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KEY TO DATES AND PAGES

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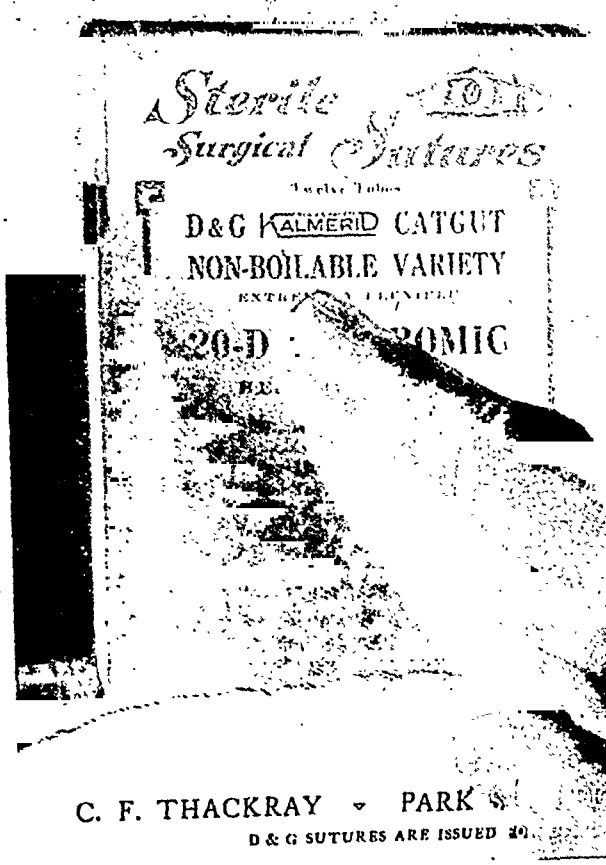

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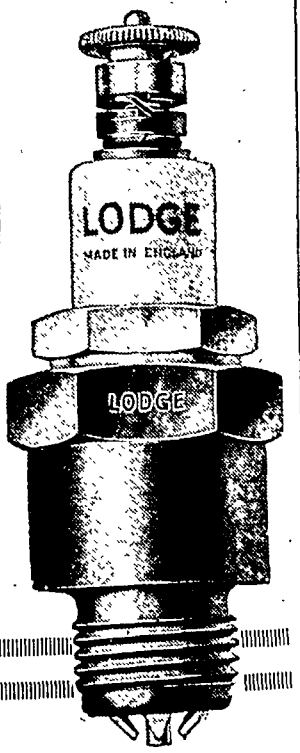

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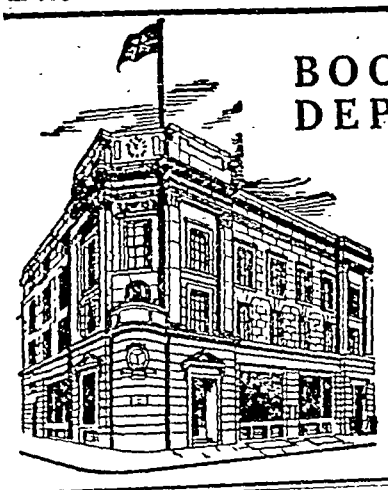

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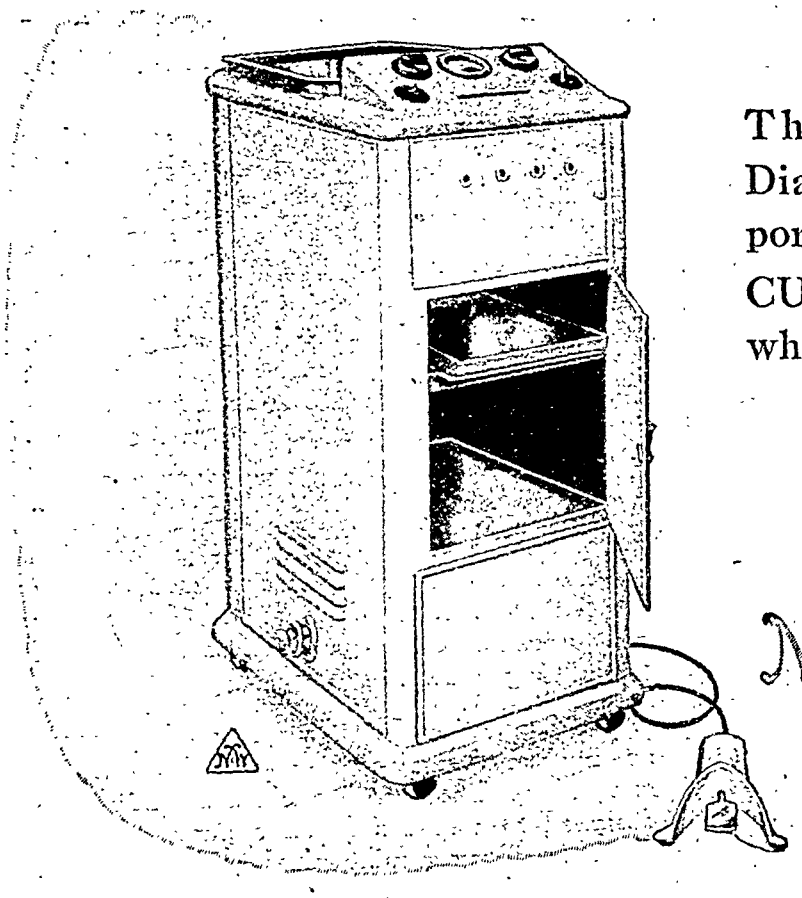

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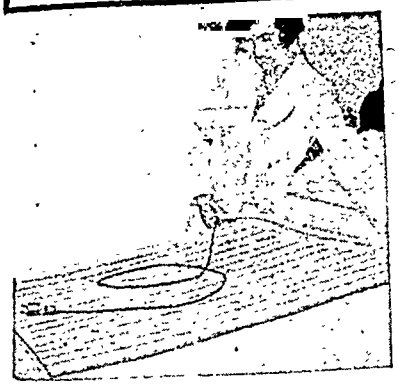

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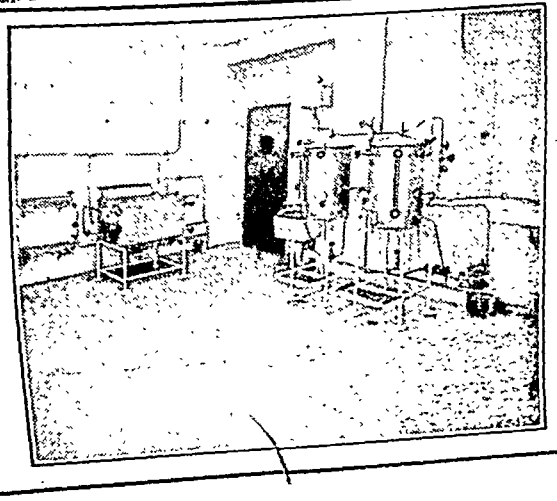

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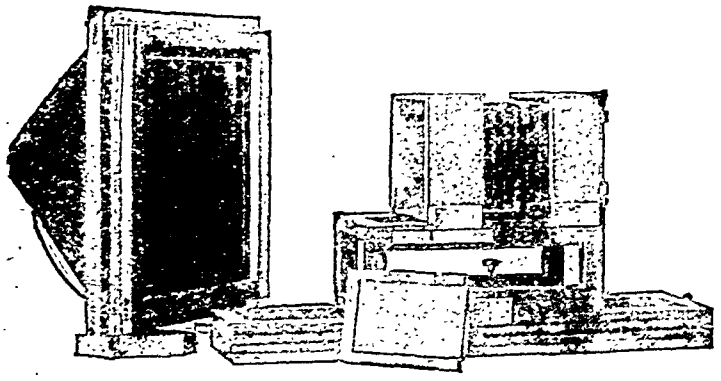

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The Safest and most Reliable Local Anaesthetic for all Surgical Cases.

Does not contain Cocaine, and does not come under the Dangerous Drugs Act.

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Each fluid drachm (4 c.c.) contains:

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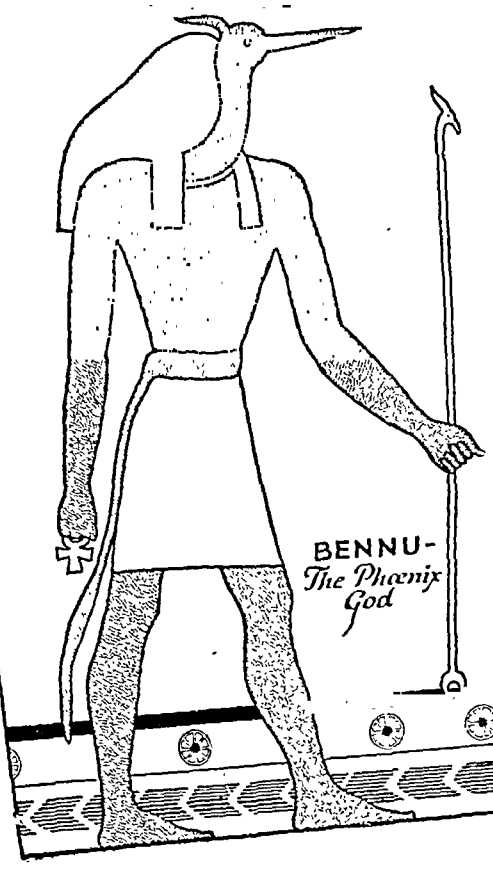

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Literature and clinical sample on request
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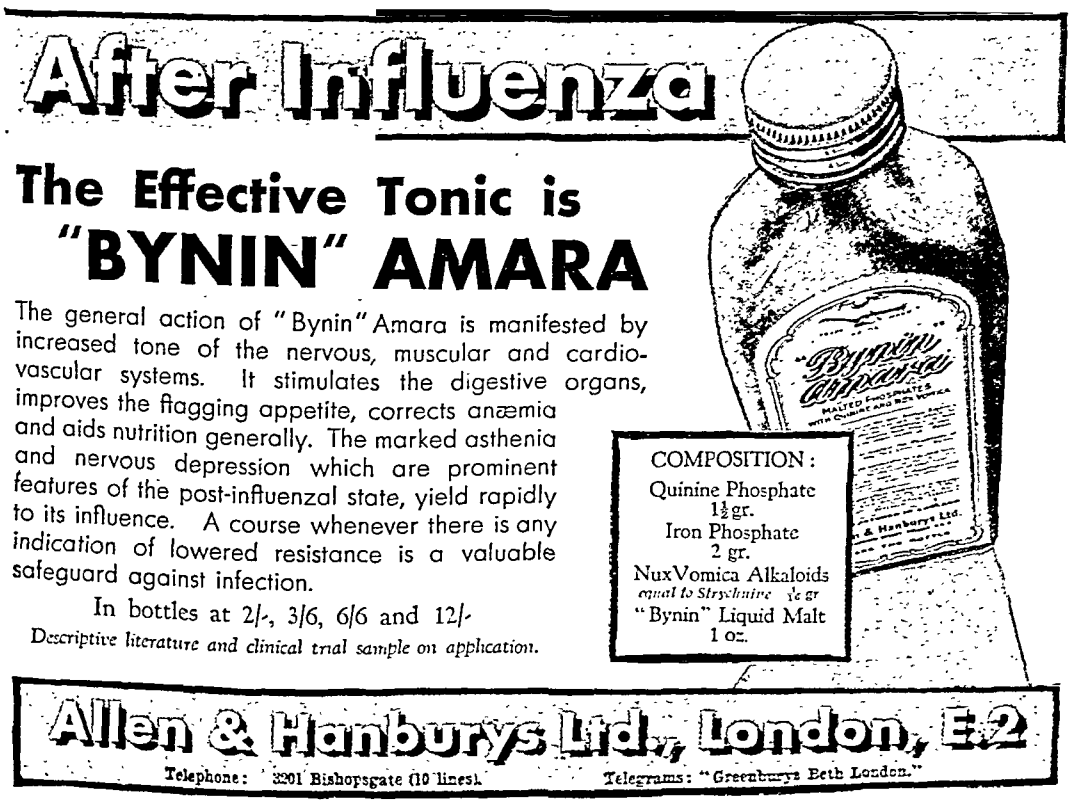
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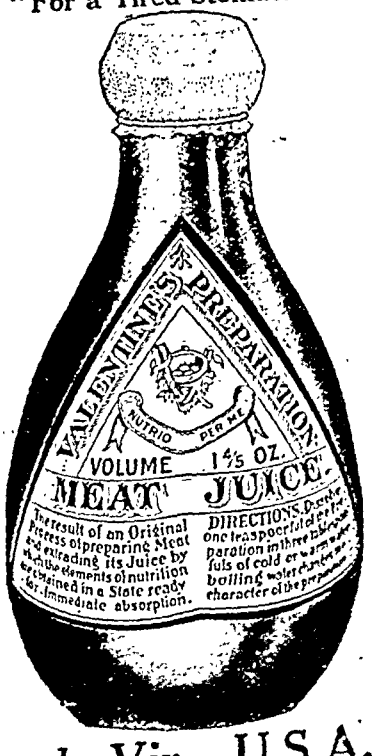

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JB 92

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Out of 2,000 Test Cases 90·1% showed definite improvement after taking BEMAX

The Medical Research Council's recent Report on Vitamins states that much subnormal health and development and low resistance to disease are associated with a partial deficiency of one or more vitamins.

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CONSTIPATION	88.8%
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GENERAL DEBILITY and CONVALESCENCE	87.3%
INTESTINAL DISTURBANCES INCLUDING DYSPEPSIA and RECURRENT DIARRHOEA	81.0%

BEMAX

THE RICHEST NATURAL VITAMIN TONIC FOOD

Laboratory reports on Bemax and clinical sample will be sent to any physician on receipt of his professional card.

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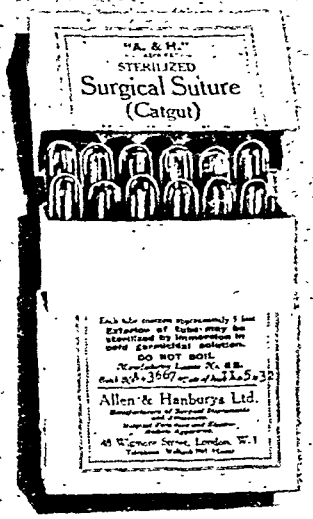
Use a British Catgut

"A & H"

"AZOULE" BRAND

Catgut



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It has a smooth, even surface which holds securely—knots do not slip.
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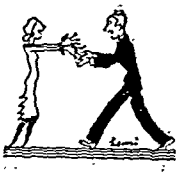
She was a nagging nervous wife, he a raging irritable husband. They were told it was "all a question of diet." If the human animal is properly fed, he—or she—is likely to be amiable and easy going.

So he went on a three months' cure where fasting "alternated with carrots, salads, golden maize meal, porridge and plenty of milk." She too undertook a three months' rest and "a diet of cream, honey and raisins."



After three months they reunited; he more generous and less ferocious, she more docile and angelic. When regular food again threatened to disturb their domestic happiness, their physician recommended less drastic measures and prescribed CAL-BIS-NATE.

A wise physician, he knew that the suffering from gastric hyperacidity is likely to disturb the most amiable disposition. Instead of a freak diet, regulation of the stomach function is the rational remedy.

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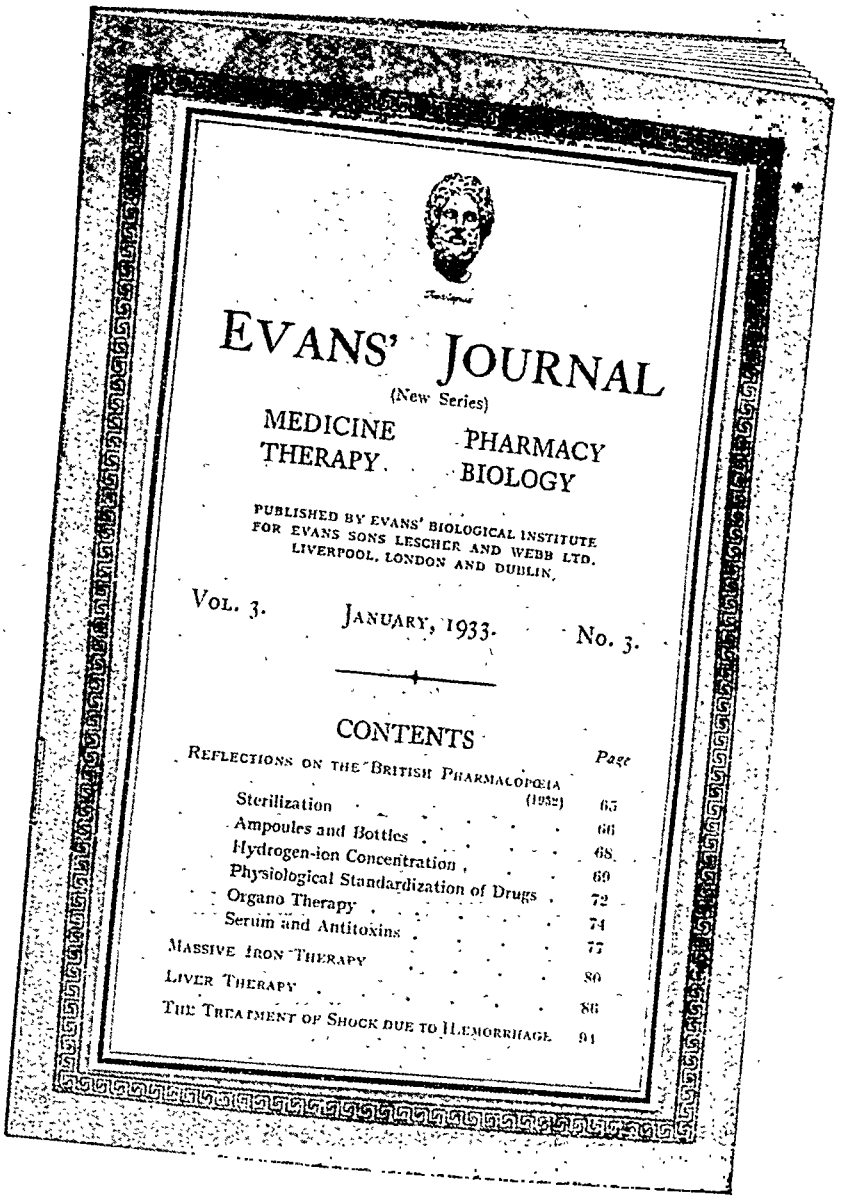
NOTE.—*Cal-Bis-Nate is known in some countries as Cal-Bis-Ma.*



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VOL. 3. JANUARY, 1933. No. 3.

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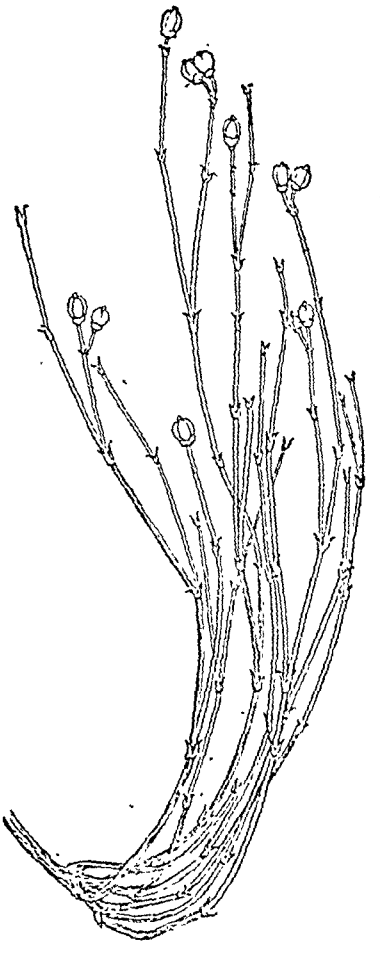

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Contains Ephedrine, 1 per cent.; Menthol, Camphor and Oil of Thyme, of each 2 per cent.; in a base of 'Paroleine' Liquid Paraffin.

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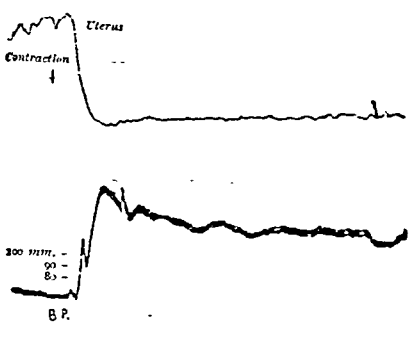

X=Injection of extract from 0·1 gramme of fresh (moist) posterior lobe
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Each 'Hypoloid' ampoule presents an accurate quantity of sterile fluid ready for immediate injection.

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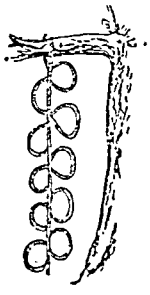

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Remarks
ON
AETIOLOGICAL FACTORS IN OSTEO-ARTHRITIS OF THE HIP-JOINT*
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(*With Special Plate*)

steo-arthritis of the hip is a condition which presents characteristic clinical picture. When, however, the istory and the pathological changes as seen in *x*-ray hotographs are taken into account, it becomes clear that iere are a number of different aetiological factors. The iitial symptom may be pain or stiffness. The pain is iost often felt in the groin or down the inner side of the high. Sometimes, however, it extends down the sciatic erve, and occasionally at the onset it may be felt in the uttock or even in the back. There is progressive loss of iovement characterized particularly by diminution of bduction and of inward rotation, and this eventually eads to a fixed deformity, the joint becoming adducted, lexed, and rotated out. Finally, with complete fixation n this position, the pain tends to disappear. Most often nly one hip-joint is affected, although not rarely both ire involved.

Radiographic Changes and their Interpretation

The pathological changes as seen in radiographs, although they vary greatly in detail, conform fairly well in general type. Put quite briefly they are as follows:

1. Loss of joint space, which may show only in the upper part or may be seen all around the femoral head. This indicates a thinning or loss of the articular cartilage and consequent approximation of the bone surfaces.

2. Alteration in the contour of the femoral head, which may become flattened above and is often widened and spread out mushroom-like over the neck of the bone. The upper surface of the head in some cases becomes sclerosed, in others it is obviously worn away and rough.

3. The femoral head tends to become displaced upwards and outwards. This is sometimes due to the wearing and flattening above, sometimes to an actual subluxation. The inner part of the acetabulum, which thus no longer holds the normal femoral head, may be filled by the mushroom-like expansion of the latter over th[illegible] side of the neck, but sometimes it appears in radiographs to be empty.

4. The texture of the femoral head alters. There may be rarefaction of those portions of the bone which are no longer transmitting weight, with visible strengthening of that part between the calcar femorale and the summit of the head. In many radiographs it is obvious that the whole of the weight is transmitted through a limited portion of the top of the femoral head impinging against the corresponding part of the acetabulum. There is then very evident sclerosis of the bone in this region. In some cases there may be an irregular patchy rarefaction of the femoral head.

5. The acetabular margin is often extended outwards above in the form of a projecting osteophyte, and there may be further osteophytic outgrowths in other parts. At the upper margin of the acetabulum an accessory bone is frequently present (os acetabuli). This is sometimes mistaken for a detached osteophyte or even for a loose body. It is often seen in a normal hip-joint, and there seems to be no reason to connect it in any way with the development of osteo-arthritis. It is not unusual to find it shown quite clearly in a sound hip when there are osteo-arthritic changes on the other side.

6. The neck of the femur may be shortened and is often abnormally thick. When the head is much spread out and enlarged it may overlap the neck very extensively. This overlapping is most obvious on the anterior and mesial aspects, but often extends over the whole circumference.

When the details of these changes in the individual cases are considered we are often met with the difficulty of deciding to what extent they have resulted from the arthritis, or to what extent they may have been present before and have acted as mechanical causes of secondary arthritic changes. For example, when the femoral head is subluxated this may be the result of progressive disease or it may have been present as an old-standing and probably congenital deformity. The broad, flat, mushroomed head may undoubtedly be the result of an arthritis, but it may be a late stage of an old-standing coxa plana deformity which has been present from childhood, which has given rise to a hip-joint that is mechanically defective, and which has thus acted as a cause of the further changes that have occurred later in life. When the femoral head has worn away there may have been nutritional changes as the result of injury or disease, or presumably the bone may be soft simply because of senile atrophy. The rarefied patches seen may also be due to simple atrophy, or they may be in result from chemical changes, as, for e[illegible]

* Made in opening a discussion in the Section of the Centenary Meeting of the British Medical Associ 1932.

GENERAL DISCUSSION

The most satisfactory view to take of osteo-arthritis of the hip is that in it we see a series of degenerative changes in the joint which may result from any one or more of a number of causes. The anatomy and mechanics of the hip tend, however, to produce certain pathological reactions which bring cases due to many causes into a more or less uniform line of development, so that in the end, in spite of varying aetiological factors, we arrive at a clinical picture which becomes characteristic.

It may be as well here to consider the extent to which the various major joints are subject to osteo-arthritic changes. In the upper limb the shoulder and wrist are comparatively seldom affected. The elbow alone frequently undergoes changes in which the joint surfaces are eroded and osteophytes develop. In the lower limb the hip and knee are most often affected, the ankle seldom. It is possible that the comparative laxity of the shoulder- and wrist-joints tends to prevent bony changes occurring, so that, when arthritis affects these joints, rigidity and stiffness develop without the usual osteo-arthritic changes. In contrast with this the elbow and the hip show a very accurate fit between the bone surfaces. Walmsley has demonstrated that the femoral head is adjusted in the acetabulum so accurately that when fresh bones are entirely stripped of their ligaments the movements of the head of the femur are limited more or less to those which occur in the normal joint, and that particularly hyper-extension of the hip cannot occur even when all ligaments and muscles have been removed. Joints in which the bone surfaces are closely adapted in this way are particularly liable to strain and injury, and these are an undoubted factor in the production of osteo-arthritis. The occasional cases of this disease which occur in the ankle-joint almost invariably follow a Pott's fracture or other injury. Among the smaller joints, those of the thumb and big toe are not infrequently affected, and these are much exposed to injury.

TRAUMA AND DEFORMITY

Osteo-arthritis of the hip is far more common in men than in women, and occurs particularly in manual workers and in athletes. Strain and minor injury must be important factors, but in the majority of cases it is impossible to ascribe the condition to any particular accident. It is, however, not unusual to find that dislocation of the hip or an intracapsular fracture leads after an interval to the development of the characteristic degenerative changes. Presumably these accidents may cause nutritional changes in the head of the femur with loss of cartilage and wearing away of bone in the upper part of the joint. But sometimes an actual alteration of contour resulting from the injury, by varying the strain thrown upon the bone, may be the actual cause of the subsequent changes. Fractures of the marginal part of the acetabulum and complete fracture of the acetabulum burying the head deeper in the pelvis are also liable to produce osteo-arthritic changes.

Coxa vara, of either the adolescent or infantile type, results in a deformity which for years may cause comparatively little disability, but which often, later in life, gives rise to secondary changes that cause pain and increasing deformity and loss of movement. In the early stages of arthritis a radiograph may show quite clearly the nature of the pre-existing deformity, but later the secondary degenerative changes obscure this, and it sometimes becomes difficult to determine whether there has been any pre-existing deformity or whether the whole picture, as seen in the radiograph, is due to osteo-arthritis.

Coxa plana and congenital subluxation of the hip are also undoubted causes of late degenerative changes. Any other disease or defect arising earlier in life, such, for example, as changes due to an infective arthritis, may leave a mechanically imperfect joint, which will wear badly later in life. It is thus important to look carefully into the past history, and to try to determine whether there were any hip symptoms in childhood or adolescence. Unfortunately many cases of these hip deformities go unnoticed in childhood. It is, for instance, comparatively common at the present day to discover a subluxated hip either accidentally or because a radiograph is taken in young adult life on account of slight pain or disability. Many patients who develop osteo-arthritis at a comparatively early age—for example, at from 40 to 50—will be found to have a pre-existing deformity of the joint.

OTHER CAUSES

We now know that osteochondritis dissecans may affect the hip-joint. In radiographs the separating flake of bone may be seen on the upper surface of the head corresponding closely in appearance with what is seen in the knee-joint. We do not yet know much about this condition or about its subsequent history, but I think it is evident that any change of this nature must upset the mechanics of the joint. There are other cases also in which in adolescence or early adult life changes occur in the head of the femur resembling those seen in coxa plana—cases in which in the early stages there is still a clear joint space, sometimes actually wider than normal, suggesting the presence of a considerable layer of cartilage covering the upper surface of the femoral head. These cases also result in a mechanical misfit in the joint. We do not know whether they are traumatic or not, but they are certainly liable to lead on to further adaptive alterations, and probably eventually to degenerative changes.

When we come to consider factors other than trauma and deformity it is much more difficult to be sure of our facts. In a certain number of cases the toxic factor, such as dental sepsis, can be clearly proved and its connexion with the changes in the hip demonstrated, because removal of the toxic focus results in diminished pain and better function. In suspected dental sepsis an investigation should always be made on proper lines. It is not only useless to extract teeth wholesale, but this course tends to bring disrepute upon a line of treatment which is undoubtedly valuable in particular cases. The teeth should be investigated by *x*-ray photographs, and their clinical and radiographic condition discussed between the surgeon and the dentist, so that only needful extractions are carried out with other accessory dental treatment as necessary.

Apart from the toxic factor there are two definitely known chemical causes. Gout may be an undoubted factor, as was demonstrated in a case recently seen, in which the presence of patchy rarefaction of the head of the femur suggested this cause and was confirmed by the patient coming to the hospital with an acute attack of gout in his big toe. Family alcaptonuria gives rise to degenerative changes in the joints somewhat similar to those seen in gout. It is quite conceivable that further biochemical research will discover that there are other chemical poisons which may be concerned in the production of chronic arthritis.

BONE DISEASE

Another group of causes of osteo-arthritis includes local or general disease of the bone. In Paget's disease, when the articular ends of the bones become affected, there is a tendency to the production of osteo-arthritic changes which may be characterized by a rather rapid wearing away and destruction of the head of the femur. Occasional cases occur in which syphilis is an aetiological factor. In one of these there was a patchy rarefaction of the head of the femur, diminished joint space, and some extension of the margin of the head over the neck of the

The changes, in fact, could not be distinguished by *x*-ray appearances from any other case of osteo-arthritis.

Usually, changes of the osteo-arthritic type may take place in the hip-joint as the result of one of the forms of inflammatory articular arthritis. For example, the changes which occur in the hip in some cases of spondylitis deformans are very similar in character, and the late results of Still's disease upon this joint may closely resemble the destructive type of osteo-arthritis in *x*-ray photographs. The pathology of these diseases is at present entirely unknown.

There is no proof that bacterial infection can cause osteo-arthritis. In fact, the evidence is all against this. Where the changes initiated by an infection of the joint may be continued by secondary degenerative alterations in such a way that the eventual clinical and radiographic picture may closely resemble that of osteo-arthritis.

Conclusion

To sum up, the aetiological factors concerned in the production of osteo-arthritis of the hip may be classed as congenital, mechanical, toxic, chemical, and local disease of the articular ends of the bone. When once the degenerative changes have started, alterations occur in the shape of the bones entering into the articulation, so that whatever the original cause an additional mechanical factor is often induced. These alterations eventually give rise to the x-ray appearances which make it difficult to assess how much of the deformity is due to the arthritis and how much was pre-existent. There is, however, sufficient evidence of the importance of the mechanical factors in producing osteo-arthritis of the hip to make us think always of the possible late results when we are treating deformity of this joint earlier in life. So that we should always bear in mind that the mechanics of the joint should be kept as nearly natural as possible.

SURGICAL TREATMENT OF OSTEO-ARTHRITIS OF THE HIP*

BY

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Osteo-arthritis of the hip presents itself in so many forms and varieties that it requires some preliminary classification and grouping of these different types before it is possible to discuss the treatment.

In the first place there are two well-marked types, which differ from one another in causation, course, and treatment. One is the "rheumatic gout" of old age, coming on very insidiously and affecting many joints and both sides of the body. It is often not very painful, but greatly disabling. Both pain and stiffness of the joints vary very much with the seasons, the weather, and

The other type occurs in much younger patients; only one joint is seriously affected, and there is a definite history of injury, which was clearly the cause of the trouble. This monarticular, traumatic form of the disease is not nearly so readily affected by changes in the physical conditions as the first.

But if the distinction between these two types is clear-cut, it must be admitted that there are many other types which are intermediate in character and origin. Two especially require mention before dealing with the problems of treatment. There is the case of toxic origin in which there is a well-established connexion between a septic focus and the origin of the disease. And there is the case which begins with a definite trauma, and then joints other than that injured are affected. For example, a neglected internal derangement of the knee will cause osteo-arthritis of that knee, and later, osteo-arthritis of the opposite knee and hips.

Dealing very briefly first of all with cases unsuitable for any operative treatment, it is true that these patients seldom come to the surgeon for advice, but if they do we should be able to give it to them. Such cases in the main are the multiple, spontaneous joint affections of age, when one or both hips are seriously implicated. There are two classes of remedy at our disposal—namely, apparatus and physiotherapy.

"Apparatus" is not very helpful. An elderly cripple will find any kind of calliper splint very irksome, and it would seem much better, therefore, to resort to the use of crutches, provided the hand grip is good. Before resorting to the surgeon the patient has usually tried whether physiotherapy can give him benefit; but, apart from this test of experience, there may be two valuable hints as to the likelihood of physico-mechanical methods relieving the pain and stiffness. These are the reaction of the patient to changes of weather and to exercise. If a patient says that his hip is better after exercise and that it is worse after resting, that it is better in hot weather and worse in the cold and damp, then physiotherapy is likely to be beneficial.

Forcible manipulation is, of course, the most potent form of mechanotherapy, and it is valuable in certain cases of monarticular arthritis for the relief of pain and muscle spasm. But it is certainly not indicated in the majority of cases, especially in senile conditions when both hips are affected. I would suggest that it is most likely to be of value in comparatively young patients, when only one hip is involved, and when *x* rays show that there is no great alteration in the articular bony surfaces.

Operative Treatment

Operative treatment is especially indicated in monarticular arthritis of comparatively young patients and in those cases where trauma has been a causative factor and pain a prominent result. Under these conditions I feel quite confident that operation can afford relief to all cases, but

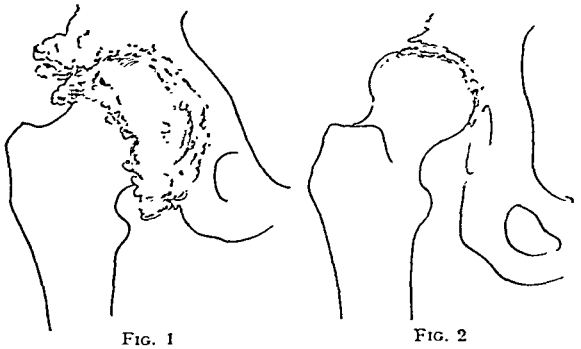

FIG. 1 FIG. 2

FIG. 1.—Common type of hypertrophic osteo-arthritis of hip with deep socket and exuberant osteophytes.

FIG. 2.—Another type, with subluxation and marked adduction.

it will require a nice judgement and a chastened experience to choose the right type of operation for each case.

Quite apart from small variations in the pathological changes, there are two widely different types of osteo-arthritic hips. In one, which is the rarer, the socket is shallow and inadequate, and there seems to be almost a subluxation, so little does the femoral head fit into the acetabulum (Fig. 2). Such cases are often old Perthes's disease or the result of congenital dislocation which has been reduced. In these cases there is often marked adduction of the leg, and the head of the femur looks as

* Read in opening a discussion in the Section of Orthopaedics at the Centenary Meeting of the British Medical Association, London, 1932.

if it was going to slip out of its socket. In the other, far commoner, type the socket is deep and the head large. There is so much osteophytic growth round the articular margin of the head that the neck of the femur is nearly as thick as the head (Fig. 1). Obviously the head has become too large for the socket, for though the latter is increased in its depth by additions to the rim, there is no general enlargement of the cavity, and it is clear that there is barely room for the femoral head in its socket and certainly no room for any synovial fluid to lubricate the joint. For this reason I think that the suggestion made by Rovsing of injecting vaseline into dry osteo-arthritic joints is impracticable. There is not room enough for the thickened head and neck, let alone any extraneous lubricant.

Cheilotomy and Arthroplasty

When one considers such a condition—namely, a greatly enlarged head with osteophytic outgrowths, spreading along the neck and a tightly embracing deep socket—it would seem obvious that both pain and stiffness must be due in large measure to the joint being as it were jammed by the tight fit of ball and socket. In the majority of such cases there is an exuberant candle-guttering of osteophytes round the margin of the femoral neck, and it has been suggested by that master of new phrases Sampson Handley that the chipping off of these osteophytes—which procedure he calls cheilotomy—will relieve the condition. But I believe this is an operation which by itself very seldom gives more than temporary relief. The osteophytes which are chipped off from the margin of the head only represent the fringe of the disease, the real centre of which is right inside the joint (Figs. 3 and 4).

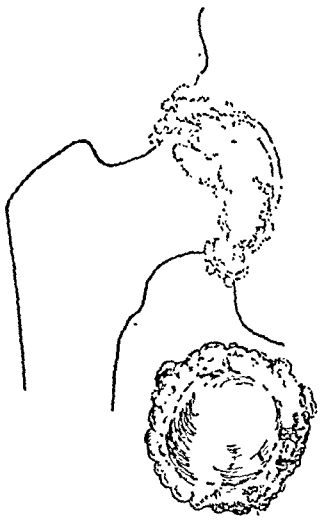

FIG. 3

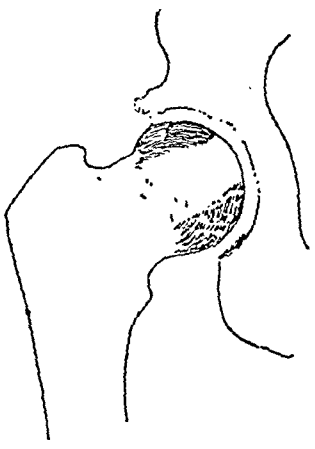

FIG. 4

FIG. 3.—"Cheilotomy"—the chipping off of the osteophytes.

FIG. 4.—The usual type of arthrodesis. Both joint surfaces being "refreshed." This inevitably leads to a widening of the joint space and hence is likely to fail.

It would seem imperative in these cases to relieve the tight-fitting joint, which strongly suggests a "seized" bearing in a machine. The ordinary way in which this is done is by a kind of arthroplasty, first dislocating the head and then reducing the size of it by chipping off not only the marginal osteophytes, but also a sufficient amount of the head of the femur to fit loosely into the acetabulum. There is, however, a difficulty in doing this effectively, because if the head be much reduced by removing its surface the cancellous tissue will be exposed, and this forms a very bad bearing surface.

There is another and better method of altering the disproportion between the ball and the socket of the joint, and that is to enlarge the socket by cutting away its lower and anterior margins. The joint must be dislocated from behind in order to get at the acetabulum, and then the projecting lip of bone together with the cotyloid cartilage is removed for rather more than the lower half of the circumference (Fig. 5).

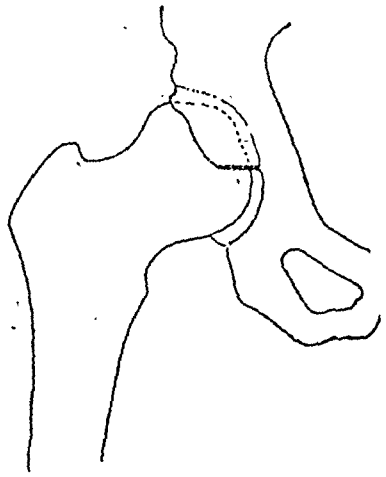

FIG. 5

FIG. 5.—A suggested form of arthroplasty, in which the rim of the acetabulum is removed below, in front, and behind so as to enlarge the joint space without making a raw surface on the head of the femur.

The more formal types of arthroplasty in which a flap of fascia is interposed between the joint surfaces hardly come into consideration, because they involve a very extensive operation upon tissues unsuitable for plastic work.

Arthrodesis

Undoubtedly the chief resource of operative surgery in the treatment of hip osteo-arthritis is some form of arthrodesis or fixation operation. The scope and indication for this procedure would be greatly increased if some really simple and efficient method could be devised. The indication for arthrodesis will be pain, made worse on movement and not relieved by physiotherapy, and affecting only one hip. Unfortunately both the general and local conditions are unfavourable for the healing of a bone-plastic operation.

The age of the patient, and tissues which are actually diseased or degenerated at the site of operation, do not make for rapid or certain union of bone surfaces; so that one is faced with an operation of some magnitude of which the result is doubtful. In these circumstances such an operation can hardly be urged, and if the risks and uncertainties are fairly put before the patient he will probably refuse. The theory of arthrodesis is good but its practice may be unsatisfactory, because of the danger and uncertainty which attends it.

Most methods of fixation of the hip have as their basis the baring of both articular surfaces—that is, the head of the femur and the acetabulum (*Fig. 4*). Now this is a long and difficult procedure, involving complete dislocation of the joint and a tedious chipping, gouging, and filing of the misshapen head and the deep socket. Further, it is open to the objection that the more of each articular surface is removed, the more loosely does the joint fit when put together again, and this very looseness of fitting is hostile to union.

The ideal arthrodesis would be achieved if we had some substance which could be injected into the joint cavity and which would produce a plastic inflammation, resulting in bony ankylosis. Possibly some chemical—for example, carbolic acid or a controlled bacterial preparation—may be found to carry out this idea.

In the meantime, we must rely upon a localized intra-articular arthrodesis or upon a purely extra-articular plastic operation. In the former case a horizontal osteotomy

made along the upper edge of the head and the ıet, and into this a flat bone graft is driven (Fig. 6). the latter procedure, a part of the great trochanter removed and fastened on to a raw surface of the ıer margin of the acetabulum and femoral neck. It the two great advantages of being practically an

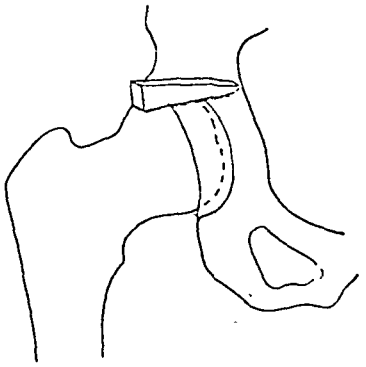

FIG. 6

IG. 6.—Arthrodesis, by driving a wedge-shaped bone graft into joint space above.

tra-articular procedure and of being much less shock-oducing than any of the classical types of intra-articular throdesis (Fig. 7).

Excision of Femoral Head: Osteotomy

There still remain for consideration two other operative ·ocedures, each of which has its definite place in treat-ent. These are, excision of the femoral head or a simple teotomy.

Excision of the head of the femur removes the chief te of pain and disease, and it leaves a mobile hip, but

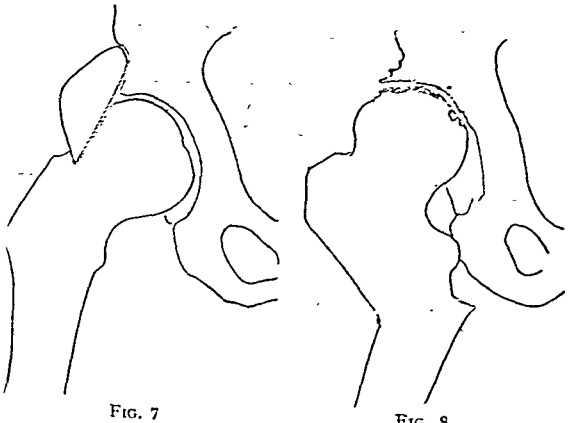

FIG. 7 FIG. 8

FIG. 7.—Extra-articular arthrodesis. The great trochanter is ısed as a graft applied to the upper surface of the socket and ıeck of the femur.

FIG. 8.—Osteotomy. This corrects the adduction, and the weight ıf the body is taken by the shaft of the femur rather than by he head.

these advantages are paid for by weakness and insta-bility, while it is impossible to promise a freedom from pain. It should therefore be reserved for severe cases of arthritis affecting both hips, the more painful side being operated upon. The patient should be warned that he will probably be dependent on crutches for walking.

Lastly, there is the operation of subtrochanteric or inter-trochanteric osteotomy (Fig. 8). The indication for this may not seem obvious at first sight, but I am convinced they are very real in special cases—that is, in cases where slow deformation of the head and neck of the femur have gone on to such a degree that a varoid deformity with the usual adduction of the thigh and raising of the pelvis has taken place. These are usually unilateral cases and there is apparently great shortening of the leg.

Much more is gained by this osteotomy than the mere correction of deformity and lengthening of the leg. The weight of the body is thrown more directly on to the line of the shaft of the femur instead of being transmitted altogether through the diseased head and neck. Also the thrust of the femur will be against the apex of the acetabulum and not all against its upper margin, whilst this thrust will also be shared by the shaft of the bone projecting against the lower margin of the sockets.

CONCLUSION AND SUMMARY

One fears that the recital of so many alternative methods of operative treatment will lead to the impression that none of them are very satisfactory. To some extent this is the case. Osteo-arthritis of the hip is essentially a process of wear and tear, resulting from two main factors—age and trauma—to which some toxic factor may be added in a minor degree.

Treatment must usually therefore be only palliative and not radical or curative. But on the other hand the relief of pain is a great achievement, and I say with considerable conviction that patients with hip osteo-arthritis treated by a well-chosen operation are nearly always very grateful and satisfied with the measure of relief afforded them.

The following summary of the indication for these various operative procedures may be made:

1. Marked osteophytic outgrowths, resulting from trauma and confined to one hip—*cheilotomy*.
2. Hip in which socket is deep, head and neck enlarged so that the joint has become "seized"—modified *arthroplasty*, either lessening the head or removing part of the socket.
3. Painful hip—*arthrodesis*.
4. *Double arthritis with stiffness of both hips and* much pain—*excision* on the worst side.
5. Cases with varoid deformity or subluxation—*osteotomy*.

SINUSITIS AND ITS RADIOLOGICAL DEMONSTRATION*

BY

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(With Special Plate)

Although the great utility and accuracy of radiology as a diagnostic aid in many pathological conditions has been universally recognized, its accuracy and possibilities when properly applied as a method of diagnosis in diseases of the accessory nasal sinuses have not been appreciated to anything approaching the proper extent. In laryngological textbooks scant heed is paid to the subject, and laryngologists—though not without reason—are disinclined to place much reliance on *x*-ray findings, and still less so if these findings conflict with their own clinical diagnoses. Yet hyperplastic changes, or fluid, in air-containing cavities in other parts of the body are constantly being demonstrated with extreme accuracy. The *x*-ray findings can be as accurate, if not more accurate, in the accessory nasal sinuses provided that the simple anatomical and physical facts of the problem are borne in mind. What are these facts?

GENERAL CONSIDERATIONS

When one *x*-rays the skull one is *x*-raying the most complicated bony structure in the body, throwing multiple shadows, widely differing in distance, size, and density,

* Paper read in the Section of Oto-Laryngology at the Centenary Meeting of the British Medical Association, London, 1932.

on to the single plane of the *x*-ray film. A small difference in the angle of incidence of the rays, in the point on the skull over which they are centred, or in the positioning of the patient's skull, will swing the shadows of structures a few inches away from the film through a wide arc and cause a big variation in their relative positions to structures closer to the film. Hence the absolute necessity for taking the radiograms at constant and standardized angles for every patient's skull, irrespective of individual differences in shape, for exact centring and angulation of the tube, and for taking several views from different standardized angles. In the majority of textbooks dealing with the subject one finds only three views mentioned—a lateral view, and two other views described respectively as the " nose-chin " and " nose-forehead " positions. These are not, in fact, " positions " at all, and the multiple shadows in the resulting radiograms depend for their situations relative to one another on nothing more accurate or scientific than the widely varying facial contours of individual patients. It is hopeless to expect accurate *x*-ray findings from such inaccurately taken *x*-ray films.

For example, Figs. 1 and 2 (see Plate) are two radiograms, both of the same patient. Fig. 1 was taken in the " nose-chin " position, and it will be seen that the lower parts of both antra are concealed by the shadows of the petrous bones, this being brought about by the patient having a long chin and a short nose. In this radiogram nothing abnormal can be detected. Yet Fig. 2, taken a few minutes later at the correct angle, throws the petrous bones clear of the antra and shows the right antrum to be half filled with pus.

This is only one illustration of the impossibility of demonstrating radiologically pathological conditions in the accessory nasal sinuses with any degree of accuracy by haphazard radiographic technique. Given correct radiographic technique the *x*-ray findings in the accessory nasal sinuses are as uniformly accurate as in any other part of the body—if not more so. My first point, therefore, is that one cannot over-emphasize the absolute necessity for accurate and standardized technique in the radiology of the accessory nasal sinuses.

Importance of Erect Posture

When *x*-ray apparatus gave only a small output, and before the days of duplitized films and intensifying screens, the exposures were very long, and the only position in which the patient could keep reasonably still was either the prone or the supine. In spite of the vast improvements in power and speed that have reduced the exposures to, at the most, a matter of six or eight seconds, by far the greater majority of *x*-ray examinations —with the exception of the chest—are carried out in the recumbent position. In the majority of instances there is no disadvantage in such a position, but it is definitely contraindicated when the part to be *x*-rayed is an air-containing cavity which may be abnormally opaque to *x* rays as a result of pathological changes in the mucosa or of pus. If one wishes to examine the contents of a glass jar, and to ascertain whether its content is solid or fluid, one does not look at it from above or below, as that would not give one the required information. One naturally holds it on a level with one's eyes, so that the light passes horizontally through the material to one's eye. In this position one can examine the structure of the material, see the upper border, and ascertain whether it is fluid or not by tilting the jar from side to side. If it is fluid, this upper border will remain horizontal whatever the position of the bottle. The same thing applies to the sinuses if they are *x*-rayed in the upright position. If they are *x*-rayed in the prone position gross pathological changes may easily escape detection.

Fig. 3, for instance, shows nothing much wrong beyond a slight degree of cloudiness in the antra. But the radiogram was taken in the prone position. Fig. 4 is a radiogram of the same patient, but taken in the erect posture a few minutes later, which shows a collection of pus in both antra. What happens is that in the prone position the fluid is spread out in a thin film over the antral wall, and when the amount is small it is insufficient to cast an appreciable shadow. In the erect position, however, the fluid is all collected into a pool in the lower part of the sinus, and is at once obvious.

Normal Transradiancy

Another possible source of error is the widely held assumption that the radiological detection of sinus infection depends on the observation that one sinus is more opaque than its fellow of the opposite side. One has only to consider the matter for a moment to appreciate how misleading radiological evidence based on this fallacy might often be. For, on the one hand, a sinus may be small and poorly developed with thick bony walls and consequent small air content, which, though non-pathological, is opaque when compared with the opposite normally developed sinus. On the other hand, a pair of sinuses may often contain an equal amount of pus or thickened lining membrane, and since both will allow an equal amount of rays to pass, they would both, on this assumption, be considered radiologically normal. The only safe and reasonable basis for radiological diagnosis is the radiologist's acquaintance with the normal degree of transradiancy which each sinus should give, according to its size and air content. This necessitates a thorough knowledge of the standard normal, and obviously can only be gained by taking the radiograms in standard positions.

STANDARD TECHNIQUE

It will be as well here to describe the six standard views which I use. They are all taken in the erect position, and at definite and accurately measured angles for every patient, irrespective of any difference in facial contour. For this purpose I designed the special " sinus stand " illustrated in Fig. 5. In each case I take six views as follows:

1. *Occipito-frontal View.*—The head is grasped by the head-clamp in the bi-temporal diameter and the head-clamp is adjusted so that the antero-posterior diameter of the skull

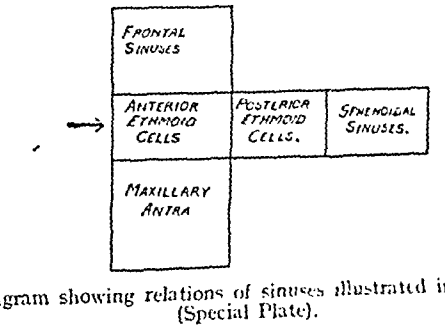

Diagram showing relations of sinuses illustrated in Fig. 6 (Special Plate).

is perpendicular to the film, the angle being read off on the dial. An imaginary line is taken joining the external auditory meatus and outer canthus of the eye, which for brevity I call the " orbito-meatal line." This line is so adjusted by means of a protractor that it is perpendicular to the film, the tube is centred half an inch below the external occipital protuberance and the exposure made. A typical result is shown in Fig. 6. The petrous bones will be seen to be thrown well above the antra in this position. The principal use of this view, however, is not to show the antra, but to show whether there is any abnormal opacity of the ethmoidal labyrinth or of the sphenoidal sinuses. On either side of the perpendicular plate of the ethmoid two air spaces are seen. These air spaces in this position consist of the superimposed shadows of the anterior and posterior ethmoidal cells and the sphenoidal sinuses from before backwards, and normally they are clear.

Occipital-mental View.—In this view, the head, still ɔed in the bi-temporal diameter, is so adjusted that the o-meatal line subtends an angle of 45 degrees to the film, angle being open towards the feet. The resulting radio- ı is shown in Fig. 7. In this position the petrous bones seen to be thrown clear below the antra, thereby giving ınmolested view of these sinuses. The anterior ethmoidal are thrown clear of the posterior group of sinuses, and frontal sinuses are well shown.

Vertico-mental View.—In this position the patient ex- ls the head as far back as possible on the neck. There obviously be no standard angle through which all patients extend the head, but this is compensated for by so tilting tube that, whatever this angle may be, the central ray :onstantly vertical to the patient's vertex. Fig. 8 gives ood view of the sphenoidal sinuses.

. *Right Oblique View.*—The head, still grasped in the np, is rotated through an angle of 39 degrees, the occiput ving towards the right. The chin is then depressed until orbito-meatal line is at 35 degrees, the tube being centred t behind the left mastoid process. This view throws the ıdows of the right posterior ethmoidal cells, and incidentally right optic foramen, into the shadow of the right orbit.

›. *Left Oblique View.*—This is the same as the right oblique w, but in this instance the occiput is rotated through degrees to the left, thereby showing the left posterior ımoidal cells (Fig. 9).

6. *Lateral View.*—This is an ordinary lateral view of the la turcica and accessory nasal sinuses, and is useful in ses of congenital absence of one or both frontal sinuses, and cases in which one or other antrum is poorly developed, th thick bony walls, and is consequently more or less opaque the anterior view. The lateral view throws into relief the ick bony walls, and consequently clears up the cause of the ›acity.

These, then, are the six standard views used in this :chnique. It will be seen that they are all necessary, nce they are ancillary to one another and each forms composite part of the whole. It will also be seen that, y using this technique, a radiogram taken in any given ne of these positions will correspond exactly, so far as he normal shadows are concerned, with the radiograms aken of any other patients in the same position. Thus, ›y this method any variation from the normal will be t once apparent to the experienced radiologist. Neces- arily, it takes a little time and experience to distinguish ıccurately each of the multiple normal shadows in each ›iew, even when they are invariably projected into the ›ame relative positions by the technique which I have described. One can imagine how unnecessarily difficult this becomes when they are thrown all over the film according to the prominence of the patient's nose, chin, or forehead, and how next to impossible it is—under such conditions—to recognize pathological changes with any approach to accuracy.

Results Obtained

It is entirely due to a haphazard technique that oto-laryngologists as a whole have hitherto placed little reliance on *x*-ray findings. It is my aim to show that radiology properly employed can give information regarding the condition of the sinuses which is not exceeded—and I doubt if it is equalled—by any other method of investigation as a preliminary to possible operation.

At King's College Hospital, and in my private practice, we have very carefully checked with our laryngological colleagues the proof puncture and operation findings in a consecutive series of 250 cases. In every one of these cases the *x*-ray findings were proved to be correct. When a fluid level was shown in the radiograms, immediate proof puncture was carried out. For a test like this such an immediate procedure was obviously necessary, as other- ›wise the pus might drain out in the interval. Such a trial of method necessarily entailed between our laryngo-logical colleagues and ourselves a very close co-operation, which is impracticable in ordinary routine work. But although, since that test group of cases, between three and four thousand examinations of the accessory nasal sinuses have been carried out, and we have frequently inquired as to the accuracy of the diagnoses, in not one instance have we heard or been informed of an error in the *x*-ray findings. On several occasions where the *x*-ray findings showed, on the one hand, thickened lining membrane but no fluid, or, on the other hand, a fluid content, proof puncture—*but* carried out several days later—showed the contrary. But in each of these cases the *x*-ray evidence of one or other condition was so definite that it was obvious, not only to ourselves but to the laryngologist himself, that the discrepancy was due to the filling or the emptying of the sinus in the interval between *x*-ray examination and the proof puncture. I think it is highly probable that where there is gross thickening of the lining membrane in the ethmoidal cells pus in one or more of the cells might be concealed by the general opacity of the superimposed cells. Also, in cases where there is marked hyperplasia of the mucosa, the outlines of, say, an antral polypus might easily be concealed by the general thickening of the mucosa. But taking the method as a whole, I have no doubt that you will find that radiology, properly applied, can be of the very greatest use to you. The method, as you see, is quite simple and straightforward, and, given the necessary apparatus and experience, any radiologist can carry it out.

Illustrative Cases

Further figures in the Special Plate illustrate the use and principles of this method in regard to sinusitis and other conditions.

It will be recalled that in Fig. 6, showing the occipito-frontal view, two air spaces are seen on either side of the perpendicular plate of the ethmoid. They consist (see diagram in text) of the superimposed shadows of the anterior and posterior ethmoidal cells and the sphenoidal sinuses from before backwards. Fig. 10 shows the space to the right to be opaque. Further radiograms having demonstrated that the anterior and posterior ethmoidal cells are clear, the vertico-mental view (Fig. 11) shows the opacity of the right space to be due to an infected sphenoidal sinus. It will be seen, therefore, that, starting with the occipito-frontal view, one has a double check on the condition of the ethmoidal labyrinth and the sphenoidal sinuses, which works out something like a game of patience. Occasionally, where there is unilateral deficient development of these sinuses, their comparatively thick bony walls will make the air space on that side opaque, although no pathological lesion is present. The other views, however, will show the reason for this opacity, while it must be borne in mind that if the angle is not exact the shadows of other structures will be thrown into the air spaces.

Fig. 12 illustrates another point. The horizontal line in the left antrum suggests that it is half full of fluid. That is an *assumption*, based on the horizontal upper margin. When the head is tilted to the left (Fig. 13) it is seen that the upper margin remains horizontal. Tilting to the opposite side (not shown) has a similar result. Nothing but fluid will remain horizontal in a cavity when that cavity is tilted. Thus the shadow is due to fluid, a fact based on *proof*, which can leave no shadow of doubt as to its accuracy. Fig. 14 shows fluid in a frontal sinus, confirmed by the tilt, while in Fig. 15 fluid can be seen in the sphenoidal sinuses.

A sinus may be transradiant or opaque to *x* rays. Opacity may be due to a fluid content or to dis-

ease of the wall, or to both, and *these are the only three possibilities.* The evaluation of normal transradiancy is a matter of experience, based on the size of the sinus, its air content, and the definition and clarity of the bony walls or foramina projected into the shadow of the sinus. With experience this can be accurately determined. The extent to which incontrovertible proof can be given by *x* rays regarding a fluid content has already been shown. With regard to the third possibility; since two are proved the third is simple. If a normally developed sinus is opaque to *x* rays and no fluid is present, the opacity must be due to thickening of the mucosa; I am, of course, excluding such comparatively rare conditions as new growth, bone disease, or thickening of the superimposed soft tissues, which, though demonstrable as such, do not enter into the scope of this paper. But quite apart from this proof by elimination, I believe I can show that not only thickening of the lining membrane, but the *type* of thickening, is as accurately demonstrable as fluid. However gross the hyperplasia may be it does not conceal fluid, except possibly in the case of the ethmoidal cells. Fig. 16 shows marked hyperplasia of the mucosa in both antra. It should be noted that, whereas at the periphery the rays are traversing the entire longitudinal thickness of the thickened mucosa, in the centre they are traversing the two layers of mucosa on the posterior and anterior walls, and consequently one sees a central comparative transradiancy if the penetration be increased to the correct degree. You will notice the thickened mucosa in both antra, and at the same time a horizontal level in the left antrum. The skull is tilted (Fig. 17), and the thickened membrane tilts with it; but the horizontal line in the centre of the left antrum remains horizontal, and therefore this sinus, in addition to thickened lining membrane, contains fluid.

Fig. 18 shows a different type of case. One sees an opacity occupying the lower half of the left antrum with a convex upper border, but there is a small gap between the upper part of its inner border and the antral wall. On tilting (Fig. 19) the upper margin tends to remain horizontal, but does not quite succeed in doing so, and the gap between its inner margin and the antral wall becomes wider. It is therefore fluid, but encysted fluid, and the obvious deduction is a cystic polypus. The diagnosis in this case was proved correct at operation.

A solitary polypus in the left antrum is seen in Fig. 20. Fig. 21 also shows polypi in the left antrum. In this picture is also seen the dense hard line around the periphery of the sinus. This is due to fibrosis of the periosteal layer of the mucosa, and is the result of long-standing infection. In acute and subacute conditions one sees, instead of the dense basal layer, a hazy, "ground-glass" appearance of the mucosa (see Fig. 22), which varies in opacity according to the duration of infection. It is caused by oedema and swelling of the mucosa proper. A slight degree of this oedematous swelling is usually seen following antral "wash-outs." Fig. 23 shows a similar acute or subacute "ground-glass" type of opacity in the right sphenoidal sinus, while in Fig. 24 is seen the chronic fibrotic type of hyperplasia, also in a sphenoidal sinus.

CONCLUSION

I have endeavoured to demonstrate in this paper, on the one hand, the impossibility of accurate *x*-ray diagnosis in the accessory nasal sinuses with the radiograms taken at haphazard angles or in the prone position, and, on the other hand, how accurate is the information obtained when the radiograms are taken at carefully measured and standardized angles and in the erect position. The underlying principles of the method are, I think, logical and obvious, and to any experienced radiologist the technique will be simple. I am sure that there is a very wide field of work to be carried out in co-operation between the laryngologist and the radiologist, and I have tried to indicate above a method of approaching that work. I hope that what I have said will be of use to both branches of the profession.

Before closing I should like to express my thanks to my laryngological colleagues at King's College Hospital and the Central London Throat, Nose and Ear Hospital, especially to Mr. Jenkins, Mr. Negus, Mr. Gill-Carey, and Mr. Cawthorne, for all their help and encouragement, and to my assistant, Mr. Crichlow, for his untiring zeal and energy. And last, but by no means least, I wish to thank Messrs. Newton and Wright of London, who took the greatest pains and trouble in manufacturing my sinus stand.

[In Fig. 17 for "tilted to left" read "tilted to right."]

ADENOMA OF ISLETS OF LANGERHANS ASSOCIATED WITH HYPOGLYCAEMIA

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(With Special Plate)

Adenomata of the islets of Langerhans are rare, and up to the present time no case with clinical manifestations has been reported in this country.* We desire to record the following case, in which such an adenoma was present, associated with periodic attacks of hypoglycaemia, and ultimately proving fatal.

REVIEW OF REPORTED CASES

Warren[1] in 1926 was able to find in the literature records of only fifteen adenomata, though he himself added four more from his own experience, suggesting that these tumours may be more common than is supposed. He pointed out that little attention is paid to the pancreas in routine post-mortem examinations, and that small adenomata may be easily overlooked. He was of the opinion, however, that they were of no clinical significance.

The association of a pancreatic tumour with hypoglycaemia was not established until, in 1927, Wilder, Allen, Power, and Robertson,[2] in America, studied and reported a case in which the condition was caused by a carcinoma originating in the islet tissue. The patient was a physician aged 40. When specially observed, in a little over three hours after a meal he complained of a sense of apprehension and depression, with vague paraesthesiae; the blood sugar was found to be 0.055 per cent. Fifteen minutes later perspiration and trembling were noticed. Four hours later twitching of the face and incoherence of speech occurred, the blood sugar being 0.036 per cent. After four and a quarter hours he became stuporous, unable to speak, and developed convulsions. At this stage the blood sugar had fallen to 0.027 per cent. Fifteen grams of glucose were then given by the mouth, and in ten minutes he was capable of rational conversation, the blood sugar having risen to 0.065 per cent. The patient eventually succumbed, and at necropsy, in addition to the primary growth, metastases were found in the liver and lymph glands. It is of interest to note that the cells bore a striking resemblance to the cells of the islets of Langerhans, and that alcoholic extracts from cancer tissue in the liver had an insulin-like action when injected

* Since writing this paper we have seen that in the current issue of the *Journal of Pathology and Bacteriology* (November, 1932) W. G. Barnard reports a fatal case in a woman aged 40.

o rabbits. Previously, in 1924, Seale Harris[3] had rgested that a hyperfunction of the pancreas might pro-ce hyperinsulinism, and reported three cases with mild mptoms of hypoglycaemia. In 1928 Thalhimer and urphy[4] reported a fatal case of hypoglycaemia, and at cropsy a small tumour of the pancreas, measuring 1.5 · 1 cm., was found. Microscopically it appeared to have iginated from the islets of Langerhans, and some doubt as expressed as to whether it was a carcinoma or an lenoma. In the same year McClenahan and Norris[5] ported a case of hypoglycaemia with a history of eriodic attacks of loss of memory. At necropsy a large lenoma of the island cells was found, and, in addition, ie islands of the pancreas itself showed a general hyper-ophy. This latter condition, but with no tumour, was ound in a case of hypoglycaemia recorded by Phillips.[6]

The first successful removal of a pancreatic tumour in case of hypoglycaemia was reported by Howland, ampbell, Maltby, and Robinson[7] in 1929. There was six years' history of coma and convulsions, and at peration a slow-growing carcinoma was found in the niddle portion of the pancreas. In the same year Lloyd[8] ublished records of a woman, 22 years old, with a clinical istory of a cerebral tumour: a large adenoma of hypo-hyseal tissue, an adenoma-like enlargement of the para-hyroids, and an adenoma of the islands of Langerhans were found post mortem. Unfortunately, there was no sugar analysis of the blood. In 1931 several cases were reported. In Carr, Parker, Grove, and Fisher's[9] patient—a youth of 19 who had complained for a period of one year of recurrent convulsive attacks, diagnosed as epilepsy—a tumour was suspected and successfully removed at operation. It measured 2 cm. in diameter; microscopical examination showed it to be an adenoma, and suggested its origin from the beta cells of the islands. A similar successful removal of an adenoma was also recorded by Womack, Gnagi, and Graham.[10] The patient's attacks began with a feeling of hunger, which was soon followed by sweating, nervousness, tachycardia, muscular twitchings, disorientation, convulsions, and coma.

Smith and Siebel[11] gave details of four additional cases. In the first there was a definite clinical picture of hypoglycaemia, ending in death in coma. At necropsy an adenoma, 1 cm. in diameter, was found in the centre of the head of the pancreas. In the second an adenoma of the body of the pancreas was an incidental finding at post-mortem examination in a man dying from primary carcinoma of the liver. There was not the slightest clinical evidence of hypoglycaemia, and as far as they could see the tumour resembled very closely the tumour seen in the first case. Case three was also an incidental finding at necropsy, and there was a vague suggestion of hypoglycaemic symptoms. Mild diabetes had been observed in the last case—that of a woman who died from pneumonia, and in whom a well-encapsulated adenoma, measuring 1 cm. in diameter, was found in the centre of the body. Her past history gave no record of any hypoglycaemia.

History of Authors' Case

The patient was a married woman, aged 52, who had suffered from periodic attacks of giddiness since the spring of 1931 and during the last six months of her life from recurrent attacks of unconsciousness. She reached the menopause in November, 1930.

At the onset of her illness she began to have attacks of giddiness which came on practically every morning at 11 o'clock and lasted until her midday meal. During these attacks she had to stop her work, as she did not know what she was doing and was unable to speak, but she was conscious of what was happening around her. Her husband knew when these attacks were approaching, as she became fidgety and restless. In February, 1932, the character of her attacks changed, and for the first time she lost consciousness on this occasion for a period of four and a half hours. The following month she had similar attacks on two successive days. They recurred at intervals of two to four weeks, but were tending to become more frequent up to the time of admission to hospital on July 16th, 1932. There was nothing of note in the patient's personal or family history.

On examination the patient appeared a well-nourished woman, weighing 13 st., of good intelligence, and able to give a clear account of her illness. There was nothing abnormal to be noticed in her speech. Detailed examination of the central nervous system revealed no abnormality. The pulse was 80 per minute, regular, and of good volume; the blood pressure was 106 systolic and 64 diastolic. The heart and lungs were normal. Her appetite was good and bowels regular; there had been no loss of weight. The abdomen was well covered, and no abnormality could be detected on palpation. Urine was normal.

Special Investigations

Wassermann reaction in the blood was negative. Blood count showed: red cells, 4,000,000 per c.mm. (normal in shape and size); haemoglobin, 70 per cent.; colour index, 0.88; leucocytes, 8,124 per c.mm. Catheter specimen of urine was normal on microscopical examination. Blood bicarbonate 52.6 c.cm. bound by 100 c.cm. plasma; blood urea 28 mg. per 100 c.cm. blood. Basal metabolic rate—+ 15 per cent. Microscopical examination of faeces normal. X-ray examination of the skull showed nothing abnormal.

Progress of Case

During the four weeks following admission the patient had several attacks of a minor and two of a major character. In the former she became restless and confused mentally for a period of about two hours. In the latter, in addition to these symptoms, speech became slurring and incoherent, and she gradually passed into a stuporous condition, which persisted for about eight hours. On examination during these attacks the only abnormal physical sign noted in her nervous system was an extensor plantar response on both sides. The pupil reflexes were present, and the patient could be roused with some difficulty. During the fifth week these major attacks became of daily occurrence and were more severe in nature. At times she was completely comatose. During the intervals she was in a constant state of mental confusion and her speech resembled that of a drunken person.

At this time it occurred to one of us (S. E. T.) that the condition might be due to hypoglycaemia: this was confirmed by an analysis of the blood, which showed a sugar level of 0.041 per cent. Glucose was then administered four-hourly in 25-gram doses, by the mouth when possible and per rectum when the patient was unconscious. This, however, had no effect on the patient's condition, and on August 19th an intravenous injection of 20 grams of glucose was given. At the beginning of the injection the patient was comatose, but at the end—that is, in about half an hour's time—she roused to a certain extent, began to move her arms about, and became very restless. This improvement was only maintained for about one hour, and she then relapsed into her former coma. In spite of the continued rectal administration of glucose and injections of pituitrin and adrenaline the condition gradually became worse and she died the following day.

Analysis of the blood sugar on successive days showed the following results:

Date	Grams per Cent
August 15th	0.041
„ 17th	0.043
„ 18th	0.031
„ 19th	0.035 before 0.5 c.cm. pituitrin 0.037 half-hour after 0.5 c.cm. pituitrin 0.022 two hours after 0.5 c.cm. pituitrin
„ 20th	0.029

Following administration of 20 grams of glucose intravenously the results were:

Time	Blood Sugar, Grams per Cent.
0	0.051 comatose
½ hour	0.091
1 hour	0.071 conscious, but restless
1½ hours	0.053
2 hours	0.042 comatose

At no time was sugar found in the urine.

Post-Mortem Examination

Externally there was nothing of note. Internally the brain was normal. Apart from slight atheroma at the commencement of the aorta the heart was normal. The lungs showed a little congestion at the bases. The spleen, kidneys, stomach, intestines, and suprarenals were normal. The liver on section appeared pale. In the tail of the pancreas there was a small ovoid tumour, just under 2 cm. in length, which appeared encapsulated; the cut surface was of a grey colour, and, except for a few small haemorrhagic areas, homogeneous in appearance.

Microscopical Examination

The sections were stained with eosin and haematoxylin.

Pancreas.—The cells both of the acini and the islets appeared normal, and there was no excess of islet tissue.

Tumour.—The section showed a definite surrounding fibrous tissue capsule. The cells were arranged in groups separated by a fine connective-tissue stroma. Each group in composition and in the appearance of the individual cell resembled a normal island of Langerhans. The cells had round or slightly oval nuclei and the cytoplasm appeared slightly eosinophilic, in contradistinction to the more basophilic staining of the acinar cells seen in the section of the pancreas.

DISCUSSION

It is evident from the course of this woman's illness and the clinical investigation that she had been suffering from periodic attacks of hypoglycaemia for more than one year, and that for the last five weeks of her life these attacks had been increasing in frequency and severity. The similarity of her symptoms to those of hypoglycaemia induced by excessive doses of insulin is striking; the double extensor plantar response displayed by her has also been noticed in this condition. Banting, Campbell, and Fletcher,[12] in experiments with insulin, found that symptoms began to appear when the blood-sugar level had fallen to 0.07 per cent., while Sendrail and Planques[13] came to the conclusion that readings below 0.09 per cent. should be regarded as hypoglycaemia. In this case the highest percentage found was 0.043, and the lowest 0.022.

The fact that the sugar tolerance curve, following the intravenous glucose, runs parallel with the normal proves that the sugar was being removed from the blood in a normal manner. The consistently low sugar percentage, even after the continued administration of glucose, suggests very strongly that a constant excess of insulin was circulating. It is a reasonable assumption that the hyperinsulinism was the result of the secretory activity of the adenoma of the islets of Langerhans. This conclusion receives support from those American cases in which the removal of similar tumours resulted in the disappearance of symptoms. The failure to effect any permanent improvement with treatment is difficult to explain. In the early months of the illness the attacks appeared to have been relieved by the midday meal. A great increase in activity of the tumour must have taken place in the later stages. It is possible that insufficient glucose was given to counteract this. On the other hand, there may have been some other unknown factors responsible, seeing that our knowledge of the exact mode of action of insulin is still incomplete.

Since the only symptoms produced by an adenoma of the islands are those of hypoglycaemia, it is important from the point of view of treatment to consider what other causes can give rise to this condition, and on what grounds it is possible to suspect the presence of such a tumour. Hypoglycaemia, apart, of course, from that induced by insulin overdosage, may be produced by various dysfunctions, which may be briefly grouped as: (1) hepatic, (2) endocrinal, and (3) pancreatic.

In the first group hypoglycaemia may result from a defect in sugar mobilization or sugar storage, and has been found in cases in which parenchymatous changes in the liver cells have followed poisoning with chloroform, arsphenamine, phosphorus, and hydrazine.[6] It has also been observed in primary carcinoma of the liver.[14] In the second it is well known that a low blood-sugar level can be brought about by the loss of substances antagonistic to insulin—as in hypo-adrenalinism, hypothyroidism, and diminished activity of the posterior lobe of the pituitary gland. In the third the syndrome is brought about by over-production of insulin. Several cases have been reported under the title of "spontaneous hypoglycaemia," in which no anatomical change has been found in the pancreas, and the condition was assumed to be due to a hyperfunction of the islet tissue.[15 16] The evidence for this is somewhat inconclusive. Certain American cases[17 18] have undergone operation and massive resections of the pancreas have been carried out, with only partial improvement in the symptoms. It is possible that some of these cases may be due to conditions outside the pancreas. In others of this group a general hypertrophy of islet tissue has been found. Lastly, a definite tumour, an adenoma or carcinoma of the islets, as in the cases already discussed, is the responsible agent.

From a review of the literature of these pancreatic cases it does not seem possible to separate clinically the various types with any degree of certainty. On the whole, it would appear that, whereas in the group with no demonstrable change in the pancreas the hypoglycaemia can be controlled by dietetic measures, in the others this is true up to a point; but beyond this the response becomes incomplete and progressively unsatisfactory, ending, if no surgical measures are undertaken, in the death of the patient.

Pathology

Some doubt has been expressed by certain writers, notably Bensley, who examined Womack's case,[19] as to whether these tumours should be regarded as adenomata or slowly growing carcinomata. Smith and Siebel are inclined to consider all their cases as adenomata. In our case the presence of a definite surrounding capsule is strong evidence for its being an adenoma. The arrangement and appearance of the cells would point to its origin from the cells of the islands of Langerhans, although the tissue was not properly fixed for demonstrating the alpha and beta granules. Bensley thinks that the cells differ from the normal in their granular structure, and regards them as atypical beta cells, which in cases with hypoglycaemia are not responsive to the ordinary pancreatic mechanism controlling the liberation of insulin. The pancreas possesses a large reserve of island tissue and is capable of producing many times more insulin than is required by the body, and it is difficult to understand how a small adenoma can produce hypoglycaemia without such an hypothesis.

In the recorded cases the islands of the pancreas itself have been found normal, with the exception of that of McClenahan and Norris,[5] in which they were stated to be hypertrophied. A diminished sugar tolerance has been noted in some, but from anatomical studies no evidence

ıy depressed activity of the normal cells has been ınstrated.[11] In our case the pancreatic islands were to be normal, and in the one test performed there was vidence of any decreased tolerance.

Conclusion

A case of adenoma of the islands of Langerhans asso- d with hypoglycaemia is reported.

It is suggested that in a case of hypoglycaemia, not rolled by dietetic measures, a tumour of the islands angerhans should be suspected.

'e desire to express our thanks to Dr. W. D. Jeans for the aration of the photomicrographs, and to Miss M. Staynes, :., for carrying out the numerous biochemical analyses.

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PANCREATIC CYSTS

BY

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(*With Special Plate*)

ancreatic cysts are uncommon, and although they are .ven a place in differential diagnosis of upper abdominal iseases it is difficult to assert with any degree of finality ıat a pancreatic cyst is present unless the clinical exam- ıation has been corroborated by radiography. In fact, here no physical signs are present routine radiography the only means by which the abnormality can be lemonstrated. The purpose of this paper is to relate ıow an intercurrent acute illness revealed the presence ıf a pancreatic cyst which was not giving rise to definite liagnostic symptoms or physical signs.

The rarity of pancreatic cysts is shown by some of the published figures. Hale-White[1] collected four cases in nearly 6,000 necropsies performed at Guy's Hospital from 1883 to 1894. Körte[2] collected 177 cases from the literature up to 1902, and Mayo Robson and Cammidge[3] 175 up to 1907. Guleke[4] reviewed 260 cases in the surgical literature up to 1912. Wangensteen[5] reports three cases from the Department of Surgery, University of Minnesota, during the years 1926–30. Friedenwald and Cullen[6] describe seven cases operated on between 1904 and 1925. Carslaw[7] details an interesting case in the *Lancet* in 1921. It is very evident from perusal of the literature that the condition has occupied the minds of surgeons and pathologists more than physicians. Cases of successful extirpation were recorded by Bozeman[8] as early as 1882, and many other successes are on record after that date. It is interesting to note that Bozeman operated for the purpose of dealing with an ovarian cyst, but found instead one in the pancreas. In 1883 Gussenbauer[9] described operations on pancreatic cysts, and showed how gastric and colonic inflation were useful methods of investigation.

The case which is here to be described has several points of interest: (1) the diagnosis was made in the course of routine radiography; (2) the aetiological factors concerned in the production of a pancreatic cyst were proved to be present; (3) an acute intercurrent illness precipitated a fatal issue; (4) although complete destruction of the pancreas had taken place there was no glycosuria and no increase in the blood sugar.

Case Record

The patient, a female aged 45, had enjoyed good health until about five years before seeking medical advice on July 27th, 1928. Her symptoms began with pain in the region of the stomach, felt most acutely in the mid-line. She did not pay much attention to her condition, and later began to have pain in the right hypochondrium, which was most intense in the region of the gall-bladder. She had discomfort from flatulence, and sometimes had an aching in the back and a sharp pain in the right shoulder. Some relief was obtained from vomiting, and at times she was jaundiced after an attack. She considered herself "bilious" and was told she had gall-stones, but no special examinations were carried out.

Apart from these attacks she made no complaint until July 20th, 1928, when she was seized with severe pain in the whole upper abdomen, which was more marked under the right costal margin. She vomited, and in the vomitus noticed portions of pie she had eaten the previous evening. Soon afterwards she had acute diarrhoea with colic. She was on holiday at the time, and the doctor who was called in diagnosed acute gastro-enteritis. She improved under treatment and returned home on July 26th. There is no record of pulse, temperature, or respirations during this attack, but she stated that she was "fevered."

The following day (July 27th), she did not feel well, and as there was a recurrence of vomiting and diarrhoea she was admitted to hospital with a temperature of 100° F., pulse 120, respirations 20. On admission her symptoms had disappeared, and physical examination was absolutely negative except for slight resistance to palpation over the whole abdomen. No swelling was visible, and no abnormality was detected on palpation or percussion. The liver and spleen were not enlarged. The bowels moved well, and she partook of light diet without discomfort. Her general condition rapidly improved, and she was allowed up on August 3rd. When she was up she complained of pain which was most marked in the right hypochondrium and spread downwards towards the umbilicus. She was considered to be suffering from cholecystitis and cholelithiasis, and preparatory to having the gall-bladder *x*-rayed she was given a barium meal on August 7th. This showed a marked spreading out of the duodenum and a displacement of the transverse colon downwards (see Plate). From the appearances a diagnosis of pancreatic cyst was made.

Operation

In the light of the radiological finding a further physical examination was carried out, but no abnormality could be detected except increased resistance in the upper abdomen. The blood sugar was 0.08 per cent., and there was no sugar in the urine. The Wassermann and van den Bergh reactions were negative. The blood picture was normal, the eosinophils being 2 per cent. in a differential count. Operation was decided on, but after her acute gastro-enteritis a few days' convalescence was thought advisable, especially as she was free from symptoms.

On August 16th she suddenly became ill. Her temperature rose to 101.5° F., and her pulse to 124. She complained of agonizing pain in the right hypochondrium and epigastrium and became slightly jaundiced. Physical examination revealed tenderness and marked resistance to palpation, and an indefinite mass in the epigastrium and right hypochondrium. The leucocyte count rose to 21,812 per c.mm. There was excess of polymorphs but no increase in eosinophils. The van den Bergh test showed a direct biphasic reaction. Immediate operation was undertaken. A right paramedian incision was made and the cyst exposed. On an attempt

to deal with it the wall ruptured, and there was a rush of dark blood-stained fluid. Extensive fat necrosis was noted. There were dense adhesions round the stomach and adjacent viscera. The patient became collapsed, the cavity was packed, and no further procedure was deemed advisable. After operation the blood sugar was 0.16 per cent., the previous readings having varied between 0.06 and 0.08 per cent.; no sugar was present in the urine. The patient died nine hours after operation.

Post-mortem Findings

The necropsy was conducted by the late Professor Teacher. The body was that of a fairly well nourished but very anaemic woman. There was a yellowish tint but no definite jaundice. There was an abdominal wound in the region of the gall-bladder. Heart and lungs were normal except for some old pleural adhesions over both lungs.

There was a certain amount of blood clot about the field of operation, but, on separation of this, widespread old adhesions were found. There was a large mass of fairly firm consistence behind the stomach and duodenum. Extensive fat necrosis was present; this was old, the patches breaking down under the finger. The liver showed extensive fatty change. The gall-bladder was full of fluid bile and contained a cholesterol gall-stone about the size of a marble. The ducts were patent, although pressed upon by the stone. The stomach was soft, rather dilated, and contained quantities of stringy mucus: no ulceration, but marked chronic catarrh. The duodenum showed no ulceration, but was stretched round the right end of a tense cyst.

The bile papilla was prominent and patent, but the pancreatic ducts were obliterated and no trace of pancreatic tissue was found. On cutting into the cyst a large amount of thin bloody fluid escaped; this was evidently serum from great masses of blood clot which occupied most of the cavity. A large mass of slough was found in the cavity: it was dark grey in colour and completely necrotic. Its nature was not certain, but it seemed most probable that it was the remains of the pancreas, dead and dissected out. The cyst on this theory was a retention cyst due to chronic pancreatitis, with haemorrhages which had lasted an unusually long time. Nothing of importance was found in any of the other organs.

Classification of Pancreatic Cysts

Mayo Robson and Cammidge[3] classify pancreatic cysts as:

1. *Retention cysts*, which are lined with epithelium and are caused by obstruction in the pancreatic duct, smaller ducts, or acini.

2. *Proliferation cysts*, due to proliferation of glandular epithelium followed by accumulation of fluid.

3. *Congenital cysts*, which are frequently multiple and associated with cystic disease in other organs.

4. *Haemorrhagic cysts*, due to haemorrhagic necrosis.

5. *Hydatid cysts*, which may be associated with hydatid changes in the liver or elsewhere.

6. *Pseudocysts*, produced by trauma or degenerative changes of the interstitial tissue of the pancreas. They are not within the substance of the pancreas, but outside it and usually in the lesser omental sac.

A seventh type has been added by Primrose[10]—namely, *dermoid cysts*. This type is also referred to by Judd[11] and Dennis.[12]

Aetiology

Many causes have been ascribed to the formation of pancreatic cysts. Of these the most important are acute and chronic pancreatitis, especially of the interstitial type. By fibrous contraction pressure is borne on the ducts, and infection then produces the true retention cyst. Cholecystitis and cholelithiasis also act by occluding the ducts, and the end-result is the same. In the case recorded above there is clinical evidence of cholecystitis and cholelithiasis preceding the final diagnosis of pancreatic cyst, and this was proved post mortem. In addition, the pancreatic ducts were shown to be obliterated. It is therefore a reasonable assumption that pressure on the bile and pancreatic ducts was present and caused obliteration of the latter. The clinical history of jaundice at intervals suggests that the bile duct was from time to time obstructed. The acute gastro-enteritis from which the patient suffered provided the final infection, and, no doubt, determined the acute terminal illness. From the history the case can be regarded as a retention cyst with a final excessive haemorrhage. Judd[11] of the Mayo Clinic thoroughly describes the aetiological significance of gall-bladder disease in pancreatic cyst formation.

Proliferation cysts are uncommon and, as Oser[13] points out, are due as a rule to cystic changes in tumours or to degeneration similar to that occurring in the kidney. Congenital cystic changes in the pancreas are rarely met with, and are, as a rule, part of cystic anomalies in other organs. Mayo Robson and Moynihan[20] refer to three cases. Haemorrhagic cysts usually develop in the tail of the pancreas, and the haemorrhage is the primary condition. Trauma is often noted as a cause, but it is often impossible to differentiate this type from one similar to the case under discussion, in which haemorrhage into the cyst appeared to be terminal. The aetiological factors which would exclude this case from being classified as haemorrhagic are: (1) no history of trauma; and (2) *x*-ray examination showed the cyst to be more in the head than in the tail of the pancreas. Hydatid cysts are accompanied by a definite eosinophilia, and are due to echinococcal infection. Pseudocysts generally occupy the lesser omental sac and are peripancreatic. Trauma almost always plays a definite part in aetiology. Dermoid cysts are rare, and at operation or post mortem definite evidence of their character is found. Trauma is undoubtedly of importance in certain cases and in certain types of cyst formation. Honigman[14] collected seventy cases in which abdominal trauma preceded pancreatic cyst formation.

From experimental work the exact aetiology is inconclusive. Ligation of the pancreatic duct has been performed by Senn,[15] and he produced slight dilatation of the duct beyond the ligature. Thiroloix[16] produced a cyst by ligation and injection of a mixture of soot and carbonized liquid vaseline. Lazarus[17] experimented by first injuring the pancreas by crushing, and he succeeded in producing a haematoma which developed cystic formation on a small scale in forty days. These experiments, however, are no more conclusive than clinical observations, such as those made by Horrocks and Morton.[18] They record large cysts occurring where cholecystitis is associated with the pressure of a large stone lodged near the orifice of the pancreatic duct.

Cysts of the pancreas may suddenly enlarge, due to haemorrhage within the cyst, and that appears to be what has occurred in the case under review.

There is no definite age incidence, although they are mostly observed in middle life. The sexes are more or less equally affected. Some authorities consider the condition occurs more frequently in men, and give this as a reason for denying the importance of cholecystitis as an aetiological factor and upholding the traumatic theory.

Malignant degeneration is not uncommon, and likewise cystic degeneration of malignant and simple pancreatic tumours sometimes takes place.

Symptoms and Signs

The symptoms are based on personal observation of three cases and a perusal of the literature. At first symptoms may be absent. A careful history usually elicits a train of complaints more or less characteristic of cholecystitis or mild cholelithiasis. If enlargement takes place pain from pressure and tension becomes more marked.

mptoms referable to pressure on other organs may e manifest. At times the symptoms are associated o-called "bilious attacks," and extreme cases may te intestinal obstruction. Pain or a feeling of dis- rt and distension are felt in the epigastrium, but cyst is confined to the head or the tail of the as then symptoms are usually referred to the right the left hypochondrium respectively. Anorexia is on. Glycosuria is usually noted in cases in which hole pancreas is involved, but in my patient there o sugar in the urine and the blood sugar was normal, u there was no sign of pancreatic tissue found at t-mortem examination.

clinical signs are progressive enlargement of the men with palpable tumour between the xiphisternum he umbilicus. The enlargement may be to one or side and moves with respiration. There may be a thrill, but sometimes this is absent on account of high tension of the encysted fluid. A radiological mination will always make the diagnosis clear.

Diagnosis: Direct and Differential

e diagnosis usually is made definite by a period of ptoms terminating in a gradually increasing abdomen h conforms to the type described. Sometimes the our presses on the common bile duct, producing idice. When the involvement of the pancreas is con- rable large fatty stools may be passed and sugar is erved in the urine. Duodenal intubation gives very e information, though Einhorn[19] reports a diminution ipsin and trypsin in his cases.

ydatid cysts of the liver cause difficulty in differential osis only when the cyst in the pancreas is of a latid type, for otherwise distinct eosinophilia will help the differentiation. Cysts of the liver also displace the ow viscera either downwards or backwards. Omental mesenteric cysts may also lead to confusion, but the position in the abdomen and the accompanying al irritation with ascites will help to differentiate. drops of the gall-bladder may give rise to doubt, but greater respiratory excursion and the continuity with liver serve to elucidate the diagnosis. Pelvic tumours ly give much difficulty if a vaginal examination is ried out and one remembers that in ovarian cysts the llow viscera tend to be pushed backwards and in pan- atic cysts forwards. In hydronephrosis the tumour is lt more in the lumbar region. The history helps con- derably, and a complete urological examination will etermine the issue.

Complications and Treatment

The main complications are: (1) haemorrhage into the st; (2) perforation into the peritoneal cavity or intestinal tract with fat necrosis; (3) extreme emaciation and lycosuria; and (4) malignant degeneration. It is inter- sting to note that no diabetes occurred in my case, hough Wangensteen[5] states that

"diabetes is an occasional complication of pancreatic cyst, specially in those instances in which excessive degenerative changes are present in the pancreas. In true cysts of the pancreas following upon attacks of acute pancreatitis in which gangrene or slowing of a good portion of the tail of the pancreas occurs diabetes is unavoidable."

The treatment is wholly surgical. Extirpation of the cyst is not uncommonly followed by a true diabetes. This happened in one patient in whom I observed a post-operative diabetes. A typical diabetes as regards symptoms was produced with marked glycosuria (31.2 grains per ounce), but there was a comparatively low blood sugar (0.14 per cent.). This is difficult to understand. This patient had no glycosuria, hyperglycaemia, or diabetic symptoms before operation; yet she developed post-operative diabetes, though extirpation of the cyst was carried out very successfully.

Summary

1. A case of pancreatic cyst of the retention type has been described.

2. The case was complicated by haemorrhage into the cyst.

3. Radiography was of the utmost value.

4. There is danger of an acute infection of the alimentary tract precipitating a rapidly fatal issue.

5. A complete destruction of the pancreas did not result in either glycosuria or hyperglycaemia.

6 Various points in history, aetiology, and diagnosis have been referred to.

7. The observations are made from three cases of pancreatic cyst, though only one has been recorded in detail.

8. Attention has been directed to post-operative diabetes.

I desire to thank Dr. John Henderson, in whose wards two of the cases were treated, and Dr. R. Crawford for his radiological investigations. For the surgical work my thanks are due to Mr. Peter Paterson and Mr. George Stevenson.

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TOTAL AVULSION OF THE SCALP

A NEW METHOD OF RESTORATION

BY

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(With Special Plate)

Despite the careful supervision evident under modern factory conditions, total avulsion of the scalp occasionally takes place. One authority quotes 173 incidents in the literature[1] with eight deaths. The scalp was replaced in forty patients; in not one single case did the replaced scalp live. It is taught in some recent textbooks that a replaced scalp may survive, though it would seem that there is no ground for this statement, all the evidence pointing to the contrary. The most efficient method of treating this severe lesion has been by Thiersch grafts.[2] The patient later has to wear a wig, as the disfigurement is terrible. Attempts have been made to take Thiersch grafts from the shaven avulsed scalp, but however successful the operation has been in the past, there is no doubt the whole thing was looked upon as an inevitable compromise.

CASE RECORD

Bearing this in mind, I endeavoured to do something different in the following case.

A young girl, aged 16 years, was brought to hospital on June 21st, 1932, with complete ablation of the scalp, the

avulsed scalp being brought up in a sheet of newspaper. I postponed intervention for seven days, during which time the patient had completely recovered from shock and the initial haemorrhage: the affected area was clean, and granulations were spreading over the pericranium.

The method of restoration adopted was as follows. The denuded area, some six inches in diameter, and the remaining shaved scalp, were dressed in saline packs. Under full anaesthesia I made a series of incisions extending right down to the pericranium, three at the lateral and two on the anterior and posterior aspects (see Fig. A), the resulting flaps being

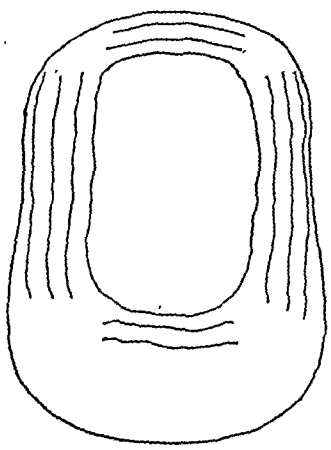

FIG. A

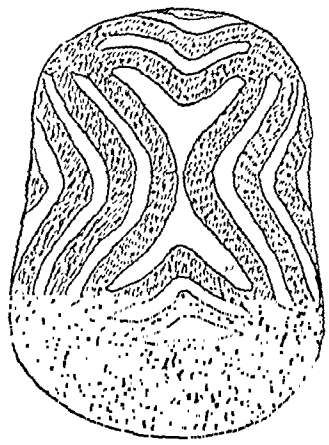

FIG. B

In Fig. A the avulsed area is reduced in size so that the lateral incisions may be shown.

some three-quarters of an inch wide. Care was taken to leave sufficient attachment at each end of the flaps to allow of an adequate blood supply. No attention was paid to haemorrhage, and each succeeding whole-thickness flap was undercut and levered towards the centre. The upper lateral flaps were first sutured together with strong catgut. The next lateral flaps were then sutured to the first, leaving a gap of half an inch, the third lateral flaps then sutured to the second, leaving another gap of half an inch. In the same way the anterior and posterior flaps were undercut, levered to the centre, and held by catgut sutures (see Fig. B). During this time the haemorrhage had been easily controlled by pressure. The whole operation area was then flushed with a 0.5 per cent. chlorine solution. A large sheet of oil silk soaked in liquid paraffin was spread over it, subsequent pressure being obtained by means of a capeline bandage. At the end of a week the flaps were firmly adherent to the pericranium.

Three weeks after the operation the centre gaps were rather wider than I had anticipated, but the granulations were healthy. Under full anaesthesia I therefore made two tongue flaps from the back of the scalp and turned them up into the adjacent gaps, after having removed the thick granulations. None of the hair-bearing scalp flaps was destroyed, and by October 11th the hair was growing well, the granulation areas being smooth and flush with the adjacent scalp. All bandages were removed at this time, the patient having mild doses of ultra-violet rays every second day.

A study of the photographs (see Plate) shows what progress has been made since the operation. The hair is now already long enough to dress back, so that the bare channels, which of course are inevitable, will shortly be entirely hidden.

OBSERVATIONS

The above method is without doubt an improvement on the Thiersch graft plan, which, however successful it may be, entails the wearing of a wig.

The actual operation takes little time, and the narrow channels between the flaps require no attention, the granulations filling the gaps completely.

The post-operative appearance is a source of satisfaction, because there is hair on the top of the head.

In nine months' time there will be no disfigurement.

I am indebted to my colleague Dr. W. Roche for his helpful suggestions.

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Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

POST-OPERATIVE INTESTINAL OBSTRUCTION

The difficulties associated with the early diagnosis of intestinal obstruction following operation involving peritoneal drainage, and the problems consequent upon such a diagnosis, render any commentary and criticism of interest and of value.

S. D., aged 25, was admitted to the War Memorial Hospital with the diagnosis of perforated duodenal ulcer; the patient's history suggested a perforation of several hours' duration. At the operation that evening a perforation of a chronic ulcer of the first part of the duodenum was found. The perforation was closed, and reinforced by an omental graft; there was a moderate amount of peritoneal exudate, removed by water suction aspiration, and drainage established by a Greenwood tube to the pelvis, with a glove drain to the right kidney pouch. Fowler's position was adopted; drainage ceased after twenty-four hours, and drains were removed in thirty-six hours.

On the fourth day after operation the patient complained of upper abdominal discomfort, and vomited once. The bowels were opened by enema; pituitrin with eserine in small doses, with anti-gas-gangrene serum, was given. On the fifth day there was a return of abdominal discomfort, the patient vomiting twice; the general condition was satisfactory and abdominal examination negative. Enemas were repeated and serums given four-hourly. On the sixth day the patient's condition deteriorated; vomiting became of a faecal character, and there was persistent abdominal discomfort, with rising pulse. It was evident that a mechanical obstruction existed. Under local infiltration anaesthesia a small incision was made over the left upper rectus, the muscle was split, and a dilated coil of small gut secured; an enterostomy was made after the method of Witzel. While in the theatre drainage of several pints of a thin faecal fluid was effected, and three pints of normal saline were injected intravenously. Salines and ammonium chloride were given continuously per rectum. For the subsequent four days the enterostomy continued to drain; the general condition improved, and the tube was loosed on the fifth day. It was apparent an ileostomy had been performed.

On the eighth day after enterostomy, under open ether, the abdomen was opened by a sub-umbilical mid-line incision. The obstruction was in the form of a "matting" of a coil of lower ileum in the pelvis; the proximal bowel was rather dilated and turgid. A lateral anastomosis short-circuiting the obstruction was made. Haemorrhage was troublesome. That evening the patient's condition became unsatisfactory, and quantities of dark altered blood appeared from the enterostomy opening. It was suggested that haemorrhage from the site of anastomosis was proceeding. The abdomen was reopened, the line of anastomosis exposed by a vertical incision in the proximal loop parallel to the line of union, haemostasis secured, and the gut wall closed. Further intravenous hypertonic salines, with continuous rectal salines with glucose, were given. Subsequent progress was uneventful. The bowels opened normally, and the enterostomy opening, after continuing to discharge for some time, closed spontaneously. There was a rapid improvement in the general condition, and the patient was discharged fit.

The difficulties are associated mainly with the question of an early diagnosis. A condition of ileus existed on the third day, with a plastic peritonitis involving the lower ileum, and a final organization causing a definite mechanical obstruction. The state of the bowel at the time of enterostomy, and the character and quantity of the bowel contents drained, serve to emphasize the divergence of the clinical condition from the actual pathology.

Early exploration is essential, but such a course with a satisfactory general condition and on no other evidence

an elusive discomfort (relieved by an enema) and ional vomiting appears a bold one. The operation ıterostomy, with a short-circuiting operation at a date, seems a logical and proper procedure. The of abundant chlorides was demonstrated.

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BILATERAL SALIVARY CALCULUS

ıugh unilateral salivary calculus is common, we think following case worthy of record because it is of the teral type.

young man of 26 complained of a swelling of his neck, ch became appreciably larger whilst taking solid food. er examination the diagnosis of salivary calculus was made, an *x*-ray photograph taken to confirm this. The radiogph (by Dr. Rowden of Leeds) showed a condition of ıteral salivary calculus, with the right one larger and more ıterior than the left. The radiograph was taken with a ge intra-oral ball of cotton-wool and the mouth firmly sed over it. At operation Mr. B. Hughes removed the ht calculus by the external route, as it appeared embedded the gland. The left one was removed by the internal ute. On seeking further a third calculus was found in the t duct, and this was also removed. A large tonsil was ucleated.

The interesting feature of this case is the rarity of lateral calculus of the salivary gland. We have not een able to find any record of double stone, nor have the ırgeon and the radiologist in their long experience ever een a case.

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Bradford. Leslie Godlove, M.B., M.R.C.S.

UNILOCULAR CONGENITAL CYSTIC KIDNEY ASSOCIATED WITH SUDDEN DEATH DUE TO HEART DISEASE

When cystic kidneys occur they are generally multilocular. Unilocular cystic kidneys are so rare that the following notes of such a condition may be of interest.

A club steward, aged 42, complained one evening while carrying out his duties of a feeling of "tightness across the chest." He walked home, about a quarter of a mile, and, not feeling well, went to bed. His wife, on seeing her husband about twenty minutes later, sent for me. On my arrival I found he had been dead about half an hour. There was no history of his having complained of "tightness across the chest" previously. Two years before he had had follicular tonsillitis. I had attended him during that illness and had found no evidence of heart disease, nor did I feel anything abnormal in the left kidney region.

At the post-mortem both lungs were found to be congested but otherwise normal. On opening the pericardium some clear, coloured fluid was found; the cavities of the heart were empty. There were some fibrous nodules on the mitral valves, but not such as to cause incompetence. The aorta showed calcification of the walls, with "egg-shell crackling." The liver, spleen, and brain were normal. The right kidney and ureter were normal, but in place of the left kidney there was a rounded, calcified, unilocular cyst about the size of a cricket ball, the walls of which were composed of dense fibrous tissue, with a fibrous ureter leading away from it. The cyst was full of thick yellow fluid. The interior walls of the cyst had deposits of salts, forming hard, irregular patches. Cultures made from the interior showed the presence of very few micro-organisms. There was no trace of renal substance about the cyst.

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Reports of Societies

CLIMATIC CONDITIONS AND INSECT POPULATIONS

At the December meeting of the Royal Society of Tropical Medicine and Hygiene, Dr. P. A. Buxton, in a paper on the effect of climatic conditions on populations of insects, said that the numbers of insects were altered by many different causes, chief among which were climate and an increase or decrease of their enemies and parasites. Seasonal changes in the insect population might be correlated with the incidence of certain diseases, such as the relation between rat fleas (*Xenopsylla cheopis*) and plague in rats and men in tropical countries, and between lice and relapsing fever in Northern India. Similarly, excess of winter rain in Mediterranean countries was followed by a marked increase in the number of anopheles and by outbreaks of malaria. Investigations might be conducted in either the field or the laboratory. Although field observations were a necessary preliminary, their function was to set problems which would subsequently be solved only in the laboratory, where experiments could be devised in which single factors varied. It was generally found that insects died after one hour at 104° to 113° F., or after an exposure of twenty-four hours between 95° and 104° F. In many parts of the Tropics the shade temperature exceeded these limits, and this was probably why insects became rare at particular seasons. On the other hand, while in the warm climates many insects existed at temperatures approximating to the fatal, they could survive temperatures many degrees below what they encountered in nature. Temperature factors often operated at critical points in the life-cycle, and so far as insects of medical importance were concerned, in no single species had these critical points all been determined. Furthermore, the velocity of insect development depended on temperature. Atmospheric humidity was another important factor, and recent advances in hygrometry had thrown new light on entomological problems. Insects might be divided into two classes—water "spenders" and water "savers." The former lived in moist environments, ate food of high water-content, and lost water readily in their excreta, etc. The latter lived in dry environments on dry food, and were resistant to starvation. The tsetse fly (*Glossina*) was obviously a "spender," depending on high atmospheric humidity; and the adults of Lucilia, Calliphora, and Trusca, and the larva of *X. cheopis* also came into this category. On the other hand, *Ornithodorus moubata*, the tick transmitting African relapsing fever, the adult *X. cheopis*, and the bugs Cimex and Rhodinius were "savers." A large insect placed in hot dry air might or might not regulate its body temperature by evaporation, but a small insect could not do this, and its existence depended on its being a "saver" or on having a high thermal death point. Martin and Bacot were the first observers to determine that the duration of life of a fasting insect (*X. cheopis*) was determined by saturation deficiency. Similarly the loss of certain insect eggs appeared to be dependent on this factor. Micro-climatic conditions and effects of humidity were discussed, and Dr. Buxton suggested that solar radiation might yet prove as important as temperature and humidity in controlling insect problems.

Dr. C. B. Williams, remarking that his work was concerned with agricultural more than with medical pests, said that the number of insects existing at any moment depended on birth rate, fertility, length of life, and death rate. Climate was concerned with every one of those factors, while in the death rate food supply and the incidence of parasites also operated. The number of parasites relative to living enemies tended to increase at a greater ratio than the pest increased. In field work the complexity of factors was enormous. Dr. W. R. Thompson said that, as long as it was impossible to predict coming meteorological conditions with certainty, it would remain difficult to put laboratory and physiological data into practice. Mr. Uvaroff stated that

insects survived in nature mainly on account of their tremendous ability to multiply and their short life-cycle, which enabled them to utilize even a short period of favourable environmental conditions. Knowledge must be obtained from two sources—namely, the climatic and micro-climatic conditions in the field, and the physiology of the insect itself. Major AUSTIN expressed the opinion that theoretical and experimental entomology was not so much of value in itself, as in the training it gave the entomologist to investigate problems and think rationally. The study in the field was most important. In Egypt the weather in the summer got too hot for flies to breed in stable manure, and theoretically they should have died out. Practically, however, it was found that artificial breeding places had been created by the Egyptian's fondness for water melons, the rinds of which were thrown out on the rubbish heaps of the city, fleshy side downwards, producing damp spots for breeding. In Russia horse flies had proved a terrible scourge, until in St. Petersburg Borchinski found that by covering the lakes with petroleum and so preventing their access to drinking water wholesale destruction followed.

Sir LEONARD ROGERS referred to his work in India, showing by charts how the incidence of plague decreased with a high temperature and high saturation deficiency: a marked difference existed in the various provinces. In the Deccan, plague began in the rainy season, and persisted through it, since the temperature was only 70° to 75°. Data for the Punjab, giving the saturation deficiency for four seasons of the year and the temperatures in the hot weather and rainy season, showed that a low saturation deficiency meant a high incidence of plague and a high saturation deficiency a low incidence. On the basis of such information forecasts could be made. Dr. WIGGLESWORTH pointed out that if a newly hatched bed bug was kept unfed in a dry atmosphere it lost water, but maintained its bulk by swallowing air; this distended the stomach, so that it might ultimately herniate into the femora, or rupture, producing surgical emphysema. If blood was now sucked up, the corpuscles escaped into the body cavity and could be observed there for as long as three weeks. Dr. HURST, discussing certain aspects of the flea problem in relation to plague, said that Dr. Buxton's observations on the climatology of burrows were of particular interest in regard to field rodent plague.

RESEARCH IN CONTRACEPTION

At a meeting of the London Association of the Medical Women's Federation, held at B.M.A. House on December 15th, 1932, with Professor LUCAS-KEENE, the president, in the chair, Mr. CECIL VOGE, Ph.D., read a paper on recent research in contraception. He described the results of three years' research which had been carried out in the Institute of Animal Genetics, Edinburgh University, on behalf of the National Committee on Maternal Health of New York. The outcome of the work had been the formation of a museum dealing with contraceptives in the department of public health of the university, and recently a similar one had been arranged in the same department of the London School of Hygiene and Tropical Medicine. Since there appeared to be evidence that woman would continue to regulate her reproductive life, it seemed to be the duty of the medical profession to ensure that the methods she used were harmless and efficient. The subject was divided into the following sections: (*a*) the scope of the research; (*b*) the anatomy of the reproductive organs, with special reference to their relation during coitus, and the fitting of mechanical contraceptives; (*c*) the effect of pure chemicals upon the life and vitality of the spermatozoa; (*d*) a study of vehicles for the suspension of spermicides; (*e*) a study of proprietary contraceptives, their quality, behaviour, and packing; (*f*) the chemistry of rubber; (*g*) summary. Dr. Voge expressed doubt whether one universally applicable contraceptive method could ever be found, but an attempt had been made to establish criteria for each type so that the medical man could choose a contraceptive suitable for a particular patient. He explained that although we had considerable knowledge of the success obtained with mechanical methods, little if anything was known of the effect of chemical ones used *per se*. The help of practitioners was asked in accumulating reliable data upon this point, which would seem, in view of the sales of these products, to be relatively easy to obtain. Dr. Voge said that he had recently approached certain members of the contraceptive trade with a view to their setting up for themselves certain standards of manufacture, packing, and distribution. He reported that they welcomed a move in this direction and said he could rely on their support. He invited members interested in this difficult subject to visit the museum.

GENETICS IN MEDICINE

At the last meeting of the London Jewish Hospital Medical Society, Professor LANCELOT HOGBEN delivered the annual oration of the society on the medical application of genetic principles.

Professor Hogben dealt with recent progress in the application of Mendelian analysis to clinical conditions in human beings. He outlined the different methods which had been devised to surmount the difficulties arising from the facts that the human family is small, and that the clinical geneticist cannot arrange the matings of the organism he studies. Special importance, he emphasized, was to be attached to the study of consanguineous unions as a means of detecting clinical entities determined by single recessive Mendelian factors. With large-scale investigations on such lines a fruitful harvest might be expected. Alcaptonuria, retinitis pigmentosa, xeroderma, and amaurotic family idiocy were quoted as examples of conditions which had been subjected to the most rigorous genetic analysis. The inherent obstacle to such analysis, arising from the tendency to place on record cases illustrating a high familial incidence, while neglecting records of families with isolated cases, was discussed. The speaker then considered the practical consequences of sterilization. He showed how the magnitude of the result depended upon the kind of transmission involved, and indicated the kind of prognosis which was possible when the mode of transmission was established. A distinction was drawn between the analysis of discrete characteristics such as the "hereditary" and "familial" diseases, and the problem of assigning the part played by hereditary factors in highly variable characteristics such as disease resistance and intelligence measurements. Recent evidence from the study of twin resemblance was discussed in relation to the common and unfounded assumption that differences of the intelligence quotient were mainly determined by genetic factors. Professor Hogben drew attention also to the need for distinguishing between the role of nature and nurture in determining variations within the family, on the one hand, as opposed to variations between individuals belonging to different families at different social levels on the other.

THE FUTURE OF SURGERY

At the last meeting of the Manchester Medical Society Mr. V. Z. COPE read a paper entitled "The future of surgery."

Mr. Cope said that the last fifty years had seen an altogether unparalleled development of surgery. Surgery had advanced almost as far as possible along anatomical lines. There was no region of the body immune to the surgeon's attack. In the future, advance must come from diagnostic and technical improvements and physiological and pathological researches. Of the three great obstacles to surgical work—haemorrhage, shock, and infection—the first had lost most of its terrors since the introduction of blood transfusion. Infection was not feared in surgical wounds, but the problem of established infection remained. As yet there was no reliable method of getting rid of infection which had established itself in the tissues. In the future it was to be hoped that there would be found some antiseptic which, after intravenous injection, would get rid of this type of infection—especially when caused by the streptococcus. Lately, new methods of

olling infection had been discovered. The cure of tion of the renal tract caused by the *B. coli communis* eeping the patient on a ketogenic diet, opened up a of possibilities. It was quite likely that modifica- of diet might play a greater part in the control of y surgical diseases. Much work remained to be done urgical shock. It was to be hoped that a broader of the pathology and symptomatology of this con- on would be adopted. Sufficient account had not yet taken of the element of shock caused by the absorp- of the products of disintegration of tissues. Surgery ld be greatly advanced when an antidote was found these toxic histamine-like bodies. Latent shock also ded to be more widely recognized.

he future was bound to see a great increase in what ht be called preventive surgery. The removal of eased tonsils had almost led to the disappearance of erculous glands in the neck. Gummata were now ely seen. Rickety deformities were much rarer. The ly treatment of hernia by operation should prevent angulation. Possibly the population might consent to annual inspection to detect any condition needing gical treatment. The technique of surgery would im- ve by the devising of various instruments and the provement of electro-surgical devices. Radium would ver entirely replace cutting surgery unless the technique application was greatly improved. *X* rays were likely play a much larger part in the treatment of malignant sease than they had hitherto played.

As to the future status of the surgeon it was difficult to recast. The number of well-qualified surgeons was in- easing and likely to increase. Decentralization was roceeding rapidly, and specialization was increasing. The pecialist should be a research worker, who ought to tandardize his craft for general use. In the future there would most likely be a better co-ordination between the maller cottage hospitals and the larger city hospitals, which would probably play the part taken by base hospitals in wartime. Voluntary hospitals were now having pay-beds attached to them, and in the future this endency would increase until most of a surgeon's work would be done in hospitals or similar institutions. The municipal and council hospitals would play a larger part in the surgical service of the future, and attract many of the junior surgeons. A full-time civilian surgical service was a probability of the future, but there would always be room for surgeons of ability who preferred to keep their independence.

INCAPACITY IN INDUSTRIAL INJURIES

At a meeting of the Liverpool Medical Institution on December 15th, 1932, with the president, Professor R. E. KELLY, in the chair, Dr. H. E. MOORE (of the L. M. and S. Railway Company) opened a discussion on "The avoidable wastage resulting from industrial injuries."

Dr. Moore pleaded for a thorough investigation of the management of traumatic conditions with a view to the reduction of the great amount of avoidable wastage which existed as the result either of bad or ineffective treatment, or, in some cases, of entire absence of real treatment. He confined his remarks for the most part to the defects in treatment carried out, after the initial stage had passed, by the hospitals and the National Health Insurance. He said that the material which had passed through his hands suggested there was ample room for the investigation of that stage. Dr. Moore produced figures showing the enormous incapacity periods, in many cases for months, among men for whom all active treatment had ceased, and whom it had been possible to return to their former occupations after very brief periods of real active therapy. He argued from this that, with proper methods at an early stage, this wastage should not have occurred. As regards the hospitals, treatment was not sufficiently intensive or persistent. Passive measures in the form of massage, etc., were in many cases a pure waste of time and energy, and the co-operation of the patient in active treatment, which was the biggest factor towards recovery, was generally neglected. Surgical supervision, which was so necessary to give the stimulus and confidence leading to co-operation, was too spasmodic to be effective. Men were discharged before real proof of function had been obtained, and the mental factor present in all and prominent in many was usually ignored. As regards National Health Insurance, he stated his belief, as the result of the evidence supplied by his patients, that there was no active treatment available for the many men who needed such help to obtain recovery, and that under the present conditions of panel practice such treatment was not possible. He urged that both the hospitals and the National Health Insurance, which received such large contributions from industry, should give this problem their serious attention with a view to the formation of some service which would reduce the present colossal wastage. The remedy appeared to him to be the complete separation of the traumatic cases from the ordinary work of the general hospitals; the establishment of traumatic centres throughout the country, with specially trained resident personnel, controlled by orthopaedic surgeons who had made a specialty of this class of work; and free facilities for treatment in these centres for all panel patients who were proving resistant or who required active treatment.

Mr. R. WATSON JONES agreed with Dr. Moore that far too few workmen recovered so completely from industrial injury as to be capable of early and full re-employment, and said that the "traumatic" surgeon should solve the problem primarily by raising the standard of fracture treatment and by remaining satisfied with no result other than that of a limb indistinguishable from normal. Too often in the past minor degrees of angulation, slight displacements, and the lesser degrees of shortening had been accepted as quite satisfactory results, and only too frequently periarticular adhesions, lateral instability of joints, hypotonicity of muscles, and recurring swelling of limbs had been entirely overlooked. The limb which was indistinguishable from normal could be secured in the great majority of fractures by conservative methods, provided that the surgeon relied on *x*-ray control after reduction, and showed a greater willingness to remanipulate, when necessary, a second or a third time. It was equally important that disuse changes in muscles, joints, and circulation should be anticipated and prevented by early functional activity. Few workmen deliberately malingered in the early days of an injury solely with the object of making money. On the other hand, if minor disabilities were allowed to remain, no workman could be blamed for fearing that his incapacity might increase with the strains of work, or that his incapacity, however slight, might lead to his early discharge on the grounds of inefficiency. The exaggeration and malingering which were the outcome could be avoided by achieving more perfect results. Traumatic neurasthenia and other functional disturbances were also frequently to be regarded as avoidable complications of industrial injury. They were due to excessive hospitalization, or to the adoption of passive methods of treatment such as massage, splints, and apparatus, in place of exercises practised by the man himself, or, better still, of occupational activity from the early days of the injury.

Mr. BRYAN MCFARLAND put forward the following points. (1) Segregation of fracture cases was not a complete remedy for the wastage. With minor injuries it was essential to maintain close liaison with a general hospital. It was often the cases with trivial injuries in which there was delay in returning to full work. Moreover, team-work was essential in dealing with patients who might sustain damage to an eye, a spleen, or a femur. (2) Until some ideal scheme, such as suggested at Alder Hey was organized, much could be done at once by close co-operation between the employers and the surgeon responsible. If an employer would communicate with the surgeon immediately and would work with him, there would be none of the gaps which Dr. Moore had shown to be the cause of wastage. Thus, the legal implications would be avoided; for, whatever might be said to the contrary, the thought of possible compensation for their injury was immediately present in the minds of certain men, and once they had "started proceedings" a cure

was unattainable. Even when cured, how could they be proved fit for work? In Liverpool it seemed to be increasingly difficult to prove that a fit man was fit. With adequate early collaboration of surgeon and employer such proceedings would be "short-circuited." Mr. McFarland's experience at the David Lewis Northern Hospital was that those firms who "carry their own insurance" co-operated most effectively and with a minimum of wastage; whereas any attempt to obtain the co-operation of an insured firm to curtail the unemployable period or to reduce ultimate disability was met with the reply, "We are insured"; and from the insurance company, the apathetic reply, "We are covered."

Dr. J. BERKSON said that just as payment for sickness and payment for claims under the Workmen's Compensation Act were separated, so should the treatment of industrial injuries be separated from the treatment of ordinary illness. Patients with industrial injuries and having massage came to their panel doctor for a certificate of incapacity, and when he wished to sign them off as fit he was told that the patient had to go back to the out-patient department in four weeks' time, and therefore was not fit to start work. In some cases that went on for months. If the panel practitioner was not allowed to give certificates of incapacity when his patient was attending for treatment at hospital one quite important cause of wastage would be got rid of. Mr. RICHARD BICKERTON said that the discussion was proof of the interest now taken in preventive medicine. Employers should not be asked to shoulder any more financial burdens until the profession was satisfied that they were getting full value for the money they were now contributing to the health services of the country. In some districts much had been done to lower the cost of litigation under the Workmen's Compensation Act without hardship to the disputants, and he urged medical men to co-operate with him with this end in view. The junior men at the Bar might oppose it, but he knew that the senior men would support the medical profession. Many cases as conducted to-day only brought discredit on the medical witnesses and injustice to the genuine workmen. Previous speakers had indicated the lines on which the present medical services could be organized so that much human wastage might be avoided, and he hoped that the Liverpool Medical Institution would formulate a plan. The members not only had the knowledge but the ability to do this necessary piece of work. Dr. K. COBBAN, speaking as a general practitioner in a mining district where there were many accidents, said it had been his experience that the majority of patients were eager to get back to work. With regard to the treatment of the long-standing cases he did not think that it could be carried out by the general practitioner, but necessitated attendance at hospital; nor did he think that the usual massage treatment carried out at present was efficacious. He would advocate its replacement to a large extent by active movements of the injured parts, and especially by curative workshops.

CHOLESTEROL METABOLISM

At a meeting of the Pathological Society of Manchester on December 14th, 1932, Dr. W. W. KAY briefly reviewed recent work on cholesterol metabolism. Endogenous synthesis of cholesterol by all animals appeared certain, but omnivores and carnivores had exogenous supplies as well. Cholesterol had no chemical relationship with either fats or lipins, but was structurally related to the bile acids, which were necessary for the proper absorption of fats and cholesterol from the alimentary tract. Although cholesterol was readily absorbed by animals, plant sterols, and the reduced forms of cholesterol, coprosterol, and dihydrocholesterol were not absorbed. Ergosterol, however, after irradiation, which produced molecular changes, probably steric rearrangement, became absorbable. Cholesterol excreted in the bile was largely reabsorbed, or might be converted to coprosterol in the intestines and excreted as such. Dihydrocholesterol seemed to be formed in tissues and excreted by the bowel wall. The normal ranges of plasma cholesterol and cholesterol ester were discussed, and their relations to diet and pregnancy. Variations in disease were also indicated. At present there was little to show the real function of cholesterol in health and disease.

PREMEDICATION

At the last meeting of the Section of Surgery of the Royal Academy of Medicine in Ireland, Dr. R. W. SHAW read a paper on premedication with nembutal. This drug, one of the newer barbituric acid derivatives, was first used by Lundy of the Mayo Clinic in 1929, and introduced to Europe by Magill in 1930. It could be administered orally, intravenously, or rectally, and was now preferred to the other members of the group—namely, sodium amytal and pernocton. The use of this drug was a big advance in securing the comfort of the patient, and in abolishing the more unpleasant effects of induction by the usual methods. Patients fell asleep peacefully and rapidly, and generally had complete amnesia for the day of operation. The dosage varied, but in no circumstances must it exceed 7.5 grains; the usual intravenous dose was about 6 grains, while orally 4.5 to 6 grains might be given. Any secondary anaesthetic might be used after nembutal, the most usual being ether; the quantity required was always considerably less after premedication, and the administration of nitrous-oxide-oxygen was much simpler and more satisfactory, especially for abdominal work.

Dr. R. W. SHAW reported a series of seventy-one cases. Nembutal was given orally in eighteen of these and intravenously in fifty-three. The secondary anaesthetics used were ether, chloroform, CE_2 mixture, nitrous-oxide-oxygen, and in four cases nembutal by the mouth was followed by spinal anaesthesia. Two cases were reckoned as failures. The advantages of nembutal over other basal anaesthetics were the ease with which it could be used, the rapid transition into unconsciousness, and the less unpleasant after-effects. In the series under review twenty-six patients vomited, eight developed a cough but only two ran temperatures, seven had slight headache which did not persist, fifteen were restless but only eleven required morphine. In conclusion, stress was laid on the need for an experienced administrator when the drug was used.

The President (Mr. HENRY STOKES) said that he had used nembutal in various cases and had seen it used in many others, and it seemed to him to be very good. Mr. F. J. MORRIN had used it extensively, and regarded it as extremely good. There were, however, certain cases in which it should not be employed, such as toxic goitre and jaundice. He had found that if a patient was given a large dose of luminal an hour to an hour and a half before operation, spinal anaesthesia was much easier to administer. Dr. G. P. MELDON said that since beginning to use nembutal in March, 1931, he had had a good deal of experience with it. One advantage was that it was burned up in the body and not excreted. The fall in blood pressure reached its maximum in about fifteen minutes, and then passed off. The fall was usually only about 15 mm. Hg, but in patients with very high blood pressures it would come down a little more. He had given nembutal in many cases which were not good anaesthetic risks, and had never been sorry for doing so. It should be administered very slowly. No barbiturates were really anaesthetics; they were only aids to anaesthesia.

Mr. H. MEADE said that he had had very good results from the use of sodium amytal. Dr. NINIAN FALKINER had used nembutal in some cases, and had noticed the relative absence of post-operative sickness and pain. The patients, however, were certainly more restless than after ether and gas. Dr. SHAW, in reply, agreed that nembutal should be given slowly. He had given it in only two obstetric cases, but the results had been very satisfactory.

Reviews

LABBÉ ON DIABETES

French excel as essayists and MARCEL LABBÉ is [illegible] interesting reading on diabetes. His present [illegible]ons Cliniques sur le Diabète,[1] like most of his books articles, follow the style of an essayist, where wisdom ideas have to be garnered quietly and slowly by [illegible] reading. His writings may be the despair of [illegible]se who would read quickly and wish to gather and [illegible]ize his facts from tables, classifications, and summaries. This cannot be done. But none the less the [illegible]ts and ideas are there, and should be read by all who [illegible] profoundly interested in diabetes and can find time prolonged study. This book is useful for every [illegible]ect of diabetes except concise practical directions. [illegible]rofessor Labbé covers a very wide field in his dis[illegible]n Little time is devoted to routine treatment, t most of the special features are dealt with at length. [illegible]ese chapters are devoted to diabetes in children, to berculosis, to gangrene, to coma—both insulin coma and [illegible]etic coma. Many of these sections have appeared various medical journals in exactly the same form as [illegible]ey appear in this book, which cannot therefore be said contain anything new. Most subjects are treated in an [illegible]teresting way in the form of a clinical lecture. Generly the problem is first defined, the existing knowledge [illegible]viewed, a few cases presented in considerable detail, [illegible]d the conclusions set forth. The latter are sometimes [illegible]ther vague, but hardly appear so until the author's [illegible]ofty dialectic presentation is submitted to critical [illegible]nalysis. Two chapters deal with two cases showing a [illegible]ombination of diabetes, cirrhosis of the liver, and testicular atrophy, and this has been called the " syndrome épato-pancréato-génital." One of these patients suffered [illegible]om bronzed diabetes, the other had no pigmentation. [illegible]he time of onset of the testicular atrophy was not [illegible]learly defined and may have been the result of the unreated diabetes, a well-known consequence. Both these [illegible]s responded easily to insulin, and altogether no facts [illegible]re presented which warrant the description of a new [illegible]yndrome. Professor Labbé has tried the administration [illegible]f insulin in all sorts of ways and finds the best to be the usual aqueous solution. The keynote of the book is a [illegible]ulogy of insulin.

OTOLOGY FOR OTOLOGISTS

" When a new book comes out, read an old one." According to Mr. Augustine Birrell this was the cynical advice once offered by a surly critic. The appearance of *The Principles and Practice of Otology*,[2] by F. W. WATKYN-THOMAS and A. LOWNDES YATES, recalls this dictum, though not in the derogatory sense in which its author intended. It applies in a different and perhaps more subtle way, for without a study of the older standard works it would be impossible for the beginner in otology to realize the revolutionary character of this book. It might easily fall into the hands of such a one, for the authors expressly state that they have written to help candidates for the D.L.O. That the authors have produced a scientific book full of fresh and stimulating ideas for the trained otologist is beyond question, though whether they will prove true friends to candidates at examinations nothing but the results will show.

It is to the scientific side of otology that the book is really devoted. The section on the properties and use of tuning forks, studied by the application of the half intensity period, is an example of how a proper training and the ability to apply mathematical principles has produced order and understanding from the chaos in which the hearing tests have long been sunk. The great reproach to otology has for long been the inability to benefit most forms of deafness, and the consequent neglect to study the cardinal symptom in otology, which until recently has flourished only in the surgical treatment of suppuration. The authors' views on the nature of deafness, the manner of its production, how its treatment should be managed, and how aids to hearing should be employed show originality based on a vast amount of careful work and observation. Where suppuration is concerned they follow the well-established lines and attempt nothing original, but even more importance is attached to myringotomy and its results than most aural surgeons would be prepared to allow. The orthodox character of this part forms a surprising contrast to the earlier sections. It seems almost too orthodox when the authors are found advocating the removal of every particle of clot in sinus thrombosis and describing severe operations on the jugular bulb, operations firmly lodged in the old textbooks but as obsolete as lateral lithotomy, while the importance of Alexander's method of treating the jugular vein is ignored. This part ends with a section on ligature of the *external* jugular vein. This would scarcely be worth mentioning if it were not one of many small errors, misprints, and mistakes in spelling which form a serious blemish to the book. However, the authors commit a much graver literary offence, for which they actually take credit in the preface. In the bibliography at the end of each chapter they give many references to abstracts of papers instead of to the originals, ostensibly for the convenience of students. They have, no doubt, themselves consulted the originals whenever accessible, but the originals should in all cases have been cited, followed by the reference to the abstract. As the authors do not recognize the ordinary rules of literary composition forgiveness for this must be included in a more general dispensation which allows that their book contains a most valuable account of recent research in otology, and provides a rich and abundant feast for the thoughtful. It is the established otologist who should read it and not the student, for it should not be attempted until Politzer, Ballance, Gray, and Milligan have first been mastered.

IRREGULAR PRACTICE

The Legal and Ethical Aspects of Medical Quackery[3] is a short but interesting book. The author, Mr. LE MARCHANT MINTY is not a medical man, but a barrister with experience of the law as it relates to medical men and to unqualified practitioners of the healing art. His publishers state that he has appeared on behalf of practitioners before the General Medical Council and has also been engaged in prosecution of unqualified practitioners. He views the problems he considers from a legal rather than from a medical aspect, and the scope of the work can most easily be indicated by the title headings of a few chapters: Infamous conduct in a professional respect ; Bogus practitioners ; The bone-setter ; The chiropractor ; The osteopath ; The abortioner ; Patent medicine quackery ; Religious quackery. This short list is a sufficient indication of the number of thorny questions which the author essays to handle in a volume of 260 pages.

[1] *Leçons Cliniques sur le Diabète.* Par Marcel Labbé. Paris: Masson et Cie. 1932. (Pp. 334 ; 36 figures. 40 fr.)

[2] *The Principles and Practice of Otology.* By F. W. Watkyn-Thomas, F.R.C.S., B.Ch., and A. Lowndes Yates, *M.C.*, M.D., F.R.C.S. London: H. K. Lewis and Co., Ltd. 1932. (Pp. xii + 568 ; 199 figures (5 coloured). 25s. net.)

[3] *The Legal and Ethical Aspects of Medical Quackery.* By Leonard Le Marchant Minty, Ph.D., B.Sc., B.Com., LL.B. London: W. Heinemann (Medical Books) Ltd. 1932. (Pp. xviii + 262. 7s. 6d. net.)

He starts with a critical discussion of the legal powers of the General Medical Council, and his main conclusion is:

"What is wanted is a new Medical Act which will give ample disciplinary powers, but at the same time provide for them to be exercised under the same rules of natural fairness and justice, governing procedure and evidence, as adopted in our law courts."

In this chapter there are certain passages that should be revised. Thus, when describing the disabilities suffered by an unregistered practitioner, the author (p. 23) states that orders made under the Dangerous Drugs Acts include "all the recognized anaesthesia" and that the Therapeutic Substances Act precludes such persons from being in possession of the substances to which it applies. The Dangerous Drugs Acts are, however, concerned solely with drugs of addiction, while the Therapeutic Substances Act regulates the manufacture of certain drugs and does not restrict their purchase. The remainder of the book deals chiefly with quackery, and in this connexion it is interesting to learn that Lord Loreburn in 1908 ruled in the House of Lords that the term "quack" meant not only a pretender to skill which was not possessed but also a person who, however skilled, lent himself to medical imposture. The account of the doings of quacks and unqualified practitioners is full of amusing anecdotes, and also contains much interesting information. The extreme tenderness that the law shows to quack medicine vendors is notorious, but it will surprise most practitioners to learn that

"Even if the name of a well-known living practitioner is made use of to lend colour to the claims of a patent medicine, he having in no way countenanced its use, there is very little he can do to stop it, save to give the facts publicity."

On the other hand, it appears to be actionable to depict a well-known athlete eating a particular brand of chocolate. Abortion presents another amazing contrast, for the police prosecute abortionists with rigour, but make no attempt to restrict the sale of "female weakness pills," which are advertised to "correct all irregularities," even though in some cases the vendors mention that the drugs in certain circumstances are likely to produce abortion.

The chief impression left by perusal of the book is that in medical matters the law of this country is chaotic. The book is short, very readable, and highly controversial. All medical men will find it of interest, although most will find points on which they differ from the author, and there are a number of small errors which careful proof-reading by experienced medical collaborators would have rectified. Apart from misspellings, such as "cocoa wine" and "flour or herb," the author's knowledge of professional customs is here and there out of date or otherwise at fault.

RADIOLOGY IN PAEDIATRICS

Professor ST. ENGEL and Dr. L. SCHALL have edited a very important Handbook on Röntgen Diagnosis and Therapy in Childhood,[4] which, with its wealth of illustrations (well over six hundred), will prove a valuable work of reference to all those concerned with diseases of childhood. The bulk of the book is concerned with diagnosis, while nearly two hundred pages at the end are devoted to treatment. Each section is the work of an expert, and the editors, while taking part in much of the text, have also been responsible for a skilful welding together of the various contributions to form an excellent whole. A good impression is gained early in a study of the book by a series of diagrams dealing with the ages of ossification, and that on page 33 (a composite diagram) will make lungs are very well done, and a series of beautiful *x*-ray pictures are supplemented by line drawings and photographs of pathological specimens. The radiology of the heart in childhood is approached in a thoroughly scientific manner, and indeed the mathematics strewn about this section, especially in relation to "surface quotients," make very complex reading. The pictures in the section on encephalography are really striking in the wealth of detail revealed, but in the adjoining chapters on the skull bones the paragraphs dealing with the nasal sinuses are disappointingly brief and poorly illustrated. Extensive bibliographies make the book valuable for reference, and there are very full indexes to subjects and authors.

The main impression left from a detailed perusal of this volume is that paediatrics in our own country is not making nearly enough use of *x* rays, and perhaps this feeling of envy may lead to some radical progress. Certainly the standards set by St. Engel and Schall will take a lot of reaching. The illustrations are throughout reproduced in the body of the text, and the price for this style of production does not seem unreasonable.

A SHORTER ORTHOPAEDIC SURGERY

Under this title Mr. R. BROOKE of Worthing has put forth a book[5] which, as he states in his preface, has been written at the suggestion of the masseuses attached to the orthopaedic department of the Royal West Sussex Hospital, whose work lies at a distance from the hospital and does not allow them to attend often and become as familiar as they could wish with the operative and other treatment of their cases. In undertaking to supply their wants and those of house-surgeons and other residents Mr. Brooke has imposed upon himself a difficult task, for we take it that condensation in such a subject involves great skill and discrimination. In the given circumstances the most that can be aimed at is a clear statement of general principles, leaving the details of treatment to personal instruction and example and the larger manuals. We think the author has succeeded in fulfilling his purpose; and in one particular direction he has gone much further, for in the article on flat-foot the relief of that common deformity is discussed in considerable and useful detail.

THE SOUTH-WESTERN BRANCH OF THE B.M.A.

There has recently been published, by direction of its Branch Council, a history of the South-Western Branch of the Association.[6] This, formed in 1840, was the fourth Branch in the history of the Association, the East Anglian (1835), Bath (1836), and Lancashire and Cheshire (1837) having preceded it. The sterling part played by the Branches in the development of the Association, and the subsequent conflict between the Branches and the Central, perhaps too central, Council has been fully described by Dr. McVail in his articles in the *British Medical Journal* in 1924, and by Mr. Muirhead Little in the "Centenary History." Suffice it to say here that our present democratic constitution, with meetings so organized that every member in the Kingdom has the opportunity of attending one and that every such meeting sends a delegate to instruct the executive of the central organization as to its public actions during the following year, has been the ultimate result.

[5] *A Shorter Orthopaedic Surgery.* By R. Brooke, M.S., F.R.C.S. Bristol: J. Wright and Sons, Ltd.; London: Simpkin Marshall, Ltd. 1932. (Pp. 150; 126 figures. 10s. 6d. net.)

This little history is a model showing what an active ...ch can do, not only for the protection of its own ...bers—as, for instance, action in the matter of vaccin... fees, troubles with nurses and midwives, hospital ..., coroners' courts, life insurance fees, workmen's ...mpensation—but also in scientific work, its post-...duate courses at the two big hospitals at Exeter and ...lymouth, its quarterly scientific meetings, and its public ...ps to improve early recognition of cancer. There also ...erges what a Branch can do to stimulate the whole ...ssociation. From 1858 to 1902 the South-Western Branch ...ok a most active part in the question of the Medical ...cts and medical education, even sending a memorial to ...rd Palmerston, and persuading its local members of ...Parliament to secure amendments in the Association's own ...ill. It sent Dr. William Gordon to be the prime mover in ...he reform of the Army Medical Services, leading to its ...ecognition as a Royal Corps in 1902. The mention of ...ordon brings out how much our local Branches and ...Divisions depend for their activity on personalities, in which the South-Western Branch has been so fortunate. We read of Thomas Shapter, John Haddy James, Samuel Barnes, Henry Davy, Maury Deas, Roper (the present president, son and grandson of former presidents), and last, but the reverse of least, the author of this history, "Russell Coombe of Exeter." As might be expected, his name hardly appears in this booklet, but to those who know, it is largely due to him during the last thirty years that the South-Western Branch has kept up its old tradition and activities. To the list of his splendid achievements for the Association, recognized by his election as a vice-president in the centenary year, may fittingly be added this History, his latest "labour of love" for his Branch and the Association.

Notes on Books

As the author, Professor STERLING V. MEAD, justly says, in his preface to the latest edition of his work on *Diseases of the Mouth*,[1] the fact that this book has reached the fourth edition in so short a time proves that there is a widespread and increasing interest in the subject. We think the author might take to himself more of the credit for this increased interest. Throughout the book special attention is given to diagnosis, and every disease and every aid to diagnosis is fully illustrated (nearly 200 new photographs have been added to this edition), in the hope that early diagnosis will lead to more prompt and efficient treatment. The work is a record of unremitting clinical observation, and very few mouth conditions have escaped the author's personal notice. The chapter on stomatitis is a good example of his thoroughness, and we think the notes and illustrations of "medicamentous eruptions" of particular interest. In so practical a book we should like to see a fuller account of tetanus: chronic tetanus receives a bare mention, and local tetanus is unnoticed. There are upwards of 500 excellently reproduced illustrations.

Following on *Blenheim*, Professor TREVELYAN has published his second book dealing with England under Queen Anne. *Ramillies and the Union with Scotland*[2] forms a continuation of the first volume, and embraces the period 1705–9. In his preface the author tells us "it is a rope twisted of three strands: the war, English politics, and the Scottish problem." A vivid picture is given of Marlborough at the apex of his career, beginning with the decisive victory of Ramillies in 1706. His brilliance as a tactician and his military genius are clearly shown in the simple yet graphic accounts of the tragedy of our Peninsular war, the taking of Barcelona, and the gallant defence of Gibraltar. There are no digressions from the main point, no incomprehensible and unnecessary technicalities. Professor Trevelyan has also achieved what may well be Marlborough's final vindication from the many tales of "meanness, avarice, and treachery" started as a Tory vendetta and given credence to by Macaulay in the nineteenth century. At home we find Queen Anne striving to fulfil her duties as sovereign, but handicapped by ill-health and the endless intrigues and dissensions between "those enormous vile factions" the Whigs and Tories of the Godolphin Ministry. The condition of Scotland before the Union is vividly depicted. Poverty, sickness, political and religious quarrels, were rife throughout the whole country; yet in not one whit did the Scot consider himself the inferior of his despised neighbour "the auld enemy," to whom he applied the disparaging epithet of "porkeater." However, there were level heads on both sides—Marlborough, Godolphin, Somers, and Hardy for England, Queensberry and Argyll for Scotland—and "their action was based not on theory, but on sound information." Thanks to their insistence on the spirit of prudent compromise the Union of the Scottish and English Parliaments was achieved, forming a part of the scheme on which the British Constitution has rested ever since. The author displays great accuracy and is impartial in his judgements. What he says he gives a good reason for saying. *Ramillies* is a book which will prove of inestimable value to the student, while the facts are so clearly stated and so charmingly told that it is also bound to interest the average reader.

In his work on Cutaneous and Sexual Diseases,[3] which forms the thirteenth volume of Lehmann's series of medical textbooks, Professor L. R. v. ZUMBUSCH, director of the dermatological clinic of Munich University, has admirably succeeded in his purpose of giving practitioners and students a concise and clear account of the essential clinical and pathological features of the subject. The book is divided into two parts. The first or general part consists of eleven pages dealing with the anatomy and functions of the skin, the general diagnosis of skin diseases, their localization and aetiology; while the second part, which forms the bulk of the work, consists of a systematic account of the various skin diseases, followed by a description of syphilis, gonorrhoea, chancroid, and other diseases of the external genitals. In view of the fact that many of the photographs in dermatological textbooks do not really fulfil their purpose, the absence of any illustrations does not detract from the value of the work.

There is much practical wisdom to be found in the pages of Dr. NEUBERGER's handbook on mental diseases, which bears the title *Comment diagnostiquer comment traiter les maladies mentales*.[10] Of necessity the counsel given as to the disposal of certain patients whose conduct has rendered them unfit to be at large can only be of academic interest in this country; but apart from such differences of procedure this manual contains so succinct an account of the various mental disorders, the mode of their detection, and the therapeutic measures employed, as to make it serviceable to all who are acquainted with the French language. The author insists on the necessity of a systematic interrogation of his patients, and warns his readers of the danger of allowing this to degenerate into a mere conversation in which certain supposedly unnecessary questions have not been posited. The constitutional predispositions are carefully depicted, while the descriptions of the individual psychoses leave nothing of importance unsaid. It is interesting to note that mania and melancholia are contrasted primarily in respect of excitement as against inhibition. Probably it is more general in this country to regard the elation and the depression as the fundamental features of such states, which allows one to speak of a "passive" mania or an "active" melancholia. The book is prefaced by a forcible introduction from the pen of Dr. Fiessinger.

[1] *Diseases of the Mouth*. By Sterling V. Mead, D.D.S., M.S., B.S. Fourth edition. London: H. Kimpton. 1932. (Pp. 932; 523 figures, 40 colour plates. 50s. net.)

[2] *Ramillies and the Union with Scotland. England under Queen Anne*. By George Macaulay Trevelyan, O.M. London: Longmans, Green and Co. 1932. (Pp. xiv + 467; 10 maps. 21s. net.)

[3] *Die Haut- und Geschlechtskrankheiten dargestellt für praktische Ärzte und Studierende*. By Dr. Leo Ritter v. Zumbusch. München: J. F. Lehmanns Verlag. 1932. (Pp. 249. RM.6.80; Geh., M.5.40.)

[10] *Comment diagnostiquer comment traiter les maladies mentales*. Par L. Neuberger. Préface par Ch. Fiessinger. Paris: N. Maloine. 1932. (Pp. 424. 40 fr.)

British Medical Journal

SATURDAY, JANUARY 7th, 1933

THERAPEUTICS IN 1932

A review of therapeutic progress during the past year must, from considerations of space alone, be incomplete, and, since time and wide experience are necessary to prove the value of new remedies and methods, an annual survey cannot pretend to give decisive judgements upon them. Here, then, it is only possible to set out, in somewhat telegraphic form, a few of the things that have been done. We cannot attempt to give a world-wide or even a European survey of therapeutics. What follows mainly relates to France. Not because France is considered to hold the *cordon bleu* in therapeutics, but because this will enable our readers to form some idea of the " therapeutic attitude " of a body of physicians trained in a different way and with a different national tradition behind them. For this we are largely indebted to Dr. P. Harvier's admirable survey, in the *Paris Médical* for December 3rd, 1932, of original and interesting work published during the year. Readers may be referred to that journal for much of the material upon which our commentary is based.

Dealing with the treatment of infections an important monograph is noted, which comes from the Pasteur Institute, on preventive vaccination for tuberculosis in man and animals by B.C.G. This is a collection of forty-six reports from various countries, excluding France, giving the results of several years' observation of various groups of infants brought up under identical conditions of contact with tuberculous infection. Some of these infants were vaccinated with B.C.G. and others were unvaccinated. It is claimed that these reports demonstrate once again the harmlessness of the method and its efficacy in diminishing the mortality from tuberculosis. Recent reports of the results of active immunization against diphtheria go to show that the success of this method is becoming year by year more striking. One author advises the systematic inoculation of infants with a mixture of anti-variolous and anti-diphtheritic vaccine. The increasing efficacy of serotherapy in streptococcal infections is generally admitted, and it is to be hoped that before long streptococcal infections, even the haemolytic types, may be robbed of their terrors. *B. coli* infections apparently yield excellent results under treatment by the serum of Vincent. Two new methods have been introduced for the control of serum reactions—namely, the oral administration of pancreatin, both as a prophylactic and for relief of symptoms which have developed, and the combined administration of sodium benzoate and salicylate. Various French writers emphasize the value of vaccinotherapy in the treatment of typhoid and paratyphoid fevers. An interesting critical review of different methods of treating erysipelas has recently been published by Schachter. Tetanus has been treated with remarkable success by intravenous injection of serum combined with urotropine. It is suggested that the urotropine facilitates the entrance of the antitoxin into the cerebro-spinal fluid. Post-vaccinal encephalitis seems amenable to intraspinal, intravenous, and intramuscular injections of serum from individuals who have recently been successfully vaccinated. Béclère, however, prefers the serum of a vaccinated heifer, believing that this serum preserves its " antivirus " properties indefinitely, while the human serum fails to do so. For immunization against poliomyelitis Pettit has prepared a horse serum which he claims is four times as potent as ordinary serum.

Sir Almroth Wright published in the *Lancet* of August 1st, 1932, his views on the action of different antiseptics in the treatment of septicaemias. He is unconvinced of the bactericidal properties of corrosive sublimate, sanocrysin, mercurochrome, trypaflavine, or gentian violet when injected intravenously. Novarsenobenzol, he admits, has an antiseptic property against certain germs, particularly the haemolytic streptococcus and anthrax bacillus. Yet, despite Wright's criticisms, the drugs he condemns as useless enjoy considerable popularity, if not always success. On the other hand, a case of death from acute oedema of the lung following a fourth injection of 5 c.cm. of trypaflavine in a 2 per cent. solution is reported by Chauvin. The use of gold salts in the treatment of phthisis seems to be increasing, and several authors take considerable pains to insist upon the need for caution in their employment. Grave anaemias, purpura, and multiple haemorrhages are attributed to " aurotherapy." Intravenous injection of alcohol (66 c.cm. of absolute alcohol in 140 c.cm. of physiological serum) has been employed with success in cases of puerperal sepsis, as well as in pneumonia, abscess of the lung, and streptococcal endocarditis. Among the diuretics recommended Glaessner advocates the oral administration of distilled water for uraemia, hypertension without arteriosclerosis, and urinary lithiasis ; Vallery-Radot and Gilbrin have used with success in cardiac dropsy ammonium nitrate, 8 to 12 grams daily for several days with or without a mercurial diuretic ; ammonium chloride or bromide has been found to increase the diuretic action of novasurol, and Nonnenbruch has practised successfully intra-abdominal injection of salyrgan (2 c.cm.) in cases of ascites. Various new remedies and measures have been introduced for dealing with arterial hypertension, such as subcutaneous injection of sodium cholate, 0.05 to 0.1 gram in strictly isotonic solution, and of potassium rhodanate, 0.3 gram thrice daily by mouth, but the latter drug has dangerous toxic properties. Hypertonic glucose solution injected intravenously is recommended by Roch and others ; while surgical measures, consisting of division of the left splanchnic nerve, may produce a long-lasting fall in pressure. Angina pectoris has been ameliorated by intravenous injections of *iodine* and iodides and by subcutaneous injections of CO_2: the methods may be used either alternately or simultaneously. Operative measures as practised by Leriche and Fontaine have yielded such remarkable results in

seventy-eight cases of recurrent angina as to deserve the closest attention.

Liver therapy in pernicious and other grave anaemias continues to prove its value, and intravenous injection of liver extracts is efficacious in many cases in which oral administration has failed. The advances made in anaesthetics with intravenous injections of such drugs as pernocton, nembutal, and sodium bromide are noteworthy. The importance of ephedrine to counteract the collapse which occasionally follows spinal anaesthesia is amply borne out. New methods for relief of pain are always welcome. In this group it is recorded that migraine and tabetic pains have yielded to injections of antirabic virus vaccine ; intravenous injection of atropine gives relief in tabetic pains and especially in gastric crises ; and for strains and traumatic arthritis Leriche and Fontaine practise daily injections into the periarticular tissues of 20 to 25 c.cm. of a 1 per cent. solution of novocain without adrenaline. Radiotherapy and surgical intervention in syringomyelia, according to Schaeffer, may to a large extent arrest the progress of this disease. The treatment of Addison's disease with extract of suprarenal cortex has yielded in a few instances brilliant results, but the expense of the preparation prevents, in some cases at least, the adequate administration of this seemingly potent remedy. An interesting addition has been made to the treatment of gastric ulcer and hyperchlorhydria with the injection of extract of the posterior lobe of the pituitary. This decreases the gastric acidity by increasing the excretion of the urinary chlorides, thereby diminishing the chloride content of the blood. The treatment of non-tuberculous pulmonary suppuration formed an important topic of discussion at the fourth Congress of the International Society of Surgery held in Madrid in March, 1932. Evidently operations on the lung are at last taking their rightful place in the domain of surgery, although it is long enough since Macewen of Glasgow demonstrated their practicability. Bronchoscopy, too, offers another valuable mode of approach to, and drainage of, abscess of the lung.

THE OUT-PATIENT PROBLEM

Exactly a year ago a committee of the King Edward's Hospital Fund for London was appointed to inquire into out-patient methods at London voluntary hospitals as affecting the suitability of patients and their time of waiting. The report of that committee is issued this week, and a brief summary will be found at page 31. The inquiry has evidently been painstaking and extensive, and the report is carefully drawn up. It contains a great deal of material which will have to be very fully considered by the boards of management of the voluntary hospitals in the area to which it relates, and there is much in it of importance to all private medical practitioners, as well as to the medical and surgical staffs of those hospitals. One section of the report will be of special interest to those who are connected with district nursing services. No doubt, also, the Council of the British Medical Association will consider the whole document in due course through the appropriate machinery. Pending this more detailed scrutiny by various bodies or persons, certain facts and impressions may be noted as affecting general practitioners in the area of King Edward's Fund and their relation with the out-patient departments of hospitals within that area. It is significant that the total number of out-patients, which dropped heavily after the coming into operation of the national health insurance scheme, though rising in recent years, has (contrary to what is believed to be the case outside the metropolitan area) not yet reached its former level by a considerable margin ; but that, on the other hand, the number of out-patient *attendances* has much increased. In this respect Guy's Hospital and the London Hospital present a contrast: the former, in 1931, had 122,867 new out-patients with 554,606 attendances ; the latter (which is understood to apply certain restrictions, especially with regard to insured persons) had, as corresponding figures, 81,389 and 492,645.

The main points to which the committee applied itself were overcrowding and waiting. It is clear, though the evidence may be difficult to formulate, that both are prevalent. A number of relatively small reforms which are suggested or may be devised would, cumulatively, reduce the times of waiting ; but overcrowding can, apart from structural changes, be dealt with only by a consideration of the suitability of patients and a careful choice of those to receive attention as out-patients. This is the point in which the practising medical profession is chiefly interested, and it will be remembered that evidence was given before the committee on behalf of the British Medical Association in accordance with the decisions of the Representative Body in 1931 as set out in the Association's pamphlet, *The Problem of the Out-Patient*. The committee reached conclusions which appear to be unnecessarily timid. As set out categorically towards the end of the report the actual recommendations are not unsatisfactory so far as they go. Their tendency is even more definite than the discussion in the body of the report would have led one to expect ; but it is difficult to avoid the impression that the committee, as a whole, favoured the obsolescent " open door for the sick poor " idea, and was disinclined to realize the revolution that has been made by the public provision of a number of alternative methods of obtaining medical attention. Of course, the committee discusses these methods, and recognizes the need for even further filtration, but it is curiously unwilling to admit the validity of any selective agency outside the staff of the hospital itself, and evidently feels suspicious of the best of such outside agencies—namely, the general practitioner himself. We are sure, however, that there are certain members of the committee (not all medical) to whom these remarks do not apply, and who individually have a greater confidence in the profession.

In its pronouncement the British Medical Association says: " The types of cases for which the out-patient department should properly be utilized fall into three

groups: (1) casualty cases; (2) consultation cases, including those retained for special treatment; (3) discharged in-patients." The committee commends the adoption of this principle in London County Council hospitals, and recommends that voluntary hospitals should be "encouraged to develop" their out-patient work on these lines. We wonder why the committee hesitated to adopt the recommendation of the Association that "only such treatment should be given at the out-patient department as cannot in the best interests of the patient be obtained elsewhere under the usual arrangements as between private practitioner and private patient, or under contract arrangements." If there is nothing to be said against so simple and useful a statement, why not endorse it? The committee's attitude is a little clearer towards the further recommendation of the Association, that "no person, except in cases of emergency, should be accepted for treatment as an out-patient at a voluntary hospital unless he brings a recommendation from a private medical practitioner, a provident or other dispensary, a public clinic, or from a public assistance medical officer of a local authority." The committee is inclined to think that the public assistance case should go to the county hospital, and that it is well to encourage the recommendation from a practitioner and intercommunication between him and the hospital staff. But it objects to establishing this as a rule—first, because in teaching hospitals this might lead to a scarcity of suitable clinical material; secondly, because there are some people for whom there is no alternative provision without fee; and, thirdly, because there are cases in which it is a good thing for a patient to seek further advice without the knowledge of his own doctor, even though easy means are available for changing the doctor should the necessary certificate or report be unreasonably withheld. The committee makes no attempt to justify this last opinion: it merely says that "there are strong arguments" in its favour. Due weight must be attached to the other two; but reasons are given in the B.M.A. pamphlet for regarding them as of very limited validity and extent.

On the whole, considering how far the committee has gone in its definite recommendations in the direction of the Association's policy, and remembering that that policy was adopted not for immediate and universal application, but for its educative value and with a view to its gradually being put into practice, there is no reason to be seriously dissatisfied with the report. Finally, we should like to draw attention to a thoughtful paragraph in which the case for co-operation between the hospital and the general practitioner and for the development of the consultative side of the out-patient department is admirably put. "The general practitioners would benefit by being brought into more frequent touch with the visiting staff and with the latest improvements in medical science. The visiting staff would not approach the patient as if the occasional visits to hospital were the only kind of medical attention he received, and as if his dossier in the hospital registry contained the whole of his medical history, but would take into account the family doctor as part of the environment affecting his past, present, and future condition. The medical students would realize more clearly the relation between the science of medicine and its application to everyday life, and, when qualified, would regard the hospital, not as a place of education which they had left behind, but as an important part of the available facilities for the efficient conduct of their practice."

MEDICAL HONOURS

The outstanding feature of the medical New Year Honours, of which a full list appears in another column, is the barony conferred on Sir Thomas Horder, Bt., Physician-in-Ordinary to the Prince of Wales, and senior physician to St. Bartholomew's Hospital. Sir Thomas Horder has long been known to his students and colleagues as a general clinician of extraordinary merit in a time of intensive specialization. As teacher, lecturer, and consulting physician his name is familiar to the whole profession, and, notwithstanding the heavy claims of hospital and private practice, he has found time to give service in medico-sociological causes. We welcome his elevation to the peerage. In debates in the House of Lords on matters touching science and the health of the people his keen intellect and command of lucid phrase should be valuable in interpreting medicine and the medical point of view to an assembly always attentive to the expert on his own ground. Social legislation pays too little heed to the teachings of biology. There is so much political incapacity and general muddleheadedness in public life to-day that a fully instructed member with the gift of orderly exposition can make his presence felt in Parliament when national policy is on the anvil. We hope that Sir Thomas Horder—like Lord Dawson and Lord Moynihan, whom he now joins—will not hesitate to "bring down the knobkerry" when this is needed in the House of Lords.

Among the other honours announced on Monday we may particularly note the K.C.I.E. conferred on Major-General John W. D. Megaw, who has served with distinction as Director-General of the Indian Medical Service during the past three years and was previously well known as pathologist and expert in tropical medicine, and as editor of the *Indian Medical Gazette*. Dr. Frederic J. Willans, Surgeon Apothecary to the King's Household at Sandringham, is created K.C.V.O.; and knighthoods are conferred on Dr. John L. McKelvey of Sydney for his services to surgery in the Commonwealth of Australia, and on Dr. San Crombie Po, formerly municipal commissioner at Bassein and member of the Burma Legislative Council. We mention also, because of his services to comparative medicine, the knighthood conferred on Professor Frederick Hobday, principal and dean of the Royal Veterinary College and editor of the *Veterinary Journal*; and, because prelates are very rare in our profession, the Kaisar-i-Hind medal for public services in India awarded to Dr. Kennedy, Bishop of Chota Nagpur.

FIG. 1.—Osteo-arthritis of the right hip in an elderly patient showing flattening of the head, loss of joint space, and displacement outwards. The os acetabuli is seen on both sides.

FIG. 2.—Osteo-arthritis of the right hip in a case of bilateral coxa vara of the adolescent type.

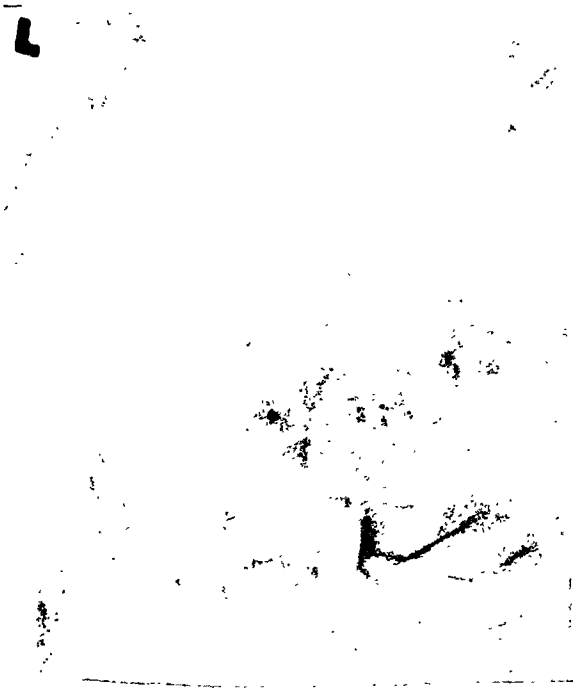


FIG. 3.—Osteo-arthritis in a case of subluxation of the hip probably of congenital origin. The way in which the pressure is carried by a limited portion of the top of the head is well seen.

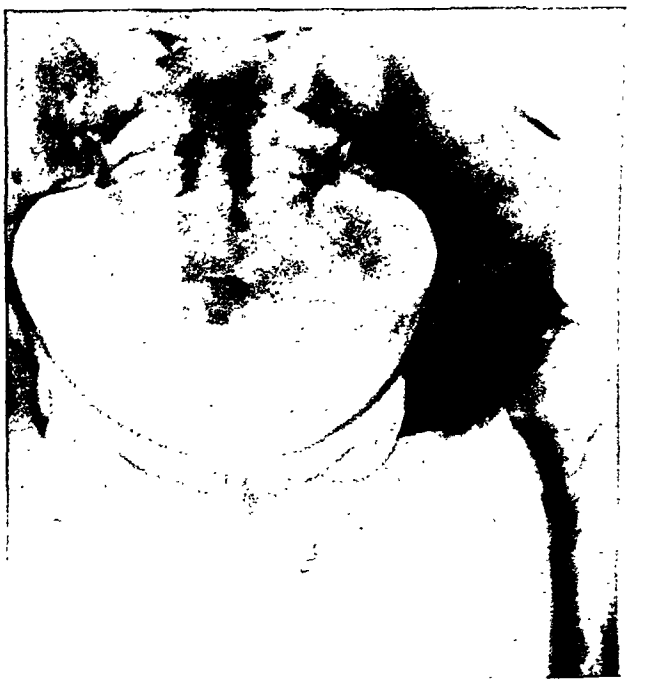


FIG. 4.—Osteo-arthritis of the hip in a case of syphilis. There is a patchy rarefaction of the head of the femur, loss of joint space, and osteophytic formation.

G. F. MITCHELL: TOTAL AVULSION OF SCALP: A NEW METHOD OF RESTORATION

FIG. 1.—June 24th, 1932.

FIG. 2.—October 10th, 1932.

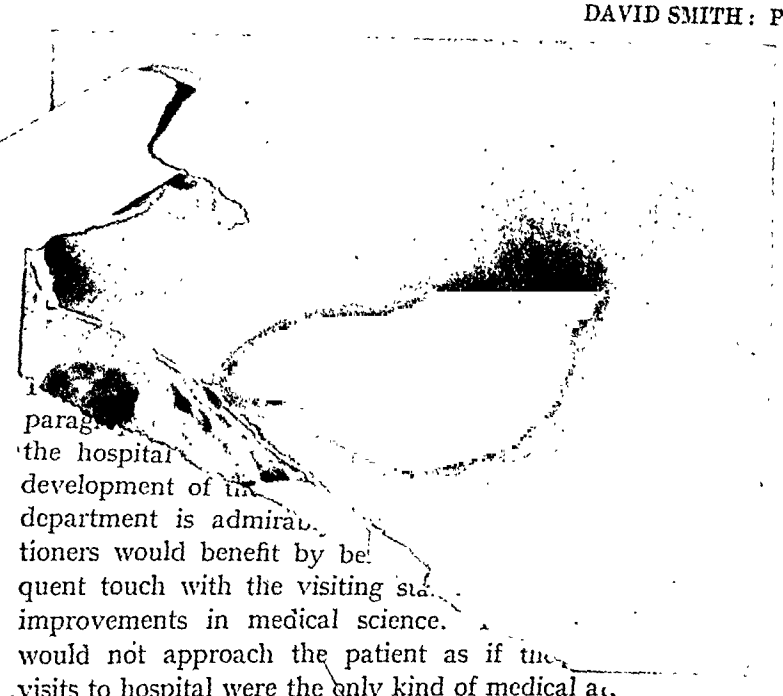
FIG. 3.—November 27th, 1932.

R. McD. CAIRNS AND S. E. TANNER: ADENOMA OF ISLETS OF LANGERHANS ASSOCIATED WITH HYPOGLYCAEMIA

FIG. 1.—Section of adenoma showing capsule on left-hand side.

FIG. 2.—Section of adenoma (high power).

DAVID SMITH: PANCREATIC CYSTS



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would not approach the patient as if
visits to hospital were the only kind of medical a
he received, and as if his dossier in the hospital registry
contained the whole of h medical history, but would a

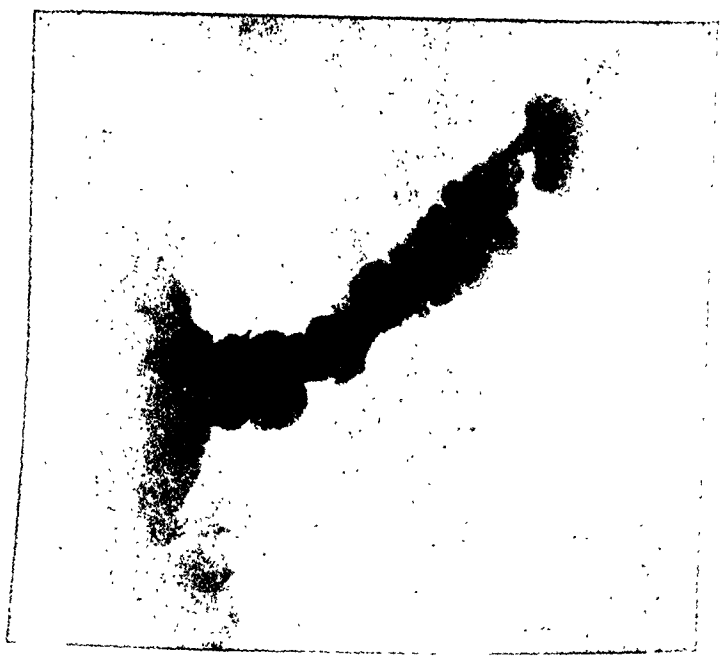


FIG. 2.—Displacement of transverse colon downwards.

THE INDIAN ROUND TABLE

onfusion between the British Medical Association ıe General Medical Council is so inveterate that :spairs of ever clearing it up so far as the lay press ; country is concerned, but it was certainly rather sing to find the same confusion persisting in the ı Round Table Conference at the House of Lords. s evident that some speakers, both British and a, were talking of the British Medical Association the General Medical Council was what they had nd. One British delegate said he desired to put record that in his opinion the British Medical Asso- n had not been altogether wise in its handling of ndian question, and another holding a still more rtant official position declared that Indians could on him not to take the side of the British Medical ciation against India. The question of the conflict een the General Medical Council and the Indian ersities was raised by a prominent Indian, who took ı remark in one of the committee reports that ing agreement between a Medical Council in India the General Medical Council some special provision ıt be required regarding the right of practitioners tered in the United Kingdom to practise in India. ill is shortly to come before the Indian Legislative ıcil for the constitution of an Indian Medical ncil, and it is anticipated that it will lay down certain guards for medical education and regulate medical ees in such a way that the constant disputes which : arisen with the General Medical Council in this ıtry will be obviated. The demand of the Indians, ıut forward by this speaker, was that if medical cation was to be standardized, this should be done ıugh the Indian Medical Council, and he wanted to w what would happen supposing agreement between ı a council and the General Medical Council were reached. He thought it must be left to the good se of the two bodies, the one in India and the other England, to regulate the rights of practitioners on a is of reciprocity. On the British side, from more n one quarter, it was pointed out that nothing must done legislatively which would give countenance to suggestion that it was open to the Government of lia so to discriminate against British doctors that ıe would be available to deal with persons of British th in India. The Indian delegate who had spoken ılied that he fully realized that Indian graduates must ne to British universities for higher medical educa- n, and he disclaimed any desire on the part of India penalize the British practitioner ; all that India sired in this matter was power to negotiate on a basis reciprocity. Another Indian delegate expressed a ong view that the two bodies, in England and in dia, should come to terms before the new Act reached e Statute Book. He added that this medical question ıd reached considerable dimensions in India, and was coming a first-rate political issue. The speeches on ıe British side were persuasive, begging the Indians appreciate the British point of view even as their wn was appreciated, and not to suggest that because ıdia had failed to arrive at agreement with the General ledical Council, even though the fault might be with ıat body, therefore British residents or travellers in ndia were to be penalized and not allowed to have ritish doctors. The short debate concluded with a promise on behalf of the India Office that it would do its best to secure a reasonable agreement before any new Act came into force.

MASSIVE RADIUM UNITS

In the early part of last year a decision by the Radium Commission to discontinue the use of a massive radium unit (the 4-gram radium bomb) aroused much discussion, culminating in a correspondence in the public press. In view of the importance of the questions at issue the Presidents of the Royal Colleges of Physicians and Surgeons summoned a conference representing the leading learned societies of the medical profession. The conference met on March 4th, when it immediately appeared that the matter was of a highly technical nature, upon which full information must be obtained before any conclusion could be reached. The conference therefore appointed a technical committee of experts to obtain the necessary information and to report to it. This committee, having considered in the most thorough manner the questions referred to it, and having obtained information from the leading radium centres both in England and abroad, has now presented its report, which we print in full at page 28 of our present issue. This report takes the form of a reasoned statement, leading to the unanimous conclusion that a massive unit should be established in this country containing not less than 5 grams of radium element. The arguments supporting this conclusion are founded upon a close analysis of the problem from its theoretical aspects, upon the experience of members of the committee in the clinical use of radium, upon the results they have seen in the chief radium centres both at home and abroad, and upon the views of all who have had charge of large radium units. The committee's conclusions gain reinforcement from such cautious and experienced observers as Professor Regaud of Paris and Professor Forssell of Stockholm, whose clinics were visited on its behalf by Mr. Souttar and Professor M'Lennan. It appears that at every centre where a large unit is in use arrangements have been made to increase it, and that an international committee has recently decided to establish a unit at Brussels containing as much as 15 grams of radium element. Provision of the unit is, however, but a small part of the work which must be put in hand if full advantage is to be taken of the opportunity its possession would offer. It must be so placed that the patients can be drawn from the widest possible area, it must be in charge of experts who are prepared to regard it as their first interest, and these experts must have freedom alike in the choice of their cases and in the method of treatment they adopt. Associated with the unit and under the same control there must be an organization fully equipped for modern operative surgery, for deep *x*-ray therapy of the most advanced type, and for physical, pathological, and biological researches on the highest plane. The advances in radium therapy which are to-day being made in Paris and Stockholm would have been impossible without the complete organizations that have been built up in those centres. The problems involved are so complex that they can never be encompassed by any one worker ; they will tax all the abilities of the surgeon, the pathologist, and the physicist ; and even then (as has often been urged in these columns) the closest co-operation is an essential condition of their solution.

INFLUENZA

Influenza is paying us another visit. During the last two or three weeks it has appeared in various parts of the country. Birmingham seems to be suffering most. Portsmouth, Glasgow, Southampton, and Durham, among other towns, have had their various activities to some extent interfered with by the epidemic. London was one of the last places to be attacked. Medical practitioners are perhaps only too familiar with this will-o'-the-wisp of medicine. The diagnosis of influenza may be often made more by faith than by knowledge, but the disease, unfortunately, does exist. Most of our readers probably have their own schemes of treatment, but those who have not, and also those who have, will find helpful advice in Dr. H. Morley Fletcher's article in this month's *Practitioner*. He recommends mixed vaccines and vitamin A as prophylactic measures. For treatment he insists upon the need for absolute rest in bed in a well-ventilated room. Immediate purgation with calomel; Dover's powder (to 10 grains) with a hot drink at night to relieve cough and restlessness; a milk diet, including a liberal supply of fluids; a mixture containing quinine sulphate (1 grain), sodium salicylate (10 grains), and 20 to 30 grains of potassium citrate to be given four-hourly; an appropriate gargle; phenacetin and aspirin for headache; 7½ grains of medinal for insomnia; menthol and tinct. benzoini co. for inhalation—these and other therapeutic details are given. In an admirable epitome of the treatment of pneumonia Dr. Morley Fletcher mentions an old remedy now much neglected: "If cyanosis be present, dry cupping, followed by poulticing, should be performed over the back." For increasing cyanosis venesection is indicated. The early administration of oxygen by the continuous nasal method is recommended at the onset of bronchopneumonia. If there is any suggestion of heart failure tincture of digitalis (7½ minims four-hourly) should be given; and, in urgent heart failure, 1/250 of a grain of strophanthin should be injected intravenously and repeated four-hourly if necessary. Attention is drawn to the need for care during convalescence. The management of gastro-intestinal and of institutional influenza is dealt with in the same number of the *Practitioner* by Dr. A. H. Douthwaite and Dr. G. E. Friend respectively. The *Memorandum on Influenza*, published by the Ministry of Health in 1927 and reprinted in 1929 (H.M. Stationery Office, price 2d. net), also contains useful information.

EPIDEMIOLOGY OF WHOOPING-COUGH

It is remarkable how little attention relatively has been paid in the past to whooping-cough in view of the facts of its high incidence (about 40,000 cases each year in London, for example), the serious impairment of physique which so often ensues after an attack, and the varying but often high mortality. Permanent damage of the respiratory, circulatory, and nervous systems is an all too common sequel. With the aid of a scientific grant awarded to him by the British Medical Association in 1930 and 1931, Dr. Percy Stocks, reader in medical statistics in the University of London, assisted by Miss Mary N. Karn, has performed a useful service in undertaking a comprehensive survey of the extent and ravages of this disease, special attention having been paid to the boroughs of Battersea and Greenwich. The conclusions reached in this investigation have been published in the November issue of the *Journal of Hygiene*, and establish the fact that this must now be considered, in London at any rate, the most important epidemic disease of childhood as regards the infliction of physical and nervous suffering, loss of school attendance, the subsequent impairment of health and resistance to other maladies, and the considerable death rate. In the two boroughs mentioned it was found that epidemics of whooping-cough tended to have a biennial periodicity, a summer outbreak being often followed by, or merging into, a winter outbreak, which had subsided by the ensuing midsummer. There then followed a year of low incidence. The general picture presented was thus an alternation of epidemic and interepidemic years. Such epidemics did not always run concurrently in parts of London separated by several miles; the spread was checked to some extent by barriers to free communication, and small districts occasionally escaped, or an interval of several months might separate the epidemic peaks in districts a mile or so apart. The usual view that the epidemic cycle in whooping-cough could be explained by a periodic reduction of the proportion of children not previously attacked below some critical limit was negatived by the investigation, and Dr. Stocks believes that both the dying down of epidemics and their periodicity can be explained by the occurrence of a latent immunization of contacts, as in measles, such immunity lasting only about one year instead of two or three. He bases this conclusion on: (1) measurement of the rise and fall of apparent infectiousness of cases to other children in the same house during six years in Battersea; (2) measurement of the frequency of second cases in houses after different intervals of time during a decade in Greenwich; and (3) an analysis of the attack rates among home contacts in Holborn and Battersea during several years following exposure to infection, as compared with those among control groups of children. These phenomena would be difficult to explain as resulting from a "cycle of activity" of the organism. Using the figures obtained in these boroughs as a basis, the conclusion is drawn that about 60 per cent. of London children have had whooping-cough by the tenth year of life, and about 61 per cent. at some time during life, this proportion being rather lower than estimates made from histories given by parents in a group of American towns. The escape from infection of the remaining children must be by virtue of the acquirement of some kind of immunity, or its inherent possession. Superimposed upon the gradual rise and fall of infectiousness believed to be due to these immunity changes, there occurs a sudden rise at the commencement of an epidemic, which must be attributed to an enhanced real infectiousness. Dr. Stocks remarks that this probably arises from a sudden increase in activity of the organism itself under seasonal influences setting in at the moment when the herd immunity becomes insufficient to withstand the infection pressure; the balance is consequently upset and the epidemic begins. He adds that these findings are similar to those for measles, the chief difference being that: (1) epidemics of whooping-cough are usually spread over a year, instead of six months in the case of measles; (2) latent immunity apparently lasts about a year, instead of two or three; (3) about 60 per cent

hildren are attacked at some time during life, ıd of about 90 per cent. ; (4) there is probably eat immunity for whooping-cough in a certain ortion of children, but not for measles ; and (5) the of latent to manifest infections is lower.

: WILLIAM HALE-WHITE AND THE GUY'S HOSPITAL REPORTS

ıuble number of the *Guy's Hospital Reports*,[1] con- ng thirty articles, the first eleven of which are by er house-physicians of Sir William Hale-White, is ated to him in celebration of his seventy-fifth birth-

Sir William was editor of the *Reports* for seven rs, and the two earliest of his thirty-seven contribu- s to them were made half a century ago. So this ıuies a jubilee. He has recently rendered another ice by analysing the articles in the *Reports* during eriod almost corresponding to his contributorship. articles cover a wide field, and, indeed, seem to ord the evolution of his career, for in 1882 he jointly orted abnormalities observed in the dissecting room ng 1880–2 ; this was followed by papers on rbid anatomy and on clinical medicine, and more ently by historical studies of Wilks, Bright, Hodgkin, dison, and other Guy's men. Among the articles by former house-physicians there are three from distant ts of the world—India, Australia, and New Zealand hus pointing to his widespread influence, and to the obtrusive activity of the editor who has organized splendid tribute of affection. Dr. H. C. Cameron ıes fully on the condition described by Eliasberg and land as epituberculosis, in which children with idence of tuberculous infection elsewhere show signs extensive consolidation of a lung but recover, thus ggesting an infiltration of the lung, which, though not berculous, is around an area of tuberculous activity. other of Sir William Hale-White's former residents— . E. P. Poulton—takes up the subject of urea tests kidney function. Dr. T. B. Heaton describes experi- nts made in the pharmacological laboratory at xford which suggest that many ordinary foods contain growth-inhibiting factor. For this factor, which is ntagonized by the vitamin fraction B_2, the name itamin I is suggested. In recent volumes of these *eports* there have been symposia on streptococcal nd staphylococcal infections, and this instalment con- ins one on *Bacillus coli* infections. By a happy hought the first article is one by Sir William, published n 1912, on the importance of examining the urine acteriologically, and dealing largely with this infection. Dr. Ryle treats the subject generally, and other articles ollow, the editor contributing the seventh and last, on *P. coli* cholecystitis. There are also three articles on ncreatic disease, a subject Sir William thoroughly xplored in 1897, and several papers by Dr. L. J. Witts nd others on acute diseases of the blood-forming rgans. This double number is a deserved and pleasing tribute to a great clinical physician of the Guy's school.

[1] *Guy's Hospital Reports*, vol. 82 (vol. 12, fourth series), Nos. 3 and 4, October, 1932. Double number, dedicated to Sir William Hale-White, K.B.E., M.D., F.R.C.P., in celebration of the seventy-fifth anniversary of his birthday. Edited by Arthur F. Hurst, M.D. London: Guy's Hospital; and Headley Brothers. 1932. (Pp. 257-508 ; illustrated. Annual subscription for four numbers, £2 2s. ; this number, 22s. 6d.)

MISS LAWRENCE

Miss A. L. Lawrence has been chosen to succeed Miss Eleanor Christopher, M.A. (who retires at Easter), as Principal of St. Hild's College, Durham, the diocesan training college for women and a hall of residence of the University of Durham. Miss Lawrence was appointed Intelligence Officer by the Council of the British Medical Association in 1919, after serving for two and a half years on the staff of the Central Medical War Committee, for which she was awarded the M.B.E. She had entered Girton College, Cambridge, as a Cloth-workers' Scholar in 1910, and gained honours in Part I of the Historical Tripos and first-class honours in Part II. In 1925 she attained the standard for honours in Part II of the Law Tripos. On the strength of these academic distinctions she was admitted to the titles of M.A. and LL.B. Cantab. Miss Lawrence's work for the British Medical Association during the past fourteen years has been done behind the scenes, and its extent and value are known to comparatively few outside the circle of officers, committeemen, and officials. Those whose duties bring them into touch with headquarters appreciate very highly the zeal and ability and devotion with which she has served the Association, and her readiness to assist in any good cause. A striking example of her constructive and analytical gifts was the report on the work and problems of the Colonial Medical Services, published anonymously in our *Supplement* of July 4th, 1931. On behalf of every worker for the Association—and in a special degree on behalf of the *Journal*, which owes much to her self-effacing help in matters large and small—we wish all success to Miss Lawrence in her new field of endeavour and say good-bye regretfully to a loyal colleague.

The annual meeting of the British Association in 1933 will be held at Leicester from September 6th to 13th, under the presidency of Sir F. Gowland Hopkins, P.R.S. ; there will be thirteen sections. Professor E. D. Adrian, F.R.S., will be president of the Section of Physiology.

We regret to announce the death, at Dundee, in his eightieth year, of Dr. Alexander Mitchell Stalker, emeritus professor of medicine in the University of St. Andrews, and for many years physician to the Dundee Royal Infirmary.

The next annual congress of the Royal Institute of Public Health will be held at Eastbourne from Tuesday, May 30th, to Sunday, June 4th, 1933 (Whitsuntide), under the presidency of Viscount Leverhulme. The scientific work of the congress will be conducted in the following Sections: (1) State medicine and industrial hygiene ; (2) women and children and the public health ; (3) tuberculosis ; (4) pathology, bacteriology, biochemistry, and veterinary medicine ; (5) climatology and hydrology. Delegates are being invited from the Governments, the municipalities, the universities, and other public bodies of Great Britain and Ireland and the British Dominions, as well as from Continental and foreign countries. Arrangements have been made with the railway companies for a reduction in the fares. The headquarters of the institute are now at 23, Queen Square, W.C.1.

REPORT OF RADIUM CONFERENCE

We have received for publication the following report of the conference on massive radiation (radium "bomb") summoned by the President of the Royal College of Physicians of London and the President of the Royal College of Surgeons of England, which met on March 4th, (See *British Medical Journal*, May 21st, 1932, p. 952), *November 24th, and December 19th, 1932. This report is followed by that of the technical committee of experts appointed by the Conference.*

The Conference owes its origin to doubts publicly expressed as to the soundness of the decision of the Radium Commission to withdraw the 4-gram bomb, then in use for massive radiation at the Westminster Hospital, and subdivide it into four units of one gram each.

It consisted of the following members:

Lord Dawson of Penn	President of the Royal College of Physicians (In the Chair)
*Lord Moynihan	President of the Royal College of Surgeons
Mr. Wilfred Trotter	Medical Research Council
Sir Frederick Menzies	Chief Medical Officer, London County Council
Dr. Watts Eden	President of the Royal Society of Medicine
Mr. H. S. Souttar	British Medical Association
Professor Arthur Hall Mr. Ernest Miles Professor Woodburn Morison	Radium Commission

In the interim report, dated March 4th, 1932, the Conference decided unanimously "that the Radium Commission arrived at a sound conclusion in discontinuing the use of the 4-gram bomb at the present juncture, though this decision is without prejudice to the question of the therapeutic value of 4-gram or even larger aggregations of radium," and "that in the opinion of this Conference a fully equipped radium institute is needed in London, where the more difficult and speculative problems connected with radium and ray therapy can be studied by the combined efforts of a trained staff."

The Conference decided to appoint an expert committee; the constitution of this committee was as follows:

Lord Dawson of Penn, P.R.C.P.
Lord Moynihan, P.R.C.S.

Chairman:
Mr. H. S. Souttar

Physics:
Lord Rayleigh, F.R.S.
Professor J. C. M'Lennan, F.R.S.

Radiotherapy and Medicine:
Dr. Roy Ward (Radium Institute)
Dr. G. F. Stebbing (Lambeth Hospital, L.C.C.)
Dr. B. W. Windeyer (Middlesex Hospital)

Surgery:
Mr. Cecil Rowntree (Cancer Hospital)
Mr. Geoffrey Keynes (St. Bartholomew's Hospital)

Gynaecology:
Mr. Louis Rivett (Middlesex Hospital)
Dr. Elizabeth Hurdon (Marie Curie Hospital)

Experimental Radiation:
Dr. W. Cramer (Imperial Cancer Research Laboratory).

The reference was "(*a*) What is the scientific case for mass radiation by radium, and what are the advantages and dangers attaching to the use of such radiation? (*b*) What are the advantages and risks of massive surface radiation by radium compared with those of radium needles and radon seeds?"

The Committee reported in the first instance to the Conference on November 24th, 1932, and finally on December 19th, 1932.

* Sir Holburt Waring has now succeeded Lord Moynihan.

The Conference expresses its appreciation and thanks for the signal service which the Technical Committee, under the chairmanship of Mr. Souttar, has performed.

It is clear that there is a field of usefulness for radiation from massive units of radium, given an adequate equipment and men and means. We adopt the view of our committee that it is desirable a radium unit containing not less than 5 grams of radium element should be established.*

An institute specially constructed for the purposes of such radiotherapy and within easy reach of the future Post-graduate School and Hospital is an ideal to be aimed at, but for the moment it may be impracticable upon financial grounds. It would, however, be feasible to organize existing institutions for the time being, provided they were near enough to each other for efficient co-operation. The amount of radium required for a large unit might mean that the allotment of radium by the Radium Commission would need to be further concentrated.

Both *x*-ray and radium therapy are at present advancing so rapidly that it is impossible to decide the position which each will occupy in the future. The whole field is one for the fullest investigation, and it is one in which results of the first importance have already been obtained.

In drawing up this report the Conference has purposely refrained from considering the relative places occupied by surgery and radiotherapy in the treatment of malignant disease.

Signed on behalf of the Conference,

January, 1933. DAWSON OF PENN.

REPORT OF THE RADIUM TECHNICAL COMMITTEE

We beg to report to the Conference as follows:

The Committee held its first meeting at the Royal College of Physicians on June 15th, 1932. Eight meetings in all have been held, and, in addition, various special visits of inspection have been made, including one to the Westminster Hospital Annexe.

Our report is based upon our personal experience in the various branches of radiotherapy to which we have individually devoted special attention, and also upon personal observations upon various visits to the radium centres in London, Manchester, Birmingham, Paris, Brussels, Stockholm, and New York. The Committee has also had the advantage of hearing evidence from Professor Sydney Russ, Mr. Rock Carling, and Mr. Stanford Cade, and was privileged to see a confidential report from Mr. Comyns Berkeley, who has recently visited most of the European radium centres on behalf of the League of Nations. Further, with a view to obtaining the latest possible information as to the progress of treatment by massive units, Professor M'Lennan and Mr. Souttar specially visited the Radium Institutes of Paris and Stockholm.

The report itself deals with the general question of the value of radiation by massive units, and attempts to answer, so far as is at present possible, the questions put forward by the Conference.

Attached to the report is an Appendix giving a detailed account of the most recent work in Paris and Stockholm, in which are set out the views of the leading authorities at these centres.

We would express our thanks to all those who have so generously placed information at our disposal. We would especially mention Professor Regaud of Paris and Professor Forssell of Stockholm, and in this country Mr. Comyns Berkeley, Mr. Rock Carling, Mr. Stanford Cade, and Professor Russ.

H. S. SOUTTAR,
Chairman.

* It is worthy of note that a 15-gram unit is likely to be established in Brussels on the advice of an International Committee.

ALUE OF RADIATION BY MASSIVE UNITS (TELE-RADIUM)

What is the scientific case for mass radiation by ım, and what are the advantages and dangers attach- o the use of such radiation?

What are the advantages and risks of massive .ce radiation by radium compared with those of ım needles and radon seeds?

'elective Action of Radiation upon Malignant Cells

ıe use of radium in the treatment of malignant ɔurs depends upon the empirical observation that large number of instances the cells of malignant ours are destroyed by an amount of radiation insuffi- t to destroy the normal tissue. This proposition is rally true over a very large range of wave-lengths, certainly holds over a range which extends from ys with a wave-length of 1 A.U. to hard gamma rays ı a wave-length of 0.04 A.U. or less. In spite of an ıense amount of research devoted to this particular ıt, it is still uncertain whether there is any specific erence between the longer and shorter waves in their ct upon the cells, although there is a general im- ssion that radiation of short wave-length has a higher rse of selective action upon the cells of malignant ıours in virtue of their rapid growth.

Penetrating Power of Short Waves

What is, however, quite certain is the physical fact t radiation of short wave-length has a higher pene- ting power, and is therefore capable of conveying rgy into the deeper tissues, whilst radiation of longer ve-length is absorbed in the more superficial tissues, l there expends a large part of its energy. It is this reason that *x*-ray apparatus is being made generate *x* rays of shorter and shorter wave-length, t no apparatus has yet been devised to generate waves short as the harder gamma rays of radium. These ort-wave generators are still on trial, and it is of im- rtance that we should be able to compare the results tained from them with those obtainable from mass diation by radium.

Importance of Uniform Field

The margin between general destruction of the tissues ıd selective destruction of the malignant cells which are vading them is very small, and it is therefore an essential ctor in treatment that every element of tissue through- ıt the region treated should receive exactly the same ount of radiation, for if at any point there is a defect ɔme malignant cells will survive, whilst if at any point ıere is an excess, the supporting tissues will be destroyed. In the treatment of malignant tumours by radio- ıerapy, whether by means of *x* rays or of radium, there indeed a general agreement upon the importance of btaining a uniform field of radiation throughout the egion under treatment. Whatever method has been dopted, its clinical success has always been proportional o the accuracy with which this physical problem has ɔeen solved, and there are strong grounds for believing hat upon its more complete solution may depend the vhole future of radium therapy in the treatment of ancer.

Physical Problem of the Uniform Field

So far, therefore, as our present knowledge is con- cerned, the solution of the exceedingly complicated clinical problem of the treatment of malignant tumours by radiation would appear to depend primarily upon the solution of the physical problem of obtaining a uniform field of radiation—that is to say, a field throughout which the scalar value of the energy absorbed is constant, both in the cross section and in the depth of the field.

The Advantage of Gamma Rays

For this purpose gamma rays present a very definite advantage over *x* rays, since, owing to their shorter wave- length, they have a proportionately greater penetration. Although in both instances the intensity of the field diminishes with the distance from the source, it is far less affected in the case of gamma rays by the absorption of the tissues, and it is therefore easier to maintain a uniform field as the depth below the surface increases.

It is true that the great volume of power available in the modern *x*-ray tube allows of a greater working distance, so that the proportion of energy delivered in the depth of the body by *x* rays may be equal to, or even greater than, that obtained from radium. But the use of such a volume of energy presents a disadvantage, since there is general agreement that *x* rays produce more constitutional disturbance than do gamma rays of equal adequacy, possibly owing to the more complete absorption which *x* rays undergo in the tissues.

The relative value of the two methods can only be discovered by further experience.

Massive Radium Units at a Distance (Tele-radium)

The use of massive units of radium outside the body furnishes a powerful means of subjecting a region of considerable volume to a uniform radiation by gamma rays, and if a sufficiently large quantity of radium were available this would prove the most perfect physical solution of the problem. It is not, of course, sufficient to use a single beam, since the unavoidable fall in intensity as the distance from the surface increases necessitates a dosage which exposes the proximal tissues, and especially the skin, to an excessive radiation. This, however, may be overcome by the use of multiple ports of entry, and by exact calculation an almost perfectly uniform field can be obtained throughout any volume of tissue where it is required.

Other Methods of Applying Radium

The difficulty of obtaining sufficient radium for use by this direct method has compelled surgeons to devise other methods, by which radium, being brought into closer contact with the tissues, is used to greater economic advantage. The application of radium plaques, the insertion of needles, and the insertion of seeds all come under this heading, and there is no doubt at all that when properly applied in suitable regions they may combine economy with efficiency. They present a further advantage that, owing to the smaller amount of radium used, the effects are strictly localized, and neither the patient nor the attendants are exposed to the possible dangers associated with large quantities of radium.

Defects and Limitations of Interstitial Methods

Although these methods have in many instances given brilliant results, and are probably of permanent value, they present the disadvantage that they do not produce the ideal uniform field of radiation, and in spite of their success, it is still an open question whether massive radiation may not produce even better results when applied to the same situations. This view is certainly supported by the work of Berven on cancer of the buccal cavity, where the results obtained are far superior to those which have hitherto been accomplished either by surface or interstitial methods. The question is one of the greatest importance, but it can only be settled by future work.

The use of needles and of seeds is further limited by the fact that it necessitates surgical access to the region of the tumour, and not merely to the tumour itself but to the whole of the neighbouring lymphatic area through which it may disseminate. This is often undesirable and frequently impossible, and, indeed, there are only a limited number of situations in which it is possible to treat effectively by these means the whole region under suspicion.

Regions Still to be Explored

In spite of the variety of methods now available it is still only in special instances that radiotherapy has been applied to cancer with success, and there remain whole regions where this has not yet been achieved or even seriously attempted ; as examples we may cite deep-seated tumours in the thorax and abdomen. It is here that massive radiation with its penetrating rays appears, at first sight, to offer the solution of the problem, but difficulties arise which are *not merely* physical but are inherent in the disease.

Such tumours are inaccessible to early diagnosis and, in the great majority of cases, are far too advanced when diagnosed for treatment of any kind to be successful. They arise often in tissues which are themselves very radiosensitive, such, for example, as the stomach, the intestine, and the rectum, and the annihilation of the tumour may involve the destruction of the organ from which it has sprung. Moreover, the exact extent of lymphatic involvement cannot be determined, so that it is difficult to ensure the complete irradiation of all malignant cells.

In spite of these difficulties there are definite grounds for hoping that, by some combination of irradiation and surgery, even cancer of the alimentary tract may ultimately be brought under control. In this achievement it is the definite opinion of such cautious observers as Forssell and Regaud that radiation from a distance, either by massive radium units or by *x* rays at a potential not yet obtained, will play an essential part.

The Dangers of Radium

Although there is still very little known about the precise action of gamma rays upon the tissue cells, practical experience is so far advanced that any of the methods which we have mentioned may be employed by experts without danger either to the patients or to themselves. In the hands of the inexperienced the use of radium in any form is dangerous, and an attempt to assess the degree of danger would be more curious than useful.

The insertion of seeds or needles or the application of local plaques in expert hands leads to the disappearance of a tumour with only a moderate local reaction, and, except in the case of a large tumour, with very little constitutional disturbance. A faulty estimation of the dosage or an uneven distribution may lead to gross destruction of the tissues, extensive ulceration of a most painful and intractable type, and even to the death of the patient, whilst there can be no guarantee that the tumour itself has been destroyed. It is true that with a larger mass of radium destruction might be extended to an even wider sphere, but that is the only difference.

All the evidence before us goes to show that the use of massive units of even the largest dimensions can be so completely controlled that the safety of the patient is assured. The occurrence in some instances of severe constitutional disturbance has always been due to some error in technique, and has been avoided on further experience. We are satisfied that there is no foundation for the idea that the use of a massive unit is necessarily associated with any special danger to the patient.

CONCLUSION

The evidence has convinced us that the treatment of cancer by radiation from a massive radium unit (teleradium) is a method the value of which has already been proved, although so far only in a limited field. How far these limits can be extended is a question which can be solved only by co-ordinated clinical, experimental, and physical research in which this country ought to take its share. The larger the unit available the more rapidly will its possibilities be discovered and the wider will be the field which can be explored.

After a full consideration of all the evidence available we are convinced that a large radium unit should be erected in this country, under conditions where such co-ordinated effort is possible, containing not less than 5 grams of radium element.

APPENDIX A

Visit to Paris by Professor M'Lennan and Mr. H. S. Souttar

In view of the importance of obtaining direct information regarding the two bombs at present in use in Paris, an interview was arranged with Professor Regaud at the Institut Curie on July 6th, 1932.

Professor Regaud stated that his experience of the use of 4 grams of radium for distance therapy began in 1924, and had now extended continuously over eight years. Only minor alterations have been made in the construction and mounting of the apparatus, a full description of which will be found in the *Archives de l'Institut du Radium de l'Université de Paris et de la Fondation Curie* (Fasc. II, vol. i, p. 324).

The apparatus consists of a square lead box with walls 6 cm. in thickness, and with an internal area of 150 sq. cm. The radium is contained in eighty platinum tubes with walls 1 mm. in thickness, and is arranged in four groups of twenty tubes each on an internal frame, so that they are situated at the corners of the lead box. The opening of the box is closed up by a block of wax of such dimensions that the plane of the radium is at a distance of 10 cm. from the skin of the patient. As a general rule the treatment extends over seventy hours, and is divided into doses of from two to four hours, according to the tolerance of the patient.

In his whole experience Professor Regaud has never seen any instance of injury to the patient, either local or general, nor has he ever seen any evidence that the treatment has been in any way injurious. It is true that sensitive patients often experience sickness after the treatment, but this soon passes off, and is entirely abolished by reducing the dose on the next occasion.

Carcinoma of the Stomach.—Twenty-five cases of carcinoma of the stomach have been treated after surgical exploration, which had proved that the case was in fact carcinoma and inoperable. In the first group of cases the dose was inadequate (600–900 mc.d.), and no effect of any kind was observed. In later cases the dose was increased to as much as 1,200 mc.d., and definite improvement was noted in several instances. Two of these cases of proved carcinoma are, indeed, alive and free from symptoms after more than four years.

Carcinoma of the Cervix.—One hundred cases of carcinoma of the cervix were treated in two similar groups of fifty each. One group was treated by deep *x* rays working on a potential of about 200kV, the other was treated by radium at a distance. The same local treatment was used in both cases. No difference whatever in the results was noted. Of Class 1 (early cases) the percentage free from symptoms for five years was 83, whilst in Class 3 (advanced cases) the percentage was 34.

Professor Regaud regards treatment by radium at a distance purely as an accessory method and entirely comparable in its effects to deep *x* rays. He quite definitely states that he regards deep *x* rays as the established method and radium at a distance as an interesting and hopeful experiment. He considers it of great importance that far larger amounts of radium should be used. He has arranged for the 4-gram unit at present in use to be increased almost immediately to 8 grams. He has just arranged, in conjunction with Murdoch, Forssell, Holthusen, and Morison, for the provision of a 15-gram unit at Brussels. He is not, however, convinced that developments in *x*-ray apparatus, and the raising of the potential to perhaps a million volts, may not again place *x* rays at an advantage as compared with radium.

Professor Regaud introduced us to Dr. Lacassagne, assistant director, who confirmed fully all that we had just heard. He regarded as of extreme importance in treatment the accurate orientation of the unit, and the limitation of the period of treatment to the tolerance of the patient. He considered it was impossible to treat two patients at the same time satisfactorily from the difficulty involved in their accurate adjustment to the unit. Neither Regaud nor Lacassagne regarded the very wide field exposed in their unit as in any way dangerous; in fact they regarded it as a definite advantage, as it enabled them to treat a larger volume of tissue. They do not connect any special danger with exposure of the liver, the spleen, the kidneys, or the pancreas to radiation, and they stated, in fact, that they had treated with success a case of carcinoma of the liver without any untoward result, the patient being alive four years later. They regarded the skin as one of the most sensitive structures in the body, and the arrangement of their treatment was largely directed to its protection.

Next day, on July 7th, an interview was arranged with Dr. Monod at the hospital, 33, Rue Antoine Chantin, where the 4-gram radium unit is situated. Dr. Monod explained to us in some detail the method of using the unit and of charting the treatment. The unit is being used chiefly for the accessory treatment of carcinoma of the cervix, and in

... the course of treatment extends over twenty-one during which the patient receives the radiation from me.d. The aperture of the unit is 150 sq. cm., and in case the treatment is given with the radium at a ce of 10 cm. from the skin. For the first two weeks riod of treatment is three hours on each day, but in the week this is increased to four hours. The exposures ade through seven distinct portals in rotation, so that portal is not employed again until after the lapse of . Dr. Monod showed us the 4-gram unit and demond the details of its construction. It will very shortly ...eased to 8 grams, but the mounting, screening, etc., t be altered in any way. Dr. Monod confirmed in particular the impression we had gained from Regaud ...assagne. He stated that they had had no serious e, and the results were very satisfactory.

... then went to the suburban anti-cancer centre at uif, 14, Avenue des Ecoles. Professor Roussy was away, ... saw Professor Huginat, his assistant, and Mme Simone rde and Dr. Wickham. Dr. Wickham showed us the m unit designed four years ago by Mme Simone Laborde 1-gram unit, and in continuous use since then. The unit lly described by Gaiffe-Gallot and Pilon, 23, Rue Casimir, Paris, VIIe, in their *Revue* for January, 1929. It is ly to be increased to 5 grams, but without any alteration ... structure. In contrast to the Paris unit, it is provided a series of obturators, so that the beam can be narrowed ... to any convenient size. The radium itself is contained latinum tubes packed side by side in a narrow space, so ... form a focal point of small dimensions. The obturators ... of varying size and shape, with openings ranging from 5 cm. square, and 3 to 5 cm. in diameter. The mini... distance from the skin within which the radium could ...rought was 10 cm.

he unit was used almost entirely as an accessory to local tment, and chiefly in cases of carcinoma of the cervix. ...osures varied with the tolerance of the patient, in most ...nces two exposures a day were given, varying between and four hours each. Dr. Wickham expressed himself as ... satisfied with the results, which he said were very ...ar to those described by Professor Regaud, with whose his own coincided.

APPENDIX B

... on Visit to Stockholm by Professor M'Lennan and Mr. Souttar

...n September 23rd, 1932, we visited the Radiumhemmet in ... holm and met Professor Gösta Forssell, Dr. Ellis Berven, ...ector of the institute, Dr. Rolf Sievert, head of the physical ...oratory, and the staff of the institute.

Dr. Berven demonstrated to us some twenty cases of ...cinoma of the mouth and pharynx in various stages of ...atment by means of the 3-gram radium unit. These varied ...m cases treated five years ago to cases actually under ...tment at the present time. With one exception the tients had not been specially summoned, but were those en in the ordinary course of the "follow through" department. It is the custom at the clinic to group together cases the same character on different mornings, and it happened at this morning was devoted to the mouth and pharynx.

The cases had all been treated by the technique described ... Dr. Berven's book on malignant tumours of the tonsil—... is to say, by primary treatment with the unit, the later ...moval of any remaining growth by endothermy, and the ...al treatment of the region by surface application of radium lement. In the more recent cases the success of the treatent by the unit had been so considerable that no other procedure had been required. It happened that several of the ases of sarcoma and of carcinoma of the tonsil were those escribed in Dr. Berven's article. Among them the following ...y be mentioned in particular:

A woman of 54, treated five years ago for sarcoma of the right onsil. No recurrence, and the only trace of treatment slight carring of the anterior pillar of the fauces.

A man of 62 with carcinoma of the right tonsil invading the ack of the tongue, with large secondary masses in the neck. This ... was treated three years ago by the unit only. No trace of ny growth was discoverable, and beyond extensive scarring and elangiectasis in the neck, and some scarring of the tonsillar ...gion, there was no evidence of previous disease.

A man of 52 with carcinoma in the left floor of the mouth extending far back towards the root of the tongue, with a small secondary gland. There is now no trace whatever of disease.

A man of 65 with an extensive carcinoma actually infiltrating the greater portion of the left lower jaw. Six months ago this man was treated exclusively with the unit. The surface had healed entirely, excepting for a small area of necrosis, where the dead bone had not yet separated.

A man of 80 who came to the clinic six weeks ago with a most extensive carcinoma involving the whole of the right upper lip and extending back within the cheek as far as the tonsil. The case was still under treatment by means of the unit, but all evidence of active growth had disappeared, and the whole area appeared to be healing.

Two cases of very extensive carcinoma of the upper jaw involving the antrum, both in elderly men. These cases had been treated exclusively with the unit. In one of them all trace of growth had disappeared, and he had remained well for some two years. The other was still under treatment, but the recession of the growth was obvious.

A woman of 60 who was treated for a similar growth five years ago was in perfect health. Her case was specially remarkable, as the growth had extended into the nose and backward into the nasopharynx.

Other cases included carcinoma of the tongue, of the floor of the mouth, of the tonsils, and of the pharynx, in many of which secondary glands had been present. The great bulk of the cases were inoperable when first seen, and most of them might have been regarded as surgically impossible, even from the point of view of alleviation. Dr. Berven admitted that they had a certain percentage of failures, but the presentation of such a series of perfect results places beyond any question the value of his method.

The unit was applied in general through an average of six ports of entry, very carefully arranged so as to provide full concentration on the tumour, but to avoid injury to the skin. The success achieved on the latter point was very remarkable, and, with the exception of one or two cases where fixed glands had demanded an excessive local dose, there was no trace whatever of any skin reaction. This was a very remarkable testimony to the value of a narrow beam, and to the very great care exercised in its direction.

THE STOCKHOLM UNIT

Dr. Sievert, who designed the radium unit, demonstrated its construction.

It consists of a heavy mass of lead arranged in the form of the letter L, and pivoted about the middle of the longer limb. The radium itself is contained in a flat carrier, which can be inserted into either of the two slots placed near the extremities of the two limbs of the L.

The box contains sixty tubes of 50 mg. of radium element each, making 3 grams in all, and it is so arranged that these tubes can be concentrated at the centre or brought out to the sides of the box by an external lever.

When inserted in the short end of the unit the radium is brought into its central position. It is protected by the equivalent of 5 mm. of lead, and its distance is 6 cm. from the skin surface. The maximum aperture is a circle of 5 cm. in diameter. At the larger end the skin distance is again 6 cm., with a maximum aperture of 8 cm.

The unit is so mounted and placed as to move with the greatest facility into any position. The smaller end is used for situations where the introduction of the larger end would be anatomically impossible, such as the neck and the perineum. It has, however, a smaller lead protection, the thickness being here only 2.5 cm., as against 6 cm. at the heavy end.

Professor Sievert then showed us his physical laboratory, and the new system of measuring ionization and thereby determining the intensity of the gamma rays with great precision. The essential part of his apparatus consists of two concentric spheres of metal insulated from one another by four points of amber. They can be made of very small size, and he showed us some in which the outer sphere was only 5 mm. in external diameter. The principle consists in charging the inner sphere to a high potential, and then placing the instrument for a known time in a region to be investigated. The inner sphere is discharged by ionization across the intervening air space at a rate proportional to the radiation, and a measurement of the charge remaining on the inner sphere enables the radiation to be determined with great exactness. These instruments have been charged in Stockholm, sent to America, there exposed to radiation, and returned to Stockholm, when it has been found possible to determine the value of the radiation to which it had been exposed within an error of 2 per cent.

In conversation Professor Forssell expressed the opinion that with larger supplies of radium it ought to be possible to obtain results even superior to those which we had seen. He saw no reason why, with sufficient quantities of radium and with sufficient experience in its application, it ought not to be possible to deal successfully with cancer in any region of the body. And although at present he regarded carcinoma of the intestinal tract as outside the possibility of direct treatment, he was convinced that by some combination of surgery and radium it could ultimately be brought under control. He attributed the success achieved in the Stockholm Clinic to two chief factors: the combined team work of a group of men, each expert in his own department, and the extreme precision with which the whole of their work was controlled. He pointed out that they had only advanced to their present achievements by very slow degrees, and that even now their resources only allowed them to deal with cases in which, from previous experience, they could have some confidence in the results.

OUT-PATIENT DEPARTMENTS

REPORT OF COMMITTEE OF KING EDWARD'S HOSPITAL FUND

A committee, under the chairmanship of the Earl of Onslow, was appointed by the Prince of Wales, President of King Edward's Hospital Fund, to inquire into the methods in the out-patient departments of the London voluntary hospitals, and their effects on the suitability of the patients and on the time of waiting. It was held that these subjects cannot be kept distinct, since if large numbers of unsuitable cases attend there will be more crowding and therefore more waiting. The committee has now issued its report,[1] of which the following is a brief summary:

THE FACT OF WAITING

The report first discusses "the fact of waiting." The evidence comes from common knowledge, from patients and their contributory associations, and from other societies interested in them, and from the hospitals themselves, which have been giving constant attention to the question of waiting and the possible methods of reducing it. The committee concludes that there is a considerable amount of waiting in the out-patient departments, though not much in the casualty departments or in most of the special departments, but that most of the very long periods of waiting which form the subject of comment are due to medical or surgical circumstances affecting the patients concerned.

THE QUESTION OF UNDUE WAITING

The report then deals with the question whether there is unnecessary and avoidable waiting. In order to decide this the committee discusses four possible causes of waiting. It may be unavoidable where there is a large population and where staff and space are necessarily limited. It may be partly due to remediable defects in the accommodation. It may be partly due to remediable defects in the procedure. It may be partly due to the attendance of excessive numbers of patients suffering from minor ailments who could equally well be treated elsewhere and do not need the services of the highly specialized staff and equipment of an out-patient department. The report therefore discusses in turn how far the hospitals could, without hardship to patients or injury to their own efficiency, reduce the amount of waiting either by referring any considerable number of minor cases to other agencies, or by changes in their procedure, or by improvements in their accommodation. On each of these questions the evidence is largely based on action already taken or contemplated by various hospitals in their efforts to solve the problem.

[1] Report of the Committee appointed to inquire into Out-patient Methods at London Voluntary Hospitals as affecting Suitability of Patients and Time of Waiting. London: Printed and published for King Edward's Hospital Fund for London by Geo. Barber and Son Ltd. 1932. (1s. 6d. net; post free 1s. 9d.)

SUITABILITY OF PATIENTS

On the question of suitability of patients the committee finds that many of the hospitals are using their out-patient departments more and more for cases which need consultative and specialist treatment, minor cases being either dealt with in the casualty departments or referred elsewhere for treatment by general practitioners. But this can only be done if the patients can obtain this treatment at a cost within their means. The report accordingly discusses the question of financial suitability and describes the various alternative agencies which can deal with minor cases at the hospitals or elsewhere. These include the hospital consultants, the junior medical staffs, general practitioners in private or panel practice, provident or charitable dispensaries, the medical services of public assistance and other statutory authorities, and the district nursing service.

The committee suggests that co-operation between the hospitals and the other agencies should be facilitated by various improvements in the procedure for doctors' letters to hospitals and replies by the hospital consultants. Its general conclusion on this part of the inquiry is that hospitals should be encouraged to develop the consultative side of their out-patient work and the reference of non-urgent minor cases, after first attendance, to suitable agencies which provide general practitioner treatment. But this is subject to three provisos—namely, that patients who desire a second opinion but cannot pay the fees of a private consultant should have access to the hospitals, at least for one medical examination, without first having to obtain the consent of any medical practitioner; that a sufficient number of cases of all kinds should, at teaching hospitals, be available for the purposes of medical education; and that the reference of minor cases to other agencies should not be made a rigid rule, but should be introduced only gradually and applied only with gradually increasing strictness, except possibly where, as in the case of insured persons, an alternative agency has already been established, the services of which are immediately available at no further cost to the patient. The committee considers that this would reduce waiting, would facilitate the treatment of the more serious cases, and would prevent overlapping between the hospitals and the other agencies.

WAITING AS AFFECTED BY PROCEDURE

The report then deals with the question how far waiting could be reduced by changes in procedure. It describes different methods in use at different hospitals and their effects on the time taken, especially where time-saving improvements have been recently introduced. The committee first discusses the separate stages of procedure, such as arrival, registration, examination and treatment, dispensary, inquiries by almoners or inquiry officers, and the sifting of major cases from minor cases. It then considers methods of general procedure, such as the holding of different sessions for different classes of patient, or the fixing of different times of arrival for different patients during the same session, as, for example, for new patients and old patients, or for men and women. Under this last heading the committee deals at some length with the suggestion, now often made, that different patients or groups of patients should be given separate appointments, as in private practice, instead of all coming at once. This is already done for old patients in a good many special departments. There are difficulties in extending the system to general patients, but the committee considers that the subject needs more study before these difficulties are pronounced insuperable.

WAITING AS AFFECTED BY ACCOMMODATION

The report deals finally with waiting as affected by accommodation. Some hospitals are greatly hampered by inadequate out-patient premises. Several have general extension schemes which have had to be suspended during the financial crisis. But the committee quotes instances where congestion has been relieved by minor structural improvements for specific purposes, and it suggests that these also should be studied by other hospitals.

CONCLUSIONS AND RECOMMENDATIONS

The last section of the report contains a series of conclusions and recommendations based on the foregoing arguments. These are set forth in the summary which the committee appends to its report. In its final paragraphs the committee says:

We are convinced that, while part of the present waiting in the out-patient departments is inherent in the provision of hospital treatment for large populations, part of it could be saved by the methods which we have indicated. These are largely based on the experience of hospitals where waiting has actually been reduced by recent changes. Some of these time-saving changes have been made in the procedure at different stages, and some by structural alterations and additions. But the subjects which seem most to deserve study in the search for remedies for waiting are: first, in connexion with the suitability of patients, the extent to which it is possible to reduce the number of minor cases by developing the consultative part of out-patient work, though not to the undue exclusion of the other parts; and, secondly, in connexion with methods of procedure, the extent to which it is possible to depart from the principle of a single fixed hour of arrival for all patients.

The committee has been impressed by the evidence of the popularity of the hospitals, by the confidence felt by the patients and their friends in the thoroughness and efficiency of the examination and treatment provided by their medical staffs, and by the amount of attention which their committees and officers have been giving to the problem of the prevention or reduction of waiting and overcrowding in the out-patient departments. Its final recommendation is that the King's Fund should assist the hospitals in the further study of the subject with a view to definite action.

NEW YEAR HONOURS

The list of New Year honours was issued as a special supplement to the *London Gazette* on Monday, January 2nd. The names of the following members of the medical profession are included:

Baron

Sir THOMAS JEEVES HORDER, Bart., K.C.V.O., M.D., F.R.C.P., Physician-in-Ordinary to H.R.H. the Prince of Wales, Senior Physician to St. Bartholomew's Hospital.

K.C.I.E.

Major-General JOHN WALLACE DICK MEGAW, C.I.E., K.H.P., I.M.S., Director-General, Indian Medical Service.

K.C.V.O.

FREDERIC JEUNE WILLANS, C.V.O., M.R.C.S., Surgeon Apothecary to H.M. Household at Sandringham, and late Surgeon Apothecary to Queen Alexandra.

Knighthood

JOHN LAWRANCE MCKELVEY, M.B. For services to surgery in the Commonwealth of Australia.

SAN CROMBIE PO, C.B.E., M.D., formerly Municipal Commissioner, Bassein, Burma.

C.B. (Military)

Surgeon Rear-Admiral HERBERT REGINALD HARRY DENNY.

C.M.G.

WALTER BURFORD JOHNSON, M.B., West African Medical Staff, Director of Medical and Sanitary Service, Nigeria.

C.I.E.

Major-General WILLIAM CHARLES HUGHAN FORSTER, M.B., V.H.S., I.M.S., Surgeon General with the Government of Bombay.

Colonel JOHN NORMAN WALKER, I.M.S. (ret.), Director, Medical Department, and Sanitary Commissioner, His Exalted Highness the Nizam's Government, Hyderabad, Deccan.

Lieut.-Colonel ROBERT BERESFORD SEYMOUR SEWELL, I.M.S., Director, Zoological Survey of India.

C.V.O.

WILLIAM HOPE FOWLER, F.R.C.S.Ed., Consulting Radiologist, Royal Infirmary, Edinburgh.

O.B.E. (Civil)

JOHN THOMAS BRADLEY, M.D., Chief Medical Officer, Seychelles.

Miss CHARLOTTE PURNELL, M.B., M.S. For long and devoted medical work among the Arabs in Palestine and Trans-Jordan.

ERIC SLACK, M.B., Medical Officer, Leper Settlement, Botsabelo, Basutoland.

ROBERT STANLEY TAYLOR, M.D., East African Medical Service, Principal Medical Officer, Somaliland Protectorate.

O.B.E. (Military)

Surgeon Commander WILLIAM HAROLD EDGAR, M.D., R.N.

M.B.E. (Military)

Major PERCY NEIL SANDWAYS, I.M.D., British Military Hospital, Trimulgherry, India.

M.B.E. (Civil)

Subadar KISHEN SINGH, Medical Department, Kenya.

Hon. M.B.E. (Civil)

MICHAELAKI SHISHMANOGLOU, Assistant Senior Medical Officer of Health, Palestine.

Kaisar-i-Hind Medal

Miss CHARLOTTE ROSE GREENFIELD, Medical Officer in charge of St. Margaret's Hospital, Poona, Bombay.

ROBERT HAROLD HULL GOHEEN, medical missionary in charge of the American Presbyterian Mission Hospital at Vengurla, Ratnagiri District, Bombay.

The Right Rev. KENNETH WILLIAM STEWART KENNEDY, M.B., B.Ch., D.D., Bishop of Chota Nagpur, Bihar and Orissa.

The following promotions are also announced:

Royal Navy

Surgeon Commanders to Surgeon Captains: WILLIAM H. EDGAR, ARTHUR G. V. FRENCH, HORACE E. R. STEPHENS, O.B.E.

Royal Naval Volunteer Reserve

Surgeon Commander to Surgeon Captain: THOMAS TURNER, V.D.

Surgeon Lieut. Commanders to Surgeon Commanders: THOMAS W. DRUMMOND, WILLIAM F. W. BETENSON.

The honour of Knighthood has also been conferred upon Professor FREDERICK T. G. HOBDAY, C.M.G., F.R.C.V.S., Principal and Dean of the Royal Veterinary College.

The distinction C.B.E. (Civil) has been bestowed upon Mrs. ALICE BAKER, one of the founders of the Thomas Baker, Alice Baker, and Eleanor Shaw Medical Research Institute, Melbourne, Commonwealth of Australia.

South Africa

[FROM OUR CORRESPONDENT IN PRETORIA]

League of Nations Regional Health Conference

A conference arranged at the request of the Union Government by the Health Organization of the League of Nations to discuss those health problems arising as the result of rapidly increasing air transport, in particular the possibility of spread of yellow fever, was opened at Capetown on November 15th, 1932. Medical representatives from the various African States and from British India attended, and the League of Nations was represented by Sir George Buchanan. While the agenda was very largely occupied with the problem of yellow fever, other public health problems of inter-State importance were discussed, such as plague, which is endemic among wild rodents of many of the African States, small-pox, which is periodically conveyed to the eastern portion of the continent by immigrants from India, and the difficulties of providing adequate medical and health services in the rural native reserve areas. The administrator of Cape Province, Mr. Conradie, in welcoming the delegates, pointed out the urgency of holding such a conference to examine questions relating to public health administration and protection

against epidemic diseases. The Health Organization of the League of Nations had already rendered conspicuous service in investigating the incidence of epidemic diseases, and this conference would be another step in the attempt to solve the very complex problems facing health experts in Southern and Central Africa. The discussions might result in determining not only the most effective measures of combating the actual inroads of disease, but also of fighting existing infection in the country. Dr. Park of Singapore, in replying to the welcome, explained the functions of the Health Section of the League, and emphasized the value of these regional conferences, which went a long way towards removing international misunderstandings. Sir George Buchanan referred to the advantages to be gained from an interchange of the experiences of different countries in combating various diseases. In matters of health they should endeavour to remove frontiers, so that one country could know what its neighbour was doing to fight disease. Geneva could not be regarded as a repository of all the intelligence of the world, and regional conferences were therefore essential for the exchange of information. Mr. Conradie had said that the Covenant of the League, in addition to providing for international co-operation, included a declaration to the effect that members wished to take steps for the prevention and control of disease. The League provided for the organization of international co-operation in the domain of public health. One of the earliest problems had been the establishment of a clearing-house for the receipt and distribution of information about epidemic diseases throughout the world. This work had been developed to such an extent that conditions in almost every country were made known to all health administrations. The investigations undertaken by the Health Committee of the League had been most successful. The principal features of the work had been the development of closer co-operation, and the gradual accumulation of information about health matters in various countries and the measures applied to combat disease.

Annual Report of Public Health Department

In his report of the Union Health Department for the year ended June 30th, 1932, Sir Edward Thornton records with great regret the retirement of Dr. J. A. Mitchell, his predecessor in the combined post of Secretary for Public Health and Chief Medical Officer. Dr. Mitchell's health broke down in 1930 at Bangkok, where he was representing the Union Government at a meeting of the Leprosy Commission of the League of Nations Health Organization. He resumed duty in August, 1931, but, owing to continued ill-health, found it necessary permanently to relinquish his office. The report states that the financial stringency has adversely affected the activities of the Department, which has, nevertheless, been able to carry out all its functions on a smaller scale. The European vital statistics (the only ones recorded) were very satisfactory. The general death rate (9.37 per 1,000 population) and the infantile mortality rate (63 per 1,000 live births) are the lowest so far recorded for the Union. Owing to lack of funds the non-European population has not been enumerated since 1921, although the European population has been enumerated twice during that time. This absence of accurate statistical information regarding the native population greatly hinders health administration.

The epidemic of malaria which occurred in Natal during the autumn (March and April) was the worst ever experienced there. The summer started with a drought, which denuded large areas of vegetation, so that the late rains produced the unshaded puddles favoured by the malaria vector, the *Anopheles costalis*. There were only sporadic cases during January and February, but towards the end of March the number increased, the epidemic reaching its height in April. The report reiterates the lessons to be learnt from this epidemic—namely, that malaria is a local disease requiring to be combated by measures which can only be effectively enforced by a properly constituted local authority thoroughly alive to the menace. The unusually high mortality among the Bantus is attributed to massive infection as the result of *costalis* prevalence and to the fact that many of the districts had been famine-stricken owing to the drought. The mal-nourished children could offer little resistance, and the mortality among them was high. Quinine was distributed on an extensive scale by the native malaria assistants employed by the Department, who visited 30,508 sick natives. The drug actually reached very many more, since it was carried by relatives to less accessible parts. The mortality due to the epidemic cannot be ascertained accurately, owing to the absence of any system of registration of native deaths. It is estimated, however, that there were 10,000 deaths among a population in the affected areas of well under a million.

The plague incidence among the human population was low—twenty-two cases, of which sixteen were fatal; all the cases occurred in the Orange Free State. As usual, the infection was traced to veld rodents. The presence of infection among these animals over wide stretches of country necessitates an alert policy on the part of the Government. Careful surveys are continually being carried out by a staff of inspectors, and a strict watch is kept on the spreading waves of infection among rodents. The rabies endemic among certain wild carnivora in the northern provinces also requires watchfulness. Propaganda has been fairly effective, and persons bitten by such animals report for treatment; none of the persons treated developed symptoms. Two fatal cases of human rabies occurred during the year, one a European male adult who was bitten in the hand by a yellow mongoose, the other a native male adult bitten on the lip by a genet cat. In both cases, as was subsequently ascertained, the victim had been bitten three weeks prior to the onset of symptoms; death occurred six days later.

"Bilharzia camps" for children were established as in previous years in parts of the Transvaal where the snails are infested with the schistosome. Fouadin and sodium antimony tartrate were used for treatment. The former was found to give quicker results, to be easier to administer, and complications were absent. The objection to its general use was one of expense; the cost of the fouadin required to cure one patient was equal to the cost of treating fifty with sodium antimony tartrate. In addition to the treatment camps, farm schools in badly endemic areas were given financial assistance in the erection of bilharzia-free swimming baths. Typhoid continues to be unduly prevalent. Although notifications average 4,000 yearly, the actual incidence is certainly much higher. Owing to imperfect notification, particularly among the native population, and to the fact that the causative bacillus not infrequently produces a condition not recognizable apart from laboratory tests, precise figures cannot be obtained. It is probable also that in Bantus the usual clinical picture is, more often than not, absent. The Department publishes annually a "black list" of the urban local authorities with the highest incidence per 1,000 of population, on the grounds that the prevalence of the disease is largely due to preventable local insanitation. The policy of "probationally discharging" those lepers in whom the disease is considered by a medical board to be "arrested and non-infective" has continued to give satisfactory results. The news appears to be spreading among the native population that entering an institution does not necessarily involve life-long incarceration, particularly if the treatment offered is accepted. Of 2,582 lepers probationally discharged since this policy was

adopted in 1923, only 199 have had to be readmitted owing to recrudescence. During the year Dr. Wade, chief pathologist to the Culion Leper Settlement, Philippine Islands, visited South Africa in his capacity of secretary to the Leonard Wood Memorial Fund. The terminology suggested at the Culion Leprosy Conference was discussed, but it was pointed out to Dr. Wade that certain cases common in South Africa did not appear to fit in with that classification. Dr. Wade was given all facilities for inquiring into this matter. The incidence of typhus continues to be high ; 1,550 cases were reported during the year, chiefly from the native territories of the Cape. The infection is, however, of a mild form locally, and mortality is low. The mild nature of the disease has raised doubts in the minds of observers, and it is thought that some of the outbreaks may be due to a flea-borne, typhus-like disease rather than to true typhus.

Birth control clinics supported by voluntary effort have been started in Johannesburg, Capetown, and Pretoria. The instruction is given to those mothers for whom it is considered necessary to prevent further pregnancies or to have greater intervals between confinements. The serious shortage of trained and certificated nurses, particularly in the rural areas, continues.

Scotland

St. Andrews Clinical Research Institute

The annual report of the Sir James Mackenzie Institute for Clinical Research shows that a considerable number of continuous health records from birth onwards have been collected during the thirteen years of existence of the institute. It is believed that in about thirty years a great wealth of medical knowledge concerning the life-histories of health and illness will have been collected, and will be available for the benefit of the country. The council expresses the opinion that this object is worthy of national support, and that it would be a misfortune if the records had to be broken off or terminated. Special attention is therefore drawn to the finances of the institute. The capital sum available amounts to £10,999, of which only £3,218 is entailed. The income from investments and subscriptions in the current year will not exceed £718, although at least £1,400 is required for maintenance. It would be possible to continue to meet expenditure for about two years by drawing on unentailed capital, but this would be an unwise procedure. Under these circumstances the council feels it must seriously consider closing the institute unless an increase of income of at least £750 a year is assured. It may be added that the clinical members of the staff give their services voluntarily, and the amount expended on salaries and wages is incurred in the employment of the laboratory, radiological, and clerical staff.

Vital Statistics of Scotland

The report of the Registrar-General for Scotland for 1931 shows that the birth rate was the lowest on record, that there was a slight further improvement in the death rate, while the infantile mortality rate had only once been lower. The mortality from the principal epidemic diseases was low, that from measles especially improved. Births registered during the year numbered 92,220, or 2,329 fewer than in the previous year ; this was equivalent to a rate of 19.04 per 1,000 of the population, and was only about half of the maximum Scottish birth rate of 35.62 registered in 1876. There were 64,229 deaths in the year, giving a rate of 13.26 per 1,000 of population, the lowest recorded except for the years 1923 and 1926, when the rates were 12.95 and 13.11 respectively. Deaths of infants under 1 year numbered 7,544, or 81.8 per 1,000 births. Influenza was responsible for 1,270 deaths, whooping-cough for 957, measles 641, diphtheria 356, cerebro-spinal fever 290, scarlet fever 161, typhoid 31, erysipelas 174, encephalitis lethargica 99, and poliomyelitis 15. There was no death from small-pox, and only one from typhus. Deaths from all forms of tuberculosis numbered 4,205, the lowest figure yet recorded ; the death rate is now less than one-quarter of the mean annual rate which prevailed in the period 1861–70. The death rate from phthisis varies with age, declining after infancy to its lowest at 5 to 9 years, rapidly increasing thereafter to its maximum at 15 to 24 years for females and 35 to 44 years for males ; over 35, the male death rate from this cause is almost twice as high as the female. Malignant disease accounted for 7,158 deaths, the organs affected being, in order of frequency, the stomach, liver, peritoneum, intestine, rectum, buccal cavity, and genito-urinary system. The age of greatest frequency was 65 to 70 in males and 70 to 75 in females. Considerable attention is paid in the report to an analysis of mortality in childbirth. While the mortality rate from puerperal causes in 1855 had been 4.9 per 1,000 births, with 1.7 due to puerperal sepsis and 3.2 to other causes, the rate in 1931 was 5.9, including 2.2 due to sepsis and 3.7 to other causes. There had been a general trend upwards of puerperal mortality in each decennium from the beginning of registration, except 1895 to 1904, which showed the lowest rate ever recorded in the country of 4.6. The year 1931, however, had shown an improvement in a rate of 5.9 as compared with 6.9 in 1930. The chief causes of maternal mortality in the past ten years had been puerperal sepsis 30.76 per cent. of deaths, eclampsia 16.59 per cent., and haemorrhage 11.98 per cent. Mortality of women from all puerperal causes in Scotland is 50 per cent. higher than in England and Wales. It is suggested, however, that this discrepancy is largely due to differences in classification. The maternal mortality rate was found to differ widely in various counties of Scotland, the rates ranging from 7.98 and 7.72 in Wigtown and Orkney down to 2.46 and 2.55 in Nairn and Bute. Deaths from sepsis showed considerable seasonal variation, the mortality being higher in winter and spring than in the summer and autumn months. An appendix deals with the vaccination of children born in Scotland in 1930. Of 94,571 children born in 1930, 6,242 died before reaching the age of statutory vaccination, leaving 88,329, of whom 47,796, or 54.11 per cent., were certified to have been successfully vaccinated ; 34,079, or 38.58 per cent., of the total were unvaccinated by reason of a declaration of conscientious objection. It is pointed out that prior to the Vaccination (Scotland) Act, 1907, more than 91 per cent. of children born in Scotland were vaccinated ; this percentage has steadily decreased each year, except in 1920, when there was an epidemic of small-pox in Glasgow and the percentage rose to 70.54. Another appendix analyses the mortality from diabetes. The crude death rate from diabetes in Scotland at the beginning of the present century was 67 per million ; this steadily increased until, in 1915, it was 113. During the war the rate fell to 83 ; and in 1922 it had increased to 108, being steadily more common in females than in males, but the following three years, after the introduction of insulin, saw a fall to 93 per million in 1925, and by 1931 it had again increased to 175 per million, the total number of deaths in this year being 660, or 56 more than in 1930. There is a steady increase in the death rate of diabetics from infancy to old age. The report states that pernicious anaemia is a comparatively rare cause of death under 35 ; thereafter the death rate increases in frequency with age in both sexes up to 75 years, females showing a much heavier death rate than males. During

1931, 285 deaths were attributed to this cause, and this compares very favourably with the figures for previous years. The improvement is attributed to new methods of therapy.

Glasgow Western Infirmary

At the annual meeting of the Western Infirmary, Glasgow, Colonel J. A. Roxburgh, chairman of the Governors, stated that the institution had been fully occupied throughout the past year, and the waiting list had not diminished. The auxiliary hospital at the David Elder Infirmary, which was opened in January, 1928, for surgical cases, had dealt with over 3,000 cases during the year. The Tennent Memorial Ophthalmological Department, for which the plans had been adjusted, would be begun early in 1933. A sum of £6,500 had been received from the trustees of the late Dr. and Mrs. Fullerton of Arran, and with this the Governors proposed to erect a training school for nurses, which would be ready within six months. Workmen's contributions would unfortunately be smaller on account of the depression in industry, and several large donations of previous years had been much reduced. Grateful patients had given £1,674, and one contributor had sent £1,500 in recognition of the treatment of a number of his employees in the institution. There would be a deficit on ordinary revenue for the year of not less than £12,500, the same as for the preceding year; this sum would have to be met from legacies.

Glasgow Orthopaedic Work

Presiding at the annual meeting of the Royal Hospital for Sick Children, Glasgow, Lord Provost A. B. Swan announced that the new orthopaedic department, which is to be built at a cost of £50,000, will include several small wards with cots—erected in such a way as to permit open-air treatment—a gymnasium, and rooms with appliances for remedial exercises, electrical treatment, light treatment, and hydrotherapy. Comparing the work of the hospital to-day with that of fifty years ago the chairman stated that in 1882, the first year of its existence, the hospital dealt with 260 cases, whereas 5,626 passed through the wards during the last year. The report for the past year showed an excess of expenditure over income of about £1,100. The number of out-patients treated had been 20,000, with a total of visits amounting to 104,113. The average daily number of children in the wards had been 244, the total available cots being 270.

Aberdeen Medico-Chirurgical Society

The annual commemorative founders' dinner of the Aberdeen Medico-Chirurgical Society was held on December 10th, 1932, under the presidency of Dr. W. Clark Souter. This society was founded in 1789 by twelve medical students at Marischal College, of whom James McGrigor, later principal medical officer to the Duke of Wellington, was the leading spirit. At the dinner, after the usual loyal toasts, Emeritus Professor J. A. MacWilliam proposed "The Founders of the Society," and Mr. Alexander Mitchell gave the toast of "The Guests," for whom Major M. M. Cruickshank, I.M.S., replied.

Proposed New Edinburgh Hospitals

At a meeting of the Public Health Committee of Edinburgh Town Council on December 20th last, it was decided to take no action on the motion that a maternity hospital should be provided in Leith to accommodate the thirty to forty cases which had to be removed each week to the Royal Maternity Hospital in Edinburgh or the Elsie Inglis Memorial Hospital. A good maternity service was provided in Leith by nurses connected with the Royal Maternity Hospital, and accommodation was available at the Council's Western General Hospital recently taken over by the local authority. The city architect submitted a report on the area of twenty-eight acres in the neighbourhood of the Colinton Mains Hospital for Infectious Diseases, which it is proposed to reserve for a general hospital. The site would provide accommodation for a hospital of 500 beds, with the usual administrative and special departments, and with sufficient grounds for recreation and isolation of the hospital. The Public Health Committee approved the report, and also set apart an area of some eight acres adjoining Redford Barracks in the neighbourhood for a hospital which the War Department had proposed to build. Tenders were submitted and approved for the erection of two more blocks at Gogarburn, certified institution for mental defectives, at a cost of about £9,000.

Ireland

Hospital Sweepstakes (Irish Free State)

The report of the Committee of Reference for hospital sweepstakes has just been published. It sanctions the participation of forty-eight hospitals in the Grand National Sweepstake. These hospitals claimed £7,736,296, and are awarded £4,809,457. Increases to forty-four hospitals represent £851,212, of which £647,186 is for endowments. The gross total award for endowment is thus increased to £2,878,147, as against claims amounting to £4,586,270. There are, it is understood, seven sweepstakes to come before the Act expires. The Grand National, 1932, made available £470,000, and, assuming that a sum of £500,000 for each of the seven other sweepstakes is realized, the total will be £3,970,000. There would still remain of the present estimated needs of forty-eight hospitals an amount unprovided for of £939,457. The report criticizes hospital administration generally, and states that the greatest possible advantages and economies would result from the co-ordination, as far as practicable, of the services of the voluntary hospitals. The sacrifices which this would entail would be outweighed by an improved service to the sick, and by increased opportunities for the teaching, study, and prevention of disease. Commenting on certain defects in the present system, the report states that many of the plans submitted for new buildings show a lack of familiarity with the needs of a hospital. There is a tendency to introduce unnecessary departments and equipment which, in some cases, would be sufficient to cater for twice, or even three times, the number of patients for whom they are claimed. Any unnecessary expenditure on buildings must automatically reduce the amount available for endowment, to the detriment of both patients and staffs of the hospitals.

Allocations for Clinical Research

The report states that a scheme is under consideration whereby a joint proposal will be presented to the committee at an early date on behalf of a number of Dublin hospitals for allocation of a sum to build, equip, and endow an institute for clinical research. As indicated in the previous report of the committee a scheme for co-ordinated research is considered necessary and desirable if clinical opportunities offered by reconstituted hospitals are to be utilized to the greatest advantage. It is the absence of facilities for continuous research in clinical fields which makes it necessary for students to go abroad. There is much to be said for the belief that on the restoration of a lost tradition in this field the future of Irish medicine and hospitalization to a large measure depends. The promoters of the new scheme will probably not lose sight of the desirability of co-operation between university laboratories and hospital workers, and

the report considers that the proposals should include facilities to research workers by the medical staffs of the hospitals. The total sum involved would be not less than £250,000.

Treatment of Children's Diseases

Special attention is given to the question of children's diseases. The treatment provided at present for the illegitimate and mentally defective child, as well as for the deaf, dumb, blind, and crippled, is inadequate. It would be impossible to expect that any one of the existing children's hospitals should embark on a comprehensive scheme embracing all the activities which make for the betterment of child health and welfare. Such hospitals are already providing for the treatment of ordinary children's diseases, but the main problem is still untouched. There is a lack of facilities for research, and there are gaps in the medical knowledge of children's diseases. The various institutions concerned with child welfare are not unified, and the existing extern departments are unsuitable. It is in the development of outpatient departments in the children's hospitals that the most practical solution of the problem will be found. The report suggests that a central clinical extern should be established, which would provide for new classifications, opportunities for research, and educational facilities for doctors and students. The clinic should be erected on a central site, and be sufficiently large to deal with the aggregate total per day of those children attending the city hospital dispensaries. Provision should be made for medical, surgical, electrical, scientific, and dental treatment.

Reference is made in the report to the proposals of some of the larger hospitals to provide more facilities for tuberculous patients, and comments are made on the direction which such schemes should take. Cancer treatment, obstetrics, and nursing services are also dealt with.

Memorial to Dr. Walter Stevenson

A tablet in memory of the late Dr. Walter C. Stevenson was recently unveiled at the St. John Ambulance Hall, Dublin, in the presence of his three sons and a number of members of the brigade and their friends. Sir John Lumsden, who performed the ceremony, said that before the Boer war Dr. Stevenson was interested in the work of the St. John Ambulance Association, and in 1910 he succeeded the late Dr. Dallas Pratt as honorary secretary, a position he held until his death. He gave an enormous amount of his time to teaching and examining, and to the compilation of the official records of the Irish centre. In 1914 he became a district surgeon of the brigade, and in 1919 the Grand Prior appointed him Knight of Grace of the Order. Sir John referred to the wonderful pioneer work Dr. Stevenson had done in connexion with x rays and radium, and spoke of his kindness, sympathy, and modesty. Professor R. J. Rowlette, who said he had known Walter Stevenson since his student days, sketched the history of his work, in co-operation with Professor Joly, in the field of radium, and particularly in the application of radium to the treatment of disease. He said that the method they introduced about twenty years ago was quickly taken up in Continental countries. So much greater was the publicity given to the treatment abroad that it became known as the "Brussels" method, later as the "Brussels" or "Dublin" method. Dr. Stevenson's pioneer work had given, and would give, relief to thousands of people all over the world.

Ulster Nursing Council

At a recent meeting of the Joint Nursing and Midwives' Council for Northern Ireland Miss A. E. Musson was re-elected to act on the Northern Ireland Executive Committee of the Queen's Institute of District Nursing. In response to a letter from the medical officers of the Belfast Infirmary, stating that the infirmary would be in great difficulties if only two preliminary examinations were held during the year, it was agreed that an additional examination should be held, commencing on May 23rd. A report on the proceedings at the conference of representatives of the General Nursing Council for England and Wales, the General Nursing Council for Scotland, and the Joint Nursing and Midwives' Council, held in Edinburgh on November 28th, 1932, to consider the question of adopting a minimum educational standard for nurses taking the State examinations and of dividing the preliminary into two parts, was given by Miss A. Curtin and Miss A. E. Musson. It was agreed that copies of the minutes of proceedings forwarded by the General Nursing Council for Scotland should be circulated to the council, and the matter brought up for further discussion at a future meeting.

Extension of Mental Hospital

The report of the medical superintendent to the committee of management of Belfast Mental Hospital shows that there has been a large increase in the number of patients during the last few years, although there has actually been a decrease of seven since the last meeting of the committee. The average number of patients for the year 1927–8 was 1,201; it is now 1,406, an increase of 205. The institution, the report states, is being used as a clearing-house. The Ministry has ruled that it must admit all cases. Its function is to take people domiciled elsewhere until their proper place is discovered and they can be transferred; it has to take children, and old men who have become childish. Of the 1,406 patients admitted, 724 were males and 682 females. Since the last meeting nineteen males and twenty-one females have been admitted, while fifteen males and fifteen females have been discharged. Eight males and nine females have died. Four of the total number of patients have been received as voluntary cases, and eight as temporary; they were not, therefore, certified to be of unsound mind.

England and Wales

Treloar Cripples' Hospital

In the annual report of the Lord Mayor Treloar Hospital at Alton, Sir Henry Gauvain comments on the increasing proportion of general orthopaedic cases admitted to the hospital each year, and he attributes this to the work of the school medical and the maternity and child welfare services. At the same time there is a steady fall in the incidence of surgical tuberculosis, so that it is possible to adjust hospital accommodation to the new demands. Clinics at Alton, Andover, Eastleigh, Havant, Portsmouth, and Southampton are conducted from the Alton hospital, and clinics working in association with the hospital and conducted by surgeons attached to the staff have also been established at Basingstoke, Farnborough, and Fleet. New hospital buildings are now being erected at Alton, and those which are complete have proved to be admirably designed for their purpose. The seaside branch of the hospital at Hayling Island has done excellent work during the year. The hospital land includes over a mile of beach, and is remote from any town. The building faces south-east, from which quarter the wind rarely blows, and the rainfall at Hayling Island is the lowest in the South of England. Experience has shown that the strong stimuli of sun, sea breezes, and bathing cannot be tolerated by weakly or cachectic children, or sick children under the age of 5. Children who are likely to benefit by treatment at the seaside are those with good constitutions, who have responded well to sun treatment inland, but in whom further progress is

a way as to avoid general reactions. Dr. Gillespie's method seems to be that at first he tries to secure some reaction, then to reduce his dose if the reaction first produced be severe [*sic*], and then to find the highest rate of increase which can be tolerated without reaction. My only comment is that my method, if irrational and absurd in Dr. Gillespie's opinion, is at least consistent.

Dr. Camac Wilkinson takes me to task for many things, the most important being that in his opinion my way of giving tuberculin, even in the maximum doses to which I am accustomed to proceed, is useless. I should like to remind him that there are observers of this disease as earnest and as experienced in assessing methods of treatment as himself, who have given up the use of tuberculin entirely, on the grounds that at best it is useless and at worst it may be harmful. I gather that, in Dr. Camac Wilkinson's opinion, I ought to give up tuberculin altogether unless I am prepared to adopt his method.

The tuberculin problem is, in my judgement, not one for platform discussion, but for critical analysis of individual experience and for reasoned criticism of different methods and of collected statistics. My opinion of tuberculin remains what it has always been—that I am sure it can be harmful, while I *think* in suitably selected medical cases it can be useful, as well as in the surgical localizations of the disease. If I am ever persuaded to give up its use I think it will be the arguments of its exponents rather than those of its critics which will be responsible. One point I may concede Dr. Camac Wilkinson, and that is that the use of liquid measure in describing dosage is more scientific, and possibly more accurate, than that mentioned in my paper.—I am, etc.,

London, W.1, Jan. 2nd. R. A. YOUNG.

The Biochemical Syndrome of Uraemia

SIR,—In his very interesting paper, in the *Journal* of December 24th, 1932, on uraemia Dr. Geoffrey Thompson tells us that his object was "to distinguish the true biochemical syndrome of uraemia from certain allied conditions." He compares the clinical phenomena presented by his patient, who unfortunately suffered from a hopeless rupture of his only kidney, which was removed, with those presented by patients with certain diseases "accompanied by a functional disturbance of the kidney, which tends, if severe, to end in a condition of uraemia apparently similar to that following total nephrectomy in animals"—and, amongst others, he mentions acute nephritis. In his case the blood pressure remained low throughout, and even fell below normal; there was no oedema; and, though fibrillar contractions of muscles occurred, there was no convulsive phenomenon. He concludes that these differences—which seem, rather, additions—are to be attributed to extrarenal factors, "which usually accompany the true biochemical syndrome"; whereas, according to him, "the latter varies in degree only, but not in kind, from case to case."

With this conclusion I find myself, I think, in complete agreement. But what are these extrarenal factors? The most significant remark in the report bearing on this point is the statement that the patient "received nothing by mouth except water and calcium chloride." Nor was any protein administered in any other way. Only "forty ounces of 5 per cent. glucose in saline were given by rectum each day." Headache, drowsiness, and marked vomiting, with death on the tenth day, ensued. But if patients with acute nephritis were treated in this way, what would happen? Possibly, if such treatment were given at the outset, the patients would rapidly revert to a state similar to that presented by Dr. Thompson's case—a lowering of the blood pressure, the disappearance of the oedema, and the absence of convulsive phenomena would be noted. And since in such cases the kidneys, however impaired, still exist, the probability is that the renal function would be rapidly restored, the patients getting well.

The difficulty is that acute nephritis is only diagnosed when oedema already exists: it is the oedema which causes one to examine the urine and to take the blood pressure—to diagnose the case. Two questions arise: (1) What is the state of the kidney immediately antecedent to the syndrome recognized as acute nephritis? (2) What is the cause of the oedema and other signs? Most people think that the acute nephritis is due to a toxin, and that a toxin is in the blood; and to this may be attributed the symptoms caused by the extrarenal forces. But, as someone at the recent meeting of the Royal Society of Medicine reminded the audience, the toxic hypothesis of acute nephritis has not yet been proved. Possibly the disease may be produced mechanically—as in pregnancy—by a blocking of uriniferous tubules in the medulla, by turgescence of this part. The influence of cold, which by constricting the cutaneous arterioles of necessity determines a greater visceral supply, must be considered. Trench nephritis, in which de Wesselow failed to find streptococci in the urine, is an example. And the effect of a contemporaneous diuresis—or the need for one—must be simultaneously kept in mind.

Thus, the question resolves itself into another. What would happen if the kidneys of a patient became blocked in such a manner—that is, if the individual got into a state comparable with that presented by Dr. Thompson's patient—and continued eating and working? Would the blood pressure go up? Would oedema occur? Would convulsions be likely? The effect of such a disturbance of the renal circulation must necessarily affect the blood flow through other parts. The blood flow through the liver must become increased—even to the extent of the systemic blood being contaminated by portal blood, insufficiently purified. Naturally, the rapidity (the duration) of the process must reflect itself in the blood changes found—in the non-protein-nitrogen ammonia urea content.—I am, etc.,

Rugby, Dec. 24th, 1932. R. H. PARAMORE, F.R.C.S.

Epidemiology

SIR,—Professor Greenwood's letter (December 24th, 1932, p. 1164) comes most appropriately at this season of peace and good will, and I hope you will allow me to thank him for his notes on my appreciation (December 10th, 1932, p. 1061) of his book. His first and second annotations satisfactorily dispose of any possible misunderstandings, and as, here, I may have been (in all innocence) at fault, I humbly express regret, but the third annotation, on Freind's criticism, must clearly be held, in Oliver Goldsmith's phrase, to constitute "the cream of the correspondence."

I threaded my way rather anxiously through Professor Greenwood's comments on "Sydenham's own testimony," as cited in my list of references to the *Medical Observations*, and, when I realized they were being tackled seriatim, I was stirred with an enthusiasm resembling that of little Mr Perker of the *Pickwick Papers*, when he saw his candidate for Parliament actually kissing, one after another, the carefully selected babies in arms, whom he had only been expected to put on the head. And then, alas! after murmuring to myself, "He has studied one reference, he has studied another. I found he was not studying them all, and then followed his conclusion: "Freind, who was a clinician, is right." Sydenham, however, was not only a [illegible] a clinician himself, he was even acclaimed as "The

founder of epidemiology," and I venture, therefore, to direct attention once again to my final citation (*Medical Observations*, V, vi, 8), which is, I believe, especially deserving of study in connexion with Freind's criticism. We read (loc. cit.): "Now, however high we may put the difficulty—even if we rank it among the impossibilities—of accurately distinguishing a new fever, immediately upon its appearance, we may still take indications as to the treatment from the *juvantia* and *laedentia*"—that is, if diagnosis be at fault, there is still the possibility of treating the symptoms. And then, too, there are the significant facts, never to be forgotten, noted in the Herter Lectures: first, "Sydenham's conception of an epidemical succession . . . was never so forcibly and magnificently expressed as by him"; and, secondly, "Where the clinical feature is involvement of the nervous system and pandemic influenza; there exists, not a pathological bond in the narrow sense, but an epidemiological affinity as perhaps Sydenham surmised."

Surely, in the light of all these findings, students of the Herter Lectures—and may there be many of them (be they clinicians, bacteriologists, epidemiologists, disciples of Freind, of Koch, or of Sydenham)—may now say to one another, in Sir W. S. Gilbert's well-known words, "I am right, and you are right, and all is right as right can be."—I am, etc.,

London, N.W.5, Dec. 26th, 1932. W. H. HAMER.

Principles of Obstetric Practice

SIR,—Dame Louise McIlroy, in her admirable paper on the above subject in the *Journal* of December 24th, 1932 (p. 1158), hits the nail on the head when she says: "I have always held the opinion that the responsibility for maternal welfare in this country lies in the hands of the family doctor; especially is this the case in country and small town areas." My only comment is that the word "should" ought to be placed before "lies" (reading "should lie"). At the present time a large sum of public money is being spent on ante-natal clinics, which are visited periodically by a medical practitioner, who watches the course of pregnancy up to the time of the onset of labour. This (presumably expert) obstetrician is nowhere to be found when labour starts and an unforeseen complication becomes apparent. The general practitioner is called from his bed (while the expert sleeps) and is expected to overcome any difficulty he may be presented with. If he fails, he is blamed; if successful, it was only his duty, and he gets little thanks.

During the time I was resident medical officer of the Newcastle-upon-Tyne Maternity Hospital I was struck by the frequency with which the doctor's letter, which arrived with an emergency case, began: "I saw this patient for the first time at . . . She had been in labour since . . . and on examination I found . . ."

How much better it would be for the local authorities, instead of spending money multiplying their clinics, which are in unfair competition with the general practitioner, and which can never be utilized by women in the rural districts, to reduce the number and staff them with sound, practical obstetricians, who would act in consultation with the practitioner in cases of difficulty referred by him.

At the present time the working-class woman receives £2 after parturition (£4 if both husband and wife are insured) on production of a certificate given by a medical practitioner or midwife. Would it not be possible to frame a scheme making it obligatory for a woman, in order to qualify for this benefit, to report to a medical practitioner at, say, the fifth or sixth month? The practitioner would be able to give her ante-natal supervision, and, in cases of doubt or difficulty, he could refer her to the central clinic for expert advice. Such a scheme would enable the local authorities to do away with their clinics, and the money saved could be devoted towards the remuneration of practitioners for their ante-natal work. I do not propose to enter into the financial questions of this subject. I am no financial expert, but the remuneration of the general practitioner and expert should be adequate; otherwise the scheme would not be a success. The most important benefit to be derived from such a scheme would be the increased interest and pride of the medical practitioner in his midwifery, which, in existing circumstances, is being crushed out of him.

In conclusion, I consider Dame Louise McIlroy's suggestion for refresher lectures excellent. The only comments I would make are: (1) lectures without clinical work are not of great value; (2) unless one could be assured that all practitioners could (and would) attend, the scheme would not be a great success, the strength of the chain being that of its weakest link.—I am, etc.,

Epsom, Dec. 24th, 1932. TERENCE G. ROBINSON.

Maternal Morbidity

SIR,—The final report of the Departmental Committee on Maternal Mortality and Morbidity[1] contains some interesting facts. The broad conclusion arrived at—that at least one-half of the maternal deaths are due to a departure from an arbitrary standard of midwifery—is not, I think, very convincing. I do not mean to imply that this standard is not essential if we hope to reduce maternal morbidity, but that even if there is a strict adherence to this standard the morbidity will not be reduced to the extent the committee hopes. I believe other factors are equally important.

Of the 4,800 cases enumerated in Table I, roughly 40 per cent. are due to sepsis, 20 per cent. to surgical emergencies arising during labour, and 40 per cent. to factors mainly arising before the onset of labour—such as eclampsia and abortion. Of the septic cases more than 85 per cent. are due to *Streptococcus haemolyticus*, which is found in the genital tract of many women who do not become septic. Also 50 per cent. of septic cases occurred in spontaneous labour. It seems to me, therefore, that the determining cause is the susceptibility of the mother, and the best method of combating it is by the immunization of susceptible mothers in the same way that susceptible members of the staffs of fever hospitals are detected and protected. Of surgical emergencies many must be due to severe and mild forms of rickets, and we must look to the elimination of rickets as much as to the treatment of these cases in hospitals or nursing homes. Of 162 eclamptic cases, sixty-two occurred without any previous albuminuria, and we must wait for a greater knowledge of the prophylaxis of toxaemic conditions before these can be materially reduced. The prevention of abortion must be the greatest problem, and even if compulsory notification of conception were practicable it would, I think, avail little.

I think attention should be focused on these conditions as much as on the primary avoidable factors before we can hope for a great reduction in maternal morbidity.—I am, etc.,

Stechford, Dec. 17th, 1932. H. G. LANGDALE-SMITH.

SIR,—May I assure Dr. Kathleen Vaughan that it was far from my mind to raise any objection to her theses? On the other hand, I had thought to support one of them by giving what seems to me an anthropological explanation for some, at least, of the instances of incompatibility between maternal pelvic and foetal head form. I am, of course, well aware of the mechanism of occipito-anterior

[1] *British Medical Journal*, August 13th, 1932, p. 327.

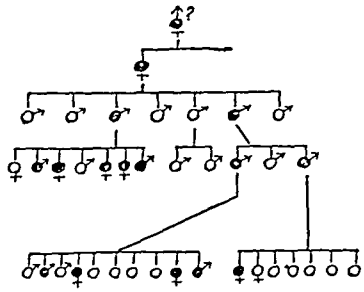
presentation, said by us to be "normal," although, for some Asiatic heads, a vertex presentation would seem to be more advantageous! But I remain under the impression that flexion and rotation, in Western Europe, are conduced to by harmony and interfered with by disharmony between the mother's pelvis and the child's head. Nor can I believe that the variation, throughout the world, of female pelvic form in correlation with infantile head form is without significance in the economy of Nature. In this connexion two papers occur to memory as interesting: the first, by Acosta and Calderon (mentioned in the *Lancet*, 1919, ii, 988), the second, by Rummell (abstracted in the *Epitome* of the *British Medical Journal*, November 16th, 1929, para. 452). Of course, too, the relation between the pelvis of a "healthy outdoor native woman" and the head of her "child by a European father" depends very much upon the racial type of the native woman and the morphology of the European father. We are apt to forget that a very large proportion of "Europeans" are very brachycephalic indeed. I do hope that Dr. Vaughan may come to admit that anthropological considerations are perhaps more worthy of attention than, I fear, she is at present inclined to concede them. Sound propositions, such as hers, so often fail to achieve due recognition by reason of the quite unnecessary exclusion of adjuvant or even corrective notions.—I am, etc.,

London, W.1, Dec. 24th, 1932. F. G. CROOKSHANK.

Monilethrix

SIR,—It seems possible that the Scottish family comprising twenty-two cases of beaded hair—the congenital anomaly known as monilethrix—recorded lately in your columns by the McCall Anderson Memorial lecturer in dermatology in Glasgow,[1] is the family described in 1894 by the late Sir Thomas McCall Anderson himself, sixteen cases of the condition having then occurred in five generations, with a possibility of the condition having been present in a preceding generation as well. Between 1880–1 (when fourteen of these sixteen cases had been traced by the earlier observer and a chart pedigree obtained) and 1932 some fifty-two years have elapsed, a time sufficient to account for the appearance of a further two generations of persons in this stock from the South of Scotland. Moreover, one of the affected males in the earlier pedigree was aged 3½ years in 1880, while in the earlier of the two more completely worked out (final) generations in Dr. Goodwin Tomkinson's family tree the age of one of the affected males appears to be 55 years, exactly what it would be if he were the individual originally seen by McCall Anderson and surviving to the present time.

In your issue of December 3rd, 1932 (p. 1010), Dr. Tomkinson states that "solitary cases of monilethrix have been recorded," the impression being that his record of multiple cases is unique. McCall Anderson in 1894 claimed that no case had so far been recorded illustrative of its hereditary nature, and that his record was "so remarkable as an illustration of hereditary transmission of a very rare defect as to appear . . . well worthy of being put upon record." His record is more than that. It has been very generally overlooked by geneticists owing to being recorded in the second edition (1894) of his *Treatise on Diseases of the Skin* (pp. 59–61), but this record assumes added importance as one of the earliest published pedigrees showing the occurrence of Mendelian inheritance in man. W. C. Farabee's pedigree of brachydactyly, published in America in 1905, has been said to be "the first Mendelian case to be demonstrated in man,"[2] a similar human condition being recorded by H. Drinkwater three years later in this country; but McCall Anderson's pedigree was published in 1894, six years before the re-discovery of Mendelism by Bateson, Correns, and de Vries. The matter is of sufficient importance to warrant republication of his pedigree, redrawn with modern conventional symbolism, and supplemented by details furnished in the text (eleven further individuals added by 1888, two affected, nine unaffected; original pedigree compiled in 1881):



From this it will be seen that the condition had occurred in sixteen individuals in at least five generations, affected persons transmitting to 41.2 per cent. of their children—that is, out of thirty-four children of affected persons fourteen had themselves been affected. By theory this number should have been seventeen. An unaffected son of an affected parent himself had unaffected children.

In Tomkinson's pedigree, excluding three children who died in infancy and whose exact condition must be doubtful, in the last two generations nineteen out of thirty-six children of affected persons themselves showed the condition, a percentage of 52.8, which corresponds to the theoretical requirements for inheritance of a Mendelian dominant. If these two Scottish pedigrees, separated by the time required for the birth of two further generations, do not represent the same family, there is a strong suggestion that they represent families genealogically as well as geographically connected, owing descent to a common ancestor (or ancestress) affected in the manner in question. As Tomkinson himself notes, citing O'Donovan to the effect that J. Schutz had only seen one case in seventeen years in Frankfort, the condition is one of extreme rarity; the independent occurrence in a restricted geographical area of two such identically affected families, each showing the same mode of inheritance, passes the bounds of easy credibility.

The problem of the aetiology of this condition remains to be solved. McCall Anderson quoted W. G. Smith[3] to the effect that "it represents a curious freak of perverted nutrition, there being, so to speak, a regular succession of periods of growth and of atrophy, or a periodic alternation of activity and sluggishness." Tomkinson, by means of a biopsy, traced the condition to an intrafollicular cause. It is possible that some light may be thrown on its mechanism of causation by a study of a comparable condition in other animals, for it would seem that this condition—disease when it occurs in man—is the normal state of the hair of the shrews, a family (Soricidae) of small insectivorous mammals, of which some three different species occur in Britain. That these creatures have hair of this distinctive type, showing alternate broader and narrower zones, is not alluded to in two recent (1931) works devoting considerable space to consideration of the hair characters of different species of animals. It is not improbable, too, that such a rhythmic character impressed on living or semi-living structures may be allied to the Liesegang phenomena, which depend

[1] Tomkinson, J. G.: *British Medical Journal*, December 3rd, 1932, p. 1009.

[2] Bateson, W.: *Mendel's Principles of Heredity*, 1909, p. 210.

[3] Smith, W. G.: *British Medical Journal*, 1880, i, 636.

for their origin on the physico-chemical nature of colloidal matter in its reaction to the diffusion through it of solutions of electrolytes, or, in certain cases, to the liberation within it of such substances. From this point of view there may be a definite relationship between the mechanism of causation of this condition and that of the pigmentary or gaseous deposits in banded or striated hairs and feathers, which are of much more common occurrence in nature.

The microscopical appearance in Tomkinson's article of a single hair may be compared with the illustration given by McCall Anderson (Fig. 7, p. 59) of six hairs from five affected persons in the family group he recorded. —I am, etc.,

Manchester, Dec. 20th, 1932. W. J. RUTHERFURD.

Mastoid Drainage

SIR,—I should have thought that in the experience of most aural surgeons the drainage of the mastoid was rather too long delayed instead of being premature, as suggested by Mr. Douglas Crow in his note in your issue of December 17th, 1932 (p. 1104). I hope this note will not lead to practitioners postponing sending their cases for investigation and operation at an early date.

I have consistently urged that an earlier mastoid operation is indicated, and although one realizes quite clearly Mr. Crow's point, yet I should have thought that most aural surgeons would never have considered operation at the stage to which he objects. Broadly speaking, I think it is necessary to impress upon practitioners that large numbers of cases of mastoid involvement are treated as though the disease were confined to the middle ear; in my personal experience I have never opened a mastoid antrum without finding a serious involvement of the structures, and this may, I think, occur at an earlier date than is appreciated by Mr. Crow, as the fulminating type is by no means uncommon, especially when arising as a complication of influenza.—I am, etc.,

Bath, Dec. 22nd, 1932. H. NORMAN BARNETT, F.R.C.S.

Classification of Arthritis

SIR,—In trying to assess the value of any treatment for arthritis the chief difficulty is in the classification of the disease. There is a wide divergence of opinion as to when any particular type begins, when it ends, and when it merges into another type. Since it is generally accepted that a good *x*-ray negative is the best means of determining the actual condition of the joint, it should be possible to make clearly defined subdivisions according to the stage of the disease as follows:

Stage 1: Articular Arthritis.—The *x*-ray findings are negative or in favourable cases show cloudy inflammatory changes in the cartilage and the joint space.

Stage 2: Osteo-articular Arthritis.—The disease has also invaded the adjacent bone but the joint-space is still intact—that is, the joint is still a cartilage-bearing one.

Stage 3: Osteo-arthritis.—The joint-space is partially or completely obliterated and the joint is now a bone-to-bone-bearing one.

Stages 2 and 3 to be subdivided into "hypertrophic" and "atrophic" according to whether or not there is evidence of bone reaction with lipping, osteophytic overgrowths, etc.

The type of disease could be added as a prefix—rheumatoid, infective, or gouty. Without this prefix it would mean true osteo-arthritis, subdivided according to its stage into osteo-articular arthritis and osteo-arthritis.

A classification along these lines would give a definite clinical picture of the actual condition of the joint at the commencement of treatment, and would be especially valuable where the disease is limited to one or two large or an isolated group of small joints. In the polyarticular types, however, it might necessitate the placing of a patient in more than one stage. It would limit the word "cure" to Stages 1 and 2, and also exclude all cases of retrogression from Stage 2 to Stage 3. It would tend to promote earlier diagnosis by emphasizing the possibility of a cure or a marked improvement in the earlier stages. If adopted in various centres, collective information would soon be available and the results of any particular form of treatment more accurately assessed.—I am, etc.,

London, W.1, Dec. 21st, 1932. W. L. WATT.

The Medical Profession and the Lay Press

SIR,—Sir Harold Gillies (December 24th, 1932, p. 1166) raises an issue that requires solution, not only for the protection of the interests of the medical profession, but also in order to safeguard the public. The value of new methods of treatment can rarely be correctly estimated by the public, and editors of newspapers do not always appear to recognize fully their responsibility to the public for medical items in their columns. My work, for instance, has recently been referred to by a section of the lay press (it is hardly necessary to say, without my personal knowledge) in a way that is grossly inaccurate. It has been implied that I have discovered new methods of treatment, and from letters I have received it is clear that one effect of this has been to arouse false hopes in the minds of friends and relations of patients who are incurable. Even if the lay press has little concern in causing embarrassment to members of the medical profession and to their work, surely it would wish that its information to the public on medical matters should not give rise through its inaccuracy to unnecessary mental suffering.—I am, etc.,

London, Dec. 24th, 1932. HUGH CAIRNS.

British and Foreign Spas

SIR,—Dr. Geoffrey Holmes, in his letter which you published on December 17th, 1932, very successfully refutes a statement made by a medical correspondent in a newspaper that British spas compared with German spas do little for poor patients. He mentions the hospitals at Bath, Buxton, and Harrogate. It is of general interest to add that at Droitwich there are two hospitals, a clinic, a convalescent home, and a hostel, with some two hundred and fifty beds, available for the same class. —I am, etc.,

Droitwich, Dec. 28th, 1932. A. R. NELIGAN.

Coroners and Evidence

SIR,—It is true that eminent judges have said that the coroner is not fettered by the strict rules of evidence which prevail in ordinary common law courts. On the other hand, if the coroner had at his elbow a voice which first softly murmured, "You can't ask that," and then, rather louder, "That's not evidence; don't answer," and, finally, if a robed figure stood up beside him and remarked, in a tone of pity rather than contempt, "My friend knows he can't ask that," we might hear less nonsense in the coroner's court. Counsel who persist after such interruptions may receive some such rebuke as this: "Mr. Jones, if what you say is right, I have yet to learn my business, after forty years in the law."

During the twelve years I was at the Common Law bar I came to see that examination-in-chief required even greater skill than cross-examination; that able advocates often reduced their cross-examinations to very few questions, turned to the jury with a smile, and sat down.

Old Bailey counsel have a maxim, "Never cross-examine a detective." As a rule, only very white wigs try to heckle medical men. One often wonders how many, or how few, coroners have ever worn robes at all.—I am, etc.,

GEORGE JONES, M.B.
London, S.E., Dec. 29th, 1932. Barrister-at-Law.

Psychology in the Curriculum

SIR,—There can be no doubt that the insertion of psychology in the medical curriculum as a subject to be studied simultaneously with anatomy and physiology (which Mr. Bourne suggests) is a reform badly needed and long overdue. This was a recommendation put forward by a subcommittee of Section J (Psychology) of the British Association, of which I was chairman, five years ago, and its need becomes more obvious every year.

Dr. McBride raises the old cry that psychology cannot be called a science, and that it consists of "various forms resting upon hypotheses rather than upon reliable data." Actually it suffers from a plethora of accurately ascertained facts, and from a poverty of well-grounded hypotheses. But the latter defect is being gradually made good in the clash and conflict of pretentious and one-sided views. We must look, not to the voluble adherents of special "schools," but to the well-trained scientists, who represent psychology in the universities throughout the world, for an ever-developing and ever more consistent presentation of the subject.

The various trends of thought and research in modern psychology are not mutually exclusive (except in the popular mind)—they are mutually supplementary. As health and disease are matters of adaptation and adjustment of the whole man—mind as well as body—psychological knowledge is an essential part, and no small part either, of medical theory and practice.—I am, etc.,

London, W.1, Jan 3rd. WILLIAM BROWN.

Members of the Royal College of Surgeons

SIR,—Every possible moderate and reasonable argument has been put forward for the case of representation of Members of the Royal College of Surgeons of England upon its council, not once alone, but times innumerable. It would be mere waste of time to repeat our logical statements, which have never been met and often pointedly evaded. It seems wiser to review the present position from a different, though none the less emphatic, aspect, and for this I would choose to give a story of its history in legend form.

There was once a mediaeval town, in the midst of which stood an old castle surrounded by a moat. The castle was guarded by a governor and twenty-four knights. The population of the town was about 18,000, but more accurately nearly twice that number if the full extent of its jurisdiction was taken into account. The citizens looked to the governor of the castle for protection *and justice, which was not unnatural.* By a custom, born of time and mutual necessity, one day a year was set apart for a delegation of the citizens to be received by the governor, in order that reforms for the benefit of the inhabitants might be suggested. When this day arrived the drawbridge was dropped, and the delegates marched over the moat to be received in the castle by the governor and as many of the twenty-four knights as appeared to be interested in the proceeding.

The governor received the delegates with marked courtesy and cordiality, listened attentively to their petition, and then informed them that the matter would have his careful consideration and that an answer would be given in due course. The delegates were then entertained with light refreshment. After this they tramped once more across the moat, and the drawbridge was hoisted, only to be let down again, so far as they were concerned, in a year's time. Now this procedure happened every year for some forty-five years, till things began to pall, and it suddenly dawned upon the inhabitants that, like the yokel in the country fair, they had been pitifully hoodwinked.

Annually, for the good of the town, they had requested the governor's permission for two of their number to be brought into closer contact with the castle; annually this request had been denied, but no reason given. Why was this answer not forthcoming? The real cause then became evident to the citizens—the ethical reasons put forward were of so strong and so just a nature that they were unanswerable.

We are too proud to go down on our bended knees to supplicate the Council to give us that which is our due; but we can and do appeal to them, at this time of the year, when "peace on earth to men of good will" prevails. If the Council can but ascend above those mists which dim the vision of the future into the clarified atmosphere of enlightened thought, they will remove that single stigma under which the Royal College of Surgeons now exists, and, by recognizing the practical need for co-operation with its members in the great march of progress, it will increase the value and dignity of our beloved College.—I am, etc.,

Crouch End, N.8, December, 1932. T. WILSON PARRY.

Obituary

SIR ALEXANDER HENDRY, K.C.V.O., M.D.

Late Surgeon Apothecary to His Majesty's Household at Balmoral

We have to announce with regret the death on December 29th, 1932, at Aberdeen, of Sir Alexander Hendry, who for many years had been one of the best-known and most popular practitioners in West Aberdeenshire. He was born at Aberdeen in 1867, and after being educated at Aberdeen Grammar School studied medicine at the University of Edinburgh, where he graduated M.B., C.M. in 1892, proceeding to the M.D. in 1901. Taking up general practice soon afterwards at Ballater, he quickly attracted a large practice among the local populace and the visitors who frequent Upper Deeside in the summer months. He also took a great interest in local affairs, was a justice of the peace for Aberdeenshire, and was elected provost of the town of Ballater a year ago. During the war he did good work as medical officer in charge of the Victoria Auxiliary Hospital at Ballater.

Sir Alexander Hendry had a long and close connexion with the Royal household at Balmoral, which is situated some seven miles from Ballater. Here he was appointed medical attendant on the staff in 1904, and six years later he was appointed surgeon apothecary to His Majesty's Household, a post which he retained until last year. For his services in this connexion he was created M.V.O. in 1911, C.V.O. in 1924, and had the distinction of K.C.V.O. conferred upon him in 1931 by the King while the Court was in residence at Balmoral. He retired from practice last year owing to ill-health.

OSCAR BAGSTER TRUMPER, M.B., B.CH.

F.R.C.S.ED.

We regret to record the death, on December 26th, 1932, of Dr. Oscar B. Trumper of Aston Manor, Birmingham, after an illness of twelve days. He was born in 1872, and received his education at Yorkshire College, Leeds, graduating M.B., Ch.B.Vict., with honours, in 1894, and M.B., Ch.B.Leeds in 1906; in 1904 he obtained the F.R.C.S.Ed. After holding resident appointments at the Leeds General Infirmary, Dr. Trumper practised at Wakefield, Market Rasen (Lincs), and held the office of medical officer of health to the urban district council. In 1909 he removed to Birmingham, where he practised until his

death. A member of the Panel Committee, and also a part-time regional medical officer under the Ministry of Health, Dr. Trumper took great interest in the work of the British Medical Association. He was chairman of the Birmingham Central Division in 1923–4, president of the Birmingham Branch in 1930–1, and a member of the Representative Body in 1919; at the time of his death he was a member of the Executive Committee of the Birmingham Central Division. He is survived by his widow, one daughter, and one son, who is a member of the medical profession.

A colleague writes: For many years Trumper held a leading position in Aston, both as a medical man and as a citizen. He had excellent business abilities, and took an active part in all things that concerned the medical profession. Indeed, no committee was complete without Trumper. The manifold duties of his many offices were discharged with dignity, zeal, and ability. He spoke with ease and fluency, and his wise counsel will be missed by his colleagues. Outside medicine he was a versatile and cultured man. He kept abreast of the recent discoveries in science, and particularly astronomical science, and was widely read in general literature and in archaeology. There was, I believe, no greater authority on Aston Parish Church than Trumper, who knew the history of every monument and the date of every moulding as only an expert can. For a series of years he was warden of the fine old church which he loved so well, and for which he had worked so hard. Trumper had a fine presence and a genial disposition; he was devoid of affectation or pretence, and his sympathy and help were freely given to all who sought them. His keen sense of humour, his well-stored mind, and his conversational powers made him a delightful companion alike in the home and in the world of men. A few years ago he acquired a plot of land adjoining Clifford Castle on the Wye. He excavated the ruins, mapped out a plan of the original building, and designed for himself a house which is so constructed that each window gives the best available view of the valley of the Wye. It was here, under the shadow of the ruined tower, and overlooking a magnificent expanse of country, that Trumper hoped to spend the leisure time of his declining years. But Trumper is gone: his death is a sudden and severe loss to the medical profession and to the community with which he worked.

Dr. THOMAS DAVIDSON died at Los Angeles on November 28th, 1932, at the age of 75. He was a distinguished fellow student with the late Dr. Freeland Fergus at Glasgow University, where he graduated M.B., C.M. in 1880, and proceeded to the M.D. in 1887. After a few months as locumtenent for Dr. Sewell, late of Helensburgh, he went to Thornhill, Dumfriesshire, as assistant to Dr. Hoggan, and on the retirement of the principal succeeded to the practice. Owing to the heavy day and night work inseparable from a large country practice his health broke down. In 1889 he sought a milder climate, and settled with his brother, Dr. Anstruther Davidson, at Los Angeles, at that time an almost unknown city, where they built up a practice. Though he had subsequently to retire from active work through ill-health he still kept abreast with the advancement of medicine, and retained his membership of the British Medical Association. He took great interest in the growing of oranges, and was one of the first pioneers of Hollywood, where he owned an orchard.

The following well-known foreign medical men have recently died: Dr. ASTLEY PASTON COOPER ASHHURST, professor of clinical surgery at the Pennsylvania School of Medicine, Philadelphia, and author of *Surgery, its Principles and Practice*, aged 56; Dr. SIDNEY YANKAUER, a prominent New York laryngologist, aged 60; Geh. Med. Rat. Professor HERMANN KÜTTNER, director of the university surgical clinic at Breslau, aged 62; Dr. A. CHAUFFARD, honorary professor in the Paris Faculty of Medicine, member of the Académie de Médicine, and Commander of the Legion of Honour; Dr. E. FLATAU, a Polish neurologist; and Dr. GUILLERMO MARQUEZ, professor of children's diseases at the Bogota faculty of medicine.

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

The following candidates have been approved at the examination indicated:

THIRD M.B.—(*Part I, Surgery, Midwifery, and Gynaecology*): J. C. G. Anderton, E. F. Baines, H. Barcroft, G. F. Barran, C. G. Batty-Smith, W. T. C. Berry, C. E. Bevan, E. V. Bevan, R. W. Billington, G. O. Brooks, R. H. Brown, J. R. Chambers, A. H. Charles, F. H. Coleman, J. Collinson, P. T. Cooper, A. G. Cross, H. S. Davis, L. W. B. Dobbin, J. R. Duffield, W. G. Evans, A. A. G. Flemming, P. H. R. Ghey, P. R. Goodfellow, R. W. Graham-Campbell, S. J. Hadfield, B. P. Harris, F. G. Hinks, M. I. A. Hunter, T. B. Jones, A. H. Knowles, D. Kyle, R. C. Langford, C. A. Lewis, W. Lewis, T. E. S. Lloyd, M. W. Lloyd Owen, K. Lumsden, F. D. MacCarthy, A. B. MacGregor, W. S. McKenzie, F. G. Maitland, T. C. Maling, G. J. H. Maud, J. W. Maycock, M. P. Morel, C. W. Morley, H. J. V. Morton, T. P. Mulcahy, J. P. S. Peck, K. M. A. Perry, F. W. J. Platts, J. S. M. Pringle, S. A. Propert, P. J. Richards, W. F. Richards, F. Ridehalgh, I. G. Robin, K. Robson, G. Scott, E. P. Sharpey-Schafer, D. W. Smithers, J. G. C. Spencer, T. V. Tattersall, E. W. Taylor, H. B. Tipler, G. E. H. Tisdall, G. I. Watson, W. E. Wells, C. J. G. White, A. Willcox, J. Wilson, R. M. Yeo. *Women*: D. K. Emery, A. C. Taylor. (*Part II, Principles and Practice of Physic, Pathology, and Pharmacology*): S. E. Birdsall, C. P. F. Boulden, A. Bowen-Davies, E. Bradbury, W. D. Brown, J. W. Campbell, C. A. Clarke, F. J. Curtis, S. F. L. Dahne, W. D. Dick, L. W. B. Dobbin, R. H. Dobbs, G. A. Emmerson, R. H. Foster, D. W. C. Gawne, W. G. Gill, G. W. Hall-Smith, E. R. Hargreaves, B. P. Harris, J. Howell, N. M. James, H. V. Knight, A. R. R. Le Fleming, R. S. Lewis, G. A. Mandow, A. R. R. Mears, D. A. Metcalf, G. A. Miller, F. H. Morrell, J. Parkes, E. B. Pawson, R. V. Payne, K. M. A. Perry, R. G. Pulvertaft, C. G. Roberts, R. D. Roper, F. W. Shepherd, S. K. K. Sze, C. W. Thomas, C. B. M. Warren, J. G. Warren, G. D. Wedd, H. D. White, G. A. W. Whitfield, W. Wilson. *Women*: P. M. Dobbs, J. C. Drury, C. A. Grove.

UNIVERSITY OF LONDON

Lectures

A course of six lectures on factors in nutrition will be given by Professor S. J. Cowell at Bedford College, Regent's Park, N.W., on Wednesdays, January 11th, 18th, 25th, and February 1st, 8th, and 15th, at 5 p.m. Four lectures on the integration of the circulation will be delivered at King's College, Strand, by Professor R. J. S. McDowall on *Thursdays*, January 12th, 19th, 26th, and February 2nd, at 5 p.m. Dr. L. E. Bayliss will give four lectures on the respiratory functions of the blood at University College, Gower Street, W.C., on January 16th, 20th, 23rd, and 27th, at 5 p.m. Two lectures on reflex action will be given by Sir Charles Sherrington at University College, Gower Street, W.C., on Mondays, January 30th and February 6th, at 5 p.m. Professor Max Bergmann (Dresden) will deliver three lectures on the chemistry of proteins at University College Hospital Medical School on January 20th, 23rd, and 25th, at 5.15 p.m. Admission to all the above lectures is free without tickets.

The following candidates have been approved at the examination indicated:

M.S.—*Branch I* (*Surgery*): O. V. Lloyd-Davies, E. G. Muir (University Medal).

SOCIETY OF APOTHECARIES OF LONDON

The following candidates have passed in the subjects indicated.

Surgery.—J. L. Bates, A. E. Glanvill, J. Harris, C. A. Saggoo, L. Wailer.

Medicine.—W. E. P. Corbett, F. M. F. Forrest, M. F. Levick, E. M. F. O'Donovan, J. C. Selnes.

Forensic Medicine.—M. F. Levick, C. W. O'Donoghue, J. C. Selnes, M. Sourasky, E. Teplitzky.

Midwifery.—L. Bhanot, P. D. Bhatt, E. L. Burgess, W. H. Ekin, A. J. McGuire, J. C. Selnes, T. B. Smith.

The diploma of the Society has been granted to Messrs. J. L. Bates, P. D. Bhatt, F. M. F. Forrest, J. Harris, M. F. Levick, C. A. Saggoo, J. C. Selnes, and E. Teplitzky.

Medical News

The nineteenth annual conference of the National Association for the Prevention of Tuberculosis will be held on July 13th, 14th, and 15th in Cardiff, by invitation of the City Council. Particulars will be issued in due course.

The annual general meeting of the Harveian Society of London will be held on Thursday next, January 12th, at 11, Chandos Street, W., at 8.30 p.m., when the president will give his address on the role of specialization, followed by a smoking concert.

At the next meeting of the Pharmaceutical Society of Great Britain, to be held at 17, Bloomsbury Square, W.C., on Tuesday, January 10th, at 8.30 p.m., Dr. G. Roche Lynch, senior official analyst to the Home Office, will deliver a lecture on poisons and their effects. Members of the society are invited to bring friends. Refreshments will be served after the meeting.

A course of twelve illustrated lectures on primitive man by Dr. T. M. Finlay began on January 4th in the lecture theatre of the Imperial College of Science, Exhibition Road, South Kensington. The lectures will be continued on Mondays, Wednesdays, and Fridays, at 5.30 p.m., until January 30th. Admission is free.

Factory cleanliness in the food industry will be the subject of a discussion arranged jointly by the Royal Sanitary Institute and the Food Group of the Society of Chemical Industry, at 90, Buckingham Palace Road, S.W., on Friday, January 20th, at 5.30 p.m. The discussion will be opened by Mr. E. B. Hughes, M.Sc., who will be followed by Dr. Thomas Carnwath (Ministry of Health), Dr. Gerald Leighton (Department of Health for Scotland), Dr. Charles Porter, Sir Weldon Dalrymple-Champneys, and Dr. T. W. Naylor Barlow.

Twenty lectures, open to the medical profession only, on psychological types and mechanisms, being an introductory course in psychological medicine for the general practitioner, will be given at the new premises of the Institute of Medical Psychology (formerly the Tavistock Square Clinic) at Torrington Place, W.C.1, on Wednesdays, beginning January 18th. Dr. E. Graham Howe will lecture each day from 3 to 4 o'clock, and Dr. H. Crichton-Miller from 4.30 to 5.30. The fee for either series is £1 11s. 6d., and for both series £2 2s. Tickets must be obtained in advance from the honorary lecture secretary; cheques payable to the Institute of Medical Psychology. A lecture on occupational therapy, and a demonstration of the methods by which such treatment can be scientifically applied to physical and mental illness, will be given on Saturday, February 4th, at 3 p.m., by Miss Joan West. Tickets (price 2s. 6d.) to be obtained in advance from the lecture secretary.

A course of lectures on rheumatism and arthritis as a public health problem will be delivered at the Royal Institute of Public Health, 23, Queen Square, W.C., on Wednesdays at 4.30 p.m. The inaugural lecture will be given by Professor W. Langdon Brown on Wednesday, January 18th; Dr. R. Fortescue Fox will lecture on rheumatism as a social and industrial problem on January 25th; Dr. C. W. Buckley on the economics of rheumatism on February 1st; Dr. W. S. C. Copeman on a scheme for industrial rheumatism on February 8th, and Miss M. W. Edminson on the rheumatism clinic and its relation to the social services, on February 15th. A demonstration will be given at the British Red Cross Society's Clinic for Rheumatic Diseases, Peto Place, N.W., on February 22nd, at 11.30 a.m. The demonstration is restricted to fellows, members, and students of the institute, but others may attend the lectures, for which no ticket is required.

The following international medical post-graduate courses will be held in Berlin in the spring: internal medicine, from February 27th to March 4th; practical haematology, from March 6th to 11th; indications for, and the technique of, modern diagnostic and therapeutic methods, from March 10th to 16th; dermatological and venereal diseases, from March 20th to April 1st; practical advances in radiotherapy, April 2nd to 9th; and surgery, from April 24th to 29th. In the autumn there will be courses in endocrinology, diseases of old age, thoracic surgery, anaesthetics and analgesics, colloid therapy, diseases of children, ophthalmology, and orthopaedics. Further information can be obtained from the Information Bureau of International Courses, Kaiserin Friedrich Haus, Robert Koch Platz 7, Berlin, N.W.7.

The Fellowship of Medicine and Post-Graduate Medical Association announces a demonstration of cases of general medical and surgical interest at the Lambeth Hospital on January 13th, at 2 p.m. A series of lectures on "Practical problems in medicine and surgery" will be given at the Medical Society of London, 11, Chandos Street, W., on Tuesdays at 4 p.m., beginning on January 17th. A demonstration of *x*-ray films, especially suitable for M.R.C.P. candidates, will be given by Dr. P. Kerley at the Medical Society of London on Friday, January 20th, at 4.30 p.m. A whole-day course in cardiology will be given at the National Heart Hospital from January 16th to 27th. It is hoped to arrange a practical demonstration of cases illustrating diseases of children on January 26th at 8 p.m., at the National Temperance Hospital, Hampstead Road. Other forthcoming courses include dermatology, gynaecology, diseases of the chest, ante-natal treatment, etc. The above courses and demonstrations are open only to members and associates. Application for particulars should be made to the Fellowship of Medicine, 1, Wimpole Street, W.1.

The thirty-seventh Congress of French-speaking Alienists and Neurologists will be held at Rabat (Morocco) from April 5th to 12th, under the presidency of Professor Georges Guillain of Paris. The subjects for discussion will be psychotic encephalitis, the ataxias, and the medico-legal consequences of traumatic amnesia.

The German Society for Internal Medicine will hold its forty-fifth meeting from April 18th to 21st, 1933, in Wiesbaden, under the presidency of Professor Lichtwitz of Berlin. The subjects for discussion are: the significance of the heavy metals in physiology and pathology, and the pathology of the erythrocytes and haemoglobin. A survey of the problem of the suprarenal will probably be given on April 19th. Notice of papers, with manuscripts, must be sent not later than February 5th, 1933, to Professor Lichtwitz, Rudolf-Virchow Krankenhaus, Berlin.

A research fellowship has been founded at Nottingham University College with a view to developing physical methods for the diagnosis and cure of cancer, and Dr. L. A. Woodward has received the appointment. The local branch of the British Empire Cancer Campaign is contributing £500 for the purchase of instruments, and £100 annually towards the biochemical side of the work. A joint cancer research committee has been established including representatives of the University College, and Dr. F. H. Jacob, Mr. R. G. Hogarth, and Mr. A. M. Webber, representing the Notts branch of the campaign.

The sixtieth anniversary of the foundation of *Le Progrès Médical* by Désir-Magloire Bourneville was celebrated in Paris on November 23rd, 1932, by a dinner presided over by M. A. de Monzie, the Minister of Education.

Dr. Portmann, professor of oto-rhino-laryngology at Bordeaux, has recently been elected a member of the French Senate.

Messrs. John Bale, Sons and Danielsson, Ltd., announce for publication this month the seventh edition of *A Compendium of the Pharmacopoeias and Formularies*, by C. J. S. Thompson. It includes a synopsis of the new *British Pharmacopoeia, 1932*, as well as the official and unofficial formularies of the United States, the French Codex, and the last editions of the pharmacopoeias of ten other countries.

The publishing offices of Messrs. H. K. Lewis and Co., Ltd., have been moved from 28, Gower Place, to the new building. All communications should be addressed to 136, Gower Street, W.C.1. The telephone number is unchanged—Museum 2853.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, B.M.A. House, Tavistock Square, W.C.1.**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names, not necessarily for publication.

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of proofs.

All communications with reference to ADVERTISEMENTS, as well as orders for copies of the *Journal*, should be addressed to the Financial Secretary and Business Manager.

The **TELEPHONE NUMBERS** of the British Medical Association and the *British Medical Journal* are MUSEUM 9861, 9862, 9863, and 9864 (internal exchange, four lines).

The **TELEGRAPHIC ADDRESSES** are:
EDITOR OF THE *BRITISH MEDICAL JOURNAL*, *Aitiology Westcent, London.*
FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate Westcent, London.*
MEDICAL SECRETARY, *Medisecra Westcent, London.*

The address of the Irish Office of the British Medical Association is 18, Kildare Street, Dublin (telegrams: *Bacillus, Dublin*; telephone: 62550 Dublin), and of the Scottish Office, 7, Drumsheugh Gardens, Edinburgh (telegrams: *Associate, Edinburgh*; telephone: 24361 Edinburgh).

QUERIES AND ANSWERS

Cracks on Nails

DR. CHARLES POLLARD (Worcester) writes: Can anyone suggest treatment or prevention for vertical cracks down the finger-nails, caused by the slightest of "hitches" in any article of clothing? The patient is somewhat "rheumaticky," but nothing definite, and otherwise enjoys good health.

Spasmodic Scapular Pain

"PERPLEXED" writes: I should feel grateful to have opinions on the diagnosis of the following case. A lady of 53 has had attacks of pain at the angle of the right scapula for the last two or three years. The pain is severe, and she describes it as a cramp or spasm, which lasts from ten seconds to half a minute. At the beginning there was an interval of two months between attacks. Lately she has had two or three in one day, and then the usual interval. She complains of chilly feelings very often by day and night, like cold water running down her back. She has dyspeptic symptoms at times, and nausea. Her teeth were x-rayed before onset of any symptoms, and some were thought to be septic, so they were all removed under an anaesthetic.

Fissure of the Lips

DR. EDMOND MURPHY (Cork) writes: If the fissures be filled with "durofix"—an adhesive sold in hardware shops—and renewed as required, the patient will soon be cured.

Softening the Beard

"A. T." (New South Wales) writes: There are three factors in "W. B. D.'s" problem (September 17th, 1932)—namely, the skin, the instrument, the operator. Warm water swells the capillaries and softens the papillae of the skin coincidentally with the softening of the beard. The razor slices the tops off these elevations, and the result is a multiplicity of small wounds—that is, a sore skin. Cold water contracts the capillaries and papillae, and gives a smooth surface to the razor, with a resultant minimum of injury. Safety razors are an abomination to all but those with silky beards. Of the "cut-throat" razors the old solid razor is infinitely better than the hollow-ground. The solid type was rediscovered in the war, and is coming into general use in Australia. The operator must learn the optimum angle to adjust between razor and skin, and this angle is much nearer 10 degrees than to the 60 degrees which appears to be habitual. Remembering the principle of the guillotine and other machines wherein a sliding cut is proved superior to any other, the shaver must learn to shave from heel to tip of the blade. The impossibility of adjusting this is the chief defect of the safety razor. Any soap which will give a free and tenacious lather is suitable. I have tried every powder, soap, and paste I have met, and find that few are better than others, but I recently found Elysium in a locally produced germicidal soap, "tenax"—a clear spirit soap, with an extract of native ti-tree (titrol), as a germicidal agent. My advice to "W. B. D." is to use cold water, a keen, solid blade held diagonally to the line of shaving, and at an angle of about 10 degrees to the skin; to eschew all preparations for after-treatment—unguents, powders, spirits, etc. If the face is at all raw at first rub in well a few drops of glycerin ʒij, ext. hamamel. ʒiij, ac. acet. glac. mx, aq. rosae ad ʒj. I have suffered agonies, as has "W. B. D.," and this is the essence of my experience. I would ask him to try it for three months and then to publish his findings.

Income Tax

Inspector's Inquiry re Purchase of House

"T. K." returned from abroad two years ago and started practice. The inspector of taxes has asked him from what resources he has bought a residence this year. Is he bound to supply information of this kind?

*** The inspector of taxes, as such, has no legal right to the information, but is presumably doing so in order that the responsible commissioners may have all relevant information before them when dealing with "T. K.'s" liability. We suppose that it would be sufficient to explain that the necessary capital was saved out of "T. K.'s" (non-taxable) earnings when abroad, especially if at the same time some indication is given of the approximate amount of those earnings, so that the inspector can see that the saving was practicable.

Sale of Practice—Expenses

"H. C. H." has recently sold his practice. Are the legal and agency expenses involved allowable for income-tax purposes?

*** No; the sale of the practice is a capital transaction, and the special expense is not deductible for income tax.

Medical Textbooks, etc.

"W. E. J." holds a hospital appointment, and inquires whether he can deduct from his salary (*a*) the expense of buying medical books, and (*b*) the cost of oil-immersion lens for microscope.

*** The expenses are allowable if necessarily incurred to carry out the duties of the office, and provided that the original cost is not claimed. For instance, if the hospital authorities require our correspondent to maintain an assortment of medical books for reference, etc., then the cost of maintaining the books up to date by the purchase of new editions would be admissible, but not the cost of the set of books originally provided.

LETTERS, NOTES, ETC.

Pain caused by Impacted Wisdom Teeth

MR. R. S. TAYLOR, M.R.C.S., L.D.S. (London, W.1) writes: I read with interest the memorandum by Dr. Graham Macphee in your issue of December 10th, 1932, on two cases of impacted wisdom teeth causing neuralgic pain. As Dr. Macphee points out, wisdom teeth are a more common cause of neuralgia than most people realize; in fact, nearly 50 per cent. of the wisdom teeth that are removed have given rise to neuralgic symptoms. Earache is a common association of impacted wisdom teeth, and I have seen one case of this nature that had been diagnosed as mastoid disease. A certain amount of doubt must be expressed as to the advisability of removing the second molar and leaving the wisdom tooth, as in the vast majority of cases the symptoms recur, which is not surprising, as it is possible to demonstrate the presence of micro-organisms in the pulps of nearly 50 per cent. of these wisdom teeth that have been removed.

Motor Car Licences

The Automobile Association emphasizes the fact that the fourteen days of grace only apply if the licence for a motor vehicle is taken out within that period. To renew the tax after "the days of grace" is insufficient, and may result in a prosecution. Another point often overlooked is that a vehicle used on any single occasion after the expiration of the old licence is immediately liable to duty. The penalty for such infringements is particular severe, the maximum fine being £20 or three times the value of the licence duty, whichever is the greater.

Vacancies

Notifications of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 45, 46, 47, 49, and 50 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 48 and 49.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 7.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

1 Herpes Zoster and Varicella

F. SALTZMAN (*Finska Läkaresällskapets Handlingar*, August, 1932, p. 653) correlates the incidence of herpes zoster and varicella in Helsingfors, where both diseases are notifiable (herpes zoster only since 1926). He publishes a table showing the incidence, month by month, of each of these diseases during the five-year period 1927–31, in which 1,826 cases of varicella and 782 cases of herpes zoster were notified. The monthly incidence of varicella showed, broadly speaking, the same curve from year to year, with a minimum of three cases or less in July and August, and a maximum of 45 to 142 cases in November, December, and January. Thus, in December, 1931, there were as many as 142 cases of varicella notified, whereas in July, 1930, there were only two such cases. The fluctuations were not so violent in the case of herpes zoster, which, however, usually showed a low level in the summer, with the fewest notifications in July, and a peak which reached its maximum in the winter, usually in January. The greatest discrepancy between the two diseases occurred in December, when the herpes zoster curve was relatively low. The author points out that a similar study was published in 1928 by Bókay, whose material was derived from Budapest in the period 1915–24. The parallelism of the two curves was less evident in his statistics than in the author's. Saltzman admits that his figures are too small, and the period he deals with too short, for far-reaching conclusions to be drawn from them. He notes that opposed to the doctrine of the identity of the two diseases is the clinical observation that varicella confers immunity to itself, and herpes zoster, as a rule, to itself. But cases have been observed of herpes zoster in persons who had previously suffered from varicella, and vice versa.

2 Administrative Problems of Diabetes

A. NORGAARD (*Nord. Med. Tidskrift*, September 3rd, 1932, p. 638) describes the administrative problems raised by diabetes among insured workers in Denmark, who, at the end of 1930, numbered 1,673,413. Only two generations ago diabetes was a rare disease in Denmark, and in 1890 only ten diabetics were treated in all the hospitals in Copenhagen. By 1924 this figure had risen to 608. In 1927 it was calculated that there were 4,247 diabetics in Denmark, and that some 900 of them were receiving insulin. This number has since risen considerably, and at the present time there are between 2,500 and 3,000 diabetics receiving insulin, while the total number of diabetics in Denmark is between 5,000 and 6,000. The sickness insurance organization, which came into being in October, 1921, plays a fourfold part in the lives of insured diabetics: (1) the prevention of threatened invalidism; (2) the treatment of patients already invalided; (3) the allocation of money; and (4) the maintenance by suitable measures of the residual working capacity of invalids in certain special cases. As this list of functions shows, the duties of this organization are far from being limited to the comparatively passive task of computing the working capacity of individuals and refusing or allotting pensions. It achieves much more than this: by keeping in touch with general practitioners, by putting the services of its specialists at their disposal, and by facilitating the provision of suitable remedies, it does much to ease the lot of the diabetic worker. How great is the part played by insulin is shown by the following. Before its introduction, 89 per cent. of insured diabetics applying for pensions were classified as permanent invalids—that is, as having a working capacity less than a third of the normal; in 1930 this percentage had been reduced to 38. Since 1928, 540 workers have applied for insulin instead of for pensions, and in most of these cases this request has been granted. By April 15th, 1932, only fourteen of these persons were known to have died, and it is unlikely that many, if any, deaths could have been overlooked. It will thus be seen that the expectation of life of the insured diabetic worker under present conditions in Denmark is relatively good.

3 Prophylaxis of Scarlet Fever

S. C. PEACOCK, M. WERNER, and C. COLWELL (*Amer. Journ. Dis. Child.*, September, 1932, p. 494), owing to an outbreak of eleven cases of scarlet fever in a children's hospital, performed the Dick test on 258 members of the staff, and took swabs from their noses and throats with the following results. In forty-five (17 per cent.) there were positive skin reactions, and seventy-two (28 per cent.) showed haemolytic streptococci in nose or throat. Of the forty-five Dick-positive individuals forty were inoculated with Dick toxin: of these, thirty-five (87.5 per cent.) were immunized to the point of negative skin reactions, thirty-two patients requiring five, and three needing six doses of toxin for immunization. Of the 186 adults with negative Dick reactions 70 per cent. gave no history of scarlet fever; 24 per cent. had had the disease; and in 6 per cent. the history was doubtful. No case of scarlet fever developed among the Dick-negative cases. Of the forty adults with positive Dick reactions, two contracted scarlet fever before the series of immunization was complete, and of the five individuals who were not immunized two had severe attacks of scarlet fever.

4 Recovery from Streptococcal Meningitis

E. LEWIS (*Arch. of Pediat.*, September, 1932, p. 632), who records an illustrative case, remarks that recoveries from streptococcal meningitis are being observed with increasing frequency, as is shown by the fact that Appelbaum has recently collected forty-six cases, including three of his own. Lewis's patient was a coloured girl, aged 8 years, who developed otogenic meningitis. Recovery followed repeated lumbar puncture, transfusion of citrated blood, and removal of the focus of infection by mastoidectomy.

Surgery

5 Carcinoma of the Prostate

J. R. CAULK and S. B. BOON-ITT (*Amer. Journ. Cancer*, September, 1932, p. 1024) compares carcinoma of the prostate with that form of the disease which occurs in the female breast. Both are diseases of the latter part of middle life, and spread very early by way of the lymphatic system; they are also alike in their power to disseminate and in their predilection to skeletal metastasis. In neither of the two types of carcinoma is the prognosis good, and the end-results of treatment are still unsatisfactory. Carcinoma of the prostate is not uncommon, and it is suggested that chronic prostatitis may be responsible for a definite number of cases. Emphasis is laid on the need for early and careful attention to be paid to all inflammatory lesions of the prostate. Diagnosis of carcinoma of the prostate in the 107 cases under review was made through the process of exclusion, supported by the characteristic feel of the carcinomatous gland on palpation per rectum, and confirmed by microscopical examination of tissue obtained by the punch operation or by prostatectomy. It is a disease of late middle age, nearly 94 per cent. of patients being over the age of 50. Symptoms of obstruction, ranging from some difficulty in voiding to complete retention of urine, and frequency of urination are the two most common complaints in the early stage of the disease. Pain in the lower part of the

back and legs may occur, and is suggestive of extension of the growth or metastatic processes. Extension of the carcinomatous process by way of the seminal vesicles appears to predominate, with spread to the pelvic bones ranking next. Metastases in the skull and other bones are also common. The cautery punch operation, in conjunction with radium and *x*-ray therapy, relieves the obstruction, and retards the progress of the disease. In the series of cases under review 72 per cent. so treated gained complete relief from obstruction, while 29 per cent. of the patients lived over three years and 10 per cent. over five years. The operative mortality was only 2.5 per cent., as compared with 17 per cent. following prostatectomy.

6 Tuberculosis of the Large Intestine

Two types of intestinal tuberculosis occur—the hyperplastic (tuberculoma), and ulcerative colitis. The latter is frequently so extensive that an operation is inadvisable or impossible. The former lesion, generally seen in the caecum and frequently involving the terminal ileum, can be successfully removed. F. W. RANKIN and S. G. MAJOR (*Surg., Gynecol. and Obstet.*, October, 1932, p. 494) present a report of sixty-five cases observed at the Mayo Clinic, in which short-circuiting operations or bowel resection, or both, were performed. The bovine type of *B. tuberculosis* is more frequently the cause of primary intestinal lesions than the human type. The incidence of hyperplastic intestinal tuberculosis is greater than has been recognized; it is more prevalent among males than females, and the ileo-caecal region is the site most frequently involved. Pain and loss of weight are the most constant symptoms. Diarrhoea occurs in many cases; it may alternate with constipation. Intestinal *haemorrhage* is rare. In a certain percentage of cases no extra-intestinal tuberculous focus can be found. Radiological examination is of diagnostic value. Radical extirpation of the ileo-caecal coil with end-to-side anastomosis between the terminal ileum and transverse colon in one (preferably) or two stages is the procedure of choice. If short-circuiting is necessary, ileocolostomy or ileosigmoidostomy may be performed, or, if the lesion is limited to the small intestine, entero-enterostomy or ileocaecostomy. The present cases show that results from resection are definitely better than from anastomosis alone. The chief complication is a gradual and insidious onset of obstruction, and a faecal fistula is also not uncommon; these two conditions should be treated surgically. Perforation and intestinal haemorrhage are more common in tuberculous enterocolitis than in hyperplastic tuberculosis. Surgical measures should always be supplemented by careful medical supervision.

7 Treatment of Congenital Torticollis

H. L. ROCHER (*Bordeaux Chir.*, October, 1932, p. 424) describes the various methods of treatment which have been used for congenital torticollis. These include forcible correction under an anaesthetic, open operation, and tenotomy of the sterno-mastoid muscle, complete or partial excision of the muscle, and finally subcutaneous tenotomy. Rocher prefers to operate before the age of 2 in the case of a child; under general anaesthesia he performs a subcutaneous tenotomy of the muscle at its insertion into the sternum. The clavicular head is then divided either through the same or a second incision. Great care is necessary to avoid causing injury to the important structures at the base of the neck. Venous haemorrhage often follows the operation, but is usually easily controlled by pressure. The author emphasizes the importance of the division of both attachments of the muscle, and of the forcible rupture of the deep fascia by the movement of over-correction of the head position, or, in older cases, by pressure of the fingers. A firm dressing is then applied over the small incisions, with a collar to hold the head in the over-corrected position. This collar is worn by the patient for about six weeks after the operation; at the end of this time massage is carried out, the collar being worn for about three months altogether. Since 1914 about sixty cases have been treated in this way with excellent results, only two complications having arisen. In one instance venous haemorrhage followed subcutaneous tenotomy, and in the other an over-correction caused a torticollis on the opposite side. It has been found that this method of treatment gives the best aesthetic results in the shortest time and with the minimum of operative risk.

Therapeutics

8 Injection of Liver Extract in Pernicious Anaemia

H. M. CONNER (*Journ. Amer. Med. Assoc.*, August 20th, 1932, p. 614) administered liver extract by injection to thirty patients with pernicious anaemia, twenty-seven of whom were studied in hospital. The intramuscular route was used in twenty-one instances, the dose being 2 to 6 c.cm. of an extract of which 2 c.cm. was the equivalent of 10 grams of liver. Three patients received intravenous injections, the dose being 20 c.cm. of an extract derived from 100 grams of liver. Three other patients were treated by intramuscular injections of an extract of which 3 c.cm. represented 100 grams of liver. In the case of the remaining three patients the degree of observation was regarded as insufficient to justify the results obtained being reported yet. Conner is satisfied that the extract from a very small amount of liver produced maximal results when administered by injection. The effects on the reticulocytes, red cells, haemoglobin, and other blood elements, as well as on the general symptoms, were similar to but more rapid than those following oral administration. The value of the treatment as regards the neurological symptoms could not be definitely ascertained, but the author does not think that there was any evidence to suggest that the poor results usually following oral therapy were improved on by injection treatment. Untoward symptoms, except pain, did not occur in cases in which intramuscular injections of the less concentrated extract were given daily. Chills were noted in two instances, and pyrexia in three, in which the intravenous route was used. There was no reaction definitely attributable to the intramuscular injection of the more concentrated extract, but in one instance status epilepticus occurred after the second injection in a case of epilepsy and syphilis of the central nervous system. Conner agrees that no patient should be treated by injection if the oral method is applicable, but there are some contingencies in which injection therapy is definitely indicated—for example, in the case of patients who are acutely ill, who have an extreme degree of anorexia, who are vomiting repeatedly, who particularly dislike liver and the other effective substitutes, or who manifest symptoms of gout after the oral administration.

9 Treatment of Syphilis in Denmark

E. EHLERS (*Ugeskrift for Laeger*, September 15th, 1932, p. 897) describes his routine and experiences with the treatment of syphilis in the Communal Hospital in Copenhagen. The dose of neosalvarsan with which he begins a course of six or seven injections is 45 cg. This dosage is increased to 60 and then to 75 cg., which is now his maximum. Should the first injections of neosalvarsan be followed by definite symptoms of poisoning, they are discontinued and only bismuth is given. Bismuth hydroxide is not employed, preference being given to "vijochin" (Leo), which is an iodine-quinine preparation of bismuth. As a rule fifteen injections of bismuth complete one course—30 cg. twice a week. The injections of neosalvarsan are started after two injections of bismuth have been made. In the case of children preference is given to a soluble preparation of bismuth (Quinby lipo-soluble), which is easily administered by subcutaneous or intramuscular injections. Since introducing bismuth Professor Ehlers has entirely discarded mercury, and he regards potassium iodide merely as a useless and troublesome relic of the past. When a patient has begun treatment in the early sero-negative stage, two courses

of injections will suffice, but he must continue under Wassermann tests. On the other hand, early cases of syphilis which begin with headaches are assumed to be complicated by syphilitic basal meningitis, and are not released from hospital with less than three months' treatment. This rule is followed even when the examination of the cerebro-spinal fluid is negative. The nature of the further treatment of such cases is determined by the Wassermann reactions, which are repeated regularly every month. Ehlers quotes figures in support of his opinion that syphilis is about to disappear. At the beginning of this century Copenhagen, with a population of 700,000, had some 2,800 new cases of syphilis every year—about fifty-five every week. At the present time some weeks may pass without a single new case, and the maximum is five or six new cases a week.

10 Treatment of Herpes Zoster

E. LENGLET (*Bull. Soc. de Thér.*, October 12th, 1932, p. 176) during the last twenty years has ordered the following treatment for cases of herpes zoster with good results. The patient is given a cachet containing 5 cg. of quinine sulphate and 7 cg. of sodium salicylate every hour, ten times daily, for five days. The earlier the treatment is adopted, the more likely it is to be successful, but it is still efficacious if first employed when the herpes is at its height. No bad effects have been observed.

Dermatology

11 Leucoderma

H. C. L. LINDSAY (*California and Western Med.*, July, 1932, p. 36) uses vitiligo and leucoderma as synonymous terms, and suggests that there may be an endocrine origin for this condition of depigmentation of the skin. He discusses the various forms of empirical therapy that have been employed in this intractable condition, and recommends intravenous injections of gold sodium thiosulphate in cases where photo-sensitivity appears to be concerned. Toxic reactions, in Lindsay's opinion, can be avoided by employing small doses at first, and not exceeding a total of twenty injections. Among the conditions which cause leucoderma, or are associated with it, are hyperthyroidism, Addison's disease, pregnancy, syphilitic involvement of the sympathetic nervous system, chronic intestinal infections, tuberculosis, and leprosy. Lindsay deduces that this skin depigmentation originates from disturbances which affect some part of the nervous system, and/or the chemistry of the tissues in its relation to the rays of the sun or to some other external factor. He believes that the injection of gold sodium thiosulphate brings about repigmentation of the leucodermic areas, with a relative lessening of pigmentation in the hyperpigmented areas—in other words, an "averaging" of the pigmentation. Recurrence may ensue, but not invariably. Such gold therapy in the author's experience was most effective in patients who had symptoms of mild hyperthyroidism; it might also be expected to be useful in cases associated with tuberculosis or syphilis.

12 Brucella Dermatitis

Brucella melitensis of the *abortus* type occasionally produces a dermatitis, and L. F. WEBER (*Arch. Derm. and Syph.*, September, 1932, p. 422) records a case of this occurring in a veterinary surgeon. The eruption was confined to the left forearm and right arm, was most acute on the flexor surfaces of the latter, and simulated the severe dermatitis due to an external irritant on a skin highly sensitized to antiseptics. For various reasons, antiseptics could be eliminated as possible causes. The dermatitis was always contracted in the spring and autumn—the periods of prevalence of contagious abortion in cattle—and only appeared during attendance on aborting animals. Haxthausen and Thomsen have shown that cultures of the pus from infected abortion material are negative, and therefore they believe that the dermatitis is not due to direct bacterial infection. Weber's patient had no constitutional symptoms of undulant fever, and Haxthausen suggests that the dermatitis from *Brucella melitensis* (*abortus* type) is an allergic reaction due to sensitization to the antigen, which had resulted from repeated successive exposures to the organism. The patient made an uneventful recovery in two weeks by using wet dressings of aluminium subacetate solution (0.5 per cent.). Though recurring several times, the subsequent attacks have not been so severe or so lengthy.

13 Granuloma Pyogenicum

A. MARIN (*Canadian Med. Assoc. Journ.*, September, 1932, p. 282) reviews the aetiology and treatment of granuloma pyogenicum, summing up in favour of *x*-ray or radium therapy, and recording a series of fourteen cases, each of which was cured by a single application. The condition appears as a skin outgrowth consisting of a tumour of variable size. It is due to inflammation by pyogenic cocci, and usually follows a skin puncture or slight excoriation with which is associated some suppuration. A papule appears, and gradually increases in size. At first it is soft, bleeds easily, and is either covered by a scab or is bright red. The surface which is not covered by the epidermis may be either smooth or granular, and the base be pedunculated or strangulated. The lesion ranges in size from that of a pea to that of a cherry. It may occur at any age and in both sexes, and at various sites on the skin or mucous membranes. When it appears on the lips or in the mouth it unduly alarms the cancerophobic type of patient. As regards forms of treatment other than radiotherapy, chemical caustics have to be repeatedly applied, and leave ugly scars; curetting is ineffectual unless supplemented by cauterization or irradiation; surgical removal calls for deep and extended ablation, and union is rarely by first intention, or there may be a relapse, and in any case scarring is marked, as it is also in cauterization; electrocoagulation is followed by slow healing and scarring; and ultra-violet rays do not penetrate sufficiently to destroy this deeply implanted tumour. Marin has found surface applications of radium or the insertion of radium needles effective; *x*-ray exposures were equally good. Towards the end of the week following treatment the tumour shrivels, begins to dry up, becomes flattened, and is absorbed in five or six weeks. There remains only a punctiform, flat, and whitish scar at the point of attachment of the pedicle. No repetition of the dose was ever necessary, and there was no recurrence.

Obstetrics and Gynaecology

14 Fat Content of the Liver during Pregnancy

E. DEBIASI (*Ann. di Ostet. e Ginecol.*, August 31st, 1932, p. 1153) has studied the question of fat accumulation in the liver under experimental conditions of toxicity, and prolonged action of hormones, during pregnancy in animals. The anabolic and katabolic actions of the hormones were compared with the degenerative effects of toxic products. Histological specimens of the liver of normal animals were used as controls to those obtained from animals killed and examined at various stages of pregnancy. The author has shown that the quantity of fat demonstrable by histo-chemical means normally present in the liver varies for each species. In the guinea-pig there is practically none. During pregnancy a moderate amount of fat appears, gradually becoming more evident in the later stages. The fat occurs in well-preserved cells which present no degenerative characteristics. The stellate cells do not seem to take any noteworthy part in this phenomenon of fat production. The actual quantity of fat and the number of cells infiltrated are individually very diverse; no particular central or peripheral distribution could be defined. Only in the few cases in which the fat is abundant can its tendency to collect in the cells round the bile ducts be recognized. The fat droplets are

disseminated without any connexion with the Kupffer cells. The fat distribution in the liver during pregnancy differs from that which results from the accumulation of purely alimentary fat, suggesting that there may be some toxic effect on the liver. Histo-chemical modifications of the liver appear to be subject to endocrine influence. The effects of insulin, folliculin, and hypophyseal extracts were investigated. Placental extract brings about fatty degeneration, but less severely than the lutein hormone. Treatment with a combined thyroid-hypophysis-supra-renal-ovarian extract produced simple fat infiltration in the early stages, but prolonged treatment resulted in a lesion of the hepatic cells.

15 Circular Tear of the Cervix

L. MARGULIES (*Zentralbl. f. Gynäk.*, September 17th, 1932, p. 2305) describes the case of a primipara, aged 37, whose labour commenced forty hours after rupture of the membranes. Twelve hours later, towards the end of the second stage, a dusky red ring-shaped structure presented at the vulva below the advancing head, and was identified as the central portion of the cervix uteri, including the os externum. This was two centimetres in diameter, with margins somewhat thicker than the thumb: the detachment of the central part of the cervix was complete except for a zone of three centimetres in front. An hour and a half later spontaneous delivery occurred, the loose fragment having retracted in the meantime; it was removed, after delivery of the placenta, by clamp and ligature. Six weeks later the appearance of the cervix was practically normal. Margulies states that this form of cervical laceration has been recorded in about twenty spontaneous and about twenty operative deliveries, of which over one-third were in primiparae aged more than 33. The prognosis is relatively good, only one maternal and three foetal deaths having occurred in the last thirty-two cases. In the case recorded by Margulies ante-natal examination had shown a very large and very hard portio.

16 Detection of Blood in the Abdomen

R. A. LIFVENDAHL (*Amer. Journ. Obstet. and Gynecol.*, September, 1932, p. 394) describes a sign for the detection of small amounts of free blood in the abdomen. It is emphasized that the obtaining of an accurate history and the careful conduct of the physical examination are of more value than all of the so-called pathognomonic signs yet described—such signs being always in the nature of confirmatory evidence. By correlating the clinical manifestations indicating peritoneal irritation (painful defaecation, pain on manipulation of the cervix, urinary disturbances, lower abdominal and later high abdominal pain, thoracic and shoulder pain) the author deduces that such signs are entirely due to the local irritating effect of the blood on the peritoneum, the pain varying in position according to the level which the haemorrhagic exudate has reached. The period of greatest diagnostic difficulty occurs when there are small amounts of free blood in the pelvis following the rupture of the tube, for it is at this point that all the previously mentioned evidence of peritoneal irritation confuses the diagnosis; such signs may be due to other causes, such as inflammatory conditions. In this early stage the patient usually localizes the pain in the lower part of the abdomen, either to the right or the left of the mid-line, or occasionally in the suprapubic region. If now the patient is rotated to the opposite side to that on which the pain is located, from her back on to her iliac crest, it will be observed that the subjective and objective signs have shifted to the dependent portion of the lower abdomen after a period of five to ten minutes. In other words, the position of the blood and the region of peritoneal irritation have been shifted concurrently. This test can only be expected to be positive when there is a moderate amount of free blood in the abdomen. It cannot occur, of course, when the entire peritoneum is irritated by an abdomen full of blood, nor when there is such a small amount of blood that it cannot be shifted. Two case histories are given illustrating this sign. One of these indicates that the sign may be of value in differentiating between an early ruptured ectopic pregnancy and appendicitis.

Pathology

17 The Sedimentation Rate in Juvenile Rheumatism

N. GRAY HILL (*Brit. Journ. Child. Dis.*, July–September, 1932, p. 181) investigated the erythrocyte sedimentation rate in a number of rheumatic children, of whom he records eight illustrative cases, and comes to the following conclusions. The test is of some clinical significance, and may be of real value in dealing with rheumatic children. It can be said with some degree of certainty that if the rate is below 10:20 active rheumatism (other than chorea) is not present, and that there is no real necessity for hospital treatment unless such is indicated by the cardiac condition. The rate throws no light on the extent of the cardiac involvement, but is affected by the activity of the carditis. When the readings exceed 10:20 the indications for rest in bed and more careful observation are increased. The sedimentation rate is not in his opinion a specific test, and a thorough clinical investigation can alone determine the cause of variations in the readings.

18 Pathogenesis of Carcinoma Related to Lupus Erythematosus

A. M. TISCHNENKO (*Arch. Derm. and Syph.*, August, 1932, p. 708) briefly mentions the recorded cases of carcinoma originating from lupus erythematosus, which is of exceptional occurrence, and discusses the pathogenesis of such neoplasms. Various theories on this point are cited, such as relaxation and oedema of the tissues, traumatism by therapeutic agents, lowered cutaneous resistance, and familial predisposition. While granting that these may be adjuvant factors, Tischnenko maintains that the predominant cause of cancer supervening on lupus erythematosus is radiotherapy, particularly with *x* rays. In support of this view tabulated details of eighty-two cases are given; these show a large percentage of carcinomatous supervention on the dermatitis thus treated. Four typical personal cases are also recorded. Tischnenko therefore concludes that *x*-ray treatment is contraindicated in lupus erythematosus, especially since the eruption causes no great suffering, and radiotherapy is employed chiefly for its aesthetic effects, usually with negative results.

19 Diagnosis of Anterior Poliomyelitis

F. PLAUT (*Münch. med. Woch.*, September 23rd, 1932, p. 1548) draws attention to the fact that the early diagnosis of anterior poliomyelitis is essential and only possible if the cerebro-spinal fluid is examined. The typical findings are: the pressure is increased, the fluid is clear and colourless, and there is a moderate increase of the number of cells (15 to 20 per c.mm.). The amount of globulin is slightly increased; the total proteins are increased (100 mg. per cent. and over). The amount of sugar is normal. A differential diagnosis between encephalitis and poliomyelitis is usually possible. In the first there is only a slight increase in the total protein content, whereas the sugar content is increased. If there is a great increase of cells and the sugar content is above 30 mg. per cent. the diagnosis of tuberculous meningitis is almost certain. In suspected cases of anterior poliomyelitis it is not enough to depend on the increase of cells, since in 25 per cent. of cases this is absent. If there is a total increase of protein of 50 mg. per cent. or over, the patient must be injected with the serum of a convalescent case. A further indication for serum treatment is a positive mastic or gold-sol reaction. Patients are usually able to stand lumbar puncture well if the cerebro-spinal fluid is withdrawn slowly. Some authors believe that there is definite danger in removing large amounts of cerebro-spinal fluid in cases of anterior poliomyelitis—according to Plaut a groundless fear. In these the micromethods of examination may be used, only 0.6 c.cm. of fluid being necessary.

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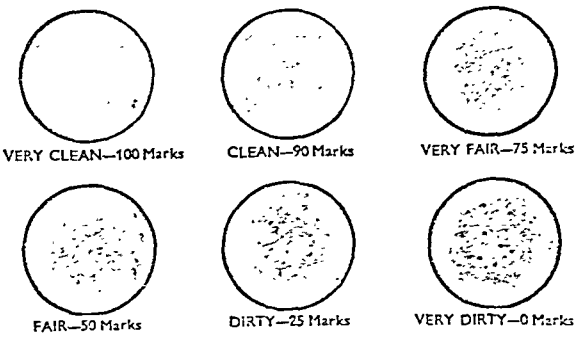

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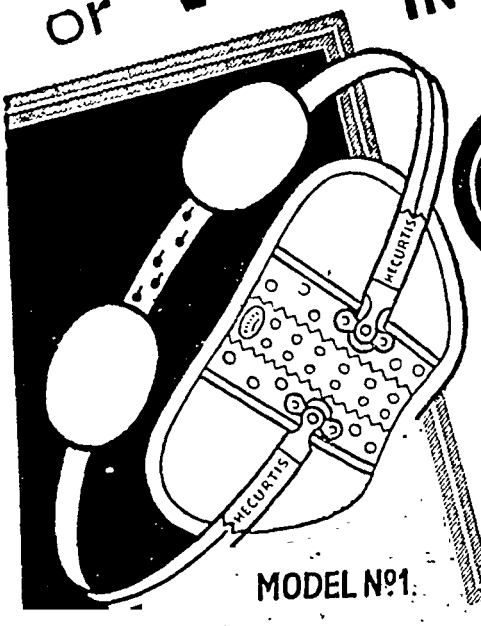

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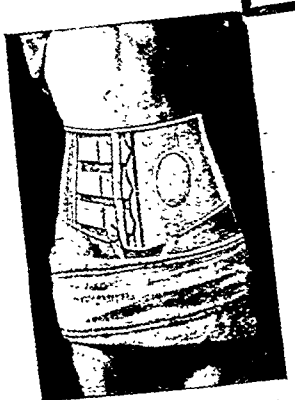

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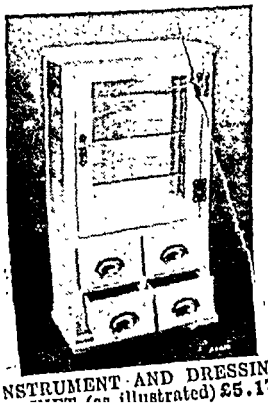

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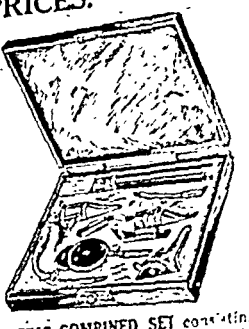

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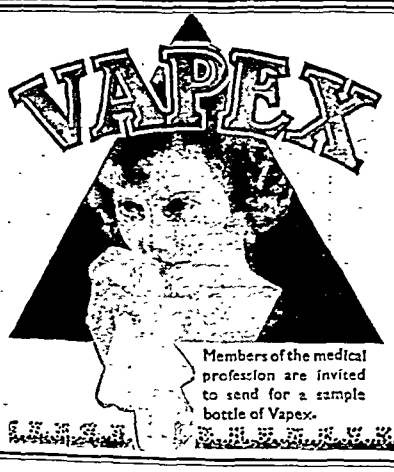

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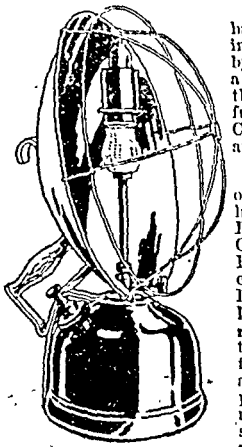

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Telephone: No. 7 Barnwood.

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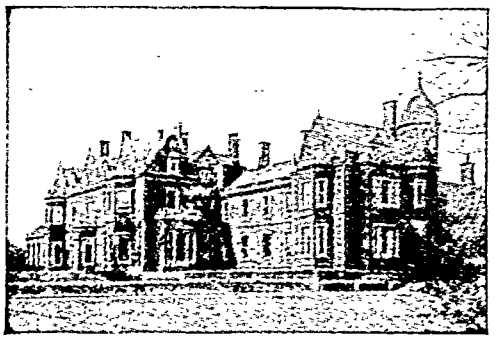

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Address—THE SECRETARY, Ruthin Castle, North Wales. Telegrams: ASTLE, RUTHIN. Telephone: RUTHIN 66.

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CHEADLE, CHESHIRE.

This REGISTERED HOSPITAL, with a SEASIDE BRANCH at Colwyn Bay, N. Wales, is for the treatment and care of those of the Upper and Middle Classes suffering from MENTAL and NERVOUS DISEASES.

The Hospital is governed by a COMMITTEE, appointed by the TRUSTEES of the Manchester Royal Infirmary.

In addition to the Main Building there are separate villas. Extensive grounds. Hard and grass tennis courts, cricket and croquet grounds, and a court for badminton. There are also wireless installations. Golf may be had within easy distance. Occupational Therapy.

VOLUNTARY, TEMPORARY, AND CERTIFIED PATIENTS received.

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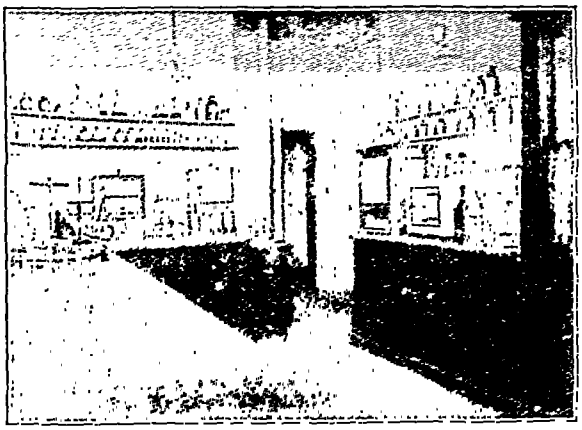

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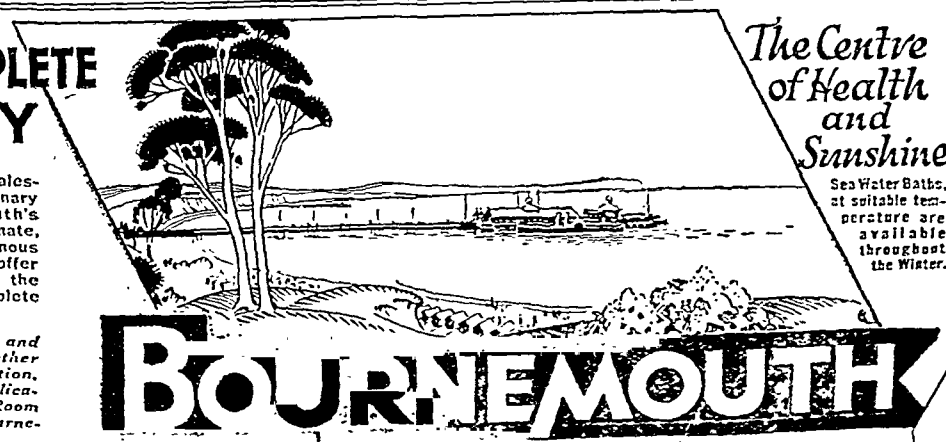

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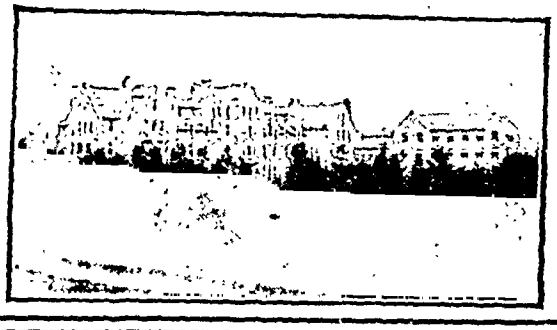

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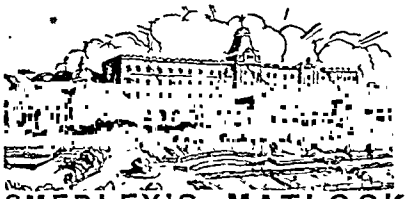

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W. L. GIFFARD (Major),
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Medical Prospectus gratis along with list of Tutors, etc., on application to the Principal, Mr. E. S. WEYMOUTH, M.A., 17, Red Lion Sq., London, W.C.1. (Telephone: HOLBORN 6313.)

STAMMERING, SPEECH DEFECTS.

BEHNKE METHOD. Estab. 1882. Cases, non resident, treated at 39, Earl's Court Square, S.W.5, and in residence, in the Summer holidays, at Miss BEHNKE's house on the Chilterns.

"Pre-eminent success in the education and treatment of stammering and other speech defects."—"Times."
"Thoroughly physiological principles."—"Lancet."
"The method is scientifically correct and perfectly effective."—"Guy's Hospital Gazette."

STAMMERING, CLEFT PALATE SPEECH, LISPING, 3/9

of Miss BEHNKE, 39, Earl's Court Sq., S.W.5

SCHOLARSHIPS OF HALF FEES, £60 p.a.

offered by good Boarding School (Girls), recognized by the Board of Education. Excellent references and examination results. Distinctions in School Certificate and Leaving Scholarships to Universities. Full particulars.—Add., —No. 201, B.M.A. House, Tavistock Sq., W.C.1.

M.B., B.S. (LONDON), M.R.C.P. (LONDON), B.Sc. honours, Physiology (London), STARTING individual COACHING and CLASSES in Physiology, Medicine, and Pathology.—Address, No. 518, B.M.A. House, Tavistock Square, W.C.1.

NORTH LONSDALE HOSPITAL, BARROW-IN-FURNESS. (152 Beds.)

HOUSE PHYSICIAN and CASUALTY OFFICER. (Male appointments.)

Applications are invited for the above resident appointments from fully qualified practitioners experienced in the administration of anaesthetics. Duties to commence on February 1st, 1933. Salaries £175 and £150 per annum respectively, with board, residence, and laundry.

Applications, stating age, qualifications, experience, and nationality, accompanied by copies of three recent testimonials, should be sent to the Secretary not later than January 16th, 1933.

URBAN DISTRICT COUNCIL OF ENFIELD.

ASSISTANT MEDICAL OFFICERS OF HEALTH.

The Urban District Council invites applications for the appointment of Assistant Medical Officer of Health for Maternity and Child Welfare purposes. Two such appointments will become vacant on April 1st next.

Applicants (female) should have had previous experience in dealing with diseases of babies and children, and of ante-natal and post-natal work.

The appointments will be part-time and the persons appointed will be required to attend at the Centres for 2½ hours on four afternoons and one morning per week. In addition, the persons appointed will be required to attend on alternate Saturday mornings at the Maternity and Child Welfare Dental Clinic for the purpose of administering anaesthetics, and should have had special experience of this work.

The persons appointed will be required to carry out their duties under the supervision of the Medical Officer of Health.

The salary will be £300 per annum, and four weeks' holiday per annum will be allowed.

Applications, stating name and address, age, whether married or single, degrees, diplomas, and previous experience, and accompanied by copies of three recent testimonials, must be delivered to the undersigned marked "Assistant M.O.H.," not later than noon on Saturday, January 21st.

Candidates canvassing Members of the Council, directly or indirectly, will be disqualified.

Public Offices, Enfield, Middlesex. December 30th, 1932.
KENNETH TANSLEY, Clerk to the Council.

LONDON COUNTY COUNCIL.

Applications invited for appointment to position of RESIDENT MEDICAL SUPERINTENDENT in Public Health Department for duty at St. Giles' Hospital (820 beds), Brunswick Sq., Camberwell, S.E. Duties also include those of Medical Officer of (1) Camberwell Institution and (2) Peckham Children's Homes. Person appointed will be under direction of Medical Officer of Health and must, if required, assist at other Council establishments. Salary £1,300 by £50 to £1,550 a year, plus £50 a year and £25 a year for duties at Camberwell Institution and Peckham Children's Homes, respectively. Unfurnished house or quarters provided free of rates, etc., valued provisionally at £100 a year. Cash remuneration is subject to temporary reductions. Candidates, other than members of the Council's medical staff, must not be over 55 years of age, and must be fully qualified medical practitioners for at least five years and have been house physician or house surgeon in public general hospital and have experience of hospital administration.

Application forms obtainable (stamped addressed foolscap envelope necessary) from Clerk of the Council, County Hall, S.E.1 returnable by January 16th, 1933. Canvassing disqualifies.

LONDON COUNTY COUNCIL.

Applications invited for appointment to the position of RESIDENT ASSISTANT MEDICAL OFFICER (Grade II) (man only) at QUEEN MARY'S HOSPITAL, SIDCUP (for convalescent patients). Salary £250 a year, together with board, lodging, and washing (subject to temporary reductions). Appointment at this hospital for one year only and not renewable.

Candidates must be registered Medical Practitioners of at least one year's standing, and have held a resident appointment in a general hospital for six months.

The duties are assigned by the medical superintendent, and include if necessary assistance at other establishments under the control of the Council.

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), County Hall, Westminster Bridge, S.E.1, returnable by January 13th, 1933. Canvassing disqualifies. Further inquiries should be addressed to Medical Superintendent at the Hospital.

LONDON COUNTY COUNCIL.

Applications invited from registered Medical Practitioners for appointment as CLINICAL ASSISTANT at ST. STEPHEN'S HOSPITAL, Fulham Road, S.W.10. Salary £100 a year, together with meals when on duty, subject to temporary reduction. Appointment is for six months in the first instance, but may be extended for a further period of six months. Duties are assigned by the Medical Superintendent and include, if necessary, assistance at other establishments under the control of the Council.

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), County Hall, Westminster Bridge, S.E.1, returnable by January 13th, 1933. Canvassing disqualifies.

Further inquiries should be addressed to Medical Superintendent at the Hospital.

THE MIDDLESEX HOSPITAL AND MEDICAL SCHOOL, W.1.

Applications are invited for ONE MEDICAL REGISTRARSHIP.

The Registrars are attached to Clinical Units of the Hospital and are responsible for the Clinical Notes, the carrying out of clinical and pathological examinations, the preparation of material for demonstration, and the co-ordination of the work in the Bland-Sutton Institute of Pathology with that in the Wards.

The appointment will be from March 12th to December 31st, 1933, and the successful applicant will be eligible to apply for re-appointment and to hold office for two further consecutive years. He will be required to attend at the Hospital daily from 10 a.m. to 6 p.m. Salary £300 per annum.

Further particulars may be obtained from the undersigned, to whom applications, with copies of not more than three testimonials, must be sent before noon on Saturday, February 4th.

S. R. C. PLIMSOLL, Secretary-Supt.

CITY AND COUNTY OF NEWCASTLE-UPON-TYNE.

NEWCASTLE GENERAL HOSPITAL. (650 Beds.)

TWO HOUSE SURGEONS AND ONE HOUSE PHYSICIAN (Male).

The above posts will become vacant on February 1st, 1933, and applications are invited from duly qualified and registered Medical Practitioners.

The salary in respect of each of the appointments, which are tenable for six months, is at the rate of £150 per annum, with board, lodging, etc.

Applications, stating age and qualifications, together with copies of not more than three recent testimonials, to be addressed to the Medical Officer of Health, Town Hall, Newcastle-upon-Tyne, not later than January 12th, 1933.

HERTFORDSHIRE COUNTY COUNCIL.

CELL BARNES COLONY FOR MENTAL DEFECTIVES.

POST OF DEPUTY MEDICAL SUPERINTENDENT.

Applications are invited from duly qualified men who should be under 40 years of age and must have had satisfactory experience in the care and treatment of the mentally defective. The post is resident, and is pensionable under the A. & C.I.O. Pensions Act, for which purpose the selected candidate will be required to pass a medical examination.

The salary and emoluments are of a total value of £600 per annum, rising by four increments of £25 to £700 per annum, subject to a temporary reduction of 7½ per cent. on the salary.

Application forms, with full information, may be obtained from the Medical Superintendent, Cell Barnes Colony, St. Albans, Herts, and must be returned to him, not later than Saturday, January 28th.

WEST LONDON HOSPITAL, Hammersmith, W.6. (234 Beds.)

Applications are invited for the post of ASSISTANT GYNAECOLOGIST.

Candidates must be Fellows of one of the Royal Colleges of Surgeons of England, Edinburgh, or Ireland, or a Fellow or Member of the Royal College of Physicians of London. The successful candidate will be required in addition to his other duties to undertake such teaching for the Post-Graduate College as the Board may approve.

Applications, accompanied by copies of testimonials, should reach me not later than Thursday, February 2nd. Candidates must attend a Special Meeting of the Medical Council on Friday, February 3rd, at 4.30 p.m. and prior to that date call upon and send copies of applications and testimonials to each member thereof. They must not canvass Members of the Board, but nevertheless must send copies of their application and testimonials to each member thereof, and if so notified, be in attendance at a Special Meeting of the Board at 5.30 p.m. on Tuesday, February 7th, when the election will be made.

H. A. MADGE, Secretary.

DOWN MENTAL HOSPITAL, DOWNPATRICK, NORTHERN IRELAND.

VACANCY FOR CLINICAL ASSISTANT.

Appointment for one year only, renewable for second year. Honorarium £90 per annum, with apartments, rations, and laundry.

Candidates must be under 30 years of age and registered.

Opportunities for study and research.

Immediate applications, with copies of testimonials, to the Res. Med. Sup[illegible]

MANCHESTER ROYAL INFIRMARY.

HOUSE PHYSICIANS (Male)—4 Vacancies.

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointments, which become vacant as follows: Two on February 15th and Two on March 15th, 1933. The applications will be considered to be for any of these posts unless it is specially stated to the contrary.

Applicants must be registered and hold a Medical and Surgical qualification.

The appointments are for six months, subject to the provisions of the By-laws as to notice, etc. Salary at the rate of £50 per annum, with board, residence, and allowance for laundry.

Applications, stating age, to be sent to the Chairman of the Medical Board not later than January 16th, 1933.

By Order,
FRANK G. HAZELL,
Dec. 22nd, 1932. Gen. Supt. & Secretary.

MANCHESTER ROYAL INFIRMARY.

ASSISTANT MEDICAL OFFICER.

MASSAGE AND ELECTRICAL DEPARTMENT.

The Board of Management invite applications from registered Medical Practitioners (men and women) for the above appointment. Previous experience in the work is not essential.

The duties are to attend daily and to assist the Medical Officer in charge of the Department. The appointment is part-time (non-resident) for one year. Salary £100 per annum.

Candidates must state age, and send twelve copies of their application and testimonials, to the undersigned on or before Thursday, January 26th.

By Order,
FRANK G. HAZELL,
Dec. 19th, 1932. Gen. Supt. & Secretary.

MANCHESTER ROYAL INFIRMARY.

HOUSE SURGEONS (Male)—5 Vacancies.

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointments which become vacant on February 15th, 1933.

Applicants must be registered and hold a Medical and Surgical qualification. The appointments are for twelve months (six months as Junior and six months as Senior) subject to the provisions of the By-laws as to notice, etc. Salary £50 per annum, with board, residence, and allowance for laundry.

Applications, stating age, to be sent to the Chairman of the Medical Board not later than January 16th, 1933.

By Order,
FRANK G. HAZELL,
Dec. 22nd, 1932. Gen. Supt. & Secretary.

MANCHESTER ROYAL INFIRMARY.

FIRST ASSISTANT IN THE CLINICAL LABORATORY.

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment, which is non-resident and is tenable for twelve months; the holder is eligible for re-election.

Salary £350 per annum. Candidates must be duly qualified and registered; they must state age and send twelve copies of their application and testimonials to the undersigned by 9 a.m. on Thursday, January 12th, 1933.

By Order,
FRANK G. HAZELL,
Gen. Supt. & Secretary.

HUDDERSFIELD ROYAL INFIRMARY.
(220 Beds.)

TWO MALE HOUSE SURGEONS required, one to commence duty on January 1st, 1933, or as early as possible thereafter, and one to commence duty about the middle of January, 1933.

Salary £150 per annum, with board, residence, and laundry. Appointment for six months, subject to renewal for further three or six months.

The Hospital is officially recognized for the surgical practice required of non-members before admission to Final Fellowship Examination of the Royal College of Surgeons of England.

Applications, with copies of three recent testimonials, to be addressed to the undersigned immediately.

H. E. G. HALL,
Gen. Supt. & Secretary.

CHESHIRE JOINT SANATORIUM, MARKET DRAYTON.

HOUSE PHYSICIAN required (male). The appointment will be for twelve months. Inclusive salary £250 p.a., with board, residence, and laundry.

Application to be made on forms obtainable from the Medical Superintendent.

SOUTH LONDON HOSPITAL FOR WOMEN, Clapham Common, S.W.4.

A General Hospital for Women and Children (120 beds), including Medical, Surgical, Ear, Nose, and Throat, Ophthalmic, Skin, Urological, and other Special Departments.

Applications are invited from fully qualified Medical Women for the undermentioned appointments:

SURGICAL REGISTRAR. Half-time duty for a period of one year from March 1st, with eligibility for re-appointment to a maximum of three years. Present holder eligible for re-election. Honorarium 50 guineas per annum.

OUT-PATIENT MEDICAL OFFICER for half-time duty. This Officer to have held a resident Hospital appointment. Salary £100 per annum.

HOUSE SURGEON. For a period of six months from March 1st. Salary at the rate of £100 per annum, with board, residence, and laundry.

Candidates are requested to call on Members of the Hon. Medical Staff before Saturday, January 28th, by which date applications and copies of testimonials, must reach the Secretary at the Hospital.

THE VICTORIA HOSPITAL FOR CHILDREN, Tite Street, Chelsea, S.W.3. (138 Beds.)

The Committee of Management invite applications for the posts of

(a) HOUSE PHYSICIAN;
(b) HOUSE SURGEON;

both vacant February 1st. The appointments are for six months. Salaries at the rate of £100 per annum, with board, lodging, and washing.

(c) OUT-PATIENT ANAESTHETIST.

To attend on Mondays at 10.30 a.m. and Wednesdays at 9 a.m. A payment of 10/6 per attendance will be made.

Candidates for these posts must attend the Hospital for the purpose of an interview at 4.30 p.m. on Thursday, January 19th.

Applications, with copies of three recent testimonials, should be sent to the Secretary not later than first post on Wednesday, Jan. 18th.

By Order,
D. ST. JOHN BAMFORD, Secretary.

THE VICTORIA HOSPITAL FOR CHILDREN, Tite Street, Chelsea, S.W.3. (138 Beds.)

The Committee of Management invite applications for the post of HONORARY SURGICAL REGISTRAR. Candidates are expected to call on members of the Honorary Surgical Staff. The appointment is for one year, renewable for a second year.

Applications, with copies of three recent testimonials, should be sent to the Secretary not later than Saturday, January 21st.

By Order,
D. ST. JOHN BAMFORD, Secretary.

ST. MARY'S HOSPITALS, MANCHESTER

TWO HOUSE SURGEONS for the WHITWORTH STREET WEST HOSPITAL (Maternity) and TWO for the WHITWORTH PARK HOSPITAL (One Children's Dept. and one Gynaecological Dept.) each for a period of six months from February 1st next. Salaries at the rate of £50 per annum, with board and residence.

Applications, with copies of three testimonials, to be sent to the undersigned on or before January 16th, 1933.

R. RATCLIFFE, Secretary.

ST. MARY'S HOSPITALS, MANCHESTER.

RESIDENT OBSTETRIC OFFICER for the WHITWORTH STREET WEST HOSPITAL (Maternity) for a period of twelve months from February 1st next. Salary £175 per annum, with board and residence. Membership of the College of Obstetricians and Gynaecologists would be an advantage. Applications, with copies of three testimonials, to be sent to the undersigned on or before January 16th, 1933.

R. RATCLIFFE, Secretary.

ST. MARY'S HOSPITALS, MANCHESTER.

ASSISTANT MEDICAL OFFICER for the Children's Out-patients' Department for a period of six months from February 1st next. Salary at the rate of £150 per annum.

Applications, with copies of three testimonials, to be sent to the undersigned on or before the 16th instant.

R. RATCLIFFE, Secretary.

UNIVERSITY COLLEGE HOSPITAL, Gower Street, W.C.1.

Applications are invited for the Honorary post of ASSISTANT SURGEON to University College Hospital, in the Ear, Nose, and Throat Department (Royal Ear Hospital).

Applications, accompanied by evidence of fitness for the post, must reach the Secretary by first post on Saturday, January 28th, 1933.

Further particulars on application.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.1.

Applications are invited for the post of HONORARY PHYSICIAN to the SKIN DEPARTMENT, with charge of SUNLIGHT DEPARTMENT.

Candidates must be graduates in Medicine in a recognized University, and be Members of the Royal College of Physicians, London, or shall proceed to obtain that Diploma. They must not be engaged in General Practice.

Applications, with copies of not more than four testimonials should be sent as soon as possible to the Secretary.

Candidates will be required to call upon Members of the Honorary Staff whose names, together with the Standing Orders relating to the post, will be forwarded by the undersigned.

By Order of the Committee of Management,
W. H. SIDNELL,
Dec. 9th, 1932. Secretary-Supt.

THE BOLTON ROYAL INFIRMARY (301 Beds, including Two Auxiliary Hospitals.)

Applications are invited for the post of HOUSE PHYSICIAN. Salary £200 per annum with board, residence, and attendance. Duty to commence February 1st, 1933.

The Infirmary has a very well equipped Pathological Department, and this post offers an exceptional opportunity for experience in clinical pathology.

Preference will be shown to applicants who have had some experience in laboratory work.

Applications, stating age, nationality, and previous experience, together with copies of testimonials, should be forwarded to the undersigned not later than Monday, January 9th, 1933.

ALBERT E. BRISCOE, Secretary.

BURY INFIRMARY, LANCS.
(127 Beds.)

Applications are invited for the post of SENIOR HOUSE SURGEON, who must have both Medical and Surgical qualifications. The appointment is for six months at a salary at the rate of £200 per annum, with board, residence, and laundry. The successful applicant will be required to commence duties about the beginning of February.

Applicants must have held a previous resident appointment.

Applications, stating age, qualifications, nationality, with copies of three recent testimonials, to be sent to the undersigned not later than January 14th.

ALEX. W. MAITLAND,
Honorary Secretary

ROYAL NORTHERN HOSPITAL, Holloway, N.7.

Applications are invited for the post of HOUSE PHYSICIAN, vacant on March 1st. The appointment is for nine months (three months as Out-Patient Casualty Officer and Anaesthetist from March 1st, and six months as House Physician. Salary at the rate of £70 per annum, with board, residence, and laundry.

Applications, with copies of testimonials, should be sent by January 13th to the undersigned from whom forms of application and rules can be obtained.

GILBERT G. PANTER, Secretary.

THE MOUNT VERNON HOSPITAL, NORTHWOOD.

The Council of Management will shortly proceed to the election of a GYNAECOLOGIST. Candidates must be registered Fellows of the Royal College of Surgeons.

Applications, with copies of three testimonials, should be addressed to the undersigned on, or before, January 7th, 1933.

WILLIAM J. MORTON,
Offices: 32, Fitzroy Sq., W.1. Secretary.

SAINT MICHAEL'S HOSPITAL, DUN LAOGHAIRE, CO. DUBLIN.

OPHTHALMIC SURGEON WANTED.

At their Meeting on January 18th, the Medical Board will recommend the appointment of an Ophthalmic Surgeon to the Hospital.

Applications must reach the undersigned on or before January 14th.

J. P. BRENNAN,
Hon. Sec., Medical Board

SEAMEN'S HOSPITAL SOCIETY, Greenwich.

HOUSE SURGEON (male) required at THE BURY HOSPITAL, Essex, for six months from February 1st. Salary £140 per annum, with board, residence, and laundry. Good opportunity for minor surgery. Applications, with copies of three testimonials, to be sent in by January 17th to the undersigned.

R. E. V. BAX,
Seamen's Hospital Society, Greenwich, S.E.10. Secretary.

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh).

(a) British Islands.

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH**
EBBW VALE, MON. *(Workmen's Medical Society.)*	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE. *(Workmen's Medical Scheme.)*	KENT EDUCATION COMMITTEE. *(School Medical Inspector.)*
GILFACH GOCH, GLAMORGAN. *(Workmen's Medical Scheme.)*	NEATH AND DISTRICT. *(Medical Aid Association.)*	LLANTRISANT AND LLANTWIT FARDRE RURAL DISTRICT COUNCIL. (1) *Medical Officer of Health (part-time.)* (2) *Medical Officer (woman—part-time) for Maternity and Child Welfare.*
LLWYNPIA, CLYDACH VALE, PENYCRAIG, GLAMORGAN. *(Workmen's Medical Scheme.)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association.)*	
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer.)*	OGMORE VALLEY, GLAMORGAN. *(Wyndham Colliery Medical Aid Society.)* *(Workmen's Medical Scheme.)*	CITY OF SALFORD. *(Assistant Clinical Tuberculosis Officer.)*
MARDY, GLAMORGAN. *(Workmen's Medical Scheme.)*		

(b) Overseas.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. G. HUNTER (Medical Secretary, New South Wales Branch), 135, Macquarie St., Sydney, N.S.W.	**QUEENSLAND.** *(Brisbane Associated Friendly Societies Institute.)*	The Hon. Sec., Queensland Branch, British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	**WELLINGTON, NEW ZEALAND.** *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec., New Zealand Branch), British Medical Association, P.O. Box 156, Wellington, New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch), British Medical Association, Medical Society Hall, East Melbourne, Victoria.	*(Toowoomba Associated Friendly Societies, Medical Institute, Toowoomba.)*		**WESTERN AUSTRALIA.** *(Contract and Lodge Practices.)*	Hon. Sec., Western Australian Branch, British Medical Association, No. 6, Bank of N.S.W. Chambers, St. George's Terr., Perth, Western Australia.

January 4th, 1933. By Order of the Council. C. C. ANDERSON, Medical Secretary.

WEST LONDON HOSPITAL, Hammersmith Road, W.6. (234 Beds.)

Required, a Non-Resident CASUALTY OFFICER (male). The appointment is tenable for one year from February 1st next, subject to one month's notice on either side. The appointed candidate will be eligible for re-election for two further periods of one year. Salary at the rate of £250 per annum, with lunch and tea daily.

Candidates must be duly qualified registered Medical Practitioners, and preference will be given to those who have held a resident appointment in a General Hospital. Applications (which must be made on printed forms obtained from me) must reach me not later than Thursday, January 19th, 1933. Selected candidates will be required to call upon such members of the Medical Staff as directed, and to be in attendance at a Meeting of the Medical Council at 4.30 p.m. on Friday, January 27th, and the House Committee Meeting at 5 p.m. the same day, when the appointment will be made.

H. A. MADGE, Secretary.

JEWISH MATERNITY HOSPITAL, 24, Underwood Street, E.1.

There is a vacancy for a RESIDENT MEDICAL OFFICER at the above Institution, commencing on February 1st, 1933. The appointment is for four months, with the option of an extension for a further two months. Salary at the rate of £50 per annum. Application, together with copies of three recent testimonials, to be sent to the undersigned not later than January 9th, 1933.

ALICE MODEL,
Hon. Org. Secretary.

BOLINGBROKE HOSPITAL, Wandsworth Common, S.W.11. (121 Beds.)

HOUSE PHYSICIAN (male) required. The appointment is for six months, commencing on February 1st, 1933. Salary £120 per annum, with board, residence, and laundry.

Candidates must be fully qualified and registered.

Applications, stating age, qualifications, and experience, with copies of not more than three recent testimonials, should be sent to the undersigned on or before January 11th, 1933.

W. S. RANDOLPH BISS,
Secretary-Superintendent.

ST. JOHN'S HOSPITAL, LEWISHAM, S.E.13.

A vacancy has been declared in the office of HONORARY SKIN PHYSICIAN, to fill which applications are invited.

The successful applicant will be required to take charge of beds and to take one Out-patient Clinic weekly.

Applications, together with copies of testimonials, should be received by the undersigned not later than Monday, January 16th.

J. C. GILBERT,
Secretary-Superintendent.

WESTERN OPHTHALMIC HOSPITAL, Marylebone Road, N.W.1.

Applications are invited for the post of HONORARY ANAESTHETIST. An honorarium of £1 1s. per visit is given.

Applications, accompanied by copies of not more than three testimonials, should reach me by January 19th.

H. W. BURLEIGH, Hon. Sec.

LONDON HOMOEOPATHIC HOSPITAL (Incorporated by Royal Charter), Great Ormond Street and Queen Square, Bloomsbury, W.C.1.
A General Hospital—200 Beds.

POST OF RESIDENT MEDICAL OFFICER.

The periodical vacancies for the Three Resident Medical Officers, male or female, occur in February, June, and October in each year, the appointment being for twelve months. Four months as Medical and Casualty Officer, four months as House Surgeon, and four months as Medical and Gynaecological Officer, with salary at the rate of £100 per annum, and board, apartments and laundry.

Candidates must be legally qualified and registered.

Applications for February appointment, stating age, with copies of testimonials, may be sent to the Secretary.

EDWARD A. ATTWOOD, Secretary.

ROYAL CHEST HOSPITAL, City Road, E.C.1. (Royal Northern Group of Hospitals.)

A vacancy occurs for a PHYSICIAN with charge of out-patients. Candidates must possess the degree of M.D. or M.B., obtained by examination at a British University and be Fellows or Members of the Royal College of Physicians of London.

Applications should be sent to the undersigned, from whom particulars with regard to the appointment, attendance, and submission of testimonials may be obtained.

GILBERT G. PANTER, Secretary.
Royal Northern Hospital, Holloway, N.7.

(Appointments continued on p. 49.)

ASSISTANCIES.

WANTED, IN ITALY, EGYPT, OR ELSEwhere, ASSISTANTSHIP, by exceptionally well qualified medical man, English and continental qualifications, age 30, single, T.T., free Jan. 31st. Fluent German, some French. Drive car. Best references. Exp. T.B., Gynaecol., and General Practice. — Address, No. 609, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — LADY MEDICAL ASSISTANT, 5½ guineas weekly (indoor). Hospital appts. State any experience of Eyes, E.N.T. work, spinal anaesthesia, or dispensing; also give age and height. Send photo.—Address, No. 522, B.M.A. House, Tavistock Sq., W.C.1.

WANTED.—OUTDOOR ASSISTANTSHIP BY Woman, F.R.C.S.(E.), M.B.; age 30 yrs. Seven years' experience Hospital and G.P., especially gynaecology and midwifery. Own car.—Address, No. 514, B.M.A. House, Tavistock Square, W.C.1.

WANTED, — PART-TIME ASSISTANTSHIP by M.B., B.S., 7 years' Hospital experience, 2 years private practice, special experience paediatrics and orthopaedics. Now reading for higher degree. Free April.—Address, No 501, B.M.A. House, Tavistock Sq., W.C.1.

WANTED. — PART-TIME ASSISTANTSHIP by M.B., Ch.B., in London or environs, preferably morning and evening surgeries; ex H.S. (general, gynaecology, children), teaching hospital. At present reading for F.R.C.S.Eng.—No. 537, B.M.A. House, Tavistock Sq., W.C.1.

WANTED. — ASSISTANT, IMMEDIATELY, indoor for general Practice, work light. Suit recently qualified man. — Address, with essential particulars, No. 607, B.M.A. House, Tavistock Square, W.C.1.

WANTED IMMEDIATELY. — INDOOR AND Outdoor ASSISTANTS for Town and Country Practices, with and without view; good salaries. State full particulars.—BRITISH MEDICAL BUREAU, 33, Cross Street, Manchester.

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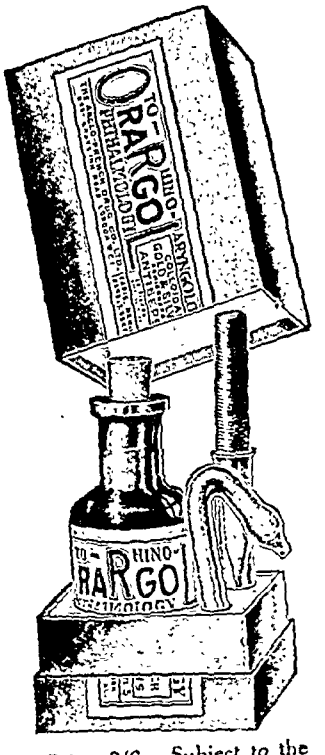

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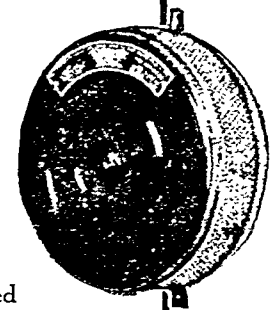

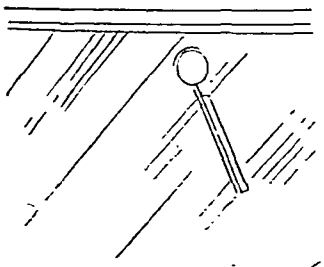

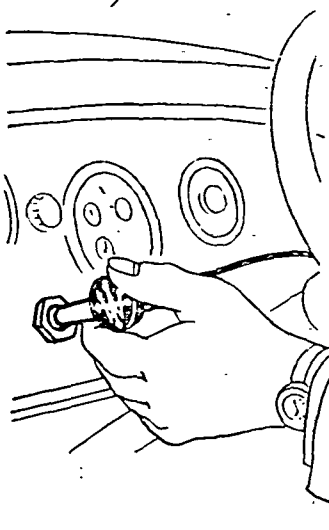

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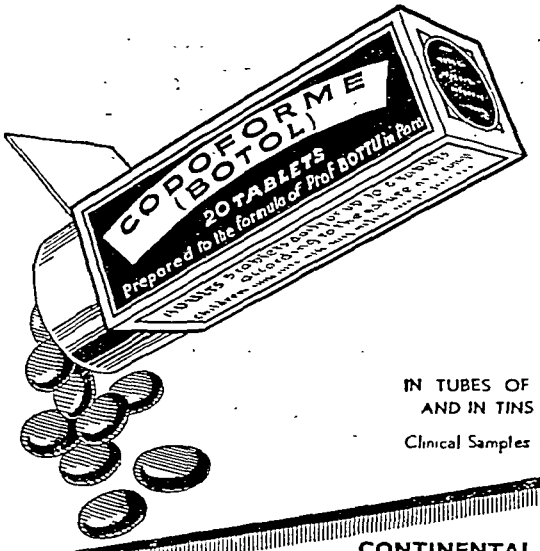

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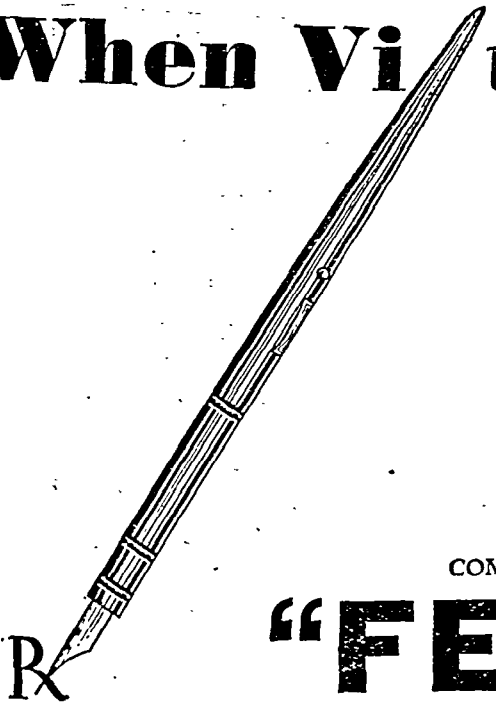

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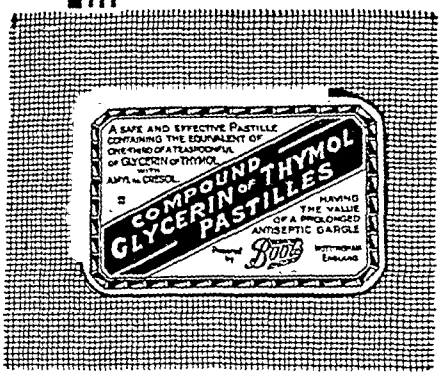

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Lancet, April 11th, 1931, p. 805.

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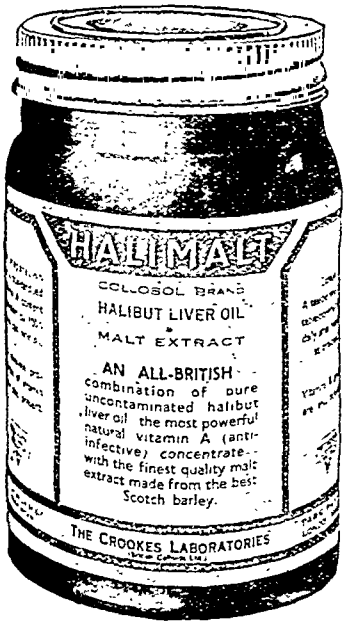

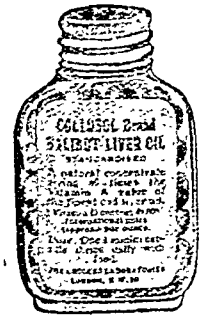

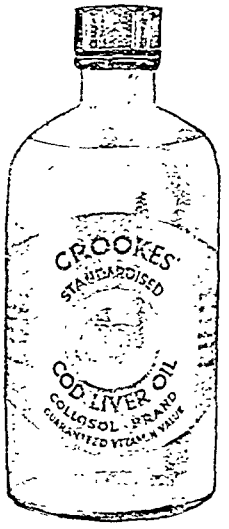

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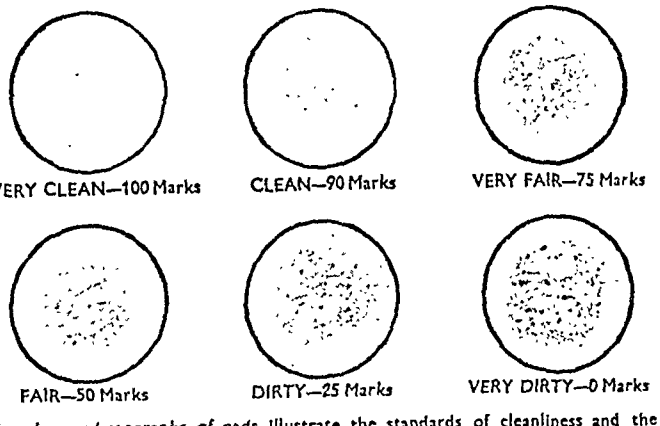

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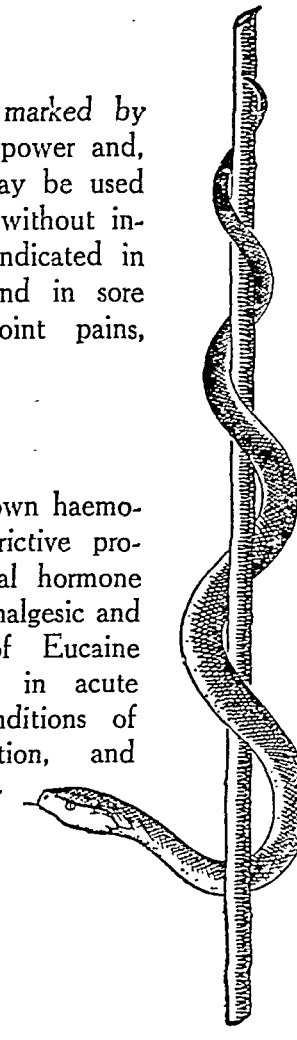

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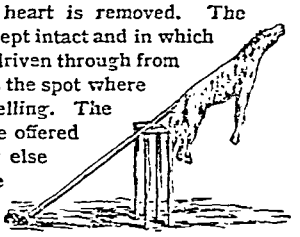
NATIVE RELIGIO-MEDICAL CEREMONIES OF WEST AND SOUTH SIBERIA.—In the scene here reproduced, the shaman and his assistants are assembled. The former, beating his drum, is engaged in applying his supernormal powers by means of supplications and incantations. He has previously discovered which god sent the sickness, by burning the shoulder blade of a sheep and interpreting the signs contained in the resulting cracks. He has learned, too, that a bull must be sacrificed. The animal is killed by a cut in the breast, through which the heart is removed. The trunk is then freed from the skin, which is kept intact and in which the head and legs remain. A long pole is driven through from head to tail, and the head is turned towards the spot where the offended god is supposed to have his dwelling. The flesh is boiled and cut up and pieces of it are offered to the god by being thrown into the air or else burned; the family and friends consume the rest during the shamanising ceremony.



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This announcement regarding the 'Allenburys' Foods is No. 2 of a series which will be continued.

Observations
ON

THE USE OF HYDNOCARPATES AND MORRHUATES INTRADERMALLY IN LUPUS VULGARIS

BY

SIR LEONARD ROGERS, K.C.S.I., M.D., F.R.C.P., F.R.C.S., F.R.S., I.M.S. (RET.)

With a Note on

THE INHIBITORY ACTION OF "ALEPOL" ON THE GROWTH OF TUBERCLE BACILLI IN BESREDKA'S FLUID EGG MEDIUM

BY

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AND

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When reporting the beneficial action of soluble preparations of the fatty acids of chaulmoogra and hydnocarpus oils in leprosy in 1916,[1] I expressed the opinion that "the reactions produced by gynocardates in leprous tissues, and the apparent destruction of Hansen's bacillus, raise the very important question as to whether some similar reaction may not be obtained in the case of another human acid-fast bacillus—namely, that of tuberculous disease."

In 1918[2] I reported the use in tuberculous disease of sodium hydnocarpate, and also of sodium morrhuate, which I had made on similar lines from the fatty acids of cod-liver oil, and in the following year[3] I recorded promising results obtained by several observers with injections of sodium morrhuate in various forms of tuberculous disease. In the winter of 1920–1, with the kind help of the Medical Research Council, I tested the action of hydnocarpates and morrhuates in the rapidly fatal acute miliary tuberculosis in the inoculated disease in rabbits and guinea-pigs, with negative results; but I concluded that the possibility of benefit in the much more chronic tuberculous disease of man was not thereby excluded. In 1924, in my fourth Croonian Lecture,[4] I summarized with references the early literature and reported trials of sodium morrhuate in surgical tuberculosis, kindly carried out at my suggestion at the large Carshalton and Fazakerley children's hospitals with somewhat variable results—results which indicated the advisability of further trials. In 1920 E. L. Walker and Marion A. Sweeney[5] reported that the sodium salts or soaps of the lower melting point fatty acids of chaulmoogra oil—consisting mainly of hydnocarpates—which I had found to be most effective in leprosy, had the power of inhibiting the growth of various acid-fast bacilli which will grow beneath the surface of fluid media, including that of avian tuberculosis, in dilutions of 1 in 100,000 to 1 in 1,000,000, but sodium morrhuate had very little such action. It will be seen from the note below that Professor Lyle Cummins has extended this important observation to the human tubercle bacillus, using "alepol," which consists mainly of sodium hydnocarpate. As this preparation can be injected intravenously in considerable doses of a 3 per cent. solution without toxic symptoms, the further trial of hydnocarpates in tuberculous disease appears to be indicated, but it should be used with caution in pulmonary cases as it can produce both general febrile and focal reactions, with softening of the tuberculous lesions.

There is now an extensive literature on the use of these preparations in tuberculosis, but I can only refer here to a very few which have a special bearing on my present subject. Colloidal copper morrhuate, prepared by Dr. Paulo Sebra, has been used extensively in both pulmonary and surgical tuberculosis in South America, and a number of favourable reports have been summarized by Dr. J. Mouzon.[6] These include successful injections into the cold abscesses of gland and bone disease, and also in lupus cases. Cases of lupus treated by injections of "iodomorrhuate" have been reported by O. Blatt and by Jaczewski in Poland,[7] but a reference to Blatt's original paper shows that he used iodine dissolved in potassium iodide mixed with cod-liver oil. In my early work on leprosy in Calcutta I found that extensive nodular lesions were best treated by injecting hydnocarpates directly into them, and this intradermal method has recently been used more extensively in leprosy by C. B. Lara, C. Nicolas, and others[8] with great benefit—confirmed by E. Muir in Calcutta, and by myself in unrecorded cases in this country.

CASE RECORD

I was thus led to try the method of intradermal injections of ester morrhuates and hydnocarpates in the following very chronic case of lupus vulgaris.

A female, aged 42, gave a history of having suffered when a child from "abscesses" on her head and over the base of the spine, and later from ulceration of her face. After various treatments with ointment, etc., by private practitioners and at three hospitals in London, she stated that she underwent the Finsen light therapy at the London Hospital for thirteen years, with nearly 2,000 hours' application in all. This resulted in some temporary improvement, but she abandoned this treatment after seeing "cancer" develop in other cases of lupus. The disease was again spreading when she was sent to consult me in May, 1931. At this time it affected the whole of both cheeks, extended across the forehead and chin, and over both sides of the neck, and had a raised, thickened margin surrounding the whole of the diseased area. There was much scar tissue over her cheeks, while the lower right eyelid had become everted by its contraction. In addition, there was a less active patch of the disease, about two inches square, over her right shoulder. This enabled me to test the effect of the injections first in an unexposed part of the body.

Her progress is a record of steady improvement. I commenced treating the thickened edge of the shoulder lesion by injecting a drop or two of ethyl ester morrhuate intradermally at several neighbouring points at each sitting, so as to produce slightly raised whitish swellings at each point. Different areas were dealt with at each weekly visit. Except for the prick of the needle no material pain or irritation resulted, the temporary swelling at the points of injection rapidly subsided, and within two weeks or so the original thickening of the treated areas showed definite reduction, without any breaking down ever occurring at the sites of the injection. I very soon extended the treatment to the thickened margins on the face and neck, with similar beneficial results. As progress with the morrhuates was somewhat slow I proceeded to use instead the more active ethyl ester hydnocarpate in the form of "moogrol," combined with 4 per cent. creosote as an antiseptic. This also caused very little irritation and no breaking down of the injected areas, while it proved decidedly more effective in quickly reducing the thickening of the treated areas. Moreover, the administration of the hydnocarpates was followed by the appearance of some fresh ulceration in the older, uninjected, central parts of the cheeks. This I regarded as a reaction in the diseased tissues very similar to the swelling and softening of leprous dermal lesions following intravenous or intramuscular injections of the same drug, with, ultimately, very beneficial results in the skin lesions. I therefore returned to the morrhuates for a time, and watched the progress of the reaction in the uninjected lupus lesions with great interest. Only a simple dressing was applied to the ulcers on small strips of linen, such as the patient had long relied on for this purpose. The exposed lupus-diseased tissues in the floors of the ulcers soon came away and the small superficial ulcers healed, leaving much more healthy-looking skin than before the breaking

down had taken place, thus bearing out the analogy with the leprous reactions produced by the hydnocarpates.

It became apparent that, in addition to their local effect, the hydnocarpate injections into the spreading margin of the disease had a generally beneficial effect in the uninjected, long-affected, central portions of the lupus patches. This made me much more hopeful as to the ultimate result. Consequently I continued the treatment with the hydnocarpates alone, and found that the reactions in the central portions became milder, and an increasing number of points could be injected at a sitting, with more rapid improvement. At the end of a year the thickened diseased areas had nearly all disappeared, and the intervals between the injections were increased from one week to two, and later to three weeks. Breaking down of the central areas ceased to take place, with great improvement in the appearance of all the affected skin, while the marginal thickening had nearly all disappeared, so that the edge could no longer be felt, although some redness still remained, except in the central parts, which presented smooth, whitish scar tissue. The shoulder patch has now lost all thickening, and shows only thin scar tissue. Occasional injections are still given, and the patient will be kept under observation to determine if the improvement proves to be permanent or not.

So far the result of this simple method of treatment in a very resistant and extensive case of lupus vulgaris encourages me to recommend its further trial by others with more clinical material than I can command. I may also mention that Dr. T. A. Henry has made a copper hydnocarpate and an iodohydnocarpate. These are now being tried by experts in skin and surgical forms of tuberculosis, but the simple creosoted ester hydnocarpate proved so satisfactory in the above case that I did not have occasion to use them.

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[4] *Lancet*, 1924, ii, 1297.
[5] *Journ. Infect. Dis.*, 1920, xxvi, No. 3, 238.
[6] *La Presse Méd.*, 1929, xxxviii, 358.
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[8] *Journ. Philippine Islands Med. Assoc.*, 1929, ix, No. 9, 321.

INHIBITORY ACTION OF "ALEPOL"

As far as we can ascertain, previous experiments designed to test the inhibitive or bactericidal effects of chemotherapeutical preparations on the tubercle bacillus have been carried out by making surface cultures on fluid media impregnated with the substance under test, or by adding the test substance to nutrient media, which were then solidified and employed as a culture substrate on the surface of which the growth, if any, of the tubercle bacillus could be observed. Examples of these methods are to be found in the works of Möllgaard, Madsen and Mörch, Sweany and Wasick (on sanocrysin), and Walker and Sweeney (on the effects of the hydnocarpates and morrhuates on the growth of acid-fast organisms). The fact that all these methods involve surface growth introduces a possible source of error, since there is a tendency for the tubercle bacillus to heap up its growth vertically as well as to push out laterally, and certain layers of established cultures may be exempt from the action of the chemical substances included in the media.

To avoid this difficulty we decided to work with Besredka's fluid egg medium. A few preliminary experiments with this substance showed that, with the necessary care in its preparation and the use of new-laid eggs, good growth, in the shape of numerous fine balls of culture, could be obtained in the depths of the medium in the course of two or three weeks. A supply of this medium, freshly prepared, was distributed into small Roux bottles —40 c.cm. to each—and the appropriate amount of test substance added, after which the bottles and their contents were sterilized in the autoclave. These Roux bottles, containing sterile Besredka medium, together with varying quantities of the chemical substance under investigation, were now inoculated with equal amounts of an emulsion of *T.B. constantinides*, a human strain of average virulence, one inoculated flask being left without chemical addition as a positive control and one left uninoculated as a negative control. The latter was regarded as important, as a certain amount of precipitation takes place in this medium after some weeks at 37° C., and this might be confused with a fine growth unless a negative control flask were included.

IN VITRO EXPERIMENTS

The substances tested in our first experiment were alepol (B. W. and Co.), a preparation of the sodium salts of a selected fraction of the lower melting point fatty acids of hydnocarpus oil, and an emulsion of cod-liver oil reduced to very fine dispersion in saline. The two latter preparations were supplied to us through the kindness of Sir Leonard Rogers, F.R.S., who informs us that the cod-liver oil emulsion has been prepared by Dr. V. G. Walsh for experiments in the treatment of tuberculosis. Sir Leonard Rogers had not suggested that this emulsion possessed bactericidal properties, nor did this appear probable, but we made use of it so as to exclude any such possibility.

Our results, after incubation of the Roux bottles for thirty-five days, are shown below.

TABLE I

Test Substance	Serial Dilutions			
	1 in 10,000	1 in 100,000	1 in 1 million	1 in 10 million
Alepol	Nil Growth	Nil Growth	Nil Growth	Contamination —
Cod-liver oil ...				

The cod-liver oil was further tested in dilutions of 1 in 100 and 1 in 1,000, a copious growth occurring in both. The positive control flask also contained copious growth, but the negative flask was sterile. To make sure that there were no living tubercle bacilli in the highest dilution of alepol noted as free from macroscopic growth, a volume of 0.5 c.cm. was taken from the 1 in 1,000,000 flask and inoculated into guinea-pigs on January 20th, 1931. At the same time 0.5 c.cm. of the 1 in 10,000 flask of the cod-liver oil emulsion was similarly tested. The cod-liver oil guinea-pig died of generalized tuberculosis on March 18th, 1931, while the animal inoculated from the alepol flask remained in good health until October 9th, 1931, when it was killed, examined, and found free from infection. So far as tubercle bacilli were concerned this experiment appeared conclusive. We found, however, on microscopical examination of our flask cultures, that a non-acid-fast rod, similar in size and certain cultural characters to the tubercle bacillus, which has been a source of trouble in some of our stock cultures during recent years, had appeared in the *constantinides* strain used, and was visible in the positive control contents. We thus felt that the work should be repeated.

In our next experiment, which was carried out on similar lines, the cod-liver oil preparation was left out and only the alepol tested. The results of our second investigation are given in Table II.

TABLE II

Test Substance	Serial Dilutions			
	1 in 10,000	1 in 100,000	1 in 1 million	1 in 10 million
Alepol	Nil	Nil	Nil	Very slight growth

Two positive control flasks showed copious growth and a negative control flask remained sterile. This experiment was carried out with a strain of human tubercle bacillus isolated by Dr. W. H. Tytler, and microscopical examination on the twenty-eighth day of growth, when the flasks were removed from the incubator, showed only acid-fast bacilli. A volume of 0.5 c.cm. of the "end-point" flask, representing a dilution of 1 in 1,000,000 of alepol, was inoculated into a guinea-pig, a similar volume of the fluid from a positive control flask being inoculated into a second guinea-pig on the same date (April 26th, 1931). The animal inoculated from the positive flask died of generalized tuberculosis on June 4th, 1931. The other continued in good health for many months, and was found free from tuberculosis on post-mortem examination.

A test on similar lines with sodium iodohydnocarpate, a new preparation recently sent us by Sir Leonard Rogers, has since been completed. This substance, if a single test is to be accepted as sufficient, does not seem to have the high bacterio-inhibitory powers of alepol, and growth is stopped up to and including a dilution of 1 in 1,000 only. We desire, however, to repeat the investigation of this preparation.

Several similar experiments with alepol, not here described, gave confirmatory results.

IN VIVO EXPERIMENTS

Towards the end of November, 1930, eighteen rabbits were purchased and placed under observation. On December 3rd, 1930, each of these rabbits was infected with an intravenous inoculation of 0.5 c.cm. of an emulsion of a relatively non-virulent strain of human tubercle bacillus isolated by Dr. W. H. Tytler at Cardiff. The dose for each animal, estimated by counting, was 185 millions. Whether as the result of the rather large dose, or of some peculiarity of the batch of rabbits used, our plans were interfered with by a series of early deaths, as described in a previous communication (*Tubercle*, May, 1932). It had been our intention to use twelve rabbits for our experiments and six for controls, but the loss of ten animals made this plan impossible. We therefore grouped our eight surviving rabbits as follows, including two animals for tests with tuberculin for comparison with alepol and finely divided cod-liver oil emulsion.

Tuberculin Group: Rabbits 104 and 109.
Cod-liver Oil Group: Rabbits 96 and 106.
Alepol Group: Rabbits 107 and 97.
Untreated Control Group: Rabbits 99 and 100.

Treatment was started on February 12th, 1931, when the tuberculin rabbits were given 1 c.cm. of 1 per cent. suspension of bacillary emulsion (B. W. and Co.), followed, at weekly intervals, by two doses of 0.7 c.cm. and five doses of 0.5 c.cm. All doses were given intramuscularly into the thigh muscles.

The cod-liver oil rabbits received, at weekly intervals, three successive doses of 0.5 c.cm. of a 10 per cent. suspension of the original emulsion, of which the exact strength was not stated. This dose was raised to 0.6 c.cm. for the last five doses. All these injections were given intravenously, and appeared, at the time, to be well tolerated. The alepol rabbits were given, for the first two doses, 0.5 c.cm. of a 1 per cent. solution in normal saline containing 0.5 per cent. of carbolic acid. The third dose was 0.6 c.cm., and the last five doses 0.7 c.cm. These doses were given intravenously.

On May 26th, 1931, Rabbit No. 96, of the cod-liver oil group, was found dead, and Rabbit No. 106 (the same group) was therefore killed. Both animals were greatly wasted, but in neither was there much evidence of tuberculosis. The remaining six animals were killed on May 28th, 1931.

In order to express our pathological findings in comparative terms we decided to allot "marks" according to the extent and character of the tuberculous lesions in the lungs, kidneys, and other organs respectively. A maximum of ten marks was allowed to each of the latter, making a possible total of 30.

Table of "Marks" for Extent of Lesions

Group	Serial No.	Lungs	Kidneys	Other Organs	Marks
					Per cent.
Tuberculin	104	5	3	2	10 = 33
	109	6	7	0	13 = 43
Cod-liver oil ...	96	0	0	0	0 = 0
	106	5	4	1	10 = 33
Alepol	107	4	2	2	8 = 27
	97	8	5	5	18 = 60
Untreated controls	99	1	3	3	7 = 23
	100	0	1	1	2 = 7

In this series only one rabbit, No. 96 of the cod-liver oil group, escaped without recognizable tuberculous infection. It is to be noted that this animal was the only one of the eight to die spontaneously, and was much wasted. The cause of death and wasting remains obscure, but as both the animals treated with cod-liver oil showed extreme wasting and neither had extensive tuberculosis, it is possible that the dosage of this vitamin-rich preparation was too large, and resulted in toxic effects. The outstanding fact is that both the control rabbits were only very slightly affected by the dose of human tubercle bacilli used. It is quite clear that, even after dosage on such a large scale as to destroy over half the rabbits at what we have described in a previous paper as the "danger period," the surviving animals tended to overcome to a varying extent the implanted human tuberculous lesions —and this quite apart from the treatments given.

CONCLUSIONS

1. The experiments *in vitro* prove that alepol possesses marked growth-inhibiting properties when introduced into a fluid medium suitable for "deep" cultures of tubercle bacilli.

2. The fact that in two experiments guinea-pigs survived after inoculation with tubercle cultures in Besredka egg medium containing alepol in a strength of 1 in 1,000,000 only, suggests that this substance may have bactericidal as well as growth-inhibiting properties for tubercle bacilli.

3. Our experiments in the treatment of rabbits artificially infected with human tubercle bacilli proved inconclusive, owing to the fact that the untreated control animals exhibited a well-marked toleration for the culture used. The results, however, do not suggest that the alepol had any specific curative effect. It is to be noted that the tuberculous lesions found at necropsy were, as usual, almost completely avascular, a fact which might be expected to nullify the effects of a bactericidal or growth-inhibiting substance introduced into the blood stream.

4. The marked anti-bacterial properties of alepol, as demonstrated by our tests *in vitro*, suggest that this substance may yet be found to play a useful part in the sterilization of the tuberculous pleural effusions which often accompany artificial pneumothorax therapy, or in

the treatment of other closed spaces, such as cold abscesses, containing tubercle-infected fluids.

This work has been greatly facilitated through a grant from the Medical Research Council, for which we desire to express our best thanks.

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AETIOLOGY OF HODGKIN'S DISEASE
WITH SPECIAL REFERENCE TO B. TUBERCULOSIS AVIS

BY

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The relation of Hodgkin's disease to tuberculosis has been the subject of extensive inquiry, and many workers, such as Sternberg (1898), Ewing (1927), and others, have repeatedly drawn attention to the similarity of tissue changes produced in both conditions. Opinion, however, is divided on the incidence of tuberculosis in patients suffering from lymphadenoma. Ewing says that "tuberculosis follows Hodgkin's disease like a shadow"; Lemon (1924) reports, to the contrary, that out of 191 cases of Hodgkin's disease under observation in the Mayo Clinic only eight showed evidence of tuberculosis. The latter worker further states that out of twenty-six cases of the disease in which the mediastinal glands were involved there was definite evidence of tuberculosis in only one.

Infective agents other than the tubercle bacillus, such as the diphtheroid organism (Bunting and Yates, 1913), certain moniliae (Dias, 1918) and amoebae (Kofoid, Swezy, and Boyers, 1922), have been described in Hodgkin's disease, but such work has lacked confirmation. Stewart and Dobson (1924) attempted to reproduce the disease in monkeys (*rhesus* and bonnet), but without results. Twort in 1930 published the results of six years' research into the causation of the condition, and arrived at the conclusion that the disease was probably of neoplastic origin, since he was unable to isolate any one organism with constancy or to reproduce the disease in laboratory animals with pathological material.

More recently American workers have advanced two fresh views on the aetiology of the condition. Medlar (1931) maintains that the disease is one primarily affecting the bone marrow, for which he proposes the name "megakaryoblastoma" in view of the particular type of cell involved. L'Esperance (1929–31) claims to have reproduced Hodgkin's disease in birds and "treated" guinea-pigs, from whose tissues she recovered the avian tubercle bacillus. This investigator therefore states that Hodgkin's disease is produced by infection with *B. tuberculosis avis*. This view has been further elaborated by Utz and Keatinge (1932), who claim to have treated successfully several cases of lymphadenoma by the use of serums obtained from chickens previously immunized with lymphadenomatous tissue. I have investigated the claims of L'Esperance by the inoculation of chickens and other laboratory animals with material obtained at biopsy from three cases clinically and histologically characteristic of Hodgkin's disease, and also with material removed at necropsy from three other cases of the disease, two of which showed mediastinal involvement.

The following brief extracts of case and post-mortem notes describe the subjects from which material was obtained.

CASE HISTORIES

1. *Case of Professor Fraser's.*—A male, aged 52, had swelling in left axilla of eleven months' duration, with later ulceration and secondary infection lasting three months. There was slight enlargement of the inguinal and infraclavicular glands, with no evidence of mediastinal involvement. Ten per cent. eosinophils were present. Histological diagnosis: Hodgkin's disease.

2. *Case of Dr. Comrie's.*—A female, aged 28, had a swelling of the glands of the neck for eight months, with later involvement of abdominal glands and spleen. These changes were accompanied by extensive bronzing of the skin and intolerable itching. Throughout her illness a fever conforming to the Pel-Ebstein type was present, and the blood picture showed an eosinophilia. At post-mortem the cervical, mediastinal, bronchial, and abdominal para-aortic glands were grossly enlarged, together with slight enlargement of the lymph nodes of the lesser omentum. The spleen was enlarged to about three times its normal size, and contained numerous nodules throughout. The heart, liver, and lungs also showed involvement with lymphadenomatous tissue.

3. *Case of Professor D. Murray Lyon's.*—A male, aged 46 complained of vague symptoms of general illness lasting three months, with loss of appetite and weight, diarrhoea, colic, and dyspnoea. Temperature reaction of the Pel-Ebstein type was present, accompanied by enlargement of liver and spleen. At post-mortem there was considerable enlargement of para-aortic, abdominal, and mediastinal lymph glands, with commencing enlargement of the cervical and inguinal groups. The bone marrow revealed red patches suggestive of erythroblastic reaction, and microscopically proliferation of bone marrow cells affecting the red cell series was found to be present.

4. *Case of Professor Bramwell's.*—A male, aged 27, gave a three months' history of loss of weight and appetite, accompanied by distension of the abdomen and bronzing of the skin. On admission the patient was found to have an enlarged spleen, dullness over the apex of the right lobe, with crepitations and vesicular breathing. Pel-Ebstein type of fever was present. Red blood cells were 4,200,000 per c.mm., and white cells 3,800: differential count was normal, and haemoglobin 70 per cent. Post-mortem revealed typical lymphadenoma of spleen, liver, and para-aortic and cervical glands. Brown atrophy of the heart. No evidence of tuberculosis demonstrable.

5. *Case of Professor Fraser's.*—A female, aged 31, first noticed lumps on her neck two years before examination, initially confined to the left side, but later involving the right. These painless swellings rapidly increased in size, and later gave rise to pressure symptoms in that region. There was no palpable enlargement of spleen, liver, or lymph glands in inguinal or axillary regions. An intermittent fever accompanied her illness. Red blood cells were 4,540,000 per c.mm., and white cells 9,200: polymorphs, 75 per cent.; lymphocytes, small, 11 per cent.; large, 9 per cent.; eosinophils, 4 per cent.; transitionals 1 per cent. Haemoglobin was 70 per cent.; colour index, 0.08. Histological diagnosis: Hodgkin's disease. Deep *x*-ray therapy and subcutaneous injections of Coley's fluid over the affected area were employed, which resulted in marked diminution in the size of the glands and considerable general improvement.

6. *Case of Dr. Chalmers Watson's.*—A schoolboy, aged 8, gave a five years' history of progressive enlargement of submental, supraclavicular, axillary, and inguinal glands, and of the spleen. Increasing weakness and cachexia, severe secondary anaemia, accompanied by cardiac haemic murmurs, commencing integumentary dryness and pigmentation were present. During the last two years patient exhibited a typical Pel-Ebstein pyrexia. The histological diagnosis, clinical manifestations, course of the disease, and reaction to deep *x*-ray therapy have shown this case to be almost a textbook picture of the disease.

EXPERIMENTAL WORK

Enlarged lymph glands removed at biopsy, together with liver, spleen, and bone marrow obtained in necropsy, were examined for the presence of avian tubercle bacilli by direct attempts at cultivation on Dorset's egg media, but no such organisms were isolated. It is of interest, however, to state that in both Cases 1 and 6 a small, typical, Gram-positive, aerobic diphtheroid organism was isolated after about ten days' incubation. Both strains subsequently proved to be non-

pathogenic to laboratory animals, and so further investigations were discontinued. About 300 histological sections of affected glands and viscera were stained for acid-fast organisms, but none were found.

Animal Inoculation

Four bantam chickens and four street pigeons were inoculated both intravenously (through the wing vein) and intraperitoneally with 2 to 3 c.cm. of a dense emulsion of affected material, comprising enlarged lymph glands, spleen, and bone marrow. Animals were kept under observation for a period of seven to ten months, but no signs of illness were noticed. Two chickens which had been inoculated with emulsions of spleen and lymph gland by the two routes were examined post mortem ten months later, but found to be perfectly healthy.

Grafting Experiments

Five healthy chickens (three buff orpingtons and two white leghorns) were used for these experiments. With strict aseptic precautions small fragments of an enlarged lymph gland (removed at biopsy by Professor Fraser, from Case 5) were implanted into the birds as follows. (1) *Extraperitoneally.* (2) *Intraperitoneally.* (3) *Intrahepatically:* This was carried out by making a V-shaped incision into the free margin of the left lobe of the liver, and inserting into this a wedge-shaped portion of gland, which was then secured by means of catgut sutures. (4) *Into shaft of femur:* This was done after the manner of an intramedullary graft, and performed by exposing the femur, removing a U-shaped fragment of bone with the aid of bone-nibbling forceps, and then inserting small fragments of lymphadenomatous tissue into the proximal and distal ends of the medullary canal. (5) *Intramuscularly:* Implantation was in the pectoral muscles. All five birds made a good recovery from the operation, and at the end of a week appeared to be in good health.

Animal No. 1 died after three months, succumbing to accidental injury. Necropsy revealed that the attempted graft had undergone necrosis and subsequent extrusion into the superficial tissues, while the surrounding tissues showed extensive fibrosis and cicatricial contracture, presumably in the nature of a reaction towards a foreign body. No evidence of tuberculous ulceration or caseation was to be found in the underlying tissues, peritoneum, or viscera. Animal No. 3 was killed after six months and the site of the attempted graft examined both macroscopically and microscopically, but no changes indicative of tuberculosis were evident and no bacterial growth was obtained on culture. The remaining animals are still under observation, and appear to be healthy after seven months.

DISCUSSION

In the experiments described above no evidence of infection with *B. tuberculosis avis* was found in material taken from six accurately diagnosed cases of Hodgkin's disease.

Cases of human infection due to the avian tubercle bacillus have already been described by several European workers. Löwenstein (1913) obtained the organism from cases of pulmonary, renal, and dermal tuberculosis. Rabinowitsch (1907) succeeded in isolating the organism from the spleen of a case of generalized miliary tuberculosis, and Janscó and Elfer (1910) also demonstrated organisms of a similar type in the mesenteric glands of a child. It would thus appear that the occurrence of human infection by the avian tubercle bacillus has been proved, and isolation of the causative organisms seems to have been achieved by the usual well-recognized methods. With reference to the claims made by L'Esperance, I have not only failed to produce tuberculosis in chickens by inoculation with lymphadenomatous material, but I have also been unable to demonstrate the presence of avian tuberculosis in affected material, either by direct cultural methods or by examination of a large number of stained histological preparations.

It is noteworthy that in the literature of the cases of human tuberculosis due to avian tubercle bacillus there is no mention that the clinical manifestations of these cases in any way differed from the syndrome produced by infection with the ordinary human or bovine types. Indeed, it is questionable whether the true nature of the causative agent would have been determined had a special search not been made for it.

The feeble pathogenicity of the avian tubercle bacillus to the guinea-pig and its more pronounced effect on the rabbit are well-recognized characteristics (Medlar, 1931) that cannot be lost sight of when one also remembers that the non-pathogenicity of lymphadenomatous material to rabbits and guinea-pigs is a fact of wide acceptance. A notable exception to this is found in the results obtained by M. H. Gordon and co-workers of the Rose Research on Lymphadenoma (1932), who have demonstrated that the intracerebral injection of lymphadenomatous tissue into rabbits is followed by ataxia, muscular spasms, and paralysis. Such effects are not produced, however, by the injection of leukaemic, sarcomatous, and carcinomatous tissue. L'Esperance nevertheless claims to have reproduced avian tuberculosis in birds by the injection of lymphadenomatous material into them, without having simultaneously done so in rabbits. The same worker's claim to have reproduced Hodgkin's disease in guinea-pigs which had previously been inoculated with killed cultures of *B. tuberculosis hominis* is also unconvincing.

It should also be pointed out that, according to Griffith (1930), under domestic conditions poultry exposed to infection readily develop tuberculosis, frequently following the ingestion of contaminated food. Organs most commonly involved are the intestine, liver, and bone marrow, but the writer has been unable to reproduce avian tuberculosis by the introduction of lymphadenomatous tissue directly into these areas.

SUMMARY AND CONCLUSION

Pathological material obtained from six accurately diagnosed cases of Hodgkin's disease have been examined by direct cultural methods for the presence of the avian tubercle bacillus, and histological sections examined for acid-fast organisms, but both with negative results. Tissue emulsions have proved to be non-infective to rabbits, guinea-pigs, pigeons, and chickens on intravenous, intraperitoneal, and intramuscular administration. Attempts to graft lymphadenomatous material obtained from an acute case of Hodgkin's disease into the bone marrow, peritoneum, liver, and muscles of chickens have likewise failed.

No evidence of *B. tuberculosis avis* can be found in cases of Hodgkin's disease.

I wish to express my thanks to the many members of the University teaching staff from whom assistance was obtained, in particular Professor J. S. Fraser, Mr. Eric Meikie, Dr. J. Davidson, and Professor T. J. Mackie. The cost of animal experiments has been defrayed by a grant received from the Moray Fund of Edinburgh University.

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ATYPICAL HODGKIN'S DISEASE

BY

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AND

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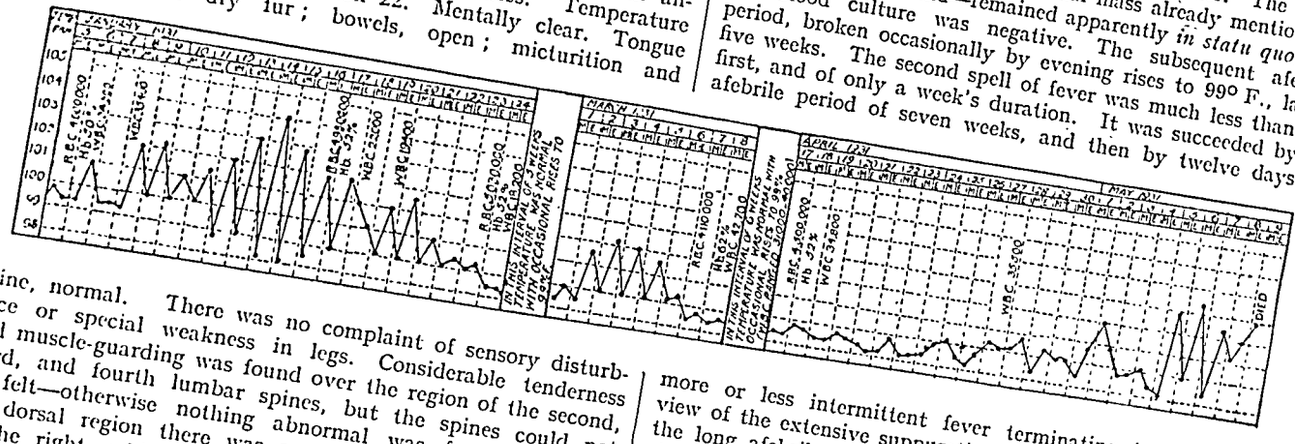
The following case of Hodgkin's disease seems worthy of publication on account of certain difficulties in diagnosis due to unusual signs and symptoms and because of uncommon post-mortem findings.

CASE RECORD

History.—A married woman, V.T., aged 31, was admitted to the National Temperance Hospital on January 5th, 1931. Twenty-one months previously she had, for no apparent reason, been suddenly seized for the first time with a severe lancinating pain in the lumbar region. Aspirin gave relief in one and a half hours. Since then backache, varying in intensity, had been present daily. She had gradually lost strength, and shortly before admission had lost weight rapidly —"almost four stone in about as many months." There was nothing of interest in the previous history—no injury to the spine, no pneumococcal, typhoid, staphylococcal, or other infection. Family history was of no interest.

On admission the patient was very ill-looking, with anæmia, manifest wasting, and great weakness. Temperature 99.8° F., pulse 94, respiration 22. Mentally clear. Tongue whitish, with dry fur; bowels, open; micturition and



urine, normal. There was no complaint of sensory disturbance or special weakness in legs. Considerable tenderness and muscle-guarding was found over the region of the second, third, and fourth lumbar spines, but the spines could not be felt—otherwise nothing abnormal was found here. In the dorsal region there was a pronounced scoliosis, convex to the right, which apparently had not been noticed until admission to hospital. It was thought that the deformity was compensatory to distortion from vertebral destruction in the mid-lumbar region. For about an inch or two to the right and left of the middle line, and extending roughly from 3 inches above to 1 inch below the umbilicus, was felt an ill-defined mass, tender and seemingly firm in consistency. Bowel distension and inability of the patient to relax properly made palpation very imperfect. Though there was a possibility of this being glandular in nature no glandular enlargement was discovered. Liver, spleen, heart, lungs, nervous system, mediastinum, skin, fauces, and gums gave no sign of disease. A few shotty lymphatic glands were noticed in both groins and one moderately enlarged gland at the root of the right side of the neck. Pelvic examination showed "tenderness on pressure high up in the right vaginal fornix, and on moving the cervix. No mass felt." (Mr. D. Denham Pinnock.)

Pathological and X-Ray Examination.—Microscopical examination of the excised lymphatic gland in the neck showed extensive fibrosis obliterating glandular structure, but areas of lymphocytes remaining intermingled with numerous endothelial cells, some of these being so large as to suggest mononuclear giant cells. Structure not definitely lymphomatous, but might represent the fibrous stage of a lymphadenomatous gland." (H. H. S.) The *x*-ray reports are as follows:

a) Lumbar and lumbo-sacral regions: "Much absorption of body of third lumbar vertebra. Some absorption along superior surface of fourth lumbar vertebra. Probably a tuberculous lesion."

(*b*) Thorax: "Some thickening of the hilar shadows on each side. Lung tissue clear. Diaphragm moves well. No radiological evidence of tuberculosis."

The blood Wassermann reaction was negative, while the blood culture, at the height of the fever (January 15th, 1931) was also negative.

Blood Counts.—Twelve counts were done (H. H. S.) in hospital. Space precludes giving these in detail; the main features of most are shown on the temperature chart. In the differential count the percentages of white corpuscles were as follows:

Polymorphs, 80–91 (average 85); lymphocytes, 6–20 (average 12); large mononuclears, 1–5 (average 3); eosinophils, 0–3 (average 0.5); basophils, 0–1 (average 0.4); myelocytes, 0–2 (average 0.25).

It will be noted that the secondary anæmia that was in progress remained more or less stationary to the end, also that the degree of leucocytosis did not correspond with the degree of fever, the highest counts, indeed, being obtained when the temperature was normal or nearly so.

Fever.—As will be seen from the chart there were, in hospital, three bouts of fever. The first was the most marked, and lasted three weeks. High and intermittent during the second week, the fever disappeared at the end of the third week in a surprising and unaccountable manner. The spinal defect and the indefinite abdominal mass already mentioned—the only lesions found—remained apparently *in statu quo*, and the blood culture was negative. The subsequent afebrile period, broken occasionally by evening rises to 99° F., lasted five weeks. The second spell of fever was much less than the first, and of only a week's duration. It was succeeded by an afebrile period of seven weeks, and then by twelve days of more or less intermittent fever terminating in death. In view of the extensive suppurative changes found post mortem the long afebrile periods (mentioned again later) are of considerable interest, especially after the fierce initial bout of fever and the seemingly moribund condition of the patient. The pulse rate remained throughout in the region of 80–90, except when the temperature was high, when it went up to 100–115, and, just before death, to 132.

Appearance and Nutrition.—The changes undergone by the patient in this respect were remarkable. On admission a pale, emaciated woman, obviously suffering great pain, she began to gain in strength and put on weight rapidly as soon as she reached the afebrile stage. Even the short febrile period in March did not greatly impede her progress, and from April 13th to 17th she actually had a menstrual period, the first for eight months. The subsequent rapid downhill progress, terminating in death, was therefore both surprising and disappointing.

Post-Mortem Examination

Nothing abnormal was found in the cranial cavity or brain. In the thorax there were present greatly enlarged mediastinal and peribronchial glands, while in the right lung two nodules could be felt, one in the upper and the other in the lower lobe, the larger being the size of a walnut. Some nodules, not easily palpable, were present in the left lung. On section the nodules were seen to project beyond the level of the surrounding lung tissue, and looked like secondary deposits of new growth. No abnormality was found in the alimentary tract. There was a chain of greatly enlarged lymphatic glands extending from both inguinal regions along the iliac arteries and aorta up to the pancreas and spleen. Those on the left side were suppurating, and there was a large abscess in front and on the left side of the third and fourth lumbar vertebrae, burrowing into and destroying the left psoas muscle and eroding the bodies of the vertebrae, so that a finger could be passed into the spinal canal, although the

abscess was outside the theca. The affected third and fourth vertebrae had undergone considerable rotation, being twisted so that their spines pointed to the left instead of posteriorly—the reason for their not being felt on clinical examination. The liver was normal, and macroscopically there appeared to be only moderate simple hypertrophy of the spleen. Nothing abnormal was detected in kidneys, uterus, and ovaries.

Microscopical Appearances.—The following tissues were examined: abdominal and thoracic lymphatic glands, periosteum and fibro-cartilage from the lumbar vertebrae, and one of the nodules from the lung. The general histological plan was the same in all, so that on cursory examination one might easily mistake a section of the lung nodule for one of a lymphatic gland. In the lymphatic gland the lymphocytes are diminished and their place partly taken by proliferating endothelial cells, including many characteristic mono- and multi-nuclear giant cells with centrally placed nuclei—the so-called Sternberg giant cells. The reticulum is much hypertrophied, and large strands replace the lymphocytes, some of which remain as islands surrounded by fibrous tissue. Where suppuration has occurred polymorph cells abound in the pus and in the abscess wall. Granulomatous changes involve the periosteum of the invaded vertebrae and the intervertebral disk. In the lung nodule, except at the periphery, the pulmonary alveolar structure has been obliterated. The tissue is very vascular and blood has been extravasated. There is, for the most part, nothing particular about the granulomatous structure except the presence of many neutrophilic polymorph leucocytes, while in one or two areas a considerable number of giant cells of the Langhans type are present. A few such cells are the centres of islands of tissue having the appearance of a tubercle, others are interspersed with the cells of the granuloma. There is no sign of caseation.

Hirschfeld,[1] describing similar cells present in lymphadenoma, regards them as tuberculous, but the presence of other cells showing an apparent transition from the Sternberg type of giant cell to the Langhans type suggests that in this case these cells constitute a rather unusual form of granulomatous change, a view strengthened by the absence of signs of tuberculous disease elsewhere in the lung.

DISCUSSION

The signs and symptoms exhibited by the patient were: anaemia, with marked and rapid emaciation; severe pain in the back and sides, with lateral curvature of the spine and tenderness over the lumbar vertebrae; attacks of remittent or intermittent fever separated by lengthy afebrile, or nearly afebrile, periods, and a high leucocytosis of inflammatory type. The patient's extraordinarily rapid improvement during the afebrile period should also be regarded as a symptom.

Reference to Ziegler's excellent monograph[2] shows that all these symptoms, with the possible exception of the spinal curvature, may be met with in cases of Hodgkin's disease, yet one would submit that not all of them are commonly present in, or generally recognized as associated with, the disorder. Mention is here made of the severe pains and the leucocytosis, and although the existence of the inflammatory type of leucocytosis in the latter stages of lymphadenoma is now more generally recognized, figures as high as 240,000 have been reported (Schur). Of bone involvement and pain, Ziegler[2] says: "Involvements of bone are relatively common in Hodgkin's disease; generally they do not betray themselves clinically"; and, again: "In connexion with bone involvement severe pains can arise." The same author's masked, or typhoid, form of the disease, in which the retroperitoneal glands are affected almost exclusively, corresponds very closely with this case, for from the results of *x*-ray examination one may reasonably assume that the involvement of the mediastinal glands and lungs was a late manifestation. However, some of the usual symptoms of these masked cases, such as oedema of the feet and abdominal wall, and diarrhoea, were absent, also the leucopenia of this type of lymphadenoma was replaced by a leucocytosis. Finally, there was no clinical enlargement of the spleen. The rapid but highly deceptive improvement in the patient's general condition—so apt to encourage belief in any form of treatment—is worth further consideration. "These patients, brought desperately low in the fever periods, can actually swell up—that is, put on flesh—during the afebrile periods, though anatomically the disease continues to spread" (Ziegler[2]). This reaction is diagnostically useful only in the presence of enlarged glands of doubtful nature. This feature of the disease appears not to be widely recognized.

The post-mortem and microscopical findings exhibit further points of interest, differentiating this case from the average case of Hodgkin's disease. Thus the formation of pus in the iliac glands and the large abscess surrounding the bodies of the affected vertebrae and extending into the left psoas muscle is quite an unusual occurrence in lymphadenoma, as is also the associated marked erosion of the bodies of the third and fourth lumbar vertebrae with consequent spinal curvature. However, involvement of the vertebrae is by no means so uncommon as Ziegler would lead one to suppose. Thus, examining the lumbar vertebral bodies in twenty-two cases, Professor H. M. Turnbull found them implicated in eight (36.4 per cent.), and examination of the dorsal vertebrae in two cases revealed similar involvement in each. In all cases the areas of disease were macroscopic in the sawn-through vertebrae. In our case the changes were more profound. Commenting on the case described by Drs. Hare and Lepper,[3] Dr. Parkes Weber suggests direct extension from glands to the vertebral periosteum, a view also expressed by Professor Turnbull.[4] The extraordinarily firm adhesion of some of the glands to the vertebrae in our case supports this view.

The breaking down of the glands and the formation of the perivertebral abscess may be ascribed to a secondary infection. It is unfortunate that this probability was not explored when the post-mortem examination was made. The polymorph pus in the walls of the abscesses certainly suggests a secondary invading organism. Professor Turnbull, whom we desire to thank for his kindly help, states that "while firm caseation is common in Hodgkin's granuloma, we have never at the London Hospital seen an abscess in an uncomplicated case of Hodgkin's disease." The absence of obvious enlargement of liver and spleen is unusual in this type of case, and it is regretted that these organs were not examined microscopically. As to the lung, Ziegler's[2] estimate of involvement in 8 per cent. of cases probably exaggerates the frequency. The absence of pulmonary symptoms would be remarkable were it not that a mild bronchitis, easily overlooked in the presence of more serious symptoms, is usually the only manifestation of the granulomatous changes.

The diagnostic difficulties in the case were, in the first place, due to the absence of any mass ascribable with certainty to enlargement of lymphatic glands, to the leucocytosis of an inflammatory type, but above all to evidence of disease of the vertebral column accompanied by severe pain. As has been stated, the *x*-ray report suggested tuberculous disease of the spine, but the age of the patient, the high fever, and the inflammatory type of leucocytosis suggested as a more likely diagnosis infective osteomyelitis of the spine, though no focus of infection was found, and no history of such or of a general infection was obtained. According to H. W. Carson[5] deformity is rare in this disease, but lancinating pain unrelieved by rest—such as occurred in this case—is characteristic, whereas in Pott's disease pain is usually relieved by rest. The same writer refers to the frequency of abscess in osteomyelitis, but in our case abscess formation was a post-mortem finding. Carson obtained in blood culture a pure growth of *Staphylococcus aureus* in all his cases, whereas blood

culture in our case was negative. Nevertheless, as suppurative changes are unknown in Hodgkin's disease, apart from secondary infection, the osteomyelitic nature of the infection taking part in the extensive erosion of the vertebral bodies and development of the abscess may be regarded as the correct explanation.

The case here reported is further proof of the extraordinary difficulties that may have to be overcome in order to arrive at the correct diagnosis of Hodgkin's disease.

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THE PHYSIOLOGICAL AND CLINICAL RESULTS OF DIVISION OF THE VAS DEFERENS*

BY

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The vas deferens, or spermatic duct, is the tube which carries the mature spermatozoon from the testicle to the seminal vesicle. It is lined by ciliated epithelium, and the lumen in comparison to the thickness of the wall of this duct is extremely small. The vas deferens has very little contractile power, the reason for which is obvious when it is remembered that the spermatozoon is mobile and is assisted towards its destination by cilia. It is only when it has entered the seminal vesicle that muscular effort is required to urge it further forward on its final journey. There must be some correlation between the vesicles, when they are fully distended with spermatozoa, and the migration of these sperm cells from the seat of their development. The capacity of the seminal vesicle is limited, and thus some control must be exercised over the number of spermatozoa which may travel in any given time along the vas deferens. It is pure surmise how this comes about, but in all likelihood a distended vesicle has an inhibitory effect upon the movements of the cells from the testicle. Coitus has but an indirect relation to these activities.

When the vas deferens is divided or ligated it is necessary to consider the effect upon the testicle, the seminal vesicle, and the prostate gland. As regards the latter, it should be obvious that no change, either physiological or anatomical, will take place, and yet in the days before prostatectomy was introduced it was a common practice to divide both vasa in the belief that the operation would result in a decrease in the size of the enlarged prostate. It is probable that this procedure was intended as a substitute for castration, which was the treatment in vogue during the nineteenth century. The removal of the testicle was discarded on account of the mental complications which it produced, but though it had no effect upon the adenomatous growth of the gland, the latter eventually underwent atrophy, due, of course, to disuse.

Division of the vas deferens *per se* has no effect upon either the function or size of the prostate gland. The quantity of the secretion is unaltered. It thus comes about that the man who has had both vasa divided is unaware of any change in the act of coitus. The quantity of fluid ejaculated is normal, but there are no spermatozoa present. With the knowledge that the vesiculae seminales merely function as reservoirs for the mature spermatozoa it is clear that any interference with the flow of cells into these small pouches must lead to their gradual shrinkage and complete atrophy. This is exactly what happens after a dissolution of the continuity of the vasa deferentia. The vesicles, at first palpable through the wall of the rectum, slowly shrivel until they are no longer to be felt by rectal examination.

A much more difficult study is the effect of duct division upon the testicle. There is one definite negative finding—namely, that there is no change in the shape and size of the gland. On the other hand, little is known as to the life history of the spermatozoon when it is imprisoned within the tubules of the epididymis. One can only surmise that the adult cell dies of inanition, unemployed and unwanted. Is the process of development of the sperm cell interfered with by the inability of its mature relatives to escape from the nest and migrate, as nature intends them to? Here again, in another but less important form, is the problem of the unemployed and its effect upon control of the birth of the unwanted. The urge to further formation of spermatozoa must remain, even after division of the vas, so long as sexual desire persists. One can visualize the overcrowding of the tubules of the epididymis with adult cells and the final squeezing out of existence of those that have not reached maturity. The final phase, in all probability, is the testicle's impotence to produce any sperm cells at all.

Such, in brief, are the physiological results of division or ligation of the vasa deferentia. Equally interesting and instructive are the clinical results of this simple surgical procedure.

OPERATIVE TECHNIQUE AND COMPLICATIONS

The operation can be carried out by any medical practitioner with a knowledge of minor surgery, but it must be stressed that this operation, if not performed efficiently, may lead to serious complications.

By far the easiest method of exposing the vas is as follows:

After the skin of the scrotum has been sterilized with iodine, picric acid, or methyl violet the vas is felt for immediately below the external abdominal ring. On the right side it is easily isolated with finger and thumb from the other constituents of the cord, but the left one is not so readily picked out on account of the multiplicity of veins which surround it. As soon as the duct is firmly gripped and fixed an incision is made in the scrotal skin between the operator's finger and thumb. With a pair of toothed forceps the vas is held while the tissues surrounding it are dissected away. It is then cut across and each end crushed between artery forceps. Should the surgeon desire to inject the vesiculae seminales with an antiseptic or sclerosing solution in order to prevent subsequent vesiculitis the proximal end of the vas must not be crushed until the injection has been made. The procedure is: the proximal end of the cut vas is lightly held with forceps while a blunted hypodermic needle is passed down its lumen. (A sharp-pointed needle is found to catch in the wall of the duct and prevent the flow of fluid along the correct channel.) As soon as the surgeon is satisfied that the needle is in the right position 4 c.cm. of 1 in 10 carbolic acid—or any other antiseptic and sclerosing solution which may be preferred—is injected by means of a glass syringe. By this technique the vesiculae seminales are sterilized, and, if the correct solution is used, also sclerosed. The divided ends of the vas are now pushed back into the scrotum and the skin wound sutured with catgut.

The complications which may arise from division of the vas are, in the main, the result of errors of technique. Thus, failure to maintain perfect asepsis will lead to scrotal cellulitis and the surrounding of the testicle by a hard mass, which has been mistaken for epididymo-orchitis. Again, particularly on the left side, a vein may be punctured during dissection and the error not recognized. The result is the formation of a scrotal haematoma.

* A post-graduate lecture delivered at the Hampstead General Hospital, November 9th, 1932.

...stly, a thickened spermatic vein can be divided in ...stake for the vas, and when or if orchitis follows, the ...g surgeon proclaims the uselessness of duct division ... a prophylactic measure!

In those cases where the vas has been divided for the ...vention of orchitis, and infection of the seminal ...esicles has subsequently occurred, the following signs ...d symptoms may be observed:

The patient complains of aching in the groin, and has a ...ight rise of temperature. Palpation of the tissues in the ...g... of the external abdominal ring will reveal a swelling tender on pressure, which may be no larger than a pea or as big as a bantam's egg. The lump is due to the formation of a localized induration of the tissues around the proximal end of the cut vas. So acute was the onset of the symptoms and so sudden the appearance of the swelling at the lower end of the groin in one patient, that the condition was mistaken for a strangulated hernia. These symptoms rarely last longer than a few days unless an abscess forms. When the latter takes place resolution quickly occurs following evacuation of the pus. The transitory constitutional disturbance produced by a small abscess at the point of division of the vas is as nothing compared with pus formation in the testicle. The inflamed vesicle can be felt through the wall of the rectum as a thickened cord projecting upwards and outwards from the upper limit of the prostatic bed. Tenderness is an uncertain sign.

It is clear from the observations which have been made on the mode of spread of infection from the bladder neck and prostatic urethra to the testicle that the effect of division of the vas has determined, once and for all, the channel by means of which bacteria reach the latter. This channel must be either the lumen of the vas or lymphatics within its wall, for the technique of division has consisted solely of breaking the continuity of the duct. Perivasal lymphatics are not interfered with. Proof of the correctness of this observation lies in the fact that infection from the prostatic urethra, the vesicles, or the prostatic bed, following removal of the gland, terminates at the point of division of the vas deferens.

General Indications

It is now necessary to consider the indications for this operation as a means of checking the spread of infection to the testicles from the bladder and urethra.

Following removal of the prostate for simple enlargement or any other disease, no technique has yet been devised which prevents some degree of infection in the prostatic bed. So long as this infection exists there is the danger of bacteria spreading from the sump of serum and urine collected in this space, firstly to the seminal vesicles, and thence, via the vas deferens, to the testicle. Thus in all cases of prostatectomy an essential part of the operative technique must be division of the vasa deferentia. The importance to the patient of safeguarding his testicle from infection after he has safely weathered the storm of prostatic disease and the operation of prostatectomy is brought home to the surgeon, who, having failed to divide the vasa, is faced with the problem of treating recurrent attacks of orchitis when he has flattered himself his patient is rid of all his bladder troubles. In urinary tuberculosis when the bladder becomes involved, subsequent complications may be prostatitis, vesiculitis, and urethritis. These organs are affected through the passage of tubercle bacilli in the urine. Once this has occurred there is the further menace of involvement of the external genitalia. It is therefore a wise step, when the prostate and seminal vesicles have been discovered to be tuberculous, to limit the further genital spread of the disease by division of both vasa deferentia. Likewise in genital as opposed to genito-urinary tuberculosis, immediately epididymitis occurs there must be a dissolution of the continuity of the sperm duct to avoid involvement of the accessory sexual organs.

THE ROLE OF MINERALS AND VITAMINS IN GROWTH AND RESISTANCE TO INFECTION*

BY

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During recent years more and more attention has been devoted by the medical profession to the role of minerals and vitamins in human nutrition. In the present paper we wish to review some of the work which is being done in this field at the Hospital for Sick Children, Toronto. This work has been undertaken, not with the object of discovering methods for the cure of various disease conditions, but in an attempt to determine the value and importance of these dietary factors for normal development and resistance against disease. There are at least ten inorganic elements which are absolutely essential for life—namely, sodium, potassium, calcium, magnesium, phosphorus, chlorine, sulphur, iodine, iron, and copper. From the standpoint of the practising physician we are fortunate in having to watch the supply of only three of these elements, because any reasonable diet will furnish the other seven elements in adequate amounts. The supply of the three elements calcium, iron, and iodine, however, should not be left to chance.

Essentials in Diet

Although calcium is the fourth most widely distributed element in the earth's crust, its occurrence in foods is quite limited. Our two chief sources of calcium are milk and leafy vegetables. As regards the child's diet, it may be stated that it is absolutely impossible to furnish an adequate amount of calcium unless liberal amounts of milk are given. This can readily be demonstrated by the following facts. A diet comparable to that found in many uninformed families, composed of rolled oats and bread-and-butter for breakfast, beef, potatoes, carrots, cabbage, and rice for dinner, potatoes, bread-and-butter, and honey or jam for supper, with four ounces of fluid milk to go on the rolled oats and rice, supplies only 0.3 gram of calcium. Yet the average 10-year-old child requires approximately one gram of calcium each day (Rose). The additional 0.7 gram of calcium required can be furnished by one pint of milk per day, or a total milk intake of 24 ounces per day. If all the milk is omitted, the amount of calcium furnished by the remaining portion of the diet is reduced to the absurdly low figure of 0.17 gram. It is thus evident that we depend mostly on milk to supply the large calcium needs of the growing child.

Iron is another mineral element that is not so widely distributed in food that its supply can be left to chance (Sherman). This is particularly true with the small infant, whose diet consists largely of milk and cereal, both of which foods are deficient in iron. Egg yolk, liver, and spinach and other green vegetables are our richest sources of iron in foods. The supply of iodine is probably an easy matter in Great Britain, owing to proximity to the sea. With us, however, in the centre of the North American continent, the iodine content of the water and the food is extremely low. We depend largely on iodized salt to furnish this element.

* Read in the Section of Diseases of Children at the Centenary Meeting of the British Medical Association, London, 1932.

A lack of vitamin A in the diet results in a keratinization of the epithelial cells. Our chief supply of vitamin A is butter-fat, egg yolk, carrots, spinach, and cod-liver oil. A lack of vitamin B_1 results in peripheral neuritis or beri-beri, while a lack of vitamin B_2 results in pellagra and possibly certain skin diseases. Vitamins B_1 and B_2 are found largely in yeast, wheat germ, milk, liver, egg yolk, and spinach and other leafy vegetables. Vitamin C, the antiscorbutic vitamin, is found in oranges, lemons, tomatoes, cabbage, and other fruits and vegetables. It is readily destroyed by heat in the presence of oxygen. Vitamin D, the antirachitic vitamin, is not found in ordinary foods, with the exception of small amounts in egg yolk and summer milk. Fish oil, such as cod-liver oil, is our most concentrated natural source. In recent years vitamin D has been produced by the irradiation of ergosterol. Vitamin E, the reproductive vitamin, is found in wheat germ, lettuce, and other leafy foods.

GROWTH AND RESISTANCE IN ANIMALS

In addition to the well-recognized deficiency diseases produced by a lack of vitamins and minerals, we have studied the importance of these food elements on growth and resistance to infection. Each one of these vitamins and minerals is essential for life, so it is only reasonable to expect that if any one of them is omitted from the diet the individual will eventually lose weight and die.

In animal experiments this has been found to be the case. In our rats fed on a normal diet the average gain in weight over a period of six weeks was 100 grams. When calcium was reduced from the optimal figure of 0.612 per cent. to 0.26 per cent. the average gain over the same period was 80 grams. In regard to phosphorus, we found that if this element was reduced from the optimal level of 0.45 per cent. to 0.24 per cent. the animals, instead of making the normal gain of 100 grams in six weeks, gained only 66 grams. With a lack of iron* the rate of gain was reduced 33 per cent. over a period of eleven weeks. Some of the vitamins have been spoken of as the growth-promoting vitamins, but a glance at Fig. 1 shows that a reduction of any one of the vitamins

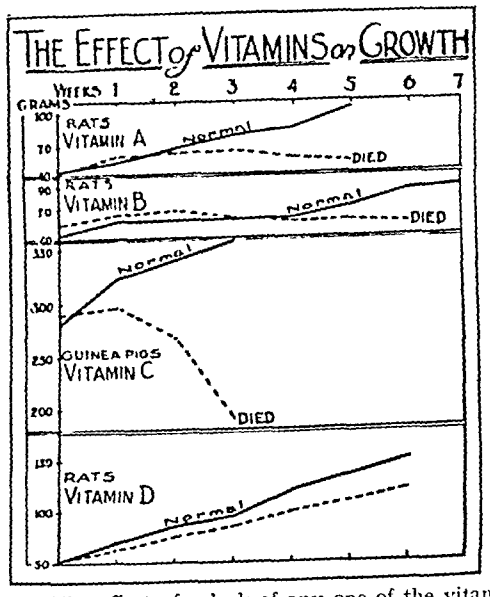

FIG. 1.—The effect of a lack of any one of the vitamins on growth.

(with the exception of E) results in loss of weight. The influence of vitamin A in maintaining a normal condition of the epithelial cells of the respiratory tract and normal resistance against infection is so well recognized that this vitamin is frequently called the anti-infective vitamin. By a method devised in our laboratories by Dr. Elizabeth Chant Robertson the effect of a lack of the vitamin B complex and of vitamin D has been studied. The procedure consisted in feeding the rat the desired deficient diet for a period of two to four weeks, and then giving by mouth a measured amount of an organism pathogenic for the rat, known as *Salmonella muriotitis*. The animals were then watched for a period of four weeks, and the number of survivors noted. Blood cultures were made from the heart blood of all animals shortly after death, and the very occasional animal which did not show a positive culture was discarded as having died from some other cause. The results given in Tables I and II show

TABLE I.—*Effect of the Vitamin B Complex on Resistance to Infection*

Vitamin B Deficient Diet			Vitamin B Deficient Diet with 6 per cent. Dried Brewers' Yeast Added		
Total Number of Rats	Number of Survivors	Percentage of Survivors	Total Number of Rats	Number of Survivors	Percentage of Survivors
73	12	16	68	47	69

TABLE II.—*Effect of Vitamin D on Resistance to Infection*

Rachitogenic Diet			Rachitogenic Diet with Addition of Vitamin D		
Total Number of Rats	Number of Survivors	Percentage of Survivors	Total Number of Rats	Number of Survivors	Percentage of Survivors
375	106	28	364	201	55

that a lack of the vitamin B complex and of vitamin D lowers the resistance of rats to infection.

VITAMIN D

As already mentioned, vitamin D is not present in perceptible amounts in ordinary table foods, with the exception of small and variable amounts in egg yolk and summer milk. Our tests show that eggs procured in the open market in Toronto in the month of March contained as little as two Steenbock vitamin D units per egg yolk. (One drachm of standard cod-liver oil contains 46 Steenbock vitamin D units.) As paediatricians, we see extremely severe rickets in the winter months in infants receiving as much as one quart of milk per day. This makes it plainly evident that the human race does not depend on ordinary foods for its source of vitamin D. As shown in recent years, we depend on the ultra-violet rays of sunshine and skyshine to produce this vitamin in our bodies. We have studied the variations in the antirachitic value of sunshine in Toronto over a period of some years, and found that the antirachitic potency of summer sunshine was approximately eight times as great as winter sunshine. The chief deciding factor in this change in potency is the altitude of the sun above the horizon. It was found that when the sun was below 35 degrees it produced only a slight effect as compared with the effect produced when above 35 degrees. In Toronto, even in the middle of the day, the sun is always below 35 degrees for four months of the year, whereas in the latitude of London this occurs for five months of the year, and in the latitude of Glasgow for six months of the year. This means that in Great Britain the sun has only a slight antirachitic effect for five to six months of the year. This, combined with modern methods of living indoors, and the smoke pall over the large cities, makes it plainly evident that unless some special means are taken the average individual will not receive an amount of vitamin D commensurate with optimal health.

The use of cod-liver oil and other vitamin D products obtained through the drug stores has increased greatly in recent years, with a resultant improvement in the health of the rising generation. We have been accustomed, possibly, to think only of the antirachitic effect

* The effect of an iron deficiency in lowering resistance against infection in humans has been strikingly demonstrated by Dr. Helen Mackay.

of vitamin D; the recent work of May Mellanby and others has shown conclusively the value of vitamin D in the prevention of dental caries. It is inconceivable that a vitamin so essential for life in the early years should not be essential throughout childhood and adult life, although in a decreasing amount. Taking all these facts into consideration, we felt that if an additional supply of vitamin D could be made available to the public, which would be obtained by it at no additional cost, and by no effort on its part, we would be doing something well worth while. Accordingly, we incorporated vitamin D, in the form of irradiated ergosterol dissolved in corn oil, in the shortening used in making bread, so that each 24-ounce loaf contained the vitamin D equivalent of 3 drachms of cod-liver oil. This bread is now being produced in some fifteen cities in Canada and some sixty cities in the United States.

USE OF SPECIAL CEREAL

It has been stated that cereal grains furnish from 30 to 60 per cent. of the calories of the average diet. Most cereal products as used to-day are highly refined and contain only a small amount of minerals, and are almost devoid of vitamins. This, combined with the rather extensive use of refined sugars, which are quite devoid of both minerals and vitamins, makes it evident that a very severe strain is placed on the remaining portion of the diet to furnish an adequate supply of both vitamins and minerals. In view of these facts, we felt that if an infant or breakfast cereal could be devised which, in addition to supplying calories, would furnish minerals and vitamins in appreciable amounts, it should prove to be a valuable addition to the average dietary. However, on account of the general preference for refined and finely milled cereals, it was felt that in order to be generally used the cereal should resemble those widely used products in taste, appearance, non-laxative effect, and keeping qualities. Accordingly a cereal has been devised that fulfils these requirements, and has the following composition: wheatmeal (farina), 53 per cent.; oatmeal, 18 per cent.; corn meal, 10 per cent.; wheat germ, 15 per cent.; bone meal, 2 per cent.; dried brewers' yeast, 1 per cent.; alfalfa, 1 per cent.

The wheat germ is used on account of its high protein, mineral, and vitamin content. It contains a moderate amount of vitamin A and is exceptionally rich in vitamins B_1 and B_2, and is the most concentrated known source of vitamin E. Dried brewers' yeast supplies vitamins B_1 and B_2, in addition to the amount already furnished by the wheat germ. Alfalfa is added on account of its high vitamin A and mineral content. We have found that 1 per cent. machine-dried alfalfa furnishes sufficient vitamin A for the cure of xerophthalmia in rats. The iron content of alfalfa is more than 130 mg. per hundred grams, which is ten times the amount found in egg yolk, one of our most concentrated sources of iron in commonly used foods. The bone meal, which is an odourless, tasteless white powder, is used on account of its high calcium and iron content. This cereal mixture has been used exclusively for the past two years in the Hospital for Sick Children, Toronto, and is also extensively used throughout the United States and Canada. In the infant wards, from the standpoint of a laxative, no difference was noted from the results obtained with the refined and finely milled cereals ordinarily used. The palatability of the product was evidenced by its being eaten with the same avidity as the ordinary cereal, not only by the infants, but also by the older children.

A study was made of the rate of growth of children given daily 2 ounces (dry weight) of this cereal mixture in place of ordinary cereals. Some twenty-four children in all were taken, and were divided into two groups, one receiving ordinary cereals in a well-balanced diet, and the other the special cereal mixture in the same well-balanced diet. The children were kept under identical conditions and weighed at weekly intervals over a period of ten weeks. At the end of ten weeks the groups were changed, and the ones on ordinary cereals now received the special cereal mixture and the ones on the special cereal mixture received ordinary cereals. Their weights were observed over an additional ten-week period. The results obtained are shown graphically in Fig. 2. It

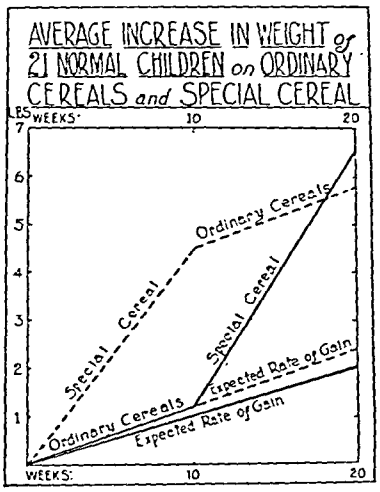

FIG. 2.—Comparison of the increase in weight of children fed on the special cereal and ordinary cereals.

is to be noted that on the special cereal mixture the children gained four to five times their expected rate, in contrast with the average rate of gain obtained while on ordinary cereals.

CONCLUSIONS

We believe that more care should be taken to ensure an adequate supply of both minerals and vitamins in the diet. The importance of these food essentials in the maintenance of normal growth and resistance against infection is not as widely recognized as it should be. Unfortunately we do not know the exact requirements of these food essentials, nor do we know the exact amounts furnished by many foods. We do know, however, that, owing to the ease with which we can obtain purified carbohydrates, we are apt to suffer from insufficient amounts of minerals and vitamins, and, in occasional cases, of proteins. Nevertheless one can go a long way towards overcoming the deficiencies so frequently encountered in the average diet by building up our meals around five essential articles of food—namely, milk, to supply calcium and protein; meat, to supply protein; eggs, to supply protein, vitamins, and iron; and vegetables and fruit, to supply minerals and vitamins. The remaining calories required can be furnished readily by the refined cereal and sugar products.

After many years of practical experience we are prepared to say that a more widespread observance of these few simple fundamental principles will go a long way towards improving the health of the community, and will materially assist us in reaching that goal which is the keynote of preventive medicine—namely, optimal health.

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THE VALUE OF CAESAREAN SECTION IN PRE-ECLAMPTIC TOXAEMIA

BY

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The object of this communication is to suggest that, although Caesarean section should never play anything but a small part in the treatment of pre-eclamptic toxaemia, it might, nevertheless, be used with advantage more frequently in the most serious cases. In my experience, the high mortality which has been shown to follow Caesarean section when eclampsia has actually supervened[1] does not occur when the operation is performed in the pre-eclamptic stage. The following is a short series of thirty cases of pre-eclamptic toxaemia treated by Caesarean section with no maternal deaths and no subsequent development of eclampsia. I have done my best to include all my cases so treated, but it is possible that one or two may have been overlooked, owing to difficulty in tracing the earlier records. I can state definitely, however, that I have never had a maternal death in a patient treated by Caesarean section for pre-eclamptic toxaemia, and the same applies in cases of Caesarean section performed for other reasons, but in which a mild degree of toxaemia was present, too slight to include in this series.

Caesarean section for toxaemia does not condemn the patient to delivery by this method in subsequent pregnancies. Since it is from eclampsia that the patient dies, and not from pre-eclamptic toxaemia, I seldom operate unless eclampsia appears to be so imminent that there is no time to induce labour. My usual practice in severe cases is to keep the patient on water only, or water, glucose, and lemonade, for twenty-four hours. The response to this treatment is generally satisfactory, but if at the end of that time there is only a slight improvement, I induce labour, while if the condition is the same, or worse, I perform Caesarean section. I should have operated sooner in some of the following cases had they come under my care earlier. I have not found that toxaemic patients stand the operation less well than others, and I am forced to the conclusion that the risk of operative procedure in this condition has been overestimated.

Vaginal Caesarean section was performed in one case; in all the others the classical operation was carried out. The anaesthetic employed was usually ether, sometimes preceded by ethyl chloride on an open mask. I should prefer spinal anaesthesia, or gas and oxygen, but, since the operation need not take more than a quarter of an hour, I do not think the choice of the anaesthetic is of very great importance. This may prove a practical point in an emergency operation.

Eclampsia following Induction

That induction, even when followed by the immediate onset of labour, is too slow a method to be relied upon to prevent eclampsia in severe cases is illustrated by the following examples.

Case 1.—Mrs. A., a primipara, was under my care for her confinement. When thirty-eight weeks pregnant, her husband a doctor, reported a trace of albumin for the first time. He blood pressure, which on a previous occasion had been 13 was 150. There was practically no oedema, and she felt qui well. As she had a slightly contracted pelvis, and inductio had already been considered for this reason, it was decide to induce labour, although neither the toxaemia nor the pelv contraction alone seemed sufficient to indicate this. She we

Case No.	Date of Admission	Age	Para	Duration of Pregnancy (weeks)	Condition on Admission and till Operation	Reason for Operation and Date	Date of Discharge and Result	
							To Mother	To Ch
1	September 19th, 1924	25	1	40	Blood pressure 145; much oedema of abdominal wall and legs. No albumin, although this had been present in antenatal department	September 24th. Despite treatment oedema increased; blood pressure rose to 170, and urine was loaded with albumin. Labour was induced with a stomach tube, but on following day blood pressure was 175, and albumin had still further increased. [illegible] very slowly [illegible] ogress of labour owing to disproportion. General condition getting worse. Temperature 101.2°	October 13th. Febrile puerperium. Finally did well	Good
2	May 1st, 1925	26	1	40	In labour. Membranes ruptured; heavy cloud of albumin. Blood pressure 152. (Oedema of face, feet, and abdominal wall had been noted four days earlier in antenatal department, but notes do not say whether this was present on admission)		July 2nd. Febrile puerperium; Finally did well	Good
3	November 22nd, 1925	30	1	40	Admitted with "show." No pains; no toxic symptoms. Following day developed very severe headache, nausea; trace of albumin. Blood pressure 160. Drug induction failed	December 4th. Extended breech which would not descend with good pains. Toxic symptoms were still present on December 2nd, but were getting less. Condition on day of operation is not stated in notes	December 23rd. Good	Goo
4	June 4th, 1926	39	2	40	Oedema of feet, legs, and abdominal wall. Blood pressure 130. Passing very little urine; trace of albumin. All symptoms improved, but she later relapsed	June 22nd. Almost complete anuria; what there was was loaded with albumin. Very marked oedema; blood pressure 148. Very anxious for a living child; twins had been diagnosed and it was feared they would succumb to the toxaemia	July 23rd. Good	Tri al w
5	April 1st, 1927	25	1	32	Very marked oedema. Urine loaded with albumin; had been vomiting. Blood pressure 170	April 2nd. Worse, despite being on water only. Urine nearly solid on boiling. Blood pressure 184	April 28th. Good	Go
6	May 13th, 1927	23	1	40	Much oedema and albuminuria. Blood pressure 160	May 14th. After water only for 24 hours, urine was nearly solid on boiling; only 16 oz. passed. Blood pressure still 160	Good	Go
7	May 27rd, 1927	29	1	? 36	Oedema of feet and legs; much albumin. Blood pressure 160. Temporary improvement followed by relapse despite medical treatment	May 29th. Blood pressure 190. Much albumin; headache	June 18th. Good	Go
8	September 30th, 1927	38	1	38	Much albumin; oedema of feet. Headache and eye symptoms. Blood pressure 144. Temporary improvement under treatment, then oedema, albumin, and blood pressure increased. On October 6th blood pressure was 164	October 7th. Tending to get worse despite treatment, although on actual day of operation there was improvement, and blood pressure was 128	October 26th Good	G
9	November 4th, 1927	24	1	[illegible]	Looked ill. Puffiness of face; very marked oedema of vulva and much oedema of legs. Much albumin. Blood pressure 140	November 4th. Risk of eclampsia supervening seemed too great to allow time for medical treatment	November 24th. Good	G
10	January 20th, 1928	24	1	34	Much albumin and oedema. Blood pressure 140. After water only for 24 hours and magnesium sulphate, albumin was the same, oedema less. Blood pressure 170. [illegible] same; following day, [illegible] he vomited. [illegible] was Blood pressure 150	January 22nd. Failure of response to medical treatment. Fear that eclampsia might supervene during induction	February 11th Good	G

TABLE (*continued*)

Case No.	Date of Admission	Age	Para	Duration of Pregnancy (weeks)	Condition on Admission and till Operation	*Reason for Operation and Date*	Date of Discharge and Result	
							To Mother	To Child
11	July 4th, 1928	25	1	36	Blood pressure 172 (which rose to 180) and albuminuria. Under treatment blood pressure dropped to 135 and albumin disappeared			
12	Re-admitted August 11th, 1928				When re-admitted blood pressure was 210. Eye symptoms present; albuminuria. Attempt to induce labour by bougies, followed by "intensive" drug treatment, unsuccessful. Toxaemic symptoms improved temporarily, then began to increase again	August 23th. Recurrence of toxaemic symptoms after temporary improvement. Failure to induce labour	September 17th. Good	Stillborn
13	September 29th, 1928	24	1	? 38	Vomiting; slight jaundice. Albuminuria and oedema. Blood pressure 115	September 30th. After strict medical treatment condition became worse. Blood pressure 118. Restlessness, headache, epigastric pain, and blurred vision. Albumin and bile in urine. Marked oedema	October 26th Good; febrile puerperium, but developed active tuberculosis	Twins; both did well
14	February 8th, 1929	25	1	40	Much albumin. Blood pressure 185	February 9th. After 24 hours on water only blood pressure was 180	March 2nd. Eventually good; convalescence delayed by bronchitis	Good
15	April 5th, 1929	27	1	33	Albuminuria; much oedema. Blood pressure 152	April 6th. After 24 hours' medical treatment blood pressure 172	June 10th. Eventually good; convalescence delayed by phlebitis	Good
16	May 13th, 1929	27	1	? 38	Much oedema and albumin. Blood pressure 165. (In the ante-natal department a high blood pressure and oedema had preceded the albuminuria)	May 14th. After 24 hours' medical treatment blood pressure was 150. (She was apparently either worse, or no better, but the notes of this and of the two preceding cases are deficient)	June 11th. Good	Good
17	April 4th, 1930	27	2	34	Much albumin; blood pressure 165. Despite treatment blood pressure rose next day to 200, dropping to 190. Albumin less.	April 6th. Blood pressure 195. Vomiting; face puffy. Worse, despite medical treatment	April 23. Eventually good; convalescence delayed by bronchitis	Good
18	July 7th, 1930	36	1	38	Blood pressure 178. Nausea, headache, and vomiting. Much albumin and oedema of legs	July 8th. After water and barley sugar only for 24 hours blood pressure was 175; passing very little urine. The patient had already been advised Caesarean section for contracted pelvis	July 23th. Good	Good
19	August 28th, 1930	30	1	40	Much oedema, headache, and vomiting. Blood pressure 135. No albumin on admission, but this appeared next day	September 21st. Temporary improvement under medical treatment, followed by relapse. Blood pressure now 170; much albumin	October 10th. Good	Good
20	October 17th, 1930	27	1	40	Oedema and headache; albumin absent or trace only. Blood pressure 150. Admitted for drug induction. Oedema and high blood pressure (170) had preceded albuminuria in ante-natal department	October 19th. No result from drug induction. Trace of albumin; headache. Blood pressure 170. Getting worse, despite medical treatment	November 8th. Good	Good
21	October 19th, 1930	25	1	35-38	? In labour. Abdominal pain and vomiting. Oedema of feet and legs; blood pressure 150. There is no note as to condition of urine on admission, but there had been a faint trace of albumin in ante-natal department, preceded by oedema and high blood pressure	October 20th (12.30 a.m.). Blood pressure rose to 200 after admission, and eclampsia seemed imminent	November 8th. Good	Good
22	January 23th, 1931	21	1	30	Blood pressure 195. Oedema; much albumin (oedema, headaches, and high blood pressure had preceded albuminuria in ante-natal department). Two attempts to induce labour by insertion of bag failed	February 3rd. (Vaginal Caesarean section.) Persistent high blood pressure and albu-	February 23rd. Good	Stillborn
23	January 30th, 1931	20	1	34	Oedema of feet and much albumin. Blood pressure 180. After 24 hours on water only blood pressure was 150	February 2nd. Blood pressure rose again to 170. Severe headache; oedema increasing	February 20th. Good	Good
24	March 20th, 1931	28	3	34	Severe headaches and eye symptoms. Blood pressure 150. Much albumin. (Had albuminuria in ante-natal department for more than three weeks, despite medical treatment)	March 20th. Had albuminuria and high blood pressure with both previous pregnancies; the first was induced at 6½ months. The present operation was performed both to prevent onset of eclampsia and to sterilize	May 8th. Good. The long convalescence was due to delayed healing of wound	Died day after birth
25	April 6th, 1931	31	2	—	Albuminuria. Oedema of legs and feet and enormous oedema of vulva; two pints of fluid let out by tapping. Blood pressure 145	April 12th. Chief toxaemic symptom was great oedema of vulva, which reappeared after tapping	May 4th. Good	Twins; both did well
26	June 23rd, 1931	26	2	26	Much albumin; oedema. Blood pressure 190. After water only for 24 hours blood pressure was 210; highest reading was 220, fell before operation to 210	June 27th. To prevent eclampsia and to sterilize. She had severe toxaemia with previous child, which was induced at 25th week, but which lived and did well	July 8th. Good	Died
27	September 21st, 1931	24	1	32	Oedema; trace of albumin. Blood pressure 145	October 4th. Getting worse despite treatment. Drug induction failed. Blood pressure 180; headache and eye symptoms	October 23th. Good	Twins (dead; born alive
28	November 18th, 1931	34	5	34	Oedema; cloud of albumin Blood pressure 235. (Previous pregnancies said to have been uncomplicated)	November 18th. Ten hours later blood pressure 220, despite water, glucose, etc., only. Fear of impending eclampsia	Jan. 2nd. Good. Prolonged convalescence owing to phlebitis	Good
29	April 1st, 1932	—	1	38	Much oedema and albumin. Blood pressure 165	April 4th. Improved at first on water only; blood pressure fell to 120, then rose to 150. Headache	April 25th. Good	Good
30	November 1st, 1932	25	1	40	Oedema of legs, hands, and face. Blood pressure 132. Heavy cloud of albumin. (*Trace of albumin noted in ante-natal department four days previously*)	November 5th. Albuminuria gradually disappeared under strict medical treatment, and the oedema diminished, but the blood pressure continued to rise, and on day of operation it was 174	November 25th. Good	Good
31	December 9th, 1932	25	2	40	Blood pressure 172. Much albumin. Had had trace of albumin in ante-natal department on three separate occasions, the first being in September. It always disappeared on dieting, and the blood pressure varied from 110 to 140	December 9th. She was admitted for operation the same day, both to prevent eclampsia and because she had had toxaemia in her previous pregnancy and a stillborn child. She was kept on water only until the operation, but the blood pressure continued to rise slightly (to 175) and the urine became almost solid with albumin on boiling	Good	Good

into the nursing home, and her urine was then found to be albumin-free. Later in the day labour was induced by rupturing the membranes.[2] Pains started about two hours later, but eleven hours after the membranes had been ruptured she had a fit, and the urine was found to be almost solid with albumin.

Case 2.—Mrs. W. was admitted into a maternity home for treatment for severe toxaemia. The urine was loaded with albumin, her legs were very oedematous, and her blood pressure was between 180 and 190. After she had been in bed on a restricted diet the oedema diminished and the albumin almost disappeared; the blood pressure remained the same. About five days after admission the oedema began to increase again, the blood pressure remaining as before. The doctor then decided to induce labour; the operation was very successful, labour starting in four hours. The child was born twenty-four hours later, but by then the mother had had an eclamptic fit, and I had been asked to see her in consultation.

In both cases the mother and child did well and the induction probably diminished the severity of the disease. It gave time, however, for the relatively safe pre-eclamptic condition to pass over into the very dangerous one of eclampsia, although in both cases there was a minimum of delay between the induction of labour and the birth of the child. The second case illustrates the prognostic value of the blood pressure compared with other symptoms, and this is the symptom on which I chiefly rely in estimating the severity of the case. I have also found that when the high blood pressure and oedema appear before the albuminuria the toxaemia is particularly apt to be severe. This happened four times in my series.

Figures are not available to show what percentage of cases of pre-eclamptic toxaemia develop eclampsia, but it has recently been suggested that 6.4 per cent. of late pregnancy toxaemia cases develop this condition.[3] It is reasonable to assume that the percentage, when only the most severe cases are considered, would be higher, and therefore that some of the cases in this series would certainly have developed eclampsia but for the operation.

It has been argued that this method of treatment is contrary to the interests of the child, but in my experience the child is more likely to die as the result of prolonged toxaemia in the mother than from prematurity, and I sometimes use this as an argument to the parents in advising the operation. The figures in this series show that the actual foetal mortality was 17.1, six children having died of the thirty-five that were born. This included three sets of twins, of whom one set died, and one of triplets. Five out of the thirty mothers, or 16.6 per cent., lost their children, and twenty-three of them, or 76.6 per cent., were primiparae.

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Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

A CASE OF POST-VACCINAL ENCEPHALITIS

The following brief account of post-vaccinal encephalitis occurring in an adult and resulting in recovery seems worthy of record.

Miss N. B., a robust, healthy girl, 19 years of age, was primarily vaccinated with fresh glycerinated calf lymph on November 15th, 1932. Two vaccination marks were made on the left calf.

On November 28th the patient attended surgery, complaining of malaise, lassitude, and diffuse headache. On examination she had normal pock-marks with no inflammatory areolae. The same evening all symptoms were accentuated and vomiting occurred once. The headache had become occipital; there was no stiffness of the neck; and all reflexes were normal, except for an indefinite Babinski reflex on the left. Temperature 101° F., pulse 80, respiration 24.

Early on November 29th, after a night of alternating restlessness and drowsiness with occasional vomiting, she was apathetic and answered questions briefly. Stiffness of the neck was marked, with no retraction. Pupils and retinae were normal, except for slight lateral nystagmus. The lower abdominal reflexes, the left knee-jerk, and both ankle-jerks were absent. The upper abdominal reflexes and right knee-jerk were diminished. There were bilateral Babinski and Kernig reflexes (left ++, right +). At midday the patient was comatose, with urinary incontinence. Lumbar puncture produced 32 c.cm. of clear fluid, and 10 c.cm. of anti-meningococcal serum was substituted intrathecally. The leucocyte count showed 18,125 cells per c.mm., 80 per cent. being polymorphonuclears. At midnight the patient was unconscious, with Cheyne-Stokes respiration. She was then given an intravenous transfusion of 30 c.cm. citrated blood from her mother, who had been vaccinated twenty years previously, and 23 c.cm. of cerebro-spinal fluid was withdrawn by lumbar puncture. One hour after transfusion generalized skeletal spasm occurred, which ceased after subcutaneous injection of adrenaline.

Early on November 30th the patient was still comatose and incontinent of urine and faeces, but Cheyne-Stokes breathing had ceased. Consciousness gradually returned, and towards evening she became restless. At midnight 30 c.cm. of serum from a Group IV donor, who had been vaccinated three and a half years previously, was given intravenously, and 20 c.cm. of cerebro-spinal fluid was withdrawn by lumbar puncture.

On December 1st the comatose state gave way to a lethargic state. Sphincter control was restored, but occasional enuresis persisted. During December 2nd, 3rd, and 4th the following reflexes were still absent: left upper and both lower abdominal, both knee- and ankle-jerks. Plantar responses extensor.

On December 14th all abdominal reflexes and both knee-jerks were present; the left plantar response was still extensor and the right flexor. Neither pain nor paresis was observed throughout. Further recovery was uneventful.

EXTRACT FROM CEREBRO-SPINAL FLUID EXAMINATION
(*November 29th, 1932*)

Culture—sterile.
Cells—233 per c.mm. 1/3 small lymphocytes.
1/3 polymorphonuclears.
1/3 large endothelial.
Globulin—increased.
Protein—45 mg. per 100 c.cm.
Sugar—57.7 mg. per 100 c.cm.

JULES F. REY.

Bognor Regis.

INTESTINAL POLYPUS AND INTUSSUSCEPTION

It may be of some interest to record the following case.

The patient, a boy aged 6, was sent to me last summer with a history of vague abdominal pains with occasional vomiting. The bowels were somewhat constipated, with intermittent passage of bright red blood. On examination the general condition was fairly good. The abdomen was somewhat distended and distinctly tender over the appendicular area. Nothing abnormal was made out on rectal examination. A barium meal examination did not help in any way. A diagnosis of appendicitis was made. It was thought that an intestinal polypus might also be present.

At operation the appendix, which was subacutely inflamed, was removed. A search was then made along the large intestine for a polypus, and about the middle of the transverse colon a rounded mass, about three-quarters of an inch in diameter, was found. It felt like a piece of faeces, and on attempting to milk it in a downward direction I noticed that an invagina-

tion commenced at a point about two inches proximal to the mass. The bowel at this moment became spastic, and held the lump in this position. It became evident that one was dealing with a polypoid tumour with a long pedicle. A small opening was made over the tumour, and a polypus, with its two-inch pedicle and base, was excised. Recovery was uninterrupted.

I think the invagination seen during the operation proves conclusively that a polypus of the intestine is a definite cause of intussusception.

Aberdeen. ANDREW FOWLER, F.R.C.S.Ed.

GENERAL PERITONITIS FOLLOWING RUPTURE OF A PERINEPHRIC ABSCESS

The case reported below is of interest because of the rather unusual sequence of events.

A youth, aged 19, was admitted to the Walton Hospital, Liverpool, with general peritonitis. He was thin and emaciated, and obviously moribund. He had a history of sudden pain in the left hypochondrium, which had occurred seven days previously. He had refused to see a doctor until the day before admission. At the age of 6 he fell from the rear of a lorry and sustained a fractured pelvis and a rupture of the urethra. Since then he had not passed urine normally.

Just above the pubis was a fistula, which barely admitted the point of a probe, and from which foul-smelling urine was oozing. He had refused operative relief.

Post Mortem. — There were the usual appearances of generalized peritoneal infection, but no appendicitis. Both ureters were dilated; the right kidney showed pyelitis, and the left several abscesses, one of which had ruptured and given rise to a perirenal abscess, which in turn had ruptured into and infected the general peritoneal cavity. The bladder showed acute cystitis. The prostatic portion of the urethra was dilated, and contained five or six faceted calculi. Beyond this there was complete urethral obstruction.

I am indebted to Dr. T. B. Davie for the post-mortem findings, and to Dr. MacWilliam and Mr. A. Wilson for permission to publish the details.

Liverpool. J. J. JENNINGS, M.B., F.R.C.S.Ed.

SURGICAL EMPHYSEMA AS A COMPLICATION OF MEASLES

In the textbooks surgical emphysema in connexion with measles finds no place, and the literature would appear to contain but few cases.[1] The combined condition is therefore of such rarity that the following case justifies record.

A boy, aged 7, was admitted to the Coventry City Hospital on July 8th, 1932, the tenth day of illness. The case presented a generalized morbilliform eruption and typical catarrhal manifestations, with cough and hoarseness; the temperature was 100.8° F., pulse 148, and respirations 28. Examination of the chest revealed a patchy bronchopneumonia in both lungs. Surgical emphysema was already evident, the initial appearances being in the infraclavicular and supraclavicular regions, with the sign of "crackling" on palpation of those parts. The resultant ballooning was bilateral and symmetrical.

On the day following admission the air infiltration of the subcutaneous tissues quickly extended. The face, the neck, the whole of the chest wall, the abdominal wall, and the scrotum were now markedly involved; the arms and forearms were affected in small degree, but the lower extremities remained unaffected. No signs of pneumothorax were evident. On the succeeding day—the twelfth day of illness—the escape of air into the tissues was such that tension and mechanical respiratory embarrassment were severe, and cyanosis became marked. Treatment included the insertion in appropriate places of hollow needles, which penetrated only to a subcutaneous level; through them much of the air found egress, confirming the subcutaneous location of the air. The patient's general condition remained substantially unaltered until eight days later, when improvement was noted. Thereafter the bronchopneumonia resolved, the emphysematous condition subsided, and the case advanced to complete recovery twenty-one days after admission to hospital.

The following are possible theoretical explanations of the occurrence of surgical emphysema in such a case: (*a*) Breaking down of a pneumonic patch on the lung surface, involving adherent visceral and parietal pleurae and allowing air to escape from pulmonary vesicles via the mediastinum and the superior aperture of the thorax to the cellular and subcutaneous tissues of the neck and thence superficially to other parts. (*b*) Rupture of an air vesicle or bronchiole, due to coughing, permitting air to penetrate via the peribronchial tissue to the roots of the lungs and thence through the mediastinum initially to the neck. (*c*) Ulceration of trachea or larynx perforating into the cervical cellular tissue. The latter can be ruled out in the particular case under consideration, the probable explanation of which is to be found in (*a*).

A. MASSEY, M.D., D.P.H.
Coventry. H. L. OLDERSHAW, M.D., D.P.H.

[1] Taylor, E. C., *British Medical Journal*, 1911, i, 1051; Nesbitt, A. W., Ibid., 1923, i, 18.

Reports of Societies

MATERNAL MORTALITY: DISCUSSION ON THE "FINAL REPORT"

At the December meeting of the Section of Obstetrics and Gynaecology of the Royal Society of Medicine a discussion was held on the final report of the Maternal Mortality Committee. The discussion was opened by two members of the committee, Dr. W. H. F. OXLEY and Professor F. J. BROWNE.

Dr. Oxley dealt with the terms of reference of the investigation and the considerations which led to the main conclusions and recommendations of the report. He reminded the meeting that the departmental committee was appointed "to advise upon the application to maternal mortality and morbidity of the medical and surgical knowledge at present available, and to inquire into the needs and direction of further research." He described the method adopted for acquiring data. Case reports relating to nearly 6,000 maternal deaths had been analysed by Mr. G. F. Gibberd and Mr. Arnold Walker, and the first object of the committee had been to group together those cases in which a "primary avoidable factor" had appeared to them to have contributed to the fatality. It was found that in 48.8 per cent. of the cases one or more of the following "avoidable" factors was disclosed: (1) an error of judgement in the management of the case; (2) omission or inadequacy of ante-natal treatment; (3) lack of reasonable facilities for treatment; (4) negligence of the patient or her friends. In Dr. Oxley's view it was probable that had the information available to the committee been more complete the proportion of cases showing a "primary avoidable factor" would have been much higher. By a further analysis of the case reports, in each of these four categories an attempt had been made to determine why the defects had occurred, and how they could be eliminated by administrative activity. The recommendations thus evolved formed the basis of the scheme for the definite co-ordinated maternity service advised in the interim report of the committee. Since the issue of this report, however, financial stringency had made any sweeping changes impracticable, and in their stead modified plans for improving the existing machinery were advocated in the final report. The cases in which no departure from established practice was recognized, amounting to just over half of the total, remained to

be considered. In this category are included most of the cases in which sepsis was the cause of death, some of the cases of eclampsia, and the majority of the cases of shock, ante-partum haemorrhage, and of pulmonary embolism. The committee had exhaustively investigated the extent of research work in these matters, and had drawn up a scheme for the direction and encouragement of further research in the various fields involved. Considerable effort had been expended in the consideration of the state of affairs in those countries in which the published maternal mortality figures compared favourably with those of Great Britain. Dr. Oxley was of opinion that the routine service for midwifery in Holland and Scandinavia was superior to ours. In conclusion, he pointed out that what the committee had done in four arduous years was to define the nature and the extent of the defects which were generally admitted, and to advise practicable measures for their eradication.

Professor F. J. BROWNE confined his remarks to one or two matters which had not been dealt with by Dr. Oxley. He defended the recommendation of the committee that the period of clinical training in midwifery for the medical student be extended from three months to six. It had already been adopted by the General Medical Council. He dismissed as impracticable an alternative suggestion which had been put forward by a critic of the report that the extra training should be secured by a period of three months' post-graduate internship. He laid stress on the conclusions of the committee that the future medical practitioner must be educated to regard any operative intervention, except the application of easy low forceps, as unjustifiably dangerous except in a specially equipped hospital. He drew the attention of the meeting to the committee's recommendations regarding the encouragement of specialization in obstetrics. There were whole counties, he maintained, without an obstetric specialist. In many large general hospitals gynaecology, and consequently the most urgent complications of childbirth, were treated by general surgeons. The committee had put forward a strong plea that gynaecological departments staffed by trained obstetricians should be established in all hospitals where they did not already exist. Professor Browne also described the special investigations of the committee into the available evidence with regard to the causation and elimination of sepsis.

Professor GILBERT STRACHAN paid a tribute to the hard work which the committee had expended on their inquiry, but he considered that in several respects the report should be criticized. He felt strongly that there was too much disparagement of British medical practitioners and too much ill-judged admiration of the maternal mortality statistics of other countries. He pointed out, in the first place, that the total number of maternal deaths considered (5,805) represented in round figures the number of women who died in association with 1,450,000 births—roughly the number of births occurring in England and Wales in two years. The committee had arbitrarily laid down eight criteria in the consideration of these maternal deaths, and any departure from the conditions of any one of these criteria had been regarded as a "primary avoidable factor." The sum total of these criteria represented practically a perfect system of ante-natal and intra-natal supervision, and it was hardly surprising that investigation showed the presence of a "primary avoidable factor" in nearly half of these. For the committee to sit in judgement, and to class certain cases as preventable and others as the reverse, savoured a little of being wise after the event. In the experience of most gynaecologists, it was often extremely difficult to decide whether a maternal death could have been prevented or not. Everyone was agreed that public opinion must be educated with regard to the need for ante-natal care, but Professor Strachan considered that the type of propaganda which had been adopted would have the effect of over-emphasizing the dangers of child-bearing in the minds of women. Scare headlines in the public press were not calculated to induce in the pregnant reader that sense of confidence which the report had rightly stressed as being so desirable. An equally grave error was the tendency to produce lack of faith in her personal medical attendant, or in the profession at large. It was also unfortunate that the committee had done nothing towards attempting to educate the public to be ready to make more adequate remuneration for the responsible services involved. In connexion with the recommended staffing of maternity hospitals, the committee had made the serious mistake of comparing the staffing of the Rotunda Hospital, with its resident master, with the staffing of the two London hospitals possessing obstetrical units. They were entirely dissimilar. With regard to the remedies proposed for the admittedly imperfect education of the medical student, he considered that the committee had failed to approach the subject with a full realization of the practical difficulties which confronted the teacher in a crowded medical school where the supply of cases was inadequate. It should have been pointed out that training in obstetrics had, in fact, improved very considerably since the war by the spontaneous efforts of the teachers concerned. One of the main recommendations of the report was that a national maternity service should be established. That a closer linking up of all the services available was desirable was admitted by all, but he asked, What would be the nature of the "supervising authority" which would be set up? Should it be of a bureaucratic nature, with an insatiable desire for form-filling and inspections, the result on obstetrical practice was very likely to be disastrous. The section of the report dealing with "shock" consisted only of a few lines, and was entirely out of proportion to the importance of this aspect of obstetrics.

Dr. T. J. HOLLINS said that he was glad that there had been some adverse criticism of the report. In his opinion the standard of efficiency of general practitioners in Great Britain compared very favourably with that of the practitioners in any country in the world. He related his personal experience in London, where he had failed to gain admission, as a qualified practitioner, to the ante-natal clinic of a teaching hospital. Very little improvement could be expected in the midwifery service of the country unless facilities were open to practitioners for post-graduate study in obstetrics. Mr. W. McK. H. MCCULLAGH considered the report invaluable in showing what remained to be done in the teaching and the practice of obstetrics. As a direct result of the report it had been decided that in the future each medical student at the City of London Maternity Hospital should be guaranteed at least twenty personal deliveries during residence for one month. He wished the committee had further extended its researches so as to consider the cause of death in the 37,000 annual stillbirths. Mrs. IVENS-KNOWLES commended the report because it drew attention to the necessity for a surgically clean technique in midwifery. She thought that an investigation should be undertaken as to the prevalence of morbidity, the effects of which invalided so many women. She considered that obstetrical teaching had improved greatly in the past twelve years, and that the younger practitioners were sending cases into hospital much earlier than hitherto. Dame LOUISE MCILROY, Dr. LETITIA FAIRFIELD, Dr. LEONARD COLEBROOK, Dr. KELSON FORD, and Dr. J. P. HEDLEY contributed also to the discussion.

Dr. OXLEY, in reply, said that there had been no discrimination in the selection of the cases reported. Medical officers of health had been asked to obtain reports of all deaths which would be classed by the Registrar-General as due to, or associated with, childbirth, and they believed that they had obtained a fair sample of such deaths occurring throughout England and Wales. The committee was fully alive to the dangers of terrifying propaganda, and had stressed that point in the report. The statement that in Holland anaesthetics were rarely given in uncomplicated cases was intended to be merely a statement of fact. A serious aspect of the problem seemed to have been missed by those who advocated a more general use of anaesthetics in normal cases. The committee was convinced that the best interests of the mothers would be served by an increasing employment of midwives in normal labour, and would regret such a general demand for anaesthesia as would interfere with the attainment of this end. It was to be hoped that

further research would bring to light a method of relieving pain which could be safely used by midwives.

Professor STRACHAN, in conclusion, remarked that nothing which had been said in the course of the discussion had modified his expressed opinion that the report reflected unwarrantably on British obstetrics, as was shown by the fact that British mortality figures, under admittedly imperfect conditions, were approximately the same as those under the more elaborate systems of Denmark and Sweden.

EDUCATION AND CHILD GUIDANCE

At the twenty-first annual conference of Educational Associations, held at University College last week, Dr. WILLIAM MOODIE delivered, on January 3rd, a lecture under the auspices of the Child Guidance Council on educational problems in a child guidance clinic.

Dr. Moodie said that the number of children referred for backwardness was only about 20 per cent., but that 65 per cent. of all cases showed some relative backwardness, some discrepancy between their potential and their actual performance. The child with about 85 per cent. intelligence was a difficult problem, for he came between the normal and the defective. Difficulty arose when too much was expected of the child by either himself or his parents; if properly handled such a child might remain perfectly pleased with himself. Many children were backward in special subjects—for instance, could not read, write, or do sums at 11 years. Children who could not read suffered, not from a word-blindness, but from a blindness to shape and position. Some intelligent children developed this power of appreciating the symbol late, but were afterwards normal. Specific defect in calculation, which required abstract thought, was nearly always due to emotional disturbances around adolescence, or to some special emotional reason why calculation itself should be selected—an antipathy, for instance, to a particular teacher. Children with supernormal intelligence were often badly handicapped through being held back from work by the doctor on the pretext that they must rest their brains. It would be just as sensible to deprive them of food because they were growing too fast. No amount of cleverness would make up for the lack of social education in the school group. Such children were often wrongly accused of being lazy, when what they needed was fundamental instruction. Special sense defects, such as partial blindness or deafness, were the cause of many difficulties. A partially blind child might not be able to read the blackboard, but often—especially if the trouble was congenital—could go on for a long time without being detected. Partial deafness was much more subtle, because it fluctuated considerably and often was not present at the medical examination. Children could mask it extremely well. Tone-deafness—that is, selective deafness to certain wave-lengths of sound—might prevent a child from understanding speech, though he might be able to lip-read. Tinnitus, resulting from suppuration or degeneration within the ear, might often produce apparently insane violence. Fatigue was the cause of many nervous disorders, and might be due to chronic interference with sleep in cramped or disturbed quarters. Acetone in the breath was a conspicuous signal of fatigue. Dr. Moodie thought that the importance of sepsis was overrated. In conclusion, he said that he doubted whether society was not wrong in the handling of its young. On the one side medical psychologists ascribed the manifold mental troubles of the present day to repression during childhood; other persons condemned punishment, and police courts gave wholesale probation. Many of the so-called problems of the clinic would never even have been produced as problems if the children had been handled differently in their earlier days. The swing away from guidance, advice, and discipline was wrong. Wholesale probation was unconstructive and harmful. Co-operation between child guidance experts and educationists should make clear the difference between repression and discipline, freedom and licence. Enough knowledge existed on which to go forward with confidence, and to adopt a little more hard handling of children.

The Competitive Spirit in Games

Dr. G. E. FRIEND took the chair at a meeting of the Medical Officers of Schools Association on January 6th, when Dr. R. COVE-SMITH spoke on the risks of competitive games and sports. He said that men and women as a whole were neglectful of the body, until it protested by discomfort or by disease, which might have been prevented by a little anticipatory thought. The tripartite nature of the human body must be remembered: man should be trained, like a dancer, to keep step with the rhythms of life. Games should have a mental and moral value as well as a physical one; they should be a creative outlet. In practice, however, physical training was too often in the hands of people whose ideal was a "Sandow." He classed sportsmen into three groups: those who played themselves, those who watched others playing, and those who could not get their excitement merely from watching but had to bet. The substitution of more spontaneous forms of play was not only desirable but essential; camping and scoutcraft were better than games and morris dancing; fencing and swimming, than the organized games of the schools. The results of the competitive spirit were that an emotional was added to a physical strain; that the specialist was overtrained and the bad player neglected; and that a wrong kind of training was given to the future citizen, whose motto should be co-operation, and not competition. Dr. J. LAMBERT said that the modern tendency of physical training was to introduce the competitive element, which formed a welcome break in the monotony of drill. He doubted whether any game had ever been non-competitive. Competition was a natural instinct. Serious injuries were rare in children under 9, whose bones and muscles were elastic, and who would not run themselves out in the way the older child did. In two preparatory schools where he was medical officer, each containing about sixty boys, he had encountered twenty-four epiphyseal and joint injuries, three fractures, thirty-one abrasions, cuts, and bruises, and thirteen muscle and tendon injuries. In this school Rugby, cricket, and hockey were played. In another school, where soccer was substituted for Rugby, he had met fourteen epiphyseal and joint injuries, fifteen abrasions, cuts, and bruises, five muscle and tendon injuries, one fracture, and one concussion. In all his thirty years' experience he had only seen two severe fractures. In ten years as medical officer to a great public school he had seen 152 joint and dislocation injuries, twelve fractures, ninety wounds, cuts, and bruises, eighty-eight concussions, thirty-six muscle injuries, eight eye injuries, seven dental injuries, and five visceral injuries. The worst fractures occurred in cricket, and were the result of inattention in the field. There was always a danger that an enthusiastic captain or master would set up a tyranny, and the school doctor could exercise wise diplomacy in this respect. It was very difficult to harm the heart of the schoolboy if it had not already been damaged by a toxin. The convalescent from any illness should be medically examined. Runs in most schools to-day were short and not dangerous. The CHAIRMAN agreed that the team spirit counted for a great deal in the useful citizen, but that competition needed careful watching. Mr. H. G. SWEENY said that the only evil was excess, and the golden mean was for every individual to find his own limit, so that both competition and co-operation played a part. Mr. R. E. ROPER pointed out the fivefold strain placed on children in the summer term—certificates, prizes, school examinations, school sports, and swimming sports—and urged that sports should be held at the beginning of the autumn term. Miss C. S. BANKS said that girls' schools were much better off in respect of their physical training instructors than boys' schools. She had noticed that doctor parents were terribly afraid of letting their children take the normal course of drill and sports.

Dr. COVE-SMITH, in reply, said that because we were steeped in the system of competition it did not necessarily mean that we ought to go the whole hog with it. It was

the team spirit he liked to see, not the competitive factor. He had no doubt that girls' schools were much better off than boys. He agreed that strain only occurred when the contestant was unfit, and that watch should be kept on those who had colds, influenza, or tonsillitis. Young children liked to build up fantasies around their play, and should not be too much supervised. It was most important to get better physical training instructors and to space out the programmes of sports.

MEDICO-LEGAL DIFFICULTIES

At the last meeting of the Paddington Medical Society Dr. JAMES NEAL, secretary of the Medical Defence Union, delivered an address on some of the medico-legal difficulties confronting medical practitioners.

Dr. Neal reviewed the various circumstances and conditions in which a practitioner might be called upon to justify his professional actions. Allegations of negligence, particularly by aggrieved, hysterical, or insane patients, were always a possibility. The treatment itself might be criticized, and omissions alleged. All that was necessary was that a patient should conceive the idea that he might have made a more rapid recovery for him to bring an action on account of loss of wages, loss of health, expenses to the seaside, and so on. Such actions often involved a counter-claim in respect of fees charged. Even when the action failed the doctor might have to pay his own costs, since many such litigants were "men of straw." There was no hard-and-fast rule regarding the instructions which a doctor should have given a patient or his nurse about treatment prescribed: his responsibility would depend on the facts of a case, which were for a jury to determine. The judicial bench might be tolerant; juries were not always so. No reply to an allegation of negligence should be made except on advice. A doctor's position might be gravely prejudiced by unwise letters. In the routine work of practice a medical man should not only be careful, he should avoid any appearance of carelessness. Outward signs of care were always worth while. If work had been done with obvious conscientiousness even a stupid error of diagnosis was not likely to cause disaster. In regard to a doctor's responsibility for the carrying out of prescribed treatment it was a question whether a surgeon could be held fully responsible for the duties of a trained nurse when complete supervision was impossible. Lately there had been a tendency to limit responsibility to duties carried out under direct supervision of the surgeon. The question of the responsibility of surgeons and anaesthetists might arise any day. It was indiscreet for an anaesthetist to operate, except in confinements. In regard to abortion, Dr. Neal pointed out that the present law, however leniently it might on occasion be interpreted, was that any operation with such an object, except on account of definite pathological conditions, was illegal, and amounted to manslaughter. A contract to provide treatment should be definite. An account should be rendered to the person liable for payment. A parent was liable for the treatment of a minor; a husband, for the treatment of his wife. Employers were not liable, except by agreement, for the treatment of their employees. No examination of an employee or domestic servant should be carried out except with the full permission of the examinee. No information concerning a patient's condition should be divulged to a third party without the patient's consent. Information to the police required careful consideration. Information regarding attempted suicide should be given only in special circumstances. In cases of suspected criminal abortion, where no objective sign existed, it was wise to proceed as in cases of natural abortion. Even when the physician was satisfied that there was criminal interference, it was not necessary to give information, providing the patient seemed likely to recover. If, on the other hand, the patient died, it was incumbent on the physician to report the case and to give full information to the coroner. If it was probable that the patient would die, the doctor should urge her to make confession to the proper authorities.

Reviews

AN INAUGURAL LECTURE AT CAMBRIDGE

In his inaugural lecture last November Professor W. LANGDON BROWN gave an account of *English Medicine and the Cambridge School*,[1] which delights the reader both by the charm of its style and the wealth of interesting information thus pleasantly presented. In the fifty-two pages of the beautiful type of the Cambridge University Press the regius professor of physic paints a clear picture of events during four hundred years, in which the dark background of the first three centuries shows up with Rembrandtesque effect the bright era of the physiological school at Cambridge since the advent of Michael Foster in 1870. As a former pupil he draws a fine portrait of W. H. Gaskell, whose discoveries were "extended and completed" by "the splendid accuracy of Langley's mental microscope." Of the achievements of the great biochemical school he speaks as one of its first nurses, for after Sheridan Lea's health broke down in 1894, he, and later Dr. H. Eichholz, kept physiological chemistry going until the splendid services of Sir F. Gowland Hopkins were obtained. Taking a broad view of what medicine should be, he points out the increasing tendency to approach it from a psychological aspect, and later pleads that in Cambridge the students' scientific studies should be given a humanistic trend. History repeats itself. In 1570 the Elizabethan statutes relaxed the obligation of medical students to take an Arts degree, with an evil influence on their general education. Since the war there has been a tendency in the same direction, and there is now an earnest effort to obviate such a falling from grace; this the regius professor feels will duly succeed, for Cambridge has "always been adept at putting new wine into old bottles." The inaugural lecture ends with a light and happy touch; for, recalling the "almost excessive joy" with which one of his predecessors, John Gostlin of Caius, returned to Cambridge in 1619, Professor Langdon Brown registers the pious hope that "the higher levels" of his nervous system will inhibit "any unseemly manifestations" of his own feelings.

THE AIMS OF MEDICINE

Sir GEORGE NEWMAN has just issued, under the title *The Rise of Preventive Medicine*,[2] what may perhaps be regarded as his most ambitious or most comprehensive volume. It consists of the Heath Clark Lectures, 1931, which he delivered at the London School of Hygiene and Tropical Medicine, and makes an excellent book both in content and in format. The style is, not unexpectedly, often touched with a rhetoric which suits the delivered lecture better than the printed page; but the chapters follow one another with a logical precision, and constitute an admirable survey of historical progress in the way of health. The contributions of folk-lore and magic, of Egyptian civilization and the Mosaic law, of the Greek spirit and the Arab conquests, of the manor, the Church, and the guilds in the Middle Ages, of the Renaissance with its anatomical and physiological research, of later clinical studies of communal disease, of pathological and bacteriological discoveries, and of collective health organization, are all in turn effectively outlined, and there is throughout the book the sustained interest of a continuous theme.

[1] *English Medicine and the Cambridge School: An Inaugural Lecture.* By W. Langdon Brown, M.A., M.D., F.R.C.P. London: Cambridge University Press. 1932. (Pp. 52. 2s.)

[2] *The Rise of Preventive Medicine.* By Sir George Newman, K.C.B., M.D., F.R.C.P., Hon. D.C.L., LL.D. Heath Clark Lectures, 1931. London: H. Milford, Oxford University Press. 1932. (Pp. 270; illustrated. 10s. 6d. net.)

This theme is, in the author's words, that "the ideal of medicine is the prevention of disease, and the necessity for curative treatment is a tacit admission of its failure; yet the ways and means of prevention from the earliest times have constituted a part of the history of human conduct in the individual and the community rather than being merely instruments of the medical art." Thus Sir George Newman ranges himself with those who regard the medical profession primarily as a body of social workers co-operating with a large number of others in promoting social welfare, rather than as technical investigators in the laboratory of the schools or of the human body. There is a cleavage of attitude between these views which is important, but a community of purpose serves to harmonize them. The author's presentation of his subject serves well to show this, both in his treatment of the applications of discoveries and by his illustrations drawn from the life and work of a number of notable members of the profession.

At the outset Sir George Newman sets forth the threefold aim of medicine. This, abbreviating his words somewhat, is: "First, the provision of a remedy or cure for disease (curative medicine); secondly, the avoidance or prevention of its causes and, when it be established, the prevention or modification of its results (preventive medicine); and, lastly, the practice of a way of life which preserves the natural defences of the individual or the community (conservative or constructive medicine)." The author recognizes, of course, that these are three aspects, rather than three divisions, of medicine—a threefold aim, and not three separate or separable aims—but, even so, we think a slight modification of his analysis would be preferable. As it is of some importance to establish a uniformity of idea and statement, if not also of nomenclature, in this matter, we suggest that the third of Sir George Newman's aspects, as he sets them out, is really included in his second (especially as he uses the word "avoidance" as well as "prevention"). There would be a clearer and more advantageous differentiation if the second aspect were held to include the avoidance or prevention of disease-producing factors by the maintenance of both a favourable external environment and a healthy physiological balance which constitutes the internal environment (preventive medicine), and if the third aspect were held to be the raising of normal bodily or mental functions and activities—of the whole personality, in fact—to the highest power of which they are capable (constructive or perfective medicine). Stated more briefly, we should then have as the threefold aim of medicine the remedying of departures from the normal, the avoidance of departures from the normal, the enhancement of the powers of the normal. The first has been the traditional purpose, the second is now a fully realized objective, and the third is being increasingly envisaged.

In his exposition of a vast subject Sir George Newman has probably over-emphasized some of the contrasts of experience and of method between the various stages into which he had divided the story of the progress of medicine in its preventive aspects. He may be held, as he himself suspects, to have introduced some matters which are rather remote from, or somewhat irrelevant to, the immediate subject. It may be said, too, that in his later chapters he has disregarded, or insufficiently expressed, the influence of the organized medical profession on public health and preventive movements. He does, indeed, indicate some of the ways in which the Royal College of Physicians exercised its powers or used its opportunities. But, during the century of its existence, the British Medical Association has been very definitely instrumental in bringing about medical reform and improvement in Poor Law administration, in promoting public health measures, and in the establishment of the school medical service, and in converting the national health insurance scheme into an effective service; and this might well have received some mention or acknowledgement. The medical profession and the public should, however, be grateful to Sir George Newman for his comprehensive, ordered, and illuminating review of the subject of which he has for long been a brilliant exponent.

ELECTRO-SURGERY

The history of surgery in the last few decades has consisted in the main in the application of our increasing knowledge of physiology, bacteriology, and pathology to those problems of disease in which methods of extirpation offered the only way of arrest or eradication. These sciences having reached a temporary plateau in the curve of their development, the surgeon, ever in search of new principles and methods, has had recourse to the new physics. The extraordinary properties of radium and *x* rays offered such new principles and methods, and the results have inspired great hope for the future treatment of malignant disease. But methods of extirpation of disease processes have still to be used extensively, and the application of our improved understanding of the physiological effects of high-frequency currents has become a feature of modern surgery. Research in this relatively new branch requires close co-operation between the electrical expert, the pathologist, and the surgeon.

The ultimate object of electro-surgery is stated shortly by the authors of the most recent book on this subject[3] to be the generation of heat in diseased tissues by the passage of a high-frequency electrical current through that portion of the body. The distinction from electro-cauterization is clear, for this involves the direct application of high temperatures to the passive part to be operated on, while in electro-surgery the tissue is an essential part of the circuit, the intensity of heat produced depending on the current density generated at that part. It is the concentration of the high-frequency current into small areas which constitutes the main electrical problem in this method. The authors of the present volume have introduced a chapter on the physics of high-frequency currents, which will serve as a reminder of the underlying principles for those who have previously studied the matter, but as an introduction to the subject it is rather disappointing. The relative merits of spark-gap generators and vacuum-tube generators are, however, put forward clearly and succinctly. The histological changes produced in normal tissues by high-frequency currents are well dealt with under the heads of electro-desiccation, electro-coagulation, and acusection, with indications for these different methods of operation. Technique and equipment are described, the fruits of long experience and care being everywhere evident. The description of precautions against the spilling of malignant cells and details of post-operative care—particularly in cases where large cavities are created—will be of great assistance to surgeons using this method. The senior author (Dr. Kelly), who was one of the pioneers of electro-surgery, indulges here and there in forecasts of future development in a pleasant and stimulatingly prophetic manner. Discussion of the use of electro-surgery in the principal areas of surgical intervention, with details of particular operations, is presented with caution. The method has its dangers, and the authors are at pains not to minimize them. It is in skin tumours that the most striking results are shown. The dangers and difficulties are obvious when so powerfully destructive an

[3] *Electrosurgery*. By H. A. Kelly, M.D., LL.D., F.A.C.S., and G. E. Ward, M.D., F.A.C.S. Philadelphia and London: W. B. Saunders Company. (Pp. xxii + 305; 382 figures. 35s.)

agent is used in regions close to large vessels, as, for example, in thyroidectomy, tonsillectomy, etc. The sections dealing with urological problems abound with important information on technique, instruments, and indications. Cystoscopic photographs, with instruments in position and actually at work, are an important feature of this part of the book.

The authors have succeeded in presenting just enough of the various applications of this method to interest and stimulate surgeons.

ADVANCES IN CYTOLOGY

During recent years the John Innes Horticultural Institute at Merton has become one of the most active schools of plant genetics in the world, and when Newton joined the staff he became the nucleus of a group of brilliant young cytologists. Newton died, and his mantle passed to Darlington. A steady stream of cytological papers, many of them highly controversial, whetted the appetites of all of those to whom cytology is important. A very hearty welcome, therefore, awaited Dr. DARLINGTON'S latest book on *Recent Advances in Cytology*,[4] for in it his contributions to fact and to theory, which simply cannot be neglected, are presented. It is not really a textbook on cytology, for it deals only with the nucleus and refers to extra-nuclear constituents of the cell only in so far as they are related to the nucleus. It consists of three parts: the first forms an excellent introduction to cytology for the student; the second is a summary for the research worker who seeks information in classified observation; the third, which possesses a particular importance, is a theoretical treatise in which Dr. Darlington's own views are developed and which is addressed to the general biologist. No one of these will find this book easy to read or the arguments easy to follow. The fault lies not with the presentation so much as with the subject, but, be it easy or difficult, the book cannot be disregarded. It heralds the beginning of a new epoch in cytology in that it marks the transition from a phase that has been concerned purely with description to one which is bound to become more and more concerned with deduction. It is seldom that one meets within the compass of 560 pages so much fact and so much attractive theory. Particularly fascinating is the chapter on the evolution of genetic systems. This may be strongly recommended to any who wish to become aware of the bearing of the facts of cyto-genetics upon evolution theory. There are appendices upon cytological interpretation and recent improvements in cytological technique, a sufficient glossary (which is very necessary), and a fairly full bibliography (in which there are to be found many minor errors).

It should be possible for most biologists to read, understand, and appreciate this book in a few months' intensive study. And it must be read and understood by anyone who, in order to explain biological phenomena, invokes the aid of the gene or of a faulty chromosome behaviour.

PRACTICAL MEAT INSPECTION

The starting-point of the effective regulation of the meat supply of this country is the inspection of carcasses in slaughterhouses by meat inspectors working to plan and following the approved code of judgement laid down for England and Wales by the Ministry of Health. For the guidance of meat inspectors in carrying out their duties under the code a useful manual has been written by the senior sanitary inspector of Whitstable,[5] who describes himself as a "practical inspector," and without aspiring to "ultra-scientific detail" treats his subject from a practical point of view. Among the topics dealt with are physiology and comparative anatomy, slaughter and the dressing of carcasses, and the malformations, abnormalities, and evidences of bacterial and parasitic infection which may be found in meat animals. The code is quoted and its application in the case of the various lesions explained. The problem presented by trichinosis is discussed. The view is expressed that the Temple gun, Mark V, is the best mechanically operated stunning instrument available at the present time. The author's disclaimer above notwithstanding, his terminology is in general most orthodox. *Acarus*, however, is not an insect, and *Linguatula*, despite its worm-like appearance, belongs to the class *Arachnida*. The closing chapter of the book contains an excellent account of refrigerating plant, and of refrigeration as used for home-killed and imported meat. This section includes an informative reference to the occurrence of *Onchocerca gibsoni* in Australian beef.

The author, from his long experience, writes with conviction, and we feel sure that his work will be appreciated by meat inspectors. We think, further, that it should prove of service and interest to candidates for the Diploma in Public Health, of whom a practical acquaintance with the site and appearance of the lesions produced by enzootic disease, as well as a knowledge of the differential points in the comparative anatomy of the meat animals, is nowadays expected by examiners.

Notes on Books

A small book, in which Dr. ZUND-BURGUET has collected descriptions of the various theories of *Sound Conduction and Hearing*,[6] has been translated by Mr. Macleod Yearsley. Its chief objective, however, is to overturn the resonance theory of Helmholtz. The author supports a view in which the chain of ossicles is held to act as a mechanism of accommodation. He has taken much trouble to search for records of old writings on the subject, and has produced a compilation which may be useful to physiologists. He also gives a good account of the theory which he considers has supplanted the resonance theory of Helmholtz. It appears that the correct view of this matter was put forward by Hippocrates.

From time to time there arise faint protests from that patient carrier of burdens, the medical student, against the cruel overloading of the medical curriculum at the behest of specialists in various branches of medical science. Licensing bodies struggle feebly against the importunities of these enthusiasts, but steadily syllabus after syllabus and examination paper after paper are laid upon the helpless undergraduate, who carries them for longer and longer, so that his average sentence is now nearly seven years. Small wonder, then, that there is a growing dissatisfaction with the curriculum, and that teacher and taught alike are talking of the need for drastic reform. In Professor RASMUSSEN'S monograph *The Principal Nervous Pathways*[7] we have an example of what in one American medical school the student is expected to learn and digest in the way of detailed information. The book comprises a series of twenty-eight diagrams, charts, and verbal schemes representing all the known masses of gray matter and fibre tracts in the central nervous system.

[4] *Recent Advances in Cytology*. By C. D. Darlington, D.Sc., Ph.D. Foreword by J. B. S. Haldane, M.A., F.R.S. London: J. and A. Churchill. 1932. (Pp. 577; 109 figures; 8 plates; 66 tables. 18s.)

[5] *Practical Food Inspection. By Charles R. A. Martin. Vol. I: Meat Inspection.* London: H. K. Lewis and Co. 1932. (Pp. 312; 138 figures. 15s. net.)

[6] *Sound Conduction and Hearing.* By A. Zund-Burguet. An Historical, Critical and Experimental Study. Translated by Macleod Yearsley, F.R.C.S. London: John Bale Sons and Danielsson, Ltd. 1932. (Pp. 139. 8s. net.)

[7] *The Principal Nervous Pathways.* By Andrew Theodore Rasmussen, Ph.D. New York: The Macmillan Company; London: Macmillan and Co., Ltd. 1932. (Pp. 73; 28 figures. 12s. 6d. net.)

The diagrams are thickly sown with names, and are all highly complex. The author's stated object has been to present to the student "those facts which will be used most directly in the immediate future." When we say that one of the diagrams represents the rhinencephalon and has over fifty names in it the unpractical character of the monograph will be apparent. It contains no selection of what is clinically valuable, and is quite unsuitable for the medical student. For the neurologist the charts and diagrams may have some interest as a work of reference, though for this purpose the text is too elementary.

The eighth edition of *Lippincott's Quick Reference Book for Medicine and Surgery*[1] has been enlarged by the addition of new matter in order to bring it up to date. The previous edition appeared in 1930, and opportunity was then taken by Dr. REHBERGER to effect a complete revision of the whole of the material; there is therefore little change of consequence to record, and the *Quick Reference Book* can still be commended as a monument of industrious compilation. Originally prepared to meet the practical needs of the author, who was then in isolated practice in the mountains of British Columbia, its aim is to give a digest of present knowledge in respect of general medicine, surgery, and the specialties. The ten parts into which this immense volume is divided are headed as follows: general medicine and surgery, including nervous and children's diseases; gynaecology; genito-urinary diseases; obstetrics; skin diseases; eye diseases; ear diseases; nose diseases; throat diseases; and orthopaedics. Illustrations are abundantly supplied throughout the text, and there are coloured plates, many borrowed from *Larousse Médical* and printed in France. An alphabetical list of drugs is supplied, with their dosage, solubility, method of administration, physiological and toxic actions, and uses.

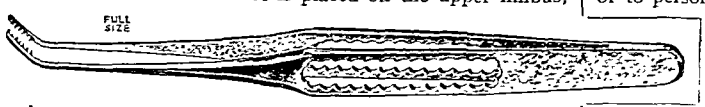
[1] *Lippincott's Quick Reference Book for Medicine and Surgery.* By George E. Rehberger, A.B., M.D. Eighth edition, revised. London: J. B. Lippincott Company. 1932. (Illustrated. 65s. net.)

The Alexander Pedler Lecture, given before the British Science Guild in November last by Sir Frederick Hobday, principal and dean of the Royal Veterinary College, has now been published as a pamphlet (6, John Street, Adelphi, W.C.2, 1s.) The title of the lecture was "Animals as a national asset and responsibility." Speaking of the recognition by foreign countries of the value of intensive research into the problems of animal diseases and their relation to public health, Professor Hobday said: "Great Britain has been very much behindhand in this respect, although during the past few years, by the establishment of an Animal Research Institute connected with the Royal Veterinary College, Camden Town, London, and an Institute for Animal Pathology at Cambridge—also by the introduction of university veterinary degrees and a post-graduate diploma in veterinary State medicine—there is a good prospect that well before another decade has passed the value of veterinary research will be recognized in Great Britain as being of as essential value to the public health of the nation as it is in other countries of the world."

Preparations and Appliances

UPPER FIXATION FORCEPS

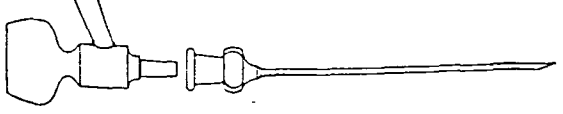
Mr. D. PRIESTLEY SMITH (Birmingham) writes: The forceps shown in the accompanying figure are for fixing the eye in cataract extraction. One foot is placed on the upper limbus,



and the other 5 or 6 mm. higher up on the globe. They are then closed. This gathers up the intervening conjunctiva to the limbus, where it forms a fold or pleat held at its base in the forceps. This affords very good fixation. The corneo-scleral section is now made forthwith, the knife cutting out immediately behind the feet of the forceps—that is, through the posterior layer of the conjunctival fold. This procedure makes a good conjunctival flap. The forceps are made by Down Bros., Ltd., St. Thomas's Street, London.

A SIMPLE ARTIFICIAL PNEUMOTHORAX NEEDLE

Dr. J. WOOD WILSON (Outwood, near Wakefield) writes: For some time I have been endeavouring to find an artificial pneumothorax needle for refills simpler than, and yet as efficient as, those now commonly employed. The following is a description of the needle I am using at present.



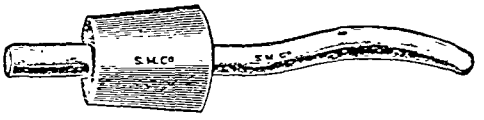
The essential feature, as can be seen from the illustration, is the short metal piece with a record-fitting nozzle to take a needle, a side branch for the attachment of the completed needle to the artificial pneumothorax apparatus, and a flat surface to fit into the hand. The actual needle used by me is an ordinary serum needle, size 12-10, with record mount. This is fitted to the nozzle with a half-turn, and the needle is complete. The advantages of this type of needle are many. It is cheap, as only the serum needles require replacing, and an adequate supply of sharp needles can be available at little cost. It is convenient and expeditious when a number of refills have to be given in one session, as only the serum needle is changed for each patient, and there is not the usual trouble of fitting the rubber connexion to the needle. The bore of the needle can be altered at will, and any desired bore used according to the needs of the patient, or to personal preference. Similarly, the length of the needle may be altered to suit the individual case. The obvious disadvantage—lack of facility for clearing a blocked needle—occurs infrequently in my experience.

The metal fitting was made to my order by Messrs. Vicarey, Davidson and Co., surgical instrument and dressings makers, 172, Bath Street, Glasgow, C.2, and has given me every satisfaction.

ANAESTHETIC DROPPER

Dr. RICHARD A. MANCLARK (St. John's Hospital, Lewisham) sends the following description of an anaesthetic dropper which he has had made and used with success in the administration of chloroform, ether, and mixtures of chloroform and ether.

The chief advantage of this dropper is that it can be used for a perhalational method by the very simple way of holding the anaesthetic bottle first horizontally and then gradually more vertically; the rate of dropping and the size of the drops can thus be varied to suit the wishes of the anaesthetist—the more vertically the bottle is held the larger will be the size of the drops and more rapid the flow. Where insufficient anaesthetic is obtained by the above method, the dropper may be used as a douche by raising the bottle up



and down vertically, and as much anaesthetic can then be obtained as required. Should, however, the anaesthetic spurt out from the small hole in the dropper, this indicates that the douching is being done too jerkily. As regards cleaning, the simplicity of its construction makes that an easy matter with a pipe cleaner or fine wire.

The dropper is composed of a metal tube, as shown in the accompanying diagram. It is made for me by the Surgical Manufacturing Company, Mortimer Street, W.1, and sold at a moderate price.

British Medical Journal

SATURDAY, JANUARY 14th, 1933

MEDICAL EDUCATION

Very opportunely comes the final report of the Commission on Medical Education, organized by the Association of American Medical Colleges, and helped by several of the medical schools of Canada and by the Rockefeller and Carnegie Foundations.[1] The only Canadian member of the Commission was Sir Robert Falconer, president of the University of Toronto, the remainder being eminent representatives of a number of universities in the United States, not all of them members of the medical profession. The report appears in the form of a large, well-printed volume of some four hundred pages, exclusive of an appendix containing a considerable number of tables. It is perhaps a little wordy, especially in its earlier chapters ; but it contains such a full, effective, well-considered review of the whole subject of medical education that it should be most helpful to all who in this country are giving their minds to the matter with which it deals: indeed, it would scarcely be an exaggeration to describe the volume as almost indispensable for such persons. The report has reference, of course, primarily to the conditions in the United States of America, and to a lesser extent to those of Canada, but the problems presented are much the same as in this country, and there is a long chapter, entitled " Medical education in Europe," which describes with surprising accuracy the position in Great Britain, and, as far as we can judge, with equal correctness that in Germany, France, Austria, Switzerland, Holland, Denmark, and Sweden.

The order of consideration is unusual, but no less logical than its opposite, which is the ordinary method of approach. Medicine is viewed throughout mainly as a section of social welfare, and medical education as part of the national health programme. The public aspects of medicine, therefore, and the needs of medicine in order that it may properly perform its national functions, are first considered and the supply and distribution of medical practitioners described. Next is taken the question of post-graduate study and the training of specialists. This is followed by a valuable chapter on " the internship " and the way in which this can be made most useful prior to a full licence to practice ; and by one on " medical licensure," which is none the less interesting because it has reference to the various " cults " that trouble America more than they do Europe, and to what is called " substandard " training and licensure. " Compromise," the commissioners declare, " with substandard training for those who deal with the health of the people is not a sound public policy." Then follows the main and detailed consideration of the medical course and curriculum, and only then, last in order, is pre-medical education discussed.

In general, the British and American systems of medical training approximate to one another and differ materially, in some respects fundamentally, from those of the continental European countries. Conditions in the United States have all along presented peculiar difficulties, but of late years there have been great improvements. It is satisfactory on reading the report on medical education in Great Britain to gather the impression that it is, on the whole, the best in the world, and now shows fewer imperfections than that elsewhere. But national requirements and the range of knowledge have both so extended as to make revision imperative, and it may be that there are even certain Continental methods which, with suitable modifications, it would not be unwise to adopt. In the Commission's invaluable chapter on " the medical course " the changes in requirements and in medical practice are set out, the main purposes of medical training are formulated, and some of the defects of that training, both general and in regard to particular subjects, are described. It is insisted that " topics are presented too frequently from the standpoint of the special interest of the teacher and from the aspect of technical details. There is an overemphasis on laboratory work as a method of instruction. . . . The course should be regarded as a unit, and the instruction in individual departments ought to be presented with respect to the whole." There is also the pregnant sentence that " the medical sciences form not only the foundation but the scaffolding of medical learning, and are built upon the principles of biology, chemistry, and physics." The importance of the personality, understanding, and enthusiasm of the teacher, and of attention to the needs of the individual student, are stressed.

It may be gathered that the Commission would agree, as a general statement, that four of the principal needs in a revision of medical training are: (1) the bringing of clinical methods into close relation with the preliminary sciences and with anatomy and physiology ; (2) the permeating of all teaching with the idea of prevention, and demonstration of its methods ; (3) emphasis on the importance of the psychological aspect of medicine and the treatment of the person rather than of the disease ; (4) recognition of the concept of medicine as a social agency. Suggestions for the detailed improvement of the curriculum are wisely implied rather than categorically stated, and, in this connexion, the necessity for gathering the opinions not merely of teachers, but also of graduands, both recent and older, has been kept in mind. In this central part of the report will be found a wealth of fact and of mature opinion based upon wide experience, together with a true " university " outlook. Even if some will not be able to read the whole volume with care, this part of it, together with the chapter on the internship, should be seriously studied by all who have any responsibility in this matter or who desire to contribute any guidance towards necessary reforms and improvements.

[1] Final Report of the Commission on Medical Education. New York: Office of the Director of Study, 630, West 168th Street.

MEDICINE AND THE MINISTRY OF HEALTH

On another page we review Sir George Newman's comprehensive survey of "the rise of preventive medicine." The profession and the public have come to look to Sir George Newman's office and chair in Whitehall for such illuminating reviews covering a longer or shorter period of time. He has, during his many years' occupancy of that chair, established the expectation that the Chief Medical Officer of the Ministry of Health will always give evidence of a broad outlook, of wide professional contacts and sympathies, and of an understanding of the needs and conditions of medical work, in harmony with those needs and conditions as seen by the practising members of his profession. Happily, there is no reason to assume that Sir George Newman's latest book is his last. We may look forward for several years yet to his annual reports, both on the state of the public health and on the health of the school child, and thereafter we may anticipate the fruits of a fuller leisure. The time of retirement, however, cannot be very far distant, and before it arrives thought will properly be given to the selection and initiation of an appropriate successor. The medical profession cannot be indifferent on a matter such as this, and, indeed, it is true to say that for the past year or two the possibilities of the situation have been much in the mind of many of its members.

There can be no question whatsoever, here and now, of personalities: it is the essential requirements of the post alone that have to be considered. It seems desirable that they should be formulated at least in a preliminary fashion. We believe that if those of greatest influence in the profession, and those who are most fully acquainted with these requirements, were consulted, three things would be unanimously urged. The first is that selection should be made from the widest field in order that the best person may be chosen. Naturally the senior medical officers of the Ministry itself must be considered, but we believe that they would be among the first to agree that consideration should not be confined to them alone. Speaking quite generally and without any reference to the present occupants of those offices, it is plain that qualifications which make a first-class departmental head are not of necessity those required for the highest post. Indeed, it is possible that, however efficient such a departmental officer may be, and however eminent in his own line, the comparative isolation in segregated work over a period of years may itself prove a handicap to success in the wider office. It should be remembered that Sir George Newman himself was appointed from outside the Civil Service. He was a local medical officer of health and a teacher who had kept himself not only in close touch with his colleagues in the public health service, but in constant association with those practising all branches of his profession, not least with the large body of general practitioners. This has been of the utmost value in assuring the success, under whatever difficulties, of the health services of the country. It is contacts and qualities such as these that have to be looked for, as well as great technical knowledge and administrative ability. Hence the widest possible field of choice should be regarded as open.

As a second primary requirement we should urge that the conditions of appointment of the Chief Medical Officer should be such as to ensure the right of direct access to the Minister himself whenever necessary. This, as is well known, obtains at present, and if it had not been so, or if this were altered, there would undoubtedly be extreme dissatisfaction in our profession. Indeed, it would be difficult to overestimate the complications that might arise in certain contingencies. The Medical Department of the Ministry of Health is differently placed from the medical department of some other Government offices. It is, in large measure, the Ministry itself, and represents the body through which almost wholly, directly or indirectly, its knowledge must be acquired and its action taken. The technical and the administrative aspects can here with difficulty be dissociated; but nothing more is claimed than that, should the need appear, the professional voice should have the right of an independent hearing.

The third requirement should be that the offices of Chief Medical Officer to the Ministry of Health and Chief Medical Officer to the Board of Education are not separated. Under the law of to-day the determination of policy in that public health service which is called the school medical service is vested in the Ministry of Health. By an interdepartmental arrangement, nothing more, its administrative supervision is farmed out to the Board of Education. It is only the fact that the Chief Medical Officer to the two Ministries is the same person that has saved the service from elements of discord or disruption. The best solution might be for the Ministry of Health to exercise full control, as provided for by Act of Parliament; but, short of that, the appointment of two chief medical officers would tend to disaster. We can hardly doubt that this and the other two considerations will be kept fully in mind when, at some time in the near future, the situation matures for action.

RISE AND FALL OF THE ROD

There are signs of a reactionary change among those who teach us how to manage our children. A few years ago not a voice could be heard in defence of corporal punishment, and we were taught that children must be allowed to do pretty well as they liked, and only be deflected gently towards some other interest if they persistently chose a dangerous or unsocial occupation. It may be the inevitable reaction from an extreme position, or it may be due to the horrible results visible in other people's children to-day, but the Conference of Educational Authorities meeting at University College last week heard two of the leading experts on child psychology advocate more and better punishment. Dr. F. C. Shrubsall, addressing the Child Study Society, began by saying that the psychiatrist might meet patients whose misfortune could be traced back to punishment,

but those dealing with the delinquent saw plenty of cases in which people were brought almost to the foot of the scaffold for lack of punishment at an earlier stage. He said that both points of view were right, and that a balance must be struck between them; and he would have found the psychiatrist addressing the Child Guidance Council at the same conference in full agreement with him. Dr. William Moodie, of whose lecture we give an account at page 63, spoke strongly in favour of firmer discipline, and asked whether society was not all wrong in its present attitude towards child training. The revolt against what was perhaps over-punishment in the Victorian era has been so widespread that beating is in fact now practically the reserved privilege of the English upper classes. Dr. Shrubsall ascribed the establishment and maintenance of corporal punishment in our public schools to the two great influences that governed literary minds at the time of the Renaissance. In Greece and Sparta boys over 7 were sent to boarding school, where there was a prefectorial system, and the elder boys whipped the younger. They were also organized into raiding packs to train them for war, and suffered punishment for idleness or inefficiency from their seniors as well as from adults. Everyone is familiar with the biblical passages which encourage the stern father, but Dr. Shrubsall pointed out that in the original Hebrew "rod" meant "sceptre" and "chasten" might be used for "instruct." The idea behind the Hebrew advice was definitely that of training. As Dr. Shrubsall emphasized, punishment must never be vengeance; the "I'll larn you" type of punishment may have serious and unexpected consequences. The whole idea underlying punishment of any kind must be to fit the child for the world in which he is to live. Even a convinced anti-punishment expert has admitted that he would smack a child who persistently ran into the road, the risks being too great for milder methods. Dr. Moodie urged the necessity for impressing parents with their responsibilities, and among the first of these responsibilities must be that of giving the child the easiest possible introduction to the inevitable knocks and buffetings of the world he lives in. If a smacking is better than being run over by a car it is probably also better than the unthinking cruelty meted out by his fellows to the small boy who has never learnt in the nursery how to respect other people's rights. The natural way of learning for children as well as for animals is through immediate dermal stimuli. The burnt child dreads the fire because it early forms a strong association between fire and pain. In the same way the toddler learns to avoid hard objects which bruise it. In the social and psychological sphere, however, the effects of bad habit may be delayed, and it is clear that the parent should step in to form those associations which he believes will, in later life, save the child from pain. Dr. Shrubsall emphasized the uselessness of delayed punishment and the danger of threats and scoldings, which may do infinitely more harm to the nervous system than a spanking given at the time and so associated firmly in the child's mind with the offence. Far more children have been permanently harmed by threats of bogies and policemen than by corporal punishment. Moreover, psychologists are agreed that the one thing which must be avoided in early life is the production of any serious doubt in the child's mind of the security of the home and of parental affection. The child understands quite well a blow given in anger, but may be seriously alarmed by solemn reasoning and the futile threat: "If you do that, mother won't love you any more."

SCIENCE ON EXHIBITION

For more than twenty years the Physical and Optical Societies have combined in an annual exhibition. The Optical Society has now amalgamated with the Physical Society; but, although the name "optical" no longer appears, optical instruments were as well represented as ever in the display which was shown at the Royal College of Science, South Kensington, during the first week of the new year. For the ophthalmologist there was the usual array of testing and diagnostic instruments, together with spectacle wear, including protective lenses against infra-red radiation, to mention only one of the special devices shown. The new type of lens which is placed in contact with the surface of the cornea, and so is almost invisible, was also demonstrated. The pathologist had a bewildering choice of microscopes. The specialization of the microscope goes on apace, and some of the high-power binocular microscopes seemed to offer the last word in facility of adjustment and perfection of result. One new inverted microscope had the objective underneath the stage and the condenser and illuminant above, an arrangement permitting operation upon bacteria in a lying drop, which is a flat stratum, as compared with the centre of a hanging drop, where movement is too free and the object may be difficult to focus. Projection apparatus also embodies many new refinements. The physiological instruments included the portable cardiograph, the sphygmomanometer, a fatigue machine for studying and registering the amount of distraction due to mental fatigue or to the influence of sensory stimuli, and a device called the eupatheoscope, designed to measure and record a quantity analogous to the physical sensation induced by a cool environment, thus forming a "comfort meter" for checking the efficiency of a heating installation. All these instruments and many others in the physical and electrical field were shown by about eighty commercial firms, and illustrated the research and experiment which is always proceeding in commercial laboratories and workshops. In a special research and experimental section to which research associations and national laboratories contributed were a number of other interesting exhibits. Here Professor E. W. Scripture of Vienna again demonstrated his experimental phonetics and the graphic registration of speech. He has evolved an ingenious method of obtaining periscope films of the glottis. A very strong beam of light is thrown by means of totally reflecting prisms through a small tube, which is passed around the side of the tongue and upon the top of the larynx. The view of the glottis and the neighbouring parts is projected by lenses and totally reflecting prisms back around the tongue through another tube to the moving film of a kinetocamera. In this way it has been found that the larynx acts specifically for every sound. Each of the vowels, for example, has a different laryngeal action. Allied with this exhibit the West End Hospital for Nervous Diseases, through its speech department, showed examples of the graphic registration of speech in disseminated sclerosis, epilepsy, and general paralysis of the insane. By means of the microphone and sound camera the patient's speech is regis-

tered also as a sound track on the film, and the exhibit included the sound track of speech in disseminated sclerosis, the first ever made of speech in a nervous disease, with the characteristic irregularity of the waves produced by a puff from the glottis in producing the tone of the voice. It is contended that this is a method of diagnosis in cases of nervous disease affecting speech as specific as a sugar test in cases of diabetes. One of the exhibits of the National Physical Laboratory illustrated an interesting piece of work on the luminous efficiency of rays entering the pupil at different points. It is commonly assumed that the apparent brightness of an object is proportional to the pupil area of the observing eye, but in this work a photometric match had been made between two fields, one illuminated by rays entering the eye axially and the other by rays entering the eye at any desired point of the pupil opening. It was found that for a ray entering the eye near the periphery of the extended pupil the luminous efficiency is only about one-third that of an axial ray.

VASCULAR RESPONSE TO HEAT AND COLD

An interesting contribution to the study of vascular reactions to heat and cold has recently appeared under the names of Th. Brosse, J. Levigne, J. Mage, and A. van Bogaert.[1] These workers have apparently been able to formulate by means of a simple hot-and-cold-bath technique certain tests whereby the state of the arterial and capillary walls may be indirectly ascertained. The varying results which had previously been reported as the result of the employment of such simple stimuli as heat and cold led them to start their work on a small series of healthy control subjects, in order that the normal physiological response might be thoroughly understood. Subsequently, a larger group of patients with thickened and tortuous arteries were subjected to the same procedure and the results compared. The evolution of the technique of their hot-and-cold-bath test, before a standardization was evolved which would enable the observers to allow for such incidental complicating factors as temporary variations in the blood pressure and in the rate and amplitude of the heart beats, is discussed at some length and repays study. The investigation of the pathological group was concerned not only with the larger arteries, but also with the end arterioles and capillaries. For the larger branches of the arterial tree oscillometric records were taken of the amplitude of the arterial pulsations, while in the latter cases more delicate investigations into the alterations in the capillary diastolic pressure and the skin temperatures were pursued. The technique and safeguards employed are described, and show considerable ingenuity. The importance of using the double (hot-and-cold) test in all instances is stressed, owing to the fact that an apparently normal artery, which subsequently gives evidence of disease, will often give identical responses to either stimulus. It was found that in young normal subjects local immersion in a hot bath (42° C.) increased the amplitude of the arterial pulsations, particularly at levels approaching the diastolic, while the diastolic pressure itself was, in the majority of cases, lowered. With the subsequent application of cold (7° C.) to the same individuals the arterial pulsations were seen to be decreased in amplitude at all levels, whilst the diastolic pressure was raised from the normal level to a varying extent. In certain cases in which the diastolic pressure was much raised, however, the amplitude, after prolonged immersion, was seen to be increased at those levels immediately below the systolic. In the arteriosclerotic group, contrary to expectation, the reactions were in most instances superficially similar to those given in the normal group. As the result of their experiments, however, the authors tentatively describe an "arterio-capillary reaction to heat and cold" from which, they claim, the anatomical state of the walls of the arterial system may be estimated. They assert that many cases of apparently subjective phenomena of the extremities will be found to have their basis actually in early organic disease of the arterial walls. They emphasize that it is unsafe, however, to make other than *qualitative* deductions from the tracings obtained in such instances. Sir Thomas Lewis has done much, by his recent work on the capillaries, to redirect the attention of young physiologists to that simple type of clinical research for which England was at one time remarkable. There is still much scope for the type of investigation outlined above, and the modern revival of interest in hydrology as a useful although neglected "handmaiden of therapeutics" would seem to point to the present time as being propitious for its accomplishment in certain spheres.

[1] *Arch. des Mal. du Cœur*, Paris, October, 1932, p. 635.

RADIOTHERAPY IN HYPEREMESIS

The severe vomiting of pregnancy has been treated by almost every drug known to medicine with varying degrees of success. There seems little doubt that a psychical factor plays a large part in many, if not all, of the cases, so that the ever-ready taunt of "suggestion" can be applied to any new treatment recommended. Nevertheless, the action of radiotherapy, as recently recommended by Dr. E. Speder,[1] seems to deserve further investigation. He has treated only nine cases, but he meets the accusation of having produced his results psychologically by pointing out that his patients had previously had far more dramatic and suggestive treatment without effect; that in many cases they did not know they were being treated, but thought the rays were being applied diagnostically; and that one and all showed a curious recrudescence of symptoms between the fifth and seventh hours and an amelioration between the twelfth and twenty-fourth hours after treatment. All were relieved of the vomiting, and showed a normal pulse rate, blood pressure, and urine volume within forty-eight hours. The consistency of results is against a purely psychological explanation. Dr. Speder's method of treatment is to irradiate the dorso-lumbar region over a field 20 cm. in diameter with rays at 95 kV with a moderate filtration of aluminium. His explanation of the success which he achieved in all nine cases is that the intractable vomiting is due to a disturbance of the neuro-vegetative system. He puts forward his hypothesis quite tentatively, and appeals for further study of the subject; but he suggests that the radiation of the back has a regulatory effect on the large abdominal centres of the sympathetic system. The adoption of this method of treatment obviously calls for considerable care, in view of the fact that the application of

[1] *Bull. et Mem. de la Soc. de Radiol. Méd. de France*, 1932, xx, 505.

x rays has been known to produce abortion. Indeed, it has recently been recommended as a therapeutic agent for this purpose. W. Harris[1] found that a 60 per cent. skin erythema dose given into the gravid uterus produced a satisfactory expulsion of the foetus in 129 out of 138 patients. Usually two fields were sufficient, but one obese woman required six. He recommends the method for patients in whom surgical intervention is undesirable—for instance, tuberculous, cardiac, diabetic, and epileptic cases, and those with pelves severely deformed by arthritis. The exact mechanism underlying the death of the foetus is not clear, and abortion can be brought about without sterilization. It may be argued that a woman suffering from intractable vomiting is in such a bad way that the risk of abortion is a justifiable one to take, or it may be that careful investigation will reveal a technique which cures the vomiting without exposing the foetus to any harm. Certainly the use of *x* rays both for the treatment of vomiting and for the induction of abortion merits further trial.

STORAGE OF FOOD

The Department of Scientific and Industrial Research has issued Part I of the fourth volume of the *Index to the Literature of Food Investigation*.[2] It must be obvious to everyone that the question of storage and distribution of food is a most important one for modern civilization. Food must be preserved for use in the unproductive times of the year, and must be brought from the producing countries to the crowded populations of the industrial countries. Moreover, it is plain in the light of modern knowledge that food must be stored in such a way that its nutritional value is as far as possible preserved. While these facts are well recognized, it is still difficult for anyone not closely concerned to realize the large variety of problems confronting those engaged in the handling of food. For this reason Miss Glennie's introduction to this volume is of the greatest interest. It speaks briefly of the progress made in many branches of storage, ranging from engineering problems of large-scale refrigeration to the condensing and sterilization of milk or the estimation of vitamins in tinned tomatoes. Cold and gas storage of fruit for transport, the avoidance of discoloration or metal contamination in cheeses, and the preservation of fats by hydrogenation are all subjects of practical importance; while the more academic knowledge of the biochemical processes taking place in excised muscle, or of the injury caused to the colloidal systems of the cell by freezing, is here applied to practical purpose. It is to be hoped that the type of work described here will eliminate the terrible wastage caused by fluctuations in the supply of foodstuffs hitherto regarded as perishable. In respect of the actual abstracts of original works contained in this volume, it could perhaps be urged that when possible the conclusions arrived at by the authors should be stated. Many of the abstracts merely describe the problem investigated, which is enough when reference to the original papers is easy but otherwise not very satisfying.

[1] *Amer. Journ. Roentg.*, 1932, xxvii, 415.
[2] Department of Scientific and Industrial Research. *Index to the Literature of Food Investigation*. Volume iv, No. 1. Compiled by Agnes Elisabeth Glennie. London: H.M. Stationery Office. 1932. (9s. 6d. net.)

STANDARDS OF X-RAY DOSAGE

The special supplement to *Acta Radiologica*, by Dr. Robert Thoraeus,[1] consists very largely of a description of the ionization chamber to be used as standard for the measurements of *x* rays in Sweden. It is designed in accordance with recent research into the properties of such chambers, exact specification of experimental detail of both *x*-ray plant and measuring apparatus being included. The limits of accuracy are carefully discussed, and it is reported that an accuracy of plus or minus 1.5 per cent. is obtainable in the specification of the *r* unit. In addition, the absorption of standard *x*-radiations in copper, tin, silver, lead, and water are discussed and results are given, while a fairly detailed description is included of the secondary aluminium chamber which has been used for some time in the calibration of therapeutic *x*-ray outputs throughout Sweden. Some interesting observations are made on the so-called equality of filters of different metals, these remarks leading to a detailed description of Dr. Thoraeus's well-known tin filters for therapeutic use. The water phantom measurements which he gives are clearly preliminaries to a more complete study of the problem. While containing little that is fundamentally new, this paper is of considerable value as being a description of very carefully controlled experimental arrangements as standards of *x*-ray dosage. The data relating to filters will be particularly useful for reference purposes in therapy.

SIR CHARLES HASTINGS LECTURE

The fifth of the series of Sir Charles Hastings Lectures, inaugurated by the British Medical Association for the purpose of offering to the public information by the highest authorities on matters of general public interest, will be delivered in the Great Hall of the Association's House in London on Tuesday evening, February 21st. This year's lecturer is Sir Henry Gauvain, medical superintendent of the Lord Mayor Treloar Cripples' Hospital and College, Alton, Hants, and his subject will be "Sun, air, and sea-bathing in health and disease." The chair will be taken at 8 o'clock by the President of the Association, Lord Dawson of Penn, and after the lecture relevant questions in writing are invited. Admission is free, by tickets obtainable on application to the Financial Secretary, B.M.A. House, Tavistock Square, W.C.1. Seats not occupied by ticket-holders by 7.50 p.m. will be available for other members of the public.

THE HALF-YEARLY INDEXES

The usual half-yearly indexes to the *Journal* and to the *Supplement* and *Epitome* have been prepared and will be ready shortly; they will, however, not be issued with all copies of the *Journal*, but only to those readers who ask for them. Any member or subscriber who desires to have one or all of the indexes can obtain what he wants, post free, by sending a post-card notifying his desire to the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1.

[1] *Acta Radiologica. Supplementum XV.* A Study of the Ionization Method for Measuring the Intensity and Absorption of Roentgen Rays, and of the *Efficiency of Different Filters* used in Therapy. By Robert Thoraeus. Stockholm: F. Englunds Boktryckeri A.-B. 1932. (10 Swedish crowns net.)

Ireland

The Irish Committee and the Irish Medical Committee

At a meeting of the Irish Committee, held in Dublin on December 20th with Dr. W. W. Murphy in the chair, the President-Elect, Dr. T. Gillman Moorhead, gave a detailed account of the work that was being done in connexion with the preparations for the Annual Meeting, and of his recent visit to Belfast. He assured the committee that the profession in the northern capital would do everything in its power to make the Annual Meeting a success. The committee discussed at considerable length sixteen items on the agenda of the Irish Medical Committee.

A meeting of the Irish Medical Committee was held in the afternoon. A resolution from the County Limerick Local Medical Committee recommended the federation of the Irish Medical Committee with the Irish Medical Association. It was, however, decided unanimously that the former should continue, and that the Irish Committee of the British Medical Association and the council of the Irish Medical Association should receive a special representation, and should be invited to send two representatives from each body. Without the provision of this special representation the Irish Medical Committee is constituted almost entirely of the most active members of the two associations. It was also decided that applications from other medical bodies seeking representation on the Irish Medical Committee should be considered. The committee approved the resolution from medical practitioners in Cork in regard to insured patients and their dependants, or other patients admitted for treatment to voluntary general hospitals, that the medical attendant shall reserve the right, so far as is consistent with the rules of the hospital, to charge for his attendance when he is satisfied that the patient concerned can afford to pay. A motion from Cork Dispensary Doctors' Association, advocating the formation of a National Association of Dispensary Doctors, with county branches, was deferred pending certain developments, and a motion from County Cork Dispensary Medical Officers' Association, dealing with the treatment of private patients in district and county hospitals, was considered and referred to the executive committee. The recent order of the Dublin Board of Assistance to dispensary medical officers, requesting them to issue certificates without fees to school children, was considered to be *ultra vires*. The question of fees for certification of births, deaths, and marriages was discussed, and it was decided to draw the attention of the Registrar-General to the inadequacy of the fees at present paid in the Irish Free State. A resolution from the council of the Irish Medical Association, protesting against the Government's new procedure when filling medical vacancies, was carried by eight votes to three. Previously the name of the first candidate placed on the list by the Selection Board was sent; now a panel of three names, in alphabetical order and without any indication of order of merit, is forwarded to local authorities, giving them the permission to elect any one. An amendment, moved by Dr. Butterly (Louth) to the effect that there was "no particular objection to the changed method, as it gives a better chance for local knowledge, affiliations, and compatibility, and hence a greater public confidence in professional duties and doings," was lost. The question of the erection of residences by local authorities for their medical officers, and of suitable dispensary houses for the treatment of the poor, was discussed; it was agreed that these matters should be brought to the notice of the Minister for Local Government and Public Health. It was also decided to draw the attention of the Minister to the question of promotion or transfer of medical officers under the Local Authorities (Officers and Employees) Act, 1926, and of the recognition of their previous services in the different health areas in the Free State. It was approved that a suggestion should be made to the Minister that the Irish Medical Committee, Irish Medical Association, and the Irish Committee of the British Medical Association should be invited to give advice as to the personnel of the forthcoming commission on hospital policy, and that in future the Irish Medical Committee should be consulted in all cases where advice is sought with regard to medical legislation, thereby avoiding unauthorized representations. In regard to fees payable under the Coroners Acts, the following resolution was carried unanimously: That the attention of the Minister for Justice be drawn to the injustice of compelling medical practitioners to attend at several adjourned inquests and only receive one fee; that it is considered inequitable that no fee is allowed for a coroner's inquest or inquiry on patients dying within public institutions; and that, where the doctor performing the post-mortem examination considers assistance necessary, it is advisable to call in a second medical man. Finally, it was decided that the necessity for amendment of the Local Government Act, 1925, in the matter of pensions should be brought to the notice of the Local Government Department. The subject of the overcrowding of the medical profession was deferred to another meeting.

Scotland

Stirling Royal Infirmary

At the annual meeting of subscribers to Stirling Royal Infirmary Professor D. P. D. Wilkie of Edinburgh said there had been a great change in the policy of voluntary hospitals in recent years. Although these hospitals had started as charitable institutions for the sick poor they were no longer in this category: they provided medical and surgical assistance for nearly 85 per cent. of the total population. This meant that the public were demanding efficient hospital service and were prepared to pay for it according to their means. It was the duty of hospital authorities to provide this service; it was their duty to provide hospital accommodation for that class of society, the "black-coated" class, which deserved the fullest consideration, but which had not received fair play hitherto in the matter of hospital services. The people of this class had always been good citizens; many were unable to afford nursing homes, and they did not like to enter hospitals on the basis of getting something for nothing, though they would willingly pay for their maintenance and treatment if hospital managements would provide small wards or rooms. If the voluntary hospitals were not prepared to take this matter up the municipalities or the State would step in and do so. He believed in the voluntary system, by which he meant voluntary management of hospitals: more efficient service and more sympathetic knowledge of the needs of the community could be obtained from it than from municipal or State management. The chairman, Colonel Dundas, said that the past year had seen the development of the new contributory scheme for treatment; this had been a great success. They should hold on to the voluntary system, but at the same time it was important that they should work in close co-operation with the local authorities, and he was glad to report that during the year they had been able to clear up some financial questions of considerable difficulty. The position of the hospital was better than that of a great many others, but they must not relax their efforts. The annual report showed that the number of patients treated in the wards had been 2,402, and the average daily number 130. The

income of £14,738 represented an increase of £409, but as the expenditure had been £16,181, there was a deficiency on the year's working.

Health Visitors

A memorandum issued by the Health Department states that the examination for the health visitor certificate will in future be conducted by the Royal Sanitary Association of Scotland under regulations approved by the Department. It will be available to any registered nurse who is a certified midwife and who has completed an approved whole-time course of training for health visitors of six months. The issue of certificates by training institutions will be discontinued. Courses have been approved at the department of social study and training of Edinburgh University and at the school of social study and training at Glasgow University. They have been organized in co-operation with the public health departments of these two cities, and have been adjusted with a view to giving thorough theoretical and practical instruction in the duties which health visitors have to undertake under the local authorities in Scotland as well as for appointments in England and Wales. The course and the certificates to be issued have been recognized by the Ministry of Health in England.

England and Wales

A Hospital for Lilliput

Last week the Prince of Wales, as president of the King Edward's Hospital Fund for London, visited the Building Centre at 158, New Bond Street, and on behalf of the Propaganda Committee of the Fund declared open a scale model of a modern hospital. The idea of the construction derives from the Queen's dolls' house, and the completeness of this piece of work down to the smallest detail is astonishing. On a scale of three-quarters of an inch to a foot it represents a three-floored hospital, with wards, operating theatre, *x*-ray department, balconies, and garden, with minute figures for doctors, nurses, and patients. Every window has its independent metal frame, every door its rebated lining fitted to the opening to which it is hinged. The electric wiring is carried in cavities through the teak-boarded floors. For the exterior, a brick-like face has been provided, indicating about a million bricks and seven thousand stones. An ambulance entrance, with a sloping way for stretcher cases, has been put in; the motor ambulance is also there. There is a bed lift in its well, the car constructed in steel, finished with cellulose, and supported on a frame with safety gear below; the lift travels at the rate of ninety inches a minute, and operates on a supply of 6 to 8 volts. The metalwork in the board room is in ornamental bronze, the carpets and curtains have been specially made by the Royal School of Needlework, and four miniature portraits hang on the walls, being those of Florence Nightingale, Lord Lister, Lord Dawson of Penn, and Lord Moynihan, all by Mr. Alfred Praga, the president of the Society of Miniaturists. Even the minute book for the board room has not been forgotten. The *x*-ray department is a perfect reproduction in miniature, with an up-to-date equipment for the screening room, the radiography room, with dark room adjoining, laid out with all the materials for the photographic process; and beyond this is the *x*-ray treatment room, with cubicles fitted with windows of ray-proof glass. In the ward the twelve beds are divided by glazed screens, and the beds are complete with castors, springs, mattresses, blankets, and linen. At the end of the ward is a solarium, designed to secure the maximum amount of sunlight. Off the corridor open bathrooms and lavatories, with sanitary fittings to satisfy the most fastidious. The two operating theatres have a combined sterilizing and washout room between them. The theatres are illuminated by shadowless light. The hospital kitchen is completely equipped for steam, gas, and electricity. In fact, in a model which can be easily accommodated in a small room, there appears to be everything of which the modern hospital administrator could dream, from a grand piano to a refrigerator. There are even steel lockers for the patients' clothing, a set of fire appliances, a petrol pump, and the most modern lighting equipment. It has not been possible to include an out-patients' department, a laboratory, a laundry, or a nurses' home; these only must be left to the imagination. Lord Burnham, addressing the Prince of Wales, referred gratefully to the many firms and professional and private people who have contributed to the furnishing and equipment; and the Prince of Wales expressed his delight and congratulations, and the hope that many who had had no occasion or opportunity to inspect the interior of a modern hospital would see the model and so learn what countless services a hospital performs, and incidentally gather some idea of their costliness.

Residential Treatment of Tuberculosis

At the present time residential treatment is provided by the London County Council for tuberculosis patients either at the Council's own tuberculosis hospitals and sanatoriums or at voluntary sanatoriums, under the arrangements prescribed in the Council's scheme for the treatment of tuberculosis in London, or in the public general hospitals recently transferred from the boards of guardians. The tuberculosis scheme originally made by the Council in 1922 excluded from its operation tuberculosis patients who were receiving treatment under the Poor Law, but the residential treatment of both classes of tuberculous patients is now the responsibility of one authority only—namely, the London County Council—and the Council has decided that the time has come to arrange for all classes of cases to be dealt with under the one tuberculosis scheme. It is felt that there is no reason for preserving the distinction in respect of residential treatment of cases under the tuberculosis scheme and those in the transferred general hospitals. The arrangements for dealing with cases have already administratively been merged to a considerable extent, with satisfactory results, and it has been found possible with a united service to allocate the accommodation available to much better advantage than when the cases were classified in separate categories. In November last the Council expressed the opinion that the review of assessments of contributions towards the cost of treatment under the tuberculosis scheme should be undertaken by the Public Assistance Committee, and the Minister of Health has been asked to amend the scheme to give effect to this arrangement. The Public Assistance Committee was already dealing with the assessment of tuberculous patients in the general hospitals. It is part of the arrangement that all assessments will be made, in the first place, subject to review, by the Tuberculosis Care Committees. These changes, both as regards dealing with all cases under the tuberculosis scheme and as regards assessment, will operate as from April 1st next.

The Northcote Trust

An interesting record of social service for hospital in-patients is to be found in the twenty-third annual report of the Cicely Northcote Trust, which covers the period October, 1930, to October, 1931. The trust, which came into existence in 1909, now forms an integral part of St. Thomas's Hospital, and extends the work of the almoners from the out-patient department to the wards. Its main objects, as with medical work, are to prevent ill-health, to alleviate suffering, and to cure disease. It must ensure that the benefits of treatment are not nullified

by a patient's too sudden return to work, by lack of proper food, or by unsatisfactory home conditions. This involves multifarious activities, which include the provision of extra nourishment, instruments, and appliances; the arrangement of special treatments; and the placing of patients in suitable homes, sanatoriums, lodgings, and spas. Assistance is provided in respect of ambulances, railway journeys, invalid chairs, and even of ward lessons. Three special branches of work exist for the benefit of diabetics, cancer patients, and young girls suffering from venereal disease. Insulin, even at the reduced hospital rate, is not cheap, and financial assistance has frequently to be given to uninsured patients. In addition to this, advice is offered in respect of diet, mode of life, etc. Those suffering from malignant disease have to be watched, visited, and provided with extra comforts and help, while arrangements are necessary for admission to special homes. The Northcote Trust Hostel, which watches the interests of the more unfortunate victims of venereal disease, was opened again during the year under review, and admitted forty patients. The "Fathers and Mothers Club," at 37, Royal Street, S.E., serves to supplement the work of the hospital maternity department and to strengthen the bond between patient and hospital.

CORRESPONDENCE

Principles of Obstetric Practice

SIR,—Dame Louise McIlroy, in her article on the above subject, expressed the opinion that the doctor who is to be in attendance at a confinement should, if possible, conduct the ante-natal examinations, and Dr. T. G. Robinson has emphasized the importance of this point in midwifery practice in his letter to the *Journal* of January 7th (p. 40). It is, indeed, generally recognized.

It cannot be too widely known that this was also the view of the Maternal Mortality Committee (Interim Report, p. 68; Final Report, p. 32), who were fully acquainted with the disadvantages of the divided responsibility arising from ante-natal clinics. It is, however, doubtful whether Dr. Robinson's somewhat crude method of compelling women to attend their doctor for ante-natal care would prove effective, and even if it did, extensive alterations in the provisions of the National Health Insurance Acts would be entailed. There is little doubt that when the necessary financial arrangements for a national maternity service can be made every expectant mother will be enabled to put herself under the care of the doctor of her choice during pregnancy without expense to herself.

In the meantime a good deal can be done to implement the advice of the committee on this point. The position is briefly as follows. Shortly after the issue of the Interim Report of the Maternal Mortality Committee, the Ministry of Health circulated a memorandum to all maternity and child welfare authorities authorizing them, *inter alia*, to make arrangements whereby private medical practitioners should be enabled to undertake the routine ante-natal examinations of uninsured women who have engaged midwives for their confinements. This was to apply not only in rural areas but also in towns, to meet the needs of those women who are reluctant to visit an ante-natal centre. If this advice were taken it would constitute a step in the right direction, but under our system of local government the Ministry of Health has no power to enforce these views, and therefore local action is necessary to supplement it. Only a few authorities have made a beginning with such a scheme, the usual reason for not doing so being given as financial stress. Many local authorities and medical officers of health, however, appear to take an exaggerated view of the usefulness of publicly provided clinics, and are blind to their limitations and disadvantages; it is therefore incumbent upon Divisions of the British Medical Association which wish to obtain these facilities to take the initiative. As they would be acting in accordance with the views of most authorities they would have a very good chance of success. Any Division which decides to do so should first obtain a copy of the Final Report (Adastral House, Kingsway, London, W.C.2, price 2s. 6d.), which contains a large amount of information together with a verbatim copy of Memo. 156 and a form of ante-natal record suitable for use in such schemes.—I am, etc.,

Poplar, E., Jan. 8th. W. H. F. OXLEY.

Death under Spinal Anaesthesia

SIR,—As a rather ardent advocate of spinal anaesthesia, and especially of that induced by percaine, I feel it only proper to record a death under this type of anaesthesia—even although it is my conviction that the particular drug used was in no way responsible.

The patient was a man of 84, suffering from complete intestinal obstruction, which was found to be due to a band from an old appendicitis. One lung was in a condition of bronchiectasis, and the pleural cavity of that side had been the site of an empyema which was treated successfully by aspiration a year ago. He had copious faecal vomiting, and was considerably distended. In these circumstances the choice of anaesthetic was a difficult one. General anaesthesia appeared to be contraindicated on account of the state of the lungs, and local anaesthesia in view of the distension of the abdomen, combined with the necessity for rapid operation owing to his age and serious condition. He was given 11.5 c.cm. of 1/1,500 percaine solution at 4/5 lumbar, which enabled the operation to be performed with speed and facility. At the finish his condition was poor, but improved so considerably after a gum-saline infusion and injection of pituitary extract that I felt the immediate result was no longer in doubt. Twenty minutes afterwards he suddenly had a very large faecal vomit, and, despite the fact that he was in a partial Trendelenberg position and vigorous endeavours to clear the pharnyx, he literally drowned in his own vomit—a quantity of which was found in the one working lung at necropsy. He was evidently at such a low ebb and his laryngeal reflexes so inactive that he could make practically no effort himself to avert the catastrophe.

There may be reasons for criticism of the surgical conduct of this case, but for the moment I am concerned solely with the anaesthetic side of the problem. At the Centenary Meeting I expressed the opinion that the chief contraindication to spinal anaesthesia in abdominal cases was in old people with intestinal obstruction. The present case seems to support this contention; indeed, the only deaths I have had in an experience of about 3,000 spinal anaesthetics have been in three such cases—one with novocain, one with stovaine, and now one with percaine. In all cases death was preceded either by a massive action of the bowels or by a copious vomit, and, while some may regard this as a terminal event, the condition of the patients immediately before did not suggest this, and I believe that the sudden loss of a large bulk of fluid from the abdomen has an effect similar to the collapse which is sometimes seen in the aged after such a simple action as the return of an enema. A sudden fall of blood pressure is the accepted explanation of these cases, the inelastic vascular system in old age being unable to accommodate itself rapidly enough to sudden changes in a portion of the peripheral circulation.

The effect will obviously be enhanced in the presence of spinal anaesthesia, but here it must be pointed out that the maintenance of the blood pressure and the constant adjustments that are required to keep it within normal limits are dependent not solely upon the vasomotor nerves; the rate of the heart, and its output, are also important factors. For complete control, therefore,

in addition to the vasomotor nerves, the inhibitor and accelerator fibres to the heart and the nervous control of the suprarenals, and perhaps of other endocrine glands, must be intact. Under spinal anaesthesia a portion of the vasomotor control is cut off, but with low anaesthesia the fibres to the heart are not interfered with, and the maintenance of the blood pressure is partly a compensatory effect of the unaffected vasomotor nerves and partly a regulative alteration in the heart rate and output. With high spinal anaesthesia, however, some of the sympathetic fibres to the heart may be cut off, as also may those to the adrenals. Thus the balancing mechanism is trebly disturbed. Under unbalanced vagal action the heart beats slowly and the total output is reduced. This, combined with widespread vasomotor paresis, accounts for the fall of blood pressure—a fall which may often be surprisingly small, a fact possibly due to the development of a local automatic response in the vessels, or perhaps to a delayed adrenal response in the absence of nervous control. In the aged it is probably these latter mechanisms which fail, and the effect is increased by the circulating toxin in the blood in cases of intestinal obstruction.

The fall of blood pressure under spinal anaesthesia is a phenomenon which is attracting a lot of attention at present, and for which many diverse explanations have been forthcoming. The majority of these concentrate upon one aspect and fail to recognize that the maintenance of normal blood pressure is a many-sided mechanism of considerable complexity (too complicated indeed to be considered at length in a letter), and that the administration of a high spinal anaesthetic dislocates this mechanism in many more ways than by simple interference with vasomotor nerves.—I am, etc.,

NORMAN C. LAKE.

London, W.1, Jan. 8th.

Rheumatic Fever and the Tropics

SIR,—With regard to the correspondence in the *Journal* on the above subject I would point out that no part of the Punjab is inside the Tropics, and that Nairobi is above sea-level; but the letter of Dr. M. Mackinnon is of much interest, as some change apparently has taken place in the highlands of that part of the world, and a similar change may have taken place in Malaya at a low elevation. Dr. Neave Kingsbury writes of two definite cases of rheumatic fever, and Dr. Wallace of one case of rheumatic fever and one of chorea, which have occurred in Kedah in natives of India. In these two tropical countries I think it is certain that rheumatic fever formerly did not occur, but now seems to be found. In each of these countries there has been a large increase in the European population; and, owing to the increased rapidity in rail and shipping communications, there is now a greater chance of an infected man or animal getting through the Tropics from Europe.

It has lately been shown that in certain overcrowded institutions haemolytic streptococci in the throat may be closely associated with outbreaks of exacerbations of the manifestations in rheumatic hearts. Coburn has shown that there is a definite positive correlation between the seasonal distribution of haemolytic streptococci and rheumatic fever. The seasonal conditions mentioned are those of the spring in New York, and these are difficult to bring into line with climatic conditions of the Tropics, even at high elevations. Haemolytic streptococci, according to Coburn, are not often present in the flora of the pharynx in the Tropics, and, if found, quickly disappear, the disease process rapidly becoming quiescent. In fact, transfer to the Tropics seems to be the best though, unfortunately, an expensive treatment for rheumatic fever. Dr. Coburn says that his findings suggest that unhygienic conditions favour both the activity of the haemolytic streptococci in the throat and the incidence of rheumatic fever. I cannot, however, think that the *Streptococcus haemolyticus* is the only infective agent.

There is much that requires explanation. A haemolytic streptococcal sore throat may get perfectly well and the organism disappear, but ten to twenty-one days later the heart may show signs of being seriously affected. The worst manifestations of the disease take place at a time when the organism is found in neither the throat nor the blood. It is not easy to understand how haemolytic streptococci, which may occur as secondary invaders in almost any infectious disease, can be regarded as the primary cause of a disease so obviously specific. It is difficult to understand how the different manifestations of rheumatic fever can result from a soluble poison produced in a single small focus. The continuing scar formation in the heart valve is also difficult to understand, unless the source of the infection is constant.

But Ledingham writes that in some virus diseases there may be concomitant bacteria, and a *Bacillus proteus* X of the Kingsbury strain has been found in the urine in a case of tropical typhus. Is it not possible that a virus in association with a strain of haemolytic streptococcus may explain some of the mystery of rheumatic fever?—I am, etc.,

J. TERTIUS CLARKE,
Late Medical Officer and Health Officer, Perak, F.M.S.

Harrow, Jan. 7th.

SIR,—I have read with interest the correspondence on this subject, and I can say that I most strongly endorse Colonel Hughes's letter appearing in your issue of December 31st, 1932. After twenty-eight years in India, most of it spent in a province south of the Punjab—namely, Bihar and Orissa—at Patna, my experience shows that cases admitted to the wards for acute rheumatism and rheumatic endocarditis, chorea, etc., were quite numerous during the cold weather. These cases were typical of acute rheumatism, etc., and reacted to the appropriate anti-rheumatic treatment. Many children were admitted to my wards with typical rheumatic endocarditis, which developed into mitral stenosis—proved in several cases by post-mortem examination later—and a considerable number of cases of acute chorea were admitted and cured by anti-rheumatic treatment only. There is no doubt whatever in my mind that acute rheumatism with endocarditis is almost as common in India during the cold weather—in those provinces which have really cold weather—as it is in any country with a temperate climate. I also fully endorse Colonel Hughes's views regarding aortic lesions, which I have found to be as frequently rheumatic in origin as syphilitic.—I am, etc.,

H. R. DUTTON,
C.I.E., F.R.C.P., Lieut.-Col. I.M.S. (ret.),
Late Principal and Professor of Medicine and First Physician, Medical College and Hospital, Patna.

St. Mary Cray, Jan. 2nd.

*** This correspondence is now closed.—ED., *B.M.J.*

Epidemiology

SIR,—As Sir William Hamer has quoted one immortal character from a novel I may quote another, the Rev. Dr. Folliott, who once observed, "There is good and sufficient reason for the fig being barren, but it is not therefore the less a barren fig." Sydenham said that the same fevers, especially the continued fevers in different epidemic constitutions, needed totally different treatments. Freind remarked that "if we consider the method which this writer has adopted in curing these fevers of, as he says, utterly different types, a method in which he was eminently successful, we shall find no trace of this dis-

tinction." Sir William challenged this statement. I then gave a list of all the passages in the *Medical Observations* known to me in which Sydenham gave details of his treatment of continued fevers. Sir William gently censures me for not quoting a passage which does not describe *any* method of treatment, and has been adequately summarized by Greenhill in the words: "Ubi nondum constat, quid sit agendum, nihil agendo et Medico et aegro optime consulitur." Freind's point is that, "ubi constat, quid sit agendum," Sydenham's agendum is always the same. To confute him one must show that the agenda of the passages I have quoted or of some passages I have missed *are* really different. It is a purely clinical problem. Freind thought that the doctrine of epidemic constitutions had little or no clinical importance, and that it did not effectively influence Sydenham's practice as a clinician. Was he right? I think only a practising physician who has studied Sydenham's writings carefully can answer that question; I certainly cannot.—I am, etc.,

Loughton, Jan. 7th. MAJOR GREENWOOD.

Dosage of Tuberculin

SIR,—Dr. John R. Gillespie's attack on haphazard dosage in tuberculin treatment in favour of a system of geometrical increases was one of the notable incidents of the session of the Centenary Meeting devoted to "The position of tuberculin to-day." The principle of geometrical or proportionate increase of dosage, to which Dr. Gillespie has so vigorously drawn attention, has an interesting correspondence to the law known in physiology as Weber's law.

"The smallest change in the magnitude of a stimulus which we can appreciate (through a change in our sensation) always bears the same proportion to the whole magnitude of the stimulus. It should be stated, however, that this law holds good within certain limits only; it fails when the stimulus is either above or below a certain range of intensity." (Foster's *Physiology*, fifth edition, p. 1211.)

Though subject to interference, this basic principle is applicable to tuberculin treatment often for long unbroken stretches of the way—a welcome guide over difficult ground. Its announcement and clear recognition are alone sufficient to rescue the session from any charge of futility, quite apart from the matter of large dosage to which Dr. Wilkinson has so pertinaciously drawn attention, and which he has punctuated, in your issue of December 31st, 1932, with the report of an interesting conversation with Koch on the subject; and apart, also, from the official report of Dr. James Watt, the publication of which in detail is awaited with much interest.

"Science is measurement." This is peculiarly true of the administration of tuberculin. But let us remember words, well worth remembering, of John Goodsir, sometime professor of anatomy in Edinburgh, which he was wont to address to his assistant: "Now, Mr. Stirling, let us have God's truth in the measurements. God's truth in everything; I live for that."—I am, etc.,

London, S.W., Jan. 8th. ROBERT CARSWELL.

*** We have received for publication a further letter from Dr. W. Camac Wilkinson, director of the Tuberculin Clinic, Nottingham Place, W., and letters from Dr. W. Bruce Fry and Dr. J. Gordon Hume, assistant physicians to the same institution. The burden of all three is the same—namely, that tuberculin given in large doses *secundum artem* is the best remedy for advanced cases of chronic tuberculosis of all forms, and is free from danger; and that to ensure success the technique, which is either that of Dr. Camac Wilkinson or a close approximation thereto, should be followed. We cannot allot more space to repetition of this point, which has been made many times by Dr. Camac Wilkinson in these columns.—ED., *B. M. J.*

"Excitability"

SIR,—My thanks are ever due to Sir Leonard Hill for his observations on my book, *Excitability*, in his letter published in your issue of December 31st, 1932, and I would now take the opportunity to make some notes which may be of interest to those engaged in medical teaching and research.

It seems to me exceedingly difficult, if not impossible, to treat of the functions of an organ without making some reference to the capacity of environmental changes to influence them. Such being the case, the next duty of an exponent should now be to decide whether the organ is rhythmically active or not, because responsiveness—the capacity of a rhythmical organ to have its activity modified by external change—so differs from the excitability studied in the muscle-nerve preparation that a rhythmical organ with much excitability has little responsiveness.

A rhythmical tissue possesses, in fact, two properties, responsiveness and excitability, whereas the quiescent members of the muscle-nerve preparation possess only excitability. Each of these properties further possesses its own laws. Thus, the behaviour of the reflex arc indicates that there is in it some structure, which may be *either* muscle *or* nerve, which is rhythmical. If, however, the presumption be made that every structure in the arc is quiescent until roused to activity by your stimulus, then the presumption plus the facts require you to seek in the arc some structure, which is neither muscle nor nerve, on which to fasten the behaviour which is not to be found in the muscle-nerve preparation. The further presumption—made like the former without positive evidence—that all fundamentals of behaviour are to be found in that preparation, leads you to the synapse theory.

The behaviour of a reflex arc really illustrates the laws of the responsiveness which is possessed by rhythmical tissues; so do also the facts of retinal stimulation by light. But if to the facts there be added the two presumptions noted above, the observer obtains the very difficult problem of attempting to explain how it can be that a rhythmical tissue can behave like a quiescent one. The problem may well seem at first sight to be insoluble, but in practice it has been proved not to be so. The literature on the eye provides theory after theory which gives an apparently reasonable solution of this really insoluble problem. The problem, however, has not been provided by the facts, but by the presumptions.

It seems to me not unlikely that many medical research workers and teachers still provide for themselves apparently insoluble problems through treating as facts of the case those two presumptions. The fact that they are presumptions should therefore always be held in view. When this is done it becomes possible to frame theories more concordant with the facts, because the observer is then free to decide whether these facts indicate that a rhythmical structure is being stimulated to greater activity or whether a normally quiescent tissue is being excited to a single outburst of activity.

The confusing of these two distinct properties of responsiveness and excitability is now general in medicine. To get rid of the confusion I have suggested that clinicians generally should cease to use the term "excitability" and employ "responsiveness" instead. That is because the phenomena they meet at the bedside seem always to follow the laws of the responsiveness of rhythmical structures rather than those of the excitability studied in the muscle-nerve preparation. They would be fairly safe, indeed, if they looked on this excitability as being more of a laboratory artefact than as a property for clinical use.—I am, etc.,

W. BURRIDGE.

London, Jan. 4th. Professor of Physiology, Lucknow.

Tabes and Naturally Acquired Malaria

SIR,—Following the publication of my short article on this subject in your issue of December 24th, 1932, I have received a communication from Dr. D. Meek of Rothes, Morayshire, which is of interest in this connexion. In the course of his experience, extending over many years, as medical officer to a group of tea estates in Assam, he can recollect at least three European planters who, although they had repeated and severe attacks of malaria at various times, yet developed tabes or neurosyphilis. The native population, however, who were saturated with malaria from infancy, the treatment of which was spasmodic and imperfect, and who suffered constantly from venereal diseases of various types, seemed to be completely immune to neurosyphilis. Dr. Meek suggests that constant saturation with malaria, combined with inefficient treatment, is responsible for the immunity of the native population.

Failure of malaria, naturally acquired, to prevent tabes in Europeans is thus further illustrated. But with regard to the native population, it seems possible that the saturation with malaria is not the only factor responsible for their escaping neurosyphilis. There may be, in addition, a higher racial resistance to invasion of the central nervous system by the spirochaete.—I am, etc.,

London, W.1, Jan. 5th. B. BUCKLEY SHARP.

Paraldehyde as a Basal Anaesthetic

SIR,—Dr. J. Duke Stewart's article in your issue of December 24th, 1932, again draws attention to the benefits of paraldehyde as a basal anaesthetic. At the West London Hospital we have used paraldehyde over a long period, and continue to use it for children—and occasionally for adults—combined with rectal ether for bronchoscopic examinations. As to its pharmacological properties, it is possibly the safest basal anaesthetic we employ.

Dr. Duke Stewart points out that the paraldehyde must be freshly mixed. As a routine at the West London Hospital a bowel wash-out is given immediately the patient leaves the theatre, and then olive oil is introduced per rectum, to be itself washed out after three-quarters of an hour. This procedure hastens recovery and guards against a possible proctitis. Perhaps it is unnecessary, but it errs on the side of safety; and it suffices to say that there has not been one case of post-operative proctitis over a period of three years. In children one drachm per stone of body weight is a safe and satisfactory formula, but our experience with adults leads to the opinion that in them this formula must be supplemented with morphine, or hyoscine as indicated by Rowbotham, if consistent results are to be obtained. With Rowbotham's technique correct dosage and consistent results can always be obtained, but the keen supervision necessary for consistent results is not always possible in busy hospital practice.

The question of fall of blood pressure and respiratory depression occurs with all the basal anaesthetics, but can be reduced to negligible proportions if the dosage and mode of administration are correct.

One rarely finds post-anaesthetic excitement with paraldehyde. Should pre-anaesthetic excitement occur it is invariably present because the anaesthetic is too light. While the margin of error between the correct dose and an overdose is wide with paraldehyde, and as a result of this it has a larger safety factor, yet I would suggest the Rowbotham method of administration as a sounder method than the empirical eight drachms for an adult weighing over eight stone. Finally, after the safety of the patient has been considered, the constancy of the result obtained is of the utmost importance when using a basal anaesthetic. Unless the individual case is closely supervised during the three-quarters of an hour before operation, paraldehyde will in adults, with greater frequency than is experienced with other basal anaesthetics, give uncertain results.—I am, etc.,

London, W.1, Jan. 4th. T. A. B. HARRIS.

Rat-bite Fever

SIR,—In a memorandum on rat-bite fever in the *British Medical Journal* of December 17th, 1932, Dr. R. A. Hickling states: "The first description of rat-bite fever in England was written by Horder in 1909." I have no wish to lead a discussion into the sterile regions of "priority" claims, but the historian of "rat-bite fever" should not omit from his bibliography the reference which occurs in a *Memoir of John Deakin Heaton, M.D.*, by T. Wemyss Reid (Longmans, London, 1883). Dr. Heaton was a successful physician in Leeds. The following extract is taken from pages 136–8.

> On the night of Sunday, December 21st [1851] "a large hungry rat . . . attacked me as I lay asleep. I was aroused by a sudden sharp pain on my nose. . . . The following morning my nose was *sore and swollen*. . . . After a few days the swelling from my nose subsided and up to Christmas Day I continued well in general health. On rising that day I had some curious giddy feelings and while at church I was chilly and uncomfortable. On returning home to dinner and while our guests were assembling I was seized with shivering and felt so sick and ill that instead of sitting down to dinner I was obliged to go to bed. This was the beginning of a serious illness. . . . I had a variety of curious symptoms in the course of the illness; a patchy eruption somewhat like Measles on my head and face, afterwards red patches very painful and tender, which became large purplish blotches from which the cuticle afterwards slowly exfoliated. I had also a peculiar inflammatory sore throat on which patches of lymph were effused and a troublesome convulsive cough and distressing attacks of dyspnoea as well as a considerable amount of general fever. Towards the middle of January I began to make some recovery and to sit up part of the day in my bedroom; but I then had much rheumatic pain and swelling in my feet, knee, and arm. On January 18th I first came downstairs. On Saturday the last day of January I left the house for the first time. From this time I gradually made a complete recovery. This illness was so singular in its commencement and progress that there were various conjectures as to its nature. Chadwick and S. Hey both attended me. The former thought I must have been poisoned by eating oysters on Christmas Eve, the evening before the attack began; the latter thought it was gout, *and there was also the question of whether it was not the result of the bite by the rat which I had received some days before.*" [Italics mine.]

—I am, etc.,

Wakefield, Dec. 23rd, 1932. REGINALD LAWRENCE.

The "Pelvic Appendix"

SIR,—Most surgeons will, I am sure, agree that delay in diagnosis, with consequent hazard to the patient's progress or even to life itself, is most frequent in those cases of acute appendicitis in which at operation the appendix is found in the pelvic cavity. The condition is doubly dangerous when of the obstructed variety. Mr. Black's recent survey of 340 cases (*Journal*, December 24th, 1932) clearly shows the still much too high mortality in this type of case. Why is it that the possession of this pelvic appendix delays diagnosis and treatment, and jeopardizes the patient's hopes of recovery? There are, I believe, three main reasons.

1. The belief is still prevalent that acute appendicular trouble is accompanied by a rapid pulse rate and a rise of temperature. While one finds that in the inflammatory type of acute appendicitis there is generally a rise of pulse and temperature, one knows from experience that, in the obstructive type especially, there is far more usually no such indication of toxic absorption until the condition

has gone on to perforation and peritonitis. If one waits for the pulse and temperature to rise, one is waiting for the appendix to perforate. Wilkie and others have stressed this extremely important point, but it is not yet fully and generally appreciated; hence the still large number of cases requiring drainage.

2. *McBurney's Point.*—At this date it seems hardly necessary to insist that a patient may be suffering from appendicular trouble although there is neither tenderness nor muscular rigidity on pressure over McBurney's point. The appendix *may* lie deep to this point, but there are many other possible positions—retrocaecal, undescended, pelvic, lying in or to the left of the mid-line; and, in the early case in which the trouble is localized, tenderness on deep pressure will be elicited *only* over the appendix. In the visceroptotic individual with constricted upper abdomen, long narrow waist, and wide pelvis, one should realize that the mobile caecum and appendix are normally situated low in the abdomen or even in the pelvis. In such a case only a digital examination per rectum (or per vaginam) will enable one to make an early diagnosis. Later, as irritating fluid—generally purulent—wells up and overflows, will tenderness and rigidity be present above the pelvic brim. Such occurs in a late case, and hence the late operation and poor result. It cannot be too often or too forcibly emphasized that tenderness and rigidity will only be elicited in the early case by pressure directly over the diseased appendix and overlying parietal peritoneum—which statement leads me to my third and perhaps most debatable point.

3. *Mackenzie's Theory.*—Mackenzie, as is well known, explained the occurrence of superficial pain and muscular rigidity in early appendicitis as due to a viscero-cutaneous and viscero-motor reflex respectively. He believed that impulses passing from the appendix by afferent sympathetic nerves to the spinal cord were "referred" to the periphery through somatic sensory nerves connected with the same segment or segments of the cord, and that in this way pain would be "felt" in the abdominal skin and not in the diseased appendix, which is insensitive to the ordinary forms of mechanical and chemical stimuli. In similar manner was muscular rigidity excited, according to Mackenzie. With this theory Mackenzie explained the superficial algesia and muscular rigidity in the *right* iliac fossa in cases of acute appendicitis, and at the same time maintained that the parietal peritoneum was insensitive. According to his theory these viscero-sensory and viscero-motor manifestations should be found in the right iliac fossa no matter what position the appendix occupied. He appears to have ignored the probability—surely one might say the fact—that being developmentally a mid-line organ the appendix is innervated from both sides of the cord, and therefore any reflex signs originating in the appendix should be found in the abdominal parietes on the left side as well as on the right.

Morley (*Abdominal Pain*) has advanced an alternative theory, to the effect that these reflex phenomena are due to peritoneo-cutaneous and peritoneo-motor reflexes, in which the nerve paths involved in the reflex are somatic only. Unlike Mackenzie he believes that the inner layer of the parietal peritoneum is exquisitely sensitive, and that it is stimulation of this membrane which is the first essential to the establishment of superficial pain and rigidity. As one who has repeated several of Morley's experiments while operating under local and spinal anaesthetics, I have no hesitation in affirming that I agree with his conclusions, and that his theory is not only more reasonable and attractive than Mackenzie's but it also stands the test of practical experience. Those who explicitly believe in Mackenzie's theory will undoubtedly miss the early pelvic appendix in which there are at first no localizing signs above the pubis.

Are we justified in assuming that any mixed somatic-sympathetic nerve reflex is probable? Can these cases of referred pain, etc., not be more reasonably explained as being due to reflexes in which the nerve paths involved are either purely somatic or purely sympathetic?—I am, etc.,

Dundee, Jan. 2nd. F. R. BROWN, F.R.C.S.Ed.

Tests for Drunkenness

SIR,—I should be very grateful to Dr. Harold Fardon were he to enumerate the tests he finds most convenient, and usually applies, for assessing the physical and mental condition of the accused.—I am, etc.,

Llandilo, Jan. 4th. J. H. LLOYD.

The Problem of Lymphoid Tissue

SIR,—I was greatly interested in Dr. J. M. Yoffey's article on the problem of lymphoid tissue in the *Journal* of December 10th, 1932, and would like your permission to add a few more proofs to the correctness of his assertion that the presence of lymphoid tissue is the real factor in facilitating the spread of inflammation and metastasis.

Some years ago, while investigating the sedimentation rate of the red blood cells in various hospital patients, I found that in every case of malignant disease the sedimentation rate was accelerated. Only in one case—namely, cancer in the upper part of the rectum—the sedimentation rate remained normal. At that time I could not find any reasonable explanation for this phenomenon, until Professor J. Fraser of Edinburgh kindly directed my attention to the recent research on the distribution of lymphatic vessels in the rectum (Villemin, Houard, and Montagne, *Rev. de Chir.*, 1925, xlix, 39). The normal sedimentation rate in this particular case was caused, in my opinion, by the relative scarcity of lymphoid tissue in the upper part of the rectum. The same fact probably explains the vast difference in the clinical picture of malignant tumours situated in the upper, as contrasted with those situated in the lower, part of the rectum. The brighter prognosis nowadays in a radical operation on a mammary cancer is due chiefly to a complete removal of all lymphoid tissue in the axilla and neighbouring regions.

Does not all this indicate that, given a method of complete blocking of lymphoid tissue, the prognosis of malignant tumours as well as of septic conditions would be far more favourable? I think that Mr. Yoffey's article is invaluable in giving a new and clear idea about the role of lymphoid tissue in man.—I am, etc.,

London, S.E.1, Jan. 2nd B. KOUNINE, L.R.C.P. and S.

The Squatting Position in Labour

SIR,—Illuminating as are the remarks of Dr. Kathleen Vaughan, there seems to be a certain lack of precision in her claims. She says that "the three things which really cause difficult childbirth are: (1) the shape of the pelvic brim, now oval, but normally round to fit the child's head; (2) rigidity of the pelvic joints; and (3) wrong position for delivery. I cannot see it at all. The ordinary oval pelvic brim is quite big enough to let the child's head through. In most primiparae it is already through before labour begins. It is when there is some departure from this normal oval that there is trouble. And the same with the pelvic joints: in a strictly normal labour they do not have to stretch at all. If they stretch, it means the pelvis is abnormal.

Her championship of the squatting position in labour is most interesting, because her findings are apparently

exactly the opposite to the traditional beliefs. She finds that the squatting position—that is, with the thighs acutely flexed on the abdomen—*lengthens* the conjugate. I wish she would tell us exactly how she came to that conclusion, because the general conception is that acute flexion of the thighs *shortens* the conjugate and *lengthens* the antero-posterior diameter of the outlet (Whitridge Williams). Hyperextension of the thighs (the Walcher position) is the posture commonly held to increase the conjugate. It is hard to believe that acute flexion and hyperextension of the thighs can both have the same effect on the pelvis. Far from Dr. Vaughan's three points explaining "everything" (her word), it seems to me that even if she is right they could only explain the small proportion of difficult labours due to disproportion. The other and much commoner causes of trouble—malpresentations, occipito-posteriors, the uterine inertias, rigidity of the soft parts, etc.—would still be there if all women had round pelvic brims, lax joints, and squatted to have their babies.

Supposing, for the sake of argument, Dr. Vaughan is right, and that all the troubles of women in labour are due to her three points, how does she propose they should set about acquiring round pelves and lax joints? If she demands only freedom from rickets and an active outdoor life, then most young women of the better-off classes have that already. The incessant activity of childhood is followed by a school life where games and gymnastics are now more of a fetish even than in boys' schools. They do not squat to defaecate, I admit, but I am sure that, in their games and exercises, they are on their hams much more often than the daily evacuations would call for. Yet I suppose their pelves are still oval. If that does not satisfy her, and she wants us all to live the lives of gipsies, canal folk, Africans, Asiatics, and New Zealanders, I am afraid we are going to keep our oval pelves to the end of time.

Any line of research which finishes with the advice to resume the habits of our remote ancestors seems to me quite unpractical, because we cannot do it; and even if we could, we would not. For good or ill, we are now a civilized and mainly urban race. If in bartering a primitive body and primitive habits for an intellect we have taken over the diseases of civilization as well, we are not going back to the jungle to look for a cure. So I fancy we are not going to be persuaded to defaecate squatting either. The attitude is alien to our temperaments, and harmonizes ill with the nature of our wearing apparel and our physical endowments, besides demanding a skill in equilibration not all of us can exert. The higher the civilization the higher the lavatory seats. These latter induce in the devotee that reposeful and contemplative frame of mind so necessary for the proper discharge of the function.

And is it really true that the maternal mortality in countries where they squat to evacuate (such as India) is practically *nil*? Because, if so, we are most grossly deceived by the practitioners of those countries. Nor can I believe that a squatting labour is entirely out of reach of puerperal sepsis. Dr. Vaughan asks: "How *can* infection arise when all the discharges flow downwards and leave the body as soon as they can be got rid of?" I do not know how, but it seems certain it can arise. It has been shown quite conclusively (King: *British Medical Journal*, March 22nd, 1930) that infection sprayed on the vulva after delivery can ascend against the tide of the lochia. Presumably a woman delivered squatting must lie down sometimes. She cannot spend the whole puerperium on her hands and knees; she would thus be as liable to that particular type of infection as a woman in any other position.—I am, etc.,

A. J. HAWES.

Erythromelalgia

SIR,—In your issue of November 5th, 1932, I wrote:

"I desire for purposes of investigation a few patients displaying severe burning pain in the feet, accompanied by redness of the skin and aggravated by warmth and the dependent position; and should be grateful for the name and address of any such patient who would be willing to attend my out-patient department at University College Hospital."

In response four patients have been referred here; these were suffering from cervical rib, erythrocyanosis, osteo-arthritis of the great toe, and severe chilblain respectively. I am grateful and have been interested in the cases, but they have not formed a series sufficient for my purpose, and I now write craving further assistance from your readers.—I am, etc.,

THOMAS LEWIS.

Department of Clinical Research, University College Hospital Medical School, W.C.1, Jan. 7th.

Miss Lawrence

SIR,—I hope you will allow me to add a few remarks to your kindly and very well deserved paragraph on my old colleague, Miss Lawrence. It is not only a pleasure but a duty to one who owed so much to her loyal help and comradeship at the British Medical Association as I did, to pay a tribute to her work and to add my best wishes for her success in her future sphere, which I feel sure will fit her like a glove—if spheres can do such a thing.

The members of our committees and the people coming into close contact with the Medical Department are fully aware of the important part she has played in the development of the Association during the last thirteen years, but to large numbers of our members she is little known. Her tremendous capacity for work was shown by the way in which she devoted literally every moment of her time to the Central Medical War Committee. Looking back at that period I cannot think how we should have managed without her. It was a real catch for the Association that we were able to keep her after the war was over, for she brought to bear on our work not only a very well trained mind and a conscientiousness which is quite abnormal, but an appreciation of medical idiosyncrasies which was remarkable and has been very useful.

Nobody ever had a more loyal colleague than she was to me, and proud as I am of her promotion (for it is a distinct score that, after being so long out of the profession for which she was trained, she should be chosen for such an important position) I am very glad that her departure from the Association did not happen in my term of office.—I am, etc.,

ALFRED COX.

London, W., Jan. 9th.

Royal Medical Benevolent Fund

SIR,—I am sure it will be of interest to your readers to know that the response to Sir Thomas Barlow's Christmas appeal amounted to £618. This sum is larger than any received in former years, and enabled gifts of thirty shillings to be distributed to 203 annuitants and thirty shillings to 209 grantees. Every penny subscribed has been distributed.

The appeal was very greatly helped by the collections made at many medical meetings, in addition to the ready and generous personal donations received. Very many grateful letters expressing thanks to the donors are being received from the recipients.—I am, etc.,

E. C. PENNEFATHER, Secretary.

London, W.1, Jan. 9th.

Obituary

CECIL F. BEADLES, F.R.C.S.

Pathological Curator, Royal College of Surgeons

By the death of Mr. Cecil Fowler Beadles the Royal College of Surgeons of England has lost a pathological curator who will always be remembered, with Paget and Shattock, as having left a very distinct and permanent mark on the Hunterian Museum—Paget by the original printed catalogue, Shattock by the revision of the latter and the rearrangement of the collection in accordance with the principles inculcated by Hunter, and Beadles by the war collection. The enormous mass of pathological material accumulated during the war, and deposited at the College of Surgeons as the central depot for its reception, was entrusted to Mr. Beadles to be dealt with in the manner he considered best. This work, achieved with untiring energy and with the exercise of the discretion required in such an undertaking, he brought to a successful issue in what now constitutes a separate section of the museum. It forms, in fact, a museum in itself of some three thousand specimens, which illustrate fully the injuries and diseases incident to warfare. Although Beadles was not curator at the time, this great collection will always, and rightly, be regarded as his creation and associated with his name. He first took up work at the museum in 1909, so that his connexion with the College was of long standing. At that time he was engaged in assisting Professor Shattock in the lengthy undertaking of the revision of the pathological catalogue and the rearrangement of the specimens, an occupation in which he was as deeply interested as in the war work. This task remained unfinished at the time of Shattock's death, when Beadles succeeded to the curatorship (1925), and shortly afterwards received the well-deserved honour of the Fellowship of the College. It was a wish very near his heart to see this revision completed, and at times, as his health declined, he sometimes seemed to doubt whether it would ever be realized. Happily, however, he had this satisfaction, and during his final illness he turned his thoughts towards the possibility of the catalogue being gradually put into printed form.

CECIL BEADLES IN 1892

There is no doubt that Beadles was an ideal curator: his whole soul was in the work. He would spare no trouble to obtain specimens to render the collections more complete. He watched the journals for accounts of interesting specimens, and would write asking the owners to present them to the museum; he took infinite care in the dissection and display of specimens; and he was assiduous in endeavouring to obtain that most important adjunct to specimens—their clinical histories. The museum was his hobby. He had no other, unless it were his garden, which he valued largely on account of the seclusion it afforded from the outside world, for he lived the life almost of a recluse. His intense application to work, coupled with the absence of proper holidays and recreation, was probably detrimental, and there is reason to think that the constant exposure to the vapour of formalin during his work on the war collection laid the seeds of the bronchial and pulmonary trouble with which he was afflicted with increasing severity in the last few years of his life. Concentration became difficult; the even tenor of his work was marred by attacks of hypertension, aggravating the inveterate insomnia from which he suffered, and for which he declined all medicinal treatment. Yet, notwithstanding these grave disabilities, he stolidly refused to slacken the work to which he was devoted, and even on his death-bed continued to give orders relating to the museum.

Although Beadles will probably be remembered chiefly in connexion with the war collection, he did good work in another sphere. Before his appointment at the College of Surgeons he filled the post of senior assistant medical officer at the London County Asylum, Colney Hatch. There he had opportunities for the study of pathological anatomy, and the *Transactions* of the Pathological Society contain many papers by him which were written at that period. He became interested more especially in the vascular supply of the brain and the variations in the distribution of the cerebral arteries, and it was his intention to write a book on that subject which should include an exhaustive account of the literature. For this purpose he spent years in collecting literary material, which from its bulk he probably found unmanageable, for he never completed the work. However, his own observations formed the subject of the Hunterian Lecture which he delivered in 1907–8, and are justly valued.

Beadles received his medical education at University College and Hospital, gaining the gold medal in histology in 1885. He qualified in 1890, and subsequently spent two years as senior house-surgeon at the Cancer Hospital. He belonged to what would perhaps now be considered the old-fashioned school of pathological anatomists. He was fond of the old Pathological Society, and regretted its extinction. He always held that pathological anatomy should form the foundation of medical and surgical knowledge.

We are indebted to Sir ARTHUR KEITH for the following appreciation:

It so happened that in 1909, when the late Professor Samuel Shattock, at the request of the Council of the College, undertook to revise and recatalogue the great collection of pathological specimens in its museum, that Mr. Cecil Beadles was at a loose end. He had by then published several papers on pathological subjects, but had had no experience of museum work. Nevertheless Professor Shattock chose him as his junior colleague in what proved to be a very heavy task. Shattock planned the great collection which now illustrates the principles of pathology, but the chief executant was Mr. Beadles. The building up of the collection of general pathology—two years was the time allotted to the task—occupied Professor Shattock and Mr. Beadles for a period of thirteen years. As they began to revise the various collections of special pathology, the senior partner of the two died. Mr. Beadles, being appointed his successor, carried on. At Mr. Beadles's request the Council of the College invited Mr. T. W. P. Lawrence to collaborate with him in the task of rearranging and bringing up to date the departments which illustrate special pathology. Last year this additional task was finished—as far as a catalogue of a growing collection can be said ever to be finished. Thus Mr. Beadles, coming to assist in a temporary task in the museum, ended by devoting twenty-three years of his life to it. He proved to be a master of museum technique, having an unrivalled skill in preparing specimens so as to bring out the essential features of a disease. He gave

the whole of his energies to what was in reality a self-appointed task.

The greatest service Mr. Beadles rendered to medicine was the preparation of the Army Medical Collection, now housed in the museum of the Royal College of Surgeons. Without doubt that collection is the most complete and most extensive representation of the wounds and diseases of the great war. Every specimen was prepared, mounted, and described by him; it was he that planned the arrangement of the collection. To be sure, Mr. Beadles had the assistance of Sergeant Mogford in building up this collection—an indebtedness which he lost no opportunity of acknowledging.

In connexion with the getting together of the material out of which the Army Medical Collection was built up, I may mention an incident which throws light on Mr. Beadles's character. Through the efforts of Sir Alfred Keogh and Sir Walter Fletcher, a system of collecting specimens from war hospitals was instituted, such specimens being forwarded to the museum of the Royal College of Surgeons. Mr. Beadles took charge of the specimens, and, in order to regularize his services, the War Office offered him a temporary commission. Nothing, however, would induce him to wear a uniform: that, he held, was for men on active service. He was permitted to serve in plain clothes, and no one ever repaid the trust placed in him by greater devotion or loyalty of service. He was a morbidly sensitive man, who covered great tenderness of heart by all kinds of subterfuges—especially by abruptness in speech and manner. Mr. Beadles, like Professor Shattock and Mr. Alban Doran, continued the traditions of devoted and unselfish service established in the museum by Paget, Eve, and Targett.

ROBERT DONALDSON, M.D., F.R.C.S.ED.

Sir William Dunn Professor of Pathology, University of London, and Director of the Pathological Laboratory, Guy's Hospital

We have to record with regret the death, on January 3rd, of Professor Robert Donaldson, at his residence in Muswell Hill, London.

Born in 1877, at Dalkeith, Donaldson received his medical education in the University of Edinburgh, where he graduated M.B., Ch.B. in 1904, obtaining the diploma D.T.M. in the same year. He became F.R.C.S.Ed. in 1909, and proceeded M.D. with honours in 1918. He had previously taken the D.P.H. at the University of Sheffield in 1912. His interest in pathology was apparent early, and he held in turn the posts of demonstrator in the Universities of Bristol and Sheffield. During the war he was bacteriological specialist to the military hospitals at Reading.

Coming subsequently to London, he held the appointment of lecturer in pathology and forensic medicine at St. George's Hospital, and was also pathologist and curator of the museum. He was pathologist, and later consulting pathologist, at the Hospital of St. John and St. Elizabeth and the Princess Louise Hospital; he also held for some time the post of bacteriologist to the Royal Borough of Kensington. He was then appointed director of the pathological laboratory and honorary pathologist to Guy's Hospital, which appointments he held until his death, together with that of Sir William Dunn professor of pathology in the University of London. In 1911 Robert Donaldson received a scientific grant from the British Medical Association. He was honorary secretary of the Section of Pathology (Human and Comparative) at the annual meeting of the Association at Glasgow in 1922, vice-president of the Section of Pathology and Bacteriology at the meeting at Nottingham in 1926, and vice-president of the Section of Pathology at the Centenary Meeting in London last year. In 1923 he published a book on practical morbid histology, and was the author of an article on the bacteriology of influenza in Crookshank's textbook, *Influenza*, in the previous year. He contributed papers on pathological subjects to various medical periodicals, including the *Lancet* and the *Journal of Pathology and Bacteriology*.

JOHN JOSEPH WADDELOW, F.R.C.S.

We have to announce the death at Whittlesey, on January 3rd, of Dr. J. J. Waddelow. He was born in 1869, the only child of the late Mr. J. Waddelow, J.P. Educated at Cambridge and King's College, he qualified L.S.A. in 1890, obtained the conjoint diploma in 1891, and the F.R.C.S. in 1896. After leaving King's College he settled in practice in Whittlesey, and in 1904 was made a justice of the peace for the Isle of Ely, taking his seat on the Whittlesey bench, of which he subsequently became chairman. His generosity, open-heartedness, and kindly nature made him popular in the district both as a doctor and as a man of public affairs. He was for many years medical officer of health for the southern area of his parish, and also medical officer of the local Poor Law institution, and certifying factory surgeon. He was an honorary life member of the British Red Cross, and belonged to the Harveian Society. Dr. Waddelow had many hobbies, being, among other things, a keen photographer, a gardener, a student of literature, and an archaeologist. He took a considerable interest in local affairs. He leaves a widow and two daughters.

Dr. ROBERT STOBO died at his residence at Welburn, York, on January 1st. He was born in June, 1866, educated at the University of Glasgow and the Newcastle College of Medicine, and graduated M.B., C.M.Glas. in 1891, and M.D. with commendation in 1906; in 1904 he took the B.Hy. (with honours) and D.P.H.Durh. After conducting an extensive practice for twenty years at Sunderland, where he became medical officer of health to the rural district council, he removed to Welburn in 1916 and became medical officer of health and public vaccinator for the Bulmer District of Malton. He retired from practice about eighteen months ago.

The following well-known foreign medical men have recently died: Dr. GEORGE STOICESCO, emeritus professor of medicine at Bucarest and corresponding member of the Académie de Médecine of Paris, aged 84; Dr. EMILE VAN ERMENGEN, professor at the Ghent Faculty of Medicine, member of the Royal Academy of Medicine, and Commander of the Order of Leopold.

The Services

DEATHS IN THE SERVICES

Colonel Vincent James Crawford, D.S.O., late R.A.M.C. (ret.), died suddenly on December 15th, aged 55, at Great Bardfield, Braintree, where he had been in practice since his retirement. He was born on March 18th, 1877, the third son of the late Surgeon General Sir Thomas Crawford, K.C.B., Director-General of the Army Medical Department fifty years ago, and was educated at Guy's, taking the M.R.C.S. and L.R.C.P.Lond. in 1899. Entering the R.A.M.C. as lieutenant on July 27th, 1899, he became lieutenant-colonel in the long war promotion list of March 1st, 1915, colonel on March 26th, 1925, and retired on October 22nd, 1927. He served in the South African war in 1900–2, when he took part in operations in the Orange Free State and in Cape Colony, receiving the Queen's and King's medals, with two clasps to each; and throughout the war of 1914–18, when he was mentioned in dispatches in the *London Gazette* of February 17th, 1915, and January 1st, 1916, and received the D.S.O. In private practice at Great Bardfield his specialization in diseases of women and children during service in the R.A.M.C. proved beneficial in his own work and in that of his colleagues. He founded a branch of the British Legion in the village, and became its first president.

Universities and Colleges

UNIVERSITY OF LONDON

The following have been recognized as teachers in the subjects indicated: *University College Hospital Medical School:* Dr. K. E. Harris (medicine). *London (Royal Free Hospital) School of Medicine for Women:* Dr. Cicely Weatherall (bacteriology). *Maudsley Hospital:* As teachers of mental diseases—Dr. A. J. Lewis (psychiatry), Dr. T. Tennent (psychological medicine). *Bethlem Royal Hospital:* Dr. E. D. Macnamara (mental diseases—psychological medicine).

Regulations for the academic diploma in medical radiology have been approved and may be obtained from the Academic Registrar. The regulations relating to degrees in medicine for external students (Blue Book, September, 1932, p. 246) have been amended by the addition of the word "pharmacy" before the word "science" in Section 2 (iii).

A course of lectures on chemical structure and pharmacological action will be given in the Department of Pharmacology, University College, by Dr. H. R. Ing, on Mondays at 5 p.m., beginning on February 13th.

The following candidates have been approved at the examination indicated:

M.D.—*Branch I (Medicine):* J. V. Armstrong, Alison M. Clark, F. S. Cliff, E. T. Conybeare (University Medal), I. Davies, W. P. Greenwood, G. B. M. Heggs, H. B. Hodson, H. W. Howell, A. Mitchell, A. M. Nussbrecher, Nellie H. Reynolds, Ursula Shelley, F. H. Stevenson, H. C. Trowell, Frances J. Vinter. *Branch II (Pathology):* C. L. Oakley, C. G. Paine, C. K. Simpson, N. Sinnadurai. *Branch IV (Midwifery and Diseases of Women):* Mabel A. Baker, Kathleen M. D. Harding, Eileen S. Morris, W. C. W. Nixon (University Medal), Everell M. Shippam, H. J. D. Smythe. *Branch V (State Medicine):* A. R. Thompson.

St. Thomas's Hospital

Two lectures on iodine and the thyroid gland will be given in the Governors' Hall, St. Thomas's Hospital, by Professor Edward Mellanby of Sheffield University, on January 26th and 27th, at 5 p.m. The first lecture will deal with goitres, experimental and clinical; the second with hypo- and hyperthyroidism. Admission is free without ticket.

Medical News

At the annual meeting of the Royal Microscopical Society, to be held in B.M.A. House, Tavistock Square, W.C., on Wednesday, January 18th, at 5.30 p.m., Mr. Conrad Beck will deliver his presidential address, entitled "Microscope illumination with transmitted light."

A dinner meeting of the West London Medico-Chirurgical Society will be held at the Hotel Rembrandt, Brompton Road, S.W., to-day (Friday) at 7.30 p.m. A discussion on arthritis will be opened by Mr. Timbrell Fisher, *M.C.*, who will speak on recent work on the pathology and treatment of arthritis; Mr. Alan Todd will speak on the orthopaedic treatment.

At the meeting of the Society of Medical Officers of Health to be held at 1, Upper Montague Street, W.C.1, on Friday, January 20th, at 5 p.m., a discussion on "What do we really mean by mental deficiency?" will be opened by Dr. G. A. Auden, followed by Dr. F. C. Shrubsall.

At a meeting of the Guild of Public Pharmacists, to be held at the Pharmaceutical Society's house, 17, Bloomsbury Square, W.C., on Wednesday, January 18th, an address, entitled "De minimis," will be given by Mr. Wilfred Trotter, F.R.S., Serjeant Surgeon to H.M. the King, and senior surgeon, University College Hospital. The chair will be taken at 7.30 p.m. by Dr. C. H. Hampshire, secretary to the Pharmacopoeia Commission, and chairman, British Pharmaceutical Conference, 1933.

At a meeting of the British Institute of Philosophy, to be held at University College, Gower Street, on Tuesday, January 17th, at 8.15 p.m., Professor F. Aveling will give a lecture on "Some contemporary contributions of psychology to philosophy," with Dr. C. S. Myers, F.R.S., in the chair. Tickets on application to director of studies at University Hall, 14, Gordon Square, W.C.1.

At a meeting of the General Council of King Edward's Hospital Fund for London, held at the offices of the Fund on January 10th, with Viscount Burnham in the chair, it was reported that the President, H.R.H. the Prince of Wales, had appointed the Earl of Onslow and Lord Wakefield to be additional members of the council. A message from the President dealing with the report of Lord Onslow's committee on the out-patient question, and with the action to be taken in the future, was also read. [This report was noticed in our columns on January 7th.] Resolutions were passed providing for the work of the Fund for 1933.

The London and Home Counties Branch of the Library Association has arranged a meeting to be held at the Middlesex Hospital Nurses' Home, Foley Street, W., on Wednesday, January 25th, at 3 p.m., when those engaged in hospital library work will have an opportunity to discuss the many problems that have arisen, and will continue to arise, as this work develops. Short papers will be read by the honorary librarians of the Middlesex and Guy's Hospitals, by Dr. Kimber, medical superintendent, Herts County Mental Hospital, Mr. Bedwell, house governor of King's College Hospital, and Mr. Bolton, borough librarian, Watford. A contribution will also be made to the discussion by a representative of the London County Council Public Assistance Department. It is hoped to arrange an exhibition of methods and stationery, including book labels, etc., now employed by the hospital libraries. Illustrations showing arrangements for transporting books from ward to ward, or any other exhibit likely to prove of interest, should be sent to Mr. George R. Bolton, F.I.A., Public Library, Watford, by January 21st.

On Friday, January 20th, at 8.45 p.m., at the Princess Elizabeth of York Hospital for Children, Shadwell, Colonel W. P. MacArthur will give a lantern lecture entitled "Plague in England in old times." The medical officer of health for Stepney will take the chair. Visitors invited.

A course of lectures on some aspects and problems of medical and industrial psychology will be given at the London School of Hygiene and Tropical Medicine on Mondays and Wednesdays during the present term. The lecturers will be Professor M. Culpin, professor of medical industrial psychology in the University, Mr. Eric Farmer, Professor Major Greenwood, F.R.S., and Dr. May Smith. The first lecture—a historical introduction—will be given by Professor Greenwood on January 16th at 2 p.m. The course is primarily intended for students taking the diploma in public health or the diploma in industrial psychology of the University of London, but members of the medical profession or students of the University of London are cordially invited to attend. Special lectures in medical and industrial psychology will also be given at times to be arranged.

The programme of Friday evening discourses at the Royal Institution before Easter is of unusual interest. On January 20th Sir William Bragg will discuss the crystals of the living body; on January 27th Sir Charles Peers, the ancient monuments of England; on February 3rd Dr. Cyril Norwood, the use of the English language; on February 10th Professor A. V. Hill, the physical nature of the nerve impulse; on February 17th Professor J. D. Wilson, the plot of *Hamlet*; on February 24th Professor W. A. Bone, the photographic analysis of explosion flames; on March 3rd Lord Ashfield, London passenger transport; on March 10th Lord Rutherford, recent researches on transmutation of the elements; on March 17th Professor W. L. Bragg, the structure of alloys; on March 24th Professor G. Elliot Smith, mind and man; and on March 31st Sir Frederick Keeble, the nitrogen hunger of the world. The discourses are given at 9 p.m. at 21, Albemarle Street, W. A series of lectures on recent advances in genetics will be given on Thursdays from January 19th to February 9th, at 5.15 p.m., by Professor J. B. S. Haldane; and Professor Elliot Smith will lecture on the evolution of the mind on Thursdays, at the same hour, from March 16th to April 6th. On Saturdays, at 2 p.m., from March 18th to April 1st, films will be shown illustrating developments in cinematography.

A course on practical problems in medicine and surgery, arranged by the Fellowship of Medicine, will begin on January 17th, at 4 p.m., at 11, Chandos Street, W., with a lecture by Dr. Daniel Davies on "Views on the aetiology and treatment of peptic ulcer." There will be a demonstration of x-ray films of the chest, heart, and intestinal tract at the same place on January 20th, at 4.30. A whole-day course in cardiology will be held at the National Heart Hospital from January 16th to 27th. A demonstration on diseases of children will be given at the National Temperance Hospital at 8 p.m. on January 26th. A course in dermatology will take place at St. John's Hospital from January 30th to February 25th, and a week-end course in physical medicine at the London Clinic on February 11th and 12th. Courses, lectures, and demonstrations are open only to members and associates of the Fellowship of Medicine, 1, Wimpole Street, W.1.

On January 16th the People's League of Health will commence its twelfth annual series of the Sims Woodhead Memorial Lectures, consisting of thirteen educational health lectures, to be given at the headquarters of the National Union of Teachers, Hamilton House, Mabledon Place, W.C., on thirteen consecutive Mondays, at 6 p.m. The lecturers include Dr. W. G. Willoughby, Sir Leonard Hill, Dr. J. S. Fairbairn, Dr. P. Manson-Bahr, Sir Thomas Oliver, and Sir Frederick Hobday. Tickets for the series, and all particulars, may be obtained from the general secretary of the League, 12, Stratford Place, W.1. Price of full course ticket, 10s.; single lectures, 1s. each.

The council of the Royal Sanitary Institute (90, Buckingham Palace Road, S.W.1) has arranged for visits on Saturday, February 4th, to the new sewage works of the city of Coventry at Finham, and to the new abattoir for the city at Upper York Street, The Butts. Those proposing to take part in either or both of the visits should notify the secretary of the Institute by January 21st.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, B.M.A. House, Tavistock Square, W.C.1.**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names, not necessarily for publication.

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of proofs.

All communications with reference to ADVERTISEMENTS, as well as orders for copies of the *Journal*, should be addressed to the Financial Secretary and Business Manager.

The **TELEPHONE NUMBERS** of the British Medical Association and the *British Medical Journal* are MUSEUM 9861, 9862, 9863, and 9864 (internal exchange, four lines).

The **TELEGRAPHIC ADDRESSES** are:
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MEDICAL SECRETARY, *Mediscera Westcent, London.*

The address of the Irish Office of the British Medical Association is 18, Kildare Street, Dublin (telegrams: *Bacillus, Dublin*; telephone: 62550 Dublin), and of the Scottish Office, 7, Drumsheugh Gardens, Edinburgh (telegrams: *Associate, Edinburgh*; telephone: 24361 Edinburgh).

QUERIES AND ANSWERS

Scabies

"ACARUS" asks for advice in the treatment of the following case. The patient has been suffering from scabies for the past twelve months, and the usual textbook treatment gives but temporary relief.

Cracked Nails

Dr. ALFRED ILES (Taunton) writes, in reply to Dr. Pollard: "Durofix," obtainable for 6d. from any ironmonger, is certain in its relief from discomfort, and, if not complicated by infection or disease, obtains a speedy cure. It is much used by radiologists, whose hands are notoriously tender, and can therefore be taken to be quite safe to use on the nail or skin.

Income Tax

Sale of Practice—Cash Basis

"C. S." has been assessed on the cash basis. As from January 1st he is taking "X" into partnership on an equal share basis, and "X" will take over the whole practice as from July 1st. It is intended to treat the practice as a new one as from January 1st, and the inspector of taxes has been notified accordingly. He has asked to see the partnership agreement, and has inquired what "C. S." proposes to do as regards receipts from accounts outstanding at January 1st.

** The partnership agreement should be forwarded to the inspector of taxes for his perusal—the request is reasonable in the circumstances. "C. S." might inform the inspector that he is advised that as there is no reason to suppose that the assessments for the past six years on the cash basis have been less than they would on a "bookings" basis he has accounted for his full liability, and the receipts after December 31st merely represent the collection of income on which tax has in effect already been assessed.

LETTERS, NOTES, ETC.

Epsom College

"A GRATEFUL PATIENT" writes: Having read Dr. Raymond Crawfurd's appeal in your issue of December 31st, 1932 (p. 1208), I have sent him one guinea in the hope that 499 other grateful patients will do the same—as they should.

"A Cure for Insomnia"

"C. H. A." writes: I suggested to an elderly man who, owing to business worries, was waking at 5 a.m. and lying sleepless till getting-up time, that he should rise from his bed and wander round the house till he was thoroughly chilled. Then he should return to his warm bed. He was inclined to try this scheme when I told him I had read of it in Boswell's *Life of Johnson*, of which book he was an admirer. The success, he told me later, was great, and in his opinion was due to the delicious sensation of the warm bed diverting the mind from business anxieties, and so sleep came.

Frost Precautions for Motorists

The following advice for preventing damage to motor cars during periods of frost is given by the Automobile Association: (1) When a car is out of use drain the radiator, cylinder jackets, and pump casing. It is not enough on many cars merely to open the radiator drain tap. (2) For cars in use either of the following safeguards should be employed: In the absence of an adequate heating system for the whole garage, a special lamp or other heating apparatus of sufficient power should be placed under the bonnet. The latter and the radiator should be completely covered with rugs. Thermal wastage can also be minimized under running conditions if a muff is used. Introduce into the water-circulating system one of the various compounds available for lowering the freezing point. Experiments to check the results obtained with, and the best proportions of, such compounds have been carried out by the technical staff, and full information on this subject can be obtained from the A.A. headquarters, Fanum House, New Coventry Street, W.1.

New Year Chocolates

We have received from Cadbury Bros. Ltd. a selection of their goods representative of the art of fine chocolate making at Bournville, the largest cocoa and chocolate factory in the world. Cadbury's have had remarkable success in recent months with their "Bourn-Vita" food-drink. This is made with fresh full-cream milk and eggs from British farms, British malt, and Empire cocoa.

In our recent review of *What is Sex?* by Dr. Helena Wright, it should have been stated that Mr. G. C. Turner, who writes an introduction to the book, is headmaster of Marlborough College.

Vacancies

Notifications of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 41, 42, 43, 46, and 47 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 44 and 45.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 11.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

20 Carbon Tetrachloride Poisoning

K. O. MÖLLER (*Ugeskrift for Laeger*, September 15th, 1932, p. 897), who is attached to the University Pharmacological Institute in Copenhagen, draws attention to the popularity carbon tetrachloride enjoys as a preparation for the dry-cleaning of clothes. From one to three litres are sold at a time, the public buying it of chemists under the popular name of "tetra." It is used extensively as a fire extinguisher, notably in electric works. Being 5.3 times heavier than air, it puts out a fire by displacing oxygen in the lowest level of a room. In hairdressing, carbon tetrachloride possesses many advantages. It dissolves fat, making hair look clean and glossy; it does not interfere with curls and permanent waves; and its use does not entail the loss of time incurred in the process of drying after the hair has been washed with soap and water. The use of carbon tetrachloride in hairdressing is reprehensible on account of the risks of serious poisoning, and the author has no doubt that a systematic investigation would reveal a long series of cases similar to the four he records in detail. None of them was fatal. The first two were hairdressing cases; the last two occurred in connexion with the dry-cleaning of clothing. While the use of carbon tetrachloride in hairdressing is indefensible, its merits in the dry-cleaning of clothing must be weighed against those of petrol. Möller remarks that the latter is responsible for so many explosions and burns that if preference is to be given to one or other of these chemicals it should be awarded to carbon tetrachloride, provided that the public is educated as to its dangers. The bottles in which it is sold should be provided with a plain statement about its dangerous properties, and the risks of using it in a closed and badly ventilated room.

21 Diagnosis of *Stenosis of the Inferior Vena Cava*

G. KATZ (*Münch. med. Woch.*, October 14th, 1932, p. 1676) points out that venous stasis is usually confined to the lower limbs and trunk. When there is oedema of the lower limbs, anasarca, and ascites, it is sometimes difficult to diagnose between failure of the right side of the heart and stenosis of the inferior vena cava due to thrombosis or pressure from without by a tumour. A collateral circulation between the inferior epigastric and the internal mammary veins may be established even when there is a certain amount of blood passing through the inferior vena cava; alternatively, when there is complete stenosis of the vena cava, the collateral circulation may not be demonstrable owing to the anasarca. In such stenosis the blood reaches the superior vena cava from the subcutaneous abdominal and internal mammary veins, partly from the femoral through the superficial epigastric vein, and partly from the iliac through the inferior epigastric. This collateral route is longer than that of the inferior vena cava, and the blood has to pass along narrower channels, two factors which retard the circulation. Katz states that a manifest retardation of the circulation from the lower extremities is positive proof of stenosis of the inferior vena cava. To demonstrate this, 1 c.cm. of a 50 per cent. solution of a bromine and calcium preparation is injected into the cubital vein of the patient. The calcium ions stimulate the warmth-sensitive nerve endings of the skin and mucous membranes in the head. The time taken for this feeling of warmth to appear after injection is noted, and in a healthy patient is usually about ten seconds. The author states that the length of the circulation from the cubital vein to the arterial twigs of the carotid is about 170 cm. The rate of flow is therefore about 13 cm. per second. A similar injection is made into the small saphenous vein. Since the route of the circulation from this point is approximately 65 cm. longer, about twenty seconds elapse before a feeling of warmth is experienced in the head. Normally, there is a difference of seven to ten seconds in the rate of flow; when the inferior vena cava is stenosed the difference may be as much as fifty-five seconds, due to the longer route traversed by the collateral circulation and the narrowness of the channels. Katz considers this procedure a simple, harmless method of obtaining a differential diagnosis of venous stasis due to cardiac or caval origin.

22 Cutaneous Gangrene in Scarlet Fever

H. D. PASACHOFF and N. SOBEL (*Arch. Derm. and Syph.*, September, 1932, p. 428) record a case of disseminated gangrene of the skin occurring in a previously healthy boy aged 5 years in the third week of a moderately severe attack of scarlet fever, and concurrently with severe pharyngitis, cervical adenitis, and albuminuria. A generalized pustular eruption appeared on the twenty-first day, and a number of the lesions passed into gangrene and ulceration. The blood culture was sterile, but *Staphylococcus aureus* was recovered from a gangrenous area. Complete recovery took place in about three months with superficial and deep scarring.

Surgery

23 Diverticula and Tumours of the Pericardium

R. KIENBÖCK and K. WEISS (*Wien. Arch. f. innere Med.*, October 1st, 1932, p. 155) state that in the *x*-ray diagnosis of the intrathoracic tumours not enough care is taken to ascertain their exact site and whether they are benign or malignant. Pericardial diverticula and tumours should be borne in mind in the diagnosis of mediastinal tumours. The former are usually pulsion diverticula occurring in old cases of adhesive pericarditis. Primary malignant tumours of the pericardium appear as lymphogranulomata, lymphosarcomata, and giant-cell sarcomata. Secondary tumours may come from the mediastinum, lung, or distant parts by way of the lymphatics or veins. The symptoms of these conditions are not characteristic; they are of long duration, and may occur at any age. The patient complains of dyspnoea and cough, of stabbing pain in the chest, and of a feeling of pressure in the chest with lassitude, anxiety, and nervousness. Later, in malignant cases, there is loss of weight, anaemia, haemoptysis, and pyrexia. In the case of diverticula, the general condition of the patient is good. On examination the patient is seen to be dyspnoeic; the heart dullness is increased usually to the right; there may be an abnormal area of dullness on the back; the apex beat is lost; the heart sounds are normal or unusually soft; there is no abnormal pulsation in the chest; and tapping gives a fluid which is slightly blood-stained or normal. On *x*-ray examination the heart-shadow is increased in size in its lower half, while the infraclavicular part is unaffected. A localized prominence is seen, which may be smooth and convex or irregular; it varies in size from an egg to a foetal head. There is usually a greater increase in the transverse than in the vertical diameter. The prominence is usually on the right side of the heart, sometimes on the left, and uncommonly on both sides. The lungs are normal, but occasionally a pleural exudate can be seen. On inspiration a light "lung gusset" is seen at the lower lateral convexity of the prominence, and the contour of the inferior vena cava may be made out. In the differential diagnosis the various inflammatory affections and new growths of the heart, pericardium, lungs, pleura, and mediastinum have to be considered. In the

x-ray diagnosis of a large intrathoracic mass in the neighbourhood of the heart the following have to be borne in mind: benign tumours of the pericardium—neurofibromata, chondromata, and dermoid cysts; inflammatory pericardial diverticula; aneurysms of the aorta and pulmonary artery; and great dilatation of the auricles. The treatment of pericardial diverticula is that of chronic pericarditis; the condition is rarely amenable to operation. Malignant tumours should be exposed to *x* rays and general treatment be instituted. Operative treatment is dangerous and ineffective. It may be indicated, however, in circumscribed tumours which have not metastatized, occurring in patients with sound hearts.

24 Prostatic Resection

T. M. DAVIS (*Minnesota Med.*, October, 1932, p. 666) believes that in many cases of prostatitis resection is a sufficiently adequate measure, and that recurrences will be few. Since the prostate diminishes in size with the removal of residual urine through a cystotomy opening, the same shrinkage follows the adequate drainage consequent on the removal of tissue impinging on the vesical orifice and posterior urethra. When this can be secured by transurethral resection, prostatectomy becomes unnecessary. Thorough decompression with a retained urethral catheter is of paramount pre-operative importance. Resection is performed by suitable electric charges applied through special instruments within the urethra; the Sterns resectoscope and the McCarthy electrotome are considered excellent appliances. The control of haemorrhage is the chief difficulty in transurethral operations, but with suitable currents haemostasis can be rapidly and permanently attained. Excessive coagulation must be avoided in order to prevent sloughing and secondary haemorrhages. The amount of tissue to be removed varies with the type and amount of obstruction; when this is large at least two-thirds of the obstructing gland must be removed. Davis describes the various electric instruments and currents, and analyses the results in 374 cases. H. C. BUMPUS, jun. (ibid., p. 671), also advocates this method of treating enlargements of the prostate, and briefly records the results in 186 cases. In these an instrument designed by Braasch was employed, and the technique is described. He believes, however, that only 5 to 10 grams of tissue should usually be removed, and that excision of the greater part of the gland is contraindicated.

25 Peritoneal Drainage in Appendix Operations

G. H. COLT and MARGARET M. M. MORRISON (*Brit. Journ. Surg.*, October, 1932, p. 197) state that a statistical analysis of 1,408 cases of acute appendicitis occurring between 1911 and 1929 has failed to justify any conclusion for or against drainage of the peritoneal cavity in appendix operations. While the material for the report was being arranged, it became evident that in general the worse the case the more frequently was drainage employed; only a small proportion of "acute with lymph" cases were drained as compared with the gangrenous perforated type. The authors are convinced that the old surgical rule of employing a short and simple route to the focus of infection is to be commended; during the years 1911 to 1923 in their series of 632 cases the mortality with the McBurney incision was greater than that with the Battle incision in nearly all stages of the disease. Only a small number of cases of the paracentral incision were available for comparison, but in these the mortality was also higher than that in the Battle series, because there is a distinct risk of spreading infection owing to the packing off of bacteria. A drain is therefore used by most surgeons in doubtful cases, and the risk of introducing infection thereby is very small. The Battle incision is emphasized by the authors as being definitely preferable, except when there is doubt as to the nature of the case—notably in women, or when the appendix is median and pelvic in position. With a median appendix localization the short subumbilical paracentral incision should prove safer than that of Battle.

Therapeutics

26 Evaporated Milk in Food Allergy and Infant Feeding

J. B. ROSS (*Med. Journ. and Record*, October 5th, 1932, p. 276) states that evaporated milk is growing in favour as a substitute for human milk and as a therapeutical agent. Pure cow's milk is evaporated *in vacuo* until approximately 60 per cent. of water has been removed; the fat globules are broken up and distributed evenly throughout the milk. Afterwards the milk is hermetically sealed in tins and sterilized, thereby destroying any accidental bacterial contamination. The curds formed in an infant's stomach are soft, small, and flocculent, resembling those of breast milk. Evaporated milk contains the normal quantity of vitamins A and B, but the heating destroys vitamin C. The latter, however, is present in so small a quantity in fresh cow's or even human milk that orange or tomato juice is introduced usually into the diet. Fresh milk contains but little of vitamin D, and cod-liver oil is thus required. The iron content of cow's milk, and therefore of evaporated milk (when diluted for infant feeding), is deficient; egg yolk is therefore added to the diluted milk in order to provide iron. Evaporated milk is used frequently for acidulated feedings—lemon juice or lactic acid is added in order to neutralize the buffer substance present in cow's milk. Lemon juice is sufficiently acid for this purpose, and also contains the necessary antiscorbutic vitamin C. Ross has found an evaporated milk formula remarkably successful in the treatment of children suffering from food allergy, such as dyspepsia, bronchitis, and nervous symptoms. Many cases of infantile eczema are relieved by the use of evaporated milk: apparently the sterilization and heating diminish the liability to excite protein-sensitivity symptoms.

27 Treatment of Chorea Minor with Luminal

P. DRUCKER (*Hospitalstidende*, September 1st, 1932, p. 1066) reports from the Children's Department of the Rigshospital in Copenhagen trials, begun in 1928, with luminal in the treatment of chorea minor. The first six children to be thus treated were given 10 to 15 cg. daily; a certain beneficial effect on the twitchings resulted, but it was by no means so great that a definite therapeutic advance could be claimed. It was not till the initial daily dosage had been increased to 30 cg. a day that the action of this drug on the course and duration of the disease was seen to be so striking that, after January, 1930, luminal was adopted as the only drug used in uncomplicated chorea minor. In the period from January, 1930, to March, 1931, fifteen children between the ages of 8 and 13 were thus treated. The initial dosage was 10 cg., given three times a day. This was continued for a fortnight, or until a rash appeared, a complication usually occurring about ten days after the beginning of the treatment, when the luminal was discontinued until the rash had completely or almost completely disappeared. The treatment was then resumed for a month with 5 cg. three times a day, and for another month with 5 cg. twice a day. This treatment was thus continued for two and a half months, during which it was supplemented by the customary isolation and rest in bed. For the first six weeks the children were spoon-fed, and they were given massage of the lower limbs before they were allowed to get up. In uncomplicated cases the duration of this treatment might be considerably shortened, for the symptoms disappear long before its completion. But the wisdom of the policy of letting the children get up and return home after three or four weeks because they were symptom-free is considered doubtful, for the risk of relapse is undoubtedly enhanced. After only a few days from the beginning of treatment the children became quieter, and after about a week they were as a rule very drowsy, twelve of the fifteen developing incontinence of both urine and faeces. The rash, which occurred in about a

third of all the cases, and which was associated with a rise of the temperature, did not seem to diminish the benefits of the treatment. The relapses, observed only in three of the fifteen cases, were all mild. Drucker adds that in view of the careful nursing this treatment entails, it is well not to attempt it in the child's home.

Radiology

28 Urography in Renal Tuberculosis

E. SIMON (*Zeit. f. Urol.*, 1932, Band 26, Heft 9, p. 41) deplores that *x*-ray examination of the kidneys is not more used in the diagnosis of tuberculosis. He states that the fear of carrying bacilli to the healthy kidney by catheterization has proved to be groundless in the experience of the last twenty years. There are several typical features of renal tuberculosis as shown by the pyelogram. They are: broadening at the base of one calyx; changes in the renal pelvis, which may be dilated or contracted; signs of small cavities near the periphery, which appear to have no connexion with the pelvis; the absence of one or more calyces resulting from fibrous contraction or because they were filled up with caseous material. When the kidney is destroyed by the inflammatory process, the differences between a tuberculous and an ordinary pyonephrotic kidney are no longer clear. Although the author does not disparage the merits of retrograde urography, he draws attention to the fact that excretion urography is the method of choice in diagnosis, supplemented by the former and by cystoscopic examination. In the earliest cases excretion urography gives as good results as the retrograde method. In later cases, if there is a negative excretion pyelogram, it diagnoses the diseased kidney and gives an indication for further examination, and perhaps in clear cases for nephrectomy. In the latest cases when there is great contraction of the bladder, and cystoscopy and retrograde catheterization are impossible, a negative excretion pyelogram will show the side on which the diseased kidney lies, to what extent it has lost its function, and to what extent the other kidney is involved. Thus it is unnecessary to perform an exploratory nephrotomy.

29 Radiography of the Pulmonary Circulation

Recent advances in radiography have rendered visible the cerebral arteries and the larger abdominal vessels following the injection of an opaque substance into the aorta. L. DE CARVALHO, E. MONTIZ, and A. SALDANHA (*Journ. de Radiol. et d'Electrol.*, October, 1932, p. 469) find that this method is useless in the case of the pulmonary circulation, since it is very difficult to inject an opaque fluid into the pulmonary artery, while an injection into a superficial vein becomes so dilute as to be invisible. Further, the great vascularity of the lung tissue renders it difficult to obtain a well-defined arterial image. It is necessary, therefore, that the opaque fluid should be introduced into the superior vena cava, or, preferably, into the right auricle. After many experiments the authors devised the following method. The patient, while fasting, and seated, raises his right arm slightly; a special catheter, opaque to *x* rays, is lubricated with a 10 per cent. sodium citrate solution, and is introduced into the median basilic vein by means of a small trocar and cannula, or by an incision when the vein is thin-walled. The catheter is pushed slowly under radioscopic control into the lower extremity of the superior vena cava or even into the right auricle. Physiological saline solution is injected slowly through the catheter to facilitate its introduction. With the patient's arm still slightly raised, the sound can be guided by the fingers past the entrance of the external jugular into the subclavian vein. On reaching the superior vena cava or the auricle, a quantity (2.5 to 2.75 drachms) of a 12 per cent. sodium iodide solution is injected until the opaque blood reaches the pulmonary arterioles. If the injection is carried into the capillaries the whole lung becomes opaque and no details can be seen. When the skiagram is complete, the sound is washed out with sodium citrate solution and withdrawn. Patients may complain of cough, a metallic taste, transient headache, and coryza. Plates of six cases taken before and after injection show that such pulmonary radiography reveals details otherwise invisible.

30 Ultra-violet Radiation of the Interior of the Bladder

H. MESCHEDE (*Wien. klin. Woch.*, October 28th, 1932, p. 1350) describes some cases of bladder disease which he has alleviated by exposing the interior of the bladder to ultra-violet rays. It was first tried in tuberculosis of the bladder. A quartz tube, 26 cm. in length and 7 mm. in diameter, is introduced into the bladder like a cystoscope, and the free end is attached to a quartz lamp. (In a later modification of the instrument the author has made the free end ten times as large as that which is in the bladder: this enables him to view the interior of the bladder and focus the rays on the affected parts.) Meschede states that the interior of the bladder is ten times as resistant to ultra-violet rays as the skin; an erythema of the skin is produced at a distance of 3 cm. in three minutes, whereas in the bladder it requires half an hour. After ultra-violet radiation the bladder irritability is increased and the patient micturates less frequently. The patient thus gains confidence in this form of treatment, which is at first somewhat painful. There is a rapid increase of the bladder capacity. The erythema produced is a sign of the reaction on the part of the bladder tissue needed in the healing of chronic inflammatory processes. The whole of the interior of the bladder is irradiated, with special attention to the affected areas. Even in acute cystitis ultra-violet radiation may be used owing to the high bactericidal action of the rays. The one disadvantage of this form of treatment is that it takes up much time; the bladder is irradiated two or three times a week. The author has used ultra-violet rays for six months, and believes that they promise hope in a large number of cases. In several incurable cases the author was able to make life bearable for the patients.

Obstetrics and Gynaecology

31 Brain Haemorrhages in Eclampsia

H. RHEINDORF (*Zentralbl. f. Gynäk.*, October 1st, 1932, p. 2413) describes two cases of eclampsia terminating fatally with large haemorrhages into the brain. In the first the subarachnoid space and all the ventricles were filled with fluid blood. The brain was moist but not swollen. In the pons and the subjacent left part of the cerebellum there was a haemorrhage the size of a hen's egg, which had destroyed the ependyma and burst into the fourth ventricle. There were a few other small haemorrhages in the cerebrum. In the second case the gyri on the surface of the brain were broader than normal and swollen; the sulci were less deep than normal. On horizontal section the ganglia on the left side were found to be destroyed, and a large blood clot was discovered in the left lateral ventricle. The right lateral ventricle was filled with dark red fluid blood. No blood was present in the fourth ventricle. The author remarks that large haemorrhages into the brain occur in 10 per cent. of fatal cases. They vary from the size of a pin-head to that of an egg, and occur chiefly in the brain substance, pons, and central ganglia; larger haemorrhages which burst into the ventricles are uncommon. Some authors believe that these haemorrhages are due to thrombosis which damages the wall of the blood vessels, which give way when the blood pressure is unduly raised. Others think that the rise in blood pressure alone is sufficient to account for a giving way of the blood vessels. A number of dissecting aneurysms have been found in some cases, the rupture of one having caused haemorrhage. A change in the arteries and veins of pregnant women has been described in which foci of new muscular tissue have been

found in the middle coat. This new tissue is easily destroyed, and undergoes fatty degeneration at the end of pregnancy. Rheindorf was unable to find evidence of any such change. He believes that haemorrhage into the brain is due to damaged blood vessels, which, in a condition in which the blood pressure is already raised and which is still further raised with the onset of convulsions, are easily liable to rupture.

32 Rupture of the Uterus

S. KOBRINSKY (*Canadian Med. Assoc. Journ.*, October, 1932, p. 385) reports a case of uterine rupture during labour, and draws certain conclusions based on it in conjunction with a study of the literature. The possibility of such an accident must always be kept in mind in normal labour, for it may occur completely without signs of shock or severe haemorrhage. In his own case there was only a tearing feeling and a burning sensation in the left lower quadrant, followed by severe pain but no vaginal haemorrhage. No pituitary extract had been given, but Kobrinsky repeats the warning that too much indiscriminate use of this drug is going on. Laparotomy rendered the diagnosis obvious, and a subtotal hysterectomy was performed with drainage; this is considered by the author to be the treatment promising the best results. Convalescence was speedy and satisfactory. He estimates that the incidence in Canada of this condition in 1930 was about 1 in 8,700 cases. Hospital figures are higher than this because the incidence of abnormal pregnancies treated in these institutions is higher than in the general population. Cases occurring during labour usually show no premonitory signs. A sudden tearing sensation is followed by a persistent sharp pain, localized more or less in the vicinity of the rupture. The uterine contractions cease, especially if the whole or part of the foetus has been expelled into the abdominal cavity. Conservative treatment such as packing is inadvisable. The maternal mortality rate rises rapidly with every hour which is allowed to elapse between the rupture and the operation. In Kobrinsky's case the anaesthetics used were ethylene and ether. The uterus was found to be perfectly normal histologically, apart from the tear.

Pathology

33 Calcinosis with Arterial Degeneration

The clinical and pathological observations in a case of calcinosis with widespread arterial degeneration which proved fatal at the age of 2¼ years are reported by R. LIGHTWOOD (*Arch. Dis. in Child.*, August, 1932, p. 193), who remarks that evidence is accumulating in favour of the view that there are conditions in childhood, other than that of hypervitaminosis D, which can give rise to pathological calcification, and that some of these cases are associated with extreme arterial degeneration. In his patient, a dwarfed female child, the skin was yellow, the urine albuminous, the blood pressure high, and the peripheral arteries hard and tortuous. Radiography revealed the presence of irregular transverse bands of osteosclerosis and osteoporosis in the metaphyses of certain of the long bones, associated with excessive calcification of the skull and calcification of the larger peripheral arteries. The combination of retarded growth with renal disease suggested a diagnosis of renal dwarfism, but in this condition extreme arterial disease and calcinosis are exceedingly rare. Lightwood considers that the question must be left open whether the renal or the arterial disease was primary, but abnormal tissue calcification was evident. The possible aetiological precursors of this are discussed, but there was no definite evidence obtainable of dietetic errors as regards calcium and phosphorus, or of a parathyroid activity. Lime-water had been administered since the age of 8 months, but this is not considered as being more than a possible contributory factor. The association of a rachitic state in the growing cartilage with an excess of calcium in the tissues and a somewhat high phosphorus value in the blood, together with the alternating zones of osteoporosis and osteosclerosis in the tibia, is believed by the author to indicate some phasic disorder of calcium and phosphorus metabolism in this case, and to demand extra caution in interpreting the calcium and phosphorus values. The aetiology of the arterial disease could not be determined, nor was its relation to the disordered calcium and phosphorus metabolism fully understood. An extreme obliterative endarteritis may have predisposed to local tissue degenerations; and a slightly excessive intake of lime, in the virtual absence of bone growth, may have been a factor in the deposition of calcium in the damaged arteries, degenerating tissues, and in the bones. The calcinosis was certainly not due to any excessive intake of vitamin D.

34 Experimental Scarlet Fever

K. H. HOFFKEN (*Jahrb. f. Kinderheilk.*, September, 1932, p. 351) gives in tabular form a record of previous attempts to inoculate animals with scarlet fever, and reports his own experiments. Four guinea-pigs were each injected intraperitoneally with 4 c.cm. of blood taken from patients on the first or second day of the eruption. None of the animals developed symptoms of scarlet fever, though two showed an eosinophilia of 2 and 6 per cent. respectively. Six rabbits were inoculated as follows: three intravenous and intraperitoneal injections of 2 c.cm. of blood from patients on the first or second day of the eruption were given with an interval of two days between the injections, but none of the typical symptoms of scarlet fever developed. The extinction sign, however, could be produced in human patients by injection of serum obtained by cardiac puncture of the rabbits on the twelfth and the eighteenth day after the first injection. No blanching, on the other hand, followed the injection of (1) normal rabbit serum, (2) the serum of rabbits treated with normal human blood, or (3) the serum of animals injected with the blood of persons with high fever (*pneumonia, influenza*).

35 Subclinical Infection with Brucella

P. DOOLEY (*Arch. Int. Med.*, September, 1932, p. 373) records observations made in a boarding school for boys in Connecticut on infection with *Br. abortus*. Previous to November 27th, 1930, the serums of a number of boys who had been tested gave uniformly negative agglutination reactions. On this date a boy developed undulant fever, and a second case occurred on December 27th; in both instances *Br. abortus* was isolated from the blood and stools. The school was supplied with certified grade A milk from the herd of about a hundred Holstein cows. Investigation revealed the fact that one cow had miscarried on November 13th, her milk being used for the first time on November 18th. This milk was shown to contain *Br. abortus*. Four other cows in the herd gave a positive agglutination reaction, though their milk did not appear to be infected. These five cows were removed from the herd, pasteurization of the milk was commenced, and no raw milk was consumed after December 20th. A study of the serums from 232 boys and 31 young adults in the school was commenced, the tests being continued apparently over a period of about six months. Of these serums 155 proved completely negative, while 109 agglutinated *Br. abortus* to a titre of 1 in 10 or over. No fewer than forty-seven serums reacted at 1 in 80 or over, while nine serums, including those from the two undulant fever cases, reacted at 1 in 1,280 or over. Examining the records of the fifteen persons whose serum agglutinated at 1 in 320 or over, it was found that two had clinical undulant fever, five had febrile illnesses the exact causation of which was doubtful, and eight had no illness whatever. The author regards the appearance of agglutinins as a specific response to milk-borne infection, and draws attention to the fact that these may appear in the serum without any clinical evidence of disease. In such cases diagnosis of *abortus* infection on serological grounds alone is apt to be misleading.

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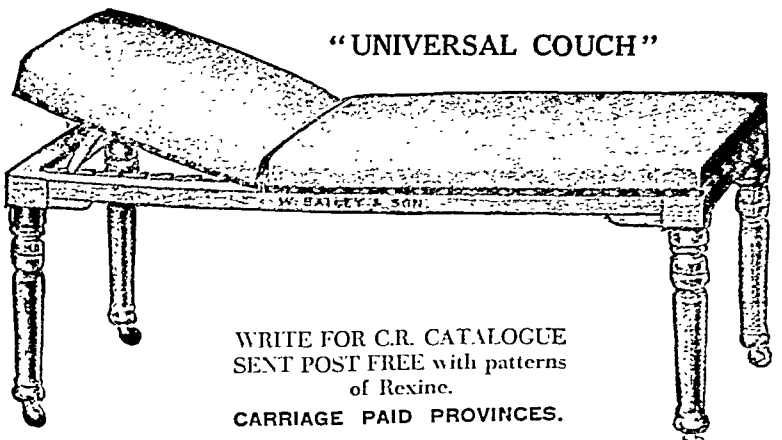

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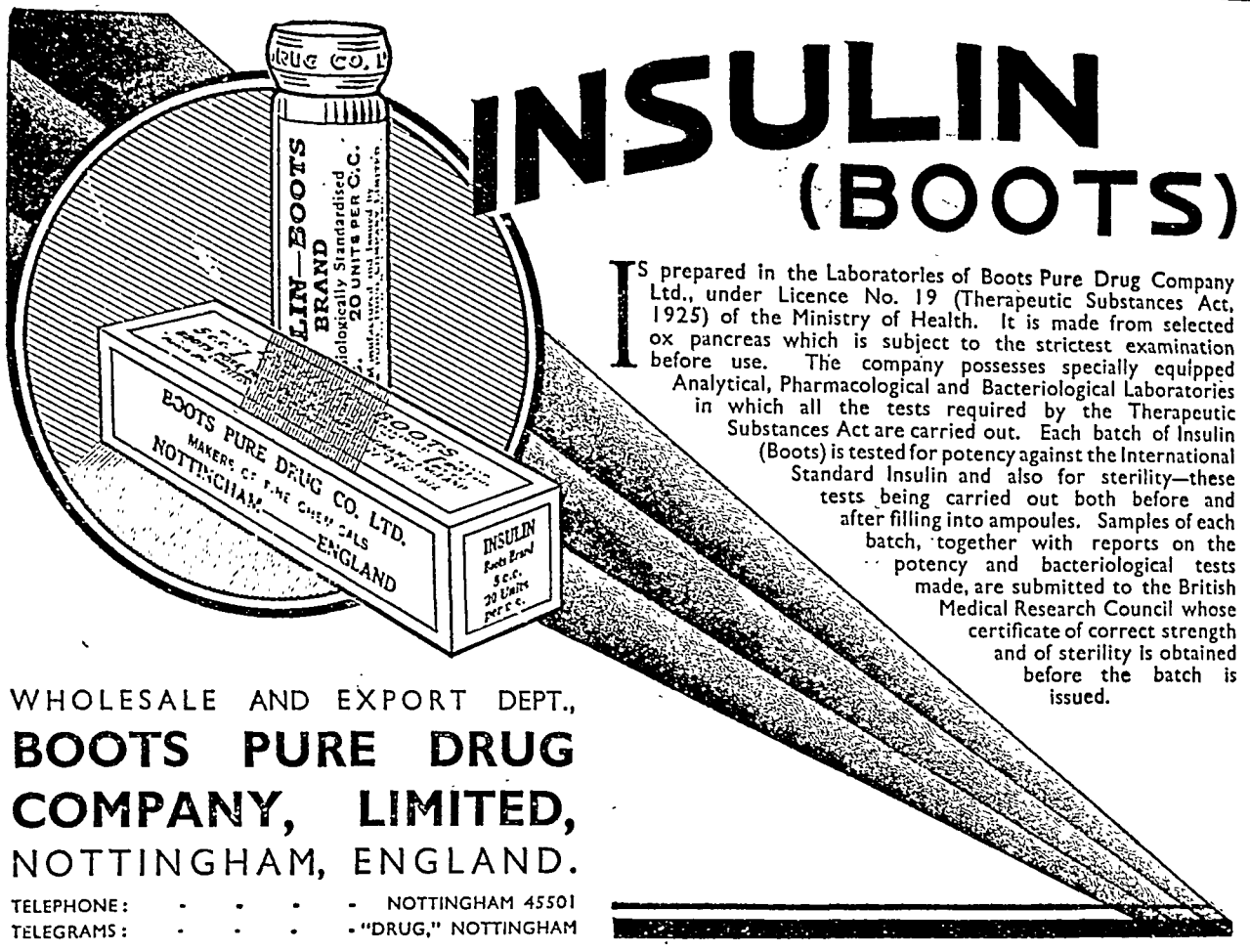

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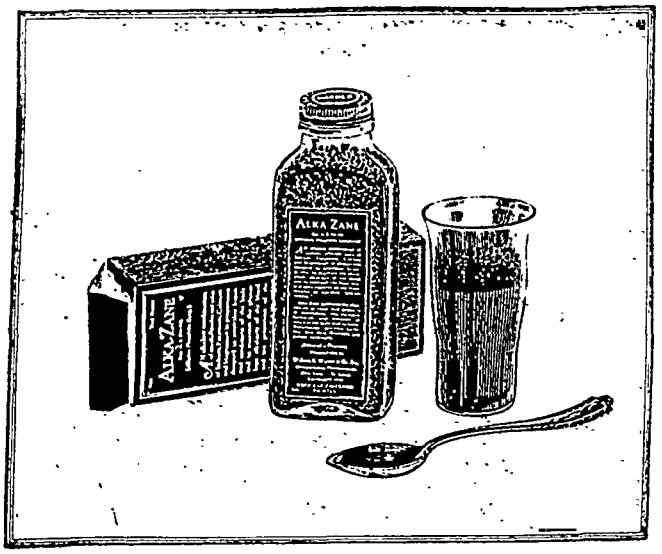

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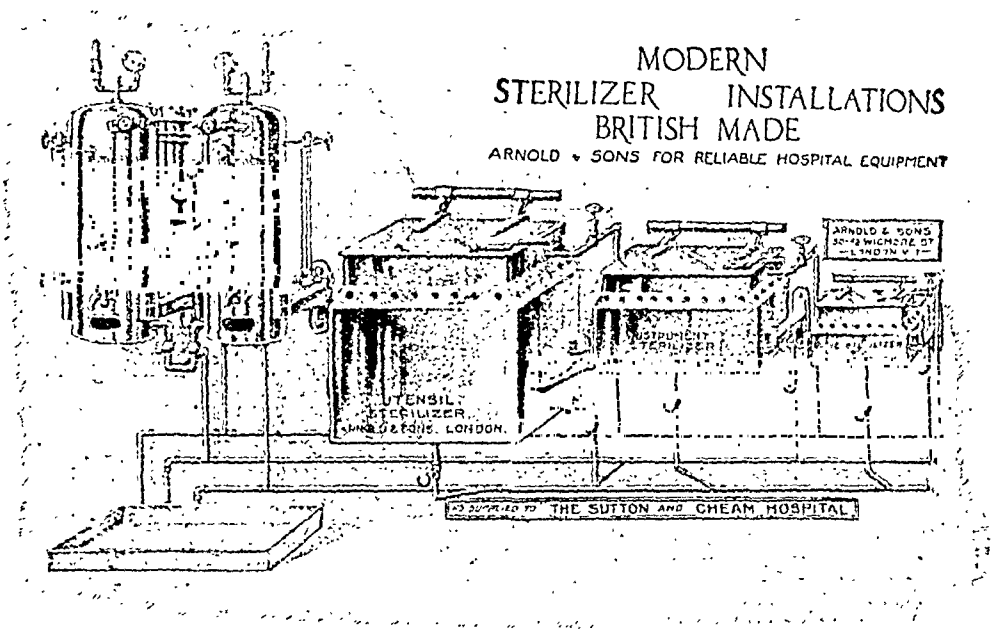

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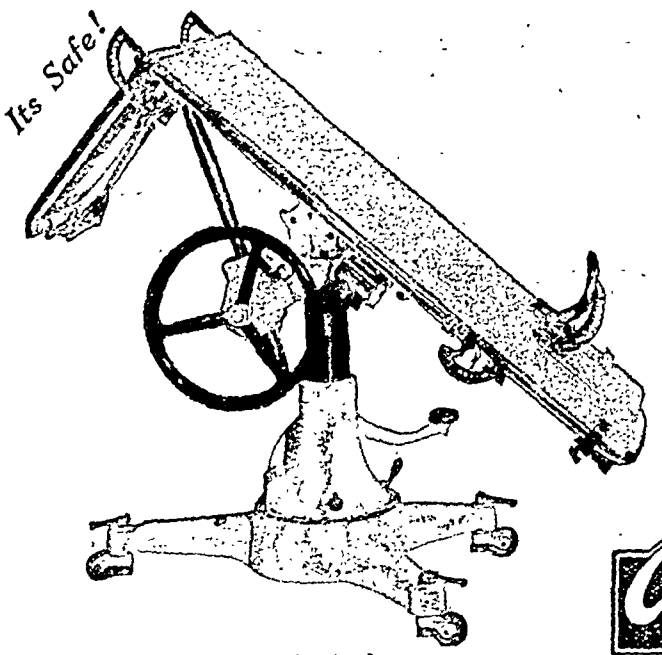

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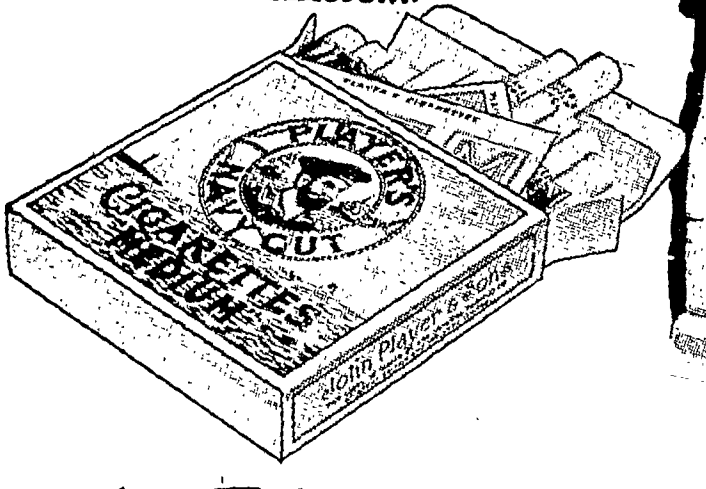

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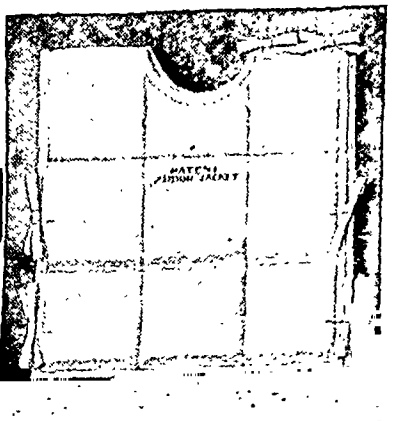

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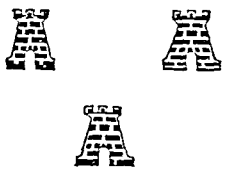

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Telephone: No. 7 Barnwood.

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This registered Hospital, situated in large grounds near the Cathedral, receives VOLUNTARY and PRIVATE PATIENTS of both sexes for treatment of Mental and Nervous Disorders, including [illegible] conditions in Psychotherapy in

All particulars may be obtained from the Resident Medical Superintendent.
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STRETTON HOUSE,

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A PRIVATE HOME for the treatment of Gentlemen suffering from Mental or Nervous Illness, including the allied disorders of Alcoholism and the Drug Habit. All types of early Mental and Nervous cases are received without certificates as Voluntary Patients under the provisions of the Mental Treatment Act, 1930. Bracing Hill country. See *Medical Directory*, p. 2314.—Apply to Medical Superintendent. 'Phone: 10 P.O. Church Stretton.

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A Private Home for the Care and Treatment of a limited number of Ladies with Mental and Nervous Disorders. Separate accommodation for Voluntary Patients. Large Mansion with 12 acres of ground. (See *Medical Directory*, p. 2294.) Apply, J. H. EARLS, M.D., Resident Physician. Telephone: Streatham 8430.

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HOME FOR TWELVE MENTAL PATIENTS (LADIES). Well appointed private house. Home comforts and Trained Nursing Staff. Eminent Mental Specialist Visiting Physician.

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Tel. and Telegrams: "Haynes, Brentwood, 45."

Littleton Hall, Brentwood, Essex.

Large grounds, 400 ft. above sea. HOME for ladies Mentally afflicted. Voluntary Boarders received. Station: Brentwood and Shenfield 1 mile. Liverp'l St. 26 min. Apply, Dr. HAYNES.

ST. ANDREW'S HOSPITAL

FOR MENTAL DISORDERS,

NORTHAMPTON.

FOR THE UPPER AND MIDDLE CLASSES ONLY.

President: THE MOST HON. THE MARQUESS OF EXETER, C.M.G., A.D.C.

Medical Superintendent: DANIEL F. RAMBAUT, M.A., M.D.

This registered Hospital is situated in 120 acres of park and pleasure grounds. Voluntary patients, who are suffering from incipient mental disorders or who wish to prevent recurrent attacks of mental trouble, temporary patients, and certified patients of both sexes, are received for treatment. Careful clinical, biochemical, bacteriological, and pathological examinations. Private rooms, with special nurses, male or female, in the Hospital or in one of the numerous villas in the grounds of the various branches can be provided.

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This is a Reception Hospital in detached grounds, with a separate entrance, to which patients can be admitted. It is equipped with all the apparatus for the most modern treatment of Mental and Nervous Disorders. It contains special departments for hydrotherapy by various methods, including Turkish and Russian baths, the prolonged immersion bath, Vichy Douche, Scotch Douche, Electrical bath, Plombières treatment, etc. There is an Operating Theatre, a Dental Surgery, an X-ray room, an Ultra-violet Apparatus, and a Department for Diathermy and High Frequency treatment. It also contains Laboratories for biochemical, bacteriological, and pathological research.

MOULTON PARK.

Two miles from the Main Hospital there are several branch establishments and villas situated in a park and farm of 650 acres. Milk, meat, fruit, and vegetables are supplied to the Hospital from the farm, gardens, and orchards of Moulton Park. Occupation therapy is a feature of this branch, and patients are given every facility for occupying themselves in farming, gardening, and fruit-growing.

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The seaside house of St. Andrew's Hospital is beautifully situated in a Park of 330 acres, Llanfairfechan, amidst the finest scenery in North Wales. On the North-West side of the Estate a mile of sea coast forms the boundary. Patients may visit this branch for a short seaside change or for longer periods. The Hospital has its own private bathing house on the seashore. There is trout-fishing in the park.

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For terms and further particulars apply to the Medical Superintendent (Telephone No. 2356 and 2357 Northampton), who can be seen in London by appointment.

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BUCKS.

FUNCTIONAL NERVOUS DISORDERS, MEDICAL & CONVALESCENT CASES.

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Telephone: Teignmouth 289.

BETHLEM ROYAL HOSPITAL, for Nervous and Mental Disorders,

Monks Orchard, Monks Orchard Road, Eden Park, Beckenham, Kent.

Reg. Tel. Address: Bethlem, Beckenham. *Station:* Eden Park (Southern Railway). *Telephone:* Springpark 1180-1181

President: LORD WAKEFIELD OF HYTHE, C.B.E., LL.D.
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This Registered Hospital is now situated at Monks Orchard, in some 250 acres of park, pleasure, and farm grounds. Applications can be considered on behalf of patients of the educated classes in a presumably curable condition. With a view to early treatment voluntary or uncertified patients are admitted.

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The comfort of sensitive patients is greatly enhanced by the fact that the majority are given single bedrooms.

For forms and further particulars apply to the Physician-Superintendent at the Hospital.

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A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS.

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CHEADLE, CHESHIRE.

This REGISTERED HOSPITAL, with a SEASIDE BRANCH at Colwyn Bay, N. Wales, is for the treatment and care of those of the Upper and Middle Classes suffering from MENTAL and NERVOUS DISEASES.

The Hospital is governed by a COMMITTEE, appointed by the TRUSTEES of the Manchester Royal Infirmary.

In addition to the Main Building there are separate villas. Extensive grounds. Hard and grass tennis courts, cricket and croquet grounds, and a court for badminton. There are also wireless installations. Golf may be had within easy distance. Occupational Therapy.

VOLUNTARY, TEMPORARY, AND CERTIFIED PATIENTS received.

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For terms and further particulars apply to the Medical Superintendent, J. A. C. ROY, M.B., who may be seen in Manchester by APPOINTMENT.

Telephone: GATLEY 2231 (3 lines).

PECKHAM HOUSE, 112, Peckham Road, London, S.E.15.

Telegrams: "Alleviated, London." Telephone: Rodney 4741-4742.

The above House, which was established in 1826, is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders. Certified voluntary and temporary patients are received. Separate houses for treatment and accommodation of special cases adjoin the Institution. There is a seaside branch, Kearsney Court, near Dover, to which patients may be sent for treatment or on holiday. Motor and carriage exercise is provided as required. Patients can avail themselves of a course of physical drill. Tennis Courts. Entertainments, dances, and indoor amusements held throughout the year. Terms from £3 3s. per week.

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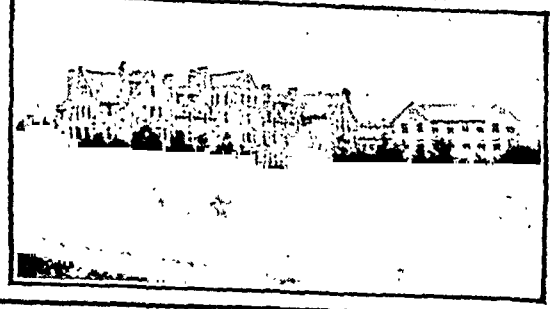

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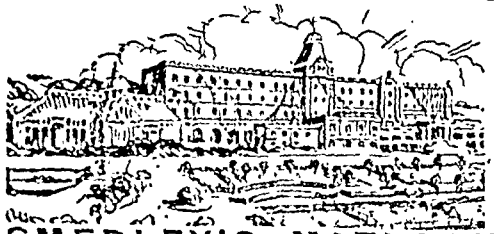

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LONDON, W.1.
(UNIVERSITY OF LONDON.)

PRIMARY F.R.C.S. EXAMINATION.

The next Course will begin on February 6th, under the direction of:—

Professor T. YEATES.
Professor SAMSON WRIGHT.
Professor E. C. DODDS.
Dr. J. H. WOODGER.

FEE.—20 guineas.

Application for admission, accompanied by the fee, should be made to the School Secretary, Middlesex Hospital Medical School, W.1.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE

(UNIVERSITY OF LIVERPOOL.)

COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on January 2nd and October 2nd, 1933, and for the Diploma in Tropical Hygiene on January 5th and April 20th, 1933 (Candidates for the D.T.H. must possess the D.T.M. of this University.)

For particulars, apply to the Hon. Dean, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool.

DEFECTIVE SPEECH.

Remedial Instruction on approved lines for **Stammer, Aphonia, Cleft Palate, Tracheotomy,** and disturbed or retarded **Co-ordination.**

Appreciations from Eton and Harrow.

ERIC MIALL, A.L.C.M.,
Speech Instructor at Middlesex Hospital.
17, CAVENDISH SQ., LONDON, W.1.
Telephone: Langham 1830.

STAMMERING, SPEECH DEFECTS.

BEHNKE METHOD. Estab. 1882. Cases, non-resident, treated at 39, Earl's Court Square, S.W.5, and in residence, in the Summer holidays, at Miss BEHNKE's house on the Chilterns.

"Pre-eminent success in the education and treatment of stammering and other speech defects."—"Times."
"Thoroughly physiological principles."—"Lancet."
"The method is scientifically correct and perfectly effective."—"Guy's Hospital Gazette."

STAMMERING, CLEFT PALATE SPEECH, LISPING, 3/9
of Miss BEHNKE, 39, Earl's Court Sq., S.W.5

M.D. THESIS

(Camb., Edin., Glas., Durham, &c.)

SKILLED COACHING, GUIDANCE, and ADVICE from Special Tutors, in conformity with the Regulations of the various Universities.

Apply for particulars and free booklet, "Hints on Writing a Thesis for the M.D. Degree," to the SECRETARY, Medical Correspondence College, 19, Welbeck Street, London, W.1.

LEOPOLD SALZER PRIZE.

Attention is called to this CASH PRIZE of £100 to be offered on January 1st, 1934, to the author of the best Essay upon the treatment, according to the principles of Homœopathy, of INSANITY in all its forms. For full particulars apply to the Secretary, British Homœopathic Association (Inc.), 45, Russell Square, London, W.C.1.

UNIVERSITY OF LONDON.

A COURSE of FOUR LECTURES on "*The Respiratory Functions of the Blood*" will be given by Dr. L. E. BAYLISS at UNIVERSITY COLLEGE (Gower Street, W.C.1) on MONDAYS and FRIDAYS, JANUARY 16th, 20th, 23rd and 27th, at 5 p.m.

A COURSE of THREE LECTURES on "*The Chemistry of Proteins*" will be given by Professor MAX BERGMANN (Professor of Chemistry in the Technical College of Dresden) at UNIVERSITY COLLEGE HOSPITAL MEDICAL SCHOOL (University Street, Gower Street, W.C.1) on JANUARY 20th, 23rd, and 24th, at 5.15 p.m. At the first Lecture the Chair will be taken by Professor C. R. HARINGTON, M.A., Ph.D., F.R.S. (Professor of Pathological Chemistry in the University). Lantern illustrations.

A COURSE of TWO LECTURES on "*Reflex Action*" will be given by Sir CHARLES SHERRINGTON, O.M., G.B.E., F.R.S., at UNIVERSITY COLLEGE, LONDON (Gower Street, W.C.1) on MONDAYS, JANUARY 30th and FEBRUARY 6th, 1933, at 5.30 p.m. At the first Lecture the Chair will be taken by Professor J. MELLANBY, M.A., M.D. (Professor of Physiology in the University). Film illustrations at the Second Lecture.

Admission free, without ticket.

S. J. WORSLEY,
Academic Registrar.

UNIVERSITY OF LONDON.

A COURSE of TWO LECTURES on "*Iodine and the Thyroid Gland*" will be given by Professor E. MELLANBY F.R.C.P., F.R.S. (Professor of Pharmacology in the University of Sheffield), at ST. THOMAS'S HOSPITAL MEDICAL SCHOOL (Albert Embankment, S.E.1), on JANUARY 26th and 27th, at 5.30 p.m. At the first Lecture the Chair will be taken by Professor J. MELLANBY, F.R.S. (Professor of Physiology in the University).

Admission free, without ticket.

S. J. WORSLEY,
Academic Registrar.

UNIVERSITY OF LONDON.

The Senate invite applications for the UNIVERSITY READERSHIP IN PHYSIOLOGY, tenable at Guy's Hospital Medical School. Salary £800 a year. The Senate would prefer that candidates should have a definite interest in the clinical side of Physiology. Applications (12 copies) must be received not later than first post on February 17th, 1933, by the Academic Registrar, University of London, S.W.7, from whom further particulars may be obtained.

COUNTY COUNCIL OF MIDDLESEX.

OPHTHALMIC SURGEON.

The County Council invites applications for the appointment of Ophthalmic Surgeon (part-time) for work at ophthalmic clinics established by the County Council at Southall, Southgate and Wembley for the treatment of visual defects and diseases of the eye occurring amongst children attending schools under the control of the County Council, and women and children residing in the County Council's area for Maternity and Child Welfare purposes.

The possession by applicants of the F.R.C.S. or D.O.M.S. diploma will be an additional recommendation.

The person appointed will be required to attend for one session (of about two hours per week during the school terms at each of the above-mentioned ophthalmic clinics. Remuneration will be at the rate of £2 12s. per session. The appointment will be held during the pleasure of the Council, and subject to three months' notice on either side.

Applications stating (1) name, (2) age, (3) qualifications and experience, accompanied by copies of not more than three recent testimonials, must be received by the undersigned not later than January 23rd.

No special application forms are provided. Envelopes must be endorsed "Ophthalmic Surgeon." Canvassing, directly or indirectly, will be a disqualification.

ERNEST S. W. HART,
Clerk of the County Council.

Middlesex Guildhall, S.W.1.
January 3rd.

CITY OF MANCHESTER.

PUBLIC HEALTH DEPARTMENT.

WITHINGTON HOSPITAL AND INSTITUTION.

APPOINTMENT OF TWO ASSISTANT MEDICAL OFFICERS.

The Public Health Committee invites applications from qualified Medical Men for the positions of Assistant Medical Officers at the Withington Hospital (1,290 beds) and Institution (1,200 beds), Nell Lane, West Didsbury, Manchester.

Every applicant must be a registered Medical Practitioner and unmarried.

Preference will be given to applicants with previous hospital experience.

The Hospital is a recognized training school for nurses and is equipped with all modern hospital requirements.

Salary for each appointment, £275 per annum, subject to a temporary deduction of £7 10s. per annum. The amount payable is, therefore, £267 10s. per annum, with board, residence, and laundry in addition, subject to the terms and conditions of the Manchester Corporation Grading Scheme. No bonus.

The appointments will be made, in the first instance, for a period of six months. The successful candidates, however, will be eligible for re-appointment for a further period of six months at the end of that period.

Applications, stating fully the age, training, qualifications, and experience of the candidates, with copies of three recent testimonials, and endorsed on the envelope "Assistant Medical Officer, Withington Hospital," must be addressed to the Medical Officer of Health, Civic Buildings, 1, Mount Street, Manchester, only, and not to members of the Committee or Council, and must be received by him not later than Saturday, January 21st.

The candidates appointed will be required to commence duty as soon as possible after appointment, to devote the whole of their time to the duties of the positions, to pass a medical examination, to contribute to the Corporation Superannuation Fund, and to execute the Deed of Service.

Canvassing in any form, oral or written, direct or indirect, is prohibited.

Town Hall, Manchester. F. E. WARBRECK HOWELL, Town Clerk.

January 9th, 1933.

DERBYSHIRE EDUCATION COMMITTEE.

ASSISTANT SCHOOL MEDICAL OFFICER (Male).

The Derbyshire Education Committee require the services of an Assistant School Medical Officer (male) at a salary of £500, rising by annual increments of £25 to £700 per annum, subject to a temporary economy reduction, together with reasonable travelling expenses.

Candidates must be registered Medical Practitioners of at least three years' standing. The duties will include work under the Maternity and Child Welfare Service. Experience in this work, the administration of anaesthetics, and Mental Deficiency is desirable.

The appointment will be a designated post under the Local Government and Other Officers Superannuation Act, and the successful candidate will be required to pass a medical examination.

The officer appointed will not be allowed to engage in private or consulting practice, but will be required to devote his whole time to the duties of the office, and will act under the direction of the School Medical Officer.

Forms of application may be obtained from the undersigned to whom they should be returned completed, together with copies of not more than three recent testimonials, on or before Thursday, January 26th, endorsed "Assistant School Medical Officer."

The appointment will be determinable by three months notice on either side.

New County Offices, St. Mary's Gate, Derby. W. M. ASH, School Medical Officer.

January 10th, 1933.

CITY AND COUNTY OF NEWCASTLE-UPON-TYNE.

ASSISTANT MEDICAL OFFICER OF HEALTH.

Applications are invited from registered medical practitioners holding a Diploma in Public Health for the appointment of Assistant Medical Officer of Health. Salary £750 per annum, rising by annual increments of £50 to £900, subject to a temporary reduction on the commencing salary of £27 16s. 3d. The successful applicant will be required to contribute to the Council's [illegible] Superannuation Fund. Previous resident servi[illegible]ses Hospital is an esse[illegible]

Applications, on the prescribed form, which can be obtained on application to the Medical Officer of Health, Town Hall, Newcastle-upon-Tyne, must be submitted not later than Wednesday, January 25th.

January 9th, 1933.

BOROUGH OF EALING.

MATERNITY AND CHILD WELFARE SERVICES.

SECOND WOMAN ASSISTANT MEDICAL OFFICER.

Applications are invited from duly qualified Medical Practitioners for the position of Second Woman Assistant Medical Officer.

The duties will mainly consist of work in connection with the Council's Maternity and Child Welfare Scheme, embracing attendance at the Health Centres, School Medical Inspection and medical attendance on patients in the Chiswick and Ealing Maternity Hospital as Deputy Medical Attendant.

Applicants must have had previous experience of maternity and child welfare and school medical work and of work in a Maternity Hospital.

The person appointed will be required to devote her whole time to the duties and will not be allowed to engage in private practice.

The salary will be at the rate of £600 per annum, rising by £25 per annum to a maximum of £700. A deduction of 5 per cent. will be made in accordance with the provisions of the Local Government and Other Officers Superannuation Act, 1922, which has been adopted by the Council, and the appointment will be subject to the candidate passing the Council's medical examination in connection therewith. Canvassing will be a disqualification.

Copies of the application form and terms of appointment can be obtained from Dr. THOMAS ORR, Medical Officer of Health, Town Hall, Ealing, W.5, to whom applications, accompanied by copies of not more than three recent testimonials, must be delivered not later than 9 a.m. on January 23rd.

Town Hall, Ealing, W.5. GEO. E. BRYDGES, Town Clerk.

WEST SUFFOLK COUNTY COUNCIL.

ASSISTANT COUNTY MEDICAL OFFICER AND ASSISTANT SCHOOL MEDICAL OFFICER.

Applications are invited for the above whole-time appointment (men or women) which includes duties in School Medical Inspection, Maternity and Child Welfare, Tuberculosis, Venereal Diseases, etc., work. Applicants must be registered Medical Practitioners and not exceed 35 years of age, preferably holding the Diploma in Public Health. Salary £500 per annum, rising by annual increments of £25 to a maximum of £700 plus travelling allowance. Particulars of appointment and forms of application may be obtained from the undersigned, by whom applications, accompanied by copies of not more than three recent testimonials, must be received not later than January 30th.

Canvassing in any form, direct or indirect,

L. G. H. MUNSEY, Clerk of the County Council.

CITY OF LIVERPOOL.

CITY INFECTIOUS DISEASES HOSPITALS.

ASSISTANT RESIDENT MEDICAL OFFICER.

The Port Sanitary and Hospitals Committee of the Council of the City of Liverpool invite applications for the above office. Salary £200 per annum, together with board, residence, etc. (subject to a temporary deduction as authorised by the Council).

The appointment is for a term of not exceeding one year and is not renewable.

Every candidate will be required to possess a registered Medical and Surgical qualification, and should have a knowledge of Bacteriological methods.

The person appointed will not be allowed to engage in private practice, and will be required to devote whole-time service to the duties of the office.

Applications to be made upon forms obtainable from the Medical Officer of Health, Municipal Annexe, Dale Street, Liverpool, to be endorsed "Resident Assistant Medical Officer," and returned to the undersigned so as to be received not later than 10 a.m., Monday, January 23rd.

Municipal Buildings, Liverpool. WALTER MOON, Town Clerk.

January 7th, 1933.

CITY OF SALFORD.

ASSISTANT RESIDENT MEDICAL OFFICER, HOPE HOSPITAL. (1,000 Beds.)

Applications are invited for the post of Assistant Resident Medical Officer (male) at HOPE HOSPITAL, Pendleton. The appointment will be for six months. Salary £250 per annum, plus board, residence, and laundry. Further information regarding the Hospital may be obtained from the Medical Superintendent. Form of application may be obtained from the Medical Officer of Health, 143, Regent Road, Salford, to whom it should be returned by January 28th.

H. H. TOMSON, Town Clerk.

LONDON COUNTY COUNCIL.

Applications invited from registered Medical Practitioners for appointment as HOUSE PHYSICIAN at LEWISHAM HOSPITAL, High Street, Lewisham, S.E.13. Position recognized for requirements of M.D.London. Salary £80 a year, together with board, lodging, and laundry, subject to temporary reduction. Appointment is for six months in the first instance, but may be extended for a further period of six months. Duties are assigned by the Medical Superintendent and include, if necessary, assistance at other establishments under the control of the Council.

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), County Hall, Westminster Bridge, S.E.1, returnable by January 27th. Canvassing disqualifies. Further inquiries should be addressed to Medical Superintendent at the hospital.

THE KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION.

JUNIOR ASSISTANT RESIDENT MEDICAL OFFICER.

Applications are invited from duly registered practitioners (male and unmarried) for the post of Junior Assistant Resident Medical Officer at the North Wales Sanatorium, Llangwyfan, near Denbigh (236 beds for pulmonary and non-pulmonary cases). Salary £250 per annum, plus maintenance (subject to an emergency deduction of £10 12s. 6d. per annum). The appointment is limited to a period of one year.

Applications, stating age, qualifications, and previous experience, together with copies of three recent testimonials, should reach the undersigned not later than January 25th.

Memorial Offices, Westgate Street, Cardiff. D. A. POWELL, Principal Medical Officer.

CARDIFF ROYAL INFIRMARY.

(Associated with Welsh National School of Medicine.)

Number of available Beds—490.

Applications are invited for the undermentioned posts:

HOUSE PHYSICIAN—Medical Unit.

HOUSE [illegible] cal Dept.

HOUSE [illegible] Dept.

HOUSE

Salary is at the rate of £50 per annum, with board and lodging for the first three posts. The Ophthalmic House Surgeon is expected to have some knowledge of refractions and will be paid at the rate of £40 for the first six months, and if the appointment is renewed for a further six months, £60 will be paid for the second six months, with board and lodging. The appointments are for six months commencing Feb. 20th.

Forms of application can be obtained from the undersigned and should be returned with copies of three recent testimonials, on or before February 6th.

Jan. 10th, 1933. R. ARMSTRONG, Medical Superintendent.

CUMBERLAND INFIRMARY, CARLISLE.

OFFICE OF HONORARY ASSISTANT PHYSICIAN.

The Committee of Election invite applications for the above vacant office. Particulars respecting the qualifications of candidates and the duties of the office can be obtained from the undersigned by whom [illegible] accompanied by copies of three rec[illegible] received by Saturday, [illegible] must hold an approp[illegible] The appointment will [illegible] Personal canvassing on the part of any candidate will constitute disqualification.

By Order, J. G. HOWITT, Secretary.

Carlisle. January 12th, 1933.

PUTNEY HOSPITAL, Lower Common, S.W.15.

STAFF APPOINTMENT.

The Board of Management invites applications for the post of SURGEON to fill the vacancy caused by the death of Mr. H. S. Clogg.

Candidates must hold the degree of Master of Surgery or F.R.C.S.(England).

Seven Private Wards for paying patients are attached to the Hospital.

Applications, stating age, present appointments held, etc., should be received by the undersigned on or before Saturday, Feb. 4th.

H. SEYMOUR HADWEN, Secretary.

TAUNTON AND SOMERSET HOSPITAL, TAUNTON. (104 Beds.)

HOUSE PHYSICIAN required at the end of February. Three Residents on Staff. Salary at the rate of £100 per annum. Applications, from either sex, with testimonials, to F. J. J. STACEY, Secretary.

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh).

(a) British Islands.

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH**
EBBW VALE, MON. *(Workmen's Medical Society.)*	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE. *(Workmen's Medical Scheme.)*	KENT EDUCATION COMMITTEE. *(School Medical Inspector.)*
GILFACH GOCH, GLAMORGAN. *(Workmen's Medical Scheme.)*	NEATH AND DISTRICT. *(Medical Aid Association.)*	LLANTRISANT AND LLANTWIT FARDRE RURAL DISTRICT COUNCIL. (1) *Medical Officer of Health (part-time.)* (2) *Medical Officer (woman—part-time) for Maternity and Child Welfare.*
LLWYNPIA, CLYDACH VALE, PENYCRAIG, GLAMORGAN. *(Workmen's Medical Scheme.)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association.)*	
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer.)*	OGMORE VALLEY, GLAMORGAN. *(Wyndham Colliery Medical Aid Society.)* *(Workmen's Medical Scheme.)*	CITY OF SALFORD. *(Assistant Clinical Tuberculosis Officer.)*
MARDY, GLAMORGAN. *(Workmen's Medical Scheme.)*		

(b) Overseas.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. G. HUNTER (Medical Secretary, New South Wales Branch), 135, Macquarie St., Sydney, N.S.W.	**QUEENSLAND.** *(Brisbane Associated Friendly Societies Institute.)* *(Toowoomba Associated Friendly Societies, Medical Institute, Toowoomba.)*	The Hon. Sec., Queensland Branch, British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	**WELLINGTON, NEW ZEALAND.** *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec., New Zealand Branch), British Medical Association, P.O. Box 156, Wellington, New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch); British Medical Association, Medical Society Hall, East Melbourne, Victoria.			**WESTERN AUSTRALIA.** *(Contract and Lodge Practices.)*	Hon. Sec., Western Australian Branch, British Medical Association, No. 5, Bank of N.S.W. Chambers, St. George's Terr., Perth, Western Australia.

January 11th, 1933. By Order of the Council. G. C. ANDERSON, Medical Secretary.

WEST LONDON HOSPITAL, Hammersmith, W.6. (234 Beds.)

Applications are invited for the post of ASSISTANT GYNAECOLOGIST.

Candidates must be Fellows of one of the Royal Colleges of Surgeons of England, Edinburgh, or Ireland, or a Fellow or Member of the Royal College of Physicians of London. The successful candidate will be required in addition to his other duties to undertake such teaching for the Post-Graduate College as the Board may approve.

Applications, accompanied by copies of testimonials, should reach me not later than Thursday, February 2nd. Candidates must attend a Special Meeting of the Medical Council on Friday, February 3rd, at 4.30 p.m. and prior to that date call upon and send copies of applications and testimonials to each member thereof. They must not canvass Members of the Board, but nevertheless must send copies of their application and testimonials to each member thereof, and if so notified, be in attendance at a Special Meeting of the Board at 5.30 p.m. on Tuesday, February 7th, when the election will be made.

H. A. MADGE, Secretary.

LONDON JEWISH HOSPITAL, Stepney Green, E.1. (General Hospital—108 Beds.)

The Council of Management invite applications for the post of SECOND RADIOLOGIST. Candidates will be required to attend the Department on two half days each week. They should send twenty copies of their application, with copies of three recent testimonials, to the Secretary at the Hospital before Friday, January 27th.

WEST LONDON HOSPITAL, Hammersmith Road, W.6. (234 Beds.)

Required, a Non-Resident CASUALTY OFFICER (male). The appointment is tenable for one year from February 1st next, subject to one month's notice on either side. The appointed candidate will be eligible for re-election for two further periods of one year. Salary at the rate of £250 per annum, with lunch and tea daily.

Candidates must be duly qualified registered Medical Practitioners, and preference will be given to those who have held a resident appointment in a General Hospital. Applications (which must be made on printed forms obtained from me) must reach me not later than Thursday, January 19th, 1933. Selected candidates will be required to call upon such members of the Medical Staff as directed, and to be in attendance at a Meeting of the Medical Council at 4.30 p.m. on Friday, January 27th, and the House Committee Meeting at 5 p.m. the same day, when the appointment will be made.

H. A. MADGE, Secretary.

DOWN MENTAL HOSPITAL, DOWNPATRICK, NORTHERN IRELAND.

VACANCY FOR CLINICAL ASSISTANT.

Appointment for one year only; renewable for second year. Honorarium £60 per annum, with apartments, rations, and laundry.

Candidates must be under 30 years of age, and registered.

Opportunities for study and research.

Immediate applications, with copies of references to the Res. Med. Supt.

THE VICTORIA HOSPITAL FOR CHILDREN, Tite Street, Chelsea, S.W.3. (138 Beds.)

The Committee of Management invite applications for the posts of

(a) HOUSE PHYSICIAN;

(b) HOUSE SURGEON;

both vacant February 1st. The appointments are for six months. Salaries at the rate of £100 per annum, with board, lodging, and washing.

(c) OUT-PATIENT ANAESTHETIST

To attend on Mondays at 10.30 a.m. and Wednesdays at 9 a.m. A payment of 10/6 per attendance will be made.

Candidates for these posts must attend the Hospital for the purpose of an interview at 4.30 p.m. on Thursday, January 19th.

Applications, with copies of three recent testimonials, should be sent to the Secretary not later than first post on Wednesday, Jan. 18th.

By Order,

D. ST. JOHN BAMFORD, Secretary.

THE VICTORIA HOSPITAL FOR CHILDREN, Tite Street, Chelsea, S.W.3. (138 Beds.)

The Committee of Management invite applications for the post of HONORARY SURGICAL REGISTRAR. Candidates are expected to call on members of the Honorary Surgical Staff. The appointment is for one year, renewable for a second year.

Applications, with copies of three recent testimonials, should be sent to the Secretary not later than Saturday, January 21st.

By Order,

D. ST. JOHN BAMFORD, Secretary.

(Appointments continued on p. 45.)

British Medical Journal,

BRITISH MEDICAL ASSOCIATION HOUSE, TAVISTOCK SQ., LONDON, W.C.1.

Tel.: MUSEUM 9861 (4 lines).

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Address must be paid for.

All advertisements should reach the above address by not later than first post TUESDAY preceding publication.

NOT CLASSIFIED.

A FUND IS BEING RAISED IN MEMORY OF the late Capt. W. J. A. COLDSTREAM, *Indian Medical Service, Civil Surgeon of Peshawar.* Friends who may wish to join should write to Major W. R. DIMOND, I.M.S., Clevehall, Denmark Hill, London.

AUTHORS AND COMPOSERS INVITED FORWARD MSS. for prompt publication to Publishers of over thirty years' standing. £50 cash prizes for Poems. Current Catalogues free. —STOCKWELL, LTD., 29, Ludgate Hill, London.

DOCTOR'S WIDOW HAVING RECENTLY taken *house centre of Promenade*, Southport, would like some PAYING GUESTS, long or short periods. Personal supervision, every *comfort.* — Address, Mrs. AITKEN, "Carolan," 41, Promenade, Southport.

LARGE WEST END NURSING HOME, UNaffected by recent adverse conditions, requires additional CAPITAL. £500 to £2,000. Fully secured & guaranteed. Exceptional terms to Medical Man. Replies to *Principals only.*— No. 606, B.M.A. House, Tavistock Sq., W.C.1.

ASSISTANCIES.

WANTED. — ASSISTANT, MALE, SCOTTISH or *English graduate*; salary £300, *indoor*, car supplied. Flourishing Midland town. Practice compact. Gentleman of good appearance and address required. Hospital posts and prev. exper. desirable, but not essential. Applications should state age and height and supply photo.— No. 730, B.M.A. House, Tavistock Sq., W.C.1.

WANTED, IN ITALY, EGYPT, OR ELSEwhere, ASSISTANTSHIP, by exceptionally well [illegible] man, English and continen[illegible] 30, single, T.T., free Jan. [illegible] some French. Drive car. Best references. Exp. T.B., Gynaecol., and General Practice. — Address, No. 712, B.M.A. House, *Tavistock Square*, W.C.1.

WANTED. — ASSISTANTSHIP (OR LONG LOCUMS) by Conj. man, act. 30, inter. anaesth., 5 yrs.' exper. G.P.; keen, reliable, well received. *Free Jan. 20th.* Capital available. — Address, No. 739, B.M.A. House, Tavistock Square, W.C.1.

WANTED.—ASSISTANTSHIP, WITH VIEW to early Partnership or Succession, in Practice with *good* panel. (Durham or North *Yorkshire pref.*) *Young, energ., married* practitioner. 3 years' G.P. experience. Capital avail. —No. 709, B.M.A. House, *Tavistock Sq.*, W.C.1.

WANTED. — *ASSISTANT*, WITH VIEW to Partnership, in a mixed Practice; ex H.S., single, keen, *energetic. Scot preferred*; abstainer. *Further particulars on application.* Interview. Usual bond. — Address, No. 737, *B.M.A. House, Tavistock Square, W.C.1.*

WANTED. — *PART-TIME ASSISTANTSHIP* by M.B., Ch.B., in London or district, *preferably morning and evening surgeries*; ex H.P., R.O.O., H.S., and R.S.O. At present reading for F.R.C.S.Eng.—Address, No. 732, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — KEEN, WELL - QUALIFIED, male ASSISTANT, with view. Salary according to experience. Good middle-class Practice. Midland City. Excellent scope.— Address, No. 708, B.M.A. House, *Tavistock* Square, W.C.1.

WANTED.—ASSISTANT, OUTDOOR, MALE, single, for private and panel Practice in Lancashire. Salary £400. State age, nationality. Small bond.—Address, No. 728, B.M.A. House, Tavistock Square, W.C.1.

WANTED IMMEDIATELY. — INDOOR AND Outdoor ASSISTANTS for Town and Country Practices, with and without view; good salaries. State full particulars.—BRITISH MEDICAL BUREAU, 33, *Cross Street*, Manchester.

WANTED. — *INDOOR WOMAN ASSISTANT*, Country Town, Gloucestershire. Cottage hospital. Drive car. Work light. Salary £150. —Address, No. 743, B.M.A. House, Tavistock Square, W.C.1.

WANTED.—WOMAN DOCTOR AS ASSISTANT, with view to early Partnership, in good-class London suburban Practice of over £2,500 per annum.—Address, No. 705, B.M.A. House, Tavistock Sq., W.C.1.

WANTED. — ASSISTANT, LONDON GRADuate preferred. Live in. Near Birmingham. Single.—Address, No. 711, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — ASSISTANT, MARRIED, AND some experience G.P. preferred. West *Country.* Salary £400. — Address, No. 727, B.M.A. House, Tavistock Square, W.C.1.

ASSISTANTSHIP, WITH VIEW TO EARLY Partnership or succession, within 100 miles of London required by London Hospital graduate, aged 28, with 7 years' experience of G.P. and *Surgery at home and abroad.*—Add., No. 718, B.M.A. House, Tavistock Sq., W.C.1.

BIRMINGHAM OR DISTRICT. — WANTED, ASSISTANTSHIP by M.B., Ch.B. (Glas.), ex H.P., ex H.S. One year's experience G.P. (panel and private). Good anaesthetist. Ex[illegible] Address No. 723, B.M.A. House.

P[illegible]

[illegible]ORATORY ASSISTANTS are invited to communicate with H. GOODING, Hon. Sec., "Moelfre," 10, Holbeck Grove, Victoria Park, Manchester. No fees.

PARTNERSHIPS.

WANTED BY WELL-QUALIFIED SURGEON, with ten years' experience of major operative surgery, on Hon. Staff of General Hospital, and also of good-class Practice, a PARTNERSHIP in the South with scope for surgery. Free in July.—Address, No. 722, B.M.A. House, Tavistock Square, W.C.1.

LANCS TOWN. — PARTNERSHIP IN GOOD and old-established Practice, with receipts of over £1,700 yearly and increasing. Panel 2,550. Price for one-third to commence, £1,000. —MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION, 6, Brown Street.

M.B., F.R.C.S.E., GENTLEMAN, WITH considerable hospital experience of gen. surg, obstet. and gynaecol., young, and energ., also exper. gen. prac., anxious to acquire PARTNERSHIP or PRACTICE with scope. —No. 530, B.M.A. House, Tavistock Sq., W.C.1.

M.B., B.S.(LOND.), EX H.S., H.P., TEACHING Hospital, requires JUNIOR PARTNERSHIP or ASSISTANTSHIP, with view, in South of England. Experienced in G.P. Capital available.—Address, No. 729, B.M.A. House, Tavistock Square, W.C.1.

PARTNERSHIP WANTED BY M.D.LOND., aged 27, in good town, Southern England or E. Anglia. Hospital appointment desired. 3½ years Medical and Surgical appointments, [illegible] teaching Hospital. Capital available. [illegible] S[illegible], W.C.1.

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D[illegible] QUALIFIED *Secretary-* [illegible] are invited to write, wire, or 'phone Temple Bar 5858, THE *DISPENSERS'* BUREAU, 3, Lindsay House, 171, Shaftesbury Avenue, London, W.C.2.

DOCTOR WANTED TO LIVE IN INDUSTRIAL Practice and do NIGHT WORK and occasional emergency in exchange for hospitality, board, and payment. — *Address, No. 715,* B.M.A. House, Tavistock Square, W.C.1.

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MEDICAL OFFICER, UNMARRIED, REquired for service in the East. Contract 1—3 years, good salary, free furnished quarters, and first-class *passages out and home.*—Address, stating age, experience, and copies of testimonials, No. 744, B.M.A. House, Tavistock Square, W.C.1.

MIDWIFERY. — WOMAN DOCTOR WANTED, to take occasional confinements for practitioner in N.W. London. Must have good experience. — Address, No. 705, B.M.A. House, Tavistock Square, W.C.1.

THE ROYAL ARMY MEDICAL CORPS ASSOCIATION, 85, Eccleston Square, S.W.1 (Telephone: Victoria 2722), supplies qualified Dispensers, Bookkeepers, Laboratory Assistants, Sanitary Assistants, Male Nurses, *Mental and Special Treatment Orderlies*, Dental Clerk Orderlies, Porters, Caretakers, etc., *without charge to prospective employers.*

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LOCUM OR TEMPORARY WORK (OR IN London, part-time) wanted by experienced Practitioner. Free from the 14th inst.—Add., No. 701, B.M.A. House, *Tavistock Sq.*, W.C.1.

PRACTICES.

WANTED IMMEDIATELY BY GRADUATE (Q.U.B.) of good address, aged 26; capable of major surgery, with three years' experience as H.S., H.P., and R.S.O., *and good-class G.P.*, a small PRACTICE (about £600 p.a.), but scope for increase, or ASSISTANTSHIP, with view to *Partnership* or early succession, in Northern Ireland or within easy reach of London.—Add., No. 721, B.M.A. *House, Tavistock Sq.*, W.C.1.

WANTED TO PURCHASE, PAYABLE FROM income, PRACTICE or PARTNERSHIP. Advertiser experienced M.D., D.P.H., *possesses* complete X-ray, Electrotherapy, Ophthalmology, and G.P. equipment and furniture. Would welcome *Assistantship* or Partnership where advertiser's complete equipment could be used as part capital. — Address, No. 503, B.M.A. House, Tavistock Square, W.C.1.

WANTED, PRACTICE IN LINCOLNSHIRE OR adjacent County, by experienced G.P., who *has recently sold* partnership share. Income £800—£1,000 or, if more, then on conditions. Would take gradually over *from elderly* practitioner. No agents.—Address, No. 738, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — PANEL AND PRIVATE PRACTICE, income £1,000—£1,500. Scotland preferred. But anywhere considered. Strictest investigation will be desired. Full particulars in confidence.—Address, No. 733, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — PRACTICE OR PARTNERSHIP *anywhere.* Good panel essential. Income £1,500 upwards. Smaller considered. House to rent. Ample capital. Total cost not to exceed 1½ years' purchase.—DOCTOR, "Cragside," St. Luke's Park, Torquay.

WANTED.—PRACTICE (OR PARTNERSHIP). £1,000 to £1,500 in South or South-West with panel. Good house, with garden and educational facilities essential. Capital available.—Address, No. 726, B.M.A. House, Tavistock Square, W.C.1.

WANTED IN LONDON OR SUBURBS, working and middle-class PRACTICE, with good panel. Income £1,300—£1,600. Ample capital available. — Address, No. 710, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — PRACTICE OR PARTNERSHIP Succession in London. Income about £2,000 p.a., including substantial panel. Cash available. — Address, No. 742, B.M.A. House, Tavistock Square, W.C.1.

WANTED.–PRACTICE, WITH GOOD PANEL, in suburban area of large city. *Birmingham district preferred*, but not essential. Ample [illegible] — Address, No. 719, B.M.A. [illegible] V.C.1.

DENT[illegible] JUNIOR IS *best type of* [illegible], would like to hear of opportunity to establish a PRACTICE. Not necessarily in same house as doctor. *Southern half of England preferred.*—*Address*, No. 707, *B.M.A. House*, Tavistock Sq., W.C.1.

FOR SALE. — INCREASING PRACTICE IN town near Glasgow. Cash receipts last year £587. Panel about 600. Excellent scope. Suitable house to rent. Premium 1½ years' purchase. — Address, No. 741, B.M.A. House, Tavistock Square, W.C.1.

KENT, WITHIN EASY REACH OF LONDON. —Growing private and panel PRACTICE, with Cottage Hospital. Partnership, share worth £1,000 at 2 years' purchase to commence with, offered to experienced married G.P., aged 30 to 40 years, with hospital experience. Nice house and garden at £2,300 to purchase. Good scope for a Radiologist or Dental Surgeon with medical qualifications. Gentlemen with ample capital need apply, with full particulars in confidence.—Address, No. 3556, B.M.A. House, Tavistock Square, W.C.1.

LANCASHIRE. — COUNTRY TOWN. — OLD-established PRACTICE. Receipts over £700 p.a. Panel 1,050. Good detached house, with garage and garden, to rent. Premium 1½ years' purchase.—THE WESTERN MEDICAL AGENCY, 22, Clare Street, Bristol, 1.

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NUCLEUS FOR SALE. — LONDON, N. — Branch Surgery, 200 panel and cash. Great scope. Rent £52. Flat above can be arranged. — Address, No. 704, B.M.A. House, Tavistock Square. W.C.1.

NUCLEUS OF PRACTICE FOR SALE, WITH lease (21 yrs.) of Lock-up Surgery. Hampstead district, on main road. Modern fittings. Drugs, etc., optional. Rent £72 p.a. Premium £200. — Address, No. 736, B.M.A. House, Tavistock Square, W.C.1.

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PRACTICE OR PARTNERSHIP REQUIRED, if possible with appointments, providing moderate income; preferably country town over 15,000 pop. Hospital experience Anaesthetics & Mids.; M.B., B.S.Lond.; replies treated confid. —No. 714, B.M.A. House, Tavistock Sq., W.C.1.

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EAST BERGHOLT (NEAR COLCHESTER), Suffolk.—For sale or to let, BUNGALOW, 3 bed., dining, and drawing room, kitchen, larder, bath, h. and c. Garage. Electric light, 'phone. Nice garden. Excellent view over Flatford (Constable's country).—Apply Capt. GOODMAN, Dunedin, East Bergholt.

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LOCK-UP SURGERY IN HAMMERSMITH FOR SALE. Promising Nucleus, prominent position, opposite cinema, main road. Thickly populated district. Rent 30/- p.w. lease. Good reason for disposing.—Address, No. 724, B.M.A. House, Tavistock Square, W.C.1.

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NEW RESIDENCE FOR SALE, RAPIDLY growing district, frontage main and side roads, 4 bed., 2 reception rooms, breakfast room, kitchenette, 2 sep. lavatories, bathroom, garage space. Eminently suitable for Doctor or Dentist. Price £1,295 freehold; 90 per cent. mortgage arranged.—Apply, Hamilton's Estate Office, 448, Watford Way, Hendon. (214 'bus route from Hendon Central Station.)

MODERN HOUSE OPPOSITE IMPORTANT N. London suburban station. Five rooms; labour-saving details; new condition throughout. Garage space, cellar. £930 freehold.—Write, Box 129, SELLS, Fleet Street, E.C.4.

TO LET. — PART-TIME CONSULTING ROOM; use waiting room; services; Queen Anne St., Cavendish Square. Plate on door. Rent £40 per annum.—Address, No. 601, B.M.A. House, Tavistock Square, W.C.1.

WIMPOLE STREET.—FIRST FLOOR CONSULTING ROOM (small). Very light and quiet. Plate. 120 gns. Very efficient service at door and telephone. Also BEDROOM, well-furnished. Lift. 2 gns. — Address, No. 101, B.M.A. House, Tavistock Square, W.C.1.

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FOR SALE. — WONDERFUL LEITZ-SEIBERT Microscope, as new, photogr. tube, dark-field ill., magn. 40 – 2,300 ×, cost £27; also Bürcke Haemocytometer and hand centrifuge. £17, no offers. — Address, No. 713, B.M.A. House, Tavistock Square, W.C.1.

X-RAY UNIT, PORTABLE, BY WAPPLER. Exceptional Bargain, 90 kVp, 10 mA, complete with 2½ kW line focus tube. Auto-transformer for all A.C. supplies. Demonstration arranged. — Address, No. 702, B.M.A. House, Tavistock Square, W.C.1.

ROLLS.—20 H.P. 1924 CHASSIS, WEYMANN Coupé body fitted 1928. Just thoroughly overhauled, repainted, and inspected by Makers. Perfect condition. Particulars and photo. £195.—"Beverly," Marton-in-Cleveland.

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APPOINTMENTS.—Contd.

ROYAL DEVON AND EXETER HOSPITAL, EXETER. (225 Beds.)

HOUSE PHYSICIAN (Male).

Applications are invited for the post of House Physician at this Hospital, shortly becoming vacant. The appointment is for six months, but candidates are eligible for re-election.

Salary at the rate of £150 per annum, with board, apartments, and washing.

Applications, giving particulars as to age and qualifications, together with copies of three recent testimonials, should be sent to the undersigned as soon as possible.

By Order of the Committee,

S. S. COLE,

Jan. 10th, 1933. Secretary & Manager.

MONKWEARMOUTH AND SOUTHWICK HOSPITAL, SUNDERLAND.

Applications are invited for the position of HOUSE SURGEON. Salary £160 per annum, with board, residence, and attendance. Duty to commence January 18th. The appointment is for six months, with option of re-engagement for further six months.

The Hospital is an entirely new one, equipped with all modern apparatus.

The post offers exceptional opportunity to enthusiastic candidates.

Applications, stating age, nationality, and previous experience, together with copies of testimonials, should be forwarded to the Secretary, not later than Tuesday, Jan. 17th.

LEICESTER ROYAL INFIRMARY. (472 Beds.)

SURGICAL DRESSER.

A vacancy has arisen for a Surgical Dresser (Final Year Student preferred).

Honorarium 10/6 a week for approved service; board, etc., provided. Appointment for three months.

Applications forthwith to the House Governor and Secretary.

January 10th, 1933.

WANTED AT SOUTHMEAD HOSPITAL, BRISTOL, RESIDENT OBSTETRIC OFFICER. Temporary appointment for 12 months. Salary £200 per annum, less temporary reduction in accordance with scale adopted by the Council. Applicants must have had experience in midwifery and gynaecology and have held similar appointment in a hospital. Application form, together with further particulars, may be obtained from the Medical Officer of Health, 40, Prince Street, Bristol, to whom the application form must be returned not later than January 28th.

EAST SUFFOLK AND IPSWICH HOSPITAL. (282 Beds—Seven Residents.)

Wanted, February 1st, HOUSE SURGEON (British, Male). Salary at the rate of £120 per annum.

Applications, stating age qualifications, and experience, to be sent to the undersigned together with copies of three recent testimonials.

The Hospital. ARTHUR GRIFFITHS,

Ipswich. Secretary.

HOSPITAL FOR WOMEN AT LEEDS.

HOUSE SURGEON to commence duties on February 1st next. Salary at the rate of £100 per annum, together with board, quarters, and laundry. The appointment is for six months. Applications, together with copies of testimonials, should be addressed to B. L. JEAFFRESON, Honorary Secretary to the Faculty, and must be received by Saturday, January 21st.

S. CECIL HILL, Secretary.

THE ROYAL EYE AND EAR HOSPITAL, BRADFORD.

Wanted, JUNIOR HOUSE SURGEON (male). Salary £150, with board, residence, and laundry. Applications, stating qualifications, age, etc., with copies of recent testimonials, to be forwarded to the undersigned.

F. BRIGGS, Secretary-Supt.

ALL SAINTS' HOSPITAL (FOR GENITO-URINARY DISEASES), Austral Street, West Square, Southwark, S.E.11.

Vacancies exist for CLINICAL ASSISTANTS in the Out-patient Department. Fee £5 5s. for three months. Applications should be sent to the Secretary at the above address.

WEST END HOSPITAL FOR NERVOUS DISEASES,
In-Patient Dept.: Gloucester Gate, N.W.1.

The Committee of Management invite applications from British male candidates for the following appointments. Duties to commence February 1st.

SENIOR HOUSE PHYSICIAN. Salary at the rate of £150 per annum, with board, residence, and laundry.

JUNIOR HOUSE PHYSICIAN. Salary at the rate of £100 per annum, with board, residence, and laundry.

Appointments in first instance for six months. Applications, with testimonials, must be received by the undersigned not later than Monday, January 23rd.

J. P. WETENHALL,
73, Welbeck St., W.1. Secretary.

MANCHESTER ROYAL INFIRMARY.

ASSISTANT MEDICAL OFFICER.

MASSAGE AND ELECTRICAL DEPARTMENT.

The Board of Management invite applications from registered Medical Practitioners (men and women) for the above appointment. Previous experience in the work is not essential.

The duties are to attend daily and to assist the Medical Officer in charge of the Department. The appointment is part-time (non-resident) for one year. Salary £100 per annum.

Candidates must state age, and send twelve copies of their application and testimonials, to the undersigned on or before Thursday, January 26th.

By Order,
FRANK G. HAZELL,
Dec. 19th, 1932. Gen. Supt. & Secretary.

BURY INFIRMARY, LANCS.
(127 Beds.)

Applications are invited for the post of SENIOR HOUSE SURGEON, who must have both Medical and Surgical qualifications. The appointment is for six months at a salary at the rate of £200 per annum, with board, residence, and laundry. The successful applicant will be required to commence duties about the beginning of February.

Applicants must have held a previous resident appointment.

Applications, stating age, qualifications, and nationality, with copies of three recent testimonials, to be sent to the undersigned not later than January 21st.

ALEX. W. MAITLAND,
Honorary Secretary.

CORNELIA & EAST DORSET HOSPITAL, POOLE. (105 Beds.)

HONORARY STAFF.

ASSISTANT ANAESTHETIST.

The Committee of Management invite applications for the post of Assistant Anaesthetist on the Honorary Staff of the Hospital.

Applications, stating age, qualifications, particulars of appointments held, and experience, together with copies of testimonials (which will not be returned) should reach the undersigned by February 4th.

E. S. FOLEY, Secretary.

EASTBOURNE: PRINCESS ALICE MEMORIAL HOSPITAL. (116 Beds.)

Applications are invited for the post of HOUSE SURGEON (male). Salary at the rate of £150 per annum, with board, lodging, and laundry. There are two Residents and the appointment is for six months, commencing February 1st.

Candidates must be unmarried, fully qualified, and registered. Applications, stating age, qualifications, etc., accompanied by copies of not more than three testimonials (one of which should be from Medical School), should be sent to the Secretary to reach him not later than Monday, January 23rd.

CHARING CROSS HOSPITAL.

ASSISTANT SURGEON.

The Council invite applications for the post of ASSISTANT SURGEON to the Charing Cross Hospital. Candidates, who must be Fellows of the Royal College of Surgeons of England, should send in their applications, together with copies of three testimonials, to the undersigned not later than Monday, January 30th.

PHILIP INMAN,
Charing Cross Hospital, W.C.2. House Governor.

CHESHIRE JOINT SANATORIUM, MARKET DRAYTON.

HOUSE PHYSICIAN required (male). The appointment will be for twelve months. Inclusive salary £250 p.a., with board, residence, and laundry.

Application to be made on forms obtainable from the Medical Superintendent.

HOSPITAL OF ST. CROSS, RUGBY.

Applications are invited for the post of MALE RESIDENT MEDICAL OFFICER. Qualified. (Three R.M.O.'s.)

Salary to commence at the rate of £100 per annum for first three months, £125 per annum for second three months, and at the rate of £150 per annum for subsequent months.

Six months' appointment, and eligible on completion of service for further extension of six months.

Candidates must be prepared to commence duties on February 1st.

The practice of the Hospital offers excellent opportunities for wide experience.

Certificates and other fees shared by R.M.O.'s.

Applications, stating age, nationality, and full details, with copies of three recent testimonials, to be sent to the undersigned.

(Signed) W. COCKBURN,
Superintendent & Secretary.

ROYAL DEVON AND EXETER HOSPITAL, EXETER. (225 Beds.)

HOUSE SURGEON (Male).

Applications are invited for the post of House Surgeon at this Hospital, shortly becoming vacant. The appointment is for six months, but candidates are eligible for re-election.

Salary at the rate of £150 per annum, with board, apartments, and washing.

Applications, giving particulars as to age and qualifications, together with copies of three recent testimonials should be sent to the undersigned as soon as possible.

By Order of the Committee,
S. S. COLE,
January 6th, 1933. Secretary & Manager.

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY.

The Board of Management invite applications for the post of CASUALTY OFFICER from unmarried medical gentlemen, doubly qualified and registered. Additional duties under Assistant Surgeons. Total Resident Staff six.

Successful applicant will be considered for other posts as vacancies occur.

Salary at the rate of £150 per annum, with board, residence, and laundering.

Applications, stating age, training, and qualifications, to be forwarded to Mr. JOHN GIBSON, Superintendent and Secretary, Royal Infirmary, Preston.

January 6th, 1933.

ROYAL VICTORIA AND WEST HANTS HOSPITAL, BOURNEMOUTH.

HOUSE SURGEON, also CASUALTY OFFICER (male, British nationality) required to commence duty end of January. Salary £150 per annum, with board, lodging, and washing. The appointment is tenable for six month and candidates must be registered according to the provisions of the Medical Act.

Applications, stating place of birth and age, with copies of three testimonials, to be sent immediately to the undersigned. Women and married men are ineligible.

GORDON M. SAUL,
January 3rd, 1933. Secretary.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE HEART AND LUNGS,
Victoria Park, E.2.
('Bus, Tram, and Rail, Cambridge Heath, L. & N.E. Railway.)

The Committee invite applications for the post of REGISTRAR (male) from March 1st. A salary is attached to the post.

Applications, accompanied by copies of three testimonials, should be sent to the undersigned on or before Friday, February 17th.

GEORGE WATTS, Secretary.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE HEART AND LUNGS,
Victoria Park, E.2.
('Bus, Tram, and Rail, Cambridge Heath, L. & N.E. Railway.)

A vacancy for a HOUSE PHYSICIAN (male) will occur on March 1st. Six months' appointment. Salary at the rate of £100 per annum. Board, residence, and laundry provided.

Applications with copies of three testimonials, should be sent to the undersigned on or before Friday, February 17th.

GEORGE WATTS, Secretary.

SEAMEN'S HOSPITAL SOCIETY, Greenwich.

HOUSE SURGEON (male) required at TILBURY HOSPITAL, Essex, for six months from February 1st. Salary £140 per annum, with board, residence, and laundry. Good opportunity for minor surgery. Applications, with copies of three testimonials, to be sent in by January 17th to the undersigned.

R. E. V. BAX,
Seamen's Hospital Society, Greenwich, S.E.10. Secretary.

DORSET COUNTY HOSPITAL, DORCHESTER.

APPOINTMENT OF HOUSE SURGEON.

The Committee of Management are open to receive applications for the position of House Surgeon, to take up his duties on or about February 13th.

Every candidate must be unmarried and possess a registered qualification to practise Medicine and Surgery from some recognized Body in Great Britain or Ireland. Salary £160 per annum, with board and lodging. The appointment is for a period of not less than six months. All applications, accompanied by copies of three recent testimonials, should be sent to the Secretary, Dorset County Hospital, on or before February 1st.

Candidates must be of British nationality.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.1.

Applications are invited for the post of HOUSE PHYSICIAN (male) for six months from February 12th (first two months in Casualty and Out-Patient Department). Salary at the rate of £120 per annum, with board and residence.

Applications, stating age, experience, and qualifications, accompanied by copies of four testimonials, to be sent to the undersigned not later than January 24th, from whom rules and other particulars can be obtained.

By Order of the Committee of Management,
W. H. SIDNELL,
Jan. 3rd, 1933. Secretary-Supt.

EYE, EAR AND THROAT HOSPITAL FOR SHROPSHIRE AND WALES.

APPOINTMENT OF HOUSE SURGEON.

The Board of Management invite applications for the post of House Surgeon at the Eye, Ear and Throat Hospital, Shrewsbury (45 beds).

Candidates (either sex) must be unmarried and have a registered qualification in Medicine and Surgery. Salary £225 per annum, with board, lodging, and laundry. Applications, with copies of testimonials, to be sent in sealed envelopes, marked "House Surgeon," to the Chairman of the Board of Management not later than January 27th.

C. S. ASBURY, Secretary.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL, Haverstock Hill, N.W.3.

APPOINTMENT OF HOUSE PHYSICIAN.

Applications are invited from unmarried Medical Men for the appointment of House Physician, vacant on February 1st next.

The salary will be at the rate of £100 per annum together with board, residence, etc., and the term will be for six months.

Application to be made on a form which will be supplied by the Secretary, together with copies of not more than three testimonials, should reach the Secretary not later than noon on January 25th.

MANSFIELD AND DISTRICT HOSPITAL.

The Board of Management of the above Hospital (135 beds) invite applications for the post of HOUSE SURGEON (male). Duties to commence on February 1st next.

Salary at the rate of £150 per annum, with residence, board, and laundry.

The appointment is for six months and is renewable.

The Resident Staff consists of a Resident Surgical Officer and Two House Surgeons.

Applications, accompanied by not more than three recent testimonials, to be sent to the Secretary, Mansfield and District Hospital.

Dated this 6th day of January, 1933.

BRADFORD ROYAL INFIRMARY.

THREE HOUSE SURGEONS (male) wanted March 1st (six months' appointment). Candidates must be single and legally qualified.

Salary £135 per annum, with board, residence, and washing. There are 215 beds and six resident officers.

Applications, stating age, qualifications, and previous experience (if any), with copies of recent testimonials, to be received by the undersigned not later than January 24th.

J. J. BARRON,
Secretary-Superintendent.

LONDON HOSPITAL, E.

There is a vacancy for the post of ASSISTANT PHYSICIAN at this Hospital.

Candidates must be Members of the Royal College of Physicians of London.

Applications should be sent to the House Governor, and should arrive not later than Saturday, February 11th.

ARTHUR G. ELLIOTT,
London Hospital, E. House Governor.

NORTH RIDING INFIRMARY, MIDDLESBROUGH.
(General Hospital—150 Beds.)

[illegible] for the post of (gentleman) to take the appointment will x months, renewable.

Salary at the rate of £150 per annum, with board, residence, and laundry.

Applications, stating age, nationality, and previous experience, with three recent testimonials, should be sent forthwith to the undersigned.

CHARLES POSTGATE,
Secretary-Superintendent.

BIRMINGHAM MATERNITY HOSPITAL.

Applications are invited for the post of RESIDENT MEDICAL OFFICER AND REGISTRAR, to commence duties on March 1st next. The appointment is made for one year at least, and can be renewed if desirable. Salary £200 per annum.

Applicants must have had previous experience in Obstetrics and be reading for Higher Examinations.

Applications and copies of testimonials to be sent to Mr. HUGH C. ASTON, 45, Newhall Street, *Birmingham, not later than January 30th.*

BIRMINGHAM MATERNITY HOSPITAL.

The Committee invite applications for the post of HONORARY OBSTETRIC SURGEON.

Candidates must hold the qualification of F.R.C.S.England.

Full particulars may be obtained from, and applications, with copies of testimonials, should be sent not later than January 30th to, HUGH C. ASTON 45, Newhall Street, Birmingham.

MARGATE AND DISTRICT GENERAL HOSPITAL (92 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male).

Salary £150 per annum, with board and laundry.

Duties to commence February 1st.

Applications, accompanied by copies of testimonials, should be addressed to the Secretary at the Hospital as early as possible.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, BRIGHTON. (100 Beds.)

HOUSE SURGEON (male) required. Salary at the rate of £100 per annum, with board, lodging, and laundry. No canvassing allowed. To commence duties as soon as possible.

Applications, in writing, accompanied by testimonials, should be sent to PERCY F. STOONER, Secretary.

January 4th, 1933.

WESTERN OPHTHALMIC HOSPITAL, Marylebone Road, N.W.1.

Applications are invited for the post of HONORARY ANAESTHETIST. An honorarium of £1 1s. per visit is given.

Applications, accompanied by copies of not more than three testimonials, should reach me by January 19th.

H. W. BURLEIGH, Hon. Sec.

ESSEX COUNTY HOSPITAL, COLCHESTER. (160 Beds.)

Wanted, a HOUSE SURGEON (male). Salary £175 per annum, with board, washing, and residence in the Hospital. Medical and Surgical qualifications required. Applications, with three recent testimonials, to be sent by Wednesday, January 18th, to—

ALFRED G. BUCK, Secretary.

GREENOCK ROYAL INFIRMARY.

Wanted, a HOUSE SURGEON *(lady)* for February 1st. Salary £100 p.a., including board, residence, and laundry. Other two Residents on staff. 150 beds. Good experience. Applications invited, with testimonials, to be sent to the Secretary, 2, Hamilton St., Greenock.

JAS. A. LOVE, Secretary.

NEWARK GENERAL HOSPITAL. (50 Beds.)

Wanted, a fully qualified RESIDENT HOUSE SURGEON, unmarried. Salary £175 per annum, with board, residence, and laundry. Applications, stating age *and qualifications*, with copies of testimonials, to be sent to W. T. CRAMPTON (Secretary), 27, Kirk Gate, Newark, Notts.

ROTHERHAM HOSPITAL.

Wanted, HOUSE PHYSICIAN (male). Salary £180 p.a., with board, residence, and laundry, to take charge of Out-patients, administer Anaesthetics, and assist Honorary Physician.

Applications, with copies of recent testimonials, to be sent to the Secretary, G. W. ROBERTS, 8, Moorgate Street, Rotherham.

BOROUGH MENTAL HOSPITAL, CANTERBURY.

Wanted, ASSISTANT MEDICAL OFFICER (male), age not over 35. Salary £350 per annum, rising by annual increments of £25 to £450 per annum, with an additional £50 to the holder of the D.P.M. Furnished apartments, board, laundry, and attendance provided.

The appointment will be subject to the provision of the Asylums Officers Superannuation Act, 1909.

Applications, with full particulars and copies of not more than three recent testimonials, of recent date, to be sent to the Medical Supt.

ST. MARY'S HOSPITALS, MANCHESTER.

TWO HOUSE SURGEONS for the WHITWORTH STREET WEST HOSPITAL (Maternity) and TWO for the WHITWORTH PARK HOSPITAL (One Children's Dept. and one Gynaecological Dept.) each for a period of six months from February 1st next. Salaries at the rate of £50 per annum, with board and residence.

Applications, with copies of three testimonials, to be sent to the undersigned on or before January 16th, 1933.

R. RATCLIFFE, Secretary.

ST. MARY'S HOSPITALS, MANCHESTER.

RESIDENT OBSTETRIC OFFICER for the WHITWORTH STREET WEST HOSPITAL (Maternity) for a period of twelve months from February 1st next. Salary £175 per annum, with board and residence. Membership of the *College of Obstetricians and Gynaecologists* would be an advantage. Applications, with copies of three testimonials, to be sent to the undersigned on or before January 16th, 1933.

R. RATCLIFFE, Secretary.

ST. JOHN'S HOSPITAL, LEWISHAM, S.E.13.

A vacancy has been declared in the office of HONORARY SKIN PHYSICIAN, to fill which applications are invited.

The successful applicant will be required to take charge of beds and to take one Out-patient Clinic weekly

Applications, together with copies of testimonials, should be received by the undersigned not later than Monday, January 16th.

J. C GILBERT,
Secretary-Superintendent.

ST. JOHN'S HOSPITAL, LEWISHAM, S.E.13.

Applications are invited from registered Practitioners for the resident posts of HOUSE PHYSICIAN and CASUALTY OFFICER (male). Vacant on February 1st.

Appointments tenable for six months.

Remuneration £100 per annum.

Applications, with copies of recent testimonials, should reach the undersigned not later than the morning of January 16th.

J. C. GILBERT, Secretary-Supt.

LONGTON HOSPITAL, STOKE-ON-TRENT.

HOUSE SURGEON required. Commencing salary £160, with board, residence, and laundry, plus certain fees.

Applications, with copies of three recent testimonials and stating nationality, to be sent at once *to the Chairman of Directors, Longton* Hospital, Stoke-on-Trent.

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LINCS WOLDS. — UNOPPOSED PRACTICE. *About £700* p.a. Panel 325. Appts. about £64 p.a. Visits 3/6 to 15/-. Mid, 2 to 5 gns. Freehold residence, 5 rooms and professional and domestic offices. Garage and garden. For sale £800.—No. 9115.

EASTERN COUNTY.—PARTNERSHIP, HALF share in Country Practice of £2,700, with panel 1,400. Fees 3/6 to 15/-. Premium 2 yrs.' purchase. House, freehold, 4 reception rooms, 2 bedrooms, bathroom, garage, electric light, and good garden. Price £1,850.—No. 9114.

OUTER RESIDENTIAL SUBURB. — GOOD-class PRACTICE hitherto worked only part-time. £350 p.a. No panel and non-dispensing. No midy. taken. Visiting fees 10/6 and 21/-. Good freehold house, 2 reception, 7 bedrooms, 2 bath., cons. room, etc. Price £2,800 for house and Practice.—No. 9110.

CHANNEL ISLES.—OVER £400 P.A. NON-panel. No midy taken. Ins. work about £60 p.a. Visits 3/6 to 7/6. Premium 1½ yrs.' purchase. Trout and sea-fishing. Choice of houses —No. 9107.

ANGLO-WELSH BORDERS.—PARTNERSHIP. One-third share of £1,800 p.a., increasing to half later. Panel and appts. about £785. Fees 7/6 to 42/-. Partner should be physician. Good modern hospital.—No. 9105.

YORKSHIRE COAST TOWN. — OVER £800 p.a. Visiting fees 3/6 to 7/6, surgery 2/6 up. Two appointments worth £30 p.a. Midy. cases *average* 10—20 *p.a.* Premium £1,250. Good house, 2 reception rooms, 4 bedrooms, bathroom, etc., surgery and waiting room, good garden and garage. Price £1,700. —No. 9104.

BERKS. — OLD-ESTABLISHED. — COUNTRY PRACTICE, about £700 p.a. has been £1,100. Panel about 500. Visiting fees 2/6 to 7/6. Very little midwifery. Splendid house, specially built for Vendor, with two acres of grounds, 2 reception rooms, 6 bedrooms, surgery, and waiting rooms, etc. Consider £4,000 offer for Practice & house, freehold.—No. 9100.

SOUTH WALES. — *NEAR CARDIFF.* — WELL-established middle and working-class PRACTICE, returning over £600 p.a. Panel 400. Visiting fees 2/6 to 5/-. Surgery 2/- to 3/6. Mids. average 12 p.a., scope for more. Modern built house, 4 bedrooms, 2 reception rooms, excellent separate surgery and dispensary. Price of house and practice £1,600.—No. 9095.

YORKSHIRE. — AVERAGING £1,050 P.A., with panel of 400. Better-class dispensing PRACTICE in outskirts of large town. Appointments worth £45 p.a. Very little midwifery. Visiting fees 3/6 to 10/6 and 21/-. Premium £1,350. Handsome stone-built house in centre of Practice, with 6 bed., waiting and cons. with sep. ent. Large lounge and dining room, etc. Garage for 2 cars. Rent £100 p.a.—No. 9093.

MIDDLESEX SUBURB.—RAPIDLY GROWING residential district. Established 3½ years and at present returning about £600 p.a. Visiting fees 5/- up. Midwifery 5 to 6 gns. House, with 2 reception, 5 bedrooms, separate surgery and waiting room, and large garden. Sell at £1,600, mortgage £1,000. Premium for goodwill £900 or offer.—No. 9070.

HANTS. — OVER £650 P.A. — COUNTRY within 5 *miles of a town.* Panel 450. Appts. and clubs £135. Very little midwifery. Fees 5/- to 10/-. Old-fashioned freehold house, with modern comforts, central heating, electric light, etc. 7 bed., 2 recep., stabling, & 1 acre. Price £1,950. Practice £1,000.—No. 9081.

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PRACTICE OR PARTNERSHIP WITH PANEL. Country in S. or S.W. County or Home County. £1,000 p.a. or so. Good house, 6 bed., and grounds. Applicant is married man of 45, M.D., etc., and has ample capital.—No. 251.

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MIDDLESEX, W.—Good middle-class, non-dispensing G.P. situated in growing residential locality. Medium-sized house available. Garden, garage. Separate entrance to Surgery. Receipts approx. £1,200 (books audited). Panel nearly 1,000. Premium 2 years' purchase or near offer.

NORTH OF ENGLAND.—PARTNERSHIP in old-established mixed G.P. Suitable accommodatic over £3,000 p.a. Panel 1,500. One-third or years' purchase.

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WEST COUNTRY.—Old-established Country Town PRACTICE with medium-sized house to rent. Receipts £1,200/£1,400. Panel over 1,300. Several appointments. Cottage Hospital. Premium 2 years' purchase.

WEST COUNTRY (Large Town). — Well-established mixed better-class PRACTICE with scope for Surgery and Eye work if desired. Medium-sized house to rent. Average receipts approx. £950. Panel 370. Fees 5/- to 1 gn. Two appointments. Premium 1½ years' purchase.

MIDLANDS (Within 2 hours of London).—Well-established mixed G.P. Receipts nearly £1,700. Small panel, 350. Medium-sized leasehold house. Fees 2/6 to 1 gn. Mids. 3 gns. Premium for Practice and house £3,250 or near offer.

LANCS (Large Town).—Good-class G.P., situated in residential locality. Medium-sized house to rent. Receipts over £1,600. Panel approx. 700. Fees 5/6 up. Premium 1½ years' purchase.

LONDON, E.C.—Mixed Cash and Panel lock-up PRACTICE, with living accommodation if desired, facing main thoroughfare, held on lease at £95 p.a. Receipts nearly £700. Panel 450 (scope). Fees 1/6 to 10/6. Midwifery not undertaken. Premium £1,000.

DURHAM.—Middle-class and industrial PRACTICE. Average receipts approx. £500. Panel 370. Medium-sized house. Branch Surgery. Fees 2/6 up. No appts. Premium £725 or offer. Excellent scope.

LONDON, E.—Suburban middle-class G.P. Medium-sized house to rent on lease at the low rental of £50 p.a. Fees 2/- up. Average receipts £516. Panel 350. Excellent scope for young man. Premium for Practice and lease £1,050 cash or near offer.

MIDDLESEX, N.—Rapidly increasing mixed G.P. situated within 10 miles of London in residential locality. Suitable modern house to rent (5 beds); would sell if desired. Average receipts approx. £1,240. Panel nearly 500. Excellent scope. Prem. 1½ years' purch.

YORKSHIRE.—Town PRACTICE in industrial locality. Medium-sized house (5 beds.). Receipts approx. £700. Panel 520. Fees 2/6 up. Premium for Practice and freehold house, £2,000 cash.

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5. YORKS. — Large Town. — Old-established mixed-class PRACTICE. Average income £980, panel 400. Nice house, on rental. Prem. £1,350. Vendor moving to London.
6. CO. DURHAM.—Well-established PRACTICE. Receipts about £550 p.a. Panel 370. House £52 p.a. Premium £650 or near offer.
7. RIVERSIDE TOWN.—Old-established PRACTICE. Receipts £1,000 a year, including fair panel. Nice house on rental. Premium 1½ years' purchase.
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LANCS TOWN, near Country.—Old-established mixed PRACTICE. Cash receipts last year £725. Panel 1,050. Excellent detached corner house, 3 reception, 6 bedrooms; garage and large garden. To rent on lease. Premium 1½ years' purchase, or near offer.—No. 403.

NORTH-WEST COAST.—LARGE RESIDENTIAL AND SEASIDE TOWN.—Old-established PRACTICE. Cash receipts about £1,200 p.a. Panel 1,500. Excellent detached corner house (freehold), 3 professional rooms, 5 bedrooms, and 2 reception rooms, garage, & good garden, for sale. Prem.—Practice—1½ yrs.' pur.—No. 417.

EAST YORKS. — Country Town near Coast.—Unopposed mixed PRACTICE. Cash receipts last year £960. Panel 630. Excellent detached house, 3 reception, 4 bedrooms; garage and large garden. Premium 1½ years' purchase.—No. 346.

MANCHESTER. — PARTNERSHIP, with view to succession in two years, in old-established mixed panel and private Practice. Cash receipts 1931, £2,408. Panel 2,700. Good house available, 2 reception, 4 bedrooms, garage, and small garden. Rent £50 p.a. Premium—half share—1½ years' purchase.—No. 418.

NORTH WALES.—COUNTRY TOWN, near Coast. — Mixed PRACTICE. Cash receipts last year £1,752. Panel 1,393. Good house, 3 reception, 8 bedrooms, garage, and garden, for sale or to rent. Cottage Hospital. Premium — Practice — £2,500 (to include fittings, instruments, etc.).—No. 376.

MANCHESTER. — Old-established middle-class (non-dispensing) PRACTICE in residential suburb. Cash receipts last year £985. Excellent detached house, 2 reception, 6 bedrooms. Garage and good garden. Premium 1 year's purchase.—No. 406.

NEAR LIVERPOOL.—PARTNERSHIP in middle-class (non-dispensing) Practice. Average cash receipts £2,300 p.a. Panel 620. Excellent house, 3 reception, 6 bedrooms, garage, and garden, with tennis court, to be sold or let on lease. Senior Partner retiring. Premium—one-half share—1½ years' purchase.—No. 407.

MANCHESTER.—Mixed PRACTICE in pleasant suburb. Cash receipts last year £720, including appointments £60. Panel 600. Scope for increase. Excellent house, 3 professional rooms, 4 bedrooms; garage and good garden. Premium 1 year's purchase. Vendor retiring.—No. 416.

OPHTHALMIC SURGEON in old-established Practice in Northern City requires a PARTNER with view to succession. Must have D.O.M.S. or D.O. and be good operator. Preliminary Assistantship if desired.—No. 353.

MANCHESTER. — Middle-class PRACTICE, in pleasant suburb. Cash receipts last year, £1,327. Panel 528. Charming house to rent, 3 reception, 6 bedrooms, billiard room. Large garden and garage. Premium—Practice—1½ years' purchase.—No. 322.

NORTH-WEST COAST. — Old-established upper and middle-class (non-dispensing) PRACTICE. Cash receipts last 9 months £640. Panel 289. Scope. Modern semi-detached house. 2 reception, 3 bedrooms, garage, and garden. Premium £300.—No. 409.

LIVERPOOL. — Mixed PRACTICE. Cash receipts £700 p.a. Panel 876. Scope for increase. Small house to rent. Premium, best offer.—No. 366.

MEDICAL WOMAN'S PRACTICE.—MANCHESTER.—Cash receipts last year £645. Panel 450. Good scope. Excellent house, 3 reception, 6 bedrooms, garage. Rent £80 p.a. on lease. Premium, best offer.—No. 330.

NORTH WALES.—Old-established mixed PRACTICE, in Country Town, near coast. Cash receipts last year £700. Panel 538. Scope for increase as the Practice has been neglected. Excellent house, 3 reception, 5 bedrooms, garage, and large garden. Net rent £50 p.a. Good sport and educational facilities. Welsh not essential. Cottage Hospital. Premium £800.—No. 412.

CHESHIRE COAST TOWN, near LIVERPOOL. — NUCLEUS held by Medical Woman Cash receipts last eleven months £125. Panel 95. Scope for increase as Vendor has not given full time to Practice. Excellent semi-detached house, containing 3 professional rooms, 4 bedrooms, etc. Small garden. Rent £75 p.a. Prem. £150 or near offer.—No. 415.

NORTH-WEST COAST, near LAKES. —Middle-class PRACTICE in beautiful district. Cash receipts last year £816. Panel 250. Scope. Detached house on sea front, 3 reception, 7 bedrooms. Garage and nice garden. Prem. 1½ yrs.' pur.—No. 388.

MANCHESTER.—Residential Suburb. —Middle-class PRACTICE. Suitable for two in Partnership. Cash receipts last year, £4,578. Panel 1,400. Two excellent houses to rent with ample accommodation. Premium 1½ years' purchase, part by arrangement.—No. 277.

LARGE LANCS CITY. — Ophthalmic Surgeon in old-established Practice requires a PARTNER with a view to succession. Applicants should possess D.O.M.S. or D.O., and be good operators. Preliminary Assistantship if desired.—No. 353.

NORTH-WEST COAST.—PARTNER wanted for mixed PRACTICE in favourite Seaside Town. Must be thoroughly experienced in Ophthalmology and/or in Ear, Nose, and Throat work. Great scope for a good man. Suitable house available. Average cash receipts £2,500 p.a Terms to be arranged.—No. 414.

DERBYSHIRE.—Small PRACTICE in beautiful district. Cash receipts £300 p.a. Panel 90. Good house, 2 reception, 3 bedrooms, nice garden. Rent £60 p.a. clear. Premium £200.—No. 367.

NORTH-WEST COAST. — LARGE SEASIDE TOWN. — Old-established PRACTICE. Cash receipts £874 p.a. Panel 250. Excellent freehold house, 2 recep., 5 beds., garage, and garden.—No. 265.

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3 BIRMINGHAM. — PARTNERSHIP (AFTER PRELIMINARY Assistantship) in Practice about £2,500 p.a. in suburb. Panel 2,400, increasing. Suitable house available. Applicant should have held Hospital appointments and be experienced in General Practice. Share would be sold to a suitable man after preliminary assistantship.

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11 HOME COUNTIES. — PRACTICE IN DELIGHTFUL COUNTRY District, easy distance of London. Earnings this year estimated at about £650. Panel over 300. Attractive house (7 bed and dressing rooms) in grounds of two acres, with garage, for sale. Very suitable for Resident Patients. Good scope for increase. Premium £700.

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18 LONDON, W.—GOOD MIDDLE-CLASS PRACTICE £400 P.A. in suburb within easy access of the West End. Panel over 100. Attractive double-fronted house with nice garden for sale. Scope for increase. Premium 1½ years' purchase.

19 CORNWALL.—VERY OLD-ESTABLISHED PRACTICE OF OVER £1,100 p.a. in delightfully situated seaside village on West Coast. Panel about 550. Well-built house (7 bed and dressing rooms), standing in half-acre of ground for sale. Scope, as building is going on. Premium 1½ years' purchase.

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2. WITHIN TWENTY MILES OF LONDON.—PARTNERSHIP.—A share, producing about £850 p.a., is offered (after a preliminary assistantship of three months), in a sound and increasing mixed-class Practice, having good scope. *Large panel. Suitable house available,* on rental. Premium 2 years' purchase. Scottish Graduate preferred.
3. CENTRAL LONDON.—Middle-class PRACTICE, producing about £750 p.a., with panel of 350. Fees 3/6 upwards. Midwifery not encouraged. Suitable flat containing sitting room, 2 bedrooms, etc., surgery, and *waiting room.* Rent on lease £120 p.a. Premium £800, or near offer.
4. MIDLAND CITY.—Old-established *good-class* PRACTICE *situated in* residential district, and producing about £1,600 p.a. net. Visits 3/6 to 21/-. Excellent house with all conveniences, nice garden, *garage, etc.* Vendor's leasehold property (25 years to run). Price for Practice and lease £3,250.
5. *LANCS. — LARGE TOWN. — Old-established* upper and middle-class PRACTICE, situated in purely residential district and averaging about £1,700 p.a. including appt. of £130, and panel of 700. Visits 5/- upwards. Very little midwifery at 5 to 10 guineas. Expenses low. Excellent and well-built house, ideally situated, having ample accommodation (surgery, *waiting* room, and dispensary, 3 reception, 5 bedrooms, etc.). Rent on lease £120. Premium £2,500. Good educational facilities.
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8. CHESHIRE.—NEAR COAST.—Old-established middle and working-class PRACTICE, averaging for the past three years over £1,300. Panel of 550. Fees from 3/6. Good house, with 3 reception, 7 bedrooms, etc. Price for freehold £1,200, part on mortgage.
9. PARTNERSHIP.—ANGLO-WELSH BORDER.—A one-third share, with increase later, is offered in an *old-established good mixed Practice,* situated in pleasant country town, amidst beautiful surroundings. Gross cash receipts for last 12 months £1,800, of which £800 is from panel and appts. Purchaser should be interested in medicine as Vendor undertakes surgery. Suitable accommodation obtainable. Premium £900, part by instalments if desired.
10. *SOUTH* [illegible] *ENGLAND.*—LARGE TOWN.—ASSISTANTSHIP with vi[illegible] Practice is very well established, chiefly [illegible] panel. Fees 3/6 to 10/6. Ingoing Partner should be between 24 and 26 years of age, with good Hospital experience, etc. and Public School education. Suitable house available during preliminary assistantship.
11. *SOUTH CORNWALL.—Old-established* unopposed PRACTICE, situated in very pleasant district, with mild climate. Gross cash receipts approximately £950 to £1,000 p.a., including £275 from panel and appointments. Fees 5/- to 7/6. Very nice house, *overlooking the* sea, containing 3 reception, 4 bedrooms, 2 maids' rooms, bathroom, etc., and professional accommodation. Garage. Garden. Freehold for sale, £300 down, and balance on mortgage. Premium £1,400, to include drugs, etc. Good scope for increase.
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17. KENT.—Good-class NUCLEUS, non-dispensing, in pleasant residential district within 20 minutes' run of London. Receipts between £350 and £400, and *offering exceptionally* good scope. Fees 10/6 to 21/-. Good house, ideally situated, with ¾ of an acre of garden, tennis court, etc. Price freehold £2,800, to include premium for Practice. Excellent educational facilities.
18. MIDDLESEX.—Residential District.—Mixed-class PRACTICE, averag*ing £537 p.a., including panel of 150.* Fees from 3/6. Corner house, with 2 reception, 5 bedrooms, and professional accommodation, *with* separate entrance. Freehold. Golf and other sport. Very good schools. Price for practice and house £2,100, or near offer, part on mortgage.
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4. LONDON or SUBURBS, preferably West or South-West.—PRACTICE or PARTNERSHIP producing about £1,200 p.a. or less if *scope.* Fair-sized house with garden.
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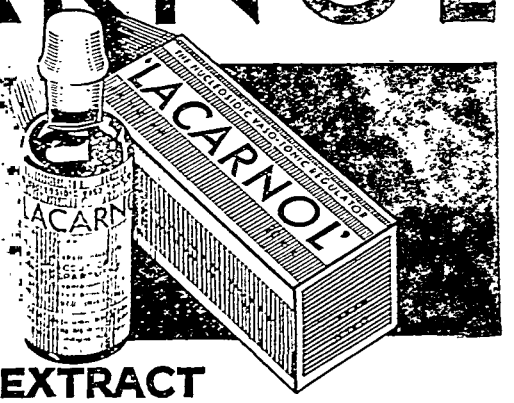

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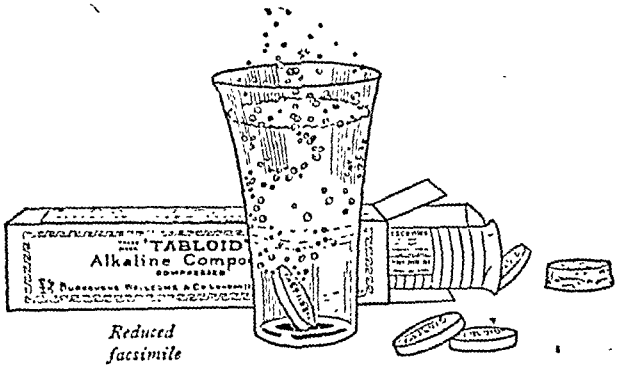

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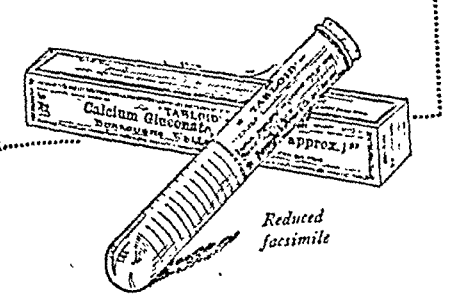

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The British Medical Journal

THE JOURNAL OF THE BRITISH MEDICAL ASSOCIATION

INSURANCE ACTS COMMITTEE
Report of January Meeting
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Including an Epitome of Current Medical Literature

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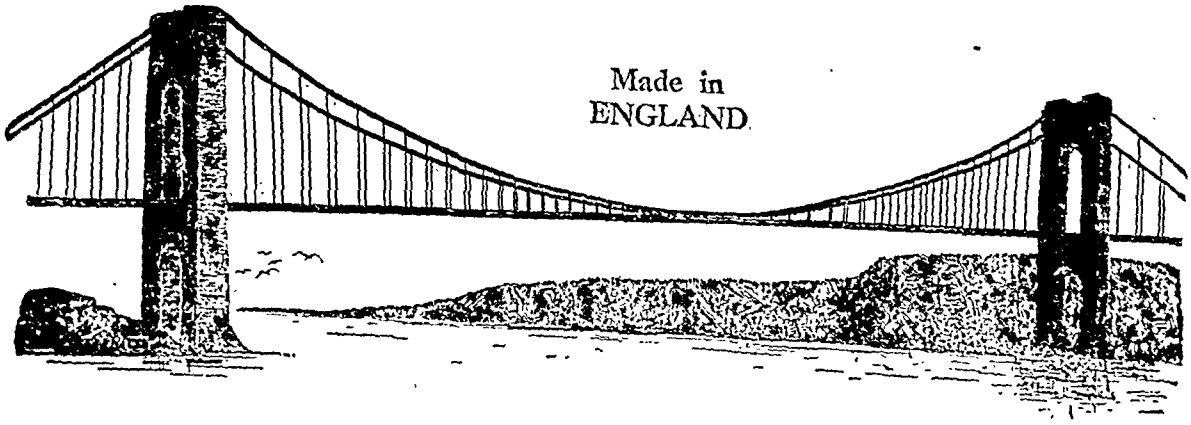

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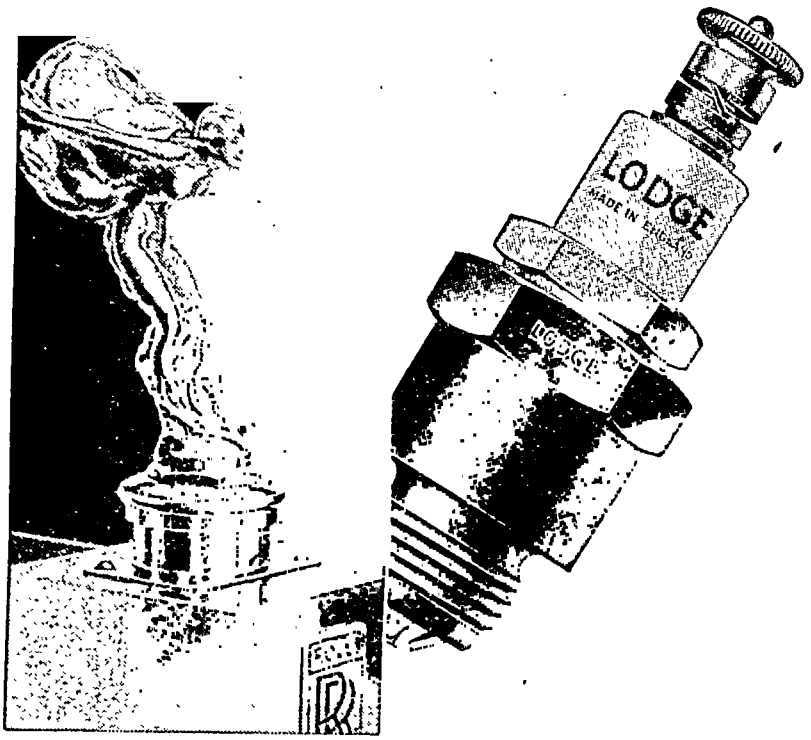

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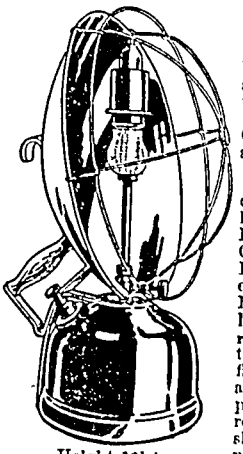
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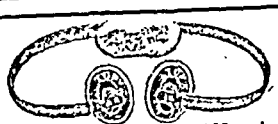

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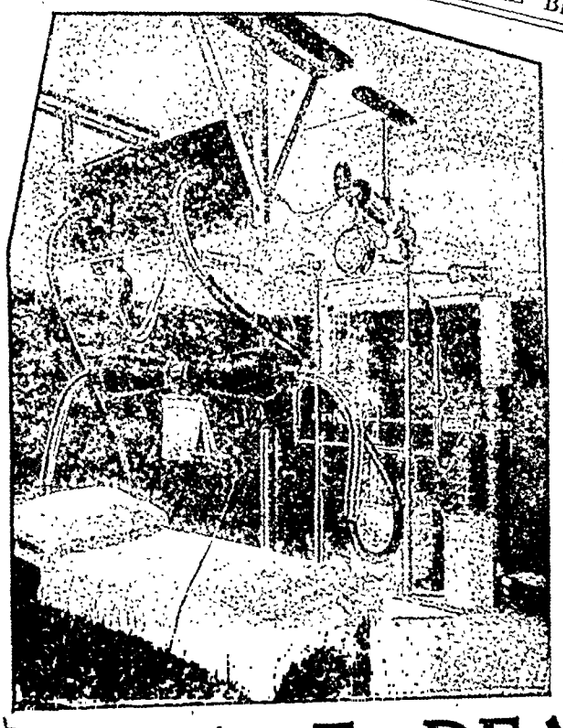

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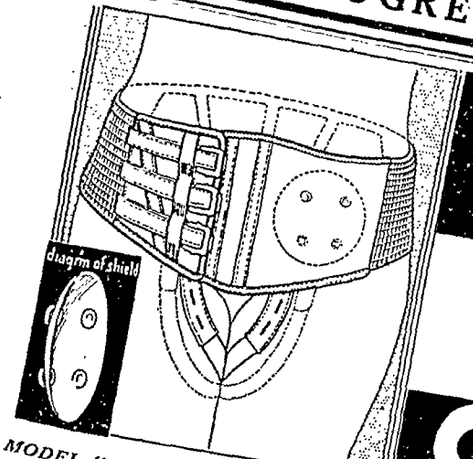

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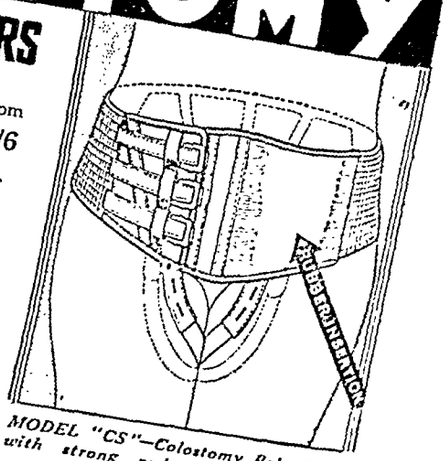

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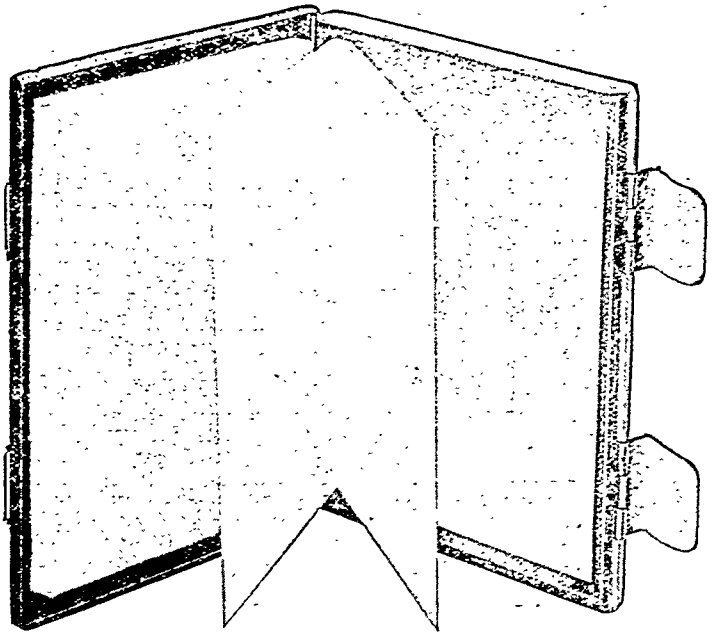

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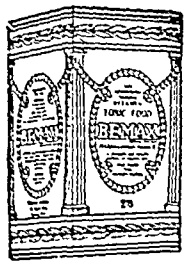

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'PANOPEPTON' presents, in a form ready for absorption, the entire nutritious substance of beef and wheat. It is a complete solution of all the nutrient, savory, and stimulant nitrogenous and inorganic constituents of these typical foods.

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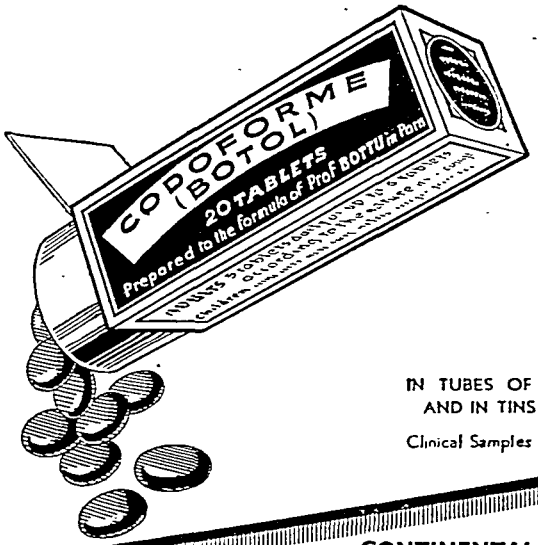

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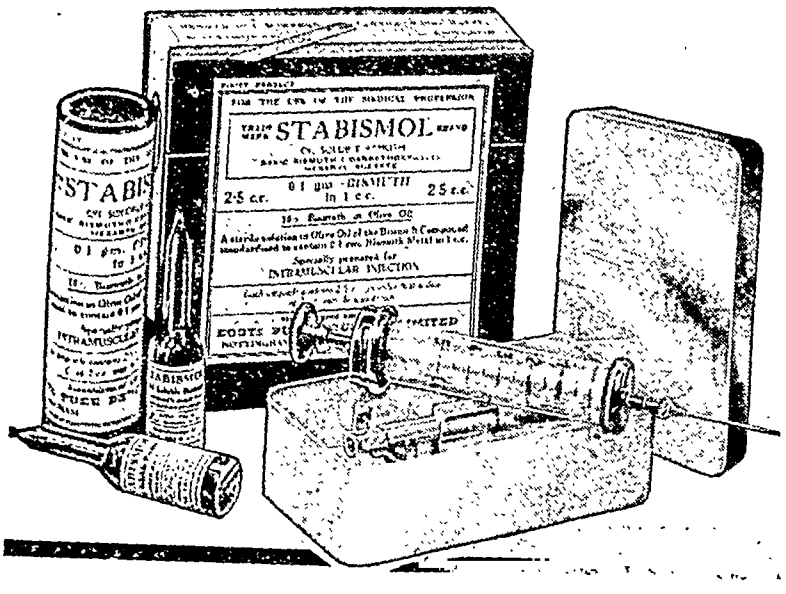

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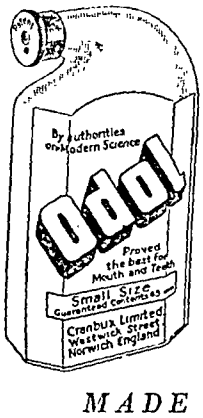

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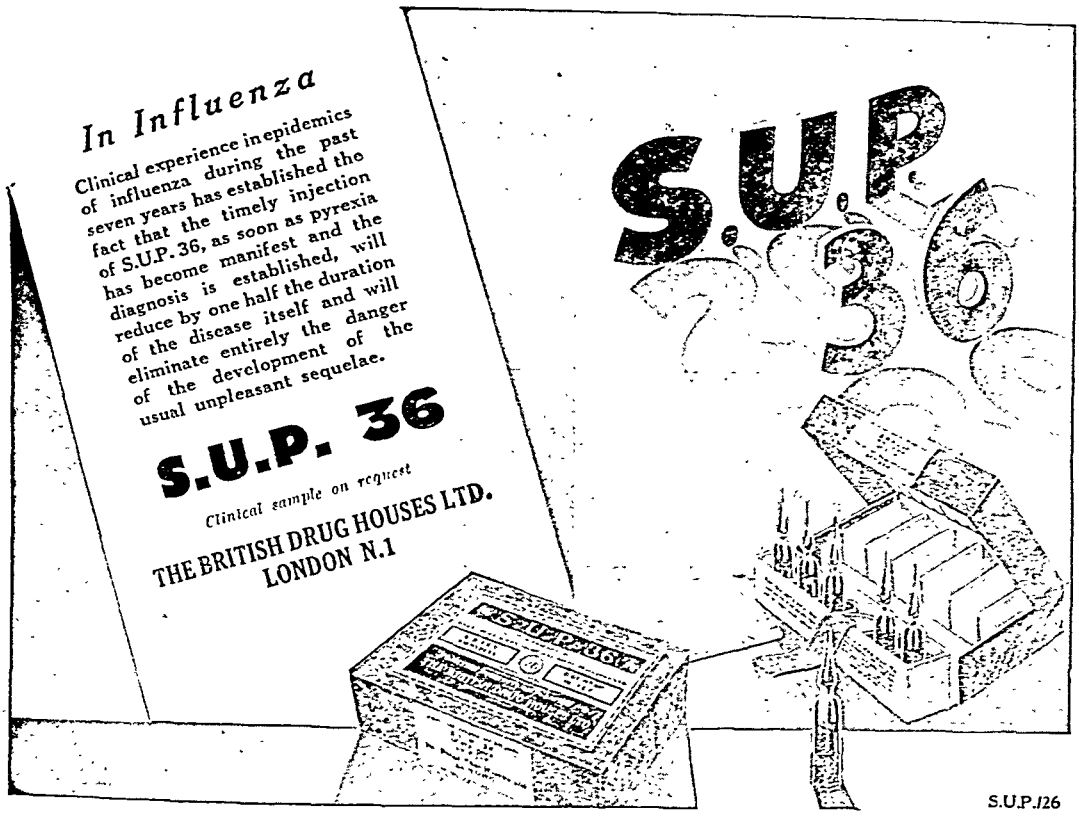

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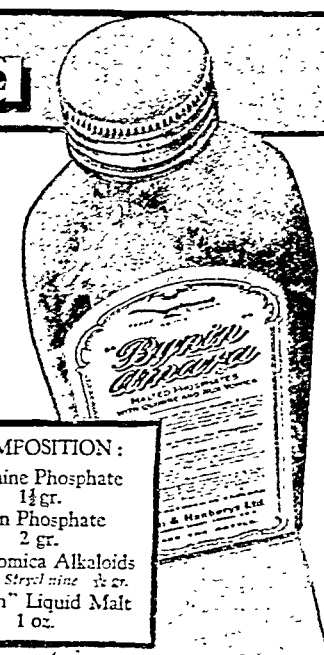

COMPOSITION:
Quinine Phosphate 1½ gr.
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An excellent Calmative and Nerve Sedative, free from any disagreeable taste or odour.

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Useful for functional nervous affections, particularly in controlling epileptic seizures.

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Whilst breast milk is seldom sterile, it rarely contains harmful germs. Cow's milk on the other hand may carry infection from the cow or extrinsic infection from a number of sources.

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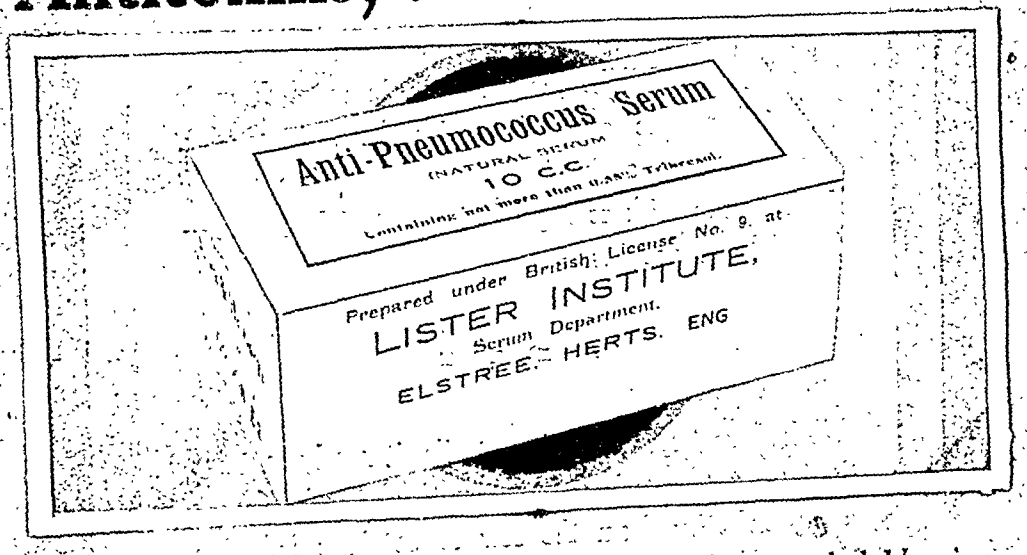

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Staphylococcus Vaccine (Aureus)
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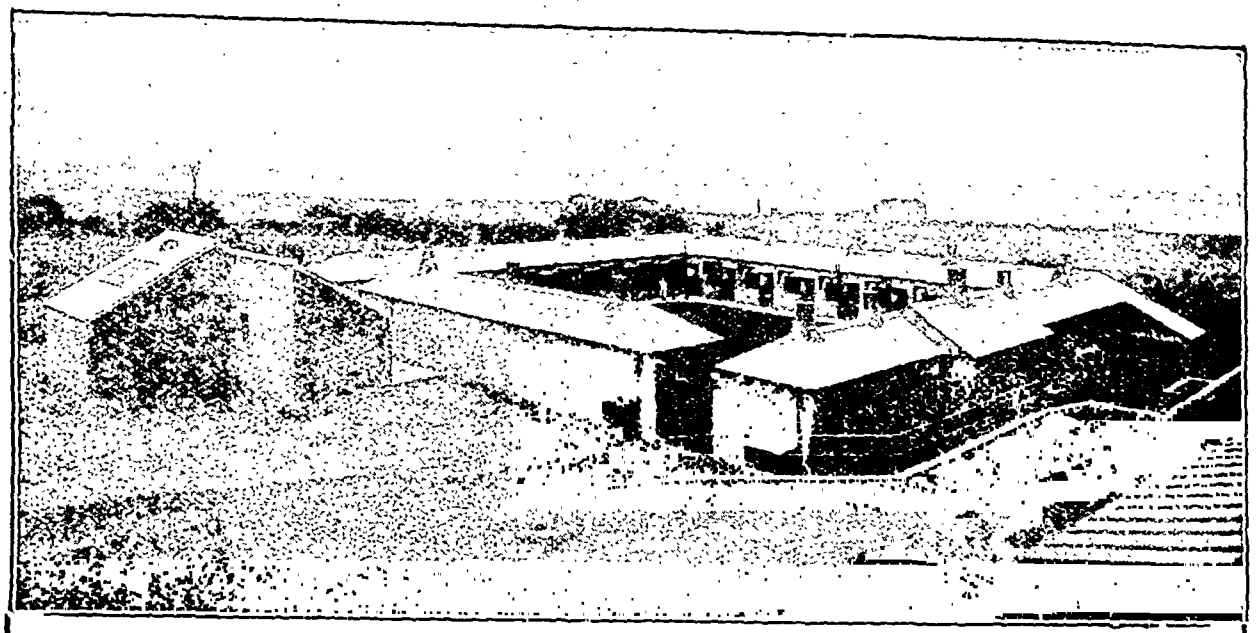

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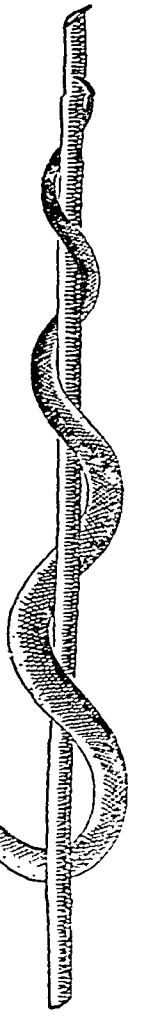

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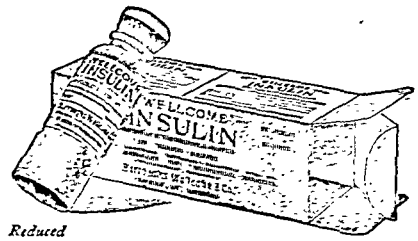

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MEDICINE-MAN OF CENTRAL AUSTRALIA.—The illustration shows a member of the second degree of medicine men. With charcoal and fat he paints a broad band across the bridge of his nose, and has drawn for him, upon the chest, shoulders and abdomen, the sacred design of the spirits in whose school he has qualified. The sign on his forehead represents the spirit's hand. He wears also a nose bone passed through the septum; this, however, is not one of the distinguishing features of a medicine man, but is worn by many among the laity. During his year of probation he visits other medicine men who initiate him in the secret rites and practices of the profession.

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ELIXIR BROMO-VALERIANATE, GABAIL.

Bottles of 187 c.c. DOSE: One tablespoonful twice or thrice daily.
As a Hypnotic—Two tablespoonfuls at bedtime.

Literature and Samples on request from THE ANGLO-FRENCH DRUG CO., Ltd., 11 & 12, Guilford Street, LONDON, W.C.1.

Observations
ON
EXOPHTHALMIC GOITRE*
BY

W. H. C. ROMANIS, M.A., M.B., M.CH.CANTAB., F.R.C.S.
SURGEON TO ST. THOMAS'S HOSPITAL AND TO THE CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST

Exophthalmic goitre is a mysterious disease, and of its pathology we are very ignorant. We know many isolated facts about its causes and onset, but it is difficult to correlate these and to give each fact its proper position in the aetiology of the disease. Thus there is little doubt of the correctness of the following facts, though they advance us very little in assigning a true pathological cause:

The disease is far more common in women than in men, in blondes than in brunettes, and in single women than in married ones.

It almost always causes more enlargement of the right side of the thyroid than of the left.

It exhibits a slight tendency to frequency in certain parts of the world, but these localities are not usually those where ordinary parenchymatous goitres abound.

It is rarely seen at the extremes of life, being uncommon under the age of 15 and over the age of 55.

It seems to be rather commoner in some professions and walks of life than in others. School teachers exhibit a marked tendency to develop it, and it is certainly seen more in brain workers than in manual workers, while it also tends to produce a type of woman who is volatile, lively, and temperamental, and who, if the disease is not too far advanced, is usually of a type distinctly attractive to the male.

These are all mere unexplained facts, but there are other features of which we are tolerably certain. Thus, most of the symptoms and physical signs are due to a substance produced in the thyroid gland, which is nearly always enlarged. This substance is either an altered and toxic secretion, or possibly an excessive amount of normal secretion. The thyroid gland, therefore, may be looked upon definitely as the factory where the symptoms are produced. That there is, however, some underlying primary cause responsible for the changes in the thyroid gland itself cannot be denied, and there is a considerable body of evidence pointing to an infective causative agent of some sort—possibly intestinal. In support of this is the fact that in many cases the patient dates the onset of the disease from some kind of febrile attack, often referred to as "influenza," while it is not uncommon to find the spleen definitely enlarged. There is, however, so far no proof of the existence of this infective agent. There is also very little doubt that the other ductless glands are involved in the process, and play a certain part in the production of the symptoms; the suprarenals especially are important in this connexion, and it is quite possible that some of the physical signs, such as the exophthalmos, are directly due to suprarenal influence. The thymus also is nearly always found to be enlarged. Again, it is not uncommon to find a direct connexion between this disease and diabetes, and the two conditions may exist together. However this may be, in the present state of our knowledge we believe that these other ductless glands are affected secondarily to, or possibly as a compensation for, the state of the thyroid, and that it is the alteration in the thyroid gland itself that is the basis of the disease.

DEFINITION

It is very important in any discussion of this disease to remember that a correct definition of the term "exophthalmic goitre" is difficult, that between the ordinary parenchymatous goitre with no toxic symptoms, the simple thyroid adenoma with nervousness, tremor, and rapid pulse, and the well-marked case of Graves's disease with its classical syndrome, there are an infinite number of different grades of severity, and that occasional clinical curiosities are found, such as: marked toxic hyperthyroidic symptoms with no appreciable enlargement of the thyroid gland; unilateral exophthalmos instead of the common bilateral type; or—by no means uncommonly—malignant disease of the thyroid, associated with exophthalmos, palpitation, rapid pulse, tremor, and nervousness. I do not, therefore, regard any case as deserving of the name of Graves's disease unless it presents a certain amount of eye change, a rapid pulse, and definite cardiac changes—slight enlargement in the milder types, and considerable dilatation, with fibrillation and alterations in the heart sounds, in the more advanced cases. Moreover, in all cases in which these toxic symptoms are mild enough to raise any doubt as to whether the condition should really be called Graves's disease or not, before the diagnosis is actually settled a microscopical examination of the gland should be made to see if the hyperplasia and changes in the epithelium, which the exophthalmic thyroid gland always shows, are present.

Primary and Secondary Graves's Disease

The distinction between primary and secondary Graves's disease is undoubtedly a useful one, both in diagnosis and in treatment. By primary Graves's disease we mean that type where the toxic symptoms have been present from the first, and more or less coincide with the appearance of the goitre, while secondary Graves's disease is the name applied to those not at all uncommon cases where a goitre (either adenomatous or parenchymatous) has been present for some time—often many years—before the full range of toxic symptoms comes on. Primary Graves's disease is usually much the more severe form, and it is usually in this class that the desperately bad cases are found. Secondary Graves's disease shows a particularly marked tendency to give rise to auricular fibrillation, but the results of operative treatment in secondary Graves's disease are even better than those in primary cases, even though marked auricular fibrillation be present. It is possible, or even probable, that in primary Graves's disease we are dealing with an altered and toxic thyroid secretion, and in secondary Graves's disease with an excess of a normal thyroid secretion.

When discussing exophthalmic goitre, therefore, it is best to refer only to the true Graves's disease, and not to such conditions as cysts or adenomata of the thyroid, with nervousness and a rapid pulse, or to parenchymatous goitres in nervous women. The true Graves's disease is naturally a very much more serious condition.

The cases one encounters clinically vary considerably, according to whether the main stress of the disease falls upon the nervous system, the cardiac system, or the abdominal organs. Marked affection of the nervous system, with tremors, jumpiness, excitability, and even mental changes, seems often to be associated with marked exophthalmos and a large, very hard, rounded, prominent goitre, though it must be remembered that the goitre of Graves's disease never reaches the very large size which a parenchymatous goitre may attain. On the other hand, in the more truly cardiac type of case, where severe dilatation and fibrillation occur, the goitre is usually softer and less definitely prominent, while exophthalmos is less marked, but pigmentary skin changes are often present. The abdominal type of case with much diarrhoea and vomiting often appears to be intermediate between the above two types.

As regards eye changes, though the exophthalmos is often very marked, there is a very early change sometimes seen in the eye before any prominence of the eyeball or von Graefe's sign is present, which is, I think, almost certain evidence that eye changes are commencing; and this is a peculiar shininess or glinting of the cornea, which is often noticeable at some little distance from the patient.

* Extracts from a paper read to the Guildford Division of the British Medical Association.

CHOICE OF TREATMENT

Several methods of treatment exist, each of which has its own advantages, disadvantages, and risks. Briefly, we are faced by the possibilities of treatment by various medical methods, by *x* rays and radium, and by surgery.

While there is no doubt that exophthalmic goitre is a disease which is serious, grave, and unpleasant, it is by no means always necessarily fatal. It is difficult to estimate mortalities, but probably about 25 to 50 per cent. of cases of Graves's disease will ultimately die of it if left untreated, while of the remainder a few will undergo a spontaneous cure, though this will take many years and there may be relapses. The majority will develop into chronic invalids, liable to be carried off by any slight infection, able to hang on to their lives but unable to do anything with them, and these points must be taken into account in estimating both the value and the necessity of any particular form of treatment.

Medicine

Treatment by medical means can certainly offer a fair chance of a cure in early cases, and, in others, a very reasonable chance that, with a careful and sheltered life, the patient may live to a good old age. At the same time it will have to be very prolonged, and it is not likely that even mild cases will get well under several years, while the more severe the case is the less likely is any permanent benefit to accrue. Temporary benefit is nearly always produced by medical treatment in every type of case, but unfortunately relapses are only too frequent. In connexion with this it is remarkable that Lugol's solution of iodine, given in 10-minim doses, nearly always produces a marked improvement, which, however, only lasts for two or three weeks as a rule. Most surgeons, therefore, make a practice of giving Lugol's solution for ten days or so before any operative treatment is undertaken, but it should not be continued for longer than this.

X Rays and Radium

The results of *x*-ray treatment are not very impressive. It is uncertain and not free from the risk of producing myxoedema. It is undoubtedly capable of producing improvement in some cases, but cures are very rare indeed and relapses very common. Moreover, the surgeon cannot help having a personal objection to it, because he often has to operate upon cases which have previously received *x*-ray treatment, and the operation is rendered definitely more difficult because of the increased adherence and vascularity of the gland. There may be no more difficult operation in surgery than the removal of a thyroid which has previously had *x* rays on it. Radium, on the other hand, does seem to be more useful in specially selected cases. Where other methods of treatment have failed, or when operation is impossible, radium applied externally over the goitre has sometimes produced marked improvement. This has been especially so in cases which are showing mental changes.

Surgery

Surgical treatment has always seemed a reasonable procedure, and there is no doubt now that operations can be performed, even in severe cases, with a mortality that is very slight, and that they result in vast improvement in the patient's health. A recent series of 650 cases of Graves's disease, published in *St. Thomas's Hospital Reports*, has shown that the mortality of all cases treated in the surgical wards is about half that of all cases treated in the medical wards.

Many surgical procedures have been devised. Excision of the cervical sympathetic is quite useless, and ligature of one or more of the thyroid arteries is very seldom done now. There is a consensus of opinion among surgeons, which is shared by many physicians, that removal of very large portions of the thyroid gland is the procedure of choice; for though we do not know the primary cause of the disease—that cause which leads to the enlargement of the thyroid—there is abundant evidence that the enlarged thyroid is what we may call "the factory of the symptoms," and that by reducing its activity we can relieve these symptoms and render the patient a normal individual again.

CHOICE OF OPERATION CASES

One of the most important points to be considered is the selection of those cases in which operation is likely to be most suitable and successful. There are very few cases in which it is not advisable to prescribe a course of medical treatment first before considering operation. The mild cases may be cured by this, while the severe ones will become fitter and better, and more able to stand the operation. Among the last 900 cases I have seen there have only been three which have been refused the chance of operation on the ground that they were too advanced for surgery to hold out any hope of benefit. But there are many cases to be seen in which the symptoms are so slight that one may well wonder whether operation is really worth while, or whether other methods of treatment should not be tried first. In connexion with the surgery of Graves's disease another reference must be made to medical treatment. In very severe cases medical treatment, in the form of absolute rest in bed, diet, strontium bromide, Lugol's solution, etc., is most valuable as a preliminary to, and a preparation for, the operation, frequently rendering the patient fitter to stand the strain of the latter. On the other hand, in moderately severe cases, or where one sign or symptom is present to any marked degree or is progressing, medical treatment, though useful as a preparation, should not take the place of operation, for it does not lead to so marked, so permanent, or so rapid an improvement, and in such cases it should not, in my opinion, be continued for more than two or three months. If the operation is undertaken reasonably early, not only is the patient in a better condition to stand it, but a better result is likely to be obtained in the end and much time and trouble saved.

I would lay particular stress upon this question of time and trouble for the patient, for many cases of Graves's disease, by careful medical supervision and treatment by means of repeated long rests in bed, are enabled to carry on semi-invalid lives for long periods, whilst were they to undergo surgical treatment early in the complaint, their return to health would come very much sooner and be much more complete. The operation mortality has now proved to be so small that the risk may very justifiably be run in an attempt to obtain a cure for a disease of so serious a character. In this way the position of the surgical treatment of Graves's disease is not unlike the position of surgery in the treatment of gastric ulcer, for the economic and the time-saving factors must be considered in both. In mild cases there are not any actual contraindications to operation, other than independent gross constitutional disease, but there is always the question as to whether the disease is sufficiently severe to warrant exposure of the patient to the discomforts and expenses associated with an operation. In the more severe types we have before us a large number of signs and symptoms for consideration, and I do not consider that irregularity or great rapidity of the pulse, even up to 200, marked cardiac dilatation, or fibrillation necessarily contraindicate operation. Fibrillation, in particular, is often enormously improved soon after a thyroidectomy—often within two days—and fibrillating cases do so well that I would almost go so far as to say that I prefer them! Nor do diarrhoea and vomiting, marked loss of weight, or the presence of acetone in the urine, prevent operation, provided that it is done under a suitable anaesthetic, that the mental condition of the patient is moderately good, and provided still more that she is willing and anxious to have the operation done.

Nervousness and emotional instability are, of course, nearly always present, and even though these are very marked they do not constitute any bar to operation; but if mental symptoms of a maniacal, delusional, or melancholic type are setting in operation does not appear to hold out a reasonable prospect of improvement, and may, in fact, make the patient's condition worse than before.

One is occasionally asked to see, with a view to operation, patients who are, to all intents and purposes, certifiable lunatics, and who have enlarged thyroids (often with other signs pointing to Graves's disease), but, needless to say, thyroidectomy is not likely to benefit them.

Five patients of this kind, with more or less marked signs of Graves's disease, and delusions, suspicions, or melancholia, have been treated by the application of radium. Two of them are no better, one is much improved, and the other two appear at present to be quite well. It is, however, too early to feel certain that the radium is responsible for this, but it appears to be quite worth while to use it again in similar cases.

There are other associated conditions which entirely negative operation—namely, an age of over 65, the presence of diabetes or other gross constitutional disease, great fear or unwillingness to undergo operation, and the presence of oedema due to a failing heart. As is well known, the majority of sufferers from this complaint are women, and they appear to derive more benefit from the operation than do the male sufferers.

CHOICE OF ANAESTHETIC

The question as to which form of anaesthetic is preferable for these operations has recently given rise to much discussion. There is little doubt that chloroform is highly dangerous to patients suffering from thyroid toxaemia, and if a general anaesthetic is to be given at all it must consist of ether, and as little ether as possible. Given by means of the intratracheal tube, ether is convenient for both surgeon and anaesthetist in all operations about the head and neck, but in exophthalmic goitres these advantages are apparently outweighed by the facts that (1) a considerable depth of anaesthesia is required at first in order to pass the catheter into the trachea, and (2) the passage of this catheter entails a certain amount of manipulation of the neck, while the fewer manipulations there are throughout this operation the better. For these reasons ether, if used at all, is better given on an open mask. Though the milder cases can be operated upon safely under open ether, rectal ether, or gas and ether, the severe cases are subjected to a much smaller risk under local anaesthesia. Recently, in all except the very severest cases, we have been using avertin in the rectum, combined with a minimal amount of gas and oxygen, or, in the very bad cases, combined with local anaesthesia. In several hundreds of cases we have so far had no trouble at all. The dose of avertin should be slightly greater per body weight than one would give to ordinary abdominal cases. We therefore make a practice of doing a thyroidectomy on these patients under some special form of light open anaesthesia, except in the very severe cases. Here a local anaesthetic is far safer, and in some severe instances one can do the operation comparatively safely by this means when one simply would not dare to give the patient a general anaesthetic at all. This applies especially to the cases where the heart is grossly disorganized, the apex beat perhaps in the axilla, and, often, marked fibrillation present. If a local anaesthetic is being used the patient is rendered sleepy or semiconscious either by means of avertin or by a large dose of paraldehyde in the rectum, or of morphine hypodermically some few hours before. Hyoscine is best avoided. The operation of thyroidectomy, performed under local anaesthesia for an adherent and highly vascular exophthalmic goitre, is naturally somewhat of a strain for both patient and surgeon, but with a combination of coaxing and cunning it can usually be done perfectly satisfactorily. If asked whether they would prefer a local or a general anaesthetic women patients, at any rate, will often choose the local; men do not tolerate it so well.

AMOUNT OF GLAND TO BE EXCISED

Another exceedingly important consideration in connexion with these operations is the amount of gland tissue that should be removed. It cannot be too strongly emphasized that removal of one thyroid lobe (hemithyroidectomy) is hardly ever sufficient completely to cure a case of Graves's disease, and that, if a permanent cure is aimed at, it will be necessary to remove one lobe, the isthmus, and a third, or even two-thirds or more, of the opposite lobe, according to circumstances. It is usually feasible to do all this at one operation, but occasionally, where the gland is abnormally adherent (as after previous *x*-ray treatment), or where the patient is exceedingly ill—it has to be done in two separate stages, one lobe being removed at the first operation, while later on a portion of the other lobe is excised.

There is very little chance of removing too much gland, provided the patient can stand it, and I have several times removed the whole gland. But all surgeons are painfully conscious of having, on occasions, not removed enough of the gland. Removal of one lobe will always produce considerable improvement, but it is not the best that can be done, and hardly ever cures the symptoms. There have been many cases in the past in which one lobe, or even more, of the thyroid gland of an exophthalmic patient with a large goitre has been removed, and yet the patient still has left in the neck, after the operation, thyroid tissue far greater in amount than that of the normal gland. How can this possibly produce a cure? It is all-important to remove sufficient gland tissue, and provided that a piece the size perhaps of one normal thyroid lobe or even less is left in the neck one would theoretically like to remove all the rest. The practical limit to the amount that can be removed is, of course, set by how long or how severe an operation the patient's condition is equal to; for a long thyroid operation, especially if done under local anaesthesia, is undoubtedly exhausting for both patient and surgeon. Thus it is not always possible to remove quite as much thyroid tissue at a time as one would like; the necessity for a second operation may then arise.

The danger of leaving too little thyroid behind in the neck is not real, for exophthalmic thyroids are curiously apt to have outlying nodules and large lobes projecting behind the larynx on both sides, and there is probably always more thyroid tissue left *in situ* than would appear, even after extensive removal. Moreover, quite a small quantity of the gland tissue found in this disease seems to be sufficient to keep off any symptoms of myxoedema and to preserve the normal thyroid balance of the body. One cannot leave the question of extensive removal of the thyroid tissue without some reference to the parathyroid bodies and their supposed association with tetany. For many years I knew of no surgeon who had had a case of real tetany after thyroidectomy, but recently I have seen two. Nevertheless, it seems that in the performance of the operation the parathyroids may really be almost completely ignored.

DETAILS OF OPERATIVE TECHNIQUE

It is the practice of some surgeons, when performing thyroidectomy, to leave *in situ* shavings of the posterior surface of the gland in the neighbourhood of the inferior thyroid artery, with a view to protecting the recurrent laryngeal nerve; but this should not be done—at any rate when dealing with cases of Graves's disease—for these small portions of gland tissue are capable of undergoing, and do undergo, growth and hypertrophy, and later may increase to such a size that their internal secretion is sufficient to cause a recrudescence of the symptoms and a failure of the operation. It is therefore of the greatest importance that the gland should be cleanly dissected out and no outlying shavings left behind. This applies equally to that stage of the operation when the superior thyroid artery is being tied and cut; this must be done cleanly above the gland, and portions of thyroid tissue should not be left on the stump of the artery, though it is tempting to leave them when the superior thyroid pole lies high up in the neck and is difficult to reach. The retrolaryngeal lobe should also be removed, at least on one side.

The recurrent laryngeal nerve, which divides up into branches some little distance away from the larynx, is at times very closely incorporated with the gland substance, and damage to this nerve may be a most serious accident for the patient. Apart from being cut or tied in a ligature—which should never occur—the nerve is remarkably sensitive to handling, pinching, bruising, or stretching, and minor insults which would have no effect on most of the nerves in the body may be sufficient to put this nerve or its abductor fibres out of action for many weeks. It should not be in danger if the wound is kept dry and

the dissection is carried out with a blunt instrument kept close to the gland substance. The gland is usually tightly adherent to the trachea at one point in front, and though a blunt instrument has been used to separate it at the sides, the scissors will nearly always be necessary to effect the separation from the front and central portion of the trachea. There is no need to lay stress on the special difficulties of this operation—the true exophthalmic gland has outlying lobes and nodules, and is very hard, exceedingly vascular, friable, and adherent. This may render very difficult the process of dislocating the lobe and lifting it up to separate it from the trachea, while the patients, if the disease is at all advanced, stand loss of blood very badly, and every effort must be made to diminish haemorrhage. The veins are usually more troublesome than the arteries—as in all branches of surgery—and though a local anaesthetic has the effect of making the superficial tissues avascular, it has no such effect on the deeper ones. Further, the fact that the patient is not unconscious makes a haemorrhage, should it occur, more difficult to deal with.

The mortality of this operation in the last 900 cases has been 2½ per cent.

RESULTS OF TREATMENT

It may well be asked, "What are we to expect from this operation in the way of improvement?" and the first question that the patient will ask is probably about the mortality. A mortality of 2½ per cent. is not unduly high when one is dealing with so serious a complaint. This disease leads inevitably to prolonged and often very serious ill-health, and gives rise to symptoms which are most unpleasant to the patient and even to her friends—especially the incessant palpitation and rapid action of the heart, the nervousness, jumpiness, and the sleeplessness. Moreover, in many cases—especially in women over 40—it leads to gross disorganization of the heart and to death. It is without doubt justifiable to run a small amount of risk in an attempt to effect a cure. Nevertheless, one cannot help regarding all patients with a certain amount of anxiety for the first two or three days after operation.

Of the twenty-two patients in this series who succumbed eight died of pneumonia within the first four days, and the other fourteen within sixty hours of the operation with the symptoms of what one is accustomed to call acute hyperthyroidism. After three or four days, therefore, any danger of death would seem to be over. Following the operation there usually appears to be an improvement, which is more marked and rapid in the subjective symptoms than in the physical signs, and patients often look and feel much better within a few days of the thyroidectomy. It is often not for a month or so that really marked improvement in the physical signs sets in. This improvement in subjective symptoms often disappears after a few weeks, when the patient goes back to her own home, but reappears later as a permanency in two or three months, and is then accompanied by marked improvement in the physical signs. A long rest for some months after the operation is absolutely essential.

As a rule, after three or four months we find that patients who have had an adequate amount of thyroid gland tissue removed feel well, eat well, sleep well, and can do their day's work, though I do not think it wise for them to recommence their normal life quite as soon as this. Though they look and feel well and put on weight, it is frequently found on examination that the pulse rate, while very much slower than it used to be, has not quite come down to the normal, remaining between 80 and 90, and that the cardiac dilatation, though considerably less, has not quite gone. Irregularity of the pulse, acetonuria, and diarrhoea, if previously present, almost invariably disappear, and the nervous excitability, tremor, and jumpiness are greatly improved; but the exophthalmos, though much less marked than before operation, rarely if ever vanishes completely. Those patients who receive surgical treatment for the condition comparatively early in its course—that is, before they have developed the gross degenerative conditions of the myocardium and of other viscera that set in sooner or later—should all, if a sufficient amount of thyroid tissue is removed, become well in the sense that they should be able to lead a normal life, do their ordinary work, and sleep the sleep of the just. On the other hand, it is no use pretending that operation on a case with a grossly dilated and fibrillating heart and advanced myocardial degeneration will ever make that heart perfect again, although it will make it very much better. Palpitation and shortness of breath—two symptoms especially unpleasant to the patient—usually show the greatest amount of improvement.

As regards the effect of the operation on the loss of weight, which is often so serious a feature in a bad case, the gain in weight following operation is nearly always marked, and may even become embarrassing. Another very satisfactory feature about this branch of surgery is that, as a general rule, the bad cases appear to derive more improvement from, and to be even more pleased with the results of, the operation than do the slighter cases.

As in other diseases, it is difficult to compare and contrast the results of treatment by merely observing symptoms and physical signs, and it is therefore satisfactory to find that there appears to be a method by which one can attempt to measure what we may call the "physiological fitness" of these patients before and after operation. Many of these patients have had their basal metabolic rates estimated before and after operation; before operation they are nearly always 40 to 80 per cent. above that of the normal individual—this presumably representing increased tissue metabolism as a result of the hyperactivity of the thyroid. After the operation these rates fall, within a few weeks, to amounts varying from normal to + 25 per cent. above normal, and this appears to be a fixed method of estimating the "physiological improvement." There have so far been only two or three cases in which, after operation, this basal metabolic rate has fallen slightly below normal, to amounts varying between − 5 and − 10 per cent., and these patients have not, up to the present, shown any signs clinically of hypothyroidism.

Of the success of surgery in suitable cases of Graves's disease there is, I think, no doubt, but one cannot help feeling conscious that in removing thyroid tissue one is really treating symptoms and not causes, and that the primary cause is something further back and not yet removable.

THREE RECENT CASES OF ENCEPHALITIS LETHARGICA

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Introductory Note by

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During the last three years a comparatively small number of cases of encephalitis lethargica have been notified. Considerable doubt has existed in the minds of many as to how far these notified cases are really encephalitis, seeing that the difficulty of diagnosis is unusual in this disease. In the last few months there have been admitted under my care at the General Hospital, Birmingham, three cases of a somewhat fulminating character in which a post-mortem examination has permitted confirmation of the diagnosis. The type of disease in these cases resembles to some extent that which was seen in the very early stages of the epidemic in 1918. Very few of such cases have been seen in the Midlands during the last few years. It is of interest to note the existence of this severe type of case during this year, as it is possible this means that a further visitation of encephalitis in epidemic form

may be imminent; it is equally possible that these are just stray cases which indicate that the epidemic has spent its force, and that in future we shall see only occasional cases appearing in sporadic form.

CASE I

A road foreman, a previously healthy man, aged 57, was admitted to the General Hospital, Birmingham, on May 30th, 1932, complaining of headache, giddiness, and double vision, with some numbness of the hands, for fourteen days. The illness began while he was at work, with sudden inability to see more than a few yards, and on reaching home he found he was seeing double. After two days' rest in bed the double vision disappeared. On admission he complained of a dull, heavy sensation in his head, and a feeling of giddiness and insecurity when on his feet. He had had some nausea, but no vomiting. Sleep was good.

Examination.—The patient was found to be a well-nourished man; he gave an intelligent history, but his speech was slow and indistinct. Bilateral ptosis and right facial weakness were apparent as he lay in bed. The pupils reacted to light, but not to accommodation. Both fundi were normal. Both internal rectus oculi muscles were paralysed, and irregular nystagmus was present on looking upwards and downwards. There was slight weakness of the muscles of mastication on the right side and a definite right facial weakness. The other cranial nerves were unaffected. There were no other motor or sensory changes present. The other systems were normal. Lumbar puncture three days after admission revealed a clear, colourless fluid, not under pressure: cells, less than 1.5 per c.mm.; sugar, 68 mg. per 100 c.cm.; protein, 85 mg. per 100 c.cm. (globulin negative); chlorides, 730 mg. per 100 c.cm.; Lange curve, 1233210000; Wassermann reaction, negative.

Progress.—On June 8th the patient became irrational, and from this time drowsiness and lethargy became a prominent feature of the disease. On June 10th the patient was able to swallow only with difficulty, and articulation was very indistinct. By this time a complete ophthalmoplegia had developed—the eyes looking straight forward—but the pupils still reacted to light. The drowsiness had now become constant. Shortly after this, paralysis of the muscles of deglutition supervened, and nasal feeding was resorted to. On June 16th the patient was comatose, with Cheyne-Stokes respiration. All four limbs were slightly rigid, the abdominal reflexes were absent, the tendon-jerks exaggerated, and both plantar responses extensor. There was incontinence of urine and faeces. Though previously afebrile he now began to run a temperature varying between 101° and 102°. He remained in this condition until he died, four days later.

Post-mortem.—The brain surface was moist, the dura mater was not adherent, and there was no flattening of the convolutions. A horizontal section across the cerebral hemispheres revealed no macroscopical abnormality, but the brain stem and basal ganglia showed multiple small haemorrhagic spots, which were particularly obvious in the grey matter surrounding the Sylvian aqueduct and in the floor of the fourth ventricle. The appearances were typical of encephalitis lethargica. The lungs showed an early hypostatic pneumonia; the other organs were normal. Microscopical sections taken from the region of the basal ganglia, the mid-brain, pons, and medulla also showed the appearances expected in this condition—namely, large collections of lymphocytes in the perivascular spaces of the smaller vessels. There was also degeneration of the ganglion cells in several areas.

CASE II

A married woman, aged 52, was admitted to hospital on August 8th, 1932, after a fortnight's illness. The initial symptoms were of feeling tired and weak, with rapid pulse and an occasional rise in temperature. A few days before admission she became delirious. No physical signs were discovered at any time by her doctor.

Examination and Progress.—The patient was delirious and very restless; temperature 99°, pulse 110, respirations 27. A complete neurological examination was out of the question owing to the extreme restlessness and irritability of the patient, but as far as could be made out there was no paralysis of the cranial nerves, trunk, or limbs. The other systems were normal. Lumbar puncture was performed under light ether anaesthesia. The fluid obtained was clear, colourless, under a tension of 235 mm. of water, and contained no organisms. The cell content was less than 1 per c.mm.; sugar, 57 mg. per 100 c.cm.; protein, 70 mg. per 100 c.cm.; chlorides, 745 mg. per 100 c.cm.; urea 111 mg. per 100 c.cm.; Wassermann reaction, negative. There was no return of consciousness following the anaesthetic, and the patient died ten hours later with pin-point pupils, a temperature of 107°, pulse of 160, and respiration of 60.

Post-mortem.—The whole of the grey matter exhibited a slightly pink colour; this was particularly noticeable in the tissues of the basal ganglia and in those of the brain stem, where the brain substance was also unusually soft. The grey matter around the Sylvian aqueduct and the floor of the fourth ventricle showed minute haemorrhagic spots, and larger haemorrhages were to be seen in the fillet and elsewhere in the brain stem. Sections taken from the mid-brain, pons, and medulla for microscopy showed local areas of oedema and softening of the brain substance with vascular congestion. No perivascular "cuffing" by lymphocytic infiltration was seen. Considerable neuronic degeneration was present.

CASE III

A married woman, aged 39, was admitted to hospital on September 5th, 1932, after one week's illness, consisting of headache, loss of appetite, and constipation. Two days before admission she became delirious, and then completely negative mentally.

Examination and Progress.—The patient was a well-nourished woman; she was lying very still in bed and occasionally moving her head from one side to the other. There was rhythmic blinking of the eyelids, which persisted the whole time until the patient died. The jaws were tightly clenched and swallowing movements were entirely absent, the saliva dribbling from the patient's mouth. A certain amount of head retraction was present, and the arms were flexed at the elbows and rigid. The patient would not obey any command, and did not react to painful stimuli. Indeed, lumbar puncture performed without a local anaesthetic evoked only a slight flinching movement. The temperature was 103°, pulse 90, and respirations 25. Both fundi oculi were normal; there was no ophthalmoplegia or facial weakness. There was a certain amount of rigidity present in the arms—chiefly in the flexor muscles—which diminished on manipulation. The arm-jerks were brisk; the abdominal reflexes, both superficial and deep, were absent; the legs were slightly rigid with diminished reflexes, and the plantar responses were flexor. There was complete incontinence of urine and faeces. The other systems were normal. Lumbar puncture was performed on the following day, and 6 c.cm. of faintly blood-stained fluid were removed. The analysis was as follows: cells, mostly polymorphs, 70 per c.mm., a little blood present; no T.B. or other organisms seen. The supernatant fluid of the centrifugalized specimen contained: sugar, 96 mg. per 100 c.cm.; protein, 170 mg. per 100 c.cm. (globulin positive); chlorides, 722 mg. per 100 c.cm. The patient's mental condition remained the same throughout; she uttered no sound, but made snarling and twitching movements with her lips. Rhythmic movements of the eyes persisted, and dissociated movements of the eyes themselves soon appeared. Nasal feeding was resorted to as the patient was unable or refused to swallow. The patient died on September 8th—that is, three days after admission—the temperature rising to 108°.

Post-mortem.—On removing the skull vault and dura mater the brain convolutions showed extreme congestion without any flattening, oedema, or exudate. Examination of the cerebral cortex, basal ganglia, mid-brain, pons, and medulla revealed great congestion, the grey matter showing a distinct pink coloration. In the anterior part of the corpus callosum, close to the anterior pillars of the fornix, there was a well-defined small haemorrhage; this was more than a petechial haemorrhage. Throughout the grey matter of the brain stem there were innumerable tiny points of haemorrhage; they were particularly well marked in the grey matter around the Sylvian aqueduct and in the floor of the fourth ventricle.

In the heart there was an area of recent haemorrhage under the endocardium of the septal wall of the left ventricle and many subpericardial petechiae. The lungs were very congested; both the lower lobes were partially consolidated by very definite areas of bronchopneumonia. There were also

many small subpleural haemorrhages. The other organs were normal. Microscopically the appearances were characteristic of encephalitis lethargica. The sections of the mid-brain, pons, and medulla showed the following features: great congestion of all the vessels with infiltration of the perivascular spaces, which were also dilated. This perivascular cuffing was most marked in the sections from the pons and medulla. Haemorrhages were seen in various parts, a very large one being present near the lamina terminalis. The ganglion cells in the brain stem showed all degrees of degeneration—some of it pigmentary—and loss of nuclear staining.

COMMENTARY

Three cases of encephalitis lethargica, proved at post-mortem, are described. In all of them there was a prodromal period lasting from one to two weeks, consisting of malaise, headache, lethargy, and constipation.

The first case pursued the characteristic course of a subacute disease, with its maximal incidence on the mid-brain, spreading thence upwards to the hypothalamic region and basal ganglia, and downwards to the pons and medulla oblongata.

Cases II and III were similar to one another in type. Both were remarkable for the fulminating course of the disease once the prodromal period was passed, the acute stage lasting only four days or so. Both showed a complete mental obliteration, and both terminated similarly with a hyperpyrexia.

The macroscopic post-mortem findings were typical of encephalitis lethargica, the main points being the pink discoloration of the grey matter, the vascular congestion, and the presence of multiple minute haemorrhages, giving the brain a flea-bitten appearance. This was especially noticeable in the region of the basal ganglia and in the brain stem. The exceptional severity of the disease in Case III was attested by the presence of haemorrhages beneath the endocardium, pericardium, and pleura—a finding to be expected where an acute toxic process has been at work.

Microscopically the characteristic cuff of lymphocytic infiltration in the perivascular spaces was present in two of the cases. At the same time there was degeneration, often pigmentary in nature, of the nerve cells. The sections also showed a certain amount of spreading apart of the neuroglial elements due to oedema. Although the sections of Case II did not show the lymphocytic cuffing of the small vessels, neuronic degeneration was a marked feature, and the similarity of the clinical course of the disease to that of Case III, taken in conjunction with the macroscopic appearance of the brain, leaves little room for doubt as to the true nature of the condition.

I wish to thank Dr. Stanley Barnes and Dr. A. Brian Taylor for their assistance and advice in the writing of this paper, and Dr. F. W. Mason Lamb, pathologist to the General Hospital, Birmingham, who performed the necropsies and reported on the histological sections.

PAIN REFERRED TO THE EAR*

BY

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Pain felt in an otherwise apparently normal ear presents a diagnostic problem often of some interest. I say "apparently normal" since at times the membrane shows no appreciable change, even when mastoid suppuration or yet more serious trouble is present.[5,6] But when the earache is really due to disease elsewhere, if on examining the ear we find some lesion possibly sufficient to account for the pain it is only too easy to walk into the trap—particularly where the pain is severe or the patient manifestly ill and we feel compelled to adopt active measures without delay. The pain may be due to trouble near but not in the ear, such as arthritis of the temporo-mandibular joint. Earache is not infrequently the first symptom of mumps, and may occur before any swelling is noticed. Even a mixed tumour of the parotid may have earache as the only symptom.

HERPES OTICUS

Herpes oticus provides another possible catch. The pain is intense, sometimes with great tenderness of the meatus and mastoid, and may precede the eruption by several days—among ten cases I found intervals of six, four, and three days. There is some fever; in one case the temperature was 102° F. Deafness, nausea, and slight vertigo are common, and the membrane may be a trifle pink. Points of diagnostic importance are a constant boring ache—as contrasted with the fluctuating, throbbing pain of otitis—and extreme tenderness of the skin to very light touch. Even when a vesicle simulates a perforation, careful examination will reveal the difference, the discharge being slight and sanious; sometimes a history of exposure to varicella is obtained. No doubt the majority of cases of herpes oticus are due to involvement of the geniculate ganglion,[2] though in my experience only one-third have facial paresis, and I have only once seen vesicles on the tongue. Twice I have seen an eruption on the soft palate, with dysphagia, which is perhaps evidence of glosso-pharyngeal affection. Herpes oticus with paralysis of the vocal cord has been recorded.[3] The two following cases illustrate vagus herpetic earache, and the third case vagus referred earache without herpes.

CASE I.—*Earache from Herpes Oticus, with Pneumonia*

W. H., aged 14, had severe pain in the left ear for three days, following a cold. He had become much worse, with giddiness, vomiting, and a temperature of 104.4° F. and pulse of 120. There was slight sanious oral discharge and extreme tenderness of the mastoid tip. I was sent for late at night to perform an operation. When I saw the boy in the anaesthetic room I was struck by the "pneumonia" look—flushed cheeks, hot dry skin, bright eye, etc. The ear showed what looked like a perforation just in front of the umbo, but on careful inspection I thought it was a ruptured vesicle. All that could be found in the chest were a few crepitations in the right base, but thirty-six hours later (not before) there were typical signs of lobar pneumonia.

CASE II.—*Earache from Herpes Oticus, with Pneumonia*

J. E. T., a man aged 31, had symptoms of fever, deafness, and right earache, worse on coughing, following influenza. He had typical pneumonia of the right upper lobe, and a herpetic eruption on the right tympanic membrane.

CASE III.—*Earache due to Pneumonia*

A boy of 10 came to the casualty department of the Royal Infirmary complaining of bad earache of a few hours' duration, following a "chill." There was no tenderness, and the ear appeared quite normal; but the boy was obviously ill, and examination of the chest showed consolidation of the left lower lobe.

OTHER CAUSES

Neuritis is a not uncommon cause of earache. Exposure to cold is the usual aetiological factor, and there is sometimes facial paralysis in addition. I have seen a number of cases in taxi and lorry drivers, generally on the right side—probably because that ear is more exposed to the wind than the other. The trouble is usually transient, but some cases have proved very persistent. The pain of neuralgia is seldom confined to the ear; indeed, it tends as a rule to be felt round rather than in it. True geniculate tic douloureux seems to be very rare; the pain is paroxysmal, confined to the ear, severe and lancinating in character.[1]

* Opening paper to discussion on referred pain, at a meeting of the Sections of Otology and Laryngology of the Royal Society of Medicine, held at Portsmouth, June, 1932.

When no local explanation of the pain is found, attention is, of course, directed to the mouth, pharynx, larynx, and nose. Dental disease is, in my experience, much the most common cause of "referred" earache. Any tooth may be responsible, but nearly always it is a molar. Even when the teeth appear quite sound, a meticulous examination by a dental surgeon may bring to light unsuspected caries, or a skiagram may show an impacted wisdom tooth. I have been puzzled by a case of earache in a child of 3. Twice, after a cold, there was intense earache all night. The membrane was normal, warm glycerin drops did not relieve, adenoids were absent, and the teeth appeared to be healthy. The dental surgeon, however, found an area of caries, and removal of the offending tooth banished the trouble.

Such conditions as a foreign body in the pharynx, a quinsy, laryngeal tuberculosis, or a nasopharyngeal fibroma may produce earache; but it is not likely to be the first or the most prominent symptom. It may be, however, in the case of a tonsil calculus or a crypt infection. Ulceration, due to Vincent's spirillum concealed behind the faucial pillar, may occasion difficulty. Cancer in any part of the nasopharynx, pharynx, larynx, or tongue frequently gives rise to pain in the ear, especially when the tonsil or the pyriform fossa is involved. Such pain, worse at night but not related to swallowing, may precede other symptoms by several weeks. Abernethy observed: "Wool in the ear and a lump in the neck mean cancer." The point is important, since many of these patients have very evil teeth, and only too often, even where manifestly malignant glands are present, time is wasted in awaiting the results of dental treatment. When the primary growth is in the nasopharynx or the auditory tube, otitis media is an early and often misleading complication.

AFFECTIONS OF THE SINUSES

Nasal sinusitis may provide a most elaborate trap for the surgeon—especially sphenoidal sinusitis, which (particularly in the young) is easily overlooked. It arises often as a complication of influenza: the pain is severe, and accompanied by fever and other evidence of suppuration; the severity of the symptoms may actually be due to the *absence* of discharge from the affected cell. Sometimes the ear itself is infected. Difficulty with regard to the other sinuses arises only rarely. In my experience the pain of chronic sphenoidal sinusitis is typically felt somewhat behind the mastoid; but in acute sinusitis the pain is actually in the ear, as pointed out by Mr. Tilley in 1905.[4] A vertico-submental skiagram is of great value in diagnosis.

CASE IV.—*Earache due to Antral Suppuration*

D. G., aged 10, complained of left earache during four days, following a cold. The pain was throbbing in character, and worse at night. The mastoid was slightly tender. Temperature 100.6° F., pulse 80. Ears and nose showed nothing abnormal at all; there were no adenoids, but the tonsils were enlarged. Four days later the temperature was still high; earache persisted; there was vomiting and giddiness—no nystagmus; hearing normal; nose normal. The attack subsided, and he went home. A week later muco-pus was seen in the left middle meatus. Exactly a month after the first complaint I explored the left antrum. It was full of thick pus, and was opened; the right antrum contained clear mucus; there was a complete recovery, with no further attacks.

CASE V.—*Acute Sphenoidal Sinusitis simulating Mastoiditis*

T. G., aged 15, was brought to me in January, 1930, as a case of acute left mastoiditis. Early in 1926 he had had pneumonia with empyema, since when the left ear had discharged. Six weeks after an operation for tonsils and adenoids in December, 1929, he complained of pain behind the left ear, with tenderness. The temperature was 101° F. He was considered in the out-patient department to be suffering from mastoiditis. I was operating at the time, and regret that I did not myself examine him. There was no post-aural oedema, and a Schwartze operation revealed perfectly normal bone. The cells contained air and a trace only of moisture, the antrum was empty and healthy, and only a trace of pus came back through the aditus when it was cleared. It seemed impossible that this would account for his symptoms. I therefore passed a cannula into the left sphenoidal sinus, and drew up several cubic centimetres of thick pus. The right sinus was healthy; both antra were infected, the pus being streptococcal. Chips from the mastoid were sterile. The left sphenoidal sinus was opened. He made a good recovery.

CASE VI.—*Sphenoidal Sinusitis, Meningitis, Septicaemia: Death*

E. E., a boy aged 9, previously healthy, had fourteen days' fever and malaise, seven days' headache and right earache; vomiting, collapse. On admission, obvious meningitis. Lumbar puncture—fluid turbid, streptococcal. Two c.cm. of thick pus aspirated from right sphenoidal sinus. Death occurred two days later. Necropsy revealed purulent meningitis; the right sphenoidal sinus was full of pus, and there were vegetations on the mitral valve.

CASE VII.—*Recurrent Sphenoidal Sinusitis simulating Mastoiditis*

R. A., aged 4, complained of "attacks" during which he suffered intense headache, with fever, and "lost control of himself; he would beat his head on the floor with the pain." In September, 1930, he had measles, and came to me a month later with right suppurative otitis media (first attack). The nose was running; he was drowsy and irritable, and was vomiting—temperature 102.8° F. There was no nystagmus or rigidity of neck, nor was there any additional evidence of mastoiditis. I advised against operation. The aural discharge ceased and the hearing became normal, but pain in the ear persisted. He had another exactly similar attack in December. In January I explored the antra, a skiagram having shown the right one to be opaque. Both were healthy and sterile. A week after this he had a similar attack, with earache but no other sign of otitis. During the year he had several more attacks, in one of which there was right frontal headache and nasal discharge. In January, 1932, I again explored the sinuses. The antra were quite healthy, as was the left sphenoidal sinus. The right sphenoidal sinus was full of thick streptococcal pus, and was opened. He has since been free of his trouble.

This child had precocious development of the frontal sinuses, but on account of his age I fear I neglected the possibility of sphenoidal sinusitis when I first saw him.

OTHER POSSIBILITIES

Earache may be the first symptom, and the only "localizing sign," of meningitis of any type—tuberculous, meningococcal, pneumococcal, or septic. In the latter particularly it is intense and persistent, and is not relieved by rupture or incision of the membrane. Any of these varieties of meningitis may occur either with a normal membrane or with otorrhoea.[5] Pain referred to the ear from some other intracranial lesion may lead one astray.

CASE VIII.—*Earache due to Aneurysm of the Circle of Willis*

R. R., aged 40, had had very bad pain in the left mastoid area for ten months. For six months the vision of the left eye had been getting misty, and now the left visual field was reduced to a 10-degree circle. The ear was quite normal. A skiagram showed that the right sphenoidal sinus was less clear than the left. Exploration of the sinuses was negative, except that from the right sphenoidal a little sterile muco-pus was drawn, from the left sphenoidal streptococcal muco-pus, and from the left posterior ethmoidal cell pus which grew pneumo-bacilli; the two latter were opened. Six days after the operation he developed signs of meningitis, to my horror; on the ninth day his temperature came down, but he suddenly collapsed, with extreme cyanosis of the left side of the head and neck, and died immediately. At post-

we found a leaking aneurysm of the left side of the circle of Willis, which had burst.

In another case in my department, under Mr. Angell James, mastoiditis was simulated and an operation performed; the lesion was an aneurysm of the basilar artery.

Oöphoritis appears occasionally to produce earache. Sometimes we are compelled to regard the earache as functional in origin, as in the case described below.

CASE IX.—*Neurotic "Earache"*

R. N., a female aged 24, was admitted as a case of mastoiditis, with severe left earache, intense tenderness to lightest touch on mastoid and behind, giddiness, and falling. No nystagmus or nausea. Temperature 98.6° F., pulse 76; hearing normal, tympanic membrane normal. She seemed quite quiet and intelligent, and anxious to have an operation —"anything to get rid of the pain." Careful examination revealed no physical signs. I made the diagnosis of quasi-hysterical neurosis, which rather startled her own doctor. When told that no operation was necessary she lost all pain. Later I found out that she had just lost her job. Three years before she had suffered from hysteria, her betrothed having married her best friend just before the date fixed for her own wedding.

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THE LATENT MASTOID AS A CAUSE OF CHRONIC AURAL SEPSIS

BY

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In the vast majority of cases of acute otitis media the path of infection is via the Eustachian tube. Owing to the early closure of the latter, the inflammatory exudate is under pressure. It must be rare indeed for the mastoid antrum to escape infection.

The acute mastoiditis which occasionally supervenes may present the classical signs of mastoid involvement. Often, however, these are conspicuous by their absence. The only definite physical sign may be the persistence of the meatal discharge. Reluctantly we operate, and we find a frankly purulent mastoid. Many such cases must be missed. What becomes of them? The answer is given by the chronic discharging ears that come to the radical mastoid operation. Whatever may be the condition determining operation in these latter cases, however completely mastoid signs and symptoms may be absent, they almost all agree in presenting at the operation unequivocal indications of old-standing mastoid infection.

When we consider the occasional, almost fortuitous, discovery of the more or less latent mastoid infection in the recent case, and the almost constant indications of prolonged latency of the mastoid infection in the old-standing case, is not the conclusion inevitable that these latter represent the mastoid extension of the original acute infection which, having run throughout a latent course, has been missed? If this is so, if these latent mastoid infections remain after the subsidence of the acute otitis media, then our failure to diagnose them is responsible for the great bulk of chronic aural sepsis, with its progressive deafness and potential dangers.

How far the mastoid bone with its diploic tissue or air cells is involved will depend on the virulence of the infection, and on the resisting power of the patient. It will, however, depend also on the rapidity with which drainage is established. Rupture or paracentesis of the drum is at the best imperfect drainage for the antrum. With partial obstruction of the aditus it becomes still less efficient. With actual involvement of the mastoid bone this drainage can do little more than serve to maintain the latency of the mastoid infection.

The discharge of chronic aural sepsis may show prolonged periods of complete remission. A scarred drum alone remains to tell the tale of previous active sepsis. As there is no reasonable ground for denying this complete latency in the case of the mastoid infection, while admitting it, as we must, in the case of the tympanic cavity, we are driven to the conclusion that even the absence of a discharge is no certain ground for assuming a non-infected mastoid. Indeed, we have only to postulate the early and complete closure of the aditus to envisage the possibility of a chronic but entirely latent mastoid infection, coexisting side by side with a normal middle ear, normal drum, and normal hearing. The two following cases suggest that this actually occurs:

CASE I

A boy of about 12 was sent in with pain, tenderness, and marked swelling over the right mastoid, with a corresponding displacement of the pinna. The drum and external meatus were, however, absolutely normal. So also was the hearing. There was nothing on the scalp, and no concurrent disease to suggest a blood-borne infection. Operation disclosed a mastoid filled with pus.

CASE II

A woman of about 40 came to me with pain in the right ear of recent onset. There was no previous history of ear trouble. She had a red and bulging, but otherwise normal, drum, which I incised. Some fourteen days later there were signs of mastoid involvement. At the operation the mastoid presented every appearance of an infection of many years' standing.

Neither of these cases definitely proves that the mastoid infection originated in an acute otitis media, which, as far as the middle ear was concerned, cleared up completely. Blood-borne infections of the mastoid are, however, so rare and infections via the Eustachian tube so common that this explanation is at least a probability.

These cases must be rare, and would, in any case, be difficult to diagnose till physical signs arose. Cases in which a discharge persists after the acute stage has subsided are very much more common. They represent nearly all cases of chronic suppurative otitis media. In how many of these is the persistence of the discharge due to the presence of residual mastoid sepsis—sepsis latent save for the discharge? My experience suggests that it is in a very large proportion of them. The following cases lend support to that view:

CASE III

A girl of 12, with a copious discharge from both ears, dating from an attack of measles eighteen months previously, developed a swinging temperature. As nothing could be found to account for this, I was called in because of the aural discharge. By that time the temperature had been swinging for eleven days. A bilateral cortical operation showed both mastoids full of pus and the left lateral sinus exposed in the abscess. She recovered.

CASE IV

Another child, of about the same age, came to the out-patient department with a history of a discharging ear and some very doubtful signs of mastoid involvement. She reappeared a week later, desperately ill, with marked adenitis round the right jugular and a swinging temperature. Immediate operation on the mastoid and thrombosed lateral sinus failed to save her, and she died of meningitis.

CASE V

In pleasant contrast to the two preceding cases this boy of 16 was sent in on the strength of one sharp rise of temperature the same day. He had a small perforation in the left drum and a history of intermittent discharge from that ear. There was no tenderness or other sign of mastoid involvement. Immediate operation disclosed a septic mastoid, with pus and granulations on the exposed lateral sinus. He recovered.

Such cases could be multiplied indefinitely. They carry a twofold and very obvious lesson—namely, that a suppurating mastoid can run a completely latent course save for the ear discharge, and that when complications arise they may do so without any warning from the mastoid.

CASE VI

A boy of 10 was sent to me from the ophthalmic department with the urgent request that any focal sepsis should be discovered and eliminated. All that I could find was a small perforation in the left drum and a history of discharge. There was no tenderness, no pain, and no discharge when I saw him. In view of the urgency of the eye condition I opened the mastoid. It was full of pus.

CASE VII

A man of 20 came under my care with bilateral acute otitis media. A paracentesis of both drums resulted in his temperature becoming normal. Pain disappeared, and the left ear recovered without further intervention. The right ear on the tenth day still showed a pulsating discharge in the tympanic perforation. There was no pain, very doubtful tenderness, and the temperature was normal. Operation disclosed a frankly purulent mastoid.

CASE VIII

A girl of 6 had had pain in the left ear for some days. There was a slight temperature and some discharge from this ear. The meatus was narrowed, and there was some excoriation of its external opening. There was no tenderness. There was a history of acute earache some years previously, followed by paracentesis, but whether of one or both ears was not known. There had, however, been pain each winter, sometimes in one ear, sometimes in the other. There were no physical signs referable to the right ear at the time of examination. Both mastoids contained pus, that in the left being under pressure.

CASE IX

A girl of 8, sister of the previous case and seen a few weeks later. She had had pain in the left ear for three days. There was no temperature, no tenderness, and she was cutting a tooth on that side. The tonsils and adenoids had been removed five years previously. Two years ago there had been earache, both sides (?). There was no history of any discharge. In the left ear there was an accumulation of epithelial debris and, in the antero-inferior quadrant, a puckered area and some granulation tissue (?) suggesting a partially closed perforation. A similar area, but without granulations, was observed in the same position on the right drum, which was thickened. Shrapnell's membrane on the right side was red, but not bulging, and there was no tenderness; there was slight deafness. On the following day there was slight tenderness over the tip of the left mastoid, none over the right. Temperature still normal. Both mastoids were filled with granulation tissue and pus.

In both these children (Cases VIII and IX) the ears recovered completely, and even a long spell of whooping-cough the same winter failed to produce aural symptoms.

CASE X

A boy of 12. A recent attack of acute tonsilitis had resulted in an exacerbation of a bilateral ear discharge, which had been intermittent since acute earache following measles two years previously. The temperature was raised, and there was definite tenderness over the right mastoid. There were no physical signs referable to the left ear other than the discharge. At the operation there was nothing to choose between the two mastoids, both being frankly purulent.

CASE XI

A hospital nurse was warded for an attack of (?) influenza. There was a slight initial rise of temperature, which quickly subsided. Ten days later, while still in bed, she had an acute otitis media on the right side. Rupture of the drum resulted in the temperature again becoming normal, and it remained so. Nevertheless, three weeks later, the discharge, which in the meantime had steadily diminished in quantity, could still be seen pulsating at the perforation. There were also vague pains referred to that side of the head. There was no tenderness, and *x* rays failed to show any difference between the two mastoids. At the operation there was a considerable quantity of pus under pressure, and a very forwardly placed lateral sinus was already exposed to the sepsis. The organism was *Streptococcus haemolyticus*.

These cases are not exceptional. On the contrary, they represent my general experience. They must represent the experience of many others also. Whether or no latent mastoid sepsis is really as often the cause of chronic aural sepsis as these cases would suggest should be speedily settled once we are alive to its possibility. In all the cases in which I have performed the cortical mastoid operation solely on account of the persistent discharge there have been only two in which the mastoid was not frankly purulent. It cannot, however, be supposed that every case of persistent discharge following an acute otitis media is due to the presence of mastoid sepsis. At present every such case must be considered on its merits. I would suggest that in doing so the probable frequency of unsuspected mastoid sepsis should be borne in mind.

THE TREATMENT OF CHRONIC AURAL SUPPURATION WITH IODINE POWDER

BY

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The purpose of this short article is to emphasize the value of a simple method of treating chronic middle ear suppuration by insufflation of so-called iodine powder, which consists of iodine 0.75 per cent. in boric acid powder. Although I began to use this powder tentatively and without much conviction of its value two years ago, I now use it as a routine for every case of chronic middle ear suppuration, first mopping or sucking out the discharge and then blowing the powder through the perforation into the middle ear and until the deepest part of the meatus is full. Nascent iodine apparently gets into the furthest corners of the affected middle ear. A simple powder blower with a glass or wooden stem and a rubber bulb is quite adequate for the patient's own use, but a special all-glass or vulcanite powder insufflator should be used by the practitioner.

I first came across this method of treatment in Chicago and New York in the autumn of 1930. The iodine powder used was an American proprietary preparation, originated by Nathan Sulzberger, a New York chemist, about 1915, and was called by him "iodosan." It was used first of all for suppurative conditions of the nasal cavities, and only afterwards for chronic middle ear suppuration. The percentage of iodine in the powder varied from 10 to 0.75, but it was found more effective and much less irritating in the smaller percentages; in America it is now used commonly as 0.75 per cent. for the initial treatments and as 2 per cent. after a number of treatments have been given.

Many practitioners are under the impression that the treatment of ear discharge by powder insufflations is dangerous, as hard concretions may form from the powder and the drainage become obstructed, especially with small

perforations in the attic region. This fear is groundless, because the iodine and boric powder readily dissolves in the discharges within forty-eight hours. The ease with which boric powder dissolves was pointed out as long ago as 1880, when boric acid powder insufflations were recommended for the treatment of ear discharges by Bezold[1] in his textbook.

The use of iodine in the treatment of middle ear suppuration is not new. The first mention of iodine powder in the literature was in 1917, when M. D. Lederman[2] wrote enthusiastically of the results obtained in the treatment of middle ear suppuration by the use of a new iodine powder (Sulzberger's), the formula of which was not disclosed by its maker but which was stated to liberate readily the iodine content. The formula was not disclosed until 1930,[3] and was then stated by Lederman to be a percentage, varying from 0.75 to 10, of iodine in boric acid powder; he insisted, however, that the best results could be obtained only with the original Sulzberger powder. An interesting discussion at the Section of Otology of the New York Academy of Medicine followed the reading of Lederman's paper.[4] Lederman read a paper on the same subject at the Second International Congress of Oto-Laryngology at Madrid in September, 1932, but this paper has not yet been published.

In 1919, F. Stoker[5] recommended the employment of bismuth and iodoform powder, 1 to 2, which was said to liberate nascent iodine; unlike iodine and boric powder, however, or even boric powder alone, it did not dissolve readily in the ear discharges, and it blocked up the deeper parts of the meatus. In 1926 F. P. Sturm[6] wrote on the value of nascent iodine in otorrhoea; the method he employed was the local application of hydrogen peroxide drops and the internal administration of potassium iodide, which, when pushed, apparently set free nascent iodine at the point of application of the hydrogen peroxide. In 1926 Fotiade[7] recorded a series of cases of chronic suppurative otitis media successfully treated by instillations of Calot's solution (consisting of guaiacol 1 part, creosote 5 parts, ether 30 parts, iodoform 10 parts, and olive oil 70 parts), which liberated free iodine. Guttman,[8] in 1927, confirmed Fotiade's claims. Joseph C. Beck[9] stated in 1929 that he had treated a series of more than thirty cases of chronic suppurative otitis media with iodine powder (Sulzberger), introduced to his notice by M. D. Lederman; most of the cases dried up, but he considered it was too early to judge of the permanence of the cure. In 1929 M. J. Mandelbaum[10] recorded a number of cases of cure of chronic middle ear suppuration by the instillation of iodized oil. In 1931 N. Asherson[11] published an article on iodine powder in the treatment of chronic otorrhoea, quoting from the article by M. D. Lederman published in America in 1930.[3] He stated that a large number of cases of chronic uncomplicated otorrhoea in children, with a marginal perforation of the drum, could be cured by treatment with 1 per cent. iodine powder, but for most cases he preferred ionization, except for those in which operation was indicated. He considered that the treatment was well worth a trial before recourse to the radical operation. My own experience is that Asherson's conclusions are very much an understatement of the value of iodine powder when the treatment is properly carried out. In the past two years I have found that it cures nearly 95 per cent. of cases of chronic middle ear suppuration, and during that period I have never had to perform the radical mastoid operation except in cases of cholesteatoma and intracranial lesions. In the latest (1932) edition of Logan Turner's standard textbook, *Diseases of the Nose, Throat, and Ear*, J. S. Fraser[12] states:

"Conservative treatment of chronic middle ear suppuration by means of drops and syringing, if efficiently carried out, results in cure in 50 per cent. of cases. A further 25 per cent. may be cured by special methods, such as syringing through the Eustachian tube, intratympanic syringing, or the use of zinc ionization. Most of the remaining 25 per cent. require operation (radical or modified radical mastoid operation). Out of 1,893 cases of chronic middle ear suppuration seen at the Royal Infirmary, Edinburgh, during five years, 424 came to mastoid operation."

Two patients of mine, who had apparently an idiosyncrasy to iodine, could not tolerate the iodine powder (even as the 0.75 per cent.), and in one of these cases the irritation persisted for several days after the powder had been mopped out with liquid paraffin. The iodine powder has cleared up several persistent fistulas, and it is also a very useful dressing in the later stages of the after-treatment of the mastoid operation. The following are brief notes of some typical cases.

Case 1.—A man, aged 28, was seen in November, 1930. He had had discharge from the right ear for three months following a severe cold; this troubled him very much, since he was already deaf (an old-standing chronic middle ear deafness) in the left ear. There had been no improvement with syringing and drops. I told him that he ought to have a mastoid operation, but that first we should try the iodine powder. I mopped and sucked out the discharge and insufflated the powder daily for ten days. At the end of that time the discharge had stopped, and his hearing was apparently normal and has stayed so.

Case 2.—A. H., aged 32, had had a radical mastoid operation performed by an aural surgeon, but discharge continued both from the meatus and from the mastoid wound. After some months the wound was opened up and the operation re-done, granulations and more bone being removed. A post-aural fistula remained, with persistent discharge. Vaccines, ultra-violet and other rays, and innumerable different methods of treatment were tried in vain. After insufflation of iodine powder into the fistula every second day for three weeks it healed completely.

Case 3.—R. M., aged 27, had had a zygomatic mastoiditis, and the incision was made well forwards over the zygoma. The post-aural wound healed well, but a large fistula to the zygoma persisted, with abundant discharge. Fomentations, syringing with eusol, and other treatments had no effect; on opening up the wound there was no sequestrum, and six weeks after the operation the discharge showed no signs of abating. The wound was then filled daily with the iodine powder and within a week it was completely healed.

Case 4.—A man, aged 50, had had a radical mastoid operation eighteen years previously. The ear seemed quite well until two months previously when it began to discharge after influenza. A mass of cholesteatomatous debris was syringed out of the ear—the syringing caused intense giddiness—and a foul discharge continued. The discharge was mopped out and iodine powder insufflated. Three days later the discharge was much less. The cavity was then filled with iodine powder and a week later the discharge had cleared up and the old mastoid wound cavity remains dry and healthy.

Case 5.—A boy, aged 11, had had discharge from both ears for the past six years, after scarlet fever. He had had his tonsils and adenoids completely removed, and the ears had been treated by syringing, drops, and ionization, but without improvement. On March 1st, 1932, the debris was syringed out of both ears (this made the patient sick and giddy), and he was given drops of boric acid in spirit 10 grains to the ounce. On March 7th both ears were mopped out and iodine powder blown in. On March 14th the left ear was dry and the discharge from the right was slight; iodine powder was again blown into both ears. When seen on March 21st both ears were dry and apparently healed.

Case 6.—A clerk, aged 24, had had a discharging left ear for six weeks. When seen on April 9th, 1932, there was a polyp coming from the postero-superior part of the drum. The discharge was mopped away and the polyp touched with silver nitrate; iodine powder was then blown in and prescribed for the patient, who used it daily. When seen a week later the polyp had disappeared and the discharge was slight. A week later still the ear was quite dry and has remained so.

Case 7.—A youth, aged 16, had had his left ear discharging for some years. On June 2nd, 1932, the discharge was mopped out and iodine powder blown in; the powder was prescribed to be used daily. When seen on June 16th the ear was quite dry and healthy.

Case 8.—A schoolgirl, aged 14, had had her right ear discharging for a month, and when seen on July 21st, 1932, it was discharging freely. It was mopped out, and iodine powder blown in, and prescribed to be used daily. When

seen on August 4th the discharge was slight, and a week later the ear was quite dry.

M. D. Lederman[3] describes the iodine powder as an intimate association of iodine with boric powder prepared by mixing an iodine solution with dry, finely powdered boric acid and evaporating the solvent. I have found the following method simple and effective:

℞ Iodi resublimatae ... ... gr. 3.6
Pulv. acid. boric. ... ... ad ʒj
Sig. Iodine 0.75 per cent. in boric powder; use in a powder blower as directed.

Rub down the iodine with a few drops of spirit. vini rect. until solution is effected, and gradually incorporate the finely powdered boric acid. The preparation should be freshly prepared and kept in a well-closed container to avoid, as far as possible, loss of iodine by volatilization.

Practitioners and hospital colleagues to whom I have introduced the method have taken it up with enthusiasm. At one institution for children which I visit as a consultant, ionization was formerly the favourite method of treating ear suppuration, but it is now discarded in favour of this newer, much simpler, and more effective treatment.

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RELATIONSHIP OF SYPHILIS AND YAWS *

BY

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The problem as to the identity or otherwise of yaws and syphilis has assumed great importance in recent times owing to advances in treatment. Those who hold that yaws and syphilis are two entirely distinct diseases will have no hesitation in treating yaws with a few injections of any suitable drug which will get rid of the skin eruption. Those, however, who think that yaws is the same disease as syphilis, and those also who hold that, without being identical, yaws protects to some extent against syphilis, will regard such treatment of yaws as fraught with considerable risk. It is a matter of great importance to our tropical possessions that a decision on this question should be reached as soon as possible. As a result of my investigation into the evidence it does not appear possible to assert here that there is only one disease. On the other hand, the more closely one examines the differential points which are set out in the textbooks on tropical medicine the less convinced one becomes that the criteria are sufficient for differentiation. The onus of proof rests on those who assert that there are two diseases and not simply modifications of a single disease.

In the short time available to-day it is impossible to deal with the long list of so-called differential points set out in the textbooks. For the purpose of opening this discussion only those have been selected which are most stressed by authors, and which form the essential arguments, the two most important being the "congenital" and the "severe nervous system involvement."

* Read in the Section of Tropical Medicine at the Centenary Meeting of the British Medical Association, London, 1932.

THE "CONGENITAL" ARGUMENT

The congenital contrast is usually set out in the tables as follows: yaws, not congenital; syphilis, congenital. The statement that yaws is not transmitted transplacentally is accepted by the majority of workers, but there are a few records which suggest that such transmission occasionally occurs. In regard to the statement that syphilis is congenital, are we justified in accepting this as correct? I think not; syphilis is not the name of a single clinical entity: it is divisible into several clinical divisions, and to some of these the statement does not apply. We may divide syphilis into categories thus:

1. Acquired venereally, with or without chancre.

2. Acquired non-venereally. This again may be divided into: (*a*) adult, with extragenital primary sore; (*b*) infantile, with extragenital primary sore, rarely genital; and (*c*) congenital, with no primary sore.

The general dictum "syphilis congenital" may be applied to the first main group, venereally acquired syphilis, provided we qualify it with reservations to the effect that transmission to the partner in marriage does not inevitably occur, that once infected the mother does not necessarily transmit to her offspring, that if she does transmit she may do so irregularly, not to one child but to the next, and even to one only of twins. In the second main division I have not been able to find figures which show the results as to transmission transplacentally of adult or infantile syphilis with extragenital chancre. Information concerning the latter would have been useful for our present purpose, since it is a group very comparable with yaws. Some authors consider that syphilis acquired soon after birth gives rise to stigmata similar to those of congenital syphilis. In the third division of the non-venereally acquired group—namely, congenital syphilis—we have the evidence of many observers who are agreed that transmission transplacentally in such cases is a very exceptional occurrence; some even go so far as to suggest that there is no properly authenticated case of such transmission.

Here, then, in congenital syphilis, and probably we may include the acquired syphilis of infancy, we have a volume of the disease, and a very important one for our present purpose, to which the dictum that syphilis is congenital cannot be applied. Reverting to yaws and syphilis it seems to introduce a fallacy if we compare yaws, which is a disease of early childhood particularly and acquired non-venereally, with syphilis as a whole. We ought at least to refrain from comparing it with venereally acquired syphilis of adults; the comparison should be limited to those forms of syphilis which affect young children and are acquired non-venereally. Instead of the antithesis with which we began we should then have: in yaws, transplacental transmission very rarely recorded; in congenital syphilis, and the acquired syphilis of early childhood, transplacental transmission very rarely recorded. When yaws is compared thus with those forms of clinical syphilis with which it appears to be properly comparable the value of the greatly emphasized "congenital" criterion of difference is seen to have no existence.

YAWS AND SYPHILIS AND THE NERVOUS SYSTEM

In the tables the contrast is: yaws, nervous system never seriously affected; syphilis, nervous system prone to infection—for example, tabes and G.P.I. It has been recorded in regard to yaws that tabes and paresis occur in adult natives of Fiji, where syphilis is reputed unknown, but the majority of observers have failed to record these sequelae in yaws areas or have recorded them very rarely. From the statement concerning syphilis, most readers would assume that in syphilis there is always a significant amount of tabes and paresis, such as is recorded in the

case of venereal syphilis, for various countries in Europe and for the white population in America. So far is this from being the case that even in Europe there is a considerable area in which tabes and paresis are conspicuous by their very rarity in syphilitics. In the region of Bosnia and Herzegovina there is recorded an endemic form of syphilis; young children are infected with extragenital primary sore, but tabes and paresis are rarely observed. In America observers find that negroes living under comparatively civilized conditions are much less affected by tabes and paresis than the white population. It does not concern us here whether this difference in incidence is due to race or occupation or the florid nature of the secondary eruption or any combination of these or other factors; what is important to note is the fact that the incidence in negroes is less than in whites. When we turn to the natives of subtropical and tropical climates living at home in their own lands we find a remarkable state of affairs. The evidence from innumerable regions and observers shows that tabes and paresis, as the results of syphilis, are excessively rare among these populations. The rarity of tabes and paresis, in spite of great prevalence of syphilis, in Malaya, India, British Guiana, the Panama zone, and the east and west French colonial territories is the subject of continual comment. The records of these areas approximate closely, though they do not quite equal, that of Cook in Uganda, who, in 100,000 syphilitics, never once found a case of tabes or paresis.

Thus all the evidence goes to show that there are vast areas in the Tropics and subtropics, with very large populations affected with syphilis, where the dictum that syphilis produces tabes and G.P.I. cannot be used in the sense implied. Indeed, the absence of these two sequelae of syphilis focuses the attention of all observers. Here again it appears to me that the constructors of the tables of differences between yaws and syphilis introduce a fallacy by comparing things which are by no means strictly comparable. Yaws, peculiarly a disease of children and one acquired non-venereally and in the Tropics, should not be compared with syphilis in general; it ought to be compared with the syphilis of native children acquired non-venereally in tropical regions. In the absence of figures for such infections we should at least compare it with syphilis as it occurs in the Tropics. Even on this somewhat unsatisfactory basis the result is highly suggestive, and if recorded in the usual form is: in yaws of tropical countries, tabes and paresis very rarely recorded; in syphilis in tropical countries, tabes and paresis very rarely recorded. When put on even an approximately comparative basis, therefore, the incidence of tabes and paresis does not assist us in distinguishing yaws from syphilis.

Primary Lesions.—Another argument frequently used is that in yaws the sore is extragenital, whereas in syphilis it is usually genital. I should like to suggest that this point, although much emphasized by all writers, has no standing whatever as a differential criterion. It is simply the statement of an epidemiological fact. By the adoption of this identical formula a person can prove to his own satisfaction, if he desires to do so, that infantile acquired syphilis in England is quite a separate disease from venereal syphilis here, because the former has an extragenital primary lesion while in the latter the primary lesion is usually genital.

Itching.—The next point stressed by some authors is that in yaws itching is common whereas in syphilis it is rare. The evidence, however, whether in descriptions of yaws or syphilis, is very inconclusive, as regards both the primary lesion and the secondaries. The qualifications as to the degree and kind of itching in various conflicting statements make it obvious that there is little agreement. One important fact—namely, that the lesions in yaws itch more than the corresponding lesions in syphilis—appears to be overlooked. The skin of a naked native child in the tropical rural areas is constantly exposed to a whole series of agencies, such as biting insects, skin-penetrating larvae, and abrading and injurious objects, any or all of which are apt to initiate pruritus. From my observations of groups of children in tropical villages I formed the opinion that itching is almost a property of the skin of the native child, and that degrees of it are not likely to help us in differentiating yaws from syphilis.

Occurrence of Alopecia.—It has been stated that alopecia never occurs in yaws but may occur in syphilis. So far as I have been able to observe, the occurrence of alopecia among the negroes in their own countries is extraordinarily rare; in this there is a contrast with the white people of Europe and America. In so far as alopecia attributable to syphilis is concerned the evidence from the latter countries is very conflicting. It is unfair to contrast yaws alopecia with any other than alopecia resulting from child syphilis in the natives of the Tropics; it does not appear from the literature which I have been able to consult that figures exist on this aspect of the problem. It would be of great interest to ascertain whether alopecia exists in, and constitutes a character of, even venereal syphilis in the Tropics.

MUMPS AND APPENDICITIS

BY

JAMES DONNELLY, L.R.C.P. AND S.

AND

JAMES BAGOT OLDHAM, F.R.C.S.

In the *Epitome* published with the *British Medical Journal* of July 2nd an abstract was given of an article by Sandler and Finne (*Archives of Pediatrics*, March, 1932) entitled, "An unusual case of epidemic mumps complicated by gangrenous appendicitis." These authors state that only five examples of this combination of diseases have been described in the literature, and we are therefore encouraged to report the following case:

HISTORY OF CASE

On May 25th, 1932, a boy, aged 7 years, was seen by one of us (J. D.). He had been "off colour" for some days; on the 23rd he had complained of pain on swallowing, and his parents had noticed that his face was swollen. A week previously a school friend had developed mumps. On examination both parotid and submaxillary glands were found to be swollen and tender. The temperature was 100° and the pulse rate 100. The appetite was lost. A diagnosis of mumps was made and the appropriate treatment instituted. On May 26th the symptoms had increased a little, but two days later the pain and swelling were diminishing and the appetite had returned. On the morning of the 29th the boy seemed to be convalescing well, the bowels had opened, the temperature was 98.8° and the pulse rate 90. That evening he complained of pain in the epigastrium, vomited, and became restless. On examination some muscular resistance was noted on palpating the upper abdomen. The temperature had risen to 100°, the pulse rate remained at 90. There was a slight glycosuria. A tentative diagnosis of pancreatitis was made.

On the next day (May 30th) the temperature was still 100°, but the pulse rate had risen to 98. Vomiting had stopped, but there was anorexia. The pain was still in the epigastric region, but was apparently increased, as was the muscular resistance. There was some tenderness on palpation of the umbilical region. The bowels had not moved since the previous morning. On May 31st the temperature was 100° and the pulse rate 100. The pain, which was still epigastric, had diminished, but the tenderness and rigidity had increased. The bowels were opened. On the morning of June 1st there

was very little pain, but there was marked tenderness and rigidity, more especially in the region of the right iliac fossa. There was some frequency and pain on micturition. A diagnosis of acute appendicitis was made. At three o'clock on the same day the boy was seen in consultation by both of us. The temperature was 100.4°, the pulse rate 136, and the respiratory rate 28. The boy denied that he had any pain. The abdomen did not move on respiration, and was slightly distended. There was marked tenderness and rigidity over the whole of the lower abdomen, but more especially over McBurney's point. There was no cutaneous hyperaesthesia. On rectal examination there was extreme tenderness in the recto-vesical region. The swelling of the salivary glands had diminished greatly, especially on the right side. A diagnosis of acute appendicitis with perforation and peritonitis was made.

THE OPERATION

The boy was immediately transferred to the General Hospital, Birkenhead. At 4.30 p.m. the abdomen was opened (J. B. O.) under gas-and-oxygen anaesthesia through a split muscle incision. A large quantity of thin, purulent, slightly offensive fluid gushed out of the incision, and it was found that the whole lower abdomen and pelvis was involved in the peritonitis. The appendix, which was gangrenous and perforated, was removed. A split rubber drain was led down into the pelvis through a suprapubic stab incision. The appendix incision was closed with a small piece of rubber glove inserted down to the muscle layer.

Convalescence was uneventful. The pulse rate and temperature quickly returned to normal, the bowels were opened on the third day and continued to act daily until the boy left hospital on June 13th. He is now in perfect health.

COMMENTARY

The details of this case correspond very closely with the history of the cases reported by Simonin (1903), Jalaguier (1909), Rosenow and Dunlap (1916), Benassi (1925), and Sandler and Finne (1932). The case reported by Gaudier and Swynghedauw (1925), and mentioned by Sandler and Finne, should not be included, as the parotitis appears to have been a suppurative condition secondary to acute appendicitis and arising after operation.

The aetiology of mumps is still a mystery, and the virus remains unknown. From the frequent occurrence of orchitis, pancreatitis, etc., it appears to attack certain glands, with a special predilection for the parotids. Opportunities to determine the morbid condition have been few, but Virchow described the condition of the gland as one of inflammatory serous and cellular infiltration of the interacinous and periacinous connective tissue, the parenchyma being but slightly involved. While the parotid glands are especially affected the submaxillary salivary glands are usually involved, the sublingual glands less often. The lymph glands at the angle of the jaw and the parotid lymph gland are enlarged. Koplik states that in every case he observed there was distinct angina and swelling of the tonsils. Enlargement of the lachrymal glands has been noted in many cases. Orchitis is a very common complication, and usually occurs about the eighth day. Less commonly ovaritis, mastitis, pancreatitis, and enlargement of Bartholin's glands are noted. It is generally admitted that these complications are metastatic infections arising from the primary foci in the salivary glands. Is appendicitis another possible metastatic complication of mumps or is their association simply a coincidence? It is interesting to note that in the case recorded above, and in all the cases previously reported, the onset of the acute appendicitis has occurred a week or thereabouts after the parotitis started. In the words of Benassi: "In these cases there is no question that the appendicitis developed at the height of the parotitis, and with some doubt and reserve there is enough evidence to support the following conclusion: that the virus or organism which lodges in Stenson's duct travels to the appendiceal region by way of the digestive tract or by way of the haematogenous or lymphatic systems."

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

BILATERAL SUPERIOR THORACIC GANGLION NEURECTOMY IN PARKINSONISM

The results obtained in the case reported below are thought to be of sufficient interest to justify publication.

CASE RECORD

The patient, a woman aged 34, had "flu" in 1924, and was admitted some time later with post-encephalitic Parkinsonism to the Maudsley Hospital, where she was treated for ten weeks. For the last seven years she has been treated at home with injections of hyoscine (grain 1/75 twice daily). For the two months previous to admission she was unable to feed herself or to walk.

On July 7th, 1932, she was admitted to the Archway Hospital, Highgate. She had marked tremor and rigidity, a mask-like expression, slow cerebration, excessive salivation, a greasy skin, and an advanced degree of talipes equino-varus in the left foot. An attempt was made to substitute tincture of stramonium for the hyoscine, but this was strongly resented by the patient, who became very depressed and unable to sleep.

Treatment

The operation described by N. D. Royle in the *Journal* of June 11th, 1932, is stated by him to decrease the tremor of the homolateral hand, and, by increasing the cerebral circulation, to decrease the spasm of the contralateral leg and to improve the mentality of the patient.

On July 18th the right superior thoracic ganglion was removed after a deep dissection in the root of the neck, according to Royle's description. There was no difficulty in finding the ganglion, which was removed and sent for section. On August 30th, at the request of the patient and her mother, a similar operation was performed on the left side. A previous subcutaneous tenotomy had been performed on August 18th to correct the deformity of the left foot.

Results

Immediate.—This was the same after each operation. While the patient was still under the anaesthetic the pupil became contracted and the sweating of the face ceased on the homolateral side. After recovery from anaesthesia the patient stated that she felt much more alive, and smiled when spoken to. On the homolateral side the tremor had disappeared at rest, and was markedly diminished on performing voluntary movements; the sweating of the face had ceased, and the salivation was lessened. Ptosis of the eyelid was present, and a decrease of the labio-nasal fold was noticed. The homolateral arm had a well-marked vaso-dilatation, with a rise of temperature. No difference was noticed in the rigidity of the legs.

One Week Later.—The ptosis of the eyelid and the vaso-dilatation of the arm had disappeared. The patient was able to drink from a glass of water held in either hand, and her cerebration was much quicker. There was no tremor at rest; she could read a book for longer periods, and she smiled when spoken to.

Six Weeks Later.—There was no tremor at rest. The patient could feed herself, and stated that she felt brighter than before the operation. She now has no injections of hyoscine, and is taking extract of stramonium. She eats and sleeps well, and her attacks of depression are much less frequent. The wounds in the neck show only as a faint scar. No change can be noticed in the rigidity of the legs. The patient is being fitted with surgical boots, but at present walking is not good, due partly to deformity and rigidity, and partly to wasting of the limbs from disuse.

COMMENT

The case was an advanced one of eight years' standing, and as a result of the operation there is a greater improvement in the mentality of the patient than could have been obtained by medical treatment alone. The

marked alleviation of the tremor allows the patient to feed herself and to lead a more enjoyable life, and both the patient and her relations are pleased with the result of the operations. They have, however, failed to alter the spastic condition of the legs, and whether the improvement at present noticed in the tremor and mentality will be maintained it is not possible to say.

The operation would appear to be indicated only in cases which seem to be stationary, and in which, in spite of the exhibition of large doses of extract of stramonium, the patient is incapacitated by tremor of the hands and complains of mental deterioration.

I wish to express my thanks to Sir Frederick Menzies for permission to publish this case, and to Dr. H. O. West, medical superintendent of the Archway Hospital, for his assistance.

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Highgate. L.R.C.P.Lond.

DEAD FOETUS IN ABDOMINAL CAVITY

RUPTURE OF PREVIOUS CAESAREAN SCAR

I consider the details of the following case to be worthy of record.

A patient, aged 31, had had a Caesarean section performed fourteen months previously at another hospital, owing to contracted pelvis. She became pregnant again, and arrangements were made to admit her to this hospital for another Caesarean section just before term. Three weeks before term she was seized with pain at 4 a.m., which she stated to be continuous and not in any way to resemble labour pain. She was admitted to hospital seven hours later. Her temperature was subnormal; pulse 108. The abdomen was acutely tender to palpation and rigidity was present. A vaginal examination was not made. At operation the surgeon, having made the usual incision (in the median line, down to peritoneum), noted that blood escaped out of the abdominal cavity, also that lying free in the abdominal cavity was a large sac. This proved to be the intact bag of membranes, containing the foetus. The placenta (attached to the bag of the membranes) was also lying in the abdominal cavity. The sac was removed entire and opened, a dead foetus being found inside. The uterus was then examined, and was found to have ruptured along the entire length of the previous (Caesarean) scar.

I am indebted to Dr. A. Lloyd Davies for permission to record the above details.

IRENE P. ROWLANDS,
Wrexham and East Denbighshire War Memorial Hospital. House-Surgeon.

Reports of Societies

TREATMENT OF THE ANAEMIAS

At a joint meeting of the Sections of Therapeutics and Medicine of the Royal Society of Medicine on January 10th, with Dr. H. MORLEY FLETCHER in the chair, a discussion on the treatment of the anaemias was opened by Dr. L. J. WITTS.

Dr. Witts said that in the treatment of the microcytic hypochromic anaemias different chemical combinations of iron had been found to vary in their therapeutic activity. In pernicious anaemia the reticulocyte count was an index of progress under treatment, but with the microcytic anaemias there was no such short cut by which the value of a remedy could be assessed. Ferrous salts of iron appeared to be much the most potent, especially when achlorhydria was present, and following them, in order of potency, came scale preparations, ferric salts, and organic compounds, the last being almost without effect. Both iron and ammonium citrate and Blaud's pill could be given in large doses. He had found that the minimum effective dose of Blaud's pill to ensure success in the treatment of microcytic anaemias could be fixed at 45 grains a day. He had not found it necessary to add arsenic, copper, or other inorganic salts to the diet of ordinary adults in this country in order to make iron therapy effective. Remarkably large doses of iron might be necessary in refractory cases, especially in pregnancy; 80 per cent. of cases of microcytic anaemia, however, improved on Blaud's pill in doses of only 15 grains a day. A new preparation of iron for injection had been included in the *B.P.C.* The therapeutic dose of iron by injection was 16 to 32 mg., and the toxic dose 48 mg.—an increase of only 50 per cent. With such a small margin of safety he preferred to avoid injections of iron. At the climacteric menorrhagia might nullify all attempts at medical treatment; in such cases the induction of an artificial menopause gave satisfactory results, and the anaemia did not appear to recur. In the treatment of pernicious anaemia the question of cost was often overlooked in selecting a remedy. At the present time desiccated stomach was the cheapest and most effective treatment for the anaemia and the associated cord changes.

Professor L. S. P. DAVIDSON referred to the value of a satisfactory classification of anaemias in facilitating the adoption of correct therapeutic measures. He went on to say that during the recuperative stage of pernicious anaemia there was no iron retained in the organs, as he had been able to demonstrate in one of his patients who was killed by a bus. For this reason he thought patients during the recuperative stage should be treated with whole liver, not merely with liver extracts. Potent extracts for the cure of pernicious anaemia could be obtained from fish livers, as he had recently been able to show, and it was probable that preparations of this kind would be put on the market very cheaply. He had used marmite with success in one or two cases of pernicious anaemia, but in several others it had had no effect. In the treatment of the microcytic anaemias he had obtained dramatic improvement by the use of solid ferrous chloride, 5 grains daily; the results had been as good as those obtained with Blaud's pill, 60 grains daily. Unfortunately ferrinol, the proprietary preparation of ferrous chloride on the market, was expensive, the cost of treatment working out at 4s. a day.

Dr. H. LETHEBY TIDY suggested that anaemia might be exaggerated in some cases by exhaustion of the bone marrow and other blood-forming organs. Cases of "acute febrile anaemia," of polycythaemia in which anaemia ultimately developed, of primary purpura with anaemia preceding haemorrhage, of pernicious anaemia which failed to react to treatment, and of the pernicious anaemia of pregnancy, might all be examples of such exhaustion of the haematopoietic system. He thought such cases might well be treated by blood transfusion, which might start them on the way to recovery, and even save life.

Professor FREDERICK LANGMEAD said he had asked himself why the dosage of iron necessary for effective treatment of the microcytic anaemias should be so much in excess of the normal iron requirements of the body. Dr. Bourdillon, whom he consulted, had suggested that it was associated with the *p*H of the duodenal contents. When achlorhydria was present the *p*H of the duodenum would naturally be raised. He thought that the dosage of iron might possibly be reduced to within ordinary therapeutic limits if it was given with sufficient hydrochloric acid or ammonium chloride to reduce the *p*H of the duodenal contents.

Dr. DOROTHY HARE said that injections of iron had been given to a patient with microcytic anaemia over a period of nineteen days without benefit; iron and ammonium citrate was then given, and marked improvement followed at once.

Dr. JOHN WILKINSON said that extract of hog's stomach was certainly the most effective preparation for the treatment of pernicious anaemia. With critically ill cases the quickest results were obtained with injections of liver preparations, but the preparations available for this purpose were extremely variable. In the treatment of microcytic anaemias he had tested the effects of copper and manganese, both separately and in addition to iron, and had reached the conclusion that iron by itself gave the best results. He thought it was doubtful whether enough acid could be given by mouth to affect the *p*H of the duodenal contents. Dr. SINCLAIR MILLER had found

that many of his elderly pernicious anaemia patients would rather have a weekly or fortnightly injection than take liver or stomach extract by mouth daily. They seemed to keep well under this treatment. Dr. E. N. ALLOTT mentioned two cases in which numbness of the fingers had developed in patients with pernicious anaemia after they had been put on liver treatment. He wondered whether liver therapy encouraged the development of subacute combined degeneration. The CHAIRMAN wanted to know whether whale liver had been tested for an extract suitable for the treatment of pernicious anaemia.

Dr. WITTS, replying, said that in his experience symptoms of subacute combined degeneration improved on increased doses of stomach extract. Where there was iron shortage in the recuperative stage of pernicious anaemia he thought iron, not liver, should be given, since few patients would eat liver twice a day for life. Professor DAVIDSON thought the incidence of subacute combined degeneration was increasing, and he had not been able to obtain any marked improvement in patients with signs of this condition by increasing the doses of liver extract.

X RAYS IN DIAGNOSIS OF PLACENTA PRAEVIA

At a meeting of the Edinburgh Obstetrical Society held on December 14th, 1932, with the president, Dr. JAMES YOUNG, in the chair, a paper was read by Professor MUNRO KERR and Dr. W. G. MACKAY (Glasgow) on the diagnosis of placenta praevia, with special reference to the employment of *x* rays for this purpose.

Professor Munro Kerr introduced the subject by referring to the high percentage of maternal deaths due to placenta praevia, and stated that in order to maintain a low maternal death rate it was of the greatest importance that the most suitable method of treatment should be selected for each individual case. He referred to the great difficulty not only of diagnosing the variety of placenta praevia that was present, but also of the diagnosis between a placenta praevia and an accidental haemorrhage. He referred to various methods of diagnostic value, but showed that even by applying all these methods diagnosis was often doubtful. He therefore considered that any method of diagnosis which would not only differentiate placenta praevia from accidental haemorrhage, but would also show which variety of placenta praevia was present, would be of the greatest value, and he called upon Dr. Mackay to demonstrate a method which they had investigated together.

Dr. Mackay gave, in the first place, a short summary of previous investigations which had been carried out in order to locate the position of the placenta in the uterus, and came to the conclusion that the only one which had been at all satisfactory up to the present was that of Manees, Miller, and Holly, who had injected strontium iodide into the amniotic sac of pregnant women. The placenta which projected into the cavity produced a defect at the edge of the shadow when the uterus was pictured from the correct angle. Professor Munro Kerr and Dr. Mackay had tried this method on ten cases, but as the foetus had died in three it was given up, and uroselectan B, which was non-toxic and non-irritant, was substituted for strontium iodide; 20 c.cm. of this substance was found to produce a suitable shadow, and in ten cases in which the procedure was carried out no untoward effects occurred either to the foetus or to the mother, though there was no doubt that the injection had a great tendency to terminate pregnancy. The technique of the operation was then described fully, and the question of taking at least two radiograms—one postero-anterior and the other lateral—was insisted upon so as to be sure of getting a full view of the indent made by the placenta. If this was not sufficient, in doubtful cases lateral radiograms had to be taken as well. Dr. Mackay then showed a number of radiograms on the screen which demonstrated the position of the placenta not only in normal cases, but also in cases of placenta praevia, when it could be ascertained exactly how much of the placenta was in the lower uterine segment and covering the os. The speaker then explained various errors which had to be excluded, such as gas in the bowel and the presence of two sacs. He also showed how *x* rays could, in certain cases, make possible a diagnosis of the sex of the child, and also show whether any coils of cord were round the child's neck.

Radiotherapy in Gynaecology

The second paper, on some aspects of radiotherapy in relation to gynaecology, was read by Dr. J. B. KING. He first dealt with the question of radiotherapy in regard to cancer of the cervix, and explained the principal methods of application. He also reviewed statistics from various Continental sources, and compared them with those of Bonney for operation in such cases. It was Dr. King's opinion that the problem of the treatment of the primary lesion was solved, and that the minor variations of technique now used in different clinics did not matter greatly so long as the cervix received some 4,000 to 5,000 milligram hours, suitably filtered. It was, however, the treatment of the parametrium and the involvement of glands that had still to be investigated thoroughly in order to improve the mortality rate, which, even in the best statistics, was about 51 per cent. in early cases. Dr. King considered that the only line along which this problem could be attacked was that of *x*-ray therapy, and it was certain that the highest percentage of cures had arisen in the clinics where *x* rays had been used as an adjunct to radium. He mentioned that 400,000 volts—almost double the dose now available—would soon be possible, and he thought that with this dose the pelvis could be irradiated very completely to cause a widespread irradiation of the carcinoma. The radium bomb might also be of use for this purpose. There was no danger in carrying out radium or *x*-ray treatment immediately after one another for cases of uterine carcinoma, and he considered that the so-called *x*-ray sickness, due to intensive radiation, was a thing of the past, and did not occur with present-day methods. He next discussed the question of radiotherapy for carcinoma of the body of the uterus and of the ovary, and concluded that, though radium might be of use in the former, it was not likely to be of any avail in the latter. The question of radiotherapy for fibroids was then advanced, and Dr. King mentioned several of its advantages over operation in such cases. The treatment of sterilization by radiotherapy and the treatment of functional menorrhagia was also touched upon, and the suitability of *x* rays and radium in such cases was discussed. Dr. King did not believe in the cure of amenorrhoea by so-called stimulation doses of *x* rays to the ovaries, as he considered no such action as slow stimulation was caused by radiation. He thought that these cases were probably due to a destruction of persistent cystic follicles rather than to any stimulation of ovarian secretion. Finally, he touched upon the treatment of some cases of menorrhagia associated with symptoms of hyperthyroidism which had improved very markedly simply by radiation of the thyroid.

A quarterly court of the directors of the Society for Relief of Widows and Orphans of Medical Men was held on January 4th. In the absence of the president Dr. W. Culver James, the senior vice-president, took the chair. Grants amounting to £1,975 were voted for the half-yearly payments to the widows and orphans in receipt of relief. Of this amount £112 10s. was for special grants to orphans to enable them to continue their education, or assist them with their expenses in connexion with the careers they were embarking on. The expenses of the quarter were £88 2s. 6d. Last December £640 was distributed as Christmas presents. At the present time there are fifty-two widows and seven orphans in receipt of relief. Six new members were elected at the meeting, and the resignations of two were received and accepted. Membership is open to any registered medical practitioner who at the time of his election is residing within a twenty-mile radius of Charing Cross. Application forms for membership and terms of annual subscription may be obtained from the secretary, who attends at the offices of the Society, 11 Chandos Street, W.1, each Wednesday and Friday between 4 and 5 p.m.

Reviews

TREATMENT OF SYPHILIS

So many people appear to think that syphilis can be cured by a few injections of arsenobenzol that the appearance of such a book as *The Treatment of Syphilis*,[1] by J. F. SCHAMBERG and C. S. WRIGHT, is to be welcomed, more especially as the authors have gone deeply into their subject, delved into the literature, and presented their thesis as fully as anyone could desire. It seems a pity that they should have confined themselves almost entirely to the treatment of the individual, and neglected to discuss the matter as a world problem: it should be more important to deal with the disease as a social evil than to treat the individual.

The four principal drugs used in anti-syphilitic medication—mercury, bismuth, arsenic, and the iodides—are dealt with in that order. Mercury is largely of historical interest, though there are still many occasions when it may be used with advantage; we gather that it has retained its popularity more in America than in this country. No fewer than ninety-eight pages are devoted to this drug, as against fifty-four to bismuth—which seems somewhat surprising in view of the fact that bismuth has very largely superseded mercury, that the former has most of the advantages and few of the disadvantages of the latter, and that a voluminous literature has sprung up around it in the last ten years. Nevertheless, the authors never fail to ascribe to bismuth its full value in routine treatment. As to whether it ever reaches the spinal fluid in appreciable amounts they retain an open mind, leaving the reader to decide from amongst the authorities quoted.

The arsenobenzenes, of course, receive more extended notice—208 pages. It would appear that the authors favour the intravenous route and the "neo" preparation where applicable, and they are disciples of the concurrent use of bismuth, all of which is in accord with the best-informed opinion in this country. The sections on the unfavourable reactions which may follow are good, but more might have been said about the treatment of jaundice and dermatitis. The authors rightly stress the fact that neuro-recurrences are due to an insufficiency of the drug, and not to the action of the drug itself. They are evidently pleased with the new drug bismarsen (bismuth arsphenamine sulphonate). The iodides have their uses, but they are limited, and it is stressed that they have no spirochaeticidal action. A useful chapter is devoted to prophylaxis, and the authors evidently are against the oral use of stovarsol, preferring to wait and watch. The treatment of the various types of syphilis—early, latent, visceral, and nerve—is eminently sound; if treatment were always given in adequate amount in the early stages there would be far less nerve syphilis. In general paralysis much is to be hoped for from endothermy fever, which appears to give results at least as good as malaria, with less risk. Intraspinal treatment for nerve syphilis—almost superseded in this country—still seems to have many adherents in America. Cisternal puncture would appear to be a simple affair, and less likely to be followed by unpleasant after-symptoms than lumbar puncture, yet it is very little used in our own clinics.

Speaking generally, this book presents views that are orthodox, and very much in accord with opinion in England. In many cases a number of authorities are quoted and various methods discussed, the authors indicating their own preferences. It is curious that while the pain which may be caused by intramuscular injections is mentioned over and over again, it does not seem to have occurred to the authors that there is such a thing as deep subcutaneous injection; this is particularly useful in the administration of sulpharsphenamine. Many of the illustrations are poor and are not in agreement with the text, and some are misplaced. The bibliography appears to be adequate, and is for the most part given in the text. The book can be recommended for reference purposes; but its standard of literacy is, frankly, very low, as shown in the following sentence on page 494: "The failure to obtain fluid is usually not always due to failure to properly enter the spinal canal." It is a pity that such a very large number of grammatical and typographical errors have been allowed to pass uncorrected.

[1] *Treatment of Syphilis*. By Jay F. Schamberg, A.B., M.D., and Carroll S. Wright, B.Sc., M.D. New York and London: D. Appleton and Co. 1932. (Pp. xxiv + 658; 62 figures. 42s. net.)

A MANUAL OF BACTERIOLOGY

Hewlett's *Bacteriology*[2] is one of the standard English works on the subject. First published in 1898, it now appears in its ninth edition—an ample testimony to its worth. In the preparation of this new edition Professor HEWLETT has had the collaboration of Professor JAMES MCINTOSH. The whole book has been overhauled and brought up to date, and it can be said without reservation that the result of their labours is a sound, reliable, and readable account of the subject. The general arrangement of the book remains unaltered. It commences with a short introduction and then passes to a general consideration of bacteria, their nature, classification, biology, and relation to disease. Following this are two chapters devoted to technical considerations—laboratory equipment, culture media, staining methods, and the like—all of which are succinctly described. A new feature in this part of the book is the section on *p*H, which receives more elaborate treatment than before. Chapter IV concerns the methods of investigating microbial disease, and contains, in addition, sections on the microscope, filterable viruses, and the bacteriophage. The general account of the filterable viruses is good, but it might have been better had it been pointed out that the estimates of the size of the different virus particles are only approximations which might possibly require reconsideration. Chapter V is devoted to infection and immunity, and following this the different groups of bacteria are accorded separate treatment, each chapter terminating with a section on bacteriological diagnosis in which the student will find clear instructions enabling him to carry out the requisite laboratory investigations. These chapters are well arranged, and the information is invariably up to date.

New chapters have made their appearance in this volume: one on undulant fever, contagious abortion, and tularaemia, and another on spirochaetes, which have now been separated from the protozoa. The latter chapter contains detailed instructions for carrying out the Kahn test, in addition to the Wassermann reaction, and, incidentally, a really marvellous dark-ground photomicrograph of *S. pallida*. It is a pity that *S. icterohaemorrhagiae* could not also have been illustrated by a photograph of it in the living state, for there is nothing characteristic about it when fixed and stained. While on the subject of illustrations it may be pointed out that this textbook is most admirably served in this respect. Not only are there numerous good photomicrographs, but there are many drawings which should prove of the greatest value to the student, besides beautifying the book.

Filterable viruses receive generous treatment, a chapter of some forty-six pages being devoted to this subject. The account is a good one, and terminates with a well-balanced consideration of malignant disease from the virus

[2] *A Manual of Bacteriology: Medical and Applied*. By R. T. Hewlett, M.D., F.R.C.P., D.P.H., and James McIntosh, M.D., B.Ch. Ninth edition. London: J. and A. Churchill. 1932. (Pp. ix + 746; 66 figures. 18s.)

standpoint. What was said previously about the illustrations needs some slight modification here, for we cannot congratulate the authors on the photomicrograph of Paschen bodies; it is not at all convincing. Chapters on various diseases not previously considered, the bacteriology of water, milk and food, and disinfection complete the volume. The book is well printed and there is a good index.

ST. BARTHOLOMEW'S HOSPITAL REPORTS

The sixty-fifth volume of *St. Bartholomew's Hospital Reports*[3] is larger than most of its predecessors since 1915, thus resembling those of the pre-war period, and it contains a general index for the volumes xli to lxv, which has been compiled by Mr. W. Girling Ball, one of the honorary secretaries of the editorial committee. There are two *in memoriam* notices, by Dr. Hugh Thursfield and by Professor W. Langdon Brown, of their late colleagues Sir Frederick Andrewes, who for thirty years taught pathology in the medical school, and Dr. James Calvert, whose personality was one of "encompassing kindliness." Two-thirds of the remaining part of the volume deal with malignant disease from one aspect or another, and nearly half of this space is occupied by Mr. Douglas Harmer's admirable Semon Lecture at the University of London in 1931 on the relative value of radiotherapy in the treatment of cancers of the upper air-passages, which has been published as a separate book and was reviewed in our issue of November 19th, 1932. The history and work of the Cancer Research Committee of the hospital, of which Sir Thomas Horder is chairman, are described by the secretaries, Drs. R. G. Canti and W. M. Levitt. This committee is a continuation of the earlier Radiotherapeutic Research Committee, and has, with a generous supply of radium, been able to carry out much work and investigation. Mr. J. Beattie contributes a well-illustrated article on the early diagnosis of carcinoma of the cervix uteri, Mr. R. W. Raven gives a valuable statistical account of secondary malignant disease of bone, Mr. R. Phillips reviews the relations of the lymphocyte and cancer, and Dr. James Maxwell records a case of massive collapse of the lung in bronchial carcinoma. A case of chronic myelocytic leukaemia in a child is fully reported by Drs. C. H. S. Harris and C. F. Harris, who believe that irradiation prevented death in an early stage, and confirm Dr. J. H. Drysdale's opinion of the importance of the red cell count in the *x*-ray treatment of leukaemia. Mr. J. P. Ross writes on causalgia, Mr. H. P. Nelson on subclavian aneurysm following fracture of the clavicle, and Mr. A. M. Boyd on the use of nembutal as a basal hypnotic before general anaesthesia in more than a thousand cases.

JOHNSTONE'S MIDWIFERY

Professor R. W. JOHNSTONE'S well-known *Textbook of Midwifery*[4] has grown out of all recognition. The sixth edition has been reset in clearer type and on a larger page, and now forms a bulky volume that can no longer be accommodated in a reasonably capacious pocket. The characteristics of its earlier stage of evolution have, however, been maintained. The scientific aspects of obstetrics are kept well in the foreground, the embryological portion being particularly clear and well illustrated. The chapter on menstruation has been rewritten, and gives an excellent précis of the present state of our knowledge. The topical metaphor used in summing up ovarian function in relation to the other ductless glands is worth quotation:

> "... the ovary acts as a Ministry of Reproduction under a Coalition Cabinet of all the endocrine glands, and not only exercises a direct control over the sexual and reproductive functions, but represents the needs of the reproductive situation to the other glands, and so influences general metabolism."

The chapter on toxaemias of pregnancy has been recast, and the practical features of the book are kept in their due proportion. On the whole, the matter is well balanced, in spite of the additions and others changes that have been made since its original layout was determined twenty years ago. There is, however, one noteworthy exception in this regard in Section IV (physiology of the puerperium), which contains but one chapter of nine pages covering this subject, the physiology of the neonatal infant, and the management of the mother and child during the lying-in period. The care of the infant, including breast-feeding, is dismissed in little more than a single page, whereas there are two chapters in Section VII (pathology of the puerperium) devoted to the diseases and injuries of the newborn infant and to artificial feeding.

From the point of view of the teacher we regret that the author has not seen his way to take physiology and pathology together in place of the old arrangement of first all of the one and then all of the other. Surely the student obtains a clearer grasp of the subject presented to him in chronological order in clearly differentiated sections of pregnancy, labour, lying-in, and the infant, in which the physiological and the pathological are taken together. An accurate delimitation of the boundary between the normal and the abnormal is difficult and often impossible in midwifery, as is recognized here where Section III includes labour in its various presentations instead of only the physiological. The separation of the clinical course and the factors of labour (Chapters XII and XIII) by intervening sections on the physiology of the puerperium and the pathology of pregnancy from faults of the powers and passages (Chapters XXIX and XXX) may also be instanced as a diversion that cannot aid easy assimilation. But preference for another arrangement does not imply any lack of appreciation of the sound teaching throughout this deservedly popular textbook.

FRENCH CLINICAL LECTURES

The volume of twenty lectures[5] delivered at the Charité Hospital, Paris, by a corresponding number of physicians, by no means confined to Paris, on present-day clinical problems, is the third brought out under the supervision of Professor ÉMILE SERGENT, who contributes an article, with radiograms, to show that tuberculosis may spread by the lymphatics from primary foci in the mediastinum and neck to the lungs. The effect of influenza on tuberculosis, especially in activating quite latent pulmonary tuberculosis, is discussed by Dr. Francis Bordet, who reviews the divergent opinions on this controversial problem. The indications and contraindications for intervention in spontaneous pneumothorax form the subject of a lecture by Dr. P. Pruvost, and the methods of treating vomicae of the apex of the lung, of the generously illustrated article by Dr. F. Dumarest of Hauteville. There are two interesting lectures on unusual, or at least rarely recognized, manifestations of congenital syphilis: Professor J. Dechaume of Lyons mentions that in his school the pulmonary lesions due to the *Treponema pallidum* are fully accepted, whereas in Paris there is some degree

[3] *St. Bartholomew's Hospital Reports*, vol. lxv. London: John Murray. 1932. (Pp. xxv + 317, with a general index to vols xli–lxv, pp. 1-42; 47 illustrations. 15s. to subscribers, 21s. net to non-subscribers.)

[4] *A Text-Book of Midwifery*. For Students and Practitioners. By R. W. Johnstone, C.B.E., M.A., M.D., F.R.C.S.Ed., F.C.O.G. Sixth edition. London: A. and C. Black, Ltd. 1932. (Pp. xxiv + 447; 263 figures. 18s. net.)

[5] *Questions cliniques d'actualité: leçons professées à la Clinique-service du Professeur Sergent, 2e série*. Paris: Masson et Cie. 1932. (Pp. 302; 17 figures. 45 fr.)

of scepticism; he describes with full pathological details two cases clinically resembling miliary tuberculosis which were really miliary gummata and fibrosis of the lungs. The occurrence of high blood pressure in the subjects of congenital syphilis, who do not show any evidence of cardio-renal change but are anaemic, is the text of Dr. J. Génévrier's lecture. Two articles deal with appendicitis —Dr. Paul Jacquet's on the chronic form, and Professor Vignes's on its occurrence in connexion with pregnancy. Professor Pasteur Vallery-Radot writes on specific hypersensitiveness, and Dr. L. de Gennes on anaphylaxis. In his clinical account of mongolism Dr. Turpin prefers this name to mongoloid or mongolian idiocy. The primary tumours of the adrenals are classified clinically in four categories by Professor Langeron of Lille: those with abdominal, those with metastatic, those with endocrine, and those with hypertensive symptoms. Professor Langeron recognizes paroxysmal hypertension with paragangliomas and continuous raised blood pressure, usually with cortical hypernephromas. Professor Gustave Roussy writes with authority on the present direction in which researches on cancer are taking; Dr. Henri Janet on the prophylaxis of diphtheria; and Professor Fiessinger on the incomplete or fruste forms of amoebic abscess of the liver.

Notes on Books

The work of Dr. WENDELL PHILLIPS on behalf of the deaf entitles his contribution, *Your Hearing—How to Preserve and Aid it*,[6] to the Appleton Popular Health Series to special consideration. As founder of the American Federation of Organizations for the Hard of Hearing, he writes with knowledge and sympathy of the problems that confront the deaf. In attempting to achieve the *via media* the authors have produced a book that is perhaps a little too popular for the medical man and too long and technical for the general public. The sections on the anatomy of the ear, the physiology of hearing, the prevention of deafness, and the indications for lip reading contain sound instruction and are well written. Some other parts which have been written in the American vernacular make tedious reading, although the advice given, for instance, in "Shall they marry?" is excellent. The book may be recommended for study by deaf persons and those who are in any way responsible for the welfare of the deaf, whether adults or children, because special attention is directed to social as well as to purely technical problems.

Dr. A. C. DOUGLAS has written a carefully thought out monograph on the physical basis of mind.[7] The aim of this work is to show that by taking full advantage of the latest advances in physiological knowledge the gaps left by associationism may be filled and the criticisms of gestaltism may be met, and a complete scientific theory of mind may be presented upon the materialistic basis which, the writer believes, behaviourism rightly demands. The book is excellently illustrated, and it includes a clearly written outline of the evolution and mechanisms of the nervous system. The author attaches much importance to the conditioned reflex, but some of his readers may find it difficult to agree with his view that the manifestations with which the psychopathologist is concerned will be found susceptible of a simple and rational explanation as the results of the interplay of cortical stimulations and inhibitions.

Dr. SANSOME and Mr. PHILP of the staff of the John Innes Horticultural Institute have contributed a volume on plant genetics[8] to the "Recent Advances" series published by Churchill. There was great room for such a book; for genetics, and particularly plant genetics, is one of the most rapidly developing of sciences, and so rapid has progress been that it is difficult for any but a few professional students to keep in touch with the literature. This book attempts to review and to discuss the recent developments of the chromosome theory of heredity that have occurred within the last ten years. It does not restrict itself entirely to plants, for no book on genetics can exclude the fruit-fly, Drosophila. It is addressed primarily to the teacher of genetics, to the researcher in genetics, and to the general biologist. Most excellent accounts are given of the origin of polyploidy, of auto- and allo-polyploids, of euploids and aneuploids, of structural hybrids, and of interspecific hybridization. A very good contribution to the species problem brings the book to an end. There is an adequate bibliography and an excellent index. The book is well written, well arranged, well illustrated, and admirably produced.

[6] *Your Hearing—How to Preserve and Aid it.* By Wendell Christopher Phillips, M.D., and Hugh Grant Rowell, M.D. New York and London: D. Appleton and Co. 1932. (Pp. 232. 6s. net.)

[7] *The Physical Mechanism of the Human Mind.* By A. C. Douglas, M.B., Ch.B. Edinburgh: E. and S. Livingstone. 1932. (Pp. xiv + 251; 24 figures. 15s. net; postage 6d.)

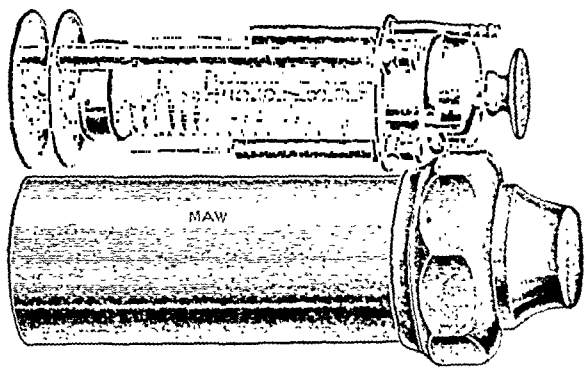
[8] *Recent Advances in Plant Genetics.* By F. W. Sansome, Ph.D., F.L.S., F.R.S.E., and J. Philp, B.Sc., F.L.S. Foreword by Sir Daniel Hall, K.C.B., M.A., LL.D., D.Sc., F.R.S. London: J. and A. Churchill. 1932. (Pp. x + 414; 56 figures. 15s.)

Preparations and Appliances

A SYRINGE CASE

Dr. W. R. THROWER (Weymouth) writes:

All physicians know the difficulty in transporting a 10 c.cm. syringe and needles in a sterile condition without damage either to the barrel or to the needle-points. To overcome this trouble I have had made a cylindrical metal case, 1⅜ inches in diameter and 5 inches long, with a spirit-proof screw cap. Into this case slides an accurately fitting metal



frame, which is so constructed that a 10 c.cm. syringe will rest vertically in the centre, while arranged round are four small tubes to contain needles of any gauge, and up to 4 inches in length. The case is kept full of spirit, which bathes the syringe and needles, so that they are ready for instant use when carried in the bag, whether for giving intravenous medication or for exploring a chest or other organ. All that has to be done is to pull out the frame by its handle, when the contents are easily accessible.

The instrument has been made for me on several occasions by Messrs. Maw and Sons, London, E.C.1, and stands up to use very well.

PARENTERAL CALCIUM

"Azoule" calcium L-B (calcium lactobionate solution) is prepared by Messrs. Allen and Hanburys Ltd. for the parenteral injection of calcium in cases in which oral administration is ineffective. "Azoule" calcium L-B contains 2 grams (31 grains) of calcium lactobionate—that is, approximately 0.1 gram of calcium, or the equivalent of 0.3 gram (5 grains) of calcium chloride, in each 5 c.cm. ampoule. The dose recommended for injection into adults is about 5 c.cm. daily, on alternate days, or every third day. Children should receive 1 to 2.5 c.cm. at the same intervals. Intramuscular and subcutaneous injections are preferable. Intravenous injection of any calcium salt should be used only in urgent cases, as it is apt to produce a digitalis-like effect, or even venous thrombosis.

RINGWORM DIAGNOSIS LAMP

The British Hanovia Quartz Lamp Co. Ltd. (Slough, Bucks) announces the production of a new portable diagnosis lamp for use in suspected cases of ringworm, and also in the diagnosis of eczema, pityriasis, erythrasma, psoriasis, and *x*-ray dermatitis. The apparatus, which provides a fluorescence beam of ultra-violet light that can be turned in any direction, is neatly finished, and available in three models (from £20) for use with alternating, direct, or either type of current.

THE DEVELOPMENT OF POST-GRADUATE MEDICAL EDUCATION

BY

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The announcement recently made in the *British Medical Journal* that the Government intends to proceed with the project for establishing a post-graduate medical school in London will give pleasure to all who have followed this proposition with hopeful expectation. The possibility that London, with its unrivalled clinical facilities, may soon possess an adequately financed and well-equipped post-graduate school is indeed a fascinating one, though much will necessarily depend on the methods which are employed in its organization and the degree of support which it receives from the profession. It must be admitted that, in spite of the incessant and devoted efforts which have been made in various quarters—notably those connected with the West London and Prince of Wales's Hospitals, and with the Fellowship of Medicine—but little has yet been done in London to study the needs of the graduate as an individual and separate factor in medical education, and the result has been that present facilities for this important branch of training lag far behind those of many other cities, especially in America and on the Continent.

A somewhat extensive experience of post-graduate study in London and the Provinces, carried on during a series of furloughs from service abroad, and culminating in a whole year recently devoted to this pursuit, has given me certain very definite impressions, both of the defects in our present system, and of the requirements which are, in my opinion, essential to the success of the new project, and these I venture to submit for consideration and criticism.

DEFECTS IN OUR PRESENT SYSTEM

Lack of Study Directed to the Peculiar Needs of Graduate Students.—To my mind the outstanding defect of our present system lies in the fact that, with a few honourable exceptions, the graduate is usually treated far more as a rather embarrassing accretion to the problem of medical education than as a completely separate entity, demanding separate study and separate facilities. The post-graduate student arrives at a hospital in which a lecture or class has been advertised, and almost at once feels out of place. He is "neither fish, nor flesh, nor good red herring." He is obviously not a member of the staff, nor of the student body, if the hospital possesses one. He is not even a regular clinical assistant, and he looks round somewhat furtively for a room where he can sit whilst awaiting the class. Nor does his discomfort necessarily cease when the hour for the lecture arrives. I remember at least one occasion when more than twenty of us who were attending an advertised post-graduate course waited over half an hour for a lecturer who neither turned up nor telephoned to say that he could not do so. This is admittedly an exceptional case, but what was not exceptional was to listen to lectures bearing little or no trace of preparation for the type of audience to which they were addressed. There were some which were of immense value, and had obviously been specially prepared for men and women who had already had experience of medical practice, but far too many lectures were little more than a re-hash of addresses given to entirely different audiences, whilst many others were far better suited to undergraduate students. (I write from an experience of five years ago, and conditions may have greatly improved in this respect to-day.) The impression which was left upon the mind of most of us was that, in spite of the numerous classes advertised in London for the benefit of post-graduate students, there were but few lecturers who treated the class with sufficient seriousness to spend any considerable amount of time in studying their needs, and making adequate preparation for their instruction. And yet it must be self-evident that a post-graduate class, consisting as it does of physicians who, for the most part, have already had considerable experience of professional work, demands an entirely different approach from the ordinary class of medical students, and will repay the most careful study and preparation.

Lack of Centralization.—Only those who have had actual experience of post-graduate study at a number of different London hospitals can form any conception of the aggravating amount of time and energy that is wasted every day in getting about from one lecture or class to another. There are admittedly certain valuable courses which are wholly conducted under one roof, but as a general rule the graduate will but rarely find his needs fully met in a single institution. Nor is this really to be wondered at. The larger and better-staffed medical centres in London are already so much occupied with the instruction demanded from them by their own under-graduate student body that they can hardly be expected to make large provision, in addition, for a class of men and women requiring a different method of instruction. The smaller hospitals, on the other hand, which welcome the post-graduate student, are, as a rule, too much crippled by lack of finance and by the demands of their clinical work to offer such wide facilities as will satisfy the post-graduate's varying needs. Thus it comes about that the unfortunate post-graduate student, in his endeavours to follow the most stimulating teachers and to attend what he considers the most valuable classes, finishes up by spending a large part of each day enjoying no other form of enlightenment than can be derived from the top of a London omnibus or from a study of the advertisements in the tube.

Paucity of Opportunity for Practical Work.—In dealing with the post-graduate problem it must never be forgotten that a large number of medical men and women who attend post-graduate classes are mainly concerned with the need for obtaining practical experience in those forms of medical and surgical investigation and treatment in which they feel themselves deficient. It is not so much lectures and demonstrations that they are seeking, as a chance of familiarizing themselves with certain methods of medical technique of which they are either ignorant or insufficiently experienced. Here a real difficulty is at once met, for but few of the existing hospitals are so organized as to supply this need, most of them naturally reserving such opportunities as they possess for their own student body, or for regularly appointed assistants. Some men of my acquaintance have endeavoured to solve this problem by going to the length of relinquishing for a time their own professional duties and taking modest posts as house-surgeons or clinical assistants. But such a solution can hardly be described as an ideal one, as it necessarily entails the expenditure of a large amount of time in ordinary routine duties which might far more profitably have been spent in other ways.

ESSENTIAL REQUIREMENTS FOR POST-GRADUATE EDUCATION

It will thus be seen that, in spite of the increasing opportunities which are open to post-graduate students in a city such as London, the present system leaves much to be desired, and it is therefore worthy of the most serious consideration as to what are the requirements that ought, if possible, to be met in establishing an adequate and successful post-graduate centre.

1. *The Centre Must be Primarily Educative*

One of the greatest difficulties which face all medical educationists lies in the fact that the hospitals attached to our medical schools are almost bound to take precedence in public interest and support over the schools themselves, so that the educational features of the institution are apt to be subordinated to the practical and clinical side. When we think of the great medical schools in a city like London we inevitably regard them in terms of the hospital which has given them their name and prestige. It is not so much the illustrious teachers, *qua* teachers, whom we recall, as the renowned physicians and scientists, the skilled operators, and the men who have

advanced the cause of medicine by their researches and experiments. Many of these men have been notoriously poor teachers and their lectures a mere weariness to the flesh, but their value to the institution in which they play so striking a part cannot possibly be overestimated.

In the organization of a post-graduate centre, however, the emphasis needs to be shifted elsewhere. The post-graduate student will but rarely be attracted by the glamour of a brilliant and spectacular operator, the renown of a popular physician, or the intricate technique of a famous pathologist. What he is seeking, first and foremost, is a competent, lucid, and inspiring teacher, one who will take interest in and understand the conditions under which his medical work has hitherto been carried out, whether it be in a busy industrial area, a rural community, or in service over-seas, and who will open up to him new fields of understanding and extend his sphere of practical usefulness. Such a teacher must necessarily be *au courant* with the latest methods of investigation and treatment, but must be sufficiently young and detached to be able to devote considerable time and thought to the problems of the post-graduate student, in a way that the busy London physician and surgeon, occupied already with the claims of a large practice, and very probably the demands of other hospitals, can hardly hope to do.

If this assumption is correct it would follow that the staff of such an institution should be selected primarily by virtue of their proved capacity as teachers, and it is worthy of consideration whether they should not be, in the main, chosen from the younger members of the profession, and engaged on short-term appointments for a limited period of years. This would not hinder the re-election of a successful teacher, but it would prevent the loss of freshness and stimulus which invariably takes place when a teaching staff becomes so immersed in clinical duties as to cease to be inspiring educators.

2. *The Centre must Provide for Very Diverse Needs*

It is only necessary to visit such well-known post-graduate centres as Vienna and New York to gain an idea of the extraordinarily diverse character of the medical men and women who take advantage of such an opportunity of further training. And if a post-graduate centre is to be the success which all its supporters ardently desire, each of these separate types must be studied individually and be separately provided for. To name but a few of them:

First, there is the practitioner who is keen to keep abreast of the times, but is conscious of having become "rusty." Possibly he has been engaged in a large and somewhat remote practice, in which every ounce of energy has had to be expended on the routine demands of his numerous patients, leaving little or no time to do anything more than glance at a weekly medical journal. Or, again, he may be returning to this country after some years spent abroad, where he has been forced by circumstances to live to a large extent on his own medical capital. In either event, the practitioner is now ready and eager to devote several consecutive weeks, or even months, to the endeavour to brush himself up in every branch of the subject, particularly those in which his practice mainly lies, or in which he has specially realized his deficiencies. It is for such a man that "refresher courses" are so invaluable, particularly when conducted by a picked group of stimulating instructors who will give the student the opportunity of seeing and practising for himself the newest methods of investigation and treatment, with which he is unfamiliar.

Secondly, there is the practitioner who has the opportunity of a far more limited period of study—possibly only a single day a week, or a complete fortnight such as is now offered to panel doctors under the national insurance scheme—and is anxious to use it in intensive study along a single line in which he feels that he could extend his field of service. Perhaps he is running the *x*-ray plant of a local hospital, and wants to see something of the newer methods of electrotherapeutics, such as might with advantage be introduced there. Or it is some particular technique with which he wants to be more familiar—for example, cystoscopy, spinal anaesthesia, blood grouping and blood transfusion, artificial pneumothorax, the injection of varicose veins and haemorrhoids, etc.—and he is anxious for an opportunity of carrying out such procedures himself under expert guidance and supervision. Or it may be that he has never felt at home in one or other of the special departments—dermatology, ophthalmology, ear, nose, and throat diseases, etc.—and he wants to seize the chance of some concentrated study in that particular line of work.

Thirdly, there are the foreign and colonial graduates, who, having completed their medical course in their own country, are anxious to widen their experience before starting upon their separate careers. They come from centres, it may be, where laboratory tradition is particularly strong, and are attracted to London by virtue of its reputation as a great centre of clinical teaching. What they are particularly seeking is the opportunity of attending out-patient clinics and ward rounds in the company of stimulating teachers, and of studying methods of diagnosis and treatment which differ in certain respects from those with which they are already familiar, and seeing types of disease not often met with in their own country.

Lastly, there is the young physician about to settle down in practice after holding various resident posts, and anxious to brush up in certain departments of medical work in which he has not had much opportunity of becoming experienced since his undergraduate days. He realizes that, as a student, with the overwhelming demands of his finals overshadowing everything else, he only devoted a minimum of time to certain types of disease commonly met with in general practice, and that it would be well worth while putting in a little intensive work along these lines before he makes his final plunge into practice or takes up a particular appointment in which special knowledge and experience will be expected from him.

If all these needs are to be met a large number of courses must necessarily be offered simultaneously all the year round, and a glance at such a syllabus as that which is published by the Post-Graduate School of New York will serve to show how numerous and varied these courses must be.

3. *The Centre must Offer a Real Home to the Post-Graduate Student*

A well-organized post-graduate centre must be far more than a mere place of call, providing specified courses at certain fixed hours. It should aim to be a real home of graduate medicine, offering facilities for the students' leisure hours as well as for the time he is under instruction. With this in view, comfortable common rooms and reading rooms, a well-stocked library, and a well-organized and self-explanatory museum should be regarded as essential parts of the scheme, in addition to well-equipped laboratories in which both research problems and the routine pathological work of the hospital are regularly carried out, and where there will always be a spare bench for any post-graduate student anxious to avail himself of the opportunity.

An inquiry office or bureau would also be of immense practical value, supplying students with information, not only on courses of instruction, scientific lectures, or surgical operations, but also on such practical matters as hotel and boarding-house accommodation, vacant medical appointments, practices offered for sale, and some of the many problems constantly met with by the practitioner. And perhaps it might not even be beneath the dignity of such a bureau to interest itself still further in the students' need of relaxation by supplying information on such topics as the nearest golf course and the best places of entertainment!

Given such a scheme, wisely planned and sympathetically carried out, the success of the post-graduate centre should be assured, and the encouraging results which have already followed the comparatively modest efforts recently attempted at various medical schools should justify the most optimistic forecasts as to the response which the scheme may hope to receive from members of the profession in all parts of the world.

British Medical Journal

SATURDAY, JANUARY 21st, 1933

A PUBLIC HEALTH STOCK-TAKING

While in matters of government a static policy may doubtless be pursued with a degree of success under suitable conditions, the same line of action in the field of public health would be looked upon nowadays by those conversant with the subject as doomed to failure from the outset, even if capable of being put into operation at all. It is recognized that the aim of the sanitarian is to promote the best health interests of the people. His policy, therefore, should be kinematic, not static; for he must, in the common phrase, move with the times, following hard on the heels of scientific discovery or setting his course along new channels opened by fresh conceptions of social responsibility or enlarged administrative ideals. But in all this he should not be content to drift passively on the stream of progress. It is not enough to be kinematic; he must be kinetic as well—a force to stimulate movement. And for his guidance in choosing the direction along which his kinetic energies may be applied he will do well on occasion to review his past achievements, mark his present position, and formulate plans for the future. Otherwise he may miss the opportunities which science or legislation hold out.

There has been a disposition in some quarters lately to hint that too often a lag of performance on opportunity exists in the public health services of this country, and the attention of authorities has been directed to the usefulness of periodical surveys of the work on which they are engaged. Such a survey is a kind of stocktaking, which makes it possible to evaluate results and, where necessary, to devise appropriate action. It may be of interest in this connexion to note some points in a large-scale public health inquiry reported from across the Atlantic. Alike in its parallelism and its differences as compared with the position existing in England, it has informative value. On May 1st, 1930, Mr. Franklin D. Roosevelt, Governor of New York State, appointed a Commission of fourteen members, under the chairmanship of Dr. Livingston Farrand, president of Cornell University, to take into consideration the activities of State and local health authorities in New York State, and to examine critically the extent to which the health needs of the people were being met. The final report of the Commission, now published,[1] presents its views and recommendations to the Governor.

Since public health problems are never wholly local, the Commissioners consider that State aid to local authorities is essential, particularly for rural areas and in the development of new health activities. They hold that the treatment of the insane, birth, death, and marriage registration, water supply standards, and rivers pollution prevention should as hitherto be administered by the State direct. For public health in general they animadvert upon the inefficacy of the existing small local authorities in villages and towns. They recommend that these should be superseded and that the county be made the unit. Cities with a population above 50,000 should have the option of remaining autonomous under a joint board. In counties above 30,000 of population the medical officer of health, who is styled health commissioner, should give whole-time service. The qualifications now prescribed for medical officers of health in New York State range from the degree of doctor of public health of an institution recognized by the University of the State of New York down to a correspondence course in public health of one year's duration, including at least one week of practical work, or an eight weeks' course in public health, including twenty attendances at an educational institution. The Commissioners regard these minimum requirements as quite inadequate, and recommend the establishment of two grades of qualification—namely, Grade I, for whole-time medical officers, involving an approved course of two scholastic years, together with one year of practical work or equivalent training; and Grade II, for part-time medical officers, involving three months of resident instruction in public health, or a correspondence course of one year with six weeks' resident instruction or equivalent training. In areas having a population under 5,000 the above requirements may be waived. Qualifications are proposed also for public health nurses, pathologists, laboratory officers, physicians in charge of sanatoriums, water superintendents, and other officials of health authorities.

The Commissioners advise the better co-ordination of school nursing with the general nursing services of the State. They urge the broadening and completion of the existing State tuberculosis scheme, and express the view that the use of B.C.G. is undesirable except under carefully controlled conditions. In the section dealing with venereal diseases reference is made to a one-day census of cases in medical practice and in clinics and in institutions throughout the State of New York in May, 1927, and again in May, 1930. In the former year the incidence of syphilis emerged as 2.35 per 1,000 of popu'ation; in the latter 2.72. Under maternity and child welfare it is noted that puerperal septicaemia in New York State, as elsewhere, accounts for one-third of all maternal deaths, and that albuminuria and convulsions come next in order and are followed by puerperal haemorrhage and other accidents of labour. The Commissioners draw from these data the somewhat defeatist conclusion that the great bulk of maternal deaths are due to causes which develop during or following labour, and that consequently prenatal hygiene alone will have no direct influence on many such deaths. As the number of births attended by midwives in the State is negligible they conclude

[1] *Public Health in New York State.* Report of the New York State Health Commission to His Excellency the Hon Franklin D. Roosevelt, Governor of the State of New York. State of New York, Department of Health, Albany, 1932. (Pp. 504; illustrated.)

that in the State medical care is the most important factor in maternal mortality, and with a view to the improvement of medical training recommend a minimum of fifty cases of labour for students of medicine. They advise, further, an intensive study, for at least one year, of every maternal death in the State, following in this particular, up to a point, the practice of this country. Under school hygiene their opinion is that the present system of annual inspections should be replaced by more thorough examinations at longer intervals. In the matter of mental hygiene the State Department operates for its purposes in all areas, and a certain amount of work is carried on by local authorities also. Closer co-ordination and full use of existing facilities are recommended.

As regards infectious disease, the decline of the typhoid fever death rate from 32.1 per 100,000 in 1900 to 1.6 in 1930 is ascribed to the chlorination of water supplies, the pasteurization of milk, and the better control of cases and carriers. The recession of the measles death rate from 13.5 to 1.4 in the same period is traced to such causes as the reduction of overcrowding, aided by the use of convalescent serum. In the course of the five-year toxin-antitoxin campaign from 1900 to 1930 756,073 persons, mostly young children, underwent prophylaxis against diphtheria. The extinction of diphtheria anticipated by some was not realized by this pioneer effort, but the case rate declined by 66 per cent., and 25 per cent. of all children in the State under 5 years of age are believed to have been rendered proof against the disease. It is estimated that for adequate community protection 35 per cent. of the children of this age group must be immune. The outbreak of poliomyelitis in 1931, amounting to over 6,000 cases, was the most extensive since 1916. Immune serum was obtained from some 1,200 convalescent donors, and 65 per cent. of cases had serum treatment: 60 per cent. were diagnosed in the preparalytic stage, and methods ordinarily available only in hospital were placed at the disposal of the practising doctor in the home. Milk-borne typhoid and paratyphoid fevers are apparently declining in New York State, while milk-borne undulant fever is increasing. The milk consumption in the State is 0.85 pint per person per day. Milk sold in the cities is safer and better than that in rural communities. Of city milk, 94 per cent. is pasteurized. The Commissioners consider that proper pasteurization has proved the greatest single public safeguard against milk-borne infection. The general question of medical care, including hospitals and home treatment, is rather lightly handled. Under the law any citizen in a county in need of hospital treatment is entitled to admission to a county hospital, at such charges as his means permit or without charge if he is unable to pay. Medical care at home is similarly authorized for those who cannot provide it for themselves. Recipients suffer no stigma of pauperism, but the full measure of medical service empowered by Statute has not yet been made generally available. The Commissioners pass from the topic with the suggestion that a legislative commission be appointed to study and make recommendations concerning medical care in New York State.

Dealing as it does with a great community which enjoys a merited reputation for progress, this report may serve as a model for those who have occasion to take stock of the position of similar health activities. While its recommendations necessarily relate more immediately to American conditions, its motives, form, and underlying principles are of general interest and application. Effective public health administration draws its strength from various sources, but it is largely founded on scientific progress and competent legislation, the facilities offered by both of which the kinetic administrator will desire to turn to account, for the benefit of the people under his charge, with the least possible delay.

DISEASES IN SEQUENCE

The occurrence of one definite disorder after another may be nothing more than a coincidence, but it is always tempting to assume some aetiological connexion and to argue from this about the fundamental pathology of one or both diseases. In the current issue of the *Archives of Disease in Childhood*[1] three papers deal with this type of association of two maladies, and in each instance the authors seek to find some causal relation. Dr. Alan Moncrieff describes two children in whom excessive obesity followed an attack of chorea. He argues that there is the possibility of inflammatory lesions in the central nervous system being responsible for both disorders, since obesity is known to follow changes in the region of the pituitary body and adjacent parts of the brain, and obesity has also been described as occurring in many instances after epidemic encephalitis, and after post-vaccinal encephalitis, cerebral tumour, hydrocephalus, polio-encephalitis, chronic meningitis, and cerebral trauma. The theory that prolonged rest in bed and lack of exercise is the cause of obesity in such cases is dismissed on the ground that the adipose changes did not occur during prolonged stay in a convalescent home, but only when, the disease process being over, the children returned to ordinary life. Other such cases have been described in the literature cited in Dr. Moncrieff's paper; in one patient under observation by Coburn the weight went from 88 lb. to 166 lb. during the few months after recovery from chorea.

The second sequence of diseases is seen in a case described by Dr. Frances Braid of osseous dystrophy following icterus gravis neonatorum. It is only within recent years, largely due to Hampson's life-saving suggestion of maternal serum or whole blood in the treatment of this serious type of jaundice, that patients have survived long enough for sequelae to be observed. The subsequent profound disturbance of the nervous system in some of these cases is a very interesting

[1] *Archives of Disease in Childhood*. Vol. vii, No. 42, December, 1932. London: British Medical Association House. (Yearly subscription (six numbers), 25s.; single number, 4s. 6d.)

observation, which, taken in conjunction with the syndrome described by Kinnier Wilson of progressive lenticular degeneration and cirrhosis of the liver, illustrates the close relation between hepatic function and the nervous system. In Dr. Braid's patient a curious cystic condition of the shafts of all the long bones was found one year after the jaundice had been successfully treated, and she quotes work on experimentally jaundiced puppies in which similar bone changes were discovered. It seems likely, in Dr. Braid's opinion, that the liver has some concern with calcium metabolism, and therefore with the normal growth of bone and nerve tissue, and it may be that this comes about because the liver is the main storehouse of vitamins and presumably controls their optimum distribution and activity. Another patient under Dr. Braid's care also developed bone changes after recovering from icterus gravis neonatorum, and here osteoporosis and a spontaneous fracture occurred.

The third example of sequence of diseases is also concerned with bony disorders following upon disease of another organ. Drs. E. A. Cockayne and F. P. Lee Lander note the occurrence of rickets following an attack of acute nephritis. This is particularly interesting in view of the comparatively rare condition of so-called renal rickets, in which evidence of previous inflammation of the kidneys is usually lacking. In the patient whose case is described acute nephritis developed in March, 1928; in April and the following months the subacute phase of the disease set in; genu valgum appeared in September, 1931, when the kidney disease had reached the chronic phase; and death occurred from uraemia in November, 1931, when the boy was aged 13, about three and a half years after the initial attack. *X*-ray examination showed typical rickety changes at the knee- and wrist-joints, and at necropsy it was confirmed that these changes were those of true rickets. Blood examination in the last stage of the disease showed that calcium was reduced to 7.5 mg. per cent., and phosphates increased to 9.8 mg. per cent. The kidney changes were proved on histological examination to be those of chronic glomerulo-tubular nephritis.

AN EXAMPLE FROM NEW YORK

An interesting announcement comes from New York City. It appears that the sanitary code of that city requires a medical examination to be made before any person can obtain a permit, issued each year from the Department of Health, to engage in any occupation which involves the handling of food; and that there are some 325,000 such "food-handlers." The purpose is, of course, to prevent the handling of food by those who suffer from some communicable disease, though it is not stated what procedure is to be adopted should such a disease be acquired during the year. Possibly this is stated on the permit, and appropriate action made a condition of its issue. Hitherto most of these medical examinations have been made at special clinics established by the Department of Health, but as from the beginning of the present year the applicant is to be examined by the private practitioner of his choice, who must fill in the application as regards the relevant health history and condition. This application is forwarded to the appropriate division of the Department, and the permit for the current year is sent to the examining practitioner, who, in turn, hands it to his patient. The fee is a private matter between doctor and patient. The reasons for making this change are stated to be "the conviction that the State should not compete with private physicians in the practice of medicine, together with the precarious economic position now occupied by a large part of the private physicians." The Health Commissioner, though he thinks that the service could not have been so successfully established otherwise than as a definite department of health activity by the city, is of opinion that, when the machinery is moving smoothly, so long as the private physician is willing and able to render any required service, it is unfair to do the work at the expense of all the taxpayers. The new arrangements for the medical certification of "food-handlers" will not only result in a definite saving to the city, but there will be a further important effect. "For years," says the Commissioner, "we have been endeavouring to interest the medical profession more and more in public health work, feeling that each physician in the city should really be a health officer in all that the word implies. With the full co-operation of the medical profession in this work we shall undoubtedly pave the way for their help in connexion with other services now being offered by the Department." Similar conditions with regard to public expenditure and the position of practitioners obtain in this country, and the same considerations are applicable. It may be suggested that there are some health services here to which it would be advantageous for the Ministry of Health and local authorities to begin to apply the principles and methods just made operative in this instance in New York.

DIURETICS

The introduction in recent years of certain new diuretic drugs has greatly extended the scope of therapeutics in this direction. Lately, the effects of the intramuscular injection of bismuth sodium tartrate have been studied by Stockton, and the results recorded in the *Archives of Internal Medicine* (1932, 1, 142). Miller and Feldman[1] have also reported on the uses of massive doses of urea as a diuretic over prolonged periods. Mercury was the first heavy metal to be used in organic combination as a diuretic, in the form of novasurol. Its application was, however, too likely to produce dangerous toxic results. Salyrgan proved to be just as good and less toxic. Its best results are only obtained by intravenous administration, while intramuscular injection, although quite effective, may cause local necrosis. The bismuth salt would appear to have certain advantages, in that it is safe and effective when given intramuscularly. The diuretic action of the drug is less sudden than that of the mercurial preparations, but more prolonged. The total increase in urinary excretion is equally good in the case of the bismuth salt. It would appear that there is a certain common mode

[1] *Arch. Int. Med.*, 1932, xlix, 464

of action in these salts of the heavy metals, which is also shared by other diuretics of the xanthine group, such as theocin, theophyllin, and theophyllin-ethylene-diamine (euphyllin). The effect of their administration is to mobilize the salt in the tissues of the body and bring it into the blood stream. The sodium chloride content of the plasma has been examined before and after the administration of these drugs, and an increase is found to occur in every case in which diuresis is caused. As a result there is an increase in the chloride output in the urine. No changes of any importance were observed in the level of the urea in the blood, but the output of urea in the urine was increased. In the cases with oedema the chloride content of the plasma was constantly found to be lower than normal before the diuretic was administered. The level of urea in the tissues and in the blood is kept so uniform that any influence of this substance in promoting diuresis could not be demonstrated. The use of massive doses of urea as a diuretic has long been known. Miller and Feldman gave 10 to 25 grams (2.5 to 6 drachms) thrice daily; a 40 per cent. aqueous solution was used, with fruit juice to cover the unpleasant taste. When about 50 grams were given daily most of the patients soon lost their oedema. The administration of urea was continued for months if there was any tendency for the oedema to return when the dose was diminished or the drug discontinued. It is surprising that some cases regained their cardiac efficiency on urea alone without the use of digitalis. Urea did not appear to lose its effect during a long administration. In one case examined at necropsy no damage had resulted to the kidney. In many cases of congestive heart failure the blood urea rises and the power of the kidneys to concentrate is diminished. Here it is unlikely that the drug will be effective, for the kidneys cannot respond to the already heightened level of urea in the plasma. In none of the cases studied was the blood urea increased. It seems probable that the administration of urea in large doses may be useful in dealing with some cases of resistant cardiac dropsy, though for the most part, when the kidneys are capable of acting, oedema can usually be got rid of by the drugs already in use.

AN ANTIMALARIAL FISH

Dr. O. Trausmiller, director of parasitology in the School of Hygiene at Zagreb, in Yugoslavia, recounts[1] his success in getting rid of malaria in two small islands in the Adriatic, cheaply and effectively, with *Gambusia holbrooki*, an American fish that preys on mosquito larvae. The larger island (Veglia in the maps, now called Krk), of 26,000 inhabitants, is of a chalk formation, so fissured that falling rain at once disappears. Apart from rain, there is no water on the island except in underground cisterns (fed from the roofs) and in pools with impermeable bottoms. These last are small, shallow, often filthy, with much weedy vegetation, and fouled by cattle. In them only are found anopheles larvae and pupae. In 1924 two hundred gambusia were introduced. The climate suited them, they bred rapidly, spread obstinately, and by 1926 had firmly established themselves. At first, while the fish were few, the vegetation in the ponds was kept down, but that seems unnecessary. Prophylactic quinine was now reduced. Nevertheless, malaria decreased, and the spleen index (children) fell from 19 to 2 in many villages. The other adjacent island Pag (Pago) is smaller, with 10,000 inhabitants. Its uplands are similar to those of Krk. In 1928-9 gambusia were introduced into a large brackish lake near the sea, and there they throve. It was speedily noticed that the mosquitos, which had been a source of great misery in the district, were being reduced, and, though the vegetation in the pools was uncontrolled, malaria diminished. It had been mostly benign tertian, but there was also some of the malignant and a little of the quartan variety. The spleen index of the community, formerly 59, fell to 39—mostly old, chronic cases. Mosquitos were no longer found in the houses, until the cold weather slowed down the activity of the gambusia. Since malaria persisted as before in the swampy fertile valleys of the south end of the island, not yet stocked with fish, the relief in the north was not due to climate. Dr. Trausmiller considers that gambusia, in suitable climates, diminish malaria till it becomes manageable and ceases to be of social importance. He insists on the debt owed to Sella, who brought from America to Europe gambusia, a "valuable, cheap, and automatic resource against malaria."

[1] *Arch. für. Schiffs- u. Tropen-Hygiene*, October, 1932.

ALCOHOL AND DRUG ADDICTION IN GERMANY

The efforts of successive German administrations in dealing with the national alcohol problem possess many interesting features. Dr. P. Wolff, editor of the *Deutsche medizinische Wochenschrift* and an active worker in this field under the League of Nations, recently explained to the Society for the Study of Inebriety the legislative and other measures which had come into force and those which were expected. The Licensed Premises Act, which was introduced in July, 1930, had as its chief object the prohibition of the sale of alcoholic refreshment to intoxicated persons and to young persons under 18. It also aimed at preventing the sale of tobacco to children under 16, the practice of charging corkage on meals taken without alcohol, and the sale of spirits on sports grounds. The measure contained a number of provisions which have been familiar in this country for many years, such as restriction of the granting of licences, and the fixing of opening and closing hours. Further, it provides for a measure which, though not in force in this country, might, according to some opinions, find a useful place—namely, the prohibition of the sale of spirits at certain times, such as pay days and election days. This legislation seems to fall in with the tendency of private habit, for the consumption of spirits in Germany has decreased to less than a quarter of what it was before the war, and that of beer to just over half. Chronic alcoholism is on the downward grade, and the form in which it is usually encountered is milder than hitherto. Delirium tremens, for instance, has become very infrequent, and the mortality from alcoholism in the hospitals is only about one-third of the pre-war figure. The cure of drunkenness in Germany is systematically organized on a national basis, and particular importance is attached

to treatment in the early stages of alcoholism. The new Penal Code contains provisions empowering judges to enforce a withdrawal cure and to subject the inebriate to supervision. The graduated treatment in use is considered to act as a deterrent to early drunkards. It is administered in about twenty public hospitals and a large number of private ones—some of which have "abstinence sanatoriums" as special departments—while there also exist State workhouses for incurable drunkards. The statistics quoted by Dr. Wolff show about 30 per cent. of successful treatments and 60 per cent. of failures. The most effective factor in reducing national drunkenness seems to have been the raising of the price of alcoholic liquors by taxation. Statistics of drug addiction, published in 1928, show a figure of between 4,000 and 6,000 addicts, including 500 doctors —about 1 per cent. There is as yet no legal restriction on the prescribing powers of medical addicts, but legislation for this purpose is soon to be introduced. In April, 1931, an ordinance was promulgated, with the co-operation of the medical profession, which seems to have effected a considerable lessening in drug addiction. Medical men may not prescribe opiates in bulk, and must register all prescriptions of more than 0.2 gram of morphine or 2 grams of opium daily. The profession is encouraging the use of substitute preparations, and of suppositories in place of injections. Since the introduction of this ordinance the consumption of morphine has gone down by 20 per cent. and that of opium by 30 per cent. Heroin, which plays such a large part in addiction in other countries, is unpopular in Germany, and the whole consumption per annum is only about 4 kilos. The consumption of cocaine, which also came under the ordinance, has decreased by more than 50 per cent., and the medical profession has largely discontinued its use. Pure cocaine is no longer supplied to doctors, modern substitutes being used whenever possible. The illegal drug traffic, according to Dr. Wolff's personal observations, has considerably diminished, and the authorities hope before very long to suppress the use of cocaine entirely.

HOSPITALS AND CHILD HEALTH

"Capital invested in hospitals in the United States is estimated at more than three billion dollars." This is the opening phrase of the introduction to a report[1] issued by the White House Conference on Child Health and Protection. The monetary standard seems at first sight rather crude and unfeeling. Yet it is a good working test. There should be some definite idea of the return on such an investment, which must be measured in terms of the effect on the health of the country. There are no fewer than 6,667 hospitals in the United States, with 905,246 beds. Of these those set apart for children number 81,055 and 47,939 cots, totalling 118,994, or some 13 per cent. of the grand total. If the children under 14 constitute one-fifth of the population, the allotted number of beds is not proportionate. The report suggests that this may be due to economic factors, or it may be the reaction of parents to hospitalization. In 1929 it was found that 69 per cent. of the beds were occupied. No hospital can be continuously full; there must be times for repairs, and there must be beds in reserve for epidemics. Nevertheless the view is expressed that it should be easily possible to run to 80 or even 85 per cent. of capacity. Such a large margin suggests that there has been too much building of hospitals; that it would be better to have fewer small hospitals of 50 and 100 beds, and more larger units. It is doubted if the smaller hospitals can afford the equipment necessary for the proper care of patients. The report gives a most elaborate and detailed account of an investigation into the whole of the work for the health of American children. This covers much more than hospital services as we should define them, for it links up with these all the work that is done in this country by or through the school medical services, voluntary aid associations, care committees, convalescent homes, nursing services, and the like. After a review of existing conditions the committee which prepared the report sets out its conclusions in a number of clear-cut recommendations. Briefly the findings are these: there is at present a lack of adequately trained personnel for positions in medical social work in the country. There is a pressing demand for better-trained workers. There are enough training centres, but the accommodation is insufficient. The true purposes and specific contributions of medical social service to medical practice are not generally understood. Co-operation between hospitals and community social agencies is hampered by lack of pertinent medical knowledge and discriminative use of medical facilities on the part of non-medical social workers. Lastly, there is failure to appreciate the strategic opportunity for inculcating good habits, based on sound principles of mental hygiene, by those who are responsible for the care of children in hospitals and dispensaries. Thus the charge, so often raised in our own country, that there is insufficient linkage between the social services and the purely medical services, has its counterpart in the United States. How to bring them together in a practical working arrangement, which will not cramp the free activities of either, is a problem difficult to solve.

[1] *Hospitals and Child Health*. White House Conference on Child Health and Protection. London: D. Appleton and Co.; New York: The Century Company. 1932. (12s. 6d. net.)

THE HALF-YEARLY INDEXES

The usual half-yearly indexes to the *Journal* and to the *Supplement* and *Epitome* have been printed; they will, however, not be issued with all copies of the *Journal*, but only to those readers who ask for them. Any member or subscriber who wishes to have one or all of the indexes can obtain what he wants, post free, by sending a postcard notifying his desire to the Financial Secretary and Business Manager, B.M.A. House, Tavistock Square, W.C.1. Those wishing to receive the indexes regularly should intimate this.

The eighth annual address to newly qualified medical practitioners and senior students of the London hospitals, arranged by the Metropolitan Counties Branch of the British Medical Association, will be given at B.M.A. House, Tavistock Square, W.C., by Mr. Wilfred Trotter, F.R.S., on Tuesday, March 14th, at 5.30 p.m. The title of the address is "Emergency."

Nova et Vetera

INCIDENCE OF DENTAL DISEASES IN ANCIENT EGYPT

BY

DOUGLAS E. DERRY, M.B., CH.B.

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In the *Journal* of October 22nd, 1932, there is a short note of a communication made by Professor Elliot Smith to the Comparative Medicine Section at the Centenary Meeting of the British Medical Association on the condition of the teeth in ancient Egyptians. He says that after the influx of a large number of aliens in the third, fourth, and fifth dynasties, dental caries became so common "that more than 80 per cent. of the people had caries." Previous to this, he remarks, caries was rare, but alveolar abscesses due to the wearing down of the teeth, with subsequent exposure of the pulp cavity, were common. With this latter statement everyone who has examined skulls of the pre-dynastic period will agree, but the assertion that 80 per cent. of the people in the pyramid age suffered from dental caries is so incompatible with my experience that the following facts derived from skulls at present in my possession may be of interest.

In 129 skulls of people belonging to the Badarian and early pre-dynastic period, eighty-six of which are before me, I have found seven with carious cavities. In two of these the enamel was already worn away, so that they are not actually in the category of those which exhibit a cavity in unworn enamel, but even if we include these we only get 5.4 per cent. of carious teeth in the pre-dynastic people of the Nile valley.

Of the pyramid age, the fourth, fifth, and sixth dynasties, I only possess seventeen skulls. Of these, three exhibited carious cavities, in two of which, however, the teeth are so worn down that the cavities cannot be diagnosed with certainty as having been primarily affections of the enamel. The third case is definitely one of primary erosion in the enamel. These three skulls are all from graves at Sakkara, of the sixth dynasty. In this pyramid period, therefore, judging from the seventeen skulls before me, we have at the most 17.6 per cent. exhibiting caries. If, as I am inclined to believe, two of these are only secondary to wearing away of the enamel, then only one skull in seventeen shows primary caries; this reduces the percentage to about 5.9, which is practically the same as in the pre-dynastic period. Indeed, it is difficult in examining skulls of the two periods to see any difference whatever in the condition of the teeth. The vast majority of skulls obtained from cemeteries are, of course, those of people of advanced age, and in these the teeth are almost invariably very worn down, owing, as we believe, to fine particles of silica derived from the stones employed to grind the grain becoming intimately mixed with the flour. A very large proportion of these skulls show extensive infection through the exposed pulp cavity round the root of the tooth in the form of alveolar abscess cavities. I have not found one case in the eighty-six pre-dynastic skulls referred to in which, the person having died before the teeth had become sufficiently worn to expose the dentine, there is any sign of dental trouble.

In the above account I have described the condition of the teeth in crania of the fourth to sixth dynasties, as this is the period referred to by Professor Elliot Smith, but in skulls of the eleventh and twelfth dynasties, of which I possess twenty-one, mostly of the upper class, I have only one case—that of a young adult woman—in which there is a minute hole in the enamel of a lower molar. Had there been such extensive disease in the earlier dynasties it is difficult to see why it should have practically disappeared some six centuries later. Actually in the twelfth dynasty there appears to be about the same percentage of cases of caries as in both the pre-dynastic and pyramid periods.

We have been accustomed to say that not until the Ptolemaic-Roman period in Egypt, when diseases, or at least those which left their mark on bones, certainly became very much more frequent, did dental caries become common, but even this statement may need modification. At the present moment good teeth are the rule amongst the country people. Major A. G. Biggam, professor of clinical medicine in this university, who drew my attention to Professor Elliot Smith's note, expressed surprise that dental caries should have been so common in the pyramid age, as his experience with patients seen in hospital is that, while pyorrhoea is frequent, caries is not. At present we have no statistics as to the incidence of the disease to-day, but it is hoped to remedy this. Suffice it to say that, while there appears to be a large number of persons affected with dental caries in the town, the consensus of opinion, in the absence of statistics, is that the condition of the teeth in the general run of fellahin is excellent.

AN ELIZABETHAN DOCTOR'S WILL

Dr. F. William Cock, F.S.A., of Appledore, Kent, sends us the abstract printed below of a will of a country doctor of the time of Elizabeth.

This will (Dr. Cock writes) is interesting from several points of view. The testator, Henry Mylborne, evidently combined the "science" of a G.P. with the grocery trade. The Apothecaries' Company was not formed till more than forty years later. It then separated, by means of its charter, from the grocers and similar businesses. A survival of the combination of the two occupations was still going in my youth, as the "general" grocers' shops hereabouts dealt largely in drugs, whether innocuous or poisonous, especially in opium, which, in this then malarious district, was largely consumed by women when aguish. They would keep a thumbnail at the right length, and this filled from a bolus of gum opium was the proper dose—I suppose about a grain in weight.

Mylborne's will suggests that he was a bachelor with his sister keeping house for him, and that his brother was also a doctor, of whom he was not too fond. Note also that he speaks of his profession as his "science"—a rather early use of the word for a country apothecary of the time. Note also the "potecarye." Well into last century old-fashioned gentry did not say, "I sent for the doctor," but "I used the potecary." I fancy that "cheste" contained most of the valuables of Henry Mylborne, and he was determined that his sister alone should have it.

9. May 1575. Henry Mylborne of Tenterden (Kent) Surgeon

To the poore of Tenterden 13s 4d at day of my buriall. To my sister Elizabeth Mylborn my mare and my Coltes and twentie shillings and all other my howseholde stuffe whereof part is in my shoppe and parte in my bed chamber and all such p'cells of moneye as at the makyng hereof are dewe unto me for cures allredye cured. All suche legaces unto my sister (and) my keye of my chest with the cheste ytself & all thinges in yt conteyned. She shall patientlie enjoy ymediately after my decease W'hout any lett interruption or gainesaying of my ex'or or any other whosoever. . . . To my brother Edmonde Mylborne of Hasting all such Potticarye ware as I have in my shoppe wth my instruments, grosserye ware, spices, potts and all other thinges apperteyninge to my science, and tenne shillinges in consideration of his paynes in comyng downe & towards the charges of my buriall . . . if anything lacke he to fulfill at his owne costes. Whereof I give him all suche bookes as I have. He to be ex'or but if he refuse this then I revooke my former bequest to him & will the same to my sister Elizabeth who then to be sole ex'trix.

Proved 10. April 1576 (at Canterbury).

I owe the transcript of this to my friend Mr. A. H. Taylor of Canterbury.

PROBLEM OF THE OUT-PATIENT

THE PRINCE'S LETTER TO THE KING'S FUND

At a meeting of the General Council of King Edward's Hospital Fund for London, held on January 10th, the following message was read from the President, H.R.H. the Prince of Wales:

"The report of Lord Onslow's Committee on the out-patient question is now in your hands. Besides containing the committee's own conclusions and recommendations, it is a storehouse of information about the procedure at the hospitals, and also about the alternative and supplementary agencies for the treatment of patients suffering from minor ailments. This should be a great help to the hospitals. The question to be decided is how far the present time of waiting is unavoidable, how far it can be shortened by changes in procedure, and how far it is possible, without causing hardship, to reduce overcrowding by arranging for some of the less serious cases to be treated by general practitioners elsewhere. It should be much easier for the hospitals to decide this now that they have all this information before them, collected together in a handy form. The report will also enable the public to realize how difficult a problem it is, and how many experiments the hospitals themselves have been making to reduce the hours of waiting. The accumulated experience is now rendered available for study. But the report is more than a mere academic discussion of the question. It is meant to lead to action. Its actual recommendations are carefully worded so as to respect the freedom of the individual hospitals, which is an essential feature of the voluntary system. But the committee present a strong prima facie case for believing that part of the waiting time can be reduced, and they want the hospitals to study that case in detail with a view to taking action wherever it is practicable. To ensure that this is done, the report ends with the definite recommendation that the King's Fund should consider to what extent it can help to carry out the recommendations by making available the detailed information accumulated during the inquiry, and by such other methods as may be relevant. I reported this to the council on December 15th, and I am glad to say that the council unanimously agreed that it should be acted on at once.

"I have now appointed a small committee for this purpose, and the council have decided to give it the power not only to consider, in consultation with the hospitals, what steps can be taken, but also, in co-operation with the Management and Distribution Committees, to take the necessary steps. This will ensure that the report is not pigeon-holed, but is used as a practical guide to action, wherever action is found to be possible and desirable. This committee will be called the Out-patient Arrangements Committee, and I have appointed the following to be its members: Sir John Rose Bradford (chairman), Dame Rachel Crowdy, Sir Ernest Morris, Sir Isidore Salmon, Mr. Eric Pearce Gould, Lieut.-Colonel A. P. B. Irwin, and Mr. R. H. P. Orde. These have all done actual hospital work; some are experienced organizers in other departments of life; four of them were members of the original Out-patient Committee.

"I take this opportunity of expressing my personal thanks to Lord Onslow and the members of his committee for the great amount of care and attention they have given to this difficult subject, and for the way in which they have dealt with it. I trust that their work will prove fruitful for the benefit of the hospitals and of their patients. In conclusion, I offer you my very best wishes for the prosperity during 1933 both of the King's Fund and of the hospitals."

The General Council unanimously resolved to tender grateful thanks to His Royal Highness for this gracious message. It was further resolved that the report of the Out-patient Committee, 1932, be commended to the consideration of the hospitals and of all others concerned. The council placed on record its grateful thanks to the Earl of Onslow (chairman) and members of the committee (Sir John Rose Bradford, Sir Francis Fremantle, Dame Helen Gwynne-Vaughan, Sir George Macdonogh, Sir Ernest Morris, Mr. Orde, and Sir Isidore Salmon), who, by the information accumulated and the recommendations made in their most valuable report, had rendered a lasting service to the voluntary hospitals of London and their patients.

Resolutions providing for the work of the Fund for 1933 were adopted, including the following powers of the Out-patient Arrangements Committee: (*a*) To consider, in consultation with the hospitals, what steps it would be practicable and advisable for the King's Fund to take—(1) for assisting the hospitals in the study of the different methods of out-patient procedure indicated in the report of the Out-patient Committee, 1932; and (2) for promoting the development of out-patient organization in the directions suggested by the report. (*b*) To take such steps as the General Council or the Management Committee shall approve for either of the above purposes.

THE VALUE OF HEALTH

AN ADDRESS BY R. G. HOGARTH, C.B.E., F.R.C.S.

At the invitation of the Merseyside Hospitals Council, Mr. R. G. Hogarth of Nottingham, a past President of the British Medical Association, delivered on January 11th an address at St. George's Hall, Liverpool, on "The value of health." The address was of a popular character, and was intended to lead up to the advantages of the British Provident Association scheme of hospital insurance for the middle class.

Mr. Hogarth began by pointing out that the science of health, as the experts now understood it, was only in the process of being discovered, and this for the best of reasons, because it was only within the last hundred years that the medical profession had begun to be master of its own science and practice. No real progress in any branch of knowledge was possible until cause and effect had been firmly established, and no science of health could come about until medical science itself had been liberated from its old empiricism and set forward on its new career. In the old days—and not so long ago either—health and life were almost matters of luck or accident. The great killing epidemics recurred at intervals. Other diseases were permanently encamped in the midst of the community, as, indeed, they still were; but formerly they took an enormously higher toll, because the environment was then as favourable to their spread as it was now adverse.

It was not mere perversity or callousness on the part of the governing classes that prevented the establishment of a Ministry of Health in this country until the great war. To have established it very much earlier would have been impossible, because the grand and inspiring conception of a nation in health had not arisen. How, indeed, could it arise when the prevailing idea about diseases and epidemics was that they were inevitable—not merely allowed by Providence, but sent for punishment and for the good of the people? The present generation could scarcely have any conception of the opposition against which the early sanitary reformers, such as Chadwick, had to contend. It was sarcastically said of the British people that they would prefer to take their chance of cholera rather than be bullied into health. And Mr. Hogarth candidly admitted that if public opinion in those days was not ready for sanitary reform, general medical opinion was not very much more advanced.

NEED FOR HEALTH DISCIPLINE

The battle of sanitation had now been won, yet there remained, as in Victorian days, the lazy mind which did not want to see, the selfish mind which resented being convinced, and the bigoted mind which would not admit new evidence. There was still need to cultivate collective health sense. The development of such a sense in the general body of the nation would produce magnificent results, but it could not be said to exist so long as millions of people regarded the medicine bottle with superstitious

reverence, and thought that a panel doctor who did not prescribe it was no good. A greater discipline was needed —as a concession to a democratic age, let it be called self-discipline. The movement towards discipline had many disappointments—witness the painful lack of success of the campaign against litter in the streets and on the countryside—yet it had its victories, as, for instance, the disappearance of the disgusting habit of promiscuous spitting. This disappearance was due, no doubt, to the deep impression made on the public mind by the discovery that the habit conduced to the widespread diffusion of the tubercle bacillus ; but it was so complete that the hideous one-time article of domestic furniture, the spittoon, was now only with difficulty obtainable.

Perhaps, as an eminent professor had said, to secure the submission of the Anglo-Saxon to discipline the thing must be called by some other name, such as education. Never before in human experience had the health of the individual been so largely in his own hands to make or to mar. It was within his power consciously to hold the processes of decay in check, to oppose retarding forces, and retain the maximum maturity for a much longer time than ever before. A child born to-day had an expectation of life twenty years longer than his grandfather. If a man could not add to his stature by taking thought, he could by so doing add to his length of days. But mere survival was not enough ; the life so prolonged must be happy and active, not a valetudinarian existence.

TRIUMPHANT INVALIDS

Admittedly it was possible to overcome physical disability and live a full life in spite of it. Mr. Hogarth mentioned, for the encouragement of those of weakly physical endowment, some outstanding examples of triumph: Arnold Hills, the shipbuilder, who suffered from a crippling paralysis, but directed his great business with indomitable energy ; Lord Trent, better known as Sir Jesse Boot, who for the last few years of his life could hardly move a limb, and yet whose brain never ceased to plan a more perfect organization for the great business which he had founded ; and Lord Curzon, who worked tirelessly, although suffering throughout life from a painful weakness of the spine which would have killed ambition stone dead in most men. (Mr. Hogarth might have added another example in Mr. Franklin Roosevelt, President-Elect of the United States.) But the hard fact remained that these were the exceptions which proved the general rule that when health was broken a man's life was finished and his usefulness done.

In these days people thought too little about their own obligations to the State in respect of health, though they required no reminder of what they called the State's duty to them. If they were ill they demanded that the State should provide them with medical attention, and, if their case was serious, with a hospital bed, and that the larger share, if not the whole cost, should be met out of other pockets. Mr. Hogarth's own view was that, while it was the duty of the State to see that no one in his hour of need lacked medical attention, and that institutional treatment was available for those in extremity, nothing ought to release the individual from his personal duty to keep himself in health and contribute what he could to the cost of his medical treatment.

And what was health but a just balance, a timely co-ordination, a nice equipoise of functional activities? It related to mind as well as body. A sound body was of little value without a sound mind, which in its turn was largely dependent upon the maintenance of harmony in the body. One of the great hindrances to health was worry of mind, fretfulness, fear obsessions. Cheerfulness was a more precious ingredient in the making of health even than wisdom. If fear were cast out of the mind a surprising immunity would be gained ; and, equally, envy and hatred were not only ugly vices of the soul, but enemies of health.

THE DIET OF THE PEOPLE

Mr. Hogarth commended as a simple rule of life the maxim of the Greek philosopher: "Of nothing too much." The question of temperance brought him to the question of diet. Although the general standards of health and fitness were much higher to-day than a generation ago, it was astonishing how careless the majority still were in diet, and what complete lack of judgement was displayed by a multitude of women in the choice and preparation of food. The root cause, perhaps, was a growing distaste for the work of the kitchen. The food of the British people as it came to the table did not compare favourably with that of many other nations, although food was cheaper and more varied in this country than elsewhere. Professor Mellanby, whose work on the prevention of rickets was universally recognized, had declared that there were two main defects in English diet—namely, that it contained too little of such foods as milk, eggs, vegetables, cheese, and fish, and that it contained too much bread, rice, oatmeal, and other cereals. While many diseases were directly due to vitamin deficiencies, those same deficiencies made the individual less able to resist the onslaught of a whole range of infectious diseases, and weakened the defence against the attack of the parasites. It was not a question of expensive foods. There was no one in receipt of a living wage who could not afford the articles of diet just mentioned, and if they were prepared to take a little trouble they could all insist on good wholemeal bread instead of white bread, from which most of the natural goodness had already been extracted, while nearly all the fruits of the earth were now for their use throughout the year.

Finally, Mr. Hogarth spoke of the merits of the Merseyside hospitals contributory scheme, whereby the people of Liverpool and Birkenhead and other towns had linked themselves to their general hospitals, and made them their own in a sense which was not true before. He called special attention to the difficult position of the middle and professional classes in relation to hospitals. The number of pay beds or pay wards at the hospitals was inadequate to meet their needs, while the nursing home often meant a prohibitive cost. The British Provident Association had lately been remodelled with a view to this particular problem, its object being to secure a very large immediate increase of the accommodation available for the middle class in existing hospitals, either by building new wards or making new outside extensions which would be within the range of service of the hospital equipment. He looked forward to the time when the subscribing members of the British Provident Association, like those of the Hospital Saving Association, would be over a million strong.

OPHTHALMOLOGY IN THE ORIENT

TRACHOMA AND DIET

The sixth annual report of the Giza Memorial Ophthalmic Laboratory in Cairo[1] shows that the good work which has been done there, under the directorship of Dr. Rowland P. Wilson, is continuing. Among the several cases recorded are some of leprotic lesions of the eyeball. There is also an account of research into alleged vitamin deficiency as a cause of trachoma, from which disease 100 per cent. of the population of the villages in Egypt suffer, and 70 per cent. of the more prosperous classes. Keratomalacia, even in its milder manifestations, is extremely rare. While there is often a deficiency of vitamin D in the diet of the fellahin, it has been agreed that the general vitamin needs of the people are satisfactorily met. A commission has recently studied the dietary of these people, and reports that the fellahin in the oases are amply supplied with natural foods—eggs, fruits, and vegetables being abundant. There is no need to import any foods, except flour, tea, and sugar. Practically everything that is grown is consumed locally. In spite of this plentiful supply of nourishing foods, trachoma is as prevalent as in the ordinary villages of the country. It seems more unlikely that vitamin deficiency is specifically related to trachoma.

With regard to the relation between the trachoma of Egypt and that seen in America, Dr. Wilson, who has visited the United States, says that he examined several

[1] Sixth Annual Report of the Giza Memorial Ophthalmic Laboratory, Cairo. Schindler's Press, Cairo. 1932.

private patients (American subjects) diagnosed as suffering from trachoma. In these cases the disease differed so widely from Egyptian trachoma that one might quite well have been dealing with a different disease altogether. It was also observed that follicular conjunctivitis, often mistaken for trachoma, is much more prevalent in America than in Egypt. Professor Lindner of Vienna, who is one of the world's foremost trachomatologists, and who visited the United States in 1930, maintains that many of the cases of so-called trachoma in America are simply cases of follicular conjunctivitis, and that the bacterium which Noguchi discovered is only one of the causes of follicular conjunctivitis. Be this as it may, the real significance of *B. granulosis* is not yet known, but these facts may account for the failure so far to find this organism in Egypt. There is also a record of a careful piece of observation by Dr. Wilson into the character of the vessels at the corneal limbus in normal eyes and in early trachoma. It is suggested that the changes noted are diagnostic of the disease.

A New Periodical

The first number of *Folia Ophthalmologica Orientalia*,[2] under the editorship of Dr. Aryeh Feigenbaum of Jerusalem, has been issued. He and his colleagues may be warmly congratulated upon this new venture. The form, paper, printing, illustrations, and the manner of the presentation of the papers, are alike excellent. Particularly to be commended is the rule of attaching to each paper (and to the description of each figure) polyglot summaries. In addition to a summary in the language of the paper, there are adequate summaries in French, German, and other languages. The opening paper is a survey of fifty years of ophthalmic progress in Egypt, by Max Meyerhof. In this, he has a subject on which he can write with first-hand knowledge, and he has done so with feeling. Of particular interest is one of his remarks on the effects of the spread of scientific medicine. He says that the happy effects of the new era in Egypt have been, on the one hand, a sensible decrease of the deleterious eye disease and of blindness, and, on the other, a remarkable repression of quack practices, which thirty years ago were one of the plagues of Egypt. There is an interesting article by Dr. A. Trantas of Athens on the exploration of the ciliary and retrociliary region for foreign bodies. These regions are inaccessible by ordinary ophthalmoscopy, but can be explored in a satisfactory way by digital or diaphanoscopic pressure, so that normally hidden foreign bodies can be seen by direct ophthalmoscopy.

Drs. M. Sobhy Bey and E. I. Attie of Cairo give their experience of the total extraction of cataract by the erisiphake (Barraquer's method), and of the surgical treatment of immature cataract. They consider that there are material advantages in favour of intracapsular extraction, and maintain that the risks in this operation of loss of vitreous are balanced by the risks of incarceration of a shred of capsule between the wound edges when the cataract is removed from within the capsule. Dr. N. Shimkin of Caiffa, Palestine, records a case of bitemporal hemianopsia in pregnancy, and concludes that the symptom was due to compression of the chiasma by the pituitary body hypertrophied during pregnancy. There is also a report of the meeting of the Ophthalmic Section of the Palestine Jewish Medical Association.

[2] *Folia Ophthalmologica Orientalia*. Vol. i, fasc. 1. P.O.B. 476, Jerusalem.

Ireland

Mental Hospital Returns

The Department of Local Government and Public Health has issued to the committees of management of the district mental hospitals comparative returns of receipts and expenditure and average costs for the year ended March 31st, 1932. The gross expenditure was £813,120, or £13,631 less than in the preceding year; excluding repayment of loans of £60,636, the expenditure amounted to £752,484, as compared with £774,281 in 1930-1, a decrease of £21,797, although the average number of patients maintained increased from 17,409 to 17,549. The receipts amounted to £863,574, of which £765,085, or 89 per cent., came from the county and county borough councils, who received from the Government by way of capitation grant £150,768. This reduced the sum to be raised locally to £614,317, which, in so far as it was leviable by county councils off agricultural land, would be met partly by the agricultural grant. The principal receipts, other than money transferred by the councils to the credit of the committees of management, were: £39,998 from paying patients—which was slightly less than in the preceding year; £21,400 from the British Ministry of Pensions on behalf of British ex-Service patients; £7,000 from the Government on behalf of criminal lunatics; £12,107 from the sales of farm and garden produce, and £8,563 from officers as contributions towards superannuation. The major portion of the produce of mental hospital farms is not sold, but is consumed in the institutions, and so helps to reduce the cost of provisions. The average cost of maintenance, per patient, calculated on the gross expenditure less repayment of loans and miscellaneous receipts, was £41 8s. 11d. (or 15s. 10d. per week) in the district mental hospitals. In the Auxiliary Mental Hospital at Youghal the cost was £29 19s. 11d. (or 11s. 6d. per week). These costs are both less than the preceding year, when they were 16s. 5d. and 12s. 7d. per week respectively. The cost per patient was highest in Grangegorman and Portrane (£47 10s. 11d.), and lowest in Castlebar (£31 11s. 1d.). In the following institutions the cost was above the average: Mullingar, £47 2s. 8d.; Portlaoghise, £44 2s. 5d.; Carlow, £44 0s. 5d.; Kilkenny, £43 2s. 8d.; Limerick, £42 18s. 2d.; Waterford, £42 13s. 4d. In the following it was below the average: Killarney, £32 17s. 1d.; Cork, £37 8s. 10d.; Letterkenny, £37 12s. 11d.; Clonmel, £37 14s. 5d.; Monaghan, £38 0s. 1d.; Sligo, £39 18s. 6d.; Ennis, £40 2s.; Enniscorthy, £40 3s. 8d.; Ballinasloe, £40 19s. 4d.

Cost of Belfast Public Health

It is estimated that a reduction of £2,523 will be made in the cost of public health services in Belfast. Salaries and wages are responsible for the decrease in the anticipated spendings which is shown in practically every section of the estimates. Of the total of £55,436, salaries and wages account for no less than £29,271; this is £3,599 less than the amount required for the present year, and is equivalent to a saving of over 10 per cent. For the Public Health Department provision is made for a net sum of £15,760, a decrease of £1,148. Salaries and wages account for £12,667, fees for analyses £600, medical fees for notification £700, and printing, stationery, and advertising £650. The cost of the municipal laboratory is estimated at £854, against £936 in the present year; salaries and wages of £1,054 is the principal item, but this is set off by the expected receipt of £560 in fees for tests and vaccines. For the disinfecting station £1,411 is provided, against £1,297, the increase being due to the absence of any receipts for the disinfection of emigrants. Assuming the cost this year of the disinfection of emigrants to be £150, the estimate shows a slight decrease. Purdysburn Fever Hospital is estimated to cost £29,280, a decrease of £1,940; of this estimate £9,715 is provided for salaries and wages, a decrease on the present year of £1,135. Food for patients and staff is estimated at £4,500; medicines, disinfectants, surgical instruments, etc., at

£1,500 ; coal and coke at £2,600 ; repairs and improvements at £1,385 ; and loan charges at £8,390. Maintenance of patients is expected to produce receipts amounting to £1,500. Over £3,000 will be required for the superannuation of various former officers of the Department, and other items include the port sanitary work, £640 ; meat inspection, £2,926 ; treatment of venereal diseases, £1,590 ; and miscellaneous expenses of £715.

Scotland

Royal Infirmary of Edinburgh

At the annual meeting of the Court of Contributors to the Royal Infirmary of Edinburgh Lord Provost W. J. Thomson, who presided, said that the number of patients admitted during the year up to September 30th last had been 19,145, and the number of out-patients 66,200. The great change in recent years in the attitude of the public towards hospital treatment was indicated in the comparative figures for the year immediately before the war, which were 11,988 and 37,800 respectively. The popularity of the institution tended to become an embarrassment, despite the fact that many local hospitals had greatly increased their accommodation. Much progress had been made in radium treatment ; the Infirmary now had the use of over 1 gram of the element, and had opened Beechmount House as an auxiliary hospital with thirty-four beds for the treatment of cancer cases. This would add materially to the cost of running the Infirmary, and when the extension was completed it would be necessary to find an increase of annual revenue amounting to between £30,000 and £40,000. At the present time it cost over £175,000 a year to run the Infirmary, and only £120,000 was available from contributions, interest on invested funds, etc. A draft was submitted of a new constitution for the Court of Contributors, which aims at securing better representation on the Board of Management for various subscribing bodies. The report for the year showed that it had been necessary to draw on invested funds to the extent of £18,726, although this had been met by special donations and legacies. The total number of in-patients treated had been 20,049 as compared with 20,123 in 1931, and the average daily number in the institution had been 980. Of the patients admitted, 9,059 came from the city of Edinburgh and 10,086 from country districts. The waiting list had shown no reduction, the average number on the list having been 3,057. General subscriptions and donations in 1930–1 had fallen from £61,598 to £59,244, patients' donations from £4,436 to £3,798, and subscriptions of approved societies from £4,326 to £2,399. On the other hand, receipts under the Road Traffic Act had risen from £223 to £1,050. There had also been a serious diminution in legacies and special donations; in 1931 these had totalled £75,268, and in 1932 £69,947. The cost per occupied bed for the year, based on total expenditure and inclusive of out-patient departments, had been £160 5s. 5d., the average cost per patient treated having been £8 3s. 11d., and the average cost per day per patient 8s. 9d. In October the Board had obtained possession of the adjoining site of George Watson's College, on which it was proposed to erect a combined gynaecological and maternity hospital and a new home for nurses ; building operations would be commenced during 1932. The special committee set up two years ago to raise funds for this extension had obtained over £260,000. The necessary Bill to enable the directors of the Maternity Hospital to transfer the property of this trust to the Royal Infirmary had now passed through Parliament and received the Royal Assent. Progress had also been made with a new building to provide accommodation for patients suffering from skin and venereal diseases ; the two departments, although in one building, would be independent of one another.

Stirling District Mental Hospital

The annual report of Dr. R. B. Campbell, medical superintendent, Stirling District Mental Hospital, shows that there were 1,037 certified patients on the register at the close of the year to May 15th, 1932, of whom 583 were males and 454 females. During the year 259 certified patients had been admitted, 155 discharged, and 82 had died. The total number of certified cases under treatment had been 1,274, as compared with 1,282 in the previous year, and there had been thirty-six fewer admissions. Of the patients admitted, only forty-eight were found to be in average bodily health. Acute mental ailments had been the cause of admission of 108 patients, for whom reasonable hopes of recovery existed ; but 151 had been suffering from confirmed and chronic forms of insanity with little prospect of ultimate recovery. Senile insanity had been present in twenty-five patients, and twenty-six were cases of general paralysis or of gross brain disease. Encephalitis lethargica with progressive mental enfeeblement had been responsible for four admissions. With regard to causes, the mental breakdown had been the result of serious bodily illness in nineteen patients ; alcoholic excess in fifteen ; senility with failure of mental and physical powers in twenty-five ; syphilis in thirty-one ; and epilepsy in fifteen. Previous mental breakdown was noted in seventy-one patients, and in thirty-nine of these it had occurred at one or other of the critical periods of life, six being associated with childbirth. Twenty voluntary patients had been admitted during the year, of whom thirteen were rate-supported ; eighteen of these (five males and thirteen females) had left hospital cured, eleven returning home after less than three months' residence. There had been on the register at the beginning of the year forty-four patients maintained by the Ministry of Pensions, and during the year one more had been admitted ; one had died and one had been transferred to another mental hospital. Of the 155 patients discharged during the year, ninety-eight were recovered, giving a recovery rate, calculated on the number of admissions, of 37.1 for both sexes. Of these, sixty-two had been discharged within six months of admission and twenty-two after twelve months' residence. One patient had been discharged recovered after being resident in the hospital for seven years. Unrecovered cases discharged had numbered fifty-seven, the majority having been transferred to other institutions. Deaths during the year had numbered eighty-two, giving a death rate for the year of 8, calculated on the average number resident ; this was the lowest for many years. It is pointed out in the report that the recovery rate of 37 per cent. keeps at a satisfactory level, but it is regarded as unfortunate that this and similar institutions, primarily intended for the treatment of mental ailments, should have their hospital departments crowded with senile cases which could be satisfactorily cared for in some more suitable way without being certified as insane. It is suggested that such cases might be readily accommodated in the poorhouses throughout the country. Satisfactory results in cases of general paralysis have been obtained with tryparsamide, seven patients having been discharged to their homes after treatment. Great benefit has resulted from the use of electrotherapy employed in 231 cases. The occupational therapy department has continued to fulfil an important role ; it has been found of the greatest value for the less hopeful and chronic patients who have refused to be employed in ordinary ways, but whose interest has, sooner or later, been attracted by one or other of the various handicrafts.

England and Wales

The London County Council Hospitals

The general and special hospitals of the London County Council, which represent the most extensive municipal hospital organization in the world, are the subject of review in vol. iv (Part I) of the Annual Report of the Council, which covers the year 1931 (2s. 6d.). At the end of that year there were under the management of the Public Health Department of the Council forty-four general hospitals and institutions, with 27,553 beds, and thirty-one special hospitals, with 13,390 beds, while the staff of the hospital and ambulance services numbered 18,870 persons. Sir Frederick Menzies, the county medical officer of health, describes the formidable task with which the Council was entrusted when the hospitals and institutions of the Metropolitan Asylums Board and the boards of guardians were transferred under the Local Government Act, 1929. A number of the special hospitals transferred from the Board were of recent construction, and were planned for specific purposes, for which they are still being used. As they had been controlled by one central authority, with expert advisers, most of them were furnished with modern and efficient plant, and with equipment in keeping with the advance of medical science. No such uniformity and adequacy marked the general hospitals, which had been controlled by the boards of guardians. While these included at the one extreme institutions fairly comparable to the great voluntary hospitals, at the other extreme they fell far below that standard. Great inequalities were found as between one hospital and another, or even between different departments of the same hospital. In most of the guardians' institutions the general hospitals did not contain a sufficient number of beds to satisfy the needs of the population dependent upon them, and during the seasonal increase in illness in the winter serious shortage of beds was revealed. The Council set about the task of surveying all these hospitals and institutions and of removing the deficiencies. The purposes in view, as described by Sir Frederick Menzies, were to establish a satisfactory standard of accommodation, to furnish every hospital with modern and efficient plant, to organize suitable accommodation for special types of patients, to convert into suitable accommodation for cases of chronic illness such portions of the institutions as were capable of being so adapted, and to provide additional accommodation for acute cases. "It was clear," he states, "that the desired end could be attained only by pursuing steadfastly a policy of progress and reform over a long period of years. The position was dominated by the fact that the whole of the work which the problem demanded had to be carried out in hospitals which continued actively to exercise their functions. . . . It follows that any considerable improvement to a hospital must be accomplished section by section in successive stages, and must occupy a considerable period in its completion." He goes on to describe in detail the major and minor works undertaken and contemplated. References to these have appeared in these columns from time to time in reporting on the work and decisions of the London County Council.

With regard to pathological services, Sir Frederick Menzies says that experience gained since the application of the group laboratory system to the transferred hospitals and institutions has confirmed the conclusion that the absence of any organized laboratory system in the Poor Law hospitals was not only unsatisfactory from the point of view of the patient and the medical officer in charge of the case, but was also uneconomical. "The Council recognizes that modern medical treatment demands for its success a great deal more in the way of pathological investigation than has been provided in the past, and, moreover, that facilities for personal co-operation between the clinicians and the pathologists are now essential in the hospitals and institutions transferred to its care. In the past it had often been taught that the pathologist should have no knowledge of the clinical condition of the case under investigation, and that only in this way could an unbiased opinion on any specimen be obtained. This is now known to be fallacious, for in many cases it is only when the pathologist is in possession of full clinical details that he is able to give a just interpretation of the laboratory findings." Without the closest co-operation between pathologist and medical officer clinical work can never be entirely satisfactory. The report, which is a document of more than 200 pages, includes many statistical tables relating to the work of different groups of hospitals and services.

Harveian Society of London

At the hundred and first annual general meeting of the Harveian Society of London, held on January 12th at 11, Chandos Street, W., the retiring president, Mr. Cecil P. G. Wakeley, delivered his presidential address on the role of specialization. Mr. Wakeley recognized that specialization in medical practice was inevitable owing to the individual's inability to make himself familiar with the many and varied additions to his science and art, but in this country it was characterized by certain developments which were not beneficial to the community. For example, regional specialization in the art of surgery was largely artificial; it gave rise to various "ologies" which were of economic value to their practitioners but of dubious value to the patient. Again, the teaching of medicine and surgery in multiple special departments tended to divorce the student from the general principles. Mr. Wakeley contended that specialization in hospital practice should be determined by the genius of the individual practitioner and the interests of the patient; it should not be enforced on successful candidates for hospital appointments because it was convenient to hospital administration. For the treatment of the sick he agreed with Vesalius, who described the "distribution among different practitioners of the practical applications of the art" as mischievous. After expressing the gratification of the society that the distinguished work of two of their members, Sir Thomas Horder and Professor Frederick Hobday, had been recognized by His Majesty, Mr. Wakeley inducted the new president, Lieutenant-Colonel E. L. Gowlland, D.S.O., M.B., T.D., into the chair. Dr. Tom Hare and Dr. Macdonald Critchley (honorary secretaries) and Mr. Cecil P. G. Wakeley (honorary treasurer) were appointed.

Medical Society of Individual Psychology

Members of the Medical Society of Individual Psychology and their guests met for dinner on January 12th at the Florence Restaurant, Professor W. Langdon Brown being in the chair. After an excellent dinner Dr. F. G. Crookshank put forward the names of new members and associates; the acceptance of these brought the numbers of the society up to 97. The election of three honorary foreign members (Drs. Ziladi, Seif, and Adler) completed the century. Professor Langdon Brown, proposing the health of the society, said that it had been in existence only three years, during which time its membership has been increased tenfold. One of the advantages of individual psychology was that by its methods a large amount of psychology could be carried out by the general practitioner. One of the most important and successful ventures of the society had been the publication of the medical pamphlets under the editorship of Dr. Crookshank

and Dr. H. Weber. Dr. O. H. Woodcock, in proposing the health of the guests, eulogized them in turn. After an appreciative reference to Dr. Henry Devine's work he said that the only way to become intimate with Dr. Devine was to become one of his patients. In welcoming Dr. Graham Howe he remarked that the platform of the society was broad, and that no restriction to any theory of psychology was enforced. Referring to the presence of the representative of the *British Medical Journal*, he said that the *Journal*, in publishing accounts of meetings of the society, helped the general practitioner to become acquainted with the articles of its faith. The society, he continued, was greatly indebted to Mr. C. W. Daniel for publishing its medical pamphlets at some pecuniary loss to himself. Responding for the guests Dr. Devine said that, having lived for so long with psychotic patients, he was shy at being among so many normal people: nevertheless he felt in a complete state of psycho-somatic unity. Dr. Devine reminded his audience that Dr. Crookshank had worked for some time in a mental hospital, and he wished that he had continued in psychiatry. There was no more important movement in medicine than this society, the two heads of which were general physicians. The mass of neuroses would have to be treated by the general practitioner, and he thought that medical students should be taught the principles of psychology. Mr. C. W. Daniel gave a short account of the financial side of the production of the pamphlets, and told a good story about a plumber. Dr. Crookshank proposed the health of Professor and Mrs. Langdon Brown. He said that they were meeting under the shadow of Professor Langdon Brown's impending resignation from the chairmanship of the society. Since his occupation of the chair the society had gone steadily forward. Professor Langdon Brown replied in a brief and apt speech.

Central Midwives Board

At a meeting of the Central Midwives Board held on January 5th it was announced that a letter had been received from the Ministry of Health approving the existing rules for a further six months from December 31st, 1932. It was agreed to inform the Association of Inspectors of Midwives, in reply to their inquiry, that a midwife complies with the requirements of the Board if she records such material particulars as are furnished to her by the doctor or clinic, and that should the patient not have undergone a medical examination she should make a note to that effect. It was resolved to inform the various local supervising authorities, lecturers, and teachers that the Board understands that the *British Pharmacopoeia, 1932*, contains a standard for lysol *B.P.* which, in the Board's opinion, may be safely used as a disinfectant by midwives.

CORRESPONDENCE

The Hastings Window in Worcester Cathedral

SIR,—You permitted me to make an appeal to members of the Association for additional contributions to meet the balance due on the cost of the Memorial Window at Worcester Cathedral erected to the pious memory of our founder. When I wrote you on October 29th, 1932, there was a deficiency of £110; that has now been reduced to about £86. Members who have not seen the window will now have gained some idea of its beauty. The Medical Insurance Agency had the pleasing thought of sending a reproduction of the artist's design to all members as a Christmas greeting. I hope they will be so attracted by that picture—which, good though it is, can give but a small idea of the beauty of the window—that I shall, in response to this appeal, be so inundated with donations that I shall receive more than I need! In that happy event the balance will be transferred to the Sir Charles Hastings Charity Fund.—I am, etc.,

N. BISHOP HARMAN,
Treasurer, British Medical Association.

B.M.A. House, Tavistock Square, W.C.1,
January 12th.

The Biochemical Syndrome of Uraemia

SIR,—Dr. Paramore, in his letter published in your issue of January 7th concerning my paper on uraemia, raises some important questions. If I understand him aright, he suggests that dietetic restrictions at the onset of acute nephritis may succeed in abolishing the hypertension, fits, and oedema, and may even result in a more rapid restoration of renal function, with recovery of the patient. With regard to the latter I can only say that I wish it were so; but in spite of much work that has been done I know of no convincing evidence that dietetic restrictions at any stage of any type of nephritis can influence the progress of the renal changes. In fact, our almost complete inability to affect the course of the renal changes in nephritis is one of the most disheartening points about this disease. Clinical observations on such a point are necessarily untrustworthy. That dietetic factors may influence the hypertension and fits of acute nephritis is possible, but difficult to prove. That they influence the oedema, however, is undoubted, and this is a matter to which I should like to refer briefly.

As every medical student knows, nephritis is a very confusing subject. It is confusing because, in any given case, a number of different processes are at work which appear to have very little causal connexion with one another. These processes are: (1) Renal insufficiency, which if sufficiently severe (renal failure) will lead to frank uraemia. This renal insufficiency may be quite temporary, as in many cases of acute nephritis, or permanent and progressive, as in chronic nephritis. (2) Hypertension, cause unknown. (3) Fits, cause also unknown, but probably related to the hypertension and vasomotor spasm. (4) Oedema. (5) Albuminuria. When all these occur in one case no wonder there is confusion, especially as the relative preponderance of each factor may vary greatly from time to time and from case to case. It is instructive to note, however, that each one of these factors is common in conditions other than nephritis. To appreciate and assess a case of nephritis, therefore, one must be able to appreciate and assess each individual factor, and this can only be done when one has sufficient insight to distinguish the factors.

First, with regard to uraemia: this is a complicated condition resulting from renal failure, though in acute nephritis the failure seems to result more from a diminution of glomerular blood flow than from a failure of renal concentrating power (thus, a little urine may be manufactured which is highly concentrated, but, nevertheless, uraemia may result because the amount of urine manufactured is so small). Uraemia produces many symptoms; but fits, hypertension, and oedema are not among them. It may be inexorably progressive, or it may be transitory, as in acute nephritis, and disappear with the onset of diuresis. No one has any difficulty in saying that a patient dying from chronic nephritis is suffering from uraemia, but the clear recognition of minor and transient manifestations of the condition in other diseases is not so universal, especially when oedema, hypertension, fits, and albuminuria are prominent features

of the case. That uraemia is, however, a "self-contained" process, having no obligate connexion with these other factors, now seems established, and on rare occasions it may even be encountered (as in the case I described) in pure and uncomplicated form. This is a view which is founded upon much laborious work in many countries, and the observations in my paper are merely advanced as additional evidence in its support.

Oedema, then, is never the result of renal insufficiency, though it is very commonly associated with it. The problems surrounding the study of so-called "renal oedema" are many and intricate, but in general it appears that two main factors are involved. These are: (*a*) loss of certain of the protein constituents of the blood plasma into the urine (albuminuria) at a more rapid rate than can be compensated for by the tissues concerned, with resulting upset in the relative concentrations of the various plasma proteins (themselves very complicated substances of which our knowledge is scant); and (*b*) an obscure alteration in the functional efficiency of capillary endothelium in certain regions of the body which results in an escape of plasma protein into the tissue fluid in a manner closely analagous to that occurring in the glomeruli of the kidney in conditions of albuminuria. Since both of these factors tend to reduce the effective osmotic pressure of the blood plasma passing through the capillary bed, it becomes obvious how important they are in the mechanism of oedema formation. They are the basic abnormalities which enable the physician in charge to produce almost any degree of oedema he pleases by fortifying his patient with milk. For the elucidation of this difficult problem, which has thrown a flood of light upon many of the obscurities of nephritis, we are indebted to Dr. A. A. Epstein of New York.

Looked at from this angle, then, dietetic restriction is certainly important in the control of oedema, but only in so far as it includes salt and water (especially salt). The factors which produce the oedema are those mentioned above; administration of salt and water simply *allows the oedema to form*. Dr. Paramore's other remarks appear equally to the point, but call for no comment from me.—I am, etc.,

Dublin, Jan. 8th. GEOFFREY THOMPSON.

Death under Spinal Anaesthesia

SIR,—As it has been my privilege on many occasions to administer subarachnoid blocks for Mr. Norman Lake in gastric surgery, and always without anxiety, he will perhaps not be offended if I point out what I consider to be the weak spot in the case which he reports in your issue of January 14th (p. 77). This has no relation to vasomotor disturbances, but to the act of vomiting.

Successful vomiting depends upon the vigorous action of the respiratory and abdominal muscles, a closed glottis, and increased intra-abdominal and intrathoracic pressure acting upon the stomach and oesophagus. Propulsion and ejection of fluid from the pharynx is the essential requirement for safety. (Anyone who has been thus treated by a child on the opposite seat of a railway carriage will appreciate this mechanism.) With paralysed intercostals the patient is robbed of the muscles which are essential for good performance of the act, and under high thoracic blocks ineffectual vomiting may be observed. In any patient, therefore, in whom copious vomiting is likely to be encountered this method is, I believe, definitely contraindicated, and I agree with those anaesthetists who maintain that a push-fit intubation of the trachea is the only means of providing safety in these cases, although in a bad case this may be an extremely unpleasant and difficult performance.

I have maintained before that high spinal anaesthesia is not a short cut to safety in bad cases, but is applicable only in those patients who can afford to surrender a portion of their vital mechanism. Furthermore, the history of the toxic analgesics—of collapse in the consulting room, the dental chair, and the out-patient department—provides ample evidence that these drugs are all violent poisons to the human central nervous system, quite apart from nerve blocks. Not until these truths become more generally recognized will this method achieve the place it deserves in surgery.—I am, etc.,

London, W., Jan. 14th. W. HOWARD JONES.

Radium Therapy

SIR,—After reading the report of the Radium Technical Committee, published in the *Times* of January 6th and in the *Journal* of January 7th, one must conclude that the Radium Commission can no longer continue to countenance the use of radium by the interstitial method without inconsistency. Take the following extracts from the report:

"... it is therefore an essential factor in treatment that every element of tissue throughout the region treated should receive exactly the same amount of radiation."

"... there is, indeed, a general agreement upon the importance of obtaining a uniform field of radiation throughout the region under treatment."

Now consider these extracts side by side with the following passage taken from the *Westminster Hospital Reports* (xxi, p. 21) in the article on applied physics of radium, referring to the effect of distance on intensity of radiation:

"So much is this the case that in practice radium necrosis occurs at the surface of each needle of a group, while the intensity is yet insufficient between them to produce the necessary reactions."

Nothing could be more in conflict than the two former passages with the latter, and anyone with a superficial acquaintance with the physics of radium knows that by the interstitial method anything approaching an even radiation is impossible, unless the tubes are placed so close together that there are more tubes than tissues in the region under treatment. Therefore, if the views of the Technical Committee are to be followed out in practice, the curtain will fall on the interstitial use of radium. But if external radiation with large masses of radium is looked upon as the only useful method of employing this element, it is very important to know how many patients could be treated by this method. If every case must have the use of 5 grams of radium for a week or more, the proportion of the cases of cancer that can be treated would be so small that I think the vast amount of money required for this purpose would be better spent on some other line of research, unless the object in view is to acquire knowledge in readiness for the day, which may be very near, when rays of a penetration equal to the hardest gamma rays can be obtained from an *x*-ray tube. But if this is the object, why not carry on experiments in the meanwhile with the hardest *x* rays available.

I think it is generally admitted that the improved results from the use of radium were obtained when it was allowed to act for days instead of hours, or, in other words, when long-continued radiation of low intensity was substituted for short periods of radiation of high intensity. By increasing the distance of the *x*-ray tube from the patient, and also, if convenient, by diminishing the current, the time occupied by the delivery of a standard dose can be increased to any extent that is likely to be desirable. At a distance of about eight feet the time could be prolonged to about a week without difficulty. The difference between the application of *x* rays by such a method and external radium would be only one of wave-length, the importance of which is admitted in the report to be speculative, and yet I do not believe that experimental work on these lines has ever been done in this country.

No trouble was too great for him in helping a surgeon over difficulties. A writer in a lay journal has written of his "simplicity," but it is obvious that with such simplicity of aim he must have combined much astuteness, for none but a diplomat could have overcome without *éclat* the resistance which met his proposals for the establishment of military orthopaedic hospitals. As an operator he was neat and wasted no time, and his manipulative skill was of the highest order, as was his power of diagnosis by palpation. He was fully cognizant of the methods of bone-setters, but there was little or nothing that they could teach him, however highly placed might be their supporters.

On his seventieth birthday some of his friends and admirers entertained him at dinner, and presented him with the "Robert Jones Birthday Book," a volume of surgical essays. In the preface to it Lord Moynihan writes:

"Few men have ever possessed in so radiant a degree the genius for friendship. No one can be long in his company, none can work with him or play with him, without realizing not only the sweet simplicity of his character, but the greatness of his heart. . . . In a long and very intimate friendship I have never heard an unjust criticism, a cruel gibe, or a word of bitter cynicism on his lips. His personality radiates cheerfulness, good temper, and good will."

Sir Robert married Susie, daughter of Mr. William Evans, in 1887, and had two children. His son, who is a member of the Bar, succeeds to the title.

Sir JOHN LYNN-THOMAS writes:

There cannot be another Robert Jones, so I am proud of the privilege of sending my appreciation of a great man, whom I knew more intimately than any, excepting your late Editor, Dawson Williams. I am reminded of a happy incident by a photograph before me in which Robert Jones stands by one pillar and Dawson Williams by the other, in the Gardens, Castle Hotel, Brecon, with Lucas-Championnière standing on the steps between them and the provost of our new Medical School sitting at his feet. It was the occasion of celebrating a lawsuit lost through introducing a new method to this country into the orthopaedic treatment of fracture-dislocations near a joint. This method is to-day in general use, due in great part to the activities of the men in this little group, which led to an international protest against the verdict. It was the great war that brought great joy to the life of Robert Jones when he saw blazoned in the sky imperishable signs of victory, fruits of world-wide triumphs for the principles and practice originated by Hugh Owen Thomas at 11, Nelson Street, Liverpool, where he and I first met after my return from the South African war. It proved to be a strange experience, unforgettable from many standpoints, as I had to stay with the little patient I took to see him, giving me opportunities to observe and attend his popular Sunday service to the maimed poor. It was more than worth while—a revelation in the late H. O. Thomas's atmosphere in which his successor, the new wonder-maker, was at work. No anaesthetic but a hypnotizing manner when he refractured badly deformed old Colles's with a Thomas wrench, and completed treatment of children's club-feet by fracturing tibia and fibula with only his immensely strong hands. Splints and dressings were always in readiness, and the whole series would be treated and dressed within incredible time—two minutes for each would more than suffice.

In his wife he had a wonderful partner. When I was staying at their home later on, Mrs. Robert Jones would say in the morning, "We are going to have a quiet lunch to-day at half-past one." Fancy my surprise to find at table, sometimes, over a dozen medical men, Britishers and foreigners! After many repetitions I got used to it.

As chief of the Military Orthopaedic Department he proved to be a great organizer, tactful and firm, succeeding in establishing new types of curative institutions in the face of powerful recalcitrants. I had the flattering experience of being asked by a firm of well-known publishers to write a book on military orthopaedics, and on an impulse agreed. I recall the incident to illustrate the greatness of the character of Robert Jones. On asking him to write a chapter for the book he immediately consented. Later I realized that he was *the man*, and, as the result, his *Orthopaedic Surgery of Injuries* appeared in 1921. There cannot be another Robert Jones.

Sir W. I. DE C. WHEELER writes:

The death of Sir Robert Jones not only will be deeply regretted by the members of the medical profession throughout the world, but it will leave a feeling of vacancy in countless places. His recent ill-health gave rise to whispers of anxiety amongst his friends, but the tragedy of an impending fatal ending was put aside as impossible to contemplate.

I have shared with others the priceless privilege of close friendship for nearly twenty years. A letter was sent to him a week ago as a reminder of the affectionate welcome he would receive in Dublin if he could be present at the Annual Meeting of the British Medical Association next July. In paying tribute to Sir Robert Jones many will recount those great orthopaedic achievements which have received universal recognition and which have been acclaimed time and again by the surgeons of the world. Many will recall how, when they sought his advice, he was able in a moment to find a simple and effective solution to orthopaedic problems which had been regarded as insoluble by his pupils and contemporaries. My desire is to record with pride that I had the friendship of a man incapable of injustice, pre-eminently modest, and one who ranked co-operation far above checkmate, and who by word and deed was a high example to his many disciples. While insisting on thoroughness and efficiency in treatment, Sir Robert Jones overflowed with generosity and sympathetic consideration for those who consulted him. The crippled children will be amongst the many to miss the sunshine of his presence, but the path which led him to scientific achievement and a rare degree of personal charm will be still brightly illuminated by the light of his memory.

Dr. CHARLES MACALISTER writes:

The passing of Sir Robert Jones, who was my friend and colleague for more than half a century, has led to an opening of the book of memory concerning him. Its tablets tell the story of a remarkable life, serenely happy in itself, and radiating that happiness among all with whom he was brought in contact. Although I knew him as a vivacious, curly-headed boy, it was not until we were recently qualified that the intimate friendship began which prompts me to add some personal reminiscences to those which others have recorded concerning his career. When a student his versatile capabilities were demonstrated at a very early period. He had a knowledge of literature far beyond that of his academic work, and this led to a capacity for debate which became cultivated in a small society, consisting of four students, which met at weekly intervals in the house of his uncle, Mr. H. O. Thomas. Matters medical were, it is true, primarily discussed mainly as a means of revising the week's work, but when these were completed papers were read and debated on literary, political, and social questions, concerning which he in particular had very definite opinions. After qualification these four men invited other members of the profession and a number of laymen to join them, and thus in 1884 the progenitor of the Liverpool Medical and Literary Society, now approaching its jubilee, became formally constituted. One of the rules was: "The society shall exist for the purpose of enabling its members to

learn the art of speaking in public," and there is no doubt that this object was, and still is, fulfilled. The membership of the society has included most of the leading members of the profession in Liverpool, and many eminent in other work. Lord Justice Greer and Mr. Justice Rigby Swift were both on its roll. Sir Robert's library and his collection of pictures, which were both begun at the period of which I speak, bear testimony to his wide interests in literature and art. I must not conclude my mention of the above society without referring to what were termed the " after-meetings," limited to a few enthusiasts, who adjourned to a room in the basement and expended their pent-up physical energies by boxing, concerning which Robert Jones was both an adept and an authority. He had great physical strength, which could be noted when he bent metal splints with his hands or over his knee to adapt them to a limb.

Sir Robert began his career as a general surgeon, and at a very early age was on the staff of the Liverpool Stanley Hospital, which he left in 1889 on appointment to the Royal Southern Hospital. It was here that he developed his orthopaedic work, to which, from 1905 onwards, he devoted his whole attention. He enlisted the interest of many workers in the out-patient department, and also at his free Sunday morning clinics, to which poor patients flocked from far and wide. His reputation as an original thinker and teacher brought surgeons from all over the world to his clinics and operations, which were always attended by large numbers of them. In connexion with his out-patient work he adopted the co-operation of the Child Welfare Association, whose workers, after some training, kept an eye on the home conditions and feeding of the children. His interest in cripples and crippling led to a co-operation in the work of Dame Agnes Hunt, who instituted her extraordinary hospital at Baschurch about 1905. At first she brought the patients periodically to see Mr. Jones (as he then was) at the Royal Southern Hospital, to which they were conveyed from the station on trucks after a journey which must have involved a great deal of trouble to the railway servants. This was ended by a reversal of the procedure when Robert Jones made periodic visits to the hospital. In 1918, when the war had ended, he resigned his appointment at the Royal Southern Hospital, and devoted much of his attention to the establishment of a national endeavour to deal with the cripple problem, an endeavour which had Dame Agnes Hunt's hospital as its nucleus.

Another great and interesting work with which he was associated was the foundation of the Royal Liverpool Country Hospital for Children at Heswall. It originated between the years 1895 and 1898 in conversations with the writer concerning the difficulties of maintaining continuity of treatment for children suffering from chronic diseases, and materialized in the latter year, when wards were opened for a limited number of children as an independent institution in the convalescent home at West Kirby. A building committee under the chairmanship of Mr. Andrew Gibson was immediately appointed, and the hospital at Heswall was opened for patients in 1909. It is now, in association with the Liverpool Infirmary for Children, one of the largest children's hospitals in the kingdom. Sir Robert Jones was honorary surgeon to it from the time of its inception. One of the wards bears his name and another that of Lady Jones, in whose memory it was built.

In concluding these recollections one must refer to Sir Robert's gracious social attributes. At his home he gathered round him men and women representing all kinds of interests. There one met surgeons and physicians of all nationalities, distinguished politicians, authors, judges, lawyers, artists, actors, and literary men of every kind, in addition to his immediate friends and intimates. He had a profound love of humanity, and an especial love for the working classes and for their children, to whom he was everlastingly kind. I remember that year by year he sent every child that could be moved from his hospital to the pantomime, and in many other ways demonstrated the kindness and generosity which were essential features of his character. Sir Robert created a great work which will live in the history of surgery, and it, in association with his name, will ever remain the " monument of a vanished mind."

MR. HARRY PLATT writes:

My debt to Sir Robert was twofold, and I pay this tribute to him both as a patient and as a pupil. He would often remind me that he had known me longer than any of my contemporary colleagues, for it is now a little more than forty years since I paid my first visit to 11, Nelson Street, and joined the countless host of his devoted child patients. Little did I think during those days of invalidism that in the fullness of time I should once more come under the spell of his radiant presence. Every detail of our first encounter is clear in my memory: the long wait—for this was before the days of fixed appointments—and the dread of what might happen if a knee-joint, painful, swollen, and flexed, were roughly handled. As he entered the room all fears were dispelled, and I submitted my limb to his gentle touch with implicit trust. Long afterwards I was to witness on many occasions the magical effect of his presence on other children similarly afflicted.

With others of my generation, I can count myself fortunate to have been admitted to that chosen band of disciples to whom Sir Robert entrusted the care of the crippled soldier in the special military surgical hospitals. Out of this work came the British Orthopaedic Association, with Sir Robert as our perpetual president, and the object of our continuous devotion, loyalty, and affection. Through him we attained to a comradeship amongst ourselves such as exists in no other group of British surgeons. We tried hard, each one of us, to fashion ourselves in his image. Who can forget the charm of those early committee meetings, held during and after dinner at the Reform Club in London, with the official business constantly interrupted by animated discussions on irrelevant subjects, for " R. J." could never control any committee! The Birthday Volume presented to him on his seventieth birthday was the open expression of what we felt about him, and for which we could never find adequate words when in his presence. It was my special privilege to be chosen by Sir Robert as his collaborator in the revision of the great textbook on orthopaedic surgery which he had written with Lovett of Boston, shortly after the war. The second edition proved to be a mighty task, which lasted two and a half years. During this time I spent many week-ends at Liverpool; our programme was a quiet dinner on Saturday evening, early to bed, and a full day's work on the Sunday, broken only by a walk round Prince's Park after luncheon, accompanied by his beloved dogs. We read the first edition of his book line by line, and he submitted every statement to a most intense and critical scrutiny. From those long hours of intimate communion I learnt to marvel at the profundity of his academic knowledge and his intellectual vigour. This was an aspect of his many-sided genius not always revealed to the ordinary spectator of his amazing career as a great practical surgeon.

And so he has passed on, and left to us a great inheritance. May we prove worthy of it.

[The photograph reproduced is by Brooke Hughes, Liverpool.]

HARRY LEE, F.R.C.S.

The death of Mr. Harry Lee at the comparatively early age of 50, sudden and unexpected as it was, has caused profound and widespread sorrow in the West Riding. On Wednesday, January 11th, he was seemingly in his customary health and carrying on his usual work at his rooms. While driving himself home in the afternoon he apparently had some kind of seizure, which resulted in death within a very short time.

A native of Dewsbury, he was known to a good many people in Leeds as the nephew of the late Dr. Edwin Lee, a greatly respected and widely known practitioner, who at one time was president of the Leeds and West Riding Medico-Chirurgical Society. Mr. Harry Lee graduated as Bachelor of Arts at Cambridge, where also he took the degrees of M.B., B.Ch. in 1910. His clinical work as a student was mostly done at Guy's Hospital; he took his F.R.C.S. in 1911. When Mr. Michael Teale left Leeds in 1913, Lee was elected surgeon to the Leeds Public Dispensary, where he had a large clinic, remaining on the staff till 1922. When in 1919 Mr. H. Secker Walker resigned his post as honorary ophthalmic surgeon to the General Infirmary at Leeds, Lee was elected to the staff, and received a most cordial welcome from everyone. He was also appointed lecturer in ophthalmology in the University of Leeds. A steady worker, quiet in his methods and most efficient in every department of his work, he was respected and loved by every member of the staff, and by the students, to whom he acted as a kindly and sympathetic teacher. Those who are best competent to speak with authority of his professional work are agreed that in his hands the reputation of the Infirmary has been enhanced. During the war he served as a captain in the R.A.M.C.(T.), and for some time was ophthalmic specialist to the British Expeditionary Force and at Chelsea. In his younger days, when at St. John's College, Cambridge, he was an ardent Rugby football player, and got his "Blue" as full-back. Since settling in Leeds he had been a constant golfer with his friends and colleagues at Allwoodley. There was something singularly engaging in Lee's character, with its easy combination of kindness, sympathy, and courtesy, and no one who knew him will ever forget him. He leaves a widow and two sons, to whom the sympathy of everyone is extended.

Dr. PETER MACDONALD writes:

The North of England has suffered a grievous loss in the passing away of Mr. Harry Lee, who died suddenly at the wheel of his motor car last Wednesday. He was senior honorary ophthalmic surgeon at the Leeds General Infirmary and lecturer in ophthalmology at Leeds University.

Presumably others better qualified to speak than I will write of his work and attainments, but I would like to say something of him as a man and a friend. Gifted with an unusual charm of manner he endeared himself to all, and one of the pleasures of going to the meetings of the North of England Ophthalmological Society, of which he has been president, was to meet him; and this was particularly so at Leeds, where he made such a genial host. His opinions there, as elsewhere, were received with respect, and all the more so as he was a generous colleague, always willing to help when his advice was sought. He had that characteristic which marks the really big man, of always being receptive of ideas and of deferring to the opinions of others whose attainments were obviously not as great as his own. To me, personally, the loss of a friend and of a trusted colleague to whom I could always turn for help in my work is very great; but such was the magnetism of his personality that I do not so much mourn that he has died as rejoice that he lived. I am sure that the hearts of all his colleagues will go out to his wife and children.

The Board of Management of the General Infirmary have adopted the following resolution: "The Board of Management of the General Infirmary, having learned with profound regret of the sudden and untimely death on January 11th of Mr. Harry Lee, honorary ophthalmic surgeon, desire to place on record their deep sense of loss and their appreciation of his valuable services to the Infirmary during the thirteen years he has been actively associated with it as a member of the honorary medical staff. The Board also desire to express their deep sympathy with Mrs. Lee and her family in the great loss they have sustained."

The funeral service was held at St. Matthew's Church, Chapel Allerton, where a large congregation assembled to pay respect at the passing of a good friend and colleague. A memorial service was also held in the chapel of the Leeds General Infirmary, which was attended by some sixty members of the medical and nursing staffs who were unable to attend the service at Chapel Allerton.

DR. WILLIAM GALBRAITH

A remarkable record of public service was ended when Dr. William Galbraith of Gosforth, Newcastle, passed away on January 6th at the age of 87. A typical Scot, born at Ayr, he was educated at Ayr Academy, and qualified in medicine and surgery at Edinburgh University. For the unusual spell of fifty years he was in practice at Gosforth, and during that time held with great efficiency the appointments of medical officer of health, police surgeon, and public vaccinator. During this half-century he initiated many public health improvements, which were reflected in a decreasing death rate to such an extent that Gosforth was locally known as a "health resort." He successfully combated many epidemics—particularly of small-pox—and was a firm believer in efficient four-mark vaccination. Ten years ago, when the disease was prevalent in Northumberland, Gosforth remained free.

As a physician he was renowned amongst his fellow practitioners as a quiet and remarkably accurate diagnostician. He was a founder and the oldest member of the Gosforth Medical Association, and a member of the British Medical Association. He was the true type of the ideal family doctor, to whom the interests of his patients and profession came first and the business side last—frequently to his own personal loss. He was generous and open-handed to a degree, and his patients, for whom he had always a cheery word, loved and honoured him. His healthy physique and smiling ruddy face gave a cheering stimulus to everyone. What he has done for Gosforth and its inhabitants, both publicly and privately, can never be fully known.

Dr. Galbraith's long life was fully occupied by his work and his sport. As a young man he had been a good footballer and cricketer, and when aged "three score years and ten" he could easily beat much younger men at golf, while in the evenings he always enjoyed his game of bridge. His annual holiday was spent in shooting and fishing in his beloved Scotland. Dr. Galbraith's cheery smile and infectious laugh will remain long in the memory of his multitude of friends. He is survived by two daughters, who have faithfully cared for him during his long life, and to whom the deepest sympathy is extended.

The following well-known foreign medical men have recently died: Dr. MILAN JANU, founder of the Franco-Czechoslovak Medical Society, aged 47; and Dr. LEHNHOFF WYLD, who discovered sulfarsenol.

Universities and Colleges

ROYAL COLLEGE OF SURGEONS OF ENGLAND

A quarterly Council meeting was held on January 12th, when the president, Sir Holburt Waring, was in the chair.

The secretary reported the death, on December 21st, 1932, of Mr. Herbert Sherwell Clogg, chairman of the Court of Examiners, and the death, on January 3rd, of Mr. Cecil Fowler Beadles, curator of the museum. A vote of condolence was passed in each case.

The Hallett prize was awarded to S. G. Nardell of King's College.

Mr. T. W. P. Lawrence was appointed acting pathological curator of the Museum for the rest of the current collegiate year.

Mr. R. E. Kelly was re-elected a member of the Court of the University of Liverpool for three years, from January 1st.

Sir *Cuthbert Wallace was appointed Hunterian Orator for* 1934.

The course of lectures for 1933 is arranged as follows: January 23rd, Professor Arthur Edmunds, Unsuccessful appendicectomy; January 25th, Professor Harold Burrows, The induction of cancer in animals by pure chemical substances; January 27th, Professor W. E. M. Wardill, The principles of treatment of cleft-palate; January 30th, Professor Kenneth Walker, Perurethral operations on the prostate; February 1st, Professor P. H. Mitchiner, An epitome of the treatment of burns and scalds, with special reference to the use of tannic acid; February 3rd, Professor J. Paterson Ross, Sympathectomy as an experiment in human physiology; February 6th, Professor H. P. Winsbury-White, The paths of infection between the genital organs and the urinary tract, with remarks on the ascent of infection from the bladder to the kidneys; February 8th, Professor Stanford Cade, Radiation treatment of cancer of the mouth and pharynx; February 10th, Professor H. Jackson Burrows, Tissue culture in its relationship to surgical pathology; February 13th, Mr. P. N. B. Odgers, Some points in the anatomy of the lumbar and lumbo-sacral diarthrodial joints in man; February 15th, Professor R. J. S. McDowall, Experimental shock, with special reference to anaesthesia; February 17th, Mr. R. W. Raven, Diverticula of the pharynx and oesophagus, with special reference to the morphological and embryological aspects; February 20th, Professor Laurence O'Shaughnessy, Thoracic surgery—the factor of post-operative infection; February 23rd, Professor G. A. Mason, The surgical significance of the vitelline duct; February 24th, Professor E. R. Flint, Some observations on pre-operative procedure. The lecture hour is 5 p.m.

The following diplomas were granted jointly with the Royal College of Physicians:

PUBLIC HEALTH.—S. N. Bandyopadhya, W. D. T. Brunyate, Alice E. N. Gilby, A. W. Johns, S. Knight, M. Singh, M. M. Syddiq, L. D. Williams, H. M. Willoughby.

TROPICAL MEDICINE AND HYGIENE.—Mabel G. Brodie, D. D. Karunaratna, C. K. Lakshmanan, V. Nadarajah.

PSYCHOLOGICAL MEDICINE.—Sophia Antonovitch, G. G. Brown, S. Carden, H. W. D. Crook, J. L. Faull, B. M. C. Gilsenan, K. Hazell, J. K. C. Liddell, J. R. Murray, F. E. Norris, Major T. P. Parr, R.A.M.C., N. Rawstron, G. M. Smith, G. V. Stephenson.

LARYNGOLOGY AND OTOLOGY.—R. Evans, L. Jacobson, J. Mazell, H. C. Meathrel, K. V. B. Pillai, A. F. Quayle, A. Rakoff, A. Rose, B. K. Sheorey, M. R. Sheridan, I. B. Thorburn.

Diplomas in Medical Radiology were granted jointly with the Royal College of Physicians to A. A. Digges la Touche and G. D. Steven.

Medical News

Sir Lenthal Cheatle was installed as an honorary Fellow of the American College of Surgeons at the last meeting of the College held in St. Louis.

Sir Henry Brackenbury, Chairman of Council of the British Medical Association, will deliver an address on "The essentials of a national medical service," at the meeting of the Brighton Division of the Association to be held at the Royal Pavilion, Brighton, on Friday, February 3rd, at 3 p.m. Members of local authorities, medical officers of health, boards of management of voluntary hospitals, insurance committees, and selected social workers in Sussex have been invited to attend, together with members of the Sussex Branch of the British Medical Association. At a further meeting of the Division, to be held at 8.30 on the same evening, at the Royal Pavilion, Sir Henry Brackenbury will speak on "The sterilization of the unfit in its relation to private medical practice—medical certification." The latter meeting is limited to members of the medical profession.

Professor E. Mellanby will give two lectures on iodine and the thyroid gland in the Governors' Hall, St. Thomas's Hospital, at 5 p.m., on January 26th and 27th.

Two lectures under the auspices of the Save the Children Fund Child-Protection Committee will be given at Caxton Hall, Westminster, on Fridays, January 27th and February 24th, at 5.30 p.m. The subject of the first, by Captain R. S. Rattray, is "The African child in proverb, in folk-lore, and in fact"; that of the second, by Dr. J. H. Driberg, is "Practical uses of anthropological study."

Wing Commander G. S. Marshall, M.R.C.S., L.R.C.P., will give a lecture on the physiological limitations of flying, before the Royal Aeronautical Society on Thursday, January 26th, at 6.30 p.m., in the lecture hall of the Royal Society of Arts (16, John Street, Adelphi, W.C.2). It is hoped that all those who have had any experience of the physiological limitations of the human body will attend the lecture, and, if possible, give those present the benefit of their experience. Tickets are not required, but the visitors' book must be signed on entering the hall.

At the meeting of the Medico-Legal Society, to be held at 11, Chandos Street, W.1, on Thursday, January 26th, at 8.30 p.m., Dr. Godfrey Carter will discuss an unusual case of fractured spine and a case of prussic acid poisoning.

A joint meeting of the Sections of Epidemiology and State Medicine and Medicine of the Royal Society of Medicine will be held at 1, Wimpole Street, W.1, on Tuesday, January 24th, at 5 p.m., when a discussion on undulant fever will be opened by Dr. W. E. Hume, Sir Weldon Dalrymple-Champneys, and Dr. I. Walker Hall.

Two meetings of the Tuberculosis Association will be held at the London School of Hygiene, Keppel Street, W.C.1, to-day (Friday). At 5.15 p.m. Dr. S. Lyle Cummins, David Davies Professor of Tuberculosis, University College, South Wales, will read a paper on tuberculosis and the South African native. At 8.15 p.m. a paper on pulmonary asbestosis, its clinical, pathological, and radiological aspects and tuberculosis risk, will be read by Dr. P. Ellman.

The next monthly clinical meeting for medical practitioners will be given at the Hospital for Epilepsy and Paralysis, Maida Vale, W.9, on Thursday, January 26th, at 3 p.m., when Dr. Wilfred Harris will demonstrate. Tea will be provided, and it will be a convenience if those intending to be present will send a card to the secretary.

The second lecture in the series "Practical problems in medicine and surgery," arranged by the Fellowship of Medicine and Post-Graduate Medical Association, will take place at the Medical Society of London, 11, Chandos Street, W.1, on Tuesday, January 24th, at 4 p.m., when Dr. Godfrey Bamber will lecture on some affections of the skin in childhood. On Thursday, January 26th, there will be a special evening demonstration of diseases of children, at the National Temperance Hospital, Hampstead Road, at 8 p.m. Cases will be shown by two physicians and one surgeon; post-graduates will have the opportunity of examining the cases, and will then be questioned and lectured on the diagnosis and treatment. A course in dermatology will be given at St. John's Hospital, from January 30th to February 25th, which will include clinical instruction daily, and lectures on Tuesdays and Thursdays. Forthcoming courses include a course in gynaecology at the Chelsea Hospital, from February 6th to 18th (mornings and/or afternoons); a course in diseases of the chest at the Brompton Hospital, from February 6th to 11th (all-day instruction); a course in ante-natal treatment at the Royal Free Hospital, from February 3rd to March 11th, on Fridays, at 5 p.m.; a week-end course in physical medicine at the London Clinic and Institute of Physical Medicine, on Saturday, February 11th, and Sunday, February 12th. Courses, lectures, and demonstrations are open only to Members and Associates of the Fellowship of Medicine.

A Congress of the North-West German Society for the Treatment of Internal Complaints will be held at the Allgemein Krankenhaus Barmbeck, Hamburg, on January 27th and 28th. The president desires to extend a cordial welcome to medical men of other countries who, being in Hamburg, may wish to attend this meeting, of which further particulars will be available at the British Consulate-General, Hamburg.

Among the latest contributions to King Edward's Hospital Fund for London are the sum of £1,000, being the annual subscription of His Majesty the King, Patron of the Fund, £105, the annual subscription of Her Majesty the Queen, and £200, being the annual subscription of H.R.H. the Prince of Wales.

The eulogy of *Léon Labbé*, a former president of the Académie de Médecine, as well as an eminent surgeon and politician, who was born in 1832 and died in 1916, was delivered before that body on December 13th, 1932, by Professor J. L. Faure.

Dr. Louis Martin, subdirector of the Institut Pasteur and director of the Hôpital Pasteur, has been nominated Grand Officer of the *Legion of Honour*.

A Union of German Biologists has recently been formed, with Professor Lehmann of Tübingen as president.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, B.M.A. House, Tavistock Square, W.C.1.**

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QUERIES AND ANSWERS

Separation of Finger-nails

Dr. C. F. DRUITT (Alvaston, Derby) would be glad of suggestions as to the cause and treatment of a case of separation of all finger-nails from the matrix. He writes: A small portion at the proximal end may remain attached and looks healthy, while the separated portion is black in colour. Laboratory investigation fails to reveal the presence of any active disease. Cutting the nails away where they are detached seems of no avail, and makes the fingers tender at the tips. The patient is a middle-aged lady in good health.

Cracks on Nails

Dr. GEORGE BLACK (Tomintoul) writes: Keep nails short, and paint them once a week or so with acetone collodion.

Scabies

Dr. T. LUCAS HILLIER (Boscastle) writes: Having suffered whilst in China from the complaint for which "Acarus" seeks treatment, and having tried ung. sulph. *ad nauseam* with only slight relief, I purchased a bottle of "mitigal" on the recommendation of a ship's officer. One application of this preparation (which is free from irritating effects and unpleasant odour, clean in application, and does not spoil linen) and I was free from this agitating complaint. So effective was this substance that I still have most of the original bottle left. The preparation is made by Bayer Products, Ltd. (19, St. Dunstan's Hill, E.C.3).

Dr. MAURICE NEWMAN (Liverpool) writes: I assume that "Acarus's" patient has had an intensive treatment with sulphur—a hot bath every twelve hours, the skin rubbed with a brush, and the whole body thoroughly rubbed with sulphur ointment in large quantities. This procedure, repeated for five days, should ensure the death of the parasite, provided that there has been no reinfection from the patient's clothes, which should have been thoroughly disinfected. If irritation persists the patient is probably suffering from post-scabietic pruritus, which may be due either to the nervous condition or to excessive sulphur medication. For the latter, hot baths should be taken and calamine oil applied to the skin. If the irritation is troublesome at night "mitigal" or "dermatol" may be applied. Bromide and valerian will help the nervous condition, while a change of air is often very necessary.

Income Tax

Appointments—Expenses—Special Study

"J. B. H." holds an appointment at a hospital, and inquires as to the allowance of expenses incurred (*a*) in studying for the D.P.H., (*b*) in carrying out the duties of a separate (honorary) appointment, and (*c*) in maintaining his membership of certain learned societies.

*** (*a*) Not allowable; they are incurred to improve his knowledge and prospects, and are in the nature of capital outlay. (*b*) Not allowable, unless he is expected by the authorities of his own hospital to carry out these additional duties; "J. B. H." is assessed for his hospital emoluments only, and those expenses were not incurred in carrying out the *hospital* duties. (*c*) Allowable if the terms of his appointment (expressed or implied) require his membership of the societies in question—otherwise not allowable.

LETTERS, NOTES, ETC.

Treatment of Tinea Imbricata

Dr. J. A. S. GOONAWÀRDENA (London, N.W.1) writes: The usual methods of treatment adopted for this condition appear to be very unsatisfactory. While working in the interior of Ceylon ten years ago I came across three cases. One was a man of about 50, the other two were boys between 15 and 18 years of age. All three patients were put on different forms of treatment, and lotions, applications of tr. iodi, ointments of sulphur, mercury, salicylic acid, resorcin, and chrysarobin were tried without effect on the lesions. Intravenous medication was then tried with such drugs as arsenobenzol, antimony, etc. Finally, the elderly patient, who had been afflicted for five years, was given, bi-weekly, intravenous injections of a solution consisting of iodine 1 part, pot. iod. 2, aq. dest. 300, commencing with 2 c.cm. diluted up to 10 c.cm. with distilled water, the doses being gradually increased up to 7 or 10 c.cm. The lesions disappeared completely with about eight injections. Similar success was obtained with the boys in three to four weeks. It was found that a simple ointment such as ung. sulph. or ung. hydrarg., ineffective by itself, was helpful in clearing up the lesions. No drugs, excepting ordinary tonics, were administered orally. The boys were subsequently lost sight of, but the other case—the worst one—has been free from the disease for a period of nine years, and when last seen his skin looked perfectly normal.

A Contraceptive Museum

Dr. EVELYN FISHER (Barnes) writes: Readers of the report of Mr. Voge's address on contraception (*Journal*, January 7th, p. 16) may be interested to know of the existence of a contraceptive museum founded as far back as 1921. This is at the headquarters of the Constructive Birth Control Society, 108, Whitfield Street, Tottenham Court Road, and may be visited by doctors who are interested. It comprises a unique collection of appliances, and illustrates in a very practical manner the dangers to be avoided and the requirements to be sought after in the ideal contraceptive. In addition there is a most useful library, from which may be obtained books bearing on birth control in all its aspects—medical, social, religious, racial, etc.

Vacancies

Notifications of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 49, 50, 51, 52, 53, 56, 57, and 58 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 54 and 55.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement at page 19.*

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

36 The Electrocardiogram in Late Middle Life

J. JENSEN, M. SMITH, and E. D. CARTWRIGHT (*Amer. Heart Journ.*, August, 1932, p. 718) have studied the electrocardiogram in fifty persons between the ages of 50 and 65 who were free from symptoms or signs of cardiovascular disease. This investigation was undertaken in order to determine whether among individuals of this age group electrocardiographic changes occur which, although unusual in earlier life, may be regarded as physiological at the later age. Records were taken in both sitting and supine positions, and sometimes also in inspiration and expiration. The authors refer to Fahr's estimate that 23 per cent. of deaths after the age of 50 are due to heart disease, and deduce from this the probability that, among their fully investigated series of fifty, few, if any, cases of "hidden" heart disease could have been present. It was found that the following electrocardiographic modifications, hitherto sometimes considered pathological, were frequent and therefore of no serious significance: diphasic or iso-electric P waves in Lead I or inverted P waves in Lead III becoming upright on deep inspiration; slurring of QRS complexes, provided that the QRS interval was less that 0.1 second; transverse heart; isolated left axis deviation; and moderate inversion of T in Lead III. Certain other recognized changes were not found, and should therefore be looked on with suspicion: inverted P waves in Lead I or II, or in Lead III if they do not become upright on deep inspiration; inversion of T waves in Lead I or II if not becoming upright with deep inspiration; PR intervals exceeding 0.2 second; and QRS intervals exceeding 0.1 second, or ST intervals exceeding approximately 0.35 second. No characteristic "age changes" could be made out in the group studied.

37 Tuberculin Reaction in Rubella

H. KOCH (*Wien. med. Woch.*, November 5th, 1932, p. 1397) states that, in contrast with measles, in which a previously positive Pirquet reaction usually becomes negative during the eruptive period, this reaction is not affected in rubella as a rule. During a recent epidemic of rubella in Vienna, however, he saw a boy, aged 3½, admitted to hospital for hilus tuberculosis and a strongly positive Pirquet reaction, in whom the reaction became negative during the eruptive period of an unusually severe attack of rubella. Measles could be excluded by a previous history of that disease, the typical character of the eruption, and the glandular enlargement. Koch attributes the disappearance of the reaction to the unusual severity of the eruption, and alludes to cases of attenuated measles in which, as in most cases of rubella, a positive reaction does not become negative.

38 Primary and Toxic Forms of Hypertension

L. POPPER (*Arch. des Mal. du Cœur*, September, 1932, p. 513) classifies hypertension into (1) primary, and (2) toxic or infective types. The first group includes all conditions of hypertonus of the arteries and arterioles leading to eccentric hypertrophy of the left ventricle, and usually to hypertension with tortuous arteries, whether or not renal involvement ultimately ensues. The second group comprises those varieties of hypertension due to such toxaemias as those occurring in pregnancy and lead poisoning. Here the ventricular hypertrophy is concentric, and the arteries are straight and narrow. Among 1,031 patients with hypertension observed over a period of ten years, 754 belonged to the primary group, 56 to the toxic group, while in 221 a mixed form was present. Death ensued in 249 of those afflicted with primary hypertension; when it was not due to intercurrent maladies it followed cerebral complications, heart failure, or anaemia. About half of the toxic hypertensive patients died, 14 of them from renal insufficiency, the age at death being generally considerably earlier than in the primary group. Popper remarks that primary hypertension is largely familial, and manifests itself usually by headache, vertigo, occipital neuralgia, and easy fatigability. From the fact that cerebral attacks occur less commonly in toxic hypertension, he infers that hypertension is not the only factor concerned in the production of such cerebral lesions, and that variations in the structure of the vascular wall probably play an important part. Among 454 primary hypertensives with cerebral lesions, the left hemisphere was affected more commonly than the right, the lesion, whether right or left, being fatal in about one-third of all cases.

39 Incidence of Diabetes in Finland

Ö. HOLSTI (*Nord. Med. Tidskrift*, September 3rd, 1932, p. 646) publishes tables and graphs showing the incidence of diabetes in the Scandinavian capitals and New York in five-year periods from 1911 to 1930. Throughout this time the diabetes rate was lowest in Helsingfors and highest in New York. In 1929 the consumption of sugar in Finland was 27.4 kilos per head, whereas in the same year in the U.S.A. it was 50.3 kilos. In Finland in 1913 it was only 15.9. Though the author does not consider the increased consumption of sugar to be the sole cause of the rise in the diabetic rate in Finland in the period under review, he attaches considerable importance to it. In Helsingfors most of the deaths among diabetics were due to associate diseases, notably infectious diseases in young persons and degenerative diseases of the heart and blood vessels in older persons. In the five-year period 1926–30 only 15.18 per cent. of all the deaths among diabetics in Helsingfors were due to diabetic coma.

Surgery

40 Phlegmonous Gastritis

W. L. WATSON (*Amer. Journ. Surg.*, October, 1932, p. 113) describes phlegmonous gastritis as a severe inflammatory process of the stomach, progressing to purulent infiltration and even necrosis of the stomach wall. There are two definite forms of the disease: one in which there is a collection of pus or a localized abscess in the wall of the stomach; and another more diffuse form in which a widespread inflammatory process may involve the entire stomach and extend into the oesophagus proximally and the duodenum distally. This latter form of the disease is twice as common as the circumscribed form; its operative results are less satisfactory, since a diffuse peritonitis is usually present. The origin of the inflammatory process may be either local or metastatic. Cases of local origin include those in which a gastric carcinoma or ulcer is present, and those in which gastric surgery has been performed. In the metastatic group are found a larger number of cases, which are seen in conjunction with puerperal fever, septicaemia, tonsillitis, erysipelas, or furunculosis. Gastric phlegmon has also occurred in cases of small-pox, scarlet fever, and acute polyarthritis. Constitutional predisposing causes include exhaustion, alcoholism, chronic gastritis, and hypo-acidity of the gastric juice. The streptococcus is isolated in 70 per cent. of cases; symptoms of the disease are not characteristic; there is usually a history of previous gastric distress, followed by the sudden onset of severe upper abdominal pain, which is at first localized, and is increased by pressure in the epigastrium. Later, when peritonitis develops, the pain becomes generalized. Vomiting occurs throughout the course of the disease, and fever is a

common symptom. The patient appears acutely ill, and later becomes dehydrated, finally going into delirium and collapse. Diagnosis is rarely made before operation, and the prognosis, especially in the diffuse form of the disease, is grave. In the localized type the abscess may rupture into the stomach and recovery ensue, or the involved portion of the stomach may be resected. Of eighteen cases in which gastric resection was performed eight recovered. In the extensive diffuse type of gastric phlegmon a palliative jejunostomy and abdominal drainage are advisable. A case is reported in which this form of treatment was tried, but the patient died three days after the operation.

41 Treatment of Biliary Lithiasis

Without dilating on the relative merits of cholecystectomy or cholecystostomy in the treatment of biliary lithiasis, D. PRAT (*Rev. Sud-Amér. de Méd. et de Chir.*, September, 1932, p. 749) discusses the advisability of drainage following these procedures. After cholecystostomy or drainage of the hepatic canal the bile is found to be of a dark, almost inky, hue, which returns to the normal golden-yellow colour after a period varying from ten days to a month ; the dark colour is due to concentration of the biliary salts and pigments. The opinions of various authorities are cited as regards its pathogenesis. Desplas and Dalsace believe that black bile is of hepatic origin, while Chiray, Davel, and Amy consider it to be vesicular. Prat discusses these statements and the significance of vesicular, canalicular, and hepatic black bile, and points out that in cholecystectomy without drainage the bile may remain black or infected for a certain period. From a study of all these points he strongly advocates drainage after all operations for biliary lithiasis ; this should be continued until the bile returns to its normal colour. Since an ordinary drainage tube may become detached owing to absorption of its retaining sutures, the use of a special tube, Kehr's tube or Pezzer's sound, is advised. The presence of calculi is often overlooked ; two cases are mentioned in illustration of this. To avoid this complication a large drain should be employed and a most careful emptying of the vesicular canals be performed at the time of operation and after radiography with lipiodol.

42 Fractures of the Vertebral Column

G. FALDINI and A. M. GIANELLI (*Chir. d. Org. di Movimento*, 1932, Fasc. 3, p. 249) record observations on 199 cases of fracture of the vertebral column treated at the Rizzoli Institute, Bologna, from 1899 to December 31st, 1929, inclusive. Of the patients, 150 (75.37 per cent.) were males, and 49 (36.62 per cent.) females ; 109 (54.77 per cent.) occurred in the third and fourth decennia. In the causation of cervical and lumbar lesions there was a predominance of indirect violence, and in dorsal lesions of direct violence. Fracture of a single vertebra was the rule, being found in 129 out of 177 in which a radiological examination was made. The twelfth dorsal (twenty-one cases) and the first lumbar (forty-one cases) were the vertebrae most frequently affected. Pain and rigidity were present in 100 per cent., and deformity in 130 out of 187 cases (69.51 per cent.), kyphosis being found in 106 (56.58 per cent.) and scoliosis in twenty-four (12.83 per cent.). Among 184 cases ninety-nine (53.73 per cent.) showed no nervous symptoms, fifty (27.10 per cent.) were paraplegic, and thirty-five (19 per cent.) had a localized sensory or motor paralysis. Paraplegia was most common in fractures of the dorsal vertebrae, being present in thirty-four out of sixty-three cases. In the dorsal region the highest number of paraplegias resulted from fracture of the fifth, sixth, or seventh vertebra. Of seventy-two cases of immediate flaccid paraplegia, six became spastic, in twenty the paralysis became localized, five patients recovered, and forty-one remained unchanged. Of five patients with spastic paralysis, only two recovered, and of twenty-three with localized paralysis only eight. The best results were produced by immobilization. No benefit was derived from laminectomy, even when it was performed early.

Therapeutics

43 Antitoxin Therapy of Erysipelas

D. SYMMERS and K. M. LEWIS (*Journ. Amer. Med. Assoc.*, September 24th, 1932, p. 1082) employ for the treatment of erysipelas an antitoxin prepared by immunizing horses with eight strains of the streptococcus of erysipelas. They consider this a definite advance in the treatment of the disease, but add that it only controls the immediate process, and does not prevent further attacks or cause immunization. The average duration of the disease is reduced by about 60 per cent. and the number of deaths in a series of more than 3,500 patients by 30 per cent. About five out of every hundred patients prove resistant to this method of treatment ; the authors attribute this to the fact that the causative organism is one of many strains. The facial type of erysipelas is more amenable to serotherapy than the body type. Delay in administering the antitoxin at the onset of the complaint and failure to repeat the dose at frequent intervals are two additional reasons for not obtaining good results. Local applications are useless as measures of control, but boric acid and other solutions may increase the comfort of the patient.

44 Bacteriophage Treatment of Staphylococcal Meningitis

R. A. SCHLESS (*Amer. Journ. Dis. Child.*, October, 1932, p. 813), who records an illustrative case, suggests the following classification of staphylococcal meningitis. (1) Localized abscess involving the meninges, and caused by the extension of suppuration from contiguous structures. Such cases can be cured by operation. (2) Meningitis occurring in the course of general staphylococcal septicaemia, the prognosis being invariably fatal. (3) Meningitis of haematogenous origin, most frequently secondary to staphylococcal infection in non-contiguous parts of the body. No recovery has been reported in such cases. (4) Exceedingly mild meningitis, of which one case only was reported, by Lamb in 1928, with recovery following the use of gentian violet. Schless's patient was a boy, aged 13, who developed meningitis following a boil on the back. No improvement followed the intrathecal and intramuscular injection of anti-meningococcal serum, but after cultures of the blood and cerebro-spinal fluid had shown *Staphylococcus aureus*, 5 c.cm. of a *Staphylococcus aureus* bacteriophage was injected intrathecally. Rapid improvement and recovery ensued. This is said to be the first case on record of the intraspinal injection of bacteriophage.

45 Milk Administration in Infantile Disorders

C. G. KERLEY (*Med. Journ. and Record*, November 2nd, 1932, p. 371) considers that by reason of its composition and physical properties cows' milk is readily adapted to the digestive capacities and requirements of infants. Fresh "certified" cows' milk, evaporated milk, and powdered milk are all useful, and the choice must be determined by circumstance. For normal infants Kerley prescribes fresh cows' milk with sugar, starch, and water, an attempt being made to imitate the composition of human milk. The average baby thrives on a mixture containing 3 per cent. fat, 2 per cent. protein, and 7 per cent. carbohydrate, lactose and starch being added in order to raise the carbohydrate content. Healthy infants require 60 to 80 calories per pound of body weight. They should be fed every four hours (for the first month or two). The milk is heated with water and starch for thirty minutes in a double boiler ; this destroys bacteria and renders the milk more readily digestible. Orange or tomato juice is used in every case. The author recommends cod-liver oil, but disapproves of green vegetables in the first few months. Children who have congenital difficulty in assimilating artificial foods, and those whose digestion has been deranged by unsuitable food, require complete physical examination. Some have pyloric stenosis, elongation of the colon and sigmoid, or sphincter

ani spasm. Chronic otitis media and mastoid disease explain some cases, and mucous gastritis, pyloric spasm, intestinal stasis, and chronic colitis are frequently present. Until such disorders have been corrected a maintenance diet is necessary, an evaporated preparation or one of the dried milks being used. Gastric lavage is employed freely in anorexia, vomiting, and mucous gastritis. Atropine is described as being particularly useful in vomiting and colic. Later, evaporated milk is best for children whose digestion has been deranged seriously. Cod-liver oil and orange and tomato juice must be added cautiously since relapses may occur. In these cases one should be content for a few weeks with only a small increase in weight.

Ophthalmology

46 Reading with Closed Eyes

A. H. PIRIE (*Canadian Med. Assoc. Journ.*, November, 1932, p. 488) describes a method of using *x* rays to stimulate the retina and so render possible vision with the eyelids closed. After remaining in total darkness for ten minutes the observer sees light when *x* rays impinge on the retina, and after fifteen minutes can read lead letters; after twenty minutes in the dark he can see properly prepared pictures, and no lens in the eye is necessary. Lead letters for such reading can be arranged on a ribbon in sentences, and an illustration, not larger than one square centimetre, be pricked on a lead sheet. Further applications of this procedure are described. A metallic foreign body inside the eye can be seen and located by the patient; it can cast only one shadow on the retina, and is visualized as single. If lying outside the eye it may cast only one shadow, but if seen as double proof is established of its external localization. Damage to the retina by a metallic foreign body can be recognized, and its position be defined by the use of a grid; if it lies over the blind spot, however, the patient will not be able to see it unless weak *x* rays are employed. The field of vision can be mapped out even in cases of complete cataract and opaque cornea. Pirie thinks it probable that patients suffering from night blindness will not be able to use this method, but this has not been tested yet; neurological cases should be benefited, however. The fact that glass fluoresces under *x*-ray bombardment will enable the ophthalmologist to detect a fragment of it in the eye, even though it is too small to be detected on a photographic film. Stereoscopic vision with closed eyes is described.

47 Emergency Treatment of Ocular Injuries

H. W. GRANT (*Minnesota Med.*, November, 1932, p. 771) emphasizes the importance of making a most careful examination of the eye in any case of suspected injury in view of the serious sequels which may result from inadequate primary treatment. Even with the external parts uninjured complications such as haemorrhage, iridocyclitis, retinal or choroidal tears, and retinal detachment may be present. For the examination the illumination must be fully adequate, and the magnification must be such as to render visible the smallest foreign bodies or wounds. The corneal microscope will frequently afford valuable information which is unobtainable otherwise. Embedded metallic fragments may give rise to oxidized bases which leave a brown stain when the particle is extracted. This stain, if not dealt with, delays convalescence and may interfere with vision; its removal is best effected by a sharp foreign body spud or the dental burr. Cauterization after removal prevents infection and stimulates healing. For burns due to caustic alkalis the United States Pharmacopoeal preparation glycerite of tannic acid is commended; this stops the destructive action of the corrosive and prevents opacity developments in the cornea. Grant has found that relief from pain is more quickly obtained by anaesthetic ointments than by aqueous solutions. In perforating injuries the wound should be closed by means of a conjunctival flap, after the excision of the prolapsed iris, if necessary. Intraocular foreign bodies present serious problems which require considerable experience and *x*-ray localization before removal is attempted. Pre-existing infections complicate any ocular injuries, especially when the infection is endogenous, as in syphilis or tuberculosis. After severe injuries with infection and in traumatic inflammation non-specific protein therapy is useful; the author prefers small intravenous doses of typhoid vaccine to milk injections. Large doses of sodium salicylate—approximately 1 grain for each pound of body weight, and administered in a starch retention enema—have proved most beneficial in aged patients and others in whose case vaccine injection is contraindicated.

48 Vernal Conjunctivitis

L. LEHRFELD (*Arch. of Ophthalmol.*, September, 1932, p. 380) points out the many distinctions between the limbal and palpebral types of vernal conjunctivitis. The former is the more benign in symptoms and course, never progressing to the cobblestone palpebral type. Having used intradermal tests, he considers the condition to be an allergy from street dust, animal dust, or pollen. Itching, a ropy discharge, and the presence of eosinophils in the discharge and blood are distinctive. The differential diagnosis has to be made from acute catarrhal conjunctivitis, "pink eye," and trachoma. Radium and calcium gluconate have only a limited value in treatment, the best results being obtained from the application of boric lotion seven times a day, with the addition of phenacaine lotion in severe cases. This treatment alleviates the symptoms till a natural desensitization occurs.

Obstetrics and Gynaecology

49 Fibroids and Cardiovascular Changes

G. V. TACCANI (*Ann. di Ostet. e Ginecol.*, October 31st, 1932, p. 1371) records his observations on the cardiovascular changes in forty-two women aged from 31 to 57 who had been operated on for fibroids in the Mangiagalli Clinic at Milan during 1930, and comes to the following conclusions. Before the operation the patients showed a rise of the maximum blood pressure, diminution of the haemoglobin and colour index, and a spasm of the capillaries; whereas after the operation there was a return to normal conditions. Taccani suggests that the cardiovascular changes found in patients suffering from fibroids, independently of metrorrhagia to which they are often subject, are to be attributed to a dysfunction of the endocrine system, of which the anatomical substratum is to be found mainly in the lesions of the ovary and thyroid.

50 Glycosuria in Pregnancy

R. RICHARDSON and RUTH S. BITTER (*Amer. Journ. Obstet. and Gynecol.*, September, 1932, p. 362) discuss the occurrence of glycosuria in pregnancy and record the results of their investigations. A sugar tolerance test was performed on each of 247 women presenting themselves for pre-natal care: the usual technique was adopted for the test, and 1.75 grams of dextrose per kilogram of body weight was administered in each case. Specimens of urine for examination were obtained before the sugar was given and at the time of the taking of the last blood sugar—that is, two hours after the time of the administration of the glucose. It was found that 60 per cent. of the series showed no gross abnormalities of the sugar metabolism; 20 per cent. had obvious sugar in the urine, without any abnormality of the blood sugar curve. No definite variation was determinable in the different periods of pregnancy, and no difference was found between primiparae and multiparae in excreting sugar: 8 per cent. showed a blood sugar curve on which a diagnosis of lowered carbohydrate tolerance would usually be made. The authors also submit evidence that 90 per cent. of women during pregnancy show microscopic traces of

glucose in the urine, and that on the twelfth day of the puerperium only 42 per cent. still have glucose in the urine in microscopic quantity. It is suggested that this may be due to damage to the renal tubules which occurs in pregnancy.

51 Polyneuritis due to Apiol

Apiol, an extract from parsley seed, was first employed as an antipyretic, but more recently as an efficient abortifacient. SCHACHTER (*Gynécol. et Obstét.*, October, 1932, p. 337) records animal experiments and clinical observations which show that polyneuritis frequently follows its administration. This is caused by tri-ortho-cresyl phosphoric acid, the toxicity of which is due to its marked neurotropism. Apiol contains 28 to 50 per cent. of this compound. A latent or incubation period of ten to fifteen days elapses after the administration of the drug. Then the first symptoms (gastralgia, gastro-enteritis) of intoxication appear, together with a progressive weakness of the lower extremities, which renders walking difficult. Formication and diffuse pains accompany this weakness. Paralysis, first of the lower, with subsequent involvement of the upper, limbs then supervenes. Only the peripheral parts are attacked ; in all cases a total paresis of the legs, feet, and hands is present with muscular hypotony and atrophy. Of the hands, the right is especially affected ; the thenar and hypothenar eminences and interosseous muscles are markedly atrophied. The Achilles reflex is abolished, but the patellar and osteo-tendinous reflexes are normal. Sensation (superficial and deep) is unaffected. The condition, which has been noted only in females, is then of a motor type with special localization in the periphery of the extremities and constant absence of sensory involvement. No effective treatment is known and the prognosis is bad, most cases ending in grave invalidism ; therefore Schachter maintains that the sale and administration of apiol should be rigorously supervised.

Pathology

52 Destruction of Treponema pallidum by Pyrexia

RUTH A. BOAK, C. M. CARPENTER, and S. L. WARREN (*Journ. Exper. Med.*, November, 1932, p. 725) have conducted an investigation of fever temperatures on the growth and fertility of rabbits. In the production of pyrexia use was made of the short-wave vacuum tube radio-oscillator. The experimental animals were exposed in a wooden box to the electrostatic field of two high-frequency oscillators in a Hartley circuit. The D.C. plate voltage on the oscillating tubes ranged from 1,800 to 2,000 volts, and the plate current from 2 to 4 milliamperes. The high-frequency waves oscillated between two aluminium plates on opposite sides of the box, producing an electrostatic field in which the animals were heated. It was found that the repeated elevation of body temperatures of male and female rabbits to 41° and 42° C. from two to five times per week by short radio waves (30 m.), beginning from 29 to 171 days of age and extending through their first period of gestation, failed to injure their growth or to interfere with mating, fertilization, or the development of the young *in utero*. Having shown that fever induced by this means had no obvious detrimental effect on the physiological activities of normal rabbits, the authors (ibid., p. 741) determined to ascertain the thermal death time of *Treponema pallidum*. This was carried out by exposing saline suspensions of infected rabbit testicle to temperatures of 37.5° to 42° C. in a specially constructed and carefully controlled series of water baths, described in the same journal by F. W. BISHOP, C. M. CARPENTER, and S. L. WARREN (ibid., p. 719). The results showed that the organism was killed in five hours at 39° C., in three hours at 40° C., in two hours at 41° C., and in one hour at 41.5° C., as determined by non-infectivity to rabbits. Finally, C. M. CARPENTER, RUTH A. BOAK, and S. L. WARREN (ibid., p. 751) exposed rabbits that had been experimentally infected with human syphilis by testicular inoculation to high-frequency radiation so as to produce pyrexia of a degree sufficient to prove lethal to *Treponema pallidum*. At varying times after inoculation rabbits were exposed in a high-frequency electrostatic field (10,000 kilocycles), either one long exposure or multiple short ones being given. It was found that twenty to thirty short pyrexias of 41° to 42° C. completely destroyed the spirochaetes, so that healing of the lesions occurred and subinoculation of the infected tissues into normal rabbits proved harmless. A similar result was attained by a single exposure of six hours to a temperature of 41.5° to 42° C. The fever treatment proved effective at any stage of experimental syphilis in rabbits.

53 Incidence of Punctate Basophilia

W. T. NELSON, L. LOCKWOOD, and KATE MACKEY (*Med. Journ. of Australia*, September 10th, 1932, p. 317) report an investigation into the incidence of punctate basophilia. The authors' results do not agree with those of various other workers in the same field, but a different technique was employed. It is emphasized that in demonstrating this condition it is necessary to prepare the films while still fresh, to use a suitable stain (such as an alkaline methylene blue solution) and, finally, in searching the films, to use a dark field technique. Estimations of stippled cells were made upon blood films from groups of workers: 255 men with no history of exposure to lead had an average of 937 stippled cells per million red cells ; fifty-nine men with a history of very slight exposure to lead had an average of 4,335 stippled cells per million ; and forty-one men with a severe lead occupational hazard had an average of 14,220 stippled cells per million. Twelve men in this last group suffering from lead poisoning had an average of 36,382 stippled cells per million red cells. It is shown that as the lead hazard becomes greater the percentage of persons with high stippled cell counts increases. There appeared to be no difference between the appearance of the stippled cells found in blood films from cases of lead poisoning and those found in normal controls. The patients with lead poisoning had, on an average, thirty-eight times as many stippled cells as the normal controls and sixty-nine times as many cells of the coarsely stippled variety. Smokers, as a class, were not found to differ from non-smokers in regard to the numbers of stippled cells. The importance of considering all possible causes of high stippled cell counts is illustrated by the fact that in a case of pernicious anaemia there were 20,000 stippled cells per million erythrocytes.

54 Standardization of Anti-gas-gangrene Serums

M. WEINBERG, J. DAVESNE, and A. R. PRÉVOT (*Ann. de l'Inst. Pasteur*, October, 1932, p. 387) report on the methods that they have found most successful in the standardization of serums for use against gas gangrene. Previous work has convinced the authors that for such serums to be effective they should contain both antibacterial and antitoxic properties. Anti-*welchii* serum, standardized by intramuscular injection of a guinea-pig with one or two lethal doses of a culture of *Cl. welchii*, so as to determine its anti-bacterial power, ought to contain at least 100 units. The same titre should be expected if it is titrated on the mouse so as to determine its antitoxic power. Serum against *Cl. septique* may be titrated for its antitoxic power by intravenous injection into the rabbit. A satisfactory serum should contain 1,000 units of antitoxin. The same serum, when titrated on the mouse, is found to contain only about 250 antitoxic units per c.cm. The same relations hold true with serum prepared against *Cl. histolyticum*. Serum against *Cl. oedematiens* may be titrated by the Ehrlich method, inoculating 100 minimal lethal doses of toxin subcutaneously. Such a serum should have 1,000 units of antitoxin per c.cm. The authors point out the advantages of using the mouse as the animal of choice for the standardization of serums towards the gas-gangrene organisms, and are convinced that the results obtained are capable of a high degree of precision.

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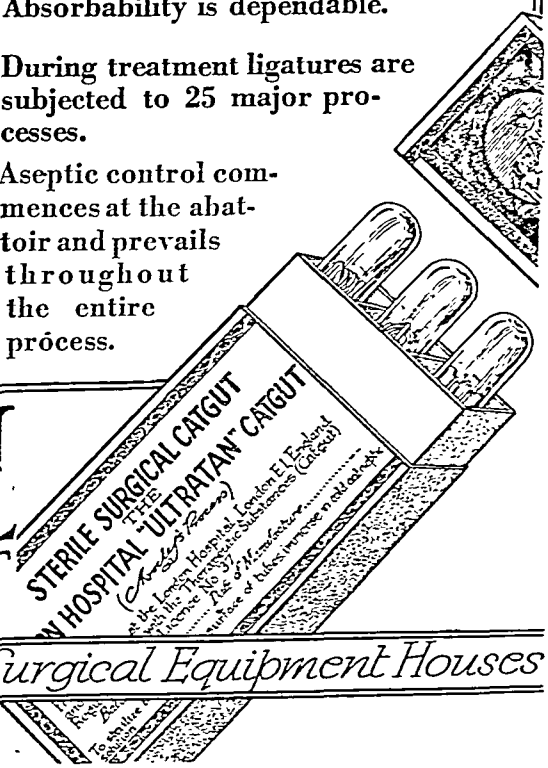

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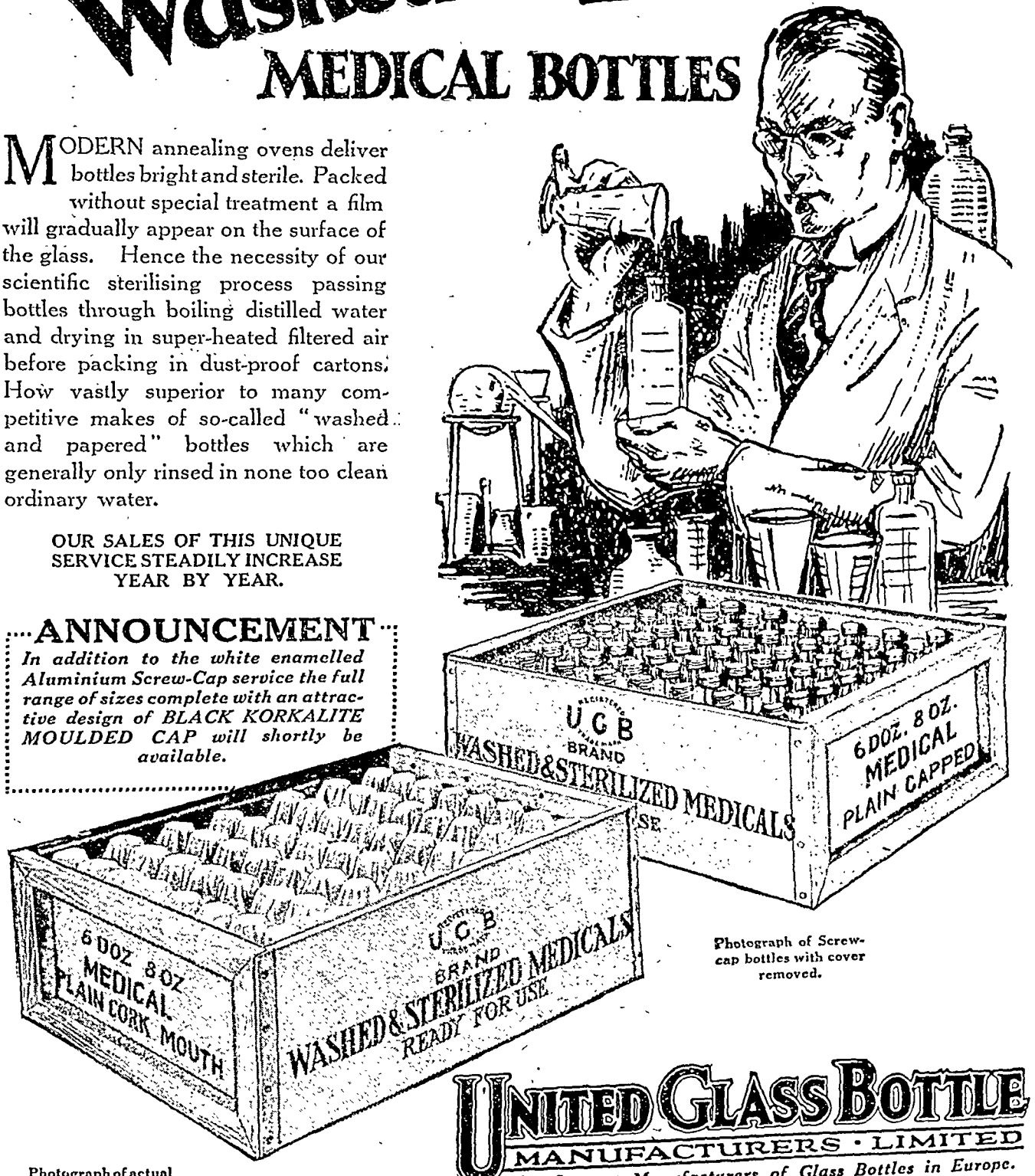

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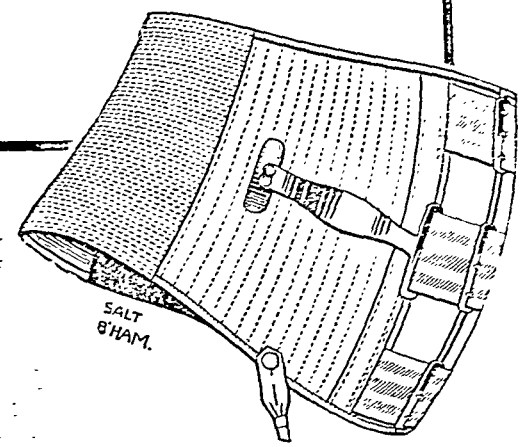

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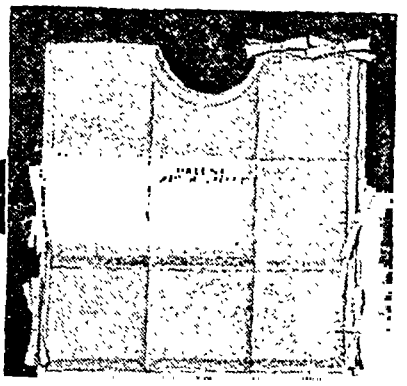

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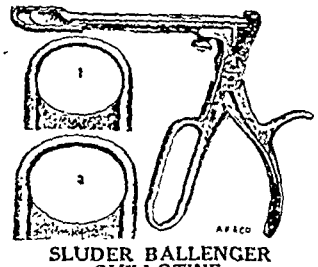

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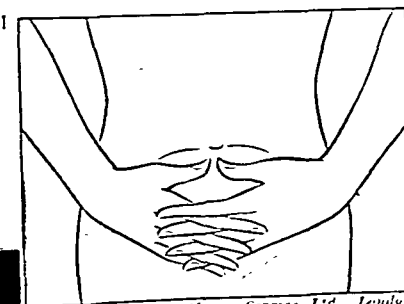

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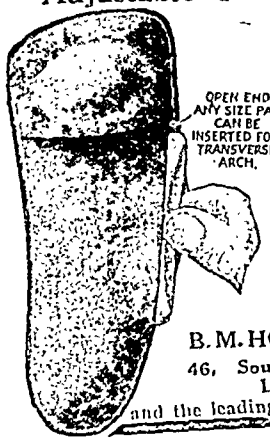

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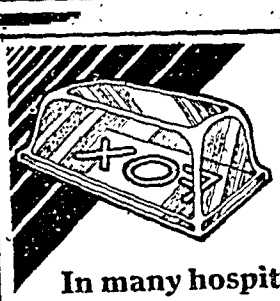

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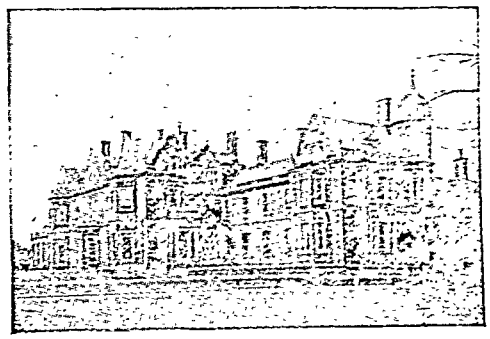

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For the treatment of GENTLEMEN. Estab. 1883 by an Association of prominent medical men and others for the study and treatment of alcohol and drug abuse. Large secluded grounds on the bank of the River Colne. Voluntary Patients can be received under the Inebriates Act. Full-sized billiards, tennis, croquet, bowls. Golf (Moor Park, Sandy Lodge) close by. For partics. apply to—F. S. D. HOGG, M.R.C.S., &c., Resident Med. Supt. Telephone: 16 RICKMANSWORTH

THE GRANGE,

near ROTHERHAM.

A HOUSE Licensed for the reception of a limited number of Ladies suffering from Nervous and Mental disorders. Both certified and voluntary patients received. Approved for temporary Patients. This is a large country house, with beautiful grounds and park, five miles from Sheffield. Station: Grange Lane, L. & N.E. Rly., Sheffield. Tel.: No 40030 Ecclesfield. Res. Phys.: GILBERT E. MOULD, L.R.C.P., M.R.C.S.

Tel. and Telegrams: "Haynes, Brentwood, 45"

Littleton Hall, Brentwood, Essex.

Large grounds, 400 ft. above sea. HOME for Ladies Mentally afflicted. Voluntary Boarders received. Station: Brentwood and Shenfield 1 mile. Liverp'l St. 26 min. Apply, Dr. HAYNES.

BOREATTON PARK,

BASCHURCH, SALOP.

A first-class Country Mansion adapted for the reception of a limited number of Ladies and Gentlemen mentally afflicted.

Large gardens, deer park, private golf links, fishing. Grounds extend to over 200 acres.

Voluntary Patients accepted.

Apply for particulars to Dr. SANKEY.

THE GROVE HOUSE, CHURCH STRETTON,

SHROPSHIRE.

A private Home for the care of and treatment of a limited number of Ladies, mentally afflicted. Voluntary and Temporary Patients received under the New Mental Treatment Act, 1930. —Medical Superintendent, Dr. MCCLINTOCK.

ALCOHOLISM & OTHER DRUG HABITS.

THE HARE NURSING HOME.

As founded and established by the late Dr. FRANCIS HARE, for 20 years Med. Supt. of the Norwood Sanatorium, and author of "Alcoholism," etc.; for the treatment of ALCOHOLISM, other Drug Habits, Insomnia, Neurasthenia, Functional Nervous Disorders.

"THE OLD HILL HOUSE," CHISLEHURST, KENT.

Fees 5—10 guineas. Ample amusements. 25 bedrooms. Annexe for mild cases. Quiet and pleasant situation.

Ladies and gentlemen admitted for treatment. For prospectus, etc., write or 'phone: WALTER E. MASTERS, M.D., M.R.C.S., D.P.H., Barrister-at-Law (Res. Med. Supt.), Author of "The Alcohol Habit." *'Phone:* Chislehurst 451 *Telegrams:* "Masters," Chislehurst.

HILL END AND HIGHFIELD HALL, ST. ALBANS.

(20 miles from London.)

Ladies suffering from all forms of Mental Illness are received for treatment, on modern lines, as Voluntary, Temporary, or Certified Private Patients at the Hill End Mental Hospital. Convalescent and mild cases can be treated in a delightful country mansion, with extensive grounds, known as "Highfield Hall," situate about a mile away from the Hospital. FEES TWO TO THREE GUINEAS PER WEEK.

For further particulars apply to the Medical Supt., W. J. T. KIMBER, L.R.C.P., D.P.M., Hill End Mental Hospital, St. Albans, Herts.

WYE HOUSE, BUXTON.

For the treatment of Ladies and Gentlemen mentally afflicted. Voluntary Boarders received. Situated 1,200 ft. above sea-level, facing S. 14 acres of grounds. — For terms, apply to the Resident Medical Superintendent, W. W. HORTON, M.D. Nat. Tel. 130.

Patients of both sexes with any disorder to which PSYCHOTHERAPY is applicable are received for treatment at ELMSLEIGH, BASSETT, SOUTHAMPTON. Domestic arrangements well ordered and surroundings pleasant. Terms and particulars from T. A. HAWKESWORTH, M.B.

ST. ANDREW'S HOSPITAL

FOR MENTAL DISORDERS,

NORTHAMPTON.

FOR THE UPPER AND MIDDLE CLASSES ONLY.

President: THE MOST HON. THE MARQUESS OF EXETER, C.M.G., A.D.C.

Medical Superintendent: DANIEL F. RAMBAUT, M.A., M.D.

This registered Hospital is situated in 120 acres of park and pleasure grounds. Voluntary patients, who are suffering from incipient mental disorders or who wish to prevent recurrent attacks of mental trouble, temporary patients, and certified patients of both sexes, are received for treatment. Careful clinical, biochemical, bacteriological, and pathological examinations. Private rooms, with special nurses, male or female, in the Hospital or in one of the numerous villas in the grounds of the various branches can be provided.

WANTAGE HOUSE.

This is a Reception Hospital in detached grounds, with a separate entrance, to which patients can be admitted. It is equipped with all the apparatus for the most modern treatment of Mental and Nervous Disorders. It contains special departments for hydrotherapy by various methods, including Turkish and Russian baths, the prolonged immersion bath, Vichy Douche, Scotch Douche, Electrical bath, Plombières treatment, etc. There is an Operating Theatre, a Dental Surgery, an X-ray room, an Ultra-violet Apparatus, and a Department for Diathermy and High Frequency treatment. It also contains Laboratories for biochemical, bacteriological, and pathological research.

MOULTON PARK.

Two miles from the Main Hospital there are several branch establishments and villas situated in a park and farm of 650 acres. Milk, meat, fruit, and vegetables are supplied to the Hospital from the farm, gardens, and orchards of Moulton Park. Occupation therapy is a feature of this branch, and patients are given every facility for occupying themselves in farming, gardening, and fruit-growing.

BRYN-Y-NEUADD HALL.

The seaside house of St. Andrew's Hospital is beautifully situated in a Park of 330 acres, Llanfairfechan, amidst the finest scenery in North Wales. On the North-West side of the Estate a mile of sea coast forms the boundary. Patients may visit this branch for a short seaside change or for longer periods. The Hospital has its own private bathing house on the seashore. There is trout-fishing in the park.

At all the branches of the Hospital there are cricket grounds, football and hockey grounds, lawn tennis courts (grass and hard courts), croquet grounds, golf courses, and bowling greens. Ladies and gentlemen have their own gardens, and facilities are provided for handicrafts, such as carpentry, etc.

For terms and further particulars apply to the Medical Superintendent (Telephone No. 2356 and 2357 Northampton), who can be seen in London by appointment.

COURT HALL, KENTON, EXETER,

SOUTH DEVON.

For the care and treatment of Ladies suffering from Mental Diseases. Limited to eight patients. Telephone: Starcross 59.

CLIFFDEN, TEIGNMOUTH, in connection with Court Hall, for early and convalescent cases. Cliffden is a large well-appointed house, with lovely views of the South Devon Coast. It is beautifully situated in grounds of 24 acres. The gardens are very attractive, and there is a private road to the beach

Resident Physicians: BERTHA M. MULES, M.D., B.S.; ANNIE S. MULES, M.R.C.S., L.R.C.P.
Telephone: Teignmouth 289.

TYKEFORD ABBEY, NEWPORT PAGNELL,

BUCKS.

FUNCTIONAL NERVOUS DISORDERS, MEDICAL & CONVALESCENT CASES.

An Approved Nursing Home for reception of Female Cases under the Mental Treatment Act.

The Home is a Mansion of Historical interest, standing in 9 acres of garden and grounds, and is situated 14 miles from Northampton, and 12 miles from Bedford on the main London to Northampton Road, fifty miles from London. Both sexes are accommodated. Psychotherapeutic Treatment is used extensively in suitable cases. Radiant Heat, X-Ray, and Ultra-violet Light. Diathermy and Foam Baths. Billiards, tennis, etc. Fees from five gns. per week.
Apply, Dr. D. E. M. DOUGLAS-MORRIS. Telephone: Newport Pagnell 121.

HAYDOCK LODGE,

NEWTON-LE-WILLOWS, LANCASHIRE.

'Phone: 11 Ashton-in-Makerfield.

For the reception and treatment of PRIVATE PATIENTS of both sexes of the UPPER AND MIDDLE CLASSES suffering from mental and nervous diseases, either voluntarily or under Certificate. Patients are classified in separate buildings according to their mental condition.

Situated in park and grounds of 400 acres. Self-supported by its own farm and gardens, in which patients are encouraged to occupy themselves. Every facility for indoor and outdoor recreation. For terms, prospectus, etc., apply MEDICAL SUPERINTENDENT.

THE COPPICE, NOTTINGHAM.

HOSPITAL FOR MENTAL DISEASES.

This Institution is exclusively for the reception of a limited number of Private Patients of both sexes of the Upper and Middle Classes at moderate rates of payment. It is beautifully situated in its own grounds on an eminence a short distance from Nottingham, and from its singularly healthy position and comfortable arrangements affords every facility for the relief and cure of those mentally afflicted. Voluntary and Temporary Patients received.

Tel. 64117. *For terms, etc., apply to the Medical Superintendent.*

CHISWICK HOUSE

A Private Mental Hospital for the Treatment and Care of Mental and Nervous Disorders in both Sexes.

Now removed to

CHISWICK HOUSE, PINNER, MIDDLESEX

Telephone: PINNER 234

A modern country house, 12 miles from Marble Arch, in beautiful secluded grounds. Fees from 10 guineas per week, inclusive. Cases under certificate and Voluntary Patients received for treatment. Special provision for "Temporary" patients under the new Mental Treatment Act.

Douglas Macaulay, M.D., D.P.M.

BARNWOOD HOUSE,

GLOUCESTER.

A REGISTERED HOSPITAL for the CARE and TREATMENT of LADIES and GENTLEMEN suffering from NERVOUS and MENTAL DISORDERS. Within two miles of the G.W. Railway and L.M. & S. Railway Stations at Gloucester, the Hospital is easily accessible by rail from London and all parts of the United Kingdom. It is beautifully situated at the foot of the Cotswold Hills, and stands in its own grounds of over 280 acres. Voluntary Boarders of both sexes are also received for treatment.

Special accommodation for Lady Voluntary Boarders is also provided at the MANOR HOUSE, which has its own private grounds and is entirely separate from the main Hospital.

For particulars as to terms, etc., apply to—
ARTHUR TOWNSEND, M.D., Medical Supt.
Telephone: No. 7 Barnwood.

FENSTANTON,

CHRISTCHURCH ROAD,

STREATHAM HILL, S.W.2.

A Private Home for the Care and Treatment of a limited number of Ladies with Mental and Nervous Disorders. Separate accommodation for Voluntary Patients. Large Mansion with 12 acres of ground. (See *Medical Directory*, p. 2294.) Apply, J. H. EARLS, M.D., Resident Physician. Telephone: Streatham 8430.

THE LAWN, LINCOLN.

This registered Hospital, situated in large grounds near the Cathedral, receives VOLUNTARY and PRIVATE PATIENTS of both sexes for treatment of Mental and Nervous Disorders, including Post-Encephalitic conditions in adults. Special facilities for Psychotherapy in co-operative cases.

All particulars may be obtained from the Resident Medical Superintendent.
Dr. MARY R. BARKAS, M.D., D.P.M.

STRETTON HOUSE,

Church Stretton, Shropshire.

A PRIVATE HOME for the treatment of Gentlemen suffering from Mental or Nervous Illness, including the allied disorders of Alcoholism and the Drug Habit. All types of early Mental and Nervous cases are received without certificates as Voluntary Patients under the provisions of the Mental Treatment Act, 1930. Bracing Hill country. See *Medical Directory*, p. 2314.—Apply to Medical Superintendent. 'Phone: 10 P.O. Church Stretton.

CLARENCE LODGE,

CLAPHAM PARK, LONDON.

Situated in 3½ acres of secluded gardens.

HOME FOR TWELVE MENTAL PATIENTS (LADIES). Well-appointed private house. Home comforts and Trained Nursing Staff. Eminent Mental Specialist Visiting Physician.
Station: *Telephone*: Brixton 0494.
Clapham Common Tube. Apply, Miss THWAITES.

SPRINGFIELD HOUSE,

Near BEDFORD. (Phone 3417.)

For Mental Disorders with or without Certificates.

Resident Physician: CEDRIC W. HOWELL.

Ordinary Terms: Five Guineas per week.
(Including Separate Bedrooms where suitable)
Interviews in London by appointment.

THE OLD MANOR SALISBURY

A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS.

Extensive grounds. Detached Villas. Chapel. Garden and dairy produce from own farm. Terms very moderate.

CONVALESCENT HOME at BOURNEMOUTH. Detached Villas standing in 12 acres of ornamental grounds, with tennis courts, etc., which Voluntary, Temporary or Certified Patients may visit, by arrangement, for long or short periods.

Illustrated Brochure on application to the Medical Superintendent, The Old Manor, Salisbury. Telephone 51.

PECKHAM HOUSE, 112, Peckham Road, London, S.E.15.

Telegrams: "Alleviated, London." **Telephone: Rodney 4741-4742.**

The above House, which was established in 1826, is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders. Certified voluntary and temporary patients are received. Separate houses for treatment and accommodation of special cases adjoin the Institution. There is a seaside branch, Kearsney Court, near Dover, to which patients may be sent for treatment or on holiday. Motor and carriage exercise is provided as required. Patients can avail themselves of a course of physical drill. Tennis Courts. Entertainments, dances, and indoor amusements held throughout the year. Terms from £3 3s. per week.

Illustrated prospectus and further particulars can be obtained from the MEDICAL SUPERINTENDENT.

CHEADLE ROYAL MENTAL HOSPITAL,

CHEADLE, CHESHIRE.

This REGISTERED HOSPITAL, with a SEASIDE BRANCH at Colwyn Bay, N. Wales, is for the treatment and care of those of the Upper and Middle Classes suffering from MENTAL and
The Hospital is governed by a COMMITTEE, ap ie Manchester Royal Infirmary.
In addition to the Main Building there are se Hard and grass tennis courts, cricket and croquet grounds, and a court for badminton. There are also wireless installations. Golf may be had within easy distance. Occupational Therapy.
VOLUNTARY, TEMPORARY, AND CERTIFIED PATIENTS received.
The Hospital is nine miles from Manchester, 50 minutes by rail from Liverpool, and 3½ hours from London.
For terms and further particulars apply to the Medical Superintent, J. A. C. ROY, M.B., who may be seen in Manchester by APPOINTMENT.
Telephone: GATLEY 2231 (3 lines).

CAMBERWELL HOUSE, 33, Peckham Road, London, S.E.5.

Telegrams: "PSYCHOLIA, LONDON." FOR THE TREATMENT OF MENTAL DISORDERS. *Telephone*: RODNEY 4731—4732.

Also completely detached Villas for mild cases, with private suites if desired. Voluntary Patients received. Twenty acres of grounds. Hard and Grass Tennis Courts, Putting Greens, Bowls, Croquet, Squash Rackets, and all indoor amusements, including Wireless and other Concerts. Occupational Therapy, Callisthenics, and Dancing Classes. X-ray and Actino-therapy. Prolonged Immersion Baths, Operating Theatre, Pathological Laboratory, Dental Surgery, and Ophthalmic Dept. Chapel. Senior Physician: Dr. HUBERT JAMES NORMAN, assisted by three Medical Officers, also resident and visiting Consultants.

An illustrated Prospectus, giving fees which are strictly moderate, may be obtained upon application to the Secretary.

The Convalescent Branch is HOVE VILLA, BRIGHTON, and is 200 feet above sea-level.

NORTHUMBERLAND HOUSE,

GREEN LANES, FINSBURY PARK, N.4.

Telegrams: "SUBSIDIARY, LONDON." *Telephone*: NORTH 0882.

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses.

Conveniently situated four miles from Charing Cross. Easy access from all parts. Six acres of ground highly situated, facing Finsbury Park. Private Suites. Voluntary Patients and Temporary Patients received without certification.

Convalescent Home, **Kearsney Court, Dover.** For further particulars, apply to the **Medical Superintendent.**

The MAUDSLEY HOSPITAL

DENMARK HILL, S.E.5.

Telephone: RODNEY 2101—4.

A CLINIC instituted by the London County Council for Treatment of NERVOUS and CURABLE MENTAL DISORDER. Voluntary patients ONLY received.

NEW OUT-PATIENTS: MEN — Mondays and Thursdays, 2 p.m. WOMEN—Tuesdays and Fridays, 2 p.m. CHILDREN—Mondays and Fridays, 10 a.m.

IN-PATIENTS: (*a*) 229 beds (both sexes) in wards or separate rooms, *including* 35 beds in a ward of King's College Hospital, which is in use as a temporary annex of the Maudsley Hospital. (*b*) 13 private rooms (for ladies) with special sitting rooms, garden, and dietary.

TERMS

(*a*) **£5 a week, but in case of patients with a legal settlement in the County of London a lesser sum may be charged according to means.**

(*b*) **£6 6s. a week.**

Terms include (with rare exceptions) all forms of treatment, for which unusual facilities exist—there being a staff of consultant specialists, and the central laboratory of London County Mental Hospitals being attached to the Hospital.

Inquiries of EDWARD MAPOTHER, M.D., F.R.C.P., F.R.C.S., Medical Superintendent.

THE MOAT HOUSE,

TAMWORTH, STAFFS.

Established 1816. For the TREATMENT of a few LADIES suffering from NERVOUS and MENTAL DISORDERS. Voluntary patients received. For terms apply to the Resident Medical Attendant. Telephone: Tamworth 103.

WOODLANDS PARK

GREAT MISSENDEN 30 miles from London **BUCKS.**

550 feet above sea-level on Southern Chilterns. 90 acres. Gardens, Woods, and Park.

FOR INSOMNIA, NEURASTHENIA, other FUNCTIONAL NERVOUS DISORDERS, and REST AFTER OPERATION or ILLNESS.

FEES FROM 8 GUINEAS.

Telephone: 91 Gt. Missenden. Apply: C. W. J. BRASHER, M.D.

THE ROYAL EARLSWOOD INSTITUTION

FOR MENTAL DEFECTIVES, REDHILL, SURREY.

(Formerly the EARLSWOOD ASYLUM.)

FOR THOSE *REQUIRING CONTROL* with EXPERT SUPERVISION and needing SPECIAL TRAINING in useful occupations. SCHOOLS, FARMING, and various TRADE WORKSHOPS. Inclusive fees from £110 p.a. *THOSE UNABLE TO PAY* admitted by votes of subscribers, with part payment towards cost.

RECREATIONS: ALL outdoor games, EXCELLENT BAND by Male Staff, for Concerts, Dancing, etc.

Apply, THE MEDICAL SUPERINTENDENT, Earlswood, Redhill, Surrey, or to the Secretary, Mr. H. STEPHENS, 14-16, Ludgate Hill, E.C.4.

Telephone: REDHILL 344. *Telephone*: CENTRAL 5297.

BAILBROOK HOUSE, BATH.

A PRIVATE HOSPITAL for the care and treatment of persons with mental and nervous disorders.

Voluntary Patients received in the Villas. Large Mansion on outskirts of Bath, with 20 acres of grounds (see *Medical Directory*, page 2306.

For terms apply S. J. GILFILLAN, O.B.E., M.B., C.M.Edin., Resident Physician. Telephone No.: Bathseaton 8189.

HOME FOR EPILEPTICS,

MAGHULL (near LIVERPOOL).

Chairman: Brig.-Gen. G. Ryffin-Taylor, C.B.E., V.D., D.L.

FARMING and OPEN-AIR OCCUPATION for PATIENTS.

A few vacancies in 1st and 2nd Class Houses.

FEES: 1st Class (men only) from £3 p.w. upwards. 2nd Class (men and women) 32/- p.w.

For further particulars apply:

C. EDGAR GRISEWOOD, *Secretary*, 20, Exchange Street East, Liverpool.

ROOKSDOWN HOUSE, NEAR BASINGSTOKE, HANTS

FOR THE RECEPTION AND TREATMENT OF
NERVOUS AND MENTAL ILLNESS.

A Superior, Modern, and Attractive Building, situated in a charming and bracing locality, 400 ft. above sea-level.

Extensive pleasure grounds, with croquet, tennis, bowling, and putting greens.

Occupational, Light, and Hydro Therapy.

ONE HOUR RAIL JOURNEY FROM LONDON.

Ladies and Gentlemen can be received as private patients on a voluntary basis or with certificates; written application alone is required for the former.

FEES, including all necessaries except clothing, from THREE to FIVE GUINEAS A WEEK.

Brochure and information may be obtained from the MEDICAL SUPERINTENDENT.

Telephone: 157 Basingstoke.

RUTHIN CASTLE, NORTH WALES

REDUCTION OF FEES

In view of the present economic position, the inclusive fees at Ruthin Castle, formerly from 17 guineas a week, have been reduced to from 15 guineas a week.

The fees include medical attendance, all scientific investigations that may be needed, such as analyses, bacteriological cultures, the ordinary x-ray examinations, and electrocardiograph readings; all treatment that may be prescribed, such as special diets, insulin, artificial sunlight, electrical treatment, baths, massage, nursing; medicines or vaccines, board, and lodging.

The only extra charge is that for a complete alimentary x-ray examination, or for x-ray therapy.

Many people who would go abroad for health will not do so this winter. All the usual forms of treatment are given at Ruthin Castle. The climate is mild. The annual rainfall is 30.5 inches, that is, less than the average for England. There is central heating throughout. Should the accommodation in the Castle not prove sufficient, comfortable rooms can be obtained near by for those undergoing treatment.

Address—THE SECRETARY, Ruthin Castle, North Wales. Telegrams: CASTLE, RUTHIN. Telephone: RUTHIN 66.

WOODSIDE HOSPITAL

WOODSIDE AVENUE, MUSWELL HILL, LONDON, N.10

President: THE RT. HON. THE EARL OF ATHLONE, K.G., P.C.

Fully equipped with every modern appliance for the diagnosis and treatment of

FUNCTIONAL NERVOUS DISORDERS

Private Rooms, Broad Verandahs, Physiotherapy and Psychotherapy, X-ray and Dental departments, Laboratories for investigation and research.

For terms and particulars apply to the Physician in charge at the Hospital. Telephone: Tudor 4211.

BOWDEN HOUSE,

HARROW-ON-THE-HILL.

A NURSING HOME OPENED IN 1911 FOR THE INVESTIGATION AND TREATMENT OF FUNCTIONAL NERVOUS DISORDERS OF ALL TYPES.

No cases under certificate. Thorough clinical and pathological examinations. Psychotherapeutic treatment, occupation, and recreation as suited to the individual case.

PARTICULARS FROM THE MEDICAL SUPERINTENDENT.

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MINERAL WATERS with high Calcium, Iodine and Bromine Content. Indicated in Rheumatism, Gastric Complaints, Asthma, Bronchitis, Debility, etc.

Hydrotherapy, Electrotherapy

Massage, Inhalation, Intestinal Lavage.

Full particulars from Spa Director

Covered communication with Allan Water & Spa Hotel

BOURNEMOUTH HYDRO,

with Vita-glass Sun-lounge and Marine Balcony.

Pyretic and Every kind of Bath. Plombière Lavage.
Every kind of Massage. Ultra-violet Light.
Every kind of Electricity Diathermy.
Every kind of Diet. Essoff Inhaler.
High Frequency. Electric Lift.
Prospectus from Secretary. *Tele.* 341.
Resident Physicians: W. JOHNSTON SMYTH, M.D. L. T. ROSE-HUTCHINSON, M.D.

PAYING PATIENTS

unable to afford the ordinary Nursing Home can be received in private rooms at the New Wing of the NATIONAL TEMPERANCE HOSPITAL, Hampstead Road, N.W.1. Terms from 4½ gns. weekly. All latest equipment. Particulars from the Secretary. (Museum 3755.)

NORMANSFIELD

For Mental Defectives of either sex.

Under private management.

Apply to Dr. Langdon-Down.

Normansfield, Teddington.

PEEBLES

In the winter garden of Scotland, facing the sun, 600 feet up. Tonic air, beauty in every landscape from sheltered balconies. Dancing, winter garden, swimming bath, tennis, badminton, golf, fishing. Fully licensed. Modern baths installation. Physio-therapeutic, massage, electrical treatment, ultra-violet radiation. Physician in attendance. Write for prospectus.

Among the Pine-clad Border Hills.

PEEBLES HYDRO, PEEBLES, SCOTLAND.

CHRONIC PATIENT IS OFFERED BEST possible ATTENTION in high-class NURSING HOME (London, West End) for moderate capital sum. Medical men and others seeking such accommodation for Patient whose income is insufficient are invited to communicate, giving some particulars of case. — Address, No. 716, B.M.A. House, Tavistock Square, W.C.1.

The MUNDESLEY SANATORIUM

The newly opened central building makes the Mundesley Sanatorium the best equipped building in England for the cure of Tuberculosis. All the bedrooms have hot and cold running water, electric light, and wireless head-phones. The new public rooms are spacious and comfortable.

Resident Physicians:
S. VERE PEARSON, M.D.(Cantab.), M.R.C.P.(Lond.).
ANDREW MORLAND, M.D.(Lond.), M.R.C.P.
E. C. WYNNE-EDWARDS, M.B.(Cantab.).

For all information apply:
THE SANATORIUM, MUNDESLEY, NORFOLK.
(Telephone: Mundesley 4.)

The buildings face S.S.W. and are sheltered from the sea by a pine-clad ridge. The sunshine record and dry air complete a perfect site. The medical equipment is of the latest kind, and there is a day and night nursing staff.

TOR-NA-DEE SANATORIUM
MURTLE DEESIDE ABERDEENSHIRE

Medical Director: David Lawson, M.D., F.R.S.E.

FULLY EQUIPPED WITH EVERY MODERN APPLIANCE FOR THE DIAGNOSIS AND TREATMENT OF ALL FORMS OF TUBERCULOSIS & ALLIED DISEASES

Physician Superintendent. J. M. JOHNSTON, M.B., D.P.H., etc.

Full particulars and Prospectus on application to the Secretary.

Inclusive Terms: SEVEN GUINEAS A WEEK.

NORDRACH-UPON-MENDIP SANATORIUM

FOR THE TREATMENT OF TUBERCULOSIS, was opened in January, 1899, by ROWLAND THURNAM, M.D.

All modern forms of treatment are available. There are X-ray and ultra-violet ray installations. Full day and night nursing staff. The Sanatorium stands in gardens and private grounds of 65 acres, at an altitude of 862 feet above sea-level, surrounded by woods and moorland. All rooms are heated by hot-water pipes and electrically lighted.

Fees 4, 5, and 6 guineas per week.

CYRIL FRANCIS ASHBY, M.R.C.S., L.R.C.P., Certificate of Sanatorium Stephani, Switzerland, *Resident Medical Supt.*

For full particulars apply to *The Secretary*, Nordrach-upon-Mendip, Blagdon, Bristol. *Telegrams*: Nordrach Blagdon. *Telephone*: Blagdon 23.

LINFORD SANATORIUM,
RINGWOOD, NEW FOREST, HANTS.

Established 1898 for the treatment of Tuberculosis. Radiators and Electric Light throughout. Hot and cold water and shower bath in nearly all rooms. Powerful X-ray Plant. Ultra-violet Rays. Full Nursing Staff. All forms of treatment available. Farm of 120 acres, including 40 acres of wood. Herd of Tuberculin-tested Guernsey cows kept. Resident Physicians—ARTHUR DE W. SNOWDEN, M.D., B.Ch.(Cantab.), A. G. E. WILCOCK, M.R.C.S., L.R.C.P., COLIN CASSIDY, M.B., B.Ch.(Cantab.).

THE COTSWOLD SANATORIUM

First opened in 1893 and rebuilt in 1925. On the Cotswold Hills, seven miles from Cheltenham, for the treatment of Pulmonary and all other forms of Tuberculosis. Aspect S.S.W., sheltered from North and East, elevation 800 feet. Pure bracing air. Special Treatment by artificial Pneumothorax (X-ray controlled), Tuberculins, Medicated Inhalations by means of the Apneu Inhalation Installation, and Ultra-Violet Rays is available, when necessary, without extra charge. X-ray plant. Electric light. Radiators, hot and cold basins, and Wireless in all rooms.

Full day and night Nursing Staff.

Medical Superintendent: GEOFFREY A. HOFFMAN, B.A. M.B., T.C.Dub. *Assistant Physician*: MARGARET A. HARRISON, M.B., B.S.Lond.
Consulting Laryngologist: SIDNEY BERNSTEIN, M.R.C.S.Eng., L.R.C.P.Lond. (Attends Regularly.)

Apply: *The* Secretary, The Cotswold Sanatorium, Cranham, Gloucester. *Telephone*: 41 WITCOMBE. *Telegrams*: "HOFFMAN, BIRDLIP."

MONTANA HALL, Montana, Switzerland

Built 1929-30.

THE ONLY SANATORIUM IN SWITZERLAND UNDER BRITISH OWNERSHIP AND CONTROL, AND WITH A DAY AND NIGHT STAFF OF BRITISH TRAINED NURSING SISTERS.

REDUCED TERMS.——QUOTED IN STERLING.

Med. Supt.: HILARY ROCHE, M.D.(Melb.), M.R.C.P.(Lond.), Tuberc. Dis. Dip. (Wales).

GRAMPIAN SANATORIUM,
KINGUSSIE, INVERNESS-SHIRE.

Specially built for the Open-air Treatment of Tuberculosis, and opened in 1901. Bracing mountain air. Elevation 850 ft. above sea-level. Sheltered situation in pine wood. Graduated walks. Electric light throughout building and in shelters. Central heating. Fully equipped X-ray Plant. Inoculation Treatment available for patients—24 beds. Trained Nurse on duty all night. Terms £4 7s. 6d. to £6 6s. p.w. inclusive. No extras. Med. Supt.—FELIX SAVY, M.D.

For particulars apply to the Secretary.

HARROGATE IS OPEN THROUGHOUT THE WHOLE YEAR —

for the Treatment of

RHEUMATISM, ARTHRITIS, FIBROSITIS, NEURITIS, ARTERIOSCLEROSIS, and HYPERPIESIS,

Diseases of the LIVER and GALL BLADDER, GASTRIC CATARRH and COLITIS, SKIN DISEASES, ANAEMIA, and Convalescence from Acute Illness.

PRICES IN THE WINTER ARE CONSIDERABLY REDUCED.

Members of the Medical Profession are asked to write for particulars of Complimentary Facilities to F. J. C. BROOME, General Manager, 3, The Royal Baths, Harrogate.

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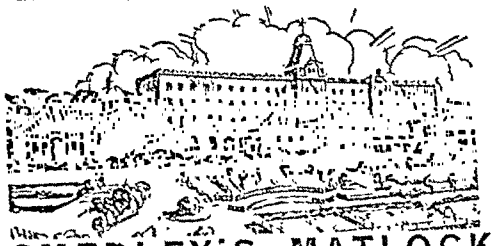

Unrivalled suites of Baths for Ladies and Gentlemen, including Turkish and Russian Baths, Aix and Vichy Douches, Massage and Plombières Treatment, and Electric Installation for Baths and other Medical Purposes, Dowsing Radiant Heat, D'Arsonval High Frequency, Diathermy, Nauheim Baths, for Invalids. "Certified" Milk from our farm of 300 acres. Large Winter Garden. Soapless Foam Baths, etc. Special provision Night Attendance. Rooms well ventilated and all bedrooms warmed in Winter. A large Staff (upwards of 60) of trained Male and Female Nurses, Masseurs, & Attendants. *Resident Physicians*: G. C. R. HARBINSON, M.B., B.Ch., B.A.O., (R.U.I.); R. MACLELLAND, M.D., C.M.(Ed.).

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MEDICAL CORRESPONDENCE COLLEGE,

19, Welbeck Street, London, W.1.

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Candidates taking the First, Second, or Final Conjoint Examinations should make sure of passing at the first attempt by enrolling for the short intensive Revision Courses of the College.

POSTAL, ORAL, PRACTICAL, CLINICAL COURSES.

MICROSCOPE AND MUSEUM WORK.

Highly qualified Tutors with accurate knowledge of the special features of these examinations.

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CITY OF LONDON MENTAL HOSPITAL, DARTFORD, KENT.

Ladies and Gentlemen received for treatment under certificates, and without certification, as either VOLUNTARY or TEMPORARY PATIENTS, at a weekly fee of TWO GUINEAS and upwards.

Bishopstone House, Bedford.

PRIVATE HOME for MENTALLY AFFLICTED LADIES. Ten only received. Apply, Medical Officer or Mrs. PEELE. *Telephone*: 2708.

Doctor's widow in North London

having large house, garden, car, good staff, would like some PAYING GUESTS. Terms moderate. — Address, No. 371, B.M.A. House, Tavistock Square, W.C.1.

MASTERY OF MIDWIFERY.

Examinations for the Diploma of the Mastery of Midwifery of the Society of Apothecaries of London will be held beginning Monday, May 15th, and Monday, November 20th, 1933.

For regulations, apply to the Registrar of the Society, Water Lane, E.C.4.

Preliminary Examinations.

The COLLEGE OF PRECEPTORS holds Preliminary Examinations for Medical and Dental Students in London and at Provincial Centres in March, June, September, and December. For Regulations, apply to the Secretary, College of Preceptors, Bloomsbury Square, London, W.C.1.

Medical and Dental Students

Special Classes for Pre-Medical and Dental Exams., Matric., and Prelims.
Chemistry, Physics, and Biology Labs.
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Full PREP COURSE with Anatomical (Cadaver and Living Model) and Surg. Path. Demonstrations, for next Exam., will commence shortly. POSTAL TUITION at any time.—H. C. ORRIN, F.R.C.S., Surgeons' Hall, Edinburgh.

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MIDDLESEX HOSPITAL MEDICAL SCHOOL

LONDON, W.1.
(UNIVERSITY OF LONDON.)

PRIMARY F.R.C.S. EXAMINATION.

The next Course will begin on February 6th, under the direction of:—

Professor T. YEATES.
Professor SAMSON WRIGHT.
Professor E. C. DODDS.
Dr. J. H. WOODGER.

FEE.—20 guineas.

Application for admission, accompanied by the fee, should be made to the School Secretary, Middlesex Hospital Medical School, W.1.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE

(UNIVERSITY OF LIVERPOOL.)

COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on January 2nd and October 2nd, 1933, and for the Diploma in Tropical Hygiene on January 5th and April 20th, 1933. (Candidates for the D.T.H. must possess the D.T.M. of this University.)

For particulars, apply to the Hon. Dean, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool.

SCHOOLS for BOYS and GIRLS

TUTORS FOR ALL EXAMS.

Messrs. J. & J. PATON having an up-to-date Knowlegde of the BEST SCHOOLS and TUTORS in this Country and on the Continent, will be pleased to AID PARENTS in their choice by sending (free of charge) prospectuses and TRUSTWORTHY INFORMATION and ADVICE.

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(University of London.)
DENMARK HILL, S.E.5.

ADVANCED MEDICINE COURSE.

A Course in Clinical Medicine, Pathology, Morbid Histology, and Biochemistry suitable for M.D. and M.R.C.P. examinations will be given for seven weeks commencing on February 14th, 1933.

Further particulars can be obtained on application to the Dean, King's College Hospital Medical School, Denmark Hill, S.E.5.

SCHOLARSHIPS OF HALF FEES, £60 p.a., offered by good Boarding School (Girls), recognized by the Board of Education. Excellent references and examination results. Distinctions in School Certificate and Leaving Scholarships to Universities. Full particulars—Apply, —No. 201, B.M.A. House, Tavistock Sq., W.C.1.

Post-Graduate Teaching, West London Hospital.

Continuous Clinical Instruction daily from 10 a.m. to 4 p.m.—Post-Graduates may enrol at any time for any period from 1 week to 3 months.—Special facilities for "Study Leave," and for those wishing to take a course under the "Grant-aided Scheme for Post-Graduate Study by Insurance Practitioners."—Anaesthetic Courses.—Clinical Assistantships.—Annual Membership Tickets at Special Terms available for General Practitioners who wish to attend the Hospital Practice at irregular intervals.

Prospectus from the DEAN, West London Hospital, Hammersmith, W.6.

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MARYLEBONE ROAD, N.W.1

Medical Students and Qualified Practitioner admitted to the Practice of this Hospital. Unusual opportunities are afforded of seeing Obstetrical Complications and Operative Midwifery (about one half of the total admission being primiparous cases). Over 2,800 patients are admitted to the Wards annually, and in the Ante-natal Department there are over 20,000 attendances per annum.

Certificates awarded as required by the various Examining Bodies.

For rules, fees, etc., apply, H. B. STOKES, Secretary-Superintendent.

UNIVERSITY EXAMINATION POSTAL INSTITUTION

17, RED LION SQ., LONDON, W.C.1.

(FOUNDED IN 1882.)

Principal: Mr. E. S. WEYMOUTH, M.A.(Lond.).

POSTAL OR ORAL PREPARATION FOR ALL MEDICAL EXAMINATIONS.

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M.R.C.P.(Lond.), 1919-32	215
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Preparation for the above and also for Medical Preliminary, and for all examinations leading up to M.R.C.S., L.R.C.P., or M.B. of various Universities; also for D.P.M., D.O.M.S., D.T.M. & H., D.L.O., D.G.O., D.M.R.E., M.M.S.A., L.M.S.S.A., etc. Numerous successes.

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MEDICAL PROSPECTUS (48pp.)

CONTENTS:—The method and the cost of entering the Medical Profession. *Particulars of all* [illegible] Oral [illegible] Medical [illegible] *Surgical* [illegible] Special [illegible] Open [illegible] for Women. Hints for writing theses.

Medical Prospectus gratis along with list of Tutors, etc., on application to the Principal, Mr. E. S. WEYMOUTH, M.A., 17, Red Lion Sq., London, W.C.1 (Telephone: HOLBORN 6313.)

STAMMERING, SPEECH DEFECTS.

BEHNKE METHOD. Estab. 1882. Cases, non resident, treated at 39, Earl's Court Square, S.W.5, and in residence, in the Summer holidays, at Miss BEHNKE'S house on the Chilterns.

"Pre-eminent success in the education and treatment of stammering and other speech defects."—"Times."
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UNIVERSITY OF LONDON.

A COURSE of TWO LECTURES on "*Iodine and the Thyroid Gland*" will be given by Professor E. MELLANBY F.R.C.P., F.R.S. (Professor of P[illegible] in the University of Sheffield), [illegible] TAL MEDICAL SCHO[illegible] S.E.1), on JANUARY 26th and 27th, at 5.30 p.m. At the first Lecture the Chair will be taken by Professor J. MELLANBY, F.R.S. (Professor of Physiology in the University).

Admission free, without ticket.

S. J. WORSLEY,
Academic Registrar.

LONDON HOSPITAL MEDICAL COLLEGE.

Primary Fellowship Examination.

A COURSE OF INSTRUCTION for the above Examination will begin on Monday, Feb. 6th.

The Fee for the Course is 15 guineas.

Further particulars may be obtained from Professor WILLIAM WRIGHT, M.B., D.Sc., F.R.C.S., Dean, Mile End, E.1.

M.D. THESIS

(Camb., Edin., Glas., Durham, &c.)

SKILLED COACHING, GUIDANCE, and ADVICE from Special Tutors, in conformity with the Regulations of the various Universities.

Apply for particulars and free booklet, "Hints on Writing a Thesis for the M.D. Degree," to the SECRETARY, Medical Correspondence College, 19, Welbeck Street, London, W.1.

SUDAN MEDICAL SERVICE.

TWO MEDICAL OFFICERS are required for the Sudan Medical Service to proceed to the Sudan in September. The selected candidates will be required to take the Course at the London School of Tropical Medicine from April 3rd, 1933 to June 22nd, 1933. Fees and a subsistence allowance provided by the Sudan Government.

Candidates must be British born, single, under 30 years of age, and have held a resident appointment in a large general Hospital.

Pay in the Sudan commences at £E.720 a year, subject to an abatement of 7½ per cent., rising to £E.1,200 after thirteen years' service. On confirmation of his appointment, the selected candidate will be eligible for pensionable service.

Applications (in writing only), with copies of recent testimonials, should be made to Dr. HODSON, 69, Harley St., W.1.

CITY OF SALFORD.

ASSISTANT RESIDENT MEDICAL OFFICER, HOPE HOSPITAL. (1,000 Beds.)

Applications are invited for the post of Assistant Resident Medical Officer (male) at HOPE HOSPITAL, Pendleton. The appointment will be for six months. Salary £250 per annum, plus board, residence, and laundry. Further information regarding the Hospital may be obtained from the Medical Superintendent. Form of application may be obtained from the Medical Officer of Health, 143, Regent Road, Salford, to whom it should be returned by January 28th.

H. H. TOMSON, Town Clerk.

CITY AND COUNTY OF NEWCASTLE-UPON-TYNE.

ASSISTANT MEDICAL OFFICER OF HEALTH.

Applications are invited from registered medical practitioners holding a Diploma in Public Health for the appointment of Assistant Medical Officer of Health. Salary £750 per annum, rising by annual increments of £50 to £900, subject to a temporary reduction on the commencing salary of £27 16s. 3d. The successful applicant will be required to contribute to the Council's Superannuation Fund. Previous resident service in an Infectious Diseases Hospital is an essential for this appointment.

Applications, on the prescribed form, which can be obtained on application to the Medical Officer of Health, Town Hall, Newcastle-upon-Tyne, must be submitted not later than Wednesday, January 25th.

January 9th, 1933.

THE KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION.

JUNIOR ASSISTANT RESIDENT MEDICAL OFFICER.

Applications are invited from duly registered practitioners (male and unmarried) for the post of Junior Assistant Resident Medical Officer at the North Wales Sanatorium, Llangwyfan, near Denbigh (236 beds for pulmonary and non-pulmonary cases). Salary £250 per annum, plus maintenance (subject to an emergency deduction of £10 12s. 6d. per annum). The appointment is limited to a period of one year.

Applications, stating age, qualifications, and previous experience, together with copies of three recent testimonials, should reach the undersigned not later than January 25th.

Memorial Offices, Westgate Street, Cardiff.
D. A. POWELL, Principal Medical Officer.

THE COMMITTEE OF MANAGEMENT OF the STOKE NEWINGTON SCHOOL TREATMENT CENTRE, 67, Church Street, Stoke Newington, N.16, invite applications from Medical Practitioners practising in or near the Borough for the following appointments:

1. SURGEON to the Eye Department (one session a week).
2. SURGEON to the Minor Ailment Department (one session a week).
3. DENTAL ANAESTHETIST (three sessions a month).

Salary at usual L.C.C. rates.

Applicants are required to state name, address, age, qualifications, and experience, and to send to the Hon. Secretary at the above address not later than January 26th.

No testimonials are required unless asked for.

The final selection will be made by the L.C.C., and the successful candidates only will be communicated with.

LONDON COUNTY COUNCIL.

Applications invited from registered Medical Practitioners for appointment as HOUSE PHYSICIAN at LEWISHAM HOSPITAL, High Street, Lewisham, S.E.13. Position recognized for requirements of M.D.London. Salary £80 a year, together with board, lodging, and laundry, subject to temporary reduction. Appointment is for six months in the first instance, but may be extended for a further period of six months. Duties are assigned by the Medical Superintendent and include, if necessary, assistance at other establishments under the control of the Council.

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), County Hall, Westminster Bridge, S.E.1, returnable by January 27th. Canvassing disqualifies. Further inquiries should be addressed to Medical Superintendent at the hospital.

ROTHERHAM HOSPITAL.

Wanted, CASUALTY HOUSE SURGEON (male). Qualified. Salary £150, with board, residence, and laundry. 130 Beds.

Applications, with copies of recent testimonials, etc. to be sent to the Secretary, G. W. ROBERTS, 8, Moorgate Street, Rotherham.

CITY OF MANCHESTER.

PUBLIC HEALTH DEPARTMENT.

CRUMPSALL HOSPITAL AND INSTITUTION.

APPOINTMENT OF AN ASSISTANT MEDICAL OFFICER.

The Public Health Committee invites applications from qualified Medical Men for the position of Assistant Medical Officer at the Crumpsall Hospital (1,568 beds) and Institution (2,000 beds), including 600 beds for Mental Patients, Crescent Road, Crumpsall, Manchester.

Every applicant must be a registered Medical Practitioner and unmarried.

Preference will be given to applicants with previous Hospital experience.

The Hospital is a recognised Training School for nurses and is equipped with all modern Hospital requirements.

Salary £275 per annum, subject to a temporary deduction of £7 10s. per annum. The amount payable is, therefore, £267 10s. per annum, with board, residence, and laundry in addition, subject to the terms and conditions of the Manchester Corporation Grading Scheme.

No bonus.

The appointment will be made, in the first instance, for a period of six months. The successful candidate, however, will be eligible for re-appointment for a further period of six months at the end of that period.

Applications, stating fully the age, training, qualifications, and experience of the candidate, with copies of three recent testimonials, and endorsed on the envelope "Assistant Medical Officer, Crumpsall Hospital," must be addressed to the Medical Officer of Health, Civic Buildings, 1, Mount Street, Manchester, only, and not to members of the Committee or Council, and must be received by him not later than Saturday, January 28th.

The candidate appointed will be required to commence duty on March 1st, to devote the whole of his time to the duties of the position, to pass a medical examination, to contribute to the Corporation Superannuation Fund, and to execute the Deed of Service.

Canvassing in any form, oral or written, direct or indirect, is prohibited.

Town Hall, F. E. WARBRECK HOWELL,
Manchester. Town Clerk.
January 16th, 1933.

MINISTRY OF HEALTH.

The Minister of Health invites applications for a VACANT APPOINTMENT on the medical staff of the Ministry. The salary commences at £833 per annum, and rises by twelve annual increments to a maximum of £1,146 per annum. This scale of remuneration is liable to review.

The appointment will carry the usual Civil Service conditions as to pension, holidays, etc., and the officer will be required to devote his whole time to the public service and must be prepared to work in any part of England or Wales if required to do so.

Candidates must possess a University degree in Science with special knowledge and experience of biochemistry and physiology in relation to food and nutrition. They must conform to the Civil Service Nationality rule.

Canvassing through Members of Parliament or in other ways will render a candidate liable to disqualification.

Forms of application, with further particulars of the appointment, may be obtained from the Director of Establishments, Ministry of Health, Whitehall, S.W.

No application can be considered unless received on the prescribed form not later than February 13th.

CITY OF BIRMINGHAM.

SELLY OAK HOSPITAL. (500 Beds.)

CASUALTY OFFICER (Male).

Applications are invited from fully qualified Medical Practitioners for whole-time appointment as Casualty Officer (male) at the Selly Oak Hospital Birmingham. The appointment will be for a period of six months, in the first instance, but may be extended at the end of that time for a further period of not exceeding six months.

Salary at the rate of £200 per annum, and full residential emoluments. The salary and emoluments will be subject to any "voluntary abatement" in force from time to time. The officer appointed will be required to refund to the Council all fees, allowances, and emoluments (other than the foregoing) received by him.

Further particulars may be obtained from the Medical Superintendent at Selly Oak Hospital, to whom applications, stating age, experience, and qualifications, with copies of recent testimonials, should be forwarded not later than Wednesday, February 8th.

F. H. C. WILTSHIRE, Town Clerk.
The Council House, Birmingham.
January, 1933.

DERBYSHIRE EDUCATION COMMITTEE.

ASSISTANT SCHOOL MEDICAL OFFICER (Male).

The Derbyshire Education Committee require the services of an Assistant School Medical Officer (male) at a salary of £500, rising by annual increments of £25 to £700 per annum, subject to a temporary economy reduction, together with reasonable travelling expenses.

Candidates must be registered Medical Practitioners of at least three years' standing.

Experience in this work, the administration of anæsthetics, and Mental Deficiency is desirable.

The appointment will be a designated post under the Local Government and Other Officers Superannuation Act, and the successful candidate will be required to pass a medical examination.

The officer appointed will not be allowed to engage in private or consulting practice, but will be required to devote his whole time to the duties of the office, and will act under the direction of the School Medical Officer.

Forms of application may be obtained from the undersigned, to whom they should be returned completed, together with copies of not more than three recent testimonials, on or before Thursday, January 26th, endorsed "Assistant School Medical Officer."

The appointment will be determinable by three months notice on either side.

New County Offices, W. M. ASH,
St. Mary's Gate, School Medical Officer.
Derby. January 10th, 1933.

COUNTY BOROUGH OF HALIFAX.

ST. LUKE'S HOSPITAL.

CONSULTING PHYSICIAN.

The Health Committee of the Halifax Corporation invite applications for the position of CONSULTING PHYSICIAN at St. Luke's Hospital, Halifax. Candidates must possess an M.D. and/or M.R.C.P. and must not be engaged in general practice.

Forms of application and conditions of appointment may be obtained from the Medical Officer of Health, Powell Street, Halifax.

Complete applications endorsed "Consulting Physician," together with copies of three recent testimonials, must be forwarded to the undersigned not later than the first post on February 6th.

Canvassing, either directly or indirectly, will be a disqualification.

Town Clerk's Office, PERCY SAUNDERS,
Town Hall, Halifax. Town Clerk.
January 16th, 1933.

CITY OF SHEFFIELD.

DEPARTMENT OF PUBLIC HEALTH.

Applications are invited from duly qualified medical men for the post of ASSISTANT MEDICAL OFFICER at the City General Hospital, Fir Vale, Sheffield.

The Hospital contains 840 beds, and deals with all branches of medical, surgical, and maternity work.

The salary offered is £250 per annum with full residential allowances, subject to a small temporary deduction in accordance with the Council's regulations, the appointment which is temporary and not subject to superannuation deductions being for one year.

Applications, stating age, qualifications, and experience, accompanied by copies of three recent testimonials, to be sent to the Medical Superintendent, City General Hospital, Fir Vale, Sheffield.

MILLER GENERAL HOSPITAL,

Greenwich Road, S.E.10.
151 Beds and 18 Special Departments.

ASSISTANT PHYSICIAN.

The Board of Management invite applications for the above Honorary post.

Candidates must be Graduates of a University and Fellows or Members of the Royal College of Physicians of London and not engaged in general practice.

The duties will be to see out-patients, and a certain number of beds will be allotted.

Candidates will be expected to call upon the Members of the Honorary Medical and Surgical Staff, a list of whom can be obtained from the Secretary.

An honorarium of 20 guineas per annum is allowed towards travelling expenses.

Applications, which must be printed or typewritten, together with copies of not more than three recent testimonials, should be sent to the Chairman of the Hospital not later than March 1st next.

January 13th, 1933.

DURHAM COUNTY MENTAL HOSPITAL.

APPOINTMENT OF MEDICAL SUPERINTENDENT.

The Visiting Committee of the Durham County Mental Hospital invite applications from legally qualified and registered Medical Practitioners for the appointment of Medical Superintendent at their Mental Hospital situate at Winterton, near Stockton-on-Tees, in the County of Durham. The number of patients in the Hospital at present is approximately 1,700.

The salary will be £900 per annum, plus house, light, and laundry, which emoluments are provisionally valued at £100 per annum.

The appointment will be subject to the provisions of the Asylums Officers Superannuation Act, 1909, and to the following terms and conditions:

(a) The Medical Superintendent will be provided with all necessary books, stationery, and apparatus (to be the property of the Committee) and postages.

(b) He will be entitled to a vacation of six weeks in each year, to be taken at a time to be approved by the Committee.

(c) He must reside in the house provided for the Medical Superintendent at the Mental Hospital.

(d) He must devote the whole of his time to the duties of his office and shall not hold any other appointment or engage either directly or indirectly in private practice.

(e) The engagement will be terminable by three calendar months' notice in writing on either side, which may be given at any time, and he may be required to retire compulsorily at the age of 65.

Applications, accompanied by copies of not more than three recent testimonials, must reach the undersigned not later than Tuesday, January 31st.

Shire Hall, HAROLD JEVONS,
Durham. Clerk to the Visiting
January 11th, 1933. Committee.

BRISTOL ROYAL INFIRMARY.

Applications are invited for the following resident appointments for the six months, commencing March 1st:

THREE HOUSE PHYSICIANS;
FOUR HOUSE SURGEONS;
ONE HOUSE SURGEON to the Ear, Nose, and Throat Department;
ONE HOUSE SURGEON to the Gynæcological and Skin Department;
ONE OBSTETRIC HOUSE SURGEON;
ONE CASUALTY HOUSE SURGEON;
ONE HOUSE SURGEON to the Ophthalmic Department and to the Junior Assistant Surgeon.

Salaries at the rate of £60 per annum, with board, apartments, and laundry, except in the case of the Casualty House Surgeon, when the salary will be at the rate of £100 per annum, with board, apartments, and laundry.

Candidates, who must be duly qualified, to send in their applications, stating age, together with copies of not more than three testimonials, to the undersigned on or before February 6th.

The elected candidates must become members of the Medical Defence Union before taking up their appointment.

ELLIS C. SMITH, F.C.I.S.,
Secretary & House Governor.

LANCASHIRE MENTAL DEFICIENCY ACTS COMMITTEE.

An ASSISTANT MEDICAL OFFICER, age not to exceed 35 years, is required by the above Committee for the purpose of the visitation and certification of Mental Defectives throughout the County of Lancashire, the supervision out of Occupation Centres, and the carrying out of such other duties as the Committee may from time to time require.

Salary £600 per annum (less a temporary emergency abatement of £25 per annum on commencing salary) rising by increments of £25 per annum to £750 per annum.

The appointment will be subject to three months' notice on either side.

Form of application and further particulars of duties, etc., may be obtained from the undersigned, and applications, accompanied by copies of not more than three testimonials, must be delivered not later than January 30th.

County Offices, GEORGE ETHERTON,
Preston, Clerk of the Committee.
January 9th, 1933.

HORTON GENERAL HOSPITAL, BANBURY, OXON. (60 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male or female) now vacant.

The appointment is for six months.

Salary at the rate of £150 per annum, with suite of rooms, board, and laundry.

Applications, with references, to—

RICHARD H. PRESCOTT,
Secretary & House Governor.

ROYAL NAVAL MEDICAL SERVICE.

VACANCIES EXIST FOR MEDICAL OFFICERS IN THE ROYAL NAVY.

Candidates will be entered as Short Service Medical Officers and will be considered for transfer to the Permanent Service after 6 months' service. They must be registered under the Medical Acts, and be under 30 years of age on date of entry.

Medical Officers, R.N., are liable to serve in Naval Hospitals or Ships in any part of the world.

Excellent opportunities exist for Clinical professional work, both Medical and Surgical, as well as for study and practice of Hygiene, Pathology, Ophthalmology, and other specialist branches.

Adequate provision is made for Post-Graduate Study.

OUTFIT ALLOWANCE of £50 is paid on joining.

PAY.—Pay from approximately £430 to £2,070 a year, according to length of service.

ALLOWANCES.—When in charge of Hospitals and Sick Quarters, 10s. and 5s. a day.
60 Specialists' Allowances of 5s. a day.
Flag Allowances, 5s. and 2s. 6d. a day.
Provisional Allowance, Lodging Allowance, etc.

PROMOTION.—To Surgeon Lieutenant-Commander after 6 years' service; to Surgeon Commander after a total of 12 years' service. Promotion to Surgeon Captain, Surgeon Rear-Admiral, and Surgeon Vice-Admiral is by selection.

Ante-date of seniority on account of civil hospital appointments and accelerated promotion can be gained.

RETIREMENT.—Gratuities are paid as follows:—

Short Service Officers, after 3 years' service -	£300
Permanent Officers, after 4 years' service - -	£500
" " " 8 years' service - -	£1,000
" " " 12 years' service - -	£1,500
" " " 16 years' service - -	£2,250

Rates of Pension range from approximately £535 a year, normally earned after about 25 years' service, to £1,064 a year, the maximum earned by a Surgeon Vice-Admiral.

Copies of the Regulations and Particulars as to Conditions of Service and Emoluments may be obtained on written or personal application to the Medical Director-General of the Navy, Admiralty, Whitehall, London, S.W.1.

ROYAL INFIRMARY, BLACKBURN.
(240 Beds—Five Residents.)

RESIDENT HOUSE PHYSICIAN (male) required at a salary of £175 per annum, with board, residence, laundry, etc. In addition to Medical Wards, to be attached to Eye, Ear, Nose, and Throat Department.

FOURTH HOUSE SURGEON (male) required at a salary of £150 per annum, rising to £250, with board, residence, laundry, etc.

Applications, with copies of testimonials, stating age, nationality, experience, etc., to be sent at once to the undersigned.

NATHAN A. SMITH,
Royal Infirmary, Gen. Supt. & Secretary.
Blackburn.

This Institution is recognized for the Surgical practice required for the F.R.C.S. final examination.

WALSALL GENERAL HOSPITAL.

The Committee invite application from men or women for the post of HOUSE SURGEON. Salary at the rate of £150 per annum.

Candidates, who must be registered under the Medical Acts, must produce three recent testimonials.

The appointment will be for six months, from February 1st.

The Hospital contains 100 beds, and is equipped in all special departments.

Applications, stating age, qualifications, and nationality, must be received by the undersigned not later than the first post Thursday, January 26th.

WALTER FRANCOMBE,
January 13th, 1933. House Governor.

MANCHESTER ROYAL INFIRMARY.

FIRST ASSISTANT IN THE CLINICAL LABORATORY.

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment, which is non-resident, and is tenable for twelve months; the holder is eligible for re-election.

Salary £350 per annum. Candidates must be duly qualified and registered; they must state age and send twelve copies of their application and testimonials, to the undersigned by 9 a.m. on Thursday, February 2nd.

By Order,
January 13th, 1933. FRANK G. HAZELL, Gen. Supt. & Sec.

NORFOLK & NORWICH HOSPITAL, NORWICH. (392 Beds.)

Applications are invited for the following posts:

CASUALTY OFFICER AND HOUSE SURGEON, with charge of 25 beds.

HOUSE SURGEON to Special Departments (Ear, Nose, and Throat and Ophthalmic).

Salary for each post, £120 per annum, with board, residence, and laundry. Candidates (male), who must possess registered qualifications, should forward applications, stating age, nationality, etc., together with copies of testimonials, to the undersigned, not later than first post on Tuesday, January 31st.

FRANK INCH,
January 20th, 1933. House Gov. & Sec.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON, S.W.3.

The Committee of Management give notice that a vacancy will occur in the office of PHYSICIAN on March 1st. Dr. G. E. BEAUMONT the Senior Physician to Out-Patients, is a candidate for the post.

A vacancy for an ASSISTANT PHYSICIAN to the Hospital will also occur, and applications, with copies of testimonials, for this latter post are invited, and should reach the undersigned not later than Monday, February 6th.

Candidates must be Members (or have passed the qualifying examination for the Membership) of the Royal College of Physicians of London.

January, 1933. FREDERICK WOOD, Secretary.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL, Haverstock Hill, N.W.3.

APPOINTMENT OF HOUSE PHYSICIAN.

Applications are invited from unmarried Medical Men for the appointment of House Physician, vacant on February 1st next.

The salary will be at the rate of £100 per annum together with board, residence, etc., and the term will be for six months.

Application to be made on a form which will be supplied by the Secretary, together with copies of not more than three testimonials, should reach the Secretary not later than noon on January 25th.

ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN.

Wanted for this Hospital, TWO HONORARY RESIDENT HOUSE SURGEONS and THREE HONORARY RESIDENT HOUSE PHYSICIANS.

One of the latter shall have charge of both a medical ward and an car and throat ward.

The appointment shall commence on April 1st, and shall be for a period of six months. Information as to duties, etc., can be obtained from the ordinary physicians and surgeons at the Hospital. Thirty copies of applications and relative testimonials, to be lodged on or before February 22nd, with Messrs. HENRY & SCOTT, W.S., 56, Frederick Street, Edinburgh. No application will be received after that date.

NORTH RIDING INFIRMARY, MIDDLESBROUGH, General Hospital, 150 Beds.

Applications are invited for the post of SECOND HOUSE SURGEON (gentleman) to take up duties February 1st. As the present Third House Surgeon is an applicant candidates must say if willing to accept Third House Surgeon.

Both appointments will be for a definite period of six months, renewable.

Salary at the rate of £150 and £125 per annum respectively, with board, residence, and laundry.

Applications, stating age, nationality, and previous experience, with three recent testimonials, should be sent forthwith to the undersigned.

CHARLES POSTGATE,
Secretary-Superintendent.

CENTRAL LONDON THROAT, NOSE, & EAR HOSPITAL, Gray's Inn Road, W.C.1.

RESIDENT HOUSE SURGEON (Male).

There will be a vacancy for a Third Resident House Surgeon to enter on duty on March 1st next.

The appointment will be for a period of nine months; three months as Third House Surgeon, three months as Second House Surgeon, and three months as First House Surgeon.

Remuneration at the rate of £75 per annum.

Applications, accompanied by copies of not more than three testimonials, should be sent to the undersigned on or before February 4th.

JOHN H. YOUNG, Secretary-Supt.

BURY INFIRMARY, (127 Beds.) LANCS.

Applications are invited for the post of SENIOR HOUSE SURGEON, who must have both Medical and Surgical qualifications. The appointment is for six months at a salary at the rate of £200 per annum, with board, residence, and laundry. The successful applicant will be required to commence duties about the beginning of February.

Applicants must have held a previous resident appointment.

Applications, stating age, qualifications, and nationality, with copies of three recent testimonials, to be sent to the undersigned not later than January 28th.

ALEX. W. MAITLAND,
Honorary Secretary.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL, Woodchurch Road, BIRKENHEAD.

HOUSE SURGEON.

The Board invite applications for the post of House Surgeon (m. or f.) for a period of six months from April 1st. Honorarium at the rate of £100 p.a., with board, residence, and laundry.

SECOND HOUSE SURGEON.

The Board invite applications for the post of Second House Surgeon (m. or f.) for a period of six months from April 1st. Honorarium at the rate of £75 p.a., with board, residence, and laundry.

Applications, together with copies of testimonials, to be addressed to the Hon. Secretary at the Hospital, not later than January 31st.

GENERAL INFIRMARY, SALISBURY. (Voluntary General Hospital, 170 Beds.)

TWO HOUSE SURGEONS and ONE HOUSE PHYSICIAN (Male) to commence duty on March 8th.

The appointments are for six months, with the right of applying for re-appointment at the end of that period for a further period of six months.

Candidates must be unmarried, fully qualified, and registered. Salary £150 per annum, with board, etc.

Applications to be sent to the House Governor not later than February 6th, 1933, from whom a copy of the Rules may be obtained.

EAST HAM MEMORIAL HOSPITAL, Shrewsbury Road, E.7. (100 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male). The appointment will be for six months, in the first instance, but the successful candidate will be eligible for re-appointment. Salary at the rate of £200 per annum, with board, residence, and laundry. Preference will be given to candidates who hold the diploma of F.R.C.S. Applications, stating age, experience, and full particulars, together with copies of three testimonials, should reach the undersigned by February 15th. Selected candidates will be required to attend a meeting of the Medical Committee at the Hospital at 6 p.m. on Tuesday, February 14th.

REGINALD PERRY, Secretary.

EAST HAM MEMORIAL HOSPITAL, Shrewsbury Road, E.7. (100 Beds.)

Applications are invited for the post of HONORARY SURGEON to the Ear, Nose, and Throat Department.

Candidates must be Fellows of one of the Royal Colleges of Surgeons, or Masters of Surgery of a University of Great Britain or Ireland, and not engaged in General Practice.

Applications, in triplicate, should reach the undersigned on or before February 13th.

Selected candidates will be required to attend a meeting of the Medical Committee at the Hospital at 6 p.m. on Tuesday, February 14th.

REGINALD PERRY, Secretary.

EAST HAM MEMORIAL HOSPITAL, Shrewsbury Road, E.7. (100 Beds.)

Applications are invited for the post of REFRACTION ASSISTANT (male) in the Ophthalmic Department. The successful candidate will be required to attend on Thursday afternoons. Honorarium £65 per annum.

Applications should reach the undersigned on or before February 15th. Candidates will be required to interview Mr. B. W. RYCROFT, F.R.C.S., at 22, Harley Street, W.1.

REGINALD PERRY, Secretary.

GENERAL INFIRMARY AT LEEDS.

A meeting of the Special Election Committee will be held in the Board Room on February 24th, to elect an HONORARY OPHTHALMIC SURGEON.

Every candidate for the office shall be a Fellow of the Royal College of Surgeons of England.

Information as to the duties and necessary qualifications for the office will be supplied on reference to the House Governor.

All applications should be addressed to the Chairman at the Infirmary and marked "Private, Honorary Staff," and should be sent in on or before February 14th.

By Order of the Board,
S. CLAYTON FRYERS,
House Governor and Secretary.

CHELTENHAM GENERAL AND EYE HOSPITALS.

The Board of Management invite applications for the post of HOUSE PHYSICIAN (male) at the General Hospital.

Candidates must be unmarried, have a registered qualification in Medicine and Surgery, and produce evidence that they are qualified to administer anaesthetics.

Salary £200 p.a., with board, lodging, and laundry.

Applications, with copies of testimonials, to be sent in sealed envelopes, marked "House Physician," to the undersigned by Jan 26th.

J. CUMMING SMITH, F.C.I.S.,
The General Hospital, Secretary.
Cheltenham. January 13th, 1933.

WANTED AT SOUTHMEAD HOSPITAL, BRISTOL, RESIDENT OBSTETRIC OFFICER. Temporary appointment for 12 months. Salary £200 per annum, less temporary reduction in accordance with scale adopted by the Council. Applicants must have had experience in midwifery and gynaecology and have held similar appointment in a hospital. Application form, together with further particulars, may be obtained from the Medical Officer of Health, 40, Prince Street, Bristol, to whom the application form must be returned not later than January 28th.

ROYAL SUSSEX COUNTY HOSPITAL, BRIGHTON. (246 Beds).

STAFF NURSE required for the V.D. Department early in February. Applicants must be State registered general trained Nurses. Salary £120 per annum, with uniform. Non-resident post, with part board. Application should be made to the Matron, and the name of a Matron given for reference.

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh).

(a) British Islands.

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH**
EBBW VALE, MON. *(Workmen's Medical Society.)*	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE. *(Workmen's Medical Scheme.)*	KENT EDUCATION COMMITTEE. *(School Medical Inspector.)*
GILFACH GOCH, GLAMORGAN. *(Workmen's Medical Scheme.)*	NEATH AND DISTRICT. *(Medical Aid Association.)*	LLANTRISANT AND LLANTWIT FARDRE RURAL DISTRICT COUNCIL. (1) *Medical Officer of Health (part-time.)* (2) *Medical Officer (woman—part-time) for Maternity and Child Welfare.*
LLWYNPIA, CLYDACH VALE, PENYCRAIG, GLAMORGAN. *(Workmen's Medical Scheme.)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association.)*	
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer.)*	OGMORE VALLEY, GLAMORGAN. *(Wyndham Colliery Medical Aid Society.)* *(Workmen's Medical Scheme.)*	CITY OF SALFORD. *(Assistant Clinical Tuberculosis Officer)*
MARDY, GLAMORGAN. *(Workmen's Medical Scheme.)*		

(b) Overseas.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. G. HUNTER (Medical Secretary, New South Wales Branch), 135, Macquarie St., Sydney, N.S.W.	QUEENSLAND. *(Brisbane Associated Friendly Societies Institute.)* *(Toowoomba Associated Friendly Societies, Medical Institute, Toowoomba.)*	The Hon. Sec., Queensland Branch, British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	WELLINGTON, NEW ZEALAND. *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec., New Zealand Branch), British Medical Association, P.O. Box 156, Wellington, New Zealand
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch), British Medical Association, Medical Society Hall, East Melbourne, Victoria.			WESTERN AUSTRALIA. *(Contract and Lodge Practices.)*	Hon. Sec., Western Australian Branch, British Medical Association, No. 6, Bank of N.S.W. Chambers, St. George's Terr., Perth, Western Australia

January 18th, 1933. By Order of the Council. G. C. ANDERSON, Medical Secretary.

WEST LONDON HOSPITAL, Hammersmith, W.6. (234 Beds.)

[illegible] for the post of [illegible] of one of the England, Edinor Member of the Royal College of Physicians of London. The successful candidate will be required in addition to his other duties to undertake such teaching for the Post-Graduate College as the Board may approve.

Applications, accompanied by copies of testimonials, should reach me not later than Thursday, February 2nd. Candidates must attend a Special Meeting of the Medical Council on Friday, February 3rd, at 4.30 p.m. and prior to that date call upon and send copies of applications and testimonials to each member thereof. They must not canvass Members of the Board, but nevertheless must send copies of their application and testimonials to each member thereof, and if so notified, be in attendance at a Special Meeting of the Board at 5.30 p.m. on Tuesday, February 7th, when the election will be made.

H. A. MADGE, Secretary.

NATIONAL TEMPERANCE HOSPITAL, Hampstead Road, N.W.1.

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male). The appointment will be for a period of six months at a salary of £175 per annum, and will date as from February 9th next. Preference will be given to those who have held Resident posts. Candidates must submit applications, stating qualifications, age, etc., with copies of not more than three testimonials, by Friday, February 3rd, addressed to the Secretary.

HOSPITAL OF ST. CROSS, RUGBY.

Applications are invited for the post of MALE RESIDENT MEDICAL OFFICER Qualified. (Three R.M.O.'s.)

Salary to commence at the rate of £100 per annum for first three months, £125 per annum for second three months, and at the rate of £150 per annum for subsequent months.

Six months' appointment, and eligible on completion of service for further extension of six months.

Candidates must be prepared to commence duties on February 1st.

The practice of the Hospital offers excellent opportunities for wide experience.

Certificates and other fees shared by R.M.O.'s

Applications, stating age, nationality, and full details, with copies of three recent testimonials, to be sent to the undersigned.

(Signed) W. COCKBURN, Superintendent & Secretary.

ROYAL DEVON AND EXETER HOSPITAL, EXETER. (225 Beds.)

HOUSE SURGEON (Male).

Applications are invited for the post of House Surgeon at this Hospital, shortly becoming vacant. The appointment is for six months, but candidates are eligible for re-election.

Salary at the rate of £150 per annum, with board, apartments, and washing.

Applications, giving particulars as to age and qualifications, together with copies of three recent testimonials should be sent to the undersigned as soon as possible.

By Order of the Committee, S. S. COLE, Secretary & Manager.

January 6th, 1933.

EASTBOURNE: PRINCESS ALICE MEMORIAL HOSPITAL. (116 Beds.)

Applications are invited for the post of HOUSE SURGEON (male). Salary at the rate of £150 per annum, with board, lodging, and laundry. There are two Residents and the appointment is for six months, commencing February 1st.

Candidates must be unmarried, fully qualified, and registered. Applications, stating age, qualifications, etc., accompanied by copies of not more than three testimonials (one of which should be from Medical School), should be sent to the Secretary to reach him not later than Monday, January 23rd.

MARGATE AND DISTRICT GENERAL HOSPITAL. (98 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male).

Salary £150 per annum, with board and laundry.

Duties to commence February 1st.

Applications, accompanied by copies of testimonials, should be addressed to the Secretary at the Hospital as early as possible.

NEWARK GENERAL HOSPITAL. (50 Beds.)

Wanted, a fully qualified RESIDENT HOUSE SURGEON, unmarried. Salary £175 per annum, with board, residence, and laundry. Applications, stating age and qualifications, to be sent to [illegible] with copies of testimonials, to be sent to CRAMPTON (Secretary), 27, Kirk Gate, Newark-on-Trent.

(Appointments continued on p.

British Medical Journal,
BRITISH MEDICAL ASSOCIATION HOUSE,
TAVISTOCK SQ., LONDON, W.C.1.
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ASSISTANCIES.

WANTED.—ASSISTANT, INDOOR, MALE, young, single, newly-qualified. Prospects good for worker to learn G.P. congenially. Near Sheffield. Photo. Bond. Salary £20 monthly.—Address, No. 820, B.M.A. House, Tavistock Square, W.C.1.

WANTED, FEBRUARY 1st, INDOOR ASSISTANT, man or woman. Country Practice, Midlands. £300. Experienced in panel practice. English preferred. References required. — Address, No. 802, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — PART-TIME ASSISTANTSHIP by M.B., Ch.B., in London or district, preferably morning and evening surgeries; ex H.P., R.O.O., H.S., and R.S.O. At present reading for F.R.C.S.Eng.—Address, No. 732, B.M.A. House, Tavistock Square, W.C.1.

WANTED IMMEDIATELY. — INDOOR AND Outdoor ASSISTANTS for Town and Country Practices, with and without view; good salaries. State full particulars.—BRITISH MEDICAL BUREAU, 35, Cross Street, Manchester.

WANTED.—INDOOR ASSISTANT, IMMEDIATELY. Must be British, total abstainer, and non-smoker. — Address, No. 835, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — ASSISTANT, LONDON GRADuate preferred. Live in. Near Birmingham. Single.—Address, No. 711, B.M.A. House, Tavistock Square, W.C.1.

ASSISTANT (INDOOR) WANTED IMMEDIately, with view; mixed general practice (large panel), London, E. State if able to cycle or drive car. Salary £300 p.a.—Address, with full particulars, No. 807, B.M.A. House, Tavistock Square, W.C.1.

ASSISTANTSHIP (PREF. WITH VIEW) OR temporary post for three months in middle and better-class Practice, wanted by M.B., Ch.B., single, age 33 years. Free Feb. 1st. Interview in London area. — Address, No. 832, B.M.A. House, Tavistock Square, W.C.1.

ASSISTANTSHIP, PREFERABLY OUTDOOR and not too far from London, required by Scots graduate, aet. 31; ex Casualty H.S. and H.S.; one year G.P. Consider long Locum. Accustomed sole charge. Own car.—Address, No. 808, B.M.A. House, Tavistock Sq., W.C.1.

ASSISTANT WANTED, NEWCASTLE-ON-Tyne, competent and energetic. Panel and private Practice, mainly industrial. May be prospects later. — Address, No. 804, B.M.A. House, Tavistock Square, W.C.1.

IN OR NEAR BRISTOL.—PART-TIME ASSISTANTSHIP or light LOCUM wanted. Live out or in.—Address, No. 828, B.M.A. House, Tavistock Square, W.C.1.

M.B., CH.B.(ABERD.), F.R.C.S.E., WANTS ASSISTANTSHIP, PARTNERSHIP, or PRACTICE. Ex R.A., A.C.O., H.P., R.M.O. Senior H.S. Exp. major surgery.—Address, No. 826, B.M.A. House, Tavistock Sq., W.C.1.

OUTDOOR ASSISTANT WANTED FOR large panel and private Practice in Derbyshire Town. Salary £500—£550. State age, race, qualifications, etc. — Address, No. 819, B.M.A. House, Tavistock Square, W.C.1.

OUTDOOR ASSISTANT REQUIRED IMMEdiately, unmarried, male, English preferred. Salary £400, with car. Work light, good experience, time to read, no view to partnership. —Address, No. 857, B.M.A. House, Tavistock Square, W.C.1.

LOCUMS.

FOR LOCUM TENENS APPLY TO PERCIVAL TURNER, Ltd.
The oldest and only Agent who for 50 years has supplied substitutes at short notice without fee to principals.
4, ADAM ST., Strand, London, W.C.2.
Teleg.: Epsomian, Lond." 'Phone: Temple Bar 9011.
After Office Hours: Epsom 9142.

WANTED. — LOCUM TENENCY (LONG OR short period) by Scotsman, bachelor. Just sold own practice. Assistantship with view considered.—Address, No. 834, B.M.A. House, Tavistock Square, W.C.1.

PARTNERSHIPS.

MIDLANDS. — PARTNERSHIP (AFTER PRELIminary Assistantship); SHARE produceing about £700 for sale. Practice established four years, steadily increasing. Panel over 1,150. Scottish graduate preferred. Premium 2 years' purchase. Modern house for sale, 2 recep., 5 bed., garage, and professional rooms.—No. 811, B.M.A. House, Tavistock Sq., W.C.1.

PARTNERSHIP (OR PRACTICE) WANTED BY Public School and Univ. man, in private and panel Practice, Home Counties, £1,000 p.a. St. Thomas's, aged 36, 2 yrs.' P.G., 8 yrs.' G.P. exp. M.D., B.S., M.R.C.S. Free now. Cap. avail. —No. 3759, B.M.A. House, Tavistock Sq., W.C.1.

PARTNERSHIP WANTED BY M.D.LOND., aged 27, in good town, Southern England or E. Anglia. Hospital appointment desired. 5½ years Medical and Surgical appointments, mostly teaching Hospital. Capital available. —No. 731, B.M.A. House, Tavistock Sq., W.C.1.

MEDICAL POSTS, DISPENSERS, etc.

WANTED. — YOUNG ENERGETIC SCOTS Graduate, good appearance and address, for Yorkshire PRACTICE. State age, experience, qualifications, and essential particulars. Motorist. Photo. returnable.—Address, No. 831, B.M.A. House, Tavistock Square, W.C.1.

WANTED BY M.R.C.P., APPOINTMENT, with or without view in the United Kingdom or abroad. Age 32, exp. G.P. and panel, and 4½ years' experience in India.—Address, No. 812, B.M.A. House, Tavistock Sq., W.C.1.

WANTED, IN A MIDLAND TOWN, YOUNG Irishman. Cycle. Work easy. Night work almost nil. — Address, No. 815, B.M.A. House, Tavistock Square, W.C.1.

A LADY DISPENSER - BOOKKEEPER supplied immediately on request, qualified and with practical experience in private practice and dispensary work, also trained in Bacteriological Laboratories of the LONDON COLLEGE OF PHARMACY FOR WOMEN. Preparation for Examinations. — Write, wire, or phone (Bayswater 0969), Secretary, 7, Westbourne Park Road, W.2.

PRIVATE SECRETARY (YOUNG GENTLEWOMAN) disengaged afternoons and evenings. High speed English and French shorthand — typewriting — German — accounts. 3½ years' medical and literary exp. Personality and initiative. Excellent recommendations.—No. 817, B.M.A. House, Tavistock Sq., W.C.1.

A WHOLE OR PART-TIME POST REQUIRED. Deep and Superficial X-ray therapy. Medical Electricity. Radium treatments. Radiography. Secretarial work. Three years' Nursing training with excellent theatre experience. Private preferred.—Address, No. 816, B.M.A. House, Tavistock Square, W.C.1.

DOCTOR'S DAUGHTER SEEKS POST, qualified DISPENSER, knowledge book-keeping; good references. Drive car. Very domesticated. Act as Receptionist.—Miss VERA ACKLAND, 103, Comeragh Road, Baron's Court, W.14.

DOCTORS REQUIRING QUALIFIED Dispensers, Nurse-Dispensers, Secretary-Dispensers or Chauffeuse-Dispensers, are invited to write, wire, or 'phone Temple Bar 5858, THE DISPENSERS' BUREAU, 3, Lindsay House, 171, Shaftesbury Avenue, London, W.C.2.

LADY DISPENSER. — APOTHECARY HALL qualification; knowledge of typewriting, bookkeeping, business correspondence, etc., DESIRES POST with Doctor (London preferred). —Address, No. 827, B.M.A. House, Tavistock Square, W.C.1.

LADY SECRETARY-DISPENSER (HALL), 5 years' experience general practice, typing, book-keeping, routine duties of M.O.H., aged 24, desires POST with Doctor within 50 miles London. — COLLY, "Ruddicot," Elms Road, Harrow Weald. Stanmore 464.

OCULIST, EXPERIENCED CHILDREN, REQUIRED for School Treatment Centre, one session weekly; preferably Tuesday morning. L.C.C. scale of remuneration. Application by letter, with two recent testimonials, to Miss RUSSELL, Bishop Creighton House, Fulham, S.W.6.

SECRETARY, YOUNG, TRAINED AT WELLknown College requires POST in or near London.—LAWRENCE, 7, Nevern Place, S.W.5.

THE ROYAL ARMY MEDICAL CORPS ASSOCIATION, 85, Eccleston Square, S.W.1 (Telephone: Victoria 2722), supplies qualified Dispensers, Bookkeepers, Laboratory Assistants, Sanitary Assistants, Male Nurses, Mental and Special Treatment Orderlies, Dental Clerk Orderlies, Porters, Caretakers, etc., without charge to prospective employers.

PRACTICES.

WANTED, KETTERING, COVENTRY, Bristol, Gloster, Northants, or Midland District, mixed PRACTICE. Income £600.—£1,000. Good panel. House on rent.—Address, No. 818, B.M.A. House, Tavistock Sq., W.C.1.

WANTED. — PRACTICE OR PARTNERSHIP, with good income and surgical prospects, by experienced Cambridge man holding F.R.C.S. Eng. — Address, No. 813, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — NUCLEUS OR SMALL PRACTICE by elderly Practitioner. Country Town with Cottage Hospital in South preferred. —Address, No. 824, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — SOUTH WALES COAST OR South England, near Coast, private and small panel PRACTICE. Income £1,700 to £2,400. Ample capital available.—Address, No. 822, B.M.A. House, Tavistock Square, W.C.1.

WANTED, S.W. SUBURB OR NEAR, PRACTICE with panel and scope. Essential particulars in strict confidence to No. 823, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — PRACTICE, LARGE PANEL (2,000). £1,600—£1,800. Midlands or London. Cash. — Address, No. 833, B.M.A. House, Tavistock Square, W.C.1.

WANTED.—PRACTICE (OR PARTNERSHIP), £1,500 or over, convenient to London. Good panel. House, with garden, in pleasant part, and good educational facilities essential. —Address, No. 2168, B.M.A. House, Tavistock Square, W.C.1.

FOR SALE.—IN PLEASANT N.W. SUBURB. A rapidly increasing PRACTICE. Established 14 years. Takings for 1932, £400. Panel nearly 200. Reason for sale serious ill-health. Premium for Practice £500 for quick sale. — Address, No. 814, B.M.A. House, Tavistock Square, W.C.1.

FOR SALE.—CASH AND PANEL PRACTICE (lock-up) in East London. Corner house, rent free, on long lease. Average receipts over £700 p.a. Considerable scope. Premium £650. —Address, No. 830, B.M.A. House, Tavistock Square, W.C.1.

LANCS, LARGE TOWN.—DEATH VACANCY. Old-established PRACTICE, held several years by Vendor. Receipts nearly £1,000 p.a., including panel 806. House available. Any reasonable offer considered.—Apply, PEACOCK & HADLEY, 19, Craven Street, Strand, W.C.2.

LANCS TOWN.—OLD-ESTABLISHED. GOOD house, pleasant district, £50. Receipts over £400. Excellent scope. Transferable appointment £75. Panel 60, increasing. Price £500.—MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION, 6, Brown Street.

LONDON, E. (NEAR FOREST GATE).—WELL-established mixed-class PRACTICE. Receipts average about £340 p.a., including panel of 216. Nice garden, rent £52 p.a. Vendor is wanting a much larger Practice and will accept £275 for quick sale. Apply, PEACOCK & HADLEY, LTD., 19, Craven Street, Strand, W.C.2.

LONDON (NEAR FOREST GATE).—DEATH Vacancy. Well-established mixed-class cash and panel PRACTICE. Receipts about £900 p.a. Nice flat available. Premium £650 for quick sale.—Apply, PEACOCK & HADLEY, LTD., 19, Craven Street Strand, W.C.2.

LONDON, S.E. (5 MINS. CHARING CROSS). —Well-established PRACTICE. Receipts at one time were £500, decreased last 12 months. Present panel 135 and about £2 weekly private. Flat available. Very small sum accepted for quick sale.—Apply, PEACOCK & HADLEY, LTD., 19, Craven St., Strand, W.C.2.

MANCHESTER. — OLD-ESTABLISHED IN well-populated district, owner retiring. Receipts exceed £700. Panel over 600, with great scope. Good corner house. Price £1,000, part deferred.—MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION, 6, Brown Street.

M.D., F.R.C.S.(ENG.), MANY YEARS' EXperience of good-class Practice, desires PRACTICE, PARTNERSHIP, or APPOINTMENT. South and Country preferred. Good house. No panel. — Address, No. 821, B.M.A. House, Tavistock Square, W.C.1.

NORTH-WEST COAST. — FAVOURITE SEAside Town.—Middle-class PRACTICE. Cash receipts over £1,500, increasing, audited. Panel nearly 700. Good house, freehold, 2 reception rooms, 5 bedrooms, surgery, waiting room, separate entrance, garage. Price £2,000; must be sold with practice. Premium for practice 11 years' purchase. Must have capital available. — Address, No. 810, B.M.A. House, Tavistock Square, W.C.1.

SOUTH AFRICA (CAPE PROVINCE). — PRACTICE of £2,000—£2,500 p.a. in Residential District close to one of the Principal Coastal Towns. Good house (5 bedrooms, etc.) Scope for surgery. Premium one year's purchase.—Address, No. 836, B.M.A. House, Tavistock Square, W.C.1.

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Please write clearly and print your name and address in block letters. State if a box number is required; there is no extra charge for this or for forwarding replies by post.

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In all cases, and particularly when seeking Assistants, it is an advantage to indicate the locality.

Advertisements intended for insertion under the "Locums" heading should be drafted in such a way as to make it clear whether a post is offered or required.

All communications should be addressed to
THE MANAGER,
BRITISH MEDICAL JOURNAL,
B.M.A. HOUSE,
TAVISTOCK SQUARE, W.C.1.
Telephone: Museum 9861.

CONSULTING ROOMS TO LET. — HARLEY Street, Wimpole Street and district. Whole and part-time. Lists sent on application. Rooms wanted in Harley Street district. — ELGOOD & CO., 10, Henrietta St., Cavendish Sq., W.1. Langham 2601.

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GROUND FLOOR MAISONETTE, 40, PORTland Place, W.—TO LET, no premium, 6 main rooms, ante-room, 2 bath, kitchen, etc., 2 maids' rooms, garage. Modern conveniences. Inclusive £625.—Langham 1153.

MODERN HOUSE OPPOSITE IMPORTANT N. London suburban station. Five rooms; labour-saving details; new condition throughout. Garage space, cellar. £990 freehold.—Write, Box 129, SELLS, Fleet Street, E.C.4.

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NURSING HOME, 17, AINSLIE PLACE, EDINBURGH.—Well-established connection. PROPERTY and GOODWILL, also FURNISHINGS, etc., FOR SALE consequent on retirement of Proprietrix. Assessed rent £170. Feu duty £11 3s. 5d.—Further particulars from M. J. BROWN, SON & CO., S.S.C., 7, North St. David Street, Edinburgh.

PROPRIETRESS OF PRIVATE NURSING Home in attractive Health Resort in North Midlands wishing to retire, desires to SELL as going concern. Registered for 15 patients. Special provision for maternity cases. Price, including furnishings £1,500.—Full particulars from J. B. BOYD, WRIGLEY & CO., Chartered Accountants, 55, Brown Street, Manchester.

ST. JOHN'S WOOD.—DOCTOR MOVING TO West End wishes to DISPOSE of LEASE of attractive small corner HOUSE, main road, where he has established Practice over 2 years. Low rent. Suit somebody with Practice elsewhere. — Address, No. 825, B.M.A. House, Tavistock Square, W.C.1.

TO DENTISTS. — DOCTOR HAS LARGE, bright, corner surgery, main road, Fulham, offers Dentist CONSULTING ROOM, with joint use of waiting room. Ample accommodation. —Address, No. 801, B.M.A. House, Tavistock Square, W.C.1.

TO LET. — PART-TIME CONSULTING ROOM; use waiting room; services; Queen Anne St., Cavendish Square. Plate on door. Rent £40 per annum.—Address, No. 601, B.M.A. House, Tavistock Square, W.C.1.

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EXTRA PHARMACOPOEIA.—FIRST TO 10th Editions wanted. Offers.—Address, No. 809, B.M.A. House, Tavistock Square, W.C.1.

APPOINTMENTS.—Contd.

THE GUEST HOSPITAL, DUDLEY.
(General Hospital—107 Beds.)

Applications are invited for the post of ASSISTANT HOUSE SURGEON. Salary £170 per annum, with furnished apartments, board, and laundry. Duties to commence March 1st. Candidates must be fully qualified and registered.

Applications, stating age, qualifications, and experience, and accompanied by copies of testimonials, to be sent to the undersigned.

H. RAYMOND HURST,
House Governor and Secretary.
The Guest Hospital, Dudley.
January 17th, 1933.

DARLINGTON MEMORIAL HOSPITAL.
(200 Beds.)

Applications are invited for the post of JUNIOR HOUSE SURGEON; one of three appointments, male, British. Salary £150 per annum, with board, residence, and laundry. Casualties and Special Departments (Ear, Nose, Throat, and Eye). Applications, with full particulars, together with copies of two recent testimonials, to be sent to me forthwith.

A. RIDDLE, Secretary.

EASTERN DISPENSARY, LEMAN STREET, E.1.

Applications are invited for the post of OPHTHALMIC SURGEON. Candidates must be Fellows of a Royal College of Surgeons or Masters of Surgery of a University in the United Kingdom. An honorarium is given.

GEORGE W. ILSLEY,
Secretary.
January 17th, 1933.

TAUNTON AND SOMERSET HOSPITAL, TAUNTON. (104 Beds.)

HOUSE PHYSICIAN required at the end of February. Three Residents on Staff. Salary at the rate of £100 per annum. Applications, from either sex, with testimonials, to F. J. J. STACEY, Secretary.

ST. JOHN'S HOSPITAL, LEWISHAM, S.E.13.

There is a vacancy for an HONORARY ANAESTHETIST (male), who will be required to give anaesthetics on one half-day weekly. Applications should be received by the undersigned within a week of this publication.

J. C. GILBERT, Secretary-Supt.

WEST LONDON HOSPITAL, Hammersmith Road, W.6 (234 Beds.)

Applications are invited for the post of ASSISTANT PHYSICIAN for Medical Diseases of Children (Out-Patient Department). Candidates must have a University Degree recognized by the General Medical Council and must be Fellows or Members of the Royal College of Physicians of London. The successful candidate will be required in addition to other duties, periodically to deliver Medical Courses of Lectures to the Nurses and to undertake such teaching for the Post-Graduate College as the Board may approve.

Applications, with copies only of testimonials, should reach me not later than Thursday, February 23rd. Candidates must attend the Medical Council Meeting on Friday, February 24th, at 4.30 p.m., and prior to that date call upon and send copies of application and testimonials to each Member thereof. They must not canvass Members of the Board of Management, but nevertheless must send copies of application and testimonials to each member thereof and, if so notified, be in attendance at a Meeting of the Board who will elect on Tuesday, February 28th, at 5 p.m.

H. A. MADGE, Secretary.

ST. BARTHOLOMEW'S HOSPITAL, London, E.C.1.

OFFICE OF ASSISTANT SURGEON.

Notice is hereby given that a meeting of the Election Committee will be held on Tuesday, February 28th, at 4 o'clock in the afternoon, to elect an Assistant Surgeon to the Hospital. Candidates, who must be Fellows of the Royal College of Surgeons of England, are required to lodge fifty copies of their applications and testimonials with the undersigned on or before Saturday, February 11th.

THOMAS HAYES,
Clerk to the Governors.
Jan. 18th, 1933.

HERTFORD COUNTY HOSPITAL.

Applications are invited for the post of HOUSE PHYSICIAN (male). Salary £150 per annum, with board, residence, and laundry. Duties to include Casualty, Obstetrics; and some Surgical work. The appointment to be for six months, in the first instance, commencing February 15th.

Applications, together with copies of three recent testimonials, should be sent to the undersigned not later than Monday, February 6th.

PERCY G. BROOKS, Secretary.

ANCOATS HOSPITAL, MANCHESTER.

A vacancy for a HOUSE SURGEON will occur on February 14th. The appointment is for six months, and the salary at the rate of £100 per annum, with board, residence, etc.

Applications, stating age, qualifications, experience, if any, and full particulars, to be forwarded to the undersigned on or before February 1st, together with copies of three recent testimonials.

By Order of the Board,
HERBERT J. DAFFORNE,
Gen. Supt. & Secretary.

BRADFORD ROYAL INFIRMARY.

THREE HOUSE SURGEONS (male) wanted March 1st (six months' appointment). Candidates must be single and legally qualified. Salary £135 per annum, with board, residence, and washing. There are 215 beds and six resident officers.

Applications, stating age, qualifications, and previous experience (if any), with copies of recent testimonials, to be received by the undersigned not later than January 24th.

J. J. BARRON,
Secretary-Superintendent.

CAMERON HOSPITAL, WEST HARTLEPOOL.

Applications are invited for the post of HOUSE SURGEON, vacant February 1st. Salary £150 per annum, with board, residence, and laundry.

Applications, stating age, qualifications, and experience, with copies of recent testimonials, to be forwarded immediately to the undersigned.

H. WOODHALL, Secretary.

THE ROYAL EYE AND EAR HOSPITAL, BRADFORD.

Wanted, JUNIOR HOUSE SURGEON (male). Salary £150, with board, residence, and laundry. Applications, stating qualifications, age, etc., with copies of recent testimonials, to be forwarded to the undersigned.

F. BRIGGS, Secretary-Supt.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN, Park Place, Cheetham Hill Road, MANCHESTER.

The Committee of Management require the services of a SENIOR HOUSE SURGEON and JUNIOR HOUSE SURGEON, both duly qualified, who are to commence duties on March 1st. Senior House Surgeon, salary £130 per annum, with board and residence; Junior House Surgeon, salary £100 per annum, with board only.

Applications, stating age and experience, with copies of recent testimonials, to be sent to the Secretary, Mr. JAMES C. DANIELS, 38, Barton Arcade, Manchester, not later than the first post February 3rd.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.1.

Applications are invited for the post of HOUSE PHYSICIAN (male) for six months from February 12th (first two months in Casualty and Out-Patient Department). Salary at the rate of £120 per annum, with board and residence.

Applications, stating age, experience, and qualifications, accompanied by copies of four testimonials, to be sent to the undersigned not later than January 24th, from whom rules and other particulars can be obtained.

By Order of the Committee of Management,
W. H. SIDNELL,
Secretary-Supt.
Jan. 3rd, 1933.

THE ROYAL LIVERPOOL CHILDREN'S HOSPITAL.

There will be vacancies on April 1st next for ONE RESIDENT MEDICAL OFFICER and ONE RESIDENT SURGICAL OFFICER at the HESWALL BRANCH of the Institution (240 beds). The appointments will be for a period of six months. Salary in each case at the rate of £120 per annum. Applications, with copies of recent testimonials, to be sent to the Secretary, Royal Liverpool Children's Hospital, Myrtle Street, Liverpool, on or before Saturday, January 28th.

THE ROYAL LIVERPOOL CHILDREN'S HOSPITAL.

There will be vacancies on April 1st next for TWO RESIDENT HOUSE PHYSICIANS and TWO RESIDENT HOUSE SURGEONS at the CITY BRANCH, Myrtle Street. The appointments will be for a period of six months. Salary in each case at the rate of £100 per annum. Applications, with copies of recent testimonials, to be sent to the Secretary, Royal Liverpool Children's Hospital, Myrtle Street, Liverpool, on or before Saturday, January 28th.

SOUTHEND-ON-SEA GENERAL HOSPITAL.

A Resident OBSTETRIC HOUSE OFFICER is required for the above Hospital. He will have charge of 24 beds, and previous resident Obstetric experience is essential. The appointment will be for six months, and is renewable. Duties to commence on Saturday, February 11th. Applications should be received on or before Saturday, February 4th, by the Secretary, who will be pleased to give any further information relating to the appointment.

BUCHANAN HOSPITAL, ST. LEONARDS-ON-SEA.

Applications are invited for two posts of HONORARY ANAESTHETISTS at the above Hospital.

Applications, together with copies of recent testimonials, should be sent before February 3rd to the undersigned, from whom further particulars may be obtained.

S. C. W. DISNEY, Secretary.

LONDON HOSPITAL, E.

There is a vacancy for the post of ASSISTANT PHYSICIAN at this Hospital.

Candidates must be Members of the Royal College of Physicians of London.

Applications should be sent to the House Governor, and should arrive not later than Saturday, February 11th.

ARTHUR G. ELLIOTT,
London Hospital, E. House Governor.

THE BUTE HOSPITAL, LUTON, invites applications for the post of HONORARY CONSULTING SURGEON. Applicants should communicate with the Secretary of the Medical Advisory Committee at the hospital.

THE LONDON LOCK HOSPITAL,
91, Dean Street.

The Board of Management invite applications for an appointment of SURGICAL REGISTRAR. Honorarium £100 per annum. Appointment is for one year in the first instance. Candidates, who must be doubly qualified and duly registered, should send their applications, together with *three copies of testimonials, not* later than the first post on January 25th, addressed to the undersigned, from whom copies of the laws and bye-laws relating to the appointment can be obtained. Candidates must be Fellows (or Members) of the Royal College of Surgeons of England, or Surgical Graduates of a University of the United Kingdom. Duties to commence forthwith.

By Order of the Board.
J. F. MORTON,
January, 1933. Assistant Secretary.

PUTNEY HOSPITAL,
Lower Common, S.W.15.

STAFF APPOINTMENT.

The Board of Management invites applications for the post of SURGEON to fill the vacancy caused by the death of Mr. H. S. Clogg.

Candidates must hold the degree of Master of Surgery or F.R.C.S.(England).

Seven Private Wards for paying patients are attached to the Hospital.

Applications, stating age, present appointments held, etc., should be received by the undersigned on or before Saturday, Feb. 4th.

H. SEYMOUR HADWEN, Secretary.

QUEEN MARY'S HOSPITAL FOR THE EAST END, E.15.

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(b) ANAESTHETIST (SURGICAL)—Thursday *mornings* 9 a.m. Honorarium 50 guineas.

Applications, accompanied by copies of testimonials from *male* candidates only, should be forwarded to the undersigned on or before Wednesday, February 1st.

RAPHAEL JACKSON, Major,
Secretary.

CHARING CROSS HOSPITAL.

RESIDENT MEDICAL OFFICER.

Applications are invited for the post of Resident Medical Officer from male candidates (unmarried) who must be registered Medical Practitioners.

Salary £350 per annum, plus additional fees amounting to approximately £75 per annum. The rules of the office may be obtained from the undersigned, to whom applications, accompanied by copies of three recent testimonials, must be delivered not later than Monday, January 30th.

PHILIP INMAN, House Governor.
Charing Cross Hospital, London, W.C.2.

CHARING CROSS HOSPITAL.

ASSISTANT SURGEON.

The Council invite applications for the post of ASSISTANT SURGEON to the Charing Cross Hospital. Candidates, who must be Fellows of the Royal College of Surgeons of England, should send in their applications, together with copies of three testimonials, to the undersigned not later than Monday, January 30th.

Charing Cross Hospital, W.C.2. PHILIP INMAN, House Governor.

Telephone: WELBECK 2728.
Telegrams: "ASSISTIAMO, LONDON."

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W. J. HICKS, *Secretary.*

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Readers of the Journal are presented week by week with a comprehensive summary of products necessary to the medical man both in his professional and private life. The advertisement pages of the Journal are carefully scrutinised before going to press, in order that our readers may deal confidently with those firms whose announcements win their interest and attention.

Modern advertising seeks to increase demand, thereby stimulating production and building a circle of prosperity, which ultimately reacts to the advantage of the purchaser himself. Advertised products necessarily maintain a high standard of excellence, for disaster must naturally come speedily to the manufacturer who through any cause and at any time loses the confidence of his customers.

It is the policy of the Journal to convince advertisers that doctors prefer to be approached directly through the pages of their own publication, for in this way we believe manufacturers are encouraged to consider the special needs of the profession, and to state clearly the results of their efforts to meet these requirements when seeking orders from medical men.

The "small" advertisements section provides a *forum* for the "domestic" business of the profession, and those wishing to arrange the Sale or Purchase of Practices, requiring Assistants or Assistancies, and Partners or Partnerships, may in these pages reach thousands of their fellow medical men at very economical cost. Such transactions may, in addition, be protected by the secrecy which the free Box Number service provides.

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DEATH VACANCY.—LANCASHIRE TOWN. Average over £900 p.a. Panel over £300. Old-established working-class. Nice house in good main road position. Would be sold or let. Locum in charge.—No. 9121.

LANCS MANUFACTURING TOWN. — £725 p.a. Panel over 1,650. No appts. Mixed dispensing PRACTICE. Detached house, 5 bed., 3 recep., surg., etc., with separate entrance. Garden and garage. To rent on lease.—No. 9120.

LINCS WOLDS. — UNOPPOSED PRACTICE. *About* £700 p.a. Panel 325. Appts. about £04 p.a. Visits 3/6 to 15/-. Midy 2 to 5 gns. Freehold residence, 5 rooms and professional and domestic offices. Garage and garden. For sale £800.—No. 9115.

OUTER RESIDENTIAL SUBURB. — GOOD-class PRACTICE hitherto worked only part-time. £350 p.a. No panel and non-dispensing. No midy. taken. Visiting fees 10/6 and 21/-. Good freehold house, 2 reception, 7 bedrooms, 2 bath., cons. room, etc. Price £2,850 for house and Practice.—No. 9110.

CHANNEL ISLES.—OVER £400 P.A. NON-panel. No midy taken. Ins. work about £60 p.a. Visits 3/6 to 7/6. Premium 1½ yrs.' purchase. Trout and sea-fishing. Choice of houses.—No. 9107.

ANGLO-WELSH BORDERS.—PARTNERSHIP. One-third share of £1,800 p.a., increasing to half later. Panel and appts. about £765. Fees 7/6 to 42/-. Partner should be physician. Good modern hospital.—No. 9105.

YORKSHIRE COAST TOWN. — OVER £800 p.a. Visiting fees 3/6 to 7/6, surgery 2/6 up. Two appointments worth £50 p.a. Midy. cases average 10—20 p.a. Premium £1,250. Good house, 2 reception rooms, 4 bedrooms, bathroom, etc., surgery and waiting room, good garden and garage. Price £1,700. —No. 9104.

BERKS. — OLD-ESTABLISHED. — COUNTRY PRACTICE, about £700 p.a. has been £1,100. Panel about 500. Visiting fees 2/6 to 7/6. Very little midwifery. Splendid house, specially built for Vendor, with two acres of *grounds*, 2 *reception rooms*, 6 *bedrooms*, surgery, and waiting rooms, etc. Consider £4,000 offer for Practice & house, freehold.—No. 9100.

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YORKSHIRE. — *AVERAGING* £981 P.A., with panel of 400. Better-class dispensing PRACTICE in outskirts of large town. Appointments worth £45 p.a. Very little midwifery. Visiting fees 3/6 to 10/6 and 21/-. Premium £1,350. Handsome stone-built house in centre of Practice, with 6 bed., waiting and cons. with sep. ent. Large lounge and dining room, etc. *Garage* for 2 cars. Rent £100 p.a.—No. 9098.

MIDDLESEX SUBURB.—RAPIDLY GROWING residential district. Established 3½ years and at present returning about £600 p.a. Visiting fees 5/- up. Midwifery 3 to 6 gns. House, with 2 reception, 5 bedrooms, separate surgery and waiting room, and large garden. Sell at £1,600, mortgage £1,000. Premium for goodwill £900 or offer.—No. 9070.

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WANTED.

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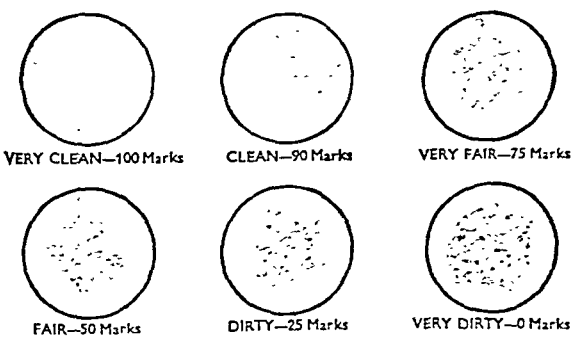

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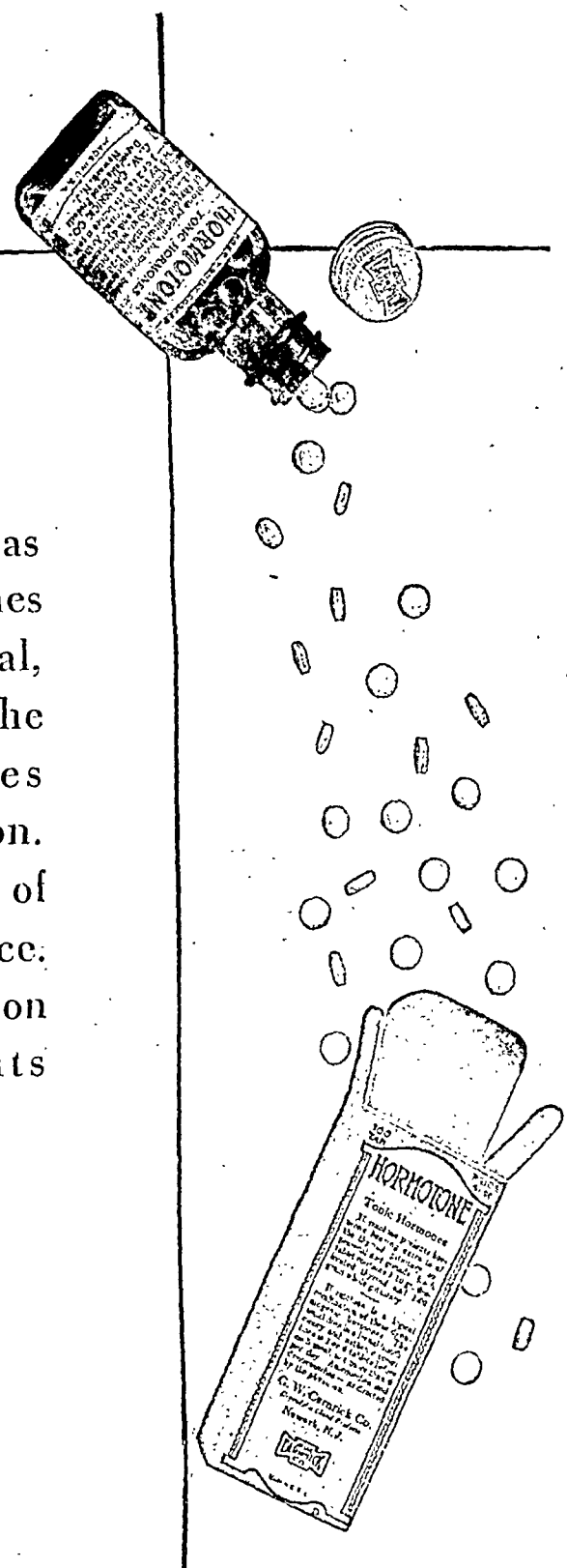

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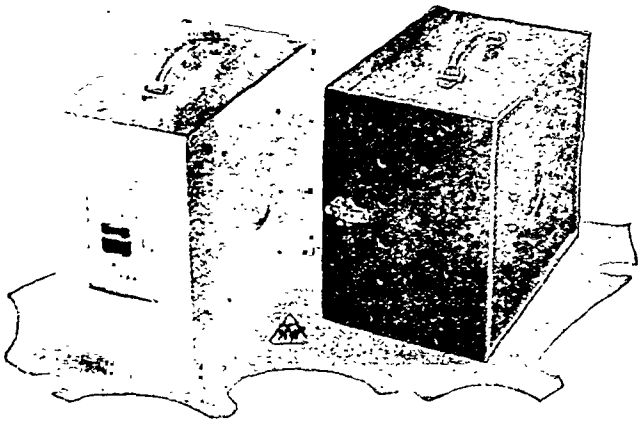

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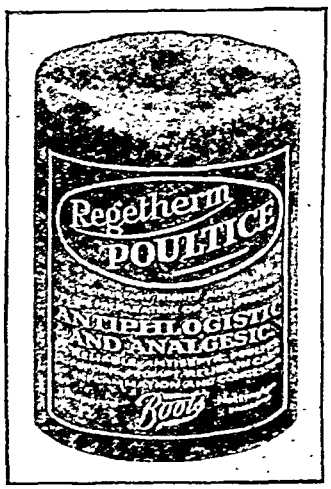

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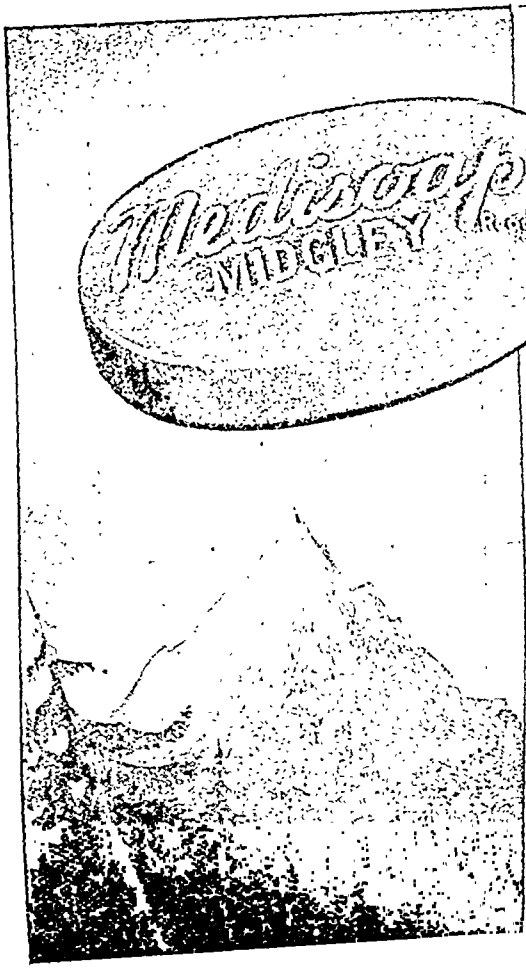

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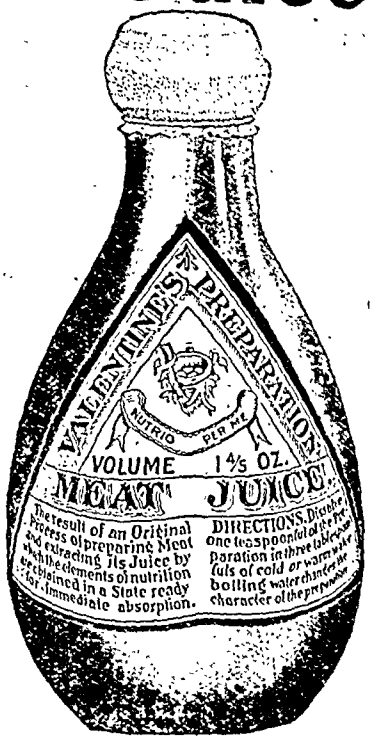

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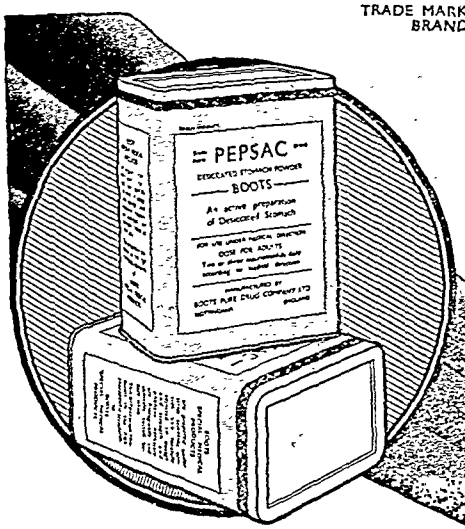

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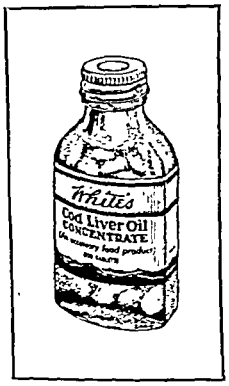

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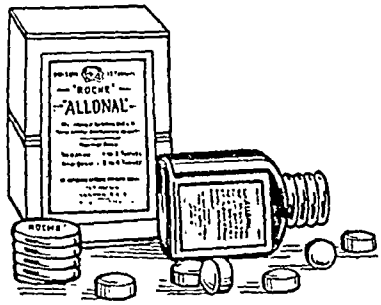

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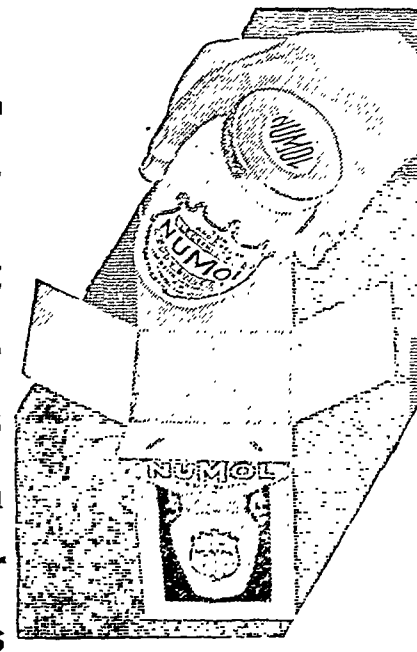

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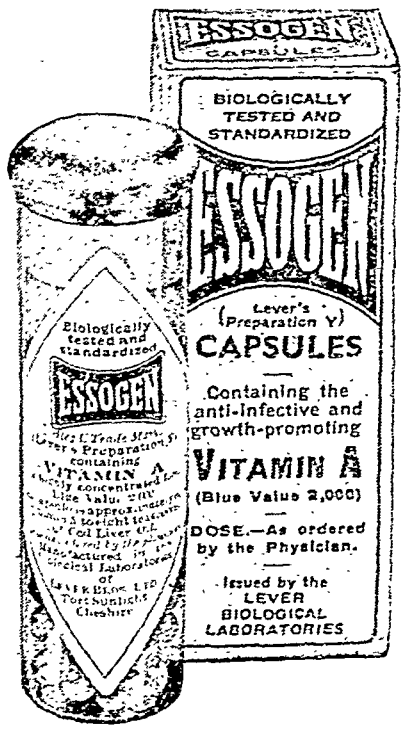

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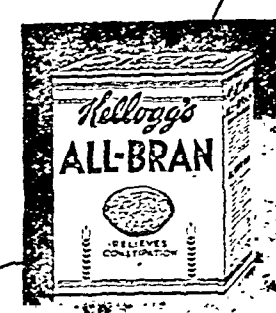

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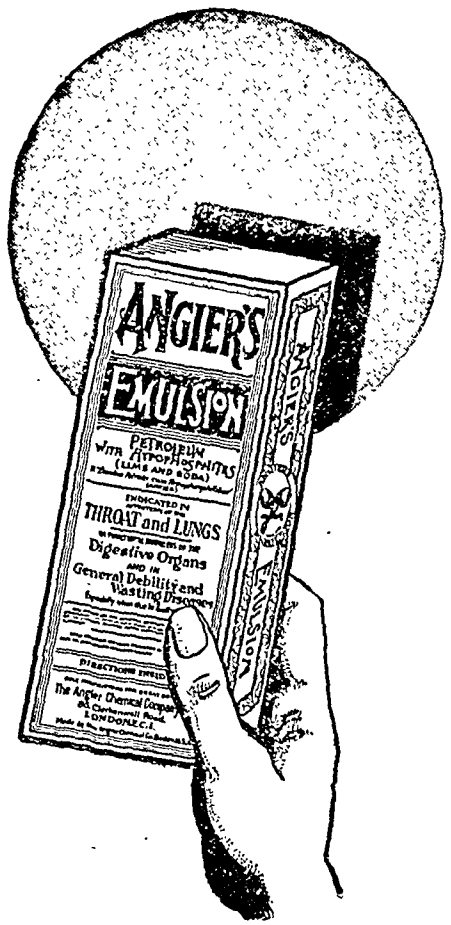

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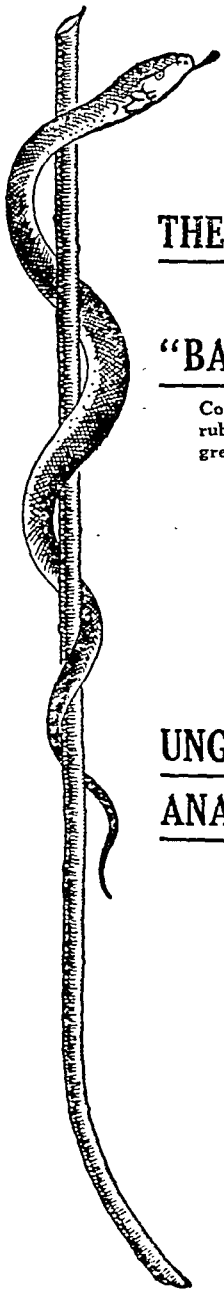

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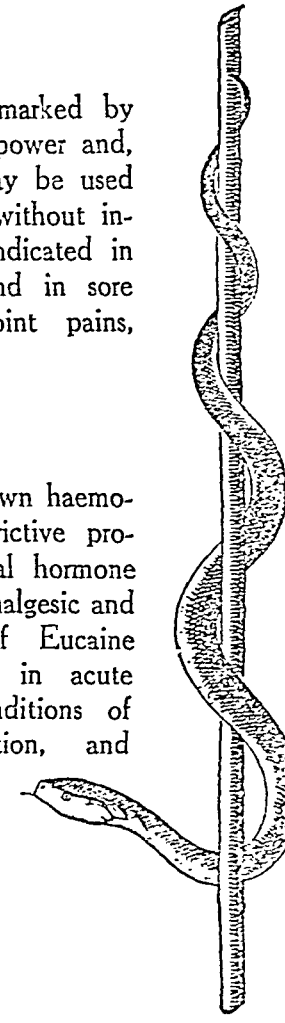

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SPECIFY ELASTOPLAST ON YOUR PRESCRIPTIONS

A Paper
ON
SIGHT-SAVING CLASSES*

BY
N. BISHOP HARMAN, M.A., M.B., F.R.C.S., LL.D.
MEMBRE D'HONNEUR, ASSOCIATION INTERNATIONALE DE PROPHYLAXIE DE LA CÉCITÉ

THE DIFFICULTIES OF STANDARDIZED SCHOOLS

The demand for some scheme of education suitable for children suffering from a defect of vision is a very natural one. It is bound to arise when education is made compulsory for every child; it is also bound to arise because no one scheme of education will cover all cases. The curriculum of any school is designed for the greatest good of the greatest number. Misfits must suffer because either they are incapable of taking advantage of the education provided, or the scheme would be injurious to them if their full attendance were insisted upon. This was early recognized in the case of the blind, and special education was provided. There has been no lack of generous efforts by intelligent and sympathetic people to found schools where the blind could be trained in such arts and crafts as would fit them for some place in the national life. Of work for the prevention of blindness and for the help of the unfortunate blind there has been no lack.

The duty of inspecting children in the schools for the blind maintained by the London education authority first brought home to me, however, the disabilities of those children who were neither blind nor well sighted, and for whose education and training there was no appropriate provision. They received no proper education, since they either idled in the ordinary school or were left to run the streets, or were trained in the blind school, which was equally bad for them. When I first worked out the incidence of blindness in these schools I found no less than 6 per cent. of children were myopes who were not blind, and would probably never become blind. That experience led me to voice their grievances in a paper read at the Second International Congress of School Hygiene held in London in 1907.[1] I protested that it was not only a waste of public money, but injurious to them that they should be taught with blind children.

By great good fortune the chairman of the Section at which the paper was read was a member of the Education Committee of the London County Council, Miss Adler. Her interest was engaged, and the next year—1908—the first experimental class was started with the backing of Dr. James Kerr, the school medical officer, and of the school teachers. The official report on the first year's working closed with the words: "It seems to be such a success as to warrant the opening of other centres for the same purpose." There are now thirty-seven classes in fifteen centres in London with a roll of 850 children; also 100 places for myopes in five schools for higher education. There are classes in nearly all the large towns in England and Scotland, in some other countries of Europe,[2] in Canada,[3] and some hundreds in the United States of America.[4] When in Canada in 1930 I learned how rapid had been the advance in the provision of sight-saving classes in the States and how favourable the method had become in the eyes of educationists and ophthalmic surgeons. In this paper I will survey our experience in London during the past twenty-five years, time enough to permit a fair judgement of the worth of these classes.

THE CHILDREN

Any child who can see but yet cannot see the normal average of the test types at the proper distance is short-sighted in the general sense of the term. Many cases of short sight can be corrected by glasses, and if the defect is not of a serious order the child will be found to be capable of joining in the ordinary school work. If the defect cannot be relieved by glasses, or when susceptible of correction is of such a serious nature that the ordinary form of class work would be injurious, then some special provision must be made. This provision is the "myope class," so called in England because most of the children in these classes are myopes. The term "sight-saving class" came from America. For a time I was dubious about its use; the succession of sibilants is unpleasing, but the chief objection lay in the claim which the term set up. Could it be justified? It confessedly had a distinct value when dealing with dubious parents: those who were inclined to demur to their child being transferred to a "myope class" readily agreed when it was called a "sight-saving class."

Examining the records of a large number of children who have been in the classes, I find that the eye defects fall into three groups, according to their nature:

Myopia	62.62 per cent.
Damages due to inflammation ...	30.35 ,,
Congenital defects	7.02 ,,

Briefly, some two-thirds of the children are high myopes and one-third have damaged or imperfect eyes. The sight-saving classes would be wholly justified by reason of the provision which they make for the latter. Such children are under far happier conditions than in the ordinary school. The individual attention they receive enables them to make advances that are impossible when they are lost in a crowd of healthy, active children, and the care exercised is definitely beneficial to those who have suffered many relapses from keratitis. It is true that the presence of these children, and especially of those with congenital defects of the eyes, complicates the curriculum, since they are not up to the same standard of intelligence and capacity as the myopes. Also their presence reduces the popularity of the classes in the eyes of parents, who are apt to resent the association of their own children with "defectives." But these difficulties are reduced with the increase in number of the classes and the possibilities of classification.

Since the greater number of the children are high myopes the classes must be judged by the services which they render to these children. First, let it be made clear that the classes are not based on any theory of myopia; they are based upon the necessity of meeting, as satisfactorily as we can, a heavy handicap, which tells seriously against the chances of a fair start in life. Myopia may be the product of several causes—heredity, congenital defect, illness, bad social conditions, and too much close eye work. The last two we can deal with. Social conditions are definitely improving, and it is our duty to control such eye work as must be done in school. Personally I have no doubt of the injurious effects, in susceptible children, of prolonged close eye work, and that this is a cause or an aggravation of myopia. Also I am sure, on such evidence as I have, that the control of eye work is beneficial to myopes. I have observed the progress over long periods of a group of 300 children. The results have been published[5] and compared with those recorded by Priestley Smith.[6] There was some advantage for my cases, but I admit that there is, and can be, no sufficient "control" of any such observations. Much more to the point are such facts as have been recorded through school medical inspection in Sweden. In that country improvement in hygiene and in school lighting, the abolition of the old Gothic type in favour of Roman, and the increase in outdoor sports have been followed by a reduction in the incidence of myopia which is remarkable. That the regulation of close work is a material

* Read at the annual meeting of the Association Internationale de Prophylaxie de la Cécité in Paris, November, 1932.

factor in that reduction is evident, since Dr. Hogarth[7] states:

"There is a 20 per cent. greater decrease on the modern as compared with the classical side. Classical studies require closer attention to books, and entail the more frequent use of dictionaries, which are generally printed in small type. Greek especially presents a form of lettering entirely new to a pupil, and requires very close concentration."

The report of the oculists who served on the British Association Committee[8] is, I think, fully justified:

"Myopia, or short-sight, commonly depends on undue elongation of the eyeball. It is never, or hardly ever, present at birth. It is rare at 5 years of age. It usually begins during school life, and increases more or less from year to year during the period of growth. It sometimes continues to increase after growth is completed. It is *not necessarily or* always associated with over-use of the eyes, either in school or elsewhere, for we see it arise after illness, we meet with it in illiterates, and we know that the predisposition is *strongly hereditary. But it is everywhere most frequent among the studious, and there is a mass of evidence to show that* it depends very largely, both in its origin and in its progress, on over-use of the eyes in near work."

There is also evidence of the injurious effects of close work in adult life. Out of a series of 480 myopes[9] of over 3 D between the working ages of 20 and 60 years no less than 53 per cent. of those engaged in close work came to a time when there was an unmistakable failure of ability to carry on because of serious eyestrain, and this number included 15 per cent. who suffered damage to their eyes. When grouped according to degree of myopia the following results were obtained:

Myopia 3 to 5 D—breakdowns 33.7 per cent.; 5 to 10 D—breakdowns 66.5 per cent.; over 10 D—breakdowns 77.4 per cent.

Of those who were not engaged in continuous close work only 9.4 per cent. experienced a critical failure of capacity owing to eyestrain or disease. There is cumulative evidence that myopia is often started and is frequently aggravated by too much close eye work. We are therefore fully justified in checking these habits in susceptible adolescents, and in diverting their attention to ways of life that will spare their eyes.

STANDARDS OF VISION

The popularity of the sight-saving classes in England has led to increasing demands by parents and ophthalmic surgeons that children who are educationally blind should be admitted to them. One can sympathize with the desire to refrain from labelling a child "blind," but if the work of a sight-saving class is to be effective—that is, if it is to be carried on by teaching the children through their eyes as well as their other senses—then they must have sufficient vision for the purpose. At first the standard set was 6/18 with glasses. It was soon found, however, that many with worse vision than this could join satisfactorily in the classes. Beneficent legislation in the interests of the blind made it imperative that only children who were blind or who were likely to become blind, for economic purposes, should be admitted to the blind schools. This had its effect on the sight-saving classes; those who were excluded from the blind schools were admitted to the sight-saving classes. But when vision is less than 6/24 it is very difficult to prevent children peering and groping at their work, and the bad habits of a few will be copied by the many. I am frequently asked what degree of myopia indicates the necessity for admission to a sight-saving class. This should always be related to age; an infant of 5 years with 5 D of myopia, especially when there is evidence of increase of the defect, certainly needs special treatment. On the other hand, a child with 7 D who is 13, and shortly due to leave school, may well be left in the ordinary school under special supervision and exemptions as regards work.

POSITION IN THE EDUCATIONAL SCHEME

At the outset the classes were definitely linked with the ordinary schools, and, so far as possible, the myopes did some oral work with the normal children, the idea being that there should be no suggestion that the children belonged to a class of "defectives." The linkage worked well; but there have been difficulties. The fashion of teaching in the ordinary schools has changed; "individual study" is now the vogue. Children are expected to prepare work by themselves, which means much book reading. Except, therefore, for the connexion of the myopes with the communal life of the ordinary schools, the gain in the linkage has been lost. Also the natural tendency of enthusiastic teachers to think highly of their work led them to strive for classes to be grouped into definite self-contained entities or schools. Accordingly schools with several classes have been established. There were advantages in that the children could be better classified and the teachers specialized in their work. But there were disadvantages. The children were segregated, and to this the parents objected. The grouping of classes meant fewer centres geographically, so that children often had further to travel—this was bad for those with scarred eyes—and finally, the system has proved more expensive. This last drawback bids fair to cause a reversion to the original plan of having separate or, at most, two classes connected with an ordinary school.

The number of children who need this form of teaching is important. The most recent return for London shows that, out of 570,000 pupils in the elementary schools, there are 850 places in the sight-saving classes. To these should be added about 100 places in the myope classes in the higher education schools. This gives a total of 950 places, or about one sight-saving place for every 600 school children. Notwithstanding this provision, there are many high myopes retained in the ordinary schools, either because there is no sight-saving class near their homes or by reason of their age. We may therefore estimate the need as not less than one sight-saving place for every 500 school children. Estimates from the United States agree with this figure.

THE CLASS

The scheme of work is founded on common-sense principles. It is a return to primitive methods such as must have existed among our forefathers, when the wise one of the tribe taught the traditions of the fathers to the children, initiated them in the secrets of craftsmanship, and showed them how to make the tribal marks upon the walls of their huts and caves. There, in brief, is the scheme of the myope class. It is essentially personal, and lacking in that modern substitute for personal teaching, the book. Details of the curriculum will differ in different countries, but the general plan is the same. The work has three sides: (1) oral teaching, (2) written work, (3) handicraft. The classroom has one prime necessity—perfect natural lighting. Artificial lighting for these rooms is a negligible consideration. All work, other than suitable exercises, oral lessons, and games, should be suspended immediately artificial light is needed. The ordinary school desk is unsuitable; special ones have been designed having a full-sized blackboard suitably sloped, which can be converted by a movement into a horizontal table. A band of blackboard is fitted all round the walls of each room, at such a height that both teachers and pupils may use it. There are also continuous black screens fitted to rollers, like jack-towels, for extended vertical work.

It is a great benefit to myopic children if their oral lessons can be taken, at any rate to some extent, with the normal children. Their presence in the normal school has not been found a drawback, and the advantage to the myopes is great. In the myope class oral teaching should

be developed as much as possible. It requires thought and intelligence on the part of the teachers, but they agree that it adds zest and interest to their labours. When an oral lesson is completed, either in a normal school or the myope class, the written work should follow. The lesson is written out from memory on the blackboard, and the children are then questioned on it. Arithmetic is similarly practised on the blackboards, teacher and children working together, each on his own board. Special attention is paid to mental arithmetic, which facilitates the association in the mind of ideas of numbers without the adjuvant written symbols. Further, arithmetic is associated with practical work in handicraft. In the higher standards the need is felt for some permanent record of work. Exercise books consisting of large paper sheets are used; these are clipped to the blackboards and written upon with black crayon, free-arm fashion. The older pupils are encouraged to make permanent records of their work by printing. Rubber-faced types mounted on wooden blocks convenient for handling are provided, and over the paper on which the print is to be made are ladder-like frames, which give the necessary alignment and spacing. The record is permanent, and forms a class library of large paper books which is invaluable for teaching purposes.

Oral teaching is greatly enhanced by the use of models, objects of interest, and pictures. Some teachers felt that the optical lantern and the epidiascope would be of assistance to them, and the idea was put to the test in a series of lessons illustrating world-wide food production. The subject-matter of the lessons and the pictures were excellent, but the lantern show was a failure; the children did not see well enough to appreciate it. That this must be so can be demonstrated by putting spectacles fitted with + 3 D lenses before one's eyes: the sharpest pictures will be so blurred as to present little attraction. Further, there is no doubt that the brilliance of the screen in a darkened room is a source of fatigue to myopes. The use of the typewriter was similarly advocated for these classes. As a means of writing it is definitely less fatiguing than the pen, but, unfortunately, habits of thought amongst elementary school children and their parents are such that the use of the typewriter is linked with a future clerkship, a wholly unsatisfactory employment for a high myope. Typewriters are therefore not used in the myope classes connected with the elementary school.

Periodically there have been attempts to introduce printed books into these classes. Some educationists have urged that the loss of books is a serious handicap to the children; it has been said that the mental age as shown by Binet-Simon and similar tests is indicative of this. It may be admitted that these children average a year or so below age standards. This is due to the presence of children with scarred and defective eyes; the former have been ill and absent from school, while the latter rarely attain normal standards. Most of the myopes are up to the average. The admission of books, even of the best-printed large type, will not raise the general average, and from the medical point of view it is undesirable. The medical aim is to secure a good education for the children with the least risk, and at the same time to cultivate a life habit of *not* reading.

Handicraft

Handicraft occupies a different place in these sight-saving classes from that which it holds in the normal or in the blind schools. In the normal school it is a side-show, of great interest to the children, but not counted as part of the serious work of the school. In the blind school its position is the antithesis of this: it is the main feature of the curriculum. The schools for the blind strive, from the outset, to make the child an efficient worker. Without sight, craftmanship is doubly difficult to learn and to carry on; hence the attention given to the early and continuous training in what will be the blind child's means of livelihood.

In the sight-saving classes handicraft is not taught as an apprenticeship to a life-long work. It is to the sight-saving class what Latin is to the public school—the one great training in care, precision, and control, and, I venture to think, a better one than Latin can ever be. The provision of a suitable and varied scheme of work is by no means easy. Consideration has to be given not only to the practicability of the work for classroom equipment, but also to its educational value and to its effect on the eyes. By the assiduity of teachers in the London classes a scheme of work has been drawn up which has proved of great value. It is not put forward as canonical; it is the outcome of the needs and experience of both teachers and children. Details vary as local conditions vary, and for this reason I do not propose to set out the scheme in full.[10] But the principles of the scheme may be outlined.

Handicraft has value in two directions—first, in training hand and eye, and secondly, in cultivating "association." Through handicraft the good teacher can impart something of history, of arithmetic, of geography, or of languages. In all our mental work there is some form of association. The written statement or the figured sum presents an association between symbol and idea. Most of us when calling up a memory see the incident, or the page of the book, or the written letter, as with our bodily eyes. In these sight-saving classes another association is taught—one that is certainly better for children whose eyes must be spared the strain of ordinary class-books, and one which is of greater educational value, if not so convenient—an association in materials, the use of material, and the process of making material objects.

Space does not permit description of the cultivation of the artistic and musical powers of the children, or of the organization of drill and games. These are of great value.

Occupations for the Short-sighted

In the sight-saving classes the children are taught to take care in the use of their eyes, and the same care is inculcated in the choice of an occupation when leaving school. Teachers ascertain the types of occupation carried on locally, and talk to the children about them. Outdoor work is most suitable, especially work which involves standing and moving, and a minimum of close eye work. Health improves with the freedom from confinement, and the eyes, as barometers of the body, benefit accordingly.

Attached to each London school there is an after-care committee, the voluntary helpers of which do much to direct the children into suitable work. The medical officer of the school indicates to the committee any particular disability of the child. Children whose sight is especially delicate are notified to the care committees which deal with the blind and partially blind. These committees endeavour to put them in touch with occupations which they can still follow should their sight get worse.

All the children in the classes are regularly examined by the school doctor—as regards both physical condition and the state of their eyes—and detailed records kept.[11] Parents are encouraged to attend medical inspections, and periodically teachers invite parents to a reunion of the school, that they may be interested in the work of the pupils and may understand why such care is being taken of their children's eyes.

The Higher Education of Myopes

The success of the sight-saving classes in the elementary schools led to the demand for similar facilities in the secondary and central schools. Some elementary school

children who were myopes were of exceptional ability; some had gained scholarships, and it seemed both unfair and unwise to deny them the opportunities which were open to normal children. Six years ago myope classes were started in some higher schools of the London County Council; there are now five classes for 100 children. Parents are warned of the risks of strain, they agree to remove their children if signs of strain be found, and they are warned that these facilities should not be considered as a stepping-stone to clerical employment after school days.

Most children admitted at the age of 11 have myopia of 4 to 7 D in the better eye, a much lower degree than in children in the elementary myope classes. Education is in each case modified according to the eye conditions. Certain children are allowed to read books with clear print for short and stated periods each day; others with worse defects are allowed to read notes made with "bulletin" typewriters for a quarter of an hour twice a day. Children with high and progressive myopia are kept strictly to myopic regulations; they do not read, but are read to by others. At three of the classes myopes are taught "touch" typewriting. The ribbon of the machine is removed, and two sheets of paper with an intervening sheet of carbon paper are inserted. The upper sheet shows no printing, the lower sheet, invisible to the child, receives the impress of the type. The results of these classes are, on the whole, good. The myopia often remains practically unchanged over a period of years, and at the age of 16 or 17 selected pupils are allowed, under sight-saving conditions arranged with different examining bodies, to sit for leaving examinations, in which they generally do well. The mean average increase of myopia per annum has been about 0.2 D. Much trouble is taken by the staffs of the different schools to obtain suitable occupation for these myopes. Many take up some branch of salesmanship; others train in pharmacy, domestic science, farming, nursing, massage, or commercial travelling. Notwithstanding these efforts, nearly one-fourth have taken up unsuitable work, although the number who do so is decreasing. In the myope classes in the higher schools there are no children with scarred eyes or congenital defects—all are high myopes.

CONCLUSION

That these sight-saving classes, or myope classes, do meet a real need in the modern school system is certain. Thirty years ago ophthalmic surgeons were wont to forbid school to their highly myopic patients; now they refer them for admission to a myope class, or; if one of these is not available, the parents are instructed in the simple principles which underlie these sight-saving classes. The work is found to be as practicable for home use, or for exceptional use at an ordinary school, as it is under the organized conditions of the London schools.

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PREVENTION OF POLIOMYELITIS*

BY

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The evidence presented on the mode of infection in poliomyelitis has established two important facts: first, that the disease is a particular form of infection of the upper respiratory tract; and, secondly, that in harmony with other epidemic diseases of respiratory origin, the cases arising during an epidemic cover a wide latitude in degree of symptoms and pathological effects. There is a consensus of opinion among clinicians that the number of children suffering some degree of infection—the slight cases expressing themselves as minor illnesses only—is very large, being many times as great as the number that are frankly paralysed. The wide occurrence of the slighter forms of infection can be taken as a means, favourable in character, of delimiting the prevalence of the severer affection, since early experimental observations showed (Lewis and myself[1]) that any degree of actual infection, irrespective of whether muscular paralysis arose or not, protected the inoculated monkeys from the effects of a second administration of the virus.

Hence the investigation of the immunological phenomena in poliomyelitis became at once a rewarding field of experiment. The knowledge of the phenomena has become considerable during the twenty-year period of the experimental study of the disease, and the application of this knowledge to the prevention of epidemic poliomyelitis has met with encouraging results in the severe outbreaks occurring in New York State in 1931 and in Pennsylvania in 1932. I shall endeavour to give a short review of the main discoveries which have led to the practical achievements to be described. It must be explained, however, that I include in this statement certain later results bearing out the earlier ones presented, which were not available at the time when this lecture was originally delivered. It is sometimes advantageous to defer writing a lecture until the time of publication arrives, especially when, as in this instance, a new method has been under trial. During the intervening period the method may have been given a wider test, with results sometimes favourable, and, of course, sometimes unfavourable, to its employment. We appear in this instance to be in the happier situation, and while it is still too early to pass final judgement on available means of preventing poliomyelitis in the young during the prevalence of an epidemic, it is desirable that the nature of such means shall become widely known, since epidemic poliomyelitis continues to appear annually in some parts of America and Europe during the summer and autumn seasons.

EARLIER EXPERIMENTAL WORK

The observation of Lewis and myself, already referred to, that monkeys which had recovered from an attack of experimentally induced poliomyelitis—irrespective of its severity—were not subject to reinfection, led quickly to the testing of the blood of recovered monkeys and human beings for immune substances to which the protection might be attributable.[2] Tests made almost simultaneously in France, Germany, and the United States disclosed the existence in the blood, after recovery from the disease, of neutralizing, antiviral bodies. A mixture consisting of the virus of poliomyelitis and the serum of the blood was injected into monkeys. No symptoms of disease tended to arise from this injection, while mixtures of virus and normal monkey serum, or the serum of many

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—but not all—persons not known to have had poliomyelitis, proved incapable of protecting the animals against the onset of the symptoms, including paralysis, characteristic of the experimental disease. I shall return a little later to a consideration of the circumstances under which the blood of supposedly normal individuals acts in a measure similar to that of persons known to have had paralytic poliomyelitis, since this action has come to have such pregnant meaning. The blood of normal monkeys, then, invariably failed to act upon, or neutralize, the virus of poliomyelitis. The neutralizing property was detectable only when the inoculated monkeys had shown unmistakable signs of infection, although these signs may have been fleeting in character and wholly devoid of a paralysing effect. Monkeys which receive the virus in the ordinary process of inoculation and resist all infection—either because the virus employed is too weak or too small a quantity is used, or because individual monkeys are exceptionally refractory—remain normal in regard to the antiviral action of the blood and their capacity to respond with paralytic symptoms when a more effective inoculation is made.

In the light of the fact that monkeys are not naturally afflicted with poliomyelitis, as is man, it is significant to note not only that normal monkeys do not exhibit the blood antiviral property, but that the blood of recovered monkeys is weaker in antiviral substances than is the blood of recovered persons. For the sake of convenience it is customary to speak of the neutralizing, antiviral blood serum obtained from recovered persons and monkeys as "convalescent serum." Thus, monkey convalescent serum is less potent than human convalescent serum. But the potency of the former can be markedly increased by the additional injection of virus into recovered monkeys, a process which Lewis and I called "reinforcement."[3] Reinforced (or hyperimmune) monkey serum equals, or even surpasses, in neutralizing power the convalescent serum obtained from human beings.

Virus and Serum Injection in Monkeys

Neutralization of the virus by convalescent serum, monkey and human, was established originally by test-tube experiments. As already stated, virus and serum were mixed before the mixture was injected into monkeys. Since under such conditions no infection occurred, the immediate question which arose was whether neutralization could also be effected inside the animal body—that is, when virus and convalescent serum were injected separately. While the test tube, or *in vitro*, demonstration of the presence of antiviral bodies in the blood undoubtedly threw light on immunity in poliomyelitis, it was thought that the determination of neutralization *in vivo* might possibly lead to therapeutic application. The tests carried out by Lewis and myself[4] consisted of the intracerebral inoculation of virus and the intraspinal injection of convalescent serum into monkeys. The intracerebral method is the most effective that is known for inducing the infection; the intrathecal injection is the most certain and efficient procedure for bringing the neutralizing serum into intimate relation with the nervous tissues, including the nerve cells, and hence for the blocking of the cells against the entrance of the virus, the injurious effects of which are responsible for the severe symptoms of the disease. While it is true that under physiological conditions the flow of the cerebro-spinal fluid, into which the serum is introduced, is away from the nerve tissues, the small rise in pressure produced by the injection suffices to reverse the current, bringing the serum into intimate contact with all the constituents of the tissues, including the nerve cells.[5]

The results of the *in vivo* experiments can be stated briefly. When the virus is injected not longer than from eighteen to twenty-four hours before the serum, and the amount of virus introduced into the brain does not exceed a fixed quantity, neutralization *in vivo* can be accomplished. Neutralization may be complete, when no symptoms whatever arise; or it may be partial, in which instance mild symptoms appear after a longer incubation period. Ordinarily, the experimentally produced paralytic disease in the monkey is severer than the paralytic disease in man. While the mortality of the human affection is 20 per cent. or less, that of the frankly paralysed monkey is 60 per cent. or more. When monkeys recover at all, they have, as a rule, merely passed through a mild attack of the experimental disease, such as is produced with weak virus strains or after partial neutralization of the virus. The *in vivo* experiments showed, therefore, that the action of the virus already present in the animal body could, under certain conditions, be suppressed. Suppression is, however, possible only when the immune serum is injected before symptoms of infection arise; once signs of infection are present, the serum is incapable of preventing the ordinary course of the disease from supervening.

The test by intracerebral inoculation is the most drastic one that can be devised. It exceeds in severity the conditions of infection occurring in man. In the human being the virus is believed both to enter and to leave the nervous system by way of the nasal mucous membrane; we[6] early found that the virus implanted in the brain escapes into the nasal mucosa. This observation was quickly followed by the induction of the experimental paralytic disease through the instillation of the virus into the nares,[7] which finding in turn soon gave rise to the discovery that the intrathecal injection of serum prevents the development of infection by way of the nasal membrane.[8] It has, indeed, proved easier to prevent infection by the nasal than by the cerebral route of inoculation.[9] An important consideration is that the time interval between the nasal instillation of virus and the intrameningeal injection of serum may be lengthened with security beyond the period of safety that has been determined when the virus is inoculated into the brain. Moreover, convalescent serum injected into the meninges is equally capable of preventing infection by virus introduced into the blood;[10] and the immune serum is also protective, in certain circumstances, when the injection is made into the blood stream instead of into the membranes surrounding the brain and spinal cord.[11]

Convalescent Serum in Human Beings

Professor Netter of Paris, in 1911,[12] seized upon these experimental results, and introduced into practice the convalescent serum treatment of poliomyelitis which has since been the subject of so much discussion. It soon became apparent that, once paralysis had appeared in human beings, the serum was quite powerless to influence the disease. As the means of diagnosis became more accurate, and instances of preparalytic poliomyelitis could be diagnosed with greater certainty, the use of the convalescent serum was increasingly restricted to these early cases. Medical opinion is still divided as to whether the serum is effective even in these circumstances. The matter has indeed become largely a statistical one, and hence it is not likely that a definite decision will be made immediately.[13] Epidemic poliomyelitis is a protean disease, symptomatically considered, and its effects are so varied that the outcome of individual preparalytic cases cannot be predicted with certainty. Even the comparison of alternate cases in which serum is given with those from which it is withheld is at best but a rough measure of effectiveness, since so much may depend on the way in which the choice of cases is made. I have attempted to

injury. If adhesions have already formed when the patient is first seen, the part should be manipulated and this followed by a daily course of physiotherapy and movements.

Let us consider injuries to muscles in certain situations.

Muscles in Relation to Ribs

In a typical case the patient has an injury over the ribs, and a fracture is suspected. There is local tenderness, intense pain on coughing, deep breathing, or laughing; but, on pressing the sternum and vertebral column together, there is no pain referred to the tender spot and the radiogram is negative. The diagnosis is an injury of one of the muscles attached to the rib—abdominal obliques, intercostals, abdominal recti, diaphragm, pectorals, or serrati. The pain is caused by the presence of a haematoma at the site of the injury which, each time the muscle works, contracts down on this blood clot. Most of these cases are strapped, and in two to four weeks' time the acute pain gradually wears off. Later, when the strapping is removed, the patient finds that there is pain or a dragging feeling on certain movements, owing to the organization of haematoma with the formation of adhesions. It is suggested that such an injury should be treated as already indicated. Support is best obtained by means of a broad piece of elastic in the form of a belt, which can be tightened or loosened as required. This prevents the pain and inconvenience of removing strapping. If this line of treatment is adopted the disability will have passed off in a week, and there will be no painful adhesions or scarring to give rise to symptoms later. A shifting of the area of tenderness, together with evidence of crepitus—denoting organizing blood clot in the region of tenderness—is indicative of tracking of the haematoma along tissue planes. The direction is usually towards the renal or lumbo-sacral region, and would account for the pain and stiffness here which often follows injury to ribs. Bone-setters and osteopaths make much of this point, telling their patients that they have vertebrae out of place or subluxations in these regions. They manage to convince the patient by producing cracks from the breaking down of adhesions, with subsequent relief of symptoms.

A personal experience may illustrate the value of the treatment advocated.

Playing football five years ago, I sustained an injury to the right abdominal oblique muscle at its attachment to the ribs. I strapped it, and it was five weeks before I could play again and a further month before the pain and stiffness had entirely disappeared from the site of injury. Two years ago exactly the same injury occurred to me on the left side, and, being particularly anxious to play in a match in five days' time, I massaged the site of the injury as hard as I could stand it, and on the following four days (including the day of the match) I gave myself diathermy and surging faradism. I played strapped, but never felt the pain again, either in that match or in subsequent ones.

Erector Spinae

It has been advocated that injuries to the erector spinae should be manipulated at once, but if vigorous treatment is started immediately these cases recover in three to five days. There is, therefore, no need to manipulate them, as adhesions have not been allowed to form, and full spinal movements are maintained by active movements.

Thigh and Buttock Muscles

If the gluteus maximus is injured great care must be taken to prevent a clicking hip or bursitis from haematoma tracking down the thick sheath of this muscle to the great trochanter. Also, in injury of the hamstrings at their origin, the bruise must be worked out at once, otherwise it settles on the ischial tuberosity or at the bursa in relation to it.

Calf Muscles

These are usually strapped, the patient walks about comfortably, and after a month feels no ill effects. On the other hand, some of these cases experience swelling and pain in the region of the ankle-joint due to gravitation of haematoma, with the formation of adhesions and thickenings, and sometimes a bursitis of the Achilles tendon bursa. Rupture of the gastrocnemii sometimes occurs bilaterally in elderly men as a result of the general degenerative process associated with old age. These cases should be treated with complete rest, and gentle massage until firm union of the ruptured muscles has taken place.

Besides the complications already mentioned—that is, the muscle continually giving way, adhesions, thickenings, and bursitis—the following sequelae may also occur to injured muscles.

1. *Neuritis.*—This may be caused either by the pressure of the haematoma or the subsequent adhesions on nerves in the vicinity. Cases have been seen in which the muscle has shown partial and, sometimes, complete R.D. either from the pressure of the haematoma or from the toxic effects of the blood clot. Naturally, even though they may show complete R.D., the nerves should not be exposed by operation for at least three months, because other treatment will often cure the condition.

2. *Rheumatism* in the muscle and surrounding structures or neuralgic pains in the overlying nerves. In such cases the patient may complain of almost unbearable pain with no physical signs to account for it, thus inviting a diagnosis of functional disease. Besides, analgesics, radiant heat, infra-red rays, and ionization often remove these pains instantaneously.

Subperiosteal Haematomas

Included under this heading are bruises of bone and cartilage. Both these conditions produce excruciatingly tender spots over the injured area. Treatment must be started at once—consisting of massage and diathermy. Even one treatment often relieves the intense pain and tenderness in these cases. If the haematoma works forward it can be aspirated under strict aseptic conditions. The surrounding muscles and ligaments must be massaged and moved to prevent the haematoma settling in them and forming adhesions. Many of these cases are rested and left, with the result that the haematoma or products of bruising organize to form exceedingly tender areas, which give rise to pain on the slightest movement or pressure.

The following cases illustrate the importance of immediate treatment.

A football player sustained a severe kick on the tarsal scaphoid, causing bruising of this bone and surrounding muscles. The radiogram was negative. As a result of vigorous treatment, the player was fit in a week and able to play in a cup tie in ten days' time, although he had been unable to walk for the first three days. This represented seven hours' work. Another footballer, who had met with a similar injury, was strapped, and on examination six weeks later was found to be suffering from stiffness in the mid-tarsal joints and bruising over the cuboid. The foot was manipulated and treatment had to be carried on for ten days—representing twenty hours' work—before the condition was right.

Another type of case, showing bruising of bone with teno-synovitis which had been left untreated for over a week, is of interest. This combination is seen on the dorsum of hand and foot, and I would rather deal with anything than such an injury, if it has been left so long untreated.

The bone is tender to pressure, and on moving the tendon there is pain, which is agonizing on kicking a football or hitting a ball with a cricket bat. Slight thickening of both the tendon and the bone may be noted, but this is not typical. Treatment is started at once—massage, diathermy,

or ionization, and movements. Presently the painful area will become more and more tender until agonizing pain is produced there. Effleurage is useless; deep friction is essential with increasing vigour. In the meantime the patient writhes in agony, swears, and squirms, and it is most difficult to persuade him to carry on with the treatment. To operate on these cases is useless, as it is impossible to scrape the bone and tendon sufficiently to do any good. Rest does not put matters right, and the only thing is vigorous treatment. As the bruise works out swelling appears; it seems as if the fibrin of blood clot must collect fluid from the tissues and swell. Later this swelling begins to break up and form little fibrous bodies. If these fibrous bodies are trapped under the finger intense agony is experienced. Under treatment the swelling will gradually disappear and the hand or foot will become well again.

INJURY TO A JOINT

Sprains are often rested, and, when subsequently moved, cause great pain from thickenings and stiffness.

They must be treated at once on the first day with massage, ionization, radiant heat, and unloaded active movements. Intense pain will be experienced, but there will be improvement as the bruising works out. An exception to this occurs in the elbow-joint, on account of the occurrence of myositis ossificans. These cases must be rested for at least three weeks, movements being then allowed gradually. If sprains of the finger-joints are treated as indicated, in about four days there is no evidence of the sprain, and the treatment prevents the unsightly joints so often seen.

Sprained Ankle

The generally accepted treatment for these injuries is to strap the ankle and force the patient to walk about on it, a procedure which will not prevent swelling, and usually results in a sleepless night and untold pain.

The first thing is to assess the degree of sprain from the clinical signs, and secondly, to inquire as to the amount of strain put on the ankle after the accident. This is important, as structures already sprained are further strained by weight-bearing. The common type is the adduction sprain, which falls into three types:

1. Slight degree. This type can be strapped and used. After three days strapping is removed and massage and exercises started, continuing until no tender spot or swelling remains.
2. Severe degree, without fracture of external malleolus.
3. Severe degree, with fracture of external malleolus. Small chips off the malleoli can be disregarded as fractures, whereas the concomitant injury to the lateral ligaments must be considered as important and treated accordingly.

There are two types of muscle tone—postural, which is always present and holds the position of the foot; and phasic, which carries out movements. In a badly sprained ankle the postural tone is depressed, and consequently, if the body weight is put on the foot, the muscles are unable to perform their work of supporting the arch, while the ligaments, already strained, are further damaged. No amount of strapping support will be sufficient—it only makes for further strain and adhesions round the ankle.

These severe strains must be rested, while massage, heat, and diathermy are given to help absorb the effusions and haemorrhage. While this is being carried out active movements are performed with the patient lying on a couch or bed. These unloaded active movements are entirely different from active movements with weight-bearing, and produce no strain.

Thus, a badly sprained ankle is treated by:

1. X ray to rule out fracture.
2. A firm bandage applied over lint soaked in some soothing lotion, such as lead and opium, liquor hamamelis, or magnesium sulphate compress. This allows some swelling to occur, but prevents it becoming excessive. One should remember to give an analgesic—even up to morphine—for the first night at least.
3. Massage at once, together with heat and diathermy applied with unloaded active movements. If treated in this way even badly sprained ankles are well in from seven to fourteen days, with no such sequelae as thickenings—especially over the external lateral ligament and both sides of Achilles tendon—with swelling in these places after exercise, flat feet from muscle strain, and stiff, rigid feet from organization of effusion and haemorrhage. After a badly sprained ankle the patient must wear proper shoes and boots—not sand-shoes or flat rubber shoes.

Sprained Wrist

Every doctor is familiar with the results of falls on the outstretched hand with the thenar or radial side taking the brunt of the force. Any of the following things may happen—Colles fracture, dislocation of the semilunar, fracture of the scaphoid, or sprain of the wrist-joint. In contrast with this, injuries caused by falls, or pressure, on the ulnar side of the hand are not generally appreciated. They may cause any of the following: bruising of the triangular cartilage of the wrist-joint, sprain of the inferior radio-ulnar joint, and fracture of the styloid process of the ulna. In cases with bruising and sprains they must be treated vigorously from the beginning as indicated above in the case of other joints.

Dislocated Shoulder

The correct way to treat a dislocated shoulder after reduction is:

1. X-ray to rule out associated fracture such as greater tubercsity of the humerus.
2. Test for involvement of circumflex nerve. It should be remembered that the deltoid may show partial R.D. without sensory loss. If there is any circumflex nerve paralysis the arm should be put on an aeroplane abduction splint.
3. Radiant heat.
4. Diathermy or ionization from the first.
5. Treat in a sling, but encourage the patient to remove the arm twice each day and put the shoulder through movements as far as possible.
6. After a few days, surging faradism to the surrounding muscles. By this method the patient is able to take vigorous exercise in five weeks with support. Strapping, so as to limit abduction, with a pad of cotton-wool in the axilla, is best, and has the advantage of giving the patient confidence and protecting the part slightly, while it controls the movements and prevents extremes of abduction.

Acromio-clavicular Joint

It is essential to realize that an injury causing one obvious derangement may at the same time be responsible for several less apparent ones. For example, a fall on the shoulder with dislocation of the acromio-clavicular joint may give rise to bruising of the end of the bones, adhesions around the shoulder-joint and subdeltoid bursitis, injury to the trapezius, or brachial plexus neuritis from tearing of the origin of the scalenes. If the dislocation or subluxation does not remain reduced after four weeks' immobilization, it may often be neglected, but this is not true of other disabilities, as they give rise to pain and limitation of movement, and are often the real cause of symptoms in such a case.

SUMMARY

1. All injuries without fracture must be treated intensively and vigorously from the beginning, except those of the elbow-joint for fear of myositis ossificans
2. The essential factor is to work out the products of injury—that is, the bruise—immediately.
3. Methods for accomplishing this are described.

A PHAGOCYTIC REACTION IN HAY FEVER

BY

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Up to the present phagocytic experiments with pollen grains and hay-fever blood have been impracticable, owing to the large size of the grains (20 μ to 80 μ in diameter) compared with that of the leucocytes.

In the course of examining films of *Phleum pratense* pollen stained with iodine, a granular appearance of the substance of the grain was observed. This was found to be due to the grain containing large numbers of discrete granules (several hundreds per grain) held in the meshes of a reticulum. These granules are small oval and short rod-shaped bodies, and stain dark brown with iodine. They are responsible for the iodine-staining properties of the pollen grain as a whole, the remainder of the cell structure not staining to any extent. The granules, which contain a large percentage of carbohydrate, are believed to be the food supply of the generative elements of the pollen grain. Suspensions of these granules were prepared for phagocytic tests. The phagocytic index was determined in twenty-four normal and non-hay-fever patients and in twenty-five hay-fever cases. "Chiastic" counts were made in five cases.

METHODS OF INVESTIGATION

Preparation of Pollen-granule Suspension

One gram of *Phleum pratense* pollen was suspended in 5 c.cm. of saline in a stout-walled test tube, glass beads added, and the whole agitated on a mechanical shaker until microscopical examination showed rupture of the pollen grains and separation of the granules from the reticulum. The emulsion was diluted with saline to 10 c.cm. and passed through a Buchner filter containing a layer of cotton-wool over a layer of filter paper. This allowed the free granules to pass through, and retained unruptured grains, cell membranes, etc. The filtrate was yellow and cloudy. Films stained with methylene blue and followed by Gram's iodine showed the filtrate to be composed of portions of reticulum (stained blue), together with large numbers of the pollen granules. By centrifugalizing at moderate speed for three to four minutes a whitish deposit and a cloudy yellow supernatant fluid were obtained. The yellow fluid was poured off, the deposit resuspended in 5 c.cm. of saline, and centrifugalized as before. The process was repeated a third time, when a suspension of granules free from portions of the reticulum was obtained from the deposit. To harden the granules somewhat, and to assist their keeping properties and prevent contamination, they were treated with 2 per cent. formaldehyde for twelve hours, then thoroughly washed by repeated centrifugalizing and resuspension in sterile saline (5 c.cm. quantities). This suspension usually corresponded to Brown's opacity tube 8-9, which was found suitable for the phagocytic tests.

The suspension soon degenerates at room temperature (in a few days). In the refrigerator it keeps usually for ten to fourteen days, when the granules often tend to degenerate by swelling and losing their staining reaction, and small yeast-like bodies may appear, rendering the suspension unsuitable. It was found that the formaldehyde treatment did not materially affect the phagocytic counts.

Phagocytic Index Technique

The blood to be tested was withdrawn from a vein and defibrinated. Two volumes of blood and one volume of pollen-granule suspension were measured in a capillary pipette, mixed, and incubated at 37.5° C. for twenty minutes; films were made by Wright's technique.[1]

"Chiastic" Technique

Washed corpuscles and serum were prepared from the case to be tested and from a normal person of the same blood group. Phagocytic mixtures of equal volumes of corpuscles, serum, and granule suspension were made of the four possible combinations of corpuscles with serum and incubated; films were made as above.[2]

Staining

The films were stained with methylene blue for two minutes or dilute carbol-fuchsine for thirty seconds, and washed. Gram's iodine was applied for one minute, and the films were washed and dried. The leucocytes stain blue or red, and the granules brown.

Counting

The granules in 100 or 200 leucocytes were counted and the average number per leucocyte obtained (phagocytic index). As the granule suspensions were prone to degenerate frequently, a hay-fever blood of known phagocytic index and a normal blood were included in each batch of tests. Commencing degeneration of the granules was shown by abnormally low indices, the granules becoming more easily destroyed by the blood.

RESULTS

In twenty-three out of twenty-four non-hay-fever bloods nearly all the granules were found to have been dissolved, the few remaining being recognizable inside the leucocytes. The phagocytic index was low, the average being 0.4. In twenty-two hay-fever cases the index was comparatively high, and in addition there were certain numbers of granules unphagocytosed; the average index was 2.4. In three cases (33, 35, and 42) the indices were normal or only slightly raised. The high indices were from severe hay-fever cases, but the converse did not always apply. All hay-fever cases gave positive skin tests to *Phleum*, *Dactylis*, and *Holcus*.

	Non-Hay-fever Cases	Phagocytic Index	Hay-fever Cases	Phagocytic Index
Normal	1	0.2	25	2.8
	2	0.8	26	3.2
	3	0.4	27	2.2
	4	0.7	28	4.8
	5	0.8	29	2.4
	6	0.2	30	2.5
	7	0.5	31	3.6
	8	0.5	32	2.0
	9	0.1	33	1.1
	10	0.3	34	1.4
	11	0.1	35	0.8
	12	0.4	36	4.4
			37	2.3
Out-patients	13 Chronic bronchitis	0.1	38	2.0
	14 Nasal catarrh and boils	0.2	39	2.5
	15 Asthma	0.7	40	2.0
	16 "	0.3	41	2.5
	17 "	0.7	42	0.8
	18 "	0.1	43	2.5
	19 Dermatitis	0.2	44	2.3
	20 Asthma and eczema	0.1	45	3.9
	21 T.B. glands	0.8	46	2.1
	22 *Eczema*	0.7	47	2.0
	23 Asthma	0.2	48	1.8
	(24***	3.5)	49	1.9
	Non-hay-fever average = 0.4		Hay-fever average = 2.4	

In the chiastic tests on five hay-fever bloods the phagocytic index was high when hay-fever serum was combined with either normal or hay-fever corpuscles, and low with normal serum. The results are shown in the following table:

	Case 28	Case 31	Case 38	Case 39	Case 40
(1)	4.2	3.0	2.9	3.5	2.7
(2)	1.4	0.8	0.5	0.4	0.6
(3)	4.2	2.3	2.0	3.2	2.4
(4)	1.0	0.6	0.4	0.4	0.5

Unphagocytosed granules were present in (1) and (3), and absent in (2) and (4).

(1) = hay-fever corpuscles + hay-fever serum.
(2) = " " + normal serum.
(3) = normal corpuscles + hay-fever serum.
(4) = " " + normal serum.

SUMMARY

In twenty-two of the twenty-five hay-fever cases tested the blood was deficient in its lytic action on the granules of *Phleum pratense* pollen, as compared with normal and other non-hay-fever bloods. This lytic property originates in the serum, as the chiastic counts demonstrate deficient lysis of the granules with hay-fever serum, irrespective of the source of the leucocytes. One non-hay-fever patient (24***) was found to have a high phagocytic index—3.5. This patient presented herself for treatment of recurrent boils of the ears, and was found to be suffering from chronic nephritis, and with a history of cholecystitis. Skin tests to *Phleum*, *Dactylis*, and *Holcus* were negative. It is of interest that this patient stated she is the mother of a hay-fever sufferer; there is no evidence of hay fever or allergy in her family history or in that of her husband.

My thanks are due to Dr. John Freeman, Director, Department of Clinical Bacteriology, St. Mary's Hospital, and other members of the staff for valuable help and criticism during this investigation.

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RECOVERY FROM PNEUMOCOCCAL MENINGITIS

NOTES ON A CASE TREATED BY FELTON'S SERUM

BY

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It is generally believed that recovery from pneumococcal meningitis is rare; in fact, doubt is usually thrown on the diagnosis if recovery results. Evidence, however, is now accumulating that recovery does occur in primary infections of the meninges with the pneumococcus.[1] That early diagnosis and the institution of prompt treatment are the all-important factors is well borne out by the investigations of Kolmer,[2] who states that "in so far as the treatment of experimental streptococcal and pneumococcal meningitis is concerned, it has been impossible for me to save any animal, when the infection has had more than a forty-eight hours' start, with diffuse purulent meningitis." Good results are reported from the use of Felton's anti-pneumococcic serum when used experimentally by Kolmer, Amano, and Rule,[3] and in cases given by Stoessiger.[4] The case we mention below is the third of three cases of recovery from meningitis occurring recently in the general practice of one of us. The present case, however, seems to us to be particularly worthy of record owing to the fact that we have good evidence for considering it to be one of pneumococcal meningitis.

CASE RECORD

The patient, a male aged 27, came under observation on October 21st, 1932, having felt unwell for about five days previously. He complained of pain in the lumbar region. His previous history was negative, except for a football injury to the sternum at the age of 16 years. His family history was good. He stated that his trouble began with backache, which was worse in bed, and he was sleeping badly, but he continued his usual duties up to the date of first seeking medical advice. Examination revealed tenderness of the muscles of the lumbar region and tenderness in the muscles of both thighs. The tongue was furred and the patient was constipated. The temperature and pulse rate were normal.

His condition remained much the same until October 25th, when he complained of weakness. His face was slightly swollen, his tongue was furred, and he complained of a slight headache. Temperature and pulse were still normal. He was sleeping badly, but there were no other symptoms. During all this period he was not confined to bed. On October 26th there was a striking change in his condition. He was lying helpless in bed, the face was swollen, the head markedly retracted. He was drowsy, with a thick and sluggish speech, and complained of pains down the spine and in his legs. He had double vision, severe headaches, sickness, and vomiting. There was some conjunctivitis and tache cérébrale was present. The abdomen was retracted and abdominal reflexes were absent. Knee-jerks were absent and plantar reflexes could not be elicited. Kernig's and Brudzinski's signs were strongly positive. Temperature and pulse were normal. There was no evidence of a lesion of the ears, nose, or throat, nor of any infection of the lungs.

A lumbar puncture was performed and a specimen of cerebro-spinal fluid, which was under considerable pressure, was sent by messenger to Dr. Cronin Lowe of Southport for his opinion. The remainder was retained and tested by one of us immediately. The following is Dr. Cronin Lowe's report.

Cells, 18 per c.mm. Polymorphs, 82 per cent.; small lymphocytes, 12 per cent.; large lymphocytes, 6 per cent. Cultures sterile. Smear: Gram-positive diplococci (probably pneumococci).

Two or three contaminatory organisms of coliform type were reported present, but these were also found by us in this and in subsequent specimens, in addition to Gram-positive diplococci. Great care was observed to avoid contamination.

On October 27th the patient's condition was unaltered except that now the disks were injected. Treatment with Felton's anti-pneumococcic serum, Types I and II, was commenced. A first injection of 10,000 units was given intravenously. Two hours later 10,000 units were injected and followed by 20,000 units at eight-hour intervals. As there was no improvement in the general symptoms on October 28th the serum was continued until 140,000 units in all had been given in a period of fifty hours. The first improvement was noticed on October 29th. The patient seemed more alert to his surroundings and the double vision had disappeared. The cerebro-spinal fluid still contained polymorphs, Gram-positive diplococci, and Gram-negative bacilli. The urine showed a heavy infection with coliform bacilli. White cells amounted to 7,600 per c.mm., 75 per cent. being polymorphonuclear. On October 30th the improvement was maintained, except for retention of urine, ptosis of the right eyelid, and slurring speech.

On November 1st Dr. Cronin Lowe's report on the cerebro-spinal fluid was as follows.

Protein, 200 mg. per cent.; globulin, ++; sugar, 0.072 per cent.; non-protein nitrogen, 25 mg. per cent.; total cells, 3 per c.mm. Cultures remained sterile.

On November 2nd improvement was more noticeable. The patient could see more clearly, there was no headache, and the pains in the legs had disappeared. The optic disks were now clearer. By November 20th the symptoms of meningitis had completely subsided and the patient appeared to be well on the road to recovery.

DISCUSSION

We are here dealing with a case of meningitis which could, from the clinical findings, fall under one of the three following types: (1) serous meningitis; (2) meningococcal meningitis; (3) pneumococcal meningitis.

With regard to the first type, our case differs markedly from those described by Braithwaite and Mitchell Innes.[1] There was no evidence of concomitant influenza or broncho-pneumonia, and lumbar puncture failed to relieve the symptoms. Furthermore, the cerebro-spinal fluid was of entirely different composition. The opinion of the bacteriologist weighs heavily against our case being of the meningococcic type—no Gram-negative diplococci were found on repeated search. On the other hand, we have here an infective meningitis, presenting early severe symptoms, in which organisms resembling pneumococci were found by two observers, and we believe that we have correctly placed our case in the latter class, even though

the cultures remained sterile. It was the finding of these Gram-positive diplococci which suggested the use of Felton's serum, and the intravenous method of injection was selected as the safest. We do not think that the intracarotid method, which is recommended by Kolmer as being both easy and safe, is likely to appeal to the general practitioner. We feel unable to explain the presence of Gram-negative bacilli in the cerebro-spinal fluid on two separate occasions, as every care was taken to avoid contamination.

CONCLUSIONS

We do not presume to draw any decisive conclusions from our experience with one case, but it appears to us that a primary pneumococcal meningitis should be amenable to treatment with a specific anti-pneumococcal serum, whereas cases with a septic focus in the ears or accessory nasal sinuses are unlikely to be benefited by this treatment alone.

The immediate use of Felton's serum by the intravenous method seems to us to be a safe and valuable aid in the treatment of this condition. Early and repeated lumbar puncture appears also to be of the greatest importance.

Finally, we hope that our experience with this case may prove of some interest and help to professional colleagues.

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SEGMENTAL HYPERALGESIA ASSOCIATED WITH HAEMOPTYSIS *

BY

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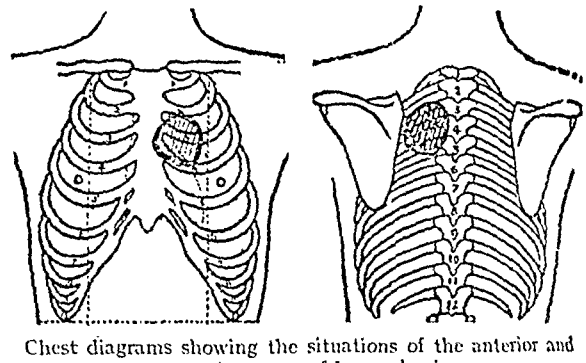
In 1929[1] I showed that in diseases of the chest the existence of segmental hyperalgesia, or Head's zones, in the majority of my cases was definitely associated with haemoptysis. In this reference I should like briefly to present the following case.

A woman, aged 51, was admitted to the Ray Brook Hospital, New York State, on October 17th, 1930. The definite onset of her illness occurred with a series of small haemoptyses on June 12th, 14th, 16th, and 19th, the total amount of blood being about an ounce. She had been treated by complete rest in bed for four weeks, and modified bed rest until her admission. For the first two months in hospital she was afebrile and practically free from symptoms; she had only a slight cough and half a drachm of sputum daily, which was negative for tubercle bacilli by direct smear and guinea-pig inoculation. On physical and *x*-ray examination she was found to have a minimal lesion in the left upper lobe; latent rales were heard in circumscribed areas over the left upper lobe, both anteriorly and posteriorly. The right lung was clear. She was a well-nourished woman, intelligent, and somewhat highly strung, but Libman's sign (which is elicited by exerting moderate pressure over the styloid process, and may be used in estimating roughly the patient's threshold for painful stimuli) was negative.

On December 22nd the sputum was found to be slightly tinged with blood. This staining of the sputum continued for four days, and on the evening of December 26th she complained of a sudden sharp pain over the second left rib near the sternum; almost immediately afterwards she raised a drachm of bright red blood. Within half an hour of the haemoptysis she developed a dull pain in the left chest, which she described as "going right through the chest from back to front." She also said that there was a feeling of soreness in the back and front of the chest, and she volunteered the information that, when she had had the recurrent haemoptysis in June, she had experienced a similar pain and soreness of the chest wall on the left side.

On examination it was found that she had well-marked areas of tenderness on slight pressure, as shown in the diagram. There was no definite hyperalgesia of the skin, such as I have found in about forty other cases of recent haemoptysis. These areas are segmental in type, and correspond to part of the cutaneous distribution of the third dorsal segment. It is not likely that they are due to underlying pleurisy, because there was no evidence of pleural involvement; further, it is not probable that the pleura would be inflamed in two widely separated and localized areas. I think there is very little doubt that these areas are topographically determined by the distribution of nerves, and are segmental in type. The patient had no further haemoptysis, and the tender areas could be elicited for six days, after which the dull pain and tenderness gradually disappeared. Since then she has had no more haemorrhage, and has not complained of any further pain in the chest.

It is an interesting fact that, in this case, there was no evidence of cavitation, either on physical or on *x*-ray examination. In the series of cases previously referred to where there was evidence that the blood was coming from a tuberculous cavity, no areas of segmental hyperalgesia were observed. This fits in with Head's observation[4]



Chest diagrams showing the situations of the anterior and posterior areas of hyperalgesia.

that, in what he calls the excavation type of phthisis, no hyperalgesia is found, and he offers the explanation that the nerve endings are destroyed, together with the lung tissue, and the first component of the reflex arc is abolished. In a few of my cases, however, a single localized patch of cutaneous hyperalgesia, sometimes with deep tenderness, was found on the anterior aspect of the chest wall directly over the cavity, and not necessarily associated with haemoptysis. I regard this single localized area as an example of the direct or pleural type of hyperalgesia due to the presence over the cavity of pleural adhesions setting up a localized or subacute inflammation of the parietal pleura.

But in the cases where the bleeding comes from a bronchiectatic cavity, segmental hyperalgesia is frequently found, presumably because the cavitation is due to the dilatation of a bronchus without destruction of the nerve endings. In these cases also, when the bleeding originates in the lower lobe, the hyperalgesia is found to involve lower dorsal segments, usually the fifth, sixth, and seventh, and occasionally the eighth. No areas of segmental hyperalgesia were found in those cases in which it could reasonably be assumed that the haemoptysis was due to congestion of the lungs, such as in mitral stenosis and other cardiac conditions; in pressure on the bases of the lungs, as, for example, in the later stages of pregnancy; in neoplasm of the lung, and in chronic pulmonary tuberculosis, in which localized congestion may occur owing to pressure on the pulmonary veins and venules by the contraction of fibrous tissue.

After some years of study of these cases I have come to regard the presence of segmental hyperalgesia in association with recent haemoptysis, and even in the absence

* Read before the Saranac Lake Medical Society, April, 1931.

of other definite clinical, radiological, and bacteriological evidence, as an early sign of a non-excavated inflammatory lesion of the lung. Its connexion with haemoptysis is, I think, accounted for by the fact that the latter is a common sign of inflammatory changes in the lungs. The blood vessels of the lung have a rich nerve supply, whereas the parenchyma, as far as investigations have shown up to the present time, has few sensory nerves or nerve endings apart from the bronchial plexuses. Further, the situation of the hyperalgesia usually indicates the site of the lesion and whether the bleeding comes from the upper or lower portions of the lung. Upper lobe lesions are connected with the third and fourth dorsal segments, and lower lobe lesions with the fifth, sixth, and seventh. The hyperalgesic areas are invariably situated, both anteriorly and posteriorly, close to the mid-line of the body, but those due to basal lesions are placed about two inches more laterally than the apical areas.

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ACNE VULGARIS, A SYMPTOM, NOT A DISEASE *

BY

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The following remarks are occasioned by the preliminary findings in a number of cases of acne occurring in the young adult female of the working classes. The investigation is being made with a view to approaching the problem of aetiology as being a question of physical and racial type, and as being determined by the influence of urban life on these types. A number of very different aetiological factors for the disease are cited in the literature, and authors lay emphasis on each of them with varying stress. The commoner causes would appear to be certain changes of puberty—particularly menstrual disorders—seborrhoea, constipation, incorrect diet, unhygienic physical life, and lack of local cleanliness. In the present series of cases attention was paid to these factors and to many other possibly associated physical characteristics and social habits.

It would appear that acne is a symptom of various abnormalities, physical and chemical, elsewhere in the body. In the same way that the physician regards palpitation not as a disease but rather as a manifestation of cardiac, gastric, renal, pulmonary, or endocrine dysfunction, so should the dermatologist regard acne as evidence of irregularity in mode of life or dietary, or of physical ill-health in some distant organ or organs. That different cases have a different aetiology may be exemplified by the three following cases.

1. Miss S., an apparently healthy individual, aged 24, has on three occasions in two years developed an acute pustular acne of the face persisting for three weeks. Each outbreak was preceded by a definite period of malaise of about the same period.

2. Miss N., aged 25, suffers from a pustular acne which is only severe during menstruation.

3. Miss K., aged 24, had a pustular acne which came on suddenly at the age of 22, when circumstances compelled her to undertake a sedentary occupation.

Further, it is accepted that chemicals of the halogen group are capable of producing acneiform lesions. Kenneth Wills has recently reported cases in which the ingestion of pig fat appears to be the chief precipitating factor, while all of us in industrial areas have seen cases of "oil grub" due to persistent exposure of the skin to dirt and lubricating materials. Of recent years suggestions have been put forward which appear to provide a common aetiology for the above different types. Barber has taken the attitude that metabolic changes consequent upon an altered mode of life may produce an environment which enables harmless saprophytes to become harmful parasites. Sequeira has mentioned the conception of "biotropism"—a faculty possessed by ingested substances of encouraging the vitality of superficial parasites. It would appear possible to combine the above two lines of thought and say that in acne, provided we have suitable terrain, a number of widely different intercurrent causes may produce identical clinical symptoms. To go even further than this, it may be suggested that inherent physical characteristics of the host will modify to a marked degree the clinical type, comedones only appearing in one individual and an acne nodularis in another.

With a view to investigating the accompanying manifestations of acne in other areas of the skin and in other systems the following form was filled in for every case.

Serial Number ..... Name ... Age . Sex	
O.P. Number ... .. Marital State . . . Children	
Build and Physique . . .. . Occupation.	
Type of Acne, Severity and Distribution. . . Colour. . ..	
General Health of Skin and Description of Type of Skin	
General Health of Scalp .... General Moisture	
Presence of Ichthyosis..... General Grease Secretion.....	
Peripheral Temperature. .... Local Grease Secretion.....	
Peripheral Colour.....	
Peripheral Moisture	Condition of Teeth. .....
Pigmentation.....	Hypertrichosis..... .....
Constipation.....	Pulse Rate.. . .. .
Thyroid..	. Onset of Puberty ....
Amount of Exercise	.. Menstrual History . . ..
Amount of Clothing	Onset of Acne. . . . .
Diet	. ...
Remarks	

It is hardly within the scope of the present communication to mention in detail the reasons for the inclusion of the various points, but I think that it will be agreed by all that the majority are of value in determining physical type, general health, mode of life, and skin normality.

SUMMARY OF FINDINGS

Some of the findings in the first 100 cases appear of interest:

Fifty-five per cent. of the patients examined showed a general increase of sebaceous activity on face, chest, back, and scalp apart from any true comedones or pustules. The greater number of these scalps were stated to become "greasy" within five days of washing.

Constipation of a degree sufficient to demand the regular taking of aperients was complained of in 60 per cent.

Follicular perniosis, as shown by a pin-point hyperkeratosis with minute areas of capillary stagnation, was found on the pulvinar areas and posterior upper arms.

Peripheral cyanosis of greater or less degree was found in 28 per cent. of the cases, although the patients had been seated in a warm room for at least one hour prior to examination.

A marked "clamminess" of the hands was found in about one-third of the cases; this clamminess has been shown by the writer elsewhere[2] to be a rather misleading phenomenon. A palpable moisture on the hands does not necessarily imply any increased secretion of moisture. In the greater number of patients whose peripheral sweat loss was estimated exactly the secretion was actually below average, and appeared to be merely the result of a lowered peripheral temperature and consequent lessened evaporation.

Peripheral temperature, as estimated by the personal criterion, was raised very rarely indeed—a hand as warm

* Read in the Section of Dermatology at the Centenary Meeting of the British Medical Association, London, 1932.

or warmer than the writer's was present in only 5 per cent. This fact appears to be of definite significance when compared with the results of inquiring as to the amount of clothing the patient was in the habit of wearing in order to keep comfortably warm. In 40 per cent. of the cases the amount of clothing appeared excessive, and many patients stated that they had always had a poor circulation.

I have been unable to find statistics as to the loss of teeth from dental caries in the young adult, and cannot say definitely whether the figure of 52 per cent. with the decay of more than six teeth is high for the average age of 21. It would certainly seem common to find complete upper dentures among those complaining of acne.

Menstrual irregularity—that is, variations of five days or more—was complained of as occurring, or as having occurred, at the onset of acne in 40 per cent. of the cases. This variation was more commonly found in brunettes than in blondes, and it would be of interest to know whether irregularity of this degree is more common in the healthy females of the former type.

Acne appeared to have a later onset in brunettes, at 17, than in blondes, at 15½. This, however, may be due to the fact that comedones and excessive grease formation are less noticeable and less likely to be regarded as pathological in those of dark complexion. It certainly cannot be correlated with any difference in date of onset of menstruation, since the average age of 14 for this was common to both groups.

It is too early, and the cases dealt with are too few in number, for any attempt at explanations of the above findings. It does, however, already seem clear that in acne we are dealing with a condition which cannot be regarded as a local disease of the skin with a single aetiological factor. It is an expression in the skin of malfunction elsewhere manifested by certain groups of susceptible individuals.

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Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

PARADOXICAL EMBOLISM OF THE RIGHT MIDDLE CEREBRAL ARTERY

In discussing the condition of paradoxical (or crossed) embolism, Thompson and Evans (*Quart. Journ. Med.*, 1929–30, xxiii, 135) remark upon its infrequent occurrence, considering the frequent association of venous thrombosis with a patent foramen ovale. The following case is of interest not only on account of the comparative rarity of the condition, but also because of the difficulty experienced in arriving at an accurate clinical diagnosis.

CASE RECORD

History.—A right-handed man, aged 51, was admitted to the Hospital for Epilepsy and Paralysis, Maida Vale, on May 27th, 1932. Five weeks previously the patient was found in bed with a left hemiparesis, which in two days progressed to a hemiplegia. Apparently there had been no loss of consciousness and no disturbance of speech. There was a vague history of headache and pain down the back at the onset of the illness. During the five weeks preceding admission he had suffered from severe occipital headache (worse at night), impairment of memory, and incontinence of urine and occasionally of faeces. There had been no vomiting.

Past History.—Heavy drinker for many years. No venereal disease. During the war he had suffered from pneumonia, sunstroke, dysentery, and typhoid fever.

Examination and Progress.—There was a complete left hemiplegia. Retinoscopy showed normal fundi and very little atheroma of the retinal vessels. The visual fields showed a left upper homonymous quadrantic hemianopia to a 1 mm. object at 2,000 mm. To a 4 mm. object at the same distance the visual fields were full. The left pupil was slightly larger than the right, and reacted sluggishly to light, with a brisker consensual reaction. The right one reacted briskly to light, and both reacted well on convergence. There was impairment of voluntary conjugate movement of the eyes to the left, but on rotating the head to the right full conjugate movement to the left was possible. All forms of sensibility were impaired over the left half of the body. The muscles of the left forearm and hand were moderately wasted. The left upper and lower limbs were spastic, with an increase in the deep reflexes on that side and an extensor plantar response. The heart was not enlarged, and the sounds were normal. Blood pressure 120/80. The radial and brachial arteries were unusually soft for a man of this age. No abnormality was detected in the lungs. There was no subcutaneous oedema. Blood Wassermann reaction was negative. Examination of the cerebro-spinal fluid showed: Wassermann reaction negative, total protein 0.02 per cent., cells 1 per c.mm. Lange's curve 00000000000. The fluid was not under increased pressure. *X*-ray examination of the skull showed nothing abnormal.

Soon after admission his condition became worse, and he complained of severe headache. He was drowsy, and his speech was incoherent. Catheterization became necessary. The spasticity of the limbs disappeared, and flaccid paralysis ensued. Fourteen days after admission he became very drowsy, and 6 oz. of 50 per cent. magnesium sulphate solution were given by rectum on three occasions, but with no improvement. On the same day there was found at the left base a small patch of dullness, with diminished movement and faint tubular breath sounds. No rub was heard. He did not complain of pain in his chest, nor was there any cough or sputum. He died seventeen days after admission.

Post-mortem Examination.—A moderately developed, muscular man. Infarction of brain, organizing thrombus in right middle cerebral artery, thrombosis of left iliac vein, patent foramen ovale. Massive softening of right cerebral hemisphere, involving white matter of frontal lobe in front of, and to lateral side of, anterior horn of right lateral ventricle, right caudate and lenticular nuclei, with adjacent internal capsule, external capsule, and island of Reil. Similar softening of contiguous upper third of temporal lobe and white matter of parietal lobe. Complete occlusion (by organizing thrombus) of lumen of right middle cerebral artery at origin of first large branch, 2.5 cm. from termination of internal carotid artery. Rusty, reddish-brown, externally laminated thrombus filling left common iliac vein a few centimetres below junction with inferior vena cava and extending down external iliac and femoral vein to lower end of Hunter's canal. Vein not explored below this level. Haemorrhagic infarct (3 cm. diameter) in outer border of lower lobe of left lung. Delicate fibrous adhesions uniting visceral and parietal pleurae over infarct. Foramen ovale patent to pencil and protected by valve-like fold. No thrombus or other abnormality in heart. Slight general atheroma. Engorgement and slight acid digestion of lungs. Back-pressure congestion of spleen and of kidneys. Parenchymatous degeneration of liver. Middle ears clean. No oedema of legs. Healed superficial abrasion in skin over left internal malleolus.

DISCUSSION

The clinical diagnosis in this case was difficult. Thrombosis of the middle cerebral artery was considered improbable in the absence of any other indications of cardiovascular degeneration. Rupture of a congenital aneurysm was thought possible on account of the headache and pain down the back, but this diagnosis, as well as that of syphilitic endarteritis obliterans, was not supported by the examination of the cerebro-spinal fluid. The presence of a tumour could not be excluded with certainty, the abrupt onset of symptoms in such circumstances being suggestive of local oedema or of haemorrhage into the tumour. The absence, however, of premonitory symptoms, of signs of increased intracranial pressure, and of radiographic abnormalities in the skull was evidence against a tumour. A diagnosis of paradoxical embolism was never considered. Thrombosis of the femoral vein was not specifically looked for, but there was never any clinical indication of its presence. This is surprising in view of the extensive thrombosis found at necropsy. The pulmonary infarct was small, and gave no symptoms. The signs found in the chest shortly

before death were considered to be due to a terminal bronchopneumonia.

Pathologically there can be no doubt that this is a genuine example of paradoxical embolism. The only other site of embolism found at necropsy was in the left lung. Clearly this small infarct could not have appreciably raised the pressure in the right auricle. The present case, then, illustrates the fact that paradoxical embolism can occur in the absence of a raised pressure in the right side of the heart, and supports the findings of Thompson and Evans that this factor does not play an essential part in the production of paradoxical embolism.

I am indebted to Dr. Russell Brain for permission to publish this case, and to Dr. Dorothy S. Russell for her report of the necropsy. I should also like to thank Dr. W. Evans for his help and criticism.

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Reports of Societies

ANAESTHESIA DURING LABOUR

At a meeting of the Medical Society of London on January 23rd, with Sir JOHN BROADBENT in the chair, a discussion took place on anaesthesia during labour.

Mr. LESLIE W. H. WILLIAMS said that from an observation of many cases he had come to the conclusion that labour was extremely painful, and particularly at two periods—namely, when the head was passing through the cervix and just beginning to distend the vagina, and at the time of delivery through the vulva. Something was needed, therefore, which would relieve over a long period, and could be reinforced in its action as desired. The ideal method of relieving pain in labour had not yet been discovered. In recent years gas and oxygen had been widely advocated as the ideal anaesthetic, but in this advocacy only the second stage had been considered, and it was obvious that this anaesthetic could not serve throughout labour, and particularly during the many hours of the first stage, when the patient, conscious only of pain without appreciable progress, was thoroughly miserable. In the search for something more powerful they had been handicapped by the encouraging reports of some observers, whose enthusiasm had not been justified in the ultimate result. Certain cases were found to respond very badly to the drugs used, some of the patients becoming wildly excited and even maniacal. Even in cases where the drugs appeared otherwise to be working well they had an adverse effect on the uterine contraction to such an extent that labour practically came to a standstill. He had had little or no experience of the method which seemed to him in theory the best of all—namely, that brought forward by Gwathmey, of synergistic anaesthesia. Early in labour, as soon as the patient was beginning to evince real distress, 1/6 grain of morphine dissolved in 2 c.cm. of 50 per cent. magnesium sulphate solution was given intramuscularly. During the first stage two further injections of the magnesium sulphate alone were given, and just before the descent of the head into the pelvic cavity a rectal injection of a mixture consisting of ether and olive oil, together with a small amount of quinine and alcohol, was made. He thought that this merited much more extensive trial in this country. "Twilight sleep" was widely used in maternity hospitals; he described his own modification of this method. At the first sign of distress the mother was given 1/4 grain of morphine and 1/100 grain of scopolamine; subsequently she received 1/200 grain of scopolamine at two-hourly intervals for about two doses, and later 1/300 grain of scopolamine at three-hourly intervals if required. It was his custom to stop scopolamine at the commencement of the second stage, and to continue intermittent chloroform, or, better still, gas and oxygen. He was not in favour of the employment of drugs like avertin which were given by rectum. The intravenous injection of barbiturates was also to be deprecated; the oral route, however, was highly satisfactory in many cases. He had never used paraldehyde in obstetrics. With regard to the second stage of labour they would all be agreed that gas and oxygen was far and away the best anaesthetic; but the patient did require to be under the influence of something like nembutal, otherwise she would wake up between each administration of the gas and oxygen and ask whether all was well.

Dr. DOUGLAS BELFRAGE said that for the second or expulsive period of labour the choice had to be between ether, chloroform, and gas and oxygen. The only one of these which fully answered the purpose was gas and oxygen; the other two inhibited the action of the uterine muscle as soon as they were used in sufficient concentration to relieve pain. The disadvantage of gas and oxygen was the cumbersome and expensive nature of the apparatus, but this was being gradually reduced. A much more difficult problem was to secure the first stage of labour free from pain, and an enormous number of drugs had been advertised for this purpose. Nembutal, in his opinion, was a perfectly safe drug when rightly used, though when used alone, even if morphine had been given beforehand, there was a tendency to restlessness. He gave a first dose of 3 grains of nembutal, followed shortly afterwards by 30 grains of chloral hydrate in lemonade. Within two hours 1½ grains of nembutal and 30 grains of chloral were given if necessary. He thought that 6 grains of nembutal was not an excessive dose taken over six, eight, or ten hours. Many of the women in whose cases this method had been used had no recollection of their labour at all, and none of them had any painful memory. He believed that avertin had some place in obstetrics; it was perfectly safe as long as the patient was not left alone. The dose should be rather smaller than the usual pre-operative dose. In the cases with which he had had to do—about twenty—he had found no difficulty in the rectal administration. If success was to be achieved the patient must not be allowed to return to consciousness after the avertin had been given. If, therefore, one began the administration too soon, one would only be saved from failure by an exceedingly long anaesthetic session.

Dr. GLYN HUGHES, speaking as a general practitioner, said that it was necessary to bear in mind that perhaps half of all labours were conducted by midwives. It was necessary also to differentiate between practitioners in large cities, who had access to consultants and nursing homes, and practitioners in country districts, who had to rely upon the help of a midwife or nurse. Of "twilight sleep" to its fullest extent he was no advocate; it called for too much personal attention and supervision, a state of excitement was often induced, and there was a tendency for the child to be born in a condition of apnoea. On the other hand, the modified method, given as a preliminary sedative, was of immense value. Nembutal could only safely be given by the mouth. In a large majority of cases with this drug he had found some degree of restlessness produced, sometimes a marked excitement; this could be lessened by giving an injection of omnopon-scopolamine beforehand. The restlessness seemed to have the effect of making the patient incapable of any effort herself. When given with chloral he had not had the same success as Dr. Belfrage. With regard to general anaesthetics he quite agreed that gas and oxygen was of enormous value, but it required the help of a skilled anaesthetist who could give the full time required. A combination of sedatives in the early stages, followed by gas and oxygen, with perhaps ether at the end, was the best procedure. As to the respective merits of ether and chloroform, he was in favour of chloroform, except, of course, in cases where it was contraindicated. The patients seemed to tolerate it well, and were always sufficiently conscious to obey orders and to render help.

Dr. ZEBULON MENNELL took the view that gas and oxygen was the ideal anaesthetic in labour, but it was an ideal that could not be reached in this country in existing circumstances except in a few special institutions. He was confident that chloroform given to the obstetrical

degree in normal labour was the only feasible anaesthesia in this country at the present time. In all his experience he had never seen any bad result from chloroform anaesthesia. By "normal labour" he meant one in which there was a reasonable hope that the woman would deliver herself, and by "chloroform anaesthesia to an obstetrical degree" he meant a definitely light form of anaesthesia, really an analgesia, which produced a partial amnesia. It was difficult for the accoucheur to realize how light the anaesthesia might be. The much abused ether was difficult to give unaided, and required a higher degree of skill than could usually be obtained in ordinary labour, but he believed that, given that skill, everything which could be done with chloroform could be done with ether, and with greater safety. "Twilight sleep" had its vogue; it had been tried out at St. Thomas's, and it was perhaps sufficient to say that hyoscine and morphine still had their uses in maternity work. The much boomed avertin was to his mind too uncertain, and if rectal anaesthesia was to be given a much more safe and certain drug was paraldehyde, after which chloroform could safely be given, as it could not after avertin. A good deal had recently been heard about capsules of chloroform distributed to midwives. He confessed that he saw very considerable difficulties and dangers in this procedure. It was likely that more capsules would be used than were required, and that an excessive percentage of chloroform would be taken by the patient in one deep inspiration. But surely it was not beyond possibility to produce some form of foolproof inhaler.

Sir WILLIAM WILLCOX uttered a warning as regards the use of certain drugs of the barbituric acid group. Nembutal had been advocated that evening, and it was used very much in America. It was a new drug, and like many such its possible dangers only became known after some experience. Nembutal was the most powerful of the barbituric acid series from the toxic point of view; it exceeded luminal in toxicity. Nembutal was a renal poison. The kidney cells stopped excreting, and suppression of urine was the result. He knew personally of four cases of fatal suppression of urine from nembutal in doses of considerably under 10 grains. Surely that was sufficient to make one hesitate to allow midwives to use a drug of that type. Within the last fortnight a patient seen by an eminent neurologist was given two capsules of nembutal. He went into a deep sleep for twenty-eight hours. Two days later he became restless, and the nurse, who had a bottle of nembutal tablets amongst other things which had been prescribed for this difficult case, gave him three capsules in twenty-four hours. The speaker was called in three days later, when the patient had a temperature of 101.6°, while the respiration was 60 and the pulse 120. It looked as if the patient was likely to die within a very few hours. There were signs of commencing pneumonia. He had recently discovered that the only thing that would save a person who had got pneumonia due to barbituric acid drugs was a lumbar puncture and the draining off of a good deal of cerebro-spinal fluid. That was done in this case, and fortunately the patient just recovered "by the skin of his teeth."

Dr. J. P. HEDLEY felt strongly that the less drugging that was given to these patients within limits the better. He did not like the very strong drugs, but much preferred the simple things such as morphine and scopolamine to the newer preparations like nembutal. Paraldehyde was another old friend, and, so far as he knew, was a perfectly safe anaesthetic. But if, towards the end of the labour, an anaesthetic was needed, he thought the only practicable one was chloroform. Gas and oxygen was very pleasant, but unless morphine or something of the kind was given beforehand the patient woke up periodically, and really, in the long run, had a worse time than if she had been given a longer labour with chloroform.

Dr. BERNARD SCHLESINGER asked whether nembutal might not leave the infant rather cyanosed. Mr. D. W. ROY spoke of a case under his observation, treated by nembutal, in which it seemed to him that the constant movement of the patient must interfere with the use of the subsidiary muscles and hinder her delivery. In cases under nembutal with chloral he was of opinion that the patient was definitely too much "doped." He thought it a great pity to use any method of anaesthesia which did away with the co-operation of the patient. Dr. T. JENNER HOSKIN asked about the anaesthetic procedure in women with damaged hearts with mitral stenosis, who, however, were considered well enough to be allowed to go to term. Dr. W. M. H. MCCULLAGH said that at his hospital morphine and magnesium sulphate had been tried out, but they could not satisfy themselves that the magnesium added anything of value. They had also tried nembutal, and had found that a number of cases had had to be held down in bed. Dr. WILLIAM GILLIATT thought it undisputed that all anaesthetics and analgesics tended to delay the contraction of the uterus. He believed it unwise that every patient should be allowed to believe that she would have a painless labour. It was better to tell her to expect some pain, but that it would be possible to relieve her to some degree.

Mr. LESLIE WILLIAMS, in reply, said that the discussion that evening would be accounted reactionary by the advocates of nembutal. In the comparatively large number of cases in which he had used this preparation he had never seen any disadvantages from the mother's point of view, though he knew of a case of suppression of urine where nembutal had been used intravenously. As to chloroform in capsules administered by midwives, this had been tried extensively, and he had always awaited news of a catastrophe, but it had never come. Midwives were now being trained at Queen Charlotte's to use capsules on the district. Nembutal had practically no effect on the infant. In women with mitral stenosis chloroform had been given, and they had gone through the labour extremely well.

PHYSICAL METHODS IN TREATMENT OF HEART DISEASE

At a meeting of the Section of Physical Medicine of the Royal Society of Medicine on January 20th, with Sir ROBERT STANTON WOODS in the chair, a discussion took place on the value of physical methods in the treatment of heart disease.

Dr. F. G. THOMSON said that the systematic treatment of heart disease by physiotherapy had been somewhat neglected in this country, especially since the injudicious treatment of unsuitable cases at Nauheim had caused the "Nauheim system" to fall into disrepute. The generally accepted physiological effects produced by different types of baths, by massage, and by graduated exercises should, in principle, be of considerable value in certain types of cardiovascular disease. The main effects were: improvement in peripheral circulation; reflex action on the heart, causing slower and more effective beat; reflex action on respiratory centre, causing deeper respiration; increase of metabolism; elimination of toxins; reduction of obesity; and general improvement in health and outlook. The only form of electrical treatment he had found to be of any real value was high-frequency current in the treatment of abnormally high blood pressure. It was necessary to make careful selection of cases in which the principles just enumerated might be applied with advantage. The following were unsuitable: infective endocarditis; rheumatic carditis, except possibly in certain old-standing stabilized cases; advanced myocardial disease; advanced arteriosclerosis; and tachycardia and the like, associated with hyperthyroi[illegible]. Suitable cases were those recovering from a toxic [illegible] acute illness; "D.A.H."; functional conditions, such as multiple extrasystoles, or dyspnoea, dependent on gastro-intestinal disorders, obesity, or thyroid deficiency; myocardial debility associated with obesity; and early cases of myocardial degeneration often associated with hypertension, with symptoms suggesting mild coronary insufficiency, such as dyspnoea and precordial distress on exertion. Dr. Thomson added that there could be no greater error than to assume one stereotyped physical treatment as being applicable to all cases. Further, physical treatment, if it was to be of any value, must be applied in the early stages, and, when that was done,

there were many cases in which it would be found of great value in the restoration of cardiac efficiency.

Dr. B. T. PARSONS-SMITH said that it was customary nowadays to divide heart affections into two main groups —functional, and structural or congenital. In both these groups a defective circulatory reserve was recognized, in which the circulatory mechanism suffered embarrassment to the extent of producing the characteristic train of symptoms well described as the "effort syndrome." From personal experience he was inclined to attribute special efficacy in heart affections to general massage and graduated exercises. Actually the result of massage and exercises was an increased heart load, and this, if suitably graduated, would in favourable cases exert a strengthening influence on the myocardium and at the same time improve the mechanics of the general circulation. Both remedies must be administered with the utmost caution, so that the processes of compensation in the heart and peripheral circulation might be suitably graduated according to the severity of the underlying disability and the patient's past and present exercise tolerance.

Dr. T. F. COTTON said that it had not been possible, by the direct action either of drugs or of physical agents, to prevent or cure the pathological condition which was recognized clinically as cardiovascular disease, but the natural course of the structural changes could be in greater or less degree controlled by suitable treatment. He drew particular attention to the cutaneous blood vessels and their response to mechanical, thermal, and electrical stimulation. The physiotherapeutic agents, by their direct action on the minute blood vessels of the skin and nerve endings, released a mechanism which played a more or less important part in controlling the peripheral circulation. If vaso-constriction was the dominant factor in the causation of symptoms, a rational form of treatment was one which restored the balance by liberating vaso-dilator influences, and he thought it possible to support the view that physical stimulus as applied by physiotherapy caused a widening of the blood vessels by direct action, and this vascular response was due to the release of a vaso-dilator substance in the skin. There was evidence that vaso-dilatation in these circumstances was under local control and independent of the central nervous system. Dr. GEOFFREY HOLMES spoke of the effects of baths. In his practice the cardiovascular conditions fell into two groups: actual valvular disease on the one hand, and, on the other, myocardial weakness and the anaemia associated with the chronic infective type of arthritis. Sometimes the heart condition was so serious that the taking of baths which would be appropriate to the joint condition was rendered almost impossible. In the normal person the taking of a bath at a temperature of 99° to 104° F. produced an immediate rise in the pulse rate, and sometimes a rise in the systolic pressure, though there was a drop in the diastolic. It was not yet agreed to as to how the CO_2 bath acted, but it certainly affected the basal metabolism, and increased the flow of blood through the peripheral vessels and so relieved the heart. Liver packs, with mustard as a stimulant, were good for auricular fibrillation. In some further discussion, Dr. W. P. KENNEDY said that he had brought about great benefit in some cases of tachycardia associated with hypothyroidism by physical methods; and Dr. R. TIMBERG mentioned that physiotherapeutic treatment of cardiovascular conditions was largely practised in Sweden fifty years ago, especially in the case of those people who had lived more "well" than wisely.

CLINICAL CASES

At a meeting of the Aberdeen Medico-Chirurgical Society, held on January 12th at the Royal Aberdeen Hospital for Sick Children, with the president, Dr. W. CLARK SOUTTER, in the chair, cases were shown by members of the staff of the hospital.

Dr. N. J. LOGIE showed two cases of rupture of the kidney. The first, a girl aged 8 years, was admitted with abdominal pain, sickness, and vomiting two days after being run into by a bicycle. Tenderness and rigidity were present in the right iliac fossa, but there was no lumbar tenderness, and no blood was found in the urine. When the abdomen was opened a little free fluid and blood were found, but there was haemorrhage into the ascending mesocolon. The lower pole of the right kidney was surrounded by blood. Appendicectomy, without drainage, was performed. Sixteen days later fullness and tenderness developed in the right side, and a radiogram suggested an intra-abdominal effusion. In twenty-three days' time a swelling had developed in the right hypochondrium. This was opened, and pus, blood, and urine (urea concentration 1.8 per cent.) were obtained. Culture showed *Staphylococcus albus*. The urea concentration of the right kidney was 1.38, 1.44, and 1.55 per cent. Retrograde pyelography showed a leakage of sodium iodide into the abscess cavity from the lower pole of the right kidney, and dilatation of the pelvis. The child was discharged very well. Ten months later retrograde pyelography showed a normal appearance apart from a suggestion of destruction of the lower pole on the right. Uroselectan showed equal shadows and equal rates of excretion. The second patient, a girl aged 11, had been run into by a bicycle ten days before admission to hospital. The symptoms were the same as in the previous patient, but in this case haematuria was present, and tenderness in the right flank. Fifteen days later right-sided lumbar pain, tenderness, and a swelling developed. Incision yielded pus and urine, which on culture gave a growth of *Streptococcus haemolyticus*. The urea concentration of the right kidney was 0.7 and 1.15 per cent. Retrograde pyelography showed marked dilatation of the right pelvis, and probably a leakage from the lower pole into the abscess cavity. The patient was discharged well, and five months later uroselectan showed a normal appearance and equal rates of excretion in the two kidneys.

Dr. JOHN CRAIG showed a boy of 5 years of age who had had a pneumococcal septicaemia for seven weeks, but had eventually made a good recovery. The child was admitted with a pneumonia of the right lung apex. As this was resolving a fresh patch of consolidation appeared at the left base, and this was followed by successive small pneumonic areas in the remainder of the left lung. The pneumococcus was of Type IV; a lung puncture demonstrated the same organism. Dr. Craig also showed a film illustrating the diagnosis and operative treatment of pyloric stenosis in infants.

Mr. ALEXANDER MITCHELL showed the case of a child of 13 years, who had been admitted to hospital with a history of seven months' pain in the left hip of gradually increasing severity; there was little limp in the mornings, but in the evenings, when the child was tired, this was more pronounced. There was no history of trauma, but osteotomy had been performed on both tibiae during childhood for rickets. There was limitation of all movements of the joint, flexion being least affected; it was possible to raise the leg to an angle of about 120 degrees from the trunk. Apparent shortening was present, but no actual shortening. Bryant's triangle was distorted, and there was a certain amount of tilting of the pelvis, but no pain, tenderness, or wasting was present. The blood Wassermann reaction was negative. A radiogram revealed coxa vara, with partial destruction of the head of the left femur. Mr. Mitchell also showed a film of two cases of cerebral diplegia demonstrating the typical scissors gait. Mr. G. GORDON BRUCE showed the case of a boy, aged 6 years, who was found, following a motor car injury, to have a retroperitoneal rupture of the duodenum. He was operated on within three hours of the accident, the opening in the duodenum being closed by suture; recovery was uninterrupted. Mr. ANDREW FOWLER showed two cases illustrating the late results of operative treatment for severe lacerated wounds of the hand and wrist and of the foot, and a film of two cases of spastic paraplegia. Dr. WILLIAM BROWN showed a case of chorea paralytica in a girl aged 6 years. There had been a rash, accompanied by pyrexia, after the administration of 24 grains of nirvanol. When the reaction subsided the child began to make voluntary movements again. Dr. Brown also showed a cinematograph film of three cases of hemichorea.

DIAGNOSIS OF EARLY PHTHISIS

At a meeting of the Liverpool Medical Institution held on January 12th, with Mr. FRANK JEANS, vice-president, in the chair, Dr. ROBERT COOPE read a paper on some reasons for the frequent failure to make an early diagnosis of phthisis.

Dr. Coope had analysed 103 cases which, on being sent for opinion, were justifiably labelled for the first time as suffering from phthisis. Of these only five were "early" enough to show by *x* rays nothing more than a small subclavicular patch of infiltration. A further twelve cases showed disease limited to one lobe without cavities. No fewer than sixty-one patients had cavities, large or small. Thus eighty-six out of 103 patients came with advanced or moderately advanced lesions, a figure agreeing closely with that of Myers of Lymanhurst. There were ten cases of the "grandparent age"—60 to 80 years; all appeared clinically to be so-called typical conditions of "chronic bronchitis" or "asthma." Such cases were dangerous—to the grandchildren. It did not appear that the medical profession was seriously at fault, though analysis of previous symptoms suggested that there is still too little heed taken of warning symptoms, such as pleurisy or slight haemoptysis. Possibly doctors were still reaping the fruits of the pre-radiological era, and tended to pay too much attention to the presence or absence of physical signs. Nor could the patient justly be blamed. The truth was that phthisis often began as it were in a rather advanced and rapid way, and the early case was found only rarely, and then often by good fortune. Once cavitation was present, the case should be regarded as serious, because of the danger of spread by the bronchi to other parts of the lung. The day had gone by for any need to defend radiology in the diagnosis of disease of the lung; it was a far more reliable instrument of precision than the stethoscope. Dr. Coope pleaded finally for a better all-round training of medical students in pulmonary tuberculosis. The subject was an important branch of medicine, and of fine educational value, full of fascinating problems of judgement both in diagnosis and in treatment—full, also, of human and social interest in its relations with social and industrial conditions.

In the discussion which followed, Dr. A. ADAMS entered a protest against the doctrine that the use of the stethoscope was valueless in the diagnosis of pulmonary tuberculosis. Pulmonary tuberculosis was a disease rarely seen now in our hospitals, and it had become a close preserve of the municipal or county specialist. Doubtful cases were almost always sent to him for diagnosis, with the result that in our teaching hospitals no material was found for the students, and there was little wonder that the younger generation had come to rely more on a radiological report than on their own perceptions. The conditions of the patients on first diagnosis had grown progressively more advanced. A few years since, he had discovered that an average of 60 to 70 per cent. were found to be definitely advanced cases on first notification in the most progressive boroughs of England. This was not entirely due to faulty work by the general practitioner, but because, mainly owing to increased resistance and immunity, the patients were able to continue at their work without serious inconvenience and without seeking medical aid.

Dr. E. T. BAKER BATES said that at a time when the early diagnosis of phthisis was essential to progress, the medical student had no facilities for the observation of early cases, owing to their segregation in municipal clinics. In no branch of medicine had radiology been of greater value than in pulmonary tuberculosis—any case with obvious physical signs was always advanced. Early bronchiectasis—especially the apical, the atelectatic, and the dry haemorrhagic types—with recurrent haemoptysis simulated tuberculosis. Primary new growths of the lung were forming a large proportion of the cases sent by the tuberculosis officers to the observation wards of the Liverpool Chest Hospital. In both of the above conditions lipiodol had been of the greatest value in the differential diagnosis. At the Stanley Hospital, Liverpool, routine radiographs of the chest were taken in all cases of dyspepsia—demonstrating active or quiescent phthisis in 35 per cent., with or without a gastro-intestinal condition such as peptic ulcer or chronic appendicitis. Dr. H. R. HURTER said that in diagnosing phthisis there was no excuse in Liverpool for the existence of what Dr. Coope had referred to as "exclusive stethoscopists," for nowhere in England was *x*-ray work better done. The co-operation of the expert radiologist had become essential in chest examinations. In the search for evidence of phthisis by *x* rays one experienced two opposite kinds of shock: first, the disagreeable one of discovering that extensive disease was present when auscultatory signs had not suggested it; and secondly, the more agreeable shock of obtaining normal *x*-ray films in cases of prolonged cough or fever after influenza, when phthisis was beginning to be suspected. It was in establishing such negative diagnoses that *x* rays were specially valuable to the general practitioner. Dr. C. G. BRENTNALL said it appeared from Dr. Coope's findings that a general practitioner would be well advised not to attempt the diagnosis of pulmonary tuberculosis, but to send all cases with suspicious symptoms to the radiologist and bacteriologist. Dr. C. ALLAN BIRCH thought that the stethoscope, though an interesting instrument to use, and the badge of a physician, could not compare with the *x*-ray machine as a means of making an early diagnosis in pulmonary tuberculosis. In some American centres students learned fluoroscopy in addition to stethoscopy.

Dr. C. ALLAN BIRCH read a paper on the diagnosis of pleuro-pulmonary perforations, which dealt with part of a piece of work he performed at the Sea View Hospital, New York, under Dr. George Ornstein, and at the Royal Victoria Hospital, Montreal, under Professor Jonathan Meakins, during the tenure of a Dorothy Temple Cross Travelling Fellowship. Several methods were available, including: (1) clinical signs; (2) injections of dyes and volatile substances; (3) pressure studies; (4) *x*-ray studies; (5) thoracoplasty; and (6) gas analysis. Dr. Birch showed that gas from a pneumothorax cavity could be examined with the same ease as a pleural effusion and valuable information obtained. Whatever non-irritant gas was put into the pleural space it rapidly adjusted itself to a mixture of nitrogen, 1 to 5 per cent. oxygen, and 6 to 8 per cent. CO_2. When fluid appeared oxygen fell to 1 per cent. or less, and CO_2 rose to 10 per cent. or more. If a bronchial fistula or spontaneous pneumothorax was present, the oxygen rose above 5 per cent. because of contamination with alveolar air. Serial analyses would demonstrate the open or closed state of a fistula. Ten illustrative cases were described.

MALARIA CONTROL IN MINING CAMPS

Sir MALCOLM WATSON lectured on January 19th to the Institution of Mining and Metallurgy on the subject of malaria control in mining camps. Swampy ground, he said, was not necessarily malarial. The anopheles which carried the parasite bred, as a rule, in clean water, and malaria could be driven out from many places by polluting the water, either with mine tailings or decomposing vegetable matter. In some countries large rivers were dangerous during the dry season and harmless during the wet; in the dry season the mosquitos bred along the rush-green banks, and in the rains the larvae were all swept away, although there were species which could anchor on to the vegetation and defy the current. Sir Malcolm mentioned tin mines in Malaya where there were acres of swamp coloured red by mine tailings, and where malaria was almost unknown; the danger came, however, in other parts of that country by reason of tiny streams and seepages. At one of the iron mines of Orissa, India, the whole of the malaria was traced to a stream and the springs which fed it, and when these had been controlled by proper organization no larvae were to be found. In the copper mines of Northern Rhodesia two species of anopheles were culprits—*A. gambiae*, which lived in pools

in sunshine, and surrendered at once to a weekly round of oiling; and *A. funestus*, which lived in slow-moving water, among grass, and liked a certain amount of shade, and for the elimination of which some drainage was necessary.

In the ensuing discussion Mr. A. D. STORK described the work on the Roan Antelope mine in Northern Rhodesia. In 1928-9, among a European population of 1,200, the malarial rate in the bad months, March and April, was as high as 200 cases per 1,000. In collaboration with the Ross Institute measures of control were instituted, and the rate fell progressively, until last year it was 28 per 1,000. A good deal of blackwater fever formerly prevailed, but last year there was not a single case on the mine. He added that the cost of control at Roan Antelope was a capital expenditure of £25,000, and an upkeep expenditure of £8,000 for the three years—an inconsiderable figure when it was remembered that the total capital invested at Roan Antelope was nearly five millions.

Dr. G. C. RAMSAY said that, in Assam, out of about twenty species of the anopheles, only one was identified as being responsible for malaria. This species was found to breed in clear water or exposed streams, and had been eliminated by shading the streams by dense vegetation. In the swamps of Assam, water with colloidal clay in suspension was perfectly safe.

A mining engineer of long experience, Mr. E. T. MCCARTHY, said that he was able to recall the towns of Klang and Port Swettenham, in the Federated Malay States, when they were exceptionally malarial. He mentioned also Ipoh and Kuala Lumpur, where Government officials were not allowed to bring their wives and children on account of the prevalence of malaria; now these towns were full of English women and children, thanks to the result of malaria control. Santos in Brazil, and Vera Cruz in Mexico, were both known in his earlier days as "La ciudad de los muertos" (the city of the dead), and were now free from malaria, as was Havana, another city which had suffered terribly. In the Malay States, in the early 'eighties, he was about to pitch his tent on a low hill, when the Malays in a near-by village declared that it was a bad place, as the fever mosquito was there. He paid no attention to this idea at the time, but thinking that the place was known to be malarial pitched his tent elsewhere. A few years later, when the facts were known about the anopheles, he tried to discover whether the Malays had any knowledge of the mosquito being infected with fever, but without any result. In that particular locality, before modern discovery, the people had in some mysterious way associated malaria with the mosquito.

MEDITERRANEAN FEVER

At a meeting of the Section of Pathology of the Royal Academy of Medicine in Ireland, held in the Royal College of Physicians on January 6th, with Dr. W. R. O'FARRELL in the chair, Surgeon Lieutenant Commander S. G. RAINSFORD (introduced by Professor J. W. Bigger) read a paper on the laboratory aspect of Mediterranean fever.

The speaker described a method of blood culture, an unusual feature of which was the use of blood clot alone—the serum of patients infected with the disease could inhibit all growth of Brucella in broth. Beef-liver broth of *pH* 6.6 was the best medium, and was successful in 80 per cent. of cases. The necessity of prolonged incubation of cultures was stressed, cases being described in which the organism was not isolated until the twentieth day of incubation. In one case the requisite length of time was sixty days. The cultures that required the longest incubation were those made from blood possessing a high agglutinating titre for Brucella. In severe cases positive blood cultures were obtained as late as the eleventh week of the disease. Blood cultures from chronic cases usually remained sterile. The following conclusions were arrived at concerning the agglutination test. Agglutinins appeared early, about the sixth to the fourteenth day of the disease, and disappeared rapidly, none being found as a rule two years after recovery. A case was described which gave negative agglutinations within a week of the temperature falling to normal, and only two months after the isolation of *Br. melitensis* from the blood. In chronic cases the agglutinins gradually disappeared, without any improvement in the clinical condition. In the later stages these cases gave negative agglutination tests, possibly indicating a blockage of the reticulo-endothelial system. Of 296 serums examined only three agglutinated Brucella when no infection either past or present could be traced. This low percentage of false positives was in contrast with the high percentage found in Ireland, where 20 per cent. of normal serums agglutinated *Br. abortus* (bovine). The probable explanation was that *Br. melitensis* was more virulent for the human race than *Br. abortus*, and it seldom invaded the body without producing disease. Any positive agglutination had therefore a greater significance in Malta than in the British Isles.

The CHAIRMAN referred to the persistence of a positive blood culture in many of the cases which had been mentioned in the paper. The textbooks stated that a positive blood culture did not persist for very long, but experience showed that it did. He himself had seen people who had been abroad and come home, and their blood cultures had remained positive for many months after their return. He thought that Commander Rainsford was to be congratulated on getting so many blood cultures which were not contaminated. He asked if any urinary cultures had been done. The question of the agglutination reaction was always a difficulty. There were many late cases in which no agglutinins could be found in the blood. These cases were diagnosed in Malta as Mediterranean fever, and were sent home. At home they did not agglutinate at all, and it was difficult to know whether they really were cases of Mediterranean fever or not. Dr. W. D. O'KELLY referred to a case of Malta fever which he had recently seen in Dublin. He thought that the seventy days which had to elapse before the result of the blood culture was known, in the method described by Commander Rainsford, was a long period and would not appeal to the clinician who was anxious to know the result as soon as possible. In the United States *Br. abortus suis* was regarded as very pathogenic. In this country *abortus* infection was not regarded as a serious thing, but it might become more serious, and from the public health point of view it was an infection which the health authorities would like to stop. Dr. G. C. DOCKERAY said that on account of the large number of people who had agglutinins in their serum there was a great danger of anyone with a febrile illness being regarded as a case of undulant fever. Unless it was possible to cultivate the organism in the blood, he thought it was quite unjustifiable in the British Isles to conclude that a case was one of undulant fever simply because the agglutination test happened to be positive. Dr. A. R. PARSONS said that on looking at the charts shown by Commander Rainsford he was struck by the extraordinary slowness of the pulse and the very high temperature. Conditions in which these two things occurred were very few. He asked if the spleen was enlarged in any of these cases. In one case which he had had under his care the spleen was distinctly enlarged. The man was in hospital for eight weeks with a high temperature all the time. The intermittent type of fever found in these cases was very much like that of tuberculosis. He asked what was the exact relation between the three different organisms which were found in these cases, and if there was any evidence showing that one organism could be converted into another.

Commander RAINSFORD, replying, said that in the acute stage the spleen was slightly enlarged; in chronic cases there might or might not be enlargement. In general, all the organisms were similar antigenically. *Br. melitensis* was the most pathogenic organism, next came the porcine bacillus, and then the bovine bacillus. *Br. melitensis* produced abortion in the goat, but in the cow it produced practically no bad effects at all. Except in chronic human cases the pulse tended to be slow and the patients showed very little constitutional disturbance.

Reviews

HEART DISEASE

In his manual on *Heart Disease*[1] Dr. CRICHTON BRAMWELL has succeeded in his aim of illustrating the most important general principles of this subject. He has dealt with problems common in practice, such as the treatment of heart disease in pregnancy, the diet of cardiac invalids, and the management of neuro-circulatory asthenia. These and like subjects are considered in a manner definite, concise, and helpful, as contrasted with the nebulous generalizations contained in many textbooks. A small but valuable section on "athlete's heart" embraces Dr. Bramwell's personal observations on Olympic athletes, and concludes with a quotation of Professor A. V. Hill's plea for the abolition among schoolboys of racing (as distinct from running) distances greater than one mile. In the reviewer's opinion Dr. Bramwell's use of the term "anginal failure," while possibly logical, is unnecessary and confusing. The term "failure" has definite clinical connotations at the present time which are quite distinct, and very unusually associated with angina. Nor can there be any doubt that patients with congestive failure quite commonly complain of pain, so that the expression on this ground also fails to justify itself. The description of cardio-aortic syphilis has no doubt been abbreviated on account of limitation of space. The essentials of the subject are included, but four small pages scarcely represent its relative importance, especially when aneurysms are included.

Throughout the book physiological and clinical principles are clarified by the provision of excellent diagrams and figures; these, combined with the incisive arguments and readable style of the text, secure for Dr. Bramwell's work a definite and individual place among current cardiological textbooks. The student or general practitioner who buys this manual will find that he has spent profitably.

GENETICS AND EVOLUTION

Professor J. B. S. HALDANE is one of the most versatile of biologists, having achieved great distinction in many diverse fields—for example, statistics, biochemistry, and genetics. He is one of the very few people qualified to investigate the bearing of modern genetics on evolution theory. The species problem is the issue with which the hypothesis of organic evolution deals. The problem of the origin of species as such has been solved, but there still exists the problem of the origin of true-breeding varieties, and this is a subject which falls within the field of modern genetics. Linnaeus defined the species as a breeding unit, the individual members of a species being fertile *inter se*, and either failing to mate with members of other species or, if doing so, producing no, few, or sterile offspring. Professor Haldane's book[2] is exceedingly valuable in that it contains all the recently accumulated evidence for the way in which such specific barriers as these originate.

The book is based on a series of lectures given by the author in 1931. The quality and arrangement of the subject-matter indicate that these lectures must indeed have been both fascinating and inspiring. But they do not make a really good book, fully worthy of the title and of the author. Cleverness of a kind that lightens a lecture can be sadly out of place elsewhere. To suggest that the creation of a tapeworm is a blemish on the moral perfection of God may illuminate a lecture but spoil an argument. Again, the book opens with a fake quotation: "'Darwinism is dead': *Any sermon.*" Now, in point of fact, these words could have been attributed just as easily and appropriately to a very considerable number of biologists of repute. Professor Haldane admits that eminent theologists have accepted evolution, and eminent biologists have denied natural selection. But, though there are many blemishes of this kind to be found in the book, it is undoubtedly of first-class importance, for no other biologist has done so much as the author to equip the concept of selection with precise significance. Three main questions are considered: (1) What is the nature of heritable differences within species? ; (2) Are the differences between species of the same or of a different character? ; and (3) Does selection really occur in Nature? The author presents a wide range of carefully chosen and clearly expounded examples, taken from the most recent advances in experimental breeding, in order to show that every type of difference which distinguishes the species is either of the same kind as the differences which distinguish the varieties, or else arises as a mutation. He offers experimental proof that evolution occurs, and that therefore, in all probability, it has occurred and in the same way in the past history of this planet.

To the medical man the chapter entitled "What is fitness?" should have peculiar appeal, for in it the author deals with some of the fallacies which have arisen from the too hasty extension of evolutionary theory to social phenomena. The book is a most fascinating and lively account of the present status of the evolutionary problem. Biologists generally will welcome it for the reason that the author's mathematical researches are found therein summarized for the first time, together with a readable account of Dr. R. A. Fisher's views. Certainly a book to be read.

SURGERY OF CHILDHOOD

The surgery of childhood, in this country, has no recognition as a specialty corresponding to that of the medicine of the same age class. Its special problems are ignored in the medical curriculum and casually dismissed in the standard textbooks. In France, however, the Faculté de Médecine has the surgery of childhood as a separate division, and the professor in charge has just brought out the third edition of his well-known textbook.[3]

The book itself has both the faults and the virtues that one expects from the French cast of mind, alike in politics, philosophy, or medicine. To its credit must be placed writing of a clearness, a style, and a wit which seem as common in French medical works as they are in those written in English or its transatlantic variant. Again, we are glad to see that Professor OMBRÉDANNE very seldom descends to that method of treating a difficult problem which consists in giving a short summary of several mutually contradictory views, and leaving the unfortunate searcher for information to make his choice. As a rule his recommendations are simple, clearly stated, and obviously based on an immense personal experience. Finally, it is recognized throughout the book that operative surgery is a craft that works in three dimensions, and that in this craft diagrams are as necessary for argument and teaching as they are in engineering. To an English reader the faults of the book, like its virtues, appear to be national, and to group themselves under two main headings—the first, a certain brutality of treatment, and

[1] *Heart Disease. The Principles of Diagnosis and Treatment.* By Dr. Crichton Bramwell, M.A., M.D., F.R.C.P. London: E. Arnold and Co. 1932. (Pp. 244; 60 figures. 12s. 6d. net.)

[2] *The Causes of Evolution.* By J. B. S. Haldane, F.R.S. London: Longmans, Green and Co. 1932. (Pp. 242; illustrated. 7s. 6d. net.)

[3] *Précis Clinique et Opératoire de Chirurgie Infantile.* Par L. Ombrédanne. Troisième édition, revue, corrigée, et augmentée. Paris: Masson et Cie. 1932. (Pp. 1,479; 1,068 figures. 140 fr.)

the second, a reluctance to admit that progress may occur outside the boundaries of Gaul. (A third objection—that there is some lack of proportion in giving as much space to a discussion of the social and sexual aspects of hypertrophy of the clitoris as to the entire subject of tonsils and adenoids—may be merely due to our national prudery.) To those familiar with the practice of the surgery of childhood in this country, a sketch of some few of the recommendations and omissions of the book will furnish materials for both categories of objections.

Chloroform is used for all operations about the mouth, because, "although they claim to do so in England," it is impossible to keep the patient under with ether if the mouth is open. Is it, we wonder, this use of chloroform which accounts for those post-operative deaths of infants with pallor and pyrexia which so few surgeons in this country ha seen? In blood transfusion, the definitely dangerous route into the superior longitudinal sinus is recommended, and though various resultant signs of trouble in infants are mentioned, no warning is given against that rapidity of injection which is their most frequent cause. No mention is made of the tannic acid treatment of burns, nor of sympathectomy for Hirschsprung's disease. It is curious in a third edition to find the very interesting subject of femoral hernia entirely omitted; while, to anyone familiar with the work of Hamilton Russell, the treatment recommended for inguinal hernia seems to carry its own explanation of the indifferent results which are apparently expected. In talipes equinovarus, once manual correction has failed, recourse is had to devastating bone operations, though the warning is given that the results of these operations should not be too confidently judged till after the eighth year. In harelip, wide slashes into the cheeks and tension sutures are used, and the formula by which double clefts are mended deliberately aims for an ape-like lengthening and tightening of the upper lip. In empyema no indication for the cessation of drainage is given beyond that of taking the tube out and seeing if the accumulation recurs. After intestinal operations in babies the abdominal wall is sewn up in one layer by wire, and sticking plaster is used to minimize the all too obvious dangers of subsequent disaster.

The final impression left by this book, in spite of all the erudition and experience of its author, is that, whichever country may be leading in this most important and promising department of surgery, that country is not France.

"HYDRO-CLIMATOLOGY"

It is five years since courses of instruction in "hydro-climatology" were formally instituted in the faculties of medicine in France. The present volume on Hydro-climatological Treatment,[1] by Professor VILLARET and Dr. JUSTIN-BESANÇON, chief of the laboratory of hydrology and climatology in Paris, deals entirely with the clinical and therapeutic aspects of this subject. The authors set forth the indications of the French spas and climatic stations in various categories of cases, and in doing so have the advantage of the experience at the new centre for the selection of assisted patients who are sent to these health resorts from the Paris hospitals. A second volume will be devoted to the work of the laboratory in experimental hydrology.

A brief outline of the evolution of spa practice from the earliest times forms an appropriate introduction to the work. Chapters follow on the indications for climatic and hydrological cures in tuberculosis, "medical and surgical," in which climatic treatment is mainly emphasized, and the favourable influence of the Atlantic French coast on chronic pulmonary affections is described. Of non-pulmonary tuberculous cases, mainly children, more than 20,000 are annually referred to one or other of the French marine resorts. Certain of the French spas have specialized in non-tuberculous respiratory diseases, including asthma, now often regarded as allergic, which are often found to be amenable to the combination of climate with waters. A chapter is devoted to the cure by diuresis, used not only for renal, but for some cardiac and hepatic cases, especially when given in *la position couchée*. With this technique it is held that portal congestion is diminished and the circulation in the intestinal capillaries facilitated. Much space is devoted to the use of waters in digestive maladies, but comparatively little to cardiac or nervous disorders. The treatment of chronic rheumatic diseases by the internal use of waters, and by pools, douches, and mud baths, is briefly described. The interesting point is made that in persons intolerant of cold—a large proportion of cases—spa treatment is best given in a warm climate.

[1] *Climat et Thérapeutique Hydro-Climatiques.* Par Maurice Villaret et L. Justin-Besançon. Paris: Masson et Cie. 1932. (Pp. 254. 30 fr.)

ATHLETICS AND BODILY HEALTH

Elements of Medicine in Relation to Athletics,[2] by Professor H. HERXHEIMER, is a book that breaks new ground, for the author has collected into a single volume the evidence available regarding the influence of athletics on bodily health. Exact knowledge of this subject is very scanty indeed, and the author has increased the difficulty of his task by omitting easy topics, such as the surgery of athletic injuries. Moreover, he has made no attempt to provide a trainer's manual, but has endeavoured to assemble the scientific evidence regarding the effects of violent exercise. What a first-class human body can do when pushed to the limits of its endurance is a fascinating field for study. The limit of performance in long-distance athletics is set chiefly by the ability of the circulation to provide oxygen to the muscles, and hence the greater part of the volume is devoted to a consideration of the effects of exercise on the circulation and respiration. This is a subject to the knowledge of which the author has made important contributions. The chief questions dealt with are the fundamental problems of the effect of exercise on the oxygen consumpton, minute-volume of the circulation, lactic acid production, etc.; a number of obscure problems, such as second wind, staleness, and effect of exercise on heart size, are also considered. The second part of the volume describes the methods used by the author in the examination of those intending to take up athletics. It concludes with a short section dealing with the effect on athletic performance of drugs, massage, and high altitudes. The need for a book covering this department of knowledge has been urgent for some years, and the author is to be congratulated on having rendered easily accessible a large mass of scientific observations.

PSYCHIATRY

The Principles and Practice of Psychiatry,[3] by Drs. ALEXANDER CANNON and EDMUND D. T. HAYES, is intended to supply its readers with all the material necessary for the higher examinations in psychiatry, including the doctorate of medicine; and also for specialists for reference, physicians, lawyers, teachers, psychologists, and medical superintendents of mental hospitals. It is difficult to see how a textbook of mental disease could meet the distinctly different needs of the advanced student of

[2] *Grundriss der Sportmedizin für Ärzte und Studierende.* Von Professor Dr. H. Herxheimer. Leipzig: G. Thieme. 1932. (Pp. 142; 45 figures. M.10.50.)

[3] *The Principles and Practice of Psychiatry.* By Alexander Cannon, M.D., and Edmund D. T. Hayes, M.D. London: W. Heinemann, Ltd. 1932. (Pp. xvii + 457. 21s. net.)

psychiatry and those, for instance, of the teacher; this volume, indeed, can scarcely be said to meet the needs of either. The student of psychiatry obviously requires, in addition to a sound textbook of psychological medicine, special works dealing with normal psychology, dynamic psychology, and psychopathology. The book gives an impression of being hastily written, and is lacking in coherence. It is not free from definitely erroneous statements. Thus the "size-weight illusion" is here described as giving the opposite results to those obtained experimentally (p. 144). Altogether, we feel that this book is calculated to give a somewhat chaotic and blurred impression of modern psychiatry and psychopathology.

Notes on Books

The *Proceedings*[7] of the Imperial Social Hygiene Congress, held at the British Medical Association House in 1931, have now been published in book form. This survey of what is being done throughout the Empire to check the ravages of venereal disease, and to secure in greater measure an appreciation by the public generally of the importance of social hygiene, will be welcomed by all those, whether medical practitioners or laymen, who are interested in this matter. The subjects dealt with include the treatment of syphilis, ante-natal care, sterility in both sexes, the conduct of treatment centres, methods and utility of propaganda, social customs in relation to the dissemination of venereal disease, the part played by British women in social services over-seas, and the present position as regards venereal diseases in different parts of the world. The international aspect of the problem is also considered. The book constitutes a useful compendium, the value of which is increased by the index. It should be of particular service to medical officers of health.

Under the title of *Brompton Hospital Reports*[8] the research department of the Brompton Hospital for Consumption has published a collection of papers by members of the medical and surgical staffs which have recently appeared in various periodicals. It is announced that this is intended to be the first of a series, which will be continued at yearly intervals, to constitute a record of the investigations carried on at the hospital. The present volume includes the three first instalments of the investigation of tuberculosis in children, which was financed by the Halley Stewart grant, and twelve other articles dealing with aetiological, pathological, and therapeutical studies of tuberculosis and malignant disease. This new volume of reports should prove of considerable assistance to research workers elsewhere, but the presence of an index to the main topics dealt with in each article, or even a summary of these, would have rendered the book more generally popular. All the contributions have merit, and it is good that they should be preserved together in this convenient form.

A new edition of *Webster's Collegiate Dictionary*,[9] the fourth of the Merriam series, has been printed in England and bears the name of G. Bell and Sons, Ltd., on its title-page; but it is essentially an American dictionary of the English language, and the spelling of the large work, of which it is an abridgement, has been followed throughout. Apart from this disadvantage it is a very good work of reference for the ordinary English family bookshelf, and it includes some features not to be found in any comparable publication. The publishers announce on the dust-cover that "at a guinea Webster's 'Collegiate' is unrivalled in offering a first-class encyclopædic dictionary of wide scope, unexcelled in scholarship, accuracy, convenient size, and usefulness." A comprehensive claim indeed; but having sampled the contents we must admit that this book is remarkable "value for money." For everyday purposes—and for solving crosswords too—the vocabulary has been well chosen, and the definitions are, in general, intelligent, accurate, and up to date. The entries comprise more than 100,000 words and phrases, and there are 1,700 illustrations of the kind with which we have been familiar since childhood in popular lexicons.

GEORGE WITHER (1588–1667), whose history of the Pestilence is now printed by J. MILTON FRENCH, assistant professor of English at Dartmouth College,[10] was a well-known poet and pamphleteer during the reign of King James. During the Commonwealth he acted as one of the commissioners for levying assessments in Surrey to support the Army, and in 1651 he was employed in the sale of the goods belonging to Charles I. Mr. French reproduces in facsimile the warrant authorizing him to act in this capacity, which is now preserved in the college library at Harvard. The date on the warrant there corrects the statement in the *Dictionary of National Biography*, which gives 1653. The manuscript here printed has long been known in the Pepys collection at Magdalene College, Cambridge, but has not hitherto been transcribed. The poem is a page-for-page and line-for-line reprint of this manuscript, which is No. 1999 in the library. It was designed as a New Year gift to Charles I in 1626, and Mr. French thinks it may possibly be the copy actually presented to the king. It is neatly written and is free from erasures. At a later period Wither revised it considerably, and published it in 1628 under the title of "Britain's Remembrancer." Wither at the time was boycotted by stationers and seems to have been obliged to set up the type with his own hands. The poem consists of two cantos and 1,860 lines of somewhat inferior verse dealing unromantically with the 1625 epidemic of the Plague. Mr. French supplies a good introduction and provides a portrait of Wither, a facsimile showing his signature, and specimen pages of the manuscript. He also adds some notes and a bibliography.

Dr. D. M. MACDONALD has revised the sixth edition of *Craig's Posological Tables*[11] in accordance with the new *British Pharmacopoeia*, and this handy little compendium of drugs, doses, weights and measures, and methods of administration has gained considerably in value thereby. It also includes tables showing the important changes effected by the new *Pharmacopoeia* as compared with the 1914 edition. Other useful sections comprise an index of diseases, with their usual therapeutic indications, an appendix on poisons, and a grading of the principal medicaments according to their actions.

[7] Published by the British Social Hygiene Council, Inc., Carteret House, Carteret Street, S.W.1. (Post free 8s. 3d.)

[8] *Brompton Hospital Reports*. Published by the Research Department of the Hospital Vol. i. 1932. Aldershot, London, and Portsmouth: Gale and Polden, Ltd. 1932. (Pp. 144; illustrated. 2s. 6d. net.)

[9] *Webster's Collegiate Dictionary*. Fourth edition of the Merriam Series. The largest abridgement of Webster's New International Dictionary. London: G. Bell and Sons, Ltd. 1932. (Pp. 1222; 1,700 figures. 21s. net.)

[10] *The History of the Pestilence* (1625). By George Wither. Edited with an introduction and notes by J. Milton French. Cambridge, Mass.: Harvard University Press; London: H. Milford, Oxford University Press. 1932. (Pp. xxxvii + 112. 13s. net.)

[11] *Craig's Posological Tables*. Sixth edition. Revised by D. M. Macdonald, M.D., D.P.H., F.R.C.P.Ed. Appendix on Poisons, Index, etc. Edinburgh: E. and S. Livingstone. 1933. (Pp. 124. 2s. net; postage 2d.)

Preparations and Appliances

FISH-LIVER EXTRACT

Filivex powder and filivex liquid (Glaxo Laboratories, 56, Osnaburgh Street, N.W.1) are made in accordance with the technique described by Professor Stanley Davidson in his paper on the treatment of pernicious anaemia with fish-liver extract, published in the *British Medical Journal* of August 20th, 1932. The manufacturers note particularly that the cost of these potent and palatable preparations of fish liver is much lower than that of preparations of mammalian liver. The liquid is sold in 8-ounce bottles, price 5s.; the powder in boxes of three 5-gram tubes at 4s., or in boxes of twelve 5-gram tubes, 14s. 6d. Both are intended for oral administration; they may be mixed with a convenient amount of hot water, and, if required, flavoured with condiments to suit the patient's taste.

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PREVENTION OF POLIOMYELITIS

In an article printed in this issue Dr. Simon Flexner gives a brief review of the existing state of our knowledge of the immunological problems presented by acute poliomyelitis. It is now generally accepted that the disease is primarily an infection of the upper respiratory tract of comparatively common incidence, and that only in a small minority of persons so affected do symptoms of involvement of the nervous system appear. This fact accounts for the great excess of carriers over clinical cases of poliomyelitis and the consequently erratic nature of its epidemiology, and explains the now established finding that the blood of the average adult town-dweller possesses considerable antiviral properties. The problem to be solved is by what means this natural immunity can be reinforced artificially in persons afflicted or threatened with the disease.

Early researches by Flexner and Lewis on the experimental disease in monkeys showed that serum from convalescent animals was capable of inactivating the virus *in vitro*. When this observation was extended to the study of the power of serum given intrathecally to modify the effect of virus injected into the brain it was found that the disease was aborted or modified only if the interval between the introduction of virus and immune serum was less than twenty-four hours. When once symptoms of infection had arisen the course of the experimental disease was unaffected by the serum. These results led Netter in 1911 to introduce the employment of human convalescent serum in the early stages of human poliomyelitis. The results of such therapy are still *sub judice*, the consensus of opinion among clinicians being that treatment with serum is certainly harmless and that it is not proved that it does no good. The choice, then, in actually treating the established disease at present is between doing nothing and carrying out a measure believed to be harmless but not proved to be beneficial. The problem here is a clinical and statistical one, and it should be noted that the experimental disease in monkeys and the disease in man are not strictly comparable, as the normal monkey has no natural immunity prior to an attack of the disease.

A study was later made by Flexner and his co-workers on the power of convalescent serum to prevent the development of the experimental disease in monkeys after infection with the virus through the nasopharynx, it being found that intrathecal injection of serum prevented the occurrence of the disease under these conditions. This observation was put to practical use in the New York City epidemic of 1931. Several thousand children in the affected area were "immunized" passively by the injection of 30 c.cm. of serum from adult town-dwellers, and it was believed that the incidence of poliomyelitis among these children was lower than that among those not so treated. In the Pennsylvanian epidemic of 1932 this method of passive immunization was given a more extensive and measured trial. The outcome of this attempt awaits full analysis, but favourable results have already been reported. Such methods of passive immunization are essentially transitory in their effects, and it is natural that attempts at active immunization should be made. Experiments directed towards finding a mixture of virus and immune serum, or a modified form of the virus which shall establish active immunity in children without risk, are now in progress. Should this be accomplished a great advance will have been made in the prevention of poliomyelitis, the only wholly satisfactory method of combating this most tragic disease.

CONVALESCENCE ON THE COAST

An unusual development is taking place at many of the seaside resorts—some well-established favourites and others creations of yesterday—which is giving them a new attractiveness as health and holiday centres. This movement on the coast has naturally been greatly stimulated by the rapid and inexpensive new transport now provided by rail and road, of which the opening of the electric train service to Brighton and Worthing at the New Year is the latest example. This is a development of considerable medical interest. At not a few of these resorts, numbering altogether more than 200 in the British Islands, there is ample evidence of good work in the convalescent homes and hospitals, often extending over many years. It is, in fact, nearly a hundred years since the first seaside convalescent institution was founded in England. Since that time many thousands of children from the cities have been invigorated or aided to recovery by the *vis medicatrix maris*. After Margate had shown the way, the coast was accepted in most countries as the place of choice for overcoming the common tuberculous diseases of glands, bones, and joints in children. In Dr. Villaret's recent report of the work of the chair of hydrology and climatology in Paris, noticed in our review columns this week, it is stated that no fewer than 20,000 such cases in France are every year sent to the sea. In many countries the same may be said, on a smaller scale, for the non-tuberculous diseases—catarrh and disorders of nutrition—in children, and for chronic respiratory and some circulatory and rheumatic affections in adults. In no country is the movement of convalescents and holiday makers to the sea increasing more rapidly than in England.

The various observations and the research required to substantiate and guide the practice of thalassotherapy must necessarily be carried on at the health resorts themselves. On the one hand, the marine environment, which is *sui generis*, with the numerous influences that operate in sea baths and climate, forms an interesting subject of study on different regions of the coast. On the other hand, the large number of convalescents in

marine hospitals and homes now affords excellent opportunities for a systematic study of the effects of this environment on many prevalent chronic disorders, especially in children. Clinical investigation of this kind, with modern methods of precision, could not fail to be of value at the present time. It is indeed only by precise observation and research in the localities that the scientific treatment of convalescents at the seaside can be guaranteed and the medical indications of the health resorts properly defined. Observers in various countries have recently recognized the great need for a close examination of the responses of the sensitive convalescent exposed to this new environment. Good work has been presented at recent congresses on thalassotherapy, and the new international journal, *La Cure Marine*,[1] founded in Belgium in 1931, is now cultivating the same field. The second number for 1932 is devoted to disorders of nutrition, and contains articles by well-known authorities in Belgium and France. But it is frankly admitted that, in the present state of knowledge, it is difficult to make a complete statement of the medical value of coastal treatment in this large group of allied conditions, the maladies and deficiencies of nutrition, and that much work is needed to enable such important indications to be defined completely. Dr. Houdmont of the Helio-marine Institute at Ostend enumerates the means upon which he relies for analysing in detail the nutritive balance, in order to obtain some estimate of the individual biological capacity. Dr. Sardou makes a point of great practical importance in stressing the close and inescapable relation between the delicate and sensitive subject and the exacting milieu of the seaside. It should, he thinks, be a rule of practice never to expose the subject to demands which his lowered defensive reactions cannot fully meet with a margin of reserve. Here, as elsewhere, it is a question of dose, and Sardou's observations are in harmony with Fox's dictum that the chief motive of treatment at the seaside is the re-education of defective peripheral reactions.

Dr. Häberlin's pioneer work at Wyk has been already reported in these columns.[2] A *Klima-Atlas* by him and Dr. Perlewitz of Hamburg has now been published,[3] which sets forth graphically the special meteorological and climatic characters of sea coasts in general and those of Germany in particular. The wide difference between the oceanic or Atlantic influences and those of eastern and semi-inland seas is strikingly illustrated. Maps, charts, and curves of this kind should be of much assistance in studying the climatology of the coast. The existing records of climate and weather at the seaside, although admirable as far as they go, still leave something to be desired for medical purposes. It would, for example, be very useful to know about the "invalids' winter" at the various resorts, to what extent they participate in, or are excluded from, foggy areas, as shown by visibility and sunshine, the distribution of sunshine from month to month, the direction and force of winds and gales, and the evidence of day and night temperature drawn from vegetation. All these and other climatic data, recorded on a "concise weather chart" such as that devised by Mr. Lockhart of the Middlesbrough High School, would, we think, exhibit the real character of the colder months on the British coasts more correctly and in a more interesting way than the figures usually published. The modern conception of climates, which are often profoundly modified by local conditions, should be of special interest to medical men at the coast. We are glad to understand that there is now some prospect (under the auspices of the British Health Resorts Association) of more precise study of the conditions of treatment of chronic ailments and convalescence at the seaside.

[1] *Revue Internationale de Thalassothérapie*. Secrétaire de la Rédaction: Dr. R. de Haene, 94, Boulevard Van Iseghem, Ostende. (20 fr. le numéro; abonnement, 40 fr.)
[2] *British Medical Journal*, 1931, ii, 331.
[3] *Klima-Atlas für die Meeresheilkunde an der deutschen Seeküste*. Von Dr. med. C. Häberlin und Dr. P. Perlewitz. 1932. Hamburg: Carl Griese. (Pp. 55.)

THE ADRENAL CORTICAL HORMONE

In a recent review[1] Drs. Swingle and Pfiffner have summarized in a simple manner the present state of knowledge of the adrenal cortex, with considerable emphasis on the clinical aspect. The syndrome of Addison's disease is well known and is in most respects simulated by adrenalectomy in animals. Removal of both glands at a single operation leads to so acute an onset of symptoms and so rapid a decline of the animal that it is essential to remove only one gland (preferably the right, since it is the more difficult to remove) and allow an interval of seven days or even longer to elapse before removal of the second. The period of survival after the second operation varies from four to twenty days, but the great majority of animals do not live longer than five to seven days. The outstanding features of the condition after the first day or two are: complete loss of appetite; apathy; weakness, in the early stages a peculiar tendency to stretching movements of the limbs; fall in temperature and metabolism; intestinal disturbances; extreme prostration; and death. Chemically the only detectable changes in the blood are a certain degree of hypoglycaemia and a raised blood urea. Pigmentation, which is a marked feature of Addison's disease, is not usually seen in adrenalectomized dogs or cats. These signs and symptoms cannot be relieved by adrenaline, so it is concluded that the cortex secretes a hormone essential to life. The extraction of an active principle free from adrenaline from the cortical tissue of beef adrenals, and the indefinitely extended period of survival of adrenalectomized cats and dogs made possible by its use, leave little doubt that the cortex does, in fact, secrete such a hormone. The hormone is standardized in dog units (D.U.), which are defined as the minimum daily dose per kilogram necessary to maintain an adrenalectomized dog in a normal condition for a period of seven to ten days, the criteria of normality being normal weight and normal blood urea. So cumbrous a unit is, of course, a clear index of our fundamental ignorance of the function of the cortical tissue. Drs. Swingle and Pfiffner express their disappointment that, even with a powerful hormone preparation in their hands, their researches have given

[1] *Medicine*, 1932, xi, 371.

little or no indication of the essential function of the cortex. Large doses of the cortical hormone produce in the normal animal neither symptoms nor any demonstrable change in the composition of the blood. We are thus faced with the peculiar situation of having a replacement therapy for a fatal cortical deficiency without any knowledge of what is being replaced in the matter of function. The high content of lipoids in the cortex is so striking that efforts have been made to correlate the cortex with lipoid metabolism, but the evidence is not convincing. Adrenalectomy is not followed by changes in either blood cholesterol or blood lipoids. Nor do Swingle and Pfiffner regard the recent attempt to associate the cortex with the sex glands as supported by any evidence. They draw attention, however, to the fact that they were able to mate adrenalectomized dogs, with resulting normal gestation, parturition, and lactation, provided their preparation was regularly injected. That this hormone produces a rise in total metabolism in thyroidectomized animals shows that it evidently contains some true stimulant to tissue oxidation. The treatment of Addison's disease is not an urgent problem, since such cases are rare. Dramatic recovery from a moribund condition is reported after the use of the cortical hormone preparation of the above-mentioned investigators. In some cases the recovery was so marked that the patients requested permission to return to work. Discontinuance of the injections is, however, rapidly followed by a re-establishment of the symptoms, and collapse is inevitable. Long-continued treatment is difficult, since only very limited amounts of the hormone are available, the manufacture of which on any considerable scale is unlikely unless it can be demonstrated that it is capable of application in more extensive fields than that of Addison's disease. The nature of the hormone is still unknown, but a lipoid nature is suggested by its solubility in such solvents as alcohol, benzene, and acetone. The problem of cortical function thus remains for solution by the physiologist, and will probably open up an unexpected field of biological knowledge.

SIGNIFICANCE OF THE RESIDUUM

In a philosophical address delivered to the Guild of Public Pharmacists on January 18th, Mr. Wilfred Trotter drew a lesson from the history of inorganic chemistry to enforce his argument for the significance of residual phenomena in medical investigation. He recounted the familiar story of Henry Cavendish's researches on hydrogen and other elementary gases, and of the small bubble of unabsorbed air which remained an enigma to him. That bubble of air stood in the background of chemistry, exciting curiosity for more than a hundred years, until, in the last decade of the nineteenth century, Rayleigh, in his experimental determinations on the density of gases, made the discovery of argon. That bubble of unabsorbed air was proved to be due to a hitherto unknown constituent, and accounted for the excessive weight of atmospheric nitrogen which Cavendish had noted. It was one of the most pregnant residues in the whole history of chemical analysis, leading to the discovery of the inert gases, with vast repercussions upon scientific theory. The fundamental activity of medical science, said Mr. Trotter, was to determine the ultimate causation of disease. The discoveries which had elucidated the processes of disease tended to obscure the fact that many of them explained nothing as to its causation. The treatment of diabetes by insulin, for example, was apt to be spoken of as if the primary pathological state were affected by the remedy, instead of merely being compensated. A great deal of recent work, although of much value, had been on the physiological level, and had scarcely penetrated to fundamental pathology. At present the explanation of diseases had to be referred to one or other of six agents: injury, malformation, defective diet, poisoning, parasitic infection, and neoplasm, and of these, malformation and neoplasm were scarcely to be regarded as primary in the strict sense. Diseases could be arranged in three groups: those assigned with certainty to one or other of the four primary causes; those so assigned with more or less probability; and those of unknown aetiology. The rate at which diseases passed from the third of these groups to the first was nowadays slow, and likely to be slower. The question therefore arose whether a time might not come when the application of known principles to the explanation of disease would be at a standstill. How far was it likely that the further extensive explanation of disease would depend upon a discovery of some totally new principle, comparable to the vitamin or the micro-organism? Diseases such as exophthalmic goitre, diabetes, and disseminated sclerosis had been under investigation for a long time and with an increasing refinement of method, yet, however much might have been learned about their mechanism, nothing whatever was known about their ultimate causation. Were they likely to be brought under causal mechanisms already known, or, like the residual bubble of air, did they await their explanation in some radically fresh development? In answer to that question, not even a plausible guess could be made. How puzzling the situation was might be seen from the fact that during the last sixty years two wholly new causes of disease had been discovered—namely, microbic infection and vitamin deficiency. The first of these explained a group of diseases which carried a certain broad clinical resemblance, while the second concerned a widely miscellaneous group which no physician could have guessed were due to cognate causes. Mr. Trotter added that he would have hesitated to indulge in these reflections if he had to abandon the subject in a blind alley. It was true that no reasonable opinion could be formed whether the great mass of disease still unexplained would be cleared up by a more thorough exploitation of principles already known or by the discovery of some new primary cause. But the discovery of argon was due to Rayleigh's determination to carry the measurement of known phenomena to a finer point than had previously been reached. In Rayleigh's branch of knowledge the saying that "science is measurement" was manifestly true; it could be said in that region that all quantity was quality. Any such doctrine might seem far removed from biological science. Up to the present medicine had almost wholly avoided precise measurement; its field was so rich and varied that qualitative methods of inquiry had proved at least adequate. Signs, however, were beginning to be perceptible that perhaps the main harvest of this method had been gathered. A time would come when an exact and exhaustive numerical explanation of the facts of disease

would have to be undertaken. The knowledge of normal function, of temperature, of reflexes, of appetite, of weight, of muscular strength, and of innumerable other things was far removed from exactitude. To obtain information of the required precision was altogether beyond the range of the individual worker. If medicine was to acquire a foundation of exact and measured data it could do so only as a result of inquiry far more widespread and co-ordinated than had yet come within the range of practical contemplation.

THE "CANCER REVIEW"

Seven years ago the British Empire Cancer Campaign decided to publish a journal of abstracts, entitled the *Cancer Review*. An editor was appointed, and eight abstracters, each with special experience of cancer, acted as an advisory editorial committee. The journal never attained a large circulation, although it was much appreciated, especially for reference purposes, by its small group of subscribers. Its publication has ceased with the last numbers for the year 1932, in which is included a statement from the secretary of the British Empire Cancer Campaign announcing that the journal has cost this organization £17,000 and that the campaign "considers it has made as great an expenditure as the present financial stringency would justify." However, economy is not the only reason. Within the last few months other periodicals devoted to cancer research have begun to undertake the type of work for which the *Cancer Review* was instituted. It must be with many regrets that the members of the editorial board now relinquish their task, but they may have the satisfaction of reflecting that they have provided a very useful review of the literature on cancer for the years 1926–32. There have been a few changes in the composition of the editorial board during the seven years of its existence, but we notice that of the original editorial committee which first met in 1926, six were still serving in 1932—namely, Dr. Francis Cavers (editor), Drs. William Cramer, Cuthbert Dukes, Major Greenwood, Ernest Kennaway, and Peter Kerley.

"LOUPING-ILL"

At the Moredun Institute of the Animal Diseases Research Association, Edinburgh, work has been in progress for some time with a view to determining the pathology of "louping-ill," an encephalomyelitis affecting sheep. In the June issue of the *Journal of Comparative Pathology and Therapeutics* there was published important evidence that the previously held view that this condition was due to a distinct filter-passing virus could now be taken as proved, the clinical manifestations arising from involvement of the central nervous system. This virus was also detected, however, in the blood of sheep which presented no symptoms at the time or subsequently, and it was concluded, therefore, that for the appearance of the characteristic symptoms of "louping-ill" it was necessary that the central nervous system should be directly affected. Accessory conditions favouring such an extension were suspected, and the occurrence of a tick-borne fever was eventually established. Recovery from the infection, whether natural or experimentally produced, resulted in immunity being gained to "louping-ill," but the use of a living virus for prophylactic immunization was found to be an unsafe procedure. The tick (*Ixodes ricinus*) which was concerned in transmitting the virus was found to harbour also another infective agent, which caused a different febrile disease in sheep; cross immunity experiments indicated that this disease was quite distinct from "louping-ill." In the September issue of the *Journal of Comparative Pathology and Therapeutics* the discovery was announced that it had been possible to transmit "louping-ill" to sheep by the bite of nymphal and adult female ticks of this species which in their previous stage had engorged on infected sheep. Indications were detected that tick-borne fever was the precipitating cause of the typical symptoms of "louping-ill," and that infection with the specific virus alone was inadequate. As the result of combining laboratory and field work it was thus made clear that two distinct but associated pathological entities are concerned, a fact which explains much of the confusion in the results of earlier workers. In a recent issue of *Parasitology* (October 27th, 1932) a detailed account is given of the life-history and bionomics of this tick. Since "louping-ill" is one of the greater scourges of sheep farming, and is known to be associated with particular pastures, the work undertaken at the Moredun Institute may open the way to advances of considerable economic value.

HEALTH IN THE AIR FORCE

An increased incidence of sickness (compared with 1930), accounted for chiefly by influenza, is recorded in the statistical report on the health of the Royal Air Force during 1931.[1] This increase amounts to 26.3 per 1,000 of strength for cases admitted to hospitals and station sick-quarters only, and 59.2 per 1,000 for all cases of medical non-effectiveness. These figures, however, compare favourably with those for the two five-year periods 1926–30 and 1921–5. Deaths, 4.4 per 1,000, were slightly above the average, but invalidings as a whole were low—the rate to the United Kingdom from abroad being the lowest yet recorded—and a reduction in the incidence of venereal diseases has been effected to another record figure, 14.7 per 1,000. In the whole force, at home and abroad—an average strength of 32,448—disease constituted 82.9 per cent., and injuries 17.1 per cent., of the total sickness during the year under review. Injury incidence was slightly lower than in 1930, while, as in previous years, "other diseases due to infection" showed the highest percentage of total sickness. Apart from injuries, diseases of the digestive system were the second commonest cause of sickness in 1931. Psychoneurosis and tuberculosis have, as in former years, proved the most frequent causes of invaliding from the Service. The total number of cases of injury during 1931 was 2,377—an incidence of 73 per 1,000. Sixty per cent. of accidents occurred on duty; the commonest site of injury was the lower limb, and the number of deaths 93—75 per cent. of them being while on duty. Flying accounted for 148 casualties, with 68 deaths; athletics for 1,089, with 1 death; motor transport for 410, with 20 deaths; starting motor engines and "airscrew" for 24 each, with 1 death;

[1] Air Ministry: Report on the Health of the Royal Air Force for the Year 1931. H.M. Stationery Office. (1s. 3d. net.)

and "other causes" for 682, with 3 deaths. Notes on diseases among home units show a fourfold increase in influenza incidence as compared with 1930, and a less marked increase in affections of the upper air passages; tonsillitis, otitis media, and injuries remained more or less *in statu quo*, while there was a drop in venereal disease. Among units serving abroad there was an increase in incidence in the enteric group, a threefold increase in that of influenza, and a rise in that of otitis media and upper air passage infections. Psychoneuroses remained stationary, while there was a fall in incidence in gastro-enteritis and heat conditions. Under the heading of "miscellaneous" we learn that 575 candidates for commissions in the general duties branch presented themselves at the central medical establishment. Defective vision continues to be the most frequent cause (34 per cent.) of final rejection. Loss or decay of teeth, poor physique, and deformities of the feet were the chief causes of rejection of recruits. As regards physical efficiency of personnel, the standard seems very high; 91 per cent. of 2,209 officers in the general duties branch liable for flying duty were fit to act as pilots of aircraft, while 98 per cent. of 331 airmen pilots were fit for full flying duties. The remaining pages of the report deal with questions of hygiene—including observations on the Uxbridge outbreak of cerebro-spinal fever—transfer of casualties by air, and dental treatment.

PATHOLOGICAL MUSEUM, DUBLIN, 1933

One of the features of the Annual Meeting of the British Medical Association in Dublin next July will be the Pathological Museum. It has been arranged to hold this in the main medical buildings of the School of Physic of Trinity College, and the material will be grouped under the following heads: (*a*) exhibits bearing on discussions and papers to the various Sections; (*b*) specimens and illustrations relating to any recent research work; (*c*) instruments relating to clinical diagnosis and pathological investigation; (*d*) individual specimens of special interest, or a series illustrating some particular subject. The committee in charge of the organization of the Museum asks for the co-operation of pathologists and others in securing specimens of medical interest on the lines indicated above, so that the exhibition may be worthy of Irish medicine. Offers of assistance should be sent to Dr. John Lait, hon. secretary, B.M.A. Museum Committee, Royal College of Physicians, Kildare Street, Dublin.

UNEMPLOYED RELIEF IN U.S.A.

Dr. D. L. Wilbur's paper, read at the staff meeting of the Mayo Clinic on November 2nd, 1932, contains some interesting facts about the relief work which is at present being undertaken for the unemployed in America. In contrasting what is now being done with the work carried out in Central Europe during the post-war period, Dr. Wilbur points out that there are two main points of difference between the two problems. In Austria, after the war, food was scarce and transport scarcer. In America, now, both food and transport are plentiful and cheap. On the other hand, since nutritional knowledge has advanced rapidly during the last two years the requirements of a conscientiously planned diet are now more exacting than they were. Dr. Wilbur gives a brief outline of the relief work undertaken at various centres in the United States, and the sketches which he draws certainly portray admirable efficiency and organization. The details of methods both of rationing and of distribution would probably be of service to anyone undertaking similar work elsewhere. Perhaps the most striking point of the paper is the picture which it conjures up of the extraordinary change in the conditions in the United States which has taken place in the last few years. Bearing in mind how very much greater than our own are the natural resources of that country, we cannot help feeling that our own system of unemployment benefit, with all its disadvantages, is infinitely superior to one which relies on private charity, however well directed.

A RESEARCH FUND FOR MENTAL DISORDERS

Through the medium of the Council of the British Medical Association Mrs. R. G. Burden of Clevedon Hall, Somerset, warden of the National Institutions for Persons requiring Care and Control, has announced her desire to give a sum of £10,000 for the encouragement and prosecution of research into mental problems and disorders. It is the donor's wish that the present director of medical services at Stoke Park Colony, Stapleton, Bristol (Professor R. J. A. Berry), shall be in a position of responsibility with regard to this work. In view, however, of the national importance of such research, active steps are being taken to form a committee of management and direction fully representative of the public interests concerned. Further particulars will be found in our *Supplement* this week.

Sir Thomas Horder, upon whom a barony was conferred in the New Year's Honours List, has taken the title of Lord Horder of Ashford, in the county of Southampton.

CEREBRO-SPINAL MENINGITIS

COLLECTION OF RECORDS OF RESULTS OF SERUM TREATMENT

As the time of year at which the incidence of cerebro-spinal fever is usually at its highest is approaching, the Chief Medical Officer of the Ministry of Health has asked us to draw the attention of our readers to the following paragraph from the Ministry's *Review of Cerebro-spinal Fever* (*Reports on Public Health and Medical Subjects*, No. 65) published in 1931:

"It is obviously desirable to secure the closest and most accurate observation on the efficiency and potency of all the serums thus in use. Seeing that by far the most valuable test of the efficiency and potency of these serums is clinical and that it rarely happens that any one hospital has sufficient cases for useful differential study, the Department is now endeavouring by means of individual case inquiry to collect and examine all evidence available regarding the results of serum treatment, both as to the methods of administration and as to the nature of the serum used. The co-operation of medical officers of health, hospital medical officers, and medical practitioners in this matter is obviously essential and is cordially invited. Forms for the purpose will be sent on application to the Senior Medical Officer, Med. I. Ministry of Health. As, however, the data required (see Appendix II) are few, any communication which contains them will be equally useful for the purpose."

THE TEACHING OF TROPICAL MEDICINE *

BY

W. P. MACARTHUR, M.D., F.R.C.P.I.

BREVET COLONEL R.A.M.C.; CONSULTING PHYSICIAN TO THE BRITISH ARMY

I presume that this discussion is confined to the teaching of tropical medicine in the various schools as they exist to-day, and that idealistic schemes impossible of realization lie beyond its scope.

The usual duration of courses of instruction for diplomas in tropical medicine and hygiene is five months. That, I think, is long enough. We know that a high standard of knowledge in so complex a group of subjects cannot be acquired within five months, but neither can it in eight or nine. Whatever may be thought elsewhere, neither the teachers nor the examiners consider that a D.T.M. guarantees a specialist standard in tropical medicine, any more than a D.P.H. in itself endows the holder with a profound knowledge of public health. I should not be willing to give my body to be cut up by anyone on the strength of his having just secured a surgical Fellowship. All that can reasonably be expected of a diploma course is to give the student a good sound foundation on which he can build later as occasion offers. It is common knowledge, of course, that these various qualifications are often taken by persons who are already conversant with the subject before they commence the prescribed studies, and this special class I omit from my survey.

Clinical tropical medicine presents the fewest difficulties to the teacher, for this is merely an extension and elaboration of what the candidates know already. The determination of hepatic dullness is the same whether an enlargement is due to amoebic abscess or to biliary cirrhosis. It is true that a multiplicity of cases of the same tropical ailment may not be forthcoming in this country, but this matters less than might appear at first glance, for personal responsibility for the diagnosis and treatment of a disease is the best teacher. Nothing can take the place of first-hand experience, and we will learn more of, say, small-pox from study of one difficult case for the diagnosis of which we are responsible than from a dozen such demonstrated in the wards of a small-pox hospital.

A defective training in general medicine is a great handicap to those taking up the study of tropical disease, and a sore trial to their teachers. It has long been my belief that the standard of knowledge in general medicine is lower to-day than it was when I qualified. Some time ago I had an experience which confirmed this impression. It fell to my lot to examine a number of recently qualified medical men representing many of the teaching schools. Having a clear recollection of the examination in clinical pathology which I and my fellows had passed in order to qualify, I subjected this group of men to an identical test, and of over a dozen only two came up to the standard which was expected, and obtained, in my time. The lack of knowledge shown by some was deplorable. One man assured me that the diagnostic method of choice in typhoid fever is to demonstrate *B. typhosus* by making a direct microscopical examination of the faeces, and was convinced that no other organism with similar morphological characters could be encountered in such a preparation. Whether this state of affairs is due to additional subjects having been squeezed into the medical curriculum, or to some other cause, it is not within my province to say, but I can say that a considerable number of those commencing a course in tropical medicine literally do not know how to use a microscope, and ought to be excluded by imposing a simple preliminary test, if monetary and other considerations permitted.

To most of the members of a tropical medicine class, parasitology, in its several branches, is new ground. I do not know if the subject is supposed to be taught in our medical schools, but up to the present such students as I have encountered had no knowledge of it worth mentioning, and the few animal parasites which they had heard of were mostly called by obsolete synonyms—*Trichocephalus dispar, Acarus scabici, Pediculus vestimentorum*, and the like. I am no unreasonable purist in these matters, and am unorthodox enough to contend that the rules of nomenclature were made for man, and not man for the rules of nomenclature. Still, it seems a pity to burden the minds of medical students with useless synonyms which should be known only to those given to archaeological delvings.

As I have said already, clinical medicine in a D.T.M. course is largely a continuation of what has gone before, but as regards protozoology, helminthology, and entomology the students are like children learning to read. The eye must be trained to see and recognize characters not familiar before. It is not much good if a child is able to describe the appearance of the letter A, and then fails to recognize an A when he is shown one. Nor will he make satisfactory progress in reading if he is blundering and guessing his way through words of several syllables while still uncertain of the identity of the letters which make them up. And so, too, in the teaching of parasitology, the course should be restricted to essentials, for the time allotted is necessarily short, and those undergoing instruction tend to be overwhelmed with masses of information new to them, and so fail to sift out and grasp the points of basic importance. It is absurd to expect a class to know the characters of, say, one of the less common intestinal flagellates when they can still be shaken in their identification of a malaria parasite. I remember one examination candidate who himself introduced a discussion on the ova of some of the rarer helminths of man, on which he discoursed with unction. Then, being given a microscope and a faeces preparation, he carefully selected a bit of vegetable debris and identified it as an egg of, I think, *Trichostrongylus colubriformis*. That is tropical medicine upside down. And for anyone who cannot be relied on to say whether a given object is an egg or not, even to mention *T. colubriformis* should be an indictable offence.

I believe that the teaching of parasitology should follow the lines of zoological classification, so as to keep a broad outlook, but that detailed instruction should be confined to parasites of outstanding importance, and the class kept to the study of these until the teachers themselves would accept their pupils' identification. This slow and careful progression from step to step gives the learners confidence in themselves, and they are therefore fitted to add to their knowledge later when time and opportunity permit. But to rush them on to, say, haemogregarines when they are still at the stage of possibly mistaking blood platelets or vacuoles for parasites is, to my mind, teaching gone mad. They do not know themselves what they know, and, what is infinitely worse, they do not realize their own limitations, and after a few seconds' scrutiny, with all the confidence of ignorance, will give an identification which might take an expert hours or days to arrive at.

The system I advocate enables the student to identify definitely only a small number of parasites, but then he knows when he encounters something that he has not seen before, and although he cannot say what it is, he has the great advantage of knowing what it is *not*, and in actual practice can take steps to ascertain its nature. Also it will cause a welcome diminution of faith, the

* Read in opening a discussion in the Section of Tropical Medicine at the Centenary Meeting of the British Medical Association, London, 1932.

faith that removes mountains, the faith that perceives parasites which are not there. This sin, when committed in an examination, should automatically cause disqualification, no matter how the candidate may have acquitted himself in other respects.

But however well arranged the course and ample the material, the main factor in success is the personality of the teacher. A man either can teach or he cannot. He cannot learn to teach any more than he can learn to write poetry, though practice may improve both arts. He must, of course, be thoroughly conversant with his subject, and possess first-hand knowledge of it, but that is not sufficient. We all know men, justly renowned for their learning, who can be trusted to make any subject, whatever its potential interest, as dull as ditchwater. And we know others who have the power of making any subject interesting: I have heard a lecture on Middle English grammar that held me spellbound. Unfortunately we cannot tell for ourselves whether or not we can lecture well, for there are no standards for comparison. Success depends, I suppose, on the possession of that indefinable power which actors call "getting across" and all that it comprises, on an instinct for narrative values, and with these some degree of enthusiasm, for a lecturer is not likely to be successful if he regards his teaching duties merely as an unpleasant interruption of more congenial tasks. Over a period of several years I examined students of the same type, in the same branch of tropical medicine, in three institutions, and invariably found the same differences—in one to examine the average candidate was a pleasure; in the second the best candidates knew all that could reasonably be expected of them; while in the third they would nearly all have hanged themselves if given enough rope. Examples of excellent, of competent, and of bad teaching respectively. (In order to circumvent possible attempts at identification I should like to state that I have examined in considerably more than the number of institutions just mentioned.)

I am of opinion that in making appointments to teaching posts in universities and elsewhere, sufficient attention is not paid to what, at any rate professedly, would be the applicant's main duty. I have been a member of a committee nominated to report on the suitability of a candidate for appointment as lecturer. His academic qualifications were considered; his published papers were read and debated at length—and I do not minimize the importance of these matters. But none of my fellow members thought it worth while to inquire whether he could teach.

The main shortcomings to be found in courses in tropical medicine seem to me to be due to: overcrowding of the curriculum; lack of individual attention through unwieldiness of the class, shortage of staff, or both; an insufficient allotment of time for the hammering in of essentials, and for revision so as to consolidate the position preparatory to a further advance. Examiners are not blameless, and some of the existing scurry and rush is caused by their unreasonable requirements. No one should be appointed to examine in any subject in which he himself, at some period, has not prepared candidates of a similar type for an examination of the like standing.

France

[FROM OUR CORRESPONDENT IN PARIS]

Resident Hospital Appointments

The front pages of the daily press have recently given considerable publicity to the competitive examination held last October for resident appointments in the Paris hospitals. To understand the events of the last few weeks, including the suicide of one of the persons concerned, it is necessary to show how all-important these hospital appointments are to every ambitious medical student. To have been an intern of a provincial hospital gives a certain cachet: to have been an intern of a Paris public hospital is to have climbed the first step of the latter to medical fame. Unless a student has held a resident appointment there is little chance of advancement, at any rate in Paris. It is this fact which makes these appointments so pre-eminently desirable. The identity of candidates used to be known to the examiners, but in order to promote impartiality a system of anonymous examination has been introduced. The unsigned, written answers to the questions are sealed up in an urn, which is not opened till the next stage of the examination. This consists in the reading of the papers to three examiners by "readers," who are recruited from hospital residents and are paid for this work. Certain "readers" at the examination last October have been accused of detecting the identity of candidates, thanks to a prearranged code, and of correcting the papers as they read them to the examiners. The authorities state that 45 per cent. of the examination papers have been found marked, in contravention of the rules of anonymity. The examiners (recruited from the élite of the medical profession) have been subjected to much annoyance over the affair, and have naturally objected to the suggestion that three further examiners should deal with the original answers. Such a second examination could not possibly yield the same results as the first, however impartial all the examiners might be. It is therefore natural that examiners, present and potential, should have categorically refused to consent to such a course, and should even have threatened to appeal to the Conseil d'Etat should it be sanctioned. The authorities have decided to organize a fresh examination with new questions. Some idea of the magnitude of the problem can be gained from the statement that the vacant appointments numbered about eighty, for which there were over 600 candidates.

A French General Medical Council

French doctors have their syndicates—glorified trade unions—but there is no disciplinary corporation or order, such as the institution which governs the legal profession. The syndicates have done useful work, which they will doubtless continue to do, but they have been seriously hampered by lack of disciplinary powers. Without official support of the State, they have been more or less impotent in their dealings with "back-sliding" members. A member would freely invoke the aid of his syndicate when he needed it, but when he erred he could more or less ignore its injunctions. As long ago as 1845 an abortive attempt was made to establish a medical council with disciplinary powers. In those days the temptations to err were less attractive, less numerous, and more risky. Everyone knew what his neighbour did, a state of affairs singularly conducive to moral rectitude. For these and doubtless for other reasons the advocates of a disciplinary order had to accept defeat. On December 9th last year, however, the Chamber of Deputies adopted without discussion the draft of a new law for the creation of a medical order which will have jurisdiction over all members of the medical profession except those in the fighting Services. Every Department is to have its own order, but no doctor can belong to more than one, and its list of accredited members is to be brought up to date at the beginning of each year, and is to be published. Each order is to have a president, duly elected by its members, and a council

whose numbers will depend on the numerical strength of that particular order. It will concern itself with questions of probity, with devotion to professional duties, defence of a doctor's honour, and the independence and prerogatives of the order itself. It will administer funds for the medical profession, accept legacies, and in general keep an eye on the activities of its members.

Rat Destruction at Havre

Dr. Adrian Loir, who is medical officer to the port of Le Havre, has earned a well-deserved international reputation for his knowledge of the rat and all its ways. It is therefore a little discouraging to learn from his own confession that in Le Havre, which has for a score of years enjoyed the alleged benefits of a special service, employing all the methods known to be very effective in destroying rats, they are more numerous than ever. It would seem that when rats are killed at a given point their surviving companions establish a new colony elsewhere. After a few weeks some of them return and again take possession of the deserted spot; but a number always remain in the new colony. The killing of a few rats has, accordingly, led to a wider distribution of the survivors. An even more disastrous consequence of the random catching and killing of rats is the preferential treatment accidentally given to the female. During a week of rat-catching in one quarter of Le Havre, 145 rats were caught, of which only nine were females. The male rat is, apparently, more inquisitive and venturesome than his partner, who remains in safe obscurity with her young. Dr. Loir points out that the fertility of sheep in Australia is promoted by the castration of 97 per cent. of all the rams, who are thus induced not to trouble the other sex with superfluous and even injurious attentions, and that the pursuit of the male bird of Paradise for its gorgeous plumage has enabled the survivors to breed in comparative peace. He suspects that the extermination of a large proportion of the male rat population of Le Havre has simply added to the domestic felicity and fecundity of the female. Dr. Loir is, accordingly, concentrating on greater cleanliness in the streets, with a corresponding reduction of the rat's potential food supply, and on the breeding of rat-catching cats.

Antirabic Vaccination of Animals

In a communication to *Annales de l'Institut Pasteur* for December Drs. P. Remlinger and J. Bailly, whose investigations have been carried out in Morocco, point out that, until quite recently, domestic animals in general, and dogs in particular, have reaped little benefit from Pasteur's work on hydrophobia. Even to-day most antirabic centres will only treat human beings, and the dog or other animal which has been bitten by a rabid animal is just killed—a tacit confession of impotence, if not indifference. For some years the authors have been experimenting—with most encouraging results—with a live attenuated virus obtained from the brains of rabbits and dogs which have died from infection with the fixed virus. A remarkable feature of their work is the observation on artificially infected dogs of the reaction to infection of the brain with fixed virus. These dogs develop a paralytic form of hydrophobia uncomplicated by the element of fear and anger. The reaction is, indeed, so painless that the authors consider this method of killing dogs is more humane than other ways of ending their lives. The artificial infection of the brain takes less time to perform than to describe, once the technique has been mastered, and is almost painless. Death usually occurs on the seventh or eighth day. Since 1928, and up to the end of March, 1932, 2,325 dogs have been given preventive inoculations of this vaccine, and 254 have been given therapeutic inoculations after having been bitten. In only three cases did this treatment fail of its object. Altogether 232 other animals have been thus treated, including ninety-nine horses, seventy-one mules, fifty pigs, and a few cattle, monkeys, and cats. The only animal succumbing to the disease was a cow, which had been badly bitten about the face. The authors do not hold out any hope of this procedure effecting an appreciable reduction in the incidence of hydrophobia, since some of the animal reservoirs are out of reach of the laboratory; but in the case of valuable dogs it should prove most useful.

Scotland

Health of Glasgow

The annual report of Dr. A. S. M. Macgregor, medical officer of health for Glasgow, shows that the death rate for 1932 was higher than that for the previous year, the figures being 14.7 per 1,000 population for 1932 and 14.2 for 1931. The death rates for the past ten years have been fairly uniform, with the exception of 1929, when there was a serious outbreak of influenzal pneumonia, and the rate rose to 16.3. During 1932 there were no great extremes of temperature; the summer was comparatively dry, with a cold autumn. These conditions were associated with a greatly reduced mortality from measles and whooping-cough. Scarlet fever was prevalent throughout the year, although the disease was of a mild type and the case mortality rate low; no case of small-pox or of typhus fever occurred. There was a slight increase in the mortality from pulmonary tuberculosis, the rate being 885 per million, as compared with 873 in 1931; this increase was attributed to the prevalence of pneumonia. The mortality from non-pulmonary tuberculosis, however, was markedly reduced, the rate being 265 as against 311 per million in 1931. Deaths from influenza and pneumonia were considerably higher, the rate for the latter being 2,495 per million as compared with 2,062 in 1931.

Psychiatry in the Medical Curriculum

In his inaugural lecture, on January 12th, Professor David Kennedy Henderson, who last year succeeded Professor George M. Robertson in the chair of psychiatry at the University of Edinburgh, discussed the place of psychiatry in the medical curriculum, and its bearing on the "problem child." Professor Henderson said that they had left behind the primitive psychic methods of early times, and had come to appreciate that recovery was assisted by the spirit of hope in the patient, rather than by any inherent virtue in the method practised. Many people still found satisfaction in a belief in treatment by Christian Science, etc., which was not very far separated from the beliefs of primitive man, and many of these curative methods had their special sphere of usefulness so long as they were employed judiciously. He considered that the real benefit derived from all these forms of treatment was centred in the power of faith and suggestion. The successful practitioner gained his eminent position not by skill in prescribing drugs, but from his understanding of the psychological needs of the patient. Similarly, the work of the psychologist concerned itself with the instincts, impulses, and emotional needs of each individual. They were now recognizing that perverse traits of character which the adult evolved often resulted from neurotic patterns formed in childhood, and that the study of the origin of these faulty attributes might furnish valuable information in guiding the development of youth and in remedying nervous illnesses in later life. This modern psycho-biological outlook had received an impetus from the analytical conceptions of the Freudian school. Unfortunately this school was becoming a close corpora-

tion, which had little or no contact medically with workers outside its own ranks. Other psychotherapists, however, were not imbued with one point of view or tied to one method of treatment. While appreciating the significance of the unconscious and other important psychological factors, not necessarily sex-determined, they retained an open mind to wider possibilities and had a healthier and more practical outlook. They did not concern themselves unduly with abstract conceptions and fanciful interpretations of dreams and symbols, but took the actual facts as they found them and considered the individual as a person who had to make a satisfactory adjustment to the circumstances of his life, and to live harmoniously with his fellows. Dealing with the influences of childhood, Professor Henderson said that character might be settled long before the individual took an interest in the affairs of the world, but he doubted whether the first five years need decide future development. He would agree, however, that the first fifteen years gave a fairly sound indication, and for this reason the keenest interest should be directed to those children who gave evidence of being different, more sensitive, or more secretive than others. This introduced the fashionable "problem child." Perhaps the older generation used this term because it was out of sympathy with the aims and aspirations of the child. There had always been "problem" boys and girls, and he sometimes wondered whether the attention now focused on them had not had a pernicious influence. He believed that a degree of casualness, of cold neglect, of matter-of-factness, was often a salutary form of treatment. Many children, however, undoubtedly required detailed investigation and treatment. The standard of life in recent years had changed, the pace was faster, there were no intervals between the acts of life, and the demand for entertainment and excitement was increasing. As a result there was a lack of independence, self-reliance, responsibility, and initiative. This problem was closely linked with the urbanization of the population, with crowded living conditions, with women as wage earners, even with the spread of education. From the family point of view, blame sometimes centred on the parents, and much of life's tragedy was due to foolish parenthood. He believed that if parents and schoolmasters could be induced to pay more attention to the child as an individual rather than to the child's aptitude at games or lessons, they would go a long way towards better character formation; there was still emphasis on knowledge rather than on training. Professor Henderson concluded with an appreciation for the work of his predecessor, Professor Robertson, who had provided in Edinburgh a psychiatric organization so that persons suffering from nervous and mental illness might obtain skilled help.

Biological Research in Aberdeen

At an inaugural dinner on January 12th, Strathcona House, which has been erected largely from funds presented by Lord Strathcona, was handed over to the Rowett Research Institute, Bucksburn, Aberdeen. Lord Strathcona occupied the chair, and Sir Godfrey Collins, Secretary of State for Scotland, proposed the toast of "Biological Research." Sir Godfrey said that future advances in biology would seem to involve especially physiology and psychology. In the investigation of agricultural problems with which the Rowett Institute was more nearly concerned, the advances since the beginning of the present century had been epoch-making. The rediscovery of Mendel's law had given them the new biological science of genetics, which seemed to foreshadow a knowledge of life far beyond what Darwin and Huxley had dreamed. Biochemistry had shed a light into the dark recesses of the alimentary canal, and the application of this science might enable them in two or three generations to create an A1 nation out of C3 material. In this connexion the work of the Rowett Institute in the investigation of the mineral deficiencies of grass and of artificial feeding-stuffs had been famous. Some of the most recent work had suggested that the effect on human beings of ill-balanced or deficient diets was to render them susceptible to disease. Another field of biological research, the control of the weeds and of insect pests in Australia and New Zealand, had proved most important, and had resulted in enormous saving of human life and agricultural material. The influence of the Rowett Institute had extended to all parts of the British Commonwealth, and research students were coming in increasing numbers from over-seas. Mr. F. L. M'Dougall, in proposing the toast of "Research Institutions," said they deserved to be supported for the sake of the welfare of mankind. The Rt. Hon. Walter Elliot, Minister of Agriculture and Fisheries, proposed the "Founders of the Rowett Institute," and referred to the various trusts and educational bodies to which the Institute was indebted for its support. He said he believed that the support of such institutions would aid progress in medical science for the ultimate good of the community.

Centenarian Nurse

The death occurred on January 7th at Edinburgh of Miss Jessie Lennox, a retired nurse, who had reached the advanced age of 102. Born in 1831, Miss Lennox went out to South Africa at the age of 27 with Miss Alice Mackenzie, sister of the ill-fated Bishop Mackenzie. She returned to Edinburgh to complete her training as a missionary, and again joined Miss Mackenzie, with whom she accompanied Dr. Livingstone in his ascent of the Zambesi in 1862. After the death of Bishop Mackenzie, Miss Lennox returned to England and entered the Nightingale Training School for Nurses, which had just been established in London. She was one of the six nurses chosen by Miss Nightingale to be the first Army sisters to take up work in the Royal Victoria Hospital, Netley. After a period of work at Netley she acted as matron of the Sick Children's Hospital at Belfast, and was subsequently honorary matron at the Epileptic Colony in Quarrier's Homes, Bridge of Weir.

Ireland

Royal Medical Benevolent Fund Society of Ireland

The report of the Royal Medical Benevolent Fund Society for the year ended April 30th, 1932, shows an increase in returns from investments, in donations, and in subscriptions paid through the central treasurer, and in receipts from branch honorary treasurers. The latter, which amounted to £558 12s. 4d. as against £482 11s. 11d. in 1930–1, are particularly noteworthy; it is felt that a very special effort to help the society's beneficiaries must have been made because of, rather than despite, the financial difficulties of the time, by both branch secretaries and treasurers and contributing members. The number of grants awarded during the year was 95 as compared with 87 in 1931, and the total amount distributed was £2,426 10s., an increase of £272 10s. on the previous year. The average amount of the grants has risen to £25 10s., an increase of 15s. 8d. There were eight medical men among the beneficiaries, who, including dependants, totalled 228. The report acknowledges the continued help of the British Medical Association, through whose propaganda on behalf of medical charities the society has been brought into touch with subscribers that it would otherwise have been unable to reach.

Retirement of Dr. E. F. Stephenson

The retirement of Dr. E. F. Stephenson, chief medical officer of the Department of Local Government and Public Health, Irish Free State, has been received with regret by the medical profession, especially by medical officers in the public services. Soon after he qualified Dr. Stephenson was appointed medical officer of the Ballyduff district, County Waterford, and was subsequently appointed in the same county to discharge similar medical duties in the more important district of Dromore East. In 1914 he was appointed medical inspector under the Local Government Board for Ireland, and was placed in charge of the Ulster area, where he became very popular. He achieved marked success as medical inspector because he always acted as the friend and adviser of the medical officers over whom he was placed. When Sir Edward Coey Bigger became chairman of the Irish Public Health Council, Dr. Stephenson was promoted to the position of Medical Commissioner in the Local Government Board. With the establishment of the Free State Sir Edward retired, after a very arduous time spent in formulating schemes which aimed at bringing the Irish medical services up to date, and it fell to Dr. Stephenson's lot to give effect to the most important of Sir Edward's medical reforms. Dr. Stephenson became a Fellow of the Royal College of Surgeons in Ireland in 1901, and two years ago he was elected a member of its council. The Honorary Fellowship of the Royal College of Physicians was conferred on him a short time ago in recognition of his contribution to the marked progress of medical reforms during his time of office.

Influenza in Belfast

The assistant medical officer of health for Belfast, Dr. Samuel Barron, states that there is no cause for alarm over the outbreak of influenza in the city. It is not serious, and, so far, shows no signs of becoming virulent. The action of the Public Health Department of the city in preparing for distribution pamphlets and posters containing all the essential information on the steps to be taken to avoid infection is merely a precautionary measure. The commandants of three detachments of V.A.D. nurses have visited the City Hall and intimated to Dr. Barron that the services of the nurses belonging to the St. John Ambulance Association and the Red Cross Society will be available for nursing influenza patients. Fortunately there has been as yet no necessity to utilize these services, as only one application for home nursing assistance had been received from city doctors. The number of school children absent through influenza forms a very small percentage of the total on the school rolls.

Belfast Port Sanitary Work

Dr. C. S. Thompson, superintendent medical officer of health and port medical officer, was unable to deliver his address on port sanitary work at the Co-operative Hall, Belfast, owing to an attack of influenza; in his absence his paper was read by Mr. Charles Gough, port sanitary officer. In Belfast, the paper stated, the jurisdiction of the port sanitary authority extended to that part of the port lying on the landward side of a straight line drawn from Blackhead, in the Larne rural district, to Orlock Point, in Newtownards rural district. The area of the port was extensive, stretching to twelve miles on the County Antrim coast and fourteen miles on the County Down coast from Belfast. The port did a very large trade with a great number of British Commonwealth and foreign ports. Close on 600 foreign ships and nearly 7,000 ships from around the coasts of the British Isles entered the port each year. Some 5,000 to 6,000 passengers arrived in Belfast annually, not counting those in cross-Channel services. In 1930, nearly 12,000 persons left the shores, in 1931 only 4,289. The countries from which passengers principally arrived were Canada and the United States of America. Port medical officers were concerned with infectious disease, imported food and meat, and the inspection of aliens, and Dr. Thompson described how ships were boarded and how infected persons, or persons suspected of infection, were detained and kept under observation. The rat problem and the menace of rodents in spreading plague was emphasized, and ship fumigation and disinfection was also described. Dr. Barron said that the average person did not realize the work of the port sanitary authority, one reason being that it cost so little in Belfast—the charge to the ratepayers being not more than £1,000 a year.

England and Wales

Undergraduate Teaching in L.C.C. Hospitals

Facilities for undergraduate teaching in certain of the London County Council general hospitals are to be granted by the Council to the metropolitan medical schools. The plan is that, for teaching purposes, each school will be linked up with a London County Council hospital. This arrangement is the result of negotiations between the London Voluntary Hospitals Committee, appointed under Section 13 of the Local Government Act, 1929, and the London County Council. Precise details of the scheme have not yet been worked out, but are in process of settlement between Sir Frederick Menzies, chief medical officer of the Council, and the deans of the medical schools. Prior to the Local Government Act somewhat similar arrangements were in force in some of the hospitals controlled by the guardians. The object is to develop and systematize these facilities. From a teaching point of view, access for students to the municipal hospitals is valuable, as the students will thus have opportunities for seeing types of cases which are not so frequently found in voluntary hospitals. From the Council's point of view it is believed that the introduction of teaching in the municipal hospitals will tend to raise their status and thus benefit both patients and staff.

British Industries Fair

The British Industries Fair, which opens in London and Birmingham on February 20th, is a show window which this country exposes to her oversea customers and rivals. From the bulkiness of the catalogue it appears to be as well supported as ever, and indeed we are informed that in London two hundred more firms are exhibiting than was the case last year. Some impressive figures are afforded, as, for instance, that the floor area occupied at Olympia and the White City, London, and at Castle Bromwich covers thirty acres, and that the frontage of stands extends for twenty miles. A brief comparison with last year's catalogue, however, shows that there has been a decline in the number of firms exhibiting in certain of the sections. Only sixteen firms are showing the products of analytical and research chemistry, as against twenty last year. Fewer firms apparently are specializing—or at least are exhibiting their specialties—in drugs and pharmaceutical preparations, in dyes and intermediates, and in disinfectants. The section devoted to medical and surgical instruments and appliances is surprisingly small—fewer than twenty firms are exhibiting. On the other hand, scientific instruments are pretty well to the fore, and in photometers, microscopes, and high-grade lenses many new

introductions are promised. The making of hospital and invalid furniture, again, is becoming an industry of considerable size, and much ingenuity is expended on devices for sleep or rest. Looking round the fair in general, with its profusion of stands devoted to such things as manicure sets, hair lotions, perfumes, and powder puffs, the cynic might be tempted to say that the principal British industry was one which concerned the adornment of the person, but that would be to overlook the exhibit at *Birmingham*, where the great industries concerned with engineering, mining, electricity, roads, building, and sanitation are in evidence.

Home Office Industrial Museum

During the past year a number of additional exhibits have been installed at the Home Office Industrial Museum. This museum, which is a permanent exhibition of up-to-date mechanical and other arrangements for promoting the safety, health, and welfare of industrial workers, is situated in Horseferry Road, Westminster, and is open (free) each weekday from 10 to 1 and from 2 to 4. The scientific and economical heating of buildings is a matter to which increasing attention has been paid of recent years, and an exhibit on this subject has now been opened at the museum. Heating, and the main considerations to be taken into account when choosing a heating system which will be efficient and economical for the particular works or building, are dealt with in the exhibit, and various heating appliances and methods of arranging the installations are illustrated. The electricity exhibit has been largely rearranged, and a number of the items have been replaced by more up-to-date apparatus. The exhibit dealing with silicosis has been rearranged and extended to cover asbestosis.

Medical Treatment of London School Children

The arrangements made by the London County Council for the medical and dental treatment of school children during the year beginning April 1st, 1933, provide for the treatment of 42,040 cases of refraction and eye disease, 18,630 ear, nose, and throat cases, 458 cases of ringworm, 78,870 cases of minor ailments, and 149,050 dental cases. It has been decided to institute the system of block grants in place of the present system of per capita grants, and a grant is to be fixed for each hospital or centre, payable in four equal quarterly instalments, and subject to review at the end of a year. It is believed that the introduction of this system will effect a saving of approximately £2,000 without reducing the number of children receiving treatment. No additional centres for the treatment of eye cases are suggested for the ensuing year, although provision for refraction is urgently needed in the Streatham area, where there is a very large new school population, which has migrated to the housing estates recently established. There has been a certain falling off in the numbers of ear, nose, and throat cases coming for treatment, probably due to the deterrent effect of an increased charge for in-patient treatment, but also to the completion of the overtaking of arrears since the extension of arrangements in London for the in-patient treatment of all cases, as well as to some modification in medical opinion as to the type of cases requiring operation. Ringworm amongst school children is now reduced to an exceedingly small incidence, and during the six months ended September 30th the number of cases treated at the centres was only 111. There has been a decrease in the number of cases coming for dental treatment, to be accounted for to some extent by the increased charge made for extensive treatment, which includes gas, though it is believed that this position will eventually be overcome as parents realize the benefit to their children's health of early attention to their dental condition. The work at eleven special ear centres where ionization treatment is provided for children suffering from discharging ears has continued with very satisfactory results. One new centre at Stoke Newington has been opened during the year. A new centre has also been established at Stoke Newington for children suspected to be rheumatic or requiring observation for rheumatism; these children are now dealt with at seven hospitals and nine centres. In 1931 the Council increased the charges to parents in respect of in-patient treatment for throat cases and in dental cases where extensive treatment was necessary. As a result there has been some falling off in numbers, but additional income, notwithstanding this reduction, has been obtained. The cost of the arrangements for the medical and dental treatment during the year 1933–4 is estimated at £111,860, this figure including £56,365 in respect of the salaries of the medical and dental staff engaged by local committees of the centres and authorities of hospitals. The gross estimate represents a reduction of £4,330 compared with the corresponding estimate for the current financial year.

CORRESPONDENCE

Division of the Vas Deferens

SIR,—Mr. Clifford Morson, in his article on the above subject in the *Journal* of January 14th (p. 54), has put his case for division of the vas deferens very clearly. He is, however, too dogmatic in some of his statements, and may create an impression which is not quite warranted by the facts as I understand them.

My criticisms refer principally to the treatment of complications following suprapubic prostatectomy. In this operation, as Mr. Morson points out, a cavity is left in which infective material collects, and into which the orifices of the ejaculatory ducts open. Infection, spreading into the seminal vesicles and along the vas to the testicle, is likely to occur. So far I am in entire agreement with him, but when he states that "an essential part of the operative technique must be division of the vasa deferentia," and goes on to say that the surgeon, "having failed to divide the vasa, is faced with the problem of treating recurrent attacks of orchitis when he has flattered himself his patient is rid of all his bladder troubles," I must join issue with him. During the twenty-seven or twenty-eight years I have been practising the operation of suprapubic prostatectomy I have never ligatured the vas. I have, of course, seen many cases of epididymo-orchitis, but I cannot recall a case in which I was faced with the problem of treating "recurrent attacks of orchitis." It is conceivable that any surgeon who has had that unfortunate experience should in every case tie the vasa in his own interests as well as in those of his patient. I have had many patients who have not had even one attack, and others who had a single attack. Rarely indeed have I seen two attacks.

I would rather look at the treatment of this complication from a different point of view. The prostatic cavity is a source of danger not only to the vesicle and epididymis, but also to the kidney, and I have always directed my efforts to sterilize, as far as possible, that cavity. To this end the prostatic cavity and the bladder are washed out daily as follows:

The nozzle of an enema syringe is placed in the orifice of the external meatus and a stream of fluid is directed so as to flush the prostatic cavity and bladder and to pass out through a large specially made tube introduced through the suprapubic wound. Recently this tube has been allowed to remain in position much longer than formerly—until, in fact, I am satisfied that all debris has separated and the cavity

is protected by granulation tissue. The tube is frequently retained for twenty days. From the sixth day onwards the patient is allowed to sit up, and is, as a rule, quite dry from the second day, the contents of the bladder being received into a bottle by his side or attached to his leg.

The incidence of epididymo-orchitis has by this method greatly diminished. In addition, the risk of extension of infection to the kidneys is much reduced. Instillation of eusol or Dakin's fluid into the depths of the bladder is a useful adjunct. Even after removal of the suprapubic tube irrigation of the bladder is continued until I am satisfied that further treatment is unnecessary, as evidenced by the appearance of the urine. When the latter is clear, danger of infection of the kidneys and vesicles is at an end.

My point is that one ought to direct one's attention to the cause of the epididymo-orchitis rather than interpolate a block in the path of infection half-way along its course from the bladder to the testicle. Mr. Morson points out quite fairly that the operation of division of the vas, "if not performed efficiently, may lead to serious complications," and, in addition, mentions the possibility of pus formation at the proximal end of the cut vas, even when the operation has been properly performed. It is clear, therefore, that the procedure may in certain cases substitute a new complication for the old. I have found in my own practice that epididymo-orchitis is much more liable to occur during the time a tied-in catheter is in position to relieve back pressure on the kidneys, and I have endeavoured to prevent this by daily urethral irrigation by the side of the catheter. This helps, but does not always succeed in preventing this complication. If we could see these cases in an early stage, before serious back pressure has taken place, it would not be necessary to use the tied-in catheter, and I am satisfied that with the technique I have outlined epididymo-orchitis would become sufficiently rare to render it unnecessary to perform an operation which at the best is only a makeshift. Before resorting to the injection of sclerosing solutions through the cut vas, I should like to be satisfied that the sclerosis would be uniform and complete—a difficult problem in a complicated cavity like the vesicle—and that unobliterated diverticula, possibly filled with septic material, are not likely to be left as the result of scar formation.

The object of this letter is to advocate the minimum of operative interference in these prostate cases. After the most careful review of my own results in a large number of cases I have reverted to the simplest technique, the details of which I described in the discussion on this subject at the Annual Meeting of the Association last year. I have reduced my mortality and morbidity to a degree which fully justifies the claims I then made for this policy.—I am, etc.,

ANDREW FULLERTON,
Professor of Surgery, Queen's University, Belfast.

Belfast, Jan. 16th.

Records of Lupus Cases

SIR,—In his article on the use of hydnocarpates and morrhuates intradermally in lupus vulgaris (*British Medical Journal*, January 14th, p. 47) Sir Leonard Rogers refers to a case treated at the Finsen light department of the London Hospital. This has prompted me to hunt up the records of the department to see if I can add to the meagre clinical history you have published, which may have an unhappy effect on patients with lupus, who will certainly read the article.

I have had some trouble in trying to identify the patient. I have before me the records of a female who fulfils the following requirements. She was aged 21 in 1910: Case No. 2109. Her lupus began on the right cheek when she was a small child. She received over 2,000 hours' application of the Finsen light from December 16th, 1910, up to October, 1923. Sex, age, onset in childhood, and duration of treatment in years and hours all coincide. I can find no other patient at that time who received 2,000 hours' application. I also received a letter from this patient (October 31st, 1923), terminating her attendance, and saying that she had been in touch with a doctor who she felt could cure her, and that because she was filled with great hope she was putting herself under his care. She records her gratitude to "the London," and makes no reference to having seen "cancer" develop in other cases of lupus. This is highly probable, since the development of cancer *upon* lupus is a rare phenomenon, and no patients in the department have the opportunity of "seeing cancer develop in other cases." The history taken in 1910 refers to *x*-ray treatment for six months, together with Finsen light at another metropolitan hospital. We have an excellent photograph of her condition in December, 1912, showing lupus extending from the orbit down over the face and chin to the level of the thyroid gland on the right side of the neck. There is revealed considerable scarring and atrophy of the right face, thickening of the nose, and ulceration and thickening on the advancing margins of the lesion.

Lupus is a disease that may have a very long history. The early records are of great clinical interest to dermatologists, and such records that we possess are, on request, at the disposal of the physician who may have the after-care of any patient who has been through the light department of "the London."—I am, etc.,

W. J. O'DONOVAN, M.D., M.P.
Physician, Skin Department, London Hospital.

London, W.1, Jan. 18th.

Fatty Acids of Cod-liver Oil in the Treatment of Tuberculosis

SIR,—Professor Cummins and Dr. Weatherall's article on the inhibitory action of "alepol" on the growth of the tubercle bacillus, in the *Journal* of January 14th (p. 48), is of very special interest to me, as for the last eight years I have been investigating the action of the fatty acids of cod-liver oil on the tubercle bacillus.

My main plan was to treat cases suffering from tuberculous infection—the potential consumptive—rather than those suffering from definite tuberculous disease, as I have long held the view that these cases are not considered seriously enough or treated as they might be. No one can prognosticate in whom the infection will pass on to definite disease—the regulating factors are so many and varied. My cases were therefore mainly confined to those in whom tuberculous infection was, on clinical grounds, definitely established, but I also treated a few cases of old-standing pulmonary tuberculosis. I instinctively avoided early and acute pulmonary invasion, but I see no reason why the same treatment should not be applied to such cases after the quiescence has been established for a reasonably long period. The results in cases of tuberculous infection were uniformly good, the improvement was, without exception, excellent, and was freely acknowledged as such by the patients. The old-standing cases of pulmonary tuberculosis also showed marked improvement, and nothing more was promised.

The first case I treated was that of a lady suffering from definite and active disease of both apices, the left showing greater activity, judged by the number of the crepitations. The question of sanatorium treatment was considered, but as the patient was definitely against it I offered the injections as a substitute. The result was most satisfactory, and for the last eight years she has been steadily at work, whereas

previously she was frequently off duty. After an interval of six years, as there were signs of renewed activity, I advised a second series of injections, with a similarly happy result.

Another interesting case was that of a young girl suffering from a broken-down tuberculous submaxillary gland. She was immediately sent to hospital, but the abscess opened spontaneously, leaving a scar which refused to heal, even after six weeks' treatment at the hospital. The surgeon wrote advising further operation, but I decided to try first the effect of a spray of a 3 per cent. solution of sodium morrhuate. Within a week the wound was firmly healed, and has not broken down since, after an interval of four years. As other glands showed activity I decided to give her a course of injections, and again the result was very satisfactory.

I tried the effect of a similar spray in a case of tuberculous laryngitis. Definite improvement resulted, but as continued observation and treatment was not possible I can only offer the suggestion to those who have more opportunity than I have to consider this line of treatment. These are just a few of my observations, and I only bring them forward thus prematurely because they agree so closely with those of your contributors—although on somewhat different lines—and because they may do just a little to stimulate others more favourably placed than I am to give this treatment a fair trial.—I am, etc.,

Birkenhead, Jan. 16th. D. J. GAIR JOHNSTON.

Caesarean Section in Pre-eclamptic Toxaemia

SIR,—The issue raised by Dr. Margaret Basden (*Journal*, January 14th, p. 58) is so important that it is a great pity that time did not permit of the question being raised at the recent meeting of the Royal Society of Medicine when Dame Louise McIlroy and others discussed indications for Caesarean section. There must be many like myself who are driven to Caesarean section in severe cases of toxaemia from sheer force of circumstances. The points which call so insistently for this line of treatment are: (1) A very wide country practice involving the minimum of consultations on any one patient; (2) the fact that there are no resident medical officers in cottage hospitals; (3) the cumbersome nature of medical methods of treatment in toxaemia and the intensive and highly skilled nursing required; (4) the relatively unsatisfactory results of medical methods in the more severe cases and in developed eclampsia; (5) the brilliant results of this method, especially when based upon spinal anaesthesia with or without gas and oxygen.

So well has this method served me in the past few years that it has been extended to certain cases of developed eclampsia. I cannot at the moment give exact figures, but in approximately twenty cases of very severe toxaemia or eclampsia there has been only one death, a mortality which probably compares favourably with any other method. I hope an early opportunity will occur of general discussion upon this very important subject.—I am, etc.,

Bath, Jan. 16th. DOUGLAS A. MITCHELL, M.D., F.R.C.S.Ed.

Monilethrix

SIR,—As my attention has twice been drawn by colleagues to the letter which appeared under the above heading in the *Journal* of January 7th, no apology appears to be needed for trespassing on your space.

The family which formed the subject of my paper read in the Section of Dermatology and Venereal Diseases at the Centenary Meeting in London is not the family described by the late Professor Sir Thomas McCall Anderson, as a careful comparison of the paper and of the report in the second edition (1894) of McCall Anderson's *Treatise on Diseases of the Skin* clearly shows. Therein he states:

"In the spring of last year [1880 apparently] Mr. James B—— senior, a farmer from the South of Scotland, consulted me with regard to his son James, aged 3½ years, on account of *defective growth of the hair.*"

The writer of the letter of January 7th states:

"The age of one of the affected males appears to be 55 years, exactly what it would be if he were the individual originally seen by McCall Anderson and surviving to the present time."

The male aged 55 years in question is a miner living about ten miles east of Glasgow in a mining district, and his father is a miner. The Christian name of both is Charles. My paper states:

"All the adult males from the most remote have followed the occupation of coal miner, and the affected daughter of the fourth generation married a miner."

It is unnecessary to stress the geographical, occupational, and nomenclatural differences further.

Again, Dr. W. J. Rutherfurd states:

"The independent occurrence in a restricted geographical area of two such identically affected families, each showing the same mode of inheritance, passes the bounds of easy credibility."

In comparing the two family trees it will be seen that McCall Anderson's shows multiple cases in the *last three generations*, and *single cases—female ones—in the first two generations*; whereas in the family tree appearing in my paper only the *last two generations show multiple cases, while the first three generations show single cases—all males*. In reply to my query of January 11th with regard to the identity of the two groups, the family physician of the surviving affected persons wrote as follows:

"Referring to our conversation yesterday over the telephone regarding the —— family, who suffer from monilethrix. I have to-day interviewed Mr. Charles ——, the grandfather, and he states quite definitely that neither he nor any of his family were ever under the professional care of Professor McCall Anderson."

The grandfather is the sole affected person of the third generation, and the father of the man aged 55, who could not possibly be the boy James, aged 3½ years, seen by McCall Anderson fifty-two years ago, for his father was a farmer, was also named James, and belonged to the fourth generation—a multiple one.

In Dr. Rutherfurd's letter the quotation from my paper, "solitary cases of monilethrix have been recorded," is alleged to give the impression that this record of multiple cases is unique. It directly follows the sentence beginning:

"The strong hereditary and familial features of the disease are well brought out in this group of successive cases in five generations,"

which supports the evidence of both British and foreign clinicians. Attention was drawn not only to solitary cases, but to those where the disease was limited to the legs. Had any question as to its being the only multiple case on record arisen in the mind of a reader—a very unlikely possibility—reference to the authorities found at the conclusion of the paper would have removed any uncertainty. Further, it is stated that I have "by means of a biopsy traced the condition to an intrafollicular cause." I made no such claim. I showed a section of skin from the scalp of the father of the boy aged 5½ years, which was mentioned in the paper, and followed upon the statement of Golay's contention

"that the formative papilla undergoes alternate dilatation and atrophy comparable to a pulsation of which the rhythm is daily."

Beatty, I believe, was the first to point out intrafollicular affection by such investigation.

The concluding paragraph of the letter of January 7th runs as follows:

"The microscopical appearance in Tomkinson's article of a single hair may be compared with the illustration given by McCall Anderson (Fig. 7, p. 59) of six hairs from five affected persons in the family group he recorded."

I may say that I removed hairs from the scalps of seventeen subjects of the group of twenty-two (five were inaccessible owing to death or to distance) in the presence of never fewer than two persons—not including myself—one of whom was always a medical graduate, and that every microscopical finding was similarly checked. The paper when read was illustrated with eighteen lantern slides. Of these, nine were photomicrographs of hairs prepared by a member of the Glasgow University Pathological Laboratory staff. Only three illustrations were published, however; limitation of space prevented all from appearing in the *Journal*, and the one mentioned was selected for publication not only on account of its being a good specimen of monilethrix, but as illustrating an unusual distribution of pigment, to which I have as yet seen no other allusion.

Apart from the recording of a large multiple group of cases, I demonstrated by the projection lantern the chance of hurriedly mistaking the disease for tinea tonsurans, and endeavoured to throw a glimmer of light, by what appear to me to be a few original observations, on the obscure aetiology of the disease. I hope to resume this attempt.—I am, etc.,

Glasgow, Jan. 15th. J. GOODWIN TOMKINSON.

Typhoid in Yorkshire

SIR,—Economic disaster has befallen some of the towns in Yorkshire, and Malton in particular, owing to the view current about the origin and nature of typhoid. Typhoid is held to originate from contaminated water and to spread by the passage of micro-organisms through this and other means from one person to another. My researches suggest that the infection neither originates nor is spread in this way. The opinion expressed below was generated by work I have been doing on the flora of the excreta since 1926, and supported by the study I was able to make, through the kindness of Dr. J. A. H. Brincker, of the paratyphoid epidemic in Essex in the winter 1930–31, and of an epidemic of so-called "food-poisoning" in London in May, 1931. The conclusions drawn were that these two epidemics occurred spontaneously through the increased activity of the bacilli of epidemic jaundice, which had been responsible for the seasonal epidemics of so-called "influenza" since the summer of 1930. My reasons for these conclusions are given in the first number of the *Nature of Disease Journal*, wherein I predicted outbreaks of typhoid if the bacilli of epidemic jaundice continued to hold the field. Through the kindness of Drs. J. T. Bleasdell, F. C. Lapage, and J. A. H. Brincker, I have been able to examine specimens from all the affected areas, and the results still further support the view previously held, which is briefly as follows:

Typhoid fever is a form of so-called "gastric influenza" which arises spontaneously as part of the seasonal epidemic. Climate renders the prevailing micro-organisms in the large intestine (which happen to be the bacilli of epidemic jaundice) pathogenic, and other factors enter to stimulate these to develop into the Salmonellae on one occasion and the *Bacillus typhosus* on another. The action of climate is universal, but it makes its effects felt more in some parts of the country than in others. In those where the victims have been rendered most vulnerable it only requires a faulty article of food to bring about the mutation mentioned above. In time water may become contaminated, and remain so for months after the epidemic has vanished; but the infection is spread, where it does not arise spontaneously, through the dissemination of the activity of the micro-organisms primarily responsible, and not through the passage of the micro-organisms themselves.

Investigations which have thrown new light upon the life-history of the *Bacillus typhosus* are being published in the second number of the *Nature of Disease Journal*. Suffice it here to say that the recent epidemics of typhoid in Yorkshire were of the nature of what I have termed "infections from within." They were of the host's own making, a form of so-called "gastric influenza," and came and went like any other seasonal epidemic. Epidemics of like nature may arise elsewhere and in the same way, but water, milk, etc., must not be held responsible. There is less likelihood of the infection recurring in Yorkshire, which should make the inhabitants feel safer there than elsewhere and cease to distrust the water supply.—I am, etc.,

London, W.1, Jan. 19th. J. E. R. MCDONAGH.

Tuberculin Dosage

SIR,—Having had considerable experience in the use of tuberculin, I venture to support Dr. Camac Wilkinson in his contention that it is the large dose of tuberculin that is of real value in the treatment of tuberculosis.

My experience of tuberculin extends over a period of thirty-six or thirty-seven years. As medical director of the tuberculosis institutions of North Canterbury, New Zealand, for nearly twenty years, and in other positions elsewhere, I have been responsible for the giving of fully 220,000 injections of tuberculin, about half being given by my own hand and the remainder by my assistants under my supervision. I have watched the results day by day of nearly every injection given, whether by myself or by my assistants. As the result of that experience there is no doubt in my mind that true and lasting benefit from the use of tuberculin can only be obtained by the giving of large doses, and by that I mean 1 c.cm. and over of the undiluted product. The early doses must, of course, be quite small, but the small doses steadily increased are, I believe, little more than a necessary preparation for the giving of the large and, as I think, only effective doses.

If any of those who are interested in the use of tuberculin have not yet ventured to give the large doses mentioned, I am sure that by working up to these doses by proper increases, and in suitable cases, they will get infinitely better and more lasting results than they are getting by confining themselves to the use of small doses only. But tuberculin is not a substance to be given in a haphazard manner by those who have had no proper training in its use.—I am, etc.,

Dawlish, Jan. 18th. G. J. BLACKMORE.

Tuberculin Treatment of Asthma

SIR,—I was much interested in Dr. James Maxwell's paper on the tuberculin treatment of asthma, published in the *Journal* of December 31st, 1932 (p. 1182), and I heartily agree with many of his conclusions.

Treatment of under six months' duration is of little value. In many cases the asthma recurs after a few months' cessation of treatment, but I have usually found that if the patient has benefited by the first course he will certainly benefit, probably to a greater degree, by the second. There is some difficulty in separating true spasmodic asthma from other asthmatic conditions. I have contented myself with separating those cases which were almost certainly of tuberculous origin from those in which some other factor, bacterial or otherwise, played the important part. I agree that great care has to be exercised in dosage, and that it is unnecessary usually to proceed to such high dosage as in the case of true

tuberculosis of the lungs. In my own practice I have always looked upon this action of tuberculin as specific in tuberculous asthmas, and have had such unsatisfactory results in treating cases which do not react to tuberculin with this antigen that I have long since given up using it for them. I notice, however, that Dr. Maxwell uses old tuberculin in treatment, whereas I use T.A.F. Possibly his success may be due to the presence of albumose in the old tuberculin, and my failure to the absence of it in the T.A.F. An argument in favour of the action of tuberculin being specific in tuberculous asthmas is the fact that equally good results are got by the use of tuberculin ointment. It is hardly conceivable that this could produce protein shock.

In looking through my notes I find full records of some fifty-four cases of asthma which were treated with tuberculin. These all gave positive results by means of Ellis's modified von Pirquet test. This test has the advantage of simplicity, and is sufficiently accurate for practical purposes. Of the fifty-four cases about 10 per cent. reacted to a dilution of 1 in 500 tuberculin—that is, they were hypersensitive—60 per cent. to 1 in 100 (sensitive), and 30 per cent. to 1 in 10 only, and not to higher dilutions. The degree of sensitiveness has little to do with the severity of the asthma, but gives an indication as to the caution that is necessary in treatment. I find that of the fifty-four cases 65 per cent. had normal *x* rays, 12 per cent. showed definite fibrosis, 7 per cent. hilum tuberculosis, while in 16 per cent. there was definite *x*-ray evidence of the apices being affected. As the result of treatment I find that those which were normal to *x* rays are all well or much improved except three; fibrotic cases were all well except one; hilum cases were all well; apical cases all much improved. The cases have been selected over a period of seven years.

As to the method of treatment I find that I get equally good results with some form of tuberculin ointment, such as "santuben," as with injections. It is a far simpler method and does not give reactions. Contrary to Dr. Maxwell's experience, I have had a few cases in which the skin condition was definitely improved under tuberculin treatment. My conclusion so far is that the average asthma which reacts definitely to tuberculin will benefit by tuberculin. If it does not improve under this form of treatment then a search must be made for some other causative organism.—I am, etc.,

London, S.W.1, Jan. 13th. F. E. GUNTER.

SIR,—On December 31st, 1932, you published a report by Dr. James Maxwell on the tuberculin treatment of asthma, but I notice that no mention is made of the work done by Colonel Gunter, which was published some years ago. I have found that the value of tuberculin is much increased by using it together with a vaccine made from the other germs found either in the sputum or in the back of the throat.—I am, etc.,

London, W.1, Jan. 9th. GORDON TIPPETT.

Contraceptives

SIR,—It is not generally realized that at least 175 chemical contraceptives may be found upon the market. Many of these appear to depart markedly from the desired standards laid down by the leading workers in this field, and a similar state is to be found when mechanical methods are considered.

It is for this reason that several firms have formed themselves into a group, with the following objects in view: (1) To maintain a certain standard of purity and excellence in manufacture. (2) To *focus attention upon such methods* as are likely to meet with general success, and to see that they are (*a*) harmless to the user, (*b*) easy to apply, and (*c*) reasonable in cost. (3) To study the question of packing and deterioration and the issuing of seemly literature and advertising.

This group is the direct result of the museum which I have recently formed in the Department of Public Health of the London School of Hygiene and Tropical Medicine, where the many aspects of this difficult and many-sided subject are dealt with. The formation of a similar group in the United States and on the Continent is under consideration, and I submit that this is a most important step, which will not only help to remove the stigmas which have so long existed, but may well aid contraception to become a worthy branch of preventive medicine.—I am, etc.,

CECIL I. B. VOGE,
London, W.C.1, Jan. 13th. B.Sc., Ph.D., F.R.S.E.

Experiments on Dogs

SIR,—Some little time ago the Council of the British Medical Association, acting under the authority of the Annual Representative Meeting, took steps to fortify the opposition in the House of Commons to a Bill designed by its promoters to limit experimental research upon dogs. In my opinion this action runs counter to the views of thousands of doctors in all branches of medical practice, and as the topic is likely to recur I beg leave to propound a theme which I feel will arouse considerable interest. My theme is that a very large number of medical practitioners of both sexes dislike and distrust experiments upon dogs. If I am right in this contention it may be possible for individuals in the Divisions to prepare resolutions for the next Annual Representative Meeting so that the policy of the Association may more accurately reflect the views of individual members.—I am, etc.,

Sunderland, Jan. 19th. G. F. WALKER, M.D., M.R.C.P.

*** At the Annual Representative Meeting, 1931, Resolution 46, referring to Commander Kenworthy's Dog Bill, unanimously approved the action of the Council in addressing a communication to all Members of Parliament giving reasons why such a proposal should be opposed.—ED., *B.M.J.*

Dispensing Opticians and Sight-testing Opticians

SIR,—The Association of Dispensing Opticians on more than one occasion has ventured to draw the attention of ophthalmic surgeons to the importance in their own interests of supporting dispensing opticians rather than sight-testing opticians, it being pointed out that there is a distinct possibility that patients sent to the latter for the supply of glasses to a surgeon's prescription might be induced on future occasions to obtain a new prescription direct from the sight-testing optician. Confirmation of this view is contained in an article published in the *Optician*, the sight-testing opticians' organ, of December 23rd, 1932.

It appears that a sight-testing optician declined to dispense an oculist's prescription, and in commenting upon this action the writer of the article points out that sight-testing opticians should carry out dispensing work for ophthalmic surgeons wherever possible. One of the reasons given for advocating this course was that by so doing an ophthalmic optician might go a long way towards converting a patient who, perhaps through ignorance, had hitherto held the opinion that the services of an oculist were essential.

It is hardly necessary to make any comment upon this advice, but it may perhaps bring home to those ophthalmic surgeons who to-day send patients to sight-testing opticians with prescriptions the danger of such a course of action.—I am, etc.,

London, W.1, Jan. 17th. E. HARWOOD.

VITAL STATISTICS FOR ENGLAND AND WALES, 1932

We are indebted to the Registrar-General for the following statement regarding the provisional birth rates and death rates, and the rates of infantile mortality, in England and Wales and in certain parts of the country during 1932. The statement is issued for the information of medical officers of health.

ENGLAND AND WALES

Birth Rate, Death Rate, and Infantile Mortality for the Year 1932 (Provisional Figures)

	Live Births per 1,000 Population	Deaths per 1,000 Population (Crude Rate)	Deaths under One Year per 1,000 Registered Live Births
England and Wales	15.3	12.0	65
118 county boroughs and great towns, including London	15.4	11.8	68
126 smaller towns with estimated *resident populations of from 25,000 to 50,000 at 1931 Census*	15.4	10.8	57
London (administrative county)	14.3	12.3	66

The birth and death rates for England and Wales relate to the total population, and are calculated on the estimated mid-1932 population The remaining rates are calculated on the estimated mid-1931 resident population, and relate to the total population for births, but to the civil population only for deaths.

For the fourth year in succession the birth rate is the lowest on record, being 1.0 per 1,000 below that of 1929 and 1930, and 0.5 below that of 1931.

The death rate is 0.3 below that for 1931.

The infant mortality rate is 1 per 1,000 below that for 1931. The only year showing a lower rate is 1930. In 1928 the rate was the same—namely, 65.

The Services

DEATHS IN THE SERVICES

Lieut.-Colonel John Stevenson O'Neill, M.C., Indian Medical Service, died at Cawnpore, of which station he was civil surgeon, on November 6th, 1932, aged 54. He was born on December 4th, 1877, was educated at Queen's College, Belfast, graduating M.B., Ch.B., and B.A.O. of the Royal University, Ireland, in 1904, and subsequently studied at the Middlesex and University College Hospitals, and took the M.D.Belfast in 1923, and the F.R.C.S.Ed. in 1924. Entering the I.M.S. as lieutenant on February 1st, 1905, he became lieutenant-colonel on August 1st, 1924, and was placed on the selected list for promotion on June 21st, 1931. He served on the North-East Frontier of India in the Abor expedition of 1911–12, when he was mentioned in dispatches in the *Gazette of India*, No. 480, of May 23rd, 1912; and in the war of 1914–18—in France and Belgium in 1914–15 and in Iraq in 1916—was mentioned in dispatches in the *London Gazette* of January 22nd, 1915, and received the Military Cross on June 3rd, 1915. Most of his service, however, had been spent in civil employ in the United Provinces, where he had held charge as civil surgeon of several of the most important stations successively—Bareli, Masuri, Benares, and Cawnpore—and was one of the most highly esteemed and popular medical officers in the province. At the time of his death he was within a month of retirement.

Lieut.-Colonel Albert Elijah Walter, O.B.E., Indian Medical Service (ret.), died at Nairobi, Kenya, on January 11th, aged 61. He was born on December 18th, 1871, the younger son of the late E. Walter, J.P., of Churston Manor, Putford, Devon, and was educated at Middlesex Hospital, where he gained the senior entrance scholarship, and filled the posts of senior demonstrator in physiology and demonstrator in biology. He took the M.R.C.S. and L.R.C.P.Lond. in 1896, and the M.D.Brussels in 1898. After acting as surgeon to the Fleet Cottage Hospital, he entered the I.M.S. as lieutenant on January 28th, 1899, became lieutenant-colonel in July, 1918, and retired on February 1st, 1925. He served in the China war of 1900, and took part in the relief of Pekin, gaining the medal with a clasp, and in the war of 1914–18, in Iraq in 1916-17, when he was mentioned in dispatches in the *London Gazette* of November 26th, 1918. He received the O.B.E. in 1918. He had previously gained the Kaisar-i-Hind medal of the first class on December 12th, 1911. During his service he specialized in *x*-ray work, and was the author of *X Rays in General Practice*, 1906; and *Practical Guide to X Rays, Electro-therapeutics, and Radium Therapy*, 1916.

Lieut.-Colonel George Ernest Hale, D.S.O., R.A.M.C. (ret.), died at Felixstowe on January 11th, aged 71. He was born at Eastbourne on June 13th, 1861, was educated at St. Mary's, and took the M.R.C.S. and L.R.C.P.Ed. in 1884. Entering the Army as surgeon on January 31st, 1885, he became lieutenant-colonel after twenty years' service, and retired in November, 1912. He had a long list of war service—Sudan, 1885-6, with the Frontier Field Force, action at Ginniss (Egyptian medal and Khedive's bronze star); Burma, 1887-9, (Indian frontier medal with clasp); Burma, 1889-91, Pounkhan, Tonhon, and Wuntho expeditions (mentioned in dispatches, *London Gazette*, February 2nd, 1892, clasp, and D.S.O.); South Africa, 1899-1902, with Yeomanry hospital, operations in Transvaal, Orange River Colony, and Cape Colony (mentioned in dispatches, *London Gazette*, September 10th, 1901, Queen's medal with three clasps, and King's medal with two clasps).

Universities and Colleges

UNIVERSITY OF OXFORD

On January 24th the honorary degree of M.A. was conferred on William Stobie, M.D.Ed., M.R.C.P.Lond., late mayor of Oxford, and for many years honorary secretary of the Oxford Division of the British Medical Association.

At a congregation held on January 19th the degree of B.M. was conferred upon H. F. Moseley.

UNIVERSITY OF CAMBRIDGE

The following candidates have been approved at the examination indicated:

DIPLOMA IN MEDICAL RADIOLOGY AND ELECTROLOGY.—*(Part I)*: J. S. Austin, L. R. B. Birt, L. G. Blair, I. Fine, F. C. Golding, Elizabeth M. Haworth, R. McWhirter, W. W. Main, R. F. May, R. J. L. O'Donoghue, R. M. Patterson, R. F. Phillips, E. J. Rawnsley, W. Sowerby, Elizabeth M. F. Taylor, A. R. Thomas, J. Z. Walker, B. W. Windeyer.

The Committee for Medical [illegible] and Electrology has approved for the Diploma in [illegible] lectrology the theses of the following [illegible] J. S. Brown, G. T. Calthrop, E. N. Cook, E. R. Crisp, A. C. Devaraj, N. Fram, M. H. Hellman, R. F. Innes, J. N. Jacobson, S. A. Nagga, J. J. O'Grady, R. N. Perrott, F. G. Stewart, E. R. Williams.

UNIVERSITY OF LONDON

The University Court, at its meeting on January 11th, learned with great gratification that four City Companies had each decided to make grants to the University in the shape of annual payments extending over a series of years. These grants will amount in all to £20,000 from the Clothworkers' Company, £10,000 from the Grocers' Company, £5,000 from the Drapers' Company (to whose munificent help to one particular school—namely, East London College—the University is already greatly indebted), and £5,000 from the Skinners' Company. As in the case of the grants already announced from the Corporation of the City of London, from the Mercers' Company, and from the Fishmongers' Company, these benefactions will be applied towards meeting the cost of the new Ceremonial Hall to be erected on the University's site in Bloomsbury. An expression of the University's great appreciation and cordial thanks has been conveyed to each of the companies.

A course of six lectures on physiology of the nervous system in man will be given by Professor Samson Wright at the Middlesex Hospital Medical School on Tuesdays and Thursdays, February 7th, 9th, 14th, 16th, 21st, and 23rd, at 5 p.m. Admission is free without ticket.

UNIVERSITY OF DUBLIN

At the later commencements of Hilary Term, held in Trinity College on January 18th, the following degrees in medicine were conferred:

M.D.—L. J. Coetzee, W. B. Hamilton.

NATIONAL UNIVERSITY OF IRELAND

UNIVERSITY COLLEGE, CORK

The following candidates have been approved at the examinations indicated:

M.D.—M. McSwiney.

M.B., B.Ch., B.A.O.—C. Delea, J. J. O'Sullivan.

Obituary

SIR PERCY SARGENT, C.M.G., D.S.O., M.B., F.R.C.S.

Surgeon to St. Thomas's Hospital and the National Hospital, Queen Square

Sir Percy Sargent, who died from pneumonia on January 22nd, was born at Clifton in 1873, and was educated at Clifton College, where he did not have a particularly distinguished career. From Clifton he went to St. John's College, Cambridge, where he first showed signs of his future career when he decided to enter the medical profession. He came to London, and sat for the University Scholarship at St. Mary's. So certain was he after the examination that he had no chance of gaining the scholarship that he went to St. Thomas's, where he took a similar examination. To his surprise he was elected to both, and it was only after considerable cogitation that he decided to enter St. Thomas's. He qualified at the Conjoint Board and at Cambridge in 1895. He was immediately elected to the junior house appointments at St. Thomas's, and took his F.R.C.S. in 1900. It was in "College House" that he showed signs of his future eminence as a surgeon, and it became evident from his manual dexterity and skill whilst registrar and resident assistant surgeon that he would fill the next vacancy on the staff. Such a vacancy occurred directly his term as resident assistant surgeon was over. He at once took a prominent place in the teaching and surgical work of the hospital. He had been house-surgeon to Anderson, the first surgeon in the hospital to use rubber gloves. He came into his work in the very early days of aseptic, as opposed to antiseptic, surgery, and really began to do surgery in the new theatres at St. Thomas's, which had been designed for aseptic work by his immediate senior, Sir Cuthbert Wallace. The technique in these theatres was so advanced for those days that it has undergone only minor variations since. As assistant surgeon Sargent came under the influence of Sir Charles Ballance, and it was through him that his inclination to neurological surgery was due. It was also due to Sir Charles that he visited the National Hospital, Queen Square, and started his friendship with Sir Victor Horsley. As more and more cerebral surgery was done, so it became evident at Queen Square that Horsley and Ballance must have assistants; Sargent was one of the two surgeons appointed when vacancies were declared. He then rapidly showed that the skill which he had applied to general surgery could be utilized in this special branch. From then until ten days before his death he was operating continually on cerebral and spinal cases, and acquired unrivalled knowledge of cerebral disease. His general work was carried out at the same time at St. Thomas's, where he only did the comparatively little neurological work which occurs in a general hospital.

Sargent was a fine surgeon, and in every sense of the word it was an experience to see him in the operating theatre. He had wonderful hands, and operated with the greatest dexterity, rapidity, and imperturbability. A laminectomy performed by him was a revelation. The spinal cord would be explored with surprising speed, and the apparent ease with which this difficult piece of hard work was done won admiration from those who knew from experience the difficulty of doing it quickly without injury to the underlying cord or shock to the patient. After such an exhibition of simple controlled strength it was an equal or a greater pleasure to witness his gentle handling of the cord or the brain. He took no unnecessary risks, previously studying the case with his neurological colleague, and they would confer together at the operating table. It is no exaggeration to say that these operations were models of skill, of restraint, of perfect technique, and of almost unbelievable delicacy of touch. The complete removal of a spinal tumour in twenty minutes must be a record difficult to beat. Sargent was a master of his craft, and, whilst his work on the brain and spinal cord calls for special comment, his general surgery was of the highest order. His gentleness and delicacy of touch in the abdomen caused the least shock to his patients, and although he never made an unnecessary movement it was almost impossible to follow his fingers. Comments have been made by surgeons, both at home and abroad, on even so small a detail as his manner of tying ligatures. He was a brilliant teacher in the wards, and gained the affection of the students. He made his rounds interesting and amusing: his caustic comments were all taken in good part, and were appreciated even by those at whom they were directed. His round has been described by an old student as a "social gathering." He examined at Cambridge for some years, and always looked forward to what he considered a happy gathering of the examiners. He took this work very seriously, and had a happy knack of drawing the best out of the examinee, quickly removing any nervousness by his happy air of good fellowship. He was a popular examiner with the candidates, but perhaps they obtained a lower mark than they expected after a viva from him. Sargent was not a prolific writer, but what he wrote was to the point, and the result of infinite care and hard work. The paper he was most pleased with himself was written in conjunction with Professor Dudgeon in 1905 on the bacteriology of peritonitis. Many other articles dealt with his special branch of surgery. He was essentially a general surgeon, not a special one, and this prevented him from publishing the wealth of material in his special branch, as he never wished to pose as a specialist. His notes were meticulously kept, and he intended to publish, and indeed had roughed out, a book on neurological surgery.

Apart from the actual practice of his craft, he entered into general professional life as far as his enormous

practice would permit. He had been a member of the Council of the Royal College of Surgeons since 1923, and was recently elected to the office of vice-president. He was a past-president of the Neurological Section of the Royal Society of Medicine, and in his presidential address chose a medical subject—namely, epilepsy. This, in the presence of so many physicians, was a bold stroke, but he filled the hall and made them think. As honorary secretary of the Royal Medical Benevolent Fund he was a great acquisition, and the fund gained materially during his tenure of the office. He was always a good committeeman. This enabled him, with his great knowledge of life and the conditions of medical practice, to carry weight in the consideration of difficult cases. The work he put in in this capacity was very considerable, and all the committees of the Fund will greatly miss his mature judgement. As consulting surgeon to the Ministry of Pensions he did good work, as he also did in his earlier days as consulting surgeon to the Margate and Epsom Hospitals, and to the Putney Hospital for Incurables. An appointment he much appreciated was membership of the council of Clifton College. He was also a member of the Court of Bristol University and of the Executive Committee of the Cancer Research Fund, while he had held many of the lectureships of the Royal College of Surgeons. Of his war work I have no special first-hand knowledge, as during that time, for the only time in our professional lives, we were separated. Sargent went to France with the Red Cross almost before hostilities started, soon became a lieutenant-colonel, and joined forces with Gordon Holmes to form a special unit in neurology. Their combined experience and technical knowledge at once became recognized, and they were acknowledged as leaders in their particular branch of medicine. Their comments were perhaps too outspoken for the higher authorities, and it was a long time before their real value was appreciated. A firm and lasting bond of friendship originated at this time between the two. Sargent obtained the D.S.O. and C.M.G., and was knighted in 1928. He was full of sympathy on his short leaves for the difficulties of those at home, and helped in any way possible those who were struggling with surgical work. Another phase of Sargent's life was Masonry. He took a very keen interest in it from his very early days. He was possibly the leading medical Mason in the country. He possessed three Grand Lodge collars, and had been master of many lodges. The comradeship and ritual appealed strongly to his innate feelings. *Au fond*, he was a religious man: he came from a deeply religious family, and his early training remained, though the outward expressions were not exhibited. Percy Sargent the man offers a more difficult problem. "Percy" to all his friends—a name of real affection and respect—inimitable, generous he was to a degree, as many could testify, and meanness in any form was foreign to his nature. His keen, intellectual, and handsome face commanded attention, and his ready wit and humour were inexhaustible and at times a little biting, but there was no malice behind it all. He was a good speaker, and a contest of wits between himself and some member of the staff of another hospital afforded a feast of clever raillery and repartee which a stranger might have misunderstood. He was very loyal to his hospital, a firm and loyal friend. He surmounted all difficulties and anxieties with courage and infinite patience. He had resigned his appointment as senior surgeon to St. Thomas's just before his death—he was a tired man and had reached a more leisured time of life in which he intended to devote his unrivalled experience and knowledge to promoting the interests of the profession. Further distinctions undoubtedly awaited him, and his death, in the height of his career, is a calamity not only to his friends and hospital, but to the profession at large.

The colleague (Z. M.) to whom we are indebted for the foregoing memoir adds:

As a close friend of Sir Percy Sargent for just on forty years I find it almost impossible to realize that so interesting a personality has passed away, and in doing so has left an irreparable blank in life. This is a personal touch but the same to a lesser degree must be in the minds of many hundreds of his friends and colleagues in the medical world and amongst his patients and others who have ever come in contact with him. To work with Sargent was a liberal education. Medical men from all over the world—English, colonial, and foreign—used to flock to the operating theatres to see him, and it was part of his assistant's duty to find out if anyone of great standing was present. He had no mechanical sense; no machine ever worked well in his hands. He often tried to use mechanical saws and trephines, but soon discarded them. There was always something wrong with them; he never realized that his hands were better than any machine, and that the sole reason for there being something wrong was that his manual dexterity enabled him to do things that a lesser craftsman could not do without the aid of machinery. It was a trying experience to sit next to him when he was driving a car; he was not in the least in sympathy with the machine. Percy was a wonderful friend, full of humour and understanding. Latterly, however, he had become rather self-centred and felt his many responsibilities. In fact, he was tired and needed a complete change of surroundings and rest. This was repeatedly urged upon him by his many friends, but he would not take their advice. If any man "died in harness" he did, as he was at work up to the last moment before his illness. When the writer thinks of those forty years—times of work and holiday, pleasures and sorrows, of the early days of motoring, the golf links, Switzerland and winter sports, domestic events, watching the gradually increasing work all over the country, successes and failures, of the almost daily association—he can then only think of the value of true friendship extending almost for a lifetime without a quarrel, and to be thankful to have been associated with a great man.

Sir CUTHBERT WALLACE sends the following appreciation:

Sargent joined St. Thomas's Hospital from Cambridge, having won the University Scholarship, in 1895, but it was not till some years later that my memory of him becomes distinct. At that time I was resident assistant surgeon, a post that gives the holder a better opportunity of judging a house-surgeon's capabilities, better even than the house-surgeon's chief. I remember picking him out as a man who was likely to go far in surgery if the opportunity and the inclination to grasp it were present. He was one of those house officers who, while independent, never gave cause for anxiety, and who, though independent, were not above asking advice and taking it. He was even in those days dexterous, gentle, and concise with his fingers.

I do not know what turned his mind to cerebral surgery, but I fancy that the offer came from Queen Square, which was looking about for a likely young surgeon. Possibly his mind had been turned in that direction by his proximity to Sir Charles Ballance. I remember his appointment, thinking that he had a hard road before him. However, his decision was justified. When I got to France early in 1915 Sargent offered me hospitality until I was settled. There I found him immersed in his special branch, about which there was a good deal of not very charitable discussion. It was characteristic of him to work away, assisted by Gordon Holmes, and to let others do the talking, for he was never a man to rush into print. On my return to England I found him back at the hos-

pital, engaged in doing his best to pull the school together and introduce improvements in its work. When the hospital settled down to its normal work it happened that my theatre and his adjoined, which gave me the opportunity of watching him at work. No one could look on and not be impressed with his methods. He always seemed to know what he had to do, and to do it with celerity, calmness, and efficiency. If he growled it was in such a way that his house-surgeon and sister rather liked it.

Although Sargent had made cerebral surgery his specialty, his interest in general surgery never abated, and he was at some pains to let this be known. Many times did he send one of his dressers to my theatre to ask me my opinion on some operative problem, and he had a very nice way of making one feel that he really wanted your help.

Professor ANDREW FULLERTON, Queen's University, Belfast, late consulting surgeon, British Expeditionary Force, France, writes:

The unexpected death of Percy Sargent has come as a great shock to his many friends, not only in the British Isles, but also in America, where his work was well known. When I received the sad news my thoughts were carried back to the early days of the war, when I became intimately associated with him and Gordon Holmes, both of whom were doing pioneer work in the diagnosis and treatment of head injuries. The services of this brilliant pair of workers were requisitioned all over the war area, and especially at the Boulogne base, to which I was attached as consulting surgeon. No one who has watched Sargent operate could fail to be impressed with the almost uncanny dexterity with which he dealt with these difficult cases. I became one of his most ardent admirers, and a friendship sprang up between us, which was further strengthened when he became my colleague on his appointment as consulting surgeon towards the end of the war. Sargent was indefatigable in his efforts to help the wounded soldier, and never spared himself if there was work to be done.

Since the war I have been greatly indebted to him for many acts of kindness rendered to me personally and to the Belfast Medical School. It is the custom at Queen's University to ask eminent surgeons from other schools to give special lectures at the University to senior students, and Sir Percy Sargent was one of the most welcome of these special lecturers. His racy style and ready wit, and his eloquence, captivated his audiences, who looked forward with great pleasure to his visits. His next visit was due at the end of this month, and the sad news of his death will be received with genuine grief by a large circle of friends in this corner of the British Empire. We all feel that we have lost a brilliant colleague, a kind friend, and a delightful companion.

Mr. DONALD ARMOUR writes:

British surgery in general and neurological surgery in particular has sustained a grievous loss by the untimely passing of my friend and colleague, Percy Sargent. Others from a greater knowledge will bear testimony to his work over a long period at St. Thomas's Hospital, where he entered as a student to end as the senior surgeon. Of Sargent's work at the National Hospital, Queen Square, to which we were appointed at the same time, I can speak with the warmest appreciation and the greatest admiration. He came to the National Hospital with the long training and wide experience of a general surgeon behind him. And he was never tired of emphasizing that a training in general surgery should be a *sine qua non* for all specialists. That it stood Sargent in good stead in his neurological work there can be no doubt, for he brought to it a sound knowledge of the anatomy of the nervous system, a clear vision of the neuro-physiological problems to be faced, and a skill and manual dexterity in manipulation which made so much for the success which he attained.

Sargent was never carried away by a mistaken enthusiasm for the new, either in operative technique or for mechanical aids in operating. On the contrary, he was too much inclined, if anything, to view them with a smiling disdain, to which amusement was always added by his trenchant and original comments. This was particularly true of anything originating in American clinics. He was not mechanically minded, and preferred to rely upon such methods as he found sufficient and efficient in his own hands rather than resort to newer and more spectacular ones. This in no way, however, lessened his skill nor detracted from his results in operating. Sargent had a most delightful and attractive personality, in which were combined all those indefinable attributes which go to make up "good company." He was a graceful and fluent speaker, with a fund of entertainment if the occasion warranted it, and with a caustic wit which was always tempered by an engaging and disarming smile. His passing will leave a void hard to fill both in the world of surgery and in the hearts of his many friends.

[The photograph reproduced is by Hay Wrightson, London.]

RICHARD GILL, M.B., B.Sc., F.R.C.S.

We regret to record the death on January 13th, in his seventy-sixth year, of Mr. Richard Gill, of 17, Albert Hall Mansions, S.W.7. Gill obtained the B.Sc.Lond. in 1879, and graduated M.B.Lond. a year later, securing first-class honours in medicine and obstetrics. He soon turned his attention to anaesthetics, and in 1881—the same year in which he passed the F.R.C.S. examination—was appointed assistant chloroformist to St. Bartholomew's Hospital. He was later appointed anaesthetist to the hospital, a position which he held for many years, and he was regarded by Bart's men as probably the finest chloroformist that has ever lived and in his day the best anaesthetist in London. By his method of gas-ether induction with a "Clover" he made use of the rebreathing principle long before Yandell Henderson pointed out the advantages of the CO_2 factor. Mr. Gill was devoted to Bart's, and worked there for many years—every morning in the surgery, and every afternoon in the theatres. But for his love of the hospital he would have been a far more widely known man. He retired from practice not long after his marriage in 1913.

Sir D'ARCY POWER writes:

The death of "Dicky Gill" will be noticed with regret by the thousands of medical men who learnt at his hands the method of securing perfect and safe anaesthesia with a minimum quantity of the drug used. His axioms must still sound in their ears—"Observe the phenomena"; "Automatic breathing is the true sign of anaesthesia." His practice was better than his teaching, for he thought more quickly than he spoke. In his lectures there were pauses in the middle of a sentence, and when he again began to speak it was clear that his ideas had outstripped his words. In his youth he was the perfect examinee. Examinations were as naught to him, and honours, scholarships, and medals came to him without effort. For many years he lived a solitary life, and wrote that curiously metaphysical work in two volumes which he entitled *The CHCl$_3$ Problem*. Then, fortunately for himself, he married Elizabeth Ann Bostock, daughter of Deputy Surgeon General John Ashton Bostock, C.B., of the Scots Fusilier Guards, honorary surgeon to Queen Victoria, and Chevalier of the Legion of Honour. He travelled widely in Europe, and became skilled in art, in pictures, and in literature.

THE LATE SIR ROBERT JONES

Professor GREY TURNER, Newcastle-upon-Tyne, sends the following tribute:

It was my great good fortune to know Sir Robert Jones for more than a quarter of a century, and during the whole of that time I have looked up to him as a great and inspiring example. I remember as long ago as my undergraduate days that one of our surgeons made a pilgrimage to Liverpool to see the work of the man who was then looked upon as the principal surviving disciple of Thomas, the inventor of the splint, which was already recognized as such a great and valuable addition to surgery. At the same time there can be no doubt that there was a section of the profession at that time which looked upon Nelson Street as the sanctum of a glorified bone-setter; but how soon that was all changed!

When William Mayo made his first visit to this country in 1907 he spent a couple of days in Newcastle, and was filled with enthusiasm about the work he had seen in Liverpool at the hands of Jones. He told us that Jones was a great surgeon who was carrying the bright lamp of surgical progress right into the heart of the camp of "the saddlers and harness makers," explaining that the latter was the expression used in America to describe the surgeons of that day who devoted themselves to the treatment of deformities. I was so impressed and stimulated by what I heard that I made an early visit to Liverpool, and was amply rewarded. It is difficult to describe the energy and vivacity of Jones in his heyday, but I would like to put it on record that my impression was of a great practical orthopaedic surgeon, whose work was founded on the surest principles. As a general surgeon I learnt an immense deal on that visit which has stood me in good stead ever since, and I can well understand how much the younger orthopaedic surgeons who have had the same experience must have profited by his teaching. After a large number of consultations during the morning there came luncheon, served in the consulting rooms, and provided by himself out of a parcel, with a little piece of pantomime, which I subsequently learned was invariable, for he always tossed an orange or an apple to the faithful footman who guarded the door so well. The house, world-famous as 11, Nelson Street, had been the residence of his uncle, H. O. Thomas, and every room seemed to be devoted to the practice. On that occasion we had what I believe was the rare privilege of being shown the blacksmith at work in his own little shop over the backyard, where he turned out splints according to the original models. At the time the sole workman was very old and had suffered the loss of his tongue, and I rather maliciously wondered if he had been chosen for the same reason as the character in Scott's novel *The Black Dwarf*, for there was a day when all Thomas's splints were turned out by this man, and perhaps secrets of manufacture had to be guarded. However, by that time other channels were necessary to supply the demand for apparatus, and the inevitable Critchley was in constant attendance, and secured a large batch of orders from the morning's work. I must not fail to mention the *x*-ray department, with Dr. Morgan in charge, and the wonderful Sister who so ably assisted Jones in the operations which were carried out there and then for club-feet, Duputyren's contraction, etc. After lunch we went down to the Southern Hospital, where Jones worked through a tremendous list of cases. I have it before me now, and see that there were no fewer than nineteen operations, including three for loose cartilage. At that time he was perfecting his technique for the open knee-joint, indicating his wants by a series of agreed signs so that not a single word need be uttered lest it should be detrimental to the success of the operation. In the evening we were received at his hospitable table with his wife and daughter. Jones was devoted to his wife, and I am sure he was never the same after her death, which occurred during the war-time. After dinner he led me on to talk of my visits to other clinics in this country and in America, and then he told us a great deal of his uncle and his work, not only in orthopaedics, but in ordinary practice and general surgery. Only a few people realize that Jones was extremely interested in general surgery, and that in his early days he was quite an adept, and that one of his favourite operations was for cancer of the rectum.

Since then I repeatedly saw Jones, and especially as one of the most welcome members of the Surgical Club, now the Moynihan Chirurgical Club, of which I then acted as secretary. Wherever we happened to be he was the soul of the party, and I can remember long railway journeys with the whole carriage full of surgeons, all bearing well-known names, listening attentively whilst Jones entertained us, expounding problems of bone and joint surgery, or with reminiscent gossip. His boundless energy during the war is now a byword, and, apart from the good that he did for countless sufferers, the experience gained under his organization and inspiration has placed orthopaedics in this country in a position which it would not otherwise have attained for very many years. After a time, when things settled down, we started our foreign tours again, and Jones was often one of the travellers. Who can ever forget that wonderful visit to Bologna with the dramatic moment when Jones and Putti greeted each other at the entrance of the Institute Rittozoli. That visit was a delightful experience for all of us; and how Jones revelled in the little *tête-à-tête* on the verandas of the cafés in that ancient city of wonderful nights. Later still he joined us on a most memorable visit to Madrid, and acted as president for the meeting. Many will remember how he helped to get us out of the difficulty, when, owing to a misunderstanding, we had to be sought to go to an official luncheon after we had half finished our own, and how he utilized his knowledge of Welsh on that occasion. At the reception at the Royal Palace the same night he was absolutely in his element as he went round with the King and Queen and Queen Mother, introducing every one of our party and engaging in an animated conversation with their Majesties on all kinds of subjects. That, I believe, was the last grand occasion at which we foregathered, and I think chiefly because our orthopaedic friends were a little jealous of his surgical associates and wanted to have him all to themselves. But it was ever a delight to meet him anywhere and to witness his astounding activities.

At the age of 70 he came to Newcastle and took the trouble to give an address to a students' medical society, and to attend their dinner in the evening. I was determined to see him at work on his own ground once more, and I shall always remember with great interest my last visit to Nelson Street in September of 1928. He was the same Jones, and showed the same deep appreciation of surgical principles, and, though a good deal of the fire had gone, the same radiant kindliness was quite touching. On that occasion it was delightful to stay in his house, to enjoy his hospitality, and to see him at home and at rest. Truly it has been a great privilege and a great inspiration to have known such a man, and I have no hesitation in saying that the whole realm of surgery is much the poorer for his passing.

Mr. JOHN ROWLAND, Chairman of the Welsh Board of Health, has sent the following tribute to Sir Robert Jones's son-in-law: To all of us who knew him so well the death of Sir Robert Jones will come as a heavy blow. There was no man who was more loved, for his qualities endeared him to everyone, whether among his immediate friends or among that larger circle for whom he laboured with so much devotion to relieve suffering. We may take comfort that he was spared to remain with us to a ripe age, and has passed away full in years, after a life so rich in well-doing. We shall mourn him as a man, but we shall also honour his name for the pre-eminent services he rendered to humanity in the cause of surgery. Wales must indeed be proud that she gave a son of such eminence to the world. We have in Cardiff a monument to his untiring labours in the Prince of Wales Hospital, and our countrymen will ever be grateful for the part he played in the fight against tuberculosis in the Principality. Looking back to the war years, when he so wholeheartedly plunged himself into the work of healing the soldiers and sailors disabled in limb, how grateful must we feel that the skill of Sir Robert Jones was available to perform those miracles of healing. His name will deservedly live as a world pioneer in orthopaedic surgery.

His whole life, directed by genius and rare perseverance, was devoted to that end. He has now passed beyond, but his memory will linger long as one of the benefactors of his race.

A cable has been received from Dr. T. LINDSAY SAMPES, president of the Medical Association of South Africa (B.M.A.), asking that sympathy may be conveyed to the relatives of Sir Robert Jones in their loss: "His memory will be held in South Africa in the highest esteem for the magnificent services to the paralysed and crippled and to the wounded soldiers in the great war, and in advancing the science and art of surgery. He will be remembered with affection as a most lovable personality."

Mrs. F. CHAPLIN HALL, secretary of the Association of Certificated Blind Masseurs, writes: The obituary notice of Sir Robert Jones is not quite complete without some reference to the important part he played in connexion with the blind massage movement in this country. The Association of Certificated Blind Masseurs, a professional body formed in 1919 to represent and safeguard the professional interests of blind masseurs and masseuses, had the honour to have Sir Robert Jones as its president from 1922, a position which he held up to the time of his death. The fact that Sir Robert consented to become the president of this association was not only of inestimable value to the work of the association, but gave a status and stimulus to the whole massage movement for the blind. Two years after the formation of the Massage Association the great misfortune of the death of Sir Arthur Pearson, who acted as its first president, came as a severe blow, as Sir Arthur played a large part in the initial formation of this band of educated blind men and women, comprising soldiers blinded in the war and men and women who had lost their sight in civilian life—many of whom had taken an active share in the treatment of the wounded in the later war period, and were anxious to band themselves together into a recognized body with strong medical backing. This desire was accomplished by the formation of the Association of Certificated Blind Masseurs. In 1922 Sir Robert Jones, having had an opportunity of seeing the work done by the blind masseurs and masseuses in the military hospitals, was interested in the massage movement to such an extent that he consented to become the second president of the Blind Masseurs' Association. Many of its members recall the general meetings which he attended to deliver the presidential address, and the delightful evenings spent at the annual dinners of the association—occasions when Sir Robert's presence acted as an inspiration.

The funeral of the late Sir Robert Jones took place at Liverpool Cathedral on January 18th. The service was conducted by the Dean, the Very Rev. F. W. Develly, and an address was given by the Bishop of Liverpool, the Rev. Dr. David. In addition to the relatives there was a large attendance, including the Lord Mayor of Liverpool, Major Milner (representing the Earl of Derby), Colonel Morgan (representing Sir Arthur Stanley and the British Red Cross Society); Sir Lisle Webb (representing the Ministry of Pensions); Sir William Wheeler, Dr. Hetherington (Vice-Chancellor of the University of Liverpool), Mr. C. Sydney Jones (Pro-Chancellor), Mr. Thurstan Holland, Professors John Hay, E. W. Hope, W. H. Wood, J. Hill Abram, H. E. Reed, W. J. Dilling, W. H. Roberts, Mr. E. E. Carey (Registrar of the University), Professors A. H. Burgess and W. F. Shaw (representing the University of Manchester), Professor A. W. Sheen (representing the University of Wales, the Welsh National School of Medicine, and the Prince of Wales Hospital, Cardiff), Dr. C. J. Macalister, Professor Blair-Bell, and Dr. C. O. Stallybrass (representing the British Medical Association). The body had been cremated, and the ashes are the first to find a resting place in the new cathedral.

The following well-known foreign medical men have recently died: Dr. ALESSANDRO BRUSCHETTINI, the eminent bacteriologist of Genoa, author of classical studies in tetanus and rabies, and Dr. KARL GRÜNBERG, professor of oto-rhino-laryngology at Bonn, aged 57.

Medical News

Sir James Dundas-Grant, K.B.E., has recently been elected an honorary member of the Italian Society of Laryngology, Otology, and Rhinology.

At the last meeting of the French National Society of Surgery Mr. Ernest Miles of London and Professor David Wilkie of Edinburgh were elected foreign corresponding members.

Viscount and Viscountess Leverhulme will be "At Home" at the Royal Institute of Public Health (23, Queen Square, W.C.1) on Tuesday, February 7th, from 4 to 6 p.m.

The Hunterian Society will hold a banquet at the May Fair Hotel, Berkeley Street, W., on Thursday, February 9th, at 7.30 p.m., to commemorate the 205th anniversary of the birth of John Hunter. The Lord Mayor and Lady Mayoress of London will be among the distinguished guests. Fellows of the society may invite medical and lay guests. The price of the dinner will be 13s. 6d. (exclusive of wines).

The annual dinner of past and present students of the Royal London Ophthalmic Hospital will be held at the Langham Hotel, Portland Place, on Thursday, February 9th, at 7 for 7.30 o'clock, with Sir Arnold Lawson, consulting surgeon to the hospital, in the chair. Application for tickets, 15s. (excluding wines), should be sent with remittance to Mr. Rupert Scott, 70, Harley Street, W.1.

The Council of the King Edward's Hospital Fund and the Directors of the Building Centre, at 158, New Bond Street, are giving a reception on the evening of January 31st. The King's Fund miniature hospital (described in our issue of January 14th, p. 76) will be on view, together with many other models and working exhibits.

Professor Samson Wright will give a course of six lectures on the physiology of the nervous system in man at the Middlesex Hospital Medical School, at 5 p.m. on Tuesdays and Thursdays, from February 7th to 23rd.

The third lecture in the series "Practical problems in medicine and surgery," arranged by the Fellowship of Medicine and Post-Graduate Medical Association, will take place at the Medical Society of London, 11, Chandos Street, W.1, on Tuesday, January 31st, at 4 p.m., when Major Meurice Sinclair will lecture on some important injuries of the upper extremity (with lantern slides). These lectures are free to members and associates of the Fellowship. A course of eight demonstrations on the interpretation of pyelograms will be given by Dr. G. Mather Cordiner, beginning on Wednesday, February 8th, at 8 p.m. Forthcoming courses include one on gynaecology, at the Chelsea Hospital, February 6th to 18th; one on diseases of the chest, at the Brompton Hospital, February 6th to 11th; a week-end course in physical medicine, at the London Clinic and Institute of Physical Medicine, Saturday, February 11th, and Sunday, February 12th; and an evening M.R.C.P. course will be held at the National Temperance Hospital, at 8 p.m., on Mondays and Fridays, February 20th to March 17th. Lectures, courses, and demonstrations arranged by the Fellowship are open only to members.

A new post-graduate course commenced at the National Hospital, Queen Square, W.C.1, on January 23rd, and will be continued till Friday, March 31st. The course includes out-patient clinics, and lectures and clinical demonstrations on each week-day, except Saturday, at 2 p.m. and 3.30 p.m. respectively; demonstrations on the pathology of the nervous system on Wednesdays and Fridays at 12 noon; demonstrations on the anatomy and physiology of the nervous system on Thursdays at 12 noon; and demonstrations on neurological ophthalmology and otology, on Mondays and Thursdays at 4.30 p.m. The fee for the course is £10 10s., and for clinical clerks or those who hold perpetual tickets, £8 8s. Special arrangements will be made for those who cannot take the whole course.

Professor K. Beringer of Heidelberg has succeeded Professor Bostroem in the chair of psychiatry at Munich.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, B.M.A. House, Tavistock Square, W.C.1.**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names, not necessarily for publication.

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of proofs.

All communications with reference to ADVERTISEMENTS, as well as orders for copies of the *Journal*, should be addressed to the Financial Secretary and Business Manager.

The **TELEPHONE NUMBERS** of the British Medical Association and the *British Medical Journal* are MUSEUM 9861, 9862, 9863, and 9864 (internal exchange, four lines).

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QUERIES AND ANSWERS

Treatment of Mucous Colitis

Dr. C. J. GROSCH (London, S.W.16) writes: Can any reader of the *Journal* offer advice in the further treatment of the following case? The patient, a student aged 21, has had mucous colitis for about five years. At first his bowels were open about eight times daily, and he still has two to four evacuations daily, with a considerable amount of mucus. His weight is stationary, and he feels well. He has been on a non-residue diet for at least three years, and was having a bismuth and catechu mixture when I first saw him in April last. He told me then that he had hay fever, which commenced in the same summer as his colitis. A consultant who saw him in June advised luminal and a mixture of potassium bromide and belladonna. He has also had a course of injections for the hay fever, and is at present taking small doses of petrolagar. The actual motions passed are well formed.

Scabies

Dr. R. D. MOYLE (Eastbourne), replying to "Acarus" (January 14th), suggests that the twelve months' history of his case raises the question as to the correctness of the diagnosis, and recommends a careful search for the parasite with needle and magnifying glass, and subsequent identification under the microscope. He writes: In case a true bill is brought in, then a more efficient parasiticide is required. I would suggest an ointment consisting of 2 to 5 per cent. of beta-naphthol and 12 per cent. of balsam of Peru in soft paraffin. If the parasite cannot be found the familiar problem of the needle and the haystack presents itself. In any case it is almost certain that with a history of twelve months' treatment the skin has now become eczematized as a result of the various applications. I have found that "mitigal" (Bayer) is a good remedy both as a sedative and as a parasiticide. It appears to me most likely that the parasite has long since ceased to give trouble, and a dermatitis medicamentosa has taken its place. Cessation from further active treatment is required, plus the use of simple sedative and emollient ointments, such as ung. zinci, with or without acid. carbol., 1 per cent., or cremor zinci.

LETTERS, NOTES, ETC.

Pain Referred to the Ear

Dr. PETER MACDONALD (York) writes: The interesting article by Mr. E. Watson-Williams in the *Journal* of January 21st (p. 92) on pain referred to the ear induces me to send the following account of a case, as it is unusual. As will be understood from the circumstances, my knowledge of it is intimate. A few days before Christmas my son was boxing in a gymnasium; I was acting as timekeeper. He received a blow on the left side of the jaw, and had a sudden acute pain in the right ear. The pain was severe, and he had to stop boxing for a few seconds. I examined the ear on my way home—that is, in about half an hour. Hearing was perfect, but there was a line of congestion along the handle of the malleus and a marked congestion of Shrapnell's membrane. After Christmas the same thing occurred, but the blow was less severe, as was the pain, and I did not examine. A few days ago the same thing happened again, but less severely than on the first occasion, and I once more examined in about half an hour, and again there was a line of congestion along the handle of the malleus and Shrapnell's membrane was congested. On the first occasion I thought that the congestion might have been due to his having done a "valsalva" immediately after the blow, which he did to test if his drum membrane was intact, as he had had it ruptured when boxing at Cambridge. It is conceivable that this rupture may have had something to do with the phenomenon, but he cannot recollect if it was the right membrane which was ruptured. The question arises whether this was a pain arising in the ear or if it was referred to the ear from the articulation of the jaw. I incline to the latter view, as ever since the first occasion he can elicit a slight sensation of discomfort, which he locates in the ear, on tightening up the muscles on the right side which close the jaw. The congestion puzzles me. The blow which causes the trouble is a "right hook," the effect of which is to force the mandible to the right.

A Streptococcus Vaccine in Influenza

Dr. H. WARREN CROWE (London, W.1) writes: According to information which I have been able to obtain the present influenza epidemic seems to be due to the *B. influenzae* associated in its major manifestations either with a pneumococcus or a green streptococcus, or both. A woman of middle age went down with an attack of influenza. Her throat was swabbed and a blood culture taken (three tubes of plain broth). Two tubes grew a short-chained streptococcus. The colonies on "chocolate" medium were circular, opaque, and dry. The type, according to my classification, is B 9(1) *e*. The sugars are unusual—namely, saccharose, lactose, raffinose, and salicin +; inulin and mannite −; milk +. A vaccine was prepared and administered forty-eight hours later. The result was excellent, inasmuch as the temperature next morning was normal, and the patient was anxious to get up. Dr. Crosby of Kenton, the practitioner in charge, tried the vaccine on four other cases, and in each case found a normal temperature next morning. The results were apparently quite dramatic. In view of the risk of reaction the doses given in each case were 10,000 organisms. If any medical man would like to advance our experience of influenza remedies by making a trial of this vaccine I should be pleased to supply him with a bottle if he will let me know.

Encephalitis Lethargica

Dr. W. M. CROFTON (London, W.1) wishes again to inform those who, like Dr. Stanley Barnes, have to treat this disease, that an efficient method is the administration of a potent influenza-antigen. He writes: To assure success the antigen must be autogenous—made from the influenza bacilli invariably present in the nasopharynx of these patients. In order to grow them efficiently and precisely the medium must contain 10 per cent. of unheated human blood, and must be at blood heat at the time of insemination. The culture must be kept at blood heat until it reaches the incubator, where it should be grown in an atmosphere saturated with moisture. The safe transference of the culture can be assured by the assistance of a rubber cap and a vacuum flask containing water at the proper temperature. As a rule there is sufficient growth in twenty-four hours to produce an antigen which should be killed with the minimum of heat. The patient may thus be treated with his own antigen within thirty-six hours in the majority of cases. The initial dose of an antigen manufactured by this technique is one million; the progression of dosage and intervals depend on the response of the particular patient. Not only in the lethargic cases is this method of immunization with a potent influenza antigen dramatically successful in over 90 per cent. of patients, but also in those fulminating meningitic cases, where sometimes the shocking headache can only be relieved by an anaesthetic.

A Warning

Flight Lieutenant J. C. NEELY (Hampstead) writes: My hotel was visited by burglars on the week-ends of January 7th and 14th. Unfortunately in a cigarette case of mine which was taken were some visiting cards inscribed with my name and rank. These have been used during the past week in the neighbourhood of Blackheath (to obtain credit), much to the annoyance of my brother, who practises these. Anyone using these cards during the next month or so will probably be the burglar.

Vacancies

Notifications of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 45, 46, 47, 49, 50, and 51 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 48 and 49.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 27.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

55 Influenzal Meningitis

W. NEEDLES (*Journ. Amer. Med. Assoc.*, October 15th, 1932, p. 1349), who records an illustrative case, states that while influenzal meningitis is by no means an uncommon disease, recovery therefrom is decidedly rare, only twenty-five examples having hitherto been recorded. The prognosis is better in adults than in children. The general consensus of opinion is that the causal organism is of the same type as that originally described by Pfeiffer. According to Neal and Rivers this type of meningitis is not at all related to epidemic influenza, as is shown by the fact that during the epidemic of 1918 there was no increase in the number of cases of meningitis. In a large number of cases influenzal meningitis may exist as a primary disease, as is shown by the fact that of seventy-one which came to necropsy twenty-nine failed to show any source of the infection elsewhere in the body. Needles's patient was a man, aged 29, admitted to hospital with symptoms of meningitis. The Pfeiffer bacillus was cultivated from the cloudy cerebro-spinal fluid. Treatment consisted in repeated lumbar punctures, and improvement followed. Recurrence of the meningeal syndrome occurred a month after his discharge, but the turbid cerebro-spinal fluid on this occasion was sterile, and rapid recovery ensued.

56 Trichomonas vaginalis in the Male Urethra

R. AMOIA (*Pathologica*, October 15th, 1932, p. 717), who records an illustrative case, states that only four previous examples have been recorded of *Trichomonas vaginalis* in the male urethra, three of which occurred in adults and one in a child aged 3. The patient was an adult who did not present any urethral discharge, but stated that he had had a smarting sensation in his urethra some months previously, to which he had not paid any special attention. Amoia is doubtful whether *Trichomonas vaginalis*, when transmitted by coitus into the male urethra, has any pathogenic action.

57 The Stair-climbing Test

O. BANG (*Ugeskrift for Laeger*, October 27th, 1932, p. 1031) reports from the Communal Hospital in Copenhagen experiments made with the stair-climbing test in the hope that, since so many patients complain of dyspnoea on exertion, this test might provide objective data helpful in assessing the degree of disablement in certain cases. In the assessment of the degree of disablement the information required from this test was not whether the heart was diseased or not, but whether the respiratory and the circulatory systems proved themselves measurably inadequate to the occasion, be the fault heart disease or some extraneous factor such as adiposity. The patients were required in two minutes to climb stairs with a gradient of one in two, and a total rise of 9.3 metres. The blood pressure, pulse, and respiration rates were noted while the patients were in the resting state at the foot of the stairs, and fresh observations were taken every three to five minutes until uniform records were obtained. Respirations were counted without palpation of the thorax in order that there should be no malingering. For the purpose of control twenty-six healthy young persons also underwent this test. It was anticipated that it would prove a useful supplement to the routine clinical examination in obscure and borderland cases. But the test proved most disappointing. It indicated as "insufficient" several patients whom the clinical examination had put into the category of the only slightly ailing. On the other hand, many patients found to be seriously ailing on clinical examination were found by the stair-climbing test to be "sufficient." It would seem that, in diseases of the circulatory system, it is easier for a patient to pass a short severe test than one which makes a demand on his powers of endurance. At all events, as a result of 151 stair-climbing tests of patients and healthy persons, the author has come to the conclusion that this test (1) is not severe enough to disclose all the clinically certain cases of "insufficiency," (2) does not run parallel with the findings of the clinical examination, and (3) never indicates "insufficiency" when the clinical examination is negative.

58 Bronchial Asthma and Atmospheric Electricity

R. A. BRANDAN (*Arch. Méd.-Chir. de l'Apparel Respir.*, vol. vii, No. 3, 1932, p. 201) reports that atmospheric changes are well tolerated by healthy persons owing to a certain adaptability factor. In cases of chronic disease such as tuberculosis or rheumatism the margin of neuro-humoral variations of adaptation is limited, and such subjects possess only slight defensive powers against atmospheric changes. Bronchial asthma, generally considered as of allergic nature, is characterized by a very unstable neuro-humoral equilibrium. Since sensitiveness to the allergic factor is variable, it is possible that the specificity of the reaction is very relative. Surmising that other extrinsic factors, capable of modifying the sensitiveness of the subject, might exist or be produced in the air, Brandan made a study of aerial ionization. This indicated that in certain asthmatics the commencement of the crisis coincided with, or was preceded by one or two days by, a predominance of the positive ionization of the air. The crises are frequently prolonged after the disappearance of the positive ionization. The mechanism of this action is explained on the basis of there being an indirect action on the allergic factors floating in the air which increases their density in the lower atmospheric strata, or by a direct action in neutralizing the charges of stabilization of the colloids of the serum, thus favouring their flocculation (Widal's colloido-clasic crisis). The action of the atmospheric ionization is only an adjuvant factor, and cannot alone originate asthmatic crises.

Surgery

59 Pancreatic Necrosis

J. D. MILLS and B. B. SPARKS (*Canadian Med. Assoc. Journ.*, October, 1932, p. 381) record a case of pancreatic necrosis, and discuss the aetiology, differential diagnosis, and surgical treatment of this condition. Biliary tract disease appears to be the main causative factor, the irritants from the gall-bladder reaching the pancreas through its ducts, or, less probably, through the lymphatics and blood stream. Activation of the pancreatic enzyme, trypsinogen, follows with a consequent digestion of tissue proteins; the simultaneous activation of steapsin causes fat necrosis. In the authors' case this diagnostic sign was not manifest at the operation, although at the necropsy fat necrosis was detected in the gland; it was only present in the omentum in five or six nodules. There would seem to be concerned in pancreatic necrosis a number of factors which, when operating alone, are incapable of producing the disease. In the recorded case, moreover, the gall-bladder, on section, showed only catarrhal reaction. The chief diagnostic symptom is an abrupt onset of agonizing pain referred to the back, and profound collapse, contrasting thus with perforation of a gastric or duodenal ulcer in which the patient is restless rather than collapsed, and the pain is only referred to the back in the rare instances of leakage into the lesser sac. The blood pressure falls in pancreatic disease, and

is unaltered in perforation, where there is also the characteristic board-like rigidity of the abdominal wall. In acute intestinal obstruction the pain is less abrupt; the vomited matter is projectile, and quickly becomes faecal in character, whereas in acute pancreatitis it consists only of stomach and duodenal contents, its expulsion is not projectile, and it is associated with nausea and retching. In biliary colic the pain is intermittent in type and often referred to the right shoulder; the patient continually twists and turns, seeking a comfortable position. Other possibilities to be excluded are pneumonia, coronary thrombosis, tabes, acute appendicitis, and, in a female patient, the rupture of an ectopic gestation sac. Immediate surgical intervention is indicated, except in the severest form (pancreatic apoplexy), when death inevitably occurs in two or three hours, and in chronic cases when the patient has become too toxic to be able to undergo laparotomy. The prognosis is always poor, however, the average mortality being about 65 per cent. Progressive toxaemia frequently ensues, the blood being flooded with the higher split products of protein metabolism due to the action of the activated trypsinogen on the pancreatic tissues.

60 The Immediate Cause of Death in Cancer

S. WARREN (*Amer. Journ. Med. Sci.*, November, 1932, p. 610) records the findings in 500 cases of carcinoma with a view to providing information about the actual immediate causes of death. Cachexia was found to be the most frequent single cause, although it was exceeded by the various pulmonary disorders. It was associated most often with cancer of the breast, stomach, and large bowel, and was attributable to considerable necrosis of the tumour tissue caused either by ulceration and secondary infection or by interference with the blood supply. Yet in a large number of fatal cancer cases excellent nutrition, and not infrequently obesity, were maintained to the end. The relatively high incidence of pneumonia (14 per cent.), particularly bronchopneumonia, was expected in view of the age and decreased resistance to infection of the patients, but the striking association of carcinoma of the buccal mucosa with pneumonia (36.2 per cent.) and with lung abscess (56.3 per cent.) emphasizes the part played by aspiration in the production of these lesions. Sepsis *per se* proved to be a very infrequent cause of death, amounting to less than 5 per cent., and haemorrhage to only 4 per cent. In one-quarter of the cases of haemorrhage, moreover, the carcinoma was only an indirect cause, the presence of the tumour having produced a high degree of obstructive jaundice, which was the underlying originator of the fatal bleeding. By far the *commonest* cause of death in carcinoma of the cervix was renal insufficiency. Peritonitis, occurring most frequently as a post-operative complication or as the result of post-radiation necrosis and perforation, but occasionally as the result of direct extension of the tumour, accounted for 11.2 per cent. of the fatalities.

61 Hyperparathyroidism

Recent observations and experiments have established the fact that hyperparathyroidism is a distinct clinical entity. J. DE J. PEMBERTON (*Minnesota Med.*, November, 1932, p. 729) reviews the work of earlier authorities, such as Von Recklinghausen and Erdheim, on this subject, which suggested that the changes noted in certain bone diseases were due to a disturbance of calcium metabolism. Later observations showed that the parathyroids are specifically concerned in the metabolism of both calcium and phosphorus, and that in those osseous maladies the parathyroid lesions are primary and the skeletal changes secondary. Knowledge of the physiology of these glands was further advanced by the isolation by Hanson in 1924 and by Collip in 1925 of a potent parathyroid extract. The latter's work is reviewed. Pemberton states that hyperparathyroidism is the antithesis of tetany. It occurs spontaneously as a chronic slowly progressive disease, caused by excessive secretion of hyperplastic or adenomatous parathyroids, and characterized by the following features: high concentration of serum calcium; low concentration of serum phosphorus; abnormally excessive excretion of urinary calcium and phosphorus; pain and tenderness of bone; hypotonia and muscular weakness; radiographical evidence of generalized osseous decalcification with or without deformities, cysts, or tumours; and anaemia and loss of weight. Its diagnosis is possible only by correlating the symptoms and laboratory findings. Operative treatment, three possible errors in which are emphasized, produces marked benefit. Pain is early relieved, a gradual improvement in health ensues, and in many cases the bone conditions are improved, though slowly and dependent on the extent to which the disease has progressed.

Therapeutics

62 Carbolic Applications in Hay Fever

G. F. CHANDLER (*Med. Journ. and Record*, October 19th, 1932, p. 337) has found that the application of pure carbolic acid to the nasal mucous membranes desensitizes them, and prevents irritants from producing hay fever. No scarring resulted, and there was no loss of the sense of smell. The end of a long slightly bent probe is covered by a pledget of cotton carefully wound round it, and saturated with pure carbolic acid; it is then passed in a speculum through one side of the nasal passage into the nasopharynx, and is carefully withdrawn so that the end of the probe passes up as high as possible into the nares and along the side of the septum. Another saturated probe is inserted in the anterior nares only, so as to coat their entire surface, with special attention to the inferior turbinate. The process is repeated in the case of the other nostril. The immediate sensation so caused is said to be quite bearable, and very *little reaction* follows. Next day the patients feel as if they were suffering from acute rhinitis or a mild cold, but on the third day they are quite well, and any hay fever that was previously present disappears. In very severe cases the process has to be repeated a week later if the hay fever returns. Chandler states that in 100 cases so treated there were only three in which three consecutive treatments at weekly intervals were required for cure. Many patients did not have to repeat the treatment in the following year, only one-sixth of the number finding this necessary. The author believes that this carbolic acid application will also prevent the ordinary nasal catarrh and greatly benefit cases of asthma. The carbolic acid should not be allowed to drip down the throat from the posterior nares; if any does so, it can be neutralized with a little alcohol applied with cotton. Chandler wipes the nares with alcohol after concluding the treatment.

63 Iodine in the Pre-operative Stage of Hyperthyroidism

W. L. WINKENWERDER and D. MCEACHERN (*Bull. Johns Hopkins Hosp.*, November, 1932, p. 282) record a study of the responses to iodine in 157 cases of hyperthyroidism. The duration of preliminary rest in bed ranged from one day to several weeks, and Lugol's solution was administered in doses of 1 c.cm. three times daily. Within forty-eight to seventy-two hours after starting iodine the signs of definite improvement were evident; the nervousness, emotional instability, tachycardia, and increased basal metabolism abated, and all the morbid phenomena became less marked, the improvement continuing for a period ranging from eight to eighteen days, and occasionally for longer. The point of maximum improvement occurred on the average in the series at 13.5 days after instituting the iodine therapy. Such a remission of symptoms is usually only temporary, and the authors consequently emphasize the advisability of administering iodine according to a definite plan with the optimum date for the operation in mind from the beginning. They believe that a preliminary stage of general medical care results in a greater ultimate improvement than that obtained from iodine therapy started without it. They enumerate certain varying reactions to iodine: (1) slow and prolonged clinical improvement;

(2) reappearance of morbid signs during continued administration; (3) two consecutive remissions in the same patient with only a short inter-iodine period; (4) the usual pre-operative improvement of limited duration; and (5) exacerbation of the disease concurrent with the treatment. No essential difference as regards reaction was noted between cases of exophthalmic goitre and nodular goitre with hyperthyroidism. The authors commend small rather than large doses of iodine, but agree that it is wiser to err on the overdose side than to give too little of the drug. Potassium or sodium iodide in aqueous solution is a satisfactory alternative to Lugol's solution.

Anaesthetics

64 The Present Status of Avertin

W. BOURNE (*Canadian Med. Assoc. Journ.*, November, 1932, p. 515) discusses the present status of avertin in anaesthesia, and concludes that there seem to be no contraindications to the use of this bromine substitution product of ethyl alcohol provided that its dose is calculated to suit each case. In support of this conclusion the findings of recent workers are summarized and correlated. Avertin is not considered now as an agent for producing complete anaesthesia, but rather as a salutary adjunct to other anaesthetics. Although the respiratory centre is depressed, this is not serious so long as the recognized doses are employed and the drug is administered slowly. Moreover, the exhibition of carbon dioxide and ephedrine will interrupt or considerably shorten avertin anaesthesia, if this becomes necessary, by stimulating the central nervous system, circulation, and respiration. Avertin causes no irritation to the lungs and upper air passages, and does not in its usual degree of concentration in the blood have any deleterious effects on the heart, although it has been shown experimentally that in much higher concentrations it slows the heart, diminishes the peripheral output, and increases the coronary circulation. Bourne has obtained evidence that the mild degree of acidosis caused compares favourably with that in the case of ether, and is probably due to a disturbance of the phosphoric-lactic acid metabolism. The slight rise in the blood sugar which is engendered is less than that provoked by ether. The temperature of the body is lowered. No severe depression of the renal function follows the usual doses, but the risk, if any, in cases of acute nephritis has not yet been satisfactorily determined. Although slight damage was inflicted upon the livers of dogs by the repeated administration of avertin, this was only transient, even in cases of associated chloroform poisoning. The author cites the good reports recorded by various clinics as further evidence of the safety of this anaesthetic.

65 Closed Endobronchial Anaesthesia

J. W. GALE and R. M. WATERS (*Anesthesia and Analgesia*, November–December, 1932, p. 203) describe a technique for maintaining a completely closed endobronchial anaesthesia for surgery within the thoracic cavity. It has been used successfully in several experimental animals for the removal of lobes of the lungs, and in one patient for the excision of a mediastinal tumour. To-and-fro endotracheal airways are introduced into one bronchus, and an inflatable cuff holds them in place and airtight; the lung on the other side is allowed to collapse when the chest wall is opened, and remains in a state of atelectasis during the operation, after which it can be reinflated. Artificial respiration is under perfect control in the intubated lung, and the amount of anaesthetic can be accurately regulated. Intrapulmonary pressure is measured by a side tube to a manometer, and the carbon dioxide is absorbed by a soda lime container. A warm moist atmosphere is kept in contact with the lung, and anoxaemia is eliminated. With the use of this apparatus the surgeon obtains full exposure through a large opening in the chest wall without entailing the serious results caused by the sudden creation of an open pneumothorax. The one lung is allowed to function during the operation under slightly more than the normal atmospheric pressure, and all paroxysmal respiration is obviated; enough oxygen is obtained, the volume of the blood passing to the heart remains constant, and circulatory collapse does not occur. The other lung is collapsed and immobile; ligatures and sutures are easily applied to it, and the necessary surgical steps can be performed deliberately. The authors submit that the closed endobronchial type of anaesthesia is eminently suitable for intrathoracic operations in which it is necessary to open the pleural cavity.

66 Respiratory and Circulatory Changes during Spinal Anaesthesia

M. H. SEEVERS and R. M. WATERS (*Journ. Amer. Med. Assoc.*, September 17th, 1932, p. 961) record clinical and experimental observations in view of their contention that too little importance has been attached to the part played by the respiration in the maintenance of cardiovascular integrity in the course of spinal anaesthesia. They enumerate the train of events during untreated high spinal block as: an initial decrease in the peripheral resistance to the blood flow owing to vasomotor nerve and skeletal muscle paralysis; a decrease in the minute-volume respiration figure accompanying intercostal nerve paralysis; inadequate oxygenation of the blood; diminished minute-volume blood flow; progressive loss of vascular tone over the whole body, and acute cardiac incompetence—both resulting from oxygen deprivation; and failure of the medullary respiratory mechanism as the nutrient flow of blood becomes inadequate, the latter occurring while the heart is still capable of being revived by oxygenation. It is concluded that the rational use of spinal anaesthesia with maximum safety to the patient involves the following requirements. There must be a proper recognition of risks, the deciding factor for its employment being the absolute need for complete muscular relaxation and the ability of the patient to oxygenate his tissues normally. This, the authors consider, precludes routine induction of spinal anaesthesia for all patients with abdominal conditions: individual considerations have to be borne in mind in this as in the case of other anaesthetics. The blocking must be limited also so as to exclude major thoracic involvement, and the method is unsuitable for operations on the head and neck. Cardiovascular collapse can be combated by the judicious use of: oxygen inhalation throughout the actual operation; the prophylactic or therapeutic use of ephedrine to maintain the original blood pressure; the adoption of a modified Trendelenburg position when indicated; and the proper administration of fluid while the blood and heart still maintain their physiological integrity. These measures are not necessary, however, in all cases. In the event of impending circulatory or respiratory failure, artificial respiration with undiluted oxygen should be instituted. Post-operative hyperventilation with carbon dioxide should be induced periodically throughout the first twenty-four hours to expand atelectatic areas of the lungs.

Obstetrics and Gynaecology

67 Treatment of Varicose Veins during Pregnancy

Knowledge of the ecbolic action of quinine has possibly deterred many practitioners from treating varicose veins, a complication of great inconvenience and pain, during pregnancy. R. GREENE (*Journ. Obstet. and Gynaecol. British Empire*, Autumn Number, 1932, p. 601) believes that this danger has been exaggerated, and that postponement of treatment until after confinement is unwise, for although the larger veins often remain distended and easily injectable, the smaller ones contract and elude treatment, reappearing at the next pregnancy. He has treated twenty-five cases of varicose veins in pregnancy by weekly injections of 1 c.cm. of quinine urethane solution containing 0.133 gram of quinine hydrochloride. The total quinine given at a single injection ranged between 0.133 and 0.798 gram, the first injection never exceeding the former amount. Only one case of cinchonism occurred;

this was not associated with any uterine symptoms. In all patients except one, a neurotic who refused further treatment, the injections were continued until all obvious veins had been sclerosed. The period of pregnancy in which treatment was given ranged between the fourth week and term, the majority being between the twentieth and thirtieth weeks. Since some surgeons obtain better results with quinine, the use of this drug has been continued despite the popularization of sodium morrhuate as a sclerosing agent.

68 Sudden Death after Labour

LAFFONT and FULCONIS (*Bull. Soc. d'Obstét. et de Gynécol. de Paris*, October, 1932, p. 548) record two cases in which death suddenly occurred about two hours after delivery. No cause for this could be discovered. The condition of each patient during pregnancy, labour, and delivery was excellent, and obstetrical traumatism in each was slight. The authors suggest that these fatalities were due to spinal anaesthesia (employed in both cases), although extreme care was taken in administering the anaesthetic.

69 "Pregnancy Kidney"

B. HAYES (*Urol. and Cut. Rev.*, November, 1932, p. 725), who records his observations on the kidney in thirty cases of pregnancy, states that it is generally accepted that the condition known as "pregnancy kidney" is a nephrosis produced by some toxin circulating in the blood stream, and that recent workers have shown that pregnancy produces a dilatation of the kidney and ureter on at least one side in 50 per cent. of cases. In his series ten were cases of normal pregnancy, five patients showed symptoms of pernicious vomiting, and fifteen had pre-eclamptic or eclamptic toxaemia. None of the ten normal cases showed any dilatation on the right side. Of the five cases of pernicious vomiting, two were promptly relieved by ureteral catheterization, one revealed bilateral hydronephrosis at the necropsy, and in two the information was incomplete. Hayes has received reports of 153 other patients who were relieved by catheterization. With the exception of one woman who had acute glomerulonephritis, all the cases of eclampsia or pre-eclampsia showed bilateral dilatation.

Pathology

70 The Dieudonne Medium in the Cultivation of Cholera Vibrios

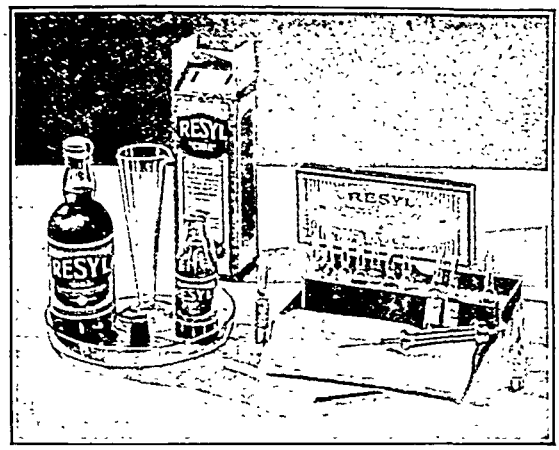
A. VEDDER and W. VAN DAM (*Zentralbl. f. Bakt.*, October 25th, 1932, p. 145) have studied the cause of the variations met with in the use of Dieudonné's medium for the growth of cholera vibrios. This medium, which was devised in 1909, and has been found of great service in the isolation of the cholera vibrio from contaminated material, is prepared by mixing equal parts of defibrinated ox blood and normal caustic potash solution, heating for half an hour in the steamer, and preserving in a flask till ready for use. In order to prepare plates of this medium three parts of the blood-potash solution are mixed with seven parts of nutrient agar and poured into petri dishes. The medium cannot be used immediately, for time must be allowed for it to "ripen"; usually a day or two at room temperature suffices for this purpose. Various explanations have been put forward to explain this process of ripening, and also the changes which this medium undergoes, on standing, in its selective action on the cholera vibrio. Being dissatisfied with these explanations, the authors have investigated the subject afresh, and on the basis of experimental evidence have arrived at the following conclusions. Both the ripening process and the selectivity of the medium are connected with the H-ion concentration, the most favourable being one of *p*H 9 to 9.6. At a lower *p*H other organisms grow, and the medium is no longer selective. At a higher *p*H the cholera vibrio itself will not grow. During the ripening process there is a fall in the *p*H, mainly due to the access of CO_2 from the air, and to a less extent to the loss of ammonia from the medium. It is only when the *p*H falls to within a given range that the medium becomes suitable for the growth of the cholera vibrio.

71 The Harmlessness of Cod-liver Oil in Bulk

J. KLOSTER (*Nord. Med. Tidskrift*, October 1st, 1932, p. 745) has studied the effects on the health of drinking large quantities of cod-liver oil over a long period. He was stationed for two years in the extreme north of Norway, where no corn and only small quantities of potatoes are cultivated. On six or seven days in the week fish is eaten at two or three meals, and it is supplemented by a daily ration of about half a litre of "mölje" (liver and liver fat) for adults in the busiest fishing season. In stormy weather salt and frozen fish are eaten in place of fresh fish, and are supplemented by cod-liver oil in which the salt fish is served. During the six winter months 30 to 40 grams of cod-liver oil are consumed per day and per head. The oil of the cod and allied fish is also used in the poorest households for frying fish. Among 609 patients examined by the author, there were only nine suffering from diseases of the heart, and he could find no grounds, either from his own observations or from those of his colleagues and predecessors in the same district, for associating heavy cod-liver oil consumption with any special morbidity of the cardiovascular or other systems. On the other hand, he was struck by the good nutrition of the infants and young children in his district; this was the more remarkable as the lives they led in small rooms during the long, dark winter were in many respects unhealthy. These observations were in marked contrast to those made by Agduhr, whose experiments on laboratory animals have suggested that large quantities of cod-liver oil inhibit the growth and interfere with the normal gain of weight of the growing animal.

72 Bacillus proteus Septicaemia

Although *B. proteus* is often associated with inflammatory conditions, its occurrence in septicaemia and bacteriaemia is rare and noteworthy. H. V. PARYZEK and E. E. ECKER (*Amer. Journ. Med. Sci.*, October, 1932, p. 533) record, therefore, the isolation of an organism of the *B. proteus* (*mirabilis*) group from a case of post-partum septicaemia of several weeks' duration. Except for the presence of phlebitis, no other major complications occurred, and recovery, once started, was uneventful. The patient, a primipara, was admitted to hospital for the induction of labour, the child being too large for the contracted pelvis. Birth followed podalic version after manual dilatation three hours after the introduction of a Voorhees bag. There had been no symptoms during pregnancy suggestive of genito-urinary disease, but a short time before delivery there was a slight irregular pyrexia, which continued until the fourth day post partum, when three very severe chills ensued; the temperature rose, becoming septic in type, and accompanied by drenching sweats and frequent chills. Albumin, pus, and bacteria were discovered in the urine; cystitis was present; and a blood culture was negative, but *B. coli* was isolated from the urine. Repeated blood cultures were negative, and the patient did not improve; phlebitis ensued in the left leg. A month and a half later, however, *B. proteus* was isolated from the blood, which agglutinated this organism in a titre of 1 in 640. From that time the patient began to improve, although no change was made in the treatment. This last bacteriological finding followed withdrawal of the blood at the beginning of a chill and its culture on brain broth. The pleomorphic Gram-negative bacillus thus obtained gave the usual sugar reactions; it peptonized milk, liquefied gelatin, and bleached litmus. Indol was not produced, and sulphites were not reduced to sulphides on the medium of Wilson and Blair. At one time the specific blood agglutination titre rose to 1 in 1,280; the organism was also agglutinated by an *anti-proteus* serum in a dilution of 1 in 1,280.



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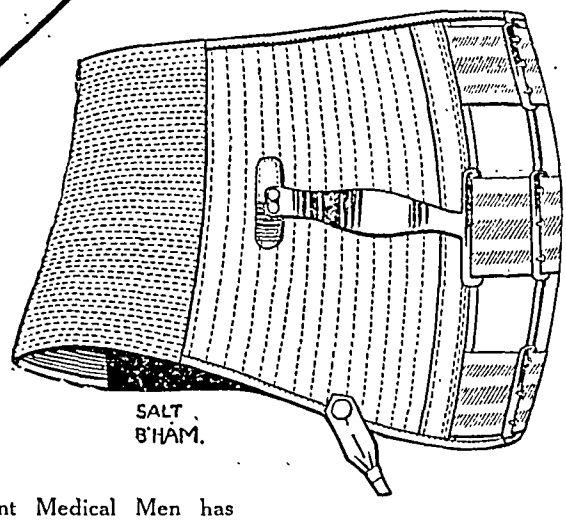

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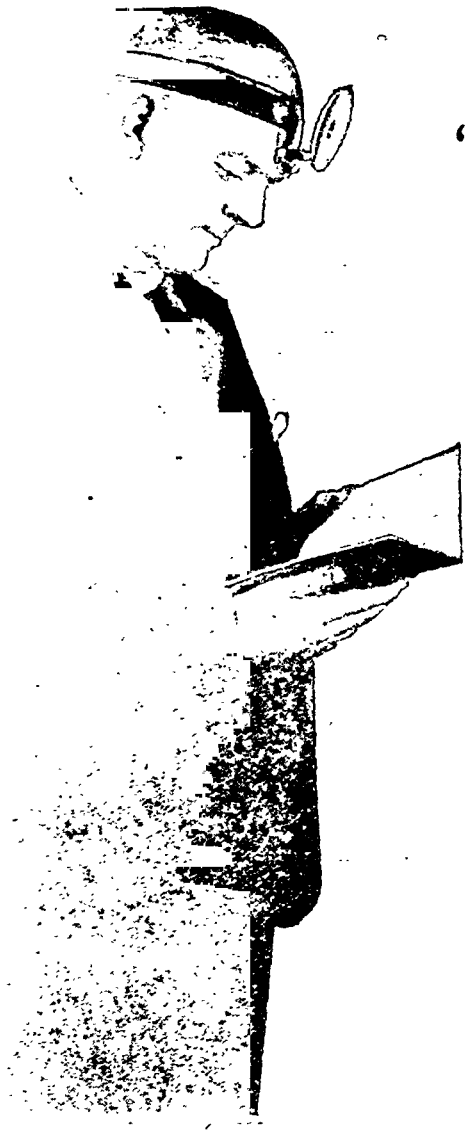

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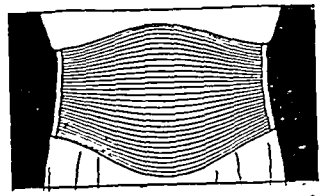

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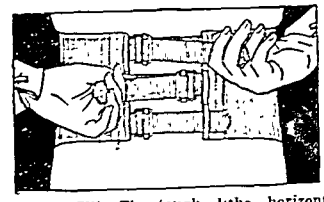

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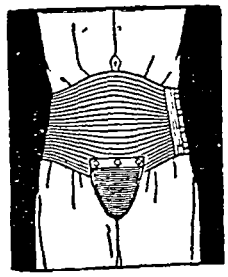

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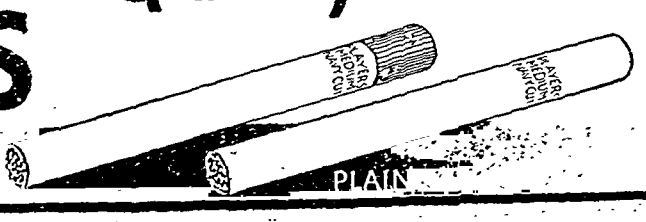

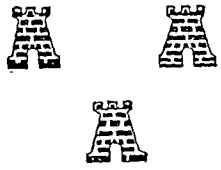

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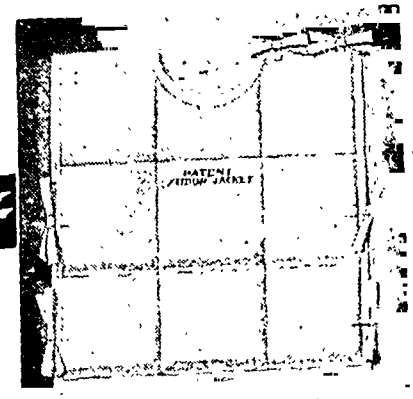

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A PRIVATE HOSPITAL for the care and treatment of persons with mental and nervous disorders.

Voluntary Patients received in the Villas. Large Mansion on outskirts of Bath, with 20 acres of grounds (see *Medical Directory*, page 2306.

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This beautiful mansion in fifty acres of secluded grounds was built specially for the TREATMENT OF MENTAL ILLNESS. Certified patients of both sexes. Thorough clinical, bacteriological, and pathological examinations. Separate bedrooms. Private suites. Indoor and outdoor amusements. Wireless and other concerts. Occupational therapy. Physical drill. Private golf course. Garden and dairy produce from farm on the estate. A few voluntary patients are received in the Medical Supt.'s house. Terms from 4 to 6 guineas a week.

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The treatment is the outcome of many years' experience, and besides removing all craving for drink and drugs, it has a tonic action on the system, and the general health is improved. Alcohol and drugs reduced gradually, without suffering.

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BROOKE HOUSE, CLAPTON, LONDON, E.5.

Telephone: Clissold 1648.

PRIVATE HOSPITAL for Ladies and Gentlemen suffering from Mental and Nervous Disorders. The hospital is situated in nine acres of pleasure grounds. Both voluntary and patients under certificates received. For further particulars apply Dr. GERALD JOHNSTON and Dr. ERNEST ROLLINS, Resident Physicians.

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having large house, garden, car, good staff, would like some PAYING GUESTS. Terms moderate. — Address, No. 371, B.M.A. House, Tavistock Square, W.C.1.

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Ladies suffering from all forms of Mental Illness are received for treatment, on modern lines, as Voluntary, Temporary, or Certified Private Patients at the Hill End Mental Hospital. Convalescent and mild cases can be treated in a delightful country mansion, with extensive grounds, known as "Highfield Hall," situate about a mile away from the Hospital.

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For further particulars apply to the Medical Supt., W. J. T. KIMBER, L.R.C.P., D.P.M., Hill End Mental Hospital, St. Albans, Herts.

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Established 1816. For the TREATMENT of a few LADIES suffering from NERVOUS and MENTAL DISORDERS. Voluntary patients received. For terms apply to the Resident Medical Attendant. Telephone: Tamworth 10d.

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FOR MENTAL DISORDERS,
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FOR THE UPPER AND MIDDLE CLASSES ONLY.

President: THE MOST HON. THE MARQUESS OF EXETER, C.M.G., A.D.C.

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This registered Hospital is situated in 120 acres of park and pleasure grounds. Voluntary patients, who are suffering from incipient mental disorders or who wish to prevent recurrent attacks of mental trouble, temporary patients, and certified patients of both sexes, are received for treatment. Careful clinical, biochemical, bacteriological, and pathological examinations. Private rooms, with special nurses, male or female, in the Hospital or in one of the numerous villas in the grounds of the various branches can be provided.

WANTAGE HOUSE.

This is a Reception Hospital in detached grounds, with a separate entrance, to which patients can be admitted. It is equipped with all the apparatus for the most modern treatment of Mental and Nervous Disorders. It contains special departments for hydrotherapy by various methods, including Turkish and Russian baths, the prolonged immersion bath, Vichy Douche, Scotch Douche, Electrical bath, Plombières treatment, etc. There is an Operating Theatre, a Dental Surgery, an X-ray room, an Ultra-violet Apparatus, and a Department for Diathermy and High Frequency treatment. It also contains Laboratories for biochemical, bacteriological, and pathological research.

MOULTON PARK.

Two miles from the Main Hospital there are several branch establishments and villas situated in a park and farm of 650 acres. Milk, meat, fruit, and vegetables are supplied to the Hospital from the farm, gardens, and orchards of Moulton Park. Occupation therapy is a feature of this branch, and patients are given every facility for occupying themselves in farming, gardening, and fruit-growing.

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The seaside house of St. Andrew's Hospital is beautifully situated in a Park of 330 acres, Llanfairfechan, amidst the finest scenery in North Wales. On the North-West side of the Estate a mile of sea coast forms the boundary. Patients may visit this branch for a short seaside change or for longer periods. The Hospital has its own private bathing house on the seashore. There is trout-fishing in the park.

At all the branches of the Hospital there are cricket grounds, football and hockey grounds, lawn tennis courts (grass and hard courts), croquet grounds, golf courses, and bowling greens. Ladies and gentlemen have their own gardens, and facilities are provided for handicrafts, such as carpentry, etc.

For terms and further particulars apply to the Medical Superintendent (Telephone No. 2356 and 2357 Northampton), who can be seen in London by appointment.

THE COPPICE, NOTTINGHAM.
HOSPITAL FOR MENTAL DISEASES.

This Institution is exclusively for the reception of a limited number of Private Patients of both sexes of the Upper and Middle Classes at moderate rates of payment. It is beautifully situated in its own grounds on an eminence a short distance from Nottingham, and from its singularly healthy position and comfortable arrangements affords every facility for the relief and cure of those mentally afflicted. Voluntary and Temporary Patients received.

Tel. 64117. *For terms, etc., apply to the Medical Superintendent.*

COURT HALL, KENTON, EXETER,
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For the care and treatment of Ladies suffering from Mental Diseases. Limited to eight patients. Telephone: Starcross 59.

CLIFFDEN, TEIGNMOUTH, in connection with Court Hall, for early and convalescent cases. Cliffden is a large well-appointed house, with lovely views of the South Devon Coast. It is beautifully situated in grounds of 24 acres. The gardens are very attractive, and there is a private road to the beach.

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Telephone: Teignmouth 289.

TYKEFORD ABBEY, NEWPORT PAGNELL,
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FUNCTIONAL NERVOUS DISORDERS, MEDICAL & CONVALESCENT CASES.

An Approved Nursing Home for reception of Female Cases under the Mental Treatment Act.

The Home is a Mansion of Historical interest, standing in 9 acres of garden and grounds, and is situated 14 miles from Northampton, and 12 miles from Bedford on the main London to Northampton Road, fifty miles from London. Both sexes are accommodated. Psycho-therapeutic Treatment is used extensively in suitable cases. Radiant Heat, X-Ray, and Ultra-violet Light. Diathermy and Foam Baths. Billiards, tennis, etc. Fees from five gns. per week.

Apply, Dr. D. E. M. DOUGLAS-MORRIS. Telephone: Newport Pagnell 121.

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NEWTON-LE-WILLOWS, LANCASHIRE.

Phone: 11 Ashton-in-Makerfield.

For the reception and treatment of PRIVATE PATIENTS of both sexes of the UPPER AND MIDDLE CLASSES suffering from mental and nervous diseases, either voluntarily or under Certificate. Patients are classified in separate buildings according to their mental condition.

Situated in park and grounds of 400 acres. Self-supported by its own farm and gardens, in which patients are encouraged to occupy themselves. Every facility for indoor and outdoor recreation. For terms, prospectus, etc., apply MEDICAL SUPERINTENDENT.

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A Private Mental Hospital for the Treatment and Care of Mental and Nervous Disorders in both Sexes.

Now removed to

CHISWICK HOUSE, PINNER, MIDDLESEX

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A modern country house, 12 miles from Marble Arch, in beautiful secluded grounds. Fees from 10 guineas per week, inclusive. Cases under certificate and Voluntary Patients received for treatment. Special provision for "Temporary" patients under the new Mental Treatment Act.

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A REGISTERED HOSPITAL for the CARE and TREATMENT of LADIES and GENTLEMEN suffering from NERVOUS and MENTAL DISORDERS. Within two miles of the G.W. Railway and L.M. & S. Railway Stations at Gloucester, the Hospital is easily accessible by rail from London and all parts of the United Kingdom. It is beautifully situated at the foot of the Cotswold Hills, and stands in its own grounds of over 280 acres. Voluntary Boarders of both sexes are also received for treatment.

Special accommodation for Lady Voluntary Boarders is also provided at the MANOR HOUSE, which has its own private grounds and is entirely separate from the main Hospital.

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[illegible] M.D., Medical Supt.
[illegible], 7 Barnwood.

THE LAWN, LINCOLN.

This registered Hospital, situated in large grounds near the Cathedral, receives VOLUNTARY and PRIVATE PATIENTS of both sexes for treatment of Mental and Nervous Disorders, including Post-Encephalitic conditions in adults. Special facilities for Psychotherapy in co-operative cases.

All particulars may be obtained from the Resident Medical Superintendent.

Dr. MARY R. BARKAS, M.D., D.P.M.

STRETTON HOUSE,
Church Stretton, Shropshire.

A PRIVATE HOME for the treatment of Gentlemen suffering from Mental or Nervous Illness, including the allied disorders of Alcoholism and the Drug Habit. All types of early Mental and Nervous cases are received without certificates as Voluntary Patients under the provisions of the Mental Treatment Act, 1930. Bracing Hill country. See *Medical Directory*, p. 2314.—Apply to Medical Superintendent. 'Phone: 10 P.O. Church Stretton.

FENSTANTON,
CHRISTCHURCH ROAD,
STREATHAM HILL, S.W.2.

A Private Home for the Care and Treatment of a limited number of Ladies with Mental and Nervous Disorders. Separate accommodation for Voluntary Patients. Large Mansion with 12 acres of ground. (See *Medical Directory*, p. 2294.) Apply, J. H. EARLS, M.D., Resident Physician. Telephone: Streatham 8430.

CLARENCE LODGE,
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Situated in 3½ acres of secluded gardens.

HOME FOR TWELVE MENTAL PATIENTS (LADIES). Well-appointed private house. Home comforts and Trained Nursing Staff. Eminent Mental Specialist Visiting Physician.

Station: Clapham Common Tube. *Telephone*: Brixton 0494. Apply, Miss THWAITES.

SPRINGFIELD HOUSE,
Near BEDFORD. (Phone 3417.)

For Mental Disorders with or without Certificates.

Resident Physician: CEDRIC W. BOWER.

Ordinary Terms: Five Guineas per week.
(Including Separate Bedrooms where suitable.)

Interviews in London by appointment.

BETHLEM ROYAL HOSPITAL, for Nervous and Mental Disorders,

Monks Orchard, Monks Orchard Road, Eden Park, Beckenham, Kent.

Reg. Tel. Address: Bethlem, Beckenham. *Telephone*: Springpark 1180-1181
Station: Eden Park (Southern Railway).

President: LORD WAKEFIELD OF HYTHE, C.B.E., LL.D.
Treasurer: SIR LIONEL FAUDEL-PHILLIPS, Bart.
Physician-Supt.: J. G. PORTER-PHILLIPS, M.D., F.R.C.P.

This Registered Hospital is now situated at Monks Orchard, in some 250 acres of park, pleasure, and farm grounds. Applications can be considered on behalf of patients of the educated classes in a presumably curable condition.

With a view to early treatment voluntary or uncertified patients are admitted.

Patients who can contribute 5 guineas weekly towards the cost of treatment and maintenance may be received as vacancies arise. The Committee will also consider applications for admission at lower rates, and in certain cases will be prepared to admit patients free of charge.

Every facility for specialized investigation and treatment is provided in the Lord Wakefield Science and Treatment Unit. In this unit is found the X-ray and Dental Departments and the Bio-Chemical, Pathological, and Psychological Laboratories.

Furthermore, provision is made for Electro-Therapy and Hydro-Therapy to be carried out in all their forms, and Occupational Therapy under competent instruction is encouraged.

In addition to the Resident Medical Staff, Consultants in special branches of Medicine and Surgery are available whenever required.

The comfort of sensitive patients is greatly enhanced by the fact that the majority are given single bedrooms.

For forms and further particulars apply to the Physician-Superintendent at the Hospital

NORTHUMBERLAND HOUSE,

GREEN LANES, FINSBURY PARK, N.4.

Telegrams: "SUBSIDIARY, LONDON." *Telephone*: NORTH 0888.

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses. Conveniently situated four miles from Charing Cross. Easy access from all parts. Six acres of ground highly situated, facing Finsbury Park. Private Suites. Voluntary Patients and Temporary Patients received without certification.

Convalescent Home, **Kearsney Court, Dover.** For further particulars, apply to the **Medical Superintendent.**

CAMBERWELL HOUSE, 33, Peckham Road, London, S.E.5.

Telegrams: "PSYCHOLIA, LONDON." FOR THE TREATMENT OF MENTAL DISORDERS. *Telephone*: RODNEY 4731—4732.

Also completely detached Villas for mild cases, with private suites if desired. Voluntary Patients received. Twenty acres of grounds. Hard and Grass Tennis Courts, Putting Greens, Bowls, Croquet, Squash Rackets, and all indoor amusements, including Wireless and other Concerts. Occupational Therapy, Callisthenics, and Dancing Classes. X-ray and Actino-therapy. Prolonged Immersion Baths, Operating Theatre, Pathological Laboratory, Dental Surgery, and Ophthalmic Dept. Chapel. Senior Physician: Dr. HUBERT JAMES NORMAN, assisted by three Medical Officers, also resident and visiting Consultants.

An illustrated Prospectus, giving fees which are strictly moderate, may be obtained upon application to the Secretary.

The Convalescent Branch is HOVE VILLA, BRIGHTON, and is 200 feet above sea-level.

CHEADLE ROYAL MENTAL HOSPITAL,

CHEADLE, CHESHIRE.

This REGISTERED HOSPITAL, *with a SEASIDE BRANCH* at Colwyn Bay, N. Wales, is for the treatment and care of those of the Upper and Middle Classes suffering from MENTAL and NERVOUS DISEASES.

The Hospital is governed by a COMMITTEE, appointed by the TRUSTEES of the Manchester Royal Infirmary.

In addition to the Main Building there are separate villas. Extensive grounds. Hard and grass tennis courts, cricket and croquet grounds, and a court for badminton. There are also wireless installations. Golf may be had within easy distance. Occupational Therapy.

VOLUNTARY, TEMPORARY, AND CERTIFIED PATIENTS received.

The Hospital is nine miles from Manchester, 50 minutes by rail from Liverpool, and 3½ hours from London.

For terms and further particulars apply to the Medical Superintendent, J. A. C. ROY, M.B., who may be seen in Manchester by APPOINTMENT.

Telephone: GATLEY 2231 (3 lines).

PECKHAM HOUSE, 112, Peckham Road, London, S.E.15.

Telegrams: "Alleviated, London." Telephone: Rodney 4741-4742.

The above House, which was established in 1826, is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders. Certified voluntary and temporary patients are received. Separate houses for treatment and accommodation of special cases adjoin the Institution. There is a seaside branch, Kearsney Court, near Dover, to which patients may be sent for treatment or on holiday. Motor and carriage exercise is provided as required. Patients can avail themselves of a course of physical drill. Tennis Courts. Entertainments, dances, and indoor amusements held throughout the year. Terms from £3 3s. per week.

Illustrated prospectus and further particulars can be obtained from the MEDICAL SUPERINTENDENT.

THE OLD MANOR SALISBURY

A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS.

Extensive grounds. Detached Villas. Chapel. Garden and dairy produce from own farm. Terms very moderate.

CONVALESCENT HOME at BOURNEMOUTH. Detached Villas standing in 12 acres of ornamental grounds, with tennis courts, etc., which Voluntary, Temporary or Certified Patients may visit, by arrangement, for long or short periods.

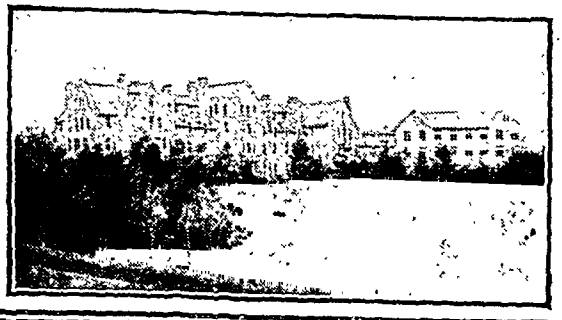
Illustrated Brochure on application to the Medical Superintendent, The Old Manor, Salisbury. Telephone 51.

OXHEY GROVE, HATCH END, MIDDLESEX.

A NURSING HOME for the treatment of EARLY MENTAL CONDITIONS in BOTH SEXES, twelve miles from Marble Arch. Resident Medical Officer, visiting Pathologist, Occupational and Psychotherapeutic treatment. Fees 5 to 12 guineas.

Full particulars from the MEDICAL SUPERINTENDENT. Telephone: HATCH END 368.

TOR-NA-DEE SANATORIUM
MURTLE DEESIDE ABERDEENSHIRE



Medical Director: David Lawson, M.D., F.R.S.E.

FULLY EQUIPPED WITH EVERY MODERN APPLIANCE FOR THE DIAGNOSIS AND TREATMENT OF ALL FORMS OF TUBERCULOSIS & ALLIED DISEASES

Physician Superintendent. J. M. JOHNSTON, M.B., D.P.H., etc.

Full particulars and Prospectus on application to the Secretary.

Inclusive Terms: SEVEN GUINEAS A WEEK.

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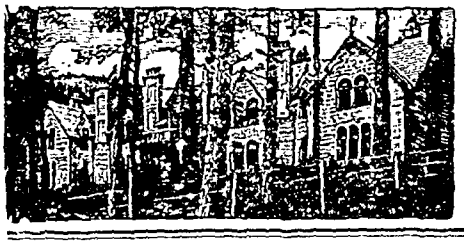
Established 1900 for the treatment of Tuberculosis. Miles of carefully graduated walks through pine-clad hills, with sea and mountain views. Modern treatment, including ARTIFICIAL PNEUMOTHORAX, SANOCRYSIN, etc. *X*-ray plant, electric light, central heating, wireless. Special milk supply from tuberculin-tested herd. Full day and night nursing staff. On L.M.S. Main Line to Holyhead, 4½ hours from London. Resident Physicians: DENNISON PICKERING, M.D.(Cantab), J. A. HENNESEY, M.B., Ch.B.; Matron: Miss S. A. EDDY, S.R.N., Late Sister-in-Charge, Royal Hospital Annexe, Sheffield.

For particulars apply to the SECRETARY, Pendyffryn Hall, Penmaenmawr, N. Wales. ('Phone, 20.)

VALE OF CLWYD SANATORIUM

This Sanatorium is established for the treatment of TUBERCULOSIS of the LUNGS and the PLEURAL CAVITIES. It is situated in the midst of a large area of park-land at a height of 450 feet above sea-level on the south-west slopes of mountains rising to over 1,800 feet, which protect it from north and east winds and provide many miles of graduated walks with magnificent views. Average rainfall 29.57 per annum. Full day and night nursing staffs. X-ray plant. Every facility for Artificial Pneumothorax and for operations on the chest. Electric lighting. Central heating. Home farm. Clean milk from T.T. Herd. For particulars apply to Medical Superintendent, H. MORRISTON DAVIES, M.D., M.Ch.Cantab., F.R.C.S., Llanbedr Hall, Ruthin, N. Wales.



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Situated in the upper Speyside district of Inverness-shire. One of the highest inhabited districts in Britain—"The Switzerland of the British Isles." Bracing and dry mountain climate. Well sheltered [illegible] specially built for the Open-air Treatment of Tuberculosis. Opened in 1901. [illegible] sea-level. Electric light throughout buildings and in rest shelters. equipped X-ray Plant. All forms of treatment available, including and Ultra-Violet Rays for surgical cases of Tuberculosis.

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Consulting Laryngologist: SIDNEY BERNSTEIN, M.R.C.S.Eng., L.R.C.P.Lond. (Attends Regularly.)

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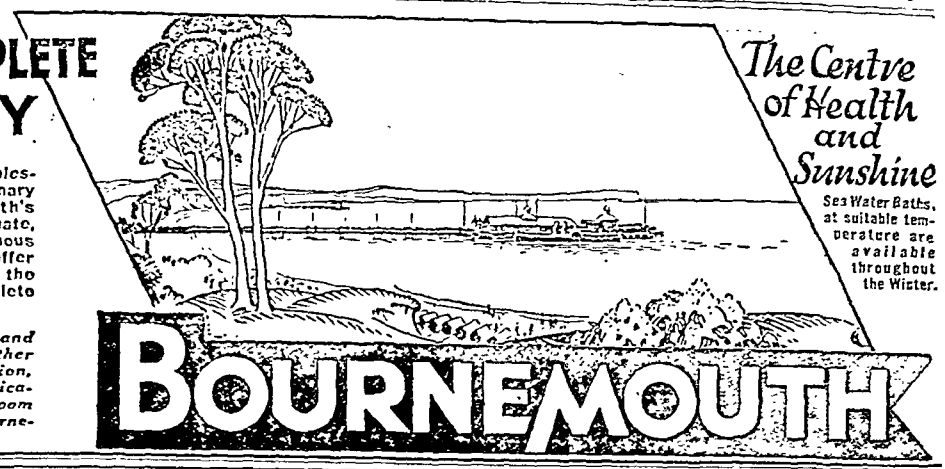

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A Course of Instruction for the June Examination will begin on Wednesday, February 1st, 1933, in the following subjects:
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The classes are conducted by the Professors and Demonstrators in the respective subjects.
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A Course in Clinical Medicine, Pathology, Morbid Histology, and Biochemistry suitable for M.D. and M.R.C.P. examinations will be given for seven weeks commencing on February 14th, 1933.
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COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on January 2nd and October 2nd, 1933, and for the Diploma in Tropical Hygiene on January 5th and April 20th, 1933. (Candidates for the D.T.H. must possess the D.T.M. of this University.)
For particulars, apply to the Hon. Dean, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool.

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For Prospectuses and Synopses of Lectures, etc., apply to the SECRETARY, LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE, Keppel Street (Gower Street), London, W.C.1.

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A COURSE OF INSTRUCTION for the above Examination will begin on Monday, Feb. 6th.
The Fee for the Course is 15 guineas.
Further particulars may be obtained from Professor WILLIAM WRIGHT, M.B., D.Sc., F.R.C.S., Dean, Mile End, E.1.

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2. At [illegible] consisting of In-patient Department of this Hospital at Charing Cross Hospital, daily practical instruction and lectures at the Royal Dental Hospital from March 20th to 31st next. Fee for course is ten guineas.

The classes will only be held if there are sufficient applications and not more than six post-graduates can be accommodated in any one course. For further partics. apply to the Dean.

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CITY OF LIVERPOOL.

RESIDENT ASSISTANT MEDICAL OFFICER (Male).

Applications are invited for the above appointment at the ALDER HEY CHILDREN'S HOSPITAL (956 beds), Liverpool, for a period of one year at a salary of £200 per annum (subject to a temporary deduction as authorised by the Council), together with the usual residential allowances. *Some orthopaedic experience is essential.* Canvassing will be *deemed* a disqualification.

Applications to be made upon *forms obtainable* from the Medical Officer of Health, Municipal Annexe, to be endorsed "Resident Assistant Medical Officer," and returned to the undersigned so as to be received not later than Friday, February 3rd.

Municipal Buildings, Liverpool. WALTER MOON, *Town Clerk.*
January 23rd, 1933.

CITY OF LIVERPOOL.

RESIDENT ASSISTANT MEDICAL OFFICER (Female).

Applications are invited for the above appointment at the ALDER HEY CHILDREN'S HOSPITAL (956 beds), Liverpool, for a period of one year at a salary of £200 per annum (subject to a temporary deduction as authorised by the Council), together with the usual residential allowances. Canvassing will be deemed a disqualification.

Applications to be made upon forms obtainable from the Medical Officer of Health, Municipal Annexe, to be endorsed "Resident Assistant Medical Officer," and returned to the undersigned so as to be received not later than Friday, February 3rd.

Municipal Buildings, Liverpool. WALTER MOON, *Town Clerk.*
January 23rd, 1933.

UNIVERSITY OF GLASGOW.

THE HARRY STEWART HUTCHISON PRIZE.

The Harry Stewart Hutchison Prize, of the value of about £50, for the best writing or writings embodying Original Research Work in a branch of Medical Science relating to Children, will be awarded in 1935. Medical Graduates (of not more than ten years' standing from their first graduation in Medicine) of all British, Home and Colonial Universities, may be competitors. Compositions must be submitted to the Clerk of Senate, University of Glasgow, not later than March 31st, 1934. Each must be distinguished by two mottoes, and accompanied by a sealed letter bearing upon the outside the same mottoes, and containing a declaration subscribed by the Author that the composition is entirely his own.

UNIVERSITY OF LONDON.

A Course of Six Lectures on "*Physiology of the Nervous System in Man*," will be given by Professor SAMSON WRIGHT, M.D., M.R.C.P. (John Astor Professor of Physiology in the University), at the MIDDLESEX HOSPITAL MEDICAL SCHOOL (Mortimer Street, W.1) on TUESDAYS and THURSDAYS, FEBRUARY 7th, 9th, 14th, 16th, 21st, and 23rd, at 5 p.m.

Admission free, without ticket.

S. J. WORSLEY,
Academic Registrar.

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Applications are invited for the above appointment at the SMITHDOWN ROAD HOSPITAL (1,200 beds), Liverpool, for a period of one year at a salary of £200 per annum (subject to a temporary deduction as authorised by the Council), together with the usual residential allowances. Canvassing will be deemed a disqualification.

Applications to be made upon forms obtainable from the Medical Officer of Health, Municipal Annexe, to be endorsed "Resident Assistant Medical Officer," and returned to the undersigned so as to be received not later than Saturday, February 4th.

Municipal Buildings, Liverpool. WALTER MOON, *Town Clerk.*
January 23rd, 1933.

CITY OF BIRMINGHAM.

SELLY OAK HOSPITAL. (500 Beds.)

CASUALTY OFFICER (Male).

Applications are invited from fully qualified Medical Practitioners for whole-time appointment as Casualty Officer (male) at the Selly Oak Hospital Birmingham. The appointment will be for a period of six months, in the first instance, but may be extended at the end of that time for a further period of not exceeding six months.

Salary at the rate of £200 per annum, and full residential emoluments. The salary and emoluments will be subject to any "voluntary abatement" in force from time to time. The officer appointed will be required to refund to the Council all fees, allowances, and emoluments (other than the foregoing) received by him.

Further particulars may be obtained from the Medical Superintendent at Selly Oak Hospital, to whom applications, stating age, experience, and qualifications, with copies of recent testimonials, should be forwarded not later than Wednesday, February 8th

F. H. C. WILTSHIRE, *Town Clerk.*
The Council House, Birmingham.
January, 1933.

CITY OF BIRMINGHAM.

MATERNITY AND CHILD WELFARE DEPT.

CANWELL HALL BABIES' HOSPITAL. (84 Beds.)

A RESIDENT MEDICAL OFFICER is required for a period of six months; duties to commence on March 29th.

Applications are invited from ladies with previous experience as *House Physician, preferably* in a Children's Hospital. Salary £250 per annum, with board and laundry.

The salary and emoluments will be subject to the "voluntary abatement" approved by the Council in respect of its officers. The officer appointed will be required to refund to the Council all fees, allowances, and emoluments (other than the foregoing) received by her.

Applications, giving all particulars of qualifications, age, and experience, and accompanied by copies of three recent testimonials, should be sent to the Medical Officer of Health, The Council House, Birmingham, on or before February 8th.

SUDAN MEDICAL SERVICE.

TWO MEDICAL OFFICERS are required for the Sudan Medical Service to proceed to the Sudan in September. The selected candidates will be required to take the Course at the London School of Tropical Medicine from April 3rd, 1933 to June 22nd, 1933. Fees and a subsistence allowance provided by the Sudan Government.

Candidates must be British born, single, under 30 years of age, and have held a resident appointment in a large general Hospital.

Pay in the Sudan commences at £E.720 a year, subject to an abatement of 7½ per cent., rising to £E.1,200 after thirteen years' service. On confirmation of his appointment, the selected candidate will be eligible for pensionable service.

Applications (in writing only), with copies of recent testimonials, should be made to Dr. HODSON, 69, Harley St., W.1.

PRISON MEDICAL SERVICE.

Applications are invited for the post of MALE MEDICAL OFFICER, Class II., in the above Service. Commencing salary £446 14s. per annum, proceeding by annual increments to £726, with quarters, or an allowance in lieu. These posts are pensionable, and there are prospects of promotion to higher rank. Applicants are informed that the conditions of service are liable to review.

Candidates must be fully qualified and registered. Preference will be given to those who have held House appointments, have had experience in Lunacy and Psychological methods, and are under the age of 30. Forms of application can be obtained from the Secretary, Staff Branch, Prison Commission, Home Office, London, S.W.1.

COUNTY BOROUGH OF HALIFAX.

ST. LUKE'S HOSPITAL.

CONSULTING PHYSICIAN.

The Health Committee of the Halifax Corporation invite applications for the position of CONSULTING PHYSICIAN at St. Luke's Hospital, Halifax. Candidates must possess an M.D. and/or M.R.C.P. and must not be engaged in general practice.

Forms of application and conditions of appointment may be obtained from the Medical Officer of Health, Powell Street, Halifax.

Complete applications endorsed "Consulting Physician," together with copies of three recent testimonials, must be forwarded to the undersigned not later than the first post on February 6th.

Canvassing, *either directly or indirectly*, will be a disqualification.

PERCY SAUNDERS,
Town Clerk's Office, Town Clerk.
Town Hall, Halifax.
January 16th, 1933.

COUNTY OF LANARK AND CITY OF GLASGOW.

LIGHTBURN JOINT HOSPITAL, SHETTLESTON, near GLASGOW.

Applications are invited from registered Medical Practitioners, with previous Infectious Diseases Hospital experience, for the post of RESIDENT PHYSICIAN for the above Infectious Diseases Hospital. The salary will be at the rate of £375 per annum (less 10 per cent. "cut"), with board and lodging. The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922.

Applications, stating age, experience, etc., with copies of three recent testimonials, to be lodged with the Subscribers not later than 10 a.m. on February 2nd.

J. MCGHIE.
ROBERT BRYCE WALKER,
Clerks to Joint Committee.

Lanarkshire House,
191, Ingram Street,
Glasgow, C.1. January 20th, 1933.

COUNTY MENTAL HOSPITAL, PRESTWICH, MANCHESTER.

ASSISTANT MEDICAL OFFICER required. Commencing salary £500 per annum, rising to £600 by yearly increments of £25, plus £50 per annum on obtaining the D.P.M., less charges for board, furnished apartments, attendance, and laundry, valued at £150 per annum if received in full. Further increases according to promotion. The gross salary is subject to a temporary abatement in accordance with the scale adopted by the Lancashire Mental Hospitals Board.

Candidates must be unmarried, and registered under the Medical Act. The appointment is subject to 3 per cent. deduction from salary under the Asylums Officers Superannuation Act, 1909. Apply, stating age and full particulars, to the Medical Superintendent.

British Medical Journal,
BRITISH MEDICAL ASSOCIATION HOUSE,
TAVISTOCK SQ., LONDON, W.C.1.
T/A: ARTICULATE, WESTCENT, LONDON.
Tel.: MUSEUM 9861 (4 lines).

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ASSISTANCIES.

WANTED IMMEDIATELY, FULLY QUALIfied male ASSISTANT, single, British, University Graduate preferred, for semi-rural mixed practice (panel 1,300) in the West Riding of Yorks. Must be keen, energetic, abstainer, and able to drive a car. Salary (indoor at first) £300 per annum, later on, outdoor, £400, and half midwifery fees. Prospects for suitable man. Healthy district.—Address, No. 906, B.M.A. House, Tavistock Sq., W.C.1.

WANTED. — INDOOR MALE ASSISTANT, for private and panel Practice in London, near West End. No branch surgery. Usual bond. Salary £300 per annum. State age, experience, references. — Address, No. 914, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — ASSISTANT, INDOOR, MALE, for Practice near Cardiff. Scotsman preferred. Salary £300. Usual bond. State age and full particulars.—Address, No. 916, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — ASSISTANTSHIP, OUTDOOR, with or without view or succession. Excellent experience G.P. Used to sole charge. Single. Own car. Free now. — Address, No. 920, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — ASSISTANTSHIP, PREFERably in or near London, by Woman. M.B., B.Ch. Five years' experience in General Practice. Free now in London.—Address, No 910, B.M.A. House, Tavistock Square, W.C.1.

WANTED IMMEDIATELY. — INDOOR AND Outdoor ASSISTANTS for Town and Country Practices, with and without view; good salaries. State full particulars.—BRITISH MEDICAL BUREAU, 33, Cross Street, Manchester.

WANTED.—INDOOR ASSISTANT (WOMAN) for General Practice in City, immediately. Salary £200 per annum. State age, experience, and references.—Address, No. 901, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — INDOOR ASSISTANT, 3—4 months. Must have had previous general practice experience. Able to drive car. Salary £300 per year. — Address, No. 903, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — INDOOR ASSISTANT, EAST London. Must be British. Abstainer. —Address, No. 912, B.M.A. House, Tavistock Square, W.C.1.

ASSISTANTSHIP WANTED BY MEDICAL Woman, indoor or out. Experienced panel and private. Free beginning of February.—Address, No. 907, B.M.A. House, Tavistock Square, W.C.1.

WELL-QUALIFIED G.P., AGED 45, VERY experienced all types of practice, holding afternoon appointments, seeks PART-TIME ASSISTANTSHIP (*morning and evening surgeries*) or appointments. Within 20—30 minutes 'bus Victoria or Charing Cross. Probable permanency preferred, but not essential. —No. 908, B.M.A. House, Tavistock Sq., W.C.1.

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PARTNERSHIP WANTED BY M.D.LOND., aged 27, in good town, Southern England or E. Anglia. Hospital appointment desired. 3½ years Medical and Surgical appointments, mostly teaching Hospital. Capital available. —No. 731, B.M.A. House, Tavistock Sq., W.C.1.

MEDICAL POSTS, DISPENSERS, etc.

A LADY DISPENSER - BOOKKEEPER supplied immediately on request, qualified and with practical experience in private practice and dispensary work, also trained in Bacteriological Laboratories of the LONDON COLLEGE OF PHARMACY FOR WOMEN. Preparation for Examinations. — Write, wire, or 'phone (Bayswater 0969), Secretary, 7, Westbourne Park Road, W.2.

DOCTORS REQUIRING QUALIFIED Dispensers, Nurse-Dispensers, Secretary-Dispensers or Chauffeuse-Dispensers, are invited to write, wire, or 'phone Temple Bar 5858, THE DISPENSERS' BUREAU, 3, Lindsay House, 171, Shaftesbury Avenue, London, W.C.2.

DOCTOR RECOMMENDS CHILDREN'S NURSE (Princess Louise), 27 years. Knowledge of "Truby King" methods; 15 mths. with advertiser; disengaged Feb. Willing to travel; at present in Glasg. Avail. London soon for interv. —No. 919, B.M.A. House, Tavistock Sq., W.C.1.

LADY DISPENSER. — APOTHECARY HALL *qualification*; knowledge of typewriting, bookkeeping, business correspondence, etc., DESIRES POST with Doctor (London preferred). —Address, No. 827, B.M.A. House, Tavistock Square, W.C.1.

LADY, 26, SEEKS POST, QUICK, ACCURATE, DISPENSER; thorough experience all branches; panel, private, parish. Bookkeeping, typing, drive car, knowledge nursing. Excellent references.—VICKERY, 31, *Horne Rd.*, Ilfracombe.

MEDICAL OFFICER, AGED 32, AT PRESENT in Malaya in charge of group of rubber estates and hospital (150 beds), Public School, London qualifications, considerable tropical and general medical experience, seeks similar tropical or other responsible ENGAGEMENT. Energetic and good testimonials. Could be free about April.—Address, No. 918, B.M.A. House, Tavistock Square, W.C.1.

MEDICAL MAN REQUIRED AS RESIDENT DOCTOR for hotel on IBIZA ISLAND, BALEARICS, SPAIN, prepared to invest £1,500 for which very material advantages are granted. Suitable for elderly man contemplating retiring. —For further particulars, Address, No. 921, B.M.A. House, Tavistock Square, W.C.1.

NURSE-SECRETARY, 36, SEEKS POST, London area. Trained maternity, C.M.B., 3½ years' experience Hospital clinics. Pitman's secretarial shorthand, book-keeping, typewriting. R.S.A. certificate. — Address, No. 902, B.M.A. House, Tavistock Square, W.C.1.

PART-TIME LONDON Doctor, pr sired by young Lady, ... typing, knowledge French, some German. — "M. L.," 82, Harley House, W.1.

THE ROYAL ARMY MEDICAL CORPS ASSOCIATION, 85, Eccleston Square, S.W.1 (Telephone: Victoria 2722), supplies qualified *Dispensers, Bookkeepers, Laboratory Assistants, Sanitary Assistants, Male Nurses, Mental and Special Treatment Orderlies, Dental Clerk Orderlies, Porters, Caretakers*, etc., without charge to prospective employers.

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PRACTICES.

WANTED IN WILLESDEN, HARLESDEN, BRONDESBURY, or WEMBLEY, small PRACTICE, £500/£1,000 p.a. *House or surgery on rental.* Advertiser already in practice, but desires to extend. *Replies in confidence.*—Address, No. 904, B.M.A. House, Tavistock Square, W.C.1.

WANTED, APRIL, PRACTICE OR 1/2 SHARE PARTNERSHIP, *income* £1,800 to £2,400, by experienced Scotch Graduate. Substantial panel and good house essential. Capital available. — Address, No. 915, B.M.A. House, Tavistock Square, W.C.1.

WANTED URGENTLY, COUNTRY PRACTICE. Income £1,200 to £1,500 by exp. G.P., married, age 35. Capital available. Replies strictly confidential.—Address, No. 905, B.M.A. House, Tavistock Square, W.C.1.

WANTED IN MIDLANDS OR S. ENGLAND, mixed PRACTICE. Income £1,400—£1,800, panel 1,500. Small house sufficient. Cash. — Address, No. 913, B.M.A. House, Tavistock Square, W.C.1.

DEVON. — VERY OLD-ESTABLISHED UNopposed country PRACTICE, returning £900 p.a. *Good house, with tennis court*, on lease £60 p.a. Premium £1,450. — THE WESTERN MEDICAL AGENCY, 22, Clare Street, Bristol, 1.

EAST LANCASHIRE. — LARGE INDUSTRIAL PRACTICE FOR SALE. Gross receipts £2,650. Panel 2,350.—Apply, HY. WHITTAKER, Solicitor, 44, Ainsworth St., Blackburn.

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LANCS TOWN. — OLD-ESTABLISHED; GOOD house, garage, £39. Average receipts £1,700, panel 1,600, excellent scope. Price 1½ years' purchase, part deferred.—MANCHESTER MEDICAL & SCHOLASTIC ASSOC., 6, Brown St.

LADY DOCTOR WISHES TO SELL NUCLEUS near Gt. Portland St. Station. Receipts about £250 p.a., panel and private. Price £200 for quick sale. Suit woman Doctor doing other part-time work. Good scope.—Address, No. 909, B.M.A. House, Tavistock Sq., W.C.1.

MANCHESTER SUBURB. — GOOD OLDestablished; nice house, gardens, garage. Average receipts £2,000. Panel over 1,500. Price, house and garage, £6,500 or offer, good part deferred.—MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION, 6, Brown St.

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NORTH-WEST COAST. — FAVOURITE SEAside Town.—Middle-class PRACTICE. Cash receipts over £1,500, increasing, audited. Panel nearly 700. Good house, freehold, 2 reception rooms, 5 bedrooms, surgery, waiting room, separate entrance, garage. Price £2,000; must be sold with practice. Premium for practice 1½ years' purchase. Must have capital available. — Address, No. 810, B.M.A. House, Tavistock Square, W.C.1.

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OLD-ESTABLISHED PRACTICE FOR SALE in West Riding City. Private, panel, also specialized in ophthalmic work. Average receipts £472, panel about 250. Good convenient house and garage £650, premium 1½ years' purchase. Vendor retiring. — Apply, 2671, REYNOLDS & BRANSON, LTD., Medical Transfer Agents, 13, Briggate, Leeds.

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CONSULTING ROOMS TO LET. — HARLEY Street, Wimpole Street and district. Whole and part-time. Lists sent on application. Rooms wanted in Harley Street district. — ELGOOD & CO., 10, Henrietta St., Cavendish Sq., W.1. Langham 2501.

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HARLEY STREET (ADJOINING). — AN ATtractive medium HOUSE to be LET ON LEASE, partly let off as Consulting Rooms, etc. An opportunity for a Medical Man to have his own accommodation practically rent free.—Apply to Sole Agents: SAMUEL B. CLARK & SON, 16b, New Cavendish Street, Portland Place, W.1.

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MODERN HOUSE OPPOSITE IMPORTANT N. London suburban station. Five rooms; labour-saving details; new condition throughout. Garage space, cellar. £900 freehold.—Write, Box 129, SELLS, Fleet Street, E.C.4.

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TO LET. — PART-TIME CONSULTING ROOM; use waiting room; services; Queen Anne St., Cavendish Square. Plate on door. Rent £40 per annum.—Address, No. 601, B.M.A. House, Tavistock Square, W.C.1.

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REVIEWED—BRITISH MEDICAL JOURNAL.
STOP-WATCHES AND ALARM-WATCHES, suitable for medical practitioners and laboratory workers. Pocket type, 30-hour stop-watch, with enamelled dial graduated in 1/5 seconds, and a side lever projection which stops and starts the centre hand; guaranteed for 2 years, price 10/6. Wrist-watches, shockproof, with seconds hand for pulse reading, price 15/-. Also an alarm watch which may be used as an appointment reminder and can be set to ring at any desired time; alarm can be put out of action when not required, price 25/-.—A. ARNOLD & CO., 122, St. John St., Clerkenwell Rd., London.

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Accounts audited and all Income Tax matters given expert attention. For further particulars consult C. G. C. KILNER, & CO., 49, Baker St., W.1. (Telephone: Welbeck 8001.)

EXTRA PHARMACOPOEIA.—FIRST TO 10th Editions wanted. Offers.—Address, No. 809, B.M.A. House, Tavistock Square, W.C.1.

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APPOINTMENTS.—Contd.

SWANSEA COUNTY BOROUGH.
ASSISTANT MEDICAL OFFICER.
The Swansea Borough Council invite applications from duly qualified Women Medical Practitioners, for the post of Assistant Medical Officer to assist with the medical services of the Corporation.
Resident Hospital, school medical service, maternity and child welfare, and obstetric experience are desirable qualifications, and preference will be given to a candidate with special experience in the treatment of venereal diseases of women and children.
Salary £500 per annum, rising by annual increments of £25 to £700, temporary annual deduction of £14 12s.
The appointment is subject to the approval of the Ministry of Health and Board of Education.
Applications on special forms, which can be obtained from Dr. THOMAS EVANS, Medical Officer of Health, 5, Prospect Place, Swansea, to be sent in not later than February 9th.

GLOUCESTER COUNTY AND CITY MENTAL HOSPITALS.
Applications are invited for the post of JUNIOR ASSISTANT MEDICAL OFFICER. Candidates must be single, and preference will be given to those under 35 years of age.
The commencing salary is £350, rising by annual increments of £25 to £450 per annum, with board, lodging, laundry, and attendance, valued for superannuation purposes at £104 per annum. A further £50 per annum will be paid if the selected candidate has or obtains a degree or diploma in psychological medicine. A temporary abatement from the initial gross salary plus value of emoluments (£454) will be made amounting to £12.
A deduction of 3 per cent. under the Asylums Officers Superannuation Act of 1909 will be made.
Excellent facilities exist for laboratory and research work.
Applications, stating age and full particulars, accompanied by copies of three recent testimonials, should be sent to the Medical Supt.

THE ROYAL SURGICAL AID SOCIETY.
The Committee [illegible] pointment of an [illegible] SURGEON to the [illegible] ment carries an honorarium of Fifty Guineas per annum, and requires attendance at the Offices of the Society, as below, every Thursday, at 3 p.m. to examine and prescribe for patients applying for Spectacles. The duties to commence on Thursday, April 6th next. Applicants must be Fellows of the Royal College of Surgeons of England; and applications for the post, stating age, qualifications, and particulars of appointments already held, must be sent to the Secretary, Royal Surgical Aid Society, Salisbury Square, E.C.4, not later than Monday, February 6th next.

ROYAL INFIRMARY, BLACKBURN.
(240 Beds—Five Residents.)
RESIDENT HOUSE PHYSICIAN (male) required at a salary of £175 per annum, with board, residence, laundry, etc. In addition to Medical Wards, to be attached to Eye, Ear, Nose, and Throat Department.
FOURTH HOUSE SURGEON (male) required at a salary of £150 per annum, rising to £250, with board, residence, laundry, etc.
Applications, with copies of testimonials, stating age, nationality, experience, etc., to be sent at once to the undersigned.
Royal Infirmary, NATHAN A. SMITH,
Blackburn. Gen. Supt. & Secretary.
This Institution is recognized for the Surgical practice required for the F.R.C.S. final examination.

STROUD GENERAL HOSPITAL, STROUD, GLOS.
Applications are invited for the appointment of HOUSE SURGEON. Salary £150 per annum, with board, residence, etc. Term: six months commencing March 1st, with eligibility for a further [illegible] ing age, nationality, [illegible] with copies of the [illegible] uld be sent immediately to the undersigned.
C. FORD SPENCER, Secretary.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN,
Park Place, Cheetham Hill Road,
MANCHESTER.

The Committee of Management require the services of a SENIOR HOUSE SURGEON and JUNIOR HOUSE SURGEON, both duly qualified, who are to commence duties on March 1st.

Senior House Surgeon, salary £130 per annum, with board and residence; Junior House Surgeon, salary £100 per annum, with board only.

Applications, stating age and experience, with copies of recent testimonials, to be sent to the Secretary, Mr. JAMES C. DANIELS, 38, Barton Arcade, Manchester, not later than the first post February 3rd.

MANCHESTER ROYAL INFIRMARY.

FIRST ASSISTANT IN THE CLINICAL LABORATORY.

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment, which is non-resident, and is tenable for twelve months; the holder is eligible for re-election.

Salary £350 per annum. Candidates must be duly qualified and registered; they must state age and send twelve copies of their application and testimonials, to the undersigned by 9 a.m. on Thursday, February 2nd.

By Order,
FRANK G. HAZELL,
January 13th, 1933. Gen. Supt. & Sec.

GENERAL INFIRMARY AT LEEDS.

A meeting of the Special Election Committee will be held in the Board Room on February 24th, to elect an HONORARY OPHTHALMIC SURGEON.

Every candidate for the office shall be a Fellow of the Royal College of Surgeons of England.

Information as to the duties and necessary qualifications for the office will be supplied on reference to the House Governor.

All applications should be addressed to the Chairman at the Infirmary and marked "Private. Honorary Staff," and should be sent in on or before February 14th.

By Order of the Board,
S. CLAYTON FRYERS,
House Governor and Secretary.

CHARING CROSS HOSPITAL.

RESIDENT MEDICAL OFFICER.

Applications are invited for the post of *Resident Medical Officer* from male candidates (unmarried) who must be registered Medical Practitioners.

Salary £350 per annum, plus additional fees amounting to approximately £75 per annum. The rules of the office may be obtained from the undersigned, to whom applications, accompanied by copies of three recent testimonials, must be delivered not later than Monday, January 30th.

PHILIP INMAN, House Governor.
Charing Cross Hospital, London, W.C.2.

CHARING CROSS HOSPITAL.

ASSISTANT SURGEON.

The Council invite applications for the post of ASSISTANT SURGEON to the Charing Cross Hospital. Candidates, who must be Fellows of the Royal College of Surgeons of England, should send in their applications, together with copies of three testimonials, to the undersigned not later than Monday, January 30th.

Charing Cross Hospital, W.C.2. PHILIP INMAN, House Governor.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE HEART AND LUNGS,
Victoria Park, E.2.
(Bus, Tram, and Rail, Cambridge Heath, L. & N.E. Railway.)

The Committee invite applications for the post of REGISTRAR (male) from March 1st. A salary is attached to the post.

Applications, accompanied by copies of three testimonials, should be sent to the undersigned on or before Friday, February 17th.

GEORGE WATTS, Secretary.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE HEART AND LUNGS,
Victoria Park, E.2.
(Bus, Tram, and Rail, Cambridge Heath, L. & N.E. Railway.)

A vacancy for a HOUSE PHYSICIAN (male) will occur on March 1st. Six months' appointment. Salary at the rate of £100 per annum. Board, residence, and laundry provided.

Applications with copies of three testimonials, should be sent to the undersigned on or before Friday, February 17th.

GEORGE WATTS, Secretary.

ROYAL VICTORIA AND WEST HANTS HOSPITAL, BOURNEMOUTH.
(Boscombe Branch 170 Beds and Private Wards.)

RESIDENT MEDICAL OFFICER (male, British nationality) required to commence duty at once. Salary, commencing £175 per annum, with board, lodging, and washing. The appointment is tenable for 12 months and candidates must be registered according to the provisions of the Medical Act. Applications, stating place of birth and age, with copies of three testimonials, to be sent immediately to the undersigned.

Women and married men are ineligible.

GORDON M. SAUL,
January 21st, 1933. Secretary.

ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN.

Wanted for this Hospital, TWO HONORARY RESIDENT HOUSE SURGEONS and THREE HONORARY RESIDENT HOUSE PHYSICIANS. One of the latter shall have charge of both a medical ward and an ear and throat ward. The appointment shall commence on April 1st, and shall be for a period of six months. Information as to duties, etc., can be obtained from the ordinary physicians and surgeons at the Hospital. Thirty copies of applications and relative testimonials, to be lodged on or before February 22nd, with Messrs. HENRY & SCOTT, W.S., 56, Frederick Street, Edinburgh. No application will be received after that date.

COVENTRY & WARWICKSHIRE HOSPITAL.
(Main Hospital—307 Beds;
Convalescent Hospital—40 Beds.)
Seven Resident Medical Officers.

Applications are invited for the post of HOUSE SURGEON for the Aural and Ophthalmic Departments.

The appointment for six months, renewable. Salary £125 per annum, with board, residence, and laundry.

Candidates must be duly qualified and registered.

Applications, stating age and enclosing copies of recent testimonials, to be sent to the undersigned immediately.

(Miss) R. HOOPER,
Secretary.

ST. BARTHOLOMEW'S HOSPITAL.
London, E.C.1.

OFFICE OF ASSISTANT SURGEON.

Notice is hereby given that a meeting of the Election Committee will be held on Tuesday, February 28th, at 4 o'clock in the afternoon, to elect an Assistant Surgeon to the Hospital.

Candidates, who must be Fellows of the Royal College of Surgeons of England, are required to lodge fifty copies of their applications and testimonials with the undersigned on or before Saturday, February 11th.

THOMAS HAYES,
Jan. 18th, 1933. Clerk to the Governors.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL,
Gray's Inn Road, W.C.1.

ASSISTANT IN THE OUT-PATIENT DEPT.

There is a vacancy for a THIRD ASSISTANT for attendance on Wednesdays at 2 p.m.

The duties are to assist the Surgeon in seeing the patients, and the post is an honorary one.

Applications, which may be for a period of three, six, or twelve months, should be sent to the undersigned immediately.

JOHN H. YOUNG,
Secretary-Superintendent.

ANCOATS HOSPITAL, MANCHESTER.

A vacancy for a HOUSE SURGEON will occur on February 14th. The appointment is for six months, and the salary at the rate of £100 per annum, with board, residence, etc.

Applications, stating age, qualifications, experience, if any, and full particulars, to be forwarded to the undersigned on or before February 1st, together with copies of three recent testimonials.

By Order of the Board,
HERBERT J. DAFFORNE,
Gen. Supt. & Secretary.

BOLINGBROKE HOSPITAL,
Wandsworth Common, S.W.11.
(121 Beds.)

The Board of Governors invite applications for the post of ASSISTANT GYNAECOLOGIST. Candidates must be Fellows of a Royal College of Surgeons.

Applications, with copies of three recent testimonials, to reach the undersigned not later than Wednesday, February 8th.

W. S. RANDOLPH BISS,
Secretary-Superintendent.

NORFOLK & NORWICH HOSPITAL,
NORWICH. (392 Beds.)

Applications are invited for the following posts:

CASUALTY OFFICER AND HOUSE SURGEON, with charge of 25 beds.

HOUSE SURGEON to Special Departments (Ear, Nose, and Throat and Ophthalmic).

Salary for each post, £120 per annum, with board, residence, and laundry. Candidates (male), who must possess registered qualifications, should forward applications, stating age, nationality, etc., together with copies of testimonials, to the undersigned, not later than first post on Tuesday, January 31st.

FRANK INCH,
January 20th, 1933. House Gov. & Sec.

WALSALL GENERAL HOSPITAL.

The Committee invite application from men or women for the post of HOUSE SURGEON.

Salary at the rate of £150 per annum.

Candidates, who must be registered under the Medical Acts, must produce three recent testimonials.

The appointment will be for six months, from February 1st.

The Hospital contains 100 beds, and is equipped in all special departments.

Applications, stating age, qualifications, and nationality, must be forwarded to the undersigned immediately.

WALTER FRANCOMBE,
January 13th, 1933. House Governor.

GENERAL INFIRMARY, SALISBURY.
(Voluntary General Hospital, 170 Beds.)

TWO HOUSE SURGEONS and ONE HOUSE PHYSICIAN (Male) to commence duty on March 8th.

The appointments are for six months, with the right of applying for re-appointment at the end of that period for a further period of six months.

Candidates must be unmarried, fully qualified, and registered. Salary £150 per annum, with board, etc.

Applications to be sent to the House Governor not later than February 6th, 1933, from whom a copy of the Rules may be obtained.

ST. THOMAS'S HOSPITAL.

VACANCY.

Applications are invited for the post of RESIDENT ASSISTANT PHYSICIAN. Candidates must be registered Practitioners of Medicine and members of the Royal College of Physicians of London.

Applications, with full details of academic career and testimonials, to be forwarded to the Clerk to the Governors not later than Tuesday, February 28th.

DARLINGTON MEMORIAL HOSPITAL.
(200 Beds.)

Applications are invited for the post of JUNIOR HOUSE SURGEON; one of three appointments, male, British. Salary £150 per annum, with board, residence, and laundry. Casualties and Special Departments (Ear, Nose, Throat, and Eye). Applications, with full particulars, together with copies of two recent testimonials, to be sent to me forthwith.

A. RIDDLE, Secretary.

SOUTHAMPTON CHILDREN'S HOSPITAL & DISPENSARY FOR WOMEN. (45 Beds.)

The Board of Management invite applications for the post of RESIDENT MEDICAL OFFICER (lady). Six months' appointment, vacant February 20th. Salary at the rate of £150 per annum, with board, residence, and laundry.

Applications, stating age, and accompanied by copies of testimonials, to be sent to the undersigned not later than February 8th.

ELLA K. MATTHEWS, Secretary.

SOUTHEND-ON-SEA GENERAL HOSPITAL.

A Resident OBSTETRIC HOUSE OFFICER is required for the above Hospital. He will have charge of 24 beds, and previous resident Obstetric experience is essential. The appointment will be for six months, and is renewable. Duties to commence on Saturday, February 11th. Applications should be received on or before Saturday, February 4th, by the Secretary, who will be pleased to give any further information.

CROYDON GENERAL [illegible].

Applications are invited from qualified and registered Medical Men for the post of CASUALTY HOUSE SURGEON. Salary £125 per annum, with board, residence, and laundry.

Applications, stating age, qualifications, accompanied by copies (which will not be returned) of three testimonials, to reach the undersigned not later than Monday, Feb. 6th.

GEORGE H. DAMS,
Jan. 20th, 1933. House Gov. & Sec.

LONDON COUNTY COUNCIL.

Applications invited for appointment to the position of ASSISTANT MEDICAL OFFICER, *Grade II*, at each of the undermentioned Hospitals.

The person appointed will be required to carry out such duties as may be assigned by the respective Medical Superintendents and, should occasion arise, to assist at any of the other establishments under the control of the London County Council.

Where residential accommodation is available the successful candidate will be required to live in the hospital.

The salary in each case is £250 a year, together with board, lodging, and washing, or a non-residential allowance, subject to review, of £150 a year in lieu. Remuneration is subject to temporary reduction. Candidates must be registered Medical Practitioners of at least one year's standing and have held a resident appointment in a general hospital for six months. The appointments will be for one year only and not renewable, and are resident except where otherwise indicated.

ARCHWAY HOSPITAL, Archway Road, Highgate, N.19.
FULHAM HOSPITAL, St. Dunstan's Road, Hammersmith, W.6.
HIGHGATE HOSPITAL, Dartmouth Park Hill, N.19.
†NEW END HOSPITAL, Hampstead, N.W.3.
†NORWOOD CHILDREN'S HOSPITAL, Norwood, S.E.27.
*ST. GEORGE-IN-THE-EAST HOSPITAL, Raine Street, Wapping, E.1.
ST. LUKE'S HOSPITAL, Sydney Street, S.W.3.
ST. BENEDICT'S HOSPITAL, Church Lane, Tooting, S.W.17

* No accommodation for a woman.
† *Non-residential appointment.*

Only one form of application is required for these vacancies and successful candidates will be allocated *in accordance with the requirements* of the service. Consideration will, however, be given to any preference which candidates *may express. In the case of women*, marriage terminates contract of service.

Forms of application obtainable (stamped addressed foolscap envelope necessary) *from* Medical Officer of Health (Staff Division 3a), County Hall, Westminster Bridge, S.E.1; *returnable* by February 10th. Canvassing disqualifies. Further inquiries should be addressed to Medical Superintendents at the Hospitals.

ST. PAUL'S HOSPITAL FOR DISEASES (INCLUDING CANCER) OF THE GENITO-URINARY ORGANS AND SKIN, Endell Street, Holborn, W.C.2.

Applications are invited for the undermentioned position:

HOUSE SURGEON (vacant April 1st). Candidates must be qualified and registered. Salary at the rate of £150 per annum, with board and residence. The appointment is for a period of six months, on the termination of which the holder is eligible for the *senior position* of Resident Medical Officer for a further six months at £200 per annum, in which capacity he will have charge of the Surgical beds. During his appointment as House Surgeon the duties will involve work in the Surgical Wards and in the Out-patient Department.

Applications, with copies of recent testimonials, to be sent on or before Monday, February 20th, to the Chairman of the Medical Committee.

ROYAL EAST SUSSEX HOSPITAL, HASTINGS. (124 Beds.)

Applications are invited for the posts of SENIOR HOUSE SURGEON (vacant February 25th), and of JUNIOR HOUSE SURGEON (vacant March 14th). The appointments are for a period of six months.

Salary at the rate of £200 per annum for the Senior post and £150 per annum for the Junior Post, with board and residence.

Candidates must be duly registered Medical Practitioners.

Applications, with copies of recent testimonials, to be addressed to the Secretary.

WILFRID G. REMSLEY,
Secretary.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.13.

There is a vacancy for HONORARY OPHTHALMIC SURGEON. Candidates should be Fellows of the College of Surgeons or Masters of Surgery, London, Oxford, or Cambridge; also have held an appointment at an Ophthalmic Hospital or in the Ophthalmic Department of a General Hospital, after graduation. Applications, with copies of three testimonials to the undersigned from whom every information is obtainable.

By Order of the Committee,
A. ERNEST WILKES, Secretary.

COUNTY BOROUGH OF CROYDON.

PUBLIC HEALTH DEPARTMENT.

Applications are invited from qualified Medical Men for the post of ASSISTANT MEDICAL OFFICER OF HEALTH FOR OBSTETRICS. The duties of the post will include the following:

(a) Obstetrical Officer at the Mayday Hospital (20 maternity beds).
(b) General clinical supervision of the Corporation's Ante-Natal and Post-Natal Clinics, and other work carried out by it under the provisions of the Maternity and Child Welfare Acts and Notification of Birth Acts.
(c) To act as consultant for cases at request of private practitioners, including, if so required, acting as Medical Officer or Consulting Obstetrician of any maternity hospital wholly or partly maintained by the Corporation.

Candidates must have had practical experience in Obstetrics and of Ante-Natal and Post-Natal Clinics. The Fellowship diploma of one of the Royal Colleges of Surgeons will be deemed an additional qualification, but the D.P.H. is not essential.

The salary will be £750 per annum, increasing by three biennial increments of £50 and one biennial increment of £37 10s. to a maximum of £937 10s. per annum.

The officer appointed will be on the staff of the Medical Officer of Health, and will work under his administrative supervision.

The Mayday Hospital is a general hospital maintained by the Corporation under the Public Health Acts, and the duties in connection therewith will be performed under the Medical Superintendent of, and as a member of the staff of, that Hospital.

Application forms, together with full list of duties and details of the appointment, may be obtained from the Medical Officer of Health, Town Hall, Croydon, upon receipt of a stamped addressed foolscap envelope, and should be returned to me with copies of three recent testimonials, not later than 12 o'clock noon on Monday, February 13th, endorsed "Assistant Medical Officer for Obstetrics."

Town Hall, Croydon. J. M. NEWNHAM, Town Clerk.
January 24th, 1933.

BRADFORD CHILDREN'S HOSPITAL.

HOUSE SURGEON (lady) wanted. Fully qualified. Salary £100, with board, residence, and laundry. Applications, stating age, with recent testimonials to—

I. W. LONGLEY,
Secretary-Superintendent.

ROTHERHAM HOSPITAL.

Wanted, CASUALTY HOUSE SURGEON (male). Qualified. Salary £150, with board, residence, and laundry. 130 Beds.

Applications, with copies of recent testimonials, to be sent to the Secretary, G. W. ROBERTS, 8, Moorgate Street, Rotherham.

THE BUTE HOSPITAL, LUTON, invites [illegible] post of HONORARY [illegible] Applicants should [illegible] retary of the Medical [illegible] hospital.

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BELFAST. — OVER £200 P.A., INCLUDING panel 195. Neglected Practice. Scope for increase, especially in mdy. Very few cases now, have been 100 p.a. Fees 5/- to 15/-. Large house to rent at £100. Smaller available.—No. 9123.

SOUTH AFRICA.—£200 PER MONTH. WELL-estab. *Special PRACTICE. Radiol.* and *Dermatol.* Centrally situated cons. rooms to rent. Premium £1,500, incl. lease and plant. —No. 8775.

DEATH VACANCY.—LANCASHIRE TOWN. *Average over £900 p.a. Panel over £300.* Old-established *working-class. Nice house* in good main road position. Would be sold or let. Locum in charge.—No. 9121.

LANCS MANUFACTURING TOWN. — £725 p.a. Panel over 1,050. *No appts.* Mixed dispensing PRACTICE. Detached house, 5 bed., *3 recepn., surg., etc., with separate entrance.* Garden and garage. To rent on lease.—No. 9120.

LINCS WOLDS. — UNOPPOSED PRACTICE. *About £700 p.a.* Panel 525. Appts about £64 p.a. Visits 3/6 to 15/-. Mdy 2 to 5 gns. Freehold residence, 5 rooms and *professional and domestic offices.* Garage and garden. For sale £800.—No. 9115.

OUTER RESIDENTIAL SUBURB. — *GOOD-class PRACTICE* hitherto worked only part-time. £350 p.a. No panel and non-dispensing. No mdy. taken. Visiting fees 10/6 and 21/-. Good freehold house, 2 reception, 7 bedrooms, 2 bath., cons. room, etc. Price £2,800 for house and Practice.—No. 9110.

CHANNEL ISLES.—OVER £400 P.A. NON-panel. No mdy taken. Ins. work about £60 p.a. Visits 3/6 to 7/6. Premium 1½ yrs.' purchase. Trout and sea-fishing. Choice of houses.—No. 9107.

YORKSHIRE COAST TOWN. — OVER £800 p.a. Visiting fees 3/6 to 7/6, surgery 2/6 up. Two appointments worth £30 p.a. Mdy. cases average 10—20 p.a. Premium £1,250. Good house, 2 reception rooms, 4 bedrooms, bathroom, etc., surgery and waiting room, good garden and garage. Price £1,700. —No. 9104.

BERKS. — OLD-ESTABLISHED. — COUNTRY PRACTICE, about £700 p.a. has been £1,100. Panel about 500. Visiting fees 2/6 to 7/6. Very little midwifery. Splendid house, specially built for Vendor, with two acres of grounds, 2 reception rooms, 6 bedrooms, surgery, and waiting rooms, etc. Consider £4,000 offer for Practice & house, freehold.—No. 9100.

SOUTH WALES. — NEAR CARDIFF. — WELL-established middle and working-class PRACTICE, returning over £600 p.a. Panel 400. *Visiting fees* 2/6 to 5/-. Surgery 2/- to 3/6. Mids. average 12 p.a., scope for more. Modern built house, 4 bedrooms, 2 reception rooms, excellent separate surgery and dispensary. Price of house and practice £1,600.—No. 9096.

YORKSHIRE. — AVERAGING £981 P.A., with panel of 400. Better-class dispensing PRACTICE in outskirts of large town. Appointments worth £45 p.a. Very little midwifery. Visiting fees 3/6 to 10/6 and 21/-. Premium £1,350. Handsome stone-built house in centre of Practice, with 6 bed., waiting and cons. with sep. ent. Large lounge and dining room, etc. Garage for 2 cars. Rent £100 p.a.—No. 9098.

MIDDLESEX SUBURB.—RAPIDLY GROWING residential district. Established 3½ years and at present returning about £600 p.a. Visiting fees 5/- up. Midwifery 3 to 6 gns. House, with 2 reception, 5 bedrooms, separate surgery and waiting room, and large garden. Sell at £1,600, mortgage £1,000. Premium for goodwill £900 or offer.—No. 9070.

WANTED.

PRACTICE OR PARTNERSHIP. — INDUSTRIAL or middle-class with large panel. Provincial Town or London. £1,200 £1,500. Medium house with tennis court, etc. Applicant is Durham Graduate with capital of £3,000.—No. 312.

PRACTICE IN WEST OR SOUTH OF England or South Midlands. Town preferred, especially Plymouth or Exeter. Client has ample capital.—No. 282.

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WELSH BORDERS.—PARTNERSHIP in old-established G.P. situated in beautiful Country Town. Suitable house to rent on lease at £56 p.a. Garden. Receipts approx. £1,800. Panel £450 (with mileage). Fees 5/- up. Appointments. Premium for one-third share (with view to one-half share later) 1½ years' purchase.

MIDLANDS.—PARTNERSHIP (after 12 months' Preliminary Assistantship) in old-established Country Town Practice. Receipts £1,800. Panel 700 (not encouraged). Fees 3/6 up. Several appointments. Premium for one-half share 2 years' purchase.

HANTS.—Middle-class Country PRACTICE. Practically unopposed. Suitable for semi-retired Practitioner. Receipts over £400. Panel 94. Fees 2/6 upwards. Premium £450.

LONDON, E.—Suburban middle-class G.P. Medium-sized house to rent on lease at the low rental of £30 p.a. Fees 2/- up. Average receipts £516. Panel 350. Excellent scope for young man. Premium for Practice and lease £1,050 cash or near offer.

S. AFRICA.—Well-established G.P., situated in well-known Health Resort. Delightful climate and surrounding country. Detached house, large garden and garage. Receipts approx. £1,800 (subject to confirmation). Fees from 10/6, plus medicine. Two appointments. Scope for surgery. Premium £3,600.

NORTH OF ENGLAND.—PARTNERSHIP in old-established mixed G.P. Suitable accommodation available. Receipts over £3,000 p.a. Panel 1,300. One-third or two-fifths share at 2 years' purchase.

DURHAM.—Middle-class and industrial PRACTICE. Average receipts approx. £500. Panel 370. Medium-sized house. Branch Surgery. Fees 2/6 up. No appts. Premium £725 or offer. Excellent scope.

WEST COUNTRY (Large Town). — Well-established mixed better-class PRACTICE, with scope for Surgery and Eye work if desired. Medium-sized house to rent. Average receipts approx. £950. Panel 370. Fees 5/- to 1 gn. Two appointments. Premium 1½ years' pur.

LONDON, E.C.—Mixed Cash and Panel lock-up PRACTICE, with living accommodation if desired, facing main thoroughfare, held on lease at £95 p.a. Receipts nearly £700. Panel 450 (scope). Fees 1/6 to 10/6. Midwifery not undertaken. Premium £1,000.

MIDDLESEX, N.—Rapidly increasing mixed G.P. situated within 10 miles of London in residential locality. Suitable modern house to rent (5 beds); would sell if desired. Average receipts approx. £1,240. Panel nearly 500. Excellent scope. Premium 1½ years' purchase.

MIDDLESEX, W.—Good middle-class, non-dispensing G.P. situated in growing residential locality. Medium-sized house available. Garden, garage. Separate entrance to Surgery. Receipts approx. £1,200 (books audited). Panel nearly 1,000. Premium 2 years' purchase or near offer.

YORKSHIRE.—Town PRACTICE in industrial locality. Medium-sized house (5 bedrooms). Receipts approx. £700. Panel 520. Fees 2/6 up. Premium for Practice and freehold house, £2,000 cash.

CHESHIRE. — Well-established mixed, middle, and working-class PRACTICE. Semi-detached house (6 bedrooms), with garden, to rent at £70 p.a. Receipts approx. £556. Panel 527. Fees 2/6 up. Premium £700 or near offer.

LONDON, S.W.—Mixed G.P. within close proximity of West End. House on lease at very low rental. Receipts approx. £1,000 p.a. Select panel over 700. Premium for Practice, lease, surgery, fittings, furniture, drugs, etc., £2,200 cash or near offer.

YORKSHIRE (Near Coast). — Agricultural locality.—Attractive house, separate entrance for surgery, for sale, freehold. Receipts average approx. £800 p.a. Panel 620. Fees 3/6 up. Premium 1½ years' purchase for Practice; house £900.

SURREY.—Mixed G.P. in growing residential locality within easy reach of Town. Receipts approx. £1,000 p.a. Excellent scope. Panel 400. Fees 3/6 up. Suitable medium-sized house available. Premium 2 years' purchase. House, £1,400 (part could remain on mortgage).

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DEATH VACANCY.—NORTH-WEST COAST.—LARGE SEASIDE RESORT.—Old-established mixed PRACTICE. Cash receipts last year £636. Panel 312. Excellent house, 3 reception, 5 bedrooms, garage, and large garden. Premium, best offer.—No. 420.

CHESHIRE TOWN, nr. MANCHESTER.—PARTNERSHIP in good mixed Practice. Cash receipts last year £1,661. Panel 1,100. Suitable arrangements can be made as to living accommodation. Local Hospital. Scope for Surgery if desired. Premium—half-share—1½ years' purchase. Succession in 3 to 5 years.—No. 421.

NR. NEWCASTLE-ON-TYNE.—Mixed General PRACTICE, averaging £800—£850 p.a. Panel 600. Scope for increase. Good house, 3 reception, 5 bedrooms, garage, and garden. Premium £950.—No. 422.

NORTH-WEST COAST, near LAKES.—Middle-class PRACTICE in beautiful district. Cash receipts last year £816. Panel 250. Scope. Detached house on sea front, 3 reception, 7 bedrooms. Garage and nice garden. Premium 1½ years' purchase.—No. 388.

NORTH WALES. — Old-established mixed PRACTICE, in Country Town, near coast. Cash receipts last year £700. Panel 538. Scope for increase as the Practice has been neglected. Excellent house, 3 reception, 5 bedrooms, garage, and large garden. Net rent £50 p.a. Good sport and educational facilities. Welsh not essential. Cottage Hospital. Premium £800.—No. 412.

MEDICAL WOMAN'S PRACTICE. — MANCHESTER.—Cash receipts last year £645. Panel 450. Good scope. Excellent house, 3 reception, 6 bedrooms, garage. Rent £80 p.a. on lease. Premium, best offer.—No. 330.

LANCS TOWN, near Country.—Old-established mixed PRACTICE. Cash receipts last year £725. Panel about 1,000. Excellent detached corner house, 3 reception, 6 bedrooms, garage, and large garden. To rent on lease. Premium 1½ years' purchase, or near offer.—No. 403.

DEATH VACANCY.—LANCASHIRE TOWN.—Old-established mixed PRACTICE. Average cash receipts over £900 p.a. (including over £300 from panel). Scope for increase. Good house on main road, 2 reception, 4 bedrooms. Rent £65 p.a. Premium 1 year's purchase. Locum in charge.—No. 423.

NORTH-WEST COAST.—LARGE RESIDENTIAL AND SEASIDE TOWN.—Old-established PRACTICE. Cash receipts about £1,200 p.a. Panel 1,500. Excellent detached corner house (frecho'd), 3 professional rooms, 5 bedrooms, and 2 reception rooms, garage, & good garden, for sale. Prem.—Practice—1½ yrs.' pur.—No. 417.

LARGE LANCS CITY.—Ophthalmic Surgeon in old-established Practice requires a PARTNER with a view to succession. Applicants should possess D.O.M.S. or D.O., and be good operators. Preliminary Assistantship if desired.—No. 353.

EAST YORKS.—Country Town near Coast.—Unopposed mixed PRACTICE.—Cash receipts last year £960. Panel 630. Excellent detached house, 3 reception, 4 bedrooms; garage and large garden. Premium 1½ years' purchase.—No. 346.

NORTH-WEST COAST. — Old-established upper and middle-class (non-dispensing) PRACTICE. Cash receipts last 9 months £640. Panel 289. Scope. Modern semi-detached house. 2 reception, 3 bedrooms, garage, and garden. Premium £800.—No. 409.

MANCHESTER. — Old-established middle-class (non-dispensing) PRACTICE in residential suburb. Cash receipts last year £985. Excellent detached house, 2 reception, 6 bedrooms. Garage and good garden. Premium 1 year's purchase.—No. 405.

NEAR LIVERPOOL.—PARTNERSHIP in middle-class (non-dispensing) Practice. Average cash receipts £2,300 p.a. Panel 620. Excellent house, 3 reception, 6 bedrooms, garage, and garden, with tennis court, to be sold or let on lease. Senior Partner retiring. Premium—one-half share—1½ years' purchase.—No. 407.

OPHTHALMIC SURGEON in old-established Practice in Northern City requires a PARTNER with view to succession. Must have D.O.M.S. or D.O. and be good operator. Preliminary Assistantship if desired.—No. 353.

MANCHESTER.—Middle-class PRACTICE, in pleasant suburb. Cash receipts last year, £1,327. Panel 528. Charming house to rent, 3 reception, 6 bedrooms, billiard room. Large garden and garage. Premium—Practice—1½ years' purchase.—No. 322.

NORTH-WEST COAST. — PARTNER wanted for mixed PRACTICE in favourite Seaside Town. Must be thoroughly experienced in Ophthalmology and, or in Ear, Nose, and Throat work. Great scope for a good man. Suitable house available. Average cash receipts £2,500 p.a. Terms to be arranged.—No. 414.

MANCHESTER. — Residential Suburb.—Middle-class PRACTICE. Suitable for two in Partnership. Cash receipts last year £4,578. Panel 1,400. Two excellent houses to rent with ample accommodation. Premium 1½ years' purchase, part by arrangement.—No. 277.

NORTH-WEST COAST.—LARGE SEASIDE TOWN.—Old-established PRACTICE. Cash receipts £874 p.a. Panel 250. Excellent freehold house, 2 reception, 5 bedrooms, garage, and garden.—No. 266.

CHESHIRE COAST TOWN, near LIVERPOOL.—NUCLEUS held by Medical Woman. Cash receipts last eleven months £125. Panel 95. Scope for increase as Vendor has not given full time to Practice. Excellent semi-detached house, containing 3 professional rooms, 4 bedrooms, etc. Small garden. Rent £75 p.a. Premium £150 or near offer.—No. 415.

LIVERPOOL. — Mixed PRACTICE. Cash receipts £700 p.a. Panel 876. Scope for increase. Small house to rent. Premium, best offer.—No. 366.

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(FOUNDED 1880.)

12, Stratford Place,
Oxford Street, W.1.

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The Association has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful Agency for the transaction of every description of Medical, Scholastic and Accountancy business, and the BRITISH MEDICAL ASSOCIATION has every confidence in recommending its members to consult Mr. A. V. STOREY, the General Manager, in all transactions requiring the services of a Medical Agent.

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1 DEATH VACANCY.—HOME COUNTIES.—OLD-ESTABLISHED PRACTICE in beautifully situated Market Town about 50 miles from London. Cash receipts last year nearly £2,000 including appointments and panel worth nearly £900. Centrally situated house (5 bedrooms) to rent. Cottage Hospital and appointment on Staff.

2 EAST ANGLIA. — PARTNERSHIP IN OLD-ESTABLISHED PRACTICE of over £4,500 p.a. in small select Seaside Resort. *Visits up to £1 1s. Detached house (4—5 bedrooms) to rent.* Very good society and sport. Premium one-fourth share 2 years' purchase.

3 EASTERN COUNTIES. — PARTNERSHIP IN SOUND OLD-established PRACTICE of £4,500 p.a. in Market Town within 90 miles of London. Small modern house available. Premium one-third share 1½ years' purchase.

4 S.W. OF ENGLAND. — WELL-ESTABLISHED MIDDLE AND better-class PRACTICE of between £1,200 and £1,300 p.a. in Seaside Resort. Panel 500. Excellent and well-situated large detached corner house with every modern convenience, to rent on lease. Very good Educational facilities. Sport of all kinds including golf, yachting, etc. Premium £2,200.

5 EAST COAST.—PRACTICE OF BETWEEN £750 AND £800 p.a. in a purely Residential Seaside District within 40 miles from London. Small Panel. Detached house (5 bedrooms) for sale. Scope for increase as district is growing.

6 SOUTH AFRICA (CAPE PROVINCE).—PRACTICE OF £2,000 —£2,500 p.a. in Residential District close to one of the Principal Coastal Towns. *Good house (5 bedrooms, etc.). Scope for Surgery.* Premium 1 year's purchase.

7 DEATH VACANCY.—LANCS.—OLD-ESTABLISHED PRACTICE in small manufacturing town. Receipts average £933 p.a. (including £344 from the panel). Well-situated house on main road to rent or purchase.

8 HOME COUNTIES. — OLD-ESTABLISHED PRACTICE, AVERaging over £1,700 p.a. in delightful first-rate residential district. Panel 1,120. Visits 5/- to £1 1s. Excellent detached house (5 bedrooms and 3 very good attics), with garage and large garden, to rent on lease. Excellent up-to-date Hospital and scope for surgery if desired. Premium 1½ years' purchase.

9 SUSSEX COAST.—ASSISTANT REQUIRED, WITH VIEW TO Partnership, in old-established Practice over £3,000 p.a., in rapidly growing and bracing place. One-fourth share would be sold to a suitable man (after preliminary assistantship) at 2 years' purchase.

10 N. DEVON. — COUNTRY PRACTICE OVER £900 P.A. IN beautiful district. Panel about 320. Excellent house (6 bedrooms), with garage and large garden, to rent on lease. Good hunting, shooting, and fishing. Premium £1,450.

11 MIDLANDS.—PARTNERSHIP IN WELL-ESTABLISHED AND increasing Practice of nearly £1,650 p.a. in growing residential neighbourhood on outskirts of first-rate town. Panel 1,830. House (4 bedrooms, etc.), *in acre of garden, for sale. Excellent prospects of increase. Premium one-half share 2 years' purchase.*

12 S. COAST. — WELL-ESTABLISHED INCREASING NON-dispensing PRACTICE in Residential Town and Health Resort. Receipts 1932, £1,500. Very good house (6 bedrooms) with garage and quarter of an acre of garden for sale (or smaller house could be obtained). Premium £3,000.

13 BIRMINGHAM. — PARTNERSHIP (AFTER PRELIMINARY Assistantship) in Practice about £2,500 p.a. in suburb. Panel 2,400, increasing. Suitable house available. Applicant *should* have held Hospital appointments and be experienced in General Practice. A two-fifths share would be sold to a suitable man at 2 years' purchase.

14 LANCASHIRE.—OLD-ESTABLISHED PRACTICE IN SMALL Manufacturing Town. Cash receipts last 12 months £725, including a panel of over 1,050. Detached house (5 bedrooms), with garage and good garden, to rent. Premium 1½ years' purchase or near offer.

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Practices and Partnerships for Disposal (continued).

15 DEATH VACANCY.—S. WALES.—VERY OLD-ESTABLISHED PRACTICE in beautiful district, with some of the finest coast and moorland scenery. Income between £850 and £900 a year, including appointments worth about £225 p.a. and a panel of 367. Well-situated house (6 bedrooms), garages, and 7 acres of grounds for sale. Excellent reasons for good scope for increase.

16 KENT.-OLD-ESTABLISHED COUNTRY PRACTICE OF NEARLY £900 p.a. in a most beautiful part within easy reach of London. Panel 440. Extremely attractive residence (5 bedrooms), with central heating throughout and beautiful gardens, orchard, etc., for sale. Good hunting. Plenty of rough shooting. Prem. £1,200.

17 WEST MIDLANDS.—PARTNERSHIP IN PRACTICE OF ABOUT £2,850 p.a. in country town. Panel 1,700. Exceptional and extremely attractive house (11 bed and dressing rooms), garages, and garden, for sale. Good social centres. Premium one-half share 2 years' purchase.

18 SURREY.—PARTNERSHIP IN SOUND OLD-ESTABLISHED good mixed-class Practice about £3,000 p.a. in the Croydon area. *Small* panel. Very little midwifery. Suitable house could be obtained. Scope for increase. Premium one-half share 2 years' purchase.

19 HOME COUNTIES. — PRACTICE IN DELIGHTFUL COUNTRY District, easy distance of London. Earnings this year estimated at about £650. Panel over 300. Attractive house (7 bed and dressing rooms) in grounds of two acres, with garage, for sale. Very suitable for Resident Patients. Good scope for increase. Pre*mium £700.*

20 LONDON, S.E. — *PRACTICE* OF £1,050 IN OUTLYING Suburban District. Panel 980. Well-situated corner house on main road (5 bed and dressing rooms), garage, and garden for sale; also separate surgery. Scope for increase. Prem. £1,800.

21 SURREY.—PRACTICE OF £1,000 P.A. IN RAPIDLY GROWing Residential District within 15 miles of London. Panel 400. Suitable house, with separate professional accommodation, for sale. Scope for considerable increase. Premium £1,600.

22 YORKSHIRE. — FAVOURITE SEASIDE RESORT. — WELLestablished PRACTICE of over £800 p.a. in growing district. Panel 640, increasing. Modern house (5 bed and dressing rooms) in prominent position with garden and garage for sale. Scope for increase. Premium £1,250.

23 LONDON, W.—*GOOD MIDDLE-CLASS PRACTICE £400 P.A.* in suburb within easy access of the West End. Panel over 100. Attractive double-fronted house with nice garden for sale. *Scope for increase.* Premium 1½ years' purchase.

24 CORNWALL.—VERY OLD-ESTABLISHED PRACTICE OF OVER £1,100 p.a. in delightfully situated seaside village on West Coast. Panel about 550. Well-built house (7 bed and dressing rooms), standing in half-acre of ground for sale. Scope, as building is going on. Premium 1½ years' purchase.

25 LONDON, N.—*PARTNERSHIP IN PRACTICE ABOUT £5,250* p.a. in thickly populated Suburban District. Panel about 800. One-fourth or one-third share at 2 years' purchase.

26 S. OF ENGLAND. — PARTNERSHIP IN OLD-ESTABLISHED Practice of nearly £1,950 p.a. in important town within 80 miles of London. No panel. Attractive corner residence (7 bed and dressing rooms), in half-acre of walled-in garden, with garage, etc., for sale. Ample scope for increase. Premium one-half share 2 years' purchase.

27 KENT.—PARTNERSHIP IN MIDDLE AND WORKING-CLASS Practice *averaging nearly* £4,450 p.a., in an industrial Town under 25 miles of London. Panel about 2,600. Detached house (4 bedrooms) *with garden to rent.* Plenty of scope for increase. Premium one-fifth share 2 years' purchase.

28 WEST END OF LONDON.—PARTNERSHIP IN GOOD-CLASS non-dispensing Practice of £3,300 p.a. No appointments or panel. Visits £1 1s. and £3 3s (very few 10s. 6d.). Premium one-half share 2 years' purchase.

29 *NORTH OF ENGLAND.—INLAND HEALTH RESORT.—NON-*dispensing PRACTICE averaging £1,130 p.a. Small select panel. House (7 bedrooms) with large garden, for sale or *rent. Premium* —Practice—1½ years' purchase.

30 HOME COUNTIES. — OPHTHALMIC PRACTICE BETWEEN £300 and £400 p.a. in desirable Residential Town, under 15 miles from London. Good detached house (4 bedrooms) with large garden for sale. Good reasons for plenty of scope for increase. Premium £300.

31 HOME COUNTY.—PRACTICE ABOUT £1,000 P.A. IN FIRSTrate Country Town under 40 miles from London. Panel 250, increasing rapidly. Choice of (large or small) house. Scope for increase. Premium £1,500.

32 LONDON, E.—PRACTICE AVERAGING £715 P.A. IN POPUlous area. Panel 365 (increasing), house (5 bedrooms) to rent. Premium £650.

33 LONDON, E.C.—OLD-ESTABLISHED "LOCK-UP" PRACTICE of £646 p.a. Panel 459. Living accommodation to rent if desired. Premium £1,000.

34 MIDLANDS.—PARTNERSHIP (AFTER PRELIMINARY ASSISTantship) in a very old-established Practice of between £1,700/ £1,800 p.a., in pleasant market town. Panel 700. Pemium for one-half share at 2 years' purchase.

35 S. AFRICA. — OPHTHALMIC AND GENERAL PRACTICE about £1,400 p.a. (about 60 per cent. Ophthalmic), including appointments £400. No Ophthalmic opposition. Premium £400.

36 CO. DURHAM.—PRACTICE OVER £500 P.A. IN RESIDENtial colliery district, near two large towns. Panel 370. Centrally *situated 7-roomed* house, with good Surgery and Dispensary, for sale or rent. Practice could be very quickly substantially increased. Premium £650.

37 N. OF ENGLAND. — OPHTHALMIC PRACTICE OF OVER £1,600 p.a. in an important town. Excellent scope for one keen on clinical and operative Ophthalmology. Large house in first-class condition for sale. Purchaser should be well qualified. Premium £2,500.

38 S. AFRICA. — PRACTICE OF ABOUT £2,000 P.A. IN A famous town. Pleasantly situated detached bungalow (5 bedrooms), garage, and small garden for sale. Good hospital (with private wards). Premium £1,100.

39 LONDON, WEST END. — X-RAY AND ELECTRO-THERApeutic Practice. Receipts 1931, nearly £620. Suitable and convenient flat at moderate rent, on lease. Premium £925.

40 LONDON, E.—CASH AND PANEL PRACTICE OF £650 P.A. in populous district. Panel 570. Small house to rent on lease. Premium 1½ years' purchase.

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Under the personal directorship of Dr. J. FIELD HALL and J. C. NEEDES

who have both had many years' experience as Medical Transfer Agents.

The commission chargeable in respect of any practice or partnership in Great Britain placed exclusively in the hands of this Agency has been fixed on an exceptionally favourable scale, the maximum chargeable on any transfer being fifty pounds (£50). Full Schedule of Terms and Conditions will be forwarded on application.

Accountancy and legal services furnished by the Agency, where desired, at moderate inclusive charges. No charge is made to Principals for the introduction of Locum Tenens or Assistants.

1. WEST OF ENGLAND.—Old-established mixed-class PRACTICE, in delightful country and market town (pop. over 7,000) with beautiful surroundings. Cash receipts average over £1,800 p.a. including panel, with mileage, producing nearly £1,000 and appt. worth £150. Expenses light. Good house with ample accommodation (6 bedrooms, etc.). Small garden. Garage. Price £1,800, of which £1,500 can remain on mortgage. Premium £2,700, to include drugs, bottles, fixtures, book-debts, etc. Sport and educational facilities. Small Hospital and scope for Surgery.
2. PARTNERSHIP.—SOUTH DEVON.—A one-third share (with increase up to one-half in 2 or 3 years' time) is offered in a very good mixed-class unopposed Practice, in very attractive district, within easy reach of good town, owing to illness of present junior Partner. Gross cash receipts for the last three years have averaged £2,673. Panel of 1,500. Modern house available. Price £1,600. Premium for share 2 years' purchase.
3. WEST INDIES.—Very old-established PRACTICE averaging about £2,000 p.a., including appointments, and situated in a town offering social attractions. Patients mostly upper-class. Rent of consulting rooms £100 p.a. Furnished or unfurnished houses are available, or Successor could reside in a hotel. Premium £1,500, £800 down and balance spread over two years. Climate excellent, and well suited to children. Golf, tennis, etc. Good scope for Surgery if desired.
4. SOUTH AFRICA.—X-RAY PRACTICE, established by Vendor 20 years and situated in a large and flourishing Town. The income is over £2,600 p.a. and fees are good. Rent of professional rooms, on lease, £16 16s. a month. Premium £1,500, to include X-ray apparatus and electrical outfit, valued at over £500.
5. LONDON, NORTH. — Outlying Suburb.—Old-established PRACTICE, averaging £721 p.a., and offering good scope. Panel of nearly 900. Visits from 3/6. Midwifery refused. Corner house, specially built, containing 2 reception, 4 bedrooms, etc. Professional accommodation with separate entrance. Price £1,000. Premium 1½ years' purchase.
6. LONDON, SOUTH-EAST.—Middle and working-class PRACTICE, producing for the last twelve months about £1,000 p.a., including panel of about 900. Visits chiefly 3/6. Practically no midwifery. Suitable house, containing 2 sitting, 6 bedrooms, 2 bathrooms, etc. Consulting room, waiting room, and dispensary. Electric light. Garage. Rent on lease £75 p.a. Premium £1,750 or near offer. Good scope.
7. BORDERS OF LINCS AND NOTTS.—Old-established PRACTICE in pleasant agricultural district. Average gross cash receipts for the last three years over £1,100. Panel of 620, plus mileage, and appts. worth over £50. Low expenses. Fees from 2/6. Detached house, with 2 reception, 5 bedrooms, bathroom, etc. Rent £55 p.a. Premium £1,785.
8. LANCS.—Well-established mixed-class PRACTICE, producing for the last 12 months £725. Panel of 1,055. Fees from 3/6. House contains 3 reception, 5 bedrooms, etc. Rent on lease £85 p.a. Premium 1½ years' purchase.
9. WITHIN TWENTY MILES OF LONDON.—PARTNERSHIP.—A share, producing about £850 p.a., is offered (after a preliminary assistantship of three months), in a sound and increasing mixed-class Practice, having good scope. Large panel. Suitable house available, on rental. Premium 2 years' purchase. Scottish Graduate preferred.
10. MIDLAND CITY.—Old-established good-class PRACTICE situated in residential district, and producing about £1,600 p.a. net. Visits 3/6 to 21/-. Excellent house with all conveniences, nice garden, garage, etc. Vendor's leasehold property (25 years to run). Price for Practice and lease £3,250.
11. LANCS. — LARGE TOWN. — Old-established upper and middle-class PRACTICE, situated in purely residential district and averaging about £1,700 p.a. including appt. of £130, and panel of 700. Visits 5/- upwards. Very little midwifery at 5 to 10 guineas. Expenses low. Excellent and well-built house, ideally situated, having ample accommodation (surgery, waiting room, and dispensary, 3 reception, 5 bedrooms, etc.). Rent on lease £120. Premium £2,500. Good educational facilities.
12. EGYPT.—Well-established PRACTICE, producing about £960 p.a., and offering good scope for increase. Fees 10/6 to 2 guineas. Excellent accommodation can be rented at £16 10s. monthly. Premium to include all furniture, drugs, drug bottles, instruments, etc., £2,000.
13. YORKSHIRE.—PARTNERSHIP.—A one-fourth share, with increase, later, is offered in a very sound old-established general Practice, situated in favourite country town, within easy reach of coast. Gross cash receipts for the last three years have averaged £3,700, and for the immediate past twelve months £4,180. Panel of 2,000, and appts. bring in about £500 p.a. Fees 5/- to 21/-. House contains 3 reception, 5 bedrooms, etc. Electric light; garden. Garage. Can be rented at £46 p.a. Or other houses available. Excellent sport and good schools. Premium for share 2 years' purchase.
14. PARTNERSHIP.—ANGLO-WELSH BORDER.—A one-third share, with increase later, is offered in an old-established good mixed Practice, situated in pleasant country town, amidst beautiful surroundings. Gross cash receipts for last 12 months £1,800, of which £800 is from panel and appts. Purchaser should be interested in medicine as Vendor undertakes surgery. Suitable accommodation obtainable. Premium £900, part by instalments if desired.
15. SOUTH CORNWALL.—Old-established unopposed PRACTICE, situated in very pleasant district, with mild climate. Gross cash receipts approximately £950 to £1,000 p.a., including £275 from panel and appointments. Fees 5/- to 7/6. Very nice house, overlooking the sea, containing 3 reception, 4 bedrooms, 2 maids' rooms, bathroom, etc., and professional accommodation. Garage. Garden. Freehold for sale, £300 down, and balance on mortgage. Premium £1,400, to include drugs, etc. Good scope for increase.
16. NORTH DEVON.—Very old-established unopposed country PRACTICE, in beautiful district, within easy reach of the sea. Cash receipts over £900, including panel and appointments about £300. Excellent residence (3 reception, 6 bedrooms, bathroom, etc.). About half an acre of garden, tennis lawn, etc. Garage. Water laid on and main drainage. Rent on lease £60 p.a. Premium £1,450. Good hunting, shooting, fishing. Educational facilities.
17. SURREY.—Growing residential neighbourhood, within easy reach of London.—Mixed-class PRACTICE, producing about £1,000 p.a., and offering good scope. Panel of 400. Fees from 3/6. Suitable house with 2 reception, 3 bedrooms, etc. Price for freehold £1,400, part on mortgage. Premium 2 years' purchase.
18. PARTNERSHIP.—NORTHERN COUNTIES.—A one-third share (with increase later) is offered in a good middle-class non-panel Practice, situated in a prosperous town, with pleasant surrounding country. Gross cash receipts average about £3,300 p.a. Fees 3/- upwards. Suitable house, with 2 reception, 4 bedrooms, etc., and small garden. Price £1,200, part on mortgage. Excellent sport and educational facilities. Premium for share, £2,000.
19. KENT.—Good-class NUCLEUS, non-dispensing, in pleasant residential district within 20 minutes' run of London. Receipts between £350 and £400, and offering exceptionally good scope. Fees 10/6 to 21/-. Good house, ideally situated, with ¾ of an acre of garden, tennis court, etc. Price freehold £2,800, to include premium for Practice. Excellent educational facilities.
20. MIDDLESEX.—Residential District.—Mixed-class PRACTICE, averaging £537 p.a., including panel of 150. Fees from 3/6. Corner house, with 2 reception, 5 bedrooms, and professional accommodation, with separate entrance. Freehold. Golf and other sport. Very good schools. Price for practice and house £2,100, or near offer, part on mortgage.
21. WESTERN SUBURB. — Old-established and mainly middle-class PRACTICE, worth about £400 p.a. and offering scope. Panel of 108. Visits 3/6 to 21/-. Midwifery 3 gns. upwards, not encouraged. Good house (6 bedrooms, etc.) with very nice garden and garage. Price leasehold (42 years to run) £1,850, £1,200 on mortgage. Premium moderate.
22. NEW ZEALAND (North Island).—Old-established non-dispensing PRACTICE, situated in increasing county town, amidst beautiful surroundings. Cash receipts for past five years average £1,400 p.a. Attractive residence standing in an acre of garden, with tennis court, orchard, etc. Electric light. Can be leased. Educational facilities, sport, etc. Premium £1,000.
23. SANATORIUM.—SOUTH-WEST OF ENGLAND, and within 20 miles of County Town. Very old-established. Receipts for the past three years average over £9,000 p.a. Patients middle and upper-class. Accommodation for 45. Price for goodwill, freehold house, with large grounds, furniture, fixtures etc., is moderate.
24. MANCHESTER. — Suitable Lady Doctor. — Middle and working-class PRACTICE, averaging £670 p.a., including panel of 450. Fees 2/6 to 7/6. House contains 3 reception, 5 bedrooms, separate surgery entrance, etc. Bathroom. Electric light. Garage. Rent on lease £80 p.a. Premium 1½ years' purchase. Very large scope for increasing the Practice as Vendor has only worked it as a part-time one

ASSISTANTS REQUIRED.—(1) MIDDLESEX.—Well-established PRACTICE, with substantial panel and good appts. Outdoor ASSISTANT, with view to Partnership. Suitable house on rental. Must be English and well-experienced. (2) HANTS.—Large Town. Indoor, salary £300 p.a. (3) KENT.—Outdoor, with view to Partnership. £400 p.a. with furnished house. English essential. (4) SOUTH WALES.—Outdoor; £300, with rooms and attendance. (5) GLOS.—Indoor £300 p.a.

WANTED TO PURCHASE.

1. LONDON, or within twenty miles.—Good mixed-class PRACTICE, with panel of about 1,500. Income £1,200 to £1,500. Fair-sized house and garden.
2. LONDON SUBURB or good Provincial Town.—Better-class PRACTICE [illegible] about £1,500 to £2,000 p.a., with fair-sized panel. Small [illegible]ital.
3. [illegible] RESIDENTIAL SUBURB OF LONDON.—[illegible] offering scope for development. Substantial panel required. Nice house and garden. Ample capital for suitable practice or partnership.
4. LONDON or SUBURBS, preferably West or South-West.—PRACTICE or PARTNERSHIP producing about £1,200 p.a. or less if scope. Fair-sized house with garden.
5. MIDLANDS OR SOUTH OF ENGLAND (not Devon or Cornwall).—Country PRACTICE bringing in from £750 to £800 p.a. Small house to rent, with good grounds. Must be within reach of good fishing.

The Agency has made arrangements for special facilities, on very favourable terms, to be afforded to approved purchasers for the advance of part of the premium for any suitable practice or partnership. Full details on application.

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BEWARE of Bovine Tuberculosis!

Read this extract from the report of the Medical Research Council

Extracts from

"TUBERCULOUS DISEASE IN CHILDREN"

(Medical Research Council Report, Special Report Series No. 172, 1932, Blacklock)

"All the cases under one year of age with intestinal ulcers had been fed on cow's milk."

"Babies who were breast-fed for nine months or till death, if that occurred before that time, suffered less from abdominal tuberculosis than infants fed on cow's milk. This was particularly noticeable in the first year of life, and also to a lesser extent in the second."

"The greatest number of primary abdominal lesions were found in the second year of life, that is, at the period when children are consuming large amounts of raw milk."

"In infants in the first year of life only one human and no bovine infections were found in babies breast-fed for nine months or till death, if this occurred earlier, but in those fed on cow's milk, two human and fourteen bovine infections were found."

"The high incidence of the bovine type of infection in the abdominal cases is doubtless due to the ingestion of infected milk, as there was a greater incidence of this type of infection in bottle-fed babies and also for the six months to two year age-groups, when the children were consuming large amounts of milk."

"The highest percentage of infections with bovine strains occurred in the second year of life, that is, at the period when children consume large amounts of raw milk."

★ **It is impossible to ignore the significance of this extract from an official publication. Useful work is being done towards decreasing the risk to infants presented by the use of raw milk. But the keenest investigators themselves must admit that their goal is not yet reached.**

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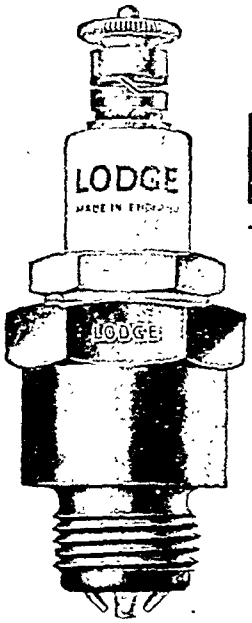

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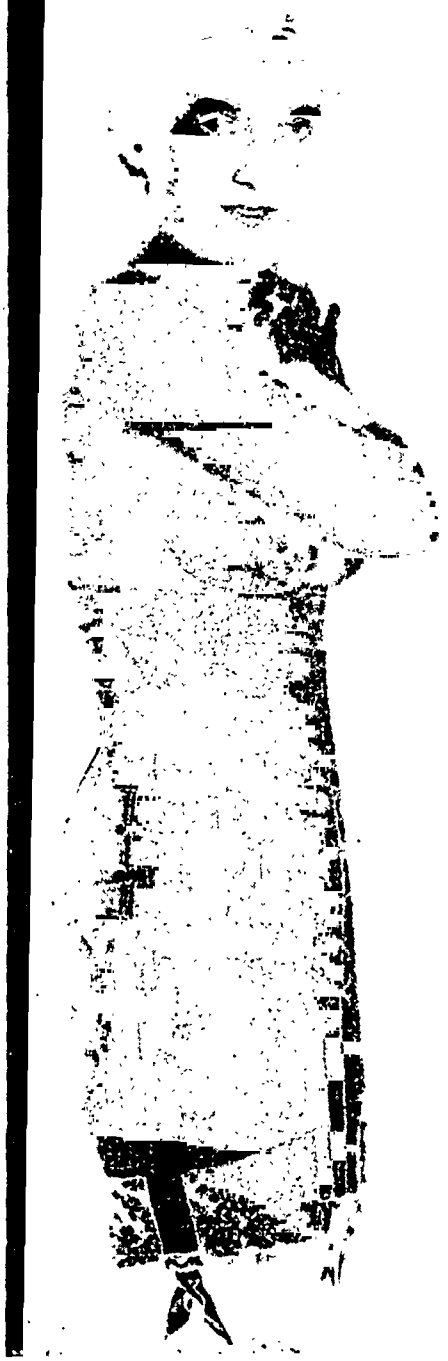

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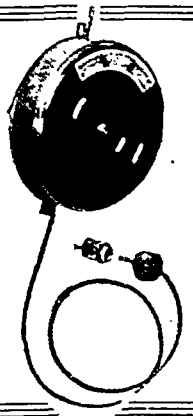

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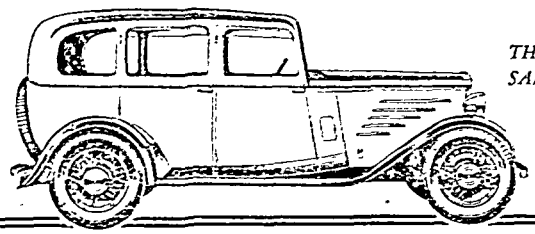

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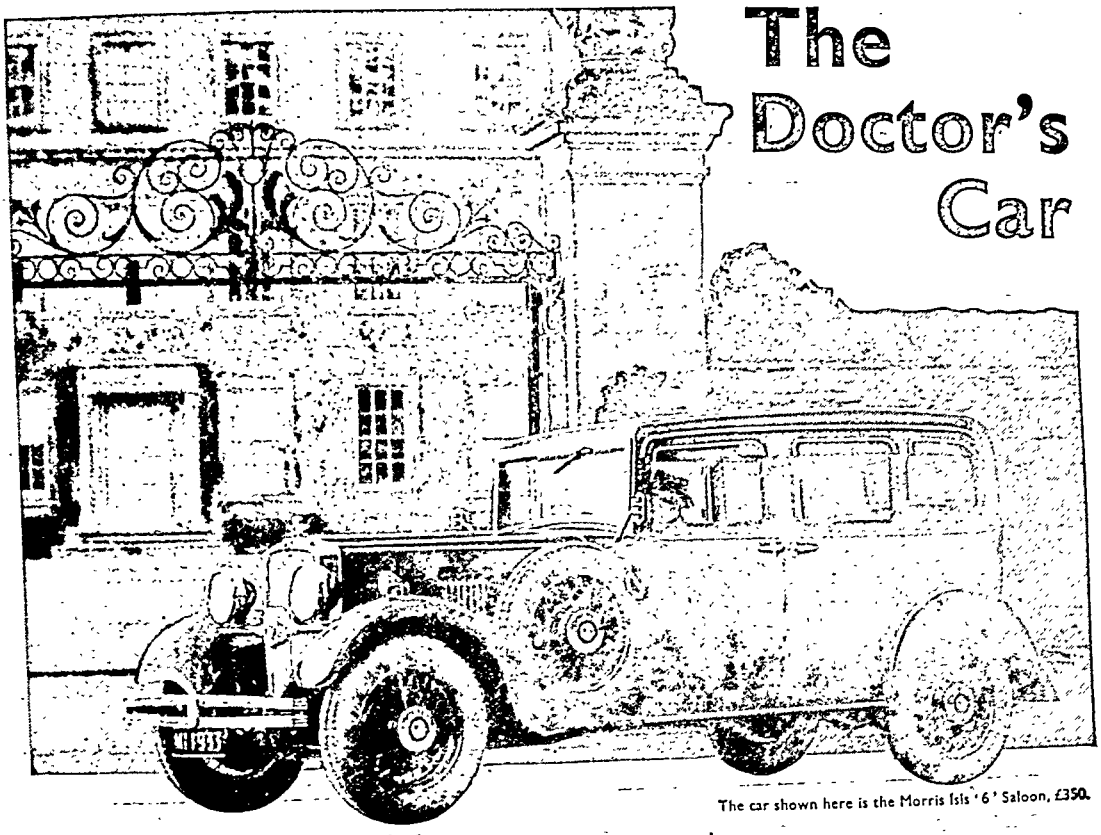

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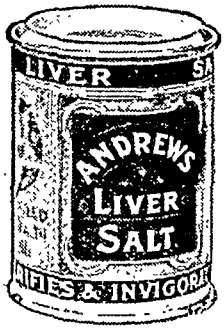

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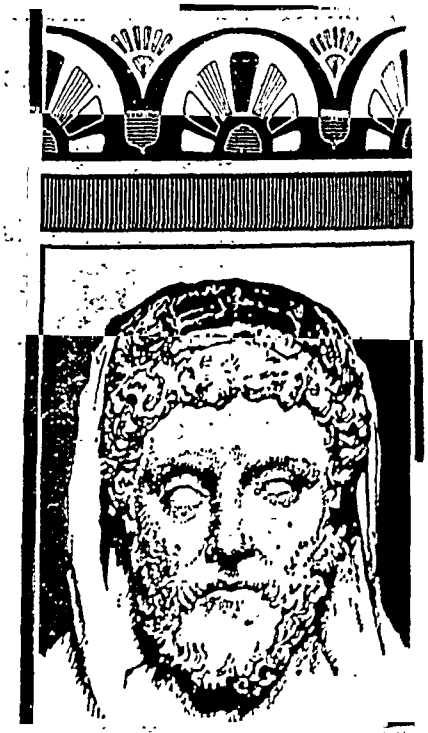

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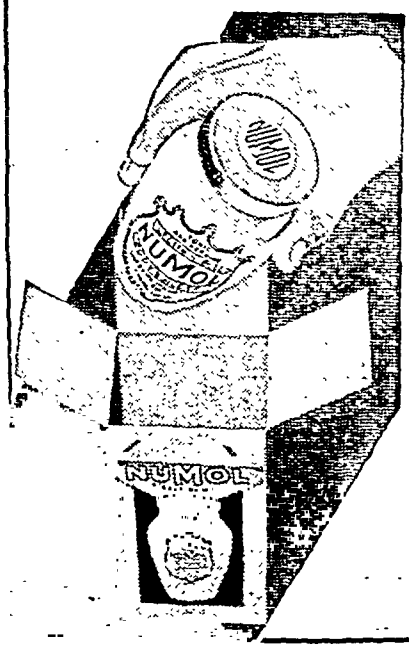

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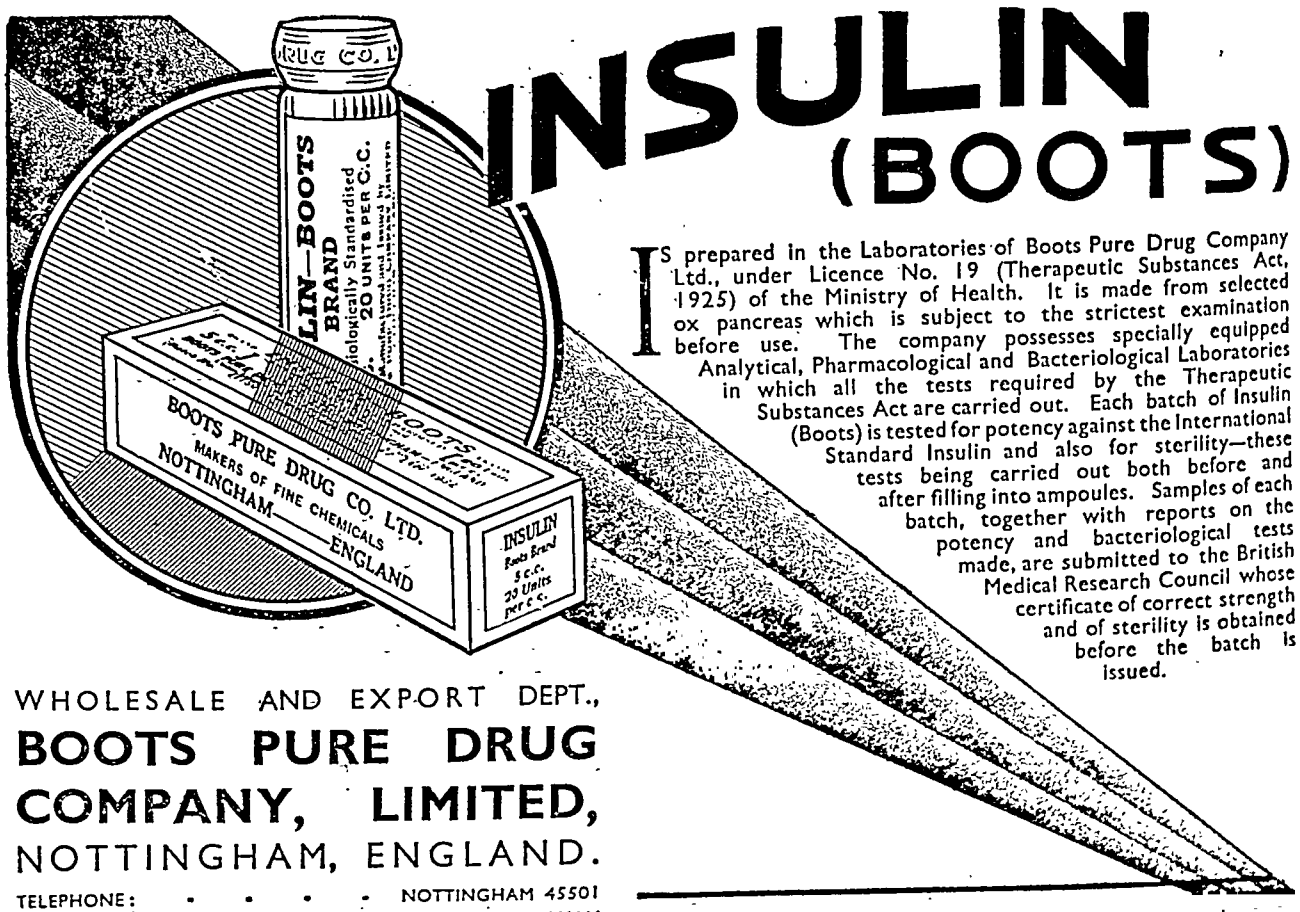

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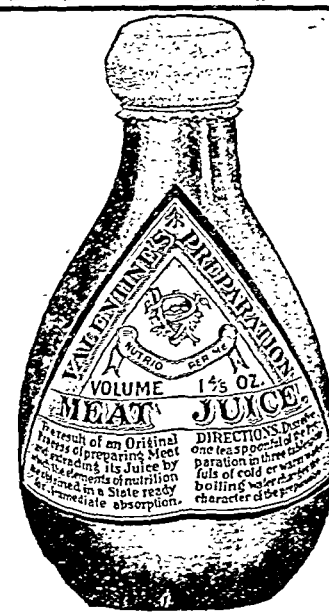

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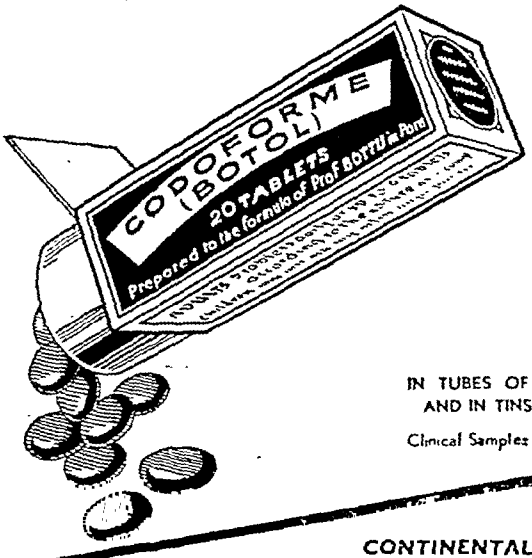

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Prepared by a new process which enables SOLID BROMOFORM to be combined with CODEINE

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The presence of the oil cannot be detected.

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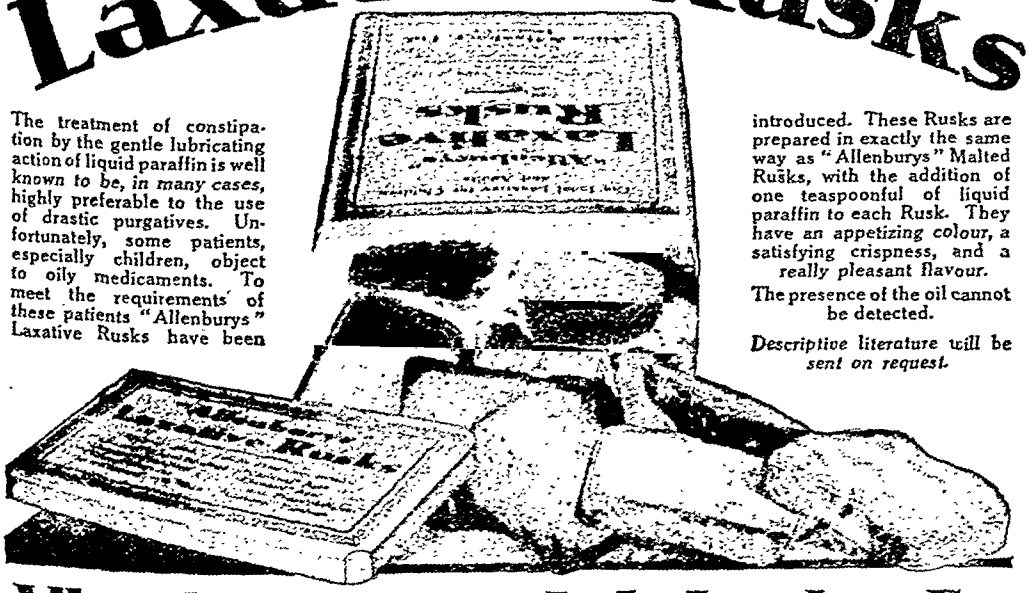

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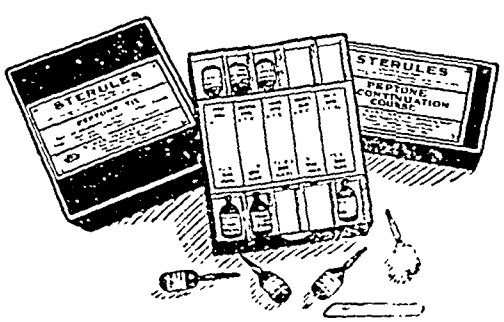

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which strengthens the glandular secretions of the organs.

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which regulates the secretion of the bile.

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which rehydrates the contents of the intestines.

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which reduce bacterial action of the intestines.

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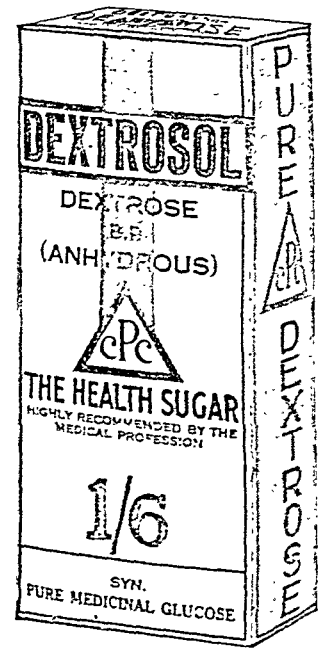

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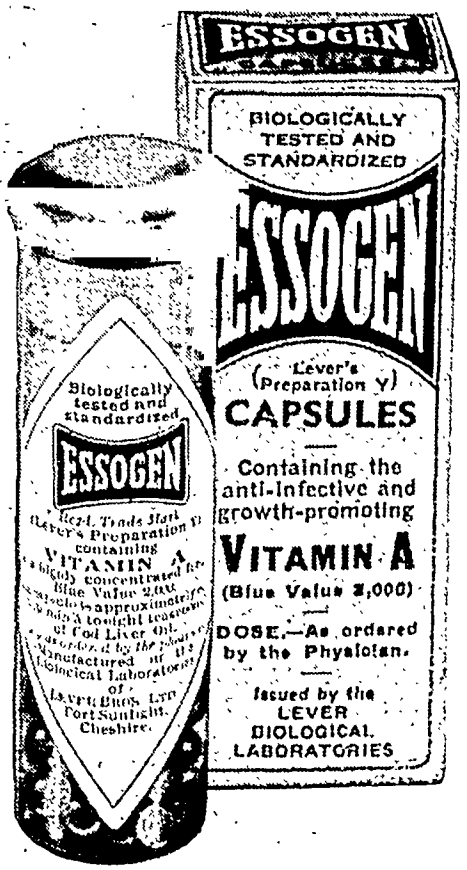

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DETOXICATED ANTI-CORYZA VACCINE. This Vaccine has been used with great success for several years. Its outstanding feature is the absence of reaction, which makes it especially useful for hyper-sensitive patients.

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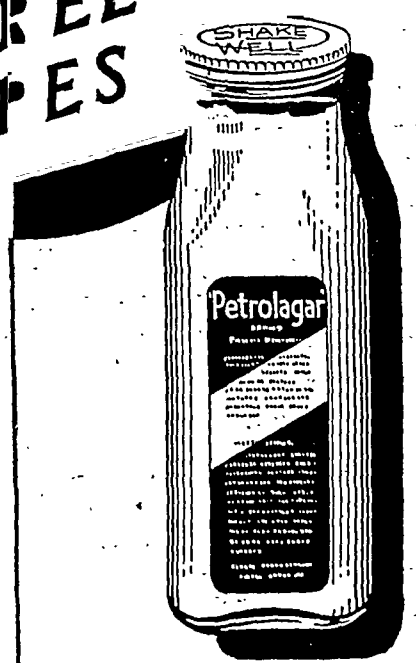

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For the convenience of doctors and to suit the requirements and indications in any specialised treatment of constipation, 'Petrolagar' is prepared in three types.

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If you have not clinically tested all varieties we will be pleased to send you specimens on request.

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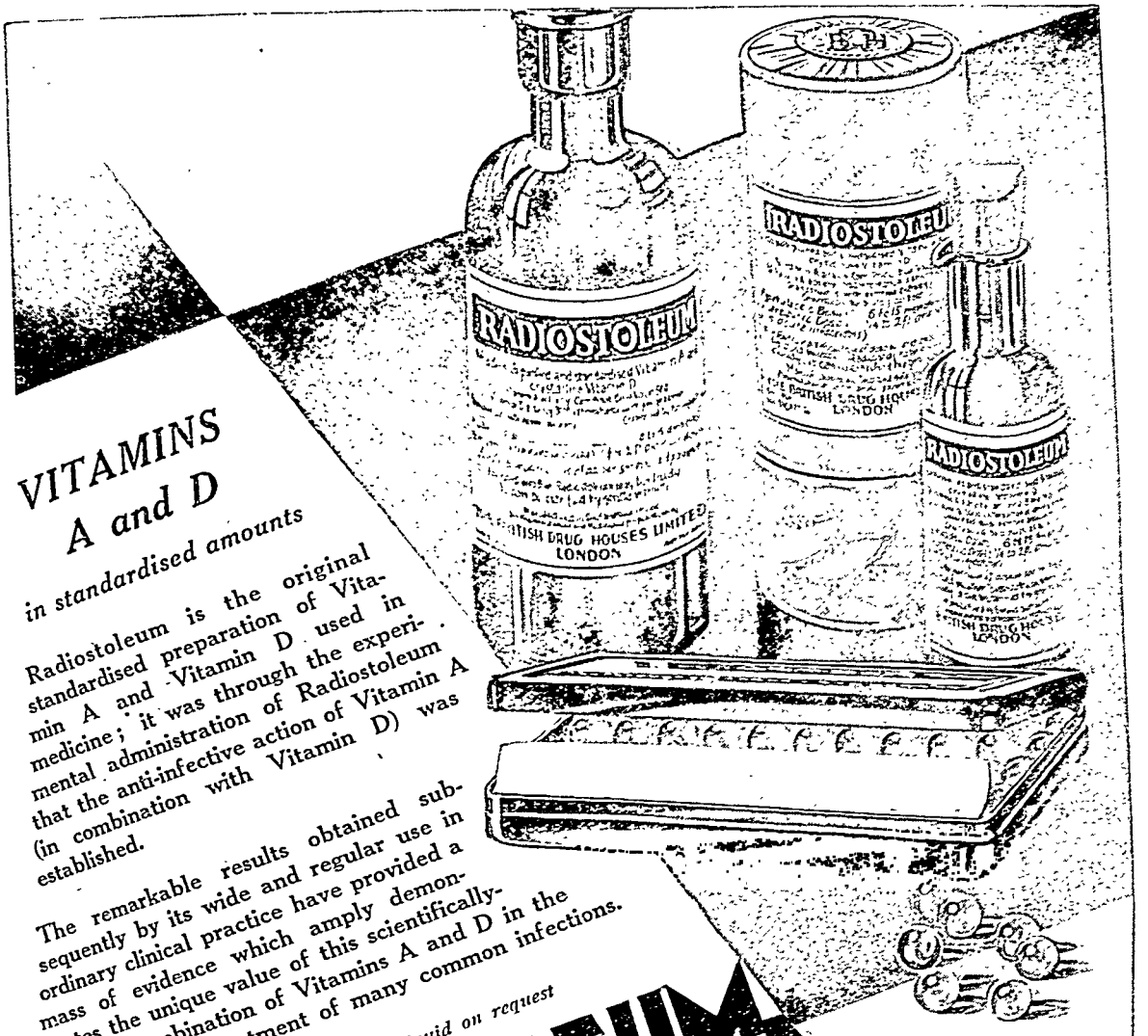

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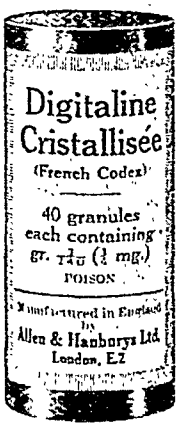
gr. $\frac{1}{240}$ ($\frac{1}{4}$ mg.)



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Digitalin Granules, "A. & H.," a British preparation, consist of the *Digitaline cristallisée* of the French Pharmacopœia. This substance is the most active principle of digitalis leaves, and, because of its reputation for uniform activity, it has long been popular, particularly on the Continent. Its use is recommended by high authority in cases where galenical preparations of digitalis have failed.

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In bottles at 2/-, 3/6, 6/6 and 12/-

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COMPOSITION:
Quinine Phosphate
1½ gr.
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Nux Vomica Alkaloids
equal to Strychnine 1/6 gr.
"Bynin" Liquid Malt
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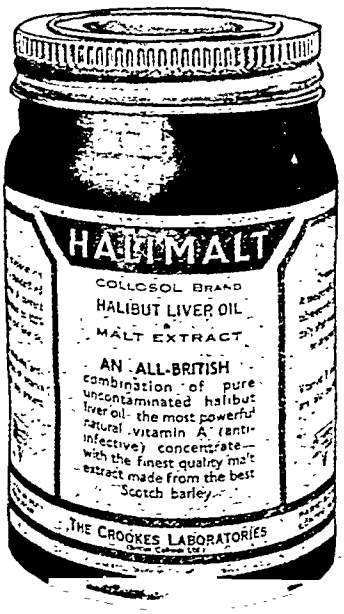
Capsules (3 minim). Bottles 25 2/6 Bottles 100 8/6



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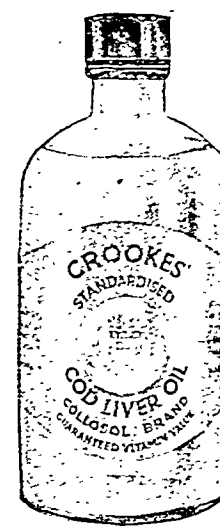

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For TREATMENT a mixed vaccine, including those organisms most likely to complicate the disease in its later stages, is recommended.

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Vitad (cod liver oil concentrate)
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FROM its origination 30 years ago "ROBOLEINE" was relatively rich in the then unidentified vitamins. It was not possible, however, to increase the Vitamin content by adjustments of the ingredients without upsetting the assimilability of the product as proved by clinical trial. Recourse was therefore had to Vitad, the unsaponifiable fraction of Cod Liver Oil. With this solitary addition, the "ROBOLEINE" of 30 years ago is the "ROBOLEINE" of to-day, a product the claims for which have been substantiated by the most severe test—results.

The value of the formula is obvious. The secret of the outstanding properties of "ROBOLEINE" lies in the process of manufacture, wherein the various ingredients are not devitalised.

We have only recently received two remarkable reports on the use of "ROBOLEINE":—

78/31 It was given in a case of puerperal fever (temp. 104/6°, pulse 160) in which there had been severe haemorrhage at parturition. Teaspoonful doses were given thrice daily, as an adjunct to the full diet treatment. Recovery has been most rapid, in spite of a pronounced anaemia at the outbreak.

The second case (the son of a Medical Practitioner) will be of interest. We quote the father's words:—

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Indications:—**Debility, Malnutrition, Anaemia, and Sleeplessness. Invaluable in Rickets, Tuberculosis, and as a general prophylactic.**

"ROBOLEINE" is stocked by all chemists in jars at 2/9 and 6/9, and we shall be pleased to send samples to members of the medical profession.

Oppenheimer Son & Co. Ltd.

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Anti-scorbutic vitamin C in adequate quantity is essential to infant health. This is the least stable of the vitamins: it is readily destroyed by heat and oxidation. The nursing mother may provide a sufficient supply in her milk, but broadly, all infants, whether breast-fed or hand-fed, require to be given daily doses of fruit juice rich in vitamin C.

■ ■ ■ ■

Exact present-day knowledge of deficiency diseases and their causes has clarified the position in regard to scurvy. It is sufficient to say that all infants, whether nursed or brought up on the "Allenburys" Modified Milk Foods, require additional vitamin C.

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This announcement regarding the 'Allenburys' Foods is No. 5 of a series which will be continued.

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Pernicious Anæmia

Burroughs Wellcome & Co. issue two palatable liver extracts. Both have given satisfactory results and can be administered over a long period without causing gastric or other disturbances.

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LIVER EXTRACT
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May be administered in soup or water.

In tubes, each containing an active selected fraction of an extract derived from half-a-pound of fresh liver.

3/- per tube
Boxes of 12 tubes, 32/5 per box

CONCENTRATED
LIQUID LIVER EXTRACT
(B. W. & CO.)

A preparation of whole liver. Specially prepared for those who prefer a liquid extract.

One fluid ounce is equal to half-a-pound of liver

Bottles containing 4 fl. oz., 6/10 each
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Date: Present day

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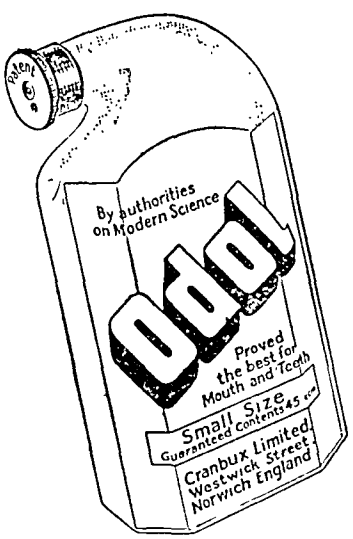
This is the opinion of an Essex Dentist who writes :—

"YOU will no doubt be pleased to know that I have found ODOL very satisfactory indeed wherever an antiseptic wash is needed, noting particularly the rapid healing that invariably follows, and I am very pleased that my attention was called to this preparation. I make it a regular thing now to syringe out all sockets after extraction with this preparation, and prescribe it to be used as a mouth wash afterwards. *I consider you are helping dentists very materially* in bringing about a more healthy condition of the oral cavity. I am always happy to recommend this as a perfect mouth wash."

This opinion is endorsed by many others received from Dental Practitioners in all parts of the Country . . .

After Extraction Odol *Cleanses · Heals · Soothes*

ODOL reduces post-operative pain. Patients appreciate its refreshing flavour and pleasant perfume.



ODOL USED DAILY DESTROYS MOUTH BACTERIA . . . PENETRATES AND DEODORISES EVERY CREVICE OF THE TEETH . . . REMAINS POTENT IN THE MOUTH FOUR HOURS AFTER USE. LONGER THAN ANY OTHER KNOWN MOUTH WASH.

Generous samples of ODOL preparations will be sent free on application to CRANBUX Ltd., Norwich.

(This offer does not apply to countries abroad or the I.F.S.)

odol

MOUTH WASH TOOTH PASTE
SOLID DENTIFRICE

MADE BY BRITISH LABOUR WITH BRITISH CAPITAL

Remarks
ON THE
RESULTS OF LUMBAR SYMPATHECTOMY IN THROMBO-ANGIITIS OBLITERANS

BY

E. D. TELFORD, B.CHIR., F.R.C.S.
PROFESSOR OF SYSTEMATIC SURGERY, UNIVERSITY OF MANCHESTER

AND

J. S. B. STOPFORD, M.D., F.R.S.
PROFESSOR OF ANATOMY, UNIVERSITY OF MANCHESTER

We have, since April, 1931, performed upwards of fifty operations on the autonomic nervous system by cervical-dorsal ganglionectomy or excision of the lumbar cords and ganglia. These operations have been done for a variety of conditions, chiefly thrombo-angiitis obliterans, Raynaud's disease, "acrocyanosis," anterior poliomyelitis, Hirschsprung's disease, and scleroderma. Of the patients treated we have, for the purpose of this communication, chosen the first sixteen cases of sympathectomy done for thrombo-angiitis obliterans, believing that a sufficient time has elapsed to warrant an opinion on the result of the operation. No case operated upon later than August, 1932, is included in this study.

The cases were all males, the average age being 47 years. Only three of the sixteen were of Jewish blood. The alleged predominance of Jews as victims of this disease is, as we have already pointed out, nothing more than a geographical accident. Of the sixteen, only two followed outdoor occupations in which they were exposed to the weather; the remainder were engaged in sheltered work within doors. Close questioning as to habits of pipe or cigarette smoking does not support the contention that this is a causal factor. The Wassermann reaction was negative in all but one case: syphilis has no relation to the disease. Routine observations on serum calcium and coagulability time have yielded nothing of interest. As regards duration of the disease, the patients show the extreme differences which exist in the rate of progress in individual cases. The longest history was one of twenty years, while in the shortest symptoms developed which became crippling within the brief space of eight months. The average interval between the onset of symptoms and operation was six and a half years.

SYMPTOMATOLOGY

It is not easy to obtain accurate histories of the onset. With most patients the first complaint is intermittent claudication, with sensations of severe pain, rigidity, or constriction about the calf of the leg. In the more intelligent patients, however, a history of initial coldness, usually in attacks, is given, and these patients describe the feet as "dead white" during the attacks. This is important, because it suggests that there is an early stage of the disease in which vasospasm is the chief feature. In most of the cases claudication is the first complaint, and the walking distance is progressively lowered to 150 or 200 yards. In one of the cases (No. 6) the limit was as low as five yards.

The cases were all bilateral, though as a rule more complaint was made of one leg than of the other. Some of the patients showed the condition which has been pointed out by other writers—namely, that the leg in which the disease is first evident may eventually prove the better limb of the two. This sequence is, however, by no means invariable. It is interesting to note that of the sixteen cases suffering from thrombo-angiitis obliterans in the lower extremities no fewer than seven made complaint of vascular disturbance in the hands. These disturbances were invariably of a spasmodic Raynaud type, and thrombosis was never clinically evident. It may be argued that these are simply instances of thrombo-angiitis obliterans in the upper limbs, but it is significant that one of our cases (No. 15) developed most classical symptoms of Raynaud's disease in both hands, three months after lumbar sympathectomy for thrombo-angiitis obliterans. In all cases the feet were very cold. The colour was usually slightly dusky owing to cyanosis, but in some cases the skin was dead white. In a few, a cadaveric appearance was observed in the feet after walking a short distance. The dependent position of the limb produced some degree of rubor in nearly all cases, whilst elevation commonly produced a distinct blanching of the foot. Most of the patients had discovered for themselves that the dependent position, together with cool air, gave them the most comfort, and were accustomed to try to get sleep by hanging the limbs out of bed.

Palpation of the pulse showed that in four of the patients *no pulse could be felt at any point below* Poupart's ligament, while in twelve a strong pulse was present in the common femoral artery, but this pulse ceased abruptly about the division of the artery into the superficial femoral and profunda arteries. One case showed perceptible pulses throughout both limbs, excepting that in both thighs the superficial femoral artery was silent and could be felt as a hard cord. A similar solid thickening of the arteries could be felt in most of the cases, whilst three patients showed a very evident deep thickening in the popliteal space, suggesting that the neuro-vascular packet had become one firm fibrous mass. The presence of a good, often thumping, pulse in the common femoral artery in twelve out of the sixteen cases is of interest, as it may help to throw light on the nervous origin of the disease. The point at which the pulse ceases is the point at which the sympathetic supply to the vessel has been shown to change over from a perivascular plexus to a supply which is derived from the peripheral nerves. This very usual preservation of the pulse in the common femoral artery thus comes into line with the preservation of the pulse in the subclavian and major portion of the axillary arteries of the upper extremity in those instances of cervical rib which give rise to vascular complications.

The common mode of onset of grave trouble in thrombo-angiitis obliterans is by an onychia rather than by gross massive gangrene. The onychia is usually of the great toe, and is no doubt related to the frequency of an ingrowing nail in this toe. Usually the nail has been removed under a mistaken diagnosis, whereupon the nail-bed is transformed into an intractable, callous, and painful ulcer, with no tendency to heal or to form a new nail. It sometimes happens, however, that the onychia proves the starting-point of a massive gangrene. Of the sixteen cases under review eight showed neither infection nor loss of tissue, four showed extensive gangrene of two or more toes, and in one instance of the heel as well, while four were admitted with callous ulcers of a toe following avulsion of its nail. In three of the sixteen cases the superficial thrombo-phlebitis which is occasionally found in thrombo-angiitis obliterans was present.

The various methods of treatment hitherto attempted have included such procedures as perivascular sympathectomy (with or without simultaneous ligature of the femoral vein), attacks upon the suprarenal gland, and injections of substances such as typhoid vaccine, acetylcholine, and muscle extract. Palliation by heat, electricity, diathermy, etc., have usually been tried. The only thing common to these is that they have utterly failed to prove of any permanent benefit in the treatment of the disease.

THE OPERATION

Owing to the fact that thrombo-angiitis obliterans contains an element of vasospasm which is, according to one view, the essential cause of the disease, and according to another merely a superadded factor, surgeons have suggested and tried various forms of sympathectomy. Having had under observation since 1924 a very large number of patients suffering from thrombo-angiitis obliterans we decided to try the effects of an extensive sympathectomy in a consecutive series of cases as they came under our observation. The operation consists in removing on both sides a section of the lumbar sympathetic cord which includes the second, third, and fourth lumbar ganglia. The approach is by the transperitoneal route, which has been admirably described by Adson. The only modification of this which we would suggest from our experience is that we have found it much easier to proceed on the right side by an incision of the posterior peritoneum lateral to the caecum and ascending colon than by the incision, as figured by Adson, between this portion of bowel and the inferior vena cava.

Owing to the invariably bilateral nature of the disease it is necessary to remove both the right and the left cords at the operation. This is, of course, easily done by a transperitoneal approach, but in five of the sixteen cases the route used was the extraperitoneal, restricted to one side. The reasons for this were that in three cases one limb had already been amputated in mid-thigh and in the other two the patients had very obese abdomens. In a very stout abdomen the transperitoneal route will be found difficult, but access to the lumbar cord can be easily obtained on either side behind the peritoneum by the use of an enlarged Abernethy incision.

Before operation we have, in all cases, made careful observations with an electric surface thermometer on the change in surface temperature of the limb induced by the spinal anaesthetic. The rise of temperature so obtained is a direct measure of the result which may be expected from the operation, and we find throughout our cases that this rise of temperature has corresponded very exactly with the quality of the post-operative result. For example, Case 14 complained of severe claudication at eighty yards. On clinical examination both legs were found to be affected by thrombo-angiitis obliterans, but the right was clearly worse than the left. Under the spinal anaesthetic the temperature on the right side rose by only 0.8° C., but on the left it rose 5° C. (These figures are, of course, much below those to be obtained in normal limbs. In healthy patients the rise of temperature in the feet under spinal anaesthesia may attain as much as 10° C.) When seen four months after the operation the man stated that he could walk any distance if he went slowly, but if he hurried he had some pain in the right calf. He regarded the left leg as completely well.

DETAILS AND RESULTS

In attempting to assess the clinical results we have grouped them as follows:

Good.—Free from pain and able to walk well.

Fair.—Improvement as regards pain and general condition, but little as regards working capacity.

Unsuccessful.—No improvement, or subsequently requiring amputation.

An analysis of the cases on these lines shows: good, 9; fair, 3; unsuccessful, 4.

There is one difficulty which arises in attempting to estimate the success of the operation. In these patients, although the disease is bilateral, one extremity is commonly in a much more damaged condition than its fellow. It may therefore happen that after sympathectomy no improvement is seen in the worst limb, but a decided gain is obtained in the better one. Case 13 is an example of this: this man's right leg was, on clinical examination, decidedly worse than the left. Ten weeks after sympathectomy it was necessary to amputate the right leg for gangrene, but the condition of the left leg is so far improved that it seems likely to give no further trouble. Such a case is, however, classed as "unsuccessful," since the operation failed in what is, after all, its main object—the recovery and preservation of the limbs.

We have paid particular attention to the question of the possible return of pulsation in arteries previously silent. In three of the cases we have observed that the pulse, after the operation, has extended a few inches lower down the limb than had been before observed. Beyond these, there is no evidence that the operation has resulted in any return of the pulse in previously silent arteries. Nor is it to be expected when one considers the firm fibrous tissue with which the lumen of these vessels is choked. Sympathectomy clearly produces its good results by dilating collateral vessels, and evidence that this has happened is afforded in several of our cases by a pulse in a dilated muscular branch in the popliteal space, and a distinct pulsation in a muscular branch of the superficial femoral artery about three inches above the patella. It is evident that the better results are given by the younger patients, in whom not only is the disease likely to be less advanced, but the younger arteries dilate more easily after sympathectomy than do those of the older patients.

Whilst cases of onychia have showed rapid healing, the outlook for sympathectomy when gangrene is actually present is not good. The operation is here hardly worth while, excepting that a sympathectomy may render it possible to amputate at a level lower than the customary above-the-knee operation. Many of these patients suffer from well-nigh intolerable "rest-pain," which causes a rapid depreciation of their general health. In such cases it is well worth while to consider a sympathectomy even if the vascular condition of the limb offers but scanty hope of success as regards function. The relief of pain after the sympathectomy is often complete, and we have found this one of the most striking and gratifying results of the operation. It is a point of great practical interest to know to what extent sympathectomy is likely to arrest the march of the disease. In a condition so chronic and so erratic in its progress as thrombo-angiitis obliterans, it will be very long before any opinion can be safely ventured on this point. All that we can say is that if the disease be, as we think it is, the result of vascular spasm, there is good ground to hope that sympathectomy will arrest its further progress. It is somewhat surprising that so extensive a removal of the lumbar sympathetic cord can be done without any sign of harmful effect. We have repeatedly cross-examined our patients in a search for any altered function or deleterious effect of the operation: none has been found, and, in fact, the only difference apparent is that the patients will often state that action of the bowels is more regular than before. It can only be surmised that a sufficient sympathetic supply to pelvic organs is provided by the fibres which descend from the intermesenteric plexus by the so-called middle root of the presacral nerve.

In view of the statements made by Hunter and Royle, we have made some observations on the muscular condition of sympathectomized limbs; it is quite evident that when judged by ordinary clinical and functional tests these limbs show not the slightest difference from the normal.

Thus we believe from our experience that, in most cases of thrombo-angiitis obliterans, sympathectomy is well worth while, and should be done in all cases which show some improvement in circulation (as measured by surface temperature) under spinal anaesthesia. It is quite plain

that in the earlier cases in which thrombosis is not excessive the operation can do much good, and in the more advanced cases the relief of pain which follows may, of itself, fully justify the intervention. We think that sympathectomy will take an established place in the treatment of thrombo-angiitis obliterans. The operation would appear at present to be passing through a phase which is common to the history of many now well-established procedures. These, in their earlier days, had to justify themselves in advanced and seriously complicated cases. They reached their full achievement only when the cases came earlier to the surgeon. Almost without exception our patients have been sent to us when all other forms of treatment have been tried and found wanting. If, then, the results from such material can be described as encouraging, they will be infinitely better when the operation is not regarded as a last resource, but is offered to the patient as soon as the diagnosis is definitely made.

SUMMARY OF CASES

1. M. B., aged 45 years, joiner. History of fifteen years. No pulse felt in either leg, excepting the common femoral, which is normal on right, but very weak on left. Claudication of both legs at 300 yards. Severe rest-pain. A large sloughy ulcer immediately above left medial malleolus; this has been present for fourteen months. Operation: bilateral lumbar sympathectomy, January 13th, 1932. Temperature rose on right 3° C. and on left 1.4° C. The immediate result was very promising, and the ulcer was completely healed in six weeks. He returned to work, but still has claudication on exertion, though with a much longer interval than before. The scar of the ulcer occasionally breaks down. General condition much improved. Result classified as "fair."

2. A. B., aged 52 years, cabinet maker. History of twenty years, during which the following amputations have been done for gangrene: first right toe, 1914; fifth left toe, 1918; first left toe, 1923. On admission the second right toe showed a gangrenous ulcer, with protrusion of the distal phalanx. No pulse present in either leg, excepting common femoral. Severe rest-pain in right leg. Operation: extraperitoneal excision of right lumbar cord, August 23rd, 1932. The pain disappeared and the ulcer healed, with exfoliation of bone in six weeks. The local circulation was much improved. Result classified as "good."

3. S. B., aged 45 years, mechanic. History of two years. Left leg had been amputated through thigh three months before admission. Admitted with gangrene of two toes on remaining foot. No pulse felt anywhere in the limb. Operation: extraperitoneal excision of right lumbar cord, April 27th, 1931. There was some improvement in pain and in the gangrene, but three months later the limb was amputated owing to rapid spread of gangrene. Histological examination of the vessels of the limb showed the changes which are present in thrombo-angiitis obliterans. Result classified as "unsuccessful."

4. R. C. F., aged 46, clerk. History of two and a half years; claudication at 100 yards; no rest-pain. No pulse felt in left leg, but in right all pulses felt, though very feeble. Operation: transperitoneal excision right and left lumbar cords, March 3rd, 1932. Temperature rose on right 3.7° C. and on left 2.8° C. The after-history is completely satisfactory on right, less satisfactory on left. Claudication is still present, but is much less, and he has returned to work. Result classified as "fair."

5. H. G., aged 35 years, capmaker. History of two years; onychia first right toe during the last six months. Claudication marked; and no pulse felt in either leg below the apex of Scarpa's triangle. Operation: transperitoneal excision right and left lumbar cords, November 5th, 1931. Temperature rose on right 1.6° C. and on left 3° C. The onychia was slow in healing, and the toe was amputated through the distal joint. Histological examination of the vessels of the toe showed the typical picture of thrombo-angiitis obliterans. Healing was prompt. He is now free from pain, walking well, and at work. Result classified as "good."

6. R. H. J., aged 53 years, salesman. History of one and a half years. Claudication extreme. He can only walk five yards, when he comes to a stop and both legs are rigid. All pulses are present, excepting the superficial femoral on each side. The artery can be felt on each side as a solid cord. Operation: transperitoneal excision of right and left lumbar cords, December 16th, 1931. He is now at work, standing or walking all day, and is apparently quite normal. Result classified as "good."

7. E. L., aged 62 years, salesman. History of three years. Claudication at 200 yards, and much rest-pain. Pulses entirely absent in both legs. No sign of atheroma. Operation: transperitoneal excision right and left cords, August 13th, 1932. Temperature rose on right 1.4° C. and on left 1.2° C. There was cessation of rest-pain and improvement in colour and condition of both feet. Now walks much better, but claudication is not entirely lost. Result classified as "fair."

8. J. L., aged 57 years, shopkeeper. History of four years. In September, 1930, left leg was amputated for gangrene of foot. On right side no pulse could be felt, excepting a slight one in the common femoral. Total gangrene of fourth toe. Operation: extraperitoneal excision of right lumbar cord, November 21st, 1931. There was a slight improvement for a time, but on January 5th, 1932, the limb was amputated for spreading gangrene. Result classified as "unsuccessful."

9. J. N., aged 57 years, printer. History five years. A very rapid onset, with severe claudication of both legs, so that he was entirely crippled. In January, 1932, the right leg was amputated for a rapid moist gangrene. Histological examination of the vessels of the limb showed the typical picture of thrombo-angiitis obliterans. On admission the left leg showed no pulse, excepting a good common femoral. There was severe rest-pain. Operation: extraperitoneal excision of left lumbar cord, April 28th, 1932. Temperature rose 4° C. Patient is now walking well with an artificial limb. The left leg gives neither pain nor trouble. Result classified as "good."

10. A. W. O., aged 59 years, salesman. History one year. Rapid onset of severe claudication. On admission, dry gangrene of anterior half, and heel, of left foot. No pulse perceptible in this limb, but very weak pulses present in right limb. Operation: transperitoneal excision right and left lumbar cords, February 6th, 1932. Temperature rose on right 0.6° C. and on left was unchanged. Right leg is much improved and remains well, but left was amputated six weeks afterwards. Result classified as "unsuccessful."

11. G. O., aged 46 years, spinner. He lost a portion of first toe of left foot in 1917, but has become rapidly worse in the last six months. Can walk only 100 yards owing to claudication of left calf. He makes no complaint of right leg. No pulse felt anywhere in left leg. All pulses present in right leg. Operation: transperitoneal excision right and left lumbar cords, March 18th, 1932. Temperature rose on right 3.1° C. and on left 1° C. This man can now work all day and walk four miles. Result classified as "good."

12. D. O., aged 25 years, engineer. History six years. Began with claudication of left calf, and soon afterwards of right calf. Nine months before admission onychia developed in first and second left toes. The nails were avulsed, but the ulcers have never healed. He spent seventeen weeks in bed under treatment, with no change. No perceptible pulse in either leg, excepting a good common femoral in both. Operation: transperitoneal excision right and left lumbar cords, August 23rd, 1932. Temperature rose on right 1.6° C. and on left 3.4° C. Both feet are now warm and of good colour. All pain disappeared immediately after the operation. The ulcers were healed in three weeks. Result classified as "good."

13. V. S., aged 37 years, clerk. History eleven years. Gradual deterioration, with claudication in both legs. Severe rest-pain. No pulses felt in either leg, excepting a weak one in Scarpa's triangle on left side. Operation: transperitoneal excision right and left lumbar cords, November 29th, 1931. There was only slight improvement in the condition of the leg. Pain continued severe in right leg. Ultimately the left leg did very well, and lost all pain, but the right leg was amputated for gangrenous ulcers in October, 1932. Histological examination showed the changes of thrombo-angiitis obliterans to a very advanced degree. Result classified as "unsuccessful."

14. R. T., aged 52 years, clerk. History of three years. Claudication began three months ago in right leg between

200 and 300 yards. The patient is very worn and tired from severe rest-pain. On the right side there is a feeble pulse to apex of Scarpa's triangle, but the femoral artery is felt as a solid cord below this point. On the left side all pulses present, but very weak. Operation: transperitoneal excision right and left lumbar cords, July 4th, 1932. Temperature rose on right 0.6° C. and on left 5° C. This man walks well and is free from pain, excepting a slight cramp of the right calf if he hurries. His general condition is greatly improved. Result classified as "good."

15. E. W., aged 31 years, chemist. History eight months. Began with claudication of left calf and thrombo-phlebitis of internal saphenous vein. All pulses in each leg are so feeble as to be doubtful, excepting the common femoral, which is strong on both sides. Operation: transperitoneal excision right and left lumbar cords, December 12th, 1931. Temperature rose on right 1.8° C. and on left 0.8° C. He is now free from pain, "can walk miles," and is playing cricket. He has, three months after the operation, developed Raynaud's disease of both hands. Result classified as "good."

16. J. W., aged 55 years, taxi-owner. History of sixteen years. Began with pain in left calf. Has got steadily worse and now has claudication at 200 yards. Has had onychia of first toe of left foot for two years. A callous ulcer has been present the whole of this time. There is much rest-pain. All pulses were perceptible in right leg, but no pulse was felt in left leg, excepting good common femoral. Operation: extraperitoneal excision of left lumbar cord, August 8th, 1932. Temperature rose on right 4° C. and on left 2.8° C. There was immediate improvement in the condition of the left foot. The ulcer healed quickly. Result classified as "good."

EFFECT OF PASSAGE THROUGH GLOSSINA ON THE RESISTANCE OF A TRYPARSAMIDE-FAST TRYPANOSOME*

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In previous papers (1930–2) we have shown that if laboratory animals infected with a pathogenic trypanosome are treated with appropriate doses of an aromatic arsenical or antimonial compound—for example, atoxyl, tryparsamide, arsacetin, neosalvarsan, stibenyl, etc.—strains possessing a high degree of "drug resistance" (or "drug fastness") are produced. These various resistant strains are similar in that each is resistant not only to the drug used to produce it, but also, broadly speaking, to all the other aromatic arsenical or antimonial compounds commonly employed in the therapy of trypanosomiasis, and also to the acridine dye, acriflavine; but each is just as sensitive to the non-aromatic compounds of arsenic (sodium arsenite) and antimony (tartar emetic) and to "Bayer 205" as is the normal parent strain. For example, an atoxyl-fast strain is resistant not only to atoxyl, but also to arsacetin, orsanine, tryparsamide, halarsol, salvarsan, stibenyl, and acriflavine; but it is normally sensitive to sodium arsenite, to tartar emetic, and to "Bayer 205." If the resistant strains are passaged through mice the resistant character is preserved unchanged for prolonged periods. Our atoxyl-fast strain has been passaged through a series of 280 mice since it was last exposed (in August, 1930) to the action of any drug, and it is still as resistant to atoxyl and other aromatic arsenicals as it was two and a half years ago.

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Contrary to the generally accepted view, we have found that the resistant character of a trypanosome is not modified by transference of the parasite from one vertebrate host to another. A strain of trypanosomes made resistant by treating infected mice or rabbits with atoxyl or tryparsamide retains its resistance when transferred to other hosts. In short, it appears that resistance to the aromatic arsenicals is a stable character, which is inherent in the trypanosomes themselves; it persists unchanged for prolonged periods when the parasite is passaged through laboratory animals, and it is in no way modified by changing the vertebrate host. Finally, no method has as yet been discovered whereby the acquired resistant character can be destroyed: our attempts to confirm Citron's (1930) statement that salvarsan resistance can be removed by sodium thiosulphate have been fruitless.

DRUG RESISTANCE OF TRYPANOSOMES IN MAN

Apart from its academic interest, the problem of drug resistance is a matter of immediate practical importance in so far as it probably has a very important bearing on the treatment of human trypanosomiasis. When once a strain of trypanosomes has attained to a certain degree of atoxyl- or tryparsamide-resistance it is impossible to cure any laboratory animal infected with that strain by the administration of even maximum doses of any aromatic compound of arsenic or antimony. If a resistant strain is developed in the course of arsenical treatment of a human case of trypanosomiasis (and as such strains can be produced in the treatment of infected mice, rats, guinea-pigs, or rabbits with equal facility there seems no reason to doubt that under suitable conditions they will likewise develop in man), then from analogy of the laboratory observations it will prove a hopeless task to attempt to cure such a patient with any aromatic arsenical or antimonial compound. An examination of the factors (size of dose, frequency and number of doses, etc.) which govern the production of drug resistance in trypanosomal infections of animals and man is consequently a matter of first importance.

That a drug-resistant strain of trypanosomes retains its resistant character, not only throughout the life of the host in which it first becomes resistant, but also throughout the lives of hundreds of other hosts through which it is passaged by means of direct inoculation of infected blood, is obviously a fact of considerable importance. It is, however, of relatively little practical significance in comparison with the question whether a drug-resistant strain of trypanosomes preserves its resistant character after it has passed through its cyclical development in its intermediate host—Glossina.

PERSISTENCE OF DRUG RESISTANCE IN INTERMEDIATE HOST

That this fundamental problem has received very little attention is probably due to two main reasons. In the first place, ever since Kleine in 1909 discovered that *T. brucei* underwent a biological development in *G. palpalis*, there has undoubtedly been a general consensus of opinion that one of the most important results of this process was to maintain constant the pathogenicity and other biological characters of the trypanosome; it was considered that the alternate passage through the insect and vertebrate hosts which takes place in nature prevents such changes in the trypanosome as are known to develop in the parasite when it is passaged through a series of laboratory animals by means of blood inoculation. In the second place, notwithstanding the great amount of work which has been devoted to the problem of drug resistance in trypanosomes since the fundamental discovery of the phenomenon by Franke and Rochl in 1907, we have had until recently but little precise knowledge of

the subject. Not only had no method been devised for assessing the degree of drug resistance exhibited by the trypanosome, but many false conceptions, based on inadequate experimental data—for example, that drug resistance was not merely a character of the trypanosome itself, but that in some unexplained way it was dependent on the host—had so complicated and confused the subject that the investigation of the fundamental question whether drug resistance survived the biological development of the trypanosome in Glossina seemed a well-nigh hopeless task.

The truth of these observations is demonstrated by a critical study of the three papers which have hitherto appeared dealing with the question whether the acquired character of drug resistance survives the passage of the trypanosome through its invertebrate host. Werbitzki and Gonder (1911), working in Ehrlich's laboratory, were the first to investigate the subject experimentally. The problem they set themselves was to determine whether an arsenophenylglycine-resistant strain of *T. brucei* would develop in the rat-louse (*Haematopinus spinulosus*), and, if so, whether or not it would remain arsenic-fast. It is recorded that the normal strain of *T. lewisi* used by the authors was sensitive to doses of 0.1 gram of arsenophenylglycine per kilo of rat, and that the resistant strain, which required two years for its production, withstood doses of 0.2 gram per kilo. In various experiments it was found that, when rats were inoculated with ground-up lice which had been infected with the resistant strain for at least sixteen days, they developed an infection which was normally sensitive to arsenophenylglycine. Gonder therefore concluded that the passage of a resistant strain through the louse *Haematopinus spinulosus* caused the disappearance of its resistant character.

Ehrlich (1911), in commenting on these observations, stated that not only were they of great scientific interest in so far as they touched the question of the transmission of acquired characters and the theory of mutation, but that they were also of great practical significance. On the one hand, the chemotherapeutic treatment of infectious diseases was becoming ever wider and of greater importance, and, on the other, the development of drug-resistant strains had been observed among the various pathogenic organisms as a consequence of such treatment. These facts had given rise to an uneasy feeling that the various diseases might undergo a fundamental change of an unfavourable nature whereby, finally, drug-resistant strains of parasites would be produced and propagated; thus infections in the future would prove intractable to chemicals which previously had shown themselves to be very active. In his opinion these observations of Gonder, that acquired characters are entirely or partly lost through the processes of fertilization and insect transmission, were well calculated to allay this disquietude.

There can be no doubt that these remarks of Ehrlich have exerted a profound influence, not only on scientific thought, but also on the practical measures adopted for the combat of sleeping sickness epidemics—for example, the French method of widespread atoxylization of the sick in the bush.

Apart from other considerations there is obviously one very serious criticism of Werbitzki and Gonder's work—namely, that the louse *Haematopinus spinulosus* is not the normal intermediate host of *T. lewisi*; in fact, the work of Nöller (1914) indicates that *T. lewisi* does not undergo a biological development in the louse as it does in its normal intermediate host, the flea.

Many years later, Reichenow and Regendanz (1927) repeated the work of Werbitzki and Gonder, but used the flea instead of the louse. These workers, contrary to Werbitzki and Gonder, reached the general conclusion that passage of the trypanosome through the flea exerted no influence one way or the other on its arsenic resistance. The chief difficulty in reaching any definite conclusions from Reichenow and Regendanz's work is that critical examination of their experimental data reveals the fact that there is no evidence that their so-called "resistant" strain of *T. lewisi* was substantially more resistant to arsenophenylglycine than was their normal strain—a difficulty which Reichenow and Regendanz frankly admit.

Duke (1927) is the only worker who has investigated the subject with one of the African pathogenic trypanosomes and Glossina. He used a strain of *T. brucei* from an antelope shot on Damba Island. His experiments consisted in endeavouring to make the strain atoxyl-resistant by treating infected monkeys with small and increasing doses of the drug, and then, after passing the strain through Glossina, examining the resistance of the infection in monkeys infected from the fly. Duke reached the conclusion that the acquired character of resistance of a trypanosome to arsenic persists after cyclical passage of the strain through Glossina. Unfortunately the same criticism applies to Duke's experiments as to Reichenow and Regendanz's. In the first place, there is no evidence that the resistance of the strain to atoxyl had actually been increased before the tsetse were infected with it. In the second place, the strain was very sensitive to atoxyl after it had been passed through Glossina—in fact, since such small doses as 0.02 gram and 0.025 gram per kilo of atoxyl cleared the blood of monkeys infected with the fly-transmitted strain, it would seem clear that the trypanosome was scarcely, if any, more resistant to atoxyl than it had been at the time of its isolation from the antelope. The belief that the *dosis efficax* of atoxyl for the original strain was 0.01 gram per kilo is, as the records show, quite unfounded, since no account was taken of the cumulative effect of repeated small doses.

AUTHORS' INVESTIGATIONS

In view of the great scientific and practical importance of the problem, and of the very unsatisfactory nature of previous attempts to solve it, we decided, if possible, to reinvestigate the subject. With this object we wrote to Dr. H. L. Duke of Uganda and to Dr. J. F. Corson of Tanganyika, asking them to be good enough to send by air mail regular supplies of pupae of *Glossina palpalis* and *Glossina morsitans* respectively. From Dr. Duke we have, during the past six months, received seven or eight consignments, each of about 500 pupae collected on the shores of Lake Victoria, and from Dr. Corson one large consignment of about 3,000 pupae of *G. morsitans* collected at Kikori. To both these gentlemen our thanks are due. Whilst several interesting facts have come to light in the course of our investigations, we propose in this preliminary communication to limit ourselves strictly to the main observations bearing on the question whether or not the resistance of a drug-fast trypanosome is modified by passage through Glossina.

Normal Strain

The trypanosome used was a strain of *T. brucei* obtained by Dr. A. R. D. Adams in South Ankole, Uganda, by exposing a dog to the bite of wild Glossina in April, 1931. This strain has since been maintained by passage through guinea-pigs, as is shown in Table I. The parasite is a typically polymorphic trypanosome, and exhibits numerous posterior nuclear forms. Its virulence for guinea-pigs, rats, and mice is similar to that of other recently isolated strains of *T. brucei* or *T. rhodesiense*: it kills guinea-pigs in eight to twelve weeks, and mice in four to eight weeks. Trypanosomes are usually to be found in considerable numbers in the peripheral blood of these animals throughout the course of the disease.

With the object of ascertaining the response of the normal parent strain to various arsenical compounds a number of mice and guinea-pigs were subinoculated from animals of the main-passage series—namely, guinea-pig 3B, and guinea-pigs 681E and 795D. In the present paper we shall confine

results of the initial infection that it would cause confusion to use the word " primary " for any other lesion.)

2. That the life of this lesion in its pure state is very short—a matter of a few days—and that by the end of that time its fate is determined. It either disappears, leaving a negligible scar, or else undergoes certain definite changes and certain unknown changes, becoming what I shall call an *intermediate lesion.*

3. That the life of the intermediate lesion is indeterminate, depending upon the diathetic condition of its host, his health at the time, and his environmental conditions. It either remains as an intermediate lesion, spreading by direct extension in all directions, or healing in one direction and spreading in another, or remaining dormant but unhealed, or else it heals decisively. In its healing it may either form a fibrous or fibro-calcareous scar with no activity, or may contain somewhere in its interstices small areas of intermediate lesion.

4. That the intermediate lesion, healed as far as it may and in a non-progressive state, is a *tertiary lesion.*

5. That pure tertiary lesions do not spread. Apparently pure ones, if they do spread, do so very slowly, and then only by virtue of the intermediate elements that they contain.

6. That tertiary and intermediate lesions may become secondarily infected.

7. That spread of disease takes place in three ways: (*a*) By the appearance of a new, haematogenous, secondary lesion, which will behave in exactly the same way as its predecessor or predecessors. These new secondary lesions may occur time and time again. (*b*) By the spreading of an intermediate lesion by its direct extension of tissue infiltration and destruction. (*c*) By rapid bronchogenic spread, in terminal states, after haemoptysis, and under anaesthesia.

THE SECONDARY LESION

I have been fortunate enough to be able to study several of these at first hand, and can give this description. They may vary in size on the *x*-ray plate from that of a sixpenny-piece to that of the palm of the hand. They are often accompanied by no subjective constitutional disturbance at all, and the objective disturbance may be of the slightest. Alternatively, they may produce the objective and subjective symptoms of a slight " chill." Very occasionally they have an acute fulminating onset, with severe constitutional disturbance and such symptoms as pleurisy and blood-stained sputum, and closely simulate pneumonia. They usually produce no physical signs—this depends on their size and situation. The constitutional disturbance, if any, caused by their onset usually disappears within seven days. *These secondary lesions apparently have no prodromata.* They can occur in the seemingly healthy, or in patients with tertiary lesions during periods of complete stability as regards temperature, pulse, symptoms, and body weight. Presumably, if the core of tuberculosis in the centre of a secondary lesion is small, and if the patient's reaction to tuberculosis is good, complete healing takes place, with the subsidence of the allergic reaction. But if the core of tuberculosis is large, or the patient's resistance to tuberculosis is poor, as the allergic reaction subsides the core begins to enlarge by direct extension and the destruction of tissue. If this enlargement of the core takes place, the secondary lesion becomes an intermediate lesion. This core of tuberculosis is probably a lesion of the nature of the subacute miliary tubercle described by Blacklock,[1] and is *in the interstitial tissue of the lung.*

THE INTERMEDIATE LESION

This lesion has the property of spreading by direct extension. Its symptomatology will depend upon its size, its rate of spread, whether or no it erodes a patent bronchiole, whether or no it is secondarily infected, and upon the patient's personal reaction to tuberculosis. It may be quite symptomless, but if present its symptoms will be that of an inflammatory lung lesion and of a general toxaemia. Either factor may dominate the picture, or be objectively and subjectively absent, or both may contribute an equal moiety to the symptomatology. The symptoms of the general toxaemia, though subjectively absent, may often be detected by close clinical observation. But in the average case the symptoms from even a large intermediate lesion are very gradual in their appearance and increase ; they are illusive, easily ascribed to slight intercurrent ill-health, and very easily allayed for the time being by mild convalescent and tonic treatment. An intermediate lesion may pass on to a tertiary lesion without recognition and without treatment. The erosion of a patent bronchiole by an intermediate lesion is probably an important event, since it lays the lesion open to secondary infection, and distinctly alters its symptomatology. It is a *sine qua non* for haemoptysis, a very important symptom for forcing a diagnosis. Similarly, the proximity of the lesion to the lung surface, with the production of a secondary pleurisy, is an important feature. The physical signs of an intermediate lesion depend upon its size, its density, and its proximity to the surface of the lung.

THE TERTIARY LESION

This lesion is irremovable and unalterable in size, as a result of routine treatment. Its anatomical characteristics can only be altered by the experience of fibrosis, or by collapse methods. It can only spread by the agency of pockets of intermediate lesion that it may contain. *Its symptoms depend upon its size, its density,* its position, its cavitation, and its secondary infection. *Per se* it is not dangerous to life, nor does it affect the general health. If it contains no elements of intermediate lesion it will slowly contract, and if situated in the upper lobe will move slowly apexwards. Fishberg's " apical types " are those which in previous years have had secondary and intermediate lesions in the lower parts of the upper lobe. These have passed safely into pure tertiary lesions without recognition, and no fresh secondary lesions have been added to them. His subclavicular types are those in which either the disease has been diagnosed in an earlier stage of its life history or there have been fresh intermediate lesions.

RELAPSE

Relapse in those cases which have really made a good response to treatment—that is, those in which the lesions have become pure tertiary ones—is caused by the appearance of a fresh secondary lesion. The symptoms of the relapse will probably be delayed until this has become an intermediate lesion and is actively spreading. Other relapses are not *real* relapses; they are due to spreading intermediate elements in a tertiary lesion for which insufficient treatment has been given, or to a superimposed secondary infection in a pure tertiary lesion.

TREATMENT

How shall this conception affect our routine treatment of chronic pulmonary tuberculosis? It calls, first, for a more intensive use of *x* rays in all types of mild disease, in an endeavour to catch the secondary or the early intermediate lesion before it has spread too far—for both are then readily curable. It also calls for the more accurate assessment of each case by the use of serial *x* rays to study their immediate progress. The secondary and intermediate lesions call for the drastic application of rest—by the use of which alone, and without any other help,

they can often be cured. The sanatorium (in its accepted meaning) should not be regarded as a place of treatment for these lesions, but as a place where the patient may be recruited after the deleterious effects of rest, and as a place for skilled observation as to the efficacy of that rest treatment. During the time that they are regaining physiological efficiency one should make certain either that the secondary lesion has disappeared or that the intermediate lesion has turned into a pure tertiary one. During a properly handled sanatorium course it should be apparent whether the previous treatment has been efficacious or not, but the sanatorium should have no other function in these cases apart from its educative influence. *It affords no specific protection for the future.*

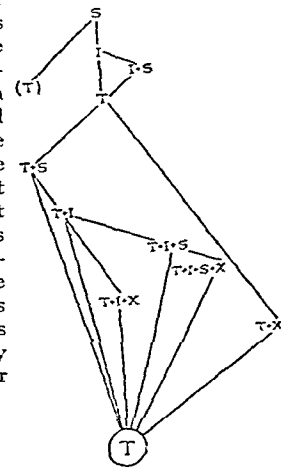
The pure tertiary lesion, or the cavitated, or the secondarily infected tertiary lesion is in a class by itself so far as treatment is concerned. In the first place, close observation will be necessary to prove that it does not contain an appreciable intermediate element. The sanatorium is probably the best type of institution for this observation, which in the average case should not take more than six weeks. This point settled, the case must be treated on its merits. If there is no appreciable intermediate element it is essentially the case for home, hospital, symptomatic, or climatic treatment. It is the one in which the patient must be taught to realize his limitations. *Neither rest, nor sanatorium treatment as we know it, will have any effect upon the lesion at all,* and if sanatorium treatment is given it should only be regarded strictly as a convalescence. The latter can be much more cheaply and pleasantly exhibited if the ponderous sanatorium machine is not used.

The case with tertiary lesions containing large intermediate elements (or in addition to which fresh secondary or intermediate lesions have appeared) must be treated exactly as suggested for pure secondary or intermediate lesions, but unfortunately with less certainty. The shadows from the tertiary lesion may obscure those from the secondary or intermediate lesions in the *x*-ray, leaving some doubt as to the efficacy of rest, and thus necessitating longer observation and treatment. Further, there will be the symptoms from the tertiary lesions to be estimated and treated. For these the sanatorium period is much more important, *but, however successful, it is in no way protective for the future.* These considerations suggest that our conceptions of the essentials of sanatorium treatment must be modified.

Collapse therapy will still play its important part. It will be used for those intermediate lesion cases that do not respond adequately to routine methods, for those cases with tertiary lesions where it is judged that compression will remove dangerous or unpleasant symptoms, and also for those who cannot, or will not, undergo routine treatment. But collapse therapy, although it may prevent the spread of intermediate elements recognized, or unrecognized, in a dense tertiary lesion, *will afford no protection against the recurrence of fresh secondary lesions in the future.*

THE PROBLEM OF RECURRENCE

This problem of recurrence and its prevention is the vital one. We seem in great measure to have solved the problem of the treatment of the acutely active case, or rather of the acutely active stage of the chronic disease, but the solution of the problem of preventing reactivity has so far eluded us. Why does one patient convert his secondary to an infinitely small tertiary lesion, or his intermediate into a pure symptomless tertiary and have no recurrence, while another will make an equally good immediate response and yet get recurrence after recurrence? Experience shows that meticulous "after-care" may help to some extent, but I think that the chief value of this lies in the complete eradication of the intermediate elements from the tertiary lesions (a grave source of danger), rather than in the prevention of fresh secondary lesions. We have all experienced these disappointing occurrences in our most carefully cherished patients. The reason for the difference in behaviour must be a personal and a diathetical one. Why does one man get a gross reaction to cow-pox inoculation and another not? The one is more allergic or sensitive than the other to that particular virus. The problem is therefore one of individual sensitiveness to tuberculosis. Granted this, the only way in which we can hope to protect our patients against these fatal recurrences of their disease is by rendering them insensitive. We cannot do this with any degree of safety by means of the living virus. It must therefore be attempted with a dead virus—with a tubercle bacillus vaccine. We know that we can render them insensitive to a tubercle bacillus vaccine, and the analogy of typhoid and small-pox inoculation does extend a hope to us. We cannot approach our patients in the same care-free manner and with the same sledgehammer doses that we use for typhoid protection. They are actually suffering from the disease, against fresh inroads of which we wish to protect them. The immunizing agent may therefore be dangerous, and we must use it cautiously. It will not be necessary to immunize every case. I have said above that if secondary lesions are going to occur they usually make their appearance within two years of one another. Cases whose *x*-rays and histories demonstrate their prolonged freedom from secondary lesions would be exempt. Experience teaches us that vaccine therapy has failed almost completely as a curative agent in infectious disease, but has been very successful as a protective agent. Surely if we regard the tubercle bacillus vaccine in this light there is a distinct hope that it may at last find a real place in our scheme of treatment.



A diagrammatic representation of the new classification of chronic pulmonary tuberculosis demanded by this hypothesis. S, secondary lesion; I, intermediate lesion; T, tertiary lesion; X, secondary non-tuberculous infection.

CONCLUSION

We must realize that symptomatology and physical signs are no guide at all to the state and behaviour of a secondary or an intermediate lesion in their early and curable stages. This is an essential fact, and without its realization all our efforts at treatment will fail. Further, if we cannot prevent the recurrence of secondary lesions, we must again admit almost a 50 per cent. failure. Therefore let us no longer label our patients as tuberculous and non-tuberculous—and the tuberculous as active or inactive, advanced or incipient—and herd the large proportion into a sanatorium, hoping for the best when we know that for the majority the worst will occur. The reactionary continuance of such a policy should hold us up to ridicule; it wastes public money, and imposes hardships on our patients to no useful end.

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PERNICIOUS ANAEMIA WITH RETURN OF HYDROCHLORIC ACID AND FERMENTS AFTER TREATMENT

BY

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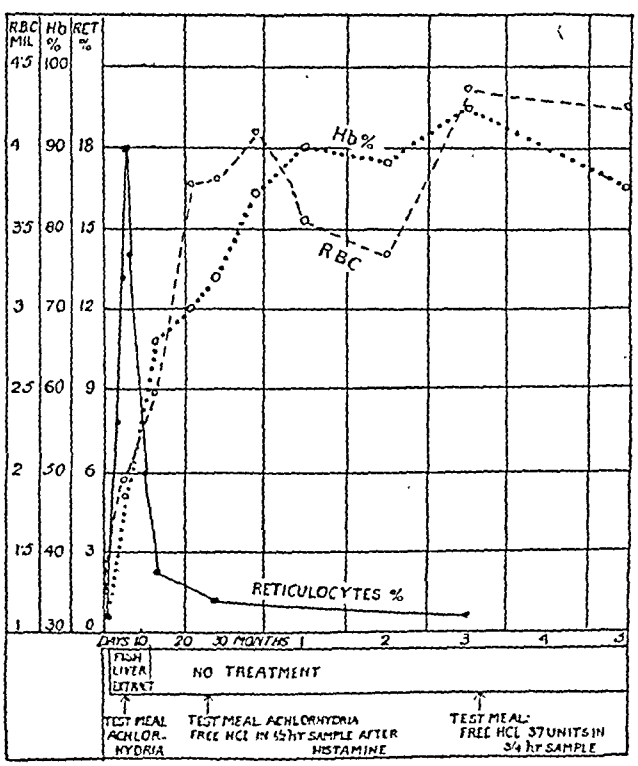
An absence of free hydrochloric acid in the gastric contents is one of the most constant features of pernicious anaemia, since achlorhydria is present in approximately 99 per cent. of cases. While it is true that an absence of the intrinsic factor (Castle)[1] and a lack of hydrochloric acid do not invariably accompany one another, it may be safely said that the finding of even a trace of free hydrochloric acid is sufficient to warrant the most serious doubts in regard to the diagnosis of pernicious anaemia. Equally important, as indicating the primary part played by the secretion of the stomach in the aetiology of pernicious anaemia, is the well-recognized fact that no matter how complete or how prolonged a remission may be, the secretion of hydrochloric acid fails to return. This has been clearly demonstrated in hundreds of cases of pernicious anaemia by workers in every country. The case reported below, in which all the cardinal features of pernicious anaemia were present, regained the power of secreting normal gastric juice. The rarity[2 3] of this occurrence would appear to warrant the publication of an individual case.

CASE RECORD

The patient, a male aged 39, had for the past ten years been a tea planter in India. His mode of life in the Tropics was unsatisfactory in every way, especially in regard to the constant abuse of alcohol and tobacco. His health was further undermined by repeated attacks of malaria. He returned to this country on sick leave some six months before he came under my charge. During this period he suffered from



weakness and general ill-health, and was easily tired. A blood count made on one occasion gave the following results: February 16th, 1932—red blood cells, 2,190,000; haemoglobin, 52 per cent.; white blood cells, 5,400.

Despite the fact that an anaemia of a macrocytic type was already present, his medical adviser was influenced, by the history of malaria and by the finding of an enlarged spleen, to consider that the blood condition was a post-malarial anaemia. No parasites were found in the routine examination of blood films, but their absence could be explained by the quinine therapy which had been given. Large doses of iron and ammonium citrate over many weeks failed to produce any clinical or haematological improvement whatsoever. Accordingly the patient was referred to me for investigation on June 16th, 1932.

State on Examination and Treatment

The patient complained of weakness, lack of appetite, and breathlessness on slight effort. For more than a year his health had been failing. Nutrition was satisfactory. Skin and mucous membranes were extremely pale, with a definite icteric tint. Cardiovascular system—apex 3¼ inches from mid-line in fourth interspace. Pulse rate 90. Haemic murmurs present at all areas. Urinary system—no albumin or bile, urobilin++. Respiratory and nervous systems satisfactory. Haematopoietic system—lymphatic glands not enlarged. Liver four fingerbreadths below costal margin in the nipple line. Spleen, hard and easily palpable four fingerbreadths below the costal margin.

Blood count on June 16th, 1932: red blood cells, 1,250,000; haemoglobin, 30 per cent.; colour index, 1.2; white blood cells, 4,375; reticulocytes, 1 per cent.

There were five megaloblasts and four normoblasts present per 100 white cells. Megalocytosis and anisocytosis were prominent features of the blood picture. Cells were oval in outline, and hyperchromic. The Price-Jones curve showed the typical picture—namely, a broadening of the base and a shift of the peak to the right. The van den Bergh reaction was: direct—negative; indirect—positive. The icteric index was 8.

The patient was given two tubes daily of a fish-liver extract made in Aberdeen. A reticulocyte crisis started on the third day and reached 18 per cent. on the fifth day, returning to normal in twelve days. As soon as the reticulocyte crisis was well developed—that is, on the tenth day—fish-liver extract therapy was stopped. Apart from the usual hospital diet the patient received nothing further in the way of specific therapy (mammalian liver or liver extract, gastric tissue products, vitamin B preparations, etc.), or drug treatment (iron or arsenic), or gastric lavage. The remarkable potency of the remedy employed for this short period is evidenced by the doubling of the blood count in twelve days and the trebling of it in twenty-one. Minot stated in a recent paper that a gain of 2,500,000 red cells in a month represented the maximum increase which could be expected. In this case this result was obtained in three weeks. Thirty-three days after admission the patient left hospital with a blood count of 4,100,000 red cells and 85 per cent. haemoglobin. The liver and spleen had markedly diminished in size, and his general health and appearance were excellent.

Gastric Analysis

First Examination, June 18th, 1932.—The fractional test meal revealed a complete absence of acid and a low total acidity. Pepsin was absent from both the fasting juice and one hour sample (Fuld's method).[4]

Second Examination, July 9th, 1932.—Fractional test meal—free hydrochloric acid absent. Histamine 0.5 mg. was injected, and half an hour later a sample of gastric juice was obtained which contained free hydrochloric acid. The amount of acid was scarcely sufficient to be titratable, but Gunzberg's test was definitely positive. The post-histamine sample contained 4 units of pepsin.

Third Examination, October 27th, 1932.—Fractional test meal showed a normal gastric secretion—namely, thirty-seven units of free hydrochloric acid in the three-quarter and one hour samples, four units of pepsin in the fasting juice, and sixteen in the one hour sample.

In view of the fact that the stomach had regained its power to secrete hydrochloric acid and pepsin, it was not unreasonable to assume that the intrinsic factor (Castle) was also being produced—in which case the pernicious anaemia might be held to be cured, an occurrence of the greatest rarity. Accordingly the patient was informed of our opinion, and it was explained to him that, provided he gave up alcohol and led a physiological life, he need take neither

liver, liver extract, nor any specific remedy for pernicious anaemia. This he has done for the past six months, and without any treatment whatsoever he has maintained perfect health, with a blood count around 4,500,000 red blood cells, and a haemoglobin percentage of 90. When last examined (December 21st, 1932) both patient and doctor were entirely satisfied with the result.

DISCUSSION

It can be safely said that the blood picture present in this case contains every feature on which the diagnosis of Addison's pernicious anaemia rests, and there can be little doubt that, had this patient suffered from the malady previous to 1926, he would have died. The megaloblastic degeneration of the bone marrow present previous to treatment can be explained as a consequence of the gradual and progressive loss of the ability of the stomach to secrete the intrinsic factor (Castle) which is essential for the continuation of normal blood formation. In idiopathic pernicious anaemia the cause of this failure in secretion is not properly understood, but in any hypothesis submitted it would be necessary to consider the constitutional factor as of great importance. In the case reported above, which can be classified as *acquired* pernicious anaemia, the deficiency was probably due to a gastritis conditioned by the abuse of alcohol and tobacco, together with the deleterious effects of malarial toxaemia. An inquiry into the patient's dietary during the past year clearly indicates that, consequent on the loss of appetite resulting from the gastritis, the dietary became progressively more and more defective in protein intake and in foodstuffs rich in the extrinsic factor of Castle. A consideration of these points throws some light on the natural history of the disease, and the mechanism of the remissions which were of such common occurrence in idiopathic pernicious anaemia previous to the inception of liver therapy in 1926. In the majority of cases of pernicious anaemia the onset is insidious, and many months elapse before the blood level reaches the stage at which symptoms are of sufficient severity to demand medical advice. At any period previous to the complete and final failure of gastric secretion a temporary improvement in the secretion of the intrinsic factor may occur, consequent on causes unknown or known (drug therapy, or even rest). In addition, provided any intrinsic factor is present, the temporary ingestion of foodstuffs rich in the extrinsic factor will also be effective in starting a remission. The reduction of the anoxaemia and the improvement of the general circulation, which follow a rise in the blood level, will in turn benefit the secretory mechanism of the stomach, with a further increase in production of the intrinsic factor. This has actually been shown to be the case in one of Castle's patients, and I have repeatedly seen the stomach regain its secretory properties in regard to hydrochloric acid and pepsin in cases of simple achlorhydric anaemia of ten years' standing or longer, in which the blood level had been brought up to normal by treatment with massive doses of iron. In idiopathic pernicious anaemia no known method exists by which a progressive loss of the secretory power of the stomach can be stopped, and in consequence remissions are invariably followed by relapses, until death finally ensues. Where a definite cause can be found and then removed, as in the present case, a complete cure may be expected to result.

SUMMARY

1. A case of pernicious anaemia is described in which the stomach regained the power of secreting hydrochloric acid and pepsin, and in all probability the intrinsic factor of Castle.

2. The patient has maintained excellent health and a satisfactory blood level for the past six months on a normal diet. While it is necessary to await developments for another year, it is not unreasonable to assume that this case of pernicious anaemia has been cured.

3. The mechanism of the natural remissions which occur in pernicious anaemia is discussed.

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FORCIBLE NASAL INSPIRATION

BY

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M.A., M.D.

In one of my cases of tonsillectomy by dissection in an adult I was sent for on account of bleeding on the sixth day. The bleeding was not coming from the tonsillar bed, but from the left half of the nasopharynx, from which a small amount of adenoid tissue had been removed. After cleansing with peroxide of hydrogen (10 vols.) diluted with an equal quantity of warm water, I instructed the patient to make *several forcible nasal inspirations, each followed by the gentlest expiration through the mouth*. The haemorrhage diminished very perceptibly. The blood-stilling action of the forcible inspiration depends on the fact that the powerful expansion of the chest leads to a dilatation of the hollow organs in proportion to the degree of their softness. The right cavities of the heart are the most dilated, but the general dilatation leads to blood being sucked into the thorax and a consequent lowering of pressure in the peripheral vessels, including those of the throat and nasopharynx. When the nose and mouth are completely closed the action is at its highest, and diminution of pressure in the radial artery is very obvious to the finger on the pulse.

Among other means of checking haemorrhage from the nose or throat, one which will be found most useful is a clinical application of J. Müller's experiment dating from 1838, which is described in Landois and Stirling's *Textbook of Human Physiology* (third edition, p. 89), as follows:

> "If after the deepest possible expiration the glottis is closed, and the chest be now dilated with a great inspiratory effort, the heart is powerfully dilated, the elastic traction of the lungs, and the very attenuated air in these organs, act so as to dilate the cavities of the heart. More blood flows into the right heart, and, in proportion as the right auricle and ventricle can overcome the traction outwards, the blood vessels of the lungs become filled with blood, and thus partly occupy the lung space. Much less blood is driven out of the left heart, so that the pulse may disappear. Hence, the heart is distended with blood and the lungs are congested, while the aortic system contains a small amount of blood—that is, the systemic circulation is comparatively empty, while the heart and the pulmonary vessels are engorged with blood."

The procedure as applied to haemostasis is recommended by G. Krebs,[1] who gives the instruction to inspire deeply with the mouth closed and to expire gently with it open. He quotes the authority of Karl Hueter, whose explanation he gives as follows:

> "The blood is thereby sucked into the thoracic cavity and the nasal mucous membrane is rendered bloodless; but at the same time, owing to the inspiratory draught towards the nasal cavity, the outflowing blood is, to a certain extent, fixed in the open lumina and closes them as it coagulates."

It may, however, lead to syncope from a lowering of the cerebral blood pressure, and it is, I believe, the

predominant factor in the production of what was formerly called "laryngeal vertigo," an error corrected by Peter McBride, who pointed out that it was really a "laryngeal syncope." This accompanies a cough, and is best explained by inspiration during the momentary closure of the glottis, with which a cough is initiated, causing a momentary cerebral anaemia. In most of my cases of laryngeal syncope there has been a strong suspicion of arteriosclerosis of the cerebral vessels, which would produce rigidity of their walls and facilitate the suction of the contained blood.

The possible *abuse of forcible nasal inspiration* was demonstrated in a case which was referred to me of a middle-aged man with exceptionally powerful physique, who sought treatment for shortness of breath, and showed signs of dilatation of the heart. I was asked for an opinion as to his nose, and I found both nasal cavities almost completely occluded by the inferior turbinated bodies, which were turgid in the highest degree. He had been conscious of the obstruction for a considerable time, but in order to keep up his muscularity, of which he was extremely proud, he practised Sandow's exercises, which called for forcible inhalation through the nose, with intense zeal. The negative pressure in the chest acted on the heart, and produced the dilatation from which he suffered. The galvano-cautery point was used for the turbinated bodies, and free nasal breathing was restored. He wrote later to say that the relief then afforded him had continued.

I cannot help feeling that great discretion is required in directing children to practise nasal inspiration when the nose is obstructed. Common-sense methods should be employed for judging whether or not the nose is at least "fairly free" before the exercises are started. If such is not the case the cause of the obstruction, usually adenoids and occasionally congenital occlusion of the posterior choanae, should be rectified. If the nose is free these exercises are recommendable; after the removal of adenoids they are practically indispensable if the best results are to be obtained.

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MULTIPLE-PUNCTURE CUTANEOUS TUBERCULIN TEST

BY

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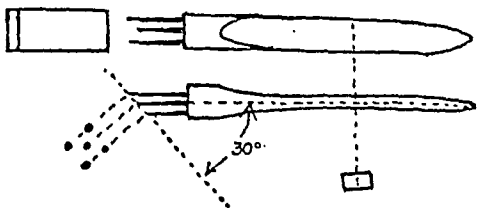
With the growing appreciation of the value of the tuberculin skin test there is an increasing need for a method which, in simplicity of technique, will appeal alike to practitioner and clinic worker, and which will, at the same time, give sufficiently trustworthy results to satisfy the most exacting statistician. At present no test in common use satisfies these requirements. The Pirquet test is very easy of application, but even when modified as suggested by McNeil,[1] Wahl and Gerstenberger,[2] and Ström[3] its sensitivity has been said to be less than that of the intracutaneous method.[4 5 6] The Mantoux test, on the other hand, requires the use of a syringe, takes time, and requires a certain degree of skill for its performance. In December, 1931, a form of cutaneous test was described[7] which is simpler in technique than either the Pirquet or the Mantoux method, and which, judging by first results, appeared to be as reliable. The work in connexion with the test, commenced in Edinburgh, was continued in Bradford, where I had access to the wards of St. Luke's Municipal Hospital, the City Infectious Diseases Hospital, and the Bradford Children's Hospital. The results, in a series of 2,009 cases (see table) confirm earlier impressions of the reliability of the method.



Cutaneous tuberculin test instrument (half scale).

INSTRUMENT AND TECHNIQUE

The instrument used (see figure above) consists of a short handle carrying at one end five needle points and fitted with a protective cap. The test is carried out as follows. A small area of skin is first cleansed with methylated ether. Then the flat spatula end of the instrument is dipped into a bottle containing undiluted old tuberculin, and a drop of the latter is transferred to the cleansed skin surface. The instrument is next held so that all five needle points rest on the portion of skin covered with tuberculin. Owing to the different lengths of the needles this involves holding the instrument so that its handle is at an angle of 30 degrees to the skin surface. With the instrument held thus it is easier to carry out the next step, which consists in quickly applying firm pressure at right angles to the test area so that all five needle points simultaneously penetrate the superficial layers of the skin. These points are then rapidly withdrawn and superfluous tuberculin is wiped off. The result of the test is read in forty-eight to ninety-six hours.

ADVANTAGES OF METHOD

In favour of the test the following claims may be made:

1. *Simplicity of Instrument.*—It can be carried conveniently in the waistcoat pocket, and, being unpretentious, it gives rise to no apprehension in children.

2. *Prolonged Potency of Tuberculin Employed.*—As has elsewhere been brought out[11] undiluted tuberculin retains its potency indefinitely; whereas diluted forms, as used in the Mantoux test, require to be freshly prepared.

3. *Simplicity of Technique.*—Repeated control tests have shown that one demonstration will enable those inexperienced in the method to carry it out successfully. Even with small infants the test can be performed without assistance, as it requires the use of only one hand, the other being available for the momentary control of the patient's arm.

4. *Rapidity.*—Even in the hands of the novice, the test takes less time than the Pirquet, and very much less than the Mantoux method. When large numbers have to be tested at one time the speed of the technique becomes still more apparent: working from bed to bed and with a nurse cleaning the arm of the patient in advance, the writer has frequently tested all the fifty occupants of a ward in under twenty minutes. Moreover, that this was accomplished without any sacrifice of reliability was proved by the incidence of almost 100 per cent. positive reactions in adult wards. In clinic or school work, where patients could be made to file past those performing the test, progress would be even speedier.

5. *Painlessness.*—Performance of the puncture is such a momentary affair that even the nervous child has no time to be upset, and it is not uncommon to find an infant unconcernedly continuing with its bottle feed while the test is being carried out. In the severest reactions slight itchiness locally was the sole complaint.

6. *Absence of Local Trauma and Systemic Reactions.*—In the entire series of cases no instance of these complications arose.

7. *Repetition Unnecessary.*—Repetition of the Pirquet test has been reported to increase the number of positive reactors,[3 5 8] and optimum results with the Mantoux method are obtained by repeating it with progressively stronger concentrations of tuberculin.[4] With the multiple-puncture test no case once negative was found to give a reaction after further applications. Taking into account the fact that the

test has been found as sensitive as the Mantoux one (para. 8) there is an obvious advantage in arriving at final conclusions regarding tuberculin sensitivity as the result of a single test.

8. *Sensitivity and Reliability.*—The opportunity of testing large numbers of adults was taken advantage of, as it was thought the high incidence of reactors among them would serve as a rough measure of the trustworthiness of the method. Examination of adults also allowed of an investigation of the effects on the test of many of the factors said to interfere with tuberculin sensitivity, and it is hoped to give the conclusions arrived at in a future communication.

Multiple-puncture Test: Results in Unselected Cases at all Age Periods

Age Period	Number Tested			Number Positive			Percentage Positive		
	Edinburgh	Bradford	Total	Edinburgh	Bradford	Total	Edinburgh	Bradford	Combined
0-1	87	32	119	15	3	18	17.7	9.4	15.1
1-3	135	37	172	35	9	45	25 7	24.4	26.1
3 5	123	28	151	49	8	57	39 8	28.6	37.7
5-7	104	31	135	43	11	54	41.3	35.5	40.0
7-11	143	84	227	65	49	114	45 6	58 2	50.2
11-12	20	14	34	14	10	24	70.0	71 4	70.6
12-13	—	33	33	—	24	24	—	72.7	72.7
13-14	—	27	27	—	20	20	—	74 0	74.0
14-15	—	19	19	—	18	18	—	94.7	94.7
15-18	—	18	18	—	17	17	—	94.4	94.4
18-21	—	40	40	—	38	38	—	95 0	95 0
21-25	—	81	81	—	79	79	—	97.5	97.5
25 30	—	64	64	—	64	64	—	100.0	100.0
30-40	—	123	123	—	123	123	—	100.0	100 0
40-55	—	244	244	—	244	244	—	100.0	100.0
55-	—	522	522	—	519	519	—	99.4	99.4
Totals .	612	1,397	2,009	222	1,236	1,458	—	—	—

DISCUSSION AND CONCLUSION

The above table gives the results obtained in both the Edinburgh and Bradford series, and included in these are 194 cases of clinical tuberculosis of all ages and all types. Three of these last failed to react to the multiple puncture, and also to the Mantoux test (1:10). All three cases were tested within four days of death, when the most sensitive tuberculin reactions are recognized as apt to fail.[4] Of the 1,034 patients over 21 years of age investigated only five did not react; all five also proved negative with the Mantoux test (1:10). Forty of the children who were negative to the multiple-puncture test were afterwards submitted to the Mantoux test (1:10), without a single positive result being obtained.

The incidence of almost 100 per cent. (99.5 per cent.) positive reactors obtained in adults is higher than that found by British workers using the Mantoux test, Cummins having given 93 per cent. as the corresponding figure for both London[6] and Cardiff,[9] and Hart[4] 95 per cent. as his finding for London. Statistics show that, particularly among younger children, the incidence of tuberculin sensitivity varies greatly in different districts, but it is generally stated[4 5 10] that about one-third are non-reactors at puberty. In both the Edinburgh and Bradford series, however, the multiple-puncture test gives 70 per cent. reactors for the even earlier age period of 11 to 12 years. Taken as a whole, these results justify the claim that the multiple-puncture test is as sensitive as the Mantoux method.

The increasing need of a simple, rapid, and yet reliable form of tuberculin test has been emphasized. The multiple-puncture cutaneous method possesses all these advantages, and on that account is the test best suited to the requirements of ward routine, clinic work, and general practice.

I have to thank Mr. E. Holroyd Slater, F.R.C.S. (superintendent, St. Luke's Hospital, Bradford), the visiting staff of the hospital, and Dr. Douglas (superintendent, Bradford City Infectious Diseases Hospital), for granting access to patients under their care. In particular, I wish to express my indebtedness to Professor Charles McNeil for his help and encouragement.

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Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

A CASE OF INFECTIVE MONONUCLEOSIS (GLANDULAR FEVER)

This case is considered worthy of record as it presented some unusual features, and, in the early stages, considerable difficulty in diagnosis.

CASE HISTORY

The patient, an Army officer aged 32, had suffered from amoebic dysentery in 1925. There were no relapses of this condition. In other respects his previous medical history was good. He enjoyed good health up to the onset of this illness. He was treated at his quarters for three days for a mild, symptomless pyrexia before admission to hospital. On admission, on the fourth day of his illness, the temperature was 100° F., skin dry, tongue coated with a silvery fur, and pharynx slightly congested. He had the usual symptoms accompanying mild pyrexia, but did not complain of a sore throat. There were no physical signs of disease in the chest or abdomen.

Table of Leucocyte Counts

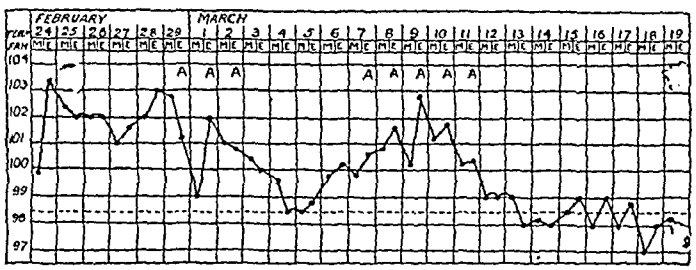
Day of the Disease	Total Leucocyte Count	Polymorphonuclears	Lymphocytes	Large Mononuclears*
		Per cent.	Per cent.	Per cent.
7th	7,200	24.0	74.0	2 0
9th	10,200	—	—	—
11th	11,200	16 0	68.0	16.0
16th	19,800	—	—	—
18th	31,000	11.4	3.0	84.0
19th	25,800	12.5	5 0	82.0
23rd	18,600	11.7	51.3	36.0
30th	13,000	21.0	72.0	7.0
36th (left hospital) ..	8,600	18.0	76.0	5.0
On return from sick leave a month later	8,400	37.0	10 0	52.0

* The type of cell was unusual, and might be described, as regards the depth of staining of the nucleus, as being between an ordinary large mononuclear and a large lymphocyte. The cytoplasm had a ground-glass appearance, and was tinted a faint blue. The cell was rather irregular in outline, somewhat triangular in shape, and frequently bent on itself. It gave a definite impression of fragility and immaturity.

From the fourth to the eleventh day there was a steady pyrexia—101° to 103°, with one remission to 99°. During this time he complained of severe headaches, and there was

frequent profuse diaphoresis, generally at night. Obstinate constipation was the rule. The tongue became thickly coated with a yellow-brown fur. The patient looked and felt very ill, and frequent hypnotics were necessary. On the sixth day the enlargement of a right submaxillary lymphatic gland was noticed. It was not very tender on palpation, caused no pain, and was at the time believed to be secondary to a gingivitis around a partially erupted lower third molar. During this period the case was investigated for the typhoid group, *Br. melitensis* and *abortus*, and malaria. The stools were also examined for *Entamoeba histolytica* and cysts, with negative results. A record of leucocyte counts is included in a table. There was no enlargement of lymph glands during this period other than that already mentioned.

On the tenth day there was an impairment of percussion note, with deficient breath sounds, over the base of the right lung. There was also evidence of upward enlargement of the liver in front. The edge of the liver was not definitely palpable. Added to this, the patient complained of pain in the right shoulder, and his face had assumed that particularly muddy complexion which one associates with an amoebic hepatitis. There was, however, no pain referred to the liver itself, nor could any tenderness of this organ be elicited. In spite of the very contradictory differential count and the absence of evidence of amoebiasis in the stools, it was felt, in view of the patient's history, that it was not justifiable to withhold emetine. Three daily injections of emetine hydrochloride were accompanied by a general improvement, the temperature falling by lysis and reading normal on the thirteenth day, and remaining so on the fourteenth. It was felt at the time that the improvement was probably not due to the action of the emetine. A radiogram confirmed the enlargement of the liver, but screening showed no limitation of movement of the diaphragm.



A = Hypodermic injection emetine gr. j.

From the fifteenth to the eighteenth day the condition steadily deteriorated, with a pyrexia increasing to 103°. The emetine, which had been discontinued, was now administered daily without effect. The blood picture—total leucocytes 31,000, with 84 per cent. large mononuclears—practically allowed of only two diagnoses: lymphatic leukaemia and glandular fever. On the eighteenth day there was for the first time a general enlargement of lymph glands, the cervical, occipital, epitrochlear, and axillary glands being found definitely enlarged and slightly tender.

Taken together with the blood picture, the diagnosis was no longer in doubt. At this time it will be noticed that there was a dramatic change in the blood picture from lymphocytosis to mononucleosis. From the nineteenth day the symptoms abated, the temperature fell by lysis, and reached normal on the twenty-second day. The spleen was never palpable, though percussion showed it to be slightly enlarged. There was no skin eruption. The Wassermann reaction and Kahn tests were negative on the twenty-third day. When the patient left hospital on the thirty-sixth day convalescence was progressing satisfactorily, but the evidence of enlargement of the liver persisted. The lymph glands had returned to normal.

At the end of a month's leave all physical signs of disease were absent, and the blood count was as follows: total leucocytes, 8,400; polymorphs, 37 per cent.; lymphocytes, 10 per cent.; large mononuclears 52 per cent.; eosinophils, 1 per cent. The patient was very well.

COMMENTARY

The features believed to be unusual in the case were as follows:

1. The severity. The patient looked and felt very ill, and lost flesh rapidly.

2. The late appearance of general glandular enlargement and the early appearance of what might be termed a "herald gland." It is now felt that the enlarged submaxillary gland was not secondary to sepsis.

3. The enlargement of the liver, together with the right shoulder pain.

4. The degree of leucocytosis—31,000 at its maximum.

5. The rapid change in the blood picture from 68 per cent. lymphocytes on the eleventh day to 84 per cent. large mononuclears on the eighteenth day.

6. The reversion to the former type as improvement set in.

7. The profuse sweats. The patient frequently had to be changed twice during the night.

No other recognized cases have occurred in the garrison of Catterick Camp during the last six months. Except for the tentative employment of emetine and stovarsol, the treatment was entirely symptomatic.

I have much pleasure in thanking Colonel W. P. MacArthur, D.S.O., for his advice on the case, Major W. A. Frost, O.B.E., for the many blood counts and laboratory investigations, and Lieut.-Colonel M. F. Grant, commanding, Military Hospital, Catterick, for permission to publish these notes.

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Reports of Societies

UNDULANT FEVER

At a joint meeting of the Sections of Epidemiology and of Medicine of the Royal Society of Medicine on January 24th, Dr. H. MORLEY FLETCHER presiding, a discussion took place on undulant fever.

Dr. W. E. HUME (Newcastle) said that the bacteriological relation between the *Micrococcus melitensis* of Bruce and the *Bacillus abortus* of Bang had frequently been described, as had the relation between the clinical picture of Malta fever and *abortus* infections in the human being; in recent years the gaps, both bacteriological and clinical, had been considerably narrowed. During the last decade the possibility of human infection by *Brucella abortus* had been increasingly recognized, though in Great Britain the total number of recognized cases was as yet small. Up to October, 1932, Professor G. S. Wilson had collected and analysed 136 cases of undulant fever in Great Britain and Ireland, excluding laboratory infections. The diagnosis had been made in all of them by the agglutination test, confirmed in twelve by the isolation of the *Br. abortus* from either blood, urine, or faeces. Many cases have been revealed by systematic examination of the blood serums for agglutinins against *Br. abortus* where the serums had been sent to laboratories for Widal estimations against members of the enteric group. Further inquiry into the clinical histories of cases isolated in this way made it probable that the diagnosis was an infection by *Br. abortus*. There was every possibility that cases of undulant fever were still unrecognized; Wilson estimated 500 as a possible annual incidence. Dr. Hume gave a personal experience of eight cases diagnosed as undulant fever, and a brief reference to ten other cases alleged to have occurred in the immediate vicinity of Newcastle. He spoke of difficulties in diagnosis and inefficacy of treatment, and drew attention to the discrepancy between the high incidence of infection of milk by *Br. abortus* and the paucity of human infection. The criteria for diagnosis of undulant fever should be: a suggestive symptomatology; the exclusion of any other possible diagnosis; isolation of the *Br. abortus* from the blood, urine, and stools; and an agglutination titre of undisputed degree. He was at present very sceptical about any known method of treatment, including salvarsan, mercurochrome, and other blood antiseptics.

Sir WELDON DALRYMPLE-CHAMPNEYS said that undulant fever was no longer a medical curiosity, but a definite clinical entity. Until 1910 its recognition was practically confined to the Mediterranean area, but it was now recognized all over the world. There were only fourteen published cases in England and Wales up to 1929, but increased interest had led to better diagnosis. The number of cases which had come to his own knowledge had steadily increased—from two in 1926 to twenty-eight

in 1932—but this did not represent the true incidence of the disease. There had also been a rapid increase in the number of reported cases in the United States, from one case only in 1922 to 1,545 in 1931; this was the result of compulsory notification. The speaker gave an analysis of his own series of eighty-three cases, which included only those with irregular fever and an agglutination titre of more than 1 in 100. The average agglutination of all cases in the series was rather more than 1 in 1,500. Cases had occurred in all parts of the country. Male cases showed a great preponderance, and the age distribution proved the disease to be uncommon in the first decade and commonest in the fifth. Farmers, farm workers, and persons living on farms comprised only 8 per cent. of the series. The evidence of bovine infection varied greatly; seventy-eight out of the eighty-three persons in the series drank raw milk, whilst only eight had contact with infected bovines. There were no butchers, slaughtermen, or veterinary surgeons in the series, though cases were known to occur among these, as in other countries. As to indirect contact, the possibility of infection by manure or litter of infected animals had to be borne in mind. A human epidemic in the South of France had been traced to the manure of infected goats. In his own series of eighty-three cases four deaths from undulant fever had occurred. The disease should have serious attention from clinicians and epidemiologists. Correct diagnosis might not always lead to successful treatment, but it often saved the patient from much useless and unpleasant therapy. He begged medical men who sent blood of patients to laboratories for the purpose of a Widal reaction to add a request to have the blood tested also against a Brucella antigen as a matter of routine, and also to send details of all cases of undulant fever to himself at the Ministry of Health, so that a true picture of the disease in this country might be obtained and measures framed to combat it.

Dr. WALKER HALL, who had been announced to participate in the discussion, but was indisposed, sent a note which was read to the meeting. He described an examination of the serum of 590 healthy persons, with the finding of agglutinins in 7 per cent. In the last sixty-one specimens agglutinins from *Br. abortus* were found in 4.9 per cent. Fleet Surgeon HOME gave some interesting historical details, and compared the disease with Malta fever. Dr. P. MANSON-BAHR said that he was the first to describe undulant fever in this country as probably due to *abortus*; that was in 1927, and it had become commoner since, certainly in tropical countries. The true *melitensis* cases ran a longer course than the average *abortus* ones; one of his colleagues had the fever for eighteen months, and he had seen cases which ran for two years. Dr. E. W. GOODALL did not doubt that the disease had existed in England for a long time; indeed, he thought there was no such thing as a new infective disease. It had never been extensively epidemic, and so one would not expect to meet many cases of it, which was curious, seeing that it was held to be a milk-borne disease. The agglutinin reaction could only be regarded as one of the factors in making a diagnosis; the latter could not be arrived at on the laboratory findings alone. This last point made by Dr. Goodall was also stressed by Dr. WILSON, who said, however, that a titre of 1 in 1,000 was so unlikely in any latent infection that *abortus* infection was practically certain when that figure was obtained. Dr. MILLER described his treatment of some cases of undulant fever by protein shock. All the cases—six in number—reacted favourably. After three doses given at intervals of two or three days the temperature was no more raised, and there was no recurrence during the considerable time afterwards that the people were watched.

The chairman (Dr. MORLEY FLETCHER) regarded the chief features in undulant fever as the long duration, the slowness of pulse, and the sweating. Cases were apt to be regarded as typhoid fever. The blood showed a low leucocyte count, possibly a leucopenia. Nearly all the cases of the disease he had seen had been investigated from the typhoid point of view, and reactions against *melitensis* and *abortus* had not been done.

BACTERIOPHAGE

At a meeting of the Royal Society of Tropical Medicine and Hygiene, held at Manson House on January 19th, with the president, Dr. CARMICHAEL LOW, in the chair, Dr. F. M. BURNET read a paper on recent work on the biological nature of bacteriophages.

He stated that recent work on bacteriophages, particularly the filtration studies of Elford and Andrewes, had done much to solve the problem of their nature. It had been shown that they were composed of particles whose size was uniform for any one phage, but varied from phage to phage, the range extending from about 10 to 60 μ. They were thus of the same order of size as the viruses which produced animal and plant diseases. Immunologically they comprised a larger number of antigenic groups, and detailed study of their serological behaviour showed many points of resemblance to the reactions of bacteria with immune serums. The existence of lysogenic bacteria had always been a difficulty in the way of accepting d'Herelle's theory, but a study of the types of phage produced from such bacteria suggested that only a host parasite relationship could account for the phenomena. Dr. Burnet concluded by saying that all the evidence indicated that bacteriophages represented a large group of independent viruses parasitic on, or symbiotic with, bacteria rather than a single virus or a series of products of bacterial origin.

Colonel F. P. MACKIE dealt with the technique of bacteriophage investigation in India, with special reference to cholera and dysentery, and with the use of resistant cultures in the detection and typing of natural bacteriophages and of single-resistant and multiple-resistant cultures in typing unknown phages. Though he had been closely associated with investigations on the prophylactic and curative value of phage during his last two years in India he had nothing definite to say on the subject. Two large field experiments were going on, one in Bihar and Orissa under Dr. Asheshoff and his co-workers, and another and smaller one in Assam under Colonel Morison and Dr. Vardon. From the point of view of these distinguished workers the results had been entirely and wholly satisfactory, but unfortunately that was not the view taken by their numerous critics. Reports from tea-garden doctors regarding the efficacy of phage were very variable, some saying it was the therapeutic discovery of the century, others that it was quite useless. Asheshoff had recently treated wells and water supplies with phages in Bihar and Orissa, and a marked drop in the incidence of cholera had followed, whereas the adjoining untreated district showed no such decrease. Unfortunately one of the biometrical officers had gone further into this question, and found that in one other district in Bihar and Orissa a similar decrease in cholera had spontaneously occurred. Colonel Mackie opined that the only way this question could be satisfactorily settled was by a large-scale experiment on some herd of laboratory animals; in human epidemics the multiplicity of factors so complicated the issue that it would be a very long time before any reliable answer could be forthcoming.

Professor J. C. G. LEDINGHAM said that unanimity on the biological nature of phages had not been reached because of the difficulty of devising a crucial experiment giving a definite answer to the question. It was clear that Dr. Burnet had definitely burnt his boats on this knotty question, and had decided, like d'Herelle, in favour of phage being a living virus. According to Dr. Burnet's view every organism in a lysogenic strain must have "sitting on it" one or two, or even three or more, viruses which did no harm to the organism. That wanted a little explanation. Again, the question of heat and activation of phage revealed nothing. While congratulating Dr. Burnet on the excellence of his work on phage he confessed that, in regard to its biological nature, he still remained an agnostic. Dr. A. FELIX pointed out that the evidence on which Dr. Burnet supported the virus theory of phage was largely based on as yet unpublished work. Professor G. S. WILSON upheld the virus hypothesis, and thought it impossible to devise the crucial

experiment for which Professor Ledingham appeared to crave. When there were so many complex factors all that could be done was to accumulate evidence along as many lines as possible. He accepted the data brought forward by Burnet and Barnard that phage was now capable of being photographed by special short-range ultra-microscopic light in the same way as some of the larger particles of visible viruses. Similarly, he considered that the filterability of phage, its definite delineation of size within a range similar to the filterable viruses, and the fact that it multiplied only in the presence of living and dividing germs, all favoured the virus hypothesis. Professor Wilson asked whether the association in lysogenic strains between the bacteriophage and the organism was of the nature of a symbiosis.

In his reply Dr. BURNET dealt with the serological aspects of phage and the question of lysogenicity, and pointed out that the only difference between his theory and that of d'Herelle was that the latter held there was only one organism, whereas he thought there were many different species of bacteriophage.

LONDON CANCER SOCIETY

At the inaugural meeting of the London Cancer Society, held at 144, Harley Street, W.1, on January 27th, the honorary secretary, Mr. T. YOUNG SIMPSON, and the honorary treasurer, Dr. PAUL CAVE, explained that the objects of the society were to study, as far as possible, every aspect of the cancer question and to report on new methods of treatment and new pathological and surgical methods of diagnosis with a view to the discovery of some common ground of progress. They appealed strongly to the profession to attend the meetings and to bring forward any new idea, any improvement in technique, or any practical discovery which might suggest a new avenue of exploration or assist in curing or alleviating any form of malignant disease. There was already a feeling among the more sanguine members that before very long cancer might be treated without some of the extremely serious surgical methods now in vogue, and possibly by quite simple medical methods. Consumption, syphilis, and other dread diseases had been more or less brought under control, and doubtless within the lifetime of the practising medical man of the day cancer would also be made to yield the secret of its existence and of its destructive growth.

Dr. CAVE then read a paper on osteoplastic metastases in cases of cancer of the prostate, and exhibited a large number of *x*-ray photographs. He referred to the case of a man, aged 50, who had adenocarcinoma of the prostate. Radiological examination revealed the most extraordinary increase in density of many of the bones, including the vertebrae and ribs, and especially the sacrum and last lumbar vertebra. The problem of such conditions was to explain why cancer should produce sclerosis of bone. If it was an effort of Nature to strangle the growth, why did it specially do so in cases of prostatic cancer and not in all cases of bone metastases? Greig's theory—that the cause was one of local arterial obstruction—was possibly important. Statistics showed that the great majority of osteoplastic metastases originated from prostatic carcinoma, and that the bones most liable were those nearest to the growth. The theory was advanced that osteoplastic metastases resulted from lymphatic spread, and that osteoblastic metastases were due to vascular dissemination. Cancer cells had been traced through the lymphatics into the periosteum of bone and through the Haversian canals into the medulla. Bone metastases from mammary carcinoma were probably due to malignant arterial emboli, and when osteoplastic metastases were found—a rare condition—they probably indicated a lymphatic spread. In conclusion, the suggestion was made that a possible explanation of osteoplastic carcinomatous metastases was as follows: (1) Spread from the primary growth through the lymphatics. (2) Infiltration of ligaments and periosteum. (3) Invasion of bone by cancer cells through Haversian canals and lymphatic channels. (4) Blockage of periosteal and bone blood vessels, with consequent diminution of blood supply. (5) Deprivation of bone cells, by restricted blood supply, of parathyroid secretion, causing retention of calcium, which would otherwise be excreted. (6) Laying down of retained calcium as carbonate. (7) As a final stage the new bone encroached upon the Haversian canals and medullary spaces, and made the whole bone abnormally dense.

Dr. MAURICE SHAW read a paper on some medical aspects of cancer, and pointed out that, had the serum diagnosis test of Dr. Bendien and others been found reliable, it would have been a godsend to many anxious patients and their medical attendants. Unfortunately, however, no test hitherto devised had proved of the slightest value in giving an infallible result.

A discussion followed, in which Mr. MCNEILL LOVE, Dr. C. E. M. LOWE, Dr. DAVID DE SOUZA, Dr. S. W. H. STUART, and others took part.

SILICOSIS

At a pathological meeting of the Liverpool Medical Institution, held on January 19th, with Mr. F. STRONG HEANEY, vice-president, in the chair, Professor M. J. STEWART (Leeds) read a paper on silicosis and allied diseases of the lungs. The classical grouping into anthracosis, silicosis, and siderosis was adhered to, with the addition of the recently described entity, asbestosis.

Professor Stewart emphasized the following points. The term "anthracosis" should be reserved for conditions resulting from the inhalation of carbonaceous dust, which produced a fibrosis of the lungs limited both in severity and in extent. It did not conduce to tuberculosis. Dense or extensive fibrosis in coal miners was due to an accompanying or antecedent silicosis, and was met with chiefly among anthracite miners. The difference in the gross and microscopical anatomy of silicosis and asbestosis was pointed out, the former nodular, whorled, mainly central in distribution and involving especially the middle and upper parts of the lungs, the latter diffuse and mainly basal. The tendency to tuberculosis was significantly less in asbestosis, but none the less very important. Asbestosis was definitely a more serious disease, proving fatal on an average after thirteen to fifteen years' employment as compared with thirty-two to forty-two years in silicosis. An account of the morphology, distribution, and mode of formation of the asbestos body was given, and the significance of its presence singly or in clumps in the sputum was discussed. The gross silico-siderotic lesion of the lungs met with in haematite miners in the West Cumberland ironstone field was described, and it was suggested that the victims of this severe disease were mainly those men who were employed on the dry mechanical drill from the time of its introduction in 1913 until its replacement by the wet drill a few years ago. The morbid anatomy of silico-siderosis was described.

In the discussion which followed Professor J. H. DIBLE asked Professor Stewart what his experience was with the polarizing microscope in silicosis cases, as it appeared that in numbers of cases of undoubted silicosis with the formation of typical nodules no doubly refractile bodies could be demonstrated. Was it the case that these became dissolved subsequent to the formation of the nodule—a suggestion which it seemed difficult to accept? In the case of animals might not their resistance to pneumonoconioses be due to the greater complexity and length of their upper air passages? Man, in addition to being less well protected in this respect, was also to some extent a mouth-breather, and these two factors were contributory causes to his great proneness to respiratory disease. With regard to the toxicity of dissolved silica, this was very definite, and acute lesions such as fatty degeneration of the heart and necrosis of the liver might be produced by it. The speaker agreed that there was rarely any real difficulty in distinguishing silicotic lesions from fibrous lesions of tuberculosis: the picture in each case was quite distinct.

Professor J. M. BEATTIE said he considered that the experimental work on silicosis should, if possible, be

carried out by the introduction of the dust into the lungs by inhalation. He did not regard other methods of experiment as comparable to the natural production of the disease. He agreed with the difficulty, in point of time, of carrying out the work, but he maintained that the fibrous overgrowth could be produced over a comparatively short time if the dust concentration was sufficient, and if precautions were taken that each animal was compelled to breathe the dust continuously for one or two hours daily. He showed by photographs from his own experiments that conditions very similar to those seen in early cases of silicosis in grinders could be reproduced in guinea-pigs by the inhalation method. He still believed that the irritative action of the particles played, at any rate, some part in the process. He expressed the view that the prevalence of tuberculosis in cases of silicosis was largely due to neglect of sanitary precautions rather than to a predisposition of workers with silica to infection with *B. tuberculosis*. Dr. R. H. MOLE asked for an explanation as to why asbestosis affected mainly the lower lobe of the lung and silicosis the upper and middle areas. Dr. C. ALLAN BIRCH referred to a large series of radiograms of cases of asbestosis which he saw in New York, and asked the reason for the less frequent association of tuberculosis with asbestosis than with silicosis. Dr. C. O. STALLYBRASS referred to the frequency with which silicosis turned up in occupations in which the risk would not have been anticipated. He instanced cotton-carders and men engaged in polishing the heels of boots. He discussed the greatly increased danger of an associated inhalation of silica, etc., with a simultaneous infection of tuberculosis. Under these circumstances a quite small amount of silica might set up a progressive fibrosis. Dr. R. W. GEMMELL said that radiologically the differential diagnosis between silicosis and tuberculosis was often impossible; it was very difficult to say where silicosis ended and tuberculosis began. There was a difficulty in getting a history from masons; they usually denied haemoptysis, cough, etc.—even in advanced cases—for fear of losing their job.

In replying to the points raised in the discussion, Professor STEWART said that undoubtedly solution of silica particles went on in the lung substance; in fact, it was the soluble silica which produced the pathological defects. Thus optically active particles slowly disappeared from the silicotic nodules. The toxicity of colloidal silica was undoubtedly high. Locally it produced an intense coagulated necrosis, followed later by endothelial cell reaction and proliferation of fibroblasts around. It would appear that the rabbit and guinea-pig protected themselves in some way against asbestos dust. The fibres certainly got into the lungs and produced asbestosis bodies in abundance, yet the pathological changes were slight—ultimate bronchiolar catarrh and fibrosis of the bronchiolar wall. There appeared to be a piling-up of asbestos fibres in that situation. He was unaware of any statistical evidence showing that cancer of the lung or bronchus was particularly common in cases of pulmonary fibrosis due to dust. He had seen at least two cases with that association. He was glad to find that Professors Dible and Beattie were in agreement with him that the silicotic nodule was highly characteristic and little likely to be confused with rounded foci of healing or healed tuberculosis. He was interested to be reminded that even the very efficient dusting chamber used by Professor Beattie in his animal experiments failed completely to produce pulmonary fibrosis with ground-up asbestos. He had seen acute silicosis in two different industries: (1) sandblasting, (2) the making of abrasive soaps and powders. The lesion here still tended to be focal, but did not present the densely collagenous whorled character of chronic silicosis, but was rather an active fibroblastic proliferation obviously perivascular in distribution. He was interested to hear that Professor Beattie during his years in Sheffield saw only two cases of silicosis in knife-grinders in whom tuberculosis was *not* present. He agreed that Bridge's figure, 56.6 per cent., was probably an underestimate, since his list would include many cases in which silicosis was present as a mere incident or casual finding (or so he presumed). He thought that the tendency for pulmonary fibrosis in asbestos workers to be mainly basal was due to the character of the dust. It consisted of fine fibres of varying length, and it was probable that the action of gravity played an important part in getting them well into the parenchyma of the lung. They could only reach the lung alveoli by the fibre passing end-on. It was very difficult to have systematic *x*-ray examination of any particular group of workmen, as they were liable either to be scared and think they would lose their job or to get inflated notions as to the possibility of compensation. Both Tylecote and Dunn, and Cooke of Wigan, had described bodies somewhat resembling asbestosis bodies in the lungs of coal miners who had never been near an asbestos factory. They were much coarser and more irregular than the bodies seen in asbestos workers' lungs, but obviously belonged to the same order of natural phenomena. It seemed reasonable to suppose that silicates other than those which composed the asbestos fibre might undergo a similar physico-chemical metamorphosis. The beautifully symmetrical and regular asbestosis bodies, however, still appeared to be almost specific. One reason why tuberculosis was more prevalent in cases of silicosis than in asbestosis was because the latter disease was much more rapidly fatal. Another explanation was afforded by Professor Beattie's description of the insanitary habits of knife-grinders, who spat into the water tanks in which they dipped the blades to cool them. Silicosis was a disease of males essentially, asbestosis largely a disease of females, and the general hygienic conditions in asbestos factories were probably pretty good. He was interested to hear Dr. Stallybrass's opinion that silica rather than silicon was the danger. The speaker would have thought it was really a question of solubility. Carborundum (silicon carbide) was found by Kettle to be almost inert on local inoculation. He was also interested to hear of the frequency of pulmonary fibrosis among the masons engaged on the Liverpool Cathedral and the drillers and quarriers in the Mersey Tunnel.

CAESAREAN SECTION

At the last meeting of the North of England Obstetrical and Gynaecological Society, held in Manchester, the presidential address was delivered by Dr. F. H. LACEY on Caesarean section.

Dr. Lacey traced the history of this operation back to Roman times. Early operations were described, one by Barlow of Bolton in 1793, and one by Trautma of Wittenberg in 1600. The reported mortality of 84 per cent. from 1737 to 1860 was reduced by Porro, in 1877, as a result of supravaginal hysterectomy being also performed. Sanger's operation in 1882 and Osiurder's lower segment operation in 1865 were referred to, and recent figures, such as those collected by Routh (6.1 per cent. in 602 cases for 1906–10) and Spencer (maternal mortality 3.3 per cent. and infantile mortality 10 per cent. in 120 cases), were given. Dr. Lacey considered that the reasons for the present abuse of the operation were: (1) A demand on the part of the patient for a shorter and less painful labour. (2) An exaggerated idea of the value of the foetal life, as compared with that of the mother. (3) Extension of indications to include the convenience of husband, patient, or doctor. Preference was expressed for the lower segment operation if the patient was in labour, or was potentially septic, and, when this variety of operation was performed, for the transverse incision. Dr. Lacey then gave an analysis of 200 of his recent hospital operations. There were only two deaths in the series—one from bronchopneumonia and the other in a case complicated by many adhesions which followed two previous Caesarean sections. He referred to the fact that one operation did not preclude a subsequent normal confinement, while Caesarean section for eclampsia, although not popular in this country, was apparently more successful on the Continent. Open ether was the anaesthetic used in the majority of cases, but spinal and other special forms of anaesthesia might be strongly indicated in such conditions as toxaemia of pregnancy.

Cases and Specimens

Mr. N. L. EDWARDS (Derby) showed the specimen of a uterus removed by subtotal hysterectomy, with pregnancy in the interstitial portion of the right tube. The patient was a 2-para, aged 36, and she complained of amenorrhoea for two months, followed by intermittent brisk haemorrhages for a month, but there was no pain at any time. Breast changes were present and bimanual examination revealed a swelling attached to the uterus, which was taken to be caused by a tubal pregnancy. Laparotomy showed the true state of affairs, for which subtotal hysterectomy was the only satisfactory treatment. Dr. J. W. BRIDE (Manchester) showed a specimen consisting of bilateral massive pyosalpinges removed with both ovaries and the body of the uterus. The left appendage mass consisted of a tubo-ovarian mass seven inches in length. The whole specimen weighed three pounds and showed no evidence of tuberculosis. The patient, whose age was 24, was nulliparous and in good health, there being no evidence of tuberculosis. The only complaint was that of aching pain in the hypogastrium for a year, menstruation being quite normal. Abdominal examination revealed a tender mobile mass extending to the right of the umbilicus, while a large cystic mass was also felt bimanually behind the uterus. At operation both masses were almost completely free from adhesions, but there was partial torsion of the right pyosalpinx. The condition was apparently one of subacute gonococcal salpingitis, and more conservative treatment was contraindicated by the size of the tubal swellings.

Dr. C. P. BRENTNALL (Manchester) described two cases of inversion of the uterus. Both patients were young primiparae, but the labour in the first case had been terminated by a low and easy forceps delivery. The third stage was not hurried and the patient was comfortable when left. Three hours later the patient was discovered lying on the floor in a state of shock. There was no evidence to prove that the inversion had not taken place before she left her bed. The shock was treated, and three days later the uterus was restored to its normal position under anaesthesia. The second patient walked into the out-patient department three weeks after a normal delivery. The puerperium had apparently been normal and she was making the customary post-natal visit. Complete inversion of the uterus was discovered, but was corrected without difficulty by Aveling's repositor. The patient mentioned that the after-birth was fast, and that the midwife used force to express it; she had had retention of urine on the day after delivery. Dr. Brentnall suggested that a possible factor in the production of the condition was a groove running from before backwards over the fundus uteri, and particularly well marked in Caesarean section, when the uterus might be heart-shaped. Exaggeration of this condition might start the process of inversion, and this appeared to be a more likely cause than thinness of the uterine walls, a patulous cervical canal, or intra- or extra-abdominal pressure. The chief interest of the two cases lay in the fact that while shock was extreme in the one, it was completely absent in the other.

The Department of Scientific and Industrial Research has just issued a second edition of *The Penetration of Daylight and Sunlight into Buildings*, which is No. 7 of the series of Illumination Research Technical Papers. It contains additional material dealing with the effect of external obstructions and the use of the "no skyline." Charts are also given for finding the hours of sunlight available in a given room at a given time. Since the first edition was published there has been research on the [illegible] of reflected light from whitened obstructions, and on the minimum standard below which light is inadequate for ordinary purposes; the results of this research are embodied in Nos. 11 and 12 of the series, *The Efficiency of Light Wells*, and *The Daylight Illumination required in Offices*.

Reviews

ANALYSIS OF GROWTH

During the last years of his life Professor LORRAIN SMITH was engaged in the preparation of a book on *Growth*.[1] He intended it to include his general conclusions on the nature of life and their bearing on the abnormal forms of growth with which pathology deals. The book was never finished, but fourteen chapters are complete, and contain his views on the nature of the normal growth process. These have now been published under the editorship of Professor J. S. Haldane, who has added a supplementary chapter by way of summary. The subject is of extreme interest, and Lorrain Smith's penetrating analysis will doubtless be studied carefully both by biologists and by pathologists. Growth is tissue increase, and depends on cell division. It commences with the division of the fertilized ovum, continues through childhood and adolescence, and ceases in the adult. It may be restrained (cretins), or exaggerated (acromegaly), and after its cessation it may be revived locally by the removal or destruction of a part (repair). A cell will not divide of itself; it requires some stimulus to set its activities in motion. But given the stimulus, it exhibits a primitive capacity of unending cell division, tissue growth never ceasing. This fact has been ascertained by means of the culture of cells *in vitro*. In the body, fertilization appears to provide the stimulus in the first instance, and the subsequent course is subject to a regulating mechanism, the nature of which forms the material of Lorrain Smith's analysis.

The key to the problem is differentiation associated with organization. Differentiation diminishes and may annihilate the power of division of a cell. In the body, division creates new conditions for each of the daughter cells, resulting in a functional differentiation in one or both, the products of which, distributed through the circulation, will influence every cell in the body, restraining their division or neutralizing the inhibitory influence of the products of other cells upon them. Growth may therefore be said to be controlled by the whole body, through the interaction of the various differentiated tissues, rendered possible by organization. In the adult an equilibrium is reached which may be upset by alterations in the relative proportions of the differentiated products, as by the removal of a part of the body or change in the amount of a secretion. In such circumstances growth, within limits, may be revived and the equilibrium restored. The condition of the tissues in the adult, as regards the power of cell division, varies. For example, in nervous tissue differentiation proceeds to the complete extinction of cell division; in connective tissue a state of quiescence is reached which may be converted into one of activity under conditions; in the cutaneous tissues there is a continuous division of basal cells, one half of the daughter cells retaining their primitive basal characters, while the other half are thrown off, the amount of tissue remaining unchanged. There is thus no growth of the adult body as a whole, although cell division is active in many tissues.

These principles of growth regulation are exemplified by the author in their application to a number of diseases, more especially the anaemias, diseases of the liver, and the processes of repair. Here the modifications observed in tissue growth take place in accordance with the principles above explained—the regulating mechanism acts normally on the affected tissues, and these react

[1] *Growth*. By James Lorrain Smith, M.D., LL.D., D.Sc., F.R.S. Edited by J. S. Haldane, C.H., M.D., F.R.S. Edinburgh and London: Oliver and Boyd. 1932. (Pp. 135; 1 figure. 6s. net.)

normally in so far as growth and cell division are concerned. In cancer, on the other hand, although the cancer tissue is exposed to the normal regulating mechanism of the whole body, it does not react in the normal way; differentiation on division is slight or absent, organization within the cancer tissue is feeble, and cell division is exaggerated, leading to unlimited tissue growth. The fault appears to lie in the cancer cells, and their abnormal reaction to the growth stimulus would seem to be due, as suggested by Professor Lorrain Smith, to an injury to some hereditary factor, the cause of which is at present unknown.

THE CORONARY CIRCULATION

It is not easy in a short space to give an adequate account of the various aspects of the important subject described by Professor HOCHREIN in his monograph on the Coronary Circulation,[2] which, as its title indicates, encompasses the physiology, pathology, and therapeutics of this part of the vascular system. We must pass briefly over the sections on physiology and pharmacology, for, although the author describes much of his own original work, it cannot be said that enough is yet definitely ascertained to appeal to the more general reader; indeed, it would be hard to find another group of blood vessels whose behaviour has appeared in such varying lights to its different students. There is abundant evidence that a new method of approach to the problems of the coronary circulation is needed before further progress can be made.

The rest of the book is of great general interest, for coronary disease is discussed very thoroughly. It would seem most useful to refer to some statements which attract our attention. Diaphragmatic hernia is not nearly so uncommon as was believed, but is difficult to diagnose; it may cause grave cardiac symptoms according to some observers, but not according to the author; *a priori* it is difficult to see how such a hernia could more readily transmit to the pericardial fluid a raised intra-abdominal pressure than does the tendinous part of the diaphragm. Cardiac asthma and paroxysmal tachycardia are labelled as coronary conditions, and with angina pectoris and coronary thrombosis form an interesting quartette. The therapeutics of coronary disease are fully described, and the author's resources are almost unlimited. Once more it must be recorded in criticism that emphasis has not been laid in this book on the indispensability of digitalizing failing hearts which are fibrillating at a rapid rate: this clinical fact is a landmark in cardiology.

UROLOGY IN WOMEN

Such a large proportion of the diseases with which the urologist has to deal occur only in the male sex that the special urological diseases of women tend to be overlooked. In spite of the absence of a prostate there are plenty of opportunities for urological diseases in women, and Dr. CATHERINE LEWIS has written a useful little book[3] which focuses attention on diseases and minor defects which may be responsible for a good deal of ill-health. It is divided into four sections, dealing consecutively with the urethra, the bladder, the ureter, and the kidney. Both medical and surgical conditions are described, but the author's outlook has a definite surgical bias, which occasionally results in the omission of useful medical remedies. For instance, no mention is made of the value of dietetic treatment in cystitis, especially the ketogenic diet. A reviewer may also perhaps be allowed to point out how ambiguous it is to use the word "sterile" when "clean" is really intended, as in the sentence, "The examination should be repeated on a sterile specimen" (p. 27). The author would also make her meaning more clear if she found another phrase than "suspiciously rank" to apply to the visible mass referred to on page 23. In subsequent editions there is room for considerable amplification of the paragraph entitled "Cystoscopy" on page 28. However, these are minor points. The book is a useful addition to urological literature. Women general practitioners will get much help from it. The illustrations are excellent, but there ought to be a list of these in the prefatory pages. The price is reasonable, and it is good to see useful books like these coming down to six shillings.

CEREBRAL BIRTH TRAUMA

The monograph on *Cerebral Injury in Newborn Children*,[4] by Dr. ERIK RYDBERG of Stockholm, contains matters of interest to a wide circle of workers in medicine. The anatomist, physiologist, pathologist, and neurologist will all find something of value in the early sections, which deal with the author's method of opening the foetal cranium post mortem by removing the bones of the vault, his procedure in examining the brain, and his modifications of the modern metal impregnation methods of staining neuroglia. He describes the normal anatomy and histogenesis of the foetal glia tissue, which he regards as wholly ectodermal in origin, and the presence in it of extracellular fat as a normal content arising from the partial precipitation of colloid fat transported to the central nervous system as material for myelination. In the regressive changes due to birth trauma, he finds that the glia exhibits a relatively greater effect, by undergoing hydropic dissolution, than the nerve fibres, which show more resistance but in marked cases undergo degeneration similar to that found in the adult.

To obstetricians, paediatricians, and psychiatrists Dr. Rydberg's main theme—the cause and nature of cerebral birth trauma, its symptoms, effects, and therapy—will prove of particular interest. He gives an outline of the various theories that have been put forward to explain its production, and accepts alterations in cranial shape as sufficient for extreme cases with tentorial tears and large haematomata, but rejects them as inapplicable to the majority of cases in which cranial deformation, tearing, and rupture of vessels cannot be demonstrated by necropsy. He propounds the view that the compression of the head in labour produces a streaming of the fluid cranial contents to the rest of the body. Increasing pressure to the extent of impeding the cerebral capillary circulation produces a compensatory rise in blood pressure (Cushing), and the essence of birth trauma is often the failure of this compensation with cessation of the circulation in some parts of the brain. The multiplicity of the haemorrhages indicates a general circulatory disturbance within the cranium. An account is given of the findings in seventy-five necropsies, at which visible bleeding was found in fifty-eight cases, and in twenty-eight of them into the brain substance or ventricular cavities.

A survey is given of thirty-four fatal cases with major cerebral symptoms, in six of which no cranial bleeding

[2] *Der Coronarkreislauf.* Physiologie, Pathologie, Therapie. Von Dr. Max Hochrein. Berlin: Julius Springer. 1932. (Pp. 227; 51 figures. RM.24.)

[3] *A Handbook of Urinary Diseases in the Female Sex.* By E. Catherine Lewis, M.S., F.R.C.S. London: Baillière, Tindall and Cox. 1932. (Pp. viii + 76; 21 plates, 4 figures. 6s. net.)

[4] *Cerebral Injury in Newborn Children Consequent on Birth Trauma: with an Inquiry into the Normal and Pathological Anatomy of the Neuroglia.* By Erik Rydberg. Copenhagen: Levin and Munksgaard; Stockholm: A. Bortzells Tryckeri A. B. 1932. (Pp. 247; 48 figures.)

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INFLUENZA

In the ten years ending in 1914 the number of deaths ascribed to influenza in England and Wales was 70,172 ; in the ten years ending in 1929 the number was 149,363. Making all due allowances for changes in the fashion of certification, the age constitution of the population, etc., it is clear that, just as after the pandemic of 1889–90 this item on the debit side of our health account acquired an importance new to the pre-war generation, so since the pandemic of 1918–19 the claim of our creditor has become substantially larger. In this post-war epoch the annual claim has thrice exceeded 20,000 lives: in 1922, in 1927, and in 1929, when the figure almost reached 30,000. We are now paying a bill which, if we are lucky, may not exceed that of 1929, but is sure to be a heavy one. The data readily available relate not to the whole population, but to that of the 118 great towns of England and Wales ; this population is, however, more than half the total population, so its vital statistics give an adequate picture of what is happening. The total of deaths from influenza in the great towns began to increase decidedly in the week ending December 24th, 1932, when the number was 120, an increase of thirty-five over the previous week's return ; in the last week of the year the number rose to 303, and then to 681. In the following week the number was 1,041, a slackening rate of increase, but in the week ending January 21st the total reached 1,589, a number which implied that the rate of increase was not yet in full decline, and in the week ending January 28th the number was 1,934. The Northern and West Midland areas were earliest affected ; London, the North-West, and Yorkshire did not react seriously until more than a week later. In the week ending January 21st—the latest period for which details are available at the time of writing—the maximum of mortality seemed to have been passed in the Northern area, but all other areas were reporting increases of deaths, even the West Midland, which in the previous week showed a decline. Notifications of primary or influenzal pneumonia, which are available for all areas, have shown a similar increase ; thus, in the week ending January 21st the number increased from 3,458 to 3,781, but, in comparison with the experience of 1928–9, the recorded increase of pneumonia has been small, and notifications of pneumonia have been fewer than the numbers of deaths ascribed to influenza would have led us to expect. We think there can be no doubt that in this country the disease is generally of a milder type than that which characterized the two later phases of the pandemic of 1918–19.

The age distribution of the deaths has been of what is usually called the normal inter-pandemic type. Between 1890 and July, 1918, the percentage of deaths from influenza in the age group 65 years and upwards never fell below 25, and was usually over 35. (These percentages relate to London experience ; the age composition of the population is, of course, an important factor, but the changes noted in the pandemic were far too great to have been explained by any change of age composition.) In the first wave of the pandemic of 1918–19 the influenza mortality in the age group 65 and upwards fell suddenly to 10 per cent., and in the second wave was little more than 5 per cent. After the pandemic the proportion almost regained its usual level, and in the present outbreak has varied little ; in the week ending January 21st 37.6 per cent. of the deaths were in this age group. In other words, although this is a serious outbreak, it is very different from the great pestilence of 1918–19. It is, of course, needless to mention in these columns that the statistics of mortality are very imperfect indices of the suffering and indirect harm done by illness so widespread. It may not be altogether too fanciful to suppose that there is some relation between popular morale and the severity of the effects of epidemic influenza. The condition of the people at the time of the great epidemic of 1847–8 was very bad. In the second quarter of the year "common cholera was fatal ; scurvy prevailed more or less over the country, from the want of vegetable food, the potato having failed: all food became scarce and dear ; typhus broke out, is still epidemic, and shows no signs of decline." Such was Farr's contemporary estimate. The still greater epidemic of 1918–19 came upon a people who had suffered four years of war. The present visitation finds the people suffering from the effects of a very unprosperous peace, so that its remoter effects upon the public health should not be regarded too optimistically.

It is not surprising that writers in the lay press, from socially important persons whose letters are printed on the leading article page of the *Times*, down to the authors of leaderettes and personal paragraphs in the illustrated and evening journals, seize the opportunity to demand that medical researchers should do something decisive, and to jeer at the impotence of the remedies suggested by the medical profession. The latter amiable propensity reminds us of the leading case of Naaman the Syrian ; Naaman was not the last person to be annoyed by the simplicity of good advice. The former propensity suggests a swing of the pendulum too far in the opposite direction, for it is certainly being rather too simple-minded to believe that those who organize and those who practise research, whether in the laboratory or at the bedside, need the stimulus of an epidemic or the advice of lay peers of the realm to encourage them to seek the solution of one of the greatest problems of medicine.

HELP FOR THE BLIND

There are some institutions which, if they did not exist, would need to be founded, so essential are they. One of these would undoubtedly be the National Institute for the Blind.[1] The world of the blind is a microcosm of the world of the sighted. The blind need all the conditions and provisions that others need. But there is this difference: whereas the sighted can for the most part fend for themselves, the blind must be helped to reach anything like the same level of attainment. Statutory services have done a great deal for them, but there are intimate needs that only a voluntary agency could satisfactorily meet. The National Institute does this. Happily the record of the past year does not show a contraction of its activities owing to lack of funds; there was, indeed, by reason of economies, some extension of work. The funds collected and spent by the Institute in the year ended March 31st, 1932, were more than £160,000. This does not include all benefactions, for much voluntary and personal service has been given by a small army of helpers, without whose assistance costs would have mounted high.

Chief among the activities of the Institute may be reckoned its work as a publishing firm. It issues more than 90,000 books, pamphlets, newspapers, and broadsheets, all in the types suited for the blind. That is a great achievement. Some of these books are classics in their several departments of learning, and the ability of the blind to gain access to such works is of inestimable advantage. Even universities make use of the printing department for the provision of examination papers and the like to meet the needs of their blind students. A great advance has been made in this side of the work during the past year. Though braille was in use both in this country and in the United States, yet there was so wide a divergence in the usage that prints prepared in one country could not be read in the other. At the World Conference on the Blind in New York last year a serious attempt was made to remedy this defect, and success has attended it. In future the same braille code will be used throughout the English-speaking world. The National Institute for the Blind is also entering into arrangements for the interchange of books between America and Great Britain. This will mean large economies and at the same time a great increase in the available literature. The Institute does the same for music. It issues volumes in braille musical notation—from oratorios to dance tunes; it has a students' lending library, and publishes a special journal for blind musicians. To assist the blind in keeping abreast of technical development there is maintained a constant supervision of apparatus used in work that can be done by them. Apparatus is provided and sent to every part of the Empire, and there is a permanent exhibition. It also aims, through a special committee, at developing new avenues along which the blind may obtain useful occupation. Closely allied to these services is the personal work done for the blind of this country, supervising home industry, co-operative purchase of materials, and marketing of wares.

The homes, schools, and colleges maintained by the Institute are of a high order. The "Sunshine" homes, of which there are three—at East Grinstead, Southport, and Leamington Spa—are well known. A new school for blind mentally defective children has been opened in South Devon, and this fills a want. Such children are relatively few, but their needs are very special. The College for Blind Girls at Chorley Wood is at the other end of the scale. A first-class public residential school, situated in a mansion and grounds, the gift of Mr. Batty, this will compare with any well-known girls' school in equipment, educational staff, curriculum, and "successes." It is the only college of the kind in the world, so that pupils have come from distant countries. Medical men who know of blind children leading solitary lives, taught by governesses, and without companions like themselves, could do no greater service to these forlorn children than by getting them to Chorley Wood. The school of massage maintained by the Institute trains specially chosen candidates of both sexes in massage and remedial exercises, and in appropriate branches of medical electricity. It is recognized for this purpose by the Board of Education, the Chartered Society of Massage and Medical Gymnastics, and the Society of Apothecaries. Massage is perhaps the only form of work in which blindness may be transformed from a handicap into an asset. By concentration upon the faculty of touch intelligent blind persons can attain a delicacy and a sureness that make them invaluable.

St. Dunstan's, for the care of those who were blinded in the great war, has now existed for seventeen years, and we have before us its latest annual report.[1] The responsibilities of its officers do not decrease as the years pass. On the contrary, middle age, premature old age, and aggravation of many conditions arising out of wounds or hardship, call for greater individual attention and assistance. Even the numbers are not decreasing as might have been expected. In the year under review thirty-one blinded soldiers died, but thirty-three new cases have been admitted, all being men whose sight has at length failed as a result of war service. The average age of the blind ex-service men under the care of St. Dunstan's is now about 40 years. The actuary has calculated that twenty years hence there will be still 1,300, and some 440 in forty years' time. The contributions received during the past year show a falling off of 25 per cent. One part of the institution's work suffers particularly from deficits—the children's fund. This fund has been overtaxed because there were more blinded soldiers, more marriages, and more children than had been expected. Two thousand children are being assisted by the fund, and, since they were born after the incidence of their fathers' blindness, none of them is eligible for Government grants. The work of St. Dunstan's may be summed up as follows. The

[1] Annual Report for the Year ended March 31st, 1932, of the Executive Council of the National Institute for the Blind.

[1] The Conquest of Blindness. Seventeenth Annual Report of St. Dunstan's for Year ended March 31st, 1932. Issued by the Executive Council of St. Dunstan's.

organization and subsidization of trades and handicrafts whereby employment is provided for all who are fit to work ; the payment of children's allowances ; the care of the health of the blind soldiers and of their families (these together make a total of 7,000 persons) ; the maintenance of a convalescent and holiday home, with a hundred beds, at Brighton ; and the relief of any necessity of the St. Dunstan's " family " after the most careful consideration of each individual case. The accounts show that one of the larger expenditures has been due to the necessity of meeting the deficiency upon the economic work of the blind men. The trading account for the year amounted to no less than £154,000, and the subsidy needed from the general funds to balance this account was £35,600.

RESIDUAL EFFECTS OF CHLORINE GASSING

In estimating the percentage disability to which an ex-service man is entitled, the members of an assessment board are often faced with very baffling situations. The difficulty arises from the equivocal nature of the evidence which purports to attribute the present condition of the claimant to injuries, shocks, or exposures which occurred during service a considerable number of years previously. Anxious to be just to the claimant on the one hand and to the tax-payer on the other, the board uses every modern means of investigation to reach a conclusion. In the matter of surgical conditions resulting from gun-shot wounds, etc., there is relatively little trouble in arriving at an assessment, but in the medical disabilities this is far from being the case. For example, it is doubtful how far a diabetic condition can be attributed to war service or how far a chronic nephritis now present can be correlated with a transient albuminuria which was observed fourteen years ago. The reappearance before pensions authorities of ex-service men who claim consideration for an attack of intestinal upset on the ground that they were diagnosed as cases of amoebic dysentery years before, and have never been fit since, also leads to difficulties in assessment. In nearly all these cases microscopical examinations of the stools are negative, and yet it is not easy to come to a conclusion. The claim of war-time aggravation of previously existent foci of disease can rarely be dismissed on completely justifiable grounds, and the tax-payer, as represented by pensions authorities, must err on the generous side.

Troublesome as it is to estimate the late consequences of the ordinary war-time agents leading to disability, it is even more so in the case of the poison gases. The introduction of these violent irritants into warfare in April, 1915, opened a new chapter in the pathology of war. In view of a recent American publication[1] on the residual effects of gassing, it is of interest to examine a few figures as to the effectiveness of these noxious agents. The principal gases used are classified in this paper as pulmonary irritants (chlorine and phosgene), vesicants (mustard gas), lachrimators (chloracetophenone and brombenzylcyanide), sensory irritants (diphenylchlorarsine), paralysants (hydrocyanic acid), and gases interfering with the respiratory function of the blood (carbon monoxide and arsine). The number of British casualties due to gassing was approximately 2 per cent. of casualties due to all causes, and in 1920 there were 19,000 British soldiers, out of a total of about 160,000 who were gassed and survived, who were receiving pensions on that account two or more years after the exposure. The number who were killed in the field by gas is, of course, impossible to estimate accurately, owing to the totally unprepared condition of the British troops for this type of attack. Of a series of 700 who had been gassed by chlorine and were studied by Meakins and Priestley, 368 either died or were returned to duty, while of the remaining 332, 188 showed signs of irritable heart, bronchitis, asthma, and neuroses four years later. French investigators of the late effects of gassing by pulmonary irritants laid primary stress on the lung conditions such as emphysema and chronic bronchitis, cardiac disabilities occurring only secondarily. The figures given by Gilchrist and Matz for the American gas casualties are of interest. The total number of patients was 70,742, of whom 1,843 were gassed with chlorine, 27,771 with mustard gas, 6,831 with phosgene, 577 with arsine, and 33,587 with gases of unascertained nature. Of the total, 200 died in the field and 1,221 died in hospital. Of the 1,843 gassed with chlorine, a group of 838 were studied by the United States War Department, and it was found that of thirty-seven who died the cause of death in two cases was pulmonary tuberculosis unquestionably attributable to the residual effects of the gas, although in both cases the gassing had been described as slight, and death occurred about seven years after the exposure. A detailed study of the histories and physical conditions before and after gassing of ninety-six cases of the 838 mentioned above led to the surprising conclusion that in only nine could the present condition (pulmonary tuberculosis, pleurisy, and bronchitis) be definitely attributed to residual effects of the chlorine ; in seven cases the evidence was equivocal, and in the remaining eighty the present symptoms were held to be unrelated to the exposure to the gas. Even in those patients who had developed pulmonary tuberculosis after the gassing, the view of these authors was that the effect of the gas was to light up previously existent foci by producing injury to the lung parenchyma or by lowering the resistance of the organism through the severe inflammatory reaction.

The criteria laid down by these authors in deciding on the presence or absence of residual signs of chlorine gassing were severe, and where there was any doubt at all the case was put in the group of equivocals. There is no question that emphysema or bronchitis, or both, are regular sequelae in those who have been severely exposed to chlorine and made a recovery.

[1] Gilchrist, Harry L., and Matz, Philip B.: Residual Effects of Warfare Gases ; The Use of Chlorine Gas, with Report of Cases, *Medical Bulletin of the Veterans' Administration*, January, 1923. Washington: United States Government Printing Office.

These are the results of the direct selective effect of the gas on the respiratory tract, but if a secondary involvement of the heart occurs it is possible later to find cases with residual heart signs and a resolved pulmonary condition. Such cases would be placed by these authors in the class without anatomical residua. From the point of view of the pension assessors such a classification would be of no value at all. The conclusion to be drawn from this analysis by the American workers seems to be that every case must be judged on its own merits, and that no general rules can be laid down. The experience of pensions authorities in this country has, we think, been much the same.

OSTEOSYNTHESIS IN FRACTURE OF THE FEMORAL NECK

One of the *opprobria medicinae* which there seemed reason to hope had of late years been in a fair way to removal by orthopaedic surgery is fracture of the upper end of the femur in elderly people. Not a few cases have been reported in which, a year or more after the operation of osteosynthesis with bone pegs, screws, or grafts, apparent complete union with good consolidation and complete cure have been inferred from the evidence offered by radiographs. But lately there have been published reports which seem to show that such inferences may be premature. To the *Revue d'Orthopédie* for November–December, 1932, Dr. Antoine Basset of Paris contributes a striking article on partial late absorption of the head of the femur after screwing (*vissage*) without arthrotomy for transcervical fracture of the neck. In January, 1928, Dr. Basset presented to the Society of Surgery a woman, aged 62, on whom he had operated in July, 1926, ten days after fracture, by pegging the detached head to the trochanter by means of a half-inch ox-bone screw, without opening the hip-joint (if such a limitation is, strictly speaking, possible). The functional result was as excellent as the anatomical restoration appeared to be. The gait was perfect, and there was, in short, no symptom of any abnormality. Radiographs showed the bone screw intact and in as good a position as it was immediately after the operation; the upper end of the femur was reconstructed in almost normal form, the site of fracture in the neck being evident only from the presence of transverse sinuosities a little denser than in other parts. This truly excellent result was maintained until April, 1930—three years and nine months after the operation—when, after an attack of acute sore throat, the patient complained of pain in the hip and groin, fluctuating in severity according to the weather and the use made of the joint. In November, 1930, radiographs were again taken. At this time nothing wrong was found on clinical examination, nor were there any symptoms of arthritis. The radiographs, however, showed remarkable changes, consisting of modifications of the screw and its neighbourhood—particularly of the upper and anterior part of the femoral head. The changes in the screw amounted to erosion in places and partial obliteration of its thread, but there was no evidence of osteoporosis around it. The site of fracture could not be made out in its lower half, and the fan-shaped bundle of fibres supporting the head passed directly from the neck into the head as in a normal bone, but the upper part of the line of fracture had reappeared above and external to the screw. The upper and anterior part of the head was irregular, with a sinuous outline hollowed out by notches, which were visible in radiographs taken in profile as well as from before backwards. These changes in the region of the head corresponding to the part of the acetabulum which normally transmits body weight to the head in the upright position consisted, in Dr. Basset's opinion, of loss of substance and erosion of the head. The tracings of radiographs illustrating the paper show the very remarkable changes above described. Other surgeons have recorded the breaking down of apparently solidly united fractures of the femoral neck after operations, but the occurrences are not so remarkable or so long delayed as in this case. Dr. Basset discusses some of these cases in his paper. There seems some ground to suppose that the nutrition of the parts has been too freely interfered with by the use of bone screws of large diameter, but on the other hand the occurrence of similar late changes in a case treated with temporary success by plaster-of-Paris, without any peg or graft or screw, is reported by J. V. Santos of Chicago. Dr. Basset also describes various suggested precautions for the avoidance of degenerative changes after union. He points out that, in a collection of thirty-four cases of osteosynthesis of the neck, Robineau noted retarded deformation in only four. For our own part, this article suggests the inquiry as to whether in these cases the predisposing factor of the original lesion was not a degenerative affection of the bone, and whether the retarded reappearance of deformity and pain was not due to the persistence or the recrudescence of the original disturbance of nutrition of the bone, the nature of which is as yet undetermined.

ENDEMIC TYPHUS IN THE UNITED STATES

In a paper read before the Section on Preventive and Industrial Medicine and Public Health at the last annual meeting of the American Medical Association, Drs. R. E. Dyer, L. F. Badger, E. T. Ceder, and W. G. Workman[1] of the United States Public Health Service discuss the history, epidemiology, and mode of transmission of the endemic typhus fever of the United States. Endemic typhus was first described by Brill of New York in 1898, and again in 1910, 1911, and 1915. He first regarded the disease, which was called after his name, as distinct from typhus, owing to his inability to infect monkeys with it, its prevalence in the autumn, and its lack of contagiousness; but it was shown later by Anderson and Goldberger to be immunologically identical with Mexican typhus. The epidemiological features of endemic typhus are its incidence in the summer and autumn in contrast with the winter and spring incidence of epidemic typhus, lack of communicability, association with food handling and rat harbours, and lack of evidence against the louse being responsible for its spread, features which are all readily explained by the rat flea. It is possible, however, that the endemic disease, once it has occurred in a lousy population, may, by transfer through lice, become epidemic in character. Dr. Dyer and his associates suggest that the rat flea is the common vector of

[1] *Journ. Amer. Med. Assoc.*, September 3rd, 1932, p. 795

typhus, not only in the United States, but also in other parts of the world, such as Rome and Athens, where a condition resembling Brill's disease occurring in the summer and not transmissible from man to man has been reported in recent years.

CHILD GUIDANCE IN GREAT BRITAIN

In 1927 the Child Guidance Council was founded with the assistance of the Commonwealth Fund, and in the course of five years it has embarked on many varied and fruitful activities. It has established successful clinics in many parts of the country. Mr. Barry Smith, the general director of the Commonwealth Fund, said at a meeting held by the council on January 23rd that no child guidance clinic in America did a better piece of work or was more sanely and soundly directed than the London clinic. The Glasgow clinic is in a Roman Catholic training college, and draws on a population which could keep more than one clinic going, for Glasgow has over forty Catholic schools. The Liverpool clinic, which has been running for about three years, has become a definite part of the social, medical, and educational service of the community, and the Manchester clinic, started a few months ago, is already flourishing. The Birmingham clinic is under the local education authority, and the experiment seems to be successful ; the East London clinic of the Jewish Health Organization is the oldest child guidance clinic in Britain. Dr. William Moodie, who gave a short account of the work of the council, said that in addition to starting clinics it had a great deal of interest in the training of social workers ; that it lent qualified workers and psychologists to clinics in their initial stages, gave courses of lectures to interested professional groups, kept a record of schools, homes, and institutions to which children could be sent, and saw numberless visitors. As Dr. Moodie explained, the child guidance clinic is a clinic of a special kind. It treats, not by any definite kind of mental therapy, but by altering the child's environment and helping him to adjust himself. One of the duties of the clinic is to advise on the handling of any kind of behaviour and educational difficulty, and to find out the total life situation of the child: how he reacts in the home, in the school, and in the playground ; how he gets on with his brothers and schoolfellows ; and how he fits into the school curriculum. This kind of research naturally provides unique material with which social workers and others can be trained. No other clinic could call upon such detailed and valuable environmental reports. The policy of altering the child's environment brings the worker at once into contact with the problem, not so much of child guidance, as of parental guidance. The social worker in the child guidance clinic has actually to handle adults much more than she has to handle children. The paradoxical result is therefore that child guidance workers are substantially trained for adult work, and the system of lending workers operates not only in the child guidance clinics, but also in adult psychiatric and allied clinics. An important feature of the council's work is that it directs its educational activities principally towards professional groups—medical men and women, teachers, and social workers—rather than to the public at large. Dr. R. H. Crowley, in an enthusiastic appreciation of the council, spoke of the rapid progress of the child guidance "movement," but Mr. Barry Smith chided him for the use of this term. He pointed out that in things mental, which are necessarily intangible, a popular movement is always open to the great danger that people who do not understand what it is all about are likely to get hold of one or two ideas and run away with them. The policy of addressing the professional mind is the strength of the council, and it loses nothing and gains a great deal by its caution and conservative spirit. Not the least important of its virtues is that it affords an unspectacular link between the British and American peoples.

A BIRTH CONTROL CLINIC

In the annual report for 1931–2 of the Society for the Provision of Birth Control Clinics will be found a report of the medical officers to the Walworth Women's Welfare Centre, which is almost a model for its kind. It is succinct, moderate, and clear in its statements, as well as discriminating and definitely informative in its conclusions. The patients at this centre are, for the most part, of the poorest class. They "include the slum-dwellers already overburdened with poverty and ill-health. . . . Many of the women are suffering from the appalling conditions in which they live ; they are badly nourished, worried, and depressed." The medical officers attended the International Birth Control Conference at Zürich in 1930, but obtained therefrom no knowledge which justified any change in the routine methods they had followed for some years. Each patient receives a gynaecological examination by the doctor, after a medical history has been taken. The most suitable method of contraception is advised for each case, and if an occlusive pessary is used it is fitted by the doctor, and the patient is instructed in its use by the nurse. The patient returns in a week to see that she is proficient in its adjustment, and is asked to report personally every six months. Normally a combination of the mechanical and the chemical contraceptives is used: in the majority of cases the Dutch occlusive pessary is placed dome upwards in the vault of the vagina, lubricated with a spermicidal ointment, and followed by a soapy douche on its removal. The medical officers believe this to be the safest method for the women with whom they deal, but they describe alternative methods for exceptional conditions. Their experience condemns as dangerous both the wishbone pessary and the Gräfenberg ring. They agree that the ideal contraceptive has not yet been discovered, and that any method may have its failures ; but they claim that the methods they use produce neither physical injury nor sterility. There seems, indeed, to be no real evidence that sterility is caused by the practice of contraception, but it is perhaps too early to be certain, or dogmatic, with regard to this. There are two points in the report to which attention may specially be drawn. One is the statement that attempts at abortion, sometimes successful, are found to be extremely common and may have a widespread influence on maternal mortality and morbidity. The other is the fact that one young wife came to the centre because she had borne two microcephalic idiots, and another woman because she had already conceived four children during the times when her husband was on leave from a mental institution.

AUGUSTO MURRI

Professor Augusto Murri, whose death was announced in our issue of December 10th, was born on September 8th, 1841, at Fermo, and studied in Pisa and Florence. He qualified in 1864 at Florence and then went to Paris, where he met Trousseau, Bouillaud, and Piorry, and afterwards to Berlin, where he studied under Traube, Frerichs, and Griesinger. After five years' service in the modest position of a district medical officer he was invited by Baccelli, who had been favourably impressed by his study of acute yellow atrophy of the liver, to become his assistant at Rome. In the course of the next few years he published important articles on regulation of the body temperature and the theory of fever, and in 1876, at the early age of 35, was appointed to the chair of clinical medicine at Bologna, which he held until his retirement in 1916 at the age of 75, in spite of several attractive invitations to become professor in other universities. Murri rapidly became one of the foremost consultants in Italy, as well as a writer of outstanding merit. In addition to the works already mentioned, he published articles on the action of digitalis and quinine, Cheyne-Stokes respiration, paroxysmal haemoglobinuria, Addison's disease, syphilitic lesions of the brain, and the diagnosis of cerebral tumours and abscesses. His clinical lectures were published in 1908. Murri was a great admirer of English medicine, and particularly of the works of Hughlings Jackson, James Mackenzie, and Gowers, whose treatise on nervous diseases he described as one of the most wonderful works of the nineteenth century. On the day of his funeral at Fermo the city of Bologna founded the Augusto Murri prize for medicine.

TESTIMONIAL TO DR. ALFRED COX

We have received from Dr. E. Rowland Fothergill, honorary secretary of the general committee, a copy of the final balance sheet of the Dr. Alfred Cox Testimonial Fund. This shows that the amount received, together with deposit interest, was over £2,095. The cheque presented to Dr. Cox was for £1,051. The chief items of expenditure were the artist's fee for the portrait; printing, postages, and clerical assistance; and the cost of the presentation album containing the names of all subscribers to the fund. Dr. Fothergill asks us to state that the applications for reproductions of the portrait did not reach the minimum number which would have justified the initial cost of putting in hand the necessary printing. The sums received for this purpose have therefore been returned to subscribers by the honorary treasurer.

Dr. J. H. Hebb has been appointed, as from April 1st, to be Director-General of Medical Services in the Ministry of Pensions in succession to Sir Lisle Webb, who will retire on March 31st. Dr. Herbert Lightstone will succeed Dr. Hebb as Deputy Director-General of Medical Services.

We regret to announce the sudden death of Sir William Taylor, regius professor of surgery in the University of Dublin, and past-president of the Royal College of Surgeons in Ireland and of the Association of Surgeons of Great Britain and Ireland.

RHEUMATISM AS A SOCIAL AND INDUSTRIAL PROBLEM

In the course of a lecture on rheumatism as a social and industrial problem, at the Royal Institute of Public Health on January 25th, Dr. FORTESCUE FOX said that disease became a social problem when the afflicted person was a danger or a burden. Disease was only a short danger when it was highly communicable, epidemic, and fatal. It was a longer but slighter danger and a long burden when, like tuberculosis, it was incapacitating and less communicable. It was a burden only to the community when, like rheumatism, it was not communicable or fatal but permanently incapacitating. Preventive measures must counteract causes and fortify resistance.

Dr. Fox summarized five reports from northern countries on the occupational incidence of rheumatic disease which had been presented to the last International Congress on Rheumatism in Paris. All revealed a maximum incidence in outdoor occupations, especially those with hard labour and exposure to cold. In Sweden Kahlmeter showed that the permanent invalidity from arthritis in 1928 had much increased since the previous report for the year 1918, and now considerably exceeded that from pulmonary tuberculosis. At least 35,000 arthritic persons were now disabled in Sweden (0.6 per cent. of the population), at a charge upon the State more than twice as great as that for tuberculosis. The question of sex was interesting: the liability was greatest in peasant women, but the *patronne* at home was more affected than her female servant, while the male labourer suffered more than his employer. Dr. van Breemen had analysed the occupations of 3,000 patients in Holland (Amsterdam), and proposed lists of suitable and unsuitable employments. Men in outdoor work had from three to five times more rheumatic abnormality than those occupied indoors. The report from Germany suggested that nearly 75 per cent. of industrial workers over 40 years of age suffered from some form of rheumatism. The report of the Rheumatism Committee in the Soviet Republics emphasized the importance of chill, and gave figures showing a great reduction of invalidity in factories where this risk was minimized. The maximum of "lost days" occurred in wet industries like tanning and dyeing and leather work. A report on 19,000 cases treated at the chief spa hospitals in England confirmed the main conclusions of the other reports: "those most affected are—in men, the strenuous manual workers exposed to damp, and in women, housewives and home workers."

Dr. Fox believed that many contributory factors were now taking a fixed place in the constellation *Rhuma*. There was no disease for which a single cause was more impossible. At the same time it was common to find a dominant cause, and the vicious circle could be broken only at this point and in favouring circumstances. He attributed much importance to the production of chronic chill by repeated exposure to uncompensated cold. Rheumatoid arthritis—the "British arthritis"—was often connected with chill. Osteo-arthritis, on the other hand, was related to mechanical trauma (injury). A home environment unfavourable to resistance was an important star in *Rhuma*. The conditions which were known to affect the housewife and mother suggested many hopeful lines of preventive treatment.

The evolution of medicine appeared to show that the problem of the epidemic was on its way to solution, that acute diseases on the whole were getting less prevalent, and that an era of chronic disease was on its way. This was a new problem, requiring new methods of approach. There were insidious failures of national health leading to chronic maladies like catarrh and rheumatism, and a new objective was needed to save health, not lives.

Nova et Vetera

SOME NOTES ON VAGITUS UTERINUS

WITH DESCRIPTION OF A RECENT CASE

A case of my own has recently interested me in the subject of the child crying *in utero*, and though I have done my best to find out what has appeared in print on the matter, and have had valuable co-operation in the search, the results seem to show that the subject is one still requiring discussion and investigation. No case seems to have been reported in the last few years, and the literature leaves me in doubt as to whether obstetricians are now in agreement on the cries and their origin.

On November 10th, 1931, I was called out to a case by a district nurse. The patient, whom I had not seen before, was in labour with her third child, and I am given to understand that her previous confinements were normal and without difficulty. Labour had begun at 10 the previous night, and I arrived about 8.30 in the morning to find a brow presentation, the os almost fully dilated, and the mother having no pains. I found the head was firmly engaged, and I could not move it. As I was withdrawing my hand after the vaginal examination the child began to cry.

It was the normal crying of a newly born infant, and was heard by not only the mother, the nurse, and myself, but also by a woman in the cottage in the room directly below the bedroom. This loud crying persisted at frequent intervals for at least a minute.

I thought that if I did not deliver the baby in a very short time I should certainly lose it, so I gave the nurse a mask and some chloroform to administer to the patient whilst I washed up again, and attempted to turn the brow presentation to a face. The crying had stopped before I began to do this, and I heard no more crying during the confinement. The patient was not under chloroform, and I could not move the head, so, after strenuous efforts, I decided that the child must be dead and that there was no need to hurry matters further on its behalf. The patient was having no pains. I therefore sent a message to my wife, who is also qualified, to ask her to come and give an anaesthetic for me.

I then examined the abdomen again, and was surprised to hear a foetal heart beating more slowly than normal, but very distinctly. I was so sure that the child that cried must be dead that I thought at once of twins, but I could make out the body of one infant only.

On my wife's arrival the patient, who had begun to have pains of moderate strength, was put fully under chloroform, and with considerable difficulty I got the head into a mento-anterior face presentation. The child had not cried again, but in turning the head I put my finger into its mouth and distinctly felt the gums close on my finger. I put on forceps and delivered the child at 1 p.m., four hours after it had cried. It was alive and normal, but very pale, and the cord, which was long, was twisted once round the neck. It began to cry at once. There seemed to be very little liquor, which I presume had drained away before my arrival. Both mother and child have progressed well.

For the literature on the subject is an editorial article in the *British Medical Journal* for July 6th, 1907, which states that:

"Much scepticism has been expressed as to whether a child can succeed to cry *in utero*, some believing that a noise resembling a cry must be due to the entrance of air or to other causes. There seems, however, reason to believe that such a phenomenon may occur. Peiser in 1903 spoke of fifteen authentic cases."

The article proceeds to describe a case of Peiser's own, when he was "exploring" during labour and distinctly heard a cry for several seconds. An anaesthetic was given and a fresh examination made, when the child was heard to cry once more. The child was delivered with forceps, and cried out vigorously after birth. The article then quotes a case of Bacura's, and later refers to two cases attended by Dr. S. Marx in America. In one of these, which was a very severe labour in which unsuccessful attempts had been made to deliver before Dr. Marx was called in, and in which difficulty was experienced with the after-coming head of a foetus which weighed 12 lb., Dr. Marx described the cry as pitiful and whining, and he is quoted as saying that the vagitus is the weirdest cry for help that can be imagined, and that most, if not all, the children are lost before they can be extracted. Peiser, however, concluded from cases recorded that the prognosis when a cry is heard is by no means unfavourable to the foetus.

As a result of this article, Dr. H. E. A. Washbourn sent to the *British Medical Journal* an account of a case of vagitus uterinus which he met with in 1905.

On September 14th, 1912, the *British Medical Journal* stated, in an annotation, that there had recently been some discussion in French and Belgian medical papers about the nature of vagitus uterinus, and as to whether the sound proceeds from the foetus or is produced by a current of air causing a fold of mucous membrane to vibrate. It recorded that Velpeau once said that even if he heard the cries he would not believe in them—that is, he would not attribute them to the foetus—and added that Allard had published a case which led him to believe that the cry came from the foetus. In this case the cry was repeated four or five times, and when the child was delivered with forceps it was asphyxiated. A case of Sippel's, which had occurred about eight years earlier, was then described, and, as this provides one of the arguments against the vagitus, I shall quote the article verbatim:

"Sippel reported a case of his own in which he undertook version. A pain occurred, and he was obliged to stop his manœuvres without withdrawing his arm. Immediately two high-pitched notes were heard clearly arising within the patient's abdomen. They precisely simulated the cries of an infant, but Sippel noted that at each cry air ran along his forearm engaged in turning, and he distinctly felt the vibrations of a fold of mucous membrane closely encircling his forearm. The current of air ran not from below, but from above downwards. The uterine contraction drove it out, and as it passed the slightly resistant fold the sound was produced. Possibly the vagitus uterinus may be explained in a similar way in most, if not all, other cases. There seems usually to be a flabby uterus on the one hand and an obstetrical operation admitting air into its cavity on the other."

The tone of the article, therefore, seems to be against the possibility of a vagitus uterinus, in contrast to the opinion in the article of 1907.

Following this article in the *Journal*, Dr. J. Reidy wrote to the *British Medical Journal* of October 26th, 1912, and reported a case of vagitus uterinus and one of vagitus vaginalis which had occurred in his experience, the only ones in upwards of 3,000 midwifery cases. Dr. Teevan wrote to describe a case he met with in Australia, and Dr. Oliver Smithson also wrote to mention a case of Dr. Robert D. Bell's, his partner, and to describe a case of vagitus uterinus he met a few days later himself.

"So far as I remember the presentation was occipito-posterior, and I applied forceps. Almost immediately afterwards the child cried distinctly, and the cry was repeated a few minutes afterwards. It was heard by both mother and nurse. Like Allard I am convinced that Velpeau himself would have changed his opinion had he been present at my case."

In the *American Journal of Obstetrics* of June, 1914, is the report of a discussion on vagitus uterinus, with the description of a case. Dr. George Brodhead said a case had been reported in the *New York Medical Journal* for October 2nd, 1913, by Dr. Telfair. At that time it was stated that until very recent years every paper on this subject had aroused a storm of criticism, sometimes ridicule. The criticism was not limited to the profession in general, the bitterest usually came from obstetricians of wide experience. These men frankly said that they had never seen a case, and they did not believe anyone else had.

Dr. Telfair stated that of forty-four reported cases more than one-half were operative deliveries, eleven being forceps, fifteen versions, and one replacement of arm and cord. The foetal mortality was 10 per cent., many of the surviving children living only after prolonged efforts at resuscitation. At this meeting Dr. Malcolm McLane said he had reported an undoubted case about sixteen years before. The foetal head was well up in the uterus. There was a suction, and he was astounded to hear the child cry. This continued for several minutes. There was a superstitious nurse present, who spent most of her time on her knees. The case was being prepared for operation when there was a suction of air into the uterus, which accounted for the cry. Dr. Telfair said that critics maintained that it was impossible to speak of what one heard. Some cases were explained by a vibrating fold of mucous membrane.

If all the cases recorded before 1914 are included in the forty-four mentioned by Dr. Telfair, the condition must be very rare, and I do not find records of any cases in the English medical press after that date.

With regard to my own case I should like to stress the fact that the noise heard was loud and absolutely that of a child crying. It was not a pitiful whining noise as described by Marx, nor a vague sound concerning which one had to ask oneself whence it came. It never occurred to the nurse or myself that it was anything but the child crying.

I noticed no suction of air into the uterus, and felt no vibration of a fold of mucous membrane, though my fingers were in contact with the skull of the child when the crying started. I do not believe that air could pass up to the uterus as said by some, or down from the uterus as described by Sippel, in sufficient volume to create sounds of the intensity I heard and lasting for a full minute at frequent intervals.

The latest mention of vagitus uterinus which has been brought to my notice is in *Principles and Practice of Obstetrics*, by Dr. Joseph B. De Lee, professor of obstetrics at the Northwestern University Medical School, published in 1928. The author writes of vagitus uterinus:

> "This term has been applied to the crying of the child *in utero*—before it is born. Many authentic cases are on record. It is said that Mahomet and Saint Bartholomew made themselves heard while in the uterus, but these are probably fables.
>
> "If air is introduced into the uterine cavity alongside the hand, as in version, or with instruments, or by a simple examination, or if gases develop there, the child may inspire, and, on expiration, produce a cry. Sometimes this may occur without evidence of dyspnoea, and the child may be delivered in good condition, sometimes hours or days afterwards.
>
> "In Kristellar's case the child cried eight different times when the forceps were closed on its head.
>
> "Reidy reports three cases. (v. Klein.)"

I do not know which is the accepted belief in this country, but I feel myself in complete agreement with the above remarks.

In conclusion, I can only thank the practitioners and specialists, unknown to me, whose cases and writings I have used in these notes, and especially Mr. Eardley Holland and Dr. W. W. MacNaught for their great help in seeking out the literature on the subject.

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Scotland

Royal College of Physicians

The annual dinner of the Royal College of Physicians of Edinburgh was held on January 20th, with the President, Dr. Robert Thin, in the chair. Dr. R. A. Fleming gave the toast of "The Houses of Parliament," to which replies were made by the Earl of Rosebery and Mr. A. N. Skelton, Under-Secretary of State for Scotland. In the course of his remarks Mr. Skelton gave it as his opinion that while the municipal hospitals established under the 1929 Act would deal with the poorer classes of the community, the future of the voluntary hospital was bound up with the question of the paying patient. Voluntary hospitals should provide for the needs of that large section of the community situated between the rich and the poor. "The City of Edinburgh" was proposed by Lord Dawson of Penn, President of the Royal College of Physicians of London, and Sir Thomas Holland, Principal of the University, gave the toast of "The Royal College of Physicians," to which the President replied.

The Medical Curriculum

The subject of the medical curriculum, in which there has lately been much general interest, came up for discussion at the conference of Students' Representative Councils of Scottish Universities which opened at St. Andrews on January 26th. A motion was adopted to the effect that the universities should be petitioned to readjust their time-tables in the faculty of medicine so as to free the final year from classes in "special" subjects, and thus to permit the fifth year to be devoted entirely to instruction in medicine, surgery, and midwifery. A further proposal was passed that it would be desirable to add a course of special clinical instruction in surgery, medicine, and midwifery to be given during the vacation in the three weeks preceding the opening of the fifth year. The delegates from Edinburgh proposed that with a view to limiting the numbers of students and enhancing the value of the M.B., Ch.B. degree, the subjects of botany, zoology, chemistry, and physics should all be included in the pre-registration examination, to be passed before entering upon the medical course; that the subjects of anatomy and physiology should be taught together in a five-term course; that the third term in the second year should be occupied with a course in the application of anatomy and physiology to clinical medicine and surgery; and that students who failed to pass in any subject on three occasions should thereafter be debarred from further continuing their medical course. These proposals were referred back to the Edinburgh Students' Representative Council as they concerned that university only.

Blind Persons' Clinic in Edinburgh

A discussion took place at the Edinburgh Public Assistance Committee on January 26th with regard to the manner in which the register for the blind and a clinic for the certification of blindness under the 1920 Act should be conducted. A report by the city chamberlain and the medical officer of health showed that these activities were at present conducted by agreement between the corporation and the Edinburgh and South-East of Scotland Society for Teaching the Blind to Read in their own Homes. This society, in return for each blind person on its roll and a sum of £80 per annum in respect of home workers, had undertaken to keep the register of the blind and to provide a clinic for certification. The society has set up a clinic in new premises at 4, Coates Crescent, at a cost of £3,000, and during the year ended March 31st, 1932, 206 cases had been examined, of whom 119 had been found to be blind and eighty-seven "not blind." There were two ophthalmic surgeons, and the clinic, in the opinion of the medical officer of health, was satisfactory. It was decided that the register and clinic should be left in the hands of this society as before, and that all blind persons in Edinburgh who had been admitted to the register prior to 1931 should be re-examined by the officers of the society.

Glasgow Royal Infirmary

At the annual meeting of employee contributors to the Royal Infirmary of Glasgow Sir James Macfarlane, chairman of the board, said that the conditions of the past year had been very trying. As an example of this the construction of the extension at Canniesburn, which had been authorized and the money for which was in hand, was now held up, because the annual expenditure on maintenance, which would amount to £8,000 or £9,000 a year, could not be faced. With regard to the Royal Infirmary, while employees' subscriptions had amounted to £24,269, a figure less than that for 1931 by almost £1,600, and most other subscriptions also showed some decrease, the deficiency in income had been more than balanced by the extraordinary revenue from legacies and donations. So many out-patients had attended the dispensary that the managers were contemplating an extension of the dispensary building. It was felt that people were taking advantage of public philanthropy, and that something should be done to insist on payment being made in such cases.

Public Health Arrangements in Ross-shire

At a meeting of Ross-shire Public Health Committee on January 24th it was reported that the Department of Health had requested that a resident doctor should be established in the county hospital at Invergordon. The committee suggested, as an alternative to this, that a residence should be built at Invergordon for the chief medical officer of health for the county. It did not agree that a resident doctor was essential in the hospital, and this alternative would save expenditure of about £400 per annum. It was also intimated that the Department of Health had not approved the proposal to turn half of the Lewis Sanatorium at Stornoway into a hospital for infectious diseases, and had suggested the erection of a separate hospital of ten beds at an approximate cost of £2,000. The matter was referred to a subcommittee for consideration.

England and Wales

Undergraduate Teaching in L.C.C. Hospitals

Following upon conferences with the London Voluntary Hospitals Committee in regard to the association of the voluntary teaching hospitals with the London County Council's hospitals for the purpose of medical education, communications have taken place with the deans of medical schools in London, and it is stated that there is a general desire on the part of the schools to link up in each case with a Council hospital for this purpose. A note to that effect appeared in last week's *Journal* at page 160. At the present time arrangements are in existence for instruction of medical students at four only of the Council's general hospitals. At its fever hospitals the Council provides instruction for London medical students in infectious diseases, and includes, when there are suitable cases under treatment, instruction in small-pox, at its small-pox hospitals, for students and qualified practitioners; also instruction at certain fever hospitals for candidates for the D.P.H. The facilities desired, and the best arrangements for their provision, have been discussed with the deans of the medical schools. The scheme contemplated is that a number of clinical demonstrations should be arranged at Council hospitals, associated for the purpose in each case with a metropolitan medical school. The number of demonstrations will vary from one or two a term to about five a week during term time, and the number of students attending each demonstration will, it is understood, be about twelve or fifteen. The scheme does not for the time being include arrangements for teaching in obstetrics; this matter, which presents certain points of practical difficulty, is still under consideration. The scheme will, if it is found that demand exists, include facilities for instruction at certain special hospitals other than the fever hospitals. Certain conditions are to be made as to definite times for the visits, selection of cases, avoidance of teaching at the bedside which might convey a wrong impression to the patient as to his diagnosis or treatment, and the setting aside, whenever possible, of a suitable room for preliminary and final talks to the students. As the facilities are appreciated it is regarded as probable that requests for additional demonstrations will be received. The scheme generally will come into operation about April 1st next, but in certain cases in which an earlier date is desired this can be arranged. It is proposed to review the arrangements after twelve months' experience has been gained. There is no anticipation that any additional cost will fall upon the Council in consequence of the proposals.

Investigation into Causes of Mental Defect

All local mental deficiency authorities have been asked by the Board of Control to co-operate in obtaining information about the children of mental defectives and their environment, with a view to assisting the departmental committee recently set up to examine the question of hereditary transmission and other causes of mental disorder and deficiency. The London County Council has undertaken to assist in the filling up, as far as practicable, of a form in regard to every defective in the London area known to have had a child, in the hope that this will furnish information on the extent to which offspring of mental defectives are likely to be abnormal, mentally or physically, and on the environment in which they are likely to be brought up. The work of obtaining and giving this information in London is considerable, and is expected to call for the equivalent of the services of a medical officer for a period not exceeding six months and for the employment of a temporary woman inspector for a similar period, representing a total cost of something over £500. It is felt, however, that the Council should co-operate in the way suggested, as it is only on the basis of reliable and exhaustive data of this kind that sound conclusions can be formed.

CORRESPONDENCE

Haematopoietic Hormone in Pernicious Anaemia

SIR,—The communication of Dr. John F. Wilkinson (*Journal*, December 24th, 1932, p. 1163) has just come to my attention. I shall attempt to answer the objections raised by him in each paragraph of his letter.

The unidentified substance in normal gastric juice which we have designated "addisin,"[1] and which Wilkinson and Klein have termed "haemopoietin,"[2] is, as Wilkinson states, "only of value in preventing pernicious anaemia when it is permitted to interact in the stomach with a particular constituent, possibly vitamin B, of the protein foodstuffs." This statement is apparently true as it applies to *oral administration*.

The haematopoietic responses we have obtained by parenteral administration of concentrated *human* gastric juice have been due to addisin alone, *without* demonstrable "extrinsic factor," such as vitamin B. Our results have been confirmed by Conner[3] and by Zerfas. We believe our results imply neither of the two alternatives suggested by Wilkinson. In the first place: (*a*) the gastric juice employed did not "contain the preformed active principle as found in liver," since boiling

inactivates concentrated gastric juice, while the active principle of liver is unaffected by boiling. The second alternative, (*b*)—" the injected material was secreted into the stomach after transport by the blood stream, and presumably was then able to react with suitable stomach contents "—appears to us an unwarranted assumption.

Wilkinson then states:

"In their first paper they stated that ten hours after injection of the concentrate from 450 c.cm. of human gastric juice there was a definite rise in the reticulocytes—thus involving the following sequence of events: (*a*) absorption of injected material into, and transference by, the blood stream to the stomach; (*b*) secretion into the stomach; (*c*) sufficient digestion of food in association with it in the stomach; (*d*) absorption of the products of this digestion; (*e*) conveyance to the haemopoietic tissues; (*f*) institution of haemopoiesis; and (*g*) appearance of reticulocytes in the peripheral blood stream. This is remarkable when one recalls that intravenous liver therapy (the most active haemopoietic stimulant) requires at least twelve to twenty-four hours to manifest its effects, and is dependent upon the presence of the active liver principle itself, which is conveyed directly to the haemopoietic centres, thus dispensing with the need for secretion into the stomach and the necessity for the digestion process there."

The complicated sequence of events involved, according to Wilkinson, appears to us to be purely speculative, and such a possibility had never occurred to us. We shall await proof of such a mechanism. There is no reason for assuming a difference in the mode of marrow stimulation between liver extract and addisin so far as we know. There seems to be no valid reason why addisin should not be absorbed from muscle and transported directly to the haematopoietic centres, as in liver therapy. Furthermore, we believe we have good evidence that addisin intramuscularly, and not intravenous liver therapy, is "the most active haematopoietic stimulant."[3] A simpler explanation, assuming the necessity for the extrinsic factor, has been advanced by Castle,[6] who suggests the possibility of a reaction between the injected gastric juice and the proteins of the injected subject's muscles.

Wilkinson[7] reports failure to obtain a reticulocyte response after injection of human gastric juice in one case of pernicious anaemia, and from this single observation he apparently concludes that our results are erroneous. Not infrequently, it has been our experience that gastric juice is inactivated in the process of concentration. Neutralization *prior* to concentration, which he seems to have done, has led to failure in our hands. The excessive foaming made high concentration impossible, whereas concentration with subsequent neutralization gave far better results. His one negative result proves either (*a*) inactivity of the original material (improbable), or (*b*) inactivation in the process of concentration. We have had positive results with human gastric juice in five cases of adequately controlled pernicious anaemia—results confirmed by Conner and by Zerfas—as stated previously, and with concentrated swine gastric contents in seven cases.

The gastric contents of swine were obtained immediately after slaughtering. There was always an admixture of food. In no case has the attempt been made to obtain gastric juice of swine by gastric fistula. But in man the fasting stomach was first washed before gastric juice was collected after histamine stimulation. From dogs pure gastric juice was obtained through a gastric fistula. As previously noted, the material injected is not the "liver active principle," as it is destroyed by boiling. Our experiments with intramuscular injections of concentrated bovine gastric contents are incomplete, we have demonstrated only that a reticulocyte response may be obtained, but we have as yet no data on the relative potency of the gastric contents of swine and cattle. However, Williams and Vanderveer[4] have reported a reticulocytosis followed by maturation of the red cells in four cases of pernicious anaemia following the oral administration of the contents of the fourth stomach of calves. These findings are not in harmony with Wilkinson's negative results with the stomach tissue of herbivorous animals.

We disagree with Wilkinson and Klein if they consider the substance an enzyme or "similar thermolabile substance." Addisin is dialysable through collodion, and is exhaustible, as we have shown. These are *not* properties of enzymes. The fact that it is thermolabile is of no significance for or against, as certain hormones are destroyed by boiling. Unlike ferments, it can be converted to an ethyl ester.

Both human gastric juice and gastric contents of swine may be converted into highly active products for parenteral use—more active than liver extract or desiccated stomach. So far as we know, "haemopoietin"—the name suggested independently by Wilkinson—has not been employed parenterally. It is probably identical with addisin. The latter we recover from the secretion of the stomach, while the former is expressed from stomach tissue under high pressure.

Active preparations of addisin have been obtained by concentration *in vacuo*, by dialysis through collodion with subsequent vacuum concentration of the dialysate, and by esterification of the concentrate obtained by either of the first two methods. This applies both to human gastric juice and to swine gastric contents. A paper giving these methods is in course of preparation.

Frank criticism is always helpful. When it comes from a man who speaks with the authority of Dr. Wilkinson, it merits a thoughtful and courteous reply. This we have attempted to give.—I am, etc.,

Cincinnati General Hospital, Cincinnati, Ohio, U.S.A., Jan. 8th. ROGER S. MORRIS.

REFERENCES

1. (*a*) *Journ. of Med.*, Cincinnati, 1932 (March), xiii, 27; (*b*) *Journ. Amer. Med. Assoc.*, 1932 (March 26th), xcviii, 1080; (*c*) *Amer. Journ. Med. Sci.*, 1932, clxxxiv, 778.
2. *Lancet*, 1932, i, 719.
3. *Proc. Staff Meetings Mayo Clinic*, 1932, vii, 213.
4. Personal communication.
5. *Journ. Amer. Med. Assoc.*, 1933 (in press).
6. *Trans. Assoc. Amer. Phys.*, 1932, xlvii, 243.
7. *British Medical Journal*, 1932, i, 525.
8. *Proc. Soc. Exper. Biol. and Med.*, 1932, xxix, 858.

Diagnostic Exploral Suction of Nasal Sinuses

SIR,—May I plead for the usage of "exploral suction" (syn., "suction exploration") or some equally descriptive term in recording the diagnosis of sinusitis based on samples of sinus contents withdrawn by suction into a syringe for macroscopic and bacteriological investigation. The diagnostic technique of "exploral suction" is now widely used in this country and in America, yet often enough the rather vague term "exploration" is employed without qualification or any indications of the special method adopted.

It is true that I myself long continued to use the term "exploration" (connoting "searching out"), which I applied originally when, towards the close of the last century, I introduced this method to replace that of washing out discharge in the sinus through the nasal passage—for example, from the maxillary antrum by the Lichtwitze trocar, now commonly referred to as proof puncture. However, the term "exploration" is now being used by other laryngologists in another sense—for example, for proof puncture washing out—and hence, particularly in the diagnosis of sphenoidal or posterior ethmoidal sinusitis, it

studied the matter, can heartily endorse the advocacy of these gentlemen, for of all others they see what they have missed in past years, when they struggled by the aid of tact and sympathy bravely but hopelessly with the shoals of neurotic, neurasthenic, hysterical patients, women with "nerves," and "spoilt" and "problem" children. What a brilliant future awaits the practitioner cultured in this "understanding" science.

As a retired practitioner I say, "If only I had known!" I agree with Dr. McBride that it is asking too much to lay yet another burden on the student at the present time. But I am sure that the subject should be compulsory in any proposed "authorized" post-graduate course, when the student mind, freed from the incubus of examinations, will be in a better mood to assimilate this new "gate to salvation."—I am, etc.,

Folkestone, Jan. 24th. G. FRANCIS SMITH, M.R.C.S.

Memorial to Malton Doctor

SIR,—Mrs. Parkin, the widow of Dr. Parkin of Malton, Yorkshire, gave birth to a daughter on January 31st.

The result to date of our appeal, which is still open, for the education of Dr. Parkin's two children has been the sum of £770 13s. We wish to thank all those who have so generously contributed, and to express our appreciation of the wide response we were able to obtain through your kindness in publishing our letter. It has been decided to hand over the final sum collected to the Royal Medical Benevolent Fund, the committee of which has very kindly undertaken to act as trustees of the money. Contributions may still be sent to Mr. James Crooks, F.R.C.S., at the Hospital for Sick Children, Great Ormond Street, W.C.1.—We are, etc.,

H. A. T. FAIRBANK,
Consulting Surgeon, Hospital for Sick Children, Great Ormond Street.

JOSEPH W. LEECH,
Consulting Surgeon, Royal Victoria Infirmary, Newcastle-on-Tyne.

W. T. GORDON PUGH,
Medical Superintendent, Queen Mary's Hospital for Children, Carshalton.

January 31st.

Obituary

ALEX. MITCHELL STALKER, M.D.

Emeritus Professor of Medicine, St. Andrews University

It was with regret that we had to announce recently the death of Professor A. M. Stalker in his seventy-ninth year. Dr. Stalker was the son of a well-known schoolmaster at Leven. After receiving his education there and at the Royal High School, Edinburgh, he proceeded to Edinburgh University, where he graduated M.A. with first-class honours in philosophy. He took the M.B. and C.M. in 1881, and proceeded M.D. in 1890. After a period of study in Leipzig, and after holding house-physicianships in Edinburgh and Dundee, he settled down for the rest of his life in Dundee, where he soon gained a good practice. He was appointed physician to the Dundee Royal Infirmary, and there found his life-work. On the affiliation of University College with St. Andrews University and the establishment of a medical school in Dundee in 1898 he was appointed the first professor of medicine in the new school. He held this appointment for twenty-five years, and on his retirement received the LL.D. from the University. He was for a time medical officer to H.M. Prison and also acted as medical referee under the Workmen's Compensation Act. He was a past-president of the local Branch of the British Medical Association, and at a later date president of the Forfarshire Medical Association. His wife, a daughter of Dr. J. W. Miller, a prominent Dundee doctor, died three years ago. He leaves a family of three daughters and three sons, of whom one is in practice in the city. His eldest son was killed in action while serving with the R.F.A. in France.

Behind this bald recital of the outstanding dates in his life there emerges the figure of one who for over forty years was one of the most prominent personalities in the medical and general life of Dundee. His full knowledge and his genial nature soon brought him patients, while his ever-ripening clinical experience and his sanity of judgement led to a wide consulting practice. His hospital work was ever a great joy to him, and when to this was added the appointment which the University had conferred on him he had at last come into his kingdom. Fortunate indeed was the University to have as its first professor of medicine one with the wide culture and philosophical outlook that fitted him to lay down on broad and generous lines the great doctrines of this subject. His students were quick to realize the value of his clear-cut lectures, in which the essentials of medicine were set out in such a sharp fashion. For him a lecture was a guide through a thorny path, and not a mere complete and exhaustive treatise that any text-book could supply. These same students never forgot the salient facts on which they could get a sure foundation with which to think for themselves when fresh knowledge called for adjustment of their views.

In his clinical lectures and in his bedside talks he was always conscious of the patient behind the disease. Keenly observant and critical if occasion called for it, he did much to train his students in just those matters that would stand them in good stead in their future careers. He was widely read in both medical and general literature, but seemed to bear his learning lightly. Not soon will one forget his great knowledge, and that quick repartee that made his conversation so stimulating. Apart from his tolerance, culture, and general interest in things human, there was ever present in him an old-world courtesy and graciousness that gained him friends among people of all classes. In his retirement nothing pleased him better than to hear of the successes of his former students, or else to get news of any fresh developments in the hospital he had loved so well and served so faithfully.

A large gathering, representative of University, medical profession, and general public, assembled to pay their last tribute to his memory.

CHRISTOPHER MARTIN, M.B., C.M.

F.R.C.S., F.C.O.G.

Consulting Surgeon, Birmingham Hospital for Women

We regret to announce the death, on January 28th, of Mr. Christopher Martin of Birmingham. He was born in November, 1866, the son of Christopher Martin of Stockton-on-Tees. Educated at Middlesbrough High School, the University of Edinburgh, and St. Bartholomew's Hospital, he graduated M.B. and C.M.Ed. with first-class honours in 1887, and obtained the diploma of F.R.C.S. in 1891. After serving as house-surgeon at the Royal Maternity Hospital, Edinburgh, and demonstrator of anatomy at the Edinburgh School of Medicine, he proceeded to Birmingham to join the late Mr. Lawson Tait, and was appointed house-surgeon to the Birmingham and Midland Women's Hospital in 1890, subsequently becoming surgeon, and thus commenced his long and valuable services to that institution. In 1920 he was appointed consulting surgeon, and acted on the committee of management, of which he was vice-chairman. It was largely due to Mr. Martin's efforts that the new hospital was established in 1904; apart from his services as surgeon

he was a generous supporter of the institution. He had also served as assistant to the professor of gynaecology at Queen's College, Birmingham. He had been chairman of the Taylor Memorial Home for about twenty years, and was also chairman of the Gertrude Myers Home at Cleeve Prior, where patients are sent during convalescence.

Mr. Martin was president of the Midland Medical Society in 1912 and of the Birmingham Medical Institute from 1913 to 1921. He was for many years a member of the British Medical Association, and was a vice-president of the Section of Obstetrics and Gynaecology when the Association held its Annual Meeting in Birmingham in 1911. He was also a past-president of the Midland Obstetrical Society and of the Birmingham Medical Benevolent Society. During the war he served on the staff of the 1st Southern General Hospital, with the rank of Captain R.A.M.C.(T.F.). In 1931 he published a book of reminiscences of Lawson Tait. His widow, before her marriage in 1920, was Dr. Mary Clarke.

ARTHUR J. EVANS, F.R.C.S.Ed.

Consulting Surgeon, Liverpool Stanley Hospital; Visiting Surgeon, Mill Road Infirmary, Liverpool

Mr. Arthur J. Evans died at his residence in Liverpool on January 14th, in his sixty-second year. A native of Pembrokeshire, he was educated at St. Edmund's College, Canterbury, and University College Hospital, obtaining the English double qualification in 1899. He served as house-surgeon to the late Sir Victor Horsley, and on the outbreak of the South African war he volunteered for duty abroad, being appointed surgeon, No. 2 General Hospital, and later to the Officers' Hospital, and the Welsh Hospital at Pretoria. At the conclusion of the war he was offered the appointment of district surgeon at Kroonstad, but chose to return home and settled in Liverpool.

He succeeded the late Sir Ronald Ross as medical superintendent of the Elder Dempster Shipping Line, paid a visit to the West Coast of Africa with an expedition sent out by the Liverpool School of Tropical Medicine, and later became demonstrator of anatomy at the University, and honorary anaesthetist to the Royal Southern Hospital. In 1907 he accompanied Sir Alfred Jones and his party to Jamaica, acting as medical officer to the s.s. *Port Kingston*. While in port at Kingston the great earthquake occurred, and for three days and nights Mr. Evans worked single-handed attending to over two hundred casualties which had been taken to the ship, which was transferred into a temporary hospital. For this work he received the personal thanks of King Edward VII, and was made an associate of the Order of St. John of Jerusalem.

In 1910 he obtained two important surgical appointments in Liverpool, becoming honorary surgeon to the Stanley Hospital and visiting surgeon to the Brownlow Hill Poor Law Infirmary, and on the closing down of the latter institution he transferred his activities to the Mill Road Infirmary. He continued in this appointment up to the time of his death. During the great war he again saw military service, being attached to a casualty clearing station in Mesopotamia. He was a sound, conservative surgeon, and his quiet but confident manner was an inspiration to his juniors and dressers. Although he made only few contributions to the literature, his articles on peptic ulcers and their complications, the result of a particularly large experience in this branch of surgery, will stand the test of time.

Apart from his profession Mr. Evans's main enjoyment was found in music. He was an ardent lover of classical music, and was a regular attendant at all the important concerts, and in his younger days a tenor singer of known repute. It is a sad coincidence that he died on the anniversary of the day on which he did such excellent work in Jamaica. He leaves a widow, one son, and three daughters.

M. E. MacGREGOR, M.A., D.Sc.

We have to record the recent death, at the early age of 43, of Malcolm Evan MacGregor, who was in charge of the Wellcome Entomological Field Laboratories at Esher, Surrey. Born in South Africa, he studied at Cambridge, and later as a Carnegie Fellow at Harvard, where he came under the influence of that great medical entomologist Dr. L. O. Howard, and decided to study the medical aspects of entomology, which he did with signal success. He first came into prominence during the war, when he served with the R.A.M.C. in East Africa in connexion with mosquitos and other insect carriers of disease. From East Africa MacGregor was invalided home, and on recovery was placed in charge of a War Office research laboratory at Sandwich to study mosquitos in their relation to the spread of malaria in this country from returned soldiers carrying the disease.

After the war he was placed in charge of the Entomological Field Laboratory founded by Sir Henry Wellcome. Here MacGregor continued his studies of mosquitos, particularly with a view to solving some of the fundamental problems underlying their mode of life, feeding, hibernation, and reproduction. For a period these researches were interrupted by a visit to Mauritius, on behalf of the Colonial Office, to study the mosquito-malaria problem and to advise on methods of mosquito reduction. As a result a valuable report on the conditions was submitted to the Colonial Office, which showed that a second important malaria-carrying mosquito occurred in Mauritius, *Anopheles funesta*, which had been overlooked both by Ronald Ross and Andrew Balfour during their visits to the island. On his return to England MacGregor resumed his mosquito studies, which have thrown considerable light on the food requirements and environmental necessities of these insects. He showed that the diverticulum —a sac which opens into the oesophagus of the mosquito— was a kind of reservoir into which the mosquito could direct at will, or by reflex action, fluids unsuitable for the stomach. He studied the extraordinary effect of ultra-violet rays on the larvae, and the various reactions of waters in which they occurred, and strove to establish the fact that the larvae of culex and anopheles mosquitos lived in waters of different but particular *pH*. Latterly he had been studying a so-called autochthonous race of *Culex pipiens*—a race which is able to complete its life-cycle without any blood meal, and which does not hibernate. These and other researches were in full swing at the time of his death, and there was every promise that during the next few years most important and conclusive results would have been obtained. His death at the height of his scientific career, when many of his researches were about to bear fruit, is nothing short of a tragedy, and inflicts a serious loss upon the science of medical entomology. Malcolm MacGregor was the author of numerous scientific papers dealing with the subjects of his particular study, and of a book entitled *Mosquito Surveys*. He leaves a wife and two sons.

THE LATE SIR PERCY SARGENT

Dr. WILLIAM EARDLEY (Goole, Yorkshire) sends the following tribute to Sir Percy Sargent from the point of view of a close personal friend for more than forty years:

It was at Cambridge in 1892-3 that we did our anatomy and physiology for the Second M.B. together, and I distinctly remember how fond he was even then, in our rooms at St. John's College, of making diagrams to

illustrate the anatomy of the brain and spinal cord. Since then our paths have been apart, but our friendship has never weakened. I am in general practice. He has steadily climbed the ladder of fame to the very top, and now it is sad indeed that he has been unexpectedly struck down in the full vigour of his manhood and at the height of his powers. I thought I foresaw for him within the next few years a success and fame beyond anything already attained, perhaps unequalled in the history of British surgery. But this was not to be. Of his consummate skill as a surgeon I do not presume to speak. Others have done this who are competent to do so. I speak of him as my friend and as a man. Sargent, as I knew him, was a truly religious man, who looked forward to the life of the world to come. I knew him, too, as an ideal Master of Freemasonry, who initiated me into the Craft more than twenty-one years ago. The nobility of his character, the strength and splendour of his manhood, his high principles and sense of honour, the strength and loyalty and faithfulness of his friendship, his unbounded sympathy and consideration for others, his constant devotion to duty, his dauntless courage, his brilliant intellect, his wit and humour, his beautiful gentleness and kindness, courtesy and tact, his innate modesty (Sargent never boasted), not to mention his erect and handsome figure, his radiant countenance and cheerful disposition, which spread happiness among all around him—these are some of the things by which I remember Percy Sargent.

Dr. MATTHEW CAMERON BLAIR, who died on January 16th, received his medical education at Glasgow and Edinburgh; he graduated M.B., C.M.Glas. in 1888, and proceeded M.D. in 1895. One of the pioneers in laying the foundation of Northern Nigeria, he served first in that country as a junior assistant medical officer from 1901 to 1907, accompanying the Yola Expeditionary Force, and receiving the African General Service medal with the Northern Nigerian clasp. He subsequently took part in other expeditions, was senior medical officer in the Southern Provinces in 1907 to 1908, and was then transferred in the same capacity to the Northern Provinces, where he took part in the Gwari Expedition of 1909. From April, 1910, to the end of 1920 he was senior sanitary officer of Northern Nigeria, and from January, 1921, to January, 1924, deputy director of sanitary services, retiring then at his own request in view of his age and length of service. He remained in Nigeria, however, and was appointed honorary consultant to the Nigerian Medical Service. During the last war he was intermittently employed, at first with the Nigerian Forces, and in 1917 was principal medical officer of the force sent to aid the French; he received the 1914–15 Star, and the British War and Victory medals. In recent years failing health compelled him to make his home in the Channel Islands and North Africa. Dr. Cameron Blair leaves behind him a great record of medical administrative achievement in Nigeria, where his devotion won him widespread popularity and gratitude. He was a member of the British Medical Association during the whole of his professional life. His brother, Dr. David Blair, is medical superintendent of the Lancashire County Mental Hospital at Prestwich.

We have to record the death on January 10th, and in his sixty-third year, of Dr. JOHN STEED of Staunton-on-Wye, consulting physician to the Herefordshire General Hospital. Dr. Steed received his medical education at Edinburgh, where he obtained the M.B., C.M. in 1893 and the M.D. in 1897. Before settling in Hereford he held a number of appointments elsewhere, including that of junior assistant to the professor of clinical medicine in the University of Edinburgh. Always interested in the welfare of the Herefordshire General Hospital, he was also medical officer and public vaccinator to the Wye-side district of the Weobly Union, and medical officer to the Jarvis Charity. Prior to the war he had been a member of the County Insurance Committee and he was chairman of the Herefordshire Medical and Panel Committee. Later he became an active member of the Insurance Acts Committee of the B.M.A., and served on a number of committees set up by the Ministry of Health in connexion with national health insurance. At the time of his death he was president-elect of the Worcester and Hereford Branch of the B.M.A. In his younger days Dr. Steed was a familiar figure in the hunting field, while he always showed a keen interest in local talent at football and cricket. He leaves a widow and four children.

The death of ANGUS ENDICOT KENNEDY took place at his home at Forest Gate on January 11th, after a short illness. Dr. Kennedy was born in 1870, and received his medical education at the London Hospital, where his father and grandfather had previously studied. He obtained the diplomas of the Conjoint Board in 1893, and the L.S.A. in the same year. Joining his father in practice at Plaistow in 1894, he remained there all his life. He took great interest in the work of the Plaistow Maternity Charity, and was largely responsible for its growth in importance. Subsequently he became consulting surgeon to the charity. He was also surgeon to the K Division of the Metropolitan Police, surgeon to the Mansfield House Medical Mission Hospital, public vaccinator of the West Ham Union, and radiologist to the West Ham Infirmary. He was a member of the Stratford Division of the British Medical Association, and a medical referee under the Ministry of Pensions. Dr. Kennedy is survived by his widow, one son (a medical practitioner), and three daughters.

We regret to learn of the death from pneumonia, on January 25th, of Professor WILLIAM P. GRAVES of Boston, who until recently held the chair of gynaecology at Harvard University. He visited London last December to receive the Honorary Fellowship of the British College of Obstetricians and Gynaecologists.

The death on January 10th of Dr. J. OSWALD LANE terminates a remarkable family sequence of doctors in Herefordshire, as three generations of that name have practised medicine in the county for over 100 years. Dr. Lane was 73 years of age. He was educated at the Hereford Cathedral School and St. John's College, Cambridge, graduating B.A. in 1879, and studied medicine at St. George's Hospital and the Rotunda Lying-in-Hospital. He obtained the M.R.C.S. and L.R.C.P. diplomas in 1881, took his M.B. degree in 1882, and proceeded M.D. in 1885. Before coming to Hereford Dr. Lane was a house-physician at the Northampton County Hospital. A delightful personality, he was never happier than when working for his patients, and his retirement in 1925 was a serious loss to medicine in the city, and one which was regretted by all. He was a keen follower of hounds, and for many years was prominently associated with the South Herefordshire Hunt. He is survived by his widow and one son.

Universities and Colleges

UNIVERSITY OF OXFORD

Dr. Geoffrey Douglas Hale Carpenter has been elected Hope Professor of Zoology as from the beginning of Trinity Term, 1933.

UNIVERSITY OF CAMBRIDGE

The Vice-Chancellor gives notice that the Sir William Dunn Readership in Biochemistry has become vacant by the resignation of Mr. J. B. S. Haldane, M.A., F.R.S., Trinity College. Candidates should communicate with the Vice-Chancellor by February 18th. The stipend of the readership is £600 a year.

A. D. Charters has been approved for the degree of M.D. in absence.

At a congregation held on January 27th the following medical degrees were conferred:

M.D.—*C. J. Scott, I. C. C. Tchaperoff, J. C. Ainsworth-Davis.

M.B., B.CHIR.—A. B. Carter, P. T. Ashby.

M.B.—M. H. Masina.

B.CHIR.—*G. A. Mandow, *F. H. Morrell, *W. D. Dick, R. D. Roper, F. W. Shepherd, E. Bradbury, A. R. R. Le Fleming, E. B. Pawson, R. H. Foster, G. D. Wedd.

* By proxy.

UNIVERSITY OF LONDON

At a meeting of the Senate on January 25th Professor L. N. G. Filon, D.Sc., F.R.S., was elected Vice-Chancellor for the remainder of the year 1932-3 in place of the late Mr. Hatton.

The degree of D.Sc. in Human Anatomy has been conferred upon Dr. Francis Davies, University Reader in Anatomy at King's College, and that of D.Sc. in Physiology upon Dr. E. W. Fish, a recognized teacher of dental surgery at St. Mary's Hospital Medical School.

The title of Reader in Experimental Physiology in the University has been conferred upon Dr. H. P. Gilding in respect of the post held by him at University College.

Mr. Eardley L. Holland has been appointed a Fellow of King's College.

UNIVERSITY COLLEGE

Two lectures in the history of medicine will be delivered at University College Hospital Medical School, W.C., by Dr. J. S. Prendergast on Wednesdays, February 15th and 22nd, at 4.15 p.m. The first lecture will deal with Greek medicine, and the second with Renaissance medicine. The lectures are open to all medical students of the University of London.

ROYAL COLLEGE OF PHYSICIANS OF LONDON

A quarterly meeting of the Royal College of Physicians was held on January 26th, when the President, Lord Dawson of Penn, was in the chair. Dr. Stanley Barnes was elected a councillor in the place of the late Dr. Carey Coombs.

Lectures

The Milroy Lectures on pneumococcal infections will be delivered by Dr. Robert Cruickshank at the College on February 23rd, 28th, and March 2nd; the Goulstonian Lectures on the physiology of the gall-bladder and its functional abnormalities by Dr. Charles E. Newman on March 7th, 9th, and 14th; and the Lumleian Lectures on complications of the specific fevers by Dr. Charles R. Box on March 16th, 21st, and 23rd.

Membership

The following candidates, having satisfied the Censors' Board, were admitted Members of the College:

Arthur John Priestley Alexander, M.D.Belfast, Hyman Philip Brody, L.R.C.P., Frank Storey Cliff, M.D.Lond., L.R.C.P., Ronald Wilson Fairbrother, M.D.Manch., Clive Hamilton Fitts, M.D.Melb., John Macpherson Harker, M.B.Lond., Howell William Howell, M.D.Lond., Robert Andrew Hunter, M.D.Manitoba, Evan Jones, M.B.Lond., L.R.C.P., Prince Mohan Kaul, M.B.Punjab, George Durant Kersley, M.D.Camb., Parshotam Lal Khosla, M.B.Punjab, Ranald Ian Macdonald, M.D.Dalhousie, Noel Francis Maclagan, M.B.Lond., Donald Uvedale Owen, M.D.Liverp., Arthur Ewart Parks, M.D.Toronto, William Phillips, M.B.Wales, Wilfrid Michael Priest, M.B.Lond., Cedric Barrington Prowse, M.B.Camb., Thomas Henry Pullar, M.B.Sheffield, William Hutton Scobie, M.B.Glas., Ronald Bodley Scott, M.B.Oxf., Frederick Harwood Stevenson, M.D.Lond., Thomas Scott Stone, M.B.Lond., Edward Gwynne Thomas, M.B.Lond., Hubert Carey Trowell, M.D.Lond., John Francis Varley, M.B.Camb., Joseph Viccars Walker, M.B.Birm.

Licences and Diplomas

Licences to practise physic were conferred on the following 134 candidates (including sixteen women), who have passed the final examination in medicine, surgery, and midwifery of the Conjoint Board, and have complied with the necessary by-laws:

G. Abbey, P. H. Addison, Monica H. Austin, Margaret M. Baddeley, T. A. Baldwin, R. Barnes, A. M. F. Batty, A. A. W. Beach, G. F. Benjamin, R. Bennett, J. G. Bentley, A. Birnbaum, R. W. Blakey, Joan C. D. Bolt, R. W. W. Bose, F. C. Bourgault du Coudray, A. Bowen-Davies, W. D. Bower, D. J. T. Brinkworth, J. Britanischski, H. W. Burge, R. J. Buxton, Jean W. D. Calman, B. S. Carter, T. Chadderton, H. F. Chard, H. K. Childs, M. M. Cohen, D. D. Coleman, D. M. Cooper, Esther Copperman, H. Creditor, F. J. Curtis, J. E. Davenport, J. Davies, D. J. Dawson, H. De, Ursula D'Monte, E. J. Dennison, L. S. De Silva, M. E. Disney, A. G. Donald, J. F. H. Eagles, G. J. Evans, J. C. G. Evans, L. H. Evelyn, E. D. Falconer, S. T. Falla, Catherine F. Forrest, Getel Gimpelson, I. H. Gosset, E. N. Hailey, P. P. Halemani, J. L. Hamilton-Paterson, B. A. E. Harley, Freda M. B. Harmer, E. H. C. Harper, H. R. Hartnell, B. T. W. Harvey, P. G. F. Harvey, Anne E. M. Herbert, A. Hilmy, F. G. Holman, J. McD. Holmes, R. A. Hooper, W. R. S. Hutchinson, L. G. Irvine, L. S. Jaikaran, A. G. Johnson, E. G. Jones, Grace M. Jones, Nellie E. Jones, S. O. Jones, G. E. Kerr, H. B. D. Kettlewell, F. B. Khambatta, F. R. Kilpatrick, B. H. Kirman, S. B. Lavine, J. A. E. Lawn, M. Lee, Beatrice Lewis, M. B. Lindsay, A. E. Locke, Madeleine Lorsignol, J. F. Lown, B. McArdle, J. O. McDonagh, B. M. McOwan, G. A. Mais, S. O. Massey, S. F. Mitchell, G. R. Morgan, R. J. G. Morrison, L. R. Norsworthy, Josie M. Oldfield, C. V. Oldroyd, J. P. O'Shea, E. D. Page, E. B. Pawson, K. M. A. Perry, A. G. Potts, L. E. J. Poulter, G. A. Ransome, P. P. Rao, F. W. Roberts, H. J. M. Robinson, A. H. W. Roffey, R. D. Roper, R. H. Rushton, A. G. Salaman, A. W. Sampey, S. S. Selladurai, H. Sergay, F. W. Shepherd, B. W. Smith, G. S. Steele-perkins, K. W. Stroude, G. H. Stuart, T. V. Tattersall, W. E. Thomas, R. E. S. Turner, H. G. Ungley, E. J. Walsham, S. P. Wanchoo, G. L. Ward, C. J. T. Watson, E. E. S. Wheatley, W. H. Whiles, I. Whittington, J. Wilton, V. F. F. Winslow, E. J. S. Woolley, Freida Yarmalinsky.

Diplomas in Psychological Medicine, Laryngology and Otology, Public Health, Medical Radiology, and Tropical Medicine and Hygiene were conferred jointly with the Royal College of Surgeons. The names of the successful candidates were printed in the report of the meeting of the Council of the Royal College of Surgeons published in our issue of January 21st (p. 127).

BRITISH COLLEGE OF OBSTETRICIANS AND GYNAECOLOGISTS

At the council meeting on January 23rd, with the president, Dr. J. S. Fairbairn, in the chair, Dr. Henry Russell Andrews was elected a vice-president, and Dr. Arthur E. Giles honorary librarian. It was decided that the annual general meeting of the College should be held on Wednesday, April 5th, at 5 p.m., in Birmingham, for the convenience of those attending the Congress of British Obstetrics and Gynaecology.

The president admitted to the Fellowship of the College C. Lane-Roberts (London), Louisa Martindale (London), and J. H. Drew Smythe (Bristol); and to the Membership E. A. Gerrard, G. F. Gibberd, Edith Hall, A. M. Johns, R. G. Maliphant, Ellen D. Morton, W. J. Rawlings, and W. F. Rawson.

The following were elected Members:

W. S. Barton, A. Broido, J. Chakravarti, R. V. Dowse, W. Freeborn, J. S. Green, D. McK. Hart, W. C. W. Nixon, J. V. O'Sullivan, R. Watson, R. K. White, Nellie Wilkes.

CONJOINT BOARD IN SCOTLAND

The following, having passed the requisite examinations, have been admitted L.R.C.P.Ed., L.R.C.S.Ed., L.R.F.P. and S.Glas.:

L. R. L. Solomon, L. Danzis, M. O. Luck, G. Kwryan, R. H. Payne, M. G. Myers, N. C. Smiedt, I. S. Lipschutz, E. L. Mommen, G. L. G. Major, A. A. Khan, C. A. S. O'Doherty, Jacomina A. Richter, J. G. Harrison, A. Ahmed, D. H. McNamara, R. Keay, W. J. Silva, K. K. Retnam, Janet R. Hardy, C. W. Cook, S. McCallum, N. Philips, A. L. Kahn, J. C. T. Reid.

Medico-Legal

THE "CHIEF TAIL-WAGGER" VINDICATED

On January 24th Captain H. E. Hobbs, known very widely as the "Tail-Wagger-in-Chief," or the creator of the Tail-Waggers' Club, which has a very large membership among the dogs of the country, sued Miss Blanche Watson, propaganda secretary to the local branch of the British Union for the Abolition of Vivisection, for libel. The defamatory matter consisted of a letter published in a Hull newspaper on the occasion of the second National Dog Week. The letter warned dog owners that in entering their pets as Tail-Waggers they were encouraging vivisection, and that National Dog Week and the Tail-Waggers' Club had the sole aim of building and maintaining vivisection laboratories at the Royal Veterinary College, and were merely masquerading under the cloak of humanitarianism. The letter further said that the object of the club was not the welfare of the dog but its exploitation, and the "thrusting of tortuous experimentation upon helpless animals." Miss Watson admitted publication of the words, but denied that they constituted a libel. Alternatively she pleaded fair comment on a matter of public interest.

Mr. Malcolm Hilbery, K.C., in opening the case, said that in 1927 and 1928, when the Royal Veterinary College was in danger of decay, Captain Hobbs had personally undertaken to raise £20,000 towards the necessary fund; he had fulfilled this task by almost indescribable efforts. He had organized the National Dog Week, which had first been held in 1928, and was entirely and personally responsible for the Tail-Waggers' Club. The £20,000 was to be devoted to a special department for dogs, including a hospital for non-infectious cases, an operating theatre, and possibly a lecture theatre. Captain Hobbs had made it perfectly plain from the outset that he could only undertake to raise the money if he were assured that no part of it would be used for any

vivisectional purpose. From first to last he had had that assurance. After a hearing of three days the special jury awarded him £500 damages.

The evidence showed that colour was given to the libel by the fact that the Royal Veterinary College grounds contained a research institution under Government control, with a different governing body from that of the College, and financed wholly by the Ministry of Agriculture. This institute is licensed for animal experiment, but no experimental work is done in the canine department of the College. Miss Watson, in her examination, displayed the attitude of mind which characterizes many of the opponents of experimental medicine. In 1929, she said, she had seen it stated that the National Dog Week was to be held for the endowment of a chair of research, which term she had always understood to mean the investigation of human and animal diseases by means of experimentation on the living animal. She had written the letter because she could not help it, to protest against what she had considered to be mere vivisection. She said that she must write against vivisection when she saw anything about it. She had had no intention of injuring Captain Hobbs or any individual. She had sincerely believed that the people who were organizing the National Dog Week and the Tail-Waggers' Club were making a bid for more research, and were disguising their true aims from the public. She had not read any of the literature on the aims of the National Dog Week, but merely an article in a newspaper contributed by the Tail-Waggers' Club. In cross-examination, she declared that she was a strong anti-vivisectionist and vegetarian. She had never been to the Royal Veterinary College, and knew nothing of its work.

Sir Frederick Hobday, Principal of the College, who gave evidence for Captain Hobbs, said that there was no shadow of foundation for saying that any part of the £20,000 was raised for the purpose of erecting laboratories in which there were to be vivisection experiments.

The chief interest of the case is that it affords a further example of the methods of the opponents of vivisection. The result will be welcomed by all people of reasonable views. Incidentally, it exhibited a feature of our legal system of which we have every cause to be proud. Although Mr. Justice Branson, who tried the case, warned counsel for the defendant that his dog was a Tail-Wagger and that he himself subscribed to the Research Defence Society, Mr. Croom-Johnson, K.C., had no fear that his lordship would on this account be in any way biased.

The Services

DEATHS IN THE SERVICES

Surgeon Commander Lawrence Charles Hunt, R.N. (ret.), died at Moor Park, Rickmansworth, on January 24th, aged 53. He was educated at St. George's, and took the M.R.C.S. and L.R.C.P.Lond. in 1902. After filling the posts of house-physician at St. George's and at the Victoria Hospital for Children, he entered the Navy, and attained the rank of surgeon commander on October 1st, 1917, retiring on January 22nd, 1927. He served through the war of 1914–18.

Colonel Donald St. John Dundas Grant, Bengal Medical Service (ret.), died at Blackheath, after a long illness, on January 16th, aged 74. He was born on May 10th, 1858, the son of the Rev. John Grant of Stillorgan, Dublin, and was educated at Trinity College, Dublin, where he graduated B.A., M.B., and Ch.B. in 1881. Entering the I.M.S. as surgeon on October 1st, 1881, he attained the rank of colonel in January, 1911, and retired on March 14th, 1917. He served in the Akha campaign on the North-East Frontier of India in 1883–4, but most of his service was spent in civil employ in the Punjab, where for over twenty years he filled the posts of professor of chemistry in Lahore University and chemical examiner to the Punjab Government.

Major John Taylor Scrogie, R.A.M.C., died at Bermuda on December 27th, 1932, aged 41. He was born on September 20th, 1891, and was educated at Aberdeen, where he graduated M.B., Ch.B. in 1915. Entering the Special Reserve of the R.A.M.C. after qualifying, he became captain on February 27th, 1919, and took a permanent commission as captain on April 1st, 1919, becoming major on July 31st, 1927. He served throughout the war of 1914–18.

Medical News

Sir Charles Sherrington, O.M., G.B.E., F.R.S., has been elected an associate member of the French Academy of Medicine.

The eighth annual address to newly qualified medical practitioners and senior students of the London hospitals, arranged by the Metropolitan Counties Branch of the British Medical Association, will be given at B.M.A. House, Tavistock Square, W.C., by Mr. Wilfred Trotter, F.R.S., Sergeant-Surgeon to the King and surgeon to University College Hospital, on Tuesday, March 14th, at 5.30 p.m. The title of the address is "Emergency."

The Manchester Royal Infirmary Old Residents' Club will hold its triennial dinner in Manchester on Saturday, October 7th. Particulars will be circulated to members in due course, but it is hoped that old residents who have moved far afield will start making the necessary arrangements to be in Manchester for that week-end.

A lecture on "The law of Scotland with reference to young delinquents" will be given by Mr. George Morton, K.C., to-day (Friday, February 3rd), at 8.30 p.m., at University College, Gower Street, W.C. The chair will be taken by Dr. J. A. Hadfield. Admission is free, and discussion is invited. Notice of the subsequent lectures will be sent on application to the honorary secretary, Institute for the Scientific Treatment of Delinquency, 56, Grosvenor Street, W.1.

Ventilation and the need for new standards will be the subject of a discussion to be opened by Dr. J. S. Owens at the Royal Sanitary Institute, 90, Buckingham Palace Road, S.W., on Tuesday, February 14th, at 5.30 p.m., with Sir Leonard Hill in the chair.

A public meeting to urge the abolition of the death penalty will be held at 8 p.m. on Wednesday, February 8th, in Caxton Hall, Westminster.

The fourth lecture in the series on practical problems in medicine and surgery, arranged by the Fellowship of Medicine and Post-Graduate Medical Association, will be given at 11, Chandos Street, W., on February 7th, at 4 p.m., by Mr. Martin Oldershaw, on the significance of bleeding as a symptom in gynaecology. A course of eight demonstrations on the interpretation of pyelograms, by Dr. Mather Cordiner, will begin on February 8th, at 8 p.m. There will be a week-end course in physical medicine at the London Clinic and Institute of Physical Medicine, on February 11th and 12th. Forthcoming courses include an evening M.R.C.P. course at the National Temperance Hospital, February 20th to March 17th; a course in medicine, surgery, and the specialties at the Prince of Wales's Hospital, February 20th to March 4th; and practical pathology, at the Brompton Hospital, February 20th to March 4th. Courses, lectures, and demonstrations arranged by the Fellowship are open only to members and associates.

The third International Paediatric Congress will be held this year in London (the exact location will be announced later) on July 21st and 22nd. There will be two sessions daily, and the subjects which have been selected for general discussion at two of the morning sessions are (1) the nature of allergy and its role in diseases of children, and (2) the prophylaxis of milk-borne diseases. Nominations are invited from secretaries of the various national committees for delegates to take part in these discussions and to contribute independent papers. Membership of the congress is open to all members of a recognized medical society, but they must be nominated by their own national committee. The subscription for medical men and women (active members) is £2, and for non-medical persons accompanying active members £1. It is hoped to arrange clinical demonstrations of interesting examples of disease, an exhibition for the display of x-ray films, pathological specimens, etc., and to organize excursions and entertainments. The secretary of the congress is Dr. Leonard Findlay, 61, Harley Street, W.1.

The Joint Tuberculosis Council has arranged a post-graduate course, to be given by the medical and surgical staff of the Brompton Hospital for Consumption and Diseases of the Chest, from February 20th to 25th. The subjects to be dealt with include the diagnosis and the surgical treatment of pulmonary tuberculosis, indications for artificial pneumothorax, tuberculosis in children, radiology of the chest, the value of lipiodol, some problems of sanatorium treatment, and operations. There will also be demonstrations of surgical cases in the wards. Inquiries should be addressed to Dr. William Brand, honorary secretary for post-graduate courses, Joint Tuberculosis Council, 8, Highway Court, Beaconsfield, Bucks.

The staff of Addenbrooke's Hospital, Cambridge, have arranged a course of post-graduate lectures on subjects of interest to general practitioners. The first lecture will be given by Professor W. Langdon Brown on the chemical importance of recent work on the pituitary, on February 10th. On March 10th Mr. Arthur Cooke will lecture on the surgical aspects of jaundice, Dr. G. S. Haynes on non-tubercular chronic lung disease, on April 7th, Mr. W. H. Bowen on swellings of the neck, on May 12th; Dr. J. F. Gaskell on chronic rheumatism, mainly rheumatoid and osteo-arthritis, on June 9th; and Dr. H. B. Roderick on the importance of early diagnosis and treatment of poliomyelitis with a view to the prevention of gross paralysis and deformity, on July 14th. The lectures will be given at the hospital at 3 p.m. The course will be continued in October.

The January issue of the *Zeitschrift für Kreislaufforschung*, the organ of the German Society for Investigation of the Circulation, now entering on its twenty-fifth year, contains a review on researches on the circulation during the last twenty-five years by the editor, Professor E. Stadler.

The second number has been issued of *The Medical Forum*, the official organ of the Brighton and Sussex Medico-Chirurgical Society, Forfarshire Medical Association, Hunterian Society, Leicester Medical Society, London Jewish Hospital Medical Society, Rugby and District Medical Society, Sheffield Medico-Chirurgical Society, and West Sussex Clinical Society. The editor is Dr. Maurice Sorsby, with Lord Moynihan as consulting editor. The price of single copies is 2s.

Professor J. A. Nixon's interesting paper on provincial medical journals, read before the History of Medicine Section at the Centenary Meeting of the British Medical Association, has been published in the winter issue of the *Bristol Medico-Chirurgical Journal* (vol. xlix, No. 186).

The Board of Trade announces that Regulations have been made under Section 8 (1) of the Finance Act, 1919, and para. 1 of the Third Schedule to the Import Duties Act, 1932, prescribing that certain classes of goods manufactured in, and consigned from, a part of the Empire must contain a minimum of 50 per cent. of Empire material and labour in order to qualify for Imperial Preference, instead of 25 per cent. as at present. The Regulations, which come into force on April 1st, are being published as the Import Duties (Imperial Preference) No. 1 Regulations, 1933, and copies of them, including the schedule of goods to which the increased percentage applies, will be obtainable from H.M. Stationery Office, Adastral House, Kingsway, W.C.2, either direct or through any bookseller.

Applications for the Government grant for scientific investigations (on printed forms to be obtained from the Clerk to the Government Grant Committee, Royal Society, Burlington House, Piccadilly, W.) must be received at the office of the Royal Society not later than March 31st.

We learn that Dr. C. Killick Millard, who has been medical officer of health for Leicester for the past thirty-two years and a member of the British Medical Association for forty years, has taken up flying as a pilot-member of the Leicestershire Aero Club and has made his first solo flight.

Dr. J. S. Webster of the Middle Temple was called to the Bar on January 26th.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, B.M.A. House, Tavistock Square, W.C.1.**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names, not necessarily for publication.

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of proofs

All communications with reference to ADVERTISEMENTS, as well as orders for copies of the *Journal*, should be addressed to the Financial Secretary and Business Manager.

The **TELEPHONE NUMBERS** of the British Medical Association and the *British Medical Journal* are MUSEUM 9861, 9862, 9863, and 9864 (internal exchange, four lines).

The **TELEGRAPHIC ADDRESSES** are:

EDITOR OF THE *BRITISH MEDICAL JOURNAL*, *Aitiology Westcent, London.*

FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate Westcent, London.*

MEDICAL SECRETARY, *Medisecra Westcent, London.*

The address of the Irish Office of the British Medical Association is 18, Kildare Street, Dublin (telegrams: *Bacillus, Dublin*; telephone: 62550 Dublin), and of the Scottish Office, 7, Drumsheugh Gardens, Edinburgh (telegrams, *Associate, Edinburgh*; telephone: 24361 Edinburgh).

QUERIES AND ANSWERS

Digitalis in Partial Heart-block

Dr. FREWEN MOOR (Westgate-on-Sea) writes: I should like to know if digitalis is contraindicated in a case of myocardial degeneration with commencing heart failure if bundle-branch block is discovered to be present. I have at the moment such a patient, a woman of 56, with a regular pulse of 108 and blood pressure 180/128. Without the electrocardiogram I should not have hesitated to give her digitalis, and should have expected symptomatic improvement; but she has right bundle-branch block, so I have withheld it for the present.

Tapeworm Infection

Dr. J. G. BENNETT (Hyde, Cheshire) asks for suggestions in treating a case of intractable tapeworm infection in a girl of 6. He writes: She has had the usual anti-parasitic treatment, including pomegranate bark, filix mas, and bismuth with santonin. She has been in hospital for a period too, but, on account of her age and the risk of massive doses of any strong drugs, has had to be discharged until some future date, when hospital treatment can safely be re-instituted. It seems rather terrible to leave her as she is, emaciated, and continually passing yards of tapeworm at varying intervals.

Spasmodic Scapular Pain

Dr. B. E. W. STALLARD (Woolhope) writes: I have seen no reply to "Perplexed's" request for a diagnosis (January 7th, p. 46). Even had the patient never been out of England I should suspect an amoebic invasion of the liver, and, after examination of stools for the organism, I should give hypodermic injections of emetine, 1 c.cm. two or three times weekly.

Injection Treatment for Piles

Captain H. G. ROBERTSON, R.A.M.C., writes: Warnings have several times appeared in the *Journal* against the injection treatment for external piles, and in the issue for November 26th, 1932 (*Epitome*, para. 442), Herr H. Elsner states that a careful differentiation must be made between external piles, which are subcutaneous, and internal, which are submucous. Perhaps somebody can explain the reason for this. Are not varicose veins of the leg subcutaneous? Why, therefore, should not subcutaneous varicose veins of the anus be similarly treated? From the practical point of view my experience is limited, the number of cases I have treated being only about a dozen in all. All were in young and otherwise healthy men, being serving soldiers, all were suffering from external piles, and all were treated in the same way—namely, by injections of quinine and urethane. The results were in every case excellent, except in one, in which the treatment failed to have any effect. It would be interesting to have the views of other readers on the subject.

Treatment of Mucous Colitis

Dr. F. O. TAYLOR (Coldingham, Berwickshire) writes, in reply to Dr. Grosch's query (January 28th, p. 172): A daily washout of the large bowel with 1½ pints of water with 2 grains of potassium permanganate helps this condition in young women so much that I see no reason for doubting its efficacy in a young man. Careful estimation of the degree of ptosis of the stomach by succussion (or *x* ray if necessary) is essential, as all cases of this type suffer from vague "indigestion" from time to time, apparently quite apart from the colitis. With this "pointer" to the true cause of the condition non-residue diet is quite wrong. A mixture containing strychnine, ac. hydrochlor., and liq. arsenicalis helps to give back "tone" to the bowels. Unless ordinary diet (minus idiosyncrasies) can be taken, we have failed in treatment. Surely a man so young cannot have diverticula? Once confidence is established the potassium permanganate can be given in capsules.

Income Tax

Assistant—"Rooms" and "Board and Lodging"

"E. A. D." is an outdoor assistant paid at the rate of £300 per annum plus £104, stated originally to be for "rooms." The inspector of taxes states that if the £104 were for "board and lodging" rather than for "rooms" it would not be assessable. "E. A. D.'s" principals have agreed that the former would be the more correct description.

*** The terms of the agreement concerning "E. A. D.'s" appointment should be referred to as they really govern the case. If they provide for the £104 to be paid to the assistant then it is chargeable to income tax; if, on the other hand, the agreement provides for certain accommodation to be provided for the assistant and that is done at an expense of £104 without the money passing through the assistant's hands, then it would *not* seem to be assessable, and it would not appear to matter whether the accommodation is merely the "rooms" or includes "board" as well. However, if it can be made clear to the inspector that the additional emolument includes "board," and he accepts that as sufficient evidence of non-liability, "E. A. D." will have no need to go deeper into the matter.

Sickness Insurance Policy

"E. D." explains that his partners and himself contemplate taking out a sickness insurance policy in order to provide for the payment of a locumtenent if one should be required. Would the premiums be considered a professional expense?

*** No, but if it should be necessary to have a locumtenent the expense of providing his services can be charged against the gross earnings of the practice notwithstanding that it might be wholly or partially borne out of the insurance benefit.

Child Allowance

"A. V. C." has a son, recently qualified, who will be holding a resident hospital appointment on April 6th. He will receive neither pay nor board and lodging. Can "A. V. C." claim the "child allowance" for 1933-4 as hitherto?

*** In our opinion it will be impossible to contend successfully that the son will be "receiving full-time instruction at any . . . educational establishment" as from April 6th onwards. Consequently the claim would seem to be inadmissible for 1933-4.

LETTERS, NOTES, ETC.

Post-Graduate Education

Dr. V. COTTON-CORNWALL (London, N.W.3) writes: May I heartily endorse all the criticisms and suggestions made by Mr. Harold Balme in the *Journal* of January 21st. He says that he writes from an experience of five years ago, but all that he says is equally true of conditions at this moment, particularly as regards the lack of centralization, but above all with regard to the paucity of opportunity for practical work. Such opportunity is as easy to find as the proverbial needle. I hope that those responsible for the planning of the proposed post-graduate medical school will ponder on Mr. Balme's article and act on his suggestions. Furthermore, one hopes that they will make full use of the knowledge already acquired, by the Fellowship of Medicine and other bodies, as to post-graduate requirements.

Rubber Nail Brushes

Dr. F. A. E. SILCOCK (Leicester) writes: I have been using all-rubber nail brushes for the past six months, and in my opinion they are far superior, from a medical point of view, in every way to the ordinary type with stiff bristles set in a wooden base. They can be boiled or left in a wet state without detriment, the rubber bristles do not get fouled with debris, while they can be used for tender skins, etc., where the stiffer-bristled type might do harm. Both varieties cost practically the same.

Bilateral Tubal Pregnancy: Rupture

Dr. J. A. DAVIES (Towyn, Merioneth) writes: A primigravida, aged 28, was admitted to hospital on October 10th, 1932, with a history of amenorrhoea for two weeks, and severe occasional pain in the lower abdomen on the right side. There was no vaginal discharge. On the third day after admission she had a slight vaginal haemorrhage, followed by sudden collapse, with pallor, a quick pulse, shock, and all the signs of impending death; the temperature was normal. I at once decided to operate. The abdomen was opened by a three-inch incision over McBurney's point, and a large quantity of blood escaped. The right tube had ruptured, and the ovum had escaped into the peritoneal cavity. The tube was seized, clamped at both ends, and removed. The patient made a good recovery, and was up and about before the end of three weeks. On November 3rd, exactly three weeks after the first operation, she was again seized with acute pain, this time in the left lower abdomen, with all the previous symptoms of internal haemorrhage and collapse. At the second operation a four-inch mid-line incision was made. The left tube had ruptured, the ovum having escaped into the peritoneal cavity. I did not remove the tube on this occasion, but, after clearing the blood out, I inserted a large drainage tube, which was removed in twenty-four hours. The patient again made a good recovery, and was discharged from hospital on December 15th. I should be interested to hear if these cases are common.

"A Simple Artificial Pneumothorax Needle"

Dr. H. V. CANTOR (Nantwich) writes: In your issue of January 14th (p. 67) Dr. J. Wood Wilson mentions the use of an ordinary serum needle, with Record mount, for artificial pneumothorax refills. Reference is made to an "obvious disadvantage"—namely, lack of facility for cleaning a blocked needle. A cheap wire stylet for clearing the needle can be obtained. During the past few years I have frequently used an ordinary serum needle for refills, but always fitted on to a Peter Edwards stopcock or obdurator which has a "Record-fitting nozzle." By opening the tap of the stopcock and pushing in the wire one can clear the needle without the least movement of the needle or stopcock. The Peter Edwards pneumothorax needle, which I prefer to all others, is very similar to a serum needle with a very short bevel, can be used for inductions as well as for refills, and can be obtained in different sizes. I agree with Dr. Wood Wilson that the use of the Record mount is convenient, expeditious, and cheap; but, in addition, it makes for still greater efficiency if used with a Peter Edwards stopcock. Whatever type of needle be used a short bevel is advisable.

Periodicals Wanted

Dr. R. D. MCKELLAR HALL (a member of the Western Australian Branch now visiting England) inquires if any reader has copies of the following which he would be prepared to sell: The *British Journal of Surgery*, Nos. 1 to [illegible] inclusive; the *Journal of Bone and Joint Surgery*, [illegible] numbers up to December, 1931. His temporary address is 142, Upper Parliament Street, Liverpool.

A warrant of appointment as cyder makers to H.R.H. the Prince of Wales has been conferred upon Wm. Gaymer and Son Ltd. of Attleborough, Norfolk.

Vacancies

Notifications of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals will be found at pages 49, 50, 51, 54, and 55 of the advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 52 and [illegible]

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 39.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

73 Encephalitis following Vaccination

G. BERGMAN (*Hygeia*, September 15th, 1932, p. 673) discusses the problem of encephalitis provoked by vaccination, and illustrates his observations with notes of five cases which occurred in Sweden early in 1932. Though complications of vaccination referable to the central nervous system were observed even in Jenner's time, and have cropped up sporadically at later dates, it seems certain that during the last eight or nine years vaccination encephalitis has occurred with unprecedented frequency. The outbreak described by the author was a sequel to the occurrence of nine cases of small-pox in January, 1932, in Malmö. Late in January and early in February 87 per cent. of the town's population were vaccinated, a total of 112,724 vaccinations. Between February 13th and 21st five patients, whose ages ranged from 46 to 68 years, were admitted to hospital suffering from acute disease of the central nervous system. The first three recovered completely. The fourth patient began to show signs of Parkinsonism. The fifth case was too recent for an opinion to be formed as to the ultimate issue. In marked contrast with the observations made in England and Austria all the present author's patients were revaccination cases, and he notes that in Kaiser's series of eighty Austrian cases there were only seven revaccination cases. The incubation period in the author's material ranged from ten to fifteen days, whereas in the Dutch statistics this period in the overwhelming majority of cases was within the narrow limits of eleven and twelve days. The source of the vaccine used was the same in only two of the five cases. It is possible that the season of the year played a part in the origin of these cases, for Bastiaanse has shown that in Holland they are most frequent, relative to the number of vaccinations, in February.

74 Conjugal Infection in Weil's Disease

F. P. J. DOELEMAN (*Nederl. Tijdschr. v. Geneesk.*, October 29th, 1932, p. 5057) records the case of a woman, aged 34, who, ten days after coitus with her husband, who was suffering from the disease (a period corresponding with the usual incubation period), developed a mild attack of Weil's disease. There was no jaundice and the urine was normal, but the agglutination test was positive in a dilution of 1 in 62,500.

75 The Heart in Funnel Chest

J. EDEIKEN and C. C. WOLFERTH (*Amer. Journ. Med. Sci.*, October, 1932, p. 445) record the investigation of ten cases of moderate or severe funnel chest, a condition which they believe is more common than the meagre literature about it would seem to indicate. There were nine males and one female; the ages of the patients ranged from 7 months to 69 years. The deformity was probably acquired in four cases, congenital in five, and of unknown aetiology in one. The only patient who showed signs of cardiac decompensation had a funnel chest complicated by kyphoscoliosis and pigeon breast, but these signs may well have been due to lung lesions resulting from the spinal deformity. The electrocardiograms were normal in seven uncomplicated cases, but two patients showed evidence of depressed myocardial function. The heart was seen fluoroscopically to be flattened in the antero-posterior diameter, and displaced upwards and to the left. In one case it appeared rotated to the right. The authors conclude that as a general rule a funnel chest of a moderate or severe grade causes displacement of the heart to the left and usually upwards. It is enlarged in its transverse diameter, but the antero-posterior diameter is decreased; the organ is occasionally rotated by a marked asymmetrical depression. In spite of such displacement electrocardiograms fail to reveal any consistent deviation of the electrical axis, probably because the heart is displaced as a whole. Uncomplicated funnel chest does not appear to have any clearly defined effect upon the functional capacity of the heart, unless the deformity is traumatic or of rapid development. The lack of symptoms can be explained probably by the slow development in the majority of cases; this allows for accommodation within the chest and for adjustment of the heart to its altered alignment.

76 Prevention of Vaccinal Reactions

W. KOELZER (*Jahrb. f. Kinderheilk.*, October, 1932, p. 91) maintains that in view of the inevitably severe reactions following vaccination with four insertions, even with dilution of the lymph, and the likelihood of complications, a milder form of vaccination is urgently needed. The best method for this purpose is the reduction of the number from four to one, measuring 0.75 to 1 cm. in length, for the following reasons. The severity of the reaction depends greatly on the number and length of the insertion, and the use of a single one excludes a violent reaction with almost absolute certainty. A marked reaction with one insertion represents the most that a child can tolerate without any ill effects. In view of the likelihood of reduction of the protective power of vaccination with a single insertion, revaccination should be performed in the fourth and ninth years of life, one insertion being used for those in whom primary vaccination was unsuccessful, and two in those in whom the primary vaccination had taken. The third revaccination should be performed, as formerly, with four insertions, at the age of 12 years. Owing to the insufficient protection of the population from the middle of the fourth decennium onwards, another vaccination should be urgently advised at the age of 35.

Surgery

77 The Whitman Operation for Ununited Femoral Fracture

C. S. LOWENDORF (*Arch. of Surg.*, November, 1932, p. 863) analyses the final results in fifteen cases in which a Whitman reconstruction operation was undertaken. This operation is indicated in ununited fracture of the neck of the femur and certain forms of arthritis of the hip in order to alleviate pain, deformity, and instability, and to allow useful ranges of motion. A moderate surgical risk is involved in this procedure, which comprises removal of the head of the femur, planting the femoral neck into the acetabulum, and transplanting the great trochanter further down the shaft. In Lowendorf's series eight patients had an ununited fracture of the neck of the femur; two had osteo-arthritis of the hip; two had suppurative arthritis; and the three remaining cases were respectively of generalized atrophic arthritis, traumatic dislocated hip, and a Charcot hip. Eleven good results were obtained, including the eight fracture cases; only one complete failure was recorded—namely, in the case of the Charcot hip. Although one patient gained 1/4 inch in length after the operation, the average result was a shortening of 1 inch, but the improved mobility, favourable position, and stability rendered this loss comparatively insignificant. Lowendorf differs from Whitman in ranking mobility as an essential attribute of a good result, since the operation is in reality an arthroplasty. A flexion contracture usually occurs, and amounted in fourteen patients to an average of 14 degrees; the average free range of flexion was 67 degrees. Such contractures only occurred in the sagittal plane of motion. About 20 degrees of adduction and the same extent of abduction could be

obtained ; internal rotation was usually limited. A stable weight-bearing joint resulted in fourteen cases, and in two of these there was even a negative Trendelenburg sign. Eight of the fourteen patients needed no external support subsequently ; in four it was required for reasons other than lack of ability to bear weight on the hip—for example, general osteo-arthritis or post-typhoid transverse myelitis. In the whole series relief from pain was secured by the operation. The author adds that the operation is only suitable in good surgical risk cases ; the oldest patient in the series was 63 and the youngest 16 years of age. It is contraindicated in tuberculosis and arthropathy. Possible complications are embolism, shock, and bronchopneumonia.

78 Differential Diagnosis between Varicose and Phlebitic Ulcer

O. MEYER (*Münch. med. Woch.*, November 11th, 1932, p. 1834) states that phlebitic ulcers are more common than the varicose form. The differential diagnosis is of the greatest importance because the injection of an ulcer following phlebitis is contraindicated. A phlebitic ulcer is only a symptom of underlying inflammation of the deep veins, and the cause of this inflammation has to be determined and treated. The deep veins may become infected from a primary varicose ulcer, but in a phlebitic ulcer they are primarily infected. There is often a history of previous influenza, pneumonia, puerperal infection, or post-traumatic infection. When the deep veins become infected there is a venous congestion ; this is often followed by a dermatitis which is very itchy, and causes the patient to scratch. It is impossible to diagnose a phlebitic ulcer from its form, for it assumes many variations. A chronic or latent phlebitis may be diagnosed by obtaining tenderness on pressure over the posterior tibial vein. Phlebitic ulcers are usually found in the lower third of the leg and medial to the tibia, rarely lateral to it. The general condition of the patient is worse than in the case of varicose ulcer. The patient's legs are liable to swell, there is secondary anaemia, lassitude, and tiredness on standing, and the patient's symptoms vary with the weather. Local treatment of the phlebitic ulcer is valueless, since it heals rapidly with rest and ointments, only to break down again when the patient resumes normal life. The general condition may be improved with rest, and the author believes that chronic phlebitis is one of the most important sources of focal infection.

79 Splenectomy in Purpura Haemorrhagica

E. L. ELIASON and L. K. FERGUSON (*Ann. of Surg.*, November, 1932, p. 801) discuss the value of splenectomy in acute and chronic cases of purpura haemorrhagica, and give particulars of five personal cases. This disease causes a reduction of the blood platelets and a disturbance of the entire reticulo-endothelial system. Although it has not been proved that the spleen is the seat of the disease in purpura haemorrhagica, yet splenectomy has given such good results that this operation should be performed when the diagnosis is established and if the case is one of the chronic recurring type. Diagnosis is made as the result of detecting certain changes in the blood associated with spontaneous haemorrhages and secondary anaemia. Uncontrollable bleeding, whether sudden and severe or recurrent, is the indication for splenectomy in this disease, and should be performed before the patient has bled to such an extent as to have become a poor surgical risk. In cases where the haemorrhage has been severe repeated blood-transfusions should be given until the haemoglobin has returned to at least 50 per cent. It is suggested that some type of toxaemia is an aetiological factor in the production of purpura haemorrhagica, and that therefore the removal of foci of infection will prevent recurrence. The authors review the results obtained in 213 reported cases. Of these the operative mortality was 13.1 per cent., but it is shown that during the last four years the mortality has dropped to 7 per cent. Death in most cases was due to post-operative shock or complications, intracranial haemorrhage, or operative accidents. In the five personal cases splenectomy with transfusion was carried out with good results in each case.

Therapeutics

80 Effect of Small Doses of Insulin

E. L. SCOTT and L. B. DOTTI (*Arch. Int. Med.*, October, 1932, p. 511) record an investigation of varying doses of insulin on the concentration of sugar in the blood in view of the prevalent tendency in practice to prefer fairly heavy dosage. They found that in animals as well as in human subjects there was a definite variability in the response to insulin injection, and that, therefore, it was inadvisable to base any conclusions on too few data. It was discovered that when the dose was measured in units per kilogram of body weight and the blood samples were taken thirty minutes after the injection the relative fall in the blood sugar content was proportional to the logarithm of the dose through a considerable portion of the practical dose range. Doses of less than 1/16 of a unit per kilogram were inadvisable because of the lack of sufficient precision in the blood-testing methods ; the limit on the other side was 0.5 of a unit per kilogram. Clinical conclusions reached were as follows. The dietary regimen may influence the initial blood sugar concentration and the absolute concentration after insulin, but the authors were unable to demonstrate that the quantity or the nature of the food in any way affected the relative blood sugar changes after insulin. There is a direct relation between the body weight and the sensitivity to insulin. If the treatment is not administered more often than once a week or for a longer period than twenty months, it does not appear that the response to subsequent injections of insulin is in any way affected. The authors obtained no evidence that very small doses of insulin did not have the full expected effect, but idiosyncrasy has to be borne in mind.

81 Treatment of Lobar Pneumonia

C. P. HOWARD and C. W. FULLERTON (*Canadian Med. Assoc. Journ.*, October, 1932, p. 367) oppose the early use of cardiac stimulants in pneumonia, and no longer administer alcohol, digitalis, strychnine, and camphor indiscriminately. In alcoholic subjects, however, regular moderate doses of alcohol may prevent the development of delirium tremens. Strychnine may also be beneficial in asthenic and toxic cases in doses of 1/30 to 1/40 grain, injected hypodermically every four hours. Camphor and caffeine sodium benzoate may be helpful in sudden cardiac failure following some undue effort, such as straining at stool, or following the crisis or in some other medical emergency. Although digitalis in massive doses from the beginning of the attack finds favour in the United States, the present authors regard its administration as inadvisable, except when heart disease coexists, or some other evidence of serious myocardial damage has appeared. Oxygen administration they regard as a routine procedure, but they have obtained little benefit from the injection of glucose. As regards serum therapy, if the patient is seen not later than the third day of the disease he is tested for hypersensitiveness to serum by the instillation of one or two drops of a 1 in 10 polyvalent serum (Felton's) into the conjunctival sac. If the patient proves sensitive he is desensitized by administering slowly and subcutaneously 5 c.cm. of the serum, and then half an hour is allowed to elapse before giving the therapeutic intravenous dose. The authors add that this cautious procedure may be advisable even if the patient does not appear to be sensitive. Even before the typing of the serum has been reported, they administer intravenously 20 c.cm. of the serum, a dose which contains approximately 10,000 units of Type I and the same amount of Type II pneumococcus antibody. This is repeated every four to six hours until at least six doses have been given, even though the temperature has started to fall after the second dose. If after the seventh dose no benefit has accrued, they give three more doses: they believe they have thus observed striking results even in Types III and IV infections. Mild "thermal reactions" occur after the first dose in 15 to 20 per cent. of the

patients; they comprise a feeling of chilliness but never a definite chill, and a slight rise in the temperature, which never amounts to hyperpyrexia.

82 Promotion of Diuresis in Congestive Heart Failure

G. HERRMANN *et al.* (*Journ. Amer. Med. Assoc.*, November 12th, 1932, p. 1647) discuss the mechanisms underlying the appearance of oedema and the action of various diuretic drugs in congestive heart failure. Emphasis is laid on the importance of the spontaneous diuresis brought about by rest and of that induced by relieving the intrapulmonary tension, with the accompanying increase in the blood pressure in the lesser circuit. Rest, followed by the exhibition of digitalis and theophylline-ethylenediamine, results apparently in augmentation of the renal glomerular tuft and tubular circulation, with a consequent increase in the glomerular filtration, and a concomitant slightly impaired or less efficient tubular reabsorption which accounts for the increased urinary output. Salyrgan seems to produce diuresis primarily by depressing the cells of the tubular epithelium, thereby hampering diffusion or reabsorption, while filtration is affected little, if at all. The defective reabsorption is sufficiently marked to account for the diuresis. There seems to be a definite fall in the carbon dioxide combining power of the blood, due in part at least to a loss of base in the urine. There is apparently an initial fall in the blood chloride level, possibly a dilution phenomenon in part, and then a sharp rise, with great amounts of chloride continuing to be excreted in the urine throughout diuresis. The blood urea values frequently rose, and the amount in the urine increased. There was apparent interference with the reabsorption of chlorides and urea, particularly when mercurials were used. The authors conclude that the action of diuretics is primarily on the kidney, and only secondarily on the tissue fluids.

Disease in Childhood

83 Nervous Manifestations in Infantile Scurvy

O. R. LANGWORTHY (*Bull. Johns Hopkins Hosp.*, September, 1932, p. 117) discusses the nervous manifestations in infantile scurvy, and reports a case which presented features which have not so far been described in the literature. The child was 10 months old, and had received an exclusively milk diet; on admission it showed definite signs of scurvy. After four days' treatment on an adequate diet, and after two transfusions, a left hemiparesis developed, with tremors on the right side of the body. Twenty-four hours after the onset of the neurological symptoms the child died. A careful necropsy was performed, and the usual post-mortem appearances characteristic of scurvy were found. In addition, on examining the brain, many minute haemorrhages were found on the surface and in the cortex of the cerebellum, and in the right half of the corpus callosum; it is considered that these accounted for the physical signs described.

84 Splenic Vein Disorders in Childhood

H. BRUGSCH (*Deut. med. Woch.*, September 30th, 1932, p. 1557) states that in the adult the triad of symptoms (haematemesis, splenomegaly, and anaemia with leucopenia) is characteristic of thrombosis of the splenic vein. In childhood the same symptoms may occur, but in the reported cases it has rarely been possible to demonstrate a thrombus in the splenic vein. Sometimes sclerotic changes in the wall of the portal vein have been found and thought to be syphilitic. In cases where no thrombus was found a stenosis of the splenic vein was assumed but not demonstrated. The author's explanation of the condition is as follows. The spleen has, in addition to its haemolytic function, that of a blood reservoir for the body, and it may be likened to a flooding chamber from which at any time a certain amount of oxidized blood may be passed into the general circulation by the splenic vein. It has been shown that if adrenaline is injected the spleen diminishes in size to one-half to one-quarter of its volume—that is, 300 to 400 c.cm. of blood are poured into the circulation. It is evident that this large amount cannot be taken up at once by the portal system and the liver, and so the collateral circulation comes into play, and in its turn acts as a kind of reservoir for the blood from the spleen. The collateral circulation is established by the veins in the phreno-splenic or gastro-splenic ligaments, which anastomose with the superior vena cava by the oesophageal veins, or with the portal vein by the coronary vein of the stomach. A haemorrhage (haematemesis, epistaxis) then acts as an "exhaust," and relieves the circulation. It has been noted that in this condition the spleen diminishes in size after a haemorrhage and begins to enlarge again later. Brugsch believes that the enlargement of the spleen is due to an exaggerated reservoir function. The primary cause of this is not known, but he feels certain that in most cases it is not secondary to thrombosis or stenosis of the splenic vein. Splenectomy is indicated to prevent sudden severe haemorrhage taking place, with resulting secondary anaemia.

85 E. NOBEL and R. WAGNER (*Wien. klin. Woch.*, September 23rd, 1932, p. 1214) state that the aetiology of this condition is obscure. Sepsis of the umbilical cord and infections (especially furunculosis) have been adduced as causative factors. The most striking symptom is haematemesis, which, coming on in perfect health, is otherwise of rare occurrence in childhood, and should give rise to suspicion of "stenosis of the splenic vein." The amount of blood vomited varies from one teaspoonful to half a litre. It is due to varicosities of the collateral veins of the spleen, which is enlarged. It fluctuates in size, its maximal enlargement occurring before a haematemesis, after which it diminishes in volume, only to increase again in size. Secondary anaemia is marked with leucopenia. The liver is usually enlarged; the faeces contain traces of blood. The spleen is always fibrosed; the capsule is thickened, and infarcts may be present. It is not always possible to demonstrate a thrombus in the splenic vein. The condition has to be differentiated from gastric ulcer, rickets, syphilis, and tuberculosis; from thrombocytopenia; from Banti's, Gaucher's, and Hodgkin's diseases; and from leukaemia. Splenectomy is indicated in all cases to prevent the characteristic sudden recurring severe haemorrhages and the secondary anaemia. It is important to remember that if blood transfusions are employed they should be in small amounts, given repeatedly, but not directly after a haematemesis, when they are liable to produce renewed haemorrhage. The citrated blood method is the one of choice.

86 Increasing Height of Children

C. SCHIÖTZ (*Nord. Med. Tidskrift*, October 22nd, 1932, p. 807) shows how improvement in the standard of living is promptly reflected in the heights and weights of school children. It was not till 1918 that the school medical service of Oslo was centralized and reorganized; before this change there was no uniform system by the help of which alterations in the growth and development of all the children of this city could be checked and compared from one period to another. But in 1920, when there were over 24,000 school children in Oslo, and again in 1925 and 1930, material for a statistical comparison was available. The improvement from one five-year period to another has been most striking, and has been demonstrable in both sexes and in every age group. For example, in 1920 the average weight of a 9-year-old girl was 24.6 kg. By 1925 this figure had risen to 25.7 kg., and by 1930 it had reached 27 kg. In the matter of height the following example is given. In 1920 the average height of a boy of 14 was 153.5 cm.; by 1925 this figure had risen to 155.9 cm., and by 1930 it had reached 157.4 cm. The school medical officers confirm these statistical findings by their personal impressions as to the improvement which has taken place during the last ten to fifteen years in the general physical condition of the Oslo school child. But so late as 1929 as great a proportion as 15 per cent. of the school children were found to be of poor physique—a condition which Professor Schiötz is more inclined to attribute to the child's surroundings than to any hereditary factor.

Obstetrics and Gynaecology

87 Vaginal Hernia

W. H. BUEERMANN (*Journ. Amer. Med. Assoc.*, October 1st, 1932, p. 1138) reports three cases of vaginal hernia, and defines six distinct types—namely: (1) cystocele, or hernia of the bladder into the anterior vaginal wall; (2) rectocele, or hernia of the anterior wall of the rectum into the posterior vaginal wall; (3) vaginal enterocele or hernia, which may be either a peritoneal sac with bowel or omentum presenting anteriorly between the bladder and uterus, or posteriorly between the uterus and rectum, or a complete uterine prolapse with enterocele; (4) a pudendal enterocele or hernia—a descent of the small intestine into a peritoneal sac extending into the labium majus of one or both sides; (5) a perineal enterocele or hernia—a descent of the small intestine into a peritoneal sac extending through the levator ani muscles and bulging through the ischio-rectal cavity; and (6) protrusion of the cul-de-sac into the anterior wall of the rectum. In the literature Buecrmann finds that the relative incidence of posterior vaginal hernia is 73.8 per cent. The symptoms are not usually characteristic, and the diagnosis is rarely made before an operation. The aetiology is doubtful, but congenital weakness of the pelvic floor and the strain of pregnancy and delivery are predisposing causes. The treatment is surgical, but the coexistence of pelvic complications precludes the adoption of a standardized technique. J. C. MASSON (*ibid.*, p. 1143) distinguishes between a "true vaginal hernia" with a sac of peritoneum, which is quite rare, except as a post-operative condition, and a "false vaginal hernia," which has no peritoneal sac. He condemns operations for abdominal fixation and shortening of ligaments alone or in combination with perineorrhaphy for prolapse and retroversion when associated with cystocele. Unless the defect in the anterior part of the pelvic diaphragm is repaired or the floor is strengthened the cystocele will recur and the symptoms will return. Herniation of the vault of the vagina may follow abdominal or vaginal hysterectomy. In such a contingency, if the perineum can be satisfactorily repaired temporary relief can at least be assured by the wearing of a ball pessary, but to ensure a permanent cure a Le Fort type of plastic operation, or complete obliteration of the vagina, is often necessary.

88 Cardiospasm complicating Pregnancy

F. ROQUES (*Journ. Obstet. and Gynaecol. British Empire*, Autumn Number, 1932, p. 550) discusses an unusual but serious complication of pregnancy—cardiospasm or achalasia. He records two cases, in one of which death resulted. As in cardiospasm in non-pregnant patients, dysphagia of sudden onset, accompanied by a sensation of burning in the thorax, was the most marked symptom. Another prominent symptom, the effortless regurgitation of much food with frothy mucus, was present in both cases, and in both the disease was intermittent, a fact distinguishing it from organic oesophageal stricture. All the pre-existing symptoms became exacerbated immediately after conception in each case, and the patients rapidly lost weight, with deterioration in their general health. The usual treatment of cardiospasm—namely, dilatation of the cardiac sphincter with Hurst's mercury bougie—proved sufficient in the case which recovered. Should this measure fail, two alternatives have to be considered: termination of pregnancy by the induction of abortion or premature labour; or gastrotomy with digital dilatation of the cardiac sphincter from below. These procedures are briefly considered. Except when symptomatic aggravation occurs shortly before viability, pregnancy should be terminated by uterine evacuation during the first sixteen weeks of gestation, and by rupturing the membranes and inserting a Horrocks's bag after the sixteenth week. Should sterilization be indicated, however, abdominal hysterotomy is the method of election. If the child is within two or three weeks of viability, operative intervention should be withheld until it is viable, when premature labour should be induced or Caesarean section be performed.

Pathology

89 Blood Changes in Paralytic Ileus

E. HEGGE (*Norsk Mag. f. Laegevid.*, October, 1932, p. 1033) records his investigations of the chlorides and residual nitrogen in the blood in patients with post-operative intestinal and gastric paralysis, as well as in several cases of paralytic ileus associated with trauma. He found that after uncomplicated operations performed under general or spinal anaesthesia only slight changes were present in the chlorides and residual nitrogen. During the first few days after the operation there was a certain tendency to hypochloraemia and a slight increase of nitrogen in the blood. When, however, the case was complicated by intestinal or gastric paralysis, the blood chlorides at once fell and a considerable degree of azotaemia appeared. In peritonitis the blood changes were closely associated with the concomitant paralysis. Hegge emphasizes the importance of compensating for the loss of chloride, in both mechanical and paralytic ileus, by the intravenous injection of hypertonic salt solution, which also has a peristaltic action. In gastric paralysis permanent drainage through a duodenal tube is advisable.

90 Penicillin and Potassium Tellurite in Selective Media

A. FLEMING (*Journ. Path. and Bact.*, November, 1932, p. 831) draws attention to the value of penicillin and of potassium tellurite in preparing selective media for the differentiation of bacterial species. Penicillin is prepared by growing *Penicillium notatum* in trypsin digest broth for a week at 20° C., filtering, and neutralizing the filtrate with HCl. If the reaction is prevented from becoming alkaline the filtrate will retain its potency sometimes for as long as three months. In the presence of 1/100 penicillin staphylococci, α- and β-haemolytic streptococci, the gonococcus, meningococcus, *M. catarrhalis*, the diphtheria bacillus, and organisms of the lacto-bacillus group will not grow. In practice the penicillin may either be added in known concentration to a fluid medium or 5 or 6 drops may be spread over one-half of the culture plate. The inhibitory action of potassium tellurite is exercised mainly on those organisms which are not sensitive to penicillin. Thus in dilutions up to about 1 in 40,000 most organisms of the coli-typhoid-dysentery group, the cholera vibrio, *B. pestis*, the influenza bacillus, and many of the chromogenic and aerobic spore-bearing groups fail to develop, while even in a concentration of 1 in 4,000 staphylococci, many streptococci, diphtheria bacilli, and *B. acidophilus* develop freely. The enterococcus is one of the few organisms that are relatively insensitive both to penicillin and to potassium tellurite. The author describes a number of representative instances in which these two substances, either alone or in combination, may be of value in routine clinical pathological work.

91 The Pirquet Test during Menstruation

H. THRAP-MEYER (*Tidsskr. f. d. Norske Laegefor.*, November 1st, 1932, p. 1311) reports from the Stavern Coast Hospital, Norway, observations made with Pirquet's test on patients during menstruation. Altogether forty-nine women were thus examined during 158 menstrual periods. The test was made on the first day of menstruation, and again ten days later. Four of the patients did not suffer from tuberculosis, and were consistently Pirquet-negative. Among the remaining forty-five there were as many as ten in whom the Pirquet reaction was temporarily, but not consistently, negative during menstruation. Ten days after menstruation all the forty-five patients gave a definitely positive reaction. As a rule the reactions, even when they were positive, were much less marked during menstruation than at other times. The author adds that these investigations suggest that in the past wholesale Pirquet tests may have been misleading, in so far as they have been applied to women during menstruation. It would be well if in adult women this test was performed from five to twenty days after the first day of menstruation.

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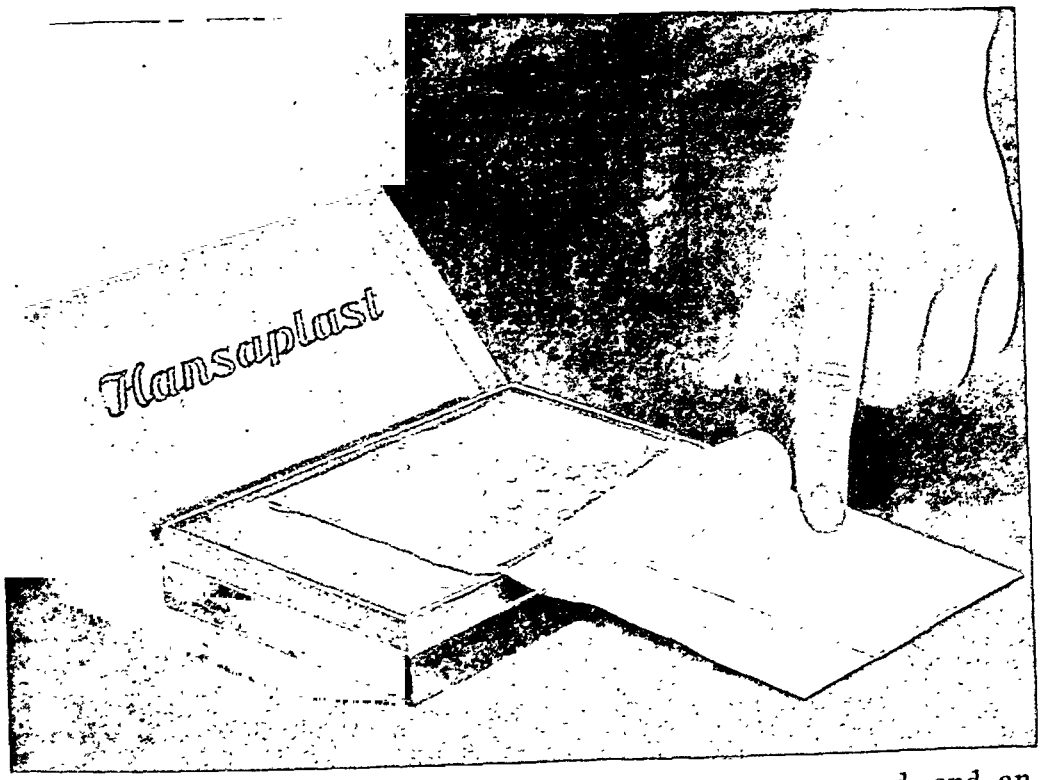

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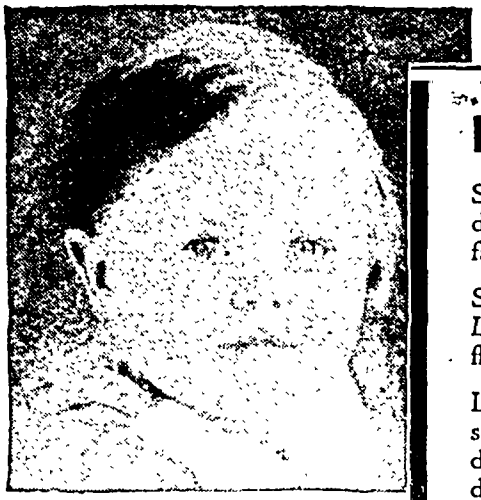

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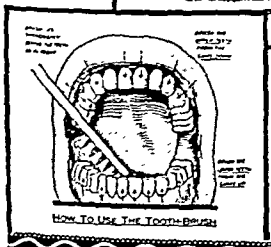

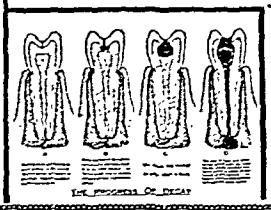

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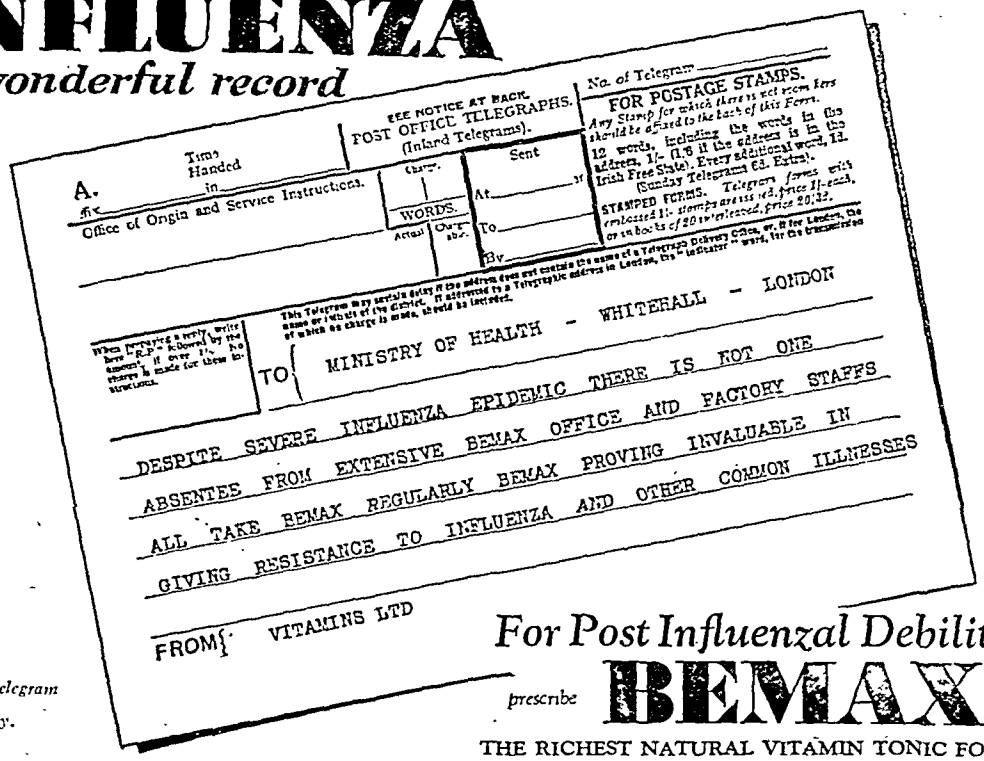

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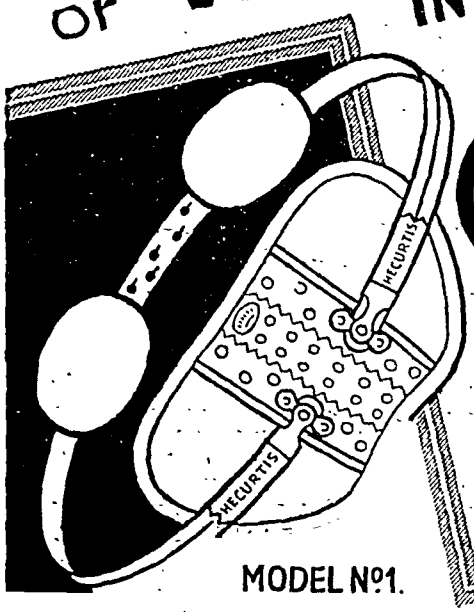

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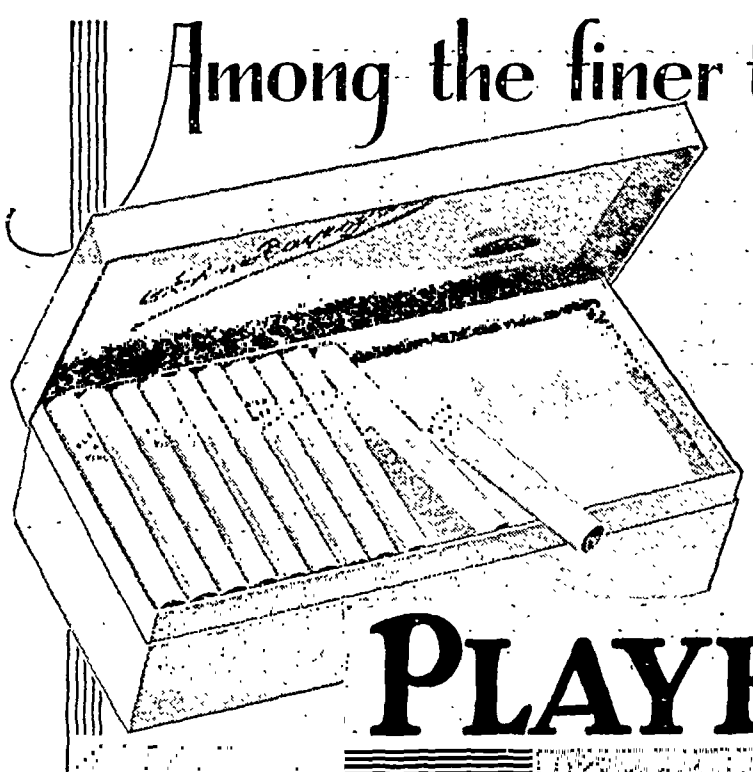

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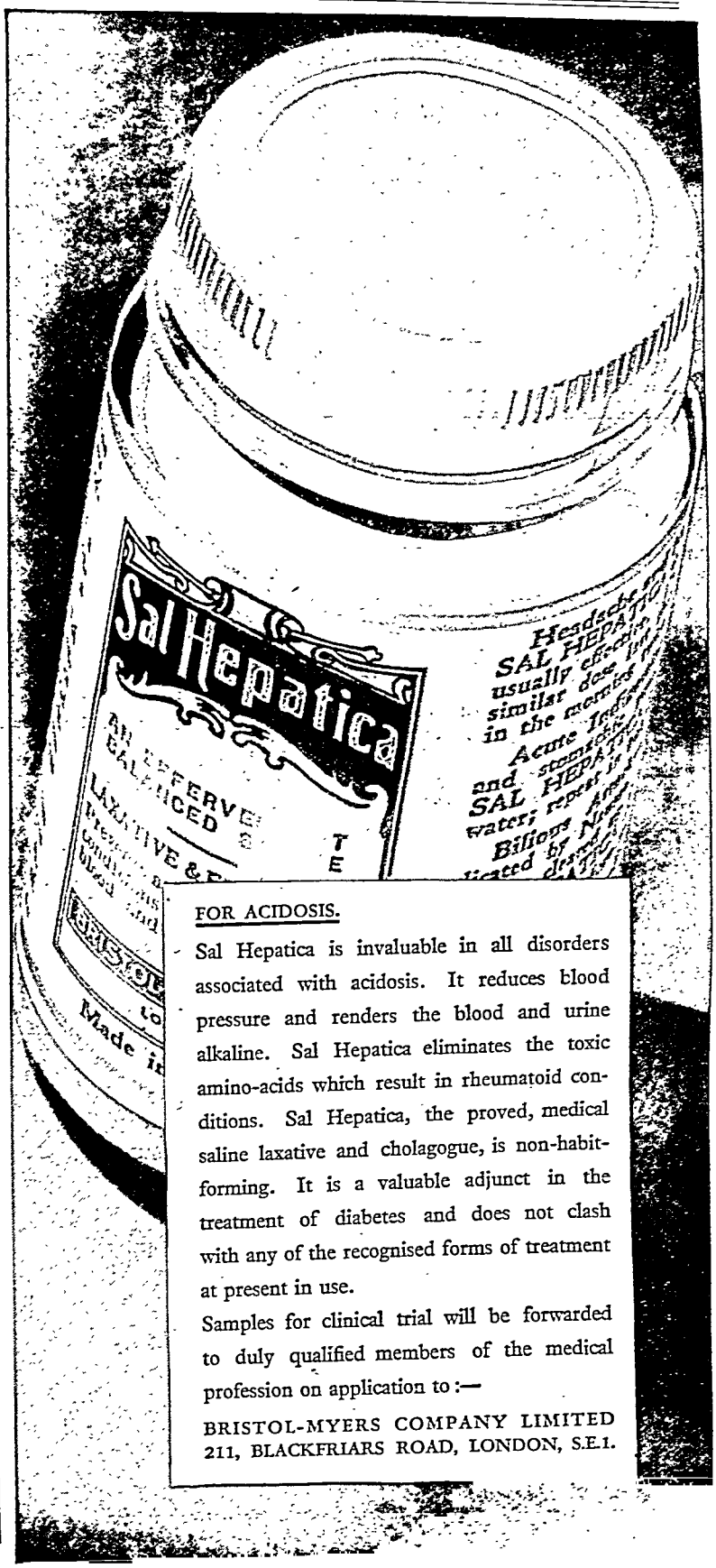

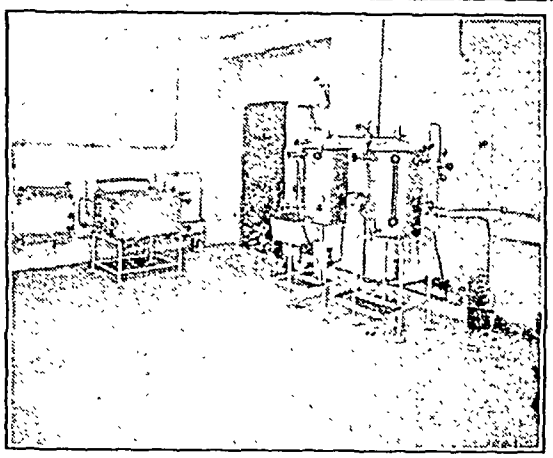

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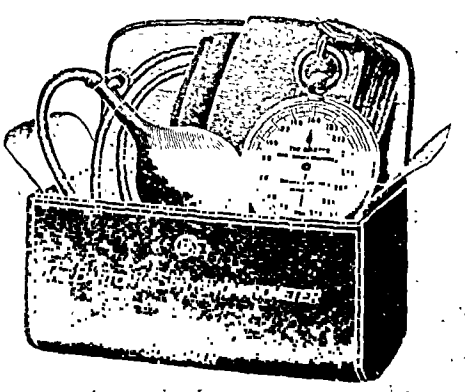

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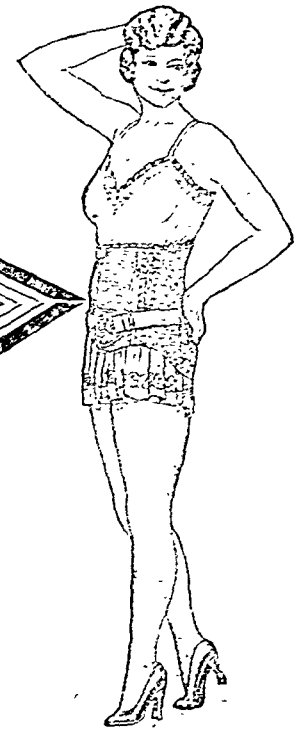

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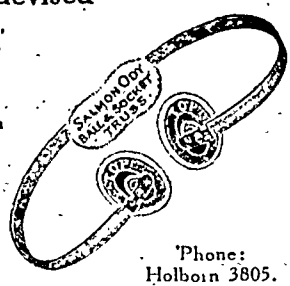

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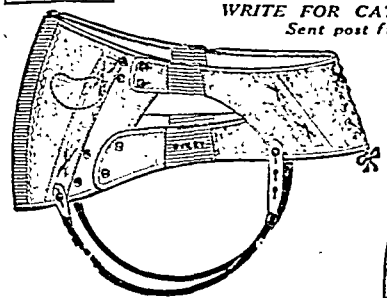

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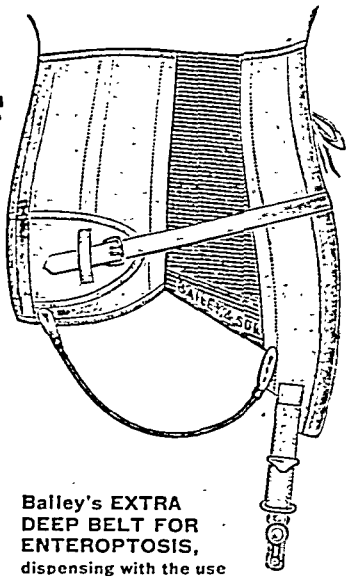

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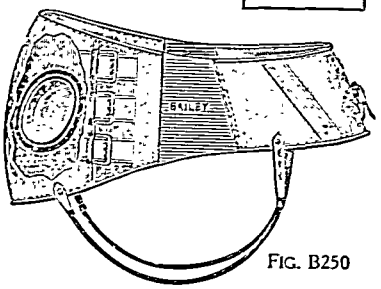


FIG. B250

(Showing Interior of Cup.)
SPECIAL BELT FOR AFTER COLOSTOMY.

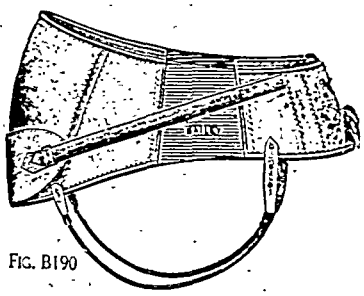
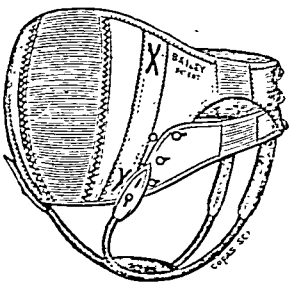


FIG. B190

BELT FOR ENTEROPTOSIS.



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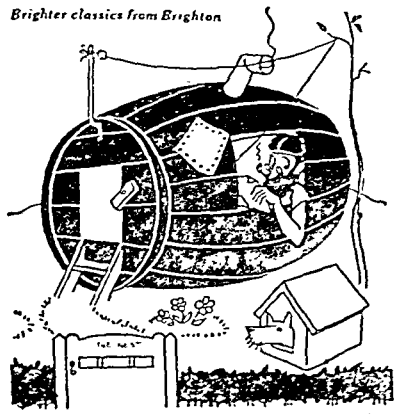

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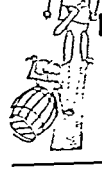

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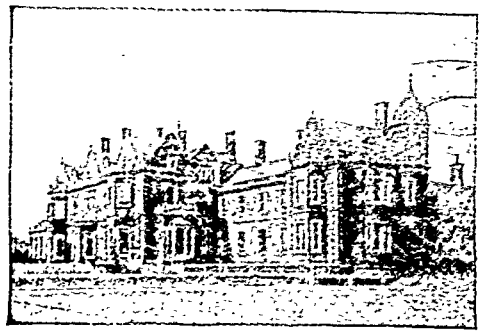

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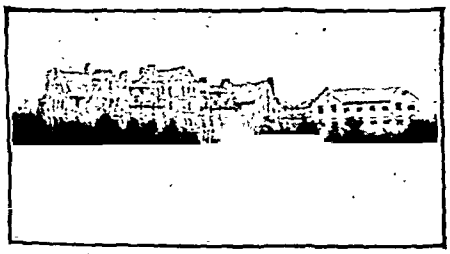

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BEHNKE METHOD. Estab. 1882. Cases, non-resident, treated at 39, Earl's Court Square, S.W.5, and in residence, in the Summer holidays, at Miss BEHNKE'S house on the Chilterns.

STAMMERING, CLEFT PALATE SPEECH, LISPING, 3/9 of Miss BEHNKE, 39, Earl's Court Sq., S.W.5.

LONDON HOSPITAL MEDICAL COLLEGE.

F.R.C.S.

A COURSE OF INSTRUCTION for the Final Fellowship Examination will begin on Wednesday, March 1st.

Fees: (exclusive of Operative Surgery) 25 guineas. Operative Surgery 10 guineas.

A separate entry can be made for all Classes other than those of a strictly Clinical character.

Further particulars may be obtained from Professor WILLIAM WRIGHT, M.B., D.Sc., F.R.C.S., Dean, London Hospital Medical College, Mile End, E.1.

LONDON HOSPITAL MEDICAL COLLEGE.

Primary Fellowship Examination.

A COURSE OF INSTRUCTION for the above Examination will begin on Monday, Feb. 6th.

The Fee for the Course is 15 guineas.

Further particulars may be obtained from Professor WILLIAM WRIGHT, M.B., D.Sc., F.R.C.S., Dean, Mile End, E.1.

THE NORTH-EAST LONDON POST-GRADUATE COLLEGE.

The Prince of Wales's General Hospital, Tottenham, N.15, North Middlesex Hospital, Edmonton, and Associated Hospitals.

An INTENSIVE REFRESHER COURSE will be held from February 20th to March 4th. Lectures, demonstrations, and cliniques in the various general and special departments.

Enquiries and applications should be sent to the Dean at the Hospital, or to the Secretary of the Fellowship of Medicine, 1, Wimpole Street, W.1.

MASTERY OF MIDWIFERY.

Examinations for the Diploma of the Mastery of Midwifery of the Society of Apothecaries of London will be held beginning Monday, May 15th, and Monday, November 20th, 1933.

For regulations, apply to the Registrar of the Society, Water Lane, E.C.4.

GENERAL BOARD OF CONTROL FOR SCOTLAND.

Applications are invited for vacant post (pensionable) of male MEDICAL DEPUTY COMMISSIONER. Salary will commence at £726 per annum, rising by eight annual increments to a maximum of £939 per annum. The scale of remuneration is liable to review. Applications, with copies of testimonials, should be lodged with the Secretary to the Board, at 25, Palmerston Place, Edinburgh, not later than March 1st.

GUY'S HOSPITAL MEDICAL SCHOOL.

London Bridge, S.E.1.

A Course of Instruction in preparation for the FINAL EXAMINATION for the FELLOWSHIP OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND will commence on Monday, February 20th.

SWANSEA COUNTY BOROUGH.

ASSISTANT MEDICAL OFFICER.

The Swansea Borough Council invite applications from duly qualified Women Medical Practitioners, for the post of Assistant Medical Officer to assist with the medical services of the Corporation.

Resident Hospital, school medical service, maternity and child welfare, and obstetric experience are desirable qualifications, and preference will be given to a candidate with special experience in the treatment of venereal diseases of women and children.

Salary £500 per annum, rising by annual increments of £25 to £700, temporary annual deduction of £14 12s.

The appointment is subject to the approval of the Ministry of Health and Board of Education.

Applications on special forms, which can be obtained from Dr. THOMAS EVANS, Medical Officer of Health, 5, Prospect Place, Swansea, to be sent in not later than February 9th.

COUNTY COUNCIL OF THE WEST RIDING OF YORKSHIRE.

SCHOOL MEDICAL INSPECTOR.

The County Council of the West Riding of Yorkshire invite applications for the appointment of a School Medical Inspector (of either sex) to act under the supervision of the County Medical Officer.

Salary £500 per annum, rising by annual increments of £25 to £700 per annum. The above salary is subject to a temporary deduction of 7½ per cent.

Further particulars and form of application may be had from the undersigned by whom all applications, with copies of not more than three recent testimonials, must be received not later than February 20th.

County Hall, Wakefield. J. CHARLES McGRATH, Clerk of the County Council.

January, 1933.

CITY OF BIRMINGHAM.

SELLY OAK HOSPITAL. (500 Beds.)

CASUALTY OFFICER (Male).

Applications are invited from fully qualified Medical Practitioners for whole-time appointment as Casualty Officer (male) at the Selly Oak Hospital Birmingham. The appointment will be for a period of six months, in the first instance, but may be extended at the end of that time for a further period of not exceeding six months.

Salary at the rate of £200 per annum, and full residential emoluments. The salary and emoluments will be subject to any "voluntary abatement" in force from time to time. The officer appointed will be required to refund to the Council all fees, allowances, and emoluments (other than the foregoing) received by him.

Further particulars may be obtained from the Medical Superintendent at Selly Oak Hospital, to whom applications, stating age, experience, and qualifications, with copies of recent testimonials, should be forwarded not later than Wednesday, February 8th.

F. H. C. WILTSHIRE, Town Clerk.

The Council House, Birmingham.

January, 1933.

CITY OF BIRMINGHAM.

MATERNITY AND CHILD WELFARE DEPT.

CANWELL HALL BABIES' HOSPITAL. (84 Beds.)

A RESIDENT MEDICAL OFFICER is required for a period of six months; duties to commence on March 29th.

Applications are invited from ladies with previous experience as House Physician, preferably in a Children's Hospital. Salary £250 per annum, with board and laundry.

The salary and emoluments will be subject to the "voluntary abatement" approved by the Council in respect of its officers. The officer appointed will be required to refund to the Council all fees, allowances, and emoluments (other than the foregoing) received by her.

Applications, giving all particulars of qualifications, age, and experience, and accompanied by copies of three recent testimonials, should be sent to the Medical Officer of Health, The Council House, Birmingham, on or before February 8th.

LONDON COUNTY COUNCIL.

Applications are invited for appointment of RESIDENT ASSISTANT MEDICAL OFFICERS at undermentioned hospitals. Duties assigned by Medical Superintendents and include, if necessary, assistance at other establishments under control of the Council. Salaries and valuation of emoluments are subject to temporary reduction. Candidates must be registered medical practitioners of at least one year's standing, and have held a resident appointment in a general hospital or maternity hospital in the case of (5) for at least six months. In the case of women, marriage terminates contract of service.

(1) ST. MARY ISLINGTON HOSPITAL, Highgate Hill, N.19.—*Assistant Medical Officer (Grade I). Duties mainly surgical.

(2) ST. GILES' HOSPITAL, Brunswick Sq., Camberwell, S.E.5.—*Assistant Medical Officer (Grade I).

(3) ST. ALFEGE'S HOSPITAL, Vanbrugh Hill, S.E.10.—*Assistant Medical Officer (Grade I). Duties mainly medical.

(4) HACKNEY HOSPITAL, High Street, Homerton, E.9. — *Assistant Medical Officer (Grade I). Work mainly casualty and in the out-patient department. Experience of treatment of fractures is desirable.

*Salary £350 a year, rising annually by £25 to £425 a year, with board lodging, and washing. There is no accommodation for a married man or for a woman.

(5) ST. MARY ABBOT'S HOSPITAL, Marloes Road, Kensington, W.8.—Temporary Assistant Medical Officer (woman). Salary £250 a year, together with board, lodging, and washing. The appointment will be until June 30th, in the first instance. The duties will include the administration of anaesthesia in maternity cases.

Forms of application obtainable (stamped addressed foolscap envelope necessary) from the Medical Officer of Health (Staff Division 3a), The County Hall, Westminster Bridge, S.E.1. Last date for receipt of applications, February 17th. Candidates should specify the position or positions for which they desire to apply. Canvassing disqualifies. Further enquiries should be addressed to the Medical Superintendents at the respective hospitals.

COUNTY BOROUGH OF CROYDON.

PUBLIC HEALTH DEPARTMENT.

Applications are invited from qualified Medical Men and Women for the post of ASSISTANT MEDICAL OFFICER OF HEALTH FOR OBSTETRICS. The duties of the post will include the following:

(a) Obstetrical Officer at the Mayday Hospital (20 maternity beds).

(b) General clinical supervision of the *Corporation's Ante-Natal* and Post-Natal Clinics, and other work carried out by it under the provisions of the Maternity and Child Welfare Acts and Notification of Birth Acts.

(c) To act as consultant for cases at request of private practitioners, including, if so required, acting as Medical Officer or Consulting Obstetrician of any maternity hospital wholly or partly maintained by the Corporation.

Candidates must have had practical experience in Obstetrics and of Ante-Natal and Post-Natal Clinics. The Fellowship diploma of one of the Royal Colleges of Surgeons will be deemed an additional qualification, but the D.P.H. is not essential.

The salary will be £750 per annum, increasing by three biennial increments of £50 and one biennial increment of £37 10s. to a maximum of £937 10s. per annum.

The officer appointed will be on the staff of the Medical Officer of Health, and will work under supervision.

The "general hospital maintained under the Public Health Acts, and the duties in connection therewith will be performed under the Medical Superintendent of, and as a member of the staff of, that Hospital.

Application forms, together with full list of duties and details of the appointment, may be obtained from the Medical Officer of Health, Town Hall, Croydon, upon receipt of a stamped addressed foolscap envelope, and should be returned to me with copies of three recent testimonials, not later than 12 o'clock noon on Monday, February 13th, endorsed "Assistant Medical Officer for Obstetrics."

Town Hall, Croydon. J. M. NEWNHAM, Town Clerk.

January 24th, 1933.

THE ROYAL INFIRMARY, SUNDERLAND. (290 Beds.)

Wanted, SENIOR HOUSE SURGEON (male). Salary £200 per annum, with board, residence, and laundry.

Applications, stating age, qualifications, date available for duty, and accompanied by copies of testimonials, to be sent to the undersigned.

J. A. BEARDSALL, House Governor & Secretary.

LONDON COUNTY COUNCIL.

Applications invited for appointment to the position of ASSISTANT MEDICAL OFFICER, Grade II, at each of the undermentioned Hospitals.

The person appointed will be required to carry out such duties as may be assigned by the respective Medical Superintendents and, should occasion arise, to assist at any of the other establishments under the control of the London County Council.

Where residential accommodation is available the successful candidate will be required to live in the hospital.

The salary in each case is £250 a year, together with board, lodging, and washing, or a non-residential allowance, subject to review, of £150 a year in lieu. Remuneration is subject to temporary reduction. Candidates must be registered Medical Practitioners of at least one year's standing and have held a resident appointment in a general hospital for six months. The appointments will be for one year only and not renewable, and are resident except where otherwise indicated.

ARCHWAY HOSPITAL, Archway Road, Highgate, N.19.

FULHAM HOSPITAL, St. Dunstan's Road, Hammersmith, W.6.

HIGHGATE HOSPITAL, Dartmouth Park Hill, N.19.

†NEW END HOSPITAL, Hampstead, N.W.3.

†NORWOOD CHILDREN'S HOSPITAL, Norwood, S.E.27.

*ST. HOSPITAL, Raine St.

ST. Sydney Street, S.W.3.

ST. BENEDICT'S HOSPITAL, Church Lane, Tooting, S.W.17.

* No accommodation for a woman.

† Non-residential appointment.

Only one form of application is required for these vacancies and successful candidates will be allocated in accordance with the requirements of the service. Consideration will, however, be given to any preference which candidates may express. In the case of women, marriage terminates contract of service.

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), *County Hall, Westminster Bridge, S.E.1*; returnable by February 10th. Canvassing disqualifies. Further inquiries should be addressed to Medical Superintendents at the Hospitals.

MINISTRY OF HEALTH.

The Minister of Health invites applications for a VACANT APPOINTMENT on the medical staff of the Ministry. The salary commences at £833 per annum, and rises by twelve annual increments to a maximum of £1,146 per annum. This scale of remuneration is liable to review.

The appointment will carry the usual Civil Service conditions as to pension, holidays, etc., and the officer will be required to devote his whole time to the public service and must be prepared to work in any part of England or Wales if required to do so.

Candidates must possess a University degree in Science with special knowledge and experience of biochemistry and physiology in relation to food and nutrition. They must conform to the Civil Service Nationality rule.

Members of Parliament or ... der a candidate liable to ...

... with further particulars of the appointment, may be obtained from the Director of Establishments, Ministry of Health, Whitehall, S.W.

No application can be considered unless received on the prescribed form not later than February 13th.

THE ROYAL SURGICAL AID SOCIETY.

The Committee in ... for the appointment of an SURGEON to the ... ment carries an honorarium of Fifty Guineas per annum, and requires attendance at the Offices of the Society, as below, every Thursday, at 3 p.m. to examine and prescribe for patients applying for Spectacles. The duties to commence on Thursday, April 6th next. Applicants must be Fellows of the Royal College of Surgeons of England; and applications for the post, stating age, qualifications, and particulars of appointments already held, must be sent to the Secretary, Royal Surgical Aid Society, Salisbury Square, E.C.4, not later than Monday, February 6th next.

ESSEX COUNTY HOSPITAL, COLCHESTER. (160 Beds.)

Wanted in March, a HOUSE PHYSICIAN (male). Salary £150 per annum, with board, washing, and residence in the Hospital. Medical and Surgical qualifications required. Applications, with three recent testimonials, to be sent on or before Tuesday, February 14th, to

ALFRED G. BUCK, Secretary.

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh).

(a) British Islands.

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH**
EBBW VALE, MON. *(Workmen's Medical Society.)*	MARDY, GLAMORGAN. *(Workmen's Medical Scheme.)*	OGMORE VALLEY, GLAMORGAN. *(Wyndham Colliery Medical Aid Society.)* *(Workmen's Medical Scheme.)*
GILFACH GOCH, GLAMORGAN. *(Workmen's Medical Scheme.)*	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE. *(Workmen's Medical Scheme.)*	
LLWYNPIA, CLYDACH VALE, PENYCRAIG, GLAMORGAN. *(Workmen's Medical Scheme.)*	NEATH AND DISTRICT. *(Medical Aid Association.)*	LLANTRISANT AND LLANTWIT FARDRE RURAL DISTRICT COUNCIL. (1) *Medical Officer of Health (part-time.)* (2) *Medical Officer (woman—part-time) for Maternity and Child Welfare.*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer.)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association.)*	

(b) Overseas.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. G. HUNTER (Medical Secretary, New South Wales Branch), 135, Macquarie St., Sydney, N.S.W.	**QUEENSLAND.** *(Brisbane Associated Friendly Societies Institute.)* *(Toowoomba Associated Friendly Societies, Medical Institute, Toowoomba.)*	The Hon. Sec., Queensland Branch, British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	**WELLINGTON, NEW ZEALAND.** *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec., New Zealand Branch), British Medical Association, P.O. Box 156, Wellington, New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch), British Medical Association, Medical Society Hall, East Melbourne, Victoria.			**WESTERN AUSTRALIA.** *(Contract and Lodge Practices.)*	Hon. Sec., Western Australian Branch, British Medical Association, No. 6, Bank of N.S.W. Chambers, St. George's Terr., Perth, Western Australia.

February 1st, 1933. By Order of the Council. G. C. ANDERSON, Medical Secretary.

THE LONDON LOCK HOSPITAL, 91, Dean Street.

[illegible] applications [illegible] appointment is for one year in the first instance. Candidates, who must be doubly qualified and duly registered, should send their applications, together with three copies of testimonials, not later than the first post on Tuesday, February 7th, addressed to the undersigned, from whom copies of the Laws and By-laws relating to the appointment can be obtained. Candidates must be Fellows (or Members) of the Royal College of Surgeons of England, or Surgical Graduates of a University of the United Kingdom.

REGISTRAR.

By Order of the Board,
J. F. MORTON,
Assistant Secretary.

January, 1933.

HULL ROYAL INFIRMARY. (367 Beds.)

Applications are invited from registered Medical Practitioners for the post of THIRD HOUSE SURGEON (male), vacant Feb. 16th.

Salary at the rate of £150 per annum, plus residence, board, and laundry.

The candidate appointed will be expected to stay for not less than six months, but the appointment is at any time determinable by one month's notice on either side.

The Hospital is recognized by the Royal College for F.R.C.S. examinations.

Applications, giving particulars of age, experience, and nationality, together with copies of testimonials, should be addressed to the undersigned.

R. J. CARLESS,
House Governor.

January 21st, 1933.

GLOUCESTER COUNTY AND CITY MENTAL HOSPITALS.

Applications are invited for the post of JUNIOR ASSISTANT MEDICAL OFFICER. Candidates must be single, and preference will be given to those under 35 years of age.

The commencing salary is £350, rising by annual increments of £25 to £450 per annum, with board, lodging, laundry, and attendance, valued for [illegible] at £104 per annum. [illegible] num will be paid if t [illegible] or obtains a degree or [illegible] medicine.

A temporary abatement from the initial gross salary [illegible] plus value of emoluments (£454) will be made amounting to £12.

A deduction of 3 per cent. under the Asylums Officers Superannuation Act of 1909 will be made.

Excellent facilities exist for laboratory and research work.

Applications, stating age and full particulars, accompanied by copies of three recent testimonials, should be sent to the Medical Supt.

ST. MARYS HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.13.

There is a vacancy for HONORARY OPHTHALMIC SURGEON. Candidates should be Fellows of the College of Surgeons or Masters of Surgery, London, Oxford, or Cambridge; also have held an appointment at an Ophthalmic Hospital or in the Ophthalmic Department of a General Hospital, after graduation. Applications, with copies of three testimonials to the undersigned from whom every information is obtainable.

By Order of the Committee,
A. ERNEST WILKES, Secretary.

MILLER GENERAL HOSPITAL, Greenwich Road, S.E.10. 151 Beds and 18 Special Departments.

ASSISTANT PHYSICIAN.

The Board of Management invite applications for the above Honorary post.

Candidates must be Graduates of a University and Fellows or Members of the Royal College of Physicians of London and not engaged in general practice.

The duties will be to see out-patients, and a certain number of beds will be allotted.

Candidates will be expected to call upon the Members of the Honorary Medical and Surgical Staff, a list of whom can be obtained from the Secretary.

An honorarium of 20 guineas per annum is allowed towards travelling expenses.

Applications, which must be printed or typewritten, together with copies of not more than three recent testimonials, should be sent to the Chairman of the Hospital not later than March 1st next.

January 13th, 1933.

BOLINGBROKE HOSPITAL, Wandsworth Common, S.W.11. (121 Beds.)

The Board of Governors invite applications for the post of ASSISTANT GYNAECOLOGIST. Candidates must be Fellows of a Royal College of Surgeons.

Applications, with copies of three recent testimonials, to reach the undersigned not later than Wednesday, February 8th.

W. S. RANDOLPH BISS,
Secretary-Superintendent.

(Appointments continued on p. 53).

ASSISTANCIES.

WANTED IMMEDIATELY, FULLY QUALIfied male ASSISTANT, single, British, University Graduate preferred, for semi-rural mixed Practice (panel 1,300) in the West Riding of Yorks. Must be keen, energetic, abstainer, and able to drive a car. Salary (indoor at first) £300 per annum, later on, outdoor, £400, and half midwifery fees. Prospects for suitable man. Healthy district.—Address, No. 906, B.M.A. House, Tavistock Sq., W.C.1.

WANTED. — ASSISTANTSHIP BY M.B., B.Ch., B.A.O., N.U.I., 1924, aged 31. Experienced in G.P., major and minor surgery, ex H.P. and H.S. 1 year; Mental Hospital exp. and Sanatorium, including induction, etc., of pneumothorax. Free now.—Address, No. 1009, B.M.A. House, Tavistock Square, W.C.1.

WANTED, MARCH 1st, INDOOR ASSISTANT, important town, E. Anglia; English or Scots graduate preferred. Must be exper. G.P., loyal, energetic, and abstainer. Usual bond. — Address, stating essential particulars, No. 1021, B.M.A. House, Tavistock Sq., W.C.1.

WANTED, YOUNG, INDOOR ASSISTANT (male) for panel and private Practice, East London. Usual bond. State full particulars. Only testimonials with stamped and addressed envelope returned. — Address, No. 1007, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — ASSISTANTSHIP BY M.A. Cantab., M.R.C.S., L.R.C.P., English, single, 4 years' excellent hospital experience. Home Counties preferred.—Address, No. 1006, B.M.A. House, Tavistock Square, W.C.1.

WANTED IMMEDIATELY. — INDOOR AND Outdoor ASSISTANTS for Town and Country Practices, with and without view; good salaries. State full particulars.—BRITISH MEDICAL BUREAU, 33, Cross St., Manchester, 2.

WANTED IMMEDIATELY.-INDOOR ASSISTANT for N.W. London. Able to drive car. £300 p.a. Prospects for energetic man.—*Address, No. 1023, B.M.A. House, Tavistock Square, W.C.1.*

WANTED.—INDOOR ASSISTANT (WOMAN) for General Practice in City, immediately. Salary £200 per annum. State age, experience, and references.—Address, No. 901, B.M.A. House, Tavistock Square, W.C.1.

ASSISTANTSHIP WANTED BY WOMAN. London or district. Experienced panel and private Practice. Able to drive car.—Address, No. 1010, B.M.A. House, Tavistock Sq., W.C.1.

LOCUMS.

FOR LOCUM TENENS APPLY TO
PERCIVAL TURNER, Ltd.
The oldest and only Agent who for 50 years has supplied substitutes at short notice without fee to principals.
4, ADAM ST., Strand, London, W.C.2.
Teleg.: "Epsomian, Lond." 'Phone: Temple Bar 9011.
After Office Hours: Epsom 9142.

BUSY WOMAN G.P. (WIMBLEDON DISTrict) wishes to get into touch with experienced lady (motorist essential) willing to do odd day or week-end LOCUMS.—Address, No. 1014, B.M.A. House, Tavistock Square, W.C.1.

MEDICAL POSTS, DISPENSERS, etc.

WANTED BY M.R.C.P., APPOINTMENT, with or without view in the United Kingdom or abroad. Age 32, exp. G.P. and panel, and 4½ years' experience in India.—Address, No. 812, B.M.A. House, Tavistock Sq., W.C.1.

A LADY DISPENSER - BOOKKEEPER supplied immediately on request, qualified and with practical experience in private practice and dispensary work, also trained in Bacteriological Laboratories of the LONDON COLLEGE OF PHARMACY FOR WOMEN. Preparation for Examinations. — Write, wire, or 'phone (Bayswater 0969), Secretary, 7, Westbourne Park Road, W.2.

DOCTORS REQUIRING QUALIFIED Dispensers, Nurse-Dispensers, Secretary-Dispensers or Chauffeuse-Dispensers, are invited to write, wire, or 'phone Temple Bar 5858, THE DISPENSERS' BUREAU, 3, Lindsay House, 171, Shaftesbury Avenue, London, W.C.2.

MEDICAL OFFICER, AGED 32, AT PRESENT in Malaya in charge of group of rubber estates and hospital (150 beds), Public School, London qualifications, considerable tropical and general medical experience, seeks similar tropical or other responsible ENGAGEMENT. Energetic and good testimonials. Could be free about April.—Address, No. 918, B.M.A. House, Tavistock Square, W.C.1.

BED AND BREAKFAST OFFERED NEAR Gower Street to Doctor in RETURN for small amount of night and week-end WORK.—Address, No. 1019, B.M.A. House, Tavistock Square, W.C.1.

LADY DISPENSER. — APOTHECARY HALL qualification; knowledge of typewriting, bookkeeping, business correspondence, etc., DESIRES POST with Doctor (London preferred). —Address, No. 827, B.M.A. House, Tavistock Square, W.C.1.

LADY DISPENSER. — QUALIFIED (HALL), thoroughly experienced, Doctors, Hospital. Excellent experience book-keeping, first aid, surgery routine. Free now.—Address, No. 1018, B.M.A. House, Tavistock Square, W.C.1.

THE ROYAL ARMY MEDICAL CORPS ASSOCIATION, 85, Eccleston Square, S.W.1 (Telephone: Victoria 2722), supplies qualified Dispensers, Bookkeepers, Laboratory Assistants, Sanitary Assistants, Male Nurses, Mental and Special Treatment Orderlies, Dental Clerk Orderlies, Porters, Caretakers, etc., without charge to prospective employers.

PARTNERSHIPS.

WANTED. — PARTNERSHIP, PREFERABLY near London, in well-established Private Mental Home, with good scope for extension. Advertiser has good Mental degree and experience. — Address, No. 1004, B.M.A. House, Tavistock Square, W.C.1.

PARTNERSHIP (OR PRACTICE) WANTED BY Public School and Univ. man, in private and panel Practice, Home Counties, £1,000 p.a. St. Thomas's, aged 36, 2 yrs.' P.G., 8 yrs.' G.P. exp. M.D., B.S., M.R.C.S. Free now. Cap. avail. —No. 3759, B.M.A. House, Tavistock Sq., W.C.1.

PARTNERSHIP WANTED BY M.D.LOND., aged 27, in good town, Southern England or E. Anglia. Hospital appointment desired. 3½ years Medical and Surgical appointments, mostly teaching Hospital. Capital available. —No. 731, B.M.A. House, Tavistock Sq., W.C.1.

PARTNERSHIP OR PRACTICE WANTED AT once by experienced Graduate, aet. 42, in Southern England; highest references. No agents. House to rent. — No. 1016, B.M.A. House, Tavistock Square, W.C.1.

PRACTICE OR PARTNERSHIP REQUIRED, if possible with appts., providing mod. inc., pref. country town over 15,000 pop. Hosp. experience Anaesthetics and Midwifery. M.B., B.S.Lond. Replies treated confidentially.—Add., No. 1011, B.M.A. House, Tavistock Sq., W.C.1.

SURGICAL PARTNER WANTED FOR SOUND Practice in Northern residential town; F.R.C.S. and experience of G.P. essential. Good hospital and chance of staff appt. Share worth £1,800 at 2 yrs.' pur. House avail. on lease. State age & full parties. re exp. & capital. —No. 1022, B.M.A. House, Tavistock Sq., W.C.1.

PRACTICES.

WANTED.—PRACTICE (OR PARTNERSHIP), £1,500 or over, convenient to London. Good panel. House, with garden, in pleasant part, and good educational facilities essential. —Address, No. 2168, B.M.A. House, Tavistock Square, W.C.1.

WANTED TO PURCHASE IMMEDIATELY, first-class PRACTICE, within easy reach of London. Scope for surgery and good house, with six bedrooms, required. Capital available. —Address, No. 1012, B.M.A. House, Tavistock Square, W.C.1.

WANTED URGENTLY, PRACTICE OR PARTNERSHIP, substantial panel, middle-class, £1,000 upwards. Town, or near; South or South Midlands, or London. House to rent. Capital available.—Address, No. 1005, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — GOOD MIDDLE-CLASS PRACTICE, with panel of 1,000 or over. Income £1,500—£2,000. Good provincial town preferred. House to rent or purchase.—Address, No. 1017, B.M.A. House, Tavistock Sq., W.C.1.

BACUP (LANCS), 18 MILES NORTH OF Manchester. Death Vacancy. Substantial cash PRACTICE and panel 1,000. Receipts being calculated but known to exceed £1,600. 20 years' continued growth. Well-appointed house available on rental.—Apply, H. HOYLE, 604, Bacup Road, Waterfoot, Rossendale.

FOR SALE.—NEAR STIRLING, SCOTLAND.— PRACTICE in Mining and Death Vacancy. Modern e, with garage attached. Assessed rental of house and garage £48. Separate well-appointed surgery in village nearby. Rent £16 p.a. — Further particulars from J. M. & J. MAILER, Solicitors, 48, Port St., Stirling, with whom offers should be lodged.

EAST LANCASHIRE. — LARGE INDUSTRIAL PRACTICE FOR SALE. Gross receipts £2,650. Panel 2,350.—Apply, HY. WHITTAKER, Solicitor, 44, Ainsworth St., Blackburn.

ELDERLY PRACTITIONER, RETIRING FROM Partnership, requires small Country PRACTICE. Income about £400, in picturesque part. Rent or Sussex preferred, with house to rent. — Address, No. 1008, B.M.A. House, Tavistock Square, W.C.1.

NO PREMIUM.

FOR SALE. — ILFORD.—NUCLEUS (PANEL 80), small private, along with commodious modern labour-saving bungalow, 10 large rooms, all conveniences. Timber garage, 1½ acre of garden, with 114 ft. frontage and 6 ft. closed fence three sides. Upset price £1,350 freehold. A[illegible] No. 1003, B.

FOR SALE
PRACTI[illegible]
Vacancy). House can be bought. Panel and private practice. Good opening for [illegible]

F[illegible] Coast. Average last 3 years £1,650. An F.R.C.S. would be on Hospital staff and have no surgical opposition for 30 miles. Population 15,000. Premium 1½ yrs.' purchase. —No. 1020, B.M.A. House, Tavistock Sq., W.C.1.

LANCS. — LARGE TOWN.—WELL-ESTABlished PRACTICE. Receipts £700 p.a., panel nearly 900. Nice house available. Short Partnership introduction. Premium to be arranged.—Apply, PEACOCK & HADLEY, LTD., 19, Craven Street, Strand, W.C.2.

LANCS.—LARGE TOWN.—DEATH VACANCY. —Old-established PRACTICE, held several years by late Vendor. Receipts nearly £1,000 p.a., including panel 806. House available. Any reasonable offer considered.—Apply, PEACOCK & HADLEY, LTD., 19, Craven Street, Strand, W.C.2.

LANCS TOWN.—OLD-ESTABLISHED. Good house, pleasant district, £80. Receipts over £400. Excellent scope. Transferable appointment £75. Panel 60, increasing. Price £500.—MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION, 6, Brown Street.

LONDON, E. (NEAR FOREST GATE).—WELLestablished mixed-class PRACTICE. Receipts average about £340 p.a., including panel 216. Nice house, rent £52 p.a. Vendor is wanting a much larger Practice and will accept £275 for quick sale.—Apply, PEACOCK & HADLEY, LTD., 19, Craven Street, Strand, W.C.2.

MANCHESTER. — WELL-ESTABLISHED mixed PRACTICE. Receipts £1,500 p.a. Panel 1,776, increasing. Good house, main road, £1,050, mostly on mortgage. Premium 1½ years' purchase.—Address, No. 1015, B.M.A. House, Tavistock Square, W.C.1.

MEDICAL. — OLD-ESTABLISHED PRACTICE in Glasgow West for Sale. Private only. Gross receipts over £700. Good house.—Apply, CRAWFORD, HERRON & CAMERON, Writers, 257, West George Street, Glasgow.

MIDLAND TOWN.—DEATH VACANCY.—OLDestablished PRACTICE. Receipts nearly £650 p.a., including panel about 1,200. Premium £950. Nice house to be sold as well.—Apply, PEACOCK & HADLEY, LTD., 19, Craven Street, Strand, W.C.2.

NORTH-WEST COAST. — FAVOURITE SEAside Town.—Middle-class PRACTICE. Cash receipts over £1,500, increasing, audited. Panel nearly 700. Good house, freehold, 2 reception rooms, 5 bedrooms, surgery, waiting room, separate entrance, garage. Price £2,000; must be sold with practice. Premium for practice 1½ years' purchase. Must have capital available. — Address, No. 810, B.M.A. House, Tavistock Square, W.C.1.

N. WALES.—GOOD AND OLD-ESTABLISHED in pretty district. Nice house, large garden, garage, rent £50. Receipts £700 yearly. Panel 538. Price £800.—MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION, 6, Brown Street.

NUCLEUS OF PRACTICE, 7 MILES IPSWICH for disposal, drugs, instruments, some furniture. House can be rented, £1. Suitable active man, with car, and some capital. Income going £80.—Address, No. 1024, B.M.A. House, Tavistock Square, W.C.1.

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mology, wishes to hear [illegible]
PRACTICE or PARTNERSHIP in the Autumn of 1933, where there is every chance of hosp. appt. S. of Eng. and Home Counties pref. —No. 1002, B.M.A. House, Tavistock Sq., W.C.1.

TWO PURCHASERS. — DO NOT BU[illegible] without expert assistance. With 50 yrs experience Mr. PERCIVAL TURNER can advise in all cases. Terms free on application to 4, Adam St., Strand, W.C.2. Telephone: Temple Bar 9011. Telegrams: "Epsomian, London."

WOMAN DOCTOR'S PART-TIME PRACTICE for sale in middle and working-class Eastern suburb of London. Attendance two hours per week only. Receipts over £100 p.a. Excellent scope for full-time Practice. Living accommodation available. Rent of surgery £3 p.a., inclusive. Premium £100.—Address, No. 1013, B.M.A. House, Tavistock Square, W.C.1.

HOUSES, CONSULTING ROOMS.

A MOST RELIABLE TELEPHONE SERVICE, together with excellent ACCOMMODATION for consulting and/or residential purposes, with use of waiting room. Gas fire, running h. & c. *water and telephone in each room. Full, or* residential, catering available. Very highly recommended. Furnished or unfurnished rooms now vacant. — 'Phone Welbeck 8116 or call 0, Welbeck Street, W.1.

A BEAUTIFULLY - SITUATED MODERN *HOUSE; very suitable private hotel, guest* house, doctor or dentist, etc.; 3 mins. Tooting junction; overlooks delightful Common; 9 bed., reception, kitchen, and scullery; garage; freehold, £2,250, or would let £160 p.a. exclusive. —WATES, 658, High Rd., Streatham. Pol. 2232.

BOURNEMOUTH.—*ON BEAUTIFUL TALBOT* Woods. Exceptional RESIDENCE at times price, close golf links. Oak panelled lounge, 2 recep., 5 bed., bath, etc. Garage. Matured garden. £2,750. Smaller house £1,950.—WILLOUGHBY & SONS, 142, Old Christchurch Rd.

CONSULTING ROOMS TO LET. — HARLEY Street, Wimpole Street and district. Whole and part-time. Lists sent on application. Rooms wanted in Harley Street district. — ELGOOD & Co., 10, Henrietta St., Cavendish Sq., W.1. Langham 2601.

HAMPSTEAD.—PAYING GUESTS RECEIVED in *comfortable modern house, till lately* doctor's residence. Would suit doctor requiring consulting room, with attendance. Terms moderate and inclusive.—117, Haverstock Hill, Primrose 4993.

HARLEY ST. (ADJOINING). — BACHELOR APARTMENT, comfortably furnished. Sitting room, with closed-up bed, large private bath-dressing room, constant hot water, lift. 2½ *gns., inclusive* of service. Breakfast optional. —No. 101, B.M.A. House, Tavistock Sq., W.C.1

HARLEY STREET.—CONSULTING ROOMS, part-time or occasional, telephone address; plate; all amenities. — Write, Box D.52, SCRIPPS'S ADVERTISING OFFICES, South Molton Street, W.1.

BY ORDER OF THE EXECUTORS OF THE LATE SIR PERCY SARGENT, C.M.G., D.S.O.

NO. 20, HARLEY STREET, W.—THE LEASE of this unique, medium-sized HOUSE, in perfect order and fitted with every possible convenience including a Passenger Lift, also garage at rear, for DISPOSAL.—For terms, etc., Apply to the Sole Agents, SAMUEL B. CLARK & SON, 16b, New Cavendish Street, Portland Place, W.1.

NO 59, RODNEY STREET, *LIVERPOOL.*— To be SOLD, with vacant *possession*, this freehold HOUSE. The residence for many years of the late Professor Rushton Parker. — For further information apply to W. S. HOLDEN & HOLDEN, *Solicitors*, 26, North John Street, Liverpool.

NURSING HOME, 17, AINSLIE PLACE, EDINBURGH.—Well-established connection. PROPERTY and GOODWILL, also FURNISHINGS, etc., FOR SALE consequent on retirement of Proprietrix. Assessed *rent* £170. Feu duty £11 5s. 5d.—Further particulars from M. J. BROWN, SON & Co., S.S.C., 7, North St. David Street, Edinburgh.

"THURSLEY," ON KINGSTON HILL, Surrey.—Most attractive modern detached freehold corner HOUSE.—Excellent residential suburb; five minutes Richmond Park, or Norbiton Station, S.R. Very suitable and long occupied by Doctor. Three reception, six bedrooms, dressing room, billiard *room*, tiled bathroom. Spacious hall with telephone room and all conveniences. Light kitchen, tiled scullery, tiled larder. Tastefully renovated interior and exterior throughout. Elec. power and light, gas. Garden, lawn, summer house. Space for garages. Ample cellerage. M.D. and C.W. For sale, mortgage if desired, or let on *lease.—OWNER*, 1, Cottenham Pk. Rd., Wimbledon Com., S.W.20.

TO LET. — PART-TIME CONSULTING ROOM; use waiting room; services; Queen Anne St., Cavendish Square. Plate on door. Rent £40 per annum.—Address, No. 601, B.M.A. House, Tavistock Square, W.C.1.

WHEN YOU COME TO LONDON STAY AT THE HAMPDEN RESIDENTIAL CLUB FOR GENTLEMEN, Hampden Street, N.W.1. Close King's Cross and Euston. 300 bedrooms; 12/6—25/- p.w., includ. baths, attend., & boot cleaning. All meals à la carte in dining room. Most tariff. Large club lms., *reading rm, study* for students. Illus. prospectus, Sec. Mus. 3424.

WOBURN SQUARE. — EXCEPTIONAL UNfurnished ONE - ROOMED FLATLET, ground or first floor. Use kitchen (c.h.w.), bath. Two-roomed Suite, kitchenette & bathroom attached. Gas fires. Maid avail. Plate allowed. —No. 1025, B.M.A. House, Tavistock Sq., W.C.1.

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REVIEWED—BRITISH MEDICAL JOURNAL.

STOP-WATCHES AND ALARM-WATCHES, suitable for medical practitioners and laboratory workers. *Pocket type, 30-hour stop-*watch, with enamelled dial graduated in 1/5 seconds, and a side lever projection which stops and starts the centre hand; guaranteed for 2 years, price 10/6. Wristwatches, shockproof, with seconds hand for pulse reading, price 15/-. Also an alarm watch which may be used as an appointment reminder and can be set to ring at any desired time; alarm can be put out of action when not required, price 25/-.—A. ARNOLD & CO., 122, St. John St., Clerkenwell Rd., London.

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Specially dependable, specially suitable in every way for instant exacting professional service. Fully guaranteed by MEBES & MEBES, Ltd. (Est. 1893).

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12 MONTHS' GUARANTEE with used Cars.

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Full particulars upon request.

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Accounts audited and all Income Tax matters given *expert attention*. For further particulars consult C. G. C. KITSON, & Co., 49, Baker St., W.1. (Telephone: Welbeck 8001.)

APPOINTMENTS.—Contd.

CARDIFF CITY MENTAL HOSPITAL, *WHITCHURCH, GLAM.*

SENIOR ASSISTANT MEDICAL OFFICER (single, male or female). Salary £570 per annum, rising by annual increments of £25 to £620 per annum, from which is deducted £120 per annum, for board, lodging, washing, and attendance. *A degree or* diploma in Psychological Medicine essential.

Applications to reach the Medical Superintendent by February 17th.

BRADFORD CHILDREN'S HOSPITAL.

HOUSE SURGEON (lady) wanted. Fully qualified. Salary £100, with board, residence, and laundry. Applications, stating age, with recent testimonials to—

J. W. LONGLEY,
Secretary-Superintendent.

CITY OF PORTSMOUTH.

THIRD ASSISTANT RESIDENT MEDICAL OFFICER.

The Corporation of the above-named City invite applications for the appointment of a Third Assistant Resident Medical Officer for the SAINT MARY'S HOSPITAL, ST. MARY'S INSTITUTION, and CHILDREN'S HOME.

The appointment will be limited to a term not exceeding one year, and will be subject to one month's notice on either side.

Salary at the rate of £250 per annum, with furnished apartments, rations, and other allowances.

Candidates *must be single gentlemen and* duly registered. Preference will be given to those having a knowledge of the treatment of mental diseases, and who have experience in surgical work.

A Resident Medical Superintendent is in attendance.

Applications to be made on printed forms (which may be obtained at 1, St. Michael's Road, Portsmouth), accompanied by copies of not more than three recent testimonials, and description of the diplomas, certificates of degrees, licences, and other instruments held by the candidates, must be returned to the Public Assistance Officer, 1, St. Michael's Road, endorsed "Third Assistant Resident Medical Officer," by Tuesday, February 14th.

The Guildhall, F. J. SPARKS,
Portsmouth. *Town Clerk.*
January 28th, 1933.

DERBY COUNTY MENTAL HOSPITAL, MICKLEOVER, DERBY.

Applications are invited for the post of *DEPUTY MEDICAL SUPERINTENDENT (male)* at the above Hospital, at a commencing salary of £600 per annum, rising by annual increments of £50 to £700, with board, laundry, quarters, and attendance, valued for superannuation purposes at £90 per annum. Permission will be given to a married man to live *outside the Hospital, and he may receive the* value of his emoluments in cash.

If the successful candidate holds the Diploma of Psychological Medicine £50 per annum will be added to the above.

Forms of application, which may be obtained from the Medical Superintendent, should be completed and returned by February 18th.

H. WILFRID SKINNER,
Clerk to the Visiting Committee.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL, Haverstock Hill, N.W.3.

APPOINTMENT OF CASUALTY MEDICAL OFFICER.

Applications are *invited from unmarried* Medical Woman for the position of Casualty Medical Officer at the Out-patient Department of the Hospital, Bayham Street, Camden Town, which will become vacant on March 1st next.

The salary will be at the rate of £100 per annum, together with board, residence, etc., *and the term will be for six months*

Applications to be made on a form which will be supplied by the Secretary, together with copies of not more than three testimonials, should reach the Secretary *not later than noon* on February 18th.

ANCOATS HOSPITAL, MANCHESTER.

Applications are invited for the post of:
ASSISTANT HONORARY PHYSICIAN.

Candidates must be Members of the Royal College of Physicians, London.

Applications, giving full particulars, to be accompanied by certificates of age and registration, *with copies of at least three testimonials*, to be forwarded to the undersigned, from whom all particulars may be obtained, by Monday, February 20th next

By Order of the Board,
HERBERT J. DAFFORNE.
General Superintendent & Secretary.

DARLINGTON MEMORIAL HOSPITAL. (200 Beds.)

Applications are invited for the post of JUNIOR HOUSE SURGEON; one of three appointments, male, British. Salary £150 per annum, with board, residence, and laundry. Casualties and Special Departments (Ear, Nose, Throat, and Eye). Applications, with full particulars, together with copies of two recent *testimonials, to be sent to me forthwith.*

A. RIDDLE, Secretary.

HOUSE SURGEON (MALE) REQUIRED FOR AYR COUNTY HOSPITAL, for six or twelve months, to take up duty on March 1st. Salary at the rate of £150 per annum, with board *and residence.*

Applications, with two copies of testimonials, to be lodged with the Secretary, Ayr County Hospital, Holmston Road, Ayr, not later than Friday, February 10th.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond Street, London, W.C.1.

A HOUSE PHYSICIAN and a HOUSE SURGEON are required on April 14th and 18th respectively.

Gentlemen are invited to send in their applications, addressed to the Secretary, before 12 o'clock on Monday, February 27th, with copies of not more than three testimonials given specially for the purpose, and also evidence of their having held a responsible Hospital appointment.

The appointments are made for six months. Salaries at the rate of £100 per annum, laundry allowance £9, board, and residence in the Hospital.

Candidates must be unmarried and possess a legal qualification to practise.

All candidates must be in attendance to appear before the Joint Committee, if required, at their meeting on Wednesday, March 1st, at 5 p.m. precisely.

Forms of application and copies of the Rules may be obtained from the Secretary.

By Order of the Board of Management,
HERBERT F. RUTHERFORD,
February, 1933. Secretary.

BRISTOL GENERAL HOSPITAL.

A meeting of the Election Committee will be held at the Hospital on Wednesday, March 8th next at 1 o'clock p.m. to elect an HONORARY ASSISTANT PHYSICIAN.

By Section VII, S.S.1 of the Rules of the Hospital: No person shall be eligible to the office of *Assistant* Physician unless he possesses a registered Medical qualification and undertakes to practise solely as a Physician.

Candidates are requested to send their applications, with copies of testimonials, and proof of qualification to the undersigned on or before Monday, February 27th next, from whom further particulars may be obtained. Every candidate is also required to forward a copy of his application and testimonials, to each member of the Election Committee.

By Order of the Committee,
THOMAS W. GREGG, Secretary.

GENERAL INFIRMARY AT LEEDS.

A meeting of the Special Election Committee will be held in the Board Room on February 24th, to elect an HONORARY OPHTHALMIC SURGEON.

Every candidate for the office shall be a Fellow of the Royal College of Surgeons of England.

Information as to the duties and necessary qualifications for the office will be supplied on reference to the House Governor.

All applications should be addressed to the Chairman at the Infirmary and marked "Private. Honorary Staff," and should be sent in on or before February 14th. There is no local candidate.

By Order of the Board,
S. CLAYTON FRYERS,
House Governor and Secretary.

COVENTRY & WARWICKSHIRE HOSPITAL.
(Main Hospital—307 Beds;
Convalescent Hospital—40 Beds.)
Seven Resident Medical Officers.

Applications are invited for the post of HOUSE SURGEON (male) for the Aural and Ophthalmic Department.

The appointment for six months, renewable. Salary £125 per annum, with board, residence, and laundry.

Candidates must be duly qualified and registered.

Applications, stating age and enclosing copies of recent testimonials, to be sent to the undersigned immediately.

(Miss) R. HOOPER,
Secretary.

LONDON HOSPITAL, E.1.

Applications are invited for the post of MEDICAL FIRST ASSISTANT AND REGISTRAR. There are two vacancies. The appointment is for one year, but is renewable annually on application, for two further periods of one year. Salary £300 per annum, payable by the Hospital and Medical College jointly.

Candidates must be fully qualified medically.

Applications should arrive at the Hospital not later than by the first post on Saturday, March 11th.

Further particulars may be obtained from the House Governor.

ARTHUR G. ELLIOTT,
House Governor.

MIDLAND HOSPITAL.
Easy Row, BIRMINGHAM. (50 Beds.)

A vacancy will occur for the post of HOUSE SURGEON on March 1st, lady or gentleman, at the above Hospital.

Salary £150 per annum, with board, residence, and laundry.

Applications, stating age and qualifications, accompanied by recent testimonials, should be forwarded as soon as possible to the Secretary, Midland Hospital, Easy Row, Birmingham.

WEST LONDON HOSPITAL, Hammersmith Road, W.6 (234 Beds.)

Applications are invited for the post of ASSISTANT PHYSICIAN for Medical Diseases of Children (Out-Patient Department). Candidates must have a University Degree recognized by the General Medical Council and must be Fellows or Members of the Royal College of Physicians of London. The successful candidate will be required in addition to other duties, periodically to deliver Medical Courses of Lectures to the Nurses and to undertake such teaching for the Post-Graduate College as the Board may approve.

Applications, with copies only of testimonials, should reach me not later than Thursday, February 23rd. Candidates must attend the Medical Council Meeting on Friday, February 24th, at 4.30 p.m., and prior to that date call upon and send copies of application and testimonials to each Member thereof. They must not canvass Members of the Board of Management, but nevertheless must send copies of application and testimonials to each member thereof and, if so notified, be in attendance at a Meeting of the Board who will elect on Tuesday, February 28th, at 5 p.m.

H. A. MADGE, Secretary.

MANCHESTER ROYAL INFIRMARY.

ASSISTANT MEDICAL OFFICER, MASSAGE AND ELECTRICAL DEPARTMENT.

The Board of Management invite applications from registered Medical Practitioners (men and women) for the above appointment. Previous experience in the work is not essential.

The duties are to attend daily and to assist the Medical Officer in charge of the Department. The appointment is part-time (non-resident) for one year. Salary £100 per annum.

Candidates must state age, and send twelve copies of their application and testimonials to the undersigned on or before Thursday, February 16th.

By Order,
FRANK G. HAZELL,
January 30th, 1933. *Gen. Supt. & Sec.*

EAST HAM MEMORIAL HOSPITAL, Shrewsbury Road, E.7. (100 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male). Duties to commence on February 23rd. The appointment will be for six months, in the first instance, but the successful candidate will be eligible for re-appointment. Salary at the rate of £200 per annum, with board, residence, and laundry. Preference will be given to candidates who hold the diploma of F.R.C.S. Applications, stating age, experience, and full particulars, together with copies of three testimonials, should reach the undersigned by February 13th. Selected candidates will be required to attend a meeting of the Medical Committee at the Hospital at 6 p.m. on Tuesday, February 14th.

REGINALD PERRY, Secretary.

EAST HAM MEMORIAL HOSPITAL, Shrewsbury Road, E.7. (100 Beds.)

Applications are invited for the post of HONORARY SURGEON to the Ear, Nose, and Throat Department.

Candidates must be Fellows of one of the Royal Colleges of Surgeons, or Masters of Surgery of a University of Great Britain or Ireland, and not engaged in General Practice. Applications, in triplicate, should reach the undersigned on or before February 13th.

Selected candidates will be required to attend a meeting of the Medical Committee at the Hospital at 6 p.m. on Tuesday, February 14th.

REGINALD PERRY, *Secretary.*

ROYAL EAST SUSSEX HOSPITAL, HASTINGS. (124 Beds.)

Applications are invited for the posts of SENIOR HOUSE SURGEON (vacant February 25th), and of JUNIOR HOUSE SURGEON (vacant March 14th). The appointments are for a period of six months.

Salary at the rate of £200 per annum for the Senior post and £150 per annum for the Junior Post, with board and residence.

Candidates must be duly registered Medical Practitioners.

Applications, with copies of recent testimonials, to be addressed to the Secretary.

WILFRID G. KEMSLEY,
Secretary.

PADDINGTON GREEN CHILDREN'S HOSPITAL (INCORPORATED), London, W.2.

Applications are invited for the post of an additional HONORARY SURGEON to the Ear, Nose, and Throat Department. Candidates must be Fellows of the Royal College of Surgeons, England.

Applications, stating age and qualifications, accompanied by copies of three testimonials, should reach the undersigned not later than Monday, February 13th.

JAMES A. HAMLIN, *Secretary.*

BIRKENHEAD GENERAL HOSPITA
(156 Beds.)

Applications are invited for the following Resident (male) posts for the six months commencing April 1st.

SENIOR HOUSE SURGEON. Salary £1 per annum.

SECOND HOUSE SURGEON. Salary £100 annum.

HOUSE PHYSICIAN. Salary £100 annum.

CASUALTY OFFICER. Salary £100 annum.

All with board, residence, and laundry.

The second House Surgeon is required to t up duty as soon as possible.

Applications, stating age, nationality, a qualifications, together with three recent t monials, to reach the undersigned as early possible.

W. H. DANIELS, F.C.I.S.,
Secretary-Supt

BIRKENHEAD GENERAL HOSPITA
(156 Beds.)

Applications are invited for the appointme of HONORARY ORTHOPAEDIC SURGEON the above Hospital.

Applications, stating age, qualifications, a experience, accompanied by copies of th testimonials, should be sent to the undersign not later than Monday, February 20th. Can dates will be required to furnish sixty cop of their application and testimonials for the of the Committee and Medical Board.

The present Honorary Assistant Orthopae Surgeon is a candidate for the post.

Canvassing is

January 30th,

LEICESTER ROYAL INFIRMAR

HONORARY ASSISTANT SURGEON.

A vacancy has arisen for an Honorary Assi ant Surgeon. Candidates must be Fellows Members by examination of the Royal College Surgeons of England or Graduates in Surge of one of the Universities of the United Kin dom or Ireland.

One Hundred Guineas annually is granted the Board for out-of-pocket expenses.

Applications, accompanied by 100 copies recent testimonials, to reach the undersigned first post on Saturday, February 11th. Can dates will be asked to interview the Board Wednesday, February 15th, when the electi will take place.

Canvassing is not allowed.

HARRY JOHNSON,
House Governor & Secretary

January 23rd, 1933.

G.W.R.. (MEDICAL FUND SOCIET HOSPITAL, SWINDON.

Applications are invited for the post NON-RESIDENT MALE HOUSE SURGEON (Surgical beds and out-patients). Salary £2 for the first six months, £250 for the second months, plus maintenance (equivalent to £15 Appointment is for six months with the opt of renewal for a further six months. Pref ence will be given to one reading for hig examinations and aged not above 30 ye Applications, stating age, qualifications, exp ence, together with copies of three testimon to be sent to the undersigned not later th February 7th.

S. E. WALTERS, Secretary

ROYAL VICTORIA AND WEST HAN HOSPITAL, BOURNEMOUTH.
(Boscombe Branch 170 Beds and Privat Wards.)

RESIDENT MEDICAL OFFICER (Ho Physician, male, British nationality) requi to commence duty at once. Salary, comme ing £200 per annum, with board, lodging, washing. The appointment is tenable for tw months and candidates must be registe according to the provisions of the Medical Applications, stating place of birth and with copies of three testimonials, to be immediately to the undersigned.

Women and married men are ineligible.

GORDON M. SAUL,
January 31st, 1933. Secretar

ROYAL NORTHERN HOSPIT
Holloway, N.7.

Applications are invited for the post OBSTETRIC HOUSE SURGEON vacant March 15th.

The appointment is for nine months months as Obstetric House Surgeon and th months as Casualty Officer). Salary at the of £70 per annum, with board, residence, laundry.

Applications, with copies of testimoni should be sent by February 10th to the un signed, from whom forms of application rules can be obtained.

GILBERT G. PANTER, Secretar

GRAVESEND & NORTH KENT HOSPITAL. (100 Beds.)

JUNIOR HOUSE SURGEON.

The Committee of Management invite applications from fully qualified men for the above post, which is of twelve months' duration.

Salary at the rate of £100 per annum first six months, £150 per annum second six months, plus board, lodging, washing, and certain fees as perquisites.

The successful candidate will be required to commence duties on March 1st.

Applications, with one copy of three recent testimonials, to be sent to the undersigned immediately.

C. E. CHAPMAN, Secretary.

GENERAL HOSPITAL, NOTTINGHAM. (384 Beds.)

A HOUSE SURGEON is required at the above institution. The appointment is for six months with salary at the rate of £150 a year with board, residence, and laundry. Candidates, who must have had previous Hospital experience, are desired to send applications and full particulars as to age, qualifications, and experience, together with copies of testimonials, to the undersigned not later than Thursday, February 23rd. Duties to commence on or about March 4th.

PETER M. MACCOLL,
House Governor & Secretary.

THE QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, London, E.2.

CLINICAL ASSISTANT required for Medical Out-patients. Attendance required every Thursday morning. Lunch provided. Honorarium £4 per attendance to cover expenses. Experience as Hospital resident desirable. Applications, stating qualifications, and experience, should be addressed to the undersigned as soon as possible.

CHARLES H. BESSELL,
January 27th, 1933. Secretary.

STROUD GENERAL HOSPITAL, STROUD, GLOS.

Applications are invited for the appointment of HOUSE SURGEON. Salary £150 per annum, with board, residence, etc. Term: six months. Particulars of eligibility, stating age, qualifications, together with copies of testimonials, should be sent immediately to the undersigned.

C. FORD SPENCER, Secretary.

THE VICTORIA HOSPITAL FOR CHILDREN, Tite Street, Chelsea, S.W.3. (138 Beds.)

The Committee of Management invite applications for the post of a TEMPORARY PHYSICIAN to Out-patients for a period of six months. Candidates are expected to call on the Physicians of the Hospital.

Applications, with copies of three recent testimonials, should be sent to the Secretary not later than first post on Monday, Feb. 13th.

By Order,
D. ST JOHN BAMFORD, Secretary.

ROYAL UNITED HOSPITAL, BATH.

HONORARY ASSISTANT PHYSICIAN.

Applications are invited for the post of Honorary Assistant Physician.

Applicants must be Graduates in Medicine of a University of the British Empire or a Fellow or Member of a Royal College of Physicians or a Licentiate of the Royal College of Physicians, London.

Applications, stating age, qualifications, and experience, together with testimonials, to be addressed to undersigned by February 11th.

J. LAWRENCE MEARS,
January 28th, 1933. Secretary-Supt.

ROYAL UNITED HOSPITAL, BATH.

Applications are invited from those holding a British registrable Dental qualification for the posts of SURGEON DENTISTS (two).

Applications, stating age, qualifications, and experience, to be addressed to the undersigned by February 11th.

J. LAWRENCE MEARS,
January 28th, 1933. Secretary-Supt.

ROYAL UNITED HOSPITAL, BATH.

Wanted, a HOUSE PHYSICIAN. Salary £175 per annum.

The appointment will be for not less than six months to commence February 15th. Candidates must be male, unmarried, and of British nationality.

Applications, with three testimonials, must be addressed to the undersigned.

J. LAWRENCE MEARS,
January 30th, 1933. Secretary-Supt.

NORTH STAFFORDSHIRE ROYAL INFIRMARY, STOKE-ON-TRENT.

ASSISTANT HOUSE PHYSICIAN.

The Committee invite applications for the post of Assistant House Physician. Salary £125 per annum, with board, residence, and laundry. Previous hospital experience desirable.

Applications, with two copies of recent testimonials, to be sent to the undersigned immediately.

W. STEVENSON,
Secretary & House Governor.

METHODIST MISSION LEPROSY HOSPITAL, DICHPALI.

The post of MEDICAL OFFICER at the Leprosy Hospital, Dichpali, H.E.H. The Nizam's Dominions, India, is vacant.

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Applications, in the first place, should be made to Sir LEONARD ROGERS, British Empire Leprosy Relief Association, 29, Dorset Square, London, N.W.1, from whom all particulars can be obtained.

BOOTLE GENERAL HOSPITAL, BOOTLE, LIVERPOOL, 20. (100 Beds.)

Applications are invited for the undermentioned posts:

ONE HOUSE PHYSICIAN.
TWO HOUSE SURGEONS.
ONE CASUALTY OFFICER.

The appointments will be tenable for six months from April 1st.

The salary attached to each post is £150 per annum, with board and residence.

Applications, with copies of testimonials, to reach the undersigned not later than Feb 15th.

A. J. COOPER,
February 1st, 1933. Secretary-Supt.

KING GEORGE HOSPITAL, ILFORD (8 miles from London).

Wanted, a HOUSE SURGEON to commence duty on March 1st, for a period of 10 months, 2 months as Casualty Officer, six months as House Surgeon, and two months as Deputy Resident Medical Officer in charge of the Casualty Department. Salary £100 per annum; £10 bonus on completion of appointment and two weeks' holiday. Candidates should send their applications, with three recent testimonials, and call on the members of the Honorary Medical Staff, indicated by the Secretary, by February 17th.

G. AUSTIN HEPWORTH, Secretary.

LIVERPOOL MATERNITY HOSPITAL, OXFORD STREET.

HOUSE SURGEON required for the six months commencing April 1st next. Salary at the rate of £90 per annum, with board, residence, and laundry. Previous experience as House Surgeon essential. Membership of a Medical Defence Society is a condition of appointment.

Applications, stating age, qualifications, and experience, together with copies of testimonials, to be sent to the Hon. Secretary of the Medical Board on or before February 24th.

THE GENERAL INFIRMARY AT LEEDS.

RADIO-SURGICAL HOUSE SURGEON.

Applications are invited for the above post. Salary £100 p.a., with board, residence, and laundry. The appointment is for six months, subject to renewal. Candidates must be legally qualified and registered. Applications, with copies of testimonials, to be sent in at once to the undersigned.

S. CLAYTON FRYERS,
House Governor & Secretary.

THE GROSVENOR HOSPITAL FOR WOMEN, Vincent Square, S.W.1

There is a vacancy for the post of CHIEF ASSISTANT. Candidates must hold the degree of F.R.C.S. England, and have had previous experience in Gynaecological work. Applications, with copies of three testimonials, should be sent to the undersigned before Feb. 19th.

EDWARD DEW, Secretary.

LONDON JEWISH HOSPITAL, Stepney Green, E.1. (General Hospital—108 Beds.)

HOUSE SURGEON required for the period ending May 31st. Salary at the rate of £100 per annum, with board and residence.

Applications, with copies of three recent testimonials, to be sent to the Secretary immediately.

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LINCS WOLDS. — UNOPPOSED PRACTICE. About £700 p.a. Panel 325. Appts. about £64 p.a. Visits 3/6 to 15/-. Mdy 2 to 5 gns Freehold residence, 5 rooms and professional and domestic offices. Garage and garden. For sale £800.—No. 9115.

OUTER RESIDENTIAL SUBURB. — GOOD-class PRACTICE hitherto worked only part-time. £350 p.a. No panel and non-dispensing. No mdy. taken. Visiting fees 10/6 and 21/-. Good freehold house, 2 reception, 7 bedrooms, 2 bath., cons. room, etc Price £2,800 for house and Practice.—No. 9110.

YORKSHIRE COAST TOWN. — OVER £800 p.a. Visiting fees 3/6 to 7/6, surgery 2/6 up. Two appointments worth £50 p.a. Mdy. cases average 10—20 p.a. Premium £1,250. Good house, 2 reception rooms, 4 bedrooms, bathroom, etc., surgery and waiting room, good garden and garage. Price £1,700.—No. 9104.

BERKS. — *OLD-ESTABLISHED.* — COUNTRY PRACTICE, about £700 p.a. has been £1,100 *Panel about 500. Visiting fees 2/6 to 7/6. Very little midwifery. Splendid house,* specially built for Vendor, with two acres of *grounds, 2 reception rooms, 6 bedrooms,* surgery, and waiting rooms, etc. Consider £4,000 offer for Practice & house, *freehold.*—No. 9100.

SOUTH WALES. — NEAR CARDIFF. — WELL-established middle and working-class PRACTICE, *returning* over £600 p.a. Panel 400. Visiting fees 2/6 to 5/-. Surgery 2/- to 3/6 Mids. average 12 p.a., scope for more. Modern built house, 4 bedrooms, 2 reception rooms, excellent separate surgery and *dispensary.* Price of house and practice £1,600.—No 9096.

YORKSHIRE. — AVERAGING £981 P.A., with panel of 400. Better-class dispensing PRACTICE in outskirts of large town. Appointments worth £45 p.a. Very little midwifery. Visiting fees 3/6 to 10/6 and 21/-. Premium £1,350. Handsome stone-built house in centre of Practice, with 6 bed., waiting and cons. with sep. ent. Large lounge and dining room, etc. Garage for 2 cars Rent £100 p.a.—No. 9098

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LONDON, E.—Suburban middle-class G.P. Medium-sized house to rent on lease at the low rental of £30 p.a. Fees 2/- up. Average receipts £516. Panel 350. Excellent scope for young man. Premium for Practice and lease £1,050 cash or near offer.

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MIDDLESEX, W.—Good middle-class, non-dispensing G.P. situated in growing residential locality. Medium-sized house available. Garden, garage. Separate entrance to Surgery. Receipts approx. £1,200 (books audited). Panel nearly 1,000. Prem. 2 years' pur. or near offer.

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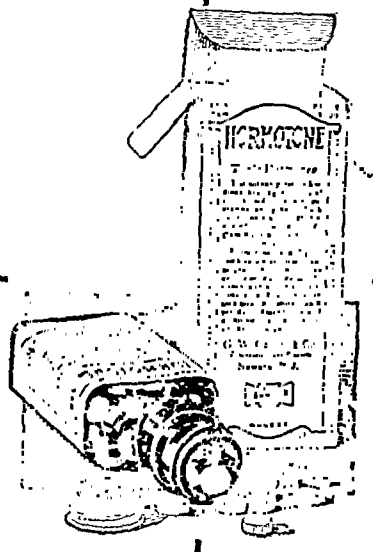

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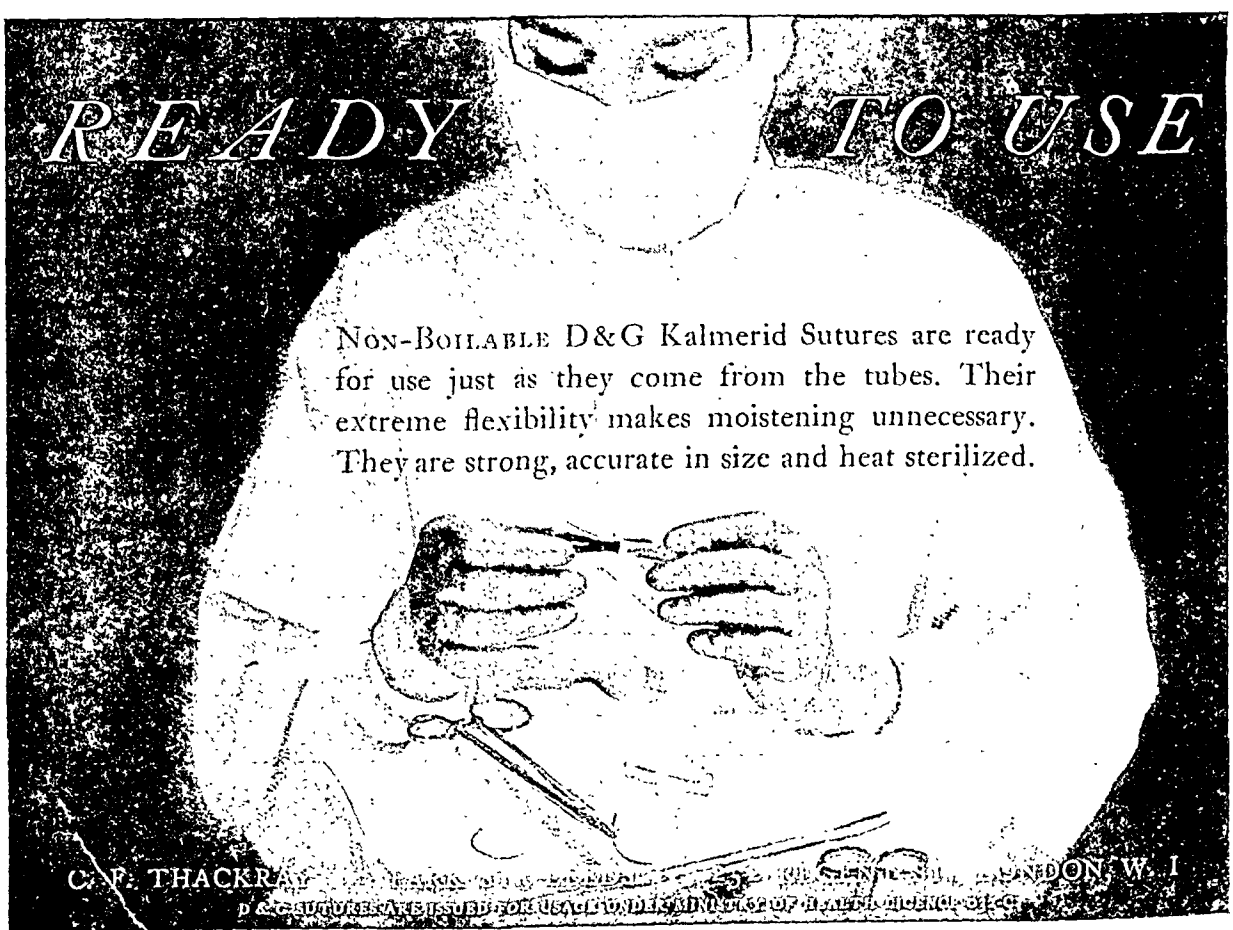

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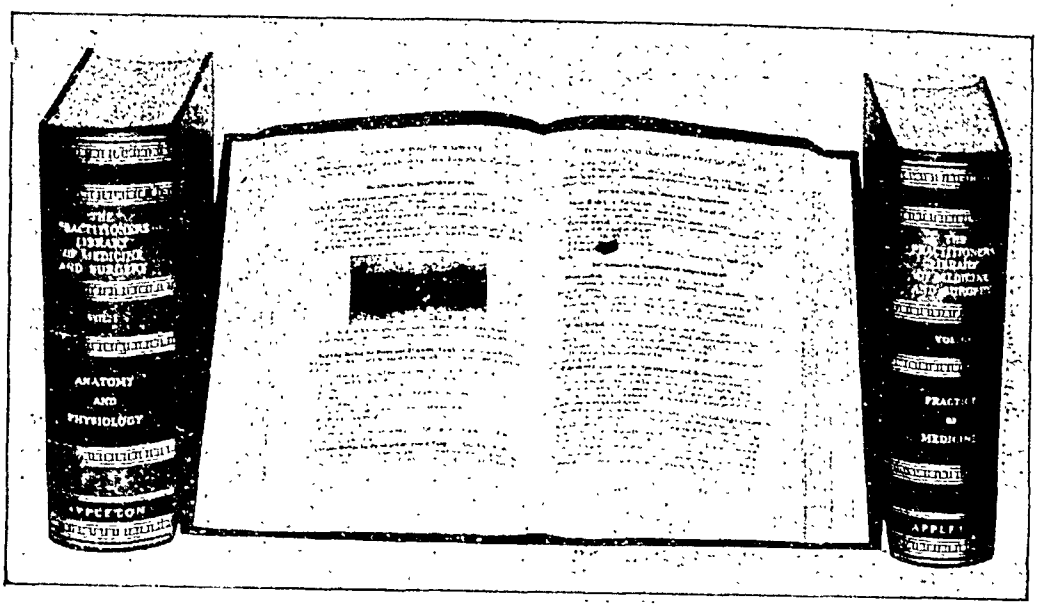

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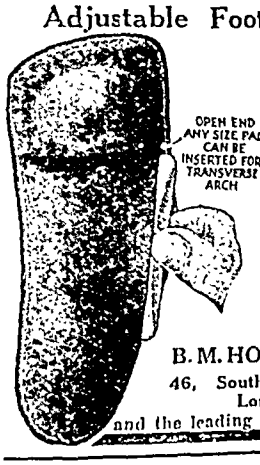

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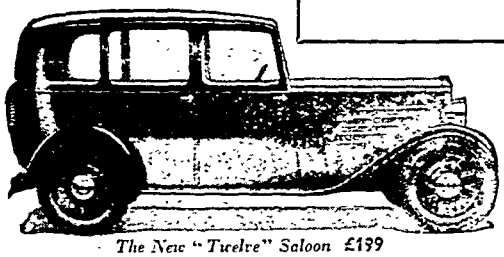

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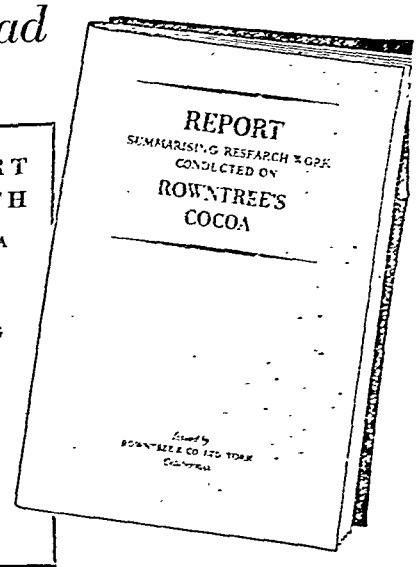
**This refers to* ROWNTREE'S COCOA *which was the subject of investigation.*



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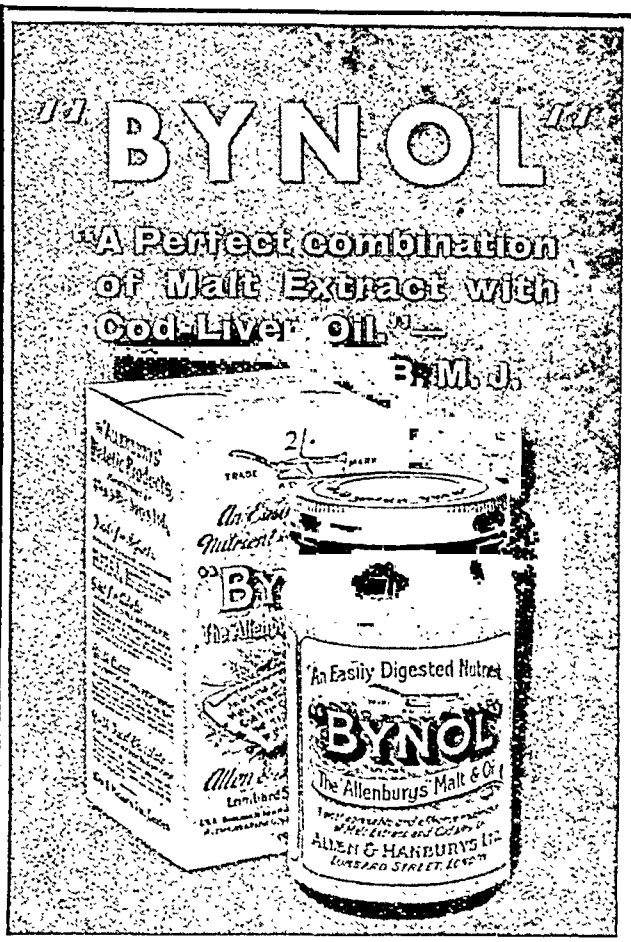

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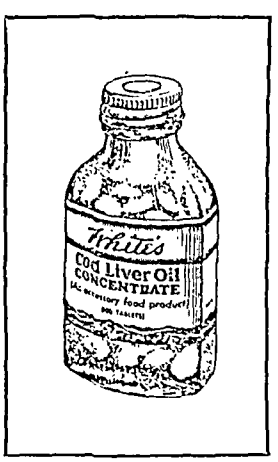

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Modern diets often lack minerals

To-day, authorities are stressing the importance of the essential mineral salts. In addition to building sturdy bones, and blood rich in hemoglobin, these mineral elements aid metabolism and contribute to nervous stability.

Yet many modern diets cannot be depended upon to furnish the proper quota of minerals, and therefore millions of people suffer from the effects of demineralization. Cooking destroys a variable amount of the mineral value of foods—in some instances as high as 76 per cent.

To correct this loss and to remedy demineralization—with its attendant symptoms of nerve fag, neurasthenia, lowered vitality and loss of energy—a tonic rich in mineral salts is needed.

Compound Syrup of Hypophosphites "Fellows" contains the mineral salts of sodium, calcium, potassium, manganese, iron and phosphorus, together with the added metabolic stimulants—strychnine and quinine. Sixty years of clinical experience the world over testify to its value as a tonic.

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Compound Syrup of Hypophosphites

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HAS A BLUE VALUE OF 2,000

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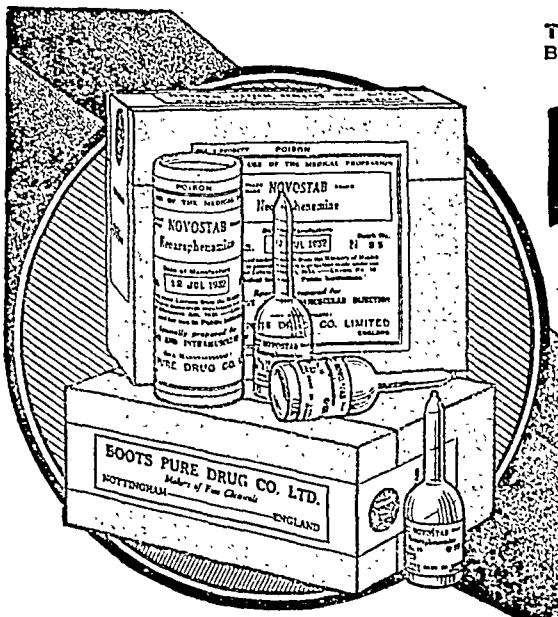

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NOVOSTAB (Neoarsphenamine-Boots) is specially prepared for intravenous or intramuscular injection in the treatment of Syphilis and other Spirochætal diseases. It has low toxicity combined with high therapeutic activity. Approved by the Ministry of Health for use in Public Institutions and tested in accordance with regulations made under the Therapeutic Substances Act, 1925. Manufactured under Licence No. 19.

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0.60 gm. 0.75 gm. 0.90 gm.

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The potency of Adexolin Capsules and Liquid has been calculated with a view to permitting the greatest possible flexibility in dosage.

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Each 3-minim ADEXOLIN CAPSULE has the vitamins A and D potency of 10 grams of high-grade cod-liver oil.

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Dispensary packs also available.

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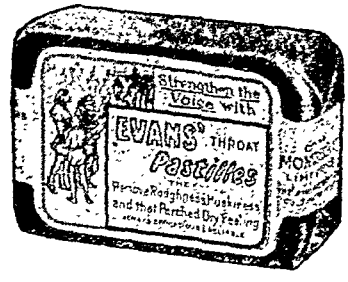

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We will send with pleasure a physician's sample on request.

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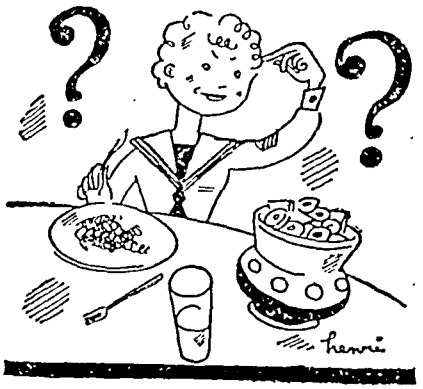

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Thereby hangs the tale. Sweet desserts increase the secretion of gastric juice. If Johnny had taken his spinach, the cakes would have helped him to digest it. But he kept his taste in mind and forgot his stomach, until he was forcefully reminded of the error of his ways. Until ripened experience can point the way to him CAL-BIS-NATE will have to stand by and relieve him of his stomach-ache caused by an excess of acid. A teaspoonful in half a glass of water, and he'll be ready for another try. You simply can't keep a brave boy down.

Cal-Bis-Nate is a combination of calcium and magnesium carbonates, sodium bicarbonate, bismuth and colloidal kaolin, blended into a palatable powder. It neutralizes excess gastric acidity quickly, efficiently and with lasting effect. . . . We will gladly explain the therapeutic merits of Cal-Bis-Nate and send a professional trial package for the asking . . . Send for it.

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A RECENT communication to "Nature" (January 21, 1933, p. 92) describes the mode of preparation of Vitamin A of a higher concentration than ever before obtained. The product described possesses an activity of 78,000 blue (Carr-Price value) which is 13,000 times that of cod-liver oil of the B.P. 1932.

THE foregoing relates to an accomplishment of The British Drug Houses Ltd. who are thus in a position to market a concentrate of Vitamin A which is more active than any that has been offered.

SUCH concentrates are suitable for the use of research workers, but they are far too highly concentrated for general exhibition for medicinal use. For the latter purpose the purified Vitamin A is issued in B.D.H. preparations in such adjusted strengths as are believed to produce the optimum clinical results.

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which exhibits highly purified Vitamin A and pure crystalline Vitamin D in scientifically-balanced proportions.

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Humanised TRUFOOD is the closest alternative to breast milk now available

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They are especially useful for the administration of Gland substances, as they prevent possible destruction of the active principle in the stomach. The maximum clinical effect which it is possible to obtain from these preparations, given orally, is thus ensured.

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THERAPEUTIC NOTES

from

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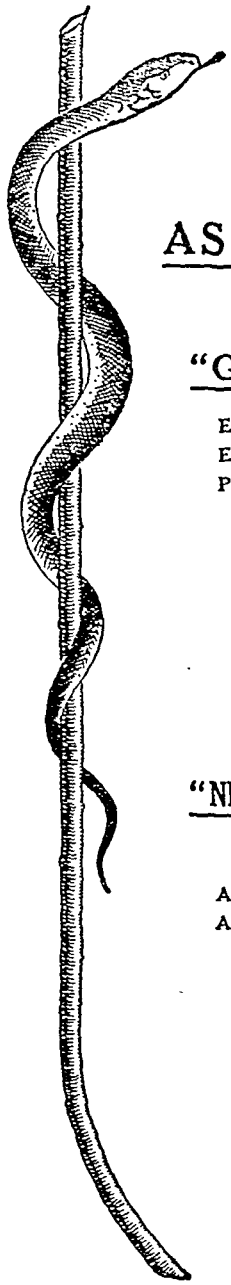

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Ext. Grindelia Robusta Liq.
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Pot. Iodid. Trinitrin.

Grindelia acts as an expectorant and relaxes the muscular coat of the bronchial tubes.

"In Asthma, and indeed in all varieties of respiratory spasm, we may turn to Grindelia with full confidence in its beneficial effects."

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Atropine, Eucsine, Hyponitrous Acid with Balsamic Extracts.

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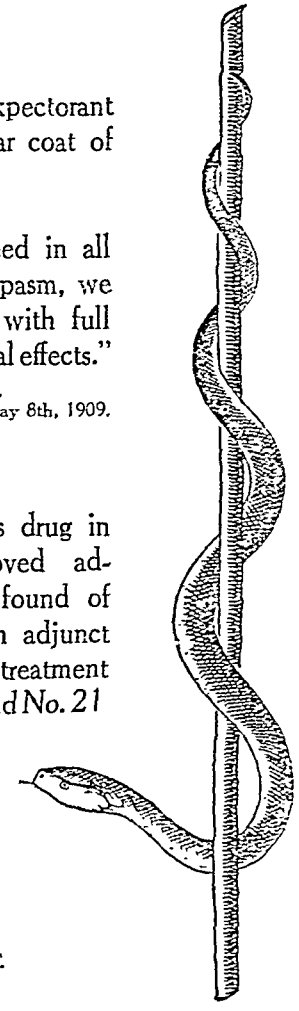

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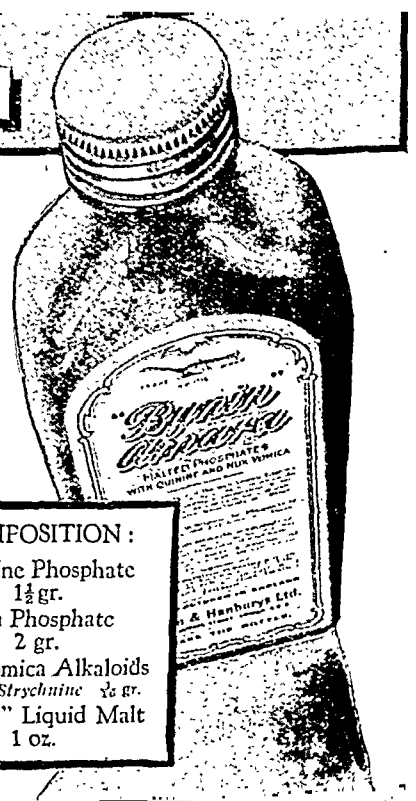

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A British Medical Association Lecture

ON

THE MEDICAL PROFESSION AND BIRTH CONTROL*

BY

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It is generally recognized that intentional restriction of fertility has played a large part in producing the decline in the birth rate which constitutes one of the most significant of the population problems of Western civilized communities. Thus in England and Wales the birth rate has fallen between 1876 and 1930 from 36.3 to 16.3 and, in Scotland, from 35.6 to 19.5 per 1,000 of population.

The medical profession has been criticized on the ground that in its corporate capacity it has remained outside a movement which, in addition to changing the whole social fabric of the State, has a profound bearing on the health of the people. It may, however, be represented in fairness to our calling that the history of birth control demonstrates only too clearly how from the beginning the question has been beset with difficulties that have rendered impossible the formulation of clear policies. The taboo imposed on the discussion of sex, the belief that decisions of such a kind are individual and intimate, the attitude of the Churches and, more especially, the variance of view among sociologists and economists, have all naturally militated against organized medicine being in a position to make a pronouncement on some of the most important national and propagandist aspects of the movement. It cannot be denied, moreover, that from these standpoints the issues have been gravely prejudiced and the sympathies of large sections of the community estranged by the irresponsible manner in which this propaganda on each side has too often been carried out. On the one hand, it has been urged that birth control is a sin against both the spirit and the flesh, and that, unless strenuously opposed in every shape and form, it is calculated to destroy the foundations of our civilization. On the other hand, it has been claimed that the salvation of the race—moral, physical, and economic—is to be sought for in a universal extension of voluntary birth restriction.

To the moderate-minded person it must seem that the arguments advanced by the extremists on either side have often lacked the support of adequate evidence. On many of the most important aspects of the subject it is apparent that there is urgent need for concentrated research before any sound conclusions can be formulated. Professor Julian Huxley, himself a powerful advocate of the movement, says:

"Unless birth control itself be consciously studied and regulated it may well run away with the situation and lead to a state of affairs just as difficult in its way as the opposite condition from which it has rescued us. Birth control, in fact, must be envisaged as a major sociological factor, and must be studied in relation to the world's population trends and economic changes. It is no longer either possible or right, as it was in the early days of the movement, to envisage it in isolation and to press for its extension in any and every circumstance."

On the larger issues of a moral and sociological character the profession cannot pretend to speak with authority, and it must await the verdict of those in a position to guide the community to clearness of decisions. In its corporate capacity it dare not assume the livery of any party. Until the State has succeeded in formulating a policy which is generally acceptable it would be idle to expect the doctor to engage in the polemics of the movement or to enlist in the ranks of the active propagandists. Whilst courted by each party for its own purposes, he must inevitably, in justice to himself and the great purpose and responsibility which he subserves, remain unfettered by any such allegiances.

At the same time it may be represented that a stage has been reached when it is becoming increasingly difficult for the medical profession to maintain its attitude of passive aloofness. Largely owing to the altered status of women and the stress of economic circumstance, recent years have witnessed a marked change in the attitude of the public mind towards matters of sex, which are now discussed in the press and on the platform in a way unknown to preceding generations. One consequence of this has been the extraordinary momentum assumed by the movement for birth control within the past decade. Further, on some of the questions which vexed the issues during its early days opinion is becoming more clearly informed. Thus the Lambeth Conference of Bishops has helped to lift the subject on to a plane where it can be discussed free from the frowning disapproval of the Churches.

To the medical profession the dominating consideration, however, is the manner in which the movement is raising in increasing measure questions of profound significance for the health both of the individual and of the nation. Indeed, it may be urged with some justice that in protesting our unwillingness to assume any allegiance that might savour of partisanship we have too long refused to concern ourselves with those matters that pertain to no party but that intimately involve us as servants of the community. It is somewhat paradoxical that, whilst remaining aloof from the overt concerns of birth control and the responsibilities that these imply, the profession at the same time has found the practice of intentional birth restriction necessary for its own economic welfare. It may be represented, with some show of reason, that the contradiction thus expressed between its public and its private practice may endanger those loyalties which it cherishes most.

There may be some among us to whom the discussion of sex and contraception is so repellent that they would resist to the utmost the pressure of circumstances that are increasingly drawing the profession into the public arena. There may be some who strenuously oppose the movement because in it they find principles subversive of those ideals which in their view should actuate the life both of the individual and of the State. On the other hand there is now a large and growing body of medical opinion that such an undeviating opposition to intentional birth restriction under every shape and form is in the interests neither of the profession nor of the State. At the outset it has to be admitted by all that it is natural that those large sections of the community which adopt practices that depend for their success and their safety upon principles founded in anatomy and physiology should look to the profession with expert knowledge on these matters to guide them aright. It is clear that on this issue the profession is called upon to declare itself, and it is a matter for earnest thought how far it is justified in withholding its service from an ever-increasing body of Christian people who seek these services in all sincerity. Further, in so far as it is frequently compelled to prohibit pregnancy in the interests of the life and health of women suffering from disease, the profession is called upon to identify itself in an active manner with the principles of birth control.

If we are to envisage the responsibilities of the medical profession in their true perspective we have at the outset to recognize that in birth control we are faced with a public health problem of considerable magnitude,

*Delivered to the Dundee Branch of the British Medical Association on November 23rd, 1932.

embracing within its scope three circumstances gravely significant for the welfare of the State. There is, in the first place, the extent to which the community in its efforts at birth restriction, has adopted practices which are detrimental to the health of the nation. In the second place, there is the profoundly important question as to how far a solution to the increasing menace of abortion can be approached through the medium of an enlightened birth control. Thirdly, there falls to be considered the question as to how far by virtue of the selective propagation implied in a rational birth control the community can protect the health of its mothers and improve the physical condition of its members generally.

It has, in some quarters, been urged that, except in the presence of authentic medical indications, the practice of birth control cannot rightly be regarded as coming within the sphere of the doctor. Such an attitude obviously fails to recognize that all matters which involve the health of the individual or the community must necessarily be the doctor's concern. At the other extreme there are those who see, in the danger to health implied in many of the methods of birth control, one reason for urging on the profession an attitude of uncompromising opposition to the whole movement. It is natural that this argument should find favour among those who base their antagonism on general grounds, and that it should constitute part of the stock of their propaganda. Such a role as that herein prescribed for the profession can receive its sanction only after it is demonstrated that a determined effort to eradicate the system root and branch is the most effective way of dealing with the national menace which is implied in the practices of birth control.

To a profession the measure of whose service is determined largely by the degree in which it maintains its sense of realism it is imperative that this question should be faced freely and frankly. It is a matter of common knowledge that birth control is employed by all classes in an increasing degree ; it has come to be assumed by the people as their inalienable right to add to their families by choice and not by chance when the circumstances so demand it ; the sanction of the " Churches " is there to bless it in varying measure, and the profession of medicine itself has adopted it as an important element of its economic creed. It is true that no one of these circumstances is of itself a justification of the principles of birth control ; nevertheless, by emphasizing the extent to which the practice has become corporate in the life of the people they demonstrate that the time has come for the profession to reflect carefully whether in its duty to the individual and its larger duty to the State it dare refuse to take an active part in guiding a movement which, in its extent and the rapidity of its growth, is exerting, and is destined in increasing measure to exert, a profound influence on the nation's health.

HYGIENE OF BIRTH CONTROL

Under this heading reference must be made to *abstention* as a means of birth control where restriction of the family is desired or is found necessary. While there are exceptional instances in which the contracting parties may pursue this course with success and safety it is a method which cannot, in general, be commended as either practicable or harmless. As Lord Dawson[1] says:

" The attempts at abstention, the struggle between physical needs and conscience, produce conflicts damaging to mind and body, and if the attempts fail, as they assuredly do, the mind is left distressed."

One of the most potent of the arguments for the active participation of the profession is the discovery on the threshold of the subject that in an effort to solve its own problem with inadequate guidance the community has had recourse to procedures which are of harm both to body and to mind. This is more particularly true of *coitus interruptus*, the method most commonly employed by those who are uninstructed. The officer of a large clinic has assured me that this has been the previous practice in about 90 per cent. of the cases coming to seek advice. The reason prompting them to visit the clinic is often their discovery of its ineffectiveness. At another clinic it was computed that the reliability of coitus interruptus was no higher than 66 per cent. It is, of course, impossible to assess the extent of the psychical and physical damage induced throughout the community by such practices, but we may be certain that it is considerable. There can be no doubt that the imparting to such people of a knowledge of procedures which can be carried out with safety is a hygienic service of great value.

Passing to the consideration of *contraceptives* we have to note that harm to the genital canal can be produced by such methods, and we have seen infective lesions in which there was clear evidence of such a causal agent. Moreover, it cannot be gainsaid that many of the minor inflammatory diseases of indeterminate aetiology which are common, especially in married women, may be induced in this way. On this subject there is urgent room for further study before we can pretend to speak with authority. The widespread commercial enterprise subsidized by birth control and the innumerable methods and materials placed upon the market witness to the extent and potency for evil of much that parades under its guise. It is true that we cannot, in the absence of an adequate analysis, speak regarding the safety of any individual method. Indeed, we are in the position of having allowed a gigantic and wealthy system, possessing much of danger to the national health, to grow up before our eyes almost entirely unheeded.

Herein lies a responsibility which the medical profession cannot escape, for it is clear that no method can be adjudged to be safe until it has been subjected to the scrutiny of skilled observation. It is true that within recent years the work of the National Birth Control Association and the investigations of individual observers are beginning to throw light on these matters and to indicate lines for future study both in the laboratory and in the clinic. One consequence of these preliminary studies has been the demonstration of the extent of our ignorance regarding both the safety and the efficiency of methods that have been in common use. At the same time it has provided us with a considerable body of evidence which goes to prove that there exist at our hand procedures which, if employed with care and in accordance with definitely prescribed rules, can be recommended as safe and in a reasonable degree as effective.

Much of this information we owe to the activities of the birth control clinics which, since the war, have been established in various centres throughout the country, and which adopt as their more or less general routine the employment of the Mensinga pessary or so-called " Dutch cap " in conjunction with a lubricating ointment and vaginal douching. The evidence, now of an extensive character, which has been gathered by such clinics is in keeping with the view that, when carefully employed and supervised, contraceptive measures can be used over long periods without inducing physical harm. Further, we cannot ignore the fact, which is emphasized by all workers in birth control clinics, that the preliminary examination invariably carried out on the women by an experienced observer not infrequently reveals the existence of disease that would otherwise escape notice.

An objection which has been urged against such mechanical and chemical methods is that they tend to produce permanent damage of the genital organs with the destruction of fertility, a circumstance of considerable moment in the case of that large class who adopt control for the spacing of their family or for other reasons of a temporary character. In this connexion the Walworth Clinic reports that out of a series of ninety-seven women who deliberately ceased to practise contraception ninety-six became pregnant, and that a similar fate overtook 158 women who had, on one occasion only, neglected to use the appliances (Dutch cap mainly).[2]

BIRTH CONTROL AND ABORTION

A further argument of supreme importance in the possession of advocates of a wider diffusion of knowledge on birth control is that the prevention of unwanted pregnancies would necessarily reduce the number of criminal abortions. It is matter of common knowledge that the domestic measures—purgation, toxic pills, douching, etc.—by which women so often attempt to interrupt an undesired pregnancy frequently fail in their action, and that this is on many occasions followed by recourse to abortionists. Apart from the large sacrifice of foetal life involved, abortion is a considerable cause of maternal mortality. The monthly Epidemiological Report of the League of Nations (July, 1930) states that, for Europe generally, abortion causes more maternal deaths than full-time childbirth, the main cause of fatality being sepsis. It is true that the problem is much more acute in some Continental countries, for example, Germany, than in this country. The report of the Maternal Mortality Committee recently published gives abortion as the cause of 13.4 per cent. of the total deaths in England and Wales directly due to child-bearing, and the Registrar-General's figures show a rise of 21 per cent. in deaths from abortion during two years.

It is thus evident that the problem of abortion is a very grave one in modern communities, and it must always be remembered that, in addition to the death rate, there is a large amount of chronic invalidity directly springing from it. In a consideration of the practical means of dealing with such a widespread menace we must at the outset recognize that punitive enactments are largely powerless to deal with women who in their time of trial are willing to take the comparatively small risk of discovery which is entailed, and who, moreover, often base their actions upon a deep conviction that in such personal and intimate decisions they are justified in following the dictates of their own conscience. The only two suggestions so far made to deal with the problem which exhibit a realistic grasp of the facts are, in the first place, legalization of abortion under controlled conditions for other than medical reasons, by which it is hoped that the dangers to life and health would be largely removed, and, in the second place, the diffusion of a knowledge of birth control. The former alternative has supporters in this and other countries, and its merits were the subject of an address recently delivered to the Edinburgh Obstetrical Society by Professor Sydney Smith.[3] It is well known that it is now the State policy of Russia, where it is claimed that the regularization of the procedure and its entrustment to skilled persons has eliminated the associated risks. Without prejudice to a decision on the ultimate merits of such legalized abortion, there can, I think, be no doubt that, of the two alternative procedures, the prevention of unwanted pregnancies by means of a rational birth control is much to be preferred, alike on medical as on general grounds. At the same time it must be noted that in any community the measure in which birth control is adopted has no necessary bearing on the relative frequency of abortion. It is generally recognized that in Holland intentional birth restriction is practised more generally than in England and Wales, and yet a comparison of the records of the two countries demonstrates that, during the five-year period 1925–9, the average maternal mortality from abortion (excluding sepsis) in the former has been nearly twice as great as that in the latter country (22 against 12 per 100,000 live births).[4]

BIRTH CONTROL FOR SOCIAL AND ECONOMIC REASONS

We are here concerned with the whole movement of birth control as this is popularly understood—that is, the practice of married people who design to restrict or space their family on grounds which may have regard to the interests of the children themselves, such as economic stringency and limitation of the resources available for their housing, feeding, and education, or on grounds which refer more particularly to their own convenience or needs and in which the motives may be worthy or the reverse. It is true that in an assessment of the total circumstances that determine recourse to family limitation there may often be implicit a desire to safeguard the health of its members, but as a rule this consideration does not come within the scope of the medical indications to which we have already referred and which will be more fully discussed in a subsequent section of this paper.

As we have seen, it has been represented in some quarters that the medical man in the performance of his legitimate functions can have no dealings with this aspect of birth control in so far as it draws its impulse from factors which are outside his sphere. Whilst it is true that the doctor cannot be an arbiter except on matters pertaining directly to his own special function, it is equally true that so soon as a married couple decide upon the adoption of family restriction they create a problem in personal and community hygiene.

In some measure the medical profession can help towards a solution of this problem by its emphatic condemnation of practices which are both dangerous to health and unreliable in their results, and by making available a knowledge on procedures which can be recommended. This responsibility of the profession we have already discussed. It has become such a heavy charge on our calling that we dare not refuse to shoulder it. It is true that we may be criticized in so far as we thereby lend our sanction to procedures that may be exploited for unworthy ends, but this is an argument which, as we know, can, both within and without the field of medicine, be applied to many scientific discoveries without robbing them of their value to the community as a whole. It is without question that the active participation of the profession would result in the elimination of much of the menace of existing practices.

The extent to which the doctor can be expected to exercise personal supervision in such cases has been the subject of much discussion. There are those who believe that the doctor should not be expected to give such personal advice where the reason for restriction is other than medical. There are others who contend that, whilst the doctor cannot be expected to engage himself in matters of family economy which are outside his sphere, once married people have satisfied themselves of the need or desirability of birth control the matter becomes a medical question involving medical responsibility.

It has sometimes been suggested that to escape the risk that the advice given may be utilized for unworthy purposes the doctor should offer his services only after a satisfactory analysis of the social and economic considerations has been made. It is obvious that the family doctor must often be consulted in regard to such decisions when the reasons for restriction, such as excessive size of the family, poverty, poor housing, and so forth, may be sufficiently clear. On the other hand, to insist on the principle that the doctor must invariably make a scrutiny of such factors before consenting to make his services available is neither practicable nor desirable, because it implies his attempting to assess circumstances which may not, and usually cannot, be fully within his knowledge, and it involves him in decisions which are no part of his function as a medical practitioner.

One of the most significant developments of the birth control movement within recent years is to be found in the establishment of birth control clinics in the poorer quarters of our large towns. They owe their inception to a desire to extend to the lower social grades opportunities for family control which are enjoyed by those more fortunately situated and to whom such advantages are more readily accessible. The clinic embodies the hope that by such means a social instrument is created for the alleviation of the misery and ill-health and degradation that attend on the overcrowding and the poverty of the slum dwellers. The system constitutes a social experiment of much interest and value, and it comprises centres of great importance for a study of the problems inherent in birth control and for the instruction of students and doctors in its procedures. Already they have proved their great service in several of these directions.

The clinics are, for the most part, staffed by women doctors, who are considered to be more suitable than men for this class of work. Advice is restricted to married women, and before the treatment is begun an investigation of the pelvic organs is carried out for the purpose of detecting any disease which may require attention. When such is present the patient is referred to the proper quarter so that it can be dealt with. The women are expected to contribute a small charge for the appliances, but necessitous cases receive them free. After receiving instruction in the proper employment of the appliance the woman is directed to return to the clinic at intervals for purposes of supervision. The centres affiliated with the Society for the Provision of Birth Control Clinics have altogether given advice to over 30,000 women during a period of ten years (1921–31). There are sixteen such centres, and the majority have been established since 1925. The Walworth Clinic in the East End of London, founded in 1921, during ten years has alone given advice to 14,527 women.

There can be no doubt that this organization, through the clinics which it has established in the poor quarters of our large industrial towns, and which are steadily increasing in numbers, is exercising an influence that must be profound. There can, further, be no doubt that in individual cases the clinics perform a beneficent social service, and by leading to a limitation in families where the size is already in excess of the means of livelihood or of the accommodation available, they are contributing in a material way towards the amelioration of an acute social problem.

It is idle to deny that the diffusion of a knowledge of birth control throughout the community, and especially the making of it available to the lower social strata, is bound to exert an important influence on the physical state of the nation. There is, for example, convincing evidence that the larger average size of the families of the lower social orders is an important cause of the relatively high infantile mortality of this class, and hence it arises that the inculcation of birth control has been advised as a rational measure for dealing with this problem. Further, there is some evidence that the bearing of a large number of children is in general associated with increased risk to the life of the mother.[5] There is, of course, overwhelming evidence that a woman suffering from certain classes of disease is exposed to a relatively high risk from frequent child-bearing.

It has been frequently represented that the large size of the families of the slum dwellers and the overcrowding and poverty and disease that spring from this cause are matters that can be dealt with adequately only by general measures of social reform directed to the improvement of the housing and the economic status of the people. It has, indeed, even been urged that birth control is undesirable, in that its tendency is to palliate and thus to obscure the gravity of the underlying causal factors.

It is no function of this communication to attempt to do more than present for the notice of the reader the problems in general hygiene involved in the principles and practice of birth control. On the ultimate economic and sociological implications of these principles and their practice it cannot pretend to judge; on such matters the decision must be left to the collective wisdom of the community. Meanwhile, as bearing on the problems under consideration, we may, however, direct attention to the experience of Holland, where, as is well known, birth control has for many years been widely practised by all social orders. The infantile mortality rate of that country is one of the lowest in Europe (51 per 1,000 as compared with 60 per 1,000 for England and Wales for 1930), whilst the high standards governing maternity as revealed in the low maternal death rate of that country received favourable notice in the recently published report of the Committee on Maternal Mortality and Morbidity of the Ministry of Health. Side by side with these figures it is instructive to note that the general death rate of Holland is the lowest (9.1 per 1,000 as compared with 11.4 per 1,000 for England and Wales for the year 1930), whilst the birth rate is one of the highest in Europe (23 for 1930 as compared with 16.3 for England and Wales). It has been stated that this relatively high birth rate is associated with, and is to some extent dependent upon, a greater uniformity in the size of families in different social grades than obtains in this country. As an evidence of the relatively sound environment in which the children of Holland are reared it is significant to find that the average stature of the army recruits coming up for measurement at the age of 18 has been matter for favourable comment.

How far these relatively advantageous experiences of Holland in regard to health are to be considered as in part deriving their source from the wide diffusion of the principles of birth control which is known to obtain in that country it is impossible to affirm with any degree of certainty. Meanwhile, however, they at least furnish for the medical sociologist reassuring evidence that the wide adoption of birth control in a community can coexist with a relatively high standard of racial vigour and health.

MEDICAL INDICATIONS FOR BIRTH CONTROL

Under this heading we have to bring under review circumstances in which the duty of the medical profession can be defined with comparative ease, for it is recognized that where, on account of such conditions as heart or kidney disease, tuberculosis, etc., pregnancy would prejudice life, the medical attendant must represent to the patient the need for the avoidance of the pregnant state.

It is commonly stated in birth control literature that this class of case—that, namely, in which there is an urgent medical contraindication to pregnancy—presents the medical argument for contraception in its clearest form. Before subscribing to this view it is, however, important that we pause to consider one fact that is commonly neglected. This is that in many such medical cases it is fundamental that *the risk of future pregnancy must be completely guarded against.* Those of us who have the experience obtained in a large obstetric hospital know that there are many women in whom a subsequent pregnancy would spell disaster. The large majority of these patients consist of women with severe cardiac and renal disease. Now it is quite clearly established from the statistical studies of the birth control clinics that ordinary contraceptive methods, even when carried out according to the regime prescribed, are liable to failure in a ratio varying from 5 to 9 per cent.[6] Further, it is found that a very large number of the women—varying in different clinics from 40 to 90 per cent.—cease to attend the clinics and thus discard the supervisory control necessary for securing the efficiency of the treatment. For these reasons it is obvious that even in organized birth control we do not yet possess the machinery which is capable of ensuring that complete protection which is absolutely necessary in urgent medical cases, and we may surmise that private birth control instruction given outside the aegis of the clinic is not calculated on the average to provide a sufficient margin of safety.

For these reasons it must be clearly recognized that for the class of case which we are at present considering birth control as ordinarily understood is unacceptable. Until we possess—and it is possible that through future research we may ultimately possess—a fool-proof contraceptive, *the only satisfactory means of dealing with this grave medical problem is by sterilization.* This is not the place for a full discussion of this subject. It is sufficient to state that in many such patients where the medical urgency demands delivery by Caesarean section or abdominal emptying of the uterus during the early months the sterilization is performed by resection of the Fallopian tubes. The advantage of such a procedure is that it maintains the ovarian and menstrual functions. In other cases it is our practice to refer the patient to the radiologist for the exposure of the ovaries to the sterilizing action of x rays.

There are, it is true, many cases in which the general condition of the patient is hardly of such gravity as to warrant the enforcement of sterilization but where, nevertheless, the avoidance of pregnancy is desirable. Into this category fall those numerous cases in which

frequent pregnancies have begun to undermine the system, the cases, namely, in which experience has taught us that any subsequent gestation may aggravate the danger to the woman's constitution and render her an ailing mother ill equipped for her manifold duties. For all such cases, as for those with grave medical disease in whom sterilization is refused or is unprocurable, birth control should be recommended on the understanding that in the event of pregnancy occurring it may require to be terminated prematurely if the health of the mother renders this necessary.

Within recent years the Ministry of Health has acknowledged its responsibility towards women in attendance at maternity and welfare clinics who require such advice, and in 1930 it empowered local authorities to make provision for contraceptive information being given to married women for whom future pregnancy would be detrimental to health. A large number of authorities have availed themselves of this power, and have arranged for the instruction to be given at special sessions held at the maternity and child welfare centres, by contract with a neighbouring voluntary clinic, or in some other way. There are obvious advantages in linking up the birth control service with the maternity and welfare centres. In that this service is essentially preventive it comes naturally within the functions of the centre, and it is convenient both for the woman and her advisers that she should receive this class of treatment at a place where she is known and where her medical state has already been under observation. At the same time it is important that the instruction should be given by an officer who is specially trained and who attends at the centre at a session convened for the purpose. A further matter of considerable moment, and this applies to all classes of birth control clinic, is that there should be, as an integral part of the service, an arrangement by which women suffering from serious disease which renders pregnancy dangerous can be referred for sterilization to a neighbouring hospital or some other suitable agency.

CONCLUSIONS

1. The birth control movement is creating important problems in public health which demand the urgent participation and guidance of the medical profession.

2. Whilst the duty of the doctor is clear in regard to women suffering from disease which renders pregnancy dangerous, the profession cannot evade the important responsibilities in public health implied in birth control employed for social and economic reasons.

3. There is need for the teaching of medical students and doctors in the methods of birth control.

4. On the medical problems inherent in the movement there is urgent need for further research.

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PREVENTION OF MEASLES BY CONVALESCENT SERUM*

BY

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During the winter of 1931–2, when there was an epidemic of measles in Glasgow, I undertook an investigation into the effect of administering convalescent serum to measles contacts in hospital wards and children's institutions. The prevention of measles by serum is an important subject, but one which presents considerable administrative difficulties in its general application. Though the reports of the results of serum injections are promising, the exact manner in which the limited amount of serum available should be used to obtain the maximum effect forms a distinct problem. What can be accomplished with convalescent serum? What are its keeping properties? What doses would be most useful during epidemic periods? These are the main points which should be determined.

For the purposes of this investigation the following material was available, obtained from adult convalescent patients:

Number of donors	54	
Amount of blood	5,108 c.cm.	Average 94.6 c.cm.
Amount of serum	2,960 c.cm.	Average 54.8 c.cm.
Number of doses (5 c.cm.)...	584	Average 10.8

Donors did not become available until November, when the epidemic was well advanced. The serum was collected under aseptic precautions on the seventh to tenth day of normal temperature, and, after the addition of a small amount of trikresol, was stored in an ice-chest. The dose adopted as a standard was 5 c.cm. injected intramuscularly. Temperatures were taken four-hourly from the eighth day of exposure, and the observation period extended till the twenty-third day of exposure, a length of time likely to exclude a normal attack, but in a few cases insufficient to allow for an attenuated attack. In most of the cases, however, this time was quite sufficient to give returns of service. Most of the factors governing the result of injection, such as type of attack of donor, age of serum, day of exposure, etc., were noted, but the evaluation of each is difficult since, even when all other factors are exactly similar, varying results tend to occur. Despite these variations, however, there are some interesting facts to be noted.

DEFINITIONS

The results were classified into (*a*) complete protection, (*b*) attenuated attack, (*c*) mild, and (*d*) normal attacks. "Attenuated" attacks showed no Koplik's spots and no fever (except perhaps a transient rise of temperature on four-hourly readings, with little or no catarrhal symptoms). The rash was more like discrete pin-points, more papular than, and certainly never typical of, a measles exanthem. It appeared on the face, occasionally including the body, and seldom the limbs. A "mild" attack was a little more definite than an attenuated one, but less so than a normal attack, there being some cough generally and somewhat more fever, with eye suffusion, etc. The "normal" case had the classical signs and symptoms. These three types were further subdivided as regards the case from which the patient was presumably infected. "Primary" cases were those which developed infection after the original exposure; "secondary," those after one of these primaries or a coincident control; and "tertiary" cases, those which developed measles from a totally different source, perhaps weeks later.

THE INQUIRY REPORTED

The scope of this investigation comprises fifty instances of exposure, involving 345 patients. One group of eighty-nine in a mental home has been excluded owing to the possibility of error in the history of previous attack, but the other forty-nine groups can be considered, as far as possible, free of error in this respect, as great care was taken in extracting histories. For instance, there were only eleven that were given serum who had had a previous attack of measles—cases mostly about whom information was not available at the time of injection. Again, out

* Communication to the Section of Public Health at the Centenary Meeting of the British Medical Association, London, July, 1932.

of the remaining 245 cases there were twelve who died in the observation period, and who are, therefore, disregarded. Since there were many other diseases affecting these children, who for the most part were in-patients in institutions, it is fortunate that there were so few who succumbed to the other disease during the period. There thus remained 233 patients inoculated with convalescent

TABLE I.—*Details of Cases*

Total number of contact cases injected			345
Doubtful negative history of measles	89		
Known positive history of measles	11		
Negatives who died in observation period	12		
		112	
Total of definitely known susceptibles		233	
Result of injection:			
(a) No attack	185		
(b) Attenuated attacks—Primary	28		
Secondary	6		
Tertiary	2		
(c) Mild attacks—Primary	7		
Secondary	1		
(d) Normal attacks	4		
Control cases—No attack	9		
Measles	23		
		32	

serum, and of these 185 entirely escaped infection—equivalent to a protection rate of 80 per cent. In thirty-six cases the attack was attenuated. It may be observed that twenty-eight of these contracted the infection from the original case of measles, six from a subsequent or "primary" case, or a coincident "normal" case, while two were later reported to have developed measles beyond that period. There were very few "mild" cases—eight in all—and of these seven were primary and one secondary. Of these, four out of the seven had only 1.7 c.cm. instead of the usual 5 c.cm., so that the number is even less than that given if the standard dose is considered. Four patients developed normal measles after serum, but as these showed rashes one, two, three, and five days respectively after the injection it is apparent that the dose was given much too late to have any preventive effect. As controls there were thirty-two cases who did not receive an injection of serum, and of these no fewer than twenty-three contracted measles. Table I shows these results.

The several factors—day of injection of serum, its age and dosage, age of the child, and the value of the serum from different donors—may be considered separately.

TABLE II.—*Day of Exposure to Measles*

Day	Total Contacts	No Attack	Primary		Measles	Per cent. Protected	Per cent. Average of Three Days
			Att.	Mild			
1	—	—	—	—	—	—	—
2	4	4	—	—	—	100	—
3	6	6	—	—	—	100	86.15
4	55	46	9	—	—	83.63	85.8
5	52	45	7	—	—	86.54	82.6
6	48	37	7	4	—	77.08	82.9
7	29	25	2	2	—	86.21	81.5
8	15	13	2	—	—	86.66	85.4
9	4	3	1	—	—	75	84
10	6	5	—	1	—	83.34	80
11	—	—	—	—	—	—	75
12	2	1	—	—	1	50	50
13	—	—	—	—	—	—	—
14	1	—	—	—	1	0	0
15	1	—	—	—	1	0	0
16	1	—	—	—	1	0	0
6-9	9	9	—	—	—	100	—
Total:	233	194	28	7	4	83.26	—

1. *Day of Injection.*—The average day of exposure on which the rash appeared in the control cases was shown to be 17.4 days. The four cases of normal attacks, therefore, must have been injected not on the third and fourth days, but on the twelfth, fourteenth, fifteenth, and sixteenth days. Correction must, of course, be made for the second exposure of a case, since, if this second exposure did not occur, the contact would have remained protected. Again, in order to compensate for slight variations in estimating the day of exposure, an average of three days is probably more accurate than the single figure of the day concerned. Table II is constructed on this principle. Thus, presuming that the other factors are constant, there is evidently no marked change in the efficacy of the injections given up to the eighth day after exposure—that is, taking the day of the rash as the fourth day. The numbers protected on the ninth and tenth days are rather small on which to base such a claim for them. Immediately after the tenth day, however, there is a very rapid falling off in the potency, and by the fourteenth day there is no protection whatever. These figures indicate fairly clearly that even a small dose of 5 c.cm. is of value in the prophylaxis of measles.

2. *Age of the Serum Used.*—Table III gives the results according to the age of the serum employed. Correction must also be made here for deaths and secondary cases

TABLE III.—*Effect of Age of Serum*

Age in Days	Total Cases	No Attack	Primary		Measles	Per cent. Protected	Per cent. Average of Three Groups
			Att.	Mild			
-25	11	11	—	—	—	100	—
-30	29	25	1	1	1	89.6	83.9
-35	47	36	7	4	—	76.6	81.5
-40	32	26	6	—	—	81.2	79.6
-45	9	8	—	—	1	88.9	81.8
-50	5	5	—	—	—	100	77.3
-55	8	4	4	—	—	50	65.2
-60	10	6	2	—	2	60	59.1
-65	4	3	1	—	—	75	52.2
-70	4	4	—	—	—	100	76.9
-75	5	3	2	—	—	60	88.2
-80	8	8	—	—	—	100	93.5
-85	8	8	—	—	—	100	91.3
-90	19	17	2	—	—	89.5	92.5
-95	13	12	1	—	—	92.3	85.6
-100	13	10	2	1	—	76.9	85.6
-110	4	4	—	—	—	100	81.2
-120	2	2	—	—	—	100	100
-130	—	—	—	—	—	—	75
-140	2	1	—	1	—	50	—
Total:	233	194	28	7	4	83.26	—

The table shows that within the limits covered—that is using serum up to 140 days old—there is practically no difference in the results attributable to the age of the serum.

3. *Age of Injected Child.*—Here again the same corrections are made, the primary cases of the disease alone being entered in the table (Table IV). The results here indicate that there seems to be some relation between the effect produced and the age of the child. In the first year protection, complete at first, falls, and in the middle of the second year is relatively low, remaining so till the beginning of the fourth year, after which the result

improve. These figures indicate that the danger period is the second year, the third year, and the first half of the fourth year of life, the figures for these periods being under the general average of the complete series. These results are in keeping with the known epidemiological

TABLE IV.—*Effect of Age of Patient Injected*

Age of Patients	Total Cases	No Attack	Per cent. Protected	Per cent. Average of Three Groups
Months 0- 2	—	—	—	—
3- 5	39	38	97.43	—
6- 8	19	18	94.74	94.74
9-11	18	16	88.89	85.45
One year 0- 2	18	13	72.22	80.85
3- 5	11	9	81 82	69 56
6- 8	17	10	58 82	73.53
9-11	6	6	100	72.73
Two years 0- 2	21	16	76.19	75
3- 5	5	2	40	75.63
6- 8	11	10	90.91	75
9-11	4	3	75	76.92
Three years 0- 2	11	7	63 63	72.22
3- 5	3	3	100	68.75
6- 8	2	1	50	83.33
9 11	1	1	100	90.91
Four years 0- 2	8	8	100	100
3- 5	—	—	—	100
6- 8	6	6	100	100
9-11	1	1	100	—
Total	231	163	83.58	—

facts that the first five years of life are those most susceptible. The figures make it clear that the effect of serum injection closely follows the same curve.

4. *Donors of Serum.*—Again it is difficult to evaluate the serum, as the other factors exert some influence on the result. Comparison of the tables compiled during the investigation show that, while as a whole the serums of the donors were fairly potent, there were undoubtedly some poor ones. For instance, in one case of cross-infection twelve contact patients were injected, and only three remained free from attack. The serum used was from the same donor injected in varying doses, but the effect produced was poor in comparison with that obtained under less favourable circumstances with another serum. Possibly, had another donor been chosen the results would have been more favourable, as the records indicated that this particular donor had had a less severe measles attack than the average.

5. *Amount of Serum Injected.*—Little can be said on the practical side, since the dose given in this series (5 c.cm.) was practically constant. In one instance, however, varying doses were given on the sixth day, and it was found that while 3.4 c.cm. gave either no attack or attenuation, a dose of 1.7 c.cm. gave resulting mild attacks.

6. *Duration of Immunity.* — The duration of the immunity produced by the serum varied in many of the cases; it probably varies with the amount injected. In my series, using the standard dose of 5 c.cm., modified cases occurred after the usual incubation period, indicating that the protection afforded was not always complete. The number of secondaries is probably larger than that recorded, but judging from the figures available in my series the number is greatest in those injected in the first six days of exposure. This seems to suggest that the period of complete protection given by 5 c.cm. is not much longer than fourteen days, but, as can be seen from the "tertiary" infections, it may extend up to six weeks, and even then the protective power is still sufficient to modify the attack.

GENERAL CONCLUSIONS

Clinically there was a striking difference in the type of attack after such a small dose as 5 c.cm., even up to the eighth or tenth day of exposure. Of all the patients who developed measles after serum not one was really ill, and, in fact, many would not have been reported had not the slightest appearance of any sign been noted as evidence of infection. Generally speaking, it would appear that the best method of utilizing the serum is not to prevent measles by large doses, but rather to cause what might be a fatal attack to be an attenuated one with no complications. The active immunity thus produced will be invaluable, whereas the passive immunity lasts only two to six weeks in the complete state.

Summarizing the results obtained, there is no doubt that the injections were of great benefit, as they secured complete protection in almost 80 per cent. That this did not always result suggests that if such is the object a sufficient dosage should be employed on an early day after exposure. The useful period for complete protection in my series appears to be slightly greater than other investigators have found, but it must be remembered that the suspicion of measles was sufficient to mean the immediate removal of a possible source of contagion from children's wards, resulting in a comparatively short period of exposure. Administratively, the procedure of protective inoculation of convalescent serum was of great value in controlling possible outbreaks of measles in hospitals and country homes devoted to the treatment of young children.

ISOLATED DEXTROCARDIA

BY

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Although reports on a considerable number of cases of isolated dextrocardia have been published, the condition is sufficiently rare to justify recording another case.

Dextrocardia naturally accompanies complete transposition of the viscera, which is not a very uncommon condition. All the organs are then transposed to the opposite side of the body, and at the same time their individual forms are transposed, the result being a mirror-image of the normal. I have seen several examples of this condition during life and one post mortem. Rarely, such a transposition is incomplete so that one organ or more escapes; a few instances have been recorded of transposition of all the organs except the heart. In the following case the heart only was transposed to the right side.

If displacements resulting from disease are excluded, true dextrocardia is a developmental error. According to Lichtman,[1] who has made a most careful review of the subject, most of the recorded cases have died in the first year of life; if the patient lives to the age of 10 the expectation of life is 30 years, after 20 the expectation is 44 years. Few, however, are so fortunate.

The subject when studied in detail is much more complicated than would at first appear. Dextrocardia, as it occurs with complete transposition—a mirror-image both

in position and in the relation of the chambers to one another—would seem to be a rare form of a rare condition. More often the chambers are not arranged as they would be in a mirror-image. Thus the right or venous ventricle may lie on the right side, and form the apex of the heart, whereas in a mirror-image transposition the apex would be formed by the arterial ventricle, corresponding to the left in the normal left-sided position. In such a case the chambers bear the normal relation to one another, though the heart as a whole is transposed. Again, in either of these forms of dextrocardia the aorta may pass over the right or left bronchus, descending through the thorax on the left side of the vertebral column. When the right aortic arch persists in this way the aorta passes behind the oesophagus to reach the other side. Four possibilities must therefore be recognized: a mirror-image transposition with right or left aortic arch, and a transposed heart with normally related chambers with right or left aortic arch. A centrally placed heart, with the venous ventricle to the right forming the apex, is a recorded stage towards one of the last two conditions.

By far the greater number of cases of isolated dextrocardia are the subjects of other congenital malformations of the heart, the most common being defects of the interventricular or interauricular septa. Conditions occur which may be regarded as derivatives of this primary defect—namely, one functioning and one "aborted" ventricle, or a trilocular heart. Such cases as these seldom reach adult life. Lichtman has traced 161 cases in the literature, of which only three were free of other congenital abnormality when studied clinically and post mortem; all were of the type having normally related chambers. He states that so far only four cases have been studied by all the methods that can now be employed: clinically, by *x* rays, by the electrocardiograph, and post mortem.

CASE RECORD

The patient, a carpenter aged 42, complained of pain over the left side of his chest, which had been noticed for about ten years. He had joined the Navy in 1910, having passed a medical examination in Devonport. In 1922 he was invalided out of the Service for heart trouble, and about that time the pain began. The pain comes on in attacks after exertion and radiates to the left arm, which then becomes powerless; the attack lasts, with decreasing severity, for the remainder of the day. The area previously painful is then tender to the touch, although lately this has not been so apparent. Between the attacks the patient is breathless on exertion, and sometimes he has swelling of the feet at night, especially if he has been at work. Recently there have been frequent fainting or giddy attacks on first rising from bed in the morning. There is no history of rheumatism.

Clinical Examination

On examination the man was of slight build, with some
r, but no cyanosis or oedema. His pulse was regular,
ried between 60 and 76; respirations between 18
temperature was always slightly subnormal. The
vas not palpable, but the cardiac dullness extended
to the right of the mid-line and up to the third
t side; the other border lay just to the left
al margin. There was a decided bulging of
an area rather larger than that of the
heart sounds were best heard to the
onsisted of a soft, toneless, blowing
al second sound. The murmur
sternum, but was not con-
the neck; it was heard
ss. The systolic blood
95 mm. No other
Wassermann
its position
nation. The
heart is rather more globular in outline than normal; this was especially seen in the rounded apex. The aortic knuckle was clearly shown in its normal left-sided position, indicating that the aorta passes over the left bronchus. The left side of the diaphragm lies at a slightly higher level than the right, and the liver and stomach occupy their normal positions. In the first oblique position one of the auricles could be seen projecting backwards into the mediastinum; this is the transposed left (arterial) auricle, which in the normal position of the heart lies posteriorly. Screen examination showed that the right and left borders of the cardiac shadow contract synchronously, so the left border must be composed of venous ventricle, and must be considerably enlarged. The venous auricle occupies a higher position than usual, and does not participate in the formation of this border of the heart.

4						
5	52					
6	40					
7	29					
8	15					
9	4	3				
10	6	5	—			
11	—	—	—			
12	2	1	—	—		
13	—	—	—	—	—	
14	1	—	—	—	1	100
15	1	—	—	—	1	
16	1	—	—	—	1	
6-9	9	9	—	—	—	
Total:	233	194	28	7	4	83.26

ELECTROCARDIOGRAPH

The rhythm is regular, the rate 69. The upright stroke in Lead 1 seems at first sight to be R, and to be followed by inversion of T. If, however, the distance from the beginning of this wave to the end of T be measured it will be found equal to the distance from the end of R (beginning of S) to the end of T in other leads. It is therefore an inverted S wave, and the whole of Lead 1 is inverted. S in Lead 1 is enlarged. The height of R in Lead 2 is greater than that in Lead 3. If these two leads are interchanged, as would be the case in a mirror-image dextrocardia in complete transposition of viscera, then the position is enlargement of S in Lead 1 and of R in Lead 3, which is what is found when the right side preponderates in a normally situated heart. In view of the transposition the electrocardiogram must be taken to indicate that there is a preponderance of the venous ventricle. (Fig. 1.)

A very simple way of checking these observations, and one which might very well be employed as a routine in cases of doubt, is to accommodate the electrocardiograph to the patient by transposing the arm leads and taking the foot lead from the right instead of the left foot. This removes the factor of the patient's transposition and enables the interpretation

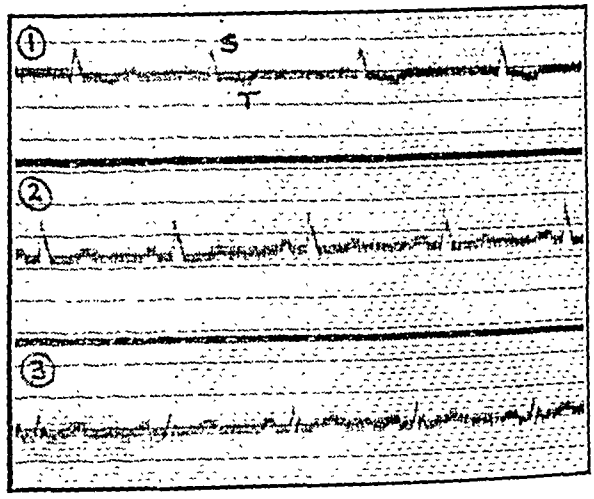

FIG. 1.

to be made as if his heart were normally placed. In this case the result of the manœuvre, shown in Fig. 2, is clearly to indicate preponderance of the right (venous) side in a series of curves which are easy to interpret.

This case is, in all probability, one of mirror-image dextrocardia, with preponderance of the venous ventricle. The aorta crosses the left bronchus, so that the heart only is transposed. The clinical and *x*-ray examinations render this much of the diagnosis clear, but the electrocardiograph gives information as to the direction of the conduction path, and consequently to the probable arrangement of the chambers of the heart. The correct interpretation of the electrocardiogram depends upon the recognition of the upstroke in Lead 1 as S, inverted and enlarged, and this can only be done by direct measurement, and confirmed by reversing the leads to the instrument. On reading some of the descriptions already

published confusion becomes apparent in the interpretation of the upright wave in Lead 1. Its nature does not seem to have been defined by direct measurement, but several of the tracings shown are demonstrably capable of the same interpretation as is given here, and in all probability reversal of the leads would have dismissed all doubt.

Preponderance of the right side is to be expected in view of the murmur, which is almost certainly of congenital origin, and most likely indicates a septal defect.

Parsons Smith, in recording two similar cases during the war, considered that their early cardiac breakdown was brought about through the relation of the right-sided heart to the solid liver, instead of to the more yielding

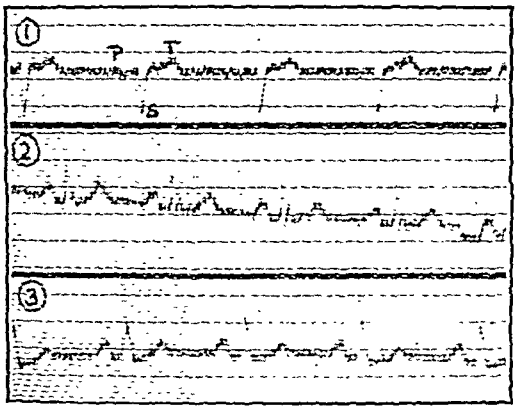

FIG. 2.

stomach, this hampering the physiological dilatation on exertion. Such effect was not produced in persons who had complete transposition of their viscera, because the heart was then related to the stomach. This is very likely the case, and it is therefore the more remarkable that this man was able to serve in the Navy for twelve years, including the war period, before his heart broke down.

The complaint of pain on exertion, involving the left chest and arm, is of interest. Pain due to disease of the right coronary artery, or to infarction of its area of supply, may be felt on the right side of the chest and down the right arm in a person whose heart is normally situated. In this case the distribution is reversed, presumably because the venous ventricle from which it originates is transposed.

The notes of this case are recorded by the kind permission of Dr. C. D. Lindsay, under whose care the patient was admitted to the South Devon and East Cornwall Hospital in June, 1932.

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JEJUNOSTOMY IN THE TREATMENT OF MASSIVE GASTRIC ULCER

BY

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The treatment of simple ulcers of the body of the stomach was discussed at a meeting of the Surgical Section of the Royal Society of Medicine in July, 1931. There was, however, no definite pronouncement made on the value of jejunostomy in the treatment of cases of the more "massive" and difficult type. The extent of any opinion with regard to jejunostomy was indicated by Mr. Gordon-Taylor in the following words: "For the extensive 'letter-box,' or inaccessible, ulcer I have little experience and less success with jejunostomy."[1] At about the time that this statement was made I had had two cases which demonstrated in such a striking and convincing way the value of jejunostomy that I feel constrained to record them as a small contribution to this subject.

CASE I

A man, aged 38, who had been invalided from the Navy on account of his gastric ulcer, first came under my care in October, 1930. He commenced to have symptoms of a gastric ulcer in 1924, his pain coming on two hours after food. The condition progressed in the usual way, with intermissions of freedom, until he had to enter a naval hospital in July, 1929. After six weeks of "alkali treatment" he had a small haematemesis. In September, 1929, a posterior gastro-jejunostomy was performed, which, in a subsequent skiagram taken after a barium meal, was seen to be functioning. The operation afforded only temporary relief, and in July, 1930, he had a severe haematemesis, was subsequently invalided out of the Service, and referred to me at the Royal Portsmouth Hospital by his civilian doctor.

When I first saw him he was having constant attacks of pain, and was able to eat very little food: he had marked anaemia, and looked very ill. A barium meal revealed that no food was passing through the stoma, but that all of it went through the pylorus, which was deformed. Operation was advised. He was admitted to hospital on January 7th, 1931, having had continuous pain, from which he could get no relief, for a month. He was put on strict medical treatment in the hope of improvement, but nothing would relieve his pain, and so, in spite of his bad general condition, it was decided that operative treatment must be attempted as the only possible hope of recovery.

On January 14th the abdomen was opened under high percaine spinal anaesthesia and gas and oxygen. Great difficulty was experienced from the beginning on account of dense adhesions to the previous operation wound, so that much time was taken up in revealing the condition of the viscera. Eventually, there was found to be a large inflammatory mass, which involved the lower half of the stomach, the transverse colon, and a loop of jejunum. With considerable care this mass was freed, and it was found that anything like a radical operation would have meant the resection of a portion of the stomach, transverse colon, and jejunum—a very formidable undertaking. At this point the patient became very collapsed, and any operation of such a nature was quite out of the question; consequently the mass was replaced and a jejunostomy performed, care being taken to leave plenty of jejunum above the opening to allow of a subsequent Polya type of partial gastrectomy. The jejunostomy tube was brought through the left rectus muscle and the abdomen closed. The patient made a very good recovery from this operation, and all feeding was carried out through the jejunostomy. As he still had some gastric pain, alkalis were given by the mouth for a short time, but soon these were discarded; nothing at all was then given by the mouth, and he complained of no more pain. With the absence of pain and with the increase in nourishment that the jejunostomy afforded, the improvement was marked; but still

further to improve his condition a blood transfusion was given on February 25th, six weeks from the first operation.

On March 18th, nine weeks from the first operation, the abdomen was reopened. Considerable time was again needed for dealing with adhesions, but when this first stage had been accomplished the inflammatory mass was found to be very much smaller, and the oedema which had been so marked and prominent at the first operation was now gone. The improvement was so great that it was clear that a partial gastrectomy was now quite feasible, without the necessity for resecting any of the colon. The first step was to isolate as far as possible the loop of jejunum that ran up to the mass. This loop was adherent to the transverse mesocolon and to the transverse colon, and had to be cut away from the latter. In doing this an opening appeared in the jejunum; the opening was not closed, but was wrapped up in a swab, as it appeared to come in such a position that it might be useful for the subsequent anastomosis to the stomach. It afterwards transpired that this opening was the relic of the gastro-jejunostomy stoma, though this fact was not clear at this stage. The jejunum now being free it remained to be seen if the stomach could be separated from the colon. To this end the first part of the duodenum and pylorus were exposed, with some difficulty, and now it appeared that here was the seat of the original ulceration, for all this portion was thickened and scarred. The first part of the duodenum was divided in the usual way for a Polya type of partial gastrectomy, and an attempt made to turn the stomach over to the left. This was not possible until the stomach had been separated from the transverse colon, and, whilst this was being done, a hole appeared in the stomach when it was cut away from the colon. The colon was forming the floor of the ulcer in the stomach, and the weak spot in the colon wall, constituting the floor of the ulcer, was oversewn and covered with a piece of omentum. The stomach could now be turned over quite freely, and one now expected to find the original gastro-jejunostomy; this was not present, and therefore it became apparent that it had already been dealt with and that the inflammatory mass had been due to gastro-jejunal ulceration at the original stoma. Furthermore, it was clear that the gastro-jejunostomy must have been performed with quite a long loop. The partial gastrectomy was then completed as quickly as possible with an ante-colic loop, and the opening already present in the jejunum was excised, extended, and used for the customary end-to-side anastomosis of the stomach to the jejunum. The abdomen was closed and a blood transfusion given, the patient's condition being quite good at the termination. He made a very quick recovery, and now, a year from the operation, is healthy, can eat well, and has regained his normal weight.

A consideration of the findings in this case points to the conclusion that the original gastro-jejunostomy was performed with rather a long loop to the jejunum, and that gastro-jejunal ulceration supervened. It would appear that the resulting inflammatory reaction and fibrosis caused the transverse colon to be drawn down to the stoma, and eventually drew it between the stomach and jejunum; thus, finally, the colon formed the bed of a gastric ulcer on the one hand and a jejunal ulcer on the other. Possibly the opening in the transverse mesocolon through which the loop of jejunum was brought was also made rather unusually close to the colon itself.

CASE II

The second patient, a woman aged about 50, stated that her symptoms started when she was 25, and that at first she had long intervals of freedom from symptoms. Vomiting commenced with the attacks twelve years ago. For one year previous to March, 1930, she had been quite free from any gastric disturbance, but at that date the trouble recommenced and continued until I saw her.

On examination this patient was emaciated, was in constant pain, was vomiting everything she took, and looked like a case of advanced malignant disease. An attempt was made by means of a barium meal exactly to locate the trouble, but this was impossible as she could not retain the meal. Medical measures were tried without relief, and, as the patient was getting rapidly worse, it was decided that operation was imperative.

On August 25th, 1930, the abdomen was opened under general anaesthesia. The stomach was found to be adherent by its upper two-thirds to the liver and diaphragm; it was impossible to move it or to get to its posterior surface, and the stomach and omentum were markedly oedematous. The question of any operation on the stomach itself was obviously impossible, and therefore a jejunostomy was performed, care being taken to leave sufficient jejunum between the opening and the duodeno-jejunal flexure to allow of a subsequent partial gastrectomy. The patient made a slow recovery, but it was very striking how her pain was at once relieved after the stomach was put at rest. In this case nothing whatever was given by the mouth, not even alkalis. All nourishment was given by the jejunostomy opening for a period of eight months. At the end of that time the patient had gained in weight, had improved in her general condition very much, and was able to get about to a certain extent. At the end of the eight months a barium meal was given, and a condition of hour-glass constriction of the stomach was revealed. There was no indication of active ulceration, and there appeared to be quite a good-sized proximal pouch. It was decided to operate again.

The abdomen was reopened on April 15th, 1931, and, though there were some adhesions, there was no very great difficulty in exposing the affected area. The duodenum was divided and the stomach turned over to the left; the situation of the ulcer was revealed by adhesions of the lesser curve to the left lobe of the liver and the pancreas. There was, however, no great difficulty in separating the stomach from these structures, and the partial gastrectomy was completed in the usual way. An end-to-side anastomosis of the stomach was made to the jejunum, and again the existence of the jejunostomy caused no trouble. As in Case I, feeding was started by the mouth in six hours, and the jejunal feeds were continued for about a week, when the tube was withdrawn; the jejunostomy opening closed rapidly of its own accord. This patient made a good recovery, and one year from the operation she writes: "I am able to do my household duties, take long walks, and enjoy good health; also my weight is 8 stone."

The examination of the portion removed showed a typical hour-glass contraction of the stomach, but there was no sign of ulceration, the mucous membrane merely being thin and adherent over the scar area.

SUMMARY

Two cases of "massive" gastric ulcer are described, in each of which the patient was in such a bad condition that immediate full operative cure was impossible.

The performance in each instance of a jejunostomy allowed both the general and local conditions to be so improved that radical operation became possible.

The jejunostomy quickly removed all the pain of which the patients complained, thus showing that it is rest to the stomach which gives relief in these cases.

One case illustrates that true rest to the stomach will cause complete healing of a large ulcer in eight months, without the use of alkalis. The case also shows that a patient can be adequately nourished for eight months by means of a jejunostomy, and at the same time be rendered fit for an extensive operation.

The jejunostomy in no way hinders the performance of a partial gastrectomy.

One case illustrates the spontaneous separation of a gastro-jejunostomy.

Two cases admittedly do not furnish sufficient evidence from which to draw dogmatic conclusions, but the obvious and definite success here would enable the writer to have no hesitation in repeating the procedure should occasion arise. The detailed reports are published in the hope that other evidence of this type of operative procedure may be recorded.

REFERENCE

[1] *Proc. Roy. Soc. Med.*, July, 1931, xxiv.

INTERMUSCULAR ABSCESSES

WITH SPECIAL REFERENCE TO ABSCESSES OF THIGH

BY

H. A. PHILLIPS, M.D., F.R.C.S.

The comparative rarity of intermuscular abscesses and their irregular distribution are responsible for the rather scanty reference accorded them in standard textbooks and in the medical press. These abscesses are generally situated between groups of muscles rather than in the actual substance of one muscle, and it would therefore appear that the original infection occurs in the areolar intermuscular tissues themselves.

There are two main types: those of known aetiology and those comprising the more interesting idiopathic type. Among the known causes are suppuration occurring in a haematoma, or in an intermuscular bursa or around a foreign body, or in lymphatic glands which are situated either normally or abnormally in tissue planes between muscles; and also pyaemic conditions.

The more common intermuscular abscesses which arise by direct spread from neighbouring suppurations, especially in joints and bones, are not considered here.

Haematomata.—These may be caused by direct violence, but are more commonly caused by complete or partial rupture of a muscle, either through the muscle fibres themselves or at their point of attachment to their respective tendons, during sudden and incoordinate contraction. Most haematomata are absorbed or become organized into fibrous tissue, but a few suffer a low-grade infection and become abscesses. If the patient be seen at this latter stage and does not remember the original haematoma, then the association of recent trauma with a deep-seated hard and painful muscular swelling, often raised in temperature, may suggest sarcoma. The muscles most commonly suffering degrees of rupture are probably those of the extremities, but very curious haematomata from the most unlikely of muscular strains occur in other muscles, such as the serratus anticus or the rectus and obliquus abdominis. A case is reported below of an abscess forming in a haematoma caused by sudden contraction of the hamstring muscles.

Pyaemia.—Pyaemic intermuscular abscesses are generally multiple and the originating foci sufficiently obvious either on ante- or post-mortem investigation. A curious point about these abscesses is their relative painlessness and the insidiousness of their spread.

Other Causes.—The possibility of abscesses developing from suppurating bursae arises only in those regions supplied with bursae. Some gluteal abscesses develop in this manner, but most of them arise from underlying conditions in the pelvic bones or track into the buttock from other regions. Those abscesses that arise around foreign bodies are usually self-evident, but occasionally the previous accident is forgotten or suppressed, and the incriminating fragment, frequently a piece of shrapnel or glass, is not discovered until the abscess is opened. Foreign bodies such as needles, which migrate along muscle planes, do not seem to set up abscesses. In regions of the body where there are intermuscular lymphatic glands, small abscesses may form and spread out among the muscles, as, for example, in subpectoral abscesses. There is said to be an occasional gland lying on the tibio-fibular interosseous membrane[1] which can originate a deep-seated abscess. The source of infection in abscesses of this type is generally obvious, but is much less so in cases occurring some weeks after influenza or scarlet fever. It seems fairly rare to find intermuscular tuberculous abscesses.

Idiopathic Abscesses.—Lastly, there is a large group of single intermuscular abscesses which appear to have no known cause. In this respect they are comparable with some cases of perinephric, ischio-rectal, popliteal, or even subphrenic abscesses. They must, however, be caused by bacterial or other emboli from some infective focus whose exact situation is not always ascertainable, and it would appear that organisms are often temporarily present in the circulation without any noticeable effect on the individual. Possibly they are excreted by the kidney.[2] In fact, in

Case	Sex	Age	Original Diagnosis	Symptoms and Duration	Signs	Temperature and Pulse	Operation	Organism	Aetiology
1	F.	15	Acute osteo-myelitis	Pain: Middle third right thigh, 5 days; worse on movement. Inability to walk, 2 days. General symptoms of toxaemia, anorexia, etc., present	Tenderness ++ in middle third. Swelling slight and general. Colour unaltered. Temperature unaltered. Fluctuation, none	101.8° 124	Abscess between vastus externus and rectus femoris	Staphylococcus aureus	Unknown
2	F.	19	"	Pain: Middle third right thigh, 6 days, "cramp-like"; could walk, but with a limp. General symptoms absent	Tenderness ++ in middle third. Swelling indefinite; thickening of middle third of femur. Colour and temperature: After 3 days' observation leg became warmer, but not red. Fluctuation, none	100.8°	Abscess between quadriceps and periosteum	Staphylococcus aureus	Unknown
3	M.	24	"	Painful limp right leg, 7 days. Deep-seated pain. Inability to walk and general malaise necessitating confinement to bed, 4 days. General symptoms very marked	Tenderness ++ in middle third. Swelling not evident. Colour and temperature normal. Fluctuation absent	98° 100	Abscess between vastus externus and rectus femoris	Staphylococcus aureus	Furunculosis in previous 3 months
4	M.	27	"	Pain and swelling in posterior aspect lower third left thigh, 2 weeks. General symptoms present	Tenderness ++ lower third left thigh, postero-medially. Swelling present locally. Colour and temperature: Red and hot [illegible] Knee	103.4° 88	Abscess amongst hamstring muscles	Staphylococcus aureus	Due to traumatic haematoma; 4 weeks previously patient slipped whilst alighting from a train and strained hamstrings at site of abscess
5	M.	36	Intermuscular abscess	Pain and swelling [illegible] aspect of right thigh at upper part of middle third, 7 days	[illegible] which in about 5 days pointed superficially, with the usual signs of heat, redness, and oedema	101° 112	Abscess at apex of Scarpa's triangle and Lwer	Staphylococcus albus	Probably due to scarlet fever 5 weeks previously. Suppuration had occurred then in the submaxillary lymph glands, but the causative organism was not known

The *x*-ray appearances in Cases 1 and 3 were normal. Cases 4 and 5 were *not x*-rayed. The radiograph of Case 2 at time of operation was normal. Twenty-one days later however a small area of bone destruction was visible immediately below the point where a precautionary incision of the periosteum had b [illegible] whilst ether was being switched on to supplement nitrous oxide anaesthesia. At th [illegible]e femur in Case 1 was drilled after the abscess was opened, but no pus was found. A [illegible]oretically doubtful. No such exploration of the medulla was made in subsequent cases.

the same way that many renal and perinephric abscesses were found to be sequels of furunculosis,[3] many of these idiopathic intermuscular abscesses are of similar aetiology, and a case illustrating this point is reported below.

Though no part of the body is immune, the commonest site for an intermuscular abscess is the thigh, and the tabulated reports of five cases seen personally show the clinical features of abscesses in this region. I have also seen abscesses in the flexor muscles of the arm, the glutei, the rectus abdominis, and the infraspinatus.

SIGNS AND SYMPTOMS

The commonest symptom complained of is deep-seated pain in the thigh, of fairly acute onset, sometimes cramp-like at first, and generally throbbing in nature in the later stages. The pain is worse on bending the hip or knee, and eventually prevents the patient bearing any weight on the leg. There are varying degrees of malaise and anorexia resulting from systemic intoxication. Rigors are rare. There is generally marked pyrexia and a rapid pulse, and the patient looks ill. Often there is nothing untoward apparent in the thigh, although there is extreme tenderness on pressure over a fairly wide area. After a few days' illness the affected thigh may be a little larger than the other on mensuration, and deep fluctuation may with great difficulty be elicited. Not, however, until the abscess points many days later will any redness or oedema be present.

Acute osteomyelitis is generally diagnosed when the case is first seen. But this is an affection of the metaphysis, and must be very rare in the middle third of the femur. Mr. Gwynne Williams has, however, reported several cases of osteomyelitis of the shaft of the femur occurring in adults.[4]

Where the general symptoms and signs of acute suppuration are not marked, and the main symptom is deep-seated pain, it might be possible to confuse the issue with diagnoses of rapidly growing osteogenic sarcoma, or more unlikely still of gumma of the thigh, intermuscular lipoma, or cold abscess. "Rheumatism" is also an easy and common misdiagnosis.

An *x*-ray examination is necessary to rule out bone conditions such as sarcoma and subperiosteal abscess, and aspiration is helpful in confirming the diagnosis.

When pus has been obtained by aspiration, it is useful to leave the needle *in situ* and then to incise along it to the abscess, retracting or splitting the intervening muscles. A minimum of trauma results if the pus can conveniently be evacuated from the lateral aspect of the thigh.

The accompanying table shows the main points of the cases.

CONCLUSIONS

The following points emerge:

1. Intermuscular abscesses of the thigh occur most frequently in young adults.
2. They are often diagnosed as osteomyelitis of the femur when first seen.
3. The causative organism is generally *Staphylococcus aureus*.
4. Some of them have a previous history of furunculosis, and in this respect are comparable with perinephric abscesses.

I am indebted to the following medical staffs for permission to publish these cases: West London Hospital (Cases 1 and 2); Woolwich War Memorial (Case 3); Bolingbroke Hospital (Case 4); and St. Giles's Hospital (Case 5).

REFERENCES

[1] *Gray's Anatomy*, p. 800.
[2] Brewer: *Journ. Amer. Med. Assoc.*, 1911, lvii, 179.
[3] Thompson: *Lancet*, 1927, ii, 695.
[4] *Brit. Journ. Surg.*, 1914, ii, 97.

PAROXYSMAL TACHYCARDIA ASSOCIATED WITH PREGNANCY

BY

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In a previous communication[1] attention was directed to a case of paroxysmal tachycardia in which throughout the entire period of gestation not a single attack occurred. Delivery took place on October 31st, 1931, and the patient is now having attacks as frequently as before the inception of pregnancy. It may be mentioned in passing that the child has a left supernumerary breast like the mother. Bishop[2] mentions a case in which paroxysms of tachycardia ceased with the onset of pregnancy, and further details are awaited with interest. Recently there has been under observation another case of paroxysmal tachycardia presenting a direct contrast to that previously recorded. The following are the particulars:

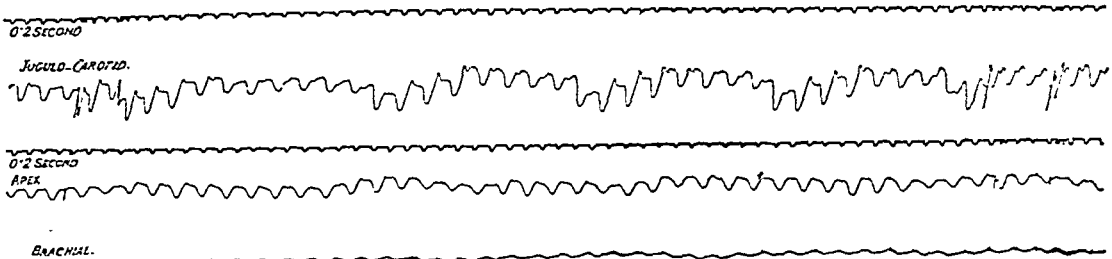
The patient, aged 30 years, pregnant for the seventh time, was admitted to the ante-natal wards of the Glasgow Royal Maternity and Women's Hospital on October 1st, 1932, having been sent from the outdoor department on account of her anaemic condition. The skin was pale, the mucous membranes of poor colour, and examination of the blood confirmed the diagnosis of secondary anaemia. Of previous illnesses she had had none, with the exception of measles and whooping-cough in childhood. The Wassermann reaction was negative and the blood pressure within normal limits. Percussion of superficial cardiac dullness revealed the right border at mid-sternum. The first sound at the apex was almost entirely replaced by a soft, blowing murmur, conducted to the axilla, while a short systolic murmur was audible at the other areas. There was no oedema, and no thyroid enlargement could be detected.

The following is the patient's obstetric history:—*First Pregnancy, 1921*: uneventful, spontaneous delivery at term. *Second pregnancy, 1924*: uneventful, spontaneous delivery at term. *Third pregnancy, 1926*: uneventful, spontaneous delivery at term. *Fourth pregnancy, 1927*: one day, when six months pregnant, she dealt with a big wash in a public wash-house. On finishing she came home, climbed two flights of stairs without difficulty, and sat down. Just at that moment she experienced a tight feeling across her chest. This lasted for two or three seconds, and was immediately relieved with the onset of a bout of palpitation. This initial attack lasted for about half an hour. Similar attacks occurred on two occasions before the birth of the child. The delivery was spontaneous, following an easy labour of two hours' duration (June 16th, 1927).

No further attacks were experienced until she was once more eight months pregnant (*fifth pregnancy*). During a stormy passage from Uist she had the tight sensation across the chest, followed by a bout of palpation, which lasted for an hour and relieved her discomfort at its onset. No other attack occurred during this pregnancy, which at term ended in spontaneous delivery after an easy labour lasting two hours (October 17th, 1929). There were no attacks thereafter until she became pregnant again (*sixth pregnancy*). She aborted at three months, having had in that period three or four bouts of palpitation, each lasting for about an hour (October 15th, 1931).

During the *seventh pregnancy* she had several attacks. They began when she was five months pregnant. A fortnight before admission she had the longest attack in her experience, lasting for twelve hours. A week after admission (October 8th, 1932), at 7.45 a.m., she suddenly complained of palpitation. The pulse at the wrist was uncountable, but the apical rate was ascertained to be 200 per minute. This rate remained practically constant throughout the attack, which was of about thirteen hours' duration and more protracted than

any hitherto. During this time the rhythm was perfectly regular, and the patient, apart from slight breathlessness, was undisturbed, eating her food normally. Polygraphic tracings confirmed the regularity of the rhythm and the rate (200–204 per minute), records being taken of the apical, jugulo-carotid, and brachial pulsations: typical portions of these are shown. Fifty minutes after the administration hypodermically of 1/10 of a grain of digitalone the radial pulse was running



Polygraphic tracings taken during paroxysm of about thirteen hours' duration.

96 per minute. On October 21st, 1932, a bout of tachycardia occurred while the patient was in the act of settling down for the afternoon rest. The apical rate was determined to be 200 per minute. Twenty minutes after the hypodermic injection of 1/10 of a grain of digitalone the tachycardia ceased and the normal rate was restored. With the usual preliminary tight sensation in the chest there was another bout of tachycardia on November 1st, 1932. The attack ceased as suddenly as it had begun, without the administration of any drug, the duration being thirty-five minutes. Spontaneous delivery occurred on November 4th. The child weighed 8¾ lb. During the labour, which lasted for four hours, the patient was not distressed in any way, and had no tachycardia. The puerperium was uneventful, and she was dismissed on November 13th.

During all her attacks the patient has felt a little breathless, but has never vomited. She usually lay down at the beginning of an attack, then got up and walked about. She used to drink cold water, but the attack finished as suddenly as it had begun. There has never been oedema, and at no time has anything suggesting thyroid enlargement been noticed. The onset and termination of an attack have always been heralded by the sensation of constriction in the chest.

The patient was advised to have sterilization performed, but declined.

Fraser[3] has kindly communicated the details of a case of paroxysmal tachycardia in which the attacks were much more prolonged and severe during pregnancy. He has found digitalis valueless in the condition.

COMMENTARY

In this case of paroxysmal tachycardia the outstanding feature is the absence of attacks between pregnancies. An obvious cardiac lesion was present. No thyroid enlargement could be detected. Digitalis on two occasions appeared to be efficacious in terminating the attack, but on another occasion, without the exhibition of this or any remedy, the attack ceased as suddenly as it had begun. In this there is an illustration of the difficulty of assessing the value of a drug in such a condition. The easy labour is another noteworthy feature in this case, and is typical of the experience of many patients who have a cardiac lesion. At no time has an attack of tachycardia occurred during labour. The first bout of tachycardia originated in the fourth pregnancy: a patient who has emerged apparently scathless from her first three pregnancies is often observed to present symptoms in her fourth as the result of damage to some organ —such as the kidney.

This case would be regarded as one in which the heart, although slightly damaged, was equal to the demands made upon it in the course of the woman's daily life. The strain of pregnancy on each occasion since the fourth gestation has proved too much for an already overtaxed organ. In the previously recorded case,[1] the possibility of increased endocrine activity during pregnancy being connected with the absence of attacks cannot be dismissed. In the case under review, it is possible that endocrine activity, although increased during gestation, has proved inadequate; alternatively, a disturbed balance in the endocrine system may have been responsible for the occurrence of attacks during pregnancy.

My thanks are due to Professor Munro Kerr, to whose unit the patient was admitted, for permission to publish these notes.

REFERENCES

[1] Anderson, D. F.: *British Medical Journal*, 1932, i, 657.
[2] Bishop, B. W. F. (Kimberley, South Africa): Personal communication.
[3] Fraser, D. H. (London): Personal communication.

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

PAROXYSMAL TACHYCARDIA ASSOCIATED WITH PREGNANCY

Having read of the case reported by Anderson[1] in the *British Medical Journal*, I am prompted to place on record my own somewhat similar case, in view of the few described. Meyer, Lackner, and Schochet[2] have recorded two cases of paroxysmal tachycardia in pregnancy. In one the paroxysm commenced two days after a normal delivery and lasted six days, with a remission of eight hours. A searching review of the literature, as stated by these authors, revealed only four or five cases of true paroxysmal tachycardia in pregnancy.

CASE RECORD

Mrs. R., aged 39, engaged me on January 10th, 1930, for her confinement. It was her fourth pregnancy, there being three healthy children. She had a faint cloud of albumin in the urine, which cleared up in the next fortnight. Examination on that date disclosed nothing abnormal with her heart, and she did not volunteer any information as to any "attacks" during her pregnancy. She was admitted to a private maternity hospital at 7 a.m. on February 28th, pain having started at 5 a.m. At 9.30 a.m. there was dilatation of the os of less than a two-shilling piece, the membranes ruptured at 2 p.m., and the pains were severe; 0.5 c.cm. of pitocin (P. D. and Co.) was administered at 2.15 p.m., as the head was almost on the perineum. A healthy normal male child, weighing 9¾ lb., was born at 2.35 p.m. There was some delay in the passage of the head through the perineum, but there was no laceration. The placenta and membranes were delivered complete at 3 p.m. A further dose of 0.5 c.cm. pitocin was then injected. Within two minutes of the second dose the paroxysmal tachycardia developed. The heart rate became 184, the pulse being uncountable at the wrist. At

[1] Anderson, D. F.: *British Medical Journal*, 1932, i, 657.
[2] Meyer, J., Lackner, J. E., Schochet, S. S.: *Journ. Amer. Med. Assoc.*, 1930, xciv, 1901.

4.15 p.m. the rate was 208, at 5.30 p.m. 180, at 6 p.m. 146, at 7 p.m. 120, and at 8 p.m. 100 per minute, so that the paroxysm lasted nearly five hours. There was a moderate amount of post-partum haemorrhage, but not sufficient to cause much rise in the pulse rate.

The following therapeutic measures were adopted: morphine 1/4 grain and atropine 1/100 grain was injected, and, as this had very little effect, digitaline 1/100 grain was given. One cubic centimetre of ergot aseptic (P. D. and Co.) was administered intramuscularly to control the haemorrhage. Unfortunately it was not possible to register the heart beat graphically, but, as far as the stethoscope could be trusted, the beats were regular. The treatment carried out seemed to have no effect on the condition.

The next morning the heart returned to normal, the patient feeling quite well. The puerperium was uneventful. It was only on questioning the patient later that she disclosed the fact that she had had numerous similar "turns" during the last three months of pregnancy. Her description was "as if all the blood seemed to rush to the groins, the heart seemed to stop beating, then the blood rushed back to the heart, which commenced beating again." Each "turn" lasted about fifteen minutes. There had been no attacks prior to this pregnancy. She had no warning of the onset of the attack at the end of labour, nor of any which occurred during the latter months of pregnancy.

One feature in this case which differs from that of Anderson is that several attacks occurred during pregnancy—in his case none occurred during gestation.

Sydney, Australia. CLYDE DAVIS, M.B., Ch.M.

SERUM REACTIONS IN EARLY SYPHILIS

A considerable amount of doubt appears to exist in the minds of many and opinions differ as to how soon a positive serum reaction may be expected after the appearance of a syphilitic sore. Kolmer[1] states that he has never observed a positive blood reaction earlier than the fifth day after the appearance of the sore, and gives the following percentage of positive reactions:

Five to fourteen days	... ...	44 per cent.
Ten to fourteen days	... ...	75 ,,
Three to four weeks...	... ...	82 ,,
Four to six weeks ...	... ...	94 ,,

In addition, it has been claimed that the Kahn precipitation test is more delicate than the Wassermann in primary syphilis.

In order to throw some light on the above points the case records of 151 consecutive male cases of untreated primary syphilis reporting at the St. Thomas's V.D. Clinic between September 29th, 1931, and October 20th, 1932, were analysed. In all cases except one *Sp. pallida* was demonstrated by dark-ground examination. A positive reaction tended to appear first after about five to seven days from the appearance of the sore, but in six cases the reaction was negative after fourteen days, in one after twenty-one, one after twenty-two, one after twenty-three, and in one it was still negative after as long as forty-two days. This last case is of some interest as spirochaetes were not found till four weeks after the sore appeared. It seems not unlikely that the original sore was a chancroid, and that this was superinfected with syphilis at a later date. Unfortunately no serum test was done between the forty-second and sixty-second day after the sore appeared. Comparing the sensitivity of the Wassermann[2] and Kahn[3] reactions, out of 151 cases tested in parallel the two reactions agreed in 122; in thirteen the Wassermann reaction appeared the sooner and in sixteen the Kahn. Of the thirteen in which the Wassermann reaction was the stronger six were doubtful (±) and seven positive. Of the sixteen which favoured the Kahn three were doubtful and thirteen positive. In the whole series there was only one case where the two reactions absolutely disagreed—negative Wassermann reaction and positive Kahn. It will be seen, therefore, that as regards the diagnosis of early syphilis there is very little to choose between the two reactions, and that a positive result may be expected in the large majority of cases by the fourteenth day from the appearance of the sore.

[1] Kolmer, J. A.: *Serum Diagnosis by Complement Fixation*, 1929.
[2] Medical Research Council, Special Report Series, No. 129, 1929.
[3] Kahn, R. L.: *The Kahn Test: A Practical Guide*, 1928. (Slightly modified.)

I am indebted to the kindness of Col. L. W. Harrison, director of the V.D. Clinic, St. Thomas's Hospital, for permission to publish these notes.

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Reports of Societies

OPERATION IN ACUTE MASTOIDITIS

At a meeting of the Section of Otology of the Royal Society of Medicine on February 3rd, with Mr. J. F. O'MALLEY in the chair, a discussion on early and late operation in acute mastoiditis was opened by Mr. DOUGLAS GUTHRIE.

It was not easy, he said, to decide when operation was required in acute mastoiditis. He regarded the term "early operation" as signifying operation before the end of the first week or ten days, and "late" or "delayed operation" as operation after the fourth week. Recently, and especially during the past ten years, it had become the accepted practice to operate early. Had the pendulum swung too far? The choice of the moment for operation must depend on personal opinion and judgement to some extent. Pain and tenderness over the mastoid process, with oedema, constituted the most important sign, but for a few days there might be pain and tenderness—described as "mastoidism" by Alexander—which did not call for immediate operation. How long should one wait, after paracentesis, for pain and tenderness to disappear? The age of the patient and the general condition must be taken into consideration. Operative intervention, if undertaken too early, might favour the spread of general infection. Mastoiditis was not analogous to appendicitis: early cases did not demand operation; it was more comparable with acute osteomyelitis, in which immediate operation might be dangerous. Neumann, in a study of 1,300 cases, had shown that the second and third weeks were the favourable period for operation, and that early intervention, while it prevented late complications, did not diminish the mortality (25 per cent. in the first week and only 5 per cent. in the third). In a series of 151 consecutive cases of his own, Mr. Guthrie said, there had been no deaths or complications among seventy cases operated on during the second and third weeks, but four deaths among cases operated on in the first week. Cases of fulminating septicaemic mastoiditis were uncommon, and as a rule improvement did not follow immediate operation in such cases. He classified mastoiditis as average, mild, and severe. For the average case he thought that early operation was sound in practice, but the second or third week appeared to be the safest period. Mild cases might possibly recover without operation. For the acute fulminating type operation during the first week was not as safe as had been supposed. Would not the septicaemia be aggravated by the removal of the nucleus of a fixation abscess, and might not a few days' delay under observation be justified?

Mr. C. A. SCOTT RIDOUT regarded "early operation" as referring to operation within the first four or five days and operation after a week as late. Pathologically, mastoiditis should be considered as an osteomyelitis. In the opinion of an authority on orthopaedic surgery osteomyelitis of a long bone called for immediate operation, and the same principle should hold in the treatment of mastoiditis. An important symptom of the condition was the toxic appearance of the patient. Radiography might help in the diagnosis of doubtful cases. Between the years 1927 and 1931 he had operated on 196 patients for mastoiditis, with four deaths; in each of the fatal cases

operation had been delayed. In only one case had the mastoid been opened unnecessarily. If a case was allowed to go on too long without operation there was danger of damage to the ossicles, with consequent loss of hearing. One authority had said: "He who waits for spontaneous rupture of the tympanic membrane teases and endangers his patient." Mr. Scott Ridout said that he had never regretted operating early, though he had sometimes regretted not operating still earlier. Paracentesis offered the smallest drainage of any surgical operation; the surgeon was endangering his patient if he did not give the pus free exit.

The CHAIRMAN considered that there was an analogy between acute mastoiditis and acute frontal sinusitis. Dr. DAN MCKENZIE was in favour of early operation, though in some of the fulminating cases it might be advisable to wait a little. He asked whether, in Neumann's series, the early operations had been performed because complications were present or simply to test the merits of early operation; if complications were present the patient might have died from these, and not as a result of operation. Fulminating cases with septicaemia could be diagnosed by the toxic condition, the high temperature, and also by a hyperaesthetic condition of the skin near the ear, so that the patient often complained while the head was being shaved. Operation in these cases was usually followed by a violent reaction, but if operation was postponed virulent material was left in close proximity to the brain and labyrinth. Dr. HENDERSHOT of Oregon said that he and his colleagues had come to depend on the blood picture in deciding the optimum time for operation. Osgood of the University of Oregon had shown that the blood picture in these cases changed from day to day; by observing whether new cells were being formed it was possible to tell whether the blood was putting up a fight against the infection.

Mr. ERIC WATSON-WILLIAMS said that although a few cases of acute mastoiditis recovered without operation only a person who had seen a great many cases was justified in trying to decide which could safely be left. During delay the patient was exposed to the risk of complications and to unnecessary pain and discomfort. In influenzal mastoiditis hearing was lost early, and might suffer permanent damage if operation was delayed. He did not think postponement of operation was of value in fulminating cases; a certain number would die in any case, and he could not see the advantage of having a fixation abscess so near the brain. Mr. T. B. LAYTON said that the infection might be either invasive or pyogenic. If it was invasive there was danger of spread to the brain, and he thought operation should not be delayed more than a day at most. In pyogenic cases delay was not serious. The invasive type was best seen in influenza, and the surgeon had to decide to what extent the general condition was due to the primary respiratory infection and how much to the otitis. Mr. E. C. TAMPLIN said that it was possible to get pus in the mastoid process within twenty-four hours. Sometimes the general practitioner failed to call in a consultant early enough. It ought to be made clear that mastoid cases needed watching by an expert.

Sir JAMES DUNDAS-GRANT drew attention to the value of a throbbing noise and feeling in the patient's head in the diagnosis of acute mastoiditis. If a patient was deaf in the other ear he thought it was an indication for early operation to conserve hearing. Mr. W. STUART-LOW was strongly in favour of early operation, but Mr. R. SCOTT STEVENSON pointed out that good results were being obtained at the Mayo Clinic by delaying operation. He was not suggesting that every case should be left, but suitable cases might be put to bed and watched. Mr. W. STIRK ADAMS said that out of 100 cases of acute mastoiditis seen during the past eighteen months he had performed paracentesis only in forty-one and the mastoid operation in the rest. He had lost only one case, and that by fulminating otitis. He thought there was a case for watching the patient in hospital. Mr. L. GRAHAM BROWN agreed with the chairman that frontal sinusitis was analogous to mastoiditis. There must be a period in mastoiditis when the mucous periosteum only was infected and natural drainage from the mastoid antrum could be hoped for. When empyema of the mastoid occurred, however, intervention was necessary. He concluded that operation might be delayed for twenty-four to forty-eight hours in the hope that the patient might recover spontaneously.

NERVOUS SEQUELS OF SPINAL ANAESTHESIA

At a meeting of the Royal Society of Medicine (Section of Anaesthetics) on February 3rd the president, Dr. C. F. HADFIELD, called on the members to pay a tribute to the memory of the late Mr. Richard Gill, who had been the first president of the Section after the formation of the Society.

Mr. H. K. ASHWORTH then read a paper on the nervous sequels of spinal anaesthesia, classifying them into immediate and remote. He described the former as paralysis of the phrenic and failure of the respiratory centre; the remote were meningitis, paresis and anaesthesia, headache, mental changes, backache, and late results. Paralysis of the phrenic, he said, could occur only as a result of gross error of technique or dosage. Every non-volatile drug injected must pass into the blood stream, and to this extent it was a potential danger to the respiratory centre. As to remote effects, Mr. Ashworth had seen one case of meningitis in 650 patients: this was in a man of 70 who had a partial cystectomy for carcinoma of the bladder under percaine. There was no trouble at operation, but twenty hours after there were drowsiness and symptoms of meningismus. On the next day the cerebro-spinal fluid was turbid and under increased pressure; a non-haemolytic streptococcus was obtained on culture. Without developing fulminating symptoms of meningitis the man went slowly downhill, and died seven weeks after operation. There were three instances of paresis and analgesia in 650 patients; two were transient and one fatal. The latter case was that of a man of 50 undergoing a second-stage prostatectomy under spinocaine: anaesthesia was unsatisfactory, and ether had to be used. On recovering consciousness the patient complained of cramp and stiffness of the legs. Five hours after operation he had profuse coffee-ground vomiting, and the pulse weakened. Twenty hours after operation there was complete paralysis of the spinal cord below the ninth dorsal segment, with signs of upward extension and profound circulatory collapse. He was conscious and rational, and died an hour later. No post-mortem examination was held, but death was probably due either to a haemorrhage compressing the spinal cord or to a virulent infection, which seemed unlikely in so short a time. Mr. Ashworth regarded headache as the most important nervous sequel, because, although not fraught with serious consequences, it was the most frequent, and very difficult to treat. There was, he said, a strong functional element in this symptom. Headache occurred in nine out of 184 patients who had had percaine. Headache was less frequent with stovaine and spinocaine. There were two types: that due to seepage of cerebro-spinal fluid at the site of puncture, and that due to slight meningeal irritation causing disturbance of the function of the choroid plexus. Strict routine as to posture was the chief means of prevention. Patients were kept in the Trendelenburg position for eight hours after operation and recumbent for twenty-four hours; reading was forbidden during this time. When the headache was occipital, associated with signs of meningismus or extending down the back of the neck, repuncture was the shortest way to a cure. Backache, if not due to posture during operation, occurred only when the puncture had been difficult. In order to ascertain late sequels the speaker had circularized 272 patients, included within a three-year period. Forty patients had died in the interim—twenty-seven from the disease for which they underwent operation; ninety-seven patients gave a direct negative to every question; sixty-four gave positive or doubtful answers to one or more questions. Thirty of these patients came for examination by Dr. F. R. Ferguson: twenty of these, he decided, had symptoms definitely not caused or aggravated by the anaesthetic. A large proportion of them showed symptoms which, except for careful examination, would easily have been attributed to the spinal injection.

parathyroid was removed at operation, whereupon the blood calcium dropped, the calcium balance became positive, and symptoms disappeared.

Dr. J. G. GREENFIELD and Dr. ELIZABETH O'FLYNN recorded observations on the leucocyte count after irradiation of the thymus. Contrary to expectation and to what had usually been believed to be the case, irradiation resulted in no drop in the relative or total lymphocytic count. Dr. S. C. DYKE, for Mr. R. L. Dutton (Wolverhampton), demonstrated an apparatus for the clinical estimation of the cholesterol content of the blood. The method required only 0.25 c.cm. of blood ; this was taken up on absorbent paper and extracted with chloroform in a special apparatus, and the estimation was made colorimetrically with the acetic-anhydride-sulphuric-acid colour reaction.

Dr. R. KLABER showed an extensive series of microscopical preparations comprising most of the fungal infections of the skin met with in this country, together with cultures of the different species. Dr. Klaber pointed out that the so-called " common ringworm " of *Microsporon audouini* was now not nearly so common as it once was, the " black-dot " ringworm—once something of a rarity—occurring more frequently. Dr. Klaber drew attention to the difficulty of diagnosis in this type of ringworm, and pointed out that infected hairs might be difficult to obtain for examination ; they were best secured by lifting them out with the overlying scurfy skin. Mr. H. E. KENDRICK demonstrated a portable apparatus, for hospital use, for the estimation of the basal metabolic rate, and also various types of apparatus for the chemical examination of the blood.

HORMONES IN PREGNANCY

At a meeting of the Edinburgh Obstetrical Society, held on January 11th, with the president, Dr. JAMES YOUNG, in the chair, Dr. J. M. ROBSON read a paper on some of the factors responsible for controlling the activity of the uterus, and more especially of the uterine muscle, during pregnancy.

He discussed the normal physiological alterations in the uterine reactions to oxytocin and vaso-pressin in the rabbit and the human subject during the various phases of the sex cycle, the data being largely based on experiments performed on uterine strips *in vitro*. He said that in the rabbit normal gestation (which lasts about thirty days) was divided into three stages. (1) In the first stage, which lasts for about sixteen days, neither oxytocin nor vaso-pressin caused any contraction of the uterine muscle. The addition of pituitrin might indeed result in inhibition of the rhythmic movements and relaxation, this being especially due to vaso-pressin. (2) In the second stage, which lasts for a varying period after the first, an anomalous condition was observed in that vaso-pressin brought about contraction of the uterine muscle, while oxytocin had no effect. (3) In the third stage, which marks the terminal part of pregnancy, the reaction to oxytocin returned and gradually increased until finally it became extremely marked during parturition, rapidly decreasing during the puerperium. Parturition, therefore, marked the apical point in the reactivity of the uterine muscle. Similar experiments were performed on human uterine strips removed during operations at various stages of pregnancy. No specimens earlier than three months were obtained. During the early stages of pregnancy—that is, about three to five months—oxytocin had no effect on the uterine strips, while vaso-pressin caused contraction. Later on the reactivity to oxytocin again returned, and gradually increased during the later stages of gestation ; at parturition it was of the same order as that observed in the rabbit uterus at the same stage. In several experiments the reactivity of strips removed from the lower uterine segment during parturition was determined and found to be significantly less than that of similar strips removed from the body of the uterus during labour.

In the second part of the paper an attempt was made to elucidate the hormonic basis of these muscular changes. The corpus luteum seemed to play an important part in determining the absence of muscular reactivity during the earlier stages of pregnancy. It appeared possible that the corpus luteum secretes a specific hormone—the inhibitory hormone, acting on the uterine muscle—which is different from the progestational hormone, acting on the endometrium. The actions of the corpus luteum on both the endometrium and the muscle did not occur unless sufficient quantities of oestrin were present, but under certain experimental conditions it was possible to obtain full progestational effect on the endometrium without any inhibitory action on the muscle. The injection of oestrin in such cases was followed by full inhibition of the muscular reactivity. This suggested that for the action of the corpus luteum on the muscle more oestrin must be present than is necessary for the development of the endometrial reaction.

According to Dr. Robson the inhibitory action of the corpus luteum could scarcely be regarded as a satisfactory explanation for the maintenance of pregnancy and onset of parturition, since it had been definitely shown that in the human subject normal gestation could occur after removal of both ovaries. Moreover, placentae removed during gestation contained no corpus luteum hormones. The fact that the uterine reactivity rapidly decreased after parturition would suggest that the high reactivity during labour was brought about by an active factor. It had been found that the injection of crystalline oestrin (B.D.H.) into ovariectomized rabbits very markedly increased the reactivity of the uterine muscle, which in some experiments became equivalent to that observed at parturition. If it be accepted, therefore, that the posterior pituitary lobe hormone plays a part in parturition, then it seemed very likely that oestrin was, to some extent at least, responsible for building up that reactivity of the uterine muscle which culminated in parturition.

ACUTE TETANUS

At the January meeting of the Section of Surgery of the Royal Academy of Medicine in Ireland, with the president, Mr. HENRY STOKES, in the chair, Mr. A. B. CLERY read notes on a case of acute tetanus. The patient was a boy aged 3½, and the onset was rapid, the time interval between infection and symptoms being seven days ; well-marked tetanic convulsions were established in a further thirty-six hours. The condition was not diagnosed until the compelling sign had developed, although the boy was seen by two doctors when in a state of trismus. Consequently treatment was not begun until the disease was well established, toxins in considerable quantity had reached the nerve centres, and the stage had arrived when one would fear that treatment was well-nigh hopeless. The boy received 94,500 units of anti-tetanic serum in a period of nine days, 30,000 being injected into the cisterna magna. He left hospital cured in thirty days' time.

The PRESIDENT said that during the war he had seen a great many cases of tetanus, and had been struck by the fact that it was almost impossible to give a prognosis in any particular case. He had never seen a case receive so much serum as Mr. Clery's. Mr. T. J. D. LANE referred to the rapid onset in this case, and wondered if there was any possibility of the cut which was supposed to be the focus of infection not being so, and of the child having been infected some days before he got that cut. Mr. W. PEARSON thought the chief difficulty in this case was the patient's age ; it was extremely difficult to administer serum to young children. During the war he had seen a great deal of tetanus, but had been fortunate in that all the cases under his care had recovered. He gave intravenous injections of serum, and had given a few intrathecal ones, but these did not seem to have any better results. In adult cases he thought it was a great advantage to get the patient semi-comatose with bromides and chloral. Mr. F. J. HENRY stressed the fact that tetanus was very likely to occur from the wadding of a cartridge or firework, which always contained spores of tetanus bacilli.

Mr. CLERY, in reply, said he thought it was necessary to give just as large doses of serum to a child as to an adult. Anaphylaxis followed anti-tetanic much more commonly than any other serum.

Reviews

DISEASES OF THE THYROID

The Diagnosis and Treatment of Diseases of the Thyroid Gland,[1] by Professor GEORGE CRILE and twenty-four associates, does not profess to be a formal treatise on thyroid disease, but represents the clinical experience of the Cleveland Clinic. There are two introductory chapters: a review of the relations of iodine and the thyroid by George Crile, jun., which has a bibliography of nearly five pages, and a short article on the biochemistry of iodine. These are on rather different lines from the other thirty-seven chapters, which deal with very many aspects of thyroid disease. The amount of material available for clinical observation and research at the clinic may be computed from the statement that 22,441 operations on the thyroid, including nearly 17,000 thyroidectomies and ninety-one operations for the removal of thyroglossal duct cysts or fistulas, have been performed.

Professor George Crile contributes exactly one-third of the chapters, beginning with those on the part played by the thyroid in the energy system, on endemic goitre, and on the mechanism of hypothyroidism and hyperthyroidism, and later six chapters on the operative treatment. For hyperthyroidism he now has sufficient data to conclude that operation is in every way superior to all the other methods, individually or all combined. In cases of pulmonary tuberculosis followed by hyperthyroidism (and this has been the invariable sequence of events in his experience of this association) thyroidectomy has been performed in eighty-seven cases, with improvement in 74.5 per cent. The view taken is that the energy system which is stimulated as a defence against the tuberculous infection is the same as the energy system which is driven excessively in hyperthyroidism, and that thyroidectomy will act in the same way as rest in the treatment of tuberculosis.

It is interesting to find that in the chapter on the treatment of hyperthyroidism by x rays and radium Dr. U. V. Portmann remarks that in the hands of competent radiologists these methods have been successful in many cases; that in the present state of knowledge it is unwise to advocate one form of treatment to the exclusion of all others; and that he does not propose to discuss the arguments against irradiation, "some of which are academic, and many of which are now obsolete or untenable, as the same objections may be raised to other methods of treatment." Other chapters deal with the blood picture, the cardiac disturbances, and metabolic manifestations in hyperthyroidism. In the section on ocular changes associated with hyperthyroidism Dr. Ruedemann gives a remarkable coloured plate of post-operative exophthalmos with congestive conjunctivitis, and mentions that post-operative exophthalmos is usually due to hypothyroidism, and that care must be taken to prevent a second operation in the erroneous belief that recurrent hyperthyroidism has occurred. This volume contains a great deal of interesting information, and is generously illustrated.

INHERITANCE OF EYE DISEASES

The fifth and concluding section of the Nettleship Memorial Volume on the hereditary aspects of diseases and anomalies of the eye has now appeared. It is a fitting finish to a magnificent work, such as has never before been undertaken in any language. The volume forms the twenty-seventh issue of the Eugenics Laboratory Memoirs series, and the five sections of the Nettleship Memorial Volume deal respectively with the general heredity of eye anomalies and diseases, colour-blindness, blue sclerotics, hereditary optic atrophy, and finally, in the section at present under review, on *Some Hereditary Structural Anomalies of the Eye and on the Inheritence of Glaucoma*.[2] This section again is by Dr. JULIA BELL, who has already secured for herself a well-earned place in the literature of her subject.

The volume divides itself naturally into three parts. The first deals with anomalies in the size of the eye—microphthalmos, megalocornea, and buphthalmos. The hereditary tendency of all of these conditions is well recognized, and the author is almost certainly right in drawing a sharp line between the latter two, which differ so materially from each other in their pathology and in their hereditary transmission. The next part deals fully with the hereditary aspects of glaucoma, for there is now an extensive literature which illustrates this aspect of the disease and which has only been adequately recognized in recent years. One interesting fact which is brought out is that the mean age of onset in definitely hereditary cases is twenty years earlier than for the general series of cases of glaucoma; in a statistical study, 52 per cent. of 196 hereditary cases occurred before the thirtieth year, while only 3.6 of the 3,021 general cases occurred before this age. Moreover, as transmission is continued, the mean age of onset in the offspring is some ten years earlier than the mean age in the parent. The last part deals with congenital anomalies of the iris—aniridia, coloboma of the iris, and hereditary ectopia lentis. There follows an extensive bibliography, a number of illustrations, and no fewer than 308 pedigrees, each of which is fully annotated. The amount of reading and labour which has been put into the preparation of the volume is enormous; it has been compiled with an accuracy and a painstaking thoroughness which can only excite the reader's admiration, and will certainly place it as the classical reference book in its subject in the literature of the world.

It is noteworthy that with the appearance of this volume the editor of the series, Professor Karl Pearson, retires from the Galton chair. In *The Treasury of Human Inheritance* he has left behind him a fitting memorial: we hope that his successor may find it possible to continue and perpetuate this fine work.

DERMATOLOGY: A NEW APPROACH

The Practical Manual of Dermatology,[3] by Drs. DESAUX and BOUTELIER, is planned on rather unusual lines. It consists of two volumes. The whole of the first is devoted to an essay on the diagnosis of skin affections by an analysis of the actual visible lesions, together with a consideration of the susceptibilities of the region attacked. This is followed by a section in which the varied reactions of the skin to different pathological stimuli are fully discussed and described; there is also a short account of dermatological therapeutics. The detailed description of the different diseases of the skin, the subject which forms by far the largest and most important part of most dermatological textbooks, is not entered upon until the second volume. The authors state that this arrangement of matter had the approval of their great teacher Louis

[1] *Diagnosis and Treatment of Diseases of the Thyroid Gland*. By George Crile and Associates. Edited by Amy F. Rowland. Philadelphia and London: W. B. Saunders Company. 1932. (Pp. 508; 164 figures. 32s. 6d.)

[2] *The Treasury of Human Inheritance*. Vol. ii, *Anomalies and Diseases of the Eye*. Part V (concluding section), *On Some Hereditary Structural Anomalies of the Eye and on the Inheritance of Glaucoma*. By Julia Bell, M.A., M.R.C.P. Edited by Karl Pearson, F.R.S. Nettleship Memorial Volume. Eugenics Laboratory Memoirs, xxvii. London: Cambridge University Press and H. K. Lewis and Co.; Bombay, Calcutta, Madras: Macmillan and Co., Ltd.; Tokio: Maruzen Company, Ltd. 1932. (Pp. 120; 18 figures. 36s. net.)

[3] *Manuel Pratique de Dermatologie*. By Drs. A. Desaux and A. Boutelier. Two volumes. Paris: Masson et Cie. 1932. (Pp. 916; 641 figures. 260 fr. the two volumes.)

Brocq, whose death had prevented him from writing the preface to their manual.

The authors quite rightly emphasize the importance of making a correct diagnosis, and they propose that their book should be used in the following way. The student must first learn "the dermatological alphabet," which is composed of the essential primary lesions of skin diseases. When considering any particular case he will only need to recognize the primary lesion of the condition before him in order to refer to the appropriate page in the section devoted to diagnosis, where he will find a photograph and a diagnosis made. This, of course, is a counsel of perfection. Anyone sufficiently well trained to recognize the primary lesion of a case will be able to make his own diagnosis without much further help. On the other hand, the section devoted to regional diagnosis in which the characteristic affections of the various parts of the human surface are detailed and illustrated—a method of approach originally adopted by Sabouraud some twenty years ago—will be found of more practical use. We must add, however, that those who already possess some knowledge of dermatology will find the detailed descriptions and classifications of the fundamental lesions of cutaneous disease most interesting, while the photographs illustrating the various features are extremely good and clear. This section, together with that upon the different forms of skin reaction, may really be regarded as constituting an essay on the philosophic and scientific foundations of dermatology, and as such it deserves study by specialists in the subject. It illustrates an attempt to unify dermatology into a logically constructed system such as probably only the Gallic mind is capable of. Such a systematization of the subject is very different from the typically British method of attack, which is always directed essentially to practical ends and in which systematic classification and elaboration is only likely to be carried far enough to prevent confusion of thought and to facilitate the student's grasp of the practical bearings of the subject. In so far as the clinical manifestations of skin diseases can be elevated into a systematized classification, these authors have performed their task extremely well. But since dermatology has really only been divided off from the general body of medicine as a matter of practical convenience rather than because it shows any essential difference, it is questionable whether it needs a special philosophy of its own. Nevertheless, we must commend the attempt that Drs. Desaux and Boutelier have made to infuse their subject with precision, and we feel sure that the study of their efforts will enable the reader to clarify his own ideas.

CHILDREN'S TONSILS: IN OR OUT?

DR. ALBERT KAISER'S investigations of the result of tonsillectomy in children, reported in the *Journal* of *the American Medical Association* (December 31st, 1927), have already been noted in our columns. He has now made a much more elaborate analysis of these observations with the aid of several colleagues of the University of Rochester Medical School, and the conclusions are published in a book entitled *Children's Tonsils: In or Out.*[4] The clinical material consists of 4,400 school children in Rochester. In one-half the operation was performed; in the control half the operation was recommended but not carried out. The children were observed for [illegible]vity of strip[illegible] years, and the two groups were found to be significantly less [illegible]pared. Most of the benefits were derived from the body of the ute[illegible] first three years after the o[illegible]s in later years, so that part of the paper an attempt was [illegible]ngrew [illegible] hormonic basis of these muscular chang[illegible]D. luteum seemed to play an important part in [illegible]ng the absence of muscular reactivity during more alike. For example, it was found that from 36 to 41 per cent. of young children have repeated attacks of tonsillitis. Tonsillectomy was recommended for all these children, but in only half was permission given for the operation. Three years after the operation a survey showed that only 3 per cent. of the children in whom tonsils had been removed had recurrent sore throats, compared with 36 per cent. previously. In the other group the incidence remained the same—about 40 per cent. before and after. Seven years later—that is, ten years after the operation—10 per cent. of the first group were having recurrent attacks of sore throat, as against 36 per cent. originally, and in the control group of 2,200 who still had tonsils 35 per cent. were having attacks of tonsillitis, against 41 per cent. previous to the time when removal had been advised.

It was found that the incidence of rheumatic fever is 33 per cent. less in children in whom the tonsils have been removed, but that the operation has no influence in preventing recurrences when performed subsequently to the initial attack. These recurrences are observed in young children under 9 years of age whether tonsils are removed or not, while after 10 years of age recurrences are less common in both groups. In each of the two groups of 2,200 seven children had had chorea before the operation was either performed or advised. During the ten years after operation twenty-six children developed chorea, while among the 2,200 in whom there was no tonsillectomy thirteen developed chorea. In the two groups, fifty-two children had rheumatic fever after tonsillectomy, and seventy-eight children who kept their tonsils had rheumatic fever. These observations appear to settle the relation between tonsillitis and acute rheumatism, which has caused so much debate. It was found that rheumatic carditis is as likely to develop in children with rheumatic fever whose tonsils are out as in those whose tonsils are still present. The operation appears to give a slight protection against the incidence of scarlet fever, but has not reduced it by one-half as was previously supposed. The influence on the incidence of diphtheria is more pronounced.

This book is a wholesome corrective to the widespread illusion that tonsillectomy is a panacea against almost every ailment of childhood. It should be studied in detail by every physician in charge of a clinic for children, and by all on whom rests the responsibility for recommending these operations.

PSYCHOLOGY OF THE PRE-SCHOOL CHILD

Primarily intended for psychologists and other research workers engaged in the study of child development, a fascinating book by Dr. KATHERINE BRIDGES of Montreal, entitled *The Social and Emotional Development of the Pre-School Child*[5] will have a wider appeal. The many photographs of children doing this or that and the "scales" devised for estimating the degree of development are themselves of interest to teachers and parents, and, in particular, the author's sincere attempt to present her results without too much dogmatic deduction makes it possible to read this book without any of the antipathy too often aroused by psychological studies from across the Atlantic. For a period of three years she has kept under observation about fifty children attending from 9 a.m. to 3 p.m. at the McGill University Nursery School for five days a week for nine months in the year. Roughly speaking they were all normal children, and the observational method was used throughout, no special experiments being employed. From the outset the author

[4] *Children's* [illegible] London: J[illegible] 21s. net.)

[5] *The Social and Emotional Development of the Pre-School Child.* By Katherine M. B. Bridges, Assistant Professor of Psychology, McGill University. London: Kegan Paul, Trench, Trubner and Co., Ltd. (Pp. x + 277; 97 figures. 12s. 6d. net.)

deliberately tried to avoid the adoption of any set method of classification of social behaviour or of emotional behaviour. A preliminary study of twenty children was made, and " scoring " for various features of development was carried out according to a tentative scale. This was then revised and used for a fuller study of the whole group. The bulk of the book deals with the results thus obtained, and the photographs taken by the author—without special posing, with an ordinary snapshot camera—serve to make very clear the type of observation carried out. A poor index is a disappointing ending to an otherwise good book.

THE BACTERIOPHAGE

Colonel J. MORRISON has published the essay awarded the Parkin Prize by the Council of the Royal College of Physicians of Edinburgh as a small book, entitled *Bacteriophage in the Treatment and Prevention of Cholera*.[6] The author has brought into his subject conceptions which would have seemed very strange one hundred years ago, when Dr. John Parkin bequeathed a sum of money for a prize to perpetuate interest in the problem of cholera, to which he had devoted so much of his energies. The bacteriophage seems novel to us. What an amazing conception it would have then seemed to a medical officer of the East India Company living before the discoveries of Pasteur and Koch! However, the book was not intended for the venerated Dr. John Parkin, but for us to-day. It is divided into three chapters, of which the first two, on the bacteriophage and the cholera problem, are very informative, and should be useful to medical officers and laboratory workers in cholera districts. The third chapter, on bacteriophage treatment of cholera, is disappointing, and the reader is left rather undecided about the future value of this line of treatment. The illustrations are good.

Notes on Books

Preparation of the third edition of *A Companion to Manuals of Practical Anatomy*,[7] of which the first was published in 1913, has involved a drastic revision of the text by the author, Dr. E. B. JAMIESON. This has resulted in the necessary addition of about a hundred pages, some of which are devoted to new matter, but others to a more explicit setting out of subjects that had suffered from too much compression in the previous issues. The anatomical basis of neurology has gained by this expansion, and the summary of facts is more comprehensive as well as more readable. The Basel nomenclature has been retained for the most part, with certain Anglicisms in general use. Care has been taken to verify some disputed statements about the relations and connexions of some deep-seated structures, and the whole book testifies to the conscientious supervision which has been exercised.

The need for a simple yet authoritative textbook of physiology is often felt by those who have to teach this subject to young people, or to nurses, public health officials, or even to students of dentistry or of general science. This need seems to have been satisfactorily filled by BEST and TAYLOR'S *Human Body and its Functions*.[8] Those who find that the ordinary books written for medical students require too much preparation by way of preliminary scientific work should derive benefit from the treatment of the subject in this very attractive little volume. It is well illustrated with simple diagrams, most of which are original; the examples and experiments quoted are easily intelligible and instructive, elementary anatomy receives proper consideration, and the claims of historical perspective and of minute structure have not been forgotten. Naturally there is no space for details, and these are not to be expected; indeed, they would have detracted from the value of the book. But the broad outlines are there, and the point of view is modern, which is very refreshing when compared with the early nineteenth century atmosphere of most such books. For example, the mechanisms of posture, the essential features of the respiratory exchange, the action of the principal hormones, receive reasonable consideration. There is also a sensible account of reproduction, and even the main features of heredity have not been omitted. Many a teacher of physiology could learn a good deal about simple ways of teaching the subject from such a book.

Professor A. V. HILL, lecturing to an audience largely composed of chemists, has recently told them that nerve transmission is of the nature of a chemical wave. The problem of the means by which the nervous impulse is transmitted is one of the oldest in physiology, and the theories advanced from time to time to explain it have been reflections of current thought, in physical or physico-chemical science, of the periods concerned. Of recent years advantage has been taken of the electrical properties of membranes charged by deposition of ions, and the modern view seems to fit the facts better than any of the previous ones did. Professor Hill was himself the first to succeed in showing that heat is produced in nerve when impulses are transmitted along it, and so his recent Liversedge Lecture[9] will be read with the interest which it should command. The lecture deals mainly with his own work or with that of his associates. As a simple and clear statement of modern opinions, which the author's work has done so much to build up, the book is an interesting addition to contemporary literature on this fundamental subject.

[6] *Bacteriophage in the Treatment and Prevention of Cholera*. By J. Morrison, C.I.E., M.B., D.P.H., Lieutenant-Colonel I.M.S. London: H. K. Lewis and Co., Ltd. 1932. (Pp. 32; 14 plates (27 figures), 4 graphs. 4s. net.)

[7] *A Companion to Manuals of Practical Anatomy*. By E. B. Jamieson, M.D. Third edition. London: H. Milford. Oxford University Press. 1932. (Pp. xxxv + 654. 12s. 6d. net.)

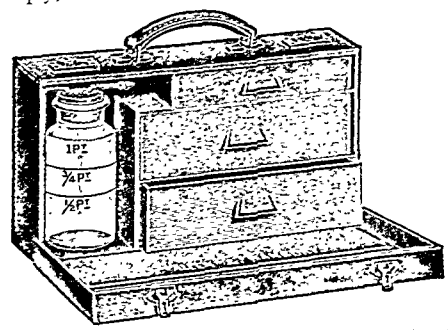
[8] *The Human Body and its Functions*. By C. H. Best, M.A., M.D., D.Sc., and N. B. Taylor, M.D. An elementary textbook of Physiology. Toronto: W. J. Gage and Co., Ltd. 1932. (Pp. 417; 299 figures.)

[9] *Chemical Wave Transmission in Nerve*. By A. V. Hill, F.R.S. Based on the Liversedge Lecture delivered at Cambridge on May 13th, 1932. London: Cambridge University Press. 1932. (Pp. 74; 13 figures. 5s. net.)

Preparations and Appliances

THE PHLEBOTOMIST'S CARRIER

Messrs. Allen and Hanburys Ltd. have made for Dr. Watson Smith of Bournemouth a handy case for carrying French's phlebotomy apparatus. The case is stoutly built of fabric and three-ply, covered with brown rexine, and is made so



that the open lid lies flat, to form a tray. The bottle is retained upright by means of a web strap affixed to the back. There are three drawers, as illustrated, to carry all accessories. The over-all measurements of the case are: 16 by 9 by 4 inches. The top drawer measures 8¾ by 3 by 1½ inches, and the middle and lowest 10¼ by 3¼ by 3¼ inches. The carrier is provided with spring locks and key.

Trufood Limited, of Union House, St. Martin's-le-Grand, E.C.1, have been appointed sole distributors for Lever's vitamin concentrates, and all inquiries with regard to these products should be addressed to them.

British Medical Journal

SATURDAY, FEBRUARY 11th, 1933

PUBLIC HEALTH AND THE UNIVERSITIES

Dr. John Sundwall of the University of Michigan, in an article on the functions of universities in public health education,[1] quotes Lord Beaconsfield to the effect that public health is the foundation on which repose the happiness of a people and the power of a country. On this showing the subject stands out as an interest of the first importance, and, if studied, worthy to be pursued with the thoroughness and intensity which are the aim of university teaching. In Great Britain the principal groups of persons who now receive public health education at universities are either undergraduates studying medicine or medical graduates aiming at a post-graduate qualification in public health. The former group receive their public health teaching as part of their medical course, a scheme of study which is broadly based on a scientific foundation, and which in its general scope and outlook may be accepted as reasonably exacting of both diligence and ability. The training of his medical course has prepared the mind of the undergraduate for the reception of the preventive idea. His public health instruction does not require to begin with the exposition of elementary details. It takes off at a fairly high level and so continues. The latter group—the medical graduates who propose to adopt public health as a career—present an equally favourable field for the implantation of the higher public health learning. Their course can be conducted from the outset on an intensive plane, and even within the limited period allotted by the current regulations a durable structure of specialized knowledge can be erected, in their case, upon the completed medical curriculum. Thus in both groups, since those concerned have undergone an effective preliminary training, high standards of teaching can be observed.

For these reasons, speaking for conditions as they apply in this country, we should entirely concur with Dr. Sundwall when he includes the teaching of public health to medical students and graduates among the services which universities are properly giving to public health education. Also, for reasons which are too obvious to need detailed reference here, we are completely at one with him when he specifies research in public health as a proper university interest. But when he proceeds, in developing his argument, to bring within the normal university field the teaching of health visitors, sanitary inspectors, and others of non-medical grade in the public health services, we cannot but feel that he is describing a regime which differs considerably from that in vogue in this country, where education at a lower standard, unless as a preliminary to further advance, is repugnant to the university plan. We do not in any way undervalue the services rendered to public health by the officials named; these are appreciated by none more highly than by the university-trained medical officers who supervise their work. Nor do we intend to criticize adversely the action of any British universities which may be providing under their aegis courses for the non-medical members of the public health service. Least of all do we seek to disparage any schemes of adult education in public health or other subjects which may be carried on at a popular level by universities, since these courses are ostensibly cultural and do not lead to a recognized qualification. British universities are in general opposed to short qualifying courses unless at a more or less specialist standard and based upon a previous degree. On these grounds we incline to the view that, except in cases where the department of public health in a university enjoys a measure of autonomy or happens to be more lavishly endowed financially than most university departments in Britain to-day, the conduct of courses in public health for non-medical grades is, on the whole, an inadvisable field of university enterprise, inasmuch as it is bound to yield a return of far less value to the country than the teaching of the same subject to medical students and graduates. A university which introduces such courses into its routine curriculum runs the risk of diverting to minor uses those energies of its public health staff which should be devoted to medical instruction. Dissipation of effort in this way can ill be afforded at the present time, when medical schools are being urged on all hands to key up the teaching of the subject to medical students, and when notable expansions of scientific knowledge are almost daily widening the scope of teaching for the diploma and degrees in sanitary science.

It appears to us that the medical undergraduate and graduate should be served first. They are those who will most richly repay the high-grade teaching in public health which the universities can provide, not only because a knowledge of the subject is essential to them for the work of their profession, but also because among the population in general they will, in after life, be the main repositories of accurate information on health, and should therefore be the most trusted apostles of any movement, whether spontaneous or specially directed, for the promotion of right health knowledge among the people. The general practitioner, as he comes and goes in his daily practice, receives and utilizes many opportunities of disseminating advice and information on health among his patients and their relatives. Questions are very often put to him and his views accepted as decisive. The average person (*pace* a recent anonymous writer in the *Week-End Review*) still reposes almost unbounded confidence in his doctor. Later on, when the doctor attains to positions on councils, associations, and committees, his influence extends over an ever-widening circle, and his opinions on public health problems assume a correspondingly greater importance. The medical officer of health again, as soon as he enters on

[1] United States Public Health Reports. Vol. xlvii, No. 41. Government Printing Office, Washington, 1932.

an independent post, takes responsibility for the health of the population in his area. As he rises in the service his opportunities and his responsibilities grow side by side until, it may be, he finds himself in charge of some great city or county, guiding policy, devising reforms, and originating—or alternatively restraining—proposals that involve financial commitments of the most serious kind. Entering the service of the State, if he attains to eminence in his department, his range of influence may become nation-wide and his views and pronouncements form national opinion, or, expressed in the appropriate quarter, may sway the destinies of his country.

To train men for the efficient discharge of such responsible duties would appear to be an adequate aim for the university teacher. It is, moreover, an aim of such signal importance that it may well call forth his most earnest endeavour, from which he should not be turned aside by any minor distraction. Since its public health, as Lord Beaconsfield said, determines the happiness and power of a nation, the competence, outlook, and mental equipment of those who administer the public health services of this country are fundamental to its progress and prosperity, and never more so than now. The training of such men should be the best attainable, and those who give it should put all their weight into it. If it be admitted—and it will scarcely be questioned—that the universities are able to give this teaching, we would recall to them the time-honoured advice, *Spartam nanctus es, illam exorna.* It is clearly their province: they should make the best of it. In other words, it is most in the public interest for the universities to continue and increase their teaching of public health to medical students and graduates, and leave the training of non-medical grades in the hands of those who at the present time are developing it in a manner which promises to be adequate for the purpose in view.

PHYSIOLOGY OF MENSTRUATION

Although remarkable advances have been made in ovarian physiology and in the identification of the hormones of the anterior pituitary, the problem of the causation of menstrual bleeding has yet to be solved. It seems to be clear that cyclical uterine haemorrhage assumes one of two forms. In the macaque monkey the haemorrhage may be comparable to that of menstruation in the human female in that it is the result of the breaking down of a premenstrual endometrium, in which case a corpus luteum is present in the ovaries; or the haemorrhage may be anovular in type, no corpus luteum being present in the ovaries and the haemorrhage being derived from the degeneration of an interval endometrium. In Europe both Schröder and Wilfred Shaw have pointed out that the two types of bleeding can be regarded as separate and distinct, and that the term "menstruation" should be restricted to haemorrhage from a disintegrating premenstrual endometrium. It may well be that the factor producing the disintegration is the same in both cases, and it is more than probable that the same factor is at work in cases of metropathia haemorrhagica. The German school still adopts Robert Meyer's conception of the "primacy of the ovum," and believes that it is not until the ovum released by ovulation has degenerated that retrogression begins both in the corpus luteum and in the endometrium. There is, however, very strong evidence against this view, for Allen and others have demonstrated degenerate ova in the washings of Fallopian tubes obtained relatively early in the premenstrual phase. Again, Hartman has shown that uterine bleeding can be induced with anterior lobe extract in female macaques which have been spayed or hypophysectomized. In his opinion the ovarian hormones do not produce uterine haemorrhage in the hypophysectomized female, and he has postulated a "bleeding hormone" for the anterior pituitary.

There is apt to be great confusion in the interpretation of uterine bleeding. Pro-oestrous bleeding in the bitch, the regular intermenstrual haemorrhage sometimes encountered in women, and the haemorrhage induced by large doses of oestrin in some of the lower animals are all examples of the congestion induced by the oestrus-promoting hormone. This type of bleeding is essentially different from either menstrual haemorrhage, the haemorrhage of metropathia haemorrhagica, or the anovular cyclical bleeding of the macaque, for in these cases there is destruction of tissue, and, in the opinion of some competent workers, necrosis as well. Recently Mazer has brought forward evidence to show that in some cases of functional sterility in women menstruation has been replaced by anovular cyclical bleeding corresponding to that of the macaque.[1] Perhaps the evidence is not conclusive, but it indicates very clearly that further work is required along these lines. One of the most striking results of the vast amount of research that has been done on the ovary and pituitary is the recognition that at least five or six hormones are linked up with the phenomenon of menstrual bleeding. Even a superficial acquaintance with biology would have damped the enthusiasm of those who welcomed the hormone oestrin as a panacea for all gynaecological disorders. Reproduction is one of the most primitive characters of life, and, existing from pre-Cambrian days, it has had ample time in which to attain a high degree of specialization. It may perhaps be admitted by some that it is possible for a fortuitous aggregation of simple molecules to form protoplasm or even a cell; but reproduction is much more than this, and it is open to question whether its essential problems will be solved by chemical reactions in a test tube. The significance of the sex hormones which have already been recognized is hardly appreciated at the present day: for example, the specific proliferation of the oestrin-sensitized endometrium under the influence of progestin is a remarkable phenomenon biologically, quite apart from its physiological importance. Perhaps such considerations as these have been responsible for the recent enthusiastic endeavours of Zondek and his co-workers to inhibit cancer growth by massive injections of

[1] Mazer and Ziserman: *Amer. Journ. Surg.*, 1932, xviii, No. 2, 332

right side of the heart. In others, careful attention to diet avoids the gastric disturbance which provokes the attack. Quinidine may be helpful in stopping an attack, through its depressant action on the heart muscle and its effect of prolonging the refracting period. As a prophylactic it is not very satisfactory to give over long periods when attacks are few and far between; but when they are frequent their recurrence may be checked. The association of the simple tachycardia with the extrasystolic arrhythmia is interesting. The latter also, as far as the auricles are concerned, and perhaps the ventricles as well, links up the circus movements of fibrillation and flutter with the simple tachycardia. Too little is known about the derangements in the state of the muscle cells which lead to these arrhythmias, but they appear to have a common basis. How far gross recognizable pathological changes play a part it is hard to say. It is as important to explain why the majority of cases in which pathological changes are present do not show these disturbances as to associate the latter with the myocarditis which Major and Wahl describe.

AETIOLOGY OF WHOOPING-COUGH

In our issue of January 7th (p. 26) we drew attention to an epidemiological investigation which suggested that whooping-cough is now (in London at any rate) "the most important epidemic disease of childhood as regards the infliction of physical and nervous suffering, loss of school attendance, the subsequent impairment of health and resistance to other maladies, and the considerable death rate." There is no doubt that this disease has been too much neglected in the past, both by clinicians and by pathologists. Perhaps to the pathologist whooping-cough made less appeal than did diseases whose origin seemed more obscure, but this need not be a factor in the future, for it looks as though the whooping-cough bacillus is going the way of *Micrococcus catarrhalis* and the influenza bacillus. When first named these bacteria were regarded as the causative agents in catarrh and in influenza; now both these infections are known to be caused by a filterable virus, the bacteria being only secondary invaders. The work of A. R. Rich[1] suggests that whooping-cough also is first caused by a filterable virus and the cough and tracheal irritation should be attributed to secondary infection with the Bordet-Gengou bacillus or even with the influenza bacillus. Such a point of view is supported by a consideration of the extreme infectivity of the disease, the durable immunity conferred by an attack, and the not infrequent complication of specific encephalitis. In these three particulars pertussis has some resemblance to distemper in dogs. Here, too, the infectivity is great, the immunity is durable, and encephalitis is common. In distemper, also, a small Gram-negative bacillus (*B. bronchisepticus*) is found to localize in the cilia of the respiratory tract in the same way as the whooping-cough bacillus does in the human being. This germ, *B. bronchisepticus*, was thought to be the cause of distemper until the work of Dunkin and Laidlaw proved that distemper is caused by a filterable virus. It is particularly interesting to notice that Rich has carried out experiments which have demonstrated the existence of a filterable virus associated with pertussis and capable of producing respiratory catarrh. There is, however, no evidence to prove that this virus is distinct from the virus of the common cold.

[1] *Bull. Johns Hopkins Hosp.*, December, 1932, li, 346.

GASTRIC ULCER IN CHILDHOOD

Chronic gastric ulcer is a very rare condition in children. In his report[1] of a case of perforating gastric ulcer in a boy of 13, Dr. J. C. Foshee has made a review of the literature on this subject. Up to date only eighteen cases have been reported. The youngest patient was a female infant aged 3 months, in whom necropsy revealed a deep single ulcer with terraced edges and a fibrotic thickened "surrounding wall." The average age at which the lesion occurs in children is 10 years. In the Mayo Clinic from 1906 to 1924 there was only one case of gastric ulcer in a child out of a total of 1,596 cases of this disease. Although an uncommon condition in children it is important that its occurrence should be recognized. Dr. J. C. Foshee's criteria for "chronicity" in these cases are that the symptoms must be of two months' duration or longer and that there must exist such pathological changes as induration and fibrosis. He considers that the ulcers are, to begin with, acute, following infection. Out of nineteen cases, eighteen of which he has traced in the literature, perforation occurred in thirteen. The nature and extent of the lesion were the same as those found in adults, the lesser curvature being the usual site of ulceration. The common symptoms were pain, vomiting, and obstinate constipation. Dr. Foshee prefers medical treatment to surgical, as he thinks children respond to the former better than adults, and that they do not stand operation well. Fourteen out of the nineteen patients recovered, thirteen of whom were operated on, posterior gastro-enterostomy being performed in twelve, and a partial gastric resection, with anterior anastomosis, in the thirteenth.

[1] Foshee, J. C.: *Journ. Amer. Med. Assoc.*, October 15th, 1932, p. 1336.

RONALD ROSS

The January issue of *Science Progress* contained an admirable appreciation of Sir Ronald Ross from the pen of his colleague and friend Sir Malcolm Watson, Director of Tropical Hygiene at the Ross Institute. We are indebted to Sir Malcolm for a reprint in pamphlet form, with a profile portrait of Ronald Ross in academic robes. By way of epilogue, there is the copy of a letter from Surgeon-General Gorgas written to Ross in March, 1914. In this Gorgas said: "Your discovery that the mosquito transferred the malaria parasite from man to man has enabled us at Panama to hold in check this disease, and to eradicate it entirely from most points on the Isthmus where our forces were engaged. It seems to me not extreme, therefore, to say that it was your discovery of this fact that has enabled us to build the canal at the Isthmus of Panama."

The Arris and Gale Lecture, on experimental shock, with special reference to anaesthesia, will be delivered by Professor R. J. S. McDowall, at the Royal College of Surgeons of England, on Wednesday, February 15th, at 5 p.m.

MEDICAL EDUCATION IN AMERICA

THE COMMISSION'S FINDINGS

The final report of the Commission on Medical Education, appointed by the Association of American Medical Colleges, was the subject of editorial notice in the *British Medical Journal* of January 14th (p. 70). The Commission was set up in 1924. It has already issued a series of interim reports, and these, together with this final report, form a notable contribution to the discussion of medical education in general. It is clear that from its inception the Commission has taken a broad view of the duty laid upon it, and has concerned itself not with the suggestion of new regulations or changes in curricula, but with the broader aspects of the relations of medical education to general and university education, and to " the shifting problems of medical practice, community health needs, and medical licensure."

Apart from changes in individual medical schools in the United States in the direction of improving the training of the medical practitioner, progress towards some unification of this training commenced in 1900, when the American Medical Association collected and published statistics on the medical school situation, and a few years later established a council on medical education within its own organization. In 1909 this association, through its council and a special committee, drew up a curriculum which was considered sufficient to meet the demands of medical practice at that time, but expressed no desire to see a uniform curriculum in all schools. Since this date the efforts of the A.M.A. in the cause of medical education appear to have devolved upon the Association of American Colleges to a large extent, but it is clear that the American Medical Association continues its interest in the subject, for its assistance is acknowledged in this report.

The American medical student does not complete his course of study and examination until an age which shows an average of just under 27 years. Following the period of primary and secondary education he attends a " college," where he takes studies preparatory to his admission to a medical school, and in this college course he spends from two to four years. At present every recognized medical school requires at least two years of preliminary college work. He then spends three to four years in the medical school, at the end of which he graduates, and finally, before starting practice, he has to pass an examination before the medical board of the State in which he proposes to practise. From the commencement of his preparatory studies at college to his admission to practice the average time taken is about ten years.

The Association of American Medical Colleges reviews but does not regulate the various curricula and examinations of the medical schools ; the Federation of State Medical Boards supervises the various State licensing examinations. In this regard it is of interest to note that in 1930 the Federation officially recognized the Association of Medical Colleges as the " standardizing agency in all matters of educational requirements for the degree of doctor of medicine or its equivalent," defining its own functions as those of (*a*) determining fitness for the practice of medicine, and (*b*) the enforcement of regulatory measures. It is clear that this voluntary association between the Federation and the medical school authorities is an important step towards bringing together the functions of education and licensing. There are other signs of an approach between the two parties, but under the constitution of the United States no unified national licensing is possible, because each State is entitled to autonomy in the matter.

PUBLIC ASPECTS OF MEDICINE

The report opens with a consideration of the public aspects of medicine and the problems with which it must deal in the community. It reviews the present organization of medical service, and remarks that present-day knowledge of the diagnosis, treatment, and prevention of disease is far in advance of its application. Regardless of how medical services may be organized and how social needs may change, the unit of practice will continue to be the individual. The application of medical remedy must be guided by the medical profession, and for this problem a wide knowledge of the medical needs of the community is necessary. No standardization of medical practice will ever be possible, although many diseases can and should be treated on the community basis—the infective fevers, for example. A present-day tendency is the emphasis placed upon mechanical devices and laboratory reports, but such are useless unless correlated with the individual patient by the trained physician. It is said here that necessary as specialization is, its development has gone beyond the needs of the community in the United States. It is remunerative, and this in part explains its extension ; and the same applies to surgery, which is not all done to-day by those who have had the necessary training.

Economic questions must have an influence on the organization of medical service, and therefore call for study by those who should advise ; service should be assured wherever it is needed, and in the forms in which it is needed, and in this matter the distribution of wealth needs regard. In the ranks of the profession the elaboration of knowledge clearly calls for more co-operation and less competition, and this elaboration calls also for modification in training, not so much by attempts to add all new knowledge to the curricula as by casting off the outworn traditions in teaching, and drawing distinction between what is essential and what has only special application. One thing that should be kept in mind is that medical practice will always begin with investigation, and that it is the faculty of investigation in particular which needs to be trained and kept alive.

The report then turns to an attempt to estimate " medical needs," and analyses a large mass of statistics derived from many sources, both public and private. It is held that without a knowledge of the distribution and nature of disease the experience that is needed by the physician cannot be estimated. Statistics of morbidity cannot alone provide this, but are of value. In regard to the supply and the distribution of medical practitioners in the United States the investigations of the Commission go to show that the total supply is in excess of the total need of the population ; that an adequate service could be provided by 120,000, whereas there are some 25,000 in excess of this number : this estimate assumes, however, a proper distribution and correlation, which is far from being the case. The influences which have concentrated the greater number in the large cities are considered, and the possibilities of correcting these are discussed. The United States possesses more doctors in proportion to the population than any other country, and the medical schools are sending out more graduates than are needed. In these days of rapid transport the uneven distribution of physicians is becoming of comparatively small importance ; more important is the excessive number who limit their practice to a specialty.

CONTINUITY OF EDUCATION

Whatever the primary training, the continuation of the training of the physician after graduation is a vital matter. In the opinion of the Commission the most important part of any programme should be directed towards taking educational opportunities to the practising medical

man in his own community or to centres where he can go without leaving his practice. Incidentally, it is suggested here that each State should keep a register of specialists, granting admission only to applicants whose training has been adequate.

There is a short chapter (V) on the curiously called "internship," a word which appears to have acquired a specific meaning in academic quarters in spite of its deformed etymology! It is held that a resident hospital appointment is necessary to supplement the curriculum, and should be required of all applicants for the licence to practise. It is to be noted that there is little in the ordinary American hospital course which corresponds to, or fulfils the purpose of, the clinical clerkship of British hospitals. In regard to the licence to practise, each State has its own requirements and regulations, but there is a considerable degree of reciprocity. In 1915 a National Board of Examiners was created, and the certificate of this Board is recognized in forty-one States and three territories, but so far few students have presented themselves. An increasing number of State Boards accept graduation in a medical school of the first rank, and require no further examination. Reference is made in this section to the fact that the public is ill informed regarding the purpose of licensing, a remark which applies to Great Britain also: from time to time public men, who should be better informed, speak of the licence as if it were a form of trade union regulation, ignorant of the fact that it is a regulation instituted by the legislature for the protection of the public. The various States of the Union also keep registers of various "cult" practitioners; the Supreme Courts of some States have ruled that osteopathy, chiropractic, and other forms of "drugless healing" are not the practice of medicine, but corresponding courts in other States have given an opposite ruling. The primary objections to this "substandard" practice is the scantiness of the training required and the absence of any scientific basis.

The existence of the State Medical Boards is said to be, on the whole, a serious bar to the maintenance of proper standards of practice, in spite of recent movements towards co-operation with the medical schools. One serious objection to their continuance is embodied in the following sentences: "The most important qualifications of an individual for the practice of medicine are character, native ability, industry, training, and experience. These qualifications can be judged best by a reliable faculty under which the individual has studied." This is, of course, the chief objection to all purely examining corporations.

REFORM OF THE CURRICULUM

In reviewing the medical course the Commission finds that some of the main difficulties of to-day arise from efforts to provide instruction in too many subjects in too great detail. The chief criticism of the clinical instruction is that it is too often focused upon the rarer and more serious diseases requiring the services of specialists and advanced laboratory investigations. This gives the student an erroneous conception of the problems that will face him in practice, and also fails to impress upon him the responsibility of the individual doctor for the individual patient.

With the accumulation of exact knowledge medical education is changing from a vocational training, which has been largely didactic, to a scientific discipline. It is axiomatic that true education at the professional level must be self-education, and the aim of the teacher should be to inculcate sound methods of study and habits of approach. This is being achieved in the better schools by personal contact between instructor and student, by clinical clerking, by teaching from cases, by conferences, and by the encouragement of reading, in place of the old didactic lectures and amphitheatre clinics. In the view of the Commission only a limited independence can be accorded to the medical student; supervision of his training is necessary, but he should have more freedom than the old rigid and crowded curriculum allowed him. It is held that although the "basic" course, in other words the strictly medical studies, cannot provide a comprehensive knowledge of all phases of medical science and practice, yet knowledge adequate for the commencement of practice can be imparted in the present four years' course together with the internship: the curriculum needs modification, however, by the elimination of the demands for memorizing innumerable facts and details of no permanent significance. This part of the report reviews the teaching of the different subjects; it emphasizes the need for considering the student's education as a single course and not as a disjointed process. The details discussed are too many for analysis here, but they deserve careful attention; the remarks on the subject of psychiatry are worthy of particular note, as also are those on the preventive aspects of medicine. Generally speaking, the faults found with the present curricula are their overcrowding and their rigidity; suggestions to compress the present four-year course into a shorter period are not approved. The final paragraphs of this chapter deal with the position of the clinical teacher, and there appears to us to be much wisdom in the views here expressed; the sum of these is given thus:

> "There is no substitute for the master clinician in the clinical fields of instruction. It is vital that universities provide the inducements which will attract and hold clinicians of the calibre and ability which teaching in this field requires, and which the responsibilities for the care of patients in the hospitals and clinics demand."

Chapter VIII summarizes opinions derived from many sources regarding medical training. Chapter IX deals with the subject of pre-medical education. American students, it is said, enter upon their professional training later than is desirable; the too long period of schooling stifles intellectual independence. The preliminary college course should provide the student with a grasp of the fundamental principles of the sciences, rather than with a mass of detailed information and technical procedures as at present. Most of the better-known schools now require a college (pre-medical) course of three years. In regard to admission the state of affairs in the United States is unique in that a large proportion of applicants for training are refused on grounds of unsuitability. In 1929–30 there were 13,569 applicants; of these 6,457 were enrolled. These figures are for the United States and Canada. In the opinion of the Commission pre-medical education should be general and not pre-professional, but this is not to be taken to mean that the subjects of biology, chemistry, and physics are not to be included; rather that they should be taught from the point of view of natural philosophy, so as to give the student habits of thought rather than masses of facts.

Chapter X deals with the cost of medical education in the United States; to the average student this is at the rate of about £240 a year, including living expenses. In Chapter XI there is a comprehensive review of medical education in Europe, by no means the least valuable part of the report, and a testimony to the industry which has been expended on its compilation. Following upon this there is given a summary of conclusions. There is much here that deserves reproduction. We must content ourselves with the following paragraph:

> "The new methods are illustrated by the discontinuance of the rigid class system, and uniform course and time schedules; the use of small teaching sections; personal contacts between students and instructors; provision of reasonable time for reading, individual work and leisure; a reduction in the amount of lecturing; and opportunities for those who desire, and are competent to do, independent work.

These changes are in recognition of the fact that the crucial element is the individual student, upon whose character, attitude, preparation, ability, and industry so largely depend the results of medical training. The aim is to develop minds capable of appraising evidence and drawing conclusions based on logical reasoning, and to help to provide a permanent intellectual equipment, resourcefulness, judgement and proper habits as well as methods of study, which will prepare the student to continue his own self-education throughout his professional life. The continuation education of the physician has been strongly emphasized as an essential element in a well-balanced medical service."

It is well said that success in the war on disease is not a matter of mechanical equipment, but depends upon trained physicians and other workers in suitable relations with the medical needs. These perceptions are introducing new thought into the profession, and they challenge the highest order of leadership to make current and future knowledge available to all. This leadership should be a contribution of the medical profession and of medical education to modern society.

Appended to the report are some 161 tables of figures and facts, and an index. We are informed that any reader who wishes to study it in its entirety may obtain a copy, free of charge, on applying to Dr. Willard C. Rappleye, Director of Study, 630, West One Hundred Sixty-Eighth Street, New York.

INCOME TAX

SALE OF PRACTICE WITH PERIOD OF INTRODUCTION

An arrangement often made in connexion with the purchase of a "sole" practice is that the vendor shall remain for a specified period for the purpose of introducing the purchaser to the clientele of the practice and generally facilitating his task of picking up the connexion and familiarizing himself with any personal or local peculiarities of the practice. During that period the outgoing practitioner is performing a most useful service and naturally takes some financial benefit for so doing; quite commonly the amount he receives is calculated on the basis of a fractional share of the net income of the practice. Where that is done the arrangements made may be such as to render it difficult to say with any degree of certainty whether or not the relationship of "partner" has been set up between the two concerned.

For all ordinary purposes the question would remain purely academic, except on very rare occasions; but where income tax is concerned the point may, and sometimes does, cause trouble and expense. This is particularly so since 1927, because if a partnership is set up during the "introduction period" then there ceases to be a clean cut as between vendor and purchaser, and income tax liability may have to be separately computed for that comparatively brief period, and the resulting adjustments on the net tax payable would often prove both confusing and troublesome.

The question has recently been before the High Court, in the case quoted as Pratt *v.* Strick, and it was decided that in the circumstances of that case a partnership had *not* been set up for the period of introduction. We understand that the decision is not likely to be appealed against, and may therefore be regarded as settled law. As facts vary in points of detail—and such points are sometimes material to the legal mind—it is advisable to state briefly what were the precise arrangements made in the leading case.

Dr. Pratt (the appellant) agreed to purchase the practice as from July 15th, 1929, and the deed provided that the vendor should continue to live with Dr. Pratt at the house where the practice was centred to September 30th, 1929, for the purpose of keeping the practice together—including the national health insurance work—and assisting generally. During that period they carried on the practice together and shared the net profits equally. The General Commissioners decided on appeal that there was a "partnership" for that period, but their decision was reversed by the King's Bench Division. Findlay J. agreed that the sharing of profits and losses was an important indication of the existence of a partnership, but he held that, taking the deed as a whole, it effected an out-and-out sale of the practice as from the date specified.

The result of the decision tends to simplify what would otherwise have been unnecessarily complicated. Where the facts are similar to those quoted above the vendor's liability to tax will be in respect of his profits up to the date of sale plus what he may receive (as an employee of the purchaser) for his subsequent services; the purchaser's liability will be in respect of his profits subsequent to the stated date of sale, and in computing those profits he will be able to deduct the expense of retaining the vendor for the period of introduction. A change of proprietorship in a practice must always introduce some complications into the calculation of income tax liability; we are glad to know that the complications are not unnecessarily increased.

England and Wales

Lord Dawson a Counsellor of Liverpool Cathedral

The new cathedral of Liverpool has lately instituted a College of Counsel, which includes persons eminent in various walks of life. Lord Dawson of Penn, President of the Royal College of Physicians and of the British Medical Association, has been chosen as representative of the medical profession, and on Sunday afternoon last, February 5th, at a special service, he was installed a member of the Order. He was welcomed by the Bishop of Liverpool (Dr. David), and the service was conducted by the Dean (Dr. Dwelly). Lord Dawson laid a wreath on the ashes of Sir Robert Jones, which have lately been deposited in the cathedral, and made a reference to him in his address, describing him as a scientific thinker, inventive craftsman, teacher, leader, a man who gave, through himself and through his disciples, great service to mankind.

In the course of his address Lord Dawson said that the medical profession, which he represented, had a wider range than perhaps any other calling. Its knowledge was based on natural history, and, in increasing measure, on exact science. Its methods were observation and experiment. It had to deal, in these days, not only with those cloistered by illness, but with men in their daily avocations, and therefore had so to extend its outlook as to take stock of individual and social relationships. The profession needed ideals of service, without which its practice would be as "a sounding brass or a tinkling cymbal." On the one hand it needed intuition and charity to perceive and understand, and on the other, strength to guide and sustain. It was here that its work came in contact with religion. The new Counsellor next passed to a consideration of the relations between religion and science. These, he said, represented two different aspects—religion belonging to the inner world of experience and conviction, and science to the outer world of the senses and the intellect. It was the outer world which made life possible, and the inward conviction which made it brave and strong. In every direction there was evident the unrest attendant on rapid change. The growth of mechanical invention and the changes in industry had concentrated attention on material civilization. The advances of science were so extending that they disturbed established habits of thought, and brought perplexity to the minds of men. It could be truly said that in the realm of thought materialism did not hold sway. On the other hand, in the realm of dogmatic belief, there were noteworthy changes, as also in those habits of observance and worship which in the minds of our forefathers were naturally, though none the less arbitrarily, regarded as essential ingredients of religious life. To an

increasing body of people dogma had less appeal ; it failed to stir, it might even estrange. Religion was for them more rooted in experience and less in belief. " It cannot be justly said," Lord Dawson went on, " that the people of to-day, notwithstanding their aloofness from observance, are not religious, though perhaps they need a firmer acceptance of the fact that the way of life for all must be ' no cross, no crown.' The manifold contacts with the ranks of the people in my hospital life and in the war impel me to speak humble and admiring tribute to that faith which gives them trust, to that courage which gives patience, that kindness which lets not the left hand know what the right hand doeth. Though scant of form and expression, surely here is godliness. Judged by the Christian virtues, assessed by the Sermon on the Mount, they hold their own with preceding generations of stricter belief and narrower tolerance. It is values which are altering ; it may be they are feeling their way back to the gospels with their universal appeal and absence of set forms." In conclusion, Lord Dawson asked whether it was not a fact that this large body of religious feeling existed and was as consciously searching for expression and shelter. It was in the power of the Church of England, with its tradition of comprehensiveness, to enfold it, and that great characteristic of the Church was apparent in the impressive ceremony of that afternoon.

Pay Beds in London Voluntary Hospitals

A useful pamphlet dealing with the provisions made for the professional and middle classes at voluntary hospitals in London was issued at the end of 1931 by King Edward's Hospital Fund. Since the report of a special committee appointed by the Fund in 1927, provision for this class of patient has continued to increase, and the total number of pay beds in London voluntary hospitals is now 1,667, as compared with 590 in 1920. A revised edition of the pamphlet is published for the Fund (price 3d. post free) by George Barber and Son, Ltd., Furnival Street, E.C.4. The introduction states that many of the London voluntary hospitals have recognized that there is a growing demand for suitable accommodation for people who, while unable to pay the charges of a nursing home, desire more privacy, and perhaps better accommodation, than is available in the ordinary wards, and who are willing to pay for it according to their means, and also for medical attention. Special provision has therefore been made for such patients, and the King's Fund has set forth in this pamphlet a complete list of the pay beds now available, together with information as to the nature of the accommodation—whether cubicles, single rooms, or small wards for two or four persons—and the normal weekly charge. Attention is drawn to the fact that the weekly charge does not include medical and surgical fees, these being usually arranged between the patient and the consultant.

Joint Tuberculosis Council

At the winter meeting of the Joint Tuberculosis Council, held in London on January 21st, twenty-seven members were present. Post-graduate study, the Ray economy report, tuberculin in diagnosis, the name " Joint Tuberculosis Council," and a scheme for the investigation of the health of contacts at [illegible]th, Barrowmore Hall, and Preston Hall, the accumulation among the subjects discussed. [illegible]ation is changing from a [illegible]s were entertained to lunch has been largely didactic, to a [illegible]rman, Dr. Lissant Cox. axiomatic that true education at the among the expected must be self-education, and the aim of the Howitt, M.P., be to inculcate sound methods of study a[illegible]mmittee, Sir approach. This is being achieved in the better : M.P., Mr. personal contact between instructor and stud[illegible]r. Lewis clinical clerking, by teaching from cases, by conte[illegible] health and by the encouragement of reading, in place of the[illegible]sence, didactic lectures and amphitheatre clinics. In the [illegible] and Dr. Howitt replied, praising the co-ordinating work of the Council. Dr. O'Donovan next, in a scintillating but thought-compelling speech, proposed the health of the Council, and Dr. Ernest Ward, in his reply, stressed the disgrace of the continued mortality and crippledom caused by tuberculosis of bovine origin. We strove, he said, after detuberculization of dairy herds (which was praiseworthy, but would take forty years), or pasteurization (which was expensive, often inadequate, and would take perhaps ten years to secure), whereas the remedy was simple: we should advocate whole-heartedly the boiling of milk before use in each individual household. Mr. G. S. Elliston proposed a vote of thanks to Dr. Lissant Cox in a witty and eloquent speech. The vote was seconded by Dr. Jane Walker and carried with acclamation.

India

Rural Sanitation

Some idea of the difficulties attending public health work in rural areas at the present time is afforded by the sixty-fourth annual report (for 1931) of the Director of Public Health of the United Provinces of Agra and Oudh. Lieut.-Colonel C. L. Dunn, I.M.S., states that in twenty-eight districts there is an organized health service, but in twenty others there is no permanent organization for dealing with epidemics and fairs. Economic stringency has also led to a reduction in the number of travelling dispensaries and assistant medical officers of health. In Gorakhpur, however, the district board continued its work in spite of the withdrawal of Government aid, and continued to employ resident officials for small public health circles. These officials tour their areas, disinfect wells, distribute anti-cholera medicaments and quinine, vaccinate, compile vital statistics, promote hygiene propaganda work, stimulate village aid activities, and enforce the district by-laws. Excellent results were obtained in reducing the incidence of cholera in two areas notable previously for its virulence, and the number of vaccinations in them were considerably increased. Moreover, these officials supervised the construction of soakage pits and manure trenches, cleaned up villages, and trained a large number of " first-aiders " to deal with emergencies and educate the villagers. In Fyzabad there are arbitration, agricultural, and sanitation committees, consisting of the villagers themselves. The duties of the sanitation committees are to see that their villages are cleansed thoroughly once a week ; that the cattle sheds are kept clean ; that manure is kept in pits outside ; that children are protected against small-pox ; that immediate information is given on an outbreak of an epidemic ; and that other instructions received from time to time are duly obeyed. A band of twenty-two village " guides " supervise all this work, and are themselves controlled by two supervisors and one education inspector, thus ensuring complete co-ordination of all health measures. As a measure of economy the strength of some of these gangs had to be reduced during 1931, and the medical officer of health was gravely handicapped in undertaking such sanitary measures as the construction of soakage pits and manure trenches, and the disinfection of wells in cholera epidemics. Nevertheless, on the whole there has been steady progress in these village aid schemes, and the inception of the Junior Red Cross movement locally has been of definite value. The financing of dispensaries has been increasingly difficult, owing to the lack of local support of this kind. Little can be done to improve existing houses, but where new dwelling places are required—for example, as the result of the construction of canals or railways—every effort is made to secure that

such new buildings are constructed on sound sanitary lines. Model by-laws have been circulated widely, but their enforcement has proved difficult owing to lack of education of the villagers. It is pointed out that as a whole the district boards are only spending 0.29 per cent. of their income on rural sanitation, the provision of adequate water supplies, and the prevention of epidemics. This is one of the prime causes of the poor economic output, the low standard of living, and the economic disabilities of the agricultural labourers, who are the chief revenue producers of these provinces, and thus a vicious circle is formed which it is difficult to break.

Public Health in Assam

During 1931 the province of Assam was, on the whole, free from serious outbreaks of cholera and small-pox, and the death rates from these diseases fell. Kala-azar appears to have been checked, and is no longer a serious menace. Five mobile epidemic units are at work ; they deal with any epidemic which may appear, but are more especially concerned with cholera, small-pox, and malaria. When not required for such duties, they undertake kala-azar survey work, or conduct investigations into other diseases. The disinfectant carriers, who are trained vaccinators, are employed in vaccinating when no epidemic is active, and it is proposed, similarly, to arrange a course in elementary hygiene and sanitation for the Vaccination Inspecting Staff. A progressive reduction in the mortality from small-pox among young children indicates that primary vaccination is receiving proper attention, but, unfortunately, some of the local boards have intimated their intention of reducing the number of vaccinators employed by them ; this will result in a far less adequate guard being maintained in several districts. Malaria remains a serious danger, and is increasing in some places. Lieut.-Colonel T. D. Murison, I.M.S., Director of Public Health in Assam, announces in his annual report for 1931 that a Provincial Malaria Committee was constituted during the year under review, and that the Assam Medical Research Society has submitted suggestions for more effective measures. The new committee will be able to co-ordinate more closely henceforth the various anti-malarial activities in Assam, where this infection is endemic. Quinine for prophylactic use is sold throughout the province at post offices, and through various other agencies. With each treatment tube is supplied a leaflet containing detailed instructions in simple language, so that patients can treat themselves without medical supervision. Malaria surveys are in progress, and the various requirements encountered are being met so far as is possible. Financial considerations have led to the reduction of much useful propaganda work since June, 1931, but it is hoped that an expansion of the public health staff will be possible in time to restore this most necessary activity. An Assam Pure Food Act has been passed, and efforts are now being made to increase the purity of the food supplies.

Ankylostomiasis in Ceylon

Financial considerations in 1931 called for a thorough reorganization of the ankylostomiasis campaign in Ceylon, but Dr. R. Briercliffe, the island director of medical and sanitary services, states in his annual report for that year that it has been possible, nevertheless, to increase the number of treatments given, and to improve their quality. Definite measures are being taken to concentrate more energetically on those villages where the infestation is most serious. In all parts of the island the disease is endemic, about 79 per cent. of the population being infected by the hookworm *Necator americanus*. Although the eight itinerant units, which until the end of 1930 had been operating against the disease, had to be disbanded, their work was distributed as far as possible among other agencies, such as the Government hospitals and dispensaries, health units, and the estate medical staffs. The number of treatments given rose to over 1,406,000, as compared with 1,293,000 in 1930 ; the dosage of such remedies as chenopodium oil and carbon tetrachloride was usefully increased, and only one case is reported of fatal poisoning (due to an already diseased liver). A much higher percentage of school children are now having effective treatment, mostly owing to the utilization of the services of the local medical officer of health or a dispenser. Following the energetic action of the itinerant units during previous years the villagers have become sufficiently instructed to be disposed to view treatment more favourably. These units only dealt with such villagers as attended at the schools on the days when the unit was administering treatment ; under the new arrangements systematic village work is carried on by local medical officers and dispensers. The education of the inhabitants generally in regard to ankylostomiasis is proceeding well by means of lantern lectures and pamphlets, and special attempts at health exhibitions in different parts of the country to win the closer co-operation of the people generally in eradicating what has previously been one of the worst scourges of Ceylon.

Ireland

Medical Certification of School Children

The recent order of the Dublin Board of Assistance to the effect that " the medical officers in each dispensary be instructed to co-operate with the school attendance inspectors in cases of children attending dispensaries and absent from school, as the majority of the parents in these cases are unable to pay for medical certification," has been the subject of representations to the Ministry of Public Health by the Irish Medical Committee and the Irish Committee of the British Medical Association. A letter has now been issued by the Ministry drawing the attention of the Board of Assistance to the fact that " the General Rules for the Government of Dispensary Districts were made under the Poor Relief Act (Ireland), 1851, and the Vaccination (Ireland) Act, 1858, as adopted by the Adoption of Enactments Acts, 1922, and that these rules do not apply to the School Attendance Act, 1906. It is therefore no part of the duties of the dispensary medical officer to give a medical certificate for the purpose of the last-mentioned Act. In the case of a boarded-out child, since the Board of Assistance is a body charged with securing the welfare of boarded-out children and the observance of the regulations relating to them, it is quite reasonable that when any such child is unable to attend school through illness the Board should require the dispensary medical officer to attend the child as a dispensary patient and furnish them when necessary with a certificate in accordance with Article 15 (IV) of the Dispensary Rule."

Increase of Insanity

The recommendations of the subcommittee appointed to consider a letter from the Local Government Department concerning the increase of insanity in the Irish Free State have been adopted by the joint committee of management of the Grangegorman Mental Hospital. The principal recommendation is that a commission be appointed to inquire into the causation of insanity, with the object of directing public attention to so grave a matter, and securing the co-operation of the public in the adoption of steps to effect a reduction in the number of freshly occurring cases. The subcommittee considers it desirable, in view of the alarming increase in the number

of insane persons in the public institutions of the Saorstat, that the study of insanity and nervous diseases should be compulsory for every medical degree. Visits to centres in England, Scotland, and Belgium by two members of the joint committee and a member of the medical staff are recommended for the purpose of investigating in those countries (*a*) the operation of extern mental clinics, (*b*) the admission of voluntary patients to mental hospitals, and (*c*) the boarding-out of insane persons. Other suggestions are that the Minister for Local Government should be asked to impress on county medical officers of health and dispensary medical officers the necessity of ensuring early treatment for persons suffering from mental illness, and to issue special instructions to teachers and child welfare societies with a view to enlisting their co-operation in securing early medical attention for backward or mentally deficient children. The replacement of wooden buildings for the accommodation of the insane is also recommended. The subcommittee deplores the absence of suitable institutions for the treatment of mentally deficient children, and recommends the joint committee to summon a conference of public bodies, medical superintendents of mental hospitals, county medical officers of health, and representatives of the Departments of Local Government and Public Health and Education, and of the university medical schools, to consider the best means for effecting a reduction in the number of new cases of insanity, and to make representations to the Government on the subject.

Cork Clinical Society

The inaugural meeting of the Cork Clinical Society was held on January 27th. In opening the proceedings Professor C. Y. Pearson congratulated the initiators of the society, and thanked them for electing him to act as honorary president, which he said was a compliment that he valued because of his long connexion with the medical school and the profession in Cork. He had been a member of no fewer than four different medical societies that had preceded this one, the first as far back as 1879. Professor Pearson urged the importance to the medical profession of supporting such a society by every member endeavouring to contribute something, both for his own benefit and for that of his colleagues, the advantage of regularity and punctuality in attendance, and the great value of mutual criticism in the promotion of professional camaraderie and co-operation. He then asked Professor John Dundon, the president of the society, to open the meeting with the report of a case of general surgical interest, which was followed by other case histories and discussions. Professor J. M. O'Donovan presented notes of three cases of lung rupture occurring in the course of artificial pneumothorax treatment for pulmonary tuberculosis, and Dr. G. A. Barter described a case of myringomycosis of the external ear.

Northern Ireland Vital Statistics

The results of the year's registration in Northern Ireland show that an increase in the death rate was accompanied by decreases in the marriage and birth rates during 1931. The total number of deaths, states the annual report of the Registrar-General, was 18,049, giving a rate of 14.4 per 1,000 of the estimated population, as against 13.8 for 1930. Births registered during the year numbered 25,673, and marriages 7,369, the rate for the former being 20.5 per 1,000, which is 0.3 below the rate for the previous year, and for the latter 5.89, or 0.18 below the rate for 1930. Deaths from all forms of tuberculosis again showed a decrease, the rate of 1.22 per 1,000 being 0.06 less than that for 1930. Tuberculous diseases, however, continue to account for more than 500 deaths in every 1,000 between the ages of 15 and 25, and for over 400 in every 1,000 between 25 and 35. The death rate from cancer has increased by 0.06 per 1,000. While the rise in this death rate has not been nearly so rapid as the fall in the rate for tuberculosis, both have been converging for the past thirty years, and in the year under review the recorded mortality from cancer actually exceeded that from tuberculosis. Deaths of infants under 1 year numbered 1,885, or 73 per 1,000 births registered; this is an increase of 5 per 1,000 on the rate for the previous year. The corresponding mortality rates for England and Wales, Scotland, and the Irish Free State were 66, 82, and 69 respectively. The report (price 2s. 6d.) may be obtained from H.M. Stationery Office, 15, Donegall Square West, Belfast.

Scotland

Mental Health in Scotland

In an address on February 1st, under the auspices of the Edinburgh Women Citizens' Association, on nervous and mental illness as a public problem, Professor D. K. Henderson, professor of psychiatry, Edinburgh University, said that cases admitted to mental hospitals formed only one-half of the problem, which nowadays concerned itself more and more with those people who were not able to live harmoniously with their fellows and who contributed little to the well-being of the community. He believed that those who were interested in this subject had taught too long in terms of illness and pathology, and the time was ripe for thinking rather in terms of mental health. The task of the psychiatrist should concern itself not so much with patching up lives that had been stretched beyond the breaking point, but rather with maintaining lives at a level of efficiency. It was well, therefore, to multiply child guidance clinics, out-patient departments for early mental cases, and observation wards, but the subject must be studied from a still more fundamental aspect. The dangers of producing an unhealthy stock were not sufficiently realized. He was strongly opposed to coercive legislation, but he would lay all the emphasis possible on the value of educating the public conscience. He believed that more attention should be paid to the emotional needs and instincts of the growing child and to its spiritual and mental health. This was too large a proposition for doctors only, and required the co-operation of the public and of the agencies that concerned themselves with public welfare.

Dr. G. J. Linklater, opening a discussion at the Mental Welfare Committee of the Council of Social Service on January 30th, said that the subject of administrative difficulties in mental defect must be approached from two different aspects—the scholastic and the social. Mental defect was still too often regarded in terms of such conditions as mongolism or birth injuries, and psychologists were apt to regard it in relation to imbecility or moral defection. A further difficulty arose from the 1913 Act, which specified that feeble-mindedness must exist from birth or from an early age. The result of all these factors was that they were still discovering defective cases at 12 or 13 years of age, and such late diagnosis was both unfair to the child and often a shock to the parents. Worse still was the fact that numerous cases were not diagnosed at all. The Education Department in 1906 had found the incidence of mental defect in school children to be 8.6 per 1,000 scholars, but this figure was too low; it should probably have been more than double. A difficulty arose at the age of 16 as to whether institutional treatment should be recommended, and in the very cases where such treatment was desirable there were often

objections, both sentimental and practical. The low-grade defective was usually accepted at once as suitable, but the suggestion in regard to high-grade cases, who showed delinquency both before and after 16, was often received with disapprobation by relatives. Dr. Linklater believed that public opinion was not far enough advanced to appreciate the necessity for guardianship in the latter type of case. He suggested the establishment of a central bureau at which all children attending special schools should be notified when they left school, and from which supervision could be maintained.

Dental Education

At the annual dinner of the Edinburgh Dental Students' Society on February 3rd, when Mr. A. Johnstone Brown presided, Dr. William Guy, replying to the toast of "The Dental School," said he had now been dean of the school for thirty-four years, and that he proposed to retire at the end of the present academic year. He traced the development of the school in the last fifty years, and said that in 1879, one year after the Dental Act, the school entered upon the premises which it still occupied at 30, Chambers Street. It paid an annual rent of £50, and had a total expenditure in the first year of £252. By 1899 the expenditure was £774 and the school overflowed into the adjoining house. During the war years the number of students at the school, as at other institutions, greatly diminished; in 1919 there were only sixteen students. By 1929, however, the annual expenditure had risen to £4,184, with a surplus of £1,177 and assets of £25,800. In that year 23,009 dental operations were performed. During his term of office nearly 1,200 students had qualified and received the diploma of L.D.S., and he felt a sense of gratification when he thought that he might have contributed something towards enabling that large number of candidates to satisfy the examiners. If so, he had a sufficient reward for his work in observing the success and distinctions they had gained in later life.

Queen's Institute of Nurses

The recently appointed Scottish Council of the Queen's Institute of District Nursing held a meeting on February 3rd, Mr. John S. Pitman, vice-chairman of the council, presiding. The Duchess of Richmond and Gordon was elected chairman, and a message was read from the Duchess of York, president of the Scottish branch of the Institute, expressing the hope that its work would continue to prosper. It was intimated that during the previous quarter nine more district nursing associations had been affiliated to the Institute, and that twenty-two nurses had been appointed at various places in Scotland. The work of 316 district nurses had been inspected during this period. In connexion with the nursing work in Edinburgh, 1,338 cases had been attended, involving 48,625 visits by nurses attached to the Central Training Home.

CORRESPONDENCE

Response to Stimuli

SIR,—In the late Professor Lorrain Smith's very suggestive book on *Growth* a description is given of the way in which the tissue cells respond to outside influences and repair injury by a process of differential cell division among basal mother cells. Striated muscular tissue seems to be exceptional in its mode of response. Thus Lorrain Smith says that muscular tissue loses, early in life, the power of growing new cells, and that increase in size is due to differential growth and not to cell division.

In the William Withering Lecture (No. II), "On the making of use acquirements," delivered at Birmingham University last May, I contrasted the response made by nerve cells to changes in environmental stimuli with that made by muscle and other tissue cells. I suggested that the neural response depends on, or is associated with, modifications or rearrangements of intracellular elements, and not, since the adult nerve cell is incapable of cell division, with the production of new nerve cells. The response made by striated muscle fibres, on the other hand, was there described as dependent, not on intracellular modification, but on an increase in the number of muscle cells.

It appears, however, from Lorrain Smith's description, and from the writings of histologists and physiologists, that the increased size in a voluntary muscle under the influence of extra stimulation is due to greater growth of individual fibres and not to increased number of muscle cells. In my lecture I apparently attached undue importance to increase in number as against increase in size of muscle fibres in muscular hypertrophy. This, however, does not do away with the contrast between the neural and the muscular response to increased or altered stimulation, because increase in size means continued growth along similar lines, and does not involve modification of intracellular structure. The response made by non-striated muscle to increased stimulation, to which I also referred in my lecture, stands on a different footing.

Histological opinion is not unanimous here. Thus, Whitridge Williams (*Obstetrics*, p. 191) says that the increase in size of the uterus in pregnancy is partly due to hypertrophy of pre-existing cells and partly to the growth of new muscle fibres in the early months of pregnancy. In the partially striated syncytial heart muscle Mallory (*Principles of Pathologic Histology*, p. 432) states that regeneration does not occur, but it is probable that a general hyperplasia of heart muscle cells may occur in young children following recovery. Adami (*Principles of Pathology*, vol. i, p. 594), on the other hand, says that in cardiac hypertrophy increased work leads to a very rapid overgrowth both of the size and the number of muscular elements. Hamilton (*Pathology*, p. 165) states that, according to Zielonko, increased size in a striated muscle, the result of overwork, is due to an increase in the number of cells, while in over-nutrition it is due to increase in the size of individual fibres, while in the pregnant uterus and in hypertrophied arteries the increase in size is numerical. It would seem, however, difficult to dissociate entirely the two factors—increased stimulation and increased nutrition—as causative agents in the production of muscular hypertrophy.

But a further question still remains. If we assume that proliferation of muscle elements from undifferentiated mother cells occurs in muscular hypertrophy—if, as Schäfer (*Essentials of Histology*, p. 139) says, new fibres are formed in the case of striated voluntary muscle from embryonic, mesoderm, muscle plate cells, by elongation and nuclear multiplication—how do these newly formed cells establish their connexion with the nervous system? Do the nerves supplying the muscle send an axon or a fibril to each newly formed cell? In the case of the syncytial heart muscle this may perhaps not be necessary if the wave of contraction is propagated from fibre to fibre without the intervention of a separate neural mechanism to each fibre.

Be this as it may, however, the object of this letter is, first, to correct the statement in my lecture, in which I apparently unduly ignored the influence of increased size in muscle fibres in muscular hypertrophy, and, secondly, to draw attention to the uncertainty of statement in physiological and histological textbooks as to the factors concerned in that process. The problem is one of fundamental importance, since it deals with the response made by the organism to environmental influences, and Professor Lorrain Smith's book on *Growth* is concerned with this aspect of the problem.—I am, etc.,

Leicester, Feb. 2nd. C. J. BOND.

*** A review of Professor Lorrain Smith's book appeared in our last issue, at page 190.—ED., *B.M.J.*

Recovery from Pneumococcal Meningitis

SIR,—In connexion with the remarkable case of recovery from primary pneumococcal meningitis after treatment by Felton's serum recorded in the *Journal* of January 28th by Dr. McAuley and Dr. Hilliard, it may be of interest to describe shortly a case of recovery from pneumococcal bronchopneumonia and meningitis without such treatment, the notes of which were published in the *Guy's Hospital Gazette* in 1911 by my clinical assistant, Mr. A. H. Todd.

The patient was a girl of 3, who was admitted on the second day of her illness in a semi-comatose condition. She was found to have confluent bronchopneumonia, and a pure culture of pneumococcus was grown from blood obtained by lung puncture. Extreme head retraction and hyperextension of the spine were present, and the cerebro-spinal fluid contained many polymorphonuclear cells and pneumococci. A week after admission she had convulsions, periodic respiration, vomiting, and incontinence, and was completely unconscious. The following day she began to improve, and a week later recovery was complete.

—I am, etc.,

London, Jan. 31st. ARTHUR F. HURST.

Rat-bite Fever

SIR,—A case of rat-bite fever reported by Dr. R. A. Hickling in the *Journal* of December 17th, 1932 (p. 1103), is very interesting, and one is grateful to the author for the details of the minute clinical observations he has made. However, I may submit there is nothing new or extraordinary in the train of the various clinical phenomena of this case, especially as these occurred and recurred after a clear history and unmistakable evidence of rat bite. Perhaps Dr. Hickling might have been able to obtain his pathological findings much earlier if he had used the fluid of the gland puncture for an experimental inoculation into a clean mouse ; or, better still, by a microscopical examination alone of a drop of fluid squeezed (after puncture) out of the skin lesion so characteristically recurrent in this case ; or, further, by an experimental injection of this fluid into a clean mouse.

One is also indebted to Dr. Hickling for the historical references of the disease, in which he has quoted Sir Thomas (now Lord) Horder, Futaki and his Japanese colleagues, and Dr. McDermott. But in doing so I feel he has either completely ignored or perhaps is not aware of the work on this disease in India. I have only to refer him to a paper on this subject by Colonel R. Knowles and Das Gupta, published in the *Indian Medical Gazette* (1928, lxiii, No. 9), which gives a fairly comprehensive account of the disease and a complete bibliography. I have myself been interested in the disease for some years now, as will be seen by a reference to a small note appearing in the *Journal* of April 29th, 1918 (p. 461). Since then I have had several papers published in India, France, and England (*vide* bibliography at the end of Knowles's monograph).

I have troubled you with this letter because of the injustice which, I submit, the workers in India have reason to feel by their being completely ignored by Dr. Hickling.—I am, etc.,

Bombay, Jan. 12th. R. ROW, M.D., D.Sc.Lond.

Retinitis Pigmentosa

SIR,—Recently a friend drew my attention to the remarks in your *Journal* concerning the treatment of retinitis pigmentosa with menformon.

In reply to Dr. Posel's letter in your issue of November 19th, 1932, I may state that my description (*Deut. med. Woch.*, October, 1931, and *Nederl. Tijdschr. v. Geneesk.*, lxxvi, 2009) is somewhat different from his abstract of it. Out of thirty-one patients treated with menformon eight were certainly benefited as to their visual field and light-sense (I never used the term " cured "). In thirteen cases there seemed to be some improvement, but owing to the difficulty of exact investigation the result was considered " uncertain." In the remaining ten cases (which were only partly the most grave ones) there was no improvement at all. In a previous publication (*Klin. Monats. f. Augen.*, lxxxvii, 298) I stated that in my opinion there exist different forms of retinitis pigmentosa ; this perhaps may explain some of the different results. With reference to the answer of Mr. J. G. Milner to the inquiry (*British Medical Journal*, 1932, ii, 1035), which apparently was the only one you received, I must say that his having no success in three cases is in no way inconsistent with my findings. I never referred to *all* cases as being benefited, but only to *some* of them. Concerning the case incidence of retinitis pigmentosa, I must note that all larger statistics agree with my statement. According to Nettleship (*Ophth. Hosp. Rep.*, xvii) the ratio of incidence in men as compared with women is 60 : 40. I investigated myself the recessive-inherited forms (the most common of all) and found amongst these 317 cases of men and 235 of women (*Klin. Monats. f. Augen.*).

I agree with Mr. Milner that we cannot hope to improve nervous or vascular elements which are already completely degenerated, but there is no reason why those elements in which the degeneration is in its beginning state could not be influenced. However, the main thing is not the theoretical foundation of this treatment, but the fact that it had a remarkably good effect in some cases, and has never done any harm. In my opinion this is important with a disease in which the prognosis is so serious, and I feel justified in claiming a fair trial for this therapy of retinitis pigmentosa.—I am, etc.,

Amsterdam, Jan. 25th. F. WIBAUT.

Nicotine Poisoning

SIR,—The report of a case of nicotine poisoning which has just appeared in the Press prompts me to send you an account of a case in my own practice. It is far from being generally known that nicotine, which is used fairly extensively in horticulture, can give rise to severe and even fatal poisoning from mere cutaneous absorption.

About three years ago I was called by the nurse on duty to see a girl of 22 who had just collapsed at her work. Within fifteen minutes of the first feeling of faintness she was pallid, cold, and almost pulseless. The nurse, on receiving the case, was unable to obtain any history from either the patient or her friends. No one knew what had happened, and the girl herself was too ill to speak. The nurse noted a faint odour about the patient, but it seemed to emanate from the clothing and not from her breath. At a loss to understand, she acted with great presence of mind and, as I think, probably saved

the patient's life, for in spite of prompt treatment the girl was extremely ill, and for half an hour after coming on the scene I took a very grave view of the case.

The nurse managed to get some emetic down the patient's throat and later I augmented this with apomorphine. She applied hot bottles to the feet, and then did what I doubt if I should have thought of, the odour being so very slight. She ripped all the clothes off the upper part of the body and scrubbed the skin thoroughly with soap and *cold* water. After this the patient was kept warm in hot blankets, and for a short time I applied artificial respiration as the pulse was imperceptible and the breathing appeared to have ceased. After some little time the patient vomited and the worst was over. The first vomit was a reaction to an attempt to pass a tube.

The full story, as discovered afterwards, was as follows. In the process of making insecticide in the factory concerned the girl accidentally spilt about two drachms of 95 per cent. solution of nicotine on her overall sleeve. She changed the overall and washed her arm under the hot tap, dried herself, wiped her damp jumper sleeve, and went on with her job. Twenty minutes later she collapsed, and no one knew what had happened.

The nicotine was obviously absorbed through the skin, and the rate of absorption was accelerated by the washing in hot water. It is this fact that makes the nurse's acumen in using cold water so very praiseworthy. The first vomits were lost on the floor, and the only one I could get for analysis was one voided three hours after the accident and after the stomach had been thoroughly emptied several times. This contained twelve parts in a million of pure alkaloid. The patient was a non-smoker, which is an interesting point. She was in every way in perfect health.

This case presents, I think, two lessons. First, that nicotine is a powerful poison when applied to the skin. Secondly, that in cases where alkaloid poisoning is suspected but the route of administration is doubtful the clothes should be removed and the skin washed in such a manner as not to increase the risk of further absorption. —I am, etc.,

Beeston, Notts, Feb. 2nd. LEONARD P. LOCKHART, M.D.

Treatment of Exophthalmic Goitre

SIR,—There is a statement in Mr. Romanis's paper (*British Medical Journal*, January 21st, p. 87) which cannot be allowed to pass without criticism. I do not propose to discuss here the precise value of *x* rays in the treatment of exophthalmic goitre. Surgeons see their own successes and the failures of others, and the same applies to radiologists. When, however, the statement is made that previous *x*-ray treatment makes the surgeon's task difficult or impossible it is time to quote other surgeons whose opinions differ radically from this view.

Mr. C. A. Joll, in his monumental work on the thyroid gland (Heinemann, 1932), expresses his views as follows (p. 488):

> "Surgeons as a body seem to be divided into those who, like de Quervain, find that surgical procedures are rendered more difficult and those who, with Walton (1923), state that they have never been able to detect the slightest difference in the appearance of the tissues at operation, even in cases which have been treated radiologically for prolonged periods. I range myself with the latter group because, although I have met with cases in which at operation the surgical or false capsule appeared to be unusually thick and opaque, and unduly adherent to the underlying true capsule, yet this state of affairs does not occur exclusively in those subjected to *x*-ray treatment, but is sometimes found in cases which have not been subjected to this treatment."

X rays in very mild doses once or twice weekly should form a part of the medical treatment of exophthalmic goitre—that is, they should be used in all cases which do not quickly respond to rest and drugs. *X* rays, according to Barclay and Fellowes (*Lancet*, 1926, pp. 593–5), cure about 60 per cent. of early cases, leaving 40 per cent. which may later need operation. The experience of these workers corresponds with that of radiologists in general, and it is therefore very important that it should be realized by the medical profession that *x*-ray treatment, *carried out with proper technique*, gives a patient a good chance of cure without surgery, and, should the latter ultimately prove necessary, does not make things any more difficult for the operator.

It is true that *x*-ray treatment does not produce the dramatic cures which follow operation in severe cases, since its object is to produce a gradual slowing of the hyperactivity of the gland. It is also true, however, that it enables many such patients to avoid the risks of a very serious operation, from which the possibility of a fatal issue can be by no means excluded. The statement that "cures are very rare indeed and relapses very common" is absolutely contrary to the experience of the majority of radiologists, and the risk of producing myxoedema when the treatment is in capable hands is almost *nil*.—I am, etc.,

Carlisle, Jan 31st. RICHARD CONNELL.

Treatment of Recent Injuries

SIR,—Mr. W. E. Tucker, in his article on this subject in the *Journal* of January 28th, has emphasized the point of the greatest importance. I would like to endorse his recommendation that all injuries of the type he describes, however small, should be treated actively and intensively from the beginning. Not only does this avoid, in many cases, subsequent disability from adhesions, but it also ensures the co-operation of the patient in his cure, which is essential in dealing with industrial accidents.

I was particularly interested in Mr. Tucker's section on injury to muscle. Tearing of the erector spinae at its sacral and lumbar origins is a common injury in the dock areas of Liverpool, and for the last eighteen months I have been treating these cases on the lines he advocates. The results have been encouraging and manipulation has been necessary very rarely. The greatest difficulty lies in persuading the patient that the initial discomfort is for his own benefit. I am convinced that the formation of a haematoma, followed by adhesions, is the correct explanation of the pain and disability which result from the passive treatment of this condition; firm strapping, supervised active exercise, and radiant heat have usually been successful without recourse to diathermy and massage.

There is one section, however, which I would venture to criticize: the paragraph relating to injuries to joints. If synovial membrane is torn a synovitis results, as indicated by effusion, and this is an "inflammation," although an aseptic one. Such joints should be rested until the effusion has settled, and subsequent active exercise will usually produce a full range of movement. These injuries should be carefully differentiated from torn ligaments around the joint—for example, a torn external lateral ligament of the ankle. In these cases firm strapping applied in such a manner as to approximate the ends of the torn structure followed by immediate active exercise and weight bearing should be employed. —I am, etc.,

Liverpool, Feb. 4th. E. N. WARDLE, F.R.C.S.

SIR,—After reading Mr. W. E. Tucker's paper in the *Journal* of January 28th (p. 135) I am forced to the conclusion that his literary ability does not do justice to his professional skill and originality of thought; for he offers one very little, apart from obvious enthusiasm, that would

lend genuine support to his extraordinary and, self-admittedly, somewhat brutal practices. It is against this "brutality" that I feel I must protest, for should his practices pass unchallenged and be adopted, even by a few, I fear that he may be the starting-point of a good deal of harm.

I am not concerned primarily with the brutality to the patient's "sensorium," for, as Mr. Tucker says, that can be tolerated, except perhaps in the case of children and highly strung adults, of whom there are many; but I am concerned with his "brutal" treatment of the tissues he is attempting to heal. The fundamental principle underlying the whole of the work of the late Sir Robert Jones was "rest to the injured part." We cannot let this golden rule casually be thrust aside.

Coming to a more particular criticism of Mr. Tucker's methods I must deal with his treatment of the bruised and partially ruptured muscle. I am sure that what he wishes to do by "working out" the clot (incidentally rupturing the muscle sheath, if that has not already been done by the injury) is to minimize the adhesions, not to obviate them altogether. For were he to do that, and were it possible, there would be nothing left to replace the torn fibres and to re-establish communication between the sound portions. Actually, a substantial degree of clot is necessary, and to be desired, for this purpose. In any case, if Mr. Tucker quarrels with this clot and wishes to remove it from the muscle, would it not be more expeditious to aspirate it in the first place?

One cannot neglect either the fact that active manipulation such as he suggests cannot fail to increase the traumatic oedema in the region, perhaps even to restart the local haemorrhage and re-form the haematoma which he has been at such pains to remove. If he persists in producing effusion upon effusion, inevitably he must be familiar with those brawny swellings in the tissues which mark the maltreated injury and which require such energetic treatment to dissipate. If he will leave his injured muscle at rest for the few days which are required for the pain and most of the oedema to settle, and then begin his massage and physiotherapy, he will find that such embryo adhesions as may have formed with other structures will be broken down readily enough and without the dramatic "clicks" of which he speaks.

It is, however, with Mr. Tucker's treatment of the subperiosteal haematoma that I most seriously disagree. In effect, what he proposes to do is to rupture the raised periosteum by "brute" force, and in a haphazard fashion. Then he proceeds delicately to take the clot from beneath the skin! All this he does, presumably, as soon after the injury as possible. Let us examine closely what happens. After perhaps being forced up and down the surface of the bone the clot is expressed through an irregularly and perhaps extensively torn periosteum, which may give rise to a good deal of irregularity of surface growth later. The clot, with probably a good deal of fluid blood, is now free to spread extensively in the tissue planes—a process which Mr. Tucker recognizes to be detrimental. Then a small fraction of the original clot reaches the skin for Mr. Tucker to remove. Again, is it not more reasonable to aspirate this clot directly from underneath the periosteum when its presence is diagnosed? In the majority of cases most people would agree that its removal is desirable, but would quarrel with the reasoning that permits comparison between what was virtually an untreated case and one treated by his method.

Mr. Tucker has evidently found that an injured elbow is more susceptible to the effects of his treatment than other joints, so he wisely makes an exception and leaves it to "rest." Finally, it is noteworthy that his treatment of the dislocated shoulder after reduction is praiseworthy and practically orthodox. He does not, in this case, advocate his early vigorous massage: one wonders why.—I am, etc.,

Blackpool, Jan. 31st. HAROLD T. CANK, M.B., Ch.B.

Acne Vulgaris

SIR,—I should like to congratulate Dr. P. B. Mumford on his discernment. In his paper in the *Journal* of January 28th he gives the observations that have led him to conclude that acne vulgaris is a symptom and not a disease. He finds among acne subjects certain constant signs, the chief of which are: (1) constipation; (2) follicular perniosis, as shown by a pin-point hyperkeratosis with minute areas of capillary stagnation on the pulvinar areas and posterior upper arms; (3) peripheral cyanosis that remained after an hour in a warm room; (4) "clamminess" of the hands; (5) cold hands and a poor circulation, impelling the patients to wear an excessive amount of clothing; (6) menstrual irregularity. I would point out that *all* the above are among the more constant manifestations of chronic intestinal stasis.

In "acne" subjects the stigmata of "stasis" are always evident. Other chronic skin diseases may be produced by the toxaemia of stasis, notably psoriasis and eczema (especially a serpiginous variety); in these cases acne is very often superimposed upon the other skin eruption. Dermatologists are aware how intractable these chronic skin troubles are apt to prove when treatment is confined to local applications. On the other hand, it has been my constant experience to find steady improvement, ending in complete cure, when to the local treatment of the skin is added the appropriate general treatment—diet, regime, etc.—prescribed after complete diagnostic investigation of the stasis. Not only the psoriasis or eczema, but also the accompanying acne, clear up as the symptoms and signs of stasis pass off. Indeed, one of the earliest signs of the successful treatment of stasis is the return of the skin to the smooth and supple condition of the healthy integument.—I am, etc.,

London, W.1, Feb. 3rd. ALFRED C. JORDAN.

SIR,—The title chosen by Dr. Mumford for his article —"Acne vulgaris, a symptom, not a disease"—surely stresses a very useful differentiation. There has been too great a tendency to pick out parts of a "symptom-complex" and label each as a separate disease. I have myself frequently stressed the fact that the dental lesions of caries and pyorrhoea are symptoms and not diseases; the relation that Dr. Mumford found between the former of these and acne should be of importance in considering the aetiology of both conditions.

I believe that the fundamental cause of dental caries lies in an upset in the balance of the blood in the direction of an acidosis. Barber, as quoted by Mumford, believes that the same condition is responsible for the alteration in the habits of the body saprophytes. This may well then be responsible for the very frequent association (52 per cent.) in Dr. Mumford's cases of excessive caries and acne. But if dental and skin lesions are symptoms only of some deeper underlying disturbance, then may not this apply to certain types of arthritis, gastric ulcer, the allergic diseases—even cancer—and many other conditions? When therefore we find, as undoubtedly we do find, that each of these has a special type of dental lesion associated therewith—caries in one case, pyorrhoea in another—we receive more than a hint as to the basic factor on which the "symptom-complex" rests. The disturbance of blood balance itself is a symptom dependent upon an upset metabolic equation—intake *versus* output—food and

oxygen on the one hand and energy expenditure (voluntary or involuntary, physiological or psychological) on the other, which, in the last resort, must depend upon a disturbance in the balanced working of the endocrine autonomic system, which regulates all metabolism.

We thus arrive at the fundamental beginning of all chronic disease, with the dental lesion pointing to the direction of the disturbance—caries suggesting excess katabolism, and pyorrhoea excess anabolism.—I am, etc.,

London, W.1, Feb. 4th. F. W. BRODERICK.

Treatment of Alveolar Abscess

SIR,—Co-operation between medical men and dental surgeons is required not only in dental radiology but in other directions. At the hospitals to which I am attached, patients all too frequently appear exhibiting the condition to which I drew attention in these pages in 1928—the condition of overlooked alveolar abscess. The histories of these cases are generally as similar as the remedies employed are unlike, but the patients have almost invariably been told that "nothing can be done till the swelling goes down." If the patient is lucky the swelling does subside, after a varying period of unnecessary suffering. If not, the patient reaches hospital in a more or less debilitated condition. One patient whom I saw, with enormous swelling of one side of the face, had actually been treated for over a week solely by large doses of morphine. Most cases have had external poultices applied.

Nowadays it is generally agreed that when an offending tooth is hopelessly carious and abscessed it should be extracted forthwith, preferably under a general anaesthetic. So long as such a tooth is left *in situ* the trouble will continue. I know of no adequate reason for the persistence of the legendary belief that extraction should be delayed "till the swelling goes down." A local anaesthetic should not be injected into or near the affected part.—I am, etc.,

G. GRAHAM MACPHEE, M.B., Ch.B., L.D.S.

Liverpool, Jan. 28th.

Post-Graduate Education

SIR,—I was much interested to read the article in your issue of January 21st by Mr. Harold Balme on the development of post-graduate education, and to note his tribute to the work of the Fellowship of Medicine. With much of what he writes I am in agreement, but I should like to make one or two further comments. He acknowledges that he writes of conditions five years ago, and it is true, as he himself suggests, that conditions have undoubtedly improved since then.

First, as regards the individual needs of post-graduates, the Fellowship of Medicine, since its reorganization, has gone out of its way to endeavour to meet this very point. This it has done by arranging different types of courses to suit the requirements of the varying classes of those who are its clients. Week-end refresher courses have been started for the busy general practitioner, and these are becoming increasingly popular. Special courses and demonstrations in different branches of medicine and surgery are provided for those who require specialized instruction, also F.R.C.S. and M.R.C.P. classes for those seeking diplomas. In the reorganized *Journal* care is taken to give information in advance of these arrangements, so that men can make their preparations accordingly. A rota system has been established which makes the individual the unit rather than the hospital, and men have a wide circle from which to choose the particular teacher most likely to be of assistance. As the result of work on these lines I should like to point out that no fewer than 1,051 tickets were issued to post-graduates in the past year, which was a difficult one, as against 751 the previous year. Equally striking is the fact that for the Rota, which has only been established eight months, 374 attendances have been recorded. As regards the preparation for the specialized work, there have been fifty-seven special courses, five special demonstrations, and five series of lectures on general and special subjects.

Second, in regard to the complaint about lack of centralization, I feel that this particular objection, which is frequently reiterated by many of our correspondents, is one which has been greatly overstated. In Vienna, which is constantly held up as an ideal, the actual organization of the curriculum is done in a small bureau, such as ours in London, while the work is carried out in the numerous hospitals, which are naturally nearer together than is the case in London. This is inevitable when we consider the relative size of the two cities.

Third, as regards opportunity for practical work, the building and equipment of a large central post-graduate hospital will hardly get over the difficulty. I know from personal experience that in Continental centres it is not in the large but in the small institutions that practical work is most accessible. Moreover, the conditions under which examination of patients is possible in Continental hospitals is, and always has been, totally different from those obtaining in this country.

Fourth, as regards the personnel, I am only too well aware of the delinquencies of many of the post-graduate teachers, both in respect of punctuality and of lack of adequate preparation. While I have had occasion to deplore this myself, I do not see any way by which it can be obviated with certainty. I would further remark that the number of complaints which the Fellowship of Medicine has received has been steadily diminishing, and is now very small indeed.

Last, in regard to the provision of a common room and other social facilities, while I am largely in agreement with Mr. Balme, I feel that possibly too much may be made of this point. The cardinal factors in the success of post-graduate teaching are the good will and spirit of energy of the teachers themselves, coupled with the receptiveness of the post-graduates. If these factors are lacking no amount of organization, however perfect, will avail.

In conclusion, the Fellowship of Medicine is surely doing in general terms all that other centres abroad have done, and has, moreover, as much, if not more, clinical material from which to build its activities.—I am, etc.,

JOHN E. RYAN,
Honorary Editor, *Post-Graduate Medical Journal*; Member of the Executive Committee, Fellowship of Medicine.

London, W.1, Jan. 31st.

The G.P. and the Curriculum

SIR,—The Council of the British Medical Association, and the Chairman in particular, are to be congratulated on their prompt action in appointing a representative committee to formulate a policy on medical education. General practitioners will welcome the appointment of seven representatives on the committee. With such a considerable proportion of general practitioners there is ground for hope that the point of view of the general practitioner regarding medical education will be put forward with energy and fullness, and be given adequate consideration.

The reference to the committee is wide, but I venture to submit that it does not go far enough. The curriculum is so intimately bound up with the control of medical training by the General Medical Council, and the teaching in medical schools and hospitals, that concentration of

perhaps for the first time, that it was possible to conduct a purely external examination of large numbers of candidates in such a way that not only could justice, expedition, and accuracy be attained, but also that the result of a candidate's examination could be given to him on the day he completed his examination. Until some better means of selection than the examination system can be evolved nothing fairer than the "Conjoint system" is likely to be created. There are few systems which permit the retention of any human element, but there must be many thousands of practitioners to-day who owe not a little to the ever-ready sympathy and advice, in failure or success, of Hallett.

His valuable work for the Royal Colleges during twenty-two years—particularly in connexion with the building of the first examination hall on the Embankment, and again with the building of the present hall in Queen Square, Bloomsbury, in 1909–12—was recognized by an honorarium of £500. In 1902 the Royal Colleges established the Imperial Cancer Research Fund, of which Hallett became the first secretary, in addition to his other duties. He retained this position until last year, when he resigned on account of his health, and the executive committee of the Fund, in the last annual report, express deep appreciation "of the way he has guided the policy of the Fund during its thirty years of existence, and of his far-sighted ability in drafting its constitution." At the invitation of the Carnegie Foundation in 1912 he visited America to explain the working of the examination system of the Royal Colleges, and the success of his visit cemented the sympathy and understanding between the medical educational authorities in both countries. It is not too much to say that the establishment of the National Board of Medical Examiners of the United States, with its system of examinations similar to that of the Royal Colleges, owed not a little to Hallett's inspiration, sympathy, and guidance.

On the outbreak of war Hallett took over, as additional duties, the responsible work of secretary to the Committee of Reference—a statutory body appointed to arrange for the calling up and demobilization of the medical staffs of the London hospitals—besides acting as secretary to the joint delegates of the Committee of Reference and of the Central Medical War Committee, and to various sub-committees of the delegates. In 1920 his war work was recognized by the award of the O.B.E., while the Royal Colleges granted him an honorarium of 100 guineas in appreciation of his work with the Committee of Reference, and he was appointed a justice of the peace for Berkshire. On his retirement in December, 1927, after fifty years of devoted service to medical education in general and to the Royal Colleges in particular, Hallett received the honour of knighthood. In 1928 the Council of the Royal College of Surgeons desired to make him a personal gift to commemorate his outstanding work for the College during half a century, and in deference to his own wish instituted the Hallett Prize, which is awarded twice yearly at each Primary Examination for the Fellowship to the candidate who most distinguishes himself in the examination in anatomy and physiology.

Apart from the Royal Colleges, the thing nearest to his heart was his home, and even here there was a link with the profession he loved and served so well. In 1884 Hallett married Margaret Elizabeth Lane, the daughter of James Lane, F.R.C.S., and niece of Samuel Lane, whose name is intimately associated with the foundation of St. Mary's Hospital Medical School. Perhaps his favourite hobby was painting and illuminating, and many are the addresses, etc., which testify to his artistic skill and ability. Many of those who have admired the beautiful Roll of Honour in the House of the British Medical Association may not be aware that this is one of Hallett's labours of love, which occupied his leisure moments during many months. Largely in recognition of this service he was made an honorary member of the Association in 1925. Lady Hallett survives him, with a son and a daughter—the wife of her father's successor, Mr. Horace Rew.

E. C. THOMPSON, M.B., F.R.C.S.I.,

Late of Omagh, County Tyrone

The death of Dr. Edward Charles Thompson, formerly surgeon to the County Tyrone Hospital, took place at the age of 83, at his residence in East Sheen, Surrey, where he had lived since his retirement from practice five years ago.

He received his early education at the Raphoe Royal school, and from there entered Dublin University, graduating M.B. in 1871. He became F.R.C.S.I. in 1885. After a short time in the Army, Dr. Thompson succeeded his father in 1895 as surgeon to the County Tyrone Hospital. He held this position for fifty years, and it was almost entirely owing to his efforts that that institution became one of the most up-to-date and best-equipped county hospitals in Ireland—and that at a time when county hospitals were in a very ill-equipped condition. He at one time represented Monaghan in the House of Commons, and succeeded in getting an important clause in one of the Local Government Acts, which enabled county councils to make grants to county hospitals in excess of the statutory grants, provided that the auditor of the Local Government Board certified there was a deficit in the funds allocated to the work of these hospitals. In the great war he placed his services at the disposal of the Allies, and was appointed commandant of the Belgian Field Hospital. On relinquishing this appointment later, Dr. Thompson devoted much of his time to the treatment and care of wounded British soldiers. In 1926 he was appointed a Deputy Lieutenant for County Tyrone, and in 1925 served as High Sheriff of the county.

Dr. Thompson, during his time in County Tyrone, was a very energetic medical politician, and in the different Irish medical crises, mainly owing to his efforts and influence, the profession in Tyrone proved always strictly loyal to the highest medical principles. Some time before his resignation he established a very successful Division of the British Medical Association, coterminous with the county as an administrative area, and was elected as its first chairman. He was also a past-president of the North of Ireland Branch.

Dr. WILLIAM BLACK JONES, who died in Cardiff on January 27th, practised for many years in Breconshire, and was well known for his writings on the mineral water of Llangammarch Wells. A son of the Rev. W. M. Jones, D.D., he was born in 1864, and studied medicine at St. Bartholomew's Hospital, graduating M.B.Lond. in 1892 and M.D. in 1894. After serving as house-surgeon at Bart's and house-physician at the Great Northern Central Hospital, he obtained the D.P.H. in 1897, and in the following year became physician to the Spa at Llangammarch. Later he was appointed medical officer of health for the combined Builth Wells and Colwyn urban and rural districts, and medical officer to the Builth Cottage Hospital. During the war he was honorary medical officer to the local Red Cross hospital, and afterwards served as medical referee for the Ministry of Pensions. Dr. Black Jones was a justice of the peace for Breconshire, and in 1924 was elected chairman of the North Glamorgan and Brecknock Division of the British Medical Association; he had served also as chairman of the Brecknockshire Panel Committee.

Medico-Legal

AN INDIAN MISCARRIAGE OF JUSTICE

The Case of Dr. Gaya Prasad

A singular story from the Indian courts has just been unfolded to the Judicial Committee of the Privy Council on appeals by an assistant civil surgeon and a sub-inspector of police from the judgement of the High Court of Patna. Dr. Gaya Prasad, a young practitioner at a hospital at Sassaram in the province of Bihar and Orissa, had been sentenced to five years' rigorous imprisonment, and the police inspector to ten years, the former for perjury and the latter for conspiring to fabricate and give evidence falsely. The Judicial Committee allowed both appeals, stating that there had been a miscarriage of justice which had caused two persons of apparently unblemished reputation to be wrongly convicted.

The story begins with a complaint to the police inspector that a young man had been attacked by six others, and so assaulted that he had died. The statement of the persons accused was that the young man had been suffering from cholera and had died of that. The police inspector sent the body for post-mortem examination to the nearest civil surgeon, fifty miles away, who happened to be Dr. Prasad. The doctor made the post-mortem examination, found a number of ecchymoses in the neighbourhood of the stomach, and gave it as his opinion that the cause of death was shock resulting from injury. Later he gave evidence at the murder trial, and testified to ruptures of abdominal organs, stating that at the sites of the ruptures there were clots of blood, indicating that the injuries were ante mortem. The accused persons were found guilty and sentenced to death, which sentence was commuted to long terms of imprisonment. After the verdict, however, there was much unrest in the village, and further inquiries were ordered, with the eventual result that proceedings were taken against the original accusers, and also against the police inspector and the doctor. The hearing, which took place at the High Court of Patna before the Chief Justice and two other judges and a special jury, occupied fifty days, and all the accused were found guilty. The charge which was held to be proved against the doctor was that of perjury at the trial, though he was acquitted on the other charge of conspiracy to fabricate false evidence —that is, his report on his post-mortem examination.

Lord Atkin, in delivering the judgement of the Judicial Committee, said that in its opinion the doctor's conviction was not justified and could not stand. The substance of the case against him was that, although he had so stated in court, he had not in fact held the opinion that the injuries were ante mortem ; yet, as Lord Atkin pointed out, a similar statement was made in the report of his post-mortem examination, and in respect to the charge founded on that he had been acquitted. The Chief Justice, who attached excessive importance to the evidence of doctors called for the prosecution that they would have expected much more blood in the pericardial cavity, had suggested to the jury that on the perjury charge they might find that the doctor had not held the view he had expressed in the witness box if they considered the things which were before him when he gave evidence quite apart from the things which were before him when he made his post-mortem report. But the only further facts before the doctor when he gave evidence were things which would strengthen the opinion he had expressed—namely, that his chief at the hospital agreed with his conclusion as to ante-mortem injury, and that the prosecutors had already given evidence that the deceased had been assaulted. It appeared that the doctor had never heard of the deceased or his relatives or the accused, and had no motive for giving a false opinion. The Chief Justice left to the jury the following choice of alternatives: that if the man died of disease and, as the doctor said, no blood was found in the abdomen, that fact should have struck him as conclusive against ante-mortem injury, while, if he died of injuries, then the abdomen would have been full of blood, "and in that case," added the Chief Justice, "he was a fool not to have noticed it. In any case he would seem to be a person who is not fit to do post-mortem work." Lord Atkin said that after opinions so expressed the jury might well have thought that no one possessed of a medical degree and holding office as a civil surgeon could have reached the depth of incompetence suggested, and therefore they would be driven to the only other alternative—perjury. But it had to be remembered that the story presented to the doctor was one of alleged assault, that the internal injuries found were obviously the result of violence, that it had not at any relevant time been suggested to the doctor that violence had been applied after death, and that the only disease mentioned—namely, cholera—was clearly negatived. Therefore it seemed reasonable that a medical man should honestly come to the conclusion that death was due to the injuries which he found. The result of the case was to leave no stain upon the integrity of Dr. Prasad's character as a professional man.

The Services

HONORARY SURGEON TO THE KING

Lieut.-Colonel H. E. Stanger-Leathes, I.M.S., has been appointed Honorary Surgeon to His Majesty the King in succession to Major-General C. Hudson, C.B., C.I.E., D.S.O., I.M.S. (ret.), and is promoted to the rank of Brevet Colonel.

DEATHS IN THE SERVICES

Lieut.-Colonel John Stephenson, C.I.E., F.R.S., Bengal Medical Service (retired), died of a heart attack in London on February 2nd, a few days before his sixty-second birthday. He was born on February 6th, 1871, and was educated at Burnley Grammar School and at the Victoria University, Manchester, where he graduated M.B. and Ch.B., with first-class honours, in 1893. He also took the degree of B.Sc , with honours in zoology, in 1890, and the M.B., with first-class honours in medicine, at London University in 1894, subsequently becoming D.Sc. in 1909, as well as taking the F.R.C.S. in 1905. After filling the posts of house-physician at the Royal Infirmary, Manchester, and at the Royal Chest Hospital, London, he entered the I.M.S. as surgeon lieutenant on January 29th, 1895. He became lieutenant-colonel after twenty years' service, and retired on September 6th, 1921. After his retirement he was lecturer on zoology at Edinburgh University from 1921 to 1929, when he came to London to take up the editorship of the Fauna of British India Series at the Natural History Museum. He served in the war of 1914–18, in the Egyptian Expeditionary Force in 1918 ; but most of his service was spent in civil employment in the Punjab, where, after serving as civil surgeon of various stations, including a spell of plague duty, he was appointed in 1906 to be professor of biology in the Punjab University at Lahore, and later professor of zoology. He made a considerable reputation as an oriental scholar, as well as in his special subject of zoology, publishing several translations of oriental works, the chief of which was the text, with translation and commentary, of the *Had:qatu-l-Haq:qat of the Hakim Sanai*. He wrote many zoological works and articles, the best known of which is a monograph on the Oligochaeta (earthworms) of India, published by the Oxford University Press in 1930. He received the C.I.E. on June 3rd, 1919, and the F.R.S. in 1930. Two years ago he was appointed zoological secretary of the Linnean Society ; he was also offered, but declined, the secretaryship of the Royal Asiatic Society.

Universities and Colleges

UNIVERSITY OF LONDON

The degree of Ph.D. (Bacteriology) has been awarded to R. Lovell of the London School of Hygiene and Tropical Medicine.

UNIVERSITY OF BIRMINGHAM

Dr. James F. Brailsford has been appointed radiological demonstrator in living anatomy.

Dr. J. Gore and Mr. E. C. N. Strong have been appointed part-time demonstrators in anatomy for the spring term.

It has been decided to abolish the degree of B.Sc. in public health and to establish a degree of M.D. (State Medicine) under regulations approved.

ROYAL COLLEGE OF PHYSICIANS OF LONDON

Lectures

The Oliver-Sharpey Lectures, on the peripheral pathway for sensation, will be given by Dr. E. Arnold Carmichael on May 2nd and 4th, and on June 8th, 13th, and 15th. Professor E. Mellanby will deliver the Croonian Lectures on "Nutrition and disease—the interaction of clinical and experimental investigations."

The lectures, to which any member of the medical profession is admitted on presentation of visiting card, will be given at the College, Pall Mall East, at 5 p.m. on each day.

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

Parliament reassembled on February 7th. The business of the House of Commons for the week included resolutions authorizing expenditure for housing in England and in Scotland under Bills before the House. An announcement was made that the Government would introduce a Bill for the licensing and regulation of the transport of goods by road.

Influenza

On February 7th Sir WILLIAM DAVISON asked the Minister of Health whether any organized research was being conducted by, or at the instance of, his Department into the primary cause of influenza and the methods for its prevention in view of the serious effects on the health and industry of the nation caused by recurring epidemics. Sir HILTON YOUNG replied: Investigation into the virus diseases, of which influenza is believed to be one, is continually in progress at the National Institute for Medical Research. A special inquiry, subsidized by my Department, is also being made into the bacteria of the nose and throat with a view to devising methods of prevention of such respiratory diseases as influenza. Hitherto, in this and other countries, the direct verification of the influenza virus has proved impracticable, because the effect of the organisms found cannot be proved experimentally in the absence of any susceptible species of animal. No general method of immunization is accordingly at present available.

Slums and the Housing Bill

On February 7th the House went into committee on the money resolution required for the Housing (Financial Provisions) Bill. Sir HILTON YOUNG moved the resolution, which, he said, was a necessary preliminary to the scheme for the enlistment of the building societies in their endeavours to provide houses. It was proposed to extend a certain guarantee to the building societies in respect of advances made by them in excess of their normal advances for building. The scheme was a big step in advance towards meeting the demand for houses by wage-earners of the class just above the lowest paid. Subsidies must be concentrated on slum clearance, and he intended to appoint a committee of his own Department as an essential step to focus knowledge on this subject.

Sir FRANCIS FREMANTLE said there was no reason why eventually a large statutory public utility society should not fill in the present gaps in the work of housing. It was as well that the Government had not included any proposal about the public utility societies in its scheme at the moment. Anything that would interfere with the clear-cut change in the Government's housing policy would invalidate the incentive to private enterprise, and to the builder and the building trade, to take up this work. He doubted whether the scheme proposed by the Government, with the help of the building societies, would produce houses at a rental which was wanted. They should not be satisfied until they got houses at a rental of 8s. in the country and 12s. in the towns, including rates. In the slums and in industrial towns there were now innumerable instances of families spending as much as 15s. to 20s. for bad accommodation in a couple of rooms. They knew of the scandalous and disgraceful cases, up and down the country, of subtenancies at exorbitant rents. In this epoch-making change of policy the Government was focusing on the slums. He welcomed the news that the Government was going "full steam ahead" with its slum policy, and was not going to confine itself to the 12,000 houses annually which had been suggested. The resolution was agreed to by 236 votes to 38.

Earlier in the sitting of February 7th Mr. EMMOTT asked the Minister of Health whether the Government's programme for slum clearance was limited to 12,000 houses a year.

Sir HILTON YOUNG replied that no limitation of the sort was imposed in the Government's programme for the clearance of slums. It was intended, by the concentration of assistance from subsidies on slum clearance, and by encouraging the more active administration of the Act of 1930 by local authorities, to raise the rate of clearance as much as possible without any arbitrary limitation. The figure of 12,000 houses a year had been referred to as the estimated number for which, in the light of experience of the working of the Act, it was reasonable to make provision in the Estimates for the coming year, which would be the first year of intensified effort. It was expected that after the first year the rate of clearance would be increased.

Medical News

The Sir Charles Hastings Lecture for 1933 will be given at the British Medical Association House, Tavistock Square, W.C.1, by Sir Henry Gauvain, on Tuesday, February 21st; the subject will be "Sun, air, and sea bathing in health and disease." The lecture was inaugurated by the B.M.A. for the purpose of offering to the public information by the highest authorities on matters of general public interest. The President of the Association, Lord Dawson of Penn, will take the chair at 8 p.m. Tickets of admission (free) can be obtained from the Financial Secretary, B.M.A. House, Tavistock Square, W.C.1. Seats not occupied by 7.50 p.m. will be available for other members of the public.

A meeting of the Royal Microscopical Society will be held in the Hastings Hall, B.M.A. House, Tavistock Square, W.C.1, on February 15th, at 5 for 5.30 p.m. Papers, followed by discussions, will be read by Mr. Arthur S. Newman and Mr. E. E. Jelley. A meeting of the Biological Section will be held on March 1st.

At a sessional meeting arranged by the Royal Sanitary Institute in the town hall, Warrington, on Friday, February 24th, Dr. J. Gifford will open a discussion on sterilization of the mentally defective. The chair will be taken at 6.30 p.m. by Dr. George F. Buchan.

The annual meeting of the Industrial Health Education Society will be held at 10, Downing Street on Monday, February 20th, at 4.30 p.m. The speakers will include the Prime Minister, Lord Horder (president of the society), Lord Luke (chairman), Dr. W. J. O'Donovan, M.P., and Mr. A. G. Walkden, president of the Trades Union Congress General Council.

Dr. Matthew B. Ray will give a Chadwick Lecture, entitled "The Hippocratic tradition," on Tuesday, February 21st, at 5.15 p.m., in the lecture hall of the Royal Society of Tropical Medicine and Hygiene (26, Portland Place, W.1). Sir William Collins will preside.

Sir William B. Hardy, D.Sc., F.R.S., director of food investigation, department of scientific and industrial research, will give the Trueman Wood Memorial Lecture before the Royal Society of Arts (John Street, Adelphi, W.C.) on Wednesday, February 22nd, at 8.30 p.m. His subject is: "Industrial research with biological material."

At a meeting of the Cambridge Antiquarian Society on February 13th at 8.30 p.m., in the Museum of Classical Archaeology, Mr. E. Saville Peck will give a lecture on John Francis Vigani (first professor of chemistry in the University) and his medicine chest, now in the library of Queens' College.

Professor J. A. Gunn of Oxford will give a lecture on the search for new remedies at the meeting of the Pharmaceutical Society of Great Britain, to be held at 17, Bloomsbury Square, W.C., on Tuesday, February 14th, at 8.30 p.m.

At the meeting of the Paddington Medical Society on Tuesday, February 14th, in the Great Western Royal Hotel, Paddington, at 9 p.m., a discussion on "Problems of medical representation" will be opened by Dr. E. K. Le Fleming, Dr. A. F. Heald, and Mr. Ernest Ware. Visitors are cordially invited.

The Fellowship of Medicine announces that Dr. H. C. Cameron will lecture on "Stammering and bed-wetting in the school child" in the series on practical problems in medicine and surgery, at 11, Chandos Street, W., on February 14th, at 4 p.m. Three courses will begin on February 20th: M.R.C.P. evening clinical and pathological demonstrations at the National Temperance Hospital on Mondays and Fridays (limited to 16); medicine, surgery, and the specialties, at the Prince of Wales's Hospital, Tottenham, for two weeks, occupying the whole of each day with demonstrations, operations, and lectures; practical pathology class at the Hospital for Consumption, Brompton, on two days a week, from 11.30 a.m. to 1 p.m. (limited to six). Other forthcoming courses include medicine, surgery, and gynaecology, at the Royal Waterloo Hospital, March 6th to 25th; orthopaedics, at the Royal National Orthopaedic Hospital, March 6th to 18th; rheumatism (evenings), at the British Red Cross Clinic, Tuesdays and Thursdays, March 7th to 23rd.

The University of London Medical Graduates Society was fortunate in being entertained by the Society of Apothecaries on February 2nd, when their hall, with its plate, art, and literary treasures, was open for inspection. The master (Dr. Cecil Wall) received the members and gave a short and extremely interesting address on the history of the Society of Apothecaries, with special reference to their development as a licensing body for the actice of medicine. This address was greatly appreted, and Lady Barrett suitably returned thanks to . Wall and the Apothecaries for their hospitality, after ich tea was served. Particulars as to membership of e Medical Graduates Society can be obtained from the norary secretaries, 11, Chandos Street, W.1.

A post-graduate course in orthopaedic surgery will be ld at the Royal National Orthopaedic Hospital, 234, eat Portland Street, W.1, and Stanmore, Middlesex, m March 6th to 18th. The fee for the course is £3 3s. ll particulars can be obtained either from the hospital or m the Fellowship of Medicine, 1, Wimpole Street, W.1.

The February issue of the *Practitioner* is devoted tirely to the early diagnosis of malignant diseases, the bject being introduced in an article by Sir Holburt aring. Thirteen sections deal with the diagnosis of ncer as it occurs in various parts of the body. The iole makes an excellent symposium.

Dr. L. P. Jacks, editor of the *Hibbert Journal*, will liver an address on the social sciences and philosophy, University College, Gower Street, on Tuesday, February th, at 8.15 p.m. Tickets can be obtained on application the Director of Studies, University Hall, 14, Gordon uare, W.C.1.

The Canadian Association of Occupational Therapy, ich has been in existence for six years, has made conlerable progress latterly, qualified members being now work in many of the larger hospitals throughout the ominion. Two-year courses are held for the purpose training, and whole-time or part-time work is availle in increasing degree for occupational therapists. ie president of the association is Dr. Goldwin Howland, d Dr. Alexander Primrose and Dr. Frank Pedley are :e-presidents; the secretary is Mr. W. J. Dunlop of the niversity of Toronto.

Progress in research work is indicated in the report for e 1931–2 session of the Hebrew University of Jerusalem. :otein structure and the nature of the deposits found in e Dead Sea have been studied by the chemistry department, while the researches in biology have included work the prevention of malaria, and poultry and plant seases. Undergraduate teaching has only just begun, it the University library has continued to maintain a eady growth.

Dr. Paul Blum has been nominated professor of thera:utic hydrology and climatology at Strasbourg, and Dr. ristol, professor of biological chemistry in succession to r. Derrien at Montpellier.

The King has appointed Captain J. J. Beausang, I.M.S.,) be His Majesty's Vice-Consul at Seistan.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, B.M.A. House, Tavistock Square, W.C.1.**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names, not necessarily for publication.

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of proofs.

All communications with reference to ADVERTISEMENTS, as well as orders for copies of the *Journal*, should be addressed to the Financial Secretary and Business Manager.

The **TELEPHONE NUMBERS** of the British Medical Association and the *British Medical Journal* are MUSEUM 9861, 9862, 9863, and 9864 (internal exchange, four lines).

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The address of the Irish Office of the British Medical Association is 18, Kildare Street, Dublin (telegrams, *Bacillus, Dublin*; telephone: 62550 Dublin), and of the Scottish Office, 7, Drumsheugh Gardens, Edinburgh (telegrams: *Associate, Edinburgh*; telephone: 24361 Edinburgh).

QUERIES AND ANSWERS

Synergism and Antagonism

Dr. D. DREW (Francistown, Bechuanaland Protectorate) asks for information about the synergism of magnesium sulphate for morphine and for ether; of magnesium chloride for amidopyrin, sodium salicylate, and acetyl-salicylic acid; and also of the antagonistic action which is stated to exist between magnesium sulphate and certain other drugs, among them quinine. Some time ago (he writes) I came across a reference, in the *Epitome*, to J. T. Gwathmey's work upon the subject, quoted from the *Journal of the American Medical Association* for December 8th, 1928, but I have not been able to get more detailed information as to how, and in what proportion, the synergistic drugs are best used. With regard to the antagonism of magnesium sulphate and quinine, I have used these drugs together in the treatment of malaria, and I believe they are used in combination in the East, but I have not remarked any antagonistic action, nor have I seen more than one reference to it in the medical press.

Tapeworm Infection

Dr. A. J. TURNER (Lee-on-Solent) writes: In reference to Dr. J. G. Bennett's inquiry about tapeworm infection (February 4th, p. 211) I would draw his attention to Dr. A. H. Kemp's experience given in the *Medical Annual* for 1933 (p. 584). I have no personal experience of carbon tetrachloride in this disease, but both this and Dr. Kemp's method with vermifuges generally are worth considering.

Treatment of Mucous Colitis

Dr. D. M. MACDONALD (Alloa) replies to Dr. Grosch's query of January 28th (p. 172) as follows: I write to suggest the use of powdered Irish moss for the above troublesome and persistent malady. I have employed it for over twenty years with most excellent results. Though not a drug in the accepted sense this does not detract from its efficacy, and in addition it is nutritious. It is probably osmotic in its action. The method of administration is as follows. About 7 a.m., before fluid of any kind is permitted, a teaspoonful of the powder mixed with marmalade or jelly, is swallowed, and no fluid taken with it or for an hour afterwards. When the symptoms are severe a similar dose is taken in the early evening under like conditions. The moss should approximate in powder form to the black or white pepper of table use. The subsequent motions are bulky, soft, and painless. The remedy is certain in action and rapid in results.

Major CHARLES NYHAN (Cork) writes: Dr. Grosch may find relief for his patient through lavage of the lower bowel with normal saline solution two or three times daily, the patient being requested to retain as much as possible each time, and as long as he can. Bismuth salicylate combined with guaiacol carbonate in suitable doses give the best medicinal effect. He should also look for organisms in the faeces.

Toxic Fibrositis

"M. D. R." writes: I have a patient, a man of 67, who is subject to attacks of toxic fibrositis, but in the intervals is particularly free from it. He wishes to live on the south or south-west coast, a mile or two from the sea. What is the most favourable part for his complaint?

*** Dr. R. FORTESCUE FOX, to whom we have submitted the inquiry, suggests that the patient would probably do well in the hinterland above Worthing, or at Branksome Park or Parkstone, near Poole. Both of these are dry and sunny, sheltered in winter, and favourable for such cases. But a course of spa treatment, under advice, might be considered if the toxic condition returns.

Heating Rooms

"F. J. L." asks for suggestions with regard to the best means of heating bedrooms to prevent condensation on painted walls. As labour-saving is necessary coal fires are not used. Gas, anthracite, or other stoves would do. Electricity is not available.

Income Tax

Change in Partnership

"F. C. C. L." had a half-share partnership at A until September 30th, 1932, when he bought a one-third share in a partnership at B. The tax payable in January, 1933, as being three-quarters of the total tax for 1932–3 on the A practice, is £150 8s., and the assessor suggests that he should pay one-third of that sum, leaving the remaining and in-coming partners to pay the other two-thirds, and, presumably, the July, 1933, instalment. (The result would, of course, be that "F. C. C. L." would pay one-quarter of the total net tax for the year 1932–3.) The accounts of the practice at A were made up to April 5th each year, and those at B to December 31st. Does this affect the position?

*** It is not strictly correct to divide fractionally the net income tax liability, because unless each partner is entitled to the same personal, etc., allowances, the tax payable on their equal shares of profits will differ. While, therefore, "F. C. C. L." is liable to account for tax as for 1932-3 on (1/2 of 1/2 =)1/4 of the gross assessment, he should have his own personal allowances deducted therefrom. We advise him to apply to the inspector of taxes at A stating the facts, and asking for a statement showing what tax is due from him personally on 1/4 of the gross assessment. Similarly, the inspector of taxes dealing with the practice at B will supply a statement showing "F. C. C. L.'s" liability on the (1/2 of 1/3 =) 1/6 share of the gross assessment there. The fact that accounts are made up to different dates is immaterial; in each case they merely supply the measure of the liability for the year of assessment.

Emoluments Received in Kind

"D. L. B." inquires whether he is chargeable for the value of emoluments (house, coal, light, etc.) received by virtue of his position as medical superintendent of an isolation hospital. The value is taken into account in calculating superannuation.

*** Assuming, as we do, that "D. L. B." has not such unrestricted use of the house as would justify him in being regarded as the occupier of the premises, we regard him as not chargeable in respect of the value of that occupation and of the coal, etc., supplied for his use, notwithstanding the method of computing superannuation.

LETTERS, NOTES, ETC.

Two Rare Complications of Scarlet Fever

Dr. EUSTACE THORP (Sunderland) writes: At the present time scarlet fever is showing an increase in severity, and I am seeing many complications of the septic type, suppurating glands, retropharyngeal abscesses, etc. Two unusual cases occurred recently worthy of note. One child, a female aged 8, developed late in the second week of disease a symmetrical gangrene, involving areas of skin of the face, and more markedly skin over the shoulders and front of the elbow-joints, the area of the glutei, knees, and feet (dorsum). A dull red circumscribed patch appeared on these localities, four or five inches in diameter, rapidly becoming dark in the centres, and finally black within forty-eight hours; death ensued twenty-four hours later. The condition is mentioned by Osler as a rarity. The second case was a girl, aged 12, who was admitted with a well-defined scarlet fever rash and a history of epistaxis. She also showed a well-marked crossed hemiplegia and loss of voice. This child has now, after two months, recovered almost completely, her mouth now only remaining paralysed.

What's Wanted

A gentleman in Tangier wrote last week to the *Times* on behalf of a Berber chieftain who wished to know "where he can obtain one of those small and inexpensive machines, to be affixed to the loud-speaker, which interpret into Arabic all air communications that are received from abroad in foreign languages." This letter, by a flash of editorial wit, was headed "Plus a little something." We are reminded of it by the receipt from the Institute of Patentees (39, Victoria Street, S.W.1) of the third edition of *What's Wanted*, described in the subtitle as "a list of 895 needed inventions." This booklet (post free, 1s. 2d.) is issued "for the purpose of giving the potential inventor some guidance as to the channel into which he should divert his natural ability so that his efforts may have some prospect of meeting with success." The entries are classified under domestic and household labour-saving devices; mechanical devices and internal combustion engines; electrical devices and wireless; building and housing; and miscellaneous. We have not made an exhaustive study of these eight hundred and ninety-five modern needs, but a few gems have caught our eye: No. 8, "Linen which will be proof against lipstick." No. 16, "Wooden domestic articles." No. 424, "A machine to put on the table to pick winkles." No. 461, "A fool-proof teat for babies." No. 650, "A device to produce an artificial dog-bark, when necessary, inside the house." Against the last item may be balanced No. 684, "Automatic mute for stringed musical instruments." These we take to be specimens of unconscious humour; some of the others are obviously facetious in intention.

Disclaimer

Mr. H. P. WINSBURY-WHITE (London, W.1) writes: Recently a postcard was circulated to members of the medical profession by Messrs. Bayer Products Ltd., quoting a portion of an article I wrote in the *British Journal of Urology* entitled "Excretion urography with per-abrodil." My name was included on the postcard with reference to the article. I am writing to advise your readers that this was done without my knowledge or consent, and I wish to include the following extract from a letter to myself from Messrs. Bayer Products indicating their regret in this incident: "We beg to furnish you with our formal assurance that in connexion with the circular your name was used by ourselves without your knowledge or consent. We had, of course, no intention to act in any way contrary to medical ethics, and we express our regret for any inconvenience which may have arisen over this matter."

A "Sleep Unit"

At the British Industries Fair at the White City, which will be open from February 20th to March 4th, Messrs. Staples and Co., Ltd., are demonstrating what they describe as the "perfect sleep unit." This consists of a new spring interior overlay, of scientific construction, in combination with the well-known Staples mattress, making a sleep unit of great luxury. Another exhibit by this firm is a divan with convertible headboard, from which, for day use, an accompanying table can be erected, while for night use, the divan, fitted with the Staples mattress, makes a particularly comfortable bed.

Copies of a pamphlet on surgical sutures and ligatures, published by Messrs. Davis and Geck, Inc., Brooklyn, N.Y., can be obtained by members of the medical profession, nurses, and students on application to Mr. Charles F. Thackray, Park Street, Leeds.

Vacancies

Notifications of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 42, 43, 44, 45, 47, 48, and 49 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 46 and 47.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 47.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

92 Tularaemia in Sweden

G. OLIN and P. SEHLSTEDT (*Hygcia*, September 30th, 1932, p. 705) add Sweden to the list of the countries (United States of America, Japan, Russia, and Norway) in which tularaemia has been demonstrated. The first case, diagnosed early in 1931, belonged to the oculo-glandular type of the disease, and the source of infection was a hare which had been dressed by the patient four days before the first appearance of symptoms. Investigations showed that the same hare had given rise to the ulcero-glandular type of disease in two other persons, the incubation period being between two and four days. Since June 1st, 1931, the Swedish State bacteriological laboratory has examined for tularaemia every sample of blood received for examination for typhoid, paratyphoid, and undulant fevers. The Swedish Ministry of Health circularized the medical profession in August, 1931, with a view to focusing attention on this disease and its diagnosis. In response to these measures altogether thirty-one cases were detected, eleven being scattered in different parts of Sweden, and as many as twenty being concentrated in the small town of Lindesberg, within a circle with a diameter of only twelve to thirteen kilometres. Epidemiological investigations carried out on the spot suggested that the vector of the disease in many of these cases was the fly *Chrysops discalis*, which in the United States has frequently been convicted as a carrier of tularaemia. In one house alone there were as many as five cases, and in about two-thirds of all the cases the primary lesion occurred on the lower limbs, whereas there were only two in which the hands were the site of the primary lesion. Diseased squirrels were probably responsible for the infection in two cases, and a tick was suspect in a third. But all the problems of this small epidemic were not solved, and the inculpation of stinging insects could not be pushed home further than to a "probability diagnosis." Apart from the hares examined in connexion with definite cases of tularaemia, the authors examined twenty other hares from different parts of Sweden, and succeeded in demonstrating the bacillus of tularaemia in two.

93 Cerebral Symptoms in Weil's Disease

S. J. R. DE MONCHY and J. ALBRONDA (*Nederl. Tijdschr. v. Geneesk.*, November 5th, 1932, p. 5147), who record an illustrative case, state that while the occurrence of meningeal symptoms, such as headache, vomiting, nuchal rigidity, and Kernig's sign, has frequently been described at the onset of the disease, definite cerebral symptoms have not hitherto been recorded. The case of the present authors was that of a man, aged 40, in whom Weil's disease was ushered in by severe headache, nuchal rigidity, choked disk, extensor response, and hypertension of the cerebro-spinal fluid in which the sugar content was increased. The disease was complicated by iridocyclitis in the second week and a relapse in the fourth week, but finally recovery ensued.

94 Undulant Fever in Veterinarians

A. THOMSEN (*Rev. Gén. de Méd. Vét.*, October 15th, 1932, p. 597) has studied the frequency of undulant fever in veterinarians in Denmark. Until April, 1931, only six cases had been recognized, all of which occurred in young veterinarians who had qualified within the preceding two years. This peculiar incidence in newly qualified practitioners led the author to wonder whether perhaps undulant fever was a new disease which had sprung up within the last few years. To gain some information on this point he sent out a number of questionaries to practising veterinarians and obtained 324 replies. Only thirty members thought it possible that they had had the disease; on closer inquiry the probable number was reduced to nine, of which five were very doubtful. The earliest case which was at all probable occurred in 1925. The author therefore concludes that undulant fever due to *Br. abortus* is a new disease in Denmark, of which there is no trace previous to the year 1925. This conclusion is to some extent supported by analogy with the incidence of abortion among hogs. The first outbreak of porcine abortion due to the specific porcine type of bacillus was noted in Denmark in the summer of 1929; since that date, in spite of control measures, it has spread till in April, 1931, more than 200 farms were infected. The author argues that both the disease in human beings and the disease in pigs are new diseases. Admitting this, he draws the conclusion that the human disease must be caused by an organism other than that responsible for abortion in cattle. He makes the recommendation that young veterinarians about to go into practice should receive protective vaccination.

95 Endemic Non-eruptive Scarlet Fever

According to H. ZISCHINSKY (*Wien. med. Woch.*, November 5th, 1932, p. 1461), it not infrequently happens that an endemic of scarlet fever occurs in a children's hospital, although the disease on such occasions does not present the complete clinical picture but only a rudimentary form—namely, a haemorrhagic nephritis associated with cervical adenitis, the initial attack having usually been overlooked. The nature of such endemics is sometimes only discovered by the occurrence of what Pospischill has termed "paradoxical return cases"—that is, the admission to hospital of a case of scarlet fever shortly after another member of the family has been discharged after an attack of diphtheria, and vice versa.

96 Pulmonary Lesions in Measles

M. TAPIA, J. ORENSANZ, and C. DIEZ (*Rev. Espan. di Tuberculosis*, November–December, 1932, p. 537) made a radiological study of the lungs in fifty-seven cases of measles and found abnormal shadows in thirty-one. The frequency of these changes appeared to be in inverse relation to the age and in direct relation to the gravity of the disease. The radiological changes were grouped in the following four classes: (1) increase of the hilar shadow; (2) nodular shadows; (3) parenchymatous infiltrations; and (4) cavities. The lesions represented by these radiological shadows sometimes occur without giving rise to any clinical symptoms, and when symptoms are present there is no relation between their intensity and the extent of the pulmonary lesions. The lesions described always appear very early, and almost always during the active stage of the disease; in convalescence they disappear in the course of three or four weeks. The evolution of the lesions, the negative result of the tuberculin reaction, and bacteriological and pathological examinations exclude the possibility of tuberculosis. The authors consider that in the present state of our knowledge it is impossible to decide whether the lesions are due to the virus of measles alone or to associated organisms. The clinical interest of these investigations consists in the necessity of not confusing an acute inflammatory process with active tuberculosis.

97 Sarcosporidiosis in Man

Though sarcosporidiosis is very common in animals the infection is rare in man, and only eight cases have been recorded in the literature. L. C. FENG (*Chinese Med. Journ.*, October, 1932, p. 976) gives a summary of these, including an account of the character of the parasite, the organs affected, and the associated lesions; he also reports another case. The infection causes no specific symptoms, and its discovery is therefore purely accidental. In

two of the previously recorded cases the parasite was found in the heart muscle, and in the remainder in voluntary muscles of various regions of the body; in Feng's case it occurred in the right thigh. The parasites have not been regarded as the cause of the associated lesions, or of death, since the infected muscle fibres and the adjacent fibres were in every case more or less normal. A description of the parasite is given; owing to lack of knowledge as to its life history, its identity is very uncertain. Its dimensions and those of its spores show great differences, and in consequence of these facts it is difficult to state if the parasites found are different species or merely at different ages or stages of the same species. The parasite in Feng's case had a very similar structure to that described by Baraban in 1894.

98 Ocular Reflexes as Diagnostic Factors

G. G. J. RADEMAKER and R. GARCIN (*C. R. Soc. de Biol.*, November 18th, 1932, p. 547) recall that reflex palpebral occlusion can be produced in many ways—for example, by touching the cornea or eyelids, by projecting a dazzling light before the eyes, or by threatening gestures. The corneal reflex (trigemino-facial) has an essentially subcortical path. It is abolished in cortical lesions of the lower rolandic area. The reaction to bright light appears to be concerned also with a subcortical route, the centripetal path following the optic fibres, the anterior quadrigeminal tubercles being the reflex centre, and the centrifugal path lying in the fibres of association going to the facial nucleus. Various authorities maintain that this reflex is abolished in certain mesencephalic lesions which show no other clinical sign. The present authors discuss the reflex in response to the sudden approach of an object or to menacing gestures. Animal experiments and certain clinical observations on this reaction are cited. They conclude that this reflex—a conditional one—is definitely abolished in cortical rolandic lesions and in hemispherical lesions involving the occipito-rolandic area of the opposite side; it is essentially a cortical reflex, and must be distinguished from the two reflexes previously mentioned, which are subcortical and mesencephalic respectively.

Surgery

99 Non-operative Treatment of Congenital Club-foot

J. H. KITE (*Journ. Amer. Med. Assoc.*, October 1st, 1932, p. 1156) records a study of the results in 200 cases of congenital club-foot; 135 of the patients were boys and sixty-five were girls. Various curative operative procedures were employed in thirty-one cases, in many of which recurrences ensued. Excellent results were obtained in five, satisfactory results in twenty-one, and poor results in five. In 149 cases no operative procedures of any kind were employed; in the remaining twenty cases bone operations had been undertaken before the patients came under Kite's care, or subsequently because they were more than 10 years old. The author discusses the efficiency of various forms of non-operative treatment, such as correcting by casts and wedgings without the use of force or the administration of an anaesthetic. Early treatment is recommended because it seems to result in better feet, but the duration of treatment is, in his opinion, not shortened by such early beginning. The fifty children who started treatment under the age of 12 months averaged only nine-tenths of a week less than did the thirty-one children who began between the ages of 1 and 7 years. Kite adds, however, that after the child begins to walk the duration of treatment necessary becomes progressively longer. The group treated twice a week showed a saving of four and two-tenths weeks over the group treated once a week. On the average it required one and four-tenths weeks longer to correct the deformity in boys than in girls. Recurrences appeared in 50 per cent. of the children with other congenital deformities, but in only 18 per cent. of those who were normal apart from the club-foot. They were fewer than in cases treated by operations and were easier to correct. Patients in the operated group obtained fairly good feet anatomically but function was poor owing to stiffness and loss of elasticity. The non-operated group showed still better anatomical correction with almost no functional disability. Kite has obtained successful correction of the club-foot without any operation in 88 per cent. of all the children who have been under his care during the last seven years.

100 Skin Metastases in Carcinoma of the Bladder

H. C. ROLNICK and C. P. O'NEILL (*Arch. Derm. and Syph.*, November, 1932, p. 883) record a case of an infiltrating transitional-celled carcinoma of the bladder associated with cutaneous metastases. There were also metastases in the peritoneum, mesocolon, and the right inguinal and iliac lymph nodes. The bladder growth mainly involved the right side, constricted the right ureter, and caused a right-sided ascending suppurative pyelonephritis. The skin metastases were diffusely scattered, but preponderated on the right side. The diagnosis was reached by a biopsy of the vesical tumour and of the cutaneous growths; it was subsequently confirmed at the operation and necropsy. The authors review the literature, and comment on the rarity of metastasis in vesical cancer. Such tumours usually extend to the base of the bladder and infiltrate the perivesical tissues. They cause death as the result of an ascending infection of the kidneys, and of ureteral infiltration, but not in consequence of metastatic involvement. When metastases occur they appear usually in the bones and in the lymphatic glands of the pelvis, but only occasionally extend upwards to the peritoneum. Cutaneous metastases are very rare.

101 Ambulatory Fractures of the Spine

F. PUTZU (*Chir. d. Org. di Movimento*, November, 19[illegible] p. 405) records five illustrative cases in men aged from [illegible] to 55 showing that fractures of the spinal column may occur without symptoms of damage to the spinal cord so that the lesions would have escaped notice in the absence of *x*-ray examination. In each of the cases however, two symptoms were constant—namely, spontaneous pain or tenderness at a fixed point of the vertebral column, and a gradually increasing sense of fatigue in maintaining the erect posture. In the presence, therefore, of such symptoms, even if there are no deviations of the spinal column or local deformities, as well as in every case in which there is the slightest doubt as to the nature of the lesion, radiological examination is essential, since it relieves the practitioner of grave responsibilities, in addition to preventing serious consequences for the patient. Although, as in Putzu's cases, the trauma is usually severe, it not infrequently happens that fracture of the vertebral column may be produced by slight injuries.

102 Mortality of Appendicectomy in Children

H. KAISER (*Zentralbl. f. Chir.*, November 26th, 19[illegible] p. 2871) has removed the appendix in 363 children between the ages of 2 to 15 in the past twenty-four years. The incidence of appendicitis increases with the increase of age, being uncommon in little children, and becoming common as puberty is reached. In Kaiser's series boys were affected more often than girls in the ratio of 5 to 4. With regard to the method of procedure, all cases of chronic appendicitis were operated on in the interval between attacks; all cases of acute appendicitis were operated on even when the attack had lasted more than forty-eight hours. Cases of appendicular abscess were treated like acute cases, unless adhesions made the removal of the appendix technically impossible. In the presence of acute peritonitis an operation was undertaken immediately. The peritoneum is involved more often in children than in adults. In his series Kaiser had no deaths from chronic appendicitis; there was a mortality rate of 0.75 per cent. for acute uncomplicated cases, of 6.5 per cent. for cases of localized abscess, and of 22.9 per cent. for cases with diffuse peritonitis. The younger the child the worse is the prognosis. The author found

that in recent years the number of cases sent in for operation for acute appendicitis which have lasted less than forty-eight hours is increasing, and the mortality of appendicectomy is decreasing. The total death rate of the disease is 3.3 per cent., and compares favourably with the mortality of all ages given, variously from 2 to 10 per cent. Kaiser believes that the prognosis is nearly as good from the fourth year onwards as it is in later life if the operation is performed early.

Therapeutics

103 Sanocrysin Treatment of Pulmonary Tuberculosis

K. FABER (*Ugeskrift for Laeger*, October 20th, 1932, p. 1005) notes that in England and Germany attempts have been made to estimate the value of gold preparations in the treatment of pulmonary tuberculosis by grouping patients in two classes, the treated and the untreated. Favourable results have been claimed with these comparisons. In Denmark another statistical system has been adopted—that of comparing the results of sanatorium treatment in the periods before and after the introduction of sanocrysin in 1925. In the period 1913–20 1,712 sputum-positive patients were treated at the Silkeborg Sanatorium. These patients fell into three categories. Of the 1,250 receiving ordinary sanatorium treatment, 419 (33.5 per cent.) were discharged sputum-negative. Of the 258 receiving tuberculin in addition to sanatorium treatment, 103 (39.9 per cent.) were discharged sputum-negative. Of the 204 treated by artificial pneumothorax as well as by a sanatorium regime, 115 (56.3 per cent.) became sputum-negative. In the period 1925–31 480 patients, of whom 366 were sputum-positive, were treated with sanocrysin. Of these as many as 239 (65.3 per cent.) were discharged sputum-negative. It will thus be seen that the proportion of cases freed from tubercle bacilli in the sputum was approximately twice as great among the patients receiving sanocrysin plus sanatorium treatment as among those receiving sanatorium treatment alone. Another criterion by which to judge the value of sanocrysin is to compare the capacity for work several years after discharge of the patients in the two periods: before and after the introduction of sanocrysin. Three years after discharge only 25 per cent. of the sputum-positive cases in the first group were still fully fit for work, whereas this was the case with 51.1 per cent. of the sputum-positive patients in the sanocrysin group. The author considers that the cases deriving most benefit from sanocrysin are those in which the disease is recent—that is, of less than six months' duration. He is also in favour of graduating the dosage to the needs of the individual and of avoiding all reactions by giving small doses, 5 to 10 cg. slowly increased at weekly intervals to a maximum of 60 cg.

104 Results of Malaria Therapy

W. REID (*Journ. Ment. Sci.*, October, 1932, p. 867) records the results of the application of malaria therapy in general paralysis during eight years at the Whittingham County Mental Hospital. Of all patients with this disease treated thus 31 per cent. are sent home each year improved. Six to nine years after treatment 12 per cent. of the patients are living at home, having recovered; one to five years after treatment 24 per cent. are living at home, well. Reid is satisfied that malaria therapy definitely improves the physical condition of such patients, even when no mental improvement results. As regards expectation of life, he finds that 76 per cent. of patients are living one year after treatment, 50 per cent. four years afterwards, and 22 per cent. nine years after it. He points out, however, that this line of therapy entails some danger, if employed indiscriminately in all cases of general paralysis admitted to hospital; 13 per cent. of the patients die within one month of inoculation. The prognosis is best in those who have had symptoms of the disease present for seven months or less before the beginning of the treatment. Reinoculation with malaria appears to be of no special benefit in general paralysis, and malaria therapy has little or no effect on the physical signs present in the nervous system. W. D. NICOL (ibid., p. 843), reviewing seven years of this treatment at the Horton Mental Hospital, Epsom, finds that the percentage of good remissions in female patients there is low compared with the results of other observers; this may be related to the high proportion of dementing types in his series, due to the disease being usually more advanced in women at the time of certification. He also finds that remissions are obtained by the first course of induced fever, and that subsequent courses exert no influence on the mental and physical progress, although they may, perhaps, be advisable to maintain the latency or suppression of the syphilitic process. Remissions were obtained in patients after the age of 50, and Nicol concludes, therefore, that advancing years need not be regarded as contra-indicative. The sooner a patient is treated after the onset of symptoms the better is the prognosis; the maximum degree of mental improvement is apparent in most instances within three months from the completion of malaria therapy.

105 Transfusion in Typhoid Fever

L. TIXIER and S. DE SEZE (*Monde Méd.*, November 1st, 1932, p. 923) record three cases of severe typhoid fever in a woman aged 25 and males aged 23 and 18. Two of these cases, which were complicated by profuse intestinal haemorrhage, were treated by two to four transfusions of blood with excellent results. In the first two cases the blood was taken from immunized donors, while in the third normal blood was used. The authors remark that, while persons who have been inoculated against typhoid fever, or have had the disease, should be chosen by preference as donors, such a condition is not indispensable for the success of the remedy. The action of the blood injected is not only haemostatic, but also anti-infective, since it tends to check the course of the disease.

106 Sodium Borate in Graves's Disease

M. LOEPER (*Bull. Soc. de Thér.*, November 9th, 1932, p. 194) states that in 1925, in collaboration with Ollivier, he recorded four cases of Graves's disease which had derived considerable benefit from treatment by sodium borate. In 1932, with Bioy and Soulié, he reported four more cases in which the results were controlled by study of the basal metabolism. Sodium borate always has a sedative effect, as is shown by its alleviating the insomnia, diminishing the tremor, and causing the sweating to disappear, as well as soothing the general nervous condition. The tachycardia lessens and the enlargement of the thyroid decreases, while the exophthalmos alone persists. The only unfavourable symptoms during the treatment are diarrhoea and vomiting, and erythematous or papular eruptions of short duration. Sodium borate can be prescribed with equal doses of sodium citrate. Loeper also uses a boro-amine compound containing 17 to 19 per cent. of boron, which is injected in doses of 5 c.cm.

107 Effect of Digitalis on the Coronary Flow

Their clinical experience having led them to suspect that untoward effects might occur with the use of digitalis in coronary disease, and that such effects might be due to coronary vaso-constriction, N. C. GILBERT and G. K. FENN (*Arch. Int. Med.*, November, 1932, p. 668) performed a series of experiments on dogs, using a variety of digitalis preparations. They found that this drug seemed definitely to decrease the coronary flow, and this under conditions of pulse rate and blood pressure which would normally tend to increase the volume of the flow. The authors remark that angina pectoris may be assumed to include a large group of cases in which coronary vaso-constriction probably occurs as the result of reflexes originating in various sources. Such a reflex vaso-constriction, moreover, is not to the advantage of the patient; it does not occur with a normally acting autonomic system, but in persons whose autonomic systems show lowered thresholds and are over-labile. In such a group it would be expected

that the vaso-constrictor action of digitalis on the coronary arteries would occur most readily. In a large series of clinical cases, as in a large series of animal experiments, digitalis in comparable doses shows a wide divergence of action. Its physiological effect, therefore, is probably not a simple function, but is conditioned by a great many anatomical and biochemical factors which are at present unrecognized. The coronary flow is also a function of *many variable factors*, and the effect of any isolated one of these cannot be accurately predicted. The authors conclude that, while a vaso-constrictor action cannot be certainly predicted in any case, there is sufficient evidence of the presence of such action to warrant great caution in exhibiting digitalis in coronary disease.

108 Oxygen Therapy

According to W. H. POTTS (*Amer. Journ. Med. Sci.*, November, 1932, p. 616) oxygen therapy has been passing through a rather intense ten-year probation period, and the time has come to examine the position. The absence of statistics showing a decline in the death rate of patients treated by oxygen is not to be regarded too seriously in view of the fact that this treatment is often reserved for the more severe cases. It is of frequent assistance in pneumonia, for example, as is glucose also, but neither of these should be considered as specific forms of treatment. The *optimum concentration* is at present regarded as 40 to 60 per cent., but the administration should be controlled by the pulse rate, which is slowed by the relief of the anoxaemia. In pneumonia oxygen gives greater comfort by making breathing easier ; slows the pulse (and at times the respiration), and often lowers the temperature ; increases the arterial oxygen saturation, and relieves cyanosis ; and frequently prolongs life until such time as the immunity mechanism is able to achieve recovery. Again, anoxaemia may play a crucial part in determining the outcome after coronary thrombosis, and the prompt administration of oxygen may keep the patient alive until the partially disabled heart can overcome its acute functional disturbance. In coronary arteriosclerosis, also, relief may be gained as the result of the lessening of the strain on the heart. The admixture of carbon dioxide with oxygen is of proved value in certain cases, and it may be that CO_2 will supplant oxygen in the future—for example, in the treatment of the post-operative pulmonary conditions ; it is already recognized as a useful supplement. Experimental pneumococcal pneumonia has already been cured by carbon dioxide alone.

109 Blood Transfusions in Typhoid Fever

In addition to commenting on the beneficial results of blood transfusion in typhoid fever, J. BOURGEOIS and A. MAISLER (*Paris Méd.*, December 10th, 1932, p. 504), who record two illustrative cases, discuss the causes of failure of this treatment in certain cases. One may be an insufficiency of blood injected. In cases of profuse *intestinal haemorrhage*, in which the loss of blood has been considerable, large transfusions are advisable to aid blood regeneration. In ataxo-adynamic cases, with or without haemorrhage, toxic symptoms develop. The authors show that these are not caused by an increase in the germs invading the blood, and that the condition is toxaemic, not septicaemic. Cure in such cases depends on the antitoxic and not the bactericidal properties of the transfused blood. The blood of normal persons possesses a neutralizing power against the typhoid toxin, but the results from its use are inconstant and obtained only by copious transfusions. The antitoxic property of blood from vaccinated subjects is also not very great. Results obtained with convalescent serums have been markedly good ; however, even these serums may differ considerably. The antitoxic power of the blood is less in patients convalescing from a severe attack of the fever ; it also becomes weaker with the progress of time. Only donors, *therefore*, should be selected whose blood manifests strong antitoxic properties ; in the absence of laboratory tests, the blood should be taken from patients convalescing from recent attacks of average intensity.

Neurology and Psychology

110 Masturbation and Mental Disturbances

W. MALAMUD and G. PALMER (*Journ. Nerv. and Ment. Dis.*, September, 1932, p. 233, and October, p. 366) discuss the part played by masturbation in the causation of mental disturbances, and record fifty cases, 70 per cent. of which were male. In their main series of 500 cases the sex disproportion was much less than this, however, and in a series of normal female students the rate of incidence was over 60 per cent. In males the highest number of cases occurred in the age period 16-20 ; in females there was a gradual rise from puberty to a pre-climacteric maximum, with an abrupt fall at the climacterium. The main conclusions reached by the authors are as follows. In a certain number of mentally diseased persons the development of the disease is closely associated with the practice of masturbation. Regardless of what connexions there may be between masturbation as such and the effects it has on the personality, the conditions observed in the present series of fifty cases were undoubtedly closely associated with conflicts introduced by the attitudes taken by these patients to masturbation, its effects, and implications. The authors found also that the development of an abnormal mental state in relation to such a conflict was not an invariable concomitant of masturbation: when it appeared there were usually (1) constitutional peculiarities evidenced by poor heredity, abnormal personality traits, or both ; (2) deficient proper sex education, associated with a history of misinformation as to the alleged effects of masturbation ; and (3) very commonly an unsatisfactory general environmental situation. The development of the abnormal state showed no definite relation to the continuation of masturbation into adult life. No proof was obtained of the supposition that excessive masturbation had led to the development of the mental disturbances. Psychotherapy was found to be very effective in securing readjustment of the patients ; the authors add that it is desirable to determine in each case not only that a conflict exists, but also what circumstances were associated with the *taking up of masturbation*, as well as with the failure to win emancipation from it.

111 Marked Cerebro-spinal Pleocytosis in Brain Tumours

H. H. MERRITT and M. MOORE (*Journ. Neurol. and Psychopathol.*, October, 1932, p. 118) record two cases of glioma of the anterior portion of the corpus callosum and frontal lobes, with turbidity of the cerebro-spinal fluid. While a slight or moderate pleocytosis in this fluid is not uncommon in cases of tumour of the brain, it is unusual for the cellular content to be so large as in these two cases (over 2,000 per c.mm.). In the first case the rapid onset of the symptoms and the finding in the cerebro-spinal fluid of a marked pleocytosis with a normal sugar content led to the diagnosis of cerebral abscess, although no signs indicative of a primary focus were evident. The finding of a glioma at the necropsy came as a surprise. The second patient at first presented symptoms of hysteria, but later there was a suggestion of meningeal inflammation. The diagnosis of an intracerebral lesion (probably abscess or possibly tumour) was eventually reached, but there were no definite localizing signs. Pleocytosis of the spinal fluid developed under observation, the figure rising to 7,200 cells per c.mm. Serum therapy was followed by a prompt diminution in the cellular content ; there were only 80 cells per c.mm. in the cisternal fluid on the day before death. The authors attribute the occurrence of pleocytosis in such brain tumour cases to the release of cells into the ventricles or subarachnoid space from the symptomatic inflammation which occurs around an area of tissue degeneration, a hypothesis which has received some support from experiments on animals. In their second case a large haemorrhage was found in the tumour at necropsy, and to this was attributed the onset of the coma and the

pleocytosis. In their first case there were smaller haemorrhagic areas, which were probably the active agents also. The authors add that the rarity of cases of brain tumour with marked pleocytosis may be explained in part by the fact that lumbar punctures are usually not performed in cases with high-grade choked disks, or when the diagnosis is evident. Even when such cases are punctured cells would only be expected in such large numbers after a recent haemorrhage or in association with the development of an area of softening.

112 Tuberose Sclerosis

M. CRITCHLEY and C. J. C. EARL (*Brain*, Part III, 1932, p. 311), who record their observations on twenty-nine cases, state that tuberose sclerosis was first recognized as a pathological entity by Bourneville, who gave it its name in 1880 owing to the characteristic prominent areas of sclerosis in the cerebrum. He attributed it to the results of a meningitis or a meningo-encephalitis, and noted its coexistence with adenoma sebaceum. Tuberose sclerosis is commonest in European countries, especially in Great Britain, and cases have also been recorded in Australia, the United States, and Brazil. Almost all the subjects were of the white races, Jews and others alike being affected. The family history is often important, other cases of tuberose sclerosis or of psychopathy being present in members of the family, as in thirteen out of twenty of the authors' cases in which a family history was obtainable. In the complete form (which was denominated "epiloia" by Sherlock in 1911) there is a syndrome of mental deficiency, epilepsy, and adenoma sebaceum. The following incomplete forms are described: (1) adenoma sebaceum alone; (2) adenoma sebaceum with epilepsy but no mental change; (3) adenoma sebaceum with symptoms of cerebral tumour; and (4) visceral tumour alone (including retinal tumour). Although the nature of tuberose sclerosis is still in doubt, there is increasing evidence to suggest a developmental anomaly commencing in early life. An association between it and von Recklinghausen's disease has been emphasized in recent years, since both disorders are characterized by cutaneous anomalies, both are heredo-familial affections often associated with psychopathic trends, and in both conditions retinal tumours of identical appearance may be demonstrable.

Obstetrics and Gynaecology

113 Experimental Alcoholism in Normal Pregnancy

In order to determine whether normal pregnancy has any influence on the behaviour of alcohol in the blood, S. C. RUSSO (*Ann. di Ostet. e Ginecol.*, October 31st, 1932, p. 1437) performed the following experiments on twenty-one pregnant women, fourteen of whom were in the first months and seven in the last months of gestation. Each woman was given 0.5 c.cm. of absolute alcohol per kilo body weight in a glass of water on an empty stomach. The estimation of the amount of alcohol in the blood was made by Baglioni's modification of Widmark's method every four hours, with an interval of half an hour between the first two measurements and an interval of an hour between the next two. The results were as follows. In all the cases the alcohol in the blood showed its highest concentration in the first thirty minutes after its administration; during the next two hours the decline was rapid, and then became much slower, so that the alcohol had not completely disappeared from the blood four hours after its administration. In women in the first months of pregnancy the average maximum concentration of alcohol in the blood appeared to be higher than the maximum observed during the last months of pregnancy. The administration of alcohol was followed almost immediately by nerve symptoms of intoxication; these were generally most marked during the early stages of pregnancy, and lasted about an hour. Russo comes to the conclusion that pregnancy in itself has a certain influence on experimental alcoholism, inasmuch as it favours an unusually rapid rise and fall of the amount of alcohol in the blood. He attributes the effect to the functional changes which pregnancy produces in the various organs and systems.

114 Irregular Uterine Bleeding

In continuation of his previous investigations (see *British Medical Journal*, 1930, ii, 1081), when a preliminary report was rendered on the treatment of irregular uterine haemorrhage by the administration hypodermically of the anterior pituitary-like hormone extracted from the human placenta, A. D. CAMPBELL (*Canadian Med. Assoc. Journ.*, October, 1932, p. 347) records further evidence of the value of this line of therapy. He believes that the injection of this hormone causes the irregularly functioning ovary to resume a complete and balanced endocrine activity. In selecting cases for treatment a correct diagnosis is absolutely essential; the organs in the pelvis must be palpably normal and the presence of uterine neoplasms be excluded. It must also be remembered that this hormone will aggravate menorrhagia or metrorrhagia due to inflammatory disease. Metropathia haemorrhagica responds particularly well. Pain is taken to signify that the musculature has returned to its normal tone, and that the hyperplastic endometrium is being rapidly expelled. The duration of the treatment varies; some cases have remained cyclic during two years of observation after treatment. The response is not so consistent, however, in the metrorrhagia of puberty, and hormone therapy is followed by periods of amenorrhoea. A further indication for the treatment is the menopause, the symptoms of which are often alleviated. Mastalgia, if accompanied by disturbed menstrual cycles, frequently subsides and the small pea-like nodules in the breast disappear. No permanent improvement has been noted in simple polymenorrhoea, and the symptoms of dysmenorrhoea are even intensified. The hormone seemed to be without effect in pregnancy, and did not alter the interval, amplitude, or duration of normal menstrual cycles. No local or constitutional symptoms were observed. Campbell emphasizes the importance in cases of uterine bleeding of an outlook which extends beyond the endometrium and the study of merely local changes. He believes that the entire human organism is influenced by ovarian function.

115 Obstetrical Shock

E. LEVY-SOLAL (*Presse Méd.*, December 10th, 1932, p. 1853) summarizes the causes of obstetrical shock, which he defines as the syndrome accompanying the evacuation of the uterus, and being of a gravity out of all proportion to the trauma. Ignoring the causes of sudden death in which the necropsy reveals degenerative lesions of the liver, grave heart lesions, or affected suprarenals, the occasions on which an effective therapy may be employed against shock are discussed. These fall into two groups: (1) an inevitable functional syndrome; and (2) a true organic syndrome, which is therefore preventable. The most common cause of the first group is shock from haemorrhage. The treatment of this condition by means of serum injection and blood transfusion is considered. Shock without haemorrhage is next described as depending on the abolition of vaso-constrictor action on the large venous reservoirs. The treatment of this condition includes inclining the bed, applying an abdominal binder, and administering adrenaline. Occasionally a blood transfusion, equivalent in amount to the small quantity of blood lost, is beneficial. Hypoglycaemic shock is the third subgroup of the inevitable functional group. During parturition the blood sugar, which gradually rises during the ninth month, increases still more rapidly, but after delivery it quickly drops. If this fall is unduly rapid, shock symptoms are produced. Treatment consists in the subcutaneous injection of glucose serum and the oral administration of sugar. Prophylaxis can be achieved by giving sugar to women during labour. Among the organic causes of shock are sudden cardiac decompensation, which may not have indicated its possible occurrence

by symptoms during pregnancy. Haemorrhage tends to re-establish the circulatory equilibrium, and the injection of caffeine or digitaline is effectual. Prophylaxis should be directed towards a very careful examination of the circulatory system. Thyroid shock is manifested by the sudden onset of tachycardia together with abnormal agitation and some exophthalmos. Patients likely to exhibit thyroid shock generally have suggestive incidents in their family or personal history. Spontaneous labour is well tolerated by them, but intervention or mild haemorrhage is not so well supported.

Pathology

116 Neurotropic Yellow Fever

N. C. DAVIS, W. LLOYD, and M. FROBISHER (*Journ. Exper. Med.*, December 1st, 1932, p. 853) produced encephalitis both in white mice and in rhesus monkeys by the bites of Stegomyia mosquitos carrying neurotropic yellow fever virus. In the four animals studied at necropsy neither the macroscopical nor the microscopical lesions were typical of those caused by viscerotropic yellow fever virus. In none of the animals did the liver show necrosis. On repeated passage through mosquitos the virus did not revert to the viscerotropic type; it became progressively weaker, and died out in the sixth passage from mice. The authors consider that the long-established neurotropic yellow fever virus has changed fundamentally from the parent French strain.

117 Transplantation of Endometrium

R. NEUMANN (*Arch. f. Gynäk.*, August 22nd, 1932, p. 393) adds to the number of researches which in confirmation of Sampson's implantation theory of the causation of endometriosis have proved survival and/or proliferation of endometrial fragments in experimental transplants. In addition to the finding that such transplants persist in the anterior chamber of the eye of the rabbit in about half of the cases in which the same individual is the donor and recipient, Neumann reports that during oestrus and pregnancy an increase of size and vascularity is noted. Similar phenomena follow the injections of progynon or the urine of pregnant women. It is suggested that these observations may possibly form the foundation of a test for pregnancy from examination of the urine.

118 Corneal Inoculation of Rabbits with B.C.G.

In view of the divergent opinions regarding B.C.G., T. DE SANCTIS MONTALDI and UGO BASSI (*Ann. de l'Inst. Pasteur*, October, 1932, p. 416) experimented with rabbits aged 3 or 4 weeks. A speculum was inserted to separate the eyelids, and a few drops of B.C.G. emulsion of various strengths (5 mg. of bacilli per c.cm. for the first group, 10 mg. for the second, and 20 mg. for the third) were instilled before scarification in one corneal quadrant. Among the first group of thirteen animals and one "control," only five presented transient localized lesions, barely visible under a lens. No intraocular lesion such as hypopyon or iritis occurred. Eight rabbits of this group, when killed, appeared to be absolutely normal; one inoculated rabbit died of coccidiosis, and the (non-inoculated) "control" died of pasteurellosis. A third very emaciated rabbit which had had keratitis died 221 days after the inoculation; it exhibited lesions resembling miliary tuberculosis, but a pure Pasteurella culture was obtained. Another emaciated animal, killed on the same day, also exhibited pure pasteurellosis. Tubercle bacilli were not found in either animal. The fifth rabbit died on the 250th day with definite pasteurellosis. The authors state that the ocular lesions produced by B.C.G. are absolutely benign and local. Coccidiosis, pasteurellosis, and pseudo-tuberculosis are very prevalent among laboratory animals; in the infected animals these diseases progressed simultaneously with the local and transient corneal infection produced by the B.C.G., which remained uninfluenced by the former infections in spite of some diminution of the animals' natural defensive power. The present authors confirm previous observations that B.C.G. is an attenuated bovine strain, capable of producing typical follicular reactions, but distinguished from true tuberculous lesions by the fact that they always regress and heal completely.

119 Angioneurotic Oedema and Bacterial Hypersensitivity

It has been suggested that the symptom-complex of angioneurotic oedema may be an allergic reaction. Wherry was the first to point out the probable causal relation between bacterial hypersensitivity and this condition. Stimulated by Wherry's report S. E. DORST and ETHEL HOPPHAN (*Journ. Lab. and Clin. Med.*, October, 1932, p. 7) studied this subject, and report three cases, chosen from a series, which have been observed for at least two years since desensitization. Each case showed definite evidence of bacterial hypersensitivity, and adequate desensitization was associated with the disappearance of symptoms. One case responded simply; the other two well illustrate the difficulty in desensitizing susceptible patients with bacterial antigens and the value of careful persistent efforts in this direction. The authors emphasize the point that the desensitization of already sensitized individuals and the immunization of non-infected subjects are distinctly different problems. Massive doses would probably have exaggerated, instead of improved, the symptoms, a sequel that has occurred in other conditions such as asthma. This factor and the failure to select and employ specific autogenous antigens cause many disappointments in treatment. The authors conclude that bacterial hypersensitivity is an aetiological factor in angioneurotic oedema. All the cases were of the non-congenital type; they think it possible that the conclusions reached will obtain only in this form of the disease, though Wherry's case indicated a decidedly hereditary tendency.

120 Tonsillectomy and the Schick Test

J. A. BIGLER (*Amer. Journ. Dis. Child.*, October, 1932, p. 728) records his observations on the effect of tonsillectomy and adenoidectomy on the Schick reaction in 470 children aged from 2 to 13 years; 325 (69 per cent.) gave a positive reaction before tonsillectomy and 145 (31 per cent.) gave negative reactions. Of 191 positive cases examined six to nine months after the operation, 176 (92 per cent.) still showed positive reactions, and only 15 (8 per cent.) had negative reactions. Bigler's results therefore are the reverse of those of Schick and Topper, but coincide closely with those of Geddie. He concludes that the decreased incidence of diphtheria after tonsillectomy and adenoidectomy is not due to increased humoral immunity to diphtheria, as measured by the Schick test, but may be due to the removal of a portal of entry or of a fertile soil for the growth of diphtheria bacilli.

121 Intradermal Reactions to Besredka's Streptotoxin

P. REYMOND (*Ann. de Derm. et de Syph.*, October, 1932, p. 881) has obtained a positive reaction, described as an erythema at the site of injection, at the end of twenty-four hours and lasting for two or three days, in a series of 395 cases investigated, comprising primary streptococcal lesions such as erysipelas and impetigo, and secondary streptococcal infections. In both groups the reactions presented all degrees of intensity. Eight positive results were observed in twenty controls showing no clinical lesion, but in five of these cases streptococci were subsequently obtained from pyorrhoeal pockets or tonsillar crypts. Of 150 cases of dermatitis of unknown origin 112 were positive, which indicates the limitations of the test in diagnosis. Positive results were obtained in seventy-eight out of 133 cases of eczema, and in twenty-two out of twenty-five cases of occupational dermatitis. In one case (an ulcer of the leg giving a strongly positive reaction to the streptotoxin) a papulo-vesicular eczema followed, though distant from the site of the intradermal injection. The test was repeated and a similar result was again obtained. Weiss's "homeotopic" reaction (an increasingly positive reaction obtained with a second intradermal injection of tuberculin at the site of, and eight days after, the first injection) was indefinite with this streptotoxin.

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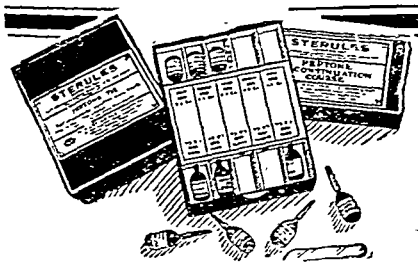

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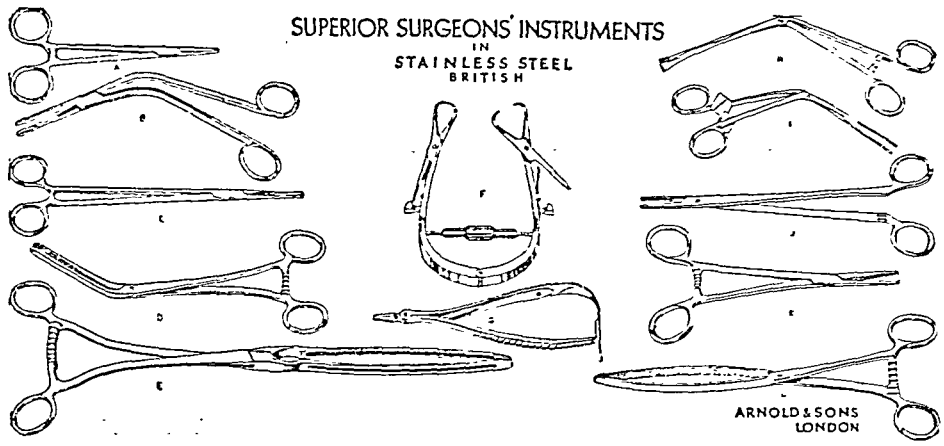

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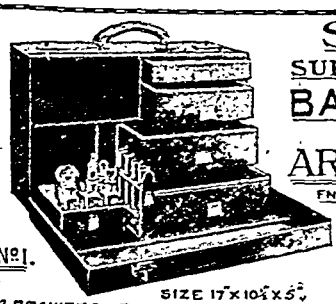

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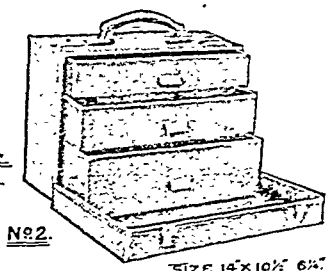

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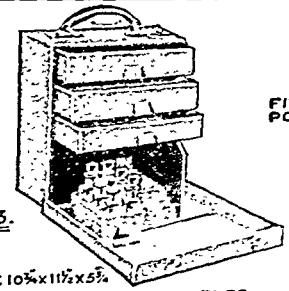

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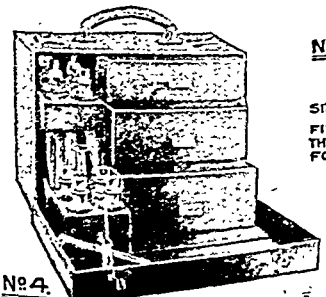

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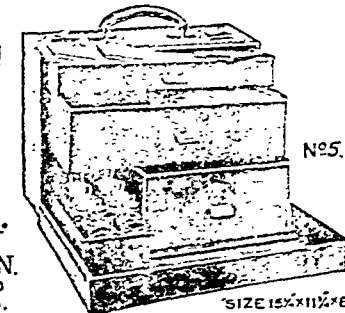

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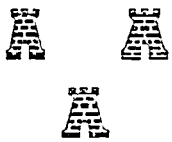

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PRIVATE HOME for MENTALLY AFFLICTI LADIES. Ten only received. Apply, Medic Officer or Mrs. PEELE. *Telephone*: 27(

BETHLEM ROYAL HOSPITAL, for Nervous and Mental Disorders,

Monks Orchard, Monks Orchard Road, Eden Park, Beckenham, Kent.

Reg. Tel. Address: Bethlem, Beckenham. *Telephone*: Springpark 1180-1181

Station: Eden Park (Southern Railway).

President: LORD WAKEFIELD OF HYTHE, C.B.E., LL.D.
Treasurer: SIR LIONEL FAUDEL-PHILLIPS, Bart.
Physician-Supt.: J. G. PORTER-PHILLIPS, M.D., F.R.C.P.

This Registered Hospital is now situated at Monks Orchard, in some 250 acres of park, pleasure, and farm grounds. Applications can be considered on behalf of patients of the educated classes in a presumably curable condition. With a view to early treatment voluntary or uncertified patients are admitted.

Patients who can contribute 5 guineas weekly towards the cost of treatment and maintenance may be received as vacancies arise. The Committee will also consider applications for admission at lower rates, and in certain cases will be prepared to admit patients free of charge.

Every facility for specialized investigation and treatment is provided in the Lord Wakefield Science and Treatment Unit. In this unit is found the X-ray and Dental Departments and the Bio-Chemical, Pathological, and Psychological Laboratories.

Furthermore, provision is made for Electro-Therapy and Hydro-Therapy to be carried out in all their forms, and Occupational Therapy under competent instruction is encouraged.

In addition to the Resident Medical Staff, Consultants in special branches of Medicine and Surgery are available whenever required.

The comfort of sensitive patients is greatly enhanced by the fact that the majority are given single bedrooms.

For forms and further particulars apply to the Physician-Superintendent at the Hospital.

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Telegrams: "PSYCHOLIA, LONDON." FOR THE TREATMENT OF MENTAL DISORDERS. *Telephone*: RODNEY 4731—4732.

Also completely detached Villas for mild cases, with private suites if desired. Voluntary Patients received. Twenty acres of grounds. Hard and Grass Tennis Courts, Putting Greens, Bowls, Croquet, Squash Rackets, and all indoor amusements, including Wireless and other Concerts. Occupational Therapy, Callisthenics, and Dancing Classes, X-ray and Actino-therapy, Prolonged Immersion Baths, Operating Theatre, Pathological Laboratory, Dental Surgery, and Ophthalmic Dept. Chapel. Senior Physician: Dr. HUBERT JAMES NORMAN, assisted by three Medical Officers, also resident and visiting Consultants.

An illustrated Prospectus, giving fees which are strictly moderate, may be obtained upon application to the Secretary.

The Convalescent Branch is HOVE VILLA, BRIGHTON, and is 200 feet above sea-level.

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Telegrams: "SUBSIDIARY, LONDON." *Telephone*: NORTH 0888.

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses. Conveniently situated four miles from Charing Cross. Easy access from all parts. Six acres of ground highly situated, facing Finsbury Park. Private Suites. Voluntary Patients and Temporary Patients received without certification.

Convalescent Home, **Kearsney Court, Dover.** For further particulars, apply to the **Medical Superintendent.**

PECKHAM HOUSE, 112, Peckham Road, London, S.E.15.

Telegrams: "Alleviated, London." Telephone: Rodney 4741-4742.

The above House, which was established in 1826, is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders. Certified voluntary and temporary patients are received. Separate houses for treatment and accommodation of special cases adjoin the Institution. There is a seaside branch, Kearsney Court, near Dover, to which patients may be sent for treatment or on holiday. Motor and carriage exercise is provided as required. Patients can avail themselves of a course of physical drill. Tennis Courts. Entertainments, dances, and indoor amusements held throughout the year. *Terms from £3 3s. per week.*

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This REGISTERED HOSPITAL, with a SEASIDE BRANCH at Colwyn Bay, N. Wales, is for the treatment and care of those of the Upper and Middle Classes suffering from MENTAL and NERVOUS DISEASES.

The Hospital is governed by a COMMITTEE, appointed by the TRUSTEES of the Manchester Royal Infirmary.

In addition to the Main Building there are separate villas. Extensive grounds. Hard and grass tennis courts, cricket and croquet grounds, and a court for *badminton. There are also wireless installations.* Golf may be had within easy distance. Occupational Therapy.

VOLUNTARY, TEMPORARY, AND CERTIFIED PATIENTS received.

The Hospital is nine miles from Manchester, 50 minutes by rail from Liverpool, and 3½ hours from London.

For terms and further particulars apply to the Medical Superintent, J. A. C. ROY, M.B., who may be seen in Manchester by APPOINTMENT.

Telephone: GATLEY 2231 (3 lines).

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A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS.

Extensive grounds. Detached Villas. Chapel. Garden and dairy produce from own farm. Terms very moderate.

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Illustrated Brochure on application to the Medical Superintendent, The Old Manor, Salisbury. Telephone 51.

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FOR MENTAL DISORDERS,
NORTHAMPTON.

FOR THE UPPER AND MIDDLE CLASSES ONLY.

President: THE MOST HON. THE MARQUESS OF EXETER, C.M.G., A.D.C.

Medical Superintendent: DANIEL F. RAMBAUT, M.A., M.D.

This registered Hospital is situated in 120 acres of park and pleasure grounds. Voluntary patients, who are suffering from incipient mental disorders or who wish to prevent recurrent attacks of mental trouble, temporary patients, and certified patients of both sexes, are received for treatment. Careful clinical, biochemical, bacteriological, and pathological examinations. Private rooms, with special nurses, male or female, in the Hospital or in one of the numerous villas in the grounds of the various branches can be provided.

WANTAGE HOUSE.

This is a Reception Hospital in detached grounds, with a separate entrance, to which patients can be admitted. It is equipped with all the apparatus for the most modern treatment of Mental and Nervous Disorders. It contains special departments for hydrotherapy by various methods, including Turkish and Russian baths, the prolonged immersion bath, Vichy Douche, Scotch Douche, Electrical bath, Plombières treatment, etc. There is an Operating Theatre, a Dental Surgery, an X-ray room, an Ultra-violet Apparatus, and a Department for *Diathermy and High Frequency* treatment. It also contains Laboratories for biochemical, bacteriological, and pathological research.

MOULTON PARK.

Two miles from the Main Hospital there are several branch establishments and villas situated in a park and farm of 650 acres. Milk, meat, fruit, and vegetables are supplied to the Hospital from the farm, gardens, and orchards of Moulton Park. Occupation therapy is a feature of this branch, and patients are given every facility for occupying themselves in farming, gardening, and fruit-growing.

BRYN-Y-NEUADD HALL.

The seaside house of St. Andrew's Hospital is beautifully situated in a Park of 330 acres, Llanfairfechan, amidst the finest scenery in North Wales. On the North-West side of the Estate a mile of sea coast forms the boundary. Patients may visit this branch for a short seaside change or for longer periods. The Hospital has its own private bathing house on the seashore. There is trout-fishing in the park.

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For terms and further particulars apply to the Medical Superintendent (Telephone No. 2356 and 2357 Northampton), who can be seen in London by appointment.

THE COPPICE, NOTTINGHAM.
HOSPITAL FOR MENTAL DISEASES.

This Institution is exclusively for the reception of a limited number of Private Patients of both sexes of the Upper and Middle Classes at moderate rates of payment. It is beautifully situated in its own grounds on an eminence a short distance from Nottingham, and from its singularly healthy position and comfortable arrangements affords every facility for the relief and cure of those mentally afflicted. Voluntary and Temporary Patients received.

Tel. 64117. *For terms, etc., apply to the Medical Superintendent.*

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For the care and treatment of Ladies suffering from Mental Diseases. Limited to eight patients. Telephone: Starcross 59.

CLIFFDEN, TEIGNMOUTH, in connection with Court Hall, for early and convalescent cases. Cliffden is a large well-appointed house, with lovely views of the South Devon Coast. It is beautifully situated in grounds of 24 acres. The gardens are very attractive, and there is a private road to the beach

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Telephone: Teignmouth 289.

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BUCKS.
FUNCTIONAL NERVOUS DISORDERS, MEDICAL & CONVALESCENT CASES.

An Approved Nursing Home for reception of Female Cases under the Mental Treatment Act.

The Home is a Mansion of Historical interest, standing in 9 acres of garden and grounds, and is situated 14 miles from Northampton, and 12 miles from Bedford on the main London to Northampton Road, fifty miles from London. Both sexes are accommodated. Psycho-therapeutic Treatment is used extensively in suitable cases. Radiant Heat, X-Ray, and Ultra-violet Light. Diathermy and Foam Baths. Billiards, tennis, etc. Fees from five gns. per week.
Apply, Dr. D. E. M DOUGLAS-MORRIS. Telephone: Newport Pagnell 121.

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NEWTON-LE-WILLOWS, LANCASHIRE.

'Phone: 11 Ashton-in-Makerfield.

For the reception and treatment of PRIVATE PATIENTS of both sexes of the UPPER AND MIDDLE CLASSES suffering from *mental and nervous diseases*, either voluntarily or under Certificate. Patients are classified *in separate buildings* according to their mental condition.

Situated in park and grounds of 400 acres. Self-supported by its own farm and gardens, in which patients are encouraged to occupy themselves. Every facility for indoor and outdoor recreation. For terms, prospectus, etc., apply MEDICAL SUPERINTENDENT.

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A Private Mental Hospital for the Treatment and Care of Mental and Nervous Disorders in both Sexes.

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Telephone: PINNER 234

A modern country house, 12 miles from Marble Arch, in beautiful secluded grounds. Fees from 10 guineas per week, inclusive. Cases under certificate and Voluntary Patients received for treatment. Special provision for "Temporary" patients under the new Mental Treatment Act.

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A REGISTERED HOSPITAL for the CARE and TREATMENT of LADIES and GENTLEMEN suffering from NERVOUS and MENTAL DISORDERS. Within two miles of the G.W. Railway and L.M. & S. Railway Stations Gloucester, the Hospital is easily accessible by rail from London and all parts of the United Kingdom. It is beautifully situated at the foot of the Cotswold Hills, and stands in its own grounds of over 280 acres. Voluntary Boarders of both sexes are also received for treatment.

Special accommodation for Lady Voluntary Boarders is also provided at the MANOR HOUSE which has its own private grounds and is entirely separate from the main Hospital.

For particulars as to terms, etc., apply to—ARTHUR TOWNSEND, M.D., Medical Superintendent.
Telephone: No. 7 Barnwood.

THE LAWN, LINCOLN

This registered Hospital, situated in large grounds near the Cathedral, receives VOLUNTARY and PRIVATE PATIENTS of both sexes for treatment of Mental and Nervous Disorders including Post-Encephalitic conditions in adults. Special facilities for Psychotherapy and co-operative cases.

All particulars may be obtained from the Resident Medical Superintendent.
Dr. MARY R. BARKAS, M.D., D.P.M.

STRETTON HOUSE
Church Stretton, Shropshire.

A PRIVATE HOME for the treatment of Gentlemen suffering from Mental or Nervous Illness, including the allied disorders of Alcoholism and the Drug Habit. All types of early Mental and Nervous cases are received without certificates as Voluntary Patients under the provisions of the Mental Treatment Act, 1930. Bracing *Hill country*. See *Medical Directory*, p. 2314.—Apply to Medical Superintendent. 'Phone: 10 P.O. Church Stretton.

FENSTANTON,
CHRISTCHURCH ROAD,
STREATHAM HILL, S.W.2.

A Private Home for the Care and Treatment of a limited number of Ladies with Mental and Nervous Disorders. Separate accommodation for Voluntary Patients. Large Mansion with 12 acres of ground. (See *Medical Directory*, p. 3294.) Apply, J. H. EARLS, M.D., Resident Physician. Telephone: Tulse Hill 7181.

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Situated in 5½ acres of secluded gardens.

HOME FOR TWELVE MENTAL PATIENTS (LADIES).

Well-appointed private house. Home comforts and Trained Nursing Staff. Eminent Mental Specialist Visiting Physician.

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For Mental Disorders with or without Certificates.

Resident Physician: CEDRIC W. BOWER.

Ordinary Terms: Five Guineas per week.
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Ladies suffering from all forms of Mental Illness are received for treatment, on modern lines, as Voluntary, Temporary, or Certified Private Patients at the Hill End Mental Hospital. Convalescent and mild cases can be treated in a delightful country mansion, with extensive grounds, known as "Highfield Hall," situate about a mile away from the Hospital. FEES TWO TO THREE GUINEAS PER WEEK.

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Every kind of Massage. Ultra-violet Light.
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Every kind of Diet. Essell Inhaler.
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Prospectus from Secretary. *Tele.* 341.

Resident Physicians: W. JOHNSTON SMYTH, M.D. L. T. ROSE HUTCHINSON, M.D.

BAILBROOK HOUSE, BATH.

A PRIVATE HOSPITAL for the care and treatment of persons with mental and nervous disorders.

Voluntary Patients received in the Villas. Large Mansion on outskirts of Bath, with 20 acres of grounds (see *Medical Directory*, page 2306.)

For terms apply S. J. GILFILLAN, O.B.E., M.B., C.M.Edin., Resident Physician.
Telephone No.: Batheaston 8189.

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For the treatment of Ladies and Gentlemen mentally afflicted. Voluntary Boarders received. Situated 1,200 ft. above sea-level, facing S. 14 acres of grounds. — For terms, apply to the Resident Medical Superintendent, W. W. HORTON, M.D. Nat. Tel. 130.

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Doctor's widow in North London

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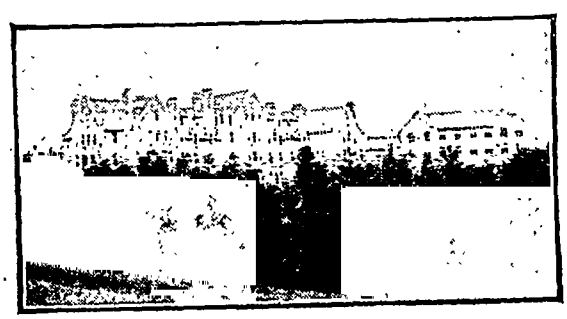

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KINGUSSIE, N.B.

THE GRAMPIAN SANATORIUM.

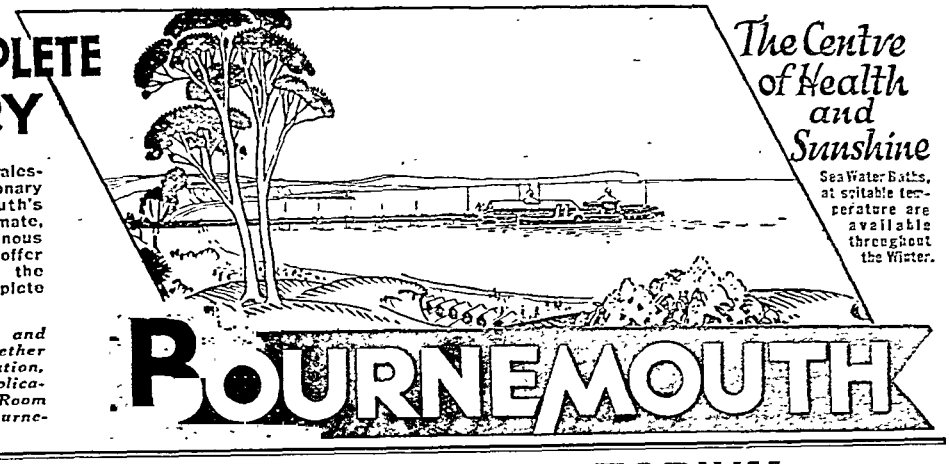
Situated in the upper Speyside district of Inverness-shire. One of the highest inhabited districts in Britain—"The Switzerland of the British Isles." Bracing and dry mountain climate. Well shelt [illegible] Sanatorium specially built for the Open-air Treatment of Tuberculosis. Opened in 1901. [illegible] e sea-level. Electric light throughout buildings and in rest shelters. equipped X-ray Plant. All forms of treatment available, including and Ultra-Violet Rays for surgical cases of Tuberculosis. Terms: £ [illegible] eek inclusive. No extras.

MEDICAL SUPT.: FELIX SAVY, M.D. For particulars apply to the Secretary.

FOR COMPLETE RECOVERY

To sufferers in the convalescent stages of pulmonary disorders, Bournemouth's temperate, sheltered climate, and the healthy resinous perfume of the pines, offer material assistance in the progress towards complete recovery.

The Illustrated Guide and Register of Hotels, together with any other information, will gladly be sent on application to the Town Clerk, Room 109a, Town Hall, Bournemouth.



The Centre of Health and Sunshine

Sea Water Baths, at suitable temperature are available throughout the Winter.

BOURNEMOUTH

PENDYFFRYN HALL SANATORIUM

PENMAENMAWR.

Established 1900 for the treatment of Tuberculosis. Miles of carefully graduated walks through pine-clad hills, with sea and mountain views. Modern treatment, including ARTIFICIAL PNEUMOTHORAX, SANOCRYSIN, etc. X-ray plant, electric light, central heating, wireless. Special milk supply from tuberculin-tested herd. Full day and night nursing staff. On L.M.S. Main Line to Holyhead, 4½ hours from London. Resident Physicians: DENNISON PICKERING, M.D.(Cantab), J. A. HENNESEY, M.B., Ch.B.; Matron: Miss S. A. EDDY, S.R.N., Late Sister-in-Charge, Royal Hospital Annexe, Sheffield.

For particulars apply to the SECRETARY, Pendyffryn Hall, Penmaenmawr, N. Wales. ('Phone, 20.)

VALE OF CLWYD SANATORIUM

This Sanatorium is established for the treatment of TUBERCULOSIS of the LUNGS and the PLEURAL CAVITIES. It is situated in the midst of a large area of park-land at a height of 450 feet above sea-level on the south-east slopes of mountains rising to over 1,800 feet, which protect it from north and east winds and provide many miles of graduated walks with magnificent views. Average rainfall 29.57 per annum. Full day and night nursing staffs. X-ray plant. Every facility for Artificial Pneumothorax and for operations on the chest. Electric lighting. Central heating. Home farm. Clean milk from T.T. Herd. For particulars apply to Medical Superintendent, H. MORRISTON DAVIES, M.D., M.Ch.Cantab., F.R.C.S., Llanbedr Hall, Ruthin, N. Wales.

THE CLINICAL RESEARCH ASSOCIATION, LTD.

WATERGATE HOUSE, ADELPHI, W.C.2. *(Close to Charing Cross Station.)*

A COMPLETE LABORATORY SERVICE.

The Consulting Rooms and Laboratories of this Association (established in 1894) are available for all Medical Practitioners desiring Laboratory assistance in the investigation and diagnosis of cases under their care. All necessary apparatus and full instructions for collecting pathogenic material, or for the personal attendance of Patients at the Consulting Rooms of the Association, will be forwarded immediately on application.

CARDIOGRAPHIC AND X-RAY EXAMINATIONS. ALSO NURSING HOME ACCOMMODATION ARRANGED.

Telephone: TEMPLE BAR 8993 (3 lines). Telegrams: "TUBERCLE, RAND, LONDON." W. J. CURRY, Secretary.

STAMMERING, SPEECH DEFECTS.

BEHNKE METHOD. Estab. 1882. Cases, non-resident, treated at 39, Earl's Court Square, S.W.5, and in residence, in the Summer holidays, at Miss BEHNKE'S house on the Chilterns.

"Pre-eminent success in the education and treatment ..... —"Times." ..... —"Lancet." and perfectly

STAMMERING, CLEFT PALATE SPEECH, LISPING, 3/9

of Miss BEHNKE, 39, Earl's Court Sq., S.W.5.

LEOPOLD SALZER PRIZE.

Attention is called to this CASH PRIZE of £100 to be offered on January 1st, 1934, to the author of the best Essay upon the treatment, according to the principles of Homœopathy, of INSANITY in all its forms. For full particulars apply to the Secretary, British Homœopathic Association (Inc.), 43, Russell Square, London, W.C.1.

F.R.C.S.(Edin.).

Full PREP. COURSE with Anatomical (Cadaver and Living Model) and Surg. Path. Demonstrations, for next Exam., will commence shortly. POSTAL TUITION at any time.—H. C. ORRIN, F.R.C.S., Surgeons' Hall, Edinburgh.

PAYING PATIENTS

unable to afford the ordinary Nursing Home can be received in private rooms at the New Wing of the NATIONAL TEMPERANCE HOSPITAL, Hampstead Road, N.W.1. Terms from 4½ gns. weekly. All latest equipment. Particulars from the Secretary. (Museum 3755.)

ROYAL DENTAL HOSPITAL OF LONDON SCHOOL OF DENTAL SURGERY

(University of London),
32, Leicester Square, London, W.C.2.

POST-GRADUATE INSTRUCTION IN ANAESTHETICS will be given as follows:

1. TWO COURSES of two hours daily practical instruction in the use of Anaesthetics suitable for administration in the dental chair, Monday, Tuesday, Wednesday, and Friday afternons, March 6th to 18th, and April 24th to May 6th next. The fee for each course is five guineas.
2. An INTENSIVE COURSE consisting of DEMONSTRATIONS in the In-patient Department of this Hospital at Charing Cross Hospital, daily practical instruction and lectures at the Royal Dental Hospital from March 20th to 31st next. Fee for course is ten guineas.

The classes will only be held if there are sufficient applications and not more than six post-graduates can be accommodated in any one course. For further partics. apply to the Dean.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE

(UNIVERSITY OF LIVERPOOL.)

COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on January 2nd and October 2nd, 1933, and for the Diploma in Tropical Hygiene on January 5th and April 20th, 1933 (Candidates for the D.T.H. must possess the D.T.M. of this University.)

For particulars, apply to the Hon. Dean, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool.

M.D. THESIS

(Camb., Edin., Glas., Durham, &c.)

SKILLED COACHING, GUIDANCE, and ADVICE from Special Tutors, in conformity with the Regulations of the various Universities.

Apply for particulars and free booklet, "Hints on Writing a Thesis for the M.D. Degree," to the SECRETARY, Medical Correspondence College, 19, Welbeck Street, London, W.1.

GUY'S HOSPITAL MEDICAL SCHOOL.

London Bridge, S.E.1.

A Course of Instruction in preparation for the FINAL EXAMINATION for the FELLOWSHIP OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND will commence on Monday February 20th.

SCHOLARSHIPS OF HALF FEES, £60 p.a. offered by good Boarding School (Girls), recognized by the Board of Education. Excellent references and examination results. Distinctions in School Certificate and Leaving Scholarships to Universities. Full particulars.—Add., —No. 231, B.M.A. House, Tavistock Sq., W.C.1.

Medical and Dental Students

Special Classes for Pre-Medical and Dental Exams., Matric., and Prelims.
Chemistry, Physics, and Biology Labs.
MANCHESTER TUTORIAL COLLEGE,
527, Oxford Road, Manchester.

UNIVERSITY EXAMINATION POSTAL INSTITUTION

17, RED LION SQ., LONDON, W.C.1.

(FOUNDED IN 1882.)

Principal: Mr. E. S. WEYMOUTH, M.A.(Lond.). POSTAL OR ORAL PREPARATION FOR ALL MEDICAL EXAMINATIONS.

SOME SUCCESSES:

M.D.(Lond.), 1901-32 (9 Gold Medallists during 1913-32)	368
M.S.(Lond.), 1901-32 (including 4 Gold Medallists)	22
M.B., B.S.(Lond.), *Final* 1918-32 (Completed Exam.)	206
F.R.C.S.(Eng.), *Primary* 1919-32	146
Final	155
M.R.C.P.(Lond.), 1919-32	215
D.P.H. (*Various*) 1906-32 (Completed Exam.)	316
F.R.C.S.(Edin.), 1918-32	53
M.R.C.S., L.R.C.P. *Final* 1919-32 (Completed Exam.)	456
M.D. Various. By Thesis. Numerous successes.	

Preparation for the above and also for Medical Preliminary, and for all examinations leading up to M.R.C.S., L.R.C.P., or M.B. of various Universities; also for D.P.M., D.O.M.S., D.T.M. & H., D.L.O., D.G.O., D.M.R.E., M.M.S.A., L.M.S.S.A., etc. Numerous successes.

ORAL CLASSES.

M.R.C.P., M.D., Primary and Final F.R.C.S., F.R.C.S.(Edin.); also Final M.B., B.S., and M.R.C.S., L.R.C.P. Museum and Microscope Work. Also Private Tuition.

MEDICAL PROSPECTUS (48pp.)

CONTENTS:—The method and the cost of entering the Medical Profession. *Particulars of all Medical Examinations*, Postal Courses, and Oral Classes. Suggestions for the Higher Medical Exam[illegible] e Higher Surgical [illegible] for the Special Diplor Courses. Openings for Women Hints for writing theses.

Medical Prospectus gratis along with list of Tutors, etc., on application to the Principal, Mr. E. S. WEYMOUTH, M.A., 17, Red Lion Sq., London, W.C.1 (Telephone: HOLBORN 6313.)

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ELECTION TO COURT OF EXAMINERS.

Notice is hereby given that the Council, on March 9th next, will proceed to the election of a Member of the Court of Examiners in the vacancy occasioned by the death of Mr. H. S. CLOGG.

Fellows of the College desirous of becoming candidates for the office must make application in writing to the Secretary on or before Wednesday, March 1st.

S. FORREST COWELL,
February 11th, 1933. Secretary.

THE NORTH-EAST LONDON POST-GRADUATE COLLEGE.

The Prince of Wales's General Hospital, Tottenham, N.15, North Middlesex Hospital, Edmonton, and Associated Hospitals.

An INTENSIVE REFRESHER COURSE will be held from February 20th to March 4th. Lectures, demonstrations, and cliniques in the various general and special departments.

Enquiries and applications should be sent to the Dean at the Hospital, or to the Secretary of the Fellowship of Medicine, 1, Wimpole Street, W.1.

THE INSTITUTE OF MEDICAL PSYCHOLOGY

(The Tavistock Clinic), 6, Torrington Place, W.C.1.

A YEAR'S COURSE IN
PSYCHOTHERAPEUTIC THEORY AND METHOD
begins on March 10th, 1933.

The number to be admitted is limited and applications must be received by February 28th.

For full information apply to the HON. LECTURE SECRETARY at the Institute.

UNIVERSITY OF LONDON, UNIVERSITY COLLEGE.

FACULTY OF MEDICAL SCIENCES.

SPECIAL COURSE FOR THE PRIMARY FELLOWSHIP EXAMINATION OF THE ROYAL COLLEGE OF SURGEONS.

Special SHORT COURSES in ANATOMY and PHYSIOLOGY will begin on Tuesday, February 28th, 1933, in preparation for the June Examination.

ANATOMY: J. KIRK, M.B., Ch.B., F.R.C.S.E.
PHYSIOLOGY: W. H. NEWTON, M.B., B.Ch., M.Sc.; J. W. de W. G. THORNTON, M.A., B.M., B.Ch., M.R.C.S., L.R.C.P.

The Course in Anatomy (including Embryology) is made up of lectures and demonstrations. Students are permitted to use the Dissecting Room and Museum of Anatomy at other times. The course in Physiology, Bio-Chemistry, and Histology consists of lectures and demonstrations, together with revision of practical work in those branches of the subject which are of particular importance in Medical Practice.

Full particulars may be obtained on application to—

University College, London. C. O. G. DOUIE, Secretary.
(Gower Street, W.C.1.)

UNIVERSITY OF LONDON KING'S COLLEGE.

PRIMARY F.R.C.S.

A Course in ANATOMY and PHYSIOLOGY in preparation for the JUNE EXAMINATION, will commence on THURSDAY, APRIL 20th, 1933, and will continue until the date of the examination.

Fees for the Course: Twelve Guineas for both subjects, Eight Guineas for an individual subject.

Further particulars from the Dean of the Medical Faculty, King's College, Strand, W.C.2.

LONDON HOSPITAL MEDICAL COLLEGE.

F.R.C.S.

A COURSE OF INSTRUCTION for the Final Fellowship Examination will begin on Wednesday, March 1st.

Fees: (exclusive of Operative Surgery) 25 guineas. Operative Surgery 10 guineas.

A separate entry can be made for all Classes other than those of a strictly Clinical character.

Further particulars may be obtained from Professor WILLIAM WRIGHT, M.B., D.Sc., F.R.C.S., Dean, London Hospital Medical College, Mile End, E.1.

NORTH-EAST LONDON POST-GRADUATE COLLEGE.

PRINCE OF WALES'S GENERAL HOSPITAL, N.15.

The Practice of the Hospital is limited to Medical Practitioners. Particulars from J. BROWNING ALEXANDER, M.D., Dean.

COUNTY BOROUGH OF OLDHAM.

BOUNDARY PARK MUNICIPAL HOSPITAL.

RESIDENT ASSISTANT MEDICAL OFFICER.

[illegible] invited from registered [illegible] for the post of an Assistant Officer.

Salary £200 per annum, with board, residence, and laundry.

Candidates should be unmarried.

The appointment will, in the first instance, be for a period of six months. The successful applicant, however, will be eligible for reappointment for a further period of six months.

The Hospital comprises 355 beds, with facilities for gaining experience in Medicine, Surgery, Midwifery, and Diseases of Children.

Applications, on forms to be obtained from the undersigned, endorsed "Resident Assistant Medical Officer," should be sent to the Medical Officer of Health, Town Hall, Oldham, and should be received not later than February 21st.

JAMES B. WILKINSON, M.D., C.M., D.P.H.,
Town Hall, Oldham. Medical Officer of Health.

ROYAL SCOTTISH NATIONAL INSTITUTION, LARBERT (for mentally defective children and adults).

Applications are invited for the post of ASSISTANT MEDICAL OFFICER. Candidates may be male or female and should have acted as House Surgeon or House Physician or held a similar post in a Mental Hospital or Institution for defectives. Salary £350, with board and lodging, or more according to experience.

Applications should be sent to the Medical Superintendent at the Institution.

POST GRADUATE STUDY

The Medical Correspondence College provides ample facilities, under highly qualified tutors, for oral, practical, and clinical instruction in preparation for the various higher qualifications, and for Post-Graduate Study irrespective of any examination.

Diploma in Psychological Medicine.
Diploma in Ophthalmology.
Diploma in Radiology.
Diploma in Laryngology, Otology, and Rhinology.
Diploma in Public Health.
Diploma in Tropical Medicine.
F.R.C.S.Eng., and all higher Surgical Examinations.
M.R.C.P.Lond., and all higher Medical Examinations.
M.D. Thesis of all Universities.

You can qualify for any of the above by our Courses of Combined Postal and Practical Courses.

Write at once stating your requirements to the Secretary, MEDICAL CORRESPONDENCE COLLEGE, 19, Welbeck Street, W.1.

WE SPECIALIZE IN POST-GRADUATE COACHING FOR ALL EXAMINATIONS.

ADMINISTRATIVE COUNTY OF ESSEX.

APPOINTMENT OF MALE ASSISTANT COUNTY MEDICAL OFFICER OF HEALTH.

The County Council of the Administrative County of Essex invite applications for the above appointment from duly qualified Medical Men, holding a Diploma of Public Health, and not over 45 years of age.

The salary, which will be subject to economy abatement according to the scale approved by the County Council, will be £500 per annum, and will rise, subject to satisfactory service, by annual increments of £25 to £700 per annum. The appointment will be subject to three months' notice on either side.

Travelling expenses, in accordance with the County Council's Scale, will be allowed to the successful candidate.

The person appointed will be required to pass a medical examination and to contribute to the fund established by the County Council under the Local Government and Other Officers Superannuation Act, 1922.

The appointment will be subject to the Council's Sick Pay Rules and Regulations, a copy of which will be forwarded on application.

Applications on the prescribed form, obtainable from the undersigned, accompanied by copies of not more than three testimonials (which will not be returned), should be addressed to me and delivered at the Shire Hall, Chelmsford, not later than 10 a.m. on Monday, February 27th.

JOHN H. GOOLD,
Shire Hall, Chelmsford. Clerk of the County Council.
February 7th, 1933.

JARVIS CHARITY, STAUNTON-ON-WYE, HEREFORDSHIRE.

The Trustees of the above Charity are prepared to receive applications for the post of RESIDENT MEDICAL OFFICER. Duties required to attend the Sick Poor in the Parishes of Staunton-on-Wye, Bredwardine, and Letton. Salary £150 per annum. Good commodious house provided. Rates and outside repairs paid. The late Medical Officer also held a County Council appointment of £128 per annum. A panel £650. In addition to this a large lucrative private practice, particulars of which apply to P. K. CROSS, Esq., 46, Queen Anne's Gate, London, S.W.1.

Applications to be received not later than February 18th, to be sent to G. M. BRIERLEY, Esq., Pyon House, Canon-Pyon, Hereford.

ROYAL AIR FORCE MEDICAL SERVICE

Vacancies exist for MEDICAL OFFICERS in the ROYAL AIR FORCE.

CONDITIONS OF APPOINTMENT.

Candidates will be selected after interview by a selection board without competitive examination.

They must be of pure European descent. They must be British Subjects, the sons of British Subjects and registered under the Medical Act.

Selected Candidates will be appointed to Short Service Commissions (for 3 years extensible to 5), and those under 28 years of age at the time of entry will be eligible for subsequent selection to Permanent Commissions, should they be desirous of remaining in the service.

Hospital appointments held since qualifying, will, under certain conditions, qualify candidates for ante-date of commission; the age on entry to qualify for a Permanent Commission, if necessary, being increased by a period equal to the 'antedate.'

Excellent opportunities exist for clinical professional work, both Medical and Surgical, as well as for the study and practice of Hygiene, Pathology, Ophthalmology, and other special branches, adequate provision being made for permanent officers to attend Post-graduate courses of study.

OUTFIT ALLOWANCE.

An officer, who has not previously held a commission in H.M. Forces, will receive an outfit allowance of £50 on joining.

PAY, ALLOWANCES, PROMOTION, ETC.

The following table shows the current rates of PAY per annum for the various ranks.

IN ADDITION to pay, officers receive quarters (with fuel and light), rations and attendance, or, if these are not available in kind, cash ALLOWANCES in lieu as shown in the table.

MARRIED OFFICERS who have attained the age of 30 YEARS receive either Married Quarters or ALLOWANCES at the MARRIED RATES.

Service.	Rank.	Pay.	Allowances (Home rates).		Pay plus allowances at Home rates.	
			Married.	Single.	Married.	Single.
On entry	Flying Officer	£259	£190	£117	£579	£476
.. ..	Flight Lieut.	£422	£228	£117	£650	£539
.. ..	.. ..	£485	£228	£117	£714	£603
.. .. .. years to	.. ..	£553	£231	£155	£784	£708
.. .. .. motion to	Squadron Leader	£812	£231	£155	£1,043	£967
Rising by increments after 2, 4, 6, 8, and 10 years to ..	.. ..	£894	£232	£155	£1,126	£1,049
By selection to	Wing Commander	£1,022	£232	£185	£1,254	£1,207
Rising by increments after 2 and 4 years to	.. ..	£1,137	£304	£246	£1,441	£1,383
By selection to	Group Captain	£1,268	£320	£307	£1,588	£1,575
By selection to	Air Commodore	£1,421	£321	£363	£2,048	£1,992
By selection to	Air Vice-Marshal	£1,621				

ALLOWANCES AT STATIONS ABROAD.

In addition to the current pay shown above, officers stationed abroad are provided with furnished Quarters (with fuel and light) and rations; or allowances in lieu, and receive Colonial and servant allowances. The present total of the allowances (including Colonial and servant allowances) payable when provision in kind is not available is as follows:—

	EGYPT.		PALESTINE.		MALTA.		MALAYA.	
	Married.	Single.	Married.	Single.	Married.	Single.	Married.	Single.
Flying Officer	£436 p.a.	£224 p.a.	£437 p.a.	£227 p.a.	£272 p.a.	£129 p.a.	£627 p.a.	£276 p.a.
Flight Lieutenant	£436 ,,	£224 ,,	£454 ,,	£227 ,,	£272 ,,	£129 ,,	£627 ,,	£276 ,,
Squadron Leader	£436 ,,	£276 ,,	£454 ,,	£231 ,,	£272 ,,	£144 ,,	£627 ,,	£293 ,,
Wing Commander	£538 ,,	£331 ,,	£548 ,,	£243 ,,	£315 ,,	£159 ,,	£710 ,,	£407 ,,
Group Captain	£575 ,,	£367 ,,	£593 ,,	£384 ,,	£351 ,,	£195 ,,	£726 ,,	£432 ,,

The married rates are payable only when the officer is accompanied by his family. If unaccompanied, he is treated as unmarried for the purposes of his own accommodation, or allowances in lieu, and receives a consolidated allowance in respect of the separated family as follows:—

Flying Officer ... ... £109 per annum.
F/Lieut. & Sq. Ldr. ... ... £136 per annum.
Wing Comdr. & Grp. Captain ... ... £173 per annum.

Iraq & Sudan.—Families are normally not allowed in these countries, and officers are provided with accommodation, etc., for themselves, and receive Colonial and servant allowances. The present rates of Colonial allowance amount to £142 p.a. (Iraq) and £55 p.a. (Sudan). In addition, married officers receive the consolidated allowance for separated families at the rate shown above.

Aden & Transjordan.—Families are only allowed at these stations if public married quarters are available. Married officers, accompanied by their families, are accordingly provided with married accommodation, etc., and receive a servant allowance of 2/- a day and a Colonial allowance of 10/- a day at Aden and 7/- in Transjordan. All other officers are provided with unmarried accommodation, and receive servant allowance of 2/- a day and Colonial allowance of 5/- at Aden and 3/3 a day in Transjordan. In addition, married officers separated from their families receive the consolidated allowance at the rates shown above.

The rates of pay of the Royal Air Force Medical Branch are fixed on an inclusive basis, and the fact that specialist pay and charge pay are not payable as separate emoluments was taken into account when the rates were fixed.

GRATUITIES.

Short service officers who complete their full period of service on the active list may be granted gratuity as follows on transfer to the reserve:

After 3 completed years ... ... £350.
After 5 completed years ... ... £700.

Permanent officers who are allowed to retire voluntarily before qualifying for retired pay may be granted gratuity as follows:

After 10 but less than 15 years' commissioned service ... ... £1,500.
With 15 or more than 15 years' commissioned service ... ... £2,500.

RETIRED PAY.

The current rates of service retired pay range from £445 a year, normally earned after 20 years' service, to £899, the maximum for which an Air Vice-Marshal is eligible (at current rates).

Full particulars as to the conditions of service are contained in Air Ministry Pamphlet 25, a copy of which, together with form of application, can be obtained on application to the Secretary, Air Ministry (D.M.S.), Adastral House, Kingsway, LONDON, W.C.2.

JOINT COUNTIES MENTAL HOSPITAL, CARMARTHEN.

MEDICAL SUPERINTENDENT.

The Committee of Visitors of the above Institution (650/670 patients) invite applications for the post of Medical Superintendent from duly qualified and registered male Medical Practitioners, not over 40 years of age, on June 1st next and possessed of the D.P.M. Diploma, or its equivalent, with not less than seven years' previous experience upon a Mental Hospital Medical Staff, a knowledge of Welsh to be deemed a desirable additional qualification, at a cash salary of £800 per annum, with biennial increments of £50 up to a maximum of £1,000 (subject to any general scale of temporary deductions from salaries in force at any time), with emoluments consisting of an unfurnished house and garage (free of rent only), laundry, garden produce, and certain contract privileges, together provisionally valued at £150 per annum for the purposes of the Asylums Officers Superannuation Act, 1909, subject to which and to the Rules relating to the position which may be in force from time to time the appointment will be made, terminable by three months' notice on either side.

Applications must be accompanied by a duly completed prescribed form which, together with the particulars of the appointment, may be obtained from the undersigned, to whom they must be delivered, accompanied by copies of three recent testimonials, not later than Saturday, *March 4th*.

34, Quay Street, Carmarthen. W. J. WALLIS-JONES, Clerk to the Visitors.

February 7th, 1933.

THE PRINCE OF WALES'S GENERAL HOSPITAL, LONDON, N.15.

The following Resident posts will be vacant on April 1st next:

(a) ONE SENIOR HOUSE PHYSICIAN.
(b) TWO SENIOR HOUSE SURGEONS.

Salary at the rate of £120 per annum, board, residence, and laundry.

The following Residents posts will be vacant on March 15th next:

(c) ONE JUNIOR HOUSE PHYSICIAN.
(d) TWO JUNIOR HOUSE SURGEONS.

Salary at the rate of £90 per annum, board, residence, and laundry.

Appointments held for six months, but holders are eligible for a further term.

Candidates (male) must be fully qualified and registered, and applications (on the prescribed form), together with copies of three recent testimonials, should be sent to me on or before the first post on Saturday, February 25th.

J. C. BURDETT, Director.

DERBY COUNTY MENTAL HOSPITAL, MICKLEOVER, DERBY.

Applications are invited for the post of *DEPUTY MEDICAL SUPERINTENDENT (male)* at the above Hospital, at a commencing salary of £600 per annum, rising by annual increments of £50 to £700, with board, laundry, quarters, and attendance, valued for superannuation purposes at £90 per annum. Permission will be given to a married man to live outside the Hospital, and he may receive the value of his emoluments in cash.

If the successful candidate holds the Diploma of Psychological Medicine £50 per annum will be added to the above.

Forms of application, which may be obtained from the Medical Superintendent, should be completed and returned by February 18th.

H. WILFRID SKINNER, Clerk to the Visiting Committee.

NORTH LONSDALE HOSPITAL, BARROW-IN-FURNESS. (152 Beds.)

RESIDENT SURGICAL OFFICER. (Male Appointment.)

Applications are invited for the above resident appointment from fully qualified practitioners experienced in the administration of Anaesthetics. Duties to commence March 7th. Salary £200 per annum, with board, residence, and laundry.

Applications, stating age, qualifications, experience, and nationality, accompanied by copies of three recent testimonials, should be sent to the Secretary not later than Feb. 13th.

NORTH LONSDALE HOSPITAL, BARROW-IN-FURNESS. (152 Beds.)

RESIDENT CASUALTY OFFICER. (Male Appointment.)

Applications are invited for the above resident appointment from fully qualified practitioners experienced in the administration of Anaesthetics. Duties to commence at once. Salary £150 per annum, with board, residence, and laundry.

Applications, stating age, qualifications, experience, and nationality, accompanied by copies of three recent testimonials, should be sent to the Secretary as early as possible.

CUMBERLAND INFIRMARY, CARLISLE. (160 Beds.)

Resident Medical Staff—Four qualified Officers.

The following posts are vacant on April 1st (six months' appointment), male. Previous experience desirable:

(a) HOUSE SURGEON;
(b) HOUSE PHYSICIAN;
(c) SECOND HOUSE SURGEON;
(d) HOUSE SURGEON to Special Departments. *(Eyes, Ear, Nose, and Throat.)*

Salary, House Surgeon (a) at the rate of £175 per annum; (b) (c) and (d) £155 per annum. Board, residence, etc., in each case.

Applications, stating age, nationality, qualifications, etc., with copies of not more than four testimonials, must be received by first post on Wednesday, February 22nd, by the undersigned, who will supply further particulars if desired.

Separate applications are required for each post.

J. G. HOWITT, Secretary.

WATFORD AND DISTRICT PEACE MEMORIAL HOSPITAL.

APPOINTMENT OF SECRETARY.

The Committee of the Watford and District Peace Memorial Hospital, Watford, invite applications for the appointment of a Secretary (male) to the Hospital at a commencing salary of £350 per annum. Applicants must be under the age of 45.

The appointment is a whole-time one, and applicants must have had some experience in Hospital administration and be fully qualified to keep all books and accounts and to carry out, with assistance, the general secretarial duties of the Hospital.

Applications, stating age, qualifications, and experience, accompanied by copies of not more than three recent testimonials, must be received by the undersigned not later than Thursday, February 23rd next.

Personal canvassing is not permissible.

HENRY BROWN, Honorary Treasurer.

February 9th, 1933.

BRISTOL GENERAL HOSPITAL.

A meeting of the Election Committee will be held at the Hospital on Wednesday, March 8th next at 1 o'clock p.m. to elect an HONORARY PHYSICIAN.

Application for the appointment will be made by Dr. H. H. Carleton, Honorary Assistant Physician.

Also to elect an HONORARY PHYSICIAN to the Skin Department.

Application for the appointment will be made by Dr. Norman C. Burgess, Honorary Assistant Physician.

Candidates are requested to send their applications, with copies of testimonials and proof of qualification to the undersigned on or before Monday, February 27th next, from whom further particulars may be obtained.

By Order of the Committee,
THOMAS W. GREGG, Secretary.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL, Haverstock Hill, N.W.3.

APPOINTMENT OF CASUALTY MEDICAL OFFICER.

Applications are invited from unmarried Medical Woman for the position of Casualty Medical Officer at the Out-patient Department of the Hospital, Bayham Street, Camden Town, which will become vacant on March 1st next.

The salary will be at the rate of £100 per annum, together with board, residence, etc., and the term will be for six months.

Applications to be made on a form which will be supplied by the Secretary, together with copies of not more than three testimonials, should reach the Secretary not later than noon on February 18th.

BURSLEM HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL.

Wanted, JUNIOR RESIDENT MEDICAL OFFICER. Salary £150 per annum, with board and residence. Must be fully qualified. Experience in Ophthalmic and Ear, Nose, and Throat work will be an advantage. Applications, *stating age and experience, together with copies* of three recent testimonials, to be sent to me.

High Lane, Burslem, Stoke-on-Trent. C. E. LOWNDES, Secretary.

CARDIFF CITY MENTAL HOSPITAL. WHITCHURCH, GLAM.

SENIOR ASSISTANT MEDICAL OFFICER (single, male or *female*). Salary £570 per annum, rising by annual increments of £25 to £620 per annum, from which is deducted £120 per annum, for board, lodging, washing, and attendance. A degree or diploma in Psychological Medicine essential.

Applications to reach the Medical Superintendent by February 17th.

THE CHRISTIE HOSPITAL AND HOLT RADIUM INSTITUTE, MANCHESTER.

RADIUM THERAPY SERVICE.

Applications are invited from the post of RESIDENT MEDICAL OFFICER to the above Hospital for duty with the Radium Therapy Department.

This appointment is for a period of twelve months, but will be terminable by either party at the end of the third month. Candidates possessing the D.M.R.E. or the F.R.C.S. will be preferred. The appointment offers an excellent opportunity of acquiring experience in all branches of Radium Therapy. Salary is at the rate of £150 per annum, plus residence, board, and laundry.

Applications, with full details of previous *experience and academic honours*, together with copies of testimonials, should be sent to the Hon. Secretary, The Radium Institute, Nelson Street, Manchester, not later than Monday, February 20th.

VICTORIA HOSPITAL, BURNLEY. (126 Beds.)

HOUSE PHYSICIAN (Male).

Applications are invited for the above post, which will become vacant on March 1st next. The duties include the giving of a certain number of Anaesthetics. The appointment is for six months, in the first instance, at a salary of £150 per annum, together with board, residence, and laundry. At the end of this period reappointment for a further period may be applied for, and if confirmed, the salary for the second six months will be at the rate of £200 per annum.

This Hospital is approved by the London University for the purpose of the M.B. and M.S. examinations.

Applications, with full details of qualifications and experience, and stating nationality, together with copies of recent testimonials, should be addressed to the undersigned forthwith.

J. E. WHEATCROFT, Secretary.

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY. (365 Beds.)

Applications are invited from unmarried gentlemen, doubly qualified and registered, for the posts of HOUSE SURGEON and CASUALTY OFFICER (with charge of Assistant Surgeons' beds).

Duties in Male, Female, and Children's Wards under Consulting Surgeons and a busy Casualty Department. This Hospital is recognized by the R.C.S.(E.), and R.C.P.(L.), in connection with Post-Graduate examinations.

Salary, in each case, at the rate of £150 per annum, with board, residence, and laundry.

Applications, stating age, qualifications, and experience, to be addressed to Mr. JOHN GIBSON, Superintendent and Secretary, Royal Infirmary, Preston.

February 3rd, 1933.

MANCHESTER ROYAL INFIRMARY.

ASSISTANT MEDICAL OFFICER, MASSAGE AND ELECTRICAL DEPARTMENT.

The Board of Management invite applications from registered Medical Practitioners (men and women) for the above appointment. Previous experience in the work is not essential.

The duties are to attend daily and to assist the Medical Officer in charge of the Department. The appointment is part-time (non-resident) for one year. Salary £100 per annum.

Candidates must state age, and send twelve copies of their application and *testimonials* to the undersigned on or before Thursday, February 16th.

By Order,
FRANK G. HAZELL, Gen. Supt. & Sec.

January 30th, 1933.

HUDDERSFIELD ROYAL INFIRMARY. (220 Beds.)

Wanted, LADY HOUSE SURGEON, to commence duty on March 1st. Duties mainly in Eye, Ear, Nose, Throat, and Medical Departments with Obstetrics. Salary £150 per annum, with board, residence, and laundry.

Appointment for six months, subject to renewal for a similar period.

Applications, with copies of three recent *testimonials*, to be addressed to the undersigned not later than February 21st.

H. E. G. HALL, Gen. Supt. & Secretary.

LIVERPOOL STANLEY HOSPITAL, STANLEY ROAD, LIVERPOOL.

There will be vacancies on April 1st next for *ONE MALE HOUSE PHYSICIAN* and TWO MALE HOUSE SURGEONS. Salary in each case at the rate of £100 per annum, with board, laundry, etc. Candidates must be on the *Medical Register* and submit their applications, with copies of three recent testimonial, addressed to the undersigned by February 16th.

E. W. OSBORN, Secretary.

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh).

(a) British Islands.

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH**
EBBW VALE, MON. *(Workmen's Medical Society.)*	MARDY, GLAMORGAN. *(Workmen's Medical Scheme.)*	OGMORE VALLEY, GLAMORGAN. *(Wyndham Colliery Medical Aid Society.)* *(Workmen's Medical Scheme.)*
GILFACH GOCH, GLAMORGAN. *(Workmen's Medical Scheme.)*	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE. *(Workmen's Medical Scheme.)*	LLANTRISANT AND LLANTWIT FARDRE RURAL DISTRICT COUNCIL. (1) *Medical Officer of Health (part-time.)* (2) *Medical Officer (woman—part-time) for Maternity and Child Welfare.*
LLWYNPIA, CLYDACH VALE, PENYCRAIG, GLAMORGAN. *(Workmen's Medical Scheme.)*	NEATH AND DISTRICT *(Medical Aid Association.)*	
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer.)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association.)*	

(b) Overseas.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. G. HUNTER (Medical Secretary, New South Wales Branch), 135, Macquarie St., Sydney, N.S.W.	**QUEENSLAND.** *(Brisbane Associated Friendly Societies Institute.)* *(Toowoomba Associated Friendly Societies, Medical Institute, Toowoomba.)*	The Hon. Sec., Queensland Branch, British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	**WELLINGTON, NEW ZEALAND.** *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec., New Zealand Branch), British Medical Association, P.O. Box 156, Wellington, New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch, British Medical Association, Medical Society Hall, East Melbourne, Victoria.			**WESTERN AUSTRALIA.** *(Contract and Lodge Practices.)*	Hon. Sec., Western Australian Branch, British Medical Association, No. 6, Bank of N.S.W. Chambers, St. George's Terr., Perth, Western Australia

February 8th, 1933. By Order of the Council. C. C. ANDERSON, Medical Secretary.

BIRKENHEAD GENERAL HOSPITAL.
(155 Beds.)

Applications are invited for the following Resident (male) posts for the six months commencing April 1st.

SENIOR HOUSE SURGEON. Salary £150 per annum.
SECOND HOUSE SURGEON. Salary £100 per annum.
HOUSE PHYSICIAN. Salary £100 per annum.
CASUALTY OFFICER. Salary £100 per annum.

All with board, residence, and laundry.
The second House Surgeon is required to take up duty as soon as possible.
Applications, stating age, nationality, and qualifications, together with three recent testimonials, to reach the undersigned as early as possible.

W. H. DANIELS, F.C.I.S.,
Secretary-Supt.

BIRKENHEAD GENERAL HOSPITAL.
(156 Beds.)

Applications are invited for the appointment of HONORARY ORTHOPAEDIC SURGEON to this above Hospital.
Applications, stating age, qualifications, and experience, accompanied by copies of three testimonials, should be sent to the undersigned not later than Monday, February 20th. Candidates will be required to furnish sixty copies of their application and testimonials for the use of the Committee and Medical Board.
The present Honorary Assistant Orthopaedic Surgeon is a candidate for the post.
Canvassing is prohibited, and will disqualify.

W. H. DANIELS, F.C.I.S.,
January 30th, 1933. Secretary-Supt.

THE HOSPITAL FOR SICK CHILDREN,
Great Ormond Street, London, W.C.1.

A HOUSE PHYSICIAN and a HOUSE SURGEON are required on April 14th and 18th respectively.
Gentlemen are invited to send in their applications, addressed to the Secretary, before 12 o'clock on Monday, February 27th, with copies of not more than three testimonials given specially for the purpose, and also evidence of their having held a responsible Hospital appointment.
The appointments are made for six months. Salaries at the rate of £100 per annum, laundry allowance £5, board, and residence in the Hospital.
Candidates must be unmarried and possess a legal qualification to practise.
All candidates must be in attendance to appear before the Joint Committee, if required, at their meeting on Wednesday, March 1st, at 5 p.m. precisely.
Forms of application and copies of the Rules may be obtained from the Secretary.

By Order of the Board of Management,
HERBERT F. RUTHERFORD,
Secretary.
February, 1933.

THE MOUNT VERNON HOSPITAL,
NORTHWOOD.
(For the Treatment of Cancer.)

There is a vacancy for a HOUSE SURGEON (male). Candidates must be fully qualified and registered. Salary at the rate of £150 per annum, with board, lodging, and laundry. Six months' appointment. Applications, with copies of three testimonials, to be addressed to the undersigned on or before February 18th.

W. J. MORTON,
Offices: Secretary.
32, Fitzroy Square, W.1.

WEST LONDON HOSPITAL,
Hammersmith Road, W.6 (254 Beds.)

Applications are invited for the post of ASSISTANT PHYSICIAN for Medical Diseases of Children (Out-Patient Department). Candidates must have a University Degree recognized by the General Medical Council and must be Fellows or Members of the Royal College of Physicians of London. The successful candidate will be required in addition to other duties, periodically to deliver Medical Courses of Lectures to the Nurses and to undertake such teaching for the Post-Graduate College as the Board may approve.
Applications, with copies only of testimonials, should reach me not later than Thursday, February 23rd. Candidates must attend the Medical Council Meeting on Friday, February 24th, at 4.30 p.m., and prior to that date call upon and send copies of application and testimonials to each Member thereof. They must not canvass Members of the Board of Management, but nevertheless must send copies of application and testimonials to each member thereof and, if so notified, be in attendance at a Meeting of the Board who will elect on Tuesday, February 28th, at 5 p.m.

H. A. MADGE, Secretary.

THE ROYAL INFIRMARY,
SUNDERLAND. (290 Beds.)

Wanted, SENIOR HOUSE SURGEON (male). Salary £200 per annum, with board, residence, and laundry.
Applications, stating age, qualifications, date available for duty, and accompanied by copies of testimonials, to be sent to the undersigned.

J. A. BEARDSALL,
House Governor & Secretary.

(Appointments continued on p. 47).

NOT CLASSIFIED.

WANTED.—PYRETIC BATH FOR RHEUMATISM AND PLOMBIERES APPARATUS. Please state price and details.—Address, No. 1105, B.M.A. House, Tavistock Square, W.C.1.

PRACTITIONER, USING CAR AFTERNOONS only, 3 hours, wishes to SHARE. S.W. district.—Full particulars of exceptional opportunity, by 'phone, Western 4115, or Address, No. 1197, B.M.A. House, Tavistock Sq., W.C.1.

ASSISTANCIES.

WANTED BY M.B., B.CH., B.A.O., ASSISTANTSHIP (pref. with view to Partnership or Succession) in well-run Practice; 2 yrs.' Hosp. and G.P. exper. Good at midwifery and anaesthetics. Young, energetic, well received. Excellent testimonials. Own car. Capital available. — Address, No. 1127, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — ASSISTANTSHIP BY M.B., B.Ch., B.A.O., N.U.I., 1924, aged 31. Experienced in G.P., major and minor surgery, ex H.P. and H.S. 1 year; Mental Hospital exp. and Sanatorium, including induction, etc., of pneumothorax. Free now.—Address, No. 1009, B.M.A. House, Tavistock Square, W.C.1.

WANTED.—ASSISTANT, MALE, INDOOR, for compact mixed Practice. London, adjacent to West End. Usual bond. Salary £300 p.a. State age, date of qualification, experience, references. — Address, No. 1122, B.M.A. House Tavistock Square, W.C.1.

WANTED WITHIN A WEEK, NEAR LIVERpool, an ASSISTANT, single, male, Protestant, 25—35 years of age. English, Scotch, or North of Ireland. Must sign usual bond. Salary offered £300 p.a. and all found, plus half midwifery fees.—Address, No. 1118, B.M.A. House, Tavistock Square, W.C.1.

WANTED, AN ASSISTANT IN A GLAMorganshire Colliery Practice. Salary £350 per annum, with furnished rooms, or a house partly furnished. Usual bond.—Address, stating age, references, etc., No. 1104, B.M.A. House, Tavistock Square, W.C.1.

WANTED.—ASSISTANTSHIP IN OR NEAR London, by M.B., B.Ch. (1927). Ex H.P., H.S. (E., N. and T.). A.M.O. Fevers; R.M.O. (San.). Experienced Anaesthetics and G.P. Motorist. Free end of February.—Address, No. 1126, B.M.A. House, Tavistock Square, W.C.1.

WANTED IMMEDIATELY, MALE BRITISH ASSISTANT. Must be keen, energetic, sober, and motorist. £450, outdoor. Prospects for suitable man. Usual bond. Photo (returnable).—Address, No. 1116, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — ASSISTANTSHIP BY YOUNG, keen, energetic, Indian, single. Recently qualified, M.B., B.S.(Durham). Country or Town. Abstainer. Not afraid of hard work.—Address, No. 1103, B.M.A. House, Tavistock Square, W.C.1.

WANTED, ENERGETIC, NEWLY-QUALIFIED ASSISTANT, male, for Yorkshire Practice. £240 per year, indoor. English or Scotch.—Address, No. 1124, B.M.A. House, Tavistock Square, W.C.1.

WANTED IMMEDIATELY. — INDOOR AND Outdoor ASSISTANTS for Town and Country Practices, with and without view; *good salaries. State full particulars.*—BRITISH MEDICAL BUREAU, 33, Cross St, Manchester, 2.

WANTED. — MALE ASSISTANT, INDOOR, London working-class Practice. Abstainer, Irish preferred. Salary £250.—Address, No. 1114, B.M.A. House, Tavistock Square, W.C.1.

ASSISTANT, MALE, SCOTTISH OR ENGLISH, wanted with view, in growing western suburb of London. £400, outdoor. State age, nationality, qualifications, and experience. Some capital necessary. — Address, No. 1133, B.M.A. House, Tavistock Square, W.C.1.

ASSISTANTSHIP, WITH VIEW, PARTNERSHIP or PRACTICE. £800—£1,000 p.a. in London or Southern England. Aged 32. Married. Experienced. — Address, No. 1107, B.M.A. House, Tavistock Square, W.C.1.

M.R.C.S., WIDE EXPERIENCE PRIVATE and industrial Practice, wishes ASSISTANTSHIP or Long LOCUM. Temperate, energetic, and capable. Recent reference. Reasonable salary.—Address, No. 1110, B.M.A. House, Tavistock Square, W.C.1.

PART-TIME ASSISTANT REQUIRED IN Central London. Must reside at Surgery. Might suit Doctor doing Post-graduate work.—Address, stating all particulars, No. 1109, B.M.A. House, Tavistock Square, W.C.1.

PATHOLOGICAL AND BACTERIOLOGICAL LABORATORY ASSSITANTS ASSOCIATION.—*Pathologists* and Bacteriologists requiring SKILLED CERTIFICATED LABORATORY ASSISTANTS are invited to communicate with H. GOODING, Hon. Sec., "Moelfre," 10, Holbeck Grove, Victoria Park, Manchester. No fees.

LOCUMS.

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After Office Hours: Epsom 9142.

PARTNERSHIPS.

WANTED, PARTNERSHIP OR PRACTICE with surgical scope, preferably S. of England, by M.B.(Lond.), F.R.C.S.(Eng.); wide experience surgery and general practice. Age 32, married, medical and surgical appointments *teaching hospital.*—Address, *No.* 1131, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — PARTNER IN OLD-ESTABlished urban Practice, capable of considerable extension. Suitable for young energetic R.C. with moderate capital.—Address, No. 1125, B.M.A. House, Tavistock Square, W.C.1.

MONMOUTHSHIRE.—PARTNERSHIP, WITH view to succession to whole in two years. Share worth £600 p.a., accs. figs. Panel 1,731. Good scope. Premium 1½ years' purchase. Good living accommodation to rent.—THE WESTERN MEDICAL AGENCY, 22, Clare Street, Bristol, 1.

ONE-THIRD SHARE, PARTNERSHIP, FOR Sale in sound Practice, Yorkshire City. Panel 2,300. Gross receipts over £4,000 per annum. Must be keen worker, with capital available. Photo (returnable).—Address, No. 1117, B.M.A. House, Tavistock Square, W.C.1.

M.D., M.R.C.P., ST. BART'S, AGED 32, desires PARTNERSHIP in good-class *Practice. Hospital appointment desired.* Four years' post-graduate Hospital experience. General and Special Practice for six years.—No. 1123, B.M.A. House, Tavistock Sq., W.C.1.

PARTNERSHIP OFFERED (HALF SHARE), in sound middle and working-class Practice in North Manchester; probable retiral in five years. £2,000 required to be paid down. Receipts on income tax returns for the last three years. Good house and garden.—Address, No. 1106, B.M.A. House, Tavistock Square, W.C.1.

PARTNERSHIP WANTED BY M.D.LOND., aged 27, in good town, Southern England or E. Anglia. Hospital appointment desired. 3½ years Medical and Surgical appointments, mostly teaching Hospital. Capital available. —No. 731, B.M.A. House, Tavistock Sq., W.C.1.

THIRD PARTNER REQUIRED, IN VERY OLDestablished Practice, with great scope. SHARE of one-fifth (£800) guaranteed first year, increase later. Premium £1,600. Excellent well-built freehold house, standing in its own grounds of over 3 acres to be bought, £2,000. Applicant must have had experience as H.S., H.P., etc., and be keen on the country.—No. 1102, B.M.A. House, Tavistock Sq., W.C.1.

MEDICAL POSTS, DISPENSERS, etc.

WANTED URGENTLY BY THE LONDON MISSIONARY SOCIETY, for interesting pioneer work at MBERESHI, NORTHERN RHODESIA, a fully qualified MEDICAL WOMAN.

Applicants should not be more than 30 years *of age, and must satisfy the Society's Medical* Council as to physical fitness. All applications and inquiries to Rev. JOYCE RUTHERFORD, M.A., L.M.S., Livingstone House, Broadway, S.W.1.

A LADY DISPENSER - BOOKKEEPER supplied immediately on request, qualified and with practical experience in private practice and dispensary work, also trained in Bacteriological Laboratories of the LONDON COLLEGE OF PHARMACY FOR WOMEN. Preparation for Examinations. — Write, wire, or *'phone (Bayswater 0969),* Secretary, 7, Westbourne Park Road, W.2.

DISPENSER - SECRETARY, DOCTOR'S Daughter, requires POST with Doctor in or near London. 15 years' experience. Free March 1st. References. — Address, No. 1108, B.M.A. House, Tavistock Square, W.C.1.

DOCTORS REQUIRING QUALIFIED Dispensers, Nurse-Dispensers, Secretary-Dispensers or Chauffeuse-Dispensers, are invited to write, wire, or 'phone Temple Bar 5858, THE DISPENSERS' BUREAU, 3, *Lindsay House,* 171, Shaftesbury Avenue, London, W.C.2.

DOCTOR'S WIDOW (YOUNG), ANXIOUS obtain POST; any capacity; experience Nursing and X-ray work; qualification Pharmacy. Drive car. Accept small salary.—Address, No. 1130, B.M.A. House, Tavistock Sq., W.C.1.

EXPERIENCED GENTLEWOMAN, YOUNG, attractive appearance, wishes POST with Doctor. Receptionist-Secretary or position of trust. Linguist; necessary qualifications. Moderate salary, free now. — AITKEN, 35, Emperor's Gate, S.W.7. Western 2595.

LADY DISPENSER, AGED 34, EXPERIENCE in hospital and with private doctor. Hall certificate. Experienced motor driver. Locum anywhere, permanency London preferred.—Write, BOON, 18, Tavistock Place, W.C.

LADY DISPENSER-BOOKKEEPER REQUIRES POST, country or seaside preferred. Hall certificate, excellent references, 18 years' experience.—E. G. ISEMONGER, Broom Lodge, Ampthill, Bedford.

THE ROYAL ARMY MEDICAL CORPS ASSOCIATION, 85, Eccleston Square, S.W.1 (Telephone: Victoria 2722), supplies qualified Dispensers, Bookkeepers, Laboratory Assistants, Sanitary Assistants, Male Nurses, Mental and Special Treatment Orderlies, Dental *Clerk Orderlies, Porters, Caretakers, etc., with* out charge to prospective employers.

YOUNG LADY DISPENSER (HALL CERTIF.) requires POST with Doctor. Two years' experience. Typing and bookkeeping. Excellent reference. — ROBINSON, 65, Charles Street, Newark, Notts.

PRACTICES.

WANTED, WITHIN 100 MILES LONDON, Country PRACTICE. Income about £1,500. Good house essential, by exper. G.P., 35, married. Capital available. Replies strictly confidential. — Address, No. 1120, B.M.A. House, Tavistock Square, W.C.1.

WANTED BY RETIRED SURGEON (Colonial Service) PRACTICE with scope for Surgery. Income about £1,000. S. or S.W. of England preferred. Modern house essential. —Address, No. 1129, B.M.A. House, Tavistock Square, W.C.1.

WANTED.—PRACTICE, ABOUT 400 PANEL, London. Full investigation. — Address, No. 1115, B.M.A. House, Tavistock Sq., W.C.1.

BACUP (LANCS), 18 MILES NORTH OF Manchester. Death Vacancy. Substantial cash PRACTICE and panel 1,000. Receipts being calculated but known to exceed £1,600. 20 years' continued growth. Well-appointed house available on rental.—Apply, H. HOYLE, 604, Bacup Road, *Waterfoot,* Rossendale.

BEDFORDSHIRE. — COUNTRY PRACTICE, pretty district. Nice house, electric light, garden, garage, rent £60. Receipts £500, excellent scope. Panel small. Opposition weak. Price £400.—MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION, 6, Brown Street.

DEATH VACANCY.—S.W. ENGLAND.—SEAside near large town; lovely district. Receipts average £720 p.a., including panel £200. Premium £750. Good house *to rent* £70 p.a. —THE WESTERN MEDICAL AGENCY, 22, Clare Street, Bristol, 1.

ELDERLY PRACTITIONER, RETIRING FROM Partnership, requires small Country PRACTICE. Income about £400, in picturesque part. Kent or Sussex preferred, with house to rent. — Address, No. 1008, B.M.A. House, Tavistock Square, W.C.1.

GLASGOW.—PRACTICE, LARGELY R.C., FOR Sale. Panel 1,350. Income £1,100. Villa, with garage, to rent £55 p.a. Two surgeries fully stocked and furnished. Premium to include stock fittings, etc., £1,750.—Address, No. 1111, B.M.A. House, Tavistock Square, W.C.1.

MANCHESTER. — FOR SALE, OLD-ESTABlished PRACTICE. Panel nearly 800 Compact house, 4/5 bedrooms. Rent £60 on lease. Premium, to include drugs, furniture, etc., £975.—Address, No. 1134, B.M.A. House, Tavistock Square, W.C.1.

MANCHESTER. — OLD-ESTABLISHED IN well-populated district, owner retiring. Receipts exceed £700. Panel over 600, with great scope. Good corner house. Price £1,000, part deferred.—MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION, *6, Brown Street.*

NUCLEUS FOR SALE IN A RAPIDLY ... middle-class area, near Chisle... active, semi-retired, well... Small panel.—Address, No. 1132, B.M.A. House, Tavistock Sq., W.C.1.

POPULAR SPA.—S. ENGLAND.—OVER £700 p.a. Fees 10/6 to 2 gns. Large house to rent. Suit retired Service man, or one wishing to do a good-class PRACTICE. Good hospital. *Premium* £1,200. — THE WESTERN MEDICAL AGENCY, 22, Clare Street, Bristol, 1.

TO PURCHASERS. — DO NOT BUY without expert assistance. With 50 yrs.' experience Mr. PERCIVAL TURNER can advise in all cases. Terms free on application to 4, Adam St., Strand, W.C.2. Telephone: Temple Bar 9011. Telegrams: "Epsomian, London."

TRUSTEE IN BANKRUPTCY, SELLING FOR reasonable cash offer, old-established private PRACTICE. Panel £850. Public Medical Service £250 [illegible]'s can be purchased [illegible] CARR, Incorporated [illegible] Gate, Leicester.

VERY GOOD PANEL, CLUB, AND MIXED PRACTICE for sale. Panel 1,950. Average receipts for the last 3 years £2,000. Suitable house, surgery, etc., to rent. Pleasant district South Yorkshire. Premium 1½ years' purchase. —Address, No. 1113, B.M.A. House, Tavistock Square, W.C.1.

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CAVENDISH SQUARE, W., REDUCED RENT from £1,000 to £400 p.a. incl.—Ground Floor, own private entrance, newly decorated, self-contained CONSULTING ROOMS and FLAT, with laboratory. All rooms h. and c. water, exceptional North light, labour-saving devices, cheap electric power. Immediate possession.—No. 1119, B.M.A. House, Tavistock Sq., W.C.1.

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FOR SALE. — FREEHOLD DETACHED splendidly built labour-saving COTTAGE RESIDENCE. Borders Hants—Surrey. 3 bed., 2 recep., garage. Excel. opening. Nearest opp. 2½ miles. £650.—Dr. GRIFFIN, 33, Gower St., London, W.C.

GROUND FLOOR MANSION FLAT TO LET IN large block of 64 Flats; 10 yds. main road; opposite Library. Great scope for Doctor to commence practising. 6 rooms, scullery, bathroom, re-decorated. Electric light; hot water. Rent £9 15s. monthly.—Apply, Morgan Mansions, Palmers Place, Holloway Rd., N.7.

HARLEY ST. (ADJOINING). — BACHELOR APARTMENT, comfortably furnished. Sitting room, with closed-up bed, large private bath-dressing room, constant hot water, lift. 2½ gns., inclusive of service. Breakfast optional. —No 101, B.M.A. House, Tavistock Sq., W.C.1.

HOUSE TO LET, NEAR CAVENDISH SQ. Rent £550. Ground and first floor sublet to consultants and dentists at £650 p.a. Seven rooms on 2nd and 3rd floor and one in basement. Recently re-decorated. Lease only 2½ years. No premium.—Address, No. 1121, B.M.A. House, Tavistock Square, W.C.1.

LOCK-UP SURGERY IN HAMMERSMITH FOR SALE. Promising Nucleus, prominent position, opposite cinema, main road. Thickly populated district. Rent 30/- p.w. lease. Good reason for disposing.—Address, No. 1112, B.M.A. House, Tavistock Square, W.C.1.

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EDINBURGH.
OCCUPATION AT WHITSUNDAY.

MORNINGSIDE.—13, BLANTYRE TERRACE. —LARGE SELF-CONTAINED DWELLING-HOUSE of Three Flats and Basement, containing four public rooms, seven bedrooms, kitchen, large bathroom, lavatories on second and top flats, kitchenette on second flat. Washhouse, larder, and ample press accommodation. Quiet district. Very suitable for Nursing Home or Boarding House. Three minutes' walk from car, and near George Watson's new School. Assessed Rent, £95; Feu duty, £14 7s. 6d.

LOW UPSET PRICE, £800.

For further particulars and card to view apply to WILLIAM ROBERTSON & SONS, House Factors, 22, Atholl Crescent, Edinburgh; or to R. H. & D. MILLER, S.S.C., 90, Constitution Street, Leith.

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TRINITY. — 101, TRINITY ROAD. — SEMI-DETACHED VILLA, containing 3 Public rooms, 4 bedrooms, also attic accommodation, bathroom (h. & c.), kitchen, scullery, and good press accommodation; garden in front and behind, with room for garage at side entrance. Assessed rent, £90; Feu-duty, £10 13s. 4d. Casualties redeemed. Eminently suitable for Nursing Home, Private School, or Boarding Establishment.

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TO LET. — PART-TIME CONSULTING ROOM; use waiting room; services; Queen Anne St., Cavendish Square. Plate on door. Rent £40 per annum.—Address, No. 601, B.M.A. House, Tavistock Square, W.C.1.

WIMPOLE STREET.—TO LET, EXCELLENT FIRST FLOOR FRONT CONSULTING ROOM. Will be re-decorated. Very moderate rental. First-class service.—Apply, LEY CLARK & PARTNERS, 3a, Wimpole Street, W.1. Langham 1095.

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FOR SALE.—SPECIAL EXTRA WIDE "Burlington" Adjustable REST CHAIR, Model 224, with polished oak frame, covered moquette; brand new; supplied by Messrs J. Foot & Son, Ltd., in September, 1932. Reasonable offer considered.—Address, No. 1101, B.M.A. House, Tavistock Square, W.C.1

APPOINTMENTS.—Contd.

GENERAL HOSPITAL, NOTTINGHAM. (384 Beds.)

A HOUSE SURGEON is required at the above Institution. The appointment is for six months with salary at the rate of £150 a year with board, residence, and laundry. Candidates, who must have had previous Hospital experience, are desired to send applications and full particulars as to age, qualifications, and experience, together with copies of testimonials, to the undersigned not later than Thursday, February 23rd. Duties to commence on or about March 4th.

PETER M. MACCOLL,
House Governor & Secretary.

EAST HAM MEMORIAL HOSPITAL, Shrewsbury Road, E.7. (100 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male). Duties to commence on February 23rd. The appointment will be for six months, in the first instance, but the successful candidate will be eligible for re-appointment. Salary at the rate of £200 per annum, with board, residence, and laundry. Preference will be given to candidates who hold the diploma of F.R.C.S. Applications, stating age, experience, and full particulars, together with copies of three testimonials, should reach the undersigned by February 13th. Selected candidates will be required to attend a meeting of the Medical Committee at the Hospital at 6 p.m. on Tuesday, February 14th.

REGINALD PERRY, Secretary.

EAST HAM MEMORIAL HOSPITAL, Shrewsbury Road, E.7. (100 Beds.)

Applications are invited for the post of HONORARY SURGEON to the Ear, Nose, and Throat Department.

Candidates must be Fellows of one of the Royal Colleges of Surgeons, or Masters of Surgery of a University of Great Britain or Ireland, and not engaged in General Practice. Applications, in triplicate, should reach the undersigned on or before February 13th.

Selected candidates will be required to attend a meeting of the Medical Committee at the Hospital at 6 p.m. on Tuesday, February 14th.

REGINALD PERRY, Secretary.

COVENTRY & WARWICKSHIRE HOSPITAL. (Main Hospital—307 Beds; Convalescent Hospital—40 Beds.) Seven Resident Medical Officers.

Applications are invited for the post of HOUSE SURGEON (male) for the Aural and Ophthalmic Department.

The appointment for six months, renewable. Salary £125 per annum, with board, residence, and laundry.

Candidates must be duly qualified and registered.

Applications, stating age and enclosing copies of recent testimonials, to be sent to the undersigned immediately.

(Miss) R. HOOPER, Secretary.

BOOTLE GENERAL HOSPITAL, BOOTLE, LIVERPOOL, 20. (100 Beds.)

Applications are invited for the undermentioned posts:

ONE HOUSE PHYSICIAN.
TWO HOUSE SURGEONS.
ONE CASUALTY OFFICER.

The appointments will be tenable for six months from April 1st.

The salary attached to each post is £150 per annum, with board and residence.

Applications, with copies of testimonials, to reach the undersigned not later than Feb. 15th.

A. J. COOPER, Secretary-Supt.

February 1st, 1933.

NORTH RIDING INFIRMARY, MIDDLESBROUGH. (General Hospital—150 Beds.)

Applications are invited for the post of SENIOR HOUSE SURGEON (three Residents).

The appointment will be for a definite period of six months, renewable. Duties to commence on March 1st next.

Salary at the rate of £200 per annum, with board, residence, and laundry.

Applications, stating age, qualifications, and experience (also nationality), with copies of three recent testimonials, to be sent to the undersigned forthwith.

CHARLES POSTGATE, Secretary-Supt.

ALL SAINTS' HOSPITAL (FOR GENITO-URINARY DISEASES), Austral Street, West Square, St. George's Road, S.E.11.

RESIDENT HOUSE SURGEON (Male) required on April 1st, for six months, being three months as Junior House Surgeon, with salary at £100 per annum, followed by three months as Senior House Surgeon, with salary at £150 per annum. Applications, giving particulars of age, experience, qualifications, and enclosing copies of three recent testimonials, should reach me not later than February 25th.

D. H. ELDE, Secretary.

ANCOATS HOSPITAL, MANCHESTER.

Applications are invited for the post of:
ASSISTANT HONORARY PHYSICIAN.

Candidates must be Members of the Royal College of Physicians, London.

Applications, giving full particulars, to be accompanied by certificates of age and registration, with copies of at least three testimonials, to be forwarded to the undersigned, from whom all particulars may be obtained, by Monday, February 20th next.

By Order of the Board,
HERBERT J. DAFFORNE, General Superintendent & Secretary.

PAPWORTH VILLAGE SETTLEMENT, Near CAMBRIDGE. (For the Treatment of all forms of Tuberculosis. 400 Beds—Male and Female.)

Applications are invited for the post of THIRD ASSISTANT MEDICAL OFFICER at a salary of £300 per annum, with board, lodging, and laundry.

Applications are also invited for the post of HOUSE PHYSICIAN at a salary of £150 per annum, with board, lodging, and laundry. The appointment is for six months.

Applicants, who should be male and single, should send their applications, accompanied by copies of not more than three references, to the Medical Director, Papworth Village Settlement, Cambridge.

EAST LANCASHIRE TUBERCULOSIS COLONY, Barrowmore Hall, Gt. Barrow, CHESTER. (Under the direction of the British Red Cross Society and Order of St. John of Jerusalem.)

ASSISTANT MEDICAL OFFICER (male) required. Salary £275, rising to £300 at the end of six months, with board, residence, and laundry.

The appointment will be terminable by one month's notice. Preference will be given to candidates, with experience in Tuberculosis.

Applications, marked "Assistant Medical Officer," with copies of three recent testimonials, to be sent to the Medical Superintendent at the above address by 9 a.m., February 25th.

Previous Medical Officers have obtained good appointments in County Medical Service.

THE GUEST HOSPITAL, DUDLEY. (General Hospital—107 Beds.)

Applications are invited for the post of ASSISTANT HOUSE SURGEON. Salary £170 per annum, with furnished apartments, board, and laundry. Duties to commence March 1st. Candidates must be fully qualified and registered.

Applications, stating age, qualifications, and experience, and accompanied by copies of testimonials, to be sent to the undersigned.

H. RAYMOND HURST, House Governor & Secretary.

The Guest Hospital, Dudley.
February 3rd, 1933.

THE LONDON LOCK HOSPITAL.

The Board of Management invite applications for the post of RESIDENT MEDICAL OFFICER to the Male Departments. Candidates must be doubly qualified and duly registered. The appointment is for six months at the rate of £175 per annum, with furnished rooms at the Harrow Road Hospital, full board and laundry; duties to commence on March 27th. Applications, enclosing copies (only) of three recent testimonials, to be in the hands of the undersigned by 10 a.m. Wednesday, February 22nd, from whom a copy of the By-laws and any further particulars can be obtained.

By Order of the Board,
J. F. MORTON, Assistant Secretary.

91, Dean St., W.1.
January, 1933.

HUDDERSFIELD ROYAL INFIRMARY. (220 Beds.)

Wanted, MALE CASUALTY OFFICER (with Senior rank over remainder of Resident Medical Staff) to commence duty on March 1st. Salary at the rate of £225 per annum, with board, residence, and laundry.

The Hospital is officially recognized for the Surgical practice required of non-members before admission to the Final Fellowship Examination of the Royal College of Surgeons of England.

Applications, with copies of three recent testimonials, to be addressed to the undersigned not later than February 21st.

H. E. G. HALL, Gen. Supt. & Secretary.

MANCHESTER BABIES' HOSPITAL, BURNAGE LANE, LEVENSHULME. (80 Beds.)

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER. Appointment is for six months from April 1st. Salary at the rate of £50 per annum, with laundry.

Applications, together with copies of testimonials, to be sent to the undersigned, marked J.R.M.O., by February 27th.

ANGELA LOPEZ, Secretary.

CITY OF LONDON MATERNITY HOSPITAL, City Road, E.C.1.

Applications invited from fully qualified male candidates for the post of ASSISTANT RESIDENT MEDICAL OFFICER, vacant April 1st. Three months' appointment at £80 per annum, plus board, residence, and laundry. If satisfactory, appointee becomes Senior for three months at £100 per annum. Twenty-five copies of application and of testimonials should be received by the undersigned by March 11th.

RALPH B. CANNINGS, Secretary.

HARROGATE ROYAL BATH HOSPITAL, (Special Hospital for Rheumatic and Allied Diseases.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) to commence duties beginning April 1st.

The appointment will be for a period of six months. Salary at the rate of £156 per annum, with board, residence, and laundry.

Applications, stating qualifications, age, etc., with copies of recent testimonials, to be forwarded to the undersigned on or before Friday, March 3rd.

E. P. L. DIXON, M.A., Secretary.

THE QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, London, E.2.

TWO CLINICAL ASSISTANTS required. Medical Outpatients. One required to attend every Thursday morning and the other on Tuesday and Friday mornings. Lunch provided. Honorarium 5s. per attendance to cover expenses. Experience as Hospital resident desirable. Applications, stating which sessions applied for, qualifications, and experience, should be addressed to the undersigned as soon as possible.

CHARLES H. BESSELL, Secretary.

February 1st, 1933.

THE PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN (Formerly the East London Hospital for Children), Shadwell, London, E.1.

HOUSE SURGEON required. Salary at the rate of £125 per annum, with board, residence and laundry provided. The appointment is for six months, from March 1st.

Applications, stating age, nationality, qualifications, and experience, accompanied by copies of not more than three recent testimonials, should reach the undersigned not later than February 21st.

J. F. RUSSELL, Secretary.

ROYAL VICTORIA AND WEST HANTS HOSPITAL, BOURNEMOUTH.

The Board of Management will, after the expiration of one month, proceed to appoint an HONORARY SURGEON.

Applicants must be Fellows of a Royal College of Surgeons. Applications, stating qualifications, age, and experience, should be sent to the undersigned by March 3rd.

Canvassing, personally or otherwise, will disqualify.

By Order of the Board of Management,
GORDON M. SAUL, Secretary.

February 1st, 1933.

ROYAL HAMPSHIRE COUNTY HOSPITAL, WINCHESTER. (158 Beds.)

HOUSE SURGEON.

Applications are invited from fully qualified men for the above post to take up duties as soon as possible. Six months' appointment. Salary £125 per annum, with board, residence, and laundry.

Candidates, who must be of British nationality, to make application at once to the undersigned enclosing copies of three testimonials.

HERBERT MASLEN, Secretary.

VICTORIA CENTRAL HOSPITAL, WALLASEY.

Applications are invited for the position of JUNIOR HOUSE SURGEON (male). Salary at the rate of £160 per annum, with board, residence, and laundry, with prospects of appointment to Senior House Surgeon in six months' time.

Candidate chosen would be appointed for six months.

Applications, with copies of testimonials, to be sent to the Secretary.

MIDLAND HOSPITAL, Easy Row, BIRMINGHAM. (50 Beds.)

A vacancy will occur for the post of HOUSE SURGEON on March 1st, lady or gentleman, at the above Hospital.

Salary £150 per annum, with board, residence, and laundry.

Applications, stating age and qualifications, accompanied by recent testimonials, should be forwarded as soon as possible to the Secretary, Midland Hospital, Easy Row, Birmingham.

PADDINGTON GREEN CHILDREN'S HOSPITAL (INCORPORATED), London, W.2.

Applications are invited for the post of an additional HONORARY SURGEON to the Ear, Nose, and Throat Department. Candidates must be Fellows of the Royal College of Surgeons, England.

Applications, stating age and qualifications, accompanied by copies of three testimonials, should reach the undersigned not later than Monday, February 20th.

JAMES A. HAMLIN, Secretary.

COUNTY COUNCIL OF MIDDLESEX.

HILLINGDON COUNTY HOSPITAL.

RESIDENT ASSISTANT MEDICAL OFFICER.

The County Council invites applications for the above appointment. Candidates must be registered Medical Practitioners, unmarried, and must have held resident appointments in a General Hospital. The officer appointed will work under the control of the Medical Superintendent, and will devote his whole time to his official duties.

Salary is at the rate of £400 per annum, rising by annual increments of £50 to £600 per annum, together with board, lodging, and laundry, valued for superannuation purposes at £100 per annum. In view of the national situation, a temporary abatement calculated on the following scale is applied to the salary and value of the emoluments: for the first £150 per annum, no abatement; for the next £100 per annum, 2½ per cent. abatement; for the next £500 per annum, 5 per cent. abatement.

The successful candidate will be required to pass such medical examination as the County Council may direct, and, unless subject to the Poor Law Officers Superannuation Act, 1896, to contribute to the County Council's Superannuation Fund. The appointment will be held during the pleasure of the Council, and subject to three months' notice on either side.

Applications, stating (1) age, (2) qualifications, and (3) experience, together with copies of not more than three recent testimonials, must be received by the undersigned not later than February 25th.

No special application forms are provided. Envelopes must be endorsed "Resident Assistant Medical Officer."

Canvassing, directly or indirectly, will be a disqualification.

N.B.—Hillingdon County Hospital is a general hospital and contains between 200 and 300 beds for acute medical and surgical cases and maternity cases. (C.D./13.)

ERNEST S. W. HART,
Middlesex Guildhall, Clerk of the
Westminster, S.W.1. County Council.
January 31st, 1933.

COUNTY COUNCIL OF THE WEST RIDING OF YORKSHIRE.

SCHOOL MEDICAL INSPECTOR.

The County Council of the West Riding of Yorkshire invite applications for the appointment of a School Medical Inspector (of either sex) to act under the supervision of the County Medical Officer.

Salary £500 per annum, rising by annual increments of £25 to £700 per annum. The above salary is subject to a temporary deduction of 7½ per cent.

Further particulars and form of application may be had from the undersigned by whom all applications, with copies of not more than three recent testimonials, must be received not later than February 20th.

County Hall, J. CHARLES McGRATH,
Wakefield. Clerk of the County Council.
January, 1933.

KING GEORGE HOSPITAL, ILFORD
(8 miles from London).

Wanted, a HOUSE SURGEON (male), to commence duty on March 1st, for a period of ten months; two months as Casualty Officer, six months as House Surgeon, and two months as Deputy Resident Medical Officer in charge of the Casualty Department. Salary £100 per annum; £10 bonus on completion of appointment, and two weeks' holiday. Candidates should send their applications, with three recent testimonials, and call on the members of the Honorary Medical Staff indicated by the Secretary by February 20th.

G. AUSTIN HEPWORTH, Secretary.

KING EDWARD VII HOSPITAL, WINDSOR.
(181 Beds.)

A vacancy will occur on the staff of the above Hospital on March 31st, for a RESIDENT MEDICAL OFFICER (Senior of five Residents). Applicants must be fully qualified, registered, and have held a resident appointment.

Salary at the rate of £200 per annum, together with board, residence, and laundry allowance.

Applications, with copies of recent testimonials, should be sent to the *undersigned not* later than March 3rd.

ARTHUR E. CHURCHER, Secretary.

LEIGH INFIRMARY, LANCASHIRE.

Wanted, a RESIDENT HOUSE SURGEON, male, single, for Hospital of 82 beds. Salary £175, with rooms, fire, attendance, and board. The position is vacant on February 1st.

The appointment is for six months with eligibility for re-election. Must be good Anaesthetist. Knowledge of Ear and Throat work desirable.

Applications to be addressed to Mr. J. A. SMITH, Secretary, 3, Silk Street, Leigh, Lancs.

LONDON COUNTY COUNCIL.

Applications are invited for appointment of RESIDENT ASSISTANT MEDICAL OFFICERS at undermentioned hospitals. Duties assigned by Medical Superintendents and include, if necessary, assistance at other establishments under control of the Council. Salaries and valuation of emoluments are subject to temporary reduction. Candidates must be registered medical practitioners of at least one year's standing, and have held a resident appointment in a general hospital or maternity hospital in the case of (5) for at least six months. In the case of women, marriage terminates contract of service.

(1) ST. MARY ISLINGTON HOSPITAL, Highgate Hill, N.19.—*Assistant Medical Officer (Grade I). Duties mainly surgical.

(2) ST. GILES' HOSPITAL, Brunswick Sq., Camberwell, S.E.5.—*Assistant Medical Officer (Grade I).

(3) ST. ALFEGE'S HOSPITAL, Vanbrugh Hill, S.E.10.—*Assistant Medical Officer (Grade I). Duties mainly medical.

(4) HACKNEY HOSPITAL, High Street, Homerton, E.9. — *Assistant Medical Officer (Grade I) Work mainly casualty and in the out-patient department. Experience of treatment of fractures is desirable.

*Salary £350 a year, rising annually by £25 to £425 a year, with board lodging, and washing. There is no accommodation for a married man or for a woman.

(5) ST. MARY ABBOT'S HOSPITAL, Marloes Road, Kensington, W.8.—Temporary Assistant Medical Officer (woman). Salary £250 a year, together with board, lodging, and washing The appointment will be until June 30th, in the first instance. The duties will include the administration of anaesthesia in maternity cases.

Forms of application obtainable (stamped addressed foolscap envelope necessary) from the Medical Officer of Health (Staff Division 3a), The County Hall, Westminster Bridge, S.E.1 Last date for receipt of applications, February 17th. Candidates should specify the position or positions for which they desire to apply. Canvassing disqualifies. Further enquiries should be addressed to the Medical Superintendents at the respective hospitals.

ROYAL INFIRMARY, BLACKBURN.
(240 Beds—Five Residents.)

FOURTH HOUSE SURGEON (male) required to commence duties March 1st at a salary of £150 per annum, rising to £250, with board, residence, and laundry, etc.

Applications, with copies of testimonials, stating age, nationality, experience, etc, to be sent at once to the undersigned.

Royal Infirmary, NATHAN A. SMITH.
Blackburn. Gen. Supt. and Secretary.

This Institution is recognized for the Surgical practice required for the F.R.C.S. final examination.

WESTMORLAND COUNTY HOSPITAL, KENDAL. (Beds 80.)

HOUSE SURGEON (male or female) required, middle of March. Appointment is for six months, renewable for a further six months. Salary £200 per annum, with board, residence, and laundry. Applications, stating age, and qualifications, with copies of three recent testimonials, to be addressed to the Hon. Sec., J. M. SOMERVELL, not later than Feb. 15th.

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[illegible] easant suburb. [illegible] rming house to [illegible] iard room. Large garden and [illegible] ars' purchase.—No. 322.

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25 SURREY.—PRACTICE OF £1,000 P.A. IN RAPIDLY GROWing Residential District within 15 miles of London. Panel 400. Suitable house, with separate professional accommodation, for sale. Scope for considerable increase. Premium £1,600.

26 YORKSHIRE. — FAVOURITE SEASIDE RESORT. — WELLestablished PRACTICE of over £800 p.a. in growing district. Panel 640, increasing. Modern house (5 bed and dressing rooms) in prominent position with garden and garage for sale. Scope for increase. Premium £1,250.

27 LONDON, W.—GOOD MIDDLE-CLASS PRACTICE £400 P.A. in suburb within easy access of the West End. Panel over 100. Attractive double-fronted house with nice garden for sale. Scope for increase. Premium 1½ years' purchase.

28 CORNWALL.—VERY OLD-ESTABLISHED PRACTICE OF OVER £1,100 p.a. in delightfully situated seaside village on West Coast. Panel about 550. Well-built house (7 bed and dressing rooms), standing in half-acre of ground for sale. Scope, as building is going on. Premium 1½ years' purchase.

29 LONDON, N.—PARTNERSHIP IN PRACTICE ABOUT £5,250 p.a. in thickly populated Suburban District. Panel about 800. One fourth or one-third share at 2 years' purchase.

30 S. OF ENGLAND. — PARTNERSHIP IN OLD-ESTABLISHED Practice of nearly £1,950 p.a. in important town within 80 miles of London. No panel. Attractive corner residence (7 bed and dressing rooms), in half-acre of walled-in garden, with garage, etc., for sale. Ample scope for increase. Premium one-half share 2 years' purchase.

31 KENT.—PARTNERSHIP IN MIDDLE AND WORKING-CLASS Practice averaging nearly £4,450 p.a., in an industrial Town under 25 miles of London. Panel about 2,600. Detached house (4 bedrooms) with garden to rent. Plenty of scope for increase. Premium one-fifth share 2 years' purchase.

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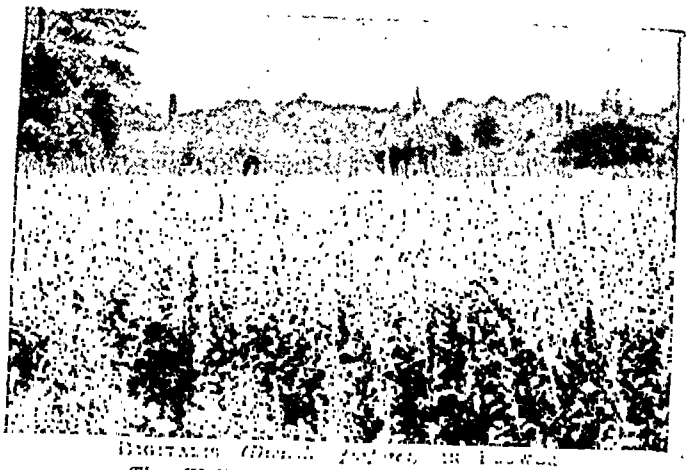

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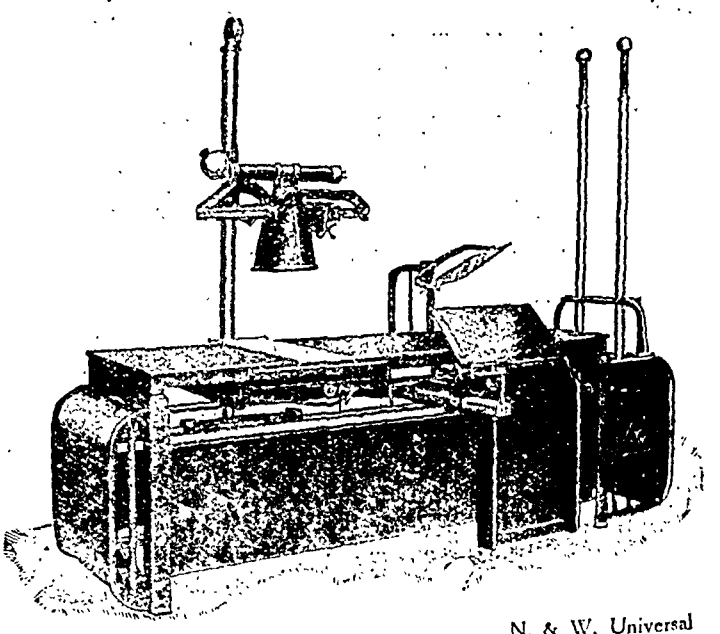

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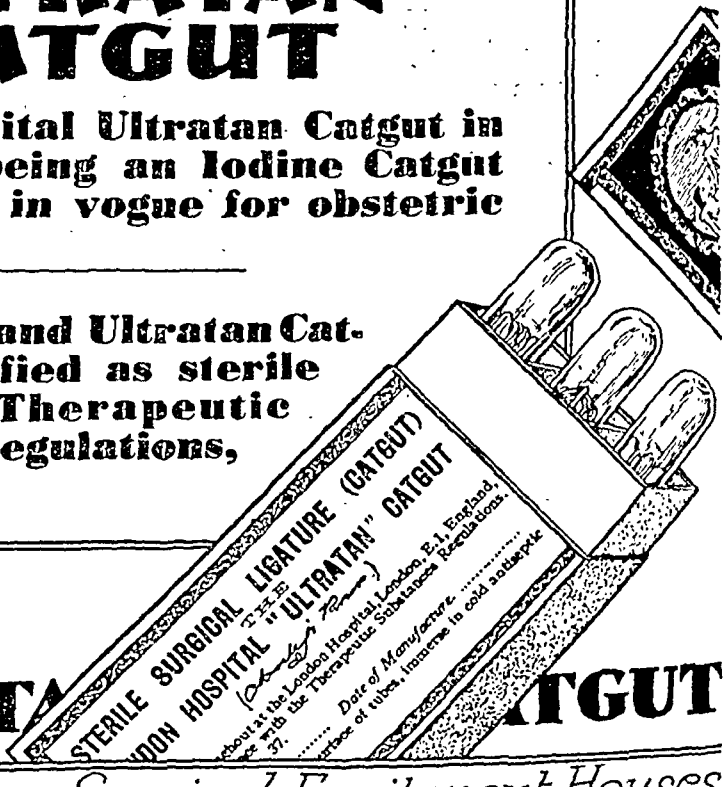

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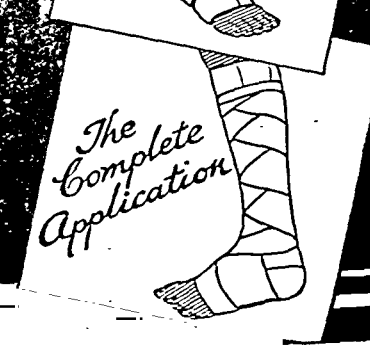

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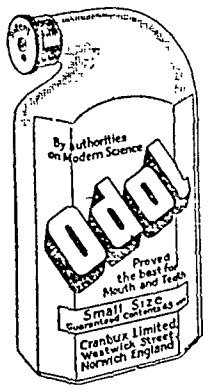

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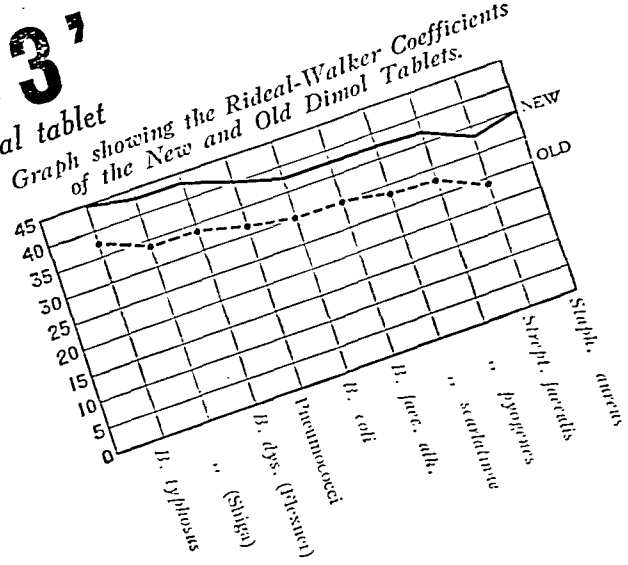

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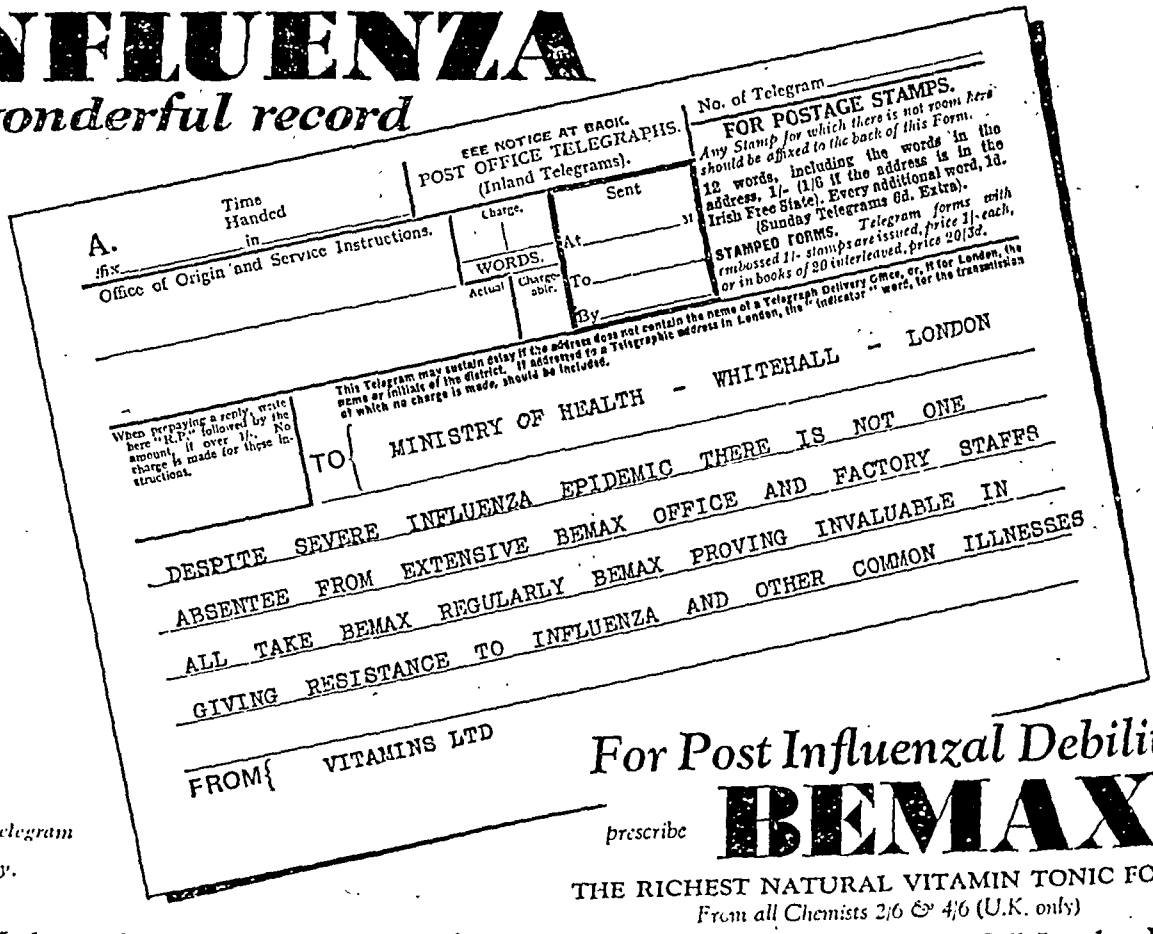
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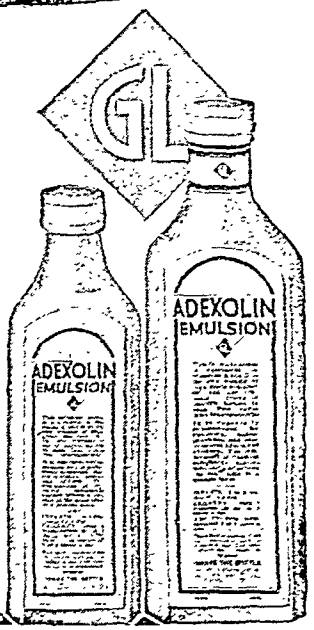

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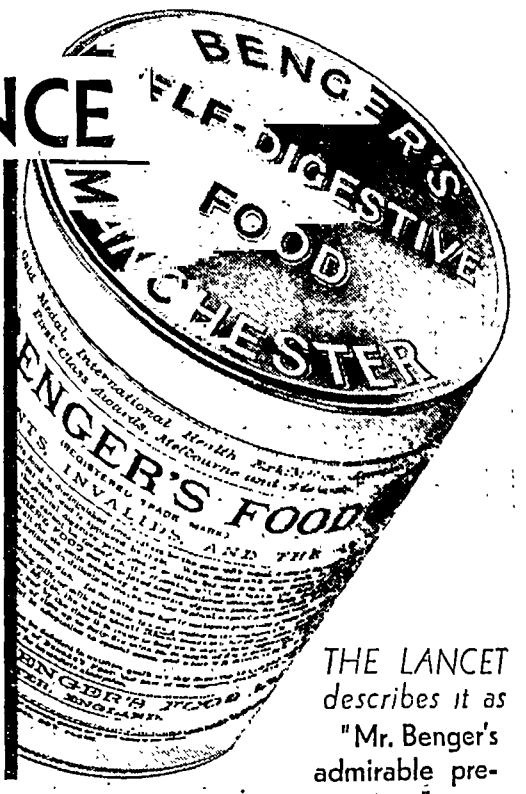

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Iron	grain	1
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Extracts from

"TUBERCULOUS DISEASE IN CHILDREN"

(Medical Research Council Report, Special Report Series No. 172, 1932. Blacklock)

"All the cases under one year of age with intestinal ulcers had been fed on cow's milk."

"Babies who were breast-fed for nine months or till death, if that occurred before that time, suffered less from abdominal tuberculosis than infants fed on cow's milk. This was particularly noticeable in the first year of life, and also to a lesser extent in the second."

"The greatest number of primary abdominal lesions were found in the second year of life, that is, at the period when children are consuming large amounts of raw milk."

"In infants in the first year of life only one human and no bovine infections were found in babies breast-fed for nine months or till death, if this occurred earlier, but in those fed on cow's milk, two human and fourteen bovine infections were found."

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"The highest percentage of infections with bovine strains occurred in the second year of life, that is, at the period when children consume large amounts of raw milk."

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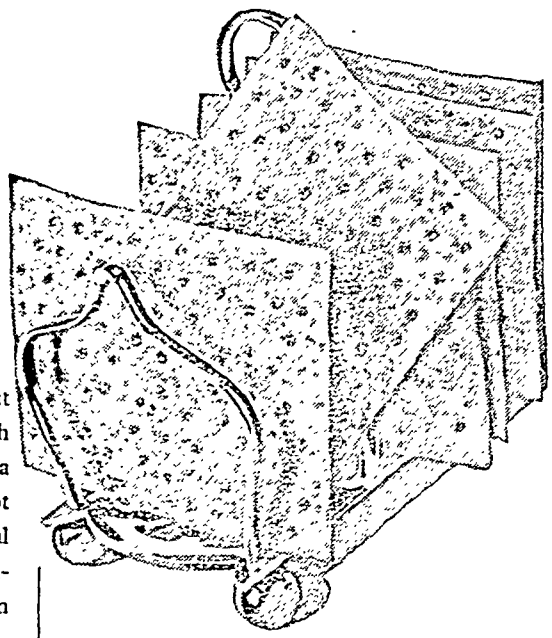

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Mineral matter, ash, etc.	2.60	1.20
	100%	100%
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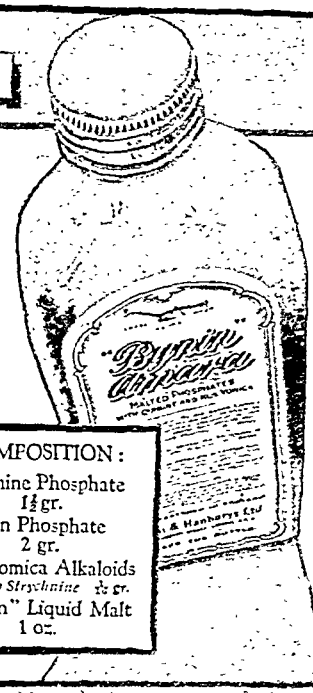

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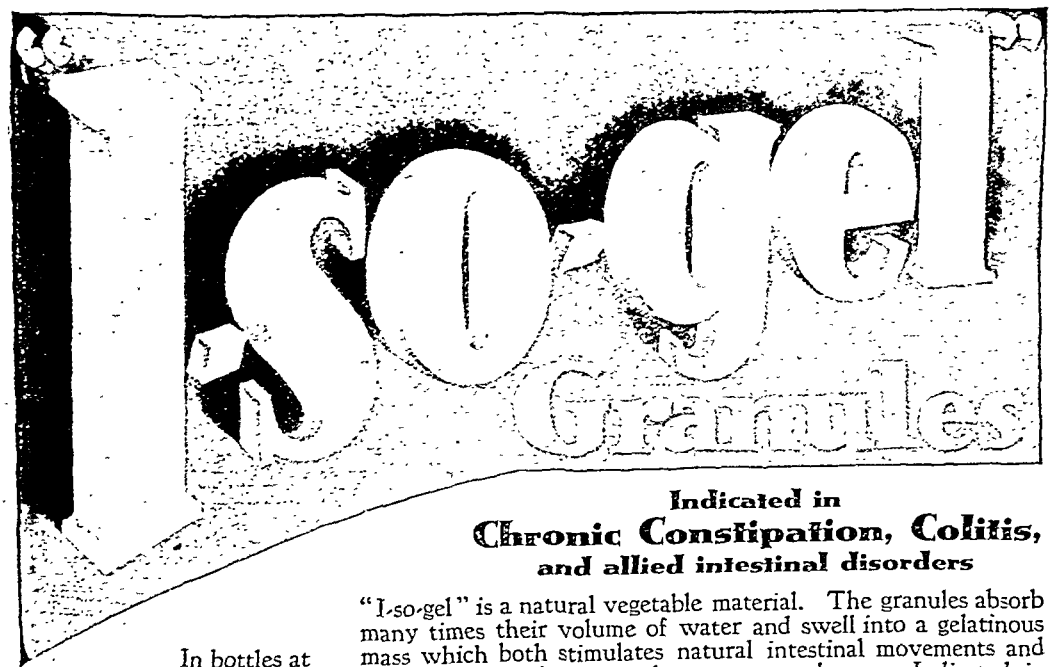

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"British Medical Journal," March 19th, 1932.

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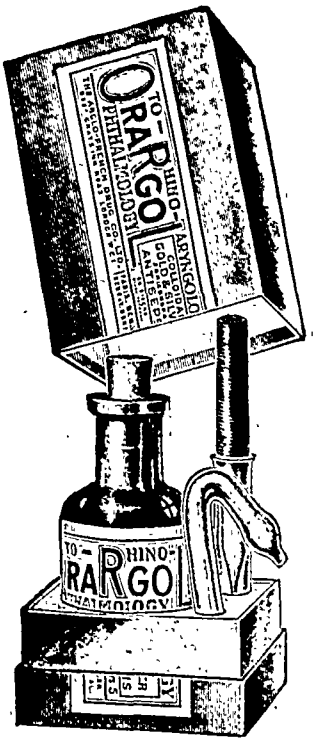

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A British Medical Association Lecture

ON

FORETHOUGHT IN MIDWIFERY*

BY

W. H. F. OXLEY, M.R.C.S., F.C.O.G.

HONORARY MEDICAL OFFICER AND LECTURER IN MIDWIFERY, EAST END MATERNITY HOSPITAL

After a study of the immediate and underlying causes of death in 5,800 cases of childbirth the Maternal Mortality Committee reported that at least half could have been prevented had due forethought been exercised by the expectant mother and her attendant, a reasonable degree of skill been brought to bear upon the management of the case, and adequate facilities for treatment been provided and utilized. This statement, made to Parliament by a committee composed exclusively of doctors and including among its members professors of midwifery and general practitioners, after an exhaustive inquiry covering many aspects of the subject, is one which the profession can hardly pass over in silence. The first clause especially requires examination, for the doctor's main function in the whole range of medicine is surely to apply his knowledge of disease in forecasting danger to his patients and so to ward off or delay the event of death. The statement that this primary function is not being performed constitutes a most serious indictment of the midwifery practice of those practitioners concerned.

Forethought in General Medicine

Let us consider for a moment the scope of forethought in general medicine. The ideal way in which this can be applied is in preventing disease from attacking individuals, and so far as parasitic infections are concerned a fair degree of success has been attained by segregating infected persons, destroying the causal agent, conferring immunity, or by increasing the general resistance of the population. But it is only a few diseases which can be prevented in this way. Beyond giving general hygienic advice we can do nothing to prevent a healthy person from becoming attacked by cancer or bronchitis or arterial degeneration—maladies which together account for nearly half the deaths in the country. We have therefore been forced to extend our conception of preventive medicine to include the early diagnosis of disease after it has attacked the patient, in the hope that early treatment may effect a cure. This is the everyday work of the doctor, which he is doing to the best of his ability against great odds. Very little is known of the origins of disease, the attention of the student being directed to the diagnosis of established disease rather than to its early signs and symptoms. The complaints for which a doctor is consulted can very often not be assigned to any definite ailment. Attempts to sort out from the many symptoms that are due to fleeting indispositions the few that may betoken serious illness are not very successful. Many disorders give rise to no symptoms in their early stages, and in the absence of periodic examinations are not found out until too late. Years may elapse before the doctor can check his prognostications by the actual result: these and a dozen other circumstances often combine "in proving foresight may be vain." It is the medicine of the future. Sir James Mackenzie, who spent his life upon this quest, appreciated these difficulties, and shortly before his death he said: "I must warn you against any immediate expectation of achieving the chief aim of medicine, the prevention and cure of disease. A long and weary road has to be travelled, and many of us will fall out before that is achieved."

* Delivered to the Furness Division of the British Medical Association, November 4th, 1932.

Forethought During Pregnancy

But now consider the application of forethought to midwifery, and see how very different and less difficult are the conditions. Here we are dealing, not with a disease, but with a natural process, which begins at a known time, is due to a known cause, and gives rise to definite signs which are known to every woman, the vast majority of whom have for long been accustomed to inform the doctor of their condition. It is a process causing bodily strain and metabolic disturbance in half a million healthy young women every year, disease in a large number, and death to some three thousand. It is one in which departures from the normal can be comparatively easily found out, and, what is most important, their significance can be checked with certainty within nine months. Are not these ideal conditions in which to carry out clinical research?

It is doubtful whether Sir James Mackenzie would have made such great advances in the knowledge of the early signs and symptoms of cardiac strain had not his genius led him to study first of all the effect of pregnancy on the damaged heart. And yet this promising field was until quite lately entirely neglected. Even the prevention of mechanical difficulties was not considered. From time immemorial a foetus of unknown size had been allowed to enter a canal of unknown size in any way it liked—frontwards, backwards, or even sideways. Many complicated instruments and manipulative measures were devised to get the foetus out when it stuck; but it does not appear to have struck anybody that these difficulties could be avoided by careful examination and correction before labour began. It is true that the hygiene of pregnancy had been considered important from the time of Hippocrates, and that in some of the works of the older obstetricians there are passages which suggest that some thought of the prevention of abnormal conditions had crossed the author's mind; but it was not until the opening years of the twentieth century that the systematic examination of all pregnant women with a view to the discovery and treatment of abnormal conditions was first advocated.

Advantages and Limitations of Ante-natal Care

It was in 1902 that Ballantyne first brought obstetrics within the field of preventive medicine; but obstetricians were slow to follow his advice. The preventive aspect of midwifery was badly taught and treated very scurvily in the textbooks, and it is only during the last eight years or so that ante-natal care has been extensively practised, even in teaching hospitals. Sufficient experience, however, has been gained within that time to convince practically all obstetricians that it will diminish definitely many of the risks of childbirth. No one who has seen the dramatic change which can be brought about in a case of pre-eclampsia can possibly doubt its value. A patient admitted to hospital, waterlogged, with a blood pressure of over 200, and scanty urine solid with albumin, presents an entirely different picture after twenty-four hours' treatment. Though not so dramatic, of far greater value is the prevention of serious degrees of toxaemia by the early treatment of cases of albuminuria. Where ante-natal care is efficiently carried out transverse presentations, which formerly were not at all uncommon, are practically never seen; while craniotomy, and even high forceps operations, are almost things of the past.

As yet there is no apparent lessening in the maternal mortality rate of this country, but that can hardly be expected, since, as the committee's investigations show, in only a minority of expectant mothers is ante-natal care practised; and even when it is done it is often so

perfunctory as not to deserve the name. But the clinical experience of obstetricians is confirmed in the records of certain hospitals in the case of women who have submitted themselves to supervision during pregnancy. These show not only a remarkably low death rate, but also an almost complete elimination of eclampsia, a great reduction in the incidence of difficulty due to disproportion and similar causes, a decrease in the death rate from intercurrent disease, and a diminution in the stillbirth and neo-natal death rate.

Although recognizing its success, we must not fall into the error of looking upon forethought during pregnancy as providing more than a preparation for labour, or as in any way obviating the need for the careful management of labour and the puerperium. Ante-natal care is not the be-all and end-all of midwifery. Thus it does nothing to lessen the risk of sepsis following normal labour, which accounted for 15 per cent. of the deaths reviewed by the committee. It will have very little effect upon post-partum haemorrhage or upon embolism. In fact, care during labour is in a way more important, for a good obstetrician may be able to make up for careless ante-natal work by skilful treatment of labour; but faults committed during labour are too often irreparable. Unless properly carried out ante-natal care may even have some disadvantages. Until a ripe experience has been gained it may lead to a good deal of unnecessary intervention, and so actually increase the risks it is designed to diminish. Unless tact is used in handling the patient a sense of fear may be instilled into her mind which renders her a subject unfit to withstand the hardships and possible perils of labour. It is expedient to note these limitations and disadvantages lest we bring discredit upon ante-natal care by promising for it more than it can perform; in spite of them it is undoubtedly the greatest advance in midwifery of the present century.

Too Little Ante-natal Supervision

Yet the Maternal Mortality Committee found that there is still too little ante-natal supervision by general practitioners and midwives, and that what there is is often too perfunctory to deserve the name. This is a strongly worded expression of opinion, but those whose duty it was to scrutinize the reports know that it is entirely justified. Thus, in 277 out of 544 cases of death from eclampsia the urine had never been tested, and in a further 120 in which albumin had been found before the onset of eclampsia no treatment whatever had been given. That is to say, that in 71 per cent. of these cases the committee considered want of efficient care to be the primary avoidable factor causing death. In many other cases obvious abnormalities had been overlooked or untreated, and this neglect had led to death. Neglect of ante-natal care on the part of attendants who had the opportunity to carry it out was found in 526 cases. In addition to this, the experience of members of the committee and evidence taken from different bodies and individuals led them to believe that negligence was much more widespread than the figures showed. That they believed that many general practitioners are doing good ante-natal work and midwifery generally is shown by their advice that further duties should be given them in the projected national maternity service.

Why is it that many doctors neglect this generally accepted safeguard? To say that it is just due to carelessness or to the impossibility of getting an extra fee for it is easy but incorrect. If a doctor contracts to attend a case for a given sum of money, he will earn it much more easily if he sees the woman four or five times comfortably in his consulting room before the labour comes off. There are some instances in which the mother is definitely to blame, and yet the committee's figures show that only 10 per cent. of the cases investigated had been so negligent as not to make arrangements for confinement with their attendant beforehand. No doubt in sparsely populated areas the mother, after being told of its necessity, does not bother to come again. The doctor has not time to look her up, and the only thing for him to do is to keep pegging away at his patients until they learn better. Education by the practitioner has not the obvious disadvantages of public lectures or wireless talks, which, however carefully given, are likely to produce an exaggerated impression of the dangers, and may even lead women to refuse to bear children at all.

There are two reasons for the doctor not exercising ante-natal care that seem worthy of consideration. In the first place general practitioners do not yet realize its advantages. The explanation is simple. Nature has provided that about ninety women out of every hundred will have a more or less normal labour without it, and as few doctors attend more than twenty confinements a year it is quite possible for one man to go three or four years without having a case which brings the need of ante-natal care forcibly home to him. The fact that he is dealing throughout this time with disease having a much higher mortality, forty or even a hundred per thousand, causes him to think less seriously of a condition with a case mortality of only four per thousand. It is because there are so many pregnancies—half a million a year—that the total number of deaths is so large. An uncommon disease, even though its case mortality be high, does not constitute such a serious sociological problem. Since doctors are day by day exercising forethought in disease there is no doubt that they would do the same for childbirth if they realized that dangers are not absent and that they have it in their power to do much to prevent them.

Can General Practitioners do Ante-natal Work?

The second reason why ante-natal work is neglected is because so much mystery has been made of it. Doctors have been told, and they really think, that they cannot do it efficiently unless they have been trained as students or have attended a special course. This attitude of mind is founded upon an entire misapprehension of what the work entails. Think what has to be done: a general examination of the mother to discover diseases which may increase the risk of childbirth; the early discovery of toxaemia by frequent examination of the urine and estimation of the blood pressure; the treatment of these diseases, preferably in hospital; the occasional taking of a sample of blood for a Wassermann reaction; the discovery and treatment of vaginal discharge; the preparation of the breasts for the function of lactation; the treatment of constipation; giving directions as to diet and exercise; the gaining of the patient's confidence. All this is merely common sense combined with general medicine. It needs no special manual dexterity or any equipment beyond that in ordinary use by the general practitioner. The only knowledge of midwifery required until late in pregnancy is to be able to diagnose the fact of pregnancy when the mother books, usually after the twentieth week, and to foretell the probable date of confinement.

Presentation of Foetus

It is not until the approach of term that we have to concern ourselves with a problem peculiar to pregnancy. We have to find out whether labour is likely to be easy or difficult, and to take what steps we can to avoid difficulty. This is chiefly a mechanical problem depending partly on how the foetus is lying and partly upon its

size relative to that of the pelvis. The lie, presentation, and position of the foetus must therefore be ascertained by the ordinary methods of clinical examination—inspection, palpation, and auscultation of the abdomen—the most favourable time for this being about the thirty-second week of pregnancy. With a willing patient, warm and gentle hands, and the trained tactile sensibility of the general practitioner, no teaching beyond what is found in the standard works of midwifery is needed. It is only in the exceptional case that there will be difficulty. Most malpresentations may be corrected at this time. A transverse or oblique lie, or an occipito-posterior position, can be put right by simple manipulations and the application of pads and binders. If the presentation be a breech it is advised by most obstetricians that cephalic version be performed in the interests of the child. In some cases this is quite easy, but in others so difficult that even in those hospitals where it is more strongly advocated many breech deliveries still occur, so that the general practitioner must not be disappointed if he sometimes fails to turn. Leaving the attempt too late is a common cause of failure; extended legs in the foetus, another. The recurrence of malpresentations after rectification often implies a deformed pelvis.

Measurement of Head and Pelvis

The next part of the mechanical problem—finding out the relative size of head and pelvis—presents much difficulty in many cases, but even here a great deal may be done without previous experience. We have no means of direct measurement of the foetal head or of the true pelvis through which it has to pass. Nevertheless, the external measurements of the pelvis should be taken, as they may give a hint that we must look out for trouble, especially if the external conjugate diameter is less than the normal 7.5 inches. Conversely, normal measurements are no absolute criterion that there will be no mechanical difficulty. Fortunately nature has provided us with a sure test, for in a normal primigravida the foetal head descends into the pelvis about the end of the thirty-sixth week of pregnancy and remains there until labour. That this has taken place is easily ascertained. The head will now be no longer in contact with the abdominal wall. In order to feel it the fingers must be placed above the middle of Poupart's ligament and dipped downwards and inwards as if to enter the pelvis from above. Any doubt that the head is in the pelvis can be confirmed by vaginal examination. If the mother is healthy, the presentation normal, and the head in the pelvis by the end of the thirty-sixth week, it is as certain as anything can be in medicine that she will be able to have her baby either spontaneously or with the aid of low forceps. If all these conditions are not satisfied there may be trouble. In multigravidae the solution of the problem is somewhat different, as with them the head does not usually enter the pelvis until the beginning of labour, and so forms no guide; but we may safely assume that, other things being normal, where the pioneer has safely passed others may safely follow. Caution must be used with the "elderly multipara," as with successive pregnancies the uterus becomes weaker, the pelvic bones more fixed, and the foetus larger.

The Doubtful Case

By acting on these lines any doctor with well-trained powers of observation may divide the patients who have booked with him into two classes—those who are reasonably sure to have no serious mechanical difficulty, and those in whom this is doubtful. The recognition that there is a doubtful class requiring special management, and that they can, and should, pick them out before labour begins, will mark a great advance in the midwifery practice of many practitioners. To do more than this needs judgement, which can only be gained by personal experience of cases which have been examined during pregnancy and followed through labour; and until he has it the doctor would be wise to get an experienced obstetrician to see all doubtful cases.

It will help the general practitioner to obtain further experience if, in addition to his own booked patients, he is also enabled to examine ante-natally patients booked by midwives, under the arrangements set out below. He should at first make a vaginal examination in all cases in order that he may become familiar with the size and configuration of the normal pelvic basin, and he should also in every instance make an attempt to judge the weight of the foetus while it is still in utero. It is impossible in this paper to go into the further management of the cases we have classed as doubtful. Their correct treatment is difficult to decide upon: obstetric specialists differ in their opinions and, like all of us, sometimes make mistakes. One thing is certain, that all cases in which difficulty is expected are better delivered in hospital, where facilities such as efficient help, a good light, and a delivery table of convenient height may be obtained. Normal patients can be safely attended in their own homes. By "weeding out" the doubtful ones, we have attended on the district attached to my hospital 5,376 consecutive patients in the last seven years without a death from obstetric causes. (Two died from general disease.)

Prevention of Contracted Pelvis

Since the difficulty in deciding upon the correct treatment of these doubtful cases arises chiefly through minor degrees of pelvic contraction, cannot we go a stage further back in the exercise of forethought and prevent their occurrence? Nothing more impressed those members of the committee who visited Holland and Scandinavia than the extreme rarity of obstetric difficulty due to contracted pelvis in these countries. It is nearly all due to rickets, a preventable disease. They summed up the position as follows:

> "Careful consideration of the data together with the general consensus of opinion of all the obstetricians we interviewed, left little doubt in our minds that the size and configuration of the female pelvis are more favourable to easy parturition in the countries we visited than in England and Wales. If that be so, we have a hopeful corollary to draw. There is no evidence that these differences are racial characteristics—according to anthropologists we are descended in the same stock—rather do they appear to depend upon the better conditions obtaining in these countries during the period of life when the pelvis is developing, and it would seem that the provision of a better balanced and more adequate diet, increased fresh air and sunlight, and sufficient open-air exercise during the whole of childhood are means open to us as a nation which will help in bringing about a considerable reduction in maternal mortality."

Since any measures taken now will not fructify for twenty years it is a matter of urgent necessity to apply widely the new knowledge available for the prevention of rickets. This is a matter for the State, but the attendant can help by encouraging breast-feeding, and seeing that the nursing mothers and children under his care are advised to take articles of diet which are rich in vitamin D, calcium, and phosphates—such as milk, butter, egg yolks, fat fish, and fish livers.

Ante-natal Care in Midwives' Cases

So far we have only considered the practitioner, but midwives also came within the indictment of the committee. The present position with regard to them is as follows. Midwives attend about twice as many cases as

do doctors, and nearly all of them are booked. The Central Midwives Board has issued a form to be used by them as an ante-natal record, and, although many of the recently trained midwives are both doing the work and filling up the form, a large number are quite unable to do either. Knowing that the ante-natal supervision of midwives' cases was being to a great extent left undone, public health authorities, encouraged by the very real success of child welfare clinics, opened ante-natal clinics in the hope of making up the deficiency. There are now some 1,200 of them, and no doubt they are doing good work, especially in educating women in mothercraft; but it is doubtful whether they will ever prove an efficient substitute for careful supervision by the expectant mother's own midwife and doctor, for the following reasons. (*a*) Many mothers object to attending ante-natal clinics, and in rural areas find it impossible to do so. (*b*) There is a tendency for midwives to rely on the clinic to do their ante-natal work instead of improving themselves in it. (*c*) The members of the staff are often not engaged in the active practice of midwifery: not being present at the labour they have not the opportunity of learning from their mistakes. (*d*) The records of the clinic are not available to the doctor called by the midwife for emergencies: it is a handicap to the doctor to have no previous knowledge of the case. (*e*) It is no part of the duty of the clinic to treat abnormal cases, so that with responsibility divided between clinic, doctor, and midwife the patient remains untreated.

The committee considered this question very carefully, and advised that public health authorities should be enabled to make arrangements for the ante-natal care of midwives' cases (apart from women insured under the National Health Insurance Acts) by general practitioners, and authority to do this was immediately given by the Ministry of Health. Under the scheme midwives would do the routine examinations and bring or send their patients to a doctor on at least two occasions—the first, early in pregnancy; and the second at about the thirty-sixth week. The obligation of the midwife to send the patient to a doctor if she discovers any abnormality during pregnancy would still remain as at present. In some areas the scheme is already working; in some it is modified by an arbitrary selection of general practitioners; in some it has not been started owing to financial pressure. For its effective working there must be co-operation between the medical officer of health and the general practitioners; unfortunately in some areas this is lacking. It is clear that, when such a scheme is adopted and working, many of the disadvantages to which we have drawn attention in connexion with ante-natal clinics will disappear.

CONCLUSIONS

1. Forethought during pregnancy and during the early life of the future mother can materially reduce the risks of childbirth.

2. Many doctors neglect ante-natal care because they do not realize its value or because they imagine they cannot do it effectively.

3. Ante-natal clinics suffer under many serious disadvantages.

4. More use should be made of the general practitioner for the ante-natal care of midwives' cases.

5. Contracted pelvis should be prevented.

REFERENCE

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THE CHOICE OF ANAESTHETIC FOR ABDOMINAL SURGERY*

BY

A. JAMES WALTON, M.S., F.R.C.S.

From the surgical point of view the requirements of a perfect anaesthetic are that the patient should be unconscious of pain, either physical or mental, and that there should be perfect relaxation of the muscles.

INHALATION ANAESTHESIA

In an inhalation anaesthetic the first of these points is perfectly obtained as regards physical pain, but mental pain or fear is often present, and one frequently hears patients state to-day that they fear the anaesthetic far more than the operation. In large part this fear is based on hearsay knowledge of the more uncomfortable methods used fifteen to twenty years ago. With ether or A.C.E. mixture given on an open mask the discomfort of the actual administration is negligible, but the fear of facing the ordeal is still great. To-day this may largely be overcome by the administration of drugs such as morphine, avertin, or nembutal in small doses while the patient is in bed, or, in some cases, by small doses of ether given in olive oil per rectum. I use the latter method as a routine in all my cases of exophthalmic goitre, and have found that it is very satisfactory. Drugs given in such a manner are, of course, used only as a means of making the patient unconscious for the period of transmission from the ward or room to the theatre, and until the real anaesthetic is commenced. By this means the first part of our surgical requirements is easily obtained.

The second part—that of the provision of adequate relaxation—is much more uncertain, and is directly dependent upon the skill of the anaesthetist. We are all conversant with the defects that arise when a strange anaesthetist has to be utilized in emergency operations performed at some distance, and how after a very bad administration we are told how peculiarly difficult that individual patient was to anaesthetize. We surgeons know, however, that this difficulty has but little to do with the patient, but is almost entirely dependent upon the skill of the anaesthetist, and thus we are not to be blamed because whenever possible we require the services of those known to us.

Pulmonary Complications

Although, however, such good results are obtained as regards the requirements at the time of operation, one has to ask at what cost they are obtained, and here there is no doubt that the results are not so satisfactory. I suppose all abdominal surgeons would agree with me that the greatest post-operative danger to-day is the onset of pulmonary complications. I do not include pulmonary embolism, for this appears to be independent of the anaesthetic, but there is no doubt that some form of bronchitis is a very frequent post-operative complication. It is difficult to estimate its frequency, for it varies so greatly in degree, in one case consisting only of a slight cough with the expectoration of a small amount of mucopus and pyrexia rarely rising above 99.5° F. for one or two days, to a severe purulent bronchopneumonia with pyrexia in the neighbourhood of 103° F. lasting for a week or more. If all cases are included some such lung

* Communication to the Section of Anaesthetics at the Centenary Meeting of the British Medical Association, London, 1932.

complication is probably present in nearly 90 per cent. of upper abdominal operations. It is only fair to state, however, that the anaesthetic is not the only factor. The limitation of thoracic movement owing to pain in the upper abdomen and the presence of the bandage does undoubtedly encourage collapse of the lungs, and thus aids the development of bronchitis or pneumonia. A cold atmosphere in the immediate post-operative period is another very important factor. This is clearly shown by the fact that these complications are more common in hospital than in private practice. For this I would in part blame the longer passage through cold corridors from the theatre to the ward, and in part the fact that the temperature of the general ward has to be kept so as to be most suitable to the majority of the patients—one which I regard as much too low for a patient recovering from an anaesthetic. In a private home the individual room can, and should be, kept for the first two days at a temperature which is uncomfortably hot for a normal person.

To a large extent the frequency of these lung complications can be reduced by careful pre-operative attention, and no anaesthetic of this sort ought ever to be given if the patient has a cold or a sore throat. This is one of the reasons why I insist upon every patient being in the home or hospital for at least twenty-four hours before the operation is performed. During this period any such infection of the nasal passages or throat will probably become manifest, and the operation can then be postponed. In spite of such precautions it is, however, very noticeable that the presence of lung complications is more marked during an epidemic of influenza. In these cases it is probable that there has been some mild infection of the air passages which has been lit up by the anaesthetic.

Although so frequently present, and so largely dependent upon the anaesthetic, these lung complications rarely progress to a fatal issue, but they do often give rise to much anxiety, and are a source of very grave discomfort to the patient. Their onset becomes a very big risk if there is any pre-existing lung condition. Especially is this so if the patient has, or has had, tuberculosis. One of the errors it is so easy to make is to mistake the dyspepsia which occurs with pulmonary tuberculosis for that due to a chronic duodenal ulcer. The performance of a laparotomy under such conditions is not only an unnecessary operation, but it is a very real danger to the patient, in that the pulmonary tuberculosis, which may have been latent, is often converted into a very active process by the anaesthetic. This danger is an answer to the claims of those surgeons who would advocate an exploratory operation in all cases of doubtful dyspepsia, and personally I am very loath to perform an abdominal operation in patients who have had a past history of pulmonary tubercle, partly because there is often no organic lesion, and in any case there is a considerable danger from the operation.

Alternative Methods

In order to overcome these difficulties and discomforts many new methods have of late been introduced, which may be considered as follows:

Intravenous Anaesthesia

Some twenty years ago the intravenous administration of ether was much employed. At that time I was assistant to Mr. Laurie McGavin, who was enthusiastic in its use. For a time it was very widely used, as it was thought that by this method of administration the risk of lung complications would be overcome. It failed, however, to realize the hopes of those who introduced it, and has now very largely dropped into disuse. More recently other drugs have been given by this route, the chief of which perhaps is avertin. The benefit of the method lies in the fact that the whole of the drug administered is utilized, so that the dose can be accurately determined, and that theoretically there should be but little irritation of the stomach and the respiratory passages. The great drawback, however, lies in the fact that, although the actual amount of drug injected is accurately known, this in itself creates difficulties, as it does not allow for individual idiosyncrasies. Thus, if the patient is peculiarly susceptible, too much is given, whereas, in other cases, the ordinary dose is insufficient to produce complete anaesthesia. If an overdose has been given it of course cannot be withdrawn. By the use of a continuous intravenous administration with a very weak solution it was hoped that this difficulty would be overcome, but such a method is slow in its induction, and is liable to interfere with the work of the surgeon. The hopes that there would be no irritation of the stomach and lungs were not realized, probably because so large a portion of the anaesthetic is excreted by these paths. My own experience has been that vomiting and bronchitis are nearly as common after this method as after the administration of inhalation anaesthesia.

Anaesthesia of the Sensory Nerves

Physiologically the ideal method of performing an operation is entirely to obliterate all afferent impulses from the operative field without affecting the organism as a whole. This may be effected by many methods. The tissues themselves may be infiltrated by a weak solution of a drug which paralyses the nerve terminals, and, if it also contains adrenaline, controls haemorrhage at the same time. The sensory nerve trunks may have their conductivity destroyed either by directly injecting an anaesthetic into them or by infiltrating the tissues around them. This may not only be used for the peripheral sensory nerves, but the splanchnic nerves may be treated in the same way, so that all afferent impulses from the viscera may be blocked and surgical shock be thereby prevented. Similar results may be more simply obtained by injecting an anaesthetic fluid into the spinal canal and thereby anaesthetizing the posterior roots, so that all afferent impulses are checked at this site. They have the great benefit that shock is much reduced, for even under full inhalation anaesthesia afferent impulses are conveyed up the sensory paths, and much shock may be produced. The toxic symptoms brought about by their use are slight, and hence vomiting rarely follows. They produce little or no irritation of the bronchial mucous membrane or lungs, and therefore pulmonary complications are less common. Patients are thereby often saved a considerable amount of discomfort in the period immediately following the operation. If used alone they have, however, what, to my mind, is a very grave drawback—that they do not render the patient unconscious, and thus do nothing to relieve the mental stress. This objection can be overcome by combining with them some other drug, such as morphine, omnopon, scopolamine, nembutal, or avertin administered by mouth or rectum, or they may be combined with a small dose of ether administered by inhalation or by rectum.

The infiltration methods are useful in certain operations in that the anaesthetizing drug can be combined with adrenaline, and this renders the field of operation almost bloodless. For this purpose it has for some time been my custom to use infiltration methods in conjunction with ether in all cases of hyperthyroidism. For abdominal work, however, I always feel that infiltration of the tissues interferes somewhat with the healing of the wound.

2. *Complement is complex.*—Methods for the fractionation of serum proteins into albumins and globulins result in a fractionation of complement. Browning and Mackie have been notable workers in this field. Protein fractions are obtained which singly do not possess the properties of complement, but which, when reunited, are almost as effective as the original serum from which they were prepared. Four components of complement are now generally recognized: *mid-piece*, associated chiefly with the serum globulins; *end-piece*, associated with the albumins (Ferrata, 1907; Sachs and Altmann, 1909; Liefmann, 1909; Brand, 1907); a third *component* which is removed by yeast (von Dungern, 1900) or zymin (Whitehead, Gordon, and Wormall, 1925); and a *fourth component*, which is destroyed by small quantities of ammonia (Gordon, Whitehead, and Wormall, 1926, A). The third and fourth components of complement are interesting in that they are both heat-stable—that is, in the case of the third component, treatment with yeast or a zymin preparation inactivates complement, but a serum so treated can have its complement activity renewed by the addition of serum which has been heated at 56° C. for half an hour. The fourth component of complement can be demonstrated by adding small amounts of ammonia to a serum, incubating for about one and a half hours, and then neutralizing. This treatment destroys the complement activity, which, as in the case of the third component, can nevertheless be restored by the addition of heated serum. It is important to notice that this action of ammonia is specific, and is not due simply to its alkalinity. The fourth component is not identical with the third component, the former occurring mainly in the end-piece, the latter mainly in the mid-piece. It has also been shown (Gordon, Whitehead, and Wormall, 1926) that a serum inactivated with ammonia can be reactivated on adding serum which has been deprived of all its third component by treatment with zymin. This inactivation of complement by ammonia does not appear to be associated with any interference with the albumin-globulin ratio or with the phosphorus partition of the serum—that is, the total organic phosphorus, the lipin phosphorus, and the inorganic phosphorus (Gordon and Marshall, 1929). These components, however, should not be looked upon as necessarily mutually exclusive, nor may we assume that there are no other components still to be found.

3. *Complement is very sensitive* to a variety of physical and chemical agencies other than those just mentioned. (*a*) Reaction. Acids and alkalis have inactivating effects, which are at least partly reversible if the treatment has not been too drastic. (*b*) "Adsorption." Many substances in the finely divided or colloidal state are able to remove complement from serum—for example, casein, kieselguhr, kaolin, and living and dead bacteria, both electro-positive and electro-negative, when dissolved in salt solution, combine with complement and render it inactive (*Klopstock, 1924*). Gordon (1930) showed that congo red and similar dyes inhibited complement activity, and that the effect of the dye is increased by the addition of magnesium sulphate. Complete inactivation was produced by treating 1 c.cm. of guinea-pig serum with 0.2 c.cm. of a 2 per cent. congo red solution, but the inactivation was reversible, activity being restored by adding adsorbing agents, such as charcoal, heated serum, serum albumin, or serum globulin. The conclusion was drawn that the congo red was first adsorbed by the complement—that is, on the serum protein, and then removed by another adsorbing agent. It is interesting to note that this occurs not only with haemolytic complement, but also with streptococcal haemolysis (Gordon, 1931). (*d*) Complement does not act at 0° C. (*e*) Violent shaking causes destruction of complement (Jacoby and Schutze, 1910). (*f*) Inorganic salts in hypertonic concentrations cause more or less reversible inhibition of complement. (*g*) Complement is destroyed by trypsin—that is, a proteolytic enzyme (Michelis and Skwirsky, 1910; Wormall, Whitehead, and Gordon, 1925). (*h*) The addition to serum of 10 per cent. sodium chloride inhibits complement activity, but allows the complement to pass through a Berkefeld candle. After filtration complement action can be restored by diluting to normal salt content (Muir and Browning, 1909). (*i*) Ultra-violet rays have a destructive effect on the heat-labile protein components of complement (Gordon and Wormall, 1928).

PROTEIN DISPERSION

The above facts point definitely to a very close association of the complement function with the protein constituents of normal serum. A protein complex could very well show all the properties described above if it be assumed that the complement function is only exhibited by the complex when in a particular state of aggregation—that is, if dispersion on the one hand, or further aggregation on the other, cause inhibition of the function.

One of the mildest means of effecting an increase in the dispersion of proteins is by the action of strictly neutral salts, such as sodium chloride or bromide. The action of such salts is more likely to be free from confusing side-effects than any of the agencies so far described, and has in consequence been made the subject of recent work (Gordon and Thompson, 1933). The salts used were the sulphates, chlorides, bromides, iodides, and nitrates of sodium and potassium—that is, salts of strong bases and strong acids, and therefore incapable of affecting the reaction of the serum. Further, the action of these salts was studied on a basis of equivalence (or normality) so as to eliminate any possible valency effect of the divalent sulphate ion. The experiments showed that the order of effectiveness in inhibiting complement activity is as follows:

$$SO_4/2 = Cl < Br = NO_3 < I$$

—that is, the exact order for the effect on the swelling of gelatin at similar concentrations of salts. This series is, of course, part of the well-known Hofmeister or lyotrope series. Work by Stiasny, Das Gupta, and Tresser in Germany, and Northrop and Kunitz in the United States, has shown that the above series is one of increasing dispersive power on gelatin. Their work proves that at concentrations such as were used in the experiments on complement these salts definitely disperse gelatin, as is shown by their effect, not only on swelling, but on osmotic pressure, ultra-filtration, diffusibility, and mutarotation. It may thus be stated that if the action of neutral salts on serum proteins is similar to their action on gelatin, then the inhibition of complement by neutral salts is due to the dispersion or peptization of the serum proteins by these salts.

HAEMOLYTIC AND BACTERICIDAL COMPLEMENT

That the bactericidal power of serum is associated with another factor in addition to complement has been demonstrated in the following way. If to a normal serum which has a marked bactericidal power for an organism like *B. dysenteriae* Flexner suitable amounts of a heated suspension of *B. dysenteriae* Flexner are added and allowed to remain in the ice-chest for two hours at 0° C., centrifuged, and the supernatant fluid tested against a suspension of the live organisms, the serum will then be found to have lost its bactericidal power, whilst still retaining its complement power as tested with sensitized red blood corpuscles. If to this serum, that has been thus treated with dead bacteria, is now added serum that has been heated at 56° C. for half an hour—that is, serum devoid of both complement and bactericidal power—then the bactericidal power of the treated serum is restored. This loss of bactericidal power is attributed to the removal of an immune body present in the serum, and the missing factor can be supplied by serum which has been heated at 56° C. for thirty minutes.

The problem whether the complement functioning in the bactericidal reaction is of the same nature as the complement used in the haemolytic reaction is one of interest. Braun (1911), Liefmann (1911), and Bochncke (1912), using the methods of "splitting" complement into

components were inactive in respect of bactericidal and haemolytic power, but that the two combined gave bactericidal power and also haemolytic complement. This similarity in structure between haemolytic complement and bactericidal complement is supported by the weakening of both functions, bactericidal and haemolytic, when the serum is diluted with water and kept at 37° C. for one and a quarter hours (Boehncke, 1912). Gordon and Wormall (1928), in investigating this relation between bactericidal and haemolytic complement, showed that small amounts of ammonia destroy the bactericidal power of normal guinea-pig serum against *B. dysenteriae* Flexner, and that this loss of bactericidal power runs parallel with the destruction of haemolytic complement. The action of ammonia on the bactericidal system and the haemolytic system of this serum is not due to *pH effects*, nor is any significant action exerted by small amounts of neutral ammonium salts. The conclusion is drawn that haemolytic and bactericidal complement have a similar constitution, and are probably identical. In the experiments with congo red described above, Gordon (1930) showed that this dye inactivated the bactericidal power of normal serum as well as its haemolytic complement, and that this reaction with the bactericidal factor was reversible.

Gordon and Carter (1932) further investigated the bactericidal reaction, seeking to determine whether this reaction was due to the presence of complement and a series of specific antibodies for these organisms. Normal guinea-pig serum and rabbit serum were adsorbed with a heavy suspension of an organism in 0.85 per cent. sodium chloride, the organism having been heated at 65° C. for one hour, and then washed repeatedly with normal saline. The adsorption took place for two hours at 0° C. The serum was then centrifuged, and the bactericidal power of the supernatant fluid tested against various other organisms. Six c.cm. of serum were adsorbed with suspensions of *B. dysenteriae* Flexner, and this serum tested against (1) *B. dysenteriae* Flexner, (2) *B. typhosus*, (3) *B. dysenteriae* Shiga, (4) *B. enteritidis* Gaertner, (5) *V. cholerae*, and (6) *B. paratyphosus* A. A series of tubes (7 to 12) contained, in addition to the above heated serums, *0.5 c.cm. of serum heated at 55° C.* for half an hour and inoculated with the same organism, since the addition of heated serum to an "adsorbed" serum in many cases restores the bactericidal action of the serum. This set of experiments was repeated by adsorbing guinea-pig serum with heated and washed suspensions of each of the six organisms mentioned, and testing the bactericidal power of the adsorbed serum against these six organisms severally. The results showed that a serum adsorbed with *B. dysenteriae* Flexner lost its bactericidal power against *B. dysenteriae* Flexner, *B. typhosus*, and *B. paratyphosus* A, but retained it against *B. dysenteriae* Shiga, *B. enteritidis* Gaertner, and *V. cholerae*. Similarly, adsorption with the suspensions of the other five organisms showed that there was no specific adsorption of the bactericidal power for any particular organism by a suspension of that organism. The organisms used showed a graded sensitiveness to serum, adsorption of serum with emulsions of dead organisms removing first the bactericidal power for the least sensitive organisms, further addition of the adsorbing agent finally destroying entirely the bactericidal power. The conclusion reached is that the bactericidal power of normal serum against various organisms *is not due to the* presence of specific natural antibodies. The variations in bactericidal power against different organisms are attributed to the varying sensitiveness of these organisms to non-specific factors in the serum (complement plus a heat-stable factor).

LEUKINS, β-LYSINS, AND LYSOZYME

There exist, however, other bactericidal systems of which much less is known than the complement systems just described. Extracts of leucocytes, containing bodies known as leukins, have been studied by a few authors. These extracts are prepared from the leucocytes by obtaining an exudate rich in polymorphs, and treating the exudate by alternate freezing and thawing, supplemented by mechanical means or treatment with weak acids, alkalis, or saline. The leukins are bactericidal towards certain organisms which are not killed by the complement system, and have as a rule a wider bactericidal action, which is effective against organisms such as *B. anthracis*, pneumococcus, streptococcus, and *M. tetragenus*, etc. *The leukins are relatively heat-stable, requiring a temperature of 75° C. for half an hour for their destruction, and,* unlike complement, are little affected by salt concentration. The action of these leukins on the bacteria is a direct one, and there is no evidence of an immune body system.

β-lysins (so called to distinguish them from α-lysins, a name sometimes used for the complement system) are bactericidal substances present in serum which are rather less heat-stable than the leukins. They have been studied in some detail by Pettersson (1927), who finds that they consist of an "activating" substance which is inactivated by heating at 63° to 65° C. for half an hour, and is therefore more stable than haemolytic complement, and an "activable" substance which is bound to the bacterium on which the activating substance acts. The two systems appear to be very similar—namely:

α-lysins—complement plus immune body.
β-lysins—"activating" substance plus "activable" substance.

The "activable" substance of the β-lysin may therefore be compared to the immune body necessary for the action of haemolytic or bactericidal complement, but, unlike the immune body, it does not attach itself to the bacteria unless the "activating" substance is present at the same time. The "activating" substance is not *affected by a reduction in the salt concentration*, or by treatment with ether, chloroform, or petroleum ether. The β-lysin content of the serum is not increased by immunization. Pettersson tabulates the bacteria which are affected by the different bactericidal systems, and suggests that there are chemical differences between the cells affected by α-lysins—that is, complement system—and those affected by β-lysins. The organisms susceptible to β-lysins include *B. anthracis*, *B. proteus*, and *B. subtilis*, and also various anaerobes.

The difficulty in understanding the part played as mechanisms of defence by these heat-stable bactericidins is exemplified by the fact that the rabbit is relatively susceptible to anthrax, whilst its heated—that is, complement-free—*serum is strongly* bactericidal to this organism, while on the other hand the serum of fowls and dogs, which are relatively immune to anthrax, has little bactericidal power.

Mention should finally be made of another system which is possibly allied to the leukins and β-lysins—namely, the bactericidal substance discovered by Fleming (1922) in various secretions of the body (especially in the tears), and called by him "lysozyme." A particular organism known as *M. lysodeikticus* is very sensitive to the dissolving action of lysozyme in extremely low concentrations, but against most pathogenic bacteria it would appear to be inactive. The probability is that various tissues and secretions of the body possess a whole series of bactericidal powers which need extensive investigation.

CONCLUSION

It will be realized that the study of the defence mechanisms of the body has not at present passed very far beyond the descriptive stage. Complete explanation and elucidation are not yet in sight. The haemolytic complement of serum is possibly the simplest of all the factors so far described, and consequently offers the greatest hope of ultimate explanation. Even in this case, however, the usual view that complement is a particular physical state of the serum proteins is not universally accepted as proved, nor can it be until a clearer picture is available of the molecular structure of proteins in solution and the way in which this structure is affected by temperature, reaction, etc. The amphoteric character of proteins—or, in other words, their more or less feeble powers of combining with either acids or bases, *or with each other*—is without doubt responsible for their power of building up into aggregates of relatively enormous size, but the forces which hold these aggregates together are often so feeble that protein systems in solution are extraordinarily labile and sensitive to relatively mild agencies. On this account a quantitative physical chemistry of proteins is only as yet beginning to emerge, and considerable time must elapse before a theory of complement structure on the lines hinted at above can be either prudently formulated or adequately tested.

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SOME EARLY OCULAR SYMPTOMS OF OVER-INDULGENCE IN SUGAR AND SWEET FARINACEOUS FOOD

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In a series of interesting papers published recently in the *Edinburgh Medical Journal*, Dr. J. Hunter Paton[1] has drawn attention to the great increase in "the national consumption of sugar within recent years in its relation to the occurrence of disease." Glucose is the end-product in the biochemistry of the carbohydrate constituents of the dietary, and it is well known that the capacity to digest and assimilate sugar and starch varies greatly in different individuals. Those whose powers are more than usually restricted in regard to such foods readily suffer from diseases especially associated with disorders of carbohydrate metabolism.

The functional activity of every organ of the body is regulated by the quantity and quality of the blood circulating in its capillaries. Krogh[2] has demonstrated that the part played by the capillaries is distinct from that of the arteries and of the veins. They are not simply tubes through which blood flows. The cells of the organ have a direct influence upon them. They open up, or close down, in response to the call of the tissues for nourishment, and in the marvellous biological adaptation of structure to function the capillaries play an important part. Much depends upon their size and on the permeability of their walls to colloids.

DISTURBANCES OF VISION AND THE DIET

Visual function depends upon the circulation of the blood in the capillaries of the retina and the choriocapillaris. In proportion to its size the eye is very abundantly supplied with capillaries. Those of the retina and the choriocapillaris are among the most delicate in the body; and in the eye, as elsewhere, "all the secret and intimate business of life is transacted through their walls" (Allbutt). In the structures peculiar to the eye, however, perfect transparency is the primary requisite, and Nature has made provision for this by the relative impermeability of the walls of the ocular capillaries to the passage of colloids (Duke-Elder). The peculiar translucency and the characteristic colour of the normal fundus oculi[3] are both due to circulation of the blood in these relatively impermeable capillaries. Dale[4] has demonstrated that dilatation of the capillaries and increased permeability of their walls to the passage of colloids are brought about very rapidly by the action of metabolic toxins. One of the earliest clinical signs of this form of toxaemia is a diminution in the translucency of the ophthalmoscopical picture—a condition analagous to a muddy complexion. Although this appearance is difficult to describe, it is easy to recognize after attention has been directed to it. Translucency is the most delicate quality of the normal fundus oculi, and any loss of this pristine brilliancy is the first sign of a departure from health.

Among the patients suffering from headache referred to an ophthalmic surgeon is a well-defined group which does not obtain the relief expected from the use of the glasses prescribed.[5] In these patients the ophthalmoscopical examination of the fundus reveals subtle changes in colour and translucency, which are probably due to interference with the rate of the circulation of the blood in the capillaries of the retina, and to increased permeability of their walls to colloids. The light sense is always more or less disturbed. Patients complain either that they require more light than formerly or that the light must

be reduced in intensity to enable them to see with comfort; and some tell of difficulties they have when working with certain colours. The headache, although aggravated by the use of the eyes, is almost invariably present in the morning on first waking from sleep, and further evidence of metabolic disturbance is revealed by an examination of the urine. A specimen kept overnight in a urine glass is usually found to contain large numbers of minute crystals of oxalate of lime when the deposit is examined under the microscope. The patients are often said to suffer from "gouti ness"; but they improve much more rapidly when the intake of sugar and carbohydrates is restricted than when the nitrogenous forms of food are cut down. As a result of suitable general treatment, in addition to the use of accurately adjusted spectacles, the capillary congestion of the retina diminishes, the fundus oculi regains its normal translucency, the visual symptoms disappear, and headache is permanently relieved.

PHLYCTENULAR CONJUNCTIVITIS

Let me give one more example. Nutritional disturbances, similar in their nature to those I have described, are the primary cause of phlyctenular conjunctivitis. This disease is invariably the result of over-indulgence in sugars and sweet starchy foodstuffs. The first attack always occurs in early childhood. It is probable, therefore, that the patients all suffer from what Garrod[6] calls "an inborn error of metabolism." Both eyes are usually more or less affected, and in many instances the ocular condition is so acute and so urgent that attention is diverted from the constitutional factor. There is probably something wrong with the general make-up of the child; but the exciting cause of an attack can always be traced to an excessive consumption of carbohydrate foods, and more particularly to a surfeit of sugar. In the majority of cases this unsuitable dietary is aggravated by want of fresh air and by an insanitary environment. The ocular signs are always part of a larger process. The child suffers from impaired digestion and defective assimilation for a considerable time before the eye symptoms develop. He has a pasty, muddy complexion—pallor veiled by lividity—and is often fat and unhealthy-looking as a result of an increased water content of his tissues (Cameron).[7] The tongue is coated, and the papillae on its surface are abnormally prominent. The teeth decay very early, and the carious condition of the milk teeth is followed by a similar condition of the second dentition. The bowels are easily upset, constipation alternates with diarrhoea, and the motions are often foul-smelling, and of unnatural colour and consistency. The urine is scanty, deposits urates, and frequently contains traces of indican and sugar.

Photophobia is one of the earliest and most characteristic symptoms. It is most distressing. The slightest exposure of the eyes to light causes acute pain; but if the child be allowed to remain in a dark corner of a room he usually opens his eyes and amuses himself with his playthings. In health we are not conscious of the direct light reflex; but in phlyctenular conjunctivitis the circular muscle of the pupil contracts spasmodically. Spasm of the circular fibres of the iris is the cause of the photophobia, which will persist until the spasm is relieved. Whenever the muscle is paralysed by atropine the photophobia disappears. In these circumstances, however, the action of the drug is of much shorter duration than normal, and the intolerance of light recurs as soon as the mydriasis begins to pass off. The mechanism of the production of photophobia is therefore spasm of unstriped muscle. The contraction of the sphincter of the pupil brings the iris from a physiological point of view into line with the hollow viscera, in all of which pain is felt very acutely during spasmodic contraction of the unstriped muscle in their walls. Pain of this character has received different names according to its location—photophobia in the eye, angina pectoris in the chest, strangury in the bladder, and colic in the abdomen. In every case, notwithstanding the difference in nomenclature, the pathological process is the same—namely, spasmodic contraction of unstriped muscle—and the pain disappears as soon as the spasm is overcome. Photophobia, unaccompanied by any lesion of the cornea, is likely to be of constitutional rather than of local origin; and in phlyctenular conjunctivitis the cause of the trouble is disordered carbohydrate metabolism.

Photophobia is usually accompanied by localized congestions of the conjunctival blood vessels in the midst of which is a small phlycten or pustule. Photophobia is the most characteristic subjective feature of the disease, and the phlycten is the most characteristic objective feature. It is formed by a localized collection of lymph corpuscles, similar to the lymphoid tissue found in other parts of the body. The discrete character and the nodular manifestation of the inflammation are evidence of the existence of a constitutional cause, and that point of view is confirmed by the fact that the majority of the patients suffer also from hypertrophied tonsils, adenoid vegetations, and enlarged cervical glands.

Treatment

In the treatment of the disease it must be borne in mind that it depends upon a constitutional cause—chronic nutritional disorder, due largely, if not entirely, to derangement of carbohydrate metabolism. It is necessary, therefore, to give very particular directions regarding diet, and to insist that these directions be obeyed implicitly. At the outset sugar in every shape and form, pastry, potatoes, and all forms of sweet and starchy foods must be temporarily excluded from the dietary. Visible improvement follows quickly after the prescription of a diet with a relatively high protein content. As soon as the tongue begins to clean the intolerance of light lessens, the child opens his eyes, and takes an interest in his surroundings. Any indiscretion in diet, however, will at once determine a relapse. The child's intense craving for sweets, biscuits, and breadstuffs ought never to be forgotten. He will get them surreptitiously if he can. If he is not making satisfactory progress, it is almost certain that the prescribed dietary is not being faithfully followed. When sugar is present in the urine, it means nothing more than that the patient has had a surfeit of sugar and carbohydrates. The child's capacity to assimilate carbohydrates is not necessarily seriously impaired; but far too large a quantity has been consumed within a short space of time. Provided the intake is properly regulated, the processes of metabolism and excretion will be sufficient to deal with any excess; but difficulties will arise at once if the same quantity of glucose be consumed at a single sitting and more especially, as so frequently happens, when sweets are eaten habitually between meals. Insulin has no effect upon the symptoms. Tolerance for glucose must be regarded, therefore, as a "velocity," not as a "mass," and complete recovery will only take place after the dietary has been properly regulated. Proneness to relapse is part of the ordinary clinical picture of phlyctenular conjunctivitis; but recurrent attacks of a serious nature only occur in those patients who neglect the instructions given them regarding diet. If they adhere faithfully to the dietary prescribed for them they will continue to keep well, in spite of the unsatisfactory conditions they have to contend against in their own homes.

Concomitant Diseases

All the complications and sequelae of phlyctenular conjunctivitis are due to secondary infection. The patient's resisting power has been greatly enfeebled as a result of

improper dieting, and a " soil " favourable to the growth of all forms of micro-organisms has been cultivated. Bacteria which are always present and are usually quite harmless become active in these patients, giving rise to conjunctivitis and to ulceration of the cornea. In patients in whom the disease has existed for many weeks, therefore, ulceration of the cornea and all other dangerous symptoms are the result of secondary infection. The eyelids, nose, and the upper lip become swollen, and the skin of the face is covered by an eczematous eruption. Painful fissures form at the external canthus, the side of the nostrils, and round about the mouth. In addition, seborrhoea of the scalp, enlarged cervical glands, nasal and bronchial catarrh, and intestinal disturbances are common. It is all-important to remember that micro-organisms—that is to say " seed "—will only grow upon a suitable " soil." The general make-up of children who suffer from phlyctenular conjunctivitis is such that they offer feeble resistance to every form of infection, consequently they fall a ready prey to the ubiquitous tubercle bacillus. The clinical picture is always that of bovine tuberculosis, and it is very probable that in these patients who are attacked disordered carbohydrate metabolism has paved the way for the onset of the tuberculous infection.

It is probable that in many adults who suffer from toxic amblyopia—the result of over-indulgence in tobacco or alcohol or both—there is disturbance of carbohydrate metabolism, and that a systematic estimation of the blood sugar may prove an important factor both in prognosis and in treatment. A full investigation of this subject offers a promising field for research.

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THE GLUCOSE TOLERANCE IN RHEUMATOID ARTHRITIS *

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It was first demonstrated by Pemberton[1] that in true rheumatoid arthritis there was marked alteration in the metabolism of glucose. He showed that after administration of a standard dose of glucose the blood sugar rose rapidly to well above normal limits and subsequently fell sharply to the base line. The curves thus obtained somewhat resemble those obtained in exophthalmic goitre. The present investigation was undertaken partly to confirm these facts, but mainly (at the suggestion of Dr. R. D. Lawrence) to ascertain whether the normal difference between the sugar content of arterial and venous blood was altered. If this were found to be diminished it would suggest that the cause of the rapid rise of the blood sugar in these cases might be due to a failure of the muscles and other tissues to utilize the sugar, with consequent failure of their nutrition.

* A paper read before the Section of Medicine at the Centenary Meeting of the British Medical Association, London, 1932.

Technical Methods

For the estimations the micro-method of Folin-Wu was utilized throughout, at each stage 0.2 c.cm. of blood being taken from the median basilic vein and from the finger tip of the patient. Blood obtained in this way from the finger-tip may be regarded as being practically arterial in character.

As the patients were all adult and practically all young women, it was decided to adopt a dosage of 50 grams of glucose as a standard; specimens were taken before administration and subsequently at intervals of three-quarters of an hour up to two and a quarter hours. In a few cases samples of urine were taken at the same intervals, whilst in a few others a specimen was collected at the end of the investigation only. The main fact that emerged from the urinary investigation was that the renal threshold for glucose is often abnormally high in rheumatoid arthritis. Some fifty cases were investigated in this manner, a few of these being controls or patients suffering from types of rheumatism not resembling rheumatoid arthritis, two being, in addition, true diabetics.

Results of Investigation

The following is a typical result obtained from a normal healthy person.

TABLE I.—*Blood Sugar Percentage*

	Before Glucose	¾ Hour After	1½ Hours After	2¼ Hours After
Artery	0.081	0.145	0.136	0.115
Vein	0.077	0.136	0.120	0.109
Difference... ...	+0.004	+0.009	+0.016	+0.006
Urine sugar	Absent	Absent	Absent	Absent

It will be noted that the arterial blood sugar content is throughout higher than the venous, the difference being least before the administration of glucose and greatest one and a half hours afterwards. In a few control cases greater differences (that is, in the vicinity of 0.025 per cent.) were observed. In some instances it was found that the peak of the arterial curve came earlier than that of the venous curve, with the result that in the one-and-a-half-hour specimens of blood there was often a much higher value in the venous blood than in the arterial. This phenomenon was observed in some of the rheumatoid cases as well as in the controls.

The following result was obtained from a patient aged 30, with true rheumatoid arthritis.

TABLE II.—*Blood Sugar Percentage*

	Before Glucose	¾ Hour After	1½ Hours After	2¼ Hours After
Arterial	0.133	0.316	0.273	0.180
Venous	0.111	0.288	0.306	0.167
Difference... ...	+0.022	+0.028	−0.033	+0.013
Urine sugar... ...	Absent	A trace	2.5 per cent.	A trace

This table illustrates well the very high peak value obtained, occurring in the arterial blood at three-quarters of an hour and in the venous at one and a half hours and followed by a rapid fall. This failure of the peaks to coincide produces a negative difference of 0.033 per cent. at one and a half hours, but it is already evident that the expected small differences between the arterial and venous values are not forthcoming. Though such small differences were observed in one or two cases they were never found to be constant, and the majority of cases show normal or even greater differences. Similar differences, greater than normal, are not infrequently observed in the high curves found in true diabetes,

which the following is an example: the patient, aged 40, had true diabetes with neuritis.

TABLE III.—*Blood Sugar Percentage*

	Before Glucose	½ Hour After	1½ Hours After	2½ Hours After
Arterial	0.236	0.354	0.526	0.465
Venous	0.207	0.332	0.455	0.434
Difference... ...	+0.029	+0.022	+0.071	+0.032

The following figures, obtained from a patient, aged 31, with true rheumatoid arthritis, illustrate the disproportionately small amount of sugar which may be passed in the urine, in spite of high blood sugar values, showing that the renal threshold is altered in cases of this disease.

TABLE IV.—*Blood Sugar Percentage*

	Before Glucose	½ Hour After	1½ Hours After	2½ Hours After
Finger blood ...	0.133	0.300	0.247	0.183
Vein	0.121	0.280	0.261	0.150
Difference... ...	+0.017	+0.020	−0.014	+0.033
Urine sugar	Absent	A trace	Faint trace	Very faint trace

Curves similar to the above were obtained in practically all cases of suspected rheumatoid arthritis diagnosed clinically, and as such curves do not occur in any other type of arthritis investigated a glucose tolerance test would seem to be a valuable confirmatory means of diagnosis. Further work is being carried out on this point.

With the subsequent introduction of insulin into the treatment of rheumatoid arthritis[2 3] the question arose as to whether, *pari passu* with the manifest clinical improvement, any alterations in the glucose tolerance occurred such as are seen in many cases of diabetes after treatment. In several patients with true rheumatoid arthritis multiple curves were plotted at varying stages, the later curves often being after several months' treatment with insulin (in most instances with great benefit clinically), but in no case was any remarkable improvement in the glucose tolerance curve observed. Indeed, subsequent curves generally showed striking resemblances to those previously obtained. Table V shows the figures obtained in one of the few cases in which there was apparent improvement in sugar tolerance after treatment. The patient was 50 years old, and the interval between the two observations nine months.

TABLE V.—*Blood Sugar Percentage*

	Before Glucose	½ Hour After	1½ Hours After	2½ Hours After
Finger...	0.121	0.235	0.250	0.133
Vein	0.110	0.190	0.211	0.125
Difference... ...	+0.011	+0.045	+0.039	+0.008
Nine months later				
Finger...	0.111	0.166	0.220	0.162
Vein	0.083	0.150	0.181	0.146
Difference... ...	+0.028	+0.016	+0.016	+0.016

We wish to record our thanks to our colleagues on the medical staff of the B.R.C.S. Clinic for rheumatism for permission to investigate and record findings on their patients in addition to our own.

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FATAL STAPHYLOCOCCAL SEPTICAEMIA WITH PSEUDOMYXOMA PERITONEI

BY

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The following case seems worth recording on account of: (1) the abdominal condition: few symptoms or physical signs were evident till the disease was advanced—papillomatous cystadenoma of ovary followed by pseudomyxoma peritonei; (2) the vomiting, acidosis, and unexplained mental upset with subsequent complete restoration of clearness of mind; and (3) the rapid, fatal staphylococcal infection which spread to the brain following what the patient called a "common cold sore" on the upper lip.

History.—The patient, an unmarried woman of 58, consulted me in October, 1930, for indefinite symptoms of headache, fatigue, slight loss of weight, occasional backache, heartburn, and flatulence. She said she had always been subject to gastric trouble, and for several years had been obliged to take aperients. She did not complain of abdominal pain; recently she had not been sleeping well. In 1905 she was operated on for "appendicitis and colitis." A horseshoe kidney was found; the appendix was not removed. Though never a robust individual, she had had no other serious illnesses. Menopause occurred several years past; no discharge since.

On examination I could find nothing definitely abnormal. I prescribed dyspeptic mixtures, and decided to suggest a barium meal if symptoms failed to improve. I saw her on two further occasions before Christmas; while her weight and general condition seemed to have undergone no marked change, she was no better. I next saw her on January 12th, 1931. She had had a slight blood-stained discharge per vaginam on the previous day, and had been passing very little urine. A large cystic abdominal tumour, filling nearly the whole of the right side of the abdomen, was palpable, and I arranged for her admission to the New Sussex Hospital. The blood picture on January 16th was: red cells, 5,152,000 per c.mm.; haemoglobin, 88 per cent.; colour index, 0.86; white cells, 9,800 per c.mm.—polymorphs 60 per cent., small lymphocytes 32 per cent., large lymphocytes 3 per cent., hyalines 4 per cent., and eosinophils 1 per cent.

OPERATION

An operation was performed on January 17th. A paramedian subumbilical incision was made, and the peritoneal cavity was found to contain a pint or more of blood-stained free fluid. A large right papillomatous cystadenoma of ovary, about the size of a cricket ball, was removed after ligature of the pedicle. A left ovarian cyst of similar consistency, although smaller, was also resected. Small nodules of friable pseudo-mucinous growth covered the whole of the broad ligaments, bladder, and uterus, and extended as a widespread jelly-like peritonitis over the pelvic peritoneum, mesentery, mesocolon, omentum, and left lobe of the liver. There were many adhesions, and there was considerable matting together of the intestines. The uterus was normal in size and position. The appendix was enlarged, being 3 cm. in diameter, and was covered with similar growth. An appendicectomy was performed. There was a large horseshoe-shaped single kidney, consisting of a large left and small right; the median part of it curved downwards, the convexity being downwards and forwards.

X-RAY TREATMENT

In view of the marked tendency of the tumours to extend to adjacent parts by implantation and invasion of the surrounding tissues, and of the fact that such pseudomyxoma peritonei may become clinically malignant, it was decided to give intensive *x*-ray treatment, in the hope of preventing further extension. Accordingly, on March 26th a total depth dosage of 110.6 per cent. was given through two large anterior and two posterior fields; and on July 31st a total depth dose of 94.3 per cent. through one anterior, one posterior, and two lateral fields. A voltage of 186,000 was employed—the focal

distance being 30 cm.—and a filter of 0.5 mm. copper + 2 mm. aluminium was used.

Sections showed papillomatous cystadenoma of ovary. Some of the cysts revealed small papilliferous ingrowths, and in other parts there was a more glandular structure, but no evidence of malignancy. Appendix showed chronic obliterative appendicitis, with growth adherent to the surfaces. The patient made an uneventful recovery.

SECOND ADMISSION TO HOSPITAL

On June 18th she came to me complaining of heartburn, fatigue and bad nights; she had gained 2 lb. in weight. The abdomen was not, however, markedly fuller. I saw her again on June 28th: she felt ill and had vomited slightly. On July 2nd she was very poorly, with slight pain in epigastrium; she had had one large vomit. There was much distension, and she was constipated in spite of many aperients. She was admitted to hospital on July 9th. The bowels were eventually opened, but a good deal of distension remained. She was seen in consultation on July 11th and a large mass palpable in Douglas's pouch was found. For the preceding eight days she had been on light diet, fluids, glucose in her drinks, and two-hourly feeds. By July 13th the abdominal distension was definitely increasing although the bowels were acting well.

On July 16th the patient had a disturbed night; she talked nonsense and was very restless. Sedobrol was given, and later luminal, but without effect; finally, at 1.30 a.m., an injection of 1/100 grain of hyoscine hydrobromide was given, but the patient did not quiet down until 3.45. When I saw her later in the morning she was much distressed, said people were saying she was out of her mind, that she saw coloured lights, and that there had been a great noise in the night, etc. Her blood pressure was 120/90, pupils dilated, disks normal, and I could find nothing abnormal in her central nervous system. On July 18th the mental condition was very bad, and for the first time acetone was present in her urine. The following day the mental condition was still very bad, and the pulse rapid—110, and soft.

On July 20th the urine contained no acetone, and the patient's mental condition became quite rational. Acetone was again present the next day, but in lesser degree. The patient's mind was clear, and indeed never became clouded again.

During the period July 13th to 20th the temperature rose to 99° on several evenings, and the pulse ranged from 92 to 110. The distension increased rather than lessened, but gradually she was able to take light, solid food, which was digested without discomfort. She had a long talk with me as to the queer "nightmares," the details of which she remembered clearly. She left the hospital on July 29th and had more intensive *x*-ray treatment, which to some extent reduced the abdominal distension.

FATAL STAPHYLOCOCCAL INFECTION

On September 9th I was sent for urgently to Worthing, where she had just moved for a month's change of air. Five days earlier she had noticed what she called a small "cold sore" on the outer right side of her upper lip. This she had not squeezed, but had painted with tincture of iodine; later, she had used hot fomentations. The swelling had suddenly spread upwards into the neighbouring cheek, her temperature had risen to 101°, pulse to 112, and the general appearance of the face at first glance almost suggested erysipelas, but there was no defined margin or raised edge. I moved her again into the New Sussex Hospital, and the following day an incision under N_2O was made. Film and culture showed a growth of *Staphylococcus aureus*. Sodium cacodylate hypodermically, mercury perchloride hypodermically, salines and glucose per rectum and later intravenously, entirely failed to check the infection, which spread rapidly, causing proptosis of both eyes just before her death on September 14th. Her temperature swung in a typically septic fashion, rising finally to 107.4°, accompanied by a relative increase in pulse rate.

ABSTRACT OF POST-MORTEM FINDINGS

The septic condition of the face extended through both cavernous sinuses, which contained pus and ante-mortem thrombi, to the brain, where pus was found on the under surface of the pons. There were petechial haemorrhages in the gastro-intestinal tract, which contained altered blood, and the spleen was diffluent. A metastatic abscess was found on the right middle lobe of the lung. The peritoneum contained several pints of yellow fluid, and the omentum was thick with a myxomatous material resembling sago or frog spawn, and lined by a single layer of flat cubical epithelium. A horseshoe kidney was present, the ureter being from the left half, which was in normal position, the right half being on the aorta.

I am indebted to my colleagues Dr. Louise Martindale for the detailed report of her operative measures and intensive *x*-ray treatments, and Dr. Mary Leslie-Smith for the pathological and post-mortem findings.

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

ACUTE STREPTOCOCCAL PERITONITIS IN CHILDREN

In the *British Medical Journal* of October 15th, 1932 (p. 704), Mr. L. E. Barrington-Ward states:

> In my experience, recovery with or without subacute encysted intraperitoneal collections never occurs. Operation has no effect. In fifteen years there have been twenty-two cases at Great Ormond Street: twelve were operated upon, ten were not, but all terminated fatally.

Although we agree with Mr. Barrington-Ward that acute streptococcal peritonitis is one of the most tragic of all abdominal catastrophes, we think there is frequently a chance of recovery. During the last four years we have seen eight cases, three of which have lived. All were treated by operation.

CASE I

Female, aged 3. She had complained of increasing abdominal pain for the previous twelve hours. On admission to a nursing home (January 28th, 1929) the temperature was 101.5° F., the pulse rate 120, and the respirations 26. Her chest and back were covered by a scarlatiniform rash. Rigidity and tenderness were present over the lower abdomen. Immediate operation disclosed an early pelvic peritonitis with pus. The appendix, which appeared normal, was rapidly removed and the pelvis drained. During the operation the child had clonic contractions of both legs and arms, and a convulsion which lasted for almost fifteen minutes. Following the operation, she received large doses of anti-streptococcal serum, and, after an acute illness of seven days, made a rapid recovery. The pus gave a pure culture of haemolytic streptococci.

CASE II

Male, aged 7. He had had acute abdominal symptoms for two days. On admission to hospital (July 8th, 1929) the temperature was 103.4° F., the pulse rate 128, and the respirations 38. When the abdomen was opened a large quantity of pus escaped. The appendix, which was not inflamed, was removed and the pelvis drained. In three days he appeared to be out of danger, and made an uneventful recovery. Non-haemolytic streptococci, of the *Streptococcus faecalis* type, were grown from the pus.

CASE III

Male, aged 4½. He was admitted to a medical ward on April 4th, 1932. The boy complained of pain in the right loin, of drowsiness, and inability to walk, and had had two convulsions the day before. The temperature was 102° F., the pulse rate 126, and the respirations 28. Nothing abnormal was found on examining the chest or central nervous system, but the right side of the abdomen was rigid and tender. Three weeks later the abdominal picture had not changed. The temperature was 103°, the pulse rate 144, and the respirations 40. Operation was decided on, and an abscess, involving the omentum, was found beneath the liver on the right side. After being acutely ill for two weeks, he gradually recovered. Non-haemolytic streptococci were grown from the pus.

We are of the opinion that a suitably timed operation distinctly improves a child's chance of recovery.

G. GORDON BRUCE.
NORMAN J. LOGIE.

Aberdeen.

EMBOLIC GANGRENE OF BOTH LEGS ASSOCIATED WITH AURICULAR FIBRILLATION

Embolism of the larger arteries is perhaps so seldom recorded that the following may be of interest.

A woman, aged 46, had had exophthalmic goitre and auricular fibrillation from August, 1930. She was almost entirely confined to bed until April, 1931, and when she first came under my notice the goitre was improving but the heart was not. Eleven septic and carious teeth were removed in twos and threes, each dental extraction being followed by slight rheumatic pains and slight fever, which continued for a few days. By July she had gained 12 lb. in weight, and was getting about in a bath chair. The pulse remained irregular, and the apex beat was in the sixth interspace five inches from the mid-line.

On September 2nd she had severe pain in the right side of the abdomen, and the heart was again fibrillating. Next day there was swelling and tenderness in the right loin, and a tentative diagnosis of an embolic condition was made. In view of the cardiac state a bad prognosis was given, but the condition cleared up in a fortnight. She remained fairly well until February 28th, 1932, when complete rest in bed was advised on account of symptoms of cardiac failure. She had been taking digitalis in pill form. She was given ten minims of standardized tincture thrice daily.

On March 2nd the patient had sudden severe pain in the right leg from groin to toes; the leg was said to become useless, bluish, and cold. After two and a half hours the pain subsided rapidly, and when I arrived, half an hour later, the limb appeared no different from its fellow. Next day she had nausea, and the dose of digitalis was reduced. On March 4th, after a bad night, she had severe pain in the left foot, and a few minutes later similar pain in the right foot and calf. An hour later she appeared in great pain; the feet were a little cyanosed, as also were the hands; the pulse was now very irregular, about 140, and the general condition alarming. A diagnosis of bilateral embolism below the popliteal arteries was made. Tr. digit. 5j was given in two doses, and later pil. digit. co., gr. 5, at eight-hourly intervals. It was evident next day that both legs were going gangrenous, the left to mid-calf, the right leg to within four inches of the knee-joint. Catheterization was required; the urine contained albumin and sugar. Oedema of the thighs and back developed rapidly, and there was free fluid in the abdomen. It was decided to operate if there appeared any prospect of the patient surviving.

Salyrgan 1 c.cm. was given intramuscularly, and ammonium chloride by the mouth. A rapid and considerable diuresis followed, with lessening of the oedema and increased comfort to the patient. The cardiac state improved very little. Pain was very troublesome, and was controlled by giving six to eight tablets of compral daily, with an occasional hypodermic injection of morphine. The operation was arranged for March 15th, but on that day jaundice appeared, and it was decided not to proceed.

In view of the possible toxic effect of compral in large doses its administration was stopped, and morphine was given hypodermically three or four times a day. The patient improved again, and within a few days the urine became free of sugar, albumin, and bile. The heart remained irregular, and there was still oedema to the scapulae. The skin at the level of demarcation began to ulcerate, and some blistering appeared. On March 20th salyrgan was again given, and nearly nine pints of urine were passed in eighteen hours.

Next day, after an injection of hyoscine-morphine, stovaine was given intrathecally, and I amputated the right leg through the lower third of the thigh. The patient stood the operation surprisingly well, but I decided to leave amputation of the left leg for another occasion. Fibrillation ceased within thirty-six hours of the first operation. The left leg was amputated, also through the thigh, on March 24th, twenty days after the onset of gangrene. The patient improved rapidly, and was discharged two months later, some delay being caused by a bed sore and an attack of cystitis; the bed sore had developed before operation. She has remained well, has put on considerable weight, and the pulse remains regular, though the heart is much enlarged and there is mitral incompetence.

It is interesting that the first embolism was presumably due to the onset of auricular fibrillation, and that the emboli at a later date were probably a sequel of digitalis medication. No minor embolic phenomena were observed.

St. Annes-on-Sea. A. H. WINCHESTER, F.R.C.S.Ed.

Reports of Societies

TISSUE CULTURES OF TUMOURS

At the meeting of the Royal Society on February 9th a paper by Mr. R. J. LUDFORD on differences in the growth of transplantable tumours in plasma and serum culture media was communicated by Dr. J. A. MURRAY. Mr. Ludford stated that in tissue cultures of tumours there were present: (*a*) the malignant cells; (*b*) non-malignant cells, consisting of cells of the stroma and cells of the monocyte-macrophage series, which varied in number according to the extent of the resistance which the animal from which the tumour was removed had opposed to the malignant growth. The malignant cells could be distinguished from the non-malignant cells by the addition of trypan blue to the cultures, since the former did not segregate the dye like the latter. The two types of cells were further distinguishable by vital staining with a basic dye such as neutral red, and by their general cytological characters, such as size of nuclei and nucleoli, and cytoplasmic vacuolation. In plasma cultures both malignant and non-malignant cells migrated from the explants. In serum cultures only non-malignant cells wandered out from the explants. In serum cultures the explants of carcinomata soon became rounded. The carcinoma cells inside the explants divided mitotically. In serum cultures the explants of sarcomata tended quickly to disintegrate —the sarcoma cells rounding off—and later floated freely in the medium. Mitosis occurred in rounded sarcoma cells. The non-malignant cells which wandered out in serum cultures exhibited a wide variety of forms, but they all stained vitally with trypan blue. The outgrowth of non-malignant cells in serum cultures was usually greatest when tumours were explanted at a time when they were not growing at their best *in vivo*. Plasma cultures made at the same time did not exhibit good growths of malignant cells. Mr. Ludford suggested that the different behaviour of malignant cells in plasma and in serum was the result of an alteration in their plasma membrane such that they were unable to adhere to glass, though able to use the fibrin network of a plasma clot as a support for their movement. This might be brought about by a greater amount of fats or lipins in the plasma membrane. To such an alteration might be attributed also the failure of malignant cells to segregate the water-soluble acid dyes, since these might be unable to penetrate such a membrane. The results of this research rendered invalid conclusions drawn concerning the specific destructive action of immune serums on cancer cells in serum cultures.

TREATMENT OF BURNS

At the annual meeting of the Devon and Exeter Medico-Chirurgical Society on January 26th, with Mr. R. WAYLAND SMITH in the chair (in the absence of the newly elected president, Dr. T. C. C. Evans), Mr. NORMAN LOCK read a paper on the treatment of burns.

Mr. Lock alluded to the high rate of mortality encountered from shock among the casualties during the earlier years of the war, and to the benefit which had accrued from the researches of a commission appointed in 1915 to survey the question of shock from every point of view. These investigations had led to an alteration in the conception of shock and to the establishment of a rational method of treatment. Quoting from the records of St. Thomas's Hospital, he stated that up to about 1900 the mortality from burns and scalds was roughly 23 to 24 per cent. of the cases occurring annually.

In 1900, with the introduction of the picric acid method of treatment, there was a reduction in the mortality to 14 per cent.—that figure obtaining until quite recently. During and after the war ambrine and dressing with paraffin wax were largely in favour; but there was little if any reduction in the mortality figure until the introduction of the tannic acid treatment in 1928. For the four succeeding years the records of the same hospital showed that the mortality was 4 per cent. in 1929, 3 per cent. in 1930, 2½ per cent. in 1931, and in 1932 (up to October) the mortality had been *nil*. Mr. Lock mentioned the close relation of the pathology of burns to that of surgical shock. The severer cases of burns and the highest mortality occurred in children under 10 years of age, for whom it had been generally accepted that involvement of more than one-sixth to one-eighth of the total body surface proved fatal, in contrast to one-third in those above this age. The area was of far more significance than the depth, and, as in surgical shock, burns of the skin, thorax, abdomen, and thighs proved to be the most dangerous.

The clinical course of severe burns was characterized by distinct stages, which corresponded to definite sequences in the pathological effects. Thus four stages could be recognized, from which arose important indications for treatment: (1) shock, initial or primary; (2) acute toxaemia, or secondary shock; (3) septic toxaemia; (4) healing. Primary shock was mainly due to excessive stimulation of afferent nerves, and was certainly accentuated by the psychical disturbance associated with the fright of a severe burn, the apparent result being a sudden disturbance of the vasomotor mechanism. The constant picture presented in such a case was collapse, subnormal temperature, and failing pulse and respiration. Mr. Lock mentioned how the vital-red methods had shown that there was a great reduction in the total volume of blood in the circulation, and that the balance could be found collected in the "great capillary bed": whereas normally only one-quarter or one-third of this bed was in use, in shock it became distended owing to universal loss of capillary tone. Coincidently the increased permeability of the capillary walls allowed the passing out of a considerable amount of fluid into the tissues, thus causing concentration of the blood. Saline transfusions were therefore of little use, as they leaked out into the tissues almost as fast as they were injected. Baylis had suggested gum saline on that account, but transfusion with whole blood was best of all.

In burns the first stage of shock was usually not very severe, and tended to pass off in under six hours. In this stage morphine and warmth were prominent in the immediate treatment. In the first stage deaths were estimated at only 2½ per cent., but the acute stage of toxaemia, or secondary shock, was far more serious, and accounted for 75 per cent. of deaths from burns. Secondary shock usually commenced from twelve to twenty-four hours after the primary injury and reached its maximum in the next twenty-four hours, the majority of deaths taking place at this stage. The accompanying symptoms were mainly those of the first stage, but with a change from a subnormal to a raised temperature, and with increase in the respiration rate. The post-mortem findings in a patient dying at this period were those of an acute toxaemia, and recent investigations had demonstrated that the shock was due to absorption from the burnt tissues, and that the state resembled closely that obtaining in secondary traumatic shock. Mr. Lock stated that the nature of the toxins was still in doubt, but one could infer products of protein breakdown, resulting either from the burn or from autolysis of the damaged tissues. Injections of histamine had been shown to produce similar effects. Tannic acid treatment fixed the damaged tissues and prevented autolysis—which seemed to support the above view of the pathology. The stage of septic toxaemia varied greatly, depending upon the degree and type of infection of the burnt area. Adequate and early cleansing followed by tannic acid spraying made for slight infection, whereas the reverse might be expected when infection had occurred before the application of tannic acid, or where preliminary cleansing had been inadequate. The stage of healing depended on the extent and severity of the burn and on the amount of subsequent sepsis; it might be of short or of long duration. When the burn was of more than third degree, fibrosis and contracture could be avoided by timely grafting.

Mr. Lock then detailed the technique of tannic acid treatment, mentioning that this was first suggested by G. C. Davidson in 1925. A moderately large dose of morphine should be given at the earliest possible moment to minimize primary shock. Fluids by mouth and rectum, glucose subcutaneously, and reinforcement of the body warmth with the electric lamp cage would meet the chief requirements at this initial period. After primary shock had appeared to pass off a further dose of morphine should be given and treatment of the burnt area undertaken. Morphine should be given in the form of tinct. opii to children from 1 month to 12 years old (the dosage varying from one-fifth to eight minims). After the age of 12 one-sixth of a grain of morphine should be given hypodermically; and to adults, according to necessity, even up to one-third or one-half of a grain. Clothes could now be carefully cut off the burnt area, blisters opened, loose epithelium removed, and the whole injured surface cleansed with ether or spirit soap. Tannic acid in a 2½ per cent. aqueous solution should now be sprayed over the whole area with an ordinary atomizer. If previous watery solutions had been avoided a better coagulum was likely to form. The solution should be freshly prepared owing to the tendency of tannic acid to oxidize into gallic acid. Half an ounce of tannic acid in one pint of water gave the 2½ per cent. solution; a useful combination was found in seventeen and a half grains of tannic acid, one-quarter grain of perchloride of mercury, and one grain of boric acid dissolved in two ounces of water. Convenient tablet preparations of this were now on the market. The patient was then put back to bed with an electric cage over him, and no clothes or dressings were allowed to be in contact with the burnt area. Spraying was continued hourly or even half-hourly for twelve to eighteen hours, until a thick black coagulum formed over the area. Blisters should be opened as they occurred, and their site sprayed repeatedly in the same way. Thereafter pain would be relieved, sleep invited, and nursing prove an easier matter. Where a burn surrounded the body, gauze, six layers in thickness wrung out of saturated tannic acid solution, should be applied to the side with the least injury, so that the patient could rest on this side while the more severely burnt area was sprayed. Separation of the scabs could usually be effected in from fourteen to twenty-one days, when the underlying surface would be found to be epithelialized; but no separation should be attempted unless the scabs practically separated of themselves. Symptoms of septic absorption would be an indication for slightly cutting away a scab and allowing for drainage. Spraying with tannic acid solution was useful in conjunction with lifting a scab. The "gallows" position, as for fractured femur, was a useful position for burns about the perineum in children. Mr. Lock warned the meeting against spraying the webs of the fingers—the resulting contraction being apt to compress the vessels and cause gangrene of the finger-tips. Care for the eyes was also needed in spraying the face, but with these exceptions the application could be used universally. He also alluded to Mr. Mitchiner's work on burns and the application of tannic acid on six layers of gauze by the latter, care being taken to ensure smooth contact and the absence of air bubbles. The method was also of advantage in mild cases treated as out-patients. The treatment of the unhealed surface of extensive burns, after removal of coagulum, might require skin grafting, and in keeping down granulations and promoting epithelial growth the following application had proved of service: 20 grains of alum, 10 grains of zinc sulphate, 5 ounces of glycerin, and 5 ounces of water. When dressing proved a very distressing process relief could be given by immersion in a bath for an hour every day, when the gauze would separate, with practically no pain.

Dr. W. A. ROBB asked whether, in an emergency, the tannic acid could be improvised by treating the burnt area with a strong infusion of tea. Dr. R. V. SOLLY

inquired whether it was necessary to wait a certain time in all cases before spraying with tannic acid.

Mr. LOCK, *in reply*, said that the Chinese were known to have used infusions of tea for treating burns for some 2,500 years. He did not consider there was any necessity to wait in cases in which there was no sign of shock.

PSYCHOLOGY AND SKIN CONDITIONS

At a meeting of the Medical Society of Individual Psychology on February 9th, at 11, Chandos Street, with the president, Professor W. LANGDON BROWN, in the chair, Dr. W. J. O'DONOVAN read a paper on "pathomimia cutanea."

He said that "pathomimia cutanea" comprised a number of pathological skin conditions which had no underlying organic basis. There was here no esoteric pathology; skin lesions were similar in type to those encountered by medical specialists in other fields. Since, however, the skin was a sense organ and could be stimulated directly from without, it displayed certain epiphenomena not met with in the internal organs. Scratching relieved the itching skin; the same mechanism was obviously inapplicable to the liver. Itching itself had a psychological interest, associated as it might be with the development of skin habits. These might commence at almost any age. One of the earliest which the speaker had encountered occurred in an asthmatic who, at the age of 3, plucked out his hair, so producing a condition simulating early baldness. Apart from habit formation the mental factor was important. Alopecia areata, about whose aetiology theories were numerous but none proved, tended to recur, significantly enough, at times of mental stress. The association of certain skin lesions with definite types of personalities was also noteworthy, and suggested the value of classification here. Dr. O'Donovan showed, by reference to one of his own cases, how cheiropompholyx, colloquially known as "bubble in the hand," was of nervous origin, and tended to occur in a definite type of personality. Like others suffering from this complaint, the man was nervous and complained of inability to sleep and a poor appetite. Yet his face was placid and his girth was increasing. In the same way patients with varicose ulcers displayed certain common characteristics. They belonged to the lower classes, and were usually dirty, slovenly, and self-satisfied people, who could not lift themselves out of dependency. In some instances the varicose ulcer was associated with drama. It might be the only means by which the sufferers could obtain that individual care and attention which life otherwise denied them. Local pruritus had similar psychological interest. Patients with pruritus ani, for example, were egocentric, with a tendency to exhibitionism and logorrhoea. The itching occurred at times of nervous stress, and the part played by suggestion in reinforcing local treatment further indicated the functional nature of the condition. "Red legs"—a discoloration of the legs from ankle to knee produced by scratching—recalled the glove-and-stocking anaesthesia of hysteria, and suggested that "red legs" might correspond to the layman's hysterical itch. He described these patients as characteristically "flat-faced people who live in back streets," to whom their red legs were as a religion.

Professor LANGDON BROWN remarked that itching in primitive times served a useful purpose; it drew attention to the need for removing parasites from the skin. He mentioned the case of a man with generalized alopecia which did not clear up till his mental conflict was brought to a satisfactory conclusion. Dr. H. MACCORMAC commented upon the vicious circle which might be established where lichen occurred on the neck. A plaster which prevented all possibility of scratching might effect a cure. Dr. H. HALDIN-DAVIS said that all dermatologists were much interested in artefacts. He mentioned an epidemic in a school of "artefact ringworm." He did not entirely agree with Dr. O'Donovan's views upon varicose ulcers, but he thought that the psychological factor was important in dermatological conditions generally, more especially where there was itching. Dr. J. C. YOUNG referred to a case of alopecia areata which had been associated with a nervous breakdown. Dr. F. G. CROOKSHANK pointed out that there were reasons for maintaining that keloid represented overcompensation for injury: it was found where there was strong affect—for instance after burns or ritual (for example, following circumcision as a rite), or on the scars on the face after duelling common among German students. Dermatology illustrated "organ jargon" and inferiority. In the area supplied by the fifth nerve—that is, the area of emotional expression—long-continued blushing might give rise to erythema.

BILATERAL SPONTANEOUS PNEUMOTHORAX

At a meeting of the Section of Medicine of the Royal Academy of Medicine in Ireland on January 27th, with Dr. H. F. MOORE in the chair, Dr. L. ABRAHAMSON and Dr. F. J. O'DONNELL presented a paper on a case of bilateral spontaneous pneumothorax, with recovery.

The patient, a man aged 35, was seen first on March 13th, 1931. Ten days previously he had had pain in his left chest, followed by breathlessness, but was able to carry on a fairly strenuous occupation. After a long motor drive on March 13th he experienced pain in his right chest, with increased breathlessness. Examination showed signs of a bilateral pneumothorax, and this was confirmed by *x*-ray examination. Some hours later he suddenly collapsed. Air was removed from each side of the chest, and improvement occurred. Six days later urgent symptoms reappeared, and aspiration of air was again performed. A needle introduced into the right side was attached to a pneumothorax apparatus with the bottles reversed. After a preliminary improvement it was apparent that the pneumothorax on the right side was due to valvular opening. After this date improvement was maintained. The left chest cleared. Air persisted in the right chest, and to a greater or less extent has been present since.

Dr. Abrahamson discussed the aetiology, and held that in this case the condition was due to the rupture of pleural adhesions. Lantern slides demonstrated the condition at the onset of the illness and at subsequent dates. Dr. Abrahamson also discussed a second case of bilateral spontaneous pneumothorax seen by him. The case was one of phthisis. The patient survived the attack.

Dr. J. LEWIS read notes on a case of chronic bilateral spontaneous pneumothorax in a man who suffered from dyspnoea. Dilated veins were visible over the thoracic wall, and *x*-ray examination showed collapse of the upper half of both lungs. The patient died suddenly before any further investigation could be made.

Dr. C. MURPHY said that in Dr. Abrahamson's case tubular breathing could be heard, and so apparently the opening in the lung was still patent. In Dr. Lewis's case it was obvious that the pneumothorax was not patent, and therefore it was rather difficult to understand how in this case tubular breathing was heard. It showed that even in cases which were not patent in character one could get tubular respiration.

Dr. E. T. FREEMAN said that in Dr. Abrahamson's case there was evidently a valvular opening into the pneumothorax originally, as the pressure became strongly positive. This had quite possibly healed now. If there was still, or had been for a long time, a positive pressure in the pneumothorax, the lung was compressed rather than collapsed. There was a world of difference between a collapsed lung which had retreated under the influence of its own elasticity and one that was compressed by a positive pressure. This latter was carnified and had no incentive to open, and it was left indefinitely compressed. It would be impossible to get it to expand at all. It would be well to remove the air from the pneumothorax and replace it with oxygen, which would be more rapidly absorbed, and, by creating a negative pressure, tend to expand the lung. This might not succeed, but it was simple and well worth trying.

Dr. ABRAHAMSON, in replying, said he did not think that oxygen replacement offered any hope of clearing up the right-sided residual pneumothorax in his patient. It might be worth trying phrenic nerve evulsion, but the patient was averse to it.

IMMUNITY

At a joint meeting of the Manchester Medical and Pathological Societies, held on January 11th, with Professor E. D. TELFORD in the chair, Professor W. W. TOPLEY read a paper on the grades of immunity.

He said that immunity did not define an entity the characters of which could be described with precision. It was a loose generic term that covered all grades of resistance beyond complete susceptibility up to that ideal and perhaps hypothetical condition in which an individual was entirely indifferent to the attacks of a potentially pathogenic parasite. Several different grades of immunity could be recognized, though they could not be separated sharply from one another. In the case of an invasive parasite complete susceptibility was associated with an acute bacteriaemic type of infection, almost uniformly fatal and with minimal local lesion. A low grade of partial immunity was associated with less frequent or less severe bacteriaemic infections, more frequent and rather more extensive local lesions, and occasional cases of latent infection. With partial immunity of a moderate grade bacteriaemic infections decreased still further in frequency and severity, and the local lesions dominated the clinical picture, while latent infections became more frequent. With partial immunity of a high grade, bacteriaemia was rare or absent, the local lesions were slight or minimal, and latent infections were the rule. As this grade passed into complete immunity latent infections became less and less frequent, until the parasite could no longer find any foothold in the host's tissues. The clinical syndrome displayed by many of the commoner infective diseases was an expression of partial immunity; and immunological methods of prevention and cure must be regarded, in most cases, as measures that allowed the increase of resistance from a lower to a higher grade, rather than the conference of solid immunity on an initially completely susceptible host. Such minor changes in resistance might be of considerable value in the prevention or treatment of infective disease; but, because they were minor changes, their effect was difficult to measure, and there was a risk of persisting with a useless method or of neglecting a valuable one. The assessment of any immunological method of prevention or cure demanded close co-operation between the laboratory worker and the clinician or epidemiologist, and adequate data could seldom be obtained without a carefully planned group inquiry on an extensive scale. Preventive inoculation against typhoid fever, the common cold, and diphtheria, and the serum treatment of pneumonia or of poliomyelitis, afforded instances in which some measure of the actual effect in man had been obtained. There were, however, very many cases in which there was as yet no knowledge of the real value of a possibly useful procedure, and it was very desirable that steps should be taken to remedy this ignorance and so to place practice on a firmer scientific basis.

At the meeting of the Aberdeen Medico-Chirurgical Society on February 2nd, with the president, Dr. W. CLARK SOUTER, in the chair, Dr. A. G. ANDERSON showed a case of alkalosis with a most unusual history. The patient, a middle-aged man, had been taking alkalis for many years without trouble. Five days before being seen by Dr. Anderson the patient had become sick, and vomited, and also became confused and disorientated. When seen by Dr. Anderson there were no signs beyond the mild delirium and tightly contracted pupils. Chemical examination of the blood showed 394 mg. per cent. chlorides, 172 mg. per cent. urea, and 118 CO_2. The urine was strongly alkaline, and contained a small amount of albumin. Large doses of acid. nitrohydrochlor. dil. were given without effect. About twelve days after the onset of symptoms the patient came to himself, the improvement coinciding with improvement in the blood chemistry. He was found to have pyloric stenosis, and, on posterior gastro-enterostomy being performed, made a good recovery. The most notable points in the case were the absence of previous vomiting or of history of alkalotic symptoms and the long duration of the mild delirium.

Reviews

A GENERAL VIEW OF PUBLIC HEALTH

The remarkable developments of public health work within recent years, while due in part to an awakening of the social conscience, must be ascribed perhaps in even greater measure to those results of scientific research which have pointed the way to a more intensified advance along the whole line of progress. The curriculum for the D.P.H. course reflects these altered conditions, so that the medical graduate who aspires nowadays to enter the public health service must perforce traverse many fields of learning as he journeys on to encounter the examiners whose duty it will be to assay his fitness to discharge the functions of a medical officer. To this wide range of knowledge there can be no royal road other than by a faithful diligence in the various sciences prescribed, but there is at the same time a proper place for the use, as a supplementary guide, of the synoptic method of presentation, which, without fully amplifying the part, seeks to image the whole in summary form.

To the works of this kind already existing a valuable addition has just been made by Dr. E. W. CARYL THOMAS,[1] who covers the ground in twenty-two divisions, including both parts of the D.P.H. examination. The book consists of an arrangement of heads or short paragraphs, set forth under their appropriate sections. Where further information is required this is given, or else references are supplied to original sources. Many of the longer articles have been compiled with much judgement—such as those on the infectious fevers, radiation, modern sewage disposal, dietetics, the vitamins, and others. Errors are commendably few, but we have noted *S. refescens* for *S. rufescens* twice. It may be observed also that Hawksley's formula is now regarded by many as archaic, and that mytilotoxin is no longer a myth, as the recent cases in California showed. These, however, are but minor imperfections.

The book in general is of an excellent standard, and likely to render useful service as a clue to the labyrinth of the public health curriculum. We recommend it to students working for their D.P.H. or a degree in sanitary science.

SURGERY OF THE CHEST

Dr. GEORGE STRAUB, in the preface to his book on this subject,[2] states that its aim and object is to create a greater interest in thoracic surgery, and to bring within reach of the student a treatise which is not too lengthy; but in no way does he claim that it supersedes or fills the place of the larger works on this branch of surgery. It would, of course, be unreasonable to expect that a volume of 446 pages could deal fully with so wide a question, but the author has achieved his aim in producing such a comprehensive survey, which, to those interested, will certainly act as a stimulus to more extensive study.

The first part is devoted to the general problems of thoracic disease, and the latter to the consideration and treatment of its out-conditions. There is, however, a lack of balance of extent allotted to certain topics; for example, while the oesophagus occupies twenty pages, while pulmonary suppuration—a much wider and more controversial issue—is dismissed in fourteen. In a work of this kind it is essential that the author should not be biased by any particular personal interest. The

[1] *A Synopsis of Public Health*. By Dr. E. W. Caryl Thomas, M.D., B.Sc.Lond., D.P.H., Barrister-at-Law. Bristol: J. Wright and Sons, Ltd. London: Simpkin Marshall, Ltd. 1932. (Pp. 652; 21s. net.)

[2] *Surgery of the Chest*. By George F. Straub, M.D., F.A.C.S. Springfield and Baltimore: Charles C. Thomas; London: Baillière, Tindall and Cox. 1933. (Pp. xvii + 475; 341 figures. 57s. net.)

three chapters on the physio-mechanics of the thorax are well done, and in such a way as to form a sound basis for the succeeding discussions. The value of *x* rays in thoracic surgery is shown by the fact that thirty-two pages are required to cover the whole field; and although this section is somewhat discursive it must tend to stimulate an interest in this all-important matter. Bronchoscopy, thoracoscopy, and oesophagoscopy are well and adequately dealt with in so far as technique is concerned; the dangers are stressed, and practical instructions are clearly enunciated, being illustrated and simplified by good photographs and clear diagrams. In the section on general surgical technique there are some valuable photographs of the various positions in which the patient may be placed for operative procedures. The author devotes some space to Labat's technique for field-block anaesthesia—a type of anaesthesia which, in our opinion, is rarely necessary. General anaesthesia also receives consideration, and the author favours positive-pressure nitrous oxide and oxygen, which, we agree, is the most useful and the safest anaesthetic when general anaesthesia is indicated.

Pulmonary tuberculosis is treated as fully as is necessary, and great care is taken in stating the main principles of treatment, the indications and contraindications being first tabulated and then discussed. It would have simplified matters if the author had confined his remarks to paravertebral thoracoplasty (Sauerbruch) instead of reviewing certain thoracoplastic methods which have little value, and which will tend to cause confusion in the student's mind.

The section on pulmonary suppuration, as we have stated, is brief. The part on lung abscess brings in all the points of importance, although greater stress should be laid on the necessity for a two-stage operation to avoid infection of the pleura; in fact, many thoracic surgeons now insist upon this as a routine procedure, owing to the difficulty of determining the density and extent of any adhesions which may be found overlying the abscess. The relatively small space devoted to bronchiectasis gives one the impression that the author considers it rather a hopeless disease from the standpoint of treatment; the diagnostic measures are, however, well described. The position of malignant disease of the lung, although briefly discussed, is fairly accurately assessed, and the high mortality indicated shows the necessity for the further and extended trial of all methods—radical and by irradiation—which have been used during the last few years. The latter part of the book is devoted to the surgery of the mediastinum and its contents—heart, great vessels, oesophagus, etc.—and gives a good review of the literature and methods of attack.

The bibliography is extensive, but consists of a list of references without giving any indication of their use in the text.

CLINICAL AND LABORATORY METHODS

The book by Drs. LABBÉ and NEPVEUX on laboratory methods applicable to diseases of digestion and nutrition[3] contains a good deal more than its title indicates. In 1909 Professor Marcel Labbé inaugurated a course of instruction in diseases of digestion and metabolism in which the biochemist was responsible for teaching the necessary technique of the examination of urine, faeces, and blood, and the physician undertook the clinical examinations and the interpretation of the analyses as applied to diagnosis and prognosis. After many years this book has appeared as a summary of the experience of the teachers, and in its make-up it reflects both aspects of the subject. It begins with a short description of the principles of nutrition, and goes on to discuss the various syndromes associated with disease of the stomach, intestine, pancreas, and liver. Affections of metabolism—diabetes, obesity, and gout—are then dealt with shortly, and this is followed by an especially good section on disturbances of the acid-base equilibrium. The intermediate metabolism of nitrogen, fats, carbohydrates, and the various inorganic salts is discussed in detail. The remaining two-thirds of the book is taken up with descriptions of methods for obtaining and analysing gastric contents, urine, faeces, and blood. The authors, while preferring macro- to micro-methods, and wholly chemical to colorimetric methods, give a fair selection of alternative tests. A good many of these are not those which find general use in this country, while many of the modern methods are not referred to—for example, Fowweather-Saxon for fat in faeces, Benedict for urine sugar (quantitative), and the micro-methods for blood phosphorus. The procedures given are on the whole, however, up to date, and cover a wide range of determinations. The section on the *p*H of urine is particularly well done, and its coloured plate is a feature of the book. The methods are well and interestingly described, with, as a rule, sufficiently full detail for practical purposes.

The book suffers from the mode of its inception and growth; it is likely to be of greatest use to those who have worked through the course given by the authors. In view of the excellent modern textbooks of laboratory technique available, notably that of Peters and van Slyke, we feel that the volume under review will not meet any real need for English-reading workers. It falls short of a textbook in the omission of reference to symptoms and treatment, and, although it carries the distinction of its talented authors, it will probably be relegated to the reference library rather than brought into constant use in the laboratory. Its individual character has made references to literature difficult; they have been omitted. There is a good table of contents, but no index.

SURGICAL ANATOMY

By the time the student leaves the medical school for work in the wards of his hospital he has mastered a great number of anatomical facts, and is often heard to express an intention to "keep up his anatomy." He rarely does so. His is a twofold difficulty—that of remembering the facts he has acquired and that of learning to apply these facts to the practical problems of his hospital work. Mr. A. L. MCGREGOR'S synopsis[4] is designed to assist him in this period of the curriculum. In its scope and presentation it follows original lines. Mr. McGregor is a teacher possessing the happy knack of putting things in a nutshell, and in this book, by making use of striking quotation and contrast, by indicating common difficulties, and by diagrammatic sketches (of which there are over 600), he succeeds in retaining the atmosphere of the tutorial class. Some of the chapters, in fact, appear to be based on the skeleton notes for class lectures, with the deliberate inclusion of any matter which may be introduced either for its interest or for the purpose of contrast. Certain of the chapters, such as those on accessory peritoneal bands, the biliary passages, accessory bones, the fascial spaces of the hand, and the surgery of the sympathetic, contain admirable summaries of recent writings, and in each case references are given as footnotes.

The book is remarkably free from ambiguities and misprints, though occasionally the matter is so simplified and condensed that the student may be misled. On

[3] *Techniques de Laboratoire.* Appliquées aux maladies de la digestion et de la nutrition. Par Marcel Labbé, Henri Labbé, and F. Nepveux. Paris: Masson et Cie. 1932. (Pp. vi + 886; 137 figures, 6 plates. 140 fr.)

[4] *A Synopsis of Surgical Anatomy.* By Alexander Lee McGregor, M.Ch.Ed., F.R.C.S. With a foreword by Sir Harold J. Stiles, K.B.E., F.R.C.S. Bristol: J. Wright and Sons; London: Simpkin Marshall, Ltd. 1932. (Pp. xiv + 609; 606 figures. 17s. 6d. net.)

page 248 the talo-fibular ligament is described as attached to the medial malleolus; the diagram on page 257 shows the long plantar ligament attached anteriorly to the metatarsals and not to the cuboid bone at all; on page 124 it is stated that the first cervical nerve never becomes cutaneous; and on page 164 the inferior layer of the urogenital diaphragm is described as being pierced twice by the dorsal nerve of the penis. The book might be made easier of reference by a slight rearrangement. A description of the psoas muscle is given in the chapter on fasciae, and that of the costo-coracoid membrane in the chapter on muscles. Similarly the tests of hip-joint mechanics associated with the names of Trendelenburg, Bryant, and Nelaton might well be grouped together instead of on three separate pages. These, however, are merely minor points of arrangement in a work which, besides being one of outstanding merit, is quite the best of its kind we have yet seen.

MASSAGE AND REMEDIAL EXERCISES

The newly qualified "chartered" masseuse who has outgrown the textbooks which were adequate earlier in her training has not usually acquired the wider background of knowledge and experience which would enable her to appreciate the advanced books on the principles and practice of massage. To meet the need of this intermediate stage NOEL TIDY has written *Massage and Remedial Exercises in Medical and Surgical Conditions*.[5] Her aim has been to provide a helpful textbook for senior students, recently qualified masseuses, and junior teachers in training for the Chartered Society's examination. She has, however, overreached her aim, and gone beyond the title of her book in dealing primarily with medical and surgical conditions, and only secondarily with massage and remedial exercises.

Although it is essential that a gymnast should have a clear understanding of what she expects to accomplish in treating any patient, and to that end must have a working knowledge of the symptomatology of disease, yet it is not desirable that her mind should be so loaded with medical details as to obscure her own part in therapeutics. Increased information, imperfectly understood, may hamper rather than help when in excess of requirements. This is the criticism which comes frequently to mind in reading this otherwise admirable book. In describing treatments the author has given most attention to those subjects which have hitherto received the least, and for this reason the chapter on fractures, competently written, is especially valuable. The same can be said of the chapter on lesions of the peripheral nerves. More attention could with advantage have been given to treatment during pregnancy and the puerperium. The detailed schemes for the management of cardiac cases are very carefully planned, and are rational and progressive; but to be of therapeutic value their application would call for much judgement on the part of the gymnast. Good advice is given about cases for which massage, though not specifically contra-indicated, may be unsuitable. In this connexion the author's view of hysteria and enuresis, for example, is particularly enlightened. The exercises are most successfully illustrated by photographs from films; they have a suggestion of continuity of movement, unlike the rather stiff photographs of fixed poses in other books.

Although the author cannot be said to have contributed much that is new to her subject, her clear presentation of schemes of physical treatment, together with information about pathology, aetiology, symptoms, and general treatment, will make her book fulfil a very useful purpose.

[5] *Massage and Remedial Exercises in Medical and Surgical Conditions.* By Noel M. Tidy. Bristol: J. Wright and Sons, Ltd.; London: Simpkin Marshall, Ltd. 1932. (Pp. xii + 429; 178 figures. 15s. net.)

NERVOUS DISORDER IN CHILDHOOD

Dr. NEILL HOBHOUSE has written a readable monograph on *Nervous Disorder in Infancy and Childhood*,[6] which successfully blends a description of those diseases having a recognizable organic basis with an account of those for which the term "functional" is still used and still will be used despite Dr. Hobhouse's preface. After a rather sketchy chapter on birth injuries of the nervous system the author gets into his stride, and the section on treatment and management of infantile cerebral palsies is particularly good, with his insistence on active movements as alone being of value. The various types of encephalitis are well discussed, especially what the author calls "encephalo-myelitis," which he describes as "now one of the commonest of acute affections of the nervous system." The section on pink disease is incomplete; there is no mention made of the vagal affection in this complaint with the possibility of death from cardiac failure, and in less severe cases a striking degree of tachycardia with unusual changes in the electrocardiogram. It would also have been an advantage to include some details of treatment in the chapter on mental deficiency and to have given a summary of the legislation on the subject.

Notes on Books

Dr. W. W. SHRUBSHALL has hit upon a novel idea, and has embodied it in an unusual book. Its title is *Things to be Desired*,[7] and it consists of 365 short health talks, printed each upon its own small page allotted to the successive days of the year. The difficulty of leap-year is surmounted by a slightly longer talk, which continues from the page for February 29th, to that headed March 1st. In a brief preface the author indicates that his purpose is "to call to mind what may possibly be already known to the reader, but what is also often forgotten to be put into practice." He says that "the suggestions made have been tested during medical practice, and it will be noted that the advice on some subjects is reiterated. This is intentional: the droppings of knowledge need to be often repeated if the hard stone of apathy and wrong habit is to be worn away." Among these frequent reminders is one to seek the help of a qualified medical adviser in appropriate circumstances, and it is pointed out that this does not necessarily involve heavy expenditure in medical fees. The little sermons themselves are wise and appropriate: there is nothing "faddy" about them, nor would anything in them be likely to lead to undue health anxiety or to any habit of self-medication. Inasmuch as in these matters it is not enough to know the right thing, or to have things done for one by others, but it is essential for each individual himself to act rightly every day, this book can be heartily recommended to all as an original and effective piece of health propaganda. It is both interesting and practical.

The author's aim in presenting to the public *An Empire Problem*[8] is to interest the non-medical reader in certain questions, upon the solution of which the whole future of the natives of our tropical possessions depends. Professor BLACKLOCK is a strong advocate of the necessity of bettering the economic condition of the native of the Tropics by means directed towards the prevention of those diseases which impair his usefulness as a worker and producer. He believes that the future progress of the problem must lie no longer in the hands of the small band of tropical disease specialists, but in those of the very much larger number largely in those of our Empire. For their ben who have interests

[6] *Nervous Disorder in Infancy and Childhood.* By Neill Hobhouse, M.D., M.R.C.P. London: Baillière, Tindall and Cox. (Pp. 218. 8s. 6d. net.)

[7] *Things to be Desired.* By Dr. W. W. Shrubshall. Foreword by Sir A. Newsholme. Daily Bible: H. K. Lewis and Co., Ltd. 1932. Sons and Danielsson, Ltd. (Pp. 370; 5s. net.)

[8] *An Empire Problem.* By D. B. Blacklock, M.D. (Pp. Health Reminders. London: John Bale, Sons and Danielsson, Ltd. 1932. (Pp. 370; 5s. net.) By Dr. W. W. Shrubshall. Foreword by Sir A. Newsholme. Daily Bible: H. K. Lewis and Co., Ltd. 1932. (Pp. 370; 5s. net.) By D. B. Blacklock, M.D. (Pp. Health Reminders. London: John Bale, Sons and Danielsson, Ltd. 1932. (Pp. 370; 5s. net.) Hodder and Stoughton. 1932. (Pp. 370; 5s. net.)

description is given of some of those commoner diseases of natives associated with defective methods of housing, water supply, and excreta disposal, and attention called to the bearing the whole problem has upon British Empire trade. As an example of Professor Blacklock's argument one sentence may be quoted: "A cheap and practical kerosene lamp will do more to obliterate the activities of the medicine-man (witch doctor) in a decade than any form of intellectual endeavour will accomplish in a hundred years."

The *Minutes of the Dental Board of the United Kingdom and of its Various Committees* for the year 1932 have been published[9] with ten appendices, which include reports of the Dental Health Education Committee and of the Education and Research Committee. The *General Index*[10] to the minutes of the Dental Board from 1921 to 1932, relating to volumes i to xi, has also been issued.

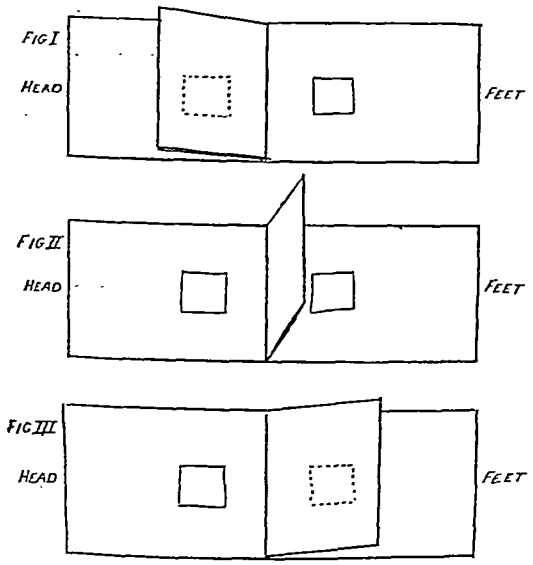
[9] London: Constable and Co., Ltd. 1933.
[10] Idem.

Preparations and Appliances

TOWEL FOR SUPRAPUBIC PROSTATECTOMY

Mr. IAN FRASER, M.Ch., F.R.C.S. (Belfast), writes:

To assist in towelling the patient for the operation of prostatectomy I have found the following of value. It consists primarily of a large towel 5 feet in length by 4 feet in width. Across the middle, and extending the whole breadth of the towel, there is attached a hinged flap. There are two large holes each 6 inches square. With the towel in position the two openings will be seen to be: the upper over the future suprapubic wound and the lower over the genitalia. With the flap folded back towards the patient's head the preliminary bladder filling, etc., can be accomplished; later the flap is folded towards the feet, when the septic area is thus covered in and a clean suprapubic field



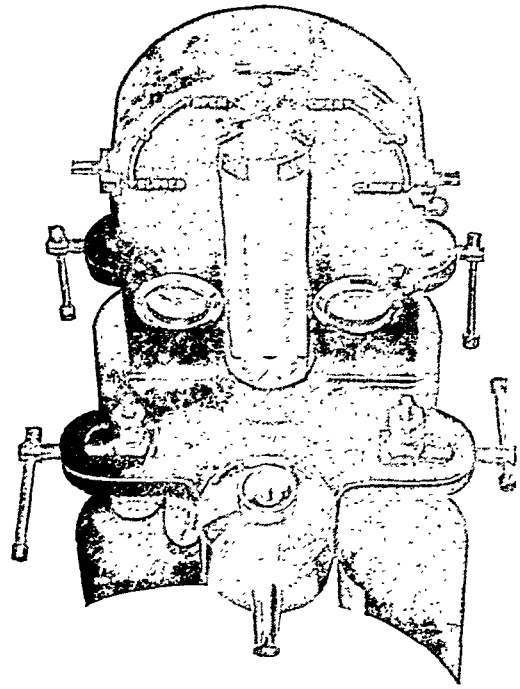
exposed. It is clean, neat, easily adjusted, and is, I think, a decided comfort in this operation. The three diagrams explain themselves. I would not have sent them for publication except for the fact that many members of the British Association of Surgeons, at dily last meeting in Belfast, admired the idea, and thought it had helped to make the operation of prostatectomy s simple and more aseptic (or less septic). In Fig. I tient is ready for the preliminary filling of bladder lesion. djusting of catheter. In Fig. II this septic area is ronic ulce and the suprapubic area exposed and ready for cy here is nothing in the idea at all, but if it sa situated in lips, time, and some infection it is always s towels, in green huckaback, are routine in vards in the Royal Victoria Hospital, Belfas

Assoc., Novembe

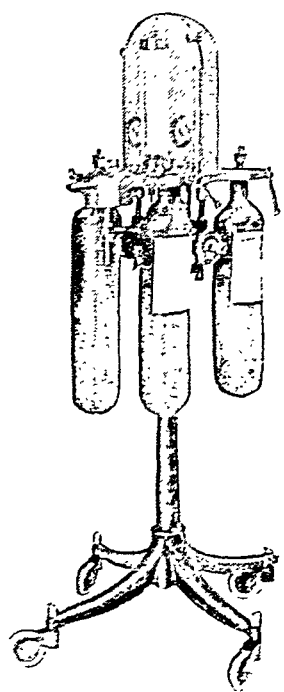
A DENTAL N_2O AND O APPARATUS

Dr. C. BOWDLER HENRY (London, W.) writes:

The British Oxygen Company has made for me a nitrous oxide and oxygen apparatus primarily for the purpose of



producing nitrous oxide anaesthesia for the preparation of dental cavities and minor oral surgery, but it may also be used for the production of continuous anaesthesia. The machine is utilizing a continuous flow with rotor meter tubes graduated in litres per minute. Both gases are led to a mixing chamber before passing to the storage and rebreathing bag.



The original features of the design are: (1) The visible index of the quantities of gas flowing. (2) The simplicity of the lever operation of the fine adjustment valves. (3) The calibrated injector device, shown on the close-up view, which is for use when it is desired to administer gas and air instead of gas and oxygen. When this is necessary the fine adjustment valve for the oxygen is turned off and the knob of the injector is rotated to a numbered position on a dial which shows what volume of air in litres is being enchained by a given flow of nitrous oxide. In other words, it is possible by moving one lever and a bulb immediately to change the anaesthetic mixture from nitrous oxide with oxygen to nitrous oxide with a definite percentage of admixed air. Provision is also made for an ethyl chloride inlet and for the interposition of ether-drip and carbon dioxide attachments.

My acknowledgements are due to Dr. I. W. Magill (London), and also to the British Oxygen Company, for many valuable suggestions.

INFLUENZA IN GLASGOW

For the following note on the influenza epidemic in Glasgow, with particular reference to the situation in December, 1932, we are indebted to Dr. A. S. M. Macgregor, medical officer of health.

The presence of influenza became noticeable in general medical practice in the city early in December, although mild catarrhal affections with or without general symptoms had previously been prevalent following upon the cold foggy weather at the beginning of November. Notifications of influenzal pneumonia began to be added to the usual winter increase of acute primary pneumonia at the beginning of December. The table given below shows that fourteen such notifications, along with eight deaths, were recorded during the week ending December 3rd, twenty-three notifications and seven deaths during the week ending December 10th, forty-two notifications and twenty-eight deaths during the week ending December 17th, 117 notifications (the highest figure reached) and eighty-three deaths during the week ending December 24th, 114 notifications and eighty-six deaths (the highest figure reached) during the week ending December 31st. The period of maximum prevalence thus lasted for about a fortnight—the last fortnight of the year—after which the epidemic rapidly declined.

The general death rate moved in association with the influenza epidemic, the first definite rise (to 18.2) taking place during the week ending December 10th. The maximum death rate of 28.7 was reached during the week ending December 24th. It may therefore be concluded from the evidence of the vital statistics that the epidemic commenced at the beginning of December, and reached its maximum prevalence during the weeks ending December 24th and 31st. The fall was rapid, although latterly it tended to taper off gradually and to merge into a period of increase of respiratory affections generally during the cold spell which commenced during the third and extended into the fourth week in January.

The following table shows the weekly behaviour of the general death rate, the deaths from acute pneumonias, influenza, and influenzal pneumonia, the notifications of influenzal and acute primary pneumonia, and the deaths of children under 5 years of age from acute pneumonia (all forms).

Glasgow: Vital Statistics during Influenza Epidemic

	November				December					January			
	5	12	19	26	3	10	17	24	31	7	14	21	28
General death rate	12.4	14.9	15.2	14.9	14.6	18.2	20.0	28.7	27.3	19.4	18.4	18.0	18.0
Deaths from:													
Lobar pneumonia	5	4	3	9	15	7	14	29	31	20	11	9	4
Bronchopneumonia	12	17	16	23	22	33	54	80	76	54	43	35	37
Other forms of pneumonia	4	4	6	2	4	1	6	21	14	5	7	1	3
Bronchitis ...	9	19	18	9	11	18	34	34	32	25	12	21	19
Influenza and infl pneumonia	3	1	5	4	8	7	28	83	86	38	32	25	11
Notifications:													
Influenzal pneumonia	6	5	6	5	14	23	42	117	114	48	57	23	21
Acute primary pneumonia	91	129	157	195	191	215	323	482	443	255	199	174	169
Deaths of children under 5 years from pneumonia (all forms)	10	14	15	19	23	23	42	67	64	43	42	27	31

The incidence of influenza in the city fell far short of the experience of January, 1929, when the death rate rose to 50 per 1,000 of the population. The statistics of sickness for the Police Force show that the outbreak began to affect the staff about December 6th. The highest number invalided was 217 during the week ending December 25th, equal to about 10 per cent. of the total Force. This figure, however, represents the total invalidity among the Force from all causes. The actual figures are given below. The experience of the Tramway Department was very similar, the invalidity figures being from 8 to 9 per cent. on each day between December 16th and 24th. About 10 per cent. of sickness on any one day was the usual experience among staffs in the city, although there were instances of much higher local incidence.

Glasgow Police Force: Incidence of Sickness

	November				December				January		
	6	13	20	27	4	11	18	25	1	8	15
No. off duty each week (all causes)	9	18	27	25	23	31	164	217	101	93	71

As regards absentees from school, the figure for scholars on December 23rd was 15 per cent., as compared with the ordinary figure of 5.5 per cent. The corresponding figures for teachers were 5 per cent. and 1.5 per cent. respectively.

Influenza was introduced among hospital staffs a few days earlier, and in one case the staff became affected during the last week of November, although, curiously enough, the hospital staffs did not suffer to the same extent as the outside population, with the exception of one large general hospital, where the figure reached about 10 per cent.

The prevailing type of influenza was, on the whole, of sharp onset and short duration, ushered in with shivering and fever, followed by headache and joint pains, and lasting for two or three days. In a considerable proportion of cases the acute symptoms tended to be followed by persistent cough and debility. The gastric type was not in evidence.

It will be observed that deaths certified as lobar pneumonia increased to a maximum of thirty-one during the week ending December 31st, and that those certified as bronchopneumonia increased to eighty during the week ending December 24th. The influenza epidemic apparently, therefore, caused an increased incidence of acute lobar pneumonia at a time when this affection does not usually prevail to anything like the same extent. Among forty-nine cases admitted to one of the hospital wards between December 15th and January 17th thirty were diagnosed as lobar pneumonia, ten as bronchopneumonia, and nine as influenzal pneumonia. Seventeen of these were fatal, giving a mortality rate of 35 per cent. as against a pre-influenzal mortality rate in the same ward of about 15 per cent.

The epidemic created great pressure on hospital accommodation for pneumonia, and during its height at the end of December there were 520 beds occupied by pneumonia patients in the infectious disease hospital, approximately 120 in the municipal general hospitals, while 450 were under treatment at home. The home visiting of all notified cases of acute primary pneumonia and acute influenzal pneumonia was undertaken by the health visitor nursing staff of the department, a service which was found to be of great value. Admission to hospital was based on their reports on the home circumstances, as was also the possibility of home treatment. In the event of the latter being feasible, the management of a patient at home was supervised by this staff. In spite of this, however, the establishment of a waiting list of urgent cases for admission to hospital became inevitable during the month of December, reaching fifty-four by the 20th of the month.

It may be remarked that the distribution of serological types of pneumococci in bronchopneumonias, as found by Dr. Ian Christie at the Broomlaughtswood Fever Hospital showed an increased proportion of Type II infections—that is, 53 per cent. Barrister-at-Law with the standard for the city over the previous three years of 36 per cent. A further note of the Simpkin Marshall pneumococci during the epidemic is being prepared by him.

Charles C. Thomas. (Pp. xvii + 47.

British Medical Journal

SATURDAY, FEBRUARY 18th, 1933

PATHOGENESIS OF PEPTIC ULCER

The aetiology of simple ulcer of the stomach and duodenum is a subject of constant interest and surmise. The alternative name of "peptic" ulcer reflects the general feeling of pathologists that the gastric juice digests the mucous membrane and so gives rise to ulceration. But since Cohnheim's day there has been discussion on the mechanism which prevents the normal stomach from digesting itself. The healthy lining of the stomach has some special resistant powers during life, probably because it is bathed by alkaline blood circulating in the mucous membrane. In patients who develop peptic ulcer the gastric juice may be specially potent and concentrated, or there may be an increased susceptibility of the mucous membrane, its resistance being lowered by some local or general condition. Local changes in the smaller gastric arteries, and such factors as anaemia and general malnutrition, have been adduced, and the influence of chronic gastritis preceding and surrounding the ulcer has been emphasized, especially by Continental workers; but the cause of gastric and duodenal ulcer still remains obscure. Typical peptic ulcers occur mainly in the parts of the gastro-intestinal tract which can be exposed to an acid medium, and which appear to be subjected to the greatest mechanical trauma by the passage of the gastric contents. From the clinical point of view it is significant that practically all of the numerous methods, both medical and surgical, that have been devised to treat the patient with peptic ulcer have for their main object the protection of the lesion from chemical or mechanical injury. Since any rational therapy must be based on sound pathology, it may be of interest to review some recent experimental work on the production of peptic ulcer in order to find indications for treatment.

F. C. Mann and J. L. Bollman,[1] in a summary of several years of work at the Mayo Clinic, point out that two types of ulcerative lesions of the gastric and duodenal mucosa have been produced experimentally. The one which most often occurs is, and remains, acute. It starts as a haemorrhage in the submucosa, and the lesion of the mucosa appears secondarily to the vascular injury. This form is readily produced by so-called toxic conditions, and by the injection of toxins, drugs, and bacteria; it remains acute and readily heals, leaving no trace of the lesion. The other type more closely resembles the chronic ulcer found in man. It is usually single and is situated in the pathway of the outflow of gastric contents. It starts on the surface of the mucosa as a greyish circumscribed membrane. It is saucer-shaped and, in the beginning, acute; but if perforation with peritonitis or fatal haemorrhage does not occur, it becomes chronic. This second type of ulcer is the one which Mann and his co-workers have had under observation. By elimination of the duodenum, anastomosis of the pylorus to the jejunum, and the bringing of the bile and pancreatic ducts into the jejunal segment, ulcers were produced in 20 per cent. of the experiments. When the common bile duct and pancreatic ducts were transplanted into the terminal ileum, ulceration developed in the duodenal mucosa in 50 per cent. of the experiments, whereas ulcer developed in 95 per cent of those which caused the gastric contents to be expelled from the stomach into the jejunum without becoming mixed with the secretions poured into the duodenum—the bile, and the pancreatic and duodenal juice—which were drained into the ileum. That ulceration may occur, however, even when the pylorus allows free regurgitation of the duodenal contents and secretions, is shown both experimentally in animals[1] and in patients with jejunal ulcer after gastro-enterostomy. Moreover, the development of peptic ulcer in animals with bile fistula is an infrequent occurrence; and the lack of the pancreatic secretion appears to be readily compensated for, since ulcer was rare in depancreatized animals. The important factor is the acidity of the gastric juice. Mann and Bollman have been able to produce chronic gastric ulcers by the administration of hydrochloric acid. By means of a continuous drip apparatus 0.4 per cent. of hydrochloric acid is instilled into the stomach through a gastric fistula at the rate of less than 1 c.cm. each minute for eight hours. Although the acid produced peptic ulcers, other features of the process appear to be of greater significance. Much larger quantities of acid could be given to animals that had had a small amount of food beforehand. The neutralization was more than that caused by the buffering action of the food present, and it appears that there is an active process of neutralization during the course of digestion. Daily repetition of excess acidity depressed this neutralizing ability, the apparent exhaustion of which, however, does not seem to be related to upset of the acid-base equilibrium of the body, and occurred in spite of the administration of large doses of alkali. In each of the methods which so readily produce peptic ulcer experimentally, therefore, the main objective has been the diminution or elimination of the mechanism of neutralization of the gastric contents as they pass from the stomach. But though acidity is of great significance in the development of these ulcers, the mechanical factors are also important. The site of the experimental ulcer is always one or two centimetres distal to the point of exit of the gastric contents from the stomach. The ulcer seems to begin in the area where the gastric contents strike first and with the greatest force on being

[1] *Journ. Amer. Med. Assoc.*, November, 1932, 1576.

[1] Fontaine, R., and Kunlin, J.: *Presse Méd.*, November 19th, 1932, 1752.

expelled from the stomach: the situation of the ulcer can be changed at will by changing the direction of the outflowing stream. The rate of development depends somewhat on the size of the opening from the stomach through which its contents are expelled. The ulcer appears more rapidly and is more liable to perforate if the gastro-enterostomy opening is small. The character of the food is also significant: coarse food certainly predisposes to and retards the healing of an ulcer.

In a recent paper on the causes of peptic ulcer[1] W. C. Alvarez points out that none of the theories of causation is wholly adequate. There is no question that it tends to run in families, and that the hereditary factor is at times important. Much evidence is accumulating to show that in many cases the tendency to the formation of ulcers is based on the abnormally high reactivity of the individual; indeed, there is a considerable literature on the importance of nervous and psychic factors on the onset and recurrence of peptic ulcer. A series of acute perforative lesions affecting oesophagus, stomach, and duodenum, which caused early fatality after operations for cerebellar tumour, led Cushing to review[2] the evidence of the neurogenic aspects of ulcer pathogenesis. Experimental lesions of the inter-brain, intracranial injuries, and diseases affecting these same basilar regions of the brain are known to be accompanied by ulcerative lesions of the upper alimentary canal, probably from an irritative disturbance of either fibre tracts or vagal centres in the brain stem. Vagal stimulation or, what theoretically amounts to the same thing, functional release of the vagus from paralysis of the antagonistic sympathetic fibres, leads to hypersecretion, hyperchlorhydria, hypermotility, and hypertonicity, especially in the pyloric segment. By the spasmodic contractions of the musculature, possibly supplemented by accompanying local spasm of the terminal vessels, small areas of ischaemia or haemorrhagic infarction are produced, leaving the overlying mucosa exposed to the digestive effects of its own hyperacid juices. The advocates of the neurogenic conception of ulcer have gradually shifted the burden of responsibility from the peripheral vagus to its centre in the medulla, to the mid-brain, and now to the inter-brain, recently recognized as a highly important station for vegetative impulses easily affected by psychic influences. So it is quite probable that highly strung persons, who incline to the form of nervous instability classified as vagotonic, through emotion or repressed emotion, incidental to continued worry and anxiety and heavy responsibility, combined with other factors such as irregular meals and excessive use of tobacco, are particularly prone to have chronic digestive disturbances with hyperacidity, often leading to ulcer—effects wholly comparable to those acutely produced by irritative lesions experimentally made anywhere in the course of the parasympathetic system from its centre in the inter-brain to its vagal terminals.

[1] *Amer. Journ. Surg.*, November, 1932, 267.
[2] *Surg., Gynecol. and Obstet.*, July, 1932, 1.

VISUAL ACUITY

Under the auspices of the Medical Research Council Dr. R. J. Lythgoe has published a series of observations on visual acuity,[1] a subject in which he is already recognized as an authority. The conclusions he presents as a result of painstaking and exhaustive experiments are well worthy of careful consideration, not only for their bearing on the problems of the accurate assessment of the function of the eyes, but also because of their relevance to matters of everyday experience. The immediate object of the inquiry was to show in what ways the relation between visual acuity and illumination could be varied under experimental conditions. It is well known that the acuity of vision increases with the illumination, and, perhaps as a result of the time-honoured practice of plotting the relation between the two factors by graphs showing their logarithmic relation on a linear scale, the view is still widely held that visual acuity is at a maximum with about three to four foot-candles. Indeed, artificial sources of light giving more than ten foot-candles are sometimes condemned. On the other hand, in sunlight, values more than a hundred times these figures are commonly met with and form ideal conditions for work. Dr. Lythgoe has shown by the usual methods of recording visual acuity that this increases in direct proportion to the logarithm of the power of the light up to twelve equivalent foot-candles; and, provided the "surrounds" are adequately lit, that the improvement increases up to, and probably beyond, 1,275 equivalent foot-candles. This improvement is not associated with the formation of a clearer image owing to contraction of the pupils, since it occurs when artificial pupils are used; it is almost certainly due to enhanced sensitivity of the retina. It is especially to be noted that these values are attained only if due attention is paid to the "surrounds"—that is, if the periphery of the retina is adequately illuminated. To obtain the optimum results the test object should be brighter than the neighbouring region, but as the illumination of the "surrounds" approaches one-tenth of that of the test object the increase of visual acuity begins to fall away. The ideal system, therefore, is one in which the light shines upon the work at hand, not in an otherwise dark room, but in a room adequately illuminated with diffuse light. This has a practical importance in the effect of glare upon vision, for "glare" may be regarded as the special type of illumination of the "surrounds" in which the light is concentrated upon one spot. The effects are much the same, and in appropriate conditions glare can either increase or decrease the visual acuity in the same way as can the surrounding illumination. When the "surrounds" are dark, as in observations at night, glare has the effect of heightening the visual acuity if the test object is well lighted. When the

[1] *Medical Research Council. Special Report Series, No. 173. Reports of the Committee upon the Physiology of Vision. X. The Measurement of Visual Acuity.* By R. J. Lythgoe. With assistance by Dorothy E. Corkill, and with a section by E. S. Pearce. London: H.M. Stationery Office. (1s. 6d. net.)

'surrounds" are already adequately lit the introduction of glare causes a fall in acuity. Neither of these effects is due wholly to the action of the pupil: in both the factor of retinal sensibility enters, for the sensitivity of the fovea seems to be augmented by peripheral illumination up to a certain value, beyond which a depression sets in. These results are of extreme interest, and deal with an important subject about which far too little is known.

Some interesting observations are made upon the end-point of accurate vision. In visual testing the size of the test object is usually decreased, and the subject is asked to read smaller and smaller letters until he begins to make mistakes. As in all biological measurements the end-point varies from time to time, and when accurate work is to be undertaken this variation should receive serious consideration. This is not a phenomenon of the laboratory alone, but occurs in the judgements of everyday life. For example, it is desirable that the lighting of streets should be enough for a motorist to judge the presence or absence of a pedestrian. As the illumination is lowered there will come a point when only nine pedestrians out of ten will be seen, and it is small consolation for the one pedestrian run over to know that nine others had been seen and avoided by the same motorist under exactly the same conditions. The magnitude of the effect of considering the end-point can be judged from an experimental example. When an average of 4.5 correct answers out of 8 was taken as a sufficient end-point, an illumination of 3.2 equivalent foot-candles sufficed in one experiment. When, however, correct answers were required 7 times out of 8 with the same size of test object, the illumination had to be raised to 10.72 equivalent foot-candles—that is, about three times. In a valuable appendix the whole of the experimental results are treated statistically by E. S. Pearson, who shows that it is possible to calculate the chance that the subject will be able to read the test object correctly. It may seem at first glance unsatisfactory to admit one's inability to reduce these observations to more definite criteria. We have to remember, however, that a variation of this type is not a feature of visual measurements alone, but one common to many biological phenomena.

EXPERIMENTAL MEDICINE

In his inaugural address to the University College Medical Society in Dublin[1] Dr. T. W. T. Dillon urged the need for a modified outlook in medicine. The old domination of medicine by morbid anatomy must give way to the newer conceptions of functional pathology and physiology. A study of the changes which tissues have undergone is of great importance in giving us a picture of the end-effects of disease, but it is the more urgent problem of medicine to obtain accurate knowledge of the deviations from normal physiological function which are the forerunners of disease. To promote this newer attitude Dr. Dillon calls for closer co-operation between the clinician, the pathologist, and the physiologist. It is the physiological outlook which is so singularly lacking in the clinical teaching in the ward, and the experimental attitude is almost completely absent. But the clinician must not be lightly condemned for these lacunae in what is so often an otherwise magnificent mind, training, and experience. Osler's words may be recalled: "Every medical student should remember that his end is not to become a chemist, or a physiologist, or an anatomist, but to learn how to recognize and treat disease, to become a practical physician." No one could, even now, quarrel with this view, but it has contributed to the alienation of the physiologist from the clinician, and has insisted on a distinction between these branches of medical science when it would have been wiser to insist on their correlation. The purely experimental attitude of the physiologist is one which the clinician is clearly unable to adopt in all its implications, but in so far as he is to become more than an automaton applying other workers' findings, he must use his imagination and judgement so to modify former treatment or to introduce new methods that he remains truly an experimentalist. This can only come about if the physician is prepared to apply his ideas to his patients, and himself observe the results of his experiment. This we are unlikely to see unless the opportunities offered to men with the best brains and talents are such that they need not apply so much of their time and energy to consulting practice. It is to be regretted that there are so many young men who, endowed with knowledge and talent, and having given brilliant promise in their days as house-physicians, are elected to the staffs of hospitals, set up as consultants, and seldom in such circumstances find time or inclination to carry out a serious investigation. The unit system has been only partly successful, for the units are regarded by some of the younger men as stepping stones to those posts on the visiting staff which allow of greater material benefits in the consulting world. The "high priest" attitude of the clinician is one which is almost demanded by the general public, and given a certain measure of presence and personality the young physician finds the experimental method somewhat superfluous. This failure to adopt experimental method is not only confined to the clinician, but extends to the laboratory worker as a result of his peculiar position. The status of the latter in the hospitals is not generally that of a co-worker in the diagnosis and treatment of disease, but merely that of a technician who may be called upon to carry out an analysis without any contact with the patient or any knowledge of his clinical condition. This not infrequently leads to a state of disgruntlement on the part of the biochemist or clinical pathologist, and his true function is steadily lost as he degenerates more and more into a mere technician who is not asked to apply his knowledge. The methods by which the reported results are obtained may be, and often are, completely unknown to the clinician, and he is rarely informed of more than their most superficial significance. How different a round in the wards would be if the physician, the pathologist, and the physiologist were all present at the bedside, and if the students could hear a short consideration of the case from the point of view of each. Were such a combination possible the experimental attitude would soon infiltrate into the wards, and the new medicine which Dr. Dillon desires would soon be a *fait accompli*.

[1] *Irish Journal of Medical Science*, December, 1932.

"GINGER PARALYSIS"

A remarkable epidemic of paralysis ascribed to the drinking of Jamaica ginger extract occurred in Oklahoma City in March, 1930. The number of persons affected must have amounted to several hundred, and the cause was eventually identified with fair certainty as being tri-ortho-cresyl phosphate, which was used as an adulterant. This epidemic has been noted previously in our issues of December 6th, 1930 (p. 971), and February 21st, 1931 (p. 322). A report recently published[1] gives an estimate of the permanent damage produced by this peculiarly outrageous case of food adulteration. The first cases of paralysis appeared on March 9th, 1930, and preventive measures succeeded in arresting the epidemic by the end of the month, but a total of 316 cases of paralysis were admitted to Cincinnati General Hospital. The toxicity of the adulterated extract was very high, for paralysis was produced by doses as low as 7 drachms. The Federal officers stated that the trail of the "jake peddler" could practically be followed by his victims. The poison in most cases produced immediate gastro-intestinal disturbances, and then after a latent period of a week or two paralysis commenced, being usually preceded by pains in the calf. The syndrome was a bilateral wrist- and foot-drop with atrophy and the usual signs of a degenerative neuritis. Only the motor neurones were affected. The uniformity of the anatomical progress is described as startling, but the degree of disability varied widely. Unfortunately recovery has been slow, and two years later (February, 1932) 119 patients were still under hospital treatment, of whom thirty-four were bed-ridden. Only one death can be ascribed purely to the intoxication. All that can be said in extenuation of the criminals responsible is that no one previously knew that tri-ortho-cresyl phosphate had any specific toxic effect of the kind that was produced. This outbreak of mass poisoning is a striking example of the unexpected dangers against which we are defended by the Food and Drugs Act.

BIOLOGICAL ASSAY

The seventh annual report on the pharmacological laboratories of the Pharmaceutical Society naturally contains references to the new *British Pharmacopoeia*. Emphasis is laid on the greatly increased number of substances which are tested by biological assay, and the work of the laboratories in Bloomsbury Square is largely devoted to experiments connected with this subject. As might be supposed, much that is of general scientific importance has emerged from this work. Foremost among such matters is the demonstration of the differences in the action of members of the sympathetico-mimetic group of substances, and the bearing of this on the probable existence of vaso-dilator fibres in the sympathetic system. A great deal of attention has been devoted to the improvement and simplification of biological methods of standardization. The assay of the parathyroid hormone, for instance, has been in the past carried out on dogs. This is, of course, an expensive and elaborate procedure. Considerable progress has been made in the direction of substituting a method in which rats may be employed, and their urinary calcium excretion determined. Of considerable difficulty, and of ever-increasing importance, is the assay of vitamin preparations. With the possible exception of vitamin A, these substances can only be standardized at present by carefully performed feeding experiments. The technique is laborious, slow, and difficult, and in few fields of research are there so many pitfalls into which the unwary may slip. All who, like Dr. J. H. Burn and his colleagues, improve and standardize the available methods perform a function the usefulness of which it is difficult to overrate. Although the staff of the laboratory consists in all of only eight workers, they have been responsible during the year for no fewer than seventeen publications. In addition to this, the "routine testing" figures show that 202 samples have been dealt with by the pharmacological department, and 104 by the nutrition department. It is evident from these figures that the organization and team work of the laboratory must be of the very highest order.

[1] Motor Neuritis Outbreak in Cincinnati, Ohio, caused by Adulterated Jamaica Ginger. U.S. Public Health Reports, vol. xlvii, No. 42. Washington, D.C.: Superintendent of Documents. (5 cents.)

BIOPSY IN MAMMARY CANCER

Is it worth while to remove a piece of a suspicious mammary tumour to verify the diagnosis of carcinoma before performing a radical excision of the breast? Most surgeons would answer "No," if for such a confirmatory diagnosis it was necessary to cut into a tumour and then sew up the wound and wait for a pathologist's report a few days later. Tumour growth may be stimulated by such an injury and cancer cells disseminated in the lymphatics and blood vessels. Small tumours whose pathological nature is uncertain must be removed for section, and it is best in such cases not to cut into the growth but to remove it completely. The verification of the diagnosis of cancer by an immediate frozen section is a method which seems at first sight to be very efficient, but it is important to bear in mind its serious limitations. For instance, the surgeon must remove a suitable fragment for examination, and the pathologist must make up his mind in a few minutes. In typical malignant tumours there is unlikely to be any difficulty in removing a suitable fragment or in arriving at the correct pathological diagnosis, but in such circumstances frozen sections are an unnecessary addition to the programme. It is in early cases or those with atypical gross characters that help from the pathologist is most needed, but unfortunately it is just in such cases that the quick frozen section method is least reliable. A short paper on the value of biopsy in mammary cancer has been written by Dr. James Ewing for the *Bulletin* of the American Society for the Control of Cancer (January, 1933), in which this very experienced pathologist draws attention again to the fact that in most cases a correct diagnosis can be made from the gross character of a mammary tumour without recourse to immediate microscopical examination.

"An experienced surgeon or pathologist should be able to recognize the great majority of malignant tumours of the breast by gross examination of the cut surface of the tumour. Unless he can do this it is obvious that the tissue chosen for microscopic section may not contain the malignant tumour. Therefore great importance attaches to the gross diagnosis, which should be relied upon wherever possible. The extent of the disease also can be told only by gross examination. The cicatricial character, resistance, opacity, or translucency and the chalky streaks of carcinoma are generally specific. Frozen section is therefore often unnecessary, but should be made in all cases which are in any respect doubtful to the particular surgeon or pathologist concerned. This

diagnosis should be made at the operation and the appropriate procedure carried out immediately."

On the subject of suspicious tumours and doubtful lesions he adds:

"There are some lesions in the breast in which it is impossible for any surgeon or pathologist to state positively whether the condition is malignant or benign. Hence the surgeon must not assume that by obtaining a microscopic diagnosis he has secured positive information. In such cases the clinical data, age of patient, extent and duration of the disease, condition of lymph nodes, and especially the gross characters of the lesion, should be given much importance in arriving at a decision. Under these circumstances some surgeons would err on the side of caution and perform the radical operation. I believe it is unfair to the patient to perform a radical mastectomy unless the diagnosis of carcinoma is positive. There are many precancerous and suspicious lesions in the breast which are clinically benign, while a true carcinoma is nearly always obvious to a pathologist of adequate experience. When a substantial doubt exists about the nature of a microscopic section of a breast tumour, it is generally not cancer."

SMALL-POX: A WORLD SURVEY

The incidence, mortality, and fatality of small-pox for 1931–2 throughout the world, of which the last survey was published in 1931,[1] are discussed in the September-October, 1932, issue of the Monthly Epidemiological Report of the Health Section of the League of Nations. In certain European countries no case occurred during 1931 and the first half of 1932—namely, Austria, Belgium, Bulgaria, Danzig, Denmark, Esthonia, Switzerland, Ireland (North and South), Latvia, Lithuania, Luxembourg, Malta, Scotland, and Yugoslavia. There are, however, three important foci of small-pox in Europe. The eastern focus is Soviet Russia, where, in spite of a considerable reduction in its incidence in the years following the war, the disease in its usually severe form seems to be on the increase. In England a very mild type is present, though diminishing, as shown by the fact that during the first thirty-two weeks of 1932 1,712 cases, more than half of which occurred in the London area, were recorded, as compared with 4,784 during the corresponding period of 1931. It is noteworthy that no cases occurred in Scotland, in the Irish Free State, or in Northern Ireland. The third European focus is the Iberian Peninsula, where the disease is mild in Spain with a case fatality of 0.93 per cent., while in Portugal small-pox is much more severe, the case fatality in 1931 being 25.8 per cent., and the disease is on the increase. Asia, however, appears to be the continent most severely affected by small-pox, British India being the most important focus of the disease in the world. The high incidence and fatality rate are shown by the fact that in 1931 there were no fewer than 88,380 cases with nearly 19,000 deaths. The morbidity and mortality, however, are by no means evenly distributed throughout the various provinces of the Indian Empire. During the spring of 1932 an epidemic wave spread over French Indo-China, the Chinese coast, Korea, and Japan, whereas Siam, Malaya, and the Sunda and Philippine Islands were scarcely affected. In America, Mexico forms the most important focus of virulent small-pox, the number of deaths from the disease in 1931 being 9,971. In Canada and North America, on the other hand, the incidence is falling, and the case fatality is very low. In Central and South America there are a few scattered foci of variola major, but the number of cases is very small. In Northern Africa there is a general decline in Algeria, Tunis and Morocco, Italian Libya, and Egypt. In Equatorial Africa there has been a sharp fall in the disease, and in several territories it did not reappear in 1932. On the West Coast epidemics occurred in Sierra Leone and Nigeria in 1932, but there has been a diminution in the French colonies since the use of dry vaccine, which has been employed in increasing quantities since 1929. The disease is still active in Nyasaland, but has practically disappeared from Kenya, Uganda, and Madagascar; it is rapidly decreasing in Rhodesia and Tanganyika, and is rare in the Union of South Africa.

[1] See *British Medical Journal*, 1932, i, 201.

ANTI-TUBERCULOSIS CAMPAIGN IN FRANCE

In the last annual statistical report of the French National Committee for the Prevention of Tuberculosis the announcement is made that all the Departments, including the three in Algeria, have now been furnished with a definitely organized anti-tuberculosis service of one kind or another. New dispensaries to the number of thirty-three have been opened, bringing the total to 743. Monthly reports forwarded to the committee from most of these enable a survey to be made of the general medical and social work that is being carried on. As in other countries, the rural districts of France require more intensified attention now than do the urban centres. For example, Cantal has only one dispensary for a population of 193,000 persons in an area of nearly 6,000 square kilometres. In the Department of the Seine there is one dispensary for each 8 kilometres and 80,000 inhabitants; in Finistère there is one for each 180 kilometres and 19,000 inhabitants; in the Upper Rhine one for 167 kilometres and 23,000 inhabitants; and in Gers there is one for each 6,300 kilometres and 190,000 inhabitants. Further efforts are needed to ensure that the whole of France is adequately supplied with a dispensary system, varying in different parts according to the geographical conditions and the needs of the local communities. The funds for such expansion, as well as for the carrying on of the already established institutions, are being provided in part by the Central Government and the Departmental authorities by means of steadily increasing special grants. To this must be added the sums accruing from the sales of the anti-tuberculosis stamp, and various donations received from the public for general and particular purposes. There is reason to hope that, as a result of this improving co-ordination of activities and the better financial support, the morbidity and mortality rates of tuberculosis, appreciably higher in France than in the adjoining countries, will soon show a rapid decrease. General statistical considerations are cited to show that on the whole the tuberculosis death rate is higher in the male than in the female, and that this disease is most destructive of the population between the ages of 20 and 39.

We regret to record the death of Dr. T. B. Hyslop, formerly medical superintendent and resident physician at Bethlem Royal Hospital, aged 69.

We regret to announce the death of Sir J. Arthur Thomson, who was professor of natural history in the University of Aberdeen from 1899 to 1930, and was very well known as an interpreter of science to the lay public.

RESEARCH SCHOLARSHIPS IN MEDICINE

LADY TATA MEMORIAL TRUST

This trust was founded and endowed in April, 1932, by the late Sir Dorabji Tata of Bombay as a memorial to his wife, the late Lady Tata, and in order to promote the advancement of medicine by research into the diseases of the blood, with special reference to the leukaemias. Provision is made under this trust for research scholarships and fellowships and for grants in aid of research. These are to be given in part to Indians and institutions in India, and in part to workers in other countries. The trustees in Bombay will be advised by an Indian Committee in respect of awards made there. Upon awards to be made in the British Commonwealth, exclusive of India, the trustees will be advised by an advisory committee having its headquarters in London.

Announcement is now made that two Lady Tata Research Scholarships, of the value of £400 a year each, will be open for award in June, *1933*, to men or women in the British Commonwealth, exclusive of India, for research work in the subject of blood diseases, with special reference to leukaemias. Each will be tenable for a year, from October 1st, 1933, and renewable up to a normal maximum tenure of three years. The scholarships will ordinarily be awarded on a whole-time basis, but a candidate holding a part-time teaching post may be allowed to retain this if, in the opinion of the trustees as advised by the committee, his duties will not prevent him from giving his chief interests and energies to his proposed research work.

Candidates for these scholarships must send their applications in time to be received in London on April 15th next, addressed to the secretary, Dr. H. S. Patel, Lady Tata Memorial Trust, Capel House, 62, New Broad Street, London, E.C.2, from whom forms of application may be obtained.

A candidate at a distance who may be unable to obtain a form of application in time will be considered if his (or her) name, age, sex, nationality, and qualifications are given, together with the proposed line of research and the methods to be used, the institute or laboratory in which this is to be done, and the director who will supervise it. Testimony in confidential letters addressed to the secretary should be sent at the same time by not more than three persons able to speak from personal knowledge of the candidate's character, ability, and experience.

Scotland

Carnegie Trust and Medicine

At the annual meeting of the Carnegie Trust Lord Sands, chairman of the Trust, referring to the research work in the laboratory of the Royal College of Physicians at Edinburgh, under Colonel McKendrick, the superintendent, said that the college had come to be regarded as one of the most successful schools of medical research in Great Britain. One of its most brilliant researchers was Dr. W. O. Kermack, a former Carnegie fellow, who for a number of years had been totally blind as the result of an accident in the laboratory, but who had triumphantly overcome almost insuperable difficulties. Twenty workers had been afforded facilities for research in this laboratory during the past year, and papers had been published on "The menopausal age and mammary carcinoma" and on "Sweat-gland carcinoma of the breast." It was believed that valuable results would be obtained from the detailed study now being conducted into the history, clinical findings, histological structure, and end-results after operation, and radium treatment of breast cases which had been treated in the Bruntsfield Hospital for Women. Other workers had continued their study of the morbid anatomy and histology of tuberculous disease of the lungs in children, and the connexion between the primary focus and secondary lesions in the bronchial glands.

Aberdeen Royal Infirmary

The annual report of the Aberdeen Royal Infirmary deals especially with the progress that has been made during the past year in the erection of the new buildings at Foresterhill. Three blocks are at present in course of erection, the medical, surgical, and administrative buildings, which will involve an expenditure of about £245,000. In the medical block, which is now so far advanced that the plaster work of walls and ceilings has been completed and the sanitary equipment fitted, provision has been made for a dietetic department. The construction of the surgical block was begun in June, and is now proceeding rapidly. Plans for the nurses' home to accommodate *270 nurses in a five-story building have been* approved and the foundations are now being excavated. The administrative block was begun a year ago, and the main section, consisting of four stories and providing accommodation for the administrative staff, dining-rooms for nurses and maids, bedrooms for ninety-two members of the domestic staff, and accommodation for twelve resident medical officers, is nearing completion. The operating theatres are arranged in this block on three floors connected with the surgical wards. The heating will be provided by steam radiators, the administrative and surgical blocks being heated by means of panels in the ceiling—one of the latest methods of central heating. For purposes of economy, the laundry and heating service will be combined with those of the neighbouring Royal Hospital for Sick Children, and the existing laundry in this institution will be rearranged and enlarged. It is proposed to erect the Watson-Fraser Nursing Home on an adjoining site so that arrangements may be made for various auxiliary services to be obtained from the staff of the Royal Infirmary.

Glasgow Western Infirmary

Presiding at the annual meeting of the Western Infirmary of Glasgow on February 10th, Lord Provost Swan stated that the ordinary income for the past year had been about 5 per cent. under that for 1931, the largest decrease being in the contributions from the public works. Instead of showing a deficit, however, they had been able to close the year with an increase of £10,000 to the capital. He referred to the presence in the hospital wards of patients whose circumstances were such as to enable them to go to nursing homes. He feared that this would tend to stem the flow of benevolence to the infirmary; people subscribed because they thought they were helping people who really needed to be helped. Sir Henry Mechan, vice-chairman of the governors, expressed their gratitude to the organization which directed the weekly contributions of the workmen. He expressed the opinion that if the public as a whole were to act as consistently as the workmen in this matter, the finances of infirmaries and hospitals would be in a flourishing condition. Principal Rait of Glasgow University, speaking of the necessity of maintaining the voluntary hospitals system, said that the majority of people were agreed that it was of vital importance that the care of the sick should not devolve on a mere department of the State, but that it *should* remain, as it was to-day, the personal interest of the citizens. The report of the infirmary for 1932 showed that the ordinary income had amounted to £67,334, a decrease of £3,446 on the previous year, while the ordinary expenditure of £82,233 showed a decrease of £1,066. There was, however, a surplus of £10,388 on the extra-

dinary receipts, and the capital at the end of the year .d been £159,893. The number of patients treated in e wards had been 12,893, as against 13,262 in 1931 ; .e number of out-patients, however, had shown a con- derable increase—48,165, as against 42,602 in 1931. The verage daily number of in-patients had been 588, with rty-six at the David Elder Auxiliary Hospital. The verage cost per patient had been £6 13s. 2d., or 7s. 5d. er day, as compared with 7s. 7d. in 1931. There were ow 128 endowed beds in the infirmary, including the six hich had been added during the year.

Central Midwives Board

At the last meeting of the Central Midwives Board or Scotland Dr. James Haig Ferguson was re-elected hairman and Dr. R. C. Buist deputy-chairman. The neeting appointed other committees and also examiners or the ensuing year, and approved, subject to inspection by the Board, the list of recognized institutions, with e teachers attached thereto, for the training of mid- wifery nurses. The examinations of the Central Midwives oard for Scotland, held simultaneously in Edinburgh, Glasgow, Dundee, and Aberdeen, have just concluded with the following results: out of 145 candidates 133 passed. Of the successful candidates twenty-eight were trained at the Royal Maternity Hospital and thirteen at the Elsie Inglis Memorial Hospital, Edinburgh ; thirty- four at the Royal Maternity Hospital, eight at Stobhill Hospital, two at the Eastern District Hospital, and two at the Western District Hospital, Glasgow ; seven at Govan Maternity Hospital ; fifteen at Bellshill Maternity Hospital ; two at Barshaw Maternity Hospital ; three at Motherwell Maternity Hospital ; one at the Royal In- firmary, Perth ; six at the Maternity Hospital, Aberdeen ; nine at the Maternity Department, Royal Infirmary, Dundee ; two at the Deaconess Hospital, Edinburgh ; and the remainder at various recognized institutions.

England and Wales

Hunterian Society Dinner

A festival dinner to commemorate the 205th anniversary of the birth of John Hunter took place at the May Fair Hotel under the auspices of the Hunterian Society on February 9th. Dr. Nathan Raw, president of the society, occupied the chair, and the occasion was graced by the presence of the Lord Mayor of London, the Lady Mayoress, and the Sheriffs. Other guests included Lord Riddell, Sir Stanley Jackson, lately governor of Bengal, Sir Henry McCardie, Sir Holburt Waring, president of the Royal College of Surgeons, Dr. J. S. Fairbairn, president of the British College of Obstetricians and Gynaecologists, and the presidents of various London medical societies. "The Memory of John Hunter" was silently pledged. In pro- posing the health of the Lord Mayor and Corporation, Dr. Thomson Brown alluded to the long association of the Hunterian Society with the City of London, within whose narrow boundaries it had nearly always held its meetings. Sir Percy Greenaway, in response, referred to the same association, and mentioned that one of his predecessors, Sir Thomas Crosby, the first medical practitioner to reign at the Mansion House, was president of the society fifty years ago. The health of the society was proposed by Sir Stanley Jackson, who, after referring to the great benefits John Hunter had conferred upon the race, spoke of facts which had come under his observa- tion in Bengal illustrating the progress of scientific medi- cine. He paid a tribute to the surgeons of India, civil and military alike, and to the directors of public health, British and Indian, who had had laboriously and un- ceasingly to contend not only with physical and climatic difficulties, but with fear, suspicion, and superstition amongst the people. The result of their labours was apparent in a greatly lessened mortality in India and an improvement in communal health. The Indian had been taught to appreciate the value of sanitation, hygiene, and inoculation, to help him to resist the ravages of cholera, malaria, and small-pox. Dr. Nathan Raw, in responding on behalf of the society, thanked four men in particular for their contributions to the success of the society— namely, the honorary secretaries, Mr. Andrew McAllister and Dr. M. H. Oldershaw, the treasurer, Dr. Irwin Moore, and Dr. Mortimer Woolf, the warden of the Hunter relics. Dr. Raw then proposed the health of the guests, to which two responses were given—one from Sir Henry McCardie, very graceful and complimentary to the company, and the other from Lord Riddell, full of amusing persiflage.

New Headquarters of the Royal Institute of Public Health

To signalize the removal of the Royal Institute of Public Health to new headquarters in Queen Square, Bloomsbury, Lord Leverhulme, the honorary treasurer, and Lady Leverhulme held an "At home" on February 7th, when the Institute was thrown open to inspection. Those who remember its former home, which was an adapted private residence in Russell Square, were very conscious of the contrast between those cramped and in some ways unsuitable quarters and the splendid home which the Institute has now been able to secure for itself. It is stated that the accommodation for students has been practically doubled, and certainly the spaciousness, the equipment, and the provision for natural lighting of the laboratories, which are designed for individual teach- ing, leave nothing to be desired. The building, which is the only one on the north side of Queen Square, is a fine architectural addition to the university quarter of London. Of the four main floors of the Institute, the ground floor consists of reception rooms and offices, with the impor- tant reference library ; the first floor, of lecture room and class rooms, with every provision for demonstration ; the second floor, of chemical laboratories ; and the third floor, of a fine suite of bacteriological and serological laboratories. With largely extended accommodation the Institute can better suit the requirements, as to hours of teaching, of those already engaged in practice who are intending to take the D.P.H. or the M.D. (State Medicine). Research in connexion with the Beit Memorial Fellowship is also undertaken, and practitioners and others are en- couraged to make use of the facilities of the Institute for original research in preventive medicine, bacteriology, epidemiology, and immunology. A consulting room has been arranged for the benefit of practitioners in con- nexion with laboratory examinations. A large and impor- tant branch of the work of the Institute is concerned with the analysis of food, water, and sewage on behalf of public authorities, and the making of Wassermann and other tests for hospitals and practitioners ; in the latter field the scope of activity of the Institute is likely to be greatly increased in consequence of its removal and modernization.

Vaccination Officers at Hospitals

It is proposed to continue indefinitely the arrangement made with the council of every metropolitan borough (except Bermondsey, where the work is done by a general practitioner) in which a hospital or institution under L.C.C. management is situated, for the medical super- intendent or medical officer to act as public vaccinator therein. The fees payable under the Vaccination Order to public vaccinators are refunded to the council by members of its staff who act in that capacity.

CORRESPONDENCE

Sir Robert Jones Memorial

SIR,—The death of Sir Robert Jones of Liverpool has taken from us one of the most distinguished of English surgeons, the creator of modern orthopaedic surgery, and the founder of the British School of Orthopaedics. Many of his colleagues, patients, and friends feel that a last tribute should be paid to his memory in recognition of his services to the cause of surgery and to multitudes of patients, and to recall his service to the Army during the great war.

Sir Robert Jones was regarded throughout the world as the greatest orthopaedic surgeon of all time; and it is only fitting that his supreme merit should be recognized in this way, and that his example should constantly be brought to mind as an incentive and encouragement to those who come after. It is hoped to be able to arrange to include in our benefactions Liverpool, the Royal College of Surgeons of England, and perhaps other bodies with which he was associated, if, as we feel sure will be the case, an adequate sum of money is received in response to this appeal. Subscriptions should be sent to Mr. A. S. Blundell Bankart, 58, Harley Street.—We are, etc.,

DERBY	GEORGIANA BULLER
ARTHUR STANLEY	A. G. HUNT
HOLBURT J. WARING	W. J. MAYO
MOYNIHAN	C. H. MAYO
E. FARQUHAR BUZZARD	W. E. GALLIE
W. LANGDON BROWN	ARTHUR STEINDLER
J. W. DOWDEN	WILLIS C. CAMPBELL
FRANK CRAWLEY	DE FOREST P. WILLARD
HAROLD B. FAWCUS	V. PUTTI
WICKLOW	G. NOVÉ-JOSSERAND
WINIFRED PORTLAND	MURK JANSEN
A. F. LONDON	H. A. T. FAIRBANK
ALBERT LIVERPOOL	R. C. ELMSLIE
H. R. HURTER	W. ROWLEY BRISTOW
ALFRED GATES	G. R. GIRDLESTONE
H. J. W. HETHERINGTON	HARRY PLATT
HAROLD STILES	NAUGHTON DUNN
R. E. KELLY	D. MCCRAE AITKEN
CHARLES J. MACALISTER	S. T. IRWIN
W. I. DE C. WHEELER	T. P. MCMURRAY
C. THURSTAN HOLLAND	A. S. BLUNDELL BANKART
D. P. D. WILKIE	

London, W.1, Feb. 9th.

Psychology in the Curriculum

SIR,—In recent discussions of psychology in relation to the medical curriculum there seems to be an element of confusion arising from the introduction of issues which do not bear on the fundamental problem. It is true that there are many points upon which psychologists themselves do not agree, and that psychology is not considered by all "a science as anatomy and physiology are sciences." It is also evident that the medical curriculum is already overburdened, and that it is not to be improved simply by extension. For practical reasons definite limits must be set to the ground which the medical student can cover; yet something is obviously lacking in his training. At present he gains little assistance in understanding more than the impersonal factors of disease, whereas he should be well equipped to take account of the more complex functions which make up the personality.

In answer to Dr. McBride's questions in your issue of December 31st, 1932, I would suggest that when introducing psychology to the medical student there is no need to dwell upon "the structure and function of the mind," nor is it necessary to teach psychology in "theoretical or experimental" form. It seems reasonable to assume that a fundamental understanding of the importance of the whole personality can be introduced by means of relatively few lectures in association with the teaching of biology, physiology, and anatomy. These lectures are best given by the medical psychologist or psychiatrist. Their object is to impress the student from the beginning with the importance of taking an interest in the individual as a whole, rather than merely in the physical organism. When the student commences his study of clinical medicine and surgery he is fortunate if he has for his teachers physicians who consider the total personality of the patient rather than regard him entirely as "an uninteresting vehicle containing some fascinating disease processes" (Bernard Hart). But this is not always the case. The association of medical psychologists or psychiatrists with the medical, surgical, and other units of teaching hospitals has proved of such value in this and other universities that similar arrangements might well be taken into consideration elsewhere. Of course lectures on psychological medicine, which at present are provided for in most universities, are essential to a well rounded curriculum, but in many cases there is much to be desired in the way in which the material is presented —I am, etc.,

RALPH A. NOBLE,
Yale University, Feb. 3rd. *Clinical Professor of Psychiatry.*

SIR,—I have followed with considerable interest the correspondence in your columns, and lament that such an important subject should be the object of controversy between certain schools of thought. The busy general practitioner is not interested in such quibbles; he wants to know what value a knowledge of psychology will be to him, and how it will help him in his daily practice. He may not be a bacteriologist and know about the preparation of vaccines and serums, but the most important thing for him is the knowledge of their use—indications and contraindications, dosage, etc.

Now with regard to psychology the important thing for him to know certainly is not the finer grades of difference between the Freudians, the Adlerians, the Behaviorists, etc., but that there is a relation between the emotional life of his patient and that patient's physical well-being. Cannon has demonstrated beyond any doubt the effect which the emotions have upon bodily function.

Now as to the teaching of psychology in the medical schools, too much stress cannot be laid upon this fundamental relation, and it should be included in the teaching of physiology so that when the student gets into the hospital wards he will be prepared to find that certain physical complaints have only a psychic background, and that there are no physical changes to account for them. If he has progressed so far that he knows the foundations of these nebulous conditions to be in the emotional life of his patient he can make a diagnosis of the condition, and this will stimulate him to demand that teaching should be given in psychotherapy to enable him to deal with such conditions, which he will meet in private practice.

The New York medical schools have at last realized the importance of teaching the student the fundamental principles of medical psychology, and a three months' course is held in the psychiatric clinics, where the students are given a thorough grounding in personality study and the handling of psychoneurotic patients. The new Cornell Hospital has a demonstration centre where the reactions of the alimentary canal to various emotional states (by a system of questioning the patient) are shown to students by means of the barium meal and the fluoroscope. Similar striking demonstrations could easily be given with regard to the cardiovascular reaction to emotions, and also that of the respiratory system. Such demonstrations as these would impress upon the mind of the medical student that there is a relation between

ıe emotional life of his patient and the physical, and ıe indications for treatment would be removal of the notional disturbance rather than the treatment of its ıanifestations.—I am, etc.,

London, N.W.3, Feb. 4th. D. NOËL HARDCASTLE.

Public Health and the Universities

SIR,—It is not often that I venture to question the visdom of the *Journal*, but the views expressed last week ın the functions of universities in public health seem too ınsound to pass uncriticized. I disagree with almost the vhole article, but especially with the last paragraph: "It s most in the public interest for the universities to conınue and increase their teaching of public health to edical students and graduates, and leave the training ɔf non-medical grades in the hands of those who at the resent time are developing it in a manner which promises o be adequate for the purpose in view." This may be e of London, but does it apply equally to the provinces? For instance, can health visitors, infant welfare workers, and the like look elsewhere in the provinces than to the universities for their instructors? No one else is at present developing their training in a manner which promises to be adequate. The education of the non-medical grades of public health workers is a proper function of universities, since they can best provide the teachers and directors of study. To speak of such fields of work as minor distractions brings back to my mind Macaulay's trenchant words on the use of abortives by the Roman matrons, who took pains to be barren for fear of being homely. An Alma Mater had better be homely than sterile.—I am, etc.,

Bristol, Feb. 11th. J. A. NIXON.

Haemopoietic Hormone in Pernicious Anaemia

SIR,—I must thank Dr. Roger S. Morris for his thoughtful and courteous reply to my criticisms (February 4th, p. 202). Being still unconvinced, I have carefully re-read the six almost identical papers that have been published during the last twelve months by Dr. Morris and his colleagues; in each of them full details of preparation and properties of "addisin" have been promised, or cross-references have been made to one or other of these papers, but as yet I have failed to find the details. The only definite clinical data given for their methods of testing the potency of "addisin" have been two cases (*British Medical Journal*, 1932, ii, 1050; *Journ. Amer. Med. Assoc.*, 1933, c, 171); these presumably were their best cases for illustrative purposes. Case I (the same in both papers) was treated with a single dose of "addisin" (variously reported as 4 and 5 c.cm. of concentrated juice), and in fourteen days the red cells had risen by only 200,000 in one paper and 600,000 in the other, while the haemoglobin increased by 5 and 9 per cent. in the two papers respectively—no more than could occur by ordinary variations without treatment, or through errors in estimation. Case II was treated the day following admission to hospital without any preliminary control period, but with similar degrees of response to Case I. I have repeatedly pointed out (*British Medical Journal*, 1932, i, 325) that no clinical trials of potency of anti-anaemic substances can be accepted unless certain criteria are fulfilled—two of the most important of these being a true case of pernicious anaemia in relapse, and spontaneous remission to be excluded by a preliminary control period of seven to ten days without treatment. For this reason, from my own experience of 400 cases, considerably less than 50 per cent. have been suitable for such tests. This is the common experience of those engaged on this type of experimental work. Thus I must disallow Case II as evidence of a satisfactory clinical trial. Case I speaks for itself.

Dr. Morris claims support from Zerfas (I have no knowledge of this case) and Conner. Of the latter's case I have seen only the details reported on his behalf by Giffin (*Trans. Assoc. Amer. Phys.*, 1932, xlvii, 242), who was unable to explain the peculiar results that were obtained; nor were they so clear as Dr. Morris would have us believe. I can show similar results following the use of deliberately inactivated stomach products, iron, and even hydrochloric acid. Dr. Morris cannot assume that "addisin" did not contain the liver principle because "boiling inactivates concentrated juice, while the active principle of liver is unaffected by boiling." I can assure him that boiling will inactivate the active liver principle in low concentration, such as might occur under the apparent conditions of isolation of "addisin" from swine juice; ignorance of this fact is one of the reasons for so many inactive batches of parenteral liver extract being offered to the medical practitioner. I suggested that the secretion of "addisin" into the stomach of patients with pernicious anaemia after parenteral injection was improbable, and therefore did not make the "unwarranted assumption."

It is truly remarkable that, while it is easy to produce remissions in pernicious anaemia by giving orally only 300 c.cm. of gastric juice incubated with beef (cf. Castle), Dr. Morris finds it necessary to give parenterally not a fraction of that, but 5,700 c.cm. (Case II)—and yet he would have us believe that this is the most potent treatment of all. Using liver preparations, on the other hand, I. and many others, have shown that parenteral treatment enables one to give relatively minute doses as compared with the more massive oral doses. I quite believe that Dr. Morris may have inactivated gastric juice during concentration, but it would more likely be due to the temperature of 40° C. and the acidity rather than the neutralization. Contrary to his statement neutralization does not inactivate the anti-anaemic principle, and his difficulty in concentrating such neutral solution can be readily overcome by methods well known to scientific workers. On the other hand, the concentration of 5,700 c.cm. of normal gastric juice containing, say, 0.4 per cent. hydrochloric acid to 7 c.cm. without neutralization (Dr. Morris) would give a constant-boiling acid solution of amazingly high acid concentration, and it would be interesting to know how such a delicate substance like the anti-anaemic principle could survive.

Dr. Morris confirms my suspicion that his so-called swine gastric juice was obtained post mortem, and he has therefore no evidence that it did not contain cellular constituents and post-mortem products in addition to the products of reaction of gastric juice and the food which was present. He has thus not demonstrated that the active product from this swine juice mixture is other than the reaction product of "intrinsic and extrinsic factors" (Castle) pre- and post mortem. Dr. Morris obtained similar responses with "addisin" derived from dogs' gastric juice. This is again most interesting, for 450 c.cm. of normal human gastric juice failed orally, while twelve and a half times that quantity (5,700 c.cm.) was required parenterally to produce remission (?) in one case; yet Coggeshall (*Proc. Soc. Exp. Biol. and Med.*, 1929–30, xxvii, 1044) failed to get a response following the oral administration of 12,000 c.cm. of dogs' gastric juice; proportionately, therefore, Dr. Morris should have required the ridiculous quantity of 150,000 c.cm. intramuscularly.

Dr. Morris misquotes Williams and Vanderveer, who administered the *incubation product* of calves' stomach contents and beef (cf. Castle), and not calves' stomach

juice—a fundamental difference. Obviously, herbivorous animals have some mechanism for producing blood components, but it is not surprising that this may be different from that in the protein-feeding animals. I have fed desiccated stomachs of ox and sheep in much larger doses than are required with hogs' stomach to some eleven adequately controlled patients with negative results (*British Medical Journal*, 1932, i, 325).

Concluding, Dr. Morris has not yet produced any satisfactory evidence that "addisin" is a hormone or that "haemopoietin" is not an "enzyme-like" substance. We believe that "haemopoietin" is very similar to, if not identical with, Castle's "intrinsic factor"—the necessity for a substrate for its satisfactory action having been amply demonstrated. If the brilliant researches of Castle and the later work from this department are correct, then the evidence is strongly in favour of an "enzyme-like nature" and not a hormone. "Haemopoietin" is most certainly not identical with the "addisin" in so far as it is described by Dr. Morris and his colleagues. They have promised full details in each of their six papers, and we await them with interest. Our further results with "haemopoietin" are already in the press.—I am, etc.,

JOHN F. WILKINSON.

Department of Clinical Investigation and Research, University of Manchester, Feb. 9th.

Chronic Pulmonary Tuberculosis

SIR,—I have read with great interest Dr. R. C. Wingfield's paper in your issue of February 4th (p. 179). Dr. Wingfield's conclusions are as follows:

"We must realize that symptomatology and physical signs are no guide at all to the state and behaviour of a secondary or an intermediate lesion in their early and curable stages. This is an essential fact, and without its realization all our efforts at treatment will fail. Further, if we cannot prevent the recurrence of secondary lesions, we must again admit almost a 50 per cent. failure. Therefore let us no longer label our patients as tuberculous and non-tuberculous—and the tuberculous as active or inactive, advanced or incipient—and herd the large proportion into a sanatorium, hoping for the best when we know that for the majority the worst will occur. The reactionary continuance of such a policy should hold us up to ridicule; it wastes public money, and imposes hardships on our patients to no useful end."

What, then, are we to do? If I understand Dr. Wingfield aright his suggested reform is outlined in the following quotation:

"If there is no appreciable intermediate element it is essentially the case for home, hospital, symptomatic, or climatic treatment. It is the one in which the patient must be taught to realize his limitations. *Neither rest, nor sanatorium treatment as we know it, will have any effect upon the lesion at all*, and if sanatorium treatment is given it should be regarded strictly as a convalescence. The latter can be much more cheaply and pleasantly exhibited if the ponderous sanatorium machine is not used."

Surely the problem of dealing with the tuberculous, and more particularly the chronic tuberculous, patient cannot be decided on the basis of a separation of what may be called good and bad cases. If more patients are, as apparently Dr. Wingfield recommends, to be sent "home," this can only be done after a careful and first-hand consideration of the home conditions. We now know that the death rate from non-pulmonary tuberculosis of children exposed to risk in tuberculous households from an adult with positive sputum is greatly in excess of the rate from the same cause in children serving as the "control," the rate being nine times greater in the age group 0 to 1 year, fourteen times greater in the age group 1 to 2 years, and nineteen times greater in the age group 2 to 5 years. This great excess of deaths from non-pulmonary tuberculosis is mainly due to tuberculous meningitis, which accounts for two-thirds of the mortality in the non-pulmonary group, ages 0 to 5 years (*Tubercle*, August, 1929). This again brings out the importance of the physician in charge of tuberculous patients combining in himself the two sides of tuberculosis work—the institutional (sanatorium) and the public health or dispensary side.

Dr. Wingfield recommends that more patients should be sent to "hospital." What does he mean by this? Public assistance hospitals, or *ad hoc* tuberculosis hospitals? That much good—in diagnosis, prevention, and treatment—would result if throughout the country far more tuberculosis officers had their own hospitals or wards in public assistance hospitals is very probable. But it is unlikely that much money would be thereby saved in the first few years. The superintendent of a sanatorium is always wishing to have his institution cleared of chronic and advanced cases. While very understandable, this does not help in the prevention and treatment of tuberculosis as a whole, for on this basis some tuberculosis institutions would be filled with hopeless cases, with the result that patients would refuse to stay in them. Experience has shown that, by the use of *x* rays and modern methods of treatment in tuberculosis institutions—not too big, situated near the patients' homes, in charge of the tuberculosis officer, and taking all types of pulmonary cases—*prevention* and treatment go hand in hand, and the title given to the institution—hospital or sanatorium—is of little importance.—I am, etc.,

G. LISSANT COX,

Preston, Feb. 13th. Central Tuberculosis Officer, Lancashire.

Radiological Demonstration of Sinusitis

SIR,—As one who has given an extended trial to Dr. Graham Hodgson's methods of standardized radiological technique in the diagnosis of nasal sinus disease, I would like to express my personal appreciation and to emphasize the accuracy and importance of his work and teaching as described in your issue of January 7th.

The indifferent results obtained by the older methods of examination were indeed discouraging, and many laryngologists were, as he remarks, disinclined to place any reliance upon the results obtained, or in many instances even to refer their doubtful cases to the radiologist. Now it is just in these latent and doubtful cases of nasal sepsis that the laryngologist requires help, and I have found that the application of Dr. Hodgson's method, carried out with the apparatus he has designed, is of such incomparable advantage as to constitute a *sine qua non* in the diagnosis of all but the most manifest cases of nasal sinusitis. Apart from the gratifying help which I have frequently obtained by the accurate application and interpretation of Dr. Hodgson's methods by my colleague Dr. J. Fielding of the radiological department of the North Infirmary, Cork, these methods have given me a practical proof of a conviction which I have long held and successfully applied—namely, that latent ethmoiditis is perhaps the most frequent form of chronic nasal sinus infection, and that it almost invariably accompanies latent or manifest maxillary sinusitis. The practical importance of this deduction is obvious.

In conclusion, I would like to reiterate Dr. Hodgson's assertion that the principles underlying his method are both logical and obvious, and that it offers a very wide field of work for helpful co-operation between the laryngologist and the radiologist.—I am, etc.,

Cork, Feb. 10th. J. B. HORGAN.

. . . of Tuberculosis in Cattle in Jersey

SIR,—Dr. Draper Bishop's letter under the above heading in the *Journal* of February 4th (p. 204) appears to require an answer to the two questions raised.

The first is the apparently wrong impression created by the extract from the *Times*. It is true that a law was passed recently in the Jersey States prohibiting the import of cows, heifers, calves, bulls, etc.; but this recent law, when sanctioned by His Majesty in Privy Council, will supersede previous enactments, of which the following may be mentioned: (1) Law prohibiting the importation of cattle from France, dated March 18th, 1826. (2) Law on the introduction of cattle from abroad, dated September 8th, 1864. (3) Law prohibiting the importation of cattle, dated July 25th, 1884. It will be seen that the importation of cattle into Jersey has been forbidden by law for over one hundred years.

In the recently passed law, in Article 25, a loophole was left whereby native cattle might have been allowed the right of re-entry; happily, on the reading of the law in the States, reintroduction of cattle was absolutely ruled out.

With reference to the question of the figures for the testing of cattle the following figures have been kindly supplied by Mr. A. Le Sueur, M.R.C.V.S., States Veterinary Officer.

"Report of Tuberculin Testing of Island Jersey Cattle: by both methods (double intradermal and subcutaneous). From January, 1927, to December 31st, 1932, 5,300 head were tested, of which twenty-five head gave either high temperatures or skin swellings and were rejected. Post-mortem examinations were held on several of those rejected, with negative results as to tubercle."

Figures prior to 1927 were given in a paper by me, to which reference was made in my letter of January 21st.—I am, etc.,

P. JANVRIN MARETT,
Jersey, Feb. 6th. M.O.H., States Jersey.

Undulant Fever: Corrigendum

SIR,—In the account of a joint meeting of the Section of Epidemiology and State Medicine and the Section of Medicine of the Royal Society of Medicine to discuss undulant fever, which appears in your issue of February 4th (p. 186), you refer three times to my series of *eighty-three* cases of this disease appearing in England and Wales. The series of cases of which I gave a brief analysis from the epidemiological aspect at this discussion consisted of 115 cases, and I can only suppose that your reporter still had in mind the smaller series which I reported at the Annual Conference of the National Veterinary Medical Association at Folkestone last summer. It is of some importance that the total number of cases with which I dealt should be given correctly, as otherwise the percentages for deaths, drinking of raw milk, etc., would work out wrongly. It should be noted that this series of 115 cases (which since the meeting has swollen to more than 140) includes only cases of endemic origin occurring in England and Wales, whereas the series of 136 cases reported by Professor G. S. Wilson at Folkestone also comprised some which had occurred in Scotland and Ireland.

Though I make every endeavour to obtain particulars of all cases occurring in this country, I have every reason to believe that many cases still escape me, but I hope that the increasing interest taken in this disease and the preponderating part played by cow's milk in its spread may bring an ever-increasing proportion of cases to light, and so enable a more correct idea of its incidence to be obtained.—I am, etc.,

London, W.1, Feb. 7th. W. DALRYMPLE-CHAMPNEYS.

Caesarean Section in Pre-eclamptic Toxaemia

SIR,—I should like to thank Dr. Mitchell and Dr. Sophian for their comments on my article. I feel, however, on reading them that perhaps I did not make it as clear as I intended that I do not advocate Caesarean section in all cases of severe pre-eclamptic toxaemia, but rather in those exceptional cases in which the onset of eclampsia appears to be too imminent to allow time for the induction of labour. It is in this type of case that the treatment seems entirely justified by results, and to which it should, with few exceptions, be limited.

The point put forward by Dr. Sophian as to how long the milder cases of toxaemia should be allowed to continue—*I take it he does not here refer to the severe ones*—is perhaps rather a side issue. But as it has been raised I should like to reply that in my own experience it is rare for mild toxaemic symptoms to persist for as long as three weeks when the patient is adequately treated and has had no similar trouble before; the question, therefore, of terminating pregnancy in such cases seldom arises, and when it does it is almost always so late in pregnancy that it could have no adverse effect on the child. But the results published by those who have investigated the effect of prolonged toxaemia on the kidneys in a subsequent pregnancy are to me so convincing that I should hardly ever feel justified in allowing a patient for whom I was responsible to continue with this condition for more than three weeks.—*I am, etc.*,

MARGARET M. BASDEN, F.R.C.S., F.C.O.G.
London, W.1, Feb. 6th.

Avitaminosis A

SIR,—With reference to the last lines of the paragraph describing the effect of avitaminosis on epithelium in Dr. J. B. Ellison's article in the *Journal* of October 15th, 1932, may I have a little space to state that it is not difficult in most of the cases to recognize a child suffering from avitaminosis A. Muddy appearance of the eyes is caused by dirty yellow thickening of the exposed parts of the bulbar conjunctiva, and by a senile arc-like encroachment of the upper part of the cornea by a thin band of translucent epithelial film, which is fringed at its lower margin with pin-point pits in more marked cases. These changes are apparent before the onset of keratomalacia. Bright sparkling eyes of a well-fed child stand out in marked contrast to the muddy eyes of a poorly fed one. I demonstrated this fact before the third annual gathering of the Punjab Branch of the British Medical Association (vide Proceedings of the Junjab Branch, third annual meeting, published in the *Supplement* of the *Journal* of June 15th, 1930).

Another observer, in the Indian Medical Service, then acting as recruiting officer at Rawalpindi, informed me a few months later that these findings could be seen among the Army recruits coming from ill-fed districts of the salt-range. Formerly he attributed muddiness of the eyes to latent malarial infection, but careful investigation revealed that they were due to avitaminosis A, and they disappeared in a few months with better feeding. My observations were carried on mostly in the school children.—I am, etc.,

Limbe, Nyasaland, Jan. 3rd. S. B. SINGH, M.B., B.S.

Pfeiffer's Bacillus

SIR,—In view of the widespread difference of opinion regarding the part played by Pfeiffer's bacillus in influenza the following brief example may be of interest.

On January 24th a laboratory worker here was attacked suddenly with the accredited symptoms of influenza. A swab from the nasopharynx was cultivated on human blood

chocolate agar, and influenza bacilli of the cocco-bacillary type were isolated, which when subcultured on to blood agar gave colonies with fairly well-marked zones of haemolysis. Half a plate of an eighteen-hour chocolate agar culture was emulsified with 3 c.cm. of saline, and 0.1 c.cm. was injected into the ear vein of a 450-gram white male guinea-pig, A, and 0.5 c.cm. intraperitoneally into another, B, of the same weight and type. The first guinea-pig died after thirty-six hours, and the latter, though ill for five days, survived. Both showed signs of toxaemia, and had considerable rhinorrhoea.

Cultures from the two guinea-pigs showed:

Guinea-pig A: Nose, pneumococci; throat, *Streptococcus viridans*; lung, pneumococci (engorgement base of right lung).

Guinea-pig B: Nose, influenza bacilli; throat, pneumococci.

The influenza bacilli obtained from B showed the same cocco-bacillary morphology as that previously inoculated. The investigation is still proceeding.

—I am, etc.,

M. M. BARRITT, L.M.S.S.A., B.Sc., Dp.Bact.
Assistant Bacteriologist, West Riding County Council.
Public Health Laboratory, Wakefield, Feb. 7th.

A Prognostic Rule in Influenza

SIR,—The prognosis and treatment of influenza appears to be governed by the following rule: the risk from an invasion of the respiratory tract by an influenzal organism varies in direct relation to the atmospheric conditions which can or may be induced subsequent to the infection.

The greater the alteration from the natural to artificial conditions, however produced, the more serious the prognosis, and the risk increases in proportion to the soothing effect on the mucous membrane which those conditions induce. The greater the alteration from artificial to natural atmospheric conditions the better the prognosis. The risk diminishes in proportion to the effects of increased stimulation to the respiratory tract which those conditions apparently produce. Thus, rapid-moving currents of air are more beneficial than still air. A person leading an outdoor life who contracts infection incurs grave risk when placed in the normal sick-room atmosphere; whereas, if the infection is contracted by a person whose life is mainly passed in a poorly ventilated house, the production of a draught leads to an improvement, generally dramatic.

This rule was deduced from a consideration of certain phenomena of the 1918 influenza epidemic, and which were published in the *British Medical Journal* of October 25th, 1919. Opportunities for further investigation have been afforded during the epidemics of 1922, 1927, 1929, and the present one, and the application of the rule has justified one in a reasonable confidence in it.—I am, etc.,

A. GARVIE.
Halifax, Feb. 13th.

Treatment of Influenza

SIR,—In view of the heavy death rate attributed to influenza during the recent epidemic I should like to record my own experiences, in general practice in a wholly industrial area, with S.U.P. 36. Although I have used this drug for some years in catarrhal conditions and other suitable cases, this is the first time I have employed it in an epidemic. It has given complete satisfaction as a drug on which one can rely for positive results, with no ill effects or contraindications. I used it only in cases which appeared to be more severe than the average; in almost all one dose was sufficient to bring the temperature down to normal in twenty-four hours. The aged usually responded as well as the young.

Two cases of influenzal pneumonia occurred: in each case two doses of S.U.P. 36 were followed by a drop to normal temperature on the third day and rapid clearing up of physical signs. Three cases had symptoms of commencing mastoid infection: in each these symptoms had disappeared next day. Three patients were already under treatment for active pulmonary tuberculosis: all recovered quickly from their influenzal attacks without appreciable ill effect on their pulmonary condition.

While I admit that the experience of an individual practitioner is not final proof of the efficacy of a drug it may encourage others to become convinced by trying it themselves, and thus, I believe, saving many lives. S.U.P. 36 is not expensive, and it is, I understand, of British manufacture.—I am, etc.,

J. ERNEST STRATTON, M.D.
London, S.E., Feb. 9th.

SIR,—During the recent influenza epidemic I have given one or two subcutaneous injections of 7½ minims of a proprietary brand of vitamin A and D concentrate (equivalent to 20,000 international A units, and 1,000 international D units) to cases of threatened pneumonia, some twenty-five in all, with apparent benefit.—I am, etc.

W. L. ENGLISH.
Crewe, Feb. 12th.

Recovery from Pneumococcal Meningitis

SIR,—We thank Dr. Arthur F. Hurst for his kind interest in our article on a case of pneumococcal meningitis (February 11th, p. 246). We are interested to read of his still more remarkable case which was published in 1911, but we note that he does not state what happened to the many cases he must have seen since that time. In Price's *Textbook of Medicine* (1928 edition), to which Dr. Hurst is a contributor, we find the following statement with regard to pneumococcal meningitis: "No case of recovery from this form of meningitis has hitherto been recorded." This is, of course, untrue, but such information encouraged us to believe that our case was worthy of record.—We are, etc.,

J. MCAULEY.
F. M. HILLIARD.
Blackpool, Feb. 12th.

Medical Women and the G.M.C.

SIR,—The letter which you published last week, written by Dr. Jane Walker and Dr. Letitia Fairfield, suggesting the desirability of the election of a woman member on the General Medical Council, we feel sure voices the opinion of all medical women. It seems appropriate that, as women now share in the work of all branches of medicine, a place should be found for one of them on such a thoroughly representative body. Candidates are available whose opinion and advice could not fail to be of value in many matters which come within the province of the General Medical Council.—We are, etc.,

RUTH NICHOLSON.
MARGARET JOYCE.
VERA FOLEY.
Liverpool, Feb. 13th.

Adenoma of the Pancreas

SIR,—In your account of the meeting of the Association of Clinical Pathologists, in the *Journal* of February 11th (p. 229), a case of adenoma of the pancreas causing hypoglycaemia, presented by my colleague Dr. Murray, is reported as having been in the Archway Hospital. In fact the patient was in St. Mary, Islington, Hospital. I rectify the mistake as the case has already been fully recorded by Dr. W. G. Barnard in the *Journal of Pathology and Bacteriology*, and it may be that someone referring to the literature in the future may be led into

error. As this was, I believe, the first case in this country in which the diagnosis was made during life and subsequently confirmed, I would add that the credit for making the diagnosis belongs to Dr. B. Barling, under whose care the patient was.—I am, etc.,

G. W. GOODHART.

Group Laboratory, Archway Hospital, N.19,
Feb. 11th.

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons this week read the London Passenger Transport Bill a third time, and also discussed unemployment. In the House of Lords the Protection of Birds Bill was read a second time.

Powers of the Medical Referee

The Workmen's Compensation Bill, which was brought up for second reading on February 10th by Mr. John, was rejected by 133 to 40. In explaining the Bill, Mr. JOHN said it would give the workman a right of appeal against the decision of a medical referee to a panel, or to three medical referees appointed from a panel of medical experts. He declared that the present powers of the medical referee were too great, and that shocking injustices had been done. Mr. STANLEY, speaking for the Government, opposed the Bill, but said there were grave complaints about the existing system. Many points could be dealt with without a radical alteration of the whole system.

All-India Medical Council

On February 13th Sir SAMUEL HOARE told Mr. John that a resolution passed at the All-India Medical Council, held at Lucknow, requesting the Government not to proceed with the All-India Medical Council Bill until such time as the Federal Legislature was duly constituted, had not reached him.

Transport Bill

The London Passenger Transport Bill was considered on the report stage in the House of Commons on February 13th. Colonel HEADLAM moved to leave out Clause 53, which proposed that Section 35 of the Road Traffic Act, 1930, should not apply to a vehicle owned or used by the London Passenger Transport Board at a time when the vehicle was driven by a servant of the Board in the course of his employment or was otherwise subject to the control of the Board. He said that his amendment would carry out a pledge which was given in the committee stage. Sections 35 and 36 of the Road Traffic Act, 1930, imposed obligations to provide against liability in respect of third-party risks either by a policy of insurance or by underwriting, involving the giving of security as defined by Section 37 of the Road Traffic Act, and depositing the sum of £15,000 with the Accountant-General of the Supreme Court. The removal of Clause 53 from the Bill really put the Board in the same position as any other persons who owned motor vehicles. Under Section 36 of the Road Traffic Act insurers were subject to a further liability to pay to a hospital which had given treatment to any person injured by their vehicles reasonable expenses up to the sum of £25. He hoped that the elimination of the clause would give satisfaction to members. The amendment was agreed to and the clause struck out. The Bill was reported to the House.

On February 14th the Bill was read a third time after further debate.

Massage and Special Treatment Establishments.—On February 8th the Cancer Hospital (Free) Bill, the Samaritan Free Hospital for Women Bill, and the Essex County Council Bill were presented in the House of Lords and read a first time. The Essex County Council Bill provides, among other things, for the licensing of establishments for massage or special treatment. There is a saving clause for establishments carried on by medical practitioners. No petitions have been lodged against the two hospital Bills, but a large number have been presented by public bodies and companies praying to be heard if the Essex County Council Bill goes to a Select Committee.

Massive Radium: Report of Recent Conference.—Replying to Mr. Leckie, on February 9th, Sir HILTON YOUNG stated that the conference on massive radium was not summoned by himself, but by the President of the Royal College of Physicians and the President of the Royal College of Surgeons. The report of the conference would receive the attention of the Radium Commission and other bodies directly concerned with the therapeutic application of radium.

Pay of the Superior Services in India and Cost of Living.—Sir SAMUEL HOARE presented in the House of Commons on February 8th an Indian Pay (Temporary Abatements) Bill "to extend the period in respect of which abatements from pay may be made under the Indian Pay (Temporary Abatements) Act, 1931, subject to a reduction in the percentage to which such abatements are limited."

On February 14th Mr. MOLSON asked the Secretary of State for India what was the index figure of the cost of living in India when the Lee Commission recommended the present salaries of the superior services, the index figure when the 10 per cent. cut was imposed, and the index figure at present. Sir SAMUEL HOARE replied that the working-class cost of living index figure for Bombay at the required dates was as follows (July, 1914, = 100): April, 1924, 150; January, 1932, 110; December, 1932 (latest figure), 110. This Bombay index figure was on the whole the most satisfactory figure maintained in India, but it was unaffected by variations in the cost of imported stores, and could not be applied without qualification to the case of members of the superior civil services in Bombay or elsewhere.

Slums in Scotland.—The Housing (Financial Provisions) (Scotland) Bill was read a second time on February 9th, and committed to Standing Committee. In moving the second reading Mr. SKELTON said that between 1921 and 1931 the total Scottish population did not increase, but there were increases up to 6 per cent. in the great cities. The main problem in Scotland, therefore, was not one of dealing with a rapidly expanding population, but a problem of slums and overcrowded areas. The work of slum clearance would go on unchecked. Between 1923 and December 31st, 1932, 20,000 slum houses had been closed in Scotland and 19,000 houses built to replace them. Another 10,000 houses were now under construction or approved for replacing slum houses.

A "Remedy" for Tuberculosis.—Sir HILTON YOUNG told Mr. David Grenfell, on February 9th, that he had not been furnished with any further records of the "umckaloabo" treatment of cases of tuberculosis. He could not consider the application of this remedy in a test to be carried out under the supervision of his Department. No further test would really be justified at the public expense. With regard to voluntary tests, there might be no objection, but he had no control. He added he could certainly confirm Sir Francis Fremantle's statement that it was essential to be careful regarding patent medicines which were advertised with a view to the profit of the advertiser

Housing of Tuberculous Families.—In reply to Mr. McGovern, on February 9th, Sir HILTON YOUNG said he was advised that under the Public Health (Tuberculosis) Act, 1921, county and county borough councils already had power to assist or arrange for the proper housing of families who had members suffering from tuberculosis, and that full use was made of the power of selection by local authorities for dealing with tuberculous families. If any particular case was in question he would gladly go into the details.

Foot-and-mouth Disease Outbreak at Reading.—On February 13th Major ELLIOT, replying to Sir G. Fox, said that since January 8th thirty-three outbreaks of foot-and-mouth disease had been confirmed. Of these, twenty-seven were directly or indirectly attributable to infection contracted at loading banks at Reading on January 5th and 6th. He regretted it had not been possible to discover the original cause of these or of the remaining six outbreaks. The compensation payable amounted to £34,895. He informed Sir C. Cayzer that a certain risk attached to the feeding of remnants of bacon to pigs, but the Ministry, in its investigations, had found no reason to suppose that recent outbreaks had been due particularly to this cause. Food containing remnants of bacon (as of other meat) must, under an Order of 1928, be boiled for an hour before being fed to pigs.

most outstanding characteristics, and he was loyal and staunch through all vicissitudes. None loyal to his memory would wish it to be known how many times he befriended those in trouble, but there are many sad hearts at his passing and many among his poorest dispensary and hospital patients. Parkin was very fond of children, and his affection for them was reciprocated. He took no part in sport, but was very fond of motoring and loved the country and country affairs. It was a delight to accompany him to a country consultation ; there was never a dull moment on such a journey, for he knew the North Country well, and he found great interest in all around him. His was indeed an intimate place in the profession, for he always gave of his very best irrespective of the social position of the patient and of time and distance. In consequence he was trusted by a large and ever-widening circle, and was often the " doctor's doctor," than which no higher compliment can be paid. There is no doubt that he gave of himself and that he was often a tired man, for though a little chary of undertaking certain work he gave his whole soul to the job in hand. Others may have taken more part in public affairs, been more active on committees and in learned societies, but no one did his daily work and that which was most directly to his hand with greater devotion and more conscientiously than Alfred Parkin. His passing is a great loss to this district—no less to his numerous patients than to his colleagues. His quiet and unassuming yet resourceful ways engendered that " love and faith which failure cannot quell," and the very large concourse at the interment was an evidence. He is survived by a widow, but leaves no family. Great sympathy is felt for this lady, for they were most devoted ; also for his mother, an old lady of 97, who was his constant care, and for the other surviving members of the family.

G. GREY TURNER.

Sir THOMAS OLIVER writes:

A week ago a wave of sorrow passed over Newcastle-upon-Tyne and the North of England owing to the comparatively sudden death of Dr. Alfred Parkin. As one of his old teachers, and as he was my assistant physician and succeeded to my ward on my retirement from the Infirmary, I feel that I must give expression of my sense of personal regret at the passing of a colleague whom I had known from his student days, and with whom I had worked closely and amicably for several years. Dr. Parkin had a refined and cultured mind: he remained a student in the best sense of the term: he knew his work well and yet was never obtrusive. He was regarded by medical practitioners as a sound and reliable consultant, and had, therefore, a large following. By the students he was held in high esteem as a teacher of clinical medicine. The thoroughness with which he examined his patients and the sympathetic regard he extended to them endeared him to all with whom he was professionally brought into contact. I do not think Dr. Parkin ever harboured an ill feeling towards anyone. Much sympathy is felt for his widow.

[The photograph reproduced is by James Bacon and Sons, Newcastle-on-Tyne.]

H. L. WATSON WEMYSS, M.D., F.R.C.P.ED.

Assistant Physician, Edinburgh Royal Infirmary

The death took place on February 3rd, from pneumonia, of Dr. Herbert Lindesay Watson Wemyss, one of the assistant physicians to the Royal Infirmary of Edinburgh. He was born at Broughty Ferry in 1885, his father being in medical practice in that town. His grandfather had been a surgeon to the Royal Infirmary of Edinburgh, and, as a lecturer on clinical surgery, was one of the first persons to devote special attention to diseases of the eye, and to publish, in 1830, a treatise on this subject.

Dr. Watson Wemyss, after an early education at Broughty Ferry and at Marlborough, studied medicine at Edinburgh University, where he graduated M.B., Ch.B. in 1908. After acting as resident physician to the late Dr. G. A. Gibson, he engaged in a period of post-graduate study at Berlin. He proceeded M.D. in 1910, and became a Fellow of the Royal College of Physicians of Edinburgh in 1914. Confining his activities to medical practice, he was appointed physician to the Royal Public Dispensary, Edinburgh, and a tutor in clinical medicine in the Royal Infirmary, to which institution he subsequently became assistant physician, a post which he held at the time of his death. He was also for a time physician to Leith Hospital, and, later, physician to the Deaconess Hospital, Edinburgh. During the war he acted as medical officer to the Red Cross hospital established in Lord Rosebery's residence at Dalmeny House, and later served in Malta. From time to time he contributed papers to medical literature upon such subjects as " Erythraemia, with notes on two cases " (*Edinburgh Medical Journal*, 1911) ; " Renal infantilism " in the same paper, 1922 ; " A case of Vaquez's disease," in the *British Medical Journal*, 1913 ; and " Treatment of the amoebic carrier," in the *Lancet*, 1918.

Dr. Watson Wemyss was one of the most successful and popular teachers in the Edinburgh Medical School, a man of quiet manner, wide culture, and many interests. For a number of years he took considerable interest in the Harveian Society, a historic dining club which was founded by Andrew Duncan at the end of the eighteenth century, and for many years acted as its secretary. He was a keen golfer, and as secretary to the Royal Colleges Golf Club interested himself greatly in arranging an annual match between the Fellows of the two Colleges. A memorial service was held in St. Cuthbert's Parish Church, Edinburgh, on February 7th, which was attended by a large gathering of his colleagues in the various medical institutions with which he had been associated and by other members of the profession. He is survived by a widow and daughter.

ALFRED EICHHOLZ, C.B.E., M.D.

Former Chief Medical Inspector, Board of Education

The death took place, on February 6th, after ten days' illness, of Dr. Alfred Eichholz, who for many years, until his retirement in 1930, occupied a position on the medical staff of the Board of Education as chief medical inspector.

Dr. Eichholz, who was 63 years of age, was the son of a Manchester cotton merchant, and was of German descent on his father's side and Dutch on his mother's. He was educated at Manchester Grammar School, and at Emmanuel College, Cambridge, where he gained first-class honours in both parts of the Natural Science Tripos. Proceeding to St. Bartholomew's Hospital, he obtained his medical qualification in 1895, and took the M.D. of his university in 1898. In the latter year he was appointed one of H.M. inspectors of schools, and was assigned to districts in South London, where he obtained that sympathetic insight into the social conditions of the working classes which was manifest in all his later work. No time could have been more opportune for the commencement of a career in such a field. Although the establishment of a system of medical inspection of school children and the beginning of the present school medical service was still ten years ahead, the Board of Education had already realized the need of developing some form of medical inspection in the schools, the case of children suffering from deafness, blindness, and mental defect had already been the subject of legislation, and the desirability that expert advice should be at the disposal of local education authorities with a view to the classification

of defects and the organization of special schools or classes had been made evident. In all this work Eichholz was specially fitted to render eminent service, and this he did to the full. In 1907 there was passed the Education (Administrative Provisions) Act, which laid upon education authorities the new duty of providing for the medical inspection of all children attending public elementary schools, and thereby Eichholz, now working centrally at Whitehall, found his duties and responsibilities greatly increased. In 1914 there was passed another piece of legislation in which he was greatly interested—namely, an Act which renewed that of 1899 (which had dealt for the first time from the point of view of the State with mental deficiency) and provided for defective and epileptic children in a more thoroughgoing way. During these important years for the development of medical as of other aspects of education, Eichholz maintained close touch with medical officers and administrators in all parts of the country, carried out much pioneer work, and helped to establish a new service, which appeared very revolutionary at the time, on sound lines. He also influenced administration by the evidence which he gave before Royal Commissions and departmental committees on such subjects as provision for the feeble-minded, physical deterioration, and the employment of juveniles.

After his retirement from the Board of Education he undertook an inquiry for the Board and the Ministry of Health into the social conditions of the deaf. This inquiry occupied two years, and the report, which was published at the end of last year, appeared under the name of the investigator. One point brought out in the report was that only those deaf persons who receive adequate vocational training during youth are likely to be self-supporting and economically independent throughout their lives. Eichholz had been himself a member of the Departmental Committee of 1922 on the causes and prevention of blindness, and it was to the interests of the blind in particular that he devoted himself on his retirement. He was an active member of the council of the National Institute for the Blind, and was engaged on the work of a committee of that institute when he contracted his fatal illness. He wrote extensively also on the subject of the treatment of the feeble-minded. One of his first contributions on that subject was in the pages of the *Journal* in 1902, and at about the same time he was responsible for a report on the treatment of the feeble-minded in Germany. The bulk of his writing was in the form of reports and memorandums conveying official information, but in his earlier career he wrote a number of papers on anatomical and physiological subjects.

Dr. Eichholz served as chairman of the Central Committee on Jewish Education and as a member of the Jewish Religious Education Board. He married in 1895 the daughter of Dr. Adler, the Chief Rabbi.

THE LATE SIR FREDERIC HALLETT

Mr. W. A. MAGGS writes: As a member for several years of the Dental Board of Examiners of the Royal College of Surgeons of England I had frequent opportunities of meeting Sir Frederic Hallett, and soon learned to appreciate his ability as an organizer and administrator. Courteous, and at all times accessible, he was pleased to discuss any matter likely to make the examinations go as smoothly as possible. He arranged that the candidates from the provinces should not be kept in London longer than was absolutely necessary. He was emphatic in stating that the College of Surgeons, although not a wealthy corporation, desired not only to pay for the dental material used in examinations, but also to remunerate those persons who took part in them—namely, the patients, house-surgeons, dental mechanics, and others. A hard-worked and busy man, he still found time for his beautiful garden. His memory will be held in high esteem by the thousands of medical and dental men with whom, as a Director of Examinations for the Royal Colleges of Physicians and Surgeons for fifty years, he came in contact—one of the best known and loved in the profession. "He was a veray parfit gentil knight."

THE LATE MR. CHRISTOPHER MARTIN

A correspondent sends us the following details supplementing the obituary notice published in our issue of February 4th.

Mr. Christopher Martin gained first-class honours at Edinburgh before he was old enough to be put on the *Medical Register*. He had won a travelling scholarship in diseases of women, but because he was not on the *Register*, on account of his youth, the scholarship was given to the man who was *proxime accessit*. The professor of that subject, however, was so impressed with his ability and personality that he gave him the advantages which the scholarship would have given, and sent him to Germany for three months' study.

Mr. Martin was appointed honorary surgeon on the staff of the Birmingham and Midland Women's Hospital in 1890, at the remarkably early age of 23. It was due entirely to his initiative, as well as largely to his subsequent efforts, that the new hospital was built in 1904. The circumstances were as follows: Mr. Martin wrote a paper for one of the medical journals describing the work of the hospital, and saying that in spite of the drawbacks of the building their results were better than those of any other women's hospital in this country. The disadvantages of the building were great, as it was an old farmhouse adapted for the purpose. The chairman of the committee of that day was very angry at having any fault found with the building, and demanded of Mr. Martin that he should either withdraw what he had said or else resign from the staff of the hospital. Mr. Martin replied that he would do neither, but that unless something were done to provide better and safer accommodation he would write to every member of the committee and to every subscriber, and let them know the facts. As a result of this the committee considered the matter, and deputed Mr. Martin, together with the architect, to inspect the most up-to-date hospitals in London; and finally the new hospital was planned and built.

The University of Capetown has suffered a great loss in the sudden death on January 22nd of Dr. DAVID EPSTEIN, assistant in the Department of Pharmacology. In 1925 he finished his medical course at the University of Capetown, obtaining the degrees of M.B., Ch.B., with honours. He was awarded the Council gold medal and the post-graduate scholarship in medicine. Since that time he had held the appointment of assistant in pharmacology. In 1928 he obtained the degree of Ph.D. for a thesis on the pharmacological actions of the venom of the Cape cobra. In 1931 he spent some months in the pharmacological laboratories of the University of Oxford and worked on the action of amines. Dr. Epstein devoted a great deal of time to research, and, alone or with others, published about twenty-five original papers, including a series on the action of drugs on the batrachian alimentary tract. His untimely death at the age of 31 brings to an early close the career of a pharmacologist of great promise.

J. W. C. G.

By the death of Dr. RHYS THOMAS LEWIS, at the early age of 38, Swansea and the medical profession have suffered a grievous loss. His medical education started at Cardiff, whence he gained the Goldsmiths' entrance exhibition in anatomy and physiology at University College Hospital, London, in 1914. There, in 1915, he was awarded the junior clinical surgical prize. He filled all the resident posts at the hospital, as well as that of clinical assistant to the skin and V.D. departments. His last post at U.C.H. was the appointment of Harker Smith scholar in radium. He was assistant physician to the Swansea General and Eye Hospital, and consulting physician to the Gorseinon General Hospital. During the war he served at Basra and Baghdad with a commission

in the R.A.M.C. A colleague, F. G. T., writes: Rhys Lewis came to Swansea eight years ago to join Dr. J. Lloyd-Davies in general practice, and two years later took over the whole practice on his own account. Already a large one, he built it up further by ability and selfless devotion to his patients, until it must have been one of the largest general practices in South Wales. It was this devotion to duty which led to his death, as on the day before he took to his bed he paid fifty visits, and there can be little doubt he had influenza himself on that last day, but, contrary to all the precepts he instilled into his patients, he made light of his own overwork and seediness. Rhys Lewis's enthusiasm for his profession, and his enormous practice, left him no time for recreation. Indeed, he had no hobbies outside his work. This did not increase his chances when influenzal pneumonia supervened and reserves were necessary to cope with a failing heart. The end came on January 29th, after a week's illness. He was integrity and loyalty personified, and his death is mourned by a large circle of friends to whom he had endeared himself. Since he settled at Swansea his character and personality developed and mellowed, and there can be little doubt he was marked out for a brilliant future and a large consulting practice throughout South Wales. He leaves a widow and two young children.

The following well-known foreign medical men have recently died: Professor KARL MARCUS, the Dresden orthopaedic surgeon; and Geh. Med. Rat. Professor HANS VON REYHER, a Dresden mechano-therapeutist, aged 72.

Universities and Colleges

UNIVERSITY OF OXFORD

At a congregation held on February 11th the degree of Bachelor of Medicine (B.M.) was conferred on C. H. Fagge (Lincoln College).

UNIVERSITY OF CAMBRIDGE

At a congregation held on February 11th the following medical degrees were conferred:

M.D.—*A. D. Charters, J. R. Armstrong, S. W. Savage, J. L. Newman.
M.B., B.CHIR.—R. S. C. McDade, S. S. Jaikaran.
M.B.—G. H. A. Graetz.
B.CHIR.—*R. L. Osmaston, K. M. A. Perry.
* By proxy.

UNIVERSITY OF LONDON

The following have been appointed examiners for the Diploma in Public Health for internal and external students in 1933: *Public Health (Part I), Internal:* M. E. Delafield (chairman), W. W. C. Topley; *External:* C. C. Okell and H. M. Maitland. *Public Health (Part II), Internal:* M. Greenwood, W. W. Jameson (chairman); *External:* T. Carnwath, A. Joe. *Hospital administration and the clinical aspects of infectious disease:* A. Joe.

Mr. H. L. Eason, C.B., C.M.G., has been appointed representative of the University on the General Medical Council, and Professor W. W. Jameson representative at the Royal Sanitary Institute Congress at Blackpool, June, 1933.

Applications for grants from (1) the Dixon Fund, for assisting scientific investigations, and (2) the Thomas Smythe Hughes and Beaverbrook Medical Research Funds, for assisting original medical research, must be sent in between April 1st and May 15th. Particulars can be obtained from the Academic Registrar.

The Leathersellers' Company has decided to make a grant to the University of £1,000, payable by annual instalments over a series of years. The benefaction is to be applied towards meeting the cost of the new ceremonial hall to be erected on the University's site in Bloomsbury.

UNIVERSITY OF LIVERPOOL

The Lady Jones Lecture for 1933 will be delivered in the surgical theatre of the Medical School by Mr. R. C. Elmslie, on Tuesday, February 28th, at 4 p.m. The subject is "The nature of so-called osteitis fibrosa cystica." The lecture, which will be illustrated by lantern slides, is open to members of the medical profession.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

An ordinary Council meeting was held on February 9th, when the President, Sir Holburt Waring, was in the chair.

Deaths

The secretary reported the death of Sir Percy Sargent (Vice-President) on January 22nd, and of Sir Frederic Hallett (formerly Assistant Secretary and Director of Examinations at the Royal College of Surgeons and Secretary to the Conjoint Examining Board and to the Imperial Cancer Research Fund) on February 5th. A vote of condolence was passed in each case.

Diplomas

Diplomas of Membership were granted to 134 candidates. (The list of successful candidates was given in the report of the meeting of the Royal College of Physicians of London, published in the *Journal* of February 4th at page 209.)

Appointments

Mr. G. E. Gask was elected a Vice-President for the rest of the current collegiate year.

Sir Cuthbert Wallace was elected a representative of the College on the Executive Committee of the Imperial Cancer Research Fund in the vacancy occasioned by the death of Sir Percy Sargent.

Mr. Victor Bonney was re-elected a representative of the College on the Central Midwives Board for one year from April 1st, 1933.

The President reported that he had appointed Mr. A. H. Burgess as Bradshaw lecturer for the ensuing year, and Mr. L. W. G. Malcolm, Conservator of the Wellcome Historical Medical Museum, as the next Thomas Vicary lecturer.

Council Election

The President reported that an election of five Fellows into the Council would take place on Thursday, July 6th, at 11 p.m. in the vacancies occasioned by the retirement in rotation of Lord Moynihan, Sir John Lynn-Thomas, Mr. A. H. Burgess, and Mr. V. Warren Low, and by the death of Sir Percy Sargent; that notice of the election would be given to the Fellows by advertisement and by circular on March 10th; that March 20th would be the last day for the nomination of candidates, and that a voting paper would be sent on April 4th to every Fellow of the College whose address is registered at the College.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH

A quarterly meeting of the Royal College of Physicians of Edinburgh was held on February 7th, when the President, Dr. Robert Thin, was in the chair. Dr. Ion Simson Hall (Edinburgh) was introduced, and took his seat as a Fellow of the College. Dr. Robert Lees (Edinburgh), Dr. Charles Mackay Seward (Exeter), and Dr. Ian George Wilson Hill (Edinburgh) were elected Fellows.

Medical News

The Right Hon. Sir Austen Chamberlain, K.G., M.P., has accepted nomination by the Minister of Health to be a Governor of the British Post-Graduate Medical School, and has been appointed by the Governors to be chairman of the Governing Body in succession to Lord Chelmsford, who resigned on his election to be warden of All Souls College, Oxford.

At a joint meeting of the Sections of Comparative Medicine and Therapeutics and Pharmacology of the Royal Society of Medicine, to be held on Wednesday, February 22nd, at 5 p.m., there will be a discussion on plant poisoning in man and animals.

The next monthly clinical meeting for medical practitioners at the Hospital for Epilepsy and Paralysis, Maida Vale, W.9, will be held on Thursday, February 23rd, at 3 p.m., when Dr. Wilfred Harris will demonstrate. Tea will be provided, and it will be a convenience if those intending to be present will send a card to the secretary.

At a meeting of the Royal Statistical Society on February 21st Dr. A. Bradford Hill of the statistical staff of the Medical Research Council will read a paper on some aspects of the mortality from whooping-cough. The meeting will be held in the hall of the Royal Society of Arts, John Street, Adelphi, W.C., at 5.15 p.m.

The twelfth annual dinner of the Society of Radiographers will be held at the Restaurant Frascati, Oxford Street, W., on Saturday, February 25th, at 7.30 p.m.

A meeting of the Medico-Legal Society will be held at 11, Chandos Street, W.1, on Thursday, February 23rd, at 8.30 p.m. Dr. C. S. Dyke will read a paper on the human blood groups, which will be followed by a discussion.

At the meeting of the Hunterian Society of London, to be held at the Mansion House on Monday, February 27th, at 9 p.m., Sir T. Crisp English will deliver the Hunterian Oration on "The language of facts."

At the meeting of the Royal Medico-Psychological Association on Wednesday, February 22nd, at 11, Chandos Street, Cavendish Square, W., a paper on the Rorschach test and its clinical application will be read by Dr. D. R. MacCalman.

The next lecture in the series on practical problems in medicine and surgery arranged by the Fellowship of Medicine will be given on March 28th at 11, Chandos Street, W., at 4 p.m., by Mr. J. P. Lockhart-Mummery, on the causes and treatment of incontinent anus. There will be a week-end course of practical demonstrations in general medicine and surgery at the New General Hospital, Southend-on-Sea, on March 4th and 5th. The course will include ward rounds, demonstrations, and a discussion on infection by the staphylococcus. Special arrangements have been made with the Palace Hotel, Southend, details of which can be had from the Fellowship of Medicine, 1, Wimpole Street, W.1. Forthcoming courses include medicine, surgery, and gynaecology at the Royal Waterloo Hospital, March 6th to 25th, all day; a course in orthopaedics at the Royal National Orthopaedic Hospital, March 6th to 18th, all day; and an evening course in rheumatism, March 7th to 23rd, Tuesdays and Thursdays at 8.30 p.m.

The next course of post-graduate lectures and demonstrations on medical, surgical, and special subjects given by the honorary staff of the Manchester Royal Infirmary will open on Tuesday, February 21st, and will continue each week (with the exception of April 18th) till May 30th. The demonstrations of clinical cases and methods in the wards and special departments, which commence on Friday, February 24th, will be continued till Friday, May 26th (with the exception of April 14th and 21st). There is no fee, and arrangements are made for the parking of cars.

A clinical research scholarship of the value of £100 per annum is offered at the Royal Westminster Ophthalmic Hospital, Broad Street, W.C.2, the holder to commence work at the hospital on May 1st. Further particulars can be obtained on application to the honorary secretary, Medical Committee, at the hospital before March 7th.

Seven further volumes of statistics relating to English counties at the Census of 1931 have now been issued, and are on sale at H.M. Stationery Office. These comprise Chester (price 4s.), Durham (3s. 6d.), Staffordshire (3s. 6d.), Worcestershire (2s. 6d.), Berks (2s. 6d.), Warwickshire (2s.), and Bedfordshire (2s.).

The thirteenth Salon des Médecins for the exhibition of works of art by medical practitioners, dentists, pharmacists, and students will be held at the Cercle de la Librairie, Boulevard St. Germain, Paris, from March 12th to 21st. Further information can be obtained from M. Pierre Malet, 46, Rue Lecourbe, Paris.

The thirty-first Italian Congress of Obstetrics and Gynaecology will be held at Bari from April 21st to 23rd, under the presidency of Professor Paolo Gaifami, director of the Bari Obstetrical and Gynaecological Clinic. The subjects for discussion are vaginal coeliotomy, introduced by Professor Bertino, and female sexual hormones, introduced by Professor Aconci.

For the week ending February 11th, 1,306 deaths from influenza were returned from the 118 great towns of England and Wales. During the previous five weeks the deaths numbered 681, 1,041, 1,589, 1,934, and 1,911 respectively. In all the geographical regions, except the south-western area, there has been a decline in the influenza death rate. The above figures in respect of the great towns are extracted from the Registrar-General's weekly return.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, B.M.A. House, Tavistock Square, W.C.1.**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names, not necessarily for publication.

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of proofs.

All communications with reference to ADVERTISEMENTS, as well as orders for copies of the *Journal*, should be addressed to the Financial Secretary and Business Manager.

The **TELEPHONE NUMBERS** of the British Medical Association and the *British Medical Journal* are MUSEUM 9861, 9862, 9863, and 9864 (internal exchange, four lines).

The **TELEGRAPHIC ADDRESSES** are:

EDITOR OF THE *BRITISH MEDICAL JOURNAL*, *Aitiology Westcent, London.*

FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate Westcent, London.*

MEDICAL SECRETARY, *Mediocra Westcent, London.*

The address of the Irish Office of the British Medical Association is 18, Kildare Street, Dublin (telegrams: *Bacillus, Dublin*; telephone, 62550 Dublin), and of the Scottish Office, 7, Drumsheugh Gardens, Edinburgh (telegrams, *Associate, Edinburgh*; telephone, 24361 Edinburgh).

QUERIES AND ANSWERS

Treatment of Epiphyseal Displacement

"PRACTITIONER" (Glasgow) writes: My attention has been drawn to the condition of shortening which occurs subsequent to epiphyseal displacement. I would like the benefit of some opinions on the mode of treatment which is usually given in this condition. Furthermore, I inquire as to the possibility of influencing the growth of the affected long bone by the administration of appropriate endocrine preparations—either orally or locally—such as by intramuscular injection or directly into the bone, as per cannula.

Digitalis in Partial Heart-block

Dr. ALBERT A. FITZGERALD PEEL (Glasgow) writes: Dr. Frewen Moor (February 4th, p. 211) need have no hesitation in prescribing digitalis for his patient whenever the state of her circulation demands it. The lesion causing the bundle-branch block is presumably a localized area of fibroid or fatty change resulting from coronary disease, and is likely to be permanent. Digitalis will not affect this lesion in any way, and will have exactly the same pharmacological action on the remainder of the heart muscle as in a similar case without bundle-branch block. The lesion itself may extend and involve the main stem of the bundle causing full heart-block; but digitalis is no more likely to do so than in any other patient. The efficacy of digitalis in relieving the circulatory failure will depend on the extent to which the remainder of the myocardium is affected by lesions similar to that which involves the right branch of the bundle; the results in many cases are excellent, in some disappointing. An attempt should also be made to reduce the very high diastolic blood pressure in this case.

Dupuytren's Contraction

"P. M. K." writes in reply to Dr. E. S. Stokes's letter of inquiry published in the *Journal* of December 17th, 1932 (p. 1130): The condition is considered to have a nervous origin, mainly for these reasons—(*a*) the hereditary factor, (*b*) the preliminary capillary flushing, (*c*) the entire exclusion of any question of injury, (*d*) diminished sensation over palmar areas of both ulnar nerves. A radiograph taken on January 28th shows: On the right side the transverse process of the seventh cervical is large, and beyond this there is seen a bony process which is also just visible below it. The evidence, therefore, is that of a partial cervical rib. The space between the first dorsal transverse process and the seventh cervical is very much diminished. The lateral view of the neck shows nothing abnormal except a little lipping of the fourth and fifth bodies.

Income Tax

Replacement of Car

"G. C.'s" firm bought a car in 1919 for £425, and were told by the then inspector of taxes that depreciation could not be claimed, but the "full allowance" could be claimed when the car was replaced. The car was sold for £2 in

1929, and £287 was allowed. That allowance has now been cancelled by an "additional assessment," which is under appeal.

*** "G. C." does not state the ground on which the inspector of taxes defends the cancellation of the allowance; we presume that ground is that a depreciation allowance was given for the fiscal year 1930–1, and that that is inconsistent with the allowance of the cost of renewal for 1929. There are two objections that can be made to the additional assessment: first, that as the Revenue authorities had the facts before them when the first assessment was made there has been no "discovery," and therefore an essential condition for the making of an additional assessment is lacking; second, that the car on which depreciation was allowed for 1930–1 is a different one from that which was replaced, and in view of the inequity of the refusal the law should not be strained to exclude the renewal allowance. We have not sufficient information to enable us to follow the figures, but the amount of the renewal allowance would be the cost of the new car less the £2 received for the old one. (Depreciation allowance was claimable from 1925 onwards, when it was extended to professions.)

Purchase of House: Repairs, etc.

"F. H. S." purchased his house last year, and has had to spend money on it for repairs. Can he still claim a deduction for "rent."

*** Income tax on property is paid on a net assessment arrived at by making a proportional reduction, fixed by statute, from the gross estimated rental of the property. In making his return for professional profits "F. H. S." can deduct as an expense the same proportion of the net assessment as he was formerly doing of the actual rent paid. In addition he can deduct the actual expenditure on repairs, etc., so far as it relates to that portion of the premises which are used professionally. The balance is normally regarded as covered in the long run by the statutory reduction referred to above.

Appointment—Car Expenses

"R. C. F. S." is employed by a local authority as a full-time school medical officer. He is allowed "bus fares" to cover travelling expenses, but uses a car, which of course costs very much more. He points out that general practitioners are allowed to deduct car expenses, and inquires why he cannot do the same.

*** The profits arising from general practice are assessable under Schedule D, the earnings from employment under Schedule E. The rules applicable to Schedule E are rather more restrictive than those of Schedule D, and, in particular, expenses must be "necessarily" incurred in performing the duties of the office. The difficulty confronting "R. C. F. S." is to persuade the income tax authorities that it is *necessary* for him to spend, say, £150 a year in the use of a car when the appointing authority considers that the duties can be performed at the cost of £20 expended in bus fares; and, to us, the difficulty seems insuperable.

LETTERS, NOTES, ETC.

The Chirurgical Club's Visit to Madrid

Professor G. GREY TURNER (Newcastle-upon-Tyne) writes: In my anxiety to do justice to the memory of Sir Robert Jones I much regret that I inadvertently fell into an error when writing the appreciation which appeared in your columns on January 28th. It has been pointed out to me that on the occasion of the visit of the Chirurgical Club to Madrid it was Mr. J. F. Dobson of Leeds who acted as president in the place of Mr. A. H. Burgess of Manchester, who was unfortunately unable to be present. On the occasion of the memorable reception at the Palace Mr. Dobson, as acting president, went round with the King, and it was Sir Robert Jones who accompanied the Queen. What a wonderful experience it was, and how nice to reflect that it was not in any way marred by apprehensive prevision. Jones was spending a few days in Madrid, having come up from Malaga; and what zest he put into everything! Before the Club arrived he had attended a bull-fight, had visited the picture galleries and the Escorial, and was just in the mood to add to the gaiety and vivacity of our party. All enjoyed and appreciated his company, and none more than our acting president for the occasion.

Contraceptive Methods

Dr. E. FISHER (Barnes) writes: In his lecture on birt control, in your issue of February 11th, Dr. James You emphasizes the importance of teaching in the metho At the Constructive Birth Control Society's Clinic (10 Whitfield Street, Tottenham Court Road, W.C.1) a fr demonstration for doctors and senior students is held the first Wednesday of each month, from 2.30 to 5 p There is first a lecture on contraceptives in general, by Dr. M. Beddow Bayly, followed by a practical demonstration of the fitting of various types on actual cases, each doctor getting the opportunity of placing the appliances in position. As accommodation is limited, application to attend should be made to the secretary before the date of the demonstration.

Hygienic Mattresses

Miss E. COCKERAM, A.R.R.C. (matron of the Children's Hospital, Birmingham) writes: Nurses, doctors, and others whose daily work takes them among those who are confined to bed will be interested to know of a test which we have carried out here with mattresses made from rubber latex. Our object was to discover the extent to which this new material is germ- and vermin-proof, and we have found that cultures taken from inside the rubber sheeting between two of these mattresses, which had been in use for several weeks for a very dirty septic case, have failed to grow any organisms at all. In other words, our experience shows that this "springy" natural rubber is definitely antiseptic, and does not require the usual stoving or baking.

Speed Limits

Inquiries received by the Automobile Association show that there is still uncertainty about speed limits affecting private cars and motor cycles. The general speed limit of twenty miles per hour was abolished by the Road Traffic Act of 1930, and under the same Act all local speed restrictions imposed under the Acts of 1896 and 1903 by the Local Government Board in England and Wales, or by the Secretary for Scotland, ceased to be effective in December, 1930. Similar restrictions made by the Minister of Transport under the Locomotives on Highways Act of 1896, the Motor Car Act of 1903, or the Roads Act of 1920, expired on November 30th, 1931, unless specially extended by an order of the Minister. Though practically all such limits have been abolished, the provisions of the Road Traffic Act do not affect the restrictions in royal or other parks, while in some seaside towns speed limits are still operative where imposed under local legislation. Again, roads situated on War Department land are sometimes subject to special restrictions though such roads may be open to the public. A revised edition of the A.A. leaflet giving details of all existing speed restrictions will shortly be available gratis to members on application.

Warning

Dr. R. S. RISK (London, S.E.1) writes: I thought it might be wise to let others know the description of a man who "took me in" the other day. He calls himself Dr. Foster, and asks for money for a train fare and for one's card in order to repay the amount. Having obtained both, he proceeds to use the card to buy drugs from any good firm. The buying of the drug is a "blind"; he "pitches the same tale" to the shop assistant about the train fare and borrows from him. In due course one receives the bill from the firm for a purchase one has never made, and later a letter from the enraged shop assistant demanding his money. The man looks about 50, has rather an untidy appearance, and his hair is grey and curly; he has a limp—I think it was the left leg. He paid me a visit here about two weeks ago, and then went to a well-known firm with my card.

Corrigendum

Commander Rainsford was reported in the *Journal* of January 28th (p. 147) as having said that "*Br. melitensis* produced abortion in the goat, but in the cow it produced practically no bad effects at all." What he actually said was that *Br. melitensis* occasionally produced abortion in the goat, but more often appeared to cause no ill effects in this animal.

Vacancies

Notifications of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 47, 48, 49, 50, 51, 54, and 55 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 52 and 53.

A short summary of vacant posts notified in the advertisement columns appears at page 299.

Association Notices

TABLE OF DATES

Mar. 16, Thurs. Branch Reports for 1932 due by this date.

Mar. 25, Sat. Nomination papers available (on application at Head Office) for election of (i) 24 Members of Council by grouped Branches in the British Isles; (ii) 2 Public Health Service Members of Council and 4 representatives of Public Health Service in Representative Body.

April 18, Tues. Last day for receipt at Head Office of clinical papers by practitioners.

April 29, Sat. [illegible] in *Supplement*.

[illegible] nominations: (i) by [illegible] ers, for election of 24 Members of Council by grouped Branches in the British Isles; (ii) for election of 2 Public Health Service Members of Council, and 4 representatives of Public [illegible] ly.

May 13, Sat. [illegible] nominations for [illegible] uncil by grouped [illegible] 2 Public Health Service Members of Council, and 4 representatives of Public Health Service in Representative Body.
Voting papers posted from Head Office where there are contests in above elections.

May 15, Mon. Motions by Divisions and Branches for A.R.M. agenda on matters of which 2 months' notice must be given

May 20, Sat. [illegible] must be [illegible] nendments by Divisions and Branches for A.R.M. on matters of which 2 months' notice must be given.
Representatives and Deputy Representatives must be elected by this date.
Last day for receipt at Head Office of voting papers for election, where there are contests, of (i) 24 Members of Council by grouped Branches in the British Isles; (ii) 2 Public Health Service Members of Council, and 4 representatives of Public Health Service in Representative Body.

June 3, Sat. Pu[illegible] [illegible] result of elections of [illegible] ches, and of result [illegible] d Representatives [illegible] Health Service members.
Nomination Papers available (on application at Head [illegible] Council by grouped

June 8, Thurs. [illegible] ity Representatives [illegible] his date.

June 22, Thurs. [illegible] ld between this date [illegible] tives.

June 24, Sat. Publication of Supplementary Report of Council in *Supplement*.

July 5, Wed. Other items for inclusion in A.R.M. printed agenda *must* [illegible] by this date.

July 21, Fri. [illegible]

July 22, Sat. [illegible]

July 24, Mon. [illegible] Council.

July 25, Tues. Annual Representative Meeting; Annual General Meeting; President's Address, Dublin.

July 26, Wed. Council.

[illegible] Dublin.

July 27, Thurs. [illegible] *Dublin.*

July 28, Fri. [illegible] Dublin.

G. C. ANDERSON,
Medical Secretary.

BRANCH AND DIVISION MEETINGS TO BE HELD

BATH, BRISTOL, AND SOMERSET BRANCH.—At Fortt's Restaurant, Milsom Street, Bath, Wednesday, February 22nd, 8.30 p.m. Professor F. A. E. Crew: Heredity in relation to man and medicine.

BORDER COUNTIES BRANCH: CUMBERLAND DIVISION.—At Globe Hotel, Cockermouth, Thursday, February 23rd, 3.30 p.m. B.M.A. Lecture by Mr. H. Harvey Evers: Gynaecological fallacies and pitfalls. The meeting is open to non-members and members of other Divisions.

KENT BRANCH: BROMLEY DIVISION.—Joint meeting with Beckenham Medical Society, at the Railway Hotel, Beckenham, Wednesday, February 22nd, 8.30 p.m. Dr. W. J. O'Donovan: Mental element in skin affections. Supper (3s. 6d.) at 7.40 p.m. All practitioners in the Division are cordially invited.

METROPOLITAN COUNTIES BRANCH: FINCHLEY DIVISION.—At Finchley Memorial Hospital, Tuesday, February 21st, 8.45 p.m. Dr. W. R. Reynell: Morbid states of anxiety and depression.

METROPOLITAN COUNTIES BRANCH: HENDON DIVISION.—At Hendon Cottage Hospital, Friday, February 24th, 8.30 p.m. Clinical meeting. Lecture by Mr. Norman Lake: The surgery of the sympathetic nervous system.

METROPOLITAN COUNTIES BRANCH: LEWISHAM DIVISION.—At Town Hall, Catford, S.E.6, Tuesday, February 21st, 9 p.m. Dr. Thomas Tennent: Psychiatric problems in general practice.

METROPOLITAN COUNTIES BRANCH: STRATFORD DIVISION.—At Gas Light and Coke Company's Offices, Broadway, Ilford, Tuesday, February 21st, 9.15 p.m. Dr. T. Izod Bennett: The nutritional anaemias.

METROPOLITAN COUNTIES BRANCH: TOWER HAMLETS DIVISION.—At London Hospital Medical College, Turner Street, Tuesday, February 21st, 4 p.m. (tea 3.45 p.m.). Lecture by Dr. Robert Hutchison: The dyspepsias of childhood. The meeting is open to non-members.

MIDLAND BRANCH: LEICESTER AND RUTLAND DIVISION.—At Leicester Royal Infirmary, Friday, February 24th, 8.45 p.m. Paper by Professor John Fraser (Edinburgh).

SOUTH WALES AND MONMOUTHSHIRE BRANCH: SWANSEA DIVISION.—Thursday, February 23rd. Lecture by Dr. James Mennell: Physical treatment as an aid to recovery.

STIRLING BRANCH.—At Falkirk and District Royal Infirmary, Wednesday, February 22nd, 3 p.m. Clinical meeting. Demonstration of cases by Dr. T. Kay MacLachlan and Mr. Robert Tennent.

YORKSHIRE BRANCH: WAKEFIELD, PONTEFRACT, AND CASTLEFORD DIVISION.—At the Strafford Arms Hotel, Wakefield, Thursday, February 23rd. Lecture by Dr. W. MacAdam (senior assistant physician, Leeds General Infirmary): The medical aspects of diseases of the thyroid. Preceded by supper (3s.) at 7.45 p.m.

APPOINTMENTS

McCALDIN, Cecil W. R., M.B., Ch.B., F.R.C.S.Ed., Assistant Honorary Surgeon to the Nottingham and Midland Eye Infirmary.

CERTIFYING FACTORY SURGEONS.—A. K. Tateson, M.D.St And., for the York District (York); H. H. V. Welch, M.B., B.S.Lond., F.R.C.S.Ed., for the Newport District (Isle of Wight).

VACANCIES

ALL SAINTS' HOSPITAL FOR GENITO-URINARY DISEASES, Austral St., S.E.—R.H.S. (male)

BIRKENHEAD: GENERAL HOSPITAL.—(1) Senior H.S. (2) Second H.S. (3) H.P. (4) C.O. Males.

BIRMINGHAM: EAR AND THROAT HOSPITAL.—Third H.S. (non-resident).

BRIGHTON: SUSSEX MATERNITY AND WOMEN'S HOSPITAL.—R.H.S. (male).

BURNLEY: VICTORIA HOSPITAL FOR BURNLEY AND DISTRICT.—H.P. (male).

BURSLEM HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL.—J.R.M.O.

CAMBRIDGE: ADDENBROOKE'S HOSPITAL.—(1) First H.S. (2) Second H.S. (3) Resident Anaesthetist and Emergency Officer. Males, unmarried.

CHARING CROSS HOSPITAL, W.C.—Registrars: (*a*) Medical, (*b*) Surgical, (*c*) to Nose, Throat, and Ear Department. Males.

CHESTER: EAST LANCASHIRE TUBERCULOSIS COLONY.—A.M.O. (male).

CHESTER ROYAL INFIRMARY.—Hon. Anaesthetist.

CUMBERLAND INFIRMARY, Carlisle.—(1) H.S. (2) H.P. (3) Second H.S. (4) H.S. to *Special Departments*.

DERBY: ROYAL DERBY AND DERBYSHIRE NURSING AND SANITARY ASSOCIATION.—Hon. Obstetric Physicians to Nightingale Home.

DUDLEY: GUEST HOSPITAL.—Assistant H.S.

EDINBURGH: ELSIE INGLIS MEMORIAL MATERNITY HOSPITAL.—J.H.S. (female).

ESSEX COUNTY COUNCIL.—Assistant County M.O.H. (male).

GOLDEN SQUARE THROAT, NOSE, AND EAR HOSPITAL, W.1.—*H.S. (male).*

HARROGATE ROYAL BATH HOSPITAL.—*R.M.O. (male).*

HENDON BOROUGH.—R.M.O. at *Isolation Hospital and A.M.O. for General* Purposes.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) H.P. (2) H.S. Males, unmarried

IPSWICH: EAST SUFFOLK AND IPSWICH HOSPITAL.—H.S. *(male).*

KING EDWARD VII HOSPITAL, *Windsor.*—R.M.O.

LEEDS: KILLINGBECK SANATORIUM.—*Senior* A.R.M.O. (unmarried).

LEEDS PUBLIC DISPENSARY.—Hon. P.

LONDON HOMOEOPATHIC HOSPITAL, Great Ormond Street, W.C.—Assistant P.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL.—R.H.S. (unmarried).

MANCHESTER BABIES' HOSPITAL, Levenshulme.—*J.R.M.O.*

MANCHESTER CITY.—*Medical Superintendent* at Crumpsall Hospital and Institution.

MANCHESTER ROYAL INFIRMARY.—*H.S (lady) at Central Branch.*

MIDDLESBROUGH: NORTH RIDING INFIRMARY.—Senior H.S.

MIDDLESEX COUNTY COUNCIL.—R.A.M.O. (unmarried) at Hillingdon County Hospital.

NATIONAL TEMPERANCE HOSPITAL, Hampstead Road, N.W.—Hon. Assistant P.

NEWCASTLE-UPON-TYNE: BABIES' HOSPITAL.—Non-resident M.O.

NEWCASTLE-UPON-TYNE: ROYAL VICTORIA INFIRMARY.—*Junior Surgical* Registrar.

NORTHWOOD: MOUNT VERNON *HOSPITAL.*—H.S. (male).

NORWICH INFIRMARY.—R.A.M.O.

NOTTINGHAM: *GENERAL HOSPITAL.*—H.S.

OXFORD: RADCLIFFE INFIRMARY AND COUNTY HOSPITAL.—(1) H.P. (2) Obstetric H.P. (3) Three H.S. Males.

PRESTON COUNTY BOROUGH.—R.A.M.O. (female) at Sharoe Green Hospital.

PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN, Shadwell, E.—H.S.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.2.—(1) H.P. (2) C.O. (3) Two Clinical Assistants for Medical O.P.

ROYAL SCOTTISH NATIONAL INSTITUTION, Larbert.—A.M.O.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester Square, W.C.2.—(1) O.P. and I.P. Medical Registrars. (2) Clinical Assistants.

ST. MARY'S HOSPITAL, W.2.—Director of All-day Venereal Diseases Clinic.

ST. THOMAS'S HOSPITAL, S.E.1.—Resident Anaesthetist.

SHREWSBURY: ROYAL SALOP INFIRMARY.—C.O. and Resident Anaesthetist (male).

SHROPSHIRE ORTHOPAEDIC HOSPITAL AND AGNES HUNT SURGICAL HOME.—H.S. (male).

TOTTENHAM: PRINCE OF WALES'S GENERAL HOSPITAL.—(1) Senior H.P. (2) Two Senior H.S. (3) J.H.P. (4) Two J.H.S. Males.

WALLASEY: VICTORIA CENTRAL HOSPITAL.—(1) Senior H.S. (male). (2) J.H.S.

WESTMORLAND COUNTY HOSPITAL, Kendal.—H.S.

WESTON-SUPER-MARE GENERAL HOSPITAL.—R.H.S.

WIGAN INFIRMARY.—Hon. Assistant S.

CERTIFYING FACTORY SURGEON.—The appointment at Huddersfield, East (York) is vacant. Applications to the Chief Inspector of Factories, Home Office, Whitehall, S.W.1, by March 7th.

This list is compiled from our advertisement columns, where full particulars are given. To ensure notice in this column advertisements must be received not later than the first post on Tuesday morning. Further unclassified vacancies will be found in the advertising pages.

DIARY OF SOCIETIES AND LECTURES

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East, S.W.—*Thurs.*, 5 p.m. Milroy Lecture by Dr. Robert Cruickshank: Pneumococcal Infections.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.—Lectures: *Mon.*, 5 p.m., Professor Laurence O'Shaughnessy, Thoracic Surgery—the Factor of Post-operative Infection; *Wed.*, 5 p.m., Professor G. A. Mason, The Surgical Significance of the Vitelline Duct; *Fri.*, 5 p.m., Professor E. R. Flint, Some Observations on Pre-operative Procedure.

ROYAL SOCIETY OF MEDICINE

General Meeting of Fellows, Tues., 5.30 p.m. Ballot for casual vacancies on Council, and ballot for Fellowship.

Section of Pathology.—Tues., 8 p.m. for 8.30 p.m., at the Bland-Sutton Institute of Pathology, Middlesex Hospital, W. Demonstrations.

Sections of Comparative Medicine, and Therapeutics and Pharmacology.—Wed., 5 p.m. Discussion: Plant Poisoning in Man and Animals. Speakers, Mr. W. Horner Andrews, Sir William Willcox, Mr. J. A. Nicholson, Dr. G. Clough, Dr. P. Haas.

Section of Urology.—Thurs., 8.30 p.m. Mr. J. Swift Joly: Bilateral Renal Calculi.

Section of Disease in Children.—Fri., 5.30 p.m. Cases at 4.30 p.m.

Section of Epidemiology and State Medicine.—Fri., 8 p.m. Dr. G. C. M. M'Gonigle (Stockton-on-Tees): Some Results of the Removal of a Slum Population to Modern Dwellings.

CHELSEA CLINICAL SOCIETY, Hotel Rembrandt, Thurloe Place, S.W.—*Tues.*, 8.30 p.m. Discussion: Contraception. To be opened by Mr. Harold G. Taylor. Preceded by dinner (5s.) at 7.30 p.m.

MEDICAL SOCIETY OF LONDON, 11, Chandos Street, W.—*Mon.*, 9 p.m. Lettsomian Lecture by Mr. V. Zachary Cope: The Pathology of Acute Abdominal Disease.

MEDICO-LEGAL SOCIETY, 11, Chandos Street, W.—*Thurs.*, 8.30 p.m. Dr. S. C. Dyke: The Human Blood Groups. Followed by discussion.

ST. JOHN'S HOSPITAL DERMATOLOGICAL SOCIETY, 49, Leicester Square, W.C.—*Wed.*, 4.30 p.m., Clinical Cases; 5 p.m., Dr. Hugh Gordon, Arsenical Jaundice.

POST-GRADUATE COURSES AND LECTURES

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION, 1, Wimpole Street, W.—*Royal Free Hospital*, Gray's Inn Road, W.C.: Fri., 5 p.m., Dame Louise McIlroy, Ante-natal Demonstration. *St. John's Hospital*, Leicester Square, W.C.: Post-Graduate Course in Dermatology; Clinical instruction daily, 2 p.m. and 6 p.m.; Lectures, Tues. and Thurs., 5 p.m. *National Temperance Hospital*, Hampstead Road, N.W.: Mon. and Fri., 8 p.m., Evening M.R.C.P. Course. *Prince of Wales's Hospital*, Tottenham, N.: Post-Graduate Course in Medicine, Surgery, and the Specialties; all day. *Hospital for Consumption*, Brompton, S.W.: Mon. and Thurs., 11.30 a.m. to 1 p.m., Post-Graduate Course in Practical Pathology, dealing with laboratory methods and interpretation of results. *Fellowship of Medicine*, 1, Wimpole Street, W.: Mon., Wed., and Fri., 8 p.m., The Interpretation of Pyelograms. (Courses open only to members and associates of the Fellowship of Medicine.)

CENTRAL LONDON THROAT, NOSE AND EAR HOSPITAL, Gray's Inn Road, W.C.—*Fri.*, 4 p.m., Mr. A. Lowndes Yates, Diseases of the Ear which Lead to Deafness.

HOSPITAL FOR EPILEPSY AND PARALYSIS, Maida Vale, W.—*Thurs.*, 3 p.m., Dr. Wilfred Harris, Demonstration.

KING'S COLLEGE HOSPITAL MEDICAL SCHOOL, Denmark Hill, S.E.—*Thurs.*, 9 p.m., Dr. E. Creed, Recent Work on some Blood Diseases.

LONDON JEWISH HOSPITAL, Stepney Green, E.—*Thurs.*, 4 p.m., Dr. Geoffrey L. S. Konstam: Anaemias due to Defective Maturation of Red Blood Cells.

LONDON SCHOOL OF DERMATOLOGY, St. John's Hospital, Leicester Square, W.C.—*Tues.*, 5 p.m., Dr. J. A. Drake, Leprosy. *Thurs.*, 5 p.m., Dr. A. Burrows, Leukaemia Cutis, Mycosis Fungoides.

NATIONAL HOSPITAL, Queen Square, W.C.—*Mon.* to *Fri.*, 2 p.m., Out-patient Clinics. *Mon.*, 3.30 p.m., Dr. C. M. Hinds Howell, Vascular Disease of the Nervous System. *Tues.*, 3.30 p.m., Dr. Grainger Stewart, Spinal Tumours and Syringomyelia. *Wed.*, 3.30 p.m., Dr. James Collier, Clinical Demonstration. *Thurs.*, 3.30 p.m., Dr. F. M. R. Walshe, Cerebral Tumours. *Fri.*, 3.30 p.m., Dr. James Collier, Virus Diseases of the Nervous System.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.—*Mon.*, 2.30 to 5 p.m., Medical, Surgical, and Gynaecological Cases, Operations. *Tues.*, 2.30 to 5 p.m., Medical, Surgical, and Throat Clinics, Operations. *Wed.*, 2.30 to 5 p.m., Medical, Skin, and Eye Clinics, Operations. *Thurs.*, 11.30 a.m., Medical, Surgical, Throat, and Children's Clinics, Operations. *Fri.*, 10.30 a.m., Throat Clinics; 2.30 to 5 p.m., Medical and Surgical Clinics, Operations.

ROYAL INSTITUTE OF PUBLIC HEALTH.—*Wed.*, 11.30 a.m., Demonstration at the British Red Cross Society Clinic for Rheumatic Diseases, Peto Place, N.W.1.

ST. MARK'S HOSPITAL FOR DISEASES OF THE RECTUM, City Road, E.C.—*Thurs.*, 4 p.m., Dr. J. K. Hasler, Anaesthesia in Rectal Surgery.

SOUTH-WEST LONDON POST-GRADUATE ASSOCIATION, St. James's Hospital, Balham, S.W.—*Wed.*, 4 p.m., Mr. Edwin Lindsay, Painful Feet.

UNIVERSITY COLLEGE, Gower Street, W.C.—*Mon.*, 5 p.m., Lecture by Dr. H. R. Ing, Chemical Structure and Pharmacological Action. *Wed.*, 4.15 p.m., Lecture by Dr. J. S. Prendergast, Renaissance Medicine.

GLASGOW POST-GRADUATE MEDICAL ASSOCIATION.—At 242, St. Vincent Street: *Tues.*, 3.30 p.m., Dr. Nora I. Wattie, Gonorrhoeal Infections in Women. At Ear, Nose, and Throat Hospital: *Wed.*, 4.15 p.m., Dr. W. S. Syme, Cases.

LIVERPOOL UNIVERSITY CLINICAL SCHOOL ANTE-NATAL CLINICS.—Royal Infirmary: *Mon.* and *Thurs.*, 10.30 a.m. Maternity Hospital: *Mon.*, *Tues.*, *Wed.*, *Thurs.*, and *Fri.*, 11.30 a.m.

MANCHESTER ROYAL INFIRMARY.—*Tues.*, 4.15 p.m., Dr. E. W. Twining, The Value of X Rays in Cardiac Conditions. *Fri.*, 4.15 p.m., Dr. F. E. Tylecote, Demonstration of Medical Cases.

MANCHESTER: ST. MARY'S HOSPITALS.—At Whitworth Street West Hospital: *Fri.*, 4.15 p.m., Dr. Ward, Problems of Infant Feeding.

British Medical Association

OFFICES, BRITISH MEDICAL ASSOCIATION HOUSE
TAVISTOCK SQUARE, W.C.1

Departments

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MEDICAL SECRETARY (Telegrams: Mediscera Westcent, London).

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Telephone numbers of British Medical Association and British Medical Journal, Museum 9861, 9862, 9863, and 9864 (internal exchange, four lines).

SCOTTISH MEDICAL SECRETARY: 7, Drumsheugh Gardens, Edinburgh. (Telegrams: Associate, Edinburgh. Tel.: 24361 Edinburgh.)

IRISH MEDICAL SECRETARY: 18, Kildare Street, Dublin. (Telegrams: Bacillus, Dublin. Tel.: 62550 Dublin.)

Diary of Central Meetings

FEBRUARY

17 Fri. Committee on Medical Education, 2.15 p.m.

21 Tues. Sir Charles Hastings Lecture at B.M.A. House by Sir Henry Gauvain: Sun, Air, and Sea Bathing in Health and Disease, 8 p.m.
Ethical Subcommittee, 2.15 p.m.

23 Thurs. Library Subcommittee, 2.30 p.m.

28 Tues. Maternity and Child Welfare Subcommittee, 2.30 p.m.

MARCH

1 Wed. Medical Students and Newly Qualified Practitioners Subcommittee, 3.30 p.m.

3 Fri. Public Assistance Medical Service Committee, 2.30 p.m.

15 Wed. Hospitals Committee, 11.30 a.m.

BIRTHS, MARRIAGES, AND DEATHS

The charge for inserting announcements of Births, Marriages, and Deaths is 9s., which sum should be forwarded with the notice not later than the first post on Tuesday morning, in order to ensure insertion in the current issue.

BIRTHS

JACKSON.—On February 7th, at the Imperial Nursing Home, Cheltenham, to Gertrude M. (née Collins), wife of Thomas Jackson, F.R.F.P.S.G., L.D.S., of Thornbury House, Cheltenham, a son.

LORD.—On February 9th, 1933, to Helen, wife of Herbert Lord, F.R.C.S.Ed., of Colwyn Bay, a son.

DEATH

PARKIN.—On Wednesday, February 8th, 1933, suddenly, at The Cedars, Osborne Road, Newcastle-upon-Tyne, Alfred Parkin, M.D., F.R.C.P., F.R.C.S., beloved husband of Elizabeth Parkin.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

122 The Heart in Diphtheria and Scarlet Fever

E. H. PLACE (*New England Journ. Med.*, November 17th, 1932, p. 864) states that the date of onset of diphtherial carditis is from the sixth to the twenty-first day after the onset. Physical findings besides pallor or exhaustion of the extremities and skin include changes in the heart sounds and heart rhythm. The first change is softening and shortening of the first sound; the diastolic pause is usually shortened. Rhythmic disturbance consists most commonly in a gallop type of three or four sounds, rarely with flutter or fibrillation. The blood pressure falls. In the worst cases the liver is enlarged and tender. Electrocardiograms show two main types of damage—namely, (1) auricular and intraventricular block, and (2) changes in the shape and direction of the T wave and reduction of the voltage of the heart current. The two changes may be associated, or the second may occur alone. The mortality from diphtherial heart damage is between 50 and 60 per cent. Death may take place within twenty-four hours from the onset, but the average time is about three days. Treatment consists in absolute rest, reduction of food by the mouth, and the administration of 50 per cent. glucose solution by the rectum and intravenously. In scarlet fever the characteristic heart damage is a mild endocarditis; this occurred in less than 0.1 per cent. of Place's cases. The diagnosis is based on the presence of fever, cardiac murmurs with tachycardia, change in the size of the heart, and associated arthritis. Electrocardiographic modifications are very rare. The onset is typical—namely, during the second or third week after the commencement of scarlet fever. Association with arthritis is very common, but no subcutaneous nodules have yet been found. The crippling effect is slight compared with that of rheumatic fever.

123 Tularaemia with Pneumonia

L. L. TUREEN (*Journ. Amer. Med. Assoc.*, October 29th, 1932, p. 1501), who records a personal case, illustrates the gravity of this condition by the fact that 36 per cent. of all cases of tularaemia, according to Perman and MacLachlan, show evidence of pulmonary involvement clinically or at the necropsy. The lesion consists chiefly in interstitial and alveolar necrosis, the basis of which is apparently thrombosis of the arterioles and smaller veins. There is an intense acute inflammation involving the interstitial tissues, the subendothelial layers and adventitia of the smaller vessels, and the alveolar spaces of the lungs. Tureen's patient was a man, aged 54, who developed tularaemia after skinning a rabbit. The diagnosis was confirmed by the agglutination test. Pneumonia developed at an early stage, and was complicated by serous pleurisy and myocarditis. Recovery ensued without specific treatment.

124 Erythema Nodosum and Tuberculosis

Erythema nodosum has been regarded as of rheumatic origin, as an exanthem, or as resulting from a streptococcal infection, but definite evidence has been forthcoming that it is associated frequently with tuberculosis. L. B. DICKEY (*Amer. Rev. of Tuberculosis*, November, 1932, p. 614) recalls one description of erythema nodosum as "an autogenic tuberculous reaction," and adds that in several cases erythema nodosum has followed immediately after the performance of a Mantoux test. Other observers have obtained a positive tuberculin reaction in 95 per cent. of cases of erythema nodosum. Cases of miliary tuberculosis or of meningitis have succeeded erythema nodosum, and erythematous exacerbations were caused by tuberculin injections. In twenty-one out of a series of twenty-three erythema nodosum cases the tuberculin test was positive, and in a school epidemic of eighteen cases all the children gave positive reactions. Wallgren has expressed the view that erythema nodosum is frequently a symptom accompanying the initial fever of tuberculosis. Dickey now reports seven cases among children of both sexes; their ages ranged from 2½ to 15 years; skiagrams of the lungs showed areas of abnormal density. Female patients are usually the more numerous, and in eight cases of adult erythema nodosum all the patients were women. The majority of patients have prodromal symptoms, fever being the most constant. In a series of sixteen cases only one patient was afebrile throughout the attack, but all reacted strongly to tuberculin, and usually to small doses; in many cases vesiculation and central necrosis of the inoculation site were noted. Dickey regards six of the tuberculous infections in this series as being probably initial. He concludes that while it has been proved that erythema nodosum may occur in children in the absence of allergy to tuberculin, and therefore probably in the absence of infection, this dermatosis in children should be considered as evidence of an early tuberculous infection or reinfection unless there is definite proof to the contrary.

125 Aetiology and Pathology of Perleche

M. H. GOODMAN (*Bull. Johns Hopkins Hosp.*, November, 1932, p. 263), who records a chronic case in a woman aged 56 and an acute case in a girl aged 9 years, states that the specific aetiology of perlèche has not been determined. A study of the literature and of his two cases suggested that this condition might be primarily caused either by streptococci and staphylococci or by a fungus organism. There is also a possibility that an undiscovered virus is the primary agent, and that the organisms named are secondary invaders. Histological examination of the lesion in the adult showed a chronic granuloma.

Surgery

126 Surgical Treatment of Renal Calculi

L. KIELLEUTHNER (*Münch. med. Woch.*, December 9th, 1932, p. 2003) states that the contraindications to removal of aseptic renal calculi are: (1) large stones which are discovered accidentally on *x*-ray examination and cause the patient no trouble; (2) small renal stones which, while causing the patient agonizing renal colic, are usually passed spontaneously; (3) stones in patients over the age of 70, who do not stand renal operations well; (4) stones occurring in the only functioning kidney; and (5) small aseptic stones in the renal parenchyma which do not produce symptoms. In all other cases the stones should be removed by pyelotomy, for infection will occur almost certainly and the stones will increase in size. When stones are found in both kidneys the author is of the opinion that the healthier kidney should be operated on in order to avert the possibility of calculous anuria. He does not believe that anuria is ever produced by a reno-renal reflex. Aseptic stones do not require urgent removal, but when they become impacted in the ureter they should be removed at once, because the renal substance is quickly disturbed when there is a damming back of the renal secretion. It may be possible to dilate the ureter through the cystoscope with a ureteral catheter and thus dislodge the stone; or an injection of oil or glycerin may bring about its passage. In a few cases the ureteral orifice may be enlarged by the diathermy knife. If these methods are unavailing the ureter should be opened and the stone be removed. In the case of infected calculi it is of the greatest importance to secure

their removal as early as possible. Pyelotomy is the easiest operation, but is only suitable for cases in which the stones are lying in the renal pelvis. Nephrectomy cannot often be carried out since the stones are frequently bilateral. Nephrotomy is the most dangerous operation because of post-operative haemorrhage. Recurrence of stones is too frequent to permit satisfaction with the results of surgical treatment. The contraindications to operation for infected stones are the same as those for aseptic calculi. An absolute indication is the presence of a unilateral stone when the other kidney is functioning well; in such cases nephrectomy is indicated. Pyelotomy is indicated when the infected stones are in a kidney which is still functioning well. Nephrotomy is indicated in those cases in which the patient is seriously ill, for the pus can be evacuated at once. Patients who only possess one kidney, and who have stones in that kidney, should be subjected to pyelotomy, since it is of great importance to keep that one kidney functioning properly. When stones have reappeared in a kidney pyelotomy is indicated, and care is taken to drain the kidney for several months after the operation. If they can only be removed by nephrotomy they are best left undisturbed.

127 Simultaneous Bilateral Artificial Pneumothorax

H. Vos (*Nederl. Tijdschr. v. Geneesk.*, November 19th, 1932, p. 5346), who records five illustrative cases of this procedure in patients aged from 18 to 25, maintains that it yields excellent results in otherwise uncontrollable haemoptysis. The dangers and drawbacks of the method are hardly greater than those encountered in unilateral artificial pneumothorax, the principal complications being spontaneous pneumothorax following perforation of the lung and pleural effusion. Vos points out that bilateral artificial pneumothorax should be regarded only as an adjuvant in the management of a case of tuberculosis, general treatment still being of the greatest importance.

128 Urogenital Tuberculosis

Emphasizing the point that tuberculosis is a constitutional disease, and that urogenital infection is only a local manifestation, G. J. THOMAS and T. J. KINSELLA (*Minnesota Med.*, December, 1932, p. 821) conclude that surgical treatment should not be undertaken, except in an emergency, until the patient has been enabled to build up a sufficient degree of resistance. Unilateral lesions of the kidney in which there is little or no evidence of tissue destruction should receive intensive medical treatment under careful observation, nephrectomy being indicated only when progressive disease is present. The authors prefer spinal anaesthesia for this operation, since it causes no pulmonary irritation, involves less trauma to the tissues during removal of the kidney, permits a better exposure, and renders possible an acceleration of the surgical procedure. Chronic sinuses following the removal of a tuberculous kidney are excised with the diathermy knife so that complete exposure of all ramifications is obtained. All parts of the wound surface are then thoroughly destroyed by bipolar diathermy. After this the wound is packed with sterile gauze, without suturing, and is repacked and treated with radiotherapy each day, stringent aseptic precautions being taken. If the patient has a good resistance against tuberculosis the wounds should heal from below upwards. Bilateral renal disease may be held in check for many years by adequate medical care, even though surgical intervention is impracticable except to arrest bleeding or to relieve pain and sepsis, the result of an obstructed ureter. Genital tuberculosis is usually an infection of the prostate and epididymis, and in most cases is associated with renal disease. Prostatic abscesses drain into the posterior part of the urethra, and may be the cause of pyuria or bacilluria. Tuberculosis of the epididymis is often an acute disease and may be cured by drainage and heliotherapy. When an operation becomes necessary this should be epididymectomy, not orchidectomy. In all forms of urogenital tuberculosis, the authors add, general constitutional treatment of the patient is of the utmost importance, and should both precede and follow any operative activities.

Therapeutics

129 Sanocrysin in Disease of the Joints

K. SECHER (*Ugeskrift for Laeger*, November 3rd, 1932, p. 1049) relates his experience with sanocrysin in the treatment of forty cases of rheumatic disease, including primary progressive chronic arthritis, chronic rheumatic polyarthritis, osteo-arthritis, rheumatic fever, acute polyarthritis, and erythema nodosum. There was also one case of syphilitic arthritis; it derived no benefit from the treatment. The author comments on the present-day tendency to regard a whole series of diseases of the joints, hitherto assumed to be non-specific, as manifestations of tuberculosis—the response, perhaps, of the organism to hitherto unknown varieties of the tubercle bacillus. The dosage was usually at first 25 cg., and it was gradually raised, according to the patient's condition and weight, to a maximum of 75 cg. Focal reactions were common; they consisted of swelling, redness, and reduced range of movement after the first or second injection. These reactions passed off after a few days, recurring in a lesser degree after the subsequent injections. The general reactions consisted of fever, lasting one or more days, and rashes which sometimes developed into obstinate dermatitis. The author regards this cutaneous reaction as a tuberculous manifestation, comparable with the rashes sometimes following the administration of tuberculin to tuberculous subjects, and not as a sign of metallic poisoning. With regard to his mixed assortment of cases, he points out that primary progressive chronic polyarthritis (of which he had as many as twenty-three cases) should test the efficacy of sanocrysin most severely, since no remedy has yet been found to arrest its progress. At the same time it is much easier to study the effects of treatment in articular than in pulmonary disease, in which there is an interplay of many factors. Among these twenty-three cases there were six grouped as cured, eleven as much improved, and five as improved. There was thus only one case failing to respond to this treatment. Among the eight cases of chronic rheumatic polyarthritis, there were five classed as cured and three as much improved. All the remaining cases of osteo-arthritis, rheumatic fever, acute polyarthritis, and erythema nodosum were classed as cured.

130 Treatment of Carbon Monoxide Poisoning

C. J. MIJNLIEFF (*Nederl. Tijdschr. v. Geneesk.*, December 17th, 1932, p. 5745) maintains that the administration of a mixture of oxygen and 5 per cent. carbon dioxide presents certain advantages over pure oxygen in the treatment of carbon monoxide poisoning, but only in certain well-defined conditions—namely, in those stages of intoxication in which the mixture amplifies and accelerates the respiratory movements. Care should be taken to pass pure oxygen into the apparatus from time to time. To be successful the cardiac action must be adequate, even though the respiration is weak or has actually been arrested. Lastly, whereas the administration of oxygen can be entrusted to a lay person, the use of the mixture of oxygen and carbon dioxide must be reserved for the medical practitioner.

131 Alkalosis complicating the Alkaline Treatment of Peptic Ulcers

The toxic effects of large doses of sodium bicarbonate, especially if impairment of renal function is present, are well known. Hardt and Rivers in 1923 first fully described this complication in sixteen cases following the Sippy treatment of gastric disease. A. M. COOKE (*Quart. Journ. Med.*, October, 1932, p. 527) reviews these cases and forty-three others appearing in the literature. Short notes on nine cases treated in St. Thomas's Hospital are also given; these occurred among 200 patients receiving similar treatment. The cause of these toxic symptoms in certain patients with peptic ulcer, otherwise apparently healthy, is imperfectly known. Such points as blood findings similar to those in excessive vomiting, the possible effects of the insoluble alkalis, and inadequate excretion

of the salt are mentioned. The occurrence of albumin, casts, and pus in the urine, and the increased blood urea, creatinine, and inorganic phosphorus contents, suggest some renal lesion. The part played by any previous renal damage, the effects of alkalis on the kidney, and the action of extrarenal causes are discussed. Cooke concludes that alkaline excretion is impaired in some way, and that the resultant alkalosis lowers the renal efficiency. The clinical and chemical features of alkalosis are summarized. If the treatment is continued these changes, especially drowsiness, become more marked; tetany appears, followed by generalized convulsions, coma, urinary and faecal incontinence, and death. Early diagnosis should be succeeded by the prompt stopping of alkalis; recovery is rapid, the symptoms disappearing in three or four days. Acidotic drugs do not hasten recovery, and large doses of these may be dangerous.

Dermatology

132 Benign Cystic Epithelioma

According to F. SUMMERILL and J. G. HUTTON (*Arch. Derm. and Syph.*, November, 1932, p. 854) multiple benign cystic epithelioma is a comparatively rare dermatitis, which begins about the age of puberty or in infancy and usually always affects females; it is often hereditary. The lesions have a symmetrical distribution, usually on the face, though the neck, thorax, and upper parts of the arms, but rarely the lower extremities, may also be affected. The disease originates as an outgrowth from the basal cells of the squamous epithelium or the hair follicles; it does not seem to undergo transition into basal epithelioma, which may at times resemble it in early clinical appearance. Multiple benign cystic epithelioma must be differentiated from syringocystadenoma, adenoma sebaceum, cylindroma, and adenoma of the sweat glands. The treatment, if the lesions are solitary or few, may be excision; this should be undertaken with the electrocautery, since tumours removed by curetting or simple excision tend to recur at the margin of the scar. Carbon dioxide snow is beneficial in the case of small lesions. Extensive tumours are best treated with *x* rays or radium, which decrease the size of the growths, leaving the cysts as small milia requiring local removal. A typical case of this condition is recorded.

133 Parapsoriasis

J. M. H. MACLEOD (*Brit. Journ. Derm. and Syph.*, December, 1932, p. 569) regrets the vagueness of the term "parapsoriasis," but now condemns his own more descriptive term "resistant maculo-papular scaly erythrodermias" inasmuch as it has been shown that certain members of this group of skin diseases are characterized from the beginning by plaques which have not resulted from the aggregation or the peripheral spreading of maculo-papular elements. He retains Brocq's original classification into parapsoriasis en gouttes; p. lichenoide; and p. en plaques. The essential lesion in most cases is a pin-head-sized inflammatory macule or maculo-papule; by the coalescence of these the three types of Brocq may be formed. The evolution of these lesions is slow, and, once established, they resist treatment and appear to persist indefinitely. Subjective symptoms are generally absent, but in extensive cases itching may occur from exposure to excessive heat, and in rare instances from cold. The primary changes are of an inflammatory nature and occur in and about the superficial blood capillaries; any alterations in the epidermis result from the underlying inflammatory oedema. There is no marked parakeratosis, and the minute dry abscesses which are met with in psoriasis do not occur. The disease is most common in males, almost exclusively in adults, and is consistent with good general health. The subjects in many cases have been exposed for long intervals to high temperatures in their occupations, but the author is not prepared to accept heat as a primary cause. Treatment is of little value as a rule, but benefit has sometimes been obtained in the guttate and patchy types by the employment of strong irritants, such as chrysarobin, pyrogallol, and 10 per cent. vasogen iodine, but care must be taken not to convert a subacute condition into an acute one and produce a general exfoliative dermatitis. H. MACCORMAC (ibid., p. 576) mentions the possibility of spontaneous recovery from this condition, and warns against too energetic treatment. He doubts whether the acute form, sometimes reported, is really to be considered a member of the group. Freedom from subjective sensations is not invariable: one of his patients experienced pronounced itching.

134 Aetiology of Eczema

W. J. MACDONALD (*New England Journ. Med.*, November 24th, 1932, p. 940) discusses the aetiology of eczema. In contradistinction to the older idea that eczema is almost wholly due to endogenous metabolic disturbances, there now exists a school which regards the disease as exogenous and allergic in the majority of cases. In the investigation of these cases the "patch" test is useful. In performing this test the supposedly offending substance—plant, drug, or toilet accessory—is applied to a small square of damp linen; this is laid on the skin, covered with a larger square of rubber tissue, and a still larger square of adhesive tape. The area is examined twenty-four to forty-eight hours later. In performing this test it must be remembered that if the suspected substance is a primary irritant it must be diluted until it is non-injurious to the normal skin. Moreover, this test should only be used with substances with which the patient has been in immediate contact. The type of reaction found on removing the patch should simulate that of the disease under study. The author believes that certain types of eczema are caused by incorrect diets. These are best elucidated by carefully performed scratch tests, using food proteins, animal emanations, furs, pollens, or feathers. MacDonald agrees with O'Keefe, Rackemann, and Duke, that infantile eczema is a dietetic problem, and recommends the replacement of milk in the child's diet by the soy-bean formula of Hill and Stuart, which contains adequate nourishment for infants. The allergic explanation of eczema is described, and in this connexion the Prausnitz-Kustner reaction is mentioned—this reaction having its greatest value where the eruption is due to food or drugs. The author maintains that bacterial sensitization can possibly cause eczema, and cites a case as an example. He also shows that epidermophytosis simulates eczema in the viciousness of subjective signs, and objectively; one mimics the other, but the trained eye can distinguish them. Glycosuria may be a cause of eczema, and MacDonald emphasizes that every eruption of apruritic nature demands examination of the urine.

Obstetrics and Gynaecology

135 Albuminuria in Pregnancy

R. S. S. STATHAM (*Bristol Med.-Chir. Journ.*, Autumn, 1932, p. 219) discusses the significance of albuminuria in pregnancy under five headings. First he refers to cases in which traces of albumin appear in the urine for no apparent pathological reason. This commonly occurs in pregnancy with large children, twins, and hydramnios; some oedema of the feet may also be present. These cases need careful investigation and observation before deciding that the albuminuria is not pathological. The definite but slight changes in the urinary tract in every normal pregnancy may determine a number of cases in the next group—those with infection of the urinary tract. Cystitis is not frequent, and is usually indicative of gonococcal infection. Pyelitis is much commoner than is suspected, and responds readily to treatment, which is described. Cases which do not respond to treatment should be examined by the *x* rays for a probable calculus. Termination of pregnancy for pyelitis should never be necessary; the condition, however, tends to recur at subsequent pregnancies, and permanent renal and ureteral damage may result. The third group comprises cases of

pre-existing nephritis associated with pregnancy. The prognosis as to both the pregnancy and the patient is not good even in early pregnancies. The diagnosis is usually easy; general weakness, headache, and mild visual disturbances are generally the first symptoms; increasing oedema is an early sign. The treatment is briefly outlined. The onset of albuminuric retinitis and other uraemic signs absolutely indicate termination of pregnancy. In the fourth group, pregnancy toxaemias, the liver is always affected and associated with the albuminuria and a raised blood pressure. Two tests can differentiate pre-eclamptic from nephritic cases—the diastase reaction and ammonia-nitrogen excretion; both are high in toxaemia but low in nephritis. The treatment of pre-eclampsia is described; that of nephritic cases is solely medical. The symptoms and signs in the final group—cases of "low reserve kidney"—are enumerated; the care and treatment of these is purely medical. Commenting on these conclusions, J. A. NIXON (ibid., p. 229) emphasizes the fact that, though no pathological symptoms may be associated with mild albuminuria, damage may result from it subsequently. He discusses the strain of pregnancy on the kidneys and liver, and suggests that in "low reserve kidney" it is the former that is great rather than the renal defect that develops under a slight strain. Other points such as the differences between toxaemic and nephritic cases are considered. As to the importance of the tests cited by Statham, Nixon believes that pregnancy should be terminated, whether the case is nephritic or pre-eclamptic, if the blood urea exceeds 40 mg. Finally, the prognosis as to future pregnancies in albuminuric patients is discussed.

136 Cause of Primary Dysmenorrhoea

E. NOVAK and S. R. M. REYNOLDS (*Journ. Amer. Med. Assoc.*, October 29th, 1932, p. 1466) state that the cause of primary or essential dysmenorrhoea is an unsolved problem, and discuss certain theories advanced as to its aetiology. The old view that it is due to obstruction (most frequently caused by uterine anteflexion) to the exit of the menses from the uterine canal has been abandoned. For reasons cited, chiefly that the disease is often acquired, the authors do not agree with the hypothesis of hyperplasia of the pelvic organs. The importance of psychogenic and constitutional factors in causing the pain is undoubted. The authors believe that the immediate cause is a disturbance of the motility factors of the uterine muscle. Discussing the possibility of endocrine factors, they point out that the female sex hormone (theelin) is an excitant and progestin an inhibitor of this motility; preparations of pregnancy urine, because of their prolan content, are also strongly inhibitory. The influence of progestin disappears a day or two before the menstrual onset, and this fact, combined with constitutional subnormality or psychoneuroses, may account for dysmenorrhoea in some cases; in others there is seemingly an actual imbalance, either quantitative or chronological, between the theelin and progestin. Comment is made on the possible influence of the anterior pituitary lobe as a causative factor, and on the use of a prolan-containing substance as part of the treatment of this condition.

137 Placental Extract in Utero-ovarian Disorders

The work of many investigators, especially Collip, has demonstrated the favourable action of placental extracts in disorders due to dysfunctioning of the utero-ovarian system. CAUJOLE (*Bruxelles-Médical*, November 27th, 1932, p. 98) records the results obtained in 400 such cases by the oral administration of an albumin-free extract of whole placenta; 10 c.cm. of this corresponds to 100 grams of placenta. This extract contains folliculin, emmenine, and a substance analogous to that extracted from the anterior pituitary lobe; it has proved efficacious in various menstrual disorders such as amenorrhoea and hypermenorrhoea, and in the vasomotor and nervous troubles following castration and the menopause. It has also proved of benefit in rheumatic pains, hypertension, and obesity. The dosage varies with the individual, and with the intensity and rapidity of the reaction obtained. The most rapid and durable results follow variation of the treatment, such as initial large doses diminishing with improvement, and a period without treatment followed by a renewal of the optimum dose on the slightest reappearance of trouble. No ill effects from this treatment have been noted, except occasionally some nausea, vertigo, sensation of abdominal heaviness, and hyperchlorhydria. These disappear on lessening the dose, which can then be gradually increased until the initial one is again attained.

Pathology

138 Disappearance of Complement from the Blood

W. H. WEIL and B. BUCHHOLZ (*Klin. Woch.*, December 3rd, 1932, p. 2019) investigated the complement concentration—the smallest amount of human serum necessary to produce hemolysis of 0.5 c.cm. of a 2 per cent. suspension of sheep red cells and inactivated rabbit serum kept for half an hour at 37° in an incubator—in a few hundred cases, and found it to be between 0.03 and 0.05 c.cm. serum. This amount did not vary in tuberculosis, severe sepsis, septic endocarditis, or pneumonia, but in rheumatic fever they found the concentration lower than 0.5 c.cm., and in acute glomerulonephritis it had fallen to 0.2 c.cm., almost indicating complement disappearance. In one case of rheumatic endocarditis this diminution of complement persisted for several months, but after a diseased root of a tooth had been extracted the complement concentration returned to the normal figure. The authors explain this disappearance on the assumption that these conditions are not brought on by an infection, but by the slow sensitization of the body from an infected focus. In these cases there appears to be an increased and violent antigen-antibody reaction, leading to complete disappearance of the complement. This seems to prove that acute rheumatic fever, rheumatic endocarditis, and acute glomerulonephritis are not to be regarded as distinct diseases, but rather as different phases of allergy.

139 Leucocytic Reactions in Measles

B. BENJAMIN and S. M. WARD (*Amer. Journ. Dis. Child.*, November, 1932, p. 921) examined the leucocytic reactions in forty-six cases of measles including twenty cases in the incubation stage. One patient was an adult, and forty-five were children aged from 9 months to 12 years. The authors find that during the incubation period the variations in the numbers of the leucocytes are relatively slight. On the first day of the prodromal stage there is a sharp decrease in the number of lymphocytes and eosinophils, and an increase in the number of monocytes and polymorphonuclear neutrophils. At the height of the disease there is a diminution of all the white cell elements. Histological examination of a lymph gland obtained from one patient revealed that the development of the lymphopenia in measles is coincident with marked hyperplasia of the lymphoid tissues.

140 Infections due to Vitamin A Deficiency

P. ARONS and M. P. J. VAN DER RIJST (*Nederl. Tijdschr. v. Geneesk.*, November 26th, 1932, p. 5445), from the study of 276 necropsies and microscopical examinations of 256 organs in rats fed on a diet deficient in vitamin A, came to the conclusion that infection was always present in certain organs, while it never occurred in others. The infection generally took place in a definite sequence in the various organs, in which it was always found to be accompanied by keratinization. While keratinization without infection was often present, infection without keratinization did not occur. A good nutrient medium for bacteria was supplied by the accumulation of the products of secretion in consequence of the keratinization of the glandular ducts and the masses of keratin. The authors conclude that the infections arising from a deficiency of vitamin A are probably not the result of a diminished resistance, but of local changes caused by keratinized epithelium and atrophy of the glands.

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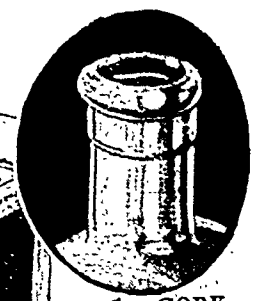

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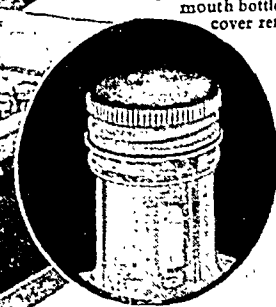

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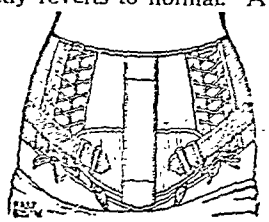

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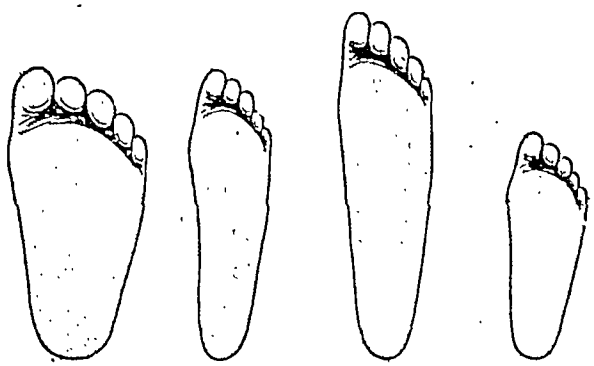

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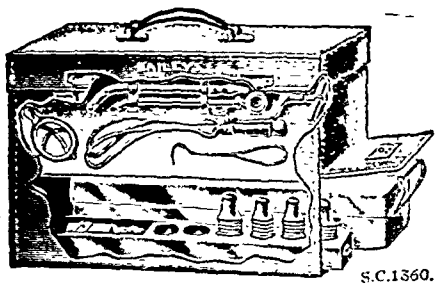

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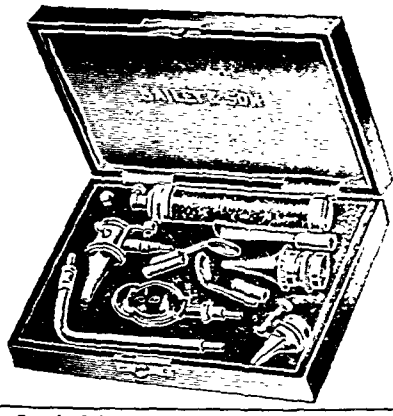

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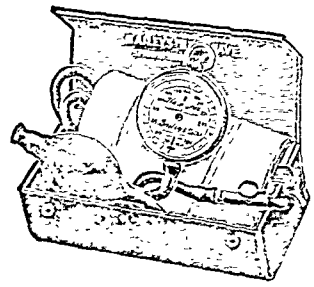

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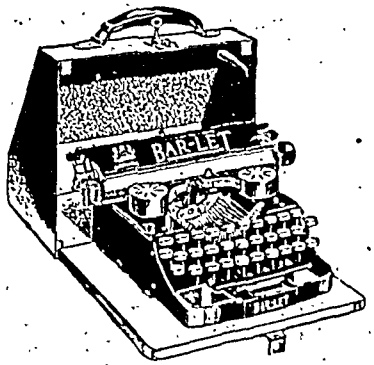

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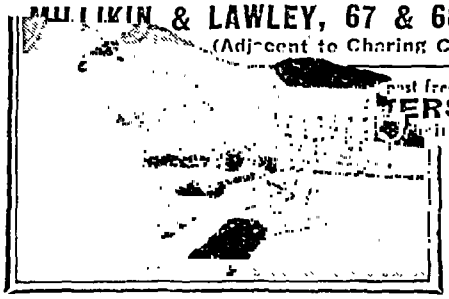

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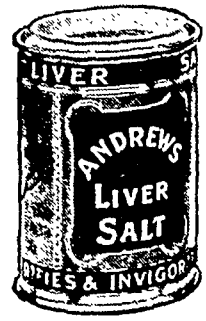

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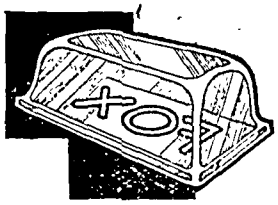

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A first-class Country Mansion adapted for the reception of a limited number of Ladies and Gentlemen mentally afflicted.
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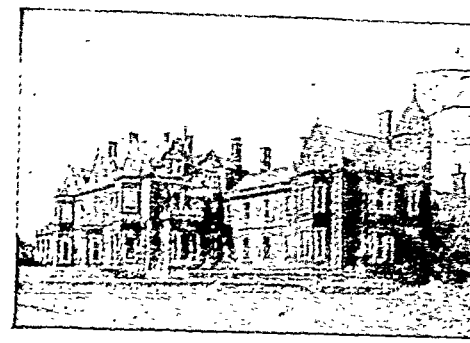

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As founded and established by the late Dr. FRANCIS HARE, for 20 years Med. Supt. of the Norwood Sanatorium, and author of "Alcoholism," etc.; for the treatment of ALCOHOLISM, other Drug Habits, Insomnia, Neurasthenia, Functional Nervous Disorders.

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Ladies suffering from all forms of Mental Illness are received for treatment, on modern lines, as Voluntary, Temporary, or Certified Private Patients at the Hill End Mental Hospital. Convalescent and mild cases can be treated in a delightful country mansion, with extensive grounds, known as "Highfield Hall," situate about a mile away from the Hospital. FEES TWO TO THREE GUINEAS PER WEEK.

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FOR THE UPPER AND MIDDLE CLASSES ONLY.

President: THE MOST HON. THE MARQUESS OF EXETER, C.M.G., A.D.C.

Medical Superintendent: DANIEL F. RAMBAUT, M.A., M.D.

This registered Hospital is situated in 120 acres of park and pleasure grounds. Voluntary patients, who are suffering from incipient mental disorders or who wish to prevent recurrent attacks of mental trouble, temporary patients, and certified patients of both sexes, are received for treatment. Careful clinical, biochemical, bacteriological, and pathological examinations. Private rooms, with special nurses, male or female, in the Hospital or in one of the numerous villas in the grounds of the various branches can be provided.

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This is a Reception Hospital in detached grounds, with a separate entrance, to which patients *can be admitted. It is equipped with all the apparatus for the most modern treatment of Mental and Nervous Disorders.* It contains special departments for hydrotherapy by various methods, including Turkish and Russian baths, the prolonged immersion bath, Vichy Douche, Scotch Douche, Electrical bath, Plombières treatment, etc. There is an Operating Theatre, a Dental Surgery, an X-ray room, an Ultra-violet Apparatus, and a Department for Diathermy and High Frequency treatment. It also contains Laboratories for biochemical, bacteriological, and pathological research.

MOULTON PARK.

Two miles from the Main Hospital there are several branch establishments and villas situated in a park and farm of 650 acres. Milk, meat, fruit, and vegetables are supplied to the Hospital from the farm, gardens, and orchards of Moulton Park. Occupation therapy is a feature of this branch, and patients are given every facility for occupying themselves in farming, gardening, and fruit-growing.

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The seaside house of St. Andrew's Hospital is beautifully situated in a Park of 330 acres, Llanfairfechan, amidst the finest scenery in North Wales. On the North-West side of the Estate a mile of sea coast forms the boundary. Patients may visit this branch for a short seaside change or for longer periods. The Hospital has its own private bathing house on the seashore. There is trout-fishing in the park.

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For terms and further particulars apply to the Medical Superintendent (Telephone No. 2356 and 2357 Northampton), who can be seen in London by appointment.

HAYDOCK LODGE,

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'Phone: 11 Ashton-in-Makerfield.

For the reception and treatment of PRIVATE PATIENTS of both sexes of the UPPER AND MIDDLE CLASSES suffering from mental and nervous diseases, either voluntarily or under Certificate. Patients are classified in separate buildings according to their mental condition.

Situated in park and grounds of 400 acres. Self-supported by its own farm and gardens, in which patients are encouraged to occupy themselves. Every facility for indoor and outdoor recreation For terms, prospectus, etc., apply MEDICAL SUPERINTENDENT.

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HOSPITAL FOR MENTAL DISEASES.

This Institution is exclusively for the reception of a limited number of Private Patients of both sexes of the Upper and Middle Classes at moderate rates of payment. It is beautifully situated in its own grounds on an eminence a short distance from Nottingham, and from its singularly healthy position and comfortable arrangements affords every facility for the relief and cure of those mentally afflicted. Voluntary and Temporary Patients received.

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COURT HALL, KENTON, EXETER,

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An Approved Nursing Home for reception of Female Cases under the Mental Treatment Act.

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Special accommodation for Lady Volu
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For Mental Disorders with or without Certifi
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REDUCTION OF FEES

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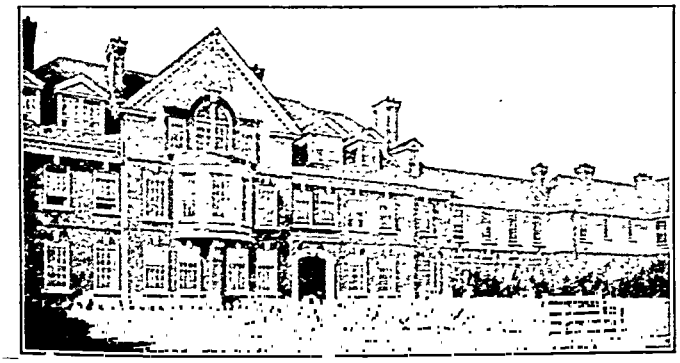

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Extensive pleasure grounds, with croquet, tennis, bowling, and putting greens.

Occupational, Light, and Hydro Therapy.

ONE HOUR RAIL JOURNEY FROM LONDON.

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FEES, including all necessaries except clothing, from THREE to FIVE GUINEAS A WEEK.

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A NURSING HOME OPENED IN 1911 FOR THE INVESTIGATION AND TREATMENT OF FUNCTIONAL NERVOUS DISORDERS OF ALL TYPES.

No cases under certificate. Thorough clinical and pathological examinations. Psychotherapeutic treatment, occupation, and recreation as suited to the individual case.

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Fully equipped with every modern appliance for the diagnosis and treatment of

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Private Rooms, Broad Verandahs, Physiotherapy and Psychotherapy, X-ray and Dental departments, Laboratories for investigation and research. For terms and particulars apply to the Physician in charge at the Hospital. Telephone: Tudor 4211.

CHEADLE ROYAL MENTAL HOSPITAL,

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This REGISTERED HOSPITAL, with a SEASIDE BRANCH at Colwyn Bay, N. Wales, is for the treatment and care of those of the Upper and Middle Classes suffering from MENTAL and NERVOUS DISEASES.

The Hospital is governed by a COMMITTEE, appointed by the TRUSTEES of the Manchester Royal Infirmary.

In addition to the Main Building there are separate villas. Extensive grounds. Hard and grass tennis courts, cricket and croquet grounds, and a court for badminton. There are also wireless installations. Golf may be had within easy distance. Occupational Therapy.

VOLUNTARY, TEMPORARY, AND CERTIFIED PATIENTS received.

The Hospital is nine miles from Manchester, 50 minutes by rail from Liverpool, and 3½ hours from London.

For terms and further particulars apply to the Medical Superintent, J. A. C. ROY, M.B., who may be seen in Manchester by APPOINTMENT.

Telephone: GATLEY 2231 (3 lines).

PECKHAM HOUSE, 112, Peckham Road, London, S.E.15.

Telegrams: "Alleviated, London." Telephone: Rodney 4741-4742.

The above House, which was established in 1826, is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders. Certified voluntary and temporary patients are received. Separate houses for treatment and accommodation of special cases adjoin the Institution. There is a seaside branch, Kearsney Court, near Dover, to which patients may be sent for treatment or on holiday. Motor and carriage exercise is provided as required. Patients can avail themselves of a course of physical drill. Tennis Courts. Entertainments, dances, and indoor amusements held throughout the year. Terms from £3 3s. per week.

Illustrated prospectus and further particulars can be obtained from the MEDICAL SUPERINTENDENT.

THE OLD MANOR SALISBURY

A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS.

Extensive grounds. Detached Villas. Chapel. Garden and dairy produce from own farm. Terms very moderate.

CONVALESCENT HOME at BOURNEMOUTH. Detached Villas standing in 12 acres of ornamental grounds, with tennis courts, etc., which Voluntary, Temporary or Certified Patients may visit, by arrangement, for long or short periods.

Illustrated Brochure on application to the Medical Superintendent, The Old Manor, Salisbury. Telephone 51.

CAMBERWELL HOUSE, 33, Peckham Road, London, S.E.5.

Telegrams: "PSYCHOLIA, LONDON." FOR THE TREATMENT OF MENTAL DISORDERS. *Telephone:* RODNEY 4731—4732.

Also completely detached Villas for mild cases, with private suites if desired. Voluntary Patients received. Twenty acres of grounds. Hard and Grass Tennis Courts, Putting Greens, Bowls, Croquet, Squash Rackets, and all indoor amusements, including Wireless and other Concerts. Occupational Therapy, Callisthenics, and Dancing Classes, X-ray and Actino-therapy, Prolonged Immersion Baths, Operating Theatre, Pathological Laboratory, Dental Surgery, and Ophthalmic Dept. Chapel. Senior Physician: Dr. HUBERT JAMES NORMAN, assisted by three Medical Officers; also resident and visiting Consultants.

An illustrated Prospectus, giving fees which are strictly moderate, may be obtained upon application to the Secretary.

The Convalescent Branch is HOVE VILLA, BRIGHTON, and is 200 feet above sea-level.

NORTHUMBERLAND HOUSE,

GREEN LANES, FINSBURY PARK, N.4.

Telegrams: "SUBSIDIARY, LONDON." *Telephone:* NORTH 0888.

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses. Conveniently situated four miles from Charing Cross. Easy access from all parts. Six acres of ground high situated, facing Finsbury Park. Private Suites. Voluntary Patients and Temporary Patients received without certificatio

Convalescent Home, **Kearsney Court, Dover.** For further particulars, apply to the **Medical Superintendent.**

The MAUDSLEY HOSPITAL

DENMARK HILL, S.E.5.

Telephone: RODNEY 2101—4.

A CLINIC instituted by the London County Council for Treatment of NERVOUS and CURABLE MENTAL DISORDER. Voluntary patients ONLY received.

NEW OUT-PATIENTS: MEN — Mondays and Thursdays, 2 p.m. WOMEN—Tuesdays and Fridays, 2 p.m. CHILDREN—Mondays and Fridays, 10 a.m.

IN-PATIENTS: (*a*) 229 beds (*both sexes*) in wards or separate rooms, including 35 beds in a ward of King's College Hospital, which is in use as a temporary annex of the Maudsley Hospital. (*b*) 13 private rooms (for ladies) with special sitting rooms, garden, and dietary.

TERMS

(*a*) **£5 a week, but in case of patients with a legal settlement in the County of London a less sum may be charged according to means.**

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Terms include (with rare exceptions) all forms of treatment, for which unusual facilities exist —there being a staff of consultant specialists, and the central laboratory of London County Mental Hospitals being attached to the Hospital.

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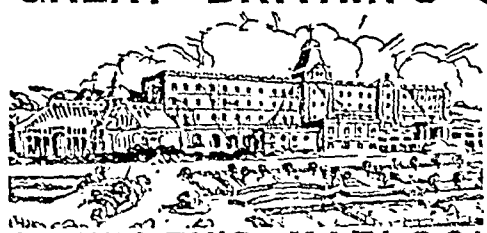

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First opened in 1893 and rebuilt in 1925. On the Cotswold Hills, seven miles from Cheltenham, for the treatment of Pulmonary and all other forms of Tuberculosis. Aspect S.S.W., sheltered from North and East, elevation 800 feet. Pure bracing air. Special Treatment by artificial Pneumothorax (X-ray controlled), Tuberculins, Medicated Inhalations by means of the Apneu Inhalation Installation, and Ultra-Violet Rays is available, when necessary, without extra charge. X-ray plant. Electric light. Radiators, hot and cold basins, and Wireless in all rooms.

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Consulting Laryngologist: SIDNEY BERNSTEIN, M.R.C.S.Eng., L.R.C.P.Lond. (Attends Regularly.)
Apply: The Secretary, The Cotswold Sanatorium, Cranham, Gloucester. *Telephone*: 41 WITCOMBE. *Telegrams*: "HOFFMAN, BIRDLIP."

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Established 1898 for the treatment of Tuberculosis. Radiators and Electric Light throughout. Hot and cold water and shower bath in nearly all rooms. Powerful X-ray Plant. Ultra-violet Rays. Full Nursing Staff. All forms of treatment available. Farm of 120 acres, including 40 acres of wood. Herd of Tuberculin-tested Guernsey cows kept. Resident Physicians—ARTHUR DE W. SNOWDEN, M.D., B.Ch.(Cantab.), A. G. E. WILCOCK, M.R.C.S., L.R.C.P., COLIN CASSIDY, M.B., B.Ch.(Cantab.).

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For further particulars apply to the Secretary to the Medical School at the Royal London Ophthalmic Hospital, City Road, E.C.1, or to the Dean, CHARLES GOULDEN, O.B.E., M.D., M.Ch., F.R.C.S.

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For particulars, apply to the Hon. Dean, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool.

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An Introductory Course in Psychological Medicine on TUESDAYS and FRIDAYS at 4.45 p.m. and 5.45 p.m. Beginning MARCH 10th. Fee for course £2 2s. Applications must be received by February 28th.

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Examinations for the Diploma of the Mastery of Midwifery of the Society of Apothecaries of London will be held beginning Monday, May 15th, and Monday, November 20th, 1933.

For regulations, apply to the Registrar of the Society, Water Lane, E.C.4.

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The COLLEGE OF PRECEPTORS holds Preliminary Examinations for Medical and Dental Students in London and at Provincial Centres in March, June, September, and December. For Regulations, apply to the Secretary, College of Preceptors, Bloomsbury Square, London, W.C.1.

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UNIVERSITY OF LONDON, UNIVERSITY COLLEGE.

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SPECIAL COURSE FOR THE PRIMARY FELLOWSHIP EXAMINATION OF THE ROYAL COLLEGE OF SURGEONS.

Special SHORT COURSES in ANATOMY and PHYSIOLOGY will begin on Tuesday, February 28th, 1933, in preparation for the June Examination.

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The Course in Anatomy (including Embryology) is made up of lectures and demonstrations. Students are permitted to use the Dissecting Room and Museum of Anatomy at other times. The course in Physiology, Bio-Chemistry, and Histology consists of lectures and demonstrations, together with revision of practical work in those branches of the subject which are of particular importance in Medical Practice.

Full particulars may be obtained on application to—

University College, London. C. O. G. DOUIE, Secretary.
(Gower Street, W.C.1.)

UNIVERSITY OF LONDON KING'S COLLEGE.

PRIMARY F.R.C.S.

A Course in ANATOMY and PHYSIOLOGY in preparation for the JUNE EXAMINATION, will commence on THURSDAY, APRIL 20th, 1933, and will continue until the date of the examination.

Fees for the *Course*: Twelve Guineas for both subjects, Eight Guineas for an individual subject.

Further particulars from the Dean of the Medical Faculty, King's College, Strand, W.C.2.

SCHOLARSHIPS OF HALF FEES, £60 p.a. offered by good Boarding School (Girls), recognized by the Board of Education. Excellent references and examination results. Distinctions in School Certificate and Leaving Scholarships to Universities. Full particulars.—Add., —No. 201, B.M.A. House, Tavistock Sq., W.C.1.

LONDON HOSPITAL MEDICAL COLLEGE.

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A COURSE OF INSTRUCTION for the Final Fellowship Examination will begin on Wednesday, March 1st.

Fees: (exclusive of Operative Surgery) 25 guineas. Operative Surgery 10 guineas.

A separate entry can be made for all Classes other than those of a strictly Clinical character.

Further particulars may be obtained from Professor WILLIAM WRIGHT, M.B., D.Sc., *F.R.C.S., Dean, London Hospital Medical College*, Mile End, E.1.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

Dr. ROBERT CRUICKSHANK will deliver the MILROY LECTURES on February 23rd, 28th, and March 2nd, at 5 o'clock, at the College, Pall Mall East, S.W.1.

Subject: "*Pneumococcal Infections*."

Any member of the Medical Profession admitted on presentation of card.

By Order of the President,
H. M. BARLOW, Secretary.

THE UNIVERSITY OF LIVERPOOL.

LADY JONES LECTURE, 1933.

Mr. R. C. ELMSLIE, O.B.E., M.S., F.R.C.S. (Eng.) (Orthopaedic Surgeon, St. Bartholomew's Hospital, and Surgeon, Royal National Orthopaedic Hospital, *London*), will deliver the Lady Jones Lecture on TUESDAY, FEBRUARY 28th, 1933, at 4 p.m., in the Surgical Theatre, *Medical School*.

Subject: "*The Nature of So-called Osteitis Fibrosa Cystica*."

The lecture, which will be illustrated with lantern slides, is open only to members of the Medical Profession.

EDWARD CAREY, Registrar.

TANCRED'S STUDENTSHIPS

Shortly after Midsummer next the Governors and Trustees propose to elect one Student in Physic at Gonville and Caius College, Cambridge, two Students in Divinity at Christ's College, Cambridge, and one Student in Law at Lincoln's Inn.

Candidates must have been born in England, Scotland, or Wales, and be members of the Church of England, unmarried, and within the ages of 17 and 20 years for Physic and Divinity, and 19 and 23 for Law.

The annual stipend of each Student is £100.

The last day for sending in Petitions is March 14th.

Applications, stating class of Studentship and mentioning this paper should be made to Mr. GUY HARGREAVES CHOLMELEY, 28, Lincoln's Inn Fields, London, W.C.2, Clerk to the Governors and Trustees.

CLINICAL RESEARCH SCHOLARSHIP

(value £100 per anum)
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ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.

The holder to commence work at the Royal Westminster Ophthalmic Hospital on May 1st.

For further particulars apply before March 7th, 1933, to the Hon. Secretary, Medical Committee, Royal Westminster Ophthalmic Hospital, Broad Street, Holborn, W.C.2.

MANCHESTER ROYAL INFIRMARY

POST-GRADUATE LECTURES will be given by Members of the Honorary Staff in Medical, Surgical, and Special Subjects, each week on Tuesdays, from February 21st to May 30th (with exception of April 18th); on Fridays from February 24th to May 26th (except April 14th and 21st). Clinical cases will be shown in the Medical and Surgical Wards. All lectures and demonstrations begin at 4.15 and are free. *Details may be obtained from the* Secretary for the Post-Graduate Lectures.

ROYAL SCOTTISH NATIONAL INSTITUTION, LARBERT (*for mentally defective children and adults*).

Applications are invited for the post of ASSISTANT MEDICAL OFFICER. Candidates may be male or female and should have acted as House Surgeon or House Physician or held a similar post in a Mental Hospital or Institution for defectives. Salary £350, with board and lodging, or more according to experience.

Applications should be sent to the Medical Superintendent at the Institution.

CITY OF MANCHESTER.

PUBLIC HEALTH DEPARTMENT.

CRUMPSALL HOSPITAL AND INSTITUTION.

APPOINTMENT OF A MEDICAL SUPERINTENDENT.

The Public Health Committee invites applications from registered Medical Practitioners for the position of Non-resident Medical Superintendent at the Crumpsall Hospital (1,568 *beds) and Institution* (2,600 *beds*—including 600 beds for mental patients), Crescent Road, Crumpsall, Manchester. The Hospital is a *recognised Training School for Nurses*.

Applicants, whose ages shall not exceed 45 years, must have had experience in Hospital and Institutional work.

The position will include duties as:

1. Medical Superintendent of the Crumpsall Hospital.
2. Medical Officer of the Crumpsall Institution.
3. Examiner of children recommended for treatment in convalescent homes not belonging to the Council.

The salary, inclusive of emoluments in respect of all services required in connection with the Hospital and Institution, will be at the rate of £1,200 per annum, subject to an authorised *temporary deduction* of £81 per annum. The amount payable at present is, therefore, at the rate of £1,119 per annum, subject to the terms and conditions of the Manchester Corporation Grading Scheme. No bonus.

Applications, stating fully the age and details of clinical and administrative qualifications and experience, with copies of testimonials and endorsed on the envelope "Medical Superintendent," must be addressed to the Medical Officer of Health, Civic Buildings, 1, Mount Street, Manchester, only, and not to members of *the Committee or Council*, and must be received by him not later than Saturday, February 25th.

The candidate appointed will be required to devote the whole of his time to the duties of the position, to pass a medical examination, to contribute to the Corporation Superannuation Fund, and to execute the Deed of Service.

Canvassing in any form, oral or written, direct or indirect, is prohibited.

Town Hall. F. E. WARBRECK HOWELL, Town Clerk.
Manchester.
February 7th, 1933.

ADMINISTRATIVE COUNTY OF ESSEX.

APPOINTMENT OF MALE ASSISTANT COUNTY MEDICAL OFFICER OF HEALTH.

The County Council of the Administrative County of Essex invite applications for the above appointment from duly qualified Medical Men, holding a Diploma of Public Health, and not over 45 years of age.

The salary, which will be subject to economy abatement according to the scale approved by the County Council, will be £500 per annum, and will rise, subject to satisfactory service, by annual increments of £25 to £700 per annum. The appointment will be subject to three months' notice on either side.

Travelling expenses, in accordance with the County Council's Scale, will be allowed to the *successful candidate*.

The person appointed will be required to pass a medical examination and to contribute to the fund established by the County Council under *the Local Government and Other Officers Superannuation Act*, 1922.

The appointment will be subject to the *Council's* Sick Pay Rules and Regulations, a copy of which will be forwarded on application.

Applications on the prescribed form, obtainable from the undersigned, accompanied by copies of not more than three testimonials (which will not be returned), should be addressed to me and delivered at the Shire Hall, Chelmsford, not later than 10 a.m. on Monday, February 27th.

Shire Hall, Chelmsford. JOHN H. GOOLD, Clerk of the County Council.
February 7th, 1933.

ROYAL DERBY & DERBYSHIRE NURSING AND SANITARY ASSOCIATION.

APPOINTMENT OF HONORARY OBSTETRIC PHYSICIANS TO THE NIGHTINGALE HOME.

The Board of Management invite applications to fill vacancies on the staff of Honorary Obstetric Physicians.

The duties include attendance and lectures in rotation with colleagues.

Election will be by the Governors at a Special Meeting to be held on Thursday, March 23rd.

Applications, stating qualifications and experience, with not more than three testimonials, should be sent on or before March 20th, to the undersigned, from whom all particulars may be obtained.

Canvassing not allowed.

By Order,
Royal Nursing Institution, London Road, Derby. E. E. POOL, Secretary.
February 8th, 1933.

COUNTY COUNCIL OF MIDDLESEX.

HILLINGDON COUNTY HOSPITAL.

RESIDENT ASSISTANT MEDICAL OFFICER.

The County Council invites applications for the above appointment. Candidates must be registered Medical Practitioners, unmarried, and must have held resident appointments in a General Hospital. The officer appointed will work under the control of the Medical Superintendent, and will devote his whole time to his official duties.

Salary is at the rate of £400 per annum, rising by annual increments of £50 to £600 per annum, together with board, lodging, and laundry, valued for superannuation purposes at £100 per annum. In view of the national situation, a temporary abatement calculated on the following scale is applied to the salary and value of the emoluments: for the first £150 per annum, no abatement; for the next £100 per annum, 2½ per cent. abatement; for the next £500 per annum, 5 per cent. abatement.

The successful candidate will be required to pass such medical examination as the County Council may direct, and, unless subject to the Poor Law Officers Superannuation Act, 1896, to contribute to the County Council's Superannuation Fund. The appointment will be held during the pleasure of the Council, and subject to three months' notice on either side.

Applications, stating (1) age, (2) qualifications, and (3) experience, together with copies of not more than three recent testimonials, must be received by the undersigned not later than February 25th.

No special application forms are provided. Envelopes must be endorsed "Resident Assistant Medical Officer."

Canvassing, directly or indirectly, will be a disqualification.

N.B.—Hillingdon County Hospital is a general hospital and contains between 200 and 300 beds for acute medical and surgical cases and maternity cases. (C.D./13.)

ERNEST S. W. HART,
Clerk of the County Council.

Middlesex Guildhall,
Westminster, S.W.1.
January 31st, 1933.

EAST LANCASHIRE TUBERCULOSIS COLONY, Barrowmore Hall, Gt. Barrow, CHESTER.

(Under the direction of the British Red Cross Society and Order of St. John of Jerusalem.)

ASSISTANT MEDICAL OFFICER (male) required. Salary £275, rising to £300 at the end of six months, with board, residence, and laundry.

The appointment will be terminable by one month's notice. Preference will be given to candidates, with experience in Tuberculosis.

Applications, marked "Assistant Medical Officer," with copies of three recent testimonials, to be sent to the Medical Superintendent at the above address by 9 a.m.: February 21st.

Previous Medical Officers have obtained good appointments in County Medical Service.

COUNTY BOROUGH OF PRESTON
SHAROE GREEN HOSPITAL.
(250 Beds.)

Applications are invited from fully qualified registered Medical Practitioners for the post of FEMALE RESIDENT ASSISTANT MEDICAL OFFICER for six months at a salary of £150 per annum, with full board and laundry, duties to commence on April 1st.

Applications, with copies of three recent testimonials, to be returned to the undersigned by Thursday, March 2nd.

ALFRED HOWARTH,
Town Hall, Town Clerk.
Preston.
February 13th, 1933.

SHROPSHIRE ORTHOPAEDIC HOSPITAL & AGNES HUNT SURGICAL HOME, OSWESTRY.

HOUSE SURGEON (male) required on April 1st.

Appointment for six months, with possibility of extension. Salary at the rate of £200 per annum, with board, residence, and laundry. Two weeks' holiday for each six months' service.

Applications, stating age, qualifications, and experience, with copies of three recent testimonials, should be forwarded to the Secretary-Superintendent.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester Square, W.C.2.

Applications for the posts of OUT-PATIENT and IN-PATIENT MEDICAL REGISTRARS are invited to be sent to the undersigned on or before Saturday morning, March 4th.

Honorarium £50 per annum in each case.

Applicants must be duly qualified and registered Medical Practitioners. Particulars of the duties can be obtained on application.

There are also vacancies for CLINICAL ASSISTANTS.

LEONARD G. R. TURPIN,
Secretary.
February 9th, 1933.

BOROUGH OF HENDON.

COMBINED POST OF RESIDENT MEDICAL OFFICER at the ISOLATION HOSPITAL and ASSISTANT MEDICAL OFFICER for General Purposes.

Applications are invited for the above post. The successful candidate will be required to reside at the Isolation Hospital and to perform the duty of Resident Medical Officer, together with other duties in connection with the Borough Council's Maternity and Child Welfare, School Medical, and other Public Health Services.

Candidates must possess a Public Health qualification and should have had Fever Hospital experience.

Salary £500 per annum, rising by annual increments of £25 to a maximum of £600 per annum, plus emoluments—viz.: board, lodging, and laundry valued at £150 per annum, which is subject to a temporary deduction in accordance with scales in force. The current deduction will amount to £16 5s. per annum on the commencing salary and emoluments.

The appointment is subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922, and the successful candidate will be required to pass a medical examination.

Applications, on forms to be obtained from the undersigned, together with copies of not more than three recent testimonials, to be sent in not later than the first post on Wednesday, March 1st.

Canvassing, directly or indirectly, will be deemed a disqualification.

Dated this 11th day of February, 1933.

Town Hall, LEONARD WORDEN,
Hendon, N.W.4. Town Clerk.

CITY OF LEEDS.

SENIOR ASSISTANT RESIDENT MEDICAL OFFICER, KILLINGBECK SANATORIUM.

Applications are invited from registered Medical Practitioners for the post of Senior Assistant Resident Medical Officer at the Tuberculosis Sanatorium, Killingbeck (220 beds).

Applicants must be unmarried, and preference will be given to those who have held a general hospital appointment and had experience in the treatment of pulmonary and surgical tuberculosis in sanatoria. The salary offered is £350 per annum, rising by annual increments of £25 to £450, together with board, residence, and laundry, and is subject to a temporary percentage deduction.

The person appointed will be required to pass a medical examination, and to contribute to the Superannuation Fund established under the Local Government and Other Officers Superannuation Act, 1922.

Form of application, together with details of the percentage deduction, may be obtained from the Medical Officer of Health, 12, Market Buildings, Vicar Lane, Leeds, 1. Applications, endorsed "Tuberculosis Officer," together with copies of three recent testimonials, should be delivered at my office, 26, Great George Street, Leeds, 1, not later than 10 a.m., on Wednesday, March 1st.

THOS. THORNTON, Town Clerk.

THE KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION.

JUNIOR ASSISTANT RESIDENT MEDICAL OFFICER.

Applications are invited from duly registered practitioners (male and unmarried) for the post of JUNIOR ASSISTANT RESIDENT MEDICAL OFFICER at the NORTH WALES SANATORIUM, LLANGWYFAN, near DENBIGH (236 beds for pulmonary and non-pulmonary cases). Salary £250 per annum, plus maintenance (subject to an emergency deduction of £10 12s. 6d. per annum). The appointment is limited to a period of one year.

Applications, stating age, qualifications, previous experience, together with copies of three recent testimonials, should reach the undersigned not later than February 23rd.

Memorial Offices, D. A. POWELL,
Westgate Street, Principal Medical
Cardiff. Officer.

QUEEN CHARLOTTE'S MATERNITY HOSPITAL, Marylebone Road, N.W.1.

ASSISTANT RESIDENT MEDICAL OFFICER (male) required to commence duty on April 1st. Applicants must be registered. Appointment for three months. On completion of this appointment the selected candidate will be expected to proceed to the post of Senior Resident Medical Officer (for three months) on the recommendation of the Medical Staff. The salary of the Assistant Resident Medical Officer is at the rate of £80 per annum and of the Senior Resident Medical Officer £100 per annum, with board, residence, and washing allowance (4/- weekly).

Applications, with copies (not originals) of not more than three testimonials, will be received by the Secretary up to March 3rd.

H. B. STOKES, Secretary-Supt.

CITY OF MANCHESTER.

PUBLIC HEALTH DEPARTMENT.

BOOTH HALL HOSPITAL.

APPOINTMENT OF TWO ASSISTANT MEDICAL OFFICERS.

The Public Health Committee invites applications from qualified Medical Men for the positions of Assistant Medical Officers at the Booth Hall Hospital for Children (750 beds), Charlestown Road, Blackley, Manchester.

Every applicant must be a registered Medical Practitioner and unmarried.

Preference will be given to applicants with previous hospital experience and good surgical experience.

The Hospital is a recognized Training School for nurses and is equipped with all modern hospital requirements.

Salary for each appointment £250 per annum, subject to a temporary deduction of £6 10s. per annum. The amount payable is, therefore, £243 10s., with board, residence, and laundry in addition, subject to the terms and conditions of the Manchester Corporation Grading Scheme. No bonus.

The appointments will be made, in the first instance, for a period of six months. The successful candidates, however, will be eligible for re-appointment for a further period of six months at the end of that period.

Applications, stating fully the age, training, qualifications, and experience of the candidates, with copies of three recent testimonials and endorsed on the envelopes "Assistant Medical Officer, Booth Hall Hospital," must be addressed to the Medical Officer of Health, Civic Buildings, 1, Mount Street, Manchester, and not to members of the Committee or Council, and must be received by him not later than Saturday, February 25th.

The candidates appointed will be required to commence duty as soon as possible after appointment, to devote the whole of their time to the duties of the positions, to pass a medical examination, to contribute to the Corporation Superannuation Fund, and to execute the Deed of Service.

Canvassing in any form, oral or written, direct or indirect, is prohibited.

Town Hall, F. E. WARBRECK HOWELL,
Manchester. Town Clerk.
February 14th, 1933.

CITY OF PLYMOUTH.

MEDICAL SUPERINTENDENT.

Applications are invited from duly qualified and registered Medical Practitioners (male) for the post of Medical Superintendent of the Plymouth City General Hospital (577 beds).

The salary will be at the rate of £1,000 per annum, plus an allowance of the sum of £250 in lieu of quarters, etc.

The appointment will be terminable by three months' notice on either side.

Personal experience in hospital administration is essential. The appointment is whole-time and private practice is not permitted. The person appointed will be an Assistant Medical Officer in the Public Health Department, and will be on the staff of the Medical Officer of Health, who is the General Medical Superintendent of the Corporation Hospitals.

Canvassing will disqualify the applicant.

Applications will be considered only on the form of application which will be provided. A form of application, together with further details relating to the appointment, can be obtained from the undersigned, on the receipt by him of a request for this, accompanied by a stamped and addressed envelope. Forms of application, duly completed, together with copies of not more than three recent testimonials, must be returned to the undersigned, in envelopes endorsed "Medical Superintendent," not later than March 2nd.

T. PEIRSON, M.D., M.R.C.S., D.P.H.,
Town Hall, Medical Officer of Health.
Stonehouse, Plymouth.
February 14th, 1933.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART.
Westmoreland Street, Marylebone, W.1.

RESIDENT MEDICAL OFFICER.

Applications are invited for the post of Resident Medical Officer (male). The appointment is for a period of six months from April 1st, but may be renewed for a further period not exceeding six months.

Salary at the rate of £150 per annum, with board, residence, and washing.

[illegible] must be duly registered [illegible] will not be expected to [illegible] Honorary Medical Staff but should send their applications, with copies of three recent testimonials, to me at the Hospital not later than Saturday, March 4th.

ROBERT G. E. WHITNEY, Secretary.

ROYAL NAVAL MEDICAL SERVICE.

VACANCIES EXIST FOR MEDICAL OFFICERS IN THE ROYAL NAVY.

Candidates will be entered as Short Service Medical Officers and will be considered for transfer to the Permanent Service after 6 months' service. They must be registered under the Medical Acts, and be under 30 years of age on date of entry.

Medical Officers, R.N., are liable to serve in Naval Hospitals or Ships in any part of the world.

Excellent opportunities exist for Clinical professional work, both Medical and Surgical, as well as for study and practice of Hygiene, Pathology, Ophthalmology, and other specialist branches.

Adequate provision is made for Post-Graduate Study.

OUTFIT ALLOWANCE of £50 is paid on joining.

PAY.—Pay from approximately £430 to £2,070 a year, according to length of service.

ALLOWANCES.—When in charge of Hospitals and Sick Quarters, 10s. and 5s. a day.
60 Specialists' Allowances of 5s. a day.
Flag Allowances, 5s. and 2s. 6d. a day.
Provisional Allowance, Lodging Allowance, etc.

PROMOTION.—To Surgeon Lieutenant-Commander after 6 years' service; to Surgeon Commander after a total of 12 years' service. Promotion to Surgeon Captain, Surgeon Rear-Admiral, and Surgeon Vice-Admiral is by selection.

Ante-date of seniority on account of civil hospital appointments and accelerated promotion can be gained.

RETIREMENT.—Gratuities are paid as follows:—

Short Service Officers, after 3 years' service -	£300
Permanent Officers, after 4 years' service - -	£500
" " " 8 years' service - -	£1,000
" " " 12 years' service - -	£1,500
" " " 16 years' service - -	£2,250

Rates of Pension range from approximately £535 a year, normally earned after about 25 years' service, to £1,064 a year, the maximum earned by a Surgeon Vice-Admiral.

Copies of the Regulations and Particulars as to Conditions of Service and Emoluments may be obtained on written or personal application to the Medical Director-General of the Navy, Admiralty, Whitehall, London, S.W.1.

ROYAL VICTORIA INFIRMARY, NEWCASTLE-UPON-TYNE. (677 Beds.)

WHOLE-TIME JUNIOR SURGICAL REGISTRAR (Open Appointment).

Applications are invited for the post of Whole-time Junior Surgical Registrar (*open appointment*).

This appointment is intended for Graduates who desire to gain surgical experience and who have already held a post as House Surgeon. Certain duties in the allied Departments of the College of Medicine will offer opportunities of Post-graduate study.

The appointment, which will commence on April 3rd, will in no case extend beyond three years and will be for one year in the first instance, renewable for two further periods.

The rate of remuneration is £150 per annum.

Applications, with copies of not more than three recent testimonials, must be lodged on or before Saturday, February 25th, with the House Governor and Secretary, Royal Victoria Infirmary, Newcastle, from whom further particulars may be obtained.

S. DUNSTAN,
Feb. 10th, 1933. House Gov. & Sec.

LONDON HOMŒOPATHIC HOSPITAL (*Incorporated by Royal Charter*), Great Ormond Street and Queen Square, Bloomsbury, W.C.1. (200 Beds.)

The Board of Management are prepared to receive applications for the following appointment:

ASSISTANT PHYSICIAN TO THE HOSPITAL.

The successful candidate must possess, or obtain, a registrable University Degree, and be, or become, a Member of the British Homœopathic Society. It is required that successful candidates for posts on the Honorary Medical and Surgical Staff of the Hospital should show evidence of knowledge of the Theory and Practice of Homœopathy within one year of appointment by having attended one or more of the Systematic Courses of Lectures at the Hospital. Any candidates canvassing the Members of the Board, Medical Council, or Medical Committee are thereby disqualified.

Candidates will be required to attend a meeting of the Medical Committee.

Applications, stating age, qualifications, and experience, with *thirty-five copies* of application and thirty-five copies of each testimonial, should be sent addressed to the Secretary, not later than March 1st.

EDWARD A. ATTWOOD, Secretary.

ROYAL SALOP INFIRMARY, SHREWSBURY. (156 Beds.)

APPOINTMENT OF CASUALTY OFFICER AND RESIDENT ANAESTHETIST.

Applications are invited from fully qualified men for the appointment of Casualty Officer and Resident Anaesthetist, vacant March 1st next.

The appointment is for a period of six months, subject to re-appointment for a further period of six months at a salary of £160 per annum, with board, residence, etc. Resident Staff comprises Resident Surgical Officer, House Physician, and Casualty Officer.

Applications, stating age, qualifications, experience, nationality, and accompanied by copies of three recent testimonials, to be sent to the undersigned not later than Wednesday, February 22nd.

Board Room. J. W. NOBLE,
February 7th, 1933. Secretary-Supt.

SUSSEX MATERNITY AND WOMEN'S HOSPITAL. (38 Beds.)

RESIDENT HOUSE SURGEON (male) required. Salary at the rate of £130 per annum, board and washing found, and £40 allowed for travelling expenses. Good experience in midwifery and gynæcology afforded. No canvassing allowed. The successful candidate will be required to enter on his duties at the end of March.

Applications in writing, accompanied by testimonials, should be sent to PERCY F. SPOONER, Secretary, at the Hospital, Buckingham Road, Brighton, on or before Monday, February 27th.

February 11th, 1933.

THE BABIES' HOSPITAL, NEWCASTLE-ON-TYNE.

Non-resident MEDICAL OFFICER required in April.

The duties are those of a House Physician with time and opportunities for research work. The appointment is for six months subject to re-appointment. Salary £175 per annum.

Applications, with two testimonials and particulars of previous appointments held, must be lodged by March 3rd with the Secretary, from whom further particulars may be obtained, West Parade, Westmorland Road, Newcastle-on-Tyne.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

Applications are invited for the following posts:

(a) HOUSE SURGEON No. 1 (male), vacant on March 16th.
(b) HOUSE SURGEON No. 2 (male), vacant on April 1st.
Each appointment is tenable for a period of six months, but is terminable at an earlier date by one month's written notice on either side.
(c) RESIDENT ANÆSTHETIST AND EMERGENCY OFFICER (male) for three months from March 14th.

The salary of each officer will be at the rate of £130 per annum, with board, residence, and laundry.

Candidates, who must be unmarried and duly registered, are requested to forward their applications, stating age, qualifications, etc., together with copies of not more than four testimonials, to the undersigned on or before Saturday, March 4th.

W. H. HEAD,
Secretary-Superintendent.

MANCHESTER ROYAL INFIRMARY. CENTRAL BRANCH, ROBY STREET, MANCHESTER.

HOUSE SURGEON (LADY).

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment. Applicants must be registered and hold a medical and surgical qualification.

The appointment is tenable for *nine* months, commencing April 1st, three months as Junior at £100 per annum, three months as Assistant at £100 per annum, and three months as Senior at £200 per annum, together with board and allowance for laundry.

Applicants must state age and qualifications, and send twelve copies of their application and testimonials to the undersigned by 9 a.m. on Thursday, March 2nd.

By Order,
FRANK G. HAZELL,
General Supt. & Secretary.

CUMBERLAND INFIRMARY, CARLISLE. (160 Beds.)

Resident Medical Staff—Four qualified Officers.

The following posts are vacant on April 1st (*six months'* appointment), male. Previous experience desirable:

(a) HOUSE SURGEON;
(b) HOUSE PHYSICIAN;
(c) SECOND HOUSE SURGEON;
(d) HOUSE SURGEON to Special Departments. (Eyes, Ear, Nose, and Throat.)

Salary, House Surgeon (a) at the rate of £175 per annum; (b) (c) and (d) £155 per annum. Board, residence, etc., in each case.

Applications, stating age, nationality, qualifications, etc., with copies of not more than four testimonials, must be received by first post on Wednesday, February 22nd, by the undersigned, who will supply further particulars if desired.

Separate applications are required for each post.

J. G. HOWITT, Secretary.

THE QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, London, E.2.

TWO CLINICAL ASSISTANTS required for Medical Outpatients. One required to attend every Thursday morning and the other on Tuesday and Friday mornings. Lunch provided. Honorarium 5s. per attendance to cover expenses. Experience as Hospital resident desirable. Applications, stating which sessions applied for, qualifications, and experience, should be addressed to the undersigned as soon as possible.

CHARLES H. BESSELL,
February 1st, 1933. Secretary.

THE QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, London, E.2.

HOUSE PHYSICIAN required April 7th.

CASUALTY OFFICER required April 7th. Some Ophthalmic work additional. Six months' appointments. Salary at the rate of £100 per year, with board, lodging, and laundry.

Applications must be made on forms to be obtained from the undersigned, and must be sent in with copies of not more than four testimonials, on or before March 6th.

CHARLES H. BESSELL,
February 8th, 1933. Secretary.

VICTORIA CENTRAL HOSPITAL, WALLASEY.

Applications are invited for the position of SENIOR HOUSE SURGEON (male). Salary at the rate of £160 per annum. Also JUNIOR HOUSE SURGEON, salary at the rate of £150 per annum, with board, residence, and laundry.

Applications, with copies of testimonials, to be sent to the Secretary.

ST. MARY'S HOSPITAL, W.2.

Applications are invited for the post of DIRECTOR of an ALL-DAY VENEREAL DISEASES CLINIC shortly to be established at the Hospital under a scheme approved by the London County Council.

Salary £400 per annum.

The Director will be required to devote 20 hours weekly to the work of the clinic.

Candidates must be qualified Medical Practitioners, having a specialist knowledge of the treatment of venereal disease. The Director will be permitted to engage in private practice.

The appointment is for a period of one year, the holder being eligible for re-election.

Applications, accompanied by three recent testimonials, should reach the undersigned not later than March 1st.

W. PARKES, Secretary.

BIRKENHEAD GENERAL HOSPITAL. (156 Beds.)

Applications are invited for the following Resident (male) posts for the six months commencing April 1st.

SENIOR HOUSE SURGEON. Salary £150 per annum.
SECOND HOUSE SURGEON. Salary £100 per annum.
HOUSE PHYSICIAN. Salary £100 per annum.
CASUALTY OFFICER. Salary £100 per annum.

All with board, residence, and laundry.

The second House Surgeon is required to take up duty as soon as possible.

Applications, stating age, nationality, and qualifications, together with three recent testimonials, to reach the undersigned as early as possible.

W. H. DANIELS, F.C.I.S.,
Secretary-Supt.

NORWICH INFIRMARY.

APPOINTMENT OF RESIDENT ASSISTANT MEDICAL OFFICER.

Applications are invited for the post of Resident Assistant Medical Officer at the Norwich Infirmary. The gross salary will be £480 per annum, rising by annual increments of £24 to £576 per annum (which represents £500 per annum rising to £600 per annum after having been subjected to a temporary adjustment) from which a deduction at the rate of £150 per annum will be made for residential allowances. The salary may be subjected to further temporary adjustments, but the total amount of reductions from the gross salary will not exceed 10 per cent. For further particulars send stamped addressed envelope to the Medical Officer, Norwich Infirmary, Bowthorpe Road, Norwich.

CHARING CROSS HOSPITAL.

REGISTRAR.

Applications are invited for the post of Registrar (male) to the Nose, Throat, and Ear Department.

Candidates must have some experience of the speciality. Attendance four half days per week. Appointment tenable for one year; eligible for re-election. Honorarium £100 per annum.

Applications, in writing, stating age, qualifications, and experience, should be made to the undersigned not later than Saturday, February 25th.

PHILIP INMAN,
Charing Cross Hospital, Strand, London, W.C.2. House Governor.

CHARING CROSS HOSPITAL.

SURGICAL REGISTRAR.

The Council invite applications from candidates, who must be registered Practitioners (male) for the post of Surgical Registrar. Honorarium £150 per annum.

A copy of the regulations can be obtained from the undersigned, to whom applications, together with copies of three testimonials, must be submitted not later than Saturday, February 25th.

PHILIP INMAN,
Charing Cross Hospital, Strand, London, W.C.2. House Governor.

CHARING CROSS HOSPITAL.

MEDICAL REGISTRAR.

The Council invite applications from candidates, who must be registered Medical Practitioners (male) for the post of Medical Registrar. Honorarium £150 per annum. A copy of the regulations can be obtained from the undersigned, to whom applications, together with copies of three testimonials, must be submitted not later than Saturday, February 25th.

PHILIP INMAN,
Charing Cross Hospital, Strand, London, W.C.2. House Governor.

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh).

(a) British Islands.

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**CONTRACT PRACTICE** *(contd.)*
EBBW VALE, MON. *(Workmen's Medical Society.)*	MARDY, GLAMORGAN. *(Workmen's Medical Scheme.)*	OGMORE VALLEY, GLAMORGAN. *(Wyndham Colliery Medical Aid Society.)* *(Workmen's Medical Scheme.)*
GILFACH GOCH, GLAMORGAN. *(Workmen's Medical Scheme.)*	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE. *(Workmen's Medical Scheme.)*	**PUBLIC HEALTH**
LLWYNPIA, CLYDACH VALE, PENYCRAIG, GLAMORGAN. *(Workmen's Medical Scheme.)*	NEATH AND DISTRICT *(Medical Aid Association.)*	LLANTRISANT AND LLANTWIT FARDRE RURAL DISTRICT COUNCIL. (1) *Medical Officer of Health (part-time.)* (2) *Medical Officer (woman—part-time) for Maternity and Child Welfare.*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer.)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association.)*	

(b) Overseas.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. G. HUNTER (Medical Secretary, New South Wales Branch), 135, Macquarie St., Sydney, N.S.W.	**QUEENSLAND.** *(Brisbane Associated Friendly Societies Institute.)*	The Hon. Sec., Queensland Branch, British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	**WELLINGTON, NEW ZEALAND.** *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec., New Zealand Branch), British Medical Association, P.O. Box 156, Wellington, New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch, British Medical Association, Medical Society Hall, East Melbourne, Victoria.	*(Toowoomba Associated Friendly Societies, Medical Institute, Toowoomba.)*		**WESTERN AUSTRALIA.** *(Contract and Lodge Practices.)*	Hon. Sec., Western Australian Branch, British Medical Association, No. 6, Bank of N.S.W. Chambers, St. George's Terr., Perth, Western Australia.

February 15th, 1933. By Order of the Council. G. C. ANDERSON, Medical Secretary.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond Street, London, W.C.1.

A HOUSE PHYSICIAN and a HOUSE SURGEON are required on April 14th and 18th respectively.

Gentlemen are invited to send in their applications, addressed to the Secretary, before 12 o'clock on Monday, February 27th, with copies of not more than three testimonials given specially for the purpose, and also evidence of their having held a responsible Hospital appointment.

The appointments are made for six months. Salaries at the rate of £100 per annum, laundry allowance £5, board, and residence in the Hospital.

Candidates must be unmarried and possess a legal qualification to practise.

All candidates must be in attendance to appear before the Joint Committee, if required, at their meeting on Wednesday, March 1st, at 5 p.m. precisely.

Forms of application and copies of the Rules may be obtained from the Secretary.

By Order of the Board of Management,
HERBERT F. RUTHERFORD,
February, 1933. Secretary.

THE MOUNT VERNON HOSPITAL, NORTHWOOD.
(For the Treatment of Cancer.)

There is a vacancy for a HOUSE SURGEON (male). Candidates must be fully qualified and registered. Salary at the rate of £150 per annum, with board, lodging, and laundry. Six months' appointment. Applications, with copies of three testimonials, to be addressed to the undersigned on or before February 18th.

Offices: W. J. MORTON,
32, Fitzroy Square, W.1. Secretary.

VICTORIA HOSPITAL, BURNLEY.
(126 Beds.)

HOUSE PHYSICIAN (Male).

Applications are invited for the above post, which will become vacant on March 1st next. The duties include the giving of a certain number of Anaesthetics. The appointment is for six months, in the first instance, at a salary of £150 per annum, together with board, residence, and laundry. At the end of this period reappointment for a further period may be applied for, and if confirmed, the salary for the second six months will be at the rate of £200 per annum.

This Hospital is approved by the London University for the purpose of the M.B. and M.S. examinations.

Applications, with full details of qualifications and experience, and stating nationality, together with copies of recent testimonials, should be addressed to the undersigned forthwith.

J. E. WHEATCROFT, Secretary.

THE GUEST HOSPITAL, DUDLEY.
(General Hospital—107 Beds.)

Applications are invited for the post of ASSISTANT HOUSE SURGEON. Salary £170 per annum, with furnished apartments, board, and laundry. Duties to commence March 1st. Candidates must be fully qualified and registered.

Applications, stating age, qualifications, and experience, and accompanied by copies of testimonials, to be sent to the undersigned.

H. RAYMOND HURST,
The Guest Hospital, House Governor &
Dudley. Secretary.
February 3rd, 1933.

THE PRINCE OF WALES'S GENERAL HOSPITAL, LONDON, N.15.

The following Resident posts will be vacant on April 1st next:

(a) ONE SENIOR HOUSE PHYSICIAN.
(b) TWO SENIOR HOUSE SURGEONS
Salary at the rate of £120 per annum, board, residence, and laundry.

The following Residents posts will be vacant on March 15th next:

(c) ONE JUNIOR HOUSE PHYSICIAN.
(d) TWO JUNIOR HOUSE SURGEONS.
Salary at the rate of £90 per annum, board, residence, and laundry.

Appointments held for six months, but holders are eligible for a further term.

Candidates (male) must be fully qualified and registered, and applications (on the prescribed form), together with copies of three recent testimonials, should be sent to me on or before the first post on Saturday, February 25th

J. C. BURDETT, Director.

GENERAL HOSPITAL, NOTTINGHAM.
(384 Beds.)

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PETER M. MACCOLL,
House Governor & Secretary.

(Appointments continued on p. 53).

British Medical Journal.
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APPOINTMENTS.—Contd.

WESTMORLAND COUNTY HOSPITAL, KENDAL. (Beds 80.)

HOUSE SURGEON (male or female) required, middle of March. Appointment is for six months, renewable for a further six months. Salary £200 per annum, with board, residence, and lat[illegible] ages stating age, nationality, [illegible] ies of three recent [illegible] to the Hon. Sec., J[illegible] than February 23rd.

WESTON - SUPER - MARE GENERAL HOSPITAL. (60 Beds.)

HOUSE SURGEON.

Applications are invited for the post of Resident House Surgeon at this Hospital. Salary at the rate of £150 per annum, with board, rooms, and laundry. Duties to commence April 1st next.

Applications, stating age and qualifications, and enclosing copies of testimonials, should be addressed to the undersigned.

LESLIE J. FURSLAND, Secretary.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.1.

Applications are invited for the appointment of CHIEF CLINICAL ASSISTANT in the Ophthalmic Department. Intending candidates who must hold the Fellowship of the Royal College of Surgeons (Eng. or Edin.) or an Ophthalmic Diploma, should submit applications, stating age and accompanied by copies of three recent testimonials, to the undersigned on or before February 25th. The duties include attendance on Tuesday and Friday mornings and on one evening weekly at the Voluntary Hospitals Ophthalmic Clinic, which is being instituted under the Scheme in operation at Ophthalmic and certain general hospitals. This appointment does not carry membership of the Honorary Medical Committee.

REGINALD R. GARRATT, Secretary.

HARROGATE ROYAL BATH HOSPITAL. (Special Hospital for Rheumatic and Allied Diseases.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) to commence duties beginning April 1st.

The appointment will be for a period of six months. Salary at the rate of £156 per annum, with board, residence, and laundry.

Applications, stating qualifications, age, etc., with copies of recent testimonials, to be forwarded to the undersigned on or before Friday, March 3rd.

E. P. L. DIXON, M.A., Secretary.

KING EDWARD VII HOSPITAL, WINDSOR. (181 Beds.)

A vacancy will occur on the staff of the above Hospital on March 31st, for a RESIDENT MEDICAL OFFICER (Senior of five Residents). Applicants must be fully qualified, registered, and have held a resident appointment.

Salary at the rate of £200 per annum, *together with board, residence, and laundry* allowance.

Applications, with copies of recent testimonials, should be sent to the undersigned not later than March 3rd.

ARTHUR E. CHURCHER, Secretary.

QUEEN CHARLOTTE'S MATERNITY HOSPITAL, Marylebone Road, N.W.1.

DISTRICT RESIDENT MEDICAL OFFICER (male or female) required to commence duty on April 1st. Applicants must be registered. The appointment is for six months. The salary is at the rate of £80 per annum, with board, residence, and washing allowance (4/- weekly).

Applications, with *copies (not originals)* of not more than three testimonials, should be sent to the Secretary by March 3rd.

H. B. STOKES, Secretary-Supt.

COVENTRY & WARWICKSHIRE HOSPITAL. (Main Hospital—307 Beds; Convalescent Hospital—40 Beds; Seven Resident Medical Officers.)

RESIDENT HOUSE SURGEON, male, wanted. Salary £125 per annum, board, lodging, and attendance provided. Candidates must be duly qualified and registered. Applications, stating age, enclosing copies of recent testimonials, should be sent to the Secretary immediately.

Miss R. HOOPER, Secretary.

BURSLEM HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL.

Wanted, JUNIOR RESIDENT MEDICAL OFFICER. Salary £150 per annum, with board and residence. Must be fully qualified. Experience in Ophthalmic and Ear, Nose, and Throat work will be an advantage. Applications, stating age and experience, together with copies of three recent testimonials, to be sent to me.

High Lane, Burslem, Stoke-on-Trent. C. E. LOWNDES, Secretary.

EAR & THROAT HOSPITAL, BIRMINGHAM.

THIRD HOUSE SURGEON wanted (non-resident). Must be qualified and with clinical experience. Salary at the rate of £150 per annum, with part board and an allowance at the rate of £50 per annum in lieu of full board and lodging. Appointment for six months, commencing April 1st.

Applications and testimonials to be forwarded on or before March 6th, to the undersigned.

W. E. REYNOLDS, *Acting Secretary.*

EAST SUFFOLK AND IPSWICH HOSPITAL. (282 Beds—7 Residents.)

Wanted, March 15th, HOUSE SURGEON (British, male). Salary at the rate of £120 per annum.

Applications, stating age, qualifications, and experience, to be sent to the undersigned, together with copies of three recent testimonials.

The Hospital, Ipswich. ARTHUR GRIFFITHS, Secretary.

GENERAL LYING-IN HOSPITAL, York Road, Lambeth, S.E.1.

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER AND ANAESTHETIST. Salary at the rate of £100 per annum, with board, residence, and laundry. Appointment for three months commencing April 1st. The successful candidate will, subject to satisfactory service, be required to succeed to the Senior Medical Officer's post for a further three months.

Applications, *stating age and qualifications*, with copies of three recent testimonials, to be sent to the undersigned not later than March 3rd next.

LILY HEARN, Secretary.

NORTH RIDING INFIRMARY, MIDDLESBROUGH. (*General Hospital—150 Beds.*)

Applications are invited for the post of SENIOR HOUSE SURGEON (three Residents).

The appointment will be for a definite period of six months, renewable. *Duties to commence* on March 1st next.

Salary at the rate of £200 per annum, with board, *residence, and laundry.*

Applications, stating age, qualifications, and *experience (also nationality)*, with copies of three recent testimonials, to be sent to the undersigned forthwith.

CHARLES POSTGATE, Secretary-Supt.

THE LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL.

Wanted, to commence duties early in April, RESIDENT HOUSE SURGEON (male or female and unmarried) possessing a medical and surgical registered qualification. Practical experience in the administration of anaesthetics is required. Salary £175, with apartments, board, and laundry. All applications, stating age, etc., with copies of testimonials, to be sent to me at once.

9, Leicester Rd., Loughborough. FRANK H. TOONE, Secretary.

THE PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN (Formerly the East London Hospital for Children), Shadwell, London, E.1.

HOUSE SURGEON required. Salary at the rate of £125 per annum, with board, residence, *and laundry provided. The appointment is for* six months, from March 1st.

Applications, stating age, nationality, qualifications, and experience, accompanied by copies of not more than three recent testimonials, should reach the undersigned not later than February 21st.

J. F. RUSSELL, Secretary.

ELSIE INGLIS MEMORIAL MATERNITY HOSPITAL, Spring Gardens, EDINBURGH. (60 Beds.)

Applications are invited from fully qualified Medical Women for the post of JUNIOR HOUSE SURGEON at the above Hospital, honorarium at the rate of £25 per annum, with board, residence, and laundry. The appointment is for six months from April 1st. Applications, with copies of testimonials, to be sent to the Secretary, 1, Brunts-field Crescent, Edinburgh, on or before March 4th.

GOLDEN SQUARE THROAT, NOSE, AND EAR HOSPITAL, London, W.1.

HOUSE SURGEON *required (male)* for April 1st. Salary £100 per annum, with board, residence, and laundry.

Applications, stating age, qualifications, and experience, together with three testimonials, should reach the undersigned on or before March 10th.

F. P. CARROLL, Secretary-Superintendent.

LIVERPOOL STANLEY HOSPITAL, STANLEY ROAD, LIVERPOOL.

There will be vacancies on April 1st next for ONE MALE HOUSE PHYSICIAN and TWO MALE HOUSE SURGEONS. Salary in each case at the rate of £100 per annum, with board, laundry, etc. Candidates must be on the *Medical Register* and submit their applications, with *copies* of three recent testimonial, addressed to the undersigned by February 24th.

E. W. OSBORN, Secretary.

LEIGH INFIRMARY, LANCASHIRE.

Wanted, a RESIDENT HOUSE SURGEON, male, single, for Hospital of 82 beds. Salary £175, with *rooms, fire, attendance, and board.* The position is vacant on March 1st.

The appointment is for six months with eligibility for re-election. Must be good Anaesthetist. Knowledge of Ear and Throat work desirable.

Applications to be addressed to Mr. J. A. SMITH, Secretary, 3, Silk Street, Leigh, Lancs.

RESEARCH ASSISTANT. RESEARCH INTO MENTAL DEFICIENCY.

Applications are invited for the post of ASSISTANT in the Research Department of the ROYAL EASTERN COUNTIES' INSTITUTION, *COLCHESTER*, to co-operate in the investigation of psychological, genetic, and social problems.

Candidates should have practical training in psychology and experience of social conditions and home visiting.

Commencing salary at rate of £300 a year, non-resident. Travelling expenses will be paid.

A form of application can be obtained from the Medical Superintendent, Royal Institution, Colchester, and must be returned to him before March 11th.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.13.

There *is a vacancy* for HONORARY OPHTHALMIC SURGEON. Candidates should be Fellows of the College of Surgeons or Masters *of Surgery*, London, Oxford, or Cambridge; also have held an appointment at an Ophthalmic Hospital or in the Ophthalmic Department of a General Hospital, after graduation. Applications, with copies of three *testimonials*, to the *undersigned from* whom every information is obtainable.

By Order of the Committee, A. ERNEST WILKES, Secretary.

ROYAL INFIRMARY, BLACKBURN. (240 Beds—Five Residents.)

FOURTH HOUSE SURGEON (male) required to commence duties March 1st at a salary of £150 per annum, rising to £250, with board, residence, and laundry, etc.

Applications, with copies of testimonials, stating age, nationality, experience, etc., to be sent at once to the undersigned.

Royal Infirmary, Blackburn. NATHAN A. SMITH, Gen. Supt. and Secretary.

This Institution is recognized for the Surgical practice required for the F.R.C.S. final *examination.*

MANCHESTER BABIES' HOSPITAL, BURNAGE LANE, LEVENSHULME. (80 Beds.)

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER. *Appointment is for six months from* April 1st. Salary at the rate of £50 per annum, with laundry.

Applications, together with copies of testimonials, to be sent to the undersigned, marked J.R.M.O., by February 27th.

ANGELA LOPEZ, Secretary.

NATIONAL TEMPERANCE HOSPITAL, Hampstead Road, N.W.1.

A vacancy has occurred for the post of HONORARY ASSISTANT PHYSICIAN.

Candidates must be Doctors of Medicine of a British University or Members of the Royal College of Physicians.

Applications, with copies of not more than three recent testimonials, must be forwarded not later than Thursday, March 9th, addressed to the Secretary.

ROYAL VICTORIA HOSPITAL, DOVER.

Wanted, RESIDENT MEDICAL OFFICER (male, unmarried), doubly qualified and registered. Previous surgical experience essential. Salary £180 a year and board, lodging, and laundry. (40 beds.)

Applications to be received on or *before* Friday, March 10th, by the Hon. Secretary, *Royal Victoria* Hospital, Dover, on a form to be obtained from him.

LEEDS PUBLIC DISPENSARY.

Notice is hereby given that the Special Election Committee is prepared to receive applications for the post of HONORARY PHYSICIAN.

Applications, with copies of *testimonials*, to be addressed to the Chairman of the Election *Committee*, Public Dispensary, North Street, Leeds, on or before Monday, March 13th.

THE WOMEN'S HOSPITAL, Catherine St., LIVERPOOL.

Applications are invited for the post of HOUSE SURGEON to the above hospital for a period of six months *from April 1st.*

Salary at the rate of £100 per annum.

Applications to be sent to the Hon. Secretary of the Medical Board, by Saturday, March 11th.

ST. THOMAS'S HOSPITAL. VACANCY.

The appointment of a RESIDENT ANAESTHETIST. Applications, with full details of academic career and testimonials, to be forwarded to the Clerk to the *Governors* not later than Tuesday, February 28th.

RADCLIFFE INFIRMARY AND COUNTY HOSPITAL, OXFORD.

Applications are invited for the following posts, which will become vacant on April 1st.
ONE HOUSE PHYSICIAN.
ONE OBSTETRIC HOUSE PHYSICIAN.
THREE HOUSE SURGEONS.
The appointments are for six months, with salaries at the rate of £120 per annum, with board, lodging, etc.
Candidates must be male and qualified.
Applications, with four copies of three testimonials, should be sent to the undersigned on or before March 4th.
A. G. E. SANCTUARY,
Administrator.

CHESTER ROYAL INFIRMARY. (211 Beds.)

Applications are invited for the appointment of an HONORARY ANAESTHETIST. The candidate appointed will be required to attend on two half days per week.
Applications, stating age and qualifications, and with copies of not more than three recent testimonials, should be delivered, addressed to the Chairman, Board of Management, Royal Infirmary, Chester, on or before Wednesday, March 1st.
Canvassing is prohibited.
By Order of the Board of Management,
J. ROWSE MITCHELL, Secretary.

WIGAN INFIRMARY.

A vacancy occurs for an HONORARY ASSISTANT SURGEON who must be legally registered to practise Medicine and Surgery, and reside preferably within six miles of the Infirmary. Applications, with copies of two recent testimonials, stating age, qualifications, etc., to reach the undersigned (from whom further information can be obtained) by Monday, March 6th.
By Order of the Board of Management of the Wigan Infirmary.
A. STANLEY BRENT,
Feb. 15th, 1933. Gen. Supt. & Sec.

ALL SAINTS' HOSPITAL (FOR GENITO-URINARY DISEASES),
Austral Street, West Square, St. George's Road, S.E.11.

RESIDENT HOUSE SURGEON (Male) required on April 1st, for six months, being three months as Junior House Surgeon, with salary at £100 per annum, followed by three months as Senior House Surgeon, with salary at £150 per annum.
Applications, giving particulars of age, experience, qualifications, and enclosing copies of three recent testimonials, should reach me not later than February 25th.
D. H. EADE, Secretary.

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Readers of the Journal are presented week by week with a comprehensive summary of products necessary to the medical man both in his professional and private life. The advertisement pages of the Journal are carefully scrutinised before going to press, in order that our readers may deal confidently with those firms whose announcements win their interest and attention.

Modern advertising seeks to increase demand, thereby stimulating production and building a circle of prosperity, which ultimately reacts to the advantage of the purchaser himself. Advertised products necessarily maintain a high standard of excellence, for disaster must naturally come speedily to the manufacturer who through any cause and at any time loses the confidence of his customers.

It is the policy of the Journal to convince advertisers that doctors prefer to be approached directly through the pages of their own publication, for in this way we believe manufacturers are encouraged to consider the special needs of the profession, and to state clearly the results of their efforts to meet these requirements when seeking orders from medical men.

The "small" advertisements section provides a *forum* for the "domestic" business of the profession, and those wishing to arrange the Sale or Purchase of Practices, requiring Assistants or Assistancies, and Partners or Partnerships, may in these pages reach thousands of their fellow medical men at very economical cost. Such transactions may, in addition, be protected by the secrecy which the free Box Number service provides.

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NORTH WALES.—COUNTRY TOWN.—MIXED well-estab. increasing PRACTICE. Over £1,700 p.a. Panel 1,000. Large house and grounds, nearly an acre, at low rental. Premium for goodwill £2,500.—No. 9126.

SOUTH AFRICA.—£200 PER MONTH. WELLestab. Special PRACTICE. Radiol. and Dermatol. Centrally situated cons. rooms to rent. Premium £1,500, incl. lease and plant valued at over £500. Would sell Radiol. only for £600 including plant.—No. 8775.

DEATH VACANCY.—LANCASHIRE TOWN. Average over £900 p.a. Panel over £300. Old-established working-class. Nice house in good main road position. Would be sold or let. Locum in charge.—No. 9121.

LANCS MANUFACTURING TOWN. — £725 p.a. Panel over 1,050. No appts. Mixed dispensing PRACTICE. Detached house, 5 bed., 3 recep., surg., etc., with separate entrance. Garden and garage. To rent on lease.—No. 9120.

LINCS WOLDS. — UNOPPOSED PRACTICE. About £700 p.a. Panel 325. Appts. about £64 p.a. Visits 3/6 to 15/-. Midy 2 to 5 gns Freehold residence, 5 rooms and professional and domestic offices. Garage and garden. For sale £800.—No. 9115.

O[illegible] RESIDENTIAL SUBURB. — GOOD[illegible] worked only part-time [illegible] nd non-dispensing. No [illegible] es 10/6 and 21/-. Goo[illegible] ption, 7 bedrooms, 2 bath., cons. room, etc Price £2,800 for house and Practice.—No. 9110.

YORKSHIRE COAST TOWN. — OVER £800 p.a. Visiting fees 3/6 to 7/6, surgery 2/6 up. Two appointments worth £30 p.a. Midy. cases average 10—20 p.a. Premium £1,250. Good house, 2 reception rooms, 4 bedrooms, bathroom, etc., surgery and waiting room, good garden and garage. Price £1,700.—No. 9104.

BERKS. — OLD-ESTABLISHED. — COUNTRY PRACTICE, about £700 p.a. has been £1,100. Panel about 500. Visiting fees 2/6 to 7/6. Very little midwifery. Splendid house, specially built for Vendor, with two acres of grounds, 2 reception rooms, 6 bedrooms, surgery, and waiting rooms, etc. Consider £4,000 offer for Practice & house, freehold.—No. 9100.

SOUTH WALES. — NEAR CARDIFF. — WELLestablished middle and working-class PRACTICE, returning over £600 p.a. Panel 400. Visiting fees 2/6 to 5/-. Surgery 2/- to 3/6. Midys. average 12 p.a., scope for more. Modern built house, 4 bedrooms, 2 reception rooms, excellent separate surgery and dispensary. Price of house and practice £1,600.—No. 9095.

YORKSHIRE. — AVERAGING £981 P.A., with panel of 400. Better-class dispensing PRACTICE in outskirts of large town. Appointments worth £45 p.a. Very little midwifery. Visiting fees 3/6 to 10/6 and 21/-. Premium £1,350. Handsome stone-built house in centre of Practice, with 6 bed., waiting and cons. with sep. ent. Large lounge and dining room, etc. Garage for 2 cars. Rent £100 p.a.—No. 9098.

WANTED.

PRACTICE IN PROVINCIAL TOWN OR South Coast Town, prefy. non-dispensing and non- or small panel. £1,000—£1,500, by M.D., B.S., and M.R.C.P.Lond. House in own grounds, preferably to rent.—No. 6602.

PRACTICE OR PARTNERSHIP OF UPPER and middle class. London or Town within 100 miles. £1,000 approx. House, with garden essential. Applicant is Scots Graduate, aged about 30.—No. 6781.

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LONDON, S.W.—Mixed G.P. within close proximity of West End. House on lease at very low rental. Receipts approx. £900 p.a. Select panel of nearly 800. Premium for Practice, lease, surgery fittings, furniture, drugs, etc., £2,000 cash or near offer.

HANTS.—Middle-class Country PRACTICE. Practically unopposed. Suitable for semi-retired Practitioner. Receipts over £400. Panel 94. Fees 2/6 upwards. Premium £450.

SOUTHERN ENVIRONS.—Old-established mixed G.P. Excellent house for sale. Receipts approx. £1,500. Panel nearly 1,500. Premium for Practice 2 years' purchase.

SURREY.—Mixed G.P. in growing residential locality within easy reach of Town. Receipts approx. £1,000 p.a. Excellent scope. Panel 400. Fees 3/6 up. Suitable medium-sized house available. Premium 2 years' purchase. House £1,400 (part could remain on mortgage).

LONDON, E 14.—Lock-up SURGERY in thickly-populated locality. Suitable accommodation available on lease, part could be sub-let. Average receipts £715. Panel 365 (increasing). Premium for quick sale, £650 (inclusive) or near offer.

LONDON, E.C.—Mixed Cash and Panel Lock-up PRACTICE, with living accommodation, if desired, facing main thoroughfare, held on lease at £95 p.a. Receipts nearly £700. Panel 450 (scope). Fees 1/ to 10/6. Midwifery not undertaken. Premium £1,000.

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Applications and testi[illegible]ED 1868. on or before March 6th, [illegible]

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Wanted, March 1 [illegible]h, HOUS[illegible] London. (British, male). Salary at the r[illegible]80. per annum.

Applications, stating a[illegible], qualifications, experience, to be sent [illegible] the und[illegible]SHIPS on together with copies of three recen[illegible]ected. monials.

The Hospital, ARTHU[illegible] GRIFFITHpplied Ipswich. Secreta[illegible]

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LEEDS.—Old-established middle and working-class PRACTICE in good suburb. Average cash receipts £1,620. Panel nearly 2,000. Excellent detached corner house, 2 reception, 6 bedrooms, 4 professional rooms (separate entrance), garage, and garden; also Branch Surgery for sale. Premium—Practice—£2,800.—No. 428.

MANCHESTER.—Old-established mixed panel and private PRACTICE. Cash receipts last year £1,478. Panel 1,300. Scope for increase. Detached corner house in main road, 2 reception, 4 bedrooms, 3 professional rooms (separate entrance). For sale, or to rent at £60 p.a. Near new Housing Estate. Premium 1½ years' purchase.—No. 430.

DEATH VACANCY.—CHESHIRE COAST TOWN, Nr. LIVERPOOL.—Old-established middle-class (non-dispensing) PRACTICE. Cash receipts £500 to £550 p.a. Panel 100. Fees 3/6 to £1 1s. Scope for increase. Suitable semi-detached house, 3 reception, 5 bedrooms, garden, and garage. Rent £80 p.a. on lease. Premium, best offer.—No. 429.

LANCASHIRE TOWN, Nr. MANCHESTER. — Old-established mixed panel and private PRACTICE. Cash receipts last year £1,200. Appointment (transferable) £240 p.a. Panel 1,100. Suitable house, 2 bedrooms, 2 reception rooms, 2 professional rooms, and garage. Rent £52 p.a. on lease. Premium 1½ years' purchase.—No. 432.

N. STAFFS.—Old-established Country PRACTICE in charming district, averaging £900 p.a. Panel 632. Appointments (transferable) £100 p.a. Practically unopposed. Scope for increase. Excellent house, with ample accommodation; garage and garden; rent £84 p.a. Premium 1½ years' purchase.—No. 426.

DEATH VACANCY. — LANCASHIRE TOWN. — Old-established mixed PRACTICE. Average cash receipts over £900 p.a. (including over £300 from panel). Scope for increase. Good house on main road, 2 reception, 4 bedrooms. Rent £65 p.a. Premium 1 year's purchase. Locum in charge.—No. 423.

[illegible]ARGE RESIDENTIAL AND SEASIDE [illegible]CTICE. Cash receipts about £1,200 [illegible] detached corner house (freehold), 3 professional rooms, 5 beds., and 2 recep. rooms, garage, and good garden, for sale. Prem.—Practice—1½ years' pur.—No. 417.

LANCS TOWN, near Country.—Old-established mixed PRACTICE. Cash receipts last year £725. Panel about 1,000. Excellent detached corner house, 3 reception, 6 bedrooms, garage, and large garden. To rent on lease. Premium 1½ years' purchase, or near offer.—No. 403.

BERWICKSHIRE.—Old-established Country PRACTICE. Cash receipts last year over £900. Panel over 700. Good accommodation available, to rent. Efficient introduction. Premium 1¼ years' purchase.—No. 431.

NR. NEWCASTLE-ON-TYNE.—Mixed general PRACTICE, averaging £800—£850 p.a. Panel 600. Scope for increase. Good house, 3 reception, 5 bedrooms, garage, and garden. Premium £950.—No. 422.

NORTH-WEST COAST, near LAKES.—Middle-class PRACTICE in beautiful district. Cash receipts last year £816. Panel 250. Scope. Detached house on sea front, 3 reception, 7 bedrooms. Garage and nice garden. Premium 1½ years' purchase.—No. 388.

NEAR LIVERPOOL.—PARTNERSHIP in middle-class (non-disp ns-ing) Practice. Average cash receipts £2,300 p.a. Panel 620. Excellent house, 3 reception, 6 bedrooms; garage and garden, with tennis court; to be sold or let on lease. Senior Partner retiring. Premium—one-half share—1½ years' purchase.—No. 407.

NORTH WALES. — Old-established mixed PRACTICE, in Country Town, near coast. Cash receipts last year £700. Panel 528. Scope for increase as the Practice has been neglected. Excellent house, 3 reception, 5 bedrooms, garage, and large garden. Net rent £50 p.a. Good sport and educational facilities. Welsh not essential. Cottage Hospital. Premium £800.—No. 412.

NEAR HUDDERSFIELD.—Old-estab. mixed PRACTICE, capable of considerable expansion. Average cash receipts £850 p.a. Panel 1,100. Good house, 2 reception, 4 bedrooms, garage, and good garden. For sale, or may be rented at £60—£70 p.a. Premium 1½ years' purchase.—No. 424.

NORTH-WEST COAST.—PARTNERSHIP in middle-class Practice in favourite seaside town. Must have good qualifications, F.R.C.S. or M.D. Cash receipts last year £2,703. Panel 80[illegible] share—2 [illegible] MANCHES[illegible] TICE, in [illegible] ceipts last year, £1,0[illegible]. Charming house to rent, 3 reception, 6 bedrooms, billiard room. Large garden and garage. Premium—Practice—1¼ years' purchase.—No. 322.

DEATH VACANCY.—NORTH-WEST COAST.—LARGE SEASIDE RESORT.—Old-established mixed PRACTICE. Cash receipts last year £636. Panel 312. Excellent house, 3 reception, 5 bedrooms, garage, and large garden. Premium, best offer.—No. 420.

OPHTHALMIC SURGEON in old-established Practice in Northern City requires a PARTNER with view to succession. Must have D.O.M.S. or D.O. and be good operator. Preliminary Assistantship if desired.—No. 353.

EAST YORKS. — Country Town near Coast. — Unopposed mixed PRACTICE. Cash receipts last year £960. Panel 630. Excellent detached house, 3 reception, 4 bedrooms; garage and large garden. Premium 1½ years' purchase.—No. 346.

MEDICAL WOMAN'S PRACTICE.—MANCHESTER.—Cash receipts last year £645. Panel 450. Good scope. Excellent house, 3 reception, 6 bedrooms, garage. Rent £80 p.a. on lease. Premium, best offer.—No. 330.

MANCHESTER. — Residential Suburb. Middle-class PRACTICE. Suitable for two in Partnership. Cash receipts last year £4,578. Panel 1,400. Two excellent houses to rent with ample accommodation. Prem. 1½ years' purch., part by arrangement.—No. 277.

NORTH-WEST COAST.—LARGE SEASIDE TOWN.—Old-established PRACTICE. Cash receipts £874 p.a. Panel 250. Excellent freehold house, 2 reception, 5 bedrooms, garage, and gard.—No. 266.

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(THE SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD.)
(FOUNDED 1880.)

12, Stratford Place,
Oxford Street, W.1.

Tele. Address: Triform, Wesdo—London. Telephone: Mayfair 1782 1783

The Association has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful Agency for the transaction of every description of Medical, Scholastic and Accountancy business, and the BRITISH MEDICAL ASSOCIATION has every confidence in recommending its members to consult Mr. A. V. STOREY, the General Manager, in all transactions requiring the services of a Medical Agent.

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1 DEATH VACANCY, BIRMINGHAM.—PRACTICE AVERAGING about £700 p.a. in Suburb. Panel 1,140. No midwifery, but plenty of scope. Nice convenient detached corner house (5 bedrooms, etc.) with garage and good garden for sale.

2 HOME COUNTY.—WELL-ESTABLISHED PRACTICE OF £700 p.a. in first-rate Country Town under 40 miles from London. Panel about 250. Fees 5/- to £1 1s. Large well-built residence (about 6 bedrooms) with modern conveniences. Beautiful garden, meadow, orchard, etc., in all about 24 acres. Excellent hunting. Premium, Practice and house, £4,500 (or near offer), which is less than the value of the house alone.

3 KENT.—PARTNERSHIP IN MIDDLE AND WORKING-CLASS Practice averaging nearly £4,450 p.a., in an industrial Town under 25 miles of London. Panel about 2,600. Detached house (4 bedrooms) with garden to rent. Plenty of scope for increase. Premium one-fifth share 2 years' purchase.

4 DEATH VACANCY.—S. WALES.—NON-DISPENSING PRACTICE in one of the principal towns. Receipts, 1932, £3,480 (average 3 years £2,832 p.a.). No panel. Visit and consultation fee 7/6. Midwifery £7 7s. upwards. House in main thoroughfare (5 bedrooms, etc.) to rent. Good prospects for further increase.

5 DEATH VACANCY.—CORNWALL.—COUNTRY PRACTICE IN delightful part on coast. Cash receipts over £700 p.a., including £200 from the panel. Eight-roomed house, with hot and cold water, electric light, etc., to rent. An ideal Practice for one requiring country life and easy work.

6 EASTERN COUNTIES. — OLD-ESTABLISHED PRACTICE about £2,750 p.a. in beautiful country district. Panel 1,150. Good house (6 bedrooms), with electric light and central heating, in large grounds, for sale. Good scope.

7 MIDLANDS — PARTNERSHIP IN WELL-ESTABLISHED AND increasing Practice of nearly £1,550 p.a. in growing residential neighbourhood on outskirts of first-rate town. Panel 1,830. House (4 bedrooms, etc.), in acre of garden, for sale or rent. Excellent prospects of increase. Premium one-half share 2 years' purchase.

8 S. AFRICA.—RADIOLOGICAL PRACTICE IN A MOST DElightful town, with excellent climate. Cash receipts last year £1,450. Scope. Premium, to include furniture, carpets, accessories, etc., £2,200.

9 DEATH VACANCY. — WEST MIDLANDS. — UNOPPOSED Country PRACTICE of over £2,200 p.a. in beautiful district. Good appointments and panel. Visits 5/6—£2 2s. Nice detached residence (6 bed and dressing rooms and 4 attics), bathroom, etc. Grounds of nearly an acre. Good sport.

10 LONDON, E.—PARTNERSHIP IN CASH AND PANEL PRACtice over £3,200 p.a. in populous area. Panel about 4,800. Suitable house available. Prem. one-third share 2 years' purchase.

11 PRIVATE MENTAL HOME (FOR LADIES ONLY).—EXCEPtionally nice house and grounds. A considerable sum required for the purchase. Further particulars on application.

12 ABERDEEN CITY.—PRACTICE OF £300 P.A., INCLUDING panel about 400. House (11 rooms), stands in own grounds, to rent. Scope for increase. Premium 1½ years' purchase.

13 EASTERN COUNTIES. — OLD-ESTABLISHED COUNTRY PRACTICE. Cash receipts about £720 p.a., including appointments over £150 and a panel of about 590. Detached house (6 bedrooms) in grounds of 1 acre for sale. Prem. for Practice £650.

14 EAST ANGLIA. — PARTNERSHIP IN OLD-ESTABLISHED PRACTICE of over £4,500 p.a. in small select Seaside Resort. Visits up to £1 1s. Detached house (4—5 bedrooms) to rent. Very good society and sport. Premium one-fourth share 2 years' purchase.

15 EASTERN COUNTIES. — PARTNERSHIP IN SOUND OLDestablished PRACTICE of £4,500 p.a. in Market Town within 90 miles of London. Small modern house available. Premium one-half share 1½ years' purchase.

16 S.W. OF ENGLAND. — WELL-ESTABLISHED MIDDLE AND better-class PRACTICE of between £1,200 and £1,300 p.a. in Seaside Resort. Panel 500. Excellent and well-situated large detached corner house with every modern convenience, to rent on lease. Very good Educational facilities. Sport of all kinds including golf, yachting, etc. Premium £2,200.

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Practices and Partnerships for Disposal (continued).

17 EAST COAST.—PRACTICE OF BETWEEN £750 AND £800 p.a. in a purely Residential Seaside District within 40 miles from London. Small Panel. Detached house (5 bedrooms) for sale. Scope for increase as district is growing.

18 SOUTH AFRICA (CAPE PROVINCE).—PRACTICE OF £2,000 —£2,550 p.a. in Residential District close to one of the Principal Coastal Towns. Good house (5 bedrooms, etc.). Scope for Surgery. Premium 1 year's purchase.

19 DEATH VACANCY.—LANCS.—OLD-ESTABLISHED PRACTICE in small manufacturing town. Receipts average £933 p.a. (including £344 from the panel). Well-situated house on main road to rent or purchase.

20 N. DEVON. — COUNTRY PRACTICE OVER £900 P.A. IN beautiful district. Panel about 320. Excellent house (6 bedrooms), with garage and large garden, to rent on lease. Good hunting, shooting, and fishing. Premium £1,450.

21 BIRMINGHAM. — PARTNERSHIP (AFTER PRELIMINARY Assistantship) in Practice about £2,500 p.a. in suburb. Panel 2,400, increasing. Suitable house available. Applicant should have held Hospital appointments and be experienced in General Practice. A two-fifths share would be sold to a suitable man at 2 years' purchase.

22 LANCASHIRE.—OLD-ESTABLISHED PRACTICE IN SMALL Manufacturing Town. Cash receipts last 12 months £725, including a panel of over 1,050. Detached house (5 bedrooms), with garage and good garden, to rent. Premium 1½ years' purchase or near offer.

23 DEATH VACANCY.—S. WALES.—VERY OLD-ESTABLISHED PRACTICE in beautiful district, with some of the finest coast and moorland scenery. Income between £850 and £900 a year, including appointments worth about £225 p.a. and a panel of 367. Well-situated house (6 bedrooms), garages, and 7 acres of grounds for sale. Excellent reasons for good scope for increase.

24 KENT.-OLD-ESTABLISHED COUNTRY PRACTICE OF NEARLY £900 p.a. in a most beautiful part within easy reach of London. Panel 440. Extremely attractive residence (5 bedrooms), with central heating throughout and beautiful gardens, orchard, etc., for sale. Good hunting. Plenty of rough shooting. Prem. £1,200.

25 SURREY.—PARTNERSHIP IN SOUND OLD-ESTABLISHED good mixed-class Practice about £3,000 p.a. in the Croydon area. Small panel. Very little midwifery. Suitable house could be obtained. Scope for increase. Premium one-half share 2 years' purchase.

26 HOME COUNTIES. — PRACTICE IN DELIGHTFUL COUNTRY District, easy distance of London. Earnings this year estimated at about £650. Panel over 300. Attractive house (7 bed and dressing rooms) in grounds of two acres, with garage, for sale. Very suitable for Resident Patients. Good scope for increase. Premium £700.

27 SURREY.—PRACTICE OF £1,000 P.A. IN RAPIDLY GROWing Residential District within 15 miles of London. Panel 400. Suitable house, with separate professional accommodation, for sale. Scope for considerable increase. Premium £1,600.

28 YORKSHIRE. — FAVOURITE SEASIDE RESORT. — WELLestablished PRACTICE of over £800 p.a. in growing district. Panel 640, increasing. Modern house (5 bed and dressing rooms) in prominent position with garden and garage for sale. Scope for increase. Premium £1,250.

29 LONDON, W.—GOOD MIDDLE-CLASS PRACTICE £400 P.A. in suburb within easy access of the West End. Panel over 100. Attractive double-fronted house with nice garden for sale. Scope for increase. Premium 1½ years' purchase.

30 CORNWALL.—VERY OLD-ESTABLISHED PRACTICE OF OVER £1,100 p.a. in delightfully situated seaside village on West Coast. Panel about 550. Well-built house (7 bed and dressing rooms), standing in half-acre of ground for sale. Scope, as building is going on. Premium 1½ years' purchase.

31 LONDON, N.—PARTNERSHIP IN PRACTICE ABOUT £5,250 p.a. in thickly populated Suburban District. Panel about 800 One-fourth or one-third share at 2 years' purchase.

32 S. OF ENGLAND. — PARTNERSHIP IN OLD-ESTABLISHED Practice of nearly £1,950 p.a. in important town within 80 miles of London. No panel. Attractive corner residence (7 bed and dressing rooms), in half-acre of walled-in garden, with garage, etc., for sale. Ample scope for increase. Premium one-half share 2 years' purchase.

33 WEST END OF LONDON.—PARTNERSHIP IN GOOD-CLASS non-dispensing Practice of £3,300 p.a. No appointments or panel. Visits £1 1s. and £3 3s. (very few 10s. 6d.). Premium one-half share 2 years' purchase.

34 NORTH OF ENGLAND.—INLAND HEALTH RESORT.—NONdispensing PRACTICE averaging £1,130 p.a. Small select panel. House (7 bedrooms) with large garden, for sale or rent. Premium —Practice—1½ years' purchase.

35 HOME COUNTIES. — OPHTHALMIC PRACTICE BETWEEN £300 and £400 p.a. in desirable Residential Town, under 15 miles from London. Good detached house (4 bedrooms) with large garden for sale. Good reasons for plenty of scope for increase. Premium £300.

36 LONDON, E.C.—OLD-ESTABLISHED "LOCK-UP" PRACTICE of £646 p.a. Panel 459. Living accommodation to rent if desired. Premium £1,000.

37 MIDLANDS.—PARTNERSHIP (AFTER PRELIMINARY ASSISTantship) in a very old-established Practice of between £1,700/ £1,800 p.a., in pleasant market town. Panel 700. Premium for one-half share at 2 years' purchase.

38 S. AFRICA. — OPHTHALMIC AND GENERAL PRACTICE about £1,400 p.a. (about 60 per cent. Ophthalmic), including appointments £400. No Ophthalmic opposition. Premium £400.

39 CO DURHAM.—PRACTICE OVER £500 P.A. IN RESIDENtial colliery district, near two large towns Panel 370. Centrally situated 7-roomed house, with good Surgery and Dispensary, for sale or rent. Practice could be very quickly substantially increased. Premium £650.

40 N. OF ENGLAND. — OPHTHALMIC PRACTICE OF OVER £1,600 p.a. in an important town. Excellent scope for one keen on clinical and operative Ophthalmology. Large house in first-class condition for sale. Purchaser should be well qualified. Premium £2,500.

41 S. AFRICA. — PRACTICE OF ABOUT £2,000 P.A. IN A famous town. Pleasantly situated detached bungalow (5 bedrooms), garage, and small garden for sale. Good hospital (with private wards). Premium £1,100.

42 LONDON, WEST END. — X-RAY AND ELECTRO-THERAPeutic Practice. Receipts 1931, nearly £620. Suitable and convenient flat at moderate rent, on lease. Premium £925.

43 LONDON, E.—CASH AND PANEL PRACTICE OF £260 P.A. in populous district. Panel 570. Small house to rent on lease. Premium 1½ years' purchase.

"MEDICAL PARTNERSHIPS, TRANSFER, AND ASSISTANTSHIPS" (BARNARD & STOCKER). *Post free* 12/6.

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Accountancy and legal services furnished by the Agency, where desired, at moderate inclusive charges. No charge is made to Principals for the introduction of Locum Tenens or Assistants.

1. DEATH VACANCY.—YORKSHIRE, WEST RIDING.—Very old-established PRACTICE, held by late Incumbent many years, situated in suburb of large town and capable of considerable increase. Average gross cash receipts for the past three years nearly £1,600, including panel of 1,500. Advice and medicine 3/6 to 10/6; visits from 3/6, with medicine extra. No midwifery, but good scope if desired. Excellent house with 2 reception, 5 bedrooms, etc., and surgery accommodation. Garden. Garage. Price £1,000, or might be rented. Locum in charge. Moderate premium.
2. DEATH VACANCY. — BIRMINGHAM.—Old-established middle and working-class PRACTICE, averaging for the past two years £700 p.a. Panel of 1,140. Fees from 2/6. Low expenses. House contains 2 reception, 5 bedrooms, etc., and professional rooms. Garden with tennis court. Garage. Price for freehold £1,500. Premium £950. Locum in charge.
3. PARTNERSHIP.—CHESHIRE.—Half share (producing over £2,000 p.a.) of very old-established Practice, situated in most pleasant residential district within few miles of a large town, can be acquired by an experienced gentleman between 35 and 40 years of age. Panel of 1,200—1,300. Patients all classes. Fees good and expenses light. Suitable house available containing 2 reception rooms, 5 bedrooms, and 3 attic bedrooms, bathroom, etc. Garage and garden. Rent £65 p.a. Premium £4,000. Every social amenity, sport, and very good educational facilities.
4. PARTNERSHIP.—SOUTH DEVON.—Very Favourite Coast Town.—A share representing £800 p.a. is offered in an exceptionally good and well-established non-dispensing Practice, having good scope for increase. Fees 3/6 to 10/6. Midwifery from 2 to 10 guineas. Choice of suitable houses available. Ingoing partner must be experienced and accustomed to good-class work, and not over 35 years of age. Premium for share 2 years' purchase.
5. DEATH VACANCY. — ESSEX COAST. — Old-established PRACTICE, held by late Incumbent nearly 30 years. Receipts estimated to be about £800 p.a. Selected panel of 143. Fees 2/6 to 5/-. Visits 3/6 to 7/6. Midwifery refused. Detached double-fronted corner house, with 2 reception, 4 bedrooms, etc. Separate professional rooms. Garden. Price for freehold £2,000. Premium £500. Particularly suitable for a Roman Catholic.
6. RIVIERA.—Old-established PRACTICE the receipts from which have averaged over £1,600 p.a., but have decreased recently owing to Vendor's ill-health. Very good prospects of extension. Fees from £1 1s. Very easy work. Suitable flat can be rented at £160 p.a. Premium £4,000.
7. MIDLANDS.—Old-established middle and better-class PRACTICE in clean and attractive manufacturing city. Cash receipts average over £1,600 p.a., including appt. worth £165 (transferable) and panel of 1,220. Visits 5/- to 2 gns. Midwifery discouraged, fees 5 to 15 gns. Exceptionally good house, in its own grounds, with ample accommodation; fitted with every labour-saving device, and economically run. Situated in the best residential part. A cottage in the grounds is let at £37 a year. Price, freehold, £5,000 (£3,500 on mortgage). Premium £3,500. Scope for active man.
8. WITHIN FIFTEEN MILES OF LONDON.—Old-established better middle and working-class PRACTICE, producing last year £1,536, of which £689 is from panel. Fees 2/6 to 7/6.
Large house in one acre of ground, with ample
(freehold) £4,750 (£2,750 on mortgage). Premium £2,000. Very good scope for increase.
9. NORTH WALES.—Old-established middle and working-class PRACTICE, averaging for the last three years over £1,700, including panel of about 1,300. Fees from 2/6. Visits from 3/6, with medicine extra. Suitable house, with good professional accommodation. Electric light. Garage for two cars. Small garden. Rent on lease £100 p.a. Premium £2,500, £1,700 down, balance by instalments. Good sport, etc. A knowledge of Welsh is not necessary.
10. PARTNERSHIP. — RESIDENTIAL SUBURB OF LONDON. — A half share is offered in a well-established middle-class Practice, producing over £2,500, with panel of 1,400. Surgery fees 2/6. Visits 4/- to 5 [illegible]Very little midwifery. Commodious house, with 2 reception, delightful grounds, etc. Can be rented at £100 p.a. Premium 2 years' purchase.
11. [illegible]N SUBURB.—Well-established PRACTICE, producing £600 £200 [illegible]ding panel of nearly 600. Suitable house available. Pre- water, electric[illegible] purchase.
12. requiring coun—SOUTH DEVON.—A one-third share (with increase ? or 3 years' time) is offered in a very good mixed-
13. *EASTERN COU[illegible]tice, in very attractive district, within easy* [illegible]g to illness of present junior Partner. Gross about £2,750 p.a. in[illegible]ree years have averaged £2,673. Panel of Good house (6 bedrooms), wi[illegible]. Price £1,600. Premium for share *in large grounds, for sale.* Goo[illegible]
14. upper-class PRACTICE averaging 7 MIDLANDS — PARTNERSHIP [illegible]ed panel of 160. Fees 3/6 to increasing Practice of nearly £1,550 at inclusive rental of £200 neighbourhood on outskirts of first-[illegible]RACTICE, averaging £220 House (4 bedrooms, etc.), in acre of [illegible] 195. Fees 3/6 to 15/-. Excellent prospects of increase. Premium [illegible] purchase.
15. House can be rented at £100 p.a. or smaller one at £80. Pre[illegible] *one years' purchase.*
16. SOUTH AFRICA.—X-RAY PRACTICE, established by Vendor 20 years and situated in a large and flourishing Town. The income is over £2,600 p.a. and fees are good. Rent of professional rooms, [illegible] £16 16s. a month. Premium £1,500, to include X-ray apparatus and electrical outfit, valued at over £500.
17. BORDERS OF LINCS AND NOTTS.—Old-established PRACTICE in pleasant agricultural district. Average gross cash receipts for the last three years over £1,100. Panel of 620, plus mileage, and appts. worth over £50. Low expenses. Fees from 2/6. Detached house, with 2 reception, 5 bedrooms, bathroom, etc. Rent £55 p.a. Pre*mium* £1,785.
18. SOUTH-EAST LONDON.—Old-established middle and working-class PRACTICE, offering scope. Receipts about £1,000 p.a. Panel of 900. Suitable house, with 2 reception, 6 bedrooms, etc. Can be rented on lease. Moderate premium for quick sale.
19. LANCS.—Well-established mixed-class PRACTICE, producing for the last 12 months £725. Panel of 1,055. Fees from 5/6. House contains 3 reception, 5 bedrooms, etc. Rent on lease £85 p.a. Premium 1½ years' purchase.
20. WITHIN TWENTY MILES OF LONDON.—PARTNERSHIP.—A share, producing about £850 p.a., is offered (after a preliminary assistantship of three months), in a sound and increasing mixed-class Practice, having good scope. Large panel. Suitable house available on rental. Premium 2 years' purchase. Scottish Graduate preferred.
21. LANCS. — LARGE TOWN. — Old-established upper and middle-class PRACTICE, situated in purely residential district and averaging about £1,700 p.a. including appt. of £130, and panel of 700. Visits 5/- upwards. Very little midwifery at 5 to 10 guineas. Expenses low. Excellent and well-built house, ideally situated, having ample accommodation (surgery, waiting room, and dispensary, 3 reception, 5 bedrooms, etc.). Rent on lease £120. Premium £2,500. Good educational facilities.
22. EGYPT.—Well-established PRACTICE, producing about £950 p.a., and offering good scope for increase. Fees 10/6 to 2 guineas. Excellent accommodation can be rented at £16 10s. monthly. Premium to include all furniture, drugs, drug bottles, instruments, etc., £2,000.
23. YORKSHIRE.—PARTNERSHIP.—A one-fourth share, with increase later, is offered in a very sound old-established general Practice, situated in favourite country town, within easy reach of coast. Gross cash receipts for the last three years have averaged £3,700, and for the immediate past twelve months £4,180. Panel of 2,000, and appts. bring in about £500 p.a. Fees 5/- to 21/-. House contains 3 reception, 5 bedrooms, etc. Electric light; garden. Garage. Can be rented at £46 p.a. Or other houses available. Excellent sport and good schools. Premium for share 2 years' purchase.
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25. NORTH DEVON.—Very old-established unopposed country PRACTICE in beautiful district, within easy reach of the sea. Cash receipts over £900, including panel and appointments about £300. Excellent residence (3 reception, 6 bedrooms, bathroom, etc.). About half an acre of garden, tennis lawn, etc. Garage. Water laid on and main drainage. Rent on lease £60 p.a. *Premium* £1,450. Good hunting, shooting, fishing. Educational facilities.
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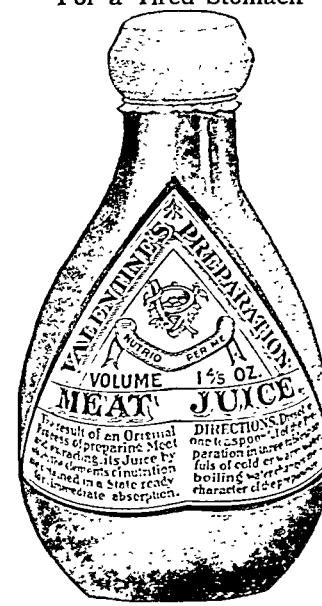

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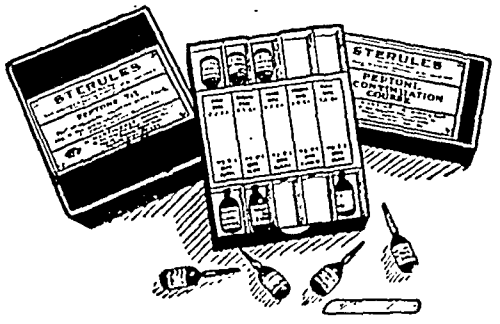

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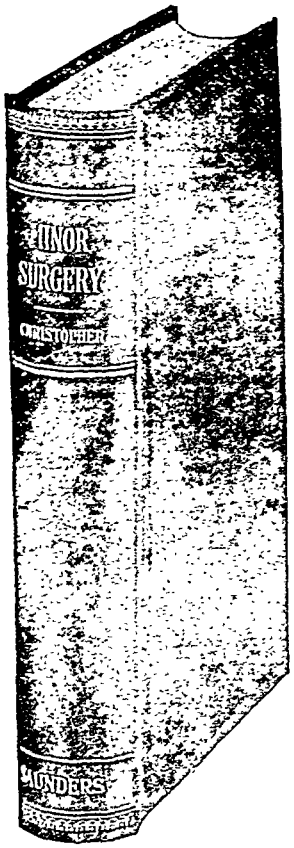

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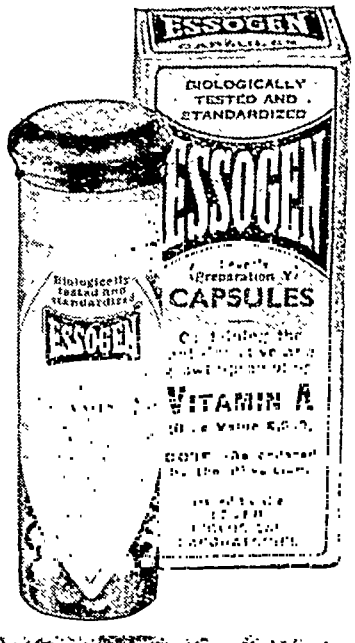

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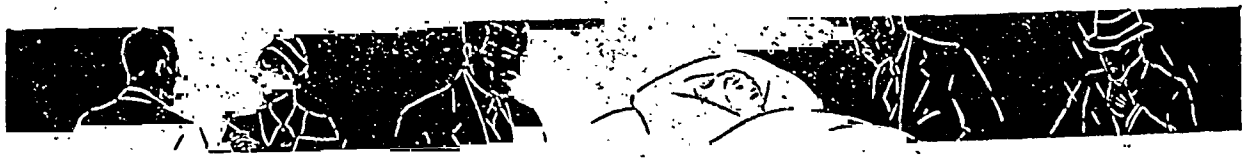

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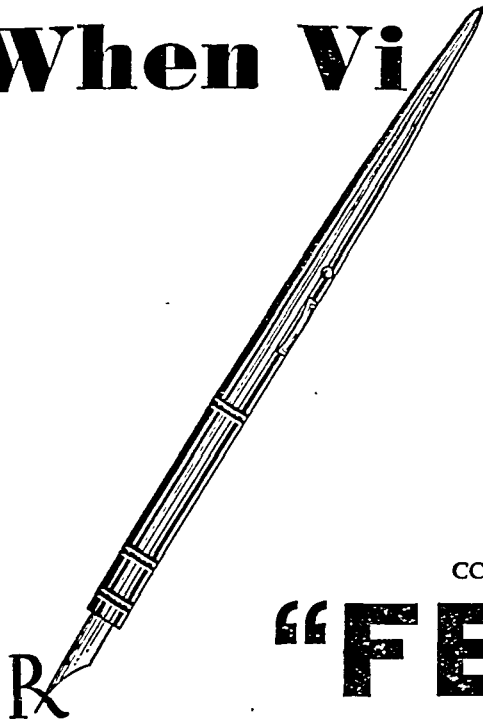

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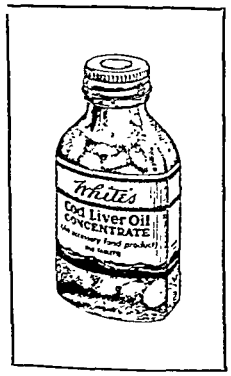

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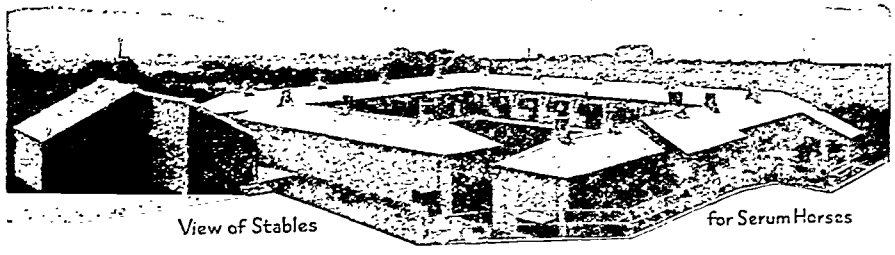

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Therapeutic use of Carbon Dioxide Gas in the treatment of Asthma, *B.M.J.*, Nov. 26th, 1932, p. 996—A Doctor writes: ". . . It will not be long before the Profession generally learns to substitute CO_2 for Brandy, to stimulate the respiratory centre instead of the heart, in all cases of collapse."

Resuscitation of Infants with CO_2 and Oxygen, *The Lancet*, Nov. 5th, 1932, p. 1001—describing the success which has attended the regular use of Carbon Dioxide in the maternity practice of Guy's Hospital.

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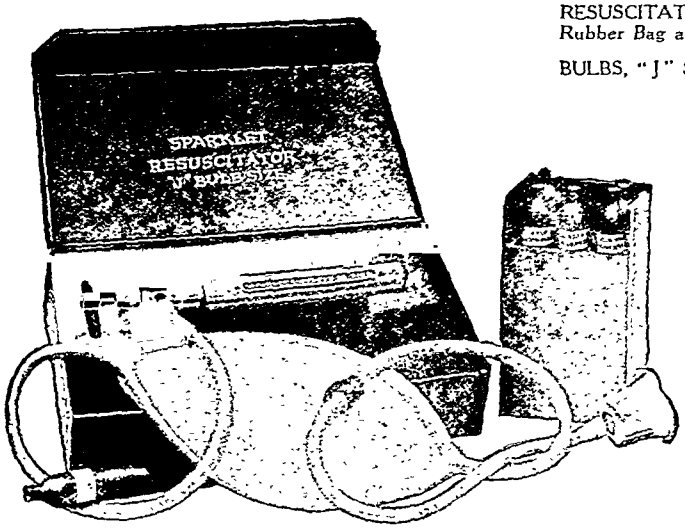

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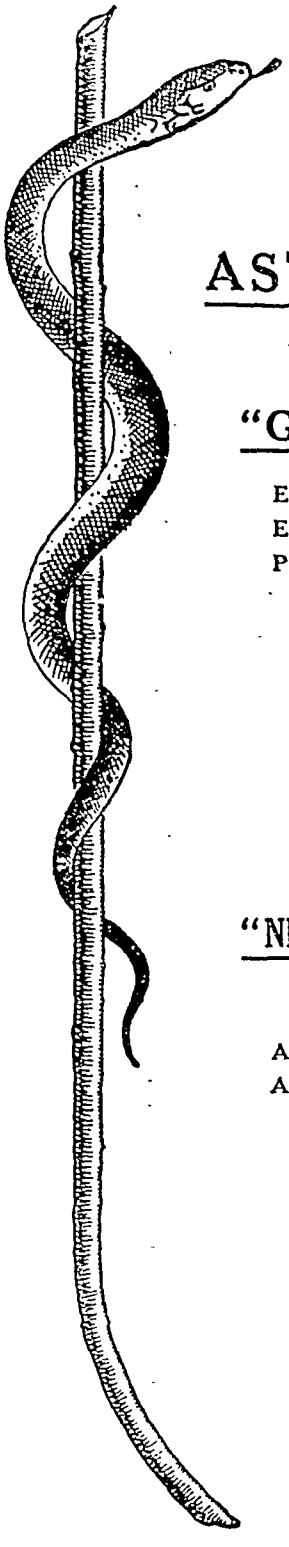

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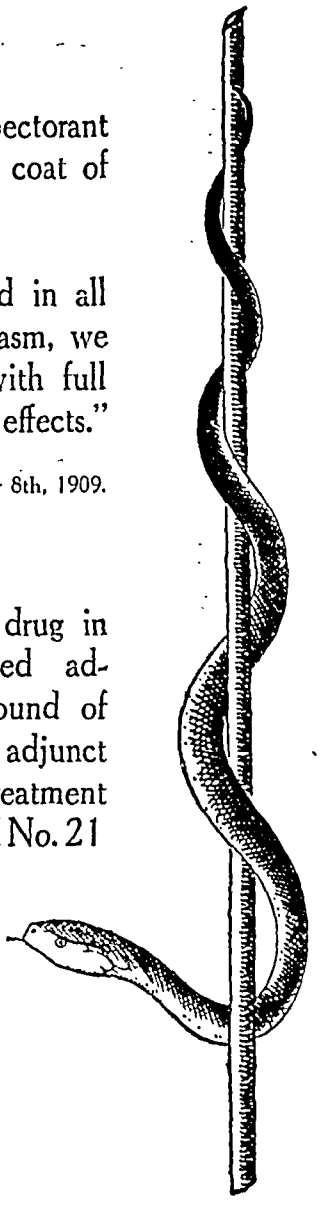

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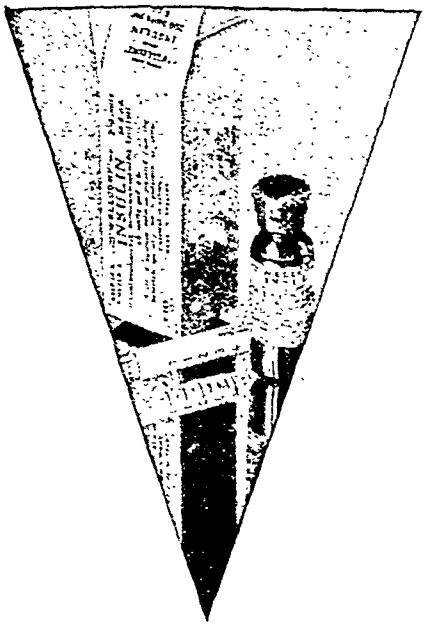

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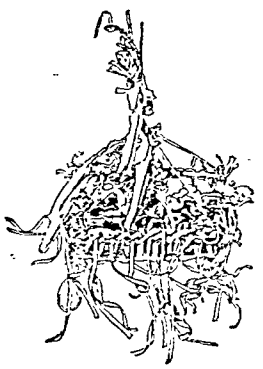
SACRIFICIAL TRAY USED BY MALAY MEDICINE MEN IN HEALING BY PROPITIATING THE DEMONS OF DISEASE.—The natives of the Malay Peninsula believe that each disease is actually a demon. Exorcism, therefore, forms the most important part of the medicine man's magico-religious curative rites. One of these is the construction of the sacrificial tray here illustrated. The tray, when made and decked, is strewn with parched rice and spread with betel leaf, native cigarettes, wax tapers, five small water vessels made with banana leaf, two of which are filled with water, two with cane juice and one with the blood of a fowl. Tiny portions of meat and Malay cakes are added, together with a couple of eggs. The tray is then suspended from a tree. Beneath it are deposited the feathers, feet and entrails of the fowl, the refuse of the parched rice, and a censer. The offerings upon the tray are for spirits, and those upon the ground for their slaves and attendants.



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his mark as a pioneer investigator, as a clinician, and as the founder of a school of tropical medicine. Working in Amoy, China, he discovered first the periodicity of *Filaria bancrofti* (1877), then part of the life-cycle in the mosquito, (1878), and he was the first to associate the transmission of disease with a winged insect. We may note that he found the eggs of *Paragonimus* in the sputum, *Spargamum mansoni*, and *Tinea imbricata*. He described sprue, became a great practitioner in Hong-Kong, and founded the school of medicine there which has now become a University. Returning to England, he was instrumental in describing several new species of filaria. He confirmed the development of the guinea-worm in cyclops, foreshadowed the life-history of the malaria parasite, and eventually, at the climax of his career, founded and conducted the London School of Tropical Medicine. We may regard his career as the culminating point of the foundation of tropical medicine.

Almost in the same breath, and out of a pious regard for historical truth, I must refer to two great laymen who helped to make the foundations of British tropical medicine more secure. The first is the great statesman Joseph Chamberlain, at one period Secretary of State for the Colonies. Without his aid Manson could not have founded the London School of Tropical Medicine; nor without the name of Chamberlain could he have obtained that influence he ultimately wielded so successfully. The other is Sir Alfred Jones, a prominent Liverpool merchant, much interested in the Elder Dempster Line and in the development of the Colonial Empire. I knew him as a boy, and well remember the sensation that was caused by his introduction of the banana to the dinner table of the citizens of Liverpool. And so it came about that Alfred Jones laid the foundation of the sister school of the Liverpool School of Tropical Medicine. Sir Ronald Ross, a contemporary and associate of Manson, must be well known to all for his historic researches on malaria and for his many activities in various aspects of this disease. He was the original professor of tropical medicine in the Liverpool School, which he joined in 1899.

In Charles Wilberforce Daniels (1862–1927) Manson discovered a capable and well-equipped first lieutenant, who, after performing original work in Fiji and in British Guiana, was instrumental in confirming Ross's malaria researches in 1899. Daniels was a great teacher and inspirer. He taught me the elements of tropical medicine, and in consequence I hold him in reverence as a reaper of the tropical harvest. Major-General Sir David Bruce (1855–1931) and Lieutenant-General Sir William Leishman (1865–1926) were both officers of great distinction, and their names and their work will for ever illuminate the records of the Army Medical Service. The reader will have no difficulty in recognizing the vital nature of their work in undulant fever, trypanosomiasis, relapsing fever, and kala-azar, which appear in the historical portions of this paper. They constituted a necessary corollary of the work of Patrick Manson and they reaped a harvest such as will never be seen again. Sir William Simpson (1855–1931) and Sir Andrew Balfour (1873–1931) can suitably be mentioned together. Although neither contributed materially to the science of tropical medicine, they reaped to the full the results of their predecessors and may be said to have laid the foundations of tropical hygiene. Only now is the real value of Simpson's pioneer efforts in tropical Africa being fully appreciated, and Andrew Balfour will ever be remembered as the pioneer of hygiene in the Sudan, as the first director of the new London School of Tropical Medicine, and as a great apostle of his cult.

Thus my brief survey of the great workers in British tropical medicine draws to a close. The present may be called the age of the gleaners. The seed sown in the past century has grown into a great tree whose limbs, stretching out in all directions, have borne a bounteous crop, but there are still some plums left in the uppermost branches for energetic gleaners of the present day.

MALARIA

It was not till 1894 that interest was aroused by Manson regarding the full life-history of the malaria parasite. Observing that "flagellation" of the crescent form of the subtertian parasite took place not in the circulating blood but only on withdrawal from the body, he enunciated his famous "mosquito-malaria hypothesis." From 1895 to 1898 Ronald Ross hammered out the probable life-history of the malaria parasite of man, again by analogy, by working on the cycle of development of the plasmodia of birds, *Plasmodium praecox*, in culicine mosquitos, and he also traced part of the cycle of the human malaria parasite to dapple-winged (that is, anopheline) mosquitos. Finally, he established that the mosquito not only removed the parasites from the blood but also transplanted them as sporozoites into their new host. But it now appears that an English-born American citizen in the person of A. F. A. King (1841–1914) wrote a very able paper as far back as 1883 in which he set forth his views on the transmission of malaria by mosquitos and adduced no fewer than nineteen reasons in support of his theory. After the scientific establishment of the mosquito transmission of malaria, there were other pieces of constructive work performed by British pioneers.

The public soon demanded visible and ocular proof that malaria could be disseminated by mosquitos and, *per contra*, prevented by their exclusion. Hence on behalf of the Colonial Office and of the London School of Tropical Medicine, Manson organized two experiments which would dispose for good and all of any objections which might have been advanced against this work. A special mosquito-proof hut was devised and erected in one of the most malarious localities in the Roman Campagna, and in it Dr. Carmichael Low, the late Dr. L. W. Sambon, and Mr. E. Terzi lived for three months without contracting the disease. Whilst this experiment was in progress, mosquitos fed in Rome on patients suffering from benign tertian malaria were forwarded in suitable cages to the London School of Tropical Medicine, and on their arrival were set to bite Dr. P. Thurburn Manson (Manson's eldest son) and Mr. George Warren. In due course both these volunteers contracted malaria, and the characteristic parasites were demonstrated in their blood. The mosquito-malaria theory was thus proven as far as scientific proof could be obtained—a theory was transferred from the realm of fancy into that of fact, and a glorious page in British medicine was thus completed.

The practical application of all this work was undertaken by the pioneer efforts of Ronald Ross himself in Nigeria in 1899–1900. The measures he then devised for the extermination of anopheles mosquitos in a malarial locality proved the basis of all future anti-malaria work and led to the brilliant results obtained by Sir Malcolm Watson in the Malay States. J. W. W. Stephens contributed considerably to our knowledge of what might be termed the new malaria by the discovery in 1922 of a new species of parasite—*Plasmodium ovale*—which, though having affinities with the quartan parasite, is nevertheless but feebly pathogenic for man. Recently (1931) this discovery has been amply confirmed by S. P. James and P. G. Shute at Horton Mental Asylum in this country.

TRYPANOSOMIASIS AND LEISHMANIASIS

In 1891 the first patient suffering from "negro lethargy" was sent to the London Hospital under Sir Stephen Mackenzie. His blood was studied by Patrick Manson, who found the *Filaria perstans* in this as in other

cases, so that he came to associate the presence of this parasite with the disease. Five years later David Bruce and his gallant wife went to Zululand, and after two years of isolation they discovered the *Trypanosoma brucei* and proved its transmission through *Glossina morsitans*. In 1901 Forde showed J. E. Dutton what was thought to be a filaria in the blood of a European on the Gambia, but Dutton instantly recognized it as a trypanosome, though neither of them associated it with sleeping sickness. In 1903 A. Castellani and later David Bruce, by the discovery of the trypanosome in the cerebro-spinal fluid, definitely clinched the association of the trypanosome with the disease. Later (1903), Bruce, Nabarro, and Greig definitely found that the disease was spread by *Glossina palpalis*, in which fly the trypanosome underwent development. In 1910 J. W. W. Stephens and H. B. Fantham found a new species of trypanosome (*T. rhodesiense*) in patients from the Luangwa Valley, N. Rhodesia, and in 1912 A. Kinghorn and W. Yorke showed that it was transmitted by *Glossina morsitans*.

Kala-azar is the visceral infection with Leishmania and is a widespread disease accompanied by a high mortality. Attention was first drawn to it by the epidemic in Assam in 1875, which decimated the inhabitants of the Garo Hills. In 1900 Sir William Leishman found the parasites in films made from the spleen of a soldier who died in Netley Hospital from a chronic fever contracted in Dum-Dum, an unhealthy station in Bengal, where kala-azar is not infrequent amongst Europeans. Leishman was apparently so careful that he did not publish his discovery till 1903, when he considered that these bodies represented a degeneration of some form of trypanosome. In July of that year Donovan observed the same parasite in a blood smear obtained by splenic puncture during life, whilst in 1904 S. R. Christophers published a valuable report on the morphology of the parasite and a commentary on the disease. In the same year Sir Leonard Rogers published his observations on the development of what he called the Cunningham-Leishman-Donovan bodies into flagellated organisms in citrated splenic blood, and in 1915 Rogers introduced treatment by intravenous injection of tartar emetic, following the lead given by Vianna in Brazil. The transmission of kala-azar has now been proved, principally by British workers—Christophers, Shortt, Knowles, Napier, Barraud, Lloyd, and Smith—to take place in the sandfly Phlebotomus, and quite recently this has been proved to be true for the Mediterranean form in Malta by S. Alder and O. Theodor (1932).

In 1885 D. D. Cunningham apparently first described the parasites of Oriental sore. They were curious organisms in the mononuclear cells derived from the sores. That this infection is disseminated by the agency of some small biting fly was first adumbrated by C. M. Wenyon, who suggested that the sandfly (Phlebotomus) was the possible vector in Baghdad, and he found that 6 per cent. of these insects caught in Aleppo had a flagellate of the *leptomonas* type in their intestinal canal.

YELLOW FEVER AND RELAPSING FEVER

The transmission of yellow fever through a mosquito was first foreshadowed by C. J. Finlay in 1891. This pioneer, despite the Christian names of Carlos Juan, was, it seems, of British stock. Sir Rubert Boyce first drew attention to the existence and deadly nature of yellow fever in West Africa, and pointed out that this area was a secondary endemic centre in addition to the more extensive and notorious range in South America. Several British investigators have fallen victims to "yellow jack" during their unselfish labours. We may mention Walter Myers (1873–1901), Adrian Stokes (1928), and A. Young (1928). It was Stokes who first demonstrated the ultra-microscopic nature of the yellow fever virus and its communicability to Macacus monkeys, an observation which has been the basis of all the more recent researches on this historic disease. As regards the prophylaxis, the work of E. E. Hindle must be mentioned, especially in respect of the toxicity of the virus and the immunity which can be produced in monkeys by the injection of attenuated preparations.

The main work of British investigators has centred round the Central African, or tick-borne, form of relapsing fever. P. H. Ross and A. D. Milne, in 1904, and later J. E. Dutton and J. L. Todd, discovered the spirochaete in the blood of natives suffering from the disease, and it was due to this infection that Dutton lost his life; but this last pair of investigators, working on the Congo, proved definitely that the spirochaete was conveyed by the bite of a tick—*Ornithodorus moubata*—and, moreover, that the parasite could pass into the egg and so to the nymph and to the mature tick of the succeeding generation. In 1907 F. P. Mackie recorded an outbreak of relapsing fever in India in which lice—*Pediculus humanus*—served as transmitting agents.

BERI-BERI AND AMOEBIASIS

The pioneer observations of C. Eijkman, in 1897, on the production of polyneuritis in fowls by the administration of polished rice led to the classical experiments of H. Fraser and A. T. Stanton in 1909. In this work they were aided by W. L. Braddon, to whom a share of credit in the foundation of the modern knowledge of avitaminosis is due. These observers noted that in a gang of Javanese coolies, whose main diet was white, or polished, rice, beriberi was of frequent occurrence till rations of unpolished or parboiled rice were substituted. The idea that the absence of a particular factor in the diet could generate something positive in the production of disease was an entirely new conception in medical science. Fraser and Stanton further showed that the antineuritic element is located in the pericarp of rice, in the aleurone layer, and in the embryo of the grain; that it is soluble in water and alcohol and is readily destroyed by a temperature of 130° C.; and that the amount of phosphorus in any given sample of rice is an indication of its safety. This work led up to the discovery by C. Funk at the Lister Institute in 1912 of those mysterious substances known as vitamins.

The organism we now know as *Entamoeba histolytica* was discovered in 1873. It now seems clear that the animalcules seen by D. D. Cunningham (1871) and Timothy Lewis in non-dysenteric stools were *Entamoeba coli*. For the painstaking researches which eventually culminated in the differentiation on morphological grounds of these two species of amoeba we are indebted to some extent to C. M. Wenyon. This was not the only difficulty to be overcome; there were several more, including the separation of the other non-pathogenic species of amoeba which inhabit the intestinal canal of man, and for the solution of the problem we can thank Wenyon and C. Dobell. The remarkable advances in the treatment of intestinal amoebiasis are mainly due to British workers. The older pioneers had been in the habit of treating chronic forms of dysentery with powdered ipecacuanha, and we find Manson in his practice in Hong-Kong, from 1883 onwards, firmly convinced of the specificity of this remedy in certain cases. But the exact action of ipecacuanha on the dysentery amoebae was not appreciated or understood. From 1917 onwards emetine, the alkaloid of ipecacuanha, had been recommended for the treatment of dysentery, but special attention was drawn to this drug by the experiments of Vedder in 1910, to the fact that it was without any visible action on the dysentery bacilli, but would kill saprophytic amoebae in 1 in 100,000.

In 1912 L. Rogers experimented with solutions of emetine hydrochloride and found that a similar strength rendered the *Entamoeba histolytica* inactive and apparently killed this organism. He then treated a series of cases of severe dysentery with hypodermic injections of emetine hydrochloride, with rapid improvement in the symptoms and disappearance of the amoebae from the stools. During the last twenty years there has been ample opportunity of assessing the value of Rogers's original discovery, and it can be affirmed that emetine still remains one of the most remarkable specifics in treatment. In the chronic stages of the disease, when the cysts of *E. histolytica* are present in the faeces, emetine proved less efficacious. In 1915 A. G. Dumez prepared the double iodide of bismuth and emetine known as emetine-*bismuthous* iodide. This was introduced into practice by H. H. Dale in 1916 and tried out in a series of chronic cases, and is undoubtedly successful in bringing about a permanent cure.

CHOLERA, PLAGUE, AND UNDULANT FEVER

In this terrible scourge of cholera, whose visitations yearly demand a colossal toll amongst the myriads of religious devotees in India, British writers have played a not ignoble part. It was by John Snow (1813-58), a man who had never lived or worked in the Tropics, that the dissemination of this infection was traced to water supply. Everyone has heard of the story of the Broad Street pump and his observations on the spread of cholera in London in 1854, and it was these facts which were so clearly substantiated by the work of Koch in the Hamburg epidemic of 1892. As regards the pathology of cholera and the part played by carriers in the spread of epidemics, we are indebted to the work of E. W. D. Greig (1914). The treatment of cholera has been much improved by the work of Sir L. Rogers (1908-11). Believing that collapse in cholera was due to the excessive loss of chlorides from the blood stream, he introduced the method of treating cholera by intravenous injection of hypertonic saline solution. It is claimed that since the introduction of his method the mortality from this disease has been much reduced. Rogers has further placed his method on a scientific basis by introducing a special method for estimating the specific gravity of the blood in cholera. The use of Haffkine's prophylactic of killed cholera vibrios which have been grown to great virulence has done much to protect the individual against acquiring the disease. The statistics obtained in the Balkan war of 1913, in Batavia in 1915 and 1916, and during the course of the great war have done much to confirm the early impressions of the value of Haffkine's inoculation.

It was J. Ashburton Thompson who from 1900 to 1906, by his observations on plague in Sydney and by his very careful analysis of the epidemiological facts observed in the Sydney outbreak, first reached the conclusion that plague in rats always preceded plague in man, and that infection was transferred from rat to rat and from rat to man by means of the flea and in no other way. He did this after the German and the first Indian Plague Commissions had decided against his theory. The work of Glen Liston (1905) and the Report of the second Indian Plague Commission (1906-8) amply confirmed these observations and gave due credit to Thompson's originality. The exact method of multiplication of the plague bacillus in the flea and the conditions governing the transmission of the bacillus by that insect were worked out in a very fine and precarious piece of research by C. J. Martin and A. W. Bacot in 1911. The part played by the rat-flea (*X. cheopis*) in plague has naturally stirred the entomologists to study the morphology of these insects closely. In 1914 C. Rothschild and K. Jordan described the rat-fleas of India as belonging to three closely allied species, *Xenopsylla cheopis, braziliensis*, and *astia*. It soon became apparent from the work of F. Hirst and F. W. Cragg that the last-named species is either unsuitable for the conveyance of the plague bacillus or it is unable to effect it, so that its presence as the common ectoparasite of the rat in India and Ceylon probably explains the absence of plague in districts where the appropriate rats are common.

Undulant fever was previously termed Malta fever. Marston, who personally suffered from the disease in 1859, first gave an accurate account of its clinical history under the term "Mediterranean remittent or gastric remittent fever." In 1886 David Bruce was the first to recognize and to demonstrate in the spleen of ten fatal cases of undulant fever the specific microbe, which he named *Micrococcus melitensis*. In 1905 Bruce and his wife, together with Zammit, discovered that the goat in the island of Malta was the source of the infection of undulant fever, and were able to lay down the measures for the control of this disease which have proved so eminently successful. The recent history of undulant fever, especially the serological diagnosis and the treatment of the disease, has been much illuminated by the late Sir P. W. Bassett-Smith (1861-1927). The association between *Brucella abortus* in cows' milk and a type of undulant fever in man, now known as abortus fever, was made by L. E. W. Bevan in 1922, and the main conclusions he arrived at have since been found to be correct.

FILARIASIS AND BILHARZIASIS

The subject of filariasis is the corner-stone of tropical medicine. The *Filaria sanguinis hominis*, to use its ancient terminology, was originally described in Havana by Demarquay in 1863 in a case of chylous hydrocele; but Timothy Lewis in Calcutta appears to have been the first to observe the larval nematode in the blood stream in 1870, and again in 1872. It was about this time that modern tropical medicine was born. It was Lewis's work that made such a momentous impression on Manson. In 1875 Patrick Manson in Amoy, China, not only confirmed Lewis's discovery, but in 1877 stumbled upon the periodicity—the swarming of these parasites in the night blood. In the next year, following the line of argument he had amplified as the result of these observations, he was able to trace the development of the embryo filaria in the thorax of the mosquito, which he, at that time, regarded in the light of a nurse to her unwilling charge. The adult filaria, now known as *Filaria bancrofti*, was found in 1876 by Dr. Joseph Bancroft in Brisbane and independently by T. Lewis in Calcutta. The actual time-cycle development of the filaria in the mosquito was worked out first by Dr. Carmichael Low in 1900 on material sent to Manson by Thomas Bancroft, the son of Joseph aforementioned. About this time S. P. James, working in India independently on these same lines, was able to confirm this observation. Patrick Manson's observations on three other species of human filariae—*Filaria ozzardi, Loa loa, and Acanthocheilonema perstans*—were made during the years 1891-7, and his predictions regarding their respective life-histories have turned out to be remarkably correct.

Bilharziasis has been known to exist in Egypt since the earliest times. In 1851 Bilharz originally discovered the parasite in Egypt, and the parasite was accurately described and named *Bilharzia haematobia* by Spencer Cobbold in 1859. The parasite was rediscovered by Harley in Natal in 1864, and its characteristic eggs demonstrated in the urine. The life-history of this parasite outside the human body and its method of transference from one man to another had long been a subject for speculation. Manson

had always stressed in early editions of *Tropical Diseases* that the life-history would in the main be analogous to that of the liver-fluke, *Fasciola hepatica*, whose cycle in a pond snail—*L. truncatula*—had first been worked at by Thomas in 1883. The first inkling of the true life-history was afforded by Ogata in 1914 for the allied species *Bilharzia japonica*, which was afterwards confirmed by R. T. Leiper and E. L. Atkinson. In 1915 R. T. Leiper, in Egypt, not only discovered the life-history of this parasite in the freshwater snail *Bullinus contortus*, but was also able to separate the intestinal form of bilharzia—*B. mansoni*, of which the lateral-spined eggs occurring in the faeces had been recognized in 1903 by Manson, and which was found to possess a distinct morphology and to develop independently in a snail belonging to a different genus, Planorbis. The method of successful treatment by means of continued injections of antimony tartrate in increasing strength we owe to J. B. Christopherson, who worked it out in Khartum in 1917, and it has hardly been improved upon up to the present day.

COUGH IN CHILDHOOD *

BY

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The symptomatology of diseases in childhood is rendered difficult by the absence of accurate self-expression on the part of the patient; in consequence, any symptom which can be carefully described by other observers must be regarded as of very great value. It is probable that in this fact lies the reason for "cough" being one of the commonest complaints made by parents on behalf of their children, and the frequency of this symptom justifies a more detailed analysis than is usually made in the standard textbooks. It will probably serve to introduce the subject in a more orderly manner if a definition of "cough" is first attempted, followed by a brief summary of the modern views on the physiology of the condition.

A cough is a modified expiration of an explosive character designed essentially to remove a foreign body from the mucous membrane of the respiratory tract.[1] Coughing may be voluntary or it may be purely an involuntary reflex act. Usually it is a mixture of the two: a reflex act reinforced by volition.[2] Thus, even in the voluntary act, there is a reflex element, and it is therefore important to consider the possible sites where the primary stimulus may arise. Broadly speaking, the afferent portion of the reflex arc runs in the glossopharyngeal nerve from the upper parts of the respiratory tract and in the vagus from the lower parts. A great deal of work has been carried out in recent years on the relative sensitivity of the various zones, and it seems conclusive that there are definite areas in the pharynx and in the region of the larynx which are more sensitive than others. The region of the bifurcation of the trachea is also much more sensitive than the rest of this structure, and as the respiratory mucous membrane is traced further and further down the bronchi sensitivity gradually disappears. The lung parenchyma is probably almost completely insensitive, although the evidence is a little contradictory. Perhaps the difficulties here can be explained, as Chevalier Jackson has suggested,[2] on the grounds that "tolerance" is very quickly established in the bronchial system, and after a foreign body has been inhaled the initial stage of coughing or choking is followed by a silent period as long as the foreign body remains fixed. If movement occurs a new area of mucous membrane is involved, and this sets up a reflex cough, followed again by a period of silence. After pus forms, the cough reappears because fresh areas are stimulated by the inflammatory process. Here again there are difficulties, but, according to the same authority, in any inflammatory condition of the lungs or bronchi the sensitivity of the mucous membrane seems to be diminished. With diminished sensitivity of the smaller bronchi and absolute insensitivity of the lung parenchyma, it is not surprising that in lobar pneumonia, for example, very little cough may be present; this disease, especially in childhood, may pass almost unnoticed, so little is there to direct attention to the lungs. Pleural involvement leads to the classical restrained type of cough, since the pleura is another area from which the cough reflex may be initiated. It should also be noted that, experimentally, there appears to be a strong reflex connexion between the nasal mucous membrane and the bronchial motor system, so that cough may be initiated by the effect of irritant gases in the nose. Similarly, cough may be produced experimentally by certain forms of stimulus applied to the oesophagus or stomach, probably because of the common vagal nerve supply.

It follows from this brief summary of the origin of the cough reflex that the upper part of the respiratory tract down to the level of the bifurcation of the trachea is of very much more importance than the portions of the respiratory apparatus below this point, and that, especially in childhood, coughs have much less to do with the "chest" than is commonly imagined. It is not an exaggeration to say that the vast majority of coughs in childhood are characterized by a complete absence of physical signs on examination of the chest.

CAUSATION

In considering the possible causes of cough in childhood it will be convenient to proceed anatomically from the upper regions of the respiratory tract downwards, adding comments on special features as the long list of possibilities is set out.

Inflammation of the Nose and Nasopharynx.—Acute inflammatory conditions of the nose and nasopharynx are frequently associated with a cough, but in such instances it is almost impossible to exclude inflammation of other portions of the respiratory tract, and the cough may have a complex origin. Similarly with the difficult question of adenoid tissue in the nasopharynx, this is so frequently associated with tonsillar hypertrophy or pharyngitis that it is impossible to be certain whether adenoids alone can cause a cough. In babies with the comparatively rare condition of congenital adenoid enlargement, a cough may occur, and this, I believe, is an example of a pure "adenoid cough." A foreign body in the nostrils is said to cause a cough in some instances, but I have not yet seen an example of this. With chronic inflammation of the nose and nasopharynx, with or without "adenoids," it is quite common to see pus trickling down the posterior pharyngeal wall; cough in such cases may in part be due to the irritation of this inflammatory material in the lower parts of the pharynx. To sum up the evidence here, I should say that to attribute a cough to a purely nasal or nasopharyngeal origin is usually unwise. The possibility, however, of a cough due to an ear disease must be mentioned. Here again the exact aetiology is complicated by the concomitant tonsillitis or pharyngitis, and I have not yet seen a child with a cough which could be directly attributed to middle-ear disease alone.

Coughs of Pharyngeal Origin.—These are very common, and need little discussion. It should be remembered that a young child seldom complains of a sore throat, and

* An address to the South-West London Medical Society.

acute inflammatory conditions of the tonsils, including diphtheria, may have a cough as the dominating symptom. This is a characteristic barking cough which is easily recognizable, and it is just this type of cough, due to recurrent acute tonsillitis, which is usually labelled "bronchitis" by the mother. Even a cursory examination of the chest will exclude this diagnosis, and a view of the throat soon settles the matter. It is important to make this diagnosis accurately and early, not only because a diphtheritic membrane may be missed, but also because the stock "bronchitis" mixture with ipecacuanha wine is useless for treating inflamed tonsils.

Larynx.—We come next to the larynx, and here the characteristic "croupy" type of cough usually makes diagnosis easy. Most laryngeal affections are a combination of inflammation and spasm, varying from almost pure laryngitis through laryngitis stridulosa, where the spasm is playing a part, to laryngismus stridulus, where underlying tetany produces an almost purely spasmodic condition. There are three conditions of the larynx and neighbouring structures in which difficulty may arise: (*a*) a croupy cough in measles before the rash appears, due probably to the occurrence of Koplik's spots on the laryngeal mucosa; (*b*) retropharyngeal abscess, where some oedema of the larynx is not uncommon and a croupy type of cough occurs; and (*c*) laryngeal diphtheria, which must always be suspected until it can be excluded either on clinical or bacteriological grounds. The differential diagnosis of all the various laryngeal affections would take us too far from the main purpose of this paper. It is comparatively easy, however, to localize the origin of the cough as laryngeal where the curious husky bark is present. Retropharyngeal abscess is readily excluded by an exploring finger.

Trachea.—Coughs due to affections of the trachea form an important group. The harsh, painful, ineffective cough of a tracheitis is a comparatively common sequel to a "cold in the head," and in adults the retrosternal discomfort makes the diagnosis easy. In the young child no help can be obtained in this way, but sometimes it is possible to hear an occasional coarse rhonchus over the upper part of the sternum. Pressure on the trachea may cause a cough, and there are three main conditions in childhood in which such pressure may occur. In babyhood an enlarged thymus sometimes accounts for a loud stridor and a loud brassy type of cough. During the last few years I have seen several with marked symptoms and good *x*-ray photographs of thymic enlargement; under radiation treatment (radium or *x* rays) the symptoms and shadow simultaneously disappeared. In later childhood enlargement of the mediastinal glands may give rise to a harsh, hacking, and spasmodic cough, which is sometimes very puzzling. I have discussed elsewhere[3] the diagnosis of the condition, which is undoubtedly not easy. The proper eliciting of D'Espine's sign is, I think, of most value; bronchial breathing and whispering pectoriloquy heard below the level of the fourth and fifth thoracic spinous processes in a child is very suspicious, and *x* rays can be used in confirmation, especially with the oblique view to show the posterior mediastinum. A third cause of tracheal pressure is advanced heart disease, with or without pericarditis, and in many instances the cough is, I believe, due to enlarged lymphatic glands in the anterior mediastinum. The diagnosis is usually easy.

Bronchitis.—Inflammation of the bronchi frequently follows tracheitis as the "cold spreads down to the chest," and the physical signs of true bronchitis require no particular comment. The rule is, roughly speaking, rhonchi on the large tubes and rales in the smaller tubes, and the finer the rales the more anxious one becomes lest bronchopneumonia should develop. Notice should be taken whether the added sounds are mostly inspiratory or expiratory in type: if the latter, then some bronchial spasm is probably present, and treatment must be directed against this. Other affections of the bronchi giving rise to cough need little comment. Bronchiectasis is characterized by showers of rales at one or other base (usually the left) after coughing has emptied some of the secretion out of the dilated bronchi and allowed air to enter. Asthma is easily recognizable during the attack, and between attacks there may either be no physical signs or those of bronchitis. It should be remembered that the younger the subject the more likely is recurrent bronchitis to be of asthmatic origin, and inquiry should always be made for any history of nocturnal wheeziness.

Inflammatory Conditions of the Lung.—Coming to the lung parenchyma, I have already stressed the fact that pneumonia may be a "silent" disease in the child as far as cough is concerned. This is true only of the primary lobar type, the common type in childhood, for in the secondary catarrhal or bronchopneumonic form there has usually been a previous bronchitis—and the alveolar involvement is secondary to this. Chronic inflammatory conditions—non-tuberculous fibrosis of the lungs—are common causes of cough in childhood, especially where the cough follows measles or whooping-cough. The physical signs of this condition are varied, but I pay particular attention to diminished movement and air entry at the base of one or other lung, especially if this is associated with persistent catarrhal signs. *X*-ray examination will confirm the diagnosis in most instances. Tuberculosis as a cause of cough in childhood is comparatively rare. Acute miliary forms give rise to little or no cough, while of the chronic type, tuberculous mediastinal glands are very difficult to diagnose, and cough may or may not be present. Fibrocaseous tuberculosis of the adult type does occur sometimes in childhood, but cough is never the same dominant symptom as it is in adult patients. It is usually easy to exclude this type of the disease on physical examination, followed by an *x*-ray picture in cases of doubt.

Pleurisy, serous or purulent, as a cause of cough in childhood presents no essential difficulties. A restrained irritating cough will occur during the early "dry" phase and a period of silence usually follows. For this reason it is a common occurrence for empyema in children to be missed and to assume a chronic form; the condition then presents itself for loss of appetite or anaemia!

From the nose to the pleura completes the anatomical survey, and I fear the list has been a long one. There still remain one or two coughs to be discussed. First let us consider "pertussis," for, I suppose, the question which bothers us all most in the coughing child is to decide whether or not this is whooping-cough. *Once the* whoop has occurred diagnosis should, of course, be easy, but mothers are extraordinarily reluctant to admit the existence of a whoop, even when you and she have listened to a perfect exhibition of a typical paroxysm together. Before the whoop occurs suspicion must be attached to a nocturnal cough which is spasmodic and associated with vomiting. This is especially likely to be confirmed if no physical signs can be found in the chest and no disease of the upper respiratory tract. The sublingual ulcer is always worth looking for, and sometimes gives help in a difficult or important case. In one patient seen recently the ulcer was on the side of the tongue instead of beneath it, and this was due to the position of the teeth, the lower central incisors being out. Bacteriological methods of diagnosis are probably quite useful, especially *the pro*cedure recently described by Gardner and Leslie,[4] but quite inapplicable to the conditions of most out-patient departments or of many practices. If in doubt the case should be regarded as whooping-cough; a week or ten days generally settles the matter.

Then there is the "stomach" cough: on the authority of Hess there are physiological experiments to prove its possibility, and coughs have been produced artificially by appropriate stimulation to the oesophagus or stomach. I think the most usual explanation is that the attack of gastritis, or whatever it is which is the stomachic element of the cough, leads to a general catarrhal state of the mouth and pharynx, also seen in the coating of the tongue, and this causes the cough. I never diagnose the condition unless I see the coating of the tongue extended right over the root of this organ and a red, glazed condition of the posterior pharyngeal wall. On the whole, it is a diagnosis to make with great caution, as it is a difficult one to live down with parents, and is apt to be sneered at.

Lastly, there is the question of cough as a habit spasm. Following an attack of whooping-cough a child is liable to go on coughing and whooping for months, for no more obvious reason than another child will go on twitching its mouth long after a patch of impetigo has vanished from the lip. To diagnose a cough as a habit spasm, however, necessitates a very careful examination of all other possible causes, and, as with any diagnosis resting on exclusion, it has inherent weaknesses. In this category also is the so-called barking cough of puberty, a cough which is labelled as hysterical in some of the textbooks. Here again diagnosis is largely by exclusion, and to attribute a cough to a purely psychical origin requires a very close examination of the whole environment of the child. As in *Alice*, it may be that

> "He only does it to annoy
> Because he knows it teases."*

TREATMENT

If the origin of the cough has been accurately localized the question of treatment becomes relatively simple. Obviously, since the prime object of a cough is to remove a foreign body from somewhere in the respiratory tract, the cough should be encouraged when there is the possibility of achieving this, and discouraged otherwise, as in most of the instances I have outlined. In other words, measures should be taken to stop almost all coughs originating above the bifurcation of the trachea: this also holds true for many coughs below this point. It follows that expectorants have a very limited use, and in my opinion too much attention has been directed in the past, as far as children's medicine is concerned, to the question of "depressant" and "stimulating" varieties. For most coughs in children a sedative linctus is best, such as tinct. camph. co. mx, oxymel scillae mx, glycerinum mx, spir. chlorof. mij, aq. ad. 3i, for a child of 2 years, as required.

Obviously, the first step in the treatment of cough is to eliminate or treat the cause as far as possible. As this will mean measures varying from radiation of an enlarged thymus to evacuation of an empyema it is not possible to discuss each type of cough in detail in this respect. I would like to emphasize, as I have already done elsewhere,[5] the importance of irritant gases as a cause of inflammation of the respiratory passages. In London the acidity of the atmosphere is sufficiently powerful to make serious inroads upon the stonework of the Houses of Parliament, and it is not surprising that many infants cough from their earliest days. Still[6] has also called attention to the possible irritation produced by a smoking fire in the nursery. Adequate treatment of coughs in childhood requires, in certain instances, a study of home surroundings.

The steam-tent in the treatment of respiratory disorders of childhood has a very limited field of usefulness and many drawbacks. In some animal experiments I carried out last year* it was found that hot moist air quickly caused fatal oedema of the lungs if the temperature was allowed to approach that of the body. The most beneficial effect in the relief of artificially produced spasmodic conditions of the bronchi was obtained when the air was merely kept fully saturated with water vapour at room temperature. This is best achieved by a kettle on the hearth, well away from the child's bed; no steam should be visible in the room at all. Used in this way moisture is of assistance in the relief of spasm, whether this be in the larynx or in the bronchi. It should be remembered in this respect that bronchitis with spasm is frequently a manifestation of asthma in the young child, and remedies based upon modern work should be employed—namely, correction of constitutional errors in digestion, removal of all possible sources of animal emanations and dust, and drugs to stop the acute attack.

Lastly, the treatment of bronchitis requires a brief word. Many of the drugs used, such as ammonium carbonate, squill, and ipecacuanha, have a direct irritant effect upon the alimentary tract if used in anything but small doses, and in young children the use of these drugs may lead to a troublesome and often dangerous gastro-enteritis. When the secretion is thick, during the early stages, alkalis are most valuable, and a good combination is vin. ipecac., miij, pot. cit. gr. v, tinct. camph. co. mv, glycerinum mx, aq. ad. 5j, three times a day, for a child of 1 year. Later on a little ammonium carbonate (gr. 1/2) may replace the potassium citrate, and if much wheeziness is present a couple of minims of tincture of stramonium should be added. The use of atropine to "dry up the secretion" in such cases is not recommended; it has, indeed, been condemned by Chevalier Jackson. It is doubtful whether much can be done to aid nature in the mechanism of expectoration, but harm can certainly be done by ill-considered interference.

* Before accepting this modern psychological dogma too hastily the chorus following these immortal lines should be recalled—"Wow, wow, wow!"

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AETIOLOGY AND SYMPTOMS OF MITRAL STENOSIS

A REVIEW OF THREE HUNDRED CASES

BY

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It has been stated by Coombs[1] that every case of mitral stenosis is a case of advanced cardiac rheumatism, and this writer has produced clinical and pathological evidence in support of the statement. It does not, however, appear clear in his monograph in what percentage of cases of mitral stenosis a rheumatic history was obtainable. Price[2] states that mitral stenosis is *usually* due to rheumatism in one or other of its protean manifestations.

The following analysis of 300 cases of mitral stenosis was undertaken on clinical lines in order to assess the importance of the history of rheumatic fever and allied conditions in the causation and aggravation of the disease. During the investigation a number of other factors have been noted. The age and sex incidence of mitral stenosis are discussed briefly, and the symptomatology is also considered.

* Working with a part-time personal grant from the Medical Research Council.

AGE AND SEX INCIDENCE

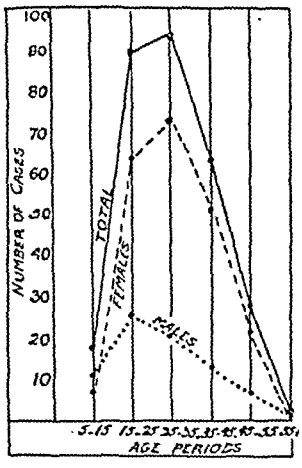
Of the 300 cases of mitral stenosis under review 79 were males and 221 females. I have arranged these in decennial age groups, and the result is shown in Table I and Graph 1. In four instances a record of the age was not available.

TABLE I

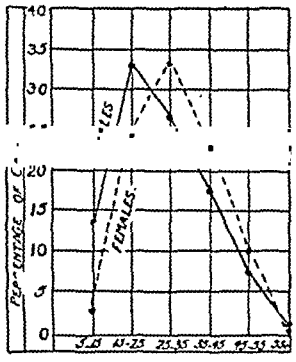
Age Periods:	5-15	15-25	25-35	35-45	45-55	55+.
Males*	11	26	21	13	6	1
Females† ...	7	64	73	51	22	1
Total cases..	18	90	94	64	28	2

*Age not given in one case. †Age not given in three cases.

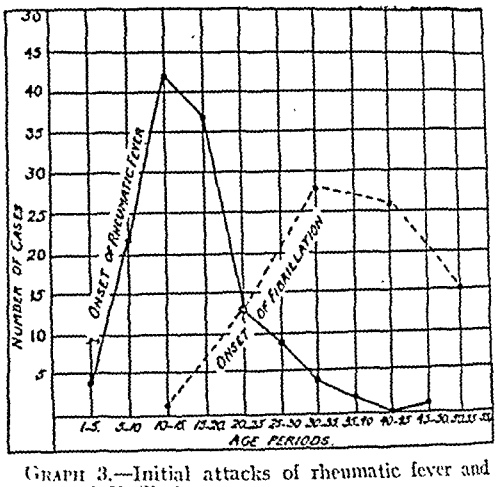
In Table II and Graph 2 the number of cases at each age period has been expressed as a percentage of the total number for each sex, and the result is of considerable significance. It will be noticed that the maximum incidence among males is a decade before that for females.



GRAPH 1.—Age incidence of all cases.



GRAPH 2.—Percentage of cases at the different age periods.



GRAPH 3.—Initial attacks of rheumatic fever and onset of fibrillation.

It seems feasible that indulgence in athletics and manual labour accounts for the earlier appearance of the disease amongst men, while the strain of pregnancy and parturition in women between 25 and 35 years of age causes their maximum incidence to be definitely later. It has not been possible to decide whether the actual stenosis occurs sooner in males, or whether it is that *symptoms* due to inadequate compensation come on at an earlier date.

TABLE II

Age Periods:	5-15	15-25	25-35	35-45	45-55	55+
Males percentage	13.9	33.0	26.6	17.8	7.7	1.3
Females percentage ...	3.2	24.5	33.0	22.5	10.0	0.5

Nearly half of the males have developed mitral stenosis before 25 years of age, while much less than one-third of the females show evidence of the lesion at that age.

ASSOCIATED VALVULAR LESIONS

Fifty patients in this series had aortic regurgitation as well as mitral stenosis. Of these twelve were males and thirty-eight females—that is, 15 per cent. and 17 per cent. respectively of the total in each group. Aortic stenosis occurred eight times in association with aortic incompetence, and on three occasions apparently independently of it. No definite pulmonary or tricuspid lesions were recorded, and it is interesting to note that the Graham-Steel murmur was not found present in a single instance. It is likely that mitral regurgitation occurs to a variable extent in the majority of cases of mitral stenosis, but it was somewhat infrequently that the diagnosis was put on record, so that the figure of 10 per cent. obtained in the present series is probably too low.

RHEUMATIC HISTORY

(*a*) *Incidence.*—Rheumatic fever, growing pains, and allied conditions are prominent features in the history of the great majority of the cases. The figures obtained are as follows: rheumatic fever, 150; chorea, twenty-seven; rheumatic pains and swellings (mostly apyrexial), twenty-three; and growing pains, fourteen.

This makes a total of 214—approximately 75 per cent. of the present series. Of the 271 cases of *known aetiology* it is seen that a definite rheumatic history was elicited in 80 per cent.: mitral stenosis with rheumatic history, 214; mitral stenosis of non-rheumatic history, fifty-seven; and no aetiological factor found, twenty-nine.

(*b*) *Multiple Attacks.*—A large number of cases gave a clear history of more than one attack of rheumatic fever—107 patients had one attack, thirty had it twice, nine had three attacks, five had four attacks, and one stated that five attacks occurred. It was noticed that the first attack not infrequently failed to leave any cardiac symptoms, and that the patient dated his trouble to the second or third attack.

(*c*) *Other Details.*—That rheumatic fever is a disease of childhood and adolescence is strikingly borne out by an analysis of the age of the onset of the first attacks, where the data could be ascertained (see Table III and Graph 3).

TABLE III

Age Period:	1-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	40-45	45-50
No. of cases	4	22	42	37	13	9	4	2	0	1

In Graph 3 the ages of onset of rheumatic fever and auricular fibrillation have been plotted, and will be considered later on. It is clearly seen that more than half of the cases of rheumatic fever occur before the age of 16, 86 per cent. before the age of 21, and approximately one-third of the patients are infected between the ages of 10 and 15. It was noticed that seventy-five cases of rheumatic origin developed one or more attacks of febrile illness (including chorea, but excluding recurrent attacks of rheumatic fever), which definitely appeared to aggravate the condition of the heart. The time of confinement to bed for the rheumatic fever cases during and following the acute attack varied from one week to twelve months. In eighty-seven cases, where the exact duration of stay in bed was known, the average was from five to eight weeks.

NON-RHEUMATIC HISTORY

The cases of non-rheumatic history were fifty-seven in number, and although a considerable proportion of these could have been included in the rheumatic division, it was considered expedient to assign them to this group. This was especially true of a number of cases of influenza, *tonsillitis, and scarlatina.*

In this group forty-one persons dated their symptoms back to definite infection as follows:

Influenza	19	Tonsillitis	6
Scarlet fever ...	4	Pneumonia ...	4
Typhoid	2	Measles	2
Puerperal fever ...	1	Quinsy	1
Diphtheria	1	Acute nephritis ...	1
"Gassed" in the war ...	1		

The remaining patients gave a history of a number of possible aetiological factors, but could not date their symptoms back to any particular illness. In three cases the only finding was a strongly positive Wassermann reaction.

No evidence whatsoever was found of any causative factor in the twenty-nine cases in this group. Many of them exhibited no symptoms, the lesion being found at routine examination. It is possible that a number of these cases were of rheumatic origin—the patient having forgotten or ignored growing pains and other mild manifestations of the infection.

COMPLICATIONS

1. *Embolism.*—Six cases of embolism—all cerebral—occurred in the present series. Two were straightforward cases of mitral stenosis, and the other four had auricular fibrillation. The only male in the series had had the fibrillation treated with quinidine sulphate, and embolism occurred a short time afterwards, with fatal results (Table IV).

TABLE IV

Case	Sex	Age	Lesion	Etiology
1	F	38	Mitral stenosis	Rheumatic fever at 10 and 30
2	F	35	Mitral stenosis. Auricular fibrillation	Rheumatic fever at 10
3	F	30	Mitral steno-is	Rheumatic fever at 11 and 17
4	F	45	Mitral stenosis. Auricular fibrillation	Rheumatic fever at 17
5	M	38	ditto	?
6	F	44	ditto	Rheumatic fever at 18

2. *Haemoptysis.*—History of haemoptysis was given in twenty-one cases (7 per cent. of the total). Of these eight were males (10 per cent.) and thirteen were females (6 per cent.). It thus appears that the incidence of haemoptysis is higher in males, but it is not wise to stress this point in view of the small number of cases under consideration. Auricular fibrillation was present in six cases, four had aortic incompetence, and three were associated with pregnancy. It is possible that haemoptysis may tend to be more prevalent at two distinct age periods: (*a*) between the ages of 20 and 30; (*b*) at about 45 years of age (Table V).

TABLE V

Age Periods:	15–20	20–25	25–30	30–35	35–40	40–45
No. of cases	3	5	4	3	3	3
Percentage of cases ...	6·5	9·1	8·3	6·0	7·7	10·0

Signs of gross cardiac failure were absent in all these cases. Tuberculosis was absent throughout the series; clinical evidence of phthisis was very suggestive in one case, but the radiological report was inconclusive.

3. *Pregnancy.*—Of the forty-eight cases where note was made concerning the relation of symptoms to pregnancy:

(*a*) Six did not complain of any symptoms at all, the lesion being found by routine examination at ante-natal clinics and the patients subsequently referred to the heart department.

(*b*) Eleven stated that the manifestations of cardiac disability occurred for the first time during pregnancy—usually the first or second pregnancy. The symptoms often cleared up completely after parturition, only to return during the following pregnancy.

(*c*) Twenty-eight complained of symptoms of varying intensity prior to pregnancy. Half of them were seriously incapacitated, and the other half showed marked aggravation of symptoms, but not to the same extent as the first group.

A number of patients suffering from mitral stenosis weathered anything up to fourteen pregnancies.

4. *Auricular Fibrillation.*—The number of cases that exhibited auricular fibrillation was 87. Of these twenty-six were males (33 per cent.) and sixty-one females (27.6 per cent.). In Table VI and Graph 4 the percentage of cases at each age period of mitral stenosis which

TABLE VI

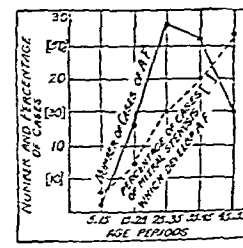
Age Periods:	5–15	15–25	25–35	35–45	45–55
No. of cases of auricular fibrillation	1	13	23	26	15
Percentage of mitral stenosis who get auricular fibrillation	5.5	14.4	30.0	40.0	54.0

Age not given in four cases.

develop auricular fibrillation is shown, as well as the number of cases of auricular fibrillation at the same age period. It is clear from the graph that with increasing age there is rapid increase in the liability of cases of mitral stenosis to fibrillation.

SYMPTOMATOLOGY

In the vast majority of cases the symptoms were very similar in type, varying only in degree of intensity. Breathlessness on exertion was the commonest complaint, while vague precordial pain—not anginal in type—was frequently mentioned.



GRAPH 4.—Incidence of auricular fibrillation (A.F.).

The type of onset of symptoms may be classified into seven groups:

1. No symptoms at all may be complained of, the lesion being found at routine examination for life insurance or at ante-natal clinics.

2. There is usually a latent period—freedom from symptoms after the rheumatic infection—which may last any time from a few months to many years. Onset of symptoms is gradual. After a period of adequate compensation, gradual decompensation sets in, in the absence of fresh infection.

3. Some cases never seem to recover properly from the attack of rheumatic fever (or pneumonia, etc., as the case may be). There appears to be more myocardial disease than is usual, and compensation is inadequate from the very first.

4. Symptoms are often absent until the onset of auricular fibrillation. The actual onset of the fibrillation may be sometimes dramatic, and the patient is able to associate it with some particular event—for example, physical strain.

5. Cardiac symptoms may be attributed to some definite occurrence, quite apart from the onset of fibrillation—for example, pregnancy, strain, infection, and domestic worry. In this group might be included a few patients who build up their symptomatology after being told that they have "heart disease."

hand is passed downward a deep depression can be felt above the pubis—this is the space between the chin and chest, and differs markedly from the much shallower depression found in anterior positions. On auscultation the heart sounds may be obscured by the limbs, or they may be heard with unusual distinctness when the limbs are not in the way and the foetal chest is closely applied against a thin abdominal wall. The distance from the median line of the mother's abdomen at which the heart sounds are heard is also helpful. When they are heard far out towards the mother's flanks it is strongly suggestive of an occipito-posterior position. On examination per vaginam one often notes how high the head is and the ease with which the anterior fontanelle can be felt. In anterior positions the posterior fontanelle is first felt, but in posterior positions it is felt with difficulty or not at all. Another significant sign is an unusual roominess in the hollow of the sacrum, which is due to the fact that the back part of the head does not fit into it as well as the forehead.

In neglected cases, sometimes, a large caput has obscured both sutures and fontanelles, making diagnosis difficult. One unfailing landmark then remains—the ear. The fingers are passed up until the ear is reached, and whichever way the helix points determines the position of the occiput.

ANATOMY

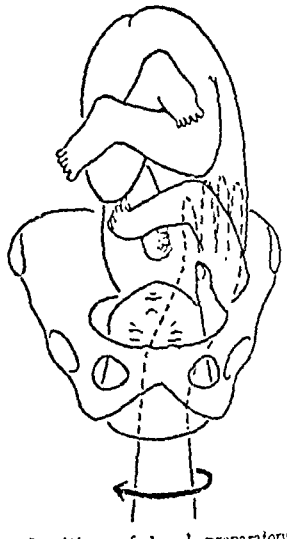
In order to understand why occipito-posterior positions give difficulty in labour certain anatomical factors must be taken into account. By comparing the shape of the foetal head with the pelvic inlet it is noticed that in anterior positions the larger back of the foetal head adapts itself more readily to the roomy anterior half of the pelvic inlet, while the maximum transverse diameter of the head also nearly coincides with the longest oblique diameter of the inlet. In posterior positions the reverse obtains, and the large back of the foetal head attempts to enter the smaller posterior half of the pelvic inlet which, in addition, is encroached upon by the promontory of the sacrum. In posterior positions the convex foetal back is directed against the convex maternal lumbar spine. This necessarily brings about extension of the foetal spine, resulting, in turn, in extension of the foetal head. The head, now, in order to engage in the inlet, must do so in the occipito-frontal diameter of four and a half inches instead of in the suboccipito-bregmatic of three and three-quarter inches. Engagement and descent are delayed unless the head is small or the pelvis roomy. Strong contractions will, however, cause the head to engage and will force it downward, but, since the sinciput is on the same level or lower than the occiput, it reaches the pelvic floor first and, according to a well-known law, rotates forward, while the occiput rotates into the hollow of the sacrum. Thus is produced the persistent occipito-posterior position. The forehead is now fixed behind the symphysis and becomes the centre of rotation. With strong pains the head will in time be born, but since the occiput has to pass over the perineum an extensive rupture often results. All too often the uterus has by this time become exhausted, and in the case of a primipara or of a patient with a scarred perineum it is unequal to the effort, progress ceases, and help is required. The underlying cause of difficulty in occipito-posterior positions is lack of flexion, and it may be stated almost as an axiom that with good flexion labour will proceed favourably, other complications being absent.

TREATMENT

In most textbooks the treatment recommended consists in rotating the occiput forward by the hand in the vagina, while the external hand pushes the anterior shoulder in the direction of the mid-line of the abdomen. By a series of pushes the shoulder is gradually pressed in the right direction till the back lies anteriorly and the malposition is corrected. This is not an easy manœuvre, and, unless the abdominal wall is unusually lax or the patient anaesthetized, it all too often fails. A method taught by Hodge many years ago was to correct the position by increasing flexion. Two fingers are passed into the vagina and touch a point midway between the anterior fontanelle and the brow. During a pain pressure is made upward; the occiput descends and turns forward. It is a simple manœuvre, and very often succeeds; but if after three or four pains the occiput does not turn, it should not be persisted in any longer. Of late, turning the occiput forward by means of the obstetrical forceps has been advocated by various authors. A brief glance at the forceps and then at the bony pelvis should convince one that they are ill adapted for this purpose. It is a difficult and dangerous operation, and though successfully carried out by expert hands, it should never be attempted by the general practitioner.

Author's Method

A method of dealing with occipito-posterior positions which I have used for many years consists in turning the back forward by internal manipulation alone. It is carried out as follows. The patient is placed on her back, the legs being held in place by stirrups; she is completely anaesthetized and all aseptic precautions are taken. The os must be fully or nearly fully dilated and the membranes ruptured. The gloved, well-lubricated hand is passed into the vagina—the right hand if the occiput is to the left and the left hand if it is to the right. The hand is carried above the head and grasps the shoulder with the four fingers placed over the child's scapula and thumb over its clavicle (see fig.). The shoulder is rotated forward toward the mid-line until the back lies in front.



Position of hand preparatory to turning the back anteriorly in a case of left occiput posterior.

The occiput usually turns with it, but if it does not it can be rotated forward as the hand is being drawn from the vagina. What often surprises one is the comparative ease with which this can be carried out. The head is now pressed into the inlet in its new position, a tight binder is applied, and the patient is left to deliver herself. A better alternative is to apply forceps and end the labour: the patient is fast asleep, and all the conditions necessary for forceps delivery are present. It seems, in these circumstances, that the more logical procedure is to deliver her than to wait. I have invariably done so, and have had no occasion to regret it.

Only in neglected cases in which the membranes have been long ruptured and the uterus is firmly applied to the foetal body is this manœuvre difficult or impossible. Another expedient then remains. Under the conditions already given, the physician should pass the hand into the vagina and turn the occiput forward, disregarding the body. To prevent its slipping back into its old position an assistant holds it in place by suprapubic pressure while the blades are applied. The head is now delivered and the body allowed to take care of itself.

This procedure is not over-difficult, and can be carried out by anyone possessed of even ordinary manual dexterity. It is easier than the pódalic version advocated by some authorities. Rotation of the child in this manner on its long axis involves a decidedly smaller risk than performing an internal version or a Caesarean section —as recommended by the radical school.

I would like to acknowledge with thanks the assistance given me by Dr. Donald H. Williams for the drawing and also other help in the preparation of this paper.

NOTES ON THE INJECTION TREATMENT OF INTERNAL HAEMORRHOIDS

BY

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It is unnecessary at this stage to restate the advantages of this method of treatment of a very common and annoying disability. The advocates of operation for every case of piles do not seem to realize that for every patient who comes to the surgeon prepared to undergo an operation there are perhaps thirty suffering a minor degree of discomfort who are content to tinker with ointments prescribed by the nearest chemist and enthusiastically advertised in the lay press. This group of patients will never submit to operation unless their symptoms become aggravated, and it is precisely this group which responds in a gratifying manner to treatment by injection.

After five years' experience of this method I feel that there are certain refinements of technique which simplify handling of the case, and obviate most of the unpleasant sequels which sometimes occur after injection.

Choice and Preparation of the Solution.—I think that most surgeons interested in this branch of proctology will agree that, looked at from all angles, a 5 per cent. phenol-in-oil solution is the most satisfactory one to use. Sloughing and secondary haemorrhage, which admittedly occur, only occasionally seem to be inseparable from the use of a solution which involves direct injection into the pile ; since the phenol in oil is injected above the pile-bearing area this complication is avoided. It is most important that the oily solution be prepared correctly. Several writers have observed the onset of influenza-like symptoms following an injection, and have attributed them to various factors, such as the use of sweet-almond oil, mixture of water with the injecting fluid, or the use of large quantities of the solution. Following on a series of baffling cases, and with the aid of Mr. Buxton, dispenser at the New Somerset Hospital, Capetown, I have succeeded in tracing the factor responsible. The symptoms are analogous to those of protein shock, and if the vegetable oil be boiled for an hour and then filtered, the phenol being added subsequently, this complication will not occur. In other words, the process of preparation should be similar to that of the oleum phosphoratum of the *B.P.* The choice of oil is immaterial. After a trial of peanut oil I have gone back to using sweet-almond oil as the diluent.

Spacing of Injections.—As a general rule, and unless there is special need for hurry, it is wisest to inject at weekly intervals. It is a little difficult to observe the result of an injection if the period between is shorter, and occasionally the fluid will leak through a puncture made only a few days previously. The total number of injections varies, of course, with the case, but it is advisable at the end of treatment to ask the patient to return after a month. At this stage one further injection will often consolidate the cure. In looking over my records and contrasting them with operation cases in order to reach a decision on the vexed question of recurrence, I have been impressed with the necessity of one or two additional injections after the piles are to all intents and appearances cured. I think there can be no question that in bad cases the percentage of recurrence is higher than it is with operation, but—in my opinion this is an important point—these recurrences are still amenable to treatment by injection, and respond very favourably in the end. It is a significant fact that medical men, when they come as patients themselves, ask to be injected in preference to submitting to operation, despite their knowledge of the perceptibly higher recurrence rate.

After-pain.—The slight discomfort following an injection may become very real pain if too large a bleb is raised subjacent to the mucous membrane. This is to be expected if we consider that an increase of tension will give rise to pain in any part of the body. The temptation to hurry on the cure must be resisted if the treatment is to be truly ambulatory. Occasionally patients are seen for the first time in an attack of acutely inflamed piles. The angry red prolapsed piles and the oedematous anal skin present a very formidable sight. Rest in bed with alternate hot and cold applications, followed by injections when conditions have returned to normal, will give good results. Injections during the acute stage may give rise to endless trouble.

Coexistence of Fissure.—No injection should be attempted in the presence of a fissure. Even where operation is indicated for the fissure it is preferable in many cases not to remove the piles at the same time, but to leave them for injection subsequently.

Badly Prolapsed Haemorrhoids.—It is in this group that the highest percentage of recurrence takes place. The first few injections should be given more deeply than usual, an endeavour being made to glue the mucous membrane to the muscular coats. Usually the injection is made with a view to raising a definite bulge, yet avoiding whitish discoloration of the overlying mucous membrane. In prolapse cases the preliminary injections are made with the needle passed just deeply enough to avoid a bulge. Occasionally in injecting through an area stiffened by previous injections some of the solution will leak through. It is better to wait a day or two and begin lower down, giving the needle an upward inclination.

Skin Tags.—Cases are frequently seen where oedematous skin tags bear witness to previous attacks of inflammation or thrombosis of external piles. Injections cannot, of course, cure these, and if they interfere with cleanliness they must be excised. In the standard operation for piles insufficient removal of redundant skin will leave the patient with an annoying reminder of his previous trouble. We are apt in our dread of post-operative stricture to err on the side of caution, and it is in such cases that it is useful to mark out, previous to operation, with methylene-blue, the area of skin to be removed.

RECONDITIONING OF TONSILS BY THE DIATHERMY CURRENT

BY

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It is frequently noticed that infection of the tonsils—the first of a chain of lymphatic structures intimately associated with the digestive tract throughout its length—will be followed by a spread to the gall-bladder, appendix, colon, and locomotor system. In the past the only treatment has been surgical, of which the best is removal by dissection. From cases which have come under our notice we have definite clinical evidence that, as a rule, partial excision, scarification, and " firing " by the electro-cautery are more conducive to subsequent trouble than if the organ had been left intact. The ideal

aimed at is to put this open end of the lymphatic system into a healthy condition in order to resist attack by ever-present organisms. This should be done without damage and with the minimum loss of tissue, so that the final appearance is that of healthy lymphatic tissue, pink in colour, and situated between healthy, red pillars of muscle. The recognition of an unhealthy tonsil is achieved by inspection, supported by pathological examination, and, if necessary, by a " diagnostic treatment."

In our experience there would seem to be two main types of infected tonsils. There is the bright red tonsil, covered by dilated blood vessels, which has the appearance of acute inflammation and is associated with a similar, slight but definite, enlargement of the cervical glands. This type of tonsil nearly always, but not invariably, grows a haemolytic streptococcus. The second type is characterized by a rather pale, oedematous, or bluish appearance, with a definite bluish or dark red band on the anterior pillar adjacent to the tonsillar margin. The prevailing organism here is generally a *Streptococcus viridans.*

In the early years of this century American electro-therapeutists applied high-frequency currents to infected and enlarged tonsils. Their ideas were crystallized by Massey[1] in 1924, when he described the two methods known as " electro-desiccation " and " electro-coagulation." Electro-desiccation produces a superficial destruction of tonsils by means of an electrode inserted into the tonsillar tissue. Of recent years Dan McKenzie[2] and others in this country have described methods of electro-coagulation of tonsillar tissue, with a view to total extirpation of the gland.

While working on these lines a trial has been made by one of us of both the electro-desiccation and electro-coagulation methods. The latter was found to be less painful to the patients and productive of better clinical results. During the process of electro-coagulation it was, however, found that patients' symptoms were relieved and the tonsils rendered apparently healthy before total destruction of the gland took place. This result is only to be expected in view of Professor Hadfield's interesting experiments at the Royal Free Hospital, in which he demonstrated a zone of infiltration occurring round an area of coagulation caused by the diathermy current. It would appear that it is this local leucocytosis, artificially produced, which is the means by which infecting organisms are destroyed. The following technique was therefore evolved.

TECHNIQUE

The patient is seated in a straight-backed chair, a small swab of cotton-wool soaked in 10 per cent. solution of cocaine being held in a pair of Spencer Wells forceps and pressed against the surface of the tonsils. The operator, sitting opposite the patient, obtains a good view of the fauces with a head-lamp and a glass spatula. A plate electrode about three inches square is attached to the leg of the patient—alternatively, he grasps a hand electrode from one lead of an ordinary diathermy machine. The other lead is connected to a pistol-grip holder, with trigger release carring a detachable thin six-inch rod, in the end of which is screwed a steel needle electrode covered with insulating paint to within a quarter of an inch of the point. Having allowed the cocaine time to take effect, the diathermy machine is started, the glass spatula is inserted so as to depress the tongue, and also, if necessary, retract the anterior pillars of the fauces, and the needle is pressed lightly on the surface of the tonsil. Pressure on the trigger then completes the electrical circuit. A white spot gradually forms round the needle, which is then pressed slowly into the tonsils to the depth of an eighth of an inch. When the needle appears loose—usually after two or three seconds—the current is stopped by releasing the trigger, and the electrode is withdrawn. A similar treatment is then given to the other tonsil. This operation should cause little or no pain. Any subsequent soreness can be relieved by an aspirin gargle.

DETAILS OF TREATMENT

The average case requires six treatments at weekly intervals. If the first produces any marked local, general, or glandular reaction, or reaction in any part of the body in which there may be outlying colonies derived from the organisms in the tonsils, the second treatment should consist of a similar single application to each tonsil in a different area, so that the effects are distributed over the whole tonsil. If none of the above reactions occur, two applications are made to each tonsil. Similarly, the third treatment may be increased to three applications to each tonsil. It has, as a rule, been found inadvisable to give more than this number of applications. Bacteriological examinations have been made by one of us from these tonsils. A growth of streptococci, with other organisms, is found in all cases before treatment, and a direct smear invariably shows the presence of pus cells in greater or lesser quantities. From these cultural examinations it has been difficult to draw conclusions, because streptococci and other organisms can be grown from practically all tonsils, whether healthy or unhealthy, and profusion of growth is no indication of the virulence of an organism.

After considerable experience it has been found that the presence of streptococci grown from a swab is of less importance than the direct examination of a smear. A smear from an unhealthy tonsil will show epithelial cells, many pus cells, and a large number of organisms. A swab from a healthy tonsil shows epithelial cells, very occasional pus cells (or none at all), with few organisms. The presence of pus cells denotes active inflammatory processes in being. It also means that the alimentary tract is being subjected to a constant stream of dead and toxic matter. After treatment, cultures show a less profuse growth and a diminution or absence of pus, and it is often found that a tonsil which before treatment harboured a haemolytic *viridans* streptococcus has ceased to do so, or may grow a non-haemolytic streptococcus.

When the effect of the cocaine has worn off the patient may experience some slight soreness for a short time. After about twelve hours the local reaction begins, characterized by some soreness and reddening of the tonsil round the coagulated area. If the organisms present are very virulent there may also be a general malaise, with, possibly, slight fever and some enlargement of the cervical lymphatic glands in the immediate region of the tonsil. It would appear that part of the general reaction is due to an inoculation of the body with toxins from the organisms present. For this reason treatments must be carefully regulated and spaced in order to build up the body's resistance to these organisms and to eradicate outlying colonies of infection. We have noticed about the time that manifestations of outlying infections may be increased, such as popping in the ears from a Eustachian catarrh, increase in a conjunctivitis or gingivitis of tonsillar origin, indigestion from cholecystitis, with increased tenderness of the gall-bladder, diarrhoea from a colitis, increased pain from any infected structures of the locomotor system or peripheral nervous system, such as lumbago or brachial neuritis. These local and general reactions subside in from one to four days, the duration becoming shorter and the reactions less severe with subsequent treatments. In about seven days the white coagulated patch is sloughed, leaving a healthy area which is covered with epithelium, and which later shows no visible or palpable cicatrization. It is generally found that where a *Streptococcus viridans* has been cultured reactions are more severe, and the technique is modified in consequence.

RESULTS OBTAINED

Table I shows the results of treatment of patients of hospital class and of those in comfortable circumstances. The total number of patients was ninety-three, some

whom showed lesions of more than one system, as indicated in the third column. The hospital-class patients were treated at the British Red Cross Society's Clinic for Rheumatism from among those under Dr. C. B. Heald. Their disabilities were rheumatic manifestations of various kinds.

TABLE I.—*B.R.C.S. (a) and Private Patients (b)*

Number of Patients	Average Number of Treatments	Systems Affected	Systems Cured	Systems Improved	Systems *in statu quo*	Systems Worse
(a) 32	6.3	32	15	14	2	1
(b) 61	5.2	101	51	48	2	—
93	5.7	133	66	62	4	1

The classification of patients under the heading of "*cured*" and "*improved*" is, of course, arbitrary. The method employed was that when the tonsils appeared healthy clinically and pathologically the patient's condition was assessed, and where symptoms were completely relieved the result was described as "cured." Where symptoms were alleviated only, the condition was noted as "improved." The private patients were treated for conditions of the upper air passages, such as chronic catarrh of the nasal passages, larynx, pharynx, and Eustachian tubes, frequent colds, and sore throats. There were also patients treated for rheumatic conditions and disabilities of the digestive tract, such as flatulent indigestion, cholecystitis, and colitis—probably secondary infections from the tonsils, either from swallowing pus or by infection through the lymphatic channels.

Table II illustrates the results of tonsil treatment on affections of the locomotor alimentary systems and upper air passages.

TABLE II.—*Private Patients Only*

System Infected	Cured	Improved	*In statu quo*	Worse
Locomotor...	10	18	—	—
Alimentary	4	11	1	—
Upper air passages ...	24	7	1	—
Other systems	12	13	—	—

In addition to the cases included in the above tables, a small number of cases of neuritis, persistent headaches, asthma, bronchitis, gingivitis, toxic myocarditis, and conjunctivitis associated with obviously unhealthy tonsils were treated by electro-coagulation with gratifying results, the proportion of those cured to those who showed improvement being 12 to 13. A remarkable feature of the records is the fact that forty-six out of the sixty-one private patients volunteered the information that as treatment proceeded they had more energy, or were less tired.

Table III shows the comparative results of treatment of rheumatism of the periarticular and articular type on the one hand and of the muscular type on the other.

TABLE III.—*B.R.C.S. Patients Only*

Type of Rheumatism	Number of Patients	Average Number of Treatments	Cured	Improved	*In statu quo*	Worse
Periarticular and articular	17	6.0	5	9	2	1
Muscular ...	15	7.1	10	5	—	—

From this it is evident that the results of treatment of the muscular type are better than in the type affecting the joints. It is curious that the successful treatment of the muscular type of case was more prolonged than that of the less amenable joint type. A possible explanation is that secondary foci of infection developed in the articular cases when these were old-standing, causing more or less permanent injury to the joint.

A small number of B.R.C.S. patients were given electro-coagulation treatment only, and Table IV shows the results.

TABLE IV.—*B.R.C.S. Patients having no other Treatment*

Number of Patients	Average Number of Treatments	Cured	Improved	*In statu quo*
12	6.5	10	2	—

These cases were of fairly recent origin, and, therefore, presumably more responsive to treatment. This would appear to tally with our explanation with regard to joint cases.

This treatment was started eighteen months ago, and therefore is to be regarded as being still in an experimental stage. For the same reason the number of complete cases is too small to be of great statistical value, but we consider that this method of therapy has a distinctly promising future.

SUMMARY

The treatment described attempts to relieve or cure certain disabilities caused by the broadcasting of poisons from unhealthy tonsils.

It is of advantage in that a considerable amount of *healthy tonsil remains*.

No damage and little discomfort attends the process, and the patient can follow his ordinary occupation and habits.

Patients of any age can be treated, the actual range being from 3 to 74 years.

Complications such as secondary haemorrhage have never occurred.

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Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

MUMPS AND APPENDICITIS

The following case may be of interest in view of the suggested rarity of this combination of diseases.

On December 12th, 1932, a boy of 11 years was taken ill with bilateral swelling of the parotid submaxillary glands. There was pain on swallowing and on opening the mouth, no abdominal pain, but frequent vomiting. There was mumps in the village, and the boy was thought to have contracted the disease. Two or three days earlier he started vomiting, and I was asked to see him. His temperature was 101° F., pulse 100. The abdomen moved on respiration; there was no pain, tenderness, or rigidity. The vomit was bile-stained; the bowels were constipated, but opened with medicine. The case was diagnosed as a severe attack of mumps, and the patient was put to bed. On the following days the boy was fairly comfortable, although he was still vomiting and the temperature and pulse were still raised. As appendicitis was suspected he was seen by another doctor on December 14th, but there were still no physical signs, and we decided to await development.

On December 16th pain, referred to the umbilicus, was complained of for the first time, and a definite swelling could now be felt in the right iliac fossa. Temperature 101.8° F., pulse 106. The boy looked very well, and the parotid swelling was beginning to subside, although it was still present. He was removed to hospital and operated on at once. A perforated swollen appendix was found and removed.

and the abscess cavity was swabbed out. This was shut off from the rest of the abdomen by what looked like old-standing adhesions and omentum. A large drainage tube was inserted. Uneventful recovery followed.

COMMENTARY

In this case, as in those referred to in the *British Medical Journal* of January 21st (p. 98), the appendix appeared to be infected as the glands of the neck subsided, about a week after onset of disease. The boy had never been ill before, although the adhesions pointed to previous attacks. The boy's grandmother and an aunt had both died of peritonitis following appendicitis in 1932, and yet, in spite of the family history, the case was very difficult to diagnose, there being no complaint of pain, no tenderness, and no rigidity until an abscess had definitely formed. I heard of a similar case last year, operated on by the same surgeon. In this case, although the mumps organism undoubtedly lit up the condition, the character of the pus was that usually associated with *B. coli*, and the number of adhesions suggested previous attacks.

Buckingham. BARBARA FINCH, M.B., B.S.

EMBOLISM OF RETINAL ARTERIES

In the *British Medical Journal* of November 12th, 1932 (p. 878), I recorded a case of embolism of the central artery of the retina, in which, thanks to Dr. Ewing faithfully carrying out my instructions, vision was restored—permanently, I hope, for it would indeed be an unheard-of piece of ill luck if a similar accident befell the patient for a second time. The following are two further cases which I promised to report.

Case 1.—Mrs. A., middle-aged, of Clacton, was sent to me on November 27th, 1930, by Dr. Percy Coleman. Fourteen days previously, during a heavy cold, she had suddenly lost half the visual field of her left eye, which "became quite black," and sight was very seriously impaired. She felt a little pain over the brow. Vision was reduced to 6/36, and fundus examination showed the inferior temporal retinal artery to be blocked. Attenuated and fragmented filaments of blood column could be seen moving jerkily, but, strange to say—and I do not recall observing this before—they moved in a centripetal sense—that is, towards the heart. Possibly this may be due to a force somewhat similar to that utilized in the hydraulic air pump, the current in the inferior nasal artery sucking remnants of blood in the temporal branch towards its own direction. I started massage at once, with no immediate result, and ordered it to be kept up thrice daily for three minutes, after pilocarpine instillation and warm foments. On December 2nd blood was circulating in the inferior temporal artery. Vision was 6/12 ptl.; treatment was persevered with. On December 16th the vision had reached 6/9 ptl.; treatment was stopped. On January 13th, 1931, vision had dropped to 6/24. Treatment was resumed and 5 per cent. dionin added at night. After one month (February 17th, 1931) vision was 6/6, and though the temporal artery still looked somewhat beaded the blood column was no longer interrupted. A few punctate and fibrillary haemorrhages were seen on the disk. On March 31st, 1931, everything was normal—V=6/5, and with presbyopic correction J1. Treatment was stopped and glasses ordered. Dr. Coleman has seen the patient quite recently. She has had no further trouble. Heart and kidneys he found normal.

Case 2.—Mr. X, aged 61, owned a restaurant. He consulted me on May 14th, 1930. There was extreme arteriosclerosis. For a fortnight he had had pain in the left temple, and the vein was swollen. On May 13th, when he awoke, the white curtains in his bedroom looked blue, and he had blue vision all day. By evening he could not see people. Five years previously he suddenly lost the sight of his right eye, which never recovered. That eye was totally blind, the optic nerve being atrophic: threads for arteries. It was obviously a case of embolism of the central retinal artery. On examining the left eye I found the retinal vessels exquisitely arteriosclerotic, there being hardly any blood circulating in them. Vision and field of vision were almost extinct, but light perception was still present. I communicated with the patient's local physician, Dr. Charles Fox of Clacton, and the same treatment was instituted and carried through as far as the patient would allow. But he would not persevere. Nevertheless, I saw him on September 30th, 1930, for the last time, when he said he could see a great deal better. In fact, his vision was fingers counted at 2 metres, and his visual field for hand movements was full all around. I persuaded him to go on with the treatment, but I never saw him again. On June 22nd, 1931, I saw his wife, who told me that his sight had recovered very considerably after I saw him, and that he was able to carry on his business till the end. He died suddenly on March 1st, 1931, of "embolism," so his wife stated.

I wish here to express my thanks to Dr. Ewing of Frinton, and Dr. Percy Coleman and Dr. Charles Fox of Clacton, for their collaboration in these cases and their permission to report them.

Colchester. GEORGE YOUNG, M.D.

Reports of Societies

DUODENAL FEEDING

At a meeting of the Medical Society of London, held on February 13th, with the president, Sir JOHN BROADBENT in the chair, a discussion took place on the treatment of peptic ulcers by duodenal feeding.

Dr. ERNEST YOUNG, in opening, explained how the method of using the duodenal tube for the treatment of gastric and duodenal ulcers had been introduced by Einhorn in America, but had not become at all popular in this country. He thought the method demanded more recognition, and he himself had treated all his private cases by this means in the last few years. Briefly, he continued, the method consisted of passing a soft rubber tube into the duodenum for a minimum period of twenty-one days, during which time the patient is given seven feeds at two-hourly intervals through the tube, thus putting at complete rest the stomach and first part of the duodenum and allowing the ulcer to heal. The best tubing to use was No. 6 drainage tube, and Dr. Young employed a piece forty inches in length with marks at twenty-three and thirty inches. This was connected as required by a further length of tubing to a glass container of 300 c.cm. capacity. The tube was passed first in the early morning upon a fasting stomach with the patient in the sitting-up position. After the twenty-three inch mark reached the teeth a few sips of water were given and the tube passed on up to the thirty-inch mark. Gastric peristalsis soon passed the lower end of the tube through the pylorus, and the presence of the tip in the duodenum could easily be demonstrated either by aspirating with a syringe to see if bile could be obtained or by giving the patient a little milk to drink by the mouth and again aspirating, when there should be no immediate return of milk. Usually the tube passed into the duodenum within ten minutes, and with the tube at the thirty-inch mark opposite the teeth the lower end was seven inches beyond the pylorus and thus well away from any duodenal ulcer. Feeding was then begun, the diet used being principally egg-and-milk alternately with Benger's food, in quantities of about 8 oz. The appetite generally remained keen, and if the patient woke in the night and felt hungry an extra feed could be given. On the evening of the last day of the period of "active treatment" the tube was withdrawn and the next day a light diet begun at once without any intermediate stage of "slops." This light diet was followed after ten to fourteen days by a slow return to a normal diet, which was carefully chosen. Some pain in the oesophagus might be felt for the first day or so, but soon ceased, and the pain of the ulcer disappeared during the first day of treatment and did not return. If duodenal discomfort occurred an alkaline powder could be given, and Dr. Young was also in the

practice of giving a liquid aperient as required through the tube, and also hypodermic injections of iron and arsenic. It was important that the mouth should be kept clean. The patient could get out of bed to go to the lavatory or to have a bath. The period of active treatment with the tube was usually twenty-one days, but for ulcers of the posterior wall of the stomach a longer period might be required, and in every case the progress was checked by *x*-ray examination. In selecting cases for this form of treatment Dr. Young only excluded those cases of gastric ulcer with pyloric obstruction or hour-glass stomach, or in duodenal cases where there was deformity of the duodenal cap with pyloric obstruction. In the last nine years he had treated seventy-five cases with the tube, and thirteen out of sixteen gastric ulcers did well, forty-four out of fifty-three duodenal ulcers did well, and six cases of multiple ulcer did well.

Dr. G. R. M. CORDINER dealt with a radiological classification of peptic ulcers which offered some basis for the proper selection of cases for medical or surgical treatment. He emphasized that there was one definite sign only of an ulcer—the presence of a niche—and that the essential basis for his classification was the functional response of the stomach to the presence of the lesion. For gastric ulcer the speaker divided cases into three degrees. In the first the stomach compensated for the ulcer by excessive peristalsis and rapid emptying time, but as the lesion went on pyloric spasm led to a delay in emptying time, and this was the second degree. Still later a weakening of the musculature set in and dilatation of the stomach occurred with narrowing of the pyloric antrum, the third degree of gastric ulcer, for which the treatment was surgical, while the first and second degrees were suitable for medical measures. In duodenal ulcer cases Dr. Cordiner also classified them into three degrees. The first showed persistent relaxation of the pylorus and rapid emptying; the second a marked degree of hyperperistalsis with some narrowing of the duodenal lumen; and the third degree, in its later stages, dilatation of the stomach and the development of pyloric stenosis. Only in the first degree of duodenal cases, said the speaker, could the duodenal tube be expected to effect a cure. In conclusion, he stressed the importance of controlling the treatment of all cases of peptic ulcer by radiology, which alone afforded a definite demonstration of the complete restoration of normal gastric function.

Sir WILLIAM WILLCOX considered that the duodenal tube was a valuable advance in the treatment of gastric and duodenal ulcers. It was an axiom, he said, that any acutely inflamed part should be rested as a cardinal principle of treatment. For the past four years he had adopted this principle by using the duodenal tube for cases of peptic ulcer with excellent results. He always controlled the stage of healing radiologically. It was important, he added, to supplement this form of treatment by a thorough investigation of the patient for any source of sepsis in the body.

Dr. STANLEY WYARD also emphasized the point that a peptic ulcer was liable to recur and the duodenal tube was not enough: the whole system of the patient must be treated. He had been using the duodenal tube for six years, and although no method could claim cure for every case he thought the duodenal tube particularly valuable for ulcers which were slow to heal by other medical methods of treatment. The passage of the tube was perfectly simple; patients usually tolerated it admirably, but occasionally acid regurgitation was troublesome, and if it did not yield to the use of alkalis he had found small doses of sulphuric acid effective in relieving this symptom. The results in cases of duodenal ulcer were less satisfactory than in gastric ulcer, but the method was well worth trying in these cases.

Mr. MORTIMER WOLFF explained how the success obtained in treating two serious cases of peptic ulcer—one with multiple ulcers—had led him to use the duodenal tube. In one case he had an opportunity at a subsequent operation for pyloric obstruction to prove that a gastric ulcer had completely healed. In consequence he now gave all his cases a preliminary period of treatment by the duodenal tube before deciding upon surgical measures, and his number of operations for peptic ulcer had in consequence considerably diminished. He mentioned certain cases where operation was essential: those with an anatomical deformity, those with recurrence, those where there was the slightest suspicion of carcinoma, and in those patients where the tube could not be tolerated.

Mr. A. J. WALTON emphasized that discussions of this type were nowadays revealing much more common ground between physicians and surgeons than some years ago, and he had been especially impressed by the modesty of Dr. Young's claims. He described certain types of case where medical treatment was definitely indicated, as, for example, in those with an incomplete set of symptoms which led to a diagnosis of "duodenitis" or, in slightly more prolonged cases, of "duodenal erosion." He stressed the need for operation in all cases with definite stenosis, and also in cases where there was any suggestion of malignant disease. Dr. GEOFFREY BOURNE described his experience in a small series of cases where the duodenal tube gave definitely better results than with a previous attempt by the Lenhartz diet. Dr. G. C. VILVANDRE disagreed with some of the statements made about the diagnosis of duodenal ulcer, holding that pylorospasm was a definite diagnostic sign. He urged that signs earlier than the appearance of a niche should be sought for, mentioning especially the occurrence of an "incisura" opposite an early ulcer.

Dr. T. IZOD BENNETT thought that a wrong impression would be created if the duodenal tube was regarded as the only successful method of treating peptic ulcer where surgical means were not adopted. He had three criticisms to make of the duodenal tube: it was tiresome to the patient, it was expensive, and it was nearly always entirely unnecessary. He thought that in selecting cases for medical or surgical treatment it was important to consider primarily the general condition of the patient. The PRESIDENT agreed that it was important to look for early signs of an ulcer, and the appearance of an incisura in gastric ulcers or spasm in duodenal ulcers should be regarded with suspicion.

IODINE COMPOUNDS IN THYROID DISEASE

At the meeting of the Section of Therapeutics and Pharmacology of the Royal Society of Medicine on February 14th, Dr. E. P. POULTON presiding, a discussion took place on iodine compounds in thyroid disease.

Professor C. R. HARINGTON, opening the discussion from the historical aspect, said that a soup made from seaweed was employed by the Chinese in the treatment of goitre many centuries B.C. The first definite reference in literature, however, was in the thirteenth century A.D., when a preparation containing burned sponge and seaweed was proposed as a specific remedy. The use of burned sponge was not taken up in this country until the middle of the eighteenth century, when it appeared as the "Coventry remedy," the secret being in the possession of a family in Coventry. During the Napoleonic wars a serious shortage of nitrate for the manufacture of gunpowder in France led to an investigation whereby iodine was accidentally isolated. A few years later this new element was found to be present in the ash of the common sponge, and was evidently the active principle in the early burned-sponge treatment. Iodine was first tried in the treatment of goitre in Geneva, with astonishing success. The success was such that people went about with little bottles of iodine worn round the neck like amulets. Later work demonstrated the direct correlation between endemic goitre and environmental deficiency of iodine, though this was for long viewed with general scepticism. Before the end of the last century two fundamental investigations were made which afforded a logical justification for the early workers. One of these was the demonstration by Marine, in 1891, that the thyroid was a true organ of internal secretion, and the other was the discovery, in 1895, that iodine was a normal constituent of the thyroid gland, and was apparently associated with its physiological activity. Marine demonstrated the inverse relation which existed between iodine concentration and the degree of glandular hyperplasia in

the thyroid. From the time it was recognized that Graves's disease was associated with pathological changes in the thyroid iodine was tried as a remedy on the basis of the success met with in its use in simple goitre; but, although good results were occasionally obtained, the majority of the reports were unfavourable. The speaker found no experimental support for the theory that Graves's disease was a dysthyroidism and not a hyperthyroidism. The correctness of such an assumption was in any case belied by the limited period during which iodine exercised its beneficial effect in Graves's disease. Its temporarily good effect was probably to be explained in some such manner as suggested by Marine—namely, by a temporary arrest of the "diarrhoea" (that is, the too rapid release of the secretion of thyroxine). The cause for this was to be sought, he believed, outside the thyroid gland, possibly in the suprarenal cortex, and if this was so it must be recognized that iodine therapy in Graves's disease could not claim to be more than a palliative method. He concluded with one practical suggestion concerning the possible advantages of different modes of administration of iodine in Graves's disease with a view to eliciting its temporary effects. From a consideration of the biological synthesis of thyroxine, it was evidently desirable that the action of the iodine should be elicited as rapidly as possible, but attempts to achieve this by massive administration of iodine were open to the objection that there was a risk of producing iodism. This risk could be avoided, and at the same time the processes to which the iodine must be subjected in the body could be cut short by one stage if it were administered in the form of desiodothyroxine.

Dr. H. GARDINER-HILL dealt with the clinical aspects. Most of the simple goitres one was called upon to treat were of the sporadic variety; perhaps in 10 per cent. the goitre had originated in some endemic area, and the patient had migrated to London. Most of these goitres developed during puberty, pregnancy, lactation, or at the climacteric. There were two definite types of simple goitre: the diffuse colloid type and the glandular type. Many regarded the first as a simple hypertrophy and the second as a simple hyperplasia, but that was a very controversial question. The nodular goitres met with in London probably represented the late stage of the diffuse. Therapeutically, iodine appeared to have very little effect in the nodular or adeno-parenchymatous type, and there was no known form of medical treatment which would have any effect on the size of the goitre; nevertheless iodine should be given as a prophylactic measure. It should be administered with care on account of the possibility of thyrotoxic symptoms, though he could not say that he had ever seen iodine produce such symptoms. In diffuse colloid goitres iodine was definitely of value if given during the first six or twelve months, and it might then cause an entire disappearance of the thyroid swelling; here again it was useful as a prophylactic measure. As to iodine in Graves's disease—in the primary disease or in exophthalmic goitre—it gave striking immediate benefit, but the effect was transient. Belgian workers, however, had recently claimed that they could control these cases by continued iodine treatment; every time the basal metabolic rate rose they increased the iodine. The majority of clinicians in this country would not be so optimistic about iodine as a routine measure, though it might cause the disease to run its course at a lower level of intoxication. With medical treatment alone, however, primary Graves's disease always seemed to relapse sooner or later. The most extraordinary effects were observed in the gland itself. A gland previously vascular and soft hardened in a very short time and appeared to become almost avascular. This beneficial remission was usually taken advantage of as a pre-operative measure. The most marked iodine remission was found in young patients. With regard to secondary Graves's disease, or adenomatous goitre, the effect of iodine in the diffuse type certainly did not bring the condition under control; but employed subsequently to the removal of the septic focus it appeared to control relapses and offer a certain amount of benefit. When the glands were of the diffuse type mild doses of x rays and iodine were given. In the nodular type a few cases derived benefit, but some others showed a tendency to intolerance.

Dr. E. P. POULTON remarked, as a practical point, that tea was the best vehicle for administering ordinary French tincture of iodine; it was tasteless in tea. As to the problem of endemic goitre, it was rather casually suggested that endemic areas were a long way from the sea and the absence of iodine in the atmosphere was the cause of the condition. But presumably the people in endemic areas ate meat, which would give them a certain amount of iodine; he recalled the occurrence of a sporadic goitre in a young woman who was a vegetarian, and he wondered whether abstinence from meat diet had anything to do with the condition.

Mr. T. P. DUNHILL said that iodine did a great deal of good for a limited time, and a drug so valuable should not be restricted solely to the preparation of patients for operation. It should not be taken out of the armamentarium of the physician. It was, however, given in such an unrestricted way and over such long periods that patients came forward in whom iodine had lost its potency through overuse, and who were so ill that they could not be improved at all. It had been said that iodine was powerful enough to render any patient safe for operation, and that there would be no necessity for doing the operation in stages. That was not true. In primary toxic goitre iodine was extremely useful. A young person might have had a non-toxic goitre for two or three years, after which toxic symptoms had developed; but she might still have a large amount of epithelium in the gland and still tolerate iodine. If the goitre, however, had been present for, say, fifteen years and had become nodular, there was much less epithelium present; and one reason why a lessened amount of iodine was advisable was because there was a greatly lessening amount of epithelium in the gland. The amount of iodine had to be graded according to the amount of epithelium present. The disease could rarely be cured by iodine, except in the very early stages.

Dr. GEORGE GRAHAM said that a great deal too much iodine was often used. The doses he employed were not much larger than 1 to 1½ grains of iodine a day. To give more was to make the gland exceedingly hard and the operation almost impossible for the surgeon. He thought that after operation patients should be kept on very small doses of iodine—not more than one-third of a grain a day.

Mr. C. A. JOLL held that the view that iodine deficiency was the cause of goitre was not by any means universally accepted, and there was considerable evidence to controvert it. In London a great deal of colloid goitre of the sporadic type was seen, yet even the poorest in London had a rich mixed diet with ample iodine in the shape of marine fish and green vegetables. He doubted whether in iodine medication more than 5 minims of the French tincture three times a day should be used.

Dr. A. W. SPENCE, who had been assisting Marine, uttered a word in defence of the latter's views on the aetiology of goitre. Marine held that the immediate cause of thyroid hyperplasia was deficiency of iodine, which might be absolute (there was a diminished amount of iodine in the diet), in which case there would be a diminished output of thyroxine by the thyroid and consequent enlargement of the gland), or relative (for some reason the tissues of the body required more thyroxine, and the thyroid enlargement was a compensatory hyperplasia for something which blocked tissue oxidation). For the last four years Marine had been working on the aetiology of "cabbage goitre." It had been found that rabbits fed on cabbage developed large goitres, and Marine thought that the substance in cabbage which was responsible for thyroid hyperplasia was cyanide, a fact which had been confirmed by animal experiment. The action of cyanides, according to Marine, prevented the tissues from utilizing the oxygen in the blood stream, and consequently the thyroid produced an increased amount of thyroxine to overcome this tissue block and enable the tissues to take up more oxygen. He believed that one day a substance which was more fundamental than iodine would be found. Simple goitre might be due to a deficiency of suprarenal cortical hormone, which was of the nature of a thyroid sparer, and the administration of

this thyroid sparer, whatever it might be, would prevent simple goitre.

Dr. W. CRAMER discussed the mechanism of the thyroid gland, and suggested that the vascularity and local distension of the capillaries was the cause of exophthalmic goitre; and Dr. GARDINER-HILL, in his reply, said that as the hardness of the gland seemed to bear a definite relation to the improvement of the symptoms, he had always wondered whether there was not some pressure effect involved such as Dr. Cramer had indicated.

THE OCCUPATIONAL NEUROSES

At a meeting of the Section of Psychiatry of the Royal Society of Medicine on February 14th, with the president, Dr. HENRY DEVINE, in the chair, the subject of discussion was the occupational neuroses, including miners' nystagmus.

Professor MILLAIS CULPIN said that the occupational neuroses generally denoted the professional cramps, to which miners' nystagmus might be added. They had been described as functional disturbances, affecting the interplay or co-ordination of several muscles. One authority had enumerated thirty-four cramps of the upper extremity, and this number could be extended. When most cramps were investigated it was the rule to find abundant associated symptoms. Minor degrees of writers' cramp were often overlooked when the patient was seeking treatment for other troubles. He had seen a typical writers' cramp in a young woman who was so disabled by a minor psychosis that she had never earned a living. He had seen it also in a gardener, whose only scriptorial effort was to write labels for his plants. He recalled one case of writers' cramp in a man whose firm's medical officer had some psychological insight, and went into his emotional difficulties, making some adjustments, with the result that the progress of the cramp was stayed. Specific difficulties in writers' cramp were often found to have symbolic significance to the patient.

The speaker had had the good fortune to take part in the late stages of an investigation into telegraphists' cramp. The investigation had begun with the assumption that the cramp was a fatigue phenomenon, but so many anomalies appeared that the view was forced upon the observers that it was largely psychological. One cramp subject handled the Morse key quite easily so long as it was connected only to a recording drum, but when there was a man at the other end of the wire, even a hundred miles away, the cramp appeared; it was analogous to the case of the stammerer who could read quite well so long as no one was listening, but developed his stammer as soon as he had an auditor. Another anomalous case was that of a woman operator, who, without premonitory difficulty, on taking hold one morning of the Morse key had severe and permanent cramp; it appeared that the previous evening she had been the victim of a sexual shock. He had examined groups of cramp and non-cramp telegraphists, and had found psychoneurotic symptoms in 76 per cent. of the former and 32 per cent. of the latter, though, as a result of later experience, he knew that both figures would be increased if he did the work again. The fact remained, however, that there were telegraphists with severe psychoneurotic symptoms who did not develop cramp. Some people suffered from such symptoms and yet carried on their work efficiently. Both writers' and telegraphists' cramps were excrescences upon an underlying psychoneurosis, though the associated symptoms were often overlooked.

Miners' nystagmus was supposed to be a physiological disorder that produced "neurasthenia," and the symptoms had been divided into "ocular" and "psychoneurotic." In this connexion he said a few words on night-blindness, which had an epidemic prevalence in Continental armies in the war, though it was almost absent from our own Army. A study of the references in French, Belgian, and German literature revealed a typical minor psychotic symptom. He had himself examined thousands of psychoneurotic ex-soldiers, and had never heard a man complain of night-blindness, though, following war strain or as a pre-war manifestation, a fear of the dark was not uncommon. It was a truism that patients tended to express their subjective troubles as objective ones. A man afraid of travelling in the tube might declare, and believe, that the close atmosphere affected his heart. Night-blindness in nystagmus was probably a conversion into objectivity of the fear of the dark. In the orthodox syndrome of miners' nystagmus nothing was heard of fear of the dark, but night-blindness had taken its place.

There were accounts from other countries of nystagmus, associated with a psychoneurosis, occurring among crane workers, who, in different parts of the field of vision, had to watch signals and a dangling hook; also among train dispatchers, who again had an awareness of danger and had to use the eyes in a strained way. In 1931 the speaker had the opportunity of examining thirty-six cases of miners' nystagmus. Three of the men showed a constant and notable oscillation; in others it could be induced by the usual methods, or the man could produce it by going through some peculiar movements. But in twenty-two out of the thirty-six he failed to find oscillation, though it was among these twenty-two that the nervous symptoms were most apparent. The nervous symptoms increased as the oscillation diminished. Why was it that this disorder began as a physical disability and then changed its apparent nature, and became identical with the minor psychoses which had no association with nystagmus? It was a commonplace that a bodily manifestation of hysteria could protect the patient against other symptoms. A man might be quite fit except for a hysterical symptom, such as a paralysis or tremor, but show severe symptoms when that condition, either spontaneously or as result of treatment, had disappeared. It was possible that in the cases of nystagmus the ocular disability behaved as a hysteria in guarding against further symptoms. When it disappeared the other nervous symptoms came to the surface. The cases could be put into a general scheme: (1) oscillation and no disability; (2) oscillation with subjective movement of objects (apparently a recoverable stage, though the added symptom might behave as a hysteria, and for a time protect against further developments); (3) unfolding of further psychologically determined symptoms; and (4) disappearance of oscillation and complete development of a minor psychosis.

In conclusion, Professor Culpin referred to the appearance of an occupational disorder among deep-sea divers, and described the psychological investigation of certain individual cases. From this it appeared that a spurious unconsciousness was due to a condition of "Angst," which could be experimentally reproduced. The occupational neuroses were to be regarded as minor psychoses (or psychoneuroses), and the anatomical conception implied in the old phrase "functional nervous disorder" must be set aside. In miners' nystagmus the oscillation was possibly determined by purely physiological causes, but the symptoms causing disability differed in no way from the well-known symptoms of psychosis. The handling of these cases was beyond the province of the present discussion, but the recognition we hope to see given to psychopathology in the curriculum should make that handling easier.

Dr. C. A. HUDSON thought it important to recognize the possibility of some organic basis in the pathology of these conditions. In miners' nystagmus it might be that gas poisoning from the coal surface indirectly influenced the health. Night-blindness was associated with xerosis of the conjunctiva, which used to be common in persons, such as sailors, suffering from defective diet.

Dr. HARRISON BUTLER remarked on the change which had taken place in the character of miners' nystagmus during the last fifteen years. Formerly the complaint of the miners was of being dazzled by the lights in the mine; now they complained more frequently of violent pains in the head, insomnia, and vertigo. He did not think that anyone knew the cause of this disease. It was possible that some unknown gas of subtly toxic nature might induce these symptoms, but he could not believe that a disease with so large a psychic element could be produced by such a material condition as the degree of illumination in the mine. The psychosis had terrible results. After long absence from work no progress was made, and he

knew of two or three men who had become insane as a result.

Dr. J. C. BRIDGE thought that the description "miners' nystagmus" required some clarification. It was not the nystagmus with which they were dealing, but a neurosis. Did a similar neurosis occur among people other than miners; and how large a part did the mere factor of working underground play in causation? Dr. N. C. NORRIS mentioned that in certain of the cable companies the presence of stiff wrists and clumsy hands was said to promote telegraphists' cramp. Dr. R. M. STEWART said that he was in charge of several Bulgarian prisoners during the war, and many of these complained of night-blindness. He came to the conclusion that the night-blindness was almost entirely a manifestation of hysteria. Dr. C. W. J. BRASHER said that one of the most marked cases of nystagmus he had seen was in a pharmaceutical chemist, obviously a highly strung and neurotic person. Dr. GRAHAM HOWE, Dr. H. S. STANNUS, and Dr. RIDLEY also joined briefly in the discussion.

Professor MILLAIS CULPIN, in reply, referred to the dilemma whereby if attention was drawn to these cases and the possible compensation the cases tended to multiply. From the public point of view it was dangerous to establish another disorder independently of the nystagmus. As to the causes, they were those of psychoneuroses in general, but some in particular applied to miners. It was extraordinary that there was no miners' nystagmus in America; he did not think it was because the lighting in the mines there was good. He had come to lay down the general rule that in any occupation the prevalence of psychoneuroses was in direct proportion to the rigidity of the occupational conditions. In an occupation where people could readily throw up their job and get another, psychoneurosis did not appear. But once a miner always a miner, and, the conditions being so rigid, the only way of escape was breakdown. The dilemma to which he had referred could be in large part met by setting oneself carefully to understand these cases, and to let the patients know that one was out to help them; but if compensation were given without proper understanding the incidence would increase.

WHOOPING-COUGH

At a meeting of the Royal Statistical Society on February 21st Dr. BRADFORD HILL read a paper on some aspects of the mortality from whooping-cough.

He said that the history of this malady could not with any certainty be traced beyond the middle of the sixteenth century, and not until the eighteenth century did accounts of epidemics become numerous. The absence of earlier reference was curious, but it did not seem likely that the lack of comment amongst ancient classical writers could have been, as a result of climatic differences, due to a real absence of cases and deaths, while in later centuries the tendency to leave the management of whooping-cough to "old women and empirics" might have to some extent led to its relative neglect by medical writers. In modern times its mortality in England and Wales had shown a remarkable decline, the death rate in the years 1921–30 being only one-third of that recorded in 1861–70. In spite of this improvement the disease remained a very important cause of child mortality—more important than was perhaps realized by the lay and medical public. In 1921–30 it was responsible in England and Wales for no fewer than 44,000 deaths, or nearly 1 per cent. of the total mortality of the population. In this period there were slightly more deaths from whooping-cough than from measles, and more than from scarlet fever and diphtheria put together. The mortality was heaviest during the first two years of life, while in 1921–30 over 90 per cent. of the deaths occurred in the first five years of life—a ratio which was equally true at the end of the eighteenth century. In view of this concentration upon very young children steps to control the disease were earnestly to be desired.

One of the most curious anomalies of whooping-cough mortality, which had long been recognized, was the consistently heavier death rate among girls. From respiratory causes, such as tuberculosis, pneumonia, and bronchitis, the mortality rates among young female children in England and Wales were 15 to 20 per cent. below those among boys; from infectious diseases, such as measles, scarlet fever, and diphtheria, they were 5 to 10 per cent. lower; from whooping-cough the female mortality at ages under 5 years was 20 to 25 per cent. in excess of the corresponding male mortality, and this excess had been remarkably constant since at least the middle of the nineteenth century. In other words, it had been unaffected either way by the growing urbanization of the country, while in addition it was found to be world-wide. Statistics of case incidence were scanty, but they were sufficient to show that there could be little doubt that females were more susceptible to clinical attack, especially after 2 years of age had been reached. Whether they succumbed more easily to attack once the disease was acquired was doubtful, but the figures available suggested that after the first year of life they might do so. Various attempts had been made in the past to explain this heavier incidence upon females—for example, in terms of the sex differences in the formation and development of the larynx, and sex differences in sensitiveness of the nervous system—but none of the hypotheses so far put forward seemed, on careful examination, to be adequate. An additional point for which no explanation was forthcoming was the disappearance, or partial disappearance, of this excess in female mortality in the second three months of life.

Another curious feature of the death rate from whooping-cough was the lower mortality in illegitimate infants, when compared with the legitimate, in the first three months of life, while at the same age lower death rates were found in urban districts when compared with rural. These characteristics were quite contrary to the general rule of mortality, and though it seemed plausible to suppose that some single explanation would account for them, a satisfactory explanation was still to be found. Dr. Bradford Hill suggested that the most likely solution lay in some selective force—for example, the premature death rate affecting the survivors—but use of available figures did not confirm this hypothesis. Another abnormal feature of the epidemiology of the disease that had existed for at least three-quarters of a century was the increasing proportion of early deaths with decreasing urbanization. This feature of the disease was not shown by measles. The latter acted according to "expectation"—namely, the more the "overcrowding" the earlier the liability to attack and death. Yet whooping-cough statistics for England and Wales suggested the reverse. Without further knowledge of its case incidence in various areas it did not seem possible to reach a definite conclusion on this further problem of its epidemiology. Dr. Bradford Hill concluded by saying that the relative importance to-day of whooping-cough as a cause of widespread sickness and death was perhaps still underrated, and that further steps to combat it were required. General notification of cases, or a careful study of the case incidence and fatality of the disease in limited areas, might contribute to this end by making clearer some of the present epidemiological obscurities.

ACUTE PANCREATITIS

At a meeting of the Liverpool Medical Institution, [illegible]). Po[illegible] on February 9th, Mr. C. A. WELLS read a note on [illegible]on th[illegible] diagnosis of acute pancreatitis. His object, he said, [illegible]d tha[illegible] to quarrel with the all-too-common belief that the [illegible] Marin[illegible] nosis of this condition was almost impossible until [illegible]ch wa[illegible] the abdomen had been opened, and also to a[illegible] a fac[illegible] attention to an individual sign which was not gen[illegible]nt. Th[illegible] described. For descriptive purposes the cases were d[illegible]nted th[illegible] into two classes: (*a*) the fulminating type, in [illegible]eam, an[illegible] Moynihan spoke of "profound collapse and unen[illegible]d amoun[illegible] agony," and (*b*) the less fulminating type, whic[illegible]enable th[illegible] present time seemed to be the commoner. Atte[illegible]ed that on[illegible] chiefly directed to this latter and larger group [illegible]tal than iodin[illegible] believed that a pre-operative diagnosis could [illegible]be due to [illegible] usually be made. The condition was [illegible]one, which was o[illegible] [illegible]the administration o[illegible]

onset of pain, both in the upper abdomen and in the back, combined with the discovery on physical examination of a distinct upper abdominal localization, possibly a sense of soft fullness and commonly incomplete rigidity. The diagnosis, having been suggested by these findings, could be confirmed by certain signs and tests. *Loewi's sign:* Most writers agreed that this was worth trying, but was not always positive in proved cases, whilst it might be positive in cases other than pancreatitis. The speaker's experience was that the sign was interesting, but of small value. It was used in three out of five cases. *Cyanosis:* (1) A vague degree of cyanosis, associated with collapse and difficulty in breathing. (2) Patches of discoloration in almost any part of the body, generally agreed to be almost diagnostic, but obviously very rare. (3) Grey Turner's sign of staining in the left flank, clearly a late manifestation of the disease. *Metabolic changes:* The only reliable change in this group seemed to be the increase in diastase, and, owing to the fact that it involved a laboratory test, the sign was omitted as not being of clinical interest in most urgent cases. *Deep tenderness in the left costo-muscular angle:* It was to this sign particularly that Mr. Wells wished to draw attention. He was convinced that it was of great value in arriving at a diagnosis. Its presence was no doubt explicable on the assumption that the pressure was transmitted to the tail of the pancreas. A search through the literature had failed to disclose any specific reference to this sign except in one American textbook (Homans's), which read, "More especially is tenderness in the left costo-vertebral angle, due to inflammation of the tail of the pancreas, of great diagnostic significance."

In the discussion which followed, the president, Dr. H. R. HURTER, said he had hitherto regarded acute pancreatitis as undiagnosable; certainly surgical treatment had usually to precede diagnosis. In the few cases he had seen the symptoms and physical signs were so alarming that an urgent laparotomy was obviously indicated, and only during its performance was the diagnosis made. His last patient, a man of 51, was in perfect health until one hour after an unusually hearty meal of curried veal, when violent pain began in the upper abdomen. This was quite unrelieved by morphine, and twenty hours after its onset operation disclosed an acutely inflamed pancreas and the usual fat necrosis. The man recovered rapidly.

INTRARENAL OBSTRUCTION

At a meeting of the Pathological Society of Manchester, held on February 8th, Professor S. L. BAKER, in a paper on intrarenal obstruction during the excretion of haemoglobin, said that the excretion of large quantities of haemoglobin, as in blackwater fever, might produce severe renal damage. The renal lesion consisted in an obstruction of the tubules by granular material derived from haemoglobin and precipitated in the tubules during the course of excretion. A similar obstruction might occur during the haemoglobinuria that follows the transfusion of incompatible blood; in this case there was a rapid intravascular haemolysis of the transfused corpuscles. Two such cases in which fatal renal obstruction followed the transfusion of incompatible blood were studied by Baker and Dodds (*Brit. Journ. Exper. Path.*, 1925, vi, 247), and it was shown that death resulted from blockage of the intrarenal tubules by granular material derived from haemoglobin. The factors determining this precipitation were: (*a*) the *p*H of the urine, (*b*) the salt content. If the patient were excreting an acid urine (*p*H 6 or less) with a salt content of 1 per cent. NaCl or over such precipitation was likely to occur. This precipitate was haematin. A similar intrarenal precipitation could be produced in rabbits by the intravenous injection of haemoglobin solutions if the animal's urine were rendered acid, as by cutting off the supply of green food. If the urine were alkaline the haemoglobin was excreted unchanged, and no ill effects on the kidney were produced. In all conditions where haemoglobinuria occurred it was important to render the urine alkaline and so avoid the possibility of intrarenal obstruction

Reviews

MEDICAL BIOGRAPHIES

Messrs. Urban and Schwarzenberg of Vienna and Leipzig, and afterwards of Berlin, have now published three biographical dictionaries of medical men. The first, in 1884, dealt with doctors of all times and all countries, and was edited by Drs. Wernich and Hirsch with a large staff of assistants. The second, in 1901, was edited by Dr. J. Pagel, and gave short lives of distinguished medical men living during the nineteenth century. It was well illustrated, and the facts were obtained by replies to a comprehensive questionary. The latest Dictionary,[1] for which Dr. I. FISCHER is responsible, is only concerned with the last fifty years. It overlaps in part Dr. Pagel's work, but does not seem to be much indebted to it. The biographies are shorter, and there are only 80 illustrations against the 669 portraits in the previous work. Dr. Fischer has done his best with a task which is beyond the power of a single individual. British biographies are full of pitfalls for one who is not intimately acquainted with the practice of medicine in this country. Universities new and old, Royal Colleges, and City Companies grant licences to practise—sometimes generally, sometimes in special branches. Titles of honour are numerous and confusing. Professoriates do not necessarily carry with them the dignity attaching to a professor in France, Germany, and Italy. The presidencies of societies are not all of equal value. It is often a greater distinction to be elected an honorary member of a society than to have attained the position by solid hard work followed by an examination. Our very names are difficult, and require care in spelling and meticulous proof reading. Dr. Fischer has fallen into most of these traps, not once but often, and in preparing any future edition he should submit his proof sheets to some competent medical librarian in this country, who would gladly help him for the mere sake of accuracy. In the meantime, the following corrections may be noted for any future edition. There is hardly any mention of the physicians and surgeons who have gained their laurels in Australia and South Africa. The M.B. degree granted by most British universities is ignored. Sir Watson Cheyne is duly noted as Hunterian professor, but it is not stated that he was President of the Royal College of Surgeons of England and was Hunterian Orator. Sir Charles Sherrington is described as President of the Royal Society [College?] of Physicians instead of President of the Royal Society. Sir A. Mayo Robson is stated to be physician and consulting physician to the Leeds General Infirmary. Sir Edwin Ray Lankester was a man of science who was never a member of the medical profession. Victor Horsley's title is omitted. There is no mention of Lister, of David Ferrier, Hughlings Jackson, Gowers, Jonathan Hutchinson, or Sir Morell Mackenzie. The omission of a comma has converted Sir William Osler into Sir William Bart Osler, and Sir Ronald Ross appears as "Ross, Ronald Sir." Creighton is spelt Creigton; and Huntington, Huntingden. In spite of these blemishes, due partly to carelessness and partly to want of knowledge, the *Biographisches Lexikon* is a useful but short guide to the careers of many distinguished medical men. The British section needs a thorough overhauling, and the opportunity may then be taken of adding a few more portraits.

[1] *Biographisches Lexikon.* Herausgegeben und bearbeitet von Dr. I. Fischer. Zugleich Fortsetzung des Biographischen Lexikons der hervorragenden Ärzte aller Zeiten und Völker. Bands I and II. Berlin and Vienna: Urban and Schwarzenberg. 1932 and 1933. 8½ 1,741 (both vols.); 80 figures; Geh. R.M.81, Geb. R.M.90 (both vols.)).

INJECTION OF VARICOSE VEINS AND PILES

Although much has been written on the injection treatment of varicose veins and haemorrhoids Mr. R. H. MAINGOT has brought these subjects together and described injection treatment as a whole in a small, handy-sized volume, *The Injection Treatment of Varicose Veins, Haemorrhoids, and other Conditions.*[2] The author covers his subject in an excellently practical and exact manner, following the work of Douthwaite in the injection treatment of varicose veins, of Dickson Wright in the consideration of varicose ulcer (devoting a chapter to the elastoplast treatment), and of Miles and Gabriel in the injection of piles, adding the results of his own large experience, and advocating those measures which long practice has proved effective. The book describes in detail the technique of the injection, the solutions used and recommended, the indications for and against this treatment, the complications that may arise, and the results that may be expected. The practitioner will find in the eighty-seven pages a complete guide to this form of treatment and the practical difficulties that may be encountered. There may be differences of opinion on a few small points, such as the value of injecting more than one quadrant of the anal canal at one sitting, and doubts as to the practicability of ligating a bleeding puncture hole in the anal mucosa at the top of a rectal speculum ; and the last few pages of the book, detailing the injection of bursae, herniae, hydroceles, varicoceles, and ganglia, are admittedly experimental and speculative. But, generally speaking, the book describes practical measures in a clear and concise manner, omitting nothing of importance, and forming a complete manual for those who seek guidance in the injection treatment of varicose veins and haemorrhoids.

OBSTETRICS AND GYNAECOLOGY

The Practical Medicine Series consists of a collection of abstracts of papers. The volume under review[3] deals with the year 1931, and is edited by Professor J. B. DELEE (obstetrics) and Dr. J. P. GREENHILL (gynaecology), who add their editorial comments at the end of the abstracts. Most of the papers considered are either American or German, and relatively few British contributions are mentioned—surely a matter for regret. The great advantage of a work of this kind is that most of the literature of any particular year is brought together and can easily be referred to without much time being spent on extracting the essential points from a long paper. Needless to say, great discrimination is required in selection, and without editorial guidance it would be difficult to distinguish good, bad, and indifferent papers. Some of the editorial comments are very much to the point, particularly those of DeLee, who is sometimes very scathing—for example, in his opinions on the use of paste injections for inducing abortion, and on what he calls "American hurry" in midwifery. Similarly his views on the use of version for delay in the second stage of labour in vertex presentations are very sound. It is a moot point whether a compilation of this kind should be completely bibliographical, or whether only the best and most reliable publications should be mentioned together. The few illustrations included are not very helpful, and the index, which should be one of the most important parts of the book, is unsatisfactory.

Professor JEFF MILLER has adopted the novel method of presenting two textbooks of gynaecology. The first, *An Introduction to Gynecology*, published some two years ago, was restricted to pathology and diagnosis. The present volume, *Clinical Gynecology*,[4] dealing solely with therapeutics, is divided into three parts, the first of which considers treatment in general ; the second, therapeutic measures such as radium, organotherapy, and physical methods ; while the third constitutes a textbook of operative gynaecology. There is much to be said for this arrangement. *An Introduction to Gynecology* was a work of special merit, and Professor Miller has endeavoured to maintain the same high standard in the present volume. He has probably found it harder to write, because personal impressions tend to be much to the fore in any work which deals with therapeutics. The chapter on carcinoma of the cervix presents the case very fairly, the views of the English school being well represented. The section on inflammation of the tubes and ovaries is one of the best in the book, for it sets out opinions which are the result of a very large experience. On the other hand, some of the minor affections are not considered fully enough: such cases are looked after by general practitioners, who should be given as much help as possible in a work of this kind. Obstetric injuries are well described and the available treatment is admirably reviewed. It is interesting to see attention paid to the method of vaginal douching, and to the technique of tamponading the vagina. A description of diathermy methods is given, and there is a valuable article on the use of the anterior pituitary hormones. Radium is satisfactorily presented from the theoretical side, but the technique of treatment should be more detailed. Furthermore, it is surprising to find the author stating that standardized doses are impossible. The section on operative gynaecology is well illustrated and many new methods are included. In the operation for prolapse attention is directed towards the importance of dealing with urethrocele, and we are glad to see emphasis placed upon Schröder's operation of partial amputation of the cervix. In the operation for vesico-vaginal fistula Professor Miller recommends the insertion of sutures through the mucous membrane of the bladder, and he even suggests that linen may be used. It is doubtful if this procedure will be universally accepted. The present volume is one for the specialist in gynaecology, and it should serve as a useful guide both on the clinical side and in the operating theatre.

PROBLEMS OF POPULATION

The proceedings of the second general assembly of the International Union for the Scientific Investigation of Population Problems, held in London in June, 1931, have now been published in a volume of 377 pages, edited by Captain PITT-RIVERS.[5] Some of the papers are hardly more than notes, but several are substantial contributions to knowledge. By those interested in the methodology of statistics, Dr. A. J. Lotka's analysis of the structure of a growing population will probably be found the most interesting of the papers. Everybody knows that the mere fact that births annually exceed deaths is no guarantee that the population will not, even without any reduction of physiological fertility, soon pass into a stationary or declining phase owing to a change in its age structure. Dr. Lotka has investigated the conditions of

[2] *The Injection Treatment of Varicose Veins, Haemorrhoids, and other Conditions.* By R. H. Maingot, F.R.C.S. London: H. K. Lewis and Co., Ltd. 1932. (Pp. xii + 87 ; 2 figures. 4s. net.)

[3] *Obstetrics and Gynecology.* Edited by J. B. DeLee, A.M., M.D., and J. P. Greenhill, B.S., M.D., F.A.C.S. The Practical Medicine Series. Comprising eight volumes on the year's progress in medicine and surgery. Chicago: The Year Book Publishers. 1932. (Pp. 665 ; 42 figures.)

[4] *Clinical Gynecology.* By Jeff C. Miller, M.D. London: H. Kimpton. 1932. (Pp. 560 ; 134 figures. 50s. net.)

[5] *Problems of Population.* Being the Report of the Proceedings of the Second General Assembly of the International Union for the Scientific Investigation of Population Problems, London, June, 1931. Edited by G. H. L. F. Pitt-Rivers, B.Sc. London: George Allen and Unwin, Ltd. 1932. (Pp. 378 ; 1 map. 15s. net.)

stability in a population the growth of which can be effectively described by a logistic curve. He provides some numerical illustrations of the algebraical method (he and Dr. Dublin have elsewhere given fuller illustrations), which is certainly a valuable one. Those who are more interested in surveys of actual conditions will be attracted by Dr. Edin's study of the fertility of marriages in Sweden, M. Dupréel's report on the conditions of large families in Belgium, Dr. Methorst's report on income, natality, and infant mortality in Holland, and Dr. Notestein's paper on the relation of social status to fertility in the United States. What might be called the philosophy of population is discussed provocatively by the late Professor J. W. Gregory and Professor H. P. Fairchild.

It is plainly impossible to summarize the results of this conference; we will only single out some observations which suggest rather graver problems than any actually discussed in detail. Professor Fairchild, in the discussion on Professor Gregory's paper, referred to the effects of technical discoveries in the following terms:

> "The general principle was that the very nature of these technicological improvements was to get the same product, and often a very much larger product, from the same amount of land, and the developments on that line in the United States in the last few years had been very striking. He believed he was correct in saying that in the five years between 1923 and 1928 the industries of the United States actually employed about 800,000 fewer labourers. The railroads were employing 150,000 fewer labourers than they did sixty-five years ago. The same principle was running through all industries at an enormous rate. This was a peculiar paradox and the menacing feature of modern civilization. As population was increased, a lesser demand for population was created. This was one thing that had to be faced seriously in the future."

It is of course implied in this argument that a population not earning wages for productive labour cannot consume. As the late Professor Loevenstein put it, the scientifically ideal system of production is the worst possible system of distribution, for if some technological genius could produce everything in a single plant, "the only person entitled to consume would be the owner of the undertaking himself, since beside him there would be nobody earning any income, that is, nobody who could participate in production and who would be receiving a share of the net product as a reward of his work, for the sole agent of production would be the business undertaker himself." (*Capitalism at the Cross Roads*, by J. Loevenstein, Prague, 1932, p. 13.) In other words, the scientific transformation, the rationalization of production unaccompanied by the rationalization of distribution, may be creating a situation so grave that differential fertility, the effect of contraceptive methods, the responsibilities of the obstetrician (discussed by Dr. Koosmak), and indeed most of the topics which came before the International Union, will have little practical importance. These, however, are matters for such statesmen as there are. The medical reader will certainly find food for thought in this volume.

A PIONEER MENTAL HOSPITAL

A Retired Habitation,[6] the title chosen by Mr. H. C. HUNT for his historical account of the Retreat, York, where he holds the position of steward, is to be found in the records of a meeting of the Society of Friends, convened in 1792 in order to consider "the propriety of providing a retired habitation" for members of the Society and others of like sympathy who might require such by reason of mental affliction. The proposed designation was, however, superseded in the following year by the name which that hospital has since borne. It was in 1792 that Pinel liberated from their chains and their torment his patients at the Bicêtre in Paris. The closing years of the eighteenth century witnessed the beginning of an offensive along a wide front against the superstitions and cruelties so rife in the treatment of the insane. The founders of the Retreat were in the vanguard of this reform, which was further accelerated by the publication and dispersion of Samuel Tuke's *Description of the Retreat* in 1813. Mr. Hunt has provided an interesting and informative account of the gradual growth of the hospital from its modest beginnings to the place it now occupies, instancing in the course of his narrative numerous occasions where the application of the "humane method" met with such singular success. The biographical sketches breathe an air of serenity which makes the success of these early experiments not difficult to understand. The work is introduced by a foreword from the pen of the late Dr. Bedford Pierce. The present medical superintendent, Dr. Neil Macleod, has furnished a closing chapter of much interest on the future of mental treatment. There can, as he says, be no sense of finality in writing the closing words of this volume; and in an appeal for a more enlightened attitude towards mental derangement Dr. Macleod insists upon the necessity for regarding mental hospitals as comparable to other specialized hospitals dealing with the treatment of illness.

[6] *A Retired Habitation*. A History of the Retreat, York (Mental Hospital). By H. C. Hunt. London: H. K. Lewis and Co., Ltd. 1932. (Pp. xvi + 144; 21 figures. 7s. 6d. net.)

Notes on Books

Dr. RANDALL CLIFFORD of the Harvard Medical School has written a useful little book entitled *The Sputum: Its Examination and Clinical Significance*.[7] It is intended to be a practical guide for both physician and medical student in the examination of the sputum and clinical interpretation of the findings. To many doctors the only familiar test on the sputum is the search for tubercle bacilli, and doubtless this is by far the most useful laboratory investigation. But there are other microscopical and bacteriological tests which provide valuable information when interpreted in the light of clinical observation. This is a point that is well brought out in the fourth section of Dr. Clifford's book, which attempts to correlate certain characteristics of the sputum with different disease conditions, such as bronchitis, bronchiectasis, asthma, influenza, malignant disease, etc. The earlier sections of the book, describing the microscopical examination of the sputum, give reliable methods of carrying out various tests, all of which are within the scope of anyone possessing an elementary training in laboratory work. Attention may be called in particular to the Gram-eosin stain, which seems to deserve more extensive use than is generally granted. The book is well illustrated and indexed, and the seven coloured plates are excellent.

In a monograph of 72 pages Dr. SCHRADER deals with his experiments on skin injuries due to electric currents—*Experimentelle Untersuchungen zur Histopathologie elektrischer Hautschädigungen, etc.*[8] The subject is obviously one of importance in forensic medicine, and this monograph has a good bibliography.

The school of midwifery in the University of Hong-Kong relies for its practical work on the Tsan Yuk Hospital and the Maternity Bungalow of the Government Civil Hospital. The annual reports of these institutions for 1930–1 appeared in the February, 1932, issue of the *Caduceus* (the official publication of that university), and have now been reproduced in the form of a booklet. Professor R. E. Tottenham and his

[7] *The Sputum: Its Examination and Clinical Significance*. By Dr. Randall Clifford, M.D. New York: The Macmillan Company; London: Macmillan and Co., Ltd. 1932. (Pp. xix + 167; 21 figures, 7 plates. 20s. net.)

[8] *Experimentelle Untersuchungen zur Histopathologie elektrischer Hautschädigungen durch wiedergespannten Gleich- und Wechsel-strom*. By Priv.-Doz. Dr. G. Schrader. Achter Band, Heft. 1. Jena: G. Fischer. 1932. (Pp. 72; 27 figures. RM.6.1.)

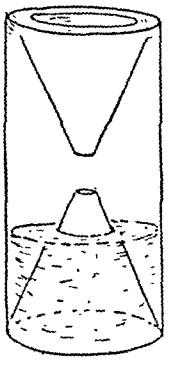
colleagues have carefully compiled sets of statistics which to some extent render possible a comparison between obstetrics and gynaecology in Hong-Kong and in Europe. For example, the percentage maternal morbidity (B.M.A. standard) in the Tsan Yuk Hospital during the period under review was 3, and in the Government Civil Hospital Bungalow it was 4.7. Under the present regulations each student is attached to the department of midwifery of the university for six months, during which period he deals with thirty to fifty or more cases of labour, attends the out-patient dispensaries twice each week, and acts as clinical clerk in the gynaecological wards.

Preparations and Appliances

A CHLOROFORM INHALER

Mr. R. CHRISTIE BROWN (London, W.) writes:

Many attempts are being made to find a safe method for the administration of anaesthetics during labour by the patient herself for employment in cases attended by midwives. Chloroform capsules have been extensively tried by hospitals, but, excellent as they appear to be, I venture to suggest that the inhaler described below offers a simpler and safer method for the administration of chloroform. By reference to the drawing, it will be seen that the inhaler, which can be made of either glass or metal, embodies the same principle as the safety inkwell. When the inhaler is charged with chloroform it is impossible for the liquid to be spilt; at the same time a free air passage through the instrument and over the surface of the chloroform is permitted. In this way only air and chloroform vapour are breathed. The air does not pass through the chloroform, but merely over its surface.



The chloroform can be administered by the patient if she simply holds the inhaler to her nostrils. Another method is to insert the inhaler into the narrow end of a rubber funnel, the broad end of which is applied to the face. The broad end should be convoluted to allow sufficient airway, or the funnel itself can be made of wire and merely surrounded by a portion of lint. So long as the patient administers the anaesthetic herself there cannot, I believe, be any danger, since no great concentration of chloroform can be obtained, and should unconsciousness supervene the administration of the anaesthetic will cease as the patient's hand falls away from her face.

These inhalers, which should be made of metal so that they will not break if dropped, have the following advantages: (1) No sudden concentration of chloroform can be administered. (2) There is no necessity for the patient to break anything, so that, even when semi-conscious, she is still in a position to administer the anaesthetic. (3) The inhalers are cheap to make and can be sold completely sealed. (4) They are simple to operate. To put the instruments into use it is only necessary for the nurse to puncture both ends of the inhaler with a sharp-pointed instrument; as an alternative screw plugs can be inserted into the ends. (5) When exhausted, the inhaler can be returned to the chemist, who, for a small charge, will replace it with a new one fully charged. (6) The old inhaler can be recharged and resealed by the chemist. (7) When for use in maternity hospitals or by a doctor, there is no need for the inhaler to be sealed, as it can be replenished simply by pouring chloroform in at one end.

This inhaler is at present being tried out by me at the City of London Maternity Hospital.

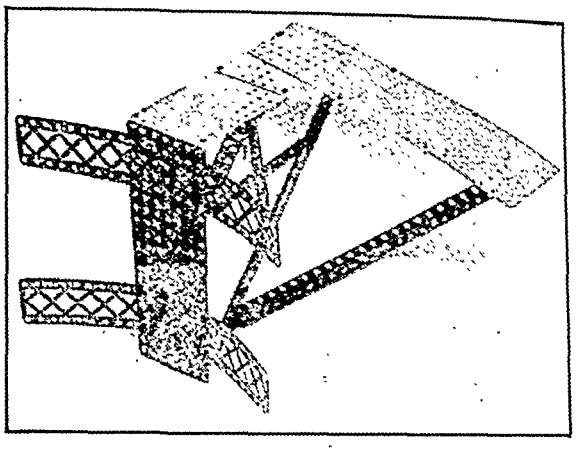
AN AEROPLANE SPLINT FROM MECCANO

Mr. P. MAYNARD HEATH (Fleet, Hants) writes:

Having to improvise an aeroplane splint I tried meccano, and was so successful that I feel my experience may be of use to others.

The main pieces are made by bolting together "flat plates," 5½ by 3½ inches—two for the chest-piece, two for the arm, and three for the forearm. The chest- and arm-pieces are united by two 1-inch angle brackets and their extremities joined by two "angle girders" 12½ inches long. These girders are themselves braced together by two crossed "perforated strips" 5½ inches long. The extremity of the forearm plate is then supported by another "angle girder." The various attachments of the angle girders are carried out by means of ½-inch angle brackets and small nuts and bolts. The two chest girdles are made of two "braced girders" 12½ inches long. These are flexible, and can be bent round the chest.

The splint is easily adaptable for either side of the body, and is adjustable in size, to a certain extent, by varying the

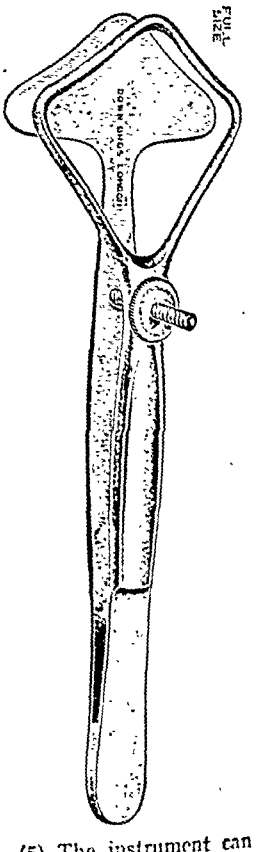


attachments of the various parts. The angle between arm and forearm pieces can also be altered. The cost is under 6s., and the parts can be obtained easily.

ENTROPION FORCEPS

Dr. GORDON SPENCER (chief ophthalmic surgeon, Iraq Government) writes:

When operating for entropion I found that Ratnaker's forceps could not be used in a large number of cases because of their prominent apex, which, owing to the atrophy which occurs at the fornix of trachomatous cases, rendered their proper adjustment impossible. I therefore had a pair of forceps made with the triangular portion much reduced, and made round instead of triangular. These forceps again were not satisfactory, because when they were adjusted and screwed up it was impossible, when putting in the stitches after having performed Snellen's operation, to bring the needle out below the ciliary margin.



Messrs. Down Bros. then made to my design the forceps illustrated herewith. These forceps have the following advantages: (1) The rounded blade enables them to be fitted into any eye no matter how small the conjunctival sac. (2) Access is obtainable into the extreme angles of the lid, usually the points of most marked entropion. A much longer incison can be made than if Snellen's or Desmarres's forceps are used. (3) The instrument can be used for either eye, so that only one forceps is necessary and not two. (4) Bleeding is as satisfactorily controlled as by the use of any other forceps, and there is no interference with the needle in putting in any form of stitches. (5) The instrument can be used for any operation on the lid for which the other forms of forceps are applicable—that is, Heisricht's, etc. (6) The forceps are made in several sizes, so that they can be used for lids of different sizes.

The forceps have now been used for over 1,000 entropion operations, and have proved entirely satisfactory.

Nova et Vetera

THE MEDICAL HISTORY OF MR. AND MRS. SAMUEL PEPYS

BY

SIR D'ARCY POWER, K.B.E.

PAST PRESIDENT OF THE SAMUEL PEPYS CLUB

Mr. Samuel Pepys, great Admiralty official and diarist, was born on February 23rd, 1633—just 300 years ago—in Salisbury Court, Fleet Street, where the Corporation of the City of London has marked the site of the house with a memorial tablet. It is immediately under the shadow of St. Bride's, and is nearly opposite the offices of *Punch*. Samuel's father was a tailor, and when Mrs. Pepys wanted to be especially venomous in the course of a love quarrel she would call her husband "pricklouse," to which he would retort "beggar," for he had taken her "in her shift," as the saying is. Mrs. Pepys was seven years younger than her husband. She was a penniless, good-looking girl of 15 when he married her, of French extraction, somewhat thriftless, and very untidy in her ways, whereas Samuel was thrifty almost to penuriousness, and neat beyond measure.

Mrs. Pepys died on November 10th, 1669. With her husband she had returned to London after a pleasant trip to France and the Low Countries on October 22nd, and on that very day she fell "ill of a fever so severe as to render her recovery desperate." The illness proved fatal on the twentieth day. No further details are available, but I imagine that the fever was typhoid. The bust which Pepys put up to her memory in St. Olave's, Hart Street, shows that she was a "mouth-breather," and that she had adenoids. Throughout her life she was a healthy woman, suffering occasionally from toothache, and once, at least, from earache due to wax, for it was cured when her ears had been syringed. In 1663 she had a somewhat prolonged illness associated with an abscess in the region of the perineum. It ended in a fistula, and may have been an ischio-rectal abscess, or, as is not unlikely considering the vagrant habits of her husband, an acute inflammation of the glands of Bartholin. She had more than one attack, and on the first occasion the entry reads:

"My wife had a troublesome night this night and in great pain, but about the morning the swelling broke and she was in great ease presently as she useth to be. So I put in a tent (which Dr. Williams gave me yesterday) into the hole to keep it open till all the matter be come out and so I question not she will soon be well again."

For the rest she suffered for many years from dysmenorrhœa, the pain being worst before and during the flow. It was sometimes so severe as to keep her in bed, but she bore it bravely, and the attacks gradually became less severe and less frequent. She was never pregnant.

Mr. Pepys kept his *Diary* from January 1st, 1660, until May 31st, 1669; that is to say, from the twenty-seventh to the thirty-seventh year of his life; and, among other things, it sets out in considerable detail the illnesses from which he suffered. The outstanding event of his life was the removal of a stone from his bladder on March 26th, 1658, when he was 25. The first entry about the operation is as follows:

"March 26th, 1660. This day it is two years since it pleased God that I was cut of the stone at Mrs. Turner's in Salisbury Court. And did resolve while I live to keep it a festival as I did the last year at my house and for ever to have Mrs. Turner and her company with me. But now it pleases God that I am where I am [at the Hague to bring back King Charles II at the Restoration] and so prevented to do it openly; only within my soul I can and do rejoice and bless God being at this time, blessed be his holy name, in as good health as ever I was in my life."

He carried out his resolve on many subsequent occasions, and on one of them

"I had a pretty dinner for them, viz., a brace of stewed carps, six roasted chickens and a jowl of salmon hot for the first course; a tanzy [pudding] and two neats' tongues and cheese the second; and were very merry all the afternoon, talking and singing and piping upon the flageollett. In the evening they went with great pleasure away. We had a man cook to dress the dinner and sent for Jane to help us."

The stone was removed by Thomas Hollier, lithotomist to St. Thomas's Hospital, who is said to have cut thirty persons in one year without a death. Dr. James Moleyns, lithotomist to St. Bartholomew's Hospital, was present, and also Dr. George Joyliffe, who shares the claim to be the discoverer of the lymphatics. The stone weighed about two ounces, and was as large as a tennis ball. It was either a uric acid calculus or it had a uric acid nucleus with a covering of ammonium urate. Pepys kept it for many years, and in 1664 he had a case made for it at a cost of 24s. The operation was a modified Jacques's operation with grooved staff and scalpel, a lateral incision, and division of the prostate. Pepys was sterile but not impotent, the result, I think, of division of the left ejaculatory duct and so much bruising of the right duct as to lead to its occlusion. The immediate result of the operation was satisfactory, but throughout his life he had repeated attacks of renal colic, and it was found at the necropsy in 1703 that the left kidney was disorganized and contained "seven calculi all fast linked together and weighing four ounces." He sought to ward off the attacks by keeping a hare's foot in his pocket, and on one occasion when it failed

"Mr. Batten in Westminster Hall showed me my mistake that my hare's foot hath not a joint in it. It is a strange thing how fancy works for I no sooner almost handled his foot but my belly began to be loose and to break wind and whereas I was in some pain yesterday and t'other day and in fear of more today I became very well and so continue."

Throughout the period of the *Diary* and for many years afterwards Pepys was haunted by the fear of blindness. The first note was made on January 19th, 1664, when he says:

"I to my office till very late and now my eyes begin to fail me and be in pain which I never felt before. I impute it to sitting up late writing and reading by candlelight." The last entry is on May 31st, 1669: "And thus ends all that I doubt I shall ever be able to with my own eyes in the keeping of my Journall I being not able to do it any longer having done it now so long as to undo my eyes almost every time that I take a pen in my hand. And therefore whatever comes of it must forbear."

He suffered from hypermetropia with slight astigmatism, and my father and the late Mr. Ernest Clarke, both skilled ophthalmic surgeons, agree that he would have had no further anxiety if it had been possible to order him spectacles + 2D c. + 0.50 D. cyl. axis 90°. Astigmatism, alas! was unknown until the beginning of the nineteenth century, and cylindrical glasses were not made until 1829, when the first were ground by Fuller of Ipswich for the use of Sir George B. Airy the astronomer. Other sources tell that Pepys's sight did not deteriorate much as years went on. One of the hitherto unpublished Pepysian papers preserved in the Bodleian Library and dated 1677 is headed:

"The present ill state of My Health . . . When I came to leave off working with my own eyes and fell to the employing clerks, my eyes shortly grew well and from that time to this never knew any of that pain till . . . I am driven often to write and read with my own hand and eyes when pain immediately ensues."

As late as 1702 he was writing letters with his own hand, though in many cases he preferred to dictate them.

The minor illnesses of Samuel Pepys were neither numerous nor interesting. He often suffered from indigestion, and after drinking the waters at Epsom he had an attack of piles which he thought might turn to a rupture, displaying thereby a sad lack of anatomical knowledge. He was extremely liable to catch cold, and is frank about the cause: once from "tousling" Mistress Lane, another time from having his hair cut, and once again from sitting without his hat at dinner. He got an attack of tonsillitis from "sitting sweating in the playhouse with the wind blowing through the windows on my head." On February 8th, 1660, he went to bed with "my head not well by too much drinking today and I had a boil under my chin which troubled me cruelly." It scared him badly, for a day or two afterwards he took advice about "the cancer in my mouth which begins to grow dangerous." He only records one occasion on which he was bled. Sixteen ounces of blood were taken and it cost him five shillings. He dined well after the operation and went out walking with his wife after dinner, "my arm being tied up with a black ribbon, our boy waiting on us wearing his sword which this day he begins to wear to outdo Sir W. Pen's boy." Sir William Penn was the next-door neighbour. A few days later Mr. Pepys felt constrained to whip the boy "till I was not able to stir and then, not being willing to let him go away a conqueror, I took him to task again and so to bed my arm very weary." This application of "salt eel" to the boy doubtless did much to subdue the pride caused by the wearing of a sword.

PLAGUE IN LONDON

It is well known that the great epidemic of plague in London in the reign of Charles II was only the culminating episode of a series of outbreaks during preceding centuries, and that the disease was very nearly endemic. If this needed any confirmation the constant flow of textbooks on the treatment of the disease would supply it, as may be seen from a perusal of the catalogue of books on the plague collected by Dr. Edwin Freshfield and advertised for sale at Messrs. Sotheby's sale-rooms on February 27th. Many of them are of marked bibliographical interest from their rarity and other causes, and their special medical interest from the point of view of our profession is also very considerable. Oldest in point of date is a manuscript of the fifteenth century, the commencement of which is quoted by the cataloguer as follows: "It is understoude whoso will loke on urine him behouyth to considre three thynges—ffirst he must aske the age of the patient and hou longe his seknes hath holden hym and what tyme it toke hym first, and which tyme of the day or of the nyght it mouyth hym most." Of which passage perhaps the most striking feature is the closeness of its phrasing to modern English, "considreing" that it is about five centuries old. A most desirable rarity is Christopher Langton's *Introduction into Physicke*, London (*circa*) 1550, with William Herbert's signature on the flyleaf; at the most only four other copies of this are extant, and two of these are in the British Museum and the Cambridge University libraries respectively. The same statements hold good exactly of Jehan Goevrot's *Regiment of Life whereunto is added a Treatise of the Pestilence*, London, 1553; this is in black letter. Then in 1563 is another London issue, "A Fourme to be used in Common prayer twyse aweke, and also an order of publique fast to be used euery Wednesday in the wecke during this time of mortalitie"; and in 1588 (?) was issued "Orders thought meete by her Maiestie and her priuie Councell, to be executed . . . in such Townes, Villages, and other places as are . . . infected with the plague." In 1592 came out Thomas Brasbridge's *Poore Man's Jewell*: "it containeth a Treatise of the Pestilence . . . prooved by the practise of the Author." This was alleged in the title to be the second edition, but apparently it was in reality the fourth, for three were put out in 1578, 1579, and 1580 respectively. They are all exceedingly rare; but two other copies of this fourth edition are known, and only four of the three other editions put together.

Of the seventeenth century items, which constitute the great majority of the collection, two of the most notable are by Stephen Bradwell: *A Watch-man for the Pest*, "Teaching The true Rules of Preservation from the *Pestilent Contagion*, at this time fearefully over-flowing this famous Cittie of London," London, 1625—the only other known copy is in the British Museum; and, *Physick for the Sicknesse, commonly called the Plague*, London, 1636, a first edition (like the previous) and containing an extra leaf with instructions as to "Doctor Burges approved Medicine against the *Plague*," with two extra leaves from another textbook of 1636, of which a complete copy also is included in the sale. This is entitled, *Certain Necessary Directions, as well for the Cure of the Plague, as for preventing the Infection*; "with many easie Medicines of small charge . . . Set downe by the Colledge of Physicians" (in black letter). This latter production was evidently popular, for the sale includes four reprints of it dated 1665, published in London and in Oxford. There are also two copies of "Certaine Prayers collected out of a forme of godly Meditations to be used at this time in the present Visitation, 1603." Bibliographically important (because it differs from the other known copies and is thought to be older than they) is *Certaine Statutes especially selected* ". . . with sundry good Rules, Preseruatives, and Medicines against the Infection of the Plague. Set Downe by the Colledge of Physicians," London, 1630. Another copy, but similar to the known copies dated the same year, has an extra leaf of "Instruction to the College of Physicians to assemble and confer as to prevention of the epidemic." A very curious (as well as rare) work, by J. D., "Preacher of God's word," is entitled, *Solomon's Pest-House, or Touvre-Royall* . . . "to preserue Londoners . . . from the doubted Deluge of the Plague . . . Whereunto is added Mr. Holland's Admonition and Mr. Phaer's Prescription for bodily Physicke; also London Looke-Backe . . . by A. H. of Tr. Colledge in Cambridge," London, 1630—the only other existing copy of which is in the University Library at Cambridge.

It is evident that 1625, 1636, and 1640, as well as 1630, were plague years, for there are several publications of each of those dates—for example, the *Especiall Observations and Approved Physicall Rvles . . . in the last heauy and grieuous time of the Pestilence*, London, 1625; and *Formes of Common Prayer* dated 1625 (two), 1626 (two), 1636 (one), 1640 (three). There are also numerous Orders of Thanksgiving after the subsidence of various epidemics—for example, 1604, 1625 (three). The great epidemic of 1665 at once caused a huge output of literature, many items of which are included in the catalogue; but naturally they are for the most part less rare than the older ones. The versatile George Wither was one of those who rushed into print: two of his productions are to be found in Dr. Freshfield's collection. Four other rarities deserve separate mention: Thomas Lodge's *Treatise of the Plague*, London, 1603; Simon Kellwaye's *Defensative against the Plague, whereunto is annexed a short treatise of the small Poxe*, London, 1593; Thomas Thayre's *Excellent and best Approoued Treatise of the Plague*, London, 1625; and John Woodall's *Cure of the Plague by an Antidote called Aurum Vitæ*, London, 1640; all these are of the first order of merit from a collector's standpoint.

The same sale contains three other items, though not from the same collection, of which brief mention may be made. Two are sermons preached at "Pawles Cross" by Thomas White, respectively on Sunday, December 9th, 1576, and Sunday, November 3rd, 1577, "in the time of the Plague." The other is a very rare edition of *The Treasure of Poor Men*, a textbook of medicine published in 1556. The series of editions of this work, which was in the celebrated Britwell Library, contained no copy of this issue, and none appears to have passed through the London auction rooms.

British Medical Journal

SATURDAY, FEBRUARY 25th, 1933

FAILING HEART OF MIDDLE LIFE

It is true of all branches of medicine that infective diseases predominate in the first half of life, while degenerative conditions threaten during the later decades. In general, it may also be said that the former aetiological group constitutes a problem of the community, while the latter is fundamentally of individual concern. To take examples in the field of cardiology: it is well known that rheumatic heart disease commonly attacks individuals who have not arrived at the age of responsibility; it causes considerable invalidism, and the problems of treatment and after-care are largely communal and economic. On the other hand, coronary artery disease, with its attendant menace to life and working capacity, usually attacks men in the prime of life whose personal responsibilities are heavy and upon whom important business and academic concerns frequently depend. The problems arising here are essentially personal and domestic. Since many cardiological authorities of late years have held that maladies of degenerative origin are becoming more common, it may be profitable to review the grounds upon which this group is regarded as an increasing danger.

The fact that the general expectation of life has been progressively improving during the past century contributes to this impression. Clearly, any disease which depends upon advancing years must increase in frequency as the general expectation of life increases. There is, however, the other side of the picture. At advanced ages the expectation of life is actually diminishing, and this is probably due to the greater incidence of high blood pressure. In a recent volume, *The Failing Heart of Middle Life*,[1] the circumstances attending the onset and progress of degenerative cardiovascular diseases are considered by Drs. Hyman and Parsonnet, who have adopted the term "*myocardosis*" as embracing all chronic myocardial lesions which are not of inflammatory origin, except in so far as sclerotic lesions of the coronary arteries may be primarily infective. These authors draw attention to a sphere of cardiological investigation hitherto largely unexplored —the chemistry of the heart muscle. It may well be that a development of microchemical methods in the examination of the myocardium will provide the solution to certain problems such as heart failure of doubtful origin and anginal seizures in the absence of cardiac or coronary pathology.

[1] *The Failing Heart of Middle Life*. By A. S. Hyman, A.B., M.D., F.A.C.P., and A. E. Parsonnet, M.D., C.M., F.A.C.P. The Myocarditis Syndrome, Coronary Thrombosis, and Angina Pectoris. With a section upon the Medico-Legal Aspects of Sudden Death from Heart Disease. Preface by D. Riesman, M.D., Sc.D., F.A.C.P. Philadelphia: F. A. Davis Company. 1932. (5 dollars net.)

Middle age has been defined by Riesman on a physiological basis as the "time when a change of function manifests itself from which a beginning wearing down of the machinery can be definitely inferred." The difficulties of early diagnosis depend upon the fact that initial symptoms are often intangible, and that such symptoms may seem to be derived from some other system. For example, the initial symptom may be some trivial change of personality, or a sense of inability to perform contemplated physical efforts—a presage of the exertional dyspnoea which is yet to develop. Again, the slighter degrees of disparity between myocardial demand and coronary supply may masquerade as insomnia, while the catastrophes attributed to "acute indigestion" are too well known to require further emphasis. It is customary to assess effort tolerance purely from the history, but whether it is justifiable to ignore the profusion of tests that have been devised for the estimation of myocardial dysfunction is questionable. Hyman and Parsonnet hold that pulse-rate tests are of value; a pulse rate of 90 per minute in the absence of extracardiac causes should direct attention to the myocardium; also, the resting pulse rate in the healthy middle-aged patient should not be accelerated by more than 25 per cent. on effort and should return to the normal within five minutes. Vital capacity tests are also held to be of value. These are based upon the observation by Rehfisch that less air can be expired in the prone than in the standing position; if the disparity exceeds 10 per cent. deficient myocardial reserve is indicated.

A comparison of myocardial syndromes with those of cerebral origin reveals many points of similarity. The myocardium, like the brain, has its silent areas; thus gross morbid changes may occur without pronounced subjective or objective manifestations if nodal, conducting, or other localizing structures are not involved, just as careful investigation may fail to locate lesions in the frontal lobes of the cerebrum. Migraine and epilepsy are similar in many respects to anginal syndromes; aura and prodromal symptoms are not uncommon in both groups, while many observers have insisted upon the neurogenic factor in certain coronary syndromes. Again, the recovery of cerebral function as the phase of oedema and inflammation gives place to repair in cerebral thrombosis is precisely analogous to the return of normal sinus rhythm in a heart in which the initial myocardial reaction after infarction had produced a temporary heart-block.

Such considerations as these conduce to a clearer understanding of myocardial disease and its consequences, the relations of which are not always apparent. Moreover, they lead to a broader view of coronary artery and related myocardial disease. Coronary sclerosis, as Libman pointed out, should be regarded as part of a generalized cardiovascular degeneration, which reaches varying degrees of severity in different regions of the body. The falling blood pressure in cardiac infarction is no doubt responsible in part for the cerebral thromboses that occasionally complicate this condition.

Certain gross disturbances of function that sometimes occur in middle and later life may have an unsuspected origin in coronary artery disease. It is a well-known clinical fact that congestive heart failure may follow infarction of the heart; further, there is abundant proof that myocardial infarction may occur without production of pain. When congestive failure suddenly appears in middle age without fibrillation or other apparent cause, the possible factor of coronary occlusion should be considered. The same principle applies to the non-rheumatic type of auricular fibrillation. Hyman and Parsonnet consider that this arrhythmia occurs as frequently as extrasystolic irregularity following cardiac infarction. It is therefore reasonable to suspect progressive obliterating changes in the coronary arteries when fibrillation appears in middle life in the absence of chronic rheumatic heart disease, and when no thyroid or other toxaemia is discoverable. Another interesting clinical fact is that both temporary and permanent coronary occlusions rarely occur when fibrillation is present. How this irregularity exerts a protective influence is not understood, but a diagnosis of anginal syndrome should be made with special caution when it is known that absolute arrhythmia was previously established.

PHYSICAL MEDICINE

It is more than sixty years since John Tyndall, in his *Heat, a Mode of Motion*, propounded the rudiments of a new philosophy. Those who followed his teaching received an ineffaceable impression of a dominant, pervading power in nature, for heat activates the organic as well as the inorganic domain. According to an elementary lesson in physics, this energy of heat is conveyed throughout the world by radiation, convection, and conduction. From living bodies, as from every warm object in a cold environment, there is a constant loss of heat, proportionate to the difference in their temperatures. The human body is warmer than its environment because it is a source of energy as well as a receiver. The bodies of warm-blooded animals maintain their energy at an even level because their exposure to cold is compensated by a proportional production of heat. As emitter and receiver they carry on a constant exchange of energy with the external world, along the same avenues of radiation, convection, and conduction. Such is the basis of all external methods of treatment, and these are the avenues of energy which are operative in sun, air, and sea baths, which Sir Henry Gauvain describes in his Hastings Lecture delivered in the Great Hall of the British Medical Association on Tuesday and published in our *Supplement* to-day.

The simple but profound elements of physical medicine could not be better illustrated. The body is to be regarded as in an inescapable contact with external forces, which can be diminished or increased at will. Health, from this point of view, is an optimum contact, with a normal exchange: the reverse may be stated of some forms of disease. Physical medicine is therefore to be directed to the restoration of normal contacts and exchanges, whether by natural or artificial means. Natural physical treatment is an alteration in the exchanges of energy made with the natural environment, accompanied very often by transformations of energy on the surface of the body. There are also numerous artificial methods by which the energies of light, heat, and movement are produced and applied. It is not unreasonable to suppose that natural remedies must always possess certain inherent advantages. There is something remedial inherent merely in place, and in stimulating or soothing surroundings. Again, like all natural influences, these remedies are composite; they include groups of associated stimuli. In the solar radiation, in the atmosphere, in the shock of waves, there is an assemblage of many energies or related forms of energy. There are many examples in medicine showing that the presence of one ingredient, perhaps in a minute quantity, may modify the action of others. In instrumental radiation, on the other hand, it is generally sought to separate and to measure the component elements. Another characteristic feature of natural phenomena is some degree of rhythm, as seen in alternations of day and night, of tides, climates, and seasons. In all forms of life, also, there can be traced a rhythmical heliotropism corresponding to periods of activity and growth.

There is clear evidence in the practice of physical treatment that external stimuli derive much of their efficacy from combination and sequence, also that combined physical impressions, as in the complex of climate, have a powerful physiological effect in two directions, according to the nature or degree of the stimuli. They may either speed up organic activity or slow it down. Frequent and abrupt changes of stimulus increase the activity of the organism, provided it possesses an adequate power of response or reaction. In practice the basal metabolism, body heat, and circulation may be very greatly increased in a few moments by a cool air or sea-water bath. The cautious practitioner, recognizing this immediate action of external forces, will not press these stimuli beyond the power of response; it may be only in temporary abeyance. Sir Henry Gauvain claims that in heliotherapy only the total reaction of the combined impressions received by the body can at present be measured, and that consequently this practice is an art rather than a science. He goes on to say that the individual reaction is almost infinitely variable, and that the close study of reactions is essential to the successful use of sun baths. It is of interest to note that in elderly and failing subjects it is commonly found that the mildest stimuli often produce very definite and favourable results, and that a long course of sedative impressions may avail to regulate disordered function and to minimize organic work, especially in chronic functional or organic diseases.

The Treloar Hospital at Alton, with its seaside branch at Sandy Point in Hayling Island, can now supply valuable data on the carefully regulated use of physical

treatment in the non-pulmonary tuberculosis of children. Sir Henry Gauvain advances the interesting thesis that the comparatively gentle atmospheric stimuli of inland stations in England are well tolerated by the most sensitive and delicate subjects, although their powers of response are wholly inadequate for the more abrupt variations and stronger stimuli of marine climates or baths, or indeed of mountain climates. It must be remembered, however, that feeble reactions may with care and patience be re-educated; that good results have often been obtained in cities, on balconies and on the roofs of houses; and also that recent observations have shown that certain regions of the coast in England make a minimum demand upon metabolism and heat production. With reference to this all-important question, some studies in Continental countries on the common variations of the physiological response to cold have opened a new and promising field of investigation. But it is necessary, in the first place, to recognize derangements of body heat in delicate children and in many chronic diseases. Exposed to the same conditions on the sea beach, one child with defective reactions is blue and cold and shivering; another, with normal reactions, is glowing and warm and exhilarated. It is very true—and the warning may well be taken to heart by the large audience to which the Hastings Lectures are addressed—that the very young and the elderly, as well as all weak and toxic individuals, are for the time being at least intolerant of tonics, and that lost reactions can only be restored by skilful application of gentle and graduated stimuli. Exposure to sky-shine and moving air, or to the air and sun bath—which has been well described as a simultaneous application of cold and heat—or to the cold sea-spray and wave bath, represents a series of physical stimuli of increasing potency, which are curiously related to the receptive power of the human body, and which are evidently of large if somewhat undetermined application in preventive and curative medicine.

THE SEARCH FOR NEW REMEDIES

In an address entitled "The search for new remedies," delivered to the Pharmaceutical Society on February 14th, Professor J. A. Gunn of Oxford remarked that it was impossible to foresee what contribution the twentieth century would yet make to the treatment of disease. New remedies from plant sources had diminished to such an extent that it would almost seem as if the source were nearing exhaustion, though there were many plants which had never yet been sufficiently examined, and it was not out of the question that new and important remedies might yet come from the vegetable world. Compounds of metals, such as those of arsenic, antimony, and bismuth, had found new and important therapeutic applications. It was certain that an increasing number of remedies would consist of synthetic compounds, and probable that further contributions would come from animal sources—not only, for example, in the way of internal secretions and antitoxins, but also possibly other complex animal compounds which were synthesized by animals and not by plants. Professor Gunn pointed to the complete change that has come about in the methods of search for new remedies as a result of the advances in medicine, especially during the last hundred years. With the rapid progress in our knowledge of the pathology of diseases, and with the development of the science of experimental pharmacology, the whole approach to the search has been altered. It is now the exception for a potential remedy to be tested, in the first instance, as a therapeutic agent in man. A new drug is almost always subjected first to pharmacological investigation on laboratory animals, and, secondly, to therapeutic control in man. The discovery of a new remedy, therefore, now usually means two separate tests: the first, an examination of the pharmacological and toxicological actions of the drug on laboratory animals; and the second, an examination of its therapeutic effects, if the previous indications suggested that it had definite possibilities in this direction. The main contributions to pharmacological research now come either from academic laboratories or from laboratories attached to drug-manufacturing firms, and the conduct and outlook of the two types of laboratory are necessarily to some extent different. Professor Gunn hazarded the opinion that we are approaching the time when a less interrupted search for new remedies may be looked for. It is to be hoped that he is right, but all will agree with him that the training ground required for the search must be broad and general. Industrial research tends to become narrower and more specialized, and less and less suited to the search for new remedies, so that the need is the more urgent for academic laboratories specially equipped for this class of work and with a specially trained personnel. In discussing commercial laboratories, he said that so many drug failures had been put on the market that the medical practitioner was becoming very sceptical of the value of new remedies, though the British manufacturer had not been the worst offender in this respect. The failures had not been due so often to insufficient pharmacological investigation as to insufficient therapeutic control, and there was a wide gap to be bridged between the two. In conclusion, Professor Gunn mentioned his own long search for a new coronary dilator, a search which, if tests now being made on human beings prove successful, may be on the point of bearing fruit.

A RUBBER OESOPHAGUS

A case recently reported by Mr. Arthur Evans[1] is of considerable interest as an example of a surgical operation which resulted in almost complete restitution of normal function. The case was one of malignant disease of the pharynx in a female aged 40. The neoplasm was a squamous-celled carcinoma, and radical treatment involved ablation of the larynx, part of the pharynx, the cervical oesophagus, and a considerable amount of the thoracic oesophagus also. Such an operation, of course, made necessary both a permanent tracheotomy and a gastrostomy. The establishment of a permanent tracheotomy leaves little opportunity for the surgeon to exercise ingenuity; but to make a permanent gastrostomy consonant with a bearable existence is a very difficult task. By establishing a pharyngeal sinus rather high in the neck, just below the hyoid, Mr. Evans

[1] *Brit. Journ. Surg.*, 1933, xx. 388.

THE HASTINGS LECTURE

SIR HENRY GAUVAIN ON SUN, AIR, AND SEA BATHING

The Sir Charles Hastings Lecture was delivered to a large audience which assembled in the Great Hall of the British Medical Association, Tavistock Square, on February 21st. The lecturer was Sir Henry Gauvain, medical superintendent of Lord Mayor Treloar Cripples' Hospital, Alton, and his subject was "Sun, air, and sea bathing in health and disease." The text of the lecture is printed in the *Supplement* to this issue.

The chair was taken by the President of the Association, Lord Dawson of Penn, who was accompanied on the platform by the chief officers, Sir Henry Brackenbury, Dr. Le Fleming, and Mr. Bishop Harman, and by several members of Council. There were also on the platform Sir E. Graham-Little, M.P., Dr. Drummond Shiels, and Dr. Alfred Cox, late Medical Secretary.

In introducing Sir Henry Gauvain, Lord Dawson explained that the Sir Charles Hastings Lecture had been established by the British Medical Association as one of several ways of perpetuating the memory of its founder. The present lecture was on a subject of much interest. The lecturer had boldly linked up three things—sun, air, and sea bathing. If to these subjects were added food and its proper cooking, and the right use of exercise, all the law and the prophets might be said to be fulfilled. The discourse, he added, was by an expert on the subject, and it was very important to have such a theme dealt with by an expert. Everyone was aware how largely the subject had been taken possession of by faddists, and it was possible to listen every day to a variety of conflicting views on the virtues of sun and air. There was, however, a right way and a wrong way of approaching the matter, and one did not need to go far in the summer to observe the consequences of the amateur application of too much sun. But sensible people would desire to be advised, not by those who had given short study to the question, even though they indulged in much conversation about it, but by one like Sir Henry Gauvain, who had devoted to it many years of study, and spoke only out of wisdom and experience.

Sir Henry Gauvain then delivered his lecture, and at the close there were projected a number of lantern slides, illustrating the life of the child patients at Alton and at the seaside branch at Hayling Island. The value of the treatment there for cases of surgical tuberculosis was amply demonstrated in a series of "before and after" pictures.

QUESTIONS AND ANSWERS

Opportunity was given after the lecture for questions from the audience, and a number of these were asked and answered by Sir Henry Gauvain as follows:

Asked to what extent he differentiated between sea water and fresh water, he said that fresh water would give the "cold shock," but there was something in sea water which was more beneficial; he did not know what it was.

In reply to a question as to the danger of relapses among the child patients who showed such wonderful recovery at Alton, he said that relapse might occur, of course, in any condition, but the danger in the case of these patients was not considered great. The relapse rate was estimated at about 5 per cent.

Another questioner asked whether, if exposure and pigmentation of the skin had such curative value for certain diseases, it was an objective which all healthy people should strive after to increase their resistance to disease. The lecturer replied that pigmentation was simply an indication of response. Because a patient was pigmented it did not necessarily mean that he was cured of his ill. Some people—albinos, for example—had not this power of response at all, while very fair and freckled people only pigmented with great difficulty.

In reply to another question, as to whether, if it were possible for everyone to have a daily air bath, there would be an improvement in the standard of physique, he said that this was not necessarily so. Benefit would only be forthcoming if there was a favourable reaction to the treatment. A very old person, for example, could not make a response. It was a question of the capacity of the person to respond to a stimulus.

Asked if treatment should be continued in the case of a child who persistently blistered when exposed, he replied that it should not, but, then, the child should never have been exposed sufficiently to blister. It meant that he had had over-exposure.

To someone who asked whether he recommended artificial sunlight for the winter months, he protested against the term "artificial sunlight," which corresponded to no reality. Light treatment under expert advice was very useful for particular conditions, but he did not think it should be indulged in generally.

Asked about sun treatment for tuberculosis of the lungs, he said that it had a certain value, but should only be conducted by an expert. In active lung diseases it might do a great deal of harm.

He did not think it injurious—this in reply to another question—to sleep in the open air frequently at night when exposure to sunlight was seldom possible.

One questioner pointed out that the lecturer had referred only to tuberculous cases. What of the influence of sunlight on rheumatism and on nervous conditions? He replied that sun treatment could certainly be used as an aid to cure for all manner of things. It was not a specific treatment.

Asked whether a child's eyes and head should be protected, he replied that this should always be done. One could not be too careful about the child's eyes and head, and they should always have a canopy when exposed to sunlight.

VOTES OF THANKS

Dr. E. K. Le Fleming, Chairman of the Representative Body, proposing a vote of thanks to Sir Henry Gauvain, said that the lecture had been thoroughly instructive and entertaining to all present. As the President had stated, the British Medical Association made a point of arranging these lectures for lay audiences from time to time, holding it part of its duty to offer to the public the best kind of information of health value that could be acquired, and as long as the public cared for it—as the large audience that evening suggested that it did—the Association would continue to do so. He called upon those present to show their appreciation of the lecture.

The vote of thanks was accorded by acclamation.

Sir Henry Gauvain, after expressing his acknowledgements, in his turn proposed a vote of thanks to Lord Dawson for taking the chair. It was encouraging, he said, to have the blessing of the President of the Royal College of Physicians on the kind of treatment they were carrying out at Alton.

Lord Dawson, the vote having been heartily carried, said that, like everyone else, he had greatly enjoyed and profited by the lecture. He had been to Alton and also to Hayling Island, and Hayling Island in particular would always remain in his memory. To see on a cold winter's day a number of children tearing about with the enjoyment of young savages, almost naked, and quite indifferent to the cold, gave one an idea of what such treatment might mean if it was judiciously carried out. The danger as he saw it at the moment was that somebody might apply the same treatment injudiciously. But to watch these children was really an education, and showed what could be done in the way of promoting health as well as curing disease.

CINEMATOGRAPHIC DEMONSTRATION OF LIVING TISSUE CELLS

H.R.H. the Duke of York attended a reception on February 21st given by the Prime Minister and Miss MacDonald at 10, Downing Street, to see the film prepared under the auspices of the British Empire Cancer Campaign by Dr. Ronald Canti, clinical pathologist to St. Bartholomew's Hospital.

This is the remarkable film of which earlier versions have been shown by Dr. Canti to many medical audiences in recent years.[1] It demonstrates by microphotography the cultivation outside the body of normal living cells, and those of Jensen's experimental rat sarcoma. Three weeks' continuous photography of growing tissue has been speeded up and condensed into a film that takes about half an hour to exhibit on the screen with explanatory captions. Movements of the cells are accelerated 50, 80, 160, 480, and 960 times in different sections of the film. The growth and reproduction of animal cells in artificial culture is shown in the most graphic manner, magnified many thousand times on the screen, and made visible by direct and by dark-ground illumination. The final section of the picture displays dramatically the immobilizing effect of radium upon cancer cells undergoing rapid multiplication.

The Marquess of Reading—chairman of the Grand Council of the British Empire Cancer Campaign, of which the Duke of York is president—in introducing Dr. Canti, said that this work was a typical example of the assistance given by the Campaign in financing researches into the problems of malignant disease. The expense of making this film, including the construction of a special apparatus now at St. Bartholomew's Hospital, had been defrayed by the Campaign. Dr. Canti gave a brief account of the origin and development of this method of demonstrating by cinematography the growth of normal and malignant tissue cells, and the effect upon them of radium irradiation.

MEDICAL CONGRESSES, 1933

The following congresses and conferences on medical and allied subjects have been announced for 1933. Particulars are given below in the following order: date, name of organizing body, place of meeting, name of person to whom inquiries should be addressed. More detailed information about these meetings is given from time to time, as it becomes available, in our news columns.

April 5-7.—British Congress of Obstetrics and Gynaecology. Birmingham. Mr. W. E. Barnie-Adshead, 89, Cornwall Street, Birmingham.

April.—International Congress of Ophthalmology. Madrid. Dr. F. Poyales, Olazaga, 3, Madrid.

May 29.—International Congress of Military Medicine. Madrid.

July 5-9.—International Union for the Protection of Childhood. Paris. Comité National de l'Enfance, 26, Boulevard de Vaugirard, Paris XV.

July 20-22.—International Congress of Paediatrics. London. Dr. Findlay, 61, Harley Street, W.1.

July 19-22.—International Society of Orthopaedic Surgery. London.

July 25-29.—British Medical Association. Dublin. Medical Secretary, B.M.A. House, Tavistock Square, W.C.1.

September 7-9.—Association Professionnelle Internationale des Médecins. London. Dr. F. Decourt, Mitry-Mory, France.

September 25-30.—South African Medical Congress. Capetown. Dr. A. W. Sichel, Capetown.

September.—International Congress of Mental Hygiene (European Reunion). Rome.

September.—Société Anonyme des Eaux Minérales d'Evian-les-Bains. Evian-les-Bains. Secretary of Society, 21, Rue de Londres, Paris IX.

1933.—International Society of Microbiology. Berlin.

1933.—Anti-War Congress (Meeting of International Medical Conference). London.

1933.—German Pathological Society. Rostock.

1933.—German Physiological Society. Innsbruck.

[1] *British Medical Journal*, August 20th, 1927, p. 313; December 28th, 1929, p. 1210.

TRYPANOSOMIASIS AND TSETSE FLY CONTROL

In 1925 a Tsetse Fly Committee was set up as a subcommittee of the Committee of Civil Research to report on the action to be taken in connexion with the control of the tsetse fly in Africa and the prevention and cure of trypanosomiasis. In 1927 it was made a standing advisory committee. Since its original appointment the committee has met at frequent intervals and reported from time to time to the Committee of Civil Research, and later to the Economic Advisory Council. The medical members are Dr. A. G. Bagshawe, Sir Walter Fletcher, Dr. A. T. Stanton, and Dr. C. M. Wenyon. Its report, now issued,[1] surveys the work which has been done since the original constitution of the committee. The important developments in the various fields in this period have been as follows.

TREATMENT OF ANIMAL TRYPANOSOMIASIS

The period under review has been marked by progress in the recognition of the nature and complexity of the problem presented by animal trypanosomiasis, and this has been accompanied by an advance in regard to the fundamental question of diagnosis. Of special importance has been the recognition of the part played by latent trypanosomiasis in increasing the losses connected with rinderpest immunization, especially in West Africa, and the successful application of measures to eliminate or minimize this factor. Drug treatment has also made progress. In the camel trypanosomiasis of the Sudan improved methods both of diagnosis and of treatment have now made it possible for the disease to be attacked with a very considerable degree of confidence. In the trypanosomiasis of cattle the action of antimony compounds has been further studied and methods of administration improved and standardized. Pending further advances along other lines this treatment, if not ideal, is rendering immense services in controlling losses and rendering possible agricultural and mining developments that otherwise could be carried through only with great difficulty. The success that has been attained has, however, emphasized the need for the prosecution of further research on the widest practicable scale.

TREATMENT OF HUMAN TRYPANOSOMIASIS

Work on human trypanosomiasis in recent years shows that germanin (Bayer 205), if given in the early stage of infection by *T. gambiense*, is curative, but that in *T. rhodesiense* infection the results are less certain. In all cases in which the central nervous system is implicated tryparsamide is the drug of choice, all observers testifying to its merits in this respect. The present tendency in British territories in Africa is to give first germanin and later a course of tryparsamide, and this is probably the best form of treatment in cases in which it is impracticable to ascertain the state of the spinal fluid by lumbar puncture. The value of germanin for the prevention of sleeping sickness in a native community is not yet satisfactorily established. Trials of more recent drugs continue.

TSETSE FLY CONTROL

The report shows clearly how serious is the tsetse fly menace in many parts of Africa. Over large stretches of territory no economic progress will be possible until this problem has been successfully tackled, and even in areas that are at present settled there is often a danger that an advance of fly may take a heavy toll both of human life and of live stock, on which the native largely depends for his existence. In extreme cases there may in present conditions be no alternative to the evacuation of the population and the surrender of territory to the fly.

[1] Economic Advisory Council. Tsetse Fly Committee Report. Developments in the Treatment of Animal and Human Trypanosomiasis and in Tsetse Fly Control in the Period 1925-31. London: H.M. Stationery Office. 1933. (6d. net.)

The search for improved methods of tsetse control, far from being of academic or scientific interest only, is thus a problem of great urgency and practical importance to many of the colonial administrations in Africa. Past experience shows that there is no royal road to the elimination of tsetse flies. The measures required differ according to each kind of tsetse, and even for the same kind of fly it is often necessary in different districts to apply different methods, on account of variations in the type or habits of the natives living there or the character of the terrain. The measures which are being adopted include the destruction of fly-infested bush by clearing or by fire, the erection of natural barriers to isolate the fly and infected game, and the wholesale catching of flies by hand or by specially made traps. By various methods considerable areas of land have been made available for occupation.

The most important work has been that carried out under Mr. Swynnerton's directions by the Tsetse Research Department of the Tanganyika Territory. This has brought within measurable distance the practical solution of many aspects of the problem. It is thus pioneer work of the utmost value to every country where tsetse flies occur. The committee trusts that, notwithstanding the present financial stringency, every effort will be made in this and following years to provide the funds necessary for the continuance of this work, the successful conclusion of which is vital not only to Tanganyika, some two-thirds of the area of which is under fly, but also to other fly-infested territories in Africa.

The committee looks forward confidently to the time when it will be possible in suitable areas to eradicate tsetse flies at a relatively small cost without risk of producing undesirable results in other directions. Such work will, however, always require special technical knowledge, and in countries in which wide areas are in the grip of the fly reclamation will only be successfully conducted if there is maintained a small organization staffed with men specially trained for the purpose.

INTERNATIONAL POST-GRADUATE COURSES FOR NURSES

FLORENCE NIGHTINGALE FOUNDATION

The British Red Cross Society has undertaken to provide a scholarship of £250 to assist in the establishment of the International Florence Nightingale Foundation. Three similar scholarships are to be financed by the National Council of Nurses of Great Britain, to the funds of which the League of St. Bartholomew's Nurses, the Nightingale Fellowship at St. Thomas's Hospital, the London Hospital Nurses' League, Guy's Hospital Nurses' League, and King's College Hospital Nurses' League are contributing.

The purpose of the Florence Nightingale Foundation is to establish an endowment fund to put on a permanent basis the international post-graduate courses for nurses which have hitherto been carried out in Bedford College, in conjunction with the College of Nursing. A committee, representing the International Council of Nurses and the League of Red Cross Societies, together with Bedford College and the College of Nursing, has already been set up under the chairmanship of Sir Arthur Stanley. It is hoped that a National Florence Nightingale Committee will in due course be set up in every country in which the Red Cross operates to raise funds for the endowment scheme.

The present donations from the British Red Cross Society and the National Council of Nurses of Great Britain have been contributed to a temporary fund of £5,000 to allow the courses at Bedford College to be carried on this year and next. By that time, it is hoped, the Foundation will be established and a permanent endowment assured. The League of Red Cross Societies, which has headquarters in Paris, has itself made provision for five scholarships to be awarded to Red Cross nurses on the recommendation of their national Red Cross Societies, and a half scholarship has been promised by the Red Cross Society of Czechoslovakia.

Scotland

Leadership in Medicine

The fourth lecture on leadership, under the Walker Trust, was delivered at the United College, St. Andrews, on February 16th, by Lord Moynihan, with Professor Charteris, dean of the Faculty of Medicine at St. Andrews, presiding. Lord Moynihan said that he would call attention to the career of Joseph Lister, a gentle, modest Quaker, who was widely acknowledged to have been one of the most effective leaders of men. He believed that nothing had rescued so many lives, spared so much suffering, and lifted so heavy a load of apprehension and sorrow as the work of this man. He had saved more lives than all the wars had thrown away, and he had been the means of sending back to their full work millions of men, women, and children who otherwise would have lingered through a tragic existence. Lister's discovery had at first been received with indifference, and had been regarded simply as a new form of dressing. Even his contemporary Sir James Simpson had failed to recognize that Lister was not merely trying one dressing after another, but was basing his methods upon a conviction, hitherto unexpressed, that putrefaction was due to living organisms. Previously all this had been guesswork, and Lister's doctrine was based upon a truth which subsequent experience confirmed. The most numbing opposition to new thought always came from apathy, and the surgeons of London in Lister's day were close-minded, complacent, and content. Lister had based his work on the belief that the organisms causing decomposition in wounds might be destroyed either in the wound or before they gained entrance, and around every step of his advance fierce controversy had raged. Lord Moynihan referred also to two other leaders in medicine who he considered should be grouped with Lister—William Harvey and John Hunter. The latter had laid the scientific foundations of surgery, and had sought in the changes of the organs after death structural reasons for the origin and progress of disease. He had founded the science of pathological anatomy. The lecturer believed that conditions were now so changed that opposition to new views like that offered to Lister, would not again be seen in medicine. It might be claimed that the scientific method of approach to medicine were being daily strengthened and verdicts could no longer be accepted merely upon authority unless they rested upon relevant knowledge and scientific inquiry. The position in this respect was much sounder than it was half a century ago.

Maternity and Health

A conference under the auspices of the Edinburgh Branch of the National Council of Women and of the Edinburgh Women Citizens' Association was held in the Scottish House of the B.M.A. in Edinburgh, on February 13th, Mrs. Chalmers Watson, M.D., presiding. Dr. James Young, president of the Edinburgh Obstetrical Society, in an address to the conference, said that each year in Great Britain about 4,000 women lost their lives and 70,000 incurred impairment of health, through childbirth. For many years this amount of death and damage had been practically stationary, despite efforts involving the expenditure of much public money. It was important to recognize that this was not due to lack of knowledge regarding the medical and obstetric conditions that endangered women. It was due rather to a failure to bring to women throughout the country the knowledge which was available; this was convincingly demonstrated by the fact that where women were adequately cared for the risk of maternity was very small. In the lying-

hospital of a poor London district, where some 26,000 women had attended, the mortality was only 1.3 per 1,000, as compared with the general English rate of 3.3 per 1,000. In another hospital, 21,500 women had been attended with a mortality rate of 0.8 per 1,000. When these results were examined, it was found that care had been taken of the women during pregnancy, and if any serious abnormality had developed the women were treated early and safely in hospital. Normal and healthy cases had been attended at home by midwives and pupil midwives under supervision. Further, the willing and understanding co-operation of the women themselves had been obtained. When the failure to reduce mortality over the country was examined, two chief considerations were found: first, that most of the women in the community were attended by midwives and doctors engaged in independent practice, and many of these had not been adequately trained in the methods of ante-natal care; and, secondly, that the local authorities had not sufficiently realized the need for linking up their ante-natal clinics with midwives, doctors, and hospitals, and much expensive effort had consequently been wasted. There was need for improved education of the midwife and the student, and for improvement in administration. Lady Cynthia Colville, addressing the conference, said that since a national maternity service was still far off, everything should be done to encourage women to attend ante-natal and post-natal clinics. Many women had no ante-natal care at all; attention to this matter would help to make motherhood the safe thing it ought to be. A resolution was carried asserting the interest with which the conference awaited the report on maternal morbidity of the Scottish Department of Health, and its confidence that thereafter measures would be taken for the provision of an adequate maternity service throughout Scotland. A further resolution urged the universities of Scotland to develop the training of students in obstetrics on the lines suggested by the departmental report on maternal mortality, and called attention to the desirability of post-graduate experience in obstetrics.

At a subsequent session of the conference, Professor R. W. Johnstone, who presided, said that both the medical profession and the more thoughtful section of the public were dissatisfied with the fact that the maternal mortality rate in Great Britain showed no tendency towards permanent reduction. The improvement that had taken place since the pre-antiseptic days was seen in the maternity hospitals, which provided the safest conditions for confinement. The solution of the problem seemed to lie in the better education of the whole fabric of society, including the medical and nursing professions: the public had as great a responsibility in this matter as the medical profession. Professor Munro Kerr, professor of midwifery in the University of Glasgow, said that with the knowledge now available they could no longer shirk taking action. It was not an easy task to put matters right, because they had to adapt an old organization to modern requirements. On the Continent midwives had always been employed, so that their services had gradually been perfected. In this country the maternity service was of recent date, and there was a disinclination to propose innovations which would prejudice interested individuals.

Edinburgh Orthopaedic Clinic

In his address at the second annual meeting of contributors to the Edinburgh Orthopaedic Clinic, held in the Scottish House of the B.M.A. in Edinburgh, on February 16th, Professor John Fraser said that the prevention of disease was an infinitely more laudable achievement than the most brilliant cure of an error which had been allowed to arise and develop through ignorance and neglect. It had to be admitted, with a certain amount of regret, that in the medical profession they were sometimes rather forgetful of the full significance of the proverb "A stitch in time saves nine." The orthopaedist and his colleagues and associates, the masseuse and masseur, and those who were expert in the question of medical gymnastics, had recognized the wisdom of prevention, with the result that the work that they did was among the best and soundest achieved in medical practice. If the method of prevention was to have its fullest application, it was obvious that certain rather unique conditions must be instituted. The ordinary hospital did not afford the opportunity, because the patient, his friends, or his parents either did not consider an error sufficiently serious to justify hospital consultation, or they were unwilling to consult the doctor who could act as a medium in recommending a hospital. If a service was to be developed which would counteract these difficulties, it must be arranged so that it was almost a part of the life conditions of the people, and it must be situated in their midst. Attention to these very important details had enabled the Edinburgh Orthopaedic Clinic to achieve unique and outstanding results; it had fulfilled a need which had hitherto in large measure been neglected. The report of the clinic stated that its object was to provide massage, medical gymnastics, medical electricity, and ultra-violet ray treatment at moderate fees for people of limited means. During the past year 320 patients had been admitted, and the number of treatments given was 6,841.

Cruelty to Children

In the *Journal* of December 24th, 1932, reference was made to the beneficial work of the National Society for the Prevention of Cruelty to Children in England. In Scotland there is a Royal Society for Prevention of Cruelty to Children which each year has over 7,000 cases to deal with, and more than 20,000 children whose condition, through the carelessness or vice of their parents, requires attention. The work of the inspectors may be described as of a prophylactic nature, for by seeing that parents give proper food to the children the inspectors are assisting in the work of medical officers in warding off disease. Although this is not generally known, it is a crime for any parent or person in charge of a child to fail to get medical attention for him should he require it, and if the parent or guardian through poverty be unable to obtain medical aid then it is his duty to apply for this under the Acts relating to relief of the poor. In matters such as these the inspectors and officials of the Society are able to guide the parents and guardians who come before them, with beneficial results to the children. Medical practitioners appreciate the care and tact that are shown by these men and women who go about the country in all weathers looking after the interests of children—reminding parents of their duty towards their children when they appear to forget it, showing them the evil of their ways, and generally striving to see that the children get a chance in life to grow up decent men and women.

Training of Nurses

In an address on the training of nurses at the annual meeting of the Edinburgh branch of the College of Nursing, Miss Nora Milnes, lecturer on social economics in the University of Edinburgh, said that, owing to the lack of openings elsewhere, there was now an opportunity for attracting the best type of women to the nursing profession. The Edinburgh branch of the college supported the resolution of the London branch that the first part of the State registration examination should be divided into two parts, and examinations in elementary physiology and anatomy with hygiene should be passed before the probationer entered hospital. In this way a better grasp of the subjects would be obtained than if they were

in charge had estimated £30,000, but similar hospitals in other places had cost much more. It had never been stated what the upkeep of the hospital would be. A resident surgeon at £800 a year and a house-surgeon would be required.

CORRESPONDENCE

X Rays and Radium in Graves's Disease

SIR,—Your correspondent Dr. Leo A. Rowden, whose letter appeared in the *Journal* of February 4th (p. 204), states that in the Leeds district the surgical treatment of exophthalmic goitre hardly has a place, and implies that the medical profession in that neighbourhood is quite satisfied with the results obtained by radiological methods of treatment. I do not pretend to any authority to speak for Dr. Rowden's colleagues, but unless I misinterpreted the views expressed to me when I had the privilege of addressing the Leeds Medical Society on this matter in 1931, Dr. Rowden's complacency is not by any means general. The evidence in favour of radiotherapy is largely invalidated by the absence of comparative figures of the basal metabolic rate, estimated both before and at intervals up to a year or two after completion of the treatment. I except from this criticism the admirable papers of Dr. Don published in this *Journal* in 1929 and 1931, in which he comes to the conclusion, after making a carefully tabulated comparison of series of cases treated by various methods, that on the whole surgical treatment is to be preferred to radiotherapy. Dr. Don's opinion would, I feel sure, have been still more favourable to surgical methods had the standard method of treatment in his surgical series been subtotal thyroidectomy in all cases rather than in merely a majority.

Dr. R. Connell, in the *Journal* of February 11th (p. 247), pays me the compliment of quoting from my book, *Diseases of the Thyroid Gland*, and quite rightly attributes to me the view that *x*-ray treatment does not produce adhesions in the perithyroid tissues, but he fails to draw what I hoped would be the obvious inference—that neither are any changes produced in the thyroid gland itself. Both Dr. Rowden and Dr. Connell urge the infrequency of myxoedema after radiotherapy applied to cases of thyrotoxicosis, but I go so far as to state that I have not seen an indubitable case of such a sequel, nor do I believe that genuine myxoedema can be so induced. More than one case has, however, come my way, labelled hypothyroidism following *x*-ray treatment, but while there were certain superficial facial resemblances to myxoedema, there were also clear indications of persisting thyrotoxicosis and a definitely raised B.M.R.

There are two other points which weigh against *x*-ray therapy in thyrotoxicosis. The first is the lengthy period needed to satisfy the radiologist that the patient has had a fair trial of the method, so that months, and even years, may be employed in lieu of the average of three months which elapses between a surgical operation and the resumption of full working capacity. Secondly, in spite of all disclaimers and presumably improved technical methods, damage to the skin of the neck is still not infrequently met with, and if surgical treatment subsequently becomes necessary, although there may be no difficulties in connexion with the operation itself, the wound seldom heals as rapidly or as perfectly as in cases not subjected to radiotherapy.—I am, etc.,

CECIL A. JOLL.

London, W.1, Feb. 14th.

SIR,—The letters of Drs. Rowden and Connell in your issues of February 4th and 11th (pp. 204 and 247) commenting upon the statements of Mr. Romanis in his article on exophthalmic goitre (p. 87) are very welcome contributions to the vindication of a treatment which, for some reason, appears to be entirely misunderstood by a number of surgeons.

The results of *x*-ray treatment of exophthalmic goitre far from being unimpressive, have always struck me as being quite the reverse, and I speak with the personal experience of a large number of cases which have come under my care during the past twenty years. The majority of cases show an improvement from the first irradiation, and progress uniformly through the course of treatment. It is claimed that surgery produces really dramatic results upon occasion. This would also apply to *x*-ray treatment should the radiologist be either sufficiently unwise or sufficiently inexperienced as to give massive doses.

With regard to the risk of producing myxoedema by *x*-ray treatment, I have not yet met with a case where this has happened. I am strongly of opinion that *x*-ray therapy should be given preference of choice over surgery as it is evident that in case of non-relief surgery there has its opportunity, whereas after surgery radiotherapy has no place.—I am, etc.,

CHRISTOPHER KEMPSTER.

London, W.1, Feb. 14th.

Chronic Pulmonary Tuberculosis

SIR,—I am very grateful to Dr. Lissant Cox for his criticism (February 18th, p. 288) of my article. In my endeavour to condense the subject sufficiently to get it into one article of a size suitable for the *Journal* I had to be terse, I am afraid, to the point of ambiguity. At the same time I purposely refrained from pursuing details in order that anyone who found some truth in the conception might develop this along his own lines. I should, however, have defined what I meant by sanatorium treatment—namely, the prolonged residence of a large number of individuals in an institution so designed that they are exposed to the maximum amount of open air possible under a strictly disciplined daily routine of balanced rest and exercise. In any sanatorium the patients may be divided into groups: (1) those for whom this period of protection and education is absolutely the correct treatment and for whom it is highly beneficial; (2) those who, though they are gaining benefit, would gain the same in an ordinary convalescent home or in their own homes; (3) those who would obtain much greater benefit in a hospital or in their own homes; and (4) those who are untreatable by reason of advanced disease.

To answer Dr. Lissant Cox's second question first. What do I mean by "hospital"? I think that the development of the Lancashire method of small local institutions, fully equipped, but more of the hospital than the sanatorium type, and at the disposal of the tuberculosis officer, is exactly what my conception demands. His other question—as to the increased risk to children in contact with home-treated patients—falls outside the conception, which dealt entirely with treatment and not with prevention. But it must be realized that many patients can, and do, live long and useful lives with positive sputum. Such patients, if of the working class, must live at home and among their children. This is perhaps unsatisfactory but unavoidable, and, if the patient's own condition does not necessitate it, I do not think that his removal to an institution for a few months will materially lessen the risk to the children. Surely the main danger is from the undiagnosed or badly handled patient? But I must not digress into this subject, which is not covered by my article.—I am, etc.,

R. C. WINGFIELD

Frimley, Feb. 19th.

Glucose Tolerance in Rheumatoid Arthritis

SIR,—Drs. Shackle and Copeman's article in the *Journal* of February 18th (p. 268) on this subject is of absorbing interest. Ever since Pemberton drew attention to the reduced sugar tolerance of the rheumatoid arthritic this feature has been quoted by various authors, but the reason for its existence has never been satisfactorily explained. It has been asserted that the high and prolonged sugar curve was attributable to failure of the muscles to utilize the glucose on account of extensive capillary constriction. In support of this statement was brought forward the fact that the sugar curve could be brought back to normal by the use of vaso-dilators, particularly thermal baths. The objection to this explanation has seemed to me to be that the basal metabolic rate should be found to be appreciably lowered. This, however, is not the case. Presumably, in view of Drs. Shackle and Copeman's work, the effect of vaso-dilators can be ascribed to their approximating the arterial and venous "peaks" to which they refer. Venous blood collected at, say, two hours after the beginning of the test might then give normal readings.

I have notes of thirty-two cases of rheumatoid arthritis in the active stage whose glucose tolerance has been estimated by Dr. C. Dukes or by Dr. Ryffel, and twenty-seven of these exhibited reduced tolerance, the curve being, as a rule, unusually high and always abnormally prolonged. Of the remainder, who fell within the normal limits, the curves were invariably *high* normals. Observations of the former group fully confirm the authors' statement that the renal threshold is raised. "Leakage" usually occurred in my series when the blood sugar rose above 0.21 per cent.

At one point my conclusions differ from those expressed in the paper to which I refer—namely, the effect of treatment on the sugar metabolism. I have found that a well-marked clinical improvement is associated with a return towards normal of the blood sugar curve. Thus a woman who in 1931 produced figures of 0.26 and 0.27 per cent., at sixty and ninety minutes respectively, when retested nine months later gave readings of 0.18 and 0.16 per cent. at the corresponding intervals after ingestion of 50 grams of glucose. Her treatment consisted of foam baths, dieting (reduced carbohydrate intake), and a prolonged course of "proteose" injections. No insulin was used.—I am, etc.,

London, W.1, Feb. 18th. A. H. DOUTHWAITE.

Recovery from Pneumococcal Meningitis

SIR,—Though proof of its pneumococcal nature is lacking, the following case is perhaps not without interest in connexion with those described by Drs. McAuley and Hilliard and by Dr. Parkes Weber.

The patient, a youth aged 20, seen by me in May, 1921, had been taken ill a week before with "influenza," followed in a day or two by well-marked signs of pneumonia at the left base, with cyanosis and rusty sputum. This appeared to be subsiding satisfactorily when he one day complained of severe headache. At this time he was quite clear mentally; neither knee-jerk could be obtained; the abdominal and plantar reflexes were normal; Kernig's sign was positive on the right side (120 degrees). Signs of consolidation of the left lower lobe were still present.

About 20 c.cm. of uniformly turbid cerebro-spinal fluid, under increased tension, were withdrawn by lumbar puncture. The fluid gave a positive Nonne-Apelt reaction, produced no reduction of Fehling's solution, and contained 1,500 leucocytes per c.cm., about 60 per cent. of which were polymorphonuclears, but as a considerable number of cells were very degenerate an accurate differential count was impossible. A prolonged search of smears failed to reveal any micro-organisms.

The abstraction of fluid did not relieve the headache, so 1/6 grain morphine was given hypodermically. In the evening he was decidedly better, and about five ounces of blood were removed from a vein in the arm with a view to injecting the serum intrathecally, in the hope that it might contain antibodies to the infecting organism, which was thought almost certainly to be a pneumococcus. The following day, however, his condition had improved so much that it was decided to leave well alone, and he proceeded to make an uneventful and complete recovery.

Unfortunately all cultures proved sterile, so that no greater claim can be made for this case than that it was one of recovery from meningitis in a person suffering from pneumonia, as it is of course possible that infection of the meninges was occasioned by the influenza bacillus or some other organism.—I am, etc.,

Bath, Feb. 20th. RUPERT WATERHOUSE.

Diagnostic Exploral Suction of Nasal Sinuses

SIR,—In the leading article in the *Journal* of December 31st, 1932 (p. 1201), you directed attention to the monograph on sinus disease and mental disorder, published in the July number of the *Journal of Mental Science*, which contains statistics of the findings in 880 cases of mental disorder whose nasal sinuses were investigated by the exploratory technique evolved by Dr. Patrick Watson-Williams.

In these cases of psychosis from sinus disease it not infrequently happens that the indications in the nose of the presence of sinusitis are not typical or may even be absent; the psychotic state, thus resembling other toxaemic states arising from foci of sepsis, increases as the evidence of external focal discharge diminishes. Hence the importance of this special technique in the search for sources of toxaemia in psychotic patients cannot be overestimated, especially in cases in which there is an early history of symptoms referable to the upper respiratory tract, and in those in which psychosis appears immediately after an attack—not infrequently mild—of what is regarded as influenza.

In his letter of February 4th (p. 203), Dr. Patrick Watson-Williams submits for general adoption a more precise nomenclature for this technique in order that records of investigations in sinus disease can be put on a uniform basis. That records should adequately indicate the exact mode of investigation has been recognized in such research in cases of mental disorder. The Board of Control in Part I of its Eighteenth Annual Report for the year 1931 (pp. 108, 109) indicates the importance of this matter thus:

> "To those who report that search for evidence of sinusitis or other foci of chronic infection has failed to reveal it as a relatively common condition we venture to make the request that they will make quite sure that they are using the precise technique employed by those who report positive results, and if they do not use this technique, to make that fact clear."

Of the terms which Dr. Watson-Williams suggests, that of "suction-exploration" appears the most useful.—I am, etc.,

Birmingham, Feb. 13th. T. C. GRAVES.

"Tonsils: In or Out"

SIR,—Your review of a book by Dr. Albert Kaiser of Rochester, N.Y., entitled *Tonsils: In or Out*, seems to me to require some notice. I would associate this book with the discussion on the end-results of the tonsil and adenoids operation which took place at the Section of Oto-laryngology at the Centenary Meeting of the British Medical Association in July, 1932. In the book, or at least in the review, and at the meeting of the Section, the operation is judged by its effect on a series of events

which occur several years after the operation—namely, the incidence of rheumatic fever, diphtheria, scarlet fever, etc. There does not seem to be much agreement on the effects of the operation on these far-off results, although the balance of opinion seems to be slightly in favour of the cases operated on. But as a surgeon I would point out that we who operate seldom have these far-off events in view. We operate for something which is doing harm to the child *now*—namely, deafness, mouth-breathing, middle-ear discharge, etc.—and we nearly always succeed in removing one or all of these conditions. If deafness be quite removed that is a good end-result, whatever may happen in future years. We are glad to have all information about the later effects of the operation, but we do not want to have the value of the operation assessed only, or indeed chiefly, by these later results.—I am, etc.,

Glasgow, Feb. 14th. JAMES KERR LOVE.

Treatment of Alveolar Abscess

SIR,—I should like to associate myself with the sentiments expressed by Mr. Graham Macphee in your issue of February 11th.

A great number of patients have come to me at St. Bartholomew's Hospital with swollen faces due to a most apparent alveolar abscess. These patients have been told that they must wait until the swelling goes down and then they can have the tooth out. During this period they have to put up with the pain as best they can, and anybody who has had an alveolar abscess knows how terrible the pain can be.

I fail to see any reason why teeth with an acute abscess should not be extracted forthwith, since, if pus is present, it must be let out, and the steady throb of pus pain is diagnostic. If the abscess is allowed to burst externally a very nasty depressed scar ensues. As long as the tooth is left *in situ* the trouble will most certainly continue. Extraction is carried out preferably under a general anaesthetic, but, if this is impossible, a nerve block, using novutox solution, may be done.—I am, etc.,

London, W.1, Feb. 17th. J. DRAPER CAMBROOK.

Treatment of Recent Injuries

SIR,—In the *Journal* of January 28th Mr. W. E. Tucker contributes an interesting and, in many ways, excellent article on the treatment of recent injuries, but there are several points on which I cannot agree with him.

Careful perusal of this article leaves one with the impression that, after an injury causing effusion of blood, the haematoma usually remains of such size that its organization results in the formation of gross adhesions, and, by tracking along tissue planes, it is able to irritate bursae and nerve endings in adjacent areas not injured by the original trauma! The fact that solution of continuity in muscle and other tissues can only be repaired by the organization of what should remain of the haematoma appears to be of no importance. Mr. Tucker therefore advocates the dispersal of the haematoma by intensive electrical treatment and repeated and vigorous massage from the first, while "the patient writhes in agony, swears, and squirms"! This can surely only have one result—namely, to traumatize further the lacerated tissues and to increase the size of the original effusion, assisting it to spread along the tissue planes. It is difficult to understand Mr. Tucker's views on the pathology of healing in mesoblastic tissues. One feels that cases treated by such methods, which "to many, may appear brutal," are only saved from more severe and widespread adhesions than they would have had without any care by the fact that the principle of early active movement is not entirely neglected. In the treatment of dislocations and sprains Mr. Tucker's account suggests that less vigorous massage is employed and more use made of the principles of physiological rest. It would appear that experience has taught Mr. Tucker to modify his methods in these cases.

It is indeed regrettable that treatment so contrary to physiological and pathological principles and to the teaching of Hugh Owen Thomas and Sir Robert Jones should be urged within a fortnight of the latter's death. Permit me to quote and to allude to a few appropriate sentences from his book *Injuries to Joints*, probably the clearest and most succinct of all his publications:

1. "Immediately after the injury . . . there may be a swelling . . . as big as a pigeon's egg. If vibratory massage is at once given, by pressing the pulps of all the fingers firmly on this and communicating a firm vibratory movement from the wrist, this swelling will disappear in a few minutes."
2. "Once general swelling has made its appearance the joint should be put in such a position that the injured tissues are relaxed, and gentle rubbing in the direction of the venous circulation will help to get rid of the effusion. If there is any fear of doing harm by moving the joint, it is better to rely entirely on elastic pressure and rest and elevating the limb to hasten the absorption of exudates."

This description of the immediate treatment, which may not be quite painless, suggests a very different picture from Mr. Tucker's "working out," and the need for increasingly vigorous and painful repetition should never arise. The second treatment quoted should be soothing and gentle—not painful and vigorous, when it is definitely harmful.

One more quotation:

"Voluntary movement is the natural physiological function of muscles and joints, and is the best physiological stimulus to their proper nutrition and well-being. Pain is nature's method of controlling voluntary movement which may be harmful, and the exceptions to this rule are very few. Hence early active movement which causes no pain can seldom be harmful and is often beneficial. This can often be obtained by fixing a joint so that one particular harmful movement cannot be performed—all harmless movements being but little impeded."

The passages quoted contain, in my opinion, the best basic principles we have in the treatment of recent subcutaneous injuries. Their application in many football and other injuries which I have treated, and in the few I have received myself since I learned of them, has given much satisfaction. Previously my experiences were not happy, and I would have been tempted to try even such heroic methods as Mr. Tucker advocates if any reasonable proportion of patients would have the hardihood to tolerate them, which I doubt.—I am, etc.,

Liverpool, February 7th. ROBERT W. AGNEW.

Obstetrical Measurements

SIR,—Dr. Oxley, in his excellent paper on forethought in midwifery, states that "we have no means of direct measurement of the foetal head or of the true pelvis through which it passes." This statement is not quite correct in 1933. In 1896, several months after the discovery of *x* rays, radiological pelvic measurements were tried with fairly accurate results, particular attention having been paid to the measurement of the antero-posterior and transverse diameters of the brim. Since then different workers in different countries have developed sufficiently accurate methods of measurement of the various pelvic diameters and of the foetal head by means of *x* rays. Some of these methods are exceedingly simple, and could easily be carried out with any ordinary radiological installation.—I am, etc.,

A. ORLEY.

London, W.1, Feb. 17th.

Nicotine Poisoning

SIR,—The letter on nicotine poisoning by Dr. L. P. Lockhart in the *Journal* of February 11th (p. 246) proved very interesting reading. It is seldom realized in our time that this was a very common and serious form of poisoning during the greater part of last century, when tobacco was a very popular remedy among the lay public for many ailments. For example, a tobacco poultice was widely recommended by many for such varied conditions as sores, ulcers, parts affected by the itch, irreducible hernia, rheumatism, etc. The following extract from a report written about 1860 is a tragic example of many unfortunate incidents.

"A little boy, aged 8, had long been affected with ringworm of the head. His father applied some tobacco juice about two o'clock one afternoon. The child almost immediately complained of giddiness and loss of sight, so that his father smilingly observed, 'The boy is drunk.' He soon afterwards became sick and vomited frequently, his limbs tottered, his face grew pale, and became covered with a cold sweat. His mother helped him to bed, and at half-past five he expired—only three hours and a half after the application."

That nicotine can be absorbed quickly into the blood stream through unbroken skin is an undoubted fact, and is shown to be true in a multitude of ways by these old writings. For instance, another interesting account states that "soldiers have not infrequently disabled themselves for duty by applying a moistened tobacco leaf to the armpit, which causes great prostration and vomiting, and violent sickness after eating." An infusion of the plant swallowed with the innocent intention of curing some internal complaint was also well known to produce serious symptoms; but it has frequently been used for more nefarious purposes. The late Professor Cleland of Glasgow, writing in the middle of last century, states: "The death of the poet Santeuil took place amid excruciating torture in fourteen hours after drinking a glass of wine in which had been placed a quantity of Spanish tobacco." The following passage is well worth quoting, but the comments are left to the reader. It is an extract from a treatise written about 1798.

"Never did Pope Urban VIII act more like an apostolic man than when he made a Bull to excommunicate all those who took tobacco in the churches. Churches and Chapels are most scandalously abused by the tobacco chewers who frequent them, and kneeling before the Supreme Being, which is so becoming when sinners appear before their Maker in prayer, is rendered in many seats impracticable because of the large quantity of saliva which is ejected in all directions."

—I am, etc.,

Paisley, Feb. 13th. A. MCNAIR AITKEN, M.B.

Strychnine Poisoning

SIR,—The ninth reprint of the thirty-eighth edition of the *Manual of First Aid to the Injured*, the authorized textbook of the St. John Ambulance Association, is now in circulation. In this book, in the chapter which treats of insensibility, occurs the following:

"Cases of insensibility, when breathing is present, may be classified as follows:..... when convulsions are present..... Poisoning—(a) Strychnine."

Now this is completely contrary to fact, for the intellect is clear until the victim draws his last breath. In the case of the death of John Parsons Cook, who was poisoned by William Palmer by means of strychnine, the murdered man, immediately before he expired, said, "Turn me over." This piece of evidence was a vital factor in bringing Palmer to the gallows; his defending counsel had tried to make out that the cause of death was an epileptic convulsion. It is regrettable that such a dangerously misleading error should occur in so important a book.—I am, etc.,

Southsea, Feb. 13th. JOHN R. KEITH, M.D.

Vagitus Uterinus

SIR,—The notes by Dr. E. C. T. Clouston on vagitus uterinus in your issue of February 4th (p. 200) tempt me to write. I had my first and only experience of the phenomenon on October 25th, 1932. I remembered how merry local wits in the profession were over a case reported here by Dr. Charles John Humphries some thirty years ago. But now, as the subject has cropped out, a few data may be of interest.

When I was called to the case about midnight the nurse remarked that her patient (a very small person, aged 32, having her seventh baby) was not making progress. Examination revealed a well-dilated os and a breech at the brim making no attempt to descend. The foetus seemed very big, but the pelvis was well proportioned, so under chloroform I brought down a leg, having to reach the fundus to get a foot. The size and plumpness of the leg gave me furiously to think, and while I was arranging things for a hard job the second shock came. My back was towards the bed when I heard just such a muffled cry as comes from the newborn infant in a blanket. I whipped round, the nurse looked startled; we both bent over the anaesthetized woman and heard noises, unmistakable, familiar, from the woman's abdomen.

No vibrating "fold of mucous membrane" could reproduce so faithfully these characteristic sounds. They were simple baby noises, natural in tone, not urgent, suggesting no distress and no "weirdest cry for help" Yet they meant "S O S" to me, who, ignorant "that the prognosis when a cry is heard is by no means unfavourable to the foetus," felt myself responsible for the life of that child.

My idea was, and is, that air entering the uterine cavity during the manipulation necessary to secure and bring down a foot had enabled the foetus, already in difficulties, to breathe. Delivery had to be managed in the best time possible; and, of course, both arms were up and the after-coming head was obstinate. The child, a male, weighed *11 lb. 12½ oz. There was no great trouble* in establishing respiration. Mother and child did well.—I am, etc.,

Belfast, Feb. 9th. ROBERT WATSON.

Treatment of Influenza

SIR,—In your issue of February 18th appear two communications recommending forms of treatment for influenza. Time passes, but we should not forget that some twenty years ago the late Mr. E. B. Turner very strongly advocated, from long experience in family and school practice, the use of large doses of salicin. He stated that this drug cut short an attack of influenza if given in large doses (20 grains an hour for twelve hours, and then every two hours for six further doses if symptoms justified it); that the drug was tolerated in ways that the salicylates were not; that he had never had a patient with pneumonia or other complications who had been so treated; and that given as a preventive the drug was justified in usage. He had had no deaths.

It is late now to remind members of these facts. But ever since then I, and many others I have talked matters over with, have found his experience and statements justified, and have been glad to adopt, with an expectorant mixture, this form of treatment Salicin has many other uses. It is expensive, one knows.

But it is economical in that it prevents many unfortunate end-results of influenza. If this is supplemented by the use of a small half-ounce bottle of formalin (carried in the waistcoat pocket) as an inhalation (nose and mouth) when one has been compelled to be in crowded places or exposed to infection this preventive treatment would seem to be nearly infallible. During the war, in camp as senior medical officer, I induced officers to warm the old serum bottles filled with formalin on their hut stoves and cautiously to inhale the vapour. They became convinced of the success of the treatment.—I am, etc.,

Hove, Feb. 18th. E. ROWLAND FOTHERGILL.

SIR,—I have read with interest the letter by my neighbour Dr. English on the use of subcutaneous injections of vitamins in influenza. For over two years I have been investigating the effect of such injections on a variety of morbid conditions. I have just completed a communication describing the interesting results obtained, and it is hoped to publish this shortly. These injections tend to be painful for weeks afterwards, but recently Glaxo Laboratories have prepared for me a very highly concentrated solution which is practically painless, but gives most satisfactory results.—I am, etc.,

Winsford, Cheshire, Feb. 21st. W. N. LEAK.

Psychology in the Curriculum

SIR,—The testimony of a converted sinner is sometimes useful, and in that hope I offer mine. For I can speak as a general physician who took up clinical psychology late in life, utilizing the doctrines of Adler and, occasionally, of Freud. Academic psychology (and Jung's) are admittedly sterile in practice.

Although I have convinced myself that clinical psychology is inevitable and overdue, it seems hardly practicable to include it in an ever-growing curriculum which is already tending to make the student under-spirited by an overwork. For this reason I feel it should be a post-graduate study, and also for the further reasons: (1) that the study of the organic and objective is the primary essential, and should therefore precede the inorganic and subjective, and (2) that the student is immature, whereas medical psychology becomes a vivid reality only to a qualified doctor applying it *tête à tête* to distressed patients of his very own. A few lectures in a crowded curriculum would lack this vitalizing reality, and might produce a life-long aversion. I would therefore crave humbly to suggest that the curriculum for the M.B. degree should remain much as it is, but that the M.D. should be awarded on a modest but compulsory proficiency in clinical psychology, which would be attained in a year or two during spare time from books (or lectures), the physician being in contact with his own patients. The man with the M.D. would not be a psychological specialist, but would have learnt the possibilities of dealing psychologically and prophylactically with the inorganic nervous patients and children who bulk so largely in private practice.

Such a plan would have these advantages: (1) It would not extend the period of dependence on a parent's purse, for the "M.B." could be earning his living. (2) It would not further crowd a crowded curriculum. (3) The physician studying this subject would have the leisure and own-patient contact which are essential, and are not attainable in the curriculum. (4) The "M.D." (new) would soon be appreciated as a more complete and effective doctor, who should command higher fees in return for more time expended. (5) The nervous sections of the public would at last be catered for by psychologically open-minded men in large numbers as well as by the few specialists with the diploma in psychology.

I believe that the young science and art of medical psychology is destined to be a golden opportunity for our profession to afford to the nervous sections of the public a rational, effective therapy, which they will gladly accept in place of the various irrational and objectionable faith-cures to which they have been driven by our failure to cater adequately for their crying needs. Is it too much to say that the present diploma qualifies only for treating organic diseases and not for treating inorganic nervous sufferers? Clearly a full medical diploma should qualify for both.—I am, etc.,

Hull, Feb. 15th. FRANK C. EVE, M.D., F.R.C.P.

SIR,—Is it not possible to simplify the whole problem by distinguishing psychological standpoint from psychotherapeutic technique? For the former is absolutely demanded as an attitude of mind by every physician in respect to every case, and should be incorporated as a principle of practical approach just as asepsis has become embodied as a principle of surgical approach; whereas the latter is a highly specialized business that can be practised only by specially qualified practitioners working under very exacting conditions.

The psychological approach does not necessitate a highly technical knowledge of the various methods of psychotherapy; it requires rather a certain attitude of mind. This attitude can be acquired by realizing that the problem of disease demands two kinds of investigation. The first question to be asked is: "How is this person sick?" while the second should be "Why is he sick?" To answer the first question we must focus down upon the disordered part, mechanism, or function, and the methods we shall employ belong to the spheres of physiology and pathology. But it is essential to teach that however thoroughly we may pursue the investigation of *the disease mechanism*, we are not dealing with the deeper problem—*Why* is this man sick?

The psychological inquiry begins at the point where physiological investigation comes to an end. For the problem of disease in no special sense differs from other human problems in that it is also, at bottom, a question of motive. Modern psychology has forced us to realize the ambivalence of unconscious motivation, and we can no longer naïvely assume that all the misfortunes, disorders, and mischances which seem to lie outside the orbit of our intention are the results of blind accident. The passive motivation of inertia which produces apathy, self-pity, neurotic impotence, acquiescence, etc., is an essential background factor of disease, and demands a psychological approach.

A complete clinical attitude, then, needs to embrace both these inquiries whereby the understanding of disordered mechanism is related to the total life-situation. The attempt to maintain an arbitrary *division* between the study of mechanism and the understanding of motive as two widely separated fields of knowledge is rapidly breaking down and the time for a fundamental reintegration of these two lines of clinical approach is surely upon us. I should like to recommend that a skilled psychologist should be present at medical consultations at every teaching hospital, so that the relation between the actual disease process and the total individual life-picture could be presented to the student as part of his essential clinical equipment. This, to my mind, is even more important than extending the curriculum to include the study of the neuroses and "functional" nervous conditions as a specialized *category of disease*.—I am, etc.,

West Byfleet, Feb. 20th. H. G. BAYNE

The Medical Profession and Birth Control

SIR,—Writing as a responsible teacher of medicine at important hospitals in London, I am in doubt as to the exact meaning of Dr. James Young's last two conclusions in his British Medical Association Lecture upon this subject (*British Medical Journal*, February 11th, p. 217).

Conclusion 3.—"There is need for the teaching of medical students and doctors in the methods of birth control."

Conclusion 4.—"On the medical problems inherent in the movement there is urgent need for further research."

Does this mean that we are to teach students methods into the value of which further research is urgently needed? For me the duties of a doctor have appeared to be to instruct students how best to prevent, cure, or alleviate disease. Does, in the future, the medical profession wish to extend its functions to the prevention of new life, or eventually to lay claim to the determination of how much new life is to be produced?—I am, etc.,

London, W.1, Feb. 13th. F. JOHN POYNTON.

SIR,—Though no supporter of the introduction of psychology into the medical curriculum, sharing to a large extent the late Dr. Mercier's view that "a knowledge of textbook psychology is of no more value to the student . . . than a knowledge of cuneiform inscriptions," it does not seem too much to ask those who address the profession on such medico-social questions as birth control, abortion, and sterilization to pay some regard to the psychopathological data.

Ever since Freud in 1894 included coitus interruptus among the aetiological conditions of anxiety neurosis this form of contraception has come to be regarded, as Dr. James Young states in his address (*British Medical Journal*, February 11th, p. 214), as "of harm both to body and mind." Experience shows that such a generalization from Freud's statement is not warranted. The method, although it is not the best, is practised over many years without ill effects if both partners are fairly normal people. It is used by a large majority of the French peasantry who practise contraception. The method is harmful if either partner is "temperamental." The objections to contraception go deeper, and have less to do with religion, ethics, or aesthetics than with archaic fantasies of the human mind; they are non-rational and difficult to efface, the usual objections being largely rationalizations motivated by fantasies of power—sexual and aggressive—and castration fears and other deep frustrations. (Others besides myself have dealt with the psychology of contraception.) The medical advocates of contraception, of whom I am one, have to recognize that the objections are more complex, more humanly complex, than the hostility of Church and State. Reason may prevail in the long run, but it behoves members of our profession, before they become propagandists, to realize the meaning of the objections and their roots in the unconscious mind.

My argument is that the psychopathology of pregnancy, contraception, abortion (and there is some literature on these matters) should be studied by those who deliver addresses or lectures on these questions.—I am, etc.,

London, W.1, Feb. 14th. M. D. EDER.

SIR,—Would it not be better if the growing interest in birth control were extended so as to include the whole problem, of which contraception seems to be merely the negative side? If it is desirable to limit population there must be some factor or factors in relation to which it should be limited. The personal motive is to curb increase as against sexual gratification. Is it, then, unreasonable to suppose that there may be a link between such gratification and the factors in question? May it not be that the sex appetite tends to evoke such qualities as make for the continuance of healthy life, apart even from its selective influence? Should it be regarded as an incentive to the production of economic values that should increase as life itself expands? If so, then here is a matter that deserves the widest consideration; for it would seem shameful to be content with less than the greatest yield from such a vital function. Yet the mass of people are not likely to conserve wisely a force that they have been led to regard as the very essence of evil, or, at best, an urge to rather futile self-indulgence.—I am, etc.,

London, W.11, Feb. 15th. H. LL. JONES.

Medical Women and the G.M.C.

SIR,—We have read with great interest the letter over the signatures of Dr. Jane Walker and Dr. Letitia Fairfield in your issue of February 11th. The point they raise is one of very great importance. Increased representation on the General Medical Council gives an opportunity to bring on to the Council points of view not yet represented there. The proportion of medical women on the *Medical Register* is, of course, beside the mark. The fact that in every department of medical work medical women have now taken their place, and necessarily approach questions of professional organization and medical politics from a fresh angle, not only because they are women, but because they are newcomers, makes it a matter of general importance that they should be represented on the G.M.C. We therefore greatly hope that the British Medical Association, which has always been so fair and wide-minded in its treatment of medical women, will include a suitable woman among its list of candidates.—We are, etc.,

ETHEL M. N. WILLIAMS, J.P., M.D.
MONA MACNAUGHTON, M.B., Ch.B.

Northumberland, Feb. 15th.

The Services

DEATHS IN THE SERVICES

Major-General Sir George Cuscaden, V.D., Director-General of the Australian Army Medical Services from 1917 to 1921, died at Melbourne on February 6th, aged 75. He was born on December 31st, 1857, the son of the late Mr. W. H. Cuscaden of Wexford, was educated at the Ledwich School, Dublin, and took the L.R.C.P. and S.Ed. in 1880. He served as transport surgeon in the Egyptian war of 1882, and in 1884 was appointed Colonial Surgeon of Dominica but soon after went to Australia. He was honorary consulting surgeon to the Women's Hospital, Melbourne, and a Fellow of the Australian College of Surgeons, and had been president of the Victoria Branch of the British Medical Association. In 1886 he married Alice, daughter of Mr. W. King of Adelaide, and had one son and two daughters.

Colonel John James La Vettée de la Dubeterre Morris, late R.A.M.C. (ret.), died suddenly on February 7th, aged 79. He collapsed while travelling in an omnibus near Hyde Park Corner, and on being taken to St. George's Hospital was found to be dead. He was born at Clonkeen, County Kildare, on December 8th, 1853, and was educated at Queen's College, Galway, where he gained a scholarship, and at the Carmichael School, Dublin, where he served as resident pupil in the Whitworth and Hardwicke Hospitals. He graduated M.D. in 1873, and M.Ch. in 1874, in the Queen's University, Ireland. Entering the Army as surgeon on February 4th, 1877, he attained the rank of colonel on November 11th, 1903, and retired on September 9th, 1908. He served in the Afghan war of 1878-80, when he was present at the battle of Charasiah, the defence of Sherpur Cantonments, the expedition to Kohistan, and the affair at Chihildakhteran, was mentioned in dispatches in the *London Gazette* of July 30th, 1880, and received the medal with three clasps. His name was originally John James Morris; he added La Vettée de la Dubeterre by deed poll, dated November 25th, 1885.

Obituary

SIR GEORGE THOMAS BEATSON, K.C.B., K.B.E.

M.D., F.R.F.P.S.G.

Honorary Consulting Surgeon, Western Infirmary, Glasgow, and Royal Glasgow Cancer Hospital

The profession in Scotland has just suffered the loss, in his eighty-fifth year, of Sir George Thomas Beatson, who died on February 16th at his residence in Glasgow. For some time past he had been in somewhat indifferent health, and for a week or two before his death he had been confined to bed.

Beatson was born at Trincomalee, and was the eldest son of the late Surgeon General George Stewart Beatson, C.B., who had served in both India and the Crimea. His school days were passed at King William's College, Isle of Man, whence he entered Clare College, Cambridge. After taking his B.A. he passed to his medical studies in Edinburgh, where he graduated M.B., 1874, and M.D., 1878. He occupied various posts open to young graduates, including that of house-surgeon to Lister at the Edinburgh Royal Infirmary, and in 1878 he commenced practice in Glasgow. His ability and perseverance were early rewarded by a large and increasing connexion in the western district of the city, where it is not too much to say that his patients regarded him with respect, confidence, and affection.

General practice, extensive though it might be, was not sufficient outlet for his energy or ambition, and very soon after his coming to Glasgow he became assistant to Sir George Macleod, at that time Regius Professor of Surgery in the University. About the same time he was appointed a surgeon to the dispensary for out-patients at the Western Infirmary. These appointments widened his scope of work, and at the same time gave him opportunities of teaching. He was promoted in due course to be visiting surgeon in 1900, and when he retired under the age limit in 1913 he was appointed honorary consulting surgeon. His work in the Infirmary was thorough and was conscientiously performed, and his post-operative treatment was marked by a resourcefulness and an attention to minor details affecting his patients' comfort, derived from his wide experience of general practice. Very early his interest was aroused in the subject of cancer; and both in the Infirmary and in the Royal Glasgow Cancer Hospital, of which he was a visiting surgeon, he made full use of his opportunities for studying that malady. He held the view that the ovary after the menopause exerted some influence on the mammary tissue, predisposing it to cancer. In consequence he became very widely known from his advocating and practising oöphorectomy in cases of inoperable cancer of the breast. His interest in cancer was maintained after he had retired from active surgical practice, and as the result of his efforts there was a year or two ago initiated and opened the Radium Institute in connexion with the Cancer Hospital.

But surgery, even, did not exhaust Beatson's capacity for work. Although circumstances had led to his following a civilian medical career he was a soldier at heart, and while still an assistant at the University he initiated what was ultimately to become a large Volunteer Medical Staff Corps. He received no encouragement from the Army authorities, but, nothing daunted, he enrolled students in companies, and drilled and instructed them in the work of medical orderlies. These companies were unofficial, and wore no uniform beyond a cap and belt. Ultimately he won through. Recognition was granted by the War Office, and he had the satisfaction of seeing the parade in the uniform of the Army Medical Staff. The movement spread, and in 1901 the corps had five companies and transport, with a strength of 500 of all ranks.

Civilian ambulance work had also claimed his attention, and he was largely responsible for the foundation in 1882 of the St. Andrew's Ambulance Association. He became chairman of the council of the association in 1899, and during his ten years of chairmanship the movement expanded so that when he demitted office the organization embraced practically the whole of Scotland, and had become to that country what the St. John Association is to England. On his retiral from the chairmanship he was entertained to a complimentary dinner, and in his speech on that occasion he gave a very interesting account of the rise of the association.[1] Early in his connexion with the association he published his *Ambulance Handbook*, the official handbook of the association. Of this book we may safely say that it is not only a textbook, but an example of literary style, and may be read with both profit and pleasure.

About this time the British Red Cross Society was organized and set going. Beatson was from the beginning naturally in the middle of things, and he was responsible for the Red Cross movement in Scotland. It was none too soon; but, thanks to his driving power, it was in working order when the great war broke out, and during that period of stress it expanded immeasurably, and took its full share of the activities of the society both at home and over-seas. Shortly after the conclusion of hostilities Beatson, who was chairman of executive and had also acted during the war as chairman of council, retired, and to mark its appreciation of his services the council of the Scottish Red Cross presented him with his portrait in oils.

During his long and active career Beatson received many honours and decorations. The C.B. which came in 1902 was followed in 1907 by the K.C.B. His Red Cross work was recognized by the K.B.E. and the British war medal. He received also the decoration of Officer of the Crown of Belgium; and the President of the French Republic (M. Poincaré), when in Glasgow in 1919, decorated him with the Officer's Cross of the Legion of Honour. He became also a Deputy Lieutenant of the County of the City of Glasgow. At the Annual Meeting of the British Medical Association held in Newcastle in 1921 he was vice-president of the Section of Ambulance and Red Cross, and for many years he was the Glasgow correspondent of the *British Medical Journal*.

Such is, in brief, the record of Beatson's private and public work. As regards the man himself, his was a tall, commanding figure, bearing unmistakable traces of his soldierly origin. He spoke as one naturally born to command, and he was a man of energy and determination. He was faithful and conscientious in the discharge of his work, and he was a good speaker and could expound his views on a subject, whether medical or otherwise, with clarity and in a ringing voice which his listeners could hear without any effort. His literary style has already been referred to. Polite to all, he was courteous to his inferiors, and while he had little patience with fools, he was very tender with anyone in suffering. As a clinical

[1] *Glasgow Medical Journal*, 1910, lxxiii, 27.

teacher his experience of general practice gave his teaching a peculiar value for his assistants and students; many were the practical hints which they received.

The late W. E. Henley was a patient in Lister's wards of the Edinburgh Royal Infirmary when Beatson was the house-surgeon, and he has left us a portrait of Beatson which does not appear exaggerated to those of us who knew him well. It might be read with profit by all house-surgeons, and even by the senior ranks, and I make no apology for reproducing it as a conclusion to my remarks on my old friend.

"HOUSE SURGEON"*

"Exceeding tall, but built so well his height
Half-disappears in flow of chest and limb;
Moustache and whisker trooper-like in trim;
Frank-faced, frank-eyed, frank-hearted; always bright
And always punctual—morning, noon, and night;
Bland as a Jesuit, sober as a hymn;
Humorous, and yet without a touch of whim;
Gentle and amiable, yet full of fight.
His piety, though fresh and true in strain,
Has not yet whitewashed up his common mood
To the dead blank of his particular Schism.
Sweet, unaggressive, tolerant, most humane,
Wild artists like his kindly elderhood,
And cultivate his mild Philistinism."

G. H. EDINGTON.

[The photograph reproduced is by Lafayette Ltd.]

RUSSELL COOMBE, M.A., M.D., F.R.C.S.,

Vice-President of the British Medical Association

It is with the greatest regret that we have to record the unexpected and sudden death, from cerebral haemorrhage, of Mr. Russell Coombe at his home in Exeter. In Mr. Coombe the British Medical Association loses one who for thirty years, through the medium of its organization, gave devoted and outstanding service to his profession—service acclaimed by the whole Association in its award to him, at the Centenary Meeting, of a Vice-Presidency. It is a satisfaction that this honour, which he prized so deeply, came just in time to crown a completed life's work.

Russell Coombe's father, Joseph Coombe, was a member of the London Corn Exchange, and lived at Waterford, Ireland, where Russell was born in 1855. On leaving school at Brighton he worked for some years in London, in the City; but, discovering early that he was not suited for that life, he managed by dint of steady application to save enough money to enable him to go to Cambridge, and afterwards to St. George's Hospital. Accordingly, at an unusually late age, he entered Caius College (where he was known as "Father Coombe") as a medical student, and took an honours degree in natural science in 1883. At St. George's Hospital he had a distinguished student career, and among other distinctions was awarded the Brodie prize for clinical surgery. In 1886 he qualified M.R.C.S., and thence successively held the posts of house-surgeon and assistant surgical registrar.

In 1888 he obtained the F.R.C.S., and left London to become house-surgeon at the Royal Devon and Exeter Hospital. It cannot now be said with certainty what took him to Exeter, but it is probable that he was no stranger to that city, for his grandfather, who was described as a "fine old English gentleman," resided for many years in the Mount Radford district there, and other ancestors had also lived in the neighbourhood. In 1890 he started private practice in Exeter as a surgeon, and then afterwards gradually built up a practice exclusively surgical from the first. In 1896 he took the degree of M.D.Cantab. Eventually he attained a commanding position as a leading surgeon in the South-West of England, with many cottage hospital appointments as consultant; and this despite the fact that he never held any honorary appointment on the staff of the County Hospital. This unusual surgical career may be taken as a further evidence of the extraordinary perseverance and thoroughness which were perhaps his most outstanding traits. During his active years of practice he contributed many papers on surgical subjects to the medical press; and his chief claim to recognition in the advancement of surgery was the original suggestion, in a paper published in 1911 in the *Annals of Surgery*, that the proper way to deal surgically with congenital pyloric stenosis was to make a transverse incision over the pylorus, to be followed, after thus exposing the pyloric ring, by division of it longitudinally down to, but not including, the mucous membrane, removal of the thickening, and subsequent closure of the incised peritoneum. In 1912 Rammstedt's paper on the subject appeared.

Though not an Exonian, Coombe was deeply imbued with the civic spirit, and to the end took an intense interest in the social and public life of the city of his adoption. In 1914 he accepted the Shrievalty of Exeter, but was unable to carry through his duties fully in that office owing to a request from the War Office that he should proceed to Netley Hospital, to serve as operating surgeon, a request meeting with immediate response from him. On his return after the war he may be said to have retired gradually from active practice in the ensuing three or four years. He was a keen Freemason, held various offices in the Craft, was a Past-Master of St. George's Lodge No. 112, and was also one of the founders of Northcote Lodge.

But to members of the British Medical Association it is on account of his long record of strenuous unremitting work for the Association, from 1906 locally, and from 1910 centrally, that his name has become the household word that it is; for it was his manifold efforts in this field that brought out into full view the organizing ability, thoroughness in all things, and capacity for persistence, despite opposition, which became such well-known characteristics of the man. In 1906 he became honorary secretary of the South-Western Branch, an office he held till 1918; and in 1907 he was honorary local secretary for the Association's Annual Meeting at Exeter that year. As Branch honorary secretary he took a prominent share in influencing the local profession in connexion with the inception of the National Health Insurance Act, often in the teeth of violent opposition to his own strong views. In pre-war days no one can deny that his was often a stormy passage; and in a sense it must be admitted that he sometimes seemed to invite it, for he never suffered fools gladly in those days, maintained his argument with unsparing cogency and caustic vigour, and was entirely fearless; yet ever scorned to take an unfair dialectical advantage. He was never a showman, nevertheless few indeed were the matters of any intricacy in connexion with the Branch right up to his death in which his opinion was not at some stage specially sought. He was chairman of the Exeter Division from 1923 to 1929, and representative at the Annual

* *Poems.* By William Ernest Henley. London: David Nutt. 1898.

Representative Meetings, 1908-19. He was a member of the Devon Insurance Committee from its inception, and in the less controversial post-war days, in the offices of chairman of the Devon Panel Committee (which he held from its constitution in 1914 to 1930) and of the Devon Medical Committee (which he held from 1912 to the day of his death), he led opinion by his manifest outstripping mastery of the subjects on the agenda.

The mere list of the posts he held centrally will suffice to indicate the scale of his activities there. In 1908 he was a vice-president of the Section of Surgery at the Annual Meeting. He was a member of the Organization Committee, 1910 to 1929, and its chairman from 1915 to 1921 ; member of the Finance Committee 1916 to 1920 ; and member of the committee concerned with the Expansion of the Army Medical Services in case of National Emergency, 1922-3. Apart from his *ex-officio* membership of subcommittees of the Organization Committee, he served for varying periods on the Propaganda Subcommittee, the Organization of Medical Students Subcommittee, the Medical Students and Newly Qualified Subcommittee, the Grants Subcommittee, the Scrutiny Subcommittee, and the Regulations and Standing Orders Subcommittee. He was a Member of the Council of the Association from 1915 to 1922.

In addition to his other war service Russell Coombe was a member of the Central Medical War Committee and of the Demobilization Subcommittee. But it was in the Organization Committee that he found the work most suited to his particular talents ; and of the activities in which he especially played leading parts should be mentioned the revision of the constitution which took place between 1919 and 1922, the incorporation of the Australian Branches (1920-1), the organization of the profession in South Africa prior to Dr. Cox's visit there in 1925 ; and lastly, but by no means least, the propaganda work of the Association among medical students (1919-29), a work in the successful results of which he took a peculiar interest, pride, and pleasure. He was the author of "A Short History of the Association, mainly Medico-Political," which occupied sixty pages of the *Annual Handbook* of 1921-2 ; and his last labour of love for the Association, completed within two months of his death, and after he had received his richly merited honour of being made a Vice-President, was the publication of his *History of the South-Western Branch* (1840-1932), a work described as a pattern for future publications of this type.

Russell Coombe was a man built on massive lines physically and of proportionately strong character, with a multitude of interests and some idiosyncrasies, one or two of which tended to create opposition. But underlying this ruggedness was a deeply sensitive, loyal, and susceptible nature, probably responsible for the vehemence with which he was ready to take up the cudgels if he thought that a friend was unfairly attacked or criticized. The loss in 1929 of his great friend the late Dr. William Gordon for the time being completely unmanned him. On his retirement from practice he was able to turn to many of his lifelong hobbies with characteristic intensity, such as architecture—particularly of cathedrals—art, history, and classical music, and his garden. At Sidmouth, where he had designed for himself a delightful house on the hill, he created and maintained with his own hands a lovely garden, in which he virtually lived all day, before latterly moving back to Exeter. In 1901 he married Miss Eve Johnstone of Hardwick Hall, County Durham, a relative of Viscount Selby, formerly Speaker of the House of Commons, a lady whose social gifts, wit, kindliness, and intense pride in her husband's activities beyond doubt continually inspired his efforts. There were no children. At the funeral service in Exeter Cathedral there was a large congregation fully representative of all the many civic and other public interests with which he was associated, and including a very large number of medical men. Dr. H. C. Jonas was present representing the Council of the British Medical Association, and Dr. F. A. Roper with Mr. P. D. Warburton represented the South-Western Branch.

Enough has been said to show that by the passing of Russell Coombe the Association loses a friend of outstanding abilities, public spirit, and devotion, who has been a tower of strength to his profession.

Dr. HERBERT C. JONAS (Barnstaple), chairman of the Annual Conference of Local Medical and Panel Committees, sends the following tribute to Mr. Russell Coombe's work, as a consulting surgeon, for national health insurance during the past twenty-one years:

He was a man who could fight for an object without losing his head and fighting for the sake of the fight. When the fight was over he was one of the first to see that there was still a tremendous lot of work left to do in consolidation. The whole of the South-West of England, and the county of Devon in particular, are for ever indebted to him for organization of the profession, for his unceasing support on the Devon Insurance Committee, and for such support on the Medical Service Subcommittee in this area as to make the job of his successor almost a sinecure. Perhaps not least of all his services here is that his example has incited some of his juniors to try to emulate his exertions.

Dr. S. MORTON MACKENZIE writes:

In our central activities the name of Russell Coombe will always be associated with the Organization Committee, though his many interests included the Central Medical War Committee and its executive subcommittee, his secretaryship of the Annual Meeting at Exeter in 1907, and his membership for many years of the Council and the Representative Body. On the Organization Committee he served from 1910 to 1929, and was its chairman from 1915 to 1921. The work of the Organization Committee is not spectacular, and it is given to few to know of the work, responsibility, and time it asks from its chairman at and between its meetings and those of its subcommittees. These duties he ungrudgingly carried out from his beloved cathedral city of Exeter, but his influence went very much further than this in his steadying effect on our constitution. The constitution of the B.M.A. is a very wonderful organization, almost unique, I believe, in having its oversea Branches, which, while functioning with considerable independence as local medical societies, have, and take a pride in, a very real voice in the policy and decisions of the Association. As time goes by circumstances and personalities call for alterations, and it was largely due to Russell Coombe's influence during these nineteen years that these alterations were effected, keeping intact the essentials of our machinery, while allowing incorporation, federation, and even affiliation to our brothers in their oversea Branches.

In our home organization he could speak from long experience of our Branches and Divisions, of their leading spirits, their activities, and their finances ; but I think his greatest public work was done in the overhaul of the whole constitution of the Association, the results of which he presented to the Representative Body at Newcastle in 1921. In acknowledging a vote of thanks to himself and his lifelong friend and fellow worker, Sir Jenner Verrall, he mentioned that the work had been done by what was known as the Scrutiny Committee, which had met fortnightly for a whole year, and which he attended regularly, with its 200-mile double journey, in addition to his other

meetings. It was owing to the confidence of his fellow Representatives in his sound judgement that the whole of the numerous amendments to the Articles and By-laws were passed, with the exception of one or two, which involved new principles and well-founded and successful opposition, with almost complete unanimity and short discussion.

Strong but self-effacing, he did his work—his "labour of love" as he said in his farewell words—as thoroughly in London as in the periphery and in his professional life, of which others speak in this number. An ideal committeeman, a very efficient and quiet chairman, he gave his friendship and very warm support to the chairmen of his subcommittees and his other colleagues in all they were trying to do for the good of the Association. Advancing years and infirmity made the constant travelling to London very difficult, and in 1929 he was able to retire to the happy seclusion of his study, his love of art and music, and his many local interests inside and outside the profession; but he never forgot his old committee, and many were the comments and very real the encouragement he gave to his successor in the work of the committee and of the Council. His last year, 1932, was made happy for him by two events at least—the publication of his small *History of the South Western Branch*, reviewed in the *Journal* a few weeks ago, and his election as a Vice-President at the Centenary Meeting, which gave him great pleasure, and which brought him for a few moments to the Great Hall for what proved a last look at his old activities and fellow workers.

[The photograph reproduced is by S. H. Chandler and Co., Southampton.]

T. B. HYSLOP, M.D.

Late Physician Superintendent, Bethlem Royal Hospital, and Lecturer on Psychological Medicine, St. Mary's Hospital

In the passing of Dr. Theophilus Bulkeley Hyslop we have lost a man of outstanding ability and versatility. He graduated in medicine in Edinburgh in 1886, but before he took his M.D. degree was, at the age of 25, assistant medical officer to Bethlem Royal Hospital, of which he became medical superintendent ten years later. His name was chiefly associated with that institution, and it was there that I, as one of his assistants for about fourteen years, had the great pleasure and privilege of an intimate and personal knowledge of this remarkable man.

In the 'nineties he achieved distinction in mental science, obtaining the Gaskell medal, writing several of the articles in Tuke's *Dictionary of Psychological Medicine*, and publishing an excellent book on *Mental Physiology*, which, however, never reached a second edition for some reason or other. Later he was rather attracted to the dramatic aspects of mental disease, gave public lectures on insane art and kindred subjects, and wrote a book on *The Borderland*; but in professional relationship his mind was always alert in difficult situations, and he usually seemed to hit the right nail on the head; at various times he was president of the Society for the Study of Inebriety, the Chelsea Medical Society, the Section of Psychological Medicine and Neurology at the British Medical Association meeting in 1910, and the Psychiatrical Section of the Royal Society of Medicine. It is therefore clear that he was regarded as a great authority on mental disease, and his lectures at St. Mary's Hospital achieved much popularity.

Hyslop scintillated with wit and humour, and was such a good raconteur and after-dinner speaker that at one time he was president of the Omar Khayyám Club. His versatility in the way of hobbies knew no bounds, and he achieved outstanding merit in everything he touched. He was a man of fine physique, and in early life was a noted pole-jumper. He played cricket well in any part of the field, and with his keen vision was up to county form as a wicket-keeper. He excelled at tennis, and, if I remember rightly, his golf handicap was plus 2. He was an expert at billiards, and I have often seen him put up a break of 100 or more. He was a first-class musician; he could play the piano and violin magnificently, and several other instruments to some extent. He composed quite a lot of music, including a number of orchestral pieces, some of which have been played at promenade concerts. He painted hundreds of pictures, and three of his larger canvases were hung at the Royal Academy. I remember his taking to sculpture at one time, or rather modelling in wax, and he produced several beautiful little things. He once published a book in imitation of Swift (*Laputa*), in which he satirized present-day customs—or rather, customs of twenty-five years ago. Another publication was a little book of poems, not perhaps above criticism, but quite good in their way. One year, for our annual show at Bethlem, he dramatized a book by T. S. Clouston, and produced a very amusing play.

It will rightly be concluded that Hyslop was a man of untiring energy. He was always doing something, and if he had been able to keep to one channel there is not the slightest doubt that he would have been a very great man indeed. His latter days were saddened by something in the nature of a neurosis. He developed an anxiety state in consequence of air raids during the war. Later this became manifest as a sort of tic of the shoulders and face, and ultimately the malady bore a strong resemblance to paralysis agitans. He will be greatly missed, for he had an enormous circle of friends.

Dr. Hyslop was a member of the Representative Body of the British Medical Association in 1903, when the Annual Meeting was held in Swansea, and again in 1904 at the Oxford meeting.

W. H. B. STODDART.

THE LATE DR. EICHHOLZ

Dr. ALFRED C. JORDAN writes: May I, as a lifelong friend of the late Dr. Alfred Eichholz, add a few lines to your admirable notice (February 18th, p. 294). The mere record that he "gained first-class honours in both parts of the Natural Sciences Tripos" seems to those who were at Cambridge with him a very inadequate account; we knew that in Part I he was easily at the head of the list in both anatomy and physiology, while in Part II, not only did he gain a first class in each subject and a distinction in one, but (as Professor Alexander Macalister himself told me) the examiners found it difficult to decide in which subject he had gained the greater distinction. He seemed built for a brilliant career as a researcher and university teacher, and indeed he became a lecturer at once, and his earliest publications (while he was still reading for Part II of the tripos) were models of clear thinking and lucid exposition; these were: "The palate process of the maxilla," and "The morphology of limb arteries," published in the *Journal of Anatomy and Physiology*, 1892 and 1893 respectively. Because no vacancies were in prospect at the university within a reasonable time, Eichholz decided to take a chance that arose of entering the Civil Service; thus abstract research lost what research in the cause of the school children—especially the afflicted children—gained. His sympathy with children, and their instinctive confidence in him, are the theme of many a story; and it was an inspiration to teachers to see him seated by the side of a young child, trying out some simple tests with him; to see the child's smiling enjoyment of the experience and almost tearful regret at its necessary termination. Dr. Eichholz will be sadly missed by those teachers and others who sought his advice on every point that arose, well knowing they would never ask in vain or fail to receive the help they needed. Eichholz never took up sports, yet he was a perfect companion on a holiday, whether in the hills or by the sea.

Road Accidents in the last Five Years.—Replying to Mr. Lewis, on February 15th, Mr. PYBUS stated that figures compiled by the Home Office relating to the number of persons killed or injured in street accidents in Great Britain for the years 1928-32 were as follows:

	Killed	Injured
1928	6,138	164,838
1929	6,696	170,917
1930	7,305	177,895
1931	6,691	202,119
1932	6,651	206,410

(Figures for 1932 provisional.)

The following were the number of persons killed or injured in accidents reported as being attributable to mechanically propelled vehicles:

	Killed	Injured
1928	5,489	133,431
1929	6,017	140,248
1930	6,551	146,243
1931	5,936	164,406
1932	Figures not yet available	

The provisions of Part I of the Road Traffic Act, 1930, came into operation on January 1st, 1931, and in that year the figures for fatal accidents for the first time showed a decrease. If the provisional figures for 1932 were confirmed there would be a further slight decrease. The number of persons injured showed a continued increase; this might be due, to a considerable extent, to the new requirements in the Road Traffic Act, 1930, with regard to the reporting of accidents.

Foot-and-mouth Disease at Reading.—Replying, on February 16th, to Sir Percy Hurd, Dr. ELLIOT stated that he had no reason to think that disinfection of Reading market was not carried out strictly in accordance with the regulations. There was only one outbreak of foot-and-mouth disease directly associated with the market. This occurred on January 25th, and there was no evidence of the spread of the disease as the result of inadequate disinfection. So far as concerned the preceding outbreaks, all the evidence pointed to infection having originally been contracted at the Reading loading docks of the Great Western Railway, and not Reading market. As all these infections, so far as could be traced, were contracted within the course of twenty-four hours in the loading banks, it would appear that disinfection must have been thorough and efficacious, especially in view of the fact that it was being carried out as a matter of routine and before any of these outbreaks were discovered.

Midwifery Service in Finsbury.—In reply to Mr. Hicks, on February 16th, Sir HILTON YOUNG said that early last year Finsbury Borough Council decided not to proceed with the erection of a proposed maternity and child welfare centre, and to substitute for the services of the municipal midwives a midwifery service provided by arrangement with the hospitals and nursing associations which served the borough. He was not aware that there had been any reduction of maternity and child welfare services in this borough. In due course a review would be made of the working of the midwifery scheme.

Loans for Water Supply Schemes.—Sir HILTON YOUNG told Mr. Levy, on February 16th, that he was always ready to entertain applications for sanction of loans for schemes of water supply which were remunerative or urgently needed on public health grounds. During the six months ended January 31st loans amounting to £484,500 were sanctioned.

Death from Generalized Vaccinia.—In reply to Mr. Groves, on February 16th, Sir HILTON YOUNG said he had made inquiries into the death of an infant after vaccination. There was no doubt that the child died from generalized vaccinia, a very rare sequel of vaccination, which was explicable only on the assumption of a peculiar susceptibility of the individual to the vaccine. The same batch of lymph had been used for at least 1,200 other vaccinations without ill effect. Mr. GROVES mentioned that an inquest on this case was held in Liverpool on January 20th.

Ambulance Exchange at Town Boundaries.—Sir HILTON YOUNG told Mr. Doran, on February 16th, that he would consider any evidence alleging injurious effects resulting from the practice of transferring sick patients from one hospital ambulance to another at the various metropolitan and other town boundaries.

Report on Economic Depression and Public Health.—Sir HILTON YOUNG told Mr. G. Macdonald, on February 16th, that he was aware of the memorandum prepared by the Health Section of the League of Nations on economic depression and public health. He did not think it necessary to supplement by another inquiry in Great Britain the information from official and other sources on conditions in England and Wales which had already been communicated to the Health Section of the League of Nations. Mr. RAMSBOTHAM told Mr. Rhys Davies, on the same day, that the effect of the economic depression on the health of school children was being carefully watched by the Board of Education and the local education authorities, as part of the ordinary work of the school medical service. Special measures to safeguard the health of the children were being taken in the areas where depression was most acute. As stated in the latest annual report of the Board's chief medical officer, the depressed state of industry did not appear to have exerted any measurable physical ill effect upon the child population.

Manufacture of Cheese.—On February 14th Mr. R. J. RUSSELL brought in a Bill to amend the Food and Drugs (Adulteration) Act, 1928, and to control the sale of cheese other than whole-milk cheese. The Bill proposed that the butter-fat in cheese should be standardized at from 40 to 55 per cent., and that all cheese not made of whole milk should be marked as "skimmed-milk" cheese.

Small-pox in Calcutta.—Sir SAMUEL HOARE, replying to Mr. Groves on February 20th, said that vaccination was compulsory in the city of Calcutta under the Bengal Vaccination Act of 1880. The number of small-pox deaths in that city was as follows: 1911, 41; 1912, 77; 1913, 120; 1914, 1,038; 1915, 2,560; 1916, 58; 1917, 28; 1918, 545; 1919, 1,870; 1920, 2,925; 1921, 89; 1922, 450; 1923, 157; 1924, 316; 1925, 3,923; 1926, 934; 1927, 2,860; 1928, 558; 1929, 393; 1930, 1,818.

Notes in Brief

The Deputy-Director of Sanitary Services recently made a tour of the mining district in the Kenya goldfield, and has furnished the Kenya Government with a report on the prevailing health conditions.

Medical News

The one hundred and fifty-ninth anniversary dinner of the Medical Society of London will be held at the Trocadero Restaurant on Wednesday, March 8th, at 7.30 for 8 o'clock.

A series of lecture discussions on "Mental hygiene in everyday life" will be given at 11, Chandos Street, W., on Wednesdays at 5.30 p.m., commencing on March 1st, when Dr. J. A. Hadfield will discuss "anxiety." On March 8th Dr. E. A. Bennet will speak on "confidence," on March 15th Dr. George Somerville on "superstition," on March 22nd Dr. John Rickman on "ambition," on March 29th Dr. C. W. Kimmins on "adaptability," and on April 5th Dr. E. A. Hamilton-Pearson on "discipline." Tickets, price 1s. 6d. each, or 7s. 6d. for the course, may be obtained from the Secretary of the National Council for Mental Hygiene, 78, Chandos House, Palmer Street, S.W.1.

The next series of eight lectures and demonstrations on tropical hygiene, which are intended for men and women outside the medical profession proceeding to the Tropics, will be given by Lieut.-Colonel G. E. F. Stammers, from March 6th to 15th. These courses of instruction, in addition to providing simple rules for guidance in regard to personal hygiene, will also embrace a short account of some of the more common diseases, with advice in regard to measures of protection and self-treatment. The synopsis and other particulars can be obtained from the secretary, London School of Hygiene and Tropical Medicine, Keppel Street, Gower Street, W.C.1.

Dr. J. H. Driberg will deliver a public lecture on practical uses of anthropology, at Caxton Hall, Westminster, to-day, Friday, February 24th, at 5.30 p.m.

A joint conference will be held at Bath on Saturday, March 4th, with the object of drawing attention to the claims of British health resorts and of co-ordinating effort and securing closer co-operation in propaganda. The Right Hon. Douglas Hacking, M.P., will preside.

A three months' course of lectures and demonstrations on clinical practice and in hospital administration will be given at the Brook Hospital, Shooter's Hill, Woolwich, on Mondays and Wednesdays and alternate Saturdays, beginning March 6th. Particulars may be had from the medical officer of health, L.C.C. Public Health Department (Special Hospitals), County Hall, S.E.1.

The following lectures, arranged by the Institute for the Scientific Treatment of Delinquency, will be given at 8.30 p.m. in University College, Gower Street, W.C.: March 3rd, Mr. Kingsley Martin, on "Crime and publicity"; March 17th, Dr. R. G. Gordon, on "The relationship of delinquency to the broken home." Admission free, discussion invited.

On Friday, March 3rd, the director of the Zuider Zee Works (Mr. V. J. P. de Blocq van Kuffeler) will give an illustrated lecture in aid of King Edward's Hospital Fund, describing the way in which this unique engineering achievement has been carried out under his supervision. The lecture will be at 5.30 p.m., at Drapers' Hall, Throgmorton Street, E.C., and the chair will be taken by His Excellency the Netherlands Minister. Tickets (3s. reserved, and 2s. unreserved) can be obtained from the secretary, King Edward's Hospital Fund for London, 7, Walbrook, E.C.4.

The one hundred and second session of the Harveian Society of London opened on February 9th with a clinical meeting at the National Hospital, Queen Square. On March 9th, at 8.30 p.m., Professor William Wright will deliver the Harveian Lecture, entitled "A pre-Harveian lecture on the anatomy and physiology of the central nervous system," at the Paddington Town Hall. At the meeting on April 13th a discussion, with cinema demonstration, on Bohler's influence on the treatment of fractures, will be opened by Mr. R. Watson Jones, Mr. E. P. Brockman, and Mr. Bryan Burns. A discussion on modern methods of treatment of acute specific fevers will be opened by Dr. R. A. O'Brien and Dr. William Gunn on May 11th. The Buckston Browne dinner will take place at the Star and Garter Home, Richmond, on June 8th at 7.30 p.m., and the summer meeting on July 20th, at 3.15 p.m., when Sir Buckston Browne will hold a reception at Down House, Downe, Kent, and give an address on Charles Darwin.

The London School of Dermatology announces that an examination for the Chesterfield Medal will be held at St. John's Hospital for Diseases of the Skin, Leicester Square, W.C., on March 20th and 21st at 10 a.m. It is open to all qualified medical practitioners.

The next lecture in the series Practical Problems in Medicine and Surgery, arranged by the Fellowship of Medicine, will take place at 11, Chandos Street, W., on February 28th, at 4 p.m. There will be a week-end course of practical demonstrations in general medicine and surgery at the New General Hospital, Southend-on-Sea, on March 4th and 5th; details of special arrangements with the Palace Hotel, Southend, can be obtained from the Fellowship of Medicine, 1, Wimpole Street, W. Forthcoming courses include medicine, surgery, and gynaecology at the Royal Waterloo Hospital, March 6th to 25th, all day; a course in orthopaedics at the Royal National Orthopaedic Hospital, March 6th to 18th, all day; an evening course in rheumatism, March 7th to 23rd, Tuesdays and Thursdays, at 8.30 p.m. A course in psychological medicine at the Bethlem Royal Hospital, March 14th to April 7th, Tuesdays and Fridays, at 11 a.m.; a course in neurology at the West End Hospital for Nervous Diseases, March 13th to April 8th, daily, at 5 p.m.

A five weeks' introductory series of lectures on psychotherapeutic theory and method will be delivered at the Institute of Medical Psychology, Torrington Place, London, from March 10th to April 11th, on Friday and Tuesday afternoons, commencing at 4.45 p.m. This series forms part of a one-year course, but may be attended by medical practitioners who wish to take it as an isolated course of lectures, the fee being in their case £2 2s. The main course, after this introductory series of lectures, is arranged for two groups, consisting respectively of those who can only devote three hours twice a week, and those who, with a view to specialization, are prepared to allot a minimum of twelve hours in the week, attending on three days. Each of these groups is limited to six members, and neither will be held for less than four. A short intensive fortnight's course, with three lectures each day, will be conducted in June, and elementary and advanced courses in mental testing in the spring. Particulars of these and other lectures may be obtained from the honorary lecture secretary, 6, Torrington Place, W.C.1.

The London County Council has granted permission to Dr. T. Lumsden, director of the Cancer Research Laboratory at the London Hospital, to arrange for the treatment with anti-cancer serum of patients in the Council's hospitals who may assent to such treatment, provided that the work is carried on in each case under the supervision and control of the medical superintendent of the hospital concerned.

The news of Dr. Leonard Robinson's promotion to the rank of officer of the Legion of Honour will be warmly received by his many friends in Paris, where he is one of the most prominent members of the British colony, and in London: he was nominated chevalier of the order for his services during the war. The success of the conferences on tropical medicine in connexion with the French Colonial Exhibition of 1931 was due, in large measure, to Dr. Robinson, and this recognition of his services is therefore especially welcome.

The January issue of the *Canadian Medical Association Journal* contains a paper by the president, Dr. Alexander Primrose, being the first of a series of special articles on medical education.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, B.M.A. House, Tavistock Square, W.C.1.**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names, not necessarily for publication.

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of proofs.

All communications with reference to ADVERTISEMENTS, as well as orders for copies of the *Journal*, should be addressed to the Financial Secretary and Business Manager.

The **TELEPHONE NUMBERS** of the British Medical Association and the *British Medical Journal* are MUSEUM 9861, 9862, 9863, and 9864 (internal exchange, four lines).

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The address of the Irish Office of the British Medical Association is 18, Kildare Street, Dublin (telegrams: *Bacillus, Dublin*; telephone: 62550 Dublin), and of the Scottish Office, 7, Drumsheugh Gardens, Edinburgh (telegrams: *Associate, Edinburgh*; telephone: 24361 Edinburgh).

QUERIES AND ANSWERS

Corneal Ulcer

Dr. RACHEL GETZ (Johannesburg) writes: I note with interest the letter by "M. C." in your issue of December 17th, 1932. May I make the suggestion that it is an ulcer of dental origin, and that the gums be *x*-rayed for any roots, unerupted wisdom teeth, apical abscesses, etc., and that these should be searched for before any local treatment for the ulcers is carried out. The nose and accessory sinuses should be carefully investigated.

Digitalis in Partial Heart-block

Dr. G. ARBOUR STEPHENS (Swansea), in a letter commenting on the query by Dr. Frewen Moor (February 4th, p. 211) and the reply of Dr. Fitzgerald Peel (February 18th, p. 297), points out that the systolic and diastolic pressures vary with the width of the armlet used in sphygmomanometry. He states also that a "large percentage of medical men are quite unable to make a reliable estimation of the diastolic pressure." He would like to draw readers' attention to his method, outlined in the *British Medical Journal* of February 8th, 1930 (p. 242).

Income Tax

Payment of Schedule A Tax by Tenant

"R. C." is tenant of a house. He has informed the collector of the landlord's name and address, but the collector is pressing for early payment by "R. C."

*** The collector is within his rights. The person liable by law is the occupier of the premises, but he can deduct the tax from his next subsequent payment of rent up to the maximum of 5s. in the £ on the amount of the yearly rent payable.

Assessment of Properties

"D. S. M." inquires as to the basis on which rented houses are assessed.

*** The gross assessment is determined by the amount of the rent payable provided that it is fixed by an agreement made within the previous seven years and represents a bona fide letting at full value. From the gross assessment a deduction for cost of maintenance is made according to a statutory scale, but where the liability for the upkeep rests on the tenant that deduction is not allowed to reduce the net assessment below the amount of the rent.

Sale of Practice—Subsequent Bad Debts

"A. S. P." sold his practice as from April, 1931, and discharged his income tax liability to that date. He now finds that the debts as shown in his closing account were overvalued, owing to so many proving wholly or partially bad, but the inspector of taxes contends that the debts in question were "presumably expected to be good at that date and there are no grounds for revising the estimate in view of subsequent developments."

*** The legal view taken by the inspector has judicial authority in a case where the result was adverse to the Revenue, but we doubt whether the authorities would desire the rule to be applied to such a case as this. Also the valuation of a practitioner's outstanding debts is an extremely difficult matter, and the methods employed in valuing commercial debts are hardly applicable. In all the circumstances we advise our correspondent to write to the Secretary, Board of Inland Revenue, Somerset House, W.C.2, explaining the circumstances and asking for an allowance to be made in respect of an overcharge arising through an error or omission, or alternatively on grounds of equity.

Retirement from Colonial Service

"B. M. W." arrived in England in November, 1932, on leave prior to retirement. His wife had arrived in June, 1932, and, as arranged, the Crown Agents made her certain payments on account of "B. M. W.'s" salary for the period June to November, 1932. Are those payments liable to British income tax?

*** Yes. In the circumstances "B. M. W." becomes ordinarily resident in the United Kingdom for the financial year 1932-3, and as such is liable to account for tax on the whole of the remuneration paid in this country.

Expenses of Travelling in an Official Capacity

"X Z" went to Winnipeg in an official capacity to attend the British Medical Association Meeting, and some time ago incurred expenses in travelling to attend meetings in London as a member of a British Commission. Are such expenses deductible for income tax purposes?

*** The general principle is that only such expenses can be deducted as are incurred in carrying on the work for which the remuneration assessed is received. The matter is not free from doubt, but expenses of the kind referred to above would probably be regarded as having too indirect an effect on the gross income assessable to justify treating them as allowable for income tax purposes.

Sick Benefit—House Repairs

"J. M. L." inquires whether money received as sick benefit is taxable; also whether he can claim any allowance for the expenditure of £100 on the garage—held with the house on a repairing lease—incurred through a crack developing in a wall.

*** The sick benefits are not liable to income tax. In our opinion the garage is maintained wholly or mainly for the purpose of the practice, and the £100 is therefore a proper claim as an expense of the practice either as a whole or in the ratio in which the car expenses are allowed—for example, if these expenses are allowed after deducting one-tenth for private use then "J. M. L." should claim nine-tenths of the cost of repairing the garage.

LETTERS, NOTES, ETC.

A Medical Film Library

A catalogue of motion pictures of surgical operations and medical subjects has been prepared by the Medical Department of Kodak Limited. During the last few years this department, with the aid of well-known surgeons, has been compiling a library of films taken during most of the major and minor surgical operations usually performed in hospitals. Films of many rare operations have also been secured. This library of medical films is now the largest of its kind in the world. In addition to films of operations there are others dealing with anatomy, dentistry, ear, nose and throat, first-aid, neurology, obstetrics, ophthalmics, orthopaedics, physiology, radium and ray therapy, nursing, and veterinary science. With the exception of the physiologic and nursing subjects the films are not intended for the general public, and are only loaned for exhibition to qualified practitioners and registered medical students. Copies of the catalogue may be had on application to the Medical Department, Kodak House, Kingsway, W.C.2.

Phlebitis in Enteric Fever

Dr. DOUGLAS WHITE (Crosslet, Dumbarton) writes: In your *Epitome* of December 10th, 1932, appeared a short statement of a case of typhoid fever in which phlebitis preceded instead of following, the intestinal disturbance. This was considered unique. Perhaps, however, my own case may be of interest to readers, though probably not on all fours with the *Epitome* case. In 1914 I was inoculated against typhoid (T.A.B.) when intending to go over-seas. The reaction was negligible. In 1917 I was again inoculated, and was laid up for three days. Shortly afterwards I had an acute arthritis of my shoulder on the same side. After some time it got better; then the other shoulder was acutely attacked. This attack was followed by a phlebitis of the right arm (median basilic, spreading to axilla). I was laid up, and, after a week, a lung embolism happened which nearly finished me (February, 1918). Then the vein stiffened up, and after three months I reported for light work, and was sent to Norwich. There I noted that the affected vein was becoming permeable, and the blood was again flowing. After that I began to feel "seedy," and one day, being unfit for work, I found my temperature was up to 102.5°. I got home, and was laid up with typical typhoid; in the second week my other lung was blocked out with an embolism. My physicians considered, as I myself, that the whole process was typhoidal from the start, resulting from a faulty inoculation with some living bacilli. It would be interesting to know whether there are any similar cases on record. The originally blocked vein has been perfectly normal since, and I should like to know whether many physicians have observed veins recover to normal which have been so definitely blocked as to feel like strings of whipcord for some three months.

The full title of Dr. W. W. Shrubshall's book, reviewed in our issue of February 18th (p. 276), should have been given in the footnote as *Things to be Desired or Do*: *Health Reminders*.

Vacancies

Notifications of offices vacant in universities, medical colleges and of vacant resident and other appointments at hospitals will be found at pages 44, 45, 46, 47, and 50 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 48 and 49.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 67.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

141 Writer's Cramp

Among the causes of writer's cramp COSTEDOAT and AUJALEU (*Paris Méd.*, November 26th, 1932, p. 445) call attention to the patient's mental and emotional outlook as being a direct or contributory aetiological factor. A review of the literature shows that this trouble is associated with many organic lesions, and that such association occurs so frequently that it cannot be a mere coincidence. Writer's cramp has been noted in spasmodic torticollis and in lesions of the vertebral column, as revealed by radiological examination. According to the present authors, who briefly describe this condition, both the mental and organic elements, especially the first, are necessary for its production. It usually occurs in emotional subjects whose lack of balance frequently dates from infancy. In support of this opinion three cases of osteophytic spondylosis, neurofibromatosis, and scapulo-humeral arthritis respectively are recorded, in each of which the emotional factor was markedly present. From this study the authors maintain that treatment should not be limited to the organic condition, but that psycho-therapy is also indicated.

142 Recovery from Streptococcal Meningitis

M. S. ERSNER and T. H. MENDELL (*Journ. Amer. Med. Assoc.*, November 5th, 1932, p. 1596), who record two illustrative cases, state that only forty-six cases of the cure of streptococcal meningitis have hitherto been published. The present cases occurred in a man, aged 21, and a young woman, aged 19, who developed haemolytic streptococcal meningitis secondary to otitis media. Mastoidectomy was performed in both, and blood transfusions, frequent lumbar punctures, and intrathecal injections of anti-streptococcal serum were used as adjuncts to the principal treatment, which consisted in the injection into the carotids of acriflavine and Pregl's solution twice daily. In both cases cerebral dehydration (effected by restriction of the fluid intake and the intravenous injection of dextrose) lessened the manifestations of increased intracranial pressure, and so proved of great advantage.

143 Chronic Progressive Polyarthritis Statistics

H. C. GRAM (*Ugeskrift for Laeger*, November 10th, 1932, p. 1069) has made various statistical analyses of the cases of primary and secondary chronic progressive polyarthritis coming under the sickness insurance scheme in Denmark. The primary cases were those which had begun with arthritis, while the secondary cases were sequels to rheumatic fever. But it was found even more difficult to distinguish between these two groups on paper than in clinical practice. After the exclusion of such simulants of chronic progressive polyarthritis as osteo-arthritis, gonorrhoeal, uric acid, and other forms of arthritis, there remained 1,014 patients, only 168 of whom were men (16.6 per cent.). In the primary group the percentage ratio of men to women was as 14.1 to 85.9; whereas in the secondary group this ratio was as 31.1 to 68.9. The relative susceptibility of women to progressive polyarthritis was thus greatest in the primary form of the disease. To what extent the disease impairs the expectation of life is shown by an analysis of 379 "primary" and 60 "secondary" patients whose ages at the onset of the disease and at death were known. The normal expectation of life proved to be considerably reduced, and in the older age groups this reduction was approximately the same for the primary as for the secondary cases. The reduction of the expectation of life was greatest among persons between 10 and 20 in the secondary group; this may have been connected with the cardiac complications following genuine rheumatic fever. An analysis of the ages at which the disease in the primary group began in women showed that the years immediately before, during, and just after the climacteric were the most fatal, although the disease might begin at any other age. The beginnings of the disease in the secondary group were, on the average, earlier in life. An analysis of 143 cases in the primary group showed that the joints first to be involved were those of the hands and fingers in ninety-five cases (66.4 per cent.). The joints of the foot and toes came next, with twenty-one cases (14.7 per cent.); the knee-joint came third, with sixteen cases (11.2 per cent.); the shoulder-joint next, with nine cases (6.3 per cent.); and the hip last, with only two cases (1.4 per cent.). Haemoglobin examinations of 252 patients showed that a little more than half of them suffered from anaemia, generally in a mild form.

Surgery

144 Acute Essential Gangrene of the Scrotum

P. GOROWITZ (*Urol. and Cut. Rev.*, December, 1932, p. 813), who records an illustrative case, states that cases of gangrene of the scrotum may be divided into two groups: (1) those in which gangrene follows some antecedent lesion of the scrotum (the majority of cases); and (2) those in which there has been no previous trauma or disease of the genital organs to account for the condition. The infection gains entrance by some insignificant abrasion, especially by scratching and inoculation with the finger-nails. In rare instances gangrene of the scrotum has occurred in small-pox, scarlet fever, mumps, typhus, malaria, cholera, and influenza. The following organisms have been incriminated in order of frequency: *B. coli*, staphylococci, *B. proteus*, diphtheroid bacilli, and the fusiform bacillus. The disease almost always begins acutely with chill, fever, and rapid pulse, accompanied in severe cases by vomiting, delirium, and sometimes collapse. After a varying interval the scrotum becomes red, swollen and painful, and emphysematous; crepitation may frequently be found on palpation. The penis is often involved, and the process may spread over the abdominal wall. Treatment consists in prompt incision, extending to and beyond the infection in all directions, and the simultaneous administration of anti-streptococcus or anti-gangrene serum. Wet dressings of potassium permanganate solution should be applied, or of 10 per cent. sodium chloride solution, or of Dakin's solution. The intravenous injection of glucose solution and the adoption of other stimulant measures are of value. Gorowitz's patient was a man, aged 58, who developed gangrene of the scrotum without any previous local disease; *B. coli* was found in the pus. Several wide incisions were made, and recovery ensued in two and a half months.

145 Diagnostic Percussion in Acute Abdominal Conditions

M. GRASMANN (*Münch. med. Woch.*, December 23rd, 1932, p. 2071) points out that it is impossible to make an accurate diagnosis in all acute abdominal conditions. A wrong diagnosis may be due to (1) a good history not having been obtained; (2) the importance and localization of the initial pain not having been investigated; (3) non-examination of other organs in "classical" cases; and (4) disregard of the value of a rectal examination. He adds that, although the surgeon may realize that an operation has to be performed, it may be extremely difficult to locate the organ which is affected. He stresses the point that, as these patients are very ill, they do not stand a second incision well if the first "exploratory"

incision is found to be improperly placed. In early cases it may be impossible to find the site of maximum tenderness and muscular boarding by gentle palpation; in late cases this cannot be done. Grasmann takes as a guide the fact that peritonitis will be most intense at the starting point of the disease, and tenderness most marked over the affected organ. He has found percussion of the greatest value in these cases. Starting over a point which is obviously not tender—for example, the thorax or thigh—he systematically percusses towards the point which is believed to be the site of the trouble. If no tenderness results from light percussion, the suspected site is heavily percussed. With a little experience this method confirms the provisional diagnosis in almost all cases. The author has found this method of the greatest value in the differential diagnosis between appendicitis and lesions of the female genitals, perforated gastric and duodenal ulcer, other acute abdominal lesions, and in the diagnosis of appendicitis in children and the aged.

146 Occupational Therapy in Fractures

J. W. HINTON (*Amer. Journ. Surg.*, November, 1932, p. 292) gives two reasons for preferring occupational therapy in fractures to massage and other forms of physiotherapy. The first is the re-establishment of confidence in the patient, so that he becomes willing to use increasingly the injured part, and can be induced to compete in this respect with other patients suffering from similar disabilities. The second is that vigorous massage has been known to give rise in children to myositis ossificans, especially in elbow fractures; it is conceivable, therefore, that this might happen in adults, though to a lesser degree. In fracture treatment the main objective is not necessarily anatomical alignment, but rather the functional result and economic restoration; the routine use of *x* rays has tended to over-emphasize the anatomical sequel, and to minimize regrettably attention to the subsequent earning capacity and functional ability. Hinton illustrates briefly the various possibilities of occupational therapy; his experience is that it produced considerably more favourable results than did baking, massage, or other forms of physiotherapy. The preliminary treatment was immediate reduction, with the application of a cast or moulded splint, the one exception being fractures of the shoulder, which were treated by traction. It was most unusual to have to resort to an open operation, provided that the patients were *x*-rayed immediately and treatment instituted.

Therapeutics

147 Treatment of Syphilis

H. BEERMAN (*Arch. Derm. and Syph.*, November, 1932, p. 796) emphasizes the danger of treating syphilis by intravenous injections of bismuth, and cites various reported cases in support of his contention. The deaths were usually preceded by symptoms of colloidoclastic shock. The author insists that, when giving an intramuscular injection, it is highly important to ensure that the point of the needle has not entered a deep vein. Delayed deaths due to bismuth intoxication are usually attributable to involvement of the gastro-intestinal tract, the liver, or the kidneys, severally or jointly. No particular bismuth preparation is regarded as being preeminently toxic. Haemorrhagic tendencies have been frequently noted in patients receiving bismuth therapy, but there is a great diversity of opinion whether these are due partly to the disease, partly to organs otherwise injured, or partly to injury caused by the bismuth. P. A. O'LEARY and J. R. ROGIN (ibid., p. 783) cite statistical evidence that the administration of the arsphenamines does not predispose to neurosyphilis; in a series of 500 cases they found that this line of treatment had not been employed in the early stages of syphilis in 85 per cent. The graver forms of neurosyphilis were much more common in cases in which the arsphenamines had not been given, or had been administered in inadequate dosage. In this series of cases 72 per cent. of the patients had not received treatment; 13 per cent. had been only given iodides or mercury in some form; 12 per cent. had been imperfectly treated with one of the arsphenamines and mercury; while only 3 per cent. had been dealt with to the extent that is now considered adequate. A full course of anti-syphilitic treatment, begun after the diagnosis of neurosyphilis had been clinched, proved equally efficient whether there had been previous treatment of the kind or not, except that the blood was normal in a greater percentage of cases when there had been previous arsphenamine administration.

148 Cortin Therapy

F. A. HARTMAN *et al.* (*Journ. Amer. Med. Assoc.*, October 29th, 1932, p. 1478) contend that the ill success attending the use of cortin (an extract of which 1 c.cm. contained the product of 40 grams of suprarenal cortex) in Addison's disease in some cases may be due to inadequate dosage, and also that other factors in the aetiology of the disease may exist. In proof of this notes are given of seven cases in which improvement followed the administration of large doses, even in certain patients who subsequently succumbed. Experiments have shown that such factors as infections, toxins, exposure to extreme temperatures, exercise, and mental worry increase the demands on the suprarenals and necessitate higher doses of cortin; congenial surroundings and plentiful rest are consequently important adjuvant measures in treatment. The cortin was administered subcutaneously, the usual dose being 5 c.cm. In a crisis 5 to 10 c.cm. should be given intravenously, followed in an hour or so by a like subcutaneous dose. Believing that cortical insufficiency exists in other conditions, the authors have given cortin with temporary benefit in muscular atrophy and dystrophy, although the ultimate course of the disease was unaffected. In an early case of toxic goitre its exhibition brought definite relief. Cortin may be of value in asthenia following infection but must be viewed as dangerous if active infection is present. The authors believe that cortin is a useful therapeutic agent in other conditions besides Addison's disease, but that much work is needed to ascertain those in which it is indicated.

149 Insulin in Pulmonary Tuberculosis

T. G. HEATON (*Canadian Med. Assoc. Journ.*, November 1932, p. 498) has found insulin most valuable in the treatment of chronic pulmonary tuberculosis, but useless in acutely active or terminal cases. It acts by restoring the falling appetite and so building up the natural resistance and nutrition. Half an hour before each meal 5, 8, or 10 units were given, and the dose was increased if the patient did not feel either a definite reaction or an increased appetite; the dose was reduced if symptoms of faintness or dizziness were experienced. It was never found necessary to increase the dose over 16 units three times daily. Heaton states that by this means a prolonged period of clinical improvement may be initiated, but the dose must be adjusted to suit the patient, the desired effect being an increased appetite without unpleasant symptoms. The administration can be continued for a long time with intervals. He adds that a fair large proportion of cases fail to acquire this increased appetite and to gain weight; he suggests that this indicates variations in the glucose tolerance or the presence of insulin sensitivity in the patient. No febrile reaction occurred in the author's series, but one case of allergic hypersensitivity was encountered in which the injection of insulin was followed by a haemorrhage. This patient, however, did not have a local reaction to an injection of a solution of crystalline insulin. Some tuberculous patients react more acutely than others; it is recommended, therefore, that the initial dose should not exceed 5 units. Special indications for insulin emphasized are (1) in preparation for an operation; and (2) in cases of loss of weight under artificial pneumothorax. Nausea and vomiting in chronic pulmonary tuberculosis may also be relieved by insulin injections.

Laryngology

150 Sublingual Incision in Ludwig's Angina

According to K. M. HOUSER (*Arch. of Otolaryngol.*, September, 1932, p. 317) Ludwig's angina is comparatively uncommon. He describes fifteen cases; fourteen of the patients were males. External operations were performed in eleven cases and internal incision in two, while in one the abscess ruptured spontaneously. Twelve patients had sublingual abscesses, nine had carious teeth, and in only two could dental caries be excluded. In the initial stage the disease is confined to the sublingual space, submandibular involvement being a later development. In a large series of recorded cases the abscesses ruptured internally. If the patient is seen early there is a probability of rapid cure following intra-oral incision. Should this fail no harm follows, and an external operation can always be performed. Houser describes the case that induced him to adopt sublingual incision. A young man had a right-sided sublingual swelling, with fever, leucocytosis, dysphagia, and board-like submental and submandibular hardness. While under observation a sublingual abscess ruptured near the base of the tongue. Later a man, aged 42, consulted him regarding a tickling sensation of four days' duration in the right side of his throat. The right submaxillary gland was slightly swollen. Two days later a right-sided sublingual swelling had pushed the tongue towards the palate, causing dysphagia and dyspnoea with pyrexia and board-like submental and submandibular hardness. Incision at the most prominent point opened an abscess; on dilating with forceps several tablespoonfuls of pus escaped. A boy, aged 13, had sore throat and dysphagia for six days; the local symptoms resembled those of the preceding cases. Two days later his temperature was 102° F., and the swelling had increased greatly. Sublingual incision and dilatation evacuated two ounces of thick foul pus.

151 Treatment of Carcinoma of the Larynx

G. B. NEW and ELEANOR FLETCHER (*Journ. Amer. Med. Assoc.*, November 19th, 1932, p. 1754) insist that in operating on carcinoma of the larynx no particular technique should be adopted as a routine, but that the special requirements of each individual case should first receive careful consideration, attention being paid to the type of growth and its grading as regards malignancy and mode of extension. Whether a radical or a conservative procedure is selected, every means possible should be employed to conserve the voice, even though elimination of the disease is the primary objective. The microscopical grading of carcinoma in this situation has great value in determining the most suitable line of treatment and in assisting prognosis. A biopsy immediately before the operation is harmless, but if an interval is allowed to elapse there is some danger of infection as well as of spread of the growth. By this means it is possible to discover the existence of extension of the morbid growth beyond the apparent margin of the tumour, and the microscopical demonstration of this has a definite relation to the malignancy of the condition. In grade "1" there was no extension, in grade "2" the disease extended up to 5 mm., in grade "3" the extension was 5.9 mm., and in grade "4" there was extension of 5.6 mm., with probable lymphatic involvement. The authors define seven groups of surgical procedures—namely, suspension, and removal by diathermy after a preliminary tracheotomy; thyrotomy and removal; thyrotomy and removal of the growth and cartilage; laryngectomy; pharyngotomy; any of the foregoing, associated with excision of the cervical glands; and treatment with x rays and radium. Special indications for each of these procedures are detailed. As a general rule an operation followed by radiotherapy offers the best chance of successfully combating the disease. In a selected group of forty-one cases in which thyrotomy was performed the percentage of recurrence within three to six years was only 13, and the patients retained a fairly good speaking voice. The pursuance of educational measures among general practitioners and the public should, it is urged, result in far more patients receiving effective treatment of this kind at the early stage when it is applicable. The operative mortality in 100 cases of carcinoma of the larynx from which specimens were removed at laryngectomy for study was 8 per cent.; in the last thirty-six cases there was only one operative death. Of these patients eighty-six were subsequently traceable; fifty-two were alive, and without recurrence, from three to six years after the operation. Of patients graded "3," 65 per cent. were alive and well at the time of reporting; 71 per cent. of those graded "2" were in a similar state; but all of those graded "4" had died.

152 Ocular Pain in Auricular Suppurations

A. MOULONGUET (*Ann. d'Oto-laryngol.*, October, 1932, p. 1098) states that the appearance of ocular pain during auricular suppuration is an important prognostic sign, and indicates an extension of the infection into the petrous portion of the temporal bone. The inflammation may extend upwards (as in most cases), with insufficient drainage of the attic and invasion of the cells of the tympanic roof. Or it may travel backwards, the posterior endocranial surface becoming affected. In both conditions the meninges innervated by the recurrent nerve of Arnold are involved. Apical extension of the infection is much rarer, especially if early intervention is secured. The ocular pain occurs on the same side as the aural lesion; sometimes superficial; it is often deep-seated and frequently retro-ocular, with a sensation of protrusion of the eye. Its character is very variable, but it is rarely continuous, and may occur in paroxysms, especially at night. Conditions producing congestion of the head, such as the recumbent posture, and cough increase it, while pressure diminishes it; sedatives are useless. In most cases the pain is an isolated symptom; in others it is associated with neuralgia in the temporal and periorbital regions, the teeth, and the maxillae. The motility of the eye is usually preserved; occasionally photophobia is present. The prognosis is grave. This pain must be distinguished from that occurring at the onset of an acute otitis media, which is of no significance and lasts only a few days after tympanic perforation.

Obstetrics and Gynaecology

153 Pregnancy complicated by Addison's Disease

P. A. PERKINS (*Journ. Amer. Med. Assoc.*, October 29th, 1932, p. 1500) reports a case of pregnancy occurring in a woman who had been under treatment for Addison's disease since 1927. When first diagnosed she was put on Muirhead's treatment, but grew steadily worse; after a time she began to improve, taking whole suprarenal gland by the mouth. In 1931 she was given cortical hormone by the mouth, and became noticeably better. Pregnancy supervened while she was still markedly bronzed, and continued without abnormality until labour, which lasted for six and a half hours and terminated in the birth of a 7-lb. child. She showed no signs of shock at delivery, but became weak and slightly nauseated four hours later. Cortical extract was injected subcutaneously, and repeated in four hours; the following day she began taking the hormone by the mouth. She improved steadily, and was discharged after twelve days. She was not permitted to nurse the infant. The placenta was flat, yellowish-green pigmented, and highly hyalinized. Six weeks later the patient reported that she was feeling well, and had resumed her normal activities. She was still highly pigmented, but was taking the cortical hormone by the mouth regularly; she stated that if she discontinued it she noticed ill effects at once. Perkins remarks that this case is unusual in that it comes within that interesting and exclusive group of patients who live longer than five years, the average expectation of life being a matter

of thirteen to fifteen months. In pregnancy there is hypertrophy of the cortical portion of the suprarenals. This case was of the atrophic type of Addison's disease, and was apparently benefited by the pregnancy. Victims of Addison's disease, moreover, are especially susceptible to trauma and infection, but this patient went through the delivery and puerperium normally.

154 Trichomonas vaginalis as a Cause of Leucorrhoea

H. L. COOPMAN (*Nederl. Tijdschr. v. Geneesk.*, December 10th, 1932, p. 5644) states that Reuling found that in non-pregnant women whose only complaint was leucorrhoea *Trichomonas vaginalis* was the cause in 18 per cent. Of 129 cases of trichomonas vaginitis seen by Hees during the period 1929–31 the majority occurred in the summer. Of 118 of Coopman's cases eighteen were classified as mild, eighty-three as moderate, and seventeen as severe. In the first group, in addition to the discharge, there is slight redness of the vagina and cervix; only a few leucocytes are seen on microscopical examination, and there is no constitutional disturbance. In the second group numerous leucocytes are found; there is a slight degree of discomfort, and the damage to the mucous membrane facilitates the absorption of parasites into the system, especially the intestine. In severe cases haemorrhage and cachexia occur, and may give rise to the diagnosis of cancer, which must always be excluded, as well as tuberculosis and gonorrhoea. Treatment consists in cleaning the vagina with a 1 per cent. solution of picric acid and daily irrigation with 0.5 to 1 per cent. solution of lactic acid so as to restore the normal vaginal flora.

155 Sodium Amytal in Obstetrics

J. J. SWENDSON (*Minnesota Med.*, December, 1932, p. 848) advises the greater employment of analgesic and anaesthetic agents in labour, with a view to safeguarding more adequately the lives of mother and child. In this connexion he commends sodium amytal (sodium iso-amyl-ethyl-barbiturate), having found that the intravenous injection of comparatively small doses of this drug gives more uniform and satisfactory relief of pain than is achieved by its oral administration. Yet he advises that oral treatment has its use in beginning the analgesia, since any failure in effect can be dealt with by intravenous injections as the case may demand. The total oral dosage in his recorded series of cases never exceeded 18 grains; 9, or sometimes 12, grains being given when labour had fully started. Smaller doses of 3 to 6 grains might be required subsequently when consciousness appeared to be returning. As regards the intravenous administration, a clear freshly prepared 10 per cent. solution of sodium amytal was injected into an arm vein, at a rate not exceeding 1 c.cm. a minute, when labour was well established. Slow injection is considered to be very important, since it controls the toxicity of the drug and prolongs its analgesic effect. Of forty-six patients receiving only intravenous medication, thirty-two had complete amnesia for their labours and fourteen had partial amnesia, but only three of these could be classed as failures. Of twenty-one patients who received only oral medication, ten had complete amnesia and eleven partial amnesia beginning one-half to three-fourths of an hour after a single large dose, or soon after receiving the third 3-grain capsule. In the complete series the period of amnesia often lasted as long as three or four hours after labour when the last dose had been given within an hour before delivery. Patients who received the last dose of the drug more than two hours before delivery, and who were given 10 grains or less, were usually conscious and co-operative at the end of labour. Restlessness during contractions, or when the patients were disturbed, was the most objectionable feature of the treatment, the factor concerned being apparently temperamental, for the route of administration seemed to make no difference. Catheterization was often necessary. Although mild apnoea of infants at birth was often frequently observed, there were no cases of true asphyxia which could be attributed to the drug, and the foetal heart rates were unaltered. The author considers that oral administration yields its best results in long primiparous labours, while intravenous injection is more satisfactory in rapid multiparous labours, or when used for patients who are seen for the first time when labour is well advanced.

Pathology

156 Sensitization with the Active Principle of Tuberculin

FLORENCE B. SEIBERT (*Journ. Infect. Dis.*, November–December, 1932, p. 383) has been able to produce specific cutaneous sensitization to tuberculin in normal rabbits and guinea-pigs by repeated injections of the highly purified undenatured protein of tuberculin. For purposes of sensitization a number of different preparations of tuberculin were selected which had been purified to a greater or less extent by chemical precipitation, by ultra filtration, or by the two processes combined. Rabbits were injected intravenously at repeated intervals with 10 mg. of the preparation to be tested; after four or five inoculations at three-day to seven-day intervals they were tested for skin sensitivity by the intracutaneous inoculation of 15 mg. of the homologous antigen at weekly intervals until a typical Arthus response was elicited characterized by an oedematous indurated area, approximately 50 × 50 mm., with a black and red necrotic centre. Practically no reaction followed the first intracutaneous injection; even the best antigens required six to twelve injections before the full response was determined. In guinea-pigs successful sensitization was likewise produced, all injections being given in the animals intracutaneously. With the purer preparations of tuberculo-protein even three injections of 10 mg. sufficed to call forth some degree of reaction. Discussing these results the author considers that the failure of many previous workers to produce sensitization by tuberculin protein is due to the fact that too small quantities of the protein were used, and also that in many instances old tuberculin was selected for sensitization purposes—a preparation in which the antigenic nature of the protein has been affected by heat. For sensitizing rabbits at least 50 mg. of the dry purified protein is required, and for guinea-pigs 30 mg., quantities corresponding to 100 c.cm. and 60 c.cm. of raw tuberculin respectively. The author concludes that skin [illegible] to tuberculin can be brought about [illegible] re preparations of tuberculo-protein, and that the phenomenon differs in no way from the state of hypersensitiveness produced by vegetable and animal proteins.

157 Experimental Obliteration of the Arteries

F. ALBERT (*Lyon Chir.*, November–December, 19[illegible] p. 649), in a series of experiments on dogs, has shown that ligature of the main artery of a limb results in vaso-dilatation, additional to the peripheral gangrene likewise caused by the obliteration of the arterial circulation. Ligature of the main vein causes a vaso-constriction, with a marked drop in the peripheral pressure; this explains the advantage at an operation of ligaturing the main artery and its accompanying vein. The vaso-dilatation is independent of the carotid sinus; it is also independent to a great extent of the nerve system. It is unaffected by a division of the nerve roots of the limb or of the lumbar sympathetic chain or of both. The amount of dilatation is, however, less after anaesthesia of the sympathetic ganglia has been induced. Variations in intravascular pressure, caused by adrenaline and in other ways, do not affect the vasomotor response to the obliteration of the artery. The author inclines to the view that the principal cause of the vaso-motor reactions is a physico-chemical change in the composition of the peripheral blood of the interstitial fluids, due to metabolic changes set up by the obliteration of the artery.

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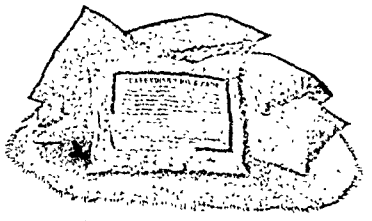

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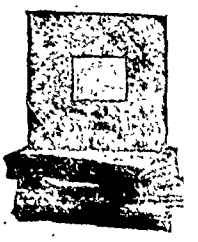

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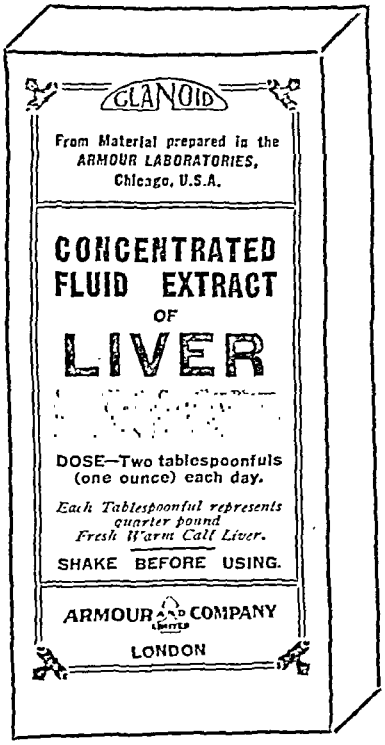

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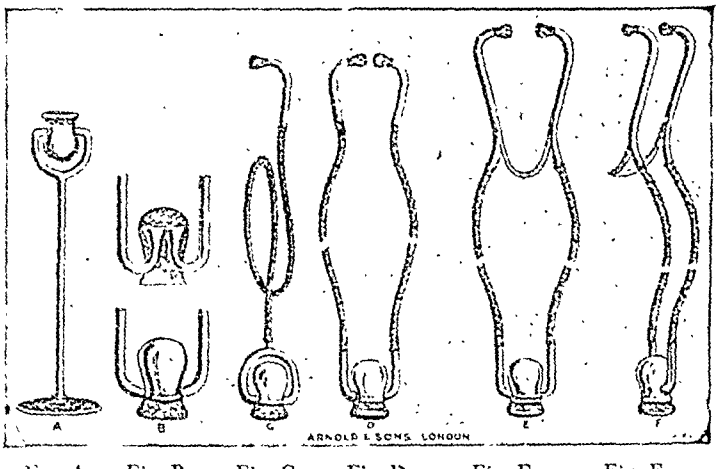

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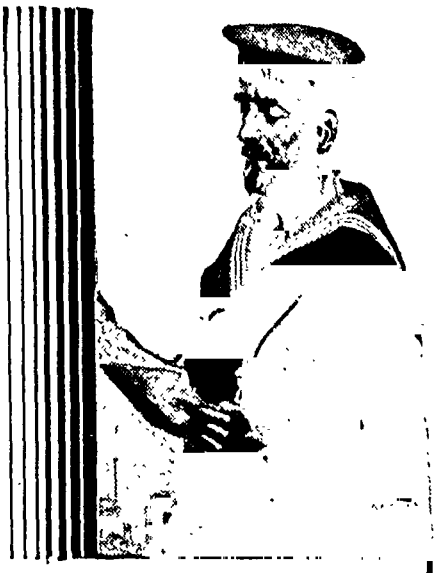

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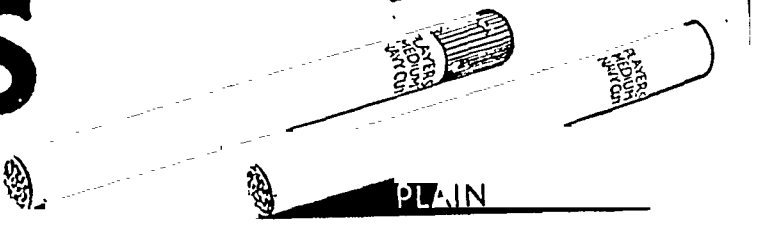

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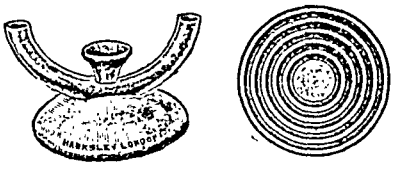

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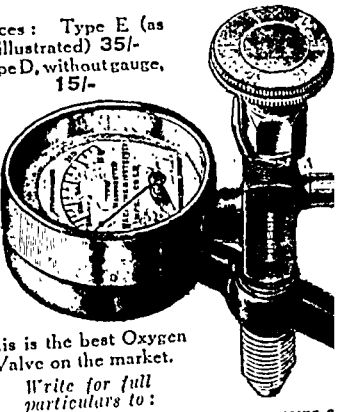

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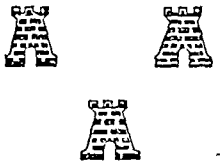

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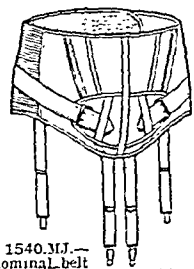

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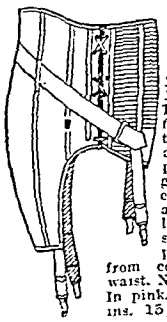

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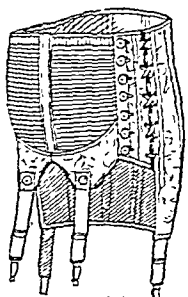

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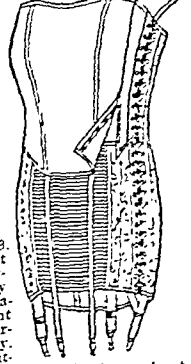

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This Sanatorium is established for the treatment of TUBERCULOSIS of the LUNGS and the PLEURAL CAVITIES. It is situated in the midst of a large area of park-land at a height of 450 feet above sea-level on the south-west slopes of mountains rising to over 1,800 feet, which protect it from north and east winds and provide many miles of graduated walks with magnificent views. Average rainfall 29.57 per annum. Full day and night nursing staffs. X-ray plant. Every facility for Artificial Pneumothorax and for operations on the chest. Electric lighting. Central heating. Home farm. Clean milk from T.T. Herd. For particulars apply to Medical Superintendent, H. MORRISTON DAVIES, M.D., M.Ch.Cantab., F.R.C.S., Llanbedr Hall, Ruthin, N. Wales.

THE COTSWOLD SANATORIUM

First opened in 1898 and rebuilt in 1925. On the Cotswold Hills, seven miles from Cheltenham, for the treatment of Pulmonary and all other forms of Tuberculosis. Aspect S.S.W., sheltered from North and East, elevation 800 feet. Pure bracing air. Special Treatment by artificial Pneumothorax (X-ray controlled), Tuberculins, Medicated Inhalations by means of the Apneu Inhalation Installation, and Ultra-Violet Rays is available, when necessary, without extra charge. X-ray plant. Electric light. Radiators, hot and cold basins, and Wireless in all rooms.

Full day and night Nursing Staff.

Medical Superintendent: GEOFFREY A. HOFFMAN, B.A., M.B., T.C.Dub. *Assistant Physician*: MARGARET A. HARRISON, M.B., B.S.Lond.
Consulting Laryngologist: SIDNEY BERNSTEIN, M.R.C.S.Eng., L.R.C.P.Lond. (Attends Regularly.)

Apply: The Secretary, The Cotswold Sanatorium, Cranham, Gloucester. *Telephone*: 41 WITCOMBE. *Telegrams*: "HOFFMAN, BIRDLIP."

PENDYFFRYN HALL SANATORIUM
PENMAENMAWR.

Established 1900 for the treatment of Tuberculosis. Miles of carefully graduated walks through pine-clad hills, with sea and mountain views. Modern treatment, including ARTIFICIAL PNEUMOTHORAX, SANOCRYSIN, etc. X-ray plant, electric light, central heating, wireless. Special milk supply from tuberculin-tested herd. Full day and night nursing staff. On L.M.S. Main Line to Holyhead, 4½ hours from London. Resident Physicians: DENNISON PICKERING, M.D.(Cantab), J. A. HENNESEY, M.B., Ch.B.; Matron: Miss S. A. EDDY, S.R.N., Late Sister-in-Charge, Royal Hospital Annexe, Sheffield.

For particulars apply to the SECRETARY, Pendyffryn Hall, Penmaenmawr, N. Wales. ('Phone, 20.)

KINGUSSIE, N.B.
THE GRAMPIAN SANATORIUM

Situated in the upper Speyside district of Inverness-shire. One of the highest inhabited di tricts in Britain—"The Switzerland of the British Isles." Bracing and dry mountain climat Well sheltered Sanatorium specially built for the Open-air Treatment of Tuberculosis. Opene in 1901. Elevation 860 ft. above sea-level. Electric light throughout buildings and in re shelters. Central heating. Fully equipped X-ray Plant. All forms of treatment availabl including Artificial Pneumothorax and Ultra-Violet Rays for surgical cases of Tuberculos Terms: £4 7s. 6d. to £6 6s. per week inclusive. No extras.

MEDICAL SUPT.: FELIX SAVY, M.D. For particulars apply to the Secretary.

PEEBLES

In the winter garden of Scotland, facing the sun, 600 feet up. Tonic air, beauty in every landscape from sheltered balconies. Dancing, winter garden, swimming bath, tennis, badminton, golf, fishing Fully licensed. Modern baths installation. Physio-therapeutic, massage, electrical treatment, ultra-violet radiation. Physician in attendance. Write for prospectus.

Among the Pine-clad Border Hills.

PEEBLES HYDRO, PEEBLES, SCOTLAND.

BOURNEMOUTH HYDRO,

with Vita-glass Sun-lounge and Marine Balcony.

Pyretic and
Every kind of Bath. Plombière Lavage.
Every kind of Massage. Ultra-violet Light.
Every kind of Electricity. Diathermy.
Every kind of Diet. Essell Inhaler.
High Frequency. Electric Lift.

Prospectus from Secretary. *Tele.* 341.

Resident Physicians: W. JOHNSTON SMYTH, M.D. L. T. ROSE HUTCHINSON, M.D.

CITY OF LONDON MENTAL HOSPITAL, DARTFORD, KENT.

Ladies and Gentlemen received for treatment under certificates, and without certification, as either VOLUNTARY or TEMPORARY PATIENTS, at a weekly fee of TWO GUINEAS and upwards.

PAYING PATIENTS

unable to afford the ordinary Nursing Home can be received in private rooms at the New Wing of the NATIONAL TEMPERANCE HOSPITAL, Hampstead Road, N.W.1. Terms from 4½ gns. weekly. All latest equipment. Particulars from the Secretary. (Museum 3755.)

LIVERPOOL SCHOOL OF TROPICAL MEDICINE

(UNIVERSITY OF LIVERPOOL.)

COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on January 2nd and October 2nd, 1933, and for the Diploma in Tropical Hygiene on January 5th and April 20th, 1933. (Candidates for the D.T.H. must possess the D.T.M. of this University.)

For particulars, apply to the Hon. Dean, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool.

DEFECTIVE SPEECH.

Remedial Instruction on approved lines for **Stammer, Aphonia, Cleft Palate, Tracheotomy,** and disturbed or retarded **Co-ordination.**

Appreciations from Eton and Harrow.

ERIC MIALL, A.L.C.M.,

Speech Instructor at Middlesex Hospital.
17, CAVENDISH SQ., LONDON, W.1.
Telephone: Langham 1830.

TWENTY LECTURES ON PSYCHO-THERAPEUTIC THEORY AND METHOD

An Introductory Course in Psychological Medicine on TUESDAYS and FRIDAYS at 4.45 p.m. and 5.45 p.m. Beginning MARCH 10th. Fee for course £2 2s. Applications must be received by February 28th.

For full information apply to the HON. LECTURE SECRETARY, INSTITUTE OF MEDICAL PSYCHOLOGY, 6, TORRINGTON PLACE, W.C.1.

STAMMERING, SPEECH DEFECTS.

BEHNKE METHOD. Estab. 1882. Cases, non-resident, treated at 39, Earl's Court Square, S.W.5, and in residence, in the Summer holidays, at Miss BEHNKE'S house on the Chilterns.

"Dr. [illegible] and treatment
[illegible] "—"Times."
[illegible] "—"Lancet."
[illegible] and perfectly

STAMMERING, CLEFT PALATE SPEECH, LISPING, 3/9

of Miss BEHNKE, 39, Earl's Court Sq., S.W.5.

Medical and Dental Students

Special Classes for Pre-Medical and Dental Exams., Matric., and Prelims.
Chemistry, Physics, and Biology Labs.
MANCHESTER TUTORIAL COLLEGE.
327, Oxford Road, Manchester.

F.R.C.S.(Edin.).

Full PREP. COURSE with Anatomical (Cadaver and Living Model) and Surg. Path. Demonstrations, for next Exam., will commence shortly. POSTAL TUITION at any time.—H. C. ORRIN, F.R.C.S., Surgeons' Hall, Edinburgh.

UNIVERSITY EXAMINATION POSTAL INSTITUTION

17, RED LION SQ., LONDON, W.C.1.

(FOUNDED IN 1882.)

Principal: Mr. E. S. WEYMOUTH, M.A.(Lond.).

POSTAL OR ORAL PREPARATION FOR ALL MEDICAL EXAMINATIONS.

SOME SUCCESSES:

M.D.(Lond.),	1901-32 (9 Gold Medallists during 1913-32)	368
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F.R.C.S.(Eng.),	*Primary* 1919-32	146
	Final 1919-32	155
M.R.C.P.(Lond.),	1919-32	215
D.P.H.	(*Various*) 1906-32 (Completed Exam.)	316
F.R.C.S.(Edin.),	1918-32	53
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M.D.	Various. By Thesis. Numerous successes.	

Preparation for the above and also for Medical Preliminary, and for all examinations leading up to M.R.C.S., L.R.C.P., or M.B. of various Universities; also for D.P.M., D.O.M.S., D.T.M. & H., D.L.O., D.G.O., D.M.R.E., M.M.S.A., L.M.S.S.A., etc. Numerous successes.

ORAL CLASSES.

M.R.C.P., M.D., Primary and Final F.R.C.S., F.R.C.S.(Edin.); also Final M.B., B.S., and M.R.C.S., L.R.C.P. Museum and Microscope Work. Also Private Tuition.

MEDICAL PROSPECTUS (48pp.)

CONTENTS:—The method and the cost of entering the Medical Profession. *Particulars of all Medical Examinations*, Postal Courses, and Oral Classes. Suggestions for the Higher Medical Examinations. Suggestions for the Higher Surgical Examinations. Suggestions for the Special Diploma Examinations. Refresher Courses. Openings for Women. Hints for writing theses.

Medical Prospectus gratis along with list of Tutors, etc., on application to the Principal, Mr. E. S. WEYMOUTH, M.A., 17, Red Lion Sq., London, W.C.1 (Telephone: HOLBORN 6313.)

TANCRED'S STUDENTSHIPS

Shortly after Midsummer next the Governors and Trustees propose to elect one Student in Physic at Gonville and Caius College, Cambridge, two Students in Divinity at Christ's College, Cambridge, and one Student in Law at Lincoln's Inn.

Candidates must have been born in England, Scotland, or Wales, and be members of the Church of England, unmarried, and within the ages of 17 and 20 years for Physic and Divinity, and 19 and 23 for Law.

The annual stipend of each Student is £100.

The last day for sending in Petitions is March 14th.

Applications, stating class of Studentship and mentioning this paper should be made to Mr. GUY HARGREAVES CHOLMELEY, 28, Lincoln's Inn Fields, London, W.C.2, Clerk to the Governors and Trustees.

CLINICAL RESEARCH SCHOLARSHIP

(value £100 per anum)
is offered at the
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.

The holder to commence work at the Royal Westminster Ophthalmic Hospital on May 1st.

For further particulars apply before March 7th, 1933, to the Hon. Secretary, Medical Committee, Royal Westminster Ophthalmic Hospital, Broad Street, Holborn, W.C.2.

NORTH-EAST LONDON POST-GRADUATE COLLEGE.

PRINCE OF WALES'S GENERAL HOSPITAL, N.15.

The Practice of the Hospital is limited to Medical Practitioners. Particulars from J. BROWNING ALEXANDER, M.D., Dean.

UNIVERSITY OF LONDON, UNIVERSITY COLLEGE.

FACULTY OF MEDICAL SCIENCES.

SPECIAL COURSE FOR THE PRIMARY FELLOWSHIP EXAMINATION OF THE ROYAL COLLEGE OF SURGEONS.

Special SHORT COURSES in ANATOMY and PHYSIOLOGY will begin on Tuesday, February 28th, 1933, in preparation for the June Examination.

ANATOMY: J. KING, M.B., Ch.B., F.R.C.S.E.
PHYSIOLOGY: W. H. NEWTON, M.B., B.Ch., M.Sc.; J. W. de W. G. THORNTON, M.A., B.M., B.Ch., M.R.C.S., L.R.C.P.

The Course in Anatomy (including Embryology) is made up of lectures and demonstrations. Students are permitted to use the Dissecting Room and Museum of Anatomy at other times. The course in Physiology, Bio-Chemistry, and Histology consists of lectures and demonstrations, together with revision of practical work in those branches of the subject which are of particular importance in Medical Practice.

Full particulars may be obtained on application to—

University College, London. C. O. G. DOVIE, Secretary.
(Gower Street, W.C.1.)

UNIVERSITY OF BIRMINGHAM

(FACULTY OF MEDICINE.)

UNIVERSITY CLINICAL BOARD.

POST-GRADUATE DEMONSTRATIONS, 1933.

A Course of Post-Graduate Demonstrations will be given at the General Hospital, the Queen's Hospital and the Children's Hospital, Birmingham, commencing on March 15th and terminating on July 18th (Tuesdays and Fridays, 5.30 to 6 p.m.).

The Course will be given by Members of the Medical and Surgical Staffs of the Hospitals and will include Demonstrations on Medical, Surgical, Obstetrical, and Gynaecological cases; Diseases of Ear, Nose, and Throat; Diseases of Children; Ophthalmology; Radiology; Venereal Diseases, etc.

Admission cards are issued on payment of the fee of £2 2s. Cheques made payable to "The University of Birmingham" should be sent to the Clerk to the Clinical Board, The University, Edmund Street, Birmingham, 3. Medical Practitioners are requested to show their Admission Card at each of the Demonstrations.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

The next ordinary PROFESSIONAL EXAMINATION for the MEMBERSHIP will commence on Wednesday, April 12th, 1933.

Candidates are required to give *twenty-one days' notice*, in writing to the Registrar of the College, to whom all certificates and testimonials required by the By-laws must be sent at the same time.

Candidates who propose to submit published work under the regulations now in force should apply to the Registrar, without delay, for detailed instructions as to the procedure they should follow.

RAYMOND CRAWFURD, M.D., Registrar.
Pall Mall East, S.W.1.

THE INSTITUTE OF MEDICAL PSYCHOLOGY

(The Tavistock Clinic), 6, Torrington Place, W.C.1.

A YEAR'S COURSE IN
PSYCHOTHERAPEUTIC THEORY AND METHOD

begins on March 10th, 1933.

The number to be admitted is limited and applications must be received by February 28th.

For full information apply to the HON. LECTURE SECRETARY at the Institute.

M.D. THESIS

(Camb., Edin., Glas., Durham, &c.)

SKILLED COACHING, GUIDANCE, and ADVICE from Special Tutors, in conformity with the Regulations of the various Universities.

Apply for particulars and free booklet, "Hints on Writing a Thesis for the M.D. Degree," to the SECRETARY, Medical Correspondence College, 19, Welbeck Street, London, W.1.

SCHOLARSHIPS OF HALF FEES, £60 p.a., offered by good Boarding School (Girls), recognized by the Board of Education. Excellent references and examination results. Distinctions in School Certificate and Leaving Scholarships to Universities. Full particulars.—Add., —No. 201, B.M.A. House, Tavistock Sq., W.C.1.

MEDICAL CORRESPONDENCE COLLEGE,

19, Welbeck Street, London, W.1.

M.D. THESIS

All Universities.

Skilled coaching, guidance, and advice, by specialist tutors.

Recent successes include Gold Medals at M.D. Edinburgh, 1929 and 1930, and at M.D. Belfast, 1930, and many "High Commendations" and "Commendations" at other Universities.

Write for free booklet "How to Write a Thesis for the M.D. degree."

M.D. LONDON

Courses by skilled tutors for each branch of the M.D. London.

Oral, clinical, and practical work arranged.

Special courses, postal, oral, and clinical, for all *higher medical* examinations, M.R.C.P. London, Edinburgh, F.R.F.P.S. Glasgow. Many successes.

Write for free booklet, "Guide to the M.D. London," to the Secretary, Medical Correspondence College, 19, Welbeck Street, London, W.1.

EXAMINING BOARD IN ENGLAND

BY THE
ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE
ROYAL COLLEGE OF SURGEONS OF ENGLAND.

PRE-MEDICAL EXAMINATION.

This Examination will commence on Monday, March 27th, 1933.

FIRST EXAMINATION.

This Examination will commence on Thursday, March 30th, 1933.

FINAL EXAMINATION.

This Examination will commence on Monday, April 3rd, 1933.

DIPLOMA IN TROPICAL MEDICINE AND HYGIENE.

This Examination will commence on Friday, March 31st, 1933.

DIPLOMA IN GYNAECOLOGY AND OBSTETRICS.

This Examination will commence on Thursday, April 20th, 1933.

Candidates who have completed the prescribed courses, and who desire to present themselves for examination, must forward the necessary schedule or schedules. [illegible] to the Examination Hall, W.C.1, twenty-one day commences.

HORACE H. REW, Secretary.

February 21st, 1933.

MEDICAL SICKNESS ANNUITY & LIFE ASSURANCE SOCIETY, Ltd.,

300, High Holborn, London, W.C.1.

Notice is hereby given that a General Meeting of the Members of the above Society will be held at the First Avenue Hotel, High Holborn, London, W.C.1, on Wednesday, April 5th, 1933, at 4.30 p.m.

By Order of the Board,
BERTRAM SUTTON,
Manager & Secretary.

Feb. 21st. 1933.

SUTTON AND CHEAM HOSPITAL, SUTTON, SURREY. (68 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER, which will be vacant on April 1st. Salary is £150 per annum, with full board and laundry. Applicat[illegible] particulars as to age and [illegible] with copies of three recent [illegible] be sent to the Secretary.

BOROUGH OF RAWTENSTALL.

MEDICAL OFFICER OF HEALTH.

Applications are invited for the position of Medical Officer of Health, School Medical Officer, Medical Officer for Maternity and Child Welfare, and Medical Superintendent of the Small-pox Hospital. The person appointed will be required to perform such other duties as the Council may from time to time direct.

The total commencing salary for the position and for other Corporation work undertaken by the above-mentioned Officer will be £800 per annum, subject to a temporary economy deduction (approximately 5¼ per cent.) as recommended by the Lancashire and Cheshire Provincial Council for the Professional, etc., Services of Local Authorities.

Candidates must be registered Medical Practitioners, possessing a recognized diploma in Public Health, and the qualifications required by Acts of Parliament and the Regulations of the Ministry of Health. The person appointed will be required to devote the whole of his time to his duties, and will not be allowed to engage in private practice. Canvassing, either directly or indirectly, will be regarded as a disqualification, but selected candidates will be permitted to send thirty copies of their applications and testimonials for the use of the members of the Council.

Applications, stating present and previous appointments, age, qualifications, and experience, accompanied by copies of not more than three recent testimonials, must be sent to the undersigned, endorsed "Medical Officer of Health," not later than Monday, March 6th next.

Town Hall, Rawtenstall, Rossendale, Lancs.
February 14th, 1933.

H. ISHERWOOD, Town Clerk.

BOROUGH OF HENDON.

COMBINED POST OF RESIDENT MEDICAL OFFICER at the ISOLATION HOSPITAL and ASSISTANT MEDICAL OFFICER for General Purposes.

Applications are invited for the above post. The successful candidate will be required to reside at the Isolation Hospital and to perform the duty of Resident Medical Officer, together with other duties in connection with the Borough Council's Maternity and Child Welfare, School Medical, and other Public Health Services.

Candidates must possess a Public Health qualification and should have had Fever Hospital experience.

Salary £500 per annum, rising by annual increments of £25 to a maximum of £600 per annum, plus emoluments—viz.: board, lodging, and laundry valued at £150 per annum, which is subject to a temporary deduction in accordance with scales in force. The current deduction will amount to £16 6s. per annum on the [illegible] emoluments.

[illegible] ect to the provisions [illegible] and Other Officers Superannuation Act, 1922, and the successful candidate will be required to pass a medical examination.

Applications, on forms to be obtained from the undersigned, together with copies of not more than three recent testimonials, to be sent in not later than the first post on Wednesday, March 1st.

[illegible] indirectly, will be

[illegible] February, 1933.
[illegible]ONARD WORDEN,
Hendon, N.W.4. Town Clerk.

STATES OF GUERNSEY MENTAL INSTITUTIONS.

Applications are invited for a Non-resident MENTAL OFFICER, with experience in treatment and care of mental defectives, and with patients at clinics and mental hospitals.

The selected candidate would be required to organize an Out-patient Department and a Child Guidance Clinic, in connection with the elementary schools.

He would also be required to study local conditions and to report on the steps that should be taken, either for adapting the existing, or building new hospitals for the housing and care of mental cases.

The candidate would be permitted to act as consultant with a local practitioner.

The appointment would be for one year certain, and the salary £800 to £1,000 per annum.

Full particulars as to duties will be furnished upon application to the Secretary to States Committees, States Office, Guernsey, and all applications to be received by first post March 10th.

FOUR LECTURES ON "HEALTH AND INDUSTRY," illustrated with lantern slides, will be delivered by Sir GEORGE NEWMAN, K.C.B., M.D., D.C.L., on February 28th and March 1st, 2nd, 3rd, 1933, at GRESHAM COLLEGE, Basinghall Street, E.C.2, at six o'clock. *Admission free.*

CITY OF PLYMOUT

MEDICAL SUPERINTENDENT.

Applications are invited from duly qual[illegible] and registered Medical Practitioners (male) for the post of Medical Superintendent of the [illegible] mouth City General Hospital (577 beds).

The salary will be at the rate of £1,000 annum, plus an allowance of the sum of £ in lieu of quarters, etc. (the inclusive va[illegible] being subject to a temporary reduction of per cent.).

The appointment will be terminable by t[illegible] months' notice on either side.

Personal experience in hospital administra[illegible] is essential. The appointment is whole[illegible] and private practice is not permitted. [illegible] person appointed will be an Assistant Me[illegible] Officer in the Public Health Department, [illegible] will be on the staff of the Medical Office[illegible] Health, who is the General Medical Sup[illegible] tendent of the Corporation Hospitals.

Canvassing will disqualify the applicant.

Applications will be considered only on [illegible] form of application which will be provided [illegible] form of application, together with fu[illegible] details relating to the appointment, can b[illegible] tained from the undersigned, on the receip[illegible] him of a request for this, accompanied [illegible] stamped and addressed envelope. Forms o[illegible] plication, duly completed, together with c[illegible] of not more than three recent testimo[illegible] must be returned to the undersigned, in[illegible] velopes endorsed "Medical Superintend[illegible] not later than March 2nd.

T. PEIRSON, M.D., M.R.C.S., D.P.H
Town Hall, Medical Officer of Hea[illegible]
Stonehouse, Plymouth.
February 14th, 1933.

EAST LANCASHIRE TUBERCUL[illegible] COLONY.

BARROWMORE HALL, GREAT BARR[illegible]
Near CHESTER.

Under the direction of the British Red [illegible] Society and the Order of St. John o[illegible] Jerusalem.

HOUSE PHYSICIAN (male) required. [illegible] appointment is for six months, and is rene[illegible] Salary £100 per annum, with board, resi[illegible] and laundry.

The appointment is terminable by one m[illegible] notice.

The Institution deals with all stages of [illegible] monary Tuberculosis, and comprises Ho[illegible] accommodation, Sanatorium accommodatio[illegible] tensive workshops for graduated work, [illegible] settlement.

Applications, marked "House Physi[illegible] with copies of three testimonials, to be s[illegible] the Medical Superintendent at the above ad[illegible]

CITY OF LIVERPO[illegible]

RESIDENT ASSISTANT MEDICAL OFFI[illegible] (Male).

Applications are invited for the abov[illegible] pointments at the WALTON HOSPITAL [illegible] Beds), Liverpool, for a period of one ye[illegible] a salary of £200 per annum (subject [illegible] temporary deduction as authorised b[illegible] Council), together with the usual resi[illegible] allowances. Canvassing will be deemed [illegible] qualification.

Applications to be made upon forms [illegible] able from the Medical Officer of Health, [illegible] cipal Annexe, to be endorsed "Resident [illegible] ant Medical Officer," and returned to the [illegible] signed so as to be received not later tha[illegible] post Monday, March 6th.

Municipal Buildings, Liverpool. WALTER MOO[illegible] Town C[illegible]
February 16th, 1933.

THE RADIUM INSTITU[illegible]

Riding House Street, London, W.1.

Applications are invited for the p[illegible] WHOLE-TIME RESIDENT SURGICAL [illegible] TRAR (male). Candidates must be unm[illegible]

The salary will be at the rate of £2[illegible] annum, board, residence, and laundry [illegible] provided, and the appointment is [illegible] months commencing April 1st next, a[illegible] newable if desirable for a maximum per[illegible] 2 years.

Applications, stating age, nationality, [illegible] fications, and experience, with copies of [illegible] recent testimonials, must be received [illegible] Institute on or before March 11th next.

Canvassing, either directly or indirec[illegible] not permitted.

THOS. A. GARNER, Secre[illegible]

ROYAL LIVERPOOL BABIES' HOSP[illegible] WOOLTON.

Required, April 1st, RESIDENT ME[illegible] OFFICER for the above hospital. The a[illegible] ment to be for a period of six months. [illegible] at the rate of £90 per annum. Applic[illegible] with copies of testimonials, to be sent [illegible] Chairman of the Hospital, c/o The Child [illegible] Association, 9, Copperas Hill, Liverpool, before March 7th.

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh).

(a) British Islands.

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**CONTRACT PRACTICE** *(contd.)*
EBBW VALE, MON. *(Workmen's Medical Society.)*	MARDY, GLAMORGAN. *(Workmen's Medical Scheme.)*	OGMORE VALLEY, GLAMORGAN. *(Wyndham Colliery Medical Aid Society.)* *(Workmen's Medical Scheme.)*
GILFACH GOCH, GLAMORGAN. *(Workmen's Medical Scheme.)*	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE. *(Workmen's Medical Scheme.)*	**PUBLIC HEALTH**
LLWYNPIA, CLYDACH VALE, PENYGRAIG, GLAMORGAN. *(Workmen's Medical Scheme.)*	NEATH AND DISTRICT *(Medical Aid Association.)*	LLANTRISANT AND LLANTWIT FARDRE RURAL DISTRICT COUNCIL. (1) *Medical Officer of Health (part-time)* (2) *Medical Officer (woman—part-time) for Maternity and Child Welfare.*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer.)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association.)*	

(b) Overseas.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. G. HUNTER (Medical Secretary, New South Wales Branch), 135, Macquarie St., Sydney, N.S.W.	QUEENSLAND. *(Brisbane Associated Friendly Societies Institute.)* *(Toowoomba Associated Friendly Societies, Medical Institute, Toowoomba.)*	The Hon. Sec., Queensland Branch, British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	WELLINGTON, NEW ZEALAND. *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec., New Zealand Branch), British Medical Association, P.O. Box 156, Wellington, New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch, British Medical Association, Medical Society Hall, East Melbourne, Victoria.			WESTERN AUSTRALIA. *(Contract and Lodge Practices.)*	Hon. Sec., Western Australian Branch, British Medical Association, No. 6, Bank of N.S.W. Chambers, St. George's Terr., Perth, Western Australia

February 22nd, 1933. By Order of the Council. G. C. ANDERSON, Medical Secretary.

VICTORIA HOSPITAL, BURNLEY. (126 Beds.)

HOUSE PHYSICIAN (Male).

Applications are invited for the above post, which will become vacant on March 21st next. The duties include the giving of a certain number of Anaesthetics. The appointment is for six months, in the first instance, at a salary of £150 per annum, together with board, residence, and laundry. At the end of this period reappointment for a further period may be applied for, and if confirmed, the salary for the second six months will be at the rate of £200 per annum.

This Hospital is approved by the London University for the purpose of the M.B. and M.S. examinations.

Applications, with full details of qualifications and experience, and stating nationality, together with copies of recent testimonials, should be addressed to the undersigned forthwith.

J. E. WHEATCROFT, Secretary.

SUSSEX MATERNITY AND WOMEN'S HOSPITAL. (38 Beds.)

RESIDENT HOUSE SURGEON (male) required. Salary at the rate of £130 per annum, board and washing found, and £40 allowed for travelling expenses. Good experience in midwifery and gynaecology afforded. No canvassing allowed. The successful candidate will be required to enter on his duties at the end of March.

Applications in writing, accompanied by testimonials, should be sent to PERCY F. SPOONER, Secretary, at the Hospital, Buckingham Road, Brighton, on or before Monday, February 27th.

February 11th, 1933.

MANCHESTER ROYAL INFIRMARY. CENTRAL BRANCH, ROBY STREET, MANCHESTER.

HOUSE SURGEON (LADY).

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment. Applicants must be registered and hold a medical and surgical qualification.

The appointment is tenable for nine months, commencing April 1st, three months as Junior at £100 per annum, three months as Assistant at £100 per annum, and three months as Senior at £200 per annum, together with board and allowance for laundry.

Applicants must state age and qualifications, and send twelve copies of their application and testimonials to the undersigned by 9 a.m. on Thursday, March 2nd.

By Order,
FRANK G. HAZELL.
General Supt. & Secretary.

RADCLIFFE INFIRMARY AND COUNTY HOSPITAL, OXFORD.

Applications are invited for the following posts, which will become vacant on April 1st.

PHYSICIAN.
NS.
r six months, with
0 per annum, with

salaries at the rate board, lodging, etc.

Candidates must be male and qualified.

Applications, with four copies of three testimonials, should be sent to the undersigned on or before March 4th.

A. G. E. SANCTUARY,
Administrater.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

Applications are invited for the following posts:

(a) HOUSE SURGEON No. 1 (male), vacant on March 16th.

(b) HOUSE SURGEON No. 2 (male), vacant on April 1st.
Each appointment is tenable for a period of six months, but is terminable at an earlier date by one month's written notice on either side.

(c) RESIDENT ANAESTHETIST AND EMERGENCY OFFICER (male) for three months from March 14th.

The salary of each officer will be at the rate of £150 per annum, with board, residence, and laundry.

Candidates, who must be unmarried and duly registered, are requested to forward their applications, stating age, qualifications, etc., together with copies of not more than four testimonials, to the undersigned on or before Saturday, March 4th.

W. H. HEAD,
Secretary-Superintendent.

ELSIE INGLIS MEMORIAL MATERNITY HOSPITAL, Spring Gardens, EDINBURGH. (60 Beds.)

Applications are invited from fully qualified Medical Women for the post of JUNIOR HOUSE SURGEON at the above Hospital, honorarium at the rate of £25 per annum, with board, residence, and laundry. The appointment is for six months from April 1st. Applications, with copies of testimonials, to be sent to the Secretary, 1, Brunstfield Crescent, Edinburgh, on or before March 4th.

(Appointments continued on p. 49).

JOINT COUNTIES MENTAL HOSPITAL, CARMARTHEN.

MEDICAL SUPERINTENDENT.

The Committee of Visitors of the above Institution (650/670 patients) invite applications for the post of Medical Superintendent from duly qualified and registered male Medical Practitioners, not over 40 years of age, on June 1st next and possessed of the D.P.M. Diploma, or its equivalent, with not less than seven years' previous experience upon a Mental Hospital Medical Staff, a knowledge of Welsh to be deemed a desirable additional qualification, at a cash salary of £800 per annum, with biennial increments of £50 up to a maximum of £1,000 (subject to any general scale of temporary deductions from salaries in force at any time), with emoluments consisting of an unfurnished house and garage (free of rent only), laundry, garden produce, and certain contract privileges, together provisionally valued at £150 per annum for the purposes of the Asylums Officers Superannuation Acts, 1909, subject to which and to the Rules relating to the position which may be in force from time to time the appointment will be made, terminable by three months' notice on either side.

Applications must be accompanied by a duly completed prescribed form which, together with the particulars of the appointment, may be obtained from the undersigned, to whom they must be delivered, accompanied by copies of three recent testimonials, not later than Saturday March 4th.

34, Quay Street, Carmarthen. W. J. WALLIS-JONES, Clerk to the Visitors.
February 7th, 1933.

SALFORD ROYAL HOSPITAL. (263 Beds.)

Applications are invited for the following vacancies which will occur in the Resident Medical Staff (male) on March 31st next:

HOUSE PHYSICIAN. Salary £125 per annum.

HOUSE SURGEON (attached to the Orthopaedic Department). Salary £125 per annum.

CASUALTY HOUSE SURGEON. Salary £125 per annum.

The appointments are for six months, with board and residence.

Candidates must be registered under the Medical Acts.

The Hospital has the approval of the Royal College of Surgeons of England, and appointments here are recognised for the English Fellowship (Final).

Forms of application, which may be obtained from the undersigned, should be delivered on or before March 8th next.

By Order of the Board,
H. B. SHELSWELL,
General Superintendent & Secretary.
February 20th, 1933.

NORTHAMPTON GENERAL HOSPITAL. (253 Beds.)

There will be vacancies on April 1st next for a HOUSE PHYSICIAN, a HOUSE SURGEON for one of the general Honorary Surgeons, and a HOUSE SURGEON to the Ear, Nose, and Throat Department. British nationality. Salary £150 per annum, with board, residence, and laundry.

The successful candidates will be appointed for a period of six months, and will be eligible for re-election for a further period.

Candidates must be duly qualified and registered.

Applications, stating age, sex, qualifications, etc., with copies of testimonials, to reach the undersigned not later than first post on Wednesday, March 8th.

H. ST. JOHN WOOD,
February 20th, 1933. Secretary-Supt.

ROYAL SUSSEX COUNTY HOSPITAL, BRIGHTON. (246 Beds.)

HOUSE SURGEON (male) required with charge of beds, part Casualties, and Anaesthetics. Salary £150 per annum, with board, residence, and laundry.

Candidates must hold Medical and Surgical qualifications of the British Empire, and be duly registered under the Medical Acts. They must be unmarried and, when elected, under 30 years of age.

Applications, with copies of testimonials, should be sent to the undersigned immediately.

L. L. W. LANCASTER-GAYE,
Secretary-Superintendent.

ROYAL VICTORIA HOSPITAL, DOVER.

Wanted, RESIDENT MEDICAL OFFICER (male, unmarried), doubly qualified and registered. Previous surgical experience essential. Salary £180 a year and board, lodging, and laundry. (40 beds.)

Applications to be received on or before Friday, March 10th, by the Hon. Secretary, Royal Victoria Hospital, Dover, on a form to be obtained from him.

LONDON HOMOEOPATHIC HOSPITAL (Incorporated by Royal Charter), Great Ormond Street and Queen Square, Bloomsbury, W.C.1. (200 Beds.)

The Board of Management are prepared to receive applications for the following appointment: PHYSICIAN FOR DISEASES OF WOMEN.

The successful candidate must possess or obtain a registrable University degree, and be, or become, a Member of the British Homoeopathic Society. Candidates are requested to state whether, in the event of one of the present Assistant Physicians being appointed to the post, they would be willing to accept, if elected, the post of Assistant Physician for Diseases of Women. Any candidates canvassing the Members of the Board, Medical Council, or Medical Committee are thereby disqualified. Candidates may be required to attend a meeting of the Medical Committee. Applications, stating age, qualifications, and experience, with thirty-five copies of application and thirty-five copies of each testimonial, should be sent addressed to the Secretary, of whom further particulars may be obtained.

EDWARD A. ATTWOOD, Secretary.

LONDON HOMOEOPATHIC HOSPITAL (Incorporated by Royal Charter), Great Ormond Street and Queen Square, Bloomsbury, W.C.1. (200 Beds.)

The Board of Management are prepared to receive applications for the following appointment: MEDICAL OFFICER FOR X-RAY DEPARTMENT. The successful candidate must be, or become within a limited period, a Fellow of one of the Royal Colleges of Surgeons and be, or become, a Member of the British Homoeopathic Society. Candidates canvassing Members of the Board, Medical Council, or Medical Committee are thereby disqualified. Candidates will be required to attend a Meeting of the Medical Committee. Applications, stating age, qualifications, and experience, with thirty-five copies of application and thirty-five copies of each testimonial, should be sent addressed to the Secretary, of whom further particulars may be obtained.

EDWARD A. ATTWOOD, Secretary.

CHARING CROSS HOSPITAL.

REGISTRAR.

Applications are invited for the post of Registrar (male) to the Nose, Throat, and Ear Department.

Candidates must have some experience of the *speciality. Attendance four half days per week.* Appointment tenable for one year; eligible for re-election. Honorarium £100 per annum.

Applications, in writing, stating age, qualifications, and experience, should be made to the undersigned not later than Saturday, February 25th.

PHILIP INMAN,
Charing Cross Hospital, Strand, London, W.C.2. House Governor.

CHARING CROSS HOSPITAL.

MEDICAL REGISTRAR.

The Council invite applications from candidates, who must be registered Medical Practitioners (male) for the post of Medical Registrar. Honorarium £150 per annum. A copy of the regulations can be obtained from the undersigned, to whom applications, together with copies of three testimonials, must be submitted not later than Saturday, February 25th.

PHILIP INMAN,
Charing Cross Hospital, Strand, London, W.C.2. House Governor.

CHARING CROSS HOSPITAL.

SURGICAL REGISTRAR.

The Council invite applications from candidates, who must be registered Practitioners (male) for the post of Surgical Registrar. Honorarium £150 per annum.

A copy of the regulations can be obtained from the undersigned, to whom applications, together with copies of three testimonials, must be submitted not later than Saturday, February 25th.

PHILIP INMAN,
Charing Cross Hospital, Strand, London, W.C.2. House Governor.

CHARING CROSS HOSPITAL.

MEDICAL REGISTRAR.

The Council invite applications from candidates, who must be registered Medical Practitioners (male) for the post of part-time Medical Registrar. Six half days per week. Salary £50 per annum. Applications, together with copies of three recent testimonials, must be submitted to the undersigned not later than Monday, February 27th.

Charing Cross Hospital, Strand, W.C.2. PHILIP INMAN, House Governor.

ROYAL SALOP INFIRMARY, SHREWSBURY. (156 Beds.)

APPOINTMENT OF CASUALTY OFFICER AND RESIDENT ANAESTHETIST.

Applications are invited from fully qualified men for the appointment of Casualty Officer and Resident Anaesthetist vacant from March 1st next.

The appointment is for a period of six months, subject to reappointment for a further period of six months at a salary of £160 per annum, with board, residence, etc. Resident Staff comprises Resident Surgical Officer, House Physician, and Casualty Officer.

Applications, stating age, qualifications, experience, nationality, and accompanied by copies of three recent testimonials, to be sent to the undersigned not later than March 6th.

Board Room. J. W. NOBLE,
February 18th, 1933. Secretary-Supt.

ROYAL SALOP INFIRMARY, SHREWSBURY. (156 Beds.)

APPOINTMENT OF RESIDENT SURGICAL OFFICER.

Applications are invited from fully qualified men for the appointment of Resident Surgical Officer vacant March 1st next.

The appointment is for a period of twelve *months, at a salary of* £250 per annum, with board, residence, etc. The Resident Surgical Officer is Senior Resident Officer of the Hospital. House Staff comprises House Physician and Casualty Officer and Resident Anaesthetist.

Applications, stating age, qualifications, experience, nationality, and accompanied by copies of three recent testimonials, to be sent to the undersigned not later than March 6th.

Board Room. J. W. NOBLE,
February 18th, 1933. Secretary-Supt.

ROYAL EYE HOSPITAL, St. George's Circus, Southwark, S.E.1.

HOUSE SURGEON and ASSISTANT HOUSE SURGEON *required* at the above Hospital. The appointment is, in the first instance, for a period of six months, with board and residence *as from April 1st.*

Salaries: House Surgeon at the rate of £150 per annum; Assistant House Surgeon at £100 per annum.

Candidates must be registered practitioners. Applications, with copies of three recent testimonials, should be sent to the Secretary at the Hospital not later than Wednesday, March 1st.

F. E. D'ALTON, Secretary.

ROYAL EYE HOSPITAL, St. George's Circus, Southwark, S.E.1.

Applications are invited for the following appointments dated as from April 1st.

ONE CLINICAL BACTERIOLOGIST to attend the Hospital on three afternoons per week. Salary £100 per annum.

ONE PATHOLOGIST to attend on three afternoons per week at a salary of £100 per annum.

Applications, with copies of testimonials, to be sent to the Secretary on or before Wednesday, March 1st.

F. E. D'ALTON, Secretary.

ST. PETER'S HOSPITAL FOR STONE, ETC., Henrietta Street, Covent Garden, W.C.2.

The office of HOUSE SURGEON will fall vacant on April 1st, and applications are invited from male candidates with previous experience in a similar office at a General Hospital. The salary offered is at the rate of £75 per annum, with board, lodging, and laundry.

At the expiration of six months' term of office, and subject to the recommendation of the Medical Committee, the House Surgeon is appointed Resident Surgical Officer for a further similar period. Candidates should therefore be prepared, *if successful,* to remain at the Hospital for twelve months in all.

Applications, accompanied by copies of testimonials, will be received by the undersigned not later than the first post on Wednesday March 8th.

BEECHEY ROGERS, Secretary.

ROYAL WEST SUSSEX HOSPITAL, CHICHESTER.

HONORARY ASSISTANT *RADIOLOGIST.*

The post of Honorary Assistant Radiologist has been created and the Board will shortly proceed to fill the post.

Candidates must be qualified Medical Practitioners, with special experience in Radiology (possessing a University Diploma in this subject), and also having knowledge in electrotherapeutics and radium, and practise only in the above subjects.

Applications to reach the undersigned by March 7th.

The election will take place on March 14th.

HERBERT S. AYLMORE, Secretary.

COUNTY MENTAL HOSPITAL, STAFFORD.

TEMPORARY ASSISTANT MEDICAL OFFICER (male) required for March 1st, for not more than twelve months. Salary at the rate of £400 per annum (subject to temporary reduction, at present £19 15s. per annum, under Economy Scheme), with board, lodging, laundry, and attendance. The post is non-pensionable and terminable by one month's notice. Candidates should be unmarried and not over the age of 35. Every opportunity is provided for study and research in well-equipped laboratory, and the post affords special facilities for younger men desirous of experience in Psychiatry. Preference will be given to candidate who has held the post House Surgeon or House Physician at a General Hospital.

Applications, stating age, qualifications, etc., and enclosing copies of testimonials, to be addressed to the Medical Superintendent.

OXFORD COUNTY AND CITY MENTAL HOSPITAL, LITTLEMORE, near OXFORD.

ASSISTANT MEDICAL OFFICER required. Must have had previous Hospital experience and experience at a clinic for nervous disorders, as this will be part of his duty. Salary £400 per annum, rising £25 every two years to £450, and £50 to applicant holding the D.P.M. (subject to a temporary deduction of £16 5s. per annum), with board, furnished apartments, and attendance. The appointment is subject to the provisions of the Asylums Officers Superannuation Act, 1909. Applications, with copies of three recent testimonials, to be sent to the Medical Superintendent by March 11th.

EDINBURGH HOSPITAL FOR WOMEN AND CHILDREN, Whitehouse Loan, EDINBURGH. (56 Beds.)

Applications are invited from fully qualified Medical Women for the post of JUNIOR HOUSE SURGEON, rising to Senior House Surgeon after three months, at above Hospital.

Appointment is for six months from April 1st, honorarium at the rate of £25 per annum for first three months, £50 per annum for second three months, with board, residence, and laundry.

Applications, with copies of testimonials, to be sent to the Secretary, 1, Bruntsfield Crescent, Edinburgh, on or before March 11th.

THE LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL.

Wanted, to commence duties early in April, RESIDENT HOUSE SURGEON (male or female and unmarried) possessing a medical and surgical registered qualification. Practical experience in the administration of anaesthetics is required. Salary £175, with apartments, board, and laundry. All applications, stating age, etc., with copies of testimonials, to be sent to me at once.

9, Leicester Rd., Loughborough. FRANK H. TOONE, Secretary.

THE QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, London, E.2.

HOUSE PHYSICIAN required April 7th.

CASUALTY OFFICER required April 7th. Some Ophthalmic work additional. Six months' appointments. Salary at the rate of £100 per year, with board, lodging, and laundry.

Applications must be made on forms to be obtained from the undersigned, and must be sent in with copies of not more than four testimonials, on or before March 6th.

CHARLES H. BESSELL, Secretary.

February 8th, 1933.

NORTH LONSDALE HOSPITAL, BARROW-IN-FURNESS. (152 Beds.)

HOUSE PHYSICIAN.
(Male Appointment.)

Applications are invited for the above resident appointment from fully qualified practitioners experienced in the administration of Anaesthetics. Duties to commence at once. Salary £175 per annum, with board, residence, and laundry.

Applications, stating age, qualifications, experience, and nationality, accompanied by copies of three recent testimonials, should be sent to the Secretary at once.

COUNTY BOROUGH OF PRESTON. SHAROE GREEN HOSPITAL. (250 Beds.)

Applications are invited from fully qualified registered Medical Practitioners for the post of FEMALE RESIDENT ASSISTANT MEDICAL OFFICER for six months at a salary of £150 per annum, with full board and laundry, duties to commence on April 1st.

Applications, with copies of three recent testimonials, to be returned to the undersigned by Thursday, March 2nd.

Town Hall, Preston. ALFRED HOWARTH, Town Clerk.

February 13th, 1933.

ROYAL MANCHESTER CHILDREN'S HOSPITAL.
Out-patients' Dept.: Gritside Street, MANCHESTER.

Wanted, for the Out-patients' Department, TWO ASSISTANT MEDICAL OFFICERS, non-resident, salary £150 per annum, who will be appointed for six months, one to commence duties on April 1st and one on May 1st. Candidates must be on the Medical Register. Particulars of the duties can be obtained from the Secretary. The hours of duty are from 9 a.m. till 1 p.m., or until the work of the Dispensary is finished. Patients' attendances number 94,000 per annum.

Applications, stating age, and accompanied by copies of not more than three testimonials, to be sent to the undersigned not later than Thursday, March 9th.

Canvassing, directly or indirectly, may disqualify.

By Order,
W. M. HUMPHRY, Secretary.

THE BABIES' HOSPITAL, NEWCASTLE-ON-TYNE.

Non-resident MEDICAL OFFICER required in April.

The duties are those of a House Physician with time and opportunities for research work. The appointment is for six months subject to re-appointment. Salary £175 per annum.

Applications, with two testimonials and particulars of previous appointments held, must be lodged by March 3rd with the Secretary, from whom further particulars may be obtained, West Parade, Westmorland Road, Newcastle-on-Tyne.

THE GUEST HOSPITAL, DUDLEY
(General Hospital—107 Beds.)

Applications are invited for the post of ASSISTANT HOUSE SURGEON. Salary £170 per annum, with furnished apartments, board, and laundry. Duties to commence March 1st. Candidates must be fully qualified and registered.

Applications, stating age, qualifications, and experience, and accompanied by copies of testimonials, to be sent to the undersigned.

H. RAYMOND HURST,
House Governor & Secretary.

The Guest Hospital, Dudley.
February 17th, 1933.

WESTON-SUPER-MARE GENERAL HOSPITAL. (80 Beds.)

HOUSE SURGEON.

Applications are invited for the post of Resident House Surgeon at this Hospital. Salary at the rate of £150 per annum, with board, rooms, and laundry. Duties to commence April 1st next.

Applications, stating age and qualifications, and enclosing copies of testimonials, should be addressed to the undersigned.

LESLIE J. FURSLAND, Secretary.

NORTH LONSDALE HOSPITAL, BARROW-IN-FURNESS. (152 Beds.)

RESIDENT CASUALTY OFFICER.
(Male Appointment.)

Applications are invited for the above resident appointment from fully qualified practitioners experienced in the administration of Anaesthetics. Duties to commence at once. Salary £150 per annum, with board, residence, and laundry.

Applications, stating age, qualifications, experience, and nationality, accompanied by copies of three recent testimonials, should be sent to the Secretary as early as possible.

BOLINGBROKE HOSPITAL, Wandsworth Common, S.W.11.
(121 Beds.)

The Board of Governors invite applications for the post of HONORARY SURGEON to the Ear, Nose, and Throat Department of the Hospital.

Candidates must be Fellows of a Royal College of Surgeons, practising in this branch of Surgery and not engaged in general practice.

Candidates will be required to call upon members of the Medical Committee.

Applications, giving age and full particulars, must be accompanied by copies of three recent testimonials, and should reach the undersigned by Wednesday, March 8th.

W. S. RANDOLPH BISS, Secretary-Supt.

BOLINGBROKE HOSPITAL, Wandsworth Common, S.W.11.
(121 Beds.)

Applications are invited for the post of part-time PATHOLOGIST.

Candidates must be registered Medical Practitioners engaged in Pathological Practice.

Details of the post can be obtained from the undersigned.

W. S. RANDOLPH BISS, Secretary-Supt.

ST. MARY'S HOSPITAL, W.2.

Applications are invited for the post of DIRECTOR of an ALL-DAY VENEREAL DISEASES CLINIC shortly to be established at the Hospital under a scheme approved by the London County Council.

Salary £400 per annum.

The Director will be required to devote 20 hours weekly to the work of the clinic.

Candidates must be qualified Medical Practitioners, having a specialist knowledge of the treatment of venereal disease. The Director will be permitted to engage in private practice.

The appointment is for a period of one year, the holder being eligible for re-election.

Applications, accompanied by three recent testimonials, should reach the undersigned not later than March 1st.

W. PARKES, Secretary.

CITY OF BRADFORD MUNICIPAL GENERAL HOSPITAL, ST. LUKE'S.

HOUSE PHYSICIANS and HOUSE SURGEONS required. Salary in each case £150 per annum, plus board and lodgings. These appointments are for six months renewable for a further period of six months.

Application forms may be obtained from the Medical Officer of Health, Town Hall, Bradford, and should be delivered to the undersigned not later than March 9th.

Town Hall, Bradford. N. L. FLEMING, Town Clerk.

SHROPSHIRE ORTHOPAEDIC HOSPITAL & AGNES HUNT SURGICAL HOME, OSWESTRY.
(320 Beds—110 Children, 210 Adults.)

HOUSE SURGEON (male) required on April 1st.

Appointment for six months, with possibility of extension. Salary at the rate of £200 per annum, with board, residence, and laundry. Two weeks' holiday for each six months service.

Applications, stating age, qualifications, and experience, with copies of three recent testimonials, should be forwarded to the Secretary-Superintendent.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.

Wanted, an ASSISTANT MEDICAL OFFICER (male) for the CROSSLEY SANATORIUM, Delamere Forest, Cheshire (110 beds). Salary £200 per annum, with board, apartments, and laundry. Candidates must be duly registered Medical Practitioners.

Applications, stating age, with copies of testimonials, to be sent not later than March 2nd to W. HUNT, Secretary, Hardman Street, Deansgate, Manchester.

CONNAUGHT HOSPITAL, Walthamstow, E.17.
(100 Beds, with Three Resident Medical Officers.)

RESIDENT HOUSE PHYSICIAN (Male) required. Salary £100 per annum. Appointment for six months, from April 1st, with board, residence, and laundry. Applications, stating age, nationality, qualifications, and experience, accompanied by copies of not more than three recent testimonials, should be received on or before Monday, March 13th.

KENELM S. ELLISON, Secretary.

ROYAL NATIONAL ORTHOPAEDIC HOSPITAL,
234, Gt. Portland Street, W.1.

Applications are invited for the post of HOUSE SURGEON (male and unmarried). The appointment is for six months from April 1st, and renewable for a further period of six months on the recommendation of the Medical Board. £150 per annum, with board, quarters, and laundry. Applications, with copies of testimonials, should be addressed to the Secretary not later than March 14th.

EAR & THROAT HOSPITAL, BIRMINGHAM.

THIRD HOUSE SURGEON wanted (non-resident). Must be qualified and with clinical experience. Salary at the rate of £150 per annum, with part board and an allowance at the rate of £50 per annum in lieu of full board and lodging. Appointment for six months, commencing April 1st.

Applications and testimonials to be forwarded on or before March 6th, to the undersigned.

W. E. REYNOLDS, Acting Secretary.

NATIONAL TEMPERANCE HOSPITAL, Hampstead Road, N.W.1.

A vacancy has occurred for the post of HONORARY ASSISTANT PHYSICIAN.

Candidates must be Doctors of Medicine of a British University or Members of the Royal College of Physicians.

Applications, with copies of not more than three recent testimonials, must be forwarded not later than Thursday, March 9th, addressed to the Secretary.

NOT CLASSIFIED.

WANTED TO ADOPT TWO CHILDREN, ages about three and four years, essential they be of gentle parentage. Every investigation both sides.—Address, No. 1404, B.M.A. House, Tavistock Square, W.C.1.

GENTLEWOMAN, HAVING A WELL-APpointed house, situated in the best residential part of Kew Gardens, desires one or two PAYING GUESTS. Every home comfort. Constant hot water. Full board if required, with attendance. Few minutes from station and Gardens. Less than ten minutes by train or bus to Richmond.—Address, in first instance for terms and interview, No. 1412, B.M.A. House, Tavistock Square, W.C.1.

ASSISTANCIES.

WANTED. — INDOOR MALE ASSISTANT immediately. Must be single and an abstainer. Salary £300 p.a. Young energetic man with some exp. in G.P. pref. Panel and private Practice in Midlands. Car provided for rounds. Recent tests. & photo to be submitted.—No. 1407, B.M.A. House, Tavistock Sq., W.C.1.

WANTED BY M.D., M.R.C.P.(LOND.), AGED 26, ASSISTANTSHIP, with view, in good-class Practice, or salaried post. Ex H.P., H.S., Spec. knowledge Skins and E.N.T. Experienced G.P. — Address, No. 1419, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — AN INDOOR ASSISTANT FOR General Practice, near Manchester. Usual bond. State age, experience, and other essential particulars. — Address, No. 1427, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — ASSISTANT FOR GENERAL Practice in East London. Usual agreement and references. Live in. Work light.—Address, No. 1418, B.M.A. House, Tavistock Square, W.C.1.

WANTED.—FULL-TIME RECENTLY QUALIfied, single, male ASSISTANT for East End Practice. Indian or West Indian. To reside Surgery. — Address, No. 1203, B.M.A. House, Tavistock Square, W.C.1.

WANTED IMMEDIATELY. — INDOOR AND Outdoor ASSISTANTS for Town and Country Practices, with and without view; good salaries. State full particulars.—BRITISH MEDICAL BUREAU, 33, Cross St, Manchester, 2.

WANTED.—PART-TIME ASSISTANT, MALE or female, North London, panel and private; male preferred. Convenient West End.—Address, No. 1408, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — ASSISTANT, YOUNG, ENERgetic, cyclist, unmarried, for mixed busy Practice. Usual bond. — Address, No. 1403, B.M.A. House, Tavistock Square, W.C.1.

WANTED.-WOMAN ASSISTANT, OUTDOOR, for working-class practice in South-East London. Suit one recently qualified. Good prospects.—Address, No. 1414, B.M.A. House, Tavistock Square, W.C.1.

ASSISTANTSHIP REQUIRED BY M.R.C.S., L.R.C.P., ex H.S., H.P., and R.M.O. 3 years' experience general practice. Own car. Testimonials. British, male, single.—Address, No. 1415, B.M.A. House, Tavistock Square, W.C.1.

LOCUMS.

FOR LOCUM TENENS APPLY TO
PERCIVAL TURNER, Ltd.
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4, ADAM ST., Strand, London, W.C.2.
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APPOINTMENT OF RESIDENT HOUSE PHYSICIAN.

Applications are invited from fully qualified male Registered Practitioners for the above appointment.

The appointment is for six months, with eligibility for reappointment for a further six months, but either party may give six weeks' notice terminating the engagement. The Hospital has 474 beds and is equipped with up-to-date special departments. There is a visiting staff of eight consultant Physicians and Surgeons.

Preference will be given to applicants with previous Hospital experience.

Salary £200 per annum.

Canvassing, either directly or indirectly, is strictly prohibited and will be deemed a disqualification.

Applications, stating age, experience, and qualifications, together with copies of three recent testimonials, must be forwarded to the Medical Officer of Health, 2, Lodge Road, West Bromwich, so as to arrive not later than by first post on Wednesday, March 8th.

Town Hall, ALFRED WICKHAM,
West Bromwich. Town Clerk.
February 21st, 1933.

ST. ALBANS & MID HERTS HOSPITAL & DISPENSARY

Church Crescent, ST. ALBANS.

Applications are invited for the post of RESIDENT HOUSE SURGEON Salary £150 per annum, with board, residence, and laundry.

The post will become vacant on or about March 15th.

Applications to be sent to the Secretary, St. Albans & Mid Herts Hospital, No. 38, St. Peter's Street, St. Albans.

February 20th, 1933.

DAVID LEWIS NORTHERN HOSPITAL, LIVERPOOL.

Applications are invited for the post of CASUALTY OFFICER.

The appointment will be tenable for six months from April 1st next.

Salary attached to the post is at the rate of £120 per annum, with board, residence, and laundry.

[illegible] with copies of testimonials, to [illegible] signed not later than [illegible]

[illegible] M.D. GIBSON, M.A.,
[illegible] Secretary and Supt.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester Square, W.C.2.

Applications for the posts of OUT-PATIENT and IN-PATIENT MEDICAL REGISTRARS are invited to be sent to the undersigned on or before Saturday morning, March 4th.

Honorarium £50 per annum in each case.

Applicants must be duly qualified and registered Medical Practitioners. Particulars of the duties can be obtained on application.

There are also vacancies for CLINICAL ASSISTANTS.

LEONARD G. R. TURPIN.
February 9th, 1933. Secretary.

LONDON COUNTY COUNCIL.

Applications invited from registered Medical Practitioners of at least one year's standing for appointment as TEMPORARY DISTRICT MEDICAL OFFICER at the undermentioned medical districts.

The candidate appointed will be required in each case to reside in or near the district, to carry out the duties prescribed by the Public Assistance Order, to work under the general direction and supervision of the Medical Superintendent of the hospital most conveniently situated in the district served by him, and to provide at his own expense an approved deputy during absence from any cause. In the case of a woman, marriage will terminate contract of service. The salary in each case is provisional. Remuneration and conditions subject to review.

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4. Area 6.—District B (Kensington). Salary £200 a year.
5. Area 8.—District M (Camberwell). Salary £200 a year.
6. Area 9.—District J (Lewisham). Salary £200 a year.
7. Area 9.—District K (Lewisham). Salary £140 a year.

Forms of application, with full details of boundaries of the districts and further particulars obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), County Hall, Westminster Bridge, S.E.1, returnable by March 3rd. Only candidates complying with the conditions as to residence are eligible. Canvassing disqualifies.

LONDON COUNTY COUNCIL.

Applications invited from Medical Practitioners with appropriate qualifications for appointment of PATHOLOGIST and ASSISTANT PATHOLOGIST at the undermentioned group laboratories. Remuneration and conditions subject to review in each case. In the case of a woman marriage will terminate contract of service

PATHOLOGIST at GROUP LABORATORY, MILE END HOSPITAL, Bancroft Road, E.1. The salary is £1,100, rising annually by £50 to £1,300 a year. The group laboratory is fully equipped and the pathologist will be responsible for the organisation and development of the pathological work for the Council's general hospitals in the group. The pathologist will be expected to visit each hospital in the group at frequent intervals and act generally as a consulting pathologist to the group. He will also be expected to carry out research work as opportunities arise.

ASSISTANT PATHOLOGIST at each of the Group Laboratories at:

1. ARCHWAY HOSPITAL, Archway Road, N.19.
2. LAMBETH HOSPITAL, Brook St., S.E.11.
3. LEWISHAM HOSPITAL, S.E.13.
4. MILE END HOSPITAL, Bancroft Rd., E.

The scale of salary in each case is £650 a year, rising annually by £25 to £800 a year.

The person appointed will be required to act under the direction of the Pathologist, and the duties will include the visitation of hospitals, the conduct of post-mortem examinations, and generally the carrying out of examinations in the laboratories in the area.

Form of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), County Hall, Westminster Bridge, S.E.1, and returnable by March 20th. Candidates should specify the position or positions for which they desire to apply.

Canvassing disqualifies.

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The Board invite applications for the post of RESIDENT HOUSE SURGEON (24 beds). Salary at the rate of £120 per annum. Candidates must be duly qualified and registered. Applications, with copies of four recent testimonials, to be forwarded to Mr. REGINALD S. MILFORD (Hon. Sec., Manchester Ear Hospital), c/o Mr. W. J. ELLAM, 33, Brazennose Street, Manchester.

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GENERAL HOSPITAL, NOTTINGHAM. (386 Beds.)

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LANCS MANUFACTURING TOWN. — £ p.a. Panel over 1,050. No appts. Mi dispensing PRACTICE. Detached house, 5 t 3 recep., surg., etc., with separate entra Garden and garage. To rent on lease.—No. 9

LINCS WOLDS. — UNOPPOSED PRACT About £700 p.a. Panel 325. Appts. £64 p.a. Visits 3/6 to 15/-. Midy 2 to 3 gns. Freehold residence, 5 rooms and profes sional and domestic offices. Garage and garden. For sale £800.—No. 9115.

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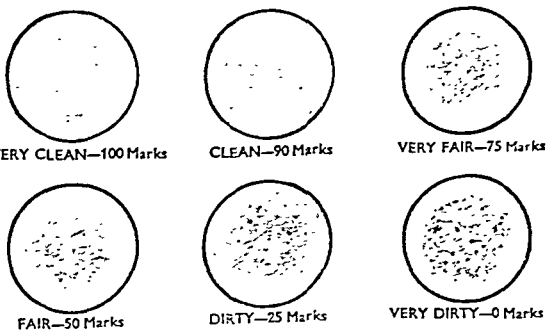

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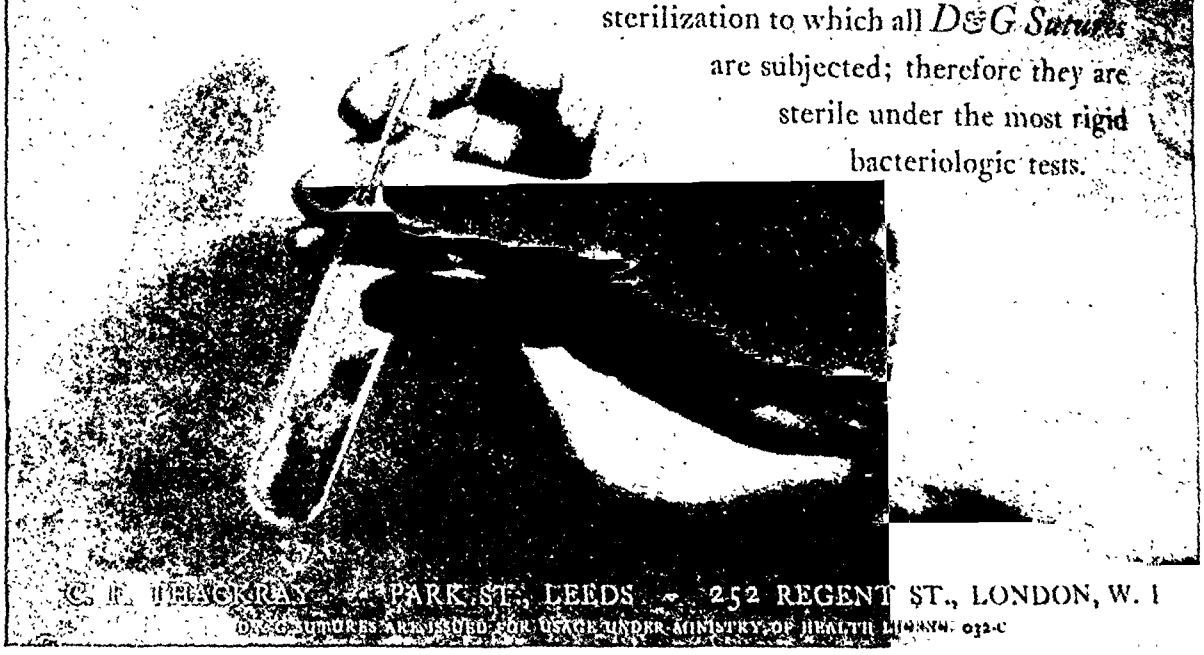

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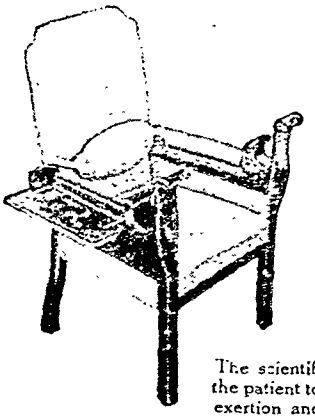

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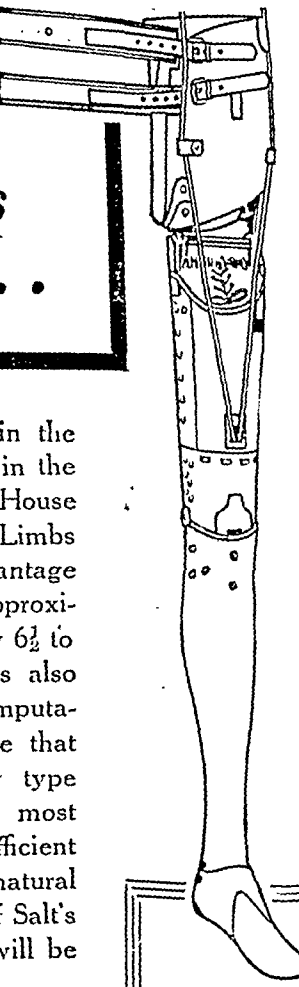

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We would draw the attention of Medical Men to the fact that we do NOT directly canvass patients. This is consistent with the policy idealised by the "B.M.J." and, we are sure, will meet with the approval of the Profession.

London Consulting Rooms:
"OAKLEY HOUSE,"
14-18, Bloomsbury St., W.C.1.
Female Fitters in attendance Monday to Friday.
Orthopaedic Mechanician Wednesdays only.
By Appointment.

SALT and SON Ltd.

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SURGICAL SERVICE SALTAIR

Birmingham: Midland 5455 *London: Museum 3845*

BREAST CONDITIONS.

Sketch shewing typical pendulous atrophic type of breasts. Usually accompanied by pronounced faulty posture. Patient has difficulty in adjusting herself to prevailing mode of dress.

Sketch shewing application of Spencer Uplift Bandeau for type shewn at left. This is style No. 400.

Patients unwittingly aggravate this condition by wearing the bandage type of brassière. This was particularly true during the reign of the mode just passed. Now, however, uplifted breasts are demanded by fashion, so doctors have little or no difficulty in getting the co-operation of patients for whom they prescribe uplift.

Bust pockets of bandeau are made of slightly stretchy material and construction of the bandeau provides for definite uplift without constriction. Cloth inside extends up under bust. Both bust and waist measurements are taken for this type of bandeau to ensure proper fit. Measurements are taken with the busts held in the uplifted position.

WHAT THE SPENCER UPLIFT BANDEAU DOES.

1. Tends to prevent sagging of the skin and subsequent ptosis.
2. Gives uplift yet permits freedom in breathing.
3. During pregnancy and for nursing mothers, provides support and uplift without pressure on the nipples. Many doctors recommend it as a preventative of breast abscesses and "caking."
4. Gives comfort to women who have large ptosed breasts, as well as to those who shew a tendency to breast prolapse.

Spencer uplift bandeaux are fashioned with cupped bust-pockets, under which there is a firm anchorage of fabric fitting snugly over the diaphragm.

Each bandeau is made especially for the wearer. Measurements taken by trained Spencer Corsetières with the figure controlled, under your supervision, if you wish. Spencer bandeaux, supports and corsets are never sold in shops.

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TRADE REJUVENO MARK
FOUNDATION GARMENTS AND SURGICAL SUPPORTS
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Expert Fitters (Trained Nurses) at your immediate Service.

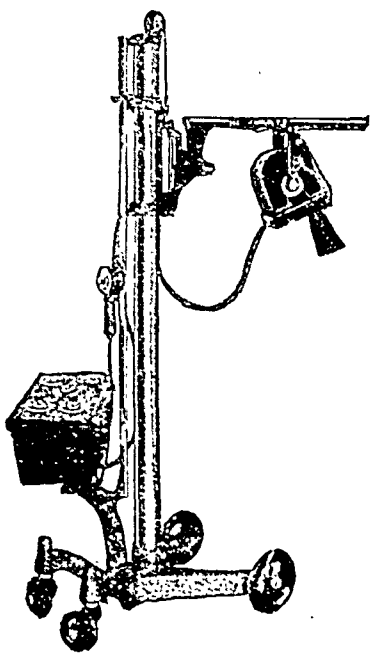
Manufactory: SPENCER HOUSE, Britannia Road, Banbury, Oxon.

Booklets Listed below gladly sent on request.

Write for booklet on the use of Spencer Supports for (check the subjects in which you are interested) Breast Conditions, Hernia, Sacro-iliac Strain, Enteroptosis and Intestinal Stasis, Movable Kidney, Pregnancy and Postpartum Support, Men's Belts. We will gladly send you any or all of these booklets.

Name, Dr. ..... *Address* .....

"The most practical, efficient consulting room x-ray unit ever designed"



—is the concensus of opinion of physicians who have seen and are using this Victor "Oil-Immersed" Shock Proof X-Ray Unit

THE spontaneous interest in this Model "D" Shock Proof Unit from the time of its announcement, is unprecedented in the history of our organization. It has equalled our own enthusiasm over this remarkable development.

Since the advent of Victor *oil-immersed* shock proof apparatus for medical x-ray diagnosis a few years ago, our engineers and designers have had to extend themselves to keep apace with suggestions emanating from the profession itself, for further adaptations of the radically new principles introduced. A number of important adaptations have been made, opening new fields and possibilities in x-ray diagnosis.

This most recent adaptation, Model "D," is the solution for every physician who has pondered the question of what might constitute a thoroughly safe, compact, and inexpensive consulting room x-ray unit, yet which would be practical and capable of producing a quality of work that would reflect credit upon himself.

Model "D" is shock proof—100% electrically safe—by the complete elimination of high tension wires. (Both the x-ray tube and the transformer are immersed in oil and sealed within the tube head.) Thus, fear of electrical shock to either the operator or patient is dismissed, once and for all. The special Coolidge tube, with its extremely small focal spot, produces the fine radiographic detail so essential to correct diagnosis. It is simple to operate, because of the positive control system, so that with comparatively little experience one may produce radiographs of the desired diagnostic value.

In truth, Model "D" is a revelation, a distinct contribution to consulting room practice. With its practical range of service and consistently reliable performance, it meets the ideal which many physicians have sought for x-ray diagnosis in the routine of every-day practice. Write for particulars now.

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ELASTIC PLASTER BANDAGE

The use of "VARIBAN" Elastic Plaster Bandages makes for the successful treatment and the speedier recovery of the patient suffering from Varicose Ulcers, Varicose Veins, Strains, or Fracture. These Bandages, evenly spread with an Antiseptic Zinc Oxide Paste, readily conform to the shape of the limb and provide the firmest support, and yet permit of easy removal. The most modern treatment yielding the most satisfactory results. Supplied in four widths: 2", 2½", 3" and 4", at 1/9, 2/-, 2/3 and 2/8 each, respectively. Sample 3" bandage sent on receipt of P.O. for 2/6, in order that you may judge "VARIBAN" Bandage in your own practice. Write direct to the manufacturers.

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Distributors to the Medical Profession:
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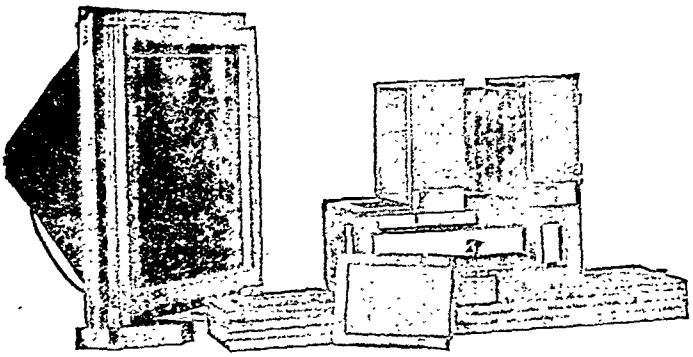
Kodak X-Ray Reduction Camera Outfit



A simple and solidly built camera. Reduces negatives of any size.

Suitable for making bromide prints or transparencies of $6\frac{1}{2}$ x $4\frac{3}{4}$ size or smaller, and lantern slides.

An automatic focussing scale makes the Kodak Reduction Camera exceedingly simple to operate.

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An important aid in the preparation of Peptonised Milk, etc.

Liquor Pancreaticus Benger is an active solution of the digestive principles of the Pancreas; a really efficient agent for the digestion of milk, gruel and farinaceous or partly farinaceous foods. Odourless and tasteless. In 4, 8 and 16-oz. bottles. Prices: 3/-, 5/6 and 10/6.

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Regd. Trade Mark

Physicians may obtain full particulars of Benger's preparations post free on request.

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For Influenza and Post-Influenzal Debility

It is recognised that the severe debility especially of the heart and digestive organs which follows influenza, yields most readily to a dietary rich in vitamins. The simplest way to secure this condition is by augmenting the ordinary diet with BEMAX.

BEMAX is a natural vitamin food prepared from the de-toxicated embryo of selected cereals. It is the richest known source of Vitamin B and contains also Vitamins A and E with valuable salts of Phosphorus.

Both as a preventive of influenza during times of epidemic, and as a restorative food during convalescence BEMAX has proved to be invaluable. Definite improvement is usually observed soon after its use.

BEMAX is a pleasant food to take, very easy to assimilate and digest. It will be taken readily even in those influenza cases where gastric symptoms predominate.

Laboratory reports on BEMAX and a clinical sample for personal trial will be sent to any medical man on receipt of his professional card.

Oxford & Cambridge Boat Race
April 1st, 1933

An Invitation

The Directors of Bemax cordially invite members of the Medical profession and their friends to view the race from the Bemax Factory Wharf, Hammersmith Reach. Accommodation is limited to 400 spectators and application for Invitation Cards should be made early.

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THE RICHEST NATURAL VITAMIN TONIC FOOD

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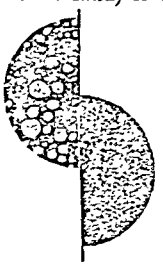
Magnesia and Liquid Paraffin, when properly presented, form the therapeutic complement of each other. Magnesia-Oil (Musterole Brand) is superlative in its therapeutic action.

The experiments of the manufacturers of Magnesia-Oil (Musterole Brand) have been directed to the end of perfect pharmaceutical presentation. Ordinary mixtures of Magnesia and Liquid Paraffin have a poor therapeutic value, owing to their lack of "covering" power. The large globules of oil "leak" whilst the molecules of magnesia are apt to coalesce. The result is anything but the attainment of the physician's desire.



In Magnesia-Oil (Musterole Brand) so fine is the state of division of the Magnesia and Liquid Paraffin, that they may be said to be in close molecular companionship. Therapeutically, the action of this product leaves nothing to be desired—as the maximum effect of both its components is always available through the "multiplied" activity which a state of ultra-superfine division alone can give it.

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MAGNESIA-OIL

ADVANTAGES

IT DOES NOT		IT DOES
Leak	..	Correct Acidity
Repeat	..	Adsorb Toxins
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Deteriorate	..	Please the Palate
Cause a drug habit	..	Suit the Patient

INDICATIONS

Constipation ..of Pregnancy, Infancy and Age
Flatulence .....and Acid Eructations
Nausea .....and Vomiting
Hyperemesis .....and the Toxæmias
Hyperacidity ..... and Dyspepsia
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A FULL CLINICAL SAMPLE WILL BE SENT ON REQUEST

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(Cataplasma Kaolini, B.P.C.)

CLEAN & CONVENIENT IN USE

More certain in its action than the old-fashioned poultice.

The healing action of Regetherm Antiphlogistic Poultice is governed by its ability to prolong and maintain an even degree of heat over a lengthy period. Moreover, the ingredients are so balanced that this action does not set up any counter-irritation, but allays pain, ensures an even circulation through the congested areas, and thus induces natural and pain-free rest.

The Medical Profession will appreciate the fact that the action of Regetherm Poultice is much superior to that of fomentations or linseed poultices, and can be relied upon as an efficient aid in the treatment of all types of inflammation.

1/1½ per ½-lb. TIN; 2/- per 1-lb. TIN

(NOTE THE WEIGHTS).

Discount to the Medical Profession

Full size trial sample free to any medical practitioner, in Great Britain ONLY, on application by postcard to BOOTS THE CHEMISTS, STATION ST., NOTTINGHAM

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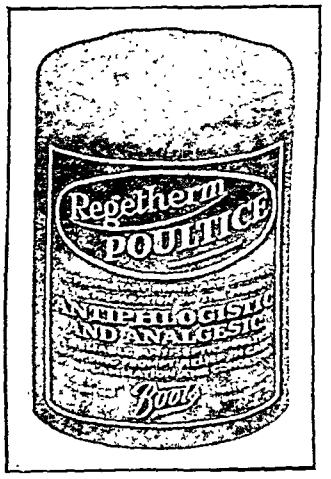
NOTTINGHAM - - - - ENGLAND

Telephone: NOTTINGHAM 45501 Telegrams: DRUG, NOTTINGHAM



OBTAINABLE FROM The Boots Chemists

NEARLY ONE THOUSAND BRANCHES THROUGHOUT - GREAT - BRITAIN

"USED MORE FREQUENTLY IN SURGERIES THAN ANY OTHER TOILET SOAP"

Replies received from a canvass of several thousand members of the medical profession recently made by the National Institute of Industrial Psychology indicate that Wright's Coal Tar Soap is used more frequently by physicians than any other brand. As a toilet and bath soap, Wright's refreshes and gently stimulates the skin; as an antiseptic soap it meets the latest requirements of Hygiene. In this form Wright's Liquor Carbonis Detergens may be applied most conveniently and effectively to the skin. Wright's Liquor Carbonis Detergens finds a place in the Pharmacopœias of eight leading London Hospitals and is recommended in the works of many eminent authorities, including the most modern editions of OSLER, and TAYLOR'S *Practice of Medicine.* Use and recommend a safe soap of recognised merit! . . . . .

RECOMMEND A *safe* SOAP

That greatest authority, the Encyclopædia Britannica, says "the skin is liable to be attacked by more forms of irritation, parasitic or other, than any organ of the body," and of Coal Tar, "The pharmaceutical use of Coal Tar products takes its place in the front rank, not . . . so much because of the amount . . . of material used, which is comparatively small, but on account of its importance in the prevention and suppression of disease."

WRIGHT'S *coal tar* SOAP

FOR FRESHNESS AND RADIANT HEALTH

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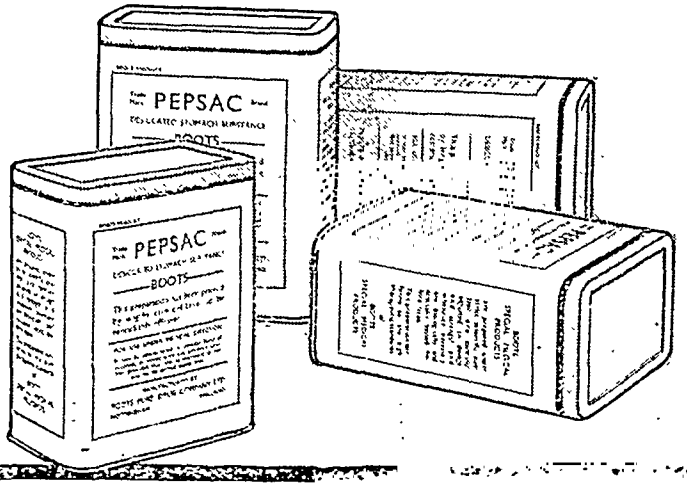
TRADE MARK BRAND

DESICCATED STOMACH SUBSTANCE

—BOOTS—



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"The high claims made for desiccated stomach had been fully confirmed" . . . . . "much the most effective as well as the cheapest treatment for pernicious anæmia at the present time."

The Lancet, January 14th, 1933, p. 84

DOSE FOR ADULTS: Two or three tablespoonfuls daily according to medical direction

Supplied in 12 oz. tins sufficient for about ten days treatment

Price 8/6

Special discount to the Medical Profession.

Literature sent on request

WHOLESALE AND EXPORT DEPT

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THE COMING OF SPRING

brings wider activities . . .

and both doctor and patient feel the need of increased energy and greater vitality. For many people, however, spring is a trying season and their lack of tone is evident. Horlick's Malted Milk can be recommended as an energising diet to overcome debility and for increasing tone.

Horlick's contains 15% of easily digested protein, and 60% of malt sugar —maltose and dextrin. Researches have shown malt sugar to be of high biological value—"un sucre vivant et minéralisateur," as one scientist has expressed it. Horlick's also contains Vitamins A, B and D, and effective mineral salts. Recent tests on human subjects show that Horlick's is not only easily digested and absorbed, but that it speedily affects metabolism—thus confirming the clinical experiences of doctors during the past fifty years.

HORLICK'S MALTED MILK CO. LTD., SLOUGH, BUCKS.
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THE NEW FOOD

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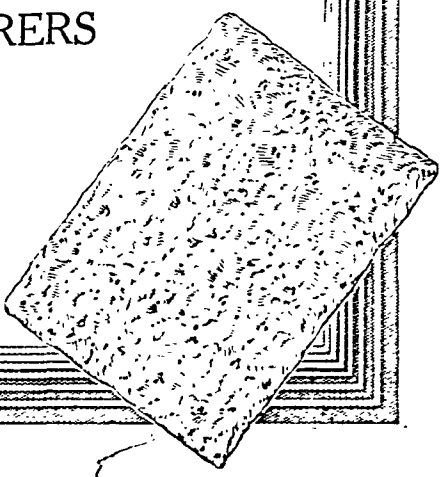
BISCUIT MANUFACTURERS

BY APPOINTMENT to H.M. THE KING and H.R.H. THE PRINCE OF WALES

May be had at all High Class Grocers and Stores



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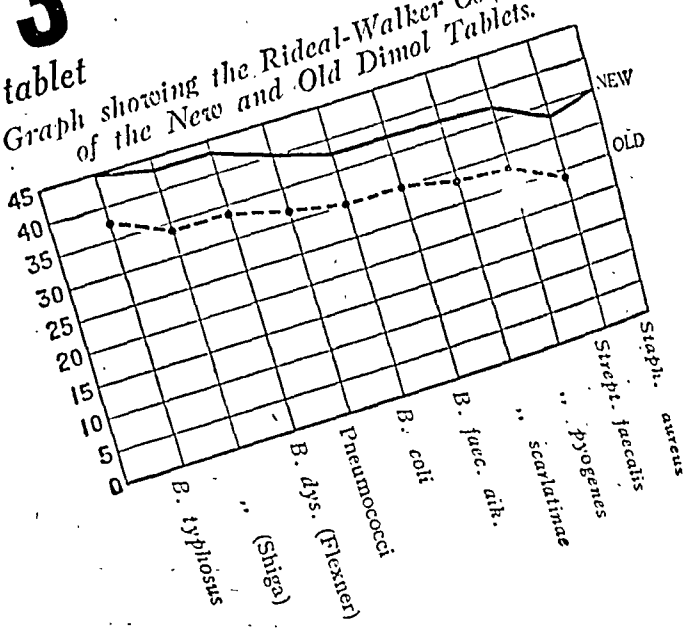
For all diseases where an intestinal focus is a definite factor

DIMOL '43'

The greatly improved intestinal tablet

achieves decisive clinical results



Prices and particulars will be sent on application to:

DIMOL LABORATORIES, LTD., 40, LUDGATE HILL, LONDON, E.C.4

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FOR THE GROWING CHILD

"Ovaltine" is indicated as a means of promoting normal growth and development when the weight of the child under observation is less than that which statistics show a child of the same height should weigh.

The physician has only to consider the composition and properties of the product to recognize how suitable it is as a building and reconstructive nutrient.

"Ovaltine" is a concentrated extraction of malt, milk, and eggs in the form of golden brown granules. For tissue growth or repair it provides proteins, mineral constituents, adequate energy value, and the Accessory Growth Factors or Vitamins in correct nutritive ratio.

Children love the deliciousness of "Ovaltine" and thrive remarkably well upon this complete food. It is of unsurpassable value as a meal-time beverage in place of tea, coffee, cocoa, or other beverages.

A liberal supply for clinical trial sent free on request.

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Works: KING'S LANGLEY, HERTS.

M.245

In Acute Inflammatory Conditions

In citing the many acute inflammatory conditions met with continually in the course of ordinary clinical practice in which he had employed S.U.P. 36 with marked success, a physician reported recently that in *"two cases of threatened acute Otitis Media . . . symptoms all disappeared within 24 hours after one dose."*

S.U.P. 36

Clinical sample on request

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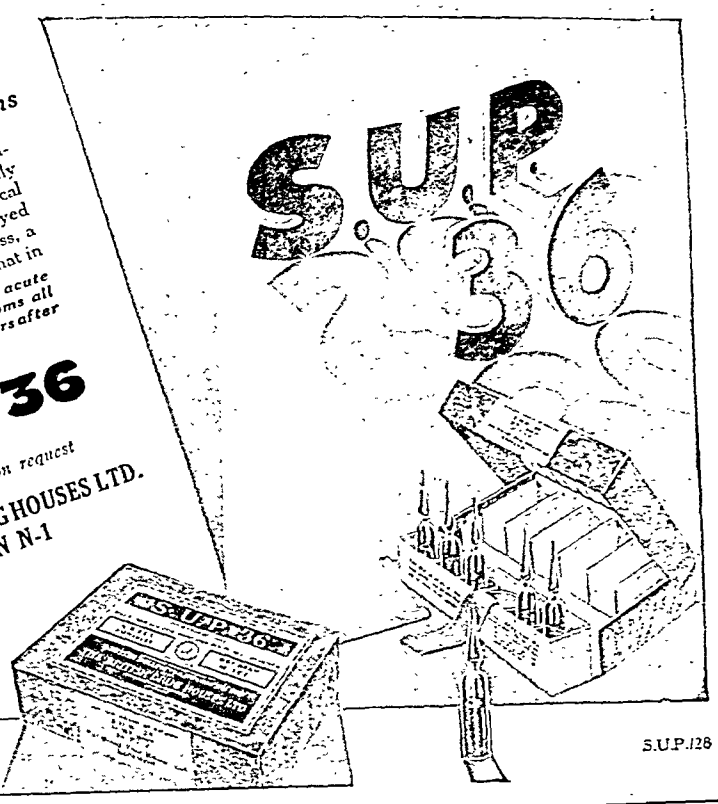

S.U.P.128

ACETYLARSAN

Diethylamine Acetarsone

ACETYLARSAN meets the need for an arsenical which is well tolerated and sufficiently potent in effect to enable its use by subcutaneous or intramuscular injection.

ACETYLARSAN is a pentavalent arsenical compound, supplied in the form of a clear colourless solution in sterilised ampoules, ready for injection.

ACETYLARSAN is indicated in all stages of syphilitic infection, being particularly useful for routine treatment in the primary and secondary stages, and in association with bismuth or mercury. Its rapid elimination and low toxicity allow frequent courses to be given.

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For
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ANTIBACSYN

Dose:—2 c.c. to 5 c.c. 12 HOURLY. 25 c.c. @ 16/- 12½ c.c. @ 8/6

The Laboratories of
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URALYSOL

Thyminic Acid — Hexamethylene-Tetramine — Lysidin

REDUCED PRICES NOW IN OPERATION

TREATMENT OF THE RHEUMATIC DIATHESIS

IN GRANULES

Clinical samples gladly sent on request.

CONTINENTAL LABORATORIES, Ltd.
30 Marsham Street, London, S.W.1
"Taxolabs, Sowest, London." *Victoria 2041.*

"... a valuable tonic"

Livogen contains in generous proportions all the blood-regenerating constituents of fresh liver, together with haemoglobin and a measured amount of the "B vitamins" the presence of which, in addition to enhancing the specific anti-anaemic action of the product, furnishes a stimulus to the appetite.

In reporting on its value in many conditions of subnormal health and debility, also in convalescence generally, a physician stated recently that he has found it to give excellent results in many forms of secondary anaemia, and to be particularly useful in post-operative cases; in all these cases he finds it *"a valuable tonic."*

Livogen is highly palatable and simple of administration.

LIVOGEN

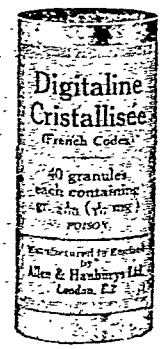
Literature and sample on request

THE BRITISH DRUG HOUSES LTD. LONDON N.1

Lan11b

Digitalin Granules "A. & H."

gr. $\frac{1}{240}$ ($\frac{1}{4}$ mg.)



gr. $\frac{1}{600}$ ($\frac{1}{10}$ mg.)

Digitalin Granules, "A. & H.," a British preparation, consist of the *Digitaline cristallisée* of the French Pharmacopœia. This substance is the most active principle of digitalis leaves, and, because of its reputation for uniform activity, it has long been popular, particularly on the Continent. Its use is recommended by high authority in cases where galenical preparations of digitalis have failed.

For Prescribing:
In tubes, containing 40 granules, 2,6 each
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Subject to the usual professional discount.

Descriptive literature and clinical trial sample will be sent post free on application.

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NOVOCAIN

The Original Preparation
English Trade Mark No. 276477 (1905)

The Safest and most Reliable Local Anaesthetic for all Surgical Cases

Does not contain Cocaine, and does not come under the Dangerous Drugs Act.

A New Vaccine for the Prevention of Colds, Catarrh, Influenza, etc.

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GLAUCOSAN

for the treatment of GLAUCOMA according to Dr. Carl Hamburger (Berlin).

Glaucosan,
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IN STERILIZED AMPOULES.

The Finest Anodyne

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PEPTONE "STERULES" in ASTHMA

(REGISTERED TRADE MARK)

Also employed with success in hay fever, associated skin affections, angio-neurotic oedema, cyclic vomiting, periodic diarrhoea, and the migraine-epilepsy syndrome; in short, to such conditions as exhibit an anaphylactic character or sensitisation.

Graded Series of 10 "Sterules," price on prescription, 8/6, professional price, 7/6. Continuation Course of 6 "Sterules," for intravenous and intramuscular use—please state which is desired—price on prescription, 7/6, professional price, 6/6.

Also Peptone "Sterules" according to prescription in article.

Lancet, April 11th, 1931, p. 805. *Leaflet on application.*

W. MARTINDALE (MANUFACTURING CHEMIST), 12, New Cavendish Street, London, W.1

Telegraphic Address:
"MARTINDALE, CHEMIST, LONDON."

Telephone Nos.:
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WHOOPING COUGH

Whooping Cough is a condition in which treatment with a suitable vaccine has proved remarkably successful. Some Practitioners, however, are deterred from using Vaccines, owing to fear of reactions, but this objection may be overcome by employing Detoxicated Whooping Cough Vaccine (Genatosan). In the preparation of this vaccine all the toxic elements of the germ are removed; as a result it is given to young children and infants without any harmful reaction and produces a high degree of immunity.

The following extract from a Practitioner's letter may prove of interest:—

"..... Some time ago, I resolved to try for the first time a vaccine in whooping cough and the results were so excellent, that I thought you would be interested to hear from me.

(*a*) Three children aged 3 years, 2 years and 8 months, were treated when the disease was about 10 days established; all were completely cured after the third injection—the mother described the effect to me as simply miraculous.

(*b*) Two aged 6 years and 3¼ years, who had relapses, were well after they had got the 2nd injection.

(*c*) An infant aged 8 months—the whoop disappeared after 1st injection. The cough was gone after 2nd injection, and the mother, who had tried everything and despaired of the child's life, was exceedingly grateful and assured me it was simply wonderful to see how the child had slept for the first time for days and was able to retain its food and rapidly put on weight. The Vaccine used was your Detoxicated Whooping Cough Vaccine. Speaking for myself, I can only describe the effects as magical, as the children were worn out and emaciated from coughing, vomiting, and loss of sleep."

Additional information regarding the above Vaccine will gladly be supplied to any Practitioner who writes to The Vaccine Department, Genatosan Ltd., Loughborough, Leicestershire.

COLLOSOL MANGANESE

IN Boils, Acne Carbuncles Abscesses Chronic Ulcers Psoriasis, Gonorrhoea affections, etc.

COLLOSOL MANGANESE is a thoroughly established therapeutic agent for use in all stubborn coccogenic affections, supported by over sixty favourable clinical references in authoritative medical journals.

Protected against precipitation on addition to the blood plasma by colloidal and other organic substances, the very minimum of pain, discomfort and untoward reaction is ensured when injected intramuscularly.

In cases where the use of Collosol Manganese by injection is deemed inadvisable, particular attention is drawn to the ORAL route, by which means Manganese may be given to children with perfect safety.

For INJECTION Ampoules containing ½ c.c., 1 c.c., 2 c.c.

Also in ½ oz. and 1 oz. sets.

For ORAL use In 4 oz., 8 oz., 16 oz., 80 oz., Bottles.

THE CROOKES LABORATORIES

(BRITISH COLLOIDS LTD.)

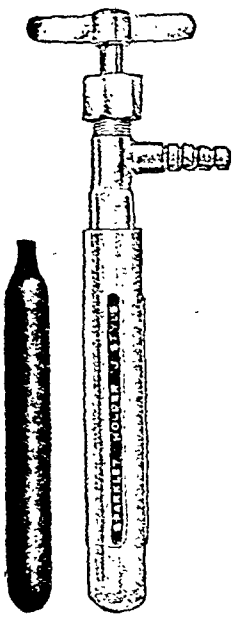
GORST ROAD, PARK ROYAL, LONDON, N.W.10

Telephone:- WILLESDEN 6313 (three lines):

Telegrams:- COLLOSOLS, HARLES, LONDON

The Sparklet

"RESUSCITATOR"



FOR USE IN GENERAL PRACTICE

A compact, easily operated, pocket apparatus measuring only 10 inches in length, by means of which CARBON DIOXIDE, OXYGEN, and MIXED GASES can be applied in the treatment of ASTHMA, WHOOPING COUGH, and all RESPIRATORY EMERGENCIES.

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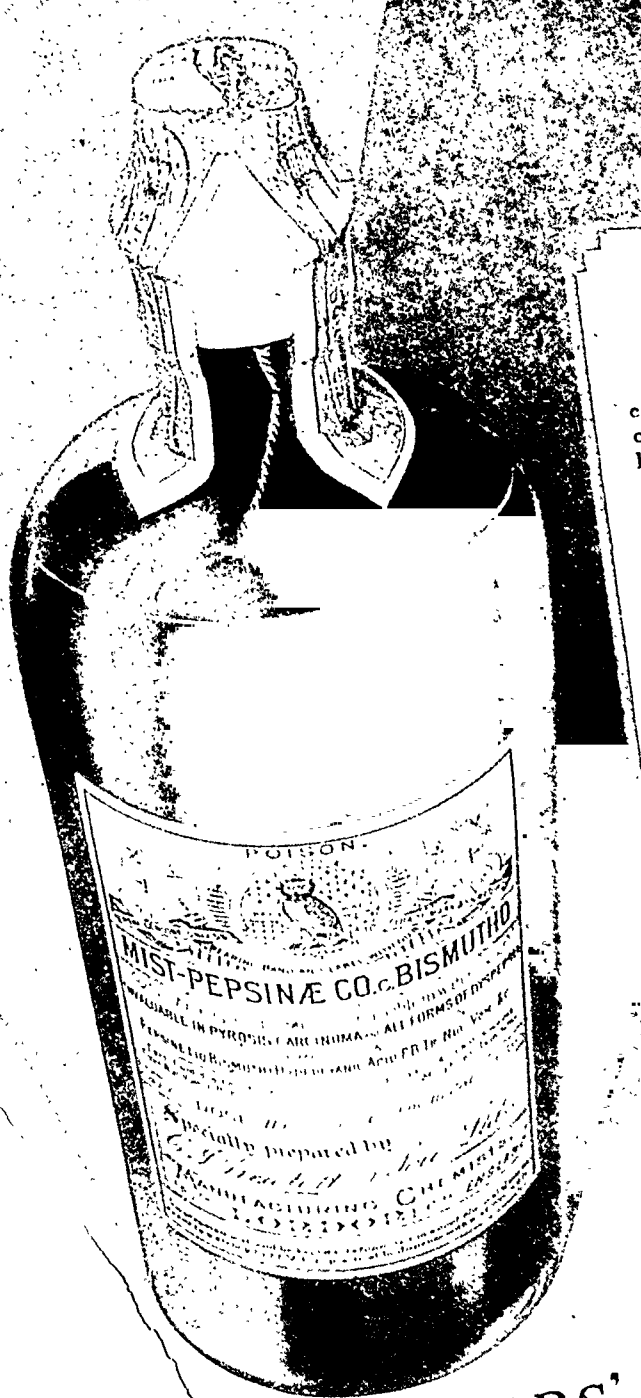

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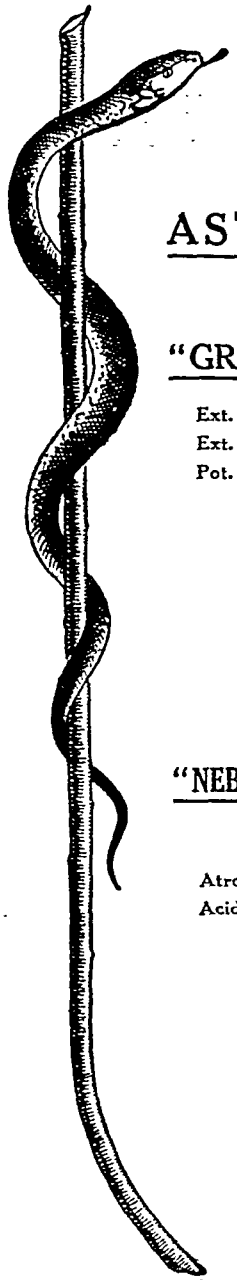

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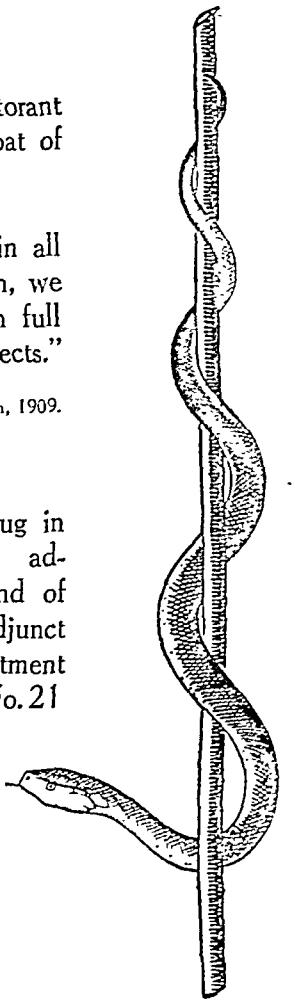

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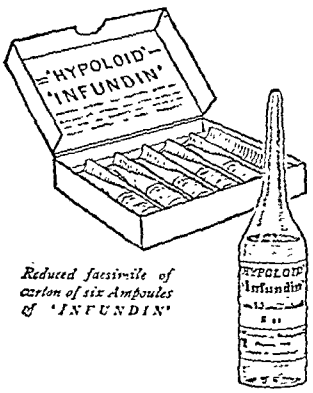

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WOODEN FIGURE USED IN HEALING DISEASE BY RELIGIO-MEDICAL PROCESS OF TRANSFERENCE.—Innumerable devices for putting into practice the widespread belief in healing by transference have been worked out. In all of them rites are performed with the object of transferring the spirit causing the disease from the sick person to some other human being, animal or object. The wooden figure here illustrated comes from Africa. Made by the medicine man, such a model is rubbed over the patient's body, in the course of which operation the evil spirit passes from the one to the other by magic compulsion, or by prayerful entreaty and offerings. The figure is then buried in the road or hidden in the grass by the wayside in order that the demon of disease inhabiting it may enter into the next passer-by and complete the patient's cure.

Date: Present day

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results are only approximate, since the uroselectan acids are not completely insoluble. With uroselectan A a very rough guide to the rate of excretion is given by simple measurement of the urinary specific gravity, which is very high when the urine contains considerable amounts of the drug—1030 and over.

INTERPRETATION OF FINDINGS

To determine these most valuable findings the co-operation of a biochemist is necessary. Band and I were singularly fortunate in having the co-operation of Dr. C. P. Stewart. He found it a very simple procedure to recover the drug in the urine and to estimate its amount. Those who are not so fortunate have, however, in the serial pictures a reasonably accurate method of determining the rate of the elimination of the drug and the amount discharged, by observing the density of the shadow in the serial cystograms, provided the patient is directed not to void urine and empty the bladder until after each photograph is taken. But as this method is liable to produce a shadow which may obscure the lower end of the ureter, it is more generally preferred to ask the patient to empty the bladder prior to the taking of each photograph, and this latter method has the great advantage in certain cases, such as prostatic enlargement, of demonstrating pictorially the amount of residual urine that remains.

In studying a series of skiagrams obtained by excretion urography, it is very important to remember that it is a running stream which is being observed—movements in a vital channel constantly emptying from one reservoir into another, and thus varying in contour from moment to moment. It may therefore be said that by excretion urography an accurate anatomical outline of the form and capacity of the pelves and ureter is not obtainable, and only very exceptionally in disease is a clearly defined outline of these channels forthcoming. Thus a demonstration of the exact morbid anatomy of the pathological process cannot be depended on as is the case with infusion urography. This observation emphasizes again the fact that the two methods are entirely distinct in their sphere of application. In their own department each is extremely valuable. This is especially well illustrated when they are used in the diagnosis of tumours of the kidney. An accurate diagnosis of a tumour of the kidney by excretion urography cannot be relied upon. By infusion urography the presence of a tumour should always be demonstrated, and from the clinical history of the case and the state of the patient a fair estimate of the degree of malignancy is usually obtainable. There is, however, one group, the most malignant of all—alveolar carcinoma—where the findings observed by infusion urography may be seriously misinterpreted. Here, owing to the rapid growth of the tumour, a rapid flooding of the neighbouring renal tissue with malignant cells occurs, and the characteristic local destruction of the drainage system of the kidney at the site where the primary growth is situated, combined with the drawing out, flattening, and elongation of the adjacent calyces, may be absent, and in a pyelogram obtained by infusion urography only slight deformity may be observed. On the other hand, by excretion urography there may be an entire absence of shadow in this kidney, indicating an organ flooded with malignant disease and almost destroyed as a functioning gland. After having carried out a combined examination by infusion and excretion urography on a number of cases of tumours of the kidney of varying degrees of malignancy, the conclusion we came to was that the degree of malignancy varied inversely with the degree of demonstrable renal functional activity.

The outflow of urine may be obstructed by causes that are organic or functional. The necessity of surgical treatment in these cases will depend upon the extent to which the obstruction interferes with the functional activity of the organ above. A stone in the ureter may lie quiescent, causing relatively little harm for seven years or longer. On the other hand, a similar stone producing complete impaction may lead to the destruction of the kidney above, as a functioning gland, in three or four weeks. In such cases excretion urography has proved the most valuable aid we possess in determining the degree of damage of the functional activity of the kidney above the site of the obstruction. Many cases of early hydronephrosis are met with which owe their origin to obstruction at the uretero-pelvic junction, and in many of these no local organic cause can be demonstrated. When examined by excretion urography it will usually be observed that the shadow appears as early on the diseased side as in the healthy kidney, but the fluid is retained within the renal pelvis in the former case long after it has disappeared from the other side. A fault in the neuro-muscular mechanism—an achalasia—probably accounts for this in certain cases.

VALUE OF THE METHOD

The primary value of excretion urography is therefore its service as a test of function. As a means of delineating the form and capacity of the renal pelvis, and thereby demonstrating the morbid anatomy of any lesion which may be present, it is unreliable. Not infrequently, however, especially where the disease has resulted in partial obstruction to the outflow of urine, an excellent anatomical demonstration may be obtained, and one sufficient to serve as a guide in determining the surgical treatment indicated. It has also to be borne in mind that occasionally it may be impossible to carry out infusion urography, or else such instrumentation of the urinary passages may be contraindicated. In the former class excretion urography has rendered it possible to demonstrate the structure and functional activity of the kidneys before and after transplantation of the ureters into the colon for vesical exstrophy, vesico-vaginal fistula, and malignant disease of the urinary bladder. In uretero-vaginal fistula the treatment indicated is determined by the degree of damage to the kidney above and the health of the other organ. Here excretion urography has proved of great value, for if it shows the kidney above to be functioning actively and not seriously damaged, reimplantation of the ureter into the bladder is the operation of choice; whereas if the kidney is seriously damaged and functionally impaired, and the other kidney is healthy, nephrectomy is to be preferred.

Excretion urography promises to prove of great assistance in treating the elderly person suffering from simple prostatic hypertrophy, and in helping to determine when operative treatment is indicated and what procedure to follow. Undoubtedly in very many cases of simple prostatic hypertrophy delay is too long before operative treatment is carried out. The fact that the ailment is met with in so many elderly men probably explains this in part. Of such patients undoubtedly a great number carry on for years handicapped, but apparently without their health being seriously damaged. The medical adviser is thus confronted with the serious problem of when to recommend operative treatment. Now the prostatic problem is essentially a renal problem, and the prognosis will almost solely depend on the functional activity of the kidneys. In a doubtful case excretion urography proves of great value here, as by its employment an accurate record of renal function can be obtained, the presence of hydronephrosis and hydro-ureter from backward pressure indicated, and a demonstration afforded, without discomfort or danger, of the amount of residual urine. The routine employment of excretion urography has enabled us to determine the very serious damage that the persistently systolic bladder produces by the backward pressure it exercises on the kidneys. Thus, where tuberculous

disease of one kidney exists with an associated tuberculous cystitis, the other kidney is frequently the site of hydronephrosis from this cause. During the convalescence of these patients after nephrectomy of the diseased organ, the functional activity of the remaining kidney should be examined at regular intervals and the degree of dilatation of the pelvis estimated, for it is possible for an apparent clinical cure of the tuberculous infection to be present years afterwards and the patient to be seriously ill with threatened uraemia from pronounced hydronephrosis of the remaining organ.

Infusion urography necessitates ureteral catheterization. A pervious channel is thus necessary. Organic stenosis may be present and render the examination impossible, but occasionally ureteral catheterization is impossible, although the orifice appears normal in appearance. The failure to introduce the instrument may be due to muscular spasm, a temporary stenosis, the kidney above being healthy, or, on the other hand, the kidney above may be a congenitally functionless organ, the patient possessing a single functioning kidney. Naturally, in this case operative treatment such as nephrectomy would inevitably prove fatal. Excretion urography provides a simple solution of this problem, which formerly was often so difficult to solve. In certain cases where infection exists in the lower urinary passages *infusion urography*, although technically easy, is contraindicated, and here the intravenous method may be substituted.

It is evident, therefore, that excretion urography is a valuable diagnostic aid. The technique of its use is simple and safe, but at the same time it is not one for general use. The interpretation of the appearances seen can only be made by one well trained in recognizing pyelographic appearances. *In all cases a preliminary x-ray examination* should be made, as otherwise the appearances of a dead kidney containing an arborescent renal calculus may be mistaken for a healthy organ with its pelvis filled with dye. The method should not be depended on as a routine means of demonstrating the cause of disease ; its province is more to demonstrate the effect of disease. Thus, in most cases it is probably best employed at the stage of the examination when the presence of the disease has been determined and the most suitable method of treatment is under consideration.

PERURETHRAL OPERATIONS ON THE PROSTATE*

BY

KENNETH WALKER, F.R.C.S.

SURGEON TO GENITO-URINARY DEPARTMENT, ROYAL NORTHERN HOSPITAL ; SURGEON TO ST. PAUL'S HOSPITAL

(With Special Plate)

Eleven years ago I stood on this very spot to deliver a Hunterian Lecture on the nature and causes of enlargement of the prostate in old age. My address, when stripped of its trimmings, was in reality a confession of ignorance, for we knew not the cause and were still in doubt as to the nature of the changes that are so apt to affect that gland in the later decades of life. But to-day I am in a more fortunate position, for, if we have not made any progress in the realm of the pathology of the prostate, we have at any rate advanced in that of its surgery.

It is with one aspect of this advance that I intend to speak to-day—namely, the effort to deal with the obstructing prostate by perurethral methods. The idea of attacking obstruction situated in the neighbourhood of the bladder neck through the urethra is a hundred years old, for although Civealé's *Traité Pratique sur les Maladies des Organes Genito-urinaires* was published only in 1837, he states in it that he had been using a special instrument for the forcible dilatation of the vesical neck since the year 1824. But Civealé's writings had little effect on surgery, and are chiefly to be remembered for the bitter controversy they produced between him and his fellow urologist, Mercier, as to who could claim priority in the treatment of bladder-neck obstructions. Forty years later, when the petty squabble had been forgotten, Bottini brought out his galvano-cautery incisor, substituting cauterization for incision of the bladder neck in order to reduce the risk of haemorrhage. Bottini's operation attracted wider attention than had Civealé's, and workers in different countries adopted his instrument and modified it to meet their needs. But other methods of attack on the prostate soon appeared on the surgical horizon, and the successes of suprapubic and perineal prostatectomy deflected for a time the interest of the profession from the perurethral method of attack. Indeed, it may be said that it is only during the last decade that attention has once more returned to it, and that urologists have again begun to wonder whether, in spite of the success of total prostatectomy, there might not also be some place for methods that had almost been forgotten.

Two advances along other lines have been responsible for this renewed interest in perurethral surgery The first of these is the perfecting of the cystoscope, with the power it gives of doing under visual control what Bottini could perform only blindly and with considerable risk. The second is the introduction of high-frequency currents into the realms of surgery. A third factor, of less importance but nevertheless having an influence on our attitude, is the realization that cases of obstruction occur in which there is to be found no massive enlargement of the prostate but only a minor deformity of the bladder neck. Whilst the two great discoveries of the cystoscope and the high-frequency current acted by furnishing us with weapons of which Bottini could only have dreamed, the realization that minor changes in the neighbourhood of the bladder neck may cause great difficulty in micturition has made us pause and consider whether it may not sometimes be possible to relieve our patients without subjecting them to so grave a procedure as total prostatectomy. Whether this is feasible or not is the question to which we must not try to find an answer.

FUNCTION OF THE BLADDER NECK

The question whether a partial operation on the prostate is sufficient to remove obstruction and restore the function of the bladder neck cannot be satisfactorily answered, owing to the fact that our knowledge of the physiology of micturition and of the mechanism of obstruction is incomplete. Clinical observations, however, show that micturition is associated with a backward movement of the posterior segment of the internal meatus and of the floor of the urethra. If during cysto-urethroscopy a patient is asked to micturate it will be seen that, whereas the anterior margin of the internal meatus remains stationary, the whole posterior segment of the bladder neck is pulled back, so that the angle made by the junction of the plane of the trigone with that of the floor of the urethra is straightened out. A similar phenomenon can be observed by making cysto-urethrograms of the bladder at rest and during micturition. This backward displacement of the posterior segment of the bladder neck and alignment of the planes of the trigone and urethra are brought about, according to Young and Wesson, by the contraction of the trigonal fibres having their origin in the trigone and their insertion in the

* Hunterian Lecture delivered before the Royal College of Surgeons of England on January 30th, 1933.

verumontanum. Some anatomists, and notably Dragonas, have denied that this muscle descends into the urethra, but my own dissection of macerated human bladders, as well as an inspection of the excellent specimens shown me by Mr. Michael Boyd at St. Bartholomew's Hospital, lead me to believe that Young and Wesson's statement is correct. The immobility of the anterior segment of the neck is explained by the fact that it is tied down to the pubis by the strong pubo-vesical ligaments; the movement of the posterior margin, by the absence of any similar obstacle to displacement.

If this view of micturition is correct, difficulty would be produced by anything that impeded the backward movement of the posterior segment of the bladder neck or accentuated the angle between the floors of the trigone and of the posterior urethra. This could be brought about either by an infiltration of the structures of the bladder neck that diminished their elasticity, or else by the presence of a new formation of tissue that acted as an obstacle to the backward displacement and at the same time increased the work of the trigonal muscle in bringing the floors of the trigone and urethra into line. The question, therefore, whether a partial removal of the prostate can relieve obstruction will be determined by the extent to which these movements of the bladder neck can be restored. When we remember that the maximum diameter of the posterior urethra is only one centimetre and the distance between the internal meatus and the verumontanum one and a half, it is not surprising that a small deformity in this region produces far-reaching consequences, and that a comparatively trifling operation may give excellent results. At the same time, the failures of McGill and of the early prostatectomists to obtain cures by partial removal remind us that incomplete operations may sometimes fail to relieve our patients, and that total removal of the prostate is the operation of choice whenever there exists a general enlargement of that gland.

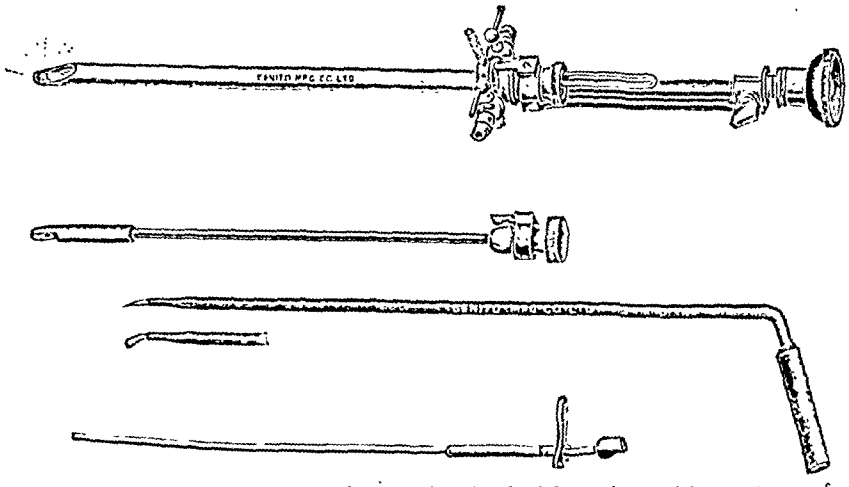

FIG. 1.—The McCarthy pan-endoscope for simple fulguration, with two types of electrode, the spike and the blade.

It is to the type of case described by French urologists under the term "prostatism sans prostate," and by American urologists under that of "prostatic bar," that perurethral methods are particularly applicable. Here the only deformity discovered is a thickening of the posterior lip, the thickening being due either to an overgrowth of the submucous glands in that locality or to infiltration with fibrous tissue. The symptoms produced are those that we are accustomed to associate with prostatic obstruction, and yet rectal examination, cystoscopy, and even exploration of the bladder fail to reveal any enlargement of that gland. All of us must be able to recall cases in which the bladder has been opened in the expectation of finding an enlarged prostate and in which nothing was discovered except a slight projection of the posterior lip of the meatus. It was this kind of experience that prompted H. H. Young many years ago to exclaim that the amount of tissue sometimes removed at a prostatectomy was so small that it seemed a pity to have to open the bladder in order to remove it. It is this type of case that is so eminently suitable for perurethral methods.

INSTRUMENTS FOR PERURETHRAL PROSTATECTOMY

It would be interesting to trace the evolution of perurethral instruments from the days of Bottini up to the present time. To do so would, however, trespass on your time and patience. It will even be impossible to mention the names of those who have been most responsible for bringing perurethral surgery to its present state of *perfection*. All that can be said is that the true ancestors of our present instruments are the prostatic punch introduced by H. H. Young in 1911, and the cautery punch that has been used by J. S. Caulk since 1920. It was the latter instrument which, in 1924, suggested to Mr. Schranz of the Genito-Urinary Manufacturing Company and myself the advisability of substituting diathermy for electro-coagulation. I will not take up time in describing the instrument we evolved, for although I believe that it was the pioneer diathermy punch, it has now been replaced by weapons of greater precision and efficiency.

The techniques employed at the present day for perurethral resection of the prostate are so numerous that it will be possible only to mention those of which I have had personal experience. Speaking generally, it may be said that perurethral operations on the prostate are of three kinds: (1) fulguration with an electrode working through a cysto-urethroscope, the operator leaving the coagulated tissue to slough away subsequently; (2) diathermy with immediate removal of the coagulated tissue by means of a punch; (3) resection of the prostate with a wire loop activated by a cutting current.

Fulguration with an Electrode

In its simplest form all that is required for this operation is an electrode similar to that used for the destruction of bladder growths and an instrument that will furnish a good view of the neck of the bladder. Originally I employed a Woolf's cysto-urethroscope and the largest electrode it would admit. It was soon discovered, however, that the usual type of electrode was too pliable to allow of complete control, and a more rigid weapon was substituted terminating in a spike. This spiked electrode, which I believe was first employed by J. Everidge, can be plunged into the substance of the obstructing prostate and a greater depth of tissue destroyed than is possible with the usual pattern. Clyde Collings of New York is of the opinion that better results are obtained by working from the bladder to the urethra, and for this purpose he employs an electrode terminating in a small blade which is set at an angle to its main axis. Working with this weapon he claims that he can excise wedge-shaped portions from the bladder neck and deal with cases of obstruction which would formerly have been considered too large for perurethral surgery. Personally I have not found that any great advantage is to be gained by working from the bladder towards the urethra. However, I agree with him that a foroblique lens system gives the best view of the bladder neck, and for the last year have abandoned the Woolf instrument in favour of the McCarthy pan-endoscope. (See Fig. 1.)

But it is not on account of difficulties of technique that I now make little use of electro-coagulation alone as a

method of treatment. It is rather because I fear a complication only too likely to arise in any method which leaves behind a large amount of necrotic tissue for subsequent separation. This complication is not, as might be supposed from the literature on the subject, haemorrhage. In only one case can I recall post-operative haemorrhage that has given me any anxiety. The complication is to my way of thinking a far more serious one—namely, sepsis. Coagulated tissue provides such an excellent nidus for the growth of organisms that no amount of subsequent washing out of the bladder can prevent post-operative infection. Should residual urine be present as well the dangers are increased a hundredfold, for although the use of an indwelling catheter may reduce somewhat the menace to the kidneys, it does not eliminate it. Three out of some seventy patients on whom I have operated by perurethral methods have died of uraemia—the result of severe infection superimposed on already damaged kidneys. I have therefore abandoned the use of coagulation alone, except in a few cases in which the amount of tissue to be removed is small and the residual urine negligible.

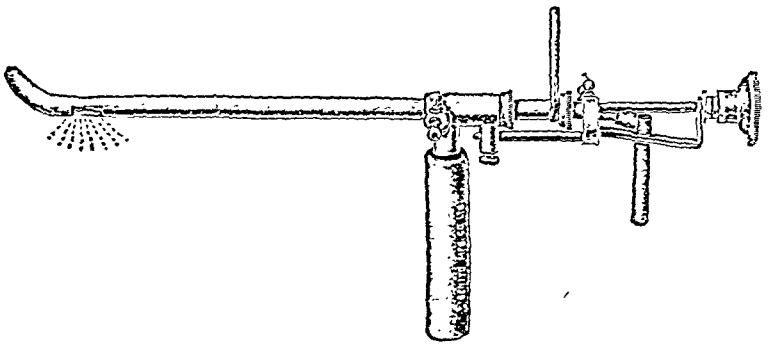

FIG. 2.—The spiral punch.

Diathermy followed by Punch Operation

At the present day there exist many different designs of diathermy punches known by the names of their designers, but I shall content myself by referring to the one with which I am best acquainted—namely, the spiral punch made by the Genito-Urinary Manufacturing Company.

This consists of an outer sheath in which a fenestrum is cut (see Fig. 2). The inner system consists of a telescope of the McCarthy type, an electrode terminating in a point, and irrigating channels with stopcocks. A tubular knife between the two sheaths acts as an obturator, and rotates between the two parts previously described. Since it is independent of any other structure, this knife can be rotated at will by means of a handle without disturbing or twisting the irrigating tubes or cords. The instrument is introduced with the window closed. When it is within the bladder the window is opened, and the obstructing tissue is located and transfixed with the needle electrode. After this has been desiccated under low heat for about thirty seconds it is resected by rotating the tubular knife. The resected tissue may be withdrawn by removing the knife and the inner tube with its attachments, leaving the outer sheath in position.

The feature that distinguishes this form from other patterns of punch is the twofold movement imparted to the cutting edge of the punch. It is obvious that a knife edge that moves in a single direction, whether it be from behind forwards or from side to side, has very little cutting power. If the tissues to be divided are tough, or if the knife itself has not got a perfect edge, they will be pushed aside rather than cut through. To act efficiently the edge must be drawn, as in using a scalpel, across the tissues, as well as advanced against them. It is true that this double movement can be imparted to the tubular knife with which a Young or Bumpus punch is fitted by giving it a twist as it is pushed forward, but unless the operator has this constantly in mind he may well omit this small point in technique. In the instrument under description the inner punching tube works in a spiral groove, so that a lateral movement is inevitably imparted to the forward one when the punch is brought into action.

Reviewing punch operations in general, they must be considered an advance on the operation of coagulation alone. Not only does the removal of destroyed tissues diminish sepsis, but it confers on the patient the advantage of profiting at once from his operation instead of having to wait for the separation of the sloughs. Yet the operation cannot be considered ideal. Owing to the impossibility of gauging the depth to which the coagulating action of the current has penetrated, the operator is always between the Scylla of punching out more than he has coagulated — and of thus running the risk of haemorrhage — and the Charybdis of overdoing the coagulation—and so encouraging sepsis. It is for this reason that the type of operation about to be described, which seals off the bleeding points at the same time as it removes tissue, is undoubtedly the best.

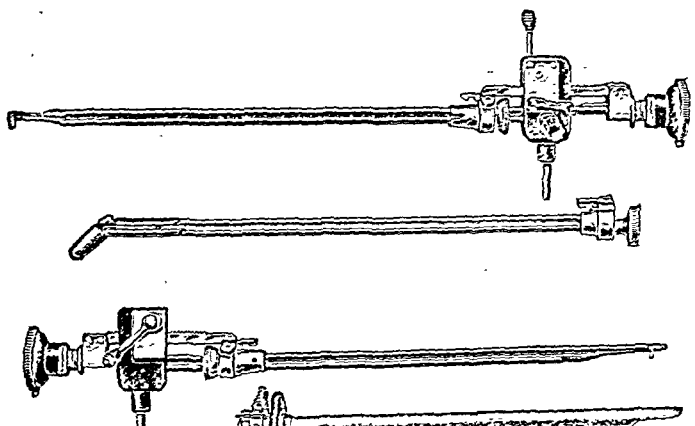

FIG. 3.—The McCarthy prostatic electrotome, showing the loop carrier with foroblique telescope, the bakelite tube, and the angled obturator.

The McCarthy Electrotome

This instrument consists of an outer sheath, an articulated obturator, and a carrier fitted with a foroblique telescope, an irrigating system, and a cutting loop. The sheath is made of bakelite, the distal end of it being cut away so that the loop is free to engage the bladder neck (Fig. 3). The loop electrode may be moved backwards and forwards by means of a rack and pinion. The bakelite sheath is first introduced

with the obturator in position, and the latter is then withdrawn. After the bladder has been washed out the loop electrode and the telescope are inserted, care being exercised to make sure that the loop is drawn back under cover of the outer sheath. The inlet tube is connected up with a large reservoir filled with sterile water. It is important in this operation to use sterile water as an irrigating fluid instead of the usual antiseptic lotion, since the cutting of the loop is reduced by the escape of current that occurs if it is surrounded by a good conductor. The obstruction having been located, the sheath is advanced into the bladder until the upper edge of the obstruction alone remains in the field of view. This is necessary in order that the loop may be pushed into the cavity of the distended bladder without risk of its coming into contact with the obstruction. In order to obtain as large a piece of tissue as possible, the ocular or proximal end of the instrument should now be elevated so that the loop entirely disappears from view behind the prostate. The current is then switched on and the lever controlling the movement of the loop turned slowly over. The movement of the loop must never be rapid, and a cut of one inch in length should occupy from fifteen to twenty seconds, according to the nature of the tissue to be cut through. Several cuts will have to be made before a clear channel is obtained. Bleeding points are dealt with subsequently by substituting a telescope carrying a diathermy electrode for that which bears the loop. With this electrode and a weak current the cut surface is lightly seared and all oozing stopped. After each cut the loop and carrier are removed from the sheath. Frequently the severed fragment will be found adhering to the loop, from which it may be removed with dissecting forceps. Occasionally a piece of tissue may fall into the bladder, more especially if the error has been made of allowing the inlet cock to remain open during the cutting. Care must be exercised to avoid unnecessary strain on the loop either before or during the cutting. It is in order to lessen this risk that the cutting is done slowly and the loop kept under cover of the outer sheath during the preliminary movement of the instrument.

The great advantage of the McCarthy operation is that the maximum amount of tissue can be resected from the neighbourhood of the bladder neck with the minimum of damage to that which is left behind. There is no necessity in this, as there is in other operations, to guess the depth of coagulation which will be necessary in order to allow of a given piece of tissue being punched out without risk of haemorrhage. The activated loop itself punches out the tissue and at the same time seals off the blood vessels in the neighbourhood. The amount of injury caused by even an extensive resection is negligible, and the risks of sepsis—that chief bugbear of perurethral operations—are enormously reduced.

ANAESTHESIA AND AFTER-TREATMENT

Perurethral operations can be done under a low spinal, a trans-sacral, or a caudal anaesthetic, supplemented by surface anaesthetization of the urethra. Of these three methods a low spinal has the widest application and is the easiest to carry out. Trans-sacral anaesthesia, although it gives good results in the hands of an expert, demands the acquisition of a difficult technique, while caudal anaesthesia is likely to prove unsatisfactory in a considerable percentage of cases. Where the patient is very nervous or dislikes the idea of being conscious during the operation a general anaesthetic can be given.

The pre-operative treatment is the same as for a suprapubic prostatectomy. If a large amount of residual urine is present preliminary drainage through an indwelling catheter will be required. The fact that perurethral prostatic resection is a trivial operation in comparison with enucleation does not relieve the surgeon of the responsibility of estimating renal function and of doing everything in his power to safeguard the kidneys. Any operative procedure, however trifling, is likely to be followed by a rise in the blood urea, and preliminary treatment of the kidneys is as important when perurethral methods are employed as it is in the case of a suprapubic prostatectomy. Should the impairment of renal function be so great that a long period of preliminary treatment is required, suprapubic drainage may have to be substituted for urethral. This may also be necessary if grave infection is present.

Drainage after the operation is carried out through an indwelling catheter. This can be inserted by means of long alligator forceps through the sheath of the operating instrument before it is withdrawn. If the end of the catheter is connected with a Duke's irrigation apparatus and the nurse is instructed in its use, the bladder may be flushed out every two or three hours throughout the day and night, and the risk of spesis is reduced to a minimum. The length of time during which this drainage should be carried out will depend on the amount of obstruction that has existed prior to operation and the severity of the superimposed infection. As after a prostatectomy, the patient should be encouraged to drink large quantities of fluid and the output of urine be increased to a maximum.

Apart from sepsis and uraemia few complications are to be feared during convalescence. Haemorrhage, either post-operative or secondary, is in the vast majority of cases trifling, and I cannot recall one instance in which I have been compelled to open the bladder for clot retention. In a few patients urethritis or intolerance may necessitate an early removal of the catheter. This also sometimes becomes necessary on account of the development of an epididymitis. If after the removal of the catheter the amount of residual urine still remains high, a period of intermittent catheterization may be required. Should the quantity of residual urine show no sign of diminishing, a second removal of obstructing tissue may be required. In any case in which sepsis and residual urine prove troublesome complications the surgeon should not hesitate to insert a temporary suprapubic tube.

MORTALITY

Some enthusiasts have claimed that perurethral resection carries with it no risk, or at any rate one that is negligible. This is an error: any surgical procedure must entail some risk to the type of patient under consideration, not only on the score of age, but still more because it is generally undertaken in the presence of sepsis and renal impairment. An examination of statistics gives less assistance in assessing the risks attached to any operation than might at first sight be expected, owing to the fact that the mortality rate of any particular surgeon will to a great extent depend on his willingness or unwillingness to tackle cases of an unpromising nature. In a series of 100 consecutive cases of my own, some of them due to prostatic enlargement and some to bladder-neck obstruction, I have had five deaths—one due to bronchopneumonia, one to uraemia, and three to a combination of uraemia and sepsis. Analysing these deaths, I can state that three of the patients who died with renal complications gave very poor renal function tests prior to operation, and that two of them were also suffering from severe sepsis. The remaining patient could alone be considered a good operation risk, for whose death the operation must be held responsible. In all of these fatal cases I employed electro-coagulation alone, without following it by a punching operation.

SELECTION OF CASES

The key to success in perurethral work on the obstructing prostate lies in the careful selection of cases. It is because enthusiasts have attempted to treat by perurethral methods types of obstruction that can be dealt with satisfactorily only by prostatectomy that perurethral resection has been, and still is, brought into disrepute. Let it be realized once and for all that the perurethral

approach is not a general substitute for prostatectomy; it should be considered rather as a method that is applicable to special types of case or in special circumstances. The special type of case in which it is indicated is that in which the amount of enlargement is small, although the obstruction may be great. More particularly is it applicable where the intravesical portion of the prostate is affected and the total volume as felt by bimanual examination but little increased. The special circumstances in which it may be used are those in which for some reason or other the total removal of the prostate is contraindicated, either because the general condition of the patient is too poor or because some serious complication exists, such as grave renal impairment or a serious cardiac or pulmonary lesion.

In these circumstances prostatic resection offers an excellent alternative to catheter life or the establishment of a permanent suprapubic drainage. The fact that subsequent growth of glandular tissue may lead to a recurrence of symptoms is not so serious a drawback as might be supposed. The risks and discomforts of the perurethral operation are so trifling in comparison with those of an enucleation that a patient will readily submit to its repetition if it becomes necessary. I have under my care one patient who presents himself without qualms every two years for perurethral resection, and although I have had to carry out this operation three times I still claim him as a success, since I am convinced that a prostatectomy would have had a fatal result. The third type of case which is sometimes suitable for a perurethral operation is where the prostate is the site of a carcinoma of the scirrhus type. Here prostatic resection offers an alternative to permanent drainage, provided the passage of the instrument is possible.

SUMMARY AND CONCLUSIONS

For the sake of convenience the foregoing remarks may be summarized in the following conclusions:

1. Since the anatomy and physiology of micturition is imperfectly known, no sound basis is available on which a theory of the mechanism of prostatic obstruction may rest.

2. An essential feature in the opening of the bladder neck being the backward displacement of its posterior segment, anything that interferes with this will hinder micturition. Enlargement of the prostate or increase of the fibrous or glandular tissue in the neighbourhood of the internal meatus would act in this way.

3. Perurethral methods of operation are of three kinds: (*a*) electro-coagulation alone; (*b*) electro-coagulation followed by a punch operation; and (*c*) removal of tissue by means of the McCarthy electrotome.

4. The chief danger attendant on perurethral resection being sepsis, and sepsis being encouraged by the leaving behind of necrotic tissue, the McCarthy electrotome operation is the best.

5. Perurethral resection necessitates the same attention to renal function and the same preliminary treatment as is required for the open operation.

6. The key to success in perurethral work is the proper selection of cases. The most suitable for this method of treatment are cases of obstruction in which there is very little total increase in the size of the prostate; cases in which for some reason or another enucleation is contraindicated; and some malignant cases of the scirrhus type.

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FRACTURES OF THE SHAFT OF THE FEMUR

BY

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(*With Special Plate*)

The methods of treating fractures of the shaft of the femur become increasingly numerous as each fresh number of the medical journals is published. Much ingenuity is displayed in devising these new methods, which are almost invariably modifications of older methods, and these modifications are usually complications. Hugh Owen Thomas in 1870 described a simple method of treating this fracture by means of a splint devised by him and called the Thomas bed knee-splint. This splint is used with fixed extensions, and the method in all its simplicity has been used in Liverpool and by the Liverpool school since that date. It is easy to apply and, if used correctly, gives very satisfactory results, but two things are essential: (1) a thorough knowledge of the Thomas splint; (2) very careful attention. It is probably because of the lack of these essential factors that this method of treatment has in some hands given unsatisfactory results.

I have reviewed in this paper every fracture of the shaft of the femur, without exception, which was admitted into Alder Hey Hospital, Liverpool, and into Wigan Infirmary during the year 1931. The majority were easy to treat, a few caused some anxiety, and one or two were distinctly difficult; but all were treated on a Thomas splint with fixed extensions. Detailed notes of these cases, the ages of which range from 2 days to 67 years, are given at the end of this paper.

Of the sixty-one cases reviewed, ten had shortening of some degree, twenty-one had full length, and thirty had up to an inch of lengthening. Of the ten who had shortening, two were discharged from hospital, one a quarter of an inch too long and the other with half an inch of lengthening. Both discarded their callipers on arriving home, because their mothers thought they walked better without them. Of the other eight, the shortening in five of them was a quarter of an inch, in two it was half an inch, and in one, which was very bad, it was three-quarters of an inch. All these eight patients were between the ages of 6 and 19 years, and no excuse, other than lack of constant daily attention, can be offered for these poor results.

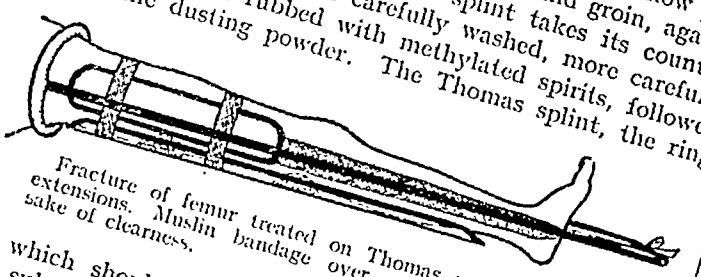
The Thomas splint is particularly satisfactory in the supracondylar type of fracture, where the treatment of keeping the knee flexed, as advised by some, makes it impossible to be certain of correct alignment and prevention of a genu valgum or a genu varum. It requires a little more care in the preliminary reduction and the adjustment of pads behind the site of fracture, but with this extra attention and constant tightening of the extensions the danger of the posterior bowing can easily be avoided.

PRINCIPLES AND METHOD OF APPLICATION

Although each fracture must be treated in the way best suited to get a good result, and the routine treatment of any one type of fracture cannot be too strongly condemned, the underlying principles remain the same in each case. These basic principles, already referred to, are the thorough knowledge of the Thomas splint and constant, unremitting attention, by both the surgeon and the nursing staff.

In most of the cases reviewed below, the fracture was put up with the patient under the influence of morphine, but occasionally a general anaesthetic was used, usually in the children.

The limb is shaved to prevent the Leslie strapping causing discomfort by pulling on the hairs, and the extensions are applied on each side of the limb stretching from the malleoli to well above the site of the fracture. Care must be taken that: (1) the strapping lies smoothly on the limb without creases, and (2) that there is no overlapping of the two extensions over the crest of the tibia. With these precautions there is never any danger of trouble arising beneath the strapping. The extensions are then bandaged to the limb—firmly, but not too tightly—with a light muslin bandage. Circular bands of strapping are never used. (To be of more value than the muslin bandage circular strapping needs to be so tight that it interferes with the normal venous return.) Occasionally the extensions have to be renewed at the end of three or four weeks, but frequently they can be made to last for the whole period. Attention is now paid to the tuber ischii, ischio-pubic ramus, and groin, against which the ring of the Thomas splint takes its counter-extension. This area is carefully washed, more carefully dried, and well rubbed with methylated spirits, followed by a fine dusting powder. The Thomas splint, the ring



Fracture of femur treated on Thomas splint with fixed extensions. Muslin bandage over extensions omitted for sake of clearness.

of which should be slightly on the large size to allow for subsequent swelling, is then threaded on to the limb. Should the leather of the ring feel at all hard, this is first softened by rubbing it well with castor oil, thoroughly wiping it afterwards to remove excess of the oil. A long metal back splint is then placed behind the limb, with a pad behind the knee to prevent hyper-extension, and another pad behind the site of fracture to preserve the normal anterior bowing of the femur. The whole is suspended to the side bars of the Thomas splint by two or three slings, so that two-thirds of the limb lies in front of the level of the bars. The leg is then pulled out as far as possible and the extensions firmly tied to the end of the Thomas splint. Two straight splints, extending from the ring of the Thomas splint to the knee, are strapped on each side of the thigh, to prevent lateral deviation at the site of the fracture, the straps passing inside the bars of the extension splint.

DAILY ATTENTION AND NURSING DETAILS

All that is now required is attention to the points of pressure and frequent tightening of the extensions. The latter are tightened at least every three or four hours for the first fourteen days, and after this two or three times a day until bony union is well on its way.

The points of pressure are seven in number:

1 and 2. At the top and bottom of the back splint.
3. At the malleoli, where the strapping and tape of the extensions join.
4. At the front of the ankle-joint at the edge of the muslin bandage.
5. At the fold of the buttock and ischial tuberosity.
6. At the pubic ramus.
7. If the ring of the Thomas splint is not a good fit, in the region of the anterior superior iliac spine.

Of these only one should cause any real anxiety—that is, the one over the pubic ramus. It is a simple matter to run the fingers over the ends of the back splint every two or three hours to see that there is no undue pressure there. The malleoli can be protected by wads of wool or boric lint, and the muslin bandage should not extend lower down than a fingerbreadth above the upper part of the external malleolus, and must be watched to see that it is not too tight. The region of the anterior superior spine of the ilium can be kept free from pressure by altering the lie of the limb in relation to the body, but in a well-fitting and properly made ring this part should not have any pressure upon it. The two remaining places of pressure are the fold of the buttock and the pubic ramus. These are the places where, in inexperienced or careless hands, a sore is most likely to develop. It should never occur on the fold of the buttock, and can, with reasonable care, always be prevented from arising over the ischio-pubic ramus. On the fold of the buttock the skin is pulled up or down every two or three hours night and day to allow a different area to take the pressure. In addition, a rag soaked in methylated spirits is inserted between the ring and the skin, and the area well rubbed with this. This is followed by dusting of the part with a fine powder. Once the patient realizes the importance of this he can assist by moving the skin himself.

The pubic ramus presents more difficulty. Here, in addition to the increased sweating of this part and the tendency to moisture and sore formation, there is also only little loose skin to move about, with the result that the area of skin taking the pressure is more or less the same during the whole time the limb is in the splint. The same careful attention is given to this part as is given to the fold of the buttock, but to a much greater degree. It cannot be too strongly emphasized that this supervision must be carried out, at first, both night and day. This interferes somewhat with the patient's sleep, but once he realizes the importance of preventing a sore he is the last to complain. The slightest suspicion of redness of the skin must be treated with the utmost care, raising the foot of the bed on high blocks or a chair, and tying the end of the Thomas splint to the foot of the bed will relieve pressure to a certain extent by allowing the patient to fall away from the ring without interfering with the extension of the leg.

Thus the attention necessary for a limb in a Thomas splint can briefly be summarized into:

1. Seeing that the ring is close up against the ischio-pubic ramus.
2. Seeing that the extensions are as tight as a bow-string.
3. Examining the points of pressure for early signs of trouble.
4. Palpating the leg at the site of fracture to see whether there is any tendency to angulation. To correct this tendency adjustment of the pad behind the site of fracture, or various methods of bandaging to either bar of the Thomas splint to alter any minor loss of alignment, can safely be left to the common sense of the surgeon-in-charge.

Once the nursing staff realize the importance of attending to pressure points night and day, and understand that should a sore develop they will be held responsible and a searching inquiry be made, this method of treatment presents few difficulties or anxieties. The results when compared with the other methods are so very much better and safer that they amply repay one for the preliminary coaching of the nursing staff in the importance of daily and nightly attention.

REASONS FOR FAILURE IN CERTAIN HANDS

If I appear to have emphasized the possible troubles which might arise from ignorance or carelessness during the treatment of a fractured femur by this method, it is because all too frequently one sees a femur lying in a Thomas splint with the extensions loose and the ring

well below the level of the great trochanter. This is because those in charge of the case do not realize the simple mechanics of the splint, or, through lack of knowledge of the nursing details, are too much afraid a sore will develop if the splint is used properly. When, some weeks later, the limb is found to be inches short, the Thomas splint is condemned and the statement made that full length cannot be obtained in a fractured femur treated by this splint. The result of such misuse of a Thomas splint is seen daily in many hospitals, where a fractured femur is treated by weights, pulleys, beams, etc., which by their complication permit of mistakes easily avoidable with the use of the simple Thomas technique. The treatment by means of a Thomas splint and fixed extension is so simple, once the principles are understood and explained to the house-surgeon and nursing staff, that with reasonable care and constant attention an excellent result is practically certain.

AFTER-TREATMENT

The treatment on a splint is carried out until union, both clinical and radiological, is sufficiently sound to allow the patient to walk in a calliper, the ring of which must fit closely around the pubic ramus and take pressure on the tuber ischii. As a rule, union is strong enough in eight to nine weeks. The patient is then encouraged to walk without sticks or crutches all day long in his walking calliper. For the first three or four weeks after walking has commenced he sleeps in the calliper; after this time he takes it off at night—but must not bear weight on the affected leg without it—and is instructed to start bending the knee, provided that he gets no pain at the sight of fracture. The calliper is dispensed with when union is solid, both clinically and radiologically.

SKELETAL TRACTION *versus* SKIN EXTENSION

No paper on the treatment of fractures of the femur can be complete without reference to the recent enthusiasm for skeletal traction which has swept through the country. This method can be used with fixed or weight extensions.

The supposed principal disadvantages of skin extension are: (1) the impossibility of getting full length (I think the results reviewed in this paper are a sufficient reply to this objection); (2) a stiff knee following the prolonged immobilization. This is the bogy of the inexperienced surgeon. Sir Robert Jones has repeatedly taught us that immobilization of a joint in the position of physiological rest does not give rise to stiffness of any severe degree. In no case among those reviewed for the purpose of this paper was there any trouble with a stiff knee. Whatever the position of the fracture, movements in the knee were obtained easily and satisfactorily, the last twenty-five degrees of flexion usually returning, with the aid of the massage department, a few weeks after firm bony union had occurred. Occasionally the last fifteen degrees of full flexion were difficult to obtain without pain, and, as this is important to miners, manipulation under anaesthesia was resorted to, but only when firm bony union was present.

The advantages claimed for skeletal traction are: (1) it is simple to apply; (2) it eliminates the danger of a strapping sore; (3) a more direct pull can be applied to the fragments; and (4) it allows movement at the knee.

To take the points one by one:

Simplicity of Application.—The application of two strapping extensions takes less than three minutes, and is so simple that even a porter could do it with safety. The introduction of metal into bone requires full surgical asepsis, with all its ritual and precautions, and this in itself adds time and anxiety to the treatment, especially if the patient is treated in his own home. The surgeon who states that the introduction of a pin into bone can be done with ease and safety in the out-patient department, private house, or farmer's cottage has sooner or later a sad awakening.

Danger of a Strapping Sore.—This is extremely rare. When it does occur it is localized, and a light powder dressing under the strapping quickly heals the condition without interfering with the extension. The complication of skeletal traction is infection—not only of the skin but of the bone itself—introduced either at the time of application or later by infection travelling along the pin. A recent enthusiast for skeletal traction advised the introduction of the pin through the crest of the tibia, so that if infection of the bone occurred the whole area of the infected bone could be excised. Thereby he admitted that such complications do occur. It is surely bad practice to choose of two methods, not only the more complicated one, but also that attended by graver risks, however small these risks may appear to be.

A more Direct Pull can be applied to the Fragments.—This only applies when the pin is fixed into the femur, and the results in this paper would seem to indicate that skin traction is efficient at any age or with any site of fracture.

Allowing Movement at the Knee.—As the trouble with a stiff knee is very little when strapping extensions are used, the greater part of the value of keeping the knee movable disappears, associated as the movement is with difficulty in maintaining immobilization at the site of fracture. Personally, the only absolutely rigid knees I have ever seen have been those in which skeletal traction had been used through the lower end of the femur. The introduction of a foreign body so near a joint had resulted in a tissue reaction so great that several manipulations were necessary, after bony union was solid, before flexion to the right angles was obtained.

WEIGHT EXTENSION *versus* FIXED EXTENSION

Lastly, there is the vexed question of weight as opposed to fixed extension. By using fixed extension the patient and his splint form one complete unit independent of surrounding structures. If the patient is moved in bed or out of it, no alteration in the position of the fragments, or change in the amount of traction, can occur. For simplicity of application there can be no comparison. The fixed extension is safe and more fool-proof, provided that it has careful attention. It does not suffer the variability of tension from outside causes, such as passers-by, ward maids dusting the floors, or by the patient himself, who wriggles into such a position that the cord does not run smoothly over the pulley and the weights are partially caught up by the bar between the legs of the bed. Finally, what is most important, any patient who has had the misfortune to experience both methods will, without hesitation, prefer the fixed extension for comfort.

I make no excuse for stressing once more the well-known principles of the splint devised by Thomas and of his methods of application. The results which I append below are my justification, and show what can be done on many occasions, even without the help of a highly trained nursing staff. The results are satisfactory, with the exception of the one case in which treatment resulted in three-quarters of an inch of shortening—a result which was undoubtedly due to want of care.

Briefly the advantages of this method are:

1. *Simplicity.*—The treatment can be carried out as well in the patient's own home as in a surgical ward of a hospital.

2. *Ease.*—No complicated apparatus is necessary—nothing, in fact, beyond the Thomas splint, three straight metal splints, strapping extensions, wool, and bandages.

3. *Freedom from Tragedies.*—In none of these cases were there any tragedies, such as stiffness of the knee, want of alignment, necrosis of bone, or non-union—occurrences which, unfortunately, are by no means unknown when skeletal traction is used.

4. *Results.*—A good result is almost certain to follow the intelligent use of this splint.

TABLE OF RESULTS

Name	Age	Result
Francis S.	3 days	¾ inch lengthening
James C.	19 years	¾ inch shortening
Martha I.	67 ,,	½ inch lengthening
Alexander C.	12 ,,	½ inch lengthening
Alan G.	1 year	½ inch lengthening
Winifred J.	6 years	½ inch shortening
Ruth H.	7 ,,	Equal length
Marie G.	3 ,,	¼ inch lengthening
Wilfred F.	3 ,,	Equal length
Joseph C.	1½ ,,	Equal length
Margaret B.	4 ,,	½ inch lengthening
Hilda A.	17 ,,	½ inch lengthening
Alice J.	7 ,,	¼ inch shortening
John E.	22 ,,	Equal length
Richard B.	5 ,,	¼ inch lengthening
Leslie B.	7 ,,	Equal length
Robert C.	7 ,,	¾ inch lengthening
Thomas V.	61 ,,	½ inch lengthening
John L.	13 ,,	¾ inch shortening
James T.	13 ,,	¾ inch lengthening
William R.	59 ,,	Equal length
Joseph B.	12 ,,	¼ inch shortening
Fred. N.	25 ,,	¼ inch lengthening
Stanley C.	21 ,,	½ inch shortening
Cyril T.	1 year	½ inch lengthening
Marjorie P.	2 years	Equal length
Lucy W.	10 ,,	¼ inch lengthening
Herbert W.	11 ,,	Equal length
Joseph W.	7 ,,	Equal length
Donald W.	7 ,,	Equal length
Thomas W.	4 ,,	Equal length
John U.	5 ,,	Equal length
Reginald T.	4 ,,	Equal length
Beryl T.	6 ,,	¼ inch lengthening
Henry S.	2 ,,	½ inch lengthening
Emma R.	3 ,,	Did not walk in calliper; ½ inch shortening
John R.	8 ,,	½ inch lengthening
Alfred O.	7 ,,	Equal length
Norman N.	6 ,,	¼ inch lengthening
John M.	7 ,,	½ inch lengthening
Stanley M.	3 ,,	Equal length
William M.	9 ,,	¼ inch lengthening
George H.	5 ,,	Equal length
John H.	5 ,,	¼ inch shortening
Pierce G.	8 ,,	½ inch lengthening
Audrey G.	1 year	Equal length
Brenda G.	2 years	¼ inch lengthening
Thomas G.	6 ,,	Equal length
Ronald F.	7 ,,	½ inch lengthening
Patrick D.	7 ,,	1 inch lengthening
Stanley D.	5 ,,	¼ inch shortening
Gladys C.	5 ,,	¼ inch lengthening
Douglas C.	7 ,,	¼ inch lengthening
Annie C.	4 ,,	Equal length
Bernard C.	7 ,,	¼ inch lengthening
John B.	8 ,,	¾ inch lengthening
Doreen B.	14 weeks	Equal length
Edwin B.	4 years	¼ inch lengthening
Evelyn B.	7 ,,	Equal length
William B.	7 ,,	½ inch lengthening
Eleanor I.	13 ,,	¼ inch lengthening. Did not walk in calliper; now ½ inch shortening

A NOTE ON PROTO-DUODENITIS*

BY

J. S. KELLETT SMITH, F.R.C.S., D.M.R.E.

AND

ARTHUR TOM, M.R.C.S., L.R.C.P.

(With Special Plate)

Anatomically the duodenum is described as being divided into four parts: (1) a superior portion, from the pylorus to the neck of the gall-bladder; (2) a descending portion, lying in front of the medial border of the right kidney and passing from the neck of the gall-bladder to the upper border of the fourth lumbar vertebra; (3) a horizontal portion, passing across the vertebral column from right to left, in front of the large vessels; (4) an ascending portion, running upwards in front of the abdominal aorta to the upper border of the second lumbar vertebra, where it turns abruptly forwards in the duodeno-jejunal flexure to become continuous with the jejunum.

These parts have varying relation to the peritoneum, in such manner that, disregarding exact detail, the condition is thus summed up in the words of a well-known textbook: "The superior part of the duodenum is somewhat movable, but the rest is practically fixed, and is bound down to neighbouring viscera and the posterior abdominal wall." This statement is misleading, like many other statements which seem to live for ever in the textbooks. By no means is the greater length of the duodenum always "practically fixed" and "bound down"; it would not function if it were. The truth is that the extraperitoneal areolar tissue attaching the gut to its related viscera varies greatly in density, so that in some cases the gut is as tightly fixed as is compatible with its function, whilst in others the attachment may be so loose that, as A. J. Walton records, there is sometimes no difficulty in even lifting the duodenum out of an abdominal incision. Certainly there is no difficulty in many cases in the way of the duodenum becoming ptosed, any more than there is in preventing a kidney from dropping below its average position. Finally, the duodenum may even have a mesentery, this being the persistence of a developmental stage in man but the normal state in some animals.

ANATOMY AND PHYSIOLOGY OF "PROTO-DUODENUM"

There is one part of the duodenum, however, where fixation is more constant and especially secured. The duodenal-jejunal flexure is supported and fixed by the muscle of Treitz (musculus suspensorius duodeni), a strong band of striped and unstriped muscle and elastic tendon which arises from the right crus of the diaphragm, and is inserted into the posterior aspect of the duodeno-jejunal junction and into the root of the great mesentery. We regard this fixation by the muscle of Treitz as a most important anatomical fact, for when the duodenum and jejunum become ptosed their junction is held up by this muscle of Treitz in such manner that the gut may become angulated by the downward drag on either side, thus forming a partial obstruction to the free onward flow of duodenal contents, and creating, as we believe, the conditions favourable to the development of one type of proto-duodenitis.

The use of the word proto-duodenitis suggests a method of dividing the duodenum into "proto-" and "meta-" duodenum which will appeal to the clinician as more useful than the old anatomical divisions. Between the

* Read at a meeting of the Gloucestershire Branch of the British Medical Association.

pylorus and the duodenal papilla the gut presents characteristics which serve to distinguish it almost as a separate organ. "It has a distinct embryological origin, being derived from the fore-gut, whereas the rest of the duodenum, which it is proposed to call the meta-duodenum, belongs to the mid-gut. It has a blood supply through the artery of the fore-gut, the coeliac axis, and not through the artery of the mid-gut, the superior mesenteric, which supplies the rest of the duodenum. . . . It has no valvulae conniventes as occur in the meta-duodenum, and possesses special glands which are only met here, the Brunnerian glands." (Cawadias, *Diseases of the Intestines.*) Brunner's glands require especial attention. They occur as a dense layer of acino-tubular glands in the submucosa of the proto-duodenum, rapidly diminishing in number below the duodenal papilla. Altogether they form such a substantial collection that some writers have alluded to them as the "Brunnerian secretory organ," and yet little is known about them. Two books on physiology do not even mention Brunner's glands, others mainly dismiss them as being similar in structure and function to the pyloric glands of the stomach. One reason for our lack of knowledge is that the cells of these glands are extremely fragile, and their histological study in animals after death is a matter of difficulty. This may have a bearing upon the fact that the region of the gut in which they occur, the proto-duodenum, is a very susceptible and tender part of the intestinal canal. It seems, however, to be pretty well agreed that they secrete enterokinase, erepsin, some other less important enzymes, and a hormone which is a gastric stimulant. On this last point Margaret M. Murray says, in a paper in the *Journal of Physiology* (1930, lxix, 48): "(1) The response of the gastric mucosa to intravenous injections of extracts of different parts of the duodenum has been investigated. (2) The results show that when that part of the duodenum which contains Brunner's glands is used, the secretion by the stomach is greater, more HCl and pepsin being produced. When parts that do not contain Brunner's glands are used the effect is insignificant in almost every case.". In view of Murray's experiments it seems to us a possible explanation of a disputed point that a pathological irritation of Brunner's glands may, by increasing this gastric hormone, overstimulate the secretions of the stomach and so give rise to the hunger sensations which are frequent in proto-duodenitis and other duodenal complaints.

TWO TYPES OF PROTO-DUODENITIS

The cases of proto-duodenitis dealt with in this paper are those in which the symptoms were suggestive of duodenal ulcer, but in which there was no positive evidence on the clinical side, and in which *x*-ray examination revealed no ulcer crater, but only tenderness of the duodenum to palpation under the screen. They may be divided into two classes: (1) those with gastro-enteroptosis, and (2) those with the viscera in normal position.

Those with gastro-enteroptosis are found most often in females, since the condition occurs chiefly in that sex. In a series of 111 cases analysed by Bedingfield there were only fifteen males to ninety-six females. On screen examination, with the patient in the erect posture, the pylorus is seen in low position—generally somewhere about the level of the base of the sacrum. The duodenal cap is large and gives the impression of "ballooning out" at each filling, a rather characteristic appearance already suggestive of some partial block to free onward flow. The outline of the cap is even, but this part of the gut is definitely tender to palpation. Occasionally one is fortunate enough to show the whole length of the duodenum on one film, this in itself being evidence of partial duodenal stasis caused by angulation at the duodeno-jejunal flexure. We are able to show two *perfect* examples of this in films taken by one of us (J. S. K. S.) (see Special Plate), in each of which the angulation of the gut where it is held up by the muscle of Treitz is a very striking feature.

We now come to the question, "Why should these cases develop a *proto-duodenitis?*" It has been shown (G. M. Smith, *Journal of Medical Research*, 1914, xxx, 147) that the mucous membrane about the pylorus is not irritated by weak HCl alone, nor by bile alone, but that a mixture of acid and bile acts as a definite irritant. Following on this we suggest that, *when, in a case of gastro-enteroptosis, there is sufficient angulation at the duodeno-jejunal flexure to interfere with the free flow of duodenal contents there is back pressure enough to allow the bile to mix with the acid chyme in the proto-duodenum, and that this mixture of bile and acid acts as an irritant to the mucous membrane and produces a proto-duodenitis.*

Next come those cases in which the position of the viscera is normal, and in which back pressure in the duodenum is not a factor. If we look upon the causes of proto-duodenitis in them as falling into the same category as those of duodenal ulcer, we find ourselves at once in a much disputed field. Rehfuss quotes references for fifty-six different causes in the production of gastro-duodenal ulcers. We do not wish to discuss these various causes or to add to their number, but there is one point we desire to emphasize—namely, *that 95 per cent. of chronic duodenal ulcers, and therefore of the antecedent conditions of duodenitis, occur in that part of the duodenum where Brunner's glands are thickest.* This seems to be more than coincidence.

SUGGESTED EXPLANATION

In attempting an explanation, the first thing that strikes one is the general agreement of research workers as to the great fragility of Brunner's glands, shown by the difficulty of their histological study. Cawadias remarked this when investigating the toxic action of the blood serum of nephritic individuals. Again, early last year F. Pescatori thought it worth while to publish (*Italian Archives of Surgery*) a description of three cases in which a hyperplasia of Brunner's glands took place, with inflammatory fibrosis fixing the mucous membrane to the muscular wall of the gut, and consequent ulceration from the fact that "the mucosa at these spots remained exposed to more direct friction against which the normal protection of the mucosa did not exist." Certainly this layer of the delicate Brunner's glands would appear to render the proto-duodenum a vulnerable tract peculiarly susceptible to inflammatory changes.

The second explanation that occurs to one is from the analogy of the reaction of other glands to certain toxins. We know that certain substances affect certain organs of the body during the process of excretion. Iodides may inflame the nasal mucous membrane; bromides, the sweat glands; mercury, the salivary glands; arsenic, by whatever channel it may have been introduced, is eliminated into the stomach, and if it is present in poisonous quantity, produces characteristic erosions and ulcerations of the mucosa (Professor A. J. Clark). *We suggest that certain toxins may pick out Brunner's glands and irritate them during excretion, producing a proto-duodenitis which may proceed to ulceration.* Especially do we suspect the pyridine bases and other products of tobacco smoking. The definitely greater incidence of proto-duodenitis in smokers may thus be explained. (One of us has had the opportunity of watching a case in which duodenal pain and tenderness to palpation under the screen would always quickly follow indulgence in cigars.)

This suggested excretory function of Brunner's glands is not entirely an original line of thought. In 1842 Curling, describing duodenal ulceration after burns, expressed a belief that "the duodenal glands of Brunner sympathized and compensated for the suppression of the exhalation from the skin by an increased activity." This, he theorized, "leads to an irritation which causes inflammation and ulceration." However, the role of Brunner's glands suggested by us remains in effect still a virgin field for investigation. There appears as yet to be no experimental evidence of any excretory function of these glands, and research on this point might throw much light upon the contentious field of proto-duodenitis and duodenal ulcer.

SUMMARY

1. The proto-duodenum is an especially vulnerable part of the intestinal tract owing to the presence of the fragile Brunner's glands.

2. In cases of gastro-enteroptosis, where there is angulation at the duodeno-jejunal flexure sufficient to cause partial block, an inflammatory reaction may be produced by the presence of an irritant bile and acid mixture in the proto-duodenum.

3. Brunner's glands may become inflamed during the excretion of certain toxins.

DISORDERED REGULATION OF TRAFFIC IN THE GUT

BY

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(With Special Plate)

This paper discusses a definite class of patients who exhibit chronic abdominal pain intermittently. These patients are plentiful, and their pains are due to various parts of the gut contracting against the opposition of sphincters which should regulate the traffic, but fail to do so by their inability to relax properly (achalasia, incorrectly called spasm). The symptoms are extremely varied, depending on the sphincter or sphincters in fault. Hence this disorder is so protean that it is hardly looked upon as a clinical entity, and often evades recognition. It is a motor neurosis very similar to asthma, and not really indigestion, for the food is completely though painfully digested.

TRAFFIC ANALOGY EXPLAINED

It is my purpose to attempt a simplification of this unwieldy subject so that it may be unified and applied in general practice. Hence it must be presented as a simple and portable working conception. Thus the sphincters will be compared with traffic "robots" which get stuck at red. The traffic is then obstructed and pain results.

The normal regulation of traffic in the food canal from mouth to anus is automatic, but its nervous mechanism is extremely complex. At over half a dozen strategic points robots have been erected to ensure the necessary delay and maintain a one-way traffic. The supervision of this intricate control would be very wearing to the central nervous system. It is therefore deputed to scattered groups of humbler, tireless, sympathetic nerve cells, which act as non-commissioned officers. Just as our robots have red and green lights worked by separate wires, so the traffic in the gut is regulated by two separate and opposing nervous wirings—the vagus and the sympathetic acting in balanced opposition. The sympathetic closes the sphincter robots at red and inhibits peristalsis in the tube. The vagus opens the sphincter to green and stimulates peristalsis. Moreover, there must be intelligent co-ordination between various sphincters. So much for the normal traffic regulation. Before we consider the painful symptoms of disordered regulation of the traffic we must clear the ground by three generalizations, which I think are broadly true:

1. Nervous indigestion is either secretory or motor (or both).
2. Secretory indigestion causes malnutrition rather than pain.
3. Motor "indigestion" causes pain due to tension in part of the tube contracting against obstruction (usually sphincteric). In chronic abdomens it is the main cause of pain, and it forms the chief topic of this paper.

It is important to recognize the rather definite class of patient subject to these stuck robots. Usually these patients are of the anxious, idealistic type, striving to do their best intelligently. Very commonly they have had migraine from about 20 to 40 years of age, and as, in the natural course, the migraine passed off so the traffic pains came on—a sensory (? vasomotor) neurosis in the head being replaced by a motor neurosis in the belly. Both come on in attacks with intervals of good health, both seem to have a toxic-metabolic cause, but both also demand a nervous temperament. Often there is a history of asthma in the family, and that will define the type to the experienced doctor. In many patients creases on the forehead betray the frequency with which their brows are corrugated and reveal their anxious temperaments.

DERANGEMENT OF "ROBOTS" IN THE GUT

At last we are in some shape to study the five chief robots individually:

The first robot is in the upper end of the gullet and it rarely goes wrong. In a middle-aged woman, dysphagia for solids and bilateral throat pains give this diagnosis—confirmed by skiagram. (Plate.) On the screen it was most interesting to watch the movements of the spindle-shaped bolus of barium paste—about 2 inches in length. Each effort to swallow dragged it down an inch or two, but then it sprang back as if suspended on an elastic thread. I have also seen this "spasm" come on a few days before death.

The second robot is at the lower end of the gullet. Food is felt to stick at the lower end of the sternum. There is no pain: indeed, the patient may be unaware of the achalasia. There is no actual spasm, except rarely and late; and the weight of 6 or 8 inches of food, or of a mercury-loaded tube, is sufficient to force this robot. The latter is usually curative, and operation is rarely needed. Generally the patients become very thin and miserable. An oesophagitis may develop from dilatation and decomposing food. G. W. Rake has demonstrated degeneration of Auerbach's plexus in this disease. (Is not this the first neurosis to be manifested to the microscope?) This "cardiospasm" is said to be relieved by tickling the back of the throat, because the robot is relaxed reflexly before vomiting. Water-brash, or the "vomiting" of small quantities of non-acid food, is diagnostic of obstruction at this point. If the robot relaxes too readily to green there may be eructations or heartburn. If the nervous mechanism of eructation is disorganized one finds air-gulping, in which, despite noisy and protracted efforts, more air is swallowed than is eructated.

The third robot is the pylorus. If it sticks at red we get hunger-pains, appearing two hours after food, and relieved by food or alkalis. Duodenal ulcer, gall-stones, or chronic appendix, etc., are often the reflex cause of this "spasm" pain, which indicates operation. It is important, however, to realize that hunger-pain may frequently be an idiopathic neurosis, and thus not call for

operation. Whether an ulcer is present or not the pain is probably due not to acid, but to painful tension in the contracted muscles of the pyloric antrum, a high-pressure chamber formed by peristaltic waves advancing vainly against the stubborn sphincter. If more food is taken pain is relieved, because a closed tension-chamber bigger than a certain size cannot be formed. From a few specimens of vomit I have seen during idiopathic hunger-pain, I estimate the capacity of this high-tension antrum at about 4 oz. If this is so, "4-oz. pain" would be a less misleading term than "hunger-pain." The stomach is not empty as in the case of hunger, for vomiting promptly relieves the condition. Attacks of idiopathic hunger-pain (lasting perhaps for weeks) may be caused by worry, exhaustion, chill, especially in cold east winds, and by excess of cellulose or roughage in the diet. Alcohol is ill borne, but tobacco is less harmful. Lennander asserts that alkalis in the stomach relax the pylorus. This explains the invariable relief of hunger-pain by alkalis. Hurst uses the tribasic phosphate of calcium or magnesium, avoiding bicarbonate of soda because it excites acid formation. Recently it has been found by Rieder that a closed sphincter is pale and a relaxed one flushed with blood. This nervous linkage between flushing and relaxation may explain the relief of hunger-pain by hot water; it actively relaxes the stubborn sphincter through relaxing its capillaries. Cold water would not be tolerated.

The "spasm" in the pylorus of the newly born is often curable by mere stomach-washing. Hence it can hardly have a reflex cause. The pylorus itself is normal: the hypertrophy is pre-pyloric. Phimosis is an interesting and invariable association, which should be treated. Three other congenital disorders, also presumably achalasic, are: hypertrophy of the bladder—which appears causeless in post-mortem dissection; Hirschsprung's hypertrophy of the colon; and its counterpart above the ileo-caecal valve.

The fourth robot is a definite sphincter in the small bowel at its point of entrance into the caecum. This should relax during a meal to allow the small gut to unload slowly in readiness for the fresh traffic. When it fails to do so there may be some abdominal pain, and a tender tumour of the size and shape of a sausage may be felt just above and parallel to Poupart's ligament. This is the contracted ileum above the ileo-colic sphincter. A doctor patient, during the weeks of sympathetic overaction manifested by hunger-pains, could regularly feel this tumour just after getting into a really hot bath. In the intervals between attacks no such tumour could be felt in a hot bath. There was no reflex cause, because his abdomen had been explored and a diseased appendix removed, with little benefit to his two achalasias.

The fifth robot is the anus. Some robot patients consider that during their attacks they are unable to pass wind either freely or quietly. An anal ulcer will cause real spasm, not an achalasia. The pelvi-rectal robot is of little importance to the practitioner.

THE COLON AND GENERAL CONSIDERATION

The colon is innervated by the sympathetic only. Although it cannot be called a robot, yet it spends nearly all the twenty-four hours in firm constriction, giving the impression that it is squeezing the water out of the faeces. Obviously no traffic movement can occur till this spasm and haustration relax. A gastro-colic reflex should inhibit them after each meal. Then for a few seconds the colon becomes smoothly tubular, and a swift, massive onward movement of the traffic occurs unconsciously. But in the victims of the red robot disorder the spastic habit of the colon is always greatly enhanced, so that parts of the colon can usually be palpated as hard (and tender) cords—a valuable diagnostic clue. As a rule this produces constipation, made worse by ordinary aperients (irritants) and relieved by belladonna. The long delay in the colon causes dehydration to proceed till the faeces are reduced to little hard nuts—"the greedy colon." Patients with this delayed action of an absorptive colon must not be too ambitious about their "traffic returns"; they cannot emulate the cow, but they can be content with the modest output of the equally healthy sheep. Hence only small motions are to be expected unless amplified by agar or paraffin. Taxol—and perhaps its new British equivalent eulaxase—are allowable. Since we have no means of digesting the cellulose, which forms the main traffic of the colon, these robot patients are greatly helped by eliminating all roughage and most of their cellulose. Otherwise their plain diet need not be faddy. Marmite and orange juice will make good the resulting deficiency of vitamins B and C.

It will be asked, "How can one be sure that one's idiopathic cases of robot disorder have no reflex cause—for example, in the appendix, duodenum, gall-bladder, uterus, or prostate?" If examination reveals such a cause, its removal by operation will generally be curative. On the other hand, if medical treatment cures permanently, or previous exploratory operation has been negative or has failed, then an idiopathic robot disorder must be assumed. Stacey Wilson's splendid series of cases show many such, and so do mine.

In *mucous colitis* there is no colitis, but merely a painful spasm of the colon, with great hypersecretion of mucus. It is a motor-secretory neurosis, exactly analogous to asthma, with its bronchial spasm and Kurschmann's spirals. But while belladonna relieves both asthma and red robot disorders ephedrine unexpectedly benefits only the asthma.

Lienteric diarrhoea is a neurosis in which the robots tend to stick at green. "Examination-funk" diarrhoea is important evidence that the mind has access to these robots when deeply moved.

PRINCIPLES OF TREATMENT AND CONCLUSION

Treatment has already been referred to incidentally: it is largely a matter of applied understanding. Hyd. c cret., bromide, and belladonna are very useful. Wilson gives tr. hyoscyamus, liq. ferri perchlor., and liq. hyd. perchlor., 15 drops of each. Walking or golf commonly increases the pain; cycling, rowing, or tennis are generally excellent. Moorland air is very beneficial; cold seaside air very bad. Allergy and vitamins are possible factors. Sleep, however short, banishes the pain.

By approaching these patients as traffic problems one is able to help them in four ways:

1. One can give them a working conception of their disorder and they can apply your doctrine in daily life.

2. One can reassure them they have no cancer (especially after three negative occult blood tests) and that their malady will not shorten life and will seldom lay them up.

3. One can adopt suggestion in a particularly precise form, showing them on a skiagram the guilty robots, which will be soothed and relaxed by the medicine. This may work wonders—and permanently.

4. They are indignant at having been labelled "only nerves," but are relieved and enlightened by the analogy with asthma.

Space does not allow me to describe the cases on the study of which during many years this paper is based, as well as on the writings of Hurst, Ryle, and Wilson, to which I gratefully refer readers. Many of my statements should have been amplified or qualified, but my purpose was to hack a short plain road through a large dark wood.

I have attempted to compress into a single picture the various spasmodic traffic disorders of the gut viewed as a clinical entity. But it is only part of a much vaster clinical picture of sympathetic tyranny (in hypersensitives) which may afflict unstriped muscle elsewhere. If in the bronchi it causes asthma ; if in the arterioles, cold hands and dead fingers (? arteriolar achalasia) ; if in the heart, pain, palpitation, and tachycardia (Wilson) ; if in the bladder, frequent micturition by day ; if in the ureters, spasm and dilatation ; if in the uterus it may produce dysmenorrhoea (? uterine achalasia) ; and perhaps, if in the gall-bladder, cause the dyskinesia of German writers. Thus the cardinal feature seems to be unstriped muscle contracting too readily and relaxing too reluctantly. Perhaps there is a common cause, such as a toxin in the gut, which produces sympathetic overaction in neurotics.

Although no one can treat chronic abdominal pain adequately without knowledge of this common traffic disorder it seems never to have captured the imagination of the profession. Perhaps this is due partly to the difficulty of describing it succinctly and partly to the lack of a suitable name to embrace its protean manifestations. The "robot disorder" is only a colloquialism, but it expresses the topic of this paper. The wider conception of which it seems to be a part is expressed by "sympathetic tyranny."

It is the proud boast of the surgeon that he witnesses the "living pathology" of the abdomen. This, though partly true, is untrue in so far that these guilty robots appear perfectly innocent under anaesthesia (or after death). Naturally there is tendency to ignore what one never sees. Here is the opportunity for the physician—as interpreter of hidden realities.

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Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

AN UNUSUALLY LARGE PROSTATE

(With Special Plate)

The following case seems worthy of record on account of the unusual size of the prostate and the advanced age of the patient.

A rather small, well-preserved man of 87* was admitted to the Northampton General Hospital on September 17th, 1932, suffering from retention of urine. There was a history of bladder trouble dating back for several years. My house-surgeon, Mr. Dawes, having failed to empty the bladder by the normal route, resorted to suprapubic puncture, using a cannula of just sufficient size to allow the passage of a No. 1 rubber catheter. By this means the bladder was emptied slowly. On September 20th I inserted a de Pezzer catheter through a small suprapubic incision, by means of a large trocar and cannula. The little operation was performed under local anaesthesia, supplemented by a minimal amount of gas. On October 4th, as the renal efficiency tests were satisfactory, I decided to remove the prostate, which appeared to be very large. Open ether was administered by Dr. Fisher Waddy, and I enucleated the prostate in two halves. Except that the base of the gland was somewhat inaccessible, the operation presented no difficulty and was soon completed. The prostate, weighed immediately after removal, turned the scale at 11 oz. The patient bore the operation well, and there were no subsequent complications. He passed urine, for the first time, seventeen days after operation. Ten days later the wound was healed and he was sent to the convalescent home.

A somewhat cursory reference to available literature has left me ignorant as to the identity of the largest prostate removed during life. Rowlands and Turner print an illustration of a prostate weighing 10½ oz., which was removed by Freyer. This is more nearly spherical than my specimen, the breadth being the same and the length slightly less. Other writers refer to prostates up to 14 oz. in weight, but do not state whether these are operation or post-mortem specimens. As far as my own somewhat limited experience goes, out of about 120 prostatectomies the next largest specimen weighed only 5½ oz., and was removed from a man of 72. The patient whose case I have recorded is the oldest of the series. The next in order of seniority, aged 86, had a prostate weighing 4¾ oz.

I am indebted to Mr. Vernon Ashford, honorary photographer to the hospital, for the excellent picture of the prostate.

C. C. HOLMAN, M.B., F.R.C.S.
Honorary Surgeon, Northampton General Hospital.

* A copy of the patient's birth certificate, obtained since the above was written, shows that he was 85 years of age at the time of the operation.

CARCINOMA OF OESOPHAGUS WITH COMPLETE DOUBLE RECURRENT LARYNGEAL NERVE PARALYSIS

(With Special Plate)

The following case appears worthy of record on account of its comparative rarity.

W. B., male, aged 38 years, was admitted to Stobhill Hospital under the care of Dr. James Adam on August 24th, 1932. He gave a history of difficulty in swallowing during the previous three months and inability to take anything but soft foods and fluids. A month later hoarseness began to develop, but at no time was there any severe dyspnoea. A week before admission pleuritic pain in the left side had set in. On admission the patient was pale and emaciated, the voice hoarse and low-pitched. He was able to swallow soft food without much difficulty. No tumour mass was palpable in the neck. Examination by direct and indirect laryngoscopy showed both vocal cords to be fixed in the cadaveric position. They did not adduct on phonation but, being slack, were sucked downwards on inspiration. The epiglottis was of infantile type ; some pent-up saliva was observed in the hypopharynx. X-ray examination by barium drink was carried out by Dr. Balfour Black. Obstruction due to tumour was observed at the upper end of the oesophagus, at the level of the manubrium sterni. When thin barium was given it was seen to pass into the trachea and bronchi. It was thought that an oesophago-tracheal fistula might be present. On August 30th, 1932, the patient died from an aspiration pneumonia. At necropsy a carcinoma of the oesophagus was found two inches below the level of the cricoid cartilage and extending downwards for one and a half inches. It encircled the oesophagus, and the recurrent laryngeal nerve on each side was involved in a hard fibrous mass. No trace of a fistula between oesophagus and trachea was found. The lower lobes of both lungs showed septic pneumonia. Microscopical examination of a section of the tumour showed the wall of the oesophagus to be extensively infiltrated by squamous-celled carcinoma.

It is rather remarkable that a complete paralysis of both vocal cords should have developed without any history of dyspnoea. The only probable explanation that I can offer is that one cord must have become completely paralysed before the other cord was affected. The passage

of the barium into the trachea and bronchi must have been due to the paralysis of the glottis. This would be accentuated by the damming back of barium above the stricture, allowing it to drain over into the unclosed larynx.

I wish to thank Dr. James Adam for his permission to publish the case.

Edinburgh. IAN B. THORBURN, M.B., CH.B.

CALCIFIED CYST OF THE SPLEEN

(With Special Plate)

The following case appears to me to be worthy of record as in its routine investigation a large calcified mass in the upper part of the abdomen was seen on the *x*-ray films. This was proved by operation to be a large solitary calcified cyst of the spleen and was treated by splenectomy.

CASE RECORD

W. B., a postal clerk aged 44 years, complained of flatulence after meals, especially after potatoes or fatty foods; this history dated from about 1914. He also stated that he had noticed pain in the left side of the lower part of his chest for the past two years. There was no previous history of any note, and as far as he knew he had never received any injury. He was in the Army during the war and served for a time in Egypt, but he stated he did not contract any disease there. Abdominal examination did not reveal any definite abnormality, but the gastro-intestinal *x*-ray showed some deformity of the duodenal cap and, in addition, a calcified cyst in the upper part of the left side of the abdomen. The radiologist reported that the deformity of the duodenum was due to ulceration, and on this diagnosis I decided to do a laparotomy.

Operation.—Under general anaesthesia a left rectus slide incision was made and the abdomen explored. The stomach and duodenum were normal, showing no signs of ulceration. The gall-bladder was yellow in colour instead of the normal slaty grey, and there were many adhesions from it to the duodenum and other neighbouring parts. The appendix was fixed and, like the gall-bladder, showed many surrounding adhesions. The spleen contained a large cyst with adherent omentum over it, but beyond this there were no adhesions. The other organs were normal. The gall-bladder, appendix, and spleen were removed. Convalescence was uneventful, the drainage tube to the spleen and gall-bladder being removed on the fourth day, and the wound healed by first intention.

Description of Specimen.—The spleen was of normal size, but arising from the lower part of its gastric area was a calcified cyst the size of a tangerine orange, and in one part the wall was very thin where the contents of the cyst were apparently pointing, and where the omentum was adherent. Covering part of the cyst were the spread-out remains of splenic tissue. On section the cyst was found to have a calcified wall about 1/32 inch thick, containing a thick greyish fluid substance which appeared to be pure cholesterol and containing no evidence of blood cells or blood pigment. There was no evidence of any daughter cysts or indeed other evidence of echinococcal infection. A microscopical section of the wall of the cyst after decalcification showed that it was a fibrous structure not lined with epithelium or endothelium and gave no clue to its origin—parasitic, traumatic, or otherwise.

DISCUSSION

Pool and Stillman[1] state that single unilocular cysts in the spleen—the ones usually encountered by the surgeon—are supposed to be for the most part due to haemorrhage. These are more frequently found in females than in males, and of the aetiological factors in their production trauma comes first, although embolism and infection appear to be the cause of a few. The splenic tissue round the cyst is compressed, resulting in a connective-tissue capsule of which the innermost cells may be large and oval, or flattened. The contents of these cysts are cholesterol, and, in addition, albumin and red blood corpuscles. Splenectomy is the ideal and usual form of treatment in these cases provided there is no marked degree of splenic adhesion. Only about 2 per cent. of cases of echinococcal cysts involve the spleen. The parasite often lodges in the centre of this organ, which in consequence assumes an elongated shape considered by some to be characteristic of splenic hydatid disease. Adhesions form early in these cases, fixing the spleen to the adjacent organs.

I can find no reference in the literature to any reported case of a calcified cyst of the spleen, although there appears to be no reason why any cyst in this situation should not calcify. There is no evidence whatever that the cyst described above is of echinococcal origin, as its appearance, macroscopical and microscopical, did not suggest such an origin, nor was there any other hydatid cyst in the other organs of the body. It is rare to meet with this disease affecting the spleen alone. Professor S. L. Baker, to whom I showed this specimen, thought it possible that the cyst was of parasitic (other than hydatid) origin, as he considered that a haemorrhage of this size would have ruptured through the splenic tissue, while there would also have been some evidence of blood pigment in the contents. I am of the opinion that the most probable explanation lies in the cyst being of haemorrhagic origin, but, if so, the cause of haemorrhage is not clear.

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[1] Pool, Eugene H., and Stillman, Ralph G.: *Surgery of the Spleen*, 1923.

CHLORAMINE IN LINIMENTUM CALCIS

In the *British Medical Journal* of April 19th, 1924 (p. 711), I described a simple method of chlorinating the linimentum calcis of the *British Pharmacopoeia*, 1914—for use as an antiseptic and emollient dressing for scalds and burns of all degrees of severity—by employing a mixture of liquor calcis and liquor calcis chlorinatae instead of liquor calcis alone. The liniment, however, possessed the disadvantage, common to all preparations of chlorinated lime (such as Dakin's solution and eusol) of requiring varying amounts of this substance—depending on its available chlorine content, which had to be ascertained by assaying—in order to produce a preparation of the required strength. It had the further disadvantage, also common to all such preparations, of losing its chlorine more or less rapidly so that it could not advantageously be prepared in bulk.

Linimentum calcis has been excluded from the *British Pharmacopoeia*, 1932, as has liquor calcis chlorinatae, but chloramine-T, which is a relatively stable chemical compound containing 11.5 per cent. to 13 per cent. of active chlorine, has become official under the title "chloramina." This compound, though soluble in water, is insoluble in oil. I wish to point out that an emollient and strongly antiseptic dressing for burns and scalds, possessing practically none of the disadvantages of preparations of chlorinated lime, can readily be made by shaking up the requisite amount of chloramine (to produce a 2 to 4 per cent. or stronger preparation) with an emulsion of equal parts of lime water and ground-nut (Arachis) and olive or coco-nut oil; the chloramine, though insoluble in oil, dissolves readily in the lime water of the emulsion. The emulsion can also be made with linseed oil, but it is not then so fluid or elegant as when made with the oils mentioned above. To obtain the best results the emulsion must be used freely and of sufficient strength to prevent suppuration.

Cairo. J. WALKER TOMB, O.B.E., M.D., D.P.H.

Reports of Societies

CARCINOMA OF THE CORPUS UTERI

At a meeting of the Section of Obstetrics and Gynaecology of the Royal Society of Medicine on February 17th Dr. ELIZABETH HURDON read a paper on radium treatment of carcinoma of the corpus uteri.

Dr. Hurdon remarked that radium had been used for many years as a palliative measure for the treatment of cancer of the body of the uterus, but surgery had generally been looked upon as the treatment of choice for most cases. A few clinics had systematically employed a combination of radium therapy and surgery. The combined figures from the literature on about 1,500 cases treated by hysterectomy gave the five years' cure rate as 43 to 65 per cent., the rate of operability having been 75 per cent., and the primary mortality rate from 3.3 to 9 per cent. Radium therapy alone had been used for twenty years. The combined results of nine leading clinics on a total of 740 cases showed a five-year survival rate of 32 per cent. on all cases, and 42 per cent. for the operable cases only. The operative risk was usually looked upon as *nil*, but might be as much as 3 per cent. With modern technique the five-year survival rate of operable cases was given as from 70 to 80 per cent. At the Marie Curie Hospital sixty-eight cases had been treated since October, 1925, and during the same period 700 cases of cancer of the cervix. Only twenty-one "corpus" patients were treated more than three years ago, and only seven more than five years ago. Of these, four were living and well. In the one operable case the patient had died at the end of five years from cerebral haemorrhage, and in the two inoperable cases the patients had died of metastatic cancer with no sign of growth in the uterus. Of the total cases, forty-six patients were living.

A microscopical examination was carried out in every instance. Radium was given in three applications of twenty-two hours each, at one and two weeks' interval. Both intrauterine and vaginal applications were made. A central applicator containing radium tubes "in tandem" was introduced into the uterine cavity so as to extend the entire length to within 1 cm. of the external os. An empty rubber cuff filled the cervical canal below the applicator. In addition, two small applicators were passed up into the uterine cornua. The radium was distributed so that all intrauterine tubes contained 8 mg. E. to each centimetre of active length. A vaginal plaque, containing 20 mg. E., was placed high up in each lateral vaginal fornix, in two out of the three treatments. The radium tubes were screened with 1 mm. platinum and 1.5 mm. rubber. The standard total intrauterine dose was 4,300 to 4,800 m.e.h.; the vaginal dose was 1,760 m.e.h. Two-thirds of the standard dose was given for a small senile uterus. One primary death had resulted from giving the maximum intrauterine dose to a small senile uterus; necrosis of the uterine wall and septic peritonitis had supervened. In three cases stenosis of the cervix, producing pyometra, had proved a late complication. This result would not follow with present-day technique. Dr. Hurdon stated that fibroids interfered with effective radiation, and she regarded tubo-ovarian and other pelvic infections as contraindications. She was of opinion that the results of irradiation treatment would prove to be equal to surgical results, and that combined radium therapy and external radiation was the best method.

Mr. JOHN BEATTIE compared the results of two groups of cases of operable carcinoma of the body of the uterus treated at St. Bartholomew's Hospital by combined radiation methods and by hysterectomy respectively. The survival rate was three times as high in the group treated surgically as in the radiation group, but the dosage of radium was admittedly inadequate. He discussed the various types of carcinoma, with special reference to their sensitiveness to radiation, and pointed out that the majority of growths of the proliferative adenocarcinomatous type were heavily infected. The risk of inserting radium in these cases was great. Dr. J. H. HANNAN emphasized the difficulty which sometimes arose in the histological diagnosis of fragments removed by curetting. While this uncertainty existed caution was necessary in assessing the results of radium treatment. Inevitably a certain proportion of cases classed as malignant were in fact innocent. Dr. HELEN CHAMBERS, a co-worker with Dr. Hurdon at the Marie Curie Hospital, discussed the histological grading of the sixty-eight cases described. As extensive curetting was not encouraged, the amount of tissue available was small, and she was not prepared to accept this as a fair sample of the growth in the uterus. The data were insufficient to determine whether the histological grading had any bearing on prognosis.

Dr. MALCOLM DONALDSON thought there were so few cases of carcinoma of the body that were technically inoperable and therefore suitable for radium treatment that all London gynaecologists should agree to give a trial to the same radiological technique. Discussing Dr. Hurdon's methods, he doubted if the small containers which were said to be placed in the cornua of the uterus actually got into that position. An *x-ray photograph would decide* the question. He considered that the right treatment when possible, was to do a panhysterectomy, followed by high-voltage *x*-ray therapy. Dr. EVERARD WILLIAMS maintained that fruitful results in radium treatment of corporeal cancer would depend on further study of the grades of malignancy in relation to their radio-sensitiveness on the basis suggested by Professor Ewing. In our present state of knowledge he would prefer to treat the adenoma malignum type by radiation and other types by hysterectomy, preferably by the vaginal route.

Mrs. F. IVENS-KNOWLES was not convinced that radium treatment was suitable for all cases. She referred to a case in which it had been necessary to resect a coil of small intestine which was adherent to the fundus of the uterus. The patient was alive ten years afterwards. She favoured vaginal hysterectomy in cases of extreme obesity, advanced age, or chronic bronchitis, in which abdominal operation was contraindicated. Miss I. MARTINDALE, in reviewing a series of fifty-six of her own cases treated between 1920 and 1932, found that she had performed panhysterectomy on forty-one of these (73 per cent.), and had treated the remaining fifteen (27 per cent.) with radium. In eighteen of the hysterectomy cases she had followed up treatment with intensive *x*-ray therapy with a view to preventing recurrence. In eleven of the operated cases radium had been used in addition, mainly for recurrence in the vaginal vault or in the lower end of the vagina. Mr. T. G. STEVENS asked Dr. Hurdon to state on what grounds she had classified her cases as operable and inoperable. He had met few cases of carcinoma which were technically or clinically inoperable.

Dr. E. HURDON, in reply, admitted the difficulty of determining inoperability in cases of cancer of the corpus. The only cases classed as inoperable were those in which an unsuccessful laparotomy had been performed or in which massive fixed growth involving the cervix made removal by surgery clearly impracticable. In reply to Mr. BEATTIE, who had referred to papillary growths already infected, she stated that her practice was to insert the usual dose after preliminary douching with flavine lotion. With the exception of slight rises of temperature there were no ill effects.

IMMUNITY IN MALARIA

At a meeting of the Royal Society of Tropical Medicine and Hygiene on February 16th, with the president, Sir CARMICHAEL LOW, in the chair, Professor GORDON THOMSON read a paper entitled "Immunity in malaria" in which he analysed the various epidemiological, clinical, experimental, and pathological evidences of immunity to this disease.

He pointed out that Europeans suffered most acutely from malaria during the first few years of residence in hyperendemic zones, while subsequent attacks became progressively less severe and more infrequent. Christophers had correlated the spleen rate with the parasitic rate, and had demonstrated the gradual process of immunity or tolerance to malarial infection. During the first year of life 100 per cent. of the children were infected with parasites, accompanied by a spleen rate of 88 per cent.

between 3 and 5 years the spleen rate was 92 per cent., but the parasites were fewer and attacks of fever less frequent; from 6 to 10 years the spleen rate fell to 74 per cent. and the parasites and fever were both decreased, while in adults the spleen rate was only about 11 per cent., and the blood contained scanty parasites. Gill showed that a constant spleen rate over a period of years signified a constant immunity, while a fluctuating spleen rate implied corresponding oscillation in the degree of immunity possessed by a community. Professor Thomson believed that immunity to superinfection in adults was associated with latent infection, and suggested that the long time taken to produce this tolerance was due to numerous different strains of malarial parasites specifically differing in antigenic properties. The experimental observations on malaria in general paralytics by Yorke and Macfie, James, and others were then reviewed; some persons proved highly susceptible to malaria, others relatively resistant, and others completely refractory to infection. According to James this varied resistance was not necessarily due to the presence of "immune bodies" in the serum, but possibly rather to certain chemical conditions of the blood. Serological investigations had not proved very satisfactory, though the presence of immune antibodies had been shown by both the complement fixation and precipitin tests. Toxins in human malaria had not been definitely demonstrated. Immunological studies in bird malaria had supplied much valuable data. Following an incubation period of variable duration, the parasites rapidly increased, and an acute attack supervened, terminating by crisis. Although parasites might persist for a week or so, a latent state followed in which, though demonstrable parasites disappeared, inoculation of the blood into healthy canaries resulted in infection. During this long latent stage there was immunity to hyperinfection, but after complete recovery, as Kikuth and Troopp had shown, reinfection was quite possible. Taliaferro and others had found in Panamanian monkeys infected with *P. brazilianum* that immunity to hyperinfection depended on the reticulo-endothelial cell system, which hypertrophied and took on enhanced phagocytic functions; though no demonstrable antibody was associated with this cellular activity, opsonic antibody in low concentration might be acting locally. Similarly, in human malaria activity of reticulo-endothelial cells in the liver, spleen, and bone marrow was very evident, and in the peripheral blood active engulfing of pigmented parasites by monocytes and even neutrophils and polymorphonuclears might be seen.

Major H. C. BROWN, I.M.S., and Dr. J. C. BROOM presented results comparing the rate of migration in an electric field of red cells infected with bird malaria with normal erythrocytes. The infection rate varied inversely with the charge, and they found in bird malaria that phagocytosis took place satisfactorily only when there was a reduction in the charge of the red cell; in hyperinfection where the charge was not reduced, phagocytosis was inadequate and death resulted. They concluded that phagocytosis took place owing to a reduction in the electric charge of the red cell when acted upon by the immune or opsonizing serum, and the migration of the cell which was correlated with the electric charge could be taken as indicating the degree of the immunizing response.

Dr. G. W. FINDLAY said that in an attempt to correlate phagocytosis with the electric charge in bird malaria they had been able largely to confirm the work of the Taliaferros, and to show that just before the parasites disappeared from the blood the reticulo-endothelial system, especially of the spleen and liver, was intensely phagocytic. Birds were killed, smears of the spleen made, and 500 monocytes examined for parasites. Using this index it was found that when the charge was decreased there was active phagocytosis of parasites with a corresponding decrease in the parasitized cells of the blood.

Colonel S. P. JAMES stated that immunity in malaria and other protozoal diseases differed from immunity in bacterial diseases: further, "immunity" was not at all a satisfactory term, and he agreed with the brothers Sargent that "premunition" was a better word. Studies in bird malaria might be misleading as far as human malaria was concerned, and the process of acquired immunity should be investigated for each species of parasite separately. Colonel James then cited an instructive human case subjected to experimental infection and reinfection with different species of parasites over a period of years showing, in contradistinction to the findings in bird malaria, that this patient remained immune after complete disappearance of the original infection from the body.

Professor WARRINGTON YORKE expressed preference for the term "tolerance" to that of "immunity"; he did not think the reticulo-endothelial system played any essential part in the development of tolerance in malaria, its function being merely that of a scavenger to clear up the debris.

Professor W. W. TOPLEY deprecated the introduction of multiple names for identical phenomena; he asked how long the immunity in bird malaria lasted, and whether the infected corpuscles behaved differently in the presence of immune or normal serum; from the experiments cited he did not see why necessarily the migration rate had anything to do with the serum.

Sir MALCOLM WATSON pointed out that before the child had any immunity there was no enlargement of the spleen, and the appearance of splenomegaly indicated that the child had developed immunity. Among the old Indian races in the Jaipur Hills both adults and children showed a high parasite rate and yet looked perfectly healthy: they enjoyed an inherited immunity which was passed on.

Dr. HAMILTON FAIRLEY stressed the importance of the reticulo-endothelial system in malaria; in 1920 Dew and he had pointed out that any factor preventing phagocytosis of erythrocytes in malaria would predispose to haemoglobinaemia and blackwater fever by keeping back damaged corpuscles in the circulation. In regard to skin tests, only the immediate wheal indicated dermal hypersensitivity to malarial protein, and most tropical workers had only reported on the delayed response; it illustrated the danger of following too closely stereotyped bacteriological methods when studying the pathogenic protozoa and metazoa.

In reply Professor THOMSON stated that active phagocytosis by reticulo-endothelial cells of the spleen and liver was found in birds recovering from malaria, and that the slides in the demonstration were from a human case which recovered. No one doubted that in kala-azar living Leishman-Donovan bodies were phagocytosed in large numbers by reticulo-endothelial cells; why, then, should it be questioned in malaria?

PLACENTA ACCRETA

At a meeting of the Section of Obstetrics of the Royal Academy of Medicine in Ireland on February 3rd, with Dr. D. G. MADILL in the chair, Dr. BETHEL SOLOMONS and Dr. F. S. BOURKE presented a communication on placenta accreta.

The cause of the condition, they said, was unknown. It was very rare; there had not been one example of the condition at the Rotunda Hospital in the last 25,000 births. It could only be diagnosed when efforts to remove the placenta failed, there being no line of cleavage. The consensus of opinion was that hysterectomy was the best treatment. The case reported was that of a woman, aged 41, who had lost a baby after a long and dry labour at the first confinement. The baby had died *in utero* about two days before it was delivered. On the present occasion the patient was about thirty-six weeks pregnant when liquor amnii began to come away. This continued for three days, but the cervix remained closed. After a consultation Caesarean section was decided on. All attempts to remove the placenta failed entirely; there was no line of cleavage; hysterectomy was done. The convalescence was without incident. A slide of the specimen was shown.

Dr. MADILL said that the specimen was unusual. Placenta accreta had only been described in the last ten years, and he had never seen a case. He asked if the placenta in this instance was low down in the uterus, or if it was in the fundal region. The only way of dealing with the condition was by radical treatment. He thought

it would be very difficult to make a naked-eye diagnosis. Chronic exhausting diseases such as phthisis were stated to have some connexion with the abnormality.

Dr. J. F. CUNNINGHAM said he thought that Dr. Solomons was fortunate in being able to make the diagnosis fairly early, as Caesarean section became necessary. In an ordinary case it would be hard to make a diagnosis because until an attempt had been made to remove the placenta it would be difficult to diagnose placenta accreta.

Dr. A. H. DAVIDSON said he had seen only one case of placenta accreta, the cause of which was very hard to explain. He wondered if it were connected with some failure of the corpus luteum. Occasionally, in adherent placenta it was possible by manual removal to get a part of the placenta separated, but portions were impossible to get away. The chief difficulty was to know when to stop trying to take out the placenta. The only treatment for the condition appeared to be radical.

Dr. NINIAN FALKINER regarded placenta accreta in somewhat the same light as an ectopic pregnancy because it undoubtedly was ectopic. The end-result of placenta accreta was that the chorionic elements were intertwined with the muscles of the uterine wall. This was what was met with in pregnancy. Chorionic elements of ova normally had the power of infiltrating the stroma endometrium, but not the glands. In cases of placenta accreta this was not so. He thought that in Dr. Solomons's case there must have been a pre-existing inflammatory state.

Dr. BETHEL SOLOMONS, in reply, said that the placenta was in the upper segment. What he meant by emphasizing the necessity for the diagnosis being made as soon as possible was that, when an effort was made to remove the placenta in a case of pelvic delivery, it should not be persisted in, but that radical treatment should be carried out immediately the diagnosis of placenta accreta was made. He had not diagnosed the condition in this case until he found it impossible to remove the placenta; section made the diagnosis easy. Failure of the corpus luteum might be thought of as an explanation, but an inflammatory state of the endometrium by which chorionic elements could get between the glands to the muscle, as suggested in a recent paper by Falkiner, was more probable.

Pituitary Extract in Labour

Dr. O'DONEL BROWNE read a paper in which he dealt with the use of pituitary extract in labour.

Dr. MADILL said that when he wrote his paper on the subject some years ago the dosage was not nearly so standardized as it was now. The master told them when he was a student at the Rotunda that they should never employ pituitary extract in the first stage of labour, or in the second stage if there was any abnormality. He had once tried the effect of pituitary extract in the induction of labour, and absolutely nothing happened. This, he thought, was because the pituitrin had not been followed by anything else. He was very glad to hear that Dr. Browne did not consider the extract suitable in cases of primary inertia. His opinion was that if it was administered in small doses in these cases it did not do any good, and if in big doses it might do a great deal of harm.

Dr. F. J. CUNNINGHAM, referring to the induction of labour by Watson's technique, said that in this pituitrin was never given in doses of more than 3 minims. He thought there was no definite place for it in the second stage of labour, and that its only action was to increase the amount of uterine contractions. In the third stage he did not resort to pituitrin at all, and thought it was very likely to produce hour-glass contraction. After labour was complete it was of great value; he never gave it in cases of placenta praevia.

Dr. R. M. CORBET thought that pituitary extract should not be given until after the uterus was empty. One should always be prepared to undertake radical measures if one employed it in labour. It should be left in the bag until it was absolutely essential to use it. Dr. A. H. DAVIDSON did not believe in post-partum haemorrhage, and thought that the administration of pituitary extract had no place in labour. There were occasionally cases in which there was difficulty in expressing the placenta, and in these the extract was helpful. It should never be employed in cases of placenta praevia because it was likely to cause adhesions, which were very apt to tear the cervix. It might be used in multiparae, but, in general, it was a drug which was better in one's bag.

Dr. BETHEL SOLOMONS said he had taken charge of the Rotunda convinced of the valuable properties of pituitary extract in labour. He had gradually come to the conclusion that students should be taught that nearly the only time for pituitrin was after the completion of the third stage. As a method of inducing labour in addition to the oil and quinine method he believed it was of little value. In the first stage of labour his teaching was against its employment, but possibly very minute doses—for example, of one unit—would do no harm in selected cases. Since the drug was introduced he had taught that its application very often caused hour-glass contraction of the uterus in the second stage and retention of the membranes in the third stage. If, however, a woman had a gonorrhoeal discharge and the head was delayed on the perineum, he allowed it to be given in minute doses. In those circumstances he thought instrumental delivery in the third stage meant a greater danger than the drug. He had seen two or three cases of hour-glass contraction of the uterus. Pituitary extract was of value in the treatment of accidental haemorrhage, but having seen a case of rupture of the uterus following its use after version in placenta praevia he strongly condemned it in the treatment of such an abnormality. It was important to remember that a very small dose of pituitary extract raised the systolic blood pressure. Those in charge of maternity hospitals had seen many cases of rupture of the uterus admitted after pituitary extract had been given in labour. This alone should deter teachers from recommending it.

CHORION-EPITHELIOMA OF FALLOPIAN TUBE

At a meeting of the Section of Pathology of the Royal Academy of Medicine in Ireland, held on February 10th with the president, Dr. J. MCGRATH, in the chair, Professor T. T. O'FARRELL showed a specimen of chorion-epithelioma of the Fallopian tube, and said he did so to promote discussion on the early diagnosis of the disease. Apart from some peculiarities likely to occur in any case, the general indications in this one pointed to ruptured tubal pregnancy. There were no clinical or naked-eye signs of malignancy or of metastasis. By contrast, he referred to an account of a well-established case of chorion-epithelioma malignum of the Fallopian tube published by Bethel Solomons and E. C. Smith (*Journ. Obstet. and Gynaecol.*, xxx, No. 2). The speaker expressed his indebtedness to Drs. T. Healy and J. Stewart of the Coombe Hospital for leave to bring forward the case, and for the following notes.

The patient, aged 35 years, married fifteen years, had two children, the last having been born eleven years before the present illness. Menstruation had been of the twenty-eight day type and five days' duration, the loss being heavy; last period October 14th, 1932. Uterine haemorrhage began on December 5th, 1932, was not excessive, lasted fourteen days, and was not accompanied by pain; but there had been slight pain in the lower abdomen during the following seven days. Haemorrhage during this time became more marked and before admission to hospital there was acute pain in the lower abdomen for twelve hours. On admission (December 26th) the patient was in a condition of shock; pulse 1[illegible] temperature 97°. There was acute tenderness and rigidity over the lower half of the abdomen, especially in the left iliac fossa. On vaginal examination the uterus was found to be small, hard, and in good position; a vague cystic mass was felt behind and on both sides of the uterus. Examination was difficult on account of rigidity. A diagnosis of ruptured tubal pregnancy was made. On further examination under an anaesthetic the cystic mass was now felt on the left side, suggesting an ovary or pyosalpinx. The diagnosis of ectopic pregnancy was now abandoned in favour of one of twisted ovarian cyst, and operation was decided upon. The abdomen was opened suprapubically in the middle line, and the pe[illegible]

cavity was seen to be filled with blood clot, a little fresh blood being present. The fimbriated end of the right tube looked as if an ectopic pregnancy had ruptured through it; the right tube was removed; a large pyosalpinx was observed on the left side. The abdomen was closed, a drainage tube being left in position. The lungs were radiographed, with a negative result. The patient refused further operation, and, after an uneventful recovery, left the hospital in three weeks; she had not attended since.

Professor O'Farrell then demonstrated the specimens, which consisted of: (1) a swollen and ruptured Fallopian tube measuring 4 cm. by 2 cm. (the actual swelling began about 1 cm. from the cut uterine end); (2) a somewhat fibrotic ovary containing a corpus luteum of pregnancy; and (3) a large amount of blood clot. No embryo was found. To the naked eye the specimens appeared comparatively commonplace, but the microscopical appearance of the tube was of interest. The various normal histological structures were present; the lumen contained chorionic villi of about the fourth-week type; and at one point there was definite invasion of the musculature. At this spot typical villi were scanty, there was marked proliferation of Langhans's cells, many of which contained mitotic figures, and there were comparatively few syncytial masses. These structures occupied about four low-power fields of the microscope, and were indistinguishable from chorion-epithelioma malignum. For comparison, other specimens of a characteristic chorion-epithelioma of the uterus and lung were shown. In discussing the case Professor O'Farrell said he was aware that, owing to the abnormal plantation of the pregnancy and to the absence of true deciduum, the cells of the trophoblast were allowed too much liberty, and acted in a locally malignant fashion; and though he recognized that in the uterus cell islands were apt to be found among placental villi, he was anxious to obtain the opinion of the members of the Section as to what criteria they considered necessary before deciding whether the specimen was an early malignant tumour or a benign condition. He emphasized the importance of early diagnosis. The exhibit was illustrated by lantern slides and specimens of cognate conditions.

The PRESIDENT said that when Fallopian tubes were examined the appearance of tubal pregnancy was frequently found, and occasionally one was observed similar in appearance to that shown by Professor O'Farrell. It was difficult to say how far the chorionic villi, when they came into the tube, were to be regarded as malignant. Cases of tubal pregnancy were frequently seen; if chorionic villi were malignant then all these cases would be malignant, but this was not so. In the present case the question was whether the specimen was one that would become a chorion-epithelioma or whether it was something that did not matter and was merely the result of a tubal pregnancy. He himself thought that it was a chorion-epithelioma.

Professor J. T. WIGHAM asked what the condition of the ovary was in this case. It was usual to find some cystic condition of the ovary associated with chorion-epithelioma. He thought that, if the ovary was found to have a normal corpus luteum on the affected side, it would be rather against the idea that the condition was becoming chorion-epithelioma. He regarded the cells in this case as being very much smaller than those which were found in a genuine tumour. This, of course, was not enough to enable one to say definitely that this was not an overgrowth of chorionic tissue, and that as such it must be regarded as being malignant. He thought that chorion-epithelioma was either very rapidly malignant or else readily removed, proving to be histologically malignant but clinically not so. One might hope that in a case like the present, in which the malignancy must be in a very early stage, the removal of the tube would be quite sufficient treatment.

Dr. R. M. CORBET said that he thought the luteinization of the ovary was not primary, but was the effect of too much trophoblast. The cause of the pregnancy proceeding was the introduction of the trophoblast into the blood stream. In cases in which chorion-epithelioma and hydatid mole were present they gave a stimulus which produced a hyperluteinization of the ovary. In cases such as that under consideration it was the deciduum which influenced the ovary and not the converse.

Dr. BETHEL SOLOMONS said he was particularly interested in the specimen of chorion-epithelioma of the tube in view of the case which he and Dr. Smith had reported some years ago. The slides shown certainly suggested an early degree of malignancy, but there was some element of doubt. He thought it would be well, in view of the rareness of the occurrence, that the slides should be submitted to a reference committee. He suggested that the large cells demonstrated by Professor O'Farrell might be a pseudo-decidual reaction in the tube, which sometimes happened. From the patient's point of view it looked as if the condition was definitely locally malignant and that she would not be troubled again. Dr. Solomons commented on the possible danger of chorion-epithelioma of the tube following salpingostomy; the risk was very slight, and he himself practised the operation. He asked whether Professor O'Farrell had often seen malignancy after a simple hydatidiform mole, as he practically never encountered it. Professor O'FARRELL replied to the various questions asked.

At a meeting of the Pathological Section of the Liverpool Medical Institution on February 16th, with the president, Dr. H. R. HURTER, in the chair, Dr. H. E. ANNETT read a paper on recent work on carcinogenesis, in which he gave a brief introductory account of Bostroem's work on chorion-epithelioma.

He said that those theories of chorion-epitheliomata (trophoblastomata) which were based on a genesis from tissues of embryonic origin (trophoblast or chorion-epithelial products of a fertilized and still segmenting ovum) were wrongly founded, because it has been definitely proved that the trophoblast was not embryonic in origin and in many animals was demonstrable before any signs of an embryo made their appearance, and often before segmentation of the fertilized ovum had been completed to form the so-called "germinal layers." He emphasized the following points: (1) The growth of a chorion-epithelioma was peripheral. (2) The differentiated tumour cells did not of themselves proliferate; they did not, by growing out, of themselves infiltrate the surrounding tissues; on the contrary, differentiated tumour cells rapidly underwent degeneration and died. (3) The tumour cells originated at the spot at which they were found; they were the products of certain mother cells, which arose at or in the neighbourhood of widened and newly formed capillaries as completely indifferent undifferentiated cells, possessing certain highly characteristic features and properties. (4) The origin of the mother cells of the tumour cells of chorion-epithelioma was from the mesenchymal formative elements ("Keimgewebe" of Marchand) present in the somatic tissues, everywhere associated with the blood capillaries, and probably also with the connective tissues.

The ninth annual report of the Ella Sachs Plotz Foundation states that thirty-three grants to research workers were made during the year, eighteen being to scientists outside the United States. In continuation of their policy especially to assist research on a single problem or on closely allied problems, the trustees have awarded seven grants for studies on nephritis. Other awards have been made for research on the physiology of the sympathetic nervous system, internal secretions, the chemistry of pathogenic bacteria, cell division, etc. The grants ranged from 100 to 500 dollars. Applications for assistance during the year 1933-4 should be received before May 1st, 1933, and should include statements as to the nature of the research, the amount of money required, and the objects for which it is to be expended. The secretary of the fund is Dr. J. C. Aub, Corliss P. Huntingdon Memorial Hospital, Boston, Mass., U.S.A.

Reviews

MEDICAL ASPECTS OF WORKMEN'S COMPENSATION

Since the first Workmen's Compensation Act was passed in 1897 there has been a very large increase in the number of accidents sustained by employees, and psychological and other effects of this legislation have arisen to an extent undreamt of by the original framers of the Act. As Sir JOHN COLLIE notes in the opening pages of his book,[1] "It is not a question of an increase of thousands of cases but of hundreds of thousands, and not a question of tens of thousands of pounds, but of millions." There can now be few, if any, medical men who do not have to deal in their practices with cases arising out of these Acts. Very few such cases are plain and straightforward, for there are third-party elements which require to be considered in a fair and proper adjustment of compensation for injury received while working. It has become necessary for every practitioner to make himself cognizant of the law in this respect: it is full of difficulties and perplexities which can only be avoided by study of the Acts and by practical experience.

The author of this volume has collated a good number of cases which involve knotty points and other issues arising out of demands for compensation that can only be settled by legal means. And in doing so he has added his comments, which are the outcome of perhaps the largest medico-legal experience in the British Isles. The book is comprehensive and most interesting to read. Who would imagine that throughout the Workmen's Compensation Acts there is no definition of the words "by accident." At first it was generally accepted that "accident" involved the idea of something fortuitous and unexpected. Later on Lord Macnaghten in the House of Lords regarded the word as denoting "an unlooked-for mishap or an untoward event which is not expected or designed," and subsequently the addition was made "not expected or designed by the workman himself." There is enough material to make a ponderous tome in all the permutations and interpretations that have arisen ever since the door of compensation has been so widely opened, but the author has compressed his volume to the limit of 160 pages which, with a good index, are easy of reference. Guidance is given on the proper way to conduct medico-legal examinations, how to shepherd a neurasthenic workman back to his work, and how a practitioner should conduct himself in the witness-box—a place where many a good medical man acquits himself badly from want of knowledge of how to give his views and from lack of attention to a few matters of detail. There are two important chapters on industrial diseases, and at the end of the book will be found a specially useful chapter on the functions of medical referees.

We commend Sir John Collie's latest work to members of the legal profession as well as to medical practitioners; the former will be able from its pages to gather some idea of the difficulties with which doctors are confronted.

ENDOCRINOLOGY OF THE FEMALE

New work on the physiology of the ovary and the pituitary is admirably reviewed in *Clinical Endocrinology of the Female*,[2] by Professor CHARLES MAZER and Dr. LEOPOLD GOLDSTEIN. In recent years there has been an enormous amount of experimental research in ovarian physiology, and the recognition of the hormones of the anterior lobe of the pituitary has added further to the number of papers which have appeared. In the present volume references are given to over six hundred papers, most of which have been published in the last ten years. An authoritative review of the work done is therefore to be welcomed.

This is a study of outstanding merit which should be brought to the notice of all who are interested in endocrinology, and it will prove to be particularly serviceable to gynaecologists. The book is beautifully produced, clearly written, and well illustrated. It considers ovarian physiology, the hormones of the pituitary, and the problems of menstruation, and then deals with abnormalities and the clinical application of the results of animal work. Medical readers will find a satisfactory outline of the animal work with proper emphasis upon which contributions should be considered reliable, and clear indications of which conclusions should be regarded as proved. Further, there is a good account of the clinical application of the various hormones which have been obtained from the pituitary and the ovary. All practitioners who are interested in organotherapy should familiarize themselves with the opinions expressed in this book. Criticism of both investigations and methods adopted is very easy, but the work is planned on sound lines. The importance of subcutaneous administration for the hormones of the ovary and the pituitary cannot be overstated, and some authoritative contribution of this kind has for long been required to indicate to practitioners the futility of certain treatments which are popular at the present day. One of the most interesting features of the book is the account given of the methods for determining the oestrin content of the blood. It seems clear that the future of rational organotherapy will depend upon such tests as these. At the present time the tests are difficult, and require skilled supervision and animal experiment.

ENAMEL, DENTINE, AND PULP

Under the title *An Experimental Investigation of Enamel, Dentine and the Dental Pulp*[3] Dr. E. W. FISH has published the results of eight strenuous years of research into the problems of dental caries, and though he tells us the report is only introductory to investigations still in progress, there is enough, and to spare, in this preliminary essay to justify publication and to arrest attention. We think the part which will most attract notice is that concerned with the "dead tracts" in dentine. When caries reaches the dentine the author has shown, both experimentally on animals and by observation in man, that the fibrils of the affected dentine are very apt to die right down to their origin in the odontoblast layer of the pulp. This tract he calls the dead tract; he has further shown that it is sealed at its pulpal end by an impermeable calcified barrier. The dead tract is no exceptional phenomenon; it is extremely common in all situations, with the exception of the occlusal surfaces of molars. In this situation the defensive reaction takes the form of the translucent zone, in which the peripheral ends of the tubules are sealed by deposit of lime salts. In either case it becomes obvious that the carious process is cut off from all fluid connexion with the pulp and the circulatory systems: the only approach is through the oral fluids. The author describes also a series of experiments designed to test the metabolism of dentine, and has found that it was impossible "to modify the calcium content of dentine either by parathyroidectomy, calcium-

[1] *Workmen's Compensation.* Its Medical Aspect. By Sir John Collie, M.D., D.L., C.M.G. London: Edward Arnold and Co. 1933. (Pp. 160. 7s. 6d. net.)

[2] *Clinical Endocrinology of the Female.* By C. Mazer, M.D., F.A.C.S., and L. Goldstein, M.D. Philadelphia and London: W. B. Saunders Company. 1932. (Pp. 305; 382 figures. 35s. net.)

[3] *An Experimental Investigation of Enamel, Dentine and the Dental Pulp.* By Wilfred E. Fish, M.D., L.D.S. London: J. Bale, Sons and Danielsson, Ltd. 1932. (Pp. 118; 51 figures, 8 coloured plates.)

deficient diet, pregnancy, or feeding on therapeutic or excessive doses of vitamin D." We note, however, that experiments with vitamin D are being continued.

The researches on the question of the possible vitality of the enamel and on the pathological reactions of the pulp are perhaps of more immediate interest to the dentist, but it must be remembered that they are complementary to those on the dentine. They go far to elucidate the nature of the spread of caries in the enamel and to explain the meaning of secondary dentine. Much of the work was done at the Hale Research Laboratory, Royal Dental Hospital of London. Financial help was given directly by the Medical Research Council, and indirectly by the Dental Board, who generously equipped the laboratory. These bodies have not had long to wait for justification. They have helped in the production of work of outstanding merit. Illustrations are numerous, and many are coloured; the publishers are to be congratulated on the excellence of their work. Here we may be allowed a word of criticism: the cross-section of an enamel prism sheath (Fig. 11) looks more like the section of a solid column than of a hollow cylinder.

THE EDUCATION OF NURSES

The Rockefeller Foundation since 1924 has been publishing a series of volumes on *Methods and Problems of Medical Education*.[4] The twenty-first of these (and last, for the time being) deals with nursing education and schools of nursing in the United States, Canada, China, Denmark, England, Finland, France, Hungary, and Siam. The articles on American methods, which form the bulk of the volume, deal for the most part with university schools of nursing. Since we have nothing exactly comparable in this country it may be of interest to dilate a little on the organization of such a school as found in America. The Yale School of Nursing succeeded the Connecticut Training School, historically important as one of the first four schools of nursing to be founded in the United States; the students obtain their clinical experience at the New Haven Hospital; the course extends over 30 months and is in preparation for the degree of bachelor of nursing. Efforts are made to co-ordinate theory and clinical practice; the curriculum is adjusted so that 15 per cent. of the entire course is devoted to theory and the remainder to clinical work, including tuberculosis nursing, care of the normal child, public health nursing, psychiatry, and, of course, medical, surgical, and gynaecological nursing. It is not easy to tell whether the theoretical teaching at the Yale School of Nursing has a wider scope than that found, say, in English hospitals; but it seems fairly certain that in other university schools the syllabus is rather heavily laden with scientific instruction: during her first six months at Cook County School of Nursing, for example, in addition to anatomy, physiology, and hygiene, the student nurse studies chemistry, bacteriology, pharmacology, drugs, and solutions, and later in the course she attends lectures in psychology, sociology, and economics. At Teachers College, Columbia University, we are told "nurses are also beginning to master some of the instruments and methods of research. A few have already won the degree of doctor of philosophy in such fields as psychology and child development." It is always difficult to say how much theoretical instruction is necessary to train a student for a profession which is essentially practical; we have possibly laid too much emphasis on the practical aspect of nursing in this country, but the result is not objectionable to the patient, as the popularity of English nurses in America shows. On the other hand, the American university schools admittedly exist to train leaders of the nursing profession whose work will be concerned less with the patient than with administration and organization; it is probably of great advantage to such women to have a basic knowledge of the sciences with which nursing comes into contact. The ideal arrangement would be for a nurse to take a university course after graduating as a registered nurse from the wards of a hospital, and this is the plan followed at Teachers College. At the Yale school the requirement is "a minimum of two years of collegiate work in an approved institution"; it is not clear whether this means that the previous training must have been in nursing or whether it was purely academic. At the Cook County School of Nursing the student body consists of regular undergraduates undertaking the three-year professional training course, affiliated students from other schools of nursing, and graduate nurse students taking shortened courses. At Vanderbilt University School of Nursing two courses are offered to undergraduate nurses, leading in either case to a diploma of nursing, and four courses to graduate nurses, leading to a diploma in nursing and the degree of bachelor of science.

The nursing profession in this country is at present passing through a critical stage in its evolution, as the report of the *Lancet* Commission on Nursing showed; it will be interesting to see whether development will follow the American system, with the establishment of university schools. It seems unlikely that there will be any wide demand for such a system for some time to come, though the establishment of pre-nursing courses in schools would probably be welcomed by parents with daughters to educate.

HISTORY OF CHINESE MEDICINE

Two Chinese medical men who are in the forefront of the profession in China have spent ten years in compiling *The History of Chinese Medicine*.[5] The first part is by Dr. CHIMIN WONG, lecturer on medical history at the National University, Shanghai. It deals with the ancient, historical, and mediaeval periods. The second part, by Dr. WU LIEN-TEH, director of the National Quarantine Service, concerns the past 130 years—the modern or transitional period.

Book One, the first and much the smaller part, contains many deeply interesting quotations which students of comparative medical history would probably wish to see recorded at greater length. That "there is nothing new under the sun" is a saying which must occur to every reader of these pages, especially those that deal with the Nei Ching, the Chinese canon of medicine. Many native practitioners still regard this book as their highest authority, although it was compiled 3,000 years ago. From its pages can be noted the forerunner of Harvey's epoch-making discovery. Thus we read that: "All the blood is under the control of the heart," and "The blood current flows in a circle and never stops." The dictum that "prevention is better than cure" was well apprehended by these ancients: "The skilful doctor treats those who are well, but the inferior doctor treats those who are ill," and "The good doctor pays constant attention to keeping people well so that there will be no sickness." Another telling instance of their acumen is to the effect that "the good physician first cures the disease of the nation, then human ailments." Massage, we learn, has been practised among the Chinese from time immemorial, though it was not brought to European notice till the eighteenth century,

[4] *Methods and Problems of Medical Education.* Twenty-first series. Nursing Education and Schools of Nursing. New York: The Rockefeller Foundation. 1932. (Pp. 226; illustrated.)

[5] *History of Chinese Medicine.* By K. C. Wong and Wu Lien-teh, M.A., M.D.Cantab., D.M.Sc.Tokio, Hon. Litt.D.Peking, LL.D., Sc.D. Tientsin: The Tientsin Press, Ltd.; Shanghai: National Quarantine Service. 1932. (Pp. 724; 92 figures. 35s. net.)

through the publications of the Jesuit fathers resident in China. Acupuncture was another measure of prehistoric origin: it was first practised with needles of flint, and must have been found satisfactory, for it lasted through the ages. A good account is given of the life of Chang Chung-Ching, A.D. 190, the Chinese Hippocrates, who studied diseases from the clinical standpoint, and who wrote a ten-volume essay on typhoid and allied fevers. After his death the standard of scientific medicine he set up degenerated into dogmatic formalism, and no other work of any value or originality appeared until the Sung dynasty—a gap of nearly 1,000 years.

Book Two starts with the advent of Jesuit missionaries and doctors, and deals with the intense individualistic efforts they made during the nineteenth century. A noteworthy feature of this modern period, more especially during the past thirty years, has been the development of public health activities. Should this volume attain a second edition Book Two would be improved by revision, much emendation of unimportant data, and by further research. The earlier medical history of China is interesting enough and sufficiently useful to warrant treatment in fuller detail. The book is well illustrated and printed—all done in North China.

Notes on Books

The last two volumes of the *Transactions of the Medico-Legal Society*,[6] xxv and xxvi, cover the years 1930–1 and 1931–2 respectively, and as in the case of their predecessors, contain useful and practical articles on subjects of general importance—the texts of speeches delivered by well-known experts before the society. The subjects so dealt with in the first of the two volumes are women mental defectives and crime; the importance of blood grouping in paternity cases; the coroner's verdict in cases of suicide; the forensic examination of firearms and projectiles; the history, construction, and use of mortality tables; the Harley Street mystery of 1880; dangerous drugs; and crime investigation in Paris. In the second volume are articles on the following topics: the causes of suicide; the social aspects of juvenile delinquency; the liberty of the subject from the medico-legal aspect; sudden death; some medical, legal, and sociological aspects of abortion; the gynaecologist in the Law Courts; the medico-legal aspects of venereal disease; and the question whether the criminologist should be encouraged, in which the speaker, Mr. Alexander Paterson, a prison commissioner, proposed the appointment of a university professor of criminology. The range covered is wide, and the fact that expert knowledge is revealed in each instance renders these volumes of special value to medical practitioners. The second volume also contains a series of abstracts from medico-legal literature, classified under headings, and drawn from foreign as well as from British sources.

The fourth volume of the forty-second series of *International Clinics*[7] is notable as being the last to appear under the editorship of Dr. H. W. CATTELL, who retires on reaching the age of 70, after occupying this post on three separate occasions since 1900. His successor is Dr. Louis Haman of Johns Hopkins Hospital. The volume consists of nine parts, devoted respectively to contributions from the collaborating staff, contributions from Canada and England, an account of the Centenary Meeting of the British Medical Association by Dr. E. E. Gray, secretary of the South Middlesex Division of the Metropolitan Counties Branch, papers on diagnosis and treatment, and an article on medical trend by the editor, containing an account of the past history of *International Clinics* and reminiscences of Osler and Billings. There are also special articles dealing with appendicitis and the maggot treatment of osteomyelitis, the Northern Hatfield Lecture on the facial expression of the emotions by Dr. R. Tait McKenzie, and a clinical lecture on a case with multiple tumours in the bones, by Professor Lewellys F. Barker. Other papers calling for special notice are those on the surgery of the sympathetic nervous system by Charles D. Lockwood; functional hyperinsulinism, by Clarence K. Weil; myelosis or myeloid leukaemia, by F. Parkes Weber; post-operative pulmonary complications, by Chevalier Jackson and Chevalier Lawrence Jackson; mental hygiene of the prospective parents, by H. W. Long; and biographical sketches of John Morgan, William Shippen, jun., John Archer, and Benjamin Rush by J. H. M. Knox of Baltimore.

The volume on *General Medicine*[8] in the Practical Medicine Series contains a concise account of recent progress in the following branches of medicine: infectious diseases, by George H. Weaver and T. T. Crooks; diseases of the chest (excepting the heart), by Lawrason Brown; diseases of the blood and blood-forming organs and diseases of the kidneys, by George R. Minot and William B. Castle; diseases of the heart and blood vessels, by William D. Stroud; and diseases of the digestive system, by Ralph C. Brown.

X- [illegible] therapy in ophthalmic practice—*Die* [illegible] *und -Therapie in der Augenheilkunde*[9]—is a worthy member of the series to which it belongs. Dr. HOFFMANN deals exhaustively with his subject in a wonderfully small space, and there is an excellent section dealing with injuries to the eye which may be produced by injudicious radiation. The monograph concludes with a full bibliography.

The title of Mr. MACLEOD YEARSLEY'S study, *The Sanity of Hamlet*,[10] leaves the expectant reader in no doubt as to which side of this age-long controversy the author upholds. His contention throughout is that the so-called madness of Hamlet was deliberately and effectively feigned. Mr. Yearsley points out how Hamlet dropped such pretences when he was alone or in the company of Horatio, who was a party to the stratagem. It is salutary to be reminded that the problem here is not what we might consider Hamlet to be, but what Shakespeare intended him to be. The author has little patience with those who would stigmatize Hamlet as melancholic or as a victim of dementia praecox. Such errors of judgement he considers to be due mainly to the neglect of the study of the historical basis of the play and of the key passage where Hamlet discloses his intention to Horatio:

> "As I, perchance, hereafter shall think meet
> To put an antic disposition on," etc.

Mr. Macleod Yearsley will certainly carry his reader with him in his main contention: but that need not necessarily imply that Hamlet's psychology is not problematical. Some of the author's expressions, however, reveal an imperfect acquaintance with psychiatry. Dementia praecox may well be a disease of middle age despite its name; while to speak of the madness of the alienist as being that which is "due to definite disease of the brain" is to anticipate the discoveries of the future. Mr. Yearsley has provided a vigorous and interesting commentary on a problem which is for him "no mystery at all." The opening lines of the famous soliloquy "To be or not to be" have apparently been accepted by the author, as by most others, as a meditation on suicide. There would seem to be ample evidence that it refers rather to Hamlet's indecision as to whether he would or would not kill the king.

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[6] *Transactions of the Medico-Legal Society*. 1930–1 and 1931–2. Vol. xxv. Cambridge: W. Heffer and Sons, Ltd. 1932. (Pp. xxv + 191. 12s. 6d. net.) Vol. xxvi. London: Ballière, Tindall and Cox. 1933. (Pp. 303. 15s. net.)

[7] *International Clinics*. Edited by Henry W. Cattell, A.M., M.D. Vol. iv, forty-second series, 1932. Philadelphia and London: J. B. Lippincott Company. 1932. (Pp. viii + 310; illustrated. £2 10s. the set of four volumes; 12s. 6d. per volume.)

[8] *General Medicine*. Edited by G. H. Weaver, M.D., Lawrason Brown, M.D., G. R. Minot, M.D., S.D., W. B. Castle, M.D., W. D. Stroud, M.D., and R. C. Brown, M.D. The Practical Medicine Series. Chicago: The Year Book Publishers, Inc. 1932. (Pp. 818 figures. 3 dollars.)

[9] *Die Röntgendiagnostik und -Therapie in der Augenheilkunde*. Von Dr. W. Hoffmann. Radiologische Praktika. Band 1. Leipzig: G. Thieme. 1932. (Pp. vi + 72; 20 figures. *M.8.70.*)

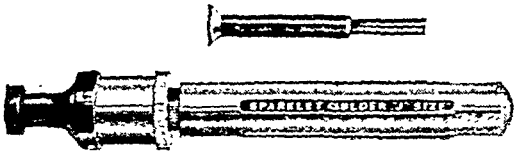
[10] *The Sanity of Hamlet*. By Macleod Yearsley. London: John Bale, Sons and Danielsson, Ltd. 1932. (Pp. 101. 6s. net.)

Preparations and Appliances

A POCKET CO_2 SNOW OUTFIT

DR. S. SHONE (Guy's Hospital) writes:

The use of carbon dioxide snow in general practice for the treatment of naevi, warts, and other skin conditions has been greatly hampered by the inconvenience of obtaining the requisite supplies of CO_2, even the most "portable" apparatus being cumbersome, involving the carriage and transportation of heavy cylinders. This deficiency has been remedied by Messrs. Sparklets, who have now issued a small attachment in nickelled brass and ebonite for use in conjunction with their J size CO_2 "resuscitator." The whole forms an outfit for CO_2 snow that can with truth be described as of pocket size. The attachment is screwed into the holder, by which action the six-inch-long "bulb" of CO_2 is pierced, so that the escaping gas forms the snow in the expansion chamber,



from which it is moulded and compressed by means of the ebonite spatula supplied. Each "bulb" of CO_2 will provide a rod of solid snow about 1¾ inches long and 3/8 inch in diameter. The apparatus is held pointing vertically downwards, so that the CO_2 may be emitted into the expansion chamber in its liquid form. The bulbs are inexpensive, empties are returnable for refilling, and—most important—can be sent by post. The whole apparatus measures about 10 inches, and the accompanying illustration shows its essential simplicity.

A SIMPLE METHOD OF MAKING REDUCED PRINTS OF X-RAY FILMS

DR. HERBERT D. CHALKE of the Welsh National Memorial Association writes:

There are many advantages in having small prints of *x*-ray films which may be attached to a patient's case notes. Such prints are particularly useful to the tuberculosis officer who has to attend a number of clinics, many of which may not be provided with an illuminated viewing-box. They are also valuable for showing at a glance the progress of pulmonary or joint disease as depicted in successive skiagrams. Further, photographic records of this kind may be used to supplement the reports furnished to medical practitioners by the tuberculosis physician, and they form an additional link between the two. The usual method of obtaining these pictures is to photograph the film and make prints from the negative in the usual way. A quarter or half-plate camera may be used. This method, although yielding admirable results, has the disadvantage of taking up a great deal of time; the process is also somewhat expensive. Both these drawbacks are eliminated by the adoption of the following technique, which has as its principle the photographing of the film directly on to gas-light paper without the use of the intermediate "negative" stage. In the prints so obtained there is naturally a reversal of the light and shade of the *x*-ray film, but ease of interpretation is not affected thereby. Though the amount of detail obtainable in these small pictures is quite considerable, it is not suggested that their use should enable the initial examination of the film proper to be dispensed with. Indeed, in one of the tuberculosis administrative areas in South Wales, where two prints are made of every skiagram taken (one for attachment to the history sheet of the patient and the other for the information of the practitioner concerned), examination of the film itself is never omitted.

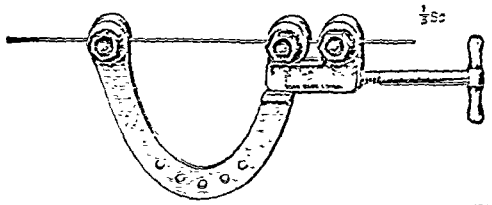
Requirements.—A good adjustable-focus camera, with detachable ground-glass screen, is required, together with a tripod and a plate-holder. The camera used by me is of quarter-plate size, provided with a double extension arrangement and a fine-focusing screw. It has an anastigmatic lens of f/4.5. A supply of a good bromide paper—preferably glossy—is necessary, and also a rectangle of plain glass of the same size. The latter can be made by cleaning an old photographic plate (4¼ by 3¼ inches).

Method.—The film of which a print is required is reversed and placed in front of an illuminated viewing-box. The front face of the box should be vertical, and it is essential that the film be held firmly in position. For this purpose it may be placed in an ordinary film-holder—such as is used for developing—which has been attached to the front of the box. The use of one of these holders ensures that successive films are all placed in the same position, and this renders constant readjustment of the camera unnecessary. The camera is placed in position in front of the viewing-box and the skiagram brought into focus on the ground-glass screen. In the dark-room the bromide paper is placed in the plate-holder and covered with the rectangle of plain glass. This slips into position in the same way as a photographic plate and flattens out the paper and holds it securely. The plate-holder is then attached to the camera and an exposure made. The time of exposure obviously depends on the density of the film and the intensity of illumination in the viewing-box, but with a lens aperture of 4.5 fifteen seconds is usually sufficient for the reproduction of films of the chest. The optimum exposure can soon be ascertained by trial. For films of bones or joints one to two minutes may be necessary. The whole process is facilitated if the apparatus is set up in the dark-room, in which case the plate-holder may, after loading, be slipped straight on to the back of the camera without covering with the metal slide. This results in a saving of time. The camera and viewing-box may easily be secured on a table in their correct positions and the focusing screen and tripod dispensed with. It is possible to take and develop as many as twenty prints in an hour at a negligible cost.

A FRACTURE STIRRUP

DR. NIGEL A. KINNEAR (General Hospital, Jersey) writes:

This modification of Kirschner's stirrup, for use in his system of piano-wire extension of fractures, seems to have advantages over some other types of stirrup. The threading of the wire through the stirrup is simple. It is impossible to twist, and so fracture, the wire while tightening it. After the wire has been tightened it is securely and rigidly held in the stirrup by the end-pice lock-nuts. The stretcher is detachable, and only one is necessary for any size or number of stirrups, expense thus being reduced. There are two alternative sizes of end-piece nuts and five sizes of stirrup to suit the olecranon, the tibial tubercle, the calcaneus, or



the lower end of the femur. In practice I think it will be found that two sizes of stirrup will be sufficient.

The instrument is reasonably priced, and has been made for me by Messrs. Down Bros., London, S.E.

ADEXOLIN EMULSION

We have received from Glaxo Laboratories (56, Osnaburgh Street, N.W.1) a sample of the latest preparation in their adexolin series. Adexolin emulsion is a pleasant creamy substance, having a content of vitamins A and D standardized to be equivalent to its own volume of high-grade cod-liver oil, and containing also 7½ grains of calcium lactate in each fluid ounce. This vitamin preparation is specially recommended for both children and adults who are run down or need extra nourishment after illness, but dislike or cannot tolerate the usual cod-liver oil emulsion. It is marketed in two sizes—8-ounce bottles at 2s. 6d., and 4-ounce bottles at 1s. 6d.

PARATHYROID EXTRACT

"Euparatone" parathyroid extract (Collip fraction), prepared by Messrs. Allen and Hanburys Ltd., is a biologically standardized solution of the active fraction of parathyroid glands responsible for the mobilization of calcium in the blood serum. It is indicated in hypoparathyroidism, such as infantile and post-operative tetany, and may also be used in haemorrhage, tuberculosis, chronic ulcers, oedema, plumbism, and nephritis.

A DENTAL N_2O AND O APPARATUS

We are asked to state that the nitrous oxide-oxygen apparatus described by Dr. C. Bowdler Henry in the *Journal* of February 18th (p. 277) will be manufactured and marketed by Messrs. A. Charles King, Ltd., 34, Devonshire Street, W.1, by arrangement with the British Oxygen Co., Ltd., whose name was given in the printed notice.

cheek) could cheer obscurantists by declaring himself on the side of the angels. The neo-vitalist attacks the second law of thermodynamics instead, or extracts strange comfort from the quantum theory. But the chemist and the physicist march on, introducing order and measurement where all was vague before, while the vitalist finds new territory to explore.

There is, however, a danger of falling into the errors of the iatro-chemical school of Paracelsus or the iatro-mathematical school of Borelli. A premature attempt to state medicine in terms of chemistry or physics is a recurrent danger. The efforts made forty years ago to synthetize proteins are now seen to be extremely crude, yet even to-day there is a tendency to push biochemistry to unjustifiable conclusions—to found a new school of iatro-chemistry. Again, the equation and the graph are so mentally satisfying, and cause things to "come out" so neatly, that there is a distinct temptation to apply mathematics too soon to clinical work. Premature attempts in this direction convey an idea of accuracy which is not only wholly illusory, but which actually delays progress by fitting facts to a formula. Advance can only be made safely by close co-operation between the biochemist and the clinician.

SOYA-BEAN MILK IN INFANT FEEDING

Long popular in the Orient, where it occupies a prominent place in the dietary, the soya bean is not usually regarded in this country as an important foodstuff, still less as a possible source of material for the feeding of infants. Nevertheless it has been tried for this latter purpose with favourable results in certain centres in England, while in America many workers are now speaking well of the so-called "vegetable milk." In a recent study[1] Drs. F. R. Rittinger and L. H. Dembo report their experiences with fifty babies fed on "milk" made from soya-bean flour, either alone or as a supplement to breast-milk feeding. They point out that this vegetable is notable for its high protein content, for the presence of vitamins A, B, and small amounts of D, and for the practically complete absence of starch. This last property is no disadvantage, but the carbohydrates generally are low and extra sugar must be supplied. The fat content is also slightly on the low side, but the fat present is rich in lecithin-phosphoric acid. The vitamin content of the bean has been carefully assayed, and one ounce of soya-bean milk is found to contain 28 Steenbock units of vitamin D. Rats fed exclusively on soya-bean milk powder and distilled water grew quite as well as those receiving in addition yeast and cod-liver oil. For human consumption soya beans of the mammoth yellow variety have been used. They are carefully cleaned, washed, treated to remove unpleasant flavours, and converted into a milky liquid. To this, in the cases recounted by Rittinger and Dembo, malt syrup and lactose were added to bring up the sugar content, cotton-seed oil for the maintenance of an optimal fat content, and the so-called Nemsalz (glycerophosphates of iron and calcium, lactate of magnesium, and the chlorides of sodium and potassium) for the mineral salt deficiency, plus calcium lactate. The whole mixture was homogenized and spray-dried at a moderate temperature. The dried powder was packed in airtight tins from which air had been exhausted and nitrogen added. Reliquefaction was made in the proportion of 35 grams of the powder to 8 ounces of boiled water. The "milk" thus obtained had a greyish-white appearance, was in fine suspension, and had about the same body as cow's milk. It had a flat taste and a slight soya odour. The suspension passed through ordinary teats without any difficulty. The babies selected for the feeding with soya-bean milk were those conforming to the normal, and came from both private and hospital practice. Some were breast-fed, with vegetable milk as a supplementary feed, the amounts given varying with the amount of breast milk available, while the others were exclusively fed on soya-bean milk from the age of about 4 weeks onwards. The soya-bean product was mostly well taken and tolerated. The gain in weight of those babies receiving the vegetable milk was in most instances perfectly normal in every way. Their general health and condition remained good, and their resistance to infection was quite equal to that of milk-fed babies. All received 4 c.cm. of cod-liver oil daily and adequate amounts of orange juice. The only unusual features about these babies appeared to have been the stools. These were large, dark green, soft, and well digested. As many as six or seven were passed daily, though the average was between three and four. Apparently the residue from soya-bean milk is about twice that from human or cow's milk, but no trouble seemed to arise from this, the intestinal flora being similar to that found in a breast-fed baby: gastro-enteritis occurred only very occasionally, being always associated with parenteral infection. The study here described is admittedly only preliminary, and the careful observation of children over a long period after a start in life as strict vegetarians (save for the cod-liver oil, and even this could be replaced by a synthetic product) will be a matter of great interest. The economic aspect of the subject is also interesting, but the cost of this preparation of soya-bean milk is unfortunately not given.

[1] *Amer. Journ. Dis. Child.*, 1932, xliv, 1221.

PROTECTION AGAINST YELLOW FEVER

It is well known that an attack of yellow fever is followed by a high degree of immunity, which ordinarily persists for life. The degree of protection does not seem to depend in any way on the severity of the attack, for efficient protection may be provoked by attacks of yellow fever so mild as to present no recognizable clinical symptoms. Until recently no method was known of using actual infection with the virus as a means of protection, but Sellards and Laigret have now shown that the neurotropic strain of yellow fever virus obtained by passages in the brains of mice may be inoculated in small doses into human subjects without producing any signs of infection. This inoculation, however, is followed by the development of antibodies in the blood comparable in strength with those developed after a typical attack of yellow fever. The application of this method is a direct result of *Theiler's* discovery that after a few passages in the brains of mice, animals resistant to the intraperitoneal injectio

[1] *Arch. Inst. Pasteur Tunis*, December, 1932, xxi, 229.
[2] *Ann. Trop. Med. and Parasit.*, July 8th, 1930, xxiv, 249.

FIG. 1.—J. McD., aged 24. Bilateral ureteral transplantation 7 years ago for vesical exstrophy. Patient has normal health with complete rectal control. Excretion urography examination: photograph taken 15 minutes after injection of uroselectan B, showing kidneys, pelves, and ureters to be of normal contour and renal functional activity normal.

FIG. 2.—M. S., aged 28. Nephrectomy for tuberculous disease of the right kidney 7 years ago. Frequency of micturition has persisted, though patient has otherwise been in good health and no evidence now of active tuberculous disease. Excretion urography examination: photograph taken 30 minutes after injection of uroselectan B, showing pronounced degree of hydronephrosis and hydro-ureter in remaining kidney due to persistent vesical systole.

FIG. 3.—A. S., aged 12. Typical clinical history of pyonephrosis of left kidney. Excretion urography examination: photograph taken 15 minutes after injection of uroselectan B, showing right kidney to be healthy, left kidney non-functioning. Nephrectomy for pyonephrosis with normal convalescence.

FIG. 4.—A. F., aged 21. Right renal calculus. Preliminary X-rays showed calculus in region of right kidney with calculus in vicinity of left kidney. Catheterization of left ureter unsuccessful. Excretion urography examination: photograph 15 minutes after injection of uroselectan B, showing calculus in right renal pelvis with hydronephrosis of right kidney and left kidney normal. "Calculus" in vicinity demonstrated to be an extraretal calcareous gland.

KENNETH WALKER: PERURETHRAL OPERATIONS ON THE PROSTATE

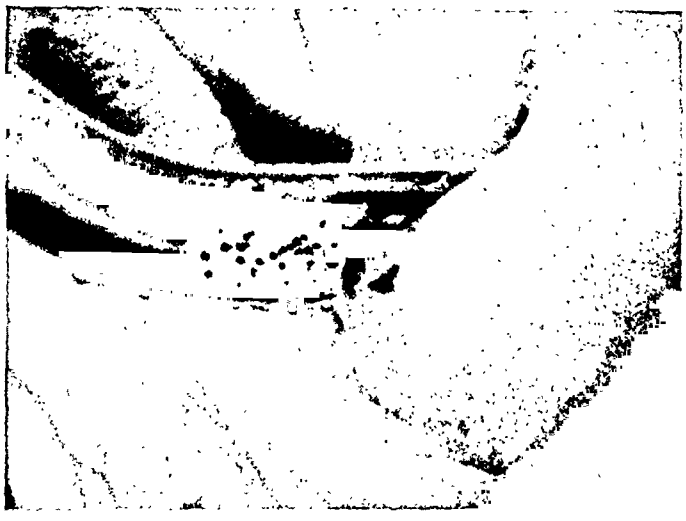


FIG. 1.—The spiral punch, showing preliminary coagulation in a case of "fibrous bar." Note the point of the electrode entering the bladder.

FIG. 2.—McCarthy electrotome at work on a "middle"-lobe intravesical projection of the prostate. The loop in position before the cut.

KENNETH WALKER: PERURETHRAL OPERATIONS ON THE PROSTATE

C. C. HOLMAN: UNUSUALLY LARGE PROSTATE

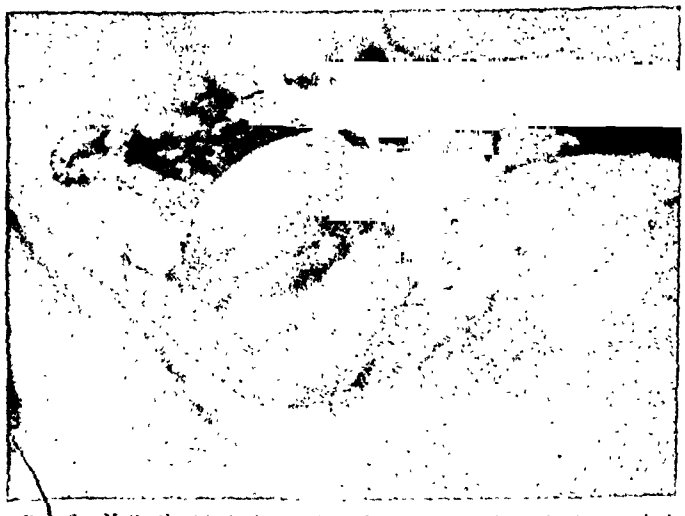


FIG. 3.—McCarthy electrotome at work on a "middle"-lobe intravesical projection of the prostate. The cut is completed.

The prostate after removal, beside a cricket ball.

W. J. EASTWOOD: FRACTURES OF SHAFT OF FEMUR

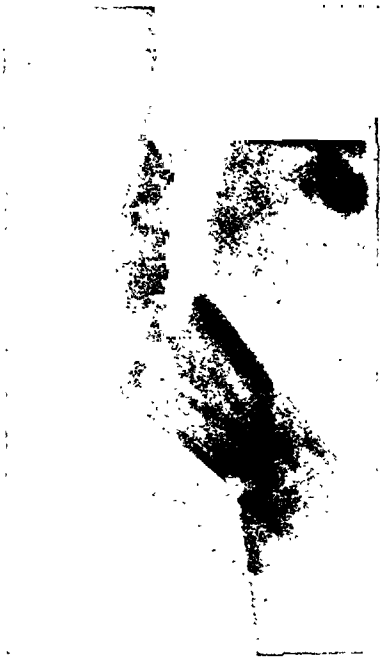
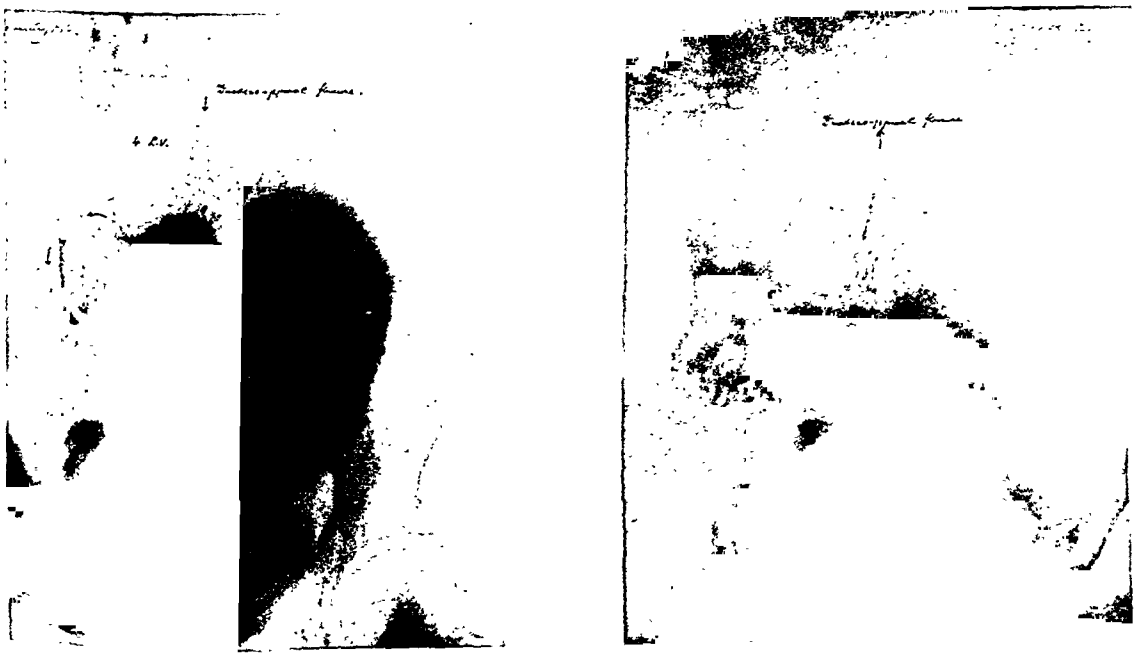


FIG. 1.—Man, aged 67 years. Compound fracture of femur. Before reduction.

FIG. 2.—Same patient as in Fig. 1. X-ray taken after 4 weeks of treatment by the Thomas method. Note increase in length.

FIG. 3.—Boy, aged 1 year. X-ray taken 6 weeks after fracture, showing increase in length.

J. S. KELLETT SMITH AND ARTHUR TOM: PROTO-DUODENITIS



X-ray photographs showing angulation of duodeno-jejunal flexure.

F C. EVE: DISORDERED TRAFFIC REGULATION IN GUT

Spasm of upper (and lower) sphincters of the oesophagus: lateral view.

IAN B. THORBURN: CARCINOMA OF OESOPHAGUS WITH DOUBLE RECURRENT LARYNGEAL PARALYSIS

Specimen dissected to show right recurrent laryngeal nerve.

F. HECTOR SCOTSON: CALCIFIED CYST OF SPLEEN

FIG. 1.—Spleen with attached calcified cyst.

FIG. 2.—Spleen with cyst opened and contents removed.

of ordinary yellow fever virus, the latter loses its power of producing a general infection in man or monkeys. In earlier passages it is possible for the neurotropic mouse virus to revert to the ordinary septicaemic type, capable of producing a general infection, but eventually the neurotropic properties become "fixed," and up to the present no method has been found of changing this virus back into the type found in cases of yellow fever. Although the intraperitoneal inoculation of the neurotropic mouse virus produces no obvious disease in monkeys, intracerebral injections produce encephalitis, as in the case of mice, and even if the virus is injected intraperitoneally the same symptoms may follow if the brain is slightly injured, such as by giving a small injection of starch intracerebrally. Consequently, the use of mouse virus alone for the protection of human subjects may not be entirely without danger, as under certain conditions it is conceivable that encephalitis might result. In order to avoid the danger of any such complications Sawyer, Kitchen, and Lloyd[1] have elaborated the method of vaccination by a combination of virus and immune serum recommended by Findlay and Hindle.[2] By using a mixture of the dried neurotropic virus, fixed for mice, and human immune serum, with separate injections of additional human serum, a lasting protection has been obtained, comparable in strength with that following an attack of the disease. The amount of virus recommended is 0.003 gram infected mouse brain per kilo body weight, and the total amount of immune serum 0.3 c.cm. per kilo body weight. This method has been tested in a number of human subjects, and the results of protection tests with their serums have been so favourable that the efficacy of this method of protection seems beyond question. Unfortunately the use of human immune serum is a serious obstacle to its general application, but it is probable that this difficulty might be overcome by the use of horse anti-yellow-fever serum, which is known to neutralize the mouse virus, in place of human serum. In any event, it is satisfactory to note that there is already available a method of protecting susceptible persons who are specially exposed to yellow fever infection in laboratories or elsewhere.

EFFECT OF TRAINING ON MANUAL DEXTERITY

In the latest report of the Industrial Health Research Board[3] E. M. Henshaw, P. Holman, and J. N. Langdon describe an attempt to ascertain how far training in one type of manual dexterity is transferred to other types which appear to resemble it. This is a question of great practical importance in industry, for diametrically opposed opinions are held on the subject, some authorities believing that extensive transfer occurs, and others that the acquisition of skill in one type of work may actually diminish the ease with which skill in a related type is attained. In the first of the two investigations the subjects of experiment were sixty boys, aged 15 to 18, and the dexterity test employed consisted in putting together the links and spindles of driving chains. It was performed for eight ten-minute periods with ten-minute rest periods interposed between the work periods in order to eliminate fatigue. The boys were induced to do their best by paying them a fixed minimum wage and a substantial daily bonus dependent on the degree of improvement effected day by day. They underwent a fortnight's training in this test, during which they improved steadily, and on dividing the boys into two equal groups it was found that the rate of improvement was no greater in the boys who did the test in the morning, and a somewhat similar test on cartridge filling in the afternoon, and those who omitted the afternoon test altogether. When two other groups of boys were made to perform a number of simple tests of manual dexterity, such as match insertion and link threading, they did not show a substantially greater improvement in performing these tests if they were simultaneously undergoing a fortnight's training in the chain test than if they omitted it altogether; but the evidence suggested that a longer period of training might have afforded some evidence of transfer. The second investigation described in the report proved that when training boys in the chain operation it is useless to increase the daily training period beyond eighty minutes, and probably the best period is less than that. When the test was performed continuously for four hours efficiency was distinctly lower than when a five-minute rest pause was introduced in the middle of the work spell; but further rest pauses during the two-hour spells caused no improvement.

[1] *Journ. Exper. Med.*, June 1st, 1932, lv, 945.
[2] *British Medical Journal*, May 2nd, 1931, p. 740.
[3] Medical Research Council. Industrial Health Research Board. Report No. 67. Manual Dexterity—Effects of Training. (1) Transfer of Training in Manual Dexterity and Visual Discrimination. By E. M. Henshaw, P. Holman, and J. N. Langdon. (2) Distribution of Practice in Manual Dexterity. By E. M. Henshaw and P. Holman. London: H.M. Stationery Office. 1933. (1s. net.)

MAGGOTS AND WOUNDS

In an annotation in these columns (1931, ii, 539) we drew attention to a research by the late Dr. W. S. Baer of Baltimore, U.S.A., on the action of maggots on open wounds in general and on those caused by osteomyelitis in particular. The opinion was then expressed that further reports would be awaited with interest. We have not seen any published reports on what might be called the "gentle treatment" in Europe, but in the United States the question has not been allowed to rest. In the *American Journal of Surgery* for January, 1933 (p. 36), we find an important communication on larval or maggot therapy in the treatment of acute and chronic pyogenic infections, by Drs. Weil, Simon, and Sweadner of Pittsburgh, Pa. Baer found that there was a real danger in the use of unsterilized larvae: two of his cases developed tetanus. Since then he and other experimenters with the method have sterilized the maggots with practical success so far as concerns pathogenic microbes. Much attention has been devoted to this question of disinfection, and somewhat elaborate methods and routine have been evolved. It is to be noted that arrangements have to be made for the constant supply of a number of maggots at the proper stage of growth at intervals of a few days in each case. Elaborate techniques have been evolved for bacteriological tests of eggs and larvae, by which thirty-five different forms of microbes have been isolated; but not more than four kinds have been found in any one brood. It may be said that clinically strict asepsis is impossible and incompatible with the paramount necessity of keeping the wound open. The skin around the wound must be protected from irritation, and the maggots prevented from wandering outside it

by a wire gauze cover, which is fastened with adhesive strapping over the wound. Drs. Weil, Simon, and Sweadner employ metal self-retaining retractors inside the wound, and lay great stress on their importance and the necessity of thorough drainage and proper exposure of the foci of infection, without which they hold that little can be expected from the implanted larvae. Not all meat-eating flies in the larval stage are suitable for wound treatment. Although several species are effective, the most efficient and most convenient to handle in the laboratory is the blue-green blowfly, *Lucilia sericata*. Its larvae will starve on clean granulation tissue. In this paper full details are given of the technique of the care of flies, the production of eggs, and the disinfection and use of larvae. The authors discuss fifty-six cases of osteomyelitis of varying degrees of severity. All were benefited by the treatment, the acute haemolytic type included. The separation of sequestra was much facilitated and hastened. The microbes in the wounds were reduced in quantity, though not entirely eliminated. The authors see reason to believe that the action of the larvae effects more than a mere mechanical removal of necrotic tissue, and that "certain potent (digestive) proteolytic enzymes secreted by the salivary and intestinal glands of the larvae produce a liquefaction of the devitalized tissues, thereby hastening its removal." It is remarkable that they have encountered no opposition to the treatment from their patients. All their results "compare favourably to any other form of treatment, and in most instances are far superior." The treatment, including disinfection, etc., is expensive. The commercial firms who supply gentles ready for use charge 5 dollars for 1,000—enough for only one application—so that an average of eleven applications to each case gives the cost per patient as 55 dollars, or £11 at par. This is more than some small hospitals or patients can afford, and therefore Dr. Duncan C. McKeever of Kansas City, Missouri, has devised a simplified technique, which he describes in an article in the January number of the *Journal of Bone and Joint Surgery* (p. 85), and which has given him good results at small cost. It would seem that the treatment has been tried in enough cases and for a long enough time to enable some opinion to be formed of its value. The verdict of the American surgeons from whose writings we have quoted is uniformly favourable and no drawbacks are recorded. After making due allowance for the good effects of drainage and exposure of diseased tissues, without which it is admitted that the larvae are useless, these writers are clearly of opinion that larval therapy has distinct advantages over other methods. It is no doubt difficult to institute exact comparative tests, but that such on a large scale are yet desirable seems to us beyond question.

MEDICAL WORK IN LABRADOR AND NORTHERN NEWFOUNDLAND

The remarkable variety and steady extension of the work of the Grenfell Association of Great Britain and Ireland are well indicated by the sixth annual report, which covers the twelve months ending September 30th, 1932. The report opens with a note about the International Grenfell Association, the general governing body, which comprises directors from the national societies in Canada, Newfoundland, and the United States, as well as in Great Britain. This organization supervises a stretch of 1,500 miles of coast line, mostly populated by Anglo-Saxons, and is responsible for the maintenance of half a dozen hospitals, the name number of nursing stations, a hospital steamer and smaller boats, an orphanage and many schools, public health nurses in outlying settlements, industrial centres, and agricultural stations, and a permanent staff of sixty-one surgeons, nurses, teachers, and social workers, aided by an additional voluntary staff of one hundred during the summer months. The British Admiralty began last year a complete survey of the coast for charting purposes, the need for which was dramatically shown when the vessel sent out for this purpose struck an uncharted rock. The United States, through Dr. Forbes, provided a hydroplane, which combined surveying work with the transport of a surgeon on two occasions for emergency cases nearly 200 miles away from the hospital ship, and the rescue of the crew of a Canadian Airways plane which had been forced down in uninhabited country by an engine explosion. There is now a wireless station, which sends out directions for dealing with various medical emergencies in places far removed from any other means of help. At the hospital in St. Anthony in Newfoundland, with its fifty beds, the in-patients during the year numbered 632, the out-patients 2,850, and 926 cases were dealt with in the dental department; a stretch of coast line of at least 150 miles was visited systematically. The work of the Grenfell Association is supported by subscriptions and by the sale of goods made by the inhabitants of Labrador and Newfoundland, samples of which can be seen and purchased at the offices, 82, Victoria Street, London, S.W.1.

THEFTS FROM DOCTORS' CARS

There is always a public watchful for any lapse on the part of the physician. If a stethoscope is left behind in the patient's bedroom the idea, faint at first, that the doctor's memory is beginning to fail gathers force, and that essential factor in the patient-doctor relationship—confidence—may be undermined. Another suspicion, that the doctor is careless, also redounds to his discredit. If drugs are left in the car while the medical man dashes up three flights of stairs to a desperately ill patient, and the drugs are stolen, it is only too human to say, "Why was he so careless?" when the fact becomes known. We are informed by the British Broadcasting Corporation that last year 1,007 S O S messages were broadcast, among which were several referring to theft or loss from doctors' cars of bags containing dangerous drugs. The S O S service of the B.B.C. is normally restricted to matters of life and death, and, as it points out, anyone stealing a doctor's bag would be unlikely to sample its contents deliberately and run the risk of being poisoned. All the same, one never knows what a thief might do with something that was of no use to him. In these days members of the medical profession should, so far as the nature of their work permits, take the necessary precautions against their property being stolen. It is no good locking the door of the car after the serum has bolted.

The Lister Memorial Lecture will be given by Sir Charles Ballance at the Royal College of Surgeons of England on Wednesday, April 5th, at 5 p.m.

HOSPITAL SERVICES IN LONDON

A SURVEY OF VOLUNTARY AND MUNICIPAL PROVISION

The London Voluntary Hospitals Committee, which was formed as a representative body under the Local Government Act, 1929, to be available for consultation by the London County Council when making new hospital provision, can now look back upon three years of achievement. It has established friendly relations with the Central Public Health Committee and its officials, thus preventing any antagonism which might have developed between voluntary and municipal systems; it has also assisted in experiments in co-ordination which may not amount to very much at the moment, but carry promise for the future. One piece of useful work is an arrangement with the L.C.C. for the linking up of certain municipal hospitals with medical schools for the purpose of undergraduate teaching. Another enterprise, which perhaps ought to have been mentioned first, as it is in the nature of an essential preliminary, is the preparation of a survey of voluntary hospital facilities to accompany a corresponding survey of municipal provision by the L.C.C. These compilations form respectively Parts I and II of *A General Survey of Medical and Surgical Services in the County of London*.[1] The statistics are excellently presented, and the basis of presentation in the two parts is as far as possible the same, though there are respects, of course, in which the figures relating to one system cannot reasonably be compared with those relating to the other. But taken together, and with the maps which show the location of the general and special hospitals, these fasciculi do succeed in bringing into focus for the first time the hospital and associated provision made by voluntary agencies and public authorities for the people of London.

THE AREA SERVED

The completeness of the survey is qualified to a slight extent by the fact that the statistics relate to 1931, and since that year various schemes for improving and extending the service have been brought into operation, especially on the municipal side. It may also seem to upset the comparison a little in that the voluntary hospital survey is limited to hospitals within the administrative county, while the municipal hospital survey takes cognizance of the many large L.C.C. institutions outside its borders. But in fact the voluntary hospitals draw their patients from a much wider area than the municipal. It is rather startling to find to what extent the twelve teaching hospitals serve populations outside the county limits. Of every eight patients in those hospitals three are not technically Londoners in the sense of residing under the governance of the L.C.C. At one hospital—Charing Cross—more patients are received from outside the county than from within it. Of the 13,600 in-patients at the London Hospital in 1931, as many as 6,460 did not belong to the county. The same is true of many of the special hospitals. The Hospital for Sick Children, Great Ormond Street, and its neighbour, the National Hospital, Queen Square, to name only two out of a dozen, draw less than half their patients from the area of the four million. On the other hand, the patients in the municipal institutions are almost entirely persons resident within the county area. In the Council general hospitals only one patient in fifty comes from outside; in the tuberculosis hospitals, one in thirty; in the fever hospitals, one in eighteen.

[1] London: P. S. King and Son, Ltd.; each part 2s. net.

THE VOLUNTARY HOSPITALS

The twelve teaching hospitals have—or had on the last day of 1931—a bed complement of 5,881, and the percentage of beds occupied was 89. The new in-patients during the year totalled 96,047, and the average period of stay was nineteen days. The operations in these twelve hospitals yield impressive figures; in the year they number 55,500, which means that in the ninety theatres of these twelve hospitals 150 operations on the average are performed every day. Further battalions of figures relate to the out-patients. More than three-quarters of a million out-patients attend these teaching hospitals in a year, putting in nearly four million attendances. During the year under review the attendance at St. Thomas's and Guy's were in each case over half a million, and at the London and St. Bartholomew's not much under. The medical staff consists of 192 consultants, 394 other members of visiting staff or holders of part-time appointments, and 227 residents. The qualified nurses and midwives number 938, and there are 2,098 probationers.

Taking all the voluntary hospitals—that is, the twelve teaching hospitals, the twenty-six non-teaching general hospitals, and the seventy-four special hospitals—there is a total voluntary provision of beds in London amounting to 14,883, a total of in-patients in the year of 216,788, staying an average period of twenty-one days, while the out-patients number over a million and a half, with a total number of attendances of over eight million. For these out-patients more than 200,000 x-ray examinations are undertaken, and they make 800,000 attendances for venereal diseases, and half a million for ante-natal or post-natal or gynaecological service. The number of medical appointments, taking all the voluntary hospitals together, and including consultant and visiting staff and residents, is 4,209, and the hospitals are served by 6,833 nurses.

MUNICIPAL HOSPITALS

Turning to Part II of the survey, which gives particulars of the municipal provision, we find first the figures for the twenty-seven London County Council general hospitals. Many of these have very considerable accommodation. The largest—Lambeth—has 1,480 beds, more than twice the number at St. Bartholomew's. The total bed accommodation in these general hospitals amounts to 16,920, and the percentage occupied is the rather surprising figure of 86, not far below the teaching hospital figure (89), and above the figure for the voluntary special hospitals (85). But consideration must be given to the fact that the average period of stay in these hospitals is thirty-five days, nearly twice as long as the period in the teaching hospitals, and comparing with twenty-three days in the special hospitals. Apparently none of these hospitals has more than one operating theatre, but the number of operations performed during the year reached the total of 25,723. The out-patients numbered 44,132, and their attendances a quarter of a million. The medical staff consists of 192 visiting specialists and 175 resident officers, and the nurses and probationers number 4,550. These twenty-seven general hospitals do not include a number of Council institutions for the chronic sick, some under the public health, and others under the public assistance department. The total number of beds in these infirmaries—to use the old word—is 6,773, of which, when the census was taken, 81 per cent. were occupied; the average stay, of course, amounts to hundreds of days.

The special hospitals consist of eighteen fever and small-pox institutions, with a total of 8,800 beds and 35,000 in-patients during 1931; the nine tuberculosis hospitals, with 2,062 beds and 4,750 patients; the six

children's hospitals, with 2,618 beds; and two colonies for epileptics, with 817 beds. The medical staff of all the hospitals, general and special, consists of 259 visiting specialists and other holders of non-resident appointments, and 293 residents. The total bed complement is just upon 39,000, and the new in-patients during the year under review numbered 200,000. The mental hospitals and homes for the mentally defective stand in a class by themselves, not part of the inheritance, as the other hospitals are, from the Metropolitan Asylums Board and the boards of guardians. The mental hospitals consist in the main of nine institutions, each with accommodation for over 2,000 patients, and the staff consists of eighty-four whole-time officers and fifty-five consultants.

DISPENSARIES AND CLINICS

Apart from this generous institutional provision, a large part of the medical services of London is discharged through dispensaries and clinics. The number of these is only appreciated when one sees them in tabular form. In the first place, there is the district medical service for the sick poor not in receipt of indoor medical relief. This is carried out by a hundred part-time district medical officers, and, in a few of the districts, by whole-time members of the Council's medical staff. At the seventy dispensaries or medical relief stations for this purpose—some of them the doctor's own surgery—more than a quarter of a million attendances were made during 1931, and in addition the district medical officers paid 65,000 domiciliary visits.

The above is a municipal or Poor Law service, but the clinics, which are of astonishing growth, are both municipal and voluntary. Under the auspices of the metropolitan borough councils or of voluntary agencies apart from the hospitals, 224 infant welfare clinics are operating—as many as fifteen in some boroughs—at which more than 80,000 children attended in 1931. There are 109 ante-natal clinics, forty-three post-natal, thirty-one clinics for artificial light treatment, also clinics for dental treatment, for orthopaedic service, for ophthalmic service, for massage, for diphtheria prevention. Twelve borough councils have provided artificial light clinics, seventeen have provided clinics for dental treatment, three have provided clinics for massage. There are also borough council clinics for foot disabilities (Bermondsey), for inhalation (Bethnal Green), for minor ailments (Fulham), for pre-school children (St. Marylebone), and many others. Nine boroughs have municipal maternity homes, and every borough except six has its tuberculosis dispensary.

Another service consists of the numerous dispensaries attached to charitable and provident organizations or medical missions. These number nearly fifty, and the patients' attendances approach three-quarters of a million. Yet again, on another level of service, are the electrical, massage, and rheumatism clinics, like those of the British Red Cross Society, and there are other agencies which it is difficult to classify, such as the three "eye centres" of the Hospital Saving Association, which together had nearly 3,000 patients in 1931, and the London Clinic of Psycho-Analysis, which had eighty new patients in that year, with twenty visiting medical men in attendance. Even when all this is said, the list is not exhausted, for there remains the school medical examination and treatment service, under the L.C.C., with its seventy-three treatment centres; also the arrangements which the Council has made with various voluntary hospitals for the treatment of venereal diseases. In the survey of voluntary agencies no monetary figures appear, but in the municipal survey it is mentioned that the annual cost of the medical and surgical services, including the mental hospitals and the mental deficiency homes, which the L.C.C. itself directly provides, is well over seven million pounds.

One has to reflect that against all this background of institutional provision there exists in London a busy insurance medical service in which a couple of thousand practitioners are engaged, also certain public medical services, and that large numbers of private general practitioners and consultants in private practice somehow manage to earn a living. Of the many amazing aspects of London the provision that it makes for its sick and ailing, taken in the mass as we have it in these tables, is one of the most outstanding. If it is satisfying, as it must be, to the Samaritan, and dubious, as it may be, to the economist and the eugenist, it is full of fascination to the sociological student who allows his imagination to play over the columns of figures so carefully accumulated.

England and Wales

Vital Statistics for 1931

Part II of the Registrar-General's Statistical Review of England and Wales for 1931, Tables, Civil, may be obtained from H.M. Stationery Office (2s.). The chief subjects are: population, births, marriages and divorces, migration, registers of electors, and vital statistics of the British Dominions. A table is given showing the populations of England and Wales, Scotland, and Ireland, as enumerated at each census from 1821 to 1931, and as estimated for each year 1892 to 1931 inclusive. The number of marriages solemnized in England and Wales during 1931 was 311,847, against 315,109 in the previous year. The rate was 15.6 persons married per 1,000 population at all ages, compared with 15.8 in the two previous years. The number of decrees nisi made absolute in respect of dissolution or annulment of marriage was 3,764—an increase of 201 over the number for the preceding year. Only in one year, 1928, has this figure of 3,764 been exceeded. The births registered during the year numbered 632,081, a decrease of 16,730. The consequent birth rate of 15.8 per 1,000 population is the lowest recorded for England and Wales, being 0.5 below that for 1930, which was the previous lowest. One other country, Austria, also had a rate of 15.8, but only one country, Sweden, showed a lower. The proportion of the sexes in the births registered during the year was 1,049 males to 1,000 females, a ratio higher than any during the last eight years. At the end of 1931 there was a total of 159,696,345 names in the Registrar-General's Index available to the general public for searches in the registers of births, marriages, and deaths. The statistics relating to Parliamentary electors give the figures for England and Wales as 12,288,852 males and 13,847,092 females.

Medical Representation

At a meeting of the Paddington Medical Society on February 14th a discussion took place on problems of medical representation. Dr. E. K. Le Fleming opened the discussion from the point of view of the General Medical Council. Having explained the functions and mode of election of that body, which were strictly governed by Act of Parliament, he referred to the reasons for the unpopularity of the Council with the Press and some sections of the profession, and the misunderstandings which, in his opinion, were responsible for that attitude. It was impossible to allow "cover" to an unqualified practitioner of repute and to deny the same privilege to the ignorant or the impostor. It would be contrary to the traditions of the profession and to the public interest to lower in any degree the high standard of morality demanded of the doctor in his relation to patients, and most unwise to modify the strict rules laid down in regard to articles

in the Press and advertising. If those three points were granted no case remained for criticism of the General Medical Council. Dr. Le Fleming pointed out that until recently the general practitioner had been unrepresented on the Council. They owed it to the organization of the B.M.A. that that anomaly no longer existed. The direct representatives had done good work on the Council, and the expression of the G.P.'s point of view was now essential to the satisfactory discharge of the Council's responsibility. Dr. A. F. Heald approached the matter from a different angle. He attributed the disinclination of medical men to seek representation, not only in the variety of ways in which they might be of use to their own profession but on outside bodies where their special experience should be of great use in the deliberations of committees connected with local government, etc., to a kind of self-consciousness. There was some foundation for this, as the average medical man was not sufficiently a man of affairs to express his opinion adequately on the matters under discussion ; not that he was by any means destitute of ideas, but he had not enough confidence in himself to unfold them in public, and for this reason, in the speaker's opinion, the medical man was not yet qualified to take the position in public work that he should do. Socially and professionally he could hold his own, but in the true perception of the ordinary business of life there was something lacking. There existed a want of enthusiasm amounting to apathy in the management of affairs that concerned his well-being most intimately. Mr. Ernest Ware gave cogent reasons for the representation of members on the council of the Royal College of Surgeons of England. The College was composed of about 1,800 Fellows and 18,000 Members, yet the council as at present constituted consisted of twenty-four Fellows, and the Members had no voice in the management of their College. Agitation for representation had gone on now for forty years, and every possible argument had been brought forward in favour of this. Nevertheless the council, after careful consideration, refused to take any steps towards granting this reasonable request. Mr. Ware hoped that all members would rally to the assistance of the society of which he had the honour to be president.

District Nursing in London

The annual meeting of the Central Council for District Nursing in London was held at the County Hall on February 23rd. It was reported that an arrangement had come into being with the London County Council for the supply of grants to be expended on nursing, and it had been arranged that one of the L.C.C. officers should be associated with the district nursing committee when any question relating to the distribution of these grants was being considered. The revised directory and list of streets, issued by the Central Council, was published a year ago, but there had not been a general demand for it apart from hospital almoners and persons immediately engaged in district nursing. The hope was expressed, however, that medical practitioners would soon come to appreciate its usefulness, and that it would be helpful to social workers, who must from time to time have to invoke the aid of the local district nurses. It was announced that St. Margaret's, Putney, had established a district nursing association in affiliation with the Queen's Institute, and that the East London Nursing Society was now in charge of the area previously covered by the Millwall and Cubitt Town District Nursing Association. Two Lewisham parishes had agreed to amalgamate under the name of the East Lewisham District Nursing Association. In Middlesex such associations had been started at Edgware and Little Stanmore, and also at Wealdstone. The executive committee of the Central Council had taken into consideration (in conjunction with the London Council of Social Services) the long delays caused by the pressure on hospital out-patient departments, and had suggested increased co-operation of the district nursing associations with the hospitals, with a view to attending such patients as could suitably be nursed in their own homes. It had been agreed by a special committee of King Edward's Hospital Fund that more use could be made of the district nursing service for out-patients who required only such dressings or treatment as nurses could supply. The usual bursaries for midwifery training were awarded during the year. The representatives of the British Medical Association upon the Central Council for District Nursing are Dr. William Paterson, Dr. Christine Murrell, and Mr. Comyns Berkeley.

A Hospital Contributory Scheme

At the annual meeting of the North Walsham and Gimmingham (Norfolk) Hospital Sunday and Saturday Fund it was stated that for the last two years there had been a small but definite decrease in the amounts contributed by members, of whom there were now about 1,700, and it had been deemed advisable to remind negligent members of the necessity of regularity in payments. Dr. C. H. W. Page, who has been president of this useful fund since its inauguration some thirteen years ago, commented on the need of giving special support to the funds of the North Walsham Hospital ; certain donations of £100 to the endowment fund and £50 to the staff fund were intended as special expressions of the great debt owed to that institution. An additional grant of £50 to the hospital was in respect of the increased sickness among the nursing staff. A donation of £25 for the reduction of the overdraft in connexion with the Norfolk and Norwich Hospital was intended as a hint that an effort might be made now to reduce this liability. A great advance has been made by the erection of the new Nurses' Home, and a remarkable amount of public support had been received for this, but the overdraft urgently required attention. Dr. Page added that he believed there was room for economy at the larger hospitals in respect of the out-patient departments. Only three classes of patients should be permitted to attend: accident cases, certain consultation cases sent up by medical practitioners, and discharged patients requiring a continuance of hospital supervision. The application of this principle would effect a useful and economical weeding out. Certain improvements at the local cottage hospital were necessary, and could be supported by the fund. A small laboratory might well be brought into being, and there should be provided facilities for a more intensive study of the heart. The annual report showed that 138 members had obtained hospital and convalescent home treatment during the year, of whom eighty had been in-patients at the North Walsham Cottage Hospital and eight at the Norfolk and Norwich Hospital: approximately 8 per cent of the members had received benefit in some form or another. It was agreed that additional financial support should be given to the North Walsham Hospital during the current year.

The Society of Radiographers

The twelfth annual dinner of the Society of Radiographers, held on February 25th, under the chairmanship of Mr. C. W. Furby, was attended by some distinguished guests. Professor F. L. Hopwood, the president of the British Institute of Radiology, conveyed the good wishes of that parent body, and congratulated the radiographers present—the majority of whom were women—on the choice of their profession. It was one, he said, which demanded high ideals and a sense of service, and he was glad that the conditions under which radiographers did their work were now much more tolerable than at first. Mr. C. W. Furby, in responding, mentioned that the

society was now twelve years old, and its more than five hundred members had all had to pass an examination. It had branches in South Africa and Australia, and would soon have one in Dublin. It was squeezing out the unqualified operator. It had instituted within the last year its own training centre, and another recent piece of work was to place its fellowship on a proper basis, so that the fellowship was open to members of the society on passing an advanced examination, in preparation for which a special refresher course had been arranged. The toast of "The Guests and Visitors" was given by Mr. H. J. Ede, and there were three responses. Sir Frederick Hobday spoke of the wide field for radiography in veterinary practice, and Professor H. A. Harris suggested that there were great possibilities in the further extension of radiography for the examination of the soft tissues. Dr. G. C. Anderson, Medical Secretary of the British Medical Association, remarked that he had had the opportunity lately of discussing with representatives of the society matters which were of special interest to the profession. The British Medical Association had been asked to take the initiative in promoting a body which might be called a council enabling those who worked in fields ancillary to medicine to have their names placed upon a register. The council would not be an examining body, but it was hoped that it would function in regard to these medical ancillaries much as the General Medical Council functioned in regard to the medical profession. Those under its discipline would, of course, be represented on it. A great debt was owing, said Dr. Anderson, to the Society of Apothecaries for the Register of Biophysical Assistants which it had established, and it was good to learn that that society would be represented on the new registering body. He was anxious that the new register should be established as soon as possible, and he was convinced that it would pave the way to State recognition, this implying, of course, that the individual was properly trained, and had proved himself competent by examination.

Paddington Tuberculosis Dispensary

New premises for the Paddington tuberculosis dispensary are projected as a memorial to Sir Donald Maclean, Minister of Education, who was the treasurer of the institution. The site has been secured, and a sum of £25,000 is required for its purchase and for the erection of the new building. A loan exhibition at Dudley House, Park Lane, in aid of the scheme was opened on February 23rd by Miss Edith McGaw, the honorary secretary of the dispensary, who founded it twenty-four years ago, and who has also started ten other dispensaries in different parts of the country. Sir Herbert Samuel, in addressing the company assembled, spoke of the keen interest shown in this work by his old Cabinet colleague Sir Donald Maclean, and the appropriateness that his lifelong public service should be commemorated in such a manner. The old building in Talbot Road had proved, he said, entirely inadequate for the purpose, and of recent years it was surprising how much work had been accomplished there under cramped and unsatisfactory conditions. During its history the dispensary had helped to reduce the death rate from tuberculosis in Paddington by 40 per cent. Lord Eustace Percy claimed for Paddington the honour of pioneership, with Edinburgh, in anti-tuberculosis enterprise. The Paddington dispensary was responsible for initiating such work in England. In alluding to the interest of Sir Donald Maclean, Lord Eustace Percy mentioned that he gave to this work a very large part of his leisure. The chairman of the occasion, Vice-Admiral E. A. Taylor, M.P. for South Paddington, also said that one of the last things that Sir Donald Maclean did before his sudden death was to sign papers in connexion with the appeal for the new building.

Health Resorts Conference at Bath

An attractive programme has been drawn up for the Conference on British Health Resorts to be held at Bath this week-end under the chairmanship of the Right Hon. Douglas Hacking, M.P. The Mayor and Mayoress are giving a reception in the Pump Room on Friday night, and for Saturday two business sessions have been arranged. The speakers include the president of the British Health Resorts Association, Lord Meston, and the chairman, Lieut.-Colonel R. H. Elliot; Dr. Charles Buckley, representing the Spa Practitioners Group of the British Medical Association; Mr. R. C. Vaughan, who has identified himself with the forward movement among proprietors of British hotels; and Sir Humphry Rolleston, Dr. Fortescue Fox, and Lieut.-Colonel W. Byam, who will open a discussion on the services of the spas to the public.

Scotland

Research in Mental Hospitals

The thirty-fifth annual report of the joint scheme of the Scottish mental hospitals for pathological research shows that a considerable amount of work has been done. Consequent on the appointment of Dr. F. E. Reynolds as pathologist to the municipal general hospitals of Glasgow Corporation, the Board has arranged that the professor of pathology in the University of Edinburgh shall act as director of the research and routine work under the scheme, and that a pathologist shall be appointed to carry out the duties under his supervision. The accounts for 1931 show that the revenue amounted to £2,259; this was partly contributed by twenty-one institutions, supplemented by grants from the Medical Research Council and from Edinburgh University. It is pointed out that the experience of the past six years has shown the great need for a school for teaching and research in the pathology of organic nervous diseases. Applications have been received from workers in other countries for admission to this laboratory, two from Canada, one from the United States, one from Germany, and one from Egypt. Many undergraduates and graduates have voluntarily attended the lectures and demonstrations.

Paying Patients in a Glasgow Hospital

At the annual meeting of the Victoria Infirmary of Glasgow on February 24th, Lord Provost A. B. Swan, who presided, made special reference to the department for paying patients, which he said had been welcomed by the community and which was still an uncommon feature of hospitals. Those members of the community who were able to pay something, but not the fees of a nursing home, could now get professional treatment and nursing at a cost within their means. He thought such departments were among the best recent developments in public institutions. The directors of the Victoria Infirmary were already considering an extension, which he believed the people of the city and the West of Scotland would support gladly. In these days of changed conditions in the value of money the public should make up the deficit in the finances of the institutions. The governors of the Infirmary should not worry with financial affairs which were entirely a matter for the public, who would see to it that the institution was maintained at its present high standard. Mr. William Gray, chairman of the governors, said that the department for paying patients had passed beyond the experimental stage, and was working well. Patients had expressed their great appreciation

of the treatment, which otherwise they would have been forced to accept without cost in the Infirmary. It had been found that the great majority of patients who were able to pay were willing to do so according to their means rather than go into the free wards. The governors were now faced with a waiting list for the department, and were contemplating an extension. As soon as this extension was completed it would be fully occupied, because there could be no doubt but that there was a growing tendency for people of moderate means to pay for their treatment. The annual report showed that the ordinary income for the past year had fallen short of the total expenditure of £69,466 by £16,339. Legacies for general purposes had, however, amounted to £22,132 and special donations to £2,882. The number of cases admitted during the year had been 8,740—surgical 5,323 and medical 3,417. The average cost per patient had been £7 7s. 5d. as compared with £8 4s. 10d. in the previous year. With regard to motor accident cases, 188 persons had been admitted during the year and 277 had been treated as out-patients. This was a decrease on the figures for the preceding year, which had been 217 and 317 respectively. Payments received from insurance companies for these cases had amounted to £786; the expenses incurred in treatment, however, had been £1,385.

Crichton Royal Institution

The report for the year 1932 of Dr. C. C. Easterbrook, medical superintendent of the Crichton Royal Institution, shows that the number of patients under treatment in the institution during the year was 1,339. The number of patients on the register at the close of the year was 987—463 males and 524 females—of whom 713 were certified and 274 were voluntary. Private patients numbered 630 and rate-aided 357. During the year there had been 315 admissions, 247 discharges, and 105 deaths; 469 voluntary patients had been treated, this being the highest number yet reached, and of these only one had to be certified. Of the 315 admissions, 260 were received for the first time into a mental hospital, 148 being voluntary patients and 112 certified. Their average age was 47.3 years; nearly two-thirds were in the middle period of life, one-fourth above 60, and one-sixth below 30. The occupations were: professional 62, commercial 27, industrial 23, agricultural 26, and domestic 112. As to the causes of psychosis, pathologic stress in the form of ill-health occurring in general debility, disordered metabolism with thinness, heart disease, arteriosclerosis, anaemia, etc., was found in almost all cases; biologic stress comprising the critical periods of life was present in 60 per cent.; psychic stresses in the form of grief, anxiety, shock, etc., in 46 per cent.; and toxic stresses in the form of alcoholic or drug cases, in 10 per cent. The types of mental illness included melancholia (100 cases), dementia (28), dipsomania and other compulsions (23), delusional psychoses (22), mania (21), confusion (21), and phobias (6). Organic psychoses included general paresis (5 cases), apoplexy (4), arteriosclerosis (2), insular sclerosis (1), and paralysis agitans (1). Congenital psychoses included 11 imbeciles. With regard to duration before admission, 59 per cent. had lasted for less than six months, a further 20 per cent. for less than two years, and 21 per cent. upwards of two years. Of the 247 who were discharged (115 male and 132 female), 164 were voluntary and 83 certified. Among the voluntary patients, the recovery rate was 40.2 per cent. of the number admitted, with 41.3 per cent. improved; of the certified cases the recovery rate was 41.2 per cent. and 16 per cent. improved. The mean age on recovery of both classes of patients was 44.6, and the forms of mental illness in which recovery chiefly took place were melancholia, dipsomania, mania, confusional insanity, delusional insanity, neurasthenia, and epilepsy. The total duration of the mental illness in recovered cases was less than six months in 42 per cent., less than two years in a further 29 per cent., and upwards of two years in 29 per cent. The causes of death were senile decay in 21 per cent., heart disease and arteriosclerosis in 17 per cent., exhaustion in 13 per cent., apoplexy and pneumonia each in 9 per cent., pulmonary tuberculosis in 6 per cent., and carcinoma in 5 per cent. The mean age at death was 61.1.

Royal Medical Society

At the annual dinner of the Royal Medical Society of Edinburgh, held on February 23rd in the hall of the Royal College of Physicians, Dr. R. L. Cormie, senior president of the society, proposed the health of the principal guest, Emeritus Professor W. Blair-Bell. He said that Professor Blair-Bell had been for over twenty years one of the most eminent leaders of gynaecology in Great Britain, and for ten years had occupied the chair of midwifery and gynaecology in Liverpool University. He had long been known as a resourceful and original surgeon, but had made his greatest contributions to medicine on the lines of research. His work on the endocrine glands was well known, and had led to his receiving the John Hunter medal and the Astley Cooper prize. The mere fact that Professor Blair-Bell in 1909 was the first to advocate the use of pituitrin in obstetrics was in itself sufficient to send his name down to posterity. As director of the Liverpool Cancer Research Organization, he had attacked the formidable problem of this disease on a large scale, and under his leadership a combined effort had been made by a number of physicians, gynaecologists, pathologists, and biochemists to cure cancer by the administration of lead. In reply, Professor Blair-Bell proposed the toast of "The Royal Medical Society," which, he said, had had an impressive history and was now approaching its two-hundredth year. Many members of the society had achieved fame by attainments other than medical—for example, Oliver Goldsmith had been a very poor doctor but he became famous in another sphere. American medicine owed a great debt to Edinburgh because two members of the society, John Morgan and William Shippen, had established the first school of medicine in America at Philadelphia in 1765. The society was an incarnation of the spirit of youth, and although its present home was somewhat worn and shabby, the soul remained, and he hoped that as their bicentenary was near at hand, they would succeed in collecting a sufficient sum of money to give them a worthy home. Dr. J. G. M. Hamilton, who replied, said that a bicentenary fund had been established, and with the money collected it was hoped to rehouse and recatalogue the large library of the society and to recondition its premises.

British Red Cross Society in Edinburgh

The annual meeting of the Edinburgh Branch of the British Red Cross was held in Edinburgh on February 20th, Lord Provost W. J. Thomson presiding. The report showed that receipts had exceeded expenditure by £45. The V.A.D. detachments continued to be satisfactory, with a total strength of 234 members. Lord Mackenzie referred to the death of Sir George Beatson, who, he said, had been, in 1910, a pioneer of Red Cross work in Scotland. It was owing to his energy that the work then begun had enabled a large number of thoroughly trained V.A.D. detachments to be ready in 1914 and to play a memorable part in the succeeding years of the war. Sir George Beatson was also entitled to the credit for sending out a Scottish Red Cross Hospital to Rouen in the early days of the war.

Ireland

Maternal Mortality in Cork

At a meeting of the Cork Clinical Society on February 10th, with Professor Dundon in the chair, Dr. J. C. Saunders opened a discussion on maternal mortality in Cork City. It was, he said, a matter of general concern that in the last thirty or forty years the maternal death rates had shown no decline comparable to that in other directions, notably infant mortality. In England and Wales the rate in 1911 was 3.87; in 1930, 4.40; in 1931, 3.94. In the Irish Free State the rate in the decade 1921–30 was 5.28; during 1930, 5.04; in 1931, 4.76. Taking the country as a whole the position must be regarded as definitely unsatisfactory. In Cork City the rate in 1924 was 6.11; in 1925, 5.59; in 1926, 6.08; in 1927, 6.02; in 1928, 7.11; in 1929, 2.24; in 1930, 1.83; in 1931, 4.10. In the first five of these years an average rate of 6.08 must be regarded as very unsatisfactory indeed. In 1932 detailed investigation of the ten maternal deaths in the city was undertaken. A careful history and analysis of these cases was given, and they were classified as seven preventable, two unavoidable, and one borderline. Ignorance and indifference of the patients and their relatives was an important factor in many of the fatalities. Professor Kearney spoke on the clinical feature of maternal mortality, and opened the subject by referring to the report of the Departmental Committee set up by the British Ministry of Health. There was in these cases always a primary avoidable factor, and this fell into one of two groups: the first due to inadequate ante-natal care, and the second, want of skill and judgement. He reviewed the causes of maternal mortality in detail; in his experience sepsis was the greatest. He emphasized the measures adopted to overcome the danger of sepsis, particularly in regard to the wearing of masks by attendants, the use of gloves, and the disinfection of the vulva as for a surgical operation. Where purulent discharge was observed before labour he advised the use of serum prophylactically in every case, and the use of 2 per cent. mercurochrome in glycerin in the vagina. Dr. Cantillon advocated a more rigid asepsis than that at present commonly employed in the conduct of maternity cases. He asked for a closer public health supervision; the ante-natal service should be developed. In order to establish a proper ante-natal system it was necessary to employ health visitors, whose duty would be to encourage the mothers to make use of the clinics and to realize their value. He considered that practical education in obstetrics was neglected. Newly qualified practitioners had only a theoretic knowledge of the problems with which they would be faced: maternal mortality was too often caused by meddlesome interference by inexperienced practitioners and nurses. Dr. Rahilly did not consider that many practical suggestions had been made. As the vast majority of the maternity cases occurred in the patients' homes it was impossible to improve the conditions under which the confinements were held. He considered that meddlesome midwifery was a constant cause of maternal complications. The president emphasized the importance of special maternity hospitals and of developing a more adequate ante-natal service in connexion with them. He referred particularly to the damage done and the dangers resulting from too early and too free use of forceps. Dr. Cummings referred to the specialized maternity hospital as the most important need of each community; without adequate special bed accommodation for the various abnormal cases discovered at the ante-natal clinic its work was greatly hampered and vitiated.

Causes of Low Irish Marriage Rate

In his paper on some causes and consequences of the low Irish marriage rate before a recent meeting of the Statistical and Social Inquiry Society of Ireland, Mr. James Meenan said that the Free State marriage rate had remained, despite minor fluctuations, at a very low level since universal registration of marriage was made compulsory in 1864. It was therefore necessary not only to consider the chief causes of the more important fluctuations, but to determine the influences which operated in the Free State to depress the marriage rate. Taking the chief fluctuations, it would be found that there was a prolonged decline over the period 1873–94; this was followed by a recovery, which was sustained until about 1920. Since then the rate had again declined. The principal causes of such changes in the rate were the state of agricultural prices and the conditions of land tenure. He questioned whether the low marriage rate was the result of emigration, as it was sometimes said to be. The real demographic problem in the country was not emigration, but those other forces in the national economy which tended to depress the marriage rate. Certain aspects of Irish life, such as the late age at which people entered gainful occupations, the absence of female employment, and the low mortality among the older age groups, tended to account for the growing proportion of unmarried people and the postponement of marriage to an age which was steadily growing later. Mr. Meenan thought that the operation of the Land Purchase Acts, by stereotyping the number of holdings, had prevented the expansion of the rural population. Finally, he drew attention to the consequences of a further fall in the marriage rate coincident with a declining birth rate. The logical end of such a process would be an excess of deaths over births.

CORRESPONDENCE

Iodine Compounds in Thyroid Disease

SIR,—I wish to draw attention to your report of the meeting of the Section of Therapeutics and Pharmacology of the Royal Society of Medicine on February 14th, in which my original proof of the internal secretory function of the thyroid gland in 1891 is erroneously attributed to Marine. In opening the discussion on iodine compounds in thyroid disease Professor C. R. Harington gave a historical survey of the subject, and referred to my original demonstration of this function of the thyroid gland in the successful treatment of myxoedema by the administration of the secretion in the form of a glycerin extract. This was first described in a paper (*British Medical Journal*, October 10th, 1891) read at the Annual Meeting of the British Medical Association in 1891, and again at the Annual Meeting in 1892 (ibid., August 27th, 1892). On the latter occasion, after describing the results of the treatment of four cases of myxoedema, I stated: "These cases show that thyroid extract can to a very considerable extent supply the place of the natural secretion which has been lost in myxoedema."

With regard to the subject under discussion, I agree with the general opinion expressed as to the temporary benefit derived from the use of iodine in many cases of Graves's disease, which renders it so valuable in the preparation of the patient for operation. As a result of this improvement iodine is apt to be used in too large doses and for too long a period in the regular medical treatment of many cases of exophthalmic goitre, with unfortunate results; so that of late I have seen more benefit from stopping iodine than from giving it. There

are, however, some cases in which decided benefit is derived from giving small doses of iodine—such as tinct. iodi mitis, two to five minims—daily in milk for two or three weeks at intervals of a month or longer. If an operation is likely to become necessary in the near future it is better to reserve the iodine for the period of preparation for the operation.—I am, etc.,

Manchester, Feb. 27th. GEORGE R. MURRAY.

SIR,—In the report of the discussion on iodine compounds in thyroid disease at the Royal Society of Medicine, in your issue of February 25th (p. 317), I am stated to have recommended the administration of iodine in the form of desiodothyroxine. As the name implies, desiodothyroxine is a compound which contains no iodine; moreover, I did not mention this substance at all. Desiodothyroxine should read diiodotyrosine.—I am, etc.,

London, W.C.1, Feb. 24th. C. R. HARINGTON.

Chronic Pulmonary Tuberculosis

SIR,—In the *Journal* of February 4th (p. 179) appeared an article by Dr. Wingfield, who suggested, amongst other things, that there is but a poor return for the enormous amount of money which is spent by different authorities on sanatorium treatment. Dr. Lissant Cox replied (February 18th, p. 288) that a large number of consumptives who are dangerous to the public should be housed somewhere, and whether the institution to which they are sent is called a sanatorium or by any other name is immaterial.

Are not these two separate issues—one, treatment of the individual; the other, the prevention of the disease? With regard to the first, I agree with Dr. Wingfield that when tuberculosis is temporarily arrested residence in a sanatorium is no insurance against a recurrence of the disease. For example, last week I saw a man who had had haemoptysis twelve years ago, but after a few weeks' rest returned to work and kept fit till last month, when, after influenza, tubercle bacilli were found in the sputum. In my opinion this breakdown would not have been prevented by six or more months in a sanatorium twelve years ago. I also agree that when a patient has active chronic pulmonary tuberculosis prolonged or recurrent residence in a sanatorium is not profitable, although it may be convenient for domestic or other reasons. Sanatorium treatment, as defined by Dr. Wingfield in your issue of February 25th (p. 338), is invaluable for some cases, useless for some, and actually harmful for others. Careful selection of patients and discharge of the unsuitable ones after a month's trial would save a great deal of money.

To turn to the second problem. Has the decrease in the incidence of tuberculosis followed the increase in available sanatorium beds? It is true that a tuberculosis "carrier" is dangerous, especially to young children, but there are many elderly members of a household who themselves enjoy fair health, except for so-called bronchitis, and who have sputum loaded with tubercle bacilli. Again, the out-patient department of every chest hospital is packed with patients who have had sanatorium benefit, are working, just holding their own, or are slowly dying, and who have tubercle bacilli in their sputum. Can their temporary absence from home in a sanatorium be a matter of real importance in the prevention of the disease?

To the clinician falls the task of trying to prolong the life of the individual, and it is impossible to avoid the thought that this duty often clashes with that of the medical officer of health, who sees that such prolongation of life, unless the patients are segregated, is a danger to the community whose protection is his primary object. If the sanatorium is used to serve both these worthy but absolutely opposite purposes the best results are not likely to be obtained in either case.—I am, etc.,

London, W.1, Feb. 26th. L. S. T. BURRELL.

Duodenal Feeding

SIR,—In the *Journal* of February 25th (p. 316) I note with interest an account of a paper on duodenal feeding, read by Dr. Ernest Young at the Medical Society of London on February 13th.

About four years ago I treated twenty-four selected cases of gastric ulcer with the duodenal tube. I call them selected cases because they were cases which I judged as suitable for treatment by non-surgical methods. The majority progressed favourably, and in the end, after removal of the tube, the results were satisfactory; most of the ulcers were healed so far as one could tell clinically and with the aid of radiology. But on the whole I was not satisfied that the cases treated with the tube did better than those treated without the tube. As a rule the ulcers were not healed at the end of three weeks, but steadily progressed after removal of the tube. In order to find out what was happening in the stomach during the course of duodenal feeding I stitched two duodenal tubes together in such a way that when the perforated end of the one lay in the duodenum the perforated end of the other remained in the stomach, and I persuaded my unfortunate patients to swallow this double tube. The position of the tubes was checked by *x*-ray examination. By this means I was able to extract the gastric contents after a duodenal feed. I found, shortly after giving the duodenal feed, that there was a gush of gastric juice into the stomach, and the stomach contents gave a hyperchlorhydric curve. This became less marked as the three weeks' course proceeded, but never disappeared. It seemed to me, therefore, that one's patients were actually put at a disadvantage through using the duodenal tube, since free acid was secreted during the process into the stomach with no citrated milk or alkali there to neutralize it. I therefore abandoned duodenal feeding, and am quite satisfied with the excellent results I have obtained in the many cases I have since treated by ordinary medical means.

I do not wish to decry Dr. Young's method and the excellent results he has obtained. No doubt this method has its place in medicine, but it is not suitable for all cases. Possibly the results might be still further improved by giving well-judged doses of alkali by mouth during the first part of the treatment. It does not seem to me possible to put an organ like the stomach in a state of physiological rest by mechanical means only, such as the insertion of the tube appears to be.—I am, etc.,

London, W.1, Feb. 28th. HAROLD PRITCHARD.

Psychology in the Curriculum

SIR,—Klages, I think, finds a metaphysical difficulty at the bottom of all neurotic conflict, and is probably right. It is likely that metaphysics is the real obstacle to the settlement of the place of psychology in the curriculum.

Is Medicine to be taught to students, as at present, on a basis of dogmatic dualism, or, as many psychologists would wish, on one of monism? Psychology and psychotherapy can be taught and practised, it is true, as a disconnected or autonomous specialty, on either. Freudians regard the difference between mind and body as clear, both in theory and in clinical practice, whilst Individual Psychologists, and many others, are adherents, not sc

much of the Platonic doctrine that " body and soul must be cured together," as of the modern notion of psychosomatic unity. But for the student to learn psychotherapy as a thing apart from general medicine will not do: even to-day as many blunders are being made by medical psychotherapists who are not clinical physicians as by physicians who are not psychologists. And they are many!

The truth is that the student must incorporate his psychotherapeutics and psychology with what he is taught in the medical wards. But how is he to do this unless there is a common *point de départ*? And must not this necessarily be metaphysical? (The difficulty is increased by the fact that, even for post-graduates, Medicine, to judge by schedules and programmes, is now a specialty which has no truck with the eye, ear, nose, throat, lungs, heart, stomach, genito-urinary apparatus, rectum, nervous system, and skin, or with mental diseases, fevers, and tuberculosis, to say nothing of epidemiology and the history of medicine itself.)

This incorporation, this synthetic presentation, can only be effected in the schools if we restore to the curriculum the old systematic instruction in the theory and history of medicine which, dropping out of esteem with the proper rise of clinical teaching, has now been displaced by the dreary lecture of printed pages dealing with *diseases*. (Even so, textbooks of the principles and practice of medicine plunge *in medias res* in the most unprincipled way, without the slightest hint to the student of the purely subjective and fictitious origin of the " diseases," and the distinction between " mind " and body," which form the subject of their discourse.) But if lectures of the kind I have mentioned were again given there would be, for teachers and for taught, a cadre of the historical and theoretical bases of Medicine, in which discussion of the newer movements and shifts in thought that sooner or later affect practice could be presented. With such a cadre (at any rate for aspirants for degrees) the teaching of (i) psychology as a special discipline ranking with anatomy and physiology; and (ii) psychotherapy as an integral part of Medicine, should fall insensibly into their natural places in the curriculum. —I am, etc.,

London, W.1, Feb. 22nd. F. G. CROOKSHANK.

"Small-pox": Need for Precise Nomenclature

SIR,—It is now generally accepted that the two varieties of small-pox, variola major and variola minor, breed true —that is, that the one variety does not give rise to the other. Certainly there is no evidence forthcoming that variola minor ever changes into variola major, either from this country—where tens of thousands of cases have now occurred—or from the United States, where experience of variola minor has been much greater and more prolonged. In these circumstances, and in view of the profound difference, both clinically and from the administrative point of view, between the two varieties, I wish to suggest that to speak of " small-pox," without specifying which variety is referred to, is both misleading and lacking in scientific precision.

As a case in point I would adduce the annotation on " Small-pox: a world survey " in the *Journal* of February 18th (p. 283), in which the one term " small-pox " is used without qualification to cover both varieties. Take, for instance, the following sentence: " The third European focus is the Iberian Peninsula, where the disease is mild in Spain with a case fatality of 0.93 per cent., while in Portugal small-pox is much more severe, the case fatality in 1931 being 25.8 per cent. . . ." Does anyone really believe that it is the same disease in Spain and Portugal? Surely in the one country we are dealing with variola minor and in the other with variola major. Again, we are told that British India is the most important focus in the world, there being (in 1931) 88,380 cases, with nearly 19,000 deaths; whilst in Canada and North America " the incidence is falling, and the case fatality is very low." Surely here again we have to deal with two totally different affections.

It is not as if there were any real difficulty in practice —apart from the first case or two in an outbreak—in deciding which variety we are dealing with in any given instance. Why should we not, therefore, in the interests of scientific precision and clarity, be asked always to specify, when discussing small-pox, to which variety we are alluding? As a necessary preliminary, of course, all returns relating to small-pox should have two columns, one for variola major and the other for variola minor. I need hardly add that the terms " mild small-pox " and " virulent small-pox " do not at all meet the case, for variola minor is not always mild and variola major is not always virulent.—I am, etc.,

Leicester, Feb. 20th. C. KILLICK MILLARD.

Cultures of Tumours

SIR,—In your issue of February 18th you publish a report of the meeting of the Royal Society held on February 9th, at which Dr. R. J. Ludford read a paper on tissue cultures of tumours. Therein Dr. Ludford stated that, in serum cultures of tumours, only non-malignant cells wander out. This, in my opinion, is incorrect. In carcinoma cultures malignant cells wander out both in the form of carpets and as amoeboid cells. Malignant cells also emigrate from fragments of sarcoma cultured in serum. At the Royal Society meeting I criticized Dr. Ludford's paper. I gave a number of reasons which convinced me that Dr. Ludford had not shown the wandering amoeboid cells to be non-malignant. Thereafter I stated several facts, each of which demonstrated in my opinion that these wandering cells *are* malignant.

The matter in dispute is one upon which research workers at the Imperial Cancer Research Fund Laboratory and myself have for long differed. It would, I fear, interest only a few of your readers, hence I do not think it necessary to publish here, *in extenso*, the criticisms I made at the Royal Society, and which in my view justified me in concluding that several of Dr. Ludford's observations were demonstrably incorrect and that his main conclusions were fallacious.

I should not, for any personal reason, have felt it worth while to refer to this matter, but that if allowed to pass uncontradicted a paper couched in terms so pontifical as those employed by Dr. Ludford might be accepted as convincing, and might tend to discourage young workers from studying tumour immunity, which many consider to be the most hopeful side of cancer research. This would appear to me to be deplorable, and is my reason for this letter.—I am, etc.,

London Hospital, E., Feb. 22nd. THOMAS LUMSDEN.

Mitral Stenosis

SIR,—I have read with interest Dr. Wyn Jones's article in the *Journal* of February 25th (p. 307), but feel regret that he has not stated the criteria he required to satisfy his diagnosis of mitral stenosis. These are necessary in order to attempt to assess the value of such conclusions.

One physician will demand the presence of a definite mitral diastolic or presystolic murmur before he will admit

such a diagnosis. Another will pride himself upon the ability to base a conclusion much earlier upon the altered quality of the apical first sound, or upon the reduplication of the second sound over an area between apex and base. The first physician, therefore, finds his figures in regard to prognosis far worse than the second, for the latter has necessarily included many mild cases which may recover completely, and many which may not even be cases of mitral stenosis at all.

There is no doubt that in London the typical severe case of mitral stenosis is much less common than it was ten years ago. Consequently the attempt is made to diagnose it earlier and yet earlier in its development; and more and more children with doubtful physical signs are placed under continued restraint. To attach the label of "mitral stenosis" is easy, but it lays a stigma on the child; and the psychological effects of the label and its associated restriction of school life on an intelligent child are removed only with the greatest difficulty. There are numbers of children attending special schools in London on account of "rheumatic carditis" whose hearts are not abnormal apart from some nervous disturbance of function. When the question of desirability is raised it is usually met by the answer that "in any case the child is scarcely fit for the rush and tumble of school life." This may or may not be true, but when the school period comes to an end such children are certainly very seldom fit to earn a living in the outside world. It is extremely difficult to get them settled in steady occupation, chiefly because their self-confidence has never been established, or else has been shaken to its foundations.

The worse the figures in regard to prognosis of mitral stenosis are, the greater will be the number of mild and doubtful cases labelled as such. I have no wish to suggest that mitral stenosis is not a very serious disease or to cavil at Dr. Wyn Jones's figures, but rather to lay stress on the necessity of knowing the diagnostic criteria of such an investigation before assessing its real value.—I am, etc.,

London, W.1, Feb. 25th. C. BLAXLAND LEVICK.

A Rubber Oesophagus

SIR,—You have been good enough to draw attention in the *British Medical Journal* of February 25th to my case as fully reported in the *British Journal of Surgery* (1933, xx, 388), but your annotation includes a sentence which invites a misconception, and I shall be obliged if you will spare me a little space for correction.

You say: "It is understandable that since the food can only reach the stomach by gravity, the consistency has to be adjusted to this end." This sentence would imply that the patient is restricted in her diet to liquids and semi-solids, but, so far from this being the case, she has been able to take ordinary food, solids or liquids, at choice for over twenty-three years. I am anxious to establish this fact, not so much to emphasize the success of the operation as to view the situation in the light of our knowledge of the action of the oesophagus, a feature of some interest to physiologists. Apparently, mastication and the propulsive force of the mouth suffice to ensure the conveyance of food to the stomach through a patent inactive tube.—I am, etc.,

London, W.1, Feb. 28th. ARTHUR EVANS.

First Successful Caesarean Section in England

SIR,—Jane Foster of Blackrod, aged 40, was the first patient in England to recover from the operation of Caesarean section; she was in good health twenty-eight years later. The child was delivered dead.

After she had had several children the patient had an accident which fractured the pelvis. This was treated by Mr. White of Manchester, but left an extreme narrowing of the pelvis, for which Caesarean section was performed 140 years ago, in 1793, by James Barlow of Chorley and Blackburn, Cheshire.

In my *History of British Midwifery, 1650–1800*, by an unfortunate printer's error (copied, I regret to say, in my book, *Caesarean Section*) the operator's residence is given as Bolton instead of Blackburn. As I find that the mistake has been copied by others, I shall be glad if you will allow me to state that James Barlow lived at Chorley and Blackburn (*not* Bolton). The case was published in *Medical Records and Researches*, 1798, and the later history in J. Barlow's *Essays in Surgery and Midwifery*, 1822.—I am, etc.,

London, W.1, Feb. 24th. HERBERT R. SPENCER.

Hospital for Ante-partum Haemorrhage

SIR,—The Maternal Mortality Committee in its final report (p. 137) recommended that all patients with warning ante-partum haemorrhage should be admitted to an institution. I suppose a good many obstetricians have, like myself, tried to carry out this advice, and to such it may be of interest to exchange experiences.

At University College Hospital there are ten ante-natal beds, for which there is always a waiting list of urgent cases. Speaking from past experience, I feel sure that we could keep at least half of these beds occupied by patients with ante-partum haemorrhage if all those with slight bleeding after the twenty-eighth week turning up at our ante-natal clinic were admitted and kept under observation until delivery or until the period of viability, when premature interruption of pregnancy might be safe for the child. If haemorrhage is severe, probably all will agree that active treatment should be undertaken without delay. The difficulty arises in the cases of *slight* bleeding from the twenty-eighth to the thirty-fifth week, when the patient is not in labour and the os is closed, and it is therefore impossible to exclude placenta praevia. After admission the bleeding usually stops. Are we then to keep the patient in hospital until delivery or viability? If not, there would seem to be little advantage in taking them in at all, as the Committee advised. Neither can I think that this is what the Committee had in mind. If we keep them in, beds urgently needed for other cases will be blocked.

To others in charge of clinics the same difficulty must have presented itself, and it would be of interest to hear how it has been met. There seem to be three alternatives: (1) To terminate the pregnancy at once, which would entail an appalling sacrifice of foetal life. (2) To keep the patients under observation till delivery or till viability is reached at thirty-six weeks, when pregnancy might be ended. (3) To allow the patient to go home a week or ten days after bleeding has stopped; this is risky, as she may return at any time with severe bleeding.—I am, etc.,

University College Hospital, Feb. 24th F. J. BROWNE.

Midwives and Ante-natal Work

SIR,—I was interested in Dr. Oxley's article on forethought in midwifery, in the *Journal* of February 18th (p. 259), especially in the part dealing with midwives, who, he states, attend twice as many cases as do doctors. Referring to ante-natal clinics he writes: "There is a tendency for midwives to rely on the clinics to do their ante-natal work instead of improving themselves in it." Later on there is a recommendation that midwives should take every case to a doctor twice during pregnancy. The effect of this would surely be to take all sense of responsibility from the midwife. She will consider that the onus of discovering abnormalities or danger signals has been

transferred from her shoulders to those of the doctor, and all her incentive to try to recognize these warning signs is taken from her. I am at one with Dr. Oxley that the midwife should have the fullest recourse to the doctor, and that she should refer any case in which she has the least doubt to him, not only once or twice, but as many times as may be necessary.

It would lead to more satisfactory results if greater insistence were put on midwives doing their own ante-natal work and keeping a full and complete record which shows both negative and positive observations. The medical health authorities of this city are endeavouring to increase the efficiency of the local midwives by post-certificate instruction; the view is taken that not only should midwives be able to conduct normal labour, but they should be able to recognize the abnormal, both in pregnancy and in labour, and that any case in which they have the least doubt should be referred to the patient's own doctor. The C.M.B. course of instruction and examination is now turning out very efficient midwives who, in the main, should be quite capable of doing their own ante-natal work up to the point at which the co-operation of the doctor is necessary.—I am, etc.,

Southsea, Feb. 21st. R. K. WHITE.

The Squatting Position in Labour

SIR,—I wrote my first letter of October 22nd, 1932 (p. 775), to find out what valid objections could be made to my statement that trouble in childbirth was caused by: (1) change of shape of pelvic brim from round to oval; (2) stiff pelvic joints; and (3) unnatural position adopted for confinement. I do not seem to have elicited the criticisms I hoped for.

In reply to Dr. A. J. Hawes (January 14th, p. 81), as briefly as possible: A round pelvic brim encloses a larger area than an oval brim having the same circumference, so that if his oval pelvis is "quite big enough" it would be too big if it were round and the woman would have a quick, almost painless, labour. If the pelvic joints open in labour in all animals (I call upon the veterinary surgeons to aid us here), why not in woman? Surely the changed and rather rolling gait before parturition indicates this loosening and separation. The Walcher position is not so effective as the squatting or crouching attitude, which enlarges both inlet and outlet at the same time. I hope shortly to publish a paper on this very point. The commoner causes of trouble rarely or never occur in the round, well-formed pelvis, and certainly rigidity of the soft parts is unknown in habitual squatters.

Again, I should not describe it as "an active outdoor life" when most of the daylight hours are spent indoors, but I would undertake to pick out in any good girls' school children of 14 or 15 who, when their time comes, will have their children easily and safely. First, gait; the feet planted nearly parallel in walking indicate the round pelvic brim. Second, teeth; a perfect set of teeth at 15 goes with absence of rickets and with a well-formed pelvis. May I remind Dr. Hawes that our recent ancestors (not our "remote ancestors") had no closets and used the squatting position, much to their benefit, until well into the nineteenth century. I am more than doubtful, too, about the modern intellect he values so highly. I do not think that the average European has the intellectual powers of many who dwell in forests. I would instance the Indian Brahmin. Europeans have no doubt more idea of material comfort and how to obtain it, but the higher developments of mind and spirit are surely no more general than they were thousands of years ago, in spite of the rather novel criterion Dr. Hawes would apply.

As to midwifery in the East, millions of women are safely confined there by mother, friend, or the hereditary midwife. The difficult cases are most frequently encountered among the purdah or indoor women, and especially among those who have adopted high heels and European habits of the toilet, and, alas! also our Western idea that education must be carried on indoors.

The case instanced of the woman whose vulva was sprayed with infection was, of course, *lying down*. There is no reason why, after delivery, a woman should *not* lie down, provided she gets into the squatting position to relieve bladder and bowels and get rid of lochia four or five times a day. It is the stagnation produced by the supine position that is so fatal.—I am, etc.,

Bordeaux, Feb. 13th. KATHLEEN VAUGHAN.

Treatment of Tinnitus and Deafness

SIR,—I read with great interest *The Principles and Practice of Otology* by Watkyn-Thomas and Lowndes Yates after reading the review in the *Journal* of January 7th (p. 19). I beg leave, however, to be allowed to traverse the views of Mr. Lowndes Yates on two important points—namely, the treatment of tinnitus and "the re-training of persons who have uncompensated deafness."

After enumerating "the various forms of tinnitus," Mr. Lowndes Yates affirms that "only those resulting from circulating chemical poisons, circulating toxins, and from the effects of early inflammation of the middle ear are curable." But, he says, when associated with otosclerosis or inflammation of the mucous membrane covering the oval or round windows it is incurable. In 1925 I published a paper on the alleviation of chronic progressive deafness by the electrophonoide method of Zund-Burguet, wherein details of 100 cases are given. Out of thirty-three cases of otosclerosis fourteen had tinnitus, and in ten of these the tinnitus ceased after the treatment; out of thirty-three cases of otitis media fourteen had tinnitus, and it ceased in nine of them; out of thirty-four cases of nerve deafness nine had tinnitus, which ceased in eight of them. In the second edition of my small book on the treatment of deafness (*The Treatment of Chronic Deafness by the Electrophonoide Method of Zund-Burguet*) I recorded 665 cases of deafness, 250 of which had tinnitus; in 150 of the latter the tinnitus either ceased altogether or diminished to such an extent that it was no longer troublesome. Two recent examples may be given here.

(1) A schoolmaster, aged 28, consulted a well-known aurist last July for deafness and most distressing tinnitus, which preceded the deafness. He was informed that nothing could be done for the deafness or the tinnitus, and was advised that as the deafness would inevitably get worse he should give up his profession and seek some other vocation, and accordingly he resigned his post. He could hear up to a distance of seven feet only on either side. After treatment with the Zund-Burguet electrophonoide method the hearing improved up to a distance of twenty-five feet on either side. The tinnitus has ceased and he has resumed his profession. (2) A man, aged 38, with chronic otitis media of long standing could only hear at eight feet with the left ear and at six inches with the right, and was afflicted with what Mr. Lowndes Yates describes as "incurable tinnitus of high pitch." After electrophonoide treatment he hears at thirty-five feet with the left ear and at eighteen feet with the right, and the tinnitus ceased in a dramatic fashion after the fourth treatment.

Having stated these facts I now turn to "the re-training of persons who have uncompensated deafness." Mr. Lowndes Yates here harks back to the idea first suggested by Urbantschitch of utilizing the human voice to re-educate the deaf. Urbantschitch used four voices—bass, baritone, tenor, and soprano; but the method was given up owing to the difficulty of carrying it out. Mr. Lowndes

Yates, who appears to have overlooked the method of Urbantschitch, now suggests employing two voices, and writes on page 254, "The method of training which is adopted is extremely simple: the patient gets a male and a female friend to read to him for fifteen minutes every day." As the result of inquiries among my friends I find that this method is not as "extremely simple" to carry out as Mr. Lowndes Yates would have us believe. Moreover, it aims at re-educating the ear not for all sounds or for all voices, but merely for those emitted by the male and female friend. I said in my book that it was not possible to tell beforehand whether the Zund-Burguet method would improve the hearing in any given case until it had been tried, and Mr. Lowndes Yates, in spite of his elaborate and ingenious system of graphs, admits that the same difficulty occurs with this method, for he says that, while certain patients improve, "certain other uncompensated patients do not improve." Further, and still more important, this method has no effect on tinnitus, which, contrary to my experience, Mr. Lowndes Yates regards in old-standing cases as always incurable. The purpose of the electrophonoide method of Zund-Burguet is to obviate the necessity for employing the human voice, and thereby to furnish a method which has proved successful not merely in curing many cases of tinnitus, but in ameliorating the sufferings of many of those afflicted with chronic progressive deafness. Of 665 cases of chronic progressive deafness 64 per cent. improved. Of those, 250 had tinnitus, and the tinnitus in 60 per cent. was cured or so greatly diminished that it was no longer a burden.—I am, etc.,

London, W.1, Feb. 23rd. GEORGE C. CATHCART.

Jejunostomy for Massive Gastric Ulcer

SIR,—Mr. O. Stanley Hillman's article in your issue of February 11th (p. 221) tempts me to record a somewhat similar case which I recently had under my care.

An unmarried female, aged 64, was admitted to the Buchanan Hospital under one of my medical colleagues on August 23rd, 1931. Two days later a barium meal was given, and the following was the report: "Large ulcer seen on lesser curvature causing spasmodic hour-glass stomach. Appearances at pylorus and duodenum suggest the presence of a duodenal ulcer, but signs not definite. Spasm of colon. Appendix not visible at twenty-four hours or at forty-eight hours." The patient was given complete rest in bed and alkali treatment, but the symptoms did not abate, and she was transferred to me for surgical treatment.

I opened her abdomen on October 4th, 1931. A massive gastric ulcer was found involving the greater part of the anterior wall and lesser curvature of the stomach. A considerable portion of the anterior stomach wall was adherent to the anterior parietal peritoneum. No duodenal ulcer was found. I considered direct attack mechanically impossible, besides which the patient's general condition was very poor. I therefore did a jejunostomy, by which the patient was subsequently fed. The pain from which she had been suffering, notwithstanding complete rest and alkali treatment, soon ceased. She was sent to the municipal hospital for some months, and on June 8th, 1932, was readmitted to the Buchanan Hospital.

A barium meal was given on June 20th. Report: "A chronic callous ulcer on lesser curvature, much scar tissue causing a high hour-glass stenosis."

On September 17th, 1932, a barium meal was again given. Report: "The ulcer is still present, but appears to be considerably smaller than at the last examination. There is still an hour-glass condition. This appears to be partly spasmodic." Meanwhile the patient was feeling well and had been gaining weight steadily.

On October 12th, 1932, the barium-meal report was as follows: "The niche is not now visible, but the middle third of the stomach has been converted into a narrow canal."

On November 15th, 1932, I reopened the abdomen. I found the anterior wall of the stomach free from any adhesions; other adhesions were easily dealt with; the jejunostomy was closed, and a Moynihan's modification of a Polya's subtotal gastrectomy was done. Convalescence was uninterrupted, and the patient has remained well and able to take ordinary diet. She is now plump, and looks well nourished. This procedure seemed to me to be the only one possible in the circumstances, and I should also have no hesitation in repeating it should occasion arise.

Consideration of this line of treatment prompts me to ask myself the following question. Is it probable that *operable* chronic gastric ulcer might best be surgically treated by a simple jejunostomy, confining more radical procedures to cases in which the ulcer failed to heal, or, in healing, produced marked deformity?—I am, etc.,

St. Leonards-on-Sea, Feb. 15th. DAVID LIGAT.

Treatment of Recent Injuries

SIR,—After reading the comments on my article in the *Journal* of January 28th (p. 135) I feel that it is necessary to explain myself further. Undoubtedly some clot is necessary for repair, but often there is more clot present than is essential for this purpose, besides, in some cases, the ecchymosis from bruising of the superficial tissues. Although some of this excessive clot is absorbed, the rest may, and often does, form the complications mentioned in the article. The object of immediate treatment is to promote the early absorption of the excess blood clot so that none of these complications may occur; and if some of the products of clot happen to appear under the skin it is far quicker to remove them by aspiration or expression. By these methods the blood clot required for repair has a greater chance of carrying out its function unimpeded, and so the resultant scar is firmer and stronger. Muscular and subperiosteal haematomata cannot be removed at once, as in the beginning they are too diffuse for this; it is absurd to suggest that it is possible to rupture a muscle sheath or periosteum by massage. Dr. R. W. Agnew (February 25th) has misread my article, since it was in the treatment of neglected injuries with periosteal thickening and teno-synovitis that I described the patient as suffering agonizing pain.

A process called "seeping" or percolation of the fluid contents of the blood is put forward to account for subdural haemorrhagic cysts—cerebellar cysts in relation to contuso-laceration of the brain in the former and cerebello-pontine papilloma in the latter—and I firmly believe that the same phenomenon occurs in muscles and is responsible for muscle tumours and for the appearance of fluid under the skin in some cases. If this is not so, why is it that the following occur: (1) disappearance with treatment of swellings in muscles which previously have been continually giving trouble; (2) appearance of blood serum, even after years, on puncturing these swellings with a large-bore needle? I find one obtains blood or blood clot from subcutaneous extravasations of blood, but the fluid aspirated from under the skin in the case of muscular or subperiosteal haematomata is straw-coloured like blood serum. Many patients with injured thigh muscles have told me they have wakened in the night with the impression that blood was trickling down their leg, and on raising the leg it feels as if the blood was running the other way. I am convinced that this is a sign that the serum of the excessive clot has reached intermuscular planes and is separating the muscles, thus giving rise to these symptoms. That the haematoma or its serum shifts can be demonstrated from day to day during treatment.

Forcible stretching of the muscle by manipulation is never resorted to until adhesions and contraction of excessive scar are present—at the end of a fortnight at the earliest. Its object is obviously to stretch the contracted scar and free the muscles from surrounding adhesions. It *must never* be performed in such a haphazard fashion as to cause further rupture of the muscle. Often the results

of these manipulations, even without anaesthesia, are dramatic, and the patient instantaneously loses his pain and stiffness. Obviously Dr. H. T. Cank (February 11th) is not conversant with these complications occurring in muscle injuries, or with the important fact that the elbow-joint is a peculiar joint in that one of its characteristics is the frequency of myositis ossificans in the tendon of brachialis anticus after injury, especially dislocation. The preventive, and only treatment, of this condition is absolute and complete rest. I agree with Dr. E. N. Wardle (February 11th) that ligamentous strains can be strapped—indeed, I tried to imply this in slight degrees of ankle sprains—but I do not agree that because a traumatic synovitis is present it is wrong to promote absorption of the fluid by the methods described.

I emphatically refute Dr. Agnew's charge of breaking the canons of treatment as laid down by Hugh Owen Thomas and Sir Robert Jones; surely I uphold them by suggesting in the case of joint injuries a combination of rest and active treatment to absorb the traumatic effusions. I distinctly said, contrary to the general teaching, that badly sprained ankles, as well as other joints, should be rested absolutely at the beginning. Surely it is not necessary to have a tearing of the synovia to produce a synovitis, as in nearly every twist or sprain of a joint the synovial membrane is stimulated and secretes extra-synovial fluid which contains fibrin and cells. If rest only is advocated in these cases the fibrin and cells become deposited in the joint and adhesions form. So often patients are seen who, having sprained their knee, have been sent to bed with a Scott's dressing or some absorbent lotion until the fluid has subsided. In three or four weeks they arrive for examination with a stiff knee and marked wasting of the vastus internus muscle. These cases require a manipulation followed by three or four weeks' treatment before they are better. By immediate treatment the fluid is absorbed in a few days, muscular wasting is prevented, and the knee is normal again in a fortnight. In spite of Dr. Agnew's remarks, patients do stand the methods described, recover in the shortest time possible, and avoid the sequels which in many cases give rise to pain and disability for months and even years after injury.—I am, etc.,

London, W.1, Feb. 25th. W. E. TUCKER.

The Medical Profession and Birth Control

SIR,—Dr. F. John Poynton, in the *Journal* of February 25th (p. 343), asks if students are to be taught methods into the value of which further research is needed. One has only to turn to the very excellent book which he has written in conjunction with Dr. Schlesinger to realize that he himself is instructing students "how best to prevent, cure, or alleviate" rheumatism, a subject about which there is still "urgent need for further research."

Surely the knowledge which has already been accumulated by numerous workers on the Birth Control Investigation Committee warrants our answering this question in the affirmative. By the scientific application of birth control we can often prevent further damage to a diseased heart, alleviate the general debility consequent upon too frequent pregnancies, and cure many cases of neurosis. He also asks if the medical profession should concern itself with the prevention of new life, by which he must mean the whole subject of birth control in its widest sense. Surely the sex factor has and will always have such an important influence on the many medical problems of everyday life that it is the bounden duty of the profession to concern itself with this problem.

Dr. Poynton says that for him the duties of a doctor have appeared to be to instruct students how best to prevent or alleviate disease; but for me, as a general practitioner, the duties of a doctor are how best to use the knowledge that we have for the alleviation of our patients.—I am, etc.,

Aldershot, Feb. 27th. EDWARD F. GRIFFITH.

SIR,—It is difficult to find support, from one's experience, for Dr. Eder's contention that most of the objections to contraception are not so simple as they seem, but that they arise from subconscious causes. Women, I find, are overwhelmingly in favour of contraception; and one would look in vain for any hint of a "frustration" which would give rise to a "false" objection. The most insistent protests come from men, who, I am reluctant to point out, carry only an insignificant part of the burden of an unwanted pregnancy. Woman's real joy at her release from obstetric slavery suffices to silence the feeble voice of a nebulous "frustration." Dr. Eder's defence of coitus interruptus may receive the support of the male peasants of France, but what of their womenfolk, who surely are experiencing the pangs of "frustration"?—I am, etc., EDITH SUMMERSKILL, M.R.C.S., L.R.C.P.

London, W.1, Feb. 28th.

SIR,—With reference to the instruction of doctors in contraceptive technique, it may interest your readers to know that the centres under the auspices of the Society for the Provision of Birth Control Clinics make this a part of their work. Periodically a lecture to medical students is given by one of the medical officers at the Walworth Women's Welfare Centre, which is followed up by a demonstration at another session of the clinic. Lectures and demonstrations are open to all students who have completed their gynaecological course, and fully qualified doctors are also very welcome. Full particulars can be obtained from Mrs. Evelyn Fuller, Walworth Women's Welfare Centre, 153A, East Street, Walworth Road, S.E.17 (Rodney 3262). In addition, facilities are afforded to doctors to attend at the ordinary sessions of the clinics, either with or without previous appointment, though the former is preferable, and not a week passes without several doctors receiving instruction at the Walworth, East London, or North Kensington Centres.—I am, etc., EDITH HOW-MARTYN.

Birth Control International Information Centre, Parliament Mansions, S.W.1.

Women and the G.M.C.

SIR,—May a mere man now enter the field and support those women members who ask that the British Medical Association should use its influence to secure the election of a woman to the General Medical Council?

I entirely agree with the writers that a suitable woman would be a useful addition to the ranks of the Council; that a suitable woman could easily be found; and that it would be a fine gesture if the B.M.A., in selecting its nominees for the next election, gave a woman her chance to make good. I know, of course, that in the B.M.A. women members are treated as doctors and not as women, and the women members themselves have cordially supported this doctrine of a fair field and no favour. But I think that even the most fiercely independent woman doctor would welcome a sign that we men thought it was time a woman should be given an opportunity to show her mettle on the G.M.C. As to the success of such an innovation I have no doubt, for we who have watched the work of our Representative Body and of our Council know that the women representatives who have taken their place on these bodies have done their work well. So I hope the next Annual Representative Meeting will nominate a woman for the G.M.C. If it does I am sure it will not be dissatisfied with the result.—I am, etc.,

London, W.1, Feb. 25th. ALFRED COX.

Obituary

SIR THOMAS GALLWEY, K.C.M.G., C.B.

Major-General, late R.A.M.C.

Major-General Sir Thomas Joseph Gallwey, K.C.M.G., C.B., late R.A.M.C., died in London after a long illness on February 25th, aged 80. He was born at Waterford on April 14th, 1852, the fourth son of the late Henry Gallwey, J.P., of Tramore, County Waterford. From Stonyhurst he went to the Queen's University in Ireland, where he graduated M.D. and M.S. in 1873. Entering the Army Medical Department as surgeon on March 31st, 1874, he became surgeon major in 1885 (a special promotion for services in the Sudan campaign), full colonel in 1898 by another special promotion for service in the Sudan war, and surgeon general in 1902, retiring in 1911.

He had a long list of war service: Afghan war of 1879, capture of Ali Musjid and expedition into Bayar Valley (medal with clasp); Egyptian war of 1882, battles of Kassassin and Tel-el-Kebir (medal with clasp, and Khedive's bronze star); Sudan campaign of 1884–5, with Nile column, in charge of Gubat field hospital and movable field hospitals, and in the engagements in the return of the desert force to Korti (mentioned in dispatches, August 25th, 1885, clasp to Egyptian medal, and special promotion to surgeon major); Dongola campaign of 1896, as principal medical officer (mentioned in dispatches, November 3rd, 1896, medal with clasp, and C.B.); Nile campaign of 1897–8, as principal medical officer of the Egyptian Army, battles of Atbara and Khartum (mentioned in dispatches, May 24th and September 30th, 1898, special promotion to colonel, medal, and two clasps to Egyptian medal); South African war of 1899–1900, as principal medical officer, Infantry Division, and afterwards P.M.O. Natal, actions of Colenso, Spion Kop, Vaal Krantz, Tugela Heights, Pieter's Hill, and relief of Ladysmith, and operations in Natal, including action at Laing's Nek, and in Transvaal (mentioned in dispatches by Sir Redvers Buller on March 30th and November 3rd, 1900, and in *London Gazette* of February 8th, 1901; Queen's medal with six clasps, and K.C.M.G.). He rejoined for service at the beginning of the great war of 1914–18, first as Deputy Director of Medical Services in the Aldershot Command, and in 1916 as D.M.S. of the Home Forces.

Besides the C.B. and K.C.M.G. mentioned above, he received the third class of the Medjidieh in 1896, and in 1918 the degree of LL.D. from the National University of Ireland. In 1892–8 he was seconded for service in the Egyptian Army. From 1902 to 1906 he was P.M.O. of His Majesty's Forces in India. In 1921 he was appointed Colonel Commandant of the R.A.M.C. In his young days he was a keen sportsman. In 1901 he married Maud Margaret Howard, daughter of the late Captain J. W. J. Gifford, 12th Lancers and Honourable Corps of Gentlemen-at-Arms, and widow of Captain C. W. Gordon, R.A.

[The photograph reproduced is by Elliott and Fry, Ltd.]

WILLIAM MITCHELL, M.B., C.M.ED.

Radiologist, Bradford Royal Infirmary

With the death of Dr. William Mitchell of Bradford on February 13th, in his sixty-eighth year, the medical profession loses one of its leading radiologists. Born in Aberdeenshire, Dr. Mitchell was educated at Edinburgh Grammar School, and subsequently spent six years in America engaged in banking. He returned to Scotland to study medicine at Edinburgh University, where he graduated in 1894. Two years later he went to Bradford and entered general practice in the Horton district, which he gave up in 1910 to specialize in radiology. He was appointed honorary radiologist to the Bradford Royal Infirmary, and inaugurated the *x*-ray department at this institution, maintaining a remarkable standard of efficiency and progress therein throughout his twenty-five years of association with the hospital. More recently he was appointed radiologist to St. Luke's Municipal Hospital, Bradford. This again was a new department. The spontaneous appreciation of the quality of his films, expressed by radiological colleagues when they visited St. Luke's a few years ago, showed their opinion of his work. As a radiologist he held a national reputation, and was for many years a member of the council of the British Institute of Radiology. He was an ex-chairman of the Bradford Division of the British Medical Association and an ex-president of the Bradford Medico-Chirurgical Society, and was vice-president of the Section of Therapeutics at the Annual Meeting of the B.M.A. in 1925. A prominent figure in Masonry, he was a Past Master of the Pentalpha Lodge and a Past Provincial Grand Treasurer. He was also an ex-president of the Bradford St. Andrews Society.

Dr. Mitchell unfortunately contracted a severe *x*-ray dermatitis affecting both hands. He lost a finger from this cause, and recently had a malignant axillary gland removed. Several months ago he developed symptoms of paralysis agitans. The nervous condition rapidly progressed, and culminated in his death. He leaves a widow and four married daughters.

Dr. HAROLD FRANKLYN, to whom we are indebted for the foregoing memoir, adds: As Dr. Mitchell's partner for many years I feel I must express my sense of personal regret at the passing of a friend and colleague whom I greatly admired and esteemed. He was a man of the highest idealism and principles in the conduct of his profession and a sincere and loyal friend.

Mr. PETER MCEWAN writes: The death of Dr. William Mitchell will cause deep regret to a wide circle of friends and colleagues within and far beyond Bradford. Like all pioneers, apart from his enthusiastic interest in the rapidly advancing science of radiology, he was a man of outstanding personality. He possessed in a striking degree the characteristics of the Northern Scot—the grit and independence and tenacity of purpose—and was a man of general culture and widespread interests. But, most of all, his friends will remember him for the lovable personal qualities that lay beneath the surface, a generosity which gave liberally to those who needed help, a shrewd understanding of men and things, a pawky sense of humour, and an unusual capacity for loyal friendship. Those who knew him best loved and appreciated him most.

Mr. BASIL HUGHES writes: When *x*-ray work came in Dr. Mitchell was one of the first in this part of the world to take up the study. He was made physician in charge of the radiological department of the Bradford Royal Infirmary. He visited various places, and particularly the Continent, to enlarge his knowledge of the subject, and he missed no development that could be of assistance to

him. It is entirely due to his efforts that the radiological department has assumed the very large proportions and importance that it occupies to-day. He was a wonderful organizer. He organized the whole department and installed the Erlangen deep *x*-ray apparatus for treating inoperable cancer. It was during the years that he unsparingly gave himself up to his work that he contracted *x*-ray dermatitis, affecting both his hands, and for which he had to forfeit two of his fingers. But this condition, painful though it was, never deterred him from giving his services cheerfully and unsparingly to his poorer hospital patients.

A. C. BALLANCE, M.A., M.B., B.CH.

Dr. Alaric Charles Ballance died after a few days' illness at his residence at Hatfield on February 20th, aged 45 years. He was the only son of Sir Charles Ballance, consulting surgeon to St. Thomas's Hospital, and was educated at Eton and Oxford, and in France and Germany. At the outbreak of the great war he was holding a resident appointment at St. Thomas's Hospital.

Having obtained a substitute to carry on the duties he joined the Navy as a temporary surgeon on August 5th, 1914. He served at Antwerp, at Gallipoli, in the Grand Fleet, and at Archangel. Ballance landed on the first day of the landing at Cape Helles, Gallipoli (April 25th, 1915), and also on the first night of the landing at Suvla Bay. He also served in Anzac Cove, and ten years afterwards, when he visited Anzac, he found that his dug-out was but little changed. In Douglas Jerrold's book *The Royal Naval Division* occurs the sentence: "During and after the Krithia battles at Cape Helles, Gallipoli, the evacuation of the wounded had to be carried out night and day, from our front line, or in front of it, under heavy fire, and over ground wholly exposed to view. In this work Surgeon Ballance (and others) did most brilliant and gallant service." In the battle of June 4th, 1915, in the attempt to advance to Krithia Village from Cape Helles, the Anson battalion, to which Ballance was attached, was almost destroyed. The Turks respected the Red Cross; indeed, the majority disliked the idea of fighting against the English. During the battle of Jutland Ballance was in the foretop of the flagship *Orion*. He made sketches of the various stages of the battle, and sent them to his father, who was serving in the Mediterranean. It is not possible during a naval battle to move about and visit the wounded on a battleship: hence he took his station in the foretop. If his duty had not taken him on to the upper deck he would have been battened down in the operating room below the water-line, without any chance of being of service to the wounded until the battle was over. Nevertheless he received the censure of the admiral the next day; but in all likelihood if the admiral had been a temporary surgeon, instead of an admiral, he would have acted as Surgeon Ballance did.

Ballance was one of many who volunteered to serve in the Zeebrugge expedition. Towards the end of the war some of the gunboats on the Euphrates and Tigris were ordered from Basra, the hottest place on earth, to the Orkneys, and from thence to Archangel, one of the coldest places on the earth. Ballance joined the flotilla in the Orkneys. A severe gale was experienced while these flat-bottomed gunboats were crossing the North Sea to Archangel. Fuel and food were exhausted, and if it had not been for the timely arrival of the ubiquitous British trawlers it is probable that a grave disaster would have occurred. Ballance served in the Royal Navy for exactly five years. On demobilization he settled in Hatfield, where he practised till his death. The practice extended over many miles of Hertfordshire. Last year he was vice-chairman of the East Herts Division of the British Medical Association, and at the time of his death was a member of the Executive Committee of the Division. His strong and lovable personality, his devotion to duty, and his high ideals combined to surround him with a great company of devoted patients and friends—poor and rich. He lived the life of service for others. He has left a widow and four children to mourn his loss.

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The death is recorded of Dr. HEINRICH OPPENHEIMER at Nice. He was born in Würzburg in 1870, graduated M.D.Heidelberg in 1892, and took the diplomas of L.S.A. in 1893, M.R.C.P.Lond. in 1895, and M.R.C.S.Eng. in 1899. He served as clinical assistant to the skin department at St. Bartholomew's Hospital and to the Hospital for Diseases of the Skin, Blackfriars. In 1906 he graduated LL.B.Lond., and two years later was awarded the LL.D. for his thesis "Criminal responsibility of lunatics." In 1912 he received the degree of D.Lit. for his thesis "The rationale of punishment," and in 1924 was awarded the Ph.D. for his paper "The constitution of the German Republic." He was called to the Bar by the Middle Temple in 1907, was the recipient of the Campbell-Foster prize, and won the Certificate of Honour (first class) of the Council of Legal Education in 1906. Dr. Oppenheimer was chairman of the Hampstead Division of the British Medical Association in 1909, and acted as a representative of that Division at the Annual Representative Meeting held in Birmingham in 1911. In 1928 he published a book on *Medical and Allied Topics in Latin Poetry*. Dr. Oppenheimer retired from practice some five years ago on account of ill-health.

Dr. THOMAS DIVINE of Fartown, near Huddersfield, died suddenly on February 24th, at the age of 64. He was a native of Kirkintilloch, and graduated M.B. C.M.Glas. in 1892, proceeding to the M.D. in 1905, when he was awarded first-class honours and the Bellahouston gold medal; in 1903 he obtained the D.P.H.Camb. He commenced practice as a partner with Dr. Laird about thirty-five years ago in Huddersfield, where he became very popular. He was a member of the Huddersfield Division of the British Medical Association, and was called to the Bar at Lincoln's Inn ten years ago. His brother, Dr. John Divine, is coroner for Hull. Mrs. Divine died some years ago, leaving a daughter and a son, who is studying medicine.

The following well-known foreign medical practitioners have recently died: Professor MAX JOSEPH, the Berlin dermatologist and author of a work on cosmetics; Dr. IRVING SNOW, a Buffalo paediatrist; Dr. H. MAILLART, president of the Central Committee of the Swiss Medical Federation; Dr. MARIE DERSHEID-DELCOURT, a prominent orthopaedic surgeon of Brussels, and president of the Federation of Belgian University Women, aged 73; Dr. PAUL RABIER of Paris, the organizer of the annual Salon des Médecins; Dr. BERNHARD RAWITZ, extraordinary professor of anatomy at the University of Berlin, aged 75; Dr. KARL KREIBICH, professor of dermatology and syphilis at the German University of Prague, aged 63; Dr. F. v. WEINGARTNER, an eminent woman paediatrist, aged 54; and Professor GIULIO ROVIDA of Buenos Aires, director of the Argentine Biological Institute, aged 36.

Universities and Colleges

UNIVERSITY OF LONDON

At the meeting of the Senate on February 22nd the following professorial appointments were made: *Chair of Genetics* (University College), from January 1st, 1933, J. B. S. Haldane, M.A., F.R.S., since 1922 Reader in Biochemistry in the University of Cambridge, since 1927 Head of the Genetical Department at the John Innes Horticultural Institution, and since 1930 *Fullerian Professor of Physiology* at the Royal Institution. *Chair of Chinese Art and Archaeology* (Courtauld Institute of Art), from August 1st, 1932, W. P. Yetts, O.B.E., L.R.C.P., M.R.C.S., Lecturer in Chinese Art and Archaeology at the Institute.

Professor W. Blair-Bell, M.D., F.R.C.S., was appointed Representative on the Court of the University of Liverpool, and Professor Cyril Burt, D.Sc., was appointed Heath Clark Lecturer for 1933.

UNIVERSITY OF BIRMINGHAM

At the annual meeting of the Court of Governors, with the Chancellor, Lord Cecil, presiding, the resignation of Sir Gilbert Barling, Bt., F.R.C.S., from his office as Pro-Chancellor was received with deep regret, and a resolution was passed recording appreciation of his valuable and devoted service to Queen's College, Mason College, and the University of Birmingham during a period extending over nearly fifty years.

UNIVERSITY OF MANCHESTER

Mr. W. W. Kay, M.Sc., M.B., Ch.B., assistant lecturer, has been appointed lecturer in chemical pathology.

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons this week discussed the Far Eastern crisis, unemployment, taxation, and the mining industry. The Housing (Financial Provisions) Bill was taken in committee.

In the House of Lords, on February 28th, the Earl of Lucan presented a Bill to amend the law relating to pharmacy and poisons, which was read a first time.

Influenza as a Notifiable Disease

Replying to Major Despencer-Robertson on February 23rd Sir HILTON YOUNG said that the question of making influenza a notifiable disease had been frequently considered. He was advised that this course would not be likely to reduce either the morbidity and mortality from influenza or the dislocation of public services during an epidemic. The many clinical forms which influenza took and the many uncertainties of its diagnosis would make it difficult to draw satisfactory conclusions from notification figures. Acute influenzal pneumonia was already a notifiable disease.

Certification of Incapacity in Scotland

On February 21st Sir G. COLLINS, replying to Mr. Graham, said that in the ordinary course of administration an annual circular letter on the subject of the issue of certificates of incapacity for work to insured persons was recently sent by the Department of Health for Scotland to each Insurance Committee in Scotland. With the letter were enclosed statistics showing: (1) the extent to which such certificates had been issued during the year ended June 30th, 1932, by each insurance practitioner in the Insurance Committee's area; and (2) the results of re-examination by the Department's regional medical officers of insured persons to whom certificates of incapacity had been issued. The letter asked Insurance Committees to inquire into the problems presented by the statistics both in respect of their area as a whole and in respect of individual practices. It also called attention to the importance of correct certification and to the unfortunate results accruing from laxity in this respect. Sir G. Collins further told Mr. Graham that it was not the function of the regional medical officers of the Department of Health for Scotland to make any recommendation with regard to the stoppage of national health insurance benefit in the case of an insured person who had been examined by them, and in no case did they do so. The duty of these officers was to furnish the insured person's approved society with an opinion as to his capacity for work. The decision as to the continuance or stoppage of benefit rested with the approved society, from whose decision the insured person had a right of appeal.

All-India Medical Council

Sir SAMUEL HOARE, replying on February 27th to Mr. Parkinson, who asked if the Government of India would consider the advisability of delaying the introduction of the All-India Medical Council Bill until such time as the federal legislature had been constituted, said that the Bill had already been introduced.

Appointments to Panel Committee for Glasgow

On February 28th Mr. MCGOVERN asked the Secretary of State for Scotland the reason for allowing doctors who had no panel practice to serve on the national health insurance Panel Committee for Glasgow, and if they were required to pay the subscriptions similar to "panel doctors."

Mr SKELTON said that the arrangements for the appointment of Panel Committees in Scotland were laid down in regulations which provided that only medical practitioners who are under agreement to treat insured persons should be entitled to take part in the election of members of Panel Committees, that all the members should be duly qualified medical practitioners, and that not less than two-thirds of the members should be practitioners under agreement to treat insured persons. He had no reason to think that the provision whereby these committees might include a proportion of non-panel practitioners was other than a desirable one. The arrangement under which the administration expenses of the Panel Committee for Glasgow were defrayed by means of a system of voluntary subscriptions by practitioners was a private one with which he had no concern.

Sir G. COLLINS also told Mr. McGovern, on February 28th, that the number serving on the Panel Committee for Glasgow had been increased from thirty to fifty-six to provide, among other things, for the fuller representation of medical practitioners in the city, whose numbers had very considerably increased since the original regulations were made.

Physique of Recruits

On February 28th Mr. DUFF COOPER informed Mr Lunn that the figures for the recruiting year 1930–1 in the Army were 82,682 men served with notice papers and 46,818 rejected. The corresponding figures for 1931–2 were 70,418 and 41,667.

Mr. T. WILLIAMS asked if the hon. gentleman attributed this large volume of rejections to a higher standard of military requirements or if it was due to the deterioration in the physique in the manhood of the country. Mr. DUFF COOPER: No; I do not think that any such conclusion could be drawn from these figures. The standard goes up and down in different districts in proportion to the number of recruits that have been obtained.

Lord STANLEY, on February 28th, told Mr Lunn that as the Admiralty required only about one-fourteenth of the total number who offered themselves for the Royal Navy and Royal Marines only the very best men were taken. In the financial year 1930–1 43,453 men offered themselves. Of these, 38,028 were rejected by recruiters for miscellaneous causes including obvious physical defects and 2,451 on examination by medical officers. The comparable figures for 1931–2 were 47,054, 41,063 and 2,781.

On February 28th Sir V. WARRENDER informed Mr Lunn that the figures for men recruits in the Air Force for the calendar year 1931 were as follows: application forms completed, 11,321; applications taken up, 5,914, of which 3,768 were rejected. The corresponding figures for 1932 were 8,265, 2,042, and 1,255. It should be added that the requirements in 1932 were much below those of 1931. Mr. LUNN asked if the answers to all these questions did not show that we were getting towards a C3 population. (*Cries of* "No.") No answer was given to the question.

MEDICAL NOTES IN PARLIAMENT

[THE BRITISH MEDICAL JOURNAL

Spurious Degrees Bill

The Spurious University Degrees Bill which Lord Dawson of Penn is to introduce in the House of Lords makes provision regarding the unauthorized use and issue of degrees and the penalties to be imposed in respect of such unauthorized use and issue. If the Bill passes into law it will be a penal offence: (*a*) for any person to use letters after his or her name which are used by any university within the United Kingdom or the Dominions or Colonies to denote the holding of a degree unless such person actually holds a degree conferred by a recognized university; (*b*) for any company, institution, organization, or individual, not being a recognized university, to confer degrees purporting to be university degrees for profit or otherwise. The penalty on summary conviction for contravention of the former will be not less than £5 and not more than £50, and for contravention of the latter £50 for each offence. With regard to Lambeth degrees nothing in the Bill is to be deemed to refer to an academic degree conferred by the Archbishop of Canterbury, or in any way to impair his authority to confer such degrees in accordance with his existing rights.

A "recognized university," as defined by the Bill is: (*a*) any university situated within the United Kingdom, the Dominions, or the Colonies which only grants academic degrees to persons who have undergone a prescribed course of training for at least three years, or which is in receipt of a university grant from the Government of the United Kingdom, the Dominions, or Colonies, or which is recognized by those Governments as a properly accredited university by Royal Charter or its equivalent; (*b*) any university situated in a foreign country having precisely similar status to those mentioned under (*a*), with analogous recognition from the Government of the country, and whose degrees are recognized by the President of the Board of Education as being equivalent to those conferred by recognized universities in the United Kingdom, Dominions, and Colonies.

Health of Elementary School Children.—Mr. RAMSBOTHAM told Lady Astor on February 23rd that of all the children who entered public elementary schools for the first time in 1931 19.4 per cent. were found to require some medical treatment. Figures showing the proportion suffering from mental defects were not available; such defects were frequently not diagnosed until a later stage. Lady ASTOR remarked that the Chief Medical Officer in his report had said that 27 per cent. of the children in elementary schools were physically defective.

Milk Meals for School Children.—Mr. RAMSBOTHAM, replying to Mr. G. MacDonald, gave a tabulated answer showing that from February, 1932, to January, 1933, approximately 81,043 individual children were provided with free milk meals by local education authorities in Lancashire.

Pension Claims.—Major TRYON, on February 21st, informed Mr. Crooke that the number of pension claims outside the seven-years period which were submitted between January 1st and December 31st, 1932, was 4,847. The number recognized was 361, including cases which required no more than medical or surgical treatment. The aggregate number of late applications which had at any time in past years been recognized was, up to the end of last December, 3,393.

Independent Medical Evidence and Disability Pensions.—On February 27th Mr. HARCOURT JOHNSTONE asked the Minister of Pensions if it was the practice to make fresh medical examinations, on behalf of his Department, of men whose claims to disability pensions had been finally disallowed in cases where fresh evidence had been brought forward by independent medical men. Major TRYON said that where fresh evidence of fact was produced which indicated that the decision was given on an incomplete knowledge of the material facts, such action was taken as might be required, including further medical examination if this was found to be necessary to determine the origin of the condition complained of.

The Lunacy Act and the Patient's Relatives.—Replying to Mr. D. Grenfell on February 23rd, Sir HILTON YOUNG said there were objections to the suggestion that a regulation, acquainting the public with their rights under the Lunacy Act, 1890, Section 79, should be posted up in all waiting-rooms where friends came to visit the inmates of mental institutions. The situation was adequately met by the existing rule which required the managers of every institution, on the admission of a rate-aided person, to send a notice, embodying the substance of Section 79, to all persons whose names appeared as relatives or friends of the patient on the statement of particulars accompanying the reception order.

Pit-head Baths.—Mr. E. BROWN states that ninety-eight mines in England and Wales (besides twenty-eight in Scotland) have pit-head baths in use. Bath installations are in construction at thirty-five other mines in England and Wales and ten in Scotland.

Tuberculosis in Scotland in 1932.—New cases of pulmonary tuberculosis notified in Scotland during the year 1932 numbered 5,512, and non-pulmonary cases 3,888.

Medical News

On February 28th the King received at Buckingham Palace Mr. William Hope Fowler, F.R.C.S.Ed., consulting radiologist to the Edinburgh Royal Infirmary, and invested him with the insignia of a Commander of the Royal Victorian Order.

The eighth annual address to newly qualified medical practitioners and senior students of the London hospitals, arranged by the Metropolitan Counties Branch of the British Medical Association, will be given at B.M.A. House, Tavistock Square, on Tuesday, March 14th, by Mr. Wilfred Trotter, F.R.S., Serjeant-Surgeon to the King and surgeon to University College Hospital. The title of the address is "Emergency."

A lecture on thirty years' progress in the study of rheumatic heart disease, prepared by the late Dr. Carey Coombs of Bristol, will be read by Dr. C. Bruce Perry of Bristol at University College Hospital Medical School, University Street, London, W.C.1, on Tuesday, March 14th. The chair will be taken by Dr. F. J. Poynton at 5.30 p.m. The lecture, which will be illustrated by lantern slides, is addressed to students of the University of London and to others interested in the subject; admission free without ticket.

Professor Elliot Smith's course of afternoon lectures at the Royal Institution on the evolution of the mind, announced for March 16th, 23rd, and 30th, and April 6th, and his Friday evening discourse on March 24th, will not be given for the present. The Friday evening discourse on March 3rd is being given by Sir Douglas Mawson on the new Polar province. Lord Ashfield's discourse on London passenger transport will be given on March 24th instead of March 3rd.

An address on religion, science, and philosophy will be given by the Dean of St. Paul's on Tuesday, March 14th, at 8.15 p.m., at University College, Gower Street, W.C., with Sir Herbert Samuel in the chair. The meeting is open to the public, and tickets can be obtained from the director of studies, British Institute of Philosophy, University Hall, 14, Gordon Square, W.C.1.

A paper on recent developments in the warming and ventilation of buildings will be read by Mr. J. L. Musgrave at the Royal Society of Arts, John Street, Adelphi, W.C., on Wednesday, March 8th, at 8 p.m.

The annual general meeting of the Medical Officers of Schools Association will be held at 11, Chandos Street, W.1, on Friday, March 10th, at 5 p.m., when Dr. J. A. H. Brincker will deliver his presidential address.

At the next scientific meeting of the Zoological Society of London, on Tuesday, March 7th, at 5.30 p.m., the communications will include a paper by Dr. R. Crawford, on the structure of the head of the anopheline larva, with observations on its method of feeding (Diptera: family *culicidae*).

At the annual general meeting of the Association of Economic Biologists, held in the Imperial College of Science on February 24th, Professor W. B. Brierley, editor of the *Annals of Applied Biology*, was elected president for the ensuing year.

The Royal Sanitary Institute will hold a sessional meeting, in conjunction with the Yorkshire branch of the Society of Medical Officers of Health, at the Royal Baths, Harrogate, on Friday, March 17th, commencing at 4.30 p.m. After a reception by the Mayor of Harrogate, there will be discussions on the problem of bacillary dysentery, to be opened by Dr. J. A. Charles, medical officer of health, Newcastle-on-Tyne, and on food inspection from the administrative aspect, to be opened by Lieut.-Colonel J. A. Dixon, chief veterinary officer, Leeds. On March 18th visits will be made to the Harrogate and District General Hospital, the baths, and the new municipal offices.

Continuing the series of lectures arranged by the Fellowship of Medicine and Post-Graduate Medical Association at 11, Chandos Street, Cavendish Square, on practical problems in medicine and surgery, Mr. C. Price Thomas will lecture on empyema on Tuesday, March 7th, at 4 p.m. (The lecture is free to members and associates of the Fellowship.) A debate will take place on March 9th, at 9 p.m., at 11, Chandos Street, on the motion "that immediate operation is indicated in every case of 'acute' appendicitis," when Lord Moynihan, president of the Fellowship, will occupy the chair, and the principal speakers will be Mr. R. M. Vick and Mr. W. H. Ogilvie for the motion, and Mr. V. Zachary Cope and Mr. R. J. McNeill Love against. Members and associates of the Fellowship and their friends are cordially invited. On March 21st, at 8.30 p.m., Mr. R. Lindsay Rea will give a demonstration on the fundus oculi at the West End Hospital for Nervous Diseases, Gloucester Gate, N.W. Forthcoming courses include psychological medicine at the Maudsley Hospital, Denmark Hill, from March 14th to April 7th, neurology at the West End Hospital for Nervous Diseases, 73, Welbeck Street, March 13th to April 8th, and proctology at the Gordon Hospital, Vauxhall Bridge Road, from March 20th to 25th.

The University of Heidelberg has issued a programme of lectures in connexion with the various activities which will be held during the spring and summer of this year. Applications for copies of this programme should be addressed to the secretary, Ruprecht-Karls Universität, Heidelberg, Germany.

The fourth Pan-American Medical Congress will be held at Dallas, Texas, from March 21st to 26th.

The forty-eighth German Balneological Congress will be held at Baden-Baden from April 4th to 8th under the presidency of Professor Dietrich. The chief subjects for discussion will be the importance of diagnosis for spa treatment, and the position of climatology. Further information can be obtained from the general secretary, Dr. Max Hirsch, Derflingerstrasse 7, Berlin, W.35.

Under the designation of the fourteenth "Concilium Ophtalmologicum," an international ophthalmological congress will be held at the Palace Hotel, Madrid, from April 16th to 22nd. Specially reduced terms for residence in this hotel during the congress are obtainable. For further information inquiries should be addressed to the conference secretary, Dr. F. Poyales, Olózaga 3, Madrid.

The following medical tours will take place in the South of France during the Easter period. From April 10th to 18th there will be a tour of the Provence and Riviera districts, during the course of which visits will be paid to Marseilles, Aix-en-Provence, Les Baux, Arles, Cassis, La Ciotat, Hyères, St. Raphaël, and Cannes. From April 16th to 23rd there will be a tour along the Riviera, visiting Cannes, Antibes, Juan-les-Pins, Grasse, Vence, Nice, Mentone, and Monte Carlo. The tours will be under the scientific direction of Professors Imbert and Olmer of the Faculty of Medicine of Marseilles, and Dr. Georges Baudouin of the Institute of Hydrology and Climatology at the Collège de France. Full information as to the cost of the tours may be obtained from the secretary, Société Médicale du Littoral Méditerranéen, 24, Rue Verdi, Nice (A.M.).

Dr. Stephen Jellinek, professor of electro-pathology at Vienna, has been awarded the Barbier prize by the Institut de France.

With reference to the announcement made in the *Journal* of February 18th (p. 284) of the Lady Tata Memorial Scholarships for research in blood diseases, we are now informed that the total number of scholarships has been increased to four, and they are open to candidates from all nations, including India. Nominations in respect of Great Britain and the Dominions will be made by the advisory committee in London to the trustees in Bombay. Applications may be addressed either to Dr. H. S. Patel, c.o. Messrs. Tata Ltd., Capel House, 62, New Broad Street, London, E.C.2; Professor A. Vacha, Calvinstrasse 27, Berlin, N.W.40; or to the Lady Tata Memorial Trustees, c.o. Messrs. Tata Sons Ltd., Bombay House, Bruce Street, Fort, Bombay.

Messrs. J. & A. Churchill announce for early publication *Recent Advances in Radium*, by Drs. Roy Ward and Durden Smith of the Radium Institute, London; *Recent Advances in Sera and Vaccines*, by Drs. A. Fleming and C. F. Petrie; *Recent Advances in Endocrinology*, by Professor A. T. Cameron; and *The Practice of X-Ray Therapy*, by Dr. Hugh Davies.

Die Zeitschrift für Kreislaufforschung, the German-speaking special organ for the pathology, physiology, and clinical study of diseases of the heart and vessels, began its twenty-fifth year on January 1st, 1933. For this reason the co-editor, Professor Ed. Stadler (Plauen), gives in this number a detailed review of twenty-five years of research on the circulation, and points out how necessary the development and improvement of an independent journal became owing to the constantly increasing significance of research in the fight against circulatory diseases. Since the first meeting of the German Society for Research on the Circulation in 1928 this journal has become its official organ. It is published by Theodor Steinkopff, Dresden.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, B.M.A. House, Tavistock Square, W.C.1.**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names, not necessarily for publication.

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of proofs.

All communications with reference to ADVERTISEMENTS, as well as orders for copies of the *Journal*, should be addressed to the Financial Secretary and Business Manager.

The **TELEPHONE NUMBERS** of the British Medical Association and the *British Medical Journal* are MUSEUM 9861, 9862, 9863, and 9864 (internal exchange, four lines).

The **TELEGRAPHIC ADDRESSES** are:
EDITOR OF THE *BRITISH MEDICAL JOURNAL*, *Aitiology, Westcent, London.*
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The address of the Irish Office of the British Medical Association is 18, Kildare Street, Dublin (telegrams, *Bimaipo, Dublin*; telephone: 62550 Dublin), and of the Scottish Office, 7, Drumsheugh Gardens, Edinburgh (telegrams, *Associate, Edinburgh*; telephone: 24361 Edinburgh).

QUERIES AND ANSWERS

Models of Orbit

"MANCHESTER" writes. Can any reader inform me where models may be hired to study the anatomy and physiology of the orbit?

An Obscure Parasite

Dr. I. H. MACIVER (Fort William) writes: Dr. D. J. MacLeod, one of H.M. inspectors of schools in Scotland, who is also one of the foremost Celtic authorities of the day, recently got hold of an old Gaelic book dealing with the Highlands and Islands of Scotland. In this book there is a case quoted of a man who had a much swollen cheek, to which was applied a poultice of barley dough. After several hours, when the poultice was removed, "a little worm," half an inch in length and about the thickness

of a goose quill, with a pointed head and many little feet on each side, was extracted by means of the poultice from his cheek. It seems that the people of those days were familiar with this type of worm, and that they called it "fiolan" or "fillan" (the Gaelic names), and it was reported that many of these worms were found in the heads and necks of people in the Island of Skye. Can any of your readers identify this parasite?

Treatment of Mucous Colitis

Dr. A. J. MOSKOW (London, N.W.8), in answer to Dr. C. J. Grosch's query in the *Journal* of January 28th (p. 172), writes: The most salient feature in the history of this patient, and one to which very little attention seems to have been paid, is the fact that the patient had hay fever, which began in the same summer as the colitis. This important fact to my mind immediately indicates an allergic basis as being the underlying cause of upset, and treatment should be directed accordingly. The first step should be the performance of skin tests, as by this measure any allergen(s) to which the patient is hypersensitive will probably be discovered.

Income Tax

Deduction of Tax from Mortgage Interest

"B. B." inquires how the deduction of tax affects the borrower.

** The tax deducted, at standard rate, has to be handed over to the State, leaving the borrower ultimately in the same position as if he had paid the interest in full. Thus, suppose a house assessed at £60 is mortgaged for £800 at 5 per cent., then the owner will pay £60 at 5s. = £15 income tax on the house, but will keep back £40 at 5s. = £10 from the mortgagee, so that he will have had a net assessed income of £60 − £40 = £20 from the house and paid £15 − £10 = £5 income tax thereon. The total net tax payable by "B. B." cannot be calculated as he does not state how much of the £703 total income is investment income as distinct from earned income.

Expenses of New Partnership

"F. A. A." inquires whether he can claim to deduct expenses incurred in obtaining a new partner.

** No. Such expenses are not incurred in the carrying on of the practice, but in rearranging the proprietorship; they are of a capital nature, and are not allowable for income tax purposes.

Premiums on Guarantee Policy

"D. M. G." has purchased a half share in a practice, and to finance it borrowed from the bank against the security of a life policy and a guarantee policy by the same company. Are the guarantee premiums deductible? "D. M. G.'s" accountants quote the case of Ryall *v.* Hoare as supporting the claim.

** In our opinion the premiums are not deductible as expenses incurred in carrying on the practice. Prima facie they are made for the safeguarding of the capital position of one person against the contingencies of death, etc., of the other, and as such are not allowable. There is a distinction between that position and the one in the case quoted, where the capital sum was not paid to an individual in respect of his capital share in the concern, but was advanced to the proprietors and used in carrying on the firm's business activities.

LETTERS, NOTES, ETC.

Recovery from Pneumococcal Meningitis

Dr. RUPERT WATERHOUSE writes: In my letter published in last week's *Journal* (p. 339) "1,500 leucocytes per c.cm." should, of course, read "1,500 leucocytes per c.mm."

"Cough in Childhood"

Dr. L. A. PARRY, F.R.C.S. (Hove), writes: Dr. Moncrieff, in his excellent paper on cough in childhood in last week's *Journal*, makes the following observations: "In some animal experiments I carried out last year it was found that hot moist air quickly caused fatal oedema of the lungs if the temperature was allowed to approach that of the body." Will he be good enough to inform us what possible benefit to humanity could have resulted from these experiments of scalding animals to death, experiments which must have entailed so much needless suffering to some poor wretched creatures?

Dr. ALAN MONCRIEFF, to whom we have referred the preceding letter, writes: The experiments in question were carried out on fully anaesthetized animals which were killed without being allowed to recover, so that no "suffering" was entailed. As regards the benefit to humanity, there is so much "needless suffering" caused to helpless babies and young children (unanaesthetized) by the indiscriminate and amateur use of a steam tent or even a steam kettle where the temperature of the inspired air is allowed to rise too high (cf. the "prescription for killing a baby with pneumonia" in Dr. Robert Hutchison's *Lectures on Diseases of Children*) that it seemed worth while to attempt to determine at what temperatures hot moist air ceased to be beneficial and became dangerous.

Treatment of Alveolar Abscess

Dr. G. S. GARDNER (Leigh, Lancs) writes: I hope that Dr. G. Graham Macphee's letter in the *British Medical Journal* of February 11th (p. 249) will be reproduced in every dental periodical. It is the dental profession who have the last "say" in the case of an alveolar abscess, and in my opinion are largely responsible for the patients delaying "until the swelling goes down." Over and over again I have referred such patients to their dentist, and most of them have returned to tell me he would not touch it, but were instructed to see him again "when the swelling has gone." Quite recently I sent a panel patient who had an alveolar abscess recurring for the third time; he got a similar "wait" answer. Thereupon the patient reported me to the Insurance Committee because I would give him nothing to ease his pain.

Teaching of Tropical Medicine

"D.P.H., D.T.M. AND H.," writes: I have read Colonel W. P. MacArthur's article on the teaching of tropical medicine in your issue of January 28th with much interest, for not only have I been through the mill as a student for the D.T.M. and H., but have since had a fair amount of experience in coaching students for examinations in tropical medicine. I, too, have found that defective training in general medicine is the chief cross which the average student has to bear. Overcrowding of the curriculum is a fault which should not, but still does, occur. It is to my mind a gross waste of the student's time, and a needless strain on his memory, to foist on him the mysteries of vital statistics or the finer details of biophysics and biochemistry —to quote a few examples. Students for a D.T.M. and H. are of three main types: (*a*) the Colonial Service medical officer, who is sent to acquire a rudimentary knowledge of tropical diseases; (*b*) the medical missionary, who is going to work in the field—often quite alone—where a knowledge of diagnosis and treatment is essential; (*c*) the man who, already a specialist, needs a D.T.M. and H. for much the same purpose as a man at home requires a D.P.H. for certain public appointments. Obviously (*a*) and (*b*) are not deeply concerned with the number of veins on the wing of a mosquito, and (*c*) is probably also not interested, or else already knows the subject. Type (*c*) may require the D.T.H., but has to wade through the D.T.M. to get it. As regards the examinations themselves, it would help the candidate if he were to have his own name and appointment known to the examiner instead of being a mere number. Lastly, students up for a diploma in a special subject should not underestimate the examination. Diplomas in special subjects are not awarded for time-serving.

Medical Golf

The following are the fixtures of the Medical Golfing Society for 1933: *Thursday, May 25th.*—Summer meeting at Walton Heath, by kind permission of Lord Riddell. *Thursday, July 6th.*—Canny Ryall Cup for mixed foursomes at Northwood. *Saturday and Sunday, October 21st and 22nd.*—Autumn meeting at Littlestone. *Thursday, December 7th.*—Annual meeting and dinner.

Members of the Marylebone Division of the B.M.A. who wish to compete for the Treasurer's Cup are asked to forward their names and lowest handicap to Dr. Rolf Creasy, 152, Harley Street. Particulars of the competition will be announced shortly.

Vacancies

Notifications of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 44, 45, 46, 47, 48, and 49 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 50 and 51.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 83.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

158 Simple Achlorhydric Anaemia

O. B. BODE and W. WEISSWANGE (*Deut. med. Woch.*, December 16th, 1932, p. 1995) state that they have found the condition which they term "simple achlorhydric anaemia" described under at least fifteen different names. It occurs most commonly in females, rarely in males, and usually in the fourth to fifth decade. As a result of the achlorhydria the patient first complains of "indigestion"; later there is anaemia, dyspnoea, and lassitude. Sometimes there is lingual pain and dysphagia; less often paraesthesias and sternal pain are encountered. Menorrhagia is common. On examination the pallor of the patient is striking; the surface of the tongue is smooth and atrophic, and the finger-nails are brittle and hollowed out. Heart sounds resembling those of anaemia are heard on auscultation. The spleen is often enlarged. Achlorhydria is found on examination of the stomach contents. The examination of the blood reveals a low colour index; the red blood corpuscles are smaller and paler than normal, but poikilocytosis is uncommon, and leucopenia is the rule. The condition can readily be differentiated from other forms of anaemia. The specific therapeutic drug is iron; liver alone is valueless, but in some cases, if given in conjunction with iron, the results are good. Hydrochloric acid and pepsin do not improve the condition if iron is withheld. Ferrum redactum is the preparation of choice; it should be given in large doses over a long period. The authors believe that the anaemia is attributable to the achlorhydria. In some cases the anaemia may be due to the lack of iron in the diet which patients with "indigestion" take. The authors do not believe that there is any connexion between simple achlorhydric and pernicious anaemia.

159 Prognosis in Cardiac Disease

Discussing the principles governing prognosis in heart disease, L. E. HURLEY (*Med. Journ. of Australia*, December 3rd, 1932, p. 677) defines three main questions that have to be considered. (1) What is the degree of damage to the cardiovascular system as a whole, and particularly to the myocardium? This is estimated by a careful study of the symptoms, for abnormal physical signs indicate structural changes, the significance of which is revealed by any resulting disturbance of function. (2) Is the apparent damage, as estimated by symptoms and signs, due to a temporary or a removable cause? (3) What is the possibility or probability of further change in the future? There may be, for example, extension of syphilitic infection of the heart, or the gradual wearing down of a heart working under the strain of some mechanical disability, or the loss of functional power associated with advancing years. Before attempting to estimate the degree of permanent cardiac damage such conditions as auricular fibrillation, a septic gall-bladder, or a toxic goitre should be dealt with. Again, myocardial exhaustion resulting from over-exertion or insomnia should first be eliminated by a period of sleep. Shortness of breath on exertion conveys no definite meaning until it has been carefully considered with regard to the patient's age, sex, weight, habits, nervous temperament, and the amount of exercise required to produce it. Dyspnoea and pain are two symptoms of special importance, the first being due chiefly to an insufficient supply of oxygenated blood to the tissues and cerebral centres, and the second to a similar deficiency as regards the myocardium. Nocturnal disturbances of breathing may precede any marked shortness of breath on exertion. Attacks of cardiac asthma or acute pulmonary oedema are of grave prognostic significance. A diagnosis of bronchial asthma, occurring for the first time in a middle-aged or elderly patient, should be made with caution, and only after cardiac and renal disease and tumour and aneurysm in the chest have been excluded so far as is possible. The necessity of using a higher pillow at night is a common symptom of commencing heart failure, and may precede by quite a considerable time definite attacks of cardiac asthma. It is usually of serious prognostic omen, indicating a fairly severe degree of myocardial involvement, particularly in syphilitic heart disease, although it may be present in certain types of cardiac disease, especially rheumatic conditions associated with mitral stenosis. As regards angina, the main difficulty in practice is to distinguish the organic form from the secondary or toxic variety. The pain is severe in both types, but is short in duration in organic angina, and frequently prolonged in the toxic condition, which also is described by the patient as being cutting or stabbing—terms rarely used by patients suffering from true angina. True anginal pain is of definite prognostic import; excluding patients who die during the first attack, the average duration of life is five to six years, but shortness of breath is of grave import, cases of syphilis are unfavourable, and the presence of pulsus alternans or cardiac asthma adds to the gravity of the prognosis. Syncopal attacks, palpitation, and a sense of exhaustion are of less prognostic significance, and the presence of systolic murmurs is, according to Hurley, no justification for telling the patient that he has a leaky valve. Unless in severe degree, mechanical defects are rarely by themselves of prognostic import, except when their causative factor, such as rheumatism, is advancing.

160 Epidemic of Weil's Disease

P. ROMIJN (*Nederl. Tijdschr. v. Geneesk.*, December 24th, 1932, p. 5832) records an epidemic of Weil's disease which occurred in August and September, 1932, at Dordrecht in Holland. The outbreak on the whole was mild, there being only one death among forty-seven cases. In fifteen cases the other symptoms were accompanied by jaundice, and in nineteen there was renal involvement, but none showed anuria or uraemia. Haemorrhage in the form of purpura, blood-stained sputum, and epistaxis occurred in 38 per cent., but in no case was it of a serious character. In one-third of the cases there were one or more relapses. The infection in thirty-four of the forty-seven cases was attributed to two swimming baths in a certain canal which was swarming with thousands of infected rats.

Surgery

161 Intestinal Obstruction

M. A. MCIVER (*Arch. of Surg.*, December, 1932, p. 1106) reviews a series of 335 cases of obstruction from all causes, and points out that strangulated external hernia is the aetiological factor in nearly half the cases. Obstructions from neoplasms are responsible for 10 per cent of cases, with bands and adhesions, intussusceptions, and volvuli coming next in frequency. The series shows a large preponderance of cases in males, and the age varies according to the various types of obstruction; in strangulated external hernia a striking peak occurs in the fifth and sixth decades. Interference with the mesenteric circulation forms a serious and frequent complication, and was present in 63 per cent. of cases, while interference with the capillary circulation from distension occurred in thirteen instances. The majority of cases (249) showed obstruction in the small intestine, where it is more rapidly fatal than in the colon. The mortality in the total number of cases was 31 per cent., and was very high in infants and in patients over the age of 50. The cardinal symptoms of obstruction are pain, vomiting, and constipation. The pain varies greatly in intensity and

location, being very severe in cases of strangulation; colicky and localized near the umbilicus in obstructions of the small intestine; and localized over the site of obstruction when this is in the large intestine and has existed for some time. Vomiting in the later stages consists of a yellowish foul-smelling fluid characteristic of the contents of the obstructed small intestine. Emphasis is laid by the author on the importance of early diagnosis and treatment, since this greatly affects the chance of recovery. Treatment, which must be surgical, may consist of relief of the obstruction with or without drainage, drainage only, or resection with immediate or delayed anastomosis. Treatment of dehydration by the administration of large quantities of salines is highly important. Local or spinal anaesthesia is usually the most satisfactory, although for patients seen early a general anaesthetic is frequently safe.

162 Rupture of the Tendon of the Brachial Biceps

J. GUIBAL and R. GENTIN (*Rev. de Chir.*, December, 1932, p. 793) report two cases of rupture of the tendon of the biceps. In each case the lesion occurred during a sudden and violent movement during which the forearm was forcibly extended, but it can also take place almost spontaneously as the result of a normal gesture following a slight muscular contraction. This form of rupture may occur at any age, although it is most common during the years of greatest muscular activity. A pathological condition such as chronic inflammation of the bursa lying between the tendon at the point of its attachment to the radius will predispose towards the rupture, but the most important aetiological factor is undoubtedly syphilis, either in the form of a gumma or as a gummatous infiltration. The pain following injury varies in intensity; it is usually sudden and may be sufficiently acute to make the patient drop whatever he is lifting. This pain is accompanied by a sensation of cracking and snapping and by immediate loss of function. When at rest the injured part is asymmetrical and shows a muscular projection in the form of a swelling. A haematoma is generally present and is accompanied by bruising in the course of a day or two. Except in special cases surgical intervention is necessary; this must be early and strictly aseptic in order that healing may be rapid and functional power be restored. The ideal to be aimed at is to obtain a normal anatomic reposition to the posterior side of the tuberosity of the radius. The tendon must be fixed behind the tuberosity of the radius for complete restoration of the action of the biceps to ensue, but when this is not possible the tendon may be sutured to the brachialis anticus as near as possible to its insertion at the elbow. Five months after operation in the two cases reported there was only slight functional disability. It is necessary in every case to reconstitute as perfectly as possible the aponeurotic expansion of the biceps.

163 Perinephric Abscess

C. C. HIGGINS and M. F. HICKEN (*Ann. of Surg.*, December, 1932, p. 998) record a detailed study of thirty-two cases of perinephric abscess. They consider that, in spite of the high operative mortality of 19 per cent., insufficient interest is taken in the subject, and in consequence the pathological processes are not recognized until the patient is in a critical condition. Pyogenic bacteria reach the perirenal tissues by direct extension from an infected kidney or adjacent tissue, by lymphatic dissemination from a primary focus, or by haematogenous metastasis. Pyonephrosis, nephrolithiasis, renal tuberculosis, and cortical abscess are the most common causes of perirenal infection. In the series under review the kidney was involved nineteen times. Some of the nephritic infections were not primary in the kidney, but were secondary to systemic foci. When the kidney is infected the parenchyma is invaded, multiple abscesses are formed, and sometimes the cortex is covered with small localized areas of inflammation which may rupture and produce a perinephritic infection. Such infection, due to extrarenal disease, may be caused by some suppurative focus such as is found in appendicitis, cholecystitis, osteomyelitis, ulcerative colitis, pneumonia, typhoid, and influenza. Local infections such as boils, felons, furuncles, and abrasions may lead to perirenal inflammations. Perinephric abscess may occur at any age, but is most common between the ages of 20 and 40, and is more often found in men than in women, probably due to the more strenuous character of their work. Trauma, by which the resistance of the injured tissue is lowered and which permits bacterial invasion, is an important predisposing factor in perirenal infection. The mode of onset varies according to the origin of the perinephritic inflammation. When this is due to pyonephrosis or calculi the onset is insidious with fever and generalized malaise. When the condition is the result of metastatic infection the onset is frequently acute and sudden with rigor and symptoms of a systemic infection. Pain, which may be intense, is usually localized to the costo-vertebral angle, but may be referred to other parts. Abdominal rigidity was present in 50 per cent. of cases and a definite tumefaction in the lumbar hollow was felt in 38 per cent. In uncomplicated cases of perinephric inflammation free incision and drainage is the best treatment, but this should be undertaken as early as possible. In the thirty-two cases under review there were two deaths; after two years twenty-five patients were well and free from symptoms.

Therapeutics

164 Treatment of Parathyroid Tetany

As the result of an experimental investigation, followed by clinical trial, P. SCHULTZER (*Acta Med. Scand.*, 1932, Fasc. I–II, p. 15) recommends a combined course of treatment for post-operative parathyroid tetany. In a dog from which the parathyroids had been removed and which was kept on an ordinary diet it was found that the serum calcium was quickly increased by parathyroid injections, but a quick fall followed. Moderate daily doses of calcium chloride and vitamin D brought about no increase of the serum calcium, even if the tetany symptoms were slightly relieved. When this latter treatment was associated with injections of parathyroid extract the serum calcium was raised to a higher level and was maintained there. While still uncertain of the best way of treating parathyroid deficiency the author had to deal with a serious case of post-operative tetany. He found that rather small doses of calcium chloride and parathyroid extract raised the serum calcium to the normal level. Stopping either of these medicaments caused the serum calcium content to fall again. When the serum calcium had been increased during the treatment of the patient in this way it was discovered that it was possible to maintain the normal calcium level in the blood serum without supplying the hormone, provided that vitamin D was administered. In a second case of the same kind simultaneous exhibition of calcium chloride, parathyroid extract, and cod-liver oil raised the blood calcium to the normal level. The hormone treatment lasted about one month. About three weeks after stopping it a decrease occurred in the calcium level, the patient having on her own initiative ceased to take the cod-liver oil. The serum calcium was again raised, although rather more slowly than before, by means of irradiated ergosterol, the vitamin content of which was equivalent to that of more than 100 grams of cod-liver oil. Schultzer concludes that the treatment of post-operative tetany should be as follows. Injections of parathyroid extract are given immediately, in association with the oral administration of calcium chloride and vitamin D. As soon as the blood calcium figure has reached the normal the hormone injections are stopped and the level of the calcium is maintained solely by means of calcium chloride and vitamin D. The author adds that it is very necessary to impress on the patient that the calcium chloride particularly must be taken regularly. He mentions that it appears that parathyroid extract injections do not continue to have the same quick effect when used repeatedly for a longer time than that stated.

165 Calcium in Gastro-Intestinal Disorders

E. PODOLSKY (*Med. Journ. and Record*, December 7th, 1932, p. 473) defines three therapeutic basic actions of the calcium ion: it reduces cell permeability and transudation, it relieves nerve hyper-irritability, and it favours phagocytosis. In jaundice some of the symptoms appear to be related to calcium deficiency; this form of therapy seems to be a dependable prophylactic against post-operative haemorrhage in patients with obstructive jaundice, cholecystitis, and cholangitis. Calcium is useful in diarrhoea, particularly in tuberculous enteritis. It has also proved effective in forms of alimentary toxaemia, such as cholera infantum, summer diarrhoea, and acute indigestion, when the clinical picture is that of an infection with severe general symptoms and grave prognosis. It has been commended for both mucous and ulcerative colitis, possibly owing to the relief of the nervous irritability. Intravenous injections of calcium have been found to act more rapidly and constantly than morphine injections in allaying the acute pain of colic due to gallstones and lead poisoning. Podolsky emphasizes the point that suitable preparations of calcium may be of great value when injected into the muscles by reason of there being thus secured a steady flow of calcium into the blood stream; an effective relief of nervous spasm results, as well as reduction of cell permeability and transudation. He prefers the gluconate, which is readily absorbed by the mouth and is not irritating to the tissues or the veins. Illustrative cases are recorded.

Disease in Childhood

166 Prevention of Rickets

On the basis of a carefully controlled study of infants and children encountered in the course of private practice, F. T. MITCHELL and S. W. COLEY (*Journ. Amer. Med. Assoc.*, November 10th, 1932, p. 1768) suggest a scheme whereby the incidence of rickets may be decreased. The first step in the investigation was to determine the incidence of rickets in untreated infants in the locality. In this "control group" the disease was diagnosed clinically in 54.2 per cent.; in the treated group the figures were 22.3 per cent. diagnosed clinically and 15.9 per cent. established by radiological examination. As usual, there was a somewhat higher percentage incidence in boys. The authors emphasize the value of radiological examinations in establishing the diagnosis and in determining the degree and advancement of the rachitic process; they are also very helpful in the evaluation of healing and repair. The conclusions of the study are listed as follows. Either cod-liver oil in doses of two or three teaspoonfuls daily or viosterol in doses of eight or ten drops daily were found to exert a definite influence against the development of rickets in children living in good hygienic surroundings. In spite of this therapy, however, there was a distinct incidence of *rachitic manifestations*. The administration of cod-liver oil in this dosage completely protected 82 per cent. of the infants, while the aforementioned dose of viosterol fully protected no more than 75 per cent., in spite of the fact that this amount of the medicament contains a little more than twice the quantity of vitamin D present in the daily dose of cod-liver oil. The lowest prevalence of rickets (9.9 per cent.) was found in a group of infants who were given sun baths in summer and cod-liver oil or viosterol in winter. It appeared that the exhibition of ultra-violet rays was a satisfactory substitute for sun baths, the incidence of rickets in those so treated being only 13.6 per cent. The authors believe that in the causation of rickets there must be other factors than deficiency of vitamin D. They suggest that such factors include a comparative deficiency of vitamin A, a deficiency of minerals in the diet, and perhaps some other as yet unrecognized agent in the combating of which the influence of light possibly has as important an influence as in the activation of ergosterol. It is advised, therefore, that as much exposure to sunlight as possible should be secured during the summer months, and be followed in the winter by regular treatment with ultra-violet rays.

167 Giardiasis in Young Children

J. ZAHORSKY (*Arch. of Pediat.*, September, 1932, p. 627), who records eight cases in children aged from 6 weeks to 6 years, states that the *Giardia intestinalis* is frequently found in the faeces of children, less often of infants. In older children its presence is not always accompanied by a recognizable digestive or nutritional disturbance. In infants, however, the infestation produces an increased intestinal peristalsis, a lessening of food absorption, and a consequent retardation of growth. Bismuth salicylate in full doses several times a day for a week or more improves the general condition, and may remove the parasite permanently. Stovarsol, in doses of 1 or 2 grains once or twice a day, is useful in refractory cases.

168 *Erysipelas in the First Three Months of Life*

P. NOBÉCOURT (*Gaz. des Hôp.*, October 8th, 1932, p. 1457), who reports an illustrative case in a male infant aged 3 weeks, states that erysipelas in the newborn usually starts in the infra-umbilical region and is due to puerperal streptococcal infection in the mother. It may, however, commence in any part of the skin, as in older children. In the newborn and in infants up to the age of 3 months erysipelas runs its course in the same manner whatever its localization may be, giving rise to streptococcal septicaemia with multiple localizations of the streptococcus, such as abscesses, gangrene, peritonitis, bronchopneumonia, empyema, and suppurative pericarditis. The gravity of erysipelas before the age of 3 months is due to the weakness of resistance at this age and indicates the absence of any natural immunity. Erysipelas offers a striking contrast with measles, which is exceptional before the age of 3 months and rare between 3 and 6 months, not because the infant has a natural immunity, but because the mother who has had measles transmits to the infant a specific though transient immunity.

Obstetrics and Gynaecology

169 Ante-natal Treatment of Breech Presentations

According to H. C. E. DONOVAN (*Med. Journ. of Australia*, November 19th, 1932, p. 617) breech presentations are a very real cause of foetal death and of danger to the mother. Statistics of the maternal morbidity and mortality are unavailable, but foetal ones show an appalling stillbirth and neo-natal rate. The maternal results are less favourable than in vertex deliveries owing to the increased risk of infection and the greater incidence of gross mechanical lesions, causing more or less chronic invalidism and necessitating subsequent surgical operations. Important diagnostic points are the presence of the breech at the pelvic inlet and the head either under the liver or spleen. In anterior positions the back is readily felt at the level of the umbilicus; in posterior positions the back is less easily localized, but the groove of the neck can be felt and the head is more prominent, its roundness, hardness, and mobility being more easily demonstrated. Excess of abdominal fat, nervousness of the patient, and rigidity of the abdominal muscles may render diagnosis difficult. The last two conditions may be overcome by skilful abdominal palpation, though in some cases a general anaesthetic may be necessary. In obesity and acute hydramnios *x* rays are of diagnostic value. The position of the foetus is really immaterial and its attitude is of major importance. Abnormal attitudes are departures from the attitude of universal flexion. Foot and knee presentations are not grave; a frank breech (hips flexed and knees extended) is a serious complication. *X* rays may be needful to diagnose the attitude correctly. Skilful delivery greatly reduces the

bad results to both child and mother in breech presentations. External cephalic version is the method of choice. This is usually recommended about the thirty-fifth week; Donovan advises that it be performed a few weeks earlier, while turning is still easy. In all methods the general principles are the same, and success depends on completely disengaging the presenting part and raising it above the pelvis, and making the foetus as ovoid as possible by compression and flexion. Contraindications to this method are ante-partum haemorrhage and fibroids. In placenta praevia the pelvic presentation is an advantage, and in accidental detachment of the placenta the necessary manipulations would be dangerous. In contracted pelvis version, if easily accomplished, is indicated, since the head is a better pelvimeter than the breech. Indications for Caesarean section are identical with those in vertex presentations, and arise chiefly in frank breeches. Induction of labour during viability and term is inadvisable owing to the increased risk of intracranial trauma, the tentorium cerebelli of premature infants being especially liable to injury by quite small stresses; in definite post-maturity, however, labour should be induced by drugs seven to ten days after calculated term.

170 Granulosa-Cell Tumours of the Ovary

E. FAUVET (*Zentralbl. f. Gynäk.*, December 17th, 1932, p. 3088) has found no fewer than 10 per cent. of granulosa-cell tumours in recent cases of ovarian carcinoma. In the majority of cases bleeding which occurred a few or many years after the menopause was the symptom which led the patient to seek treatment; it could be correlated with glandulo-cystic hyperplasia of the endometrium. Post-climacteric bleeding was absent in two cases in which a granulosa-cell tumour had undergone sarcomatous degeneration. Mammary hypertrophy, which sometimes was noted, is ascribed, like the renewed activity of the endometrium, to hormonic influences from the granulosa cells of the tumour. In two cases Schuschania and Pahl were able to demonstrate increased urinary excretion of oestrin and prolan respectively. Fauvet reports a favourable prognosis in granulosa-cell tumour: long-standing cures were obtained in spite of considerable degrees of ascites, or breaking of the tumour through its usually thick capsule. In one case the patient was found, six and eight years respectively after operation, to have granulosa-cell tumours in the omentum and retrocolic tissue; recovery followed their extirpation.

171 Association of Pregnancy with Tuberculosis

A. COUVELAIRE (*Paris Méd.*, December 17th, 1932, p. 522) discusses the questions whether: (1) reproduction ever so affects a woman, hitherto healthy, as to make her susceptible to the development of pulmonary tuberculosis, and the part played by reproduction in the general mortality of tuberculosis; (2) reproduction has any influence on the evolution of tuberculosis previously contracted; (3) the progress of maternal tuberculosis has an influence on the foetus, and what is the future of infants delivered from tuberculous mothers; and (4) there are special rules for the clinical conduct of a case in which tuberculosis is associated with pregnancy. The conclusion reached as regards the first point is that reproduction very rarely causes tuberculosis to make its appearance; such a manifestation occurs even less frequently where the hygienic conditions are good than where fatigue and overcrowding are the habitual environment. Investigation concerning the second point showed that a large number of mothers already tuberculous passed through their pregnancy without impairment of health, but in a certain number of instances the affection was aggravated. This aggravation might only be the acceleration prior to a premature death, and as such might not be an entirely unfavourable eventuality in certain cases. If the infant of a tuberculous mother was protected against post-natal infection, either by separation or Calmette vaccination, or, better still, by a combination of these prophylactic measures, it was not found to be in any way inferior to a child of healthy parentage. With regard to the treatment of such cases, Couvelaire expresses the opinion that very often the uterus is emptied by the profession with a vague belief that something definite should be done rather than for true and scientific reasons. Since the author finds himself unable to promise to the mother undoubted advantages for herself which might compensate her for the real loss of her infant, he is disposed to refuse to terminate labour on such cases.

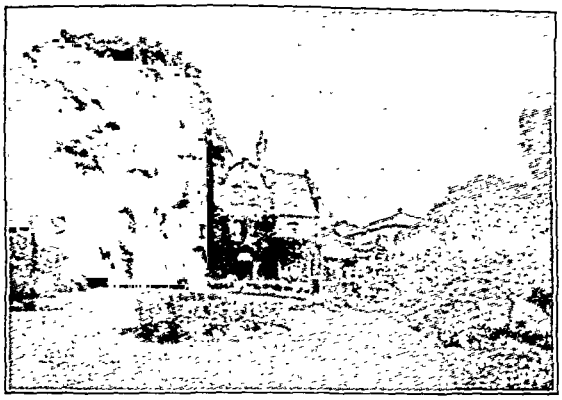
Pathology

172 Early Diagnosis of Syphilis

L. CHARGIN, J. J. ELLER, and C. R. REIN (*Arch. Derm. and Syph.*, December, 1932, p. 965) remark that the ideal time for commencing the treatment of syphilis is up to the fifth or sixth week after infection, when the serological tests are negative, the diagnosis depending upon the discovery of spirochaetes in chancres or glands. For various reasons this often fails. The lesions are too old, are contaminated, or have been treated chemically prior to examination. Further, spirochaetes in smears are not identified easily. Some investigators have observed a positive Wassermann reaction in chancre fluid while the serum remains negative, but it is difficult to obtain enough fluid from a chancre for the examination. Moreover, anti-complementary results occur frequently with local Wassermann tests. Early positive Kahn tests have been obtained with chancre fluids, but this method is considered unreliable by the present authors. They have used the microscopical slide precipitation test in 110 consecutive cases. The Kline blood-serum tests were positive in over 65 per cent. of cases, while the Wassermann tests were positive only in 33.77 per cent. This is held to indicate that the Kline test becomes positive earlier than the Wassermann test, and that the former is more sensitive by 8.16 per cent. than the local slide test. In twenty cases the dark-field examination results were negative, but the local slide tests were positive, while the Kline serum test gave nineteen positive reactions. The strongest positive reactions occurred in fluids containing a considerable amount of blood.

173 The Rapid Isolation of Enteric Bacilli from the Stools

S. Z. IVANIC and V. DIMITRIJEVIC-SPETH (*Zentralbl. f. Bakt.*, December 15th, 1932, p. 445) have devised a method that promises to be useful for the rapid isolation of typhoid and paratyphoid bacilli from the stools. It consists essentially in making use of their motility, which allows them to swarm on a weak agar medium. In order to prevent other motile organisms such as *B. coli* and *proteus* from also swarming, a mixture of calcium chloride and brilliant green is added to the medium. The exact amount of calcium chloride required differs for the different organisms and for different batches of the salt, which vary in their water content. The swarming of *proteus* and of *B. coli* is inhibited by a concentration of about 1.5 or 2 per cent., of *B. typhosus* by one of 2 to 3 per cent., of *B. paratyphosus* A by one apparently of 3 to 4 per cent., and of *B. paratyphosus* B by one of rather over 4 per cent. It is advisable to use a concentration of agar of about 0.75 per cent. Calcium chloride to the appropriate amount is added in the form of a strong solution made very slightly acid with HCl and brilliant green in a concentration of 1 in 250,000 to 1 in 500,000. Plates are poured, the material is inoculated in the form of a streak, and after twenty-four hours' incubation examination is made of the organisms that have grown out for some distance—10 to 70 mm. or so—from the line of inoculation. Since the medium is very unsuitable for the growth of aerial contaminants, it can be prepared quite rapidly by merely adding the salt and the dye to the sterile melted agar; no further sterilization is necessary, even though as a routine it is desirable



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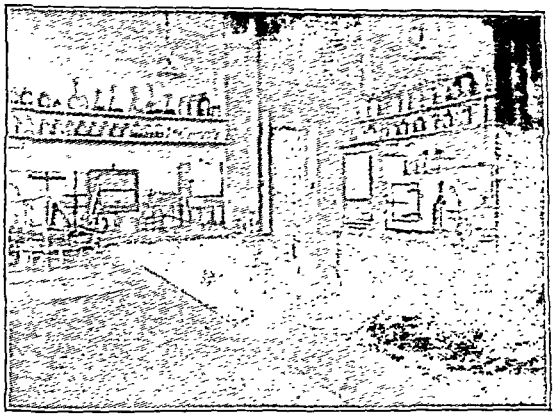

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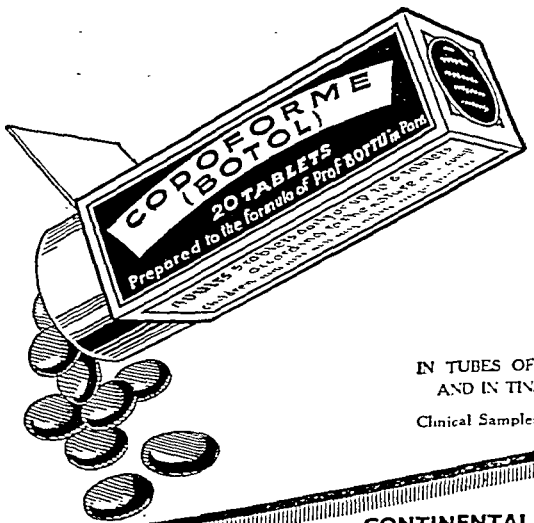

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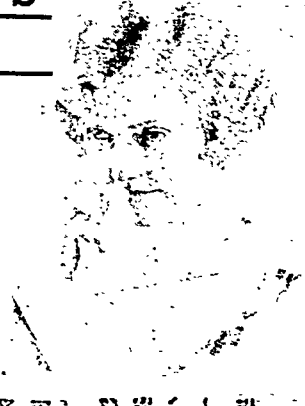

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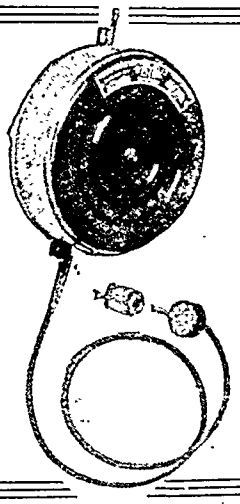

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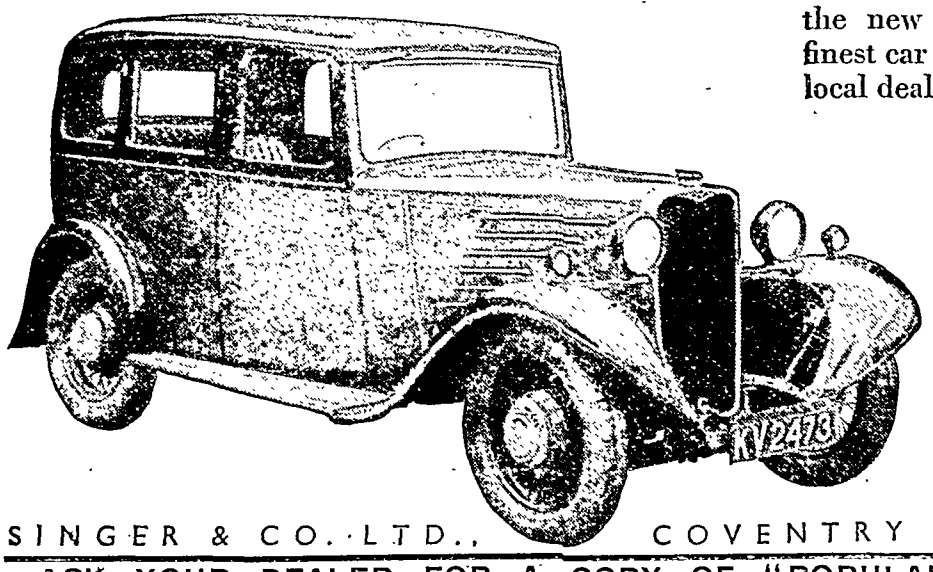

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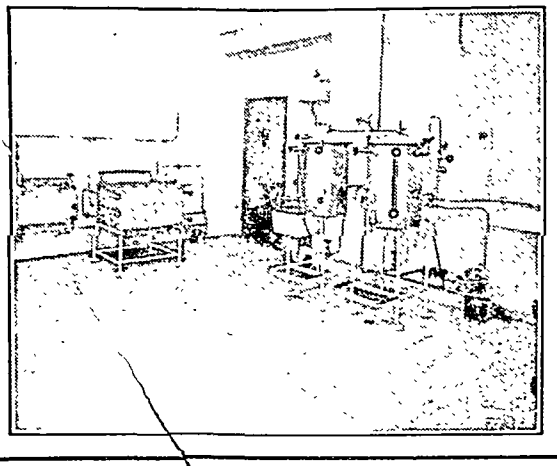

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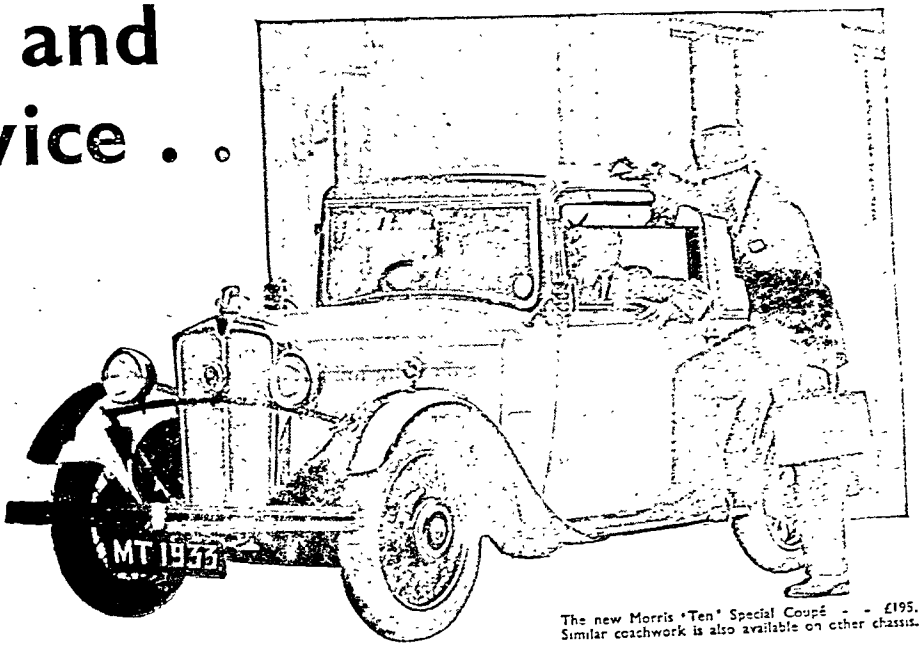

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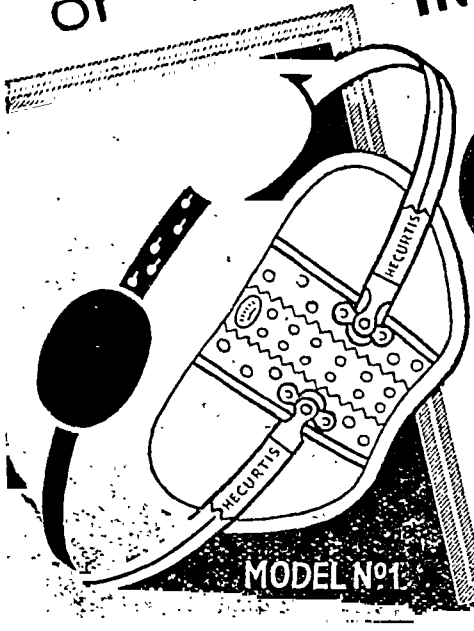

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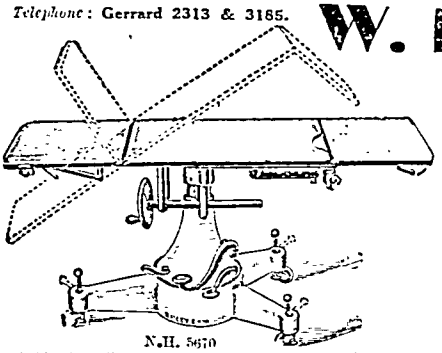

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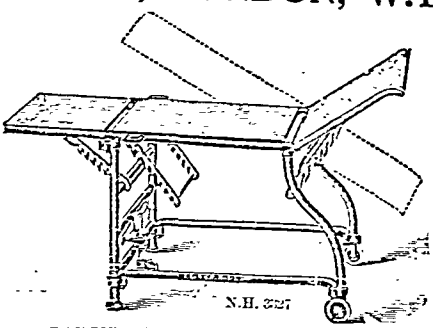

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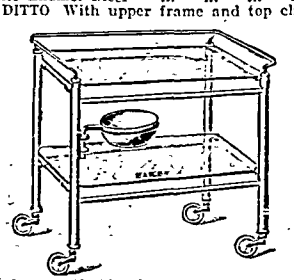

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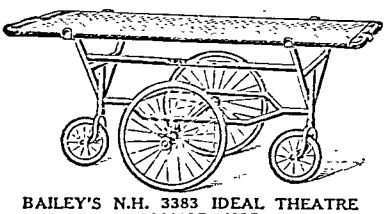

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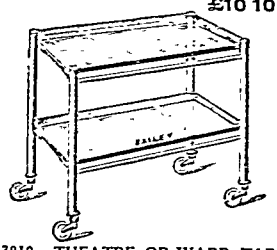

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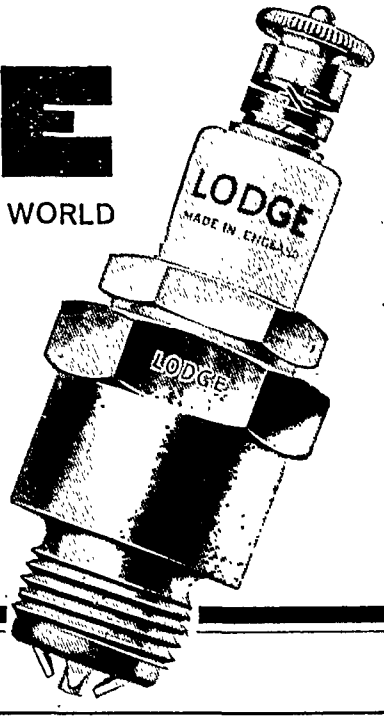

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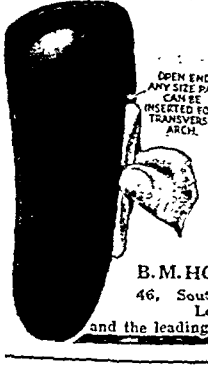

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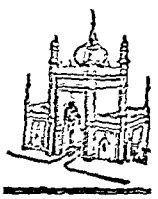

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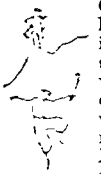

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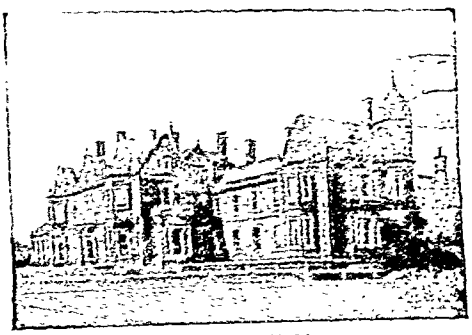

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Illustrated Brochure on application to the Medical Superintendent, The Old Manor, Salisbury. Telephone 51.

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Telegrams: "SUBSIDIARY, LONDON." *Telephone*: NORTH 0888.

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses. Conveniently situated four miles from Charing Cross. Easy access from all parts. Six acres of ground highly situated, facing Finsbury Park. Private Suites. Voluntary Patients and Temporary Patients received without certification.

Convalescent Home, **Kearsney Court, Dover.** For further particulars, apply to the **Medical Superintendent.**

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Also completely detached Villas for mild cases, with private suites if desired. Voluntary Patients received. Twenty acres of grounds. Hard and Grass Tennis Courts, Putting Greens, Bowls, Croquet, Squash Rackets, and all indoor amusements, including Wireless and other Concerts. Occupational Therapy, Callisthenics, and Dancing Classes, X-ray and Actino-therapy, Prolonged Immersion Baths, Operating Theatre, Pathological Laboratory, Dental Surgery, and Ophthalmic Dept. Chapel. Senior Physician: Dr. HUBERT JAMES NORMAN, assisted by three Medical Officers, also resident and visiting Consultants.

An illustrated Prospectus, giving fees which are strictly moderate, may be obtained upon application to the Secretary.

The Convalescent Branch is HOVE VILLA, BRIGHTON, and is 200 feet above sea-level.

PECKHAM HOUSE, 112, Peckham Road, London, S.E.15.

Telegrams: "Alleviated, London." Telephone: Rodney 4741-4742.

The above House, which was established in 1826, is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders. Certified voluntary and temporary patients are received. Separate houses for treatment and accommodation of special cases adjoin the Institution. There is a seaside branch, Kearsney Court, near Dover, to which patients may be sent for treatment or on holiday. Motor and carriage exercise is provided as required. Patients can avail themselves of a course of physical drill. Tennis Courts. Entertainments, dances, and indoor amusements held throughout the year. Terms from £3 3s. per week.

Illustrated prospectus and further particulars can be obtained from the MEDICAL SUPERINTENDENT.

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This REGISTERED HOSPITAL, with a SEASIDE BRANCH at Colwyn Bay, N. Wales, is for the treatment and care of those of the Upper and Middle Classes suffering from MENTAL and NERVOUS DISEASES.

The Hospital is governed by a COMMITTEE, appointed by the TRUSTEES of the Manchester Royal Infirmary.

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For all information apply:
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(Telephone: Mundesley 4.)

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MURTLE DEESIDE ABERDEENSHIRE

Medical Director: David Lawson, M.D., F.R.S.E.

FULLY EQUIPPED WITH EVERY MODERN APPLIANCE FOR THE DIAGNOSIS AND TREATMENT OF ALL FORMS OF TUBERCULOSIS & ALLIED DISEASES

Physician Superintendent. J. M. JOHNSTON, M.B., D.P.H., etc.

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Full day and night Nursing Staff.

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Apply: The Secretary, The Cotswold Sanatorium, Cranham, Gloucester. *Telephone*: 41 WITCOMBE. *Telegrams*: "HOFFMAN, BIRDLIP."

LINFORD SANATORIUM,
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For full particulars apply to *The Secretary*, Nordrach-upon-Mendip, Blagdon, Bristol. *Telegrams*: Nordrach Blagdon. *Telephone*: Blagdon 25.

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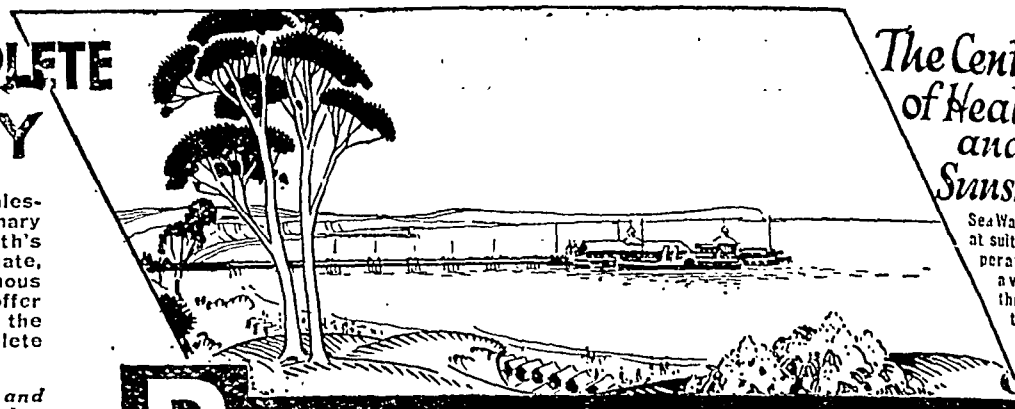

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Patients of both sexes with any disorder to which PSYCHOTHERAPY is applicable are received for treatment at ELMSLEIGH, BASSETT, SOUTHAMPTON. Domestic arrangements well ordered and surroundings pleasant. Terms and particulars from T. A. HAWKESWORTH, M.B.

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Open only to Members of the Fellowship of Medicine. Annual Subscription £1 1s.

MEDICINE, SURGERY, and GYNAECOLOGY (Royal Waterloo Hospital, March 6th-25th, all day); ORTHOPAEDICS (Royal National Orthopaedic Hospital, March 6th-18th, all day); RHEUMATISM (British Red Cross Clinic, Tuesday and Thursday, March 7th-23rd, 8.30 p.m.); PSYCHOLOGICAL MEDICINE (Bethlem Hospital, Tuesday and Friday, March 14th-April 7th, 11 a.m.); NEUROLOGY (West End Nervous Hospital, March 13th-April 8th, daily, 5.0 p.m.). *PANEL OF TEACHERS always available.*

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Continuous Clinical Instruction daily from 10 a.m. to 4 p.m.—Post-Graduates may enrol at any time for any period from 1 week to 3 months.—Special facilities for "Study Leave," and for those wishing to take a course under the "Grant-aided Scheme for Post-Graduate Study by Insurance Practitioners."—Anaesthetic Courses.—Clinical Assistantships.—Annual Membership Tickets at Special Terms available for General Practitioners who wish to attend the Hospital Practice at irregular intervals.

Prospectus from the DEAN, West London Hospital, Hammersmith, W.6.

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An Examination to award open SCHOLARSHIPS AND EXHIBITIONS is held each May. Candidates must be under 21 years of age. One Scholarship and one Exhibition will be reserved in the first instance for candidates who intend to study for a Medical Degree. The Scholarships are tenable for four years and are of the value of £20 a year, but may be augmented where further assistance is needed. The Hall charges, by deduction from which these emoluments are paid, range, according to the accommodation selected, for the normal minimum period of 25 weeks' residence, from 70 to 84 guineas.

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POST-GRADUATE COURSES FOR SHIP SURGEONS.

PART II.—Tropical Medicine and Hygiene.

The Seamen's Hospital Society announces that a course in Tropical Medicine and Hygiene will be held from April 3rd to April 28th, 1933, at the Hospital for Tropical Diseases, Endsleigh Gardens, W.C., and the London School of Hygiene and Tropical Medicine, W.C.1.

Further particulars may be obtained on application to the Secretary, Seamen's Hospital Society, Greenwich, S.E.10.

Preliminary Examinations.

The COLLEGE OF PRECEPTORS holds Preliminary Examinations for Medical and Dental Students in London and at Provincial Centres in March, June, September, and December. For Regulations, apply to the Secretary, College of Preceptors, Bloomsbury Square, London, W.C.1.

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Intensive evening revision course, covering all sections of the D.O.M.S. Examination for June, 1933, commencing:

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Part I. May 29th. Hours 5—7 p.m.

Fees: Part II, £10 10s.; Part I, £5 5s.

Individual sections may be taken separately:

Part II—Clinical, £6 6s.

Part I—Any one of the three subjects £2 2s. each.

Operative Surgery, Lectures in special subjects, and Pathology, £2 2s. each section.

All particulars can be obtained from the Dean, The Royal Eye Hospital, St. George's Circus, S.E.1.

F.R.C.S.(Edin.).

Full PREP. COURSE with Anatomical (Cadaver and Living Model) and Surg. Path. Demonstrations, for next Exam., will commence shortly. POSTAL TUITION at any time.—H. C. ORRIN, F.R.C.S., Surgeons' Hall, Edinburgh.

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Medical Prospectus gratis along with list of Tutors, etc., on application to the Principal, Mr. E. S. WEYMOUTH, M.A., 17, Red Lion Sq., London, W.C.1. (Telephone: HOLBORN 6313.)

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DIPLOMA IN MEDICAL RADIOLOGY AND ELECTROLOGY.

New Regulations for the Diploma come into force on October 1st, 1933, and apply to all candidates who have not been admitted to any examination for the Diploma before that date. The course, which occupies nine months in all, begins on October 4th, 1933, and comprises:

(a) Four months' instruction in Physics, Radiology, Electrology, and Pathology.
(b) Three months further instruction in Radiology and Electrology, together with three months clinical work in the Radiological Department of a hospital approved by the Managing Committee for the Diploma.
(b) Three months further instruction in ant in the Radiological Department of a hospital approved by the Committee. Hospitals in London, in the Provinces, and Overseas have been approved for this part of the course.

Examinations for Part I (Physics) will be held in February and July, 1934, and for Part II (Radiology, Electrology, and Pathology) in July and October, 1934.

The courses are open to men and women whose medical qualifications are approved by the General Medical Council for purposes of registration, and who satisfy the Committee that they have had sufficient post-graduate clinical experience.

Further information as to the courses may be obtained from G. STEAD, M.A., Secretary for the Diploma, Cavendish Laboratory, Cambridge, or the General Secretary, British Institute of Radiology, 32, Welbeck Street, London, W.1.

UNIVERSITY OF BIRMINGHAM

(FACULTY OF MEDICINE.)

UNIVERSITY CLINICAL BOARD.

POST-GRADUATE DEMONSTRATIONS, 1933.

A Course of Post-Graduate Demonstrations will be given at the General Hospital, the Queen's Hospital, and the Children's Hospital, Birmingham, commencing on March 17th and terminating on July 18th (Tuesdays and Fridays, 3.30 to 5 p.m.).

The Course will be given by Members of the Medical and Surgical Staffs of the Hospitals and will include Demonstrations on Medical, Surgical, Obstetrical, and Gynæcological cases; Diseases of Ear, Nose, and Throat; Diseases of Children; Ophthalmology; Radiology; Venereal Diseases, etc.

Admission cards are issued on payment of the fee of £2 2s. Cheques made payable to "The University of Birmingham" should be sent to the Clerk to the Clinical Board, The University, Edmund Street, Birmingham, 3. Medical Practitioners are requested to show their Admission Card at each of the Demonstrations.

UNIVERSITY OF LONDON.

A Lecture on "*Thirty Years' Progress in the Study of Rheumatic Heart Disease*" (prepared by the late Dr. CAREY COOMBS of Bristol), will be read by C. BRUCE PERRY, M.D., M.R.C.P. (of Bristol), at UNIVERSITY COLLEGE HOSPITAL MEDICAL SCHOOL (University Street, Gower Street, W.C.1) on TUESDAY, MARCH 14th, at 5.30 p.m. The Chair will be taken by Dr. F. J. POYNTON, M.D., F.R.C.P. (Senior Physician to University College Hospital and to the Hospital for Sick Children).

Admission free, without ticket.

S. J. WORSLEY, Academic Registrar.

UNIVERSITY OF OXFORD.

DIPLOMA IN OPHTHALMOLOGY.

The *next Examination begins on June 19th*, 1933. The two months' Course of Instruction starts on April 24th, 1933.

For further information apply to—

P. H. ADAMS,
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Chemistry, Physics, and Biology Labs.
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MASTERY OF MIDWIFERY.

Examinations for the Diploma of the Mastery of Midwifery of the Society of Apothecaries of London will be held beginning Monday, May 15th, and Monday, November 20th, 1933.

For regulations, apply to the Registrar of the Society, Water Lane, E.C.4.

MEDICAL CORRESPONDENCE COLLEGE

19, WELBECK ST., LONDON, W.1. Tel: Welbeck 8931

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¶ Both at the Primary and Final F.R.C.S. England the majority of our Students are successful at the first attempt, and Candidates who have failed at these Examinations on several previous occasions get through without difficulty after going through our courses.

¶ The Surgical Tutors of the College all hold either the M.S.Lond. or F.R.C.S.England, or both, and are highly experienced teachers.

¶ The Postal Courses are thoroughly clear, concise, and up to date, and the test questions are carefully selected from those set at previous Examinations, so as to embrace all parts of the subject. By working systematically through the Course the Student is brought up to the examination standard in the minimum time, and much unnecessary reading is saved.

VALUABLE BOOK

"How to Pass the F.R.C.S.," free on application to the Secretary.

EPSOM COLLEGE.

ROYAL MEDICAL FOUNDATION.

Notice is hereby given that an Extraordinary General Meeting of the Governors of Epsom College will be held at the College Office, 49, Bedford Square, W.C.1, on Friday, March 17th, at 4 o'clock p.m., to consider and, if thought fit, to approve (a) such alterations in the Bye-laws as will ensure their conformity with the amending Act of 1932; and (b) certain minor variations of other Bye-laws.

The draft revised Bye-laws will be available for inspection at the College Office from March 1st to 16th (inclusive) between 10 a.m. and 5 p.m.

By Order of the Council,
W. L. GIFFARD (Major) Secretary.
February 24th, 1933.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

Dr. CHARLES NEWMAN will deliver the GOULSTONIAN LECTURES on *March 7th, 9th*, and 14th, at 5 o'clock at the College, Pall Mall East, S.W.1.

Subject: "*The Physiology of the Gall-bladder and its Functional Abnormalities.*"

Any member of the Medical Profession admitted on presentation of card.

By Order of the President,
H. M. BARLOW, Secretary.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE

(UNIVERSITY OF LIVERPOOL.)

COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on January 2nd and October 2nd, 1933, and for the Diploma in Tropical Hygiene on January 5th and April 20th, 1933. (Candidates for the D.T.H. must possess the D.T.M. of this University.)

For particulars, apply to the Hon. Dean, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool.

TWO RESIDENT MEDICAL OFFICERS required. Salary at the rate of £150 p.a., with board, lodging, and laundry. Hospital contains 120 beds. Applications to be sent to the Secretary, Chelmsford and Essex Hospital, by Wednesday, March 8th.

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE

(University of London.)

DIPLOMA IN TROPICAL MEDICINE AND HYGIENE (Eng.)

Dates of the Courses, 1933.

(Each part can be taken independently.)

SECTION A. (CLINICAL AND LABORATORY INSTRUCTION)—a 3-months' Course.

January 2nd—*March* 24th, 1933;
April 3rd—*June* 22nd, 1933.
October 2nd—*December* 22nd, 1933.

SECTION B (TROPICAL HYGIENE)—a 2 months' Course.

January 16th—*March* 17th, 1933.
April 18th—*June* 16th, 1933.

FEES (inclusive):

Section A, £25; Section B, £15.

In Section A, students may enter for the whole Section at recognised intervals (of 4 or 8 weeks) after the beginning of the course. Short periods of laboratory or clinical instruction can also be taken at proportionate fees.

DIPLOMA IN PUBLIC HEALTH

(University of London.)

Course of Study (nine months for those working whole-time) commencing in October. Inclusive fee, 54 guineas.

DIPLOMA IN BACTERIOLOGY

(University of London.)

Course of Study (whole-time, one academic year) *commencing in October.* Inclusive fee, £47 15s.

EPIDEMIOLOGY AND VITAL STATISTICS.

Special three-monthly advanced courses. Inclusive fee, 7 guineas.

For Prospectuses and Synopses of Lectures, etc., apply to the SECRETARY, LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE, Keppel Street (Gower Street), London, W.C.1.

THE LONDON SCHOOL OF DERMATOLOGY.

St. John's Hospital for Diseases of the Skin,

49, Leicester Square, W.C.2.

Conducted by the Honorary Staff of the Hospital, together with the Physicians in charge of the Dermatological Departments of the London Teaching Hospitals. Lectures and Demonstrations every *Tuesday and Thursday* at 5 p.m., from October to March, and four times weekly during May. General Practitioners desiring to attend any *particular lecture* or lectures can do so without paying a fee. Clinics daily at 2 p.m. and 6 p.m., Saturdays 2 p.m. only. *Pathological Laboratory* for Instruction or Research Work.

For further particulars, fees, etc., apply to J. E. M. WIGLEY, *M.B., Dean.*

SCHOOLS for BOYS and GIRLS

TUTORS FOR ALL EXAMS.

Messrs. J. & J. PATON having an up-to-date Knowlegde of the BEST SCHOOLS and TUTORS in this Country and on the Continent, will be pleased to AID PARENTS in their choice by sending (free of charge) prospectuses and TRUSTWORTHY INFORMATION and ADVICE.

The age of the pupil, district preferred and rough idea of fees should be given.

J. & J. PATON, Educational Agents, 143, Cannon St., London, E.C.4. Tel.: Mansion House 5053.

EAST LANCASHIRE TUBERCULOSIS COLONY.
BARROWMORE HALL, GREAT BARROW, Near CHESTER.
Under the direction of the British Red Cross Society and the Order of St. John of Jerusalem.

HOUSE PHYSICIAN (male) required. The appointment is for *six months, and is renewable.* Salary £100 per annum, with board, residence, and laundry.

The appointment is terminable by one month's notice.

The Institution deals with all stages of Pulmonary Tuberculosis, and comprises Hospital accommodation, Sanatorium accommodation, extensive workshops for graduated work, and a settlement.

Applications, marked "House Physician," with copies of three testimonials, to be sent to the Medical Superintendent at the above address.

THE MEDICAL AND DENTAL DEFENCE UNION OF SCOTLAND, LIMITED.

Secretaries and Registered Office: Millar, Thomson & Dunlop, C.A., 113, St. Vincent Street, Glasgow.

ANNUAL SUBSCRIPTION £1. ENTRANCE FEE 10/-.

No entrance fee to those joining within 12 months of obtaining qualification. Benefits include defence of claims for alleged negligence in professional work, including indemnity of £2,500 and costs, and advice on professional difficulties.

Particulars and forms of application can be obtained from the Secretaries at the above address.

CITY OF LIVERPOOL.

MEDICAL SUPERINTENDENT.

MILL ROAD INFIRMARY.

Applications are invited from fully qualified Medical Practitioners with the necessary knowledge and experience of Hospital administration, for the appointment of full-time Medical Superintendent at the above Infirmary at a salary of £1,000 per annum (subject to a temporary deduction authorised by the Council), together with an allowance of £150 per annum in lieu of residence. For the time being the appointment will be non-resident, but the Council reserve the right to call upon the Medical Superintendent to reside in the Infirmary when suitable accommodation is available. Any fees received in connection with the appointment to be handed over to the City Treasurer in accordance with the Standing Orders of the Council.

The gentleman appointed will assume control of the Infirmary under the direction of the Medical Officer of Health, and be responsible for the work of the Medical, Surgical, Nursing, and Administrative Staffs in accordance with the instructions of the Council from time to time. Special experience in Surgery is essential.

The Infirmary accommodates acute medical, surgical, and maternity patients, with approximately 800 beds, and has a staff of resident Assistant Medical Officers, Visiting Specialists, and a Nursing Staff of 130.

The Infirmary is a Training School recognised by the General Nursing Council and the Central Midwives Board, and the Medical Superintendent will be required to organize the necessary lectures in connection with the training of Nurses.

The appointment will be made subject to the Local Government and Other Officers Superannuation Act, 1922, and the Standing Orders of the City Council, and will be determinable by three calendar months' notice on either side.

Applications to be made upon forms to be obtained from the Medical Officer of Health, Municipal Annexe, Dale Street, Liverpool, to be endorsed "Medical Superintendent, Mill Road Infirmary," and returned to the undersigned so as to be received not later than Monday, March 20th. Canvassing of Members of the City Council, either directly or indirectly, will be considered a disqualification.

WALTER MOON,
Town Clerk.

Municipal Buildings,
Liverpool. February 24th, 1933.

CITY OF LIVERPOOL.

RESIDENT ASSISTANT MEDICAL OFFICER (Female).

Applications are invited for the above appointment at the ALDER HEY CHILDREN'S HOSPITAL (956 beds), Liverpool, for a period of one year at a salary of £200 per annum (subject to a temporary deduction as authorised by the Council), together with the usual residential allowances. Canvassing will be deemed a disqualification.

Applications to be made upon forms obtainable from the Medical Officer of Health, Municipal Annexe, to be endorsed "Resident Assistant Medical Officer," and returned to the undersigned so as to be received not later than Tuesday, March 14th.

WALTER MOON,
Town Clerk.

Municipal Buildings,
Liverpool. February 28th, 1933.

BIRMINGHAM PROVIDENT DISPENSARY.

(SANDS COX TRUST.)
HOCKLEY BRANCH.
357, Farm St., Hockley, BIRMINGHAM.

The Co[illegible] qualified regi[illegible] or the position [illegible] FICER (male). [illegible] r than March 1 [illegible] to be prepared [illegible] 1st.

Emoluments last year £780.

The appointment is subject to six months' notice on either side, and the agreement must be signed prohibiting private practice.

Applications, with recent testimonials, to be made to the Secretary, Birmingham Provident Dispensary, 357, Farm Street, Hockley, Birmingham.

Canvassing the Committee will mean disqualification. A. J. ROLLASON, Secretary.

BUCKS COUNTY COUNCIL.
AYLESBURY BOROUGH COUNCIL.
AYLESBURY RURAL COUNCIL.
LONG CRENDON RURAL DISTRICT COUNCIL.

ASSISTANT COUNTY MEDICAL OFFICER AND MEDICAL OFFICER OF HEALTH.
(Local Government Act, 1929, s.58.)

Applications are invited from duly qualified Medical Men, with experience in public health duties, holding a registrable qualification in Public Health, Sanitary Science, or State Medicine, for the following joint appointment:

(a) Medical Officer of Health for the Rural District of Aylesbury.
(b) Assistant County Medical Officer to act as School Medical Inspector and Medical Officer to Infant Welfare Centres for the following districts: Aylesbury Borough, Aylesbury Rural District, and Long Crendon Rural District, and to undertake temporarily similar duties in the Urban District of Chesham, and the Rural District of Amersham.
(c) When vacancies occur, Medical Officer of Health for Aylesbury Borough and the Rural District of Long Crendon.

Salary £800 per annum, subject to temporary percentage abatement.

Travelling expenses while on County duties will be paid on the County Council scale, but part of the salary will be subject to superannuation deduction of 5 per cent.

Applicants should not be over 40 years of age, and will be required to pass a medical examination as to physical fitness, and the final appointment will be subject thereto.

The appointment is subject to the approval of the Minister of Health and to the particulars and conditions of appointment set out on the form of application, which can be obtained from the Clerk of the County Council, County Hall, Aylesbury.

Office accommodation and any necessary clerical assistance will be provided.

Applications on the prescribed form, accompanied by copies of not more than three recent testimonials, which will not be returned, should be addressed to the Clerk of the Bucks County Council, and delivered at the County Hall, Aylesbury, not later than 11 a.m. on Saturday, March 18th, marked "Medical Officer."

GUY R. CROUCH,
County Hall, Clerk of the Bucks County
Aylesbury. Council.
February 25th, 1933.

STATES OF GUERNSEY MENTAL INSTITUTIONS.

Applications are invited for a Non-resident MENTAL OFFICER, with experience in treatment and care of mental defectives, and with patients at clinics and mental hospitals.

The sele[illegible] required to organize a[illegible] and a Child Guidance [illegible] the elementary schools.

He would also be required to study local conditions and to report on the steps that should be taken, either for adapting the existing, or building new hospitals for the housing and care of mental cases.

The candidate would be permitted to act as consultant with a local practitioner.

The appointment would be for one year certain, and the salary £800 to £1,000 per annum.

Full particulars as to duties will be furnished upon application to the Secretary to States Committees, States Office, Guernsey, and all applications to be received by first post March 10th.

THE RADIUM INSTITUTE,
Riding House Street, London, W.1.

Applications are invited for the post of WHOLE-TIME RESIDENT SURGICAL REGISTRAR (male). Candidates must be unmarried.

The salary will be at the rate of £250 per annum, board, residence, and laundry being provided, and the appointment is for six months commencing April 1st next, and renewable if desirable for a maximum period of 2 years.

Applications, stating age, nationality, qualifications, and experience, with copies of three recent testimonials, must be received at the Institute on or before March 11th next.

Canvassing, either directly or indirectly, is not permitted.

THOS. A. GARNER, Secretary.

LONDON COUNTY COUNCIL.

Applications invited from Medical Practitioners with appropriate qualifications for appointment of PATHOLOGIST and ASSISTANT PATHOLOGIST at the undermentioned group laboratories. Remuneration and conditions subject to review in each case. In the case of a woman marriage will terminate contract of service.

PATHOLOGIST at GROUP LABORATORY, MILE END HOSPITAL, Bancroft Road, E.1. The salary is £1,100, rising annually by £50 to £1,300 a year. The group laboratory is fully equipped and the pathologist will be responsible for the organisation and development of the pathological work for the Council's general hospitals in the group. The pathologist will be expected to visit each hospital in the group at frequent intervals and act generally as a consulting pathologist to the group. He will also be expected to carry out research work as opportunities arise.

ASSISTANT PATHOLOGIST at each of the Group Laboratories at:

1. ARCHWAY HOSPITAL, Archway Road, N.19.
2. LAMBETH HOSPITAL, Brook St., S.E.11.
3. LEWISHAM HOSPITAL, S.E.13.
4. MILE END HOSPITAL, Bancroft Rd., E.

The scale of salary in each case is £650 a year, rising annually by £25 to £800 a year.

The person appointed will be required to act under the direction of the Pathologist, and the duties will include the visitation of hospitals, the conduct of post-mortem examinations, and generally the carrying out of examinations in the laboratories in the area.

Form of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), County Hall, Westminster Bridge, S.E.1, and returnable by March 20th. Candidates should specify the position or positions for which they desire to apply.

Canvassing disqualifies.

LONDON COUNTY COUNCIL.

Applications invited from registered Medical Practitioners of at least one year's standing for appointment as TEMPORARY DISTRICT MEDICAL OFFICER at the undermentioned medical districts.

The candidate appointed will be required in each case to reside in or near the district, to carry out the duties prescribed by the Public Assistance Order, to work under the general direction and supervision of the Medical Superintendent of the hospital most conveniently situated in the district served by him, and to provide at his own expense an approved deputy during absence from any cause. In the case of a woman, marriage will terminate contract of service. The salary in each case is provisional. Remuneration and conditions subject to review.

1. Area 1.—District E (Stepney). Salary £150 a year.
2. Area 5.—District A (Westminster). Salary £140 a year.
3. Area 5.—District E (Fulham) Salary £200 a year.
4. Area 6.—District B (Kensington) Salary £200 a year.
5. Area 8.—District M (Camberwell) Salary £200 a year.
6. Area 9.—District J (Lewisham) Salary £200 a year.
7. Area 9.—District K (Lewisham). Salary £140 a year.

Forms of application, with full details of boundaries of the districts and further particulars obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), County Hall, Westminster Bridge, S.E.1, returnable by March 10th. Only candidates complying with the conditions as to residence are eligible. Canvassing disqualifies.

GRIMSBY AND DISTRICT HOSPITAL.
(125 Beds.)

Applications are invited for the post of HOUSE SURGEON. Salary £200 per annum, with board and residence.

Applicants must be registered and hold a Medical and Surgical qualification. Previous Hospital appointment experience desirable.

Applications, stating age, qualifications, and enclosing copies of not more than three recent testimonials, to be forwarded at once to the Secretary-Superintendent.

URBAN DISTRICT OF SHIPLEY.

MEDICAL OFFICER OF HEALTH.

Applications are invited from duly qualified gentlemen for the appointment of Medical Officer of Health of the Urban District, subject to the provisions of the Public Health (Officers) Act, 1921, and the Sanitary Officers Order, 1926.

The gentleman appointed will be required to perform all the duties imposed on a Medical Officer of Health, to act as School Medical Officer, Superintendent of the Maternity and Child Welfare Centre, Medical Superintendent of the Shipley and Bingley Joint Maternity Home, and to carry out all such duties as the Council may with the consent (if necessary) of the Minister of Health, from time to time direct.

He must reside in the district, and devote all his time to the duties of the office, and must not engage in private practice.

The appointment will be subject to the approval of the Minister of Health, will also be subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922, and the successful candidate will be required to pass a medical examination.

The salary to cover all the duties specified above will be £800 per annum (subject to a temporary deduction of £17 10s. per annum), with an addition of £40 per annum as car allowance.

Applications, stating age, qualifications, and experience, accompanied by copies of not more than three recent testimonials, should reach the undersigned not later than March 15th, endorsed "Medical Officer."

Canvassing, either directly or indirectly, will be a disqualification.

H. BARNES,
Clerk to the Council.

Town Hall,
Shipley.
February 23rd, 1933.

COUNTY BOROUGH OF WALSALL.

MANOR HOSPITAL.

ASSISTANT MEDICAL OFFICER.

Applications are invited from duly qualified gentlemen for the appointment of Assistant Medical Officer at the above Hospital, which contains 300 beds.

Commencing salary £350 per annum, rising by annual increments of £25 to a maximum of £450 per annum, together with the usual residential allowances (subject to a temporary reduction of 5 per cent. on the cash salary).

The appointment will also be subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922, from the date of designation by the Council.

The person will be required to act under the general direction of the Resident Medical Officer, from whom any further particulars of the appointment may be obtained.

Applications, stating age, professional qualifications, and experience, accompanied by not more than three copies of recent testimonials, should be sent to the undersigned by not later than March 13th.

C. S. FOTHERGILL,
Public Assistance Officer.

29, Leicester Street,
Walsall.
March 3rd, 1933.

WEST LONDON HOSPITAL,
Hammersmith Road, W.6. (234 Beds.)

Required ONE HOUSE PHYSICIAN, ONE HOUSE SURGEON (General and some Deep X-Ray Therapy), ONE HOUSE SURGEON to Throat, Nose, and Ear Department (with some Anaesthetic duties), and ONE RESIDENT ANAESTHETIST. These four appointments (males) are tenable for six months from April 1st next, subject to one month's notice on either side. Salary at the rate of £100 per annum, with board, lodgings, and laundry allowance.

Candidates must be registered under the Medical Act. Applications (which must be on printed forms obtained from me) must reach me not later than Thursday, March 16th. Selected candidates will be required to call upon such members of the Medical Staff as directed, to be in attendance at a meeting of the Medical Council on Friday, March 24th, at 4.30 p.m. and the House Committee Meeting the same day at 5 p.m., when the appointments will be made.

H. A. MADGE, Secretary.

WESTON-SUPER-MARE GENERAL HOSPITAL. (80 Beds.)

HOUSE SURGEON.

Applications are invited for the post of Resident House Surgeon at this Hospital. Salary at the rate of £150 per annum, with board, rooms, and laundry. Duties to commence April 1st next.

Applications, stating age and qualifications, and enclosing copies of testimonials, should be addressed to the undersigned.

LESLIE J. FURSLAND, Secretary.

COUNTY BOROUGH OF WEST BROMWICH.

HALLAM HOSPITAL.

APPOINTMENT OF RESIDENT HOUSE PHYSICIAN.

Applications are invited from fully qualified male Registered Practitioners for the above appointment.

The appointment is for six months, with eligibility for reappointment for a further six months, but either party may give six weeks' notice terminating the engagement. The Hospital has 474 beds and is equipped with up-to-date special departments. There is a visiting staff of eight consultant Physicians and Surgeons.

Preference will be given to applicants with previous Hospital experience.

Salary £200 per annum.

Canvassing, either directly or indirectly, is strictly prohibited and will be deemed a disqualification.

Applications, stating age, experience, and qualifications, together with copies of three recent testimonials, must be forwarded to the Medical Officer of Health, 2, Lodge Road, West Bromwich, so as to arrive not later than by first post on Wednesday, March 8th.

ALFRED WICKHAM,
Town Clerk.

Town Hall,
West Bromwich.
February 21st, 1933.

ST. PAUL'S HOSPITAL FOR DISEASES OF THE GENITO-URINARY ORGANS (INCLUDING CANCER) AND SKIN,
Endell Street, Holborn, W.C.2.

Applications are invited for the undermentioned position:

HOUSE SURGEON (vacant April 1st). Candidates must be qualified and registered. Salary at the rate of £150 per annum, with board and residence. The appointment is for a period of six months, on the termination of which the holder is eligible for the Senior position of Resident Medical Officer, for a further six months at £200 per annum, in which capacity he will have charge of the Surgical beds. During his appointment as House Surgeon the duties will involve work in the Surgical Wards and in the Out-patient Department.

Applications, with copies of recent testimonials, to be sent on or before Monday, March 20th, to the Chairman of the Medical Committee.

QUEEN CHARLOTTE'S MATERNITY HOSPITAL, Marylebone Road, N.W.1.

Applications are invited for the combined appointment of ASSISTANT to the Paediatrician and Medical Officer to the Infant Consultation Centre. The appointment will be for twelve months, which may be extended. The duties will include attendance on In-patients at the Hospital, and the holding of two clinics at the Infant Consultation Centre per week. The appointment of Assistant to the Paediatrician carries no honorarium, but remuneration will be paid at the rate of 1½ guineas per clinic at the Infant Consultation Centre. Applications, with copies of three testimonials, to be sent to the undersigned not later than March 25th.

H. B. STOKES, Secretary-Supt.

BOLINGBROKE HOSPITAL,
Wandsworth Common, S.W.11.
(121 Beds.)

The Board of Governors invite applications for the post of HONORARY SURGEON to the Ear, Nose, and Throat Department of the Hospital.

Candidates must be Fellows of a Royal College of Surgeons, practising in this branch of surgery and not engaged in general practice.

Candidates will be required to call upon members of the Medical Committee.

Applications, giving age and full particulars, must be accompanied by copies of three recent testimonials, and should reach the undersigned by Wednesday, March 8th.

W. S. RANDOLPH BISS, Secretary-Supt.

LIVERPOOL STANLEY HOSPITAL,
STANLEY ROAD, LIVERPOOL.

There will be vacancies on April 1st next for TWO MALE HOUSE SURGEONS. The appointment in each case will be for a period of six months with salary at rate of £100 per annum, with board, laundry, etc. Candidates must be on the *Medical Register*, and submit their applications, with copies of three recent testimonials, addressed to the undersigned by March 6th.

E. W. OSBORN, Secretary.

RESIDENT MASSEUSE REQUIRED AT HOLLOWAY SANATORIUM, Virginia Water. Salary £80 per year, with board, lodging, and washing. Four weeks' holiday per year. Applications, stating age and qualifications, together with testimonials, should reach the Medical Superintendent not later than Monday, March 13th.

COUNTY BOROUGH OF WEST HAM.

PUBLIC ASSISTANCE COMMITTEE.

The Council invite applications for the appointment of SPECIALIST CONSULTANT GYNAECOLOGIST at their Whipps Cross Hospital, Whipps Cross Road, Leytonstone, E.11, at a retaining fee of £50 per annum, and £5 5s. per visit.

Applicants must be Fellows of one of the Royal Colleges of Surgeons of Great Britain, and must be attached to a Special Hospital for Diseases of Women or to a corresponding Special Department of a General Hospital.

The duties will consist of making visits, when requested, to the Hospital, there to treat (or advise to the treatment in) such cases as are selected by the Medical Superintendent. The duration of each visit would vary with the number of cases arising; emergency visits, if any, would be rare.

The services of the gentleman appointed will be retained for a period of one year in the first instance, and he will be required to provide his own Locum Tenens during holidays and absences.

Applications, with copy of three recent testimonials, should be made to the undersigned not later than March 11th.

CHARLES E. CRANFIELD,
Town Clerk.

Public Assistance Offices,
Union Road, Leytonstone, E.11.
February 20th, 1933.

THE LONDON LOCK HOSPITAL.

The Board of Management announces the expiration of the appointment of the present Female SURGICAL REGISTRAR to the Female Lock Hospital and invites applications for a successor. The appointment is for one year in the first instance, with honorarium at the rate of £100 per annum. Candidates, who must be doubly qualified and duly registered, are invited to submit applications, with three copies (only) of testimonials, to the undersigned not later than 10 a.m. on Thursday, March 23rd, from whom copies of the Laws and By-laws relating to the appointment may be obtained. Candidates must be Fellows (or Members) of the Royal College of Surgeons of England, or the Royal College of Surgeons of Ireland, or Surgical Graduates of a University of the United Kingdom. Duties to commence April 6th.

By Order of the Board,
J. F. MORTON,
Assistant Secretary.

283, Harrow Road, W.9. Feb., 1933.

THE LONDON LOCK HOSPITAL.

The Board of Management invite applications for the post of RESIDENT MEDICAL OFFICER (either sex) to the Female Departments. Candidates must be doubly qualified and duly registered. The appointment is for six months commencing March 24th, with salary at the rate of £175 per annum, with furnished rooms, full board, and laundry. Preference will be given to candidates having previous obstetric experience. Applications, enclosing copies (only) of three recent testimonials, to be in the hands of the undersigned by 10 a.m. Tuesday, March 14th, from whom a copy of the By-laws and any further particulars can be obtained.

By Order of the Board,
J. F. MORTON,
Assistant Secretary.

283, Harrow Road, W.9. Feb., 1933.

ANCOATS HOSPITAL, MANCHESTER.

RESIDENT SURGICAL OFFICER.

Applications are invited for the post of Resident Surgical Officer which becomes vacant on March 31st next. The appointment is for twelve months. Salary at the rate of £200 per annum, with board, apartments, and laundry. Candidates holding F.R.C.S. degree will be preferred.

ORTHOPAEDIC HOUSE SURGEON.

A vacancy will occur for an Orthopaedic House Surgeon on March 31st next. Salary at the rate of £100 per annum, with board, apartments, and laundry. The appointment is for six months.

Applications, stating age, qualifications, experience, together with copies of not more than three recent testimonials, to be forwarded to the undersigned on or before March 15th.

By Order of the Board,
HERBERT J. DAFFORNE,
Gen. Supt. & Secretary.

CITY OF BRADFORD MUNICIPAL GENERAL HOSPITAL, ST. LUKE'S.

HOUSE PHYSICIANS and HOUSE SURGEONS required. Salary in each case £150 per annum, plus board and lodgings. These appointments are for six months renewable for a further period of six months.

Application forms may be obtained from the Medical Officer of Health, Town Hall, Bradford, and should be delivered to the undersigned not later than March 9th.

N. L. FLEMING,
Town Clerk.

Town Hall,
Bradford.

THE ROYAL HOSPITAL, WOLVERHAMPTON.
(Incorporated under Charter.)

HOUSE PHYSICIAN required for March 17th. The Hospital contains 300 beds, the usual special departments, and is recognised by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice. Candidates must be registered under the Medical Acts and unmarried.

The appointment is for six months, with a salary at the rate of £125 per annum, board, furnished rooms, and laundry provided.

Applications, with copies of testimonials, to be forwarded to the undersigned.

Wolverhampton. W. H. HARPER,
February 27th, 1933. House Gov.

THE ROYAL HOSPITAL, WOLVERHAMPTON.
(Incorporated under Charter.)

HOUSE SURGEON required for Ear, Throat, and Nose Department, duties to commence March 29th. The Hospital contains 300 beds, includes the usual special departments, and is recognised by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice. Candidates must be registered under the Medical Acts and unmarried.

The appointment is for six months. Salary at the rate of £100 per annum, board, furnished rooms, and laundry provided.

Applications, with copies of testimonials, to be forwarded to the undersigned.

Wolverhampton. W. H. HARPER,
February 27th, 1933. House Gov.

GENERAL HOSPITAL, NOTTINGHAM.
(386 Beds.)

A HOUSE PHYSICIAN is required at the above Institution. The appointment is for six months, with salary at the rate of £150 a year, with board, residence, and laundry. Candidates are desired to send applications, together with copies of testimonials and full particulars as to age, qualifications, and experience, to the undersigned, not later than Wednesday, March 15th. The appointment will be made on Wednesday, March 22nd. Duties to commence on or about April 22nd.

PETER M. MACCOLL,
House Governor & Secretary.

THE HOSPITAL FOR SICK CHILDREN, NEWCASTLE-UPON-TYNE. (85 Beds.)

Applications are invited for the following (male or female) for six months as from April 1st. Salary at the rate of £100 per annum, together with board, residence, and laundry.

Applications, stating age and qualifications, with copies of three recent testimonials, to be sent to the Secretary, Mr. NEIL BRODIE, 18, City Road, Newcastle-upon-Tyne, 1.

BRIGHTON SANATORIUM AND INFECTIOUS DISEASE HOSPITAL.

Applications are invited for the post of MALE JUNIOR RESIDENT MEDICAL OFFICER. Salary £150 per annum, with board and lodging. The appointment is for a period of six months.

Particulars and form of application can be had from the undersigned.

Latest date for application for appointment, March 20th.

Town Hall, JAS. H. ROTHWELL,
Brighton. Town Clerk.
February 25th, 1933.

THE LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL.

Wanted, to commence duties early in April, RESIDENT HOUSE SURGEON (male or female and unmarried) possessing a medical and surgical registered qualification. Practical experience in the administration of anaesthetics is required. Salary £175, with apartments, board, and laundry. All applications, stating age, etc., with copies of testimonials, to be sent to me at once.

9, Leicester Rd., FRANK H. TOONE,
Loughborough. Secretary.

THE QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, London, E.2.

HOUSE PHYSICIAN required April 7th. CASUALTY OFFICER required April 7th. Some Ophthalmic work additional. Six months' appointments. Salary at the rate of £100 per year, with board, lodging, and laundry.

Applications must be made on forms to be obtained from the undersigned, and must be sent in with copies of not more than four testimonials, on or before March 6th.

CHARLES H. BESSELL,
February 8th, 1933. Secretary.

MANCHESTER VICTORIA MEMORIAL JEWISH HOSPITAL, MANCHESTER, 8.
(Non-Sectarian.) (102 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male). The appointment is for six months. Salary at the rate of £125 per annum, with board, residence, and laundry, to which will be added certain emoluments from the Pay Department. Applications, stating age and qualifications, together with copies of three recent testimonials, to be forwarded to the undersigned not later than Monday, March 13th.

FRED BARNES,
Superintendent & Secretary

MANCHESTER VICTORIA MEMORIAL JEWISH HOSPITAL, MANCHESTER, 8.
(Non-Sectarian.) (102 Beds.)

Applications are invited for the post of RESIDENT SURGICAL OFFICER (Male). The appointment is for twelve months. Salary at the rate of £200 per annum, with board, residence, and laundry, to which will be added certain emoluments from the Pay Department. Applications, stating age and qualifications, together with copies of three recent testimonials, to be forwarded to the undersigned not later than Monday, March 13th.

FRED BARNES,
Superintendent & Secretary.

MANCHESTER VICTORIA MEMORIAL JEWISH HOSPITAL, MANCHESTER, 8.
(Non-Sectarian.) (102 Beds.)

Applications are invited for the post of JUNIOR HOUSE SURGEON (male). The appointment is for six months. Salary at the rate of £125 per annum, with board, residence, and laundry, to which will be added certain emoluments from the Pay Department. Applications, stating age and qualifications, together with copies of three recent testimonials, to be forwarded to the undersigned not later than Monday, March 13th.

FRED BARNES,
Superintendent & Secretary.

THE JESSOP HOSPITAL FOR WOMEN, SHEFFIELD.

The Board of Management invite applications for the post of CLINICAL ASSISTANT (Honorary) to the Ante-Natal Department.

Candidates must be fully qualified general practitioners.

The officer appointed will be required to assist in the Ante-Natal Clinic during one or two sessions weekly.

Applications, with not more than three testimonials, to be sent to the undersigned not later than March 13th.

DAVID OSWALD, Secretary.

STOCKPORT INFIRMARY.

Applications are invited for the post of SECRETARY-SUPERINTENDENT. Salary commencing £500 per annum.

Applications, stating age, experience in Hospital administration, and copies of recent testimonials, should be sent to the undersigned marked "Private," by March 10th.

The successful candidate will be expected to join a contributory Pensions Scheme, if he has not already done so.

EDWIN J. PEARCE,
Secretary-Superintendent.

STOCKTON AND THORNABY HOSPITAL, Stockton-on-Tees.
(140 Beds—Three Residents.)

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER (male) for a period of at least six months, duties to commence March 22nd. Salary £160, with board, residence, and laundry. Candidates must be duly qualified and unmarried.

Applications, stating age, nationality, and experience, together with copies of three recent testimonials, to be sent to the undersigned

J. WILKINSON, Secretary

UNIVERSITY COLLEGE HOSPITAL, Gower Street, W.C.1.

Applications are invited for the Honorary post of ASSISTANT OBSTETRIC SURGEON to University College Hospital.

Applications, accompanied by evidence of fitness for the post, must reach the Secretary by first post on Friday, March 24th.

Further particulars on application.

NORTH DEVON INFIRMARY, BARNSTAPLE. (70 Beds.)

Wanted, April 1st, duly qualified RESIDENT MEDICAL OFFICER (male or female). Salary £150 per annum, with board, apartments, and laundry. Appointment to be for not less than six months. Applications, stating age, qualifications, with copies of recent testimonials, to be sent forthwith to the Hon. Secretary.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL, Haverstock Hill, N.W.3.

APPOINTMENT OF CASUALTY SURGICAL OFFICER.

Applications are invited from unmarried Medical Women for the position of Casualty Surgical Officer at the Out-patient Department of the Hospital, Bayham Street, Camden Town, which will become vacant on April 1st next.

The salary will be at the rate of £100 per annum, together with board, residence, etc., and the term will be for six months.

Applications, to be made on a form which will be supplied by the Secretary, together with copies of not more than three testimonials, should reach the Secretary not later than noon on March 18th next.

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN,
St. Quintin Avenue, North Kensington, W.10.
(56 Beds.)

HOUSE SURGEON (male or female) required for six months from April 1st. Salary for first three months at the rate of £75 per annum, after which should he or she be appointed Senior Resident (of two) the salary would be at the rate of £100 per annum, with board, residence, and laundry in each case. It is desirable that applicants should have held a responsible Hospital post. Applications, with copies of three recent testimonials, must be submitted on a form to be obtained from the Secretary at the Hospital, and must reach him not later than first post on Friday, March 17th.

LONDON HOSPITAL, E.1.

Applications are invited for the post of MEDICAL FIRST ASSISTANT AND REGISTRAR. There are three vacancies. The appointment is for one year, but is renewable annually on application, for two further periods of one year. Salary £300 per annum, payable by the Hospital and Medical College jointly.

Candidates must be fully qualified medically.

Applications should arrive at the Hospital not later than by the first post on Saturday, March 11th.

Further particulars may be obtained from the House Governor

ARTHUR G. ELLIOTT,
House Governor.

SWINDON AND NORTH WILTS VICTORIA HOSPITAL. (80 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER. Salary £125 per annum, with board, residence, and laundry.

The appointment is for a minimum of six months Candidates must be registered under the Medical Act. Applications, stating age, qualifications, etc., and enclosing copies of not more than three recent testimonials, should be sent to the undersigned not later than Saturday, March 11th.

(Signed) KENNETH N. KNAPP, Secretary

MOUNT VERNON HOSPITAL, NORTHWOOD.
(For the Study and Treatment of Cancer.)

There is a vacancy for a RESIDENT MEDICAL OFFICER. Candidates must be fully qualified and registered. Salary at the rate of £250 per annum, with board, lodging, etc. Applications, with copies of three testimonials, to be sent to the undersigned not later than March 11th.

Offices: W. J. MORTON,
32, Fitzroy Square, W.1. Secretary.

MOUNT VERNON HOSPITAL, NORTHWOOD.
(For the Study and Treatment of Cancer.)

There is a vacancy in the Radiographers' Department for an ASSISTANT, possessing full Medical qualifications, together with the D.M.R.E. Particulars as to duties, emoluments, etc., can be obtained from the Secretary, 32, Fitzroy Square, W.1.

NATIONAL TEMPERANCE HOSPITAL, Hampstead Road, N.W.1.

A vacancy has occurred for the post of HONORARY ASSISTANT PHYSICIAN.

Candidates must be Doctors of Medicine of a British University or Members of the Royal College of Physicians.

Applications, with copies of not more than three recent testimonials, must be forwarded not later than Thursday, March 9th, addressed to the Secretary.

DURHAM COUNTY HOSPITAL.
(100 Beds.)

HOUSE SURGEON (male) required to commence duties on March 27th. Salary £150 per annum, with board and lodging. Applications, with copies of testimonials, to be sent to WM. R. WILSON, Secretary, 78, Saddler Street, Durham.

CORPORATION OF LONDON.

PUBLIC HEALTH DEPARTMENT.

THE PUBLIC HEALTH (LONDON) ACT, 1891.

COMPULSORY NOTIFICATION OF CHICKEN-POX.

NOTICE IS HEREBY GIVEN that the Mayor and Commonalty and Citizens of the City of London, as the Sanitary Authority for the City of London, do hereby, by virtue of the powers vested in them by Section 56 of the Public Health (London) Act, 1891, and with the approval of the Minister of Health, *Order that* the provisions of the said Act, with respect to infectious disease, shall apply in the City of London to the disease known as Chicken-pox, in addition to the diseases specifically mentioned in Section 55 of the said Act (or any Order extending or amending the same) and that for a period of twelve months from the 18th day of *March*, 1933, *Chicken-pox* shall be compulsorily notifiable disease within the City of London.

BELL.

Guildhall, E.C.2. February 25rd, 1933.

CITY AND COUNTY OF NEWCASTLE-UPON-TYNE.

CITY HOSPITAL FOR INFECTIOUS DISEASES.

RESIDENT MEDICAL ASSISTANT (MALE).

Wanted immediately, a Resident Medical Assistant (male), who holds a registrable qualification in Medicine and Surgery, and possesses a practical knowledge of Bacteriology. The holding of a previous resident appointment and some experience of general practice will be considered a recommendation.

Salary £350 per annum, subject to a temporary reduction of £10 18s. 9d., with board, lodging, etc.

The appointment is for the period of one year only.

Applications, on the prescribed form, which can be obtained on application to the Medical Office of Health, Town Hall, Newcastle-upon-Tyne, must be submitted not later than Tuesday, *March* 14th.

February 27th, 1933.

MILLER GENERAL HOSPITAL, Greenwich Road, S.E.10.

Applications are invited for the two following posts:

RESIDENT SURGICAL OFFICER AND REGISTRAR (the senior of six Resident posts). Salary £250 per annum.

HOUSE PHYSICIAN. Salary £100 per annum.

Candidates (male) must be unmarried. Board, residence, and laundry are provided. Duties to commence on April 1st next. Applications, stating age, nationality, qualifications, and experience, accompanied by copies of not more than three recent testimonials, to be sent to the Secretary as soon as possible.

March 1st, 1933.

EAST HAM MEMORIAL HOSPITAL, Shrewsbury Road, E.7. (100 Beds.)

Applications are invited for the post of HOUSE SURGEON (male) to Special Department, and CASUALTY OFFICER, for six months commencing April 1st. Salary at the rate of £120 per annum, with board, residence, and laundry. Applications, stating age, experience, and full particulars, together with copies of testimonials, should reach the undersigned immediately.

REGINALD PERRY, Secretary.

EAST HAM MEMORIAL HOSPITAL, Shrewsbury Road, E.7. (100 Beds.)

Applications are invited for the post of HOUSE PHYSICIAN (male) for six months commencing April 1st. Salary at the rate of £150 per annum, with board, residence, and laundry. Applications, stating age, experience, and full particulars, together with copies of testimonials, should reach the undersigned immediately.

REGINALD PERRY, Secretary.

EASTERN DISPENSARY, LEMAN ST., E.1.

Applications are invited for the post of OPHTHALMIC SURGEON. An honorarium is given.

GEORGE W. ILSLEY,

February 28th, 1933. Secretary.

HOUSE SURGEON (MALE) REQUIRED AT the COUNTY HOSPITAL, HUNTINGDON. Salary £125 and usual allowances. — Apply, *W. R. Grove, M.D., Senior* Medical Officer, Huntingdon County Hospital.

BOOTLE GENERAL HOSPITAL, BOOTLE, LIVERPOOL, 20. (100 Beds.)

CASUALTY OFFICER.

Applications are invited for the above post, which will be tenable for six months from April 1st next.

The salary attached to the post is £150 per annum, with board and residence.

Applications, with copies of testimonials, to be sent to me immediately.

A. J. COOPER,

March 1st, 1933. Secretary-Supt.

ST. MARY'S HOSPITALS, MANCHESTER.

RESIDENT SURGICAL OFFICER for the HIGH STREET HOSPITAL (Gynaecology and Children) for a period of twelve months from May 1st next. Salary £175 per annum, with board and residence. Membership of the College of Obstetricians and Gynaecologists would be an advantage.

Applications, with copies of three testimonials, to be sent to the undersigned on or before March 16th.

R. RATCLIFFE, Secretary.

ST. MARY'S HOSPITALS, MANCHESTER.

TWO HOUSE SURGEONS for the WHITWORTH ST. WEST HOSPITAL (Maternity); and ONE for the WHITWORTH PARK HOSPITAL (Gynaecological Dept.); each for a period of six months from May 1st next. Salaries at the rate of £50 per annum, with board and residence.

Applications, with copies of three testimonials, to be sent to the undersigned on or before March 16th.

R. RATCLIFFE, Secretary.

JEWISH MATERNITY HOSPITAL, Underwood Street, E.1.

Applications are invited for the post of REGISTRAR-PATHOLOGIST, to commence duties on April 1st. Honorarium 50 gns. a year. The appointment, which is for one year, can be renewed annually for a period of three years. Candidates must hold the F.R.C.S. (Eng.). Applications, with copies of three recent testimonials, should be sent to the undersigned not later than the first post on Monday, March 13th.

ROYAL NATIONAL ORTHOPAEDIC HOSPITAL, 234, Gt. Portland Street, W.1.

Applications are invited for the post of HOUSE SURGEON (male and unmarried). The appointment is for six months from April 1st, and renewable for a further period of six months on the recommendation of the Medical Board. £150 per annum, with board, quarters, and laundry. Applications, with copies of testimonials, should be addressed to the Secretary not later than March 14th.

SUSSEX THROAT AND EAR HOSPITAL, BRIGHTON.

HONORARY CLINICAL ASSISTANTS.

... Medical Practitioners resid- in ... invited for the posts of tw... Assistants.

Applications and testimonials to be forwarded to the Secretary at the Hospital on or before March 25th.

Church Street, Brighton. W. A. HABENS, Secretary.

YORK COUNTY HOSPITAL. (200 Beds.)

The post of RESIDENT ANAESTHETIST AND ASSISTANT HOUSE SURGEON will become vacant on April 1st. Salary £150 per annum, with board, residence, and laundry.

Applications, stating age and previous experience, together with copies of not more than three recent testimonials, to be sent to the undersigned not later than 9 a.m. on Wednesday, March 15th.

H. E. RYAN, General Supt.

BUCHANAN HOSPITAL, ST. LEONARDS-ON-SEA. (109 Beds.)

Applications are invited from British subjects for the posts of SENIOR and JUNIOR HOUSE SURGEON (female). Salaries at the rate of £175 and £125 per ... for a period of six months ... t.

Applications, statin... and experience, accompanied by copies of at least three recent testimonials, should be sent to the undersigned before March 15th.

S. C. W. DISNEY, Secretary.

WHITEHAVEN AND WEST CUMBERLAND HOSPITAL.

Applications are invited for the post of HOUSE SURGEON at this Hospital. Salary at the rate of £150 per annum, with board, rooms, and laundry. Six months appointment. Duties to commence April 14th. Applications, stating age, qualification, experience, and nationality, accompanied by copies of three recent testimonials, should be sent to the undersigned as early as possible.

R. HIGGINS, Secretary.

SWANSEA GENERAL AND EYE HOSPITAL. (316 Beds.)

HOUSE PHYSICIAN wanted, gentleman, single. Salary £150 per annum, with board, residence, and laundry. Appointment for six months.

Applications, stating age, nationality, qualifications, and experience, together with copies of three recent testimonials, to be forwarded to the undersigned.

O. C. HOWELLS, Secretary-Supt.

SEAMEN'S HOSPITAL SOCIETY, Greenwich.

TWO HOUSE PHYSICIANS required at the HOSPITAL FOR TROPICAL DISEASES, Endsleigh Gardens, W.C., for six months from April 1st. Salary £120 per annum, with board, residence, and laundry. Candidates must be male. Applications, with copies of three testimonials, to be sent in by March 15th to the undersigned.

Greenwich, February 25th, 1933. R. E. V. BAX, Secretary.

SEAMEN'S HOSPITAL SOCIETY, Greenwich.

HOUSE PHYSICIAN and HOUSE SURGEON required at DREADNOUGHT HOSPITAL, Greenwich, for six months from April 1st. Salary £110 per annum, and a proportion of fees, with board, residence, and laundry. Candidates must be male. Applications, with copies of three testimonials, to be sent in by March 13th to the undersigned.

Greenwich, February 25th, 1933. R. E. V. BAX, Secretary.

GOLDEN SQUARE THROAT, NOSE, AND EAR HOSPITAL, London, W.1.

Applications are invited for the post of HON. ANAESTHETIST. Particulars of the duties may be obtained from the undersigned. Applications, stating qualifications, experience, and age and accompanied by copies of three testimonials must be received on or before March 10th.

F. P. CARROLL, Secretary-Superintendent.

BOLINGBROKE HOSPITAL, Wandsworth Common, S.W.11. (121 Beds.)

Applications are invited for the post of part-time PATHOLOGIST.

Candidates must be registered Medical Practitioners engaged in Pathological Practice.

Details of the post can be obtained from the undersigned.

W. S. RANDOLPH BISS, Secretary-Supt.

ROYAL NORTHERN HOSPITAL, Holloway, N.7.

Applications are invited for the post of HOUSE SURGEON. The appointment is for nine months (six months as House Surgeon and three months as Casualty Officer) from April 15th. Salary at the rate of £70 per annum, with board, residence, and laundry.

Applications, with copies of testimonials, should be sent by March 10th to the undersigned from whom forms of application and rules can be obtained.

GILBERT G. PANTER, Secretary.

MANCHESTER ROYAL EYE HOSPITAL.

JUNIOR HOUSE SURGEON required. Salary £120 per annum, with residence, board, etc.

Applications (with copies of testimonials) endorsed "House Surgeon," to be addressed to the Chairman of the Board of Management not later than March 17th.

H. R. NORTH, Secretary.

CHESHIRE TOWN. — A THREE-TENTHS SHARE in large Partnership, with average gross receipts of £4,872, and a panel of over 5,000, together with several appointments, is offered for sale, at 2 years' purchase. There is a good house to be sold for £1,400. H.P. and H.S. experience essential, and a Diploma in Ophthalmology an advantage.—Address, stating age, experience, and nationality, and if possible forward a photograph, No. 1524, B.M.A. House, Tavistock Square, W.C.1.

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh).

(a) British Islands.

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**CONTRACT PRACTICE** *(contd.)*
EBBW VALE, MON. *(Workmen's Medical Society.)*	MARDY, GLAMORGAN. *(Workmen's Medical Scheme.)*	OGMORE VALLEY, GLAMORGAN. *(Wyndham Colliery Medical Aid Society.) (Workmen's Medical Scheme.)*
GILFACH GOCH, GLAMORGAN. *(Workmen's Medical Scheme.)*	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE. *(Workmen's Medical Scheme.)*	**PUBLIC HEALTH**
LLWYNPIA, CLYDACH VALE, PENYGRAIG, GLAMORGAN. *(Workmen's Medical Scheme.)*	NEATH AND DISTRICT *(Medical Aid Association.)*	KENT COUNTY COUNCIL. LENHAM SANATORIUM. *(Male Assistant Medical Officer.)*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer.)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association.)*	LLANTRISANT AND LLANTWIT FARDRE RURAL DISTRICT COUNCIL. (1) *Medical Officer of Health (part time.)* (2) *Medical Officer (woman—part-time) for Maternity and Child Welfare.*

(b) Overseas.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. G. HUNTER (Medical Secretary, New South Wales Branch), 135, Macquarie St., Sydney, N.S.W.	**QUEENSLAND.** *(Brisbane Associated Friendly Societies Institute.)*	The Hon. Sec., Queensland Branch, British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	**WELLINGTON, NEW ZEALAND.** *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec., New Zealand Branch), British Medical Association, P.O. Box 156, Wellington, New Zealand
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch, British Medical Association, Medical Society Hall, East Melbourne, Victoria.	*(Toowoomba Associated Friendly Societies, Medical Institute, Toowoomba.)*		**WESTERN AUSTRALIA.** *(Contract and Lodge Practices.)*	Hon. Sec., Western Australian Branch, British Medical Association, No. 6, Bank of N.S.W. Chambers, St. George's Terr., Perth, Western Australia

March 1st, 1933. By Order of the Council. G. C. ANDERSON, Medical Secretary.

NORTHAMPTON GENERAL HOSPITAL. (253 Beds.)

There will be vacancies on April 1st next for a HOUSE PHYSICIAN, a HOUSE SURGEON for one of the general Honorary Surgeons, and a HOUSE SURGEON to the Ear, Nose, and Throat Department. British nationality. Salary £150 per annum, with board, residence, and laundry.

The successful candidates will be appointed for a period of six months, and will be eligible for re-election for a further period.

Candidates must be duly qualified and registered.

Applications, stating age, sex, qualifications, etc., with copies of testimonials, to reach the undersigned not later than first post on Wednesday, March 8th.

H. ST. JOHN WOOD,
February 20th, 1933. Secretary-Supt.

ST. PETER'S HOSPITAL FOR STONE, ETC., Henrietta Street, Covent Garden, W.C.2.

The office of HOUSE SURGEON will fall vacant on April 1st, and applications are invited from male candidates with previous experience in a similar office at a General Hospital. The salary offered is at the rate of £75 per annum, with board, lodging, and laundry.

At the expiration of six months' term of office, and subject to the recommendation of the Medical Committee, the surgeon is appointed for a further should therefore be prepared, if successful, to remain at the Hospital for twelve months in all.

Applications, accompanied by copies of testimonials, will be received by the undersigned not later than the first post on Wednesday, March 8th.

BEECHEY ROGERS, Secretary.

ROYAL MANCHESTER CHILDREN'S HOSPITAL.
Out-patients' Dept.: Gartside Street, MANCHESTER.

Wanted, for the Out-patients' Department, TWO ASSISTANT MEDICAL OFFICERS, non-resident, salary £150 per annum, who will be appointed for six months, one to commence duties on April 1st and one on May 1st. Candidates must be on the *Medical Register*. Particulars of the duties can be obtained from the Secretary. The hours of duty are from 9 a.m. till 1 p.m., or until the work of the Dispensary is finished. Patients' attendances number 94,000 per annum.

Applications, stating age, and accompanied by copies of not more than three testimonials, to be sent to the undersigned not later than Thursday, March 9th.

Canvassing, directly or indirectly, may disqualify.

By Order,
W. M. HUMPHRY, Secretary.

EDINBURGH HOSPITAL FOR WOMEN AND CHILDREN, Whitehouse Loan, EDINBURGH. (56 Beds.)

Applications are invited from *fully qualified Medical Women* for the post of JUNIOR HOUSE SURGEON, rising to Senior House Surgeon after three months, at above Hospital.

Appointment is for six months from April 1st. Honorarium at the rate of £25 per annum for first three months, £50 per annum for second three months, with board, residence, and laundry.

Applications, with copies of testimonials, to be sent to the Secretary, 1, Brunstfield Crescent, Edinburgh, on or before March 11th.

SALFORD ROYAL HOSPITAL. (263 Beds.)

Applications are invited for the following vacancies which will occur in the Resident Medical Staff (male) on March 31st next:

HOUSE PHYSICIAN. Salary £125 per annum.

HOUSE SURGEON (attached to the Orthopaedic Department). Salary £125 per annum.

CASUALTY HOUSE SURGEON. Salary £125 per annum.

The appointments are for six months, with board and residence.

Candidates must be registered under the Medical Acts.

The Hospital has the approval of the Royal College of Surgeons of England, and appointments here are recognised for the English Fellowship (Final).

Forms of application, which may be obtained from the undersigned, should be delivered on or before March 8th next.

By Order of the Board,
H. B. SHELSWELL,
General Superintendent & Secretary.
February 20th, 1933.

MANCHESTER EAR HOSPITAL, Grosvenor Square, All Saints'.

The Board invite applications for the post of RESIDENT HOUSE SURGEON (24 beds). Salary at the rate of £120 per annum. Candidates must be duly qualified and registered. Applications, with copies of four recent testimonials, to be forwarded to Mr. REGINALD S. MILFORD (Hon. Sec., Manchester Ear Hospital), c/o Mr. W. J. ELLAM, 33, Bridgeford Street, Manchester.

British Medical Journal.
BRITISH MEDICAL ASSOCIATION HOUSE,
TAVISTOCK SQ., LONDON, W.C.1.
T/A: ARTICULATE, WESTCENT, LONDON.
Tel.: MUSEUM 9361 (4 lines).

SMALL ADVERTISEMENT RATES.

Up to Six Lines (32 Words) 9s.
Each Additional Line, 1s. 6d.
(a line averages 5 words)
Address must be paid for.

All advertisements should reach the above address by not later than first post TUESDAY preceding publication.

NOT CLASSIFIED.

WANTED. — LADY TO SHARE QUIET residential FLAT with Medical man and wife. Close to Harley Street. — Address, No. 1550, B.M.A. House, Tavistock Square, W.C.1.

ATTRACTIVE TERMS FOR HIRE OF SMART PACKARD LIMOUSINE with chauffeur. Would wait on Consultants day or night. Also private Garage space available Courtfield Gardens. Would clean, service, deliver by arrangement.—FLAXMAN 2426.

FRENCH DOCTOR OF VICHY DESIRING TO perfect his English would like to STAY in London with a MEDICAL FAMILY of good standing. — Address, No. 1505, B.M.A. House, Tavistock Square, W.C.1.

ASSISTANCIES.

WANTED. — OUTDOOR ASSISTANT, LARGE mixed Practice (chiefly industrial). Town 10 miles from Manchester. Panel 3,800. Partnership to suitable man. Salary £400, rising £450, plus unfurnished house and car expenses. Usual bond.
Address, No. 1514, B.M.A. House, Tavistock Square, W.C.1.

WANTED, AN OUTDOOR ASSISTANT IN A South Wales Practice. Dispenser kept. Usual bond. Salary £350 per annum, with furnished rooms, etc., or a partly furnished house. — Address, stating age, references, etc., No. 1521, B.M.A. House, Tavistock Sq., W.C.1.

WANTED. — ASSISTANT FOR RADIOlogical Practice, Northern district. Radiological experience essential. Suitable for D.M.R.E. candidate. Salary £350—£400, according to experience. — Address, No. 1529, B.M.A. House, Tavistock Square, W.C.1.

WANTED AT ONCE A TEMPORARY INDOOR ASSISTANT (English or Scottish) for a Country Practice in Kent. £21 monthly. Dispenser kept. Bicycle within 2 miles radius of Surgery, beyond that car available. — Address, No. 1534, B.M.A. House, Tavistock Sq., W.C.1.

WANTED, BY RECENTLY QUALIFIED Edinburgh Graduate, aged 33, outdoor ASSISTANTSHIP in mixed Practice, Yorkshire or West of England preferred. Car available.—Address, No. 1540, B.M.A. House, Tavistock Square, W.C.1.

WANTED FOR COUNTRY TOWN (Cheshire) outdoor ASSISTANT, male, English, Scotch, or Irish. Salary according to experience. Car provided for use in Practice. Dispenser kept. Usual bond. — Address, No. 1530, B.M.A. House, Tavistock Square, W.C.1.

WANTED, — INDOOR, SINGLE, MALE ASSISTANT for General Practice in London, East. Suitable for recently qualified man. English or Scotch preferred. State essential particulars.—Address, No. 1532, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — ASSISTANTSHIP OR LOCUM (with or without view) by M.R.C.P., Indian, age 32, experienced G.P. and panel, energetic, abstainer, drive car, references. Free March 31st.—Address, No. 1501, B.M.A. House, Tavistock Square, W.C.1.

WANTED AT ONCE, INDOOR FEMALE ASSISTANT for private and panel Practice in London, near West End. Usual bond. Salary £200 per annum. State age, experience, and references. — Address, No. 1503, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — NORTHUMBERLAND.—MIXED Practice, Part-time ASSISTANT, middle June. Suit man or woman wishing to take D.P.H. Medical School within 10 miles. £200 live in. Motor cyclist or car owner preferred.—No. 1542, B.M.A. House, Tavistock Sq., W.C.1.

WANTED. — ASSISTANTSHIP, APRIL, Letchworth, Bedford, or Luton district, by Woman M.B. Many years' experience Hospital, Midwifery, G.P. — Address, No. 1507, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — ASSISTANTSHIP, M.B., AGED 28; 2½ yrs.' hospital experience, H.S. and H.P. Available March 21st. London preferred. —Address, No. 1544, B.M.A. House, Tavistock Square, W.C.1.

WANTED IMMEDIATELY. — INDOOR AND Outdoor ASSISTANTS for Town and Country Practices, with and without view; good salaries. State full particulars.—BRITISH MEDICAL BUREAU, 33, Cross St, Manchester, 2.

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B[illegible]IED. — COUNTRY [illegible] p.a. has been £1,100. Panel about 800. Visiting fees 2/6 to 7/6. Very little midwifery. Splendid house, specially built for Vendor, with two acres of grounds, 2 reception rooms, 6 bedrooms, surgery, and waiting rooms, etc. Consider £4,000 offer for Practice & house, freehold.—No. 9100.

WANTED.

WANTED. — PRACTICE OR PARTNERSHIP in London, S.W.; Putney district particularly desired. £1,000 p.a. Applicant is M.B., Ch.B., aged about 40 and would pay a good price for suitable investment.—No. 513.

WANTED.—PRACTICE OR PARTNERSHIP, with early succession by experienced practitioner. Eastern Counties and near coast preferred. House, with 6/7 bedrooms. Capital to £4,000.—No. 501.

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5 NORTH OF ENGLAND. — INLAND HEALTH RESORT. — NON-dispensing PRACTICE of about £1,000 p.a. Small select panel. House (7 bedrooms) with large garden, for sale. Premium—Practice—£750.

6 N. MIDLANDS.—PARTNERSHIP IN SOUND AND LUCRATIVE Practice in manufacturing district. Good appointments and large panel. House, with 7 bedrooms, to rent on lease. Premium for share worth about £2,600 p.a., 1¾ years' purchase.

7 EAST COAST.—PARTNERSHIP IN OLD-ESTABLISHED AND lucrative Practice over £8,000 p.a. in popular watering-place. Good appointments and panel well over 5,000. Excellent house (3 bedrooms), with all modern conveniences to let. Guaranteed share of £800 p.a. would be sold at first at 2 years' purchase, with option to increase share later.

8 S. MIDLANDS. — VERY OLD-ESTABLISHED PRACTICE OF £1,354 p.a. in beautiful country district, within 125 miles of London. Panel nearly 900. Nice house (6 bed and dressing rooms, 2 attics), garage and one and a half acres of garden, to rent on lease. Pretty surrounding country. Hunting and other sport. Premium £2,000.

9 HOME COUNTIES. — PARTNERSHIP (AFTER PRELIMINARY Assistantship) in large mixed Practice in growing district within 20 miles N.W. of London. Applicant should be a keen and energetic young Englishman.

10 LONDON, E.C. — NUCLEUS OF PRACTICE (ABOUT FOUR-fifths Ophthalmic) in the City. Cash receipts average £258 p.a. Fees for Consultations £1 1s. to £2 2s. Consulting and waiting room to rent. Premium £250.

11 HOME COUNTY.—WELL-ESTABLISHED PRACTICE OF £700 p.a. in first-rate Country Town under 40 miles from London. Panel about 250. Fees 5/- to £1 1s. Large well-built residence (about 6 bedrooms) with modern conveniences. Beautiful garden, meadow, orchard, etc., in all about 24 acres. Excellent hunting. Premium, Practice and house, £4,500 (or near offer), which is less than the value of the house alone.

12 KENT.—PARTNERSHIP IN MIDDLE AND WORKING-CLASS Practice averaging nearly £4,450 p.a., in an industrial Town under 25 miles of London. Panel about 2,600. Detached house (4 bedrooms) with garden to rent. Plenty of scope for increase. Premium one-fifth share 2 years' purchase.

13 EASTERN COUNTIES. — OLD-ESTABLISHED PRACTICE about £2,750 p.a. in beautiful country district. Panel 1,150. Good house (6 bedrooms), with electric light and central heating, in large grounds, for sale. Good scope.

14 MIDLANDS. — PARTNERSHIP IN WELL-ESTABLISHED AND increasing Practice of nearly £1,550 p.a. in growing residential neighbourhood on outskirts of first-rate town. Panel 1,830. House (4 bedrooms, etc.), in acre of garden, for sale or rent. Excellent prospects of increase. Premium one-half share 2 years' purchase.

15 S. AFRICA.—RADIOLOGICAL PRACTICE IN A MOST DE-lightful town, with excellent climate. Cash receipts last year £1,450. Scope. Premium, to include furniture, carpets, accessories, etc., £2,200.

16 DEATH VACANCY. — WEST MIDLANDS. — UNOPPOSED Country PRACTICE of over £2,200 p.a. in beautiful district. Good appointments and panel. Visits 3/6—£2 2s. Nice detached residence (6 bed and dressing rooms and 4 attics), bathroom, etc. Grounds of nearly an acre. Good sport.

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19 S.W. OF ENGLAND. — WELL-ESTABLISHED MIDDLE AND better-class PRACTICE of between £1,200 and £1,300 p.a. in Seaside Resort. Panel 500. Excellent and well-situated large detached corner house with every modern convenience, to rent on lease. Very good Educational facilities. Sport of all kinds including golf, yachting, etc. Premium £2,200.

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21 SOUTH AFRICA (CAPE PROVINCE).—PRACTICE OF OVER £2,600 p.a. in Residential District on outskirts of one of the Principal Coastal Towns. Good house (5 bedrooms, etc.). Scope for Surgery. Premium £2,000.

22 DEATH VACANCY.—LANCS.—OLD-ESTABLISHED PRACTICE in small manufacturing town. Receipts average £933 p.a. (including £344 from the panel). Well-situated house on main road to rent or purchase.

23 N. DEVON. — COUNTRY PRACTICE OVER £900 P.A. IN beautiful district. Panel about 320. Excellent house (6 bedrooms), with garage and large garden, to rent on lease. Good hunting, shooting, and fishing. Premium £1,450.

24 LANCASHIRE. — OLD-ESTABLISHED PRACTICE IN SMALL Manufacturing Town. Cash receipts last 12 months £725, including a panel of over 1,050. Detached house (5 bedrooms), with garage and good garden, to rent. Premium 1½ years' purchase or near offer.

25 DEATH VACANCY.—S. WALES.—VERY OLD-ESTABLISHED PRACTICE in beautiful district, with some of the finest coast and moorland scenery. Income between £850 and £900 a year, including appointments worth about £225 p.a. and a panel of 367. Well-situated house (6 bedrooms), garages, and 7 acres of grounds for sale. Excellent reasons for good scope for increase.

26 KENT.-OLD-ESTABLISHED COUNTRY PRACTICE OF NEARLY £900 p.a. in a most beautiful part within easy reach of London. Panel 440. Extremely attractive residence (5 bedrooms), with central heating throughout and beautiful gardens, orchard, etc., for sale. Good hunting. Plenty of rough shooting. Prem. £1,200.

27 SURREY.—PARTNERSHIP IN SOUND OLD-ESTABLISHED good mixed-class Practice about £3,000 p.a. in the Croydon area. Small panel. Very little midwifery. Suitable house could be obtained. Scope for increase. One-fourth share at first at 2 years' purchase, with option to increase in twelve months.

28 HOME COUNTIES. — PRACTICE IN DELIGHTFUL COUNTRY District, easy distance of London. Earnings this year estimated at about £650. Panel over 300. Attractive house (7 bed and dressing rooms) in grounds of two acres, with garage, for sale. Very suitable for Resident Patients. Good scope for increase. Premium £700.

29 SURREY.—PRACTICE OF £1,000 P.A. IN RAPIDLY GROWing Residential District within 15 miles of London. Panel 400. Suitable house, with separate professional accommodation, for sale. Scope for considerable increase. Premium £1,600.

30 LONDON, W.—GOOD MIDDLE-CLASS PRACTICE £400 P.A. in suburb within easy access of the West End. Panel over 100. Attractive double-fronted house with nice garden for sale. Scope for increase. Premium 1½ years' purchase.

31 CORNWALL.—VERY OLD-ESTABLISHED PRACTICE OF OVER £1,100 p.a. in delightfully situated seaside village on West Coast. Panel about 550. Well-built house (7 bed and dressing rooms), standing in half-acre of ground for sale. Scope, as building is going on. Premium 1½ years' purchase.

32 LONDON, N.—PARTNERSHIP IN PRACTICE ABOUT £5,250 p.a. in thickly populated Suburban District. Panel about 800. One fourth or one-third share at 2 years' purchase.

33 S. OF ENGLAND. — PARTNERSHIP IN OLD-ESTABLISHED Practice of nearly £1,950 p.a. in important town within 80 miles of London. No panel. Attractive corner residence (7 bed and dressing rooms), in half-acre of walled-in garden, with garage, etc., for sale. Ample scope for increase. Premium one-half share 2 years' purchase.

34 WEST END OF LONDON.—PARTNERSHIP IN GOOD-CLASS non-dispensing Practice of £3,300 p.a. No appointments or panel. Visits £1 1s. and £3 3s (very few 10s. 6d.). Premium one-half share 2 years' purchase.

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36 LONDON, E.C.—OLD-ESTABLISHED "LOCK-UP" PRACTICE of £646 p.a. Panel 459. Living accommodation to rent if desired. Premium £1,000.

37 MIDLANDS.—PARTNERSHIP (AFTER PRELIMINARY ASSISTantship) in a very old-established Practice of between £1,700/£1,800 p.a., in pleasant market town. Panel 700. Premium for one-half share at 2 years' purchase.

38 S. AFRICA. — OPHTHALMIC AND GENERAL PRACTICE about £1,400 p.a. (about 60 per cent. Ophthalmic), including appointments £400. No ophthalmic opposition. Premium £400.

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41 S. AFRICA. — PRACTICE OF ABOUT £2,000 P.A. IN A famous town. Pleasantly situated detached bungalow (5 bedrooms), garage, and small garden for sale. Good hospital (with private wards). Premium £1,100.

42 LONDON, WEST END. — X-RAY AND ELECTRO-THERAPeutic Practice. Receipts 1931, nearly £620. Suitable and convenient flat at moderate rent, on lease. Premium £925.

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MANCHESTER. — Old-established panel and private PRACTICE. Cash receipts last year £642. Panel 788. Scope. Good corner house, 2 reception, 4 bedrooms; garage. Rent £60 p.a. Premium 1½ years' purchase.—No. 437.

LIVERPOOL.—Mixed PRACTICE. Cash receipts last year £943. Panel 876. Scope for increase. Hospital appointment £75—£100 p.a. Good house, 3 reception, 5 bedrooms, professional rooms, to rent, or would sell. Premium—Practice—best offer.—No. 436.

MANCHESTER.—Middle-class PRACTICE in good residential district which is rapidly developing. Average cash receipts £1,427 p.a., excluding appointment £120 to £150 p.a. Panel 700. Excellent corner house, 3 reception, 5 bedrooms, 3 professional rooms, garage, to rent or for sale. Premium—Practice—1½ years' purchase.—No. 438.

DEATH VACANCY.—LANCS TOWN. —Good middle-class private and panel Practice. Cash receipts approx. £1,900 p.a. Panel 994. Excellent house, 2 reception, 5 bedrooms, 3 professional rooms, garage, and garden, to rent on lease or would sell for £1,000. Efficient Locum in charge. Premium—Practice—£1,850.—No. 439.

MANCHESTER. — Old-established mixed panel and private PRACTICE. Cash receipts last year £1,478. Panel 1,300. Scope for increase. Detached corner house in main road, 2 reception, 4 [illegible] rooms (separate entrance). For sale, or to rent on lease. Premium 1½ years' purchase.—No. 440.

LEEDS.—Old-established [illegible] PRACTICE in good suburb. Average cash receipts £1,020. Panel nearly 2,000. Excellent detached corner house, 2 reception, 6 bedrooms, 4 professional rooms (separate entrance), garage, and garden; also Branch Surgery for sale. Premium—Practice—£2,800.—No. 428.

LANCASHIRE TOWN, near MANCHESTER. [illegible] mixed panel and private PRACTICE. Cash receipts last year £1,478. Appointment (transferable) £240 p.a. Fine house, 2 bedrooms, 2 reception rooms, 2 professional rooms, and garage. Rent £52 p.a. on lease. Prem. 1½ yrs.' pur.—No. 432.

NORTH WALES.—Old-established mixed PRACTICE, in Country Town, near coast. Cash receipts last year £700. Panel 538. Scope for increase as the Practice has been neglected. Excellent house, 3 reception, 5 bedrooms, garage, and large garden. Net rent £50 p.a. Good sport and educational facilities. Welsh not essential. Cottage Hospital. Premium £800.—No. 412.

LANCS TOWN, near Country.—Old-established mixed PRACTICE. Cash receipts last year £725. Panel about 1,000. Excellent detached corner house, 3 reception, 6 bedrooms, garage, and large garden. To rent on lease. Premium 1½ years' purchase, or near offer.—No. 403.

N. STAFFS.—Old-established Country PRACTICE in charming district, averaging £900 p.a. Panel 632. Appointments (transferable) £100 p.a. Practically unopposed. Scope for increase. Excellent house, with ample accommodation; garage and garden; rent £84 p.a. Premium 1½ years' purchase.—No. 426.

DEATH VACANCY.—LANCASHIRE TOWN.—Old-established mixed PRACTICE. Average cash receipts over £900 p.a. (including over £300 from panel). Scope for increase. Good house on main road, 2 reception, 4 bedrooms. Rent £65 p.a. Premium 1 year's purchase. Locum in charge.—No. 423.

SCOTLAND.—Mixed PRACTICE producing £700 p.a., including appointment £400 p.a. Panel 226. Pleasant district. House, with modern conveniences. Rent £16 p.a. Prem. £450.—No. 434.

EAST YORKS. — Country Town near Coast. — Unopposed mixed PRACTICE. Cash receipts last year £960. Panel 630. Excellent detached house, 3 reception, 4 bedrooms; garage and large garden. Prem. 1½ years' pur.—No. 346.

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DEATH VACANCY. — CHESHIRE COAST TOWN, near LIVERPOOL.—Old-established middle-class (non-dispensing) PRACTICE. Cash receipts £500 to £550 p.a. Panel 100. Fees 3/6 to £1 1s. Scope for increase. Suitable semi-detached house, 3 reception, 5 bedrooms, garden, and garage. Rent £80 p.a. on lease. Premium, best offer.—No. 429.

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22. LANCS.—Well-established mixed-class PRACTICE, producing for the last 12 months £725. Panel of 1,055. Fees from 3/6. House contains 3 reception, 5 bedrooms, etc. Rent on lease £85 p.a. Premium 1½ years' purchase.

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"The greatest number of primary abdominal lesions were found in the second year of life, that is, at the period when children are consuming large amounts of raw milk."

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"The highest percentage of infections with bovine strains occurred in the second year of life, that is, at the period when children consume large amounts of raw milk."

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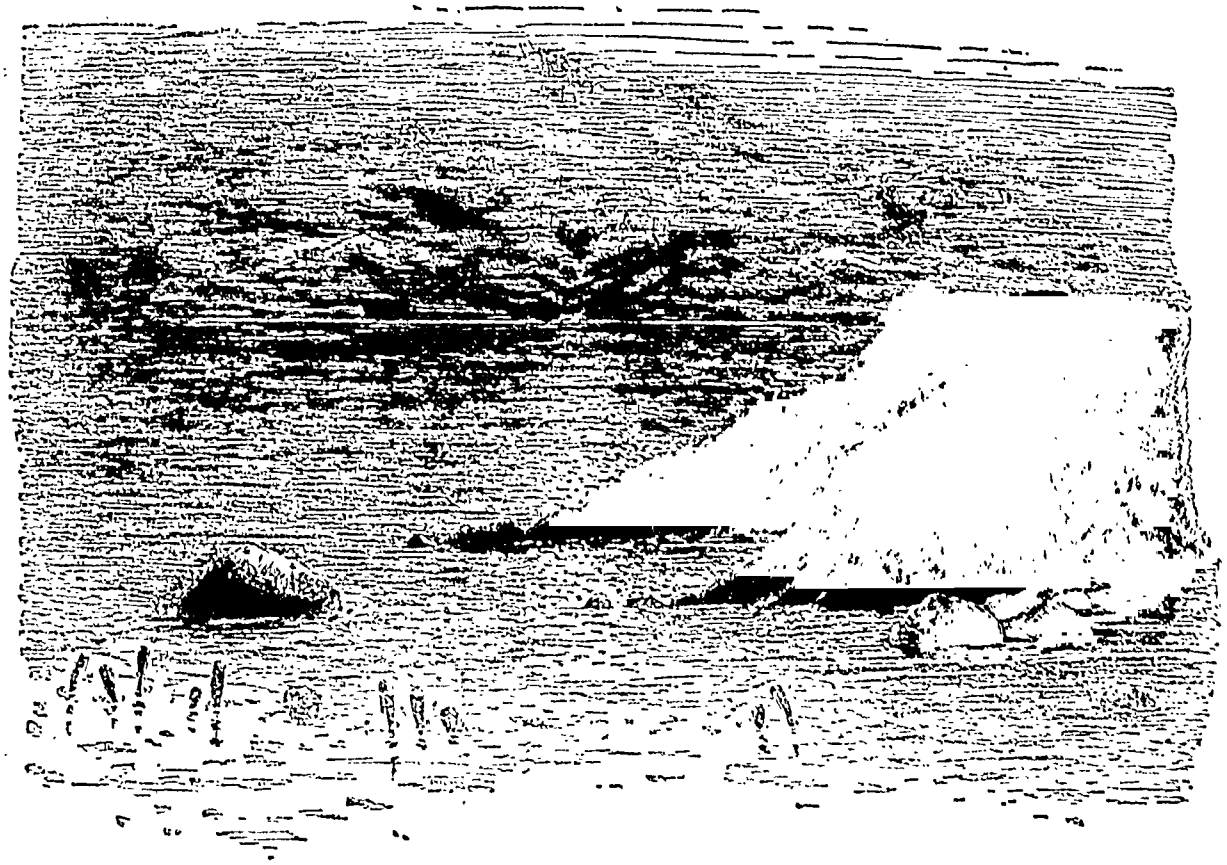

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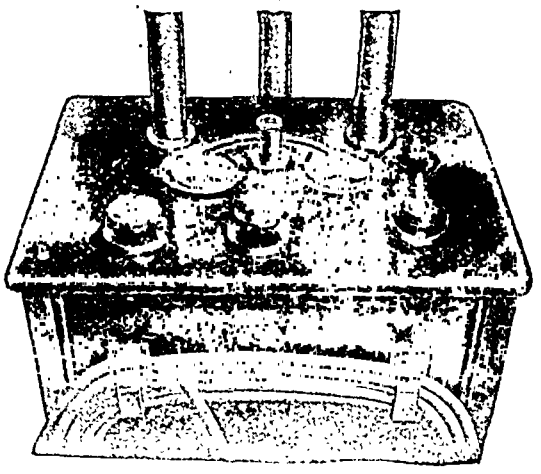

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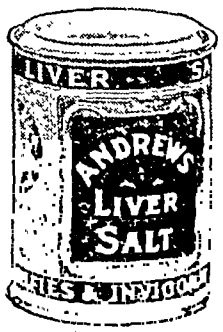

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Powdered medicinal glucose (98 per cent.) with "Ostelin" vitamin D and calcium glycerophosphate for use in acidosis, debility, physical and mental strain, cardiac disease, febrile illnesses, malnutrition, dyspepsia, anorexia, and convalescence. The "D" compensates for the vitamin deficiency in low fat diets.

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That it is now possible to protect epithelial tissues from the inroads of invading organisms is the direct result of clinical experiments with *Radiostoleum*.

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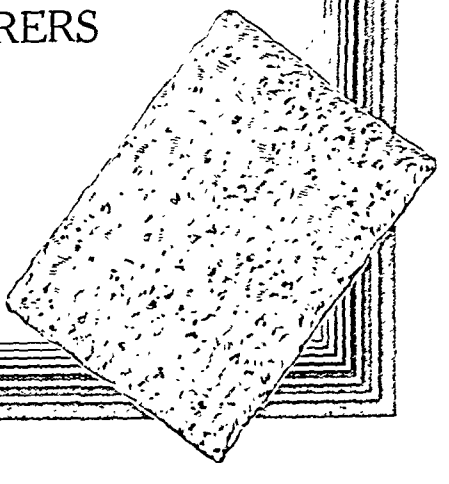

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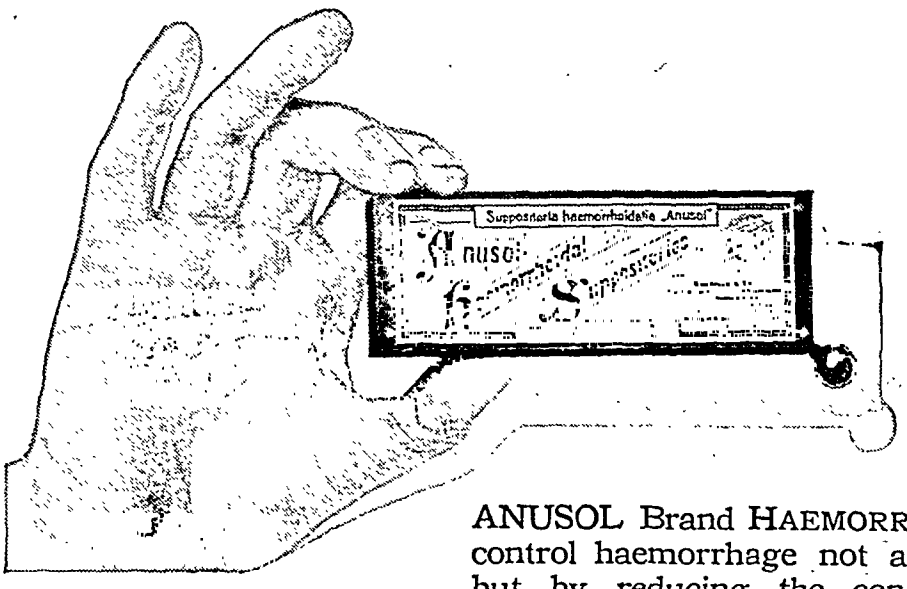

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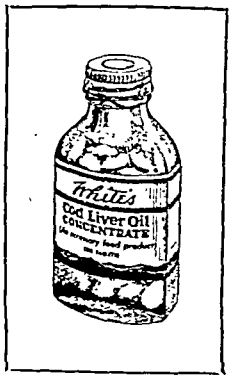

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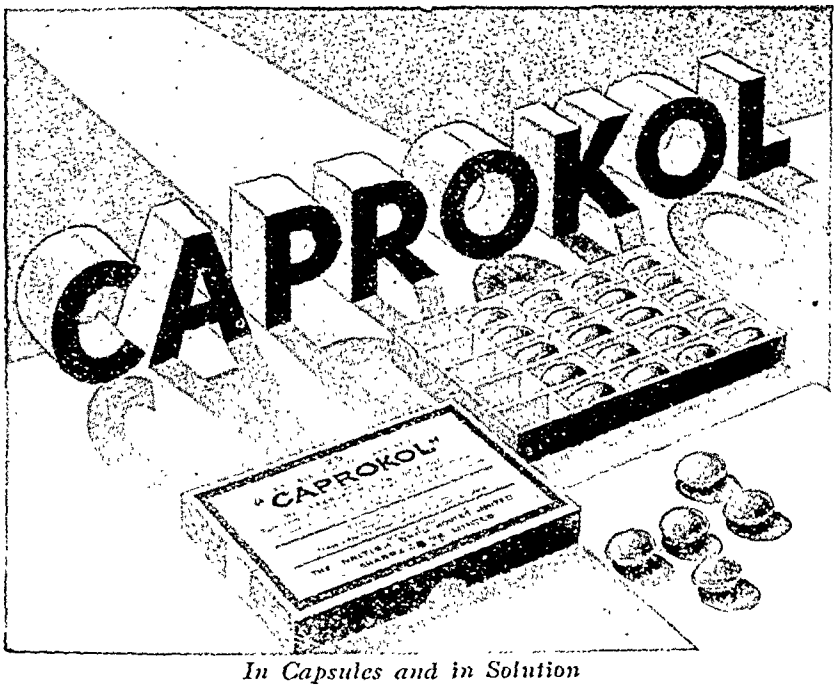

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DOSAGE: Kaylene being completely non-toxic can be given in any quantity which may be needed to reduce the frequency of evacuation.

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which rehydrates the contents of the intestines.

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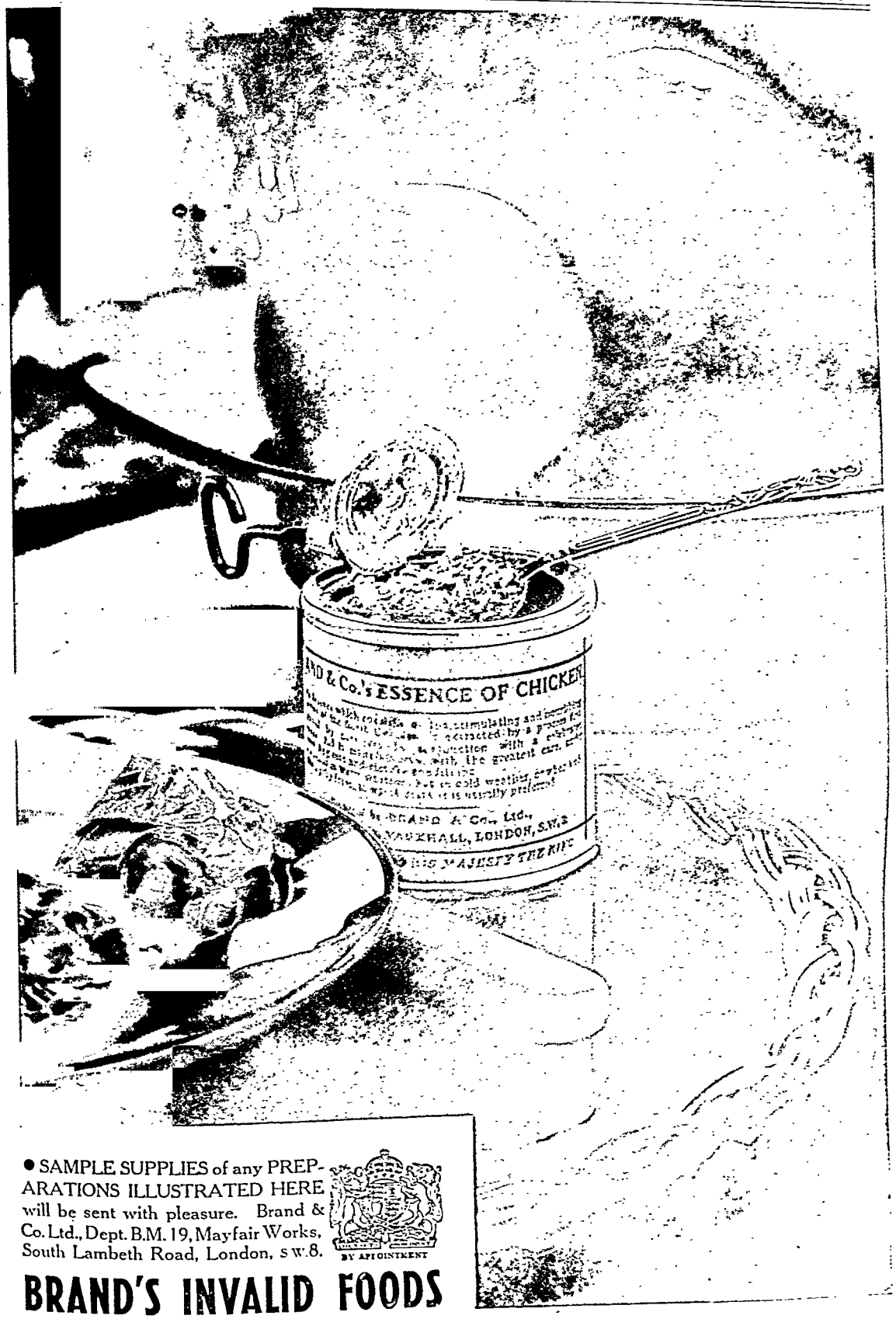

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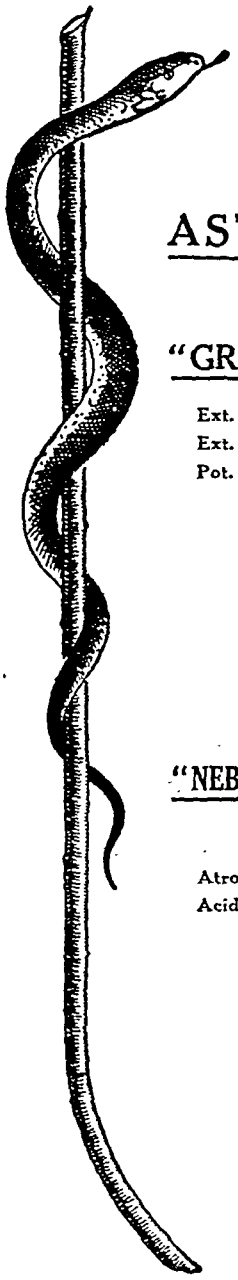

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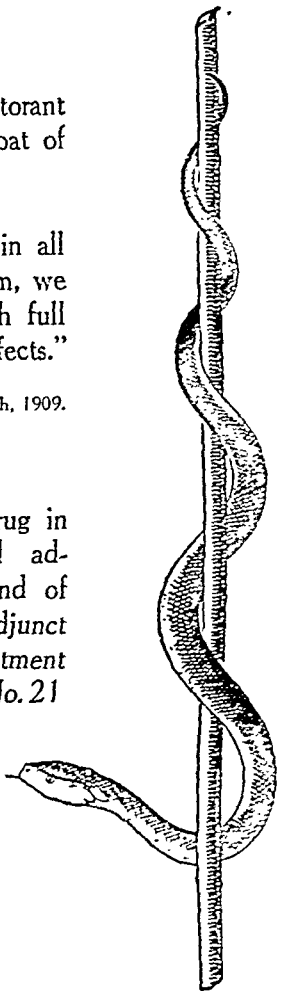

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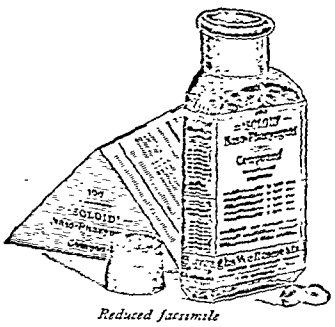

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BY

THOMAS WATTS EDEN

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An interesting feature of midwifery practice at the present time is the willingness, or often the eagerness, of women to enter a hospital for their confinement. This attitude is a comparatively recent development, and arises no doubt from the growing confidence of the public in the work of our hospitals. Yet the proportion of confinements which take place in hospitals or other institutions—that is, which take place away from home—is small if we view the country as a whole. In rural districts the proportion is very small indeed. In the city of Cardiff the proportion is relatively high—namely, 15 per cent. Hospital accommodation for midwifery is admitted to be inadequate over the country as a whole, but the task of increasing the available accommodation is expensive and progress is slow; in all probability, at least 75 per cent. of our women will be confined in their own homes for many years to come.

There is much to be said for the view that it is better for the average normal mother to have her baby at home, so long as the home conditions are decent and good medical and nursing attendants are available. The case which can be recognized as abnormal during the ante-natal period is better dealt with in hospital, except in respect of the small minority whose social circumstances allow them to command specialist services when required. Statistics showing the results of domiciliary midwifery are not easy to obtain, but there are at any rate two sources of information available which deserve attention. One is the outdoor practice of the lying-in hospitals and the midwifery departments of general hospitals; the other is the practice of the midwives belonging to the Queen's Institute of District Nursing, who work for nursing associations in various parts of the country.

May I first of all remind you of the figures of our national maternal mortality, which is the cause of so much public concern at the present time. Table I gives the essential features and the alteration they have undergone during the last twenty-one years. The figures given are average figures for the five-year periods, and they refer only to England and Wales.

TABLE I.—*Mortality per 1,000 Live Births*

Year	Sepsis	Other Causes	Total
1911-15	1.42	2.61	4.03
1916-20	1.51	2.61	4.12
1921-25	1.40	2.50	3.90
1926-31	1.72	2.52	4.25

It is especially to be noted that during this period the total mortality has shown no improvement, a small but sustained fall in column 2 being more than counterbalanced by a rise in the mortality from sepsis.

Taking the country—that is, England and Wales—all over, great inequalities appear in the maternal mortality rates of different localities. In the counties the rate in 1931 varied from 9.83 in a certain Welsh county to 1.98 in an English county. In the county boroughs the rate varied in the same year from 9.69 in a Yorkshire manufacturing town to 1.21 in an English town devoted to the brewing of beer. These very wide variations are difficult to account for. A special inquiry recently undertaken by the Ministry of Health into the causes of the persistently high mortality in Lancashire, the West Riding, and in Wales has not succeeded in elucidating what is clearly a very difficult problem.

* Delivered to the Cardiff Division on December 15th, 1932.

ORGANIZED DOMICILIARY MIDWIFERY

The results which can be obtained from organized domiciliary midwifery may be seen in the work of midwives employed by the Queen's Institute of District Nursing, or, as it was originally called, the Queen Victoria Jubilee Institute of Nurses. A communication dealing with their work up to and including the year 1925 was published in the *British Medical Journal* of January 8th, 1927, by Dr. J. S. Fairbairn. For the following particulars I am indebted to Miss Wilmshurst, the general superintendent of the Institute.

These midwives, who work not privately, but exclusively for county nursing associations, attend large numbers of women in different parts of the country, the total number attended having reached 66,000 for each of the last two years.

Table II shows that during each year of the period 1926–31 the total maternal mortality of the cases attended has been remarkably low, considerably less than one-half of the national maternal rate. What is even more striking is the very low mortality from sepsis among their cases, which during the same period averaged only one-quarter of the national sepsis rate. These midwives appeal freely to doctors for assistance, and the proportion of doctors' consultations is steadily rising. During the last five years medical aid has been obtained in 25 per cent. or more of the cases attended by them. They have no special claim on hospital beds, and comparatively few of their cases are, in fact, transferred to hospitals. In compiling their statistics of mortality I am informed that all cases attended by them and subsequently transferred to hospital, or to a doctor's care, are included.

TABLE II.—*Midwifery Results of the Queen's Institute of District Nursing*

Year	Cases Attended	Total Mortality per 1,000	Mortality from Sepsis per 1,000	Proportion of Cases in which a Doctor was Called
1926	56,858	1.50	0.25	19.0 per cent.
1927	53,502	1.30	0.20	25.0 "
1928	65,077	1.90	0.44	25.2 "
1929	63,131	2.10	0.63	23.4 "
1930	66,003	2.00	0.53	27.6 "
1931	65,570	1.70	0.45	27.0 "
Average of six-year period, 1926-31 ...		1.75	0.42	—

During 1931 the Queen's Institute had 3,775 midwives working for it in various parts of the country under the county nursing associations. Less than one-fourth of these midwives are fully trained registered nurses (S.R.N.); the remainder are women who have been trained as midwives, and in addition have received six months' instruction in district nursing, to enable the village midwife to do a certain amount of general nursing in addition to her proper midwifery work. A very large proportion of the work is, in fact, done in villages and in industrialized rural districts remote from hospital facilities and from specialist obstetric assistance. From

this it is clear that the midwives employed by the Queen's Institute are somewhat better trained than the average midwife, but, on the other hand, the village nurses work under the disadvantage of having to do general nursing as well as their own proper work.

Other examples of organized domiciliary midwifery are offered by the outdoor services of our maternity hospitals, and to one of these I wish now to call your attention.

The East End Maternity Hospital of London has recently published returns carefully compiled by its medical officer, Dr. W. H. F. Oxley, covering the five-year period 1925–29.[1] About 2,000 cases were attended annually; roughly one-third were attended in their own homes, the remainder were admitted to the hospital. Of the primiparae 82 per cent. were confined in the hospital; the multiparae in about equal numbers at home and in hospital. The total maternal mortality during this period over both home and hospital work was surprisingly low—namely, 0.48 per 1,000 births—which does not greatly exceed one-tenth of the national rate for the same five years. The proportion of abnormal labour is very low indeed, and this is attributed mainly to the thoroughness and efficiency of the ante-natal supervision which all the patients receive. The conditions in which this hospital works are unusually favourable, inasmuch as the patients all live near the hospital, and hospital accommodation is freely available, not only for all difficult cases, but also for the great majority of the primiparae. The actual attendance at labour, whether in the hospital or in the home, is mainly in the hands of midwives and pupil-midwives, but expert medical assistance is instantly available in case of need.

These two examples serve to show that the national figures are capable of great improvement without any revolutionary change in the English system. If similar results could be achieved in all parts of the country the problem of maternal mortality would at once take on a very different aspect.

The main features of the work of the two institutions we have been examining are: (*a*) attendance at confinements by trained midwives; (*b*) prompt resort to medical advice and assistance. These conditions, if not everywhere available at the present time, are becoming more and more widespread every year.

I have been interested to find, from a study of the report of the M.O.H. for Cardiff, that the conditions under which the great majority of the confinements take place in this city show the same general features as we have just been considering. Thanks to the admirable liaison which has been established between the local authority, the Medical School, and the Royal Infirmary, there is adequate hospital accommodation, and the highest medical skill has been made available for the working-class patient.

When I went into another point, with the kind assistance of Dr. Picken, it appeared that in the city of Cardiff in the year 1931, out of a total of 3,961 births, there were only from 25 to 30 per cent. in which a medical practitioner was primarily engaged. I believe that much the same state of affairs may be found in most of the large industrial centres in England, and it appears that already the great bulk of the midwifery service of the industrial classes is being carried out by midwives, the general practitioner acting as consultant at first instance to the midwife. It is more than likely that the midwifery service of the country will gradually be built up on this basis; not, perhaps, as a formal national scheme—that is not the English way—but rather by progressively taking shape, as step follows step, until one day we shall realize that we are in possession of a national maternity service without knowing quite how we got it.

Risks of Droplet Infection

It is worth while to observe that the outstanding results we have been noticing have been obtained by the use of such simple antiseptic methods as can be carried out in the average home of the industrial classes. On the other hand, these are exceptional results, and we must give due consideration to the authorities who are now so strongly urging the adoption of a more elaborate antiseptic technique. It is urged that this is necessary to meet the recently discovered danger of droplet infection by carriers of the haemolytic streptococcus. It must be recognized that the theory of droplet infection has now been fairly established. Briefly the theory postulates that an individual—for example, a nurse, a doctor, or the patient herself—may be unconsciously a carrier of the haemolytic streptococcus in the throat without presenting any local symptoms at all. These organisms are expelled from the mouth in the fine spray of saliva which is emitted in talking, coughing, or sneezing; they may then fall upon the hands, instruments, or dressings, and so be carried into the genital canal, where they are likely to set up a severe form of sepsis. The theory has been proved by showing that the particular strain of streptococcus from the septic patient is identical with that taken from the throat of one of the attendants or possibly of the patient herself, and this has, in fact, now been done in a sufficient number of cases and by different expert observers. There seems to be little doubt that here at last we have stumbled upon the explanation of the baffling case of the woman who becomes septic although no vaginal examination was made during or after labour. These used to be called cases of "auto-infection," but recent research suggests that infections which are set up by organisms present in the genital canal at the time of labour are almost invariably of a mild type, and are due not to haemolytic streptococci, but to another variety—the anaerobic streptococci. These organisms can, in fact, be found frequently in the vagina in pregnancy under apparently normal conditions, and are then non-virulent; after delivery, however, they get their chance of propagation under different conditions, and they then may invade the uterus.

It will be at once obvious that the risks of droplet infection will be greatly increased if one of the attendants is suffering from tonsillitis or other form of sore throat, or from nasal discharge. It has, of course, long been recognized that purulent discharge from the ear or from a finger may be an active source of infection, but in these instances the infection is carried in a different way—that is, by direct contact.

This question of droplet infection has now reached a stage at which strong representations are being made that measures specially designed to meet the risk should be generally adopted in midwifery practice. The final report of the Departmental Committee on Maternal Mortality and Morbidity, issued last summer, contains a scheme of antiseptic technique which is advocated as suitable for adoption into general practice, and which would afford protection against droplet infection. The committee has evidently been considerably impressed by the fact that in the series of 4,655 puerperal deaths which were the subject of inquiry by it, 18 per cent. of the fatalities were cases of sepsis following normal labour. Such deaths result from failure to prevent infection of the genital tract under conditions which present no special obstetric difficulty, and they must be looked upon as obstetric calamities of the gravest kind. It is clearly incumbent upon us to omit no precaution which advancing knowledge indicates as necessary and which experience proves to be efficacious. That complications of labour should take a certain toll

of victims will probably always be inevitable, but it ought not to be beyond our power so to conduct the normal process, in women of average good health, as to eliminate the risk of the occurrence of fatal septic infection.

ROUTINE ANTISEPTIC PRECAUTIONS

The relative frequency with which this failure occurred in its series had, one surmises, a good deal of influence in leading the Departmental Committee to the point of recommending considerable stiffening of our routine antiseptic precautions.

The antiseptic technique recommended by the Departmental Committee may be briefly passed in review. It says, to begin with, that "the present-day practice of midwifery cannot be relied on to . . . keep the vulva and perineum as far as possible free from pathogenic bacteria" (p. 111). It advises: (1) That the vulva should be shaved or the hair closely cut. (2) The vulva should be washed with coal-tar soap, or some other antiseptic soap, using either boiled water or water sterilized by the addition of 1 drachm of a 2 per cent. iodine solution to a pint. (3) All instruments used should be boiled shortly before use, and allowed to remain in the boiled water, or be wrapped in a sterilized cloth. (4) The hands and forearms should be scrubbed for five minutes with coal-tar soap and iodine water, and then soaked for two minutes in a 1 in 1,000 aqueous solution of biniodide of mercury. (5) Previously sterilized gloves should then be put on wet out of the water in which they have been boiled. (6) Frequent re-sterilization of the gloves, after contamination, can be effected by simply washing the gloved hands in soap and iodine water and then immersing them again in the biniodide solution. (7) "Droplet infection can be countered to a large extent by the use of efficient masks"; "These should be worn over both mouth and nose by all in attendance upon the patient, and by any other person present"; "A piece of impervious material, such as paper (or mackintosh), about 4 inches square, should be incorporated in the mask"; "The use of these masks should not be limited to the time of delivery; they should be worn whenever any local treatment is carried out"; and, lastly, the warning is added, "If the masks are touched by the wearer they may be more a danger than a safeguard."

No one can question the soundness of the scientific basis of this technique, but it must be admitted that the practical use of the mask has not yet been subjected to the extensive tests which are necessary before it can be said to be practically efficacious in diminishing the risks of infection.

After its use has been thoroughly tried out in hospitals, and in the outdoor practice of hospitals, we shall be in a better position to judge of its practical efficiency. It cannot too strongly be emphasized that in order fairly to test the use of masks they should be worn by every attendant, not by the doctor only. Whenever he or anyone else present is suffering from a sore throat the risk of infecting the patient is then much greater; and the reasons for using the mask are accordingly more urgent.

The more our knowledge of the causes of puerperal infection grows the more complex and difficult does the problem of protection appear to become. The public mind is now thoroughly aroused as to the grievousness of our high national maternal mortality. It is not questioned that the intensive propaganda of the last ten years has been useful, and was necessary; it has, however, placed us in a somewhat awkward predicament, because while the medical profession is anxious to inculcate the view that pregnancy and labour are natural processes, necessary to a woman's full development, the public are being warned by louder voices than ours of the dangers which attend those natural processes, and of the failure of doctors to devise effective measures to combat them. A good deal of uneasiness in the minds of many prospective mothers has undoubtedly arisen in consequence.

An elaborate technique has its disadvantages, and we must not overlook the fact that it has been shown that with the simple methods in common use to-day it is possible to reduce the incidence of infection much below its national level. The Queen's nurses, whose results have been referred to, do not adopt an elaborate technique. I am informed that only during the last year have masks been used at all, and then only in exceptional cases; nor is the use of sterilized gloves by these midwives compulsory, although gloves are, in fact, in common use by the district midwives, who also are responsible for a certain amount of general nursing. Yet the low rate of mortality, and in particular the low rate of infection, shown by their cases is very striking. In the practice of the East End Maternity Hospital referred to above neither gloves nor masks were used during the period under review.[2]

All obstetric operations, however trivial, undoubtedly call for full observance of all the details of complete surgical asepsis, and if I may be so bold as to put my own view to you, it is that a practitioner who carries out, for example, a forceps operation under conditions short of full surgical asepsis is assuming a grave responsibility. Yet it must be admitted that there may, on occasions, be no alternative before him but to accept that responsibility; that is to say, it may be the less risky of the possible alternatives.

ANTE-NATAL SUPERVISION

Our results in domiciliary midwifery will clearly be influenced very largely by the degree of success we achieve in recognizing the abnormal case and in making timely arrangements for it. And in this connexion I want to make a special appeal to the members of the Cardiff Division who are general practitioners. I said earlier that I thought that things were developing in such a way as to make the general practitioner the consultant at first instance in regard to the great bulk of midwifery practice. If this should prove to be true his position will be not only a more honourable but also a more responsible one. I was interested to notice that during 1931 a sum of £1,207 was paid by the city of Cardiff to practitioners for consultant services in midwives' cases. But may I respectfully remind you that the ability to render such consultant services depends upon the possession of special knowledge and aptitude, and these are not inborn qualities; they can only be acquired by work and by training. If the practitioner is to play a more responsible part in the midwifery service of the country than he has hitherto played he must fit himself for this added responsibility. Possibly a process of natural selection will bring forward those practitioners to whom midwifery appeals, and who have accordingly made of it a special study.

I want to illustrate my conception of the work by a reference to ante-natal supervision. It is beginning to be recognized that the widespread ante-natal work which is now being carried on in clinics and privately has up to the present made no impression whatever upon national maternal mortality. This is a great disappointment, for strong hopes of improvement were built upon it. It is, however, open to question whether ante-natal supervision has as yet received a fair trial. The doctor's part in ante-natal work requires not only a sound practical knowledge of midwifery, but also a wide acquaintance with practical medicine. It is essentially work for the practical

man with wide clinical experience. If at this point I seem to be criticizing public health authorities let me say that I recognize fully that municipal ante-natal clinics have to be run by the best persons available to run them, and it is unreasonable to criticize them upon that score. Yet it remains true that ante-natal work inefficiently performed may do almost as much harm as it does good. Even the ante-natal departments of hospitals, as Professor Browne of University College Hospital has shown,[3] have not come up to expectations, as is evidenced by the fact that the proportion of their booked cases which develop unexpected difficulties in labour is still disappointingly high, and the incidence of eclampsia in the practice of these hospitals has shown little diminution since their ante-natal clinics were established. It would be expected, on the other hand, that both of these complications of labour would be considerably less frequent when patients were systematically cared for by skilled ante-natal workers. I am quite aware that patients are often negligent in attending and may be lost sight of for weeks together, but efficient ante-natal work implies that the patient must be rounded up at regular intervals if she does not keep her appointments.

It is necessary to take broad views of what is comprised in ante-natal supervision—much more than an estimation of the size and shape of the pelvis, and the testing, at intervals more or less regular, of the urine for albumin. Let it be admitted if you will that pregnancy is a normal event in a woman's life, it is all the same an event which under the conditions of life which prevail to-day calls for careful and skilled supervision if the risks of disaster are to be minimized. There is a good deal to be said for the view that the highly civilized woman of to-day compares unfavourably, in the performance of her chief physiological function, with the less favoured woman of earlier periods. She is sometimes an unwilling mother though married, and this attitude of itself handicaps her from the very beginning; further, she has a great dread of pain, and, I think, a diminished capacity to bear it. These are some of the reasons why the women of to-day need more watchful care in pregnancy than did their grandmothers.

A woman who is knocked out by her labour for a few days is a comparatively easy prey to infection: or perhaps it would be more correct to say that a degree of mild infection which a robust woman would easily throw off may assume serious proportions in one who has been exhausted by her labour. The general health of the pregnant woman, therefore, calls for special attention. Foci of chronic infection in the mouth or throat are clearly of particularly grave significance in the light of what we now know about the risks of droplet infection. Anaemia, dyspepsia, constipation, have a debilitating effect, and should not be regarded as unworthy of attention in ante-natal work. It is impossible to go over all the matters which are of importance, but may I call the attention of the practitioner-consultant to recent advances in our knowledge of the dieting of pregnant women, and especially to the evidence that a dietary rich in vitamin A may be expected to enable the patient to put up a more energetic resistance to infection should this occur.

The importance of making frequent measurements of the blood pressure is stressed by the Departmental Committee in its final report, and it advises that "midwives should be trained to make blood pressure determination" (p. 137). I should be interested to hear what members of the Cardiff Division think of this suggestion. They are, I am sure, aware of the importance of blood pressure observations when symptoms of toxaemia appear, for a rise in diastolic pressure sometimes gives the earliest warning of the imminence of eclampsia.

I think I have now said enough to show that ante-natal supervision offers a field of work which is well worthy of your attention. In the words of the Final Report of the Departmental Committee: "It is essential that ante-natal care should reach the highest possible standard of excellence, and that no slipshod work should be allowed to pass muster."

In another Departmental Report[4] the statement is made that in some areas it is difficult to make arrangements for ante-natal supervision by general practitioners "because all doctors are not yet sufficiently interested in the work to wish to undertake the responsibilities which effective ante-natal care involves." I have no doubt it is true that not all doctors are sufficiently interested, but it certainly is not true that no doctors are sufficiently interested in the work to do it properly. There must be many men and women practising as family doctors who are interested and who would be willing to fit themselves to carry it out efficiently. The moment is ripe for them to come forward, and it is not too much to expect that their services would be welcomed by the local authorities in many instances, if not in all.

REMOTE RESULTS OF INJURY OR INFECTION

There is one other matter I should like to refer to. Our aim is not fulfilled if our patient merely escapes with her life; it is necessary that she should be able to resume a full and active life within a reasonable time after her confinement. This only too often we fail to achieve. The records of the gynaecological departments of the hospitals offer the clearest evidence of this: it is agreed that a considerable proportion of the patients treated are suffering from the remote results of injury or infection, or very often from both, following labour. The proportion has been variously estimated at 47.3 per cent. by one observer to 30 per cent. by another. These conditions are very frequently overlooked at the time because a thorough local examination is not made when the patient is ready to be up and about once more. Only when it is recognized that such an examination should be regarded as a routine measure for every case shall we have taken the first step towards the alleviation of the heavy toll of ill-health and disability which now results from childbirth.

It is very difficult to obtain definite evidence as to the frequency of non-fatal complications of the puerperium in domiciliary practice. The nearest we can get to such evidence is found in the records of outdoor hospital midwifery, and although all maternity hospitals publish their indoor morbidity rates not all of them record their outdoor rates. By puerperal morbidity is meant a degree of fever which constitutes notifiable pyrexia—namely, a temperature of 100° F. or over on two occasions from the second day of the puerperium onwards. I should like in this connexion to call your attention to certain recent observations which demonstrate how an improvement in these puerperal morbidity rates was brought about. These observations are from the outdoor maternity service of University College Hospital, London, as reported by Miss Gladys Carter.[5] They cover a period of about two and a half years, in which 1,360 cases were attended; all but thirty-three cases were delivered in their own homes; of those sent to hospital one died, giving a total maternal mortality of 0.57 per cent., which does not differ greatly from that of the East End Hospital already referred to. During the first half of the period under review the students attended their cases without the assistance of a nurse; during the second half they had the assistance in every case of a nurse-midwife—that is, a State-registered nurse who had also taken obstetric training. Sterilized gloves were in routine use throughout the whole period, and masks were also used throughout

almost the whole period. The only difference, then, was that during the second period the students were accompanied by a nurse-midwife. Miss Carter selected the occurrence of notifiable puerperal pyrexia as the test of the effect of this change, and she found that during the first period 5.22 per cent. of the cases were notifiable as puerperal pyrexia; during the second period the proportion fell to 2.19 per cent. There were no fatalities during the second period.

In comparing these results with those of the East End Hospital it must be remembered that the number of cases dealt with in the University College Hospital series is comparatively small, which to that extent invalidates comparison. It was, however, reported[6] that the puerperal pyrexia rate for the East End series was 1.1 per cent., while that for the University College Hospital series was 5.29 per cent. in the first half and 2.19 per cent. in the second half.

It would be wrong to look upon these minor complications of the puerperium as of no importance. It is probable that about 50 per cent. of them are due to minor degrees of uterine infection, either alone or in combination with injury, which may lead to long periods of suffering and invalidism. I would further call your attention to the fact that evidence is fast accumulating that chronic inflammatory changes in a cervix damaged in labour form a definite predisposing cause of cancer. Leucorrhoeal discharges in women who have been recently confined, therefore, call for careful local examination of the cervix, for the great majority of such discharges arise in fact from that part. The importance of prolapse and backward displacement of the uterus calls for no emphasis. Post-natal examination is essentially work for the man with practical experience: it does not demand a high degree of technical knowledge, and it could, with advantage, be entrusted to practitioners who will fit themselves to undertake it and to deal with it efficiently.

Conclusion

The outcome of all that I have been saying is this. I would suggest that the position of the general practitioner in relation to midwifery has already changed, and will probably change further, inasmuch as the bulk of the attendance upon confinements in the industrial classes is passing into the hands of midwives. With this change new opportunities are opening up for the doctor: in respect of the practice which is being taken out of his hands he may become, if he will, the consultant at first instance to the midwives. It is estimated that midwives already attend from 60 to 70 per cent. of the total births of the country, and in some areas the proportion is higher than that, and it appears to be rising year by year. The proportion of midwives' cases in which a doctor's services are called for is also steadily rising. Much of the ante-natal and post-natal work now being carried on could be efficiently done by general practitioners. If, however, he is to rise to this opportunity the practitioner must make himself efficient in practical knowledge, and he must try to keep himself abreast of progress in all departments of midwifery. He would then become a very important link in the chain of a national maternity service, and in my submission the work would be well worthy of the English doctor at his best.

References

[1] *Proc. Roy. Soc. Med.* (Section of Obstetrics and Gynaecology), 1930.
[2] Loc. cit., p. 128.
[3] Ante-natal Care and Maternal Mortality, *Lancet*, July 2nd, 1932.
[4] High Maternal Mortality in Certain Areas, p. 7.
[5] The Domiciliary Service of a Maternity Hospital, *Lancet*, January 2nd, 1932.
[6] Loc. cit., p. 135.

HEPATOMEGALY WITH PERSISTENT KETONURIA IN A CHILD

PROBABLY A CASE OF VON GIERKE'S "GLYCOGEN ACCUMULATION DISEASE" WITH FUNCTIONAL RECOVERY

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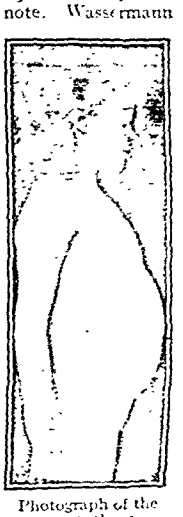
The following case was shown by me on March 23rd, 1923, at the Royal Society of Medicine (Section for the Study of Disease in Children, *Proceedings*, 1923, xvi, 56–60), under the heading "A case of enlarged liver with persistent acetonuria and diaceturia." The patient, a girl, was first seen at the age of 10, on June 10th, 1920.

History of the Case

Father and mother were both alive; the former always had good health, but the mother was deaf (otosclerosis). The mother was the eldest of eight children; of the seven, three had died of phthisis, one had had a tuberculous wrist-joint, two had been epileptic, and one had been quite healthy. In the father's family there was nothing of note. Wassermann reaction (blood) in both the father and mother was negative. The patient had a sister, aged 7, who was said to have an "enlarged liver." On investigation the liver edge was found to be palpable two inches below the costal margin, but *x*-ray examination indicated ptosis of the organ rather than enlargement; the spleen was impalpable, and there were no other physical signs of importance. Wassermann reaction (blood) was negative.* The only other child had died twelve years before at the age of 3; he was said by a doctor to have had an "enlarged liver and spleen" and to have died of "kidney disease."



Photograph of the patient at the age of 12.

The mother stated that pregnancy and labour had been normal, and that at birth the child had weighed 11 lb. She had been breast-fed, and had been perfectly well until 1 year old. From the age of 1 to 4 she had suffered from "fits" (description suggested epilepsy, with average frequency of one fit in two months), and between the ages of 3 and 5 had suffered from recurrent attacks of vomiting, strongly suggestive of cyclical vomiting. She had not appeared to grow during that period, and a medical man had said that "the liver was enlarged." She had not walked until she was 4 years and 3 months. Since that time her general health had been fairly good, and from the age of 5 she had grown steadily.

Physical Examination and Special Investigations

The patient was very bright and intelligent, her mental capacity being fully up to her age standard. Physically she was rather undersized, and the development of the body was somewhat out of proportion to that of the limbs: height, 47 inches; spine from occipital protuberance to tip of coccyx, 20 inches; subcostal girth, 28 inches. The skull was normal. The teeth showed indentation on enamel of incisors, the margins of which were slightly irregular; other teeth were normal. The breath had a strong acetone odour. The liver edge was felt three inches below the costal margin, the edge being firm but not irregular. The spleen was impalpable and not enlarged to percussion. The heart, lungs, and nervous system were normal. Brachial systolic blood pressure,

* This sister has since developed definite otosclerosis, but is otherwise well (January, 1933).

105 mm. Hg. *X*-ray examination confirmed the presence of an enlarged liver, but showed nothing else abnormal. The blood serum yielded a negative Wassermann reaction (three tests). Examination of urine showed: specific gravity 1022, acid reaction ; acetone and diacetic acid both present, but no albumin and no sugar. Centrifugalized deposit showed a few epithelial cells, but no casts or crystals.

The complete blood picture was as follows: haemoglobin, 80 per cent. ; colour index, 0.76 ; red blood cells, 5,200,000 per c.mm. ; no vacuolation, but anisocytosis and poikilocytosis were marked ; no nucleated red cells. White blood cells, 11,000 per c.mm. Differential count: polymorphonuclears, 54 per cent. ; small lymphocytes, 26 per cent., large lymphocytes, 14 per cent. ; cosinophils, 4 per cent. ; basophils, 1 per cent. ; myelocytes, 1 per cent.

During the two and a half years she was under observation she remained fairly well, was able to go to school, and to lead an ordinary life. The urine was examined on many occasions, and *both acetone and diacetic acid were invariably present and sugar absent*. As a rule, the breath had a strong acetone odour. Reaction to Wassermann test in June, 1922, was again negative. The blood picture showed no material change.

Liver Function Tests

Several hepatic efficiency tests were applied, all yielding negative results.

Straus's Laevulose Test.—The patient was given 60 grams laevulose and the urine was examined hourly for six hours ; in no specimen was sugar found.

	Quantity	Specific Gravity	Sugar	Acetone
1	1¼ oz.	1022	Nil	+
2	3½ oz.	1018	„	+
3	8 oz.	1014	„	+
4	3½ oz.	1018	„	−
5	3 oz.	1020	„	−
6	1¾ oz.	1028	„	++

It is to be noted that in the specimens obtained four and five hours after taking the laevulose acetone was absent.

Blood Laevulose Test.—The blood sugar estimated by Benedict's method was found to be 0.109 per cent.* Twenty-five grams of laevulose were given by the mouth, and the blood sugar, estimated three-quarters of an hour later, was found to be 0.110 per cent. (Experimental error 0.005 per cent., certainly less than 0.01 per cent.)

Widal Haemoclasic Test.—Total white cell count, 8,700 per c.mm. ; one hour after seven ounces of milk, 14,000 per c.mm.

Sulpho-conjugation Test (Foster and Kahn's test).—Ratio of ethereal sulphates to inorganic sulphates in urine (benzidine method): before thymol, 1:13 ; after half a gram of thymol, 1:4.4.

The association of hepatic enlargement with the continued presence of acetone and diacetic acid in the urine, without glycosuria, was unusual. The history rather suggested a familial condition ; the fact that both parents and the sister showed no signs of syphilitic disease, and all, including the patient, gave negative Wassermann reactions, excluded syphilis. The familial form of haemolytic jaundice was excluded by the absence of jaundice. As Sir Humphry Rolleston has pointed out (*Diseases of Liver*, first edition, p. 445), congenital cystic disease of the liver is known to occur in rare instances without the association of congenital cystic kidneys, and examples have been recorded by Borst, Dudgeon, W. Müller, and Batty Shaw. " Idiopathic " hepatic cirrhosis of children is also occasionally met with as a familial condition. Although either of the two last-mentioned disorders was a possible diagnosis, neither, as far as I was aware, was usually associated with persistence of acetone and diacetic acid in the urine. It was suggested in this case that these substances might be of alimentary origin, and their persistence possibly due to interference with the metabolism of amino-acids in a liver embarrassed by the formation of fibrous tissue. Against this view, however, was the fact that none of the hepatic efficiency tests indicated any defect of liver function. Increasing the carbohydrates in the child's diet did not lead to a disappearance of the acetone (although it was absent for a very brief period following the administration of laevulose in the alimentary laevulose test), and her mother was emphatic in the opinion that the child was never as well when taking an increased amount of carbohydrate ; she became listless and irritable, and developed a poor appetite.

None of the members present at the demonstration at the Royal Society of Medicine knew of any similar case. Dr. F. Parkes Weber, in the discussion, said that when he was shown the case in October, 1922, he was sceptical about the ketonuria always being present, but he was convinced by finding that the urine passed by the child at the time gave positive Gerhardt's and Legal's reactions.

SUBSEQUENT PROGRESS

The child remained for several years in much the same condition, and the urine continued generally to contain acetone and diacetic acid. In 1925 the liver seemed to be a little smaller. On March 4th, 1930, the fasting blood sugar was 0.075 per cent., and the blood sugar curve showed a delayed fall. In 1932 the patient, 22 years old, was bodily and mentally well developed, although puberty had been delayed till the age of 17. The liver could no longer be felt enlarged. Nevertheless her breath still often smelt of acetone, and she usually had acetone in the urine, but Gerhardt's reaction for diacetic acid was negative. Glycosuria had never been detected. The blood sugar, when tested in 1930, showed slight hypoglycaemia. The patient's height was 5 ft. 8½ in. ; weight 9 st. 6 lb. ; blood count: haemoglobin 90 per cent., erythrocytes 4,500,000 per c.mm., leucocytes 7,400 per c.mm. (nothing abnormal by differential count).

REMARKS

The patient seems to have practically " grown out " of her disease, which was clearly metabolic constitutional in origin. No one, however, could have suspected what was probably the exact nature of the metabolic defect in question till E. von Gierke in 1929 made a post-mortem examination in the case of a girl, aged nearly 8, who had died from influenza and was known to have had persistent enlargement of the liver of unknown origin. He found that the enlargement of the liver was due to excessive accumulation of glycogen. In an elaborate article, with coloured plates of microscopical findings,[1] he described the case under the heading " Hepato-nephromegalia glykogenica—Glykogenspeicherkrankheit der Leber und Nieren."

A similar glycogen accumulation was found in the liver of a boy aged 4 years and 10 months who died of pneumonia. The case was handed on to Professor von Gierke from Vienna. Both these children from their birth had had a strikingly full abdomen. In the girl a doctor had noted extreme enlargement of the liver five years before her death, but the nature of this hepatomegaly had never been settled. There had been *no splenomegaly in either case*, but in the girl the kidneys at the post-mortem examination were double their normal size. The other viscera seemed not to be involved in the chronic metabolic disease. In the liver of the girl Dr. Schönheimer, who undertook the chemical examination, found absence of the glycogen-splitting ferment which can be detected in normal livers. It seemed, therefore, that the enlargement of the liver was due to defective transformation of glycogen into sugar and to the resulting accumu-

* This may not have been the *fasting* blood sugar.

lation (storing) of glycogen in the hepatic parenchyma. The girl's kidneys also showed accumulation of glycogen. According to von Gierke, the disease is not in any way allied to diabetes mellitus.

During life the presence of von Gierke's glycogenic-accumulation disease is not likely to be absolutely established except by the microscopical examination of an excised piece of the liver or material obtained by liver puncture, but probably even without that a diagnosis of the disease (minor forms of which are perhaps not so extremely rare) can be sometimes arrived at. In this respect one of the latest articles on the subject may be consulted, especially that by L. Schall, which is founded on the observation of three children (not relations).[2] Schall concludes that the most important feature of the disease is an enormous enlargement of the liver (without splenomegaly), which has been present from earliest life and which is due to a heaping up of glycogen in the organ. The second feature to be noted is the presence of hypoglycaemia without the usual clinical signs of the condition, while a third is the fact that the glycogen cannot be mobilized by adrenaline. Fatness, ketonuria, and a certain weakness of the skeletal musculature may likewise be observed. According to Schall's observations the disease takes no acute course, and his earliest case—first seen in December, 1928, when the patient was 8 years and 6 months—in which the diagnosis was made certain by an exploratory laparotomy and microscopical examination of an excised piece of the liver, has been observed for almost four years without showing any change.

Although in the case which we have described examinations of the blood sugar (which was 0.075 per cent. in March, 1930) have not been carried out sufficiently often, it is difficult to explain the symptoms in any other way than to suppose the remarkable hepatomegaly to have been due to von Gierke's metabolic constitutional disease with heaping-up of glycogen in the liver.

Clinical Diagnosis.—Although Professor von Gierke[3] points out that during life the diagnosis of his "glycogen accumulation disease" can be made certain only by the examination of material obtained by puncture or excision of a piece of the liver, it seems to us that in all probability the disease will turn out to be, of all rare diseases, one of the easiest to diagnose with practical certainty during life. Picture a child of 5 to 12 years with an enormous uniform enlargement of the liver, which feels smooth and not especially hard, and is not tender to palpation. The child does not appear really ill, does not complain or look very weak, is not in the least jaundiced and has never been jaundiced, has no ascites, oedema, or thoracic disease, and tends to be rather fat than wasted, has no *enlargement of the spleen* or lymphatic glands, and no haematological sign of any kind of leukaemia, or indeed of any other disease. It is true that in a young child with evidence of rickets one might think of the possibility of fatty infiltration of the liver,* but in a case like the one we have described such a diagnosis could certainly not be entertained after watching the unaltered condition for a long time. Moreover, apart from starvation, wasting and vomiting, and a specially ketogenic diet, is there any disease in which, in the absence of an acute or infectious condition, the urine day after day, month after month, and year after year, nearly always contains acetone and diacetic acid, always without sugar? Is not the clinical diagnosis from both these considerations doubly probable? Possibly, in some cases, the ketonuria may not be so striking; but there are other clinical signs. There are, as pointed out by Schall, the presence of hypoglycaemia without the ordinary symptoms of hypoglycaemia, and the adrenaline effect on the blood sugar to be taken into consideration. Surely a clinical diagnosis will sometimes be justified without liver puncture.

I wish to acknowledge my great indebtedness to those of my colleagues who from time to time have helped me in the examination of this case—Sir Humphry Rolleston, Dr. Clement Lovell, Dr. H. C. Lucey, and Dr. D. T. Davies.

REFERENCES

[1] von Gierke, E.: *Ziegler's Beiträge z. path. Anat. u. z. allg. Path.*, 1929, lxxxii, 497; *Med. Klinik.*, 1931, xxvii, 576, 611.
[2] Schall, L.: *Münch. med. Woch.*, 1932, lxxix, 2078 (with references to the literature after von Gierke's original paper).
[3] von Gierke, E.: *Med. Klinik.*, 1931, loc cit.

ADDENDUM.—Just before the proofs were corrected a paper appeared in the *Lancet* for February 11th, 1933 (p. 297), by Dr. E. Bellingham Smith and Dr. Elizabeth O'Flynn, entitled "Familial hepatomegaly of uncertain pathology." The patient was a boy, aged 6 years, with enormous enlargement of the liver and chronic pulmonary fibrosis and bronchiectasis, who, whilst coughing, was seized with violent abdominal pain, and fatal collapse followed. During life a diagnosis of Gaucher's disease had been made because the left portion of the liver was taken to be an enlarged spleen, puncture of which had yielded large clear "Gaucher-like" cells. The necropsy and microscopical examination made the authors regard the case as probably of the same nature as Gierke's original case. The familial character of the hepatomegaly was more definitely evidenced than in the present case. On the other hand, there was no evidence of ketonuria. It may be repeated that the present case was shown as one of enlargement of the liver of uncertain nature with persistent ketonuria as long ago as March, 1923, and has since then almost completely recovered; but there was no associated severe infective disease present, such as bronchiectasis and pulmonary fibrosis.

* Smooth symmetrical enlargement of the liver due to fatty infiltration (retention and heaping-up of fat in the glandular cells of the liver) was formerly not rarely found at post-mortem examinations on rachitic infants.

ACUTE OBSTRUCTION OF THE COLON

BY

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SENIOR SURGEON TO ST. MARK'S HOSPITAL FOR DISEASES OF THE RECTUM

Acute obstruction of the bowel is certainly one of the most serious surgical emergencies that we as doctors are called upon to deal with, and the patient's life will depend upon prompt recognition of the nature of the case and the taking of such steps as will adequately relieve the condition with the least possible delay. The mortality from acute obstruction is still much higher than it should be.

The patient, with very few exceptions, will be suffering from two, and possibly three, distinct conditions. (1) An obstruction to the lumen of the bowel, which prevents any of the contents from passing along the lumen. (2) A toxaemia due to the absorption of poisons generated in the obstructed bowel; this toxaemia, while often not very evident—or at least often obscured by the more obvious results of the obstruction—is a very real source of danger to the patient, and has to be taken very seriously into account in the treatment of the case. (3) If the bowel is strangulated from bands, adhesions, or twists, or any other condition which in addition to causing obstruction of the lumen also causes obstruction to the blood supply of the affected portion of bowel, then serious damage to part of the bowel wall will be a third factor causing danger to the patient. In a case of hernia or volvulus all these three factors will be present in varying degrees, but in the more usual forms of obstruction, such as stricture, only two of these factors are present.

DIAGNOSIS

The necessity of making a diagnosis between a case of obstruction of the small and one of the large bowel always arises, but should as a rule not present any serious

difficulty. In the first place some 75 per cent. of all cases of obstruction of the small bowel are the result of external hernia, and if looked for, as they always should be, will be easily detected, but apart from this the symptoms are usually very different. In small bowel obstruction the symptoms are most acute, and vomiting of the characteristic faecal type occurs almost from the onset of the crisis. Pain is usually well marked and often severe, and there is little distension in the early stages. Such distension as is present will be in the central part of the abdomen. The appearance of the abdomen in a case of obstruction is often alone sufficient to enable one to distinguish between an obstruction of the small and of the large bowel. In obstruction of the large bowel distension is usually the chief symptom, and vomiting only occurs late and is never so severe or frequent as in obstruction of the small bowel.

Having arrived at the conclusion that the case is one of obstruction of the large bowel, it is advisable to diagnose, if possible, the cause of the obstruction, or at any rate the probable nature and whereabouts of the obstructing lesion. This is often a matter of very considerable difficulty, but there are a number of factors which will assist us, and the possibility of error, though always present, can usually be reduced to a comparatively small fraction.

In the first place the law of probabilities, which is just as useful in medical practice as it is in playing bridge, will be a great help. If we see a bird on a telegraph wire in a London street it may be a canary, but the probabilities are very great indeed that it is a sparrow. Now by far the commonest cause of obstruction of the large bowel in people over middle age is cancer, and there will therefore be a probability of at least two to one that a tumour is the cause of the trouble. After this the commonest cause is diverticulitis, which probably accounts for more than one-half of the remaining cases. Thus the probabilities offer a very big chance that cancer of some part of the colon is the cause, a considerably smaller chance of diverticulitis, and quite a small chance that some other condition is responsible. This small chance is probably not more than about 10 per cent. If we continue to use the law of probability it will assist us further, as we know that the commonest situation for a cancer of the large bowel is in the rectum or pelvic colon, which accounts for some two-thirds of all cases. The next commonest site is in the caecum, and after that the splenic angle. We also know that very much the most usual situation for an obstruction due to diverticulitis is in the pelvic colon. We may therefore conclude, before we look for any other evidence, that the chances are very considerable that we have to deal with a cancer of the bowel, probably at the lower end of the colon.

An examination of the rectum is the next procedure, as it will tell us whether there is a tumour in the rectum, and in a normal individual we shall be able to feel whether there is any tumour or swelling in the pelvis. If an examination can be made with a sigmoidoscope it will enable us to confirm or exclude the presence of an obstructive lesion at the extreme lower end of the colon, which is the commonest site. An examination of the abdomen will be of some assistance, as we should be able to feel a tumour, if present, in the caecal region, though it is very unlikely that it will be palpable anywhere else. If, however, diverticulitis is the cause of the obstruction it is most probable that a hard tender swelling will be detectable in the left iliac fossa. The patient's previous symptoms, if any, before the onset of the obstruction will also be of value. In cases of cancer there are almost always symptoms of irregularity of the stools and evidence of blood for some weeks or months. In diverticulitis there will be a history of attacks of pain in the abdomen, usually accompanied by temperature often extending over a considerable period, it may be for some years.

SOME DIFFICULTIES

In at least two-thirds of the cases of obstruction of the large bowel it should be possible to diagnose both the nature and the site of the lesion, but there will always remain a residue where an exact diagnosis cannot be established, and these cases call for further consideration. In looking through my case books I find quite a number of cases of obstruction of the colon, of which many were not diagnosable with certainty previous to operation. In two cases a previously undetected megacolon was the cause of an acute obstruction. In one case a correct diagnosis was made and the patient relieved without operation, in the other the patient was put on the operating table and an anaesthetic administered, but the relaxation produced by the latter caused a copious evacuation and relieved the obstruction, and a subsequent examination with a sigmoidoscope established the diagnosis. In two cases the obstruction was caused by adhesions from a chronic appendix abscess, deep in the pelvis, which had not been detected and was not even suspected until discovered at the operation for obstruction of the colon. In three cases the obstruction was caused by acute cellulitic inflammation of a section of the pelvic colon due to diverticulitis. In one case an almost complete fibrous stenosis of the pelvic colon from the same cause was present, and in a number of cases diverticulitis of the pelvic colon was the cause. In some of these the lumen had become so narrow as to get blocked, and in others the colon had become acutely kinked as the result of adhesions to neighbouring structures. Adhesions or bands were the cause of obstruction in several cases. These were mostly due to some previous operation on the abdominal cavity performed many years previously. Hypertrophic tuberculosis was the cause in two cases, and in three cases tuberculous peritonitis in childhood had caused almost complete obliteration of the abdominal cavity, which must have been present for many years without causing serious trouble, but had finally, from the contraction of some particular band of fibrous tissue, caused a complete obstruction. Five cases were due to volvulus. Two of them were cases of volvulus of the pelvic colon; two were due to volvulus of the whole caecal angle, the twist occurring around the superior mesenteric artery and involving almost the whole of the small intestine and half the colon. These cases are almost invariably fatal owing to the enormous mass of gut involved and the difficulty of untwisting it, but one of these patients survived and is alive to-day. The other case of volvulus was one of the splenic angle. This must be a very rare occurrence, as I have never seen any other case where the splenic angle was loose enough to be able to twist at all. In this case it was quite loose and had a long mesentery.

There was also one case due to a large stercolith stuck in the lower end of the pelvic colon. It could not be diagnosed, as there was so much oedema below it that it was not possible to feel it, or see it with the sigmoidoscope, although, of course, a swelling could be felt which was thought to be a growth. In one case the obstruction was due to a large submucous lipoma in the pelvic colon.

TREATMENT

Immediate operation is called for in all cases, although there is no harm in administering an enema, which may possibly relieve the immediate symptoms, and, in a few cases such as megacolon, may relieve the obstruction entirely. The operation will always be an anxious and dangerous one, owing to the patient's condition. The chief dangers are vomiting while the patient is under the anaesthetic, and toxic shock. It often happens that when

the abdomen is opened there is sudden faecal vomiting, and if the patient is deeply under the anaesthetic some of the vomit gets into the lungs and causes a fatal broncho-pneumonia. This can be guarded against by passing a stomach tube directly the patient is unconscious, and before commencing the operation. The stomach may be either washed out or allowed to drain during the operation, and washed out before the patient leaves the table. A still better method is to do the operation under local or spinal anaesthesia, so that the coughing reflex is not abolished. The prevention of toxic shock is more difficult. The administration of large quantities of water or saline so as to dilute the poisons and encourage their elimination is most important, but this is not easy. If the patient is not being sick it can be administered by the mouth, but if there is sickness this is impossible, and if the obstruction is low down rectal salines will probably not be retained. It is often necessary to give subcutaneous, or intravenous, saline, and this should always be done in a bad case before or during the operation. Glucose, or some other form of sugar, should also be given by the most convenient route.

As regards the operation itself, all surgeons are agreed that "to get in quick and get out quicker"—the famous motto of the late Professor Murphy of Chicago—is even sounder in cases of acute obstruction than it is in cases of acute peritonitis, for which it was originally invented. One should do the least possible that will relieve the obstruction and leave direct interference with the lesion to a subsequent operation when the patient has got over the toxaemia which has been produced by the obstruction. Some years ago, at Bristol, Mr. Burgess and I advocated blind caecostomy in these cases as the best treatment, and there is still considerable difference of opinion on this question. The advantages of blind caecostomy are that it can be performed under local anaesthesia through a small incision with the absolute minimum of interference with the abdominal cavity, and that it completely drains the whole of the colon above the obstruction and rapidly gets rid of the toxaemia. The opening, if made by the tube method, which I suggested in 1922 (*Lancet*, 1922, ii, 1117), will remain open for ten days to a fortnight and will close itself without a secondary operation. This gives time enough to perform a second operation to deal with the obstructing lesion. It has been urged against blind caecostomy that "it does not enable a diagnosis to be made of the obstructing lesion, but this is not a serious objection, as it is not the lack of an exact diagnosis that is threatening the patient's life, but the obstruction. It has also been pointed out that if the obstructing lesion is a volvulus it will not be relieved by a blind caecostomy. This is a more serious objection, but volvulus only accounts for about 1 per cent. of cases of obstruction, and in any case it is generally fatal. It was pointed out by Mr. Burgess that if it can be proved that the mortality from acute obstruction of the colon can be reduced materially and as a whole by blind caecostomy, this is sufficient justification for its adoption.

While surgeons still hold different views as to the advantages of blind caecostomy in cases of colonic obstruction they all agree that a colostomy or caecostomy should be performed above the site of obstruction, and the actual obstructing lesion should not be dealt with at the time, but be left till after the obstruction has been relieved. On no account should any attempt be made to resect the obstruction or to short-circuit it. An occasional successful result from such a procedure is no justification for the very serious risk involved. The subsequent treatment of the patient should aim at getting rid of the toxaemia by freely administering water in some way or another and relieving the overloaded bowel. It is generally better to evacuate the bowel by means of enemas given through the artificial opening rather than by administering purgatives by the mouth.

CONCLUSIONS

1. It should not be difficult to diagnose obstruction of the large bowel from that of the small.
2. The commonest cause of obstruction of the colon is a growth in the pelvic portion, and the next commonest diverticulitis in the same region. It should be possible to diagnose the cause of the obstruction with only a small percentage of error.
3. The chief danger and the most frequent cause of death is the toxaemia which results from the obstruction. This can be best dealt with by the free administration of fluids.
4. The best operation for relieving the condition is blind caecostomy or colostomy performed under local anaesthesia.

A QUANTITATIVE MODIFICATION OF THE BENDIEN REACTION IN SERO-DIAGNOSIS OF MALIGNANCY*

BY

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In 1931 Dr. S. G. T. Bendien of Holland published his observations in "Specific changes in the blood serum," and introduced a flocculation test which he claims, with certain reservations, differentiates between normal and pathological serums by variations in the reaction. Although he details many reaction changes which occur with malignant serums, the test is not primarily put forward as specific for cancer. The Bendien test consists of two parts: the first, a chemical precipitation of proteins from a serum by a specially arranged series of acetic acid sodium vanadate mixtures, and secondly, the spectrographic examination of the precipitated protein. The observations and conclusions of the second part of the test are based upon technical findings of a specialized kind, and have been criticized by Smith, Holiday, and Marrack (1931), whose findings have so far not been refuted. The first (precipitation) part of the test has also been questioned by Fine (1932), but this adverse criticism is tenable only so long as the reaction is restricted to the use of unheated serum, which, as will be shown later, is an insufficient employment of the test.

After carrying out over two hundred tests upon various serums, nearly all Bendien's flocculation reaction observations upon human serums, and several upon animal serums, have been confirmed. The delicacy of the precipitation reaction is striking, and necessitates a carefully standardized technique; but this gives to it a degree of differentiation between serums, and of variations from time to time in the serum of the same case, which suggest that the test has a definite clinical value.

Several of the difficulties which were met with, and observations which were made in doing the precipitation test, suggested that a quantitative estimation of the deposits would give more concise findings than the qualitative readings suggested by Bendien, and the following is a brief description of the modified quantitative method that has been employed, and upon which the subsequent findings are based.

The Reagents.—The first eight mixtures of N/10 acetic acid and N/10 ortho-sodium vanadate are prepared accord-

* Paper read before the Liverpool Medical Institution on November 24th, 1932.

ing to Bendien's detailed description. The vanadate used has been obtained from the British Drug Houses, Ltd. Difficulty occurs from the fact that the composition of sodium vanadate varies considerably. Fresh batches of reagents have so far been standardized against those previously used by employing pooled "normal" serums, so as to maintain a correct sequence of reactions. Experiments are being made, however, to improve upon this method of standardization.

The Serum.—Ten c.cm. of blood is required, obtained from the patient in a fasting condition. The serum should not be haemolysed—after standing it is centrifuged clear of cells. Fine's suggestion of using only 0.1 c.cm. of serum in each reaction tube economizes serum.

The tubes must be standardized—75 mm. in length and 7 to 8 mm. internal diameter. Gross variations cause considerable alterations in reaction.

Delivery of the small quantities of serum and reagents employed demands absolute accuracy; for this reason rheometer syringes (John Weiss and Co.) are used.

TECHNIQUE

For the modified test now to be described each serum is divided into three portions and marked accordingly. Approximately 1 c.cm. is required for each part.

"A" is the portion to be used *unheated*. It is carefully diluted with an equal quantity of distilled water, well mixed, and 0.2 c.cm. of the mixture is delivered into each of eight tubes; the respective reagents are added—Reagent 1 to the first tube, Reagent 2 to the second, and so on—the mixtures well shaken, and put aside to settle for sixteen to twenty-four hours. "B" is the portion to be *inactivated by heating* in a water bath for half an hour at 56° C. "C" is the portion in which the lipoid-protein complex is to be *dissociated by ether*. For this purpose at least half as much ether is added as there is serum, the whole being thoroughly shaken in a well-corked tube and set aside to separate out. This will occur as a layer above the cleared serum.

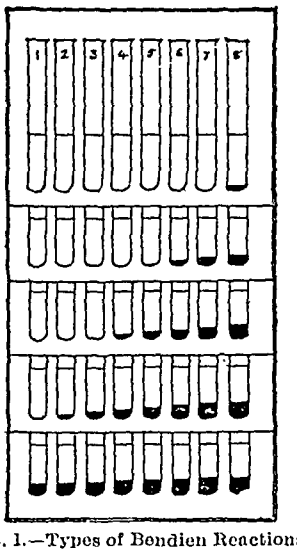
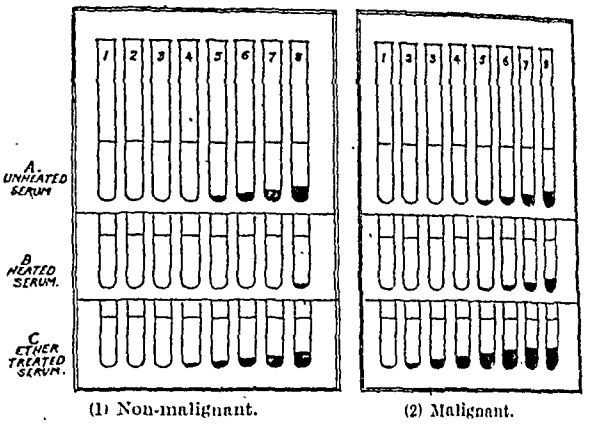


FIG. 1.—Types of Bendien Reactions.

1. First precipitation with Reagent 8
2. " " " " 6 (Normal).
3. " " " " 4 } Positive
4. " " " " 2 } reactions.
5. Full " " " 1 }

The following day the "A" (unheated serum) tubes are examined. The reactions vary from *nil* in which the contents of the tube are quite clear, to a complete precipitation of all protein contents of the serum, which is shown by a heavy deposit lying below a water-clear, supernatant fluid. Between these two extremes every variety of turbidity and less or more precipitation may be found. Examples of the marked variability in reaction of different serums are shown in Fig. 1. Two rows of tubes are now placed in the rack behind the "A" series. Into the first of these rows 0.2 c.cm. of diluted "B" (heated) serum is placed, and into the second row 0.2 c.cm. of diluted "C" (ether-treated) serum, which has been carefully pipetted from below the ether layer and then diluted. To each tube 1 c.cm. of the respective reagents is added, all being shaken and allowed to stand, as in the case of the "A" series. From each serum a series of the "A," "B," and "C" reactions are obtained. The result in the "B" and "C" series may differ markedly in certain cases, according to the amount of thermolabile substance inactivated by heating and to the dissociation effect produced by ether on the serum constituents. Fig. 2 shows the tubes from two cases obtained as described above and the deposits obtainable for quantitative estimation.



(1) Non-malignant. (2) Malignant.

FIG. 2.—Three-phase Reaction with Unheated, Heated, and Ether-treated Serums.

(1) A. First precipitation in Tube 5 (2) A. First precipitation in Tube 5
B. " " " 8 B. " " " 6
C. " " " 4 C. " " " 2

ESTIMATION OF DEPOSIT

The visual readings of the deposits, although they show a move to the right of varying amount in the "B" (heated serum) and a move to the left, most marked in malignancy, in the "C" (ether-treated serum) reaction, are not sufficiently accurate for quantitative estimation, and the following method is therefore employed. The tubes are centrifugalized at about 1,000 revolutions per minute and the supernatant fluid carefully removed without disturbing the deposit. The deposits are dissolved by adding, to each, 2 c.cm. of N/100 NaOH, and the resulting solutions vary in concentration according to the amount of precipitate dissolved in each. By means of the Löwe interferometer (1910), as made by Zeiss, these concentrations are read in units, using a 5 mm. observation chamber, and by experimental estimation it is found each unit corresponds to 0.025 mg. A reading, therefore, of 40 units equals 1 mg. of precipitate, and this amount obtained from 0.1 c.cm. of serum equals a 1 per cent. precipitation. Experimentally this amount of deposit is found to be that which usually appears visually as the "first precipitation," and it was therefore arbitrarily taken that a quantitative estimation of 40 units (or nearest above) should be regarded as the "first precipitation" and the reaction classified by the reagent number in which this amount of deposit is first found.

INTERPRETATION OF FINDINGS

The tube of the "A" series in any case which gives the first reaction having been determined, the unit measure thus obtained is taken as the basal figure for the computation of that serum, and the corresponding "B" and "C" deposits are similarly estimated, with the result that from these values in interferometer units a fraction may be worked out in which the numerator is calculated

by subtracting the unit value of " A " from " C " and the denominator by subtracting " B " from " A."

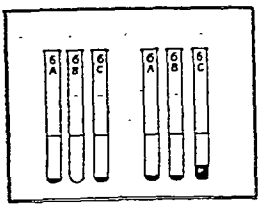


FIG. 3.—Quantitative Estimation of Precipitates.

Reagent 6 A B C 6 A B C
Interferometer units of deposit } 40 20 45 59 57 103
Fraction $\frac{C-A}{A-B}$ = 5/20 50/2
= Non-malignant. = Malignant

For instance, as shown in Fig. 3, the first case—a normal serum—gives:

Precipitation in Tube 6 in A (unheated serum) = 40 interferometer units
" " 6 in B (heated ") = 20 " "
" " 6 in C (ether ext. ") = 45 " "

The result is expressed as:

$$6.C - A/A - B$$
$$= 6.45 - 40/40 - 20$$
$$= 6.5/20$$

Similarly, in the second instance—the serum of an early case of carcinoma of the cervix—the findings, while also giving a primary precipitation in Tube 6, show in the " B " and " C " reactions entirely different results, giving a fraction greater than unity—namely, 6.50/2.

In cases where the thermolabile effect is marked and the increase of precipitation after ether treatment is slight (as is found in normal or non-malignant inflammatory conditions) the fraction is less than unity. Conversely, when the thermolabile effect is slight or absent, and the precipitation after ether treatment increased or high (as is found in malignancy), the resulting fraction is equally consistently greater than unity, and this differentiation holds good irrespective of whether the first " A " reaction occurs in the lower or in the higher numbered tubes. Normal serums, as a rule, show a first precipitation with Reagent 6. Non-malignant infective and malignant conditions may show a first reaction in any of the series, according to the severity of the pathological condition. This is shown in Table I, which also demonstrates how the quantitative diagnostic formula or fraction differentiates malignant from non-malignant reactions of varying types.

TABLE I.—*Examples of Reaction Readings*

First Precipitation in Tube	Reaction Formula: Malignant	Reaction Formula: Non-malignant	Clinical Diagnosis
1	1.30/1	—	Carcinoma of rectum—advanced
	—	1.30/35	Enlarged prostate, sect. non-malig.
2	2.50/25	—	Carcinoma of tongue; glands +
	—	2.15/30	Gall-stones, cholecystitis, non-malig.
3	3.27/14	—	Carcinoma of stomach
	—	3.16/26	Gastric ulcer
4	4.30/20	—	Carcinoma of uterus; gland in groin
	—	4.34/50	Ovarian cyst, non-malignant
5	5.40/26	—	Carcinoma of cervix, Stage II
	—	5.15/35	Uterine prolapse, simple
6	6.40/5	—	Carcinoma of sigmoid, early
	—	6.0/30	Chronic colitis with achlorhydria
7	7.57/10	—	Carc. breast early; no axillary glands
	—	7.8/35	Chronic mastitis; sect. non-malig.
8	8.44/23	—	Carc. cervix; radium 14 months
	—	8.10/20	Dysmenorrhea, simple; section neg.

NATURE OF REACTION

The different degree of precipitability in the " A " reaction (unheated serums) probably depends upon an alteration of the normal albumin-globulin ratio, the globulin fraction being increased in malignancy (as shown by Guthmann and Platz in 1930), and also upon variations in the amounts of calcium, magnesium, and potassium present in the serum (as found by Gunther and Greenberg in 1930), or alterations in the electric charges carried by these electrolytes and the proteins associated with them (as suggested by Bendien in 1931 and Pierron in 1932).

The alterations in the " B " reaction, produced by heating or inactivation of serums, are probably also a biophysical result, in which part of the globulin is denatured or labilized, and thereby rendered no longer precipitable as formerly. This feature of the test, described as " normallabilin " by Bendien, is found most marked in septic and infective conditions, where there is evidence of good resistance or immunizing response—usually less marked in normal serums, less still in infective conditions of poor resistance, and, as a rule, least of all in malignant cases. An increase of this thermolabile feature of the reaction has been observed to follow the removal of a malignant growth in some cases, and more especially the successful local destruction of a growth, such as a carcinoma of the cervix uteri by radium, as if the process had stimulated an increase in globulin lability. It may be associated with an immunizing response. Possibly the experimental work of Lumsden (1932) and the observations of Casport (1929) may offer an explanation not only of the clinical improvement in certain cases as the consequence of the autolysis of cancer cells and the absorption of disintegration products resulting from such treatment, but also of the spontaneous cure in occasional instances.

The variations in the subsequent precipitation of the " C " reaction may depend in part upon the lipoid content of malignant serums being higher than normal (Benso, 1930)—these observations, however, have not been confirmed—but more probably upon the findings that in malignancy the lecitho-protein-globulin association is in some way locked up and rendered more stable, possibly by the saturation of fatty acid radicles. The ether treatment dissociates this abnormal stability of the protein constituents of the serums, and allows of the greater precipitability in the " C " reaction in malignancy as compared with non-malignant serums similarly treated. In his book Bendien mentions the importance of observing the effect of heating serums, and also describes the increased precipitability after ether treatment, though he does not emphasize that the combined estimation of these reactions is essential to a sero-diagnosis. The modification of the test here introduced utilizes his original flocculation technique, but insists upon its essential employment in the three phases (of unheated, heated, and ether-treated portions of every serum), while a quantitative estimation of the precipitates obtained by any one reagent after treating the serum in this threefold manner provides differentiating data.

The variety of reaction which is consistently associated with cancer shows, according to the degree of malignancy, a combination of these three features in which the altered precipitability of the unheated serum proteins is the most variable, and the decreased labilization and abnormal lipoid-protein complex are the most constant. In this connexion the valuable work of Shaw Mackenzie (1911, 1912, 1913), confirmed by Lewis (1928), is of special interest. Possibly the deficiency in serum lipolytic power

accounts for the abnormal lipoid-protein complex demonstrable in malignant serums. In the diagnosis of malignancy the quantitative estimation of the inactivation and ether effects upon the serum is of greater importance than the variations in primary tube precipitation. The latter, however, expresses the degree of malignancy if the two former observations indicate its presence.

CLINICAL RESULTS

This quantitative estimation has been carried out on more than one thousand occasions. Many were " repeat " examinations of the same case ; others were experimental observations, and have been excluded from the 600 examinations the results of which are presented as illustrating the diagnostic value of the test.

Out of the total there were 362 cases of various degrees of malignancy, ranging from the most advanced and obvious to the earliest and clinically uncertain type. These included carcinoma of the tongue, jaw, lip, etc., 42 ; stomach and oesophagus, 26 ; colon, rectum, appendix, and sigmoid, 75 ; lung and larynx, 24 ; uterus and cervix, 91 ; ovary, 13 ; breast, 49 ; gall-bladder, 2 ; bladder and kidney, 4 ; prostate, 4; scrotum, 9; glands, 1; skin, 14 ; pancreas, 2 ; brain, 2 ; and sarcoma, 4. Of these, 349 tests gave malignant, and 13 (3.7 per cent.) non-malignant reactions. Of clinically non-malignant cases there were 238, including 92 normals. Of these, 226 gave non-malignant, and 12 (5.3 per cent.) malignant reactions, a total clinical non-correspondence of 25 (4.25 per cent.) out of 600 cases. The majority of these examinations were made without knowledge of the condition of the cases. The clinical details were supplied later, when it was found that the discrepancies between the test findings and clinical conditions of the cases concerned were more apparent than real.

Table II details twenty-five cases of non-correspondence. The first eight were of cases clinically non-malignant. In these the " first precipitation " took place with Reagents 6, 7, or 8, and, as far as the tube reaction is concerned, did not indicate active malignancy, but all gave a malignant type of fraction, and may indicate a precancerous tendency. All were over 40 years of age.

In another group of 134 cases which were clinically normal or suffering from simple medical or surgical conditions of a non-malignant type, all over the age of 36 years, twelve gave first precipitation in Tubes 6, 7, or 8, but of the malignant type, and this 9 per cent. of " possibly precancerous cases " is suggestively near the percentage of cancer incidence.

In the next group, Cases 9 to 18 in Table II, all ten showed " first precipitation " with reagents lower than No. 6, and therefore, as far as the tube reaction goes, in the more malignant zone. In all of them definite cancer with more or less gross secondary septic infection was present. In Cases 12, 14, and 17 the patients were actually dying of secondary sepsis. When the clinical condition is revealed the apparent non-correspondence of the test as regards malignancy in these particular cases is open to the explanation that at the time of examination the cases were more septic than malignant. Case 19 was one of Hodgkin's disease, and there are probably many who may consider that a malignant reaction in such a case is not incorrect. If possible clinical explanations are allowed there are left six cases (1 per cent.) out of 600 which are not explainable, with the possible exception of Case 22, which, retested eight days later, still gave a Tube 7 reaction, but of a malignant type.

The diagnostic accuracy of the Bendien test appears, therefore, to approximate 95 per cent. if the clinical condition is not taken into account, and 98 per cent. if it is.

TABLE II.—*Details of Cases not corresponding in 600 Examinations*

Case No.	Reaction		Clinical Conditions
	Malignant	Non-malignant	
1	6.47/33	—	Chronic appendix after appendicectomy
2	6.60/25	—	Menopausal menorrhagia and hyperplasia
3	6.42/38	—	Subserous fibroids—section negative
4	6.57/20	—	Pyloric ulcer and hyperchlorhydria
5	7.60/15	—	Duodenal ulcer
6	7.35/5	—	Gastro-intestinal toxaemia
7	7.45/20	—	Marked anaemia secondary type; occult blood in faeces +++
8	8.50/40	—	Menorrhagia, non-malignant ; section neg.
9	—	5.4/40	Radium burn ; epithelioma and local inflammation
10	—	5.26/50	Rodent ulcer face, healing ; septic infection
11	—	4.14/35	Carcinoma of cervix, fungating type ; infiltrating pelvis
12	—	4.18/43	Carcinoma of oesophagus ; obstruct. and purulent bronchitis and bron. pneumonia
13	—	4.5/13	Carcinoma of antrum and septic absorption
14	—	3.17/30	Carcinoma of oesophagus and inflammatory infiltration
15	—	3.30/50	Carcinoma of pelvis ; inflammatory reaction
16	—	2.14/42	Carcinoma of cervix and local pelvic infiltration and pyometra
17	—	1.7/46	Carcinoma of pharynx, extensive suppuration, lung abscess
18	—	1.11/50	Carcinoma of rectum (scirrhous). Intestinal stasis
19	2.30/5	—	Hodgkin's disease
20	—	4.17/51	Adenocarcinoma of ovaries
21	—	6.10/20	Carcinoma of breast, early scirrhous type, glands +
22	—	7.15/17	Carcinoma of cervix with chronic endocervicitis
23	6.60/25	—	Fibro-adenoma of breast. No malignancy found
24	4.38/40	—	Enlarged prostate
25	1.37/8	—	Aortic aneurysm, abdominal. No malignancy found

THE TEST IN PROGNOSIS

Details of fifty cases of uterine carcinoma show a close correspondence between the degrees of clinical malignancy and the positiveness of the serum reaction. Some overlapping occurs between the test findings in the three groups clinically arranged according to the League of Nations I, II, and III grades, as might be expected ; precisely similar correspondence was found in a further series of fifty cases of mammary carcinoma. A point of interest is that in twelve out of fifteen cases of carcinoma of the cervix treated by radium and deep *x*-ray therapy, and in five out of eleven cases of carcinoma of the breast treated surgically—all of which show no evidence of recurrence and are clinically satisfactory—the serum reaction is of the non-malignant type. In all the others, whether of advanced or early malignancy, or of clinically satisfactory conditions, the reaction is of the malignant type. A comparison of the Wassermann and Bendien reactions was made in thirty cases (in fifteen of which the Wassermann was positive), and the Bendien reaction was non-malignant in all but three. In the latter early conditions of malignancy were found—in one carcinoma of the cervix, another of the prepuce, and in the third of the larynx. All were unsuspected clinically, but confirmed later by section. A small group of six cases of pregnancy have been examined, ranging from an ectopic gestation of six weeks to a nine months' pregnancy, and in each case the reaction was positive and malignant in type. The test would therefore be of no value in attempting to differentiate malignancy from pregnancy, or to diagnose malignancy in a pregnant woman. This finding emphasizes the fact that many of the endocrine and serological changes physiologically present in pregnancy are apparently similar

to those pathologically present in malignancy. This suggests that there is present some loss of the normal inhibition of growth-stimulating hormones, as described by Susman's observations (1931), and is in keeping with the hypotheses of Blair-Bell.

Over one hundred cases of various types and degrees of malignancy have been re-examined at approximately monthly intervals in many cases, and less frequently in others.

Cases of inoperable cancer have usually shown a steady increase in positiveness of reaction, the first precipitation of the serum in the tube series moving more or less steadily to the left, and usually reaching a full precipitation in Tube 1 shortly before death. Reactions of the lower tube types usually indicate a hopeless prognosis. In some cases comparatively small and clinically more malignant growths have shown a more positive reaction and a more rapid increase of positiveness than has been found in cases of larger and more extensive neoplasms. This suggests that the test findings may indicate variations in individual resistance to malignancy, rather than have any relation to the size of the mass of cancerous tissue. Cases of scirrhous carcinoma—especially the atrophic type in elderly patients, in whom clinically the malignancy is little more than a local manifestation, or at worse very slowly progressive—have given reactions of a mildly positive type, and in one a negative result. Cases in which the primary growth has been satisfactorily removed, and in which metastases have not developed, usually show a fairly rapid move of the first precipitation to the right in subsequent tests.

In several cases of mammary carcinoma complete removal has been followed by an alteration of the serum reaction from a definitely positive to a non-malignant type, while in others recurrence after a similar operation has been associated with a persistence of the malignant fraction in spite of temporarily improved tube reactions. Later, a move back to the left in tube precipitation has accompanied or preceded the development and progress of recurrence of the growth or the formation of metastases. In three cases the serological diagnosis of recurrence anticipated the clinical findings by from one to three months. It thus appears possible that in post-operative cases of malignancy and those under radium and *x*-ray treatment such means of observing serum alterations may give information with regard to clinical progress and the probability of recurrence or metastases developing, and may indicate the need for repetition of treatment, if such were possible, or suggest, by reason of a change to a reaction of a non-malignant character, that treatment might be safely omitted.

In *Some Aspects of the Cancer Problem* (Blair-Bell, 1930), the statement is made that "immense importance would be attached to the discovery of a reaction that will indicate the presence of cancer cells left after a radical operation, or after a supposed cure by any means at our disposal, or that will demonstrate the development of a recurrence at a later date." I suggest that the Bendien test as described, while not necessarily indicating the presence of cancer cells, does indicate the existence or non-existence of biochemical and biophysical conditions which would allow of the development or recurrence of cancer cells. It therefore comes somewhere near to the fulfilment of the hope that is expressed in this quotation.

On these grounds it would justify itself for serious consideration, as an aid to clinical diagnosis, and probably even of more importance as a method of making post-operative "follow-up" observations upon known cases of cancer, and assessing thereby the clinical value or otherwise of suggested methods of treatment whatever their character.

CONCLUSIONS

1. A quantitative method of employing Bendien's flocculation reaction is described, and the results of 600 tests detailed.

2. The primary tube reaction alone is shown to be insufficient for the diagnosis of malignancy. The triple test must be employed, and will then differentiate malignant from non-malignant conditions in at least 95 per cent. of cases.

3. The clinical malignancy and the degree of positiveness shown by the test closely correspond.

4. Post-operative cases of cancer, or those having radium, *x*-ray, or other forms of treatment, may be "followed up" by means of this test, and clinical information may thereby be obtained regarding prognosis and treatment.

5. Cases are referred to in which satisfactory clinical improvement and apparent cure is associated with the continued presence of a normal or non-malignant serum reaction.

6. In some cases the serum reaction has foretold a recurrence months before clinical observations have confirmed it.

7. Among normal and clinical non-malignant conditions a certain percentage of abnormal reactions occur, suggesting the possibility of recognizing in such cases a precancerous tendency.

8. The test is delicate and reliable, more satisfactory as a laboratory technique than any other at present available, and should be of value as a clinical aid to diagnosis and prognosis of malignancy, especially in early cases.

My sincere thanks are due to the many colleagues who have made this work possible—to Dr. Bendien, for his criticism and appreciation of the modified application of his test; to Dr. Gemmell and Mr. Malpas for the provision of a large number of serums and, later, full clinical notes from cases at the Royal Infirmary, David Lewis Hospital, and Radium Institute, etc.; to Dr. MacWilliam and his staff at Walton Infirmary for supplies of serums and clinical details; and to several colleagues at the Eye and Ear Infirmary, Liverpool, the Hahnemann Hospital, Liverpool, and the Southport Infirmary, for the opportunity of conducting tests and examining their cases; also, to my two assistants P. H. Osmond and L. H. Bennett, who have carried out a considerable part of the experimental and routine work.

Since writing this paper an article by Professor Gomes da Costa of Lisbon (*Arq. de Patologia*, 1932, iv, 1) has appeared upon "The Bendien Test for the Diagnosis of Cancer," in which the author confirms many of Bendien's findings both in the flocculation test and also in the spectrophotographic examinations. A further paper by Beggs and Aitken (*Journ. Exp. Path.*, 1932, xii, No. 6) has appeared on "The Effect of Tumour Regression on Serum," and confirms from an experimental aspect upon animals that variations in the Bendien reaction and lipolytic power of serum are associated with development of, or regression in, malignant neoplasia.

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TYPHOID-PARATYPHOID IN INSTITUTION SEWAGE

BY

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The occurrence of sporadic cases of typhoid and paratyphoid B, and outbreaks of the extreme seriousness of those at Malton and Denby Dale, emphasize the vital importance from a public health point of view of the detection of carriers, to the existence of whom practically all these outbreaks are due. In the general population this is, of course, a large and complicated undertaking, but in a hospital where several hundred people are collected together over a number of years the detection of carriers is a much simpler matter, although by no means as simple as it would appear on the surface. As part of this work the examination of the sewage from the Hereford Mental Hospital was undertaken soon after the search for carriers was begun. At the time when *B. typhosus* was first isolated from the sewage four carriers of *B. paratyphosus* B had been detected, but none of *B. typhosus*, and it was not for some days that a carrier of *B. typhosus* turned up.

Typhoid and paratyphoid carriers are probably much commoner in the general population than is at present admitted. Many mild outbreaks and sporadic cases of paratyphoid are undoubtedly missed, and so the proportion of carriers probably increases from year to year. The only figures which appear to be available are from foreign sources. The proportion varies between 3 per 1,000 (Chapin[1]) and 50 per 1,000 (Welch, Dehler, and Havens[2]). In this latter case the examination was of both urine and faeces, and was carried out very thoroughly. Pickworth[3] has shown that from a large town like Birmingham, among the admissions to the mental hospital 23 per cent. of 464 new admissions in one year agglutinated pathogenic organisms of the *coli*-typhoid group.

The isolation of typhoid and paratyphoid B organisms from sewage has always been regarded as a matter of no little difficulty, and it is very largely owing to the splendid work of Wilson and Blair in Belfast, and to the use of their technique, that progress has been and is being made. Wilson in 1928,[4] using his special solid glucose-iron-bismuth-sulphite medium, found *B. typhosus* in the Belfast sewage. Gray in 1929[5] found *B. paratyphosus* B in Edinburgh in three out of seven tributaries to the main sewer. Begbie and Gibson in 1930,[6] using three different methods (MacConkey's, brilliant green, and Wilson and Blair's 1927 solid medium), examined fifty-eight samples of sewage from the various main sewers of Edinburgh, and found *B. paratyphosus* B in seven. The detailed examination of the results is interesting. The direct plating of sewage on MacConkey's medium was negative throughout; five out of the seven examples were the result of brilliant green enrichment, and two were on Wilson and Blair's medium. In none of these was a positive result obtained by both methods. The sewer from which Gray had obtained positive results in 1929 gave a negative result in 1930. These writers draw a tentative conclusion that "the presence of organisms of the enteric group in sewage indicates a concentration of missed cases, convalescents, and transient contact carriers in the general population." In 1929 I made an attempt to isolate *B. typhosus* from the sewage at the Dorset Mental Hospital, where there were several known typhoid carriers. Wilson and Blair's solid medium was used, but the results were negative.

A FLUID ENRICHMENT MEDIUM

In the meantime Wilson and Blair were continuing their work in Belfast, using various modifications, and in 1931,[7] using their solid medium, they found *B. typhosus* in twelve out of fifteen samples of Belfast sewage. They also isolated *B. paratyphosus* B. They point out that the isolation of *B. typhosus* from sewage is more difficult in July, August, and September, owing to the seasonal increase in sulphite-reducing organisms. They also carried out experiments showing that *B. typhosus* can live for thirty-eight days in sewage at room temperature, and *B. paratyphosus* B for twenty-one days. This is very much longer than had previously been realized, and the great importance of this from the point of view of water-supply contamination is evident. (Houston[8] found *B. paratyphosus* B alive after twenty-one days in Epping sewage.)

As the result of a number of experiments Wilson and Blair produced a fluid enrichment medium. It is with the use of this medium that the present paper is concerned. They used a standard bismuth broth, to which they added varying amounts of different alcohols and a 1 in 10,000 solution of perchloride of mercury. With their modification containing 1 c.cm. of absolute ethyl alcohol and 4 c.cm. of a 1 in 10,000 solution of perchloride of mercury they isolated *B. typhosus* three times out of five. This enrichment medium proved very useful for isolating *B. typhosus* and *B. paratyphosus* B from faeces when other methods were unsuccessful. Their fluid enrichment medium consists of 100 c.cm. mannite broth (Fairchild's peptone), 6 c.cm. sodium sulphite (20 per cent. solution), and 0.22 c.cm. bismuth solution. To the boiled mixture 0.5 c.cm. of a 1 per cent. solution of brilliant green is added. To every 100 c.cm. of mannite broth 1 c.cm. of absolute alcohol is added, and 4 c.cm. of a 1 in 10,000 solution of perchloride of mercury. The use of alcohol and perchloride of mercury destroys *B. coli* and *B. proteus*.

In February, 1931, at the beginning of an outbreak of paratyphoid in Epping, Houston[8] isolated *B. paratyphosus* B from 1 c.cm. of the sewage effluent from the township of Epping. Subsequently the sediment deposited on the sewage irrigation area was found to contain the paratyphoid bacillus. These results were confirmed by Scott.[8] *B. paratyphosus* B was found in the Epping sewage for some months after the epidemic had subsided.[9]

ITS USE AT HEREFORD MENTAL HOSPITAL

The examination of the sewage of the Hereford County and City Mental Hospital was commenced in July, 1932. Two carriers of *B. paratyphosus* B had been isolated towards the end of June, and it was thought that the examination of the crude sewage from the hospital might prove interesting and instructive from a public health point of view. Collection of the sewage was made from an inspection chamber at such time as it was believed that the flow of bath and laundry water was at a minimum. For the first seven examinations the solid Wilson and Blair bismuth-sulphite-glucose-iron medium alone was used for direct plating, and in addition peptone water brilliant green cultures were subcultured on MacConkey plates. All these examinations proved negative. On August 20th the liquid enrichment medium of Wilson and Blair was introduced, and proved at once successful.

The technique used was as follows. Three solutions were made up—A, B, and C. A consisted of 60 grams bismuth citrate, 50 c.cm. distilled water, 20 c.cm. ammonia (S.G. 880), and, when these were mixed, sufficient distilled water to make 500 c.cm. B consisted of 120 grams sodium sulphite (A.R.) and 300 c.cm. distilled water, to which 150 c.cm. of A was added and the whole warmed slightly. C consisted of 30 grams of sodium phosphate dissolved, by warming slightly (not boiling), in 150 c.cm. of a 1 in 20 glucose solution. This was added to the AB mixture and boiled slightly for one to two minutes. This mixture can be kept in a stoppered bottle.

To make the liquid enrichment medium the following were used: 30 c.cm. of stock ABC mixture; 50 c.cm. trypsinized

broth; 100 c.cm. peptone salt water (difco); 1.5 c.cm. 8 per cent. ferric chloride solution; 0.1 c.cm. 1 per cent. brilliant green; and 3 c.cm. absolute alcohol. This mixture is divided into a convenient number of large tubes, and 10 to 15 c.cm. of crude sewage sown into each in proportionate quantities. These tubes were incubated for thirty hours, after which small quantities were plated on Wilson and Blair's solid medium: nutrient agar 2.5 per cent., 100 c.cm.; ABC mixture, 20 c.cm.; brilliant green 1 per cent., 0.25 c.cm.; ferric chloride 8 per cent., 1 c.cm. The plates were incubated for a number of days and examined daily. Typical colonies were picked off and examined in the usual way—that is, they were tested direct for agglutination by the slide method, subcultures being made from positive colonies for fermentation and absorption tests. This technique is slightly modified from that of Wilson and Blair. The results were as follows:

August 23rd, 1932	*B. typhosus* isolated.
August 24th	Negative.
August 29th	Negative.
September 5th	*B. paratyphosus* B isolated.
September 6th	Negative.
September 12th	*B. paratyphosus* B isolated.
September 19th	Negative.
September 26th	Negative.
October 3rd	Negative.
October 10th	Negative.
October 31st	Negative.
November 7th	Negative.
December 5th	Negative.
December 12th	*B. typhosus* isolated.

At all these examinations direct plates were made on the solid Wilson and Blair medium and proved negative, although exactly the same batch of media were being used for the examination of faeces at the same time, and were proving successful.

During the period from June to December carriers of *B. typhosus* were isolated on September 2nd and 21st; and of *B. paratyphosus* B on June 6th, July 20th, August 16th and 19th, October 11th and 31st, and November 3rd and 15th. As carriers were found their stools were disinfected before being disposed of, so that the positive result on December 12th showed that there were still undetected carriers among the hospital population. (Only some two-fifths of the patients had been examined up to that date.)

At no time during the course of the work did colonies develop on the MacConkey plates.

CONCLUSIONS

1. The liquid medium introduced by Wilson and Blair for enrichment has proved invaluable in the isolation of *B. typhosus* and *B. paratyphosus* B from sewage, and appears likely to introduce a new era in sewage bacteriology.

2. Direct plating on MacConkey's medium after Wilson and Blair enrichment is quite useless in the examination of sewage.

3. From a public health point of view very great importance attaches to the examination of sewage.

4. Crude sewage, which in the past has often been deemed harmless, should not be spread on horticultural and agricultural land. Wilson and Blair have shown that *B. typhosus* can live for thirty-eight days in sewage. It may live much longer in portions of faeces in the sewage; we do not know that it cannot do so.

My thanks are due to Mr. J. D. Becket, laboratory technician, for much hard work, skill, and for useful suggestions on technique; and to Dr. W. M. Scott of the Ministry of Health for advice and encouragement.

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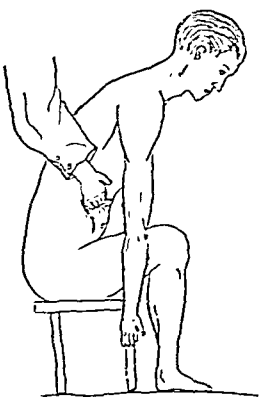
Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

UPPER ABDOMINAL PALPATION IN THE "DANGLE" POSITION

Abdominal palpation is a physical investigation the ease and effectiveness of which varies enormously with the build, tonus, and mentality of the patient. The combined difficulties of rigidity, depth from the surface, and cover by the hard parietes are nowhere so apparent as in the hypochondria and the epigastrium; particularly does this apply to conditions of the spleen, stomach, and gall-bladder, which are apt to be retracted under cover of the lower chest wall by inspiratory spasm. Examination by the method to be described (of which no mention has been discovered elsewhere) will be found to obviate both of the disadvantages referred to.



The Method

The patient is seated on a lowish stool or chair, with his feet on the floor. The knees should flex to a right angle, or preferably a little less; the thighs should be in contact. The trunk and head are now allowed to incline forwards practically by their own weight, the upper limbs hanging loosely by the side of the thighs. It is essential that the trunk should not be *held* forwards by the patient. The condition of the arms is an excellent indication of the effectiveness of the position; if the correct relaxation is obtained they dangle flaccid by the side of the thighs, swaying easily to the slightest push. (The patient, however, should not swing them himself.) A right-handed examiner will now palpate the upper abdomen, standing to the right side and behind the patient. If the correct co-operation of the subject has been obtained, it is found that the examining hand sinks with surprising ease almost knuckle-deep into the hypochondria and epigastrium, under and actually round the costal margin.

Particular Applications

This method, whilst not only obtaining remarkable relaxation of the upper abdominal parietes, has also an additional and most valuable property in that the spleen, stomach, and gall-bladder are carried by gravity downwards and forwards against the hand of the examiner, instead of away from it as in the usual supine position. (In the uncomfortable and undignified knee-elbow position these viscera incline upwards and forwards; the relaxation is definitely inferior.) The particular applications of the position lie in: (1) the detection of gastric tumours, the importance of whose early demonstration will readily be conceded; (2) the elicitation of gall-bladder tenderness—the method is in all cases far more effective than the "finger-hooking" sign, and gives positive results in a considerable number of cases in which "finger-hooking" is negative; (3) the palpation of minor splenic enlargements and the elicitation of splenic tenderness. Renal palpation, and, indeed, mid-abdominal examination in general, is also rendered easier by the method, which, however, is obviously not suited for the lower abdomen.

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COMPLEMENT OF HIGH TITRE

If one freezes solid a test tube of guinea-pig serum in a mixture of ice and freezing salt and then thaws it in either a water bath or incubator, and looks at it from time to time, a change will be seen taking place. On gently rocking the tube there is a movement of oily-looking streaks between the top and bottom portions, and ultimately, when the thaw is completed, a darker coloured lower and lighter coloured upper portion will be observed. If, without shaking or inverting the tube, the freezing and thawing is repeated a few times, the differences between the two portions are more marked, until the lower portion becomes highly coloured and heavy-looking, and the top portion colourless. If the complement titres of the extreme upper portion and extreme lower portion are tested with sensitized sheep cells a vast difference in the two will be noted. The top may give a titre of 1 in 5 and the bottom 1 in 150. Evidently that portion of serum responsible for haemolysing sensitized cells has largely migrated to the bottom of the tube. On inversion of the tube a few times the two portions blend together, and an apparent return to normal serum occurs.

I found this out about a year ago, when, for economic reasons, I began to freeze solid and preserve in a freezing mixture in a vacuum flask in the ice chest the guinea-pig serum left over from the day's Wassermann tests. By applying similar methods, the greater part of the serum can be recovered from the saline dilutions employed in the Wassermann tests, and can be used again on another day. There did not appear to be much of practical value gained except the possibility of being able to preserve the high titre portion of the complement in liquid or powder form. In the frozen solid state I have kept it for six months, and obtained quite a good titre.

I communicated my observations to Dr. E. J. Wyler, the Ministry of Health pathologist for serum tests for syphilis, who confirmed my findings with undiluted serum. Experimenting with the inactivated serum of rabbits immunized with sheep's red cells, he found he could get an increased haemolytic titre of the lower portion. I am publishing this note after reading Dr. Gordon's account of the part played by complement fractions in combating disease, as it occurs to me that the freezing and thawing of serum which causes the separation of certain components may be of value to those who are working on this subject.

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Reports of Societies

FEVERS OF UNDULANT TYPE IN RELATION TO COW'S MILK INFECTION

At a meeting of the Medical Society of London on February 27th, with Sir JOHN BROADBENT, Bt., presiding, a discussion was held on the increased frequency of fevers of the undulant type in non-tropical countries and its relationship to infection by cow's milk.

Dr. P. H. MANSON-BAHR, in introducing the subject, said the term was used to include several clinical pyrexias due to organisms which were closely allied to each other. Fevers of the undulant type were all due to organisms of the same bacteriological group. In man the following varieties of undulant fever were recognized: the original type, which was contracted from the drinking of the milk of the goat, the organism responsible being *Br. melitensis*; the localized aberrant type, as encountered in North Africa, also derived from goat's milk and due to *Br. paramelitensis*; and the *abortus* type, apparently world-wide, caused by *Br. abortus*, derived in man apparently from cow's milk. A form found in pigs was attributed to *Br. bronchisepticus*. Typical undulant fever showed wide variations in character and undulations in temperature, which might rise to 105° F. The fever might last a year or longer, but eventually subsided, probably burning itself out. The time of highest temperature excursion was *between 4 and 6* p.m., in this respect differing from fevers of septic origin. Owing to the occurrence of pains flitting from one joint to another it has sometimes been diagnosed as influenza. In some cases, however, the pain was limited to fascias and bony prominences. The night sweats met with in undulant fever were more profuse and exhausting than those of any other disease. In the *melitensis* form the spleen was usually enlarged, and it was common to see haemorrhages from nose and gums, also purpuric skin eruptions. Among the complications were neuralgias and rheumatic pains, and the sequelae included abscess, orchitis in the male, mastitis in the female, parotitis, and neuritis. In pregnant women the disease tended to cause abortion or premature labour. For the *abortus* type Dr. Manson-Bahr thought a better name—as both sexes were affected—would be "undulant fever of *abortus* type," or "Bang's disease." This form of the disease had now become quite common in high-bred cattle herds, the organisms being found in the vaginal discharge and uterine exudate, and for weeks or even months in the milk. Often the organism was found in the genitalia of bulls, which could hence perpetuate and increase the herd infection. A ready means of diagnosis was by serum agglutination, which took place in dilutions of from 1 in 100 to 1 in 10,000. Also useful *in diagnosis was an intradermal test. The patients* preserved their hearty appetite, and also their mental clarity, during the illness. The leucocyte count in the *abortus* form was distinctive, a slight leucopenia, with a relative increase in the lymphocytes. There were, he said, "subclinical cases," those in which the temperature increases were so slight as not to be noticed unless by a routine four-hourly observation. Dr. Manson-Bahr could not say much of a hopeful nature about treatment. Patients should be well fed on easily assimilable food, with plenty of fluid to promote sweating. The joint pains could be alleviated by a combination of phenacetin and aspirin. Dr. Miller found that three or four intravenous injections of T.A.B. in doses of 50 to 150 million organisms cut the fever short.

Professor G. S. WILSON said the *abortus* type would not grow under ordinary aerobic conditions; it needed the addition of 10 per cent. CO_2. The disease occurred mainly in people between 20 and 50 years of age, and the cases were twice as numerous in males as in females. Of 136 cases collected in England and Wales, ninety-seven occurred in towns. A considerable number of the cases were in people who had returned from a holiday spent at a farmhouse, where unaccustomed milk-drinking was indulged in. Cream was often found to contain an abundance of the organism. Hard cheese, most of which had been stored a long time when consumed, was negligible as a source of infection, but this did not obtain with soft cream cheeses, which were often eaten in a comparatively fresh state. A recent inquiry showed that a high proportion of raw milk was heavily infected with *Br. abortus*. In the development of the disease as a clinical entity it was recognized that predisposing factors were important, and that the organisms might gain entry without causing clinical symptoms. Professor Wilson examined the blood of ninety-eight veterinarians at a recent congress at Folkestone and found that 20 per cent. of them contained agglutinins to *abortus*. In arriving at a diagnosis the clinical and serological evidence must be taken together.

Dr. THEODORE THOMPSON said that the incubation period of *Br. abortus* was five to fifteen days, the same as that of Malta fever. The striking clinical feature was a continuing pyrexia without obvious cause. Except for profuse sweatings, with a peculiar odour of the skin, the patient usually appeared to be well. Melaena was not by any means common, but it had been noted to occur. An accompaniment of the disease was a mild anaemia, and the proportion of white corpuscles was often seriously

reduced, sometimes to 4,000 or 5,000 per c.mm. The intradermal reaction was certainly a useful aid to diagnosis, inoculation of the organism into the skin substance causing a wheal, which continued two or three days. He had found that the disease usually ran its course, little checked by treatment. Mr. L. E. W. BEVAN, who had had an extensive experience of veterinary practice in Southern Rhodesia, told how, in 1921, after reading the work of Alice Evans, he thought some obscure human cases of fever which were admitted to hospital in Southern Rhodesia might be due to the *abortus* organism, and found such to be the case. Since that date about 300 cases had been admitted to the Rhodesian hospitals. Since he had been in this country he found that bovine abortion was very prevalent among farm stock. The comparatively few human cases in the British Isles seemed to argue a considerable degree of immunity or tolerance in the general population. The PRESIDENT referred to a French contribution on the subject in which much of the disease in that country was said to arise from sheep rather than from goats. In America the transfusion of 500 to 700 c.cm. of blood from a healthy person was reported to have brought the temperature of cases down in two or three days.

Dr. MANSON-BAHR, in reply, said there was a good deal of evidence to show that the disease was not solely traceable to the drinking of goat's milk ; soft cheese was largely consumed in France, and much of this cheese was made from the milk of sheep.

DIAGNOSIS OF CHRONIC DIARRHOEAS

At a meeting of the Section of Tropical Medicine of the Royal Society of Medicine, held on March 2nd, with Dr. HUGH S. STANNUS, the president, in the chair, Dr. ROBERT HUTCHISON opened a discussion on the diagnosis of chronic diarrhoeas.

Dr. Hutchison suggested a classification of the chronic non-tropical diarrhoeas under five headings: (1) Gastrogenic diarrhoea, or diarrhoea associated with achlorhydria. The administration of hydrochloric acid by mouth cured this condition. (2) Fatty diarrhoea. This included all conditions in which there was an excess of unsplit fat in the stools, such as congenital steatorrhoea, pancreatic diarrhoea, coeliac disease, non-tropical sprue, and states in which obstruction of the lacteals prevented the absorption of fat. (3) Enteritis—a catarrh of the small intestine. This might be due to an irritant, such as provided by the abuse of alcohol or by gross errors of diet, or to the toxins of disease, as in tuberculosis, or possibly to the elimination of poisons, of which the so-called eliminative diarrhoea associated with uraemia was an example. Maldigestion of proteins and fats gave rise to the varieties of enteritis called " putrefactive " and " fermentative " diarrhoea respectively. (4) Colonic diarrhoeas. These might be (*a*) catarrhal, (*b*) ulcerative—dysenteric and non-dysenteric ; (*c*) obstructive. Obstruction might be from new growth or, in old people, from scybala causing spurious diarrhoea. (5) Neurogenic diarrhoeas might be either reflex, as seen sometimes in children in whom the gastrocolic reflex appeared to be set on a hair-trigger, or psychogenic, as in cases where the patient responded to emotion or excitement by developing diarrhoea. To make a diagnosis in a case of diarrhoea a careful history and a complete physical examination were needed ; naked-eye and microscopical examinations should be made of the stools, and possibly the fat content would have to be estimated. A digital examination of the rectum must be performed, and in some cases the use of the sigmoidoscope, the administration of a test meal, or an *x*-ray examination after a barium enema gave valuable information.

Dr. P. H. MANSON-BAHR said that in the Tropics colitis, or some form of diarrhoea, was only secondary to fevers in importance. Just as it might become a habit to treat all patients with fever as though they were suffering from malaria, it became an almost equally dangerous habit to assume that every case of diarrhoea was due to amoebic dysentery, and thus dose the patient with emetine. Bacillary dysentery had been neglected, but was by far the most frequent cause of tropical diarrhoea ; the chronic form was often unrecognized. Idiopathic ulcerative colitis also occurred in the Tropics, and was frequently confused with one or other of the dysenteries. Emetine was harmful if used in the treatment of ulcerative colitis or bacillary dysentery. Mucous and membranous colitis were common in the Tropics, and were often sequels of dysentery. Sprue had to be distinguished from pancreatitis and pernicious anaemia.

Mr. LIONEL NORBURY said that the surgeon was chiefly concerned with three forms of spurious diarrhoea—namely, ulcerative colitis and proctitis, and their sequels ; tumours of the colon ; and diverticulitis of the colon. Ulcerative colitis affected young adults, and had been supposed to be of dysenteric origin, owing to the fact that Flexner's bacillus had been found in a case. He had not been able to demonstrate the bacillus in any of his series of cases at St. Mark's Hospital. Sigmoidoscopy showed sloughing ulcers, and the mucous membrane between the ulcers tended to become polypoid. The distribution of the ulcers corresponded to the three longitudinal muscle bands running in the intestinal wall. Achlorhydria had been demonstrated in certain cases, and there had been improvement following the administration of dilute hydrochloric acid. Ulcerative proctitis might coexist with ulcerative colitis, or might be a separate entity. It might follow the use of radium for carcinoma of the cervix, or might be gonorrhoeal, gummatous, or, rarely, tuberculous. Stricture was a common sequel of proctitis. Villous papillomata and polyposis intestini might both give rise to spurious diarrhoea. New growth could be diagnosed on sigmoidoscopy, a portion being removed for examination. *X*-ray examination was unsatisfactory for the diagnosis of sigmoidal tumours, because the barium in the rectum obscured the region to be examined.

Mr. E. T. C. MILLIGAN thought that ulcerative proctocolitis could be distinguished from granular proctocolitis, a condition in which there was redness of the bowel mucosa but no ulceration and no loss of elasticity of the bowel wall ; digital examination of the rectum was not painful, and the prognosis was much more favourable than in ulcerative proctocolitis. Dr. G. VILVANDRÉ said that an expert radiologist ought to be able to demonstrate the sigmoidal region clearly. The rectum, containing barium, had only to be deflected to one side. After evacuation of the bowel, moreover, the anatomy of the region was outlined in streaks of barium.

Dr. N. HAMILTON FAIRLEY said that it was rare for the bacillus to be isolated from cases of so-called chronic dysentery seen in this country. He thought some cases of proctocolitis were intermediate between the two types described by Mr. Milligan. Dr. M. A. ARAFA said that in Vienna diagnostic significance was attached to the presence of a tender spot to the left of the umbilicus in catarrhal enteritis. Dr. JULIUS BURNFORD thought that Dr. Hutchison had based his classification partly on aetiology and partly on symptomatology. He thought the increase in the incidence of ulcerative colitis might be associated with the increase of ulcerative conditions throughout the alimentary tract. The CHAIRMAN stated that he had not been able to find any evidence proving that stricture of the rectum was due to syphilis or tuberculosis, and very little to suggest that it was due to gonorrhoea or chancroid.

The Industrial Health Education Society exists to disseminate knowledge about the prevention of disease to workers in factories and other industrial organizations. In its annual report for 1932 a list is given of a large number of health talks which have been delivered to miners' lodges and branches in Lanarkshire, the Lothians, Durham, Northumberland, Monmouthshire, and South Wales, as well as to other similar industrial organizations all over the country. This society is supported by subscriptions and donations from various sources, including welfare funds and trade union councils. During 1932 such receipts amounted to £1,285.

Reviews

RECONSTRUCTION OF THE BILE DUCTS

The publication of a volume devoted solely to the problem of the reconstruction of the bile ducts is a sure indication of the advanced and specialized stage which the technical side of surgery is reaching. Yet it must not be imagined that such a book is in any way redundant, for there can be no more serious condition for the patient, or more delicate problem for the surgeon, than that of complete biliary obstruction. In *Reconstruction of the Biliary Tract*[1] Dr. HORGAN of Washington has given us a complete survey of all the methods which have been used, from Winiwarter's first operation in 1880 to the present day, and, as the bibliography contains references to over 200 papers on the subject, it will be seen that this is no mean task.

The methods which have been used by various operators can be summarized as follows: (*a*) implantation of a portion of the biliary tract in the alimentary canal, (*b*) end-to-end anastomosis of a bile duct, either direct or indirect, (*c*) implantation of a biliary fistula into the alimentary canal, (*d*) the establishment of a direct communication with the liver, (*e*) plastic reconstruction with or without the use of a pedicle flap or transplanted graft, and (*f*) dilatation of a stricture. It will thus be seen that practically every feasible method of reconstituting the biliary drainage to the intestine has been attempted. All the methods are very fully described in this book, while a most excellent set of illustrations make the operative technique quite clear. As a result of his study Horgan reaches the conclusion that cholecystenterostomy has been most frequently used and is generally followed by good results. In many cases, however, the gall-bladder has already been removed or is so diseased as to be useless for purposes of anastomosis and collateral bile circulation; in these circumstances the direct implantation of the hepatic or common ducts has given consistently good results. Methods of indirect union in which a gap is bridged by rubber tubing wrapped round by omentum have not given sufficiently good results to encourage their use, but contrary to expectations the implantation of an established biliary fistula appears to be fairly satisfactory, and it is recommended that in some cases it may be better to establish such a fistula with a view to its subsequent implantation rather than embark upon a complicated method of but slight promise.

Attempts to establish communication between the parenchyma of the liver and the intestine have been almost uniformly unsuccessful, but in suitable cases a pedicle flap may be used with good prospect of cure. Plastic operations upon strictures have on the whole given excellent results, but in most cases of simple dilatation the final result has been unsatisfactory. It is obvious that the type of operation chosen will largely depend upon the anatomical condition revealed at operation, and it is therefore essential that the surgeon should be well informed as to the possibilities before he can be considered competent to handle these difficult cases.

It is impossible to conclude a review of this book without reference to the causes of such biliary obstructions, and here it has unfortunately to be recorded that a very large number are due to accidental damage to the duct during operation. True, the present volume purports to be dealing only with the reconstruction of such damaged ducts, but we cannot help feeling that its general usefulness would have been still further enhanced had the author included a chapter or two, instead of a mere paragraph, upon the anatomical variations in the ducts which may lead to accidental damage, and the points in the technique of the ordinary biliary operation to which special attention must be paid if such serious consequences are to be avoided. Nevertheless this is a very useful book, and one which every surgeon whose practice includes biliary surgery should possess.

[1] *Reconstruction of the Biliary Tract.* By E. Horgan, M.D., M.S., F.A.C.S. New York: The Macmillan Company. 1932. (Pp. 201; 75 figures. 20s. net.)

PSYCHOPATHOLOGY

An Introduction to Analytical Psychotherapy,[2] by Dr. T. A. Ross, medical director of the Cassel Hospital, is an essentially practical monograph, in which the author outlines his personal methods of approach to his psychoneurotic patients. From the standpoint of psychoanalytic theory and practice this book is decidedly "unorthodox." Dr. Ross does not accept the theory of fixed symbolism, and also questions whether it is necessary or desirable for the analyst himself to be analysed. This book includes chapters on the unconscious, transference, dreams, sex problems, symptom formation, the dangers of analytic investigation, and on technique. Dr. Ross has had exceptional opportunities for dealing with psychoneurotic patients, and this clearly written and definitely personal contribution to psychotherapy will be read with profit and interest by the medical practitioner who is anxious to gain some insight into the problem of the neuroses and their treatment.

In a book on *The Medical Value of Psychoanalysis*[3] Dr. FRANZ ALEXANDER gives a particularly lucid exposition of his subject. The author sees the significance of psycho-analysis for medicine in the following two accomplishments: (1) With the help of a technique specifically adapted to the nature of psychic phenomena it has developed a consistent and empirically founded theory of the personality fit to serve as a basis for the understanding and treatment of mental disturbances. (2) It has given a concrete content to the philosophic postulate that living beings are psycho-biological entities, by investigating in detail the interrelation of physiological and psychological processes. The chapter on the psycho-analytic treatment of the psychoses will be especially interesting to the psychiatrist. Dr. Alexander gives an outline of the work that has already been done by psycho-pathologists on psycho-analytic lines, and himself suggests a technique which he believes might be usefully applied to schizophrenic patients. In the concluding chapter the author deals with the problem of psycho-analysis in medical education.

A SHORT HISTORY OF SURGERY

That *A Short History of Surgery*[4] should emanate from the Royal College of Surgeons of England is most appropriate, and Drs. Arnold and Maurice Sorsby are most fortunate in having secured for their "Short History Series" the high authority of Sir D'ARCY POWER, the Honorary Librarian of the College. It is fully recognized that it is more difficult to write an elementary textbook or to give elementary lectures of real value than to bring out an advanced monograph. Any regret that Sir D'Arcy, who has written on almost every aspect of surgery, has not contributed between two covers all the material scattered among his four hundred separate publications

[2] *An Introduction to Analytical Psychotherapy.* By T. A. Ross, M.D., F.R.C.P.E., M.R.C.P. London: E. Arnold and Co. 1932. (Pp. vii + 203. 10s. 6d. net.)

[3] *The Medical Value of Psychoanalysis.* By Franz Alexander, M.D. London: G. Allen and Unwin, Ltd. 1932. (Pp. 247. 10s. 6d. net.)

[4] *A Short History of Surgery.* By Sir D'Arcy Power, K.B.E., F.R.C.S. London: John Bale, Sons and Danielsson, Ltd. 1933. (Pp. 91. 3s. 6d. net.)

on the history of medicine, will be temporarily dissipated by the interest of this presentation of surgical history.

After a concise summary of the infancy and rather stormy youth of surgery, an account of the advent of antiseptic surgery follows, and here Sir D'Arcy Power speaks with personal knowledge, for he was house-surgeon to Sir William Savory, whose address on surgery at the Cork Meeting of the British Medical Association in 1879 has been described as "the swan-song of the already dwindling race of pre-antiseptic surgeons." The history of the substitution of asepsis for antisepsis reminds the reader that W. S. Halsted of Baltimore introduced the use of rubber gloves as a protection both for patient and for surgeon in 1891, and that in 1900 Dr. William Hunter advocated gauze masks for surgeons and nurses to protect their patients from any danger due to oral sepsis. The dramatic events which attended the introduction of general anaesthesia in Boston, London, and Edinburgh, and the subject of specialism and that of surgical nursing, are set out in such a way that every reader will welcome this "short history of surgery" as a most pleasant *multum in parvo*.

"GRAY'S ANATOMY"

Gray's Anatomy[5] is a truly British product, and has for nearly three-quarters of a century been, for generations of students, an introduction to one of the most important subjects of their curriculum, and to practitioners a cherished book of reference. The text is clear and concise. Moreover, the illustrations are easily and quickly understood, owing to the names of the parts being printed in full at the side and to the liberal use of indicating lines. As a student's book it is both eminently suitable for a beginner and yet sufficient for the standard of the higher examinations. This twenty-fifth edition and its predecessor, edited by Professor T. B. JOHNSTON, show a distinct advance on the older textbooks. Important new matter has been added, which includes much of the recently published embryological and histological work, and many excellent illustrations have been inserted either as text figures or plates. The general text has been carefully revised, and we are glad to note that much of the material published for the first time in 1931 by Professor J. E. Frazer in his *Manual of Embryology* has been incorporated in this edition; and also recent work on the relations of the intercostal vessels and nerves to the "internal intercostal" and "intracostal" muscles. The section on surface anatomy has been entirely remodelled, and rendered interesting by the very clear conception that the author has of the value of "surface marking" on the living subject from the standpoint of applied anatomy. These two aspects of the subject have, however, as in previous editions, been treated separately, notes on the practical application of the anatomical facts being appended to the description of each organ and system when it first comes under the notice of the reader. The notes on applied anatomy thus serve a double purpose: they add interest to the newly acquired knowledge of a fact and help to register it in the memory.

The general accuracy of the text is remarkable, and we find little to criticize. We consider it of importance, however, to draw attention to Fig. 186, a diagram which clearly shows the relations of the septum primum and septum secundum to the endocardial cushions and foramen ovale. Incidentally, it brings into prominence a discrepancy in nomenclature which has for many years caused confusion with regard to the application of the names "dorsal" and "ventral" as applied to the position of the endocardial cushions of the atrial canal. The "cranial," "upper," or "anterior" cushion was originally described as the "dorsal endocardial cushion," since in the early embryo it corresponds to the attachment of the dorsal mesocardium. At a later stage of development, however, when the S-shaped bend of the heart is completed, and the atrial canal lies behind the bulbar portion of the tube, it becomes cranial or anterior, and also more ventral in position. Hence certain authors have reversed the names, and described the "cranial" cushion as ventral and the "caudal" cushion as dorsal. The confusion is so great that in one well-known textbook on developmental anatomy the cranial cushion is described as the ventral on one page and a few pages further on it is labelled "dorsal endocardial cushion." The discrepancy could, in our opinion, be avoided by employing the terms "cranial" (upper) and "caudal" (lower) in place of "dorsal" and "ventral," more especially as these terms are applicable at all stages of development, and the adjectives "cranial" and "caudal" are equally applicable in the description of pronograde and orthograde animals. We note also an accidental error which has escaped the vigilance of the reviser. In the excellent coloured drawing Fig. 115, of the model of a chondrocranium reconstructed by Professor Fawcett and Miss Gwladys Llewelyn, the venous sinus passing down to join the sigmoid part of the transverse sinus below and lateral to the ductus endolymphaticus, is labelled "internal jugular vein." This and the two following drawings of the same human chondrocranium have not been published elsewhere, and they represent a part of the life-work of a British embryologist who is one of the greatest authorities on the morphology of the chondrocranium.

[5] *Gray's Anatomy*. Descriptive and Applied. By Henry Gray, F.R.S., F.R.C.S. Twenty-fifth edition. Edited by T. B. Johnston, M.B., Ch.B. London: Longmans, Green and Co., Ltd. 1932. (Pp. 1,483; 1,203 figures. 42s. net.)

REGIMEN FOR DIABETICS

In a new series of small books dealing with the "hygiène" of the patients in various diseases, Dr. HENRY SCHWAB has produced one for the diabetic.[6] It touches on most of the usual subjects in books of its kind, diet—including food tables and recipes—insulin, and personal hygiene. The author deals with practically every type of diet from the days of Naunyn and Guelpa onwards. Starvation days and oatmeal and potato "cures" are all described, but it is difficult to find any details of the diets that should be used in insulin cases. Indeed, the whole treatment of diet questions is thoroughly old-fashioned, and great emphasis is laid on Bouchardat's old dictum, "Eat as little as possible." All the drugs formerly used, such as opium, salicylates, and antipyrin, are mentioned, but it is again difficult to gather if the author thinks them of any value. He certainly stresses the importance of not wasting time with them in cases that need insulin. Dr. Schwab points out that in France insulin does not occupy the therapeutic place it merits. In general it is improperly and insufficiently used by the practitioner. This improper use has discredited it in the eyes of many doctors and patients. We are afraid that this unfortunate state of affairs applies to many other countries as well as France. A chapter is devoted to the spa treatment of diabetes by baths and waters, a subject ignored in English and American books on diabetes. There are many small points which conflict with accepted opinion, such as the use of alcohol in coma, and the amount of glucose derived from protein in metabolism. And we certainly do not agree that the diabetic "needing much repose" must keep outside the "rhythm of modern city life." We know many severe insulin cases whose lives are full and active in every respect.

[6] *Hygiène et Diététique du Diabétique*. Par Henry Schwab. Paris: G. Doin et Cie. 1932. (Pp. 128. 12 fr.)

RADIUM THERAPY

Dr. SIMONE LABORDE, by the publication of his very clearly written little book, *La Technique de la Curiethérapie*[7] (Technique of Radium Therapy), adds yet another volume to the rapidly increasing literature upon the subject; nevertheless it is welcome as containing details of the technique employed at a great French school. Radium therapy is, of course, a subject which can no more be learned from books than can anatomy; the present work, however, shows distinctly the apparatus and methods employed, together with the broad general principles governing their use. Dr. Laborde commences with a brief description of the biological action of the radiations, and, proceeding to a description of radium applicators, indicates the different therapeutic effects of β and γ radiation, and the comparative merits of radium and radon. One or two types of apparatus for massive radiation are described, including one designed by the author himself, of which a sectional view is given. The different methods of applying radiation—surface, interstitial, and intracavitary—are described in some detail, together with such modifications of technique as are called for in particular regions of the body. The broad principles of dosage, together with a description of the measuring apparatus employed, forms the subject-matter of the final chapter, which concludes with some useful tables showing the absorption of β and γ radiations by different filters, and various constants useful in treatment by radon.

Notes on Books

The Marketing of Literary Property,[8] by G. HERBERT THRING, is a useful book, written in a way which makes its practical lessons easy to appreciate. Mr. Thring was secretary of the Society of Authors for thirty years, and remains its honorary advising secretary, and has thus a complete familiarity with all the situations in regard to publishing which may embarrass an author. Beginning with a brief exposition of the law of copyright in our own country, including our colonial possessions and dependencies, he proceeds to give a clear picture of the American law, indicating where its provisions affect home authors. These are the markets from which the British author derives his chief returns, the circulation of works in the English language throughout foreign countries being small, save in respect of a few famous writers; but Mr. Thring indicates the possible value of translation. The various forms of contract between author and publisher which are in use to-day are discussed, their meaning is set out, and their implications in connexion with different classes of literature—popular, technical, educational, and scientific—are explained. And an informing chapter deals with literary agents, of whom Mr. Thring is distinctly critical. Although the works of scientific men, and perhaps especially of doctors, seldom include "best sellers," the mass of literary property which these writers create is large, and represents a great deal of money, of which they should know how to obtain their fair share. Mr. Thring's book will enable them to realize what a fair share means, as well as to enter upon publishing contracts with a full understanding of what the conditions involve. There may be many of our readers to whom such information will prove useful.

The first impression created by the seventh issue of "The Year's Therapeutics"[9] for 1932 is that there are far more references to English, American, and German papers than is usual in a French publication, and the editor, Dr. A. RAVINA, must be congratulated [illegible] striking change, which has brought about a great [illegible] ment in the comprehensiveness of the book. It is [illegible] sections—one dealing with diseases and symptom[illegible] their treatment, one with new methods, and one with [illegible] medicaments—the whole occupying less than two hun[illegible] pages. Parenteral liver extract for pernicious anaemia, the use of copper in conjunction with iron for simple anaemia, apple diet for infantile diarrhoea, atebrin for malaria, concentrated serum for pneumonia, and ovarian extract for haemophilia are among the recent advances which are described, while under new procedures there is an account of gastroscopy with a flexible apparatus, and under new drugs the use of pilocarpine in the treatment of influenza. These examples suffice to indicate the wide scope of the book.

In *Old Trades and New Knowledge*[10] Sir WILLIAM BRAGG presents notes of six lectures delivered in recent years at the Royal Institution. Although they are short and popular they are none the less full of information and suggestions that make the reader think and ask questions. The subjects are the trade of the sailor, of the smith, of the weaver, of the dyer, of the potter, and of the miner.

The work by Dr. STANILAS HIGIER on the Male Sexual Functions and Their Disorders[11] forms not only, as its subtitle indicates, an introduction to the clinical study of impotence, but is also, as Professor Laignel-Lavastine remarks in his preface, a treatise on masculine sexology. We would, however, hesitate to call it a "complete" treatise, as does Professor Laignel-Lavastine, inasmuch as the question of treatment is omitted, though it will probably be discussed in a later work by the same author. The subjects considered are the various elements of the normal and pathological sexual act in its somatic and psychical aspects, including erection, intromission, orgasm, ejaculation, and depletion; abnormal satisfaction of the sexual impulse, abstinence, masturbation, homosexual practices, the phenomena of erotization, and the sexual constitution. A bibliography of 355 references is appended. The work will appeal not only to the sexologist, but also to the physiologist, neurologist, psychiatrist, endocrinologist, and medical jurist, but its austere and involved style will baffle the casual reader who has been attracted by the title.

The late Dr. R. W. MACKENNA's literary activity was not confined to dermatology, and fourteen of his later essays, written in a pleasant philosophical vein on various aspects of life, have now been brought out, under the title of *As Shadows Lengthen*,[12] by his son, who supplies an appreciative sketch of his various activities. Sir John Murray, whose firm published his first prose book, *The Adventure of Death*, during the war, contributes a short and pleasing introduction as a tribute to his valued friend. Dr. MacKenna, who was a son of the manse, was in general practice before he became associated with the late Dr. G. Stopford Taylor at the Liverpool Skin Hospital, and suffered from the effects of long-continued exposure to x rays and radium, and died prematurely from grave anaemia in his fifty-sixth year. As an energetic Scot he had wide interests, was elder of the Church, a popular lecturer, president of the Liverpool Athenaeum and, as one of these essays shows, a great admirer of Burns. His literary activities date from 1913, and in the attractive essay on "hobbies" he gives an account of his experience as a writer and introduces interesting references to the methods employed by various well-known authors. The tragic story of Francis Thompson, a failure as a medical student, and author of the *Hound of Heaven*, is sympathetically told. MacKenna's meditations on growing old will appeal to many, and his love of beauty is shown in the first of these extremely readable essays.

[7] *La Technique de la Curiethérapie*. Par Dr. Simone Laborde. Les actualités physiothérapiques, publiées sous la direction du Dr. Duhem. Paris. Gauthier-Villars et Cie. 1933. (Pp. 118; 12 figures. 20 fr.)

[8] *The Marketing of Literary Property: Book and Serial Rights*. By G. Herbert Thring. With a letter to the author from Bernard Shaw. London. Constable and Co., Ltd. 1933. (Pp. 242. 7s. 6d. net.)

[9] *L'Année Thérapeutique*. Edited by Dr. A. Ravina. Médications et Procédés Nouveaux. Seventh year, 1932. Paris: Masson et Cie. 1933. (Pp. 176. 16 fr.)

[10] *Old Trades and New Knowledge*. By Sir W. H. Bragg, O.M., K.B.E., F.R.S. Bell's Popular Science Series. London: G. Bell and Sons, Ltd. 1933. (Pp. viii + 266; 41 plates. 4s. 6d. net.)

[11] *Les fonctions sexuelles mâles et leurs troubles*. Par Stanislas Higier. Préface du Professeur Laignel-Lavastine. Paris: G. Doin et Cie. 1932. (Pp. vii + 391; 2 figures. 50 fr.)

[12] *As Shadows Lengthen: The later Essays of Robert W. MacKenna, M.A., M.D.* With a Memoir by R. M. B. MacKenna, M.A., M.D. London: J. Murray. 1932. (Pp. xlvii + 187. 5s. net.)

INSPECTION OF QUALIFYING EXAMINATIONS BY THE GENERAL MEDICAL COUNCIL

By the courtesy of the Registrar of the General Medical Council we have received a copy of the reports of the inspectors appointed by the Council in 1930 to inspect and report upon the final examinations held by the various licensing bodies.[1] The volume includes a report by the Examination Committee of the Council on the series of inspections, received and adopted by the Council at its meeting in November last.

This inspection is undertaken by the Council at intervals of ten years, and the inspectors are required to visit and report upon the conduct of each qualifying examination and, specifically, to state whether in their opinion each particular examination is "sufficient" as a test of fitness for admission to the *Medical Register*. The inspectors appointed in 1930 were: Dr. T. Wardrop Griffith in medicine, Mr. Farquhar Macrae in surgery, Dr. John S. Fairbairn in midwifery. Their reports are published in detail in this volume of 700 pages as an addendum to the Minutes of the Council; before publication they were submitted to the licensing bodies, who were invited to comment upon the reports which referred to their own examinations, and the comments so received are embodied in the report as now issued.

Influence of Recommendations and Resolutions

The outstanding impression that is gathered from reading this report is the effectiveness of the methods employed by the General Medical Council, which aim at maintaining the general standard of the final qualifying examinations. It is well known that the Council does not impose—in fact, has no power to impose—a uniform curriculum on the medical schools, nor a uniform plan of examination. Yet there is ample testimony to the influence of its Recommendations and Resolutions throughout the pages of this report, and the impression which it gives is that the relation between the Council and the medical schools is a wise one, and is bearing fruit of a kind that could hardly be produced on any other plan. The Council is empowered by the Medical Act to report to the Privy Council that a particular licensing body is failing in the duty of imposing an adequate examination test, but this power has never been exercised. The Council's influence is such that it seems unlikely that it will ever need to be exercised. An example of this influence is the effect of the Recommendation made ten years ago, following a previous inspection, that all licensing bodies should hold a clinical examination in midwifery. At that time such a test was applied in only about one-half of the final examinations; at the time of the recent inspection all had adopted the Recommendation of the Council save one, and that one has now followed suit. Evidence of this influence is no doubt gratifying to the General Medical Council; no doubt, also, the Council feels the weight of responsibility that is thereby thrown upon it in the framing of its Recommendations and Resolutions.

Criticisms in the Reports

The criticisms included in the inspectors' reports have regard chiefly to the extent to which these Recommendations are complied with in the various examinations. Not all examining bodies, it appears, comply with that which advises that evidence of further study should be required of a student before readmission to examination in a subject in which he has failed. In reference to another Recommendation it is reported that there are a number of examples of candidates being examined and marked by a single examiner; the Council's disapproval of this custom has behind it the weight of all instructed opinion. The inspector in surgery reports that the length of time given to the examinations in clinical surgery is, generally, too short, and all the inspectors find that candidates are imperfectly supervised in their examination of patients, so that the actual methods of examination are inadequately assessed.

It seems that little progress has been made up to the present in the taking into account of the records of the student's industry and ability during his course of study. In very few instances were such records available to the examiners. There are obvious difficulties in carrying out this particular Recommendation, especially in the case of examining bodies which are not also teaching bodies. Yet the Recommendation is so thoroughly in accord with the best-informed educational opinion of to-day that it might well receive more definite emphasis by the General Medical Council.

In very few instances are candidates now allowed to pass the qualifying examination who fail to obtain a pass mark in the clinical part; it is somewhat surprising that there should be any exceptions to this rule, for the soundness of which no argument seems necessary. The inspectors are not in agreement regarding the requirement of a pass in all the three main subjects at one examination: they note that with few exceptions the licensing bodies require completion of the final examination within a period of nineteen months. The words in the Act requiring "an examination in medicine, surgery, and midwifery" do not logically imply an examination in all three subjects simultaneously, although the inspector in surgery maintains that they do. The Council has never taken the latter view. Evidence is wanting that the average young man or woman of 24 is so deficient in memory that he or she will have forgotten at the end of eighteen months any great part of what has been learnt of, say, the subject of midwifery. We suspect that the requirement of a pass in all three subjects at one and the same time is upheld in some quarters because it makes the examination "stiffer," and not on the ground of any sound educational principle.

Preventive Aspects of Medicine

The inspectors were asked by the Council to report as to what evidence they could discover that the attention of the student was being sufficiently directed to the preventive aspects of medicine. We imagine that they will have found difficulty in answering this question, more particularly as, except in one or two instances, they did not inspect the examinations in hygiene and public health. The question of prevention is so allied to that of aetiology that any specific separation of it from the latter would be artificial. It has been stated by bodies particularly interested in the subject that the preventive aspects of disease are inadequately taught to the student; but there appears to be little direct evidence in support of this opinion, and the Council's inspectors do not, on the whole, add to it.

Perhaps the most important general comment made in the inspectors' reports, having regard to the main purpose of the final examination, is that upon "a common tendency to devote inadequate time to the clinical examinations." It is not surprising to read that the Examination Committee of the Council is "much concerned" regarding this. From some general knowledge of the examinations in question we are disposed to single out this criticism as the one which most urgently calls for attention.

It is impossible to read these reports without being impressed with the thoroughness and competence with

[1] *Addendum to Minutes of the General Medical Council for 1932.* Reports of the Inspection of Qualifying Examinations, 1930–1932. London: Constable and Co., Ltd. 1933. (Pp. 700. 10s. net.)

which the inspectors have carried out the duties imposed upon them. On the whole there is abundant evidence that, as regards the final examinations, a high standard of knowledge is being required by the licensing bodies. In a few instances the inspectors have found definite defects; their reports are so obviously the product of carefully balanced opinion, and the relations of the General Medical Council with the licensing bodies have been so wisely cultivated, that we have no doubt that the publication of this report by the Examination Committee will influence their remedy.

EXTENSION OF MATERNITY SERVICES

WORK OF NATIONAL BIRTHDAY TRUST FUND

Sir JULIEN CAHN presided at the annual meeting of the National Birthday Trust Fund, which was held last week at No. 11, Downing Street, by permission of Mrs. Stanley Baldwin, a vice-chairman. Inaugurated in 1928 by Lady George Cholmondeley, the fund has for its objects the financing and extension of voluntary maternity hospitals and training centres; the expansion of maternity services, and the promotion of co-operation between such services throughout the Empire; also the encouragement of hospitals to administer anaesthetics where required in normal cases of labour.

Mr. L. C. RIVETT reported for the medical committee on the extensive trials which have been made possible by the fund during the past few months on the use of crushable chloroform capsules for use in childbirth. These 20-minim capsules have been supplied *free* to hospitals and doctors in return for reports on their use. Mr. Rivett stated that 2,000 such forms had been returned by forty-two hospitals and fifty-six doctors, and a careful analysis of them by the medical committee had revealed that in all cases in which the capsules had been employed not one maternal death had resulted, while in the few cases of stillbirths which had occurred it could be definitely affirmed that in no case could the death be in any way attributed to the chloroform capsules. Experience at Queen Charlotte's and Middlesex Hospitals had been the same. The capsules had been administered to nearly 4,000 patients, and no maternal or infant deaths had been caused. At both institutions midwives were already using the capsules with success, while Queen Charlotte's Hospital was instructing those not working at that hospital in the use of the capsules, so that other institutions might have the benefit of the experience. In over 90 per cent. of the records patients obtained relief from pain; in over 50 per cent. it was noted that they felt great relief, while 5 per cent. became excited and refused chloroform. In over 60 per cent. it was recorded that labour proceeded perfectly normally. In about 15 per cent. use of the capsules assisted the progress of labour by abolishing the actual pain and allowing the natural powers to act unhindered by the restraining efforts of patients. Occasionally labour had been prolonged, but delay had never been serious, and had not necessitated the use of instruments. In fact, there was definite evidence that chloroform capsules did not increase the need for instruments. Although most hospitals which had used the capsules had given them a fair trial and shown sincere interest, there were one or two striking exceptions. Their reports showed that there had been an atmosphere of hostility and suspicion. Mr. Rivett then quoted extracts from letters accompanying some of the reports, and which confirmed the conclusion that the administration of the capsules was a completely safe and foolproof method of relieving the pains of childbirth. It was, moreover, a method easily learnt at a short course of instruction, and one eminently suitable for use by nurses and midwives in institutions in which there is a resident medical officer. Mr. Rivett thought there should always be two nurses present at the time of administration of the chloroform capsule. It was not convenient for the same midwife to administer the capsule and conduct the labour.

Dr. J. S. FAIRBAIRN (Chairman of the Central Midwives Board) spoke principally as an individual member of that Board and as a colleague of Mr. Rivett on the fund's medical committee. While urging most strongly that the fund should proceed with its beneficent work in connexion with the administration of the capsules, Dr. Fairbairn wished to see such investigations as those carried out at Queen Charlotte's and Middlesex Hospitals repeated in a series of selected hospitals by a selected body of doctors. Thus it would be possible to obtain a more general report before the capsules were actually put on the market.

Mrs. BALDWIN, in proposing a vote of thanks to Sir Julien Cahn for his generosity and help, took the opportunity of pointing out that as a result of personal inquiry she had learned from a large maternity hospital in Glasgow that the chloroform capsules had been used there with much success.

The general report which was submitted showed that allocations had been made during the year to twelve co-operating maternity hospitals, and a sum of £45 had been set apart for the provision of rubber gloves for midwives, following upon the strong recommendation of the Departmental Committee on Maternal Mortality and Morbidity.

ROYAL MEDICAL BENEVOLENT FUND

At its January meeting the committee of the Royal Medical Benevolent Fund voted eighty-four grants, amounting to £2,089, and at the February meeting £693 was voted to thirty-four applicants.

Subscriptions and donations are very urgently required in order that the activities of the Fund may be maintained, and legacies are needed to support the annuity department. Cheques should be made payable to the Honorary Treasurer, Royal Medical Benevolent Fund, 11, Chandos Street, Cavendish Square, W.1.

The following are particulars of a few cases helped.

M.B., Ch.B., aged 39. Married, two sons, aged 12 and 9. The applicant is suffering from disseminated sclerosis, and is incapacitated from following any occupation; he cannot move one step without help. It was found that his total income was £123, with which he has to maintain himself, his wife, and two sons. Fund voted £40 in four instalments, and assistance is being obtained from other societies.

M.B., aged 69, married, wife aged 62. Applicant is suffering from macular choroiditis in an advanced stage in both eyes, and four years ago had to sell his practice. Since then he has been living on his capital, which is now almost exhausted. Income for past twelve months was £101. Fund voted £40.

Widow, aged 41, of M.B., Ch.M. Husband contracted pneumonia and died at the age of 36, leaving the widow with two children—a girl aged 9 and a boy aged 5. The boy has recently developed epilepsy. Total income £1 a week. Fund voted £26 in four instalments, and is obtaining help from other societies.

Widow, aged 46, of M.R.C.S., L.R.C.P. Husband died in December, 1932, at the age of 56. He was a retired R.A.M.C. officer. The widow is left with an Army pension of £90, and a children's allowance of £16 for each of the two youngest, making a total of £122. Fund voted £26 in four instalments.

An apparatus for the rapid study of ultra-violet absorption spectra is the subject of a report by Mr. J. St. L. Philpot and Dr. E. H. J. Schuster, which has been issued by the Medical Research Council (Special Report Series, No. 177, H.M. Stationery Office, 1s. 3d.). The use of this method of examination is particularly effective in studies of the nature of vitamin D when it is necessary to investigate mixtures of substances having closely similar absorption spectra. By the method described it is claimed that a complete absorption curve may be obtained for a given organic substance even if it remain unchanged for only five seconds. In view of the fact that technical problems of similar nature frequently occur in other forms of biochemical research it is hoped that the apparatus described in the report will enable such research to proceed with greater ease and certainty than has hitherto been possible.

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RESEARCH IN THE MEDICAL FIELD

The keynote of the report of the Medical Research Council for 1931–2[1] is clinical research. One of the great obstacles in the way of clinical research is that human beings cannot be treated as laboratory material. The practice of medicine must in the long run be an art, for the relation between physician and patient is something that cannot be weighed on a chemical balance or analysed in a test tube. Nevertheless medicine is also a science: it is not applied physiology any more than physiology is applied physics and chemistry. The stress that has for ages past been laid on the "art" of medicine may account for the fact that, though the most ancient of the biological sciences, it still is—as a science—in a state of immaturity. In its peculiar study of the species *Homo sapiens*, medicine has in the past been largely concerned with the accumulation of detailed and often uncorrelated observations. Its method has of necessity been empirical and descriptive. The parallel with zoology is obvious. The great wealth of knowledge that has accumulated in the laboratories of the physiologist, the biochemist, and the pathologist has had perhaps just this disadvantage—that workers in the medical field may have been tempted away from the direct study of the human being. The debt of our profession to these more exact sciences can never be overemphasized, nor must their debt to it be forgotten, but that medicine has its own particular sphere in which the scientific method can be allowed to have full play has perhaps received tardy recognition. The growing appreciation of the value of clinical research we owe in large measure to the Medical Research Council. As is stated in its present report, "The promotion of clinical research—research, that is to say, in which the human patient is the immediate object of scientific study—has always been given a primary place in the policy of the Council." In this country, it is pointed out, able young men have been unable to devote themselves to clinical research as a life-work. In spite of their desire to follow this bent they are compelled by economic circumstances to go into professional practice or to work in "the 'laboratory' sciences as established in the universities." The Council has always made a point of assisting the sporadic clinical research that does, in spite of difficulties, still go on. But there is a dearth of posts which could be filled by the many men who cannot, for economic reasons, fulfil their early promise in this line of work.

In 1916 the Council, in co-operation with University College Hospital, appointed Dr. (now Sir) Thomas Lewis as whole-time director of a clinical research department. This was the first establishment of its kind in this country. It is hardly necessary to remind readers of the *British Medical Journal* of the immense importance of the work which has resulted during the past sixteen years from the activities of Sir Thomas Lewis and the men who have been trained under him. No more striking vindication of the policy of the Medical Research Council could have been obtained. Within the past year the Rockefeller Foundation of New York has generously endowed in perpetuity the directorship of Sir Thomas Lewis's department, thus enabling the Council to use for further clinical research the funds thus set free. The University of Aberdeen, in improving the conditions of appointment to the regius chairs of medicine and of surgery, has furthered the movement of clinical research, and there is hope, the report states, of other universities interesting themselves in this question. Recently the Council has undertaken to co-operate with the National Hospital for Diseases of the Nervous System at Queen Square in the formation of a self-contained research department at that hospital. It has appointed Dr. E. A. Carmichael as a whole-time director for a provisional period of five years, and the Halley Stewart trustees have generously provided for two or more studentships in connexion with this work.

The formation of such a department at Queen Square is most opportune, for, as the report states, "study of the disorders of this master system of the body must always play an indispensable part in medical advance." Here we should like to express gratification at the fact that the council of the Royal Society, in nominating Dr. Gordon M. Holmes for election to its Fellowship, has shown its appreciation of the scientific work carried out by a practising physician. The National Hospital has had a long train of brilliant workers, who have laid the foundations of our knowledge of disease of the nervous system. The methods by which this knowledge has been gained have, the report explains, been largely exhausted. The problems of nutrition and infection in their relation to nervous diseases will have to be attacked. Further, the approach to disorders of the nervous system has hitherto been mainly anatomical; there has been little knowledge of the underlying normal physiology of the complex of nerve cells and their interconnecting fibres and fibrils. Interpretation of nervous activity has for long been in terms of "conduction." As a result of Sir Charles Sherrington's experimental studies "central excitation" and "central inhibition" are now established as processes quite distinct from conduction. The report concludes that "when classification of mental and nervous disorders can be attempted in terms of the essential nervous processes mainly at fault, his [Sir Charles Sherrington's] later work upon the process of central excitation will play a dominant part."

Nearly forty years have passed since the Manson-Ross discovery, yet, contrary to the general belief, the total number of sufferers from malaria throughout the world has increased rather than diminished. "The campaign against malaria cannot be generally effective until we can design co-ordinated plans of attack upon it at every

[1] Cmd. 4248. H.M. Stationery Office, 1933. (2s. net.)

assailable point, and by means that are practicable and cheap under various conditions of place and time." More funds are necessary for the work which is needed to tackle the innumerable problems connected with this disease. The Council has for some years maintained the researches of Dr. P. Tate and Miss M. Vincent at the Molteno Institute at Cambridge, under the direction of Professor Keilin, and in the past year has secured the whole-time service of Sir Richard Christophers as director of a team for malaria research at the London School of Hygiene and Tropical Medicine. This latter undertaking has been made possible by a benefaction from the trustees of the late Lord Leverhulme. In its account of dog distemper (see *British Medical Journal*, 1932, ii, 1066) the Council reports that "the work with distemper antiserum seems to provide the first known instance in which a virus infection can be treated successfully after the outward symptoms of disease have appeared." The knowledge thus gained has been of great value in the study of viruses generally. The other matters commented on in the introduction to the present report are investigations into the legibility of print, the Bernhard Baron Memorial Research Laboratories at Queen Charlotte's Hospital, investigations into iodine in foodstuffs and the incidence of goitre, and vitamins. The introduction concludes with a short statement under the ominous heading "problems of finance." The Council received for the year 1931–2 £139,000 as a grant-in-aid from Parliament, which was £9,000 less than for the previous year. Many of its projects were made possible only by private benefactions. The high standard of the work carried out under its auspices is a tribute to the wisdom and efficiency of the Council and its secretary, Sir Walter Fletcher.

FEE-SPLITTING

Dichotomy has a more respectable sound than fee-splitting. But when it is necessary to deal with unpleasant subjects let us have no misunderstanding as to what we have in mind. By fee-splitting is meant an arrangement between general practitioner and consultant or specialist by which the former retains, or receives back, part of the fee paid to the latter for special services. It is obvious that either party may be primarily responsible for such procedure. The essence of the transaction is that part of the consultant's fee, unknown to the patient, is deflected to the practitioner who advised the consultation or operation. The transaction, being in the nature of a secret commission, is not likely to come to light unless one or other of the parties considers himself aggrieved, and this is the reason for the appearance in last week's *Lancet* of an anonymous letter on the subject from one who describes himself as a young London surgeon.

The receipt of secret commissions in this country is recognized as being against the public interest, and also forbidden by law. Experience has shown, however, that it is one thing to make a law and quite another to enforce it. Can a higher standard of financial morality be expected of doctors than of the rest of the community? The answer is found in the fact that a higher standard of morality in other directions is both expected and maintained. The public press has been quick to notice the significance of the subject, which, once raised, must take a prominent place in the purview of medical ethics, and it is incumbent upon those who are concerned in safeguarding the ethics of the profession to face the situation without delay. In what degree this commercialism of medicine represents the spread of a disease from other commercial transactions in trade and business it is difficult to estimate, but that it is the first step to a debasement of the art of medicine no one can doubt. How far fee-splitting has become established in this country it is impossible to say. It has certainly appeared in London, but there is no evidence of its degree, or of its extension to the provinces. There is, of course, no reason whatever, if the attendance of the patient's family attendant is desired at an operation or consultation, why he should not receive a suitable fee. On the contrary, there is every reason why he should, and we believe that it is the custom for a general practitioner to charge a fee in such circumstances. But it is clear that everything should be above board, and this object will be attained if the general practitioner himself makes a suitable charge to his patient.

What the establishment of fee-splitting can mean is well shown in a pamphlet published last year by Professor Baldwin of Columbus, a former Chancellor of Ohio State University, who, in summing up the arguments on "State medicine: its imminence and advantages," writes as follows: "As to the commercialization of the profession (particularly as is shown by its extensive—in some cases universal—fee-splitting . . .) the prospect of any reform from within the profession seems utterly hopeless, its general attitude being that of indifferent or eager acquiescence. The ostensible opposition of a few years ago has become dormant; is a mere gesture; the trustworthy 'family physician' of the past is almost extinct, and the instincts of his successor seem to be purely commercial." The situation as here presented in the United States to-day has not developed without the full knowledge and attempted opposition of the American profession. How far a similar state of affairs exists in other countries is the subject of an inquiry at the present time by the Association Professionnelle Internationale des Médecins. Meanwhile this evil thing has raised itself above ground in this country. Every right-minded member of the profession will unite in condemning a form of commercialism which threatens the foundation of sound medical practice. It is a threat alike to the honour of our profession and to the public interest. The proper and hence happy adjustment of the relations between practitioner and patient can only be secured when the interests of both are identical.

We refuse to believe that the profession is unable to rid itself of this danger, or that the powers that govern the conduct of doctors in this country will be unable

to devise means to prevent the continuance or spread of an objectionable practice. The general practitioner is the guardian of the public interest in relation to matters of health. His high reputation and the universal trust accorded him are based, more than on any other ground, on a recognition of mutual interests. Any weakening of this bond between them will hasten the day when the public will seek, and rightly seek, protection of its interests by other means. These are grave words, but in our view the occasion warrants their use.

CONVALESCENT SERUM IN MEASLES

It is to-day generally agreed that the protection conferred by the injection of suitable "convalescent serum" shortly after exposure to measles is virtually complete though temporary, and that delayed administration permits a mild attack of measles affording longer immunity. In the application of this general knowledge such detailed studies as those of Dr. T. M. Hunter[1] will be welcome. Dr. Hunter calculates his exposure from the first day of infectivity, but it will probably be more convenient for the practitioner to calculate from the first day of appearance of rash. Serum injected up to the fourth day after contact with a patient with exanthem conferred complete protection; given on the sixth day it usually allowed a mild attack to occur. The amount of serum harvested from each donor was unusually small—54 c.cm.—and one donor appears to have provided serum of poor value, which protected only three of twelve children. This result is unexpected, since the serum was withdrawn during convalescence, but the donor mentioned suffered from only a mild attack. The complete protection described by Dr. Hunter and his many predecessors will appeal to the hospital administrator or the doctor with ill children unwittingly exposed to measles; but probably most parents, bearing in mind the more serious inconvenience of measles in later years, will wish their children to obtain prolonged protection if it can be achieved without risk, and with material readily available. R. Debré holds that long-lasting protection will not occur if the protection given by the serum be so complete as to prevent the development of a moderate degree of illness. J. M. Lewis and L. H. Barenberg,[2] working in the New York Home for Hebrew Infants, add to the evidence already available that the blood of normal adults is a valuable source of antitoxin, since almost all adults living in cities have suffered from measles. These investigators injected 30 c.cm. of parental blood, considered free from risk of conveying syphilis or tuberculosis, into fifty-six infants who were exposed to continuous infection in an epidemic. While all twenty-three infants left unprotected suffered from a typical attack of measles, thirteen (23 per cent.) of those receiving blood escaped entirely, and twenty-three others had an attack so mild that they spent most of their time sitting or standing in their beds. A number of those receiving blood after the seventh day of exposure had a more definite but still mild attack; some suffered from measles twelve to twenty-three days after the injection, when the passive protection had weakened. The blood or serum of adults may be valuable—but how valuable? Obviously the general level of antibody in the blood will be higher if there is a clear history of past infection. But even then, as C. C. Okell[1] pointed out, the amount of antibody produced after an attack of a disease diminishes throughout the years—the rate of drop of diphtheria antitoxin is known fairly well, and serum taken from certain patients long after an attack of infantile paralysis may show very little protective power when tested in monkeys. Okell considers 50 to 100 c.cm. of parental blood an impracticably large dose; the L.C.C. report holds that it is inadvisable to give more than 60 c.cm. of parents' blood. Morales and Mandry[2] used doses of 20 to 40 c.cm. of "immune adult serum," representing about twice that volume of blood, and secured complete protection in 80 per cent. of children. What, then, is the practitioner's duty? Obviously it is to make every effort to obtain convalescent serum—for choice taken from several donors, tested for absence of infectivity, and mixed—and to administer it about the sixth or seventh day after exposure, thus securing an attenuated attack traditionally free from complications. But if we cannot apply to Dr. Nabarro's public-spirited organization for supplies of convalescent serum, we must give a larger dose of adult serum obtained from those with a clear history of the disease. If this is not available, adult blood can be used in an emergency, in the expectation that a dose of about 30 c.cm. given intramuscularly into at least two different sites in the buttock will provide sufficient antibody to ensure that only modified measles will result. It is to be hoped that the extensive inquiry being carried out in the institutions of the London County Council will furnish sufficient clinical data for the statistician to decide how far adult blood is useful and in what doses.

[1] *British Medical Journal*, February 11th, 1933, p. 217.
[2] *New York State Journ. Med.*, January 15th, 1932, p. 97.

ANTIMONY POISONING FROM ENAMEL

The danger of using enamelled vessels of inferior quality for the preparation of acid drinks, such as lemonade, is emphasized in a recent memorandum by the Ministry of Health,[3] which describes three outbreaks of antimony poisoning due to this cause during the last few years. In the summer of 1928 a Newcastle-upon-Tyne firm decided to provide cooling drinks for its employees, and, "lemonade" crystals having been purchased, the drink was prepared in a number of new white-enamelled buckets and allowed to stand overnight. By noon next day seventy of the employees had helped themselves to the "lemonade" and practically all of them were speedily sick, the symptoms complained of being a burning sensation in the stomach, colicky pains, nausea, vomiting, and collapse, and the degree of distress varying directly with the quantity of drink imbibed. Intestinal symptoms were absent, and there was no case of haematemesis. In most instances the patients were fit to return to work within three hours, though two were detained in hospital for the night. Analysis of the crystals showed 80 per cent. of sugar, 18 per cent. of tartaric acid, and 1½ per cent. of carbonate of soda. The enamel on the pails contained 3 per cent. of antimony oxide. The tartaric acid had dissolved the enamel, presumably forming tartar emetic with the antimony present. A tumblerful of the liquid contained

[1] *British Medical Journal*, 1932, ii, 397.
[2] *Porto Rico Med. Assoc.*, 1930.
[3] Memo. 171/Med. H.M. Stationery Office. (1d. net.)

1½ grains calculated as tartar emetic, the emetic dose being 1/2 to 1 grain. That the presence of tartaric acid is not necessary for the production of soluble antimony compounds in such cases, and that the natural citric acid of fresh lemons will also dissolve dangerous amounts of antimony from defective enamel, is illustrated by a second outbreak which occurred at a school at Folkestone in 1929. On this occasion lemonade from fresh sliced lemons was prepared in white enamelled jugs lent by the local ironmonger. Half an hour after it was served twenty-five persons were sick. Examination of the lemonade revealed the presence of antimony, and the enamel on the jugs was found to contain 9 per cent. of antimony oxide. In the third outbreak, in which a number of hospital nurses were attacked with vomiting after their Christmas dinner in 1932, fresh fruit was also used in preparing the lemonade. The jugs were of the same pattern as those used in the Folkestone outbreak, and the enamel was found to have been attacked by the acid of the lemons. Antimony oxide, adds the memorandum, is widely used in place of tin oxide as an opacifying agent in the enamelling of hardware, and it is the cheap low-grade enamels that are the danger. These enamels are not acid-proof, and appear to be readily dissolved by citric, tartaric, acetic, and other acids present in foods. The antimony oxides disseminated throughout the enamel are thus exposed to the action of these acids, and any trioxide present goes into solution. Provided, however, that the enamel matrix enclosing the oxide particles is itself insoluble in acids, there would appear to be little likelihood that dangerous amounts of antimony trioxide will dissolve in food or drinks. The memorandum concludes: "Now that the use of antimony in place of tin has become common, it is advisable that the public should be warned that enamelled hollow-ware vessels obviously intended for other purposes may be dangerous if used for the preparation or storage of food or drink."

APTITUDE TESTS FOR MEDICAL STUDENTS

American medical schools have long been faced with the problem of a superabundance of candidates for admission. The best of these schools have therefore sought for tests of suitability. The criteria most commonly used some years ago were the duration of pre-medical studies and relative success in those studies. In a large proportion of cases these tests proved to be unsuccessful, and in our issue of May 3rd, 1930 (p. 833), attention was called to a novel series of aptitude tests which were being applied in a more or less experimental fashion. At that time it was said that these aptitude tests, as judged at the end of the first year of medical study, showed that they were a correct guide in 63 per cent. of those who were tested. Combined with the pre-medical grade test the success percentage was 74. There has now been an opportunity of applying these tests more widely and of judging their predictive value as evidenced throughout the whole four years of medical school work. The results are set out in an article in the *Journal of the Association of American Medical Colleges*[1] for January, 1933. The study of 1,000 students who took the test four years ago, and who are now completing their course in fourteen schools, shows that they have a high guidance value. The students were divided into ten equal groups on the basis of their scores in the aptitude test. In the highest tenth no student failed in any of the four years of the medical course, and the average "grade" of the group throughout was the high one of over 86. On the other hand, in the lowest tenth as judged by the aptitude test, sixty failed and the average grade for this whole tenth was 75—just barely passing. The immediate tenths show a continuous shading-off downwards. A number of other interesting tables are given in the article referred to. One of these shows that, if only the upper three-quarters of those taking the aptitude test were admitted, some 5 per cent. of those actually obtaining high averages during the course would in fact have been excluded. The conclusion is reached that no single method of selection is perfect, that the aptitude test gives a better prediction than any other, and that a combination of tests is to be preferred. As was said in our previous annotation on this subject: "A further criterion, an interview, definitely directed, with more than one member of the medical school staff, is of much value. But as long as we have men of slow mind and men of quick mind, and personal characteristics which in addition to scholarship make for success in the medical profession, so long will these tests fail in a number of cases."

[1] Scholastic Aptitude Tests for Medical Students. Report for 1932. By F. A. Moss. Presented at the forty-third annual meeting of the Association of American Medical Colleges, Philadelphia.

SMALL-POX NOMENCLATURE

Dr. Killick Millard raised a point of considerable interest in his letter to the *Journal* last week when he pleaded for separate registration of figures regarding the lethal and relatively non-lethal types of small-pox—variola major and variola minor, as they are now termed in the *International List of Causes of Death* and in the nomenclature of the Royal College of Physicians. With the basis of this plea many epidemiologists and public health officers will be in sympathy; differentiation should help comprehensive studies of the disease, and as a practical matter of administration it is useful in arranging preventive measures. On the other hand, the suggestion is hardly one which will appeal to the working practitioner. He often has quite enough in the way of conundrums to solve in deciding that a particular case is small-pox, without having to add to it a distinction which is hardly within his province, and which, in the individual case alone, he cannot substantiate. The limitation of the statutory obligation on the individual practitioner to the notification of small-pox is still a sound one. It should be left to the health authorities of the district or the country to declare, on the observation of total cases, what the prevalent type of small-pox is—major, minor, or (if it should so happen) both concurrently. In this respect there is little fault to be found with the present English practice. This is to give total "small-pox" figures in official weekly, quarterly, and yearly returns, but to supplement them with observations at suitable intervals as to the type of the current epidemic. The Ministry of Health includes such observations in its periodical reports, and authoritative statements prepared every six months about the incidence, cases, and fatality of small-pox in this country, as required by the International Sanitary Convention, are circulated to the

health authorities of other countries. For some time past the fact that the whole of the notified small-pox in this country has belonged to the epidemic type of variola minor has been set out in these statements. The real need is that other national public health administrations should do the same, and that proper notice of all these statements should be taken by the Health Section of the League of Nations when "world surveys" of small-pox, such as that to which Dr. Millard refers, are prepared at Geneva or elsewhere.

THE BICENTENARY OF JOSEPH PRIESTLEY

Joseph Priestley was born on March 13th, 1733, and to celebrate his bicentenary the Royal Society is arranging an At Home, and the Chemical Society a special meeting, whilst at Leeds there is to be an exhibition of Priestley relics. It is rare for an individual to shine in so many different spheres. Priestley was at once a theologian, a Unitarian (Calvinistic, but still human), a political writer, a Republican, and a man of science. Humble-minded and sweet-tempered, he passed through life comparatively unscathed by the fierce opposition which his originality caused in minds less generous than his own. His religious and political views no longer interest us, but his position as a scientific man remains unassailed. His friendship with Erasmus Darwin links him to the medical profession, his association with Boulton and Watt to the engineering profession. He was indeed fortunate in his friends, and was a member of that remarkable group which banded themselves together under the name of the Lunar Society. It met weekly on a day nearest the full moon that the members might get home in safety. The meetings took place at each other's houses in turn, and lasted from two to ten o'clock. Erasmus Darwin was the founder, James Keir, whose biography still has to be written, was the unofficial chairman. Mathew Boulton and James Watt the engineers, Josiah Wedgwood the potter, Samuel Galton the physicist, Thomas Day who wrote *Sandford and Merton*, and Michael Edgeworth were among the members living in Staffordshire, between Birmingham and Litchfield. All clubable men, as Dr. Johnson would have said, and all good talkers, but they lacked a Boswell, and their great evenings and discussions have passed unrecorded. Priestley was a born experimenter, and by the time he was 11 years old he was putting spiders into bottles to see how long they would live without air. The answer came on August 1st, 1774, when he produced a new gas, "the dephlogisticated air," which Lavoisier in the following year named "oxigène." Many experiments were made with it—some physiological, others remedial. In 1796 Dr. Beddoes of Bristol was employing James Watt—better known as the inventor of the condensing steam engine—as his assistant in administering oxygen to cure disease. The experiments were necessarily crude and were made with an impure gas, but they answered a good purpose, for they drew attention to its medicinal properties in such a way that its uses and limitations soon became well known. For a long time it was expensive because it was produced on a small scale; later it was developed commercially, first by Brin, and in 1886 by the British Oxygen Company. Priestley was strongly in favour of the French Revolution, and suffered much for his Republican principles. His house was wrecked by a Birmingham mob in July, 1791, the furniture and scientific apparatus being also destroyed. His spirit, however, was not broken, nor were his political views changed, for in the following year he was elected a French citizen. The position became impossible, and in 1794 he sailed for New York with his wife and family. The rest of his life was spent quietly at Northumberland in Pennsylvania, where he continued his chemical investigations, writing from time to time on religious topics and abandoning his wig because he could find no one in the town to keep it in order. He is described as standing 5 feet 9 inches in height, very erect in his carriage, slight in build, but large-boned. His countenance was at its best in profile, but the right profile differed remarkably from the left, and his front face was heavy.

TELESCOPIC SPECTACLES

Recent variations in the lens combination which makes up the magnifying glasses known as "telescopic spectacles" have effected some small improvement. But there has been an unfortunate claim put forward by some makers of these glasses, particularly in the United States, that the use of the new lenses can restore vision to 40 per cent. of persons classified at present as blind. These reports have filtered through the press into this country. The National Institute for the Blind has been asked by many blind persons where these marvellous glasses can be obtained. The Institute asked the corresponding society in the United States for its observation on the claims of the makers of telescopic glasses. The reply given by American ophthalmologists agrees with the experience of their colleagues in this country. The use of these spectacles is strictly limited. Instead of their being a benefit to "40 per cent." they are of use to much less than 5 per cent. The majority of the blind owe their disability to gross scarring of the cornea, or to optic atrophy, and in either of these conditions magnification of the images of objects does not aid vision. There are some forms of partial blindness which would be aggravated by excessive use of the eyes. Finally, these spectacles, even in their most recent form, limit the field of vision so strictly that for those few whose vision is somewhat aided by the spectacles, they prove more of interest than of practical everyday use. The danger of attempting to walk in such glasses is serious.

THE ROYAL SOCIETY

Among the seventeen candidates recommended by the council of the Royal Society for election as F.R.S. are J. B. Collip, M.D., professor of biochemistry in McGill University, Montreal; Gordon M. Holmes, M.D., F.R.C.P., physician to Charing Cross Hospital and to the National Hospital for Nervous Diseases, Queen Square; James Walter McLeod, M.B., Brotherton professor of bacteriology in Leeds University; A. S. Parkes, D.Sc., Foulerton student of the Royal Society; and Harold King, D.Sc., of the staff of the National Institute for Medical Research, Hampstead.

The War Office announces that the appointment of Lieut.-General Sir Harold B. Fawcus, K.C.B., Director-General, Army Medical Services, has been extended for a period of one year from September 16th, 1933.

BRITISH HEALTH RESORTS

CONFERENCE AT BATH

On the invitation of the Mayor of Bath a conference on British health resorts took place in that city on March 4th. It was largely attended by representatives of spas and marine resorts from many parts of Great Britain, regional publicity associations, travel and hotel interests, and spa medical organizations. The Right Hon. Douglas Hacking, M.P., presided over the rather heterogeneous assembly with great skill. The Mayor of Bath, Mr. Rhodes Cook, gave a reception at the Pump Room on the evening of March 3rd. There was also an exhibition of British and foreign travel propaganda, posters, booklets, and films, which illustrated the art and enterprise already available for making known the resources of British "airs, waters, and places." The local arrangements for the conference were in the experienced hands of Mr. John Hatton, spa director of Bath.

CO-ORDINATION AND PUBLICITY

The purpose of the conference was to explore methods for closer co-operation between the different organizations concerned in furthering from one or other point of view the claims of health resorts, and addresses were given on behalf of four of these bodies. The first, the British Spas Federation, was described by its chairman, Alderman England, as having been inaugurated in 1917, primarily to obtain uniformity in the efficient administration of the resources and treatment at the spas, and to confer with the medical profession as to standards and management generally. Mr. England spoke of the variety of British spas, the range of waters and climates, and the multiplicity of treatments obtainable. He indicated how his Federation had co-operated with the Committee for the Study of Medical Hydrology in the provision of university and other lectures on the subject, and the arrangement of visits to spas by medical graduates and students for practical demonstration, and with the British Medical Association in making available spa treatment for members of friendly societies.

The work of the recently formed British Health Resorts Association—a predominantly medical body—was described by Lord Meston, its president. It began, he said, as a patriotic movement, to promote "holidays in Britain," but soon it widened its aim so as to direct attention to, and co-ordinate as far as possible, the vast curative resources available in these islands. Lord Meston explained that his society had never contemplated any encroachment on the activities of the other bodies, nor did it depreciate the special facilities available at the great cures of foreign countries. It was realized that among these there were natural gifts and highly developed methods of treatment which must always appeal to those who could afford to resort to them; but it was also felt that at our own health resorts there existed the material, both curative and restorative, for the treatment of many thousands of those who were unable to go to the great watering places abroad. A systematic study of the medical virtues of these resorts had not been made with anything like the same precision as on the Continent, and the new association was setting itself to remedy that omission. Its aim was to obtain, with the co-operation of the local authorities and the medical experts concerned, the most up-to-date and scientific description of the curative and restorative properties of all our chief health resorts, wherever situated, to have the information tested and scientifically co-ordinated by an advisory medical body, and to ensure that it was then made available to the whole of the medical profession. Lieut.-Colonel R. H. Elliot, chairman of the executive committee of the association, added a few remarks, pointing out that the support of the medical profession had been obtained for this venture. A handbook had been already prepared, and it was proposed to establish a bureau of information. He disclaimed any chauvinism; what he wanted was a spirit of internationalism, based on friendly rivalry in doing the best possible for the sick and convalescent of all nations. He did not begrudge Continental spas the patients whom British doctors sent to them, but he hoped the day would come when many Continental doctors would send their patients to Britain. He stressed the difficulty of financing the new body; hitherto it had been supported by the generosity of individuals, but it was felt that as a national movement designed to make the best use of our common resources, it deserved the support of Government and local authorities and many others who would benefit.

Dr. Charles Buckley, representing the Spa Practitioners Group of the British Medical Association, stressed a point already made by Colonel Elliot. While every advantage from the point of view of treatment could be provided in this country, novel surroundings and unaccustomed gaiety would still lure the Englishman abroad, but he thought that Continental people might well be attracted to our spas and seaside stations by the bracing and tonic climates and the excellent treatment equipment. In Belgium, Holland, and the Scandinavian countries we had neighbours reasonably near, and practically without spas of their own. He also suggested that some spas might be developed along such lines as would bring them more especially within the reach of the poorer classes of the community, possibly with subsidies from friendly societies, or, in more prosperous times, from the State. Finally, Mr. Meredith of the Travel and Industrial Development Association, described the aims of that body, which are to make known abroad the advantages of this country, and said that his society was anxious to include in its propaganda the medical case for British health resorts.

The discussion which followed was directed to exploring some possible affiliation of these various bodies so as to prevent overlapping. It was stated on behalf of one body which had been invited, but was not officially represented, the Conference of Health and Pleasure Resorts, that it gave the British Health Resorts Association its full support, and was desirous of some liaison. In reply to a proposal for amalgamation of the various bodies, Dr. Alfred Cox, secretary of the British Health Resorts Association, said that the association was anxious to co-operate with anybody engaged on the same job, but it could not be an essential part of any organization not largely medical. It had been formed with a predominantly medical purpose, and would fail if not kept to a very great extent in medical hands. Lord Meston emphasized the same point. The medical profession, he said, had a very high standard of independence to maintain; it believed that in supporting the association it was acting within its proper competence, but this would no longer be the case if the association became a section of a more comprehensive body with wider aims. The proposal to amalgamate or affiliate was negatived, but a proposal was carried, on the motion of Mr. John Hatton of Bath, seconded by Mr. W. H. Dyer of Hastings, urging that these various organizations, with a view to co-ordinating effort on behalf of British health resorts, should, through their representatives, confer from time to time so that respective functions might be defined and lines of co-operation suggested.

THE SERVICE OF SPAS TO THE PUBLIC

At a later stage of the conference Sir Humphry Rolleston spoke on the service of spas to the public. British genius, he said, had generally produced its triumphs by individual rather than by organized and endowed endeavour, and this example had been followed by the health resorts and spas, which had thus flourished, or remained stationary, or declined in accordance with the character of the particular local authority. Abroad the position was different. In Germany and Italy the State directly subsidized the spa, and in France, although spas were taxed, this was in order to ensure their efficiency, and their interests were looked after by official bodies. What was desirable was a combination of British individualism and initiative with more practical support and active encouragement from the Government to develop the varied resources and potentialities of this national asset. As in other matters so here, this country had given a lead which had been taken up abroad to such an extent that its origin had been forgotten. For example, it was Richard

Russell, a medical man of Lewes, who died in 1771, who was the real founder of Brighton as a health resort, and he was even described by Häberlin in Germany as the "father of marine treatment." Sufficient attention had perhaps hardly been paid to the value of spas in the prevention of diseases, especially those prone to occur in and after middle life as a result of strain and worry. The cure or relief of existing disease at spas should be open to the poor as well as to the rich, and there was perhaps more provision for this than was generally recognized. The activities of spa hospitals must not be overlooked, nor the scheme which the British Spas Federation had drawn up in conjunction with the British Medical Association whereby accommodation, special medical service, and all forms of treatment could be obtained at suitably reduced charges. The spas should possess not only the most modern and efficient facilities for treatment, but laboratory provision for the diagnostic investigation of individual patients and for research in various directions, such as biochemistry and the effect of infinitely small quantities of substances in spa waters. Finally, he touched on the value of spas for convalescent treatment.

Dr. Fortescue Fox, after praising the British climate, which conduced, he said, to health, energy, and long life, found encouragement in three directions. The importance of physical medicine had been definitely recognized in progressive countries. The seaside had been discovered by urban populations, and he computed that not fewer than ten million people visited the coast every year; definite seaside treatment—thalassotherapy—was increasing to a surprising degree. Finally, there was increasing provision for industrial invalidism at spas. Scientific as well as social developments made new demands on the health resorts and on those responsible for them. This opportunity called for a united movement in which three things were needed—a clear medical policy, organization, and public support.

Lieut.-Colonel W. Byam, chairman of the medical advisory council of the British Health Resorts Association, described further the aims and objects of that body. It was one of its tasks to encourage the improvement of the treatment given. Cities were becoming more and more unsuitable for the treatment of the sick, and it was necessary to visualize the setting apart of health centres in which treatment could be carried out. Foreign spas were not being idle. He understood that new buildings were projected at Aix costing many thousands of pounds. The need for a central body to gather what was being done in health resorts in other countries and to appraise the new methods of investigation and treatment was obvious. Other activities would embrace such things as the drawing up of dietaries for invalids and a register of hotels willing to provide for such cases. He agreed, in reply to a question, that definite treatment could also be carried out at other health resorts as well as at spas. In time it would be possible to check the respective value of waters, light, exercises, and so on.

Dr. F. J. Poynton remarked that before it was determined that infinitely small quantities of substances in spa waters were of any real value an enormous amount of work would have to be done, and not by spa physicians only. As regards acute rheumatism, it could be said that recovery did not require any special waters. Whether the tendency to rheumatism could be altered by the use of special waters was another important subject for investigation; but all this went to show how necessary it was to link up spas to scientific medicine.

Other papers were read on the transport and hotel side of health resorts, and the usual indignation was expressed from some quarters of the conference against "Dora," to whom is ascribed every inconvenience which anyone may suffer from the operation of the licensing regulations and of the Shops Act. A different point of view was put forward by Dr. Alfred Cox in proposing a vote of thanks to the Press. He suggested that the spas in particular had a function of special value for a restless generation which had lost the art of repose. There was need, he said, for some zones of quietness, some places which preserved the true spirit of leisure, and no places so well fitted this character as the spas.

England and Wales

Rheumatic Research Centre at Harrogate

Lord Harewood, who presided over the annual meeting of the Royal Bath Hospital at Harrogate on February 28th, announced that in association with the University of Leeds it was proposed to establish a research centre at the hospital to investigate the causes of rheumatic diseases. In order to finance this scheme provision would have to be made for seven years' work, at a minimum annual cost of £1,000. The funds in hand and the money already promised amounted to about £750 a year. The proposed agreement with the University of Leeds included the appointment of a research worker who would have an official position in the university, and whose title would be Fellow in Rheumatism Research. The British Red Cross had offered financial assistance to the amount of £200 a year for seven years, and would assist the scheme in any other possible way. Lord Harewood added that the scheme was only small at present, but it might well serve as the nucleus for future extension. Practical results might not become manifest at once, for even the most important discoveries in the past had often taken some time to prove of definite clinical value. It was announced also during the meeting that it had been decided to install an *x*-ray department at the hospital. This would cost about £2,000, and would involve subsequently an annual charge of about £350 to £400. The necessity for it had long been felt, particularly in connexion with research, and only financial difficulties had prevented its establishment previously. A small credit balance was shown in the accounts for the past year, due largely to the adoption of many small economies in administration. There had been a gratifying increase in annual subscriptions, but the sum received from the approved societies had much diminished. Contributions from patients had shown a welcome rise in view of the recent decreases in the income resulting from investments.

King Edward VII Sanatorium, Midhurst

A considerable part of the twenty-sixth annual report of the King Edward VII Sanatorium is devoted to a review of the measure of success which has attended the practice of pneumothorax and other similar surgical procedures in the treatment of pulmonary tuberculosis. In the course of the eight years terminated in June, 1932, artificial pneumothorax was attempted in 148 cases and successfully induced in 111, the reasons for the thirty-seven failures being the occurrence of such conditions as gross adhesions or a small or absent pleural space. Of these 111 patients, who were still having refills when they left the hospital, ninety-three are alive and seventy-eight have no sputum or there are no tubercle bacilli present in it. Of the ninety-three surviving patients sixty-five have ceased to require refills and twenty-eight are still pursuing this treatment. In thirty-five cases the refills were continued for at least three years after primary induction, after which it was deemed safe to re-expand the lung again; in eleven cases re-expansion occurred for no apparent reason and the refills could not be resumed; in eleven cases the appearance of fluid rendered further refills impossible; and in eight cases the treatment had to be suspended owing to the development of disease in the other lung. Only one of these thirty-five completed cases had a recurrence of sputum containing tubercle bacilli, and that took place one year after re-expansion. Seven patients had laryngeal tuberculosis also; all appear now to be soundly healed. The after-histories of thirty-three cases in which phrenic evulsion was performed (other than as a preliminary to thoracoplasty) was very encouraging, and particularly good

results were obtained in those where there had been heavy infiltration above an interlobar pleurisy. Thoracoplasty was tried in eight cases between 1928 and 1932; no patient failed to benefit very markedly. Two of these were cases in which pneumothorax had already been established, but had failed after two years to produce quiescence. Four of these patients were men and three are now back at work; the fourth is doing well under sanatorium treatment. Of the four women two have now no bacilli in the sputum and are back at their usual employment; the other two are still under treatment. In three of the eight laryngeal tuberculosis was present before the operation, but this has entirely cleared up in all. With such encouraging success from this line of treatment, it is added, there is much less difficulty now in obtaining suitable cases for thoracoplasty, objections being less often heard.

Birmingham General Hospital

A very substantial improvement in the financial position of the Birmingham General Hospital was brought about during 1932, partly as a result of a large donation and the success of the joint appeal with the Queen's and the Ear and Throat Hospitals and partly in consequence of a considerable reduction in expenditure following a careful investigation of the general administration. The hospital has continued active work in connexion with cancer research; this has been much facilitated by a generous and anonymous gift of 100 milligrams of radium, valued at £1,500. A conference called by the Lord Mayor recommended that a scheme for a new hospital of 500 beds should be prosecuted; the hospital board, together with the committee of management of the Queen's Hospital, is therefore taking steps to effect amalgamation, so that it may be possible to accept the responsibility for the new institution when completed in accordance with the approved scheme. From the Contributory Association and Hospital Saturday Fund a grant of £38,055 was received during the year under review, as compared with £31,218 in the previous year. Subscriptions from workpeople amounted to nearly £1,800.

Scotland

Royal Edinburgh Hospital, Morningside

In his report to the annual meeting of the Royal Edinburgh Hospital for Mental and Nervous Disorders at Morningside, Professor D. K. Henderson, physician-superintendent of the institution, stated that at Craig House and West House 1,023 patients had been treated in the year, of whom 822 were still on the register at December 31st. Of the remainder 140 had been discharged—120 recovered and relieved and twenty not improved—and sixty-one had died. At the neighbouring Jordanburn Hospital there had been 211 admissions; 123 had been discharged recovered and relieved, and forty-nine as not improved, while two had died. At the nursing homes under the management of this institution 137 patients had been admitted, of whom 124 had been discharged recovered and relieved and five had died. At the outpatient departments 423 patients had attended. Professor Henderson emphasized the extensive use that was now being made of the voluntary principle of admission, the number of voluntary patients being 294, as against 729 certified patients. It is believed that this system tends to minimize the fear of mental hospital treatment in the minds of those affected, and that patients admitted in this way make the best and quickest recoveries. The report contains a review of the vast change in psychiatric practice and treatment during the present century. To-day any form of mental illness is believed to be a faulty method of response to actual difficulties in the individual's development; it is not considered to be any more mysterious than other forms of illness. Anxiety, fear, depression, excitement, delusion, and hallucinations should be regarded as objective manifestations or as symptoms of underlying trends which are peculiar to the individual. It is therefore especially important that cases should be treated while they are incipient, long before treatment in a mental hospital has become a necessity. Psychiatry has thus become an affair for the community. In university towns and in connexion with several provincial mental hospitals there are facilities whereby patients can receive help at a time when it is likely to be of most service to them, without any stigma attaching to them or to their relatives. No legal formalities exist, and in consequence patients apply for treatment just as they do for physical illness. More attention is being paid to habit training for the pre-school child, to child guidance clinics, and to psychological clinics, and attempts are also being made to interest the public in the broad social aspects of mental hygiene. Mental health can be safeguarded by starting persons on a career which is likely to prove of value and pleasure to them, and to effect this certain schools, as well as the National Institute of Industrial Psychiatry, are dealing with vocational guidance. With regard to the teaching of psychiatry the report points out that the medical schools have been criticized on account of the inadequate time devoted to this subject; this is now being remedied. In Edinburgh a course in psychology is attended before that in psychiatry, and a short series of demonstrations of mental deficiency, methods of examination, etc., is provided. In the second term a series of systematic lectures and demonstrations in psychiatry, with emphasis on the dynamic aspects, is given. In addition the student may attend the psychiatric outpatient clinic at the Royal Infirmary, where a wide range of cases embracing defects and problems of childhood and mental illness in the adult can be studied. The last is of great importance, since it provides the type of case most likely to be met with in general practice. A tribute is also paid in the report to the predecessors of the present physician-superintendent. It is recalled that, although Morningside was opened for patients in 1813, a resident physician-superintendent was not appointed until 1840, when Dr. William M'Kinnon was chosen. There were then thirty-nine patients in residence, and Dr. M'Kinnon encouraged them in community singing, gardening, carpentry, shoemaking, tailoring, bookbinding, and basketry. In 1846 he was succeeded by Dr. David Skae, who in 1853 commenced a series of lectures and clinical demonstrations to the students of Edinburgh University. In 1873 Sir Thomas Clouston, who founded Craig House, was appointed. He later became lecturer on mental diseases to the university, and is still known for his brilliant clinical writings on mental disease. He was succeeded in 1908 by Professor G. M. Robertson, who effected a wonderful series of changes, the admission rate rising during his tenure of office from 239 to 538 a year. In 1920 he was appointed to the new chair of psychiatry in Edinburgh University, the first chair on this subject to be established in the British Isles.

Health Visitors

The Department of Health for Scotland has issued a memorandum on the training and examination of health visitors. This states that the examination for the Scottish health visitor certificate will in future be conducted by the Royal Sanitary Association of Scotland, in accordance with regulations approved by the Department. It will be

open to any registered nurse who is a certified midwife, and who has completed an approved course of health visitor training lasting for at least six months, whole time, in accordance with the conditions appended to the memorandum. In order to meet the position of existing whole-time health visitors in Scotland, the examination will also be open to any registered nurse who, being a certified midwife and having been appointed by a local authority in Scotland as a whole-time health visitor on maternity and child welfare duties prior to September 1st, 1932, has given satisfactory service for not less than three years, and satisfies the examining body that she has had the necessary practical experience. The examining body may also, with the consent of the Department in each case, admit to the examination a registered nurse who, being a certified midwife and having been appointed as a whole-time officer of a local authority in Scotland prior to September 1st, 1932, has for not less than three years given satisfactory service, and has been engaged for part of that time as a school nurse, tuberculosis visitor, etc., provided that not less than half the period of service has been devoted to maternity and child welfare duties. Courses for the training of health visitors have been approved at the Department of Social Study and Training, Edinburgh University, and at the School of Social Study and Training, Glasgow University.

Aberdeen Post-Graduate Course

The Aberdeen Medical School has arranged a course of post-graduate study at the Aberdeen Royal Infirmary and the Royal Aberdeen Hospital for Sick Children on Tuesdays and Thursdays at 3.15 p.m., from April 18th to June 22nd, both dates inclusive. In order to enable practitioners, if possible, to attend the complete course of instruction, the lectures and demonstrations given on Tuesdays will be repeated on Thursdays. The fee for the course will be £3 3s. Those desiring to attend the course should notify Mr. H. J. Butchart, secretary of the University, Aberdeen.

East Fortune Sanatorium

The tenth annual report by Dr. Charles Cameron, medical superintendent of the East Fortune Sanatorium, which is maintained by the counties of Midlothian, West Lothian, East Lothian, Peebles, Berwick, Roxburgh, and Selkirk, surveys the general progress of this institution during the past ten years. The number of admissions has varied from year to year. The highest figure was 284 in 1926, but in the course of the following five years the figure fell to 216; during the past year it rose to 248. It has been difficult, with the accommodation provided, to meet the demands of counties with waiting lists of tuberculous cases. The average period of residence for patients treated in the institution in the past year was 509 days, the highest figure ever encountered. The period of residence was especially increased by hopelessly advanced bone or joint cases which were sent for treatment. Of the admissions 133 had pulmonary tuberculosis and ninety-nine had disease of other parts than the lungs, while sixteen had been found not to be suffering from tuberculosis, and were accordingly kept only for a short period. The report draws attention to two important facts: that advanced cases preponderate because many patients refuse treatment for years and finally come to the sanatorium when recovery is hopeless; that although the death rate throughout the country from tuberculosis generally is failing, there has been no fall in the death rate for young adolescent women—in some areas this death rate is actually rising. It is suggested that this latter increase is due to unhygienic conditions of living and to diminished expenditure upon necessities.

Ireland

Vital Statistics of Northern Ireland

The report for the year 1931 of the Registrar-General for Northern Ireland shows that marriages registered during the year numbered 7,369, a rate of 5.89 per 1,000 of the estimated population. This is slightly lower than the rate for the previous year, and represents the first check to the upward movement which began in 1928. There were 25,673 births registered in 1931, the birth rate being 20.5. Although this rate is the second lowest recorded for Northern Ireland, it is the highest in the British Isles for that year. Deaths registered during the year numbered 18,049, giving a rate of 14.4 per 1,000 of the estimated population, which is slightly in excess of the record low rate of 13.8 for 1930. The number of deaths from all forms of tuberculosis continues to decline, the rate of 1.22 for 1931 being the lowest on record. Despite this considerable fall in the death rate, tuberculosis still accounts for nearly 50 per cent. of the deaths in Northern Ireland in adolescence and early adult life. During the year 1931 there were the first signs of a migration into Northern Ireland; some 1,690 persons moved into the country during the year. Cancer continues to account for an increasing number of deaths; the rate of 1.25 per 1,000 in 1931 is the highest on record. Though the rise in the cancer death rate has not been as rapid as the fall in the death rate for tuberculosis, the two rates have been converging over the period 1900–31, and in the year 1931 the recorded deaths from cancer exceeded those from tuberculosis. Deaths of infants under 1 year numbered 1,885, or 73 per 1,000 births registered, as against 68 per 1,000 births in 1930. The corresponding rates for England and Wales, Scotland, and the Irish Free State were 66, 82, and 69 respectively.

New Belfast Maternity Hospital

The new maternity hospital in Falls Road will in all probability be opened this summer, and the long-mooted amalgamation with the Royal Victoria Hospital will then be completed. These facts were contained in the report submitted to the recent annual meeting of the Townsend Street Maternity Hospital, and also the statement that a joint committee of the two hospitals had been appointed to consider final details of the amalgamation. The increased accommodation, the report stated, would supply a long-felt want, as the total of twenty-six beds in the present hospital was quite inadequate. In 1932 patients admitted to the hospital numbered 954, an increase of 86 on the previous year; the number of babies born was 732, an increase on the yearly average for the past ten years and an actual increase on the number for 1931 of 131. At the ante-natal clinic 1,272 new patients attended, as against 1,142 in 1931, and no fewer than 747 of these were admitted to the hospital. The total number of examinations was 5,278, as against 4,468 in 1931. Women attended at home numbered 173, of whom 155 were ante-natal patients; 174 babies were born. In the previous year 207 women were attended and 210 babies born. The baby clinic, started over seven years ago, continued to do good work, 330 new patients attending, as compared with 253 in 1931. Professor C. G. Lowry, in his medical report, referred to the ante-natal department, which, starting in 1921 with only 200 patients in that year, had dealt with 1,272 during 1932, and with at least 15,000 since its inception. This, he stated, indicated that the public recognized the importance of ante-natal work. The mortality among pre-examined patients was 1 per cent.; among late cases, complications, etc., 3 per cent. The treasurer's report showed that expendi-

ture for the year had been £4,184 and applicable income £3,627, the deficit, before bringing into account any income from invested capital funds, being £557. The average cost per occupied bed had been somewhat less than in the previous year. The report recorded considerable reduction in the amounts received from patients and from subscriptions.

Annual Meeting, Dublin, 1933

During the absence abroad of Dr. J. Chassar Moir members wishing to take part in the proceedings of the Section of Obstetrics and Gynaecology at the forthcoming Annual Meeting of the British Medical Association in Dublin should communicate with the local honorary secretary of the Section, Dr. A. W. Spain, 31, Lower Baggot Street, Dublin.

CORRESPONDENCE

Anaphylactic Shock after Injection of Sodium Morrhuate

SIR,—Profound anaphylactic shock, followed ten minutes later by a most severe generalized urticarial rash, consequent upon an injection of sodium morrhuate for the treatment of varicose veins, is a sufficiently rare and alarming occurrence to merit its being reported. I have dealt with over 3,000 "varicose vein" patients, and have, of course, occasionally encountered cases of quinine idiosyncrasy. In the milder forms this latter is shown by flushing, fast pulse, throbbing headache, and, occasionally, slight dimness of vision; these symptoms always arise within one minute of the injection, and have completely passed off within two to five minutes of their onset. In the severe form (of which I have encountered three cases) the foregoing symptoms are followed by pallor, cold sweat, dilated pupils, and stertorous breathing during the quite temporary unconsciousness which supervenes. In the case to be reported the patient had had, at fortnightly intervals, injections of quinine (2 c.cm. of the normal quinine and urethane mixture) and had only experienced mild and momentary flushing and no discomfort, then or subsequently.

The patient, an active, otherwise quite healthy, tall, thin lady, aged about 55, was found to be suffering from uncomplicated internal haemorrhoids and varicose veins of the calves. She had the following treatment.

September 1st and 9th, 1932.—Injections of 3 c.cm. of 5 per cent. carbolic in almond oil for the haemorrhoids. No ill effects; very successful locally.

September 23rd.—Injection of 1.25 c.cm. of quinine for a varicose vein by the "empty-vein" method: no flushing.

October 6th.—She had 1.75 c.cm. of quinine into a right calf vein, accompanied by slight flushing. Ten minutes later into another vein of the same leg she had 1.25 c.cm. of 5 per cent. sodium morrhuate (Evans) with no discomfort.

November 7th.—She had 3 c.cm. of 5 per cent. carbolic in almond oil for her haemorrhoids, and, on account of the previous flushing with the quinine, she received 2 c.cm. of 40 per cent. sodium salicylate into her right calf.

November 21st.—She reported that she had had the best fortnight for months, and had treatment (without any discomfort or flushing) in the following order of injection (by "empty-vein" method): right calf 2 c.cm. of quinine; left calf 2 c.cm. sodium morrhuate; 2 c.cm. of 5 per cent. carbolic in almond oil for haemorrhoids.

December 12th.—On this day occurred the anaphylactic shock. The patient standing, 2 c.cm. of quinine was injected into the left calf. She immediately sat down, the legs up: no flushing. Ten minutes later I was against 729 of sodium morrhuate into a lower leaf this system tends sitting with her legs on the couch hospital treatment in the said that she didn't feel well, hat patients admitted in over. Her face in three minut quickest recoveries. The She was laid flat, and then went a deathly white and became pulseless, although she never lost consciousness. Breathing was very shallow: pupils dilated, but reacted feebly. A colleague, Dr. Cronin Lowe, saw her and suggested pituitrin. As I was about to inject it I noticed intense red urticarial papules all over the thighs, body, and arms. Adrenaline was injected instead. In twenty minutes' time the patient began to recover. In sixty minutes, I took her to a nursing home, where she stayed all night, the only event being that at 8 p.m. her temperature was 99.5°. She returned home to another city on the following day.

I saw the patient again on January 6th, 1933. She had had some itching for a day or two at Christmas, but otherwise she was well; fortunately her veins and haemorrhoids were cured. Recently this patient has had a return of intense urticaria following the eating of shrimps. She consulted Dr. P. B. Mumford of Manchester, who finds that the patient is sensitive to fish.

Even before hearing from Dr. Mumford I was satisfied that the anaphylactic shock was due to the morrhuate and not to the quinine; the symptoms were not those of quinine sensitivity and did not come on after the quinine injection, for the culpable morrhuate injection was the second morrhuate injection that she had had. Moreover, the symptoms were those of anaphylactic shock. I have never been a supporter of morrhuate for varicose vein injections; they frequently do not "take." In the hands of the non-expert I have seen as many post-injection ulcers as with quinine, and now we have the added and serious danger of anaphylactic shock with the second or subsequent injections. I have always felt that quinine is the drug of choice unless it is definitely contraindicated, in which event I turn to sodium salicylate and, rarely, perchloride of mercury (1 in 500).—I am, etc.,

Liverpool, Feb. 20th. STUART MCAUSLAND, M.D.

Chronic Pulmonary Tuberculosis

SIR,—The recent interesting discussion on the above prompts me to refer to the important "nutrition" aspect of our sanatorium system, to which no reference has been made. All are probably agreed that the results of our present methods of treatment, whether in or out of a sanatorium, leave much to be desired. The term "ordinary sanatorium diet," as commonly employed, is misleading. Experience shows that the dietary in different sanatoriums differs within wide limits, more especially in relation to the amount of fresh live food administered.

In Germany, in recent years, claims have been advanced (Dr. Gerson, Professor Sauerbruch, Professor Hermannsdorfer, and others) that a diet which includes a large amount of fresh vegetables and fruits in the form of juices, raw and cooked, with a restricted intake of sodium chloride, has a special value in the treatment of tuberculosis. This claim appears to have been adequately substantiated for lupus and certain forms of surgical tuberculosis. Through the courtesy of the medical officer of health and the Public Health Committee of the Edinburgh Town Council I had the opportunity, eighteen months ago, of carrying out a series of observations at the Royal Victoria Hospital for Tuberculosis, Edinburgh, and was fortunate to secure the co-operation of a skilled radiologist (Dr. Fulton), whose close co-operation was arranged as a wholly independent observer. This investigation was, so far as I am aware, the first of its kind in this country; it lasted six months. Adequate control cases were a difficulty, but this was overcome, as far as possible, by the study of all the other available hospital cases and films, including a special series of films submitted memo[illegible]lton by the tuberculosis officer (Dr. Elder) at the visitors. [illegible] the experiment. The results of this in- health visitor recently communicated to the Edinburgh the Royal Sanita Society, and, later, to a meeting of the with regulations ap

North-Eastern Society of Tuberculosis Officers in Manchester. The results obtained were of an interesting and very arresting nature, but from the conditions of the experiment as described were not such as to justify any definite conclusion. The data obtained, however, appear fully to justify a part at least of Gerson's claim that diet has a definite influence in accelerating the healing of the lung lesions, the evidence, on both the clinical and the radiological side, amply warranting the conclusion drawn from the experiment as to the advisability and the urgency for further investigation of the subject with the requisite skill and an open mind.

At neither of the two meetings referred to was there any criticism of a constructive or destructive kind of the radiological findings described by Dr. Fulton or of his interpretation of them. After the meeting at Manchester, one or two of the medical officers present expressed the opinion that the results obtained, including the radiological appearances, were such as are very frequently obtained under existing conditions of practice. I am quite open to conviction on this point, but in the absence of evidence I am sceptical, and am endeavouring to arrange for an opportunity for Dr. Fulton and myself to see the evidence on which this criticism is based. The question at issue is a very vital one.

In the meantime the outstanding conclusions to which I have been led by a very interesting inquiry in this special department of medicine are the following: (1) The necessity for the collaboration of a skilled radiologist in an investigation of the kind in question—one conversant both with the principles of general medicine and with the limitations of the value of radiological evidence. (2) If the diet in use in the sanatorium in question at the outset of the experiment may be correctly regarded as the ordinary sanatorium regime, there is no doubt about the need for drastic reform. (3) The need for emphasizing the truth of the observation made by Dr. Lissant Cox towards the conclusion of the Manchester meeting—that, unfortunately, the subject of nutrition has too long been the Cinderella of medicine. If any evidence is required to justify this statement in special relation to tuberculosis, it is available in the report of the M.O.H. for Edinburgh (Dr. Guy), dealing with the experiment referred to. "The dietetic treatment produced no specific effect on tuberculosis. The dietary, however, emphasized what is, I think, a growing demand on the part of the general public—namely, to include in our foodstuffs a larger proportion of fresh raw vegetables, a tendency that is in keeping with the best nutritional standards." The essential objective in the experiment was to ascertain the presence or absence of any new or suggestive clinical data which "emphasized" anything of value, and which might, as in the author's opinion it decidedly does, point the way.—I am, etc.,

Edinburgh, March 5th. CHALMERS WATSON, M.D.

SIR,—The differences between Dr. Lissant Cox on the one hand and Drs. Wingfield and Burrell on the other would appear to relate to words rather than to facts.

"Sanatorium treatment," in the restricted sense in which it is used by Drs. Burrell and Wingfield, now forms but a small part of the work of our sanatoriums. At any rate, in Wales, Cheshire, Lancashire, and the North all sanatoriums worthy of the name are now highly efficient "chest hospitals," where all methods of treatment that have stood the test of experience are in daily use. For this happy development we have mainly to thank Dr. Hugh Morriston Davies, as the medical staffs of the sanatoriums in the districts mentioned have all been trained by him.

If with our present knowledge and experience we had to begin all over again there is little doubt that our institutional treatment would have been organized rather on the lines laid down by Dr. Batty Shaw at a recent meeting of the Tuberculosis Society than on the lines on which it was begun twenty-five years ago. But in those days the value of collapse therapy, and the extent to which it could be applied, were not realized. We are now making up for lost time. There are, one fears, some sanatoriums in existence which are, structurally and organically, unsuited for the carrying out of modern methods of treatment. Some other sphere of utility can doubtless be found for these institutions—a development which cannot be long delayed is the admission of non-tuberculous forms of lung disease, requiring special forms of treatment, to our "public" sanatoriums. They already form an appreciable proportion of the cases in the best of the "private" sanatoriums.

As regards the dissemination of infection, there is one class of case which is in a special position—namely, the dying consumptive during the last three months of his or her life. Any medical man who habitually attends these cases will testify to the fact that the prevention of massive infection—a comparatively simple task in the case of ambulant and working cases—becomes impossible in a small home crowded with children in which a patient is dying of consumption. The provision of "hospital" or "hospice" accommodation for such cases in all probability gives, from the public health point of view, a better return for the money spent than any other measures which we can take.—I am, etc.,

P. HEFFERNAN,
Clinical Tuberculosis Officer, Derbyshire County Council.

March 6th.

Glucose Tolerance in Rheumatoid Arthritis

SIR,—We were greatly interested to see the letter of Dr. A. H. Douthwaite in your issue of February 25th, in which he describes high curves of glucose tolerance obtained by him and Dr. Ryffel in cases of rheumatoid arthritis.

The main respect in which these curves seem to differ from those obtained by us, and described in our article published in the *Journal* of February 17th, is that, though we found the glucose tolerance curves constantly raised, we did not find the prolongation of the curves described by Dr. Douthwaite. In nearly all our cases, though the curve did not necessarily return absolutely to the base line at the end of two and a quarter hours, it had nearly done so. It has occurred to us that the reason for this apparent discrepancy may be that the curves obtained by Dr. Douthwaite and Dr. Ryffel were plotted on venous blood; our own observations go to show that the venous curve in these cases shows a shift to the right when compared with that obtained on arterial blood. By the end of the usual period of a test the arterial curve may have returned practically to normal, while the venous curve is still lagging behind.

Whether this is the true explanation or not, the decided differences noted between arterial and venous curves seem to suggest that it is important in reporting any blood sugar estimation to record whether the estimation was carried out on arterial (finger-tip) blood or venous blood. We are much interested in Dr. Douthwaite's suggestion that the failure of the two curves to correspond may be due to circulatory disturbance, and that it might be possible to correct the discrepancy by suitable therapeutic measures. With regard to the lowering produced in the curves of rheumatoid cases by lowering the carbohydrate intake, we have both observed such a lowering in normal persons following a period of "short commons" of carbohydrate; where the deprivation has been severe and of long duration, the resultant lowering is often remarkable

It would thus seem important to bear this fact in mind when assessing the value of diet in modifying the curves of these cases.—We are, etc.,

W. S. C. COPEMAN,
J. W. SHACKLE.

London, W., March 5th.

An Unusually Large Prostate

SIR,—Mr. Holman's note with this heading (March 4th, p. 366) calls to my mind a patient, aged 73, on whom I operated almost twenty-four years ago. He was referred to me by Dr. Colville of Belfast for haematuria and retention of urine. I removed, in two pieces, a prostate weighing 17 ounces. There was a good deal of oozing of blood after the operation, but recovery was otherwise uneventful. The notes of this case were published in the *British Medical Journal* of May 22nd, 1909, and the specimen is preserved in the museum of Queen's University, Belfast.—I am, etc.,

Belfast, March 5th. ANDREW FULLERTON.

X Rays and Radium in Graves's Disease

SIR,—I should like to support Dr. L. A. Rowden, Dr. Connell, and Dr. C. Kempster in their favourable opinion of the value of *x* rays in the treatment of hyperthyroidism. The success of this means of treatment depends largely on the selection of suitable cases and the application of appropriate doses. The slight and early cases give the best results, but many which are fully developed also do well and remain well without relapses. Cases in which the enlargement of the thyroid is considerable, or in which signs of cardiac failure are beginning, and cases of secondary toxic adenoma should, as a rule, be referred to the surgeon for operation without delay. Taking all grades of hyperthyroidism together I have found surgical treatment to be advisable in about one-twelfth of the cases seen. The experience of the treatment by radiation in Manchester has been well described by Dr. A. Burrows and Professor Woodburn Morison (*Proc. Roy Soc. Med.*, 1920, xiii, 132), by Dr. A. E. Barclay and Dr. F. M. Fellows (*Lancet*, 1926, i, 593), and by Dr. C. D. Don (*British Medical Journal*, June 22nd, 1929, and August 15th, 1931), whose observations were carefully controlled by estimations of the basal metabolic rate. I can confirm the favourable results described by Drs. Barclay and Fellows, as many of their 300 cases came under my observation. After comparing the results of radiology with those of operation Dr. Don concluded that on the whole the latter were better than the former. Radiological treatment should not be continued for more than six months unless marked improvement has taken place. Mr. Cecil Joll is doubtful as to the power of *x* rays to produce atrophic changes in the thyroid gland at all. When *x*-ray treatment has failed and a thyroidectomy has subsequently been carried out my surgical colleague has generally told me that the operation was rendered more difficult by the presence of pericapsular adhesions. As the object of the treatment is to produce a fibrosis the absence of adhesions appears to indicate that *x*-ray treatment has not had a fair trial. A microscopical examination by the late Professor Lorrain Smith of the gland of one of my patients, removed after *x*-ray treatment, showed an early interstitial fibrosis, which we attributed to the action of *x* rays.

Adequate radiation can reduce the size and activity of the thyroid gland in hyperthyroidism, and excessive radiation may reduce, if not actually destroy, the functional activity of the normal gland. This was illustrated at a meeting of the West London Medico-Chirurgical Society on November 4th, 1921, by a case shown by Mr. H. Stratford, in which, after a year's radiation of the scar and suprascapular region following amputation of the breast for carcinoma, signs of myxoedema had developed. The risk of producing myxoedema by the ordinary use of radiology in hyperthyroidism is very small, and it is to be remembered that this sequel occasionally follows recovery without the use of *x* rays or radium.—I am, etc.,

Manchester, March 3rd. GEORGE R. MURRAY.

SIR,—Among the extraordinary statements that are made from time to time about radiotherapy few surely can equal in erroneousness several of those made by Mr. Cecil A. Joll in his letter in your issue of February 25th (p. 338). How can the indubitable clinical evidence in favour of radiotherapy (6,000 or more cases) be "largely invalidated" by the absence of basal metabolic rates? Is the basal metabolic rate to be held the *sole* test of improvement? Many records of cases exist in which decreasing metabolic rates have been reported over long periods, during and after treatment; recently I have started a series of cases, controlled in this way, with several colleagues at the Middlesex Hospital. Dr. Don's view, which Mr. Joll extols, I criticized in several essentials in the *Journal* (1929, i, 1179).

Mr. Joll advocates the extreme surgical, sceptical view that (1) radiotherapy has no clinical effect, and that (2) no observable changes are produced in the thyroid following irradiation. But Murray in 1912 reported histological changes following *x*-ray treatment. In animals Zimmern and others have produced myxoedema and almost total disappearance of the thyroid after *x*-ray applications. Ten or more "roentgen-myxoedema" cases have been reported since Acchiotè in 1907 recorded a case following *x*-ray treatment for hypertrichosis. A case, clinically "toxic goitre," with a doubtful basal metabolic rate of −2 following some months' treatment with iodine, returned to me lately after a course of mild *x*-ray treatments lasting for several months, with a colleague's comment, "This is now a case of early myxoedema." (I have seen a number of apparently "dysthyroid" patients, with mixed hyper- and hypothyroid signs, in whom tentative *x*-ray treatment may be advisable. These are of great interest.) Further, in criticism of Mr. Joll's statements, there should be now no risk whatever of skin damage with a proper technique. This I pointed out in my paper in the *Journal* (1927, i, 985), and I would advance this emphatically as true.

The only advantage that can be put forward in favour of operation for Graves's disease is that, if the operation is successful, the patient may be cured more quickly than with radiotherapy. But if the risks of operation be weighed, and the possibility be considered that a second or third operation may be needed to restore the patient to full working capacity, I believe that few patients will be submitted to operation without a preliminary trial for some months of radiotherapy. I have given *x*-ray treatment in about ten cases, with benefit, after operation had been followed by an incomplete result (*pace* Dr. Kempster's view on this point, February 25th, p. 338). In 1926 I reported "marked improvement" in 82 per cent. of 107 cases; further experience, with nearly 200 cases in all, has confirmed this conclusion. *In spite of* all the recent advances in thyroid surgery I believe that radiotherapy remains the "method of choice" for all patients who are resistant to medical treatment.—I am, etc.,

London, W.1, Feb. 25th. J. H. DOUGLAS WEBSTER.

SIR,—Mr. W. H. C. Romanis's instructive paper on exophthalmic goitre, in the *Journal* of January 21st (p. 87), has given rise to considerable correspondence on the efficacy of radium and *x* rays in this condition;

yet it is upon this very point that Mr. Romanis's paper is of little value. Although full details of his operative technique are given, the far more complicated affair of radiotherapy is dismissed as *x*-ray or radium treatment. Similarly, Dr. Connell advocates radiotherapy in vague terms, such as "*x* rays in very mild doses once or twice weekly"; or again, "*x*-ray treatment carried out with proper technique." As it is impossible to compare two methods of treatment without having a clear idea of what is meant by both, may I ask your correspondents to give details of the radiological treatment they disparage or recommend.—I am, etc.,

Southampton, Feb. 27th. A. G. C. TAYLOR.

Diagnosis of Acute Appendicitis

SIR,—The opening sentence in Mr. Ian Fraser's interesting article in your issue of February 25th (p. 310) rather took my breath away. I venture to think that it would be much nearer the truth to say: "In few diseases is a *correct* diagnosis more often made than in acute appendicitis"; and I imagine most surgeons will agree with me. I have, in fact, come to regard the diagnosis of acute appendicitis as "almost a certainty," and, from a fairly long experience, should say that the percentage of error is extremely small.

Out of the nine possible causes of error mentioned by Mr. Fraser only two are likely to give trouble at all often.

The first is perforated peptic ulcer. In these cases, as I believe Lord Moynihan pointed out years ago, the leaking fluid may be directed downwards and outwards by the mesentery to the right iliac fossa, and acute appendicitis may be simulated. But if the sudden, often dramatic, onset, the abdominal rigidity, *and* the history accompanying ulcer (*too often overlooked*) are duly considered, mistakes in diagnosis should be few.

The second is a right-sided pyosalpinx. Diagnosis of this condition from acute appendicitis, especially a "pelvic" one, may be difficult or impossible, and evidence or a history of gonorrhoea may be the only clue.—I am, etc.,

Wakefield, Feb. 28th. G. W. THOMAS.

Hydrology and Climatology

SIR,—Owing, in the main, to the already crowded state of the medical curriculum the subjects of medical hydrology, climatology, and physiotherapy generally are not being accorded in this country anything like the attention which they receive in most of the Continental schools. While it is true that physical methods are attracting an increasing amount of attention, hydrology and climatology are still being virtually ignored, at any rate in so far as systematic teaching is concerned.

Lack of familiarity with the methods employed at the various spas, together with an insufficient knowledge of the climatic and hydrological characteristics of each, only too often result in patients being referred for spa treatment who are totally unfitted for it, or, more often, who are unsuitable in type for the particular spa chosen. Results, disappointing alike for patient and doctor, inevitably follow.

It was partly with the object of familiarizing medical men with spa methods and characteristics that the Committee for the Study of Medical Hydrology in Great Britain was formed, consisting of medical men from London and from virtually all the British spas. They in turn drew up a panel of lecturers, all of whom have expert knowledge of climatology and spa treatment. These lecturers are available to give addresses, illustrated by films and lantern slides, to any medical school or medical society. It should be clearly understood that the function of this committee is education and not advertisement. The list of lecturers is sent to any medical society on application, and free choice of a lecturer can be made. The lectures deal with the nature of, and indications for, spa treatment, as well as the grounds for selection of a particular spa and the steps to be taken by the practitioner who wishes to send a case for treatment.

I shall be glad to forward full particulars concerning the above-mentioned lectures and the facilities offered for visits to the spas to the secretaries of any Branches or Divisions of the British Medical Association, or of any other medical societies.—I am, etc.,

LESLIE C. HILL,
Honorary Secretary to the Committee for the Study of Medical Hydrology in Great Britain.

Buxton, March 1st.

Protection against Yellow Fever

SIR,—The annotation under this heading in your issue of March 4th contains one statement which may lead to misapprehension. In the case of human beings the amount of virus injected is not 0.003 gram of infected mouse brain per kilo of body weight, nor does the amount actually used vary with body weight. It consists of 0.5 c.cm. of a 1 in 10 dilution in normal human serum of infected mouse brain filtered through a Seitz filter. The amount of immune serum, however, does depend on body weight, and may vary from 0.3 to 0.5 c.cm. per kilo of body weight, according to the immune body content of the serum.

It may be added that the method of immunization against yellow fever initiated by Sawyer, Kitchen, and Lloyd is now available in this country, and nearly twenty persons have already been successfully immunized in these laboratories.—I am, etc.,

Wellcome Bureau of Scientific Research, London, N.W., March 3rd. G. M. FINDLAY.

*** Sawyer, Kitchen, and Lloyd, in their article on yellow fever vaccination referred to in the annotation, give a table on page 955 showing the amount of mouse virus used in their experiments. In thirteen out of the sixteen cases recorded the amount of virus is given as 0.003 gram per kilo of body weight. The dose recommended by Dr. Findlay is possibly a later modification of the original method which has not yet been published.—ED., *B.M.J.*

Psychology in the Curriculum

SIR,—Dr. F. C. Eve, in a letter published in the *Journal* of February 25th (p. 342), suggests that clinical psychology should not be taught except as a post-graduate subject for the M.D. The strength of his argument lies in his contention that the student is less mature than his practising colleagues, and that there is no room for psychology in an already overcrowded curriculum.

No one denies that the curriculum is quite crowded enough, but surely medical psychology is sufficiently important to be included, even to the exclusion of some other subject; it is only among those who think that psychology is nothing more than a vague knowledge of how to handle neurotics that its importance would not be conceded. But granted that it is important, then room should be found for it. It should not remain outside the curriculum merely because it is new, as many contend. After all, a curriculum should not be founded on a chronological, but on a utilitarian, basis.

It is certainly difficult to think of any clinical subjects which could go by the board, but what a blessing it would be if it drew attention to the waste of time that

is incurred in the pre-hospital days. To take only one instance: How much use is the forgotten knowledge of botany to any practitioner? Moreover, from the utilitarian standpoint, surely it is more important for a qualified medical man to understand the psychopathology of an anxiety state than to know the cultural characteristics of the anaerobes, or to be able to classify odontomata—both M.B. questions!

Dr. Eve also fears that a course of medical psychology might give the student a lifelong aversion to the subject. It is difficult to see why this should occur with anyone, unless he is prejudiced from the start. I know that in one teaching hospital the students have formed a psychological society, and I have heard from a lecturer in psychiatry at a London teaching hospital that it is not the students who turn an unsympathetic ear to medical psychology, but the staff.

But surely the most important objection to Dr. Eve's scheme lies in the fact that a great number of medical men do not proceed to an M.D., and in many cases they take it by thesis in a subject which may be so far removed from psychology as to make it very unreasonable to demand a knowledge of psychology in it. In these circumstances very much the same position would be reached as now—namely, that the majority of patients would be unable to find a general practitioner with a knowledge of medical psychology—a condition which Dr. Eve himself finds undesirable.—I am, etc.,

W. LINDESAY NEUSTATTER, M.B., M.R.C.P.

London, Feb. 25th.

SIR,—If the question be asked, "Should the theory and practice of psychotherapy be added to the course of study obligatory on the student?" the answer must be in the negative. The student is already overburdened, and, moreover, many of them would be temperamentally unfitted to derive any benefit.

The real need is that the teaching of medicine as a whole should be given a new orientation away from the almost exclusively materialistic outlook which has prevailed since the profession whole-heartedly embraced the theory of germs as the cause of disease. Interest should now be shifted from the seed to the soil. A beginning could be made in the course on physiology, where the student could be shown that the influence of the emotions in inhibiting or promoting vital functions is at least as important as the reactions obtained by stimulating a nerve with an electric current, a process which does not obtain in nature.

Room should be found, too, in the physiology course for two or three lectures on hypnotism, which, although the process has a very limited field of application in the treatment of neuroses, would enable the student to realize the part played by suggestion in initiating or imitating diseased conditions. Later, in the out-patient department, the student should be encouraged to note the mental attitude of the patients as well as the general physical condition; and when clerking in the wards he should be told to let the patient confide in him the history of his business and domestic worries as well as that of previous illnesses. Needless to say, details of this sort would not find their way into the written notes, but it would be sufficient for the student to put down such phrases as "the present illness was preceded by a period of financial stress," or "a domestic crisis occurred about six weeks ago." As a result the student would gain considerable insight as to the method in which bodily illness may come as a relief to some intolerable mental strain, and a considerable body of knowledge would grow, giving much-needed information as to what kind of people develop certain illnesses and in what particular circumstances.

There is nothing in all this which would add to the length of the curriculum, but it would mean that all through his studies the student would never be allowed to forget that medicine should deal with diseased individuals and not with diseases. For those who have time and inclination there should be a short course of lectures on general psychology, based on the generally accepted dynamic drive of innate tendencies. Such lectures need be neither recondite nor controversial, and will not form part of the examination subjects. By these means the newly qualified practitioner should be "psychologically minded" enough to be able to give advice, of considerably more value than the bottle of medicine which may or may not accompany it, to a fair proportion of those suffering from functional neuroses, whom he will find composing a large share of his practice. The more difficult cases he will need to refer to a specialist, and that is where he finds it difficult in existing circumstances to make a choice. In the absence of psychological clinics (which ought to exist in every large centre), and not knowing who has the necessary qualification, he may send his cases to some well-known neurologist who may be an expert in the diagnosis and treatment of organic nervous diseases, but who takes an entirely materialistic view of medicine and regards psychology with suspicion. To meet the need of psychotherapeutic experts there should be post-graduate lectures combined with attendance at a recognized clinic, followed by an examination at which success entitles to a diploma in psychotherapy. The present diploma in psychological medicine shows its possessors to be qualified to treat the insane, but does not necessarily connote the ability to carry out a psychological analysis of a neurotic. This is a point which needs stressing.

In conclusion, the most important aspect of medicine is prophylaxis, and no one should be considered fit to minister to the health of the public who has not a good working knowledge of the psychological stresses which operate in nursery and school days, and which, if unnoticed and unrelieved, form the basis of an unbalanced personality. Teaching on this point must, above all *else*, be included in the training on diseases of children.—I am, etc.,

R. MACDONALD LADELL.

Birmingham, Feb. 27th.

Non-operative Treatment of Chronic Hydrocele of Tunica Vaginalis

SIR,—Owing to several inquiries as to the *proportions* of the fluid used for the injection treatment I should like to correct an error in my article in the *Journal* of August 6th, 1932. The fluid used should read: two parts iodine resublim. to four parts of liq. phenol. I might add that the usual iodized phenol of one in four is equally efficient, and is better used in those cases in which iodism is likely to occur.—I am, etc.,

MORTON WHITBY.

London, W.1, March 4th.

Strychnine Poisoning

SIR,—In his letter published in the *British Medical Journal* of February 25th Dr. John R. Keith pays "first-aiders" a high compliment when he expects from them the same degree of accuracy in diagnosis which he would expect from senior medical students. As an Honorary Associate of the Order of St. John he should know that the St. John Ambulance Association has always taught its pupils that they must not seek to undertake "the duties and responsibilities" of medical practitioners; and as a graduate in medicine he knows that there is always complete loss of consciousness during convulsions. Consequently, from the first-aid standpoint, the inclusion of strychnine poisoning as a cause of insensibility is

perfectly correct. Indeed, it is in the same category as hysteria, which figures among the causes of insensibility on the same page of our textbook *First Aid to the Injured*, and yet is apparently accepted as such without any protest from Dr. Keith.—I am, etc.,

A. N. CAHUSAC,
Chief Secretary, St. John Ambulance Association, and Chairman of Textbook Revision Committee.

St. John's Gate, Clerkenwell, E.C.1,
Feb. 28th.

Notices of Vacant Appointments

A Plea for Uniformity

SIR,—Glancing through the advertised vacancies for resident hospital appointments I have been struck by the lack of uniformity in the wording and content of the announcements. Many of these advertisements leave out essential particulars, which must result in much waste of time in correspondence, etc. Could not some standard form of advertisement be adopted for all these posts?

A concrete example of this laxity of advertisement came to my notice recently. I visited a hospital which had advertised for an R.M.O. with a view to ascertaining the nature of the position and whether I should apply for it. To do this I devoted four hours of my valuable time and spent a sum of money which I could well have expended more beneficially. Judge, therefore, of my astonishment and annoyance when I was calmly informed that a woman R.M.O. was required, there being four other women residents at the hospital. I pointed out that no mention of this was made in the advertisement, and the excuse advanced was that the secretary had been away with influenza and the advertisement was drafted by a clerk. (Incidentally the advertisement was repeated the following week with exactly the same wording.)

Now it is precisely this ineptitude which I consider it is necessary to guard against. In my opinion it is preposterous that carelessness of this nature should be permitted to favour the dispersal of energy and the wasting of time and trouble. The publication of this letter might serve a useful purpose in dropping a gentle hint to those responsible for the drafting of advertisements of this nature. May I conclude by appending an imaginary advertisement which would fulfil essential particulars?

> "King William the Conqueror Hospital, Castletown, Homeshire. 181 beds. Fully qualified and registered R.M.O. (male, unmarried) required on April 1st. Four other residents. Salary £200 with full board. Previous resident experience essential. Applications with testimonials to be in by March 3rd.—X. Y., *Secretary*."

—I am, etc.,

Sutton, Feb. 21st. J. B. WRATHALL ROWE.

Medical Women and the G.M.C.

SIR,—I find to my dismay that an article, with photograph, has appeared in the lay press dealing with the question of my possible nomination as a candidate for the General Medical Council. I need hardly say that this was inserted without my knowledge or consent. If I should have the honour to be selected by the British Medical Association as one of their candidates for the General Medical Council election it would be as a member of that Association and on my record of work in it that I should stand, and if so fortunate as to be elected would serve as a representative of the whole profession and not of medical women only.—I am, etc.,

London, W.2, March 6th. CHRISTINE M. MURRELL.

*** No one who knows Dr. Murrell will need her disavowal.—ED., *B.M.J.*

Memorial to Professor Leith Murray

SIR,—In accordance with the wishes of many friends and colleagues of the late Professor H. Leith Murray a committee has been formed with the object of raising a memorial to his life and work. The members of the committee, who represent the various activities with which he was associated, consider the most appropriate form of memorial would be the foundation of an annual Leith Murray prize or scholarship in obstetrics and gynaecology at the University of Liverpool. Donations towards this object, both large and small, will be gratefully acknowledged, and contributions should be sent to Mr. George Leather, 24, North John Street, Liverpool.—I am, etc.,

A. LEYLAND ROBINSON,
Chairman, Leith Murray Memorial Fund.

Liverpool, March 2nd.

South African Medical Congress

SIR,—In the *South African Medical Journal* dated January 14th, 1933, there appears a very cordial welcome to South African medical men to attend the meeting of the British Medical Association in Dublin next July. The invitation is penned in glowing periods by Dr. Gillman Moorhead, President-Elect, and many of us will hope to respond. May I be permitted to follow so excellent an example and draw the attention of members of the British Medical Association in Great Britain and Ireland and elsewhere to the fact that we are holding the twenty-seventh Annual Medical Congress of the South African Medical Association (B.M.A.) in Capetown from September 25th to 30th of this year? A very warm welcome awaits any of our confreres who can come to the Congress. It is to be held in the recently erected buildings of the University of Capetown on the slopes of Table Mountain, commanding one of the finest views in the world. Anyone who is likely to come should communicate with me or with Dr. A. W. S. Sichel, organizing secretary, P.O. Box 643, Capetown.—I am, etc.,

E. BARNARD FULLER,
President-Elect.

85, St. George's Street, Capetown, S.A.

The Services

DEATHS IN THE SERVICES

Major Bernard Langridge Davis, O.B.E., R.A.M.C., died at Mansfield on January 17th, aged 43. He was born on April 11th, 1889, and was educated at Aberdeen, where he graduated M.B., Ch.B. in 1915. Subsequently he obtained the diploma of D.T.M. at Liverpool in 1924, gaining the Allan Milne medal, and the D.P.H. and D.T.H. in 1926. He was mobilized in the R.A.M.C. Territorial Force on January 4th, 1916, and took a permanent commission, becoming captain on July 4th, 1919, and major on January 4th, 1928. He was placed on half-pay on November 28th, 1929. He served during the war of 1914–18 in Macedonia, Serbia, Bulgaria, and the Aegean Islands, was mentioned in dispatches in the *London Gazette* of November 28th, 1919, and June 11th, 1920, and received the Serbian Order of St. Sava (fourth class) and the O.B.E.

Lieut.-Colonel Carrapiet John Sarkies, Bombay Medical Service (ret.), died on January 23rd, aged 74. He was born on January 5th, 1859, and was educated at the Calcutta Medical College and at Aberdeen University, where he graduated M.B., C.M. in 1882. Entering the I.M.S. as surgeon on September 29th, 1883, he became lieutenant-colonel after twenty years' service, and retired on December 6th, 1912. He served in the Burmese war in 1887–8, receiving the frontier medal with a clasp; on the North-West Frontier, in the Tirah campaign of 1897–8 (medal with clasp); and in East Africa, in Somaliland, in 1903 (medal with clasp).

Obituary

LLOYD TURTON PRICE, M.B., F.R.C.S.ED.

Professor of Surgery, St. Andrews University

Lloyd Turton Price, professor of surgery in the University of St. Andrews, died in an Edinburgh nursing home, following an operation, on February 26th. Born in Shrewsbury and educated at Oswestry Schools, he proceeded to Edinburgh University, where he had a distinguished career. He won the Lister prize, open to students of not more than three years' standing, for the best surgical thesis, and the Crichton Research Scholarship. Graduating M.B., Ch.B. in 1901, he proceeded to the Fellowship of the Royal College of Surgeons of Edinburgh in 1905, and thereafter filled the following posts. He was house-surgeon in the Royal Infirmary, Edinburgh, the Royal Hospital for Sick Children, Edinburgh, under Sir Harold Stiles, and the Royal Infirmary, Manchester: and assistant demonstrator in anatomy, and later surgical tutor, in Edinburgh University. In 1906 he was appointed assistant in the department of surgery in the University of St. Andrews, under Professor MacEwan. During the war he held the posts of consulting surgeon to the Dundee war hospitals, and chief surgeon to the Red Cross hospitals, Central Eastern District of Scotland. He was also surgeon in charge of the Dundee Orthopaedic Annexe, and after the war did an immense amount of work for disabled ex-service men, for which the Joint Disablement Committee placed on record high appreciation of his services. In 1919 he succeeded Professor MacEwan in the chair of surgery in the University of St. Andrews, and was appointed senior surgeon to the Royal Infirmary, Dundee.

For the following appreciation we are indebted to Mr. R. Saunders Melville, F.R.C.S.Ed., assistant to the professor of surgery at St. Andrews.

As a lecturer Professor Price was clear and concise, and his wide and accurate anatomical knowledge made the operative surgery class of particular value to his students. It was, however, his clinical teaching at the Royal Infirmary which gave him most pleasure, and there his great experience and depth of human understanding were displayed to the greatest advantage. Few who had to "think it out" for themselves during those mornings "on the floor" will forget the experience and what it taught them. Irony he used, and a barbed wit. If at times the process was painful, the masterly survey of the case at the end, the obvious contrast in methods, the demonstration of how to examine and handle patients, drove home the principles of clinical surgery as no other method could, and kept the class "alive" and ever popular. His capacity for work was enormous. Chief consulting surgeon to the Royal Infirmary, Perth, the Forfar Infirmary, and surgeon to the Dundee Dental Hospital, it is no exaggeration to say that there is scarcely a hospital or nursing home in Forfarshire, Perthshire, or East Fife which has not profited by his professional skill and wise counsel. As an operator he was gifted with fine hands. His technique was simple, rapid, and scrupulous. Possessed of great powers of concentration and self-control, he seemed untiring. If he demanded a high standard from those about him he himself set the example. Pretentiousness, complacency, slackness—these felt the sledge-hammer weight of his disapproval.

He believed in keeping abreast of the times, visiting the Continent frequently, and latterly Stockholm, in order to study the use of radium; but he did not necessarily accept every "new" method as sound. These characteristics, allied to sound judgement and a vast and varied experience, won for him a large private practice, the enviable reputation of an essentially safe surgeon, and the compliment of being chosen by so many of his colleagues when they or their relatives required surgical skill. At the bedside his sympathetic understanding was complete. He had the rare faculty of giving of his own strength, and was selfless in his devotion to those under his care. In them he recognized neither rich nor poor—only members of suffering humanity whom he was privileged to help. To the community he served, and to many of his personal friends, the news of his death came as a great shock, and left them with a sense of irreparable loss. He had gone quietly to Edinburgh to undergo a necessary operation, and when respiratory complications ensued it was his wish that his friends should be spared the knowledge of his critical condition. Many will remember him best as they saw him last—virile, alert, with kindly smile and extended hand. A dominating personality, far-seeing, shrewd, he could, when occasion arose, be a doughty opponent. A loyal friend, with an innate courtesy and charm of manner, he loved children, and they turned to him with instinctive trust.

Professor Price has left a splendid record, a record which has added a bright page to the history of the Medical School of St. Andrews University, and which will be an inspiration to those who were privileged to know and to serve him. His students are scattered in many distant lands, but wherever they gather his name will be mentioned with profound respect, with affection, and with pride.

Dr. G. F. WHYTE writes:

The death of Lloyd Turton Price came as a great shock to his many friends in Dundee and the surrounding districts. He was only 58 years of age, and has been cut off at the height of a very successful career and in the plenitude of his powers. He was a man not easy to get to know intimately, but once a friendship had been established he was in every sense of the word a good friend. Apart from his work, to which he was devoted, he had several other interests or hobbies. For many years he had been well known as a breeder of sporting dogs, of the setter and spaniel variety; in fact, his kennel had a world-wide reputation. Every year, too, he rented a shooting in Angus, and nothing gave him greater pleasure than a day with the guns and the subsequent distribution of the bag to his friends. He was also a great connoisseur and buyer of old furniture, mirrors, engravings, brasses, and other *objets d'art*, and he loved showing any fresh treasure to any friend calling at his house. Of his work I need say little. His lectures at college and infirmary were greatly appreciated by his students. His surgery was marked by skill and dexterity. He was a sound consultant, and had an extremely kindly and tactful manner in dealing with patients and relatives. Above all he was a friend of little children, loving them and being loved by them in return. His untimely death leaves a blank in our community which will be difficult to fill, and his loss is mourned by a very wide circle of friends and patients. This was exemplified at his funeral, which was attended by a very large gathering fully representative of the University, the City Council, the medical, legal, and clerical professions, the directorate of the Royal Infirmary, and the general community. It was a very wet day, but in spite of that a crowd of over 2,000 assembled to pay the last honour in their power to the man who had saved many of their own and their relatives' lives. We shall all miss him.

Another colleague writes:

The passing of L. T. Price leaves a blank that no words can fill. To one who has admired his power as a teacher, his gentle skill as an operator, and his wise judgement as a consultant, there has come the further privilege of knowing

and loving a man of great-hearted humanity. There was a magnetic charm about him, the source of which one could not define, and therein, perhaps, lay an enhanced attraction. Surgery was his profession, healing his aim. His breadth of outlook enabled him to sense features of an illness aside from its purely surgical aspect, but equally important in the promotion of recovery, and no matter what the operation, the restoration of health was his sole criterion of success. Ungrudging in his tribute to others, he was ever modest regarding his own achievements, and any pride he took in the performance of an operation was but the prelude to the pleasure he showed in seeing his patient about again. At the end of a winter during which he accomplished much, and for the writer more than can be told, he made arrangements for having his own health seen to. Even then, at the peak of his service to mankind, his thoughts were of those to whom he was a beloved friend.

EDMUND HOBHOUSE, M.D., F.R.C.P.

Consulting Physician, Sussex County Hospital, Brighton

Dr. Edmund Hobhouse, whose death at the age of 72 took place in London on March 2nd, was an old St. Thomas's man, and a medical graduate of Oxford, where he obtained the M.A., M.B., and B.Ch. degrees in 1887, and the M.D. in 1893. He later went to the universities of Berlin and Vienna for the purpose of studying Continental medicine. After practising at San Remo and in Colorado, U.S.A., he settled in Brighton, where he rapidly took a leading part in the medical work of the town. He was appointed to the staff of the Royal Alexandra Hospital for Sick Children, and to that of the Royal Sussex County Hospital, afterwards becoming consulting physician to both institutions. He was elected a Fellow of the Royal College of Physicians of London in 1901. During the war he was mobilized as one of the *à la suite* officers of the Second Eastern General Hospital, with the rank of lieutenant-colonel, in charge of one of the departments of the hospital, where he served from beginning to end of hostilities.

In his practice at Brighton Dr. Hobhouse was recognized as the leading consulting physician in the town, and his opinion was sought and valued by his medical colleagues until he left a few years ago to settle in the West End of London. His medical friends could always rely on sound, honest, and sympathetic advice from him. He was a colleague valued and respected by all the practitioners in the town, always reliable, always treating those who called him in for consultation with courtesy and consideration. He was elected to the presidency of the Brighton and Sussex Medico-Chirurgical Society, and held many important offices in the local Branch and Division of the British Medical Association, including those of President of the Branch 1916–19, and chairman of the Brighton Division in 1916. He was also president of the Section of Medicine at the Annual Meeting of the Association at Brighton in 1913. His writings were not voluminous, but they included a book entitled *Health Abroad: A Medical Handbook of Travel*, and articles in the more important medical journals.

He took a prominent part in the public work of the town, being elected a member of the Hove Town Council, and serving on many committees which dealt with philanthropical and sociological work, where his assistance was much valued. He was a man of the highest character, and no more accurate summary of the opinion in which he was held by his patients, his friends, and his fellow practitioners can be found than this—he was essentially an English gentleman. He leaves a widow and a son and daughter, to whom every sympathy is extended by his colleagues.

Dr. GEORGE HAMILTON, who died recently at Bexhill-on-Sea, was born in April, 1881, the son of the Rev. Benjamin Hamilton, Vicar of Fewcott, Oxon. He entered Guy's Hospital Medical School with a scholarship from the Haberdashers' Company, and was the winner of the second entrance scholarship. He obtained the diplomas of the English Conjoint Board in 1905, and graduated M.B., B.S. Lond., in 1907. He served as clinical assistant in the wards, out-patient officer and house-physician at Guy's Hospital in 1906; in the following year he was appointed surgical registrar, which post he retained until October, 1908, when he settled in practice at Bosham. In September, 1914, he joined the medical service of the Royal Navy and served as a battalion medical officer in Antwerp and had a very responsible charge in the retreat from that city. On transference to the First (R.N.) Field Ambulance he was in charge of B Tent Operating Section during the Gallipoli campaign and was mentioned in dispatches. After undergoing an emergency operation for appendicitis he was appointed in September, 1916, to the staff of the Royal Naval Hospital at Haslar, where he remained until October, 1918, when he joined the *Lord Clive* and saw active service at Dover, Dunkerque, and Yarmouth, being invalided out of the service in January, 1919. In the following April he joined Dr. David Ewart of Chichester as partner, and was appointed assistant surgeon and subsequently surgeon and honorary consulting surgeon to the Royal West Sussex Hospital. In consequence of ill-health he took a voyage in 1928 to South Africa, and had to relinquish practice in 1930.

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

The next examination for the Diploma in Medical Radiology and Electrology will be held from April 18th to 21st. The names of candidates, together with their certificates and fees, must be sent to the Registrary, the University Registry, Cambridge, so as to reach him by March 28th.

T. K. S. Lyle and R. Marnham have been approved for the degree of M.Chir.

At a congregation held on February 24th the degree of B.Chir. was conferred on G. A. W. Whitfield and S. F. L. Dahne.

UNIVERSITY OF LONDON

UNIVERSITY COLLEGE

The annual report of the Committee of University College, London, for the year ending February, 1933, states that the number of students on the books of the College last session was 3,038; 2,468 came from the British Isles; 296 from different parts of the Empire over-seas; 183 from various countries in Europe; and 91 from countries outside Europe of whom 39 came from the United States of America. The income of the Establishment Account amounted to £225 665, £76,202 being provided by fees, £38,740 by income from endowments, £100,068 by the recurrent grant from the Court of the University, and the balance by sundry grants and donations. An addition to the College buildings has been made by the reconstruction and equipment of a portion of the newly acquired property south of the College for the Department of Zoology. These premises include a junior biological laboratory for one hundred students, advanced laboratories for comparative anatomy and comparative physiology, private and research laboratories, a museum, and an aquarium. A new science library has been provided in the former zoology theatre and its adjacent territory.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

The spring course of demonstrations of specimens in the Museum opened on March 6th, when Dr. Wilfred Shaw gave the first of three demonstrations on cysts and tumours of the ovary. On March 13th and 15th Mr. E. K. Martin will deal with inflammatory diseases of the stomach and duodenum, and on March 17th inflammatory disease of the caecum and appendix. On March 20th and 24th Mr. C. E. Shattock will demonstrate specimens illustrating diseases of the kidney and of the testicle. The demonstrations will be given in the theatre of the College, Lincoln's Inn Fields, at 5 p.m.; they are open to advanced students and medical practitioners.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND

At the monthly business meeting of the President and Fellows, held on March 3rd, Harold Pringle, M.D.Dublin, F.R.C.P.I., was elected King's Professor of Institutes of Medicine in the School of Physic in Ireland, Trinity College, Dublin.

SOCIETY OF APOTHECARIES OF LONDON

The following candidates have passed in the subjects indicated:

SURGERY.—J. Burden-Cooper, R. P. Huggins, W. W. B. Kelly Wiseham, A. W. Turner.

MEDICINE.—M. Belo-Zercovsky, J. A. Bull, J. Burden-Cooper, T. R. Hornby, V. L. Kahan, W. B. Mattar, T. E. Mitchell, J. T. Moohalaparackel, L. Wailer.

FORENSIC MEDICINE.—E. H. Antoniades, J. G. Q. Brown, J. A. Bull, J. Burden-Cooper, L. A. Freeman, T. R. Hornby, D. Kyle, E. O'C. Parsons, F. H. Williams.

MIDWIFERY.—J. A. Bull, J. B. Frumin, E. C. Rowlands, J. A. Van Rooyen, C. E. Wetherall.

The diploma of the Society has been granted to Messrs. J. A. Bull, D. Kyle, W. B. Mattar, and L. Wailer.

Medico-Legal

INJURIES FROM SPILLED ACID: CLAIM AGAINST A SCHOOL

Before Mr. Justice Charles and a special jury in the King's Bench Division, on February 28th and March 1st, John Rodwell, formerly a pupil at Felstead School, Essex, suing by his father, claimed damages from the governors of the school and the headmaster for injuries sustained in November, 1930, when a fellow pupil, having obtained from the school laboratory a test tube filled with concentrated sulphuric and nitric acid, accidentally spilled it on Rodwell's head and neck, with the result that he became, it was alleged, permanently disfigured.

Mr. G. O. Slade, in opening the case, said that after the acid fell on him the boy rushed to the lavatory, where he placed his head under the cold water tap. He was then sent to the school infirmary, where the nurse and matron, after some hesitation, put vaseline on the burns. An hour later a chemistry master said that an alkali should be applied to neutralize the acid, and some liquid caustic soda was applied, whereupon the pain became very much worse. No further treatment was given for twenty-one hours, when a doctor was called in, and directed different treatment, which afforded immediate relief. It was submitted that there was negligence in permitting acids to be removed from the laboratory, in administering improper treatment, and in not calling in a doctor until the next day. The burning had left Rodwell with two streaks on his head, where the hair would never grow again, and his neck was so injured that he could not wear a stiff collar. Dr. H. H. Brown of Ipswich, who later on attended Rodwell, testified that it was of the utmost importance that acid burns should be treated at once, as any delay exacerbated the injury. The proper treatment would have been to apply bicarbonate of soda dissolved in water. Caustic soda, after the acid had been neutralized, would produce as much damage as the acid.

For the defence it was contended that the nurse, who had been at the school for seventeen years, had not been negligent, but had acted according to her best judgement. She testified that when the boy was first brought to her she applied, not vaseline, as stated, but olive oil on lint to the burns. When the science master later suggested that an alkali was needed, he mentioned three things, and she chose caustic soda, which she diluted down to 1 in 400, and applied with a bandage. Fresh olive oil was then put on, and next morning boric ointment. The doctor was not sent for because the usual doctor of the school was ill, in fact dying, and Dr. Wills, who eventually attended, was in charge of his practice and helping to look after him, and she felt competent to take charge of the case in the circumstances. Dr. J. T. Wills, who attended the boy next day, said he approved of the treatment which the nurse had administered. Dr. Geoffrey Barber, one of the medical officers of the school, said that the treatment given by the nurse conformed to the standard treatment laid down by the highest authorities for acid burns, and a 1 in 400 solution of caustic soda could not hurt anyone. Dr. H. G. Adamson, consulting physician for skin diseases to St. Bartholomew's Hospital, also stated that the treatment of washing an acid burn, applying olive oil, then a 1 in 400 dilution of caustic soda, and afterwards olive oil again, could not have been bettered. In his view the boy would be able to wear a stiff collar again in the future. Evidence was also given as to the practice in schools with regard to access to concentrated acids in laboratories.

The jury, without retiring, gave a verdict for the defendants, and judgement was entered accordingly, with costs, the judge saying that he could not conceive of any other verdict.

THE AFFAIRS OF THE LONDON CLINIC AND NURSING HOME, LIMITED

In the Chancery Division, before Mr. Justice Maugham, on February 20th, a petition was presented by a firm of creditors for the compulsory winding up of the London Clinic and Nursing Home, Ltd. This home, which stands in Harley Street and Devonshire Place, was opened by the Duchess of York rather over a year ago, and has accommodation for 200 patients. The company running the home was formed in 1929, with a capital of £175,000, all practically paid up. It was stated that the petitioners were creditors for £3,496, and the petition was supported by other creditors for smaller amounts. It was opposed by two large secured creditors, one for £200,000 and another for £51,000. The opposing creditors based their case upon the fact that the property was in the hands of a receiver appointed by the court, and that a winding-up order would injure the goodwill of the business. If the home was closed down it was apprehended that the building might become derelict; as the premises were constructed as a nursing home their conversion for any other purpose would be extremely expensive, if not impossible. His lordship thereupon adjourned the case for fourteen days, during which period he asked that evidence might be filed to assist him in coming to a conclusion with regard to the probability of realization.

When the opposed petition came again before Mr. Justice Maugham on March 6th, his lordship, after hearing arguments from counsel, said that the company was formed to acquire a site in Harley Street and Devonshire Place, there to carry on the business of a nursing home. There was a miscalculation in connexion with the formation of the company. It was not realized that time was needed before such an institution could get patients who would fill its beds. The accommodation provided was in part laboratory and consulting room, but it was mainly for the purpose of receiving patients. The number of patients in the nursing home when the receiver was appointed in August last was about forty, and it was now eighty or ninety. The petition was presented in circumstances in which it might be stated that things were not actually getting worse, but they were far from satisfactory, and the receiver was still not able to carry on at a profit. It was obvious that quite a substantial number of months must elapse after an official opening before such an institution got a fair chance of being satisfactorily conducted in all respects for patients who wanted a great deal of care and attention. In considering an application which had been made to him for an adjournment of the order, he felt that it was perfectly true that from the strictly legal point of view a winding-up order would not prejudicially affect the continuance of the clinic and nursing home as a going concern, because a receiver had been appointed who was able to continue the business, and, he hoped, with increasing success, whether or not a winding-up order was made. On the other hand, it would be foolish of the court not to realize that the making of a winding-up order was an exceedingly bad advertisement for the institution, and would tend to reduce the sum which the receiver was likely to get. Accordingly, having regard to the fact that there were large secured creditors who desired an adjournment, and to the fact that an immediate order would not be of benefit either to the shareholders or the unsecured creditors, he was disposed to grant a moderate period of adjournment. It seemed to him almost obvious that the best course to be adopted, in the hope of the continuance of the nursing home, which might be of great public benefit, was some kind of reconstruction involving the formation of a new company, and enlisting the support of a number of new shareholders. He was not willing,

however, that the case should stand over without the court keeping a certain amount of control, and he thought the proper course would be to adjourn the petition until March 27th, by which time Mr. Justice Bennett would have had to deal with an adjourned application by the debenture holders. On March 27th he would take the petition again, after the result of that application was known, and it might then be possible for the receiver to give him information as to the steps which were being taken for the purpose of realizing the credit of the concern.

ALLEGED PERFORMANCE OF ILLEGAL OPERATION: DOCTOR AND NURSING HOME PROPRIETRESS ACQUITTED

At Glamorgan assizes on February 23rd, before Mr. Justice Goddard, Dr. Evan Henry Griffiths of Corporation Road, Cardiff, was charged with performing an illegal operation on a young woman named Gertrude Davies, and Ada Alice Bines, proprietress of a Cardiff nursing home, was charged with aiding and abetting.

At the close of the case for the prosecution, Mr. Walter Samuel, K.G., for Nurse Bines, submitted that there was no evidence in support of the charge, or even if there was corroboration, it was not sufficient to call upon the jury to consider the case further. One of the witnesses for the prosecution, Nurse Williams, he said, would never have been called by the prosecution unless they had thought she would have been able to corroborate the allegations of Mrs. Davies, but in fact she had not corroborated Mrs. Davies's story, and she had destroyed the prosecution's evidence.

Mr. Justice Goddard upheld the submission of the defence that there was not sufficient evidence of corroboration, and directed the jury to return a formal verdict of "Not guilty." He pointed out that Nurse Williams, who was one of the principal witnesses for the prosecution, had stated that no illegal operation was performed upon Mrs. Davies. There might have been a suspicion, and the case, quite properly, had been investigated, but there were so many possibilities that it would not be safe to put the accused further on their peril.

The jury, by the judge's direction, found the accused "Not guilty," and Dr. Griffiths and Nurse Bines were discharged.

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons this week read the Local Government (Exchequer Contributions) Bill a second time, and the Housing (Financial Provisions) Bill a third time. The Indian Pay (Temporary Abatements) Bill was also read a third time. The Army Estimates were down for discussion.

On March 6th Sir Robert Gower presented the Protection of Animals (Amendment) (No. 2) Bill, the object of which is to amend Section 3 of the Protection of Animals Act, 1911.

In the House of Lords debates of medical importance arose on the Pharmacy and Poisons Bill and the Road Traffic (Compensation for Accidents) Bill.

Pharmacy and Poisons Bill

In the House of Lords, on March 7th, the EARL OF LUCAN moved the second reading of the Pharmacy and Poisons Bill. He said that the Bill was almost identical with the Bill which passed through the House in 1931, but failed to get beyond the first reading stage in the House of Commons owing to the dissolution. The Bill was intended to give effect to the recommendations of a departmental committee set up by the late Lord Balfour in 1926 to inquire into the law with regard to poisons. In 1931 the Bill was opposed by the Pharmaceutical Society, but that body was now in favour of it. Lord Dawson of Penn took exception to the Bill in 1931 on the ground that the medical authorities had not been sufficiently consulted. As a result of conferences between Government departments and the medical societies the medical objections had now been overcome, and a representative of the British Medical Association had been added to the Poisons Board. The Bill was now practically an agreed measure, and as it was urgently required he hoped that the House would give it a second reading. The duty of administering the law with regard to poisons was transferred by this Bill to the Home Secretary, who would be assisted by a Poisons Board. Part I of the Bill, which dealt with pharmacy, was intended to strengthen the position of the Pharmaceutical Society and its representative character, and it made every registered pharmacist a member of the society. The sale of poisons in automatic machines would be prohibited. The provisions for removal of pharmacists from the register were re-defined and applied to bodies corporate. All alterations had been made with the concurrence of the Pharmaceutical Society.

Lord ASKWITH said the Bill was of a far-reaching character, and might be the precursor to other Bills. It established the Pharmaceutical Society on a solid basis. Lord PONSONBY, Lord HALSBURY, and Lord BERTIE OF THAME supported the Bill, which was read a second time.

Health Service in Cornwall

Sir HILTON YOUNG told Mr. Price, on March 2nd, that he would make inquiries of the Cornwall County Council concerning the proposal to reduce the number of health visitors in that county from eleven to nine, and to combine their work with that of inspectors of midwives. Mr. PRICE asserted that on more than one occasion the Minister had pointed out to this authority that the medical and clerical staff employed by it on the public health work of the county was insufficient, and did not provide proper maternity and child welfare services.

Ministry of Pensions Mental Hospitals

Major TRYON, replying on March 6th to Mr. Donner, said that the accommodation provided at Maghull Hospital, near Liverpool, which was Crown property and had been used for the treatment of severe cases of epilepsy, had become increasingly in excess of the requirements of his Department. The institution was required by the Board of Control, which was in a position to use it more advantageously for its own cases. He had accordingly arranged for the transfer of the patients now at Maghull and of the medical and nursing staff to Chepstow, where there was another Ministry hospital of more suitable size, and where equivalent accommodation would be provided. In reply to Mr. Donner's question as to the truth of the suggestion that the Minister of Pensions was trying to get all these patients out of Ministry of Pensions hospitals, Major TRYON said that the patients were being transferred from one Ministry of Pensions hospital to another. It was the policy of the Ministry to utilize civil hospitals in preference to duplicating existing facilities, but only so far as this practice was consistent with the interests of ex-service patients, for whom the Ministry was responsible. With the decline in demand for treatment some of the hospitals had necessarily to be dispensed with, but special accommodation would continue to be provided so long as it was needed.

Replying to Mr. Hall Caine, Major TRYON said that no patients for whom the Ministry of Pensions was responsible were at present being treated in any Liverpool civil hospital for their accepted war disabilities. He informed Mr. Brocklebank that there had been no change in the policy of the Ministry with regard to the treatment in Liverpool or anywhere else "of men whose minds were injured by war service." He had no authority to detain or treat in a Ministry institution a certified case of mental unsoundness, but his policy, and that of his predecessors, had been to provide suitable treatment in special institutions for all cases of mental affection for which the Ministry was responsible, so long as they were not certifiable. During the past twelve months only one case had to be transferred in the Liverpool area to a mental hospital, and that was eight months ago. Any statement, such as he believed had recently been publicly made in Liverpool, to the effect that the policy of the Ministry was, in the interests of economy, to transfer men from Ministry institutions to lunatic asylums, was wholly untrue.

Compensation for Road Accidents

The New Road Traffic Bill

In the House of Lords, on March 7th, Lord DANESFORT moved the second reading of the Road Traffic (Compensation for Accidents) Bill. He explained that the first clause provided that where bodily injury was caused as a result of the use of a motor vehicle on a road, damages could be recovered from the person driving the motor vehicle or from any person causing or permitting him to use it, except where an injury was wholly caused by the negligence of the person so injured or by the combined negligence of such person and a third person. There was also a proviso that the clause should not apply to a person who, at the time of the accident, was driving or being carried in or upon a motor vehicle. Clause 2 gave a right to the motorist, in a case where he had to pay under the Bill because his car had actually caused the damage, to obtain indemnity from a third person by whose negligence the accident was actually caused.

Lord MOYNIHAN said that he gave general support to the Bill. He hoped that there would be further inquiry into the *general position with regard to the working of the Road* Traffic Act, and that, by means of such investigation, information would be brought to light with regard to the heavy burden which was at present placed on the medical profession and on hospitals. He realized that a new principle, or a modification of an old one, was inherent in the present Bill. It was the principle of the Common Law of England that if a man was charged with an offence he was considered innocent until he was proved guilty. Under this Bill his guilt would be assumed unless his innocence was established. There was, however, a precedent for such legislation in the Workmen's Compensation Act, under which the onus of proof of negligence rested on the owner of the machinery by which a man was injured or crippled. There was no more dangerous machinery in this or in any other country than the motor vehicle. The position was serious from the point of view of the medical man, who might be taken away from his patients to attend to a motor accident. However much the services of medical men in the treatment of road accidents might be appreciated, he understood that they were very *rarely rewarded. Somehow or other means must be found* whereby medical men in such cases should receive payment. He suggested that a central pool should be established by the insurance companies, and that the fund thus created should be vested in a competent body, and that payments from that fund should relate only to first-aid treatment. A registered medical practitioner rendering such treatment should be paid a fee from the pool unless he was otherwise remunerated for his services. Such a plan would do a great deal to remedy the disadvantages from which medical practitioners were now suffering. The effect of the Road Traffic Act was intended to be beneficial to the hospitals, but in practice it had not been so. Something ought to be done to safeguard the financial position of the hospitals. Unhappily, the burden borne by the hospitals in this matter was chiefly borne by the smaller hospitals. Nothing whatever was done in respect of the out-patient treatment of road accidents, which might be very costly. One of the great disadvantages of the present position was that the supporters of local hospitals were finding that their money was being used for purposes for which it was not intended.

The EARL OF PLYMOUTH said that while there was a considerable amount of precedent for altering the principle of the law in regard to the onus of proof of negligence, in the opinion of the Government Lord Danesfort's Bill went a great deal too far. He suggested that if the Bill was given a second reading Lord Danesfort might be willing to move that the Bill be sent *to a Select Committee, so that the whole matter might* be fully examined. Lord DANESFORT agreed to this course. The Bill was then read a second time by 31 votes to 2, and referred to a Select Committee.

Housing Bill

On March 6th the Housing (Financial Provisions) Bill was considered on report and afterwards read the third time. During the report stage Sir Percy Harris moved an amendment providing that the houses to be built under the guarantees, except where otherwise approved by the Minister on the recommendation of the local authority, should be provided with a fixed ba . Sir FRANCIS FREMANTLE said that during the past thirty years the standard of housing had changed. Whereas it was quite possible to reduce some of the standards to which we had grown accustomed since the war with hardly any harm, a bath was absolutely essential. He was among those who said that the bath need not necessarily be a fixed one. It was all very well for officialdom to say that baths would be provided. He had learnt from a very long experience in actual practice that, especially in the case of the smaller councils, which were not in the public eye, things were allowed to slip through unless it was definitely laid down that they should not be allowed to do so. This question of a bath was one of those things, and he hoped, speaking for medical officers of health and on behalf of the general health of the public, that the Government would reconsider the amendment.

After further discussion, Sir Hilton Young accepted the amendment, which was agreed to. A further amendment by *Mr. Greenwood, to provide bathrooms as well as baths,* was rejected.

In moving the third reading, Sir HILTON YOUNG said he proposed to call on every local authority which *was a housing* authority to prepare a survey of its area from the point of view of slums, and to follow that survey with a programme for the abolition of the slums so revealed. A distinction would be made between those areas which could be dealt with by reconditioning and those which required the more radical remedy of clearance. Each programme should state the periods during which each of the areas would be dealt with. The programme would also provide that a reconditioning area, when all the effects of reconditioning had been exhausted, should become a clearance area. The Government would set no limit to the number of houses that might be thus dealt with. There were ample powers under the Act of 1930 to enable the Minister to carry out this programme after the passage of this Bill, and in case of need there would be no hesitation to put those powers into force. The Government was determined to fix a definite term in which the slum evil would be ended.

Mr. GREENWOOD said that the only idea of the Bill was a return to private enterprise. It contained no single constructive proposal and no word dealing directly or indirectly with slums.

Departmental Committee on Slum Clearance

On March 6th Captain CAZALET asked the Minister of Health whether he was able to announce the terms of reference and composition of the Departmental Committee to be set up with regard to the reconditioning of slums and other matters. Sir HILTON YOUNG said that the terms of reference and the composition of the committee would be as follows:

To consider and report: (*a*) What, if any, further steps are necessary or desirable to secure the maintenance of a proper standard of fitness for human habitation in working-class houses which are neither situate in an area suitable for clearance under Part I of the Housing Act, 1930, nor suitable for demolition under Section 19 of that Act. (*b*) What, if any, further steps are necessary or desirable to promote the supply of houses for the working classes without public charge, through the agency of public utility societies or other bodies subject to similar limitations operating in particular areas or otherwise. Lord Moyne had consented to act as chairman of the committee, and the other members would be Sir Francis Acland, Major Hills, Sir Charles Barrie, Sir Geoffrey Ellis, Sir Vivian Henderson, Miss Horsbrugh, Mr. Lindsay, Major Lloyd George, and Dr. J. V. Worthington.

Causes of Road Accidents.—Lieut.-Colonel HEADLAM states that he is not satisfied that the causes of any considerable proportion of accidents on roads are susceptible of removal by further legislation. Fresh light may, however, be thrown on the subject by the investigation into the causes of fatal accidents which is now being carried out by his Department *with the help of the police.*

Date of Production on Certified Milk.—Captain MCEWEN, on March 2nd, asked Sir Hilton Young whether the Ministry of Health would not alter the requirement that the date of production must be stated on the caps of all bottles of certified milk. Sir HILTON YOUNG replied that, pending decisions on wider questions of policy, he could not at present alter the relevant requirements of the Milk (Special Designations) Order, 1923.

Medical News

At the meeting of the Royal Microscopical Society, in B.M.A. House, Tavistock Square, W.C., on Wednesday, March 15th, at 5.30 p.m., Dr. R. G. Canti will give a cinematograph demonstration of living tissue cells cultivated *in vitro*.

A combined meeting of the Sections of Neurology and Physical Medicine of the Royal Society of Medicine will be held on Thursday, March 16th, at 8.30 p.m., when a discussion on the causation and treatment of interstitial neuritis will be opened by Drs. Wilfred Harris, J. Purdon Martin, M. B. Ray, and J. Barnes Burt. The summer meeting of the Sections of Laryngology and Otology of the Society will be held in Edinburgh on Friday and Saturday, June 2nd and 3rd.

The Kensington Division of the British Medical Association has arranged a discussion on the B.M.A. National Maternity Service Scheme, to take place at the Kensington Town Hall on Tuesday, March 28th, at 8.45 p.m., when representatives of the various interests concerned will take part. Among the openers of the discussion will be a consultant and teacher, a general practitioner, a medical officer of an ante-natal centre, a medical officer of health, and a certified midwife.

At an evening meeting of the Pharmaceutical Society, on March 14th, at 17, Bloomsbury Square, W.C., a lecture on "Some problems in plant pathology" will be given by Mr. H. B. Lacey. The chair will be taken by the president at 8.30 p.m. Members are invited to bring friends.

The St. Patrick's Day dinner of the Irish Medical Schools' and Graduates' Association will be held at the Dorchester Hotel, Park Lane, W., on Friday, March 17th, at 7.30 for 7.45 p.m., with the president, Dr. T. G. Moorhead, in the chair. The guests will be the Right Hon. Sir Dunbar Plunket Barton, Bt., K.C., Dr. W. J. O'Donovan, M.P., and Flight Lieutenant J. MacConnell Kilpatrick, R.A.F. Medical Service.

A course of instruction in modern methods in the diagnosis and treatment of venereal diseases is being held on Fridays, at 2 p.m., in the Municipal Clinic, 155, Regent Road, Salford. Particulars may be had from Dr. E. Tytler Burke, venereal diseases officer to the city.

An international post-graduate course in laryngology, rhinology, and otology, with special reference to treatment, will be held in Vienna from April 3rd to 15th. It is also announced that there will be a course in therapeutics from September 25th to October 6th, and another course in the modern advances in therapeutics from November 27th to December 8th. Free syllabuses of all these courses can be obtained from the secretary of the international post-graduate courses, the University, Ring des 12 November, Vienna 1.

The next lecture in the series Practical Problems in Medicine and Surgery arranged by the Fellowship of Medicine and Post-Graduate Medical Association will be given on March 14th, at 4 p.m., by Dr. Ellman, on recent advances in diagnosis and treatment of chronic diseases of the chest (free to members and associates of the Fellowship). On March 21st Mr. Rea will give a demonstration of the fundus oculi, at 8.30 p.m., at the in-patient department of the West End Hospital for Nervous Diseases, Gloucester Gate, N.W. On March 22nd, at 5 p.m., at the Royal Westminster Ophthalmic Hospital, Broad Street, W.C., Mr. Penman will demonstrate fundi of medical interest, and on March 30th Mr. Gimblett some points in medical ophthalmology (illustrated by epidiascope). Forthcoming courses include: proctology, at the Gordon Hospital, March 20th to 25th; a week-end course in diseases of the chest, at the Brompton Hospital, March 25th and 26th; diseases of infants, at the Infants' Hospital, March 27th to April 7th; a course in ophthalmology, at the Royal Eye Hospital, March 27th to April 8th. Particulars may be had from the secretary, Fellowship of Medicine, 1, Wimpole Street, W.1.

We are asked to state that hospitals situated within eleven miles of St. Paul's desiring to participate in the grants made by King Edward's Hospital Fund for London for the year 1933 must make application before March 31st to the honorary secretaries of the Fund at 7, Walbrook, E.C.4 (G.P.O. Box 465A). Applications will also be considered from convalescent homes which are situated within the above area or which, being situated outside, take a large proportion of patients from London.

In view of the success of the experiment made in 1932, the Central Association for Mental Welfare has again rented the Green Lady Hostel, Littlehampton, for the use of local authorities, managers of institutions, social workers, and others, as a holiday home for mental defectives needing a holiday and change. The hostel will be available for two periods during 1933—from March 31st to May 26th, and again from September 1st to October 27th. Last year over 340 defectives were received at the hostel during the fourteen weeks for which it was rented. There is accommodation for about fifty, including staff. Applications and all inquiries should be addressed to the secretary, C.A.M.W., 24, Buckingham Palace Road, S.W.1.

Dr. John Jones, Dolgelly, has been appointed chairman of the Medical Committee of the King Edward VII Welsh Memorial Association.

The number of deaths from influenza during the first four weeks of the year in fifty-one large German towns with a total population of 19½ million inhabitants was 43, 72, 128, and 450 respectively, as compared with 681, 1,041, 1,589, and 1,934 in 118 of the largest English towns. Although the number of influenza deaths in Germany has exceeded that of the last three previous years it has by no means reached the figures for 1929.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, B.M.A. House, Tavistock Square, W.C.1.**

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Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of proofs.

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The **TELEPHONE NUMBERS** of the British Medical Association and the *British Medical Journal* are MUSEUM *9861, 9862, 9863, and 9864 (internal exchange, four lines).*

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MEDICAL SECRETARY, *Mediaecra Westcent, London.*

The address of the Irish Office of the British Medical Association is 18, Kildare Street, Dublin (telegrams: *Bacillus, Dublin*; telephone: 62550 Dublin), and of the Scottish Office, 7, Drumsheugh Gardens, Edinburgh (telegrams: *Associate, Edinburgh*; telephone: 24361 Edinburgh).

QUERIES AND ANSWERS

Sweating at the Menopause

"H. N. B." writes: I would be grateful if any of your readers could acquaint me with the line of treatment to adopt to minimize or prevent the very numerous exhausting sweatings and flushings associated with the menopause. My patient is a woman, aged 49, who has had three children, the youngest aged 20, and who was treated three and a half years ago by deep *x*-radiation for excessive and irregular menstrual losses. These are now normal in amount and occur at two-monthly intervals; but at points corresponding to the menstrual and mid-menstrual dates—that is, every fourteen days—she suffers a series of very severe and exhausting sweatings which I am unable to control.

"An Obscure Parasite"

Dr. JAMES B. SIMPSON (Golspie) writes: In reply to Dr. Maciver's query (March 4th, p. 397) with regard to "an obscure parasite," referred to in an old Gaelic book, I suggest that the parasite mentioned is the larva of the "bot-fly" or warble fly (*Oestrus*), which infrequently, but not rarely, attacks human beings, as well as cattle, deer, etc. The female bot-fly pierces the skin of the cheek or forehead and deposits an egg. As this develops the part swells and becomes inflamed, and from the small puncture in the centre the "bot" or larva escapes. A number of cases in which this has occurred have been reported in the various medical journals dating back to the fifties and sixties of last century. A full account of these was given a few years ago in the *Edinburgh Medical Journal* by Mr. D. M. Greig, curator of the Royal College of Surgeons Museum in Edinburgh.

*** An article on the larva of the warble fly as a human parasite, by Dr. F. W. Stile, appeared in the *British Medical Journal* of June 21st, 1924.

Heating Rooms

"M.B., M.Ch." writes: I think "F. J. L." (February 11th, p. 256) would be very satisfied with a "cozy stove," which can be used "open or closed" at will. It burns all night and requires about 25 per cent. less coal than the ordinary fire. It can be seen at 42, Berners Street, W. The Esse Vista is a similar stove, and can be seen at 11, Ludgate Circus, E.C.

Income Tax

Tax on Salary

"H. H." is an Australian who came to this country over two years ago. In 1932 he completed a diploma course in radiology, and since April 5th, 1932, has earned £162 in locum fees. In January he obtained a whole-time appointment at a salary of £400 per annum, plus a proportion of private fees, payable quarterly. What is his liability to tax as a married man?

*** Presumably "H. H." will receive a formal application to make a declaration of his income as soon as the authorities became aware of his appointment. His liability will be as follows:

	£
Schedule D: £162 less 1/5 (earned income relief) =	130
Schedule E: Proportion of £400 for period to April 5th, 1932, say, £85, plus proportion of fees for same period, say, £15 = £100, less earned income relief (1/5 of £100) = £20 =	80
	£210
Deduct personal allowance as a married man ...	150
	£ 60
Tax at 2s. 6d. in the £	£7 10

The above would be subject to deductions for agents' fees and travelling expenses in connexion with the locum work, if not already deducted in arriving at the £162.

LETTERS, NOTES, ETC.

First Successful Caesarean Section in England

Dr. HERBERT R. SPENCER writes with reference to his letter published last week at page 390: Another correction, please. Chorley and Blackburn, where James Barlow lived, are in Lancashire, not Cheshire.

Colloidal Iodine

Dr. HASSAN BEY SHAHEEN, M.Ch. (Cairo), writes: I should like to bring before your readers the following observations, which I hope they will find useful. In the course of treating cases of chronic otitis sicca by intravenous injections of collosal iodine, I found that the treatment is also efficacious in the following diseases: (1) rheumatism, sciatica, arthritis; (2) acne; (3) deafness and tinnitus; (4) parenchymatous goitre; (5) some eye diseases (vitreous opacities); and (6) chronic laryngitis. The effect in these diseases is wonderful. The symptoms and signs seem to respond immediately to this treatment. I have seen faces full of acne clear up after 50 c.cm. given intravenously, and cases of goitre diminish in size or disappear in no time. Dr. Dan McKenzie, to whom I communicated my method in 1928, read a paper at the Otological Section of the Royal Society of Medicine in 1929, entitled, "The symptomatic treatment of deafness," in which he says of the injections: "Curiously enough, it seems to produce no apparent general effects. There is no sign of shock—for example, rigor and pyrexia—as with so many other intravenous remedies; there is no subsequent iodism, and we soon found that it was quite safe to let the patients return home immediately after each injection." I regret to say that I cannot concur with Dr. McKenzie's observations. My own experience of about 2,500 cases both at Kasr-el-Aini Hospital and in private practice show that, though no serious symptoms happen, yet in some cases rigor and pyrexia take place. These symptoms usually disappear on taking aspirin. The effect of this treatment on unrelievable deafness and tinnitus has been detailed in my previous papers on the subject. Its effect on some eye diseases has also been observed by myself and corroborated by my colleagues in the ophthalmological section of the hospital, where the treatment is now, I understand, used on a large scale.

Pepys's Urticaria

Dr. G. M. WAUCHOPE (Hove) writes: Sir D'Arcy Power's most interesting account of the medical history of Mr. and Mrs. Samuel Pepys (*Journal*, February 25th, p. 325) tempts me to recall Pepys's description of an attack of urticaria which overtook him on Sunday, February 8th, 1663, when he was walking in the park, "it being a very great frost."

"Whether the wind and the cold did cause it or no I know not, but having been this day or two mightily troubled with an itching all over my body which I took to be a louse or two that might bite me, I found this afternoon that all my body is inflamed, and my face in a sad redness and swelling and pimpled, so that I was before we had done walking not only sick but ashamed of myself to see myself so changed in my countenance, so that after we had thus talked we parted; . . . At last got home and to bed presently, and had a very bad night of it, in great pain in my stomach, and in great fever.

"9th. Could not rise and go to the Duke as I should have done, but keep my bed and by the Apothecary's advice I am to sweat soundly, it being some disorder given the blood, and by what I know not, unless it be by my late quantitys of Dantzic-girkins that I have eaten. Sir J. Minnes advises me to the same thing but would not have me take anything from the apothecary, but from him, his Venice treacle being better, which I did consent to and fell into a great sweat; and about 10 or 11 o'clock came out of it, and slept pretty well."

Spastic Intestine

Dr. R. CHALMERS (Darlington), in a letter on this subject, writes: Dr. Eve's paper in the *Journal* of March 4th (p. 364) on disordered regulation of traffic in the gut is opportune, because of the prevalence at the present time of spastic conditions of the gut. Commonly the splenic flexure is dilated, raising the left leaf of the diaphragm and frequently resulting in dyspnoea, cardiac disability, and shoulder girdle neuralgias. In some patients one sees evidence of the disturbed vegetative nervous system changing from one region to another.

Contraceptive Technique

We are asked to state that lectures and demonstrations in contraceptive methods are given to medical students at the headquarters of the Society for the Provision of Birth Control Clinics, at 153A, East Street, Walworth Road, S.E.17. Readers wishing for further particulars are invited to write to the secretary, Mrs. Evelyn Fuller.

The British Legion

The annual report of the British Legion for the twelve months ending September, 1932, reveals a measurable advance in the value of the unemployment bureaux, despite the continued depression. Considerable benefit has been derived as the result of the recommendation of the Royal Commission on Unemployment Insurance that at least 50 per cent. of a disability pension should be ignored when considering applications for transitional payment and for outdoor relief. The British Legion Village at Aylesford, Kent, had a most successful year, an increased number of patients being admitted and discharged after effective treatment. The new bronchoscope has proved to be very useful, and it is proposed to issue during the current year a medical report on the results obtained as regards treatment and diagnosis. An extension of the principle of producing *x*-ray photographs from negative films has been greatly appreciated by tuberculosis officers in connexion with the transference to their supervision of discharged patients.

Vacancies

Notifications of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 44, 46, 47, 48, 49, 52, and 53 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 50 and 51.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 91.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

174 Diphtheria in Immunized Patients

J. TOMCSIK (*Deut. med. Woch.*, November 25th, 1932, p. 1884) reports the after-histories of 100,000 children who were immunized three times with diphtheria antitoxin; of these only 10 per cent. contracted diphtheria. His statistics are as follows: children from 0 to 2 years, 6 per cent.; 3 to 4 years, 23 per cent.; 5 to 6 years, 23 per cent.; 7 to 8 years, 36 per cent.; 9 to 10 years, 8 per cent.; 11 to 12 years, 7 per cent. Thus 86 per cent. of the immunized children were under 8 years old. The mortality of diphtheria in children under 8 who have not been immunized is stated to be 10 per cent. In the author's cases the disease was mild in 75 per cent., and there was a mortality of only 3 per cent. He points out that there are a number of patients who are unable even with three immunizations to produce sufficient antibodies to combat the invasion of the diphtheria bacillus.

175 Incidence of Actinomyces in the Mouth

O. BJERRUM and S. HANSEN (*Ugeskrift for Laeger*, November 10th, 1932, p. 1075) report from the Rigshospital in Copenhagen a systematic search for actinomyces in the pus of seemingly innocent gumboils and other suppurative conditions in the mouth. The tooth and its surroundings were first carefully painted with iodine; the pus was removed on a sterile spatula after incision and introduced into a sterile glass tube. Among 112 such samples of pus there were as many as twenty-seven from which anaerobic actinomyces could be cultivated. The clinical behaviour of these twenty-seven cases was practically identical with that of the other cases; all the twenty-seven were re-examined some months later, and complete healing was invariably found to have followed the incision and dental extraction. Among thirty teeth presenting periodontitis there were as many as twenty on which anaerobic actinomyces were found. Yet in all these twenty cases uneventful healing followed the dental extraction. A search was then made for actinomyces outside the mouth, in the pus from abscesses in the face and neck. Among seventy-two such cases there were thirteen (18 per cent.) in which actinomyces were found. The authors are unable categorically to dismiss the possibility that the actinomyces found near diseased teeth may have been the original source of infection of the many acute cases of cervicofacial actinomycosis hitherto overlooked because rapid healing has usually followed ordinary surgical treatment.

176 Prognosis in Coronary Thrombosis

C. F. COOMBS (*Bristol Med.-Chir. Journ.*, Winter, 1932, p. 277) discusses the prognosis in coronary thrombosis on the basis of a series of 144 patients seen by himself. Death occurred during or shortly after the attack in forty-nine of these cases. Of the survivors about one in three died within the next twelve months. Classified according to age, the results were as follows. In forty-eight patients under the age of 60, 66.6 per cent. of the attacks were non-fatal immediately and 51.8 per cent. were surviving a year later. In sixty-six patients between the ages of 60 and 69, 75.7 per cent. of the attacks were non-fatal and 71.1 per cent. were surviving a year or more subsequently. In thirty patients aged 70 or over, 43.3 per cent. of the attacks were non-fatal and 70 per cent. were surviving a year later. The percentage of immediately non-fatal attacks in males was 68.8 and in females 57.9, but the survival figures for a year or more were 58 per cent. in men and 75 per cent. in women. A family history of liability to coronary disease seems to be an unfavourable feature. The presence or absence of a pericardial rub affords a simple criterion of the degree of cardiac damage; the immediate prognosis is rather worse in cases where such a rub is detectable, and also in cases when the pain is abdominal rather than thoracic. Persistent ventricular tachycardia is generally admitted to imply a poor outlook. Indications of failure of the heart to fill the peripheral circulation are ominous; they include extreme pallor and a fall in the systolic tension. Coombs found reasons in clinical practice for considering the pulse pressure as normal if it was about 40 per cent. of the systolic pressure; in coronary thrombosis and other forms of severe ventricular failure it might fall to as low a figure as 10 per cent. A fall to 25 per cent. is shown by his investigations to be a bad sign, but it is not to be deduced, however, that patients with a wide blood pressure are sure to recover. An alternating pulse is seldom found except when the immediate attack has been survived and secondary ventricular failure has set in. Persistence of fever and leucocytosis are bad signs; returning vigour of the heart sounds and beat and a rise in the blood pressure are favourable. Such complications as glycosuria and embolic accidents make the outlook graver still. Coombs concludes that in many of the surviving cases there is evidence that an apparently complete recovery has taken place. With an increasing accuracy of early diagnosis the prognosis is improving. Early diagnosis leads to thorough treatment, based on an adequate period of rest, and in this way an appreciable number of lives can be saved. [Soon after the publication of this paper its author died from the disease which he had studied so particularly.]

177 Spontaneous Cure of Tuberculous Cavities in the Lung

B. TOSI (*L'Ospedale Maggiore*, September, 1932, p. 531), who records five illustrative cases in patients aged from 8 to 53, states that among 457 cases of pulmonary tuberculosis with cavities reported by May, in twenty-seven the cavity became spontaneously obliterated, and in twenty-nine there was considerable diminution in its size, while in 319 cases of cavity diagnosed by Baret the proportion of recoveries was 9.6 per cent. Though the possibility of such recovery was known to observers in the early part of the nineteenth century, such as Laennec and Andral, recent radiological studies have shown that the event is less rare than is supposed. The process of recovery may take place, according to Wolf, in four ways—namely, by (1) fibrous retraction of the wall of the cavity, (2) subsequent adhesion of the walls of the cavity, (3) absorption of the area of infiltration round the cavity, and (4) transformation of small cavities into connective tissue and calcified nodules.

178 Migraine

H. A. RILEY (*Bull. Neurol. Inst. of New York*, November, 1932, p. 429) records an extensive review of the literature on migraine, and discusses its aetiology, pathology, and treatment. He considers that the presence of congenital and familial factors is unquestionable: statistical studies seem to indicate that a history of maternal inheritance is more usual than that of paternal transmission. There is also some association with an inherited tendency to certain cutaneous disorders of allergic origin. Evidence is accumulating that the ophthalmoplegic type may depend upon factors quite foreign to the central concept of migraine, the headache being the only common factor in the manifestations. Riley remarks that grave doubts may be entertained as to the validity of the facioplegic form, and also possibly of the psychic form, but that the visceral types (affecting the organs of the thoracic and abdominal cavities) deserve more extended study. As regards aetiology, the reflex and central theories, he adds, can be disregarded; the allergic theory is supported by a great mass of clinical evidence, but throws no light

on the central mechanism of migraine. The anatomical position of the pituitary gland and its relation to the menstrual function indicate a possible aetiology in some cases: patients suffering from migraine have demonstrable disturbances of the hormone balance. The vasomotor apparatus still remains the most plausible origin of the varying manifestations, but much remains to be elucidated as regards the metabolic and biochemical processes in these patients. The great variety of commended therapeutic procedures suggests that the mechanism of migraine may be influenced from several quarters, and the specific therapy of the condition will not be determined until the mechanism of the attacks is more fully understood. At present attempts at relief are directed towards the alleviation of what appear to be vascular crises in the attack and the equalization of a disturbed hormone balance in the intervals between seizures.

179 Mussel and Oyster Poisoning

E. LESCHKE (*Münch. med. Woch.*, December 2nd, 1932, p. 1959) describes three causes of poisoning in patients who had eaten mussels or oysters. Such a sequel may be due to the fact that mussels ingest and store poisons similar in their action to curare and atropine; this has been experimentally confirmed in aquaria. (If the molluscs are no longer fresh when eaten poisoning may also occur from the decomposition products. In a few cases patients suffer from paratyphoid fever or botulism as a result of contamination of the water in which the fish have been preserved.) The patient complains of a feeling of tightness in the chest and neck. He becomes very anxious, and, while complaining of cold, sweats copiously. There are sensory and motor disturbances. In acute cases death may occur in one to five hours. The stomach should be washed out and purgatives be given. In some cases bromides will be needed.

180 Weil's Disease in Holland

W. A. P. SCHÜFFNER (*Nederl. Tijdschr. v. Geneesk.*, December 3rd, 1932, p. 5548) states that from January 1st to October 1st, 1932, 186 cases of Weil's disease were notified in Holland—a number not much less than the total notified in that country since 1924. The incidence varied considerably in different areas; thus, 140 cases occurred in South Holland, seventeen in North Holland, seven each in Utrecht and Limburg, four each in North Brabant, Groningen, and Gelderland, two in Zealand, and one in Drenthe. The towns most affected were Amsterdam and Dordrecht. In Amsterdam the disease was in most cases contracted by falling into one of the canals. In Dordrecht, on the other hand, where there was an epidemic last summer, the disease was chiefly contracted in the swimming baths, infection taking place once in every 6,000 baths.

Surgery

181 Unilateral Exophthalmos in Intracranial Tumours

C. A. ELSBERG, C. C. HARE, and C. G. DYKE (*Surg., Gynecol. and Obstet.*, December, 1932, p. 681) record a study of marked unilateral exophthalmos occurring in fifteen patients included in a series of 807 intracranial tumours. Most of the tumours were meningiomata, but exophthalmos occurred also in a case of primary carcinoma of a sweat gland of the scalp, in an epidermoid in the middle cranial fossa, in a case of Paget's disease with intracranial complications, and in two cases of orbito-ethmoidal osteoma. The authors add that the unilateral form may also occur in metastatic carcinoma and in venous and arterio-venous angiomata. Meningiomata and the cranial hyperostoses present with these growths are a frequent cause of protrusion of one eyeball. The exophthalmos was on the left side in nine and on the right in six of the fifteen patients; eight were females and seven males. The lesion was on the left side in seven females and on the right in five males. This predilection of site in each sex is considered noteworthy. The protrusion of the eyeball was most frequently due to perforation of the tumour into the orbit, thickening of the orbital walls, extension of the growth through an enlarged supraorbital fissure, or increased pressure in the middle cranial fossa directly transmitted to the orbit through this fissure. Cases may be divided into the following groups: those in which the exophthalmos and cranial deformity were the only symptoms; those in which other symptoms supervened, such as headache, failing vision, and convulsive seizures; those with a history of slowly progressive frontal enlargement, with exophthalmos finally and signs of increased intracranial pressure. In many of the patients there was a cranial hyperostosis—visible when on the vertex and demonstrable by *x* rays when on the base. Short notes on six typical cases are given, and the radiological examinations of ten are tabulated. Owing to the extension of the tumour in many instances, the operative results were not very good; they might have been better with earlier intervention. The authors believe that, in the absence of demonstrable disease in the orbit or neighbouring air sinuses, a slowly increasing unilateral exophthalmos may indicate an intracranial lesion.

182 Diagnosis of Pneumococcal Peritonitis

O. LOEWE (*Zentralbl. f. Chir.*, December 17th, 1932, p. 3049) points out that female children suffering from pneumococcal peritonitis are too often operated on for "appendicitis," with fatal results. The author deprecates the heroic diagnostic method of abdominal puncture, and suggests puncture of the pouch of Douglas as an alternative method. The child is anaesthetized, and a trocar is introduced into the vagina without rupturing the hymen. When resistance by the posterior fornix is encountered, a thin-bore needle is inserted into the trocar. With a finger in the rectum the needle is guided into the pouch of Douglas and pus is aspirated. Loewe is of the opinion that it does not matter whether the needle passes through the cervix, posterior uterine wall, or posterior fornix. The aspirated pus is rapidly stained and examined microscopically. Cultures of the pus will confirm the differential diagnosis between appendicitis and pneumococcal peritonitis. Since the latter condition occurs practically only in females the author believes this method to be the most easy and rapid one in obtaining information as to the bacteriology of the peritoneal exudate.

183 Operative Relief of Prostatic Obstruction

In considering the treatment of prostatic obstruction H. G. BUGBEE (*Journ. Amer. Med. Assoc.*, November 26th, 1932, p. 1832) emphasizes the basic facts: (1) a patient suffering from prostatic obstruction is not a good surgical risk, and can never be looked upon lightly from this standpoint; (2) changes incidental to this obstruction have taken place slowly, and cannot be rectified rapidly; (3) the object of all treatment is to relieve the obstruction permanently with the greatest possible margin of safety to the patient. The earlier surgical attempts to relieve this condition were attended by a high mortality owing to lack of a clear understanding of the pathology of the prostate gland and of the secondary changes in it, and also to incomplete operation. With the dawn of fuller knowledge in these respects has come a fuller preparation of the patient, with a better technique; prostatectomy now compares favourably with other operations of the same degree of severity. Bugbee discusses the literature relating to the evolution of prostatic surgery, and records his own experience. He believes that a real advance of major significance has been made by the present intra-urethral methods of approach. With the perfection of modern cystoscopes and urethroscopes, and the use of electrodes capable of conveying high-frequency currents of high potential, the removal of sections of prostatic tissue of sufficient size to relieve obstruction is possible in carefully selected cases, in full vision, and with control of haemorrhage. H. C. BUMPUS (*ibid.*, p. 1836) reports the results of prostatic resection over a period of seven

years. He is satisfied that the late sequels of transurethral resection indicate that recurrence of the obstruction is the exception, even in cases of adenofibromatous hypertrophy. Complete relief from residual urine by the entire removal of all obstructing tissue is essential to success, and therefore renders the transurethral resection of excessive amounts of tissue to relieve obstruction a hazardous procedure, preferably undertaken by prostatectomy.

184 Fibular Grafts in Fractures of the Neck of the Femur

B. KILVINGTON (*Aust. and New Zeal. Journ. of Surg.*, October, 1932, p. 152) describes Nordenbos's fibular graft method of treating fractures of the femoral neck. The latter has employed this technique in 160 cases with constant success. Gas and oxygen anaesthesia gives sufficient relaxation. Traction, continued during the operation, is made by an assistant. Three positions of the limb must be maintained: extension, to secure equal lengths of the limbs; internal rotation of the whole limb to an angle of 12 to 15 degrees; and full abduction of the leg at the hip. The fibular graft of 5 inches is taken from the same side, and scraped clean. The incision (6 to 8 inches long) to expose the femur is made down to the bone and lateral to the trochanter. A small drill is now inserted for about 4 inches; this enters the bone about half an inch below the great trochanter, and passes horizontally to the opposite anterior superior iliac spine. The graft is hammered in this track, a thimble being used over the end to prevent splitting. The excess of fibular bone is clipped off. Over-extension of the limb, and too deep an insertion of the graft, must be avoided. The wound is closed with catgut, and the limb is put up in plaster, which should extend almost from the axilla to the toes on the injured side. Nordenbos, in addition, includes the sound leg in the plaster as far as the knee. After three months the plaster is removed; massage is given and movements of the hip and knee are encouraged. At the end of six months the leg should be capable of any movement, and walking, with the leg in a splint, may be allowed. In nine months the limb should be strong, with little or no shortening, and no outward rotation at the hip. Most patients, except the very old and decrepit, stand this operation well. With intertrochanteric fractures a broad raw area for bone union is present, so grafting is unnecessary, though it does no harm.

Therapeutics

185 Treatment of Strychnine Poisoning

M. C. WHEELOCK (*Journ. Amer. Med. Assoc.*, November 26th, 1932, p. 1862) records a case of the successful treatment of strychnine poisoning by the injection of phenobarbital sodium and sodium amytal. When first seen, the patient was suffering from severe convulsions with cyanosis; there was marked opisthotonos, with rigid extension of the legs and flexion of the arms on the chest. An intravenous injection of 5 grains of phenobarbital sodium was given without complete relief, so 15 grains of sodium amytal dissolved in 10 c.cm. of water were administered intravenously, 1 c.cm. per minute. At about the fourth minute subsequently the patient began to doze, and at the end of the tenth she was in a deep sleep. Only a few slight spasms followed in the course of the day. Further therapy consisted of the oral administration of a mixture of the three bromides. The later physical symptoms were soreness of the muscles and a marked weakness of the neck. No attempt was made to wash out the stomach. It was calculated that the patient must have taken about 1 grain of strychnine sulphate. The author concludes that the dramatic results obtained in this case afford justification for the trial of intravenous injections of phenobarbital sodium and sodium amytal as antidotes for strychnine poisoning, and adds that animal experiments have been previously found to support this conclusion.

186 Combined Sugar and Insulin Therapy in Cardiac Insufficiency

RIMBAUD, BALMÉS, and MARTIN have reported astonishingly good results from the administration of sugar and insulin in cases of asystole, right and left ventricular insufficiency, and of dys- and hypo-systole cases which did not respond to the usual cardiac tonics. Ten units of insulin were injected subcutaneously, and about fifteen minutes later 100 grams of a 50 per cent. aqueous solution of glucose were given orally. A. L. JORGE and J. P. SOBRINHO (*Presse Méd.*, December 24th, 1932, p. 1951) have employed this treatment in ten cases, detailed descriptions of five being given. In cases of right ventricular insufficiency, following the combined administration of these substances, the present authors noted an almost constant improvement in the subjective symptoms, such as dyspnoea; a marked though not always constant action on diuresis, oedema, and the weight; and sometimes an appreciable effect on the venous pressure, which may return to normal. Slight improvements in the pulse and electrocardiograms were also noted. Jorge and Sobrinho have adopted the dosage outlined in the recorded cases; this ranged from 10 to 20 units of insulin, and from 100 to 200 grams of glucose. The present authors add that the administration of other cardiac tonics may be associated with this treatment.

187 Treatment of Pernicious Anaemia

R. S. MORRIS *et al.* (*Amer. Journ. Med. Sci.*, December, 1932, p. 778) refer to the efficacious use of hog's stomach in pernicious anaemia, and to the work of Castle, which showed that an unknown substance was present in normal gastric juice which is lacking in the gastric secretion in this blood dyscrasia. As a result of these studies the present investigators, believing that this unknown substance, though ineffective when given orally, might cause a response if administered parenterally, studied the results in pernicious anaemia of giving injections of gastric juice. A product has been obtained from the gastric juice of swine which gives rise to no leucocytosis; it causes a slight local reaction with practically no fever, and a reticulocyte response beginning on the third day after a single injection equivalent to 500 c.cm. of the original volume of the gastric juice. Sixty-two injections, ranging in amount from 5 to 25 c.cm., have been given; these were made deeply into the gluteal or thigh muscles, either preceded or accompanied by sufficient procaine to make a 1 per cent. solution. This anti-anaemic substance is thermolabile, dialysable, and exhaustible, and has been named "addisin" by the authors. There is evidence that this is the physiological stimulant of the bone marrow which maintains the blood cells and haemoglobin at a normal level. It has proved efficacious in Addison's disease and may be of value in other blood dyscrasias; its effects on the cord changes in pernicious anaemia have not been determined.

188 Association of Quinidine and Digitalis

Pharmacological studies of the combined actions of digitalis and quinidine are particularly interesting in view of the fact that while the two drugs act similarly in some respects, they produce diametrically opposite effects as regards other phenomena. H. GOLD, W. MODELL, and L. PRICE (*Arch. Int. Med.*, November, 1932, p. 766) have therefore endeavoured to establish the effect of quinidine in the presence of an ectopic rhythm that is introduced most consistently by digitalis—namely, ventricular tachycardia. They state that rather striking results were obtained on dogs. Quinidine and digitalis together were found to produce effects that are hardly ever seen when either of the two drugs is being tested alone. In the heart poisoned by digitalis, quinidine under some conditions may exert an apparently favourable influence, and temporarily abolish the toxic rhythms caused by digitalis, while, with a change in the conditions, it may provoke serious reactions that may even prove fatal in doses that are never fatal in the normal undigitalized animal, but are yet comparable with those well within the range of

therapeutic doses for man. The general conclusion of the authors is that the use of quinidine to abolish ventricular tachycardia from any cause is dangerous in the presence of A-V block. In treating patients with auricular fibrillation, digitalis is usually given to relieve the cardiac failure, and quinidine to re-establish the normal rhythm. If ventricular tachycardia, however, has been induced by digitalis, quinidine may abolish this ectopic rhythm, and at the same time slow the sinus, re-establishing a normal sinus rhythm that is considerably slower than the ectopic rhythm that was abolished. But, in the presence of A-V block induced by digitalis, doses of quinidine as low as 5 mg. sufficed to abolish the ventricular tachycardia, resulting frequently in prolonged periods of ventricular standstill. This effect is attributed by the authors to inhibition of the ventricular automatic action, consequent on its previous excitation by digitalis; the abolition of the abnormal rhythm may be followed by a still more serious state of the ventricle—namely, complete ventricular arrest. They add that it is a striking fact that total doses of quinidine alone up to 40 mg. cause only auricular acceleration, whereas doses as small as 3 mg. during digitalis poisoning may cause auricular standstill.

Neurology and Psychology

189 Comparative Sterility of Schizophrenics

A. J. NISSEN (*Nord. Med. Tidskrift*, November 26th, 1932, p. 929) has investigated the number of offspring of 322 patients treated for schizophrenia in a public asylum in Norway in the period 1929–32. There were 170 men and 152 women, who were classed in age groups of five years each up to the age of 50. Patients between the ages of 50 and 60 were classed in one group by themselves, and all who were 60 or more were classed in another group. The Norwegian census of 1920 served as a control, although for this purpose it was apt to be misleading, partly because the birth rate in Norway has declined somewhat since 1920. The analysis showed that the proportion of schizophrenics who marry is much below that of the general population; the proportion of childless marriages was also much greater among the schizophrenics. Thus, of thirty-two married schizophrenic males, 12.5 per cent. were childless, and of forty-one married schizophrenic women, 24.4 per cent. were childless, whereas in the general population only 9.43 per cent. of the married women were childless in their marriage. The average number of children born to each patient in wedlock was 2.67 (2.91 for men and 2.49 for women), whereas in the general population this average was as high as 4.02. The 322 patients had begotten altogether 226 children—170 men begetting 100 children, and 152 women giving birth to 126 children. It should be noted that these children included illegitimate offspring, the proportion of the last named being comparatively high. Considering how sterile schizophrenics are, to judge by these figures, in comparison with the general population, the author asks how such an hereditary disease as schizophrenia can have escaped being bred out of the human race in the past. He suggests that there may be other factors at work in recruiting new cases of schizophrenia.

190 Effects of Lightning on the Nervous System

M. CRITCHLEY (*Bristol Med.-Chir. Journ.*, Winter, 1932, p. 285) reviews the literature on the effects of lightning with special reference to the nervous system. He recalls that a flash comprises an electrical discharge operating at a potential of several thousand million volts, generating 20,000 to 100,000 amperes; the current is of the alternating type with a large number of reversals each second. The duration of the discharge is approximately 1/1000 second. The cause of death has been variously attributed to ventricular fibrillation, and the medullary inhibition of respiration. Within the nervous system gross lesions may be noted. There may be extravasations of blood from the meninges or from smaller vessels within the medullary substance; in some cases the whole brain has been found diffluent and disorganized, as though it had been subjected to the action of high temperatures. In contradistinction to electrical accidents the victim experiences little or no sensation when struck by lightning; Critchley doubts whether such significance can be attached to this, for there may be a short period of retrograde amnesia which obliterates possibly the memory of actually abundant sensory disturbances. The consciousness is almost immediately lost; the patient lies immobile, and shows none of the restlessness, tremor, or myoclonic twitchings which may be seen after electrical shock. The respiratory and circulatory upset is, however, very severe. Recovery of consciousness is usually fairly abrupt. The patient may pass into a state of noisy excitement, with restlessness or anxiety; sleep is usually much disturbed on the night following the accident, and an excitement stage may persist for a week or so. The chief nervous sequel appears to be impairment of nerve function. As soon as he recovers consciousness, the patient usually notices an immobility and loss of feeling in the legs and the lower part of the trunk, many having the sensation of there being nothing below the waist: actual paraplegia of a flaccid type, combined with objective loss of sensation, does occur. This begins to pass off in about an hour, and at the end of twelve hours there is, as a rule, no demonstrable loss of power or sensation, although a sluggishness of the tendon jerks has been recorded. During this period of paraplegia severe vasomotor changes are often present, the legs being white or livid, the toes often bluish, and the limbs icy cold. The actiology of these manifestations is still conjectural, some authorities considering them psychogenic; this is apparently borne out by the return of dysaesthesias subsequently, particularly during thunderstorms. Others do not agree, suspect an organic basis: permanent neurological sequelae have been recorded, testifying to a severe structural affection of the nervous system. Examples are cited of these. Well-known organic neurological disorders, such as disseminated sclerosis, may at times seem to have been precipitated by lightning stroke; on the other hand, there are records of the consequent instantaneous cure of chronic nervous disorders of the functional type.

191 Interstitial Hypertrophic Neuritis

A. WOLF, A. H. RUBINOWITZ, and S. C. BURCHELL (*Bull. Neurol. Inst. of New York*, November, 1932, p. 373) record three cases of the interstitial hypertrophic neuritis of Déjerine and Sottas, and discuss the literature of the relatively rare disease, forty cases only having been recorded hitherto. Of these, thirteen were clinically typical and histologically established; four were histologically characteristic, but the clinical data were inadequate or had some unusual aspect; twelve were clinically typical; but lacked adequate histological confirmation; while in eleven the pathological reports were lacking and the clinical features were atypical or ambiguous. The essential clinical criteria of the disease are: (1) the signs and symptoms of disease of the peripheral nerves; (2) palpable nerve trunks; and (3) a progressive course. Exceptional cases are encountered, however, in which the diagnosis can only be established by biopsy. The variable clinical features of the disease are familial incidence, onset in childhood, motor disturbance with or without loss of sensation, Argyll Robertson pupils, intention tremor, ataxia, nystagmus, scanning speech, and kyphoscoliosis and other skeletal deformities. The essential pathological features of the disease are: (1) uniform gross thickening of the nerve trunks, of wide distribution; and (2) the characteristic hypertrophy of the Schwann sheath which produces the concentric laminated structures that are termed "onion bulbs." Secondary histological features are: (1) degeneration and shrinking of the myelin away from the axis cylinder and toward the outer sheath; (2) degeneration and proliferation of the axis cylinder; secondary degeneration in the dorsal columns; and occasional gross thickening of the spinal roots, but frequently microscopical involvement. The patients of the present authors were two young men and a woman, in whom the disease had begun at the ages of 12, 13, and 26; there was no familial history in any of them.

The chief clinical features were the signs of a severe slowly progressing polyneuritis, associated with paralysis; muscular atrophy; and palpably thickened peripheral nerves. Both upper and lower extremities were involved, the lower more than the upper. Lancinating pain or muscular cramps occurred in all the cases; two showed a neuritic type of sensory disturbance. The pupils reacted to light sluggishly in two cases, and promptly in the third. Fibrillary contractions were present in two patients, and absent in the third. None of the patients had scanning speech, nystagmus, or evidence of kyphoscoliosis.

Obstetrics and Gynaecology

192 Contraindications to Caesarean Section

According to W. A. COOKE (*Journ. Amer. Med. Assoc.*, November 26th, p. 1823) a high percentage of the deaths which follow Caesarean section occur in patients in whom contraindications to this operation were present previously. While it is impossible to enumerate such contraindications, since individual considerations in each case are so important, it is possible to state that this procedure should never be adopted when the probable maternal mortality risk would be greater after section than after any alternative method of delivery. Three groups of contraindications are indicated: the existence of infection, actual or potential, in the genital tract; the lack of a valid indication for the operation; and, almost universally, the convulsive stage of eclampsia. These groups are discussed in detail, and the warning is added that pain, fatigue, and fear for the safety of the child must only rarely be considered to be adequate excuses for the performance of Caesarean section. As regards the prevention of genital infection, it is mentioned that the majority of cases of labour in the care of a competent obstetrician can be conducted under the guidance of abdominal examination; vaginal examination increases very much the possibility of infection. Similarly, the failure of attempted obstetrical manœuvres through the vagina is held to constitute an absolute contraindication to subsequent Caesarean section. It must be remembered, also, that micro-organisms can nearly always be found in the uterus of a patient who has been for some time in labour, in whom the cervix has been materially dilated, or in whom the membranes have been ruptured for so long as four hours. Two simple rules are given. There must be no invasion of the vagina (by examinations, douches, or intercourse) during the last two months of pregnancy. Each case of labour should be conducted as though it were certain that Caesarean section would have to be performed eventually; no vaginal or rectal examinations should be made, except when imperatively demanded in the interests of the patient, and not more than two if section is to be performed. In cases of disproportion between the foetus and the maternal passages time is often effective in overcoming the difficulty. Too much gravity is often attached to apparently inadequate uterine contractions and rigidity of the cervix, as well as to minor degrees of placenta praevia. Cooke adds that, even in unskilled hands, the procedures alternative to Caesarean section carry a total maternal mortality risk from shock, haemorrhage, and infection which is less than that of section performed in the presence of contraindications.

193 Maintenance of Gestation

A. M. HAIN (*Quart. Journ. Exper. Physiol.*, December 13th, 1932, p. 249) has found that the gestation period in the rat can be prolonged from four to ten days by the administration of: (1) anterior pituitary tissue; (2) extract of human pregnancy urine (Wiesner and Marshall); (3) alkaline pituitary extract (Teel); and (4) the growth hormone of the anterior pituitary, consisting of an alkaline extract treated with Na_2SO_4 (Van Dyke and Wallen-Lawrence). Pregnancy is apt to be interrupted when injection of the urine extract is made in the early stages. The author suggests that the pregnant condition is not maintained solely by the corpus luteum, and that parturition is not due merely to degeneration of that body.

194 Aberrant Endometrium

L. L. HILL (*Amer. Journ. Surg.*, November, 1932, p. 303) discusses the not infrequent incidence of tissue resembling the true endometrium or endosalpinx in such foreign situations as the round ligament and pelvic cavity, a condition which Sampson recognized as a definite clinical entity. From the records of Touro Infirmary, Alabama, the present author collected 135 cases in a series of 1,200 patients operated on for some pelvic disorder between January, 1927, and January, 1931. Of these 151 cases, 15 per cent. were adenomyomata of the uterus and 85 per cent. were peritoneal endometriomata. The aberrant endometrium in the pelvis was considered to be sufficiently extensive to give rise to some of the symptoms in 26 per cent. of the patients in the entire series. The correct diagnosis was made at the time of operation in 58 per cent. of patients on the gynaecological side of the infirmary, and in only 2 per cent. on the general surgical side. Fibroids were associated with the aberrant endometrial tissue in 46 per cent. of the patients; pelvic inflammatory disease was present in 37 per cent. The youngest patient in the series was 16 years of age, and the oldest 61; most of the patients were between the ages of 20 and 45. Menorrhagia was a symptom in 22 per cent.; metrorhagia in 11 per cent.; dysmenorrhoea in 31 per cent.; and there were no menstrual disturbances in 48 per cent. The aberrant endometrium is believed to have caused little, if any, of the menstrual disturbance. Hill concludes that there are no constant characteristic signs or symptoms of this condition; such as are reported are derivable from the associated pathological disorders. The most important suggestive symptom is pain with tenderness over the site of the growths during the menstrual period; this, however, he adds, is the exception, and not the rule. Aberrant endometrium probably has its origin both from the implantation of uterine mucosa regurgitated through the Fallopian tube, and from a metaplasia of the germinal epithelium or pelvic peritoneum. The author remarks that, although this condition is still escaping general recognition, it sometimes produces marked symptoms of a varied nature depending on the extensiveness of its growth and the organs affected by it.

195 Regional Vaccinotherapy in Gynaecology

P. POINCLOUX and A. FRON (*Journ. de Méd. de Bordeaux*, December 10th, 1932, p. 898) record the analyses of 366 cases of gynaecological infection treated by means of local vaccine injections. Regional vaccination *par la porte d'entrée* is defined as the injection of a simple emulsion of bacteria deprived of their pathogenic power into one of the tissues susceptible to penetration by the same microbes in an active state. This method has been found by the authors to be of outstanding use in gynaecological infections. Apart from post-partum and post-abortion infections, and also tuberculous conditions, the common infections were gonococcal (82 per cent.), *B. coli* (34 per cent.), and staphylococci (1.25 per cent.) Smears and cultures had to be taken repeatedly in order to find the specific organism responsible for the metritis, salpingitis, or bartholinitis. The apparatus required consists of a graduated 1 to 2 c.cm. syringe, very fine needles 7 to 8 mm. long, a speculum, a long forceps, a rectoscope, a frontal mirror, a 1 in 1,000 solution of oxycyanide of mercury, gonococcal and staphylococcal vaccines, and a *B. coli* vaccine. The usual sites of injection are the urethral, near Skene's tubules or near Bartholin's glands, and occasionally the cervix. The maximal dose is 0.25 c.cm.; the injections are repeated every two days for the first three, and then every three or four days subsequently. Each injection is increased by 0.25 c.cm., until the maximum of 1 to 1.5 c.cm. is reached at about the fifth. It is necessary to continue the treatment until the maximum dose causes only an insignificant reaction. There should be a marked and painful reaction after each injection. No accident has ever occurred in the experience of the authors. Absolute contraindications are severe cardiac or renal lesions and pulmonary tuberculosis. The authors' own results are: 59 per cent. of patients completely cured; 30 per cent. ameliorated or "cured" from the patient's point of view; 11 per cent. resisted

treatment. Others have confirmed this method as a simple and effective treatment giving quick results. The suggestion is made that a similar method might be tried for gonococcal manifestations in both sexes, and even for other chronic infections such as otitis, bronchitis, and meningitis.

196 Genito-Anorectal Elephantiasis

W. FREI (*Dent. med. Woch.*, December 9th, 1932, p. 1964) draws attention to the not uncommon condition of esthiomène. The aetiology of the disease is believed to be a chronic damming up of lymph chiefly in the labia majora and rectum following an infection of the inguinal glands. The labia are grossly enlarged in a similar way to what occurs in elephantiasis, and are of rubber-hard consistency. Other parts of the external genitals may be involved—for example, the labia minora. The labia may be ulcerated. When the rectum is involved the thickening is nodular, and stricture formation is common. In the anal region the elephantiasis masses may be taken for condylomata or haemorrhoids. The diagnosis is made by injecting the patient intracutaneously with a solution of the sterilized contents of an inguinal bubo. In positive cases there is an allergic skin reaction. There is no specific treatment as yet; the ulcers are treated conservatively or surgically.

Pathology

197 Aetiology of Generalized Osteoporosis and Osteitis Fibrosa

H. L. JAFFE, A. BODANSKY, and J. P. CHANDLER (*Journ. Exper. Med.*, December 1st, 1932, p. 823) report a series of experiments on dogs based on the known fact that the administration of ammonium chloride induces porosis of bones. Decalcification was most marked in the young puppy stage, and varied inversely as the calcium intake. When the decalcification was rapid and severe, generalized decalcification and secondary marrow fibrosis resulted (osteitis fibrosa). When the decalcification was less severe, generalized thinning of the bones without marrow fibrosis ensued (osteoporosis). The special underlying causes of the decalcification may, in the authors' opinion, incidentally contribute features to modify the generalized osteoporosis or osteitis fibrosa, as in rickets and in Recklinghausen's disease.

198 Pathology of Acute Silicosis

According to P. HEFFERNAN (*Tubercle*, December, 1932, p. 109) the existence of an acute form of silicosis in workers handling siliceous soap powders can scarcely be doubted any longer, since further fatal cases have now been reported from soap works in the north-west of England. The author discusses the aetiology of this condition, with special reference to the work of W. Bragg on the structure and stereo-chemistry of silica and the silicates. Heffernan remarks that if the fine silica powder is capable of altering or destroying the surface tension and surface energy of films of oils, greasy carbon mixtures, and soapy waters there would appear to be no reason why it should not be capable of acting similarly upon the surfaces of unprotected living cells, and upon the colloidal equilibrium of the protoplasmic structures within those cells. This explanation does not involve the necessity of the silica passing into solution, and affords an explanation of the cases reported by S. McDonald in which no alkali was present, but in which the silica dust was known to be very fine. Bragg demonstrated that there is no essential difference between silica in the "hydrosol" and "aerosol" states apart from one of size and of the existence of the tetrahedra singly or in mass formation. He suggested also that in certain circumstances both silica and some silicates, when freshly powdered, were able to act on their surroundings in a manner which might be regarded as truly chemical or electro-chemical. The present author remarks that it is now obvious that the necessity for silica to enter into "solution" before it can cause silicosis can no longer be maintained, and that the belief that freshly formed silica hydrosol is the active agent in the causation of silicosis requires qualification. Team work by clinicians, pathologists, chemists, biochemists, physicists, and biophysicists is essential for the elucidation of the many-sided problem of the aetiology of silicosis. There is a curious resemblance between the action of silica and that of certain mineral oils on living cells; both appear to upset the equilibrium of the protoplasmic colloidal balance by altering the tension at the inter-surfaces, and so modifying the metabolism and even the growth of the cells. Moreover, the "silicotic islet" has some resemblance to a tumour. It may well be, therefore, that energetic prosecution of research with a view to clearing up the mysteries of the causation of silicosis will throw light on even more important biological and pathological problems.

199 Mode of Action of Respiratory Stimulants

S. SELLADURAI and S. WRIGHT (*Quart. Journ. Exper. Physiol.*, December 13th, 1932, p. 233) record a study of the effects on respiration of the inhalation of various concentrations of oxygen (ranging from 4 to 16 per cent.) and of nitrogen in the decerebrate cat and in the chloralosed animal. Their results are in general agreement with those in the thesis of Heymans and his co-workers. The stimulation of respiration which may be produced by moderately severe anoxaemia is wholly reflex and depends entirely on the integrity of the sinus nerves and vagi. With the buffer nerves eliminated oxygen lack acts as a depressant to the "isolated" respiratory centre. The reflex stimulation from the sinuses may, in certain circumstances, be of greater importance than that produced by the vagi. The integrity of the buffer nerves may enable the respiratory centre to withstand for long periods degrees of anoxaemia which are lethal to it when it has been "isolated" by section of the vagi and denervation of the sinuses. The authors reject the classical theories accounting for the stimulating action of oxygen lack. Anoxaemia, contrary to Herman's view, actually depresses the response of the "isolated" respiratory centre to carbon dioxide. The same authors (ibid., p. 285) have performed a further series of experiments, with similar methods, designed to determine quantitatively the alterations in the response to the inhalation of various concentrations of CO_2 in the cat subjected to denervation of the carotid sinuses, to double vagotomy, and to both. The response to CO_2 is usually reduced by denervation of the sinuses in the intact or vagotomized animal. It is concluded that the altered condition of the blood, resulting from the raised CO_2 concentration, stimulates respiration in part reflexly from the carotid sinuses. Vagotomy alone produces variable effects. As a rule the response of the intact animal to CO_2 is greater than that of the same animal with sinuses denervated and vagi divided.

200 Thorium Migration in the Body

In a dog which two years previously had been injected with thorium dioxydsol, T. NAEGELI and A. LAUCHE (*Klin. Woch.*, December 3rd, 1932, p. 2029) found definite evidence of a passage of the thorium via the lymph vessels into the regional lymph nodes; there were no signs of hematogenous excretion. There was no evidence of any local damage. The dog had received two injections of about twice the amount given to man proportionate to its weight. Even after the lapse of two years the spleen and liver showed a clear shadow on *x*-ray examination, and enlarged abdominal lymph nodes were visible near the spinal column. Microscopical examination of the spleen and liver revealed a reduction of the splenic lymphatic tissues and a hepatic perivascular infiltration with cells filled with thorium. Although the authors could not find any special susceptibility to infections in animals which had received injections with thorium dioxydsol, they consider it inadvisable to use thorium preparations in man for diagnostic purposes until more evidence has accrued that the presence of this metal in the lymph nodes and the reduction of the lymph tissue in the spleen do not constitute a danger to the organism.

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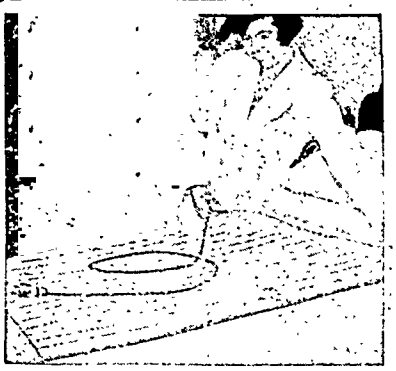

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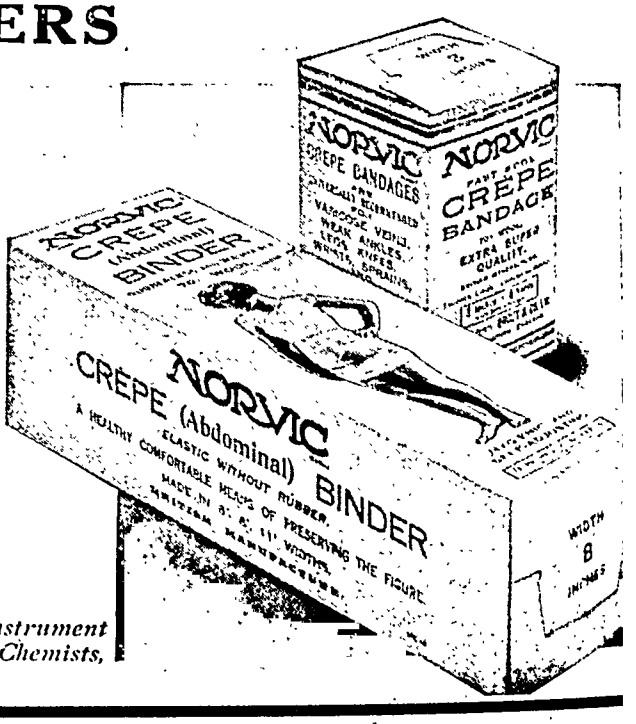

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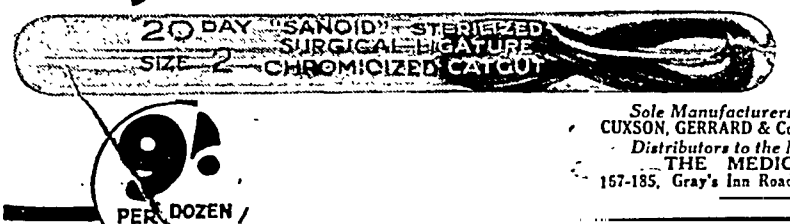

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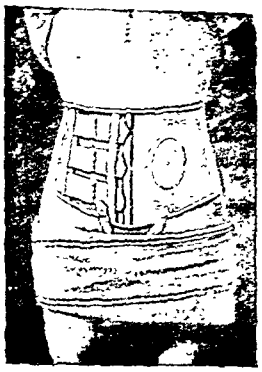

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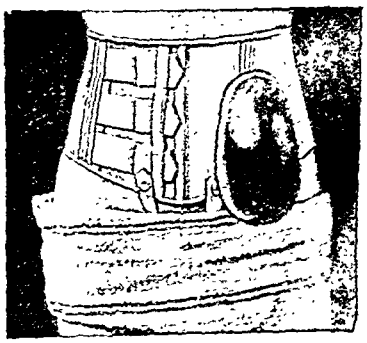

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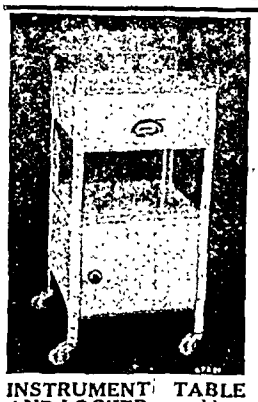

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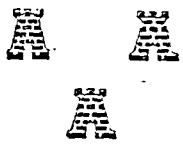

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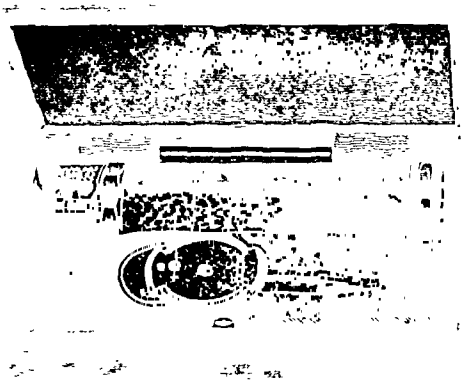

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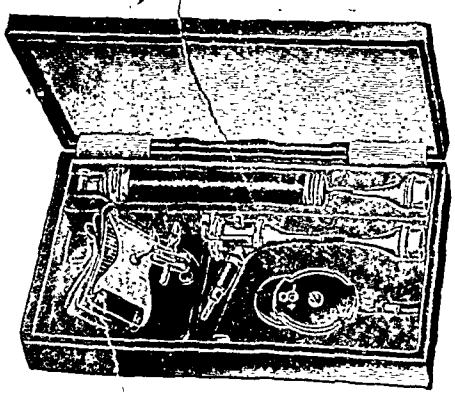

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A HOUSE Licensed for the reception of a limited number of Ladies suffering from Nervous and Mental disorders. Both certified and voluntary patients received. Approved for temporary Patients. This is a large country house, with beautiful grounds and park, five miles from Sheffield. Station: Grange Lane, L. & N.E. Rly., Sheffield. Tel.: No. 40030 Ecclesfield. Res. Phys.: GILBERT E. MOULD, L.R.C.P., M.R.C.S.

CITY OF LONDON MENTAL HOSPITAL, DARTFORD, KENT.

Ladies and Gentlemen received for treatment under certificates, and without certification, as either VOLUNTARY or TEMPORARY PATIENTS, at a weekly fee of TWO GUINEAS and upwards.

Bishopstone House, Bedford.

PRIVATE HOME FOR MENTALLY AFFLICTED LADIES. Ten only received. Apply, Medical Officer or Mrs. PEELE. *Telephone*: 2703.

COMFORTABLE, REFINED NURSING HOME for invalids requiring rest, care, or supervision. Moderate charges.—3, Broadhurst Gardens, N.W.6. Tel.: Maida Vale 7102.

PEEBLES

In the winter garden of Scotland, facing the sun, 600 feet up. Tonic air, beauty in every landscape from sheltered balconies. Palm winter garden, swimming bath, tennis, badminton, golf, fishing. Fully licensed. Modern baths installation. Physio-therapeutic, massage, electrical treatment, ultra-violet radiant. Physician in attendance. Write for prospectus.

Among the Pine-clad Border Hills,
PEEBLES HYDRO, PEEBLES, SCOTLAND.

BOURNEMOUTH HYDRO,

with Vita-glass Sun-lounge and Marine Balcony.

Pyretic and
Every kind of Bath. Plombière Lavage.
Every kind of Massage. Ultra-violet Light.
Every kind of Electricity. Diathermy.
Every kind of Diet. Esseff Inhaler.
High Frequency. Electric Lift.

Prospectus from Secretary. Tele. 341.
Resident } W. JOHNSTON SMYTH, M.D.
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HOME FOR EPILEPTICS,

MAGHULL (near LIVERPOOL).

Chairman: Brig.-Gen. G. Kyllin-Taylor, C.B.E., V.D., D.L.

FARMING and OPEN-AIR OCCUPATION for PATIENTS.
A few vacancies in 1st and 2nd Class Houses.
FEES: 1st Class (men only) from £3 p.w. upwards. 2nd Class (men and women) 32/- p.w.

For further particulars apply:
C. EDGAR GRISEWOOD, Secretary,
20, Exchange Street East, Liverpool.

BAILBROOK HOUSE, BATH.

A PRIVATE HOSPITAL for the care and treatment of persons with mental and nervous disorders.

Voluntary Patients received in the Villas. Large Mansion on outskirts of Bath, with 20 acres of grounds (see *Medical Directory*, page 2306.)

For terms apply S. J. GILFILLAN, O.B.E., M.B., C.M.Edin., Resident Physician.
Telephone No.: Batheaston 8189.

BOREATTON PARK,

BASCHURCH, SALOP.

A first-class Country Mansion adapted for the reception of a limited number of Ladies and Gentlemen mentally afflicted.

Large gardens, deer park, private golf links, fishing. Grounds extend to over 200 acres. Voluntary Patients accepted.

Apply for particulars to Dr. SANKEY.

WYE HOUSE, BUXTON.

For the treatment of Ladies and Gentlemen mentally afflicted. Voluntary Boarders received. Situated 1,200 ft. above sea-level, facing S. 14 acres of grounds. — For terms, apply to the Resident Medical Superintendent, W. W. HORTON, M.D. Nat. Tel. 120.

Doctor's widow in North London having large house, garden, car, good staff, would like some PAYING GUESTS. Furnished bungalow at the Sea. Terms moderate.—Address, No. 371, B.M.A. House, Tavistock Square, W.C.1.

Patients of both sexes with any disorder to which PSYCHOTHERAPY is applicable are received for treatment at ELMSLEIGH, BASSETT, SOUTHAMPTON. Domestic arrangements well ordered and surroundings pleasant. Terms and particulars from T. A. HAWKESWORTH, M.B.

THE GROVE HOUSE, CHURCH STRETTON, SHROPSHIRE.

A private Home for the care of and treatment of a limited number of Ladies, mentally afflicted. Voluntary and Temporary Patients received under the New Mental Treatment Act, 1930. —Medical Superintendent, Dr. MCCLINTOCK.

Tel. and Telegrams: "Haynes, Brentwood, 45."

Littleton Hall, Brentwood, Essex.

Large grounds, 400 ft. above sea. HOME for ladies Mentally afflicted. Voluntary Boarders received. Station: Brentwood and Shenfield 1 mile. Liverp'l St. 26 min. Apply, Dr. HAYNES.

BETHLEM ROYAL HOSPITAL, for Nervous and Mental Disorders,

Monks Orchard, Monks Orchard Road, Eden Park, Beckenham, Kent.

Reg. Tel. Address: Bethlem, Beckenham.
Station: Eden Park (Southern Railway). *Telephone*: Springpark 1180-1191

President: LORD WAKEFIELD OF HYTHE, C.B.E., LL.D.
Treasurer: SIR LIONEL FAUDEL-PHILLIPS, Bart.
Physician-Supt.: J. G. PORTER-PHILLIPS, M.D., F.R.C.P.

This Registered Hospital is now situated at Monks Orchard, in some 250 acres of park, pleasure, and farm grounds. Applications can be considered on behalf of patients of the educated classes in a presumably curable condition. With a view to early treatment voluntary or uncertified patients are admitted.

Patients who can contribute 5 guineas weekly towards the cost of treatment and maintenance may be received as vacancies arise. The Committee will also consider applications for admission at lower rates, and in certain cases will be prepared to admit patients free of charge.

Every facility for specialized investigation and treatment is provided in the Lord Wakefield Science and Treatment Unit. In this unit is found the X-ray and Dental Departments and the Bio-Chemical, Pathological, and Psychological Laboratories.

Furthermore, provision is made for Electro-Therapy and Hydro-Therapy to be carried out in all their forms, and Occupational Therapy under competent instruction is encouraged.

In addition to the Resident Medical Staff, Consultants in special branches of Medicine and Surgery are available whenever required.

The comfort of sensitive patients is greatly enhanced by the fact that the majority are given single bedrooms.

For forms and further particulars apply to the Physician-Superintendent at the Hospital.

THE OLD MANOR SALISBURY

A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS.

Extensive grounds. Detached Villas. Chapel. Garden and dairy produce from own farm. Terms very moderate.

CONVALESCENT HOME at BOURNEMOUTH. Detached Villas standing in 12 acres of ornamental grounds, with tennis courts, etc., which Voluntary, Temporary or Certified Patients may visit, by arrangement, for long or short periods.

Illustrated Brochure on application to the Medical Superintendent, The Old Manor, Salisbury. Telephone 51.

NORTHUMBERLAND HOUSE,

GREEN LANES, FINSBURY PARK, N.4.

Telegrams: "SUBSIDIARY, LONDON." *Telephone*: NORTH 0888.

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses. Conveniently situated four miles from Charing Cross. Easy access from all parts. Six acres of ground highly situated, facing Finsbury Park. Private Suites. Voluntary Patients and Temporary Patients received without certification

Convalescent Home, **Kearsney Court, Dover.** For further particulars, apply to the **Medical Superintendent.**

CAMBERWELL HOUSE, 33, Peckham Road, London, S.E.5.

Telegrams: "PSYCHOLIA, LONDON." **FOR THE TREATMENT OF MENTAL DISORDERS.** *Telephone*: RODNEY 4731—4732

Also completely detached Villas for mild cases, with private suites if desired. Voluntary Patients received. Twenty acres of grounds. Hard and Grass Tennis Courts, Putting Greens, Bowls, Croquet, Squash Rackets, and all indoor amusements, including Wireless and other Concerts. Occupational Therapy, Callisthenics, and Dancing Classes. X-ray and Actino-therapy. Prolonged Immersion Baths, Operating Theatre, Pathological Laboratory, Dental Surgery, and Ophthalmic Dept. Chapel. Senior Physician: Dr. HUBERT JAMES NORMAN, assisted by three Medical Officers, also resident and visiting Consultants.

An illustrated Prospectus, giving fees which are strictly moderate, may be obtained upon application to the Secretary.

The Convalescent Branch is HOVE VILLA, BRIGHTON, and is 200 feet above sea-level.

PECKHAM HOUSE, 112, Peckham Road, London, S.E.15.

Telegrams: "Allevlated, London." Telephone: Rodney 4741-4742.

The above House, which was established in 1826, is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders. Certified voluntary and temporary patients are received. Separate houses for treatment and accommodation of special cases adjoin the Institution. There is a seaside branch, Kearsney Court, near Dover, to which patients may be sent for treatment or on holiday. Motor and carriage exercise is provided as required. Patients can avail themselves of a course of physical drill. Tennis Courts. Entertainments, dances, and indoor amusements held throughout the year. Terms from £3 3s. per week.

Illustrated prospectus and further particulars can be obtained from the MEDICAL SUPERINTENDENT

CHEADLE ROYAL MENTAL HOSPITAL,

CHEADLE, CHESHIRE.

This REGISTERED HOSPITAL, with a SEASIDE BRANCH at Colwyn Bay, N. Wales, is for the treatment and care of those of the Upper and Middle Classes suffering from MENTAL and NERVOUS DISEASES.

The Hospital is governed by a COMMITTEE, appointed by the TRUSTEES of the Manchester Royal Infirmary.

In addition to the Main Building there are separate villas. Extensive grounds. Hard and grass tennis courts, croquet lawn, bowling green, and a court for badminton. There are also wireless installations. Golf may be had within easy distance. Occupational Therapy.

VOLUNTARY, TEMPORARY, AND CERTIFIED PATIENTS received.

The Hospital is nine miles from Manchester, 50 minutes by rail from Liverpool, and 3½ hours from London.

For terms and further particulars apply to the Medical Superintendent, J. A. C. ROY, M.D., who may be seen in Manchester by APPOINTMENT.

Telephone: GATLEY 2231 (3 lines).

DARTMOOR CONVALESCENT HOME. 750 FEET ABOVE SEA-LEVEL

Established 1903 for Treatment of Pulmonary and other forms of Tuberculosis. Sheltered Situation on the slopes of the Haytor moorland. Radiographic Installation. Electric Light. Central Heating. Separate Bedrooms. Efficient Treatment combined with individual comfort and minimum restrictions. Illustrated Prospectus on request to the Resident Physician: C. H. BEATY, M.R.C.S., L.R.C.P., Torr House, Chagford, Devonshire. *Telephone*: 11 CHAGFORD. *Telegrams*: TORR, CHAGFORD.

HARROGATE

for the Treatment of RHEUMATISM, ARTHRITIS, FIBROSITIS, NEURITIS, ARTERIO-SCLEROSIS and HYPERPIESIS, Diseases of the LIVER and GALL BLADDER, GASTRIC CATARRH and COLITIS, SKIN DISEASES, ANAEMIA and Convalescence from Acute Illness.

SULPHUR, Saline Iron and Pure Chalybeate waters, together with the presence of large deposits of Volcanic Mud, enable Harrogate to offer every facility for the cure of an unusually wide range of the diseases amenable to Spa Treatment.

The Harrogate Royal Baths, housed in one of the finest Spa buildings in Europe, are equipped with the most modern apparatus for all forms of Physiotherapy.

HARROGATE is open throughout the whole year. Prices in winter are considerably reduced.

Members of the Medical Profession are cordially invited to pay a visit to this BRITISH Spa. Concessions available include free use of the Baths and Waters, Golf, Concerts, etc. Considerable reductions off hotel bills, etc.

For full details apply to:—

F. J. C. BROOME,
General Manager, 3, The Royal Baths, Harrogate.

Pullman and Fast Restaurant Car Trains daily from King's Cross Station, London.

PENDYFFRYN HALL SANATORIUM

PENMAENMAWR.

Established 1900 for the treatment of Tuberculosis. Miles of carefully graduated walks through pine-clad hills, with sea and mountain views. Modern treatment, including ARTIFICIAL PNEUMOTHORAX, SANOCRYSIN, etc. X-ray plant, electric light, central heating, wireless. Special milk supply from tuberculin-tested herd. Full day and night nursing staff. On L.M.S. Main Line to Holyhead, 4½ hours from London. Resident Physicians: DENNISON PICKERING, M.D.(Cantab), J. A. HENNESEY, M.B., Ch.B.; Matron: Miss S. A. EDDY, S.R.N., Late Sister-in-Charge, Royal Hospital Annexe, Sheffield.

For particulars apply to the SECRETARY, Pendyffryn Hall, Penmaenmawr, N. Wales. ('Phone, 20.)

VALE OF CLWYD SANATORIUM

This Sanatorium is established for the treatment of TUBERCULOSIS of the LUNGS and the PLEURAL CAVITIES. It is situated in the midst of a large area of park-land at a height of 450 feet above sea-level on the south-west slopes of mountains rising to over 1,800 feet, which protect it from north and east winds and provide many miles of graduated walks with magnificent views. Average rainfall 29.57 per annum. Full day and night nursing staffs. X-ray plant. Every facility for Artificial Pneumothorax and for operations on the chest. Electric lighting. Central heating. Home farm. Clean milk from T.T. Herd. For particulars apply to Medical Superintendent, H. MORRISTON DAVIES, M.D., M.Ch.Cantab., F.R.C.S., Llanbedr Hall, Ruthin, N. Wales.

THE COTSWOLD SANATORIUM

First opened in 1898 and rebuilt in 1925. On the Cotswold Hills, seven miles from Cheltenham, for the treatment of Pulmonary and all other forms of Tuberculosis. Aspect S.S.W., sheltered from North and East, elevation 800 feet. Pure bracing air. Special Treatment by artificial Pneumothorax (X-ray controlled), Tuberculins, Medicated Inhalations by means of the Apneu Inhalation Installation, and Ultra-Violet Rays is available, when necessary, without extra charge. X-ray plant. Electric light. Radiators, hot and cold basins, and Wireless in all rooms.

Full day and night Nursing Staff.

Medical Superintendent: GEOFFREY A. HOFFMAN, B.A., M.B., T.C.Dub. *Assistant Physician*: MARGARET A. HARRISON, M.B., B.S.Lond.
Consulting Laryngologist: SIDNEY BERNSTEIN, M.R.C.S.Eng., L.R.C.P.Lond. (Attends Regularly.)

Apply: The Secretary, The Cotswold Sanatorium, Cranham, Gloucester. *Telephone*: 41 WITCOMBE. *Telegrams*: "HOFFMAN, BRADLEY."

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Situated in the upper Speyside district of Inverness-shire. One of the highest inhabited districts in Britain—"The Switzerland of the British Isles." Bracing and dry mountain climate. Well sheltered Sanatorium specially built for the Open-air Treatment of Tuberculosis, opened in 1901. Elevation 860 ft. above sea-level. Electric light throughout buildings and in rest shelters. Central heating. Fully equipped X-ray Plant. All forms of treatment available, including Artificial Pneumothorax and Ultra-Violet Rays for surgical cases of Tuberculosis. Terms: £4 7s. 6d. to £6 6s. per week inclusive. No extras.

MEDICAL SUPT.: FELIX SAVY, M.D. For particulars apply to the Secretary.

BATH Grand Pump Room Hotel

Premier Hotel West of England

Intercommunication with the world-famed Corporation Baths. Lifts from all floors. Hot and cold running water, central heating, and every modern convenience. Special diet if desired.

Moderate charges.

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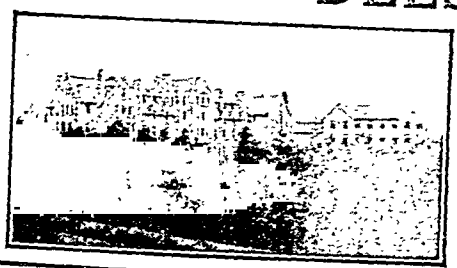
Telegrams: "Pumpotel, Bath."

Under same direction:

BRIGHTON—"Royal Crescent" Hotel. LONDON—"De Vere" Hotel, Kensington, W.

TOR-NA-DEE SANATORIUM

MURTLE DEESIDE ABERDEENSHIRE



Medical Director: David Lawson, M.D., F.R.S.E.

FULLY EQUIPPED WITH EVERY MODERN APPLIANCE FOR THE DIAGNOSIS AND TREATMENT OF ALL FORMS OF TUBERCULOSIS & ALLIED DISEASES

Physician Superintendent. J. M. JOHNSTON, M.B., D.P.H., etc.

Full particulars and Prospectus on application to the Secretary.

Inclusive Terms: SEVEN GUINEAS A WEEK.

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MEDICAL - SURGICAL - HYDROPATHIC

THE very latest facilities for the application of Medical Science. Situated 300 feet above sea-level, in beautiful 60 acres wooded park, within easy reach of London.

Members of the Medical Profession are cordially invited to visit The Stanboroughs and inspect the equipment which includes apparatus for artificial sunlight, ultra-violet, and infra-red; Electric Baths; Nauheim Baths; Foam Baths; Sitz Baths; Radiant Heat; Ionization; Diathermy. Maternity and Surgical Sections. Well-equipped Laboratory and modern X-Ray apparatus.

Two Resident Physicians.
Resident Medical Superintendent:
C. E. NELSON, M.D., F.R.C.S.

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Residential Health Hydro
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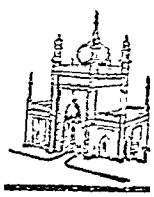

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- Specially ATTRACTIVE PROGRAMME
- NO INCREASE IN PRICES. 60 Bedrooms with hot and cold running water. Opposite Royal Pavilion. Write to the Resident Director for full particulars.

A comfortable London Hotel, convenient for Harley Street and Nursing Homes.

THE CLIFTON HOTEL,

WELBECK STREET, LONDON, W.1.

gives comfort, service, and cuisine equal to larger hotels at less cost. Bedrooms with hot and cold water and telephones. Centrally situated, close to Harley Street and Nursing Homes.

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The Practice of the Hospital is limited to Medical Practitioners. Particulars from J. BROWNING ALEXANDER, M.D., Dean.

F.R.C.S.(Edin.).

Full PREP. COURSE with Anatomical (Cadaver and Living Model) and Surg. Path. Demonstrations, for next Exam., will commence shortly. POSTAL TUITION at any time.—H. C. CHEEK, F.R.C.S., Surgeons' Hall, Edinburgh.

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Candidates taking the First, Second, or Final Conjoint Examinations should make sure of passing at the first attempt by enrolling for the short intensive Revision Courses of the College.

POSTAL, ORAL, PRACTICAL, CLINICAL COURSES.
MICROSCOPE AND MUSEUM WORK.

Highly qualified Tutors with accurate knowledge of the special features of these examinations.

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UNIVERSITY EXAMINATION POSTAL INSTITUTION

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POSTAL OR ORAL PREPARATION FOR ALL MEDICAL EXAMINATIONS.

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Preparation for the above; also for Medical Preliminary, and all examinations leading up to M.R.C.S., L.R.C.P., or M.B. of various Universities; also for M.R.C.P.(Edin.), D.P.M., D.O.M.S., D.T.M. & H., D.L.O., D.G.O., D.M.R.E., M.M.S.A., L.M.S.S.A., etc. Many successes.

ORAL CLASSES.

M.R.C.P., M.D., Primary and Final F.R.C.S., F.R.C.S.(Edin.); also Final M.B., B.S., and M.R.C.S., L.R.C.P. Museum and Microscope Work. Also Private Tuition.

MEDICAL PROSPECTUS (48pp.)

CONTENTS:—The method and the cost of entering the Medical Profession. *Particulars of all Medical Examinations*, Postal Courses, and Oral [illegible] the Higher Medical [illegible] for the Higher Sur- [illegible]estions for the Special Diploma Examinations. Refresher Courses. Openings for Women. Hints for writing theses.

Medical Prospectus gratis along with list of Tutors, etc., on application to the Principal, Mr. E. S. WEYMOUTH, M.A., 17, Red Lion Sq., London, W.C.1. (Telephone: HOLBORN 6313.)

THE LONDON SCHOOL OF DERMATOLOGY

The EXAMINATION for the CHESTERFIELD MEDAL will be held at ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester Square, W.C.2, on Monday and Tuesday, March 20th and 21st, at 10 a.m.

Open to all qualified practitioners.

Full particulars from the Dean.

ABERDEEN MEDICAL SCHOOL.

A COURSE OF POST-GRADUATE STUDY in Eye, Radiology, and Skins will be held from April 18th to June 22nd, 1933, on Tuesdays and Thursdays at 5.15 p.m.

A Syllabus of the Lectures may be had on application to the Secretary, The University, Aberdeen.

LEOPOLD SALZER PRIZE.

Attention is called to this CASH PRIZE of £100 to be offered on January 1st, 1934, to the author of the best Essay upon the treatment, according to the principles of Homœopathy, of INSANITY in all its forms. For full particulars apply to the Secretary, British Homœopathic Association (Inc.), 43, Russell Square, London, W.C.1.

LONDON HOSPITAL, E. 1.

CARDIAC DEPARTMENT.

The post of PATERSON RESEARCH SCHOLAR in the above Department will be vacant on April 24th. The salary is at the rate of £400 a year. Further particulars will be sent on request.

Applications should reach the House Governor not later than by the first post on April 8th.

ARTHUR G. ELLIOTT, House Governor.

CHARING CROSS HOSPITAL MEDICAL SCHOOL

LONDON, W.C.2.

M.R.C.P. COURSE.

A Course in Preparation for the June Examination for MEMBERSHIP OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON will be held, commencing on Monday, April 24th.

The Course will exten[illegible]
will comprise daily [illegible]
SPECIAL LECTURES AN[illegible]

The course will be conducted by the Honorary Staff of the Hospital.

FEE: TWENTY GUINEAS.

Further particulars may be obtained from the Dean, to whom applications should be submitted.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

Dr. CHARLES R. BOX will deliver the LUMLEIAN LECTURES on March 16th, 21st, and 23rd, at 5 o'clock, at the College, Pall Mall East, S.W.1.

Subject: "*On Complications of the Specific Fevers.*"

Any member of the Medical Profession admitted on presentation of card.

By Order of the President,
H. M. BARLOW, Secretary.

SEAMEN'S HOSPITAL SOCIETY.

POST-GRADUATE COURSES FOR SHIP SURGEONS.

PART II.—Tropical Medicine and Hygiene.

The Seamen's Hospital Society announces that a course in Tropical Medicine and Hygiene will be held from April 3rd to April 28th, 1933, at the Hospital for Tropical Diseases, Endsleigh Gardens, W.C., and the London School of Hygiene and Tropical Medicine, W.C.1.

Further particulars may be obtained on application to the Secretary, Seamen's Hospital Society, Greenwich, S.E.10.

ROYAL MEDICAL BENEVOLENT FUND,

11, Chandos Street, Cavendish Square, London, W.1.

The ANNUAL MEETING of the Members of the Royal Medical Benevolent Fund will be held at 5 p.m. on THURSDAY, MARCH 23rd, 1933, at 11, Chandos Street, Cavendish Square, London, W.1, when the Annual Report and Financial Statement for the year ended December 31st, 1932, will be presented, and the Officers and Committee for the current year elected.

R. M. HANDFIELD-JONES,
March 10th, 1933. Hon. Secretary.

COUNTY BOROUGH OF BURNLEY.

MUNICIPAL GENERAL HOSPITAL.

JUNIOR RESIDENT MEDICAL OFFICER (Female).

Applications are invited from fully qualified Medical Practitioners (female) for whole-time appointment as Junior Resident Medical Officer at the Municipal Hospital, Burnley. The appointment will be for a period of twelve months.

Salary at the rate of £150 per annum and full residential emoluments. The salary will be subject to a temporary abatement at the rate of £2 10s. per annum. The officer appointed will be required to refund to the Council all fees, allowances, and emoluments (other than the foregoing) received by her.

Further particulars and application form may be obtained from the Medical Officer of Health, St. James' Street, Burnley, to whom applications, together with three recent testimonials, should be forwarded not later than Saturday, March 25th.

Canvassing, either directly or indirectly, will be a disqualification.

The Town Hall, COLIN CAMPBELL.
Burnley. Town Clerk.
February 28th, 1933.

THE BURDEN MENTAL RESEARCH TRUST.

The Committee of Administration of the above Trust invite applications from candidates possessing the necessary qualifications, including experience of research, for the position of PRINCIPAL INVESTIGATOR at a commencing salary of £750 per annum. Applications, with the names of not more than three persons to whom reference may be made, should be lodged with the Honorary Secretary of the Trust, Dr. G. C. ANDERSON, B.M.A. House, Tavistock Square, London, W.C.1, not later than Monday, April 10th. A statement of additional details may be obtained on application in writing to the above.

BUCKS COUNTY COUNCIL.
AYLESBURY BOROUGH COUNCIL.
AYLESBURY RURAL COUNCIL.
LONG CRENDON RURAL DISTRICT COUNCIL.

ASSISTANT COUNTY MEDICAL OFFICER AND MEDICAL OFFICER OF HEALTH.
(Local Government Act, 1929, s.53.)

Applications are invited from duly qualified Medical Men, with experience in public health duties, holding a registrable qualification in Public Health, Sanitary Science, or State Medicine, for the following joint appointment:

(a) Medical Officer of Health for the Rural Distict of Aylesbury.

(b) Assistant County Medical Officer to act as School Medical Inspector and Medical Officer to Infant Welfare Centres for the following districts: Aylesbury Borough, Aylesbury Rural District, and Long Crendon Rural District, and to undertake temporarily similar duties in the Urban District of Chesham, and the Rural District of Amersham.

(c) When vacancies occur, Medical Officer of Health for Aylesbury Borough and the Rural District of Long Crendon.

Salary £800 per annum, subject to temporary percentage abatement.

Travelling expenses while on County duty will be paid on the County Council scale, but part of the salary will be subject to superannuation deduction of 5 per cent.

Applicants should not be over 40 years of age, and will be required to pass a medical examination as to physical fitness, and the final appointment will be subject thereto.

The appointment is subject to the approval of the Minister of Health and to the particulars and conditions of appointment set out on the form of application, which can be obtained from the Clerk of the County Council, County Hall, Aylesbury.

Office accommodation and any necessary clerical assistance will be provided.

Applications on the prescribed form, accompanied by copies of not more than three recent testimonials, which will not be returned, should be addressed to the Clerk of the Bucks County Council, and delivered at the County Hall, Aylesbury, not later than 11 a.m. on Saturday, March 18th, marked "Medical Officer."

County Hall, GUY R. CROFCH,
Aylesbury. Clerk of the Bucks County
February 25th, 1933. Council.

URBAN DISTRICT OF SHIPLEY.

MEDICAL OFFICER OF HEALTH.

Applications are invited from duly qualified gentlemen for the appointment of Medical Officer of Health of the Urban District, subject to the provisions of the Public Health (Officers) Act, 1921, and the Sanitary Officers Order, 1926.

The gentleman appointed will be required to perform all the duties imposed on a Medical Officer of Health, to act as School Medical Officer, Superintendent of the Maternity and Child Welfare Centre, Medical Superintendent of the Shipley and Bingley Joint Maternity Home, and to carry out all such duties as the Council may with the consent (if necessary) of the Minister of Health, from time to time direct.

He must reside in the district, and devote all his time to the duties of the office, and must not engage in private practice.

The appointment will be subject to the approval of the Minister of Health, will also be subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922, and the successful candidate will be required to pass a medical examination.

The salary to cover all the duties specified above will be £800 per annum (subject to a temporary deduction of £17 10s. per annum), with an addition of £40 per annum as car allowance.

Applications, stating age, qualifications, and experience, accompanied by copies of not more than three recent testimonials, should reach the undersigned not later than March 15th, endorsed "Medical Officer."

Canvassing, either directly or indirectly, will be a disqualification.

Town Hall, H. BARNES,
Shipley. Clerk to the Council.
February 23rd, 1933.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.

Wanted, an ASSISTANT MEDICAL OFFICER (male) for the CROSSLEY SANATORIUM, Delamere Forest, Cheshire (110 Beds). Salary £200 per annum, with board, apartments, and laundry. Candidates must be duly registered Medical Practitioners.

Applications, stating age, with copies of testimonials, to be sent not later than March 17th, to W. HUNT, Secretary, Hardman Street, Deansgate, Manchester, 3.

(Appointments continued on p. 46)

UNIVERSITY OF EDINBURGH.

Principal—Sir THOMAS H. HOLLAND, K.C.S.I., K.C.I.E.

The WINTER SESSION, 1933-4, opens on October 3rd and closes on March 16th.
The SUMMER SESSION, 1934, opens on April 17th and closes on June 29th.

FACULTY OF MEDICINE.

Dean—Professor SYDNEY SMITH, M.D., D.P.H.

The Faculty embraces 19 Professors and about 80 Lecturers, and attached to these there are about 40 Assistants and Demonstrators. Instruction is given in all the main branches of Medical Science, viz.:—

PROFESSORS.

Chemistry—George Barger, M.A., D.Sc., F.R.S.
Zoology—J. H. Ashworth, D.Sc., F.R.S.
Botany—Sir Wm. Wright Smith, M.A.
Anatomy—J. C. Brash, M.C., M.A., B.Sc., M.D.
Physiology—
Materia Medica—Alfred J. Clark, M.C., M.D., F.R.S.
Pathology—A. Murray Drennan, M.D.
Bacteriology—Thomas Jones Mackie, M.D.
Forensic Medicine—Sydney A. Smith, M.D., D.P.H.
Public Health—Percy Samuel Lelean, C.B., C.M.G., F.R.C.S.
Medicine—W. T. Ritchie, M.D.
Surgery—D. P. D. Wilkie, M.D., Ch.M.
Midwifery and Gynaecology—R. W. Johnstone, C.B.E., M.A., M.D.
Clinical Surgery—John Fraser, Ch.M., M.D.
Clinical Medicine—Edwin Bramwell, M.D., W. T. Ritchie, M.D., and D. Murray Lyon, M.D.
Tuberculosis—Sir Robert W. Philip, M.A., M.D., LL.D.
Therapeutics—David Murray Lyon, M.D., D.Sc.
Psychiatry—D. K. Henderson, M.D.
Child Life and Health—Charles McNeil, M.A., M.D.

LECTURERS.

Anatomy—E. B. Jamieson, M.D., F. E. Jardine, M.B., W. Q. Wood, Ch.M.
Applied Anatomy—F. E. Jardine, M.B.
Histology—May L. Cameron, M.A., B.Sc., M.B.
Biochemistry—Philip Eggleton, M.Sc., D.Sc.
Biophysics—W. A. Bain, B.Sc.
Physiology of the Nervous System—A. Ninian Bruce, M.D., D.Sc.
Materia Medica—C. M. Scott, M.B.
Pathology—Theodore Rettie, D.Sc. W. G. Millar, M.B.
Morbid Anatomy—J. Davidson, M.B.
Bacteriology—J. M. Alston, M.B., H. J. Gibson, M.B.
Physics—G. A. Carse, M.A., D.Sc., J. Paton, M.A., B.Sc.
Botany—J. L. S. Smith M.A., R. J. D. Graham, D.Sc., A. Nelson, B.Sc., Ph.D., C. P. Stewart, M.Sc., Ph.D., ..., D.Sc., A. L. Craig-Bennett, M.A., Ph.D., R. A. R. Gresson, Ph.D., P. Gray, Ph.D., G. F. Friend, B.A., B.Sc., A. W. Taylor, M.Sc., W. Nicoll, D.Sc.
Tropical Diseases—Lt.-Col. E. D. W. Greig, C.I.E., M.D.
Medical Entomology and Parasitology—J. H. Ashworth, D.Sc., F.R.S., A. E. Cameron, M.A., D.Sc.
Public Health—John Guy, M.D.
Tropical Hygiene—J. du P. Langrishe, D.S.O., M.B., B.Ch. (conjointly with Professor).
Medicine—J. G. McCrie, M.B.
Surgery—J. J. M. Shaw, M.A., M.D.
Clinical Instruction in Infectious Fevers—W. T. Benson, M.D.
History of Medicine—J. D. Comrie, M.A., B.Sc., M.D.
Surgical Pathology—K. Paterson Brown, M.B.
Venereal Diseases—David Lees, D.S.O., M.B.
Psychology—J. Drever, M.A., B.Sc., D.Phil.
Radiology—J. Duncan White, M.B., D.M.R.E.
Neuro-Pathology—
Psychiatry—T. R. C. Spence, M.D., R. G. McInnes, M.B., J. R. Ewing, M.B., A. Ninian Bruce, D.Sc., M.D.
Therapeutics—A. R. Gilchrist, M.B., D. M. Dunlop, M.B.
Mental Deficiency—R. D. Clarkson, B.Sc.
Orthopaedics—W. A. Cochrane, M.B.
Clinical Midwifery—R. W. Johnstone, M.D., James Young, M.D., Douglas Miller, M.D., W. F. T. Haultain, M.B., E. C. Fahmy, M.B., John Sturrock, M.B., Clifford Kennedy, M.B., E. M. Ross, M.B.
Child Life and Health—N. S. Carmichael, M.B., Ch.B., L. H. F. Thatcher, M.D., Gertrude Herzfeld, M.B., and Norman Dott, M.B.

CLINICAL TEACHING STAFF, ROYAL INFIRMARY

Clinical Surgery—Geo. L. Chiene, M.B., W. J. Stuart, M.B., J. W. Struthers, M.B., D. P. D. Wilkie, M.D., Ch.M., Henry Wade, M.D., John Fraser, M.D., Ch.M., J. M. Graham, Ch.M., A. Pirie Watson, Ch.M., F. E. Jardine, M.B., W. Q. Wood, M.D., Ch.M., J. J. M. Shaw, M.D., Walter Mercer, M.B., K. Paterson Brown, M.B., R. Leslie Stewart, M.B., T. McW. Millar, M.B., D. S. Middleton, M.B.
Clinical Medicine—D. Chalmers Watson, M.D., Edwin Bramwell, M.D., Edwin Matthew, M.D., W. T. Ritchie, M.D., John Eason, M.D., D. Murray Lyon, M.D., J. D. Comrie, M.D., Alex. Goodall, M.D., G. D. Mathewson, M.B., A. Fergus Hewat, M.D., W. D. D. Small, M.D., W. A. Alexander, M.B., T. R. B. Todd, M.D., A. R. Gilchrist, M.B., J. K. Slater, M.B.
Clinical Gynaecology—R. W. Johnstone, M.D., James Young, M.D., W. F. T. Haultain, M.B., Douglas Miller, M.D., E. C. Fahmy, M.B., John Sturrock, M.B.
Diseases of th Larynx, Ear and Nose—John S. Fraser, M.B., J. D. Lithgow, M.B., W. T. Gardiner, M.B., G. Ewart Martin, M.B.
Diseases of the Skin—Fredk. Gardiner, M.D., R. Crawford Lea, M.D., Robert Aitken, M.D., G. H. Percival, M.B., Ph.D.
Diseases of the Eye—H. M. Traquair, M.D., E. H. Cameron, M.B., C. W. Graham, M.B., J. R. Paterson, M.B.

Practical Instruction is afforded, under the superintendence of the Professors, in Laboratories with the necessary appliances and ... Tutorial and Practical Classes connected with the above Chairs, and opportunities are afforded to Students to extend their practical knowledge and engage in original research.

Opportunities for Hospital Practice are afforded at the Royal Infirmary, the Hospital for Sick Children, Maternity Hospital, the City Fever Hospital, and the Royal Edinburgh Hospital for Mental Disorders. Upwards of 2,870 beds are available for the Clinical Instruction of Students of the University.

Four Degrees in Medicine and Surgery are conferred by the University of Edinburgh, viz., Bachelor of Medicine (M.B.), Bachelor of Surgery (Ch.B.), Doctor of Medicine (M.D.), and Master of Surgery (Ch.M.).

The Class Fees for M.B. and Ch.B., including Hospital Fee (£12), amount to about £260, and the Matriculation and Examination Fees to £47 15s. 6d. An additional Fee of £21 is payable by those who proceed to M.D., and £21 by those who proceed to Ch.M.

The annual value of the Bursaries, Prizes, Scholarships, and Fellowships in the Faculty of Medicine amounts to about £3,600, and that of (...) Students of Medicine, amounts to about £1,820.

... Courses of instruction are given for the University Diplomas in Public Health, Tropical Medicine and ... gy. These Diplomas are open to approved registered practitioners as well as to graduates in Medicine and Surgery of the University. Courses of instruction for the Diploma in Tropical Veterinary Medicine are also given. This Diploma is open to those holding an approved Veterinary qualification registrable by the Royal College of Veterinary Surgeons. The University also takes part in the Courses given under the auspices of the Edinburgh Post-Graduate Courses in Medicine. In the departments of the Faculty of Medicine provision is made for research by students of graduate standing. In the University laboratories facilities will be provided for candidates for the Degree of Ph.D. whose applications to engage in research have been accepted by the Senatus.

A Syllabus and further information as to Matriculation, the Curricula of Study for Degrees, etc., may be obtained from the Dean of the Faculty of Medicine; and for Degrees in the Faculties of Arts, Science, Divinity, Law, and Music, from the Deans of these Faculties, or from the Secretary; and full details are given in the University Calendar, published by James Thin, 55, South Bridge, Edinburgh. Price, by post, 6s. June, 1933.

By authority of the Senatus, W. A. FLEMING, Secretary.

UNIVERSITY OF LONDON.

... *Progress in the ... ease*" (prepared ... of Bristol), will ... M.D., M.R.C.P. ... COLLEGE HOSPITAL MEDICAL SCHOOL (University Street, Tower Street, W.C.1) on TUESDAY, MARCH 14th, at 5.30 p.m. The Chair will be taken by Sir. F. J. POYNTON, M.D., F.R.C.P. (Senior Physician to University College Hospital and to the Hospital for Sick Children).
Admission free, without ticket.
S. J. WORSLEY, Academic Registrar.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE.

COUR ...) ... ree months) for the Diploma in Tropical Medicine commence on January 2nd and October 2nd, 1933, and for the Diploma in Tropical Hygiene on January 5th and April 4th, 1933. (Candidates for the D.T.H. must possess the D.T.M. of this University.)
For particulars, apply to the Hon. Dean, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool.

UNIVERSITY OF LONDON.

A Course of Three Lectures on "*The Osteodystrophic Diseases of Domesticated Animals*" will be given by Sir ARNOLD THEILER, K.C.M.G., D.Sc., Hon. Assoc. R.C.V.S., etc., at the ROYAL VETERINARY COLLEGE (Great College Street, Camden Town, N.W.1), on MARCH 21st, 22nd, and 23rd, at 4.30 p.m. At the first lecture the Chair will be taken by Prof. Sir JOHN MCFADYEAN, LL.D., C.M., M.R.C.V.S., F.R.S.E.
Admission free, without ticket.
S. J. WORSLEY,
Academic Registrar.

STAMMERING, SPEECH DEFECTS.

BEHNKE METHOD. Estab. 1832. *Cases, non-resident, treated* at 39, Earl's Court Square, S.W.5, and in residence, in the Summer holidays, at Miss BEHNKE'S House on the Chilterns.

"Pre-eminent success in the education and treatment of ... —Times."
... —Lancet."
... and perfectly ...

STAMMERING, CLEFT PALATE SPEECH, LISPING, &c., at Miss BEHNKE, 39, Earl's Court Sq., S.W.5.

M.D. THESIS

(Camb., Edin., Glas., Durham, &c.)

SKILLED COACHING, GUIDANCE, and ADVICE from Special Tutors, in conformity with the Regulations of the various Universities.

Apply for particulars and free booklet, "Hints on Writing a Thesis for the M.D. Degree," to the Secretary, Medical Correspondence College, 13, Wellington Street, London, W.C.

SCHOLARSHIPS OF HALF FEES, £60 p.a. offered by good Boarding School (Girls), recommended by the Board of Education. Excellent references and examination results. Distinctions in School Certificate and Leaving Scholarships to Universities. Full particulars—A.M.—No. 221, B.M.A. House, Tavistock Sq., W.C.1.

Medical and Dental Students

Special Classes for Pre-Medical and Dental Exams., Matric., and Prelims.
Chemistry, Physics and Botany Labs.
MANCHESTER TUTORIAL COLLEGE, 327, Oxford Road, Manchester.

ST. PAUL'S HOSPITAL FOR DISEASES (INCLUDING CANCER) OF THE GENITO-URINARY ORGANS AND SKIN, Endell Street, Holborn, W.C.2.

Applications are invited for the undermentioned position:

HOUSE SURGEON (vacant April 1st). Candidates must be qualified and registered. Salary at the rate of £150 per annum, with board and residence. The appointment is for a period of six months, on the termination of which the holder is eligible for the Senior position of Resident Medical Officer for a further six months at £200 per annum, in which capacity he will have charge of the Surgical beds. During his appointment as House Surgeon the duties will involve work in the Surgical Wards and in the Out-patient Department.

Applications, with copies of recent testimonials, to be sent on or before Monday, March 20th, to the Chairman of the Medical Committee.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.1.

Applications are invited for the post of HONORARY PHYSICIAN to the Skin Department with charge of Sunlight Department.

Candidates must be Graduates in Medicine in a recognised University and be members of the Royal College of Physicians, London, or shall proceed to obtain that Diploma. They must not be engaged in General Practice.

Applications, with copies of not more than four testimonials, should be sent as soon as possible to the Secretary.

Candidates will be required to call upon Members of the Honorary Staff, whose names, together with the standing orders relating to the post, will be forwarded by the undersigned.

By Order of the Committee of Management,
W. H. SIDNELL,
March 6th, 1933. Secretary-Supt.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.1.

Applications are invited for the post of HOUSE SURGEON (male) for six months from April 12th (first two months in Casualty and Out-patient Department). Salary at the rate of £120 per annum, with board and residence.

Applications, stating age, experience, and qualifications, accompanied by copies of four testimonials, to be sent to the undersigned not later than March 28th, from whom rules and other particulars can be obtained.

By Order of the Committee of Management,
W. H. SIDNELL,
March 6th, 1933. Secretary-Supt.

BRISTOL HOMOEOPATHIC HOSPITAL (Bruce Melville Wills Memorial). (75 Beds.)

The Board of Management invite applications for the posts of HONORARY SURGEON and HONORARY GYNAECOLOGIST. Applicants must be Fellows of one of the Royal Colleges of Surgeons, or Masters of Surgery of a British University.

Applications and testimonials should be received by the undersigned, not later than March 25th.

Bristol Homoeopathic Hospital, H. HUNTER, Lt.-Col., Secretary.
Bristol, 6.

BUCHANAN HOSPITAL, ST. LEONARDS-ON-SEA. (109 Beds.)

Applications are invited from British subjects for the posts of SENIOR and JUNIOR HOUSE SURGEON (female). Salaries at the rate of £175 and £125 per annum respectively for a period of six months commencing April 1st.

Applications, stating age, qualifications, and experience, accompanied by copies of at least three recent testimonials, should be sent to the undersigned before March 15th.

S. C. W. DISNEY, Secretary.

CORNELIA AND EAST DORSET HOSPITAL, POOLE, DORSET. (105 Beds.)

HOUSE SURGEON.

Applications are invited for the post of House Surgeon (male), only resident. Salary £150 p.a., with usual emoluments. Duties to commence April 1st next for six months.

Applications, stating age, experience, and qualifications, and accompanied by copies of three recent testimonials (which will not be returned), must reach the undersigned at the Hospital by March 17th.

E. S. FOLEY, Secretary.

DURHAM COUNTY HOSPITAL. (100 Beds.)

HOUSE SURGEON (male) required to commence duties on March 27th. Salary £150 per annum, with board and lodging. Applications, with copies of testimonials, to be sent to WM. R. WILSON, Secretary, 79, Saddler Street, Durham.

WEST RIDING MENTAL HOSPITAL, WAKEFIELD.

Wanted, an ASSISTANT MEDICAL OFFICER (male), post-graduate medical or surgical experience essential. Salary £350 per annum, rising by annual increments of £25 to £450 per annum, with board, lodging, laundry, and attendance, valued for Superannuation purposes at £120 per annum.

Junior Officers who decide to specialise in mental diseases receive recognised training for the Diploma in Psychological Medicine of the University of Leeds, and on gaining this obtain an additional £50 per annum. The whole emolument is subject to 3 per cent. deduction under the Asylums Officers Superannuation Act, 1909, and to a temporary abatement at the rate of £17 5s. per annum.

Medical Officers on gaining their diplomas may be promoted to serve in one of the other Mental Hospitals of the West Riding Mental Hospitals Board.

Applications, together with testimonials and full particulars, to be sent to the Medical Superintendent as soon as possible.

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN, St. Quintin Avenue, North Kensington, W.10. (56 Beds.)

HOUSE SURGEON (male or female) required for six months from April 1st. Salary for first three months at the rate of £75 per annum, after which should he or she be appointed Senior Resident (of two) the salary would be at the rate of £100 per annum, with board, residence, and laundry in each case. It is desirable that applicants should have held a responsible Hospital post. Applications, with copies of three recent testimonials, must be submitted on a form to be obtained from the Secretary at the Hospital, and must reach him not later than first post on Friday, March 17th.

ROYAL SUSSEX COUNTY HOSPITAL, BRIGHTON. (Beds 246.) (Six R.M.O.'s.)

CASUALTY HOUSE SURGEON (male) required.

Salary £120 per annum, with board, residence, and laundry. Candidates must hold Medical and Surgical qualifications of the British Empire, and be duly registered under the Medical Acts.

They must be unmarried, and when elected under 30 years of age.

Applications, with copies of recent testimonials, should be sent immediately to the undersigned.

L. L. W. LANCASTER-GAYE,
Secretary-Supt.

HARTLEPOOLS HOSPITAL, Friar Street, HARTLEPOOL.

Applications are invited for the posts of
(a) HON. AURAL SURGEON;
(b) HON. OPHTHALMIC SURGEON.

Candidates should forward their applications, with copies of testimonials, and also stating earliest date when able to commence duty, to the undersigned by first post on Tuesday, March 21st.

F. J. CARR,
March 6th, 1933. Chairman (*pro tem.*).

OLDHAM ROYAL INFIRMARY.

Applications are invited for the following post:

HOUSE SURGEON, required for a period of six months.

Salary at the rate of £175 per annum, with board, residence, and laundry.

Applications, stating age, experience, and qualifications, together with copies of three recent testimonials, must be forwarded to the undersigned not later than March 18th.

H. J. CLOUT, Gen. Supt.

KING GEORGE HOSPITAL, ILFORD.

Applications are invited for the appointment of HONORARY SURGEON to this Hospital. Candidates must be Fellows of the Royal College of Surgeons of England. Further particulars may be obtained from the undersigned, to whom applications should be sent not later than March 30th.

G. AUSTIN HEPWORTH, Secretary.

THE BUTE HOSPITAL, LUTON, INVITES applications for the appointments of HONORARY CONSULTING PHYSICIAN and HONORARY CONSULTING GYNAECOLOGIST.

Applications should be sent to the Secretary of the Medical Advisory Committee at the Hospital.

HERZL MOSER HOSPITAL, Leopold Street, LEEDS.

RESIDENT MEDICAL OFFICER required (to commence April 1st). Salary £200 per annum. Ample time for Post-graduate study. Apply Secretary.

WEST BROMWICH AND DISTRICT GENERAL HOSPITAL. (150 Beds.)

Applications are invited for the posts of (1) HOUSE PHYSICIAN; and (2) CASUALTY HOUSE SURGEON (males).

Candidates must be doubly qualified and unmarried. Salary in each case at the rate of £200 per annum, with board, residence, and laundry.

The appointments are for six months, and the candidates appointed will be required to take up their duties on April 1st next.

Applications, stating age and qualifications, with copies of recent testimonials, should be sent to the undersigned on or before March 20th.

By Order,
Edward St., West Bromwich. FRANK I. HANCOCK, Secretary & Supt.

THE PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN (Formerly East London Hospital for Children), Shadwell, London, E.1.

CASUALTY OFFICER required. Salary at the rate of £125 per annum, with board, residence, and laundry provided. The appointment is for six months, from April 1st. Candidates must be unmarried.

Applications, stating age, nationality, qualifications, and experience, accompanied by copies of not more than three recent testimonials, should reach the undersigned not later than March 21st.

J. F. RUSSELL, Secretary.

THE PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN (Formerly East London Hospital for Children), Shadwell, London, E.1.

HOUSE PHYSICIAN required. Salary at the rate of £125 per annum, with board, residence, and laundry provided. The appointment is for six months, from April 1st. Candidates must be unmarried.

Applications, stating age, nationality, qualifications, and experience, accompanied by copies of not more than three recent testimonials, should reach the undersigned not later than March 21st.

J. F. RUSSELL, Secretary.

THE WILLESDEN GENERAL HOSPITAL, N.W.10.

Applications are invited from fully qualified and registered candidates (unmarried) for the appointment of a Resident Officer, to hold the appointment of CASUALTY OFFICER for three months from April 1st, followed by a six months' appointment as HOUSE PHYSICIAN (Total nine months).

Salary at the rate of £100 per annum.

Applications to be received by the Secretary not later than first post on Monday, March 20th.

March 6th, 1933.

THE HOSPITAL FOR SICK CHILDREN, NEWCASTLE-UPON-TYNE. (85 Beds.)

Applications are invited for the following appointments:

HOUSE PHYSICIAN,
SENIOR HOUSE SURGEON,
JUNIOR HOUSE SURGEON,

(male or female) for six months as from April 1st. Salary at the rate of £100 per annum, together with board, residence, and laundry.

Applications, stating age and qualifications, with copies of three recent testimonials, to be sent to the Secretary, Mr. NEIL BROWNE, 16, City Road, Newcastle-upon-Tyne, 1.

ROYAL [illegible] HANTS

HOUSE SURGEON (male, British nationality) required immediately. Salary £150 per annum, with board, lodging, and washing. The appointment is tenable for six months, and candidates must be registered according to the provisions of the Medical Act. Applications, stating place of birth and age, with copies of three recent testimonials, to be sent at once to the undersigned. Women and married men are ineligible.

GORDON M. SAUL,
March 6th, 1933. Secretary.

HOSPITAL OF ST. JOHN AND ST. ELIZABETH, 60, Grove End Road, London, N.W.8.

Applications are invited for the post of RESIDENT HOUSE SURGEON (male). The appointment will be for six months from May 1st. Salary at the rate of £75 per annum, with full board. Appointment approved for M.S. examinations of the University of London. Applications, together with copies of three [illegible] to the undersigned on

[illegible] ODDS, B.A., Secretary.

THE LONDON LOCK HOSPITAL.

The Board of Management announces the expiration of the appointment of the present Female SURGICAL REGISTRAR to the Female Lock Hospital and invites applications for a successor. The appointment is for one year in the first instance, with honorarium at the rate of £100 per annum. Candidates, who must be doubly qualified and duly registered, are invited to submit applications, with three copies (only) of testimonials, to the undersigned not later than 10 a.m. on Thursday, March 23rd, from whom copies of the Laws and By-laws relating to the appointment may be obtained. Candidates must be Fellows (or Members) of the Royal College of Surgeons of England, or Surgical Graduates of a University of the United Kingdom. Duties to commence April 6th.

By Order of the Board,
J. F. MORTON, Secretary.

283, Harrow Road, W.9. Feb., 1933.

THE LONDON LOCK HOSPITAL.

The Board of Management invite applications for the post of RESIDENT MEDICAL OFFICER (either sex) to the Female Departments. Candidates must be doubly qualified and duly registered. The appointment is for six months commencing March 24th, with salary at the rate of £175 per annum, with furnished rooms, full board, and laundry. Preference will be given to candidates having previous obstetric experience. Applications, enclosing copies (only) of three recent testimonials, to be in the hands of the undersigned by 10 a.m. Tuesday, March 14th, from whom a copy of the By-laws and any further particulars can be obtained.

By Order of the Board,
J. F. MORTON, Secretary.

283, Harrow Road, W.9. Feb., 1933.

THE LONDON LOCK HOSPITAL.

The Board of Management invite applications for the post of RESIDENT MEDICAL OFFICER to the Male departments.

Candidates must be doubly qualified and duly registered.

The appointment is for six months commencing March 27th, with salary at the rate of £175 per annum, furnished rooms at the Harrow Road Hospital, full board, and laundry.

Applications, enclosing copies (only) of three recent testimonials, to be in the hands of the undersigned by 10 a.m. Tuesday, March 14th, from whom a copy of the By-laws and any further particulars can be obtained.

By Order of the Board,
91, Dean St., W.1. J. F. MORTON,
February, 1933. Assistant Secretary.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN
(Usually known as the Children's Hospital),
ST. MICHAEL'S HILL.

APPOINTMENT OF OUT-PATIENT SURGEON.

The Election Committee of this Institution are prepared to receive applications for the appointment of an Honorary Out-patient Surgeon.

Candidates must be Fellows of the Royal College of Surgeons of England, Edinburgh, or Ireland, or, if holding some other qualification, shall undertake to become Fellows within a limited period of their appointment.

Applications, stating age, training, qualifications, and experience, accompanied by not fewer than three testimonials, must be sent to the undersigned not later than March 25th.

REGINALD C. THOMAS.
March 11th, 1933. Secretary.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN
(Usually known as the Children's Hospital),
ST. MICHAEL'S HILL.

Applications are invited for the position of HOUSE SURGEON. Salary £125 per annum, with board, rooms, [illegible]

Applicants should [illegible] experience, and send [illegible] signed not later than March 22nd.

REGINALD C. THOMAS,
Secretary.

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL, Woodchurch Road, BIRKENHEAD.

HOUSE SURGEON.

The Board invite applications for the post of House Surgeon for a period of six months from April 1st. Honorarium at the rate of £100 p.a., with board, residence, and laundry.

SECOND HOUSE SURGEON.

The Board invite applications for the post of Second House Surgeon for a period of six months from April 1st. Honorarium at the rate of £75 p.a., with board, residence, and laundry.

Applications, together with copies of testimonials, to be addressed to the Hon. Secretary at the Hospital, not later than March 18th.

BURY INFIRMARY, LANCS.
(127 Beds.)

Applications are invited for the post of HOUSE SURGEON to the Special Departments, namely, Obstetrical, Gynaecological, Ophthalmic, and Ear, Nose, and Throat. The appointment is for six months at a salary at the rate of £175 per annum, with board, residence, and laundry.

The appointed candidate will be required to commence duties on or about April 1st.

Applications are also invited for the post of Third House Surgeon, who must have both Medical and Surgical qualifications. He is responsible for Medical, Casualty, and Anaesthetic duties. The appointment is for six months at a salary at the rate of £150 per annum, with board, residence, and laundry.

The appointed candidate will be required to commence duties on May 1st.

Applications, stating age, qualification, and nationality, with copies of three recent testimonials, to be sent to the undersigned not later than March 18th.

ALEX. W. MAITLAND,
Hon. Secretary.

HOVE HOSPITAL, HOVE, SUSSEX.

A RESIDENT MEDICAL OFFICER (male) is required, who must be unmarried and under 40 years of age.

The hospital contains twenty-four beds.

The appointment offers excellent opportunities for surgical experience and for acquiring knowledge of Radium treatment.

Salary £200 per annum, with board, apartments, and laundry.

The successful candidate will be expected to take up his duties on April 3rd next.

Expenses not exceeding one guinea will be paid to any applicant invited to attend for interview.

Applications must be received by the undersigned not later than March 13th.

H. AUBREY FROGGATT,
General Secretary.

EAST HAM MEMORIAL HOSPITAL, Shrewsbury Road, E.7. (100 Beds.)

Applications are invited for the post of HOUSE SURGEON (male) to Special Department, and CASUALTY OFFICER, for six months commencing April 1st. Salary at the rate of £120 per annum, with board, residence, and laundry. Applications, stating age, experience, and full particulars, together with copies of testimonials, should be forwarded to the undersigned immediately.

REGINALD PERRY, Secretary.

EAST HAM MEMORIAL HOSPITAL, Shrewsbury Road, E.7. (100 Beds.)

Applications are invited for the post of HOUSE PHYSICIAN (male) for six months commencing April 1st. Salary at the rate of £150 per annum, with board, residence, and laundry. Applications, stating age, experience and full particulars, together with copies of testimonials, should be forwarded to the undersigned immediately.

REGINALD PERRY, Secretary.

LONDON HOSPITAL, E.1

Applications are invited for the post of FIRST ASSISTANT AND REGISTRAR to the Ear, Nose, and Throat Department.

Candidates must be Fellows of the Royal College of Surgeons of England.

The salary is £150 per annum.

Further particulars will be sent on application.

Applications should be sent to the House Governor and should arrive not later than Saturday, May 13th.

ARTHUR G. ELLIOTT.
March 4th, 1933 House Governor

LONDON HOSPITAL, E.1

There is a vacancy for the post of HONORARY ASSISTANT SURGEON.

Candidates must be Fellows of the Royal College of Surgeons of England.

Applications should be sent to the House Governor (from whom further particulars may be obtained) and must arrive not later than on Saturday, May 13th.

A. G. ELLIOTT.
March 4th, 1933 House Governor

PEACE MEMORIAL HOSPITAL, WATFORD, HERTS.

TWO RESIDENT OFFICERS, one Medical and one Surgical (female), duties to commence April 1st, or as soon as possible after that date. Salary £150 per annum. Appointments for six months, eligible for re-election.

Applications, stating age and qualifications, with at least three recent testimonials, should be received by the Secretary not later than March 27th.

No canvassing permitted.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, Broad St., Hanover Sq., W.C.2.

APPOINTMENT OF HOUSE SURGEONS.

Required for May 1st, for six months:
FIRST HOUSE SURGEON (male). Salary at the rate of £160 per annum.
SECOND HOUSE SURGEON (male). Salary at the rate of £60 per annum.
Both with board, residence, and laundry.
Note.—Candidates must be registered Medical Practitioners, registered in the Medical Register, and must have had experience in Ophthalmology. Applications, in which should be stated whether the candidate is prepared to accept the Second House Surgeoncy, must be accompanied by copies of testimonials, and to be sent to the Secretary on or before Saturday, April 1st.
Intending candidates are required to call upon the staff of the Hospital, a list of whom can be obtained from the Secretary's Office.

ROYAL VICTORIA INFIRMARY, NEWCASTLE-UPON-TYNE. (577 Beds.)

The House Committee declare vacant the office of HONORARY PHYSICIAN.

According to Statutory Provision every candidate must be a registered Graduate in Medicine of any University recognised by the General Council of Medical Education and Registration of the United Kingdom, or a registered Fellow or Member of one of the Colleges of Physicians of the United Kingdom, practising that he is practising as a Physician and not as a General Practitioner.

Applications must be sent to the House Governor and Secretary, Royal Victoria Infirmary, Newcastle-upon-Tyne, not later than Friday, March 31st. The appointment will be made on Thursday, April 6th.

Personal canvassing will be considered a disqualification for office.

S. DENSTAN,
March 3rd, 1933 House Governor & Sec.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL, Haverstock Hill, N.W.3.

APPOINTMENT OF CASUALTY SURGICAL OFFICER.

Applications are invited from unmarried Medical Women for the position of Casualty Surgical Officer at the Out-patient Department of the Hospital, Buchanan Street, Camden Town, which will become vacant on April 1st next.

The salary will be at the rate of £100 per annum, together with board, residence, and laundry, and the term will be for six months.

Applications, to be made on a form which will be supplied by the Secretary, must be sent with copies of not more than three testimonials, should reach the Secretary not later than noon on March 18th next.

MANCHESTER VICTORIA MEMORIAL JEWISH HOSPITAL MANCHESTER, 8
(Non-Sectarian.) (162 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male). The appointment is for six months. Salary at the rate of £125 per annum, with board, residence, and laundry, to which will be added certain emoluments from the Pay Department. Applications, stating age and qualifications, with copies of three recent testimonials, to be forwarded to the undersigned not later than Monday, March 13th.

FRED BARNES,
Superintendent & Secretary.

MANCHESTER VICTORIA MEMORIAL JEWISH HOSPITAL MANCHESTER, 8
(Non-Sectarian.) (162 Beds.)

Applications are invited for the post of RESIDENT SURGICAL OFFICER (male). The appointment is for six months. Salary at the rate of £125 per annum, with board, residence, and laundry, to which will be added certain emoluments from the Pay Department. Applications, stating age and qualifications, with copies of three recent testimonials, to be forwarded to the undersigned not later than Monday, March 13th.

FRED BARNES,
Superintendent & Secretary.

MANCHESTER VICTORIA MEMORIAL JEWISH HOSPITAL MANCHESTER, 8
(Non-Sectarian.) (162 Beds.)

Applications are invited for the post of JUNIOR HOUSE SURGEON (male). The appointment is for six months. Salary at the rate of £100 per annum, with board, residence, and laundry, to which will be added certain emoluments from the Pay Department. Applications, stating age and qualifications, with copies of three recent testimonials, to be forwarded to the undersigned not later than Monday, March 13th.

FRED BARNES,
Superintendent & Secretary.

CITY OF LIVERPOOL.

MEDICAL SUPERINTENDENT.

MILL ROAD INFIRMARY.

Applications are invited from fully qualified Medical Practitioners with the necessary knowledge and experience of Hospital administration, for the appointment of full-time Medical Superintendent at the above Infirmary at a salary of £1,000 per annum (subject to a temporary deduction authorised by the Council), together with an allowance of £150 per annum in lieu of residence. For the time being the appointment will be non-resident, but the Council reserve the right to call upon the Medical Superintendent to reside in the Infirmary when suitable accommodation is available. Any fees received in connection with the appointment to be handed over to the City Treasurer in accordance with the Standing Orders of the Council.

The gentleman appointed will assume control of the Infirmary under the direction of the Medical Officer of Health, and be responsible for the work of the Medical, Surgical, Nursing, and Administrative Staffs in accordance with the instructions of the Council from time to time. Special experience in Surgery is essential.

The Infirmary accommodates acute medical, surgical, and maternity patients, with approximately 800 beds, and has a staff of resident Assistant Medical Officers, Visiting Specialists, and a Nursing Staff of 130.

The Infirmary is a Training School recognised by the General Nursing Council and the Central Midwives Board, and the Medical Superintendent will be required to organize the necessary lectures in connection with the training of Nurses.

The appointment will be made subject to the Local Government and Other Officers Superannuation Act, 1922, and the Standing Orders of the City Council, and will be determinable by three calendar months' notice on either side.

Applications to be made upon forms to be obtained from the Medical Officer of Health, Municipal Annexe, Dale Street, Liverpool, to be endorsed "Medical Superintendent, Mill Road Infirmary," and returned to the undersigned so as to be received not later than Monday, March 20th. [illegible] bers of the City Council, [illegible] indirectly, will be considered.

WALTER MOON,
Town Clerk.

Municipal Buildings,
Liverpool. February 24th, 1933.

ADMINISTRATIVE COUNTY OF ESSEX.

LADY ASSISTANT COUNTY MEDICAL OFFICER OF HEALTH.

The County Council of the Administrative County of Essex invite applications for the above appointment from persons duly qualified, holding a Diploma of Public Health and not over 45 years of age.

The salary, which will be subject to economy abatement according to the scale approved by the County Council, will be £500 per annum, and will rise, subject to satisfactory service, by annual increments of £25 to £700 per annum. The appointment will be subject to three months' notice on either side.

Travelling expenses, in accordance with the County Council's Scale, will be allowed to the successful candidate.

The person appointed will be required to pass a medical examination and to contribute to the fund established by the County Council under the Local Government and Other Officers' Superannuation Act, 1922.

The appointment will be subject to the Council's Sick Pay Rules and Regulations, a copy of which will be forwarded on application.

Applications on the prescribed form, obtainable from the undersigned, accompanied by copies of not more than three testimonials (which will not be returned), should be addressed to me and delivered at the Shire Hall, Chelmsford, not later than 10 a.m. on Monday, March 27th.

JOHN H. GOOLD,
Clerk of the County Council.

Shire Hall,
Chelmsford.
March 7th, 1933.

ST. MARY'S HOSPITAL, W.2.

CASUALTY HOUSE SURGEON.

Applications are invited from duly qualified candidates for the post of Casualty House Surgeon. Candidates must have been House Surgeon for a full period of office to this Hospital or to some other General Hospital approved by the Board.

The salary is £100 per annum, with board and residence, and the appointment is for six months.

Applications, with copies of testimonials, not exceeding three in number should reach the undersigned (from whom particulars of the office may be obtained) on or before Friday, March 24th.

The successful candidate will be expected to take up the duties early in April.

W. PARKES, Secretary.

CITY OF MANCHESTER.

PUBLIC HEALTH DEPARTMENT.

WITHINGTON HOSPITAL AND INSTITUTION.

APPOINTMENT OF AN ASSISTANT MEDICAL OFFICER.

The Public Health Committee invites applications from qualified Medical Men for the position of Assistant Medical Officer in the wards for patients suffering from Pulmonary Tuberculosis at the Withington Hospital (1,290 beds) and Institution (1,200 beds), Nell Lane, West Didsbury, Manchester.

Every applicant must be a registered Medical Practitioner and unmarried.

Preference will be given to applicants with previous hospital experience.

The hospital is a recognised training school for nurses and is equipped with all modern hospital requirements.

Salary £300 per annum, subject to a temporary deduction of £8 10s. per annum. The amount payable is, therefore, £291 10s. per annum, with board, residence, and laundry in addition, subject to the terms and conditions of the Manchester Corporation Grading Scheme. No bonus.

The appointment will be made for a period of twelve months.

Applications, stating fully the age, training, qualifications, and experience of the candidates, with copies of three recent testimonials, and endorsed on the envelope "Assistant Medical Officer, Withington Hospital," must be addressed to the Medical Officer of Health, Civic Buildings, 1, Mount Street, Manchester, 2, only, and not to members of the Committee or Council, and must be received by him not later than Saturday, March 18th.

The candidate appointed will be required to commence duty as soon as possible after appointment, to devote the whole of his time to the duties of the position, to pass a medical examination, to contribute to the Corporation Superannuation Fund, and to execute the Deed of Service.

Canvassing in any form, oral or written, direct or indirect, is prohibited.

F. E. WARBRECK HOWELL,
Town Clerk.

Town Hall,
Manchester. March 7th, 1933.

MINISTRY OF HEALTH.

The Minister of Health invites applications for a VACANT APPOINTMENT on the medical staff of the Ministry. The salary commences at £833 per annum, and rises by twelve annual increments to a maximum of £1,146 per annum. This scale of remuneration is liable to review.

The appointment will carry the usual Civil Service conditions as to pension, holidays, etc., and the officer will be required to devote his whole time to the public service.

The officer now to be appointed will in the first instance be employed in the Pathological Laboratory of the Ministry in London but must be prepared to work in any part of England or Wales if so required.

Candidates must be registered medical practitioners experienced in bacteriological research. Clinical and epidemiological experience will also be taken into account. They must conform to the Civil Service nationality rule.

Canvassing through Members of Parliament or in other ways will render a candidate liable to disqualification.

Forms of application, with further particulars of the appointment, may be obtained from the Director of Establishments, Ministry of Health, Whitehall, S.W.

No application can be considered unless received on the prescribed form not later than March 27th.

MITCHAM URBAN DISTRICT COUNCIL.

MEDICAL OFFICER FOR MATERNITY AND CHILD WELFARE WORK.

Applications are invited for the appointment of a part-time Medical Officer, whose duties, under the general direction of the Medical Officer of Health for the District, will be:

(a) To attend the Council's Ante-Natal Clinics.
(b) To report fully to the Medical Practitioner whose services have been retained for the particular case.
(c) To attend the Council's Infant Welfare *Centres and to give advice* to mothers both regarding themselves and their children.

Salary £300 per annum.

The estimated number of attendances required are: Welfare Centres 12 per month; Ante-Natal Clinics 6 per month.

Applications, stating qualifications, together with copies of not more than two recent testimonials, should be addressed to the undersigned so as to be received not later than Saturday, March 25th.

Dated this 2nd day of March.

STEPHEN CHART,
Clerk to the Council.

Council Offices,
Mitcham.

LONDON COUNTY COUNCIL.

CONSULTANT AND SPECIALIST SERVICE.

Applications are invited from Medical Practitioners, who must be of recognised consultant and specialist status, for appointment to the undermentioned positions in the hospital service.

The persons appointed will be required to carry out such duties as may be assigned by the Medical Officer of Health. The remuneration and conditions of service are subject to review in each case. In the case of women marriage terminates contract of service.

(1) PART-TIME APPOINTMENTS FOR A REGULAR NUMBER OF SESSIONS WEEKLY:
(a) Physician;
(b) Surgeon;
(c) Obstetrician—Gynaecologist;
(d) Ophthalmologist;
(e) Ear, Nose, and Throat Specialist;
(f) Orthopaedist;
(g) Dermatologist;
(h) Paediatrist;
(i) Urologist;
(j) Radiologist.

The remuneration in each case will be an annual salary according to a scale based on the number of weekly sessions, each of approximately 2½ hours' duration.

(2) PART-TIME APPOINTMENTS FOR OCCASIONAL SESSIONS. — Neurologists and Anaesthetists. Remuneration at the rate of £2 12s. 6d. a session for Neurologist and £1 14s. a session for Anaesthetist.

(3) FULL-TIME APPOINTMENTS. — Radiologists. Salary £900, rising annually by £50 to £1,100 a year.

Application forms containing full particulars of the conditions of the appointments are obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division), County Hall, Westminster Bridge, S.E.1, returnable by March 31st. Candidates should specify (a) the position or positions for which they desire to apply; (b) the number of sessions a week which they are prepared to devote to the work; and (c) the portion of London, if any, to which they desire to be attached, if possible. Canvassing disqualifies.

LONDON COUNTY COUNCIL.

Applications are invited for appointment of RESIDENT ASSISTANT MEDICAL OFFICER, Grade 1, at Paddington Hospital, Harrow Road, W.9.

Remuneration £350 a year, rising by £25 to £425, with board, lodging, and washing, and subject to the temporary reduction made by the Council from salary and value of emoluments. Candidates must be registered Medical Practitioners of at least one year's standing, and have held a resident appointment in a general hospital for at least six months. No *accommodation* for a married man or for a woman. The remuneration and conditions of service subject to review.

Application forms obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), County Hall, Westminster Bridge, S.E.1, returnable March 24th. Canvassing disqualifies.

ABERDEEN DISPENSARY AND VACCINE INSTITUTION.

Applications are invited for the post of HONORARY MEDICAL OFFICER in charge of the Ear, Nose, and Throat Department of the above Institution. Applications should be lodged with the Subscribers on or before March 22nd.

WATT & CUMINE,
Secretaries.

8, Golden Square,
Aberdeen.
February 28th, 1933.

THE SOUTHEND-ON-SEA GENERAL HOSPITAL.

(221 Beds—Six Residents.)

Wanted immediately, a SECOND HOUSE SURGEON, salary £100 per annum, board, residence, and laundry, to complete a period ending May 14th, eligible for re-appointment. Application from British (male, single) candidates, stating age, qualification, and experience, and accompanied by three recent testimonials, to be sent to the undersigned.

C. G. PEARSON,
Joint Secretary.

Southend General Hospital.

ROYAL HAMPSHIRE COUNTY HOSPITAL, WINCHESTER. (158 Beds.)

HOUSE PHYSICIAN.

Applications are invited from fully qualified men for the above post to take up duties on April 1st. Six months' appointment. Salary £125 per annum, with board, residence, and laundry.

Candidates, who must be of British nationality, to make application at once to the undersigned, enclosing copies of three testimonials.

HERBERT MASLEN, *Secretary.*

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh).

(a) British Islands.

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** (contd.)	**CONTRACT PRACTICE** (contd.)
EBBW VALE, MON. *(Workmen's Medical Society.)*	MARDY, GLAMORGAN. *(Workmen's Medical Scheme.)*	OGMORE VALLEY, GLAMORGAN. *(Wyndham Colliery Medical Aid Society.) (Workmen's Medical Scheme.)*
GILFACH GOCH, GLAMORGAN. *(Workmen's Medical Scheme.)*	MERTHYR VALE COLLIERY WORKMEN'S MEDICAL COMMITTEE. *(Workmen's Medical Scheme.)*	**PUBLIC HEALTH**
LLWYNPIA, CLYDACH VALE, PENYGRAIG, GLAMORGAN. *(Workmen's Medical Scheme.)*	NEATH AND DISTRICT *(Medical Aid Association.)*	KENT COUNTY COUNCIL. LENHAM SANATORIUM. *(Male Assistant Medical Officer.)*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer.)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association.)*	LLANTRISANT AND LLANTWIT FARDRE RURAL DISTRICT COUNCIL. (1) *Medical Officer of Health (part-time.)* (2) *Medical Officer (combination—part-time) for Maternity and Child Welfare.*

(b) Overseas.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. G. HUNTER (Medical Secretary, New South Wales Branch), 135, Macquarie St., Sydney, N.S.W.	**QUEENSLAND.** *(Brisbane Associated Friendly Societies Institute.)*	The Hon. Sec., Queensland Branch, British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	**WELLINGTON, NEW ZEALAND.** *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec., New Zealand Branch), British Medical Association, P.O. Box 156, Wellington, New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch, British Medical Association, Medical Society Hall, East Melbourne, Victoria.	*(Toowoomba Associated Friendly Societies, Medical Institute, Toowoomba.)*		**WESTERN AUSTRALIA.** *(Contract and Lodge Practices.)*	Hon. Sec., Western Australian Branch, British Medical Association, No. 6, Bank of N.S.W. Chambers, St. George's Terr., Perth, Western Australia.

March 8th, 1933. By Order of the Council. G. C. ANDERSON, Medical Secretary.

WEST LONDON HOSPITAL, Hammersmith Road, W.6. (234 Beds.)

Required ONE HOUSE PHYSICIAN, ONE HOUSE SURGEON (General and some Deep X-Ray Therapy), ONE HOUSE SURGEON to Throat, Nose, and Ear Department (with some Anaesthetic duties), and ONE RESIDENT ANAESTHETIST. These four appointments (males) are tenable for six months from April 1st next, subject to one month's notice on either side. Salary at the rate of £100 per annum, with board, lodgings, and laundry allowance.

Candidates must be registered under the Medical Act. Applications (which must be on printed forms obtained from me) must reach me not later than Thursday, March 16th. Selected candidates will be required to call upon such members of the Medical Staff as directed, to be in attendance at a meeting of the Medical Council on Friday, March 24th, at 4.30 p.m. and the House Committee Meeting the same day at 5 p.m., when the appointments will be made.

H. A. MADGE, Secretary.

STOCKTON AND THORNABY HOSPITAL, Stockton-on-Tees. (140 Beds—Three Residents.)

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER (male) for a period of at least six months, duties to commence March 22nd. Salary £160, with board, residence, and laundry. Candidates must be duly qualified and unmarried.

Applications, stating age, nationality, and experience, together with copies of three recent testimonials, to be sent to the undersigned.

J. WILKINSON, Secretary.

WHITEHAVEN AND WEST CUMBERLAND HOSPITAL.

Applications are invited for the post of HOUSE SURGEON at this Hospital. Salary at the rate of £150 per annum, with board, rooms, and laundry. Six months appointment. Duties to commence April 14th. Applications, stating age, qualification, experience, and nationality, accompanied by copies of three recent testimonials, should be sent to the undersigned as early as possible.

R. HIGGINS, Secretary.

SEAMEN'S HOSPITAL SOCIETY, Greenwich.

TWO HOUSE PHYSICIANS required at the HOSPITAL FOR TROPICAL DISEASES, Endsleigh Gardens, W.C., for six months from April 1st. Salary £120 per annum, with board, residence, and laundry. Candidates must be male. Applications, with copies of three testimonials, to be sent in by March 15th to the undersigned.

R. E. V. BAX, Secretary.

Greenwich, February 25th, 1933.

SEAMEN'S HOSPITAL SOCIETY, Greenwich.

HOUSE PHYSICIAN and HOUSE SURGEON required at DREADNOUGHT HOSPITAL, Greenwich, for six months from April 1st. Salary £110 per annum, and a proportion of fees, with board, residence, and laundry. Candidates must be male. Applications, with copies of three testimonials, to be sent in by March 15th to the undersigned.

R. E. V. BAX, Secretary.

Greenwich, February 25th, 1933.

ANCOATS HOSPITAL, MANCHESTER.

RESIDENT SURGICAL OFFICER.

Applications are invited for the post of Resident Surgical Officer which becomes vacant on March 31st next. The appointment is for twelve months. Salary at the rate of £[illegible] per annum, with board, apartments and washing. Candidates holding F.R.C.S. [illegible] preferred.

ORTHOPAEDIC HOUSE SURGEON.

A vacancy will occur [illegible] House Surgeon [illegible] at the rate of £[illegible] per annum, with board and laundry. The appointment is for six months.

Applications stating age, qualifications and experience, together with copies of three recent testimonials, should be sent to the undersigned not later than March 15th.

By order of the Board,

HERBERT J. DAVIGNE, Secretary.

GENERAL HOSPITAL, NOTTINGHAM. (550 Beds.)

A HOUSE PHYSICIAN is required at this Hospital [illegible] at the rate of £[illegible] per annum, with board, residence and laundry. Candidates must be registered [illegible] and must have had experience in Medicine and Midwifery. Applications, stating age, and experience, together with copies of three testimonials, to be sent to the undersigned not later than March 15th. The appointment will be made on Wednesday, March 22nd. Duties to commence on or about April 22nd.

PETER M. MACGILL, House Governor & Secretary.

(Appointments continued on p. 52.)

British Medical Journal
BRITISH MEDICAL ASSOCIATION HOUSE,
TAVISTOCK SQ., LONDON, W.C.1.
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ASSISTANCIES.

WANTED. — OUTDOOR ASSISTANT, LARGE mixed Practice (chiefly industrial). Town 10 *miles from Manchester*. Panel 3,800. Partnership to suitable man. Salary £400, rising £450, plus unfurnished house and car expenses. Usual bond.
Address, No. 1514, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — ASSISTANTSHIP OR LOCUM (*with* or without view) by M.R.C.P., Indian, age 32, experienced G.P. and panel, energetic, abstainer, drive car, references. Free March 31st.—Address, No. 1501, B.M.A. House, Tavistock Square, W.C.1.

WANTED FOR COUNTRY TOWN (Cheshire) outdoor ASSISTANT, male, English, Scotch, or Irish. Salary according to experience. Car provided for use in Practice. Dispenser kept. Usual bond. — Address, No. 1734, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — NORTHUMBERLAND.—MIXED Practice, Part-time ASSISTANT, middle June. Suit man or woman wishing to take *D.P.H.* Medical School within 10 miles. £200 live in. Motor cyclist or car owner preferred.—No. 1542, B.M.A. House, Tavistock Sq., W.C.1.

WANTED. — INDOOR MALE ASSISTANT, for middle-class mixed Practice, London, near West End. No branch surgery. Car available. Usual bond. Commenc. salary £300 p.a. State age, date of qualification, exper., refs.—No. 1724, B.M.A. House, Tavistock Sq., W.C.1.

WANTED, OUTDOOR ASSISTANT FOR mixed Practice in Midland town. Must have some experience G.P. Salary £350. Own car.—Address, stating age, experience, references, *nationality*, No. 1720, B.M.A. House, Tavistock Square, W.C.1.

WANTED IMMEDIATELY, — INDOOR AND outdoor ASSISTANTS for Town and Country Practices, with and without view. Good salaries. State full particulars.—BRITISH MEDICAL BUREAU, 33, Cross St., Manchester, 2.

WANTED, INDOOR ASSISTANT, BRITISH, unmarried, for mixed Practice in Newcastle-upon-Tyne. All found except laundry. Salary £300 per annum.—Address, No. 1736, B.M.A. House, Tavistock Square, W.C.1.

WANTED ON MARCH 16TH, ASSISTANT for mixed Country Practice, 20 miles North of London. Excellent experience in *general practice offered young man*.—Address, No. 1731, B.M.A. House, Tavistock Sq., W.C.1.

WANTED. — OUTDOOR ASSISTANT, WITH some experience in a country town Practice, North Wales. Work light. Must be able to drive car. Usual bond. — Address, No. 1515, B.M.A. House, Tavistock Square, W.C.1.

WANTED, ASSISTANTSHIP, BY M.B., Ch.B., ex H.P. and H.S., also G.P., single, male, driver. Free April 5th.—Address, No. 1718, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — ASSISTANT, MALE, TO LIVE in Branch Surgery. Salary £300 p.a., all found. Usual bond.—Address, No. 1740, B.M.A. House, Tavistock Square, W.C.1.

ASSISTANT. — OUTDOOR WANTED FOR INdustrial, panel, and private Practice, Yorks. English or Scotch, single, age 25—30, with some prev. exper. Cyclist. Usual bond. £300 p.a. and all found. No view Partnership. Rural dist. —No. 1708, B.M.A. House, Tavistock Sq., W.C.1.

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R. RATCLIFFE, Secretary.

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NORTH STAFFORDSHIRE ROYAL INFIRMARY, HARTSHILL, STOKE-ON-TRENT.

VACANCY FOR AN ASSISTANT HONORARY SURGEON.

The Committee invite applications for the post of Assistant Honorary Surgeon.

Candidates for appointment to the Honorary Staff of the Infirmary, will be required to produce evidence that they hold, for the post of Assistant Honorary Surgeon, the Degree of Master in Surgery (obtained by special examination) of a British or Irish University, or the Diploma of Fellow of one of the Royal Colleges of Surgeons of Great Britain or Ireland.

Canvassing will disqualify.

Further information may be obtained from the undersigned.

By Order of the Committee,
W. STEVENSON,
March 6th, 1933. Sec. & House Governor

MANCHESTER EAR HOSPITAL. Grosvenor Square, All Saints'.

The Board invite applications for the post of RESIDENT HOUSE SURGEON (24 beds). Salary at the rate of £120 per annum. Candidates must be duly qualified and registered. Applications, with copies of four recent testimonials, to be forwarded to Mr. REGINALD S. MILFORD (Hon. Sec., Manchester Ear Hospital), or Mr. W. J. ELLAM, 33, Brazennose Street, Manchester.

EAST SUFFOLK AND IPSWICH HOSPITAL. (282 Beds—7 Residents.)

Wanted, April 1st, HOUSE SURGEON (British, male). Salary at the rate of £120 per annum.

Applications, stating age, qualifications, and experience, to be sent to the undersigned, together with copies of three recent testimonials.

The Hospital, Ipswich. ARTHUR GRIFFITHS, Secretary.

JEWISH MATERNITY HOSPITAL, Underwood Street, E.1.

Applications are invited for the post of REGISTRAR-PATHOLOGIST, to commence duties on April 1st. Honorarium 50 gns. a year. The appointment, which is for one year, can be renewed annually for a period of three years. Candidates must hold the F.R.C.S. (Eng.). Applications, with copies of three recent testimonials, should be sent to the undersigned not later than the first post on Monday, March 13th.

KING EDWARD VII HOSPITAL, WINDSOR. (181 Beds.)

HOUSE SURGEON required for six months from April 1st. Applicants must be fully qualified and registered.

Salary at the rate of £100 per annum, together with board, residence, and laundry.

Applications, stating age, qualifications, and experience, accompanied by testimonials, should be sent to the undersigned not later than March 18th.

A. E. CHURCHER, Secretary.

LEICESTER ROYAL INFIRMARY. (472 Beds.)

CASUALTY HOUSE SURGEONS.

VACANCIES are expected to arise on April 1st for Two Casualty House Surgeons. Salaries at the rate of £125 per annum. Applicants preferred who have held a resident Hospital post, or similar experience.

Applications forthwith to the House Governor and Secretary.

March 1st, 1933.

HEREFORDSHIRE GENERAL HOSPITAL, HEREFORD. (140 Beds.)

Applications are invited for the post of HONORARY ANAESTHETIST at the above Hospital.

Candidates must be registered under the Medical Act.

Applications, stating age and qualifications, should be forwarded to the undersigned, on or before March 31st.

T. W. UPTON, Secretary.

CITY OF EDINBURGH.

PUBLIC HEALTH DEPARTMENT.

SENIOR ASSISTANT MEDICAL OFFICER (male or female) having the D.P.H. qualification, required for Child Welfare Department. Salary £600, less temporary cut, amounting at present to £26. Apply, not later than March 15th, giving full particulars, to Medical Officer of Health, Johnston Terrace, Edinburgh.

HARROGATE ROYAL BATH HOSPITAL.
(Special Hospital for Rheumatic and Allied Diseases.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) to commence duties beginning April 1st.

The appointment will be for a period of six months. Salary at the rate of £156 per annum, with board, residence, and laundry.

Applications, stating qualifications, age, etc., with copies of recent testimonials, to be forwarded to the undersigned on or before Thursday, March 23rd.

E. P. L. DIXON, M.A.,
Secretary.

NORTH RIDING INFIRMARY,
MIDDLESBROUGH GENERAL HOSPITAL.
(150 Beds.)

Applications are invited for the post of THIRD HOUSE SURGEON (Gentleman) to commence duties April 1st.

The appointment will be for a period of six months. Salary at the rate of £125 per annum, with board, residence, and laundry.

Applications, stating age and nationality, with copies of recent testimonials, should be sent forthwith to the undersigned.

CHARLES POSTGATE,
Secretary-Superintendent.

ROYAL SOUTHERN HOSPITAL, LIVERPOOL.

WANTED.

ONE ORTHOPAEDIC HOUSE SURGEON.
ONE *MEDICAL OFFICER* to the Special Departments.
RESIDENT ANAESTHETIST.

The salary for the above appointments is £60 per annum, including board and residence.

The appointments will be for six months, duties commencing as from April 1st.

Applications and copies of testimonials to be sent to the undersigned at once.

ALLEN NALDRETT,
Superintendent & Secretary.

DARLINGTON MEMORIAL HOSPITAL.

Applications are invited for the following posts at the above Hospital. (Two of three appointments.)

(1) *SENIOR HOUSE SURGEON*, male, unmarried, British. Salary £200 p.a.
(2) HOUSE PHYSICIAN, male, unmarried, British. Salary £175 p.a.

Board, residence, laundry. Candidates must be fully qualified. Applications, stating age and qualifications, together with copies of two recent testimonials, to be addressed to the undersigned.

ARTHUR RIDDLE, Secretary.

MILLER GENERAL HOSPITAL,
Greenwich Road, S.E.10.

Applications are invited for the post of HOUSE PHYSICIAN. There are six Resident Officers. Salary £100 per annum. Candidates (male) *must be unmarried*. Board, residence, and laundry are provided. Duties to commence on April 1st next. Applications, stating age, *nationality*, qualifications, and experience, accompanied by copies of not more than three recent testimonials, to be sent to the Acting Secretary as soon as possible.

March 6th, 1933.

THE PRINCESS BEATRICE HOSPITAL,
Richmond Road, Earl's Court, S.W.5.
(General Hospital—80 Beds.)

RESIDENT MEDICAL OFFICER (male) required, to act as House Surgeon and Casualty Officer for six months, as from April 1st. Salary at the rate of £110 per annum, with board, residence, and laundry. Previous resident experience essential. Applications, to be sent to the House Governor, accompanied by copies of three recent testimonials, not later than March 20th.

MOUNT VERNON HOSPITAL,
NORTHWOOD.
(For the Study and Treatment of Cancer.)

There is a vacany for a RESIDENT MEDICAL OFFICER. Candidates must be fully qualified and registered. Salary at the rate of £250 per annum, with board, lodging, etc. Applications, with copies of three testimonials, to be sent to the undersigned not later than March 11th.

Offices: W. J. MORTON,
32, Fitzroy Square, W.1. Secretary.

MOUNT VERNON HOSPITAL,
NORTHWOOD.
(For the Study and Treatment of Cancer.)

There is a vacancy in the Radiotherapeutic Department for an ASSISTANT, possessing full Medical qualifications, together with the D.M.R.E. Particulars as to duties, emoluments, etc., can be obtained from the Secretary, 32, Fitzroy Square, W.1.

BATH AND WESSEX CHILDREN'S ORTHOPAEDIC HOSPITAL,
Combe Park, BATH.

HOUSE SURGEON required, to commence duty April 1st.

The appointment will be for six months, with salary at the rate of £120 per annum, together with quarters, board, and laundry.

Candidates must have had special experience in administering anaesthetics.

Applications, with copies of three recent testimonials, should be forwarded to reach the undersigned not later than March 17th.

HAROLD J. FRICKER.
March 3rd, 1933. Secretary.

Telephone: WELBECK 2728.
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Manchester, 3152 Ardwick.
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EASTERN COUNTY. — AGRICULTURAL PRACTICE over £1,000 p.a., [illegible] for 7 miles. Panel worth about £400. Clubs and appts. about £150. V. and M. 4/6 up. Detached house in good garden, 3 recep., 4 bed., surgery, etc. £37 p.a. on lease. Exceptionally safe practice.—No. 9128.

LANCS.—RESIDENTIAL SEASIDE RESORT.—One-third share of £2,300 net [illegible] good middle-class. Third partner wanted owing to increase. Panel 860 increasing. Very busy midwifery. House on front with garage to rent. Premium 2 years purchase, part deferred.—No. 9131.

ITALIAN COAST — DELIGHTFUL SPOT — About £500 p.a. Scope to increase. Good opening in neighbouring town. No English opposition. Fees 12/6 to 35/-. Flat to rent at under £100. 2 recep., 3 bed., cons. room, and usual offices. Furniture, etc., can be bought if desired. Good-will £750 cash.—No. 9129.

EASTERN COUNTY. — ASSISTANCY, OUT-DOOR, with view to Partnership in a very old-estab. Practice of £3,000 a year in a pleasant agricultural village. One-third share for disposal. Unopposed Practice, with ample scope for suitable man, with some experience. Practice well known to Mr. Turner and recommended.—No. 9117.

CHANNEL ISLES. — IN FAVOURITE RESIDENTIAL district overlooking sea. £397 p.a. Fees 3/6 to 7/6 med. extra. No panel. Midwifery refused. Good schools. Sea and trout fishing. Choice of houses.—No. 9107.

RESIDENTIAL SEASIDE RESORT.—WITHIN easy reach of London. £700—£800 p.a., suffered through Vendor's ill-health. Ample scope. New estate building. Small panel. No dispensing. Mids. not sought. Attractive freehold house, built by Vendor, 5 beds., etc., garden, and garage.—No. 9127.

SOUTH WALES.—MINING PRACTICE WORTH £1,250 p.a., mostly panel and contract. Scope to increase further. Mids. 2—3 guineas. Visits 3/6. House, with 2 recep., 4 bed., etc., to rent. Collieries working full time. Opposition not severe. Prem. 1½ yrs.' purch.—No. 9125.

DEATH VACANCY.—LANCASHIRE TOWN. Average over £900 p.a. Panel over £300. Old-established working-class. Nice House in good main road position. Would be sold or let. Locum in charge.—No. 9121.

LANCS MANUFACTURING TOWN — £700 p.a. Panel over 1,050. No appts. Mixed dispensing PRACTICE. Detached house, 5 bed., 2 recep., surg., etc., with separate entrance. Garden and garage. To rent on lease.—No. 9120.

OUTER RESIDENTIAL SUBURB — GOOD-class PRACTICE hitherto worked only part-time. £350 p.a. No panel and no midwifery. No mids. taken. Visiting fees 10/6 and 21/-. Good freehold house, 2 reception, 7 bedrooms, 2 bath., cons. room, etc. Price £2,850 for house and Practice.—No. 9110.

BERKS. — OLD ESTABLISHED. — COUNTRY PRACTICE, about £700 p.a. has been £1,100. Panel about 500. Visiting fees 2/9 to 7/6. Very little midwifery. Splendid house, specially built for Vendor, with two acres of grounds, 2 reception rooms, 6 bedrooms, surgery, and waiting room, etc. Consider £4,000 for Practice & House, freehold.—No. 9104.

WANTED.

WANTED. — PRACTICE OR PARTNERSHIP in London, S.W.; Putney district particularly desired. £1,000 p.a. Applicant is M.B., Ch.B., aged about 30 and would pay a good price for suitable investment.—No. 9113.

WANTED, IN AUGUST OR EARLIER, A PRACTICE returning £1,650 to £2,000 a year with small panel. Preferably in Midland shire, South County, or Welsh Border. Locality with small hospital or nursing home preferred. Applicant is married and has ample capital.—No. 9121.

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LONDON, N.—Well-established, mixed middle and working-class Lock-up PRACTICE, situated on main thoroughfare in thickly-populated locality. Professional accommodation may be rented on lease. Receipts average £750 p.a. Panel 550. Fees 2/- to 10/6. One appointment. Premium 1¼ years' purchase.

MIDLANDS.—PARTNERSHIP (after 12 months' Preliminary Assistantship) in old-established Country Town Practice. Receipts £1,800 Panel 700 (not encouraged). Fees 3/6 up. Several appointments. Premium for one-half share 2 years' purchase.

LONDON, E.C.—Mixed Cash and Panel Lock-up PRACTICE, with living accommodation, if desired, facing main thoroughfare, held on lease at £95 p.a. Receipts nearly £700. Panel 450 (scope). Fees 1/6 to 10/6. Midwifery not undertaken. Premium £1,000.

DURHAM. — Middle-class and industrial PRACTICE. Average receipts approx. £500. Panel 370. Medium-sized house. Branch Surgery. Fees 2/6 up. No appts. Prem. £725 or offer. Excellent scope.

S. AFRICA.—Well-established G.P. situated in well-known Health Resort. Delightful climate and surrounding country. Detached house, large garden, garage. Receipts approx. £1,800 (subject to confirmation). Fees from 10/6, plus medicine. Two appointments. Scope for Surgery. Premium £3,600.

LONDON, E.—Suburban middle-class G.P. Medium-sized house to rent on lease at the low rental of £30 p.a. Fees 2/- up. Average receipts £516. Panel 350. Excellent scope for young man. Premium for Practice and lease £1,050 cash or near offer.

N.W.—Lock-up NUCLEUS situated in residential locality. Suitable accommodation if desired. Receipts £230. Panel 180. Fees 2/6 upwards. Premium 1½ years' purchase, or near offer.

LONDON, S.W.—Mixed G.P. within close proximity of West End. House on lease at very low rental. Receipts approx. £900 p.a. Select panel of nearly 800. Premium for Practice, £1,500.

MANCHESTER. — Old-established *industrial* PRACTICE. Medium-sized house to be rented on lease. Receipts approx. £650, increasing. Panel nearly 800. Fees 2/6 up. Prem. £950, to include furniture.

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YORKSHIRE (Near Coast). — Agricultural Locality. — Attractive house, separate entrance for surgery, for sale, freehold. Receipts average approx. £800 p.a. Panel 620. Fees 3/6 up. Premium 1½ years' purchase for Practice; house £900.

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LANCS. — Old-established middle-class and industrial G.P. Suitable accommodation to rent on lease at low rental. Receipts nearly £1,900. Panel 2,950. Fees 2/6 up. One Branch Surgery. Suitable to two in Partnership, or Principal and Assistant. Premium £3,000 cash.

LANCS (Large Town). — Good-class G.P. situated in residential locality. Medium-sized house to rent. Receipts over £1,600. Panel approx. 700. Fees 3/6 up. Premium 1½ years' purchase.

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3. LANCS. — Large Town. — Old-established PRACTICE, held 21 years by Vendor. Receipts £1,800 p.a., panel nearly 3,000. Nice house. Premium 2 years' purchase.
4. WALES, large town.—DEATH VACANCY.—Well-established PRACTICE. Receipts about £900, including panel about 1,000. Reasonable offers considered.
5. LANCS TOWN. — DEATH VACANCY. — Old-established PRACTICE. Receipts nearly £1,000 a year, panel 806. Nice house on lease. Reasonable offer considered, easy terms arranged.
6. LONDON, N.W. (near Highgate). — Well-established PRACTICE, capable of good increase. Receipts £250 per annum. Surgery rent £1 weekly inclusive. Premium £150.
7. YORKS.—Large town. — Old-estab. mixed class PRACTICE. Average income £980, panel 400. Nice *house, on rental. Premium* £1,350. Vendor moving to London.
8. LANCS.—Old-established PRACTICE. Receipts average £750 p.a., panel 1,050. Nice house, rent to be arranged. Vendor wishes a change South. Premium 1½ years' pur.
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NORTH WALES.—Country Town (Border of Shropshire).—Mixed PRACTICE, averaging £783 p.a. Panel 760. Scope for increase. Good house, 2 reception, 4 bedrooms. Garage and garden. Rent per

p.a. Panel 900. Scope for increase. Good accommodation available, containing 3 bedrooms. Premium 1½ years' purchase.—No. 441.

LAKE DISTRICT. — Small Seaside Town.—Middle-class PRACTICE. Cash receipts over £800 p.a. Panel 250. Excellent house (freehold) on sea front, 3 reception, 7 bedrooms. Garage and nice garden. All kinds of sport. Vendor retiring. Premium —Practice—1½ yrs.' purch.—No. 388.

DEATH VACANCY.—LANCASHIRE TOWN.—Old-established mixed PRACTICE. Average cash receipts over £900 p.a. (including over £300 from panel). Scope for increase. Good house on main road, 2 reception, 4 bedrooms. Rent £65 p.a. Premium 1 year's purchase. Locum in charge.—No. 423.

LIVERPOOL.—Mixed PRACTICE. Cash receipts last year £943. Panel 876. Scope for increase. Hospital appointment £75—£100 p.a. Good house, 3 reception, 5 bedrooms, professional rooms, to rent, or would sell. Premium—Practice—best offer.—No. 436.

N. STAFFS.—Old-established Country PRACTICE in charming district, averaging £900 p.a. Panel 632. Appointments (transferable) £100 p.a. Practically unopposed. Scope for increase. Excellent house, with ample accommodation; garage and garden, rent £84 p.a. Premium 1½ years' purchase.—No. 426.

MANCHESTER. — Middle-class PRACTICE in good residential district which is rapidly developing. Average cash receipts £1,427 p.a., excluding appointment £120 to £150 p.a. Panel 700. Excellent corner house, 3 reception, 5 bedrooms, 3 professional rooms, garage, to rent or for sale. Premium—Practice—1½ years' purchase.—No. 438.

LANCS TOWN, near Country.—Old-established mixed PRACTICE. Cash receipts last year £725. Panel about 1,000. Excellent detached corner house, 3 reception, 6 bedrooms, garage, and large garden. To rent on lease. Premium 1½ years' purchase, or near offer.—No. 403.

MANCHESTER. — Old-established panel and private PRACTICE. Cash receipts last year £642. Panel 788 Scope. Good corner house, 2 reception, 4 bedrooms; garage. Rent £60 p.a. Premium 1½ years' purchase.—No. 437.

NORTH WALES.—Old-established mixed PRACTICE in Country Town, near coast. Cash receipts last year £700 Panel 538 Scope for increase as the Practice has been neglected. Excellent house, 3 reception, 5 bedrooms, garage, and large garden Net rent £50 p.a. Good sport and educational facilities. Welsh not essential. Cottage Hospital. Premium £200.—No. 412.

MANCHESTER. — Residential Suburb — Middle-class PRACTICE. Suitable for two in Partnership. Cash receipts last year £4,573. Panel 1,400. Two excellent houses to rent with ample accommodation. Premium 1½ years' pur., part by arrangement.—No. 277

SCOTLAND.—Mixed PRACTICE producing £700 p.a., including appointments £400 p.a. Panel 226. Pleasant district. House, with modern conveniences. Rent £16 p.a Prem £450.—No. 434

NR. NEWCASTLE-ON-TYNE.—Mixed general PRACTICE, averaging £800—£850 p.a. Panel 600. Scope for increase Good house, 3 reception, 5 bedrooms, garage, and garden. Premium £950.—No. 422.

NORTH-WEST COAST. — LARGE Residential and Seaside Town —Old-established PRACTICE. Cash receipts about £1,200 p.a. Panel 1,500. Excellent detached corner house (freehold), 3 professional rooms, 5 beds., and 2 recep. rooms, garage, and good garden for sale Premium—Practice—1½ years' purchase.—No 417

MANCHESTER. — Small mixed PRACTICE offering great scope for increase Cash receipts last year £600. Panel 450. Suitable house in main road, 2 professional, 2 reception, and 4 bedrooms Rent £42 p.a. Premium £750.—No 433.

NORTH-WEST COAST — PARTNERSHIP in middle-class Practice in favourite seaside town Must have good qualifications, F.R.C.S. or M.D. Cash receipts last year £2,703 Panel 800 Premium—one-third share—2 years' purchase.—No 414

MANCHESTER. — Middle-class PRACTICE, in pleasant suburb Cash receipts last year, £1 327 Panel 528 Charming house to rent, 3 reception, 6 bedrooms, billiard room Large garden and garage. Premium—Practice—1½ years' purchase.—No 322

EAST YORKS — Country Town near Coast — Unopposed mixed PRACTICE Cash receipts last year £950 Panel 650 Excellent detached house, 3 reception, 4 bedrooms; garage and large garden. Premium 1½ years' purchase.—No 346

MEDICAL WOMAN'S PRACTICE.—MANCHESTER.—Cash receipts last year £645 Panel 450. Good scope Excellent house, 3 reception, 6 bedrooms, garage. Rent £80 p.a. on lease. Premium, best offer.—No. 330

BLACKPOOL. — NUCLEUS, established 4 months, in rapidly developing district. Cash receipts £134, excluding Panel of 50. Exceptional scope. Imposing corner house to rent or would sell Premium—goodwill, household, and all other furniture, etc., £850. —No. 444.

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All communications to be addressed to the Branch Manager, BRITISH MEDICAL BUREAU, 33, CROSS ST., MANCHESTER, 2.

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(FOUNDED 1880.)

12, Stratford Place,

Oxford Street, W.1.

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1 DEATH VACANCY, S. COAST.—OLD-ESTABLISHED NON-dispensing PRACTICE averaging over £1,200 p.a. in popular Health Resort. No panel. Well-situated house to rent or purchase.

2 MIDLANDS.—PARTNERSHIP IN MIDDLE AND WORKING-class Practice of about £6,200 p.a. in Country Town in first-rate Hunting Centre. Panel over 3,000. House to purchase. Excellent opening for capable and energetic man. Cottage Hospital. Ample scope for good Surgeon. Premium one-half share 2 years' purch.

3 HOME COUNTIES.—PARTNERSHIP IN MIXED PRACTICE IN Country District within 25 miles of London. Cash receipts average nearly £4,300 p.a., including panel of 2,650. Detached house (4 bed and dressing rooms) in own grounds for sale. Premium one-third share 2 years' purchase.

4 S. MIDLANDS.—VERY OLD-ESTABLISHED PRACTICE ABOUT £500 p.a. in a town of about 50,000 inhabitants. Panel 430. Very good detached double-fronted house with 7 bed and dressing rooms, garage, and good garden. Great scope for an energetic man. Premium, freehold house and Practice, £4,000.

5 ESSEX COAST.—PARTNERSHIP IN PRACTICE OF £2,500 p.a. in small Seaside Town. Panel 2,300. Modern house in good position facing Sea with 4 bedrooms for sale. Scope for increase. Premium one-fourth share £1,250, and further share later.

6 W. MIDLANDS. — PARTNERSHIP IN OLD-ESTABLISHED Country Practice over £4,300 p.a. in delightful part. Good appointments and panel over 2,000. Conveniently situated house in own grounds, for sale. Cottage Hospital. Premium one-third share 2 years' purchase.

7 ESSEX.—PRACTICE ABOUT £1,150 P.A. IN DEVELOPING district in the Thames Estuary. Panel 350. House with ample accommodation. Electric light, main drainage, garage, and very nice garden to rent Yachting. Plenty of scope for increase. Premium £1,700.

8 LONDON, W.—STEADILY INCREASING NUCLEUS OF PRACtice in the Maida Vale district. Bookings for 11 months £249, of which about £100 has been received. Rent of consulting and waiting rooms 30/- weekly. Good scope. Premium £300.

9 DEATH VACANCY.—LONDON, W.—VERY OLD-ESTABLISHED good-class PRACTICE of over £600 p.a. Small select panel. Visits 10 6 to £1 1s., some higher. No midwifery. Excellent corner house (5 bed and dressing rooms), the lease of which is for sale. Ample scope for increase.

10 WEST OF ENGLAND.—PARTNERSHIP IN OLD-ESTABLISHED PRACTICE over £2,200 p.a. in County Town. Panel about 1,000. Premium one-half share 2 years' purchase. Good prospects for well-qualified physician (preferably M.R.C.P.), who should be an R.C. and who would have opportunity of getting on Staff of Hospital in near future.

11 EAST ANGLIA. — PARTNERSHIP IN OLD-ESTABLISHED PRACTICE of £3,870 p.a. in Market Town in Agricultural Centre. Suitable house available. Partner aged about 30, with experience in Anaesthetics and Ophthalmic work desired. One-third share at first at 2 years' purchase. Preliminary Assistantship entertained.

12 LONDON, E.C.—PARTNERSHIP IN OLD-ESTABLISHED PRACtice in the City. Receipts average about £1,650 p.a., including appointments and panel worth over £500 p.a. Premium one half share £1,000.

13 NORTH OF ENGLAND. — INLAND HEALTH RESORT. — NON-dispensing PRACTICE of about £1,000 p.a. Small select panel. House (7 bedrooms) with large garden, for sale. Premium—Practice—£750.

14 N. MIDLANDS.—PARTNERSHIP IN SOUND AND LUCRATIVE Practice in manufacturing district. Good appointments and large panel. House, with 7 bedrooms, to rent on lease. Premium for share worth about £2,600 p.a., 1¾ years' purchase.

15 EAST COAST.—PARTNERSHIP IN OLD-ESTABLISHED AND lucrative Practice over £8,000 p.a. in popular watering-place. Good appointments and panel well over 5,000. Excellent house (3 bedrooms), with all modern conveniences to let. Guaranteed share of £800 p.a. would be sold at first at 2 years' purchase, with option to increase share later.

16 HOME COUNTIES. — PARTNERSHIP (AFTER PRELIMINARY Assistantship) in large mixed Practice in growing district within 20 miles N.W. of London. Applicant should be a keen and energetic young Englishman.

17 LONDON, E.C. — NUCLEUS OF PRACTICE (ABOUT FOUR-fifths Ophthalmic) in the City. Cash receipts average £263 p.a. Fees for Consultations £1 1s. to £2 2s. Consulting and waiting room to rent. Premium £250.

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Practices and Partnerships for Disposal (continued).

18 HOME COUNTY.—WELL-ESTABLISHED PRACTICE OF £700 p.a. in first-rate Country Town under 40 miles from London. Panel about 250. Fees 5/- to £1 1s. Large well-built residence (about 6 bedrooms) with modern conveniences. Beautiful garden, meadow, orchard, etc., in all about 24 acres. Excellent hunting. Premium, Practice and house, £4,500 (or near offer), which is less than the value of the house alone.

19 KENT.—PARTNERSHIP IN MIDDLE AND WORKING-CLASS Practice averaging nearly £4,450 p.a., in an industrial Town under 25 miles of London. Panel about 2,600. Detached house (4 bedrooms) with garden to rent. Plenty of scope for increase. Premium one-fifth share 2 years' purchase.

20 EASTERN COUNTIES. — OLD-ESTABLISHED PRACTICE about £2,750 p.a., in beautiful country district. Panel 1,150. Good house (6 bedrooms), with electric light and central heating, in large grounds, for sale. Good scope.

21 MIDLANDS. — PARTNERSHIP IN WELL-ESTABLISHED AND increasing Practice of nearly £1,550 p.a. in growing residential neighbourhood on outskirts of first-rate town. Panel 1,830. House (4 bedrooms, etc.), in acre of garden, for sale or rent. Excellent prospects of increase. Premium one-half share 2 years' purchase.

22 S. AFRICA.—RADIOLOGICAL PRACTICE IN A MOST DELIGHTFUL town, with excellent climate. Cash receipts last year £1,450. Scope. Premium, to include furniture, carpets, accessories, etc., £2,200.

23 PRIVATE MENTAL HOME (FOR LADIES ONLY).—EXCEPTIONALLY nice house and grounds. A considerable sum required for the purchase. Further particulars on application.

24 EASTERN COUNTIES. — OLD-ESTABLISHED COUNTRY PRACTICE. Cash receipts about £720 p.a., including appointments over £150 and a panel of about 590. Detached house (6 bedrooms) in grounds of 1 acre for sale. Prem. for Practice £650.

25 S.W. OF ENGLAND. — WELL-ESTABLISHED MIDDLE AND better-class PRACTICE of between £1,200 and £1,300 p.a. in Seaside Resort. Panel 500. Excellent and well-situated large detached corner house with every modern convenience, to rent on lease. Very good Educational facilities. Sport of all kinds including golf, yachting, etc. Premium £2,200.

26 EAST COAST.—PRACTICE OF BETWEEN £750 AND £800 p.a. in a purely Residential Seaside District within 40 miles from London. Small Panel. Detached house (5 bedrooms) for sale. Scope for increase as district is growing.

27 SOUTH AFRICA (CAPE PROVINCE).—PRACTICE OF OVER £2,600 p.a. in Residential District on outskirts of one of the Principal Coastal Towns. Good house (5 bedrooms, etc.) Scope for Surgery. Premium £2,000.

28 DEATH VACANCY.—LANCS.—OLD-ESTABLISHED PRACTICE in small manufacturing town. Receipts average £933 p.a. (including £344 from the panel). Well-situated house on main road to rent or purchase.

29 LANCASHIRE. — OLD-ESTABLISHED PRACTICE IN SMALL Manufacturing Town. Cash receipts last 12 months £725, including a panel of over 1,050. Detached house (5 bedrooms), with garage and good garden, to rent. Premium 1½ years' purchase or near offer.

30 DEATH VACANCY.—S. WALES.—VERY OLD-ESTABLISHED PRACTICE in beautiful district, with some of the finest coast and moorland scenery. Income between £850 and £900 a year, including appointments worth about £225 p.a. and a panel of 367. Well situated house (6 bedrooms), garages, and 7 acres of grounds for sale. Excellent reasons for good scope for increase.

31 SURREY.—PARTNERSHIP IN SOUND OLD-ESTABLISHED good mixed-class Practice about £3,000 p.a. in the Croydon area. Small panel. Very little midwifery. Suitable house could be obtained. Scope for increase. One-fourth share at first at 2 years' purchase, with option to increase in twelve months.

32 HOME COUNTIES. — PRACTICE IN DELIGHTFUL COUNTRY District, easy distance of London. Earnings past 12 months £667. Panel over 300. Attractive house (7 bed and dressing rooms) in grounds of two acres, with garage, for sale. Very suitable for Resident Patients. Good scope for increase. Premium £700.

33 SURREY.—PRACTICE OF £1,000 P.A. IN RAPIDLY GROWing Residential District within 15 miles of London. Panel 400. Suitable house, with separate professional accommodation, for sale. Scope for considerable increase. Premium £1,000.

34 LONDON, W.—GOOD MIDDLE-CLASS PRACTICE £400 P.A. in suburb within easy access of the West End. Panel over 100. Attractive double-fronted house with nice garden for sale. Scope for increase. Premium 1½ years' purchase.

35 CORNWALL.—VERY OLD-ESTABLISHED PRACTICE OF OVER £1,100 p.a. in delightfully situated seaside village on West Coast. Panel about 550. Well-built house (7 bed and dressing rooms), standing in half acre of ground for sale. Scope, as building is going on. Premium 1½ years' purchase.

36 LONDON, N.—PARTNERSHIP IN PRACTICE, ABOUT £5,250 p.a. in thickly populated Suburban District. Panel about 800. One-fourth or one-third share at 2 years' purchase.

37 S. OF ENGLAND. — PARTNERSHIP IN OLD-ESTABLISHED Practice of nearly £1,950 p.a. in important town within 80 miles of London. No panel. Attractive corner residence (7 bed and dressing rooms), in half-acre of walled-in garden, with garage, etc., for sale. Ample scope for increase. Premium one half share 2 years' purchase.

38 HOME COUNTIES. — OPHTHALMIC PRACTICE BETWEEN £300 and £400 p.a. in desirable Residential Town, under 15 miles from London. Good detached house (4 bedrooms) with large garden for sale. Good reasons for plenty of scope for increase. Premium £300.

39 LONDON, E.C.—OLD-ESTABLISHED "LOCK-UP" PRACTICE of £646 p.a. Panel 459. Living accommodation to rent if desired. Premium £1,000.

40 S. AFRICA. — OPHTHALMIC AND GENERAL PRACTICE about £1,400 p.a. (about 60 per cent. Ophthalmic), including appointments £400. No Ophthalmic opposition. Premium £400.

41 CO. DURHAM.—PRACTICE OVER £500 P.A. IN RESIDENtial colliery district, near two large towns. Panel 370. Centrally situated 7-roomed house, with good Surgery and Dispensary, for sale or rent. Practice could be very quickly substantially increased. Premium £650.

42 N. OF ENGLAND. — OPHTHALMIC PRACTICE OF OVER £1,600 p.a. in an important town. Excellent scope for one keen on clinical and operative Ophthalmology. Large house in first-class condition for sale. Purchaser should be well qualified. Premium £2,500.

43 S. AFRICA. — PRACTICE OF ABOUT £2,000 P.A. IN A famous town. Pleasantly situated detached bungalow (5 bedrooms), garage, and small garden for sale. Good hospital (with private wards). Premium £1,100.

44 LONDON, WEST END. — X-RAY AND ELECTRO-THERAPeutic Practice. Receipts 1931, nearly £620. Suitable and convenient flat at moderate rent, on lease. Premium £95.

45 LONDON, E.—CASH AND PANEL PRACTICE OF £360 P.A. in populous district. Panel 570. Small house to rent on lease. Premium 1½ years' purchase.

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who have both had many years' experience as Medical Transfer Agents.

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Accountancy and legal services furnished by the Agency, where desired, at moderate inclusive charges. No charge is made to Principals for the introduction of Locum Tenens or Assistants.

1. SOUTH-WEST OF ENGLAND.—In a thriving and pleasant seaport town, with beautiful surrounding country, a well-established increasing PRACTICE worth last year over £1,100, including panel producing £286 and appts. £200. Visits 3/6 to 21/-. Midwifery practically refused. House is Vendor's property and is for sale. Premium £2,000, or near offer.
2. PARTNERSHIP. — EASTERN COUNTIES. — The third share, with increase to half in 3 years, can be acquired by an experienced Practitioner about 30 years of age and with some knowledge of Eye work and Anaesthetics, in a very old-established Practice situated in very pleasant market town, with Cottage Hospital. Cash receipts average £3,870 p.a., including panel producing £1,100 and appts. Fees good. Excellent house with ample accommodation, garden, garage, etc. Electric light. Can be rented (£40 to £45 a year) or would be sold. Preliminary Assistantship considered.
3. CHELSEA AREA.—LOCK-UP SURGERY.—Old-established and averaging about £450 p.a., including panel of 140. Hours: 9.30 to 12 and 5 to 7 p.m. Consultations 7/6 and 10/6. Very little visiting at 5/- upwards. Rent of two rooms £84 p.a. Total expenses just over £100 p.a. Premium £650. Ill-health reason for sale.
4. OPHTHALMIC AND EAR, NOSE, AND THROAT PRACTICE.—North-East Coast Town.—Gross cash receipts £1,000 to £1,200 p.a., mostly Ophthalmic. Three Hospital appts., School Clinics. Other salaried appts. Practice has been established 30 years, but is increasing in hands of Vendor who is taking an appointment at a Teaching Hospital elsewhere. Suitable house available. Practice could be divided if desired. Premium 1 year's purchase.
5. WITHIN SIXTEEN MILES OF LONDON.—Small PRACTICE, offering large scope in good residential town. Receipts estimated to be between £500 and £600 p.a. Good house. Price for Practice and house £4,000, or near offer.
6. PARTNERSHIP.—NORTH-WEST COAST.—A one-third share (or larger share as arranged) is offered in a well-established good middle-class Practice, in rapidly growing seaside town. Average net receipts for the last three years £2,350. Panel of 800, and increasing. Suitable house, on front, with small garden and garage can be rented. Premium 2 years' purchase. Excellent scope for increase.
7. PARTNERSHIP. — NEAR EPPING FOREST.—A one-third share is offered in a well-established and rapidly developing good middle-class Practice, averaging for the past three years £3,504, including appointments worth £250. Selected panel of 660. Good house available (professional accommodation, 3 reception, 5 bedrooms, etc.). Large and secluded garden. Garage. Price (freehold) £2,400. Premium 2 years' purchase.
8. LANCASHIRE.—LARGE TOWN.—Old-established chiefly working-class PRACTICE, averaging for the last three years nearly £1,900. Panel of 2,950. Advice and medicine from 3/6. Surgery can be rented at £55 p.a. Premium £3,000, or near offer.
9. LIVERPOOL.—Well-established PRACTICE in rapidly growing district. Gross cash receipts over £950, including panel of 876. Fees from 2/6. Suitable house can be rented at £80 p.a. Premium 1½ years' purchase.
10. NORTH WALES.—Chiefly Panel and Contract PRACTICE in the midst of beautiful surrounding country. Average gross cash receipts for last three years £783. Panel of 760. Advice and medicine 2/6 to 5/-. Not much midwifery. House contains 2 reception rooms, 4 bedrooms, boxroom, bathroom, etc., and professional rooms. Electric light and gas. Garden. Price for freehold £800, £580 on mortgage. Premium £900, or near offer. Excellent fishing, shooting, hunting, etc., and good schools within reach.
11. HOME COUNTIES. — PARTNERSHIP. — A share, representing about £650 to £700 p.a., with good prospects of an early increase, is offered in a better-class Practice, situated in a good residential district within easy reach of town. Fees from 5/- to 21/-. Panel of over 2,000, and appts. worth about £150. Moderate living expenses. Ingoing partner should be English or Scotch, preferably single between 28 and 35 years of age, and experienced in general practice. Premium for share £1,350.
12. WITHIN SIX MILES OF CHARING CROSS.—Well-established middle and working-class PRACTICE, averaging about £1,100 p.a., including panel of 900. Commodious house with 2 reception, 5 bedrooms, bathroom, etc., can be rented at £75 p.a. Premium £1,650.
13. MIDDLESEX.—ASSISTANTSHIP, with view to Partnership offered in a large mixed general Practice, after a preliminary period of six months. Ingoing partner must be English and experienced.
14. HOME COUNTIES.—ASSISTANTSHIP, with view to Partnership, is offered in a better-class Practice in residential town. Ingoing partner must have experience of general Practice and be able to undertake major surgery.
15. NORTH WALES.—Old-established middle and working-class PRACTICE, averaging for the last three years over £1,700, including panel of about 1,300. Fees from 2/6. Visits from 3/6, with medicine extra. Suitable house, with good professional accommodation. Electric light. Garage for two cars. Small garden. Rent on lease £100 p.a. Premium £2,500, £1,700 down, balance by instalments. Good sport, etc. A knowledge of Welsh is not necessary.
16. PARTNERSHIP.—CHESHIRE.—Half share (producing over £2,000 p.a.) of very old-established Practice, situated in most pleasant residential district within few miles of a large town, can be acquired by an experienced gentleman between 35 and 40 years of age. Panel of 1,200—1,300. Patients all classes. Fees good and expenses light. Suitable house available containing 2 reception rooms, 3 bedrooms and 3 attic bedrooms, bathroom, etc. Garage and garden. Rent £65 p.a. Premium £4,000. Every social amenity, sport, and very good educational facilities.
17. DEATH VACANCY.—ESSEX COAST.—Old-established PRACTICE, held by late Incumbent nearly 30 years. Receipts are estimated to be between £500 and £600 p.a. Selected panel of 143. Fees 2/6 to 5/-. Visits 3/6 to 7/6. Midwifery refused. Detached double-fronted corner house, with 2 reception, 4 bedrooms, etc. Separate professional rooms. Garden. Price for Practice and house £1,750.
18. RIVIERA.—Old-established PRACTICE the receipts from which have averaged over £1,600 p.a., but have decreased recently owing to Vendor's ill-health. Very good prospects of extension. Fees from £1 1s. Very easy work. Suitable flat can be rented at £100 p.a. Premium £4,000.
19. MIDLANDS.—Old-established middle and better-class PRACTICE in clean and attractive manufacturing city. Cash receipts average over £1,600 p.a., including appt. worth £165 (transferable) and panel of 1,220. Visits 5/- to 2 gns. Midwifery discouraged, fees 5 to 15 gns. Exceptionally good house, in its own grounds, with ample accommodation; fitted with every labour-saving device, and economically run. Situated in the best residential part. A cottage in the grounds is let at £37 a year. Price, freehold, £5,000 (£3,500 on mortgage). Premium £3,500. Scope for active man.
20. WITHIN FIFTEEN MILES OF LONDON.—Old-established better middle and working-class PRACTICE, producing last year £1,535, of which £689 is from panel. Fees 2/6 to 7/6. Midwifery discouraged. Large house in one acre of ground, with ample accommodation. Price (freehold) £4,750 (£2,750 on mortgage or might be rented). Premium £2,500. Very good scope for increase.
21. PARTNERSHIP. — RESIDENTIAL SUBURB OF LONDON. — A half share is offered in a well-established middle-class Practice, producing over £2,500, with panel of 1,400. Surgery fees 2/6. Visits 4/- to 7/6. Very little midwifery. Commodious house, with 3 reception, 6 bedrooms, etc. Can be rented at £100 p.a. Premium 2 years' p.p.
22. WESTERN SUBURB.—Well-established PRACTICE, producing £900 p.a., including panel of nearly 600. Suitable house available. Premium 1½ years' purchase.
23. BORDERS OF LINCS AND NOTTS.—Old-established PRACTICE in pleasant agricultural district. Average gross cash receipts for the last three years over £1,100. Panel of 620, plus mileage, and appts. worth over £50. Low expenses. Fees from 2/6. Detached house, with 2 reception, 5 bedrooms, bathroom, etc. Rent £55 p.a. Premium £1,785.
24. LANCS.—Well-established mixed-class PRACTICE, producing for the last 12 months £725. Panel of 1,055. Fees from 3/6. House contains 3 reception, 5 bedrooms, etc. Rent on lease £85 p.a. Premium 1½ years' purchase.
25. LANCS. — LARGE TOWN. — Old-established upper and middle class PRACTICE, situated in purely residential district and averaging about £1,700 p.a. including appt. of £130, and panel of 700. Visits 5/- upwards. Very little midwifery at 5 to 10 guineas. Expenses low. Excellent and well-built house, ideally situated, having ample accommodation (surgery, waiting room, and dispensary, 3 reception, 5 bedrooms, etc.). Rent on lease £120. Premium £2,500. Good educational facilities.
26. EGYPT.—Well-established PRACTICE, producing about £960 p.a., and offering good scope for increase. Fees 10/6 to 2 guineas. Excellent accommodation can be rented at £16 10s. monthly. Premium to include all furniture, drugs, drug bottles, instruments, etc., £2,000.
27. YORKSHIRE.—PARTNERSHIP.—A one-fourth share, with increase later, is offered in a very sound old-established general Practice, situated in favourite country town, within easy reach of coast. Gross cash receipts for the last three years have averaged £3,700, and for the immediate past twelve months £4,180. Panel of 2,000, and appts. bring in about £500 p.a. Fees 5/- to 21/-. House contains 3 reception, 5 bedrooms, etc. Electric light; garden. Garage. Can be rented at £46 p.a. Or other houses available. Excellent sport and good schools. Premium for share 2 years' purchase.
28. NORTH DEVON.—Very old-established unopposed country PRACTICE in beautiful district, within easy reach of the sea. Cash receipts over £900, including panel and appointments about £300. Excellent residence (3 reception, 6 bedrooms, bathroom, etc.). About half an acre of garden, tennis lawn, etc. Garage. Water laid on and main drainage. Rent on lease £60 p.a. Premium £1,450. Good hunting, shooting, fishing. Educational facilities.

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BEWARE of Bovine Tuberculosis!

Read this extract from the report of the Medical Research Council

Extracts from

"TUBERCULOUS DISEASE IN CHILDREN"

(Medical Research Council Report, Special Report Series No. 172, 1932, Blacklock)

"All the cases under one year of age with intestinal ulcers had been fed on cow's milk."

"Babies who were breast-fed for nine months or till death, if that occurred before that time, suffered less from abdominal tuberculosis than infants fed on cow's milk. This was particularly noticeable in the first year of life, and also to a lesser extent in the second."

"The greatest number of primary abdominal lesions were found in the second year of life, that is, at the period when children are consuming large amounts of raw milk."

"In infants in the first year of life only one human and no bovine infections were found in babies breast-fed for nine months or till death, if this occurred earlier, but in those fed on cow's milk, two human and fourteen bovine infections were found."

"The high incidence of the bovine type of infection in the abdominal cases is doubtless due to the ingestion of infected milk, as there was a greater incidence of this type of infection in bottle-fed babies and also for the six months to two year age-groups, when the children were consuming large amounts of milk."

"The highest percentage of infections with bovine strains occurred in the second year of life, that is, at the period when children consume large amounts of raw milk."

It is impossible to ignore the significance of this extract from an official publication. Useful work is being done towards decreasing the risk to infants presented by the use of raw milk. But the keenest investigators themselves must admit that their goal is not yet reached.

The SAFE milk for infants, when breast feeding is impossible, is *still* COW & GATE—free from pathogenic bacteria, readily digestible, rich in vitamins and bone-building minerals.

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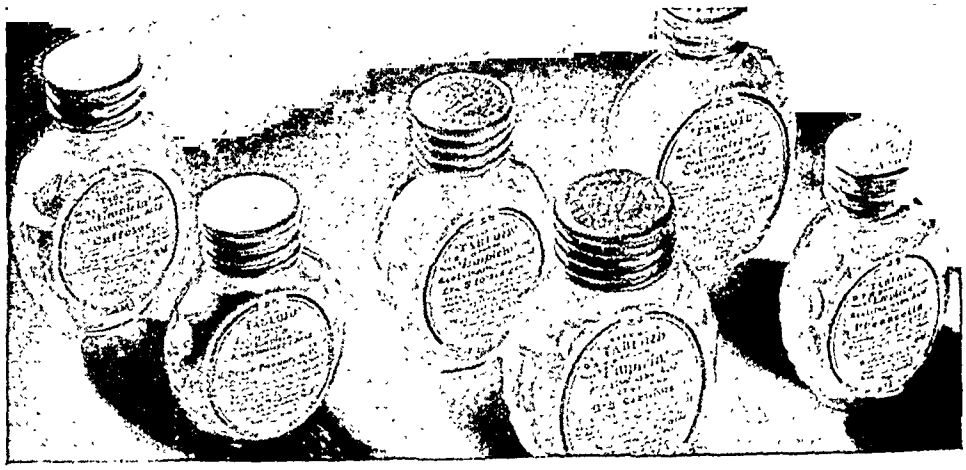

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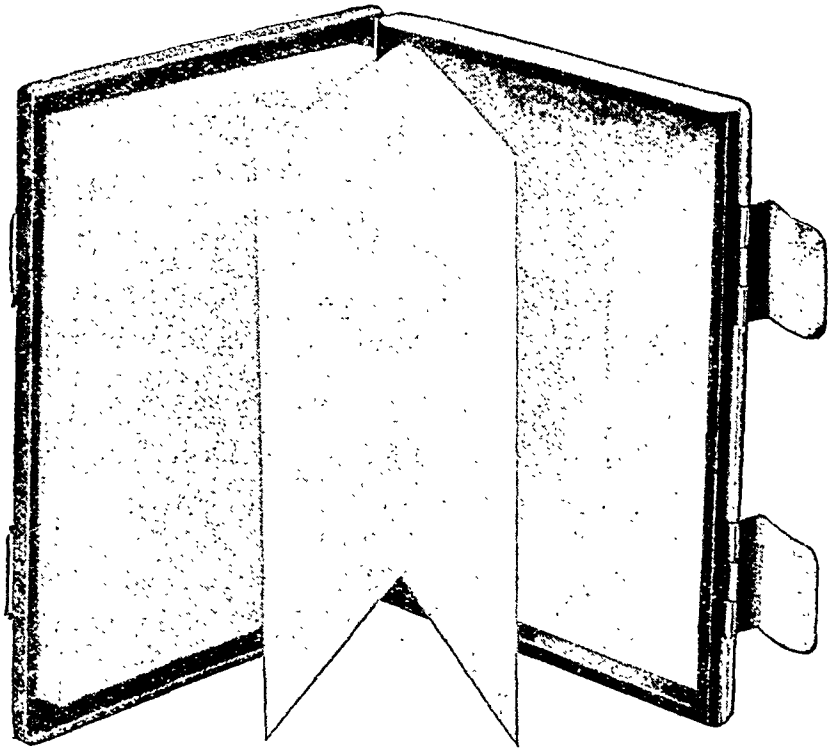

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QUARTERLY SUPPLEMENTS

MINOR SURGERY
(January)

MINOR SURGERY OF THE EYE
By N. BISHOP HARMAN, F.R.C.S., Consulting Ophthalmic Surgeon, West London Hospital.

MINOR SURGERY OF THE FOOT
By R. J. McNEIL LOVE, F.R.C.S., Surgeon, Metropolitan Hospital.

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MINOR SURGERY OF MUSCLES AND TENDONS
By H. C. EDWARDS, F.R.C.S., Surgeon to the Evelina Hospital for Children.

DISEASES of the SKIN
(April)

COMMON SKIN DISEASES OF CHILDHOOD
By M. SYDNEY THOMSON, M.D., M.R.C.P., Physician for Diseases of the Skin, Belgrave Hosp. for Children; Junior Physician, Diseases of the Skin, King's College Hospital.

STREPTOCOCCAL AND STAPHYLOCOCCAL INFECTIONS OF THE SKIN
By ROBERT GIBSON, M.D., Hon. Physician, Manchester and Salford Hospital for Diseases of the Skin.

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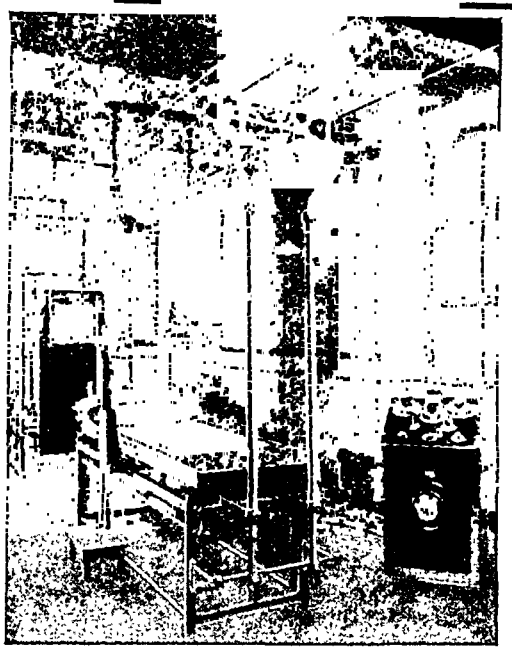

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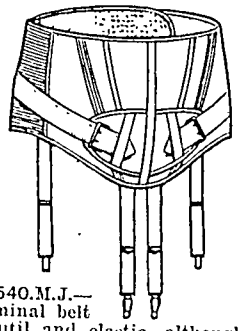

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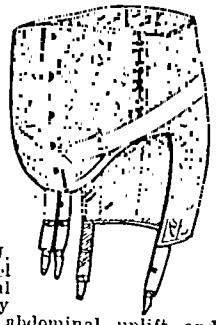

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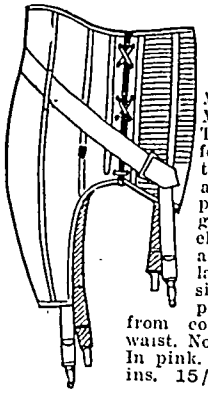

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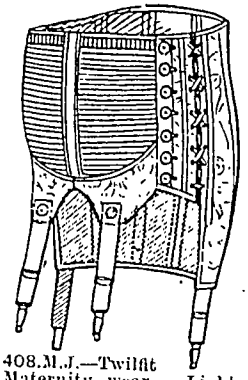

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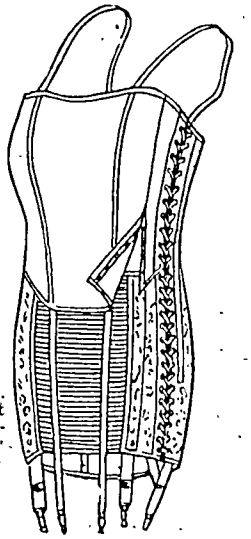

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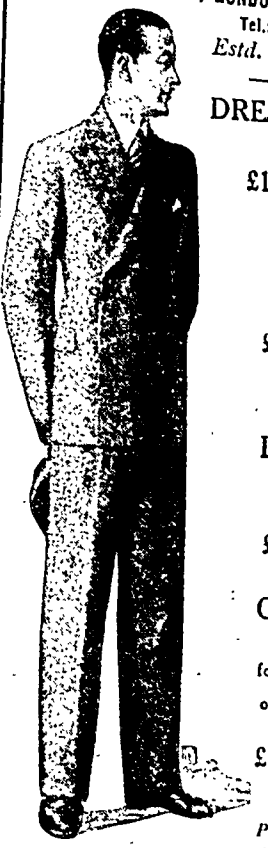

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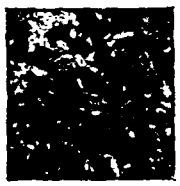

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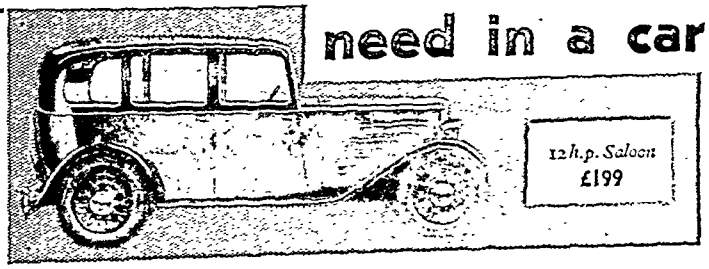

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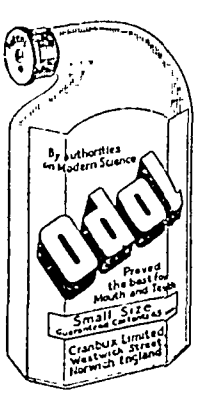

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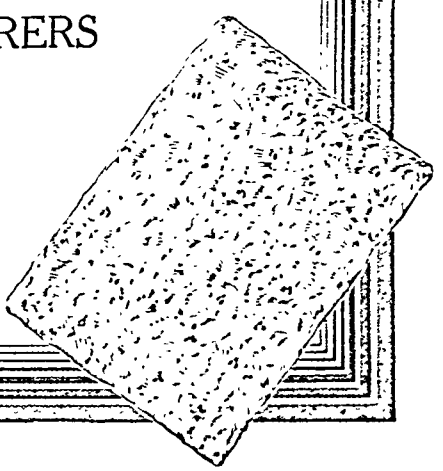

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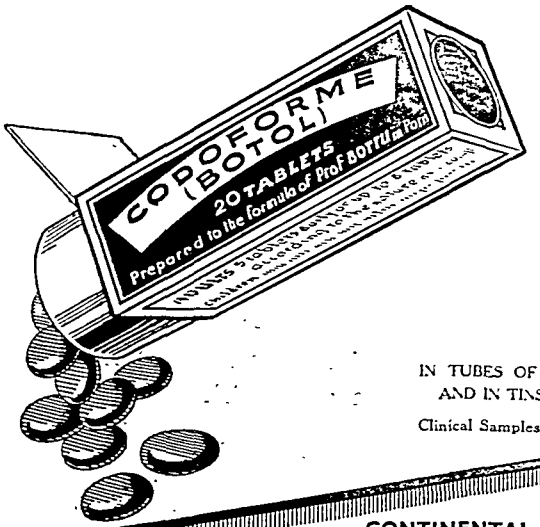

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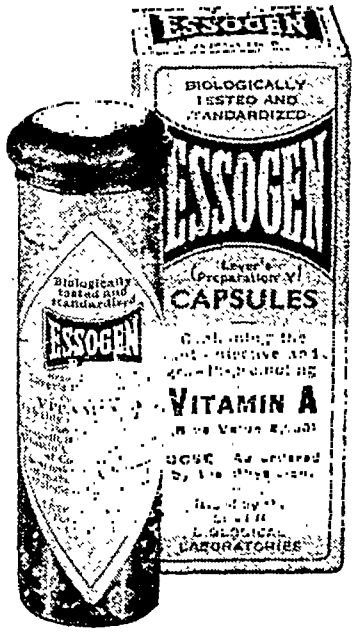

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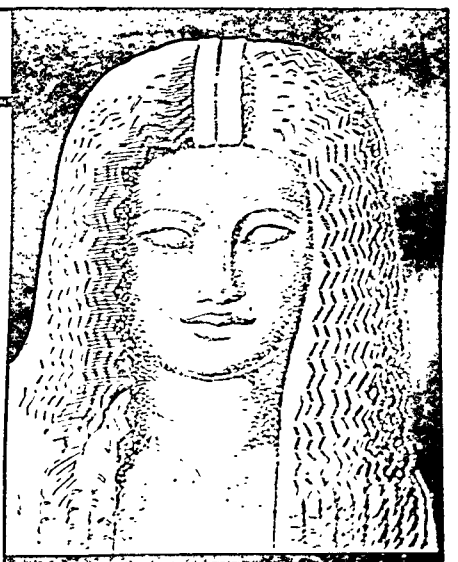

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The churns are provided by the Company. The milk is either collected at the farms or delivered at the Condensery by the supplier, the morning and evening milk being kept separate. The contents of each churn are at first examined physically by a skilled examiner, and if approved are strained and weighed. The milk is then pumped into large aluminium receptacle tanks. All milk not approved by the examiner is returned.

The empty churns and lids are washed in hot soda water in machines with expanding rotary brushes; they are then rinsed with a jet of clean water, and finally steamed; the clean cans are then returned to the farms.

Lactogen is a modified dried milk for use in infant feeding—prepared in England by Nestlé's, from the rich, pure milk of selected English herds.

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THE large bowel is probably the seat of origin of a large number of chronic infections. There is no need for us to emphasise this point, nor is it for us to stress the eliminant effect of a regular efficient action of the bowels. We would, however, like to bring to your notice our preparation Regulol. This is a highly emulsified pure liquid paraffin of high viscosity combined with Agar Agar. It is acceptable to the taste, efficient in action, and never gives rise to leakage.

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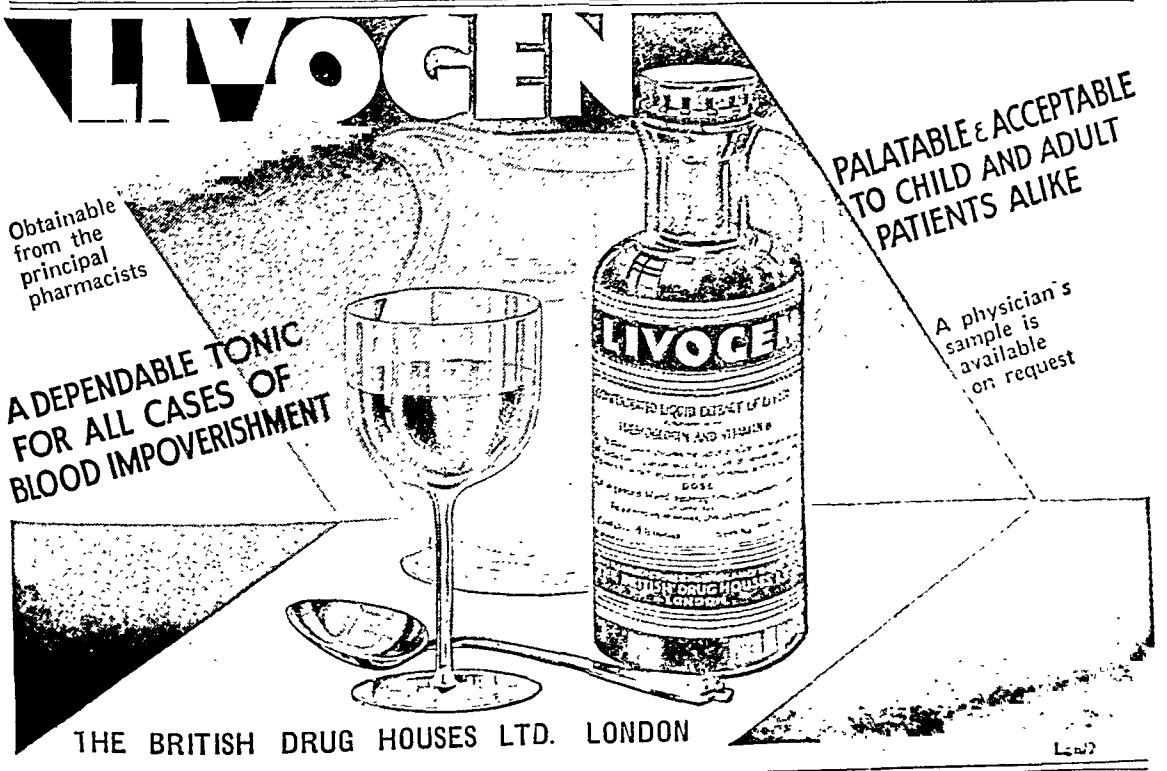

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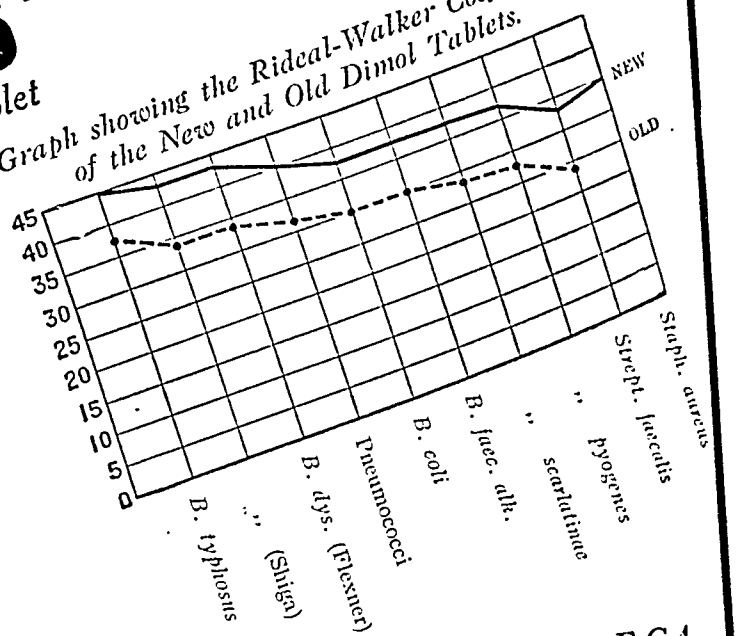

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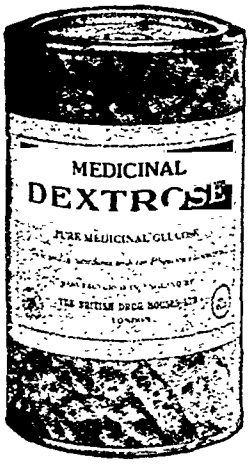

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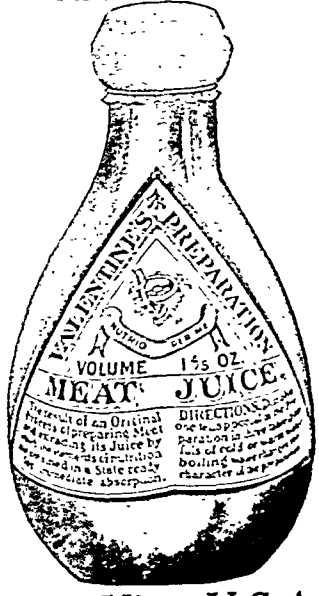

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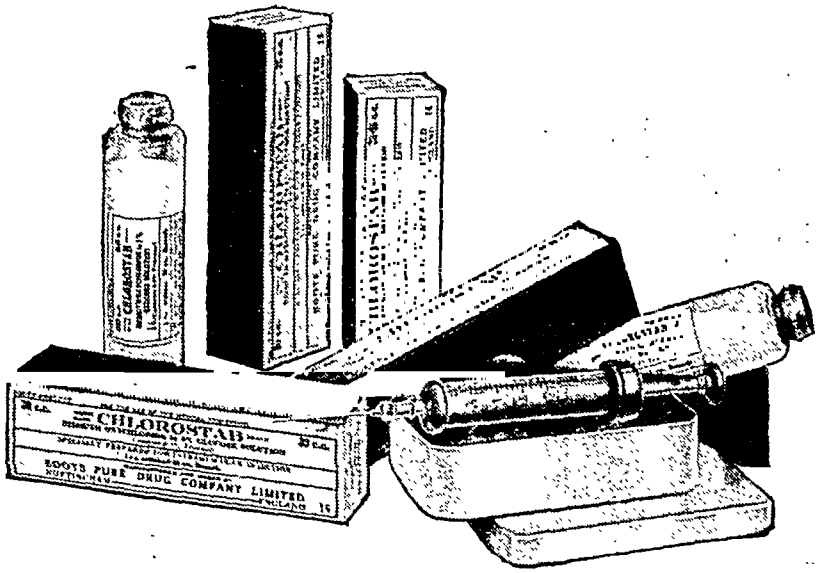

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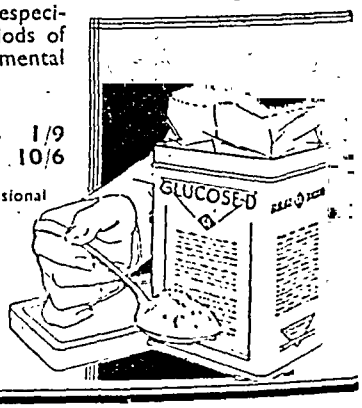

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Read this extract from the report of the Medical Research Council

Extracts from

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(Medical Research Council Report, Special Report Series No. 172, 1932. Blacklock)

"All the cases under one year of age with intestinal ulcers had been fed on cow's milk."

"Babies who were breast-fed for nine months or till death, if that occurred before that time, suffered less from abdominal tuberculosis than infants fed on cow's milk. This was particularly noticeable in the first year of life, and also to a lesser extent in the second."

"The greatest number of primary abdominal lesions were found in the second year of life, that is, at the period when children are consuming large amounts of raw milk."

"In infants in the first year of life only one human and no bovine infections were found in babies breast-fed for nine months or till death, if this occurred earlier, but in those fed on cow's milk, two human and fourteen bovine infections were found."

"The high incidence of the bovine type of infection in the abdominal cases is doubtless due to the ingestion of infected milk, as there was a greater incidence of this type of infection in bottle-fed babies and also for the six months to two year age-groups, when the children were consuming large amounts of milk."

"The highest percentage of infections with bovine strains occurred in the second year of life, that is, at the period when children consume large amounts of raw milk."

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WHEREVER a reduction of weight is indicated, Vita-Weat can be recommended with confidence instead of ordinary bread or toast. Vita-Weat offers all the nourishment of the whole wheat berry, with the vitamins intact and active, in readily assimilable form. It is 'crunchy' to tempt jaded appetite and encourage thorough mastication. It has the wheat starch completely broken up for ease of digestion and the bran reduced to the correct degree of fineness to ensure natural elimination. So it actively discourages any tendency towards obesity.

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	100%	100%
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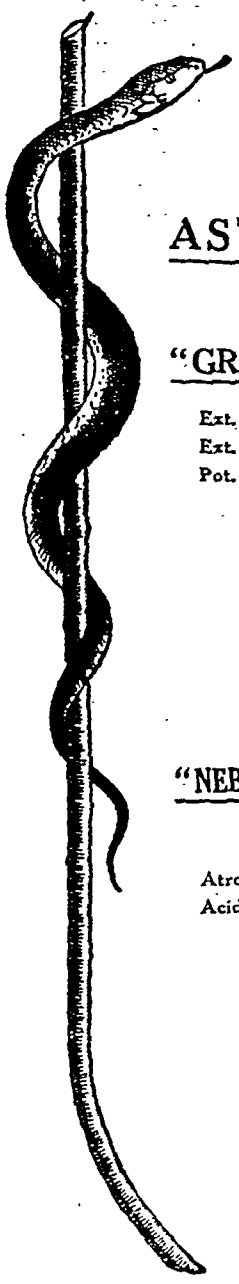

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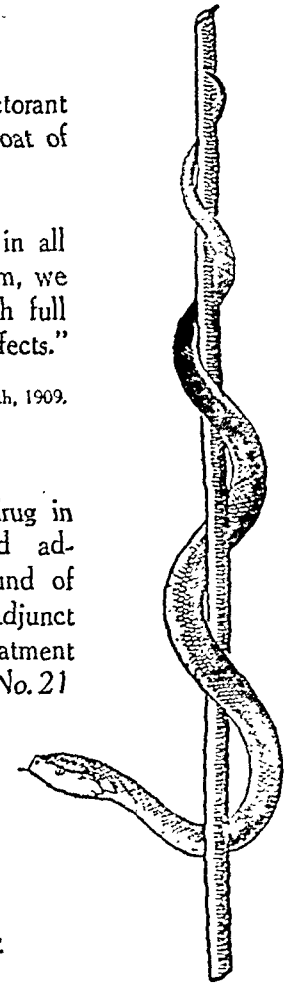

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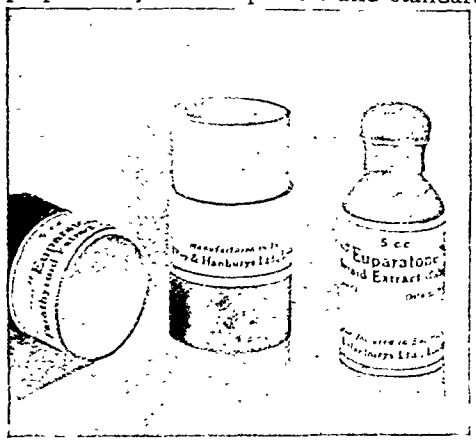

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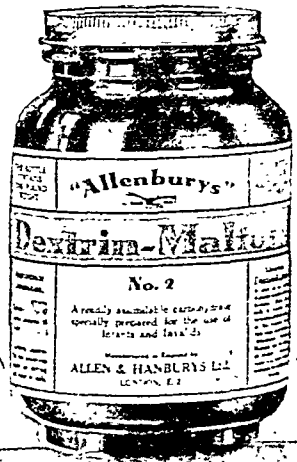

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An electrically prepared Gold-Silver Colloid in a special O.R.L. Outfit for nasal irrigation in the treatment of all Naso-Pharyngeal Inflammations, Coryza, Catarrh, Rhinitis, Hay Fever, etc.

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Correspondence on The Common Cold,
"British Medical Journal," March 19th, 1932

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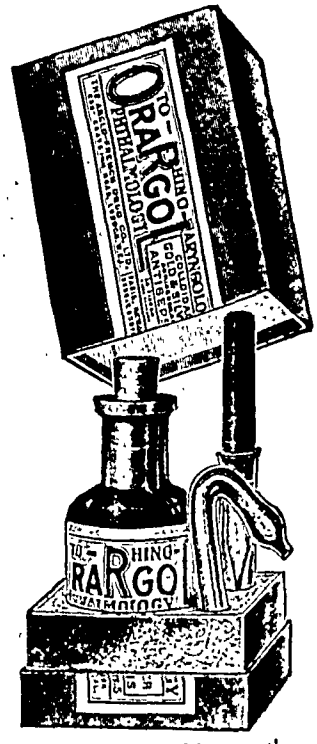
Sig: 4-5 drops to be applied to each nostril (in the douche provided) three or four times daily.



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An Address
ON
THE SOURCE OF MODERN MEDICINE*
BY

SIR ANDREW MACPHAIL, M.D., LL.D.
PROFESSOR OF THE HISTORY OF MEDICINE, MCGILL UNIVERSITY

Gentlemen,—I must trouble you with a date, 1685, the year in which Charles II died. That reign marks the watershed between the mediaeval and the modern world; between the mass and the individual; between authority and experience; between books and experiment. From that summit the spring of modern medicine burst forth. It was in reality a new world. The Royal Society had been founded; the circulation of the blood had been proven; the Cartesian method had been disclosed; the universal law of gravity and the laws of planetary motion had just been announced. Logarithms, electricity, magnetism, chemistry, were words coming into common use. Up to that time, the authority in science was Aristotle; in philosophy, Thomas; in medicine, Galen. All three had organized and synthesized the existing knowledge of their day. It was a useful task; but when life is too closely organized it begins to perish. The body of knowledge then becomes a burden, a tradition; it blinds men's eyes; it makes them incapable of observation or thought. It enslaves them; but suddenly, freedom asserts itself. Freedom too has perils, but they are less dangerous than the perils of slavery. One can now say what he likes, even in medicine, no matter how foolish; there will be plenty to contradict him.

There were reasons deeper still for the scientific renascence of the period under review. The divine right in science of Aristotle and the Greeks had passed; the divine right of kings in politics perished at the hand of Cromwell; the divine right of Galen in medicine came to an end with the appearance of Thomas Sydenham; and so we have come to our subject at last.

For a perfect sight of the old medicine, let me conduct you to the bedside of Charles II: With a cry he fell. Dr. King, who, unfortunately, happened to be present, bled him with a pocket-knife. Fourteen physicians were quickly in attendance. They bled him more thoroughly; they scarified and cupped him; they shaved and blistered his head; they gave him an emetic, a clyster, and two pills. During the next eight days they "threw in" fifty-seven separate drugs; and, towards the end, a cordial containing forty more. This availing nothing, they tried Goa stone, which was a calculus obtained from a species of Indian goat; and as a final remedy, the distillate of human skull. In the case report it is recorded that the emetic and the purge worked so mightily well it was a wonder the patient died. One physician did protest that they would kill the king; and out of this arose the suspicion that he had been irregularly poisoned. But he did die, "as peaceable as a lamb"; his last words were, "Do not let poor Nellie starve."

SYDENHAM'S METHOD

Whilst this mediaeval practice was in progress at the palace, not far away, on the north side of Pall Mall, looking south over St. James's Park, opposite to Nellie's, and quite near the house of Moll the dancer, lived Thomas Sydenham. But he was not called to the royal bedside. He was a Puritan; he had been a captain of horse in the Parliamentary army; and, worse still, he was reputed to be practising medicine "in a new way." Out of his specifically creative mind modern medicine was already emerging by this new way. His method was no secret. Twenty years ago he had published his method of curing fevers; he was ready to publish his Observations, a series of five letters addressed to his friends: "about the sum of all I know of the cure of disease up to the day on which I write—namely, the 29th September, 1666." He died three years later. A collection of letters to his son was issued after his death. That is all. He lies buried in the Church of St. James's, Piccadilly, where a mural tablet was put up by the Royal College of Physicians in 1810. It bears the inscription adapted from Horace, *Medicus in omne aevum nobilis*—a physician famous for all time.

The most casual reading of his little books reveals the method. There is no dogma, no system, no body of doctrine, merely a few general principles. It is not a method even; it really indicates a way of looking at things, without searching too curiously into their causes. He looked upon diseases as they appeared to him, and made a complete study of each. Most forms of disease, he thought, had a definite and uniform type due to the uniformity of the cause. He sought only for the "evident and conjunct causes"; the remote ones he thought it vain to seek. Acute disease he considered to be a reaction of the body to meet some injurious influence coming from without. He was content to watch and aid in the natural crisis. Chronic diseases were in the main due to errors in diet and in the general way of life. As he put the case, "Acute disease is an act of God; of chronic disease the patient himself is the author." Fever was nature's engine against the enemy, or her handmaid for removing the morbific material from the blood. Fever was a sign that nature was curing the disease, and should not be curbed unless it becomes too violent. The patient should be lightly covered; he should be allowed air and light, with water if he was thirsty, and food only when his appetite demanded it.

To do without hypotheses, and study the actual disease with an open mind; to make an unbiased study of the natural processes in health and disease; to trust in the healing power of nature—for nature is the mother and healer of us all—and provide help only when help was demanded—that was his rediscovery, for the original discovery had been made by Hippocrates himself. He demanded that a physician should regard disease with the eye of a naturalist, and describe it with equal care. "If only one person in every age," he said, "had accurately described and habitually cured only one single disease, and disclosed his method, physic would not now be where it is." Every hypothesis must be abandoned, whilst every phenomenon of disease is being minutely observed; "but it is right and necessary to distinguish between the constant characteristics of a disease and those that are merely accidental and adscititious. Want of accuracy in distinguishing diseases that are apparently similar is fatal to medicine."

Sydenham, of course, had his own theories; but he was never enslaved by them. Still less was he enslaved by classical dogma or by the chemical theories then in vogue. He made his own the great saying of his favourite, Bacon: "We have not to imagine or to think out, but to discover what nature does." These are the very words that Hunter addressed to Jenner, "Do not think—try."

SYDENHAM'S PRACTICE

In practice Sydenham did not disdain the use of drugs; he used Peruvian bark freely, as well as laudanum, which he was the first to prepare; but he had many cases, "in which he consulted his patient's safety and his own reputation most effectually by doing nothing at all." It was a great mistake, he declared, to suppose that nature

* Delivered to the American College of Physicians, Montreal Meeting, February 8th, 1933.

always needed the assistance of art. His friend John Locke, the philosophical father of Hume and Kant, himself a captain in the army of the Parliament, and a practising physician as well, in commending the new method writes to a friend, "You cannot imagine how far a little observation will carry a man in the curing of disease; though very stubborn and dangerous, and that with very little and common things, and almost no medicine at all."

Too much has been made of Sydenham's contribution to the diagnosis of disease. True, he distinguished between chorea and St. Vitus's dance; he described syphilis, and recognized many diseases as specific in the modern sense; he established hysteria as a definite disease; his description of gout remains unexcelled. It was from that malady he suffered and died; but he consoled himself with the reflection, that fools rarely suffered from it, unless indeed he himself might have been an exception. He missed many of the symptoms of scarlatina; and his classification of fevers remains obscure.

It was in practice he excelled. For a patient who had suffered from the prevailing lowering treatment he prescribed a roast chicken and a pint of Canary wine. A hypochondriac he advised to consult a physician in Inverness. The man proceeded on horseback; he could not find the doctor; he returned very angry but cured. "Nothing," Sydenham said, "so cherishes and strengthens the blood and spirits as riding a horse."

In addition to all this, there was in Sydenham, as there was in Hippocrates, in Pasteur, and in Lister, a powerful moral element which shines on every page. "Whoever," he wrote, "applies himself to medicine ought seriously to consider: first, that he will one day have to render an account to the Supreme Judge of the lives of the sick committed to his care; and next, that whatever skill or knowledge he may, by divine favour, possess should be devoted above all else to the glory of God and the welfare of humanity." And again, "The physician will care for the sick with more diligence and tenderness if he remembers that he himself is a fellow-sufferer."

CONTEMPORARY OPINION OF SYDENHAM

Sydenham created no great stir in London. To the end of his days he remained on the outside of the faculty, although he had his friends within and without, and in that Invisible College which was the precursor of the Royal Society. To us who are alert for any new method the conduct of the profession towards Sydenham seems strange: For thirty years he was described as a "sectary." In one of the few letters now extant, written in English, he admits that, "whilst he has the happiness of curing his patients, some of the faculty take fire at his attempts to reduce practice to a greater easiness." In another letter he utters a mild protest against those who make it a matter of reproach, if one brings forward anything new, which had not previously been said, or heard, by themselves.

But the profession must not be too severely blamed. We are so often right in our scepticism, we may be forgiven when we are occasionally wrong. And Sydenham was quite "irregular." He practised in London until he was 40 years old, without a licence of any kind. In 1663 he was admitted licentiate by examination of the Royal College of Physicians, which is the lowest rank. It was not until 1676 that he acquired the doctor's degree, not from Oxford but from Cambridge. He was at the time 52 years old, and his son was an undergraduate there. He is known to have had the degree of bachelor of medicine from Oxford, but there is no official record. In any case, his medical study must have been short, and not profound. To compensate, he is alleged to have taken a post-graduate course at Montpellier. There is no evidence of that either, although French writers make the most of the legend through the natural desire to claim him as their own.

Even his unlicensed practice was interrupted by an excursion into politics in 1658, when he became a candidate for Parliament. He was unsuccessful; but as a defeated candidate he was appointed Comptroller of the Pipe, an office long since obsolete, and having to do with Crown lands. More important, he was awarded £600 on account of his military service. With this money in hand he married, and settled down to practise medicine.

Likewise, his study preliminary to medicine was brief. He entered Oxford at the age of 18; but after three months his career was interrupted by the outbreak of civil war. He joined the army in company with three of his brothers; he kept the field for four years, when he returned to the university, and received an academic degree in 1646. Two years later, after his return from the Second Civil War, he was made Bachelor of Medicine by "actual creation." It was an honorary degree given in advance of the study for a profession which he entered by the influence of "a great man and by his own destiny."

It was quite natural, therefore, that he should be considered in London as an uneducated and *unqualified* person. He could not write Latin, although he could read it; his writings must be translated for him, and the work was badly done. Only rough notes in his own English remain, and it is without especial quality. Although his pre-medical education was deplorable, he was not an ignorant man. He could speak Latin. Cicero was the author he most admired, "the great teacher both in thought and language." He frequently quotes Homer, Theocritus, Virgil, Horace, Juvenal, Seneca; and all modern Latin writers were known to him, especially Bacon and Erasmus. He knew the English Bible, which was then a new book.

It was from Edinburgh and Leyden the fame of Sydenham first extended to the world. Boerhaave described him as the light of England, an Apollo in the art of medicine, a true pattern of the Hippocratic physician. Haller, a pupil of Boerhaave, who carried Sydenham's method to Germany, discovered him as the beginning of a new epoch in medicine. Van Swieten, a fellow-pupil, bore the seed to Vienna, where it developed into a great clinical school. Arbuthnot in the Harveian Oration for 1727, found in him the "aemulus" or emulator of Hippocrates; and more recently the beloved Dr. John Brown describes him as the prince of practical physicians.

This Boerhaave was professor of medicine in Leyden, where he succeeded "Sylvius," who had made a vain attempt to reconstruct medicine upon a basis of the new chemistry and the circulation of the blood, losing himself in the technical and the mechanical. Boerhaave lectured five hours a day; his hospital contained only twelve beds, but by Sydenham's method he made of it the medical centre of Europe. That knowledge came to him through Edinburgh from Archibald Pitcairne, who for a short time occupied the professor's chair in Leyden, and was the teacher of Boerhaave.

PITCAIRNE AND THE SCIENTIFIC METHOD

This Archibald Pitcairne was born in Edinburgh in 1652. His ancester fell at Flodden with his seven sons. The family was continued by a posthumous child. He entered Edinburgh University in 1668, where he graduated Master of Arts in 1671, at the age of 19. Then he studied divinity and law. In Paris, where he went for his health, he began the study of medicine, but soon returned to Edinburgh, and took up the study of mathematics and medicine. Once more he went to Paris, and graduated

doctor of medicine at Rheims. He practised in Edinburgh with wide success, and in 1692 he went to Leyden to occupy a professor's chair. Two of his pupils were Boerhaave and Mead. In 1693 he returned to Edinburgh for his marriage to the daughter of an eminent physician, Sir Archibald Stevenson, from which place he often went as consultant to England and Holland.

Lacking the means of anatomical study, he persuaded the town council to permit him and some of his medical friends to dissect the bodies of paupers in Paul's Work, unclaimed by their relatives. The persuasion was easy, as they agreed to bury the bodies after dissection at their own charge, and to save the town from that expense. To this was added the somewhat dangerous provision that they were to attend the patients free of cost to the town until they died. This was the origin of the Edinburgh School of Medicine.

Anatomy has been the origin of every school of medicine. Human dissection is even yet the sovereign method of transforming the average layman into a physician. To this rule neither Hippocrates nor Sydenham is an exception. They did not dissect; but they were men of genius; and genius knows no law. Besides, they did not found schools. The fame of every school, McGill included, is based upon anatomy. It was fixed by Shepherd. I pause to utter a word of respect to his memory. In the modern sense he was not a teacher; but he compelled men to learn by the sheer drudgery of dissection—dissection not of earthworms, frogs, rats, or guinea-pigs, but of the human body. To him the human body, living or dead, was the primary unit in medicine; and in those days the ward bed and the dissecting table were not very far apart. Indeed, as Sir John Bland-Sutton reminds us, the word κλίνη, from which "clinical" is derived, applies equally to a bed and to a table.

I am well aware that in these days, when a student must be converted into a physiologist, a physicist, a chemist, a biologist, a pharmacologist, and an electrician, *there is no time to make a physician of him.* That consummation can only come after he has gone out in the world of sickness and suffering, unless indeed his mind *is so bemused, his instincts so dulled,* his sympathy so blunted by the long process of education in those sciences, that he is forever excluded from the art of medicine, which was to Hippocrates "the art" of all arts. In that case he is destined for the laboratory, the professor's chair, or the consultant's office. What would have happened to Sydenham had he been put through this machinery is a problem in infinity which no human intelligence is competent to solve.

Pitcairne, like Sydenham, insisted upon the strictly scientific method long since enunciated by Bacon: an exact compliance with observation and experience. "Nothing," he affirms, "more hinders physic from being improved than the curiosity of searching into the virtues of medicine; but to inquire whence they have that power is a superfluous amusement, since nature lies concealed. A physician ought therefore to apply himself to discover by experience the effects of medicines and diseases, and not needlessly fatigue himself by inquiring into their causes, which are neither possible nor necessary to be known." This is going too far; but we must agree that undergraduates in medicine and practitioners should be debarred from this "superfluous amusement."

Both Sydenham and Pitcairne were convinced that nature lies concealed, and always will be concealed. The more we seek, the further she recedes. To pluck out the heart of her infinite mystery was to them a vain task, and the seeker was sure to go astray. Nature knows no law. The laws of nature were merely our own presuppositions.

Pitcairne was also a poet, a mathematician, a scholar, a collector of books. His library was acquired by Peter the Great of Russia. His monument in Greyfriars churchyard bears an epitaph in testimony of his generosity to scholars. He was the first champion of Harvey. He, too, failed to win the approval of his colleagues; his plan for dissection was strongly opposed. His way of life was equally disapproved by the Calvinistic Edinburgh. If we can believe his detractors, he was a frequenter of clubs, public-houses, and taverns. He is reputed to have been drunk twice a day; an unbeliever; much given to profane jests; an atheist; involved in quarrels with the faculty, and suspected by the Government. A curious evidence of his quality is supplied by Richard Mead, his pupil along with Boerhaave at Leyden, afterwards court physician to George II, better known as the discoverer of the *Sarcoptes scabiei*, the insect that causes the itch. Pitcairne's son was out in 1715, and was condemned to death. Mead in gratitude to his master interposed and saved his life. He pleaded with Sir Robert Walpole that if he and the royal family had been cured by his skill, it was due to the instruction he had received from Pitcairne.

The intermediary between Pitcairne and Sydenham was Dr. Andrew Brown. He had read Sydenham's "new and *quite contrary method*" It so *impressed* him that *he went to London* "to *settle* his *tossed thoughts*" He spent "some months in his society," and found in him "everything that use to beget in wary and prudent people trust and knowledge." He returned to Edinburgh "as much overjoyed as if he had gained a treasure." He had; he published it to the world in 1691, "a vindicatory schedule concerning the new cure of fevers, first invented by the sagacious Dr. Thomas Sydenham." Pitcairne in the following year carried that treasure to Leyden.

MODERN MEDICINE CROSSES THE ATLANTIC

Modern medicine had a resting stage in Edinburgh, whence it issued in two faint streams across the Atlantic to Montreal and Philadelphia. In 1821 the Montreal General Hospital was founded, and from it emanated the McGill Medical School. This was the first hospital in America to introduce students into the wards. Here again the old and the new came into conflict. A duel was fought. men had conviction in those days. Five shots were exchanged with ounce bullets. One protagonist was shot through the chest; the other had his right arm shattered. Both recovered, the one by the old treatment, the other by the new, so their comparative merit was left undecided. The four founders were Edinburgh men.

When the College of Physicians of Philadelphia was founded in 1787, four of the eleven senior fellows had graduated from Edinburgh and four others had studied there, "children of Edinburgh and grandchildren of Leyden," as Weir Mitchell said. There is in the Frick Library a collection of 126 theses, presented by Sir William Osler, written by American students in Edinburgh between the years 1760 and 1813. Some of them bear the names of Morgan, who founded the first American medical school in the University of Pennsylvania in 1763; of Shippen, Kuhn, Logan, Rush, and Lee. The first clinical lecture was given by Thomas Bond in 1766, on the advantages of clinical instruction. He took the precaution of reading it in advance to the board of managers, who inscribed it in their minutes. To complete the record, Osler in 1885 went to Philadelphia, bearing with him what he had learned at McGill; and so these two streams of modern medicine were joined.

MEDICAL EDUCATION

If I stopped at this point I should be a mere historian repeating what you already know, or can read in books. Sydenham's little writings are at your hand in Latin and English, published by the old Sydenham Society. Everything germane to the subject has been collected by Dr. F. Picard, and by J. F. Payne in 1900. From this material, small though complete as it is, many charming essays have been drawn, none more charming than that by H. H. Bashford in his Harley Street Calendar.

But history is the master to whom we all must go. If now we are convinced that Sydenham has achieved a world mastery in medicine we might do well to inquire how close we come to his mind, or how far we have departed from it. For the moment I shall content myself with one aspect—medical education—a subject upon which Sydenham expressed himself without reserve. We must not rely too implicitly upon even his authority, for he had no experience in the public teaching of students; he never had a hospital appointment, never occupied a professor's chair. He had, however, some private pupils, one of whom was Dr. Dover, whose powder yet bears his name. His own instruction at Oxford was scanty; he never entered a laboratory; never walked through a ward; there were no wards to walk in. He mentions Aristotle only once, Galen three times, Celsus not at all.

If a young man were to ask you by what means he should achieve a medical education, you would feel compelled to offer him the curriculum for the first two years. They are much the same; they represent the sum of our wisdom. In one recently under my hand, the first year is assigned to physiology, anatomy, histology, and organogen; although if the aspirant asked me what "organogen" meant, I should be obliged to confess that I do not know; unless, indeed, it is derived from the Greek word ὄναργος through the Latin *onager*. In the second year biochemistry and pharmacology are added, with lectures on public health and the history of medicine. It is not on record that the neophyte comes into the remotest contact with a sick human being for two years. The London schools are within the hospitals, and students from curiosity or boredom wander with new interest and profit into the wards. The French go to the other extreme, and assign clinical duties to a student on the first day of his entrance.

This very question of medical education was put to Sydenham by Hans Sloane, who afterwards achieved the highest professional and social honours, and is yet remembered as the founder of the British Museum. The young man modestly suggested that he might take a course in anatomy and botany. "This is all very fine," said Sydenham; "but it won't do. Anatomy, botany—Nonsense, Sir. I know an old woman in Covent Garden who understands botany better; and as for anatomy, my butcher can dissect a joint full as well. No, young man; all this is stuff: you must go to the bedside; it is there alone you can learn disease." Rather than go abroad to study botany, he recommended this earnest seeker to drown himself in a pond that was commonly used for that purpose. The frightful thing is that he may have been right.

Sydenham was a physician, an artist, a practitioner; he thought that enough for any one person. He was not an ultimate scientist, not a botanist, anatomist, or physiologist. These were separate trades; they concerned him indirectly or not at all; they destroyed in the practiser the quality of physician. He had a passion for curing the sick, which expelled all other interests.

He does not seem to have heard of Harvey or the circulation of the blood, which was then a discovery forty years old. Osler goes further when he writes: "There was nothing in Harvey's discovery which could be converted immediately into practical benefit, nothing that even the Sydenham of his day could take hold of and use." He knew nothing of Malpighi's discovery of the arterioles twenty years earlier. Indeed, he averred that not even the microscope could disclose them. These to him were explanations, and he kept his mind upon the majesty of open facts. He gave to medicine a method which was more valuable than detailed discovery; he brought canonical authority to an end. But, strange to say, this method was soon to be extended into those fields of science of which he professed himself negligent or ignorant. Boerhaave applied that method to anatomy, physiology, and the microscope. Haller bore it with him to Göttingen, and developed physiology into a natural science; Morgagni in morbid anatomy was "the counterpart of Sydenham."

If Sydenham in his mature age began to practise in any American city, he would be put in gaol; if he applied with his poor preliminary qualification to study medicine in the first year of any medical school, he would be put in the asylum, along with Shakespeare, if he were found wandering about, after he had applied to a high-school as an instructor in English composition. We in Canada have been in the habit of blaming the United States for our established curricula. Forty per cent. of our medical students at McGill are Americans; they help to pay our salaries, although they do profit to the extent of 600 dollars a year from our pious endowments.

In times gone by, Canadian graduates went freely to the United States to practise. We felt obliged to conform with the regulations of the various State Boards; we still feel obliged in a measure to meet the legal needs of our American students. Now the border is more strictly closed. If an American physician comes to us, he comes on his own record since graduation. No one thinks of asking how or where Penfield, or Cone, or Stehle studied. If now our curricula are too abstract, the fault is our own. We have to deal only with the various Provincial Boards. The eye of the legislatures is upon them and upon us; and they are swift to act. One Canadian Provincial Board is much more rigid than any similar body in the United States. The final Report of the Commission on Medical Education, issued last month,[1] discloses that all State regulations are completely relaxed, and the schools are now free. The head of one Board writes that licensing examinations, "as such," that is, apart from the candidate's school record, are worthless. Sydenham would sanction the profound sanity of this report.

Let us now, in conclusion, try to discover if Sydenham's practice has any lesson for us. When he came upon the scene, practice had become so scientific that the most scientific physician did not even look upon his patients. In Paris their excretion was carried to him in an earthen vessel by a servant. By inspection of that alone he made a diagnosis, and sent the proper remedy. To be "elaborately curled" was a favourable sign. A similar practice prevailed in Scotland, if we can believe the panegyric of Robert Burns upon Dr. Hornbook, except that the mode of conveyance was upon a "kail-blade"—that is, a cabbage leaf.

We in our time have departed still further from reality, when we substitute a photograph for the thing itself. The older surgeons were content to diagnose a broken leg if the end of the bone protruded through the skin. Now we must have a picture. The fault is not wholly with the surgeon. The poorest patient is so hedged about with insurance that the surgeon must provide himself with the evidence the court may require. Nothing lies like the camera, especially when the deeper

[1] See *British Medical Journal*, January 14th, 1933, p. 70, and February 11th, p. 233

structures are involved. By a judicious use of the camera a fish may be made to appear as long as the man who caught it. In hospitals given over mainly to chronic and convalescent cases, an expert photographer comes once a week to "read" the pictures that have been made in the interval by the "technicians." He makes the diagnosis and suggests the treatment, although he has never seen a patient *qua* patient since the day he acquired his degree.

THE SCIENTIFIC RITUAL OF TO-DAY

If Sydenham were alive to-day, and came into a modern hospital, he would be for the moment bewildered. He would have to teach himself that the field of medicine has been immensely widened, and cannot even be surveyed by a single mind. He would see acute conditions diagnosed at a glance, and swift treatment applied. But he would see obscure cases which had baffled practitioners as earnest as himself. He would discover, to his joy, that the chief physician was so scientifically conscientious that he would not make a diagnosis, still less prescribe anything more than a palliative treatment, until he had before him all the reports of his various expert assistants. By the time the file was complete the patient might have left the hospital alive or dead. If living, he might take his file with him, to display with the interest he had in his family album. But the visitor would recognize in that physician a brother to himself—with this reserve, that the patient be not lost in the problem, or the physician in the abstract scientist. The world may be a stage: it is not a hospital, as the young man will discover when he begins to practise, deprived of apparatus, and compelled to rely upon his own natural senses.

Sydenham would be astonished at the magnificence of the modern hospital, and wonder if practice could not be reduced to a "greater easiness," thinking of the days when he fought his troopers and doctored them, too, as indeed the soldiers in the recent war were adequately treated in aid-post, dressing station, field ambulance, and in rest stations for their convalescence. He would ask, as many are now asking, who bears the expense of three dollars a day for each public patient, described in his time as a pauper.

Unless the hospitals for public patients curb their scientific curiosity and return to the simple practice of Sydenham, their task will be taken away from them and given to another. Science, too, is governed by economic law. Even private patients are beginning to discover, as Sydenham did, that they can get well without becoming victims of the scientific ritual. Any patient who lives long enough will get well. Life is not now so desirable as it used to be. To die in peace is better than a few months of added misery.

BACK TO THE BEDSIDE

Nature may be expelled; insensibly she returns. Happily, the tide of practice is now turning again to the bedside. The voice of Sydenham is being heard anew. To a patient clamouring for drugs and operation David MacKenzie said: "The quickest and cheapest way to recovery is lying in that bed." Sydenham said to Locke: "You will best cherish yourself by keeping to bed; it will contribute more to your relief than can be imagined." Dean Martin instructs his students that the educated hand and ear will tell the average physician enough, and all he can understand, towards treating a patient with heart disease. Electrical machinery is for the expert; he alone can tell if the fibrillations that appear upon the photograph are really in the heart or are due to extracardial electrical currents induced by a nearby radio or vacuum cleaner in the hands of a ward-maid. John Meakins informs his students that the one question that really interests a patient is how soon he can resume his usual employment. Francis W. Peabody, six years ago, expounded to the students of Harvard the complete care of the patient.

Sydenham was a Puritan; he believed that scientific truth came as a revelation from Heaven; or, as we would say, by an act of intuition in a creative mind. Experiments were of no avail, unless there was a mind to interpret them and discern the end to which they led. All else was mere research, searching for the already seen, or an aimless wandering in the mazes of nature. He made no objection to these experimenters. They might be as abstract and finical as they liked; he merely insisted that they know what they were trying to do, and above all keep out of the field of practical medicine, and not lead the minds of the young away from the bedside. There is a lesson in that for the laboratories.

Fame enough has come to Sydenham; but he had "long since weighed in a nice and scrupulous balance, whether it were better to serve men or be praised by them."

TREATMENT OF BURNS AND SCALDS

WITH SPECIAL REFERENCE TO THE USE OF TANNIC ACID*

BY

PHILIP H. MITCHINER, M.D., M.S., F.R.C.S.

HONORARY SURGEON TO THE KING; SURGEON WITH CHARGE OF THE SEPTIC WARDS, AND SENIOR SURGEON TO OUT-PATIENTS, ST. THOMAS'S HOSPITAL

Before dealing with the mortality of burns and scalds there are two important factors to be considered irrespective of the method of treatment used.

The first, as pointed out by Donald,[1] is that the improved social conditions in the homes of the poor, and the disappearance of the open light and open fire, have done much to diminish the number and severity of burns coming for treatment to the great hospitals of the metropolis. Taking the figures from 1899 to 1903 at the London Hospital, he has shown that the mortality from the 999 burns and scalds admitted during those years was 25.3 per cent., whereas in 1924–28 the number of admissions had diminished to 286, or rather less than one-third, and that the mortality had dropped to 6.6 per cent., although the treatment used was practically the same during both these periods. This he attributes largely to the passing of the Children's Act in 1908, which made it a punishable offence to leave a child alone in a room containing an open fire-grate insufficiently protected; and he pointed out that in the years 1909 to 1913, immediately following the passing of this Act into law, the number of burns admitted to hospital diminished by 50 per cent.

At St. Thomas's Hospital the figures are by no means so conclusive, for though the number of burns and scalds treated in out-patients is slightly smaller, the number of burns and scalds admitted to the hospital has remained very steady throughout a number of years, both before and after the passing of the Children's Act in 1908, and has been approximately sixty per annum from the year 1894 onwards until 1930, since when the numbers have risen to about seventy per annum. It is, however, of interest to find that, whereas in the years before the passing of the Children's Act the number of burns to scalds averaged 3 to 2, the proportion of burns to scalds has now reversed to 1 to 2.5, while in children under 10 years of age it is approximately 1 burn to 7 scalds. Donald's figures give the ratio as having changed from 1 burn and 1.5 scalds to 1 burn and 2.3 scalds in children under 6 years in the same period. This is a complete reversal of the type of injury, and, as we shall see in

* Extracts from a Hunterian Lecture delivered before the Royal College of Surgeons of England.

dealing with the next point, has a great and beneficial influence on the mortality, irrespective of the treatment used.

The second point has not, I think, been sufficiently realized previously—namely, the very much smaller mortality from scalds than from burns. While we must admit that the introduction of the covered light and the covered fire and the passing of the Children's Act have greatly diminished the number of burns, we find that this has not been so with the number of scalds, which has risen considerably in proportion—that is, from 2 scalds to 3 burns in 1899 to 2.5 scalds to 1 burn in 1929 (in children under 10 years, 7 scalds to 1 burn in 1929). By the tables it will be seen that, whereas the average mortality for burns over the period of years from 1894 to 1899 was 39.6 per cent., that for scalds for the same period was only 19 per cent. Again, during the period from 1900 to 1903 the average mortality from burns was 39.7 per cent., whereas from scalds it was only 7 per cent. Here it is of interest to note that in 1899 picric acid was used for burns, and the mortality fell to 33 per cent., but the mortality of scalds—for some reason still treated by the old method—was 40 per cent. Again, from 1924 to 1928 the mortality from burns was 15.5 per cent., but for scalds only 7.5 per cent., and from 1929 to 1932 inclusive the mortality was: burns 4 per cent., scalds 1.7 per cent. The Registrar-General's mortality figures are unfortunately not helpful, for they give the number of deaths per million of population and offer no indication of the relative number of non-fatal burns and scalds. They show a greater number dying from burns than from scalds—20.8 burns and 18 scalds per million at all ages. It is startling and unexpected to find that the female deaths from burns are just over twice as great as the males throughout the period 1924–31, while in the case of scalds the proportion is 2 females to 3 males. Further, whereas the number of burns to scalds in the first period (1894–8) was 275 burns to 202 scalds, in the second period (1899–1903) it was 239 burns to 172 scalds, and in the third period (1924–31) it was 132 burns to 360 scalds. This shows that though the total number of burns and scalds admitted to St. Thomas's has remained very constant there is a considerable increase in the number of scalds to burns—a factor the importance of which must be realized when considering the mortality of these cases apart from the method of treatment adopted, and one which I venture to point out has so far apparently escaped notice. It is, however, of some importance, for I find that while some writers by " burns " mean burns only, others include scalds under this heading—a proceeding which vitiates the value of comparative tables.

TABLE I.—*Comparative Mortality of Burns and Scalds, Separately and Combined, from 1894 to 1932 in St. Thomas's Hospital*

Year Group	Treatment	Mortality Per cent.		Burns and Scalds
		Burns	Scalds	Combined Figure
1894 to 1899 ...	Baths and ointment	39.6	18.8	30.8 per cent.
1900 to 1903 ...	2 per cent. picric	39.7	7.0	25.8 "
1924 to 1928 ...	2 per cent. picric	15.5	7.5	9.4 "
1929 to 1932 ..	2 per cent. tannic	4.0	1.7	2.4 "
Do. Under 10 yrs	2 per cent. tannic	11.1	2.2	3.7 "

CAUSES OF DEATH FROM BURNS

In considering the causes of death from burns, as has been so admirably summarized by Wilson,[2] we have the stage of initial shock (or, as I prefer to call it, " shock "), which immediately follows the upset to the nervous system resulting from the exposure to flames or scalding fluid. He estimates the mortality in this period as only 2½ per cent. The experience at St. Thomas's Hospital places it even slightly lower in those cases which survive to be admitted to hospital; though Donald gives this figure as far higher, and increasing from 30 per cent. (1899) to 58 per cent. (1928). Secondly, the stage of acute toxaemia due to the absorption of toxic substances from the damaged tissue in the burnt or scalded area. Here the experience at St. Thomas's leads one to agree emphatically with Wilson's opinion that this occurs six to twenty-four hours subsequent to the injury, and not, as stated by Fraser,[3] on the fourth day or later. As has been shown by Davidson[4] and Fraser,[6] this toxaemia is the result of histamine freed into the blood from the damaged tissues. This possibly causes diminution of blood chloride, and is best combated, if and when it has occurred, by exsanguination transfusion, as suggested by Ajello and Parascando,[7] and advocated and practised with such success by Fraser,[6] Harris,[10] and others. This method, which consists in removing a measured quantity of the toxic blood from the patient and replacing it by a somewhat larger volume of whole blood from a donor, is not necessary if by coagulation of the damaged tissues we can prevent absorption toxaemia. It is therefore unnecessary, as will be shown, in the treatment of burns the surface of which has been sufficiently coagulated with tannic acid.

There is, however, at an earlier period (six to twelve hours) a very important factor which seems to have escaped the attention of Wilson, for he does not mention it. Attention is nevertheless devoted to this subject by Underhill,[5] who discovered that the loss of blood serum from the burnt surface in the first hours after a burn is very excessive—a fact well known clinically and demonstrated both by the condition of the dressings on the burns and the extreme thirst and restlessness of the patient. Underhill showed with rabbits that this loss may reach 70 per cent. of the blood volume, that the maximum loss occurred with third-degree burns of large extent, and, moreover, that where one-sixth of the total surface is burnt death almost inevitably follows. In analogy with his experiments on rabbits a man of 65 kilograms body weight, who might be expected to have 5,000 c.cm. of blood in his body, would lose 3,500 c.cm. of serum in the twenty-four hours following a third-degree burn involving one-sixth of the total body surface, and the majority of this loss would occur in the first twelve hours. It will be seen, therefore, that this factor constitutes a very potent cause of that collapse which ensues, and which is responsible for something like 80 per cent. of the deaths after burns. This collapse is due both to the toxic absorption and to this extensive loss of fluid from the burnt area.

The excessive loss of serum may be combated by the administration of fluid intravenously, subcutaneously, and orally, but with an extensive burn it is next to impossible to get sufficient into the tissues to replace the loss, and it is therefore essential that some method of combating this loss—such as coagulation of the surface of the burnt area—shall be devised which will be sufficient, both mechanically and physically, to prevent the escape of fluid from the capillaries on the surface of the damaged tissues. It was, I think, here that the picric acid treatment constituted such an advance on the older bath and grease method, though it failed inasmuch as the coagulum did not penetrate the tissues to prevent the absorption of toxic substances from the deeper tissue damaged in the accident. Again, owing to the toxicity of the picric acid—manifested by skin rashes, irritation, and not infrequently albuminuria—it was seldom possible to retain this dressing more than two or three days, after which paraffin had to be substituted and sepsis not infrequently supervened. Thirdly, there is the stage of septic toxaemia, which constituted so serious a problem in the few cases which in the old days survived the previous stage. This is not a serious problem if the injury is treated by picric acid, and is practically non-existent in the tannic acid treatment, where, with proper and adequate preliminary cleansing of the damaged area, sepsis is practically never seen.

REASONS FOR FAILURE OF OLDER METHODS OF TREATMENT

The practice at St. Thomas's Hospital before 1899 was to treat all burns by daily baths, with the object of washing away septic material, and to apply an antiseptic grease dressing between these periods in an endeavour to obtain a painless dressing, and a vain hope of preventing

the suppuration which invariably occurred. But no local treatment was present either to prevent the absorption of collapse-producing histamine bodies or to stop the escape of serum from the damaged tissues. As will be seen from Table II, the average mortality during these years for burns was 39.6 per cent. and for scalds 18.8 per

TABLE II.—*Mortality of Burns and Scalds in St. Thomas's Hospital, 1894-8*

Treatment: Baths and boric ointment

Year	Burns			Scalds		
	Number	Deaths	Per cent.	Number	Deaths	Per cent.
1894	67	19	28.0	46	10	21.0
1895	63	25	39.0	44	2	4.5
1896	48	26	54.0	34	11	32.0
1897	49	18	36.0	33	7	21.0
1898	48	21	43.75	45	8	18.0
Total, 5 years	275	109	39.6	202	38	18.8
1899*	45	15	33.0	30	12	40.0

* Treatment: 2 per cent. aq. picric. | Baths and ointment.

cent.—compared with the figures of the Sick Children's Hospital, Toronto, 37.2 per cent. (Harris[10]) ; and at Edinburgh, 35.4 per cent. (Wilson[12]).

Following the introduction of the picric acid treatment for burns by, I believe, Sir Cuthbert Wallace in 1899, the mortality at St. Thomas's Hospital during the succeeding four years, as seen from Table IIIA, diminished consider-

TABLE III.—*Mortality of Burns and Scalds in St. Thomas's Hospital*

Treatment: 2 per cent. aqueous picric acid for two or three days, then paraffin dressings in most cases.

(A) 1900-3.

Year	Burns			Scalds		
	Number	Deaths	Per cent.	Number	Deaths	Per cent.
1900	49	16	32.6	32	3	9.4
1901	55	29	52.7	42	1	2.3
1902	51	18	35.2	35	3	8.5
1903	39	14	35.8	33	3	9.0
Total, 4 years	191	77	39.7	142	10	7.0
(B) 1921-3.						
1924	9	1	11.0	29	0	0
1925	13	4	30.8	39	3	7.7
1926	11	1	9.1	40	3	7.5
1927	14	2	14.3	52	5	9.6
1928*	11	1	9.1	25	3	12.0
Total, 5 years	58	9	15.5	185	14	7.5

* In addition treated with 2 per cent. tannic spray—7 burns and scalds, with 1 death, 14.2 per cent.

ably for scalds, showing an average for the period of 7 per cent., that of burns remaining at 39.7 per cent. (Table IIIA). In a corresponding five-year period immediately preceding the introduction of tannic acid the mortality for burns had fallen—partly, I think, owing to the introduction of adequate preliminary cleansing of the damaged area, and partly to improved social conditions—and there had been a change in the proportion of burns to scalds (Table IIIB). Mortality from burns was now 15.5 per cent., while that for scalds remained approximately the same, at 7.5 per cent. No exsanguination transfusion was carried out on these cases.

These figures compare very favourably with the figures quoted by Wilson[12] for the Edinburgh Royal Infirmary (22.4 per cent.) during the same period, and with those from the Sick Children's Hospital, Toronto (29.6 per cent. in 213 cases), where exsanguination transfusion was used combined with local treatment.

What, then, was the reason of this improvement in mortality where picric acid 2 per cent. aqueous solution was used, unless that the coagulation of the surface protein both lessened collapse and stemmed the escape of serum?

GENERAL CONSIDERATIONS IN TREATMENT

The treatment of burns and scalds, following adequate cleansing of the damaged area, therefore has as its main object the lessening of the collapse by stopping the absorption of those bodies which cause this collapse—and death in from twelve to forty-eight hours after the burn—and also the diminution of the loss of fluid from the burnt area, which, as has been shown, is so serious and so often fatal in the first six to twelve hours. A further aim is prevention of the toxaemia from absorption of septic material from the infected burnt area, which may be manifested elsewhere—especially as septic bronchopneumonia—and cause death in from five to twelve days. The initial shock and suffocation cannot be affected by local treatment of the burnt area, and death from these causes can be ameliorated only by efficient first-aid treatment from those on the spot at the time of injury.

USE OF TANNIC ACID

On taking over the charge of the septic wards at St. Thomas's Hospital, to which all the burns and scalds are admitted, I adopted the spray method advocated by Wilson,[2] saying that I found a 2 per cent. solution of tannic acid was adequate to secure good results. I was immediately struck by the enormous improvement in the general condition of the patients and the absence of pain and sepsis in the areas so treated. It was a noteworthy fact that patients with very extensive burns and children with scalds were comfortable, bright, and alert the day following the injury, read, talked cheerfully, and ate well, while the pulse was not rapid nor was the temperature raised. It was obvious, however, that there were many disadvantages to this method of treatment—to wit, (*a*) the necessity for leaving the area exposed to the air, while at the same time keeping it and the patient warmed ; (*b*) the disadvantage of the mechanical restraint necessary to keep the damaged area at rest and free from interference and irritation ; (*c*) the need for constant attention and repeated hourly sprayings for from ten to twenty-four hours (and usually, in my experience, nearer the latter period) ; (*d*) the obvious impossibility of being able to spray and expose the entire burnt or scalded surface in those cases where the body had been burnt both in front and at the back ; and (*e*)—a minor detail—the hourly need of making fresh solutions. This last was necessary, as I discovered that with solutions kept after this time the crust produced was soft in consistency, light in colour, and, though it gave an equally satisfactory result as when constant fresh solutions were applied, yet the patient suffered some pain and inconvenience, which could be avoided under the rigid black coagulum obtained with repeated applications of freshly made 2 per cent. tannic acid.

These facts made this method of treatment applicable only in the case of in-patients in large hospitals—also, possibly, the offspring of that diminishing class, the millionaire—and even in these cases only to those patients who were sufficiently thoughtful to be burnt on one side alone. I therefore set about to try to discover some other method which should be applicable universally to the treatment of burns and scalds in the out-patient departments, by general practitioners, and both at home and in works as a first-aid application. Here I was helped by the suggestion of a compress for first aid in the Medical Research Council's pamphlet.[11] It struck me that if an antiseptic were added it would enable the solution to be made with clean tap-water, and prevent possible infection from outside sources. I found, however, that when added in a strength of more than 1 in 2,000, the perchloride of mercury interfered with the coagulating action of the tannic acid and produced only a soft soapy crust, which was unsatisfactory and did not relieve the patient's pain

or completely prevent collapse. The next thing that occurred to me was why a fresh solution was necessary hourly.

CHANGES IN TANNIC ACID AND ITS SOLUTIONS ON KEEPING

On analysis of the tannic acid used at St. Thomas's Hospital it proved to be a natural gallotannin prepared from Aleppo galls and containing, when fresh, 88 per cent. gallotannin, 6 per cent. gallic acid, and some moisture.

Thanks to the aid of Professor Plimmer and Dr. Lowndes of our chemistry department, I soon knew that even at the end of two years no change had taken place in the colloidal state of the tannic acid solution, and it was therefore necessary to seek some other explanation as to why a stale solution gave an unsatisfactory crust. Frankly, I have not been able to find it. With the help of Mr. Peck, the pharmacist at St. Thomas's Hospital, and the very great assistance of Mr. W. A. Woodward, one of the dispensers—who, working by the colorimetric method advocated by Ainsworth Mitchell,[8] has shown that even after five years a 2 per cent. solution of tannic acid contains no more than 8.45 per cent. of gallic acid as a result of hydrolysis and 73 per cent. unaltered gallotannin, and that the percentage of gallic acid in solutions of earlier date is considerably less—I have been convinced that change to gallic acid does not occur to any appreciable extent. Moreover, this hydrolysis to gallic acid takes place extremely slowly in solutions free from moulds, which do not develop in those containing 1 in 2,000 perchloride of mercury ; and it has been shown that in a three-months-old 2 per cent. solution with 1 in 2,000 perchloride of mercury no practical increase occurs in the percentage of gallic acid. Incidentally, on sterilizing and using the five-year-old solution above referred to on a burn as a compress, a good scab was obtained with a perfect result.

A further possible cause for failure of the stale solution was that, owing to an increased density of colloid, a solution of diminished strength only could get through the nozzle of the atomizer, but this was easily disproved. Then was it possible that oxidation was causing some change in the solution though none was demonstrable. A solution was charged with carbon dioxide to prevent this oxidation, and though this remained quite free from those traces of pyrogallol which cause the darkening of any tannic acid solution exposed to the air, the crust produced was not in any way different to that obtained from using the ordinary stale solution of tannic acid ; it was softer and lighter in colour.

It was obvious, therefore, that no apparent change occurred in the solution, and I considered that longer contact of the solution to the area would probably result in a satisfactory coagulum. I evolved the method of treating these burns and scalds with a compress left undisturbed on the previously cleaned area until the scab separated—usually in from fourteen to twenty-one days.

THE COMPRESS METHOD

A compress of 2 per cent. tannic acid with 1 in 2,000 perchloride of mercury makes a most efficient first-aid dressing for all burns and scalds, as I have proved in my own home. But in the home, and in other places where burns occur but rarely, tablets or powder, to be dissolved in warm water and applied by soaking clean linen in the resulting solution, will be found more advantageous than the keeping of a large quantity of stock 2 per cent. solution. The formulae for the tablets and powder are appended:

Powder: Tannic acid 17½ grains, perchloride of mercury 1/2 grain—to be dissolved in 2 oz. of warm water, when a 2 per cent. solution will result.

Tablets: Tannic acid 17½ grains, perchloride of mercury 1/2 grain, boric acid 1 grain—to be dissolved in 2 oz. of warm water, when a 2 per cent. solution will result.

Whatever method of first-aid treatment may have been employed—and I hope that as time goes on the method I am about to describe may become universally adopted as a first-aid dressing—it is essential that this first-aid dressing, even if of tannic acid, should be removed (an easy matter), and the area carefully cleaned before the final tannic acid dressing is applied. By this careful cleansing alone can subsequent sepsis be avoided. Should sepsis supervene during a course of treatment it is only necessary to remove the tannic acid dressing, re-clean the area thoroughly, and reapply a new tannic acid dressing in order to get a good result. The cleansing must start with the removal of all dead and charred tissues, the excision of all loose skin raised over blisters, and the removal of grease, especial attention being given to the edges of the damaged area. The whole area should then be gently but thoroughly cleansed with soap and water (applied with a sterile swab and *not* with a nail-brush) and finally carefully sponged over with ether, to remove all natural or applied grease in order to get a thorough coagulation. It is obvious that this treatment cannot be carried out unless the patient is rendered insensible to the pain which such a cleansing of the damaged area must entail. We have found at St. Thomas's that it is safer and more satisfactory to procure this insensibility by the administration of large doses of opium rather than the use of general anaesthesia, which tends, even with the greatest care in its administration, to be followed by pulmonary complications, usually of a mild nature, which are detrimental to the rapid recovery of the patient. Table IV indicates the dosage and drug employed at various ages, and has proved both safe and satisfactory.

TABLE IV.—*Opium Dosage for Cleansing Burns and Scalds*

(I) In Children.

Age	Preparation	Dose	Remarks
1 month	Tinct. camphor co.	mij-iij	
2 months	Tinct. camphor co.	miv-vi	
3 months	Tinct. opii	m½-¾	
6 months	Tinct. opii	m¾-1	
1 year ...	Tinct. opii *or* inj. morph.	mij-iij grain 1/75	Tinct. opii is more satisfactory than morphine
Over 1 year	Tinct. opii *or* inj. morph.	mij for each year and mij in 15 min., if necessary grain 1/75 for each year	

(II) In Adults.

12–15 years	Tinct. opii *and* inj. morph.	mxxx grain 1/6	
15–20 years	Tinct. opii *and* inj. morph.	mxxx grain ¼	
Over 20 years	Tinct. opii *and* inj. morph. *or* inj. morph.	mxxx grain ¼-⅓ grain ⅓-½	For women For men, according to stamina

N.B.—Should slow or shallow breathing give rise to anxiety, atropine sulphate grain 1/200 to 1/50 should be administered hypodermically.

Application of Compress

A compress, consisting of either six layers of sterile gauze or three layers of lint, should be thoroughly soaked in a stock solution of 2 per cent. tannic acid and 1 in 2,000 perchloride of mercury, and applied closely and evenly over the entire burnt area without wringing out the dressing. This compress should then be firmly and evenly bandaged in position, the bandage being applied directly to the outer side of the compress. The whole of the outside of the bandage may then be soaked with a spray of 2 per cent. tannic acid and 1 in 2,000 perchloride of mercury in order to ensure that the underlying dressing is thoroughly wet. Mackintosh or jaconet should be placed under the patient until the dressing has dried in order to save soiling of the sheets by the tannic acid solution, for though this all washes out excepting for a faint ironmould, the sheet subsequently rots in this area. It is also well to secure the burnt limb temporarily in order to prevent undue movement until the tannic coagulum has formed firmly. This dressing should be left in position and untouched for at least a fortnight in the case of small burns

... scalds, and three weeks where large areas are involved. At the end of this time the bandage should be cut and the dressing lifted, when the scab usually will separate completely from the burnt area. If it does not do so the dressing can be re-bandaged and removed later, when separation has occurred. The separation may be rendered quite painless and assisted by spraying with tannic acid solution between the coagulum and the skin during this process.

The escape of a little serous or sanio-serous fluid from the edges of the coagulum, or the raising in blisters of its centre with serum, is no more an indication for interference or removal of the dressings during the first week after their application than it is with the bare coagulum resulting from the "spray" method. Temperature and toxaemia as shown by a rapid pulse, dried and furred tongue, and pain, with, possibly, the escape of sero-pus in considerable quantities, are the only indications calling for removal of these dressings before the time stated, and these indications in our experience are extremely rare, and usually result from a failure in the thoroughness of the preliminary cleansing. Should removal be necessary—and in my experience it is very seldom called for—the area should be re-cleaned carefully and another tannic acid dressing applied.

As indicated, the dressing must be closely and evenly applied to the burnt area, and there are certain areas, therefore, such as the perineum, the groin, the axillae, the neck, and also the face, where the absence of bandages is an advantage, and where the spraying method gives better results; but the compress method has been, and can be, used with good effect in these areas. It must be realized that in burns, where destruction of the subcutaneous and muscular tissues has occurred, subsequent scarring and contracture are inevitable, and it is therefore necessary to apply tannic acid dressings, either by compresses or spraying, with the part in such a position that subsequent contracture may be counteracted. It is equally obvious that although full epithelialization will have occurred in those areas where the first-, second-, or third-degree burn has occurred, an ulcer must be expected, and will be met with, in deeper burns.

This, if extensive, should be treated by subsequent autogenous skin grafting, or, if small, by the application of some lotion, of which, in my experience, the most satisfactory is: purified alum 20 grains, zinc sulphate 10 grains, glycerin 7 fluid ounces, water to one pint.

Here I may draw attention to the excellence of this 2 per cent. tannic acid compress as a dressing not only for electrical, radium, and chemical burns, but also as an application to the area from which Thiersch grafts have been cut for the purpose of skin grafting in mastoid and other operations.

THE SOLUTION

It will be seen from the above that a stock solution of 2 per cent. tannic acid and 1 in 2,000 perchloride of mercury will fulfil adequately the needs of the compress method. In order to meet the desirability of applying this solution warm to the burnt area it is our custom to keep it in a concentrated form and dilute it with the requisite amount of warm water. I do not advise keeping it at more than double strength, as I find that more concentrated solutions are inclined to decompose very quickly, and the results obtained are therefore not so painless or so satisfactory as from the weaker solution. In order to meet the requirements of shops or works, and the home where burns are not frequent, or on ships where the storage of quantities of solution is likely to be a bother, I have, with the assistance of Mr. Peck, composed the tablet previously mentioned. This, dissolved in two ounces of water, gives a solution of the necessary strength, though slightly muddy in appearance due to the presence of the boric acid, which, however, does not interfere in any way with its efficacy of coagulation. It can be used equally well for spraying where this method is preferred.

RESULTS WITH TANNIC ACID

As will be seen from the tables which show the mortality of severe burns and scalds separately for periods of five years in St. Thomas's Hospital, under the old bath-and-grease treatment the average mortality was 39.6 per cent. burns and 18.8 per cent. scalds. In the early days of the picric acid treatment the mortality was 39.7 per cent. burns and 7 per cent. scalds, and in the last five years of the picric acid treatment the mortality was 15.5 per cent. burns and 7.5 per cent. scalds, whereas the adoption of tannic acid in October, 1928, and its systematic use in subsequent years has reduced the mortality to 4 per cent. burns and 1.7 per cent. scalds.

TABLE V.—*Mortality of Burns and Scalds in St. Thomas's Hospital, 1929–32*

Treatment: 2 per cent. tannic acid, 1 in 2,000 mercury perchloride (spray or compress).

Year	Burns			Scalds		
	Number	Deaths	Per cent.	Number	Deaths	Per cent.
1929	12	0	0	27	0	0
1930	15	1	6 6	37	2	5.4
1931	21	1	4.7	53	1	1.8
1932	26	1	3.8	58	0	0
Total, 4 years	74	3	4.0	175	3	1.7

If we consider the mortality in the case of children under 10 years of age and compare it with that in the late picric acid period it will be seen that the results with burns are not so good as those with scalds—a point analogous to the transition from oil to picric acid (compare Tables II and IIIA). The Edinburgh figures (combined) for the same period are 8.7 per cent. (1926–29), 5.8 per cent. (1930), and 4.8 per cent. (1931), against St. Thomas's (combined) 3.7 per cent. (1929–32), and Sick Children's Hospital, Toronto, 16 per cent. in 230 cases (1925–28).

TABLE VI.—*Mortality of Burns and Scalds in St. Thomas's Hospital. (Under 10 years)*

Treatment: 1924–8, picric acid 2 per cent.
1929–32, tannic acid 2 per cent., $HgCl_2$ 1 in 2,000.

Year	Burns			Scalds		
	Number	Deaths	Per cent.	Number	Deaths	Per cent.
1924	7	1	14 2	23	0	0
1925	7	2	28 4	26	3	11.5
1926	7	0	0	32	3	9.3
1927	5	1	20 0	30	5	16 6
1928	6	0	0	23	3	13.0
Total, 5 years	32	4	12.5	134	14	10 4
1929	3	0	0	23	0	0
1930	3	1	33.3	24	2	5 8
1931	14	1	7.1	38	1	2 6
1932	7	1	14 2	41	0	0
Total, 4 years	27	3	11 1	126	3	2.2

OUT-PATIENTS

I would add that during the period 1929 to the present date, during which tannic acid compresses have been the routine out-patient treatment for all burns and scalds, no deaths have occurred among those slighter cases, which average 800 a year, and of which about one-third are in children under 10 years of age. As might be expected, there is a seasonal incidence of approximately 3 : 2 in favour of the winter months.

For the past three years, then, the compress method has been in use in the out-patient department at St. Thomas's Hospital with excellent results, though I regret I cannot give details either as to the number and type of cases treated, or as to the exact degree of severity

of the burns and scalds ; but in only two cases has sepsis occurred of a sufficiently severe nature to call for the admission of the patients to the wards, and in both these cases cleansing and re-application of the tannic acid dressing has led to an uneventful recovery.

I venture to think that this simple method of compress may be of universal application both by the general practitioner, in the out-patient departments of hospitals, and as a first-aid treatment in works and in the home, presenting, as it does in its simplicity, great advantages over the more complicated method of reinforced compresses, recently advocated by Messrs. Hunt and Scott[9] and Wilson.[12]

CONCLUSIONS

I have endeavoured to trace the progress of the treatment of burns and scalds during the past forty years, and to show that, although improved social conditions have done much to reduce this mortality, yet improved treatment has done more—especially the introduction, or should I say rediscovery, of the value of tannic acid in this relationship.

I have described a simple method of using this tannic acid. Even if you do not consider it suitable for universal application, as I hope you may, yet you must admit that its use in reducing the mortality of severe burns and scalds to 4 per cent. and 1.7 per cent. respectively at least redounds to the credit of the local treatment, for social conditions remain the same as in the preceding five years, when the mortality was considerably higher (15.5 per cent. and 7.5 per cent.).

Further, I would urge the necessity of separating the figures relative to the treatment of burns from those of the treatment of scalds in articles dealing with this subject.

I wish to tender my thanks, in addition to those already mentioned, to my successive house-surgeons, Messrs. R. W. Butler, R. O. Lee, T. H. Wilson, R. H. Franklin, and T. W. Mimpriss, and especially to Miss Routh (sister of the septic wards) to whose patient care and continued enthusiasm so much of the success of this treatment has been due.

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RECENT CONCEPTIONS OF BRIGHT'S DISEASE AND ITS TREATMENT*

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My intention is to attempt to summarize the trend of opinion and lines of advance in our knowledge of Bright's disease since the beginning of this century. An enormous mass of information has been added to the subject of kidney disease in the last twenty-five years, but it must be admitted that most of the problems are still unsolved, and this knowledge has not yet had the simplifying effect which comes when theories are proved and hypotheses become facts. It is only possible to touch upon a few of the problems, and I therefore intend to discuss only questions with a direct practical bearing, and to omit reference to the numerous theories and more academic problems.

*Extract of paper read at the Leeds and West Riding Medico-Chirurgical Society, October, 1932.

My main impression as a student twenty-five years ago was that the clinical teaching was entirely based on the end-results of kidney disease. One thought only in terms of gross structural changes, and every endeavour was made to correlate the clinical picture with the various forms of anatomically altered kidneys. All albuminuria was regarded seriously, though so-called physiological albuminuria was mentioned as a real, but rare, occurrence. Degenerative kidney disease, as distinct from inflammatory infections, was not recognized. Nor was the possibility of the occurrence of a reversible reaction considered. The infective origin of nephritis (apart from scarlatinal nephritis) was scarcely mooted at that time, while the conception of a kidney affection as "a disease of the body in which the kidneys suffer" was unknown.

One of the most important advances has been the change in attitude towards albuminuria *per se*. Up to the time of the war there never had been any attempt on a large scale to find out the incidence of albuminuria in adults, although several casual investigations on inmates of institutions had revealed a surprisingly large number of albuminurics. During the war an investigation was carried out by MacLean on 60,000 men, physically fit to undergo military training ; 5 per cent. (3,000) of these showed albuminuria—2 per cent. marked, and 3 per cent. slight in degree. It is also to be noted that the investigation was carried out on early morning samples of urine. If specimens had been collected after exercise the percentage of albuminurics would probably have been doubled. Albuminuria must therefore be regarded as much commoner than previously supposed. Moreover, the after-history of these men while on active service revealed no higher incidence of nephritis or of other affections than in the 57,000 free from albuminuria. Doubtless a considerable proportion of these cases were due to affections of the lower urinary tract, while many were of an age at which functional albuminuria was probable. But the investigation goes to show that albuminuria should not be regarded seriously in the absence of definite signs of organic disease, especially of the cardiovascular system, and where excess of casts has not been demonstrated in the centrifuged sediment of urine.

The attempted treatment of albuminuria is worthy of brief mention. Frequently patients are referred to the out-patient department because a small amount of albumin persists in spite of all efforts "to clear it up." The deleterious effect of a loss of a small amount of albumin is of no moment—even the loss of much larger quantities is no great drain on the protein of the tissues. A urine of average output which is coagulable on heating means merely the daily loss of the amount of protein contained in one egg—approximately only one-tenth of the minimal total protein intake. Moreover, as Geoffrey Evans puts it, the residual albumin from a previous kidney affection may have no more significance than the scar of a perfectly healed wound in the skin. Such albuminuria often disappears if and when the general metabolic disturbance clears up and the renal tissue has not been so irrevocably damaged that recovery is impossible. Otherwise, in spite of all therapeutic measures, the proteinuria will become permanent and persistent. It is not uncommon to see cases of chronic albuminuria with a persistent slight general oedema which disappears within a week when the patient is recommended to take a diet containing an average protein ration. Such oedema is in fact a starvation oedema, due to the individual having been restricted to a low protein diet for months in a mistaken and futile attempt to "clear up" the slight persistent albuminuria.

SECRETORY CLASSIFICATION

Perhaps one of the greatest advances has been the change of conception of Bright's disease as a condition of altered kidney structure in response to a disorder of the body chemistry of which the kidney lesion is a local manifestation. In recent years much attention has been focused on this biochemical conception. Before the war a certain amount of work was done on this aspect of the question by the French school, notably by Widal and Ambard, but little practical application had resulted. Since then, as a result of the introduction of tests of renal functional efficiency, and of the relative ease of estimation of the blood urea content by newer and simpler methods, considerable attention has been devoted to a secretory classification of Bright's disease in contrast to the anatomical one, and the nomenclature of the French school has come into vogue, namely:

1. *Hydraemic Nephritis (or Water Retention Type).*—Profuse albuminuria; marked oedema; retention of chlorides; normal blood urea; normal blood pressure; no cardiovascular changes.

2. *Azotaemic Nephritis (or Nitrogen Retention Type).*—Slight or no albuminuria; no oedema or salt retention; increased blood urea and blood pressure with cardiovascular changes.

But it was soon found that the clinical problem was far too complex for such a rigid biochemical classification. The percentage of nephritics who fall definitely into one or other group is relatively small, with the result that a third class—and this by far the largest class—"mixed nephritis," had to be introduced. It is now recognized that this classification has marked limitations, and that it represents only one aspect of the problem. It has, however, introduced a useful, practical conception, especially in its bearing on treatment. If there is no nitrogen retention, as shown by a normal blood urea content, then there is no reason why the protein of the dietary should be unduly restricted. Again, it also helps to clear up some of the confusion as to the indications for a salt-free diet. Such a diet is most valuable in the treatment of the oedema of hydraemic nephritis; on the whole, it is practically useless in cases of azotaemic nephritis, and indeed may do positive harm if adhered to for more than three weeks at a time. Its insipid nature diminishes the appetite, while even more important is the fact that its long-continued use leads to a condition of chronic ill-health probably from uncompensated acidosis.

Brief mention of renal function tests is perhaps appropriate here. The first and most popular was MacLean's urea concentration test, which has been in vogue for fifteen years. There have been various attempts to increase its delicacy, notably Calvert's range of function test, while more recently there has been introduced van Slyke's range of clearance test. There is no doubt that these tests have been of considerable value in certain types of cases—for example, in the recovery stage of acute nephritis, especially if recovery is delayed—in estimating the degree of residual kidney damage. Perhaps they have been of most value to the surgeon, who merely requires an opinion as to whether renal function is so grossly impaired as to contraindicate or delay operation. But from the physician's standpoint they have marked limitations. They give no indication as to the nature of the morbid change which is affecting the functioning tissue; and it is the nature of the lesion, and not its extent, in the early stages of nephritis at least, that is one of the physician's chief guides to prognosis. Moreover, these tests give equivocal results in the very type of case in which the clinician also is in doubt—for example, functional albuminurias, or early cases of suspected granular kidney. This is scarcely surprising when we recollect that experimentally two-thirds of the renal tissue can be removed before any gross defect in renal function can be detected by biochemical means. Finally, a word of caution must be uttered, for certain dangers seem to lurk in the very attractiveness of these tests. More attention is apt to be paid by students to the estimation of the blood urea, etc., than to the simpler procedures which can be carried out by himself—for example, the detection of tube-casts, or the estimation of specific gravity in nocturnal and diurnal samples of urine; while again, if these tests are once carried out and found satisfactory in the presence of a lesion too early to be detected by such methods, its gradually progressive character may be ignored by the practitioner. The albuminuria of pregnancy is perhaps a case in point.

Attention must be drawn to the usefulness of blood urea estimations in cases of latent uraemia (apart from the more acute type associated with anuria). In conditions with a long history of progressive languor, easily induced fatigue, loss of appetite, perhaps anaemia, but no albuminuria, and probably no cardiovascular changes, a blood urea content of 100–200 mg. per 100 c.cm. may be present, and such an estimation may be the only means of confirming the diagnosis, which otherwise would merely be a matter of surmise. Although the blood urea content is, in this way, of definite value in determining the presence of a uraemic state, yet it is the consensus of opinion that the retention of urea is not the cause of uraemia. Indeed, this neurotoxic condition appears to be a morbid state due to various disturbances of the body chemistry of which the manifestations of renal disease are themselves only a part. Although the problem of uraemia is still unsolved, yet there has been an advance of practical importance in recent years in the differentiation of the group of cases due to cerebral oedema. It is a well-known fact of clinical experience that the convulsions and amaurosis of acute nephritis are more alarming, though much less serious, than the quieter type of neuro-toxaemia seen in cases of chronic nephritis. The prognosis is much better if only the patient survives the convulsions. These appear to be of mechanical origin, associated with cerebral oedema. Lumbar puncture has been found to be dramatic in its relief of such convulsive seizures, whereas the evacuation of cerebro-spinal fluid is worse than useless in the treatment of the milder convulsions and twitchings of chronic uraemia, which is a neuro-toxaemia, in contrast to the neuro-oedema of the former condition.

As for acute Bright's disease, the most important practical point which has been emphasized in recent years is the clear-cut distinction in children and young adults between acute diffuse nephritis and acute haemorrhagic nephritis or so-called "essential renal haematuria." The latter is much the more common affection; malaise, pyrexia, and oedema are all very slight, while the blood pressure is unaffected—indeed, except for the definite haematuria (often recurrent) the absence of physical signs and symptoms is a distinctive feature. These cases are practically always streptococcal infections—tonsillitis, sore throats, antral infections, middle-ear disease. The condition clears up after treatment of the septic focus, and usually no permanent damage results. Acute diffuse nephritis is a much less common affection, associated with definite pyrexia, dropsy, oliguria, profuse albuminuria with probably a raised blood pressure. Its aetiology is doubtful, although probably also infective, and it is a much more serious affection both as regards immediate and ultimate prognosis. It is the failure to differentiate

these two types which has led to the diverse views frequently expressed as to the prognosis of acute Bright's disease in children.

THREE GROUPS OF CASES

Although it is my intention to avoid any attempt at classification of renal disease (and for this reason have adopted the non-committal title of Bright's disease), yet the recognition and differentiation of three reasonably distinct groups of cases is probably of help both as to prognosis and as to treatment.

1. *The Septic Group.—Perhaps the best example is the* acute haemorrhagic nephritis discussed above. But chronic sepsis is no doubt also an important aetiological factor, the type of lesion resulting therefrom depending on the renal element upon which the brunt of such sepsis falls. Hence in the heterogeneous group of conditions called chronic nephritis every effort must be made to eradicate any foci of latent sepsis.

2. *The metabolic group,* of which the best example is the chronic interstitial nephritis, or red granular kidney of classical description. Although the textbooks make much of gout, lead, diabetes, etc., as important causal factors, yet there seems little doubt that nowadays the basal pathology of the condition is best expressed by the term "goutiness" of Leonard Williams. "It is that condition of ill-health due to insufficient or perverted metabolism leading either to the formation of material which is foreign to the healthy economy or to the inadequate discharge of normal excreta." In short, it is due to a want of balance between intake and output. This metabolic group is usually associated with high blood pressure, and probably both the kidney lesion and the hypertension have the same aetiology. But further discussion of this subject is outside the scope of the present paper.

3. *The extrarenal group* is worthy of recognition, if only to draw special attention to that type of generalized affection of which the kidney lesion is merely a local expression. During the war the occurrence of famine or starvation oedema in Central Europe focused attention on the extrarenal origin of oedema as distinct from the simple mechanical theory of renal obstruction—nephritis being the cause of anasarca—a view which had persisted since the time of Bright. The trend of recent opinion is that so-called renal oedema is not a direct consequence of renal injury, but is merely a local manifestation of widespread changes in the tissues, the cause of which is still unknown.

In recent years the literature of Germany and America abounds in discussions on nephrosis, as distinct from the disease usually recognized as chronic parenchymatous nephritis, but the introduction of this term has not been received very favourably in this country. It was first introduced by Müller in 1905 to designate those cases in which the main feature is degeneration of the tubules as contrasted with inflammatory conditions of the glomeruli. The distinguishing features of nephrosis are largely negative in character—namely, (1) absence of renal inadequacy and of tube-casts in the urine, although there is a profuse albuminuria; (2) no increase in blood pressure; and (3) no cardiac enlargement—while the most interesting positive characteristic is the great increase of cholesterol in the blood. Further, to quote Evans, "their striking feature is the complete recovery that is made for no apparent reason after months of persistent oedema, marked albuminuria, and a general condition of severe illness. Nothing like this is seen in any other form of Bright's disease." Many such cases in children and young adults have been recorded, mostly of severe type, while there are probably numerous milder affections which clear up without their relation to this group of lipoid nephrosis being recognized.

Apart from this sharply defined clinical entity, degeneration of the renal tubules is usually associated sooner or later with glomerular inflammatory changes, and therefore much confusion has resulted from the use of the term "nephrosis" by foreign workers to denote the condition generally recognized in this country as chronic parenchymatous nephritis. It should be added, however, that the introduction of this conception of nephrosis has been useful in directing attention to the importance of widespread tissue changes in affections associated with general oedema and profuse albuminuria, while it also emphasizes the fact that an apparently gross kidney affection may be coterminous with its extrarenal cause.

TREATMENT BY DIET AND ALKALIS

Very little space is left for the discussion of treatment. Some of the main advances have been already indicated in the discussion on albuminuria and uraemia, on the biochemical types of nephritis and the importance of the role of sepsis in special groups of cases. In the last few years perhaps most attention has been paid to the effects of alkalis and of high basic diets in nephritis. The beneficial effects of alkalis and the deleterious action of acids on the kidney have long been recognized. Bright himself advocated the use of an alkaline mixture, and for generations physicians have prescribed alkalis, doubtless empirically, in the treatment of kidney disease. Nowadays they are given in three different types of case. It is now the practice of many fever hospitals to give alkalis to all cases of scarlet fever, since it is considered that by this regime the incidence of post-scarlatinal nephritis has been considerably reduced. The usual dosage ranges between 120 and 240 grains per day, the aim being to give just sufficient alkali to keep the urine about the neutral point. In cases of hydraemic nephritis Osman has emphasized the value of large doses of alkalis—700 to 800 grains per day. This line of treatment may sometimes be beneficial, though in cases of mixed nephritis the results are disappointing. Moreover, there are decided disadvantages: In many patients these large doses cause much vomiting, while there is a very real danger of alkalosis. Such intensive alkaline therapy has very definite limitations, and in my opinion should never be attempted unless under hospital conditions of supervision.

Perhaps a more useful part is played by alkalis in the metabolic group of cases as already defined. They may be administered in a mixture of the usual alkaline salts or in the form of the so-called "high base diet." The acid or base forming properties of food depend on the inorganic constituents or "ash" remaining after the organic constituents have been oxidized in the body, and, according to the type of food ingested, this ash may be neutral, acid, or alkaline. On a high base diet, namely, fruit, vegetables, bread, and milk, even advanced cases of chronic interstitial nephritis seem to improve. It is possible to arrange a high acid and high base diet containing the same amount of protein, and recent carefully controlled work by Lyon and his co-workers shows that cases do much better on the high base diet. The practical deduction is that it is not the type of protein in the diet which matters, but the actual acidity or basicity of the diet used. In other words, dietetic restrictions are of minor importance so long as the diet given is sufficiently "covered" by doses of alkalis. In practice, however, the highly acid character of certain proteins makes their adequate covering with alkalis a matter of some difficulty. Certain restrictions are required, but a varied diet of meat, fish, and eggs may safely be given to patients with chronic interstitial nephritis to their physical benefit and mental contentment if alkalis in ordinary doses be also administered.

PRIMARY PNEUMONIA

A TWO-YEAR SURVEY OF CASES TREATED NON-SPECIFICALLY

BY

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The profession seems to be awaking belatedly to the immense problem of pneumonia. This is due to the advent of specific serum therapy, and also, I think, to some realization of the great number of cases treated in municipal hospitals. Thus it is pertinent to inquire into what may be the natural history of this condition at the present time in cases where no specific therapy is used. The ensuing series has been dealt with in the adult medical wards of Selly Oak Hospital during the period March, 1930, to March, 1932.

DIAGNOSIS AND TREATMENT

Diagnosis has rested upon the characteristic history of onset, sputum, and the definite establishment of physical signs of consolidation. No case has been included in which these physical signs have been absent. It appears to me that much of the success claimed by pioneers in various fields of therapy is obtained in those cases which naturally abort within thirty-six hours, without ever developing definite signs of the established disease. During an epidemic of pneumonia the hospital wards always contain numerous examples of this condition—dealt with as adequately by calomel as by specific therapy. Some criterion of diagnosis must be established before dogmatism can take place on definite curative results within the first forty-eight hours of so-called pneumonia. It has seemed to me that any strict clinical distinction between broncho-pneumonia and the lobar type is not possible, and, although many of the ensuing cases have been only lobar in distribution and character, post-mortem examination has demonstrated in a few instances the coexistence of both types in different lobes. I therefore decided to investigate primary pneumonia and not to attempt any more strict classification—if, indeed, one is always possible. The population from which the hospital draws its material is similar to that of most voluntary hospitals in any large town, except that in a municipal hospital we have to deal rather more extensively with the very poor. It will be seen, therefore, that with the prevailing economic depression and unemployment, these figures relate to the prognosis of pneumonia among those in whom it should be and is most unfavourable. The frequency, too, is much greater in the congested areas which the hospital serves, and I feel sure that much of the incidence, death rate, and crippling effect of pneumonia is directly related to bad housing, overcrowding, and straitened economic circumstances.

The treatment has followed no set plan, but the basis of it has been:

1. Adequate fluids throughout, with continuous rectal salines in those cases where insufficient fluid has been taken by mouth, at least eight pints daily being given. Glucose in large amounts to all cases.
2. Complete rest in the position most favoured by the patient.
3. The administration of sufficient hynotic, often morphine, to ensure sound sleep, particularly in the early days.
4. Continuous intranasal oxygen in any severe infection.
5. An effective clearing of the lower bowel in all cases.
6. The administration of alcohol to cases with delirium—particularly where the history suggested a partiality to this beverage, as was not infrequent—and to those who, at or near the crisis, showed a failing appetite or loss of interest in life. Other stimulants were kept for dealing with emergencies as they arose, and digitalis was only administered to cases where auricular fibrillation was found.
7. Pain was dealt with by local application, and the time-honoured linseed and mustard poultice was found of great service in severe pleural pain.
8. Subsequent to the fall in temperature an adequate reinflation of the affected lung was attempted by means of breathing exercises.

INCIDENCE AND MORTALITY, ETC.

The age period was 10 to 70 years, and the total number of cases under review during the two years was 496. Complete bacteriological investigation and typing of the pneumococcus was not undertaken, owing to pressure of work. The sex incidence, as shown in Table I, is in accordance with accepted teaching—namely, 68 per cent. males and 32 per cent. females—while 70 per cent. of the cases were encountered in the months October to April inclusive, which also agrees with common findings.

TABLE I.—*Incidence*

	Decade						Total	Percentage
	10-20	20-30	30-40	40-50	50-60	60 and over		
Males ...	49	63	74	62	57	23	338	68
Females ..	23	18	36	31	19	25	158	32

It was noteworthy throughout that practically all patients who recovered had a higher pulse rate during the thirty-six hours subsequent to admission than they had at any other day of their stay. This was taken as indicating that the movement to hospital was temporarily imposing more strain than the height of the infection itself. It is also important to note the mortality rate increasing as the length of duration of symptoms prior to removal to hospital increases. This is seen in Table II.

TABLE II.—*Mortality and Day of Admission to Hospital*

	Day of Disease on Admission							
	1	2	3	4	5	6	7 and over	Not Definitely Known
Number of cases admitted	75	81	99	70	55	20	82	14
Number of deaths in each age group	14	20	22	17	21	9	24	—
Percentage of deaths in each age group	18.7	24.7	22.5	24.3	38.0	45.0	30	—

Deaths numbered 127—the gross mortality during the whole period being 25.6 per cent.—but of this total thirty-one were moribund on admission and died within thirty-six hours. If these are excluded, I find a mortality rate of 20.6 per cent. It was noticed that this varied from one influx of cases to another—during January and February, 1931, eighty-three patients were admitted, with a mortality percentage of 35.

In considering other points relating to mortality, the gross figures are used throughout.

The age factor appeared to me to exert one of the maximal effects in bad prognosis. These facts are well brought out in Table III.

TABLE III.—*Mortality and Age*

		Decade					
		10-20	20-30	30-40	40-50	50-60	60 and over
Total deaths per decade	Male ...	1	9	15	25	23	15
	Female	Nil	3	5	12	9	8
Percentage of deaths per decade	Male ..	2.0	13.2	21.6	41.0	42.0	57.0
	Female	Nil	16.7	14.0	33.0	47.0	31.0

It is evident from the preceding tables that the gross mortality for cases under 40 years is 12.5 per cent., while over that age the figure is 41.7 per cent.; it is thus among the older group that benefits from specific remedies should be sought, as any small series having a low age incidence will naturally tend to show an excellent prognosis.

In view of the shortening of duration of temperature which is said to follow specific remedies, it was considered beneficial to inquire the period of duration in this series. The results are shown in the table.

TABLE IV.—*Duration of Temperature in Days*

	Day																	
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18 and over
No. of cases	3	7	23	65	18	41	45	31	15	21	12	14	6	3	3	3	25

From this it will be seen that 70 per cent. of cases reach a normal temperature before the tenth day, with a maximal incidence on the fifth day. The incidence of deaths was found to correspond fairly accurately with the day of the fall in temperature as set out above.

In severe cases with much bronchitis it is sometimes difficult to assess clinically the extent of lobar involvement; but there was found a close relation between the lobar extent and the prospect of a favourable prognosis. In those cases living the clinical involvement was: one lobe, 241 cases; two lobes, 116 cases; three lobes, 25 cases. Post-mortem examination was undertaken in 59 cases, when the numbers were: one lobe, 10; two lobes, 18; three or more lobes, 31. Despite some recent assertions it is thus seen that there is a direct correspondence between the extent of lesion and the mortality rate as shown in Table V.

TABLE V.—*Mortality and Lobar Involvement*

	One Lobe	Two Lobes	Three or More Lobes
Cases living ...	241 = 60.5 %	116 = 30.3 %	25 = 7.0 %
Post mortem ...	10 = 16.9 %	18 = 30.0 %	31 = 52.0 %

COMPLICATIONS

The outstanding complications met with in the series as detected were:

Empyema	19 (14 L, 5 D)
Sterile effusions	5 (L)
Non-suppurative arthritis	6 (L)
Localized pneumococcal abscess	6 (L)
Meningismus	5 (L)
Venous thrombosis (leg)	5 (L)
Parotid abscess	2 (1 L, 1 D)
Erythema multiforme	2 (1 L, 1 D)
Pyopneumothorax	2 (1 L, 1 D)
Corneal ulcer	1 (L)
Pneumococcal panophthalmitis	1 (L)

L = Survived. D = Died.

The most outstanding feature here is that in all six cases where a multiple non-suppurative arthritis was found a fatal termination ensued. The occurrence of sterile effusions, the cytology of which closely resembled that found in many cases of idiopathic effusions which are labelled tuberculous, should give rise to speculation as to the number of these cases which are the result of a pneumococcal or streptococcal pulmonary infection, where the lung lesion is of limited extent. The 100 per cent. recovery rate in cases where metastatic pneumococcal abscesses were found prompted the thought that in severe pneumococcal infections treatment by means of fixation abscesses, either from lung-puncture fluid or other means, might be worthy of trial. The two pyopneumothoraxes were obviously the result of rupture of a superficial lung abscess: culture of the foul fluid in both revealed large numbers of anaerobic organisms. Despite this, wide drainage sufficed to bring about a favourable issue in one case. The instance of pneumococcal panophthalmitis must be one of considerable rarity. The condition, associated with a left pneumococcal empyema, appeared to commence as an iritis, but within twenty-four hours there was cloudiness in the anterior and posterior chambers, while subsequent evisceration of the eye revealed a semi-purulent aqueous and vitreous humour yielding a pure pneumococcal culture. Simultaneous drainage of the empyema was followed by an uninterrupted recovery.

POST-MORTEM FINDINGS

Fifty-nine cases were subjected to necropsy. The extent of the pulmonary lesion has been set out above. The gross extent of this is noteworthy, and few cases failed to reveal either some serious complication indicative of both direct and blood-spread infection, or the coexistence of some other disease. Pericarditis was found in ten instances, and in each it was associated with disease of the left lung. This would lend support to the fact that this lesion is the result of a direct spread of infection comparable to pleurisy and empyema. It was absent in two cases in which pneumococcal endocarditis was demonstrated. I have found the clinical diagnosis of pericarditis extremely baffling in many severe cases owing to the innumerable added sounds in the chest. The not infrequent existence of a pleuro-pericardial friction, usually on the left side, has also added to the difficulty. To such an extent has this been true that in those cases recovering I have been inclined to regard all friction sounds near the left border of the heart, and rhythmical in quality, as having a pleuro-pericardial origin. Consequently, reliable statistics of survival rate in pericarditis are difficult to obtain.

The frequency of lung abscess was a feature in the series, eleven cases being seen, and it was noteworthy that the major incidence of this coincided with the severe epidemic noted above. In only two cases was previous evidence suggestive of this condition; the remainder were "closed" at the time of death. This frequency rate would suggest that superficial abscesses do at times result in empyema formation, as clinical lung abscesses are rare, and rupture into the pleura may be one method of drainage. Ten empyemas in all were seen—again in this complication the percentage was much higher than in convalescent cases. Four of these were associated with pneumococcal peritonitis.

Table VI summarizes the important post-mortem lesions.

TABLE VI.—*Chief Complications Discovered Post Mortem*

	Lung Abscess	Empyema	Pneumococcal Peritonitis	Pneumococcal Endocarditis
No. of cases	11	10	4	2
Percentage of total ...	18.6	16.9	6.7	3.5

THE PROBLEM OF HOSPITALIZATION

Pneumonia, as is well appreciated by all who are in intimate contact with the condition, is a notoriously difficult disease on which to dogmatize. Its too frequently fulminating progress, or its equally frequent dramatic subsidence, will at times confound the most expert prognosis. It may well be that blood culture will be of immense value in this direction. The famed stand-by of blood-pressure-pulse-rate ratio has not appeared to me to warrant the value so often ascribed to it. Despite all difficulties, however, certain facts do force themselves on one's notice in considering the subject.

survey of the mortality rate for the city of Birmingham indicates an incidence rate three times as great in the overcrowded, badly housed population in the inner ring of the city (where economic factors play an important part) as that in the outer ring, where housing, ventilation, and social factors do not devitalize the inhabitants. Unless courts and alleys are still too frequently the causes of an overcrowded hospital, for had cases of pneumonia under 10 years of age been included in this survey approximately one thousand primary infections would have been seen, and those in two years!

Emphasis has been laid on the tremendous extent of infection of those dying, and when this is considered in conjunction with the figures showing the day of disease on which patients were admitted to hospital it will be apparent that in the present circumstances, whatever mode of therapy is used, one must expect an irreducible mortality of at least 15 per cent. or over. I feel that where home conditions are good and adequate help is available the movement of patients is quite correctly deprecated: where these conditions do not obtain I feel that every inducement should be employed to persuade patients and relatives to permit removal at the earliest possible juncture. Too often I see an almost hopeless sufferer admitted on the fifth day, accompanied by one or more relatives whose whole vitality has been sapped in a vain endeavour to see the illness through in most unfavourable circumstances. The nursing of pneumonia is one of the most exacting tasks any unaided household can undertake, and it may be that if this fact were forcibly placed before those concerned consent for hospitalization in suitable cases would be obtained more readily. It is impossible to visualize any serum so potent that it would prove capable of re-establishing a circulation which is failing from peripheral paralysis, as is the case with many of our patients on admission. Again, where more than half the lung area is consolidated, is it likely that sterilization of the blood in the later days is going to be of sufficient service to allow recovery to take place? A large percentage of elderly patients will always succumb to the disease, but it is in the third, fourth, and fifth decades that we need every possible assistance in preventing the death of the mainstay of large families.

SUMMARY AND CONCLUSIONS

1. 497 cases of primary pneumonia with an incidence of ten years and upwards are reviewed.
2. A criterion of diagnosis in early stages of the disease is needed.
3. No specific therapy was given, and the gross mortality rate was 25.6 per cent. Excluding those moribund on admission the mortality rate was 20.6 per cent.
4. Prognosis was more dependent on age than on any other factor. Mortality for cases under 40 years was 12.5 per cent., for those over 40 years 41.7 per cent.
5. Pulmonary abscess is a fairly common post-mortem finding.
6. A plea is made for cases of pneumonia to be sent to hospital as early as possible in the disease.

I am grateful to several of my colleagues for the use of their notes in preparing this article.

ON THE TREATMENT OF NEW GROWTHS BY FLUORESCEIN AND X RAYS*

BY

HECTOR A. COLWELL, M.B., PH.D., M.R.C.P.

e cases which form the subject of the present note e treated by the combined *x*-ray and fluorescein hod. It had been represented to me that the treatit was harmless and that good clinical results had owed its use. It had also been suggested that such efit as was recorded might be due to some secondary iation produced by the action of *x* rays upon rescein. At the outset it may be said that such an on of penetrating radiations of the *x*- and γ-ray type regarded as in the highest degree improbable when chemical composition of the drug employed—sodium rescein—was taken into consideration. In all cases ium fluorescein was administered by the mouth, and ome cases a 5 per cent. solution was employed locally, only at the time of *x*-ray treatment. For oral inistration about 1 gram was given, divided into two lets, four hours before *x*-ray treatment. The skin conjunctivae were well coloured by the dye, which manifest also in the sweat, urine, and exudates n ulcerated surfaces, when these were present. The l application of a 5 per cent. solution of sodium rescein was confined to those cases in which ulceration present.

he obvious difficulty in estimating the value of such nethod of treatment is that of obtaining suitable trols. Growths respond differently to radiations, and and the same growth may show a tendency either rapid increase or to temporarily diminished activity ntaneously. Nevertheless, as will be seen, an attempt a very rough control was made.

Forty-five cases were treated. In the great majority of them it was impossible to state that the administration of fluorescein had influenced the action of the radiation in the slightest degree. Some cases of ulcerated mammary carcinoma did, however, appear to respond better to *x*-ray treatment when fluorescein was used at the same time. Six cases of carcinoma of the rectum in which there was a mass of growth protruding from the anus did not derive the least benefit. The total number of recurrent breast cases treated was thirty: of these, fifteen showed local ulceration; the remaining fifteen showed enlarged supraclavicular and axillary glands with or without subcutaneous carcinomatous nodules. Of the fifteen cases of ulcerated mammary cancer five had been receiving ordinary routine *x*-ray therapy before fluorescein treatment was started, and it was these five cases which served as a very rough control. In three of them it certainly appeared as though the local condition improved more under the fluorescein treatment; in the remaining two it was apparently without effect—either good or bad. Of the remaining ten cases of ulcerated breast cancer in the treatment of which fluorescein was used from the first, perhaps six seemed to make what seemed to be unusually good progress; the remaining four showed no special features.

To this matter we shall return shortly. As already said, no special effect was noted with the six rectal cases and with the fifteen non-ulcerated breast cases; while the same was true of two cases of neoplasm of the lung, three of non-ulcerated bone sarcoma, and four of lymphadenoma. The sum-total of the therapeutic experiment was, then, that nine cases of ulcerated recurrent breast carcinoma seemed to have been benefited to some extent by the use of fluorescein.

We may now turn to the consideration of certain laboratory experiments which were carried out by Dr. Creed and myself upon mice, tadpoles, and toad ova. In the case of the mice, these animals were fed upon the ordinary laboratory food to which had been added a 5 per cent. solution of sodium fluorescein. They took

The expenses of this work were defrayed by a grant from the ical Research Council.

it well, and evidence of the absorption of the drug was given by the coloration of the skin and the urine. When such animals were killed the peritoneum was found to be stained, and the dye could be dissolved out from the liver and other organs. In all cases the mice were kept in semi-darkness so as to avoid any possible complication from normal solar radiation. Some of the animals were irradiated through a 4-mm. aluminium filter, receiving a dose of 1¼ Sabouraud B doses. Examples were killed at different periods after the radiation and sections of the organs examined. No differences could be detected between control and fluorescein-fed irradiated animals. Another batch of mice fed with sodium fluorescein were given an ordinary B dose of unscreened radiation. This is the ordinary dose given for producing epilation in the treatment of tinea of the scalp. No differences were observable in the response of mice fed with fluorescein and the controls.

Irradiation of tadpoles and amphibian ova led to a similar lack of difference between examples kept and irradiated in a solution of sodium fluorescein and those kept in ordinary water. One experiment with toad ova, however, led to experiments which it is thought may supply the key to some of the apparently beneficial clinical results. A batch of toad ova had been brought by a kind and enthusiastic friend from a particularly unsavoury pool. When the lid was removed from the container the condition of the contents was at once evident, and further investigation showed that in most cases the "gelatinous" envelope which normally holds the ova in elongated "strings" had decomposed to a diffluent mass. A few intact strings were, however, rescued. These were thoroughly washed in several changes of water and then divided into two batches, one of which was placed in 5 per cent. sodium fluorescein while the other was placed in ordinary water. Both were put into a cool, dark cupboard, and were left for about a week. At the expiration of that time the specimens left in water had suffered disintegration of the "gelatinous" material and become offensive: the specimens kept in sodium fluorescein, on the contrary, still preserved their moniliform arrangement, and had no smell. The "gelatinous" material had absorbed the dye to such an extent that the individual ova could only with difficulty be distinguished. The obvious suggestion from this was that the sodium fluorescein had exercised an antibacterial action.

A series of experiments with different organisms was then carried out with Dr. J. N. Cumings. These need not be here described in detail, but the general conclusion was that sodium fluorescein solutions exert a mild antibacterial action, and a 5 per cent. solution was found to take at least seven and a half hours to kill ordinary organisms, including *Staphylococcus aureus* and *Bacillus coli*. It was, however, found to act as an inhibitor to the growth of these organisms, even in a concentration of 0.5 per cent. A similar antibacterial action was obtained with specimens of normal urine and of urine from a patient suffering from cystitis, the development or increase in ammoniacal odour being somewhat less in the presence of sodium fluorescein.

Now it is well known that septic changes militate strongly against the success of any form of radiation therapy, and it seems possible that the thorough permeation of the ulcerated tissue with the dye, in cases treated with fluorescein, and its presence in the serous discharge, may have had a beneficial effect from the mild antibacterial action. It may be noted that all of the cases of ulcerated breast carcinoma which appeared to have derived any benefit from fluorescein plus radiation as distinct from those merely irradiated were patients of scrupulous personal cleanliness, in whom the ulcerated areas were carefully dressed and where, in short, everything possible was done to ensure a clean condition of the parts. In cases of breast cancer which were ulcerated, but where the same scrupulous cleanliness was not observed, the apparent benefit from fluorescein was not so seen, while in the cases of carcinoma of the rectum a similar effect was noted. It seemed therefore possible that the mild antibacterial action of the dye was sometimes able to turn the scale a trifle in the patient's favour.

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

AN UNUSUAL CASE OF FRACTURE OF THE ATLAS

The report by Dr. A. Ingham in the *British Medical Journal* of December 31st, 1932, of two cases of injury to the cervical spine resulting from a minor degree of trauma in a motor accident aroused my interest, as I recently had a similar case under my care.

On September 28th, 1932, I was called in consultation to a lady, aged 50, who three weeks previously had been travelling on the back seat of a car, when it was involved in a head-on collision. The patient was dazed, and did not remember what happened, but another passenger stated that she was thrown forward against the back of the front seat, she was thrown forward, and then backwards. She was taken to a nearby hospital in the South of England, and kept in bed there for three weeks. When I saw her she complained of inability to control the movements of her head, and some pain down the left side of the neck. She was, in fact, quite unable to support her head, which rolled about in any direction. Besides this there was only slight tenderness just beneath the base of the skull posteriorly. X-ray examination showed a fracture at the base of the posterior arch of the atlas on either side, the arch being displaced slightly backwards. The patient was given a plaster splint which effectually supported the head on the shoulders. Massage and supported movements were started at once, and in a month's time good control had been gained, and an uneventful recovery followed. A radiograph four months after the accident showed no attempt at callus formation.

In this case I would suggest that the fracture was due to muscular violence, resulting from sudden flexion of the neck over the top of the back of the front seat, when the patient was thrown forwards.

F. J. MILWARD, M.Ch., F.R.C.S.

Chesterfield.

RECTO-VAGINAL FISTULA AND PERSISTENT LEFT SACRO-POSTERIOR POSITION

It may, I feel, be of interest to publish an account of the following case in view of its unusual nature.

Late one night I was asked by a midwife to see a 7-para who was in labour and had just begun to pass faeces per vaginam. I found a fat patient of low mentality, with marked oedema of legs, vulva, and abdominal wall. She was passing faeces per anum and per vaginam. Anus and perineum appeared normal. Abdominal examination revealed a large baby with its head in the fundus and its back to the left, but no foetal heart was heard. There was marked right obliquity of the uterus and the bladder was much distended. Two ounces of olive oil were passed gently into the rectum, and in one minute oil appeared in the vagina. In spite of this, it was felt necessary to pass a catheter. After a thorough cleansing of the region this was done (under anaesthetic) owing to the extreme tenderness and oedema) and much dark-coloured urine obtained, which, on boiling, became nearly solid. The foetal vulva was seen appearing, but no further examination was then thought advisable. Much liquor was still present. The patient only had niggling pains, and after

some hours no advance had been made. A small enema was given with good result, and though the pains became slightly stronger they were not effective. It was reluctantly decided that intervention was necessary. A vaginal examination showed a posterior position of the breech with extended legs. Both legs were brought down. Advance was then rapid, and a 10-lb. macerated foetus was delivered without difficulty, after rotation. The placenta was delivered normally, and haemorrhage was very slight.

Periodic examination of the urine had been carried out by a careful midwife; and the only explanation I have to offer for the toxaemic condition of the mother and death of the foetus is that the patient had tried to gas herself a few days previously. The attempt failed because, as she put it, "I only had sevenpence, and the gas went off."

Hove. V. E. CLAXTON, M.B., B.S.

Reports of Societies

SUPPURATIVE ARTHRITIS OF THE KNEE

A joint meeting of the Sections of Orthopaedics and Surgery of the Royal Society of Medicine was held on March 7th, under the presidency of Mr. G. R. GIRDLESTONE, for a discussion on acute suppurative arthritis of the knee-joint.

Mr. P. H. MITCHINER said that on looking through the cases of suppurative arthritis of the knee at St. Thomas's Hospital during the last two years he had been able to find only seventeen. The first thing that struck him was that none of these cases followed wounds of the knee-joint. During the last two years there had been six cases of penetrating wounds of the knee-joint in St. Thomas's, but none of these had gone on to suppuration. It was evident that penetrating wounds of the knee were not usually followed, in civil practice, by suppuration in the joint. Of the seventeen cases mentioned, acute suppurative osteitis in the neighbourhood of the joint was responsible for six, and in all those cases the blood culture was positive and staphylococci were present, and were recovered both from the blood and from the joint. The lower end of the femur accounted for three out of these six cases, the patella for two, and the upper end of the tibia for one. In all these cases the joint was treated by making an incision along the front of the biceps tendon on the outer side of the joint; it was an incision he had found very efficacious. He also applied an extension to the limb. In addition to that the bone lesion was attacked and opened up and pus evacuated. If he found pus under the periosteum in large quantities he did not go on into the bone, but if there was any question that the pus was not free he trephined and let the pus out. The patella cases were not quite so easily dealt with; in both the cases he was afraid the diagnosis was not established until some three or four weeks after the patient came in, and x rays showed an osteitis developing in the patella. In these cases, drainage and extension, with operative treatment promptly on the bone lesion, resulted in a knee-joint which he would class as from 40 to 60 per cent. efficient. His practice was, at the end of about three months, to remove the extension and put the knee in plaster, in which it remained for a further three or four months. Two of the seventeen cases were due to epiphysitis in the lower end of the femur, both in young children. These cases had not done well, and amputation had had to be performed. One case was to be regarded as an acute septicaemia, with the suppurative arthritis as a part of it; this case proved fatal. There had been two cases of subacute pyaemic joints; in one the primary focus was an old bone, and in the other a carbuncle, and both did well. He found one case of typhoid, where suppuration had occurred in the knee-joint. He had not been able to ascertain the cases in the venereal department, but he had found three gonorrhoeal cases in the general wards in which suppuration had occurred in the joint. Two of these had settled down under extension, local treatment of the disease, and vaccine, and in one case aspiration had been carried out. In this latter case extensive suppuration resulted in and around the joint, which led to a condition of stiffness and ankylosis. In three cases no cause was given for the suppuration. One of these went steadily downhill in spite of treatment, which consisted first of aspiration, and secondly of opening the joint and washing it out. He could find no record that any extension was applied. That patient, following amputation of the limb, died; the other two made an uninterrupted recovery after aspiration of the joint with the application of extension and subsequent plaster. Of the seventeen patients, therefore, three had gone to amputation and two had died, so that suppurative arthritis was a fairly serious matter. It would appear that a prompt and rather conservative treatment gave better results than drastic opening up of the joint. The application of extension was extremely valuable. If the condition with such extension did not look like settling down, he thought aspiration should be performed, and when performed this should, of course, be with all aseptic precautions. Again, if drainage had to be done, he thought a simple incision to the outer side of the joint in front of the biceps tendon, laying the whole joint open, was the best procedure. He did not believe in washing out the joint, because he thought it tended to spread the infection into other parts.

Mr. V. H. ELLIS said that the condition was one which must appeal more to the general than to the orthopaedic surgeon. Suppurative arthritis of the knee-joint, once fully developed, was a very serious condition. No treatment could be considered successful unless there was at any rate a fair degree of movement subsequently in the joint. The prognosis as regards life might not be very bad, but as regards regaining full movement of the knee-joint it was gloomy. The condition was not a very common one to-day. He doubted whether there were more than half a dozen cases in any London teaching hospital in a year. The variation in the results depended a good deal on the mode of infection of the joint, whether by penetrating wounds from without, or by the blood stream. A certain number of cases of suppurative arthritis of the knee-joint were evidently blood stream infections but without any apparent primary focus, while in other cases the condition did appear to follow from some single focus of infection such as a boil. Again, there was the blood stream infection in which there was presumably a general septicaemia, or at any rate the pyaemic joint was merely a local manifestation which might have been caused by a septicaemia, and other joints might have been involved at the same time. However good the results of suitable treatment of suppurative arthritis might be, the most pessimistic would agree that prevention was better than cure. It was in the class of infection from without—namely, penetrating wounds of the knee—that prophylactic treatment was most successful. In considering the pathology of the condition, the very important part played by the synovial membrane must be borne in mind. The first stage in acute infection was a hyperaemia of the synovial membrane, which produced an exudate, and that exudate was bactericidal. The washing out of the joint must remove the synovial fluid, which presumably was active and resistant to infection. It was, however, the changes in the articular cartilage produced by the infection which gave the key to progress. This cartilage must retain its life if a movable joint was to be produced. By irrigation the life of the cartilage might easily be jeopardized. One of the things most remarkable about suppurative arthritis was the speed with which the condition might reach a full-blown state of panarthritis. If the condition was not fatal, recovery occurred, but with one of two unfortunate results—either ankylosis or a chronic suppurative condition—and in such cases amputation was practically always required, and would be better carried out at an earlier stage. Suppurative arthritis was not a very common complication of osteomyelitis; he had seen two cases, in both of which the lower end of the femur was involved. It was interesting to note that a sterile effusion never seemed to give rise to any adhesions in the joint or any displacement. The generally accepted methods of treatment were to open the joint, and to adopt early

movement with a view to promoting drainage. The usual method of opening the joint was by one or two incisions on either side of the patella. Some people advocated the cutting of the patellar ligament and laying open the whole front of the joint.

Mr. R. W. BUTLER gave an analysis of the cases recorded at St. Thomas's Hospital during the last ten years. In about one-quarter of them there was an acute primary septicaemia, in which the local manifestation in the joint was comparatively a small part of the picture. The nature of the infection, wherever this was recorded, was *Staphylococcus aureus*. The largest class of cases were those secondary to acute osteomyelitis from neighbouring bones, principally the femur. A smaller number were due to metastatic pyaemic infection. Dr. J. D. Rolleston of the South-Western Fever Hospital had informed him that after scarlet fever about 3 per cent. of patients had some transitory joint symptoms, but a very small number of these got an actual suppurative arthritis. Only a few cases derived from perforating wounds, which in civil life, where attention was given quickly, very generally escaped this sequel. In considering treatment he thought it was of value to differentiate between those cases of suppurative arthritis with a severe general infection and those in which there was primarily a local lesion. Further, as regards the septicaemic type, it was well worth while to ascertain the infecting organism as early as possible. This might be obtained by aspirating the pus, but a blood culture should always be obtained, and if the culture showed a streptococcus the injection of anti-streptococcal serum did help in some cases. In staphylococcal septicaemias the injection of various chemical antiseptics had been advocated, but he was never satisfied that it had a very great usefulness. With regard to the treatment of the local lesion, the joint became distended by fluid, and it was important to reduce the tension to relieve pain as well as to reduce the toxaemia and save the structure of the joint. While it was true that freshly secreted synovial fluid had considerable bactericidal properties, when it became stale and full of cell debris it was a most excellent culture medium. Therefore, by the time the fluid had turned to frank pus, the more freely it could gain an exit the better.

The President (Mr. GIRDLESTONE) said that the point just made by Mr. Butler that the synovial fluid was only bactericidal when fresh seemed to be an argument for aspiration, because by aspiration stale synovial fluid was removed and fresh fluid was allowed to be discharged into the joint. Another most important point was the removal of tension. He personally felt very strongly that the synovial fluid had only a paramount influence over the infection so long as the infection was retained within the joint. The purulent fluid tended to spread up the thigh and down the intermuscular spaces of the leg, and this occurred the more easily if the joint was allowed to be tense for long. That seemed another argument for early and repeated aspiration. He was convinced that by aspiration or by incision without washing, and cases treated by washing out did a great deal of harm, and cases treated the insertion of any drainage material, had done much better than cases in which these methods were used. Mr. E. G. SLESINGER spoke as an advocate of movement, and could not but believe that the function of a joint was improved by movement, also that the patient's general condition reacted quite definitely to the procedure of putting the joint on a real extension—not a Thomas splint—enough to separate the surfaces completely, with encouragement to the patient himself to move the joint actively, which was not a difficult thing to do. Now [illegible] was sufficient extension. Dr. OSMOND CLARKE strongly advocated a series of twenty cases treated in the orthopaedic therapy, and treatment of Ancoats Hospital, Manchester, [illegible] tion of the ulcerative years. There they insisted on the with fluorescein, and [illegible] all suspicious joints, and had found may have had a bet[illegible] fluid the greatest help in diagnosis bacterial action. It [illegible] drainage and temporary immocases of ulcerated breast without delay. In deciding have derived any benefit from arthrotomy was adequate as distinct from those merely guided by the local and scrupulous personal cleanliness, [illegible]ture and pulse rate were low, and in whom the fluid aspirated contained few or [illegible] organisms. If the general condition deteriorated, the swelling and tenderness of the knee increased, and the pus became thicker and the organisms more numerous, it was unwise to persist in aspiration. Successful drainage had been achieved in eleven of the twenty cases by opening up the joint.

Mr. H. A. T. FAIRBANK said that there were two main classes of suppurative arthritis—namely, those which had a source of continual and repeated infection and those which had not. In the war, cases were met with which had a foreign body driven into the knee, or, at any rate, an opening into the knee-joint which was infected, and those, on the other hand, which had a major fracture of the tibia or femur running into the joint. The first class, if dealt with adequately, would probably recover. The second class, in which there was a repeated infection going on all the time from a major fracture which could not be adequately dealt with, would probably go on to amputation. In ordinary civil cases the difficulty was to decide whether to open and wash out and close, or whether to drain, and one had to look at every side of the question—the temperature, the leucocyte count, and the general condition. There were certain cases where an infection of the knee-joint was forthcoming apparently from some distant focus. These might be called cases of septicaemia if one pleased, but it was not obviously clinical septicaemia. These cases gave rise to a good deal of anxiety. One point that might perhaps help was a smear examination of the pus from the joint. If there were few organisms, and those mostly intracellular, one would be tempted to try washing out the joint, whereas if the organisms were numerous and not mostly intracellular one would be inclined towards drainage. He thought that oedema was a point to consider. If there was much oedema it was a severe infection, and one would be inclined towards drainage rather than more conservative measures.

Mr. MITCHINER, in reply, said that he himself did not encourage movement; the moving about in bed that the patients had with the requisite nursing seemed quite enough for the average acute joint. In regard to treatment, he wished to make it very clear that he had great faith in the resistance of the fresh synovial fluid, and did not decry aspiration unless aspiration was definitely failing, as shown by a deterioration in the general condition of the patient.

OBSTETRICS AND GYNAECOLOGY

At a meeting of the North of England Obstetrical and Gynaecological Society, held in Sheffield on February 24th, with the president, Dr. LEYLAND ROBINSON, in the chair, Professor MILES PHILLIPS (Sheffield) showed a specimen demonstrating an unusual source of severe post-menopausal bleeding.

The patient, a multipara aged 61, had two severe floodings fifteen years after the menopause. Her regular periods had ceased in 1916 at the age of 44. Thereafter she had a period lasting for five or six days in the February of each second year until 1930, when she had a menstrual-like loss lasting for six months. At no time had there been any pain or discharge. On examination the cervix was free from any signs of new growth, and the uterus was felt to be rather larger than a cricket ball. On the assumption that the case was one of malignant disease of the corpus uteri a panhysterectomy was performed without preliminary curettage. The specimen showed a hard fibroid projecting into the cavity of the uterus, the mucosa being slightly ecchimosed in several places and showing a black area suggestive of a clot in a small vessel. Professor Phillips concluded that the source of the haemorrhage was a ruptured vessel in the capsule of the fibroid.

Professor Phillips also demonstrated a case of ante-partum moulding of the head in a breech presentation due to oligohydramnios.

The patient, 22 years of age and a primipara, was sent into hospital as a breech presentation at the thirty-eighth week. Attempts at external version failed, though an *x*-ray examination showed the legs to be flexed. The want of mobility of the foetus was thought to be due to the small amount of liquor amnii. Two weeks later labour commenced

by spontaneous rupture of the membranes and only a small amount of liquor escaped. Labour was quick and easy, and a living child, 6½ lb., was delivered. Although there was no caput there was marked moulding of the head and the right parietal bone overrode the other bones of the vertex. The *x*-ray film which had been taken two weeks earlier was then examined, and it was seen that distortion of the head was present in the radiogram, and had been overlooked. Professor Phillips attributed the condition to compression and deformity of the head owing to scantiness of liquor amnii.

The PRESIDENT and Dr. M. DATNOW showed a case of very early tubal pregnancy.

The patient, a parous woman of 36, was admitted to hospital on account of some slight menstrual irregularity, which led her doctor to suspect ectopic gestation, her last period being a week overdue and having been followed two days later by acute pain in the lower abdomen. Bimanual examination failed to show any pelvic abnormality, but posterior colpotomy revealed two small blood clots in the pouch of Douglas, so laparotomy was performed. There was no free blood in the peritoneal cavity, but the left tube was found to be distended to the size of a man's little finger, with a distinct bulge about its mid-point. There were no adhesions to surrounding viscera. The tube was removed and the patient made a complete recovery. Serial sections through the tube revealed embryonic elements in 120 sections through a thickness of 0.48 mm., and the sections showed that an ovum had become embedded in the submucosa of a plica at the blind end of a diverticulum and had developed in the tissue between the lumen and the mesosalpinx.

They considered this to be a very early example of an ectopic gestation where the ovum had perished at a time antecedent to that in which the trophoblastic epithelium is differentiated into branched processes containing mesothelium, and they considered the ovum, as shown by the sections, to be little more than a week old.

Mr. W. GOUGH (Leeds) showed a case of sarcomatous polypus treated by radium and later by hysterectomy.

The patient, aged 46, gave a history of the passage of clots per vaginam for sixteen days, and between the passage of clots there had been an offensive discharge. She had had slight pain in the lower abdomen and also some difficulty in the commencement of micturition for one week. Examination had revealed the fundus uteri one inch above the symphysis and a large rounded smooth mass protruding from the cervical canal through a widely dilated cervix. At operation the mass was found to be very friable, and as much as possible was removed piecemeal, but examination showed a considerable amount of growth still within the uterine cavity. Radium was inserted in the uterine cavity for seventy-five hours, the total dosage being 4,160 mg. hours. Pathological examination showed it to be a polymorph-celled sarcoma. Fourteen weeks later the patient was readmitted to hospital and panhysterectomy was performed. On pathological examination of the uterus no trace of sarcomatous tissue could be found in four separate areas.

RADIUM TREATMENT OF CANCER

At a meeting of the Aberdeen Medico-Chirurgical Society held on March 2nd, with the president, Dr. W. CLARK SOUTER, in the chair, a paper was read by Dr. W. G. EVANS on the treatment of cancer by radium.

Commencing with skin cancers, Dr. Evans said that these could be classified conveniently into an epidermic group, comprising rodent ulcers, squamous epitheliomata, and glandular cancers; and a melanotic group. The epidermic group was radio-sensitive, while the melanotic group (naevo-carcinomas) was frequently refractory to every form of treatment, especially to radiotherapy. It was interesting to note that rodent ulcer very seldom appeared above the level of the eyebrow, cancers higher up being usually squamous epitheliomata. In face cancers the average duration before treatment was, in 222 cases, three years and five weeks. Radium gave more successes and a better cosmetic result than excision, the five-year survival rate being 80 per cent. It was to be remembered that where radium failed surgery was still available. Passing to squamous-celled cancer of mucous membranes, Dr. Evans dealt with cancers of the lip, which were radio-sensitive to slow continuous irradiation, and were slow to metastasize. Where local glandular enlargement was present the glands were found in 40 per cent. of cases not to be malignant, while where no glands were palpable in only 10 per cent. of cases were the glands found to be malignant. The average duration of lip cancers before treatment was one year. Tongue cancers were radio-sensitive also, but here, on account of the richness of lymphatic supply, dissemination was rapid. The average duration before treatment was eight months, while the natural course of the disease averaged sixteen months. Cancer never originated in a healthy mouth, but there was a close association with syphilis, although statistical data of the frequency of cancer in syphilitic patients was not available. As far as smoking was concerned, no causal relationship had been shown by statistical analysis, although the de-nicotinized fraction of tobacco smoke had been shown experimentally to be capable of causing ulceration in mice. In the treatment of carcinoma linguae the excision or cauterization of the tongue by the buccal route or by the submaxillary extrabuccal route was a formidable procedure, now rarely practised at any big surgical centre since the advent of radium. The use of diathermy in conjunction with radium and surgical removal of neck glands was, however, a valuable adjunct in the treatment. Radium also gave excellent results in lymphosarcoma of the tonsil. Carcinoma of the larynx was a squamous carcinoma where lymph-gland involvement was late. Surgical treatment in this condition was by the operation of laryngo-fissure, if the growth was limited to a vocal cord; this was an excellent operation causing little disability, and in which the operative mortality was low, but few carcinomas were caught at this stage. More often, however, laryngectomy was necessary, and this was a severe procedure. With radium, by the fenestration operation, both groups of cases could be treated; naturally, the best results were obtained in the first (laryngotomy) group, but in laryngectomy cases there was a considerable percentage of success without mutilation and shock, and with creditable functional results. In performing the fenestration operation nembutal and a local anaesthetic were sufficient for anaesthetic purposes; no sepsis must be present, and specially screened radium was required—the perichondrium must never be damaged. The wound was closed completely, but it was advisable to perform the first stage of a tracheotomy in case of obstruction being caused by radium reaction.

In the case of sarcomata, other than of the tonsillar region, the malignancy was great, and rapid blood stream dissemination to vital organs occurred. These tumours were extremely radio-sensitive, and were best treated by massive intermittent surface irradiation for short periods. Although palliation was usual, occasionally apparent "cures" were recorded. In the case of carcinoma mammae it could not be denied that the present radical operation was a rather severe procedure, although operative mortality was low and surprisingly little disability followed removal of the pectoral muscles. There was a group of cases, nevertheless, whose age or general condition rendered them bad surgical risks, or in whom the growth was barely operable. Radium or radium and surgery should be used here, and an excellent plan was pre-operative and post-operative irradiation. Dr Evans quoted some of the striking results obtained by Forssell in Sweden with pre- and post-operative deep *x*-ray therapy, in which five-year figures were available, showing the advantages over surgery alone. The radium treatment of the breast usually consisted of needling, to include all the lymphatic drainage areas, and a surface application before or after, or both before and after, the needling.

In conclusion, Dr. Evans emphasized the fact that permanency of healing was possible by radium and *x*-ray treatment if the case was a reasonably early one. In addition to this, however, palliation was undoubtedly obtained in advanced cases. The outlook for radiology (both radium and deep *x* rays) was promising, there being certainly a big field for further research. Dr. Evans illustrated his lecture with numerous slides of his own cases and a series lent by Mr. Geoffrey Keynes of breast cases, also with a gramophone record lent by Dr. Finzi illustrating the functional results in cancer of the larynx treated by laryngo-fissure and by fenestration.

Reviews

RECTAL SURGERY

During the last ten or fifteen years considerable progress has been made in the diagnosis and treatment of diseases of the anal canal and rectum, and in the spread of knowledge gained by increasing experience. The work done at St. Mark's Hospital, London, has been always in the van of this advance, and one of its surgeons, Mr. W. B. GABRIEL, in his recent book, *The Principles and Practice of Rectal Surgery*,[1] provides a sound introduction to this specialty. The author confines his attention to conditions of common occurrence, devoting two-thirds of his space to the so-called "minor" anal conditions—which are only minor to the patient inasmuch as his complaints are so often neglected. The remaining third is concerned with the present attitude towards cancer of the rectum.

The book is essentially practical, and the minutiae, which count for a very great deal in rectal work, are exactly described. This is not a compilation of the views of others, but rather an expression of the author's opinions and methods. On each of the subjects treated there is complete and accurate instruction. The investigation of a rectal case is described in detail, and all the information necessary for diagnosis and treatment of the common rectal conditions is to be found clearly and concisely stated. Particularly useful are the paragraphs on "A.B.A." in the treatment of anal fissure and of pruritus ani, on the value of injection treatment for rectal prolapse as well as for haemorrhoids, and on the importance of triangular wounds around the anus, especially in the treatment of chronic anal fissure. The discussion on adenomata and papillomata and their relation to cancer is of great interest, and treatment by the diathermy snare is well described. The illustrations throughout are excellent and very helpful, and if the publishers have erred at all in this matter it is on the side of lavishness. The only disappointing feature of the text occurs in the treatment of fistula in ano, where clear indication is lacking on the vital question of the musculature that may be divided with safety.

The last part of the book, on cancer of the rectum, describes the operation of perineal excision and its after-treatment, and gives the immediate and late results of excision obtained from the follow-up scheme of St. Mark's Hospital. These figures are valuable and of especial interest in their relation to the A, B, and C classification. The old controversy about the relative advantages of perineal excision and of the abdomino-perineal operation is not entered into, but the retrograde perineo-abdominal excision is strongly advocated and its advantages extolled. The concluding pages on colostomy are particularly good.

THE JAUNDICES

Professor ÉTIENNE CHABROL, physician to the great St. Antoine Hospital, Paris, has appropriately dedicated his elaborate monograph, *Les Ictères*,[2] to the memory of his master, the late Professor A. Gilbert, who in the last century, with Victor Hanot, and subsequently with a succession of his pupils, worked so devotedly on the clinico-pathological aspects of jaundice and hepatic disease. The author has followed this example, and after more than twenty years' work and a hundred publications on the subject speaks with much experience and authority. While naturally dealing fully and impartially with the large volume of work, and especially that of the late Professor A. Chauffard on haemolytic jaundice, standing to the credit of the French school, the author has by no means neglected that of American and British workers.

The volume is divided into four parts, the first of which deals fully with the clinical features and methods of examination, and discusses the origin of bile pigment, and also that of urobilin and the value of urobilinuria as a sign of hepatic inadequacy. The classification of jaundice (an old, difficult, and much-discussed problem) is important from the practical point of view—namely, treatment—and Professor Chabrol devotes the second and third parts of the volume to the physico-pathological and the clinical classifications respectively. Under the first heading there are two divisions, each with subdivisions: retention jaundice may be complete or incomplete; the other main division is that of jaundice due to polycholia and haemolysis and mixed jaundice. Part III, devoted to the clinical classification of jaundice, describes in fourteen chapters, occupying 230 pages, the various forms of jaundice, such as that of the newborn, catarrhal icterus, toxic, infective, gall-stone, acholuric, and grave jaundice (acute yellow atrophy). Probably this arrangement will be more appreciated by the practitioner, for under each heading, such as the jaundice of pregnancy or that occurring in connexion with syphilis, a useful account of the condition is provided. The final part is a summary in general terms—for the details in special forms of jaundice have been given in the previous section—of the treatment, medical and surgical. Stress is rightly laid on the importance of early intervention if operation is to be undertaken.

This book is obviously one for reference, especially to the work of the French school on jaundice.

MIDWIFERY IN THE TROPICS

A Text-Book of Midwifery in the Tropics,[3] by Colonel V. B. GREEN ARMYTAGE and Captain P. C. DUTTA, is modelled on the lines of the Synopsis Series, and there is a close resemblance in arrangement and material to Bourne's well-known volume. In outline the book corresponds fairly closely with that of English textbooks, and mention of the effects of the Tropics is restricted to short paragraphs. It is interesting to learn of the incidence of the anaemias of pregnancy in the Tropics, and one can appreciate the difficulties in the diagnosis of pyrexia during the puerperium in Eastern climes. Quinine is given almost as a routine prior to delivery in India, and a good deal of evidence has been accumulated to show that this treatment reduces the incidence of uterine inertia. Opinions expressed in Great Britain and Ireland are carefully considered, and much attention has been paid to the work of FitzGibbon and of Munro Kerr. On the scientific side there are some inaccuracies. The development of the corpus luteum is badly described, and the account given of its functions will not be accepted by all. Similarly, it is strange to read that the liquor amnii is a non-conductor of heat: this statement is likely to offend such distinguished Indian physicists as Raman and Saha. The style is incisive and dogmatic. The views will be accepted by the average student, for they are expressed so convincingly as to intimidate opposition. Most of them will be universally accepted, but it is more than probable that the Dublin school will disapprove of the recommendation that occipito-posterior presentations

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[1] *The Principles and Practice of Rectal Surgery*. By W. B. Gabriel, M.S., F.R.C.S. London: H. K. Lewis and Co., Ltd. 1932. (Pp. 254; 118 figures, 16 plates (8 coloured). 20s. net.)

[2] *Les Ictères*. Par Professor Étienne Chabrol. Paris: Masson et Cie. 1932. (Pp. 524; 72 figures. 75 fr.)

[3] *A Text-Book of Midwifery in the Tropics*. By V. B. Green Armytage, M.D., F.R.C.P., F.C.O.G., and P. C. Dutta, M.B., F.R.C.S., D.S.O. Calcutta: The Book Company, Ltd. 1933. (Pp. 306. 10s. 6d. net.)

should be treated by manual rotation when the os is three fingers dilated. The authors might at least have mentioned the method advocated by Bill in America, or even Potter's technique of version. Apart from these minor criticisms, and apart from fairly numerous mistakes in the letterpress, the book deserves warm praise, and it should be useful not only to Indian students but also to students in this country.

CHILD MORALITY

The game of marbles has taken on a new importance. Professor JEAN PIAGET has made it the basis of a brilliant, if somewhat difficult, study of *The Moral Judgment of the Child*,[1] leading to fresh and far-reaching ideas in the psychological, ethical, sociological, and educational fields. No one who is a student in any of these fields can afford to ignore this book. Professor Piaget's previous studies with regard to the child's conceptions and reasoning are well known, and the results of his latest work are equally interesting and even more surprising. The subject of the book is strictly that which its title indicates. It is not moral behaviour, or moral feeling, which is being investigated, but moral judgement. In the first place the rules of the game of marbles as played with numerous variations by the children of Geneva and Neuchâtel are noted and the children's attitude towards these rules observed. In such a game adult direction is eliminated, for it is rarely played after the thirteenth year. The children under observation by the author were between 2 and 11 years old. The youngest group devise unorganized games and often imitate one another. The next group, playing with those somewhat older still, accept rules imposed from above as unchangeable and sacred. Later and older groups, from 8 years of age upwards, accept the rules as sound, but as being subject to modification, provided that any suggested alteration is discussed and then generally agreed by the players.

Professor Piaget goes on to observe and apply this classification and evolution of judgement to what may be called minor childish offences, particularly lying and disobedience—again, be it noted, not as modes of behaviour but as subjects for judgement. Here the method of observation has to be less direct, and consists usually in asking questions or evoking statements about a narrated story or incident. Conclusions in this sphere have to be more cautiously drawn and more closely examined, but they are of the same kind as those resulting from the earlier investigation, and indicate the same progression from compulsion and conformity to a rational attitude. Further, the notions which arise out of the relations in which children stand to one another are inquired into, and thus the idea of justice comes to be discussed. The author's results appear to be both reliable and consistent, and he applies them to various current ideas and hypotheses in the most striking way in his final chapter headed "The two moralities of the child and types of social relations." No summary or indication of its contents can do this chapter justice, but the final paragraph of his foreword may be quoted as an indication both of Professor Piaget's modesty and of his purpose:

> The present book on child morality is just such a preliminary piece of work. It is my sincere hope that it may supply a scaffolding which those living with children and observing their spontaneous reactions can use in erecting the actual edifice. In a sense, child morality throws light on adult morality. If we want to form men and women nothing will fit us so well for the task as to study the laws that govern their formation.

[1] *The Moral Judgment of the Child.* By Jean Piaget. With the assistance of seven collaborators. International Library of Psychology. London: Kegan Paul, Trench, Trubner and Co., Ltd. 1932. (Pp. ix + 418. 12s. 6d. net.)

THE SCIENCE AND PRACTICE OF SURGERY

Within two years of the appearance of the third edition it has been found necessary to produce a fourth edition of *The Science and Practice of Surgery*,[2] by Messrs. W. H. C. ROMANIS and PHILIP H. MITCHINER. When a publication has met with such remarkable success it may be assumed that it is fulfilling the objects for which its authors devised it. In spite of the very brief interval between the births of the third and the fourth edition, the authors have found time to revise the work throughout, and greatly to amplify it. By abridging the descriptions of some of the older and partly obsolete historical methods of treatment space has been found for the addition of such newer but authenticated advances in surgical pathology, diagnosis, and treatment as are now definitely established and coming into general use. Hence it has been found necessary to add only some twenty-five pages to the new edition. The chapter on diseases of the ear, nose, and throat have been largely rewritten by Mr. Nielson, that on radiology and radium treatment by Dr. Fildes, and that on anaesthetics by Dr. A. F. Potter. These, together with the chapters on fractures and dislocations, have been brought into line with modern work. The sections on blood transfusion, the sympathetic nervous system, cerebral surgery, bone diseases in relation to the parathyroid gland, carcinoma of the rectum, and diseases of the spleen have been remodelled in the light of recent work, while those on peritonitis, varicose veins, and burns and scalds now contain full details of the most recent methods of treatment.

A number of new and effective illustrations have been added. The latest edition of this popular work is a credit to the authors and to the publishers, and should prove as acceptable to students and practitioners as its forerunners have been.

THE HISTORY OF THE GOLD-HEADED CANE

The Gold-Headed Cane, of which the sixth edition[3] has just been brought out by the professor of medical history in the Temple University School of Medicine, Philadelphia, not only gives a pleasant gossipy account of fashionable practice in London during the eighteenth century, but may now be said to be acquiring a history of its own, which perhaps is not without a significant bearing on the spirit of these latter days. Originally published anonymously in 1827, it went into a somewhat expanded edition in the next year; but then interest and demand died down, and it was not for more than half a century that another edition appeared. In 1884 William Munk, the learned Harveian librarian and author of the *Roll of the Royal College of Physicians of London*, brought out an edition with very considerable additions, carrying on the narrative more or less in the original style, but without the illustrations, to 1871. Though this, of course, provides much more information, it is not the work written by William Macmichael, and his name did not appear on the title-page. Like the two previous editions, it is now rare, and its price has trebled. Another long interval, this time of thirty-one years, passed before a further edition saw the light; in 1915 Francis Packard of Philadelphia, the editor of the *Annals of Medical History*, brought out the fourth edition, from the second edition of Macmichael; this, with the original author's name on the title-page

[2] *The Science and Practice of Surgery.* By W. H. C. Romanis, M.A., M.B., M.Ch., F.R.C.S., F.R.S., and Philip H. Mitchiner, M.A., M.B., M.Ch., F.R.C.S. Fourth edition. London: J. and A. Churchill. 1932. Vol. i, *General Surgery* (pp. x + 791, illustrated; 18s.) Vol. ii, *Regional Surgery* (pp. x + 871, illustrated; 18s.)

[3] *The Gold-Headed Cane.* By William Macmichael, M.D. Sixth edition. Edited with explanatory and illustrative notes by Herbert Spencer Robinson. New York: Froben Press, Inc. 1932. (Pp. xxxi + 223; 30 figures. 3.50 dollars.)

for the first time, and an account of his life and works, was reprinted in 1919, 1920, and 1922, and confirmed Sir William Osler's dictum in the introduction that its appearance is " an indication of the zeal with which the study of the history of medicine has been taken up by the profession in the United States." The last edition in this country appeared in 1922, that by G. C. Peachey, also a reprint, with fine illustrations, of the second edition. This example has been followed by Professor H. Spencer Robinson, who has unearthed much information and a portrait of Macmichael, and has supplied a detailed biographical account of the *Cane* and most copious notes, extending to seventy-six pages in smaller print, on the text. It is certain to be the standard source of reference on the subject, and illustrates the increasing interest taken in medical history (especially in America), for half of the six editions of the *Cane* during its 105 years of existence have appeared during the last eighteen years.

Notes on Books

The appearance within one year of the second edition of *The Science of Signs and Symptoms*[7] indicates how warm a welcome has been given to Professor McDOWALL'S textbook by the medical practitioners for whom it was written. His aim is to compose the differences between the exponents of physiology and of medicine, and bring about an alliance which might be termed " clinical physiology "—the title of an earlier publication by this author—to the enrichment of medical diagnosis and treatment. Despite the brevity of the interval between this volume and its predecessor, care has been taken to interweave new matter so as to bring some subjects again up to date without increasing the size of the book. The arrangement of the matter is commendably concise, while the clarity of expression simplifies the setting out of new information, which is often of some complexity. Professor McDowall has increased the debt of obligation due to him from those practitioners who appreciate the practical advantage of a compendium of physiological knowledge related systematically to clinical problems. An account of modern research, so ably summarized, is sufficiently rare to merit grateful commendation.

The Glasgow school of biochemistry has always had a strong connexion with the clinical aspects of disease, and in a short monograph on *Acidosis and Alkalosis*[8] Drs. STANLEY GRAHAM and NOAH MORRIS have admirably succeeded in the difficult task they set themselves of presenting this subject, with its mathematics and complicated formulae, in a manner serviceable to the clinician. It should no longer be necessary for the weary physician to flinch at the mystic symbols " *p*H," for throughout this small book the disturbances of the acid-base chemistry of the body are approached through the disorders in which such disturbances occur, and although the first few chapters of necessity deal with pure biochemistry, the manner of presentation is skilful and the style makes for easy reading. The authors' interests are particularly in the diseases of children, and this is fortunate in many respects since the disorders with which they are concerned are often simpler in their manifestations in childhood. An immediate application of their work is seen in reference to pyloric stenosis, since they show the frequency of alkalosis in this condition and the danger of employing alkali in gastric lavage or of feeding with citrated milk. One point which requires some qualification in light of recent work is in reference to the action of carbon dioxide on the respiratory centre. In view of the discoveries of peripheral regulators of respiration it would be safer to talk of the effect of carbon dioxide on " respiration " without tying down such action to the centre. This does not, of course, affect the arguments set out, but since the rest of the book seems so free from inaccuracy such a slight amendment would appear desirable.

The third edition of Professor J. A. GUNN'S *Introduction to Pharmacology and Therapeutics*[9] follows close on the heels of its predecessor, the supply of which was quickly exhausted. Its coincidence with the publication of the new *British Pharmacopoeia* has enabled the author to revise it accordingly, and to make certain additions which bring this handy and thoroughly practical volume up to date. Thus a short section on active immunization has now been included in order to explain the use of vaccines and toxins, and certain minor changes appear in the text elsewhere. The value of this concise but comprehensive survey of a most important side of medical practice is sufficiently indicated by the fact that two new editions have been called for since the first appearance of the book in 1929. Primarily intended for students, the volume has also some claim to recognition as an everyday reference book in these times when medicaments multiply so rapidly that the older and well-tried remedies are in danger of being forgotten or ignored.

In his attractive work on French Medicine in the Seventeenth Century,[10] Dr. LÉVY-VALENSI, the well-known French neurologist, has given us an erudite but lively presentation of the medical doctrines and practice of the time as well as much biographical information. The work is divided into four parts, devoted respectively to medical science, including anatomy, physiology, hygiene, symptomatology, and treatment ; medical education at Paris and Montpellier, which were then the principal centres for medical instruction in France ; public assistance, in which an account is given of the general and special hospitals and out-patient departments in Paris and Montpellier, as well as of the care of the insane ; a general survey of contemporary medical practitioners under the headings of physicians, surgeons, accoucheurs, apothecaries, and empirics, of whom the best known were Frère Jacques, the lithotomist, and Nicolas de Blegny, the hernia specialist, and biographical sketches. The last section records the lives not only of such well-known men as Théophraste, Renaudot, who started the first French newspaper and originated information bureaux and pawnshops, Guy Patin, the caustic dean of the Paris faculty and celebrated letter writer, Fagon, the physician to Louis XIV, Jean Riolan, the anatomist and opponent of Harvey, the surgeons Dionis and Mareshal, and the accoucheur Mauriceau, but also of many lesser luminaries in the medical firmament of the time. The text is liberally interspersed with excellent contemporary portraits and illustrations of the hospitals, instruments, and books of the period. The absence of an index is to some extent compensated for by a full table of contents.

The *Medical Register*[11] for 1933 reveals that 1,545 names were added last year, twenty-three more than in 1931. New registrations numbered 806 in England, 372 in Scotland, 167 in Ireland, and 200 in the Colonies and abroad. The total number of names on the *Register* at the end of the year was 56,096, an increase of 492. The number of names removed from the *Register* during the year was 1,112, as against 1,264 for the previous year. Of these, 960 were deleted on evidence of death, 145 for failure to comply with the inquiries of the Registrar as to cessation of practice or change of address, one on ceasing to practise, and six were struck off under the disciplinary powers conferred by the Medical Act. Since the beginning of registration in 1858, 110,174 persons have been registered.

[7] *The Science of Signs and Symptoms.* By R. J. S. McDowall, D.Sc., M.B., F.R.C.P. Second edition. London: William Heinemann, Ltd. 1933. (Pp. 440 ; 7 figures. 21s. net.)

[8] *Acidosis and Alkalosis.* By Stanley Graham, M.D., F.R.F.P.S., and Noah Morris, M.D., B.Sc., D.P.H., F.R.F.P.S. Edinburgh: E. and S. Livingstone. 1933. (Pp. 203. 7s. 6d. net, postage 5d.)

[9] *An Introduction to Pharmacology and Therapeutics.* By J. A. Gunn, M.A., M.D., D.Sc., F.R.C.P. Third edition. London: H. Milford. Oxford University Press. 1932. (Pp. 237. 5s. net.)

[10] *La Médecine et les Médecins Français au XVIIe Siècle.* Par J. Lévy-Valensi. 1932. Paris: J. B. Baillière et Fils. (Pp. 668 ; 51 plates, 86 figures. 100 fr.)

[11] *The Medical Register, 1933.* Printed and published under the direction of the General Council of Medical Education. London: Constable and Co., Ltd. 1933. (Pp. cii + 1,637. 21s. ; 22s. 6d. post free.)

Following two reprints in 1930, the year after its first publication, F. CHRISTOPHER'S *Minor Surgery*[12] has now passed into its second edition, and will no doubt earn further popularity among students and general practitioners. New material has been introduced dealing with local anaesthesia in fracture cases, post-operative care, burns (with special reference to tannic acid treatment), injuries to the chest and electrical injuries, osteochondritis, and venoclysis. Written throughout from the practical point of view, this book supplies a detailed description of the conditions most likely to be encountered and the most modern lines of dealing with them. The illustrations are good, and the index is complete and serviceable.

[12] *Minor Surgery*. By F. Christopher, M.D., F.A.C.S. Second edition, reset. Foreword by A. B. Kanavel, M.D., F.A.C.S. Philadelphia and London: W. B. Saunders Company. 1932. (Pp. 998; 687 figures. 50s. net.)

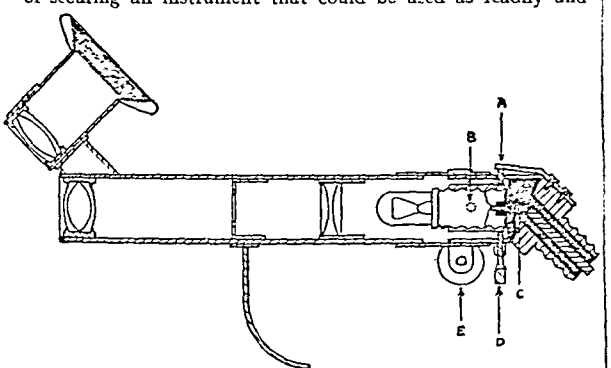
Preparations and Appliances

A HAND SLIT-LAMP

Mr. N. BISHOP HARMAN, F.R.C.S., writes:

The value of the standard forms of slit-lamps for certain ophthalmic investigations is undoubted, but the immobility of these large instruments limits their use to the consulting room and clinic.

The hand slit-lamp shown has been devised with the intent of securing an instrument that could be used as readily and



In the diagram A represents the spring and D the screw controlling the lamp centre. B indicates the position of the trunnion, C the centre contact of the lamp, and E the clamping screw. Note that in practice the filament and slit are horizontal.

as easily as an electric ophthalmoscope; so that it can be carried about, and used for the examination of children and of patients in bed or in their own homes. It cannot, by reason of its small size, compete with the large instruments in magnification and in resolution of fine detail, yet it will secure a valuable view of the media of the eye as deep as the anterior part of the vitreous. The small lamp as compared with the large might be said to have something like the relation of the two-thirds-inch objective of the microscope to the one-sixth-inch objective. But the small lamp gives the same effect of depth as the large lamp, so that its value for localization is certain.

The lamp is fitted to the battery handle of an electric ophthalmoscope, or a small adaptor can be supplied with leads to a torch battery or other suitable source of current. At the upper end, set at right angles to the ophthalmoscope handle, is an eye-piece consisting of a triple achromatic lens giving a linear magnification of × 12. The lens holder is so made that other-powered lenses can be substituted. The case of the eye-piece is graven with a scale, so that the focus of the lens, once found, can always be recovered.

Below the eye-piece, and at an angle of 45 degrees to it, is the projection combination, forming a horizontal slit of light at a distance of one inch. It comprises a gas-filled lamp with a single-strand filament, made for two-cell or three-cell dry batteries. The centre pole of the lamp abuts on to a spring contact, so that all lamps can be set with the filament horizontal. A powerful condensing system produces an image of the filament upon a slit fixed in the tube, so that the projection lens—an achromatic lens of some 60 dioptres—can form a clear image of this slit, free from disturbing hairs or filament irregularities.

In use the instrument must be kept steady in relation to the eye of the patient, and yet allow focusing for depth. This can be obtained by the following manœuvre. The lamp is held by the main tube with the battery handle or adaptor hanging down. There is a trigger-like spur projecting below the main tube, and this lies conveniently between the second and third fingers. The thumb rests on the top of the tube, with its end in the angle between the tube and the eye-piece; the forefinger lies along the side, so that the projecting tip of the finger can rest against the patient's cheek at the lower border of the orbit. This contact gives steady support. Alternate crooking and straightening of the forefinger brings the lamp near to or further from the eye, and gives focusing for depth.

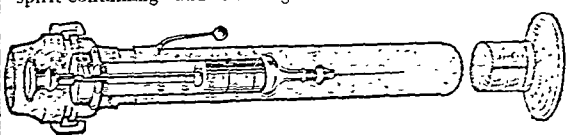
Adjustments of the instrument are of the fewest; normally the eye-piece alone is likely to require setting. But the setting of the lamp bulb, in case of replacement, needs attention. The filament must be horizontal and in the axis of the system. Whether or no this adjustment is correct can be seen by looking at the face of the projection lens. The bright line of light should cut the lens horizontally into two equal parts. If this line is not true the position of the filament must be altered. The lamp mount is pivoted at its front end on a horizontal axis on trunnions. At the back there are a screw and a spring on a vertical axis, the one lifting the back, the other allowing it to fall. As the back rises so the filament is lowered, and vice versa, the movement being made by releasing or screwing in the lower screw. The distance between the lamp and the condenser system can be varied by loosening the large-headed screw under the lamp end of the tube, and allowing the tube to slide over the lamp stem a little. This large-headed screw should be turned firmly when the adjustment has been made. Once the adjustment is obtained it need not be altered until a new lamp is required.

It is better not to wear spectacles when using the lamp, so that one's eye can be well within the shield of the ocular. It is well not to overrun the electric bulb, so when a new battery is used the switch to the rheostat should be turned on no more than two-thirds until the battery weakens.

The hand slit-lamp is made by Messrs. Rayner of New Bond Street, London.

INSULIN SYRINGE

C. L. Bencard Limited (184, Wardour Street, W.1) have recently placed on the market a special insulin syringe. Graduated in both units and cubic centimetres, it can be used for single or double strength insulin. It is housed in a special spirit-containing and fluid-tight metal case secured by a



simple "bayonet" catch at the top, and supported on a detachable stand. A pocket clip completes the outfit, which costs 11s. 3d. altogether. The syringe is of the Record type, and the case can be comfortably carried about in a waistcoat pocket.

A CORSET BELT

In the Charmaux corset belt, product of the Charmaux Patent Corset Company, Ltd., 27, Riding House Street, W.1, the makers claim to have overcome all the old objections to the use of rubber for corsetry. The belt with its thousands of perforations (there are as many as 4,000 in each garment), is made from an electrically deposited latex by a new process. It is a simple, slim belt, with no attachments of any kind beyond a zip fastener on the left side. It is the result of considerable experiment on the part of the manufacturers, who claim that the perforations have been so arranged as to produce lines of stress which give an upward lift. In the hand the belt is light in weight, delicate to the touch, and without that surface "adhesion" so characteristic of rubber. It is of remarkable elasticity, which can be demonstrated by poking a forefinger or thumb into one of the smallest perforations (the size of a pencil point); the perforation returns to normal immediately the finger is removed. The latex is odourless, and the manufacturers have been at pains to establish that it is free from any injurious chemicals and contains nothing which is harmful to the skin.

CONSULTANTS AND SPECIALISTS IN THE L.C.C. SERVICE

The Central Public Health Committee of the London County Council has had under consideration the arrangements for the engagement of consultants and specialists in the hospitals it controls. Hitherto consultants have been, in the main, engaged for individual hospitals and institutions, some at annual salaries, others at a fixed charge for visits. The committee is of opinion that the consultant and specialist service should in future be provided, as far as possible, on a uniform basis. It is submitting to the Council proposals framed with a view to the services of consultants or specialists being available at every general hospital—namely, physician, surgeon, gynaecologist, ophthalmic surgeon, ear, nose, and throat surgeon, orthopaedic surgeon, dermatologist, paediatrist, urologist, radiologist (except at Lambeth Hospital), obstetrician (where there is a maternity ward), and tuberculosis officer (under appropriate circumstances). The general hospitals have been divided into seven groups according to geographical position, and special hospitals, residential schools, and public assistance institutions in the area have been affiliated to each group. The normal number of sessions a week to be worked by consultants and specialists at grouped general hospitals and institutions will be as follows: physicians, 26; surgeons, 34; obstetricians and gynaecologists, 16½; ophthalmologists, 20; radiologists, 51; ear, nose, and throat surgeons, 25; dermatologists, 15½; paediatrists, 15; urologists, 9½; orthopaedists, 11. The consultants and specialists will be available in connexion with the school medical service, the tuberculosis service, and medical examiners' work. It has been found difficult to estimate the number of sessions of anaesthetists' and neurologists' time which would be required, and in these cases panels are to be formed, and the services of such consultants will be utilized as required and paid for at a sessional rate.

In future, consultants will be appointed to the service and utilized as required for a group, or groups, of hospitals. They will be engaged at yearly salaries, for which they will work at different hospitals, to each of which they will be definitely attached for a fixed number of sessions a week, undertaking, in addition, any necessary emergency work. In the case of specialists required to perform operations, the salaries proposed are to be held to cover such operations. The minimum period for which a consultant or specialist will be appointed will normally be two sessions a week. As opportunity arises, and with a view to the future creation of full-time consultant positions in the service, certain officers at present on the hospital medical staff will be detailed for part-time consultant work. The salaries for part-time consultants and specialists generally will be £125 a year for one session a week; £200 for two sessions; £275 for three sessions; £350 for four sessions; £425 for five sessions; and £500 for six sessions; a session to be of approximately two and a half hours' duration. For anaesthetists the remuneration will be 34s. a session; for neurologists 52s. 6d. a session; for full-time consulting physicians and surgeons, £1,250 a year, rising by increments of £50 to £1,500 a year, with no emoluments; and for full-time radiologists, £900, rising by £50 to £1,100 a year. The appointment of part-time consultants and specialists is to be subject to annual review, and in the case of a woman, marriage will terminate her contract of service. It is considered unnecessary for psychiatrists as such to be appointed, in view of the arrangements under which medical officers in the Mental Hospitals Service act as consultants in the mental observation wards in selected general hospitals.

The special hospitals, as a general rule, will be linked up with the general hospitals, and share their consultant staffs, so that a number of the existing positions of consultant at the special hospitals may be discontinued as from July 1st next, when the scheme comes into operation. Certain positions at special hospitals, however, are to be continued on the existing terms. It is considered that all the fever hospitals should be visited by an otologist, and accordingly the payment of two part-time otologists at a salary at the rate of £150 a year is recommended to assist the present otologist in the work. It is proposed that the allowances and fees paid to the medical staff for duties of a consultant nature should be continued generally as at present, except as regards the remuneration paid to certain medical superintendents of the infectious diseases hospitals when on the daily rota of duty for small-pox consultative work. An arrangement has been made under which the medical superintendents are paid at the rate of £1 a day in addition to their salary scales when on this daily rota.

It is estimated that the revised scheme for the provision of a consultant and specialist service will involve an additional expenditure of £5,145 in the financial year 1933–4, and of an average of £6,856 in subsequent financial years. The estimate does not include the cost of any special payment for operations, which payment, under this scheme, will, it is hoped, be substantially reduced; neither has any allowance been made for compensation arising out of claims from transferred officers whose appointments will be terminated and who will not be re-engaged. Consultants and specialists in the hospital service are to be given notice of the termination of their engagements on June 30th, and to be informed that the question of their re-engagement after that date will depend upon the arrangements made for the provision of a consultant service.

CHRONIC ENTERIC CARRIERS AND THEIR TREATMENT

At the request of the Scottish Board of Health an investigation of chronic enteric carriers was made by the Medical Research Council, whose report is now published.[1] The work was undertaken by Professor C. H. Browning in the pathological department of the University and Western Infirmary, Glasgow, with the co-operation at different times of Dr. H. L. Coulthard, Dr. R. Cruickshank, Dr. K. J. Guthrie, and Dr. R. P. Smith. The report is divided into three sections, dealing respectively with the incidence and importance of carriers, the identification of enteric carriers, and the treatment of enteric carriers. An appendix gives the details of the authors' own researches relating to three carriers in Glasgow and a list of recorded cases of enteric carriers who have submitted to surgical treatment.

TYPES OF CHRONIC ENTERIC CARRIERS

A considerable proportion of convalescents from typhoid fever are temporary carriers. The majority of those who continue to excrete enteric bacilli for as long as six months after the acute attack become carriers. Those who continue to excrete typhoid bacilli after a year should be regarded as permanent or chronic carriers. Carriers may be divided into groups, faecal and urinary, according to the habitat of the persisting organisms. In the majority of faecal carriers the typhoid bacilli live in the gall-bladder, which is usually inflamed to a greater or less extent. The striking fact about urinary carriers, whether temporary or chronic, is that the bacteria are excreted intermittently. Though as a rule there is no definite pyuria, yet the bacteriuria is probably due to focal infection of the kidney and the rupture into the renal tubules of minute abscesses. Where the bacilli persist in the urine it is the rule to find some accompanying pathological condition of the urinary tract, such as malformation or calculous disease. In such circumstances the excretion of enteric bacilli is often unilateral, being limited to the diseased side. Typhoid and paratyphoid bacilli may persist in sites other than the biliary-intestinal and urinary tracts, such as in connexion with subcutaneous suppuration, periostitis, or osteomyelitis. There is some evidence

[1] Medical Research Council. Special Report Series No. 179. Chronic Enteric Carriers and their Treatment. (1s. 6d. net.)

that enteric bacteria may persist in the tonsils after having disappeared from other organs.

IDENTIFICATION OF CARRIERS

Conclusive evidence of the carrier state depends on the demonstration of the specific bacilli in the discharges of the individual. A comparison of different methods used for the isolation of enteric bacilli from the faeces of carriers has shown that *B. typhosus* can be recovered more easily by direct plating than by the use of the brilliant green enrichment technique, whereas for the paratyphoid carriers the brilliant green method of preparation gave a larger number of positives. Negative tests in the faeces do not exclude the possibility of the carrier state, for in a considerable proportion of convalescent typhoid patients positive cultures may be obtained from cultivation of the aspirated duodenal contents when no growth of enteric bacteria can be obtained from the urine or faeces. Urine cultures for typhoid carriers are best made from a twenty-four-hour specimen, because of the intermittency of excretion of the bacilli. Serological tests, such as agglutination, complement-fixation, and opsonic index, are not of any practical value in the identification of carriers, but it is possible that in the future a cutaneous test for hypersensitiveness to typhoid may serve to distinguish carriers from non-carriers.

TREATMENT OF ENTERIC CARRIERS

The treatment of chronic enteric carriers with a view to abolishing excretion of the specific bacilli is considered under two headings—non-surgical and surgical. Non-surgical treatment with various types of so-called intestinal antiseptic, dietetic treatment designed to alter the reaction and bacterial flora of the intestine, vaccine, and bacteriophage therapy have all been unsuccessful. On the other hand, in cases in which the gall-bladder has been proved to be the site of infection, surgical measures directed toward that organ have yielded highly satisfactory results. Thus three chronic carriers were cured by operation at the Western Infirmary, Glasgow. They all voluntarily submitted to operation, although they had no symptoms referable to the gall-bladder. It is probable that in other cases in which gall-bladder operations have not cured the carrier state there has been some other focus in the body where the bacteria have maintained their habitat, such as the intestinal wall.

In chronic urinary carriers vaccines and urinary antiseptics have not been successful, but in a few instances the infection has been proved to be unilateral, and operative treatment of some remediable lesion has effected cure of the carrier state.

THE GROWTH AND VARIABILITY OF INTELLIGENCE

In the Monograph Series issued by the *British Journal of Psychology*, under the general editorship of Professor James Drever, an interesting brochure with the above title has just appeared.[1] In order to measure the growth of intelligence (as indicated by performance tests) an obvious suggestion is to give the same tests to groups of children of different ages and to compare their scores. The equally obvious objection is that if, for instance, the average score of children aged 6 years were 45 per cent. of the maximum marks, that of children aged 7 years 65 per cent., and of children aged 8 years 85 per cent., it would not necessarily, or even probably, follow that the growth proceeded by equal increments between the ages of 6 and 7 and 7 and 8. An increase from 45 to 65 per cent. might well measure a much smaller improvement than one from 65 to 85 per cent. The authors (the first part of the monograph is by Mr. C. A. Richardson, the second by Messrs. C. A. Richardson and C. W. Stokes) have accordingly adopted a method introduced into psychological work by Thurstone. This device is essentially the same as that described by Professor M. Greenwood and Mr. Udny Yule in 1915 in their paper on the statistical measurement of immunity.[2] Greenwood and Yule started from a suggestion of the late G. D. Maynard that resistance to disease might be regarded as a graded character, symmetrically distributed about some mean value. Suppose, for example, the difference between vaccinated and unvaccinated persons were that the mean resistance of the latter to small-pox was higher and perhaps the variation around the mean less than in unvaccinated persons, but that in both cases the distributions around the means were of the particular symmetrical type known as a "normal" distribution. Then if one had experience of two or more epidemics of small-pox of different severities—that is, killing different proportions of unvaccinated attacked persons—it would be possible to express the mean resistance and variation of the vaccinated in terms of the unvaccinated, and, incidentally, to measure the advantage of the former under different conditions. The principle of Thurstone's method is identical with this; where "intelligence" takes the place of "immunity," different performance tests take the place of different epidemics, and different age groups that of the two groups vaccinated and unvaccinated in Greenwood and Yule's system (actually these writers did also apply their method to the comparison of natural resistance in different age groups). Consequently some of Greenwood and Yule's criticisms of their own method—for instance, of the adequacy of such a criterion of its applicability as Table IV of Part 1 of the monograph under notice—are relevant to the present work.

The authors have dealt with very satisfactory data—namely, tests consisting of 100 items applied to no fewer than 11,266 children, virtually the whole school population (aged 6 to 14) of the town of Blackburn. In the first part of the memoir they show the results obtained when the mean of intelligence of each age group is measured from the mean of the age group 7–8, and the variability (standard deviation) in terms of that for the age group 7–8. The growth curve shows an inflexion towards the age of 11. They also investigate the value of the ratio of standard deviation to intelligence (now measured on an absolute scale) necessary to fulfil the conditions that this ratio shall be a constant, as surmised by Thurstone, and that the data shall be adequately described. They find that 0.18 is a satisfactory value.

In the second part of the monograph the form of the growth curve is investigated, and it appears that a function formally identical with that used by Benjamin Gompertz to describe the change in force of mortality with age is reasonably satisfactory. The identity is of course only formal, as in the authors' use the function must approach a finite maximum (in their notation b must be less than 1), while the force of mortality must increase without limit (b must be greater than 1). They discuss in careful detail the validity of the assumption that all the tests are measuring a common something, which we may term "intelligence," and conclude that although this assumption is not really justified its adoption leads to a portrayal of "the growth and variability of *all-round* mental ability, which is probably not far from the truth, though it must be remembered that the solution of the problem is really indeterminate." They conclude that by the age of 11 years intelligence has reached a level of over 80 per cent. of maturity, by 18 years 96 per cent., and by 24 years 99 per cent. of its full development. This is a carefully written and valuable paper.

[1] Cambridge: University Press. 1933. (Pp. 89. 8s. 6d. net.)

[2] *Proc. Roy. Soc. Med.* (Section of Epidemiology and State Medicine), 1915, viii, 113.

ENTERIC FEVER IN YORKSHIRE

THE MALTON OUTBREAK

References to the above outbreak have already been made in these columns.[1] The subject is again raised in a report published this week by the Ministry of Health.[2]

In a prefatory note, in which he points out that the outbreak was due to pollution of the public water supply derived from a local well—a source which the district council were urged by the Local Government Board to abandon forty years ago—Sir George Newman states:

"The story is an old one and, in this particular area, has been repeated during successive generations of the Malton sanitary authorities. History records that it has been demonstrated also to many scores of local authorities throughout England and Wales, but speaking generally, its grave lesson has been learned, with the result that by the adoption of measures of preventive medicine, including the provision of wholesome public water supplies, the mortality from enteric fever has declined from 371 per million persons living in 1871–5 to 7 per million in 1930. . . . In the peculiar circumstances set out in this report some spread of infection may have been inevitable, but had the first patient been promptly removed to an isolation hospital the outbreak would, in all human probability, have been more circumscribed. That the outbreak was not larger must be attributed to the commendable action by the local authorities in respect of early diagnosis, prompt isolation, 'sterilization' of the water supply, and preventive inoculation."

THE OUTBREAK DESCRIBED

Dr. Vernon Shaw, whose report follows, describes his visit to the country market town of Malton to investigate the circumstances and advise the district council. The

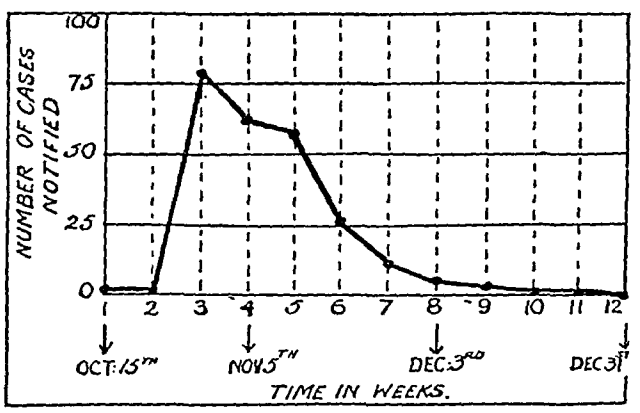


Chart showing incidence of cases.

water has been obtained since 1868 from a number of pools and springs lying in the angle between the River Derwent and the railway line. The present well—the Ladywell—which is leased to the district council, is covered in, sunk to a depth of fourteen feet on the oolite, and taps directly a number of springs. Surface washings are excluded, but there is some communication, probably through the wall, with the springs supplying adjacent pools. Two hundred yards distant is the pumping station, which draws water from the well and raises it to a reservoir and water tower. A number of houses are supplied by the main from the pumping station to the reservoir, and the remainder from the reservoir itself. The Ladywell has been subject to not infrequent pollution by inundation when the Derwent was in flood, and, in 1894, the banks between the well and the river were remade and raised to prevent this. Household sanitary arrangements consist of 898 cistern-flushed water closets, 611 pail privies, and twelve midden privies. Sewer contents are discharged by two outfalls into the river without screening or other treatment—one of these lies upstream from the Ladywell. The pails are removed weekly by council employees to a depot outside the town, where local farmers buy the contents for manuring purposes. House refuse from covered bins is also collected weekly, and is incinerated, after screening at the depot, together with the midden privy contents.

[1] *British Medical Journal*, November 26th, 1932 (p. 982), and December 3rd, 1932 (p. 1032).

[2] Reports on Public Health and Medical Subjects. No. 69. Ministry of Health, H.M. Stationery Office. 1933. (1s. 6d. net.)

Previous Incidence of the Disease

Dr. Shaw recalls that in 1892 the late Dr. Bruce Low undertook investigations at Malton on account of the persistent recurrences, over a period of years, of enteric fever and diarrhoea in the district. These outbreaks had followed seasons of flood of the Derwent, and had been associated with the supply of muddy water from the Ladywell. In 1889 the sanitary authorities had called in a firm of consulting engineers, who recommended the abandonment of the existing water supply in favour of a new scheme. This recommendation was never proceeded with. In 1892 Dr. Low attributed the recently diminished incidence of enteric to the action of the borough surveyor, who, as soon as the water in the river had reached a certain level, had formed the practice of ceasing to pump from the well to the reservoir until some time after all discoloration had vanished from the water in the well. Dr. Low's plea, made to the Malton sanitary authorities in 1893, for "a sufficient and wholesome water supply," had no result other than to cause the banks of the river to be raised, and constant vigilance, with curtailment of water supply at times of flood, to be exercised. Up to the present epidemic (1932) only fourteen cases of enteric fever have occurred in the last twenty-one years.

FINDINGS ON EXAMINATION

On his arrival on October 25th Dr. Shaw found that the epidemic was almost entirely confined to—and, therefore, the vehicle of infection largely operative in—Malton. Preliminary inquiries had excluded the possibility of milk and other articles of food and drink, save water only. On the eve of his arrival it had already been suggested that the infection was water-borne, and warnings advising householders to boil water had been circulated in the town, while the local cottage hospital had been requisitioned as a temporary isolation hospital, twenty-six patients having been admitted. The investigation of infected houses was such as to suggest that infection of water was general, and had taken place either at the pump or before the water reached that point. Samples of water from the well and adjacent pools were taken on October 26th, and showed organisms of excremental origin. Dr. Shaw recommended the following emergency measures: (1) sterilization by chlorination of the water; (2) removal to hospital of all notified cases; (3) offer of protective inoculation by the medical officer of health or by private practitioners; (4) a further warning that all drinking water should be boiled, pending such time as it could be sterilized in bulk. These were put into action, and a chlorinating apparatus was installed by midnight on October 27th.

In searching for the source of pollution flood-water was easily excluded, and attention was soon directed to the presence of a male enteric patient (notified on October 9th) in the Public Assistance Institution, which is situated 300 yards to the west of the Ladywell and at a higher level. This patient had been admitted in a febrile condition on September 23rd with a four-day history of headache and anorexia. Three days later the entry, "To be treated as typhoid," was made on the record card. On October 2nd the agglutination was found to be negative, but a positive result was reported on October 9th. The man appears to have been a difficult patient, having formed the practice of getting out of bed and going to the water closet instead of using the bed-slipper and urine bottle according to instructions given on September 28th.

In the meantime, notifications of other cases had been received on October 22nd and 23rd (1 each), and on the 24th (15 cases). Dr. Shaw ordered the removal of this, and of another patient, from the Institution. Subsequent excavations revealed a leakage in the drain between the male sick block of the Institution and an inspection chamber outside. It was found that an old break in the pipe had allowed the discharge of the bulk of the sewage into the surrounding soil at a point a short distance from the pumping station, and 250 yards from the Ladywell. It seems probable, states Dr. Shaw, that the bed of clay forms a channel along which sewage from the broken pipe might find its way into the well. Bacteriological examination of the surface soil, oolite rock, and water at the bottom of pits dug between the well and the Institution showed evidence of sewage pollution in the rock. Dr. Shaw suggests that the distance (250 yards) between the break in the pipe and the well probably accounts for the interval which elapsed between the date of the Institution patient's admission and the first group of water-borne infections.

Antityphoid inoculations were performed on 1,600 residents in the town. No individual who was inoculated before infection developed the disease, but a number who were inoculated during the incubation period did. Further statistical and epidemiological details are added. In brief, the epidemic affected 235 people (approximately 5 per cent. of the population of Malton) during the six weeks ended mid-November, 1932. There were thirty-five secondary cases. In his summary Dr. Shaw repeats the conclusion of Dr. Low—namely: "That the members of the Malton Urban Sanitary Authority should, therefore, without delay reconsider the question of obtaining for the town a sufficient and uniformly wholesome water supply."

BRITISH POST-GRADUATE HOSPITAL AND MEDICAL SCHOOL

COMPLETION OF ARRANGEMENTS

Arrangements have now been completed, after nearly three years of consideration and postponement, for the establishment of the British Post-Graduate Hospital and Medical School at Hammersmith.

In May, 1930, the Government invited the London County Council to co-operate in the establishment in London of a post-graduate hospital and medical school, and the utilization of the Hammersmith Hospital, which had been recently taken over by the Council from the board of guardians, was suggested. The first proposal of the Government was to contribute a maximum of £250,000 for building and equipping the school, but, as a result of the financial position which developed in 1931, less costly proposals had to be formulated, and a scheme to cost not more than £200,000, half of which sum would represent the maximum contribution of the Government, was prepared by the London County Council and approved by the governing body for the management of the school, which had in the meantime been set up. The Government, however, wished to defer the date at which the scheme should be brought into operation, and not until November, 1932, was the Council informed that the work might proceed, and that the Exchequer grant would be forthcoming.

Proposals and estimates have accordingly been prepared, and were submitted to the London County Council at its meeting on March 14th. They provide for the erection at the Hammersmith Hospital of a medical school and casualty, receiving, and out-patient departments in two new blocks, a new ward, central dressings and sterilizing room, massage and light section, and other apartments. The new blocks will displace existing portions of the hospital buildings, and there will be a net increase of twenty-eight beds for patients. It is pointed out that the provision of the school in association with one of the Council's hospitals will be very advantageous from the Council's point of view, as it will improve the medical and surgical treatment at the disposal of the sick of London, and enhance the value of the Council's hospital service. There will be a concentration at the school of the best medical and surgical skill available to teach on modern lines all members of the medical profession who take advantage of the facilities offered. It will be possible for members of the Council's medical staff to attend the school for post-graduate study, and the opportunities thereby given for instruction in the most modern methods should be of the greatest benefit to the hospital service generally. In addition, patients from any of the Council's hospitals can be sent to Hammersmith Hospital for diagnosis and specialized treatment.

The draft agreement between the London County Council and the governing body of the school provides that the capital cost of the new and the adapted buildings shall be borne equally by the Council and the school, subject to a limit of expenditure by the school of £80,000. The number, nature, duties, and pay of the professional and technical staff of the school who will have duties at the hospital will be agreed between the parties. The staff will be appointed and paid by the school, subject to the Council's approval, and the Council will contribute towards the cost an amount calculated on the basis of the sum which would have been payable by it for consultant and similar staff and for laboratory work if the school were not attached to the hospital. The nursing, domestic, and maintenance staff will be appointed and paid by the Council.

An agreed number of post-graduate medical students will be resident at the hospital, one-quarter to be nominated by the Council and three-quarters by the school, but the Council will be entitled to the services of the whole of such students in connexion with the work of the hospital in such manner as shall be agreed. The Council will provide lodging and maintenance for these resident students, recovering the cost from the school in respect of the school's nominees. Non-resident students will be admitted in such a manner as the school may determine. A joint committee of four members nominated by the Central Public Health Committee of the Council and four nominated by the school will advise on matters of mutual concern.

The building works are estimated to cost £145,000, the plans including a two-story block for casualty, receiving, and out-patient departments. This block is to be made sufficiently strong to take a third story, the use of which has not been visualized at present, and which will cost £6,615, to be paid for by the Council. Thus of the total cost the school will be responsible for £72,500 and the Council for £79,115. The cost of equipment will be met out of the difference between these respective sums and the £100,000 which is the agreed limit of expenditure for each of the two parties concerned, the Council and the school. For the first full year the maintenance expenditure on the post-graduate school is estimated at £23,940, and the ultimate average annual expenditure at £22,665. It is proposed to put the work in hand without delay.

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MEDICAL CARE IN THE U.S.A.

In May, 1927, a group of some sixty representative physicians, health officers, and others interested in social science and the public health met to establish a Committee on the Costs of Medical Care in the United States of America. The inspirer and actual director of the investigation was Mr. Harry H. Moore, Ph.D. ; but on the carefully chosen committee of forty-eight persons, Dr. Ray Lyman Wilbur, then President of the Leland Stanford University, formerly President of the American Medical Association, and since Secretary of the Interior in President Hoover's Cabinet, was the chairman ; and Dr. Winslow, professor of public health at the Yale School of Medicine, was the vice-chairman. The committee was primarily a fact-finding organization, and such facts and statistics as were collected have been published from time to time in twenty-five volumes of considerable size. There are three more such volumes still to be issued. The official report of the committee, based upon these facts, was released at a largely attended meeting of interested and influential persons in the New York Academy of Medicine on November 29th last, when a full discussion took place. The report forms a volume of 214 printed pages. The first 102 of these summarize the facts disclosed by the investigations. The next forty-eight pages contain recommendations for future action by the majority of the committee, and these are followed by a minority report signed by nine members, including Dr. Van Etten of New York and Dr. Olin West, the Secretary of the American Medical Association. There is a further minority report signed by two dental members of the committee.

It is very difficult to give—or, at all events, to be sure that one is giving—a correct picture of the situation disclosed by this mass of material, or of the proposals that are made to deal with it. Viewed from our side of the Atlantic, the statements made, both in the report itself and by those who have expounded or commented upon it, are somewhat bewildering. The language used is at times unfamiliar ; the position dealt with is perhaps not completely or certainly understood ; and, in both majority and minority reports, the recommendations are rather vague, or at any rate less concrete and clear than might have been wished. They definitely disclose a number of prejudices and suppositions which in this country have been dissipated by experience, and which therefore seem curiously anachronistic. Many of the economic and statistical facts disclosed by the investigation are interesting. In the year 1928—a prosperous year—the average money income per head of population was approximately £150, and the average per capita cost of all forms of medical care was £6, of which 25s. was for drugs. Thus the total expenditure on medical care was 4 per cent. of the income. These average figures, however, give but little idea of the actual problem, for family incomes are very unevenly distributed, and the costs of medical care fall with very variable incidence. It is calculated that families in the group with an income of £2,000 a year or more receive 84 per cent. of the domiciliary medical attendance they need, 87 per cent. of the hospital attention, but only 62 per cent. of the dental care desirable. The corresponding figures for a group with an income of £250 or less are 34 per cent., 67 per cent., and 12 per cent. One family in every hundred must spend from a quarter to a half of its annual income upon medical care in sickness. The average income of medical practitioners in the year 1929 is given as £1,100 ; but one-third of them had incomes of less than £500. It is calculated that a slightly increased expenditure, of about £7 a year per capita instead of £6, would provide a really complete preventive service and curative care for all the people of the country.

The problem presented is: On what system can this complete provision be made, and by what means can its cost be met? This problem is in fact shirked by both the majority and the minority reports of the committee. There is no proposal for a complete service practically available for all who need it. The majority recommend the establishment of an organized system of voluntary insurance, aided perhaps by a contribution from taxes, which would provide, it is true, a complete service for those who joined it, but from which it is clear that the poorest and least thrifty members of the community would remain aloof. The minority, in effect, ask merely that the medical profession should be relieved of the burden of attendance on the indigent by an expansion of governmental care for them, but that, for the rest, matters should be left very much as they are. This statement by itself gives perhaps a too favourable impression of the proposals made in either the majority or the minority report. The majority do not envisage a universal or common scheme even of voluntary insurance, but the "provision of service through organized groups" of a regional character, separate, independent, even competing ; though "there should be an agency in each community through which the lay and professional groups concerned in providing and financing medical services could consult, plan, and act in behalf of the best provision of medical resources which the community can afford." What would constitute a "community" for this purpose and what would be the nature of the "agency" remain indefinite. It appears, too, that there are no fewer than "twenty-five types of development of such groups" in the United States. Though the majority emphasize that "lay groups organized for profit have no legitimate place in the provision of this vital public service," elsewhere they seem to treat all twenty-five plans on an equality as experiments to be subjected to careful evaluation, though "some are mere attempts to

capitalize for private gain the people's need for better medical service."

The minority will have none of this; but they, too, cannot be acquitted of the charges both of vagueness and of apparent inconsistency. They recommend "that the corporate practice of medicine, financed through intermediary agencies, be vigorously and persistently opposed as being economically wasteful, inimical to a continued and sustained high quality of medical care, or unfair exploitation of the medical profession," yet they go on to propose "that methods be given careful trial which can rightly be fitted into our present institutions and agencies without interfering with the fundamentals of medical practice." What exactly these "methods"—in the plural, be it noted—are is not stated, though among them is "the development by State or county medical societies of plans for medical care," with certain "safeguards," among which are the entire elimination of any lay element in the administration (except for some representation on a "Grievance Board" to settle disputes), and the continuance of the payment of private fees even by those within the service. Perhaps further consideration and analysis might lead to the discovery that neither the exact method of payment nor the absence of lay help in administration can properly be placed among the "fundamentals of medical practice," whatever importance may sometimes be attached to them.

Any criticism from outside the United States must, of course, be offered with diffidence and reserve, but judging from conditions and experience in Great Britain the report would appear to exhibit an absence of clear thinking and a quite unnecessary timidity; and the attitude of some of those who support the minority report as against that of the majority, especially as represented by a lucubration in the *Journal of the American Medical Association* of December 3rd, 1932, seems to be unwarrantably antagonistic and unhelpful. Wherein, then, may wisdom lie, if facts from this side are applicable at all? It can scarcely be doubted that, in America as here, some communal concern and provision for the health needs of those who cannot supply them for themselves is not only legitimate but necessary; and surely it is not the medical profession alone that is concerned in such provision and in its administration. Such provision *for all* can be made only by a free service paid for wholly by taxation, or by some form of compulsory insurance. Twenty years' experience of the latter method (imperfect and incomplete though it be) in this country, has shown that it does not necessarily carry with it, as the minority report alleges, "solicitation of patients, destructive competition among professional groups, inferior medical service, loss of personal relationship of patient and physician, and demoralization of the profession." It is true that the proposals of the majority may involve some danger of the first two of these evils; therein they are inferior to the system of national health insurance as known here. It is true, also, that in any scheme there are certain essential provisos, but on most of these the majority and minority of the committee are united. The provisos are: that the general level of medical practice should be raised; that the family practitioner should be restored to his proper place in the scheme; that at all costs, by the preservation of free choice and otherwise, the confidential relationship between patient and doctor should be preserved; that there should be no exploiting of the profession by securing a reduction of average professional incomes or otherwise; that any plan for cash benefits should be separate and distinct from medical services. With such a measure of fundamental agreement an outsider would suppose that it would be wiser and more profitable for the minority to direct its energies to removing the dangers and obvious shortcomings of the majority's plan, even though it should need an extension of that plan in order to secure their avoidance, rather than to set itself obstinately against any and every plan of insurance for medical care (except purely individual), and against the inevitable extension of communal provision for the national health. As Dr. Wilbur has said: "The doctor must recognize that whether he likes it or not something is going to be done. It is better to have it done by him than to him."

ALUMINIUM AND HEALTH

During the past eighteen months much interest has been taken in the controversy which has raged around aluminium cooking utensils. One feature which distinguishes this from some other controversies in which commercial interests play a part is that the commercial interests appear to be wholly in favour of publicity. We suggest, with some cynicism, that this by itself argues in favour of the use of aluminium, for if the bill were not so clean the commercial interests would be likely to keep it in the background. The latest example of this candour is Bulletin No. 3 of the Mellon Institute of Industrial Research, which consists of abstracts of 150 papers dealing with the occurrence of aluminium in foods and tissues; the action of foods, biological materials, and chemicals upon aluminium; the physiological and pharmacological aspects of aluminium; medical problems and aluminium; and editorial comment in different journals. The bulletin has been prepared by a body of workers who do not hesitate to call themselves "The Utensil Fellowship," established in 1926 by the Aluminium Company of America; the bulletin is fully indexed and all references are clearly given.

From the mass of papers only a few points can be selected. The amount of aluminium in vegetable foods and fruit has been examined both in America by Winter and Bird[1] and in France by Gabriel Bertrand and Levy,[2] and it is evident from the reasonably good agreement between the two sets of results that errors of estimation are no longer obscuring the facts—for example, both examinations show that carrots, after

[1] Winter and Bird: *Journ. Amer. Chem. Soc.*, 1929, li, 2264.
[2] Bertrand and Levy: *Bull. Soc. Chim.* (4), 1931, xlix, 1417.

removing the surface, contain twenty-two parts per million of aluminium present in the dry material. There appears to be no doubt that aluminium occurs in appreciable amounts in all common vegetables, yet no one who is interested in this controversy proposes to ban them as articles of diet. Lampitt and Sylvester[1] have recently published figures showing the amounts taken up from aluminium pans in the course of cooking. Great difficulties, which have led in the past to fantastic conclusions, surround the estimation of these amounts in the presence of calcium, magnesium, and phosphates; Lampitt and Sylvester have, however, devised a method which enables added aluminium to be estimated with accuracy. They find that when milk, water, apples, tomato soup, potatoes, or cabbage are boiled in the ordinary way the amounts taken up vary from 0.2 (milk) to 12 (apples) parts per million. Thus the consumption of a quarter of a pound of apples so cooked would mean the intake of about one-fiftieth of a grain of aluminium from the pan. To those who base their medicine on principles accepted in modern pharmacology, this amount is not alarming, but it is easy to understand that those who (like Dr. le Hunte Cooper) believe in homoeopathy may not be so readily satisfied.

On the question of the toxicity of aluminium the scientific evidence is substantially in favour of the view that the metal is as harmless as iron. It is difficult to put on one side the evidence of Professor E. V. McCollum, whose reputation in America in the field of nutrition stands perhaps as high as that of Sir Frederick Hopkins in this country. When to the results of experiments in nutrition, in which observation has failed to reveal any harmful effect of aluminium on growth and reproduction through four generations, we add the fact that colloidal aluminium hydroxide has some reputation as a gastric antacid and for the treatment of peptic ulcer, it becomes difficult to know how the controversy has arisen. Nevertheless, as the correspondence in our columns during the past twelve months has shown, a number of medical men are dissatisfied with the scientific evidence. There are those who are in frank disagreement with it, and others who are doubtful, but who are impressed with the statement that some patients suffer from a feeling of malaise immediately after eating food cooked in aluminium vessels. To a certain type of medical practitioner, worried by the difficulty of treating vague dyspepsias, the suggestion that aluminium cooking vessels may be blamed comes like a gleam of hope; it appeals to the imagination and adds a new weapon to his armoury. It is just the kind of explanation which will suit many dyspeptics. Other medical men, however, have received the suggestion with more caution. It is obvious enough that psychological forces may play a part; on the other hand, as Dr. Eric Pritchard pointed out, such forces cannot explain beneficial effects in children. While making full allowance for the scientific work, it is rightly urged that the precise effect of aluminium in ailing middle-aged subjects cannot be inferred from experiments on rats or on healthy university students.

Can anything be done to solve this problem? We think that it can. A suggestion was made by Dr. J. H. Burn, in a paper read to the Society of Public Analysts on June 1st last year, that a number of these patients who say they are sensitive to aluminium, who experience immediate malaise when they have eaten food cooked in aluminium vessels, should be tested in an hotel or house where it is arranged for them to have food cooked in aluminium vessels and food cooked in other ware; they should be given the food without knowing in what vessels it had been cooked. The same suggestion was also made in the *British Medical Journal* for November 12th, 1932, by Dr. C. B. Heald, who wondered if the Medical Research Council would institute a practical test of this kind. All that would be needed is a place in London where midday meals could be attractively prepared, and where the patients, one or two at a time, could go to eat them. It would be discovered whether the patients could or could not distinguish between food cooked in aluminium vessels and food cooked in other ware. It occurs to us that such an experiment might be arranged with the help of the household and social science department of King's College for Women, who have all the cooking facilities and the cookery experts. With a continuance of its desire for the fullest investigation which the British Non-ferrous Metals Research Association has hitherto shown, and the co-operation of those medical men who know patients who are sensitive to aluminium, we think a scheme could be devised to dispose of the existing doubt, which would be neither expensive to the Research Association nor unattractive to those who were willing to be the subjects of the investigation.

[1] Lampitt and Sylvester: *Analyst*, 1932, lvii, 418; also Bibliographic Series, Bull. No. 3, Mellon Institute of Industrial Research, Pittsburgh, Pa., 1933.

THE POST-GRADUATE MEDICAL SCHOOL

It is with great satisfaction that we announce this week (p. 469) the completion of the arrangements made by the London County Council for the establishment of the British Post-Graduate Medical School and Hospital at Hammersmith. We may recall that a few months ago a strong effort was made to induce the Government to abandon its proposed Exchequer grant for this purpose or to divert it for use by some entirely different method of educational provision. We have reason to think that our statement of what we believe was at that time (*Journal*, October 1st, 1932, p. 638), and still is, the general and strong feeling of the medical profession as a whole, was an influential factor in determining the decision that has now matured in action. There are a number of interesting and somewhat novel features in the arrangements that have now been made between the London County Council and the governing body of the School (on which, it will be remembered, the British Medical Association is represented). The development of these will be watched with great interest.

SLUM CLEARANCE AND HEALTH

The Ministry of Health has for some time advocated and put into practice a vigorous policy of slum clearance, believing that the best way to improve the health of the nation is to house the people in clean, airy, sanitary dwellings. Although the value of good housing cannot be disputed, a very interesting commentary on the policy was put forward at the last meeting of the Section of Epidemiology of the Royal Society of Medicine by the medical officer of health for Stockton-on-Tees, Dr. G. C. N. M'Gonigle. He was able to compare two sets of families, one of which had been removed from a slum area to an almost ideal council estate in 1927, while the other had remained in an unhealthy area of tenements and two-roomed houses, with bad sanitary conditions and bad structure. The first figures that aroused surprise were those for the crude death rates. From 1923 to 1927 the rate per thousand of population was 12.15 for England and Wales, 18.75 for the slum area, which was subsequently cleared, and 22.16 for the other slum area, which still remains. From 1928 to 1932 the corresponding figures were: 12.2 for England and Wales, 26.71 for the families which had been moved from the slum to the council estate, and 20.45 for those remaining in the slum area. Thus the people in the improved houses showed an increase of 8.47 per thousand deaths, while those who remained in their squalor showed a decrease of 2.9. This startling result caused Dr. M'Gonigle to make a search for the cause. He found that the removed families showed a considerable increase in birth rate, which was mainly due to an increase in the size of the family, being unaccompanied by any increase in illegitimacy or first births. The viability of the infants born compared favourably with that in other parts of the country, and the increased death rate could not be attributed to infant mortality. It was chiefly found in the age group 65–75, closely followed by the age groups 25–35 and 45–55. The principal causes of death were measles, cancer, heart conditions, bronchitis, and pneumonia, and there were decreases in whooping-cough, diphtheria, cerebro-spinal fever, tuberculosis, appendicitis, and congenital debility. Dr. M'Gonigle's investigations excluded housing, drainage, overcrowding, and insanitary conditions, and led him to a careful study of the family budgets. He also analysed the food purchased by a number of families, and found everywhere a deficiency in protein, and particularly in first-class protein. The greatest deficiency (about 50 per cent.) was among the unemployed on the council estate, and the least (20 per cent.) among the employed in the slum area. There was also reason to suppose that there was a corresponding deficiency in vitamins and minerals. Studying the prices in the Stockton markets, Dr. M'Gonigle found that a physiologically adequate diet could be purchased for 4s. 6d. per man per week—or, allowing for human errors, for 5s. He further found that the average rent on the council estate was 8s. 10d., in some cases rising as high as 13s. 4d., whereas in the slum area it was 4s. 10¾d. The proportion of the budget left over for food was obviously too small. Some of the unemployed in the council estate could only spend 2s. 10½d. per man per week on food. Dr. M'Gonigle's tentative conclusion was that, in the absence of any other apparent cause, the increase of rent for the transplanted families was the direct cause of the serious deterioration in their health resulting from malnutrition. His conclusions support those of Dr. G. P. Crowden,[1] who spoke strongly on the disproportionate size of the rent in the budget of many poor families, and declared that officials whose duty it was to let dwellings should be compelled to refuse to let them unless it was clear that the budget of the family would allow 7s. per man value per week for food, as well as a reasonable allowance for such other items as clothes and fuel.

A LIFETIME IN AMERICAN SURGERY

Being now one year beyond the Psalmist's three-score years and ten, Dr. W. B. Coley, whose name was once so familiar in connexion with the treatment of inoperable malignant disease by a mixture of erysipelas and prodigiosus toxins, has retired from his hospital appointments in New York, and was entertained last month at a testimonial dinner at the Waldorf Astoria Hotel, given by 350 of his friends and admirers.[2] In responding to the speeches made by Dr. J. M. T. Finney of the Johns Hopkins Hospital, Dr. Charles H. Mayo of Rochester, Dr. James Ewing, director of the Memorial Hospital, New York, and others, he gave a most interesting review of his forty-four years of active hospital life. After leaving Yale in 1884 he taught Latin and Greek for two years in order to get the funds necessary to study medicine at Harvard. It was not until 1887 or 1888 that Lister's methods were generally adopted in the leading American hospitals, and Coley remembers the surgeons clothed in "Prince Albert" coats that were spotted with the blood of many patients and with silk ligatures suspended from their lapels. The discovery of anaesthesia in 1846 had its evil results, for it led to the routine performance of operations with a mortality which he described as "a surgical catastrophe." The first operation for appendicitis was performed when he was a student at the Harvard medical school—largely as a result of the advocacy in 1886 of Reginald Fitz, who constructed the word appendicitis. A dramatic incident occurred at a symposium on appendicitis at the meeting of the American Medical Association at Denver in 1898. After the late J. B. Murphy of Chicago had pleaded for immediate operation directly the diagnosis was made, one of his colleagues rose and delivered himself as follows: "Dr. Murphy preaches one thing but practises another. I should like to ask whether Dr. Murphy did not see a case in consultation with me two weeks ago last Saturday at 224, South Fourth Street, a young boy of 15, in which I had made a diagnosis of acute appendicitis; whether he did not agree with the diagnosis and whether he did not advise against operation?" Dr. Murphy sprang to his feet and replied: "What my colleague says is entirely true. I did see the patient at the place and time mentioned. I did agree on the diagnosis of acute appendicitis, and I did advise against an operation. I will tell you the reason why: because I believed the boy's chances of life were greater without an operation than by an operation performed by my colleague." Such were the amenities in the early days of Coley's surgical experience. He

[1] *Lancet*, 1932, i, 960.
[2] *The Yale Alumni Weekly*, January 20th, 1933.

referred to Samuel Gross's dictum in 1876 to the effect that surgery had reached its acme and that little further could be expected in the way of improvement or discovery, and to Professor Faure's recent opinion to the same effect. In 1893 Coley was appointed to the staff of the New York Cancer (now the Memorial) Hospital, and has seen the cancer mortality in New York City rise from 53 per 100,000 in 1885 to 117 per 100,000 in 1931. There is not any age limit at the two hospitals from which he is now retiring; he still feels vigorous, but believes that room should be made for the young, and he will have more time for writing and other work.

FERTILITY AND ECONOMIC STATUS

More than sixty years ago Francis Galton warned us that a nation in which economic or religious customs impeded the reproduction of gentle-natured persons endowed with foresight and favoured the reproduction of their opposites, was "practising the arts which breeders would use, who aimed at creating ferocious, currish, and stupid natures." Twenty-seven years ago Dr. David Heron, a worthy disciple of Galton and Galton's great apostle Karl Pearson, brought forward "evidence enough to show that the birth rate of the abler and more capable stocks is decreasing relatively to the mentally and physically feebler stocks." Since then a great majority of published statistical investigations have confirmed Heron's conclusions. In a recent paper Professor Raymond Pearl discusses the data provided by a bureau for contraceptive advice in Baltimore from the point of view of studying the relation between fertility and economic status.[1] The material consisted of, for some purposes, 816 women, and, for detailed study, 728 women, and may not be a random sample of the population. It had, however, the advantage that the histories of the women with respect to pregnancies were known in fuller detail than is usual. Professor Pearl made use of a new method of measuring the pregnancy rate (to which we shall refer later) as well as the time-honoured birth rate; he also examined the wastage rate—namely, the ratio of abortions and/or miscarriages to total pregnancies, and correlated the three variables with weekly income. The results he reaches are: (1) that the women in his sample had higher pregnancy rates than comparable samples of the general population, a result which, as he remarks, was to be expected in such data. (2) That the women with relatively higher weekly incomes tended to have relatively fewer pregnancies and fewer children than those with relatively lower weekly incomes. (3) That although the previous conclusion applies to both white and coloured women, the higher pregnancy rates and birth rates of the latter are only partly explained by economic differentiation. (4) That there is within each group no sensible correlation between wastage rate and economic status. (5) That in spite of their greater fertility the wastage rate of the coloured women is less than that of the white women, leading to the corollary that, as reproductive mechanisms, the negro women are more efficient than the white women. In so far as economic status is a measure of social efficiency—and the most Bolshevik-minded persons would probably allow that it is *some* measure—Professor Pearl's results are in line with those of a majority of his predecessors.

It is usually possible to rouse the most apathetic statisticians to fury when somebody proposes a new index number, and Professor Pearl's pregnancy index may perhaps have that effect, although vital statisticians are milder folk than economic statisticians. His plan is to divide the number of pregnancies by the number of years of married life, less 0.75 times the number of full-term pregnancies, 0.250 times the number of spontaneous miscarriages or abortions, and 0.375 times the number of therapeutic abortions. For instance: "Case No. 72 had been married five and a half years, and had had two living children and fifteen self-induced abortions. Her exposure to risk of pregnancy was therefore $5.5-(2\times0.75)-(15\times0.25)=0.25$ person-year, and her pregnancy rate per 10 person-years exposed to risk $=17\times10\div0.25=680$." A possible objection to this plan is that it makes the eventuation of the pregnancy of the essence of the business, so that two women of essentially the same physiological fertility will necessarily have different indices. Suppose, for example, that Case No. 72 had become pregnant on the marriage night and had borne a child at the end of nine months, had then immediately become pregnant again, and so on. Then in the sixty-six available months she will have produced seven children and will be three months pregnant. She will have, from one point of view, 100 per cent. index of *fertility*. Professor Pearl would give her an index of $70\div5.5-(7\times0.75)=70\div0.25=280$. If, again, the woman had had an abortion every three months—twenty-two in all—then, since $5.5=22\times0.25$, Professor Pearl's index would be infinite; even if we leave out the twenty-second abortion as coming just outside the range of observations, the index would have the respectable value of 840. Professor Pearl has, of course, defined his index as a pregnancy *not* a fertility index, but as there is a danger of confusion it might be worth while to consider whether another index not having this defect might not be invented. This should be a pleasant topic for discussion in vital-statistical circles.

EARLY DIAGNOSIS OF POLIOMYELITIS

With the increased interest shown in the use of convalescent serum in the prophylaxis and treatment of acute poliomyelitis has come a realization that more attention must be paid to the diagnosis of the disorder in the pre-paralytic stage. In a review of the use of immune serum in this malady, appearing in the current issue of the *Archives of Disease in Childhood*,[1] Dr. J. M. Smellie quotes an American authority to the effect that the diagnosis of pre-paralytic poliomyelitis consists of a "healthy clinical suspicion and a lumbar puncture." While there are many instances where this may well be true it should be recognized that the pre-paralytic stage does present a definite chain of symptoms and physical signs which make diagnosis possible although difficult. The acute phase lasts for twenty-four to forty-eight hours, and while fever is constant it is seldom above 102°, and the child is more prostrate than the temperature would indicate. Among other symptoms are: headache, pains in the neck, back, and limbs, vomiting (once or twice), apathy, and drowsiness with irritability on being roused, due essentially to hyperaesthesia and muscular rigidity. Of the early physical

[1] Some Data on Fertility and Economic Status, *Human Biology*, 1932, iv, 525.

[1] *Archives of Disease in Childhood*. Vol. viii, No. 43, February, 1933. Published by the British Medical Association. (4s. 6d.)

igns Dr. Smellie stresses rigidity of the neck muscles, which is seldom sufficient to cause head retraction and ust be looked for. It may be demonstrated in various ways: asking the child to pick up a penny or kiss his knee, getting the child to sit up when the hands are placed behind the body to support it (Amoss's sign), or by getting the child to touch the sternum with his chin, when the child in the pre-paralytic stage will try to do this by opening the mouth. Other physical signs include a rapid pulse rate out of proportion to the temperature, constipation, some fine tremor of the hands and lips, with often an increase in the deep reflexes. Retention of urine, photophobia, and sweating of the face and neck may occur, but less commonly. It is obvious from these various features that differential diagnosis must be difficult on clinical grounds alone. However, there is enough in the picture here summarized to point strongly to the need for a diagnostic lumbar puncture. The cerebro-spinal fluid will be found under slightly increased pressure ; it will be clear, and on examination show the following features: the cells are usually between 50 and 200 per c.mm., and, while the presence of polymorphonuclear leucocytes in the early, and lymphocytes in the later, stages is the rule, this is open to variation, and cytological examination alone is insufficient. The protein content of the fluid is increased, while the chloride content is normal. These three points—cells, protein, and chlorides—enable the diagnosis to be made with some degree of certainty. In this connexion Dr. Smellie points out that lumbar puncture is viewed by some authorities as of possible danger in causing extension of the disease, and this seems likely to happen when too much fluid is withdrawn and the pressure allowed to fall too steeply. The removal of a small quantity of fluid for diagnostic purposes is, however, fraught with no danger at all, and for early diagnosis the procedure cannot be omitted.

"RADIUM POISONING"

In the *Journal of the American Medical Association* for February 11th (p. 410) is a report, by Drs. Gettler and Norris, of a further fatal case of poisoning from the ingestion of radio-active materials. The patient, a man 52 years old, died from emaciation, anaemia, and necrosis of the jaw. He had been taking some quack preparation for about five years, and, after death, radio-active deposits were found in the bones and teeth in such amounts that they produced "autophotographs" when laid upon photographic plates. Up to the present, we believe, no such cases have been recorded in this country ; but the symptoms of poisoning by this means are so insidious in their onset that a case might easily deceive the most experienced as regards its true nature. We understand that the authorities have it under consideration as to whether radio-active preparations should be included in the poison schedule. So far as the matter concerns us it would appear to be one in which prevention is certainly better than cure, and we agree with the American authors who consider that the sale of all preparations of this nature should be absolutely prohibited, and that all radio-active materials should be definitely labelled "poison." Radium and other radio-active substances taken by the mouth are the most deadly poisons known to science: it is estimated that 0.01 mg. distributed over the whole body is a sufficient amount of radium to produce a horrible death. It is, moreover, a poison for which there is no known antidote.

A BISHOP'S TRIBUTE

A noteworthy tribute to the medical profession was paid by Dr. Luke Paget, lately Bishop of Chester, at the annual meeting of St. Luke's Hostel. Bishop Paget, who is a son of the great Victorian surgeon Sir James Paget, confessed that he was often rather pained by the very light-hearted criticism he heard with regard to doctors. At times when people spoke so lightly of medical research and opinion he felt inclined to tell them that they had no notion of the immense validity of medical science. The public had small appreciation, too, of the skill which entered into surgery—the bishop compared the surgeon's fingers, with their strength and delicacy, to those of Kreisler playing the violin. Yet people had a habit of discussing doctors as airily as they would discuss their dressmaker ; they rushed into discussions on medical matters with the same eager ignorance as they talked on theology, and he felt that such people needed a measure of wholesome correction and to be reminded of the strength and solidity of the great structure of medical science and practice which had now been reared. Bishop Paget gave a vivid description of an occasion at University College Hospital when he saw Victor Horsley, surrounded by his students, coming down the stairs. "Talk of a general among his immediate staff, or a bishop among his clergy, they were not in it with the dignity of the surgeon and his ardent followers. I moved out of the way of them just as I would move out of the way of a royal procession." Bishop Paget also recalled a remark made by his father, that he could almost have written a paper on the sort of things—mostly ill-informed things—his patients said about him. Very often the person for whom he had done something really considerable would say, "Well, you have not done me much good," while another to whom he had rendered the most trifling service would exclaim that he had been marvellously benefited. Another of Bishop Paget's reminiscences was of hearing Liddon preach in the University Church at Oxford on the choice of a profession for young men. Liddon clearly felt that there was one profession—his own—which stood apart from all others, but he added that if the young men did not feel a call in that direction, why should they not think of being doctors? He summed up the doctor's work in one burning sentence, telling his university congregation that it was a profession which with one hand stretched out to the utmost attainable in science, and, with the other, scattered what it had gathered broadcast among those who needed it most.

The King, accompanied by the Queen, will lay the foundation stone of the new buildings of the University of London in Bloomsbury on Monday, June 26th.

At the invitation of the president of the Swiss Goitre Commission Colonel Robert McCarrison will open the discussion on the aetiology of goitre at the second International Congress on Goitre, to be held in Berne from August 10th to 12th.

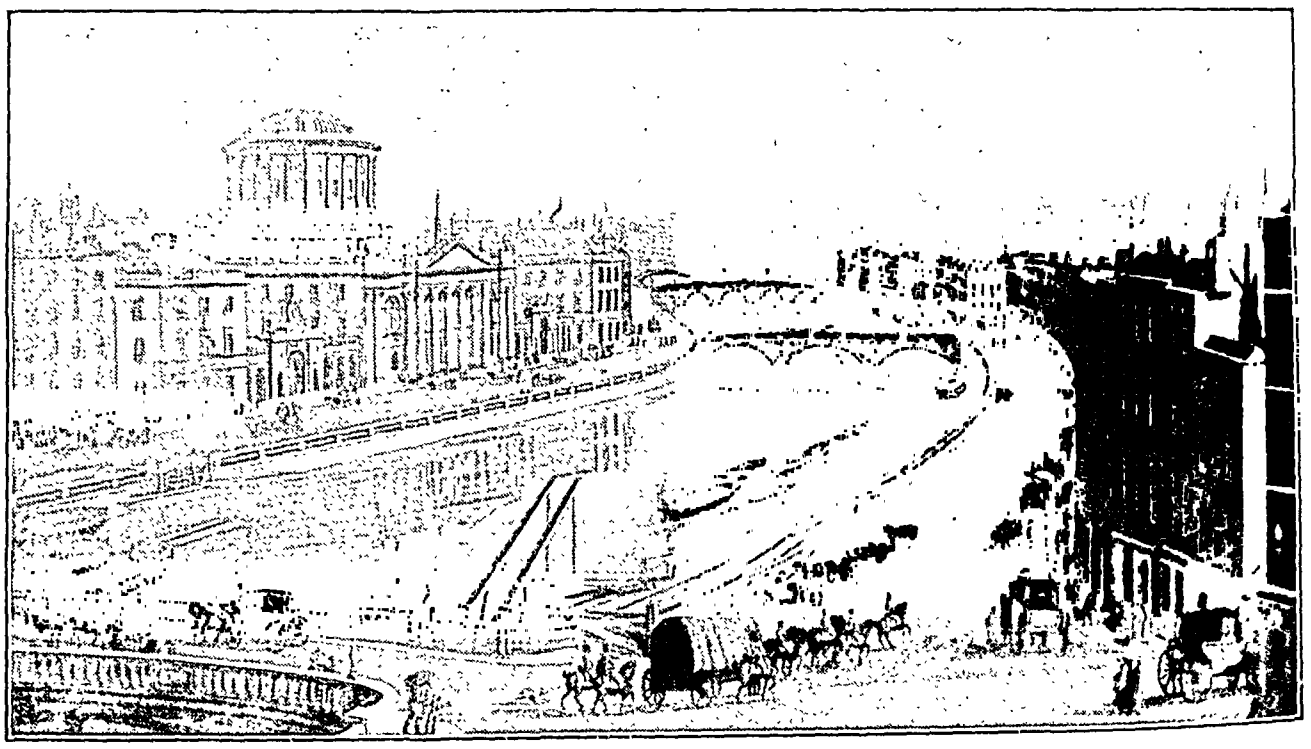
ONE HUNDRED AND FIRST ANNUAL MEETING
of the
British Medical Association
DUBLIN, 1933

THE one hundred and first Annual Meeting of the British Medical Association will be held in Dublin this summer under the presidency of Dr. T. Gillman Moorhead, Regius Professor of Physic, Trinity College, who will deliver his address to the Association on the afternoon of Tuesday, July 25th. The sectional meetings for scientific and clinical work will be held, as usual, on the three following days, the morning sessions being given up to discussions and the reading of papers, and the afternoon to demonstrations. The Annual Representative Meeting for the transaction of medico-political business will begin on the previous Friday, July 21st. The full list of presidents, vice-presidents, and honorary secretaries of the sixteen Scientific Sections was published in the SUPPLEMENT *of March 4th. Other details of the arrangements for the Annual Meeting will appear in later issues. We publish below the first of a series of descriptive and historical articles on Dublin and its medical institutions. A preliminary note appeared in our issue of December 3rd, 1932 (p. 1026).*

HISTORY OF DUBLIN

BY J. J. O'NEILL, M.A.

The English name "Dublin" is a corruption of the Irish *Duibhlin*, the "Black Pool." This pool, in all probability, was situated in the vicinity of the original settlement, whence the name spread to the settlement near by. In Irish records the name is *Ath Claith Duibhlinne*. The Egyptian geographer, Ptolemy, whose work was regarded down to the fifteenth century as a standard textbook, calls Dublin *Eblana* and Ireland *Hibernia*.



THE RIVER LIFFEY AND THE FOUR COURTS, DUBLIN.
(From an old print.)

From Jocelyn's *Life of St. Patrick*, a twelfth century record, we learn that the pagan monarch of Dublin was converted to Christianity in A.D. 445; from this it may be concluded that Dublin was a place of considerable importance at that early period. To follow the growth and development of Dublin we must begin with the capture of the city by Scandinavian pirates in the year A.D. 836. The method employed by those early invaders was curious and original. According to one of their historians, Claus Magnus, the city was taken by the stratagem of snaring a number of wildfowl and releasing them each with a lighted turf fastened under its wings; when the birds fell on the roofs of the houses the lighted turf speedily set fire to the thatch and reduced the buildings to ashes. Four years after their entry the Danes erected a large fort, which occupied a position adjacent to the present Castle of Dublin, but when, later, dissension made itself manifest among the invaders, King Malachi seized the stronghold. (It may be of interest to note that this Malachi was the king mentioned in Moore's well-known poem *Let Erin Remember*.) For close on forty years Dublin enjoyed peace, but in 919 the Danes again became masters of the settlement and of parts of the surrounding country. About twenty-five years later a large number of Danes embraced Christianity, and the famous Abbey of St. Mary was erected on the northern side of the Liffey. From time to time the Irish endeavoured to overcome the Danish rule in Dublin, but they were without success until Good Friday, 1014, when the Danish power was finally broken at the Battle of Clontarf.

The next important event was the capture of Dublin by Dermod MacMurrough and his Norman ally, Richard

FitzGilbert, Earl of Striguil, who was known by the sobriquet "Strongbow." Henry II arrived in Dublin in November, 1171, and for close on three months held court in a wicker palace erected near the site of the present St. Andrew's Church. A charter, still preserved in the municipal archives, was presented to Dublin, and Hugh de Lacy was appointed governor. Following the departure of Henry, a determined effort was made by the Irish of Leinster to capture the town, but the attackers were driven off after sustaining severe losses. In 1185 a great part of the town was destroyed by fire, and in the same year the building of the Cathedral Church of St. Patrick was begun. The Castle of Dublin was erected in 1197 under the direction of Miles Fitz Henry, the justiciary. In 1209 the O'Byrne and O'Toole clans swept down on the city and caused great havoc among the inhabitants. During the succeeding years Dublin grew in size and importance, and the chief magistrate was dignified by the title of Provost. A public water supply was introduced, and many improvements were effected in the life of the community.

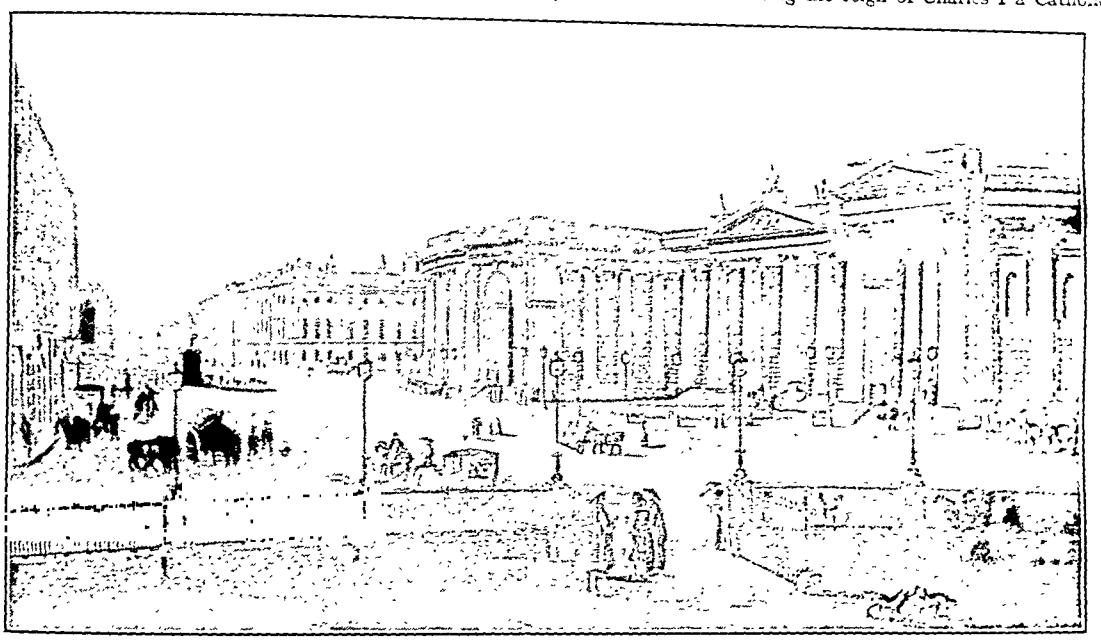
In 1315 Edward Bruce planned to lay siege to the town, but the preparations made by the inhabitants appear to have daunted his followers, and after a brief skirmish at Castleknock he withdrew to Limerick. Five years later, in 1320, Pope Clement V. established a university in the Cathedral Church of St. Patrick, where it continued until the suppression of the monasteries by Henry VIII. Among the various references to Dublin during the fourteenth century are some which allude to sittings of Parliament. Richard II, who visited Ireland in 1394, held a Parliament in Dublin during the winter months of that year and, we are informed, "redressed many grievances." A Norman writer who accompanied Richard to Dublin says:

> "Dublyn is a good town, the best in the Realme, seated upon the sea, and rich in merchandise, where we found such plenty of victuals to relieve our army, horse and foot, consisting of thirty thousand or thereabouts, that the prices of the same did not much increase."

Early in the fifteenth century the townspeople equipped a warlike expedition which was sent to invade Scotland and Wales. The soldiers, we are told, "fought valiantly, and ravaged the shores of those countries." They returned amid scenes of great popular rejoicing, and among their spoils were the relics of St. Cubic, which were deposited in the vaults of Christ Church. Lambert Simnel's rebellion was supported by the citizens, who afterwards made humble apology to Henry VII for their action. The next event of importance was the rebellion of "Silken Thomas," the son of the Earl of Kildare. He laid siege to Dublin, which was captured after a short resistance; but later he was defeated and was taken prisoner to London, where he forfeited his life. An outstanding event in the history of Dublin in the sixteenth century was the establishment in 1591 of Trinity College under the title of "The College of the Holy and Undivided Trinity, near Dublin"; it was opened in the winter of 1593–4.

In 1613 a Parliament representative of all Ireland was held in Dublin. During the reign of Charles I a Catholic University was established in Back Lane, but this was closed by Government order in 1632. The outbreak of the war of 1641–2 saw Dublin closely invested by Eoghan Ruadh O'Neill, but lack of provisions and of the necessary war supplies compelled him to withdraw his forces. At the restoration of the Stuarts, Dublin citizens were rewarded with a gift of a gold chain from the King, and the title of Lord Mayor was bestowed upon its first citizen. From this time began the development of Dublin as we know it to-day. Houses were erected outside the mediaeval walls, and the space between the Castle and Trinity College was built upon. The Green at Oxmantown was laid out in building lots, and four new bridges were erected over the Liffey. The close of the seventeenth century was a period of great excitement in Dublin. James II arrived in 1689, and the capital remained his headquarters until his final defeat at the Boyne in July, 1690. A royal mint was set up in Capel Street, and a Catholic was appointed provost of Trinity College. When William III came he presented a mayoral chain to replace that which had been given by Charles II, and which had disappeared along with its wearer, Sir Michael Creagh, during the confusion which marked the flight of James II.

The first agitation for an autonomous legislature marks an important epoch in the story of Dublin. William Molyneux in his *Case of Ireland*, and Swift in his *Drapier Letters*, published respectively in 1698 and 1724, presented a new conception of the political relations of England and Ireland. Notwithstanding the severe restrictions under which Irish trade laboured during the eighteenth century, there appears to have been a considerable advance in Dublin's commercial life. The linen trade progressed to an astonishing degree, and in 1726 a Linen Hall was erected. Towards the middle of



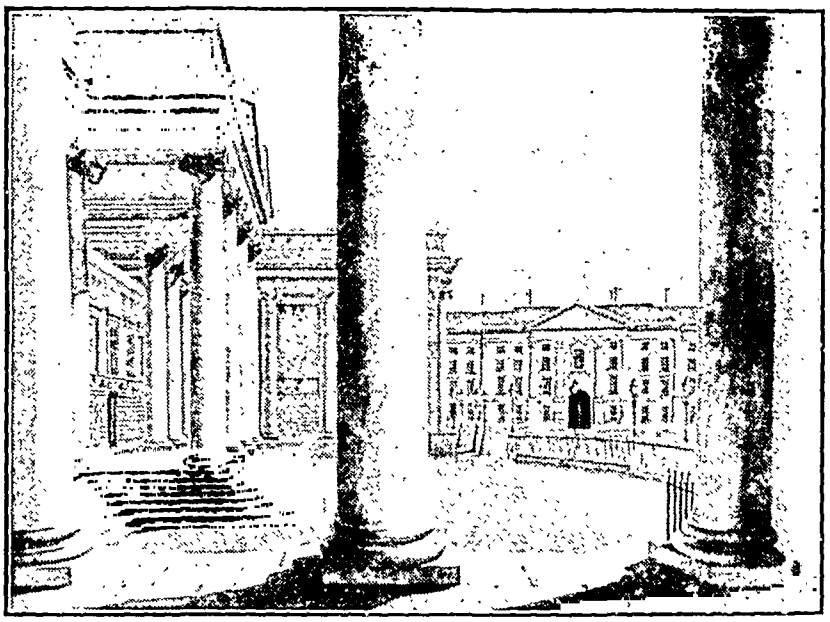
COLLEGE GREEN AND THE HOUSES OF PARLIAMENT, DUBLIN
(From an old print.)

the century the population had grown to nearly 100,000. Local and municipal institutions extended their spheres of influence, and a very thriving silk industry was firmly established. During the second half of the century many fine public buildings and private residences were built. Art, literature, science, painting, and the drama were encouraged by the brilliant and hospitable society of the period. Packet boats were running regularly between Dublin and England, and no fewer than twenty stage coaches connected the city with the provincial towns. The brilliance of the social life of Dublin at this time was unequalled in any Continental capital. In 1731 a music hall was opened in Crow Street, and theatres were erected in Rainsford and Aungier Streets. Four years afterwards the first performance of Handel's *Messiah* was given in the Fishamble Street Music Hall, the great composer himself conducting. Charitable institutions have always been well supported in Dublin, and it is interesting to note that one of the earliest of the Dublin charities—the Rotunda Lying-in Hospital—was founded as far back as 1745, by Dr. Bartholomew Mosse, in George's Lane (now Great George's Street). At the end of the century Dublin had a population of 172,084 and an area of 1,264 acres.

The Act of Union dealt a severe blow to the fortunes of Dublin during the early years of the nineteenth century. The transfer of legislation from College Green to Westminster meant a greater loss to Dublin than was at first apparent. The nobility, who had acquired or built magnificent residences in or near the city, now betook themselves to England, and for a period it seemed as if the capital of the nation was destined to sink into a sleepy and decaying provincial town. Great efforts were made, however, by the citizens to stem the tide of ill fortune, and by degrees improvements were effected. In 1808 the policing of the streets was reformed, and what was previously Parliament House was opened as the Bank of Ireland. In 1815 the General Post Office in O'Connell Street was erected, and in the following year the Pro-Cathedral Church of St. Mary in Marlborough Street was begun. The railway between Dublin and Dun Laoghaire (Kingstown) was opened in 1834, and municipal life was improved by the introduction of democratic representation in 1841. An electric telegraph between Dublin and Holyhead was laid down in 1852, and in the following year there was a great industrial exhibition in Merrion Square. The railway between Dublin and Bray was opened in 1854, and in the autumn of the same year the Catholic University was established under the direction of John Henry (later Cardinal) Newman. In 1865 an International Exhibition was held in Earlsfort Terrace on the site of the present University College; 1868 saw the completion of the Vartry water supply for the city, and February, 1872, the inauguration of the Dublin tramway system. St. Stephen's Green, which was enclosed about 1678, was reopened for public use about this time. The Municipal Free Libraries were inaugurated in 1884, and six years later the National Museum and Library, Kildare Street, were opened. The National Museum contains the Royal Irish Academy's unique collection of Irish antiquities. The first performance was given at the Abbey Theatre in 1904. In 1908 the Royal University of Ireland was incorporated with the National University: there are now three constituent colleges—Dublin, Cork, and Galway—and the handsome building which at present houses the first of these was erected on the site of the old Royal University buildings in Earlsfort Terrace. April, 1916, saw an insurrection in Dublin. The General Post Office and other public and private buildings were garrisoned by the Irish Republican Army and the Citizen Army; the city was the scene of fierce engagements for nearly a week, and much destruction was caused.

During the last century there has been a steady advance in Dublin's intellectual and commercial life. The high order of Irish scholarship received fresh stimulus from the establishment of the National University, and it may be of interest to note that the originators of the Shannon Electricity Scheme and the Drumm electric train are graduates of the Dublin College of the National University.

The trade of Dublin has considerably increased in size and importance since the creation of the Irish Free State. During the last ten years many industries have been launched, and it is pleasing to learn from official statistics that they all show a steady upward tendency. Brewing, baking, printing, malting, tobacco, and the manufacture of woollen and worsted goods and of boots and shoes are the chief industries of Dublin, but practically all others are represented. Protective tariffs have helped to no small extent, and as most of the new protected industries have been established in or near the city, it is certain that Dublin in the future will be the centre of no inconsiderable manufacturing activity.



TRINITY COLLEGE, FROM THE HOUSES OF PARLIAMENT, DUBLIN.
(From an old print.)

[The illustrations in this article are reproduced by the courtesy of the Irish Tourist Association.]

HEALTH OF THE ARMY

The report on the health of the Army for 1931[1] conforms to a set standard initiated early in the post-war era. It is divided into three sections: a succinct survey of the health of the Army at home and abroad among officers, gentleman cadets, soldiers, boys, women, and children; an account of the work carried out by the special departments; and detailed statistics of the health of the troops in the various commands. Statisticians, in all walks of life, in preparing tables are apt to forget the dictum of a business man that "Statistics warn the wise." The Army Medical Department cannot be accused of this fault, as they endeavour to explain any increase or decrease of disease in the Army, and their report is therefore interesting. It impresses by accepting the uncontrovertible fact that certain diseases cannot be prevented by administrative measures until medical knowledge is further advanced. It indicates that medical officers of the R.A.M.C. engaged in the practice of medicine, surgery, and their branches are skilled in professional duties, and work under good conditions and in hospitals well equipped for the treatment of patients. In due course the Army, no less than the civil authorities, will recognize that many preventive measures may be expected to result from the

[1] H.M. Stationery Office. 1933. (2s. 6d. net.)

investigations and studies of the general practitioner. When this is fully realized enthusiasm will weld a groping band of hard workers into a compact force for the furtherance of medical science in the Army.

In reading this official publication one can visualize the high ideals of the Army doctor, so well described in a lecture to the students at Camberley by that great soldier the late Field Marshal Sir William Robertson. "Remember that when the day for fighting comes the qualifications demanded of you, whether on the staff or in command, will include, in addition to a good theoretical knowledge of your professional duties, the possession of a quick eye, a good digestion, an untiring activity, a determination to close with your enemy, and a firm resolution not to take counsel of your fears."

The sick admission ratio among officers was 204.3 per 1,000 of strength, as compared with 196.1 for 1930, and, among soldiers, 467.7 as against 428.4. The increase, 39.3, in the admission ratio for soldiers was almost entirely due to influenza during the early months of the year. This disease was responsible for the admission to hospital of 8,324 warrant officers, non-commissioned officers, and men, compared with 1,564 in 1930—an increase of 37.1 per 1,000 of the strength. The admission ratios for the ordinary diseases due to infection, with the exception of influenza and meningococcal infections, were normal. They were: diphtheria, 1.0; enteric fever, 1.2; influenza, 45.9; measles, 0.6; meningococcal infection, 0.5; mumps, 0.8; pneumonia, 3.3; scarlet fever, 0.6; pulmonary tuberculosis, 1.3. So, too, were the common ailments, and in most cases the figures correspond closely with those for 1930. The admission ratios were: diseases of the digestive system, 54.7; local and general injuries, 54.3; malaria, 39.6; diseases of the areolar tissue, 35.5; venereal diseases, 32.2; diseases of the skin, 24.1.

The ratios for diseases of the respiratory system, 20.2, and inflammation of the tonsils, 31.7, are lower than were to be expected in a year when the influenza rate was high. Among Eastern diseases the ratio for dysentery increased to 9.4 from 7.6 in 1930; pyrexia of uncertain origin, 1.3 against 0.9; while sandfly fever shows a slight decrease, 17.1 against 17.9.

Attention is drawn to the recorded cases of gastric and duodenal ulcers and the figures for venereal disease. A special scrutiny was made of all cases operated on for gastric and duodenal ulcers. These diseases are comparatively common in the Army, and, while a yearly survey is interesting, the time is now opportune to examine and publish the results of treatment over a period covering the last five years, in view of the statement that operation only rarely renders a man fit for military duty at home and abroad.

The figures for venereal diseases are remarkable. There is a decrease in the general incidence (32.2) which is noteworthy, but a very high ratio of 221.9 per 1,000 of strength in China, which is regrettable. The British soldier of to-day is usually a clean-living man, and by his healthy conduct impresses his personality on his fellow citizens. Abroad, when carefully looked after, he is an ambassador for peace. If he is cut off from wholesome amusements, recreations, and sports he may fall a victim to boredom, leisure, and vicious pursuits. It is evident from the published reports and statistics that, if headway is to be made in China, stricter attention to sociological factors should be paid by regimental officers.

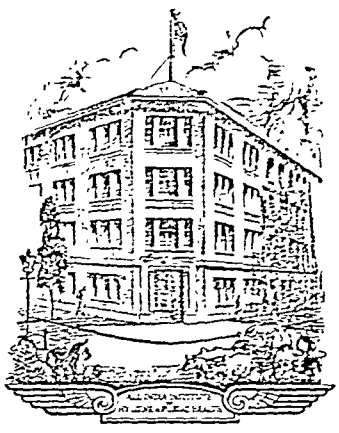
The death ratio was 2.58 per 1,000, against 2.32 in 1930; while the invaliding rate, an indication of good doctoring, fell to 8.19 per 1,000, against 9.28 in 1930—the lowest yet recorded since 1921. Nervous and mental diseases, pulmonary tuberculosis, and inflammation of the middle ear are still the principal causes of invaliding. The numbers invalided from these diseases were: nervous, 192; mental, 175; pulmonary tuberculosis, 181; and inflammation of the middle ear, 131.

Section II deals with departmental organization and the work which has been carried out during the year. Many old problems, such as clothing and equipment, physical training, and rations, are discussed. Here are seen the different standpoints of the medical enthusiast in advocating more hygienic uniforms and lighter equipment, and the "practical soldier" who evidently for the present accepts the acid test of a great war and is guided mainly by questions of policy and finance. In Section III the full account of the health of the troops in India merits careful reading. It shows that the medical authorities in India are taking stock of the medical situation, and are subjecting the important diseases to a critical analysis.

India

All-India Institute of Hygiene

The opening of the All-India Institute of Hygiene at Calcutta some three months ago was the sequel to collaboration between Major-General Graham, Public Health Commissioner with the Government of India, Sir J. W. G. Megaw, formerly head of the Calcutta School of Tropical Medicine and now Director-General I.M.S., and Dr. W. S. Carter, Associate Director of the Rockefeller Foundation. The Foundation offered to the Government of India to bear the cost of securing the site selected, and to build and equip the Institute, *provided that* the Government would agree to meet the cost of staffing and maintenance subsequently. The site was acquired and cleared in 1930, and in the autumn of that year the process of building began. The new Institute almost adjoins the Calcutta School of Tropical Medicine, and comprises six departments — namely, public health administration, sanitary engineering, vital statistics and epidemiology, biochemistry and nutrition, malariology and rural hygiene, and maternity and child welfare and school hygiene. Each department is staffed by a professor and his assistant, with laboratory or other workers. The primary object of the Institute is to bridge over the gulf between the results achieved by pure research and their practical application to the community; its chief function will be instruction, therefore. The subjects for the first part of the Diploma of Public Health will continue to be taught by the staff of the School of Tropical Medicine, but the specialized subjects in public health will be taught by the staff of the Institute, each professor being in charge of his own subject. The examination for the D.P.H. is conducted by the University of Calcutta, with which the Institute will be duly affiliated. It is also intended to provide short post-graduate courses in special subjects for public health workers who desire to take up advanced study, and the University has now brought into being a doctorate in public health science for which a year's training in the new Institute in some special branch of this subject will be required. In view of the importance of maternity and child welfare work and of public health nursing it is contemplated that special courses in these subjects may be arranged for women graduates and nurses respectively. The work at the Institute will also be co-ordinated with the various aspects of practical hygiene and public health all over India. It is hoped that it will thus be able to render assistance to public



health administrators and workers, and institute inquiries and investigations of a practical nature in the application of medical research and knowledge for the betterment of the Indian peoples.

Health and Economics in the Punjab

In his last annual report for 1931 as Director of Public Health Colonel C. A. Gill remarks that in few parts of the world is the influence of meteorological conditions upon the state of the public health so striking as in India, and in no part of this sub-continent is the association of great epidemics of malaria and plague with conspicuous vagaries of climate so manifest as in the Punjab. In 1931 there was no great pestilence in the province; this is attributed to the facts that the first half of the year was marked by a deficient rainfall militating against plague epidemics, while an almost normal monsoon in the second part of the year negatived the occurrence of any widespread epidemic of malaria. In the year reviewed there was an exceptional increase in the number of births, a lower infantile mortality rate, and a lower general death rate. The great fall in the prices of wheat and cotton seriously reduced the income of the peasant and his ability to pay his way, but no evidence was forthcoming that he suffered in health as well as in pocket. On the contrary, the cheapness of the staple food grains rendered it possible for even the poor man to obtain, with the aid of his hidden reserves, more of the necessaries of life than would have been possible in normal times. Colonel Gill concludes, therefore, that there is no reason to think that the precarious condition of the agricultural population occasioned by the phenomenal fall in prices has exercised any adverse effect upon health. He adds that, from the public health standpoint, low prices must always be preferable to high prices. An appreciable proportion of both the urban and rural populations, however, is constantly afflicted by disease and ill-health as a direct or indirect result of economic stress. This fact has become increasingly obvious in the Punjab during the past few years, and it is now known that several diseases, such as rickets, scurvy, and osteomalacia, which are either predisposed to or caused by an improper or unsuitable diet (rather than attributable to a lack of food or the ability to purchase it), are widely prevalent in the province. Colonel Gill insists that one of the most important tasks of the Public Health Department—if its efforts to promote the health and well-being of the people are to succeed—is, therefore, the inception of measures directed against dysgenic habits and customs that deprive the body of the essential food factors, and thereby lower the resistance to infection, or give rise to specific disease.

The Central Provinces and Berar

The three years 1929–31 were characterized in the Central Provinces and Berar by a steadily growing appreciation of medical relief and dwindling financial resources. The total number of hospitals and dispensaries increased by three, to 337, although several mission, mine, and railway dispensaries were closed; these were mostly only temporary, and their abolition did not curtail treatment. Four more local fund dispensaries were taken over by local bodies, the number so far thus transferred being 119. In his triennial report Colonel F. E. Wilson, I.M.S., Inspector-General of Civil Hospitals in the Central Provinces, states that the scheme for bringing medical relief within closer reach of the rural communities by subsidizing medical local practitioners (inaugurated in 1929) has failed to fulfil its objective; the principal reason for this appears to be the reluctance of the well-to-do to pay for medical treatment, which makes the free treatment of the poorer classes an overwhelming burden on these medical practitioners, even with the subsidy. The number of travelling dispensaries controlled by the Director of Public Health steadily increased, but the four malaria dispensaries started by the Public Health Department had to be discontinued owing to shortage of funds, although there was an increase in the incidence of this disease. In spite of such curtailing the number of out-patients dealt with exceeded that of the previous triennium by 1½ millions; the number of in-patients rose by 25 per cent., and that of operations by over 20 per cent. A gratifying feature of the statistics is the advance thus recorded in the treatment of women patients: all the women's hospitals show satisfactory results, which would have been even better had it been possible to provide the additional accommodation required. A scheme for organizing and training nurses was brought into being during this triennium, but the supply of trained nurses for hospital and private needs is still far short of the demand. At the Mayo Hospital, Nagpur, financial difficulties have resulted in the closing of a number of free wards. Since April, 1931, post-graduate courses for medical practitioners in the United Provinces, at the School of Tropical Medicine, Calcutta, and the Medical College, Bombay, have been suspended for the same reason. The provision of a sanatorium for tuberculosis has had to be postponed until more money becomes available. In 1931 there was a regrettable decrease in the payment of grants by certain local authorities, and Colonel Wilson points out that this is an unsound form of saving, for there is no point in subsidizing the education of children if they are to die from disease. He urges that the time has come for the Government to consider seriously the question of dispensary finance, and he suggests certain restrictions upon the supply of medical treatment for persons who could afford to pay for it but do not.

France

[FROM OUR CORRESPONDENT IN PARIS]

School of Puériculture of the University of Paris

When the term "puériculture" was mentioned for the first time in 1895 at a meeting of the French Academy of Medicine, it provoked general hilarity. Since then it has come into its own—has ceased to seem ridiculous and fantastic and has been accepted with all the honours due to solemn orthodoxy. Puériculture and all it connotes have begun to permeate the national mentality and to find concrete expression in bricks and mortar and much else. On Sunday, March 5th, the President of the French Republic, accompanied by the Ministers of National Education and Public Health, opened the magnificent new School of Puériculture in the Boulevard Brune, where some of the old fortifications of Paris were situated before the war. Though the building itself is brand new—not even completed—the movement it represents dates from July 1st, 1919, when the School was officially created in response to an urgent demand for the centralization of various activities, some more or less still in the nascent state. These activities include teaching infant welfare in all its aspects to doctors, midwives, and nurses. The school is an autonomous institution attached to the University of Paris under the direction of the Faculty of Medicine. It is authorized by the Conseil Supérieur de l'Instruction Publique to grant university diplomas, issued by the Faculty of Medicine, to French and foreign medical students and doctors, and also to midwives and nurses. With a generous donation from the American Red Cross, the School began its work in modest quarters in the 15th arrondissement—one of the poorest in Paris.

Here the students of social service in connexion with infant welfare found ample material to illustrate their two-year course of theoretical and practical studies. The new building is in the adjoining 14th arrondissement—a "Promised Land" into which Mademoiselle Greiner has migrated with her devoted staff of ex-pupils after many years' labour in the "15th." So, though the buildings are new, they have been occupied by a staff of veterans, well versed in all the problems confronting them, and accustomed to working together. The oldest of these veterans is Professor Pinard, the School's Director. The President of the Executive Committee is Professor Balthazard, doyen of the Faculty of Medicine. The Secretary-General is Dr. B. Weill-Hallé, whose name is familiar to many on account of his association with the first administration of B.C.G. to babies.

Under the personal guidance of Mademoiselle Greiner, the School's Directress, your correspondent inspected the new building from top to bottom. Professor Pinard has described it as a "temple of puériculture where we can apply the great principles destined for the amelioration of the race." The ground floor is largely devoted to offices, kitchen, out-patient quarters, etc. The students' dining-room, sitting-room, library, and other quarters are spacious and airy. Each student has her own bed-sitting-room, 150 altogether. They are tastefully furnished and capable of reflecting the personality of the individual occupant. Last October there were as many as 253 students attached to the School; they are recruited from all over France. The prestige of the School is such that the applications are already in excess of the vacancies. The School not only sends its students out to workmen's homes in the "14th" and to old friends in the "15th," but also to as many as eighty different hospital services in various parts of Paris. These hospital services thus benefit from the volunteer aid of a body of workers who, though not yet fully trained, are well-educated, cultured young women anxious to help as well as to learn.

When the General Practitioner becomes a Specialist

The other day Professor Spillmann of the Faculty of Medicine of Nancy delivered a lecture on the evolution of the campaign against syphilis in the Department of Meurthe-et-Moselle. He has taken a prominent part in this campaign since 1907, and has had some instructive experiences in the ways of human beings as well as of the germs they cultivate. With Nancy as headquarters he has helped to organize a network of dispensaries for the diagnosis and treatment of syphilis. They are to a certain extent polyvalent, being also used for tuberculosis and infant welfare work. But that is by the way. How to staff these dispensaries? The principle was first solemnly enunciated by Professor Spillmann himself that the campaign against syphilis could not be waged regardless of the general practitioner. "Every organization which dispensed with the services of the medical practitioner would find its viability impaired and its development arrested"—noble and statesmanlike sentiments which doubtless did much to appease any feeling of hostility that may have been germinating in the bosoms of the general practitioners in the neighbourhood. This willing-to-co-operate gesture was followed up by an invitation to the local medical society to nominate medical officers to these dispensaries. The arrangement seemed ideal, and in 1923 the local medical society unanimously adopted a resolution voicing its approval of the organization of the campaign against venereal disease in the department. In practice, however, this arrangement proved not quite ideal. The practitioners who staffed certain dispensaries without having properly specialized in syphilis began to acquire an undeserved reputation for superior skill in this field and to steal a march on their fellow-practitioners. Why should such a dispensary appointment qualify a confrere, hitherto "just one of ourselves," to give himself airs? So in November, 1932, the same local medical society, in a resolution, again unanimous, urged the advisability of appointing duly qualified specialists to these dispensaries.

England and Wales

Medical Society of London

The 159th anniversary dinner of the Medical Society of London was held on March 8th at the Trocadero Restaurant, with the president, Sir John F. H. Broadbent, Bt., in the chair. Among the guests at the high table were Lord Hanworth, Master of the Rolls, Lord Dawson of Penn, President of the Royal College of Physicians and of the British Medical Association, Sir Holburt Waring, President of the Royal College of Surgeons, Sir Farquhar Buzzard, Regius Professor of Medicine at Oxford, Dr. Cecil Wall, Master of the Society of Apothecaries, Surgeon Vice-Admiral R. St. George S. Bond, Medical Director-General R.N., Lieut.-Colonel Sir Harold Fawcus, Director-General A.M.S., Air Vice-Marshal John McIntyre, Director R.A.F. Medical Services, Dr. John S. Fairbairn, President of the British College of Obstetricians and Gynaecologists, Mr. V. Warren Low, President of the Royal Society of Medicine, and the presidents of other kindred societies in the metropolis. After the loyal toasts had been honoured, Lord Hanworth proposed "Prosperity to the Medical Society of London," and paid a graceful tribute to the medical profession for the benefits it conferred on the public. "Medicine," he said in conclusion, "is a dynamic science, and to those who practise its art we look for hope and comfort." The President, in acknowledging the toast, recalled that his father, Sir William Broadbent, had occupied the presidential chair of the society forty-two years ago. It had always been a polyvalent body, embracing all branches of medicine, but, unlike most others, it had not opened its doors to women, and in part explanation of this Sir John Broadbent quoted a passage from the *Dirt of the Moon*. In conclusion, he thanked the honorary secretaries, Dr. Jenner Hoskin and Mr. Neil Sinclair, and the registrar, Mr. L. H. Carter, for their admirable work. The health of the visitors was given by Mr. Donald Armour, who prefaced his compliments with a word of regret for the absence of Lord Horder, the society's Orator for 1933, to whom this toast had originally been entrusted. Sir Harold Fawcus expressed the thanks of his fellow guests for the hospitable welcome given them by the Medical Society of London, and, speaking for his own Service, asked why the R.A.M.C. should be considered something apart from the profession as a whole. Why were not young doctors joining? A glance at the report on the health of the Army for 1931 (reviewed at p. 478) would show the many opportunities for professional work offered nowadays by the Corps.

Sterilization of the Mental Defective

At the sessional meeting of the Royal Sanitary Institute held at Warrington, over which Dr. G. F. Buchan presided, a discussion on the sterilization of mental defectives was opened by Dr. J. Gifford, deputy medical superintendent of the Winwick Mental Hospital. Dr. Gifford said that the problem of the unfit was no new one, but it was accentuated in this generation by the saving of infant life as a result of social legislation. A Bill to promote sterilization had already failed in Parliament,

and another would shortly be presented embodying proper safeguards. The term "mental defect" was one defined in law, but the mental defective in many cases was not an easily recognizable unit in the community, and there was a variable graduation from the subnormal downwards to the idiot. It might be especially difficult to distinguish mental defectives from the dull and backward whose condition was perhaps due to a temporary cause. The evidence for hereditary germinal defect in primary mental deficiency was overwhelming, but such heredity was very often not direct. Large numbers of mental defectives had parents who were not themselves defective or even subnormal. This large number of parents, therefore, would be unaffected by any legislation regarding sterilization, and their defective progeny would continue to be born. There was a section of mental defectives whom it would pay to sterilize, but the number of selected cases would be small. It was demonstrable that sterilization would not at present prevent a continual addition to the numbers of defective children, for such children occurred fortuitously in many families apparently free from taint. He pointed out the need for research on a more generous scale in many directions, but he held that a permissive Bill legalizing sterilization with full safeguards should be passed immediately, in particular for selected cases of mental defect, but definitely also in the near future to be extended for the prevention of familial heredities, such as congenital cataract, such grades to be defined by a suitable national committee or commission. Dr. J. S. Manson of Warrington, in supporting Dr. Gifford's contentions, said that it was generally agreed that further research was necessary, but three or four generations, not merely one or two, had to be studied, and the observers did not live for four generations, so that some central organization for making and keeping records was required. He proposed certain resolutions to the effect that the sterilization of persons affected with certain grave defects transmissible by the germ cells to succeeding generations would be a valuable public health measure; that, notwithstanding this opinion, the limitations of sterilization in the present stage of knowledge were recognized; and that steps should be taken towards securing scientific data of a much more reliable character than were at present available, so that the practice of sterilization might be placed on a sure basis, with a view to reducing the incidence of mental defect and disorder. Dr. G. W. N. Joseph, M.O.H. for Warrington, supported the propositions. Segregation was very expensive and almost impossible. It was suggested that marriage between mental defectives would be vetoed, but the community had no right to veto marriage as such. Certain mental defectives could be stopped by sterilization and by no other means, and it was nothing more than an assumption that sterilization would increase immorality and spread certain diseases. Dr. Henry Herd, assistant medical officer of health, Manchester, said that he only wished that some public utterances on this subject were as sound as those put forward by Dr. Gifford. He warned the meeting against expecting too much from sterilization. Some American States had adopted the practice, but it was surprising how little had been done. In California, where sterilization had been in practice since 1909, only about seventy persons per annum had been sterilized. Dr. F. T. H. Wood, M.O.H. for Bootle, supported sterilization on the ground that mentally defective people were unable to carry through the "skilled job" of parenthood. After some further discussion the resolutions proposed by Dr. Manson were unanimously adopted by the meeting, and it was agreed to send them to the Ministry of Health, the Board of Education, the Board of Control, and the Departmental Committee now dealing with the subject.

Red Cross Day

May 12th, the anniversary of Florence Nightingale's birthday, which is now being recognized officially throughout the Empire as Red Cross Day, is to be celebrated on a much more elaborate scale this year by the British Red Cross Society. Permission has been granted for the holding of a flag day throughout the Metropolitan Police area, and all the mayors and chairmen of urban and rural district councils in this area are being asked to co-operate with the organizers. In order to co-ordinate the work of the various counties concerned, Mrs. J. C. May, who last year acted as flag day organizer in the City of London, has been appointed by the Red Cross headquarters as honorary liaison officer. As well as arranging street collections, Red Cross branches are this year organizing displays of their peace-time work. Last year over £10,000 was raised as the result of Red Cross Day collections and appeals in England and Wales.

Scotland

Health of Scotland

The return by the Registrar-General for Scotland dealing with the quarter ending December 31st, 1932, contains a supplementary return for the whole of the year, the chief features of which are a birth rate which is the lowest on record, a marriage rate which is slightly higher than that for the previous year but is equal to the average, a death rate which is slightly above that for the previous year but still below the average, and an infantile mortality rate which is also higher and slightly above the average of the preceding five years. Births registered during the year numbered 91,001, which was 1,219 less than the number registered in the preceding year, and 3,628 less than the average for the preceding five years; the birth rate for 1932 was 18.6. Deaths numbered 66,045, giving a rate of 13.5 per 1,000 of the population, which is 0.2 higher than the rate for the previous year. Deaths of infants under 1 year numbered 7,841, representing an infantile mortality rate of 86 per 1,000 births, which is 4 above that for the previous year and 1 above the average. The death rate from all forms of tuberculosis was 84 per 100,000 of population, being 3 below that for the previous year and 10 below the average. Malignant disease gave a death rate of 153 per 100,000, which is 5 more than in 1931 and 8 above the average; these are the highest figures so far recorded. Diseases and accidents of pregnancy and childbirth accounted for 579 deaths of mothers, or 6.4 per 1,000 births. This rate is higher than that for 1931, when it was 5.9, but slightly lower than the average of 6.6 for the previous five years. The return for the last quarter of the year showed that births were fewer than in the preceding quarter, the rate varying from 9.2 in Peebles and 11.3 in Bute to 23.2 in Airdrie and 24.5 in Port Glasgow. Deaths were more than in the preceding quarter, the rate varying from 9.4 in West Lothian and 9.5 in Clackmannan to 16.2 in Glasgow and 16.0 in Arbroath. Out of the total of 16,812 deaths registered during the quarter, the principal epidemic diseases accounted for 995, or 5.9 per cent., including 554 from influenza, 138 from whooping-cough, and 100 from diphtheria. Deaths from measles were fewer, numbering only 7. Deaths from diseases of the respiratory system were more than in the previous quarter; pneumonia was responsible for 1,477 deaths, or 8.8 per cent. of the total, and bronchitis for 996, or 5.9 per cent. These figures are higher than the corresponding figures for the previous quarter, the increase being for pneumonia 873, and for bronchitis 600.

Odonto-Chirurgical Society

At the annual dinner of the Odonto-Chirurgical Society of Scotland, which was held in the hall of the Royal College of Surgeons, Edinburgh, on March 10th, Dr. F. C. Doubleday, London, who proposed the toast of "The Society," said that in spite of the valuable help which had been given by the Royal Colleges of Surgeons in England and Edinburgh to dentistry, he believed that it would be well if dentists controlled their own education and policy. The chairman, Dr. R. M. Fraser, in his reply, said that one of the chief dangers to the dental profession in the present day was that of becoming over-mechanized. Many inventions were being introduced, but they did not prevent the decay of a single tooth; for this they must have a broad scientific view of their duties. He believed that science was leading them back to a more natural way of living, and that increased consumption of butter, eggs, milk, and green vegetables was doing for the teeth of the community what dentists could never achieve by mechanical means. Mr. J. Menzies Campbell, in proposing "The Royal College of Surgeons," gave an outline of the development of dentistry in Edinburgh. James Lizars, an eighteenth century member of that corporation, was the first man in Edinburgh to recognize the low nature of dentistry as then practised and to deliver systematic lectures on diseases of the teeth. In 1839 John Goodsir, who was also a surgeon, published a book on *The Development of the Teeth*. Not until about the middle of the nineteenth century, however, were there regular courses of dental lectures in Edinburgh. Before that time the only means of acquiring knowledge was by apprenticeship to someone who styled himself a dentist. Dr. John Smith, a far-seeing pioneer, had the credit for inaugurating, in 1856, the first regular course of lectures on the physiology of and on diseases of the teeth. Mr. J. W. Dowden, in reply, said that in the developments of the future he hoped dentists would still recognize that the Royal College of Surgeons was as deeply interested in dentistry as it had been in the past. Dr. William Guy, dean of the Edinburgh Dental Hospital, said that there had always been critics of the curriculum, especially among people who took no part in dental education. He believed the hospital (with which he had been connected for forty-three years) was now at the peak of its prosperity, for the number of students approached the maximum for which accommodation could be provided, and the balance sheet was very satisfactory.

CORRESPONDENCE

Fee-splitting

SIR,—I, for one, am very glad that you have referred in so excellent an article to the scandal of fee-splitting. It is better to drag putrescence into the open, where fresh air can blow on it, than to try to cover it up.

I have been a general practitioner for forty years. I have had no experience of the thing (perhaps I have been fortunate in the consultants with whom I have been associated), but I have heard of it, and I am under the impression that it is increasing. One provincial city at least had a bad reputation in this respect some years ago, and I gather that it exists elsewhere, especially among the younger consultants. I do not know what can be done about it except to show up its intrinsic dishonesty and its threat of alienating the confidence of the public.

It is a polite custom for even the most respectable consultants to thank the general practitioner for his recommendation. Even this is, strictly speaking, improper, though harmless. It is the general practitioner who should thank the consultant.—I am, etc.,

Colwyn Bay, March 12th. S. L. B. WILKS.

Sterilization of Mental Defectives

SIR,—In the *Supplement* of February 11th there appears a report of Sir Henry Brackenbury's address delivered on February 3rd to the Brighton Division of the British Medical Association entitled "Sterilization of the unfit in its relation to private medical practice." Sir Henry is reported to have opened his address by explaining that he did not propose to discuss primarily the effect of sterilization upon the race. Nevertheless this aspect of the subject seems to have been somewhat fully treated by him.

In the course of his remarks Sir Henry appears to have contended that in the great majority of cases mental defectiveness is the product of one or more recessive genes which are carried by outwardly normal persons; that if such defectiveness is the product of a single such gene the reduction of the incidence of the character in the community, by preventing the parenthood of all persons exhibiting it, would take a very long time; and that if the character is the product of multiple recessive genes the process of elimination would take an immensely longer time. The report continues: "From a racial point of view, therefore, it was evident that very little effect would be produced by the sterilization of every mentally defective person. . . ." This pessimistic conclusion appears to have been directly deduced from the hypothesis that mental and other forms of defectiveness only show in individuals recessive for one or more recessive genes.

While concurring with Sir Henry Brackenbury in the view that mental defectiveness, in most of the cases in which it is purely hereditary, is the product of more than one gene, we are unable to regard all defectives as genetically alike. It is clearly difficult to form an accurate estimate of the number of mentally defective persons in the community who have mentally defective parents. Hereditary factors are certainly more obvious in the causation of feeble-mindedness than of idiocy and imbecility. Feeble-mindedness, moreover, probably occurs with greater relative frequency in the so-called social problem group than do the two lower forms of defect, and the social problem group contains a large number of certifiable but uncertified defectives. As suggested in the Wood Report, we do not yet know how many of these subnormal and certifiable persons are the parents of children whose defectiveness has been recognized. Moreover, estimates of the proportion of mentally defective children who are born of mentally defective parents varies between such limits as 5 to 30 per cent. of the total of defectives. While recognizing that the second estimate is probably excessive, we would point out that even the smaller figure is far from bearing out the pessimistic conclusion expressed by Sir Henry. Nor does it suggest that in those cases where the defect is hereditary the condition is produced by a single recessive gene. On the contrary, it suggests that defectiveness is due to the cumulative action of a number of factors, a genetic situation which would render elimination *more rapid* than would be the case if a single recessive gene were involved. In view of our ignorance of the genetic principles here operative, and in view also of the fact that this very subject is now being studied by a Departmental Committee, it seems to us regrettable that Sir Henry Brackenbury should have expressed himself on this and on previous occasions with such dogmatic pessimism.—We are, etc.,

K. B. AIKMAN, M.D., M.R.C.P.
C. P. BLACKER, M.D., M.R.C.P.
R. A. GIBBONS, M.D., F.R.C.S.
HORDER OF ASHFORD, M.D., F.R.C.P.
March 7th. J. A. RYLE, M.D., F.R.C.P.

Small-pox Nomenclature

SIR,—The views of Dr. Killick Millard are invariably of interest, and in particular those relative to small-pox must command respect in virtue of his wide experience. From time to time I have watched Dr. Millard cast his fly in guise not unlike his letter in the *Journal* of March 4th (p. 388), but unless my observation has been at fault the surface of the controversial stream has lately remained disappointingly free from responsive ripples.

Dr. Millard refers to case fatality as a point of importance in determining type of disease. Now the case fatality of small-pox is largely determined by, and is in inverse proportion to, the prevalence of the factor modification in a series of cases under review. Modification of an attack of small-pox can be brought about by the influence of any one of several factors, but the end-results in all cases are very similar, and may be mutually indistinguishable. Thirty years ago, in this country, possession on the part of the patient of a relative natural or acquired immunity was regarded as the most important source of those " anomalous " features of the individual elements of the focal rash which gave rise to much confusion before Ricketts's work on distribution became generally known. But even at that time it was recognized, as Ricketts's records clearly show, that in certain circumstances the degree of virulence (or attenuation) of the strain of infecting virus might be an element of equal importance. It is a matter of common knowledge that during recent years the bulk of the small-pox in this country has been produced by a benign strain, or strains, of virus " breeding true," and that modification of attack has invariably followed such infection. From the force of recent numerical example the importance of this particular cause of modification has perhaps been overemphasized.

I have never been able to appreciate the alleged need for attaching a special label to any series of cases of modified small-pox ; I am far from convinced that the adoption of such a policy would be " in the interests of clarity " ; nor do I believe that the " scientific precision " of such a method could be maintained under all conditions. In spite of statements to the contrary it is probably a fact that the origin of modification of attack in any individual case of small-pox cannot always be determined accurately by reference to that case alone. Dr. Millard admits this, but foresees difficulty in applying his nomenclature, and whatever follows from it, only at the commencement of an outbreak. During the last five years the London small-pox hospitals have received over 13,000 cases of modified small-pox, derived, presumably, in the absence of evidence to the contrary, from infection with a benign strain of virus. During the same period they have also admitted fourteen cases, in some of which the attack was modified, where it was definitely known that the patients concerned had been infected with a malign strain. In the event of such a virulent strain once more gaining a footing in London—and this must be admitted as a possibility even at the present time—I would confidently predict that the presence of the two, well mixed amongst this population, would very soon defy any attempts at nice classification. A modified case would have to be accepted then merely at its face value and the reason for the modification often remain unproved.

There is one further point which bears on this question. It seems to have been tacitly assumed—at least by those who would have us embrace the terms " variola major " and " variola minor "—that there are but two strains of small-pox virus in the world, a strong and a weak, an Eastern and a Western. But on the evidence available I am not convinced of the accuracy, and still less of the finality, of this conclusion. Thirty years ago our experience of small-pox in this country had not ben sufficiently wide to suggest to anyone the need for applying the name " variola minor " to the disease as produced by infection with a particular strain of virus. Let us continue to take the long view and hesitate to adopt it now, lest perchance still further experience teach us we should have better termed it " minimus "!—I am, etc.,

Dartford, March 7th. J. PICKFORD MARSDEN.

Modified Bendien Reaction

SIR,—The modification of Bendien's chemical test by Dr. Cronin Lowe[1] has led to results which, if confirmed, must establish the test as an important contribution to clinical pathology. The original unmodified chemical test possessed no specificity and had a limited value in diagnosis. The possibilities it possessed for diagnosis were not exploited by Bendien, as he relied on the spectrophotometric part of his test for diagnosis. When the latter was exploded by the London Hospital workers there still remained the chemical test, which was shown to be closely analogous to the sedimentation test and to yield information of the same order.[2] Recent work has in fact shown the chemical test to be of undoubted value as a routine test for determining prognosis in tuberculosis.[3] To be of value for the diagnosis of cancer, however, some modification of the test was essential, and it would appear that Lowe has made an important contribution to a successful modification.

Bendien had already pointed out that different results were often obtained with untreated serum, serum that had been inactivated, and serum that had been treated with ether. The effect of heat is to cause a displacement to the right in the test, of treatment with ether to cause a displacement to the left. What Cronin Lowe has done is to show that in cancer the ether displacement is greater than the heat displacement, and hence the fraction $\frac{\text{ether displacement}}{\text{heat displacement}}$ is greater than unity, while in any other condition the fraction is less than unity. Actually Cronin Lowe does not arrive at the fraction by giving the ratio of the displacements, but by a method enabling a more delicate measurement of the differences in precipitation. This involves measurement of certain precipitates by means of the interferometer, but it is clear that for the purposes of diagnosis this procedure is not always necessary. Thus in the case of the two serums indicated in Fig. 2 in Cronin Lowe's paper the first serum shows an ether displacement of one tube and a heat displacement of three tubes: hence the ratio $\frac{\text{ether displacement}}{\text{heat displacement}} = \frac{1}{3}$ = non-malignant, while for the second serum the ratio $= \frac{3}{1}$ = malignant. No doubt when the fraction approaches unity a more delicate method is required.

The high percentage of successes in diagnosis (95 per cent.) recorded by Cronin Lowe would appear to place the test on a level with the Wassermann. It must be remembered, however, that the diagnosis in most of the 600 cases examined was not in question, and if the cases belong to the group of cases where the diagnosis was clinically in doubt, then the above figure greatly exaggerates the true usefulness of the test. Besides, a high percentage of successes in diagnosis is quite compatible with an essentially non-specific test. With his unmodified test Bendien achieved 100 per cent. success with the batch of serums submitted to him from London: there are undoubtedly a number of tests that can achieve the same result provided the serums are confined to advanced carcinoma and normal or certain mild conditions.

[1] Cronin Lowe: *British Medical Journal*, March 11th, 1933, p. 417.
[2] Fine: *Glasgow Med. Journ.*, 1932, cxvii, 13.
[3] Fine and Dunlop: *Quart. Journ. Med.*, 1933 (in press).

Examples of such tests are the antitryptic index and the Shaw Mackenzie test.

When septic states are included in the series the Bendien test begins to fail, and even Cronin Lowe's modified test loses specificity in such cases. Thus from his table of twenty-five cases where the test failed to diagnose correctly it is seen that nine were from cancer cases in which a septic element was present. Unfortunately no information is given of the number of cases of *cancer plus sepsis* where the diagnosis was correct, and so the disturbing effect of sepsis cannot be assessed. In nine other cases of failure a wrong diagnosis of cancer was obtained by the test, all of them giving a tube reaction of 6 or more. Here again it is important to know how many non-malignant cases with a tube reaction of 6 or more were correctly diagnosed. Cronin Lowe inclines to Bendien's view that a reaction of 6 or more is often associated with a pre-cancerous state, but he offers no more evidence for such a view than does Bendien himself.

Apart from the application to cancer diagnosis, for which some modification (such as Cronin Lowe's) of the original test is essential, the unmodified test has a definite value in prognosis in tuberculosis, as is clearly demonstrated in a number of striking charts in the work previously referred to.[3]—I am, etc.,

St. Bartholomew's Hospital, March 13th. J. FINE.

SIR,—As one who has found the original Bendien technique very unreliable, I should like to congratulate Dr. Cronin Lowe on the excellence of the figures he has produced with his modified technique (*British Medical Journal*, March 11th). His percentage of error compares very favourably with that obtained in any serum test so far elaborated.

If this work can be substantiated the main value of the test will be in determining the worth of any line of treatment rather than a means of diagnosis, and can be compared with the value of the Wassermann test for syphilis.

It would seem that by means of this triple test the percentage of error which we all found when using Bendien's first test on unheated serum has been much reduced. Furthermore, it has relieved us of the tedious spectrographic examination of the precipitated protein which formed Bendien's second test. In a research of this nature control work is of the utmost importance, and I am confining my own work to non-malignant conditions such as tuberculosis, pregnancy, sepsis, and jaundice, which, in my hands, gave a high percentage of error with the original Bendien technique.

So far, I can confirm Dr. Cronin Lowe's findings that his modified test is of no value in attempting to differentiate pregnancy from malignancy. With regard to my other group of controls, I am not as yet in a position to pass an opinion, but I feel that the arbitrarily quantitative estimation of 40 units as "the first precipitation" may need modification. Finally, I should like to say that I agree that the test indicates individual resistance to carcinoma rather than the actual size of the neoplasm.—I am, etc.,

JOHN H. HANNAN,
Pathologist to the Hospital for Women, Soho Square, W.

March 12th.

SIR,—I was very interested to read in your last issue Dr. E. Cronin Lowe's results of the differential vanadic acid test in cancer, results which I can confirm in every way, reading them by visual precipitation in capillary tubes, by viscosity or by nephelometric measurements, or, finally, and that which is undoubtedly the most accurate method, the interferometric one which he describes.

However, one cannot allow his remarks concerning the vanadium solution to stand as they are. He employs, as he says, the B.D.H. ortho-vanadate, using the Bendien formula, and then moves the tube numbers of the mixtures to suit his particular pooling of normal serums. The original mixtures assumed a formula of $3Na_2O.V_2O_5.20H_2O$, containing 25 per cent. V_2O_5. The B.D.H. salt contains 29.3 per cent. V_2O_5, and corresponds approximately to $2.4Na_2O.V_2O_5.16H_2O$. It will be seen therefore, that, making the solution according to the supposed Bendien formula, it becomes approximately N/8.7 V_2O_5 and N/10 Na_2O. The difficulty is further increased by various factors. Sodium ortho-vanadate has been obtained from six different sources from four different countries, the compositions all vary, and no two are the same. A synthetic and absolutely correct N/10 solution has been prepared which, both theoretically and practically, does not give the required range of precipitation with serum, the tribasic vanadic acid having a considerably lower *p*H than N/10 acetic acid. Further, although this synthetic solution parallels the peculiarities of the *p*H titration curve with that of Bendien's original vanadate, it does not correspond exactly, and still less with the curve supplied from the German firm from which Bendien now obtains his vanadium for his revised series of mixtures. One concludes, therefore, that the required vanadate solution is not an N/10 one, and also that the one Bendien uses himself is again not an N 10 one; this is complicated by the fact that he makes his solution up according to a formula which does not correspond to the actual salt that he uses.

I hope, with the able assistance of the research department of the B.D.H., to be able to get a standard solution which, when made up to a standard formula, will give all the required details for the correct precipitation, and so obviate the necessity for each laboratory making its own standard. Probably the method of obtaining a varying *p*H with sodium acetate and acetic acid buffer solutions, and having a constant quantity of vanadium in each solution, as suggested recently in the *Biochemical Journal* by Boyland, will be the most satisfactory. By direct observation in the dark-field ultramicroscope and viscosity measurements, one has been able to show that the "heating" effect is almost undoubtedly due to the dispersion and hydration of the colloidal protein particles, which leads to an increased surface density charge, and thus increases the protecting effect observed and measured in these differential estimations.

Nevertheless, these differential quantitative estimations are of real value, especially in the following up of treatment by various means, and will lead, one hopes, to methods of determining the best value to be obtained from various therapeutic measures, such as surgery and radium.—I am, etc.,

A. F. H. COKE, M.R.C.S., L.R.C.P.

London, W.1, March 11th.

Palpation in the "Dangle" Position

SIR,—Mr. C. Jennings Marshall, in a memorandum published in the *British Medical Journal* of March 11th (p. 413), advocates palpation of the upper abdomen with the patient in the erect sitting position, stooping forward so that complete relaxation of the upper abdomen is obtained. From a long experience I can endorse all he claims for the method. With the patient in this position, either sitting or standing, surgical conditions in connexion with the stomach, liver, kidneys, gall-bladder, and spleen are more readily detected than when the examination is made with the patient lying down.

Mr. Marshall states that no mention of the method has been discovered elsewhere. It has been, however, a

routine practice of my own for many years. In opening a discussion at the Subsection of Proctology of the Royal Society of Medicine in 1928 (*Proceedings*, 1928, xxi, 61) I pointed out that—

"In the hepatic and splenic flexures palpation is often difficult, but considerable assistance is obtained by palpation in the erect stooping position. The surgeon stands behind with both hands encircling the patient, and in this manner searches the upper abdomen under the ribs. The muscles are well relaxed and malignant tumours, encouraged by inspiration, descend as a rule to a lower level."

—I am, etc.,

London, W.1, March 11th. W. I. DE C. WHEELER.

SIR,—It may interest Mr. Jennings Marshall to learn that a similar method of upper abdominal palpation was described by Dr. Richard Powell in his Goulstonian Lectures of 1799. The lectures were published with the title, *Observations on the Bile, and its Diseases, and on the Oeconomy of the Liver*, London, 1800. The author protests against the usual lying position of the patient during abdominal palpation, and adds (p. 19)—

"It has always appeared to me much better to have the patient standing, with a little flexion of the body forwards, and by giving him a support to prevent the posture from being occasioned by contraction of the abdominal muscles. This assists the gravitation of the liver towards the point where the hand is to be applied, and, under these circumstances, the edge can mostly be felt, and a tolerable judgement formed respecting it."

Powell, who was a physician to St. Bartholomew's Hospital from 1801 to 1824, delivered the Harveian Oration (1808), the Lumleian Lectures (1811–22), and was four times censor to the College of Physicians. His writings were numerous for his time and original. He described three cases of "Bell's palsy" in 1813, forestalling Bell by seventeen years. He was the first to write of the history of his own hospital. He was the first English writer to describe symptomless gall-stones, and (I quote Sir Norman Moore) "to give exact directions for the physical examination of the liver."—I am, etc.,

London, W.1, March 11th. ALFRED W. FRANKLIN.

"Acetone and Diacetic Acid" in Urine

SIR,—I have been puzzled for years as to the exact meaning of the common phrases in medical literature that "both acetone and diacetic acid" are present in a urine (as occurs in Dr. Worster-Drought's interesting article on page 404), or that "acetone is present, but diacetic acid absent," another common statement in articles dealing with ketonuria. These phrases convey no clear meaning to me, and I think the terminology should be clarified for the following reasons.

Acetone and diacetic acid are always present in the same urine. Both give positive reactions with the nitroprusside (Rothera's) test—a purple colour—when present in quite small amounts. The other simple test for ketonuria with ferric chloride solution is never given by acetone, and only by large amounts of diacetic acid, when Rothera's test is also strongly positive. I presume that the phrase "acetone present, but diacetic absent" is meant to express a mild ketosis with a positive Rothera but negative ferric chloride test. But such a phrase is quite inaccurate, and implies a qualitative distinction which Rothera's test does not give, and obscures an important quantitative difference in the two tests.

I therefore submit that the phrase "acetone present, but diacetic acid absent" should be replaced by "the nitroprusside test positive, the ferric chloride negative," indicating a mild ketonuria; and "both acetone and diacetic present" by "both nitroprusside and ferric chloride tests positive," showing a heavy ketosis.

The exact significance and importance of many published cases is obscured by the above ambiguity in terminology.—I am, etc.,

London, W.1, March 12th. R. D. LAWRENCE.

Forethought in Midwifery

SIR,—I have read with interest the criticisms on my paper published in the *Journal* of February 18th.

Dr. Orley may be right in saying that precise measurements of the pelvis and of the foetal head can be obtained by radiography. My paper, however, was intended to be of practical use to general practitioners in the management of their midwifery cases, and radiography was not mentioned because, on the one hand, the general practitioner does not need it to pick out the doubtful from the normal cases, while on the other the expert obstetrician can employ other means which are quite as reliable as *x* rays for deciding upon the treatment of the cases which are referred to him.

Dr. White agrees that the midwife should have the fullest recourse to the doctor who will be called should abnormalities arise, but differs from me as to the point at which his co-operation becomes necessary. The views which I expressed were based on those of the Maternal Mortality Committee, whose investigations appeared to show that the doctor's help was required in every pregnancy. For instance, they found that in a large number of the cases they investigated (1150 out of 5,805) death was due, not to childbirth, but to some intercurrent disease which had often been unsuspected and untreated during pregnancy, and they therefore advised that a general medical examination of every mother should be made early in pregnancy. Dr. White appears to think either that such an examination is unnecessary or that a midwife should be trusted to carry it out.

Again, the committee advised that a doctor should check the ante-natal findings of the midwife at about the thirty-sixth week of pregnancy. This examination of her cases, if made in the presence of the midwife, would provide her with a series of post-certificate demonstrations which could hardly fail to effect an improvement in the ante-natal work, while the closer association of the two ordinary members of the obstetric team would tend to increase their mutual respect and confidence, to the great benefit of the patient when they were confronted with an emergency. If the form of ante-natal record advised by the committee, and published on page 151 of their final report, were adopted by local authorities, there would be no danger of the midwife losing her sense of responsibility for the ante-natal care of her patients.—I am, etc.,

London, E., March 7th. W. H. F. OXLEY.

Painless Labour and Maternal Mortality

SIR,—I am firmly convinced that painless labour and maternal mortality are closely related—the more of the former, if obtained with discretion, the less of the latter.

Suppose that in cases in which there is no hopeless disproportion between the child and the bony canal of the mother's pelvis, or no other definite mechanical obstruction, every general practitioner had to his hand the means of producing, with safety and with little trouble, a labour, not only almost painless, but greatly shortened in duration and with greatly lessened risk of injury to the mother's soft parts, maternal mortality would be very much reduced. There would be no temptation to make unnecessary vaginal examinations or to employ forceps or other surgical means.

My experience at St. Mary's with a large number of cases leads me to believe that if after labour has definitely

begun—that is, somewhere about the middle of the first stage—an intramuscular injection of opojex ovarian residue (British Organo-therapy Company) is given, at the same time as two capsules of nembutal (Spicer) by mouth, these desirable results can in most instances be obtained. Often nothing is seriously felt by the mother till the head is on the perineum, and even then apparent pain is not remembered. There is such relaxation of soft parts that cervical and perineal injuries are absent or slight. There is no shock or exhaustion, and the mother's subsequent recovery is rapid. The baby also seems to benefit by the lessened interference with the placental circulation. This treatment is a godsend in occipito-posterior presentations, which, by the way, are better corrected by abdominal manipulation before the membranes are ruptured. The treatment is so simple that no one need believe in its efficacy without trying it.—I am, etc.,

G. GILBERT GENGE, M.D.
Physician in Charge, St Mary's Maternity Hospital, Croydon.

March 8th.

Chronic Pulmonary Tuberculosis

SIR,—I have been very interested in Dr. Wingfield's article in your issue of February 4th, and in the discussion which it has evoked. I agree with Dr. Wingfield when he denounces the herding of tuberculous patients in sanatoriums, hoping for the best, but knowing perfectly well that the worst will, in all probability, transpire. I agree, too, when he says that many patients live long and useful lives with positive sputum. And I agree with the general conclusions of Dr. Burrell—that when the sanatorium is used to achieve two absolutely opposite purposes it is unlikely to succeed in either. Dr. Lissant Cox, too, is very right in saying, with regard to sending patients home, that "this can only be done after a careful and first-hand consideration of home conditions." Surely this is the crux of the whole matter?

Is it too much to suggest that unfavourable home conditions are more responsible for the spread of tuberculous infection than any other single cause? And does it not therefore follow that any course of treatment which is followed by a return to such conditions is, in nine cases out of ten, a waste of time and money? Surely, therefore, I may be pardoned for suggesting that this discussion affords yet further proof of the necessity for the development of the Papworth system.—I am, etc.,

PENDRILL VARRIER-JONES,
Medical Director.

Papworth Village Settlement, March 7th.

SIR,—I have read Dr. Wingfield's interesting paper on chronic pulmonary tuberculosis in your issue of February 4th, and Dr. Lissant Cox's and Dr. Burrell's replies in your issues of February 18th and March 4th. The paper itself and the subsequent correspondence are instructive for a variety of reasons, not the least of which is that they illustrate how opposed may be the views of a sanatorium medical superintendent and a tuberculosis medical officer as to the role of the sanatorium and the type of case with which it should deal. There is also suggested, indirectly perhaps, a thought that the name "sanatorium" is now not the most appropriate one for the majority of residential institutions which are included in the schemes which deal with tuberculosis.

A medical superintendent is naturally anxious to receive only those patients for whom he can reasonably anticipate a good individual result from the treatment given. If the sanatorium is a separate entity and not a unit in some comprehensive scheme, there may be an excuse for this attitude, but where the sanatorium is part of a scheme organized to deal with every phase of tuberculosis work—that is, diagnosis, treatment (palliative and curative), prevention, etc.—the interests both of the family and of the community must be considered as seriously as those of the individual, and cannot be ignored. A tuberculosis medical officer should have beds at his disposal for the purposes of diagnosis (that is, for observation), for treatment, and for the reception of infective incapacitated patients who are living in contact with young children and are ineffectively isolated. Tuberculosis has long been recognized as a family disease, and it is essential to regard the family rather than the individual as the unit for investigation, treatment, and care, if satisfactory results are to be expected; and by satisfactory results I do not refer solely to those which apply to the patient. In addition, I venture to think that the larger the percentage of deaths from pulmonary tuberculosis in residential institutions the better it will be both for the health of the family concerned and for the comfort of the afflicted individual.

Dr. Wingfield warns us against the reactionary continuance of a certain policy which should hold us up to ridicule, and which wastes public money. I would remind him, however, of many hospitals in this country set apart for the treatment of special diseases, such as those dealing with sufferers from cancer, nervous and cardiac diseases, etc. Because the treatment they give fails to prevent recurrence, or because they may have to record a large number of failures, it is unusual to hear their financial cost described as a waste of money, or their efforts held up to ridicule, and I hope that similar good will may be extended towards institutions dealing with tuberculosis. I consider that a certain amount of misunderstanding might be averted if many institutions now called sanatoriums were to assume the title of sanatorium-hospital: this applies particularly to those that provide accommodation in separate pavilions for patients who require observation, treatment, and segregation. As Dr. Lissant Cox suggests, it is an advantage when they are staffed by tuberculosis officers and are situated in proximity to the centres of population from which patients are drawn. This policy has been adopted for many years in several tuberculosis schemes, and has proved efficient.—I am, etc.,

G. B. DIXON.

Birmingham, March 6th.

SIR,—I have read Dr. Wingfield's article and Drs. Lissant Cox and Burrell's replies with much interest. Dr. Wingfield was striving, I thought, to make a classification of the disease to suit the sanatorium and not of the disease itself. Surely a perfectly simple classification is the one I use here—namely, an early case, a medium case, and an advanced case—explaining as I do to my changing assistants that Marcus Paterson used to say (and rightly, I thought) that the prognosis in a case with a cavity, classified as a III case, was often much better than that of an early acute Class I case. As Dr. Lissant Cox states, the dangerous consumptive must be housed somewhere; therefore, would it not be an excellent move to abolish the name "sanatorium" altogether and have consumptive or tuberculosis hospitals?

The word sanatorium is a hypocritical one any way, and was introduced by the Continental pioneers to induce the poor consumptive to go to a convalescent home, knowing quite well that tuberculosis was a most fatal disease. It was a disingenuous move, and in my opinion unjustifiable then as it is to-day. If the consultants only knew how the patients blamed them for it they would be surprised.

Now just take the admissions into this sanatorium in 1931: Class I, 59; Class II, 168; Class III, 126; observation, 24. Who could possibly claim that this

advantage of cheaper labour. To compete successfully we must make full use of machinery, thus creating more unemployment. If we cut down our standard of living further and take less wages, our spending power is reduced. We are already realizing the viciousness of this particular circle. The truth is that many of our fellow countrymen are suffering because work has not continued to increase in geometrical progression.

The treatment is obvious. The population must decrease. No politician has dared suggest this, the real cure, because in the past the criterion of a nation's success has been judged by its increase of population. We may flatter ourselves that but for the medical profession there would be no unemployment problem, for after the Black Death labourers became so scarce that they could command their own wage. Plague changed the survivors from serfs to freemen. But as doctors, are we not eternally striving to upset the-balance of Nature? We bade farewell to the plague in 1666, since when most of the other deadly epidemic diseases have been conquered. Infant mortality has been decreased and the expectation of life increased, so that although the great war took toll of nearly a million of our fittest countrymen and their children unborn, yet this was not enough to undo what medical science has achieved, in building up what is now proving to be an excessive population.

Our legislators as yet cannot see their way to tackling the problem of sterilizing the insane; in fact, during their relapses of sanity lunatics are allowed out on probation, even though they are a most prolific class. Among their nearest competitors in this matter of fertility comes the one class who are finding themselves replaceable by machinery—namely, the general labourers, who produce 438 children per 1,000 married couples, being four times as fertile as doctors (103), ministers of religion (101), and teachers (95). If medical science has outstripped the art of economics, enabling more people to survive than can be adequately provided for under the present system, we can at least prevent unnecessary misery and suffering in the next generation until economics have caught up with medicine.—I am, etc.,

E. IVIMY PUDDY, M.B., B.S.

Litcham, King's Lynn, March 6th.

INTERNATIONAL CONGRESS OF MILITARY MEDICINE

Further information has now been received regarding the International Congress of Military Medicine and Pharmacy at Madrid from May 29th to June 4th.

The subjects for discussion are: the general principles affecting the military organization of a nation in case of war, and the application in the various zones of the prescriptions of the new Geneva Convention (papers by Spanish and Swedish delegates); preventive inoculation in the Naval, Military, and Air Services (papers by British, Spanish, and Japanese delegates); treatment of the more urgent surgical cases in the front area during a war of movement, with the consideration of a specialized unit, its organization, and tactical employment (papers by Spain and Belgium); the preserved foods forming part of the rations issued in the Services in peace and war, including the mode of preparation and analysis (papers by Spain and Switzerland); and a comparative study of the organization of the different military Services as regards their dental and administrative aspects (papers by Spain, Mexico, and Paraguay).

On June 4th there will be field demonstrations in the morning, a visit in the afternoon to the military medical establishments at Segovia, Aranjuez, l'Escurial, and Toledo, and in the evening a reception by the President of the Republic, and special entertainments. A special train will conduct delegates to Seville, where the third session of the International Office of Military Documentation will be held. Meetings will occupy June 6th to 7th, and subsequently the special train will visit Granada and Malaga. From June 10th to 15th there will be an excursion from Malaga to Ceuta, Tetuan, Tangiers, Melilla, the Balearic Islands, and elsewhere.

The International Congress of Medical Air Services will be held from June 1st to 4th at Madrid, and its meetings will be open to any members of the previous congress. Applications from those wishing to take part in the congresses should be made before April 1st to the Secretariat del Congresso, Ministero de la Marina, Madrid, and the subscription of 50 pesetas (30 for other members of a family) should be forwarded by international money order or traveller's cheque to the account of the Banco Mercantil y Industrial, Madrid. Thomas Cook and Son, Ltd., are arranging for travel tickets at reduced rates for those who attend.

The Services

DEATHS IN THE SERVICES

Surgeon Commander Henry Frederick Iliewicz, R.N. (ret.), died at St. Ives, Hunts, on February 19th. He was educated at the London Hospital and Durham University, and took the L.S.A. in 1882 and the M.R.C.S. in 1883. After filling the post of house-surgeon at the London Hospital, he entered the Navy as surgeon, and attained the rank of fleet surgeon, subsequently changed to surgeon commander, on February 11th, 1900. He took the degree of M.D.Durh. in 1910.

Colonel Maxwell MacKelvie, C.I.E., Indian Medical Service (ret.), died in a nursing home in London on February 28th, aged 56. He was born on January 10th, 1877, the son of the late Alexander MacKelvie of Campbeltown, Argyllshire, and was educated at Edinburgh University, where he graduated M.B., Ch.B. in 1899, subsequently taking the F.R.C.S.Ed. in 1906. He entered the I.M.S. as lieutenant on June 28th, 1900, received a brevet lieutenant-colonelcy for war services on January 1st, 1918, became lieutenant-colonel on December 28th, 1919, and full colonel on September 8th, 1927, retiring on October 17th, 1930. He received the C.I.E. on February 7th, 1921. He served in the Waziristan campaign on the North-West Frontier of India in 1901–2 (medal with clasp), the Darwesh Khel Wazizi campaign of 1902, in East Africa, Somaliland, in 1903-4 (medal with clasp), in the great war, in France and Belgium, 1915, and in Iraq from 1916 to 1921 (mentioned in dispatches in the *London Gazette* of September 9th, 1921, brevet of lieutenant-colonel and C.I.E.).

Lieut.-Colonel John Conrad Gie Kunhardt, Indian Medical Service (ret.), died suddenly at Totland Bay, Isle of Wight, on February 10th, aged 57. He was born on August 2nd, 1875, was educated at St. Mary's, and took the M.R.C.S. and L.R.C.P.Lond. in 1901. Entering the I.M.S. as lieutenant on July 26th, 1902, he became lieutenant-colonel after twenty years' service, and retired on June 1st, 1925. He served in Somaliland, East Africa, in the campaign of 1903-4, receiving the medal with a clasp. From 1910 on he was a member of the Indian Plague Research Committee, and wrote a number of papers on plague in the *Indian Journal of Medical Research*. He had also made an intensive study of the rubber industry, visiting many of the chief rubber-producing areas. In 1921 he published a booklet entitled *An Analysis of the Statistical Position of Rubber*, and in 1930 another pamphlet on *The Future of Rubber*. In 1927 he married Marion Campbell, daughter of the late David Edwardes of Ceylon.

Charles Edward Cortis Stanford, D.S.O., Group Captain, Royal Air Force Medical Service, died after an operation at Singapore on February 21st, aged 58. He was the son of Edward Charles and Jemima Simpson Cortis Stanford, born at Edinbarnet, Drumtocher, Dumbartonshire, on March 20th, 1874, and was educated at Glasgow High School and University, where he gained the Malcolm Kerr bursary and the Alexander Donaldson scholarship, and graduated B.Sc. in 1895, and M.B. and B.Ch. in 1898. He entered the Royal Navy in 1901. In 1914 he served in the Royal Marines at Ostend and Antwerp; he commanded a field ambulance of the Royal Naval Division in 1915 in the Dardanelles, at the landings in Gallipoli, both at Cape Helles and at Suvla Bay; and in 1916 served in France, when he was present at the battles on the Somme; he was thrice mentioned in dispatches and received the war medals and the 1914 Star. He then transferred to the Royal Naval Air Service, and served at Taranto, then as P.M.O. of the Mediterranean area, and in 1926–7 as P.M.O. in Iraq. He retired in 1929. In 1919 he married Hazel Shakespear, daughter of Francis Morgan of Dublin, and leaves two daughters.

Obituary

S. J. H. GRIFFITHS, M.B., F.R.C.S.

Assistant Surgeon, Bristol General Hospital

We regret to record the untimely death of Mr. Sidney John Hermann Griffiths, honorary secretary of the Bristol Division of the British Medical Association.

John Griffiths entered Bristol University as a medical student in 1919, after serving in the Royal Air Force. His vivacity and humour soon endeared him to his "year," while his keenness in the more serious work of the medical school marked him for academic distinction. His versatility made him an excellent comrade for all occasions, and there were few musical instruments that came amiss to him. He was fond of the sea, and later made it a custom to spend his holidays as a ship surgeon. He qualified M.R.C.S., L.R.C.P. in 1924, and a few months later took the M.B. and Ch.B. degrees with honours in Bristol University. After completing his house appointments he went to Guy's Hospital and the London Hospital to study surgery, obtaining the F.R.C.S.Eng. in 1926. During this time he seized the opportunity of travelling widely on the Continent, visiting such surgical centres as Vienna, Berlin, Paris, and Strasbourg. He returned to the Bristol General Hospital in 1927 as senior resident, where his efficiency and insatiable capacity for work soon made him indispensable to the honorary staff. His appointment as assistant surgeon in 1929 followed as a matter of course.

In association with the late Dr. Carey Coombs he devoted much attention to thyrotoxic conditions, and in the short space of three years was able to present a series of over one hundred thyroidectomies, with a low mortality of 3 per cent. Such figures speak for his skill and ability in no uncertain manner. Orthopaedics occupied his attention to a considerable extent, and here he applied with outstanding success the knowledge acquired during his close association with Mr. Hey Groves, to whom he acted as assistant both when senior resident and afterwards in private surgical practice. He revised the last edition of the *Synopsis of Surgery* for Mr. Hey Groves, and with the same author edited the orthopaedic section of the *Medical Annual* of 1932. In the teaching of surgery he took an especial interest, his "rounds" and out-patient room being attended by students of his own hospital and those of the Bristol Royal Infirmary. He was also constantly in demand as a medico-legal witness.

It was inevitable that such a man should rapidly build for himself a flourishing surgical practice extending far beyond the city of Bristol. His loss in this respect will be greatly felt by many practitioners, to whom he was particularly "available" for rich or poor alike. The question of a "fee" never deterred his prompt help, even in the poorest parts of Bristol. The medical school has lost an invaluable teacher and one who would have brought distinction and honour to its traditions. His friends have lost one whose happy spirit, sound advice, and trusted skill made him a pillar of strength in days of doubt and indecision.

Mr. HEY GROVES writes: A fortnight ago I left England for a sea cruise, having seen John Griffiths only a few days previously, when he was suffering from a small carbuncle in the neck, which did not prevent his carrying on his work. On my return to England I was shocked to learn of the tragedy of his death from septicaemia. I can heartily endorse all that has been written above, and will only add that he was one of my most brilliant pupils, my most valued assistant, and a very dear friend. He devoted himself to helping me in practical surgery, clinical teaching, and literary work, and I looked to him to carry on the traditions of orthopaedic surgery at the Bristol General Hospital.

[The photograph reproduced is by Victor Turl, Clifton.]

A. E. R. HOSKINS, M.B., CH.M.

Resident Medical Officer, Southend General Hospital

News of the death of Dr. Albert Edward Roy Hoskins at the Southend-on-Sea General Hospital, on March 5th, after a short illness, cannot but bring a sense of loss to a very wide circle of friends and acquaintances. He was born in Sydney, Australia, in 1901, being the youngest son of Mr. T. J. Hoskins, for nearly twenty years a member of the Legislative Assembly of New South Wales. He was educated at Trinity Grammar School and at Sydney University, where, in 1925, he took the degrees of M.B., Ch.M. During his course there he distinguished himself, winning the prize for operative surgery. In the same year he joined the resident staff of the Royal Prince Alfred Hospital; in 1927 he was appointed house-surgeon to the Royal Hospital for Women, a hospital of 280 beds; and in the following year he became senior resident medical officer to the Coast Hospital, a large general hospital of 900 beds. He then acted for a year as locumtenent in Australia before sailing for England in September, 1931. Within a fortnight of his arrival he was appointed house-surgeon to the Southend-on-Sea Victoria Hospital, which post he retained until 1932, when, on its inauguration, he was welcomed to the post of resident medical officer to the new General Hospital in Southend-on-Sea, working in this capacity until his death. At school and in his university life Hoskins had a distinguished career, both academically and in athletics. He was a double blue of Sydney University, playing in the Rugby First Fifteen from 1921 to 1925. In 1922 he toured New Zealand with the Combined Australian University Rugby team, and in 1924 he played as forward for Australia against the New Zealand All Blacks.

Mr. RODNEY MAINGOT writes: No one who knew Hoskins personally could fail to appreciate the outstanding merits of his character. In his work he was always thorough and conscientious, possessing extraordinary tact, keenness, and ability in all he undertook. His aptitude for organizing and his initiative were of infinite value in helping to establish the new Southend General Hospital in its medical and administrative branches, and the many improvements and innovations for which he was, either directly or indirectly, responsible at the Victoria Hospital during his term of office there bespoke the wholehearted enthusiasm which marked him in everything he took up. Only those who had had personal dealings with him and had worked side by side with him could appreciate fully all his excellent qualities, both as regards his actual work and in the untiring way in which he devoted his whole energy and thought to the prosperity and well-being of the new General Hospital, which he had so constantly at heart. His zeal and his efforts to further and secure in every possible way the good of this hospital will long be remembered and valued, and cannot but be keenly missed. Apart from his work he had a charming personality, and his unfailing cheerfulness and courtesy, his loyalty and discrimination, and his outstanding enthusiasm had certainly won the hearts, not only of

those who knew him well, but also of many with whom he was less intimately acquainted. His fortitude and his sense of duty are clearly shown up in the determined way in which he kept to his post until compelled to relinquish it so shortly before his death.

Dr. WALTER LATHAM of Newton-le-Willows, Lancs, died on March 1st after a life of incessant labour and public service. Born near Wigan in 1865, he realized at the age of 17 that his ambition to be a doctor could not be attained without very drastic effort and self-sacrifice. He obtained employment at Crewe, and devoted all his leisure to study of the preliminary medical subjects at the local institute, where he obtained first-class honours in chemistry. He then removed to Liverpool, and while working in a chemist's shop attended the school of pharmacy, qualifying in 1891 as a pharmaceutical chemist. After continuing this line of employment successively in Liverpool, Birkenhead, and Sheffield, he went to Bolton, and while still in business studied medicine at the Victoria University of Manchester (Owens College). He obtained the triple qualification L.R.C.P., L.R.C.S.Ed., L.R.F.P.S.Glas. in 1896, and the D.P.H.Vict. in 1902. After qualification he joined a relative in practice at Ashton-in-Makerfield, and in 1898 removed to Earlestown, where he took a deep interest in local life generally. He associated himself actively with the building of the public library and the school for technical instruction; he promoted sanitary developments, and was an active agent in the development of street and house lighting. In 1901 he was elected a member of the Newton Urban District Council, and for many years, with occasional remissions, continued to be re-elected. During the war he did good work as chairman of the war relief committee and as a member of various other organizations promoted in the course of his chairmanship of the local council. Throughout all this time Dr. Walter Latham carried on a large general practice. He was a member of the St. Helens Division of the British Medical Association, and his son, Dr. W. C. Latham, is also in practice at Newton-le-Willows.

We regret to record the sudden death on February 17th, in his sixtieth year, of Dr. JAMES ALLISON, who had been carrying on medical practice in Cambuslang, Lanarkshire, since 1898. He graduated M.B., B.Ch.Edin. in 1895, and proceeded M.D. in 1912, having obtained the diploma in public health of the Royal Colleges of Physicians and Surgeons of Edinburgh eight years previously. Before settling in Cambuslang he had filled an appointment as ship surgeon, and had held various locumtenencies. His great professional abilities were quickly recognized, and he soon built up an extensive practice. For many years he was a member of the Glasgow and Lanarkshire County Panels. He found time for helping in different ways in the general life of the community, one special interest of his being ambulance training, which he continued for nearly thirty years. He was a keen supporter also of the local ex-service men's club and football club. The extent of his association with local interests was recognized on repeated occasions by presentations of different kinds. Twelve years ago he was appointed a justice of the peace. Dr. Allison was a loyal member of the British Medical Association, and attended its meetings faithfully. He had held the office of vice-chairman of the Division, but did not see his way to accept the chairmanship when offered.

Dr. A. M. COLLCUTT of Brighton, who passed away just about the same time as Dr. Edmund Hobhouse, was an active and honoured member of the British Medical Association, serving from time to time on its local executive. He was in active practice when he died, in his sixty-fourth year. Mr. George Morgan writes: Arthur Maurice Collcutt was the son of the London architect who built the Imperial Institute, South Kensington, and other important London buildings. After graduating M.A., M.B., B.Ch. at Cambridge in 1894, he was appointed house-physician at his hospital (St. Thomas's), and, later, house-surgeon at Poplar Hospital. Coming to Brighton in 1898, he was engaged for the first few years in private practice, and acted at the same time as medical officer of the Brighton Post Office, and St. Mary's Home. He then took up anaesthetics, and soon became one of the most careful, skilful, and trusted anaesthetists in the district. In 1914–18 Captain Collcutt was attached to the Second Eastern General Hospital at Brighton, and he carried out the exacting duties of those strenuous years with no thought of himself, but gave all his time and talents to the service of the wounded soldiers and his other military duties. Though never of robust appearance he enjoyed good health until a short time before his death. A chilblain on his hand became infected with streptococci, which in a short time developed into a most severe attack of lymphangitis and cellulitis of his arm, to which he quickly succumbed. Dr. Collcutt was one of those quiet, unassuming, sincere folks who always make a permanent impression on their surroundings. Retiring to a fault, the chair nearest the door was generally Collcutt's chair. We have heard the expression "cultivating a friendship." Collcutt was one of those shy folk whose friendship needed to be cultivated, but when cultivated it grew into a flower and a fruit—a living thing of beauty and sweetness. Were I asked to put in a sentence a pen portrait of this shy, placid, patient, but most able and sincere man, could I say more than "He never slammed a door"?

Medico-Legal

AN ADJOURNED INQUEST

CONFLICTING MEDICAL TESTIMONY

At Paddington coroner's court on March 9th, before Mr. Ingleby Oddie, an inquest was concluded on Mrs. Frances Caroline Beech, aged 34, the divorced wife of Viscount Glenapp, now the Earl of Inchcape. The inquest had been adjourned from February 28th to obtain expert evidence as to the action of certain drugs which had been prescribed for the lady shortly before her death. It appeared from the evidence at the first hearing that she was passing through London on her way abroad and was taken ill on February 8th. She went to Dr. C. H. Atkinson, complaining of "nerves," insomnia, and colic. He prescribed for her paraldehyde and medinal in view of her extremely excited condition. On February 10th she told him she had taken a large amount of sal volatile, whereupon he called in Dr. R. D. Gillespie, who inquired into her history, heard about the drugs given her, and gave paraldehyde and, later, 4½ grains of nembutal. She was under constant supervision in a nursing home. Still unable to get sleep, she was given, on the night of February 11th–12th, 7½ grains of medinal. On February 12th she was given paraldehyde, and at 9.15 that evening 6 grains of nembutal. That night she had several hours' sleep, and awoke on the morning of February 13th apparently fresh and bright. Shortly afterwards, however, she became restless, and the nurse, on Dr. Gillespie's standing instruction, gave her 7½ grains of medinal. She afterwards lapsed into unconsciousness, and died at 3.30 in the afternoon. The post-mortem examination revealed no cause of natural death, and an analysis was ordered by the coroner. Dr. Roche Lynch found nembutal in the liver and kidneys, showing that although it had been taken eighteen hours before death, it had not left the body. A smell of paraldehyde was noticed, and perhaps a trace of medinal. Dr. Roche Lynch formed the opinion that death was due to the combined effect of the drugs taken, and he could not wholly exclude the sal volatile. Sir Bernard Spilsbury was of the same opinion.

At the resumed hearing Dr. Atkinson testified that Mrs. Beech was first attended by him at a nursing home in April, 1931. She was then taking omnopon, and it was desired to get her off this drug. She left the home in May. In September of that year he saw her again, when she had gastric trouble and was also suffering from mental upset. For the latter she was given paraldehyde. He recounted from a list supplied to him by the doctor previously in attendance the drugs which had been administered to her at various times; these included dial and luminal, which she had taken well,

and on only one occasion had her doctor been worried about her, when it was found that she had taken 2 ounces of sal volatile. In October, 1932, she was again referred to him; she had been given 3 grains luminal per day (later she was put on 6 grains) intramuscularly, with 2 drachms paraldehyde at night, but these had been greatly reduced by the time she saw him; on one occasion her doctor had substituted somnifen for luminal. She came for investigation for duodenal ulcer. In the course of treatment more paraldehyde was given, also intramuscular injections of dial. Her mental condition demanded these narcotic drugs, and it was particularly desired not to give her morphine. She came to see him again on February 8th, and on the following day he prescribed 5 grains of medinal. He added that he would not consider her a drug addict, nor, except when upset, did she resort to alcohol.

Dr. Edward Mapother, medical superintendent of Maudsley Hospital, said that nembutal was extensively used there. Since January, 1932, 24,000 grains had been used in a total of 328 patients, in 6,116 individual doses. The maximum quantity given to a patient in twenty-four hours was 13½ grains, in three doses of 4½ grains each. A maximum of 6-grain doses had been given on some occasions. The drug was used to produce sleep in quiet patients and a sedative effect in restless ones. No unfortunate consequences had resulted. Two patients at the first dose had shown signs of sudden collapse, but had quickly recovered, and one of them had subsequent doses without ill effect. The effect of nembutal was transient, as was shown by the fact that when an attempt was made to induce continuing "twilight sleep" by this means it failed because there was no "carry over" from dose to dose. It was excreted within five or six hours. The patient usually became drowsy a quarter of an hour after administration, was asleep within half an hour, remained deeply asleep for an hour, and in a light sleep, easily broken, for three or four hours more. At Maudsley nembutal had been given on occasion in combination with medinal, hyoscine, paraldehyde, and somnifen.

Dr. A. H. Douthwaite said that these drugs had no continuing effect. It was possible to find a small quantity of a drug in the organs post mortem without inferring that the effect had continued until death. It was in the liver that the nembutal was found, and the liver acted as a safety valve. The analyst might easily mistake medinal for nembutal in the body. It was put to Dr. Douthwaite that the dose mentioned in the *Extra Pharmacopoeia* was 1½ grains of nembutal, and that this was a maximum or at least an average dose. He said that 1½ grains was the sort of dose one would give to a child; on a grown person it would probably have no effect whatever. It was because the drug was put up in 1½-grain capsules that that dose had got into literature. In the 7½ grains of medinal given on the day of death there was no danger at all; it was three-quarters of the official maximum dose in the 1932 *Pharmacopoeia*. He added that he occasionally gave other drugs, such as bromide and chloral, with nembutal, but in most cases not. For intravenous injections it was usual to reckon at most half the mouth dose. Asked what would be the effect of the 4 ounces of sal volatile taken by the patient three days before death, he said that there might have been instant death from shock and suffocation, or, what was quite common with irritant poisons, delayed death after four or five days. Mr. Morris (who appeared for Dr. Gillespie) mentioned a case in Taylor's *Medical Jurisprudence* in which death was said to have occurred eleven days after taking a commercial solution of ammonia. The delayed action, said Dr. Douthwaite, took place by the destruction of a considerable area of mucous membrane, and the mild corrosion of the stomach and oesophagus mentioned in the post-mortem report on this case suggested an area of dead tissue. It was quite possible for a patient not to suffer from severe pain after taking a poison, and yet to die several days afterwards. The explanation of delayed death was the liberation of histamine. He believed the action taken by Dr. Gillespie to have been reasonable in the circumstances. The fact that the patient was wide awake and active nine hours after the nembutal had been given negatived the suggestion of death from that drug; one would have expected continuing coma.

Dr. J. A. Ryle said that it was outside medical experience for a patient to succumb to a hypnotic remedy from the effects of which she had so far recovered. As for the medinal given on the morning of death, the effect would have been to produce a little sleep, nothing more. The cause of death might have been gastric uraemia, of which he had seen six cases with five deaths, and which was described by him in his Hunterian Lectures to the Royal College of Surgeons. This was a uraemia following gastric and duodenal ulcer, with or without gross scarring effects. Such patients passed sometimes into a state of coma, generally preceded by mental irritability. Investigated during life, the cases presented similar signs to those found in other forms of uraemia; the alkalis in the blood were increased, the chlorides diminished, and the blood urea often rose to from three to five times its normal figure. Liability to the condition was increased by the administration of alkalis. Sal volatile was likely to have caused a certain gastritis in a patient who had previously had duodenal ulceration, and he felt it very likely that the cause of death was gastric uraemia or alkalosis, a finding which had nothing to confirm it at necropsy, and could be made in life only by chemical analysis and clinical familiarity with the condition. It had been described largely in French literature. Asked if he had known a person to take large quantities of sal volatile and die of gastric uraemia, Dr. Ryle said that he had not, but he had also never come across the association of gastric or duodenal ulcer with the taking of large doses of ammonia. It seemed to him that Dr. Roche Lynch and Sir Bernard Spilsbury had not taken into account the facts in life, but only the facts elicited at post-mortem examination. To the coroner's remark, "I suppose you will agree that the most eminent clinicians occasionally have mishaps?" Dr. Ryle replied, "Yes, and the most eminent pathologists."

Sir Maurice Craig was asked what he had to say as to the merits of combining drugs rather than giving only one drug. He replied that it was much safer because each drug acted in a different way. Paraldehyde acted more like an alcohol, and therefore contrary to the drugs of the barbituric acid group. Patients could take an extraordinary amount of paraldehyde without toxic effects. Asked what he thought of the histamine theory, he said that the work on histamine had always impressed him. It was said that any damage to the cells might allow histamine to escape, and it was known to be one of the most toxic substances developing from corroded tissue.

Dr. Roche Lynch, recalled, said that he had made no mistake in confusing medinal and nembutal in the analysis. The material might have contained traces of medinal, but 95 per cent. of it was undoubtedly nembutal. He distinguished by the respective melting points, nembutal being about 126° and medinal about 191°. Asked what was the composition of sal volatile, he said it was an aromatic spirit of ammonia containing ammonia and ammonium carbonate and alcohol. Sal volatile would cause restlessness in a patient and necessitate larger doses of hypnotic drugs than would otherwise be required. In his opinion death was due to the drugs used, and nembutal was a dangerous drug.

Sir William Willcox, examined by the coroner, said that he had made a special study of the barbituric acid group of drugs, and as long ago as 1913 had published a paper on veronal poisoning. All these drugs had powerful toxic action, especially on the brain, but also on other organs. He believed that death in this case was due to the combination of drugs, that the sal volatile was perhaps contributory, and also that the patient's condition of health had to be taken into account. Certain persons were more susceptible to poisons and combinations of poisons than others. The barbituric acid group did not produce such tolerance as did morphine and other drugs of addiction. Nembutal was a drug only recently introduced; he would not agree to state a safe dose. After a few years' experience of veronal the dose was reduced from 10 grains to 5. He knew of four fatal cases in which nembutal had been used for purposes of anaesthesia; in three of the cases the doses were 7½ grains, in the other 6 7 grains. All these people, of course, were acutely ill. He had seen one case of pneumonia follow 4½ grains. He could not accept Dr. Ryle's view that gastric uraemia was the cause of death in the present case. The gastric or duodenal ulcers had been healed for some time, and the patient had had no intensive alkali treatment. The alkali in sal volatile was not like the alkalis associated with alkalosis. The ammonium carbonate in sal volatile, with a certain amount of free ammonia, would be very rapidly turned into urea and excreted. He believed

also that not sufficient damage had been done to the patient by the sal volatile to render the histamine theory tenable, and the post-mortem signs were not such as followed histamine poisoning. Asked whether the fact that the deceased had taken a large amount of the drugs previously without prolonged unconsciousness indicated that she was not particularly susceptible, he said that a patient might be fairly resistant to a drug and then be " knocked over " when it was repeated. After nembutal administration a patient might partially recover consciousness and then relapse; nembutal differed in this respect from medinal and veronal and the other barbituric acid drugs, in which coma lasted until death. He thought the doses quoted in literature were too high for general adoption, but he did not criticize Dr. Gillespie's treatment: he had adopted a treatment which was in large use in cases of this kind.

Cross-examined by Mr. Morris, Sir William Willcox was asked if he had not fought a losing battle against certain drugs. He refused to agree, saying that a large number of the members of the profession paid great attention to what he had said on the subject. One of the great dangers with the barbituric acid drugs was the small margin between the therapeutic and the dangerous dose. Dr. Mapother had stated that he frequently gave 6 grains of nembutal, but Dr. Mapother would agree with him that if he gave 9 grains he would be in the danger zone. Further passages in the cross-examination were:

So far as the signs of any effect of nembutal on the tissues are concerned, they are absent in this case?—Nembutal may produce death without producing any signs. The only signs of nembutal poisoning are the absence of signs of natural disease plus the presence of nembutal in the liver and kidneys.

Nembutal may produce death without visible signs to the naked eye? How do you know that, Sir William?—Because I know of cases.

You will agree that Dr. Gillespie had every reason to think that the patient was not susceptible?—I am not criticizing Dr. Gillespie in the slightest degree. I have a very high opinion of him.

He agreed that in the cases just mentioned, in which 7½ grains had been given, part of it had been given intravenously, whereas in the present case it had been given by the mouth.

Would it not be fair to say that the three cases you have mentioned are not typical cases in considering nembutal?—They are complicated, not pure cases.

They can be set on one side?—One should not attach too much importance to them. They are cases of special effect.

We may take it that there are no cases recorded in which nembutal has had fatal results in therapeutic doses?—I have had one other case, which again was a complicated case, where suppression of urine occurred.

That did not occur in Dr. Gillispie's case?—No.

Would it not be fair to say that nembutal in 3 to 6-grain doses is a hypnotic of the greatest value, not unpleasant to take, certain in its action, devoid of risk, and free from unpleasant after-effects?—I should entirely disagree. My view of nembutal, a recently introduced drug, is that it should only be used with the very greatest care.

Do you know that nearly 30,000 capsules of nembutal are sold per month?—I know the sale is very large.

Have we arrived at this position, that there is no known case of any fatality from nembutal that is uncomplicated by any other facts?—I do not remember a case beyond the four I have quoted, which are complicated and special.

Sir Bernard Spilsbury said that he did not think there was any possibility of histamine poisoning arising in this case; there were no post-mortem changes to indicate it. Asked whether he agreed with Sir William Willcox that there could be cases of death from narcotic poisoning with no visible signs of change in the organs, he said that it depended how closely one looked for them.

The coroner, in returning a verdict of " Death from narcotic drugs due to misadventure," dealt first with the part played by the sal volatile. The deceased took 4 ounces of it, not very much diluted, and it might be that it produced a marked effect necessitating the continuing high doses of hypnotic drugs. He found the theories of gastric uraemia or of histamine poisoning unconvincing. He did not think the question of suicide arose at all; the lady took the large quantity of sal volatile simply because she was not improving under the treatment she had received. Taking into consideration the state of the patient and the fact that she had swallowed this large quantity of sal volatile, the action of Dr. Gillespie could not be criticized. It was true that he was using a drug described by Sir William Willcox as new and dangerous, of uncertain action and undetermined dosage, but it was also true that it was used very largely in similar doses without ill effects, and no death was recorded as directly due to nembutal, though deaths had occurred in complicated cases following its administration, and in which, for all that was known, it might have played some part. Dr. Gillespie first gave 4½ grains, which could not be regarded as excessive, and on the following day 6 grains; he was evidently using caution and skill. Had it not been for the period of consciousness, when the patient was wide awake, chatty, and almost normal, nine hours after the last dose of nembutal had been taken, it might have been inferred that she had had too much of this drug, but as it was, the reasonable inference was that the effects of the nembutal had passed off. Nor did he see anything to criticize in the administration by the nurse on Dr. Gillespie's instructions of 7½ grains of medinal on the morning of death. But he hoped that the case had served a useful purpose by drawing attention to the need for caution in the administration of derivatives of barbituric acid, and the fact that they sometimes produced unexpected results, such as prolonged unconsciousness, which might go on to death. Dr. Gillespie was a man of the highest position in his profession, an expert in the use of hypnotics, and his evidence was supported by distinguished medical men. He did not mean to say that there was, possibly, no error of judgement in this case; it would not affect the verdict if there were, but he did say that there was no negligence. Dr. Gillespie was entitled to rely upon his past experience, his knowledge of similar patients and similar drugs, and he had told the court that he had used these drugs in this way without ill result.

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons this week went into committee on the Estimates for the Navy and Air Force. The Agricultural Marketing Bill was debated on second reading and a Shops Acts Amendment Bill was also down for discussion. The House of Lords passed the Pharmacy and Poisons Bill through committee.

The Parliamentary Medical Committee has been summoned to meet on April 6th.

Medical Evidence in Late Disability Claims

On March 7th Mr. HUTCHISON asked the Minister of Pensions if his Department would adopt the principle, in cases of difference of medical opinion as to whether a disease was attributable to the great war, of appointing an independent medical arbitrator to be agreed on by both sides. Major TRYON replied that he feared he could not adopt this suggestion with due regard to his responsibility to Parliament. He reminded Mr. Hutchison, however, of the present arrangements under which medical specialists of eminence, nominated by the Presidents of the Royal Colleges of Physicians and of Surgeons, were invited by the Minister to give their independent advice upon the merits of cases of late claim for disablement which presented serious doubt or difficulty on the evidence.

Panel Treatment for War Disabilities

On March 13th Mr. HICKS asked what was the number of men suffering from war disabilities who had been referred to their panel doctor for treatment, and the attitude of the Ministry of Pensions to the representations made by the British Medical Association protesting against the practice of referring men suffering from disabilities other than wounds to their panel doctors for treatment. Major TRYON replied that he had no record of the number of men for whom no special treatment by the Ministry was found to be necessary, or treatment other than such as their own medical attendant could give them. No representations had been received from the British Medical Association on this matter, in regard to which there had been no change of policy.

Pharmacy and Poisons Bill

On March 14th the House of Lords considered in committee the Pharmacy and Poisons Bill. On Clause 23 (power of the Secretary of State to make rules) the Earl of LUCAN moved an amendment providing that the Secretary of State might issue to the Poisons Board a direction that the power of the Board to recommend as to the making of rules with respect to certain matters specified in the clause should not be exercised except after consultation with such body of persons as was specified in the direction, being a body which was, in the opinion of the Secretary of State, representative of persons engaged in the manufacture of poisons, or preparations containing poisons. The Secretary of State might from time to time revoke or vary any such direction without prejudice to the issue of a new direction. The amendment was accepted. The Bill passed through committee and was reported to the House.

Inoculation Treatment for Distemper

Mr. H. WILLIAMS, on March 13th, asked what steps were being taken to give publicity to the successful inoculation treatment for the prevention of distemper in dogs which had been discovered as the result of the investigations of the Medical Research Council. Mr. BALDWIN replied that a statement signed by the Duke of Portland and other members of the *Field* Distember Council, which supported the researches, had been widely published, and full accounts of the work and its results had been communicated to the veterinary profession through the technical journals. The preparations used were now available commercially. Mr. WILLIAMS asked if this research work would have been impossible if the Protection of Dogs Bill had been passed into law. Mr. BALDWIN said he believed it would have been quite impossible.

Ministry of Pensions Hospitals

Major TRYON, replying to Mr. McEntee on March 13th, said that hospitals now maintained entirely by the Ministry of Pensions were: Edenhall (Musselburgh, Edinburgh), Dunston Hill (Newcastle), Chapel Allerton (Leeds), Mossley Hill (Liverpool), Maghull (Liverpool), Cosham (Portsmouth), Orpington (Orpington, Kent), Latchmere (Kingston, Surrey), Leopardstown Park (Dublin), Rookwood (Cardiff), and Chepstow Hospital (Monmouth). One hospital (Highbury, Birmingham) was closed on January 9th, 1932, and Maghull Hospital (Liverpool) would be given up by the Ministry on March 31st, when the Chepstow Hospital, now undergoing alterations, would be reopened. There were nineteen hospitals not under the control of the Ministry in which either the entire accommodation or some part of it was reserved for Ministry patients, who were maintained by a capitation rate at the cost of the Ministry.

Strength of the Army Medical Services

On March 9th the House of Commons went into committee on the Army Estimates. Sir FRANCIS FREMANTLE said the number of medical officers in the Army was much below establishment. The establishment required for the Army at home was 826, and the actual number on the strength was 669, a deficiency of 35 per cent., which was not made up by the forty-eight temporarily commissioned officers and fifty-four retired officers employed. Two-thirds of the medical officers served abroad, and the period at home was only about two years. That was partly the reason why the Army Council could not get officers into the Army Medical Services. They knew that when they married they would have to spend the greater part of their time abroad, because the War Office was able to fill up the positions at home with temporary commissioned officers, but could not get temporary commissioned officers to go abroad. The Service was becoming more and more a Service of old men, a position which had been recognized in 1931 when a memorandum on the health of the Army stated that the deficiency of regular officers of the Royal Army Medical Corps was causing grave concern. The War Office did now recognize that the medical services were vital to the efficiency of the Army. Two years ago the deficiency was admitted to affect not only the War Office, but also the Admiralty and the Air Force, and an Inter-departmental Committee, under Sir Warren Fisher, was set up to find some solution. Sir Francis Fremantle had given evidence fifteen months ago to the 1931 committee, and now heard that it was proceeding to consider its report. Evidently no solution had been found, or the report was delayed because the committee could not face the solution which was necessary. The British Medical Association had made several suggestions. Sir Francis asked the Financial Secretary to the War Office, Mr. Duff Cooper, to give an assurance that he would put it to the Government and to the Chancellor of the Exchequer that the Health Services were essential to the Army and that the country could not face the possibility of another war with depleted Services.

Captain GUNSTON asked for more assurance in regard to cerebro-spinal meningitis, and whether any special medical officer had been detached for duty to investigate it. The number of cases had been reduced, but sixty-seven in the Home Commands was serious. In which units had these cases occurred? He understood they had been confined to a few units. He was told that some of the troops were doubtful about the effect of the inoculation, or whatever treatment was used. Had any of our medical officers consulted medical officers in the Dominions? During the war the commanding officer of a Canadian regiment stamped out this disease by giving more blankets to the men and by nailing the windows open. Many medical officers in other parts of the world held that the disease was spread by keeping the men in the same barracks and using the same blankets. Would it be possible to take the opinion of other nations and find out whether, by abandoning barracks for a period and taking the men right away, the disease could be stamped out?

Mr. DUFF COOPER said the question of obtaining sufficient recruits for the Royal Army Medical Corps had been considered for a long time. The committee set up to go into the matter slackened its work about a year ago, when there seemed little prospect of obtaining funds for anything, even for so good a cause as this. He had studied suggestions previously made by Sir Francis Fremantle. If they could be brought into force—which would need collaboration with local authorities—they might overcome the difficulty. The committee under Sir Warren Fisher had resumed its sittings and was actively pursuing its inquiries. The War Office hoped some solution would be reached in the near future. The health of the troops was a matter of deep concern. This year's figures for cerebro-spinal meningitis, although still causing great anxiety, showed a falling off. In the past year there were sixty-seven cases, of which twenty-six proved fatal—a low proportion of fatal cases. The Army Council was keeping in touch with scientific development in regard to this disease, both in this country and in foreign countries. Everything that could be done to lessen the incidence would be done.

The House then agreed to the Estimates.

In his preliminary survey of the state of the Army, given on the same date before the House went into committee on the Estimates, Mr. Duff Cooper said the health of the troops had improved during the year, though there had been so much illness among the civilian population. Major defects in barracks and in huts had been remedied, but much remained to be done. The three fighting services had done a great deal of co-ordination in hospitals, research, and experiment, and the War Office was fully alive to the importance of this approach to economy.

Air Estimates

On March 14th Sir PHILIP SASSOON, in introducing the Air Estimates, said that a comprehensive review was proceeding of the whole personnel of the Service. Speaking of the work of British air forces, he said that, for example, settlers in the backblocks of Canada and Australia had had their daily material existence eased and improved and the amenities of civilization brought to their doors. Lives of men, women, and children had been saved by the provision of medical and surgical aid where otherwise accident or illness would have entailed fatal consequences. Reports from the overseas commands of the flying carried out in the last twelve months included accounts of the conveyance of surgical aid to sheikhs in the deserts of Iraq and on the shores of the Persian Gulf,

the carriage to remote villages of anti-cholera and anti-typhoid vaccines, and the supply of food to famine-stricken tribes in Trans-Jordan.

In the course of the debate Mr. WHITESIDE said that the danger in the next war would come not from explosives, but from germs and gases. It might be that war would not even be declared, but that one nation, wanting to destroy another, would infect rats with anthrax and plague and send them to the country it was desired to destroy. They might send through the post a parcel containing germs so potent that a whole nation might be wiped out. No peace pact in the world could prevent that.

Poisoning from Enamel-ware. Sir HILTON YOUNG informed Mr. Hutchison, on March 9th, that he had no power to lay down a standard of safety for enamel-ware of British manufacture, nor could he prohibit the importation of foreign enamel-ware which did not come up to this standard. He had recently issued a circular on antimony poisoning from enamel-ware. (See *British Medical Journal*, March 11th, p. 423.)

Physique of Applicants for Motor Licences.—Mr. STANLEY, in reply to Mr. Ross Taylor on March 1st, said he had no evidence that false declarations under the Road Traffic Act, 1930, were frequently made by applicants for licences to drive motor vehicles in regard to physical fitness, including eyesight. He thought it would be well to have longer experience of the operation of the Act before coming to any conclusion on the need for imposing further requirements in the matter of physical fitness.

Sanitation in Stirlingshire.—Replying to Mr. Leonard on March 2nd, Mr. SKELTON said he was aware that groups of inhabitants of the villages of Strathblane and Blanefield, Stirlingshire, demanded a public inquiry into the non-observance of sanitary and health regulations. He had no information regarding the condition of certain basement houses there, but would have the matter investigated.

Functions of Coroners.—The Home Secretary does not think it necessary to appoint a departmental committee to review the powers and functions of coroners, or to introduce legislation revising those powers.

Notes in Brief

Sir John Gilmour announced, on March 9th, that the British Government intends to ratify, before April 13th, 1933, the Convention for Limiting the Manufacture and Regulating the Distribution of Narcotic Drugs, 1931.

Sir John Gilmour holds out no hope of legislation at present on the lines of the Performing Animals (Regulation) Amendment Bill of 1930.

Universities and Colleges

UNIVERSITY OF OXFORD

An election of two members of the Board of the Faculty of Medicine, vice Mr. E. L. Pearce-Gould and Dr. J. J. Conybeare, will be held on Friday, June 2nd; the members elected will hold office for two years from the first day of Michaelmas Term, 1933. The General Medical Electorate consists of all Oxford graduates in medicine who are members of Convocation. The Board of the Faculty of Medicine includes four members elected by the General Medical Electorate, who must be members of that body, and of whom three at least must be persons engaged in teaching one or more of the clinical subjects of the Faculty. Nominations of duly qualified candidates for election will be received by the Secretary of Faculties at the University Registry, Oxford, up to 10 a.m. on Friday, May 12th. Each nomination must be signed by six members of the General Medical Electorate, and no candidate will be eligible whose nomination has not been received before that date.

UNIVERSITY OF CAMBRIDGE

The Appointments Committee of the Faculty of Biology "B" has appointed Joseph Needham, M.A., Ph.D., Fellow of Gonville and Caius College, to be Sir William Dunn reader in biochemistry as from March 1st, 1933, in succession to Mr. J. B. S. Haldane, M.A., F.R.S., now professor of genetics at University College, University of London.

At a congregation on March 11th Professor W. Langdon Brown, M.D., was appointed to represent the University at the sixth Imperial Social Hygiene Congress, to be held in London from July 3rd to 7th, 1933.

The following medical degrees were conferred:

M.D.—N. M. Goodman, R. Pearce.
M.CHIR.—R. Marnham, T. K. S. Lyle.
M.B., B.CHIR.—L. C. Cook.
M.B.—W. H. G. Jessop, M. A. Rushton.
B.CHIR.—S. E. Birdsall.

UNIVERSITY OF LONDON

The King, accompanied by the Queen, will lay the foundation stone of the new University buildings on Monday, June 26th, at 3 p.m.

The University Court, at its meeting on March 8th, learnt with gratification that the Armourers and Brasiers' Company and the Carpenters' Company had decided to make grants to the University of £2,000 and £1,000 respectively in the shape of annual payments extending over ten years, and that the Ironmongers' Company had granted £500 and the Dyers' Company £105. These benefactions will be applied towards meeting the cost of the new Ceremonial Hall to be erected on the University's site in Bloomsbury. A munificent bequest made to the University by the late Mr. Arthur L. Leon has been accepted with great appreciation. The bequest, amounting to some £20,000, is for the promotion of post-graduate or advanced research work.

Mr. H. V. Ellis has been recognized as a teacher of surgery (orthopaedic) at St. Mary's Hospital Medical School. Professor Geoffrey Hadfield has been appointed staff examiner in pathology for 1933.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

Council Election

The secretary of the Royal College of Surgeons has sent out the usual announcement, which on this occasion states that, on Thursday, July 6th, at 11 a.m., there will take place an election of five Fellows into the council in the vacancies occasioned by the retirement in rotation of Lord Moynihan, Sir John Lynn-Thomas, Mr. A. H. Burgess, and Mr. V. Warren Low, and by the death of Sir Percy Sargent.

A voting paper will be sent by post to each Fellow whose address is registered at the College on April 4th. Fellows are requested to give notice without delay of any change of address, in order that voting papers may not be mis-sent.

An ordinary Council meeting was held on March 9th, when the President, Sir Holburt Waring, was in the chair.

Diplomas and Licences

Diplomas of Membership were granted to G. P. Goodwin and E. K. James.

Licences in Dental Surgery were granted to twenty-six candidates.

Diplomas in Ophthalmic Medicine and Surgery were granted, jointly with the Royal College of Physicians, to the following fifteen candidates:

A. J. Boase, A. J. Cameron, J. L. Connacher, K. G. Das, L. P. J. Evans, F. S. Flynn, G. S. Forrester, N. C. Ghosh, A. L. Kiow, Djung-Lin Lu, C. A. Pittar, V. B. Purvis, S. V. Rao, O. L. Senaratne, S. P. Srivastava.

Appointments

Mr. C. P. G. Wakeley was elected a member of the Court of Examiners in the vacancy occasioned by the death of Mr. H. S. Clogg. Mr. E. W. Hey Groves was elected a member of the Court of the University of Bristol in the vacancy occasioned by the death of Sir Percy Sargent.

Receptions

The President reported that arrangements had been made to hold a reception for the Société Internationale d'Urologie at the College on Tuesday, July 11th, at 9.30 p.m. to 12 o'clock. It was also agreed to hold a reception at the College on Thursday, July 20th, at 8.30 p.m., for members of the Congress of the International Society of Orthopaedic Surgery.

ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW

At the monthly meeting of the Royal Faculty of Physicians and Surgeons of Glasgow, held on March 7th, the following were admitted Fellows: A. J. Hutton, J. Dunbar.

Medical News

The annual meeting of the Mental After-Care Association will be held at 141, Harley Street, W. (by invitation of Lord and Lady Horder), on Thursday, March 23rd, at 3.30 p.m., with Lord Wakefield of Hythe in the chair. The speakers will include Sir Robert Armstrong-Jones, Sir Hubert Bond, Sir John Broadbent, Miss Elizabeth Haldane, Bishop Paget, Dr. Nathan Raw, Sir Humphry Rolleston, and Dr. Reginald Worth. Tea at 4.30 p.m.

The annual meeting of the Royal Medical Benevolent Fund will be held at 11, Chandos Street, W.1, on Thursday, March 23rd, at 5 p.m. The annual report and financial statement for 1932 will be presented and the officers and committee for the current year elected.

The Royal College of Physicians and Surgeons of Canada at its third annual meeting conferred honorary Fellowship upon the Governor-General (Lord Bessborough), Mr. I. H. Cameron of Toronto, and Dr. John Stewart of Halifax.

The Royal Institute of Public Health announces that, in view of the interest aroused by the publication in last week's *British Medical Journal* of the article by Dr. E. Cronin Lowe of Liverpool on "A quantitative modification of the Bendien reaction in sero-diagnosis of malignancy," he will give a demonstration of his technique in the lecture hall of the Institute, 23, Queen Square, W.C., on Friday, March 24th, at 8 p.m.

The main discussion of the British Congress of Obstetrics and Gynaecology, to be held in Birmingham on April 5th, 6th, and 7th, will be "The mechanism of uterine action and its disorders." The secretary of the congress is Mr. W. E. Barnie-Adshead, 89, Cornwall Street, Birmingham.

The next monthly clinical meeting for medical practitioners will be given at the Hospital for Epilepsy and Paralysis, Maida Vale, W.9, on Thursday, March 23rd, at 3 p.m., when Dr. F. L. Golla will demonstrate. Tea will be provided, and it will be a convenience if those intending to be present will notify the secretary.

The last of the sessional meetings in London, arranged by the Royal Sanitary Institute for the present session, will be held at 90, Buckingham Palace Road, S.W., on Wednesday, March 29th, at 5 p.m., when a discussion on "Standards in the milk industry: a joint responsibility of medical officers of health, producers, distributors, and the veterinary services," will be opened by Lieut.-Colonel C. Waley Cohen, with Viscount Astor in the chair.

The last lecture in the series on Practical Problems in Medicine and Surgery, arranged by the Fellowship of Medicine and Post-Graduate Medical Association, will be given on March 21st, at 4 p.m., on effects on the heart of disease of other systems, and indications in treatment (free to members and associates of the Fellowship). There will be a demonstration of medical and surgical cases of general interest at the Lambeth Hospital, Brook Street, on March 24th, at 2 p.m., when selected cases will be demonstrated. There will be a week-end course in clinical surgery at the Royal Albert Dock Hospital, on April 1st and 2nd. All-day instruction will be given, with special reference to the relation of technique and end-result. Demonstrations of medical ophthalmology specially suitable for M.R.C.P. candidates have been arranged as follows: March 21st, 8.30 p.m., in-patient department of the West End Hospital for Nervous Diseases; March 22nd, 5 p.m., and March 30th, 8.30 p.m., Royal Westminster Ophthalmic Hospital.

An election of Junior Fellows under the Beit Memorial Fellowships for Medical Research will take place in July next. They are of the annual value of £400, and the usual tenure is for three years. The elected Fellows will be required to begin work on October 1st. Applications should be received by May 18th, though late entries will be accepted up to June 1st. Forms of application and all information may be obtained by letter only, addressed to Professor T. R. Elliott, M.D., F.R.S., honorary secretary, Beit Memorial Fellowships for Medical Research, University College Hospital Medical School, University Street, W.C.1.

The following members of the medical profession have been nominated members of the General Nursing Council by the Ministry of Health: Dr. M. A. Collins, medical superintendent of Kent County Mental Hospital; Mr. H. L. Eason, medical superintendent of Guy's Hospital; Dr. Marguerite Kettle, an assistant editor of the *Lancet*; and Dr. Charles Porter, M.O.H. for Marylebone.

It is only a very short time ago that the Epsom College Act of 1932 was passed extending the benefits of the Royal Medical Foundation of the College to medical women *pari passu* with medical men. The council has now taken the first opportunity of asking two medical women to serve, one as a member of the council, the other as the representative of the Medical Women's Federation on the conjoint committee of the College, which now elects the pensioners and foundationers. To Mrs. Robert Hutchison, M.B., and Dr. Christine Murrell, respectively, falls the distinction of being the first lady members to serve in the above capacities.

Mr. Leslie Paton, who is already an honorary member of the French, Spanish-American, and Japanese Ophthalmological Societies, has been elected an honorary member of the Hungarian Ophthalmological Society.

The annual congress of the French Society of Gynaecology will be held at Luxeuil on June 3rd, 4th, and 5th, under the presidency of Dr. L. M. Pierra of Luxeuil, when the subject for discussion will be pain in gynaecology. Further information can be obtained from the general secretary, Dr. Maurice Fabre, 6, Rue du Conservatoire, Paris, IXe.

Professor D'Arsonval has resigned his chair of physiology at the Collège de France on the occasion of his eighty-first birthday.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, B.M.A. House, Tavistock Square, W.C.1.**

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Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the *Financial Secretary* and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of proofs.

All communications with reference to ADVERTISEMENTS, as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager.

The **TELEPHONE NUMBERS** of the British Medical Association and the *British Medical Journal* are MUSEUM 9861, 9862, 9863, and 9864 (internal exchange, four lines).

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QUERIES AND ANSWERS

Nail-biting

Dr. J. KERR MUIR (West Hartlepool) writes: Can any reader inform me of an effective treatment for nail-biting in a child (aged 8)?

Sweating at the Menopause

Dr. A. PATTON (Widnes) writes: In reply to "H. N. B." I have found elixir bromo-valerian (Gabail) in full doses when required of considerable service in several of these cases.

"An Obscure Parasite"

Colonel W. P. MACARTHUR (Royal Army Medical College) writes: In reply to Dr. I. H. MacIver's query in your issue of March 4th, the parasite described was probably the larva of *Hypoderma lineatum*, one of the Diptera. It causes "warbles" in the skin of cattle, and has been recorded in man in Scotland. I suggest that the Gaelic word quoted (*fiolan*) was not applied to the parasite, but to the lesion it produced, for in Irish Gaelic *fiolan* (or *fiolún*) is a common name for a variety of necrotic lesions of the skin. Such cases of human myiasis would naturally be more common in the past, owing to the old custom of keeping cattle in dwelling-houses.

Dr. T. W. STEWART (Accrington) writes in answer to Dr. MacIver: The "little worm" is presumably the larva produced from an egg deposited under the skin by the warble fly, which does so much to spoil the market value of animal hides. The condition described is not uncommon in pastoral districts, and of three cases personally noted in Tiree two occurred in the scalp area in school-boys and one on the face of an adult who, needless to say, had the hirsute facial appendages so common in island districts. The essential requirement necessary to deceive and tempt the warble fly appears to be a thick skin well covered by hair; and as the hatching out of the egg is hastened by the sun's heat, one can appreciate the success of poulticing as a substitute.

Income Tax

Appointment: Expenses of Car

"G." is medical officer to a hospital outside the town in which he resides and two and a half miles from his residence. He is required by the terms of his appointment to keep a car so that he may be available in emergencies. He is allowed to do consultant work and uses the car to attend at patients' residences. The inspector of taxes refuses to make any allowance for the use of the car.

*** As regards the first point, the inspector appears to have the law on his side, as it is a settled principle that the cost of travelling from the residence to the place where the work is performed is not allowable. We consider, however, that he is wrong in refusing to allow such part of the cost of the upkeep, etc., of the car as is fairly attributable to the travelling to patients' residences. Any fees received from such work are taxable under Schedule D, and the ordinary rules with regard to the deduction of reasonable expenses apply to the assessment of such fees.

Travelling to a London Hospital

"J. W." is a country practitioner who travels to London once a week to work as clinical assistant at a London hospital. Can he deduct his travelling expenses when making income tax returns?

*** In strict law, no; the emoluments of the appointment (if any) are assessable under Schedule E, and the cost of travelling to the place where the duties are performed is not allowable. But by a concession of general application practitioners holding appointments are allowed to bring the salary, etc., into their general profits for assessment under Schedule D, and in that case the cost of travelling is allowed. The normal case, however, is that of a practitioner having an appointment in the immediate locality, and whether the concession would be extended to such a case as this, where the hospital is a long way from the practice and totally unconnected with it, we are unable to say. Moreover, clinical assistantships at London hospitals are usually held for the sake of experience, and are honorary posts.

LETTERS, NOTES, ETC.

First Successful Caesarean Section in England

Dr. A. HAYES SMITH (Bradford) writes: In regard to Dr. Herbert Spencer's reference to the case of Jane Foster of Blackrod in the *Journal* of March 4th, the following extract from a published letter by Dr. John Hull of Manchester, dated December 24th, 1798, reveals that Dr. Barlow's contemporaries did not accept this as a true example of Caesarean section, but rather a case of removal of the uterine contents from the abdominal cavity after spontaneous rupture of the uterus. The term "gastrotomy" was in general use at that time for this operation—that is, laparotomy for removal of the uterine contents in abdominal cavity after spontaneous rupture of the ut

"The case, to which you allude, must from the circum*mentioned*, be the case of Jane Foster, related in the M Records and Researches, page 154, &c. She was atten Mr. Barlow, formerly one of my pupils. I suspected in first, that Mr. Barlow was deceived in this case, from the he gave me of the remarkable thinness of the Uterus I had formed an opinion, that the child had escaped t a laceration of the uterus, into the abdomen enveloped Secundines, and that he had merely divided the mem when he fancied he had divided the uterus. On sponding, however, with Mr. Howarden, a very int practitioner at Blackrod, who assisted at the operation, I the following important circumstances, in reply to my viz. that 'after having divided the cutis, membrana and muscles, Mr. Barlow made a small opening throu peritonoeum, which he gradually enlarged with an obtuse knife;' that 'upon the opening being made throu peritonoeum, the foetus presented itself at the wound, s a manner to exclude the external air, and prevent any pr of the intestines;' that 'the child was most certainly general cavity of the abdomen, and neither in the uterus fallopian tubes;' that 'the uterus was supposed to gi about three o'clock on the Tuesday morning, preceding t on which the operation was performed; because at that the pains were most exquisite, and she felt at that junct use her own expression, as if something had broken o way within her, and moreover her pain then removed stomach, where it continued, till the foetus was extra that 'the foetus was lodged in the left side entirely, w head up towards the lower part of the sternum, a breech and thighs to the wound;' that 'the foet placenta were extracted without much difficulty;' th haemorrhage was little more than is usual after a c delivery;' that 'he never saw the lacerated wound uterus, nor even the uterus itself;' and that 'he is c Mr. Barlow did not make any incision into the uterus.'

"Cough in Childhood"

Dr. L. A. PARRY, F.R.C.S., writes: The reply Moncrieff to my query is to me very unsatisfactor states his experiments were carried out (*a*) on (*b*) who were anaesthetized, and (*c*) who presumab normal bronchial tubes. He at once, most unscienti draws the deduction that the same results would (*a*) to human beings, (*b*) who were nof anaesthetize (*c*) who had diseased bronchial tubes. All clinical m contradicts this conclusion. There has never been recorded of fatal oedema of the lungs due to the inh of hot moist air at body temperature. We know that at too high a temperature will do harm if breath but we have learnt this by using our common sens Moncrieff's reference to Robert Hutchison's "pres for killing a child with pneumonia" is not relevant. applies to a method of treatment by every wrong possible to conceive, and has no bearing on the subj

Traffic Signals on Motor Cars

Since the report of the special committee appointed *Ministry of Transport to investigate* the use of signals on motor cars has been published, some appears to exist among motorists as to the lega certain types. The position is that *no type* ha definitely barred and none officially approved. same time the trend of official opinion appears de to be in favour of the semaphore or moving-arm ki view of this fact Morris Motors Ltd. announce, information of our readers, that the flashing signa longer being fitted to Morris cars, and is now repla a semaphore (moving-arm) type, which will be s and fitted free of charge to 1933 Morris cars with th light flashing signal if application is made to the from whom the car was obtained.

Jean Civiale

Mr. KENNETH WALKER writes: Will you permit me to an error in the report of my Hunterian Lecture pu in the *British Medical Journal* of March 4th? Th urologist referred to was Jean Civiale, not, as I "Civealé." I am indebted to an accurate and reader for having pointed out this error.

Vacancies

Notifications of offices vacant in universities, medical c and of vacant resident and other appointments at ho will be found at pages 44, 45, 46, 47, 50, and 51 advertisement columns, and advertisements as to l ships, assistantships, and locumtenencies at pages 48

A short summary of vacant posts notified in the ad ment columns appears in the *Supplement* at page 9

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

201 Hypochloraemia in Mercurial Nephritis

H. CHABANIER and C. LOBO-ONELL (*Presse Méd.*, January 7th, 1933, p. 28) refer to their previous communications concerning a post-operative state of acute chloride deficiency with rapidly progressive renal insufficiency and oligoanuria, the effects of this on the clinical condition and acid-base equilibrium, and the brilliant results following the administration of chlorides. These conclusions agree with those of Blum and Rothery regarding the acute accidents of renal insufficiency in chronic nephritis and diabetic acidosis. A study of ten cases revealed that similar conditions pertain in acute mercurial nephritis. The renal condition in mercurial intoxication is usually accompanied by a decrease in the blood chlorides; this is the more marked the longer the period after absorption of the poison; generally absent on the first two days, it appears on the third. The authors believe that this deficiency is due not only to the concomitant diarrhoea and vomiting but also to the migration of the chlorides to various other tissues. Many authorities have attributed the profound change in the clinical condition partly to the toxin, but mainly to the renal intoxication. Having noted that in hypochloraemic nephritics with toxic symptoms the nitrogen residual was abnormally raised, the present authors believe that the hypochloraemia influences the general condition by the disturbance of nitrogen metabolism it causes. They also consider that the lowering of the blood chlorides is not the cause of the nephritis, but that, when established, it determines the evolution of this condition either by accentuating it or by retarding the tendency of the renal lesion to recover. Of the ten cases, nine were cured by the administration of hypertonic serum (20 per cent.), the equivalent of 20 to 30 grams of salt in twenty-four hours. The remaining patient died, but not from mercurial poisoning. This treatment should be continued until the chloraemia returns to normal.

202 Typhoid Fever at Bordeaux

H. BALOUX (*Thèse de Bordeaux*, 1931–2, No. 66) maintains that meteorological factors, in Bordeaux at least, do not appear to have any direct influence on the course and gravity of typhoid fever. His reasons for this view are as follows: (1) Years which are unlike one another as regards their meteorological manifestations resemble one another in the incidence and fatality of typhoid. In both the years 1923 and 1929, for instance, the incidence and fatality of typhoid were very low, though the meteorological features differed considerably from one another; 1923 was a remarkably rainy year, while in 1929 there was relatively little rain. (2) In years resembling one another in their meteorological features the typhoid history shows considerable variations; 1923 and 1931, for instance, were both rainy years, but in 1923 there were few cases of typhoid and no deaths, while in 1931 there was a high incidence and fatality rate. (3) Certain years, such as 1926, in which there was nothing outstanding in the meteorological features, showed a high incidence of typhoid fever. (4) Meteorological manifestations of the most varied character, and often showing the most marked contrasts, such as rain, drought, dampness, heat, low temperature, and stormy and calm weather, may precede a recrudescence or aggravation of the disease. (5) Summer seasons which are very different from one another as regards their climatic features may precede autumns in which the pathological history is very similar. In 1926, for instance, the summer was rainy and its temperature relatively low, whereas the summer of 1928 was warm and dry. In both the autumns of 1926 and 1928, however, typhoid fever showed the same intensity and gravity. (6) Summers which resemble one another meteorologically may precede autumns in which the typhoid incidence and mortality are very different. In 1925 and 1931, for instance, June was hot and dry, July was cold and cloudy, and August cold and rainy, whereas the autumns of these two years showed a marked contrast as regards typhoid fever, there being a low incidence in the autumn of 1925 and a sharp outbreak in that of 1931. Baloux suggests that undoubtedly the increased incidence and fatality of typhoid fever in the spring and autumn are due to other causes than the climate—namely, the fall in the consumption of oysters and the reduction in the number of inhabitants during the hot season, and the return to the city of large numbers at the end of summer and beginning of autumn.

203 The Blood and Urine after Marching

A. SCHRUMPF (*Norsk Mag. f. Laegevid.*, December, 1932, p. 313) examined the blood and urine of forty soldiers after a severe march (thirty kilometres in seven and a half hours with a pack weighing 15 kilos). The results were as follows. Neither haemoglobinaemia nor haemoglobinuria was ever found. In nine cases the bilirubin value of the serum exceeded 1 in 5 (Meulengrath). In all examinations of the serum, and in thirty-one out of thirty-seven tests of the urine in a dilution of 1 in 8, the Ehrlich-Neubauer reaction was positive. The haemoglobin in all probability was converted into urobilinogen, partly within and partly outside the intestine, and then excreted through the kidneys, apart from a certain portion which became fixed in certain organs. In Schrumpf's opinion there was only a difference of degree between the haemoglobinuria and urobilinoginuria due to marching. In nine cases Hay's test for bile acid was positive; in only three could traces of sugar be found; in three distinct traces of acetone were detected in the serum and in twenty-eight cases in the urine. The specific gravity of the urine was constantly raised.

Surgery

204 Surgical Treatment of Rheumatoid Arthritis

J. F. MACKENZIE (*Med. Journ. of Australia*, December 3rd, 1932, p. 690) believes that the making of openings in some of the large bones has a curative effect in rheumatoid arthritis. In nineteen such operations rarefaction of the bone was revealed, accompanied by undoubted evidence of decalcification, with a very marked degeneration of the bone marrow, which flowed like thin oil from the openings made. The earlier the case the less the thin oil found. Three-quarter-inch trephine openings were made and sometimes enlarged. The sites for the openings were the lower end of the femur on the antero-lateral aspect and the upper end of the tibia on the antero-median aspect. In addition to the relief from pain a most marked improvement in the general condition of the patient was observed. An increase in the red cell count by 100,000 per c.mm. in a fortnight was usual; an increase up to 700,000 has been noted, and in one instance the rise was one million. Improved functioning of the limbs occurred, probably owing to the relief from the pain which had previously to the operation accompanied every movement. The incision extended down to the bone; the periosteum was pushed back to expose a bare area, large enough to permit the use of the trephine or a large bit. Small drill-holes are not sufficient. The opening was made into the marrow cavity and a Volkmann spoon was inserted towards the cancellous tissue of the bone, some of which was always scooped out to bring about a state of decompression. This opening of bone was always made on both sides. In the case of rheumatoid arthritis of the upper limbs the holes were smaller.

Cultures of the bone marrow were sterile in all cases. For one or two nights after the operation morphine injections in small doses were sometimes required, but after that a nightly dose of an aspirin-caffeine-phenacetin mixture was sufficient, even this being stopped in a short time. Early movements of the limbs in bed were encouraged. After a month the patient was permitted to sit up on the edge of the bed and to dangle his legs, but no weight was allowed to be put on the legs for eight weeks owing to the definite risk of fracture in these cases. The author adds that very little pain is attached to his operation and a local anaesthetic is sufficient. All the patients commented on the welcome early relief obtained from the previous dull bursting pain.

205 Primary Carcinoma of the Duodenum

J. G. MATEER and F. W. HARTMAN (*Journ. Amer. Med. Assoc.*, November 26th, 1932, p. 1852) discuss the clinical and pathological aspects of primary carcinoma of the duodenum, with special reference to the differential diagnosis of this condition, the rarity of which is indicated by the fact that only six cases have been proved by necropsy in a series of 176,000 admissions to the authors' hospital. They believe that carcinomas arising in the duodenum constitute about 0.25 per cent. of all carcinomas and about 3 per cent. of intestinal carcinomas. They may be preferably classified according to their site: supra-ampullary, peri-ampullary, and infra-ampullary. The symptomatology of growth in these different situations varies and diagnosis is thus facilitated. A table of special localizing features is supplied, and it is shown, for example, that the presence of intermittent fever with jaundice is an important differentiating sign of peri-ampullary carcinoma. Occult blood in the stools distinguishes duodenal carcinoma from stone in the common duct, duodenal ileus, various other benign lesions, and usually from carcinoma of the head of the pancreas. The authors think that the appearance of blood in the stools (if unexplainable otherwise), followed by incipient epigastric distress or right upper quadrant pain, and in some cases associated with a radiographically detected localized filling defect, is probably the earliest diagnostic finding. Jaundice often appears late, but may be early in peri-ampullar involvement. In the case of patients in whom jaundice has been demonstrated by duodeno-biliary drainage, examination of the stools, the serum bilirubin curve, or other methods to be due to malignant obstruction of the lower biliary tract, it is of great practical importance to determine whenever possible whether the malignant lesion is located in the duodenum or more proximally in the head of the pancreas or in the common bile duct. In the first case there is the possibility of surgical resection of the new growth, whereas in the second surgical measures, in the form of cholecystenterostomy, do no more than offer relief from the jaundice and associated symptoms. Early and accurate classification of all jaundiced patients will result in earlier operation of the resectable type of malignant biliary obstruction.

206 Staphylococcal Epididymitis

E. B. RAYMOND (*Thèse de Paris*, 1932, No. 570) records ten illustrative cases of staphylococcal epididymitis, three of which are original, in patients aged from 21 to 50. *Staphylococcus pyogenes aureus* was the usual organism found. The condition may be primary or secondary, the epididymis being attacked in different cases from the blood stream or through the urinary or uro-genital tract. Acute staphylococcal epididymitis usually develops in the course of a general staphylococcal infection, and presents the clinical features common to all acute inflammations of the epididymis. Although it is as a rule impossible to make an exact diagnosis of chronic staphylococcal epididymitis, it is possible, and often easy, to exclude tuberculosis by careful and repeated clinical and bacteriological examination. The diagnosis is very important as the course of staphylococcal epididymitis is constantly favourable, in marked contrast with that of tuberculous epididymitis. Staphylococcal epididymitis therefore, with very rare exceptions, needs medical treatment.

Therapeutics

207 Therapeutic Massage

K. G. HANSSON (*New York State Journ. Med.*, December 1st, 1932, p. 1359) states that the main action of massage is directly or indirectly on the circulation, and he believes that with better understanding of the physiology of the capillaries further use of massage will arise. The action of massage is divided into the mechanical and the reflex. The former, the most important, may be exerted in three ways: by aiding the blood and lymph circulation through the affected part; by tension on structures that can be freed or stretched; and by pressure on abdominal viscera. By the first-named the blood column in front of the arterioles is lessened and the blood is allowed to pass more readily through the capillaries. The part must be so placed that the operator works with and not against gravity. Lymph stagnation commonly occurs. As the pressure in the lymphatics is less than in the veins less force is used in treating oedema or lymphatic deficiency. Muscular relaxation is important and the proximal part should be first treated. Elevation of a limb alone can reduce oedema, but massage is needed to restore the vasomotor tone. Contractures in soft parts and stiffness or ankylosis in joints are benefited by massage, which must be forceful and penetrating. The good results obtained from massage in nervous fatigue must be of reflex nature. The hand movements of massage are superficial or deep; the former secures reflex and mechanical action on the superficial circulation, and must be unidirectional, slow, gentle, and rhythmical. Deep massage acts on the return flow of blood and lymph and increases the vasomotor tonus. It differs from the superficial in the force applied, and should be strong enough to empty the veins but not to act on the arteries. Other forms of massage are compression and percussion movements. Massage for stimulation should be given in the first half of the day and for repair in the second half. General massage should not be given within one hour after a meal. Lubricants such as powders and fatty acid productions may be used, the former on hairy or moist skins, the latter on dry ones. Massage should be preceded by some form of heat and be followed by exercises. Contraindications for massage are conditions diffusable by manipulations, such as neoplasms, myositis ossificans, and acute infections. Febrile and cutaneous diseases are also contraindications. Precautions must be used in advanced arteriosclerosis and oedema, and massage is especially dangerous in phlebitis.

208 Treatment of Acute Coronary Thrombosis

Reviewing in detail the steps to be taken in a case of acute coronary thrombosis, S. A. LEVINE (*Journ. Amer. Med. Assoc.*, November 19th, 1932, p. 1737) emphasizes the value of the liberal administration of morphine in the early stages to control the pain and sometimes severe dyspnoea. Nitroglycerin and such medicaments are useless, and may even be harmful, since the consequent fall in blood pressure may occasionally tend to bring on an attack of coronary thrombosis or, if the attack has already started, to aggravate it. If there is extreme collapse with unconsciousness the use of adrenaline as a temporary measure may prove effective and is harmless; such symptoms may be due to the marked fall in blood pressure or to some form of heart-block. Shock has to be combated. The employment of digitalis has been criticized, but Levine thinks that it has definite value in certain types of case—for example, he advises its use when there is peripheral pitting, oedema, and persistent auricular fibrillation. These conditions are rare in the acute stages, but are not uncommon after the first few weeks. For marked dyspnoea, cyanosis, and air hunger an oxygen tent with the administration of caffeine sodio-benzoate in intramuscular doses of 0.5 gram may prove efficacious, but the degree of real value is uncertain. Nothing need be done about the anuria or oliguria in the first few days; it will disappear with the recovery of the general circulation. Nor need alarm be felt at the state

of the bowels following the initial large doses of morphine; strain of all kinds must be avoided and strong cathartics or enemas are most unwise. If the initial attack is satisfactorily overcome there must be rest in bed for four to six weeks in any case. Glycosuria and diabetes are often associated with coronary thrombosis, but insulin must be entirely avoided during the acute stage, since occasionally death has followed its injection or anginal attacks have been precipitated. Dietary regulation may be advisable after the first week or two, but before that the symptoms are preferably ignored. A complication requiring prompt attention is the development of complete heart-block with attacks of Stokes-Adams syncope; adrenaline is here of great value and may save life. The incidence of paroxysmal ventricular tachycardia in about 5 per cent. of cases requires specific therapy, and must be diagnosed from the more common paroxysmal auricular fibrillation. Quinidine is required when ventricular tachycardia has been demonstrated; some patients will respond to doses of 5 grains, while others will require more than 15 grains. It is best to start with a small dose, and increase it every four hours until the desired result is obtained. The author believes that the selective use of quinidine during the early part of the illness will help to prevent sudden death, and thereby diminish the mortality. He adds that patients who do fairly well during the first two weeks are likely to recover, since complications at a later date are less probable.

209 Trypan-Blue in Nervous Diseases

H. L. J. POLLET (*Thèse de Paris*, 1932, No. 602) records seven cases of nervous diseases, two of which were post-encephalitic Parkinsonism, two myelitis of Erb's type, and three disseminated sclerosis, treated by intravenous injections twice weekly of 2 c.cm. of the 1 in 100 watery solution of trypan-blue. A series of six or seven injections was given, and was followed by another series after a month's interval. Improvement, at least for a time, occurred in the two cases of Parkinsonism, especially in the muscular rigidity and mental condition. The results, however, were poor in Erb's myelitis, as well as in disseminated sclerosis.

Anaesthetics

210 Paraldehyde as a Basal Anaesthetic

J. L. THOMPSON and L. J. T. HARTNETT (*Med. Journ. of Australia*, December 3rd, 1932, p. 682) prefer paraldehyde over other basal anaesthetics by reason of its ease of administration, safety and certainty of action, and its very trifling cost. Their technique is as follows. The patient's weight is ascertained, and a dose ranging from 0.3 to 1.2 c.cm. per kilogram (one-half to one fluid drachm per stone), with five times the quantity of normal saline solution, is administered slowly by the rectum, by means of a soft catheter, half an hour after a hypodermic injection of morphine, atropine, and hyoscine, varying with the age and weight of the patient, and one hour before the time fixed for the operation. This is given in bed when the preparation for the operation has been completed. The patient's ears are lightly plugged with cotton-wool and the eyes are loosely bandaged; sleep has usually come on before the injection is completed, and removal to the theatre does not interrupt it. Ether is usually administered by the open method and the period of induction is short, with little or no struggling. Excellent muscular relaxation is obtained, and is continued even with great reduction in the quantity of ether administered subsequently. The respirations and the blood pressure are unaffected, though the latter may be slightly raised. The reflexes quickly return on the cessation of ether, but consciousness is not regained for some hours. There is usually no vomiting, or at the most the patient vomits once, but has no recollection of so doing. As a general rule the condition of these patients after twenty-four hours is more satisfactory than in similar cases where no basal anaesthetic has been employed. In the series of seventy cases on which the authors base their conclusions there were included such operations as cholecystectomy, hysterectomy, gastro-duodenostomy, prostatectomy, perineal operations, and operations on the head and neck. Additional advantages of the use of paraldehyde are diminution of shock, much lessened post-operative pain, and the very small expense involved in inducing and maintaining unconsciousness.

211 Choice of the Anaesthetic

L. BAZY (*Bull. et Mém. Soc. Nat. de Chir.*, December 17th, 1932, p. 1523) comments on a study made by Yves Delagenière of various forms of anaesthesia as the result of the compilation of 21,000 records of cases. His first conclusion is that the mortality rate does not depend on the nature of the anaesthetic employed. Although local anaesthetics appear at first sight to be safer, they have not the same applicability as general anaesthetics, and consequently any comparison is vitiated. There is statistical evidence for the view that the introduction of spinal and local anaesthesia has not as yet diminished the operation mortality rate. Attention is drawn to the gradual change in favour by H. Delagenière, a surgeon who from 1895 to 1930 preferred first ether for about five years, then passed to chloroform for twelve years, then to a mixture of chloroform and ether, with some ethyl chloride, and then to a more extended use of the last-named anaesthetic, which became increasingly popular with him. H. Delagenière to the end of his life denounced the use of spinal anaesthesia in view of its many inconveniences and its few advantages. He similarly rejected local anaesthesia after careful trial, but the rectal administration of ether found more favour with him. Bazy remarks that in 2,831 operations collected by himself there was only one anaesthetic death, and that was due to spinal anaesthesia with percaine. He commends general anaesthesia on the usual lines of inhalation, and adds that pulmonary and alimentary complications in these cases are usually traceable not to the anaesthetic, but to some infection in the field of operation. Even in hepatic post-operative complications he is inclined to blame the previous state of the patient rather than the anaesthetic. He suggests that a good classification of anaesthetic agents should be primarily based on dividing those which permit the retention of consciousness from those which do not; he maintains that this is a factor of primary importance in post-operative morbidity and mortality. General anaesthesia involves this desideratum; it can be prolonged as desired, and can be terminated immediately if this becomes necessary. Such a trio of advantages, according to Bazy, entitle the general anaesthetic agents to higher favour than those which operate locally or through the spinal canal.

212 Lumbar Anaesthesia with Tropacocaine

ALS-NIELSEN (*Hospitalstidende*, November 10th, 1932, p. 6) records his experiences of 850 cases of lumbar anaesthesia with tropacocaine at the Bispebjerg Hospital in Denmark. The results were wholly satisfactory in 732 cases (86 per cent.), satisfactory in 107 (12.5 per cent.), and unsatisfactory in eleven (1.5 per cent.). Among 177 cases of "high lumbar anaesthesia" there were 121 wholly satisfactory, fifty-five satisfactory, and one unsatisfactory. Among 379 laparotomies below the umbilicus there were 327 wholly satisfactory, forty-eight satisfactory, and four unsatisfactory. Among 294 operations for hernia and on the external genitals, perineum, anus, and lower limbs, there were 284 wholly satisfactory, four satisfactory, and six unsatisfactory. The average dosage was 5 cg. for the anal region and external genitals, 5 to 7 cg. for the lower limbs, 8 to 10 cg. for laparotomies below the umbilicus, 12 cg. for laparotomies above the umbilicus and operations on the kidneys, and 12 to 15 cg. for operations on the stomach. Among the post-operative complications were headaches observed in forty-four cases, or 5.2 of the total. In five cases the headaches were severe. Paresis of the abducens was observed in two instances, of the oculo-

motor in one, of the nerve to the extensors of the fifth finger in one, and of the peroneus in one. All these pareses cleared up completely. The author does not consider that lumbar anaesthesia is contraindicated in peritonitis, nor that it increases the risk of infarcts or emboli.

Obstetrics and Gynaecology

213 Amnesia in Childbirth

G. S. SHARP (*New Zealand Med. Journ.*, December, 1932, p. 420) reviews twenty cases of delivery conducted under colonic ether, twenty cases under avertin, and twenty-five cases under nembutal analgesia. The colonic ether method of Gwathmey and Harrar was used, and only in 70 per cent. was the method a complete success from the patient's point of view ; the administration is tedious and messy, but is most useful in long cases. In no instance was there any irritation of the rectum. In the case of avertin the technique of Connell was followed, but without a preliminary injection of morphine. In primiparae avertin is best given when the second stage pains commence, or when the membranes rupture, whichever is the earlier ; in multiparae it is administered when the pains are strong and regular, and probably when the cervix is half dilated. The dosage used was 0.075 c.cm. per kilo of body weight. In every case in this series avertin gave perfect amnesia ; there was no vomiting, and the patient slept on peacefully for several hours after the confinement. Every one of the infants was perfectly normal. The disadvantages are: (1) expense ; (2) the continuous supervision necessary until at least an hour after the child has been born ; (3) the complicated apparatus necessary for the mixing of the solution ; (4) the extreme restlessness of some cases, which may be due to the omission of the morphine, but Sharp considers morphine undesirable in the best interests of the baby. Four capsules (6 grains) of nembutal (sodium pentobarbital), followed by a small drink of cold water, are given to a primipara when the os is about three-fifths dilated, and to a multipara directly she starts the second stage, preferably fasting or at least two hours after food. If the confinement is long two more capsules may be given, but not within two hours of the first dose. The outstanding advantages claimed by the author for nembutal are: (1) the administration is simple ; (2) perfect amnesia results without detriment to mother or child ; (3) compared with morphine-scopolamine amnesia little supervision is required, labour is not delayed so much, and the infants do not give the slightest anxiety ; (4) it is inexpensive ; and (5) it is fool-proof.

214 Diagnosis of Tubal Abortion

M. REEB (*Gynécol. et Obstét.*, November, 1932, p. 385) describes four cases in which early ectopic pregnancy terminated in tubal abortion through the ostium abdominale, and in which, in spite of continuous clinical and other investigations, a diagnosis could not be established for some weeks. He concludes that if the diagnosis of tubal rupture is easy (because of the characteristic symptoms and signs of intraperitoneal haemorrhage) that of early tubal abortion is the more difficult the more recent the pregnancy, bimanual examination even under general anaesthesia failing to reveal a juxtauterine swelling. His first patient expelled a complete decidual cast, free from foetal elements, twenty days after a missed menstruation, but no pelvic haematocele could be detected until forty-five days later. In another case the haematocele became apparent fifty-seven days after the commencement of bleeding, which followed forty-two days' amenorrhoea. The third patient first showed a haematocele thirty-six days after the commencement of uterine bleeding. In these two patients curetting fourteen and twenty days respectively before the diagnosis was established had shown an interval endometrial phase without chorionic villi or decidual cells. In the fourth patient the Zondek-Aschheim reaction was negative eight days after the patient had begun to bleed. Discussing the differential diagnosis, which lies in these cases between (1) early tubal abortion, (2) uterine abortion, and (3) the passage of a decidual cast resembling that of membranous dysmenorrhoea but due to the excessive production of corpus luteum hormone (pseudo-pregnancy), Reeb comes to the following conclusions. Naked-eye and microscopical examination of decidual tissue expelled per vaginam, whether in fragments or complete, cannot decide the diagnosis, but, tubal abortion being less uncommon than pseudo-pregnancy, the passage of a complete decidua, without foetal elements, points to a probable ectopic pregnancy. Examination of the curetted fragments is inconclusive ; decidua without chorionic villi does not necessarily indicate extrauterine pregnancy, and on the other hand normal endometrial findings are compatible with it. The Zondek-Aschheim and other biological tests have a certain value, but only when positive. A more reliable clinical sign of tubal abortion, in Reeb's opinion, is the persistence of slight uterine bleeding after a uterine curetting which has with certainty cleared out the cavum uteri.

Pathology

215 Protein in Pituitary Disease

Very marked conclusions have been reached by investigators of the part played by the endocrine glands in altering the specific dynamic response to food, and some have reported that this response is diminished or abolished in patients with disease of the thyroid or pituitary gland. M. N. FULTON and H. CUSHING (*Arch. Int. Med.*, November, 1932, p. 649) have therefore recorded the result of a study of the effect of a protein meal on the metabolism of sixty-nine patients with pituitary disease. It was found that in such patients there is an increased heat production of essentially the same magnitude as that found by other workers in normal persons. In other words, a disturbance of pituitary function, whether due to either of the usual types of pituitary adenomas or to pressure on the hypophysis from an adjacent tumour, does not have any influence one way or the other on the metabolic response to a protein meal. The authors' patients comprised: fourteen cases of acromegaly ; seven of fugitive acromegaly ; thirty-two of hypopituitarism ; sixteen of parahypophyseal tumour ; and thirteen control cases. The authors add that this investigation lends further support to the view that the endocrine glands have no direct bearing on the specific dynamic action of food.

216 Physiological Leucocytosis

Before Shaw's investigations most workers regarded Widal's haemoclasic-test for hepatic efficiency as quite reliable. In 1927 Shaw, after careful experiments, suggested that the observed leucocytosis was due to the normal diurnal variation of the leucocytes. Japha, twenty-seven years previously, had concluded that a post-prandial leucocytosis existed quite distinct from the diurnal variation. H. E. MARTIN (*Journ. of Physiol.*, December 19th, 1932, p. 63) records his own work on this subject, employing a technique which he has previously described. Experiments were carried out on patients with advanced hepatic disorders and control tests on fasting and resting subjects. The counts showed that, after a full meal, the leucocyte variations were similar to those in fasting individuals. Like conclusions were deduced following the ingestion of milk (Widal's haemoclasic test). As Widal had attributed the phenomena following his test to protein degradation products, it was hoped that the post-prandial counts could be so increased that they would lie outside the normal range. Peptone was therefore used, since it is non-toxic and can be employed in large amounts. The results were the same as in the previous experiments. It was shown, therefore, that the variations following ingestion of a full meal, milk, and peptone in both normal subjects and patients with hepatic disease fell within the normal range of the leucocyte count of fasting subjects.

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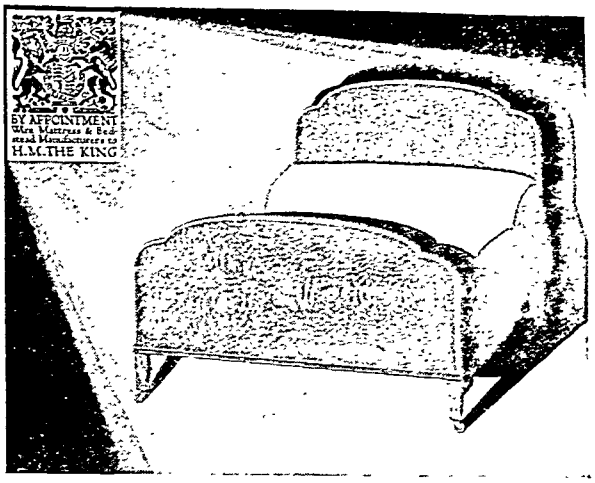

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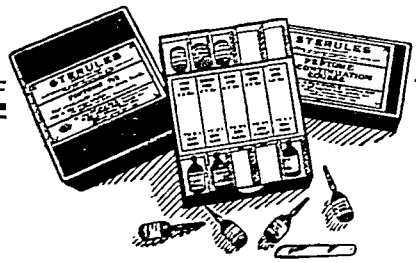

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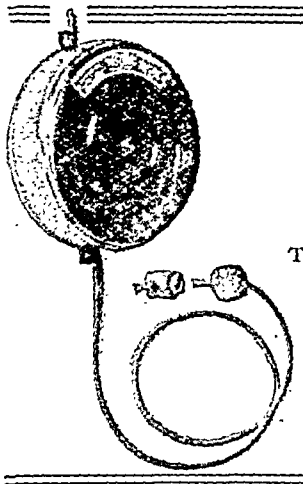

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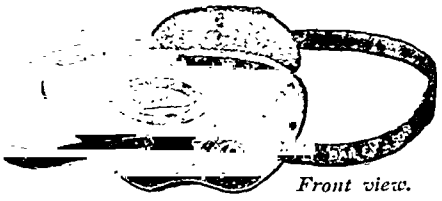

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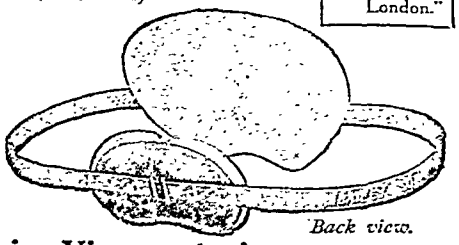

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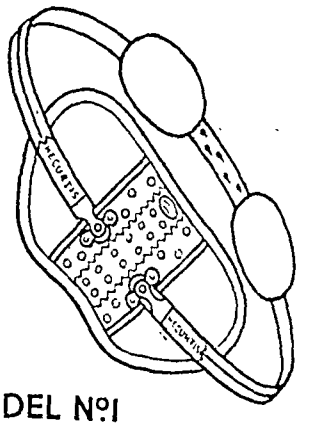

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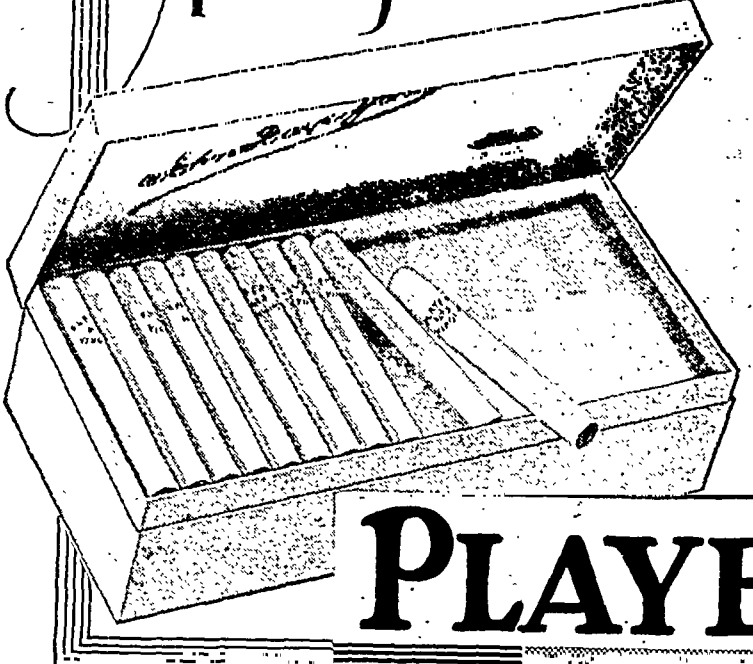

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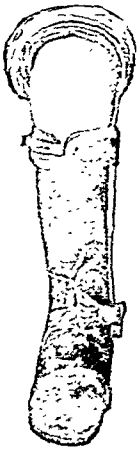

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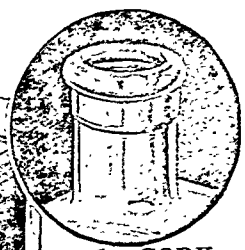

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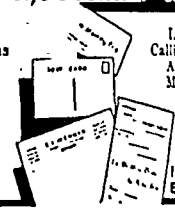

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Voluntary Patients received in the Villas. Large Mansion on outskirts of Bath, with 20 acres of grounds (see *Medical Directory*, page 2306.)

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Telephone: No. 7 Barnwood.

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A PRIVATE HOME for the treatment of Gentlemen suffering from Mental or Nervous Illness, including the allied disorders of Alcoholism and the Drug Habit. All types of early Mental and Nervous cases are received without certificates as Voluntary Patients under the provisions of the Mental Treatment Act, 1930. Bracing Hill country. See *Medical Directory*, p. 2314.—Apply to Medical Superintendent. 'Phone: 10 P.O. Church Stretton.

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For Mental Disorders with or without Certificates.

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FOR THE UPPER AND MIDDLE CLASSES ONLY.

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Medical Superintendent: DANIEL F. RAMBAUT, M.A., M.D.

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This is a Reception Hospital in detached grounds, with a separate entrance, to which patients can be admitted. It is equipped with all the apparatus for the most modern treatment of Mental and Nervous Disorders. It *contains* special departments for hydrotherapy by various methods including Turkish and Russian baths, the prolonged immersion *bath*, Vichy Douche, Scotch Douche, Electrical *bath*, Plombières treatment, etc. There is an Operating Theatre, a Dental Surgery, an X-ray room, an Ultra-violet Apparatus, and a Department for Diathermy and High Frequency treatment. It also contains Laboratories for biochemical, bacteriological, and pathological research.

MOULTON PARK.

Two miles from the Main Hospital there are several branch establishments and villas situated in a park and farm of 650 acres. Milk, meat, fruit, and vegetables are supplied to the Hospital from the farm, gardens, and orchards of Moulton Park. Occupation therapy is a feature of this branch, and patients are given every facility for occupying themselves in farming, gardening, and fruit-growing.

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The seaside house of St. Andrew's Hospital is beautifully situated in a Park of 350 acres, Llanfairfechan, amidst the finest scenery in North Wales. On the North-West side of the Estate a mile of sea coast forms the boundary. Patients may visit this branch for a short seaside change or for longer periods. The Hospital has its own private bathing house on the seashore. There is trout-fishing in the park.

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For terms and further particulars apply to the Medical Superintendent (Telephone No. 2355 and 2357 Northampton), who can be seen in London by appointment.

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For the care and treatment of Ladies suffering from Mental Diseases. Limited to eight patients. *Telephone: Starcross 59.*

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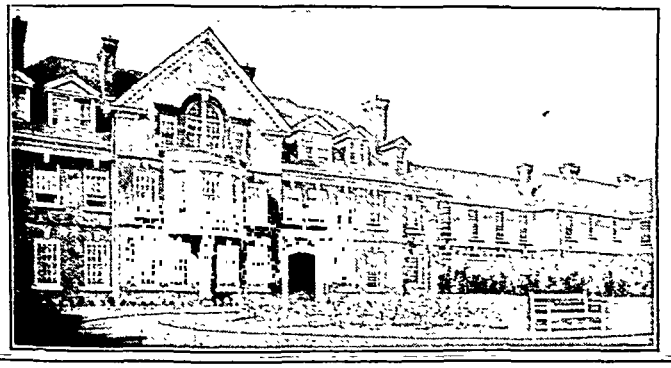

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No cases under certificate. Thorough clinical and pathological examinations. Psychotherapeutic treatment, occupation, and recreation as suited to the individual case.

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CONVALESCENT HOME at BOURNEMOUTH. Detached Villas standing in 12 acres of ornamental grounds, with tennis courts, etc., which Voluntary, Temporary or Certified Patients may visit, by arrangement, for long or short periods.

Illustrated Brochure on application to the Medical Superintendent, The Old Manor, Salisbury. Telephone 51.

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This REGISTERED HOSPITAL, with a SEASIDE BRANCH at Colwyn Bay, N. Wales, is for the treatment and care of those of the Upper and Middle Classes suffering from MENTAL and NERVOUS DISEASES.
The Hospital is governed by a COMMITTEE, appointed by the TRUSTEES of the Manchester Royal Infirmary.
In addition to the Main Building there are separate villas. Extensive grounds. Hard and grass tennis courts, cricket and croquet ground and a court for badminton. There are also wireless installations. Golf may be had within easy distance. Occupational Therapy.
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For terms and further particulars apply to the Medical Superintent, J. A. C. ROY, M.B., who may be seen in Manchester by APPOINTMENT.
Telephone: GATLEY 2231 (3 lines).

PECKHAM HOUSE, 112, Peckham Road, London, S.E.15.

Telegrams: "Alleviated, London." Telephone: Rodney 4741-4742.

The above House, which was established in 1826, is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders. Certified voluntary and temporary patients are received. Separate houses for treatment and accommodation of special cases adjoin the Institution. There is a seaside branch, Kearsney Court, near Dover, to which patients may be sent for treatment or on holiday. Motor and carriage exercise is provided as required. Patients can avail themselves of a course of physical drill. Tennis Courts. Entertainments, dances, and indoor amusements held throughout the year. Terms from £3 3s. per week.
Illustrated prospectus and further particulars can be obtained from the MEDICAL SUPERINTENDENT.

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Telegrams: "SUBSIDIARY, LONDON." *Telephone*: NORTH 0833.

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses. Conveniently situated four miles from Charing Cross. Easy access from all parts. Six acres of ground highly situated, facing Finsbury Park. Private Suites. Voluntary Patients and Temporary Patients received without certification

Convalescent Home, **Kearsney Court, Dover.** For further particulars, apply to the **Medical Superintendent.**

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For Mental Defectives of either sex.

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Telephone: Clissold 1648.

PRIVATE HOSPITAL for Ladies and Gentlemen suffering from Mental and Nervous Disorders. The hospital is situated in nine acres of pleasure grounds. Both voluntary and patients under certificates received. For further particulars apply Dr. GERALD JOHNSTON and Dr. ERNEST ROLLINS, Resident Physicians.

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For the treatment of Ladies and Gentlemen mentally afflicted. Voluntary Boarders received. Situated 1,200 ft. above sea-level, facing S. 14 acres of grounds. — For terms, apply to the Resident Medical Superintendent, W. W. HORTON, M.D. Nat. Tel. 150.

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'Grams: "Smedley's Matlock." 'Phone: No. 17.
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A few vacancies in 1st and 2nd Class Houses.
FEES: 1st Class (men only) from £3 p.w. upwards. 2nd Class (men and women) 32/- p.w.

For further particulars apply:
C. EDGAR GRISEWOOD, Secretary, 20, Exchange Street East, Liverpool.

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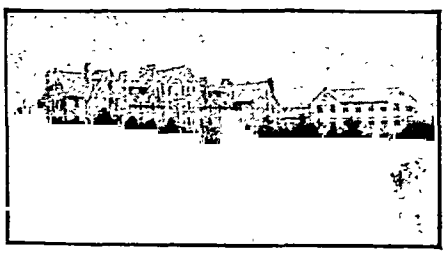

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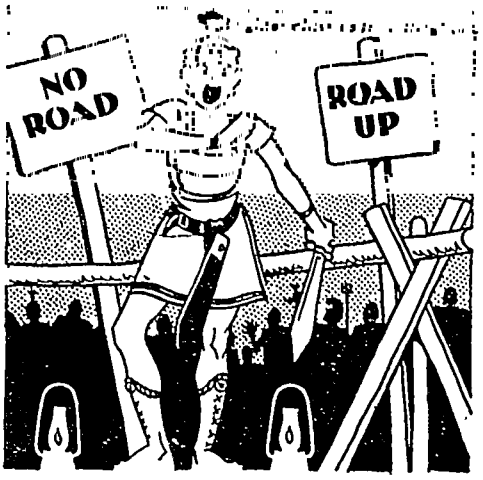

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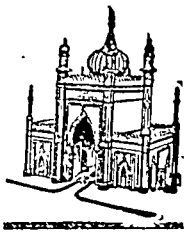

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Forms of application, and all information may be obtained by letter only, addressed to Professor T. R. ELLIOTT, M.D., F.R.S., Secretary, Beit Memorial Fellowships for Medical Research, University College Hospital Medical School, University Street, London, W.C.1.

Preliminary Examinations

The COLLEGE OF PRECEPTORS holds Preliminary Examinations for Medical and Dental Students in London and at Provincial Centres in March, June, September, and December. For Regulations, apply to the Secretary, College of Preceptors Bloomsbury Square, London, W.C.1.

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Full PREP. COURSE with Anatomical Classes and Living Model) and Surg. Path. Demonstrations, for next Exam., will commence shortly. POSTAL TUITION at any time.—H. C. Dale, F.R.C.S., Surgeons' Hall, Edinburgh.

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For particulars, apply to the Hon. Dean, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool.

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The duties commence on October 1st, 1933.

Further particulars of the appointment may be obtained from the Secretary, Welsh National School of Medicine, The Parade, Cardiff.

Twelve copies of application, accompanied by testimonials, are required, and must be received by April 25th.

S. C. EDWARDS, Secretary.

COUNTY BOROUGH OF CROYDON.

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MAYDAY HOSPITAL.

Applications are invited from registered Medical Practitioners, who also hold a Diploma in Radiology of a recognised examining body, for the post of PART-TIME VISITING RADIOLOGIST to the above General Hospital. The person appointed will be required to hold two sessions per week at the Hospital, to supervise the work of the X-ray Department, and to undertake the X-Ray Treatment of Ringworm of the Scalp.

The salary will be £200 per annum.

Application forms and further particulars of the duties of the post may be obtained from the Medical Officer of Health, Town Hall, Croydon. Applications, together with three testimonials, must be sent to the undersigned not later than 11 a.m. on Monday, March 27th, endorsed "Radiologist."

Town Hall, Croydon. JOHN M. NEWNHAM, Town Clerk.

March 7th, 1933.

UNIVERSITY OF BRISTOL.

The University invites applications for the CHAIR OF PATHOLOGY (full-time). Applications should reach the undersigned, from whom further particulars may be obtained, on or before April 20th, 1933.

WINIFRED SHAPLAND, Sec. & Registrar.

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Further particulars may be obtained on application to the Dean, Professor WILLIAM WRIGHT, M.B., D.Sc., F.R.C.S., London Hospital Medical College, Turner Street, London, E.1.

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APPOINTMENT OF AN ASSISTANT TUBERCULOSIS OFFICER.

Applications are hereby invited for the appointment of an Assistant Tuberculosis Officer in the Borough. The person appointed will also be required to carry out such other duties as the Medical Officer of Health may from time to time determine.

The person appointed must be qualified in accordance with the provisions of the Local Government (Qualifications of Medical Officers and Health Visitors) Regulations, 1930. The possession of a Diploma in Public Health is desirable.

The salary will be at the rate of £600 per annum, rising by annual increments of £25 to a maximum salary at the rate of £700 per annum.

The person to be appointed will be required to devote the whole of his or her time to the duties of the office; act under the direction and supervision of the Medical Officer of Health and pass an examination by the Council's Medical Referee as to constitutional fitness. The appointment will also be subject to the provisions of the Stepney Borough Council (Superannuation) Acts 1905 to 1931, and to the Council's By-laws.

Forms of application may be obtained from the undersigned, to whom they must be returned in envelopes endorsed "Appointment of Assistant Tuberculosis Officer," so as to reach him not later than 12 noon on Saturday, April 1st.

Canvassing members or officers of the Council is strictly prohibited and will disqualify candidates. The Council do not bind themselves to appoint any of the candidates.

By Order,
Municipal Offices, Raine Street, Old Gravel Lane, E.1. W. L. McCARTY, Town Clerk.

March 8th, 1933.

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RESIDENT MEDICAL OFFICER required. Salary £200 per annum. Ample time for Post-graduate study. Apply Secretary.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

LEVERHULME RESEARCH SCHOLARSHIPS.

Two Leverhulme Research Scholarships will shortly be awarded by the Royal College of Surgeons of England.

Each Scholarship will be of the annual value of £400, with an allowance not exceeding £[illegible] for expenses of research, and will be tenable for one year in the first instance, but renewable at the discretion of the Council.

Scholars must be British subjects, and must hold a medical qualification registrable in the United Kingdom or a University degree.

Scholars must devote themselves to the investigation of some biological or clinical problem of disease as it occurs in man, with a view to the extension of surgical knowledge.

Facilities for research and for residence will be provided at the Buckston Browne Surgical Research Farm, Downe, Kent, where Scholars may be required to reside. Scholars may also be permitted to pursue certain forms of research in the laboratories of the Royal College of Surgeons in Lincoln's Inn Fields.

Applications, stating the nature of the proposed research and accompanied by a recommendation from a member of the staff of the applicant's Medical School or University, should be sent to the Secretary, Royal College of Surgeons, Lincoln's Inn Fields, W.C., before April 1st.

March 10th, 1933.

COUNTY BOROUGH OF BLACKBURN.

PUBLIC ASSISTANCE COMMITTEE.

RESIDENT JUNIOR ASSISTANT MEDICAL OFFICER.

Applications are invited from Medical Practitioners (male) for the appointment of a Resident Junior Assistant Medical Officer at Queen's Park Institution and Infirmary. The applicants must be registered as Medical Practitioners.

The Staff consists of a Resident Medical Officer, a Resident Assistant Medical Officer, a Consulting Surgeon, a Laboratory Assistant and X-ray Attendant.

There is a separate Infirmary, separate Mental Block, and a separate Sanatorium for children, and there is opportunity for experience in all departments, including Medical, Surgical, and Midwifery cases. An X-ray apparatus is installed.

The person appointed will be required to devote his whole time to the duties, and also to act as may be directed by the Resident Medical Officer.

The appointment will be limited to a term not exceeding one year, with a minimum period of six months.

Salary £150 per annum (subject to a temporary economy deduction of £3 5s.), together with board, apartments, and attendance.

Applications, stating age, qualifications, and experience, and accompanied by copies of not more than three recent testimonials, must be sent so as to reach the Public Assistance Officer, Public Assistance Offices, Cardwell Place, Blackburn, not later than March 22nd.

Town Hall, Blackburn. BRIGGS H. MARSDEN, Town Clerk.

March 8th, 1933.

ADMINISTRATIVE COUNTY OF ESSEX.

LADY ASSISTANT COUNTY MEDICAL OFFICER OF HEALTH.

The County Council of the Administrative County of Essex invite applications for the above appointment from persons duly qualified, holding a Diploma of Public Health and not over 45 years of age.

The salary, which will be subject to economy abatement according to the scale approved by the County Council, will be £500 per annum, and will rise, subject to satisfactory service, by annual increments of £25 to £700 per annum. The appointment will be subject to three months' notice on either side.

Travelling expenses, in accordance with the County Council's Scale, will be allowed to the successful candidate.

[illegible] will be required to pay [illegible] and to contribute to the [illegible] County Council under [illegible] and Other Officers' [illegible] 1922.

The appointment will be subject to the Council's Sick Pay Rules and Regulations, a copy of which will be forwarded on application.

Applications on the prescribed form, obtainable from the undersigned, accompanied by copies of not more than three testimonials (which will not be returned), should be addressed to me and delivered at the Shire Hall, Chelmsford, not later than 10 a.m. on Monday, March 27th.

Shire Hall, Chelmsford. JOHN H. GOOLD, Clerk of the County Council.

March 7th, 1933.

THE ROYAL HOSPITAL, WOLVERHAMPTON.
(Incorporated under Charter.)

HOUSE SURGEON required for Ear, Throat, and Nose Department, duties to commence March 29th.

The Hospital contains 300 beds, includes the usual special departments, and is recognised by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice.

Candidates must be registered under the Medical Acts and unmarried.

The appointment is for six months. Salary at the rate of £100 per annum, board, furnished rooms, and laundry provided.

Applications, with copies of testimonials, to be forwarded to the undersigned.

Wolverhampton. W. H. HARPER,
March 13th, 1933. House Governor.

THE ROYAL HOSPITAL, WOLVERHAMPTON.
(Incorporated under Charter.)

HOUSE SURGEON required for Orthopaedic *Department*, duties to commence forthwith.

The Hospital contains 300 beds, includes the usual special departments, and is recognised by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice.

Candidates must be registered under the Medical Acts and unmarried.

The appointment is for *six months*. Salary at the rate of £100 per annum, board, furnished rooms, and laundry provided.

Applications, with copies of testimonials, to be forwarded to the *undersigned*.

Wolverhampton. W. H. HARPER,
March 13th. 1933. House Governor.

MANCHESTER ROYAL INFIRMARY.
MEDICAL REGISTRAR TO OUT-PATIENTS
(Non-resident).

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment, vacant April 1st. Applicants must be registered and hold a Medical and Surgical qualification and have held a hospital appointment.

The appointment (mornings only) is for six months, renewable for further periods of six months, subject to the provisions of the By-laws as to notice, etc. Salary £150 per annum.

Applications, stating age, to be *sent* to the Chairman of the Medical Board not later than March 25th.

By Order,
FRANK G. HAZELL,
March 10th, 1933. Gen. Supt. & Sec.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.1.

Applications are invited for the post of HONORARY PHYSICIAN to the Skin Department with charge of Sunlight Department.

Candidates must be Graduates in Medicine in a recognised University and be members of the Royal College of Physicians, London, or shall proceed to obtain that Diploma. They must not be engaged in General Practice.

Applications, with *copies of not more than* four testimonials, should be sent as soon as possible to the Secretary.

Candidates will be required to call upon Members of the *Honorary Staff, whose names*, together with the standing orders relating to the post, will be forwarded by the undersigned.

By Order of the Committee of Management,
W. H. SIDNELL,
March 6th, 1933. Secretary-Supt.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.1.

Applications are invited for the post of HOUSE SURGEON (male) for six months from *April 12th (first two months in Casualty and Out-patient Department)*. Salary at the rate of £120 per annum, with board and residence.

Applications, stating age, experience, and qualifications, accompanied by copies of four testimonials, to be sent to the undersigned not later than March 28th, from whom rules and other particulars can be obtained.

By Order of the Committee of Management,
W. H. SIDNELL,
March 6th, 1933. Secretary-Supt.

NEWCASTLE THROAT, NOSE, AND EAR HOSPITAL.

HOUSE SURGEON required for *six months* from date of appointment. Applicants must be fully qualified, registered, and perferably have held Resident appointment.

Salary £100 per annum, together with board, residence, and laundry. Applications, stating age, qualifications, and experience, accompanied by copies of three *recent* testimonials, should be sent to the undermentioned not later than March 23rd.

CHAS. W. LISLE, Secretary.

THE LONDON LOCK HOSPITAL.

The Board of Management announces the expiration of the appointment of the present Female SURGICAL REGISTRAR to the Female Lock Hospital and invites *applications* for a successor. The appointment is for one year in the first instance, with honorarium at the rate of £100 per annum. Candidates, who must be doubly *qualified and duly* registered, are invited to submit applications, with three copies (only) of testimonials, to the undersigned not *later than 10* a.m. on Thursday, March 23rd, from *whom copies of the* Laws and By-laws relating to the appointment may be obtained. Candidates must be Fellows (or Members) of the Royal College of Surgeons of England, or *Surgical Graduates* of a University of the United Kingdom. Duties to commence April 6th.

By Order of the Board,
J. F. MORTON, Secretary.
283, Harrow Road, W.9. Feb., 1933.

PETERBOROUGH & DISTRICT MEMORIAL HOSPITAL. (154 Beds.)

APPOINTMENT OF RESIDENT HOUSE SURGEON.

Applications are invited from fully qualified male Practitioners for the above post, which will become vacant early in April.

Salary £135 per annum, with board, residence, and laundry.

The appointment will be for a minimum *period of six months*.

Applications, stating age, qualifications, and experience, with copies of recent testimonials, to be sent to the undersigned, from whom further particulars may be *obtained*.

FRANK A. C. TAYLOR,
Secretary-Superintendent.

THE HOSPITAL FOR EPILEPSY AND PARALYSIS, Maida Vale, W.9.

A RESIDENT MEDICAL OFFICER required May 1st.

HOUSE PHYSICIAN required May 1st.

Applications are invited for these posts. The salaries are at the rate of £150 and £100 per annum respectively, and the appointments are for six months. Candidates for the post of *Resident Medical Officer should state if they are* willing to take that of House Physician, and applications, accompanied by copies of three recent testimonials, should reach me by April 3rd.

The accommodation at the Hospital does not permit of Women Graduates holding these appointments.

H. W. BURLEIGH, Sec. & Gen. Supt.

THE ROYAL SURREY COUNTY HOSPITAL, GUILDFORD. (182 Beds.)

RESIDENT MEDICAL AND SURGICAL OFFICER AND REGISTRAR.

Applications are invited for the above post from Practitioners who have held post-graduate *Medical and Surgical Hospital appointments* for at least one year. The candidate appointed will be required to act as House Physician, to supervise the work of three House Surgeons, to perform such operations *as may be deputed to him*, and to take up the duties on April 1st. Salary £250 per annum, with board, residence, and laundry. Applications, accompanied by copies of testimonials, to be *sent as soon as possible*, to the Secretary-Superintendent, from whom further particulars may be obtained.

THE GENERAL INFIRMARY AT LEEDS.

A *meeting of the Special* Election Committee will be held in the Board Room on April 7th at 3.30 p.m. to elect an HONORARY PHYSICIAN.

Information as to the duties and necessary qualifications for the office will be supplied on reference to the House Governor and Secretary. *Thirty-two copies of applications, accompanied by copies of three recent testimonials*, should be addressed to the Chairman at the Infirmary, and marked "Private, Honorary Staff," and should be sent in on or before March 27th.

By Order of the Board,
S. CLAYTON FRYERS,
House Governor & Secretary.

BIRKENHEAD GENERAL HOSPITAL. (156 Beds.)

Applications are invited for the appointment of HONORARY ASSISTANT *ORTHOPAEDIC SURGEON*.

Applications, stating age, qualifications, and experience, accompanied by copies of three testimonials, should be *sent to the undersigned* not later than March 31st. Candidates will be required to furnish sixty copies of their application and testimonials for the use of the Committee and Medical Board.

Canvassing is prohibited and will disqualify.

W. H. DANIELS, F.C.I.S.,
March 13th, 1933. Secretary-Supt.

THE PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN
(Formerly East London *Hospital for Children*),
Shadwell, London, E.1.

CASUALTY OFFICER required. Salary at the rate of £125 per *annum, with board*, residence, and laundry provided. The appointment is for six months, from April 1st. Candidates must be unmarried.

Applications, *stating age, nationality*, qualifications, and experience, accompanied by copies of not more than three recent testimonials, should reach the undersigned not later than March 21st.

J. F. RUSSELL, Secretary.

THE PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN
(Formerly East London Hospital for Children),
Shadwell, London, E.1.

HOUSE PHYSICIAN required. Salary at the rate of £125 per annum, with board, residence, and laundry provided. The appointment is for six months, from April 1st. Candidates must be *unmarried*.

Applications, stating age, nationality, qualifications, and experience, accompanied by copies of not more than three recent testimonials, should reach the undersigned not later than March 21st.

J. F. RUSSELL, Secretary.

BOOTLE GENERAL HOSPITAL, BOOTLE, LIVERPOOL, 20.
(100 Beds.)

CASUALTY OFFICER.

Applications are invited for the above post, which will be tenable for six months from April 1st next.

Candidates must be duly qualified on the Medical Register.

The salary attached to the post is £150 per annum, with board and residence.

Applications, with copies of testimonials, to be sent to me immediately.

A. J. COOPER,
March 7th, 1933. Secretary-Supt.

FINCHLEY MEMORIAL HOSPITAL, Granville Road, London, N.12.
(72 Beds.)

RESIDENT MEDICAL OFFICER.

Applications are invited for the post of Resident Medical Officer at this Hospital. The appointment is for six *months*, which may be extended by a further six months. Salary at rate of £150 per annum for first six months, and £200 per annum for a further period of six months, with board, rooms, and laundry.

The appointm[illegible] men.

Applications, [illegible] and enclosing copies [illegible] e addressed to Miss M. A. BRUCE, Secretary.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.

Applications are invited for the *following* post on the *Honorary* Medical Staff.

JOINT MEDICAL OFFICER in charge of the Massage and Electro-therapeutic Department.

Candidates for this post must be *duly qualified Medical Practitioners and registered* under the Medical Acts. Three sessions weekly will be required.

Applicants must send *twelve copies of their application* and testimonials to the undersigned by March 31st.

ARTHUR R. CASH,
March 14th, 1933. *Gen Supt & Sec.*

DARLINGTON MEMORIAL HOSPITAL.

Applications are invited for the following posts at the above Hospital. (*Two of three appointments.*)

(1) SENIOR HOUSE SURGEON, male, unmarried, British. Salary £200 p.a.

(2) HOUSE PHYSICIAN, male, *unmarried*, British. Salary £175 p.a.

Board, residence, laundry. Candidates must be fully qualified. Applications, stating age and qualifications, together with *copies of two* recent testimonials, to be addressed to the undersigned.

ARTHUR RIDDLE, Secretary.

DONCASTER *ROYAL* INFIRMARY,
(185 Beds.)

CASUALTY HOUSE SURGEON (male) required immediately. Five House Surgeons are resident. Salary at the rate of £175 per annum, with *residence*, board, and laundry. Successful applicant will be promoted to post of House Surgeon as a vacancy occurs.

This large industrial area offers excellent opportunities for gaining experience.

The vacancy will occur on April 30th

Applications, accompanied by not *more than* three testimonials, *to be sent* to the undersigned.

WALTER R. SMITH, Secretary-Supt.

British Medical Journal

BRITISH MEDICAL ASSOCIATION HOUSE, TAVISTOCK SQ., LONDON, W.C.1.

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ATTRACTIVE TERMS FOR HIRE OF SMART PACKARD LIMOUSINE with chauffeur. Would wait on Consultants day or night. Also private Garage space available Courtfield Gardens. Would clean, service, deliver by arrangement.—FLAXMAN 2426.

ASSISTANCIES.

WANTED.—ASSISTANT, WITH VIEW TO Partnership, in residential, middle and working-class Practice, situated in a Birmingham suburb. Salary at the rate of about £500 a year, with unfurnished modern house specially built for Medical Practice, and suitable for a married man. A man with Hospital and G.P. experience preferred. Partnership with easy terms to suitable man.—Address, No. 1821, B.M.A. House, Tavistock Square, W.C.1.

WANTED IMMEDIATELY FOR GOOD MIXED Practice, ASSISTANT, with car. English. £300 p.a. and car running expenses. All found. Separate house. Must be experienced in G.P. Future Partnership if desired for suitable man. Birmingham. Give full particulars.—Address, No. 1832, B.M.A. House, Tavistock Sq., W.C.1.

WANTED. — ASSISTANT (PARTNERSHIP later to good man), male, single, aged 25—30, Scotch Graduate preferred, for good mixed Practice in Midlands. Salary about £350 (according to experience, etc.), with furnished rooms, board, and attendance.—Address, No. 1827, B.M.A. House, Tavistock Sq., W.C.1.

WANTED, APRIL 3rd, MALE ASSISTANT, Colliery and panel Practice in South Wales. Salary £300 p.a., outdoors, increase after six months. Previous experience and references. Usual bond. — Address, No. 1802, B.M.A. House, Tavistock Square, W.C.1

WANTED. — ASSISTANTSHIP OR LOCUM (with or without view) by M.R.C.P., Indian, age 32, experienced G.P. and panel, energetic, abstainer, drive car, references. Free March 31st.—Address, No. 1501, B.M.A. House, Tavistock Square, W.C.1.

WANTED.—ASSISTANTSHIP BY M.B., B.S., British West Indian, aged 43, ex H.P. and H.S. General experience. Expert Obstetrician. Own car. References. Free April 3rd. —Address, No. 1833, B.M.A. House, Tavistock Square, W.C.1.

WANTED FOR COUNTRY TOWN (Cheshire) outdoor ASSISTANT, male, English, Scotch, or Irish. Salary according to experience. Car provided for use in Practice. Dispenser kept. Usual bond. — Address, No. 1819, B.M.A. House, Tavistock Square, W.C.1.

WANTED IMMEDIATELY, MARRIED OUTdoor ASSISTANT, Monmouthshire. Motorist essential. Salary £400 p.a. and unfurnished house in good locality. Apply, stating age and all particulars. Usual bond.—Address, No. 1834, B.M.A. House, Tavistock Sq., W.C.1.

WANTED. — INDOOR ASSISTANT, MANchester Suburban Practice, private and panel. Work light. Salary £264 p.a. Partnership to suitable man. State age, experience, etc. — Address, No. 1810, B.M.A. House, Tavistock Square, W.C.1.

WANTED IN LIVERPOOL, INDOOR MALE ASSISTANT. Salary £300 p.a. Duties light. Experience in G.P. not essential.—Address, No. 1853, B.M.A. House, Tavistock Square, W.C.1.

WANTED.—MEDICAL WOMAN AS INDOOR ASSISTANT for London. Must have had previous general practice experience. Salary £300 p.a. Recent references must be enclosed. —Address, No. 1828, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — OUTDOOR ASSISTANTSHIP with view, by Graduate, English, single, aged 40, own car, etc. Experienced London Hospitals and G.P. First-class life, highest refs. South preferably.—Address, No. 1822, B.M.A. House, Tavistock Square, W.C.1.

WANTED, AN ASSISTANT IN A GLAMORganshire Colliery Practice. Usual bond. Salary £350 per annum, with furnished rooms, attendance, etc. — Address, No. 1809, B.M.A. House, Tavistock Square, W.C.1.

WANTED IMMEDIATELY. — INDOOR AND outdoor ASSISTANTS for Town and Country Practices, with and without view. Good salaries. State full particulars.—BRITISH MEDICAL BUREAU, 33, Cross St., Manchester, 2.

WANTED IMMEDIATELY, A MALE ASSISTANT in a large mixed Practice in Lancashire. English, Irish, or Scotch.—Address, No. 1712, B.M.A. House, Tavistock Sq., W.C.1.

ASSISTANT (MALE) WANTED UNDER 35. Protestant. £350, outdoor. Definite view Partnership if Assistantship satisfactory. Share worth £800 will be for disposal with prospects of inc. later. Outlying North London Suburb. —No. 1838, B.M.A. House, Tavistock Sq., W.C.1.

ASSISTANT. — OUTDOOR WANTED FOR INdustrial, panel, and private Practice, Yorks. English or Scotch, single, age 25—30, with some prev. exper. Cyclist. Usual bond. £300 p.a. and all found. No view Partnership. Rural dist. —No. 1818, B.M.A. House, Tavistock Sq., W.C.1.

ASSISTANTSHIP, PERMANENT OR WITH prospects, required by M.B., N.U.I. (1923), aet. 32. Reliable and experienced. Accustomed to sole charge. Preferably outdoor. Own car. —Address, No. 1804, B.M.A. House, Tavistock Square, W.C.1.

ASSISTANT WANTED.—INDOOR OR OUTdoor, in a large Practice in a small Yorkshire Town. Salary according to experience. Male. Scottish Graduate preferred.—Address, with qualifications and experience, No. 1855, B.M.A. House, Tavistock Square, W.C.1.

INDOOR ASSISTANT WANTED FOR LONDON, E.—Must be experienced. Salary £300 p.a. —Address, stating full particulars to No. 1815, B.M.A. House, Tavistock Square, W.C.1.

MEDICAL WOMAN DESIRES OUTDOOR ASSISTANTSHIP with good prospects in or near London or Oxford. Excellent experience. —Address, No. 1836, B.M.A. House, Tavistock Square, W.C.1.

WOMAN ASSISTANT WANTED FOR working-class Practice, North London. No midwifery. Must be experienced. £300 p.a. plus house (or board).—Address, No. 1837, B.M.A. House, Tavistock Square, W.C.1.

LOCUMS.

FOR LOCUM TENENS APPLY TO
PERCIVAL TURNER, Ltd.
The oldest and only Agent who for 50 years has supplied substitutes at short notice without fee to principals.
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After Office Hours: Epsom 9142.

LOCUM, WITH SPECIAL TRAINING IN Pathology, required at once. Part-time, London.—Address, No. 1817, B.M.A. House, Tavistock Square, W.C.2.

LOCUM, WITH WIFE PREFERRED, WANTED for London Practice, April 10th to 14th inclusive. Drive car. — Address, No. 1854, B.M.A. House, Tavistock Square, W.C.1.

MEDICAL MAN, 59, EXPERIENCED IN G.P., Mental, Neurasthenia, and T.B. work, will act as LOCUM TENENS, Institution or go voyage as Ship Surgeon.—Address, No. 1738, B.M.A. House, Tavistock Square, W.C.1.

MEDICAL POSTS, DISPENSERS, etc.

THE BURDEN MENTAL RESEARCH TRUST. The Committee of Administration of the Trust invite applications from candidates possessing the necessary qualifications and having experience of research, for the [illegible] PRINCIPAL INVESTIGATOR at a commencing salary of £750 per annum. Applications, with the names of not more than three persons to whom reference may be made, should be forwarded with the Honorary Secretary of the Trust, Dr. G. C. ANDERSON, B.M.A. House, Tavistock Square, London, W.C.1, not later than March 31st. April 10th. A statement of additional duties may be obtained on application in writing for the above.

A LADY DISPENSER - BOOKKEEPER supplied immediately on request, qualified and with practical experience in general practice and dispensary work, also trained in Bacteriological Laboratories of the LONDON COLLEGE OF PHARMACY FOR WOMEN. Preparation for Examinations. — Write, wire, or 'phone (Bayswater 0969), Secretary, 7, Westbourne Park Road, W.2.

DOCTORS REQUIRING QUALIFIED Dispensers, Nurse-Dispensers, Secretary-Dispensers or Chauffeuse-Dispensers, are invited to write, wire, or 'phone Temple Bar 5858, THE DISPENSERS' BUREAU, 3, Lindsay House, 171, Shaftesbury Avenue, London, W.C.2.

GENTLEWOMAN. — DOCTOR'S DAUGHTER requires POST with Doctor in London as RECEPTIONIST-SECRETARY or position of trust. Experience typing. Can give good references. — Address, No. 1826, B.M.A. House, Tavistock Square, W.C.1.

LADY DISPENSER-BOOKKEEPER (QUALIfied) desires permanent POST with Doctor. Experienced private and panel Practice. Excellent testimonials. Can undertake dresser. Now free.—Miss BLOXSOME, 10, Mount Pleasant, Halesworth, Suffolk.

LADY DISPENSER, BOOKKEEPER, QUALified (Hall) DESIRES POST. Excellent experience private, panel practices, hospital, that of doctors. Typing, first aid. — Address, No. 1719, B.M.A. House, Tavistock Square, W.C.1.

LADY DISPENSER (APOTHECARIES HALL) desires WHOLE, PART-TIME, or LOCUM work. Home or abroad. Experienced Lady dispensary.—Write, ZENA M. WOOLLARD, 35, Eaton Road, Norwich.

M.D., LONG EXPERIENCE PRIVATE AND panel, wishes PART-TIME WORK, S.E. London district. — Address, No. 1709, B.M.A. House, Tavistock Square, W.C.1.

MEDICAL STUDENT (WOMAN) PART Finals, 3 years' experience dispensing, U.V.L., Radiant Heat massage work with Doctor, SEEKS similar POST. Bookkeeping, typewriting. Full or part-time. Financial basis. —No. 1831, B.M.A. House, Tavistock Sq., W.C.1.

MEDICAL GENTLEMAN, AET. 45, RETIRED from India, wishes LIGHT WORK of a genial kind in healthy area with good society. Capital up to £800.—Address, No. 1803, B.M.A. House, Tavistock Square, W.C.1.

STENOGRAPHER-TYPIST REQUIRED by Chief Medical Officer of a large industrial company, S.E. London. Previous experience of medical work desirable. Salary 60/- per week. Address, No. 1801, B.M.A. House, Tavistock Square, W.C.1.

THE ROYAL ARMY MEDICAL CORPS ASSOCIATION, 85, Eccleston Square, S.W.1 (Telephone: Victoria 2722), supplies qualified Dispensers, Bookkeepers, Laboratory Assistants, Sanitary Assistants, Male Nurses, Mental and Special Treatment Orderlies, Dental Clerk Orderlies, Porters, Caretakers, etc., without charge to prospective employers.

TYPEWRITING, DUPLICATING, AND TRANSlations. Experts in Medical work. TESTIMONIALS, THESES, etc., copied in style that commands attention. Accuracy guaranteed. WOBURN BUREAU, 3, Upper Woburn Pl., W.C.1. (Adjoining B.M.A. House.) Museum 4475.

PARTNERSHIPS.

WANTED, IN LARGE MIDLAND CITY, well-qualified PARTNER, with Opthalmic qualification and experience, in old established General Practice, with rapidly increasing Ophthalmic work, which constitutes nearly half total income. Applicants should state age, qualifications, experience. Full particulars given suitable applicants only.—Address, No. 1702, B.M.A. House, Tavistock Square, W.C.1.

F.R.C.S.ENG., LATE OF TEACHING HOSpital Staff, desires PARTNERSHIP in a general practice in or near London.—Address, No. 1430, B.M.A. House, Tavistock Sq., W.C.1.

LANCS TOWN. — PARTNERSHIP IN GOOD and old-established Practice, with receipts over £1,700 yearly and increasing. Panel Price for one-third to commence, £1,000. —MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION, 6, Brown Street.

PARTNER REQUIRED IN OLD-ESTABLISHED Glamorgan Colliery Practice with view to succession. Approx. receipts £2,500, panel £,300. Premium for half share £1,500. Must be M.D. or Fellowship. Local Hospital; scope for major surgery.—Address, No. 1851, B.M.A. House, Tavistock Square, W.C.1.

PARTNER REQUIRED FOR GOOD AND middle-class Country Suburban Practice established by Vendor over 30 years) near a prosperous Midland Town with Educational facilities. Income (average 3 years) £1,530 panel £600). Easily worked and excellent opportunities for rapid increase. Possibility of purchasing the whole in 2 or 3 years' time if Vendor retires. Premium for one-half share two years' purchase. Good modern house, 2 recep., 4 bed., standing in good-sized garden with greenhouse, storerooms, etc., and large gar. Dep. surgery. Rent £100; or sell £2,000.—No. 1825, B.M.A. House, Tavistock Sq., W.C.1.

PARTNER WANTED TO PURCHASE A HALF SHARE in an X-ray and Electro-Therapeutical Practice within 20 miles of South London. Fully equipped for X-ray Therapy, Radiography, and all branches of Electro-Therapy. Applicant must hold a Diploma in Radiology.—Address, No. 1812, B.M.A. House, Tavistock Square, W.C.1.

PARTNERSHIP OFFERED TO LONDON OR Cambridge graduate, ONE-HALF SHARE amounting to about £1,200. Old-established country Practice, Kent. Good appointments. Single man preferred, aged about 35. Experience essential. To commence June this year.—No. 1858, B.M.A. House, Tavistock Sq., W.C.1.

PARTNERSHIP OR PRACTICE WANTED, West or South-West, by M.D., aged 36. [illegible] ss. Scope. Good [illegible] At present large [illegible] 743, B.M.A. House, Tavistock Square, W.C.1.

PARTNERSHIP (OR PRACTICE) WANTED BY Public School and Univ. man, in private and panel Practice, Home Counties, £1,250 p.a. St. Thomas's, aged 36, 2 yrs.' P.G., 8 yrs.' G.P. exp. M.D., B.S., M.R.C.S. Free now. Cap. avail. —No., 3759, B.M.A. House, Tavistock Sq., W.C.1.

RADIOLOGY. — WANTED, PARTNER, HOLDing a hospital appointment in London in West End Practice on favourable terms.—Address, No. 1860, B.M.A. House, Tavistock Square, W.C.1.

WOMAN DOCTOR, M.D.EDIN., REQUIRES PARTNERSHIP, good-class Practice, West End or South West End. Has done over £2,000 per annum in own Practice. House not required.—Frobisher 1672, or Address, No. 1856, B.M.A. House, Tavistock Square, W.C.1.

PRACTICES.

WANTED.—GOOD-CLASS PRACTICE £1,500 upwards in pleasant suburb or town anywhere in England or Scotland, but Liverpool, Newcastle-on-Tyne, Edinburgh, or Yorkshire districts preferred. Good house and educational facilities essential. Capital available.—Address, No. 1705, B.M.A. House, Tavistock Sq., W.C.1.

WANTED.—PRACTICE (OR PARTNERSHIP), £1,500 or over, convenient to London. Good panel. House, with garden, in pleasant part, and good educational facilities essential. —Address, No. 2168, B.M.A. House, Tavistock Square, W.C.1.

WANTED IMMEDIATELY BY M.B.CAMB., Mixed PRACTICE in South of England. Income about £1,300. Panel 1,000. House to rent. Cash available. — Address, No. 1823, B.M.A. House, Tavistock Square, W.C.1.

WANTED IN CARDIFF, PRACTICE OR PARTNERSHIP with view to early succession, by experienced M.D. Married. Strictest mutual confidence.—Address, No. 1852, B.M.A. House, Tavistock Square, W.C.1.

WANTED, PRACTICE, INCOME £1,200— £1,500, good panel, within 40 miles of London. Capital available.—Address, No. 1839, B.M.A. House, Tavistock Square, W.C.1.

WANTED.—MIXED PRACTICE IN LONDON area. Income £2,000 or more with large panel. Best cash price paid.—Address, No. 1859, B.M.A. House, Tavistock Square, W.C.1.

CAN BE RUN AS LOCK-UP.—PRACTICE IN Walthamstow. Panel 84. Income £400. Price £450.—Address, No. 1806, B.M.A. House, Tavistock Square, W.C.1.

ESTABLISHED DOCTOR RECOMMENDS immediate OPENING on new Estate, Middlesex, 15 miles from West End. No premium, but mutual help expected.—Send particulars, age, qualification, to No. 1816, B.M.A. House, Tavistock Square, W.C.1.

FOR SALE.—RAPIDLY INCREASING PRACTICE, established 6 years, with wonderful scope, in delightful residential N.W. suburb. Visiting fee 7/6 with medicine. Mids. 7—10 guineas. Receipts for 1931 £600; 1932 over £700. Panel 100. Modern freehold house, with 4 bedrooms, for sale £2,200 (present mortgage £1,500). Any introduction. Premium for Practice £1,100.—Address, No 1811, B.M.A. House, Tavistock Square, W.C.1.

FOR SALE.—MEDICAL WOMAN'S PRACTICE near London of £1,000. Appointments. 2 years' purchase. Funds must be available. Applicants state age and experience.—Address, No. 1820, B.M.A. House, Tavistock Square, W.C.1.

FOR SALE.—YORKSHIRE, NORTH RIDING, average gross cash (3 years) £1,000, panel over 500, house rent £50. Flat country. 1½ years' ill health.—Address, No. 1861, B.M.A. House, Tavistock Square, W.C.1.

GOOD OPENING. — UNIQUE POSITION FOR a Doctor. No near opposition. 300 houses occupied. — Address, No. 1807, B.M.A. House, Tavistock Square, W.C.1.

LANCS TOWN.—OLD-ESTABLISHED. GOOD house, pleasant district, £50. Receipts over £400. Excellent scope. Transferable appointment £75. Panel 60, increasing. Price £500.—MANCHESTER MEDICAL & SCHOLASTIC ASSOCIATION, 6, Brown Street.

LARGE MIDLAND TOWN. — OLD-ESTABlished PRACTICE. Receipts average £650 p.a., panel nearly 800. Nice house, £60 p.a. Premium 1½ years' purchase.—Apply, PEACOCK & HADLEY, LTD., 19, Craven Street, Strand, W.C.2.

NEAR CRICKLEWOOD, N.W. — RAPIDLY growing part, well-established PRACTICE. Receipts £400 last year, should be more this year. Panel 220. Nice corner house. Illness. Premium £650.—Apply, PEACOCK & HADLEY, LTD., 19, Craven Street, Strand, W.C.2.

NEAR KINGS CROSS, W.C.—WELL-ESTABlished PRACTICE. Receipts about £350 p.a., including panel 300. Good scope. Surgery premises partly covered subletting. Premium £500.—Apply, PEACOCK & HADLEY, LTD., 19, Craven Street, Strand, W.C.2.

TO PURCHASERS. — DO NOT BUY without expert assistance. With 50 yrs.' experience Mr. PERCIVAL TURNER can advise in all cases. Terms free on application to 4, Adam St., Strand, W.C.2. Telephone: Temple Bar 9011. Telegrams: "Epsomian, London."

URGENT. — WANTED, MIXED COUNTRY PRACTICE of about £1,000. House and garden to rent. Capital available.—Address, No. 1824, B.M.A. House, Tavistock Square, W.C.1.

WALES.—LARGE TOWN. DEATH VACANCY. Well-established PRACTICE. Receipts about £900, including panel about 1,000. Reasonable offers considered.—Apply, PEACOCK & HADLEY, LTD., 19, Craven Street, Strand, W.C.2.

WOMAN'S PRACTICE IN LONDON. AVERage [illegible] three years £1,700, [illegible] Premium £3,000 ca[illegible] must produce bank[illegible] No. 1829, B.M.A. House, Tavistock Square, W.C.1.

HOUSES. CONSULTING ROOMS.

WANTED BY M.B., B.S., CONSULTING ROOM and SHARE of WAITING ROOM in the district between Sloane Square and Knightsbridge. — Address, No. 1835, B.M.A. House, Tavistock Square, W.C.1.

A REAL HOME FOR BUSINESS PEOPLE.

ONE-ROOMED AMERICAN FLATLETS. SERVICE OPTIONAL.

Wee Kitchenette and constant hot water basin (enclosed cupboard). Easy chairs, divan beds, plate, linen, china, laundry, baths; all free. Newly decorated and artistically furnished. Spotlessly clean. Excellent housekeeper. Breakfast if required. SINGLE FROM 25/-. 37, Cambridge Terrace, W.2. Paddington 7703.

CONSULTING ROOMS TO LET. — HARLEY Street, Wimpole Street and district. Whole and part-time. Lists sent on application. Rooms wanted in Harley Street district. — ELGOOD & CO., 10, Henrietta St., Cavendish Sq., W.1. Langham 2601.

DOCTORS, DENTISTS.—PORTMAN SQUARE (just off). — Newly converted MANSION especially equipped for consultants. Large bright rooms from £150. Central heating, service lift.—38, Seymour St. Padd. 4656.

FOR SALE, OUTSKIRTS LONDON, LARGE MANSION, 22 years' connection as Rest Home. Electric light, central heating, secluded grounds, garage, cottage. Lease 36 years. Immediate Possession. — Address, No. 1830, B.M.A. House, Tavistock Square, W.C.1.

FOR SALE OR LET.—GOOD CORNER RESIDENCE in West Kensington, occupied by Doctor 3 years. £2,500 or near offer. Mortgage could be arranged.—Apply, 22, Edith Road, W.14.

HARLEY ST. (ADJOINING). — BACHELOR APARTMENT, comfortably furnished. Sitting room, with closed-up bed, large private bath-dressing room, constant hot water, lift. 2½ gns., inclusive of service. Breakfast optional. —No. 101, B.M.A. House, Tavistock Sq., W.C.1.

HARLEY STREET.—TO LET, THREE SMALL FLATS for Medical Men and Women only. From £100. Also Consulting Rooms.—Add., No. 1703, B.M.A. House, Tavistock Sq., W.C.1.

HEALTH GIVING ESSEX COAST.—5 MILES from Brightlingsea and Colchester. South slope of River Colne Estuary. A perfectly situated HOUSE, well suited for a Private Nursing or Convalescent Home. Lounge, 3 reception, and 12 bedrooms (9 principal), 2 bathrooms, electric light, and central heating. Garage and stabling. Lodge. 27 acres of grounds. Woodlands and paddock. (2 cottages if desired.) Executors Sale, low price, possession.—Parties, from ALFRED SAVILL & SONS, 51a, Lincoln's Inn Fields, W.C.2, or C. M. STANFORD & SONS, Colchester.

KENT (30 MINUTES LONDON). — WELLsituated corner HOUSE, admirably suited for Doctor, Oculist, Masseuse, etc. One room used as Surgery by Dentist. Including or excluding living accommodation. Splendid opportunity.—Address, No 1857, B.M.A. House, Tavistock Square, W.C.1.

MIDLANDS. — SMALL HOME FOR MENTAL CASES, well established. Profits £1,300 p.a For sale, with freehold and furniture, and private house for licensee. Terms on negotiation. — Address, No. 1803, B.M.A. House, Tavistock Square, W.C.1.

NURSING HOME, 17, AINSLIE PLACE, EDINBURGH.—Well-established connection. PROPERTY and GOODWILL, also FURNISHINGS, etc., FOR SALE consequent on retirement of Proprietrix. Assessed rent £170. Feu duty £11 3s. 5d.—Further particulars from M. J. BROWN, SON & Co., S.S.C., 7, North St. David Street, Edinburgh.

OLD-ESTABLISHED SMALL HOME FOR Functional Nervous Disorders, Alcoholism, etc., FOR SALE. Well-furnished, freehold, nice grounds. Good connection, gross takings £3,400, light work.—Particulars from No. 1813, B.M.A. House, Tavistock Square, W.C.1.

THE CLIFF, WARWICK. — A HOUSE OF distinction standing in own grounds. Four acres beautiful lawns and trees. Sunny aspect. High and dry; gravel subsoil. Upkeep low. Absolutely Ideal for Nursing or Convalescent Home. Near G.W.R Station. 1½ hours London; 20 minutes Birmingham; 9 miles Coventry. Very low price; £3,000 freehold.—Particulars: T. WOODHOUSE, The Cliff, Warwick.

WHEN YOU COME TO LONDON STAY AT THE HAMPDEN RESIDENTIAL CLUB FOR GENTLEMEN, Hampden Street, N.W.1. Close King's Cross and Euston. 300 bedrooms; 12/6—25/- p.w., includ. baths, attend., & boot cleaning. All meals à la carte in dining room. Mod. tariff. Large club rms., reading rm, study for students. Illus. prospectus, Sec. Mus. 3424.

LONDON COUNTY COUNCIL.

CONSULTANT AND SPECIALIST SERVICE.

Applications are invited from Medical Practitioners, who must be of recognised consultant and specialist status, for appointment to the undermentioned positions in the hospital service.

The persons appointed will be required to carry out such duties as may be assigned by the Medical Officer of Health. The remuneration and conditions of service are subject to review in each case. In the case of women marriage terminates contract of service.

(1) PART-TIME APPOINTMENTS FOR A REGULAR NUMBER OF SESSIONS WEEKLY:
(a)
(b)
(c)
(d) Ophthalmologist;
(e) Ear, Nose, and Throat Specialist;
(f) Orthopaedist;
(g) Dermatologist;
(h) Paediatrist;
(i) Urologist;
(j) Radiologist.

The remuneration in each case will be an annual salary according to a scale based on the number of weekly sessions, each of approximately 2½ hours' duration.

(2) PART-TIME APPOINTMENTS FOR OCCASIONAL SESSIONS. — Neurologists and Anaesthetists. Remuneration at the rate of £2 12s. 6d. a session for Neurologist and £1 14s. a session for Anaesthetist.

(3) FULL-TIME APPOINTMENTS. — Radiologists. Salary £900, rising annually by £50 to £1,100 a year.

Application forms containing full particulars of the conditions of the appointments are obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division), County Hall, Westminster Bridge, S.E.1, returnable by March 31st. Candidates should specify (a) the position or positions for which they desire to apply; (b) the number of sessions a week which they are prepared to devote to the work; and (c) the portion of London, if any, to which they desire to be attached, if possible. Canvassing disqualifies.

LONDON COUNTY COUNCIL.

Applications are invited for appointment of RESIDENT ASSISTANT MEDICAL OFFICER, Grade 1, at Paddington Hospital, Harrow Road, W.9.

Remuneration £350 a year, rising by £25 to £425, with board, lodging, and washing, and subject to the temporary reduction made by the Council from salary and value of emoluments. Candidates must be registered Medical Practitioners of at least one year's standing, and have held a resident appointment in a general hospital for at least six months. No accommodation for a married man or for a woman. The remuneration and conditions of service subject to review.

Application forms obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), County Hall, Westminster Bridge, S.E.1, returnable March 24th. Canvassing disqualifies.

CARDIFF ROYAL INFIRMARY.
(Associated with Welsh National School of Medicine.)
(No. of available Beds—490.)

Applications are invited for the undermentioned posts:
HOUSE PHYSICIAN.
HOUSE PHYSICIAN—Medical Unit.
HOUSE SURGEON.
HOUSE SURGEON—Surgical Unit.
HOUSE SURGEON—Gynaecological.
CASUALTY SURGICAL OFFICER.

Salary is at the rate of £50 per annum, with board and lodging, for the House Physicians and House Surgeons. For the Casualty Surgical Officer salary is at the rate of £75 per annum to an applicant with previous Hospital experience, and £50 per annum without.

Appointments are for six months commencing April 20th.

Application forms can be obtained from the undersigned and should be returned, with copies of three recent testimonials, not later than first post on April 3rd.

R. ARMSTRONG,
March 14th, 1933. Medical Supt.

SOUTHEND-ON-SEA GENERAL HOSPITAL, ESSEX.
(221 Beds—6 Residents.)

Applications are invited for the following posts vacant on May 10th next; six months' appointments:
ONE CASUALTY OFFICER;
ONE HOUSE PHYSICIAN;
TWO HOUSE SURGEONS.
(Male Officers.) Salaries £100 per annum, with board, residence, and laundry.

Particulars of duties can be obtained upon application to the Joint Secretaries.

MINISTRY OF HEALTH.

The Minister of Health invites applications for a VACANT APPOINTMENT on the medical staff of the Ministry. The salary commences at £833 per annum, and rises by twelve annual increments to a maximum of £1,146 per annum. This scale of remuneration is liable to review.

The appointment will carry the usual Civil Service conditions as to pension, holidays, etc., and the officer will be required to devote his whole time to the public service.

The officer now to be appointed will in the first instance be employed in the Pathological Laboratory of the Ministry in London but must be prepared to work in any part of England or Wales if so required.

Candidates must be registered medical practitioners experienced in bacteriological research. Clinical and epidemiological experience will also be taken into account. They must conform to the Civil Service nationality rule.

Canvassing through Members of Parliament or in other ways will render a candidate liable to disqualification.

Forms of application, with further particulars of the appointment, may be obtained from the Director of Establishments, Ministry of Health, Whitehall, S.W.

No application can be considered unless received on the prescribed form not later than March 27th.

COUNTY BOROUGH OF BURNLEY.

MUNICIPAL GENERAL HOSPITAL.

JUNIOR RESIDENT MEDICAL OFFICER (Female).

Applications are invited from fully qualified Medical Practitioners (female) for whole-time appointment as Junior Resident Medical Officer at the Municipal Hospital, Burnley. The appointment will be for a period of twelve months.

Salary at the rate of £150 per annum and full residential emoluments. The salary will be subject to a temporary abatement at the rate of £2 10s. per annum. The officer appointed will be required to refund to the Council all fees, allowances, and emoluments (other than the foregoing) received by her.

Further particulars and application form may be obtained from the Medical Officer of Health, St. James' Street, Burnley, to whom applications, together with three recent testimonials, should be forwarded not later than Saturday, March 25th.

Canvassing, either directly or indirectly, will be a disqualification.

The Town Hall, COLIN CAMPBELL,
Burnley. Town Clerk.
February 28th, 1933.

ROYAL LONDON OPHTHALMIC HOSPITAL (MOORFIELDS EYE HOSPITAL), City Road, E.C.1.

Applications are invited for the office of SENIOR RESIDENT OFFICER.

Candidates must be registered Medical Practitioners and must be prepared to begin duties on May 1st.

Salary at the rate of £150 a year, with board and residence in the Hospital. Additional income will accrue to this post, the care of private patients being included in the duties.

In the event of the First House Surgeon being appointed other candidates are requested to state whether they would accept the office of First House Surgeon at the rate of £150 a year, Second House Surgeon at the rate of £125 a year, or Third House Surgeon at the rate of £100 a year.

The appointments are for a period of six months.

Aplications, with testimonials, stating age and qualifications, must be received not later than April 4th.

A. J. M. TARRANT, Secretary.

REDLANDS HOSPITAL FOR WOMEN (Glasgow Women's Private Hospital).

RESIDENT DOCTOR (woman) required for the above Hospital for six months from April 1st. Salary at the rate of £75 per annum, with board and laundry.

Patients treated include Medical, Surgical, Gynaecological, Obstetrical, etc., cases.

Applications, with three testimonials, to be sent to the Secretary, Medical Staff, Redlands Hospital for Women, Glasgow, W.2, not later than March 27th.

ROYAL INFIRMARY, WIGAN.
(180 Beds.)

HOUSE SURGEON (male) required April 1st, for a period of six months. Salary £150 per annum, with board, apartments, and washing. Staff consists of R.S.O. and three House Surgeons. Applications, stating age and qualifications, with copies of three recent testimonials, should be addressed to the undersigned as soon as possible.

A. STANLEY BRUNT,
March 13th, 1933. Gen. Supt. & Sec.

COUNTY BOROUGH OF HALIFAX.

SENIOR RESIDENT MEDICAL OFFICER ST. LUKE'S HOSPITAL.

Applications are invited for the appointment of Senior Resident Medical Officer at St. Luke's Hospital.

Applicants must be duly qualified Registered Medical Practitioners and preference will be given to those who have held a resident appointment in a general hospital.

The salary will be £350 per annum, rising by annual increments of £25 to £450, together with board, lodging, and laundry.

Applications must be made on a prescribed form which may be obtained from the undersigned, and should be sent, together with testimonials of not more than three recent date, endorsed "Senior Resident Medical Officer," to the undersigned so as to be received not later than April 3rd.

Canvassing, either directly or indirectly, will be a disqualification.

Town Clerk's Office, PERCY SAUNDERS,
(Carlton-Street Branch), Town Clerk.
Halifax. March 14th, 1933.

METROPOLITAN HOSPITAL, Kingsland Road, E.8.

There are vacancies for the following:
(a) SENIOR HOUSE PHYSICIAN (Male);
(b) SENIOR HOUSE SURGEON (Male);
(c) JUNIOR HOUSE PHYSICIAN (Male);
(d) JUNIOR HOUSE SURGEON (Male);
(e) TWO CASUALTY OFFICERS (Male);
salary £100 per annum.

Appointments in the first place will be for a period of six months dating from May 1st.

Candidates must possess a registerable Medical and Surgical qualification of the United Kingdom.

Applications, with copies of three recent testimonials, and a certificate of ability to administer anaesthetics, should be sent to the undersigned, not later than first post on Thursday, April 6th.

Two members of the Resident Staff are candidates for the two Senior appointments.

GEO. W. COOLING, Secretary.

SOUTH LONDON HOSPITAL FOR WOMEN, Clapham Common, S.W.4.

APPOINTMENT OF ASSISTANT SURGEON.

The Board of Management invite applications from fully qualified Medical Women for the above appointment.

Candidates must be Fellows of the Royal College of Surgeons, England, or obtain the Fellowship within three years from the date of appointment.

Further particulars may be obtained from the Secretary.

Applications, with copies of testimonials, to reach the Secretary at the Hospital, not later than Saturday, April 15th.

THE ROYAL HOSPITAL, WOLVERHAMPTON (Incorporated under Charter).
(230 Beds.)

Applications are invited for the post of SURGICAL REGISTRAR and RESIDENT ASSISTANT SURGEON. Salary £250 per annum. Experience of major surgery essential. The successful candidate must hold qualifications in Surgery; he will be permitted to undertake private consulting surgical practice.

The appointment commences on April 14th next and is for six months in the first instance.

Wolverhampton. W. H. HARPER,
March 14th, 1933. House Governor.

SOUTH LONDON HOSPITAL FOR WOMEN, Clapham Common, S.W.4.

APPOINTMENT OF ANAESTHETIST.

The Board of Management invite applications from fully qualified Medical Women for the above appointment.

Attendance on Monday mornings and Thursday afternoons respectively.

Honorarium 10/6 per attendance.

Applications, with copies of testimonials, to reach the Secretary at the Hospital not later than Saturday, April 1st.

THE BELGRAVE HOSPITAL FOR CHILDREN, Clapham Road, S.W.9.

The Committee of Management invite applications for the post of TWO HOUSE PHYSICIANS and ONE HOUSE SURGEON, which will become vacant on April 30th next.

Applicants (men) must be fully qualified and registered. The appointments are for six months, with board, residence, and washing provided. Salary at the rate of £100 per annum.

Applications, with copies of testimonials, stating age, should be forwarded on or before Thursday, April 6th to the Secretary.

MISCELLANEOUS SALES, etc.

USED CARS —this week's Bargains—

Irreproachable in looks and performance, implicitly reliable, these cars are specially suitable for busy professional use—and soundest VALUE at the prices asked.

Fullest Out of Income Facilities, Exchanges. Call, write, phone.

1932 AUSTIN 12/6 Coachbuilt Saloon. Blue/Black; tax paid, extras. £135

1929 SUNBEAM 16 h.p. 4-door Saloon. Black, maroon upholstery, luggage trunk, etc.; really splendid condition. £135

1932 AUSTIN "16" Burnham de Luxe Sunshine Saloon. Dark Blue. Very carefully used. Fine opportunity. £215

1932 HUMBER 16/50 Sunshine Saloon. Black, White line; one owner; very sm. mileage. Remarkable bargain. £295

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"SAFETY FIRST"

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Full particulars upon request.

We have given satisfaction to hundreds of Medical Practitioners. Why not let us supply your requirements.

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The benefit of our unique experience over many years is available to the Medical Profession.

HARDY & HARDY
TAXATION CONSULTANTS.
49, Chancery Lane, London, W.C.2.
'Phone: Holborn 6659.
Write for Copy of "Advice on Income Tax."

FOR SALE.—COMPLETE X-RAY APPARATUS by Dean, including 16 inch coil, etc., couch, stand, tintometer, developing tanks and hangers. 200 volt A.C. Also Jesionek mercury vapour lamp. What offers?—Address, No. 1805, B.M.A. House, Tavistock Square, W.C.1.

X-RAY APPARATUS FOR SALE.—"NINETY-Thirty" *model.* A.C. 200/240 V. Purchased new 9 *months'* ago; hardly used. Combined Couch and Screening Stand. Cost £350. Accept £250.—*Address, No. 1814,* B.M.A. House, Tavistock Square, W.C.1.

APPOINTMENTS.—Contd.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Road, S.E.1.

There is a vacancy for a HONORARY PHYSICIAN in charge of the Physiotherapy Department of the above Hospital. Candidates must be registered Medical Practitioners. Applications, with copies of three recent testimonials, should reach the undersigned not later than March 28th, from whom further particulars can be obtained.

J. H. TEASDALE, Secretary.

BURSLEM HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL.

Wanted, JUNIOR MALE RESIDENT MEDICAL OFFICER. Salary £150 per annum, with board and residence. Must be fully qualified. Experience in Ophthalmic and Ear, Nose, and Throat work will be an advantage. Applications, stating age and experience, together with copies of three recent testimonials, to be sent to me.

High Lane, Burslem, Stoke-on-Trent. C. E. LOWNDES, Secretary.

ALTRINCHAM GENERAL HOSPITAL. (100 Beds.)

The Board of Management are prepared to receive applications for the position of HON. GYNAECOLOGIST to the above Hospital.

Applications, accompanied by testimonials, to be sent on, or before, April 1st, to the Secretary, The General Hospital, Altrincham.

THE BUTE HOSPITAL, LUTON, INVITES applications for the appointments of HONORARY CONSULTING PHYSICIAN and HONORARY CONSULTING GYNAECOLOGIST.

Applications should be sent to the Secretary of the Medical Advisory Committee at the Hospital.

THE INFANTS HOSPITAL, Vincent Square, Westminster.

Applications are invited from qualified Medical Practitioners for the post of CLINICAL ASSISTANT in the out-patient department.

Applications, stating previous experience, should be addressed to the Secretary.

REYNOLDS & BRANSON,
Limited,
MEDICAL TRANSFER AGENTS,
13, BRIGGATE, LEEDS, 1.
Telegrams: Reynolds Leeds.
Telephone: 20047.

OLD-ESTABLISHED PRACTICE for sale in West Riding City. Private, panel, also specialized in Ophthalmic work. Average receipts £472, panel about 250. Scope for energetic young man. Good convenient house and garage £650, nominal premium. Vendor retiring. Apply, No. 2671.

NORTH-EAST COAST HEALTH RESORT.—Old-established private PRACTICE. Small panel, average receipts £2,291. Convenient freehold house in commanding position £2,700. Prem. £2,700.—Apply, No. 2645.

SOUND COUNTRY PRACTICE in East Yorks in nice locality. Average receipts £645. These have fallen owing to the illness of the Vendor, but the Practice is capable of increase. Rent of house £50. Reasonable premium for ready sale. Panel 305.—Apply, No. 2668.

DEATH VACANCY in delightful North Yorkshire village, held by late owner 40 years. Average receipts £1,071—£1,185, panel 436, rent of house £60.—Apply, No. 2676.

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W. J. HICKS, *Secretary.*

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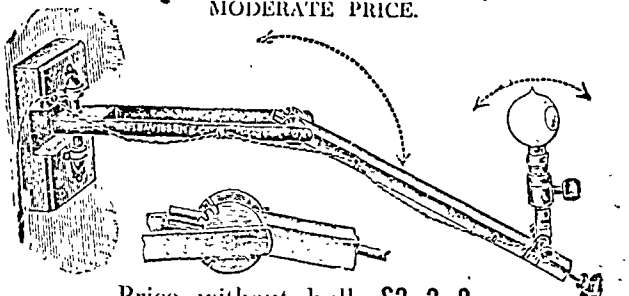

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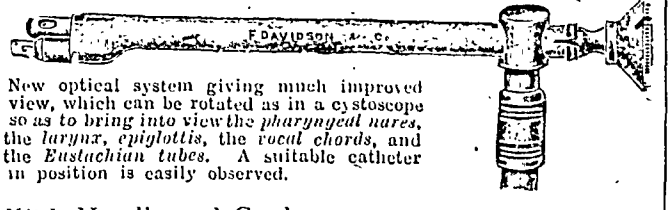

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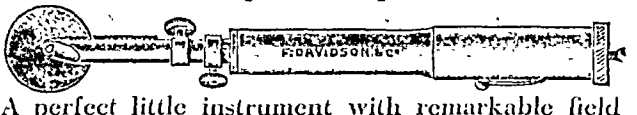

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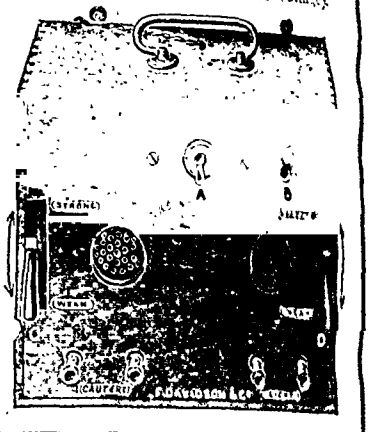

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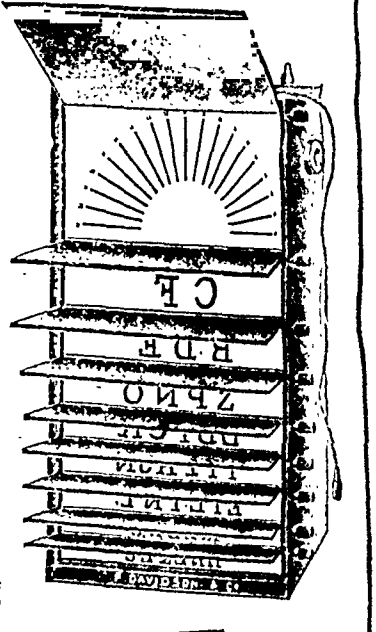

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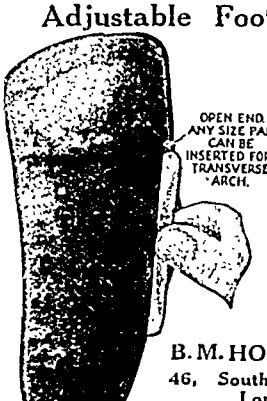

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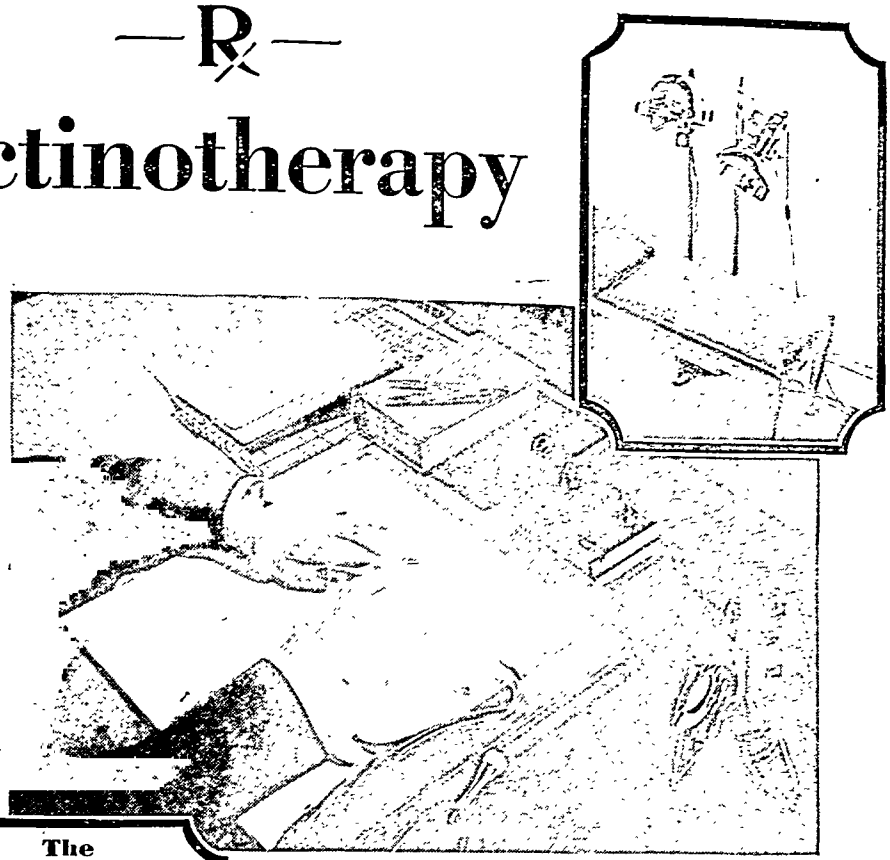

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British specialists in actinotherapy equipment and providers of a complete service of information and supply, available through medical dealers in Britain and Overseas Dominions.

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Standardised by the Medical Profession for all illnesses involving or arising from weaknesses of the digestive system.

Physicians may obtain full particulars of Benger's Food and other preparations for the treatment of disorders of the digestive system, post free. Address: BENGER'S FOOD, Ltd., Otter Works, Manchester.

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A natural organic TONIC associated with nourishing albuminous proteids.

AN EFFICACIOUS REMEDY IN ALL FORMS OF ANAEMIA

associated with constitutional diseases.

Obtainable in Syrup *and* Tablets.

"SEDIN"

Nervinum-Sedativum

Consisting of

Pot.	Brom.	0.4	gramme	(grains 6½ approx.)
Sod.	„	0.4	„	(grains 6½ approx.)
Ammon.	„	0.2	„	(grains 3 approx.)
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combined with Vegetable Extract in form of soup tablets. (A disguised dietetic form.)

Samples free and carriage paid on application to—

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THE TREATMENT OF AN ANAEMIC CONDITION

"The simple inorganic ferrous salts are approximately ten times as effective as any other preparations of iron."—Extract from the article by . . . . . M.D., F.R.C.P., in the PRACTITIONER.

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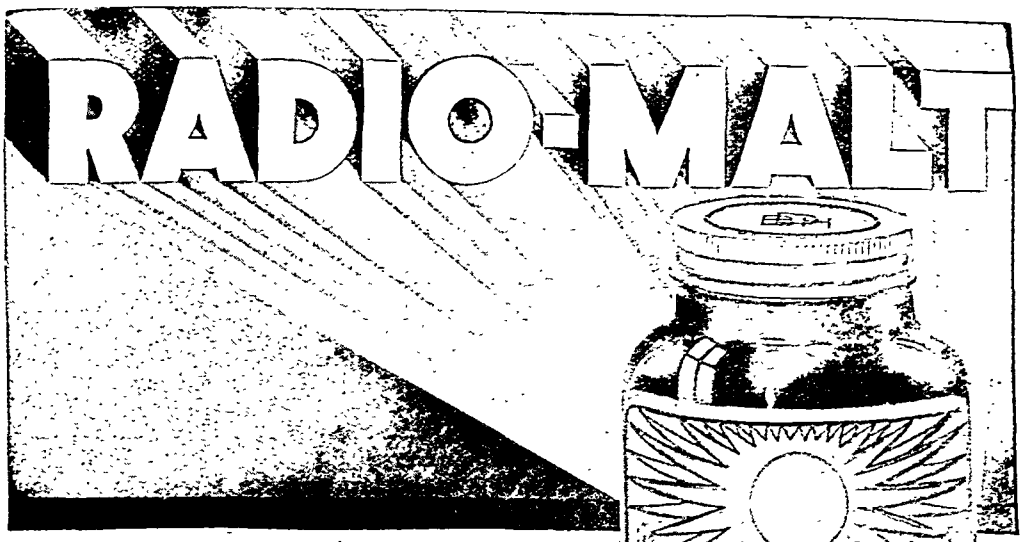

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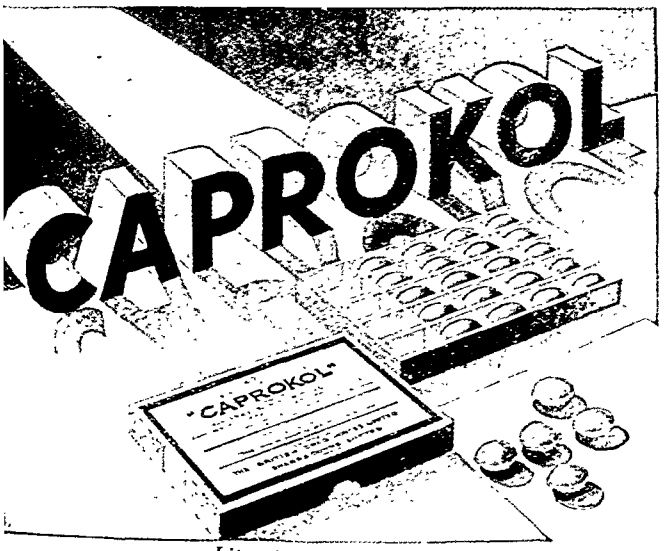

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In the conditions of discomfort which prevail in urinary tract infections Caprokol therapy comes as a boon.

The analgesic action of Caprokol brings relief after a few doses; whilst persistive treatment causes the urine to become highly bactericidal, resulting eventually in complete disinfection of the urinary tract.

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MEDISOAPS are mild and effective in their action and there is no risk of the further injury to the skin which sometimes follows over-treatment by the patient with ointments.

Their remedial value has been emphasized by recent research work which shows that soap is an admirable vehicle for Sulphur, Beta-naphthol, Resorcinol, Peru Balsam, Birch Tar, and other skin medicaments.

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for CHRONIC COLITIS

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Evacuations are normalised. Looseness is controlled although interval constipation is corrected.

The mucosa is protected from mechanical and chemical irritants.

The contents of the bowel are purified.

Toxaemia disappears.

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(the crystalline ovarian follicular hormone)

The British Drug Houses Ltd. invite enquiries for Oestroform, the crystalline ovarian follicular hormone.

The function of the follicular hormone in the female is to regulate the sex cycle and to maintain the female accessory and secondary sexual organs in the fully developed condition characteristic of the organism after puberty.

Oestroform is available for use by injection or by oral administration as follows:—

In a sterile solution for injection

Standardised biologically to contain 1000 units per c.c.

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OVARIAN HYPOFUNCTION

such as

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When the mental and physical energies of your patients have been dangerously depleted, prescribe "Dextrosol." This pure, medicinal Glucose (Dextrose B.P.) will restore their strength and assist in correcting internal disorders. It is identical with blood-sugar, requires no digestion and aids the liver to fulfil its antitoxin functions.

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Insulin 'A.B.' contains the minute quantity of phenolic preservative originally recommended by the Medical Research Council and still considered necessary by bacteriologists (*Lancet* Sept. 12, 1931, pp. 582-584) as a complete safeguard against the development of bacteria that may be accidentally introduced during self-administration.

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5 c.c. (100 units) - - 2/- each
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80 units per c.c. Packed in bottles containing:
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Full particulars and the latest literature will be sent free to members of the Medical Profession.

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Joint Licencees and Manufacturers:
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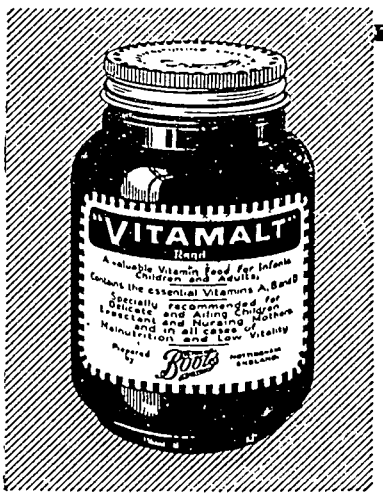

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BRIT. MED. JOUR., No. 3638, 1930.

MED. JOURNAL OF AUSTRALIA, No. 22, 1930.

L'UNION MED. DU CANADA, No. 7, 1931.

LANCET, March 4, 1933.

THE ROCHE LABORATORIES, LONDON, N.13.

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To-day, authorities are stressing the importance of the essential mineral salts. In addition to building sturdy bones, and blood rich in hemoglobin, these mineral elements aid metabolism and contribute to nervous stability.

Yet many modern diets cannot be depended upon to furnish the proper quota of minerals, and therefore millions of people suffer from the effects of demineralization. Cooking destroys a variable amount of the mineral value of foods—in some instances as high as 76 per cent.

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Compound Syrup of Hypophosphites "Fellows" contains the mineral salts of sodium, calcium, potassium, manganese, iron and phosphorus, together with the added metabolic stimulants—strychnine and quinine. Sixty years of clinical experience the world over testify to its value as a tonic.

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CONTAINS THE ESSENTIAL MINERALS

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Megalocytic hyperchromic anæmia

". . . the response of the anæmia to Marmite was as dramatic as that obtained by the administration of liver extract in the treatment of Addisonian pernicious anæmia."
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IN sickness

and, indeed, at all times

RECOMMEND A safe SOAP

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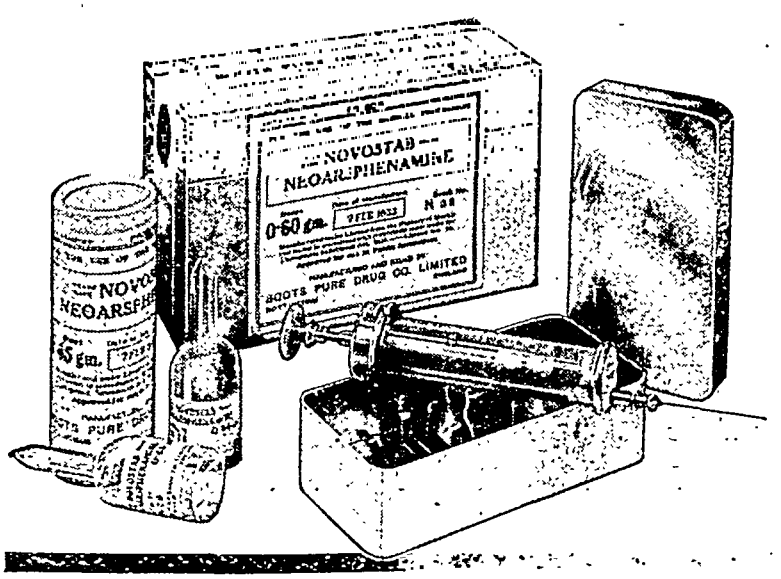

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free from secondary effects

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RHEUMATISM
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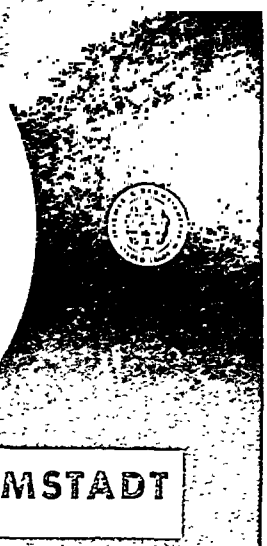

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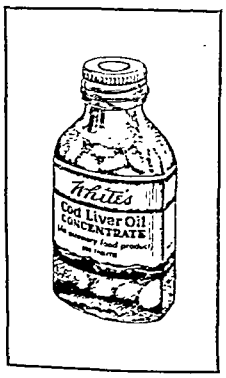

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Bulletin No. 3

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in tooth cleansers

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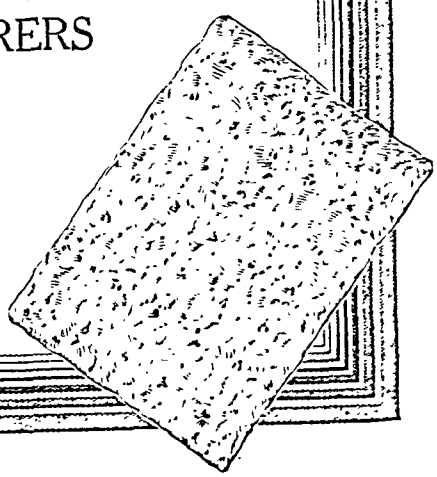

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Does not contain Cocaine, and does not come under the Dangerous Drugs Act.

A New Vaccine for the Prevention of Colds, Catarrh, Influenza, etc.

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for the treatment of GLAUCOMA according to Dr. Carl Hamburger (Berlin).

Glaucosan, Laevo Glaucosan, Amino Glaucosan

IN STERILIZED AMPOULES.

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The extra germicidal power of the new product will defeat even the most stubborn infection.

EMULSIFICATION IS THE SECRET OF SUCCESSFUL DISINFECTANT ACTION
— and —
DIMOL '43' is far more readily emulsified than the earlier form of tablets.

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Meduphites
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Orchitic
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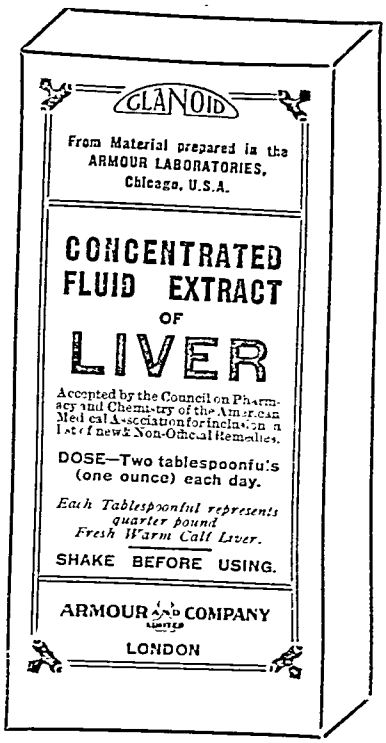

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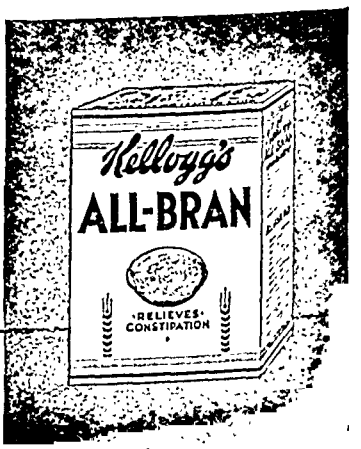

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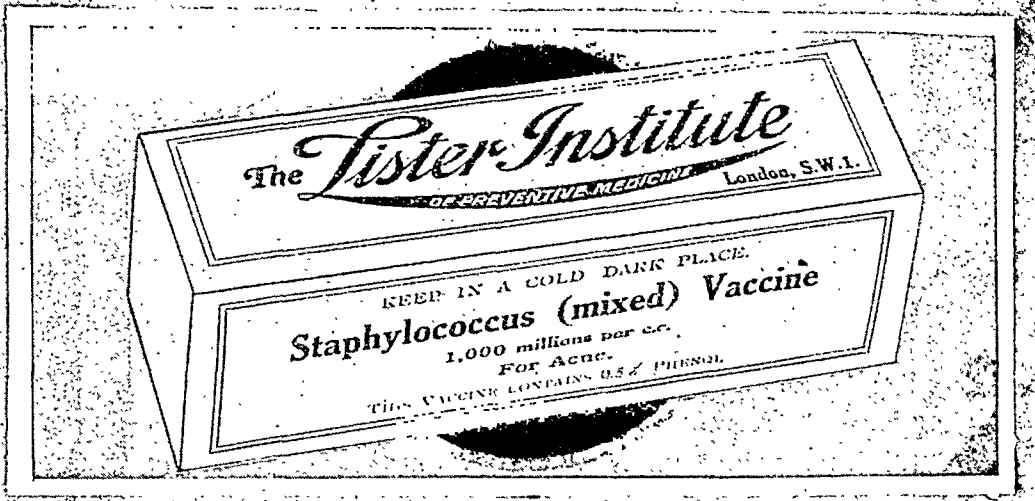

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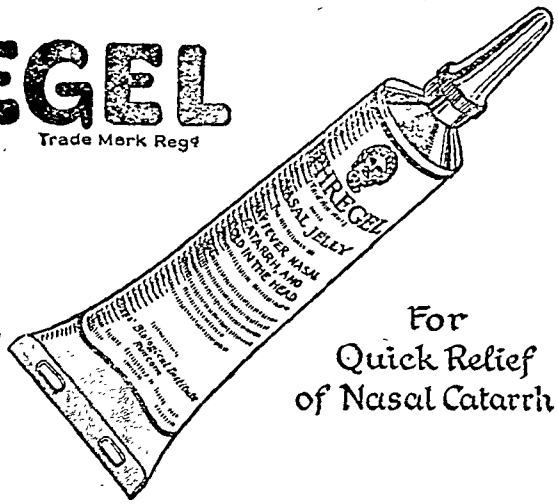

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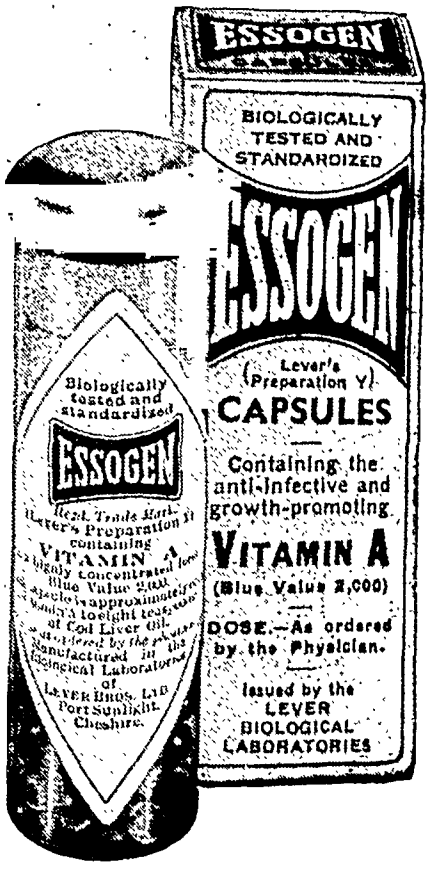

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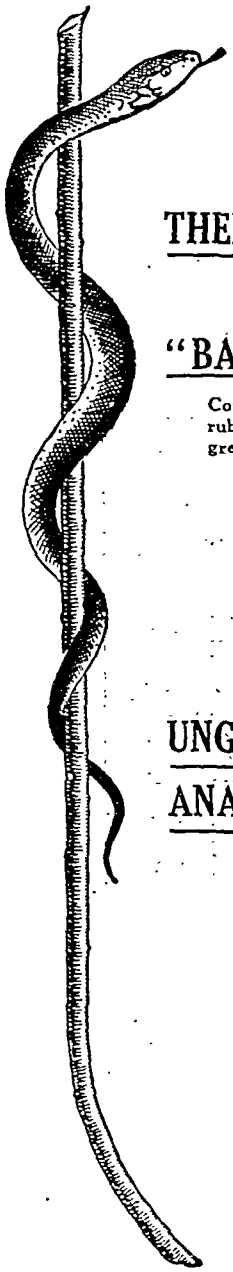

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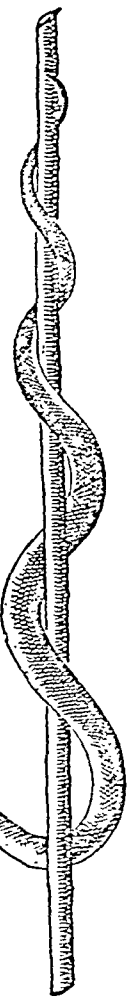

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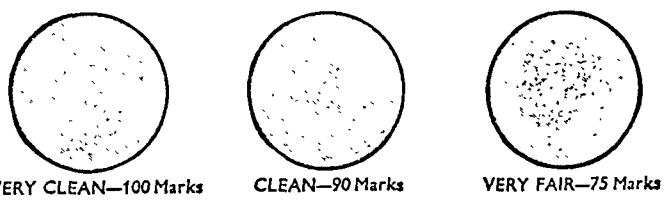

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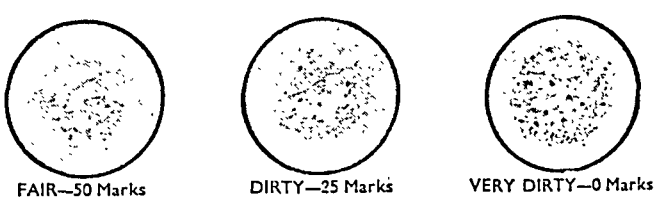

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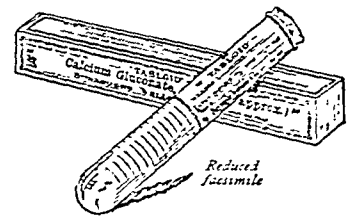

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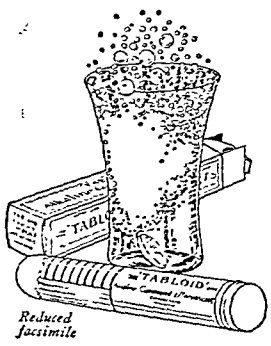

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A Paper
ON
CHANGES IN THE CHARACTER OF DISEASES*
BY
SIR HUMPHRY ROLLESTON, BART.
G.C.V.O., K.C.B., M.D.

Sydenham, the British Hippocrates, maintained that acute diseases had (*a*) seasonal variations with waves measured in months, and due, as Hippocrates believed, to meteorological conditions, so that their character and response to treatment differed within a short period, a feature now so familiar in influenza epidemics; (*b*) a long-period evolution with a rise, decline, and fall extending over centuries; and (*c*), though, as Crookshank has pointed out, Baillou (Ballonius), sometimes called the French Hippocrates, anticipated him in 1574, an "epidemic constitution," namely, that special influences—telluric or cosmic—become dominant and impress some special feature on the clinical manifestations of diseases prevalent at the time to the exclusion of other types, the amplitude of this wave being measured in years. Major Greenwood translates the much-discussed term "epidemic constitution" as meaning that the non-specific secondary infections, such as those seen in influenza and measles, are as important as regards morbidity and mortality as are the specific causes of disease.

That the character of acute diseases undergoes changes has been vigorously contested in the past, especially in 1857 by J. Hughes Bennett in Edinburgh, and by Markham, who in 1864 denied that after the cholera epidemic of 1832 the type of fevers previously sthenic became asthenic, so that bleeding was no longer beneficial; he indeed suggested that this notion of a change in character was largely invented, years after 1832, to justify the change of fashion in treatment—namely, the abandonment of venesection. In 1873 Murchison wrote that each of the acute specific fevers had maintained its identity in all ages and countries, and that the supposed change of type was really due to failure in recognizing that a disease other than that supposed to have altered its character had appeared on the scene; he instanced the confusion between typhus, a killing disease, and relapsing fever, which rarely terminates fatally. The argument that improved diagnosis must be taken into account before accepting a supposed change of type in disease must be allowed due weight: coronary thrombosis has only been generally recognized and found to be extremely common since about 1926, and in the future it might therefore be thought that angina pectoris had changed its type; but is it not that differential diagnosis has altered the label? At any rate retrospective diagnosis has made it highly probable that the rupture of Sir Robert Darcy's heart, recorded by William Harvey in 1649, was secondary to infarction, for there is now good evidence that spontaneous rupture of the heart is nearly always the result of recent acute infarction (Beresford and Earl). This morbid change was first described in 1880 by Weigert, but the clinical syndrome was not recognized until 1910 by Obrastzow and Strachesko,† and did not become widely known for another sixteen years.

At the present time no one can doubt the evidence of a change of character in some acute diseases, such as scarlet fever. For the last ten years the type of small-pox prevalent in this country, under the names parasmall-pox, variola minor, or alastrim, has been so mild and the mortality so nearly negligible that the suggestion has been made that it is a new disease and not a mild form of small-pox, a view not acceptable from an immunological point of view (Ledingham). A curious position has thus arisen. Since the Vaccination Act of 1907 came into force it has become easier to evade vaccination, and the unvaccinated proportion of the population must be large; its exact proportion cannot be accurately estimated, but Dr. J. R. Hutchinson of the Ministry of Health has kindly informed me that for the period 1916–30 the yearly average of primary vaccination in infancy has been 43 per cent. This leaves perhaps more than half of the population unprotected, and yet its logical result—namely, an epidemic of severe small-pox—has not yet followed. The present type of small-pox is so mild that many people prefer to run this risk to being vaccinated. Are we in a fools' paradise?; and how does this affect the insurance of unvaccinated applicants for life policies? From the point of view of change of type of disease the mild typhus fever, known in America as Brill's disease, is comparable with variola minor.

In order to realize the high probability that diseases must change their character it is only necessary to remember that they are not rigid entities like, let us say, precious stones or an issue of postage stamps, but are the reactions of the living body when it fails to adapt itself to an adverse environment—internal or external. A morbid state is therefore the outcome of two variables: the resistance or the susceptibility of the body on the one hand and the numerous factors coming under the heading of environment on the other hand. The internal environment, the constancy of which (*milieu interieur*) Claude Bernard emphasized more than half a century ago and W. B. Cannon in 1930 called "homeostasis," includes the constitution, the make-up of the body, and the metabolic processes which, like the physical structure of the body, may, as A. E. Garrod has so well said, be also subject to congenital malformation. The influence of constitution is seen in hereditary and racial liability to certain diseases—for example, the frequency of diabetes and disorders of lipoid metabolism in Jews. The external environment includes micro-organisms, poisons, physical agencies, trauma, unhealthy surroundings, tainted food, poverty, and over-fatigue of body and mind; in fact, the consideration of the aetiology of disease has its sociological side. In infective diseases attention must be directed to the "soil" as well as to the "seed," and the difficult question arises as to which—the individual's resistance or the virulence of the invading micro-organism—is generally the more important factor in the production of disease. From their rapid multiplication bacteria must be more prone to mutations and changes in virulence than is man to develop alterations in resistance, but the complexity of this problem, so exhaustively discussed by Topley and Wilson, should engender caution in attempting to draw a conclusion which might, of course unconsciously, be coloured by "the extreme anthropocentric view of the physician."

In some instances the obvious influences, however various they may be, of environment are overwhelming: In the European war there appeared new forms of disease as the result of stationary trench fighting; an increase of deficiency diseases, and a fall in the incidence of those due to dietetic excesses in Russia, Gantt found a diminution of chronic alcoholism, obesity, appendicitis, cholecystitis, and diabetes mellitus; in Germany there

* Read at a meeting of the Assurance Medical Society on February 1st, 1933.

† In his *Classic Descriptions of Disease* (pp. 398–402), Professor R. H. Major reproduces the account of the clinical diagnosis in 1876 in an isolated case of coronary thrombosis by Adam Hammer (*Wien. med. Woch.*, 1878, xxviii, 102).

was a fall in diabetes, arteriosclerosis, and acute pancreatitis. The greater speed and the wear and tear of modern life, a complaint of generations other than the present, may be correlated with the increased incidence in Europe and America of epidemic diseases of the central nervous system due to some factor or factors such as more rapid transport or concentration in crowded towns. High blood pressure, cardio-renal disease, and diabetes may also be products of strenuous existence.

The improved hygienic circumstances due to the Public Health Services have banished from this country many acute infections, such as cholera, typhus, and relapsing fever, and made enteric fever comparatively rare. Infant mortality has been greatly diminished—from 149 per 1,000 in 1871–80 to 60 per 1,000 in 1930—and, mainly as a result of this, the expectation of life at birth has increased from about 41 years in the middle of the last century to about 57 years in 1922: the population is becoming older—a change of financial importance to life assurance companies and also to their policy holders. But, on the other hand, more people now survive to come into the age period of cancer and degenerative cardiovascular disease.

That cancer bulks more prominently in death rates than formerly is certain, but whether or not this is because it is more correctly diagnosed now and that more people than in the past live into the cancer age is open to discussion. But abdominal malignant disease in males has probably increased. Another debatable point is whether or not low-grade streptococcal infections and septic foci have really become much commoner or have only recently been more generally recognized.

Reference will now be briefly made to some diseases in which changes in character or incidence have occurred within comparatively recent times.

Chlorosis has practically disappeared since the beginning of this century, and with it the conditions of gastrostaxis and perforating gastric ulcer in chlorotic young women (Cope). Its place appears to have been taken by the simple achlorhydric anaemia in middle-aged women (Witts), which is also curable by efficient administration of iron, but is closely related pathologically to pernicious anaemia and, like it, is familial. The disappearance of chlorosis has been ascribed to the discontinuance of the corset (F. P. Weber), improved conditions of life, better food, and exercise.

Acute rheumatism has, during the last eighty years, undergone considerable modification; thus its complication by pneumonia, which occurred in twenty-one out of 136 analysed by Peter Mere Latham in 1846, had disappeared fifty years ago. A more recent change is in the lessened severity of the arthritic affection, and the rarity of hyperpyrexia and of profuse sweating before patients come under treatment. Unfortunately salicylates have not, at any rate appreciably, influenced the incidence of cardiac complications.

Tophaceous gout has been getting rarer for many years.

Syphilis is in some respects less obviously malignant than formerly, for the terrible bone lesions are now rarely seen except in museums. This may be largely due to treatment, but improvement began long before the introduction of salvarsan, and the question of a greater racial resistance cannot be entirely set aside. The new methods of treatment have greatly shortened the duration of the infective period, but their influence on the late nervous and vascular lesions—tabes, general paralysis, aneurysm, and cardiac disease—cannot be finally estimated yet; some statistics, such as Gager's, suggest that unless they rapidly produce complete sterilization the arsenobenzol preparations may damage the immunity mechanism; he states that syphilitic aortitis has become increasingly common since the introduction of these remedies. Warthin found that the *Treponema pallidum* is extraordinarily persistent in the myocardium, aorta, and aortic valves (1929), and that among 501 cases of syphilis sudden cardiac death was five times as frequent as among the non-syphilitic (1930). Others have not found the treponema with any approach to this frequency; Saphir and Scott, though using the Warthin-Starry method and also the Levaditi method, did not find the treponema in the myocardium in any of their 107 cases of syphilitic aortic insufficiency. My own impression is that thoracic aneurysm has become less common than it was earlier in this century, just as popliteal aneurysm, which in 1847 Crisp found second only in frequency to thoracic aneurysm, certainly has done since 1880. It is a little more than thirty years ago since Dr. Parkes Weber wrote a paper on "Syphilis in relation to Life Assurance, with an Examination of Five Hundred Consecutive Claims." It will be interesting to know in what respects the methods of treatment adopted since then bear on the acceptance of applicants with a history of syphilis for life assurance.

Appendicitis, though recognized more than a hundred years ago, became much commoner after the return in 1889 of influenza, after its absence for forty years.

Cirrhosis of the liver has now become less frequent and, though alcoholism is far from being its only cause, the advance of temperance and the retreat of cirrhosis may reasonably be correlated.

Pneumonia has undergone a change since influenza again became prevalent; the frank lobar pneumonia is less frequent, and a bronchopneumonic form has become more in evidence.

Primary carcinoma of the lung, usually starting in the bronchi, has become much less rare since 1918. The nature of the irritation responsible for this increase has excited some speculation, but no sound conclusion has so far been reached.

Hydatid disease has become quite rare within the professional life of some of us. Sir Charles Ballance remembers a physician who carried in his pocket an ordinary knife and a piece of copper wire to incise a hydatid cyst and extract the daughter cysts.

Urinary calculi, for which Norfolk was formerly notorious, no longer show any predilection for that part of England.

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NEUROPARALYTIC ACCIDENTS COMPLICATING ANTIRABIC TREATMENT

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The occurrence in Palestine within the three-months period April 28th to July 29th, 1932, of three paralytic accidents following on treatment with a killed carbolized rabies virus vaccine is without precedent or parallel anywhere, and would therefore appear to merit record, description, and discussion. In the series are included two fatally ending cases of Landry's paralysis and one case of paresis of the lower extremities in which recovery took place without loss of control at any time over the urinary and rectal sphincters. The fact that on this occasion an opportunity was afforded of studying in the central nervous system the pathological anatomy of an exceedingly rare condition, of which the aetiology still remains obscure, lends added interest to the occurrence.

CASE I

This was a young Moslem, aged 29 years, whose family history recorded no affections of the nervous system, and no evidence of mental disease, paralysis, or fits. There was nothing in the patient's occupation, environment, or mode of life likely to injure health or predispose to nervous instability. He had at no time suffered from any acute illness or infectious disease, and there existed neither chronic nephritis nor abnormality in the circulatory system. For a man of his class he was of more than average intelligence.

On April 13th, 1932, he was severely bitten by a camel, which inflicted, through the clothing, a deep wound on the right upper extremity. Antirabic treatment was begun on April 15th, but, on the camel's remaining healthy after ten days' observation, was discontinued on April 26th. During the period of vaccine administration the patient's conduct was exemplary; no local accidents (or accidents with a local point of departure) occurred, and he showed no undue signs of nervousness. On April 28th, without any premonitory fever, headache, vomiting, or backache, he experienced a feeling of weakness in all four extremities. On April 29th a progressive loss of power in arms and legs was noted, but he was still able to move about, although with difficulty. Next morning an almost complete motor paraplegia was found to have replaced the earlier paresis; he was unable to walk or to raise his arms, and in the afternoon he was brought to the Government Hospital in Jerusalem.

Examination revealed a total flaccid motor paralysis of the extremities. Reflexes, both superficial and deep, were abolished. Cutaneous sensibility was perfectly intact. There were no changes in the nerves of special sense. Both pupils reacted to light and to accommodation, and were of equal size. Intelligence and memory were unimpaired. The bladder and rectum were unaffected. The legs and arms could be moved passively without muscular resistance, and the muscles showed neither active nor reflex tension. The pulse rate was 90, the respiration rate 22. The patient's condition remained unaltered till the afternoon of May 3rd. Then, although the temperature remained normal, the pulse rate was 150, the respiration rate 40, and breathing was laboured. The neck muscles were paralysed. There was retention of urine and faeces. Dysphagia and dysarthria were present as well as certain ocular symptoms—namely, marked dilatation of the left pupil, hippus, and ophthalmoplegia interna. No changes in the fundus oculi were seen. Blood pressure was 128/90. White and red cell counts were respectively 18,700 and 5,400,000 per c.mm., and the differential count showed the percentages of leucocytes to be: polymorphs 85, lymphocytes 14, eosinophils 0.5, and basophils 0.5. The spleen and liver were not palpable. Muscular wasting had not occurred, and the electrical reactions were normal. The urine contained a trace of albumin. Complaint was made of a feeling of oppression in the chest.

On May 4th the disease had progressed; patient was drowsy and unable to talk or answer questions; the pulse was rapid and almost imperceptible; the respirations were shallow and slow; face and fingers were deeply cyanosed. Death took place, after an illness of six days' duration, at 1.45 p.m. A post-mortem examination was made at 4 p.m. on the same day.

CASE II

On July 13th, in a Jewish settlement in Southern Palestine, a dog, suspected of rabies, was reported to have bitten several other dogs, including one which belonged to the family of the case about to be described. In spite of the fact that no member of the family had been bitten by the dog and that all the animals concerned were destroyed on July 16th, antirabic treatment was requested from the medical officer of the settlement on behalf of the patient—a boy of 5 years—whose mother was 30 years old and whose sisters were respectively 9 and 2.

Whereas, however, the mother and sisters received a complete course of treatment without untoward incident, the boy developed, after the tenth injection, symptoms of an acute ascending spinal paralysis. The patient was a Jewish boy of Bulgarian extraction. His family history was without evidence of nervous disease, but he himself was an exceptionally highly strung child. He had never contracted any infectious disease and there had been no occurrence of medical interest during his life. Antirabic treatment was begun on July 19th and continued till July 31st, when the boy's condition precluded further injections. On July 29th complaint was first made of pains in the feet and legs, and it is noteworthy that the onset of symptoms happened immediately after the patient had taken a cold shower-bath and three days after he had been severely punished by his father. By July 31st the legs were completely paralysed and pains were felt in the hands and arms. On August 3rd the patient began to experience difficulty in swallowing and in breathing, and on that day he was sent to the Government Hospital in Jaffa.

Examination revealed a complete flaccid paralysis of both legs, with abolition of the deep tendon reflexes. No response was obtained on stroking the outer margin of the sole of the foot and no muscular contraction on striking the periosteum and fasciae. Cutaneous sensibility remained unchanged, and control over the urinary and rectal sphincters was preserved. The abdominal reflexes were absent. There was partial paresis of both upper extremities and a paralytic condition of the sixth right cranial nerve. Pupillary reactions to light and accommodation were normal. The patient could articulate distinctly, but was unable to swallow solid foods. Tongue movements were unimpaired. Respiration was forced and deep; the temperature varied from 37° C. to 37.5° C.

On August 4th the general condition was little changed but a definite paresis of the right facial nerve was now marked. During the course of the evening paralysis of both arms became total; Cheyne-Stokes breathing supervened, and the patient was no longer fully conscious. On August 5th the temperature rose to 38° C. and death ensued at 9 a.m. A post-mortem examination was carried out at 10 a.m. on the same day.

CASE III

The patient was a Jewish girl of Palestinian origin and was at the time of the occurrence 5 years of age. She had never suffered from any infectious disease, and physical examinations, made during and shortly after her period of vaccine treatment, revealed no constitutional abnormality. In the left eye there was marked internal strabismus but she was in every respect a well-developed healthy child. Although she had not recently experienced any trauma or chill, she had, it may be noted, been bitten by a dog in 1931, and had then undergone a short course of antirabic treatment. On that occasion but eight injections had been administered as the biting animal proved to be healthy after ten days' observation. No ill-effects had followed the treatment. The family history negatived the idea of any predisposition by heredity to nervous disease in the child.

On June 28th the patient was scratched—not bitten—by a cat near Haifa, a town in Northern Palestine—where antirabic

treatment was commenced at her parents' request and continued for only ten days, the cat having remained healthy. On July 11th the child did not feel well, and on the next day complained of weakness in the legs when she tried to walk. On July 13th she developed, near the sites of inoculation, an urticaria, which was accompanied by general malaise, nausea, and vomiting. Later in the day she found it impossible to stand up, and was transferred to a private hospital in Haifa. Clinical investigation at this time showed normal movements of hands and arms, weakly positive abdominal reflexes, no evidence of cerebral disturbance or pupillary change, and no involvement of bladder or rectum. In the legs there was no muscular atrophy or appreciable lowering of muscle tone; passive movements were fully possible, and active though very feeble movements of all joints could be elicited. The patellar and Achilles reflexes were abolished, but the cutaneous reflexes were intact. No extension response to Babinski's reflex was obtained. A generalized itching and a disagreeable cough contributed to the child's extreme irritability.

On July 15th the urticaria and itching became more pronounced and the ataxia more definite; otherwise the condition remained unchanged. There was no motor weakness in either arm, no disturbance of bladder or rectum, and no obvious alteration in cutaneous sensibility. On July 17th, although the paresis in the lower extremities showed no improvement, the electrical excitability of the muscles was undiminished; the urticaria and itching became less troublesome and the cough easier. By July 19th the patient's state was considerably better: she could sit unsupported in bed for short periods, but not yet stand up; the itching, urticaria, and cough had disappeared. On August 21st a further improvement was noted: the leg movements were more forcible and the ataxia was hardly discernible; the patient could now stand up and walk a few steps with support, but tired quickly. Electrical reactions were normal. Within ten days recovery was complete and the child was discharged from hospital.

SPECIFIC TREATMENT

In Palestine the vaccine employed is a 2 per cent. emulsion of fixed-virus brain, killed by the combined action over twenty-four hours of heat at 37° C. and of 1 per cent. phenol, and diluted to half with physiological saline solution prior to use. Ordinarily, treatment consists of the daily administration, over fourteen days, of 5 c.cm. of this killed carbolized virus, but in none of the cases under review was the full course given. Cases I and III received only ten injections, Case II twelve. Paralytic accidents followed, therefore, on the introduction of 0.5 gram and 0.6 gram respectively of nervous tissue.

TYPES OF ACCIDENT: DIAGNOSIS: MORTALITY RATES

Cases I and II presented an almost identical pathological condition, in which the main feature was a rapidly advancing, flaccid paralysis, without accompanying fever, without sensory disturbances, without loss of sphincter control, and terminating fatally within a short time from involvement of the bulb. The clinical picture is that of Landry's syndrome, but an affection of cranial nerves in both cases is worthy of remark—in Case I paralysis of the oculomotor, in Case II paralysis of the abducens and facial. Remlinger (1927), however, insists upon the frequency of the involvement of the facial nerve in the paralyses of antirabic treatment. Case III, in which paresis of the lower limbs occurred without bladder and rectum troubles, was, in the neurologist's opinion, a very mild type of dorso-lumbar myelitis.

Clinically, paralytic accidents show the greatest diversity. When, however, classification is based on their degree of intensity, they are capable of division into three main types: neuritis forms, or simple localized paralyses referable to lesions of peripheral nerves; dorso-lumbar myelitis; and paralysis of the Landry type. Avezzu (1923), from his analysis of 140 cases, has found the relative frequency and mortality of these groups to be as follows: neuritic forms 35 per cent., without fatality; dorso-lumbar myelitis 30 per cent., with a mortality rate of 5 per cent.; paralysis of the Landry type 35 per cent., with the high death rate of 30 per cent. The relative incidence given by Avezzu, however, differs considerably from that estimated at the International Rabies Conference of 1927. Then it was shown that of 243 cases of paralysis reported from different antirabic institutes only thirty-nine (or 16 per cent.) presented the Landry syndrome. Again, within our own experience in Palestine, five cases have occurred since 1928; of that number all three showing Landry's paralysis proved fatal, while the remaining two with dorso-lumbar myelitis recovered.

ONSET OF SYMPTOMS IN RELATION TO PROGNOSIS

In Case I the patient, bitten by a healthy animal, showed first symptoms thirteen days after the commencement of treatment and fifteen days after the date of bite. In Cases II and III, in which the patients were not bitten at all, symptoms appeared respectively ten days and thirteen days after the first antirabic inoculation. Paralytic accidents usually occur within thirty-five days of commencement of treatment. The greatest incidence falls within the first three weeks, and the earliest date of onset yet recorded is the fifth day (Brault, 1897). The most serious cases appear during the second week of treatment—that is, from the seventh to the twelfth day; in the milder forms onset is commonly delayed until the end of treatment, or after its termination. These observations are of considerable value in prognosis. A study of Cases II and III makes it abundantly clear that there is no connexion between the date of bite and onset of symptoms.

INCIDENCE

Present knowledge of incidence has been largely derived from a series of records collected and published by several observers. Remlinger (1905) described forty cases among 197,712 patients treated, Babes (1912) eight among 6,525, Simon (1913) 103 among 211,744, Pelser (1920) 200 among 260,000. At the Rabies Conference of 1927 it was shown that since the introduction of Pasteurian treatment in 1885, there had occurred among 1,164,264 inoculated patients 329 cases of paralytic accident, while more recently McKendrick (1930) has reported a further eight among 31,656 persons treated during the period 1926-8 at various institutes. The incidence per thousand treated patients, therefore, varies considerably: according to Remlinger it is 0.37, to Babes 1.3, to Simon 0.48, to Pelser 0.77, to the findings of the Rabies Conference 0.28, to McKendrick's statistics 0.25. Variation is, presumably, to be explained by lack of uniformity in statistical standards, but, if we accept as most reliable the two rates given last, it proves that a relatively rare disease is being discussed. Its rarity, however, by no means relegates it to a position of merely academic interest and importance.

Undoubtedly certain influences have an important bearing on incidence. The extremes of life are usually held to be immune. Thus among children, who constitute 50 per cent. of the total treated, paralysis has never been noted in the Pasteur Institutes of Egypt or of the U.S.S.R. The statistics of the Rabies Conference also show that among 149 cases in which the age was specified accidents did not occur below the age group 6–10 years. Yet the age at which Cases II and III of our present series developed paralytic symptoms was only 5 years—the earliest age so far recorded. An almost equal liability to accident is observed in the two sexes, but the condition is more frequently encountered among Europeans than among indigenous races of warm countries. There is

a preponderance of cases among those engaged in intellectual pursuits as compared with purely manual labourers. There is no evidence that season affects incidence in any way; cases crop up at any time during the year without apparent reference to month or meteorological variation; on the other hand, there exists an undoubted, although as yet unexplained, periodicity about this disease exactly comparable with that sudden increase in incidence recorded from time to time in the encephalomyelitis following or complicating certain of the exanthemata (measles, variola, vaccinia, typhoid fever, etc.). The question as to whether a person has been bitten by a rabid or by a healthy animal, or indeed has not bitten at all, does not appear to be of importance in the production of paralytic accidents. A study of their occurrence in relation to the date of the bite and to the date of the commencement of treatment must lead to the inevitable conclusion that the sole prerequisite of accident is that treatment has been administered. But, whereas the appearance of paralysis is independent of the nature of the biting animal, the method of treatment and individual predisposition most certainly play predominant parts in causation. Moreover, it would seem to have been sufficiently established that the protective inoculations themselves are ultimately responsible, and that no matter what modifications of Pasteurian treatment have been employed, no matter to what degree the basic nerve substance of antirabic vaccines must thereby have been altered—whether by chemical or physical means—accidents have surely, even if rarely, supervened.

The proportion of cases of paralysis to the number of treated persons, however, varies markedly according to the method of vaccination employed, and in this connexion the statistics of the Rabies Conference proved conclusively the superiority of carbolized vaccines over all others. McKendrick (1930) also, from an analysis of the data furnished by thirty-one Pasteur institutes during the period 1926–8, has shown that there occurred eight accidents among 31,658 patients treated; of this number, however, dried cords accounted for five cases out of 2,318 treated, dilution methods for two out of 6,362, and phenol vaccines for one out of 17,538. Indeed, the degree to which paralysis has complicated treatment with killed, carbolized virus up to the present day is reflected in the fact that there are on record only sixteen authentic cases: at Lemberg, one accident among 2,213 persons treated—an incidence rate of 0.45 per 1,000; at Jerusalem, five among 9,959, or 0.5 per 1,000; at Kasauli, two among 7,295 Europeans and one among 77,548 Indians, or 0.27 and 0.013 respectively per 1,000; at Lwow, one among 2,313, or 0.43 per 1,000; in the U.S.A., six among 17,645, or 0.34 per 1,000. It is, however, important to recall that in Palestine the first accident occurred after 4,580 bitten persons had been treated, the second after 5,409, and the fifth after 9,950. Moreover, during 1932, three cases occurred within three successive months, when only 320 patients had attended for antirabic inoculations. Again, while the period 1923–7 was entirely free from accident, the period 1928–32 showed five cases of post-treatment paralyses. To this, however, a striking parallel is to be found in the statistics of the Vienna Institute: whereas, between 1894 and 1914, 7,632 bitten persons were treated without accident, between 1915 and 1923, 6,764 treatments yielded thirty-nine cases (5.7 per 1,000).

These figures lend support to the view that the incidence of paralytic accidents shows periodic increases which, however, neither in Palestine nor in Vienna, can be ascribed to intensification of treatment or be explained by the number of passages to which the fixed virus used for vaccine purposes has been submitted (Bujwid's theory). Finally, in the light of our recent experience in Palestine, it has to be admitted that the safeguards afforded by the use of carbolized vaccines are far from absolute.*

PATHOLOGICAL ANATOMY AND HISTOLOGY

To quote Remlinger (1927): "The pathological anatomy of the paralyses of treatment is imperfectly known. The first Rabies Conference added nothing to our knowledge of the subject. Deaths are, as a matter of fact, very rare, and a post-mortem examination is often refused by the families of the deceased." The last observation fully accounts for our present lack of precise information. Moreover, perusal of the relevant literature shows the macroscopic appearances in brain and spinal cord to vary considerably.

Babes and Mironesco (1908—one case): oedema of brain, cord, and investing membranes; marked softening of the cord, especially in the lower dorsal and lumbar segments; differentiation between white and grey matter no longer possible; the cord surface of a homogeneous greyish-pink appearance with loss of typical design. J. Koch (1912—one case): localized oedema of the pia in the region of the lumbar enlargement; serous meningitis, and small areas of softening in the lumbar cord. Simon (1913), in an analysis of the reports on twelve necropsies: hyperaemia of the central nervous system; intense myelitis with, specially in the lumbar swelling, destruction of the white substance of the cord. Jochmann (1913—one case): meningitis serosa circumscripta in the cervical cord; meninges, over the lumbar portion, oedematous. Fielder (1915—one case): acute softening in the cord, most pronounced in the cervical region, least severe in the lumbar segment. Kontschoner and Schwenburg (1925—seven cases): (1) haemorrhagic myelitis; (2) disseminated myelitis, with destruction of the white matter in certain areas; (3) general congestion and oedema in cord; (4) transverse myelitis; (5) intense diffuse myelitis; (6) severe myelitis; oedema, congestion, and haemorrhage; similar changes in brain; (7) general hyperaemia. Smith and Murphy (1930—one case): vessels throughout the brain markedly congested, brain and cord grossly negative.

It will be seen that invariably the lesions described are of a totally different order from those of rabies. Negri bodies are never present; passage to rabbits produces no symptoms; lesions are distributed uniformly through white and grey matter alike, with a preponderance in the dorso-lumbar cord.

FINDINGS AT NECROPSY

In our two fatal cases of Landry's paralysis, permission to investigate the central nervous system was fortunately secured, and these partial necropsies were performed with the least possible delay in order that the occurrence of post-mortem changes might be obviated. Both cases showed an almost complete absence of gross pathological alterations. No inflammation, oedema, swelling, or areas of softening obtained, no obvious destruction of the white matter in brain or cord. There was no loss of design in any part of the spinal cord, differentiation between white and grey matter being clearly marked. The meninges were unaffected. In Case II the vessels were somewhat congested, and here and there throughout the central nervous system small haemorrhages were noted.

No positive results followed the direct subdural inoculation of rabbits with emulsions of either brain. The microscopical examination of nervous lesions in fatal cases of paralytic accident has been, perhaps, too infrequently undertaken to assign as yet to the condition any definite histological criteria. On the other hand, the minute changes described by Babes and Mironesco (1908), Jochmann (1913), Fielder (1915), and Bassoe and Grinker (1930) would seem to establish the histological identity of such paralyses with the nervous disorders occasionally complicating certain of the exanthemata (small-pox,

* The carbolized vaccines productive of the various accidents were in each case fully tested on rabbit series with entirely negative result

vaccinia, measles, varicella, and typhoid)—the occurrence in the central nervous system of perivascular zones of demyelination together with some degree of perivascular cuffing—that is, infiltration of the adventitial lymphatics with cells of the lymphocyte class. Moreover, should this same microscopical picture, so highly characteristic of the condition known as acute disseminated encephalomyelitis (Westphal), be constantly present in cases of paralytic accident, then antirabic treatment must necessarily be added to the somewhat heterogeneous group of factors (small-pox, vaccinia, measles, etc.) capable of producing that condition. Indeed, its inclusion within the group has already been suggested by Perdrau (1928), Greenfield (1930), and Marsden and Hurst (1932).

It is not our intention to give here any detailed account of the histology of the two fatal cases in our present series. For the sake of completeness, however, permission to include a summary of the principal findings has been secured from Professor S. Getzowa, formerly of the University of Bern, who has aided us in our recent investigations and in collaboration with whom we hope shortly to publish elsewhere a contribution to the histology of Landry's paralysis. In the nerve centres the brunt of the attack was borne by the ganglion cells, in which, varying with the region examined, all stages of degeneration were observed, from slight chromatolysis to nucleolysis and complete necrosis. Periganglionic and perivascular cell infiltrations did not occur, and perivascular zones of demyelination were wholly absent. Axis cylinders and myeline sheaths were everywhere unaffected. Neuroglia was not increased. Fat stains proved negative, but in Case II, in certain areas above the medulla, a fatty degeneration, strictly limited to the walls of the vessels, was not infrequently observed. The small vessels of the central nervous system showed little or no narrowing of lumen or thickening of the walls; they were, however, much congested, and haemorrhages were not infrequent. The condition was essentially an intoxication in contradistinction to an inflammation. In the spinal ganglia the capsule showed cellular proliferation; most of the nerve cells here had undergone necrosis, and several had been replaced, in whole or in part, by endothelial cells.

AETIOLOGY

Remlinger (1927) has already shown it to be unnecessary to seek an explanation of the occurrence of paralytic accidents in fixed virus, street virus, street virus modified by treatment, rabies toxin, enzyme or ferment action, bacterial infection, anaphylaxis, neurotropic virus, or *génie épidémique neurotrope*. Marinesco (1908) attributes these paralyses to a poison of normal nervous tissue, and we (1928, 1930), in support of this cytotoxin theory of origin, have stated that "the cause lies in the antirabic injections themselves, and more specifically in some component of the nerve substance necessarily introduced during the process of immunization." To this view we still adhere although, admittedly, had the histology of our two recent cases proved to be identical with that of the four cases described by previous writers and therefore with that of acute disseminated encephalomyelitis (Westphal) or of acute perivascular myelinoclasis (Marsden and Hurst), we might have thought fit to revise our position and subscribe to arguments favouring an encephalomyelitic virus as *causa causans*.

SUMMARY

1. Paralytic accidents are a rare complication of antirabic treatment, but exhibit a certain periodicity in their occurrence.

2. Since 1928 the condition has been observed in Palestine on five occasions: three patients showing Landry's syndrome have died, two with dorso-myelitis have recovered.

3. Incidence is now, for the first time, recorded among members of the age group 0–5 years.

4. The proportion of cases to the number of treated persons varies according to method of vaccination employed. In this connexion, statistics have proved the superiority of carbolized vaccines over all others, but now the safeguards thereby afforded are shown to be far from absolute.

5. The histopathology now described does not agree with that previously published. In our cases the microscopical appearances of brain and spinal cord revealed little more than varying degrees of degenerative change in the nerve cells, together with considerable vascular congestion and occasional haemorrhage. Evidence of perivascular demyelination or of perivascular cuffing was altogether wanting and, therefore, the type of paralytic accident represented by the cases under review cannot, on histological grounds, be included among the group of diseases termed "acute disseminated encephalomyelitis" or "acute perivascular myelinoclasis." Further, the absence of Negri bodies and of perivascular and periganglionic infiltrations differentiates the condition from rabies.

6. A cytotoxin, rather than a virus theory of origin, is again advanced. Thus, in the basic nerve substance of all antirabic vaccines there seems to exist some deleterious component which, though adversely affected by various physical and chemical agencies, is still capable, in peculiarly susceptible individuals, of producing neuroparalytic disorders.

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THE WORKING CAPACITY OF THE CONSUMPTIVE

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It is not often that tuberculosis workers are in a position to correlate clinical findings, sociological environment, and precise economic status in patients under their care in the exact way in which this is possible in a village settlement for the tuberculous. At Preston Hall there are just over 150 settlers—all ex-patients—living in the village and employed in the different industries attached to the sanatorium section. From this number ten men have been selected for the purpose of this note. I believe that a detailed statement of the known working capacity of a selected group of patients with positive sputum may interest those who so frequently, and often with good cause, cast doubts on the ability of the patient with relatively advanced pulmonary tuberculosis to earn his livelihood.

CASE I

The patient, a male aged 36, left school at the age of 14, and served for seven years in the machine-tool trade. In 1917 he joined the Flying Corps, but after eleven

months was transferred to the infantry and sent to Ireland, where, after three months' residence, he had a haemoptysis and went to hospital for three weeks. Pulmonary tuberculosis was not diagnosed then, but the patient was transferred to the R.A.S.C., where he remained until demobilized in October, 1919. He then returned to his former work, and remained well until 1921, when cough and sputum developed; in August, 1921, there was a repetition of the haemoptysis, and tuberculosis was then diagnosed. The sputum was found to be positive.

He spent six weeks at Brompton Hospital and nine weeks at Frimley. His powers of resistance have from the beginning been good, for during the time he was under treatment at home he gained nearly 3 st. in weight. From October, 1923, to October, 1925, he worked as a mechanical inspector of aeroplane engines, but the strain of the work told on him, and in March, 1926, he was forced to return for sanatorium treatment. He was admitted to Preston Hall in March, 1926, and was sent to the printing department, where, after twelve months' training, he became an excellent compositor. In September, 1927, he was admitted to the village settlement and given a wage as a compositor. His general condition has remained excellent for the past five years, and except for a short period of two weeks in September, 1930, when he had an elevation of temperature accompanied by pain in the left side, he has kept regularly at work. The sputum was negative between 1927 and 1930, but it has been positive since. His weight is well maintained.

Socially this patient leads a steady, sober life, and is an ideal type of settler in every respect. Quite recently he lost his wife as the result of a fatal motor accident. He has had four children, one of whom died before the patient came here as a settler; a second died of acute bronchopneumonia during the summer of 1928; a third child—a baby of 1 year—was involved in the recent accident in which the patient lost his wife, but this child has recovered and is well. The fourth member of the family is a boy, aged 12, who is quite well.

Since September, 1927, the patient has earned £665 15s. 10d. in wages—that is, an average yearly income of £133 3s. 2d. The average number of days of absenteeism per annum is seven.

Physical Signs

There is tuberculous infiltration over the whole of the right upper lobe, with scattered deposits over the right middle and lower lobes. There is evidence of cavitation at the right apex, and some drawing of the trachea to the right. *X*-ray photograph showed focal deposits in the left lung, and these radiological signs are confirmed by physical examination of the chest, which shows definite dullness over the right side of the chest and moist sounds at the right apex posteriorly.

CASE II

This man, aged 47, was a clerk before joining the Army in 1916, when he was drafted to Salonica. In May, 1917, he developed cough, and showed evidences of haemoptysis: tuberculosis was diagnosed. He was sent home and ultimately discharged from the Army with pulmonary tuberculosis, with a 100 per cent. pension. On leaving the Army he received sanatorium treatment until September, 1918, when he took up an insurance agency and kept going for two years in this occupation. At the end of 1920, however, he broke down again, and between that date and September, 1930—that is, a period of nearly ten years—he had various short spells of sanatorium treatment, interspersed with casual work as a clerk with different organizations. In August, 1931, he was discharged from Preston Hall and admitted to the village settlement, where he has been working in the manufacture of travelling goods and acting as storekeeper. He is a 100 per cent. pensioner for life.

He is living in the village as a single settler, and socially has looked after himself fairly well. His total earnings over a period of fourteen months have been £126 9s. 4d.—that is, at the rate of £117 2s. a year; and his average yearly absenteeism works out at eighteen days.

Physical Signs

There is definite pulmonary infiltration over both upper lobes, with heavy root shadows. There are some scattered nodules in the right lower lobe, shown by *x*-ray examination. On auscultation some crepitations are to be heard over both apices and between the scapulae posteriorly. Neither the physical signs nor the *x*-ray picture have varied much during the past two years. The sputum has been positive at intervals since his coming here, and there has been no substantial reduction in weight, the maximum being 8 st. 9 lb., and the lowest recorded weight 8 st. 4 lb.

CASE III

This patient, aged 37, served in the Navy and had a good athletic record. In 1920 he complained of frequent colds, accompanied by cough and sputum, and in April, 1921, sputum was bloodstained for the first time. Pulmonary tuberculosis was diagnosed in May, 1921, and the sputum was then positive. He was discharged from the Navy with a 100 per cent. pension for pulmonary tuberculosis. In May, 1922, he came to Preston Hall, and received some training in horticulture. In December, 1922, he coughed up about two pints of blood. At intervals between January, 1923, and August, 1925, he had three relapses, with periods of incapacity ranging from one to two months at a time.

Towards the end of 1926 he was introduced into the printing department at Preston Hall, and was so apt that he became in charge of the machine-room and the warehouse section of that department. Despite the relative frequency of relapses, the patient's weight has not varied more than 12 lb. in eleven years. The sputum has been consistently positive. The man is married and has one child—a healthy girl of 16 years. His social life is limited to the confines of his own house almost entirely. He is a keen student of his work, and takes the greatest care of his physical condition.

Since April 1st, 1925, this man has earned £738 11s. 9d. in wages—that is, an average of £98 9s. 9d. a year. In addition to this, of course, he has his pension. The average number of days per annum which he has lost from employment as a result of ill-health is ninety-nine. This patient represents, physically, one of the most seriously handicapped settlers in the village.

Physical Signs

The disease is apparently only very slowly progressive. The chest is flat, but moderately well covered. There is hollowing and flattening below both clavicles, especially in the right side, with marked winging of the right scapula. The air entry over the left upper lobe is deficient in volume, and fine crepitations are heard over the right upper lobe in front. There is distinct bronchial breathing and whispering pectoriloquy at the right apex posteriorly, and at both bases some crepitations are heard from time to time. The most recent development has been an extension of the lesion in the right lower lobe.

CASE IV

The patient, aged 34, worked as a warehouseman until joining the Army in 1916. He served in France and was wounded behind the left ear, but not seriously. In 1919 he was discharged under category B3. Early in 1920 he developed pneumonia and pleurisy, and this illness was the beginning of chest symptoms which continued until 1928, during which time he had been working fairly regularly as a carman. Tubercle bacilli were then found in the sputum, and he was sent to a sanatorium for seven months. The history between 1928 and August, 1929, shows that various attempts were made to resume work, but in each case his health broke down, and he was admitted to Preston Hall in August, 1929. Sputum has been consistently positive until January, 1931, when it became negative for the first time. The two most recent examinations have shown a negative sputum.

He has earned altogether £131 6s. in wages, being one of the lowest-paid men in the industries—that is, an average of £75 0s. 8d. a year. He has lived rent-free,

on account of his poor earning capacity. Absenteeism has been seventy-eight days per annum.

There are four children in the family, and all are badly nourished and share in the domestic difficulties. One child has a definite and persistent deposit in one lung, but she is symptomless, although the Mantoux test is consistently positive.

Physical Signs

Clinical and *x*-ray examination indicates widespread tuberculous disease over both sides of the chest, more marked on the right. The patient's physical condition is poor. He is working as handyman in the portable building section of Preston Hall Industries, and is able to undertake a number of jobs more suitable to the unskilled workman. Socially he is from a lower category, and his domestic sphere is badly administered. He appears to be losing ground, for the lesion on the right side especially is more marked than on admission, but the patient's weight has dropped only 2 lb. in three years and three months.

CASE V

The patient, aged 44, served in the Army as a Regular and became a warrant officer. He had an excellent athletic record. He was stationed at Malta at the outbreak of the war, and contracted malaria in 1917, when he was transferred to Egypt. Chest symptoms were suspected in 1918, but the sputum was negative. Between that time and the summer of 1920 there were recurrent attacks of night sweats, cough, and elevation of temperature. In March, 1922, the sputum was again examined and found positive, and he was discharged from the Army with pulmonary tuberculosis, receiving a pension of 100 per cent.

Between 1922 and February, 1928, he had four periods of sanatorium treatment, but no permanent benefit accrued. He was admitted to Preston Hall in February, 1928, and was given light clerical work as occupational therapy. His previous Army experience benefited him considerably, and he was admitted to the settlement on the clerical staff in October, 1929. Apart from slight attacks of haemoptysis he remained fairly fit until September, 1931, when he had a haemoptysis of about one pint. An emergency artificial pneumothorax was induced, and he was off work resting for the greater part of that winter. Since admission to Preston Hall the patient's weight has not varied more than 7 lb.

Socially this patient lives in an excellent environment, and has benefited considerably from both the occupational and the social aspects of settlement life. His total income, apart from his pension, during the time he has been here comes to £324 16s. 4d.—that is, an average of £108 5s. 5d. a year. The average number of days per annum he has been off work is seventy.

Physical Signs

The signs noted in 1928 have not been materially altered. The sputum has, however, always been positive. The left upper lobe bears the brunt of the lesion, which is, however, not confined to the left side, there being considerable fibrosis on the right. Moist sounds are audible at both apices.

CASE VI

The patient, aged 30, joined the Navy as a boy, and served regularly until 1918, when he developed pneumonia and pleurisy. He was discharged in 1918 with pulmonary fibrosis, and returned to his home and began work as a farm labourer. During this time, however, he was troubled constantly with cough and sputum, and pulmonary tuberculosis was diagnosed definitely in 1923. In July, 1926, he came to Preston Hall, and became interested in the printing department, where he took up work in the composing room. So satisfactory was his progress in this direction, both medical and technical, that he was drafted into the village settlement in June, 1927. His sputum was then negative. In December, 1929, he had a haemoptysis amounting to some four or five ounces, and was given sanatorium treatment at Preston Hall until March, 1930. In the spring of 1931 he had a recurrence of the haemoptysis, but this subsided after some eight weeks' rest in bed. On admission to Preston Hall in 1926 the patient's weight was 10 st. 12 lb.; he now scales 11 st. 4½ lb.

This man is married and has one child, who is in excellent health. His wife had pulmonary tuberculosis and was notified in 1925, before coming to Preston Hall. Her sputum has been positive. Under the conditions at Preston Hall she has remained in reasonably good health for five years. The daughter, aged 11, has a positive Mantoux reaction, but no abnormal radiological signs in the chest are to be observed. Socially this man is well-behaved and has high ideals.

During the past two and a half years he has earned £300 13s. 9d. in wages—that is, an average of £120 5s. 6d. a year—and the average number of days per annum absent from duty is 60.8.

Physical Signs

The lesion involves the greater part of the left lung with cavity formation, and there is definite infiltration at the left apex.

CASE VII

The patient, aged 34, worked as an engineer until he joined the Army in 1914. He developed pleurisy with effusion in 1916, and following that had a persistent cough. Despite this, however, he served over-seas until the time of his discharge in March, 1919. In July of the same year he had a haemoptysis of about four ounces, and was treated at Brompton Hospital and later in a sanatorium. He was given a pension for pulmonary tuberculosis and did no work until 1922, when he started farm work. This he continued for three months only, when he had a recurrence of haemoptysis, and further sanatorium treatment was given at Preston Hall in 1922.

Between that time and Christmas, 1925, he worked intermittently at pig farming and as a carman. In August, 1926, however, he fell ill again, and was readmitted to Preston Hall, where his sputum was found to be positive. He did well under treatment, and in January, 1928, was admitted to the settlement, where he has worked on the rabbit farm and in the fibre department, and latterly as assistant in the laboratory. The sputum has been positive at intervals since he came to Preston Hall.

Socially he leads a good life, and takes great care of himself. His total earnings since coming here are £557 16s. 6d.—a yearly average of £117 18s. 6d. He has been off duty, on an average, only 3.6 days a year.

Physical Signs

There is tuberculous infiltration over both upper lobes, with evidence of fibrosis most marked on the right side. There are several calcareous nodules to be found on both sides of the chest, particularly the right. His chest condition is well maintained, and his weight has not altered more than 2½ lb. in five years. Apart from some morning cough he complains of very little. No moist sounds are to be heard in the chest. His progress is in every way satisfactory.

CASE VIII

This man, aged 28, is a post-war case of pulmonary tuberculosis. As a youth he was a machine minder in a printing shop in London, but in 1921 he joined the Army, and after serving for five years developed symptoms of pulmonary tuberculosis; tubercle bacilli were found in the sputum, and he was discharged from the Army.

After a period of six weeks at a sanatorium on the South Coast he resumed work in the printing industry, and carried on until 1929, when he was readmitted to an institution under the London County Council for three months. From the time of his discharge until April, 1931, he worked fairly regularly, but was then sent to Preston Hall, when the sputum was found to be still positive. He made immediate improvement, and it was found possible to admit him to the village settlement in July of the same year on account of his high technical abilities. He is now working in the printing department, at his old trade, but, of course, under entirely different hygienic conditions.

An interesting point in this case is that the two most recent examinations of the sputum have shown negative results.

He is a good type of settler, well-behaved, and a conscientious worker. His earnings since coming on the staff amount to £143 4s. 10d.—that is, at the rate of £115 a year. He has been off, on an average, 25.6 days per annum.

Physical Signs

There is pulmonary infiltration over both apices, with scattered patches over both lungs and some calcareous nodules on either side. The radiological examination shows good movement of the diaphragm on both sides. The patient's weight has varied by only 3 lb. in eighteen months.

CASE IX

This man, aged 39, was a miner in Lancashire, and served four and a half years in the Army during the war. Prior to coming to Preston Hall in October, 1929, he received treatment at two institutions in the North-West of England for a period of eight months in all. There is a strong history of tuberculosis in the family, and the patient has always been subject to so-called bronchitis. *During an attack of "influenza" in 1926 tuberculosis* was diagnosed and tubercle bacilli were found in the sputum. On discharge from a sanatorium in the North he was unable to find employment suitable to his physical condition, but some weeks after coming as a patient to Preston Hall he was sent to the printing department, where he made excellent progress. In July, 1930, he was admitted to the village settlement, and has become an apt compositor in the printing department. During the winter months he loses some ground, but in the better weather of the summer he makes substantial improvement. The sputum has been consistently positive for five years at least.

His total earnings since admission to the village settlement have been £165 4s. 6d.—that is, an average of £76 5s. 2d. a year—and the average number of days absent from work per annum is thirty-six.

Physical Signs

There is a dullness over the left upper lobe, and impaired resonance at the right apex. Pectoriloquy is heard over the left upper lobe, and fine moist sounds are audible over both apices from time to time. The *x*-ray picture showed that the lesion was most marked in the left upper lobe; there were diffuse calcareous deposits over the right lung. The patient's weight has not fluctuated more than 3 lb. in five years.

CASE X

This patient, aged 41, had good health as a boy. He joined the Royal Irish Fusiliers in 1899. He was sent to Ostend at the outbreak of the war in 1914, and to the Dardanelles in 1917. He kept fairly well until the latter part of 1917, when he developed pains in the chest and lassitude. While at home in 1918 he reported sick at Chatham, and pulmonary tuberculosis was diagnosed. He was discharged immediately, with a pension for pulmonary tuberculosis due to war service.

Following upon a period of treatment at Brompton Hospital for three months and at Frimley Sanatorium for a further thirteen weeks, he worked in Suffolk as a gardener until 1920, when he had a breakdown and was readmitted to Brompton Hospital prior to coming to Preston Hall in December, 1920. The sputum was then positive. At Preston Hall he was trained in the boot department under the Industrial Settlements Incorporated, but when the British Legion took over in 1925 he was transferred to the appliance department. In 1927 and again in 1930 it was necessary to admit him to hospital, for eight and three weeks respectively, owing to temporary incapacity. Since then, however, he has remained fairly well. His weight has been stationary for five years.

Socially this man leads a quiet and well-ordered life. He has three children, all of whom are well. His total wages since April 1st, 1925, come to £772 5s. 10d., the average earnings being £102 17s. 3d. a year. The rate of absenteeism is forty-nine days a year.

Physical Signs

The lesion in this case is confined to the right upper lobe, with a small patch at the left apex. The right middle and lower lobes and the left lower lobe are comparatively clear, and all the evidence tends to show that the disease in this case is completely arrested.

SUMMARY

Short histories with notes on the physical signs of ten relatively advanced cases of pulmonary tuberculosis are given. The total period of sojourn of all ten cases in the village settlement at Preston Hall is thirty-nine years and two months. The sputum has been positive in all cases, and is still positive in seven.

During the five-year period prior to their admission to the settlement at Preston Hall these men have had, in all, at least 198 months of sanatorium treatment—that is, an average of 120 days per man per annum. Since being admitted to the settlement at the British Legion Village they have earned collectively £3,926 4s. 8d. in wages, or an average of £106 8s. 6d. a year. The average number of days per annum absent from duty from all causes, including tuberculosis, is 44.8. Only two men—Cases V and VIII—are doing work in which they had training before coming to the village settlement.

The cost of treatment, on the basis of 45s. per patient per week, to local authorities for this group during the five-year period prior to their coming to the village settlement is altogether £1,935. During the period under review, however, these ten cases have cost local authorities in sanatorium treatment only £144.

It is submitted, in conclusion, that the results, medical and economic, in these cases are a definite improvement on those which could be obtained in a similar group of patients for whom the special conditions prevailing in a village settlement are not available.

PROGNOSIS IN PULMONARY TUBERCULOSIS

BY

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Prognosis in tuberculosis is fraught with difficulty. One patient, diagnosed early and treated promptly and skilfully under the best conditions, may go steadily downhill, while another makes uninterrupted improvement, despite every unfavourable circumstance. Why does this difference exist? Let us consider the common or ulcerative type of pulmonary tuberculosis, selecting those cases in which the sputum has been found positive—the only unequivocal evidence of the presence of the disease.

In diagnosis, physical examination and *x*-ray investigation are not enough, valuable as they are. Specific therapy and sanatorium treatment produce the best results in cases of "primary" infection (where natural cure can be expected). The healed lesions of the lungs found at necropsy after death from non-tuberculous causes are attributed to infection of this nature. It will be necessary to define a standard of cure and to describe the results of treatment. The Ministry of Health advises the use of the following terms:

> *Quiescent.*—Cases in which there are no symptoms of tuberculosis and no signs of tuberculous disease except such as are compatible with a completely healed lesion, and in which sputum, if present, is free from tubercle bacilli.
>
> *Arrested.*—Cases in which the disease has been "quiescent" for a period of at least two years; in non-pulmonary cases if the disease is "quiescent" and there is reason to believe that it is unlikely to recur.
>
> *Recovered.*—Cases in which arrest of the disease has been maintained for at least three years.

The features of "quiescence" form a satisfactory standard. It is recognized clinically by gain in weight, the lessening of physical or radiological signs, absent or negative sputum, normal temperature and pulse rate, and so on. This criterion necessarily excludes that all-too-common group of cases which tend to speedy relapse after discharge from institutional care. Clinically, we recognize the group of patients that respond unfavourably to treatment whatever the conditions.

Age: Sex: Race.—The age of the patient is a factor. Speaking generally, the younger the patient the worse the prognosis. Before the advent of compression therapy it was said, and not unreasonably, that a child affected with pulmonary tuberculosis before the age of 16 was doomed unless the disease was located in the root glands (with or without ulceration into a bronchus). To-day it is possible to save a certain proportion of the young patients by early artificial pneumothorax, although the outlook continues to be gloomy until the age of 35 or thereabouts. It is unfortunately true that the majority of cases occur in the age group below 35. From 50 onwards the resistance of the patient to tuberculosis appears to increase, perhaps from repeated small doses of tuberculin; at this time of life the prognosis is better and the chances of arrest are much greater. These cases are frequently classified as chronic emphysema and bronchitis, or chronic asthma, as the result of masking of the signs of pulmonary tuberculosis. It is probable that the influence of sex on prognosis should be attributed, in the main, to occupation and environment rather than to sex *per se*. An outstanding exception to this generalization occurs in pregnancy: a woman may show apparent improvement while pregnant, but parturition is commonly followed by extension of pulmonary damage. In my opinion, although it is generally unnecessary to terminate a first pregnancy, it is imperative that further conceptions be avoided. It is difficult to analyse the effect of race on prognosis, but experience teaches that this should be more guarded in Irish patients, probably because of actual environmental conditions rather than intrinsic racial factors.

Sociological and Psychological Factors.—It cannot be too strongly impressed upon medical students that pulmonary tuberculosis in the artisan classes and pulmonary tuberculosis in the wealthier classes, considered from the point of view of prognosis, are two entirely different diseases. As Sir Pendrill Varrier-Jones has so aptly put it, "The working man cannot afford to be an early case of pulmonary tuberculosis." Arrest of the disease is more likely if the patient can winter in Montana or Bordighera, or on our own South Coast, rather than in the stagnant and vitiated air of slum tenements. Uncertainty of employment and poverty, for the working man, militate against recovery. Such anxiety is inimical to recovery, as indeed are the late hours and associated dissipations of the wealthy young man in a foreign health resort. Discipline is essential. An ordered life, with an obedience to what must often be unpleasant restrictions, adds considerably to the chances of recovery. It must be recognized that the patient's response to the physician's instructions in this matter depend to a large extent on the temperament of the former. A sensible placid man can adhere to rules and regulations without difficulty, and the outlook is better than in the headstrong individual who will only obey as long as it suits himself to do so. Marcus Patterson's dictum (often erroneously attributed to Kingston Fowler)—"No fool ever gets rid of tuberculosis of the lungs"—is near enough the truth to be accepted. In the middle-aged patient large quantities of alcohol appear, at times, to promote the healing processes of the lungs! Although this form of treatment would, without doubt, be popular with many patients, it is unlikely to gain widespread acceptance in these days of financial stress, at least in public institutions.

Pulse Rate and Fever.—In estimating the chances of a patient many observers regard the temperature range as the most important. In my opinion the pulse rate should be regarded as predominant in this forecast. An increase in pulse rate is much more difficult to control than a moderate degree of fever. The heart beat affords more evidence of a severe degree of toxaemia than the thermometer, and it is on the degree of toxicity rather than on the physical signs that judgement depends. Extensive lung damage, as evidenced by *x*-ray and clinical examination, without toxicity bears a much more favourable prognosis than a case of apparently early disease with considerable systemic poisoning. In other words, using Sir Robert Philip's symbols, the outlook is better in L3 S1 than in L1 S3. It is said that patients with the inverted type of temperature—up in the morning, down in the evening—carry a bad prognosis. Under modern methods of treatment it is frequently possible to convert a swinging temperature into a steady one. The effect of an artificial pneumothorax, by ridding the patient of a constant source of poisoning, is sometimes quite dramatically reflected in the temperature chart.

Physique and Heredity.—Notwithstanding numerous attempts to comfort the public by stressing the role of environment rather than heredity in the acquisition of tuberculosis, we cannot lightly disregard the significance of a family history of the disease. Where there is a well-marked habitus phthisicus as well as a bad family history, the outlook is indeed black. Nevertheless, it would appear that with each successive victim the bacillus loses something of its virulence: in general, a well-nourished member of a phthisical family in which three or four have died has a better chance than an ill-nourished patient of apparently healthy stock. The classical type of habitus phthisicus is recognized in lay as well as in medical literature. The delicate, fragile-looking young woman with the lovely complexion and the long dark eyelashes has a poorer chance than the squat, coarse-featured, unattractive woman.

Mode of Onset: Influenza.—The method of onset has a distinct bearing on prognosis. The fact that a single haemoptysis is regarded as of good import is probably due, in some measure, to the fear that the sight of blood induces in a patient, with the consequent readiness to seek medical advice. Repeated haemorrhages, on the other hand, are unfavourable, suggesting ulcerative processes in excess of fibrotic changes. Dry pleurisy, as an initial condition, is of favourable significance, suggesting a chronic type of disease. I am not quite certain how far the history of a pleural effusion influences the end-result of the pulmonary process when it manifests itself five to ten years later. Nor can I be dogmatic as to the effect of a pleural effusion during the course of an obvious case of florid phthisis. Effusions are curiously rare in cases in which no surgical interference is attempted. Effusions are common in artificial pneumothorax, appearing (as established by screening) in 50 to 70 per cent. of cases. I believe that effusions are beneficial to the patient, and that they should not be interfered with, save in exceptional circumstances. It is comparatively rare that they become infected or cause respiratory embarrassment. Absorption may occur, leaving a collapsed, scarred, but inactive lung. Reactivation may supervene on the removal of fluid. The history of "influenza" often means a grave prognosis. Without discussing the problem of the real nature of the "influenza" (whether it is tuberculous or not), it is undoubted that cases following "influenza" exhibit a sinister type of disease and

rarely respond to treatment to any degree. Clinically and radiologically they are of acute type with diffuse areas of disease in both lungs.

Extent of Disease. Complications.—The extent of disease is important. The patient with unilateral or mainly unilateral disease has, because of modern methods of treatment, a better chance. The outlook in upper lobe disease is better than in lower lobe disease, although the advent of phrenic avulsion makes the latter less unfavourable. Complications, particularly those which are tuberculous, seriously affect the prognosis. Intestinal ulceration is rarely recovered from. To-day, tuberculous laryngitis, serious enough, does not necessarily mean a fatal termination. Artificial pneumothorax may lead to the control and ultimate cessation of sputum, thus giving an infected larynx an opportunity to heal. Of non-tuberculous complications diabetes is serious, but, with the help of insulin, is not hopeless. In my view mitral stenosis, a rare complication, can still be regarded as a deterrent to the progress of lung disease.

Special Investigations.—The results of laboratory investigations have some bearing on the question of prognosis. In this paper I am confining myself to those cases in which the sputum is positive, and thus the question of the prognostic significance of the tuberculin test does not arise, although I must add that the elucidation of its meaning in prognosis has been aided not a little by Ranke's hypothesis of the three-stage reaction. It has been held by some that the appearance of the bacillus under the microscope affords some indication of the degree of virulence. The long, thin type of bacillus is said to be the most virulent, the short stubby type with the Much's granules the least virulent. In recent years the sedimentation rate of the erythrocytes has come to be regarded as of considerable prognostic value. I am not convinced of this. By others, emphasis is laid on the value of the Arneth count, vital capacity estimations, and so on. Frankly, I regard most of these as mere frills. The clinical judgement of the physician is, to my mind, the most valuable contribution to the evaluation of prognosis. A radiologist may miss a case of early diagnosis of pulmonary tuberculosis if his view is sought before that of the physician. Furthermore, *x*-ray examination cannot reveal a shadow until the lesion is of appreciable size (and most probably recognizable by the clinician). On the other hand, it commonly reveals disease deeper and more extensive than can be shown by ordinary clinical examination. In demonstrating the existence of cavitation *x* rays are invaluable. To the expert they indicate not only the true extent but the different forms of the disease, as shown by different types of shadows. For example, the fluffy cotton-wool patches represent an acute type of disease with unfavourable prognosis, while firm striated areas suggest a longer history, greater resistance, and a better prognosis.

SUMMARY

I suggest that the well-built person over 35 years of age with a good family history, a comfortable financial position, and with little evidence of toxaemia, has a much better prognosis than the young man of 20, of the artisan class, with poor physique, a bad family history, and obvious evidence of toxaemia. But in considering even the latter group we must not forget Samuel Gee's abiding aphorism: "Never give a definite opinion as to how long a patient suffering from phthisis will live, for the only certainty is that—if you do—you will be wrong."

PHTHISIS IN ADOLESCENCE AND EARLY ADULT LIFE*

BY

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For many years there has been a steady decline in the death rate from tuberculosis in all its forms, in both sexes, and at all ages—with one notable exception. There is everywhere a relative—and in some districts, I believe, even an actual—increase in the death rate among young females between the ages of 15 and 25 years.

A letter from Mrs. Siddons to Mrs. Galindo in 1803 describes a situation with which we are all sadly familiar. Though something of the greenroom is apparent in her writing—for even in her private sorrows she cannot quite forget that she is the Queen of Tragedy—the terror that broods over a household stricken by consumption has never been described in more moving terms. "Two lovely creatures gone, and another is just arrived from school with all the dazzling, frightful sort of beauty that irradiated the countenance of Maria, and makes me shudder when I look at her. I feel myself like Niobe, clasping to her bosom the last and youngest of her children, and—like her—look every moment for the vengeful arrow of destruction." *Sunt rerum lachrymae.*

Time was, and this in days within living memory, when a diagnosis of consumption in adolescence was rightly regarded as a sentence of death. The "churchyard cough" was the inevitable prelude to the grave, and in some country churches white gloves and faded garlands still hang in clusters round the nave cornices in pathetic witness of virgins untimely dead. If we may judge by the novelists of the period, consumption was the normal fate of youth allied to beauty, but the Lady of the Camelias might have looked forward to a disreputable old age had she lived to-day. Many practitioners, I think, still fail to realize the change that has taken place in the outlook for young consumptives—that, owing perhaps partly to increasing racial immunity, especially in towns, but much more, as I think, to radiology and collapse therapy, the outlook for them need no longer be regarded as hopeless. The disease is, as a rule, curable in its early stages, and even advanced disease will often yield to modern methods of treatment.

We owe a special debt to radiology, because it enables us to diagnose tuberculosis in its earliest stages without regard to the physical signs which, in this disease, are notoriously misleading—signs which, indeed, may be absent despite the presence of virulent disease. But radiology is essential not only for accurate diagnosis, but also for the control of treatment. Our most effective treatment—rest for the lung by a prolonged period of recumbency or by collapse therapy—cannot be properly exercised or adequately controlled without *x* rays.

SYMPTOMS IN EARLY DIAGNOSIS

Diagnosis, however, is even more important than treatment, and, if I may presume to add one word of advice concerning the early diagnosis of pulmonary tuberculosis in adolescence, I would say:

(*a*) Pay much attention to symptoms; they are usually more reliable than physical signs, and of the signs perhaps the patient's appearance and manner are as valuable as any.

* An address given to Essex general practitioners at Black Notley Sanatorium.

(*b*) Regard with suspicion any cough in a young person which persists for more than a fortnight.

(*c*) It is our duty to consider every haemoptysis *in a young person* as due to tuberculosis until the contrary is proved—the qualification is necessary, for at the other end of life the rule should be reversed.

(*d*) Do not neglect the psychology of your patient—the young consumptive is usually *difficile*, and almost invariably strives to minimize symptoms. Her speech is sprinkled with diminutives, but when a girl tells you that she has "only" expectorated a mouthful of blood, the diagnosis is scarcely in doubt.

(*e*) Lastly, if you find any suggestive clues, do not be too proud to call in scientific methods to your aid.

Examine the sputum for tubercle bacilli, and repeat your examination at least twice if the first result is negative. The last word in the diagnosis of a doubtful case usually remains with the skiagram, which will seldom let you down, provided it is of first-class quality and interpreted in the light of clinical experience. You need not, however, believe all the radiologists tell you—they are excellent fellows but incurable romanticists.

EXUDATION AND FIBROSIS

We can divide cases of pulmonary tuberculosis into two main groups: (*a*) the fibrotic or proliferative, and (*b*) the exudative. Examples of each are seen at all ages, but the former is the type prevalent in middle or later life, while the latter is usually associated with adolescence and early adult life.

Proliferative disease is characterized by insidious onset and a chronic course. The physical signs are those of pulmonary fibrosis, though these are often masked by the signs of bronchitis, by compensatory emphysema, or by pleural thickening. The *x*-ray appearances are characteristic—linear shadows indicating strands of fibrous tissue, discrete nodular opacities in areas where fibrosis has surrounded and obliterated tuberculous foci, ring shadows with dense irregular outline indicating cavities, blunting of the costo-diaphragmatic angles, and marginal shadows outlining the periphery of the lung, in whole or in part, indicating pleural adhesions and thickening. As a rule, such patients only come under observation when the disease is firmly established. There can be no resolution of fibrous tissue. Artificial pneumothorax is often impracticable on account of adhesions, and though in some patients the disease may remain stationary for years, and though in others the desperate expedient of thoracoplasty may cause arrest, in most instances chronic ill-health precedes a lingering death. If, however, an early haemoptysis—that crowning mercy for the consumptive—drives the patient to the doctor before the disease is firmly established, the *x*-ray appearances are not dissimilar from those of exudative disease, and the response to treatment is good.

During puberty and in early adult life the exudative type of disease is that commonly encountered. The *x*-ray appearances are in sharp contrast with those seen in the proliferative variety, except in its incipient stage. The characteristic feature of the shadows is their softness and the fact that their margins are not clearly defined. The shadows of fibroid disease are "stringy," those of exudative disease are "fluffy." Cavities form rapidly. They are often exactly circular and set in a surrounding haze. In other cases they are outlined by a hazy periphery two or three millimetres in thickness. The loculations often evident in fibrotic cavities are seldom apparent, and a rounded outline is the rule, although oval forms are not uncommon. The disease appears suddenly, spreads rapidly, and under favourable conditions resolves with equal rapidity. *X*-ray examination after recovery generally shows linear scarring, but it is surprising to note that after recovery the skiagram may show an apparently normal lung.

The various types of exudative disease and their response to treatment may now be considered. It is important to remember that though the exudative forms of tuberculosis in early life are more immediately threatening than the proliferative variety, they are more amenable to treatment. But prompt recognition of the danger and immediate action are necessary if tragedy is to be averted.

MANIFESTATIONS OF THE DISEASE

I. *Tuberculosis of Epi-tuberculous Type*

A variety of tuberculosis resembling the condition known as "epi-tuberculosis" in childhood is occasionally met with in adolescence. The patient, who is usually a "contact," complains of a cough, and physical examination may reveal an impaired note on percussion below a clavicle and perhaps a few crepitations. *X*-ray examination shows a diffuse shadow of uniform intensity, more or less triangular in shape, with its apex towards the hilum. The shadow resembles that due to lobar pneumonia, except that its edges are more clearly defined—especially inferiorly, where the interlobar septum forms a barrier to spread. Under treatment by rest the area may resolve as it does in early childhood, leaving perhaps some linear scarring. Resolution does not always take place; a cavity may develop, when tubercle bacilli, which are seldom demonstrable in epi-tuberculous disease, at once appear in the expectoration.

II. *Early Tuberculous Foci and Infiltrations (Rundherde and Frühinfiltrat)*

The subapical infiltrations are typical of adolescent tuberculosis. The earliest *x*-ray evidence of these is a faint circular shadow about the size of a sixpenny-piece situated in one or other subclavicular region. The centre of the shadow may be clear, indicating a small cavity. In many cases such lesions must heal spontaneously, for their scars are seen in the skiagrams of patients who give no history of disease, or are discovered at necropsy. In others healing occurs under sanatorium treatment, while in a third group the lesion progresses to the condition described in the next section.

III. *Subapical Disease with Cavitation*

The rapid development of a lesion similar to that shown above may lead to the formation of a large cavity at an early period of disease, a phenomenon I once had the opportunity of observing in a child aged 4 years. Physical signs are often entirely absent, or are only discovered after *x*-ray examination. The cavity which develops rapidly may resolve with equal celerity, and under favourable conditions may close within a period of a few months or even weeks.

IV. *Basal Disease with Cavitation*

Disease situated in a lower lobe is usually considered to be more virulent than upper lobe disease, but here again resolution may take place and permanent healing result without resort to any special form of treatment other than rest.

Such a happy termination is, however, by no means the rule, and strict *x*-ray control is necessary. A soft cavity may contract and apparently close, when a reactivation of infection results in a further disintegration of lung tissue and a vomica reappears. It is for this reason that early artificial pneumothorax is often pre-

ferable to an expectant attitude. It ensures the approximation of the cavity walls till healing is firmly established by scar tissue.

V. *Pulmonary Tuberculosis with Miliary Distribution*

The acute form of miliary tuberculosis of the lungs usually causes death within a few weeks. The skiagram is characteristic and presents the well-known "snow-storm" appearance. It is only in the last few years, however, that radiology has revealed a subacute or chronic form of pulmonary tuberculosis with miliary distribution. When cough first draws attention to the lungs the patient may be healthy in appearance, afebrile, and well nourished. Physical examination reveals perhaps a few scattered catarrhal sounds at a time when a skiagram proves that the lungs are everywhere mottled with small opacities. These differ only from those of a true miliary tuberculosis in being slightly coarser, and the appearance of the condition thus resembles a hail-storm rather than a snow-storm.

VI. *Progressive Disease of Exudative Type*

We have hitherto been discussing examples of exudative disease of a relatively benign type. The patient's resistance and the attacking force are so nicely balanced that although she is not immune to attack when exposed to the debilitating conditions associated with unhealthy conditions of work—long hours, and travel during the rush hours—life under sanatorium conditions, complete rest, proper food, and continuous fresh air tip the scales on the side of recovery. And, as we have seen, this recovery is often surprisingly rapid and complete. The resistance of many patients is permanently raised after leaving the sanatorium, and a return to the old conditions of life is not followed by relapse. If recovery after this manner were the rule the treatment of pulmonary tuberculosis would be as simple a matter as the pioneers of sanatorium treatment conceived it. Occasionally the scars of subclavicular disease are seen in radiograms of healthy young persons who give no history of chest disease. But such cases are not common, and even sanatorium treatment without the adoption of special methods succeeds in only a small proportion of cases. An area of infiltration may spread rapidly, caseation may lead to early cavity formation, and cavities may increase in size despite the advantages of bed, rest, fresh air, and good food, and the psychological stimulus of medication, whether by hypodermic injection or mixtures.

An opportunity of studying the spread of disease in serial radiograms was afforded recently when the mother of a boy aged 16 years, who was admitted to the Harold Court Sanatorium suffering from a subclavicular infiltration, refused to allow collapse therapy to be practised. In the treatment of adolescent tuberculosis delays are especially dangerous, and artificial pneumothorax should, as a rule, be adopted directly it is obvious that cure by simpler means is doubtful. A skiagram taken in September, 1931, showed the disease in its early stage. A skiagram in March, 1932, showed that the condition had been allowed to develop to a dangerous degree with widespread infiltration and cavity formation. At this stage the parent listened to reason, an artificial pneumothorax was induced, a satisfactory collapse obtained, and the patient set on the road to recovery. Otherwise the disease would have spread throughout the lung and infection of the opposite side would have been inevitable.

A further example of rapid spread under observation is afforded by the case of a young school teacher. In this instance prompt treatment by artificial pneumothorax resulted in a satisfactory cure, and within two years of the onset of symptoms the patient was able to return to her work with the approval of the educational authorities.

VII. *Unilateral Disease of Exudative Type Involving the Greater Part of the Lung*

If often happens that, either because the onset of disease was latent, or because the patient has refused to pay any attention to symptoms, both lobes of one lung are extensively involved when she is first seen. Immediate artificial pneumothorax then offers the best hope, and, despite the adhesions which in cases of this type usually prevent a complete collapse, sufficient pulmonary deflation is often obtained. Sometimes the lung becomes flattened like a pancake against the posterior thoracic wall, at others, although the lung may appear to be suspended by festoons of adhesions, the diseased areas are well collapsed. Adhesions should not be interfered with unless they are preventing the closing of cavities.

VIII. *Bilateral Disease*

When exudative disease involves both lungs the prognosis is obviously more serious than in unilateral disease, but the outlook should not be regarded as hopeless.

(*a*) An area of exudation with a soft-walled cavity on one side is frequently associated with a small area of "frühinfiltrat"—subclavicular, or less commonly basal—on the opposite side. As a rule this clears up rapidly when healing commences in the more serious lesion, whether as the result of collapse therapy or simple rest treatment.

(*b*) A more extensive lesion may be present in the contralateral lung, either when the patient is first seen or as the result of an aspiration spread. The latter is sometimes seen after the induction of pneumothorax, and necessitates either the abandonment of collapse therapy, or a bilateral pneumothorax, or a continuation of pneumothorax on one side with phrenic avulsion on the other. An example of successful simultaneous bilateral pneumothorax illustrates the healing of a large soft cavity in each lung.

The patient, a girl aged 15 years, was admitted to the Black Notley Sanatorium suffering from pulmonary tuberculosis involving the whole of the right upper lobe. A soft-walled cavity had already formed in the subapical region. A small area of stippling, seen in the skiagram, in the left middle zone indicated secondary infection of the opposite side. Artificial pneumothorax was induced on the right side in December, 1928. Satisfactory collapse of the lung was obtained, and tubercle bacilli disappeared from the sputum within a month. The patient made excellent progress until June, 1930, when signs of active disease were elicited over the left axillary region, tubercle bacilli reappeared in the sputum, and a skiagram showed the formation of a cavity about the size of a walnut in the left middle zone. In July, 1930, artificial pneumothorax was induced on the left side, while a low-pressure pneumothorax was maintained on the right. The right lung was allowed to re-expand in December, 1930, when, apart from slight linear scarring of the upper lobe, no evidence of disease was apparent. Collapse of the left lung was maintained for two years, and after re-expansion its condition was similar to that of the right. The patient was discharged to her home in good health.

(*c*) As already noted, in some severe infections both lungs may be riddled with minute foci constituting a form of miliary tuberculosis of subacute or chronic type.

As a rule the prognosis of chronic miliary tuberculosis is grave. Neighbouring foci coalesce, caseation follows, and the ultimate picture is that of fibro-caseous disease of chronic type. But such a tragic result is not invariable. Resolution may occur as in other types of exudative diseases. The opacities melt away, and in the course of a few months there is a return to the normal picture, and a careful inspection of the skiagram after resolution may fail to supply any evidence of scarring. In other cases resolution may apparently be complete in most areas while progressive disease is apparent in one lobe. We can then direct our efforts to the healing of the local area with

some hope of success. Thus, in the case illustrated, after the miliary foci had resolved, phrenic avulsion was performed on the right side where a soft-walled cavity had developed in the subapical region. Within four weeks of the operation the cavity had shrunk to half its original size, and its complete closure is now anticipated.

SURGICAL MEASURES IN SUPPORT OF COLLAPSE THERAPY

When artificial pneumothorax is impracticable or inexpedient, phrenic avulsion is often of great value in giving a measure of rest to the lung, and, by relaxing tension within the hemithorax, allowing scar tissue to contract. After phrenic avulsion soft-walled basal cavities often heal rapidly—an example of a very large cavity closing within a few weeks of the operation is given—and in some instances even apical cavities will close in a similar manner. An upper lobe cavity persisting after artificial pneumothorax owing to an adherent apical cap may heal in this way. Phrenic avulsion may also be employed to close a basal cavity on one side while artificial pneumothorax is carried out for the opposite lung. The risks inseparable from a bilateral pneumothorax may thus be avoided.

When a cavity is situated beneath the pleura the overlying visceral pleura is usually inflamed, and unless artificial pneumothorax is induced at a very early stage pleural adhesions form. When the remainder of the lung collapses the area in which the cavity is situated remains anchored to the chest wall, forming a cone of pulmonary tissue containing the vomica. Severance of the adhesions is then essential. A thoracic endoscope, similar in principle to a cystoscope, is introduced into the pneumothorax cavity through a cannula. A second trocar, inserted through another intercostal space, permits of the introduction of a cutting instrument—either diathermy knife or actual cautery. After coagulation of the adhesion by diathermy to prevent haemorrhage, the adhesion is then divided as near to the chest wall as possible. The latter precaution is essential, because lung tissue is always present in the base of the cone, and perforation of the lung is attended by disastrous consequences. Thoracoplasty, sometimes beneficial in the fibroid forms of disease common in later life, is rarely indicated in adolescence or early adult phthisis, and need not be considered here.

Drug treatment, except as a palliative measure, is of no avail, but the intravenous injection of gold salts is sometimes followed by resolution of recent disease of exudative type. Thus, when, as sometimes happens during the collapse of one lung, a flare of exudation appears in the opposite side, sanocrysin or some similar preparation may lead to rapid resolution of the fresh area of disease and disappearance of tubercle bacilli from the sputum. The method of action of gold salts is obscure, and as they are apt to cause serious reactions their use should be restricted to selected cases. One might compare the effect of sanocrysin to that of a bucket of water in a case of fire—it is useful to extinguish an incipient outbreak or to suppress local outbursts after the main fire is under control, but more than this must not be expected.

Not every case of tuberculosis is curable. Some patients go downhill despite all our treatment. The cynic might remark that many patients recover in spite of all our treatment. But I hope the examples shown have demonstrated that modern treatment is effective in curing many cases of grave disease, and that early treatment cures most of the less virulent forms. Delay in diagnosis, whether due to the patient's reluctance to admit ill-health or to the doctor's neglect of warning symptoms, is responsible for many, if not for most, of the deaths from consumption in early life. As a rule, the patient's ultimate fate is in the hands of the general practitioner, because the first complaint is made to him.

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

SPONTANEOUS RUPTURE OF THE SPLEEN DUE TO NITROBENZENE POISONING

The following record of an unusual case appears to be worthy of publication.

The patient, a man aged 39, was a chemical worker, dealing chiefly with nitro-compounds of benzene. Several times he had had to give up his work for periods of two to three weeks owing to attacks of "chemical intoxication," the main symptoms of which were headache and lassitude and the main sign cyanosis, but for a whole year before the illness now being described he had been steadily at work. On January 7th, 1930, he had to give way to increasing fatigue and malaise, and again ceased work. His wife thought that he looked slightly cyanosed, and one of his usual "attacks" was diagnosed. Two days later, while in bed, he was seized with severe pain localized to the left hypochondrium, passing off in an hour or two. When the pain was at its height his temperature was 101° F. After two days the pain again returned, this time continuing until his admission to hospital, three days later, on March 15th, 1930. On admission he was extremely pale and looked very ill. There was a suggestion of conjunctival jaundice. He was complaining of severe abdominal pain, by now quite generalized, aggravated by an occasional ineffectual cough. He said that he felt sick, but there was no vomiting. He was not constipated. The pulse rate was regular at 100 per minute, respirations 28, and temperature 100.2°. Despite careful inquiry no history of trauma could be elicited. The abdominal respiratory movements were normal and there was no distension. Definite resistance could be made out in the left hypochondrium, with a dull percussion note here and in Traube's space. The left upper quadrant was very tender. There was no evidence of any intrathoracic lesion. The urine on examination gave no information. Laparotomy revealed a haemoperitoneum, the origin of which turned out to be a tear, about 1 inch long, on the hilar surface of the spleen, near its lower pole. Splenectomy was performed. The patient recovered satisfactorily and is still in good health. Two days after the operation the blood count (done for the first time) showed a normal picture. The platelet count was 277,600 per c.mm. The spleen was normal in size and consistency, and apart from the tear, which was quite superficial, looked quite healthy. Microscopical examination revealed only some thrombosis in veins near the surface. The appearance was otherwise normal. There was no subcapsular haemorrhage. The Liverpool city analyst reported that the spleen contained a trace of nitrobenzene.

DISCUSSION

Spontaneous rupture of the abnormal spleen occurs most commonly in malaria—of the natural or therapeutic variety. It sometimes happens in typhoid fever, in the acute infections in general, in blood diseases, and in pregnancy, parturition, and the puerperium. In all these conditions either damage to vascular endothelium by circulating toxins is liable to occur, or upset of the platelet balance may take place, predisposing in both cases to thrombosis. Spontaneous rupture of the apparently normal spleen is very rare indeed. Susman[1] collected six cases and reported another, Bailey[2] collected four more and reported one, while Byford,[3] Nixon,[4] and Dardinski[5] have reported one each—a total of only fifteen cases.

Why does the spleen rupture? Three factors must be considered. First, it is to be noted that there is generally a fairly considerable subcapsular haemorrhage. Now a subcapsular haemorrhage due to a breach of the endothelial continuum would tend to accumulate and increase if the opening were valve-like, but probably not otherwise.

[1] Susman, M. P.: *Brit. Journ. Surg.*, 1927, xv, 47.
[2] Bailey, H.: Ibid., 1929, xvii, 417.
[3] Byford, W. H.: *Arch. of Surg.*, 1930, xx, 232.
[4] Nixon, P. I.: *Journ. Amer. Med. Assoc.*, 1932, xcvi, 1767.
[5] Dardinski, V. J.: Ibid., 1932, xcix, 831.

Secondly, a lesion of the nature of thrombosis at the surface would be likely, by devitalizing a very small volume of tissue, to cause just such a breach. In the present case some *minute* thrombosis certainly took place, the result, very probably, of the exogenous chemical toxaemia. Lastly, it must be remembered that the spleen is a muscular organ, contracting rhythmically about once a minute, and more violently during effort of any kind. These movements might be responsible for the endothelial tear in the first place, and afterwards, by a more or less gentle syringe-like action, for the progressive increase in size of the subcapsular haematoma, which ultimately ruptures.

I have to thank Mr. C. A. Wells, who operated on this patient, for permission to publish the case.

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TURPENTINE IDIOSYNCRASY

The following case of idiosyncrasy to turpentine may be of interest on account of the rarity of such susceptibility.

The patient, a man aged 24, sustained a sprain of the left wrist in December, 1932. The skin was not broken and he was given linimentum album *B.P.C.* to rub in. At the end of a fortnight he found some blebs on the wrist, and calamine lotion was prescribed. The next day there was considerable swelling of the forearm and a vesicular eruption on the wrist. The face was puffy and an erythematous rash was present on the neck.

During the next three days all the physical signs rapidly increased. The left arm became very hot and swollen, and vesicular eruption spread over the whole limb. Later the right hand and arm were similarly affected. Urticaria wheals appeared over the whole body, especially the thighs, and vesicles on both ears. The general condition remained good, but the patient was unable to take any solid food. The skin affection then began to subside, but he continued to vomit any food. The gastric symptoms persisted for a few days longer and then passed off; the urticaria also subsided. The skin pealed off the places where there had been vesicles. The duration of the illness was three weeks.

One other case, not quite so severe, came to my notice last year. This idiosyncrasy must be rare since turpentine is so frequently administered by the bowel in enemata and applied in lotions. The effect which might be produced in a susceptible patient should there be absorption by the bowel is a matter for speculation. I can find no mention of this form of poisoning, or any suggestion as to treatment, in the literature. I should be glad to hear of any similar experience.

Newport, I.W. W. W. JEUDWINE, M.D.

Reports of Societies

CHRONIC PANCREATITIS

At a meeting of the Medical Society of London on March 13th, with Sir JOHN BROADBENT in the chair, a discussion took place on chronic pancreatitis.

Mr. A. J. WALTON said that in investigating and correlating his experience of this disease the clinician was always up against the difficulty that his results must be in large part hypothetical. After glancing at a few cases in which chronic pancreatitis was associated with some other lesion, such as cysts, pseudo-cysts, and calculi, Mr. Walton based his principal remarks on sixty-one cases of primary chronic pancreatitis. It was within the knowledge of surgeons, he said, that the prognosis in the operative treatment of acute pancreatitis was improving enormously, and he thought all would be agreed that the improvement was due to the fact that the cases which were met with were less severe than formerly. In the old days the abdomen was found distended, full of a port-wine-coloured fluid, and with a large number of fat necroses widely scattered. Nowadays the fluid was clear, and although there were quite a number of fat necroses, they were not so widespread. Another group of cases might be regarded as subacute, where the fat necroses were perhaps limited to the lesser sac. In a certain number of cases of chronic pancreatitis one could recognize at operation definite scars on the posterior wall of the lesser sac signifying old fat necroses. One could find also in the past history of cases of acute and subacute pancreatitis suggestions of the chronic condition. Of twenty-eight cases of acute pancreatitis of which he showed a table, nine revealed a past history of the chronic condition, three had persistent symptoms of chronic pancreatitis after operation, and one of them had a later acute attack for which another operation was done; ten out of the twenty-eight had gall-stones. In fifteen cases of subacute pancreatitis there was a past history of the chronic condition in nine, five showed persistent symptoms after operation, five had gall-stones, and one had diabetes. Of the sixty-one cases of chronic pancreatitis which formed the basis of his remarks not one developed an acute pancreatitis later.

With regard to the pathological changes, these were definite enough post mortem. At operation it was difficult to determine with the fingers the normal hardness and size of the pancreas, and, further, chronic pancreatitis of what he called the "irregular type" might be localized to the head of the gland, and it was difficult to distinguish between the chronic pancreatitis of this kind and a carcinoma. On the other hand, in the type of case where the fibrosis was more evenly distributed it led rather to atrophy of the pancreas, which took on a shrunken and distorted condition. Among these sixty-one cases there were later chronic symptoms in nine, gall-stones in fifteen, later carcinoma in three, later diabetes in four, later cholangitis in one, and later duodenal ulcer in one. The distribution of the cases was almost equal as between the sexes. The majority of them came forward at ages between 40 and 60. In certain cases of acute pancreatitis the view had to be accepted that the infection passed up the common duct. Looking at the infections of all viscera to-day, the evidence was more and more against infection by what might be called the obvious path. In the gall-bladder there was very little evidence of infection passing up from the duct, and the same was true of the kidney. There was an increasing body of opinion that many of these cases of acute and chronic pancreatitis were due to a blood-borne infection.

Classifying his sixty-one cases from the point of view of symptoms, Mr. Walton said that there was diabetes at onset in five, jaundice in thirty-five, and pain in twenty-one. In the cases in which there was obstructive jaundice its onset as a rule was slow and steadily progressive, but some showed a premonitory attack lasting a week or two, clearing up under treatment over several months, and then changing to a progressive condition. As to pain, this in the early stages was a periodic dyspepsia. It was not the pain characteristic of ulcer. If a patient had had gastric or duodenal ulcer he would present a clear-cut history, so that in 99 per cent. of cases a positive diagnosis could be made without *x* rays or a test meal. The pain in chronic pancreatitis might superficially resemble the pain in these other conditions, but not in detail. In the later stages pain would be continuous, and over and above this there would be nearly always attacks of pain of great severity. In a few final words on treatment Mr. Walton said that in the type of case where the patient had the milder degrees of pain suggestive of gastric or duodenal ulcer the treatment should be medical. Cases with calculi must go to operation, and might be cases of profound difficulty. In cases with obstructive jaundice one had to do an anastomosis between the dilated gall-bladder and the duodenum, an operation associated with considerable danger of ascending infection. In the group of cases where the lesion of the gall-bladder was mild and there was a possibility of dilatation of the duct, although no jaundice, he did a cholecystduodenostomy.

Sir WILLIAM WILLCOX, after paying a tribute to the work of Mr. Walton on pancreatic disease, said that a good deal was known about the physiology of the pancreas, and at first sight it might seem that there would be numerous reliable tests for pancreatic efficiency. But Nature had been generous, and, with the pancreas as with the liver, had provided much more than the individual needed for his requirements. Thus the efficiency tests were not very reliable. Another reason for the difficulty of diagnosis in pancreatic disease was that there were no objective signs, the pancreas being deeply seated, and rarely to be palpated, while in the absence of an appropriate radio-opaque substance *x*-ray examination as a rule was negative. Therefore in the diagnosis of pancreatic disease one was left largely to rely on subjective symptoms such as pain, and in some cases jaundice of an obstructive type, and in others a tendency to profuse haemorrhage. He noticed that in the *Annals of Surgery* for September, 1932, two American surgeons gave their records of operative cases in acute pancreatitis, and in not a single one of the twenty-two cases did they make a diagnosis before operation. The common cause of the infection he believed to be a spread by the lymphatics. In many cases, he agreed, infection spread up through the duct, particularly in the cases associated with calculi, and he also agreed that chronic pancreatitis might be caused by a blood-borne infection. Regarding the aetiology of chronic pancreatitis, one could divide the subject under four headings: (1) where the pancreatitis was secondary to infections of gall-bladder, duodenum, appendix, or colon ; (2) where it was due to some general blood infection following typhoid fever, food poisoning, dysentery, influenza, pneumonia, small-pox, scarlet fever, and occasionally syphilis and tuberculosis ; (3) where the pancreas was associated with the group of poisons, such as alcohol and lead ; and (4) where it was associated with some other lesion of the pancreas, such as cysts, calculi, growth, or traumatic lesions.

With regard to the types of chronic pancreatitis, Sir William Willcox said that these could be placed in three groups: those resembling gastric lesions, those in which there was obstructive jaundice, and those (a small group) in which there was diabetes. Of the signs and symptoms of chronic pancreatitis, he thought the most important was pain, which might be very severe, occurring in spasms, and bearing some relation to food, though there was not the exact time relation to food which one found in gastric or duodenal ulcers. It was rather obscure, not to be definitely associated with the stomach, duodenum, kidney, or gall-bladder. In many of these cases the pain was almost unendurable, and pancreatic pain was one of the causes of drug addiction. The pain was variable in its distribution ; it was commonly in the epigastrium, but it might occur in the right or left lumbar region, or in the iliac region, or in the back under the right or left shoulder, or lower down. He thought that stress should be laid in chronic pancreatitis on the importance of doing a test for latent jaundice, the presence of which, when it was not apparent, might be shown by the van den Bergh test or the icterus index test. One of the best tests for chronic pancreatitis was the diastase test. If the diastase was low it was a strong indication that there was not pancreatic disease. The blood sugar test was not done sufficiently often; it should always be done, and also the glucose tolerance curve. As regards the stools, increase of fat was one of the important signs of chronic pancreatic disease. The occult blood test should always be done, and this was often positive. With regard to treatment, most physicians would agree that these cases were generally referred to the surgeon. The treatment was very disappointing. In the first place he would look for the causative lesion and deal with that —a chronic appendix, an infected gall-bladder, a duodenal ulcer, and so on. Then he thought the stools should be carefully examined for any evidence of bacterial infection. In many cases the paratyphoid group of organisms, such as *B. faecalis alcaligenes*, was found. If such organisms were present the bowel infection might be treated by colon irrigations, by vaccines, and by intestinal antiseptics. Of the drugs which might be used, saline aperients were of value, causing a flow of bile, and probably of pancreatic juice. The iodides might be tried, and some antiseptic such as a fairly full dose of urotropine. In considering diet it was important to forbid excessive fat.

Professor E. C. DODDS confirmed the statement made by Mr. Walton in his introduction, namely, that examination by chemical means had been of little assistance. That had been his own experience at the Middlesex Hospital with cases of this type. In the first place it must be remembered that the functions of the pancreas had been very carefully studied, and it was shown that seven-eighths of the pancreas could be removed from an animal without the development of any symptoms. Apart from obstruction to the pancreatic outflow, no lesion was likely to produce destruction of seven-eighths of the pancreas unless it was so severe that it would be manifest by other clinical signs and symptoms. The condition could therefore be compared very closely with that of the liver, where it had been shown that four-fifths might be removed before there were any signs or symptoms. From the function-testing point of view, the problem was almost hopeless from the beginning. Three tests had been suggested—namely, the diastase test, the presence of glycosuria, and fat in the stools. With regard to the urinary examination, the diastase test had been valueless in the diagnosis of chronic pancreatitis. In the diagnosis of acute pancreatitis, if it was over 200 units there was no doubt that it was of very great value ; if below 200 it was very unwise to place any reliance upon it. Minor variations in the diastase content of the urine were extremely unreliable. With regard to the glucose content of the urine, the only cases that he had seen develop diabetes had been patients in whom a gall-bladder might have led to trouble, and in these at a later date glycosuria had developed ; but unfortunately the cases he had seen had not had the abdomen opened when they had got diabetes, and therefore it was very difficult to say whether they had a pancreatitis. One striking point about this type of glycosuria was that it was very severe. With regard to the glucose tolerance test, his experience had been that it was a complete failure in the diagnosis of acute pancreatitis. As for the fat content of the stools, in acute pancreatitis this had always been found to be very high, but he personally would place the normal variations much wider than those which appeared in most textbooks or papers. The normal figure of 25 per cent. was not a safe one to take. To sum up the position, if he were called in by his clinical colleagues to see a case in the wards and they asked him whether there was any test which he could do to indicate whether the patient had chronic pancreatitis, he would unhesitatingly say, "I can be of absolutely no assistance to you whatsoever."

Mr. ZACHARY COPE found in the confession of three masters of the subject that there was no guide or test which would enable chronic pancreatitis to be diagnosed with certainty a source of consolation for the great difficulty he had found in making a diagnosis and the occasional errors into which he had been led. There was one form of pancreatitis to which no reference had been made. About twenty years ago he had operated on a patient who was supposed to have duodenal ulcer. On opening the abdomen he found the veins of the stomach larger than he had ever seen, and there was evidently some obstruction, the pancreas was very greatly enlarged, but nothing more could be done at that time. Later it appeared that there was a large gumma at the head of the pancreas which simulated chronic pancreatitis. On opening the abdomen it was often very difficult to distinguish between carcinoma of the head of the pancreas and chronic pancreatitis. Dr. G. VILVANDRÉ discussed the *x*-ray appearances and produced slides showing calculi which he said were absolutely diagnostic of calculi in the head of the pancreas. Mr. MCNEILL LOVE asked for opinions on prognosis. Up to a few years ago when he removed gall-bladders containing stones he used to tell the patients that he had removed what he hoped was their trouble, but they returned afterwards with

recurrence and flatulence. Mr. W. E. TANNER said that one of the greatest dangers was lest the gall-bladder be hastily examined and removed. He had seen three patients recently who had had gall-bladders removed on no very clear grounds, and all three of them had gone on to pancreatitis. Mr. L. E. C. NORBURY thought it was important in doing an operation not to express too much pessimism. Mr. PHILIP TURNER referred to syphilitic disease of the pancreas, which was rare, but cases did turn up occasionally. He had in the course of an operation palpated the pancreas to see if he could come to any conclusion from its feel as to whether there was inflammatory change or not, a point extremely difficult to decide. Sometimes the viscus felt large and flabby, at other times small and hard; but it was very difficult to tell from the feel at the time of operation whether any pathological condition was present.

Mr. WALTON, in reply, said that he was more and more certain that accuracy of diagnosis lay in the analysis of the patient's history. In chronic pancreatitis there was a definite history of pain which was more or less characteristic. It was a question of periodicity, alternation, location, and association with flatulence. He had always said that hepatic pain was a radiation to the right shoulder and pancreatic pain to the left. On a further point he said that one was never justified in removing any viscus purely on grounds of symptoms; it must be done only on operative findings.

CAUSATION AND TREATMENT OF INTERSTITIAL NEURITIS

At a joint meeting of the Sections of Neurology and Physical Medicine of the Royal Society of Medicine on March 16th, with Dr. RISIEN RUSSELL in the chair, a discussion on the causation and treatment of interstitial neuritis was opened by Dr. WILFRED HARRIS.

Interstitial neuritis, he said, was an acute or chronic inflammation of the supporting tissue which bound together the separate nerve fibres. The origin of the inflammation might be toxic, as in alcoholism or diabetes, in which case both interstitial and parenchymatous degeneration of the nerve might occur; or it might be due to certain fevers, such as paratyphoid, or more chronic infection such as dental sepsis. Other cases were due to the local spread of neighbouring inflammation, as in tuberculous caries, or chronic fibrositis of the shoulder and back muscles, involving the finer nerves and nerve endings, and causing the pain of so-called muscular rheumatism and lumbago. Spread of fibrositis of the back muscles might involve the sciatic nerve at the notch and produce sciatica, while fibrositis of the neck muscles might give rise to brachial neuritis. A more troublesome form of sciatica, with contralateral scoliosis, was due to a rheumatic or osteo-arthritic process involving the lumbar nerves at the intervertebral foramina. Obstinate sciatica might also result from osteo-arthritis of the hip-joint, by direct spread of inflammation to the sheath of the sciatic nerve. Chill to the surface might set up an interstitial neuritis, such as sciatica or facial palsy, and contusion might produce the same result. Treatment might be physical or medicinal. Rest was important in the acute stage, and sedatives or opiates often played a necessary part. Iodine was of value in the chronic cases, and strychnine and other tonics, such as cod-liver oil or radiomalt, were useful in the convalescent stage of acute nephritis, when pain and tenderness had disappeared. Massage was usually borne earlier than either strychnine or electricity. Antiphlogistine, mud packs, hot saline baths, and radiant heat all had a place in treatment, but he had little faith in *x* rays, blue or red light, or high-frequency currents, except as instruments of suggestion.

Dr. M. B. RAY said that the tissue which bound the nerve fibres together, the supporting structures of the muscles, the fascial planes, and the periarticular tissues, together formed a unified connective tissue system. Patients who developed changes in this system were often characterized by inadequacy of the endocrine sympathetic system, as shown by intolerance to cold and inactive skin, and were, furthermore, frequently maladjusted to their physical and psychical environment. Rest was one of the essential factors in treatment. A long Liston splint might be used to ensure that the limb was at rest in sciatica. Dry heat gave less relief than moist heat, especially moist heat in the form of mud packs. He had also tried painting the painful area with six or seven coats of paraffin wax, the wax case being left in position for about half an hour. This treatment promoted sweating over the painful area and often gave relief. Diathermy was useful in the later stages of treatment. Benefit was often derived from saline injections into the nerve and from the injection of oxygen round the nerve sheath. Acupuncture sometimes gave good results.

Dr. J. P. MARTIN described the pathology of neuritis. Exudate was present beneath the epineurium and between the lamellae of the perineurium, and probably exerted pressure on the nerve fibres; it was not easy to see why this caused pain unless the nerve endings of the nervi nervorum were involved. Paralysis occurred relatively frequently in association with neuritis of the facial and long thoracic nerves. In sciatica there was often some degree of wasting, loss of the ankle-jerk, and fibrillation of muscles. Radiculitis affecting one spinal root might occur, and the fifth cervical seemed to be more commonly affected than other roots. The large amount of exudate present in interstitial neuritis suggested that acupuncture was a rational form of treatment. It was possible that, where fibrositis was present, injection of oxygen relieved pain by causing separation of the inflamed surfaces.

Dr. J. BARNES BURT said that Gowers and Osler had considered the majority of cases in the rheumatic group to be due to interstitial neuritis, but in most cases the patient was seen before changes in the nerve had occurred. Primary inflammation of interstitial tissue might occur as a result of chill, but the condition was usually secondary to arthritis, bursitis, or fibrositis of neighbouring structures. In rheumatic headache inflammation probably spread from the trapezius to the great occipital nerve; massage to the muscle relieved the condition. Brachial neuritis might be due to arthritis of the intervertebral joints, to inflammation of the subacromial bursa, or to fibrositis of the supraspinatus muscle, causing pressure on the supraspinatus nerve and pain referred down the median nerve. Sciatica should be distinguished as root, trunk, or referred sciatica. Root sciatica was often associated with arthritis of the lumbar vertebrae. Trunk sciatica might be due to fibrositis of the gluteus maximus, and referred sciatica might be associated with fibrositis of the gluteus medius, compressing the nerve against the bone. He advised spa treatment for sciatica

Sir ROBERT STANTON WOODS thought a long Liston splint unnecessary in the treatment of sciatica, though he agreed that rest was essential. He thought that the pain in interstitial neuritis might be due to ionic changes brought about by the long-continued pressure of the exudate. Dr. DENNY BROWN described a case in which a patient with disseminated sclerosis, who was also suffering from sciatica, had died, for no clear reason, following an injection of oxygen. On section, the sciatic nerve showed oedema under the perineurium, extending right round the nerve bundles in some places. The probable cause of pain was damage to the nervi nervorum by pressure.

Dr. GORDON HOLMES pointed out that two separate conditions had been discussed—namely, true interstitial neuritis and referred pain along a nerve due to inflammation of neighbouring structures. Rheumatic headache was due to fibrositis of the trapezius, and was not a true interstitial neuritis. Brachial neuritis was rare, pain in the arm was usually due to subacromial bursitis or to changes in the shoulder-joint or neighbouring muscles. Inflammation in the hip-joint or in the gluteus maximus might give rise to pain in the leg not associated with changes in the sciatic nerve. In true sciatica of the high type there was an increase of cells and protein in the cerebro-spinal fluid, indicating that changes had occurred in the intrathecal portions of the roots. In main trunk sciatica the lesion was probably in the region of the notch.

SEX PERVERSIONS

At a meeting of the Section of Psychiatry of the Royal Society of Medicine, on March 14th, two papers were read on the psychopathology of sex perversions.

Dr. J. A. HADFIELD expressed his belief that the attempt to explain these abnormalities as arising from the association of ideas, or as simple conditioned reflexes, was inadequate. Perversions proved to be in most cases persisting morbid reactions of infantile life. While not denying that congenital characteristics might be met with in some cases, he thought that the fact that such patients could very often be cured by psychotherapy was a strong indication of the nature of the cause. He cited instances in support of this view, and maintained that sex perversions had the same general causation and the same mechanism as the other psychoneuroses. The essential aetiological factor was a feeling of deprivation of love. This was capable of being interpreted biologically as well as psychologically. The infantile sensuousness, he added, must be regarded as biologically egoistic, and not sexual; transference to the uses of sexuality was a subsequent phenomenon. Perversions should not be regarded as the mere persistence of these normal infantile tendencies; they were, in fact, morbid reactions to abnormal situations. The reactions underwent repression, and this accounted for the fixation and arrest of sexual development. The precipitating conditions later in life aroused the latent repressed tendencies, which emerged in the form in which they had been repressed originally.

Dr. E. A. BENNET, who gave details of a case he had investigated fully, reviewed briefly the current theories as to causation, and suggested an explanation in which considerable stress was laid on the relation of the pervert to other members of the community. He denied that sex perversions and psychoneuroses were merely positive and negative aspects of infantile sexual components. Clinical details of this particular case were adduced in support of the view that the physical aspects of the perversion were of secondary importance, as compared with the mental. The occurrence of such a maladjustment indicated a failure in personal and social integration. The patient made efforts to alter this by the adoption of aggressiveness, child-like conduct, and perverse activities. Although there were manifold perverse reactions, a uniformity of purpose was discernible, for the "policy" of the illness was to regain a satisfying personal and social life. This, however, was the same policy as that in the psychoneuroses.

JUVENILE DELINQUENCY AND THE BROKEN HOME

The extent to which the broken home may be a factor in juvenile crime and misbehaviour was the subject of a lecture delivered last week by Dr. R. G. GORDON to the Institute for the Scientific Treatment of Delinquency.

Dr. Gordon deprecated the tendency in this as in other matters to find simple explanations of complicated phenomena or rule-of-thumb solutions of problems. The fact that there were no "specific remedies" which could be applied to delinquency was not without its advantages, because the moment an easy solution of a problem was discovered the problem lost its interest. The delinquent, he insisted, was an individual, and must be treated as such. The interest should not be fastened on the particular crime or the anti-social act to the neglect of the delinquent himself. In young people stealing was the commonest delinquency, but stealing might be due to a host of causes, requiring all sorts of different treatments, and the broken home was not so much a principal cause as a contributory factor. Taking a series of cases of delinquency in children, the environmental factor would be found to play a very important part, and quite often—though by no means always—if the environment were changed so that it became more favourable to the individual and induced less friction the child would be able to adapt himself in a remarkable way and overcome his difficulties. But Dr. Gordon refused to stress the environmental factor more strongly than that. Of all environmental factors the most important was the broken home—that is to say, a home in which the normal relationship which should exist between father, mother, and children was not obtained, either through the absence of one parent, or the intrusion into the circle of a step-parent or of step-brothers or sisters, or other relatives. Dr. Gordon narrated five interesting cases taken at random, in all of which the broken home had contributed to the difficulty or delinquency. In one or two the home had almost everything to do with the abnormal behaviour; in another, part of the difficulty had to be ascribed to the home and part to constitutional factors in the child, which made it doubtful whether the child would have made good in any environment; while in yet another case the influence of the broken home was almost negligible. This last was the case of a young girl who apparently had an inherent incapacity for social adjustment, the blame lying in some far-back defective stock, and not in the child's contemporaries. She had what was frequently called the "epileptic personality," and was indeed subject to epileptic fits; though certainly all such people were not epileptics, nor were all epileptics of this character. The broken home with its divided loyalties came into all these stories, but Dr. Gordon wished to make it clear that there were plenty of children in broken homes who were not delinquent, and plenty of children in unbroken homes who were. The fact remained, however, that in a great many of such cases it would be all to the good if the child could be removed from the home environment. Public assistance committees could send the child to a cottage home under foster-parents, an experiment which might be successful if the child was quite young, but Dr. Gordon was evidently doubtful of its general efficacy. As to residential schools, the ordinary reference to these was through the juvenile courts, so that it was necessary for a child to be charged with some crime before he could have access; and in the case of small children, of course, there was an unwillingness on the part of the authorities to charge them, and even when children were charged the magistrates might put them on probation, which, with all the good will of the probation officer, was an unsatisfactory proceeding so long as they remained in the same home conditions. Under the new Children Act there was a clause whereby the education authority had power to take action and bring a child before the courts as not being properly controlled and looked after in his home, in which case he might be sent to a residential school. If this power were wisely exercised, and if the education authorities would take a sympathetic interest in the subject, this might be, Dr. Gordon considered, a very useful way of solving some of these social difficulties.

PERNICIOUS ANAEMIA WITHOUT ACHLORHYDRIA

At the meeting of the Section of Medicine of the Royal Academy of Medicine in Ireland on March 3rd, with the president, Dr. W. G. HARVEY, in the chair, Professor HENRY MOORE and Dr. W. R. O'FARRELL described the case of a woman, aged 58, with anaemia, Addisonian in type, but with a normal curve of gastric hydrochloric acid in the fractional test meal (done on three different occasions).

The patient complained of weakness and dyspnoea on exertion, and looked sallow; the appearance of the tongue was typical of pernicious anaemia (beefy-red, furrowed, and with atrophic papillae). The erythrocyte count was 2,490,000 per c.mm., and the leucocyte count 2,000 per c.mm.; haemoglobin, 63 per cent.; colour index, 1.32. There was a distinct megalocytic tendency, the average size of the red cells, with a Price-Jones count, being 8.13 μ; there were slight but distinct poikilocytosis, polychromatophilia, and punctate basophilia; no normoblasts were seen; the differential count was normal. The blood bilirubin was 1.9 mg. per 100 c.cm. Liver treatment by mouth gave a reticulocyte response (10 per cent. in ten days), and in two months, with no other form of treatment, the blood count showed: red cells, 4,640,000 per c.mm.; leucocytes, 4,800 per c.mm.;

haemoglobin, 100 per cent. ; colour index, 1.08. Anisocytosis and poikilocytosis were slight ; punctate basophilia and polychromatophilia were absent ; the blood bilirubin content was normal. The patient has remained quite well up to date, and had taken liver extract or liver by mouth for one year, but had discontinued the treatment for the past six months without relapse.

Dr. O'FARRELL said it was very uncommon to find a patient with pernicious anaemia with free hydrochloric acid in the gastric juice, but he felt very strongly that this case was one of pernicious anaemia. Referring to megaloblasts, he said that they were very seldom seen, except in bad cases. In the present instance he would not lay much stress on the absence of megaloblasts, because the patient's anaemia was never low enough to show them. He was of opinion that their presence was not sufficient to establish absolutely the diagnosis of pernicious anaemia.

The PRESIDENT said that cases of pernicious anaemia without achlorhydria were very rare, and it was important that they should be put on record. He referred to a recently reported case in which hydrochloric acid was present and in which the diagnosis of pernicious anaemia had been made ; it turned out to be a case of duodenal ulcer. He asked whether the Price-Jones curve gave a more correct result than that which was obtained from a colour index. Dr. V. M. SYNGE suggested that pernicious anaemia was not a definite disease. He frequently came across borderline cases which, though in many ways like pernicious anaemia, did not exhibit the complete picture of that disease, and improved under liver treatment more than did other cases of anaemia. Dr. W. R. COLLIS said he had at present under his care a patient—exactly the opposite of Professor Moore's—with microcytic anaemia and achlorhydria. The administration of iron had no effect at all ; he was now giving vitamin C in the form of a glass of orange juice three times a day. Dr. G. T. O'BRIEN referred to a case of a woman, aged 38, suffering from pernicious anaemia. A test meal a week after admission gave a high gastric curve, and demonstrated the presence of free hydrochloric acid in the stomach. She was treated by hepatex, and improved rapidly. Nucleated red cells were found in the first, but not in subsequent, blood counts. Tests of faeces for occult blood were negative. In Dr. GEOFFREY THOMPSON'S opinion the question was, What was pernicious anaemia? He thought that it should be regarded not as a definite disease, but as a syndrome characterized by certain points—namely, anaemia, increase in the size of the red cells, active destruction of the red cells in the body, and achlorhydria. Pernicious anaemia was not a disease which ran a regular course, but one which ran through a stage of improvement and then of falling back again, and it was only when the disease was in the stage of active haemolysis that any reaction from liver treatment could be obtained.

Professor MOORE, replying, referred to the large number of pitfalls in cases of achlorhydria. He thought that undoubtedly there were borderline cases, but he himself had never come across one. He never gave iron by injection, as he had found he got much better results when he gave it by mouth.

At a meeting of the Paddington Medical Society on March 14th Mr. LEONARD PHILLIPS, in an address entitled "The place of the general practitioner in the practice of midwifery," explained the improved training methods now in vogue in certain European countries—notably in Holland and Denmark—and expressed the opinion that improved methods of training were desirable in this country both for midwives and for doctors. Midwifery practice should be co-ordinated so that midwives, general practitioners, and consultants participated in an effective and complete scheme in which there should be no overlapping of functions, and in which treatment in all its aspects could be properly organized. Mr. Phillips stressed the importance of making special treatment freely and speedily available for cases of puerperal sepsis under conditions which could give the patient and her medical attendant equally a chance.

Reviews

CHOYCE'S "SYSTEM OF SURGERY"

The editor of a systematic treatise on surgery has a difficult task to-day. To deal with the mass of material which is entitled to the description "surgical" through the pens of many contributors, and to maintain a balance and some degree of uniformity in method of treatment, is no easy undertaking. In the various articles of the third edition of CHOYCE'S *System of Surgery*,[1] revised by surgeons who write authoritatively, one aspect of a subject—the operative aspect, for example—is treated exhaustively by some and scantily by a few others, but speaking generally a high degree of uniformity has been attained, as high, perhaps, as is desirable to attempt. The *System* was well planned in its original form, with an exceptionally adequate consideration of the pathological and preventive aspects of surgical disease. These two volumes, like volume i of this edition (reviewed in our issue of December 17th last), show evidence throughout of complete revision, in many instances of rewriting. They offer to the surgeon and the general practitioner the opportunity of adding to his library a textbook which adequately sums up the present position of surgical knowledge and practice in all its sections. Two articles —that on the breast and that on the skin—previously in volume ii are now in volume i.

The second volume commences with Mr. Cyril Nitch's article on malformations of the face, lips, and palate. In this, exceptional space is given to the description of operative procedures, one or two of which are now seldom employed. Professor Wilkie has revised the article on the tongue, Mr. H. S. Souttar that on the oesophagus, and Mr. A. J. Walton that on the stomach and duodenum. As in the case of other articles, the new illustrations are numerous, many of them radiographic. Mr. Alexander Miles's article on the intestines is prefaced, as before, by a consideration of the physiology of the canal ; when space permits, such an introduction to a subject is to be highly commended—through physiological knowledge is the main line of advance in surgical practice to-day. Under the heading of Hirschsprung's disease in this article we should have expected a fuller reference to the subject of sympathectomy ; the subject is referred to in volume iii, but there also somewhat cursorily considering its importance. Mr. Maybury and Mr. B. W. Williams have recast the description of acute peritonitis. Since the appearance of the last edition the prospect of successful treatment of rectal cancer by radium has passed through a phase of optimism, and is now again where it was in 1923. Under the heading of disease of the gall-bladder and bile ducts there is much more to be said than before regarding radiological diagnosis ; but was it worth while to describe the intravenous administration of sodium tetraiodophenolphthalein, and is the usual method of oral administration of this drug now by gelatin capsules? In the article on prostatic disease we find no mention of the fibrous obstructing prostate ; and the after-treatment of prostatectomy, often troublesome to the practitioner, might advantageously have received fuller discussion. Included now in volume ii are the articles on the female genital tract and the cardiovascular system. In the latter a more detailed description of the injection treatment of varicose veins would have added to its value.

In volume iii we find entirely new articles by Mr. T. P. Dunhill on the neck and by Mr. Geoffrey Jefferson on the

[1] *A System of Surgery*. Edited by C. C. Choyce, C.M.G., C.B.E., B.Sc., M.D., F.R.C.S. Pathological Editor, J. Martin Beattie, M.A., M.D., C.M. In three volumes. Third edition. London: Cassell and Co., Ltd. 1932. (Vol. ii. pp. 1,111, 357 figures, 27 plates. Vol. iii. pp. 1,107, 277 figures, 50 plates. £6 net the three volumes.)

peripheral nerves ; both are more comprehensive than those which they replace, and are lucid and well-illustrated contributions. The new developments of brain surgery are reflected in the section on the scalp, skull, and brain by Mr. Wilfred Trotter and Mr. Julian Taylor. Without much alteration Mr. Morriston Davies writes again authoritatively on the surgery of the lungs and pleura. In the second edition a large amount of space was found for orthopaedic surgery ; including the article on muscles, fasciae, and tendons, and that on bursae, half of this volume is devoted to the subject. Mr. W. H. Trethowan has materially enlarged his article on general orthopaedic surgery ; there is no better section in the whole *System*.

The editor has now omitted the "general bibliographies" which were provided at the end of each article in the last edition ; we agree that they did not add anything of substantial value. The *System* as a whole ranks with the best and most comprehensive works that have been produced by British surgery. As a book for reference, and also for study, it will certainly prove its value to those who add it to their bookshelves. There is a complete index to each volume, and a general index to the whole work at the end of volume iii.

THE CANCER PROBLEM

Le Terrain Cancéreux et Cancérisable,[2] by Dr. REDING, is an exhaustive study of what may perhaps be best termed the natural history of cancer, or cancer and predisposing conditions. The author takes it as his main thesis that some individuals are naturally more prone to malignant disease than others, and that it is only such individuals who develop the disease, while others, though exposed to the same carcinogenic influences, are immune. The first part of the book deals with the experimental production of cancer in animals by means of tar, and the question of hereditary influences in determining the development of malignancy. In the second section the chemical and physical properties of body tissues and fluids are considered. Hydrogen-ion concentration, viscosity, and surface tension of serum and cerebro-spinal fluid, concentration of electrolytes, and many other physico-chemical problems are considered in more or less detail. Variations from the normal and their possible relations to cancer production form the next section of the book. Increase in the alkalinity of the plasma is described as occurring before development of malignant tumours and, associated therewith, a diminution in calcium-ion content. The book undoubtedly represents the outcome of a great deal of laborious work ; it suggests new poin of view to other investigators and it has a comprehensive bibliography. Dr. Reding holds what he terms the "alkaline diathesis" (*diathèse alcaline*) as being the prime agent in predisposing to the development of cancer. An efficient prophylactic agent is still to be sought, but while extract of the posterior lobe of the pituitary and parathyroid extract are regarded as helping towards a diminution of alkalosis, insulin is contra-indicated.

The paramount importance of early diagnosis in cases of cancer is a matter of common knowledge. In Germany this has received practical expression by the publication of a special handbook—*Anleitung zur frühzeitigen Erkennung der Krebskrankheit* (Introduction to the Early Diagnosis of Cancer).[3] The book is designed to assist the general practitioner, under whose observation the great majority of cases will first come. In 130 closely printed pages the early signs and symptoms of malignant disease in all regions of the body are carefully set forth. The various articles are contributed by a team of writers, and the book is issued under the auspices of the official cancer campaign in Saxony. It should certainly serve as an excellent guide to its subject, and it may be noted that the present issue is a second edition, the first having appeared in 1917. The publication of such a volume as this might well occupy the attention of the British Empire Cancer Campaign.

Eight leading French scientists contribute to a series of lectures on the cancer problem—*Huit Conférences de Cancérologie*[4]—which were delivered at the anti-cancer centre of Toulouse. Dr. Béclère deals with radiotherapy in uterine fibromyomata, and contributes the only paper in the series which does not confine itself to cancer. The other contributors are: Dr. Chalier, rectal cancer; M. Magrou, cancer in plants ; Dr. Nabias, histological characters and their relation to radiotherapy ; Dr. Laborde, radio-sensitivity ; Dr. Delherm, pulmonary and mediastinal tumours ; Dr. Lacassagne, radiotherapy in sarcomata ; and Dr. Leclercq, trauma and cancer. A most valuable and interesting series of lectures, each by an acknowledged master of his subject.

CONTROL OF CONCEPTION

The chief value of the volume entitled *The Practice of Birth Control*,[5] by Dr. ENID CHARLES, is that it is an elaborate demonstration of the complete unreliability of the response to questionaries on this practice, and of the figures (or at least the significance to be attached to the figures) which are published from time to time as to the results at this or that clinic or centre, or in any particular series of cases. The inquiry by the author did not set out to achieve such a demonstration: indeed, from the trouble that has been taken and the somewhat laborious methods of analysis that have been adopted, it must be assumed that there was a reasonable expectation that results of a more definite and positive value would emerge. The material consisted of 432 replies to a questionary issued by the Birth Control Investigation Committee, 198 replies to a questionary from a private clinic, and a report on 244 cases visited on behalf of the Birmingham Women's Welfare Centre—874 cases in all. Careful comparison is made between the results arrived at by the analysis of this material and the results of other investigators of other groups of cases. It may be said at once that the inquiry described in the present volume is probably the most detailed, most scientific, and most unbiased which has so far been undertaken. Recurrent phrases like the following are a testimony alike to its care and honesty, and to its statistical futility.

"It is based upon matters of behaviour about which human beings rarely, if ever, tell the truth. . . . The survey serves to indicate the prevailing chaos of birth-control statistics. . . . Hardly any one set of figures can be compared with another. Even on the comparatively simple matter of deciding what kind of cases can be regarded as indicating success or failure there is no unanimity. . . . Differences lead to ways of arranging data yielding totally incomparable results. . . . The questionnaires which form the largest sample have been shown to be very probably biased in favour of success. . . . In view of the small number of cases considered it is not

[2] *Le Terrain Cancéreux et Cancérisable. Physiologie pathologique du Cancer, Action biologique des Radiations.* Par R. Reding. Paris: Masson et Cie. 1932. (Pp. 389 ; 17 figures. 50 fr.)

[3] *Anleitung zur frühzeitigen Erkennung der Krebskrankheit.* Im Auftrage des Landesausschusses zur Erforschung und Bekämpfung der Krebskrankheit in Sachsen. Contributed by Best, Fromme, Payr, Rostoski, Saupe, Schmorl, Tonndorf, and Warnekros. Leipzig: S. Hirzel. 1932. (Pp. 134. RM.3.)

[4] *Huit Conférences de Cancérologie.* By eight French Scientists. Centre Anti-Cancéreux de Toulouse, Conférences du Dimanche sous la direction du Professeur Duening. 1re série. Paris: Masson et Cie. 1931. (Pp. 230 ; illustrated.)

[5] *The Practice of Birth Control.* An Analysis of the Birth Controlling Experiences of Nine Hundred Women. By Enid Charles, M.A., Ph.D. London: Williams and Norgate, Ltd. 1932. (Pp. 190 ; tables and diagrams. *10s. 6d. net.*)

claimed that any dogmatic conclusions can be drawn. . . . Subject to the amount of error generally pertaining to the data. . . . The standard deviations of the percentages are too great to enable any conclusion to be drawn."

The final chapter, embodying certain general conclusions, is of much interest. As regards the comparative value of different methods it is indicated that the two most reliable are the use of the sheath together with a chemical pessary; and the Dutch cap, expertly fitted, together with a contraceptive jelly, followed by syringing with soapy water. The result of the present analysis in drawing attention to the relative reliability of the former of these methods is noteworthy. The only two statements of any significant statistical value are probably these: that "if any one type of method is recommended to a number of people at least a third will find themselves unable to use the method with satisfaction"; and that if the two most effective methods were employed together "the odds against a single conception occurring over a mean period of five years are about 17 to 1." This concluding chapter exposes a number of fallacies not uncommon even in trained minds; but it falls into one or two of its own. Finally, we may draw attention to the acute remark that

"observers drawn from a professional class in which success is partly dependent on sterility will tend to undervalue the importance of individual variations in reproductive intensity It may be that a woman who produces a large family in conditions which appear to a richer person as squalor is not very different from the artist or poet working out creative impulses in a garret. She may not necessarily be of inferior intelligence to her neighbour who prefers the aspidistras and lace curtains of respectability";

and we may commend to politicians and social reformers the suggestion that a provision for the endowment of parenthood "could readily be regulated in such a way as to exclude from its scope persons who fail to conform to a certain minimum of physical and social fitness. Under such a system the economic and social barriers to reproduction would be sufficient in themselves."

SEX DETERMINATION

"What," asks the familiar nursery rhyme, "are little boys (and girls) made of?"; providing answers which, though perhaps not literally exact, at least embody a quantum of figurative truth. Of many of the theories of sex differentiation that are put forward by writers unfamiliar with the history and content of biological science, and are regularly rediscovered every year, not even this much virtue can be claimed. All of them, as Professor CREW remarks in his little book on *Sex Determination*,[6] are attractive; but they all have in common one grave disqualification: "they are not in accordance with established scientific fact." His own book is an attempt—an entirely successful attempt—to expound for the biological amateur the chief facts and theories connected with sex control that are accepted as true by serious workers in the fields of genetics and cytology. In the compass of little over a hundred pages he covers the subjects of cell division, the sex chromosomes, sex-linked inheritance, parthenogenesis, intersexuality, and sex reversal, demanding of his reader no more preliminary knowledge than could be obtained from an equally elementary exposition of Mendelism and evolution. The book is admirably written, the style is lucid and concrete, the examples are cogent and adequate to the argument, and the author's devices to help the reader—for example, tabulation wherever continuous narrative might prove confusing, a full glossary of technical terms, a bibliography, and separate indexes of subjects and authors—could serve as models for all works of which the primary aim is the simple exposition of difficult subjects.

[6] *Sex Determination*. By F. A. E. Crew, M.D., D.Sc., Ph.D. London: Methuen and Co., Ltd. 1933. (Pp. 128; 3s. 6d. net.)

BLOOD DISEASES IN CLINICAL PRACTICE

In the seventy pages of his little book *Die Blutkrankheiten in der Praxis*,[7] Professor P. MORAWITZ has described the clinical and haematological characters of the blood diseases met with in medical practice, and the treatment adopted for these cases. The author also deals with the modifications of the healthy blood picture occurring in conditions which are not primarily diseases of the blood. The account is most comprehensive and concise. Its practical dogmatism, avoidance of theory, and the limitation of technical details make an uninterrupted lecture which should be very helpful to the clinician who has occasional access to a laboratory. More might well have been said on the value of the reticulocyte reaction in the diagnosis and treatment of pernicious anaemia. We are in sympathy with the author's opinion on the doubtful reliability and utility of Arneth's leucocyte pictures. We have not seen the first edition of this book, but can thoroughly recommend the present issue to practising physicians who read German.

Notes on Books

The Faiths and Heresies of a Poet and Scientist[8] is well described by the publishers as a "personal" book. It is a posthumous work by RONALD CAMPBELL MACFIE, the creed of a scholarly and deeply religious man, who, having contemplated the mysteries of "sin, and pain, and death, and love," had to write his experiences and conclusions down, even though some of them, by their subjective nature, were uncommunicable except to those who already shared them. In modern science, and in his own intuitions and visions, Ronald Macfie found "a continual revelation of the Wisdom and the Power of a conscious Being"—a complete justification for faith in God and hope of immortality which neither sought nor needed support from any of the revealed religions. "If," he wrote, "*tout passe, tout lasse, tout casse*, the stars must seem corpse-candles, and the flowers wreaths on a tomb. If a few years ahead there wait relentless old age and inexorable death, there must be a skeleton at every feast and a coffin by every cradle, and we are all, as some cynic remarked, only bundles of cellular tissue on the way to become manure. If there be no eternity, love in the first kiss must forebode the last, and affection must be tortured by fear." It is no wonder that the author of this passage held the belief in God on its intuitive side to be the greatest and most satisfying spiritual satisfaction and joy that man could ever attain. "The stars burning," he affirmed, "the flowers blossoming in my brain, love and beauty and poetry surging in my heart, the wonder of the lives and thoughts of other men, the revelation of perfect character shown me in Christ, are all from Him, are all Himself *given to me*—all Himself made *me*. The whole cosmos is only an aspect of His Infinity, a Mood of His, a Smile of His, a Fancy of His; a Vision of Him in me." But even to the infidel he could offer a crumb of comfort, finding in honest atheism more to be admired than in easy credulity, and even an attitude of life which might be associated "with a morality not unlike the morality taught by Christ." Ronald Campbell Macfie's book will not perhaps turn the unbeliever away from his unbelief: but to those who share the author's faith and heresies it will bring a clearer vision, a surer faith.

[7] *Die Blutkrankheiten in der Praxis*. Von Professor Dr P. Morawitz. Klinische Lehrkurse der *Munchener medizinischen Wochenschrift* Band I. Munich: J. F. Lehmanns Verlag. 1933. (Pp. 70; Geh. M.2.50, Gebd. M.3.50.)

[8] *The Faiths and Heresies of a Poet and Scientist*. By R. Campbell Macfie, M.A., M.B., C.M., LL.D. London: Williams and Norgate. 1932. (Pp. 184. 7s. 6d. net.)

The continued popularity of Dr. R. D. LAWRENCE'S practical book *The Diabetic Life*[9] has necessitated the production of another edition, the seventh. Certain dietary modifications have come more into favour since the last edition, and this has involved small but important changes in the text. Special attention is devoted to discussion of variations in treatment to suit the needs of individual patients, and the very useful diabetic recipes have been carefully revised. We are not surprised to learn that this manual has been translated into French, Spanish, and Dutch, for it is undoubtedly one of the best books of its kind. Medical practitioners can safely commend it to their patients in order to secure a loyal following of the lines of treatment described.

The 1932 volume on *Pediatrics*[10] in the Practical Medicine Series of Year Books is once again a very useful summary of the year's progress, and Drs. I. A. ABT and A. F. ABT have done their selection and editing excellently. Especially valuable are the editors' comments on certain of the subjects annotated. While the range of literature covered appears to be wide there is a disappointing absence of references to work in this country —perhaps because little of what was published in 1932 was thought worthy of notice. G. W. Bray's work on the allergic child is summarized, there is a brief reference to the theory of origin of erythema nodosum put forward by W. R. F. Collis, and a short paragraph on congenital anaemia based upon a paper by Leonard Parsons. These are three out of the nine British workers whose names appear in an index of nearly 500 names. A particularly good section deals with various papers on the toxic action of excessive dosage of vitamin D.

Who Killed the Doctors?[11] by ALAN PETERS, is a thriller in which the reader is led on many false trails before the truth is revealed of how three out of six doctors crowded together within a suburb of Ruddersford, a city of smoke and lowering chimneys, met their death. Each one had received the unsigned typed message: "There are too many doctors in Midwood. You are advised to clear out without delay. Remain at your peril," and mutual suspicion promptly arose.

In *The Curative Value of Light*[12] Dr. EDGAR MAYER has achieved the rare feat of writing a book that will be useful and intelligible to the educated lay reader and yet not fail to be informative and interesting to the general practitioner. He follows a conventional plan, surveying in succession the history of heliotherapy, the biological action of light, its value in deficiency diseases, and its applications and hazards in tuberculosis and other diseases; but though all this is an old story, and a story to which the author adds nothing fresh, it is still worth reading for the pleasant and competent way in which he has told it. The technique of heliotherapy is discussed in general terms only; medical practitioners are referred for details to a more advanced work by the same author, and the general public is warned that this is no self-treatment manual. "It has been my aim to make it clear," says Dr. Mayer, "that the use of light is not a simple matter, to be employed or handled by the patient according to his own ideas. He must never assume for himself that light treatment will be of benefit for his particular illness. The use of light is safe *only when under the direct guidance of a physician*. Light, like drugs, if properly used in right dosage, may prove a vital factor in building up body resistance, but if wrongly administered, or given in too large doses, can produce harmful results." And again, later in the book: "A true danger exists in the *self-treatment* of patients with light before obtaining a diagnosis of their ailment from a physician. Diseases not suited to light treatment have thus been aggravated. Furthermore, dangerous delays of time have changed a curable stage of a disease to the incurable one." It is to the author's credit that every chapter of his book serves to drive home the truth of these statements.

[9] *The Diabetic Life*. By R. D. Lawrence, M.A., M.D., F.R.C.P. Seventh edition. A concise manual for practitioners and patients of control by diet and insulin. London: J. and A. Churchill. 1933. (Pp. vii + 218; 10 figures. 8s. 6d. net.)

[10] *Pediatrics*. Edited by I. A. Abt, M.D., with the collaboration of A. F. Abt, M.D. The Practical Medicine Series of Year Books. Series 1932. Chicago: The Year Book Publishers, Inc. 1932. (Pp. 564; 78 figures.)

[11] *Who Killed the Doctors?* By Alan Peters. London: Heath Cranton, Ltd. 1933. (Pp. 252. 7s. 6d.)

[12] *The Curative Value of Light*. By Edgar Mayer, M.D., F.A.C.P. Sunlight and Sun-lamp in Health and Disease. New York and London: D. Appleton and Co. 1932. (Pp. 175; 13 figures. 6s. net.)

Preparations and Appliances

A BOOK REST FOR RHEUMATIC CHILDREN

Dr. J. VERNON BRAITHWAITE (Leicester) writes: The treatment of the rheumatic infection in childhood resolves itself largely into ensuring complete rest for as long a period as possible. Three months in bed is regarded as the minimum. It is very irksome for children to undergo such prolonged immobilization, and very often the effect of the treatment is vitiated by the patient rebelling and sitting up as soon as the nurse's back is turned. Reading helps considerably in keeping the patients still, but the effort of holding up a book when in the supine position may have a very pernicious effect.

In order to allow the patient to read and at the same time to obviate the muscular strain involved in holding up the book this frame has been devised. It has been in use now for some months in the Children's Department at the Leicester Royal Infirmary. The patient keeps quite still with the arms

in bed. The only movement required is the occasional turning of a page, and if necessary this can be done by a nurse. The apparatus is made of light metal.

With this book rest and a wireless loud speaker it has been found that rheumatic children rest much more efficiently, and not only do they obtain greater benefit from their stay in hospital, but also the mental distress occasioned by the prolonged rest is very largely relieved.

COLONIC LAVAGE APPARATUS

We have received from the Colonator Company (197, Bath Street, Glasgow, C.2) a new apparatus for colonic lavage, which seems to combine ease in operation with ingenuity and simplicity in design. It consists of a rubber bag, about twice the size of the average hot-water bottle, pierced in the middle of one side by a faucet controlled by a tap. Into the head of the faucet rectal nozzles of two different sizes can be screwed. When the rubber bag, or reservoir, has been filled with fluid for irrigation the patient sits upon it, with the rectal *nozzle in situ*, and, controlling the flow by means of the tap, allows the irrigation to proceed. The bag is made so as to lie on its side over an ordinary lavatory seat which, if it has no lid, can be boarded over for the time being. For irrigations in the recumbent position a special piece of tubing is provided, the bag being now slung over the bed and the feed being by gravity, instead of by pressure resulting from the patient's weight acting directly upon the bag. The tubing screws into the neck of the bag, and a special rectal *nozzle* fits into its distal end. A vaginal douche attachment is also supplied for use by this method, the flow being controlled in either instance by a rubber "*shut-off*" mounted on the tube. Amongst the advantages claimed for the apparatus are: the fact that the nozzles are perforated at the sides, that it has an easily controlled tap, and that it is simple and clean to manage. The complete apparatus is put up in a convenient and light portable case.

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THE GRADING OF MILK

Amidst the present conflict of fact and opinion concerning the whole of the milk problem, the report of the Milk Reorganization Commission,[1] which, it will be remembered, was appointed by the Minister of Agriculture and Fisheries in April, 1932, will be received with a welcome not always accorded to Government publications. By systematically listening to evidence from all sides, the Commission has been able, as the result of several months' labour, to produce an analysis of the present situation which, for comprehensive understanding and critical discernment, could hardly be surpassed. Without attempting to summarize the report, we shall endeavour to extract from it some of the more important conclusions. There is evidence to show that the recent trend of milk consumption is downward rather than upward. That this is not due simply to the cost of milk seems clear from the lack of connexion between the retail price level prevailing in different towns and the per capita consumption ; though it is pointed out incidentally that the retail price of milk has not fallen since 1923 to the same extent as that of other foods. One of the chief reasons for the present low level of milk consumption, which is estimated to be between one-third and two-fifths of a pint daily per head of the population, is the lack of confidence of the general public in the quality and safety of the milk supplied. To quote from the report: "The public is repeatedly alarmed by statements that milk is 'unsafe' unless it is treated by heat, by statements that when it is treated by heat its nutritive value is impaired, and by reports of outbreaks of disease said to be due to milk-borne infection." Again: "There seems to be no question that, on the grounds of public health, an increase in the consumption of 'safe' milk is desirable." And again: "If a standard can be established that commands the support of the medical profession, one of the great deterrents to an increase of milk consumption will have been removed." The Commission has realized that "safe" milk and "clean" milk are not synonymous terms, and that it is on account of its potential danger that milk is not consumed freely by the public or recommended unstintingly by the medical profession.

To remedy this situation a number of steps are deemed necessary by the Commissioners. First, they would secure the effective and uniform administration of the Milk and Dairies Order and the Tuberculosis Order, providing for this purpose a whole-time veterinary service. The three grades of raw milk now recognized—namely, Certified, Grade A (Tuberculin-tested), and Grade A—should be replaced by a single grade called "Special," which would be of the standard of the present Grade A (Tuberculin-tested) milk. Secondly, they lay considerable stress on the compulsory routine clinical inspection of all dairy cattle, considering that this would be the most effective immediate measure for dealing with tuberculosis, short of the slaughter of all reacting cows and heifers. Thirdly, they would stimulate production of clean milk, not only by paying a premium to producers of "Special" grade milk, but also by the institution of a roll of "accredited producers," who would agree to take certain sanitary precautions desirable for the production of good quality milk. Membership of this roll would entitle a producer to a guaranteed higher price for all milk sold. In order still further to increase the stimulus, a penalty would be imposed on all non-accredited producers whose milk was found to be below a minimum standard of cleanliness. With regard to pasteurization the Commissioners express themselves with caution. They point out that pasteurization is not, and never can be, a substitute for clean production, and that the same care should therefore be exercised in the production of milk that is to be heat-treated as is required to be observed in the production of milk that is to be consumed in its raw condition. They agree that pasteurization should be carried out efficiently under strict supervision, and that re-pasteurization of milk is undesirable and should be prohibited. The medical profession generally, they remark, seems to take the view that the safety of the milk supply, at least in the large towns, can be ensured only if milk below the tuberculin-tested grade is efficiently pasteurized. While not prepared, mainly on account of the effect that it would have on the small retailer-producer, to advocate compulsory pasteurization, they foresee the time when producers will have considerable difficulty in resisting the demand for compulsory pasteurization unless adequate steps are taken to improve the quality of raw milk supplies generally.

It is peculiarly interesting to compare with the findings of the Milk Reorganization Commission a recent report[1] to the League of Nations, by Professor G. S. Wilson, on the system of grading milk in the United States of America. Though the Federal Government is endeavouring to introduce some uniformity into the system of milk grading, there is at present a strange complexity of practice, each town being free to draw up its own regulations, provided they are not less stringent than those framed by the State. In spite, however, of such diversity of legal measures, the actual tendencies towards the evolution of an established milk policy have been remarkably alike in different parts of the country. Generally speaking, the practice has been to insist on compulsory grading of all milk. In the early stages this necessitated, in order not to be unfair to the poorest class of producer, a number of grades, both of raw and of pasteurized milk. By gradually tightening up the regulations, and at the same time conducting an active educational campaign among producers, distributors, and the milk-drinking public, it

[1] Report of the Reorganization Commission for Milk. Ministry of Agriculture and Fisheries, Economic Series, No. 38. H.M. Stationery Office, 1933.

[1] Wilson, G. S. *Quart. Bull. of Health Organ.*, League of Nations, December, 1932, 1, No 4, 664.

has proved possible within a few years completely to eliminate the lower grades. The ultimate aim, which has already been reached in some cities, is to reduce the grades to two—namely, one grade of raw milk coming from tuberculin-tested herds and produced under rigidly controlled conditions, and one grade of good quality pasteurized milk. Probably the most striking development has been the increase in pasteurization. Though in a number of cities both raw and pasteurized milk are recognized, in hard fact the proportion of raw milk consumed is often not more than 1 or 2 per cent. of the total. The objection, frequently raised in this country, that the introduction of compulsory pasteurization would "kill" the clean milk movement is certainly not borne out by experience in the United States. Taking, for example, cities of over 500,000 inhabitants, in which 98 per cent. of the milk is pasteurized, a recent investigation[1] by L. C. Frank and F. J. Moss of the Federal Government has shown that no less than 96 per cent. comes from tuberculin-tested herds. Probably in no other country has the clean milk movement made greater strides. Active education of the producer, a determined effort to eliminate tuberculosis from cattle by means of building up herds free from this disease, control by the local authority of all producers sending milk into their area by means of a "permit" licensing system, and the imposition of a pre-pasteurization standard to which all milk must conform, have been mainly responsible for the gradual improvement in the quality of the raw milk supply. At the same time, increasing attention has been directed to the control of pasteurization. It is realized that, if pasteurization is to be the hall-mark of safety, it is essential, by insistence on the use of plants free from faults of structural design, on the employment of trained operatives, and on the automatic control of the actual processing of the milk, to ensure that the ultimate product is absolutely free from the risk of conveying infective disease.

The success of this policy may be gauged by the distribution of milk-borne epidemics during the years 1924 to 1929 in the United States. During this period records[2] are available of 258 outbreaks, affecting at least 10,906 persons, of whom 371 died. No less than 94 per cent. of these outbreaks occurred in rural districts and towns of fewer than 25,000 inhabitants, in which the greater part of the milk was consumed raw. Since the proportion of the total population residing in these small communities was only about 50 per cent., it is difficult to explain the relative freedom from milk-borne disease of the larger towns except on the assumption that pasteurization afforded them a more or less complete protection. The aim of the public health authorities in the United States has consistently been to supply the public with a clean milk rendered safe by pasteurization. Such an ideal is one that this country might do well to follow.

[1] Frank, Leslie C., and Moss, Frederic J.: *United States Public Health Service*, 1932.
[2] Preliminary Report of Committee on Milk Production and Control. White House Conference on Child Health and Protection. United States Treasury Department, Washington, 1931.

PSYCHOLOGY AND THE WRONGDOER

Dr. Pailthorpe's report to the Medical Research Council has brought the psychological approach to the study of delinquency into great prominence. Unfortunately, its exponents have tended to allow themselves to be led into an excessive denunciation of the present system. We are apt to forget how much our criminal law and procedure have improved within living memory. It is little more than twenty-five years since the Old Bailey was pulled down and the splendid building of the Central Criminal Court put up in its place. Persons of early middle age can remember an institution which was associated with one of the darkest chapters in the history of this country. Mr. Theobald Mathew, the author of *Forensic Fables*, read to the Johnson Society of London the other day a paper in which he drew a vivid picture of the Old Bailey as it used to be, when gaol fever carried off lord mayors, aldermen, and counsel, and the place had to be fumigated with burnt herbs to enable gentlemen to endure the stench; when hanging and transportation were as common as imprisonment in the second division is nowadays. Mr. Claud Mullins, the stipendiary magistrate at the North London Police Court and the author of *In Quest of Justice*, who has given exhaustive study to the medico-psychological aspects of crime, delivered a much-needed corrective to psychological enthusiasm in a lecture given to the Institute of Medical Psychology on the same evening as Mr. Mathew was describing the Old Bailey in the time of Dr. Johnson. There may be anomalies in our present criminal law and procedure, and the system may be by no means perfect, but it is the best in the world, and is steadily improving. Since the passing of the Probation Act of 1908, the number of persons who undergo imprisonment every year has diminished by half and the number of prisons to a third. This is one of the few countries in which a man is deemed innocent and his record may not be divulged until he is proved guilty, and in which there is no minimum sentence. In Germany, for instance, the penal code lays down that if a man is found guilty of a certain crime he must suffer at least so many months in prison. In England, every court has power to put an offender on probation or even to discharge him for any offence short of murder.

The theory that a man is innocent until he is proved guilty is a very strong reason against adopting Dr. Hamblin Smith's advice that every person accused before magistrates should be examined by a psychologist before his trial. As Mr. Mullins pointed out, this would be an invasion of the ordinary rights of the subject, and in many cases would be unnecessary. On the other hand, he thinks that if psychologists want to study crime they should do so in the police court rather than in the prison, for in the police court the offender is seen against the background of his offence, and the psychologist may study innocent and guilty, serious and grave offenders alike. Moreover, Mr. Mullins's own observation has taught him that psychology is better at diagnosis

than at treatment. What psychologists—and not only medico-legal psychologists—are apt to forget is that psychological cure depends on the will to be cured. Mr. Mullins points out the unpleasant truth that crooks are not as a rule just ordinary people who have gone wrong. Many offenders, he says, are so lazy and feeble that they like prison ; many are so bored by the present conditions of life that they like crime. There is danger, too, in the suggestion that many persons would abandon crime if they could be found congenial work. There is probably some truth in this, but if every unemployed man and every square peg in a round hole knew that he could obtain a congenial job by committing some kind of misdemeanour, the increase of crime would at once become appalling.

Nevertheless, psychology is of definite value in a certain number of cases of a certain type. Given the will to be cured, it has yielded splendid results in cases of attempted suicide, sexual delinquency, unexplained larceny, and damage to property. Mr. Mullins would welcome, he says, the advice of a medical psychologist before passing sentence, but is strongly in favour of the appointment of medical psychologists to prisons rather than to all courts. He goes so far as to say that the prison authorities should be allowed an opinion in all cases before offenders are sentenced, and feels strongly that it is time that the idea of the omniscience of the Bench was abandoned. Among the other reforms he wishes to see introduced are the appointment only of judges and magistrates who have studied the psychological aspects of delinquency ; and a searching inquiry into whether such offences as homosexual behaviour and the procuring of abortion should not be removed from the scope of the criminal law altogether. It is to be hoped that his words will be taken to heart by all persons interested in the psychological approach to the criminal.

PROPHYLAXIS IN DIPHTHERIA

To enthusiastic public health administrators it is a deep disappointment that diphtheria, which to-day must be regarded as almost entirely preventable by methods now available, still kills in England about 3,000 victims a year. These methods are not being utilized by the public, but they will make a greater appeal when the present drawbacks—the multiplicity of injections, and the chance of disturbances resulting from the injections—are altered for the better. More powerful prophylactic is required which will, in fewer than three injections, immunize almost every child, thus enabling us to omit Schick tests before and after immunization. Most immunologists have held that immunizing efficiency increases with increasing combining power, the most convenient measure of which is the Lf content, a view for which Ramon and Nélis[1] have recently supplied further evidence. Prophylactic of high value is now becoming available. In July, 1932, Pope[2] in England prepared toxoid of the extraordinary value of 60 Lf or "immunizing units" as measured by the flocculation test, and it is probable that he has since materially improved on that figure. O'Brien and Parish[3] reported gratifying results in the prompt immunization of children following the use of toxoid containing 36 units per c.cm. In France Ramon describes formol-toxoid of 40 units, though the anatoxine being used there for human immunization apparently contains from 10 to 15 units. The Ministry of Health, in an important memorandum,[4] has recently suggested that formol-toxoid containing 25 to 35 or more units per c.cm. should be employed. Concentrated toxoid may some day aid us. In 1926 Watson and Langstaff concentrated toxoid from fifty to a hundredfold. C. Jensen[5] has recently used concentrated toxoid prepared by absorption with aluminium hydroxide, and containing upwards of 150 units per c.cm. ; if his favourable results are confirmed by further work and it proves possible to obtain rapid immunity by one or even two doses with material that can be produced in quantity and free of high liability to cause reactions, a promising step will have been made. Sparrow and Mayzner have used ultra-filtration for concentration. The English administrator will probably feel that the elimination or reduction of reactions must be in sight before he will persuade the public to jettison the satisfactory beneficent prophylactics hitherto most used in England, and will view with pleasure the attempt of FitzGerald, Fraser, and Moloney to avoid "reactions" by a preliminary search for those people, rare at early ages but increasing during late school life, who may suffer from local induration and transient mild illness during immunization. By the preliminary minute dose of toxoid injected intradermally these peculiar people are detected, and may receive a long series of cautiously increased doses of toxoid, or may, as is the practice in some parts of Canada, be left without further immunization. The United States, Canada, and some parts of Europe have taught us that immunization on a large scale is practicable, and will materially reduce diphtheria when some two-thirds of the school population and at least one-third of the pre-school group are immune.

[1] *Ann. de l'Inst. Pasteur*, 1933, 1, 66.
[2] *Journ. Path. and Bact.*, 1932, xxxv, 573.
[3] *Lancet*, 1931, ii, 176.
[4] Memo 170 Med.
[5] *C. R. Soc. de Biol.*, 1931, cviii, 528.

SOCIAL PAEDIATRICS

This century has seen a veritable competition develop among the growing number of organizations, voluntary and official, concerned with the health and well-being of the child. In some countries the result of this is an overlapping and a consequent waste of energy which must be deplored. It is with the object of remedying this position and providing a forum where current ideas may be exchanged and experiences discussed that a group of French paediatricians and social workers have decided to publish a new periodical, entitled *Revue Médico-Sociale de l'Enfance*. This will appear six times in the year, and the first number, now available, sets out in detail the scope of the intentions of the founders. The medical aspects will be confined to the question of disease as a social scourge, with clear indications for preventive measures. The educative side will receive full recognition as regards the physical and psychical problems of the child in relation to school, and the question of re-education after illness will also be discussed. Finally, social and philanthropic questions will be dealt with on a broad basis. The

contents of the first number illustrate the way in which these objects will be realized. Professor P. Lereboullet deals with the infant welfare work carried out in France, describing especially the way in which working mothers can be helped, and also touching upon the methods of collaboration possible between voluntary organizations and public institutions. Professor R. Debré in a short paper urges the use of the vaccine called "anatoxine" in the prevention of diphtheria, and Dr. J. Huber briefly sets out the routine measures to be adopted in the prevention of congenital syphilis developing among children of known syphilitic parents. An important part of the new journal is that dealing with various special investigations or descriptions of special medico-social work. Three papers touch on various aspects of infant welfare work in different parts of France, while a series of comments on recent or coming events, organizations, and institutions concerned with infant welfare work, etc., and some book reviews complete the volume. Edited jointly by Dr. J. Huber and Mlle M. Dupont, a director of social service in connexion with Paris hospitals, this new periodical should prove a valuable co-ordinating influence. Its appearance at a time when there are already far too many journals, and when the economic situation is not encouraging, shows the determination and courage of its founders, and the names on the title-page are a sufficient indication that it will be well guided.

THE HISTORY OF DERMATOLOGY

Of all special branches of medicine dermatology is the oldest. The amount of space devoted to it in the Egyptian records is astonishing, and many of the case records found in the Hippocratic collection provide almost modern descriptions of skin diseases. But it is only within the last 150 years that those who practise dermatology have gradually separated themselves from the general body of physicians as a special section of the profession. We are indebted to a famous American dermatologist, William Pusey, who has turned during the evening of his days from the practice of his specialty to the study of its development, for the first history of dermatology published in English.[1] He has traced it from the earliest times down to the present day. Many may be surprised to learn that the Greeks and the Egyptians suffered from very much the same dermatoses—for example, scabies, alopecia areata, eczema, and baldness—as we do ourselves. Both the Egyptians and the Greeks were very strong on cosmetic dermatology, and many remedies were prescribed for the removal of moles and wrinkles and the improvement of the complexion. On the other hand, it is interesting to note that in these early times neither leprosy nor syphilis appears to have existed. Among the Greeks and Romans the development of personal hygiene and the cult of the bath must have been highly effective in preventing skin diseases. Hippocrates himself urged cleanliness in order to avoid suppuration. Dr. Pusey has traced in a most interesting way the history of medicine in its dermatological aspect through the Dark and Middle Ages, mentioning with appreciation those of the old physicians who contributed anything of importance to the subject. The exanthemata, for example, were particularly studied by the Arabian school, and small-pox was first adequately described by Rhazes of Bagdad (860-932). Incidentally, it may be noted that the contagiousness of this disease was not recognized by Rhazes, and was not generally accepted for hundreds of years; the first to point it out was Gilbertus Anglicus in the thirteenth century, but it was denied even by Sydenham in the seventeenth century. In modern times we are much concerned with industrial diseases of the skin. The first work on this subject was written at the beginning of the eighteenth century by the Italian Bernardino Ramazzini, a dermatologist who, as Dr. Pusey says, has been shamefully neglected by many writers on medical history. The history of scabies, one of the curses of former times, is comparatively well known. Averroes of Cordova described the acarus in the twelfth century, although he did not realize its aetiological importance, while in 1687 Bonomo both demonstrated it and grasped the rationale of the disease. Nevertheless, not until the second quarter of the nineteenth century was the nature of the disease thoroughly established by Renucci in Paris, and the prevalence of this disorder may be illustrated by the fact that, when Hebra first took over his clinic in Vienna, out of 2,673 patients admitted in one year 2,197 were cases of scabies. Nor were the highest ranks of society spared. In one of his famous letters Horace Walpole declares his intention of avoiding the court of Hanover, since he has been told that all the ladies there are suffering from the itch! Modern dermatology as a special department of medical practice is generally acknowledged to have been founded by Robert Willan, and Dr. Pusey has naturally devoted considerable space to the history of its development and to the numerous physicians all over the civilized world who have contributed thereto. He has provided many excellent portraits. Nor has he forgotten to mention the various societies and periodicals that have arisen for the purpose of furthering the study of the specialty. It will probably be news to many that the first society with this object was the New York Dermatological Society, founded in 1869, while the first British dermatological journal, the *Journal of Cutaneous Diseases*, was started by Sir Erasmus Wilson in 1867. All who are interested in the history of medicine will be delighted with Dr. Pusey's very readable little book.

[1] *The History of Dermatology*. By W. A. Pusey, M.D., LL.D. London: Baillière, Tindall and Cox. 1933. (17s. 6d.)

TYPHUS IN 1931-2

The last issue (November–December, 1932) of the Epidemiological Report of the Health Section of the League of Nations contains a survey of the prevalence of typhus throughout the world during the last two years. In the countries of Eastern Europe, such as Poland, Rumania, Bulgaria, and Yugoslavia, a certain recrudescence took place during the first half of 1932, as compared with the corresponding period of 1931. The increase was most pronounced, however, in the European part of the Soviet Union, where nearly 40,000 cases were notified, or double the number reported during the first half of 1932. On the other hand, no increase occurred in Greece, Latvia, Lithuania, or Czechoslovakia. In Africa the incidence of the disease remained practically the same, except in Egypt, where

a severe epidemic, almost exclusively confined to the Nile Delta, broke out in February, 1932, and reached its height in April. The total number of cases notified from January 1st to the end of the epidemic on December 2nd was 2,198, with a case fatality of 17.2 per cent. In Algeria an outbreak of 236 cases occurred between April and July, 1932. In the Union of South Africa typhus shows an increasing tendency to remain limited to the Cape Province, only a few sporadic cases having been found in the Transvaal in 1932 after the epidemics of 1931. In Asia the most outstanding fact was the remarkable spread of the disease in the Asiatic countries of Soviet Russia, where the number of cases reported during the first six months of 1932 was 19,250, in contrast with 3,692 during the whole of 1931, the western part of Siberia and the Cossack Republic being the greatest sufferers from the disease. In America the disease was most prevalent and fatal in Mexico, especially in the central part of the country. A small outbreak of typhus also occurred in 1932 in the central and southern parts of Chile, where 183 cases were reported between March and November. A special form of endemic typhus, with a high fatality rate (80 per cent.), has been present in São Paulo, Brazil, for the last three years, where sixty-eight cases have been notified between October, 1929, and December, 1931.

WATER POLLUTION

The Water Pollution Research Board, in its report for the year ended June 30th, 1932, issued this week by the Department of Scientific and Industrial Research,[1] states that several factors have operated towards reducing the pollution of rivers. The investigations carried out have not only aided in focusing attention on the subject and in arousing greater recognition of the benefits to be derived generally from reduced pollution of rivers and streams, but they have achieved results of practical value which are now gradually being applied. In the few years prior to the autumn of 1931 economic conditions operated in such manner as to result in increased activity in the preparation and carrying out of schemes of water supply, the provision of new sewage disposal works, and the improvement of existing works. These schemes were partly inaugurated with the object of relieving unemployment. At the same time, the new sewage disposal works and the improvements in other similar works are assisting in keeping down pollution. The difficult financial situation which developed eighteen months ago has led to some curtailment of activity on these schemes. When there is a revival of industry the Board considers that pollution must increase unless further steps are taken to dispose of the various effluents or to avoid their production. The report states that the taking up of lead by drinking water during passage through service pipes to consumers has on many occasions been the cause of considerable trouble in different parts of the world. A comprehensive summary of the literature dealing with this subject has been made at the department's chemical research laboratory, and, as a result, some of the main features of the problem have been selected and experiments have been begun in the laboratory. These include a study of the rate of attack of lead by different waters; an investigation of the influence of methods of cleaning specimens of lead on the subsequent action of waters on the metal; and a third series of experiments will deal with the effects produced by electric power leakage to leaden water pipes. It is a common practice of electricians to "earth" the metal conduits in which cables are enclosed by connecting them to leaden water pipes with the object of minimizing risk of shock from accidental leakage. From the point of view of water supply it is desirable to ascertain what amount of leakage may occur without causing the water to take up such quantities of lead as might be deleterious to public health. Experiments with this object have therefore been begun.

[1] H.M. Stationery Office. (1s. net.)

THE LOCAL EXPENDITURE REPORT

The report of the Committee on Local Expenditure (England and Wales) published in November last[1] has been considered by the Minister of Health, who has issued this week a circular to local authorities (No. 1311) recommending, to a limited extent, action on the lines suggested in that report. The Minister expresses agreement with most of the committee's suggestions for a cut in local authority public health expenditure of approximately £1,000,000, but he is obviously unwilling to accept the more reactionary of the proposals, particularly those which were the subject of the memorandum submitted to him by the British Medical Association soon after the report appeared. The circular confines its attention to housing, public health, public assistance, and general organization and financial administration. The public health service, it states, "is not and cannot be a static service": stagnation would be a very false economy. In maternity and child welfare the Minister recognizes a clear case for development on urgent grounds of public health. The proposal to encourage the slowing down of appropriation of Poor Law infirmaries as general hospitals is definitely rejected. The committee's suggestions that the routine period of isolation for uncomplicated scarlet fever should be shortened, that mild cases should be treated at home, and that the myth of domestic disinfection should be publicly exposed, are accepted by the Minister—as indeed they have been accepted by the more progressive public health authorities for some time. The Minister, impressed by the evidence that the condition of mental defectives is improved by treatment, defends in this respect the policy of the Board of Control. He draws attention to the inequality of salary reductions suffered by local authority officials, and throws out a definite suggestion that the possibility of reduction of numbers by better organization and improved methods of working should be explored, and that salary cuts should not be blindly imposed but should bear relation to the quality of the official and the type of work done. Costing systems are advocated for many local authority activities. The recommendations of the committee on construction and maintenance of baths and washhouses, mental hospitals, mental deficiency institutions, maternity homes, and public assistance institutions are in general accepted.

[1] See *British Medical Journal*, December 3rd, 1932 (p. 1057); December 10th (p. 1065).

SERUM THERAPY IN POLIOMYELITIS

BY

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In a recent article Dr. Simon Flexner[1] asks clinicians whether human immune serum which is able to inactivate, *in vitro*, infective doses of poliomyelitis virus, and which makes some difference in the severe infection induced experimentally in monkeys, may not be used to supplement and fortify the mechanisms pre-existing in man (as opposed to the monkey), tending to abort and confine the virus of this disease. Though twenty-two years have elapsed since A. Netter[2] first used the serum of convalescents as therapy in poliomyelitis, Dr. Flexner's question will receive at present many answers in the affirmative and some in the negative. The therapy was suggested before clinicians were ready for its application. One objection,[3] that it is impossible to obtain adequate supplies of human serum, has been overcome in several centres by preparation of serum before an epidemic occurs and by the provision of adequate after-care to potential donors[1 5 6 7] in the intervals between epidemics. Another objection, that the disease cannot be recognized before paralysis has developed, has faded with increased experience. There is now consensus of opinion that in the epidemics which have occurred recently in temperate climates it has been possible to recognize the disease in the preparalytic stage with a degree of certainty which increases with experience. The diagnosis rests upon the recognition of a syndrome, the failure of a careful clinical examination to discover any other cause for the illness, and the confirmation afforded by changes which usually occur in the cerebro-spinal fluid.

Serum therapy in poliomyelitis has been, and still is, handicapped by the lack of any uniform standard unit of virus or of serum. Ehrlich did much to promote uniformity of results from the use of diphtheria antitoxin by calling attention to the necessity for the use of a suitable toxin, and by distributing a dry standard antitoxin to various laboratories.[8] For the standardization of diphtheria antitoxin the inexpensive guinea-pig has provided a convenient animal. At present the expensive monkey is the only animal susceptible to poliomyelitis. Laboratory strains of virus are liable to variations, quantitative and possibly qualitative in nature.[9] While, as pointed out by Kramer,[10] the neutralization test, properly controlled, can be very useful in giving certain information, there is no standard unit of poliomyelitis virus or of serum to permit delicate, or standardized, or comparative measurement of potency.

VARIATIONS IN POTENCY OF SERUM

Experience with diphtheria antitoxin, made without undue haste, standardized, and concentrated, has not prepared clinicians for the variations in potency, at present inevitable, in the serum obtained from the blood of persons who have had poliomyelitis. In the former, the clinician has become accustomed to a weapon whose potency he knows, and whose dosage has become almost a standard figure. In the latter the product is liable to variations in potency induced by varying procedures in the selection of donors: the possibility of the inclusion of serum from non-immunes; the varying time interval from the donors' initial disease; the variation in potency of individual serums comparable to that found in individual horses immunized against diphtheria toxin; the possibility that the immunity of some of the donors has been induced by a strain differing slightly from that of the epidemic for which the serum has been prepared; and the possibility of depreciation of the product from storage, or exposure to heat and antiseptic.

Some of the variables may be reduced—for example, by preliminary examinations to confirm the donors' statements that the disease from which they suffered has been poliomyelitis, and by shielding the product from exposure to heat even during transit; but in view of uncontrollable variables, more is demanded of the doctor responsible for the treatment of patients than the inoculation of serum in the dosage written on the container. His difficulties are increased in that poliomyelitis does not run its course to any schedule. The duration of the preparalytic stage and the urgency of the condition vary in different epidemics and in individual patients. Because of these variations clinicians seeking to learn to use the only weapon at present available in such a manner as to protect from severe paralysis every one of those patients slow to develop immunity for themselves, have followed and gradually elaborated the procedure suggested by Amoss and Chesney[11] in 1917. This involves observation of the patient's response; aiming at the administration of an initial dose large enough to produce the desired effect—namely, lowering of the temperature and improvement of the general condition; ensuring by observation that if the first injection has been inadequate the necessity for a second or third will be recognized; learning from one patient how to guess approximately the dose required by the next; and using relatively larger doses when a new batch of serum is provided until there has been opportunity to compare its potency with that of the preceding batch. The study has been helped by lessons taught by serum therapy in other diseases. In the directions for the use of diphtheria antitoxin, Park and Williams[12] advise that it is the early and sufficient dose which is important; that the size of the individual must be taken into consideration; and that antitoxin injected intravenously passes out to the tissue fluids about ten times as rapidly as when the injection is given subcutaneously, and four times as rapidly as when given intramuscularly.

Study of the patient's condition and history, together with the clinician's previous experience with the batch of serum he is using, guides in the estimation of the dose required: the duration of the patient's illness; his age and weight; the degree of toxaemia; the rapidity with which the illness has progressed through the stage of general symptoms to special warning signs. A patient who gives a history of illness lasting for a few days succeeded by an interval of apparent recovery, followed by the second phase of his illness, with pain in the neck and back, spine sign, fever and rapid pulse, and toxaemia lasting over twenty-four hours, has little time to lose, especially if tremor and hyperaesthesia have developed. Such symptoms suggest a larger dose than that required by a patient who has developed a spine sign within the past four hours after two days of observation for indefinite illness. The emergency is greater in patients in whom general symptoms are closely followed by the spine sign and tremor, especially if the pulse is rapid and toxaemia marked. Such cases approximate more closely to the fulminating cases of the older textbooks, and demand much larger initial doses than those in whom the progress of the disease is more leisurely, and the patient's resistance greater.

DIFFICULTIES IN GAUGING ITS VALUE

Human immune serum is expensive. In many countries large sums of public money have been spent on its preparation and administration. It is therefore important that any work which claims to give more accurate information of the value of serum than that of opinions gathered over years of observation should be carefully examined in order to ascertain whether the statistics presented have been so accurately compiled as to warrant any conclusion as to the therapy in general or to the methods of treatment adopted in the work reported. It is admitted that the only way to assess the value of serum on a statistical basis would be a study lasting for several years, during epidemics of varying virulence, carried out by clinicians experienced in this disease and enabled by their previous training in muscle examination to ensure that patients selected for the comparison had not progressed past the preparalytic stage. In this study, comparison would be made of the end-results of two groups of cases selected on a strictly alternate basis, in which one group would receive no serum and the patients in the other group would receive serum carefully prepared in the optimum initial dosage for each individual, the total dosage being determined by the response. The patients would be treated under conditions which would

llow observation, and records of the temperature would e kept.

No such comparison has yet been recorded. The xperiences in New York City during 1931 have been uoted[13] as representing a controlled comparison. Examination of Dr. Park's report of the work undertaken in hat epidemic shows that any claim to have made a controlled comparison is invalidated by the fact that the wo groups of cases were not comparable. "There was ccidental inclusion of a somewhat larger number of raver infections in the treated patients."[14] It is readily dmitted by physicians whose work Dr. Park includes n his report that the emergency of the epidemic prevented n accurate comparison or treatment of the patients ccording to individual requirements. The report of)r. Linsly R. Williams, the chairman of the Poliomyelitis Committee of the New York Academy of Medicine,[15] tates: "The untreated group was indeed a much milder roup than the treated group. The results were inconclusive. Many of the members of the committee and he physicians who took part in the study feel that more ccurate and more intensive work should be done along hese lines." Statistics derived from the study to which)r. Williams referred were included in the statistics eported by Dr. Park. Some of the procedures adopted n the New York epidemic of 1931 have been discussed n a recent publication[16]—namely, the administration in ome instances of doses as small as 25 c.cm.; the lack)f detailed examinations of muscle power to ensure that he classification of cases as preparalytic was accurate)r later to assess the end-results; the use of terms, such as "weakness," open to variable interpretations by different observers; the delay which occurred between withdrawal of cerebro-spinal fluid by lumbar puncture and the administration of serum to the cases which applied to the New York City Department of Health. These criticisms have been regarded by Dr. L. R. Williams as fair and just.[17]

Lessons from New York and Elsewhere

Nevertheless, the work done in New York City made two useful contributions to the problem: (1) the demonstration that during that epidemic many cases recovered without treatment, though a spine sign and cerebro-spinal fluid changes were observed (unfortunately no indications have been recorded by the New York workers by means of which such cases could be differentiated with certainty from the remainder who proceeded to paralysis); (2) the demonstration that the use of a variable product against variable conditions in a dosage decided arbitrarily rather than by the requirements or response of individual patients was followed by a percentage of failures—3.8 per cent. mortality, 19.6 per cent. paralysis, and 7.7 per cent. "weakness." In a smaller series Kramer and Aycock and their associates[18] were able to do more accurate work, but the preliminary examinations to ensure the accuracy of the classification "preparalytic" were limited to examinations in the recumbent and sitting positions, and the dosage administered was arbitrarily decided. These workers did not claim that their study represented a controlled experiment, but that it more nearly approached one than any they had previously been able to make, and they concluded that the study should be continued. Five of their treated cases developed severe paralysis. The authors state that there was some indication that these irregular results may be accounted for by the lateness of the treatment; but no temperature charts were published.

In some circles, where there has been no opportunity afforded by recurrent epidemics of judging the effect of serum in doses adapted to individual requirements, the publication of the New York work has been followed by a reaction of opinion more extreme than would appear warranted by the failure of Kramer and Aycock and their associates to avert paralysis in five patients by the administration of an arbitrary dose of serum. Surgeons have not discarded operative intervention for intussusception on the grounds that some of the patients recover unaided, nor are they influenced by the fact that results in any series are not 100 per cent. successful when in some instances the operation is delayed or the reduction incomplete. The value of the treatment is assessed by the results achieved in series of cases where every effort is made to diagnose early, to avoid delay between diagnosis and treatment, and to reduce the intussusception completely.

Levinson, McDougall, and Thalhimer,[19] in reporting the results of the work in Chicago, state that in none of their treated cases was the involvement severe. They stressed the clinical response following a large initial dose of serum. "There were many patients treated who showed such a prompt and favourable response within twenty-four hours, a temperature drop to normal, and complete subsidence of symptoms and signs (except for some increased neck rigidity following spinal serum administration), that it seemed almost specific." Paterson,[20] reporting experiences in Brisbane during the epidemic of 1931–2, described reactions which occurred in some of his patients, beginning about four hours after injection of serum and lasting on an average for twelve hours—characterized by a rise in temperature, extreme discomfort, and headache. "Suddenly the picture would change, the child would feel a lot better, and the headache was gone; food and drink were wanted, and from being very irritable the child showed pride in attempting the various actions asked for." Within twenty-four hours there was a considerable drop in temperature, but it was generally two or three days before the temperature became actually normal. Paterson explained that as Brisbane was unprepared for an epidemic, serum had to be obtained from Melbourne, and therefore the doses given were smaller than those he would use in the future. The report does not state whether any other treatment was undertaken after serum had been given. From the clinical study of Dr. S. F. McDonald,[21] it appears that many of the Brisbane patients were toxic. A "dengue state" is described. In Victoria it was found that patients were frequently constipated, dehydrated, and acidotic, the pain in the neck having prevented adequate ingestion of fluid. The administration of an aperient, carbohydrate, and fluid by means of a bent glass tube or feeding cup helped to eliminate from the picture such features which mask the indications for a second dose. It is too early to ascertain from the Brisbane workers whether the discomfort of which the children complained was more than that experienced by any toxic febrile child after an anaesthetic, or whether the reactions occurred after any particular batch of serum. McDonald stressed the importance of having serum and facilities for examination of the cerebro-spinal fluid available at the bedside. "To do as is not infrequently done—to do a lumbar puncture and bring in fluid five miles for examination and to return with serum—meant delay, so that rapid extensions may occur."

Conclusion

It is unlikely that Dr. Flexner's question will be answered from statistics as long as a uniform standard unit of serum and of virus is lacking. In New Zealand,[22 23] Canada,[7 24] Australia,[6 20] and the United States of America[11 19] experience has led many workers to consider human immune serum a therapy of value in promoting prompt recovery and protecting from severe paralysis. In Wellington, during the epidemic of 1924–5, Dr. W. S. Robertson,[25] to whose example of early and adequate dosage Victorian work is greatly indebted, found that occasions arose when the supply of serum was too small to allow doses he considered adequate for all the cases which came for treatment. Rather than divide the available supply among them so that each would have a subeffective dose, some were treated adequately and others left without serum. In March, 1927, Dr. Robertson's demonstration of the untreated cases still in hospital severely paralysed provided a stimulus for the provision of an adequate supply of serum in Victoria. The ideal of using serum in such a manner as to protect from severe paralysis every one of the patients unable to deal adequately with the disease is more likely to be accomplished if it is realized that the clinicians treating the patients have to assume

the additional responsibility of judging the dosage—responsibility reduced in the use of other serums by laboratory standardization. Observation of each patient, study of the temperature chart, and experience with the disease and the serum available tend to make the estimation of the necessary dosage more accurate. In Victoria, critical analysis of the methods one had adopted in the handling of the seven failures of the series of 133 patients suggested that in these instances remission of watchfulness and delay were responsible for the development of paralysis. When a method of controlling the cause or conferring protection upon the child population or an easier or better therapy is introduced, human immune serum will be no longer necessary as a therapy in poliomyelitis.

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MEDICAL RESEARCH COUNCIL

ANNUAL REPORT FOR 1931–2

In a leading article in the *Journal* of March 11th (p. 421) attention was drawn to some of the general conclusions arrived at in the annual report of the Medical Research Council.[1] In this, and a later issue, it is proposed to make a more detailed comment on the various researches that are being carried out.

VIRUS DISEASES

Further work has been done in measuring, by Dr. W. J. Elford's method of critical filtration, the size of the infective units of viruses. Dr. Wilson Smith and Mr. Barnard, using the latter's optical methods, have succeeded in photographing the infective particles of vaccinia, the size of which, estimated in this way, closely agrees with the measurements determined by filtration. These particles, photographed in the living state and unstained, undoubtedly correspond to the Paschen bodies seen in stained preparations of vaccinia. Drs. Perdrau and Wilson Smith have measured the diameter of the herpes virus particles, which are found to be similar in size to those of infectious ectromelia and vaccinia. The infective units of Borna disease (a central nervous disease of horses and cattle) appear, according to the work of Dr. Elford and Mr. Galloway, to be smaller than the last two mentioned but within the range of visual and photographic demonstration. The particles of the "louping-ill" [illegible] disease of sheep) virus pass through much smaller filters, and, as with the still smaller units of the foot-and-mouth disease virus, are too minute to form a microscopical image by the methods yet available.

Dochez, in New York, has put forward the claim that the virus or viruses of the common cold can be artificially cultivated in a medium containing living embryonic cells of a chicken. Dr. Andrewes, working with Dr. Oakley at St. Bartholomew's Hospital, has been able to infect students with the filtered virus obtained directly from human cases, but not with cultures of the virus made on the Dochez medium. Nor were they able to produce colds in their human volunteers with the culture preparations made by Dochez himself, which the latter had found infective for American volunteers. The common cold still remains the *enfant terrible* of medicine. It has not yet been possible to infect animals with the viruses of measles, mumps, or chicken-pox, and attempts are being made to propagate these viruses in cultures of human tissue cells.

BACTERIOPHAGES

Continued investigations into the nature of bacteriophages support d'Herelle's view that they are separate self-multiplying, particulate organisms. Dr. Andrewes and Dr. Elford, using the latter's method of critical filtration, have found that the diameter of the smallest bacteriophage yet examined is identical with that of the virus of foot-and-mouth disease. The largest bacteriophage is stopped by a filter of such relative coarseness to suggest that its particles are almost within the range of microscopical detection. Dr. Burnet has shown that bacteriophage may be used as a sensitive indicator of certain strains of bacteria in the Salmonella group, and has prepared a number of serums which specifically neutralize the action of different bacteriophages. Bacteriophages can be inactivated by methylene-blue in the presence of oxygen and on exposure to light. This is another point of correspondence between these substances and viruses, as it has been shown that the viruses of vaccinia, herpes, Borna disease, "louping-ill," and fowl plague can be similarly inactivated. It is possible that this action of methylene-blue may have some medical application.

INFECTIVE TUMOURS OF BIRDS

Drs. Gye, Purdy, and Andrewes have continued their observations on malignant tumours of birds. The interesting thing about these tumours is that they can be transmitted by cell-free extracts, the infective agents exhibiting many properties in common with the viruses. By injecting a cell-free filtrate Dr. Gye has produced in the duckling the fowl sarcoma discovered by Fujinami, and by similar filtrates has propagated the tumour from duckling to duckling through twenty "generations." When transmitted to the duck, the Fujinami tumour consists of duck cells. Thus, in this instance, the conception of rigid species limitation of tumours does not hold water. Dr. Andrewes has already shown that the fowl sarcoma of Rous is transmissible to the pheasant, and Dr. Purdy has succeeded in producing it in the duckling. The process here, however, is one of grafting, and the cells of this tumour, successively transferred from duck to duck, still retain the specific characters of fowl cells; this is analogous to the method of propagation of mammalian tumours.

BACTERIA

Drs. Dudley and Gough, investigating the chemistry of the tubercle bacillus, have separated fractions having the properties of an albumin and of a pseudo-globulin, the former having a carbohydrate constituent absent in the latter. As announced in last year's report, Dr. Gough has investigated the carbohydrate "haptene" of the tubercle bacillus; using the same methods, he has now

[1] Report of the Medical Research Council for the Year 1931–2. 1933. H.M. Stationery Office. (2s. net.)

lated a complex carbohydrate from the pollen grains the Timothy grass. This complex has the same ieral properties as the carbohydrate haptenes found in :teria, and the possibility of its exhibiting in allergic iditions a similar function to pollen proteins is being imined. Drs. Wilson, Smith, Fischer, and Dudley are rking at methods for obtaining good yields of the ferent carbohydrate haptenes characterizing the different ological types of pneumococcus. Mr. Bruce White has ıcluded his ten years' study of the bacteria of the monella group. Professor J. W. McLeod, in his studies the electrical potentials developed in bacterial cultures relation to bacterial oxidation and reduction, has own that there is a graded difference in the height of potentials set up, the strictly anaerobic organisms ng the most active and the aerobic organisms the st. Mr. Dobell continues his study of the protozoa ecting the intestinal tract of monkeys and of man. e bacteria always present in artificial cultures of a otozoon are being investigated. It has been found that tain bacteria are favourable and others inimical to the owth of *Entamoeba histolytica.*

Vitamins

Now that the anti-rickets vitamin has been isolated as a re crystalline sterol (calciferol) the fundamental problems of its chemical structure and of the nature of the change brought about by the action of ultra-violet light have to be tackled. A necessary preliminary to this is a knowledge of the structure of ergosterol itself and of the general plan of the structure common to the sterols as a group. The formula for the sterols suggested by Windaus and Wieland has been shown to be inadequate by Mr. J. D. Bernal, who has applied the modern methods of *x*-ray crystallography to calciferol and other sterols. There is as yet no chemical evidence for identifying the artificially produced calciferol with the natural vitamin D, an attempt to isolate which is being made by Dr. Callow and Mr. Webster. The poisoning that follows large doses of irradiated ergosterol (deposits of calcium salts in the walls of the heart, etc.) have also been obtained with excessive doses of calciferol. Dr. Harris and Mr. S. N. Ray have found that the adrenal gland is richer in vitamin C than any natural source hitherto investigated, and that it is three times as active as orange juice or lemon juice. It has been shown by Dr. Moore that conversion of carotene to vitamin A occurs in cows and other animals. A viscous, pale yellow oil, obtained by distillation at very low pressures of potent extracts from fish-liver oils, is the nearest approach to pure vitamin A yet described. Butters from Australia and New Zealand are as well supplied with vitamins A and D as the best summer butters produced at home.

ACUTE APPENDICITIS

DEBATE ON IMMEDIATE OPERATION

: a recent debate arranged by the Fellowship of Medicine d Post-Graduate Medical Association on the need for eration in appendicitis, with Lord Moynihan in the air, the motion that "in every case of acute appendicitis immediate operation is indicated" was proposed r Mr. R. M. Vick.

Mr. Vick said that the revived expectant treatment was ghost stalking the land, which he hoped would be laid. peration should be performed at once in all cases in hich the diagnosis had been made with such certainty was humanly possible, provided that the condition as not subsiding by the time the surgeon arrived. undreds of people owed their lives to-day to the recogtion of the need for operation. Yet this devil of doubt ıd arisen again; it might be ascribed partly to the fact ıat everybody was afraid of operations, partly to the ıcreasing number of operations that were nowadays erformed by surgeons of limited experience, and partly the desire for change, which was eternal. He confintly anticipated a rising mortality in appendicitis as a sult of the pernicious revival of expectant treatment. e supposed that the opposers of the motion would proıce statistics, but he preferred to describe his own perience in the words: "Behold, I have passed through ıe valley of the shadow and I have seen terrible things." he operation within forty-eight hours of onset was easy, ıvariably successful, and transferred the patient from state of danger to a state of safety. He would, however, perate also on every inflamed appendix, because it was ot possible for the surgeon to know what was happening ıside the organ. The need for operation was a hundredld more in cases of children.

Mr. Zachary Cope opposed the motion, fixing on the ords "immediately" and "in every case." He said ıat he operated in cases in which the appendix had been erforated and in cases in which there was doubt whether r not it had perforated. He also operated when an bscess was well formed, and on most children. He did ot, however, intervene when peritonitis was advanced; hen the patient had a well-formed lump and seemed to e doing well; or when there was a chance that preminary measures such as saline transfusion would greatly ecrease the surgical risk in a few hours' time. Expectant treatment had not been properly tried, because most of the expectant measures now used were of recent introduction. Mr. Cope asked whether the rule of thumb was to displace experience. What was the use of surgical skill unless every case was to be judged on its merits and placed under the care of a skilled surgeon as soon as the condition was recognized?

Mr. W. H. Ogilvie, supporting the motion, said that he had come to the debate with an open mind, prepared to be convinced by the other side, and in fact he found himself much impressed by Mr. Cope's words. He admitted that operation was undesirable in bad surroundings or if the case was subsiding, but he had only felt justified in withholding operation in 1 or 2 per cent. of all the many cases he had seen. Human judgement was very fallible. Three patients showing identical history and physical signs might reveal at operation: first, an apparently normal appendix with only a little inflammation in the lumen; secondly, an appendix distended with pus and about to burst; thirdly, a gangrenous but not distended appendix. The apparent increase in mortality revealed by the Registrar-General's figures did not take into account the great increase in the number of operations and the improvement in diagnosis. Some well-established figures from Denmark showed a steady increase in mortality with every day that the surgeon delayed his intervention. Mr. Ogilvie himself lacked the courage to carry out expectant treatment, because in an early stage the risks were certain and justifiable, but as time passed they became more doubtful. It was all very well for brilliant surgeons and prognosticians to declare their right to use their judgement, but they thereby led humbler men into paths of danger. For the journeyman surgeon operation was the right and safe course in appendicitis.

Mr. J. McNeill Love said that everyone agreed that a case seen early should be submitted to surgical treatment, and a subsiding case should be left alone. The difficult case was the one seen about forty-eight hours after the onset, and presenting some fever and increase of pulse rate, a little localized rigidity, and tenderness felt per rectum. In this case operation was difficult; it was usually necessary to insert a drainage tube; and a localized peritonitis might be converted into a generalized one. Moreover, the patient's resistance about the fifth day had reached a negative phase, and complications were encouraged by untimely intervention. The mortality for this type of case was about 5 per cent. The average mortality for expectant treatment was 3 per cent. Mr.

McNeill Love emphasized the essential four F's of expectant treatment: Fowler's position, fomentations, the four-hour chart (signifying constant skilled supervision), and fluids only—meaning nothing else but water. In about 65 per cent. of cases the inflammation would subside, and a clean operation without complications could be performed later. In about 25 per cent. of cases an abscess would form, but this generally resolved, or could be opened under gas and oxygen with a small incision if it increased or was slow to disappear. In about 10 per cent. an emergency operation might be necessary, but the mortality even of this procedure was only about 6 per cent. The patient must be under expert observation the whole time, and children should not generally be left, as they had nearly always been given purgatives. The position of the appendix had an important bearing on prognosis, as inflammation was likely to spread from an appendix pointing inwards or upwards.

The CHAIRMAN then declared the debate open, and a number of eminent surgeons and other members of the Fellowship expressed their views. One surgeon emphasized the importance of the anatomical disposition of the appendix. The retrocaecal type, which might or might not develop an abscess, could be operated on at any time, but operation was urgent for the pelvic type and for those in which the infection spread towards the left iliac fossa. Thrombosis or obstruction of the ileum was apt to block a retro-mesenteric appendix, but the prognosis was good if operation was performed early. When the appendix ran up behind the peritoneum on the posterior wall operation was also urgent, as suppuration of this area was almost impossible to treat. He advised his hearers to distrust philosophy, to distrust courage, and to operate on the acute appendix. Another speaker said that he had realized the necessity for preparation of the patient before operation, and had found that the preparatory treatment often rendered operation unnecessary. In the last two and a half years he had had fifty-nine cases watched, with no deaths, and twenty-six cases operated on immediately, with two deaths. He had no objection to drainage, preferring a weak spot in the abdomen to a coffin, however well padded. That sepsis required drainage was one of the eternal verities of surgery. Another, supporting the motion, retorted that there were only two groups of appendicitis: the early cases in which the surgeon operated, and the late cases in which the undertaker was called in. He declared that conservatism in operation was in direct proportion to the amount of arteriosclerosis in the surgeon's arteries, and that there was only one treatment for appendicitis—immediate operation. One of the speakers pointed out the difficulty of the young man whose judgement had not yet reached the high standard of the experienced surgeon, and who would find it extremely difficult to select cases. For him, he thought, it was better to advise immediate operation.

Mr. COPE, in reply, pointed out that the word "early" did not appear in the motion. Unless voters thought that every case without exception was to be operated on immediately, however ill the patient, however bad the conditions, however inexperienced the surgeon, they must vote against it. All the speakers in favour of the motion had with one accord begun to make excuses and to beg the terms at issue.

Mr. VICK, in reply, accused Mr. Cope of playing with words, and said that nobody would dream of operating on a patient dying of acute peritonitis. The people who had spoken against operation did not realize the dangers that arose from the spread of infection.

Lord MOYNIHAN, summing up, said that the really essential point had been entirely omitted throughout the debate: that was the administration of aperients. He declared that patients never died of appendicitis, but only of its treatment. Acute appendicitis was obstructive, and no case would become really serious if aperients were never given. Nothing whatever must be given by the mouth, especially water. A single drop of water caused violent activity at the ileo-caecal valve. If the conditions were good there was no doubt whatever that early operation was the correct treatment. If, however, they were bad, delay would not be dangerous in any case that had had no purge, but if a purge had been given the surgeon must operate whatever the conditions and whatever the prognosis. Children were an exception to the rule: no child should be left alone with an inflamed appendix for half an hour.

When the motion was put to the vote it was passed by 54 to 49.

Scotland

Diet in Relation to Health

An address dealing with the nature of an adequate diet for the community was delivered to members of the Edinburgh Women Citizens' Association on March 15th by Dr. John B. Orr, director of the Rowett Research Institute, Aberdeen. Dr. Chalmers Watson, who presided, said that there was need for the medical profession to concern itself more with life than with disease, for good nurture would obviate, to a considerable extent, the necessity for medical treatment. In 1900 the amount spent in Edinburgh upon public health services had been twopence per £ of the local taxes; in 1930 it had risen to tenpence, and the services were still materially on the increase. The proportion of industrially unfit, however, showed no signs of decreasing, and sound nutrition was beyond question the most important factor lacking. Dr. Orr referred to the great changes that had taken place in the food supply of his country in the past century. Until the end of the eighteenth century the food of Scotland had been provided by Scottish agriculture; the average harvest had just sufficed for the people, so that every ten or fifteen years there had been an actual shortage, and people had died of starvation. To-day an acre of land in Scotland grew five or six times more than it had done a hundred years ago, and a good cow gave over 1,000 gallons of milk, as compared with 300 or 400 gallons or less. Steamships brought food from every part of the world, and the nature of the food had changed remarkably. Instead of barley and oats, which were ground and made into bread, we now received from abroad white flour, polished rice, sugar, dried milk, and tinned foodstuffs. Natural foods had been changed into artificial foodstuffs, from which the substances needed for perfect health had been purified away. At the beginning of the present century scientists had been concerned merely with the supply of sufficient calories and protein. Experiments had since proved that it was unsafe to be dogmatic on these points, and ideas regarding the relative importance of foodstuffs had been revolutionized. Rickets, which some years ago had been very common, would, he believed, be almost unknown in twenty years. Dr. Orr referred to some investigations among carnivorous and vegetarian African tribes, which tended to show that the diseases from which they suffered corresponded to defects in the diets. He referred also to recent experiments among groups of children in Scottish schools concerning the effect of milk. One group had received fresh milk, another skim milk, and a third biscuits rich in sugar and fat, in addition to their ordinary diet. The children were weighed before the experiment and again after seven months of the dietaries. The addition of milk had produced a rate of growth 20 per cent. greater than that of control children getting no extra milk, while the growth of the children getting the biscuits was no greater than that of children having no extra diet at all. A good diet was a natural one with plenty of milk, fresh eggs, fresh meat, fresh vegetables, fruit, and wheat ground wholemeal. Such a diet might be more expensive, but he considered that, seeing the people of his country spent one million pounds every week on sweets and chocolates, they could well afford to spend part of this on a healthy dietary.

Health and Leisure

In the closing address of the winter session of the Anderson College of Medicine, Glasgow, on March 17th, Professor E. P. Cathcart said that the main advance of medicine in the future would be concerned with preventive medicine and public health. He believed that divergences from what might be regarded as the normal state would be more readily detected, that the expectation of life would be definitely increased, and that epidemics could be checked before they became widespread. What medicine wanted more than anything else at the present time was a true idea of the state of health. In the first place much more information was needed in regard to the limits between which lay what might be called perfect health. It was a good thing to applaud the manifestation of philanthropy by the State and communal authorities at the cost of the taxpayer, but there was another side which was too seldom regarded, for philanthropy should be selective and not promiscuous. In the past great advances in public health had been achieved by attacks on impure water supply, faulty drainage, faulty housing, and so forth, but progress in the future would be slower because the object to be attacked was man. He must be educated in the proper use of his life. Rationalization of industry was necessarily followed by the employment of fewer workers, and thus the average workman would have more and more compulsory leisure. The right use of this leisure would in time become as urgent as the right use of machinery. Hard work never killed a sound, healthy man, but too much leisure might ruin him physically and spiritually, and the majority of people had not yet grasped the dangers of leisure. It might prove an insidious dry rot in the community. Work centres, allotments, and physical training centres should become as much the interest of public health authorities as public wash-houses, baths, and infant welfare centres were to-day.

Reopening of Chalmers Hospital, Edinburgh

The Chalmers Hospital, Edinburgh, after closure for over a year for alterations and additions, was reopened on March 15th by Lord Provost W. J. Thomson. The hospital originally opened in 1864, following a bequest by George Chalmers, plumber in Edinburgh, of the residue of his estate to the Faculty of Advocates for the purpose of founding such an institution. It is endowed, and does not, therefore, compete with the voluntary hospitals in the matter of appeals to the general public for support. Since 1871 it has included two wards for paying patients at a moderate charge. The hospital has received many gifts from time to time, the present alterations being made possible by a gift of £10,000 from the trustees of the late Edward Clark. These consist of a new operating theatre, an *x*-ray department, and improved accommodation for the staff. Sir William Chree, Dean of the Faculty of Advocates, presided at the opening ceremony, and the Lord Provost, in declaring the new premises open, said that the Chalmers Hospital had performed a great service to the community for nearly seventy years. The paying wards in particular had conferred a great benefit on a class of the community who were reluctant to avail themselves of public wards, and who were anxious to pay according to their means for the services they sought. Like all hospitals this one was constantly developing, and, with the advance of medical and surgical methods, it had fallen behind the requirements of a properly equipped modern hospital. When, therefore, the directors had obtained the necessary funds, they decided to make the hospital thoroughly up to date, and it was satisfactory to know that the Chalmers Hospital was now one of the best equipped in the country.

Recommendation Form for Out-patients at Aberdeen

The Board of Directors of Aberdeen Royal Infirmary has made an inquiry into the use which is made of the infirmary by those who cannot properly be regarded as suitable recipients of the charitable services which it provides. The great increase in recent years in the numbers of in-patients and out-patients has produced serious pressure on the time and energy of the medical staff, and it is believed that many patients whose financial circumstances would enable them to pay for their treatment elsewhere, or who could be suitably treated in private practice, are taking advantage of the services of the institution. In order to ensure that the services of the hospital are restricted to persons whose circumstances render them genuine recipients of charitable services, or, in the case of out-patients, to those for whom statutory provision is not otherwise made, the directors have decided that in future all patients, other than cases of accident or emergency, applying to the infirmary, must present a form duly completed by their medical attendant recommending the patient to members of the medical and surgical staff. It is believed that this will help to reduce the waiting list, and will accelerate the admission and treatment of those patients for whom the benefits of the institution are primarily intended.

Glasgow Hospital for Sick Children

At the fiftieth annual meeting of subscribers to the Royal Hospital for Sick Children in Glasgow the Earl of Home, who presided, said that the hospital had first been projected in 1861 ; it was completed in 1882 at a cost of £13,000. It had contained fifty-eight cots, later extended to seventy-four, and the annual cost of maintenance had been £2,000. To-day there were 350 cots, and last year the cost of running the hospital had been £43,000. In the first year of the hospital's activity 300 children had been treated in the wards ; last year 5,819 were treated in the hospital and 936 at the country branch. In 1907 the directors issued an appeal for £100,000 for the construction of a new building ; this sum was raised within a year, and the present building was opened by the King and Queen in 1914. The last financial year had closed with a balance on the right side, but this had only been made possible by the use of legacies and donations, which, under ordinary circumstances, would have been transferred to capital. Sir Robert Rait, Principal of Glasgow University, said that the hospital should not stand still on this, the occasion of its jubilee anniversary, for the building was already too small, and a waiting list was particularly objectionable in the case of children The Dean of Guild said that the directors were especially anxious to provide a completely equipped orthopaedic department as a centre for orthopaedic work in Glasgow and the surrounding district. They also desired to provide a research endowment fund for sustained scientific inquiry into the causes of, and methods of combating, disease in infancy and childhood.

Central Midwives Board

At the last meeting of the Central Midwives Board for Scotland Dr. James Haig Ferguson, the chairman, reported that Miss Alice Helen Turnbull had found it imperative (after seventeen years' continuous service) to resign. Her intimate knowledge of nursing in all its branches and her wide administrative experience had made her well qualified to sit on the Board, of which she had been an invaluable member since its inception, and the wisdom of the Privy Council in selecting her originally had been abundantly justified. The Board resolved to convey to Miss Turnbull expressions of its esteem and of its loss in the termination of her long association.

Attention was directed to a recent public statement to the effect that certain recognized teaching institutions were not carrying out their obligations, especially in regard to adequate ante-natal instruction to pupil midwives. On investigation no foundation could be discovered for such a criticism, and the Board was satisfied that the several institutions were fulfilling their obligations in this matter. At a special meeting for the hearing of penal cases a certified midwife appeared in answer to charges of negligence, breach of the rules, and failure to send for medical assistance in a case of puerperal septicaemia. The charges were found to be proved, and the secretary was instructed to remove her name from the roll, to cancel her certificate, and to prohibit her from attending women in childbirth in any other capacity.

Ireland

Irish Graduates' Dinner

The London dinner of the Irish Medical Schools' and Graduates' Association was held on March 17th at the Dorchester Hotel, Park Lane, and was a great success. The chief guests were Sir Dunbar Plunket Barton and Dr. W. J. O'Donovan ; the president, Dr. T. G. Moorhead, being in the chair. After the toasts of " The King " and " The Prince of Wales, and other members of the Royal Family" had been drunk, the chairman made the presentation, *in absentia,* of the Arnott Memorial Medal to Flight-Lieutenant James MacConnell Kilpatrick. He said that the medal, instituted forty years ago, was awarded this year for conspicuous devotion and brave services during an epidemic of cerebro-spinal fever in a military depot in England. Mrs. Claude Beddington then entertained the guests with some stories of suitably Irish-medical flavour. In proposing the toast of " The Guests," Dr. J. E. A. Lynham paid a great tribute to the versatility of Sir Dunbar Plunket Barton. He had been president of the Oxford Union in 1877, and secretary to the Lord Lieutenant of Ireland in the year of the speaker's birth. He was a member of the Irish and English Bar, and had been a lecturer on law, a judge, a governor of the City Hospital, Dublin, and a recipient of many honours in arts, science, history, law, and literature, besides being a keen sportsman, a yachtsman, and the president of the Golfing Union. Dr. O'Donovan had taken the front rank in his branch of the profession. He was a Member of Parliament, and took a special interest in public health administration. The speaker hoped that with his opportunities in Parliament he would put his ardour and oratory to the cause of better housing conditions. Replying on behalf of the guests, Sir Dunbar Plunket Barton said that, as perhaps the only lawyer present, he felt rather like the attorney among the bishops, the goat among the sheep, the thorn among the roses, and the goose among the swans. There were plenty of points of contact between doctors and lawyers, and one of the things that united them that night was a desire to prove themselves worthy of Ireland. He was now in his eightieth year, and attributed this to the skill of the medical schools whose guest he was. He was tempted to tell the story of his first case, but realized that the only person who could do this without bringing a blush to the cheek was Mrs. Beddington!

In a popular speech, in the course of which he mentioned the Bog of Allan, Harley Street, and amongst other matters Lord Beaverbrook, Corigan, and Jacob, Dr. O'Donovan proposed the health of the president and association. He said that the Irish schools produced true sons of Hippocrates. In reply to the toast, Dr. Moorhead expressed thanks for the honour which had been accorded to him in being elected president. The last physician resident in Ireland to hold that position was Sir C. Cameron in 1915. Since then there had been four well-known surgeons—Sir A. Chance, Sir William Taylor, Sir William Wheeler, and Professor Fullerton. This was the fifteenth centenary of St. Patrick's coming to Ireland. Describing the profession at the time of St. Patrick, Dr. Moorhead said that every physician attached to a chieftain had 500 acres of land, a free house, a good salary, and was allowed to charge private fees. He was more protected from quacks than the doctor of to-day, for if a quack was called in to see a patient he had to say he was a quack, and if he did any harm he had to pay a heavy penalty. As regards medical cases, if one man injured another he had to pay the doctor in charge as well as the damages ; but now, when a doctor was called in for a motor accident, he was often not paid at all. In St. Patrick's days, and before, Ireland was famous for its women doctors ; it had always been famous for its women. There was to be a great event in Dublin this year—the British Medical Association Meeting. A thousand members of the Association were resident in Ireland, and many others were scattered throughout the world. He hoped that everyone would come. There had been some anxiety as to whether political conditions would interfere with the arrangements, but he wished to allay any fears on that score, and to assure everyone that a great welcome awaited them. He hoped it might be a occasion for the beginning of a better feeling between some sections of the community in each country.

Public Health in Northern Ireland

In a recent interesting review of the activities of the Public Health Committee of Northern Ireland, the chairman, Councillor F. Logan, said that the public health service was divided into three sections, all under the supervision of the medical officer of health, Dr. Patterson Rea. As regards the sanitary inspector's department, during 1932, more than 4,800 house inspections were carried out, 453 notices served under the Public Health Acts, 69 houses disinfected, and 130 samples of food and drugs, including 61 of milk, were taken for analysis. The average quantity of milk-fat found in the 61 samples was 4 per cent., and as the minimum legal standard was 3 per cent. the result was very creditable. Notifications of infectious diseases numbered 123, but only 16 were of scarlet fever and diphtheria ; the remainder were of chicken-pox and measles. A detailed survey of all the temporary wooden dwellings in the borough was carried out. It was found that there were 508 such buildings, of which about 40 (8 per cent.) were unfit for habitation ; steps were being taken to deal with these. It had been asserted at a public meeting in Bangor recently that the water supply of that town was nothing but ditch-water. Samples were taken from time to time, and it was reassuring to know from the public analyst's reports that the water supply was pure. Since the public abattoir was opened in 1928, 36,691 animals had passed through it. Fifty-three carcasses and 4,171 organs and portions of carcasses were condemned ; of the latter, 2,915 were livers, mostly of sheep and lambs. Lamb's liver was a delicacy consumed largely by invalids, and it was gratifying to know that their system of inspection ensured a supply of the highest quality. One of the most important and beneficial undertakings of the public health service was the child welfare scheme. There were 351 mothers and 503 babies on the register at the end of 1932. Over 6,000 visits were paid to mothers in their homes, and there were 2,000 attendances by mothers and 3,300 by babies at the clinic. Over 7,300 pints of milk were given in necessitous cases, and baby foods were supplied at cheap rates.

More Graded Milk for Belfast

Speaking at the recent opening of the extension to the Lansdowne Dairy, the Minister for Agriculture in Northern Ireland stated that "T.T." milk was the best that poor people could buy because it did not get sour and lasted doubly as long as ordinary milk. At first it had been difficult to get people to buy "T.T." milk, but in the end they had found it was more economical. It was a great thing to have dairies for the supply of this graded milk established in Ulster, and the demand for the milk was increasing. Mr. Minford stated that more than £1,000 had been spent in erecting this new plant so that people might have a milk supply second to none in the British Empire. In 1927 only 240 gallons of "T.T." milk were produced in Ulster; since the passing of the Act that quantity had been increased to 7,000 gallons, produced on sixty licensed farms in the province. Dr. Andrew Trimble, chief tuberculosis officer for Belfast, said he was greatly pleased to see the increasing number of "T.T." milk dairies in the province. The new installation meant one less danger in contracting tuberculosis. In Belfast 50 per cent. of the pulmonary cases in children were due to tubercle-infected milk. Although the danger of infection from this source had been considerably reduced by the introduction of these new dairies, he hoped that the time was not far distant when it would be removed altogether.

Central Midwives Board

At the recent statutory meeting of the Central Midwives Board of the Irish Free State Sir Edward Coey Bigger was unanimously re-elected chairman, and Sir William Smyly vice-chairman. The former referred to the work of the Board during the past year with regard to the holding of examinations for qualified, but uncertified, midwives in the Free State. He stated that, as a result of this special provision, these women had been given an opportunity to become enrolled, and the response was very satisfactory. The secretary reported that as the provision referred to expired on December 31st, 1932, the final examination was held on December 22nd. The Board held seven special examinations during the year—two in Cork and five in Dublin—sixty-six candidates were admitted to the roll of midwives. Two midwives were reported to the Board by the local supervising authorities for breaches of the rules, and, having considered the reports, it was agreed that their cases should be dealt with by the Penal Cases Committee. The examinations in 1934 would take place on the following dates: March 20th and 21st, June 12th and 13th, October 23rd and 24th. The following members of the Board were present: Sir Edward Coey Bigger, Sir William Smyly, Miss G. O'Carroll, Dr. T. Hennessy, Mr. Stafford, Mrs. M. Price, and Dr. P. T. McArdle.

Royal National Hospital for Consumption

At the annual general meeting of the Royal National Hospital for Consumption for Ireland, Newcastle, County Wicklow, the report of the medical officer, Dr. Denys Hanan, stated that 325 cases were treated in the hospital during 1932, and 103 patients were resident at the close of the year. Referring to the *x*-ray installation, Dr. Hanan said that the very earliest involvement of the lungs, before clinical signs developed, could be detected by *x* rays. For this reason he hoped that every county tuberculosis medical officer would shortly have *x*-ray facilities for the purpose of diagnosis of early cases. The chairman, Major E. H. C. Wellesley, in moving the adoption of the report, said that towards the end of the year Sir William Wheeler had resigned his appointment as consulting surgeon to the hospital, owing to his departure for London. The Board very much regretted the loss of his services, and in his place had appointed Mr. R. F. J. Henry. Moving a vote of thanks to the staff of the hospital, Dr. T. G. Moorhead, President of the Royal College of Physicians of Ireland, congratulated the medical and nursing staffs on their work, and referred to the forward policy which was being pursued. Since the introduction of the *x*-ray apparatus it had been possible to carry out pneumothorax treatment on a fairly extensive scale. The trouble in the past regarding the sanatorium treatment of tuberculosis consisted in the fact that these institutions were able to restore good health, but when the patients returned home they invariably relapsed. Pneumothorax treatment afforded a prospect of increasing the number of permanent cures. There was great need for accommodation for adult patients suffering from bone tuberculosis, and when funds became available the Board hoped to provide wards for that purpose. In conclusion, Dr. Moorhead appealed for a Clean Milk Bill. There was little doubt, he said, that the seeds of tuberculosis were laid in early life often through infection by dirty milk and by insanitary surroundings. A Clean Milk Bill was overdue, and should be pressed forward by a Government which had stated that it had the welfare of the people at heart.

England and Wales

Thefts from Doctors' Cars

In the *Journal* of March 4th (p. 380) there appeared an annotation with this heading. At the request of the Executive Committee of the General Medical Council we print below a communication on the same subject received by the Council from New Scotland Yard.

I am directed by the Commissioner of Police of the Metropolis to inform you that his attention has been called to the number of thefts and losses of cases containing dangerous drugs, serums, and bacteria from motor cars left unattended by doctors in the Metropolitan area, and particularly in the neighbourhood of Harley Street.

The general question of thefts from standing motor cars has already been referred to by the B.B.C. and in the Press at the Commissioner's request, and the attention of the public has been drawn to the risk of leaving removable articles unprotected in this way—frequently without even locking the car. But in the case of dangerous drugs, bacteria, etc., the matter is not—as in ordinary cases—merely one of making crime easy and putting avoidable work on to the police, and the special importance of taking all possible precautions to prevent articles of this kind from getting into the hands of ignorant persons is sufficiently obvious.

I am therefore to ask whether your Council would be good enough to consider the possibility of drawing the attention of the profession to this matter. The Commissioner feels that if they can do so they will not only be assisting the police but will also be rendering a public service.

British Red Cross Rheumatism Clinic

The third annual report of the British Red Cross Society Clinic for Rheumatism, just published, shows that the activities of the clinic were well maintained during 1932. The general patients' department records 78,589 attendances for treatment, with 2,790 new cases, while in the private patients' department there have been 8,040 attendances with 549 new cases. Out of a total of 3,154 discharged cases, 36 per cent. of the men and 43 per cent. of the women were able to come for treatment without interrupting their work. During the year seventy-six approved societies have sent 1,136 new patients to the clinic under Additional Benefit 16, and of these, sixteen

societies have sent patients for the first time. There is no provision for in-patient treatment at the clinic, but by arrangement with the L.C.C. ten beds at St. Charles's Hospital are set aside for cases requiring such treatment. The accounts show a total deficit of £3,400, a figure slightly below that for 1931. The report states that the importance of referring early cases of rheumatism for treatment is becoming more and more realized; but there are still a considerable number of advanced cases sent to the clinic. Evening clinics, held for the purpose of attracting early sufferers from rheumatism without causing them financial loss or absence from work, have proved distinctly popular. A survey of the type of case attending for consultation and treatment during the year shows the following percentages in each group of the rheumatic diseases: Group A (sequels of rheumatic fever) 2.1 per cent.; Group B (non-articular rheumatism) 37 per cent.; Group C (articular rheumatism) 53.8 per cent. Further subdivision of the latter group shows that rheumatoid arthritis accounts for 7.1 per cent., arthritis due to a known specific organism for 1.1 per cent., osteo-arthritis for 17.2 per cent., gout for 3 per cent., and "chronic unclassified" for 25.4 per cent. Group D, which includes patients suffering from non-rheumatic conditions, represents 7.1 per cent. The relative percentages of the main groups show little variation from the 1931 figures. A new classification is being adopted during the coming year, which will attempt to regard the various rheumatic diseases from an aetiological point of view and to aim at eventually abolishing the anatomical basis of classification. As regards the results of treatment, of 2,133 cases the figures show 19 per cent. cured, 55 per cent. improved, 25 per cent. unchanged, and 1 per cent. worse. Many pathological examinations have been made during the year, and it is of interest to note here that in true rheumatoid arthritis a high peak value of blood sugar occurs after the administration of glucose, and thus affords a useful means of diagnosis. Another fact of interest is that in all cases so far examined of spondylitis occurring in the young patient, evidence of infection of the sacro-iliac joints has been present. It has been found that this infection begins several years before back symptoms are complained of. The number of patients sent to the gynaecologist was double that of the previous year, the commonest condition found being a chronic cervicitis; many of these patients were treated with diathermy. Research into the problems of rheumatism which are now being carried out include studies on the effect of autogenous antigen immunization, skin temperature and capillary microscopy in rheumatoid arthritis, specific and non-specific vaccine therapy, splenic extract in the treatment of gout, comparative radiological findings in non-specific infective arthritis and rheumatoid arthritis, arthritis at the menopause, and pancreatic diathermy in the treatment of rheumatoid arthritis. Several demonstrations have been held during the year, and regular courses of post-graduate lectures have been instituted under the auspices of the Fellowship of Medicine.

Yarrow Home and Hospital for Children

The Alfred Yarrow Home and Hospital for Children, Broadstairs, Kent, is approaching its fortieth year of useful activity on behalf of children suffering or recovering from illness, who may be expected to derive benefit from a stay at the seaside under medical and nursing care. Sir Alfred Yarrow founded the home in 1895, and furnished it with a generous endowment. His purpose was primarily to assist the members of his own professional institution, the Institution of Civil Engineers, but also other professional men, clergymen, officers in the Services, and members of scientific societies, who were unable on account of limited means to send their ailing children for needful change of air. He took a keen interest in the home up to the time of his death, rather more than a year ago, and its work continues as an appropriate memorial of this fine old shipbuilder. It was only in the last year or two that, owing to the approach of ninety years, Sir Alfred Yarrow yielded the chairmanship of the committee of management to his daughter, Lady Dawson of Penn. Lord Dawson is honorary physician to the home, and Mr. Robert Milne honorary surgeon, and Mr. P. J. Jery aural surgeon and laryngologist. In addition, the home has the services of two medical officers at Broadstairs and a radiologist. Not long before his death Sir Alfred Yarrow provided a new *x*-ray installation, which has proved of great value. In the course of its existence (it was closed during the war years, being in an exposed position on the south-east coast) something like 20,000 children have been admitted and restored to health. About ninety boys and girls are usually resident, the recognized period of stay being four weeks, though this may be extended on the recommendation of the medical officer. In the latest report to hand the medical officers state that of the 297 children who left the hospital during the year under review 105 were completely restored and 168 improved, while an increased weight, averaging 5½ pounds for each child, was shown by 239 of this number. The illnesses from which the children admitted to the home had been or were suffering were, in the order of frequency, glandular affections, nervous debility, bronchitis and asthma, tonsillitis, and rheumatism and chorea. A number also came to recover after various operations. The ages at which the children are admitted are from 4 to 12 in the case of boys, and to 14 in the case of girls, though the upper age limit may be extended in suitable cases which require special treatment in the two wards set apart for more serious cases than those usually admitted into a convalescent home. Some interesting figures are furnished showing the cost per child. Soon after the home was started the maintenance cost was little more than £1 per week; before the war it rose to 24s., and in post-war years it has been well over £2, the latest figure being round about £2 5s. At the same time, of course, the professional classes whom the home is designed to help have been more impoverished. Of the income of something less than £10,000, about £5,830 is represented by interest from investments, and £3,200 by receipts from parents towards the maintenance of their children. The home, which has the appearance of a spreading English manor house, and is situated in beautiful grounds, with an aspect to the North Sea, includes sun balconies with wind screens, shelters, and a sanatorium.

Cerebro-spinal Fever in Yorkshire

At a recent meeting of the Society of Medical Officers of Health, Dr. E. Ashworth Underwood, deputy medical officer of health for the City of Leeds, gave an address dealing with the outbreak of cerebro-spinal fever in the West Riding of Yorkshire during the last three years.[1] Although the country boroughs were not affected until 1931, cases began to appear in epidemic proportions in the previous year—for instance, in the rural districts of Thorne, Doncaster, and Wombwell. In the course of 1931, 89 cases occurred in Barnsley, 75 in Maltby, 47 in Rotherham, and 36 in Conisborough, while cases continued to appear in the rural districts. In 1932 the incidence of the disease remained almost as high as in 1931. Investigation showed that many towns and areas which seemed to be similar as regards industrial and social conditions were very differently affected, although in close continuity with one another. An explanation for this was found in the fact that the incidence of the disease

[1] *Public Health*, March, 1933, p. 182.

was highest in the areas where the ratio of children under 14 was highest. This was well exemplified in rapidly growing areas such as Doncaster, Maltby, and Thorne. Dr. Underwood suggests that in those areas where children are in excess they may act as reservoirs for the meningococcus when once it is introduced, and that its virulence is roused by passage through these children until meningitis is ultimately produced in a susceptible individual.

Merseyside Hospitals

The annual meeting of the Merseyside Hospitals Council, which controls the Penny-in-the-Pound Fund, was held in Liverpool Town Hall on March 21st. It was reported that an agreement had been reached with the Hospitals Medical Staffs Association, with the consent of the associated hospitals, providing for an annual payment of 7 per cent. on the distribution to hospitals up to £90,000, with a maximum payment of 10 per cent. should this ever reach £150,000. The income for 1932 was £141,683 and the total distribution was £116,420. The amounts were: twenty-one associated voluntary hospitals, £84,137; medical staffs funds, £5,460; other voluntary hospitals, £7,567; and public assistance hospitals, £14,559. The associated hospitals had an estimated deficit at the end of 1932 of £39,000, and it is recommended that either the rate of contribution to the fund be increased or the fund no longer accept financial responsibility for the contributors admitted to public assistance hospitals. A co-ordination committee of the large hospitals has been set up to see how far expenditure can be reduced by co-ordination and economy.

Central Midwives Board

At the March meeting of the Central Midwives Board for England and Wales the following elections for the year commencing April 1st were announced: Dr. J. S. Fairbairn, Miss E. M. Doubleday, and Miss A. A. I. Pollard by the Midwives Institute; Miss Edith Greaves, Miss Ada Davies, Dr. W. Allen Daley, and Mr. A. B. Maclachlan by the Ministry of Health; Mr. Victor Bonney by the Royal College of Surgeons; Councillor W. J. Loxley by the Association of Municipal Corporations. A letter was read from the chairman of the Leeds Maternity Hospital enclosing correspondence with the Ministry of Health on the training of medical students and pupil midwives, together with copies of letters received from hospitals throughout the country supporting the object of the letter; it was resolved to inform the Leeds Maternity Hospital that, whilst the Board is fully alive to the desirability of more midwifery cases being made available for the training of medical students, and would gladly consider any practicable means to that end, it cannot accept the measures suggested in the letter to the Ministry of Health as desirable or practicable, and it is in thorough agreement with the view of the Departmental Committee on the Training and Employment of Midwives, which reads as follows:

> "That it is both undesirable and impracticable to subject pupils who do not intend to practise as midwives to a procedure in relation to training, examination, or certification differing in any way from that imposed upon those who intend subsequently to take up practical midwifery work."

As this matter appears to concern medical education, the Board considers that the General Medical Council is the proper body to deal with it. In reply to a letter from the Queen's Institute of District Nursing in regard to ante-natal supervision of patients carried out by medical practitioners in midwives' cases, it was decided to reply that, while the routine ante-natal examination of a midwife's patient should naturally, wherever practicable, be made by the medical practitioner who will attend the patient should medical aid be required, the Board has no power to lay down any rule on the matter.

CORRESPONDENCE

Fee-splitting

SIR,—One aspect of this question, mentioned in your leading article on March 11th, should not be overlooked—namely, that in addition to its immorality fee-splitting is also illegal, being a contravention of the Act prohibiting secret commissions. Perhaps a prosecution or two would assist in stopping it.—I am, etc.,

Watford, March 17th. C. LUTHER BATTESON.

Distinctive Colour for Chloroform

SIR,—Those who handle chloroform daily and appreciate its physical properties are unlikely to confuse it with ether, but some extra safeguard is necessary for others. If manufacturers would add some distinctive dye to chloroform prepared for anaesthetic purposes it would be to some extent a safeguard against the accidental use of chloroform instead of ether. If the dye were of the right colour and deep enough it would probably act as a sufficient screen for the harmful light rays, and thus do away with the necessity for coloured bottles. The main object, however, is to have a chloroform which is recognizable instantly by its colour as it issues from the bottle and by the stain it makes on the mask. Chloroform is exactly eight times as powerful an anaesthetic as ether, and is, in addition, a more dangerous drug, whether in a pure state or in mixture. The common mixture consists of chloroform two parts and ether three parts, so that it is somewhere about four times as powerful as ether, and should be made easily distinguishable from ether. As a refinement ether might be made to contain some colourless substance which, on mixture with dyed chloroform, would change the colour completely without damage to either drug.—I am, etc.,

London, March 20th. G. R. PHILLIPS.

Research in the Medical Field

SIR,—To one who has long urged that the "interpretation of nervous activity in terms of conduction" is, as regards the manifestations of mind and its disorders, inadequate, obsolescent, and at best but a misleading and dangerous half-truth, your leading article of March 11th has not appealed in vain. In your issue of April 19th, 1924, you were good enough to publish an article of mine in which this same point was made and stressed, and, with added experience, is now even more strongly stressed. The conducting neurones are but the feeders of the much more important shorter internuncial ones, to which medical and mental attention is seldom or never directed. Yet to-day every scientifically trained neurologist recognizes the fact that the receptor area is not confined to the post-central gyrus, but involves the whole of the granulous cortex cerebri. Kappers himself emphasizes the strongly sensory or receptive nature of this internuncial cortical tissue. It is doubtless within this and the other correlated internuncial tissues of the brain that memories are stored in the form of potential nerve energy, the resultant of the conversion of physical stimuli into kinetic nerve energy; that speech is integrated; and that "cerebral excitation" and "central inhibitions" arise. Such suprasegmental nerve tissues appear, indeed, to be the very essence of mind. The brain of an imbecile, which I was examining only to-day, was strangely deficient in this strongly receptive granular layer of the cortex, and with disastrous results to his mentality.

"Classification of mental and nervous disorders in terms of the essential nervous processes mainly at fault" is not

so far distant as the report you quote might lead the reader to infer. To a certain limited extent it could even be made now, but unfortunately there are as yet too few who realize the advances recently made in our understanding of the cerebral cortex. Yet this knowledge exists, and the younger members of the profession are slowly but surely awakening to the fact, and this in spite of their teachers. The time cannot therefore be so very distant when they will sweep out of existence those anatomical and physiological crudities which still masquerade as the preparatory teaching of the nervous system. In the acquisition of this recent and more accurate knowledge of the real relationship of brain matter to mind the first step is to forget much we have ever been taught. Then indeed can we begin to assimilate this newer science and so come to an understanding and interpretation of the normal and abnormal minds of ourselves and our fellow men and women.—I am, etc.,

Stoke Park Colony, Stapleton, Bristol, March 14th. RICHARD J. A. BERRY.

Droplet Infection and Puerperal Sepsis

SIR,—Dr. Watts Eden's lecture on midwifery in the home, in the *Journal* of March 11th (p. 399) is so valuable a piece of propaganda in a great cause that I hesitate to criticize it adversely. It is written in Dr. Eden's finished style, with the pleasing selection of the right word to which he has accustomed us. But there is just one word to which I take exception, and I feel compelled to draw attention to it.

In writing of the theory of droplet infection he says: "There seems to be little doubt that here at last we have stumbled upon the explanation," etc. I feel certain that on second thoughts Dr. Eden will agree that the word "stumble" is not a fair one to apply in view of the laborious work which has been required to establish this theory. Since the original work in America by Kanter and Pilot in 1924, and that of Watson and Meneley, also in America, in 1928, J. Smith of Aberdeen, and, in England, R. Armstrong, L. Colebrook, W. W. King—working with the bacteriologists J. W. Edington and F. S. Kirk—C. G. Paine, and others have all worked hard on this difficult problem. Dr. Eden can now say, in the lecture referred to, "The theory of droplet infection has been fairly established," whereas in 1929, alarmed at the precautions which would be necessary, he wrote, "Let us hope that further work may relegate it to a position of rarity among the possible channels of infection" (*British Medical Journal*, 1929, ii, 83). Something more than a stumble must have preceded so important a step.

Another eminent authority has been sufficiently impressed to state in a wireless talk that "The evidence that cases of puerperal infection do occur through the agency of droplet infection is overwhelming." As a matter of fact, over a hundred years ago two British doctors did stumble on this idea. Dr. John Clarke, writing in 1793 on the "Fever of childhood," says: "It is a curious circumstance that before the attack of the epidemic of lying-in women at Paris in the year 1746 there had been an epidemic low fever, with an ulcerous sore throat." Dr. Alexander Gordon, who wrote in 1795 on the "Epidemic puerperal fever of Aberdeen" (1789–92), prepared a set of tables showing the simultaneous prevalence of "inflammatory sore throat."

May I add that it seems probable that this new means of protecting women in and after labour, if conscientiously employed, will solve a most elusive problem in midwifery, granted that it be not nullified by accompanying laxity in the use of other well-established measures. Pendulum-swinging appears to be a special weakness of the medical profession, and has before now led to new ideas replacing instead of strengthening confirmed practice.—I am, etc.,

Sheffield, March 19th. MILES H. PHILLIPS.

Modified Bendien Reaction

SIR,—I am very glad to have this opportunity of replying to Dr. J. Fine's letter in your issue of March 18th, as it was Dr. Fine, when working with Dr. Menton at the County Laboratory, Stafford, who first showed me the Bendien reaction as he was then doing it in September, 1931. Throughout the work I have since done I have adopted his method of utilizing the smaller tubes, arranging these with regard to standard capacity, and employing the smaller amounts of serum which allow of the more elaborate test being carried out without requiring an abnormal amount of serum from any individual patient.

Dr. Fine is quite correct in stating that in many cases the differentiating readings are obvious by visual observation, but I have found it necessary to make quantitative estimations—as explained in my paper—so that subsequent tests upon the same patient may have definite quantitative relations one to another; and this is only possible by adopting some form of more accurate estimation than is obtainable by comparatively gross visual observations. I still employ a simple instrument which I have made and call a "precipitometer," by means of which the deposits are estimated in millimetres against a movable transparent millimetre scale. This is a useful help in choosing the reactions most likely to be required for the more accurate quantitative interferometer estimations. I have no doubt that readings could also be made by means of an accurate nephelometer, and probably also by other means, which may make it unnecessary to have so expensive an apparatus as the Zeiss interferometer—which latter, however, does give an extraordinarily accurate reading and allows of a rapid and easy technique.

With regard to the point Dr. Fine raises as to the number of cases in which the diagnosis of malignancy was not in question, and also as to the number in which septic conditions affected the reaction, I would give him the following figures relating to the first 306 which were worked out in this way, and which included every case of malignancy whose blood was sent in for examination, and therefore did include a higher percentage of gross and obvious malignant cases than has occurred later.

Tube Reaction	Total Cases	Malignant Reaction	Non-correspondence		
1	65	63	2	99	187
2	34	33	1		
3	47	45	2	88	
4	41	39	2		
5	51	50	1	119	
6	46	45	1		
7	11	11	0		
8	11	11	0		
Total ...	306	297	9		

From these figures it will be seen that ninety-nine cases were of advanced carcinoma, and gave reactions in the first and the second tube. A further eighty-eight were of definite carcinoma, and gave primary reactions in the third and the fourth tube. Of these 187 cases seven gave non-correspondence, and in all of them gross inflammatory conditions, consisting of septic pneumonia, pyometra, mediastinal inflammatory infiltration, pelvic

abscesses, purulent bronchitis, and abscess in the lungs were present. In many of the others which gave correct *malignant reactions a mild degree of secondary sepsis* was present, but this was not enough to disturb the differentiating fraction. It is only when it is so gross as to be representing at the time a more acute clinical condition than the cancer itself that sepsis definitely vitiates the diagnostic reaction.

With regard to the early cases of carcinoma, those in which the first reaction occurs in 5, 6, 7, and 8, out of 119 of these two gave incorrect diagnostic fractions. In one, the first reaction occurring in Tube 5, a superficial and septic radium burn had followed the treatment of an epithelioma of the chest wall, the actual growth having been destroyed and the septic condition being the only active infection remaining. The other was a case of scirrhous carcinoma of the breast in an elderly woman, which had been present for several years. This reaction gave a first precipitation in Tube 6 of a non-malignant type. As in this type of case the probability is that the patient will die of old age, intercurrent pneumonia, or possibly cerebral haemorrhage or some such condition rather than of cancer, it is of interest that the reaction should be a non-malignant one, as I think serum alterations upon which the test depends are probably associated with evidence of efficient or deficient resistance to cancer; and in such a case as the last one referred to the patient can hardly be considered malignant in the clinical sense of the word, for although in her breast there may be a carcinoma, it is atrophic, scirrhous, and clinically non-malignant.

With regard to non-malignant cases, giving a first reaction in Tube 6 and higher, which were correctly diagnosed, these have now reached to somewhere in the region of 400, but I have not yet put together the final figures. An analysis of what now amounts to over 1,000 examinations is in course of preparation. Out of 194 non-malignant cases which were analysed with regard to their tube reaction, 134 gave a first reaction in the sixth, seventh, or eighth tube, and of these, eight gave a fraction of the malignant type.

This modified Bendien reaction is, on the whole, more accurate with regard to ultimate clinical findings in early and doubtful cases of carcinoma where there is less liability to confusion from disturbing septic conditions or possible metabolic derangement.—I am, etc.,

Liverpool, March 20th. E. CRONIN LOWE.

X Rays in the Treatment of Graves's Disease

SIR,—An extensive experience of *x*-ray treatment of Graves's disease prompts me to contribute to the discussion on this subject which has recently appeared in your columns.

The protagonists of thyroidectomy in the treatment of hyperthyroidism, while agreed in their attitude towards *x*-ray therapy, unfortunately find themselves at variance in their objections to it—Mr. Romanis because of the excessive action of the rays on the thyroid and surrounding structures, and Mr. Cecil Joll because of the absence of any effect whatever. Between these extremes lies the claim of radiologists that in *x* rays we have an agency which, in experienced hands, will reduce the size and activity of the enlarged gland, and which will, in a large percentage of cases, exercise control sufficient to enable the endocrine system to recover its balance. Additional evidence of this recovery can be obtained by comparison of the basal metabolic rate before and after treatment, and the progress of cases submitted for *x*-ray treatment by my colleagues at the Leeds General Infirmary is checked by this means.

It has been urged against *x*-ray therapy that the lengthy period required to determine if the treatment has proved successful constitutes a serious objection to the method. This should not be so. If signs of definite improvement are not apparent within three months the question of undertaking other treatment should be considered. It is, I believe, useless to persist further with *x*-ray treatment in these circumstances. Again, there should be no risk of surgical treatment being rendered more difficult after *x*-ray therapy by reason of damage to the skin. This is a sequel which should never occur if proper precautions be observed.

The technique that I have employed during the past five or six years includes the use of a harder type of ray than is generally used in the treatment of this condition—namely, 180 kV with filtration: 0.75 mm. copper + 3 mm. aluminium. A dose of 150 R is given to each lobe of the thyroid gland at weekly intervals for a total of six treatments. In mild or moderately severe cases this generally proves sufficient, but should further treatment be deemed advisable an interval of at least six weeks is observed, and then I do not think it is wise, in most cases, to continue for more than four additional treatments, given at fortnightly intervals.

Patients with cardiac involvement do not, as a rule, respond very favourably to *x*-ray therapy, but the result achieved in many instances is as good, perhaps, as that gained by other methods of treatment. I have found that cases occurring near the menopause are greatly benefited by including the pituitary gland in the scope of radiation. I administer a depth dose to this gland of about 50 R at each treatment, and I find that the nervous disturbance, which is such a marked feature in these cases, is more readily brought under control. Radiation of the pituitary gland has, I believe, a place also in the treatment of many other types of this disease.—I am, etc.,

Leeds, March 14th. G. COOPER.

SIR,—In reply to your correspondent Dr. A. G. C. Taylor, who suggests that radiologists should give details of their *x*-ray technique, I quote the method I use in my own practice. It must naturally be understood to apply to an average case only.

A course of eighteen sittings is given, extending over nine weeks—two treatments per week. The gland is treated from the front and sides alternately—one field per sitting. The a.-p. field is allowed to extend 3 to 4 inches below the episternal notch as the gland may be in part retrosternal. The anticathode skin distance is 12 inches; 2 mm of aluminium are used as a filter, and the tube is excited at 90 kilovolts. Two milliamperes are passed for ten minutes. The total dose on any given area of skin during the whole nine weeks is less than an erythema dose.

At the end of nine weeks the pulse rate should be down by 20 per cent. or more in favourable cases, and the capacity for walking should be definitely improved. Subjectively the patient should be conscious of an increase of energy. A further ten sittings should be given after three months, however the patient feels—beyond this, no fixed rule can be laid down. The filtration for the second series should be 3 mm of aluminium. It should be noted that good effects are not always immediately apparent, and one should wait at least three months after the termination of a course of treatment before deciding as to its results.

The technique described I have used for twenty years, my first patient being treated and reported on in 1913. In its origin it was empirical, and conditioned by the equipment available at the time. With the advent of powerful apparatus I tried various modifications, but have always come back to a procedure much the same as that with which I started.

No doubt there are other techniques which give excellent results. I can at least say for the one I describe

that it brings about symptomatic cures in quite 60 per cent. of all cases ; that I have never in an experience of hundreds of cases in hospital and private practice seen any sign of damage to the skin, either early or late ; and that, no matter how ill a patient may be, treatment on these lines causes no upset.—I am, etc.,

London, W.1, March 12th. F. HERNAMAN-JOHNSON.

Duodenal Feeding

SIR,—May I reply briefly to Dr. Harold Pritchard's letter in the *Journal* of March 4th (p. 387).

I note with interest that the cases of gastric ulcer treated by Dr. Pritchard by duodenal feeding were selected cases, which, I take it, means cases of *average* severity likely to prove amenable to medical treatment. May I suggest that a better criterion of the value of the method of duodenal feeding is its success in cases of *abnormal* severity, such as the deep-seated penetrating ulcers which Dr. Pritchard saw me show upon the screen, and the similar cases of equal severity recorded by others at the meeting—cases, in short, which would generally be referred to the surgeon without any attempt at medical treatment.

Dr. Pritchard's experiment with the double tube was performed by Garbat as far back as ten years ago (*Arch. Int. Med.*, 1923, xxxii, 771), when a similar result—the flow of gastric juice into the stomach after a duodenal feed—was obtained. Theoretically, this secretion of acid may seem harmful, but in the large majority of cases it produces no symptoms whatever and does not delay the healing of the ulcer. There are, however, as I stated in my paper, certain physicians both here and in America who consider it an advantage to give alkalis between feeds throughout the course of treatment.—I am, etc.,

London, W.1, March 13th. ERNEST YOUNG.

Reactions after Injection of Sodium Morrhuate

SIR,—It is important to recognize that the injection of sodium morrhuate for varicose veins is not entirely free from the danger of unpleasant reactions. Some illustrative cases were published in your columns in July and August of 1930. Having given the drug an extensive trial it is my opinion that reactions are rare, but may very occasionally prove alarming. Three types, which may overlap, may be distinguished: (*a*) gastro-intestinal disturbances with abdominal pain and diarrhoea, coming on soon after the injection and lasting from three to forty-eight hours ; (*b*) cutaneous disturbances, either local or general, and, as a rule, erythematous in nature ; and (*c*) very rarely, collapse with cyanosis or pallor, low blood pressure, and even temporary loss of consciousness. By limiting the first dose to 1 c.cm. of 5 per cent. sodium morrhuate, and subsequently using in its place salicylate or quinine in any case in which any slight reaction has occurred, I have had no troubles in a large series of cases.

Dr. McAusland's interesting case, reported in your issue of March 11th (p. 430), would appear to represent a combination of (*b*) and (*c*) types of reaction. I cannot, however, support the view that these reactions are due to anaphylaxis, as there is no protein whatever in the solutions of sodium morrhuate supplied by the best firms. Following a case of severe reaction in November, 1930, analysis of the remaining ampoules from the box used showed them to be protein-free, and also free from products of oxidation or excess alkali. Moreover, in this case the reaction followed the first injection, and the patient had never received an injection of serum.

The suggestion that post-injection ulceration is as common with sodium morrhuate as with quinine can hardly be taken seriously, for, as is well known, sodium morrhuate can be injected subcutaneously without producing necrosis, provided that asepsis is maintained. I have never seen an ulcer follow the injection of sodium morrhuate, even by non-experts.—I am, etc.,

Liverpool, March 20th. PHILIP HAWE.

Treatment of Tinnitus and Deafness

SIR,—In your issue of March 4th (p. 390) you publish a letter from Dr. G. C. Cathcart in which he presents his reasons for differing from my views as set out in *The Principles and Practice of Otology* as regards the curability of tinnitus and uncompensated deafness. These differences are based on the results he has obtained by treatment with an instrument known as the electrophonoide. In *The Principles and Practice of Otology* the forms of tinnitus which are curable are stated to be those due to circulating chemical poisons, circulating toxins, and the effects of early inflammation of the middle ear. The incurable forms of tinnitus are stated to be those due to tumours of the auditory nerve, to alteration in the bony capsule which surrounds the internal ear, and to fibrinous exudate in the cochlea itself. In justice to the authors it should be stated that the tinnitus in these last two forms has never been "cured" in the experience of otologists, though sometimes it spontaneously disappears synchronously with the function of the cochlea.

Dr. Cathcart suggests that the electrophonoide has cured tinnitus in some of the conditions classed as incurable in the book. I will mention an old saying of a former teacher to the effect that, if we found that we had cured by some form of treatment conditions generally believed to be incurable, we should consider that we had cured a case in which our diagnosis had been incorrect until we had conclusively proved the contrary.

Dr. Cathcart, in dealing with the question of deafness, raises a point of interest in that he states he considers that treatment by the electrophonoide gives better results than by re-training. Re-training does not, of course, aim at increasing the acuity of hearing ; its object is to increase the ability of the patient to use the hearing he possesses. When a patient cannot fully use such hearing as he has for listening to conversation, his deafness is said to be uncompensated. In the simpler cases of uncompensated deafness almost anything that will make the patient listen will improve the hearing, and in certain cases the inability to listen is due to psychological rather than to otological factors. I think it very probable that the electrophonoide may be helpful in this class of case, but whether it is more helpful than the more simple method of re-training in the patient's home can only be determined when a whole series of cases has been published in which the graph of hearing has been carefully recorded and the improvement in the ability to hear speech shown in contrast to the improvement of the ability to hear the simple notes.

In a subject such as deafness, in which the factors which produce the inability to listen are so complex and until recent years so little understood, we should embrace all methods in which careful records have proved success in treatment. We should, however, dismiss all methods in which these careful records have not been made, for they may claim to increase the actual hearing when, in fact, it is the ability to listen that has been increased, and in the time spent in increasing the ability to listen the pathological process may lead on to chronic irremediable deafness which could have been prevented by appropriate treatment.—I am, etc.,

London, W.1, March 14th. A. LOWNDES YATES.

Fractures of the Shaft of the Femur

SIR,—In the *Journal* of March 4th (p. 359) Mr. W. J. Eastwood has written a very sound and interesting article on this subject. It is well, at this time, that a surgeon should come forward and state his firm belief in the efficacy and simplicity of the Thomas bed-knee splint when correctly applied and used. Skeletal traction, weight extension, etc., are admittedly more spectacular, but I am prepared to maintain strongly, with Mr. Eastwood, that they are not in the best interests of the patient.

I have had the experience of introducing the method, as he describes it, successfully into two hospitals where it had not previously been part of the tradition, and where it is now standard treatment; moreover, this proves Mr. Eastwood's contention that success depends upon unremitting attention on the part of the surgeon and nursing staff. Recorded failures are not due to any fault in the method, but to lack of attention to detail. My last case was a six-foot member of a fire brigade, who had a fracture of the shaft of the right femur with one and a half inches shortening. In eight weeks he had clinical and radiological union with full length, and had no pressure sore. To my mind it is also important to note that he did not have an anaesthetic, and that he was never subjected to any trauma, manipulative or operative, which was likely to delay union. A nursing staff needs more than coaching: it is necessary that the surgeon should demonstrate his own capability of carrying out the treatment which he expects them to undertake.

My experience with stiff knees has been the same; those I have seen have been, without exception, in cases treated by callipers inserted into the condyles of the femur. While reading the article it occurred to me that there were two claims with which Mr. Eastwood had not dealt. First, that fractured femurs should be immediately pulled out to full length, under an anaesthetic, by means of pulley extension, and put up in a plaster spica; my observations have led me to believe that this produces delayed union, and the reason is not far to seek—namely, excessive manipulative trauma. This method should be placed in Mr. Eastwood's category of those definitely inferior to fixed traction on a Thomas splint. Secondly, it has been stated that lateral instability of the knee results from continued fixed traction, but I think this is answered by the observation that such instability, which I have rarely found, may occur after any kind of immobilization, and invariably disappears when complete muscular tone is restored to the limb.—I am, etc.,

Liverpool, March 5th. E. N. WARDLE.

SIR,—I read with much interest Mr. W. J. Eastwood's article on fractures of the shaft of the femur in the *Journal* of March 4th. The satisfactory treatment of an infant, aged 2 days, in a Thomas splint, and the fact that in most cases it was found possible to pull the limb out to its normal length under the influence of morphine alone, seemed particularly noteworthy. I have found an elastoplast bandage applied loosely, but without creases, over the side strips of adhesive plaster better than circular strapping or muslin bandage, and that patients are most comfortable when the splint is suspended from a Balkan beam by a system of counterpoised weights. Care must, however, be taken to control rotation. Four points of suspension are convenient: one from each side bar and one from each side of the ring, which is thus held forward against the tuber ischii.

I think the objection to such fixed traction is the subsequent attention required, as we are told, to seven points of pressure, and to tightening the extensions "at least every three or four hours for the first fourteen days, and after this two or three times a day until bony union is well on its way." It would have to be a very well-trained nurse to whose care tightening of the extensions could safely be left (everything depends upon this), and it would be quite out of the question for the doctor to give this amount of attention to a patient being treated in his own home.

In my experience traction by weights and pulleys with gravity countertraction by raising the foot of the bed is far more satisfactory, and by having both methods in use in a ward at the same time I have repeatedly found that patients much prefer mobile traction. Hamilton Russell's method is very convenient, and suspension in a gallows, for small children. Mr. Eastwood himself resorts to gravity countertraction when there is the "slightest suspicion of redness." I do not regard weights and pulleys as being any more complicated than the splints he uses, and they do not obstruct examination of the fractured thigh. I share his dislike of bone traction, and find it very rarely necessary, particularly in children, who form the greater part of his cases. It is true that fixed traction "does not suffer variability of tension from outside causes, such as passers-by, ward maids dusting the floors," but it does suffer variability of tension from inside causes (stretching of the traction bands, slipping of the adhesive, settling of the patient further through the ring) to such an extent that it requires adjusting 112 times in a fortnight, which "interferes somewhat with the patient's sleep."

In claiming that this "treatment can be carried out as well in the patient's own home as in a surgical ward of a hospital" I think Mr. Eastwood underestimates the skill and care of the medical and nursing staffs that have contributed to the good results he records. It would be harmful if his article should lead to the extensive adoption of fixed traction in general practice, where there cannot be available the amount of attention necessary to produce by it good results.—I am, etc.,

London, March 7th. J. K. MONRO.

Caecostomy

SIR,—To read of caecostomy, in Mr. Lockhart-Mummery's admirable article on acute colonic obstruction, "that it completely drains the whole of the colon above the obstruction" (*British Medical Journal*, March 11th, p. 407) calls forth the following remarks. It is assumed that caecostomy, as practised by Mr. *Lockhart-Mummery*, consists in draining, by a Paul's tube of about half-inch diameter, a pouch of caecum which is stitched to the parietes in McBurney's incision. Granting this, and it is the method which I use routinely, my own experience goes counter to the view expressed in the above quotation. So often have I found after two weeks' profuse faecal discharge from the caecostomy, combined with zealous lavage of bowel through it, that the colon above a cancerous stricture of the left half is still so heavily loaded with faeces as to complicate union of the segment above the block with the collapsed bowel below, and to make the bowel unwieldy to manipulate. So keen has been my disappointment that it has made me discuss with many colleagues the efficacy of caecostomy in acute cancerous obstruction of the left colon. Instead of finding support for Mr. Lockhart-Mummery's dictum, I have had sympathetic expressions of regret over the failure of caecostomy to deplete the colon proximal to a stricture, which one feels is essential to ensure easy and safe surgical resection-anastomosis. Is there some special point in his technique that leads to Mr. Lockhart-Mummery's confident assertion of the invariably effective drainage the procedure offers?—I am, etc.,

Clifton, Bristol, March 14th. A. WILFRID ADAMS.

Diagnosis of Acute Appendicitis

SIR,—In reply to Mr. G. W. Thomas's criticism in the *Journal* of March 11th (p. 433) of an article of mine in the *Journal* of February 25th, I must still respectfully disagree. I still hold that in no disease is an incorrect diagnosis more often made than in acute appendicitis. The present mortality throughout the country is 4 to 6 per cent., and probably an equal percentage recover by good fortune after drainage: it must be admitted that the majority of this number were "missed diagnoses" (the alternative reason is faulty technique on the part of the surgeon).

Possibly it is not generally realized that out of every hundred patients coming to operation for a stone in the right ureter twenty-five bear the scar of a previous useless appendicectomy—a wrong diagnosis. I agree with Mr. Thomas that the case of acute appendicitis with the classical syndrome can and should be diagnosed with certainty every time, and, what is more, its state and position; but it is the atypical case that causes difficulty.

As regards the perforated duodenal ulcer which simulates acute appendicitis, it is not the case that is heralded by sudden abdominal pain and signs of an obvious grave internal calamity, but rather the smaller leak, the contents from which pass down the right paracolic gutter, which may cause confusion of the issue. The chronic history is naturally a help, but in many cases of silent ulcer the patient denies truthfully any previous digestive symptoms—a recent case of perforation of a silent ulcer in a schoolboy of 16 years exemplified this.

I am afraid that throughout the country the diagnosis of acute appendicitis is still often mistaken and far from being "almost a certainty." I feel that almost all reputable surgeons exercising due care have at some time made all or some of the mistakes which I quoted. I would very much like to hear the opinions of others in this matter.—I am, etc.,

Belfast, March 12th. IAN FRASER.

"Proto-duodenitis"

SIR,—I have read with great interest Mr. J. S. Kellett Smith and Dr. Arthur Tom's note on proto-duodenitis in the *Journal* of March 4th (p. 362), especially so as the condition which your contributors call "proto-duodenitis" has already been described by me[1] as the pre-ulcerative stage in the causation of chronic gastro-duodenal ulcers, and I cannot admit, therefore, that this paper describes a new symptom-complex, or that a case has been made out for the coining of another expression in an already overburdened medical vocabulary.

Your contributors give anatomical and physiological reasons to show that the first part of the duodenum should be considered as a separate entity. I have given these reasons, as well as several others (op. cit., p. 54), to show that the first part of the duodenum belongs embryologically, morphologically, and pathologically to the stomach, and that whatever differentiation takes place it does so only as a modification in the transition from stomach to bowel. I was glad to see a reference to G. M. Smith's experiments, which have been completely overlooked in English medical literature and to which not even Professor Stewart and Dr. Hurst made any reference in their magnificent book on peptic ulcers, although giving an extensive bibliography comprising no fewer than 540 names. I think that I may confidently claim to have been the first to call attention to them as well as to indicate their great significance, since I have used them as the basis of the experimental proof for my theory on the causation of chronic peptic ulcers.

[1] *The Causation of Chronic Gastro-Duodenal Ulcers*, Oxford University Press, 1931.

In their "suggested explanation" I am afraid that the authors have misunderstood my conception of the pathology of chronic gastro-duodenal ulcers. What I wished to make clear was that a complete differentiation existed between acute and chronic ulcers, that in no way could it be demonstrated that a relation existed between them, and that the *acute* one is *toxic* in origin and therefore *systemic* in causation, whilst the *chronic* one is entirely dependent on *local* irritation. It must be clearly understood that the acute ulcer never becomes chronic, and, *a fortiori*, that the chronic ulcer never originates from an acute one. Hence the obvious postulate that as long as irritation lasts so long will the chronic ulcer persist, and the corollary that the existence of a pre-ulcerative condition is a preliminary to and unavoidable in the formation of chronic ulcer, whilst no such pre-ulcerative stage can possibly occur in the development of acute ulcers.—I am, etc.,

London, W.1, March 4th. J. JACQUES SPIRA.

Small-pox Nomenclature

SIR,—Dr. J. Pickford Marsden says in his letter (*Journal*, March 18th) that he "has never been able to appreciate the alleged need for attaching a special label to any series of cases of modified small-pox." My answer is that, as we now recognize that variola minor is not a "series of modified small-pox," but a distinct entity, it behoves us, for the sake of clarity, to give it a distinctive name. Surely, to group together under one classification two pathological affections, one having a fatality rate of from 20 to 30 per cent. or even more, and the other having a fatality rate of 1 per cent. or less, and which present totally dissimilar administrative problems, must tend to confusion and obscurantism.

The point I am raising has a very definite bearing upon the question of the retention of compulsory vaccination. The recent prevalence in this country of "small-pox" is held by some to justify the retention of compulsion, for the word "small-pox" still connotes a loathsome, disfiguring, and fatal disease. But substitute for "small-pox" the name "variola minor," or "minor small-pox"—a term which connotes a trivial, non-disfiguring, and non-fatal disease—and undoubtedly the case for the retention of compulsion virtually disappears, so far at least as any argument from the prevalence of "small-pox" is concerned.

Dr. Marsden's further point that there may conceivably be more than the two varieties of small-pox is of academic interest, but it has little bearing upon the issue in question.—I am, etc.,

Leicester, March 19th. C. KILLICK MILLARD.

Uterine Prolapse

SIR,—Just a few words in reply to the courteous and interesting letter of Mr. Hesketh Roberts in the *Journal* of December 31st, 1932. The writer tells me that I am wrong "in presuming that the lateral vesico-uterine ligaments (referred to by Mestitz of Vienna) are identical with the cardinal ligaments." That being so, it would not, in my opinion, be advantageous to enter into further discussion on an erroneous supposition, especially as Mr. Roberts states that his own views "are not very dissimilar from those of the late Arthur Nyulasy."

I greatly regret that I have not yet been able to read Mr. Hesketh Roberts's *Recent Work on Ptosis of the Female Pelvic Viscera* (1932 impression), but will seek an opportunity to do so. Nor have I even seen the recent work of Peham and Amreich of Vienna, to which Mr. Roberts makes reference; such European literature is difficult to obtain in remote Australia.—I am, etc.,

Melbourne, Victoria, Feb. 7th. FRANK A. NYULASY, M.D.

Strychnine Poisoning

SIR,—Mr. Cahusac is labouring under a misapprehension when he says, in his letter of February 28th, that convulsions due to strychnine poisoning are accompanied by insensibility. I would refer him to that well-known *Manual of Medical Jurisprudence* by A. S. Taylor (edited by T. Stephenson), now in its twelfth edition, in which the following occurs: " The patient is conscious and the mind is commonly clear to the last "—that is, throughout the whole incident. I do not expect from " first-aiders " the same degree of accuracy in diagnosis which I would expect from senior medical students, nor did I suggest such ; nor that they should seek to undertake the duties and responsibilities of medical practitioners ; but evidently the author or authors of the manual think that " first-aiders " should be able to recognize and treat a case of strychnine poisoning, or else they would not have described how to do so in their book.—I am, etc.,

Southsea, March 13th. JOHN R. KEITH.

British Goods for Hospitals

SIR,—In October, 1931, I wrote to the medical press a letter urging the medical profession to support British industries and to see that the materials used in hospitals and private practice were of British origin. Since that time the " Buy British " campaign has been steadily gaining ground in our profession, and I am told that now many thousands of pounds are spent in this country which used to go to the foreign workman. The time has now arrived when it only requires an additional fillip to be given to this movement to banish the foreigner from our market almost as completely as we are banished from his, but it can only be done by each individual member taking the trouble to insist on being supplied with British goods.

There are certain articles to which attention should be paid—namely, rubber gloves, catheters, catgut, hypodermic syringes and needles, rubber tubing, glass utensils (including graduated medicine glasses), syringes, and ampoules. To take these in detail, English rubber gloves are now made as good as, and cheaper than, the foreign gloves ; in fact, an American firm has started to manufacture gloves in this country, so that anyone who still entertains the idea that American gloves are better can still pursue his fancy with the knowledge that they are made by British labour. English catheters are now superior to those made anywhere else. Catgut, prepared by half a dozen English firms, now, can be obtained as good and quite as cheaply as that made abroad. Hypodermic syringes, which formerly were inferior to foreign ones, are now just as good, although unfortunately we have taken the foreign name of " record," thereby advertising the foreign firm, as often the box, and not the instrument, is stamped " made abroad." Often a stick-on label is the only indication of its foreign origin, and this is removed before the buyer sees it. Hypodermic needles, both ordinary and those made of stainless steel, are now made at home, and are inferior to none. Rubber tubing is still largely made abroad, and as it is not marked the origin is not suspected, but of late we have rapidly been displacing the foreigner. With glass utensils it is more difficult, as we have allowed the foreigner to take our glass manufacture almost entirely out of our hands. Much of our graduated glassware, however, is still marked and finished in this country. The fighting Services stipulate that all medicines contained in ampoules shall be put in ampoules that are home made.

It is impossible to give exact statistics of imports, because all rubber goods are classed together, and surgical instruments are not classified separately. It is only necessary to bring the matter before the profession, and this can best be done through the kindly action of the medical press. I would suggest that the Medical Secretary of the British Medical Association might ask the Branches of the Association to bring the matter up at their meetings, as in this way it would be brought to the attention of those on the staff of the local hospitals, as it is only then a short step to the medical staffs' discussion of the matter. Action will then follow in those institutions which have not yet acted. Surgeons operating in private should insist that English gloves are supplied by the firms who cater for private operations. I notice that in London they are still often of foreign origin.

The word foreign in this letter means any country outside the British Empire.—I am, etc.,

London, W., March 20th. D. C. L. FITZWILLIAMS.

The Medical Profession and Birth Control

SIR,—The function of medicine is to prevent and cure disease, and now it is asked, as a side-line in its practice, to teach contraceptive methods and to assist in their application, thus—as Dr. F. J. Poynton points out in his recent letter—extending " its functions to the prevention of new life, or eventually to lay claim to the determination of how much new life is to be produced." But can the teaching of how to set aside the operation of the highest natural law, by breaking the chain of events which constitute normal coitus, be regarded as safe or sound physiologically? Is not the *raison d'être* of a normal woman's " passion " the maternal instinct (a subconscious urge) which is being blocked every time contraceptives are used ; and when Nature is thus baulked does not a state of psychological conflict ensue, detrimental to her health and happiness?—I am, etc.,

Prestatyn, March 20th. W. THOMAS.

Mitral Stenosis

SIR,—In answer to Dr. Blaxland Levick, whose letter appeared in your issue of March 4th (p. 388), I wish to point out that the presence of a mitral presystolic or diastolic murmur was considered necessary in every case before admitting it to the group of mitral stenosis cases under review.—I am, etc.,

Liverpool, March 16th. E. WYN JONES.

Medico-Legal

UNQUALIFIED PRACTITIONER COMMITTED ON MANSLAUGHTER CHARGE

What the user described as an amplification of " Abrams's box " whereby not only could disease be detected and diagnosed, but the extent of it measured, has figured in two recent inquests in Lancashire, and as a result of the second of them an unqualified practitioner Charles Clement Abbott of Leigh has been committed for trial at Manchester Assizes on a charge of manslaughter

First Inquest

The first inquest was held by the Wigan coroner (Mr J Hopwood Sayer) on February 22nd on Mary Thorpe aged 55, who had received electrical and other treatment from Abbott The son of the deceased woman said that Abbott has described himself as a " physio-medical practitioner " His charges had been five guineas for the first visit half a guinea for each subsequent visit, and half a crown for each bottle of medicine. Dr. W. E. Cooke, pathologist to the Wigan and Leigh Infirmaries, who had made the post-mortem examination, said that the cause of death was heart failure due to cancer of the uterus. Dr. Cooke was asked by the coroner to consider

Abbott's formula for medicine and paste, which, it was explained, consisted of herbs, roots, barks, and berries. Dr. Cooke would not say that the treatment given by Abbott had accelerated or retarded death, but the last month of the woman's life could have been made easier and her pains alleviated had she been under proper medical care. Asked by Abbott if he understood the principles of herbal medicine, Dr. Cooke replied, "I do not understand much about quackery." It appeared that in addition to the herbal treatment Abbott had put his patient on a vegetarian diet, and had employed ultra-violet rays. He stated that the prescription was made by "my method of electronic vibrations of the machine," explaining that the machine could tell by vibrations whether the medicines given were correct or not. The machine was based on "Abrams's box." Asked for particulars of his training, Abbott stated that he started training as a "physio-medical" practitioner at 17, and took a postal course with the National Association of Medical Herbalists. The coroner said, "You are charging bigger fees to people in moderate circumstances than would be charged by a fully qualified specialist, and I want to see whether they are getting full value for their money." Summing up, the coroner said that the deceased had been suffering intense pain, and was no doubt ready to try any treatment. He believed that it was quite possible that Abbott had confidence in his remedies, and he did not see how he could charge such big fees for each consultation without having a clear conscience. When his nominal training was compared with that of a medical practitioner, "one cannot but express some admiration for his abounding courage." A verdict of "Death from natural causes" was returned.

Second Inquest

The second inquest was held six days later at Royton, near Oldham, before Mr. E. N. Molesworth, the coroner, on a boy named Taylor, aged 11, who had died from meningitis. The coroner's jury found that death was accelerated owing to the negligence of Charles Clement Abbott, and that Abbott unlawfully killed Taylor. Abbott was thereupon committed for trial on a coroner's warrant.

The boy's father said that his son had suffered from fits since he was 2½ years old. He had been treated by four doctors and a specialist before being taken to Abbott, who treated him at least half a dozen times. He would not have gone to Abbott had he known he was not a medical practitioner. The treatment which Abbott applied for meningitis was to take some lotion from a bottle and rub it on the boy's head and chest. He was charged five guineas the first time the boy underwent the electrical test, and one guinea for each subsequent visit, with five shillings for each bottle of medicine. A Rochdale chemist testified that he had analysed the contents of the bottles and found them to contain chiefly extracts of liquorice, a little sweetening matter and flavouring agents, with water, and their value would be about threepence or fourpence. Mrs. Taylor, the boy's mother, stated that the practitioner was introduced to her as "Dr. Abbott," and there were two other men present, who were both introduced to her as "doctors." Abbott in the witness-box stated that he had been practising "physio-medicine" for twenty-five years. For some time he had been experimenting with an improvement of "Abrams's box." Questioned by the coroner about the initials he used, he said "M.H." meant "medical herbalist," and "F.P.C." "Fellow of the Physiological College," which he believed still existed, although it was ten years since he had seen it. The coroner took up his statement that he had his notifications of death taken by coroners, from which they had given certificates, and Abbott emphatically reaffirmed this, and wrote down the names of the coroners in question. The coroner stated that he had visited Abbott's premises and there saw Mrs. Abbott, who was described as the "subject." She and an assistant were railed off inside a wire fence, and the woman had a metal disk on her head. The assistant placed a glass rod over the woman's abdomen. Abbott stood by a black box, the electrical machine, which "diagnosed from a blood spot that a man at Southport, from whom it had been taken, was suffering from gall-stones." Abbott put several bottles into the box and eventually said they contained the correct medicine.

As stated, the jury found that the boy had died from meningitis, and that his death was accelerated owing to Abbott's negligence.

Police Court Proceedings

On March 10th Charles Clement Abbott was brought up at the Royton police court on a charge of manslaughter. Mr. H. C. C. Riches, for the Director of Public Prosecutions, said that after the boy, who suffered from fits, had been attended by four doctors and specialists, he received treatment by Abbott, who placed him in a chair, while the boy held a handle connected by wire to a black box. Mrs. Abbott also held a handle, which she placed on the top of her head, whilst standing on a brass plate connected with wire to the box, and a man described as "Dr. Foster" passed a rod over her. Abbott poured something from a bottle into small containers, which were put into a box over which a rod was waved, and after a lot of numbers had been called out it was apparently decided that the case had been diagnosed and the proper medicine found for the boy. He suggested that this was "one of the greatest medical ramps of the century, and that defendant is a charlatan of the worst possible type."

The defendant, who pleaded "Not guilty," was committed for trial and allowed bail.

The Services

NAVAL MEDICAL COMPASSIONATE FUND

A meeting of the subscribers of the Naval Medical Compassionate Fund will be held on April 19th, at 3 p.m., at the Medical Department of the Navy, Admiralty, S.W.1, to elect six directors of the Fund.

OFFICERS IN THE INDIAN SERVICES

RETIREMENT ON PENSION

The India Office issued the following announcement on March 17th.

It has been decided that on the inauguration of the new Constitution in India the following classes of officers recruited before the inauguration shall be eligible to retire on proportionate pension at any time during the remainder of their service provided they are physically fit for further service in India, are permanently employed in a field of service under the control of a Government responsible to a Legislature, and, if appointed after April 1st, 1924, were of non-Asiatic domicile at the time of their appointment:

Members of the following Services: The Indian Civil Service, Police Service, Forest Service, Forest Engineering Service, Educational Service, Agricultural Service, Service of Engineers, Veterinary Service, and Medical Service (Civil).

Members of a Central Service, Class I, who were appointed by the Secretary of State in Council.

Officers of the Regular Army holding posts on the cadre of any of the above-mentioned Services who are not liable to recall to military employment or whom the military authorities are unable or unwilling to absorb in such employment.

Officers of the Royal Indian Marine holding posts on the cadre of any of the above-mentioned Services whom the competent authorities are unable or unwilling to absorb in naval employment; and

Officers appointed by the Secretary of State in Council holding posts, other than listed posts, on the cadre of any of the above-mentioned Services.

DEATHS IN THE SERVICES

Major Charles William Allport, R.A.M.C. (ret.), died on February 15th, aged 73. He was born on March 24th, 1859, and was educated at Queen's College, Cork, graduating M.D. in 1882 and M.Ch. in 1883, in the Royal University of Ireland. Entering the Army as surgeon on July 28th, 1886, he became major after twelve years' service, and retired on July 28th, 1906. In 1907 he was given employment on the retired list at Yarmouth. He served in the Burmese campaigns of 1888-9 (medal with clasp); and in the South African war from 1899 to 1902, taking part in the operations in the Transvaal, Orange River Colony, and Cape Colony, and received the Queen's medal with three clasps, and the King's medal with two clasps.

Obituary

ARTHUR COOKE, F.R.C.S.

Surgeon to Addenbrooke's Hospital, Cambridge

We regret to announce that Mr. Arthur Cooke, senior surgeon to Addenbrooke's Hospital, Cambridge, died at his home, Grove Lodge, suddenly from heart failure, on March 13th, aged 64 years.

He was the eldest son of Mr. Henry James Cooke of Summerfield, Ilkley. Educated at Giggleswick School, and New College, Oxford, he took honours in natural science, and represented his university in cross-country running. Proceeding to the London Hospital, he took the M.B., B.Ch.Oxon. and the F.R.C.S.Eng., and in 1893 went to Cambridge as a partner in the firm of Hyde Hills, Wingate, and Doughty. In 1903 he was appointed assistant surgeon to Addenbrooke's. Always interested in ophthalmology, Cooke was clinical assistant at Moorfields and surgeon in charge of the ophthalmic department at Addenbrooke's ; and it was owing to his energy and perseverance that eye wards were opened there by his wife last summer. At the outbreak of the great war, Cooke was called up as a major on the *à la suite* staff of the 1st Eastern General Hospital, and after service at Cambridge was surgeon at No. 55 General Hospital and at casualty clearing stations in France, retiring with the rank of lieutenant-colonel. After the war Cooke gave up general practice, and devoted himself to ophthalmic and consulting surgical work. He was a teacher and examiner in surgery in the university, past-president of the Cambridge and Huntingdon Branch of the British Medical Association, and vice-president of the Section of Surgery at the Annual Meeting in 1921. He was also a past-president of the Cambridge Medical Society, a Fellow of the Association of Surgeons, and a member of the editorial committee of the *British Journal of Surgery*.

Cambridge is largely indebted to Arthur Cooke for a magnificent nursing home, and for a notable extension to Addenbrooke's Hospital. In 1918 he performed a serious operation on Evelyn, wife of Morland Agnew, and it was on Mrs. Agnew's recovery that Mr. Agnew conceived the idea of presenting to Cambridge the Evelyn Nursing Home, now a flourishing up-to-date institution on Trumpington Road. To Cooke's energy, persistence, and personality the success of the appeal for £90,000 for extensions to the hospital is in a great measure due. He married in 1891 Vivien Collyer, daughter of Mr. John Collyer, and leaves two sons and a daughter. His eldest son, Christopher, was killed in the *Vanguard* disaster at Scapa Flow in 1917.

G. S. H.

Mr. W. H. BOWEN writes:

By the death on March 13th of Mr. Arthur Cooke of Grove Lodge, Cambridge has lost an outstanding figure in its medical life. A man of great energy, industry, and ability, he had made a name for himself as a fine surgeon. Combined with this he had a charm of manner and a power of genuinely sympathizing with the person and work with which he was for the moment in contact. He would give careful thought to the issue involved, and sink his personality in the task at hand. This not only brought him the affection and respect of all his colleagues and friends, but proved of inestimable service in his work for the hospital and the welfare of his profession. For thirty years of his life he was a member of the surgical staff of Addenbrooke's Hospital. In those years, and especially after 1931, when he gave up all general practice, he was the moving spirit. His kindly diplomatic skill at meetings, combined at the same time with his realization of the fundamentals of the problem at issue, made him an invaluable committeeman. He could always, where he deemed it right, disagree with views expressed, but could do it with such tact and kindly feeling that no one was offended, let alone hurt. Thus when he was in the chair at staff meetings the friendliest feelings existed, and the amount of work got through was a tribute to the good will that prevailed.

As a surgeon he was an indefatigable worker with a stimulating personality. By his energy and industry he animated all who came in contact with him. But he was not a man who just dealt with cases. He had a large and kindly heart. His work never ended in the operating theatre, but went on in the wards, and often after the patient had left the hospital. As a technician he ranked very high indeed, and he had that knowledge of instruments and methods, and the power of seeing where improvements lay and of avoiding the pitfalls of expediency and apparent cleverness, which made his technical work not only fine—one might say brilliant—but also successful. It can truly be said of him that he was always up to date, and that no improvement in surgery escaped his observation and sound criticism. He incorporated the best into his work. He was looked upon as the moving spirit in all progress, whether in the wards or in the committee room, by his hospital colleagues, his medical friends outside, and the public.

Having given up general practice and limited himself to general surgery, he joined the Moynihan Chirurgical Club. Here he gained a wider outlook by the travel and companionship it aimed at and accomplished, and no man was able to benefit more fully by the opportunities it afforded. He never came back from a foreign clinic but that there was a store of useful knowledge to be applied, stimulating talk for his friends, and a general uplift of the whole intellectual medical outlook. In 1919 he published a very useful little book called *Groundwork of Surgery*, which was written specially for the Cambridge undergraduate, with whom, as a teacher at Addenbrooke's Hospital, he had been for many years associated. This was a bit of war relaxation. He wrote many papers for the Cambridge Medical Society, but seldom published them. Cooke was an easy, graceful speaker, and he could extemporize from comparatively rough notes. In his busy life he probably never troubled to work these up for publication. We shall miss his sane optimism, his genial manner, his extraordinary energy, his technical skill, and other virtues he possessed, but we shall always be pleased to associate them with his name, and they will help to keep his memory vivid for many years to those who knew him.

GEORGE HERBERT SOWRY, M.D.

M.R.C.P., F.R.C.S.

Consulting Physician, North Staffordshire Royal Infirmary

George Herbert Sowry, who died at the age of 62 on March 12th, after an illness of many months' duration, was born at Leeds, and received his medical education at St. Bartholomew's Hospital, where he graduated M.B., B.S.Lond. in 1895, and obtained the Fellowship of the Royal College of Surgeons in 1898. Later he became M.D., and a Member of the Royal College of Physicians. In 1900 he settled in Newcastle-under-Lyme, and rapidly built for himself an extensive practice by dint of hard work, attention to detail, and the kindly interest he took in all his patients. Elected assistant physician to the North Staffordshire Royal Infirmary, he became physician nine years later, retiring on reaching the age limit in 1929, when he was elected an honorary vice-president and consulting physician ; he was also connected with many other charitable institutions, at all of which he gave his services freely and fully. Dr. Sowry had held the positions of chairman of the North Staffordshire Division and president of the Staffordshire Branch of the Association, and

also the presidency of the North Staffordshire Clinical Society. He gave up general practice in 1919, and devoted himself to consulting work, in which he had conspicuous success, his services being sought for many miles beyond Newcastle.

Mr. ERIC YOUNG writes: Sowry's great sympathy and understanding, his big heart, his inspiring confidence, his unselfish devotion, and his kindliness endeared him to all with whom he came in contact. A loyal and upright friend, a courteous colleague, perhaps he was seen at his best when tending a member of his own profession or one of his family, as he so often did, when stricken with illness; his sympathetic encouragement and friendly interest were unbounded and ever present. He was never fond of public speaking or writing, but was a very valuable and helpful member of any committee—work which he never shirked—a man of firm opinions, but always deferential to the opinions of others; a strong advocate for some years of the establishment of a "pay-bed department" at the North Staffordshire Royal Infirmary, insisting upon the urgent need of such a department on all possible occasions; it is pleasing to reflect that he lived just long enough to see his hopes fructifying, for such a block is now in course of erection in the hospital grounds. Never enjoying robust health, he did not fully recover from the extra pressure of work during the great war, when he organized and took charge of the "oxygen wards" erected at the Infirmary, in the work of which he was deeply interested, though disappointed with the results. The esteem and affection in which he was held was evidenced by the large and representative gathering at the funeral service held at St. George's Church, Newcastle, on March 22nd. If asked to sum up his characteristics in one word, one would immediately answer that he was human. He has passed onwards, leaving a fine example of devotion behind him, and as adviser, helper, and friend he will be sadly missed, but we can retain very happy and grateful memories of him.

THE LATE MR. JOHN GRIFFITHS

Dr. FRANK BODMAN (chairman of the Bristol Division of the British Medical Association) writes: John Griffiths was appointed honorary secretary of the Bristol Division at the last annual meeting in May, 1932. With characteristic energy he set about the task of livening up the Division. The meetings had largely been concerned with medico-political business, and the average attendances were very small. Griffiths recognized that there was room for developing the keenness of the general practitioners in the Division, and he suggested a scheme of bi-monthly meetings at which general practitioners discussed among themselves topics of everyday practice. The success of these meetings was ensured by the excellent suppers which Griffiths organized before the discussions. In the short time that John Griffiths was secretary he had trebled and nearly quadrupled the attendances at the Divisional meetings. Nothing was too much trouble; no detail was ever forgotten, and his loss is the more to be deplored, for the Division had learnt his value as one of the most keen and energetic officers it has ever appointed.

THE LATE DR. CAMERON BLAIR

Dr. B. J. COURTNEY (Shaftesbury) writes: I have recently returned from the East and only just seen the obituary notice of Dr. M. Cameron Blair in the *Journal* of February 4th. May I, as one who served with him in Nigeria for many years, add a word of tribute to his memory? I have before me his little treatise, *Littafi Mai, nunawar Kiwon, Lafiya*, which may be broadly translated as "A manual to illustrate the principles of health," and which is, I suppose, almost unique in modern medical literature. It was printed in early 1914, written in the Hausa language, and intended for use in the Education Department, then only in its infancy, of the Mohammedan States of Northern Nigeria. The book's simple unequivocal language, explaining in terms adapted to primitive minds the essential causes of common diseases and their prevention may, I think, serve as an index to Cameron Blair's life and character. Simple in the best sense of the word, straightforward, idealistic, unswervingly loyal, lavishly hospitable, there must be many old Nigerians from the medical service and outside it who will hear of his passing with regret. Dr. Blair rendered great service to Nigeria, both in his early days, when Northern Nigeria was a separate colony, and later, as head of the Public Health Department of the United Nigerias: though his services did not receive the public recognition which might have been reasonably expected, he was one of the world's great men of whom the world has never heard.

The late Dr. ANDREW STARK CURRIE was born on June 7th, 1852, and was educated at the Glasgow High School and graduated in medicine in the University of Edinburgh. After settling in practice in London he was appointed assistant physician to the Italian Hospital in 1911, an appointment which he still held at the time of his death. During the war he was appointed a member of the Italian Medical Commission in London to deal with the examination of recruits and reservists called up for military service, and was rewarded by being nominated a Cavaliere of the Order of the Crown of Italy. He held numerous other appointments in London. Andrew Currie was a man of many attainments, a sound physician, and an accomplished linguist, speaking fluently Italian, German, and modern Greek, while his skill as a raconteur endeared him to his many friends, who will ever regard him in affectionate memory. He was taken ill with acute influenza on February 4th and died on February 19th. He was twice married.

Dr. FREDERICK WILLIAM SLINGSBY MANN died on February 25th, after having been engaged in general practice for thirty-five years in Revesby, Lincolnshire. Born in 1871, he received his medical education at the University of Durham and Queen's College, Birmingham, obtaining the diplomas M.R.C.S., L.R.C.P. in 1895. After holding the appointments of house-surgeon at the General Hospital, Birmingham, and resident medical officer at the City Infirmary, he removed to Revesby, where he built up an extensive practice, and was medical officer to the Revesby district of the Horncastle Union. For him his medical work was the outstanding interest, and to it he brought a charm of manner and a high degree of clinical skill which won for him widespread popularity, manifested by the large assemblage which attended his funeral. A member of the British Medical Association, he was highly esteemed by his colleagues, and much sympathy is felt with his widow, daughter, and son.

Sir WILLIAM WANLESS, whose death at his home in California was recently announced, was born at Charleston, Ontario, in 1865, and graduated in New York. The Board of Foreign Missions of the Presbyterian Church in the United States selected him for medical work in India in 1889, and for nearly forty years he devoted his energies to building up a large and efficient hospital and dispensary organization in Miraj, the capital of a small State in the Southern Maratha country in Western India. Starting with a building very little more than a mud hut, he erected in a few years a modern hospital, the construction of which he was able to supervise personally, having the necessary technical knowledge. Five branch dispensaries were subsequently brought into being. The annual total of operations rose to 6,000, the majority performed by Wanless, for the fame of the hospital spread, and patients travelled to it from the whole of Western India. His experience was made public in various papers on gastric and duodenal ulcer, and intestinal tuberculosis, as well as on other surgical topics. He inaugurated a medical school in connexion with the hospital, and more than 200 students graduated from it. The great value of his work was first recognized by the conferment on him of

the silver, and later the gold, Kaisar-i-Hind medal. Knighthood followed in 1928, when he retired. He received from the Aga Khan a warmly appreciative message of farewell in a silver casket, and money was raised for the erection of a tuberculosis sanatorium in the Deccan, to be named after him as a practical expression of the gratitude of India. He spent the few years of his retirement in California, where he continued actively to help on the work he loved by writing articles and speaking on its behalf.

Dr. JOHN TATE CREERY of Coleraine, Co. Derry, died on March 7th in his seventy-sixth year, just a week after the death of his wife. He was a son of Canon Andrew Creery, a distinguished minister of the diocese of Down and Connor, and his mother was Alice, daughter of John Tate. Dr. Creery graduated M.B., B.Ch. at Trinity College, Dublin, in 1880, and settled at Coleraine in October, 1882, being appointed dispensary medical officer two years later. In 1887 he married the daughter of Lieut.-Colonel T. Stering, who was killed at the Relief of Lucknow while spiking one of the enemy guns. While Dr. Creery carried on a busy general practice, he gave most devoted and faithful service to his poor dispensary patients. With him his patients' welfare always came first; his own health or any personal profit or gain was never considered. He found time to do a great deal of medical reading, and always took a deep interest in new medical knowledge. A keen B.M.A. man, he seldom missed a meeting. He was a past chairman of the North-East Ulster Division. In 1929 he read a paper entitled "Calcium and its intelligent use," which revealed a knowledge of the recent literature and a mental alertness which for a man of his age were remarkable. Dr. Creery was a perfect example of the old family practitioner, respected and loved by his patients, their friend and guide in trouble. He was very popular with his medical colleagues, many of whom from a wide area attended his funeral. Dr. Creery was an all-round sportsman, and in his earlier days played golf and football; he was also keen on hunting and rowing.

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

The Rede lecturer for 1933 is Sir Charles Sherrington, O.M., G.B.E., M.D., Honorary Fellow of Gonville and Caius, Wayneflete professor of physiology, and Fellow of Magdalen College, Oxford, who has chosen as his subject "Mechanism and the brain." It will be delivered in the Arts School on Wednesday, May 24th, at 5 p.m.

UNIVERSITY OF DURHAM

At the June Convocations the honorary degree of D.C.L. will be conferred on Lord Horder of Ashford, K.C.V.O., M.D., physician in ordinary to the Prince of Wales, and senior physician to St. Bartholomew's Hospital.

UNIVERSITY OF BIRMINGHAM

Professor J. T. J. Morrison, M.A., M.Sc., F.R.C.S., on his retirement from the chair of forensic medicine and toxicology, has been elected by the Court of Governors emeritus professor and a life governor of the University.

SOCIETY OF APOTHECARIES OF LONDON

Master of Midwifery

With reference to the examination for the Society of Apothecaries' diploma of Master of Midwifery, the Court has had under further consideration the qualifications—theoretical, practical, and administrative—which are necessary for the successful conduct of ante-natal and infant welfare clinics. It was considered desirable that a separate paper dealing with the application of the principles of public health and administrative practice to maternity and child welfare should be substituted for the present practice of including questions on these subjects in the obstetrics and paediatrics papers. In order that such a paper might meet adequately the needs of the situation it was felt that it should be set and marked by examiners specially chosen as having had wide experience in public health appointments. Arrangements to this end are now being made, and will come into force at the May examination.

LONDON INTER-COLLEGIATE SCHOLARSHIPS BOARD

Medical Scholarships

The London Inter-Collegiate Scholarships Board announces that an examination for fifteen medical scholarships and exhibitions, of an aggregate total value of £1,858, will commence on May 15th. They are tenable at University College and University College Hospital Medical School, King's College and King's College Hospital Medical School, the London (Royal Free Hospital) School of Medicine for Women, and the London Hospital Medical College. Full particulars and entry form may be obtained from the secretary of the Board, Mr. S. C. Ranner, the Medical School, King's College Hospital, Denmark Hill, S.E.5

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons has this week debated foreign affairs and the reduction of unemployment. The Agricultural Marketing Bill was read a second time and the Estimates for the Navy, Army, and Air Force were reported. In the House of Lords the Pharmacy and Poisons Bill was down for third reading and the Housing (Financial Provisions) Bill for second reading. A Select Committee of Peers was nominated to examine the Road Traffic (Compensation for Accidents) Bill. The Pharmacy and Poisons Bill passed the report stage in the House of Lords on March 16th without discussion.

The Estimates Committee of the House of Commons took evidence from a representative of the Board of Control, on March 21st, regarding expenditure under that body. A report will be made later to the House.

The Government has tabled a motion for the appointment of a Select Committee of both Houses to examine proposals for the future government of India.

The Parliamentary Agricultural Committee discussed, on March 21st, proposals for the compulsory treatment of all cattle to protect them against the warble fly.

The Budget will be opened in the House of Commons on April 25th.

The Gift Coupons Bill has been withdrawn.

Public Health and Local Expenditure

The Ministry of Health has issued a circular to local authorities enumerating which among the economies recommended by the Ray Committee on Local Expenditure should be acted upon. The circular remarks that

"the public health is not and cannot be a static service. Circumstances change and fresh needs develop as medical and health knowledge and practice grow. In such a service complete stagnation would be very false economy, and some measure of development and new expenditure is inevitable. An outstanding instance is the maternity and child welfare service."

In this circular the Minister indicates that he would regret if the appropriation of Poor Law infirmaries as general hospitals was not made where desirable on public health grounds. The Minister commends the remarks of the Ray Committee about the isolation of cases of scarlet fever. He has consulted the Board of Control about recommendations concerning that body, and communicates its views. He wishes further experience of the present arrangements before reconsidering the functions of the Board on the transfer of administrative duties to the Ministry. The Minister and the Board dissent from observations of the Ray Committee about the Mental Deficiency Service.

Social Services for Country Dwellers

During a debate on rural industries, on March 15th, Dr. O'DONOVAN said if village life and rural industries were to prosper there must be fostering care by the Government for the village labourer's wife. At present the social services at her disposal were impoverished. Every city had expensive buildings staffed by expensive experts for maternity and sickness. The country village had the country doctor and the village midwife working under great difficulties. The Government must return to the country in the form of social services some of the money they took from it. They must have services comparable to those received by town dwellers, and a first-class parish doctor.

Dr. ELLIOT, replying to the debate, said he appreciated Dr. O'Donovan's contention that social services should, to some extent, be available for the country dweller.

Milk for Expectant Mothers.—On March 21st Miss RATHBONE asked the Minister of Health whether he was aware that analysis of the reports of the medical officers of health showed that only about half the county councils and about a fourth of the borough councils exercised their power to provide milk for expectant mothers during the last three months of pregnancy and during lactation; and whether, in view of the high maternal mortality rate and the privation suffered by many mothers owing to their husbands' unemployment, he would urge on local authorities that they should all put this power into operation. Mr. SHAKESPEARE said that the information available to the Department indicated that such provision was made by at least 80 per cent of the county and borough councils. The Minister did not think the issue of a circular would be useful.

Deaths following Vaccinia and Vaccination in 1932.—Sir HILTON YOUNG informed Mr. Groves, on March 21st, that three death certificates were received in 1932 on which vaccination or vaccinia was mentioned as a cause of death. The ages of the deceased persons were 3 months, 5 months, and 6 months respectively. In addition, there were five cases in which the practitioner had entered vaccinia or vaccination as one of the causes of death, but where, in the course of the customary inquiries, it was ascertained that neither vaccinia nor vaccination had contributed to the fatal issue, and the original certificate was withdrawn. He further told Mr. Groves that three deaths were registered in 1932 as due to small-pox. In one of these some other disease was mentioned on the death certificate. The ages of the persons covered by the certificates were 3 weeks, 56 years, and 79 years.

Pulmonary Tuberculosis in the Navy.—Replying to Sir Bertram Falle, on March 15th, Sir EYRES MONSELL stated that the number of naval ratings and Royal Marines invalided during the year 1932 was 979. The number invalided with pulmonary tuberculosis was 190, and to 148 of these pensions were granted on the attributable to service scale.

Essex County Council Bill.—The Essex County Council Bill, which contains provisions for the licensing of establishments for massage and special treatment in the county and exempts establishments carried on by medical practitioners, was read a second time in the House of Lords on March 16th, and referred to a Select Committee.

Health Insurance Arrears due to Unemployment.—Sir HILTON YOUNG told Mr. Banfield, on March 16th, that all possible steps were being taken to ease the position of unemployed persons who would be in arrears next June as members of their approved societies under the National Health Insurance Acts. They had been informed by a leaflet of the changes arising under the provisions of the National Health Insurance Act, 1932. Arrangements had been made under which arrears due to unemployment might be redeemed by instalments at any time from now to the end of next November.

In reply to Mr. D. Grenfell, on March 16th, Sir HILTON YOUNG stated that no extension of the scope of voluntary insurance under the National Health Insurance Acts was in prospect. Persons who had been forced to leave insurable occupations had for the most part had an opportunity of becoming voluntary contributors under existing legislation.

Water Supply Schemes.—On March 20th Mr. SHAKESPEARE, replying to Sir P. Hurd, said that the Minister of Health was always ready to entertain applications for schemes of rural water supply, and his staff constantly advised local authorities on such schemes.

Gas Masks for Sewermen.—Replying to Mr. Hutchison, on March 16th, Sir HILTON YOUNG said local authorities were not required to keep gas masks to be worn by employees descending into sewers; they would not be effective in all cases of danger. It was the practice to make tests before men descended into sewers.

Chemical Treatment of Glasgow Sewage.—On March 21st Mr. SKELTON, replying to Mr. Kirkwood, said the Department of Health for Scotland had received no complaints regarding the action of the Glasgow Corporation in suspending the chemical treatment of sewage entering the Clyde from the sewage works at Dalmuir. The medical officer of health for Glasgow was of opinion that there had been no danger to public health from the action taken. The Corporation recently approved a recommendation that provision should be made in next year's estimates for the resumption of the chemical treatment of the sewage at the sewage works, from June 1st, 1933.

Notes in Brief

Complaints from residents in Chiswick concerning the odour arising from the Chiswick sewage works are being investigated, and it is hoped a remedy will shortly be found.

Medical News

Dr. B. D. Pullinger will read a paper on the action of radium as seen in the pelvis, at a meeting of the London Association of the Medical Women's Federation, on Tuesday, March 28th, at 8.30 p.m., in the Members' Common Room, B.M.A. House, Tavistock Square. The meeting is open to all medical men and women.

The annual meeting of the Society for the Study of Inebriety will be held at 11, Chandos Street, Cavendish Square, W., on Tuesday, April 11th, at 4 p.m., to elect officers for the session 1933–4, to receive the report of the council and financial statement, after which Dr. E. W. Adams will read a paper on "Unusual forms of drug addiction." Each member and associate is at liberty to introduce visitors.

The Seamen's Hospital Society announces that Part 2 of the post-graduate courses for ship surgeons—that is, tropical medicine and hygiene—will be held at the Hospital for Tropical Diseases, Endsleigh Gardens, W.C., and the London School of Hygiene and Tropical Medicine, W.C., from April 3rd to 28th. Further particulars on application to the secretary, Seamen's Hospital, Greenwich, S.E.

The Fellowship of Medicine and Post-Graduate Medical Association announces that a week-end course in clinical surgery will be held at the Royal Albert Dock Hospital on April 1st and 2nd. All-day instruction will be given, with special reference to the relation of technique and end-result, as judged by the period of disability in the shipping industry. There will be a demonstration of medical ophthalmology at the Royal Westminster Ophthalmic Hospital, Broad Street, on March 30th at 8.30 p.m. A course in uterine infections in obstetrics and gynaecology is given during the first and third weeks of every month at St. Mary Abbots Hospital, Marloes Road, W.8. The course is held from Monday to Friday inclusive. Individual clinics are available daily in almost every branch of medicine and surgery; a list of the clinics is available, and those wishing to attend must make previous arrangements with the Fellowship. Forthcoming courses include: psychological medicine at the Maudsley Hospital, an evening course in physical medicine at the London Clinic and Institute of Physical Medicine, a week-end course in gynaecology at the Samaritan Hospital, dermatology at St. John's Hospital, and a week-end course in cardiology at the Victoria Park Hospital. Details of all these courses can be obtained from the Fellowship of Medicine, 1, Wimpole Street, W.1.

An intensive post-graduate course in English for oto-laryngologists—theoretical and practical—will be held under the auspices of the Dozentenvereinigung of the University of Berlin from July 24th to August 4th, by Professors van Eicken, Bayer, Claus, Creuzfeldt, Flatau, Grosmann, Simons, and Stahl, and Drs. Bernhard, Halle, Lange, Loeb, and Vogel. As practical work will be specially emphasized the number of participants is limited to fifteen. Further information may be had from the secretary of the English section, the Dozentenvereinigung, Berlin, N.W.7, Robert Kochplatz 7.

The annotation on Joseph Priestley in the *Journal* of March 11th did not mention Priestley's stay in Warrington, where he wrote the famous *History of Electricity* and made many experiments. On March 17th a meeting to commemorate the bicentenary of his birth was held at the Old Academy, Warrington, under the joint auspices of the Warrington Society and the Warrington Philomathic Society. The Priestley room and the Priestley collection of books were on view during the evening.

The Trade Marks Committee, under the chairmanship of Viscount Goschen, has begun its investigations, and persons and associations who wish to submit suggestions or to give evidence are invited to communicate with the secretary, Mr. R. W. Luce, Industrial Property Department, Board of Trade, 25, Southampton Buildings, W.C.2. The committee was appointed by the Board of Trade to report whether any, and if so what, changes in the existing law and practice relating to trade marks are desirable.

Two articles on a topic that is much before the profession at the moment have lately been published. One is "The medical curriculum and the general practitioner," by Dr. Arnold Gregory of Manchester, in the February issue of the *University of Leeds Medical Society Magazine*, the other is "The medical curriculum as viewed by a country general practitioner," by Dr. H. R. Clouston of Huntingdon, Quebec, in the March issue of the *Canadian Medical Association Journal*.

An inquiry was held at the City Hall, Cardiff, on March 17th, by Dr. T. W. Wade, a medical officer of the Ministry of Health and the Welsh Board of Health, into the application of the Welsh National Memorial Association for authority to purchase and adapt large premises in Cathedral Road, Cardiff, for the purpose of a tuberculosis dispensary. Mr. Alban, general secretary of the association, stated that it was imperative to secure suitable property in the centre of Cardiff for a modern tuberculosis dispensary and clearing-house for treatment. The inspector, at the conclusion of the inquiry, stated that a report would be presented to the Ministry of Health.

Berlin has now the lowest birth rate in the world. In 1931 there were only 8.7 births per 1,000 of the population in Berlin, as compared with 14.7 in Paris, 15.8 in London, and over 20 in New York.

Dr. Mathilda Theyessen, who was the first medical student and the first woman doctor in Europe, has just celebrated her ninety-fifth birthday at Freiburg in Breisgau.

Dr. Souques, the Paris neurologist, has succeeded Dr. Meillière as president of the Académie de Médecine.

Professor Bohumil Prusik has been appointed director of the propaedeutical clinic in the Medical Faculty of the Charles University, Prague.

Brevet Colonel P. H. Mitchiner, T.D., R.A.M.C.(T.A.), has received the King's authority to wear the Insignia of the Third Class of the Order of St. Sava, conferred upon him by the King of Yugoslavia, in recognition of valuable services. Authority has also been granted to Dr. I. Ridge-Jones, *M.C.*, and Dr. I. D. Ramsay, O.B.E., to wear the *Insignia of the Fourth Class of the Order of* Al Rafidain, conferred upon them by the King of Iraq, in recognition of valuable services.

The late Mr. R. T. Richardson, solicitor of Barnard Castle, Durham, has bequeathed the bulk of his estate of £169,947 net personalty in trust for founding and endowing a cottage hospital and convalescent home in Barnard Castle.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, B.M.A. House, Tavistock Square, W.C.1.**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their *names, not necessarily for publication.*

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of proofs.

All communications with reference to ADVERTISEMENTS, as well as orders for copies of the *Journal*, should be addressed to the Financial Secretary and Business Manager.

The **TELEPHONE NUMBERS** of the British Medical Association and the *British Medical Journal* are MUSEUM 9861, 9862, 9863, and 9864 (internal exchange, four lines).

The **TELEGRAPHIC ADDRESSES** are:
EDITOR OF THE *BRITISH MEDICAL JOURNAL*, *Aitiology, Westcent, London.*
FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate Westcent, London.*
MEDICAL SECRETARY, *Mediocra Westcent, London.*

The address of the Irish Office of the British Medical Association is 18, Kildare Street, Dublin (telegrams: *Bacillus, Dublin*; telephone: 62550 Dublin), and of the Scottish Office, 7, Drumsheugh Gardens, Edinburgh (telegrams: *Associate, Edinburgh*; telephone: 24361 Edinburgh).

QUERIES AND ANSWERS

Exudation after Dermatitis of Leg

"G.P." (Surrey) writes: A man over 50 came to me having the skin of the right leg covered by a thick crust, extending from a few inches below the knee to within a few inches of the ankle. The mass of crust, which is of a dark-greenish colour, is about two and a half or three inches wide. When removed in parts by ointment (ung. pic. carb.) and oiling, the surface underneath is smooth, shining, and dry: little or no pain on pressure, and little or no irritation, except when leg is near fire. He says "matter" appeared through the crust at one time, but I have never seen any sign of it. He has had the crust for ten months, and before its appearance the skin was red and irritated. The great trouble in the treatment is the rapidity with which the thick crust forms; it returns almost in a night. What could be done to prevent this?

*** The crust which appears so quickly on the patient's leg is no doubt composed of dried serum, the exudation of which takes place very quickly through a damaged epidermis which refuses to form a horny layer in the normal way. Such cases are by no means uncommon as a sequel of attacks of dermatitis in the lower limbs. To train the epidermis to re-form the horny layer is often by no means easy. Sometimes support of the limb by means of elastoplast bandages, to compress the part and reduce the tendency to exudation of serum, is effective. They should not be kept on too long, and if they produce irritation themselves they are useless. Rest in bed also tends to reduce exudation, and is effective, but patients are usually reluctant to submit to this restriction. Sometimes the epidermis may be stimulated by painting with various fluids, such as dilute silver nitrate (5 grains to the ounce), or with a dye solution, such as Bonney's solution, which consists of 1 per cent. each of brilliant green and crystal violet in a mixture of equal parts of rectified spirit and water. But at best these cases are tedious in recovery.

Cement-block Houses

Dr. EDWARD JACOMB (St. Aubins, Jersey) writes: I should be grateful if any of your readers would state their experience of houses built of cement blocks (that is, sand and cement, *with a few stone chips mixed in*. There is some authority for saying that such blocks both absorb and exude moisture; that it is almost impossible ever really to dry them, even in the Tropics or with the aid of central heating; and that if they ever do become dry, they then crack. Many houses are now being built of such blocks; but, if there is any truth in the above assertions, they would not appear to be very suitable residences for persons suffering from, or liable to, rheumatism, lumbago, etc.

Phlebitis after Childbirth

"G. N. W." (Sussex) writes: I would be very grateful if anyone could suggest treatment for a woman who, since the birth of her child two years ago, has had what appears to be continual phlebitis of both long saphenous veins. At present only that portion of the vein which is situated in the lower third of the leg is involved. The vein can be felt as a hard and very painful cord, and the patient complains of cramp-like pains and a perpetual throb and ache. Elastoplast bandages, crêpe bandages, and applications of the usual sort have been useless. Of course, when the whole vein is involved (as it is occasionally) the patient is kept in bed, but at present she is up and about.

Income Tax

Cost of Locumtenent: Deduction

"OXON" had to employ a locumtenent owing to illness. He received £42 towards the total cost from an insurance company; premiums on the policy had not been treated as admissible expenses for income tax purposes.

*** He can deduct the whole cost—that is, not only the amount paid to the locumtenent in cash, but also the cost of his board. The amount received from the insurance company can be ignored in view of the fact that no allowance has been received for payment of the premiums.

Panel Committee Medical Charity

"S. C." explains that for the past three years a sum of money has been set aside by his Panel Committee. The accumulation has been invested in the names of three members "as trustees, and they can only apply the interest at the direction of the full committee," but there is no special deed of trust. Is the income of the fund exempt from tax?

*** Yes, provided it can be shown (*a*) that the income is held by a "body of persons or trust established for charitable purposes only," and (*b*) that the income in respect of which relief is claimed is "applied to charitable purposes only." The claim should be made to the Chief Inspector of Taxes, Cornwall House, Stamford Street, S.E. If the claim is not valid the untaxed interest received will be liable to assessment.

LETTERS, NOTES, ETC.

Memorial to Dr. Alfred Eichholz

We have received for publication the following letter signed by Lord Charnwood, president, National Institute for the Deaf; the Duke of Montrose, vice-president, National Institute for the Deaf, and president, Scottish Association for the Deaf; Lord Blanesburgh, chairman, Advisory Committee on the Welfare of the Blind; and Sir Beachcroft Towse, chairman, National Institute for the Blind: It has been suggested that a memorial should be raised to the memory of the late Dr. Alfred Eichholz, that remarkable man whose work, at the Board of Education, for handicapped children, and especially the blind and deaf, won him the esteem and affection of a host of friends throughout the country. May we ask you, Sir, for space to make this suggestion known, since there must be many who would be glad to take a part, however small, in such a memorial? Those who wish to subscribe should send their contributions to Mr. W. McG. Eagar, National Institute for the Blind, 224, Great Portland Street, W.1, or to Mr. A. J. Story, National Institute for the Deaf, 2, Bloomsbury Street, W.C.1, the honorary treasurers of a small committee which has been set up to carry out the proposal, and of which we are members. The sum raised in response to this appeal will be used as an endowment for the benefit of the blind and deaf, to whose welfare Dr. Eichholz in his life made so notable a contribution.

First Successful Caesarean Section in England

Dr. HERBERT R. SPENCER writes: In reply to Dr. Hayes Smith's letter may I say that the account of James Barlow's operation was communicated to the Medical Association by his contemporary Dr. Haighton, the distinguished lecturer on midwifery at Guy's Hospital, as a case of Caesarean section, which, according to Barlow's account, it undoubtedly was: "The integuments and the left rectus muscle being cut through, a small opening was made through the peritoneum at the upper part, and, by means of a probe-pointed bistoury, this membrane was dilated to the same extent as the external parts. The uterus was now exposed to view, and an incision, of the same length, was continued through it. The child presented with its breech, and was extracted through the artificial opening," etc. It suspicions of Dr. John Hull of Manchester (who was present at the operation) that Barlow, his "former pupil," mistook the membranes or the peritoneum for the uterus, and the statements of Mr. Hawarden (who, as will be seen, only "assisted" in the French sense of the word) cannot be held to invalidate Barlow's account. There were two Hawardens concerned in the case: the first, who came from Wigan, owing to the well-known danger of the operation, "declined taking any part in it, and he returned home." The other was the brother of the first, practised at Blackrod, and "assisted" at the operation. In his *Essays in Surgery and Midwifery* (1822), James Barlow, in republishing the case, adds the following note:

> "It may be requisite to state that, at the commencement of the operation, Mr. Hawarden was suddenly seized with a violent fit of syncope, which wholly incapacitated him from attending to the steps of the operation, and, having no other professional person present, I was obliged to be assisted by a female attendant."

Tuberculosis Dispensaries

The honorary secretary of the Paddington Tuberculosis Dispensary writes: I would be grateful if you could find space to correct a mistake which, through no fault of your reporter, has appeared in your issue of March 4th (p. 384). At the opening of the Theatrical Loan Exhibition at Dudley House it was said that Paddington Tuberculosis Dispensary, opened in 1909, was the first tuberculosis dispensary in *England*, which is true. Unfortunately, it was also said that Paddington Tuberculosis Dispensary and the Royal Victoria Dispensary, Edinburgh, competed for the honour of being the pioneer dispensary. This is impossible, as the Royal Victoria Dispensary, created by Sir Robert Philip, was opened in 1887 and was the first tuberculosis dispensary in the world. Every other tuberculosis dispensary, whether its founders choose to acknowledge it or not, is a copy of that original. Paddington Tuberculosis Dispensary was modelled on it, and almost every document we have issued contains an acknowledgement of our indebtedness. Sir Robert Philip is one of our vice-presidents, and we owe much to his kindness and his wise and helpful advice.

Treatment of Influenza

Dr. RICHARD KERRY (Montreal) writes: Your statistics on influenza (February 4th, p. 194) make one wonder how far this great economic loss and attendant distressing death rate are necessary. For many years I had recurring attacks of influenza, acquired in the out-patient department of the hospital. Since instituting treatment fifteen years ago I have had one attack, due to neglect, which aborted promptly when treatment was resumed. The method is simple. One drachm of 4 per cent. solution of carbolic acid is diluted with eight of warm water and taken up in a bulb syringe. With the head well thrown back the nasopharynx is filled with the fluid, which is retained for thirty seconds or more. The head is then lowered, the fluid allowed to run out, and the nose blown freely to remove mucus without closing the nostrils. The procedure is then repeated, the ounce of fluid being enough to fill the space twice. As is often the case in treatment, the choice of the remedy seems to be of less importance than the method of using it. The nasopharynx appears to be the point of entrance of influenza, and while local treatment will not be sufficient for late constitutional symptoms it will in the great majority of cases abort the disease and prevent them from occurring.

A Warning

Dr. JAMES G. M. HAMILTON (Edinburgh) writes: Some unknown person appears to have used my name recently to obtain money under false pretences in Blackpool. He obtained money for tickets for last Saturday's international Rugby match here, and told the buyer to call on "Dr. Hamilton" at the Royal Infirmary, Edinburgh, for the tickets.

We are asked to say that any member of the Association may obtain a free copy each month of *L'Orientation Médicale*, a medico-literary review published in Paris, by applying to the Continental Laboratories, 30, Marsham Street, London, S.W.1.

Vacancies

Notifications of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals will be found at pages 44, 45, 46, 47, 48, 49, 52, and 53 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 50 and 51.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page *111*.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

217 Aetiology of Asthma

F. M. RACKEMANN (*Arch. Int. Med.*, December, 1932, p. 819) has followed up a series of 213 " cured " asthmatic patients and reports his conclusions on their condition six years after their last treatment. He finds that the longer a series of such cases is kept under supervision the more evident it becomes that the prospect of a true " cure " is doubtful, though many patients remain free from symptoms for long periods. Of an original total of 1,074 such cases, the number of " cured " was 213 in 1928, but had fallen to 131 in 1932. The old dictum " once an asthmatic, a patient is usually a potential asthmatic for the rest of his life " appears to be true. Discussing the reasons for this the author points out that, as regards the good results obtained by treatment in the extrinsic group, all that has been done is to remove the trigger which initiated the attack ; the gun still remains loaded. Fundamental allergy is a remarkably persistent trait. The conception of the " capacity to develop sensitiveness," as a supplement to Pirquet's conception " capacity to react," seems justfied by the observation of patients over periods long enough to enable the observer to discover that they tend to develop sensitiveness to new substances in their environment. It is the " capacity " which is fundamental, but nothing is as yet known about its nature. Sinusitis is a common finding in asthma. Acute colds and sinus affections can cause asthma in short attacks, which last for the duration of the infection. Chronic sinus infections originate chronic asthma, which may be relieved for long periods by operations on the sinuses. In other cases, however, such good results have not followed radical treatment, and in some patients clinical recovery has occurred even though nasal polypi and other evidences of sinus infection were still present. There are also cases in which the sinus lesion is a complication which adds to the primary cause to produce a summation which in turn leads to asthma. In them neither the extrinsic factor alone nor the infection alone is sufficient to produce symptoms which depend on the presence of infection at the time of exposure to the foreign substance. The author asks the question whether the high incidence of sinusitis can be correlated with the capacity to develop sensitiveness. Is it possible that allergic tissue reactions tend to hold the infection, while immune serum reactions tend to destroy it? He insists that progress in knowledge will be more rapid as one learns that in asthma the fundamental problem lies not in the sensitiveness to any particular protein nor in the incidence and treatment of nasal disease, but in the study of the capacity to develop sensitiveness to foreign substances.

218 Alcohol as a Cause of Death

M. HINDHEDE (*Hospitalstidende*, October 27th, 1932, p. 1247) draws attention to the unwillingness of doctors to let any reference to alcohol appear on death certificates, lest they should reflect unkindly on the persons concerned. Owing to this inhibition the official statistics for Copenhagen in 1905 showed that only 6 per cent. of the deaths between the ages of 25 and 65 were due to alcohol. In order to get nearer to the truth a request was addressed by a commission on sobriety to all the medical practitioners in Denmark asking them to send in a private report on the cause of every death in 1905, and to indicate whether alcohol was the sole or a contributing cause of death. The returns thus obtained showed that 39 per cent. of all the deaths among men in Copenhagen between the ages of 25 and 65 were due solely or partly to alcohol. The author's present statistical study deals with selected periods before and after the war. The only important difference between the five-year pre-war periods 1900–4 and 1910–14, on the one hand, and the five-year post-war periods 1921–5 and 1926–30 was the reduction in the consumption of spirits in the post-war periods to one-seventh of what it was in the pre-war periods. Not only have the deaths openly ascribed to alcohol fallen in the post-war periods to one-seventh of the corresponding figure in the pre-war periods, but there has also been a remarkable drop in the general mortality among males in Copenhagen in the same years ; the author concludes that this drop reflects the growing sobriety of the male. But even in his last five-year period, 1926–30, he finds that the annual number of deaths from alcohol poisoning among males between 25 and 65 must be about 270 in Copenhagen, although death certificates put this number at only nine. He argues that the sole cause of the death rate among men being higher than that among women is the comparative addiction of the former to alcohol, and that it is not so much heavy drinking as moderate drinking that is responsible for the great number of premature deaths among men in Denmark.

219 Diphtheria Associated with Purpura Haemorrhagica

R. N. HOWARD (*Med. Journ. of Australia*, December 10th 1932, p. 723) records the case of a girl, aged 10, who was admitted to hospital with haematuria, numerous petechiae on the skin, and a haemorrhagic condition of the right tonsil with a few discrete whitish specks. A blood examination showed 2,300,000 red cells and 7,600 white cells per c.mm. No platelets were seen. The following day the patches on the tonsil became confluent, and a pure culture of diphtheria bacilli was obtained from a throat swab. Three doses of 20,000 units of diphtheria antitoxin were given and recovery was uneventful apart from an attack of otitis media. The case was not one of haemorrhagic diphtheria, since the child was not severely ill, nor were the diphtherial faucial lesions extensive. The condition appears to have been one of diphtheria occurring in a purpuric subject.

Surgery

220 Treatment of Minor Injuries of the Knee

Although it is admittedly true that an original slight injury to the knee-joint is very often the starting-point of an unstable joint, R. G. ATKINS (*Journ Royal Army Med. Corps*, January, 1933, p 16) believes that there is nothing inherent in such a lesion to cause such a sequel, and that the explanation is that these cases are not being treated on sound lines. In the fully extended position the integrity of the knee-joint depends largely on the normal condition of its ligaments, which prevent abnormal movement and form practically the whole strength of the joint. This extended position is maintained by the tonic contraction of the muscles round the joint. When the knee is in any other position this is maintained solely by the co-ordinated action of the muscles governing the joint, the ligaments other than the crucial ligaments being lax. A voluntary or reflex contraction of one group of muscles round a joint is normally accompanied by a reflex co-ordinated relaxation of the opposing muscle group. It follows, therefore, that any lack of co-ordination between opposing muscle groups is bound to throw a strain on ligaments which limit joint action. Since after injury to a joint there is reflex atrophy, with loss of reflex and voluntary control over the muscles, such a joint is particularly liable to further injury, and requires special care. In devising this it has to be remembered that the synovial fluid secreted after an accident is pathological, and its absorption is not on normal lines ; the

capsule of the joint is composed of inelastic fibrous tissue; at the site of any damaged structure there is capillary dilatation and resulting induration; peri- and intra-articular adhesions are liable to form; the lymphatics draining the joints are numerous; and there is a good nerve supply, the principal one being the nerve to the vastus internus, which it supplies before entering the joint. The author suggests a method of treatment consisting of exercises, contrast baths with alternating hot and cold water, and massage followed by a tight bandage fixed over an ample supply of wool. In order to get rid of the joint distension the active blood supply must be increased by muscular action which does not cause joint movement. The patient is therefore instructed to contract his knee extensors with the leg in the extended position; he also uses the muscles on the posterior aspect of the joint against a resistance. Douching with hot and cold water must be begun cautiously, and never for longer than two minutes at a time; a large area of the leg and thigh should be included. This obviates any chronic capillary dilatation and a consequent passive congestion. Massage aids absorption by the lymphatics. The author describes a simple exercise designed for re-education and co-ordination of the muscles. He believes that this line of treatment, carefully conducted, will diminish the number of cases admitted to hospital with recurrent injuries of the knee.

221 Prostatic Resection

A. E. GOLDSTEIN and C. S. LEVY (*Urol. and Cut. Rev.*, January, 1933, p. 55) record their observations on nineteen cases of prostatic resection in patients aged from 49 to 72. There were three deaths, two of which were directly due to the operation. Ten patients had serious complications following the operation, such as profuse haemorrhage, bronchopneumonia, or pyelonephritis. In fourteen there was some improvement, and eight had complete relief of their symptoms. The average stay in hospital was 27.7 days, with an average post-operative stay of 21.9 days. The authors recommend that post-operative cystoscopies and testing for residual urine should not be carried out until four weeks have elapsed from the time of the operation.

222 Correction of Bony Deformities after Artificial Softening

F. KRAUS (*Zentralbl. f. Chir.*, January 7th, 1933, p. 18) describes a case of a girl, aged 1½ years, who had marked bowing of all extremities as a result of rickets, and in whom he was able to correct the deformity after artificial softening of the bones. For a fortnight the following treatment was undertaken. Venous congestion was produced by bandaging the extremities with rubber bandages for twenty hours daily; all bone-forming foods and drugs were withheld, cod-liver oil, fresh vegetables, calcium preparations and sunshine being excluded. Ammonium chloride in doses of 0.2 gram per kilo of body weight was given in five doses daily. At the end of fourteen days the bones were soft but painful. The child was then anaesthetized, and at one sitting all the bones were bent into their correct alignment, and put up in plaster. The child was then given plenty of sunshine, ultra-violet radiation, and cod-liver oil. The actual results of the operation as shown by *x*-ray examinations were good. The temperature rose, however, the child became dyspnoeic; haemoptysis, convulsions, lipuria, and finally oedema of the lung occurred, and death ensued on the third day from fat embolism. The author points out that fat embolism is the great danger of this form of treatment; the risk might be obviated by correcting only one limb at a time, but in so doing the whole value of the procedure—a rapid correction of all deformities under one anaesthetic—would be lost. Krauss believes this form of treatment is indicated when there is only one deformity, for the procedure obviates the danger of bridge-forming callus which may restrict movement or involve one of the important nerves, as occurs when the more heroic form of fracturing and straightening the deformed bones is employed.

Therapeutics

223 Treatment of Anterior Poliomyelitis

SCHOTTMÜLLER (*Deut. med. Wach.*, January 13th, 1933, p. 43) is of the opinion that in future the method of choice for the treatment of anterior poliomyelitis will be transfusion of blood of persons who have recovered from the condition. Blood-transfusion has the advantage over serum therapy in that donors are more easily obtainable, while serum requires from six to twelve hours for its preparation. At the most 100 c.cm. can be introduced, whereas the serum equivalent of a blood transfusion is at least 250 to 500 c.cm. The author states that one litre of blood contains half a litre of serum. He remarks that persons who have recovered from anterior poliomyelitis contracted not more than two to six years previously are the ideal ones from whom to obtain blood. He has three universal donors who have declared themselves ready to give blood at any time, and he suggests that such a provision might be made in any large hospital. In the case of children from 1 to 2 years old the amount of blood to be transfused is 50 to 100 c.cm.; in those from 3 to 6 years 200 to 300 c.cm. are necessary. It will probably always be impossible to diagnose the condition in the very earliest stages, and thus it is of the greatest importance to introduce as much antitoxin into the patient as possible as soon as the meningeal symptoms make the diagnosis certain. This can only be done by giving a large blood transfusion from persons who have recovered. If the latter are not available the author suggests a blood transfusion from persons who have nursed or been in contact with patients suffering from anterior poliomyelitis.

224 Therapeutic Value of Blood Transfusion

While the transfusion of blood cannot be ranked as a panacea, W. R. ESDALE (*Canadian Med. Assoc. Journ.*, January, 1933, p. 57) remarks that it has particular value in haemorrhage and certain other conditions, but he hopes that the misleading Moss classification will be abandoned in favour of the original Jansky one. It is important to distinguish between a case of haemorrhage and one of surgical shock; in the first, rapid improvement follows transfusion, whereas in shock the recovery is slow or absent. Much of the blood in surgical shock is stagnant in the splanchnic vessels, which have lost their tone; there is also an increase in the permeability of the capillaries and smaller blood vessels which is unaffected by the injection of an isotonic salt solution of slight viscosity. For this condition a gum glucose solution is indicated; it is effective if given early before the vital centres are damaged, and is always the method of choice for an unconscious patient. Esdale enumerates the indications for blood transfusion as acute or chronic haemorrhage; as a pre-operative or post-operative measure in poor surgical risk cases; pernicious and severe secondary anaemias; the presence of a haemorrhagic diathesis in such diseases as haemophilia, purpura, thrombocytopenia, and melaena neonatorum; severe toxaemia following burns, erysipelas, acute intestinal intoxication, septicaemia, septic pneumonia, infectious diarrhoea, and carcinomatous cachexia and infection; carbon monoxide poisoning; infantile prematurity and debility; starvation in newborn infants, with dehydration and acidosis; and diabetic coma. The most dramatic results of transfusion are seen after severe haemorrhage, including ectopic gestation rupture, post-partum bleeding, and gunshot wounds of the abdomen. Esdale agrees with Titus that the routine typing of all obstetrical cases with a few potential donors would lessen the mortality and prove an excellent precaution. The mortality from transfusion is about 1 or 2 per 1,000 cases. The chief causes of death are the effects produced in the kidneys, liver, heart, and blood vessels by the breaking down and disposal of the foreign substance. The use of a universal donor without cross-matching is, according to Esdale, a very unwise and daring procedure. It is better to use a corresponding

type whenever possible. Brines, however, has concluded that cross-matching is unnecessary. In repeated transfusion, using the same donor, it is a wise precaution to cross-match the donor's cells and the recipient's serum previously, since reactions are more common after the second injection. The present author considers it reasonable to suppose that the titre of the recipient's serum changes after the addition of the donor's blood. By the transfusion of half a litre of blood an increase of half a million red blood cells and a 10 per cent. increase in haemoglobin may be anticipated; the white cell count is not appreciably affected. It is safe to transfuse before an operation a patient suffering from internal haemorrhage, since the blood pressure is not increased thereby. Reactions occur in 28 per cent. of cases, mostly in the form of chilly sensations; in 4 per cent. they are severe in character, generally attributable to errors of technique.

Dermatology

225 Treatment of Tuberculosis of the Skin

A. REYN (*Hospitalstidende*, November 17th, 1932, p. 1331) reviews the changes of opinion in recent years on the subject of tuberculosis of the skin and its treatment. Until quite recently local treatment was considered the most important, and constitutional treatment as only a subsidiary factor. The dietetic treatments associated with the names of Gerson, Hermannsdorfer, and Sauerbruch have induced certain writers in Germany to attach most importance to general treatment. At the present time the pendulum is swinging away from this tendency back to a greater appreciation of local treatment—a move, according to Reyn, in the right direction. In the ten-year period 1914–23, 957 patients were treated for tuberculosis of the skin at the Finsen Institute, local Finsen treatment being supplemented from 1914 onwards by universal carbon arc light treatment. In 1930 an analysis of this material showed that 735 were apparently cured, 75 were still undergoing treatment, and 147 had discontinued treatment. If these 147 patients who discontinued treatment prematurely are excluded from the analysis, it can be claimed for the remainder that 90.7 per cent. were apparently cured on discharge. It is true that as many as thirty-two relapsed and twelve developed new local lesions; but in all these forty-four cases recovery was ultimately effected. Turning to other methods of treatment, Reyn condemns Roentgen treatment as dangerous and unreliable, but he qualifies this judgement by measured praise of the modified form of Roentgen treatment recently introduced by Bucky. Reyn does not employ diathermy in this connexion, as in almost every case it is apt to leave bad scars and to be followed by recurrence of the disease if the treatment has not been sufficiently radical. At one time he was hopeful of sanocrysin treatment, but ultimately he was greatly disappointed by it, and his opinion of other forms of chemotherapy is no more flattering.

226 Recurring Erythema due to Phenolphthalein

MILIAN and MOURRUT (*Bull. Soc. Franç. de Derm. et de Syph.*, December, 1932, p. 1669) record a case (male) of an extensively disseminated erythematous affection, which occurred in attacks lasting five to ten days, disappearing in the interval, and then recurring with always an identical localization and aspect. On the palms and anterior surface of the wrists were found red or violet circinate polycyclic patches; these were confluent, covering the whole palm, and on one was noted a commencing bulla. The dermatitis was also present on the interdigital spaces, the dorsal surface of the hand at the thenar eminence, the side of the neck below the right maxillary angle, the penis, glans, scrotum, inner surface of the thighs, around the anus, below the knee on the anterior surface of the left tibio-tarsal region, and right foot. The dorsal surface of the penis was unaffected. The scrotum showed some weeping. Very superficial small erosions on the lingual borders and tip and an erythematous patch on the soft palate were also found. All the lesions were accompanied by a moderate pruritus, insufficient to prevent sleep. Since the condition was analogous to that caused by antipyrine, and since similar cases due to the absorption of phenolphthalein had been reported, a like aetiological factor was looked for. It was learnt that the patient had been in the habit of taking various proprietary medicines, each containing phenolphthalein, to cure chronic constipation. The erythema always appeared during periods of constipation—namely, when the drug was being taken—and did not entirely disappear in the intervals, a slight pigmentation persisting for a long time. As a marked lingual and commissural leucoplakia existed specific treatment was given. The authors believe that the condition is not due to an antigen-antibody reaction (incompatible with the localization of the symptoms) but to an alteration in the peripheral or central vaso-sympathetic system, caused by a previous disease such as syphilis (as seemingly in the present case), tuberculosis, etc. JOLTRAIN (ibid., p. 1672) cites a case of urticaria and eczema due to phenolphthalein, and G. SOLENTE (ibid., p. 1673) mentions that cases of erythema multiforme due to this drug have been reported in America.

227 Simplified Treatment of Ringworm of the Scalp

I. S. BARKSDALE (*Med. Journ. and Record*, December 21st 1932, p. 494) reports the results obtained in the treatment of eighty cases of ringworm of the scalp occurring among male negro school children. Realizing the difficulty and expense of treating such a large number of cases by means of *x* rays, a newer and simpler method was devised and thoroughly tested. The procedure associated a tuneacide, in the form of bismuth violet, with a keralytic agent, salicylic acid, using 70 per cent. alcohol as a solvent for both drugs. The formula used was as follows: bismuth violet (crystals), 1 gram; salicylic acid, 10 grams; and alcohol, 70 per cent. (rubbing alcohol); q.s. 100 c.cm This solution should be applied daily to the affected areas until healing commences, which is usually after the sixth to the tenth application. Depilation with *x* rays is unnecessary with this treatment, although better results are obtained if the hair is clipped short. The results were universally satisfactory in spite of the poor co-operation obtained from the class of patient treated.

Obstetrics and Gynaecology

228 *Interstitial Pregnancy*

Interstitial pregnancy is very rare, as much so as the ovarian form. J. L. LAPEYRE (*Gynécol et Obstét.*, December, 1932, p. 481) records a personal case and refers to one reported by Bonnet. In the former the pregnancy occurred in the right uterine horn, the treatment being resection of the horn with excision of the right adnexa only. In the latter the embryo was found in the left horn; subtotal hysterectomy was performed. Various theories as to the pathogenesis of this condition are mentioned, such as congenital, inflammatory, and new formation of diverticula and canaliculi. Four points characterize it histologically, the absence of a true decidua, the periovular tissue reacting by the production of decidual cells; the presence of masses of fibrin in which are the villosities; penetration of these, and invasion of the uterine muscle, which is constantly present The destructive action of the foetal elements favours rupture, and their destructive action on the walls of the vessels causes haemorrhage. Anatomical characteristics are: asymmetry of the uterus; asymmetrical insertion of the adnexa; and abnormal insertion of the round ligament which, generally outside the gravid horn, is found at other points. Rupture usually occurs, most frequently into the peritoneum, and secondary abdominal pregnancy is possible; more rarely the sac opens into the uterus or large ligament. Its site is most frequently postero-superior, and it usually occurs early from the first to

the fourth month. There is no pathognomonic sign of this condition, and the diagnosis is rarely made before rupture or intervention; an earlier diagnosis can only be confirmed by a biopsy. The diagnostic signs are menstrual cessation and the presence of a more or less painful firm palpable mass in the uterine horn, attached to the uterus by a large base. The differentiation from tubal and angular pregnancies depends on such points as the position and type of contraction of the uterus. The prognosis is always grave. Intervention before rupture is safe; after rupture the great danger is haemorrhage. An abdominal operation is always necessary; resection of the uterine horn with excision of the corresponding adnexa is the method of choice. Other measures such as hysterectomy may be advisable, the type of operation depending on the result of the biopsy, the state of the adnexa, the patient's age, and the number of previous pregnancies.

229 The Occipito-Posterior Position

J. D. MCQUEEN (*Canadian Med. Assoc. Journ.*, January, 1933, p. 42) reports that in a series of 632 obstetrical cases an occipito-posterior position was present in 217 (34 per cent.), a right posterior position occurring in 184, and a left in thirty-three. He suspects that several instances of the left posterior type may have been overlooked. Of these 217 patients 108 were primiparae and 109 multiparae. He condemns the routine use of instrumental rotation or podalic version with extraction as alternative methods to be followed in the treatment of this condition. He remarks that, provided the initial sacrifice is not too great, these methods may be best for those who have attained exceptional experience, dexterity, and judgement, but the fundamental principles of the mechanism of labour and the belief that nature still survives modern civilization will keep many from accepting these innovations as necessary in all cases of occipito-posterior positions. As regards their management and treatment he emphasizes the value of early diagnosis as a guide, for success in labour often depends on the conservation of the patient's energies during the first stage. The accoucheur should be continuously cognizant of the progress made, and any unnecessary operative intervention should at all times be deprecated. When no disproportion exists an occipito-posterior presentation will, with average uterine contractions and in the great majority of cases, rotate spontaneously to the front and be delivered naturally or with the aid of low forceps. When intervention becomes necessary manual rotation performed at the right time would appear to be the most natural, most simple, and the safest procedure to adopt. Manual rotation implies the rotation of the foetal back to the front by the combined action of the internal and external hands upon the shoulders, the rotation of the occiput by the internal hand through 180 degrees, and the holding of the head well flexed until engagement occurs as an occipito-anterior. Forceps should not be applied until the head is well engaged.

Pathology

230 Parathormone in the Production of Osteitis Fibrosa and Renal Calculi

F. MANDL and R. UEBELHÖR (*Zentralbl. f. Chir.*, January 14th, 1933, p. 68) describe the result of injecting guinea-pigs with parathormone. They were interested in the fact that a large percentage of cases of generalized osteitis fibrosa, which had successfully been operated upon, suffered from renal colic, and they believe that deposition of calcium in the urinary tract is a definite symptom of the disease. In their experiments male guinea-pigs were used. All received the same food during the period of investigation. Each animal was *x*-rayed; the bones were seen to be normal and there were no shadows in the renal region. Doses of 10 units of parathormone were injected into each guinea-pig daily for four weeks subcutaneously. The general condition of the animals deteriorated and they became thin and emaciated, but the injections had no effect on their appetite. Urinary stasis was produced in each case by clamping the penis with an elastic band for seven to twelve hours daily. At the end of one month the animals were again *x*-rayed, and the commencement of the typical bone changes of osteitis fibrosa were seen. They were then killed and examined. The liver was found to have undergone fatty degeneration. The bladder was dilated, and in one case the ureters were dilated. Although the *x* rays had shown no shadows in the renal region, a white hard crystalline mass was found round the pyramids. Microscopically, calcium cylinders were detected in the medulla, and the epithelium surrounding the pyramids was seen to be atrophied. The epithelium of Henle's tubules had undergone fatty degeneration, but the renal cortex was normal. No other pathological lesions were found. In control animals in which no parathormone was given, but in which urinary stasis was produced, no calcium was found in the renal pelvis. The authors conclude that they have demonstrated the presence of a cycle—namely, increased calcium production—generalized osteitis fibrosa—resultant formation of renal calculi.

231 Spread of Tuberculosis through the Cervical Lymphatics

E. SERGENT and I. GASPAR (*Presse Méd.*, December 21st, 1932, p. 1917) have been able to demonstrate the presence of Indian ink or of lipiodol, injected into the cervical glands of guinea-pigs previously infected with tubercle bacilli of low virulence, successively in the substernal and tracheo-bronchial glands and in the lungs. Indian ink took two or three weeks to reach the substernal glands, a month to reach the tracheo-bronchial glands, and two months to appear in the lungs. Lipiodol was demonstrable in the substernal glands in five to eight days, and along the trachea and in the tracheo-bronchial glands in twenty to thirty days. The authors suggest that the appearance of the Indian ink or the lipiodol at the sites and at the intervals indicated is evidence of spread through the lymphatics. Further, when lipiodol was injected, not into the glands, but under the capsule of the glands or in the soft periglandular tissues, it remained at the site of injection or was absorbed without being demonstrable along the trachea.

232 Destruction of Br. abortus in Milk by Pasteurization

S. E. PARK, R. GRAHAM, M. J. PRUCHA, and J. M. BRANNON (*Journ. Bacteriology*, December, 1932, p. 461) have made a study of the combination of temperature and time necessary under laboratory conditions to destroy *Br. abortus*. Cultures of two porcine strains, which had been grown for twenty-four to forty-eight hours at 37° C., were suspended in saline solution and added in varying amounts to sterile whole or skim milk in tubes. The tubes, either cotton-stoppered or hermetically sealed, were immersed in a constant temperature water bath for a given length of time, removed, placed immediately in iced water, and then submitted to cultural procedures to determine whether all the bacilli had been destroyed. Briefly, the significant results were as follows. When heated in hermetically sealed tubes, milk containing even 500 million organisms per c.cm. was sterilized in seven minutes at 144° C., and in fifteen minutes at 142° C. When heated in cotton-stoppered tubes the organisms were not destroyed so easily; milk containing 5,000 to 1,000,000 organisms per c.cm. was sterilized in thirty minutes at 144° C., but from milk containing 10 to 500 million per c.cm. *Br. abortus* could still be recovered after heating for this length of time at 144° C. The apparently greater resistance of the organisms in the open tubes is thought by the authors to be due to the formation of a milk film during heating, in which the organisms are protected. It is pointed out that in practice such massively contaminated milks as those employed in these experiments would rarely be encountered. (In this country the official temperature of pasteurization is 145° to 150° C. for thirty minutes.)

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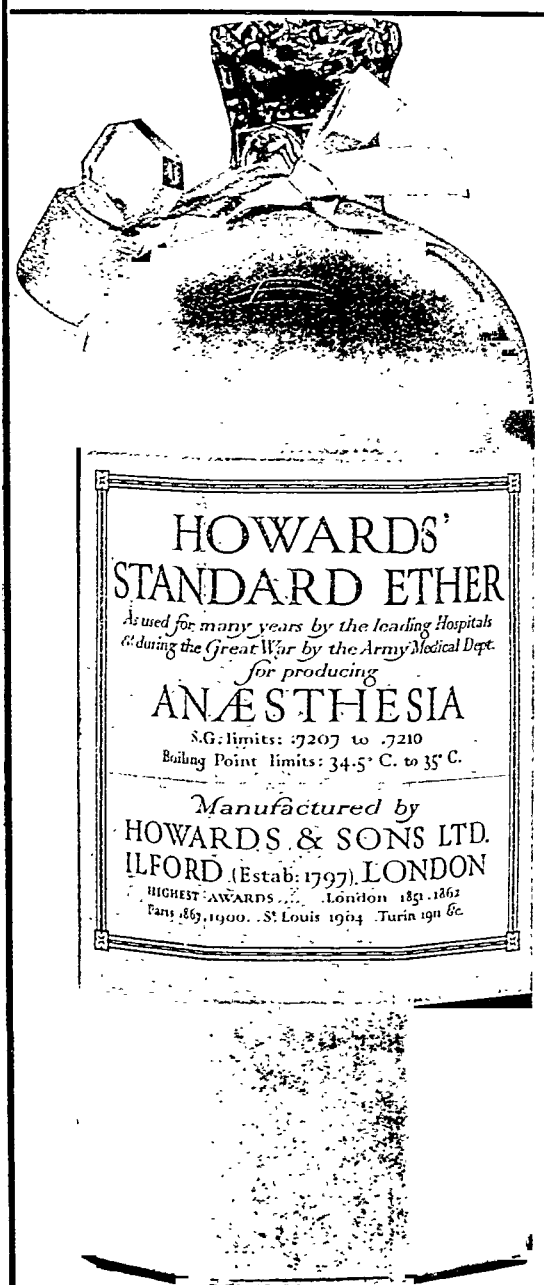

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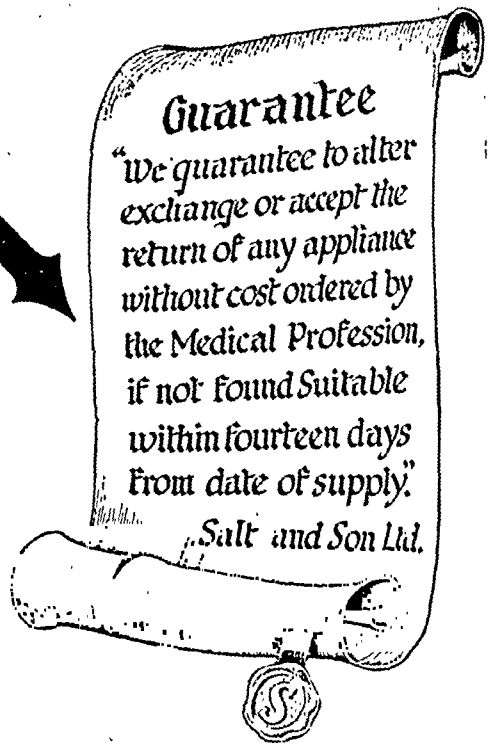

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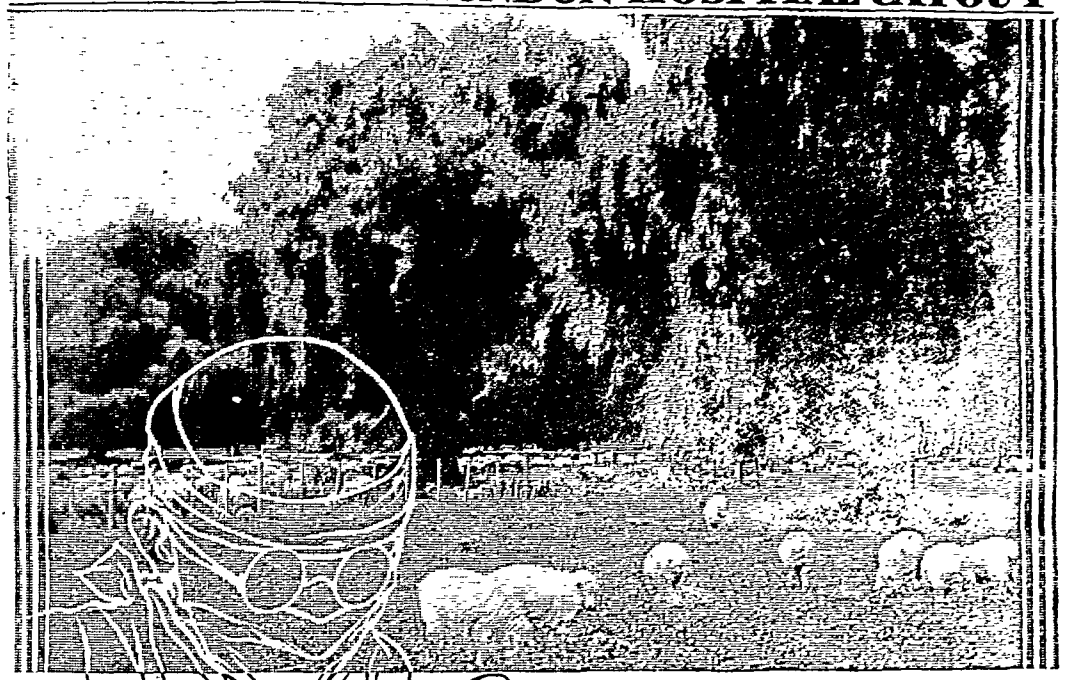

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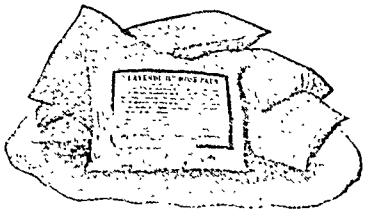

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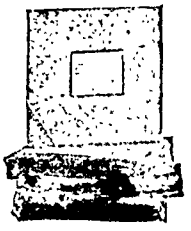

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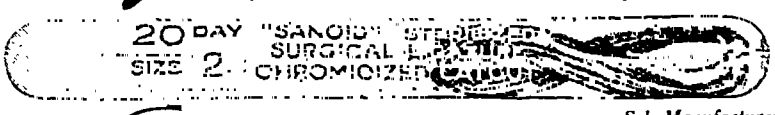

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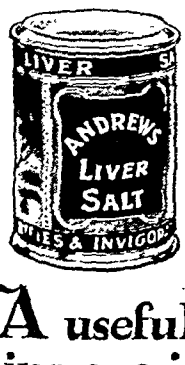

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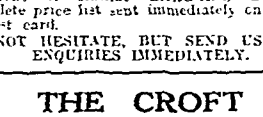

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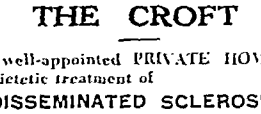

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This registered Hospital is situated in 120 acres of park and pleasure grounds. Voluntary patients, who are suffering from incipient mental disorders or who wish to prevent recurrent attacks of mental trouble, temporary patients, and certified patients of both sexes, are received for treatment. Careful clinical, biochemical, bacteriological, and pathological examinations. Private rooms, with special nurses, male or female, in the Hospital or in one of the numerous villas in the grounds of the various branches can be provided.

WANTAGE HOUSE.

This is a Reception Hospital in detached grounds, with a separate entrance, to which patients can be admitted. It is equipped with all the apparatus for the most modern treatment of Mental and Nervous Disorders. It contains special departments for hydrotherapy by various methods, including Turkish and Russian baths, the prolonged immersion bath, Vichy Douche, Scotch Douche, Electrical bath, Plombières treatment, etc. There is an Operating Theatre, a Dental Surgery, an X-ray room, an Ultra-violet Apparatus, and a Department for Diathermy and High Frequency treatment. It also contains Laboratories for biochemical, bacteriological, and pathological research.

MOULTON PARK.

Two miles from the Main Hospital there are several branch establishments and villas situated in a park and farm of 650 acres. Milk, meat, fruit, and vegetables are supplied to the Hospital from the farm, gardens, and orchards of Moulton Park. Occupation therapy is a feature of this branch, and patients are given every facility for occupying themselves in farming, gardening, and fruit-growing.

BRYN-Y-NEUADD HALL.

The seaside house of St. Andrew's Hospital is beautifully situated in a Park of 330 acres, Llanfairfechan, amidst the finest scenery in North Wales. On the North-West side of the Estate a mile of sea coast forms the boundary. Patients may visit this branch for a short seaside change or for longer periods. The Hospital has its own private bathing house on the seashore. There is trout-fishing in the park.

At all the branches of the Hospital there are cricket grounds, football and hockey grounds, lawn tennis courts (grass and hard courts), croquet grounds, golf courses, and bowling greens. Ladies and gentlemen have their own gardens, and facilities are provided for handicrafts, such as carpentry, etc.

For terms and further particulars apply to the Medical Superintendent (Telephone No. 2356 and 2357 Northampton), who can be seen in London by appointment.

THE COPPICE, NOTTINGHAM.

HOSPITAL FOR MENTAL DISEASES.

This Institution is exclusively for the reception of a limited number of Private Patients of both sexes of the Upper and Middle Classes at moderate rates of payment. It is beautifully situated in its own grounds on an eminence a short distance from Nottingham, and from its singularly healthy position and comfortable arrangements affords every facility for the relief and cure of those mentally afflicted. Voluntary and Temporary Patients received.

Tel. 64117. *For terms, etc., apply to the Medical Superintendent.*

COURT HALL, KENTON, EXETER,

SOUTH DEVON.

For the care and treatment of Ladies suffering from Mental Diseases. Limited to eight patients. Telephone: Starcross 59.

CLIFFDEN, TEIGNMOUTH, in connection with Court Hall, for early and convalescent cases. Cliffden is a large well-appointed house, with lovely views of the South Devon Coast. It is beautifully situated in grounds of 24 acres. The gardens are very attractive, and there is a private road to the beach.

Resident Physicians: BERTHA M. MULES, M.D., B.S.; ANNIE S. MULES, M.R.C.S., L.R.C.P. *Telephone*: Teignmouth 289.

TYKEFORD ABBEY, NEWPORT PAGNELL,

BUCKS.

FUNCTIONAL NERVOUS DISORDERS, MEDICAL & CONVALESCENT CASES.

An Approved Nursing Home for reception of Female Cases under the Mental Treatment Act.

The Home is a Mansion of Historical interest, standing in 9 acres of garden and grounds, and is situated 14 miles from Northampton, and 12 miles from Bedford on the main London to Northampton Road, fifty miles from London. Both sexes are accommodated. Psycho-therapeutic Treatment is used extensively in suitable cases. Radiant Heat, X-Ray, and Ultra-violet Light. Diathermy and Foam Baths. Billiards, tennis, etc. Fees from five gns. per week. Apply. Dr. D. E. M. DOUGLAS-MORRIS. Telephone: Newport Pagnell 121.

HAYDOCK LODGE,

NEWTON-LE-WILLOWS, LANCASHIRE.

'Phone: 11 Ashton-in-Makerfield.

For the reception and treatment of PRIVATE PATIENTS of both sexes of the UPPER AND MIDDLE CLASSES suffering from mental and nervous diseases, either voluntarily or under Certificate. Patients are classified in separate buildings according to their mental condition.

Situated in park and grounds of 400 acres. Self-supported by its own farm and gardens, in which patients are encouraged to occupy themselves. Every facility for indoor and outdoor recreation. For terms, prospectus, etc., apply MEDICAL SUPERINTENDENT.

CHISWICK HOUSE

A Private Mental Hospital for the Treatment and Care of Mental and Nervous Disorders in both Sexes.

Now removed to

CHISWICK HOUSE, PINNER, MIDDLESEX

Telephone: PINNER 234

A modern country house, 12 miles from Marble Arch, in beautiful secluded grounds. Fees from 10 guineas per week, inclusive. Cases under certificate and Voluntary Patients received for treatment. Special provision for "Temporary" patients under the new Mental Treatment Act.

Douglas Macaulay, M.D., D.P.M.

BARNWOOD HOUSE,

GLOUCESTER.

A REGISTERED HOSPITAL for the CARE and TREATMENT of LADIES and GENTLEMEN suffering from NERVOUS and MENTAL DISORDERS. Within two miles of the G.W. Railway and L.M. & S. Railway Stations at Gloucester, the Hospital is easily accessible by rail from London and all parts of the United Kingdom. It is beautifully situated at the foot of the Cotswold Hills, and stands in [illegible] grounds of over 280 acres. Voluntary Boarders of both sexes are also received for treatment.

Special accommodation for Lady Voluntary Boarders is also provided at the MANOR HOUSE, which has its own private grounds and is entirely separate from the main Hospital.

For particulars as to terms, etc., apply to—ARTHUR TOWNSEND, M.D., Medical Supt.

Telephone: No. 7 Barnwood.

THE LAWN, LINCOLN.

This registered Hospital, situated in large grounds near the Cathedral, receives VOLUNTARY and PRIVATE PATIENTS of both sexes for treatment of Mental and Nervous Disorders, including Post-Encephalitic conditions in adults. Special facilities for Psychotherapy in co-operative cases.

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Re [illegible] M.

FENSTANTON,

CHRISTCHURCH ROAD,

STREATHAM HILL, S.W.2.

A Private Home for the Care and Treatment of a limited number of Ladies with Mental and Nervous Disorders. Separate accommodation for Voluntary Patients. Large Mansion with 12 acres of ground. (See *Medical Directory* p. 2294.) Apply, J. H. EARLS, M.D., Resident Physician. Telephone: Tulse Hill 7181.

CLARENCE LODGE,

CLAPHAM PARK, LONDON.

Situated in 3½ acres of secluded garden.

HOME FOR TWELVE MENTAL PATIENTS (LADIES).

Well-appointed private house. Home comforts and Trained Nursing Staff. Eminent Metropolitan Specialist Visiting Physician.

Station: Clapham Common Tube. *Telephone*: Brixton 0434. Apply, Miss THOMAS.

STRETTON HOUSE,

Church Stretton, Shropshire.

A PRIVATE HOME for the treatment of Gentlemen suffering from Mental or Nervous Illness, including the allied disorders of Alcoholism and the Drug Habit. All types of early Mental and Nervous cases are received without certificates as Voluntary Patients under the provisions of the Mental Treatment Act, 1930. Bracing Hill country. See *Medical Directory*, p. 2314.—Apply to Medical Superintendent. 'Phone: 10 P.O. Church Stretton.

SPRINGFIELD HOUSE,

Near BEDFORD. (Phone 3417.)

For Mental Disorders with or without Certificates.

Resident Physician: CEDRIC W. BOWLES.

Ordinary Terms: Five Guineas per week.

(Including Separate Bedrooms where suitable.)

Interviews in London by appointment.

BETHLEM ROYAL HOSPITAL, for Nervous and Mental Disorders,

Monks Orchard, Monks Orchard Road, Eden Park, Beckenham, Kent.

Reg. Tel. Address: Bethlem, Beckenham. *Telephone*: Springpark 1180-1181

Station: Eden Park (Southern Railway).

President: LORD WAKEFIELD OF HYTHE, C.B.E., LL.D.
Treasurer: SIR LIONEL FAUDEL-PHILLIPS, Bart.
Physician-Supt.: J. G. PORTER-PHILLIPS, M.D., F.R.C.P.

This Registered Hospital is now situated at Monks Orchard, in some 250 acres of park, pleasure, and farm grounds. Applications can be considered on behalf of patients of the educated classes in a presumably curable condition. With a view to early treatment voluntary or uncertified patients are admitted.

Patients who can contribute 5 guineas weekly towards the cost of treatment and maintenance may be received as vacancies arise. The Committee will also consider applications for admission at lower rates, and in certain cases will be prepared to admit patients free of charge.

Every facility for specialized investigation and treatment is provided in the Lord Wakefield Science and Treatment Unit. In this unit is found the X-ray and Dental Departments and the Bio-Chemical, Pathological, and Psychological Laboratories.

Furthermore, provision is made for Electro-Therapy and Hydro-Therapy to be carried out in all their forms, and Occupational Therapy under competent instruction is encouraged.

In addition to the Resident Medical Staff, Consultants in special branches of Medicine and Surgery are available whenever required.

The comfort of sensitive patients is greatly enhanced by the fact that the majority are given single bedrooms.

For forms and further particulars apply to the Physician-Superintendent at the Hospital.

THE OLD MANOR SALISBURY

A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS.

Extensive grounds. Detached Villas. Chapel. Garden and dairy produce from own farm. Terms very moderate.

CONVALESCENT HOME at BOURNEMOUTH.

Detached Villas standing in 12 acres of ornamental grounds, with tennis courts, etc., which Voluntary, Temporary or Certified Patients may visit, by arrangement, for long or short periods.

Illustrated Brochure on application to the Medical Superintendent, The Old Manor, Salisbury. Telephone 51.

CAMBERWELL HOUSE, 33, Peckham Road, London, S.E.5.

Telegrams: "PSYCHOLIA, LONDON." **FOR THE TREATMENT OF MENTAL DISORDERS.** *Telephone*: RODNEY 4731—4732

Also completely detached Villas for mild cases, with private suites if desired. Voluntary Patients received. Twenty acres of grounds. Hard and Grass Tennis Courts, Putting Greens, Bowls, Croquet, Squash Rackets, and all indoor amusements, including Wireless and other Concerts. Occupational Therapy, Callisthenics, and Dancing Classes, X-ray and Actino-therapy, Prolonged Immersion Baths, Operating Theatre, Pathological Laboratory, Dental Surgery, and Ophthalmic Dept. Chapel. Senior Physician: Dr. HUBERT JAMES NORMAN, assisted by three Medical Officers, also resident and visiting Consultants.

An illustrated Prospectus, giving fees which are strictly moderate, may be obtained upon application to the Secretary.

The Convalescent Branch is HOVE VILLA, BRIGHTON, and is 200 feet above sea-level.

NORTHUMBERLAND HOUSE,

GREEN LANES, FINSBURY PARK, N.4.

Telegrams: "SUBSIDIARY, LONDON." *Telephone*: NORTH 0888.

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses. Conveniently situated four miles from Charing Cross. Easy access from all parts. Six acres of ground highly situated, facing Finsbury Park. Private Suites. Voluntary Patients and Temporary Patients received without certification.

Convalescent Home, **Kearsney Court, Dover.** For further particulars, apply to the **Medical Superintendent.**

PECKHAM HOUSE, 112, Peckham Road, London, S.E.15.

Telegrams: "Alleviated, London." Telephone: Rodney 4741-4742.

The above House, which was established in 1826, is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders. Certified voluntary and temporary patients are received. Separate houses for treatment and accommodation of special cases adjoin the Institution. There is a seaside branch, Kearsney Court, near Dover, to which patients may be sent for treatment or on holiday. Motor and carriage exercise is provided as required. Patients can avail themselves of a course of physical drill. Tennis Courts. Entertainments, dances, and indoor amusements held throughout the year. Terms from £3 3s. per week.

Illustrated prospectus and further particulars can be obtained from the MEDICAL SUPERINTENDENT.

CHEADLE ROYAL MENTAL HOSPITAL,

CHEADLE, CHESHIRE.

This REGISTERED HOSPITAL, with a SEASIDE BRANCH at Colwyn Bay, N. Wales, is for the treatment and care of those of the Upper and Middle Classes suffering from MENTAL and NERVOUS DISEASES.

The Hospital is governed by a COMMITTEE, appointed by the TRUSTEES of the Manchester Royal Infirmary.

In addition to the Main Building there are separate villas. Extensive grounds. Hard and grass tennis courts, cricket and croquet grounds, and a court for badminton. There are also wireless installations. Golf may be had within easy distance. Occupational Therapy.

VOLUNTARY, TEMPORARY, AND CERTIFIED PATIENTS received.

The Hospital is nine miles from Manchester, 50 minutes by rail from Liverpool, and 3½ hours from London.

For terms and further particulars apply to the Medical Superintent, J. A. C. ROY, M.B., who may be seen in Manchester by APPOINTMENT.

Telephone: GATLEY 2231 (3 lines).

DARTMOOR CONVALESCENT HOME. 750 FEET ABOVE SEA-LEVEL

Established 1903 for Treatment of Pulmonary and other forms of Tuberculosis. Sheltered Situation on the slopes of the Haytor Rocks. Radiographic Installation. Electric Light. Central Heating. Separate Bedrooms. Efficient Treatment combined with individual comfort and minimum restrictions. Illustrated Prospectus on request to the Resident Physician: C. H. BERRY, M.R.C.S., L.R.C.P., Torr House, Chagford, Devonshire. *Telephone*: 11 CHAGFORD. *Telegrams*: TORR, CHAGFORD.

LEICESTERSHIRE AND RUTLAND MENTAL HOSPITAL,
NARBOROUGH.

There are at present a few vacancies for gentlemen in the Private Block (Carlton Hayes).

The fees are two guineas a week excluding clothing.

Applications should be made to the Medical Superintendent at the Hospital.

ALCOHOLISM & OTHER DRUG HABITS.
THE HARE NURSING HOME.

As founded and established by the late Dr. FRANCIS HARE, for 20 years Med. Supt. of the Norwood Sanatorium, and author of "Alcoholism," etc.; for the treatment of ALCOHOLISM, other Drug Habits, Insomnia, Neurasthenia, Functional Nervous Disorders.

"THE OLD HILL HOUSE," CHISLEHURST, KENT.

Fees 5—10 guineas. Ample amusements. 25 bedrooms. Annexe for mild cases. Quiet and pleasant situation.

Ladies and gentlemen admitted for treatment. For prospectus, etc., write or 'phone: WALTER E. MASTERS, M.D., M.R.C.S., D.P.H., Barrister-at-Law (Res. Med. Supt.), Author of "The Alcohol Habit."

'Phone: Chislehurst 451. *Telegrams*: "Masters." Chislehurst.

EPILEPSY.

Owing to extensions there are at present a few Vacancies at the

DAVID LEWIS COLONY

for Ladies and Gentlemen who have Epilepsy, but are of good intelligence and sound mind.

Colony life gives to most people who have epilepsy the best chance of happiness and contentment.

Apply to the Medical Superintendent,

The David Lewis Colony, Warford, Alderley Edge.

HILL END AND HIGHFIELD HALL, ST. ALBANS.
(20 miles from London.)

Ladies suffering from all forms of Mental Illness are received for treatment on modern lines, as Voluntary, Temporary, or Certified Private Patients at the Hill End Mental Hospital. Convalescent and mild cases can be treated in a delightful country mansion, with extensive grounds, known as "Highfield Hall," situate about a mile away from the Hospital. FEES TWO TO THREE GUINEAS PER WEEK. For further particulars apply to the Medical Supt., W. J. T. KIMBER, L.R.C.P., D.P.M., Hill End Mental Hospital, St. Albans, Herts.

BOURNEMOUTH HYDRO,
with Vita-glass Sun-lounge and Marine Balcony.

Pyretic and
Every kind of Bath. Plombière Lavage.
Every kind of Massage. Ultra-violet Light.
Every kind of Electricity. Diathermy.
Every kind of Diet. Esseff Inhaler.
High Frequency. Electric Lift.

Prospectus from Secretary. *Tele.* 341.
Resident Physicians: W. JOHNSTON SMYTH, M.D. L. T. ROSE-HUTCHINSON, M.D.

THE GROVE HOUSE, CHURCH STRETTON, SHROPSHIRE.

A private Home for the care of and treatment of a limited number of Ladies, mentally afflicted. Voluntary and Temporary Patients received under the New Mental Treatment Act, 1930. —Medical Superintendent, Dr. MCCLINTOCK.

GREAT BRITAIN'S GREATEST HYDRO

SMEDLEY'S—MATLOCK

'Grams: "Smedley's Matlock." 'Phone: No. 17.
For prospectus and full information please write MANAGER, M.J.

Unrivalled suites of Baths for Ladies and Gentlemen, including Turkish and Russian Baths, Aix and Vichy Douches, Massage, Plombières Treatment, and Electric Installation for Baths and other Medical Purposes. Dowsing, Radiant Heat, Ultra-violet Ray, Frequency, Diathermy, Nauheim Baths for Invalids. "Certified" Milk from farm of 300 acres. Large Winter Garden. Soapless Foam Baths, etc. Special prices. Night Attendance. Rooms well ventilated and all bedrooms warmed in Winter. Large Staff (upwards of 60) of trained Male and Female Nurses, Masseurs, & Attendants. *Resident Physicians*: G. C. R. HARRISON, M.B., B.Ch., B.A.O., (R.U.I.); R. MAY LELLAND, M.D., C.M.(Edin.).

Northwoods, Winterbourne, BRISTOL.

'Phone & 'Grams: Winterbourne 18.

For further particulars and prospectus, apply to JOSEPH CATES, M.D.

This beautiful mansion in fifty acres of secluded grounds was built specially for the TREATMENT OF MENTAL ILLNESS. Certified patients of both sexes. Thorough clinical, bacteriological, and pathological examinations. Separate bedrooms. Private suites. Indoor and outdoor amusements. Wireless and other concerts. Occupational therapy. Physical drill. Private golf course. Garden and dairy produce from farm on the estate. A few voluntary patients are received in the Medical Supt.'s house. Terms from 4 to 6 guineas a week.

CALDECOTE HALL
Nr. NUNEATON, WARWICKSHIRE.

Phone. NUNEATON 241.

Particulars may also be had from the Secretary, 40, Marsham Street, London, S.W.1.

ALCOHOLISM, NEURASTHENIA, Etc.
(For Men)

At this beautifully situated country mansion in Warwickshire (2 hrs. from London on L.M.S.R.) the residential treatment of Alcoholism, Neurasthenia, Insomnia, and Nervous breakdown is carried out on the most modern principles under the supervision of the Res. Med. Supt. Recreation and graduated occupational therapy are available in the extensive secluded grounds. Prospectus from A. E. CARVER, M.D., D.P.M., Resident Medical Superintendent.

ALCOHOLISM, DRUG HABIT, NEURASTHENIA, etc.
BAY MOUNT, PAIGNTON.

ESTABLISHED 1922. *Phone*: PAIGNTON 5110.

A comfortable private HOME, charmingly situated overlooking Torbay, near Torquay. Main line 3½ hours from Paddington. Both Ladies and Gentlemen admitted as voluntary patients. The treatment is the outcome of many years experience, and besides removing all craving for drink and drugs, it has a tonic action on the system, and the general health is improved. Alcohol and drugs reduced gradually, without suffering.

FUNCTIONAL NERVOUS DISEASES AND NEURASTHENIA are also treated with excellent results. Cases with insomnia, depression, etc., do especially well.

Exceptionally good climate and ample and varied amusement. Moderate, inclusive terms. Prospectus, etc., from STANFORD PARK, M.B., Ch.B., Res. Med. Supt., Bay Mount, Paignton.

ALCOHOLISM & DRUG HABIT
DALRYMPLE HOUSE, RICKMANSWORTH, HERTS.

For the treatment of GENTLEMEN. Estab. 1883 by an Association of prominent medical men and others for the study and treatment of alcohol and drug abuse. Large secluded grounds on the bank of the River Colne. Voluntary Patients can be received under the Inebriates Act. Full-sized billiards, tennis, croquet, bowls. Golf (Moor Park, Sandy Lodge) close by. For particulars apply to—F. S. D. HOGG, M.R.C.S., &c., Resident Med. Supt. Telephone: 16 RICKMANSWORTH.

SHAFTESBURY HOUSE,
FORMBY-BY-THE-SEA, Nr. LIVERPOOL.

Specially built and licensed for the care and treatment of a limited number of Ladies and Gentlemen suffering from Nervous and Mental breakdown. Voluntary and certified patients received. Ladies also admitted as "Temporary Patients" without certification. Terms moderate. Apply, RESIDENT PHYSICIAN. Tel.: No. 8 Formby.

PEEBLES

In the winter garden of Scotland, facing the sun, 600 feet up. Tonic air, beauty in every landscape from sheltered balconies. Dancing, winter garden, swimming bath, tennis, badminton, golf, fishing. Fully licensed. Modern baths installation. Physio-therapeutic, massage, electrical treatment, ultra-violet radiation. Physician in attendance. Write for prospectus.

Among the Pine-clad Border Hills,
PEEBLES HYDRO, PEEBLES, SCOTLAND.

Patients of both sexes with any disorder to which PSYCHOTHERAPY is applicable are received for treatment at ELMSLEIGH, BASSETT, SOUTHAMPTON. Domestic arrangements well ordered and surroundings pleasant. Terms and particulars from T. A. HAWKESWORTH, M.B.

Doctor's widow in North London
having large house, garden, car, good staff, would like some PAYING GUESTS. Furnished bungalow at the Sea. Terms moderate.—Address, No 371, B.M.A. House, Tavistock Square, W.C.1.

BAILBROOK HOUSE, BATH.

A PRIVATE HOSPITAL for the care and treatment of persons with mental and nervous disorders.

Voluntary Patients received in the Villa. Large Mansion on outskirts of Bath, with 20 acres of grounds (see *Medical Directory*, page 2306.)

For terms apply S. J. GILFILLAN, O.B.E., M.B., C.M.Edin., Resident Physician. Telephone No: Batheaston 8189.

WYE HOUSE, BUXTON.

For the treatment of Ladies and Gentlemen mentally afflicted. Voluntary Boarders received. Situated 1,200 ft. above sea level, facing S. 14 acres of grounds. — For terms apply to the Resident Medical Superintendent. Nat. Tel. 152. W. W. HORTON, M.D.

Tel. and Telegrams: "Haynes, Brentwood, 45."

Littleton Hall, Brentwood, Essex.

Large grounds, 400 ft. above sea. HOME for ladies Mentally afflicted. Voluntary Boarders received. Station: Brentwood and Shenfield 1 mile. Liverp'l St. 25 min. Apply, Dr. HAYNES.

An Invitation to Visit

HARROGATE

Members of the Medical Profession are cordially invited to pay a visit to this BRITISH Spa. Concessions available include free use of the Baths and Waters, Golf, Concerts, etc. Considerable reductions off hotel bills, Motor-Coach Excursions, Tennis, etc.

Pullman and Fast Restaurant Car Trains
Daily from King's Cross Station, London.

For full details apply to F. J. C. BROOME, General Manager, 3, The Royal Baths, Harrogate.

TOR-NA-DEE SANATORIUM
MURTLE DEESIDE ABERDEENSHIRE

Medical Director: David Lawson, M.D., F.R.S.E.

FULLY EQUIPPED WITH EVERY MODERN APPLIANCE FOR THE DIAGNOSIS AND TREATMENT OF ALL FORMS OF TUBERCULOSIS & ALLIED DISEASES

Physician Superintendent. J. M. JOHNSTON, M.B., D.P.H., etc.

Full particulars and Prospectus on application to the Secretary.

Inclusive Terms: SEVEN GUINEAS A WEEK.

VALE OF CLWYD SANATORIUM

This Sanatorium is established for the treatment of TUBERCULOSIS of the LUNGS and the PLEURAL CAVITIES. It is situated in the midst of a large area of park-land at a height of 450 feet above sea-level on the south-west slopes of mountains rising to over 1,800 feet, which protect it from north and east winds and provide many miles of graduated walks with magnificent views. Average rainfall 29.57 per annum. Full day and night nursing staffs. X-ray plant. Every facility for Artificial Pneumothorax and for operations on the chest. Electric lighting. Central heating. Home farm. Clean milk from T.T. Herd. For particulars apply to Medical Superintendent, H. MORRISTON DAVIES, M.D., M.Ch.Cantab., F.R.C.S., Llanbedr Hall, Ruthin, N. Wales.

PENDYFFRYN HALL SANATORIUM
PENMAENMAWR.

Established 1900 for the treatment of Tuberculosis. *Miles of carefully graduated walks through pine-clad hills, with* sea and mountain views. Modern treatment, including ARTIFICIAL PNEUMOTHORAX, SANOCRYSIN, etc. *X*-ray plant, electric light, central heating, wireless. Special milk supply from tuberculin-tested herd. Full day and night nursing staff. On L.M.S. Main Line to Holyhead, 4¼ hours from London. Resident Physicians: DENNISON PICKERING, M.D.(Cantab), J. A. HENNESEY, M.B., Ch.B.; Matron: Miss S. A. EDDY, S.R.N., Late Sister-in-Charge, Royal Hospital Annexe, Sheffield.

For particulars apply to the SECRETARY, Pendyffryn Hall, Penmaenmawr, N. Wales. ('Phone, 20.)

THE COTSWOLD SANATORIUM

First opened in 1893 and rebuilt in 1925. On the Cotswold Hills, seven miles from Cheltenham, for the treatment of Pulmonary and all other forms of Tuberculosis. Aspect S.S.W., sheltered from North and East, elevation 800 feet. Pure bracing air. **Special Treatment by artificial Pneumothorax (X-ray controlled), Tuberculins, Medicated Inhalations by means of the Apneu Inhalation Installation, and Ultra-Violet Rays** is available, when necessary, without extra charge. X-ray plant. Electric light. Radiators, hot and cold basins, and Wireless in all rooms.

Full day and night Nursing Staff.

Medical Superintendent: GEOFFREY A. HOFFMAN, B.A., M.B., T.C.Dub. *Assistant Physician*: MARGARET A. HARRISON, M.B., B.S.Lond.
Consulting Laryngologist: SIDNEY BERNSTEIN, M.R.C.S.Eng., L.R.C.P.Lond. (Attends Regularly)
Apply: The Secretary, The Cotswold Sanatorium, Cranham, Gloucester. *Telephone*: 41 WITCOMBE. *Telegrams*: "HOFFMAN, BIRDLIP."

KINGUSSIE, N.B.

THE GRAMPIAN SANATORIUM.

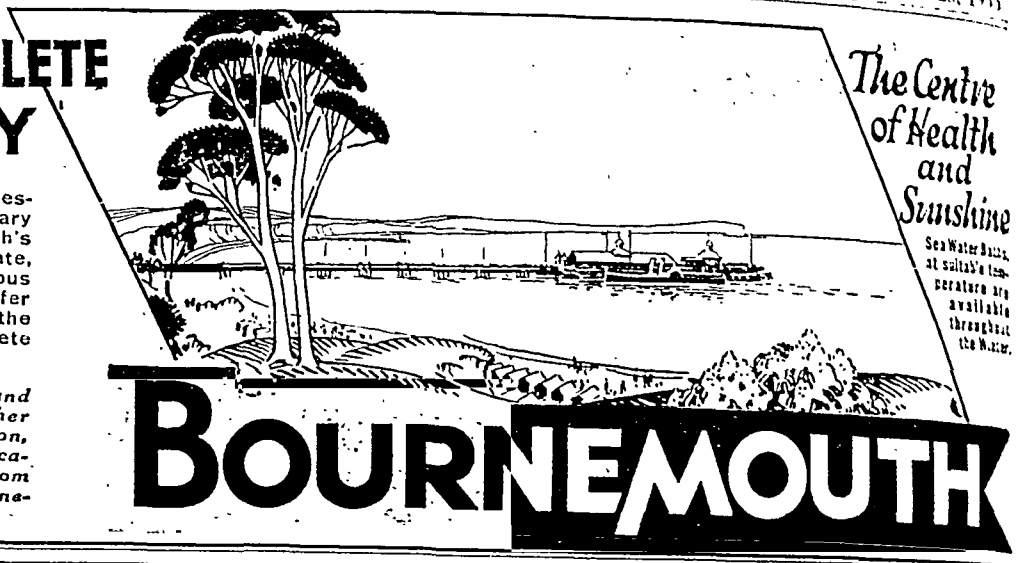
Situated in the upper Speyside district of Inverness-shire, one of the biggest inhabited districts in Britain—"The Switzerland of the British Isles." Bracing and dry mountain climate. Well sheltered Sanatorium specially built for the Open-air Treatment of Tuberculosis, opened in 1901. Elevation 850 ft. above sea level. Extensive pine-clad hillsides and walks. Open shelters. Central heating. Fully equipped X-ray Plant. All forms of treatment available, including Artificial Pneumothorax and Ultra-Violet Rays for surgical cases of Tuberculosis. Terms: £4 7s. 6d. to £6 6s. per week inclusive. No extras.

MEDICAL SUPT.: FELIX SAVY, M.D. For particulars apply to the Secretary.

FOR COMPLETE RECOVERY

To sufferers in the convalescent stages of pulmonary disorders, Bournemouth's temperate, sheltered climate, and the healthy resinous perfume of the pines, offer material assistance in the progress towards complete recovery.

The Illustrated Guide and Register of Hotels, together with any other information, will gladly be sent on application to the Town Clerk, Room 109a, Town Hall, Bournemouth.



The Centre of Health and Sunshine

Sea Water Baths at salt's temperature are available throughout the Winter.

BOURNEMOUTH

BAD KISSINGEN

Season from February 1st — to November 30th. —

DIAGNOSIS:—Diseases of the stomach, intestine, liver and gall organs, heart and vessels, gout, diabetes and obesity. Chronic diseases of the respiratory organs, women's diseases, rheumatism, blood diseases, and consequences of tropical diseases.

METHODS OF CURE:—Drinking fountains of ferruginous mineral water containing common salt, earthy saline, and earthy sulphate. Bathing fountains of natural gaseous brine, mud-baths, fango treatment, vapour baths, and hydrotherapy, graduation works, inhalers, pneumatic chambers, light baths, medico-mechanical Zander institute, Swedish hygienic gymnastics, country cure, sanatoriums.

Prospectus through the Kurverein.

FOR PRIVATE DRINKING CURES:—

RAKOCZY FOUNTAIN for the stomach, intestine, liver and gall organs, gout, troubles of blood circulation, obesity.
MAX FOUNTAIN for chronic diseases of the respiratory organs.
LUITPOLD SPRING for anaemia, diseases of the glands, women's diseases.
Kissing Magnesia Salt Water dashed into the Rakoczy fountain.
Kissing bathing salts.

Kissing mineral waters for sale everywhere. List of sellers and literature through the Bäderverwaltung.

HOSPITAL FOR CONSUMPTION
AND DISEASES OF THE CHEST, BROMPTON, and FRIMLEY SANATORIUM.

PAYING PATIENTS RECEIVED.

BOTH MEDICAL and SURGICAL CASES.

4 to 8 guineas per week at the Hospital. 3 to 4 guineas per week at the Sanatorium.

APPLY TO THE SECRETARY:—BROMPTON HOSPITAL, S.W.3.

CRUISES

to MOROCCO, ALGERIA, SPAIN, MADEIRA, or NORWAY, and SHIPPING by all lines, or CONDUCTED TOURS to various countries, or INDEPENDENT TRAVEL anywhere. We can give you valuable advice about interesting and lovely places to visit. Write or call:

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- Specially ATTRACTIVE PROGRAMME
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A comfortable London Hotel, convenient for Harley Street and Nursing Homes.

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Grams: Cliflinton, London. *Tel.*: Welbeck 6881

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PRIVATE HOME FOR MENTALLY AFFLICTED LADIES. Ten only received. Apply, Medical Officer or Mrs. PEELE. *Telephone*: 2703.

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COMFORTABLE, REFINED NURSING HOME for invalids requiring rest, care, or supervision. Moderate charges.—3, Broadhurst Gardens, N.W.6. Tel.: Maida Vale 7102.

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Ladies and Gentlemen received for treatment under certificates, and without certification, as either VOLUNTARY or TEMPORARY PATIENTS, at a weekly fee of TWO GUINEAS and upwards.

NORTH-EAST LONDON POST-GRADUATE COLLEGE.

PRINCE OF WALES'S GENERAL HOSPITAL, N.15.

The Practice of the Hospital is limited to Medical Practitioners. Particulars from J. BROWNING ALEXANDER, M.D., Dean.

ABERDEEN MEDICAL SCHOOL.

A COURSE OF POST-GRADUATE STUDY in Eye, Radiology, and Skins will be held from April 18th to June 22nd, 1933, on Tuesdays and Thursdays at 3.15 p.m.

A Syllabus of the Lectures may be had on application to the Secretary, The University, Aberdeen.

UNIVERSITY OF DURHAM
COLLEGE OF MEDICINE,
NEWCASTLE-UPON-TYNE.

The degrees in Medicine, Surgery, Hygiene, and Dentistry, the Diploma in Public Health, the Diploma in Psychiatry, and the Licence in Dental Surgery of the University of Durham are open to men and women.

The SUMMER SESSION, 1933, will be commenced on WEDNESDAY, APRIL 19th.

Students can complete, at the University of Durham College of Medicine, Newcastle-upon-Tyne, the entire course of professional study required for the above degrees, diplomas, and licence; also for the Examinations of the Royal Colleges of Physicians and Surgeons and other Examining Bodies.

Hospital practice is carried out at the Royal Victoria Infirmary, a general hospital containing more than 500 beds, and there are facilities for the study of the various special subjects. General and Special Post-Graduate Courses are held.

Practical Midwifery can be studied at the Princess Mary Maternity Hospital, which contains 90 beds, with an annual indoor and outdoor attendance on 3,000 cases. Lectures are given on Psychological Medicine in the College of Medicine, and clinical instruction at the Mental Hospital, Newcastle. Clinical instruction in Infectious Diseases is given by the Medical Officer of Health in the City Hospital at Walkergate.

A Dental Department has been established, which includes a dental hospital, newly erected and equipped on the most modern lines, with abundant material for clinical teaching and facilities for training in practical dental mechanics.

Particulars may be obtained from the DEAN of the College.

POST-GRADUATION SCHOOL

Central London Throat, Nose and Ear Hospital

Gray's Inn Road, London, W.C.1

INTENSIVE COURSE of LECTURES and DEMONSTRATIONS,

including

ANATOMY AND PHYSIOLOGY CLASS — OPERATIVE SURGERY CLASS

PERORAL ENDOSCOPY CLASS — PATHOLOGY AND BACTERIOLOGY CLASS

will be given from 24th APRIL to 20th MAY, 1933.

THE COURSE IS ESPECIALLY SUITABLE FOR D.L.O. STUDENTS.

Full Syllabus of the Intensive Course and of the routine clinical work may be obtained from the Dean.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL
MEDICAL SCHOOL.

(FOUNDED 1816)

Telephone: TEMPLE BAR 1457. BROAD STREET, HOLBORN, W.C.2. (Near British Museum Station)

The Hospital has been rebuilt and contains 86 beds, including fourteen private rooms for paying patients. The new building has been specially designed for clinical teaching and post-graduate study.
Classes for the D.O.M.S. Examination Part I and II commence in March, 1933.

Out-patients are seen daily at 1.30 o'clock. Operations are performed at 3 p.m.
The Pathological and Bacteriological departments will be pleased to report on specimens sent in by Ophthalmic Surgeons or Hospitals.
Qualified medical practitioners and registered students may join at any time. For particulars apply to the Dean or Secretary at the Hospital.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE

(UNIVERSITY OF LIVERPOOL.)

COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on October 2nd, 1933, and January 3rd, 1934, and for the Diploma in Tropical Hygiene on January 11th and April 5th, 1934. (Candidates for the D.T.H. must possess the D.T.M. of this University.)

For particulars, apply to the Hon. Dean, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool.

M.D. THESIS

(Camb., Edin., Glas., Durham, &c.)

SKILLED COACHING, GUIDANCE, and ADVICE from Special Tutors, in conformity with the Regulations of the various Universities.

Apply for particulars and free booklet, "Hints on Writing a Thesis for the M.D. Degree," to the SECRETARY, Medical Correspondence College, 19, Welbeck Street, London, W.1.

STAMMERING, SPEECH DEFECTS.

BEHNKE METHOD. Estab. 1882. Cases now resident, treated at 39, Earl's Court Square, S.W.5, and in residence, in the Summer holidays, at Miss BEHNKE'S House on the Chilterns.

"Pre-eminent success in the education and treatment of stammering and other speech defects."—"Times."

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STAMMERING, CLEFT PALATE SPEECH, LISPING, &c. at Miss BEHNKE, 39, Earl's Court Sq., S.W.5.

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Principal: Mr. E. S. WEYMOUTH, M.A.(Lond.).

POSTAL OR ORAL PREPARATION FOR ALL MEDICAL EXAMINATIONS.

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M.D.(Lond.), 1901-32 (9 Gold Medallists during 1913-32)	368
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F.R.C.S.(Eng.), *Primary* 1919-32	146
Final	155
M.R.C.P.(Lond.), 1919-32	215
D.P.H. (*Various*) 1906-32 (Completed Exam.)	316
F.R.C.S.(Edin.), 1918-32	53
M.R.C.S., L.R.C.P. *Final* 1919-32 (Completed Exam.)	456

M.D. Various. By Thesis. Numerous successes.

Preparation for the above; also for Medical Preliminary, and all examinations leading up to M.R.C.S., L.R.C.P., or M.B. of various Universities; also for M.R.C.P.(Edin.), D.P.M., D.O.M.S., D.T.M. & H., D.L.O., D.G.O., D.M.R.E., M.M.S.A., L.M.S.S.A., etc. Many successes.

ORAL CLASSES.

M.R.C.P., M.D., Primary and Final F.R.C.S., F.R.C.S.(Edin.); also Final M.B., B.S., and M.R.C.S., L.R.C.P. Museum and Microscope Work. Also Private Tuition.

MEDICAL PROSPECTUS (48pp.)

CONTENTS:—The method and the cost of examination. *Particulars of all* [illegible] Courses, and Oral the Higher Medical [illegible] for the Higher Surgical [illegible] suggestions for the Special Diploma Examinations. Refresher Courses. Openings for Women. Hints for writing theses.

Medical Prospectus gratis along with list of Tutors, etc., on application to the Principal, Mr. E. S. WEYMOUTH, M.A., 17, Red Lion Sq., London, W.C.1. (Telephone: HOLBORN 6313.)

UNIVERSITY OF GLASGOW.

FACULTY OF MEDICINE.

Notice is hereby given that the number of Students to be admitted to the FIRST YEAR COURSES IN MEDICINE in October, 1933, will be limited.

Forms of application for permission to commence the study of Medicine then, may now be obtained from the undersigned. These forms must be returned by applicants not later than September 1st, 1933.

ROBERT BROUGH,
March, 1933. Registrar.

UNIVERSITY OF WALES.

THE WELSH NATIONAL SCHOOL OF MEDICINE.

Applications are invited for the appointment of INDEPENDENT LECTURER in Materia Medica and Pharmacology.

The appointment is a full-time one, and the salary is £750 per annum, plus Superannuation.

The duties commence on October 1st, 1933.

Further particulars of the appointment may be obtained from the Secretary, Welsh National School of Medicine, The Parade, Cardiff.

Twelve copies of application, accompanied by testimonials, are required, and must be received by April 25th.

S. C. EDWARDS, Secretary.

THE UNIVERSITY OF SHEFFIELD.

The University invites applications for the CHAIR OF PHYSIOLOGY, which is about to become vacant owing to the retirement of Professor J. B. Leathes, F.R.S. Salary £1,000—£1,200, according to qualifications. Applications should be sent to the undersigned (from whom further particulars may be obtained) not later than April 20th

W. M. GIBBONS, Registrar.

EPSOM COLLEGE.

A SIR WALTER BUCHANAN SCHOLARSHIP, present value £26 a year, is now vacant. Boys must be over 12 and under 14 years of age on January 1st, 1933. "This Scholarship is primarily intended for the sons of deceased or prematurely invalided Officers of the Indian Medical Service, but failing any such candidates, it may be granted to the sons of medical men of purely British parentage who are in necessitous circumstances and who have practised medicine for at least five years in India." The Scholarship is awarded at the discretion of the Council. Forms of application, obtainable from the Secretary, 49, Bedford Square, W.C.1, must be returned by April 14th, 1933.

ROYAL COLLEGE of PHYSICIANS of EDINBURGH
ROYAL COLLEGE of SURGEONS of EDINBURGH
ROYAL FACULTY of PHYSICIANS and SURGEONS of GLASGOW.

COPIES OF REGULATIONS for the TRIPLE QUALIFICATION (L.R.C.P.E., L.R.C.S.E., and L.R.F.P. & S.G.), and the DIPLOMA IN PUBLIC HEALTH, containing Dates of Professional Examinations for the year 1932-33, Curriculum, etc., may be had on application to the REGISTRAR, 49, George Square, Edinburgh, or to the REGISTRAR, 242, St. Vincent St., Glasgow.

(Incorporated 1505.)

Royal College of Surgeons of Edinburgh.

COPIES OF REGULATIONS for the FELLOWSHIP, LICENCE, HIGHER DENTAL DIPLOMA, and LICENCE in DENTAL SURGERY, containing dates of Examinations, may be had on application to—

49, George Square, Edinburgh. DAVID THOMSON, Clerk of the College.

CHARING CROSS HOSPITAL MEDICAL SCHOOL

LONDON, W.C.2.

M.R.C.P. COURSE.

A Course in Preparation for the July Examination for MEMBERSHIP OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON will be held, commencing on Monday, April 24th.

The Course will extend over ten weeks and will comprise daily instruction, including SPECIAL LECTURES AND DEMONSTRATIONS.

The course will be conducted by the Honorary Staff of the Hospital.

FEE: TWENTY GUINEAS.

Further particulars may be obtained from the Dean, to whom applications should be submitted.

BEIT MEMORIAL FELLOWSHIPS FOR MEDICAL RESEARCH.

Notice is hereby given that an ELECTION of JUNIOR FELLOWS will take place in July, 1933. The Fellows then elected will be required to begin work on October 1st. Junior Fellowships are of the annual value of £400; the usual tenure is for three years. Applications from candidates should be received by May 18th, though late entries will be accepted up to June 1st.

Forms of application, and all information, may be obtained by letter only, addressed to Professor T. R. ELLIOTT, M.D., F.R.S., Hon. Secretary, Beit Memorial Fellowships for Medical Research, University College Hospital Medical School, University Street, London, W.C.1.

SEAMEN'S HOSPITAL SOCIETY.

[illegible] FOR SHIP [illegible]

The Seamen's Hospital Society announces that Part 2 of these courses—i.e., Tropical Medicine and Hygiene, will be held from April 3rd to April 28th, 1933, at the Hospital for Tropical Diseases, Endsleigh Gardens, W.C., and the London School of Hygiene and Tropical Medicine, W.C.1.

Further particulars may be obtained on application to the Secretary, Seamen's Hospital, Greenwich, S.E.10.

ROYAL NORTHERN INFIRMARY, INVERNESS. (150 Beds.)

HOUSE SURGEON (male) wanted to commence duty on May 1st. The appointment is for six months. Salary at the rate of £100 a year, with board, residence, and laundry.

Applications, stating age, qualifications, etc., with copies of recent testimonials, to be sent not later than April 5th to ROBERT GILBERT, Hon. Secretary, 20, Church Street, Inverness.

POST GRADUATE STUDY

The Medical Correspondence College provides ample facilities, under highly qualified tutors, for oral, practical, and clinical instruction in preparation for the various higher qualifications, and for Post-Graduate Study irrespective of any examination.

Diploma in Psychological Medicine.
Diploma in Ophthalmology.
Diploma in Radiology.
Diploma in Laryngology, Otology, and Rhinology.
Diploma in Public Health.
Diploma in Tropical Medicine.
F.R.C.S.Eng., and all higher Surgical Examinations.
M.R.C.P.Lond., and all higher Medical Examinations.
M.D. Thesis of all Universities.

You can qualify for any of the above by our Courses of Combined Postal and Practical Courses.

Write at once stating your requirements to the Secretary, MEDICAL CORRESPONDENCE COLLEGE, 19, Welbeck Street, W.1.

WE SPECIALIZE IN POST-GRADUATE COACHING FOR ALL EXAMINATIONS.

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Special Classes for Pre-Medical and Dental Exams., Matric., and Prelims.
Chemistry, Physics, and Biology Labs.
MANCHESTER TUTORIAL COLLEGE, 327, Oxford Road, Manchester.

F.R.C.S.(Edin.).

Full PREP. COURSE with Anatomical (Cadaver and Living Model) and Surg. Path. Demonstrations, for next Exam., will commence shortly. POSTAL TUITION at any time.—H. C. GRAY, F.R.C.S., Surgeons' Hall, Edinburgh.

UNIVERSITY OF BRISTOL.

DEPARTMENT OF PREVENTIVE MEDICINE.

Applications are invited for a SENIOR PATHOLOGIST. Salary £700 per annum. Appointment to date from August 1st. Candidates who must be fully qualified and registered, must have specialised in Pathology and in Biochemistry, and have had considerable experience in a recognised Pathology Department. Applications should reach the undersigned from whom further particulars may be obtained, on or before April 20th.

WINIFRED SHAPLAND, Secretary & Registrar.

UNIVERSITY OF BRISTOL.

The University invites applications for the CHAIR OF PATHOLOGY (full-time). Applications should reach the undersigned, from whom further particulars may be obtained, on or before April 20th, 1933.

WINIFRED SHAPLAND, Sec. & Registrar.

SOUTHEND-ON-SEA GENERAL HOSPITAL, ESSEX.

(221 Beds—Six Residents.)

Applications are invited for the following posts, vacant on May 10th next, six months' appointments:

ONE CASUALTY OFFICER,
ONE HOUSE PHYSICIAN,
TWO HOUSE SURGEONS (Male only).

Salaries £100 per annum, with board, residence, and laundry.

Particulars of duties can be obtained upon application to the Joint Secretaries.

INDIAN MEDICAL SERVICE

Recruitment of European Officers.

Applications are invited from medical men for permanent commissions in H.M.'s Indian Medical Service. The terms offered include a gratuity of £1,000 on retirement after six years' service, or £2,500 after 12 years' service, together with free return passages for those who no longer desire to remain in the Service. In other respects the terms will be as detailed below.

Candidates must be European British subjects under 32 years of age at the time of application, and must be registered under the Medical Acts in force in Great Britain and Northern Ireland.

CAREERS.

The Indian Medical Service offers wide opportunities of medical experience, including clinical, preventive, specialist, and research work. At the beginning of his career an officer is employed on the military side, which has medical charge of the Indian Army. Promotion is on a time scale up to the rank of Lieutenant-Colonel, and by selection to the ranks of Colonel and Major-General. An officer may apply after one year's Indian Service to have his name registered for transfer to the civil side, from which appointments are made to Civil Surgeoncies, which are established at the principal civil centres to provide for the medical needs of civil officials and for general medical administrative purposes; to specialist (for example, public health and bacteriological) services; to research posts; and to professorships at the Medical Schools.

NOTE.—It is not possible to state at present what, if any, prospects of employment on the civil side will be open to Indian Medical Service Officers under the proposed new constitution for India.

PAY.

Owing to the state of the financial emergency at present prevailing in India it is proposed to subject the existing monthly rates of pay, which are as follows, to a temporary reduction not exceeding 5 per cent.

Rank.	Service in Rank.	Basic Pay.	Overseas Pay.	Year of Total Service.
		Rs.	Rs.	
Lieut.	—	500	150	1st
			150	2nd
			150	3rd
Capt.	(i) During first 3 years' service as Captain	650	150	4th
			£15	5th
			£15	6th
	(ii) With more than 3 and less than 6 yrs.' service as Captain	750	£25	7th
			£25	8th
			£25	9th
	(iii) With more than 6 years' service as Captain	850	£25	10th
			£25	11th
			£30	12th
Major	(i) During first 3 years' service as Major	950		
	(ii) With more than 3 and less than 6 years' service as Major	1100		
	(iii) With more than 6 years' service as Major	1250		
Lieut.-Col.	(i) Until completion of 23 years' total service	1500	£30	13th and over
	(ii) During 24th and 25th years' service	1600		
	(iii) After completion of 25 years' total service	1700		
	(iv) When selected for increased pay	1850		

EXTRAS.—In addition to the above rates various allowances are admissible for a large number of special appointments on both the military and the civil side which may be held by members of the Indian Medical Service. Special high rates of pay are also attached to the numerous administrative appointments open to officers in both branches of the Service.

ANTEDATES IN COMMISSION.

Any service rendered by an officer during the war as a medical or combatant officer, or in a position usually filled by an officer, may be counted as service for increments of pay, promotion, retirement and retired pay, but not for gratuity.

One half of any service in the ranks during the war may be counted as service for retirement and retired pay only.

Candidates possessing certain higher medical qualifications may be granted an antedate of one year in their commissions. Past service in certain hospital appointments may also render candidates eligible for an antedate of one year. Persons holding or about to hold resident posts at recognized hospitals may be seconded in those posts for a period not exceeding one year. The maximum period of antedate, secondment, or antedate and secondment combined, admissible under this paragraph, is limited to one year.

OUTFIT ALLOWANCE.

Officers on appointment will receive an allowance of £50 towards the cost of outfit.

PRIVATE PRACTICE.

With the exception of Administrative Officers, military or civil, and officers holding certain special appointments, officers are not debarred from taking private practice, so long as it does not interfere with their proper duties.

LEAVE.

Leave can be taken at reasonable intervals, and adequate rates of leave pay are provided. Extra leave (known as study leave), which may not exceed 12 months in all during an officer's service, may be granted to officers desirous of pursuing special courses of study of a post-graduate nature. During such leave, study allowance, at present fixed at the rate of 12s. a day in the United Kingdom, £1 a day on the Continent of Europe, and £1 10s. a day in the United States of America, is granted to an officer in addition to ordinary rates of leave pay.

PENSIONS.

The rates of pension are as follows:

	Per annum £
After 17 years' service for pension	400
,, 18 ,, ,, ,, ...	430
,, 19 ,, ,, ,, ...	460
,, 20 ,, ,, ,, ...	500
,, 21 ,, ,, ,, ...	540
,, 22 ,, ,, ,, ...	580
,, 23 ,, ,, ,, ...	620
,, 24 ,, ,, ,, ...	660
,, 25 ,, ,, ,, ...	700
,, 26 ,, ,, ,, ...	750
,, 27 ,, ,, ,, ...	800

These rates are subject to alteration on account of a rise or fall in the cost of living as compared with the year 1919 to an extent not exceeding 20 per cent. in all. At present a reduction of 8¼ per cent. is being made on this account.

There are additional pensions ranging from £65 to £350 per annum for officers who have held administrative appointments.

PASSAGES.

An officer on appointment is provided with free passage to India. The wives and families of officers who are married prior to the date of the officers' embarkation on first appointment will also be provided with free passage to India, subject to the payment of messing charges.

Officers and their families are also eligible for passage concessions under which they are granted a certain number of return passages home at Government expense during their service.

INSTRUCTION PRIOR TO EMBARKATION.

Officers are required to undergo courses of instruction at the Royal Army Medical College and at Aldershot, lasting approximately six months, prior to their embarkation for India on first appointment. Information as to the rates of pay admissible during this period and subsequently up to arrival in India is contained in the memorandum referred to below.

A memorandum giving full details regarding these appointments and forms of application may be obtained from the Under-Secretary of State for India, Military Department, India Office, London, S.W.1. The Selection Committee will meet at the India Office early in April next, and the selected candidates will be required to join a course of instruction commencing towards the end of April prior to sailing for India about November, 1933. Applications should be submitted as soon as possible.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.3.

The Committee of Management invite applications for the following posts:

ASSISTANT RESIDENT MEDICAL OFFICER. Candidates must have held a resident hospital appointment for not less than six months. Salary £150 per annum, with board and residence. The appointment is for six months in the first instance.

HOUSE PHYSICIANS. There are three vacancies for House Physicians. The duties include work in the Out-patient Department as well as in the Wards, and one of the selected candidates will also be appointed Assistant to the Tuberculosis Officer for the Local Tuberculosis Dispensary at the Hospital. The appointment is for six months, commencing May 1st, with an honorarium of £50.

JUNIOR HOUSE PHYSICIAN (MALE) AT THE SANATORIUM AT FRIMLEY. The appointment is for six months, commencing May 1st, with an honorarium of £50. At the expiration of his term of office, or in the event of a vacancy, the Junior House Physician will be expected to apply for, and, if appointed, to hold the post of Senior House Physician for a further term of six months.

Applications, with copies of testimonials, must reach the undersigned not later than Saturday, April 8th.

Brompton. FREDERICK WOOD,
March, 1933. Secretary.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.13.

Applications are invited for the posts of RESIDENT and ASSISTANT RESIDENT MEDICAL OFFICERS (vacant April 30th), male or female. The appointments are for six months and will expire on October 31st next. Board and residence are provided. Salaries at the rate of £175 and £120 per annum respectively, including £5 allowance for laundry. The duties of the R.M.O., are mainly surgical and those of the A.R.M.O. mainly medical. Personal canvassing not desired. Applications, with copies of three recent testimonials, to be sent to the undersigned not later than April 6th.

A. ERNEST WILKES, Secretary.

CITY MENTAL HOSPITAL, FULFORD, YORK.

ASSISTANT MEDICAL OFFICER (Deputy Medical Superintendent) required. Previous experience essential. Salary £400 p.a., rising by two annual increments of £25 to £450 p.a., with an additional £50 per annum if the selected candidate possesses a D.P.M., less a temporary deduction of £13 15s. p.a., with emoluments valued at £150 p.a., which include furnished house, board, laundry, and attendance. The appointment is subject to the provisions of the Asylum Officers Superannuation Act, 1909. Applications stating age, qualifications, experience, and
by copies of three re
sent to the Medical Superintendent.

THE ROYAL SURREY COUNTY HOSPITAL, GUILDFORD. (182 Beds.)

RESIDENT MEDICAL AND SURGICAL OFFICER AND REGISTRAR.

Applications are invited for the above post from Practitioners who have held post-graduate Medical and Surgical Hospital appointments for at least one year. The candidate appointed will be required to act as House Physician, to supervise the work of three House Surgeons, to perform such operations as may be deputed to him, and to take up the duties on April 1st. Salary £250 per annum, with board, residence, and laundry. Applications, accompanied by copies of testimonials, to be sent as soon as possible, to the Secretary-Superintendent, from whom further particulars may be obtained.

ROYAL SURREY COUNTY HOSPITAL, GUILDFORD. (182 Beds.)

Wanted, April 1st, HOUSE SURGEON. Salary £150 per annum, with board, residence, and laundry. Applications, stating essential particulars, with copies of testimonials, to be sent to the Secretary-Superintendent as early as possible.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.1.

Applications are invited for the post of HOUSE SURGEON (male) for six months from April 12th (first two months in Casualty and Out-patient Department). Salary at the rate of £120 per annum, with board and residence.

Applications, stating age, experience, and qualifications, accompanied by copies of four testimonials, to be sent to the undersigned not later than March 28th, from whom rules and other particulars can be obtained.

By Order of the Committee of Management,
W. H. SIDNELL,
March 6th, 1933. Secretary-Supt.

HULL ROYAL INFIRMARY. (367 Beds.)

Applications are invited from registered Medical Practitioners for the following posts (male):

ASSISTANT HOUSE PHYSICIAN. Vacant April 14th. Salary at the rate of £150 per annum, plus residence, board, and laundry.

HOUSE SURGEON at the SUTTON BRANCH HOSPITAL. Vacant April 17th. Salary at the rate of £160 per annum, plus residence, board, and laundry. The Branch Hospital contains 100 beds, 55 of which are used for acute surgical cases.

The candidates appointed will be expected to stay for not less than six months, but the appointment is at any time determinable by one month's notice on either side.

The Hospital is recognized by the Royal Colleges for the F.R.C.S. Examinations.

Applications, giving particulars of age, experience, and nationality, together with copies of testimonials, should be addressed to the undersigned.

R. J. CARLESS,
March 18th, 1933. House Governor.

KENT COUNTY OPHTHALMIC AND AURAL HOSPITAL, MAIDSTONE. (109 Beds.)

Applications are invited for the post of HOUSE SURGEON (male) to the Ear, Nose, and Throat Department, which post will shortly become vacant. Candidates must be duly qualified and registered medical practitioners, single, and of British birth and nationality, and should have had some experience in the treatment of diseases of the Ear, Nose, and Throat. The Hospital is recognised by the Examining Board for the D.L.O. The appointment will be for six months, but may be renewed for a second six months. Salary at the rate of £200 per annum, with board, residence, and laundry.

Applications, stating age, together with copies of not more than three testimonials, should be sent to the undersigned.

JOHN W. STRICKLAND, Secretary

HEREFORDSHIRE GENERAL HOSPITAL. (140 Beds.)

Applications are invited for the post of HOUSE SURGEON AND CASUALTY OFFICER (male).

Salary at the rate of £100 per annum, with board, residence, and laundry.

The appointment will be for a period of six months commencing May 1st. The successful candidate will, subject to satisfactory service, be eligible to succeed to the Resident Surgical Officer's post, with a salary at the rate of £150 per annum.

Applications, stating age, qualifications, and experience, together with copies of three recent testimonials, should reach the undersigned on or before April 5th.

T. W. UPTON, Secretary.

HEREFORDSHIRE GENERAL HOSPITAL. (140 Beds.)

Applications are invited for the post of HOUSE PHYSICIAN (male) to commence duties April 17th.

The appointment will be for a period of six months at the rate of £100 per annum, with board, residence, and laundry.

Applications, stating age, qualifications, and experience, together with copies of three recent testimonials, should reach the undersigned on or before April 5th.

T. W. UPTON, Secretary.

KENT AND CANTERBURY HOSPITAL, CANTERBURY.
(Recognised by the University of London for the purpose of the M.S. Examination.)

HOUSE SURGEON (male) required, to commence duties on April 19th. Six months' appointment. Salary payable at the rate of £125 per annum, plus board, residence, and laundry.

Applications, stating age and particulars of qualifications, and enclosing copies of testimonials, should be forwarded to the undersigned not later than April 3rd.

W. T. SOUTHWOOD,
Superintendent & Secretary.

KENT AND CANTERBURY HOSPITAL, CANTERBURY.

HOUSE PHYSICIAN (male) required, to commence duties about April 20th. Six months' appointment. Salary payable at the rate of £125 per annum, plus board, residence, and laundry.

Applications, stating age and particulars of qualifications, and enclosing copies of testimonials, should be forwarded to the undersigned not later than April 3rd.

W. T. SOUTHWOOD,
Superintendent & Secretary.

WALSALL GENERAL HOSPITAL.

The Committee invite applications from men or women for the post of HOUSE PHYSICIAN AND RESIDENT ASSISTANT PATHOLOGIST. Must have had experience in the administration of [illegible] who must be regis-
ter[illegible] Acts, must produce
thr[illegible]

The appointment will be for six months. Salary at the rate of £150 per annum.

The Hospital contains 100 beds and is equipped in all Special Departments.

Applications, stating age, qualifications, and nationality, must be received by the undersigned not later than the first post Tuesday, April 4th.

WALTER FRANCOMBE,
March 17th, 1933. House Governor.

THE HOSPITAL FOR EPILEPSY AND PARALYSIS, Maida Vale, W.9.

A RESIDENT MEDICAL OFFICER required May 1st.

HOUSE PHYSICIAN required May 1st.

Applications are invited for these posts. The salaries are at the rate of £150 and £100 per annum respectively, and the appointments are for six months. Candidates for the post of Resident Medical Officer should state if they are willing to take that of House Physician, and applications, accompanied by copies of three recent testimonials, should reach me by April 3rd.

The accommodation at the Hospital does not permit of Women Graduates holding these appointments.

H. W. BURLEIGH, Sec. & Gen. Supt.

THE ROYAL INFIRMARY OF EDINBURGH.

Applications are invited for appointments (Two) as CLINICAL ASSISTANTS (non-resident) in the Ear, Nose, and Throat Department, which will become vacant on April 1st.

Candidates must be duly qualified and registered. No salary is attached to these posts, but they afford valuable experience for graduates wishing to take the Fellowship of the Royal College of Surgeons of Edinburgh, with diseases of the Ear, Nose, and Throat as their special subject.

Applications should be addressed to the undersigned at the Royal Infirmary.

HENRY MAW,
March 14th, 1933. Secretary & Treasurer.

ROYAL [illegible]
Near MANCHESTER. [illegible]

Wanted, a RESIDENT SURGICAL OFFICER, salary £125 per annum, who will be appointed for six months. Duties to commence May 1st. Candidates must be unmarried and duly registered. Previous hospital experience essential. A Fellow of one of the Royal Colleges of Surgeons would receive preference. Applications, stating age, and accompanied by copies of not more than three testimonials, to be sent to the undersigned not later than Thursday, April 6th. Canvassing, directly or indirectly, may disqualify.

By Order,
W. M. HUMPHRY, Secretary.

ROYAL [illegible] CHILDREN'S
Near MANCHESTER. [illegible] ds.)

Wanted, a RESIDENT MEDICAL OFFICER, salary £125 per annum, who will be appointed for six months. Duties to commence May 1st. Candidates must be unmarried and duly registered. Previous hospital experience essential. Applications, stating age, and accompanied by copies of not more than three testimonials, to be sent to the undersigned not later than Thursday, April 6th. Canvassing, directly or indirectly, may disqualify.

By Order,
W. M. HUMPHRY, Secretary.

DONCASTER ROYAL INFIRMARY, (185 Beds.)

CASUALTY HOUSE SURGEON (male) required immediately. Five House Surgeons are resident. Salary at the rate of £175 per annum, with residence, board, and laundry. Successful applicant will be promoted to post of House Surgeon as a vacancy occurs.

This large industrial area offers excellent opportunities for gaining experience.

The vacancy will occur on April 30th.

Applications, accompanied by not more than three testimonials, to be sent to the undersigned.

WALTER R. SMITH, Secretary-Supt.

DURHAM COUNTY HOSPITAL (100 Beds.)

HOUSE SURGEON (male) required to commence duties on March 27th. Salary £150 per annum, with board and lodging. Applications, with copies of testimonials, to be sent to WM. R. WILSON, Secretary, 79, Saddler Street, Durham.

ROYAL NAVAL MEDICAL SERVICE.

VACANCIES EXIST FOR MEDICAL OFFICERS IN THE ROYAL NAVY.

Candidates will be entered as Short Service Medical Officers and will be considered for transfer to the Permanent Service after 6 months' service. They must be registered under the Medical Acts, and be under 30 years of age on date of entry.

Medical Officers, R.N., are liable to serve in Naval Hospitals or Ships in any part of the world.

Excellent opportunities exist for Clinical professional work, both Medical and Surgical, as well as for study and practice of Hygiene, Pathology, Ophthalmology, and other specialist branches.

Adequate provision is made for Post-Graduate Study.

OUTFIT ALLOWANCE of £50 is paid on joining.

PAY.—Pay from approximately £430 to £2,070 a year, according to length of service.

ALLOWANCES.—When in charge of Hospitals and Sick Quarters, 10s. and 5s. a day.
60 Specialists' Allowances of 5s. a day.
Flag Allowances, 5s. and 2s. 6d. a day.
Provisional Allowance, Lodging Allowance, etc.

PROMOTION.—To Surgeon Lieutenant-Commander after 6 years' service; to Surgeon Commander after a total of 12 years' service. Promotion to Surgeon Captain, Surgeon Rear-Admiral, and Surgeon Vice-Admiral is by selection.

Ante-date of seniority on account of civil hospital appointments and accelerated promotion can be gained.

RETIREMENT.—Gratuities are paid as follows:—

Short Service Officers, after 3 years' service	-	£300
Permanent Officers, after 4 years' service	-	£500
" " " 8 years' service	-	£1,000
" " " 12 years' service	-	£1,500
" " " 16 years' service	-	£2,250

Rates of Pension range from approximately £535 a year, normally earned after about 25 years' service, to £1,064 a year, the maximum earned by a Surgeon Vice-Admiral.

Copies of the Regulations and Particulars as to Conditions of Service and Emoluments may be obtained on written or personal application to the Medical Director-General of the Navy, Admiralty, Whitehall, London, S.W.1.

ROYAL LONDON OPHTHALMIC HOSPITAL (MOORFIELDS EYE HOSPITAL), City Road, E.C.1.

REFRACTION ASSISTANT.

Applications are invited for the post of Refraction Assistant to attend on Mondays and Thursdays.

Candidates must be registered Medical Practitioners. Salary at the rate of £100 per annum.

The Refraction Assistant will be appointed for a period of one year and will be eligible for re-appointment.

He will be required to undertake not more than 16 new cases per day and the hours of attendance will be from 9 a.m. until 1 p.m.

Copies of regulations governing the appointment can be obtained on application.

Applications, with testimonials and stating age and qualifications, must be received by the undersigned not later than April 7th.

A. J. M. TARRANT, Secretary.

THE ROYAL HOSPITAL, WOLVERHAMPTON. (Incorporated under Charter.)

HOUSE SURGEON required for Ear, Throat, and Nose Department, duties to commence March 29th.

The Hospital contains 300 beds, includes the usual special departments, and is recognised by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice.

Candidates must be registered under the Medical Acts and unmarried.

The appointment is for six months. Salary at the rate of £100 per annum, board, furnished rooms, and laundry provided.

Applications, with copies of testimonials, to be forwarded to the undersigned.

Wolverhampton. W. H. HARPER,
March 13th, 1933. House Governor.

THE ROYAL HOSPITAL, WOLVERHAMPTON. (Incorporated under Charter.)

HOUSE SURGEON required for Orthopaedic Department, duties to commence forthwith.

The Hospital contains 300 beds, includes the usual special departments, and is recognised by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice.

Candidates must be registered under the Medical Acts and unmarried.

The appointment is for six months. Salary at the rate of £100 per annum, board, furnished rooms, and laundry provided.

Applications, with copies of testimonials, to be forwarded to the undersigned.

Wolverhampton. W. H. HARPER,
March 13th, 1933. House Governor.

PADDINGTON GREEN CHILDREN'S HOSPITAL (Incorporated), London, W.2.

HOUSE PHYSICIAN.
HOUSE SURGEON.

These appointments will become vacant on May 1st. Gentlemen (unmarried) are invited to send in their applications, with copies of three testimonials, to the undersigned not later than first post on Friday, April 7th. Salary of each at the rate of £150 per annum, with board and residence. Candidates, who have held a responsible Resident Hospital appointment are preferred. The appointments are for a period of six months.

JAMES A. HAMLIN, Secretary.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.

Applications are invited for the following post on the Honorary Medical Staff:

JOINT MEDICAL OFFICER in charge of the Massage and Electro-therapeutic Department.

Candidates for this post must be duly qualified Medical Practitioners and registered under the Medical Acts. Three sessions weekly will be required.

Applicants must send twelve copies of their application and testimonials to the undersigned by March 31st.

ARTHUR R. CASH,
March 14th, 1933. Gen. Supt. & Sec.

THE HOSPITAL FOR SICK CHILDREN, NEWCASTLE-UPON-TYNE. (85 Beds.)

Applications are invited for the following appointments:

HOUSE PHYSICIAN,
SENIOR HOUSE SURGEON,
JUNIOR HOUSE SURGEON,

(male or female) for six months as from April 1st. Salary at the rate of £100 per annum, together with board, residence, and laundry.

Applications, stating age and qualifications, with copies of three recent testimonials, to be sent to the Secretary, Mr. NEIL BRODIE, 10, City Road, Newcastle-upon-Tyne, 1.

BATH AND WESSEX CHILDREN'S ORTHOPAEDIC HOSPITAL, Combe Park, BATH.

HOUSE SURGEON required, to commence duty April 1st.

The appointment will be for six months, with salary at the rate of £120 per annum, together with quarters, board, and laundry.

Candidates must have had special experience in administering anaesthetics.

Applications, with copies of three recent testimonials, should be forwarded immediately to the undersigned.

HAROLD J. FRICKER,
March 20th, 1933. Secretary.

SOUTH LONDON HOSPITAL FOR WOMEN, Clapham Common, S.W.4.

APPOINTMENT OF ASSISTANT SURGEON.

The Board of Management invite applications from fully qualified Medical Women for the above appointment.

Candidates must be Fellows of the Royal College of Surgeons, England.

Further particulars may be obtained from the Secretary.

Applications, with copies of testimonials, to reach the Secretary at the Hospital, not later than Saturday, April 15th.

THE BELGRAVE HOSPITAL FOR CHILDREN, Clapham Road, S.W.9.

The Committee of Management invite applications for the post of TWO HOUSE PHYSICIANS and ONE HOUSE SURGEON, which will become vacant on April 30th next.

Applicants (men) must be fully qualified and registered. The appointments are for six months, with board, residence, and washing provided. Salary at the rate of £100 per annum.

Applications, with copies of testimonials, stating age, should be forwarded on or before Thursday, April 6th to the Secretary.

NORTH RIDING INFIRMARY, MIDDLESBROUGH GENERAL HOSPITAL. (150 Beds.)

Applications are invited for the post of THIRD HOUSE SURGEON (Gentleman) to commence duties April 1st.

The appointment will be for a period of six months. Salary at the rate of £125 per annum, with board, residence, and laundry.

Applications, stating age and nationality, with copies of recent testimonials, should be sent forthwith to the undersigned.

CHARLES POSTGATE,
Secretary-Superintendent.

WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.1.

Applications are invited for the office of ASSISTANT SURGICAL REGISTRAR AND RADIUM OFFICER. Candidates must be registered medical practitioners. The duration of the appointment is six months and may be extended for a further six months. The salary attached to the office is at the rate of £125 p.a. Applications, with copies of testimonials, should be sent in to the undersigned on or before March 29th.

CHARLES M. POWER, Secretary.

THERE IS A VACANCY FOR A RESIDENT MEDICAL OFFICER at WESTMINSTER HOSPITAL ANNEXE, 66, Fitzjohn's Avenue, Hampstead.

Salary at the rate of £200 p.a., plus accommodation and board.

The post offers an opportunity for wide and unique Radium experience.

Candidates who previously have held a Resident post preferred.

Applications should be submitted to the undersigned at Westminster Hospital, Broad Sanctuary, S.W.1, not later than April 7th.

CHARLES M. POWER, Secretary.

WARNEFORD GENERAL HOSPITAL, LEAMINGTON SPA. (143 Beds.)

RESIDENT HOUSE PHYSICIAN required on May 1st next. Salary £165 per annum, with board and laundry. Applications from qualified and registered Medical Practitioners (single men) should be sent to the undersigned by April 7th, accompanied by copies of at least three recent testimonials.

EDWARD L. WIRGMAN,
House Governor and Secretary.

UNIVERSITY COLLEGE HOSPITAL, Gower Street, W.C.1.

Applications are invited for the appointment of HONORARY ANAESTHETIST for duty on Thursday mornings at the National Dental Hospital, Great Portland Street, W.1 (Dental Department of University College Hospital).

Applications, accompanied by evidence of fitness for the post, should reach the Secretary, University College Hospital, Gower Street, W.C.1, by noon on Monday, April 10th.

THE CANCER HOSPITAL (FREE) (Incorporated under Royal Charter), Fulham Road, London, S.W.3.

The Committee are prepared to receive applications for the post of HOUSE SURGEON to commence duties on May 1st. Salary at the rate of £100 per annum.

The appointment is for six months, and subject to rules.

Candidates must call upon each member of the Medical Committee not later than Tuesday, April 18th.

A copy of the rules and the names and addresses of the Medical Committee may be obtained from the Secretary.

Previous experience as a House Surgeon is indispensable.

Applications, with three (copies only) testimonials, to be sent to the Secretary not later than the first post on Saturday, April 8th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE HEART AND LUNGS, Victoria Park, E.2. ('Bus, Tram, and Rail, Cambridge Heath, L. & N.E. Railway.)

A vacancy for a HOUSE PHYSICIAN (male) will occur on May 1st. Six months' appointment. Salary at the rate of £100 per annum. Board, residence, and laundry provided.

Applications, with copies of three testimonials, should be sent to the undersigned on or before Friday, April 21st.

GEORGE WATTS, Secretary.

EASTBOURNE: PRINCESS ALICE MEMORIAL HOSPITAL. (116 Beds.)

Applications are invited for the post of HOUSE SURGEON (male). Salary at the rate of £150 per annum, with board, lodging, and laundry. There are two Residents and the appointment is for six months.

Candidates must be unmarried, fully qualified, and registered. Applications, stating age, qualifications, etc., accompanied by not more than three testimonials (one of which should be from Medical School), should be sent to the Secretary to reach him not later than Friday, March 31st.

TORBAY HOSPITAL, TORQUAY. (146 Beds.)

A HOUSE SURGEON (male) is required for April 13th. Salary £175 per annum, with board, residence, and laundry allowance. Candidates must be fully qualified, registered, and unmarried.

Applications, stating age, nationality, qualifications, and experience, to be sent to the undersigned as early as possible, with copies of not more than three recent testimonials.

E. L. GRIST, Secretary.
March 18th, 1933.

SOUTH-EASTERN HOSPITAL FOR CHILDREN, Sydenham, S.E.26.

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER (lady). The appointment will be for six months from April 11th. Honorarium £120 per annum, with board, residence, and laundry. Applications, by letter only, stating age and qualifications, with copies of three testimonials, should be sent to the Hon. Secretary, Mr. E. E. DENT, 182, Turney Road, Dulwich, S.E.21, to be received not later than Monday, April 3rd.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone Road, N.W.1.

Applications are invited for the post of HOUSE SURGEON for a period of six months commencing May 1st next. Salary at the rate of £100 per annum, with board, lodging, and washing. Previous experience as House Surgeon essential.

Applications, stating age, accompanied by copies only of testimonials, must reach the Secretary at the Hospital on or before Thursday noon, April 6th.

G. H. HAWKINS, Secretary.

THE STOCKPORT INFIRMARY.

HOUSE PHYSICIAN (male) required. Salary £150 per annum, with board, residence, and laundry.

Applications, with copies of three recent testimonials, stating age, University or Medical School, and experience, to be delivered to the undersigned not later than the morning of March 31st.

EDWIN J. PEARCE,
Secretary-Superintendent.

WESTERN GENERAL, MUNICIPAL HOSPITAL, EDINBURGH.

HOUSE PHYSICIAN also JUNIOR HOUSE SURGEON required for six months from April 1st. Salaries at rate of £100 and £50 per annum, plus board, etc. Apply with testimonials, to Medical Officer of Health, Edinburgh.

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table *without having* first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh).

(a) British Islands.

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH**
EBBW VALE, MON. *(Workmen's Medical Society.)*	MARDY, GLAMORGAN. *(Workmen's Medical Scheme.)*	KENT COUNTY COUNCIL. LENHAM SANATORIUM. *(Male Assistant Medical Officer.)*
GILFACH GOCH, GLAMORGAN. *(Workmen's Medical Scheme.)*	NEATH AND DISTRICT *(Medical Aid Association.)*	FARNBOROUGH INSTITUTION HOSPITAL. *(Resident Assistant Medical Officer.)*
LLWYNPIA, CLYDACH VALE, PENYGRAIG, GLAMORGAN. *(Workmen's Medical Scheme.)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association.)*	LLANTRISANT AND LLANTWIT FARDRE RURAL DISTRICT COUNCIL. (1) *Medical Officer of Health (part-time)* (2) *Medical Officer (woman—part-time) for Maternity and Child Welfare.*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer.)*	OGMORE VALLEY, GLAMORGAN. *(Wyndham Colliery Medical Aid Society)* *(Workmen's Medical Scheme.)*	

(b) Overseas.

Medical practitioners are requested not to apply for any appointment referred to in the following table *without* having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. G. HUNTER (Medical Secretary, New South Wales Branch), 135, Macquarie St., Sydney, N.S.W.	**QUEENSLAND.** *(Brisbane Associated Friendly Societies Institute.)* *(Toowoomba Associated Friendly Societies, Medical Institute, Toowoomba.)*	The Hon. Sec., Queensland Branch, British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	**WELLINGTON, NEW ZEALAND.** *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec., New Zealand Branch), British Medical Association, P.O. Box 156, Wellington, New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch, British Medical Association, Medical Society Hall, East Melbourne, Victoria.			**WESTERN AUSTRALIA.** *(Contract and Lodge Practices.)*	Hon. Sec., Western Australian Branch, British Medical Association, No. 6 Bank of N.S.W. Chambers, St. George's Terr., Perth, Western Australia.

March 22nd, 1933. By Order of the Council. C. C. ANDERSON, Medical Secretary.

METROPOLITAN HOSPITAL, Kingsland Road, E.8.

There are vacancies for the following:
(a) SENIOR HOUSE PHYSICIAN (Male);
(b) SENIOR HOUSE SURGEON (Male);
(c) JUNIOR HOUSE PHYSICIAN (Male);
(d) JUNIOR HOUSE SURGEON (Male);
(e) TWO CASUALTY OFFICERS (Male);
salary £100 per annum.

Appointments in the first place will be for a period of six months dating from May 1st.

Candidates must possess a registered Medical and Surgical qualification of the United Kingdom.

Applications, with copies of three recent testimonials, and a certificate of ability to administer anaesthetics, should be sent to the undersigned, not later than first post on Thursday, April 6th.

Two members of the Resident Staff are candidates for the two Senior appointments.

GEO. W. COOLING, Secretary.

BURY INFIRMARY, LANCS. (127 Beds.)

Applications are invited for the post of THIRD HOUSE SURGEON (male), who must have both Medical and Surgical qualifications. The appointment is for six months at a salary at the rate of £150 per annum, with board, residence, and laundry. The successful applicant will be required to commence duties beginning of May.

Applications, stating age, qualifications, and nationality, with copies of three recent testimonials, to be sent to the undersigned not later than March 31st.

Particulars of duties may be had on application.

ALEX. W. MAITLAND, Hon. Secretary.

ROYAL FREE HOSPITAL, Gray's Inn Road, W.C.1.

Applications are invited from duly qualified Medical Women for the post of RESIDENT CASUALTY OFFICER. Previous experience as *Hospital Resident* essential. Salary £150 per annum. Intending candidates should submit applications, stating age, and accompanied by copies of three recent testimonials, to the undersigned on or before the 1st prox. The appointment is tenable for six months from May 1st next.

REGINALD R. GARRATT, Secretary.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Road, S.E.1.

There is a vacancy for a HONORARY PHYSICIAN in charge of the Physiotherapy Department of the above Hospital. Candidates must be registered Medical Practitioners. Applications, with copies of three recent testimonials, should reach the undersigned not later than March 28th, from whom further particulars can be obtained.

J. H. TEASDALE, Secretary.

BURSLEM HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL.

Wanted, JUNIOR MALE RESIDENT MEDICAL OFFICER. Salary £150 per annum, with board and residence. Must be fully qualified. Experience in Ophthalmic and Ear, Nose, and Throat work will be an advantage. Applications, stating age and experience, together with copies of three recent testimonials, to be sent to me.

High Lane, Burslem, Stoke-on-Trent. C. E. LOWNDES, Secretary.

HOSPITAL OF ST. JOHN AND ST ELIZABETH, 60, Grove End Road, London, N.W.8

Applications are invited for the post of RESIDENT HOUSE SURGEON (male). The appointment will be for six months from May 1st. Salary at the rate of £75 per annum, with full board. Appointment approved for M.S. examinations of the University of London.

Applications together with copies of three testimonials should reach the undersigned on or before Monday, April 3rd.

F. DUDLEY HOBBS, B.A., Secretary.

STOCKTON AND THORNABY HOSPITAL, Stockton-on-Tees. (140 Beds—Three Residents.)

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER (male) for a period of at least six months, dates to commence earliest possible. Salary £150 with board, residence, and laundry. Candidate must be duly qualified and unmarried.

Applications, stating age, nationality, and experience, together with copies of three recent testimonials, to be sent to the undersigned.

J. WILKINSON, Secretary.

KING GEORGE HOSPITAL, ILFORD.

Applications are invited for the appointment of HONORARY SURGEON to the Hospital. Candidates must be Fellows of the Royal College of Surgeons of England. Further particulars may be obtained from the undersigned to whom applications should be sent not later than March 30th.

G. AUSTIN HEPWORTH, Secretary.

(Appointments continued on p. 51.)

NOT CLASSIFIED.

RHYTHMIC PHYSICAL EXERCISE.—MODERN German method.—Woman Teacher WISHES to DEMONSTRATE SYSTEM to Medical Practitioners.—Secretary, 1, Onslow Crescent, S.W.7. Tel.: Ken. 4705. 10—10.30 a.m. and 5.30—6 p.m.

DOCTOR, WITH NICE HOUSE AND GARDEN in lovely suburb of Northern town, would TAKE GIRL of school age. Would suit delicate child or child of parents going abroad. Good schools available. Companionship of other two girls. — Address, No. 2033, B.M.A. House, Tavistock Square, W.C.1.

DOCTOR AND WIFE (FULLY QUALIFIED NURSE) can accept ONE PATIENT under their care. Luxurious country house, Suffolk, with every comfort. No other patients. Particulars. — Address, No. 2032, B.M.A. House, Tavistock Square, W.C.1.

ASSISTANCIES.

WANTED IMMEDIATELY, ASSISTANT (male), outdoor, Protestant, English, Irish, or Scotch. South Coast. Work light. Good-class Practice. Salary £300—£350, according to experience. Car provided. Unusually comfortable digs., convenient, two guineas weekly. —No. 1979, B.M.A. House, Tavistock Sq., W.C.1.

WANTED, APRIL, INDOOR ASSISTANT, industrial Practice, Newcastle-on-Tyne. R.C. preferred, but not essential, single. Bond. Car provided. Fullest particulars required.—Address, No. 1961, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — ASSISTANTSHIP BY M.B., Ch.B., young, energetic, thoroughly experienced large general hospital (two years) and good-class G.P. (two years). Married. With view (easy terms) or without.—Address, No. 1972, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — ASSISTANTSHIP OR LOCUM (with or without view) by M.R.C.P., Indian, age 32, experienced G.P. and panel, energetic, abstainer, drive car, references. Free March 31st.—Address, No. 1501, B.M.A. House, Tavistock Square, W.C.1.

WANTED.—ASSISTANTSHIP, PREFERABLY outdoor, by woman, English, aged 31, F.R.C.S.(E.), M.B., 7 years' experience Hospital and G.P. Own car.—Address, No. 1956, B.M.A. House, Tavistock Square, W.C.1.

WANTED IMMEDIATELY. — INDOOR AND outdoor ASSISTANTS for Town and Country Practices, with and without view. Good salaries. State full particulars.—BRITISH MEDICAL BUREAU, 33, Cross St., Manchester, 2.

ASSISTANTSHIP WANTED, 5 YEARS' G.P., including extraction of teeth, venereal diseases M.O. Total abstainer. Drive car, motor-cycle. M.B., Ch.B., L.R.C.P., M.R.C.S., D.P.H. Free and available for interview in London or elsewhere immediately. — Address, No. 1951, B.M.A. House, Tavistock Sq., W.C.1.

ASSISTANT WANTED.—INDOOR OR OUTdoor, in a large Practice in a small Yorkshire Town. Salary according to experience. Male. Scottish Graduate preferred.—Address, with qualifications and experience, No. 1855, [illegible]

ASSISTANT near London, sole charge, £300. Good House. Partnership in a year. Experienced. Preferably married, hard working. State full particulars. — Address, No. 1969, B.M.A. House, Tavistock Square, W.C.1.

INDOOR ASSISTANT WANTED, YOUNG, UNmarried. £300 per annum, with increment. South Coast.—Address, No. 1988, B.M.A. House, Tavistock Square, W.C.1.

PARTNERSHIPS.

WANTED, IN LARGE MIDLAND CITY, well-qualified PARTNER, with Ophthalmic qualification and experience, in old-established general Practice, with rapidly increasing ophthalmic work, which constitutes nearly half total income. Applicants should state age, qualifications, experience. Full particulars from suitable applicants only.—Address, No. 1983, B.M.A. House, Tavistock Square, W.C.1.

WANTED TO PURCHASE (BY LONDON Applt.M.B., aged 25, after preliminary Assist- appointm't) PARTNERSHIP in good mixed Prac- HOUSE h panel. Share desired £800—£1,000, SENIOR rease later. South of England pre- JUNIOR Address, No. 1953, B.M.A. House, (male or Square, W.C.1. April 1st. S.

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OXFORD GRADUATE, AET. 33, MARRIED, requires PARTNERSHIP (share worth about £1,000 p.a.) or PRACTICE, in better-class neighbourhood in S. of England. Cathedral, seaside, or country town preferred. Preliminary Assistantship considered. — Address, No. 1965, B.M.A. House, Tavistock Sq., W.C.1.

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DOCTORS REQUIRING QUALIFIED Dispensers, Nurse-Dispensers, Secretary-Dispensers or Chauffeuse-Dispensers, are invited to write, wire, or 'phone Temple Bar 5858, THE DISPENSERS' BUREAU, 3, Lindsay House, 171, Shaftesbury Avenue, London, W.C.2.

GENTLEWOMAN REQUIRES POST AS SECRETARY-ACCOUNTANT or DISPENSER-SECRETARY-ACCOUNTANT to firm of Doctors in country town, or in country hospital. Pharmaceutical Society's certificate. 16 yrs.' secretarial and disp. exper. Ex. tests.—No. 1958, B.M.A. House, Tavistock Sq., W.C.1.

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WANTED.—GOOD-CLASS PRACTICE £1,500 upwards in pleasant suburb or town anywhere in England or Scotland, but Liverpool, Newcastle-on-Tyne, Edinburgh, or Yorkshire districts preferred. Good house and educational facilities essential. Capital available.—Address, No. 1705, B.M.A. House, Tavistock Sq., W.C.1.

WANTED BY EXPERIENCED PRACTI[illegible] of titioner, in [illegible] oad, PARTNERSHIP [illegible] trial Income £1,500—£2,000, [illegible] panel. London preferred. Full cash premium. House to rent or purchase. Details in confid.—No. 1987, B.M.A. House, Tavistock Sq., W.C.1.

WANTED IMMEDIATELY BY M.B., Ch.B (Glas.), PRACTICE or ASSISTANTSHIP with view. Seven years' G.P. experience. Good panel essential. Own car. Recently disposed of Practice. Replies confidential.—Address, No. 1985, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — GOOD MIDDLE-CLASS AND Panel PRACTICE. Income £1,500 or over. Within 50 miles of London. Good house with garden and good educational facilities essential. —Address, No. 1971, B.M.A. House, Tavistock Square, W.C.1.

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PRACTICE WANTED.—PRACTITIONER WITH available capital, is anxious to secure a PRACTICE in Brighton, or S.E. coast town, having a good panel and house, with garden. Would consider Partnership with view to succession. Replies in first instance.—Address, No. 2031, B.M.A. House, Tavistock Square, W.C.1.

SOUTH MANCHESTER.—GOOD RESIDENTIAL district. Nucleus PRACTICE for sale. Good scope for increasing. Excellent house and garage for sale. Leaving on account of health. —Address, No. 1974, B.M.A. House, Tavistock Square W.C.1.

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APPOINTMENTS—Contd.

CITY OF LIVERPOOL

RESIDENT ASSISTANT MEDICAL OFFICER (Male)

Applications are invited for the above appointment at the Mill Road Infirmary (for ladies), Liverpool, for a period of one year, at a salary of £200 per annum (subject to the Superannuation Scheme), rising by annual increments of £10 to £250 per annum, together with the usual residential emoluments. Canvassing will be deemed a disqualification.

Applications must be made on forms obtainable from the Medical Officer of Health, Municipal Offices, Dale Street, Liverpool, to whom they must be returned not later than Monday, April 10th, endorsed on the envelope "Assistant Medical Officer."

WALTER HOWE,
Town Clerk.

Municipal Buildings,
Liverpool.
March 21st, 1933.

CITY OF LEICESTER.

CITY GENERAL HOSPITAL.

APPOINTMENT OF SPECIALISTS.

Applications are invited by the Health Committee from Medical Practitioners who must be prepared to reside at Leicester, for appointment to the following positions:

(a) TWO CONSULTING PHYSICIANS. These must be of recognized consultant or specialist status. They will not be required to take charge of beds but to act in a purely consultative capacity, and each will be expected to attend one session weekly or oftener if required for special cases. Remuneration, one hundred guineas per annum.

(b) ONE CONSULTING RADIOLOGIST. The officer appointed will be expected to act also for the City Isolation Hospital or other Corporation Institutions, as required. A trained radiographer is employed. Remuneration, fifty guineas per annum.

(c) TWO ANAESTHETISTS. These will attend as required probably each about one session weekly. Remuneration, one and a half guineas per session.

The above appointments should be regarded as experimental and are subject to review at end of 12 months.

Applications (on form to be supplied) to be sent to the undersigned not later than April 8th. Canvassing is prohibited.

C. KILLICK MILLARD, M.D.,
Health Offices, Medical Officer of Health.
Leicester. March 20th, 1933.

CITY OF LEICESTER.

CITY GENERAL HOSPITAL.

SENIOR RESIDENT MEDICAL OFFICER.

Applications are invited for the post of Senior Resident Medical Officer and Deputy Medical Superintendent at the City General Hospital (500 Beds). Applicants must have already held at least one resident appointment at a general hospital of recognized standing, and besides a good general knowledge of medicine they should have begun to take an interest in some special branch. The appointment will be limited in the first instance to two years.

Commencing salary £500 per annum, with board and residence, but subject to a deduction of 5 per cent. for superannuation, and to a temporary "voluntary deduction" of 7½ per cent. on £400.

Applications, on a special form to be supplied, and accompanied by copies of three testimonials, to be sent to the undersigned not later than April 8th. Canvassing is prohibited.

C. KILLICK MILLARD, M.D.,
Health Dept., Medical Officer of Health.
Leicester. March 20th, 1933.

CITY OF NOTTINGHAM EDUCATION COMMITTEE.

Applications are invited from registered Medical Practitioners for the post of Whole-time JUNIOR ASSISTANT SCHOOL MEDICAL INSPECTOR (Woman).

Applicants must have had not less than three years' experience since qualification. Special consideration will be given to those candidates who have had experience in diseases of children and in the correction of errors of refraction.

Salary £500 p.a., rising, subject to satisfactory service, by annual increments of £25 to £700. The appointment will be subject to (1) the provisions of the Local Government and Other Officers Superannuation Act, 1922, and (2) the terms of appointment set out in the Committee's Form of Application M.1.

Canvassing, directly or indirectly, will disqualify.

Applications, which must be made on the Forms M.1, obtainable from the undersigned, must be sent in not later than April 6th.

A. H. WHIPPLE,
School Medical Service, Director of
28, Chaucer Street, Education.
Nottingham.

CITY AND COUNTY OF NEWCASTLE-UPON-TYNE.

NEWCASTLE GENERAL HOSPITAL.
(650 Beds.)

HOUSE SURGEON (Male).

Applications are invited for the above post from duly qualified and registered medical practitioners. The salary in respect of the appointment, which is tenable for six months, is at the rate of £150 per annum, with board, lodging, etc.

Applications, stating age and qualifications, together with copies of not more than three recent testimonials, to be addressed to the Medical Officer of Health, Town Hall, Newcastle-upon-Tyne.

March 17th, 1933.

LONDON COUNTY COUNCIL.

CONSULTANT AND SPECIALIST SERVICE.

Applications are invited from Medical Practitioners, who must be of recognised consultant and specialist status, for appointment to the undermentioned positions in the hospital service.

The persons appointed will be required to carry out such duties as may be assigned by the Medical Officer of Health. The remuneration and conditions of service are subject to review in each case. In the case of women marriage terminates contract of service.

(1) PART-TIME APPOINTMENTS FOR A REGULAR NUMBER OF SESSIONS WEEKLY:
(a) Physician;
(b) Surgeon;
(c) Obstetrician—Gynaecologist;
(d) Ophthalmologist;
(e) Ear, Nose, and Throat Specialist;
(f) Orthopaedist;
(g) Dermatologist;
(h) Paediatrist;
(i) Urologist;
(j) Radiologist.

The remuneration in each case will be an annual salary according to a scale based on the number of weekly sessions, each of approximately 2½ hours' duration.

(2) PART-TIME APPOINTMENTS FOR OCCASIONAL SESSIONS. — Neurologists and Anaesthetists. Remuneration at the rate of £2 12s. 6d. a session for Neurologist and £1 14s. a session for Anaesthetist.

(3) FULL-TIME APPOINTMENTS. — Radiologists. Salary £900, rising annually by £50 to £1,100 a year.

Application forms containing full particulars of the conditions of the appointments are obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division), County Hall, Westminster Bridge, S.E.1, returnable by March 31st. Candidates should specify (a) the position or positions for which they desire to apply; (b) the number of sessions a week which they are prepared to devote to the work; and (c) the portion of London, if any, to which they desire to be attached, if possible. Canvassing disqualifies.

SURREY COUNTY COUNCIL.

MENTAL HOSPITALS COMMITTEE.

APPOINTMENT OF JUNIOR ASSISTANT MEDICAL OFFICER (Male).

Applications are invited for the post of Male Junior Assistant Medical Officer (unmarried) in the Surrey County Mental Hospital Service.

Commencing salary, which will be subject to statutory deductions under the provisions of the Asylums Officers Superannuation Act, 1909, will be £350, rising by annual increments of £25 to a maximum of £450 per annum, together with apartments, board, laundry, and attendance valued for superannuation purposes at £150 per annum. The person appointed will also be paid in addition to his salary the sum of £50 per annum if he holds the Diploma of Psychological Medicine. Such part of the gross remuneration as exceeds £150 per annum is subject to a temporary economy reduction of 5 per cent.

Applicants should state whether they have had experience in the work of a Pathological Laboratory.

The appointment will be subject to termination by one calendar month's notice on either side.

Applications, stating age, accompanied by copies of three recent testimonials, and enclosed in an envelope endorsed "Mental Hospitals Junior Medical Officer," must reach me not later than 12 noon on Wednesday, April 5th.

County Hall, DUDLEY AUKLAND,
Kingston-upon-Thames. Clerk to the
March 20th, 1933. Committee.

WEST LONDON HOSPITAL,
Hammersmith, W.6. (234 Beds.)

Required, ONE NON-RESIDENT HOUSE OFFICER (part-time) for Children's Department for six months from May 1st next, subject to one month's notice on either side. Applicants may be male or female. Salary at the rate of £150 per annum. Candidates must be registered under the Medical Act and have held a resident appointment at a Children's Hospital or in the Children's Department of a General Hospital.

Applications and copies of testimonials in quadruplicate (which must be made on printed forms obtained from me) must reach me not later than first post on Friday, April 21st. Selected candidates will be required to call upon such members of the Medical Staff as directed, to be in attendance at a Meeting of the Medical Council on Friday, April 28th, at 4.30 p.m. and the House Committee Meeting at 5 p.m. the same day, when the appointment will be made.

H. A. MADGE, Secretary.

CITY OF BIRMINGHAM.

SELLY OAK HOSPITAL. (500 Beds.)

CASUALTY OFFICER (Male).

Applications are invited from fully qualified Medical Practitioners for whole-time appointment as "Casualty Officer" (male) at the Selly Oak Hospital, Birmingham. The appointment will be for a period of six months in the first instance, but may be extended at the end of that time for a further period of not exceeding six months.

Salary at the rate of £200 per annum and full residential emoluments. The salary and emoluments will be subject to any "voluntary abatement" in force from time to time. The officer appointed will be required to refund to the Council all fees, allowances, and emoluments (other than the foregoing) received by him.

Further particulars may be obtained from the Medical Superintendent at Selly Oak Hospital, to whom applications, stating age, experience, and qualifications, with copies of recent testimonials, should be forwarded not later than Wednesday, April 12th.

The Council House, F. H. C. WILTSHIRE,
Birmingham. Town Clerk.
March, 1933.

ESSEX COUNTY COUNCIL.

PUBLIC ASSISTANCE COMMITTEE.

Applications are invited for the appointment of an Ear, Nose, and Throat SPECIALIST, whose services will be required mainly at Oldchurch Hospital, Romford, the appointment being for a trial period of one year at a fee of 50 guineas per annum for one session per month, plus travelling expenses in accordance with the County Scale. Applications to be made on forms obtainable from the Public Assistance Officer, Prudential Buildings, Duke Street, Chelmsford, and returned to him not later than April 4th.

By Order,
Shire Hall, JOHN H. GOOLD,
Chelmsford. Clerk of the County
March 24th, 1933. Council.

THE KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION.

THIRD ASSISTANT RESIDENT MEDICAL OFFICER.

Required at the Glan Ely Hospital, Fairwater, near Cardiff (a hospital of 185 beds for pulmonary and non-pulmonary cases of tuberculosis), THIRD ASSISTANT RESIDENT MEDICAL OFFICER.

Salary £250 per annum, plus maintenance (subject to an emergency deduction of £10 12s. 6d. per annum). This appointment is limited to a period of one year.

Applications, stating age, qualifications, and previous experience, together with copies of three recent testimonials, should reach the undersigned not later than March 30th.

Memorial Offices, D. A. POWELL,
Westgate Street, Principal Medical
Cardiff. Officer.

COUNTY BOROUGH OF HALIFAX.

SENIOR RESIDENT MEDICAL OFFICER.
ST. LUKE'S HOSPITAL.

Applications are invited for the appointment of Senior Resident Medical Officer at St. Luke's Hospital.

Applicants must be duly qualified registered Medical Practitioners and preference will be given to those who have held a resident appointment in a general hospital.

The salary will be £350 per annum, rising by annual increments of £25 to £450, together with board, lodging, and laundry.

Applications must be made on a prescribed form which may be obtained from the undersigned, and should be sent, together with copies of not more than three recent testimonials, endorsed "Senior Resident Medical Officer," to the undersigned so as to be received not later than April 3rd.

Canvassing, either directly or indirectly, will be a disqualification.

Town Clerk's Office, PERCY SAUNDERS,
(Carlton-Street Branch), *Town Clerk.*
Halifax. March 14th, 1933.

ST. THOMAS'S HOSPITAL

VACANCY.

The appointment of a MEDICAL REGISTRAR for one year, with possible extension for further two years.

Applications, with full details of academic career, to be forwarded with copies of testimonials, to the Clerk to the Governors not later than April 1st.

LEEDS MATERNITY HOSPITAL, Hyde Terrace, LEEDS. (126 Beds.)

Applications are invited for the posts of SENIOR HOUSE SURGEON and JUNIOR HOUSE SURGEON. Salaries payable: Senior House Surgeon £52 per annum; Junior House Surgeon £26 per annum.

The appointments are to be for a period of six months in the first instance, from May 1st to October 31st.

Applications are to be sent to the Secretary, The Medical Faculty, Leeds Maternity Hospital, Hyde Terrace, Leeds, on or before April 18th.

HENRY F. PITT,
Secretary-Supt.

March, 1933.

MANCHESTER VICTORIA MEMORIAL JEWISH HOSPITAL, MANCHESTER, 8. (Non-Sectarian.) (102 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (*male*). The appointment is for six months. Salary at the rate of £125 per annum, with board, residence, and laundry, to which will be added certain *emoluments from the Pay Department. Applications*, stating age and qualifications, together with copies of three recent testimonials, to be forwarded to the undersigned not later than Tuesday, March 28th.

FRED BARNES,
Superintendent & Secretary.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, Gray's Inn Road, W.C.1.

ASSISTANTS IN THE OUT-PATIENT DEPT.

There are vacancies for TWO THIRD ASSISTANTS, one to attend on Tuesdays at 5 p.m. and one to attend on Fridays at 2 p.m. The duties are to assist the Surgeons in seeing *the patients*, and the posts *are honorary ones*.

Applications may be for periods of three, six, or twelve months, and should be sent to the undersigned *immediately*.

JOHN H. YOUNG,
Secretary-Superintendent.

THE WILLESDEN GENERAL HOSPITAL, Harlesden Road, N.W.10.

The Council of Management invite applications for the appointment of ASSISTANT SURGICAL OFFICER, *who will* be required to commence duty on *July 1st*.

Candidates, who must be Fellows of the Royal College of Surgeons of England, are invited to send six copies of their application and testimonials, *to* the Secretary not later than first post on Thursday, *April 20th*.

An honorarium at the rate of £50 per annum attached to this appointment, and candidates will be provided with a copy of the Regulations, upon written application to the Secretary.

March 20th, 1933.

GENERAL HOSPITAL, NOTTINGHAM. (386 Beds.)

A HOUSE SURGEON is required at the above Institution. The appointment is for six months with salary at the rate of £150 a year, with board, residence, and laundry. *Candidates, who* must have had previous Hospital experience, are desired to send applications and full particulars as to age, qualifications, and experience, together with copies of testimonials, to the undersigned not later *than Wednesday*, April 19th.

The appointment will be made on *Wednesday*, April 26th. Duties to commence on May 6th.

PETER M. MACCOLL,
House Governor & Sec.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

The General Committee invite applications for the appointment of an HONORARY SURGEON in Charge of the Ophthalmic Department.

Applications, accompanied by sixteen copies of each of three recent testimonials, *to be sent to the* undersigned on or before Thur-day, April 20th.

Personal canvass of the Committee is expressly *forbidden*.

W. H. HEAD,
Secretary-Supt.

March 20th, 1933.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

The General Committee invite applications for the appointment of an HONORARY SURGEON.

Applications, accompanied by sixteen copies of each of three recent testimonials, to be sent to the undersigned on or before Thursday, April 20th.

Personal canvass of the Committee is expressly forbidden.

W. H. HEAD,
Secretary-Supt.

March 20th, 1933.

THE LADY CHICHESTER HOSPITAL, HOVE (*BRIGHTON*). FOR FUNCTIONAL NERVOUS DISEASES. (60 Beds.)

JUNIOR HOUSE PHYSICIAN (woman) required May 1st. Six months' appointment at £50 per annum, all found.

Valuable experience for Diploma in Psychological Medicine.

Applications, with testimonials, to the Secretary, 117, North Street, Brighton.

ST. PAUL'S EYE HOSPITAL, Oldhall Street, LIVERPOOL.

HOUSE SURGEON required. Six months' *appointment*. Salary £145 per annum, board, residence, etc.

Applications, with copies of testimonials, should be sent to the Secretary on or *before* March 31st.

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W. J. HICKS, *Secretary*

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CHANNEL ISLANDS. — URGENT SALE through ill-health of Vendor. Private PRACTICE in best part of Island, overlooking sea, averaging £357 p.a. No midwifery taken. Fees 5/6 to 7/6, med extra. Centre of town and others building. Good schools. Sea and trout fishing. Prem. 1½ years, porch.—No. 9135.

EASTERN COUNTY. — ASSISTANT (UNDER 30) wanted with view to Partnership in an old-established Town Practice. One-third share worth nearly £1,000 p.a. at 2 years' purchase after 6 months (or more if desired) Assistantship at £400 p.a., plus allowance towards car. Good *modern house* (specially built) with half-acre of garden.—No. 9139.

LONDON, E.C.—AVERAGE OVER £640 P.A. *Panel about* 500, rapidly increasing. Visiting fees 5/6 to 10/6. No midwifery. Small hours at £95 p.a. incl. on long leases. Could be run as bed-sit. Prem. 1½ yrs. *for*.—No. 9136.

WITHIN 10 MILES OF LONDON. — BUSY *Town* Small PRACTICE with over £500, with great scope for more by *personal* Selling through ill-health. Price £1,000 or near offer. Practice £4,000. Mortg. cash be arranged.—No. 9138.

NORTHERN UNIVERSITY CITY. — £1,700 a year. Old-established PRACTICE in best position in residential district. Opposition not strong. Appt. worth £150. Price £1,750. Fees 5/- up. £4 house with 5 beds, 3 recep. and *designed professional* rooms, etc. For sale or lease. Would suit gentleman of some experience.—No. 9134.

EASTERN COUNTY — AGRICULTURAL PRACTICE over £1,000 p.a., unopposed for 7 miles. Panel worth about £400. Clubs and appts. about £150. V. and M. 4/6 up. Detached house in good garden, 3 recep., 4 bed., surgery, etc. £37 p.a. on lease. Exceptional, safe practice.—No. 9132.

ITALIAN COAST. — DELIGHTFUL SPOT — About £500 p.a. Scope to increase. Good opening in neighbouring town. No English opposition. Fees 12/6 to 35/-. Flat to rent at under £100. 2 recep., 3 bed., cons. room, and usual offices. Furniture, etc., can be bought if desired. Goodwill £750 cash.—No. 9129.

RESIDENTIAL SEASIDE RESORT.—WITHIN easy reach of London. £700—£800 p.a., suffered through Vendor's ill-health. Ample scope. New estate building. Small panel. No dispensing. Mdy. not sought. Attractive freehold house, built by Vendor, 5 bed. etc., garden, and garage.—No. 9127.

SOUTH WALES.—MINING PRACTICE WORTH £1,250 p.a., mostly panel at 4 contracts. Scope to increase further. Mdy. 2—3 guineas. Visits 3/6. House, with 2 rec. p., 4 bed., etc., to rent. *Collieries working* full time. Opposition not severe. Prem. 1½ yrs.' pur.—No. 9125.

LANCS MANUFACTURING TOWN. — £725 p.a. Panel over 1,050. No appts. Mixed dispensing PRACTICE. Detached house, 5 bed., 2 *recep., surg.*, etc., with separate entrance. Garden and garage. To rent on lease.—No. 9124.

OUTER RESIDENTIAL SUBURB — 1,600 *class* PRACTICE hitherto worked on part time. £350 p.a. No panel and no appts. exist. *No* mdy. taken. Visiting fees 10/6 and 21/-. Good freehold house, 2 reception, 7 bedrooms, 2 bath., cons. room, etc. Price £2,8 for house and Practice.—No. 9110.

BERKS — OLD ESTABLISHED — COUNTRY PRACTICE, about £700 p.a. has been £1,100. Panel about 500. Visiting fees 2/6 to 7/6. Very little midwifery. Specially built *for* Vendor, with two acres of grounds, 2 reception rooms, 6 bedrooms, surgery, and waiting rooms. To consider £4,000 offer for Practice and freehold.—No. 9102.

WEST OF ENGLAND — UNIQUE OPPORtunity.—A Doctor's House can be rented or purchased in popular residential fringe of market. Situated on main road, centre of town.

WANTED

GOOD OLD ESTABLISHED PRACTICE IN Lancs or Yorks (after present) with £1,000 p.a. or upwards with fees of about 1,500. Applicant is graduate of 20 years' has ample capital available.—No. 9133.

WANTED, IN AUGUST OR EARLIER, A PRACTICE producing £1,500 to £2,000 a year with good panel. Preferably in Yorkshire, South Counties or Midlands. Salary or share with Locality with good hospital or training to be preferred. Applicant is married and has ample capital.—No. 9121.

NO CHARGE TO PURCHASERS.

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LIVERPOOL.—PARTNERSHIP in good middle-class G.P. in Suburban District. Excellent detached house for sale or rent (furnished or unfurnished), garden, garage. Receipts over £2,000. Panel 700—800. Fees 3/6 up. Hospital appointment. Excellent scope. Premium for one-half share (to include car) £2,400.

KENT.—PARTNERSHIP in good-class G.P. in rapidly growing district within 40 miles of London. Suitable house (newly decorated) to be rented at £70 p.a. Receipts approx. £1,700 p.a. Panel 1,200 (no dispensing). Fees 2/6 up. One appointment. Surgeon preferred. Premium for two-thirds share, 2 years' purchase.

HANTS. — Middle-class Country PRACTICE. Practically unopposed. Suitable for semi-retired Practitioner. Receipts over £400. Panel 94. Fees 2/6 upwards. Premium £450.

CHESHIRE. — Well-established mixed, middle, and working-class PRACTICE. Semi-detached house (6 bedrooms), with garden, to rent at £70 p.a. Receipts *approx.* £556. *Panel* 527. *Fees* 2/6 up. Premium £700, or near offer.

LONDON, E.C.—Mixed Cash and Panel Lock-up PRACTICE, with living accommodation, if desired, facing main thoroughfare, held on lease at £95 p.a. Receipts nearly £700. Panel 450 (*scope*). Fees 1/6 to 10/6. Midwifery not undertaken. Premium £1,000.

LONDON, N.—Well-established mixed middle and working-class Lock-up PRACTICE, situated on main thoroughfare in thickly-populated locality. Professional accommodation may be rented on lease. Receipts average £750 p.a. Panel 550. Fees 2/- to 10/6. One appointment. Premium 1½ years' purchase.

LANCS (Large Town).—Good-class G.P., situated in residential locality. Medium-sized house to rent. Receipts over £1,600. Panel approx. 700. Fees 3/6 up. Premium 1½ years' purchase.

S. AFRICA.—Well-established G.P. situated in well-known Health Resort. Delightful climate and surrounding country. Detached house, large garden, garage. Receipts approx. £1,800 (subject to confirmation). Fees from 10/6, plus medicine. Two appointments. Scope for Surgery. Premium £3,600.

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LONDON, E.—Suburban middle-class G.P. Medium-sized house to rent on lease at the low rental of £30 p.a. Fees 2/- up. Average receipts £516. Panel 350. Excellent scope for young man. Premium for Practice and lease £1,050 cash or near offer.

N.W.—Lock-up NUCLEUS situated in residential locality. *Suitable* accommodation if desired. Receipts £230. Panel 180. Fees 2/6 upwards. Premium 1½ years' purchase, or near offer.

YORKSHIRE (Near Coast). — Agricultural Locality. — Attractive house, separate entrance for surgery, for sale, freehold. Receipts average approx. £800 p.a. Panel 620. Fees 3/6 up. Premium 1½ years' purchase for Practice; house £900.

DURHAM. — Middle-class and industrial PRACTICE. Average receipts approx. £500. Panel 370. Medium-sized house. Branch Surgery. Fees 2/6 up. No appts. Premium £725 or offer. Excellent scope.

MANCHESTER. — Old-established industrial PRACTICE. Medium-sized house to be rented on lease. Receipts approx. £650, increasing. Panel nearly 800. Fees 2/6 up. Prem. £950, to include furniture.

MIDLANDS. — PARTNERSHIP (after 12 months' Preliminary Assistantship) in *old-established Country Town Practice.* Receipts £1,800. Panel 700 (not encouraged). Fees 3/6 up. Several appointments. Premium for one-half share 2 years' purchase.

LANCS.—Old-established middle-class and industrial G.P. Suitable accommodation to rent on lease at low rental. Receipts nearly £1,900. Panel 2,950. Fees 2/6 up. One Branch Surgery. Suitable to two in Partnership, or Principal and Assistant. Premium £3,000 cash.

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NEWCASTLE (Near).—Well-established middle-class and club PRACTICE. Medium-sized house to rent. Receipts over £450. Panel 500. Fees 2/6 upwards. Premium £775, to include drugs, instruments, surgery fittings, etc.

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4. LANCS. — Old-established PRACTICE. Receipts average £750 p.a., panel 1,050. Nice *house, rent to be arranged.* Vendor wishes a change South. Premium 1½ years' pur.
5. ESSEX COAST. — Well-established compact PRACTICE, held 8 years by Vendor. Receipts average £550 p.a., panel 250. Very nice but small house on long lease, rent £70 p.a. Premium £700. Good introduction given if desired.
6. LANCS. — Large Town. — Well-established PRACTICE. Receipts £700 p.a., panel nearly 900. Nice house available. Short Partnership introduction. Premium to be arranged.
7. RIVERSIDE TOWN.—*Old-established* PRACTICE. Receipts £1,000 p.a., including fair panel. Nice house on rental. Premium 1½ years' purchase.
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FOR DISPOSAL.

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3. LANCS. — FASHIONABLE RESIDENTIAL & SEASIDE TOWN. — Good-class, non-dispensing panel and private PRACTICE. Receipts £874. Good house for sale. Garage, etc.
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MANCHESTER. — Middle-class PRACTICE in good residential district which is rapidly developing. Average cash receipts £1,427 p.a., excluding appointment £120 to £150 p.a. Panel 700. Excellent corner house, 3 reception, 5 bedrooms, 3 professional rooms, garage, to rent or for sale Premium—Practice —1¼ years' purchase.—No. 438.

CO. DURHAM.—Small PRACTICE offering great scope in beautiful country district. Cash receipts £550 p.a. Panel 380. Good semi-detached house (3 bedrooms) to rent at £55 p.a. Garden. Premium £350.—No. 446.

NORTH-EAST COAST. — MIXED PANEL AND PRIVATE PRACTICE. Cash receipts last year £2,354. Appointment £120 p.a. Panel 2,070. Modern house, built especially for Practice, 2 reception, 5 bedrooms, 3 professional rooms, garage; also Branch Surgery, for sale. Premium —Practice—2 years' purchase; part by arrangement. Good introduction. —No. 445.

NORTH-WEST COAST.—Large residential and Seaside Town. — Old-established PRACTICE. Cash receipts about £1,200 p.a. Panel 1,500. Excellent detached corner house (freehold), 3 professional rooms, 5 beds., and 2 recep. rooms, garage, and good garden, for sale. Premium —Practice—1½ years' pur.—No. 417.

DEATH VACANCY.—LANCASHIRE TOWN.—Old-established mixed PRACTICE. Average cash receipts over £900 p.a. (including over £300 from panel). Scope for increase. Good house on main road 2 reception, 4 bedrooms. Rent £65 p.a. Premium 1 year's purchase. Locum in charge.—No. 423.

NORTH WALES.—Country Town (Border of Shropshire)—Mixed PRACTICE, averaging £785 p.a. Panel 760. Scope for increase. Good house, 2 reception, 4 bedrooms. Garage and garden. Rent £65 p.a. Cottage Hospital. Premium £850.—No. 440.

NR. NEWCASTLE-ON-TYNE.—Mixed general PRACTICE, averaging £800—£850 p.a. Panel 600. Scope for increase. Good house, 3 recep., 5 beds., garage, and garden Premium £950.—No. 422.

N. STAFFS.—Old-established Country PRACTICE in charming district, averaging £900 p.a. Panel 632. Appointments (transferable) £100 p.a. Practically unopposed. Scope for increase. Excellent house, with ample accommodation; garage and garden; rent £84 p.a. Premium 1½ years' purchase.—No. 426

MANCHESTER.—Middle-class PRACTICE, in pleasant suburb. Cash receipts last year, £1,327. Panel 528. Charming house to rent, 3 reception, 6 bedrooms, billiard room. Large garden and garage. Premium—Practice—1½ years' purchase.—No. 322.

LIVERPOOL.—Mixed PRACTICE. Cash receipts last year £945. Panel 876. Scope for increase Hospital appointment £75—£100 p.a. Good house, 3 reception, 5 bedrooms, professional rooms, to rent, or would sell. Premium—Practice—best offer.—No. 436.

LAKE DISTRICT.—Small Seaside Town.—Middle-class PRACTICE. Cash receipts over £800 p.a. Panel 250 Excellent house (freehold) on sea front, 3 reception 7 bedrooms Garage and large garden All kinds of sport. Vendor retiring. Premium—Practice —1½ years' purchase.—No. 382

LANCS TOWN, near Country.—Old-established mixed PRACTICE. Cash receipts last year £725. Panel about 1,000. Excellent detached corner house, 3 reception, 6 bedrooms, garage, and large garden. To rent on lease. Premium 1½ years' purchase, or near offer.—No 403.

MANCHESTER.—Old-established panel and private PRACTICE. Cash receipts last year £642. Panel 788. Scope Good corner house, 2 reception, 4 bedrooms, garage. Rent £60 p.a Premium 1½ years' purchase.—No. 437.

NORTH WALES — Old-established mixed PRACTICE, in Country Town, near coast. Cash receipts last year £700. Panel 538. Scope for increase as the Practice has been neglected. Excellent house. 3 reception 5 bedrooms, garage, and large garden Nr rent £50 p.a. Good sport and educational facilities. Welsh not essential Cottage Hospital Premium £800 —No 412.

DEATH VACANCY — CHESHIRE Coast Town, near Liverpool.—Cash receipts £500 £550 p.a Panel 100 Good house, 3 reception, 5 bedrooms garage and garden Rent £80 p.a Premium, best offer.—No 429.

MANCHESTER.—Small mixed PRACTICE offering great scope for increase. Cash receipts last year £660 Panel 450 Suitable house in main road, 2 professional, 2 reception and 4 bedrooms Rent £42 p.a Premium £750 —No 433

MEDICAL WOMAN'S PRACTICE.—MANCHESTER.—Cash receipts last year £645. Panel 450. Good scope. Excellent house 3 reception, 6 bedrooms, garage. Rent £60 p.a. on lease Premium, best offer.—No. 330.

EAST YORKS. — Country Town near Coast — Unopposed mixed PRACTICE. Cash receipts last year £950 Panel 650 Excellent detached house, 3 reception, 4 bedrooms; garage and large garden. Premium 1½ years purchase.—No 349

SCOTLAND.—Mixed PRACTICE and ing £700 p.a., including appointments £400 p.a Panel 226. Pleasant district. House with modern conveniences. Rent £16 p.a. Prem. £450.—No 434

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All communications to be addressed to the Branch Manager, BRITISH MEDICAL BUREAU, 33, CROSS ST., MANCHESTER, 2.

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(THE SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD.)

(FOUNDED 1880.)

12, Stratford Place,

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3 MIDLANDS. — OLD-ESTABLISHED PRACTICE, AVERAGING £1,230 p.a. in prosperous town about 70 miles from London. Panel 1,836. Semi-detached house in good position to rent. Good scope for increase. Premium £2,000.

4 LONDON, S.W.—OLD-ESTABLISHED PRACTICE ABOUT £650 p.a. in well-populated area. Panel 850. Separate Surgery and private residence to be purchased. Scope for increase. Premium £1,100.

5 S.W. OF ENGLAND.—WELL-ESTABLISHED PRACTICE, AVERaging £618 p.a., in popular seaside resort. No panel, clubs, or midwifery. House in good position, containing 5 bedrooms, for sale. Educational facilities and sport of all kinds. Great scope for increase. Premium 1½ years' purchase.

6 S. COAST.—SMALL BUT INCREASING PRACTICE OVER £300 p.a. in developing district within 2 miles of favourite watering-place. Panel 120. No midwifery. Detached house (4 bedrooms), garage, and good garden, for sale. Scope as building is going on. Premium £300.

7 SURREY.—PARTNERSHIP IN SOUND OLD-ESTABLISHED good mixed-class Practice about £3,000 p.a. in the Croydon area. Small panel. Very little midwifery. Suitable house could be obtained. Scope for increase. One-fourth share at first at 2 years' purchase, with option to increase in twelve months.

8 S. MIDLANDS. — OLD-ESTABLISHED COUNTRY PRACTICE over £2,000 p.a. in attractive part. Good appointments and panel of nearly 1,600. House (6 bedrooms), garage, and three-quarters of an acre of garden, for sale. Shooting, fishing, etc. Scope for increase. Premium 1½ years' purchase.

9 S.E. COAST.—MIDDLE AND WORKING-CLASS PRACTICE OF £1,000 p.a., in favourite summer resort. Panel over 1,000. Corner house (4 bedrooms), with garage and garden, for sale. Premium one and a half years' purchase.

10 N. WALES.—STEADILY INCREASING COUNTRY PRACTICE in partly Welsh-speaking district. Receipts average £1,115 p.a., including panel over 530. No resident opposition. Convenient and centrally situated house (4 bedrooms), with garden. Shooting, fishing, etc. Premium—house and Practice—only £2,000.

11 MIDLANDS.—PARTNERSHIP IN MIDDLE AND WORKING-class Practice of about £6,200 p.a. in Country Town in first-rate Hunting Centre. Panel over 3,000. House to purchase. Excellent opening for capable and energetic man. Cottage Hospital. Ample scope for good Surgeon. Premium one-half share 2 years' purch.

12 HOME COUNTIES.—PARTNERSHIP IN MIXED PRACTICE IN Country District within 25 miles of London. Cash receipts average nearly £4,300 p.a., including panel of 2,650. Detached house (4 bed and dressing rooms) in own grounds for sale. Premium one-third share 2 years' purchase.

13 S. MIDLANDS.—VERY OLD-ESTABLISHED PRACTICE ABOUT £500 p.a. in a town of about 50,000 inhabitants. Panel 430. Very good detached double-fronted house with 7 bed and dressing rooms, garage, and good garden. Great scope for an energetic man. Premium, freehold house and Practice, £4,000.

14 ESSEX COAST.—PARTNERSHIP IN PRACTICE OF £2,500 p.a. in small Seaside Town. Panel 2,300. Modern house in good position facing Sea with 4 bedrooms for sale. Scope for increase. Premium one-fourth share £1,250, and further share later.

15 W. MIDLANDS. — PARTNERSHIP IN OLD-ESTABLISHED Country Practice over £4,300 p.a. in delightful part. Good appointments and panel over 2,000. Conveniently situated house in own grounds, for sale. Cottage Hospital. Premium one-third share 2 years' purchase.

16 ESSEX.—PRACTICE ABOUT £1,150 P.A. IN DEVELOPING district in the Thames Estuary. Panel 350. House with ample accommodation. Electric light, main drainage, garage, and very nice garden to rent. Yachting. Plenty of scope for increase. Premium £1,700.

17 LONDON, W.—STEADILY INCREASING NUCLEUS OF PRACtice in the Maida Vale district. Bookings for 11 months £249, of which about £100 has been received. Rent of consulting and waiting rooms 30/- weekly. Good scope. Premium £300.

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Practices and Partnerships for Disposal (continued).

18 DEATH VACANCY.—LONDON, W.—VERY OLD-ESTABLISHED good-class PRACTICE of over £600 p.a. Small select panel. Visits 10/6 to £1 1s., some higher. No midwifery. Excellent corner house (5 bed and dressing rooms), the lease of which is for sale. Ample scope for increase.

19 WEST OF ENGLAND.—PARTNERSHIP IN OLD-ESTABLISHED PRACTICE over £2,200 p.a. in County Town. Panel about 1,000. Premium one-half share 2 years' purchase. Good prospects for well-qualified physician (preferably M.R.C.P.), who should be an R.C. and who would have opportunity of getting on Staff of Hospital in near future.

20 LONDON, E.C.—PARTNERSHIP IN OLD-ESTABLISHED PRACTICE in the City. Receipts average about £1,650 p.a., including appointments and panel worth over £500 p.a. Premium one-half share £1,000.

21 NORTH OF ENGLAND. — INLAND HEALTH RESORT. — NON-dispensing PRACTICE of about £1,000 p.a. Small select panel. House (7 bedrooms) with large garden, for sale. Premium—Practice—£750.

22 N. MIDLANDS.—PARTNERSHIP IN SOUND AND LUCRATIVE Practice in manufacturing district. Good appointments and large panel. House, with 7 bedrooms, to rent on lease. Premium for share worth about £2,600 p.a., 1½ years' purchase.

23 HOME COUNTIES. — PARTNERSHIP (AFTER PRELIMINARY Assistantship) in large mixed Practice in growing district within 20 miles N.W. of London. Applicant should be a keen and energetic young Englishman.

24 LONDON, E.C. — NUCLEUS OF PRACTICE (ABOUT FOUR-fifths Ophthalmic) in the City. Cash receipts average £268 p.a. Fees for Consultations £1 1s. to £2 2s. Consulting and waiting room to rent. Premium £250.

25 HOME COUNTY.—WELL-ESTABLISHED PRACTICE OF £700 p.a. in first-rate Country Town under 40 miles from London. Panel about 250. Fees 5/- to £1 1s. Large well-built residence (about 6 bedrooms) with modern conveniences. Beautiful garden, meadow, orchard, etc., in all about 24 acres. Excellent hunting. Premium, Practice and house, £4,500 (or near offer), which is less than the value of the house alone.

26 KENT.—PARTNERSHIP IN MIDDLE AND WORKING-CLASS Practice averaging nearly £4,450 p.a., in an industrial Town under 25 miles of London. Panel about 2,600. Detached house (4 bedrooms) with garden to rent. Plenty of scope for increase. Premium one-fifth share 2 years' purchase.

27 EASTERN COUNTIES. — OLD-ESTABLISHED PRACTICE about £2,750 p.a. in beautiful country district. Panel 1,150. Good house (6 bedrooms), with electric light and central heating, in large grounds, for sale. Good scope.

28 MIDLANDS. — PARTNERSHIP IN WELL-ESTABLISHED AND increasing Practice of nearly £1,550 p.a. in growing residential neighbourhood on outskirts of first-rate town. Panel 1,830. House (4 bedrooms, etc.), in acre of garden, for sale or rent. Excellent prospects of increase. Premium one-half share 2 years' purchase.

29 S. AFRICA.—RADIOLOGICAL PRACTICE IN A MOST DE-lightful town, with excellent climate. Cash receipts last year £1,450. Scope. Premium, to include furniture, carpets, accessories, etc., £2,200.

30 PRIVATE MENTAL HOME (FOR LADIES ONLY).—EXCEPTIONALLY nice house and grounds. A considerable sum required for the purchase. Further particulars on application.

31 EASTERN COUNTIES. — OLD-ESTABLISHED COUNTRY PRACTICE. Cash receipts about £720 p.a., including appointments over £150 and a panel of about 590. Detached house (6 bedrooms) in grounds of 1 acre for sale. Prem. for Practice £650.

32 EAST COAST.—PRACTICE OF BETWEEN £750 AND £800 p.a. in a purely Residential Seaside District within 40 miles from London. Small Panel. Detached house (5 bedrooms) for sale. Scope for increase as district is growing.

33 SOUTH AFRICA (CAPE PROVINCE).—PRACTICE OF OVER £2,600 p.a. in Residential District on outskirts of one of the Principal Coastal Towns. Good house (5 bedrooms, etc.) to rent. *Scope for Surgery.* Premium £1,750 or offer.

34 LANCASHIRE. — OLD-ESTABLISHED PRACTICE IN SMALL Manufacturing Town. Cash receipts last 12 months £725, including a panel of over 1,050. Detached house (5 bedrooms), with garage and good garden, to rent. Premium 1½ years' purchase or near offer.

35 HOME COUNTIES. — PRACTICE IN DELIGHTFUL COUNTRY District, easy distance of London. Earnings past 12 months £657. Panel over 300. Attractive house (7 bed and dressing rooms) in grounds of two acres, with garage, for sale. Very suitable for Resident Patients. Good scope for increase. Premium £700.

36 SURREY.—PRACTICE OF £1,000 P.A. IN RAPIDLY GROWing Residential District within 15 miles of London. Panel 450. Suitable house, with separate professional accommodation, for sale. Scope for considerable increase. Premium £1,000.

37 LONDON, W.—GOOD MIDDLE-CLASS PRACTICE £300 P.A. in suburb within easy access of the West End. Panel over 160. Attractive double-fronted house with nice garden for sale. Scope for increase. Premium 1½ years' purchase.

38 CORNWALL.—VERY OLD-ESTABLISHED PRACTICE OF OVER £1,100 p.a. in delightfully situated seaside village on West Coast. Panel about 550. Well-built house (7 bed and dressing rooms), standing in half-acre of ground for sale. Scope. A building is going on. Premium 1½ years' purchase.

39 LONDON, N.—PARTNERSHIP IN PRACTICE ABOUT £5,250 p.a. in thickly populated Suburban District. Panel about 800. One-fourth or one-third share at 2 years' purchase.

40. S. OF ENGLAND. — PARTNERSHIP IN OLD-ESTABLISHED Practice of nearly £1,950 p.a. in important town within 80 miles of London. No panel. Attractive corner residence (7 bed and dressing rooms), in half-acre of walled in garden, with garage, etc., for sale. Ample scope for increase. Premium one-half share 2 years' purchase.

41 HOME COUNTIES. — OPHTHALMIC PRACTICE BETWEEN £300 and £400 p.a. in desirable Residential Town, under 15 miles from London. Good detached house (4 bedrooms) with large garden for sale. Good reasons for plenty of scope for increase. Premium £300.

42 LONDON, E.C.—OLD-ESTABLISHED "LOCK-UP" PRACTICE of £646 p.a. Panel 459. Living accommodation to rent if desired. Premium £1,000.

43 S. AFRICA. — OPHTHALMIC AND GENERAL PRACTICE about £1,400 p.a. (about 60 per cent. Ophthalmic), including appointments £400. No Ophthalmic opposition. Premium £4[illegible].

44 CO. DURHAM.—PRACTICE OVER £500 P.A. IN RESIDENtial colliery district, near two large towns. Panel 370. Centrally situated 7-roomed house, with good Surgery and Dispensary, for sale or rent. Practice could be very quickly substantially increased. Premium £650.

45 N. OF ENGLAND. — OPHTHALMIC PRACTICE OF OVER £1,600 p.a. in an important town. Excellent scope for one keen on clinical and operative Ophthalmology. Large house in first-class condition for sale. Purchaser should be well qualified. Premium £2,500.

46 S. AFRICA. — PRACTICE OF ABOUT £2,000 P.A. IN A famous town. Pleasantly situated detached bungalow (5 bedrooms), garage, and small garden for sale. Good hospital (with private wards). Premium £1,100.

47 LONDON, WEST END. — X-RAY AND ELECTRO-THERAPeutic Practice. Receipts 1931, nearly £900. Suitable and convenient flat at moderate rent, on lease. Premium £[illegible].

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1. LONDON, SOUTH-WEST.—Old-established middle and working-class PRACTICE, producing about £1,100 p.a., including panel of about 1,150. Visits 3/6 to 5/-. Suitable corner house, with 2 reception, 4 bedrooms, bathroom, and separate professional accommodation. Can be rented on lease. Premium £2,000. Easily worked, and offering very good scope for increase.
2. SOUTH-WEST OF ENGLAND.—In a thriving and pleasant seaport town, with beautiful surrounding country, a well-established increasing PRACTICE worth last year over £1,100, including panel producing £286 and appts. £200. Visits 3/6 to 21/-. Midwifery practically refused. House is Vendor's property and is for sale. Premium £2,000, or near offer.
3. PARTNERSHIP. — EASTERN COUNTIES. — The third share, with increase to half in 3 years, can be acquired by an experienced Practitioner about 30 years of age and with some knowledge of Eye work and Anaesthetics, in a very old-established Practice situated in very pleasant market town, with Cottage Hospital. Cash receipts average £3,870 p.a., including panel producing £1,100 and appts. Fees good. Excellent house with ample accommodation, garden, garage, etc. Electric light. Can be rented at £80 p.a., or would be sold. Preliminary Assistantship considered.
4. WITHIN SIXTEEN MILES OF LONDON.—Small PRACTICE, offering large scope in good residential town. Receipts estimated to be between £500 and £600 p.a. Good house. Price for Practice and house £4,000, or near offer.
5. PARTNERSHIP. — NEAR EPPING FOREST. — A one-third share is offered in a well-established and rapidly developing good middle-class Practice, averaging for the past three years £3,504, including appointments worth £250. Selected panel of 660. Good house available (professional accommodation, 3 reception, 5 bedrooms, etc.). Large and secluded garden. Garage. Freehold for sale, or might be rented. Premium 2 years' purchase.
6. LANCASHIRE.—LARGE TOWN.—Old-established chiefly working-class PRACTICE, averaging for the last three years nearly £1,900. Panel of 2,950. Advice and medicine from 3/6. Surgery can be rented at £55 p.a. Premium £3,000, or near offer.
7. LIVERPOOL.—Well-established PRACTICE in rapidly growing district, Gross cash receipts over £950, including panel of 876. Fees from 2/6. Suitable house can be rented at £80 p.a. Premium 1½ years' purchase.
8. NORTH WALES.—Chiefly Panel and Contract PRACTICE in the midst of beautiful surrounding country. Average gross cash receipts for last three years £783. Panel of 760. Advice and medicine 2/6 to 5/-. Not much midwifery. House contains 2 reception rooms, 4 bedrooms, boxroom, bathroom, etc., and professional rooms. Electric light and gas. Garden. Price for freehold £800, £580 on mortgage. Premium £900, or near offer. Excellent fishing, shooting, hunting, etc., and good schools within reach.
9. MIDDLESEX.—ASSISTANTSHIP, with view to Partnership offered in a large mixed general Practice, after a preliminary period of six months. Ingoing partner must be English and experienced.
10. SOUTH-EAST LONDON.—Good middle and working-class PRACTICE, producing last twelve months nearly £950. Panel of 986. Suitable house, with 2 reception, 4 to 5 bedrooms, etc. Rent on lease £70 p.a. Premium, to include drugs, etc., and surgery fittings and furniture, £1,450.
11. HOME COUNTIES.—ASSISTANTSHIP, with view to Partnership, is offered in a better-class Practice in residential town. Ingoing partner must have experience of general Practice and be able to undertake major surgery, and preferably hold a Fellowship.
12. NORTH WALES.—Old-established middle and working-class PRACTICE, averaging for the last three years over £1,700, including panel of about 1,300. Fees from 2/6. Visits from 3/6, with medicine extra. Suitable house, with good professional accommodation. Electric light. Garage for two cars. Small garden. Rent on lease £100 p.a. Premium £2,500, £1,700 down, balance by instalments. Good sport, etc. A knowledge of Welsh is not necessary.
13. DEATH VACANCY.—ESSEX COAST.—Old-established PRACTICE, held by late Incumbent nearly 30 years. Receipts are estimated to be between £500 and £600 p.a. Selected panel of 143. Fees 2/6 to 5/-. Visits 3/6 to 7/6. Midwifery refused. Detached double-fronted corner house, with 2 reception, 4 bedrooms, etc. Separate professional rooms. Garden. Price for Practice and house £1,750.
14. PARTNERSHIP.—CHESHIRE.—Half share (producing over £2,000 p.a.) of very old-established Practice, situated in most pleasant residential district within few miles of a large town, can be acquired by an experienced 5 and 40 years of age. Panel of 1,200—1,300. Fees good and expenses light. Suitable house available: reception rooms, 3 bedrooms, and 3 attic bedrooms, bathroom, etc. Garage and garden. Rent £65 p.a. Premium £4,000. Every social amenity, sport, and very good educational facilities.
15. RIVIERA.— Old-established PRACTICE the receipts from which have averaged over £1,600 p.a., but have decreased recently owing to Vendor's ill-health. Very good prospects of extension. Fees from £1 1s. Very easy work. Suitable flat can be rented at £160 p.a. Premium £4,000.
16. MIDLANDS.—Old-established middle and better-class PRACTICE in clean and attractive manufacturing city. Cash receipts average over £1,600 p.a., including appt., worth £165 (transferable) and panel of 1,220. Visits 5/- to 2 gns. Midwifery discouraged, fees 5 to 15 gns. Exceptionally good house, in its own grounds, with ample accommodation; fitted with every labour-saving device, and economically run. Situated in the best residential part. A cottage in the grounds is let at £37 a year. Price, freehold, £5,000 (£3,500 on mortgage). Premium £3,500. Scope for active man.
17. WITHIN FIFTEEN MILES OF LONDON.—Old-established better middle and working-class PRACTICE, producing last year £1,536, of which £689 is from panel. Fees 2/6 to 7/6. Midwifery discouraged. Large house in one acre of ground, with ample accommodation. Price (freehold) £4,750 (£2,750 on mortgage or might be rented). Premium £2,500. Very good scope for increase.
18. PARTNERSHIP. — RESIDENTIAL SUBURB OF LONDON. — A half share is offered in a well-established middle-class Practice, producing over £2,500, with panel of 1,400. Surgery fees 2/6. Visits 4/- to 7/6. Very little midwifery. Commodious house, with 2 reception, 6 bedrooms, etc. Can be rented at £100 p.a. Premium 2 years' purchase.
19. WESTERN SUBURB.—Well-established PRACTICE, producing £600 p.a., including panel of nearly 600. Suitable house available. Premium 1½ years' purchase.
20. LANCS.—Well-established mixed-class PRACTICE, producing for the last 12 months £725. Panel of 1,055. Fees from 3/6. House contains 3 reception, 5 bedrooms, etc. Rent on lease £85 p.a. Premium 1½ years' purchase.
21. LANCS. — LARGE TOWN. — Old-established upper and middle class PRACTICE, situated in purely residential district and averaging about £1,700 p.a. including appt. of £130, and panel of 700. Visits 5/- upwards. Very little midwifery at 5 to 10 guineas. Expenses low. Excellent and well-built house, ideally situated, having ample accommodation (surgery, waiting room, and dispensary, 3 reception, 5 bedrooms, etc.). Rent on lease £120. Premium £2,500. Good educational facilities.
22. EGYPT.—Well-established PRACTICE, producing about £960 p.a. and offering good scope for increase. Fees 10/6 to 2 guineas. Excellent accommodation can be rented at £16 10s. monthly. Premium to include all furniture, drugs, drug bottles, instruments, etc., £2,000.

ASSISTANTS REQUIRED. — (1) NORFOLK. Good town. Experienced, keen worker required for well-established and increasing Practice. Not over 30 years of age. Commencing salary £400 p.a., with yearly increase. (2) SOUTH WALES. Outdoor, salary £400 p.a. Required immediately. (3) LONDON, E. Indoor, £300 p.a. (4) LONDON, N.W. Indoor, £300 p.a. (5) LONDON, S.E.—Indoor, £300 p.a. (6) SOUTH COAST. Large town. Indoor £300 p.a. (7) YORKSHIRE. Outdoor, £300 p.a., all found. Single, aged 28 to 30, English or Scot, and willing to cycle. (8) STAFFS. Outdoor, £450 p.a. Must provide own car.

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4. SOUTH COAST TOWN, or near locality.—PRACTICE averaging about £1,500 p.a., with panel of 1,000 or thereabouts. Small house preferably on rental. Capital available.
5. LONDON OR SUBURBS.—PRACTICE, producing £1,400 to £1,600 p.a., with panel of 1,500. Good house, with garden.
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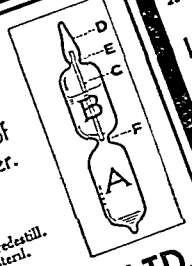

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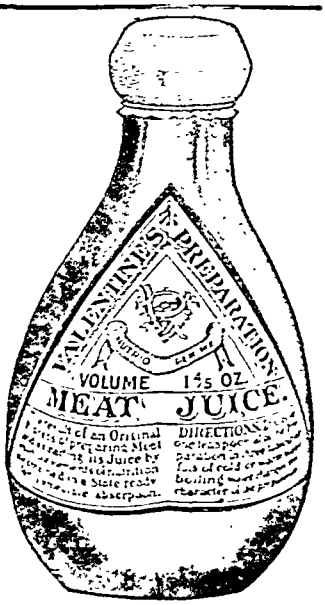

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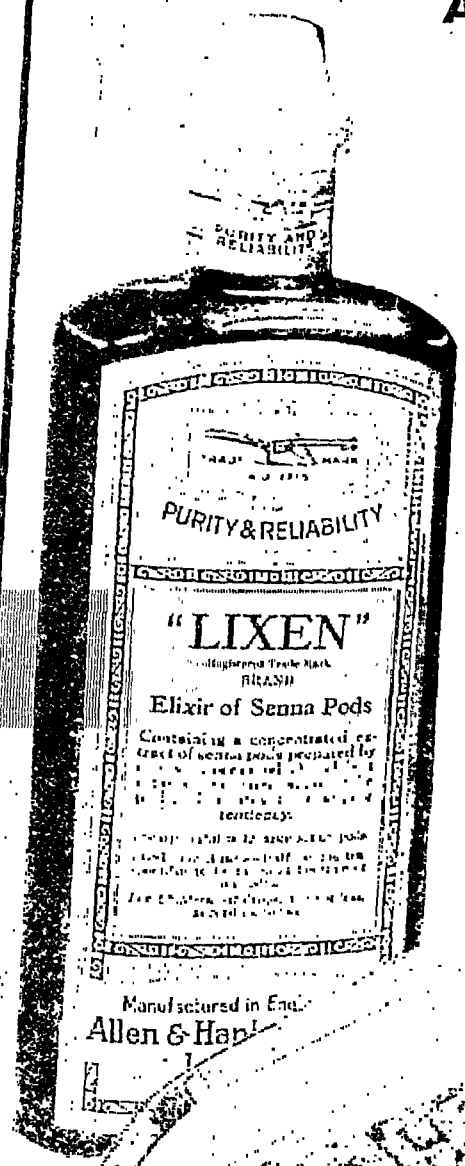

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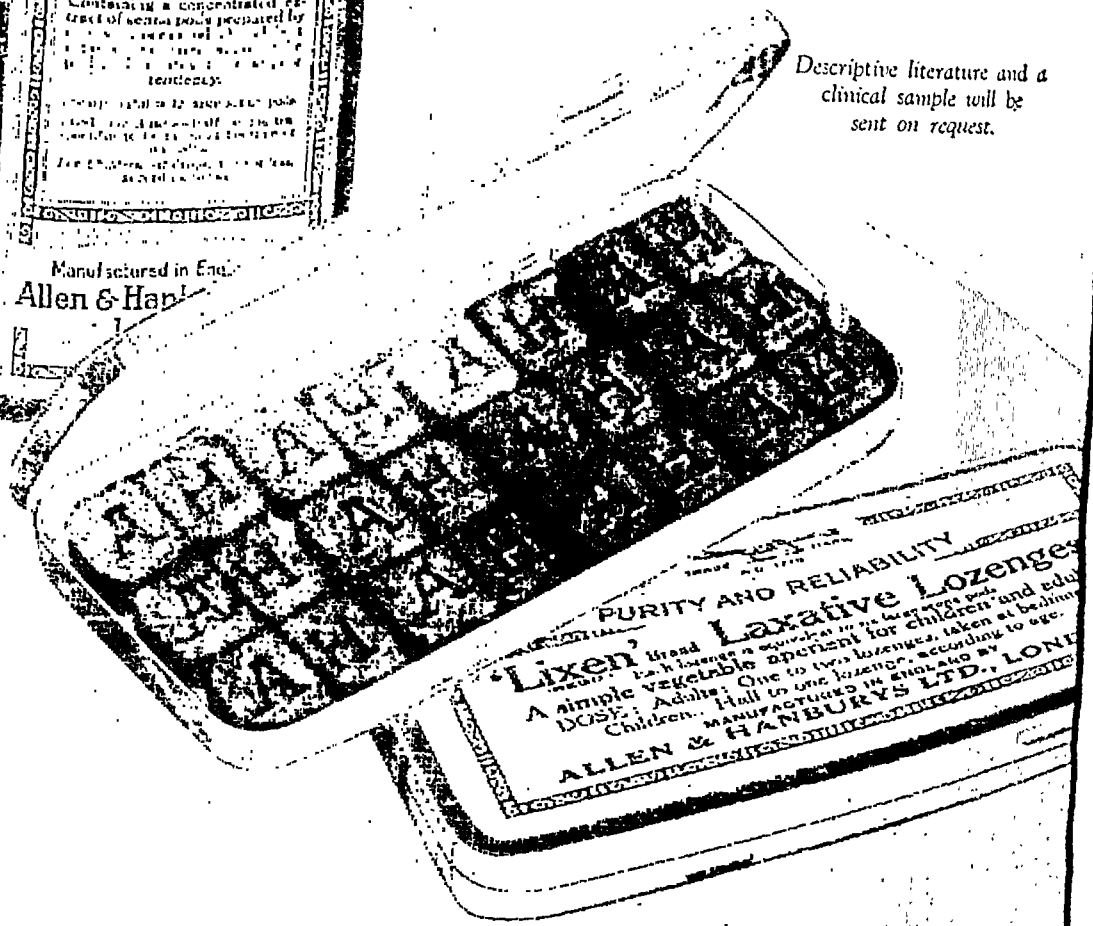

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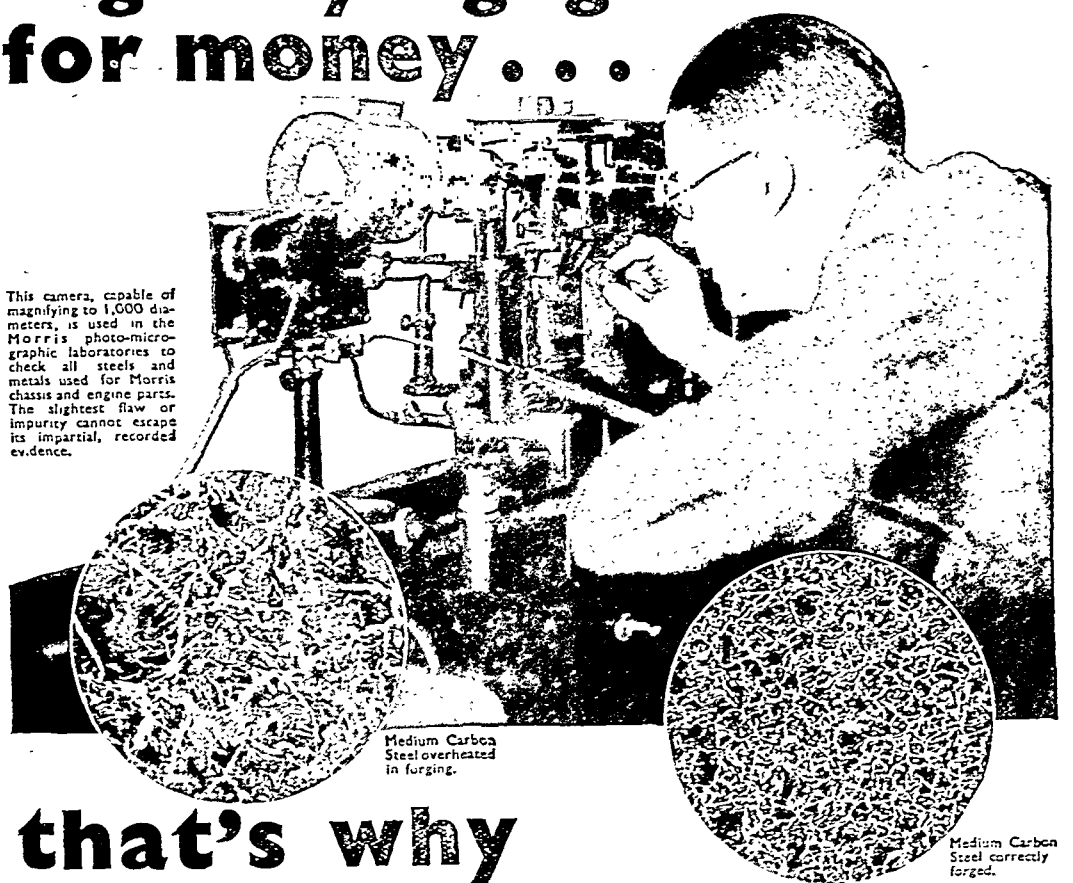

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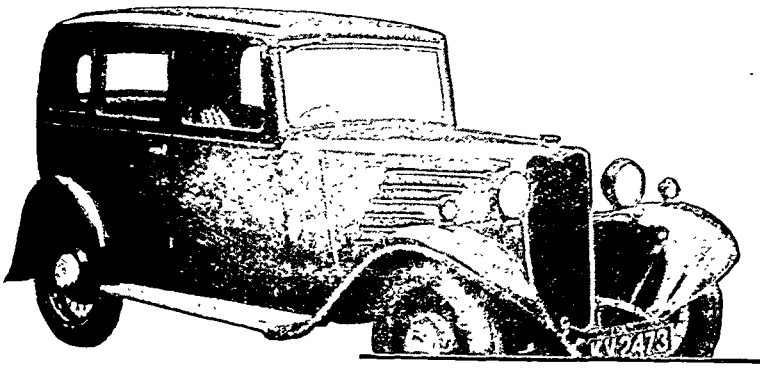

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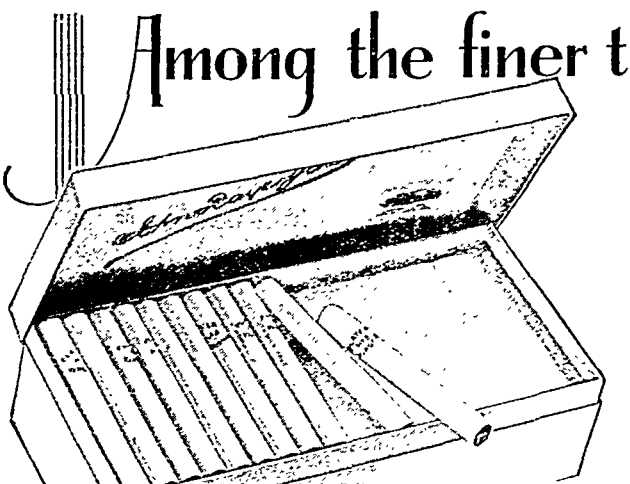

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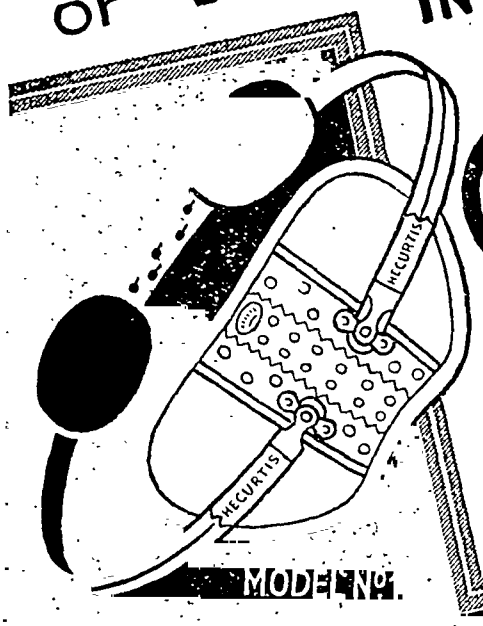

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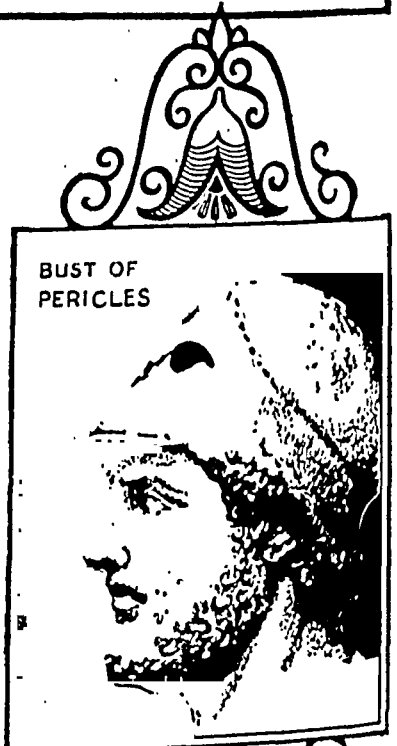

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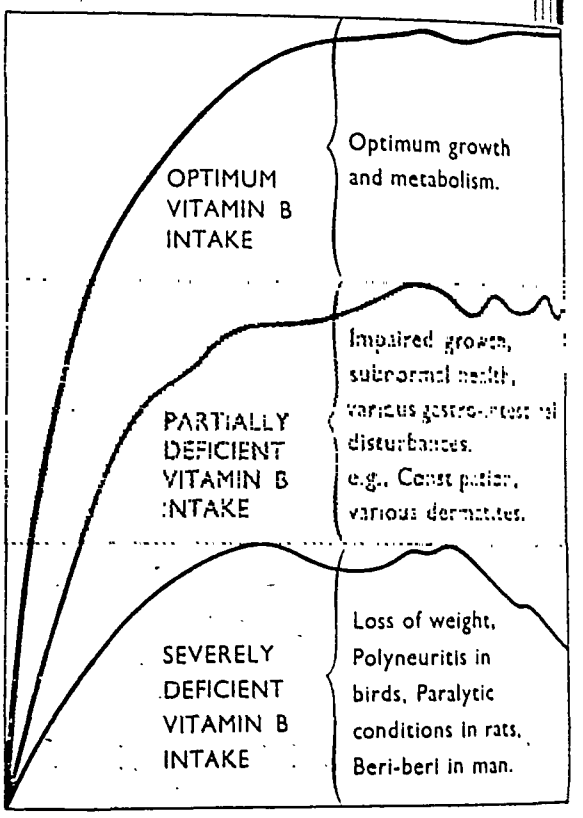

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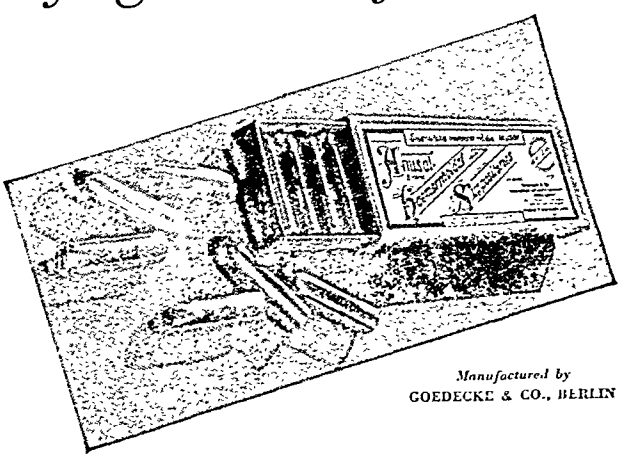

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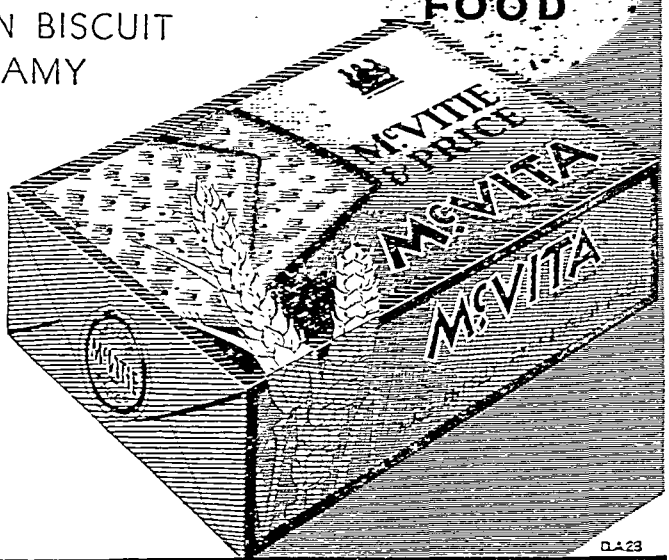

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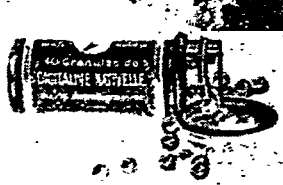

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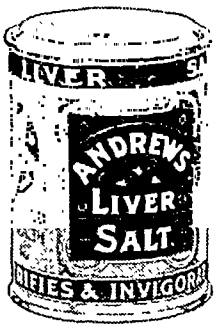

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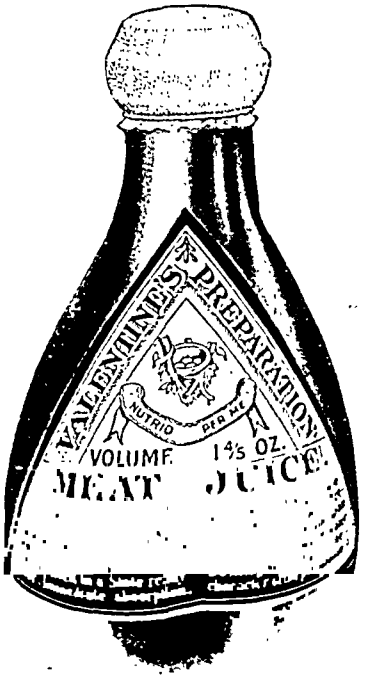

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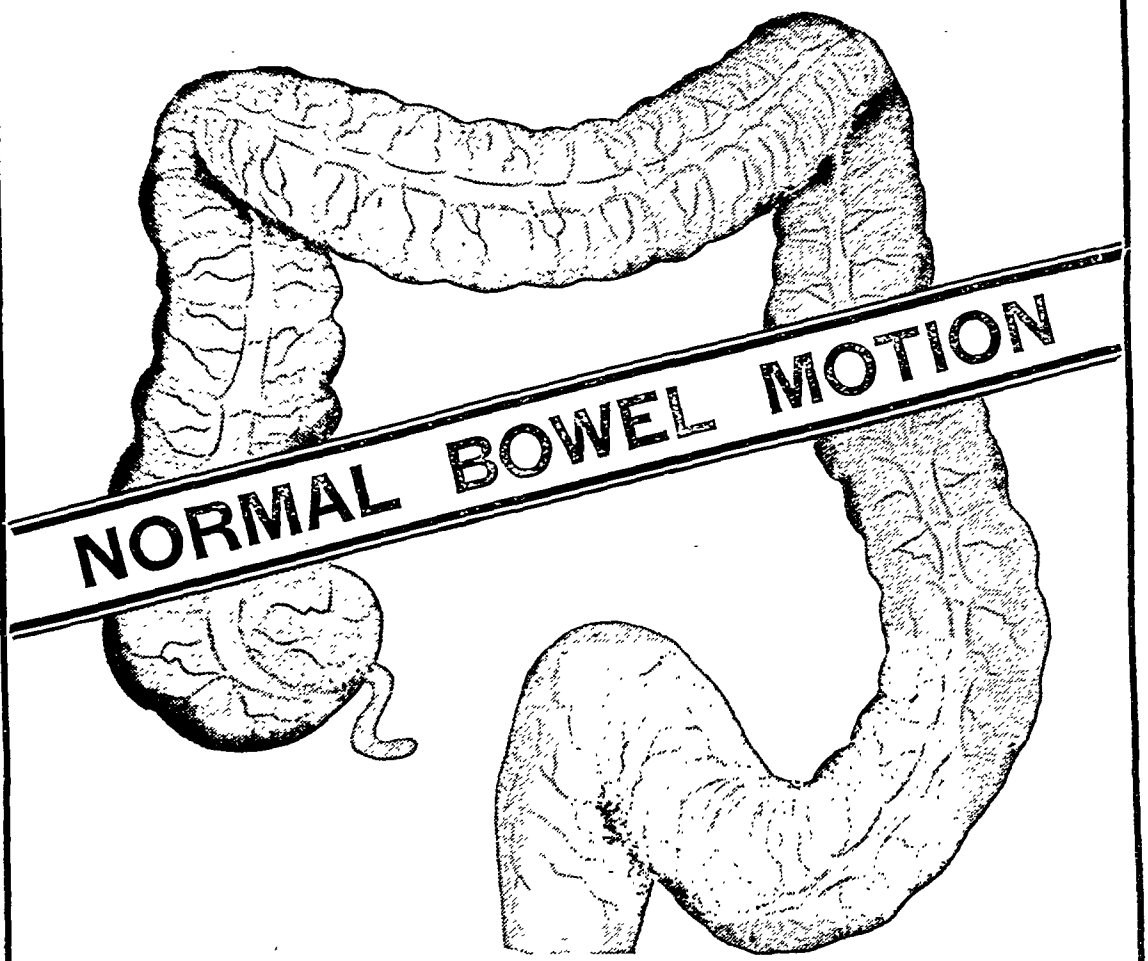

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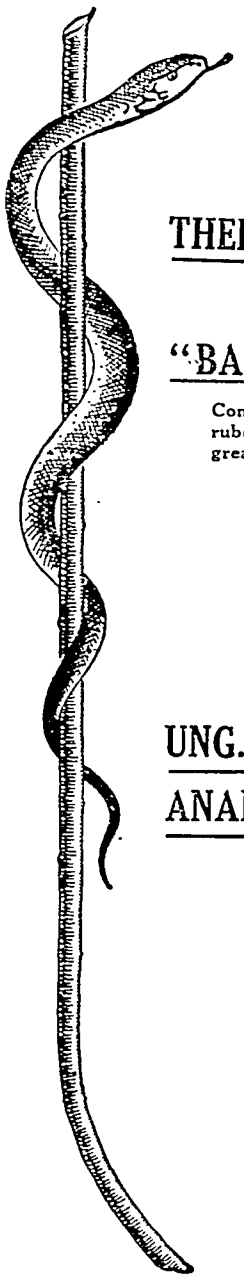

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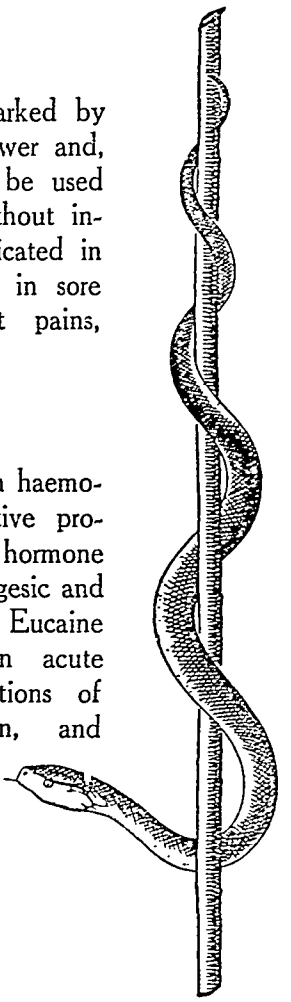

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Remarks
ON
HEADACHE AND PAIN IN INFLAMMATION OF NASAL SINUSES*
BY
HERBERT TILLEY, F.R.C.S.

It is common knowledge that pain is a frequent and sometimes the chief subjective symptom of chronic inflammation of the antrum, ethmoid, and frontal and sphenoidal sinuses or air cells. We are equally aware that the pain may assume the type of a generalized headache, or be confined to a more or less restricted area. In the latter case the localization of the symptom may be so definite as to suggest the particular sinus which is at fault. On the other hand, it must be emphasized how true but strange it is that one, more, or all the air cells on both sides may be in a state of chronic inflammation, even of the suppurative type, and yet there may be no history of diffuse or of restricted pain in the head. For example, an ophthalmic colleague referred an elderly man to me for examination of his nasal cavities as a possible cause of diplopia with slight downward and outward proptosis of the right eye. The corresponding nasal fossa contained many polypi, and all its sinuses were suppurating. On opening the frontal sinus externally a pulsating discharge of pus under tension escaped. After free exposure and cleansing of the sinus it was seen that its posterior bony wall had been destroyed and its place taken by granulation tissue protecting the dura mater. The inferior wall, or floor of the sinus was also absent, and occupied by intra-orbital tissues covering the upper dome of the eyeball. In spite of these destructive lesions and the presence of pus under tension, the patient was most explicit in his statement, "I have never had a headache in my life."

RELEVANT FACTS

For those who have little practical experience of diseases of the nasal cavities it may be well to state at this juncture a few facts which have an anatomical, physiological, and pathological bearing on that particular aspect of the subject which has been chosen for our discussion.

The accessory nasal sinuses or air cells lie in close relation to one another, especially the ethmoid, frontal, and sphenoidal cavities; consequently it is unusual to find chronic inflammation confined to any one of these. On the other hand, the maxillary antra having a more or less detached and lower position, it is not uncommon to find one of them to be affected, and particularly so when the primary source of inflammation is of dental origin.

With the exception of the specialized epithelium of the olfactory nerve expansions in the higher regions of the septum and ethmoid bone, the nasal cavities and the sinuses which communicate with them are lined by a continuous, columnar-celled, ciliated epithelium. In the living condition and by means of the cinematograph it has been demonstrated that the action of the cilia in each sinus is such as to produce a propulsive and wave-like movement over the surface of the mucous membrane, which is directed towards the nasal cavity by way of the "ostium" of the respective air cell. If one watches a slow-motion picture of a highly magnified ciliated cell, it will be seen that the lash of the cilium is not an indiscriminate waggle, but that it has a slow back and quicker forward movement, which closely resembles the "cast" of the angler or the "drive" stroke of the correct golfer. It is this concerted and characteristic action of the cilia which causes the general and purposive wave-like movement which tends to expel both normal and pathological secretions into the nasal fossa, and from these towards the anterior or posterior nares. This intimate continuity of ciliated mucous membrane extending from just behind the vestibule of the nostrils to the furthest ramification of the nasal sinuses explains (*a*) the ease with which inflammation may extend from the nasal cavities to their accessory air cells, or from any one of these to its immediate neighbour; and (*b*) that if ciliary action is temporarily or permanently inhibited there will be retention of inflammatory products with pain and other clinical manifestations as probable consequences.

Incidentally, such considerations have this important bearing on treatment in that, while every effort must be made to establish free and spontaneous drainage for pathological secretions, equal care must be taken to preserve any inflamed mucous membrane which would appear to be capable of ultimate recovery. Neglect of this precaution may lead to such ultimate complications as pain resulting from obstructive scar tissue, or troublesome crust formation, which may prove an intolerable nuisance to a sensitive patient.

PAIN IN THE HEAD: ANATOMICAL AND PHYSIOLOGICAL ASPECTS

In the consideration of this symptom in relation to chronic inflammation of the nasal sinuses, we naturally envisage the origin and distribution of the fifth or trigeminal nerve, from which the air cells, as well as the whole face area and most of the deeper structures of the head, derive their sensory innervation. As this aspect of the subject will be dealt with authoritatively by my collaborator Dr. Wilfred Harris, there is no need for me to do more than refer to one or two general observations upon it. In a very clear and illustrated account of the anatomy of the fifth nerve Leslie Paton (*British Journal of Ophthalmology*, June, 1926) says:

> "The sensory afferent nerves from the whole face area and from a portion of the scalp are gathered together into three main branches of this nerve and pass into the Gasserian ganglion and thence into the pons to be distributed up and down over a very extensive area of the brain stem from the mid-brain on a level with the corpora quadrigemina to the upper cervical region of the cord. . . . This extensive distribution of the fifth nerve from the mid-brain down to the second cervical level and the numerous interrelationships which it forms with the nuclei of origin of all the other cranial nerves form one of the reasons why headache so frequently results from many different causes and is so vague in its distribution."

When pain happens to be a symptom of chronic nasal sinus inflammation its cause is often obvious—namely, pathological secretions retained under tension. This is proved by the fact that release of the discharge is frequently followed by immediate relief of the symptom. But sometimes pain or headache is complained of even though drainage appears to be quite free by way of the natural opening of the sinus into the nasal cavity. This may be due to at least two causes. (1) The presence of a secondary chamber or "loculus" within the parent air cell and not freely discharging into it. (2) A hypersensitive condition of the inflamed mucous membrane of the sinus in a patient whose deep trigeminal nuclei have a low threshold of resistance to afferent impulses—that is, both a distal and a central weakness, which is often met with in the type of patient who says he (or she) "never feels really fit." The explanation of this want of tone may, of course, result from a mild toxaemia arising from the infected sinus, or from some independent constitutional factor.

* Introductory paper read in a discussion at the Medical Society of London, March 27th.

In other instances headache or pain is produced by mere pressure on sensory nerves in the neighbourhood of the lesion. Here is a specimen of a cystic middle turbinal, as large as a pigeon's egg, which completely blocked the right nasal cavity. Its upper extent was tightly wedged between the nasal septum and the "lateral mass" of the ethmoidal labyrinth. Its removal at once relieved severe pain in the upper nasal region, the inner side of the right orbit, and the corresponding lower mid-frontal region. On this aspect of the subject it is unnecessary for me to say more than that, however uncertain we may be as to ultimate factors of pain in relation to chronic inflammation of the nasal sinuses, we can safely assume that its primary source is due to impulses which arise in the inflamed mucosa of the air cells and pass along their respective sensory nerves to join those others which go to form the ophthalmic, maxillary, and mandibular roots of the Gasserian ganglion. From here they issue in the main trunk of the fifth or trigeminal nerve to enter its central nuclei, with their numerous ipso- and contra-lateral communications.

The nerves from which the nasal sinuses receive their sensory supply are as follows:

Frontal Sinuses.—Terminal twigs of the supraorbital branch of the "frontal nerve," derived from the ophthalmic division of the fifth.

Ethmoidal Sinuses.—The naso-ciliary branch of the ophthalmic nerve, and from the maxillary nerve by way of the orbital and posterior superior nasal branches of the sphenopalatine ganglion.

Sphenoidal Sinuses.—The orbital branches of the latter ganglion.

Maxillary Antra.—From the maxillary nerve through its posterior superior alveolar branches.

(The mandibular nerve has only an indirect connexion with the sinuses by way of the otic ganglion, and its communicating branch with the deep petrosal nerve which enters the sphenopalatine ganglion.)

CLINICAL ASPECT OF PAIN

I have already stated that chronic inflammation of a nasal sinus may be associated with a localized or more diffuse pain in the head. In the first type the symptom may be felt in the immediate region of the inflamed air cell, or at a distance from it and where there is no apparent reason for the discomfort. In such cases it is spoken of as "referred pain," and examples of it will be familiar to you in other regions of the body—for example, angina pectoris with pain in the left arm, or tuberculous disease of the hip-joint, with pain on the inside of the corresponding knee-joint, or lancinating pain in the ear caused by certain lesions in the throat or in the larynx. It is my experience that pain is more likely to be of the localized or of the referred variety when only one sinus is affected, whereas a general headache is more common when more than one air cell is inflamed. In the latter condition the explanation may be that with an increase of afferent impulses reaching the ganglion cells of the ipsolateral nuclei, the stimuli may overflow or irradiate those of the contralateral group and thus cause a diffusion of pain, which is felt in the whole head area. If a rough simile be permitted, one might compare the large central nuclei of the fifth nerve and its connexions with B.B.C. House, where in-coming messages are received, considered, and transmitted to their appropriate destinations. A message from a distant station and of only local importance would receive a direct reply, but if the information was of far-reaching importance B.B.C. House would relay it, or refer it to other or even to all its outlying stations.

But this is dangerous ground for me to tread on, and I shall await, with due composure, any "corrective" which my friend Dr. Wilfred Harris thinks fit to administer.

We may now pass to the consideration of the situations and types of pain to which chronic inflammation of each particular sinus may give rise. In the first place, it may be said that such a condition is generally the result of an acute or subacute primary infection which has not undergone resolution, either with or without treatment. Furthermore, in a large majority of cases the sinus infection is a complication of one of the acute specific fevers, and particularly of influenza.

Maxillary Antrum

This large air cell differs from the other sinuses in that an additional source of infection arises from septic conditions in and around the roots of the second bicuspid and the first and second molar teeth, which are in close relation with the floor of the sinus. In such circumstances pain will often be experienced in the cheek area, and may be explained by the presence of some degree of alveolar periostitis. It is a common experience to find the pain of chronic antral inflammation, whether of dental or of intranasal origin, referred to a region corresponding to the supraorbital foramen and the distribution of the supraorbital nerve. In the former area it may be so intense and localized as to suggest the frontal sinus as its source. In other instances, and particularly in patients of low resistance, the pain may affect the whole corresponding side of the head. There is a further peculiarity about headache and pain in chronic inflammation of all the sinuses—namely, its tendency to come on soon after the patient rises in the morning and to pass off about, or shortly after, noon. Such periodicity should always call for a careful examination of the paranasal air cells.

Ethmoid

In chronic inflammation of this labyrinth of air cells, whether suppurative or not, pain is most often felt in regions bordering the inner side of the orbit and at the root of the nose. Sluder gave its location as a small area bounded by the supraciliary ridge above, the supraorbital foramen laterally, and the nasal bones below. From the diagnostic point of view such pain can often be relieved immediately by the application of cocaine to the internal and external branches of the naso-ciliary nerves in the upper anterior regions of the nasal fossae. In yet other instances pain may be felt over the vertex, or there may be a feeling of "pressure" in that locality.

Frontal Sinus

As a general rule when pain is complained of this symptom is localized in and immediately around the region of the sinus, and is definitely aggravated if pressure be applied upwards and inwards on the inner region of the floor of the air cell. The periodicity of the pain, to which I have referred, is particularly noticeable in a chronic suppurative inflammation of this sinus.

At this juncture one may perhaps draw attention to what is termed "vacuum headache." It is due to the narrowing of the fronto-nasal duct leading from the sinus into the nasal cavity, and is generally brought about by encroachment of the adjacent ethmoidal cells through which the duct passes. Absorption of the air in the frontal sinus brings about the vacuum, and this induces a dull frontal headache, which is much increased by any sustained use of the eyes. There may be no intranasal signs of disease, and the diagnosis has to be inferred from the above symptom coupled with pain on pressure on the inner region of the floor of the sinus. In cases of doubt, a skiagram may be of great value.

Sphenoidal Sinus

Perhaps the most frequent situation of pain is over the occiput, and next in order the vertex and, occasionally, the region supplied by the supraorbital nerve. If the Vidian nerve becomes involved by hyperplastic inflammation of the outer wall of the sinus and neuritic changes reach Meckel's ganglion, the spheno-palatine ganglion syndrome may result—that is, neuralgic pains in the supraorbital, ocular, superior maxillary, mastoid, and occipital regions. In some cases they may extend to the shoulder-blade, the arm, and even to the finger-tips. Such symptoms may be accompanied by lachrymation and sneezing attacks. My own experience has confirmed this widespread nature of the symptoms. The diagnosis is usually easy, because an application of cocaine to the nasal mucous membrane behind and above the posterior end of the middle turbinal will temporarily cut short the pains, and sometimes they can be cured by injecting the ganglion with 5 per cent. phenol in 95 per cent. alcohol. It may be well to emphasize one very definite and not infrequent symptom of chronic inflammation in the sphenoidal sinus—namely, pain over the corresponding mastoid region—to which I drew attention so long ago as 1905 at the meeting of the British Medical Association in Leicester. It is, of course, a referred pain, the sensory impulses passing from the spheno-palatine ganglion by way of the Vidian and large superficial petrosal nerves to the geniculate ganglion of facial, and from thence to the facialis cutaneus branch of the posterior auricular nerve, which terminates about 5 cm. behind the mastoid.

SUMMARY AND CONCLUSION

In this brief introduction of the subject for discussion it has been my object to show: (1) that pain is a frequent symptom of chronic inflammation of the nasal accessory sinuses, and that it may take the form of a more or less generalized headache or be felt in so restricted a region that suspicion will fall on a particular sinus; and (2) that there may be a complete absence of pain when one, more, or all the usual air cells are in a state of chronic inflammation, even of the suppurative variety. These facts should prompt a question of even wider clinical significance—namely, if and when pain is *associated* with the chronic nasal sinus lesion, may it not sometimes be due to a cause entirely independent of local inflammation? The answer may be of far-reaching importance, because in the majority of such inflammations some form of surgical intervention will probably be required; and, if this is carried out in ignorance of a coexisting extraneous factor, the most skilful operation may be followed by prolonged convalescence or by complications productive of anxiety to all concerned. In other words, a preliminary overhaul of the patient should never be omitted, and at any rate, the heart, lungs, blood pressure, and the proper functioning of the kidneys and bowels should receive attention. A single example in illustration of my meaning will suffice. A healthy-looking patient was sent to me for chronic antral suppuration, associated with headache and occasional "neuritic pains in the limbs," all supposed to be due to absorption of toxins from the septic focus. Two days later she entered a nursing home for operation. In the meantime examination of the urine showed a high sugar content, and operation was deferred. The following day diabetic coma developed, and she died. (This was in pre-insulin days.) It is unnecessary to comment on what my feelings, and those of the relations, would have been had the fatal issue taken place immediately *after* the proposed operation.

Any surgeon who has had considerable experience of intranasal operations for the relief of septic conditions will agree that secondary haemorrhage is by no means an infrequent complication, and that sometimes it is difficult to control because of the relative inaccessibility and the unhealthy nature of the tissue surrounding the source of bleeding. Many such accidents could be prevented, or their frequency minimized, by a little general care and preparation of the patient before operation. To my senior colleagues these observations may seem trite and almost discourteous, but that is because they graduated in days when the "nature of the soil" received greater consideration in the scheme of treatment than it seems to retain in these later years. It is for this reason that a word of warning may not be out of place to the younger members of our profession, and particularly to those who are beginning to concentrate their attention on diseases of the throat and upper air passages.

In these regions foci of infection are very common, their local manifestations are well known, and it is now common knowledge that the toxins derived from such sources may bring about pathological conditions in practically every region of the body. For the establishment of this truth Medicine is indebted to the pioneer work of William Hunter, which he commenced some forty years ago. Since then it has been so fruitful in its application to the practice of medicine and surgery that, in 1927, the then President of the Royal College of Surgeons—now Lord Moynihan—said (*British Medical Journal*, November 5th, 1927): "William Hunter's contribution to direct research is, in my judgement, the most significant of any conducted in the last generation." There can be no dissent that such a eulogium, and coming from such an authority, was timely and well-merited. On the other hand, those who are in touch with current medical practice will surely have had frequent occasion for questioning whether there is not a tendency to assume too readily that nearly all pathological lesions of obscure origin are the result of a focal infection. The net of "hidden sepsis" is very wide in its spread, and in proportion to the myopia of the fowler will be the number of birds which escape it. May it not be that the unlettered patient who said he had been told that his ailments were caused by a "sceptic" antrum (or tonsil) was possibly as near the truth as he by whom the diagnosis had been made?

HEADACHE AND PAIN IN INFLAMMATION OF NASAL SINUSES*

BY

WILFRED HARRIS, M.D., F.R.C.P.

In approaching this subject from the physician-neurologist point of view, one is at first impressed by the brilliance and rapidity of the cures of headaches and neuralgias that are so frequently wrought by skilful surgeons in sufferers of perhaps many years' standing. On second thoughts our more lasting impression is the difficulty in diagnosis and in the sorting out of those headaches and neuralgias which are amenable to surgery of the nasal accessory sinuses from those which are not, for truly the path of diagnosis is beset with many pitfalls. The periodicity of the pain, in frontal sinusitis especially, commencing at 9 or 10 a.m., and lasting to the late afternoon, may simulate a migraine or may even be mistaken for paroxysmal neuralgic tic by those unfamiliar with the latter disease. We are probably all well acquainted with cases of antral abscess, often bilateral, which have given rise to chronic headaches and ill health, perhaps for

* A paper read in a discussion at the Medical Society of London, March 27th.

years, until the cause was recognized. One such lady whom I saw had previously made two journeys to England from Trinidad, seeking medical advice without any relief. The cure of such cases by efficient drainage is often dramatic enough to inspire unbounded optimism, and indeed one well-known foreign rhinologist claims cures by his treatment of the sinuses for the pain of maladies as far apart as glaucoma, lumbago, uterine disease, corneal ulcers, and writer's cramp!

The difficulties that beset us may be illustrated by two cases of frontal cerebral abscess secondary to frontal sinus infection.

CASE I

During the recent influenza epidemic I saw a man of about 40, with a temperature of 101°, who for forty-eight hours had had continuous violent pain on the left side of his head from the eyebrow to the back of the head. There was marked tenderness of the cheek and supraorbital ridge, the eyelids were becoming oedematous, and transillumination showed the left frontal sinus and antrum partly opaque. The eye movements and optic disks were normal, but on removal of the patient to hospital next day for operation on the sinuses the eye had become proptosed and the lids were much more oedematous. The antrum only was opened, but very little exudation was found in it, though next day he was better and the lids less swollen. Two days later he became rapidly comatose and died. At the necropsy the left antrum was empty, but the left frontal sinus was full of thin muco-pus, and the orbital contents were normal. On slicing the brain a large spherical abscess, the size of a tangerine orange, lay in the frontal lobe close behind the infected frontal sinus, with thrombosis of the veins in its vicinity, one of which had ruptured extensively into the left lateral ventricle.

The treatment of the violent, periodic frontal neuralgia in frontal sinusitis is a problem that affects the general practitioner and the neurologist as well as the throat and nose surgeon. I understand that the safest method of giving relief is to cocainize the upper nasal mucous membrane at intervals, when drainage of the sinus through the frontal foramen may be resumed spontaneously, perhaps aided by a turbinectomy later. Mr. Robertson also informs me that the open operation on an infected frontal sinus is especially dangerous from the liability to acute osteomyelitis.

CASE II

Even more difficult to understand, and a trap for the unwary, was a case I saw about three years ago in the Hornsey Isolation Hospital with Dr. Prior. A young man was admitted for scarlet fever and given a dose of antiserum, the symptoms clearing at once except for a slight attack of otorrhoea on the left side. Within a week he began to have curious fits, in which he complained of the vision of the right eye failing; the right eyeball became partially fixed, the pupil dilating, while the left eye moved normally. He did not lose consciousness completely, but talked rather wildly, and in one attack which I witnessed his remarks were obviously cheeky and ill mannered, quite unlike his real self. There was no proptosis, and after a few minutes the eye movements became normal again and the vision returned. The disks and fundi were normal, but a fortnight later papilloedema commenced. He was removed to St. Mary's Hospital; a decompression was done over the right frontal region, but nothing abnormal was discovered. He died shortly after, when to everyone's surprise a large, thick-walled abscess was found in the left frontal lobe, evidently secondary to infection from the left frontal sinus, which was full of pus. There had been no previous symptoms to suggest frontal sinus infection, and what the connexion was between the left frontal abscess and the fits, with fixation of the right eyeball and blurring of vision of the right eye, is still a mystery to me.

NERVE SUPPLY OF THE SINUSES

The mucous membrane of the nasal accessory sinuses, sphenoidal and ethmoidal, frontal and antral, has its sensory supply from the fifth trigeminal nerve, that of the frontal being derived entirely from the inner portion of the Gasserian ganglion, or ophthalmic division, through the supraorbital branch. The ophthalmic division also supplies sensation to a portion of the ethmoidal cells by means of the naso-ciliary or anterior ethmoidal nerve, which leaves the orbit on its inner side by the anterior ethmoidal foramen. The rest of the ethmoidal cells and the sphenoidal sinus are supplied from Meckel's ganglion through the superior maxillary nerve. This ganglion has an attachment to the Vidian nerve, the so-called motor root of the ganglion, which is made up of the great superficial petrosal and the great deep petrosal nerves, the former being a branch from the geniculate ganglion on the facial nerve and the latter a sympathetic trunk from the tympanic plexus. The great superficial petrosal is usually called the motor root of Meckel's ganglion, but it is more than doubtful if it carries any motor fibres from the facial, while it undoubtedly carries gustatory afferent impulses from the palate by way of the posterior palatal nerves and Meckel's ganglion to the geniculate ganglion and the pars intermedia Wrisbergi. Indeed, the geniculate ganglion, by its two afferent roots, the chorda tympani and the great superficial petrosal, supplies the upper and lower anterior portions of the buccal cavity with gustatory sensation, the posterior portion being supplied by the glossopharyngeal.

The maxillary antra, of course, receive their sensory supply through the alveolar branches of the superior maxillary or second division of the fifth. The four nasal accessory sinuses, therefore, receive their main, if not exclusive, sensory supply from the trigeminal nerve, but through the Vidian nerve to Meckel's ganglion come connexions to the facial and the sympathetic. Whether painful impressions as well as gustatory are conveyed along the great superficial petrosal from Meckel's ganglion to the geniculate is entirely speculative, but a possible connexion through synapses is there established with the sensory supply of facial branches to the posterior wall of the auditory meatus, the tympanum, and mastoid region, and the area liable to be affected in otic or geniculate neuralgia. The great superficial petrosal nerve is in close relation to the wall of the sphenoidal sinus, and it is this relation which may explain the pain that is sometimes complained of behind the ear in cases of acute infection of the sphenoidal sinus, a symptom observed by Mr. Tilley in 1905. I have seen in acute mastoid suppuration hyperaesthesia and referred pain over an area above the pinna, deep in the ear, and behind the pinna and at the back of the mandible. According to Sluder, pain may be referred here from irritation of Meckel's ganglion, and he even asserts that the pain may spread to the back of the head, neck, shoulder, and arm down to the fingers.

LOCAL AND REFERRED PAIN

It is well known that referred pain may radiate far beyond the territory of the actual nerve trunk affected by disease. Thus an aching molar tooth may cause referred pain upwards or downwards to the upper or lower jaw, and to the ear; and, if unrelieved, the pain may spread into the neck and down the arm to the fingers of the same side. I have watched the pain of antral abscess, at first local over the cheek, gradually involve the whole trigeminal area on that side, and then spread into the neck and down the arm to the hand and fingers. Just as in the case of dental referred pain, so the pain of antral abscess may be referred upwards to the frontal region on the same side, rather than to the cheek. The wide spreading of referred pain on the same side seems to depend on two factors: first, the intensity of the stimulus of the diseased focus, especially the degree of tension within the infected sinus; and, secondly, the type of nervous temperament of the individual. I have

little doubt that in highly strung neurotic individuals referred pain spreads more widely and readily. What is, however, a very important point to remember is that such referred pain does not spread across the middle line. If such crossing to the opposite side were possible, it would surely be seen in the violent pains of severe dental neuralgia, in trigeminal tic, in herpes zoster, and in postherpetic neuralgia. When, therefore, general headache is complained of in sinus inflammation, it may be assumed that either general toxaemia is present or else that there is bilateral involvement of the sinuses, which is not an uncommon occurrence.

In addition to pain, local or referred, definite tenderness on pressure is frequently present in frontal or antral sinusitis. Tenderness on pressure on the inner floor of the frontal sinus, under the supraciliary ridge, may, however, be present in "vacuum headache," and is known as Ewing's sign. This dull form of headache, which is increased by much use of the eyes, is due to obstruction of the frontal duct connecting the sinus to the nose, with consequent absorption of oxygen.

A theory that has often been put forward—that sensory painful impressions may be carried centrally along sympathetic fibres, usually in an attempt to explain the persistence of pain continuing after section of the sensory trigeminal root—is probably founded on fallacy. Such cases are most probably to be explained by the persistence of a few uncut fibre bundles, or else that the pain is of central origin, either organic or functional. The balance of modern physiological evidence is against the conduction of sensory painful stimuli along sympathetic nerve trunks. Facial psychalgias are unfortunately fairly common; they are very frequently mistaken for, and treated as, cases of tic douloureux. True tic douloureux may undoubtedly have its origin from an infected antrum, no doubt through an infective neuritis of nerve filaments in the neighbouring maxilla. I have seen probably a dozen such cases of paroxysmal tic of the second division which dated from an infected antrum. Two common forms of pain in the face which may be mistaken for that of chronic sinusitis are (1) migrainous neuralgia, and (2) chronic neurosis of the jaw.

Migrainous Neuralgia

A not infrequent form of recurrent neuralgia affecting the region of the eyes and forehead, and sometimes even spreading down into both upper and lower jaws, should not be difficult to distinguish from the pain and headache due to the various forms of sinusitis. Usually, the irregular periodicity (like migraine) every few weeks, perhaps accompanied by nausea, and lasting for twenty-four to forty-eight hours, is sufficiently suggestive of its association with migraine; and, indeed, not only may a history of migraine be present in near relations, but, frequently, typical hemicranial attacks with vomiting and teichopsia have been recurrent since childhood, the type of pain changing in later years into the more anterior neuralgia to which I have given the name "migrainous neuralgia."

Chronic Neurosis of the Jaw

This is one of the atypical neuralgias, a complaint almost limited to women of reproductive age, and is, in my opinion, mainly psychalgic in origin. The distinguishing feature of this affection is that the pain is constant, mainly affecting the cheek and maxillary region on one side only. This pain is unaffected by the movements of eating or handling the face, as is usual in paroxysmal neuralgic tic; and though the intensity of the pain varies, it is always present during waking hours. As a rule sleep is not interfered with by it. Sometimes flushing and even slight swelling of the cheek are complained of, which symptoms will especially suggest a local cause to the unwary practitioner; before the advice of a neurologist is sought the teeth, eyes, throat, and accessory sinuses have almost invariably been thoroughly examined and treated. Perhaps wholesale extractions of the teeth have been done, as well as removals of portions of turbinal bones, antrotomies, slicing of the nasal septum, and the fitting of glasses—all, however, in vain. I, too, have to confess that, until I learnt by experience that alcohol injection was useless in these cases (even if total anaesthesia of a nerve trunk or even of the whole ganglion was produced), I did not realize that this form of atypical neuralgia of the face was a neurosis, psychical in origin, and therefore not amenable to operative intervention. Indeed, I would go further and deprecate strongly all local treatment of a destructive nature, as being apt to diminish the chances of successful suggestive treatment. Some of these cases have, I am sure, been mistaken for instances of the "nasal ganglion neurosis" of Sluder. I do not believe that slight swelling and flushing of the cheeks in these patients are necessarily evidence of any local disease or infection, for they may be due to reflex vasomotor disturbance secondary to a psychalgia or to pain of central origin. Similar flushing and swelling are undoubtedly often met with in paroxysmal neuralgic trigeminal tic, in which there is no local disease beyond a possible chronic septic neuritis of peripheral nerve filaments in the jaw. Many of these cases of chronic neurosis of the jaw can be traced to some nervous shock. It is important to recognize their psychical origin, for all forms of operative treatment—dental extractions, antrotomies, or nerve injections—tend to fix the pain, though usually there is a temporary relief for a day or two. Soon, however, the complaints of pain are the same or worse than before, and once the risky line of operative treatment has been embarked on, there is excuse for more and more extensive surgery, injections, Gasserian operation, and then perhaps, suicide, as I have seen.

CASE III

A happier ending resulted for a strong, healthy girl of 26, a mistress of physical training at a girls' school, whom I saw last year for violent facial neuralgia. Some six months before I saw her she had changed her situation and taken up her duties at another school. Formerly in perfect health, at the end of her first term at the new school she was attacked by severe pain around the right eye and cheek, on and off for a quarter of an hour at a time. She went home for the holidays for four weeks, the pain disappearing almost at once. A few days after her return to school the pain began again as previously, getting worse and worse daily and keeping her awake. During the week before I saw her the pain had become bilateral—in both cheeks and temples, the back of the head, both ears, and under the jaw, worse on the right side. The pain would come on after any exertion, after her classes, or after tennis, making her cry with the pain. There were no physical signs in the sinuses or the teeth, but cross-examination disclosed the fact that she was unhappy at her new school, where she disliked the head mistress intensely, and felt in a continual state of irritation and resentment against her interference. The only remedy was for her immediately to leave the school; this was done, and the neuralgic pain disappeared at once, with no return up to the present.

The frequency of cranial, and especially facial, psychalgias may, I think, be explained by the natural reference of one's "ego" or individual personality to the region of the eyes and face, which more than any other part of the body express the emotions, the eyes in particular establishing contact between the individual and the world around. I have noticed amongst the blind St. Dunstan's men, who are especially liable to neurasthenia, that their neurasthenic headaches are always referred to the cranium, and I have yet to see a case of facial psychalgia among them.

SPONTANEOUS SUBARACHNOID HAEMORRHAGE OF INTRASPINAL ORIGIN

BY

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HARROGATE

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LEEDS

The clinical picture of spontaneous subarachnoid haemorrhage of cerebral origin is now definitely established, and cases occur with moderate frequency. The onset is usually sudden, generally with loss of consciousness, which passes off gradually. There usually follows severe headache—often in the occipital region—recurrent vomiting, and more or less confusion. As a rule there is no paralysis and no sensory changes, though such may occasionally be found. The fundi may show retinal haemorrhage, or there may be only a papillitis. On lumbar puncture the cerebro-spinal fluid is usually found under slightly increased pressure, and contains blood. The blood is intimately mixed with the cerebro-spinal fluid, thus differentiating the condition from the trauma of lumbar puncture. The causation is usually ascribed to a leak or burst of a miliary aneurysm on one of the superficial cerebral arteries. Though the condition is fatal in a considerable number of cases, on the whole the recoveries more than outnumber the deaths. If the patient survives there are, as a rule, no sequelae.

Spontaneous subarachnoid haemorrhage of intraspinal origin is a much rarer condition, and hence the justification for publishing the clinical and laboratory notes of the following case.

CASE HISTORY

A married man, aged 40, consulted one of us (H. D.-W.) on October 4th, 1932, because of feeling "off-colour" for the previous few days. He gave a history of marked constipation—an unusual feature for him—slight headache, and malaise. No abdominal tenderness. Sent to bed, given bowel wash-outs.

On October 6th the condition was worse, and he was admitted to the Harrogate Investigation Clinic. Tongue dirty, breath foul, slight abdominal tenderness, knee-jerks and abdominal reflexes present. Temperature 100.6° F., vague pains in back. Blood culture negative, blood count showed a very slight leucocytosis, blood urea normal, Wassermann reaction negative, moderate albuminuria, urine sterile on culture. Six days after admission to the clinic the blood gave a positive agglutination to typhoid (1 in 250 dilution). The spleen was now palpable, abdomen doughy, and there were a few rose spots. The condition was now considered to be due to a typhoid infection, and the patient was treated accordingly. The pains in the lumbar region became progressively worse in the course of the next few days, being almost girdle-like in type. Rigidity of the spine appeared. Blood pressure now became definitely raised: systolic 155 mm., diastolic 105 mm. Pulse rate 60.

October 16th.—The pains in the back were so severe and so persistent that it was thought that some other causative factor must be present. Fundi were still negative. Knee-jerks had gone, but ankle-jerks were active. Plantar response flexor, superficial abdominal reflexes absent, except in right lower quadrant. No sensory changes. Bowels very obstinate. Lumbar puncture was considered.

October 20th.—Seen for the first time by G. W. W. Blood pressure 160/110. No fundal changes; central nervous system as before. Report of lumbar puncture (S. M.): no increase of pressure, blood present, 7,000 red cells per c.mm., white cells 240 per c.mm., supernatant fluid distinctly yellow, Wassermann reaction negative, Lange sol curve almost normal, sterile on culture. After lumbar puncture the temperature fell and the general condition of the patient improved.

October 23rd.—Patient much as before, abdominal reflexes returned. Knee-jerks could just be elicited.

October 24th.—Relapse. Patient vomited. Return of severe pain in lumbar region. Spinal puncture repeated. Slight increase of pressure, fluid redder than previously, 43,000 red blood cells per c.mm. Obviously a fresh haemorrhage had occurred. Patient much more comfortable after lumbar puncture.

October 25th.—Return of vomiting. Patient seen in consultation by Dr. James Collier and G. W. W. Fundi examined under atropine—no ocular haemorrhage, no fundal changes. Lumbar puncture repeated. Pressure markedly increased, red blood cells 45,000 per c.mm. Supernatant fluid after centrifugalization was bright yellow in colour, and gave a very faint haemoglobin spectrum.

October 26th.—Condition more satisfactory.

October 27th.—Return of severe pain in back. Lumbar puncture repeated. Fluid as before. For the next five days following this the condition slightly improved.

November 2nd.—Patient had disturbed night, recurrence of severe pain in back, vomiting, abdomen tense.

November 3rd and 4th.—Slight improvement. Pains now extending to quadriceps extensors.

November 5th.—Rigidity in the back much more marked, nausea and vomiting, lumbar puncture—increase of blood in cerebro-spinal fluid, 86,000 red blood cells per c.mm. Pressure much increased.

November 6th to 9th.—Condition unsatisfactory. Patient not improving.

November 10th.—Disturbed night. Twitching of muscle bundles. Lumbar puncture. Put on calcium by the mouth and magnesium sulphate per rectum (G. W. W.).

November 11th to 16th.—Condition not satisfactory. Patient complained of generalized pains, neuralgic in type, all over the body.

November 17th.—Return of vomiting. Pain intense at times.

November 18th.—Patient worse, pains more severe. Hyperaesthesia marked. Lumbar puncture repeated, pressure very high. Fluid very red in colour, 140,000 red blood cells per c.mm. Severe lumbar pain immediately relieved by puncture.

November 19th.—Patient seen in consultation by Professor Arthur Hall and G. W. W.

November 20th and 21st.—Patient much easier.

November 22nd to 24th.—Slight return of vomiting. Blood pressure slightly increased (160/110).

November 25th.—Improvement definite. Blood pressure lower (145/98), but pulse rate increased (106).

November 26th to 30th.—Steady improvement. Appetite returning, blood pressure falling. From this date onwards the patient continued to improve steadily.

December 23rd.—Condition highly satisfactory, muscle tone markedly improved, general nutrition good, pulse 80, regular and of good quality. Blood pressure 120 mm. systolic, 80 mm. diastolic. No abnormality in heart. No evidence of paresis, no sensory disturbances. Superficial abdominal reflexes of normal activity, except in the left upper quadrant, where the reflex was elicited with difficulty. Knee-jerks absent, ankle-jerks active, plantar response flexor, no ankle-clonus. Patient can sit up without undue fatigue, appetite excellent, bowels regular.

December 24th.—Patient left the clinic convalescent.

DISCUSSION

The case described differs in many respects from a typical case of spontaneous subarachnoid haemorrhage of cerebral origin. Loss of consciousness and subsequent confusion were entirely absent. There were no ocular symptoms, neither paralysis nor photophobia, and no fundal changes. There was no suggestion of paralysis of any of the cranial nerves or other symptomatology denoting a lesion of the cerebral hemisphere.

The suggestion that the haemorrhage was intraspinal in origin is supported by several facts: (1) The almost complete absence of cerebral symptoms at onset. (2) The severity and localization of the pain in the lumbar region, the pain being excruciating at times and increased by movement. (3) Rigidity of spine, with a mild degree of opisthotonos. (4) Marked irritability and hyperaesthesia of the spinal roots and nerves. (5) The almost instantaneous relief of symptoms on lumbar puncture.

From whatever cause the haemorrhage arose there is no doubt that on four separate occasions bleeding of an extensive nature occurred, and though the illness was a protracted one, recovery appears to be complete and the sequelae insignificant. It is also of interest to note the close association of the fall of the blood pressure with improvement in the clinical condition.

SPONTANEOUS SUBARACHNOID HAEMORRHAGE

WITH REPORT OF EIGHT CASES

BY

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ASSISTANT PHYSICIAN TO THE CORNELIA AND EAST DORSET HOSPITAL, POOLE

Leakage of blood into the cerebral subarachnoid space apart from any trauma is being recognized clinically with increasing frequency. The blood escapes from an artery, perhaps sometimes from a vein, into the meshwork of trabeculae which intervenes between the pia mater and the arachnoid membrane: this occurs most often from a vessel lying at the base of the brain. Haemorrhage into the subarachnoid space of the spinal cord has been recorded,[5 7] but is much rarer. Blood escaping from a vessel within the brain may find its way either through the nervous tissue or through the foramina in the fourth ventricle into the subarachnoid space, but this paper is not concerned with these secondary types.

The underlying pathological lesion falls under several heads, and individuals of all ages may be affected. "Arteriosclerosis," in the form of medial degeneration, associated with high blood pressure and cardiovascular hypertrophy, is probably a common cause of spontaneous subarachnoid haemorrhage at or past middle life. In cases occurring in young adults the blood pressure is usually not raised, and the heart and peripheral arteries generally appear normal. Deficiency of the media has, however, been found in the arteries at the base of the brain, and it has been suggested that this is a congenitally installed defect.[14] Syphilitic arteritis, when the inflammation is severe, leading to necrosis, may end in haemorrhage; when less acute a thickening of the intima occurs and there is no possibility of rupture. Weakening of the arterial wall by an embolus in infective endocarditis may occasionally result in rupture. It is possible that a vessel may give way as a late effect of cerebral embolism when the embolus is sterile; this is indicated by Case II below. Other known causes are: cerebral angioma, blood diseases, acute haemorrhagic infections, sunstroke, eclampsia, haemorrhage from tumours and cysts, and thrombosis of the superior longitudinal sinus.

The clinical picture shows wide variations, depending on the severity and site of the bleeding. In the most severe cases there is a sudden loss of consciousness and such compression of the brain that death supervenes within a few hours. In the mildest cases there will be headache, vomiting, and some pyrexia, followed by gradual recovery. Between these two all intermediate forms occur. The following is an example of a rapidly fatal haemorrhage.

CASE I

A man of 58 was admitted to the London Hospital under Dr. Robert Hutchison on April 22nd, 1929. He had been taken into the hospital seven weeks previously because of severe headaches beginning in the occipital and extending to the frontal region, each lasting about twenty-four hours and recurring weekly. Examination then showed subacute glaucoma of the left eye. The blood pressure was normal, and there was only slight arteriosclerosis.

On April 21st, 1929, the patient had several attacks of faintness of a few minutes' duration. Next day he became completely unconscious, and was admitted to hospital. The temperature was 99° and the pulse rate 60. On the left side the tendon reflexes were brisker, the plantar response was extensor, and there was ptosis of the left eyelid. Consciousness was temporarily recovered at 11 p.m., when he complained of headache. During the night there were three fits, and death occurred at 6.15 a.m. on April 23rd. The blood Wassermann reaction was negative.

Post-mortem Findings

The following is an extract from the records of the Bernhard Baron Institute of Pathology, by the kind permission of Professor H. M. Turnbull.

"There was a collapsed ruptured aneurysm, 1.2 cm. long and 0.7 cm. broad, at the junction of the left carotid, middle cerebral, and posterior communicating arteries. The aneurysm was covered by thin layers of adherent clot, and lay in a haemorrhagic depression in the left uncus, from which a haemorrhagic track led into the left lateral ventricle. The left lateral ventricle contained 4 to 5 drachms of clot and the right lateral and fourth ventricles a smaller amount. Subarachnoid haemorrhage was confined to the immediate neighbourhood of the aneurysm. The arachnoid membrane here was ruptured, and blood had passed into the subdural space. In this space some 6 to 7 drachms covered the left hemisphere, whilst less lay over the right hemisphere and still less in the posterior fossa; a layer of blood 1 mm. thick filled the subdural space of both optic nerves. There was rusty brown pigmentation of the dura in the posterior fossa and of the pia-arachnoid upon the inferior surface of both cerebral hemispheres, being greatest upon the left. An unruptured aneurysm, 1 mm. in diameter, projected from the junction of the right carotid and middle cerebral arteries, with an accessory posterior communicating artery. Microscopic examination of the aneurysm and adjacent arteries showed that the media and internal elastic lamina ended abruptly at the mouths of the aneurysms, whilst the walls of the aneurysms were formed by adventitia lined with a variable thickness of tissue continuous with the intima. The media of the right middle cerebral artery showed at some distance from the aneurysm patches in which muscle fibres were almost entirely absent. There was no evidence of arterial inflammation or degeneration. The aneurysms were therefore considered to be due to rupture of the intima and media at sites of congenital malformation of the media."

A haemorrhage causing initial coma may abate or cease and consciousness be subsequently regained. Symptoms of meningeal irritation, of general cerebral compression, and of local cerebral irritation or paralysis will then probably be observed; these symptoms persist for a variable period; a fresh leakage of blood may suddenly, or perhaps gradually, lead to a fatal conclusion. The following three patients illustrate this type.

CASE II

A man of 38 suddenly fell unconscious on March 17th, 1926, and was admitted in a stuporose condition to the Middlesex Hospital under Dr. E. A. Cockayne. He had had acute rheumatic carditis in 1912, and in 1924 a cerebral embolus causing left hemiplegia. On admission he was mentally confused and disorientated, complained of headache, and was constantly putting his hand to his head. The pupils were unequal, but the cranial nerves were otherwise normal. There was neck rigidity, and Kernig's sign was

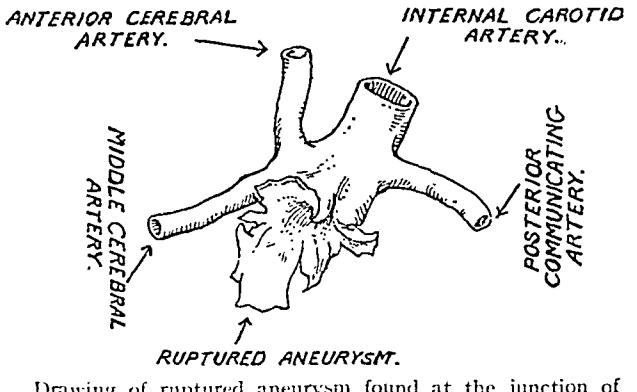
present. The arms showed flexibilitas cerea, but no loss of power. The tendon reflexes were absent in the legs, and the plantar reflex was flexor. The cerebro-spinal fluid was under increased pressure, and contained a large quantity of blood; culture was sterile. There was evidence of cardiovascular hypertrophy, and the blood pressure was 210/90. Paroxysms of auricular fibrillation occurred while the patient was under observation, and although no diastolic murmur was heard a reduplicated first sound and a systolic murmur at the apex suggested mitral disease. The temperature varied from 100° on admission to 103° just before death. The urine contained some albumin only at first. Four days after admission a lumbar puncture showed less pressure of cerebro-spinal fluid, but the stupor gradually deepened, and death occurred on March 24th, six days after the onset of haemorrhage. Unfortunately there was no necropsy.

CASE III

A woman of 51 was admitted to the Middlesex Hospital under Dr. C. E. Lakin on April 17th, 1928. There was a history of severe headaches and vomiting for years. On the day of admission she was out shopping and feeling quite well, when she was suddenly seized with shaking and trembling, and saw flashes of light. Within a minute consciousness was lost. When examined in hospital she was stuporose, but she rapidly improved, and questions could be answered intelligently. Headache was severe, and for the first two days she vomited. Examination of the nervous system revealed no abnormal signs except some stiffness of the neck. The disks were indistinct, but not beyond the physiological limit. The heart was normal, and the blood pressure 140/75. Lumbar puncture showed a blood-stained sterile fluid; the Wassermann reaction was negative. Blood analysis was normal, and there was no albuminuria. The temperature was intermittent, and reached a maximum of 103°. Eight days after admission the plantar reflex was extensor on the right side; this was followed by a sudden right hemiplegia with absolute aphasia. Lumbar puncture at this time showed an increased quantity of blood in the fluid. The patient's condition remained unchanged for three or four weeks. Then she became slowly weaker, passed gradually into coma, and died on June 11th. There was no necropsy.

CASE IV

A youth of 17, referred by Dr. Siggs of Canford Cliffs, was playing football on October 8th, 1932. He had an attack of severe headache, and was sick; this he ascribed to heading the ball. He quickly recovered, and was well until November 12th, when he again played football. The ball came to his



Drawing of ruptured aneurysm found at the junction of the right middle cerebral and posterior communicating arteries in Case IV.

feet, but instead of kicking it he was seen to sink to his knees, rapidly becoming unconscious. When he was taken home he was in a state of mental confusion, and complained of headache and pain in the neck. There was photophobia, and he vomited once. I saw him on November 17th, and he was then much better, complaining only of slight headache. He was clear mentally. There were some signs of meningeal irritation—a little pain on full flexion of the neck, and slight Kernig's sign. The temperature and pulse were normal. Examination of the fundi and of the nervous system yielded no further abnormal signs. There was no cardiac lesion, and the blood pressure was within normal limits. When admitted to the Cornelia Hospital two days later he was completely free from symptoms. The next day, at 8.15 a.m., he suddenly became unconscious, and was dead within an hour and a half.

The cerebro-spinal fluid removed immediately after death was under increased pressure, but was unexpectedly quite clear. It was found, however, to contain 500 red cells per c.mm. (Dr. McNaughton). At necropsy the right hemisphere and base of the brain were found to be covered with a thick layer of blood. At the bifurcation of the right carotid artery in the angle between the middle cerebral and the posterior communicating arteries was an aneurysm about 4 mm. in diameter, which had ruptured (see figure). The brain tissue immediately lateral to the rupture was ploughed up over an area about three-quarters of an inch in diameter.

Yet another variant is noted in Case V. Here it would appear from the symptoms that there was an initial slow leakage, producing the relatively mild symptoms which lasted a fortnight. A sudden increase is then suggested by the patient's passing into coma, from which he slowly recovered, only to succumb quickly to a further attack four weeks after his first symptoms.

CASE V

A young man of 32 was well until July 4th, 1924, when he had pain in the head and back of the neck, and vomited. He went to bed, and remained there for two weeks; there was then a recurrence of vomiting, and he became unconscious. He was immediately admitted to the General Hospital, Birmingham, under Dr. A. P. Thomson. The respiration was slow and deep, the face pale and clammy. The pulse was slow (60), and there was slight pyrexia (99°). He was semiconscious and irritable, so that any attempt at examination was resented. Focal damage to the nervous system was indicated by a right facial palsy and an extensor plantar reflex on this side. Meningeal irritation was shown by well-marked cervical rigidity and the presence of Kernig's sign. The cerebro-spinal fluid did not appear to be under increased pressure, but was uniformly blood-stained; culture was negative. The heart and blood vessels were normal. The blood Wassermann reaction was negative; the urea content was 81 mg. per cent.; the white cells were 15,000 per c.mm. The fundi oculi were normal on admission, but shortly after papilloedema appeared in both eyes, and later became severe; no haemorrhages were noted. The urine contained a haze of albumin. The patient gradually became more conscious, but on August 2nd, eleven days after admission, he suddenly went into coma; the breathing was stertorous; both plantar reflexes were extensor. He never regained consciousness, and died the next day.

Post-mortem Findings

This report is given by the kind permission of Professor G. Haswell Wilson.

There was a firm mass of blood clot adherent to the left carotid artery at the point of its bifurcation. In this region the brain tissue was ploughed up, and blood clot filled the left lateral, third, and fourth ventricles. Microscopical examination of the carotid artery revealed thinning of the wall and dilatation of the vessel at the point of rupture, with no evidence of gross disease at the site of the aneurysm. The cerebral vessels generally were slightly thickened.

Bleeding severe enough to produce total unconsciousness may, however, be recovered from completely and the patient enjoy good health for a considerable period. Always, however, there is the liability to a renewed leak.

CASE VI

A man of 31 had a head injury during the war, for which he was in hospital ten days. He was well till 1924, but after this complained of intermittent headaches. On April 20th, 1928, shortly after a severe headache, he fell unconscious. He was brought to the Middlesex Hospital and admitted under Dr. Cockayne. He was in a stuporose condition, and the pulse rate was slow (64). The abdominal reflexes were absent; otherwise examination of the nervous system was

negative. Consciousness was gradually regained, and three days later the abdominal reflexes were present and equal; early papilloedema was now present in both eyes. The blood pressure was 140/105, falling later to 115/80. The urine contained no albumin. Thirty c.cm. of cerebro-spinal fluid was now drawn off; it was under greatly increased pressure, and contained a large quantity of blood. The blood Wassermann reaction was negative, as was an *x*-ray examination of the skull. During the next few days the papilloedema became greater, the abdominal reflexes disappeared, and the patient became very drowsy and complained of severe headache. There were independent eye movements, and some stiffness of the neck and the back; Kernig's sign was present. During the next three weeks periods of incoherence alternated with a clear mentality and headache. These symptoms gradually disappeared, the papilloedema subsiding at the same time. The patient was discharged on May 23rd, 1928, feeling very well and without any abnormal signs in the nervous system. Except for occasional occipital headaches he remained well for one year and five months. Later attempts to trace this patient have failed.

The existence of a group of cases in which there is a slow leak from an artery, or perhaps from a vein, can no longer be doubted. Several have been reported by Richardson.[11] These represent the most benign form of subarachnoid haemorrhage. There is a slow onset of headache, pain in the neck, vomiting, photophobia and pain behind the eyes, pyrexia, and more or less mental change. There are signs of meningeal irritation and perhaps papilloedema and fundal haemorrhages. Healing of the rupture and recovery of the patient may occur. This recovery is likely to be only temporary, however, and there is a constant risk of a further and probably more serious leakage. On the other hand, a subacute illness which is the result of a small leak may be terminated more or less suddenly by a brisk haemorrhage, as in Case V of this series. Here it was only after two weeks with symptoms of mild grade that coma developed; the post-mortem showed the symptoms to be due to ruptured arterial aneurysm. Fearnsides[3] described a case in which there were repeated small leaks, each incapacitating the patient for a day or two only; finally there was a large, quickly fatal haemorrhage. In this series there were two examples of a slow leak followed by recovery.

CASE VII

A stout, plethoric woman of 43 was admitted to the London Hospital under Dr. Cecil Wall on October 11th, 1928. There was a history of occipital headache and misty vision coming on five days previously. She had vomited once on the second day of her illness, and had suffered from hallucinations. She had had similar attacks, lasting twenty-four hours, every two or three months for the past two years. On examination she was found to be very drowsy and forgetful, and her answers were incoherent. There was bilateral ptosis, greater on the right side, dissociated ocular movements, and doubtful weakness of the left internal rectus. The pupils were unequal, but reacted to light and accommodation. There was bilateral papilloedema, with scattered retinal haemorrhages and patches of exudate; in the right eye there was also a vitreous haemorrhage. The neck was stiff, and there was some head retraction; sensation, power, and reflexes were normal in all four limbs. The plantar reflex was flexor. Six days after admission lumbar puncture showed a cloudy, pale yellow fluid; a film showed red cells and white cells in the proportions present in blood; culture and Wassermann reaction were negative. An *x*-ray examination of the skull revealed no abnormality. The blood urea was normal (24 mg. per cent.), as were also the red and white blood cell counts. The urine (catheter specimen) contained a trace of albumin. The blood pressure was 210/110, and there was some cardiac enlargement. For three weeks after admission there was mild fever reaching 100°. There was gradual improvement in the headaches and the vision, and when discharged the patient was feeling well.

CASE VIII

A woman of 67 was seen in consultation with Dr. E. K. Le Fleming of Wimborne on June 6th, 1932. There was a history of pain in the neck and the back, and of "falling about" eight weeks previously. About four weeks later she consulted Mr. Dixon of Salisbury because she had felt as though there were a film over her right eye; she was found to have an early cataract. In the course of a general examination her blood pressure was found to be 180. At the end of May an attack of vomiting and diarrhoea led to the suspicion of food poisoning; but continued vomiting, headache, and pain behind the eyes suggested some intracranial lesion. There had been irregular pyrexia for about fourteen days, reaching 101.5°; the pulse remained slow (60–70). She was fully conscious and quite clear mentally. The pupils were equal, rather small, and reacted briskly to light; there was no ocular palsy or nystagmus. The right optic disk was imperfectly seen; the left showed slight oedema. The other cranial nerves were normal. The neck was stiff and tender, and Kernig's sign was present. The blood pressure was 190/90. On lumbar puncture a uniformly bright red fluid under increased pressure was drawn off. Examination showed red blood corpuscles and a few endothelial cells and leucocytes; no organisms were present. The puncture was followed by a rapid improvement in the headaches and a fall in temperature. She made a steady and apparently complete recovery. She is at present (March, 1933) quite well, except for an occasional occipital headache.

POINTS IN DIAGNOSIS

Cerebro-spinal Fluid.—In most cases examination of the cerebro-spinal fluid will give the diagnosis of subarachnoid haemorrhage, or confirm this if it has already been made. The three diagnostic criteria are: uniform admixture with blood, failure to clot on standing, and coloration of the fluid remaining when the red cells have sunk to the bottom of the tube. These three features, which were first explained by Froin in 1904, serve to exclude accidental haemorrhage at the time of puncture. It is important to note that the fluid does not necessarily appear tinted with blood to the naked eye. The concentration of red cells may be so low that the fluid is perfectly clear, and they are only discovered on microscopy, as in Case IV. Here, presumably, the initial haemorrhage was a fairly small one, and clotting must have hindered the passage of blood down the spinal envelope in anything but small quantities. The final severe haemorrhage killed this patient so quickly that one must suppose there was no time for blood to reach the lumbar region. Martin[10] mentions a case of subarachnoid haemorrhage in which the cerebro-spinal fluid withdrawn on the fifth day of the illness was free from blood. Collier[1] refers to slowly leaking aneurysms round which there forms an organizing haematoma, in appearance like liver; in this type the cerebro-spinal fluid does not become blood-stained.

Massive Albuminuria.—Albuminuria tends to appear in any condition which is accompanied by coma, but attention has been called to the exceptionally large quantity of albumin which the urine may contain in subarachnoid haemorrhage. Its occurrence has recently been discussed by Symonds[13] and Hall,[6] and the last observer was able in one case to prove that it may occur apart from any demonstrable renal lesion. Of the eight cases here recorded the urine was examined in six. There was never a large quantity of albumin; in five there was a slight or moderate amount, and this was present only for a short time. It must be added that there was never an opportunity to examine a specimen during coma. In the sixth case (Case VIII), in which there was a slow haemorrhage and the intracranial pressure could never have reached a very high level, the urine was quite free of albumin.

Mental Changes.—These are almost invariable when the condition has been of such severity that coma has been a part of the clinical picture. Irritability, confusion, and disorientation in time and space are common. Korsakoff's psychosis, characterized by disorientation and pseudo-reminiscences, is occasionally observed,[5 6 8] but was not noted in this series.

The Fundus Oculi.—Although they are not invariable, changes in the eye grounds are very common and sometimes of great diagnostic value. Three phenomena have been described—namely, papilloedema, retinal haemorrhages, and vitreous haemorrhages. According to Riddoch and Goulden,[12] these appearances can all be attributed to the presence within the optic sheath of blood which, by raising the pressure therein, interferes with the venous return from the eye; and histological examination suggests that the intraocular haemorrhages are never the result of blood passing into the eye from the optic sheath. Among the eight cases in the present series some fundus change was noted in four. In three there was papilloedema only; in the other there was papilloedema and, in addition, retinal and vitreous haemorrhages. In Case IV, although the initial haemorrhage was fairly severe, there were no eye changes. It was possible to account for this at necropsy, when large clots were found round the aneurysm; these had prevented the entry of anything more than a small quantity of blood into the optic sheaths.

TREATMENT

Any unnecessary movement or effort on the part of the patient is to be avoided, as this will raise the blood pressure and so be likely to increase or restart the bleeding. Lumbar puncture is a ready method of reducing intracranial pressure, and it takes a prominent place in treatment. The value of the method has, however, been variously assessed. Some doubt the advisability of reducing the intracranial pressure, believing that it determines new or increased bleeding. Ingvar[9] records one case in which he considers lumbar drainage was responsible for the patient's death within a few hours. On the other hand, Collier[1] has recently expressed the opinion that free and repeated drainage should be performed so long as symptoms of increased intracranial pressure exist. In intracranial haemorrhage death is caused by diminution, through increased pressure, of the blood supply to vital centres, and it is agreed that deepening coma is a clear indication for reduction of this pressure by lumbar puncture. The risk of aggravating the haemorrhage is then outweighed by that of fatal cerebral compression.

The question of whether or not lumbar puncture is to be employed will arise in one other phase of the disease—namely, the period characterized by symptoms of meningeal irritation, such as pains in the head and neck and mental changes. These symptoms will occur after recovery from the coma produced by a severe haemorrhage or may be present from the onset in a mild case without coma. Hall[7] has sometimes observed them to subside rapidly without lumbar puncture, while Fordham[4] found the effect of puncture beneficial in some but not in others. He concludes that it should not be repeated unless decided improvement is noted. In the present series of cases the lumbar puncture was undertaken several times for the relief of meningeal symptoms. It was frequently followed by improvement, and never by any immediately unfavourable effect. The cerebrospinal fluid was slowly removed until the pressure was reduced to normal as judged by the rate of flow. It is better, however, to control the pressure with a manometer, as Ingvar recommends, so that the pressure may not be allowed to fall below 100 mm. Various other methods used in treatment are subsidiary and probably of small importance. Intracranial pressure may be reduced by giving magnesium sulphate orally or per rectum. Substances designed to promote clotting may be given intravenously, and with the same object anti-meningococcal serum has been given intramuscularly.[11] Eskuchen[2] injected gelatin intrathecally with the object of encouraging coagulation of the blood; the result suggested that the method was risky.

SUMMARY

Eight cases of spontaneous subarachnoid haemorrhage are reported. Various grades of the disease, from the most severe to the mild, are illustrated. Two instances of the latter are recorded in which there is a slow oozing of blood, leading to headache, pyrexia, and symptoms of meningeal irritation. Coma does not occur, and a good recovery follows.

Examination of the cerebro-spinal fluid is the key to the diagnosis, and the fluid is nearly always uniformly tinted, due to the presence of blood. It may, however, be clear to the naked eye, yet red corpuscles can be discovered under the microscope. This was the finding in one case in which the diagnosis was proved at necropsy.

Intraocular changes are valuable in diagnosis, and were observed in half the cases. Clotting of the blood, so that it is prevented from entering the optic sheath, is one cause for their non-appearance.

Periodic headaches are often complained of for years, either before or after the rupture of a cerebral aneurysm, or both. This was so in five of the eight here recorded, one having the characters of migraine.

Treatment consists in absolute rest and in reduction of intracranial pressure when life is threatened and where symptoms of meningeal irritation are severe and persistent.

I am much indebted to those physicians whose names appear in the text for allowing me to publish case notes.

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THE RUBIN TEST AS A THERAPEUTIC AGENT

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As a therapeutic agent the Rubin gas inflation of the upper female genitals stands conspicuously alone. When confronted with a case of sterility due to occlusion of the Fallopian tubes the gynaecologist realizes how limited are the therapeutic agents at his disposal. Surgical intervention to restore patency has been uniformly unsuccessful in accomplishing the desired result. In the Rubin test, however, he has a powerful agent to overcome obstructive sterility. In over 500 consecutive consulting room cases of the gas test there was evidence of obstruction in only 35 per cent. In many of these the obstruction was only of a mild nature that gave way before the high pressure of the first test. In these the

pressure would frequently rise to 180 mm. or 200 mm. of mercury, and then suddenly fall to 80 or 90 mm., and never rise again. In a subsequent Rubin test the gas rarely rose above 120 or 130 mm. before patency was re-established.

There were thirty-three cases in which pregnancy followed the Rubin test, after periods of sterility varying from two to eighteen years. In most instances the pregnancy followed surprisingly quickly after the first successful patency test.

In all cases of sterility, of course, the routine examination of sperms, etc., was made. But in many instances where the sperm activity was impaired Rubin tests were done either to promote greater facility for conception or at the urgent request of the patient.

The greatest number of tests in a single patient was seven. Many cases had from three to five tests before complete patency was established. In many the patency is quickly and permanently established at the first test, but in others one or more tests with a pressure of from 200 to 240 mm. were required to effect a passage of the gas. Not infrequently pregnancy followed quickly upon an inconclusive and unsatisfactory test, where even under a pressure of 220 to 240 mm. there were no appreciable signs of the gas having gone through. The most reliable clinical sign of patency after the Rubin test performed upon a conscious patient is the characteristic shoulder pain occurring a few minutes after assuming the sitting posture.

My method consists in sitting the patient up immediately after the withdrawal of the intrauterine tube, and then asking her to tell if or when she feels anything unusual. It is thought prudent not to tell her what to expect. When not knowing the signs, she is not led to imagine the desideratum. Almost invariably the first sign of the development of the shoulder symptom is a subconscious movement of the hand to the opposite shoulder. This is a sign that the gas has reached the subdiaphragmatic area, and the pain is referred to the shoulder as in gall-bladder trouble. It is readily conceivable, however, that the amount of gas which passes through a very small aperture of a tubal stricture may be so slight as to get lost among the coils of intestine and therefore never reach the diaphragmatic area, and similarly the small leak through the Fallopian stricture may not be appreciable in the fall of the mercurial level, which is the second most constant sign of patency. Most striking among this class was a physician's wife, sterile for eighteen years. The Rubin test rose to a pressure of 240 mm. without any evidence that the carbon dioxide had gone through, but she became pregnant the next month, though no hope for such an outcome had been given her.

The most interesting type of case is that which permits gas to penetrate in small quantity at 240 mm. of mercury. Three months later gas penetrates at 200 mm., and at each seance the pressure required is progressively lower. Then pregnancy supervenes.

It has always been a question what can be the pathology of these occlusions that give way before gas pressure. By a process of exclusion one may state that it cannot be a tube filled with fluid and therefore occluded at both ends. By the lipiodol test one can see cases of obstruction at either the cornual or the fimbriated end. But clinically I am convinced that the great majority of those cases of obstruction that yield to pressure are strictures at the intramural section of the tube, and that most of these are due to a peritubular lymphangitis and cellulitis of a mild nature. In corroboration of this one finds a great number of the successful therapeutic Rubin tests are those that are done upon patients who have had an infected abortion and have become sterile after this. Many of my cases were of this type, and they are those in which a successful therapeutic Rubin may be expected. In two such cases Rubin tests were done five and seven times respectively before pregnancy occurred. In the one, pregnancy did not occur until gas went through at 140 mm. at the seventh sitting, thereby registering a slow drop from 240 mm. In the other instance, five repeated tests at from 200 to 220 mm. had given negative results as to penetration, but in spite of that the patient became pregnant after the fifth unsuccessful test. Both these cases, like many others, followed incomplete abortion and digital evacuation of the uterus.

Singularly enough, though there was definite obstruction of the tubes in all thirty-three successful pregnancies following the therapeutic tests, in not one was there an ectopic gestation. One would be led to think that the greater motility of the sperm over that of the ovum, and its smaller size, would enable the sperm to traverse where an ovum could not. But definitely such is not the case.

Anaesthesia was required in only eleven of the cases for the Rubin test, owing either to constricted cervix or to extreme nervousness or fear. The symptoms and signs of a successful Rubin test are much more convincing and emphatic with the conscious than with the unconscious patient. In only one instance was there any unpleasant sequel to the consulting room application of the Rubin test with carbon dioxide gas and a carefully adjusted pressure and water gauge and mercurial manometer.

THE PROPERTIES OF HALIBUT-LIVER OIL

BY

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Within the last few months considerable interest has been shown in halibut-liver oil as a source of vitamin A and vitamin D for use in the treatment of malnutrition, and there is no doubt that the product is already proving of great value in the hands of the medical profession.

The liver of the halibut (*Hippoglossus hippoglossus linnaeus*) may show considerable variation in the amount of oil present, but of greater significance is the curiously wide variation in vitamin A value which is encountered. Lovern,[1] and Heilbron and others,[2] have drawn attention to these differences, for which, as yet, no satisfactory explanation has been advanced.

In examining the question of the origin of the vitamins in the liver of the cod, Drummond and Hilditch[3] were led to suggest that although the normal food of this fish contains only very minute traces of both A and D, accumulation might take place and in time produce the oils of high value that are encountered. Interesting confirmation of this view has recently been put forward by Macpherson.[4] He has shown from an examination of the liver oils of individual codfish that there is a general relation between the age of the fish and the reserves of A in the liver, which indicates that accumulation does occur.*

In addition to this gradual storage which tends to produce high vitamin oils in the older fish, there are variations caused by changes in the amount of oil present in the liver at different periods of the life of the fish.

Whether these views can be extended to cover the remarkable vitamin A values encountered in some halibut-liver oils remains to be determined. Meanwhile it is of interest to place on record the results of the examination of a number of authentic halibut-liver oils of known

* We are indebted to Dr. H. Thompson and Dr. Macpherson of the Fishery Research Station, Newfoundland, for the opportunity to read the account of this work before publication.

origin. We have been able to trace only three analyses of the oil in the literature, and for comparative purposes the data from these papers have been included in the table setting out our own results.

Of the eight samples examined by us seven were known to be uncontaminated liver oil from the halibut. That referred to as "Danish" was a commercial sample for the authenticity of which we cannot vouch. It proved to be in some respects abnormal in comparison with our own products.

The analytical and other results given in Table I show that there are no obvious correlations which might be of significance from the standpoint of the medicinal value of the oils. We had expected that there might be a rise in the amount of unsaponifiable matter associated with an increased vitamin A content, but, except that the oil of the greatest potency is also that with the most unsaponifiable matter—whilst the weakest oil contains the least—the intermediate samples show no such correlation. With regard to the cholesterol content of the unsaponifiable fractions Channon,[8] from the study of many fish-liver oils, suggested that the cholesterol content varied inversely as the proportion of unsaponifiable matter. This is roughly borne out by our results, since the oil which contains the highest unsaponifiable fraction shows the smallest cholesterol content.

Several of the values for oil 012 are appreciably different from the majority, and it is also interesting that this oil, although pale in colour, is one of the richest in vitamin A. The correlation between vitamin A and natural yellow colour is not as distinct in the case of this oil as in that of cod-liver oil.[3 4]

wThe fatty acids from one oil were examined in some subsl. The results are given in Table II.

found in othe unless c series of c several times was frequently any immediately spinal fluid was slowly reduced to normal as judg better, however, to control t as Ingvar recommends, so the allowed to fall below 100 mm. Va used in treatment are subsidiary and probably of sma

TABLE II

	Fatty Acid			Unsaturated Fraction				
	Refr. Ind.	Equiv. Weight	Iodine Value	Refr. Ind.	Equiv. Weight	Iodine Value	Insoluble Bromine Value	Hexa-bromide
	141.0	1.4778	298	243 5	74.2	6.9%		
	—	—	—	—	—	—	—	—

CORRELATION BETWEEN "BLUE VALUES" FOR HALIBUT-LIVER OILS AND SPECTROSCOPIC ASSAY OF VITAMIN A

There has been much discussion recently regarding the value of the colour test with antimony trichloride in evaluating cod-liver oils in terms of vitamin A. It is, we think, generally conceded that the method, particularly when applied to the unsaponifiable fraction, is of considerable utility in arriving at an approximation to the vitamin A value. On the other hand, evidence is accumulating to show that great reliance can be placed on measurements of the intensity of absorption of light at 3,280 A.U. as a method of assaying vitamin A in such materials as liver oils.

TABLE I

Sample in Order of "Blue Value"	The Oil: (1) "Blue Value"	(2) Vit. A Spectrographic	Sp. gr.	Refr. Index 40° C.	(3) Colour	Iodine Value	Sap. Value	The Unsaponifiable Fraction: Non-Sap. Matter	Iodine Value	(4) Cholesterol Per cent.	"Blue Value"	(5) Loss of Vit. A on Extraction Per cent.	Remarks
Danish ...	300	0.72	0.924	1.4734	5.3	136.5	177.3	8.15	112.6	71.0	3,605	2.0	Darkened with alkali
Exp. batch ...	655	1.512	0.924	1.4755	8.1	135.3	172.9	10.30	133 6	72.1	6,470	Nil	—
06	670	—	—	1.4750	8.1	132.6	173.0	10.10	150.0	67 8	5,840	3.0	—
010	749	1.68	—	1.4745	9.2	128.3	172.6	10.60	142.0	—	7,100	Nil	From the Faroes
09	755	—	—	1.4750	7.0	129.6	172.0	9.45	133.2	—	6,370	20.2	—
011	783	—	—	1.4741	7.0	128.7	176.3	9.18	145.5	—	8,580	Nil	—
012	830	—	—	1.4721	6.0	120.0	179.8	9.36	148.1	—	7,670	13.5	—
Sp. 3000 ...	1720	3.89	—	1.4780	14.2	135.0	174.6	12.70	193.0	43.4	13.640	Nil	From Greenland "Commercial sample"
Emmett's[6] ..	—	—	0.927	—	—	118-126	179-193	7.44	—	—	—	—	"Solvent extracted"
Evers's[6] ...	475	—	0.9229	1.4705	—	127.0	170.0	9.76	68.0	73.0	—	—	"Extracted"
Tsujimoto's[7]	—	—	0.9332	1.4780	—	160.3	174.9	11.08	—	72.0	—	—	

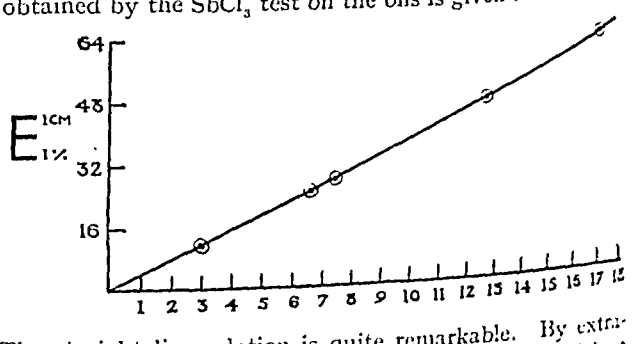
NOTES.—(1) In dilution to give 5 to 8 units, Lovibond scale, referred to a 10 per cent. solution. (2) By Hilger echelon wedge cell spectrophotometer. (3) In 1-inch cell, Lovibond tintometer. (4) By digitonin method. (5) Calculated.

We were fortunate in having the co-operation of Dr. R. J. MacWalter, who very kindly estimated the vitamin A present in four of the oils, and a mixed oil of intermediate value, by means of the Hilger spectrophotometer. The results are set out in Table III.

TABLE III

$E\ \frac{1\%}{1\ cm.}$	Percentage Vitamin A	Blue Value 10 % Dilution
11.52	0.75	300
24.20	1.512	655
26.85	1.678	749
47.20	2.95	1,268
62.23	3.89	1,720
1,600.00	100.00	44,080

The graph correlating Dr. MacWalter's values for the extinction coefficient at 3,280 A.U. in a concentration of 1 per cent. ($E\ 1\ cm./1\ \%$) with the "blue values" obtained by the $SbCl_3$ test on the oils is given in the figure.



The straight line relation is quite remarkable. By extrapolation to the value $E\ 1\ cm./1\ \%$ 1,600—the highest recorded figure for the purified vitamin A—the "blue value" of the vitamin referred to 10 per cent. dilution

would be 44,080.[9] This result encourages us to believe that the $SbCl_3$ test is trustworthy for assaying the vitamin A value of halibut-liver oils of high potency. We are inclined to believe that solvent extracted oils, of which some are on the market, should be examined by applying the test to the unsaponifiable fractions.

It is a curious fact that, although the liver of the halibut may contain 20 to 30 per cent. of oil, the direct treatment with live steam—such as will readily liberate the same proportion of oil from cod livers—does not break up the tissue and release the oil. Considerable modifications of the steaming process have to be employed before the yield is entirely satisfactory. Lovern[1] has also reported the poor yield derived from direct steaming. In order to ascertain whether this curious difference in behaviour is due to the fat being distributed in a different manner in the two tissues, sections of the two livers were submitted to microscopical examination after staining with Sudan III, but except for the fact that halibut liver appeared to contain slightly more connective tissue than did the cod liver, no marked difference was observed. As soon as fresh livers become available from the spring catch this problem will be further examined.

Our thanks are due to Dr. MacWalter for his spectrophotometer determinations, and to Mr. G. Napier for assistance in making the estimations of the "blue value" of various oils and concentrates.

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EFFERENT FIBRES IN THE ILIO-INGUINAL NERVE AND THEIR RELATION TO INCISION FOR APPENDICECTOMY

BY

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A number of observers have noted that a right inguinal hernia may follow the McBurney muscle-splitting incision, and one authority has placed its occurrence as high as 30 per cent. The cause of the hernia has not been exactly determined, but Southam[1] has recently advanced evidence which strengthens considerably the view that this unfortunate sequel arises from interference with the ilio-inguinal nerve. At the operation for the cure of the inguinal hernia a piece of the ilio-inguinal nerve was excised in three cases. Subsequent examination of the excised portions of nerve showed partial degeneration, and the histological appearance was consistent with compression at a higher level by scar tissue. It is well known that the ilio-hypogastric nerve may partially or completely replace the ilio-inguinal, and there is reason to believe that both should be under suspicion when one attempts to discover the origin of the inguinal hernia after the muscle-splitting operation. Most anatomical books refer somewhat vaguely to the distribution of these two nerves to the muscles of the abdominal wall, and it was with the intention of procuring more precise knowledge that twenty dissections have been undertaken.

After exposure of the muscles of the lower part of the abdominal wall the ilio-inguinal nerve was secured in the inguinal canal, and carefully traced proximally and distally to its finest ramifications. A gross study was made, and, in addition, several pieces of muscle were removed with the endings of the nerve and were subjected to microscopical examination. The results of this investigation may be summarized as follows:

1. The lower fibres of the transversalis abdominis and internal oblique muscles—including those which are inserted by the conjoint tendon—receive a considerable supply from the ilio-inguinal nerve, and also from the complex plexus formed by this nerve and the ilio-hypogastric as they lie between the two muscles.

2. The presence of a constant branch from the ilio-inguinal, or the nerve replacing it, to the region of the anterior superior iliac spine to supply the oblique muscles and the integument.

3. The dissections showed that the ilio-inguinal and ilio-hypogastric nerves are closely related and form a plexus, but it is evident that the former is distributed to the internal oblique and transversalis (and in a few instances also the external oblique), while the latter innervates only the oblique muscles.

It is apparent from this investigation that a considerable proportion of the lower fibres of the internal oblique and transversalis muscles receive their innervation from the ilio-inguinal and ilio-hypogastric nerves, and that interference with the function of the former alone is likely to cause appreciable muscle weakness and predispose to the development of an inguinal hernia. My dissections show that the McBurney muscle-splitting incision may lead to implication of these nerves above the point at which fibres are distributed to muscles, but it does not seem possible for any motor disability to result from damage to the nerves in the field of the operation for the radical cure of an inguinal hernia. As regards the ilio-hypogastric nerve, the latter statement is supported by Andrews,[2] who failed to obtain any muscular contraction on stimulating the distal end of the nerve in the inguinal canal.

CONCLUSIONS

1. Injury to the ilio-inguinal nerve, especially if it is associated with damage to the ilio-hypogastric nerve, will lead to appreciable weakness of the fibres of the internal oblique and transversalis muscles which are inserted by the conjoint tendon.

2. Such weakness must predispose to the development of an inguinal hernia.

3. Muscular weakness will follow injury to the nerve, or nerves, at the level of the McBurney muscle-splitting operation, but not from damage in the inguinal canal.

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Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

SIGMOID IMPLANTATION OF URETERS FOR GROSS VESICO-VAGINAL FISTULA

The condition of those patients suffering from intractable vesico-vaginal fistula is so utterly miserable that any means available for their relief should be tried, even though of a drastic nature. The two patients whose cases are here reported were in a horrible state, offensive alike to themselves and to their neighbours. Constantly soaked in urine, and suffering from extensive and painful excoriation of the thighs, they deeply appreciated the relief obtained by the diversion of urine to the bowel, and the mental and physical change effected was a pleasure to see.

CASE I

A married Turkish woman, about 35 years old, had a difficult confinement in her village two years previously, following which she was extremely ill for two weeks. During

this illness she noticed that she was unable to control her bladder, since when she had been constantly saturated with urine. On examination the exploring fingers in the vagina passed immediately upwards to the fundus of the bladder, and could be felt through the abdominal wall. The floor was practically absent.

First Operation.—On December 1st, 1931, the abdomen was opened by a low left paramedian incision; the left ureter was mobilized and carefully divided, and, after the method of Stiles, one and a half inches of it were implanted into the sigmoid. No ureteral catheter was employed, but Mayo's catgut "urine guide" was used and a tube inserted in the rectum. About the third day the temperature rose to 104°, and the patient complained of pain over the left kidney. The wound healed normally, but for six weeks the patient continued, from time to time, to have recurring attacks of pyrexia and pain. She was then discharged. Very little urine was passed per rectum during the first month, after which period it began to increase.

Second Operation.—On March 19th, 1932, the abdomen was opened by a right paramedian incision and the right ureter was located and mobilized. The transplantation was effected into the lower sigmoid. The convalescence after this operation was less stormy, though there was some pyrexia and pain; she was discharged at the end of a month. Present condition is very satisfactory. She has good rectal control, and her general health has greatly improved.

CASE II

A married Greek woman, about 40 years old, had a difficult confinement about four years ago, followed by loss of bladder control and constant leakage of urine. Examination revealed a condition of the bladder almost identical with that of Case I, the examining fingers, through a large defect, coming directly in contact with the abdominal wall. The patient was in a very miserable, almost suicidal, condition, and was willing to submit to any intervention.

First Operation.—On August 31st, 1932, the abdomen was opened by a right paramedian incision, and the right ureter, which was considerably enlarged, was isolated, divided, and implanted at the recto-sigmoid junction. A rectal tube was inserted. The patient made an uninterrupted recovery, devoid of pain or fever. There was an immediate local improvement, and urine was regularly voided by the bowel.

Second Operation.—On September 28th, 1932, the abdomen was opened by a left paramedian incision, and the ureter was transplanted into the sigmoid loop; a rectal tube was inserted. There were no complications, and the patient was discharged, well and with good control. So far as I have been able to ascertain both these patients are in good health and quite content. The average period of rectal control at present is about three hours.

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Reports of Societies

PAIN AND THE NASAL ACCESSORY SINUSES

At a meeting of the Medical Society of London on March 27th, with Sir JOHN BROADBENT, Bt., in the chair, a discussion took place on headache and pain in relation to chronic inflammation of the nasal accessory sinuses. The opening papers by Mr. HERBERT TILLEY and Dr. WILFRED HARRIS are published elsewhere in this issue.

Mr. LIONEL COLLEDGE referred to the question of pain in the region of the frontal sinus when the sinus itself was absent or scarcely developed. This was a rare condition, but he could recall three definite cases in which the pain was very severe, though the *x*-ray photographs showed the frontal sinus to be absent, the region being occupied by what appeared in the photograph to be simply a clouded area. Ultimately in all these cases an incision was made, and very vascular bone was found in the area concerned. When this was removed the relief was immediate. It was possible that in these cases the pain was due to pressure on the supraorbital nerve; there might be hypertrophy or hyperplasia of the bone compressing the nerve. There was no question but that many unnecessary nasal operations were done for neuralgias.

Mr. F. A. WILLIAMSON-NOBLE, speaking as an ophthalmic surgeon, said that it would be very useful to discover some ready means of ascertaining whether a given headache was due to an error of refraction or not. He had been told that if the headache was made worse by the patient putting his head down it suggested sinus trouble rather than an uncorrected error of refraction. Many people appeared to have a headache not related to the eyes, and yet it was cured by glasses. He had known cases where headaches had been cured by ordering the wrong glasses as well as by ordering the right ones. He had found the condition improved greatly by means of eye exercise, or, again, after slight correction for astigmatism.

Mr. J. F. O'MALLEY referred to some oscillographic tracings he had taken on air-pressure variations in the sinuses. This work had revealed a good many interesting results having a bearing on the question of whether there was a vacuum in the air space or not. It seemed to him to be certainly possible to have a vacuum in a long tortuous frontal nasal duct. The question of the vacuum in relation to pain was one which had interested him for a long time, and was of special importance in trying to explain periodic frontal pain. There was a peculiar pain commonly attributed to sinus disease which he did not think was due to that cause at all. This occurred very frequently in relation to an acute antrum suppuration. The patient got up in the morning free from pain. About 10 o'clock pain set in, and became increasingly severe until about noon, when it became impossible for him to do anything. Then it gradually eased off in the afternoon, and disappeared completely until the next day. He had had at least six antral cases of that kind during the last year. He explained his view of the mechanism of the condition. There was an infected process in the frontal nasal duct. When the patient got up in the morning the lining of the duct was so swollen that there was no air going in or out, but as he entered on the day's activities the lining began to shrink, and a certain amount of air entered, causing for a time an intensity of pain owing to the swelling. With further shrinkage, however, more air would enter and restore the atmospheric pressure, so that the pain would disappear until the following day.

Mr. W. M. MOLLISON referred to a case of a dental mechanic who while at work had the most intense pains over the right maxillary region. Nothing could be found wrong with him, and an operation performed on his antrum yielded no result. The moment he went away for a holiday, however, the pain left him. Dr. Harris had inferred that such cases occurred only in women, but this was in a man. The speaker had also seen a girl with acute pain in her right ear for two days; nothing wrong could be found on that side, but she had a carious tooth in the opposite jaw, and that having been extracted her pain disappeared. Mr. Tilley had said that the inferior maxillary nerve seldom had any apparent connexion with pain about the sinuses. The speaker had come across a girl who had complained of severe pain for six months in the left ear, which was accompanied by acute pain in the left eye. The skiagrams were quite normal, but she had an unerupted third molar on the left side, and, that being extracted, the pain both in the eye and in the ear immediately disappeared. Pain in the ear in such circumstances was a commonplace observation, but he thought the pain in the eye might be explained by reference to the second division of the fifth nerve, which supplied the periosteum of the orbit. Mr. HAMBLEN THOMAS described the case of a woman who came complaining of pain on the inner side of the right eye. Nothing could be found in the right nasal sinus to account for it, but she had an infected left antrum, and on opening this and draining it the pain in the right eye disappeared. Mr. Tilley had done well to draw attention to the need for being careful in operating for headaches in women which might be due to sinuses. Women often had pain and congestion in the frontal region during the menstrual period. He knew of one girl who used to have, during her periods, bleeding from the middle turbinate. Such pain in women also occurred at about the menopause. If operation was done,

they were still likely to complain of pain, whatever had been done inside the nose. A very good test as to whether any good was likely to be done by relieving the congestion was to spray with cocaine, and if immediate relief were obtained then an operation might be performed with some hope of success.

Dr. GEORGE RIDDOCH said that one of the most remarkable characteristics of sinus headaches was their periodicity. The periodic headaches of actual sphenoidal sinus disease were less difficult to understand than the periodicity of the frontal sinus headache. Why a headache should begin at ten in the morning and last until four in the afternoon, or recur, as it sometimes did, at seven in the evening and last until midnight, was very difficult to understand. Although the pain might be dull and throbbing in character, it was frequently shooting also, and sometimes in frontal sinus cases there was a referred pain to the back of the head. These headaches might be associated with vomiting, and this association, especially if it occurred in the morning, sometimes led to the assumption that growth might be present. Another common character of the antral pain was its association with numbness. This might begin at the front of the gum on the same side—a symptom possibly preceding the actual onset of pain itself. The numbness might then spread to the upper lip on that side, and a neuralgia develop. The association of numbness with pain was important from the diagnostic point of view, and if there were some swelling of the cheek it might give the clue to a neuralgia localized in character which might be puzzling in itself. One of the most important things in dealing with pain and assessing its value was to ascertain its main focus. There was a great deal still to be learnt about these pains, and they deserved to be taken in hand methodically. Dr. WARREN CROWE said that rather an interesting experience in regard to influenza had occurred on the Continent. This particular form of influenza originated apparently in Copenhagen, and was followed by the most violent neuralgic symptoms in the head. He had met a Danish doctor who told him that it was almost universal, and so severe that in many cases morphine had to be given. After the temperature of influenza had subsided the neuralgias in the head became very acute, with much tenderness over the mastoid. The only thing he himself had found to give relief in such cases was a spray of 3 per cent. ephedrine given for four minutes until relief was obtained. He rather explained the relief as due to the gradual opening up of the sinuses and allowing the discharges to come away. The relief, however, did not last very long.

THE INFLUENCE OF INDUSTRY UPON PUBLIC HEALTH

At the meeting of the Section of Epidemiology and State Medicine of the Royal Society of Medicine on March 24th, with Professor MAJOR GREENWOOD in the chair, a discussion took place on the influence of industry upon public health.

Dr. JOHN C. BRIDGE, Chief Medical Inspector of Factories, Home Office, in an opening paper, considered first the recognized specific risks of industry. Under Section 73 of the Factory and Workshop Act, certain diseases contracted in a factory or workshop were notifiable by practitioners to the Chief Inspector of Factories. One of these was lead poisoning, for which ninety-nine persons were freshly compensated in 1931, while the compensation of 119 others was continued in that year. Other notifiable diseases were epitheliomatous ulceration, due to pitch, tar, mineral oil, and paraffin ; chrome ulceration, due to the vogue of chromium plating ; and anthrax, occurring amongst persons handling wool, horsehair, hides, and skins ; there were twenty-one cases of anthrax notified in 1931. Another risk of industry was due to the inhalation of dust, which set up silicosis and asbestosis. The most important industry from the point of view of causation of silicosis was sand-blasting, in which the period of exposure before silicosis occurred was quite brief, even five or six years. There was definite evidence that the inhalation of this dust increased the incidence of tuberculosis. With regard to asbestosis, the influence upon the tubercle bacillus in a lung thus affected was not so well established. The effect of other dusts, such as emery and carborundum, could not be estimated at present, but he thought it might be affirmed that they did not cause silicosis. Other diseases in the schedule under the Workmen's Compensation Act included nystagmus and dermatitis. He had no knowledge of the occurrence of the former in factories. With regard to dermatitis, the number of new cases receiving compensation in 1931 was 1,328. Fatal accidents in factories and workshops during 1931 numbered 755. Those which arose from machinery accounted for only 20 to 25 per cent. of this number, while falls accounted for one-third. The common ailments ascribed to industrial conditions were diverse. It was difficult to assess the part played by industry in the incidence of illness in the common population, such as rheumatism, in the production of which amongst the heavy industries trauma might play an important part. Dr. Bridge next dealt with some of the ways in which industry, either directly or indirectly, notwithstanding its risks, was of benefit to the community from the point of view of preventive medicine. One of the most important of these was the supervision of the workers. Direct medical supervision was still a comparatively new idea. It was handicapped by the system of national health insurance, which required from employer and employed a fixed sum per week for treating the employee when ill, so that the employer, having to pay this sum, was reluctant to provide medical supervision for his employees at work who were presumed to be well. But an increasing number of medical officers, whole- or part-time, were attached to works, and were proving themselves practitioners of preventive medicine in the true sense of the word. It had been said that industry, by causing aggregation of workers, was an important factor in the spread of infections such as influenza, but such aggregation was no worse than that on the football ground or in the picture theatre, and the conditions under which workers were employed, so far as sanitation and heating were concerned, were in a vast number of cases better than the conditions pertaining at their homes. It was also important to remember that except in one instance—namely, anthrax—the specific diseases of industry were not communicable to the general public. He believed that the methods taken for the protection of workers from specific poisons had raised the standard of general health. The charge that industry raised the cancer incidence was no light one, but here again the production of cancer by pitch, tar, and oil was leading research workers to a better understanding of the cause of the disease, and by granting compensation to patients with occupational cancer an incentive to early treatment was provided. Again, it was the occurrence of anthrax in industry which led to the earlier introduction of Sclavo's serum. The late Sir Thomas Legge, after a visit to Italy in 1904, brought back a supply of serum, which was kept at the Home Office and sent out on request in cases of anthrax. The speaker showed some views of the anthrax disinfection station maintained by the Home Office at Liverpool. It was only seventeen years since there was any legal requirement for first aid in factories, and large numbers of workers had now received first-aid training. A well-organized factory was becoming increasingly a centre of preventive medical work of no little value to the community.

Professor MILLAIS CULPIN said that industrial dermatitis had always been a conundrum to dermatologists. One possibility was that a dermatitis, once established, could be kept up by all sorts of other factors. Since the war there had been several minor affections prevalent in this country which were not prevalent before, among them a fungus affection of the skin, generally occurring between the toes, but also on the hands, and this might be latent for a long period. As for miners' nystagmus, this had increased tremendously during the last twenty years. If a miner had oscillation of the eye-balls to a considerable degree, so far as to incapacitate him, he had headache and giddiness and so forth, but revealed no other symptoms.

As the oscillation diminished, however, nervous symptoms increased, until at last one had a large body of people who were receiving compensation for miners' nystagmus, but in whom nystagmus in the sense of oscillation of the eye-balls was not present at all. The speaker referred to the large group of cases of industrial sickness in which the fact of compensation played a certain part. After colds and influenza, he believed the most frequent cause of absenteeism was nervous debility, breakdown, or exhaustion—a disorder which at bottom was the manifestation of some psychological disturbance. It was unfortunate that there were no standards of what was a reasonable amount of disability in any particular industry, and as between industries there were very great differences.

Dr. N. HOWARD MUMMERY declared himself not in favour of first-aid training in large factories where a clinic with a doctor and trained nurses was available, although its first principles should be inculcated by example and advice to individual patients. In his view, the little knowledge which first-aid classes imparted was a dangerous thing under factory conditions unless restricted to the simplest procedures, and he deprecated attempts to remove emery sparks from eyes with match-sticks, or the application of advertised ointments to wounds and skin eruptions, before he saw the cases. On the other hand, it was impossible to overestimate the importance of training workpeople by example in the essentials of personal and general hygiene, for this not only was necessary in a food factory, such as the one with which he himself had to deal, but had a most beneficial influence upon their home life and upon the physical fitness of the next generation. In his own work during the past ten years he had seen a most remarkable change in the hygienic condition of the workpeople with whom he came in contact. Body parasites that used to be common were now conspicuous by their absence, and rigid insistence upon adequate dental treatment had resulted in healthy mouths and a reduction in the incidence of gastritis and fibrositic infections. In spite of the prevailing unemployment there had been a steady general improvement in the physique and fitness of the working population in London, in marked contrast with what he found in the factories, and among the people in general, in Germany in 1931. Unemployment tended largely to limit the beneficial effects of industry in spreading the principles of preventive medicine and hygiene, and therefore he called attention to an aspect of the case which was assuming grave proportions. The Workmen's Compensation and Employers' Liability Acts rightly held the employer responsible for injuries and diseases arising out of, and in the course of, a workman's employment, and from time to time the scope of those Acts was being extended, in accordance with the advance of medical knowledge, to cover more and more of the pathological conditions met with in industry. Unfortunately, however, the legal definition of what was or was not an industrial injury or disease in many instances appeared based upon previous rulings unearthed from the hidden limbos of legal archives rather than upon the pathology or merits of the particular case, and the legal machinery of industrial courts seemed in urgent need of overhaul and readjustment. Few who were not directly concerned had any appreciation of the burden upon industry that assurance against the risks covered by these Acts entailed. Many large companies paid between £12,000 and £15,000 annually in premiums for such insurance, and as these premiums were based upon the average claims the assurance company had to meet, the employer still remained vitally concerned. Only recently the House of Lords ruled that an employee who while at work died suddenly from cardiac infarction secondary to progressive disease of his coronary arteries had died from "internal injury by accident," although admittedly he had not been exposed to any particular strain. Equally, the final rupture of an aortic aneurysm was an "internal injury" if it chanced to occur during the hours of employment. Such inequitable decisions must have a profound influence upon employers who tried to help the "lame dog," handicapped in the struggle for existence by some physical infirmity, to find suitable employment. In large industrial concerns all applicants for employment were examined by the firm's doctor, who endeavoured to find jobs for many such men. At present, as medical officer to Messrs. J. Lyons and Co., he rejected only between 2 and 3 per cent. of applicants for work, but a more rigid selection of those physically fit would raise this figure to more nearly 20 per cent. He also saw from time to time old employees suffering from diseases common to advancing years, among whom were many with cardiovascular degeneration which in the fullness of time would cause death, which might be sudden, and might occur at work. These people naturally wished to retain their jobs as long as possible, but the courts were making them a very serious liability in industry. He submitted that in the absence of competent medical evidence of causation or aggravation by employment, the natural termination of progressive disease should not be termed an "internal injury" and a liability of the employer.

Sir KENNETH GOADBY said that it was perhaps hardly appreciated how useful the methods adopted by the Home Office might be in raising the standard of factories. It had been the practice of the Home Office Medical Department to note those factories which took particular precautions for the prevention of disease, and to use them as a standard in attempting to bring other factories which were laggards up to the same level. In respect to dermatitis, again, the work done by the Home Office had not only been of benefit to the worker but to the general public, for as a result of the observation of the certifying surgeons the attention of the general dermatologist had been brought to bear on the origin of these cases. He was of opinion that the skin of the average employed person showed some lowering of resistance to external irritants, and it was not improbable that there were infective factors present of which up to now they were not cognizant. With regard to lead poisoning, this was gradually and steadily diminishing.

Dr. MAY SMITH remarked that the factory was serving as a research laboratory for the benefit of the general population. A very large number of the environmental conditions causing sickness were not peculiar to industry, but pertained to the general population, and work in the factories had made it possible to find out much more clearly than could be done by a doctor in general practice what exactly were the effects of, for instance, different arrangements of heating and ventilation. The effect of noise could also be studied, as well as those more difficult psychological conditions which so radically affected health, such as monotony of work or rigidity of working conditions. All these were things which in the factory and workshop could be estimated and to a certain extent measured. The factory doctor could perform experiments in the selection of workers and the allocation of them to different departments, which experiments were of real scientific value. Dr. W. S. C. COPEMAN entered a mild protest against the casual manner in which Dr. Bridge had spoken of rheumatic disease in industry. Of the total sickness benefit paid in this country by the approved societies, one-sixth was paid on account of rheumatic diseases, or a sum of something like £20,000,000 a year.

Professor GREENWOOD, from the chair, said that the subjects which were definitely and indubitably part of the Home Office work, even if miners' nystagmus were included, formed numerically a very small portion of the general sickness and incapacity, and therefore the lines of investigation pointed out by Professor Culpin and Dr. May Smith were important. As a statistician he deplored that some of the elementary facts regarding sickness and lost time in industry were not known because sufficiently careful records were not kept, even by factories of the highest standing. It would seem to an insurance company an astounding state of affairs to insure people's lives and receive premiums, but never to work out life tables. But if the simple question were asked of a great employing concern, "Of every thousand people you engage, what proportion are still working for you at the end of a certain number of months?" it would be found that only a small minority of businesses in this country were so organized that the information could be given. Even at the present time, when it might be thought that anybody who had a job would hold on to it for all he was worth,

the experience of a large firm had recently been investigated with regard to the persons who were engaged as permanent members of its staff, and it was found that out of 100 persons engaged, not more than seventy-five were still in the business at the end of twelve months from engagement. Once these figures were ascertained it would be necessary to consider what proportion of these industrial " casualties " were due to some failure in the process of selection, or to sickness, or to some other cause. Dr. BRIDGE, in reply, said he did not treat rheumatism at all lightly, but his great fear was that there would be devised a disease called " industrial rheumatism " for which compensation would be demanded, and in that event miners' nystagmus " would not be in it."

AETIOLOGY OF CANCER

At a meeting of the London Cancer Society, held in the London Clinic on March 24th, with the president, Mr. LOCKHART-MUMMERY, in the chair, Sir LENTHAL CHEATLE read a paper on the incidence and spread of cancer.

Dealing with the question of innervation, the speaker mentioned that Oertel of Montreal had given it as his opinion that malignant tumours were always innervated ; R. J. Ludford had, however, shown striking reasons for believing that this was not so, but that the tumours grew into regenerating nerve fibres. The cause of carcinoma was in operation at the point of its incidence, and it might be that the cure of carcinoma was hidden in the factors that governed the establishment of secondary deposits. In carcinoma of the breast it was common to find a very large number of deposits in the bones, but not in any other tissue. Dr. J. A. Murray had discovered a tumour the secondary deposits of which grew only in the retina, and Dr. Cave had shown a prostatic growth which limited its secondary deposits to certain special bones and certain special vertebrae. From the preventive point of view the importance of avoiding local irritation should be stressed, but one wondered why it was so rare for a woman to suffer from both cancer of the breast and cancer of the uterus when both the organs might have been subjected to almost equal local irritation. Did it mean that cancer in one part of the body had a protective influence over further infection? Dealing with the question of predisposing conditions of the body tissues and fluids, Sir Lenthal Cheatle said that all the evidence went to show that carcinoma was not usually produced in a sudden and dramatic manner. In the production of tar cancer in mice one could almost forecast the exact time that the process would take once the tar painting had begun. In Schimmelbusch's disease of the breast the preliminary changes were almost absolutely constant. In carcinoma of the hand the common site was always that part exposed to the greatest wear and tear—the back of the second metacarpal bone. This " biotripsis " was characterized by the skin first becoming thin, then pigmentation being altered, the skin losing its elasticity, small warts forming on it, and eventually the appearance of cancer. The incidence of cancer of the breast was an interesting study. One should note that it was not correct to speak of the growth in the breast as the primary tumour and any deposits elsewhere as secondary growths. In most cases the growth in the breast could easily be shown to consist of both primary and secondary growths.

In the discussion which followed mention was made of the colloidal vanadium test for cancer, and of a method of treatment by glandular extracts.

TREATMENT OF ECLAMPSIA

At a meeting of the Liverpool Medical Institution on March 16th, with the president, Dr. H. R. HURTER, in the chair, Mr. J. ST. GEORGE WILSON read a short paper on the treatment of eclampsia.

Mr. Wilson said that treatment was rendered difficult by the fact that the cause of the condition had not been discovered, in spite of a great deal of research. Treatment varied according to the most recent theory as to the cause ; the most popular theory was that of a toxaemia due to the presence of pregnancy. He mentioned the most widely known methods of treatment. Eclampsia was to be divided into two stages—pre-eclampsia and eclampsia proper—and the treatment of eclampsia proper was divided into three groups: (1) treatment during a fit, (2) treatment to limit the number of fits, and (3) treatment to remove the cause of fits. During a fit the posture of the patient was of great importance to prevent aspiration of vomited material and oedema of the lungs. The introduction of a gag into the mouth prevented biting of the tongue or cheek, and liability to haemorrhage. To limit the number of fits the patient should be treated in a dark, quiet room. All movements and manipulations should be carried out with care. A preliminary injection should be given of 1/2 grain of morphine hypodermically, and 10 c.cm. of 20 per cent. solution of magnesium sulphate intravenously. The injection of magnesium sulphate might be frequently repeated without harm, and up to 2 grains of morphine might be given in twenty-four hours, the number of injections being regulated by the condition of the patient. After a preliminary colonic lavage 30 grains of chloral hydrate should be introduced into the bowel. Chloroform should only be administered when fits interfered with necessary manipulations, and in cases of status epilepticus. In treatment for removing the cause of the fits elimination was carried out by colonic lavage, assisted by magnesium sulphate by mouth or per rectum. In the treatment of pre-eclampsia the most important point was the early recognition and treatment of albuminuria and raised blood pressure. In cases which do not respond to treatment the early induction of labour by mechanical means was recommended, with additional antispasmodic treatment at the onset of labour. Caesarean section had no place in the treatment of eclampsia and pre-eclampsia.

Dr. R. J. MINNITT said that there was a good deal of interest in the subject from the anaesthetist's point of view. He himself had undertaken an investigation into the changes of blood urea following anaesthesia, and the inference drawn from this was of some importance in the treatment of eclamptic and pre-eclamptic patients. Dr. Minnitt thought that any operation undertaken on a pre-eclamptic or eclamptic patient should never be performed with chloroform, and where there was kidney damage no ether should be used. The only safe inhalation anaesthetic was gas and oxygen.

Cardiovascular Syphilis

Dr. E. NOBLE CHAMBERLAIN, in a paper on cardiovascular syphilis, described in turn the clinical manifestations and method of diagnosis of the commoner forms of the disease. He emphasized the importance of early diagnosis, particularly in cases of aortitis, and, whilst admitting that this diagnosis was always difficult and sometimes impossible, he thought that sufficient evidence to justify further antisyphilitic treatment might be obtained in many cases by careful clinical and radiological examination. Aortic regurgitation was next discussed, particularly as regards those signs which help to distinguish the syphilitic from other varieties of this disease. Dr. Chamberlain then turned to myocardial lesions, and again described the difficulty of diagnosis. He emphasized idiopathic hypertrophy of the heart as a sign of importance in certain cases. In a series of 232 cases examined by Follows and himself eleven were found by palpation and percussion to have cardiac hypertrophy with no other abnormal signs, and several of these were young persons. He also pointed out that certain negative features might be of value in distinguishing syphilitic from other forms of myocardial lesion, particularly the rarity of cardiac arrhythmia and coronary infarction in syphilitic disease of the heart. He mentioned briefly the results of an investigation by Follows and himself into the electrocardiographic changes in syphilis. This investigation revealed the presence of serious electrocardiographic defects in a number of persons suffering from syphilis who had no clinical manifestations of cardiovascular disease, and although the majority were many years (fifteen to twenty) after the primary infection, a few were within three to six years from the primary

disease. In such cases it seemed justifiable to use antisyphilitic measures cautiously and persistently in order to prevent further advance of the condition. Dr. Chamberlain then described shortly the course of cardiac syphilis, and proceeded to its treatment, in which he advocated improvement of the patient's cardiac reserve by the usual methods, followed by judicious administration of antisyphilitic remedies, commencing with a heavy metal, preferably bismuth, and iodides, and followed after some weeks, if the patient tolerated this well, by small doses of arsenicals, such as neokharsivan or tryparsamide, the latter being of special value in aortic disease.

Professor JOHN HAY said he considered the paper most opportune, as it was reasonable to expect a considerable increase within the next five or ten years of patients suffering from cardiovascular syphilis. Remembering the widespread infection during the war and post-war period, it was realized that a sufficient time had now elapsed for the results to show themselves. He stressed the point that syphilis killed through the cardiovascular system, and that the deaths under this heading were greater than the total number of deaths from all other forms of visceral syphilis combined. He agreed with Carey Coombs's axiom that syphilis "blockaded rather than invaded the heart." Special reference was made to that particular type of angina pectoris associated with syphilitic aortitis and free aortic regurgitation—in which pain was intense, often spontaneous, and yielded to amyl nitrite. The electrocardiogram was, unfortunately, of little value in helping to form an opinion as to the responsible aetiological factor behind cardiovascular damage, and this was certainly the case in syphilis. It was admittedly difficult to determine how far arsenical treatment was justifiable in this type of case, but experience suggested that it was dangerous in those patients with severe anginal pain, with advanced coronary stenosis, or with well-marked aotitis.

SOCIAL PROHIBITIONS AND MENTAL ILLNESS

In the course of a clinical demonstration to a meeting of the Scottish branch of the British Psychological Society at the Glasgow Royal Mental Hospital on March 4th, Dr. A. Macniven, physician-superintendent of this institution, said that mental illness should be regarded as an individual reaction to social situations, problems, and difficulties. It might be thought that the improvement in social and economic conditions of the past century, which had mitigated the stress of the individual's existence as regarded material welfare, should have increased his resistance to mental illness. He now enjoyed greater freedom of thought, speech, and action than he used to do, but it might be questioned whether this had been accompanied by the necessary change in mind which enabled him to adapt himself to the new conditions and to take full advantage of them. The intolerant social laws which formerly curbed his freedom were reflections of similar prohibitions in the minds of the individual members of society. There was every reason to believe that these prohibitions still existed, although the field of their operation had changed. The fact that there had not been any essential change in human mentality was therefore likely to incite the individual to increased aggressiveness in other directions. These prohibiting tendencies played an important part in the causation of mental illness. The submission of the members of society to an over-rigorous social code constituted in itself what one might call a mass neurosis, which, to a certain extent, protected the individual from some forms of mental illness. In return for the amelioration in social and economic conditions and the greater degree of freedom now enjoyed, he had sacrificed the limited immunity to mental illness which the harsher conditions of former times conferred on him. The fact that increased freedom had made man more sensitive to the crippling effect of internal [illegible] in the end prove to be to his advantage, [illegible] his attention to the real source of his difficulties, which lay in the conflict existing deep in his mind.

Reviews

BIOCHEMISTRY FOR THE CLINICIAN

Readers already familiar with Professor A. T. CAMERON'S *Textbook of Biochemistry* would naturally expect *The Biochemistry of Medicine*,[1] which he has produced in collaboration with Professor C. R. GILMOUR, to be a useful and interesting volume. In this expectation they will not be disappointed. In catering for the practitioner who wishes to "get up" biochemistry, as well as for the senior student, the authors have undertaken the task of prefacing their sections with a brief survey of the relevant portions of normal biochemistry. Had they contented themselves with catering only for present-day students this might have been avoided, perhaps to the betterment, certainly to the curtailment, of the volume considered as a whole. It is, however, easy enough for the reader to skip those portions with which he feels himself sufficiently familiar.

The book is a comprehensive one, and covers most of the ground over which, at the moment, biochemistry can usefully guide the clinician. The authors have succeeded, on the whole, in the important task of showing where lie the difficulties and uncertainties both of methods and of interpretation. Naturally enough, the theoretical interpretations advanced are open to criticism at various points. A couple of instances might be worth quoting. The writer of this review is always impressed, especially when teaching students, with the "thinness" of the explanation of ketogenesis, which is sponsored chiefly by Shaffer, and which postulates a chemical combination between the "four-carbon" stage of the fatty acids and the degradation products of carbohydrate. The view is now gaining ground that ketosis is due rather to the overloading of the normal machinery for fat oxidation, which takes place when there is a deficiency of carbohydrate oxidation, and when, therefore, energy must perforce be derived from fats. As knowledge stands to-day the adoption of one view or the other is perhaps still a matter of personal bias, but both should be stated in a textbook such as this. Again—and admittedly everyone must weigh the matter for himself—theories of oedema that are founded on the supposition that the main factor is the swelling or shrinking of cell colloids seem to have much less to recommend them than those which are based on what may for convenience be termed the "Starling theory." The fluid, after all, has never been shown to be intracellular, and, until this can be done, to saddle the cell colloids with the task of swelling and shrinking seems to be unnecessary, when a simpler explanation lies to hand. One more point may be mentioned. The "hypoglycaemic response" is discussed at considerable length, but no mention is made of the fact that Holmes and his collaborators have shown that during hypoglycaemia the central nervous system does suffer immediate carbohydrate starvation, since (probably alone among the tissues) it is dependent, from moment to moment, upon the blood sugar for its carbohydrate supply.

In their opening chapter the authors define the relation of biochemist and clinician in rather a curious way. The biochemist, they say, should preferably not be a medical man. The initiative must rest entirely with the clinician, who is at liberty to query any biochemical results which do not fit in with his notions of the correct diagnosis. That the clinician has no right to blame the biochemist for his own mistakes, whether they are due to lack of proper clinical examination or to genuine errors of judge-

[1] *The Biochemistry of Medicine.* By A. T. Cameron, M.A., D.Sc., F.I.C., F.R.S.C., and C. R. Gilmour, M.D., C.M., F.R.C.P.(C.). Churchill's Empire Series. London: J. and A. Churchill. 1933. (Pp. 506; 31 figures. 21s.)

ment, is plain, but the clinician must surely assume that, before the biochemist brings him results, the latter has assured himself that, within the limits of error of the methods available, they are accurate ones. If through shortage of material duplicate analyses cannot be made he will, presumably, say so when handing in his report. It is impossible to imagine a harmonious relation between ward and laboratory based on the state of affairs suggested by the authors of this book.

SKIN DISEASE, SYPHILIS, CANCER

Under the guidance of Professor LOEPER, who occupies the chair of therapeutics in the University of Paris, a comprehensive System of Treatment[2] by various authors in several volumes is now appearing. We welcome the fifth, which is devoted to the consideration of the skin, syphilis, and cancer. No attempt is made to deal with different skin diseases individually, and the dermatological section consists of three chapters only, which are given to the nature of cutaneous infection, to a description of the various medicaments used in external treatment, and to such methods of internal treatment as are in general vogue for various forms of skin disease. The account of these various subjects is comprehensive and philosophical. In each case the essays are well written and extremely readable. The reader will be interested to learn that the metal zinc, which, especially in the form of oxide, is the most indispensable weapon of the practising dermatologist, is far more widely diffused through the animal world than many might expect, that it has a distinct function in the promotion of growth, that it is present in appreciable quantities in the brain, and that it is often discoverable in association with sulphur (an association by no means uncommon in dermatological descriptions). It is permissible to speculate whether the undoubted efficacy of this metal in so many inflammatory dermatoses may not be due to some more subtle quality than its undoubted protective function when made up into an elegant paste or ointment.

The treatment of syphilis is discussed authoritatively by several venereologists, and there is a very interesting chapter on the dangers of arsenotherapy by Dr. Flandin; nor is the question of prophylaxis forgotten. In the section devoted to cancer there is a preliminary chapter on the biology of the cancerous process which is interesting, but in which we are surprised to find no mention of the work of Warburg, who showed that the metabolism of a cancerous cell differs fundamentally from that of the normal in the production of lactic acid. Although no practical results have yet accrued from this discovery it must be of primary importance. There is of course no discussion of the surgery of cancer, but the various forms of radiotherapy and cryotherapy are well dealt with, and the methods of palliation of the sufferings of the patient in the later stages of the disease are also usefully discussed. On the whole, it may be said that in this volume dermatologists will find many of their problems approached from fresh aspects.

AETIOLOGY AND PATHOLOGY OF APPENDICITIS

Professor ASCHOFF has summarized his work on appendicitis in a short book[3] translated into English by Dr. Pether. In this he gives an account of the bacteriological and histological examination of a large number of normal and diseased appendices, and reaches certain definite conclusions about the pathology of appendicitis. He considers that in the majority of cases the disease appendicitis is caused by the invasion of the appendix by intestinal streptococci, resulting in inflammation, at first limited to the appendix but later extending to the meso-appendix and regional lymph nodes. In a smaller proportion of cases pneumococci or *B. coli* may be originators of the inflammation, but these, and certain other bacteria described by Aschoff, are more commonly secondary infecting agents. The intestinal streptococci which he regards as the cause of appendicitis are not carried to the appendix from other parts of the body: they are the natural bacterial population of the appendix. They are usually found in profusion in the distal segment, and constitute a special appendix flora in contrast with the organisms which are found in the caecum. The question remains, Why does the appendix become susceptible to invasion by germs which live a harmless, perhaps even a useful, existence within its lumen? Probably there are many different types of injury which may pave the way for bacterial infection. The one to which Aschoff directs attention is the influence of retained secretions. To quote from page 134:

> "If the distal segment of the appendix contains no faeces, and this is more curved than usual, then its secretions tend to be retained. As a result of this the virulence of the appendicular flora is increased, and this favours the development of disease. Since these circumstances are so commonly occurring the frequency of acute attacks, especially those of a transient nature, is not surprising."

This is a book which will be read both by surgeons and by pathologists with great interest, interspersed perhaps with moments of exasperation, due to two obvious faults. One is the way in which long tables giving the results of various examinations interrupt the text, so that the reader is left high and dry in the middle of a sentence, while he turns over page after page of intervening detail until he can find the missing fragment (as, for instance, page 55 to 64). The other ground for complaint is the way in which the author keeps postponing his opinions with such phrases as "We shall return to this later," just when the reader is beginning to expect some definite conclusion. The translation is good, the illustrations clear, and the index adequate.

PRACTICAL OBSTETRICS

In *Practical Obstetrics*[4] Professor BROOKE BLAND of the Jefferson Medical College, Philadelphia, has attempted to produce a textbook for students and practitioners which emphasizes the clinical aspect rather than considers theory and pathology in great detail. A good deal of the modern work on the tests for pregnancy and the pregnancy toxaemias has been included, and in the chapter on normal pregnancy the change from the wearisome repetition of most obstetric works is welcome. The tables of differential diagnosis found scattered through the book, and showing much thought and teaching experience, will be of great use. Similarly, the account of pre-natal advice is well worth careful attention. Most of the opinions expressed are sound, and call for little comment. The author objects to vaginal examination near term, and with this point of view most teachers will agree. Practitioners will be interested to read the account of deep transverse arrest of the head; it is time that this complication of labour was properly emphasized in our English books. A chapter on obstetric jurisprudence, at the end of the book, makes interesting reading.

Criticism can be made of the chapters dealing with normal labour, the malpresentations, and the inertias. In

[2] *Thérapeutique Médicale*. vol. v (*Peau, Syphilis et Cancer*). By several authors, under the editorship of Professor P. M. Loeper. Paris: Masson et Cie. 1932. (Pp. 404. 50 fr.)

[3] *Appendicitis—its Aetiology and Pathology*. By Ludwig Aschoff. With a short contribution on the Lymphatic System of the Human Appendix by Dr. H. Seng. Translated by G. C. Pether, M.D., M.R.C.P. London: Constable and Co., Ltd. 1932. (Pp. 153; 36 figures. 16s. *net*.)

[4] *Practical Obstetrics for Students and Practitioners*. By P. Brooke Bland, M.D., assisted by T. L. Montgomery, M.D. Philadelphia: L. A. Davis Company. 1932. (Pp. 750; 516 figures. 8 dollars.)

its present form the book fails to stress the practical side of obstetrics. Much more space should be allotted to normal labour, and the introduction of numerous practical suggestions gleaned from his own experience would enable Professor Bland to help his students more than anything else. Obstetrical textbooks which are inherently practical are few in number. In this country it is becoming more and more difficult to find sufficient material for medical students, and there is a real danger that their obstetrical training will be saturated with theory unless particular care is taken to emphasize the clinical side in their textbooks. The problems which practitioners encounter in midwifery are usually those of the inertias and the malpresentations, and these aspects should be stressed, if necessary to the exclusion of the academic rarities, which even now take up a large proportion of our standard works.

ANALYSIS OF DEVELOPMENT

The appearance of a translation into English of Professor BERNHARD DÜRKEN'S *Experimental Analysis of Development*[5] will be welcomed by biologists as well as by medical practitioners. It is a clear and concise account of a wide subject, which bears on many issues of cardinal importance for a proper understanding of such vital processes as repair of injuries, interrelation of organs, immunity, and heredity. It is especially fortunate at this time, when so much is being claimed for a purely mechanistic conception of heredity by means of genes—which since they are stated to be located in special parts of particular chromosomes are clearly regarded as being particulate in nature—that a reasoned treatise like Dürken's should have been published. The book, from beginning to end, is not only a careful analysis of the results of experimental embryology, but contains valuable deductions which are of prime importance in connexion with present-day medical and surgical practice. The illustrations are exceptionally clear and apposite. Where all is good it is difficult to name any parts which are more valuable than others; we would, however, specially commend a close study of the chapters on epigenesis, potency, determination, environmental influences, and interrelationships which lead up to the main proposition of the "Einheitstheorie" or the conception of the essential unity of the organism. In conclusion, we should like to express appreciation of the way in which the translators, H. G. and A. M. NEWTH, have accomplished their difficult task. We recommend the book to all interested in the main principles of biology and, more especially, of genetics and heredity.

THE INFANT WELFARE MOVEMENT

There are many advantages in approaching a subject from the historical point of view. Often a true appreciation of the present position can be achieved only in this way, and sometimes it is only thus that anomalies or shortcomings can be explained. Certainly by no other method can full justice be done to the pioneer work of many men and women of initiative and enthusiasm. All this is true even if the history of a particular movement has not been a very long one, and Dr. G. F. MCCLEARY deserves thanks for his narrative of *The Early History of the Infant Welfare Movement*[6] in a volume under that title. Dr. McCleary himself holds an honourable place in such a history, and his personal association with the movement and knowledge of those who were chiefly responsible in founding it and in directing its early course give an authority and justification for his narrative which cannot be gainsaid. He draws a most interesting picture of the origins of the movement, and its development in France and in America, in Battersea and in St. Pancras, in Manchester, Huddersfield, and Glasgow, and emphasizes the credit which is due to the wise and devoted men and women—medical officers of health, other medical men, members of local authorities, and social workers—whose names will be immediately recalled by the mention of those localities in this connexion. His book contains six portraits—those of Pierre Budin, Nathan Straus, Henry Leber Coit, Benjamin Broadbent, William Fleming Anderson, and J. F. J. Sykes—and gives in an appendix the presidential address delivered to the First National Conference on Infant Mortality in 1906 by John Burns, then President of the Local Government Board. The volume covers the period between the year 1899, when the infant mortality figures for England and Wales were the highest ever recorded, and 1914. It constitutes a valuable, well-authenticated, and very interesting record.

[5] *Experimental Analysis of Development*. By Bernhard Dürken. Translated by H. G. and A. M. Newth. London: George Allen and Unwin, Ltd. 1932. (Pp. 288; 119 figures. 14s. net.)

[6] *The Early History of the Infant Welfare Movement*. By G. F. McCleary, M.D., D.P.H. London: H. K. Lewis and Co., Ltd. 1933. (Pp. xii + 176; 6 portraits. 6s. net.)

Notes on Books

We welcome the third edition of Dr. Chadwick's excellent little book *Radioactivity and Radioactive Substances*.[7] It is ten years since the publication of the first edition, and during that time it has been familiar to several generations of students working for the diploma in radiology. No better introduction to the physics of the subject could be desired, and a further recommendation is its small size. Radioactivity is a very "new" subject to many who are desiring to gain some acquaintance with radium and the phenomena of radioactivity. The subject therefore is one which needs a good deal of reading; and a small, accurate, clearly written introduction, which can be slipped into the pocket and looked at in odd moments, is really a necessity. The work now before us fulfils all these conditions, and this present edition has been thoroughly brought up to date. We wish our old friend every success and a long career of usefulness.

A Text-Book of Genetics,[8] by A. W. LINDSAY, is a typical elementary treatise of the more admirable kind. In general, it follows the lines already laid down in such textbooks as those of Babcock and Clausen, and of Sinnott and Dunn. Its opening chapter gives a concise account of the development of the science. Its chapters on Mendelian inheritance, chromosome theory, and linkage are excellent, and it includes an introduction to biometry. It discusses the bearing of genetics on evolution theory, and describes the practical applications of genetics in plant breeding, animal breeding, and in man. As is usual in such books the final chapter deals with eugenics. One advantage that this book offers is that, at the end of each chapter, there is a list of questions arising from the subject-matter of that chapter and of topics worthy of fuller discussion. The bibliographies at the end of the chapters are sufficient to guide the student in further reading; there is an adequate index, and the illustrations are both good and plentiful. The book is an excellent example of a manual for class use.

Dr. VICTOR ROBINSON'S *Syllabus of Medical History*[9] consists of fifty questions and answers taken from his course at the Temple University School of Medicine, where he holds the chair of history of medicine; an essay on Duchenne of Boulogne from his *Pathfinders of Medicine*; he holds the chair of history of medicine; an essay on specimen illustrations of primitive and Egyptian medicine,

[7] *Radioactivity and Radioactive Substances*. By J. Chadwick, M.Sc., Ph.D. Third edition. Foreword by Sir Ernest Rutherford, D.Sc., LL.D., F.R.S. London: Sir Isaac Pitman and Sons, Ltd. 1932. (Pp. 147; 33 figures, 9 tables. 2s. 6d. net.)

[8] *A Text-Book of Genetics*. By Arthur W. Lindsay. New York and London: Macmillan and Co., Ltd. 1932. (Pp. xvi + 354, 128 figures. 14s. net.)

[9] *Syllabus of Medical History*. By Victor Robinson, M.D. New York: Froben Press. 1933. (Pp. 110; 1 dollar.)

with explanatory notes ; the chronology of goitre from the prehistoric era down to 1925 ; and an illustrated essay on the photostat and its value to students of medical history by Charles Perry Fisher, librarian of the College of Physicians at Philadelphia. The work is concise but lively, and forms an attractive introduction to the study of the history of medicine.

Bailey's Text-Book of Histology,[10] now in its eighth edition, has been revised and rewritten by a distinguished group of professors of Columbia University, headed by the two responsible for the department of neurology. This edition brings to an end a process of revision which has been continuing for some years. In its predecessor the chapters on the tissues and the nervous system were completely revised by Professors O. S. Strong and A. Elwyn, and only slight changes in them have now been found necessary. In the present edition the chapters on the organs of the body have been extensively rewritten with the help of the anatomical staff of the university ; a large number of new illustrations have been added. A new chapter on " the living cell " has been included ; in this the methods employed in the study of living tissues are discussed, and certain of the important findings resulting from the use of special technique are set out. The book is now entirely changed in scope and appearance from the original edition, another indication of the very rapid progress that has been made during the last few years in histological research, and of the alteration in the views held. Correlation of function with structure is now regarded as of the greatest importance, and this has led to the inclusion, when possible, of the relevant physiological considerations. One outstanding change is that the new edition only contains that part of the old section on the nervous system which relates primarily to neuro-histology. The chapters on the nerve tissue, the nervous system, and the organs of special sense have now been reproduced as a separate book.

The medical census of Nigeria, 1931,[11] was undertaken with the object of obtaining as accurate a picture as possible of disease in relation to physical and social conditions in certain selected areas. Considerable information has been collected on fertility, food and nutrition, and disease in general among the West African natives, but it is admitted that the survey is far from complete, largely because the native often withholds important facts, and some of the information he supplies is of doubtful truth. Further work is therefore necessary if we are to secure reliable data concerning disease in relation to the community in West Africa. To this end the report makes some useful recommendations.

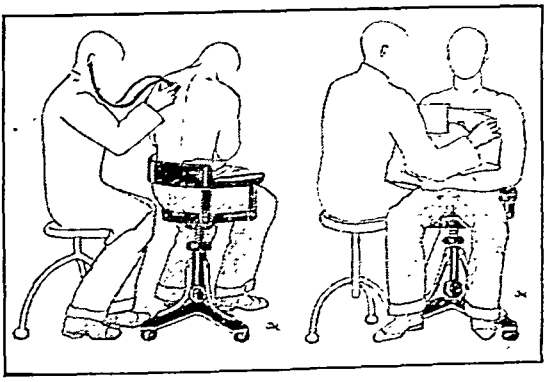
Volume lii of the *Transactions of the Ophthalmogical Society of the United Kingdom*,[12] which relates to the session of 1932, contains a list of communications made to the society last year, papers read to the Oxford Ophthalmological Congress, and the transactions for the year 1931-2 of the affiliated Midland, North of England, Irish, and South-Western Ophthalmological Societies. The result is a very readable compendium of the main advances recently made in this subject ; a number of excellent illustrations, some in colour, add considerably to the usefulness of such a survey. In his presidential address to the first-named society, Dr. A. H. H. Sinclair discussed the technical improvements achieved in the intracapsular extraction of cataract. The Bowman Lecture last year was delivered by Professor J. van der Hoeve of Holland, who, as a preliminary to a practical discussion of ocular movements, paid special tribute to the debt of his country to the life and work of Sir William Bowman. At the Oxford congress there was an interesting symposium on the treatment of non-paralytic squint, which was opened by Dr. Luther Peter of Philadelphia, and the Doyne Memorial Lecture had as its subject " Eye symptoms in phakomatoses," excellently delineated by Professor van der Hoeve. The present volume would be notable if only for its containing the texts of these discourses ; but its practical utility is enhanced by the various shorter contributions made by leading exponents of ophthalmology at meetings of the United Kingdom Society and its affiliated organizations. It is, in short, a great year-book of modern ophthalmology, which is indispensable for those who wish to keep up to date in a subject that is making rapid progress, as regards both technical advances and scientific investigations.

The *Minutes of the General Medical Council* and of its various committees for the year 1932, with nineteen appendices, are published in a volume of 462 pages. It includes the minutes of the two sessions of the Council, of its Executive and Dental Committees, and of meetings of the English, Scottish, and Irish Branch Councils. The appendices comprise tables of accounts, showing the receipts and expenditure of the Council as well as of the Branch Councils and Committees, reports of the Dental Education and Examination Committee, Education and Examination Committee, Finance Committee, Pharmacopoeia Committee, and Public Health Committee, together with a memorandum by the Registrar on the constitution, functions, and procedure of the Council. The *General Index to the Minutes of the General Medical Council and of the Executive and Dental Executive Committees and of its three Branch Councils* from 1903 to 1932 is also published, and comprises a volume of 244 pages. It is a very useful book of reference, the indexing being well carried out. Both volumes are published for the General Medical Council by Messrs. Constable and Co., Ltd., price 12s. and 10s. respectively.

Preparations and Appliances

CHAIR FOR CHEST EXAMINATIONS

Dr. HILARY ROCHE (Montana, Switzerland) writes: Three years ago I had made for me a revolving chair, which I have found most useful for the clinical examination of the chest in the upright position in ambulatory patients. The chair very closely resembles an ordinary revolving " desk " chair, except that it has a low back. I have found that it presents the



following advantages both to the patient and to the physician: (1) The low back gives support to the patient, but does not impede examination of the lower parts of the chest (see figure). (2) The revolving character enables the seat level to be raised or lowered according to the patient's height, and also permits of easy examination by the physician of the front, back, and axillary regions. (3) The physician remains seated, without the necessity of moving his own chair—a decided help if a large number of patients have to be examined.

[10] *Bailey's Text-Book of Histology*. By A. Elwyn, A.M., and O. S. Strong, A.M., Ph.D. Eighth edition. Revised and rewritten, with the collaboration of P. E. Smith, M.S., Ph.D., W. M. Copenhaven, Ph.D., A. E. Severinghaus, A.M., Ph.D., R. L. Carpenter, Ph.D., C. M. Goss, A.B., M.D. London: Baillière, Tindall and Cox. 1932. (Pp. xvi + 746 ; 529 figures. 31s. 6d. net.)

[11] *Census of Nigeria, 1931*. By Dr. J. G. S. Turner, M.O.H., W.A.M.S. Vol. vi. Medical Census Southern Provinces. London: The Crown Agents for the Colonies, on behalf of the Government of Nigeria. (Pp. 101. 8s. net.)

[12] *Transactions of the Ophthalmological Society of the United Kingdom*. Vol. lii, Session 1932. London: J. and A. Churchill. 1933. (Pp. 604. 30s. net.)

British Medical Journal

SATURDAY, APRIL 1st, 1933

ECONOMY AND PUBLIC HEALTH

Readers of this *Journal* have had ample opportunity of becoming acquainted with the report of the Committee on Local Expenditure (the Ray Committee), which was issued at the end of last November, and with the trenchant criticisms to which it was immediately subjected. On December 3rd we published an epitome of the report (p. 1037), mainly with regard to those parts touching on public health, public assistance, and education, with which the medical profession is greatly concerned. In the following week's issue a leading article (p. 1065) gave emphatic expression to the misgivings of most of those connected with these services in presence of the evident risk that either the local or central authorities might act upon the committee's suggestions without much further deliberation ; and in the same issue was reported a speech by Sir Henry Brackenbury (p. 1072) in which, at a conference on mental deficiency, he strongly combated those parts of the report which had to do with that particular service. In the *Supplement* of December 31st (p. 309) we printed a letter sent to the Ministry of Health after the Public Health Committee of the British Medical Association had considered the report at a special meeting. This letter contained forcible protests and objections, and these were endorsed by the Council of the Society of Medical Officers of Health, and by the Council of the Association.

These utterances, together with others not dissimilar from other quarters, have evidently produced their effect. The first necessity was to show that, however worthy of attention the personal or collective opinions of fourteen gentlemen of undoubted experience in local administration might be, the report was far less authoritative than some people supposed. This now appears to be recognized. There were a number of matters on which the members of the Ray Committee pronounced judgement on which they were imperfectly informed. This being so, it was clear that a good deal more consideration would need to be given to all their proposals and a good deal of sifting applied to their various suggestions before any action could wisely follow. So far as the Ministry of Health is concerned this further consideration and this necessary sifting have now taken place, and all those who shared our misgivings about the report will have read with much relief the Ministry's Circular 1311, issued to local authorities in England and Wales on March 22nd, to which we referred in our annotation last week (p. 525). While recognizing the value of such suggestions towards economy as those with regard to block grants, housing subsidies, building requirements, proper costing systems, and central purchasing, the Minister politely but definitely rejects all the committee's major proposals. As his circular says: "The public health service is not and cannot be a static service. Circumstances change and fresh needs develop as medical and health knowledge and practice grow. In such a service complete stagnation would be very false economy." He proposes to ask local authorities, "on urgent grounds of public health," to continue to improve and extend their maternity and child welfare services on the lines of the Ministry's Circular (1167) and Memorandum issued two years ago. With regard to the recommendation that "the appropriation of Poor Law infirmaries as public health hospitals should not be unduly pressed," the Minister insists on the need for improvement in the transferred services, and would "think it a matter for regret if appropriation is not made." He combats in some detail almost the whole of the conclusions of the committee with regard to the mental deficiency service. Its remarks on cost "cannot be accepted without material qualification." Further, "neither the Board of Control nor the Minister could subscribe to the view expressed that there is no evidence that more than a negligible number of the mentally deficient are improved in condition by treatment. The effect of the experience obtained is, in fact, that all but a negligible number show improvement after treatment, both as regards habits, behaviour, and capacity for work." The suggestion that there should be a further drastic cut in the salaries of officials, together with a reduction in the number employed, is repudiated in favour of a more considered review and "a cautious and fair examination of the work to be done and the remuneration reasonable for that work in present conditions."

Thus it is clear that all those major proposals of the report to which the Council of the British Medical Association has taken "strong objection" have gone by the board ; and the general proposition enunciated by the Public Health Committee and endorsed by the Council remains true: "that no substantial economies can be made without abolition or marked curtailment of the public health services, and that such curtailment is contrary to the public interest." In the proposition just quoted emphasis must be laid upon the word "substantial" ; for it is recognized in the same document that there is "need for economy in national and local expenditure," that considerable economies "without detriment to the public interest can be effected by careful administrative action within the services," and that "no more expensive way should be adopted when a less expensive method will suffice." Illustrations of how modest economies on these lines might be brought about will occur to every experienced administrator. There are two general considerations, however, which militate against even such curtailments of expenditure. The first is that often popular lay opinion, as opposed to medical opinion, will not permit them. For example, there are many influential persons who seem unable to appreciate the fact that normal labour can be conducted at least as safely in the mothers' homes as in an institution. They press for

hospital accommodation for normal cases, and it is true also that when such beds are available there is often a long list of waiting cases. Nevertheless, in respect of the public health, this is almost wholly unnecessary; and it follows that if such accommodation is desired for other reasons, such as domestic convenience, no cost of such provision should fall on public funds.

The second general consideration is that what can be saved by the curtailment of one service may still be urgently required for providing another. A good illustration of this is the hospital provision for cases of scarlet fever, a matter referred to in the report of the Committee on Local Expenditure. There seems to be a growing agreement, both among clinicians and among medical officers of health, that many cases of scarlet fever are kept isolated unnecessarily long, and that the great majority of cases can, in fact, be treated as effectively and safely at home as in an infectious disease hospital. If this be true it is evident that much expenditure on the provision or extension of fever hospitals might be saved. There is, however, probably an equal consensus of opinion that cases of severe or complicated measles and whooping-cough are frequently in great need of hospital accommodation for their efficient treatment. In this instance it may be that the swings and the roundabouts do not balance one another, and that on the whole there might be some saving. But it affords an example of the kind of consideration which should always be given to proposals to abandon public health provision, and of a situation which tends seriously to reduce the amount of economy which careless enthusiasts are led to expect.

PROPHYLACTIC VACCINATION WITH B.C.G.

B.C.G. was first used for the vaccination of infants against tuberculosis in 1921, but it was not till 1924 that the method of premunition recommended by Professor Calmette became at all general. From July, 1924, to November, 1932, over 500,000 vaccinations with B.C.G. were practised in France alone. Three doses of vaccine, each containing 10 mg. of living bacilli of attenuated virulence, are given by the mouth during the first ten days of life. Though the immunity conferred by this means is believed by Calmette to last for five years, revaccination is recommended at the age of 1, 3, 5, and 15 years, the vaccine being given as before by the oral route. The claim that B.C.G. is innocuous and of insufficient virulence to give rise to progressive lesions in the human body is supported by general clinical observation, and by the failure—in a series of over 400 post-mortem examinations carried out on vaccinated infants who had died of non-tuberculous diseases—to demonstrate any increase in the virulence of the inoculated strain. This second piece of evidence is clearly of little value, since, if B.C.G. did undergo an increase in virulence as the result of residence in the human body, one would expect to demonstrate it, not in children who had died of non-tuberculous, but in those who had died of tuberculous, diseases, though whether such an organism after regaining its virulence could be distinguished from a virulent organism that had infected the patient by natural means is difficult to say.

From time to time Professor Calmette has published figures intended to serve as evidence of the value of B.C.G. vaccination in the prevention of tuberculosis, and from time to time it has been pointed out that these figures, largely on account of their method of collection and the absence of suitable control groups of children, were insufficient to justify the conclusions drawn from them. The latest evidence adduced by him[1] relates to the use of B.C.G. in the families of medical practitioners. In response to a brief questionary dispatched on September 12th, 1932, to 282 doctors who had vaccinated their own children, 280 replies were received from different parts of France. Altogether 514 infants were vaccinated, a few as early as 1924, but the majority within the last two or three years. Of these, sixty lived in an environment in which they were certainly, and forty-three in an environment in which they were suspected of being, exposed to tuberculous infection from contacts. Revaccination on one or more occasions was practised on 140 of the children. Analysis of the records showed that altogether seven deaths had occurred, of which only one was probably due to tuberculosis. The remaining 507 children were, with four exceptions, in a satisfactory state of health at the time the inquiry was made. Such a result appears to be satisfactory, though to what extent it was determined by B.C.G. vaccination it is impossible to say. Unfortunately no inquiry was made amongst a similar number of doctors who had not vaccinated their children, and in the absence of such a control group the conclusion that B.C.G. was responsible for the apparently low general and tuberculous mortality observed is unjustifiable.

B.C.G. vaccination has now been used for about twelve years, and we are still ignorant of its value. Generally speaking, the medical profession is divided in its attitude towards it into two categories. The one group, content to accept the opinions of others, practises vaccination without questioning its efficacy. The other group, comprising those who demand evidence before forming their opinions, is growing so tired of the repeated publication of figures that do not conform to the principles of statistics that it has largely lost interest in it. No one who realizes the difficulties of making quantitative estimates of the degree of immunity resulting from any given procedure will pretend that an answer is easy to obtain; likewise, no one who has studied this problem will admit that an answer is unobtainable if the correct methods of investigation are employed. As medicine passes the stage of empirical observation it should be recognized more and more widely that some of her major problems can only be solved by the use of a rigid scientific technique.

[1] Calmette, A.: *Ann. de l'Inst. Pasteur*, Supplément, 1932, xlix, No. 5, 1.

L.C.C. AND CONSULTANTS

Voluntary organization of its members is one of the characteristics of a profession. Such an organization has its most direct appeal to the rank and file who constitute the majority of a profession. For them individual action can have but little effect on matters of policy or in the utterance of protest; the voice of individual grievance is usually lost in the wilderness. But the need for collective concern with professional standards and for collective bargaining is as great in one section of a profession as in another, and an occasion has recently arisen in which the consultants and specialists of London have decided to take advantage of that common action which is made possible through the medium of the British Medical Association. Those who are not already acquainted with the position will find a full account in our *Supplement* of March 25th (p. 105) of the London County Council's treatment of the part-time consultants and specialists to the Council's hospitals.

It is unnecessary here to retell the discussions and decisions arrived at in previous meetings of the consultants concerned which led up to the resolutions passed at the meeting at B.M.A. House on March 28th (see this week's *Supplement*, p. 117). This meeting unanimously decided to take direct collective action in refusing to work under the L.C.C.'s scheme unless and until the L.C.C. agrees to meet a committee of consultants and specialists and to consider remedying those terms of service and methods of organization which the consultants of London are unable to accept. It must be emphasized, at the risk of repetition, that while there is considerable disagreement with details in the L.C.C.'s scheme, the main objection is levelled at its method of approach to the problem. The consultants' chief concern is to maintain the high level of their professional technique. This cannot be done unless the L.C.C. confers with the consultants, who alone can offer the Council that expert advice which it is unable to obtain elsewhere. We urge those consultants and specialists who were not present at the meeting on March 28th to be guided by the decisions unanimously arrived at by more than 200 of their colleagues. The fight, if one must call it so, is not on matters of petty detail or of petty cash. A question of principle is at stake. If the consultants of London allow themselves to be coerced into accepting terms and conditions of service which offend their professional sense of what is right, then a dangerous precedent will have been created which will be difficult to live down.

The meeting on March 28th, like that held on March 20th, is of considerable significance to the profession as a whole, and to the consultants as an important part of that whole. More than 200 consultants met for the express purpose of defining their attitude to what were considered to be the arbitrary measures adopted by the L.C.C. in its proposed constitution of an important branch of its hospital service. The meeting was unanimous in its expression of profound disapproval of the action of the L.C.C. in ignoring the consultants' offer of co-operation. The L.C.C. has put itself in the position of proposing to form a highly specialized technical service without discussing with the technicians concerned the best way of constituting this service. More than that, it appears to have ignored the concrete proposals put forward by the technicians themselves. This is a matter that concerns not only the interests of the medical profession, but also those of the sick public.

SEQUELS OF EPIDEMIC ENCEPHALITIS

An attack of acute epidemic encephalitis, as we now know, is too often the beginning—and frequently in itself an insignificant beginning—of what later becomes a very tragic story. The sequels of the initial illness may not appear for some considerable time, and in not a few cases the interval is one of several years. So, despite the declining incidence of the disease, there is still a continuous crop of post-encephalitic cases to which, in recent years, the attention of clinicians and authors has been more and more transferred. A monograph by Professor Georges Guillain and Dr. Pierre Moliaret[1] is another of several attempts made lately to carry out a stocktaking of the literature on the post-encephalitis syndrome. The authors begin by observing that their attempt to define this syndrome is beset with difficulties, and they suggest that, though the pattern of post-encephalitis is already composed of an extraordinary assortment of parts, it may not even yet be complete. Some stress is also laid on the difficulties inseparable from any attempt to classify the various symptoms on anatomical, physio-pathological, or other grounds, and there is perhaps some justification for the authors' plaint that the very profusion of literature on the subject does not make their task any easier. In the brief reference to the aetiology of post-encephalitis credit is given to the notion that most of the sequels are due to a lighting-up of the original infection, which has long lain dormant; on clinical, anatomical, and bacteriological grounds this evolutionary explanation seems a justifiable one. In the major portion of the monograph, which is devoted to a clinical study, the authors, without attempting any rigid system of classification, parade for a brief review the various manifestations of spasm, abnormal movements, affections of the special senses, disorders of sleep, psychic disturbances, and a motley of other symptoms under the title of "troubles végétatifs, endocriniens et visceraux." Parkinsonism rightly receives chief attention as the fundamental and most clearly defined phase or type of post-encephalitis, while reasons are given why, with the notable exception of Cruchet and Souques, the majority of French authorities consider the Parkinsonism of post-encephalitis to be distinct from Parkinson's disease. The remarks on the various spasms include a reference to the strange condition of decerebrate rigidity: one patient under the authors' observation at the Salpêtrière has been in this state for twelve years. Regarding the equally strange oculogyric crises, it is noted that these crises have occurred as small epidemics in families and in hospital. In the chapter on psychic troubles a distinction is drawn between those mental aberrations

[1] *Les Séquelles de l'Encéphalite Epidémique.* Par Georges Guillain et Pierre Mollaret. Paris: G. Doin et Cie. (28 fr.)

which are carried over from the acute attack and those which supervene in, and so often characterize, the chronic or post-encephalitic phase, more especially in youthful patients. These latter, as the authors point out, have already opened up new chapters in psychiatry and forensic medicine.

IMMUNIZATION PROPAGANDA

In the United States the campaign for immunization against diphtheria has reached spectacular extremes which would hardly be possible among our own more reticent people. Moreover, the campaign is amply financed by great corporations like the life assurance companies. At a crowded meeting of the Society of Medical Officers of Health last week Dr. E. H. T. Nash described and illustrated some of this American "propaganda with a punch." The broadcast is used for this purpose, and parents are urged on their baby's first birthday to make it a present of complete immunization against diphtheria. On the hoardings, posters, 23 feet by 9 feet, *sound this call to arms. The largest moving* electric sign in the world, 200 feet long and 20 feet wide, bids New Yorkers protect their children from diphtheria. "Healthmobiles" rush about the city like fire engines. The Press has immense scare headlines on the subject. The street cars are placarded. The mayor of New York has even been persuaded to issue an official proclamation. In Milwaukee they send out diphtheria immunization publicity with the rate demands, and elsewhere affix labels to the doorstep milk bottles. The result is seen in queues, as proved by the indisputable photograph, of children waiting to be immunized. In fifty-three cities where an active campaign is afoot there has been a fall of 32 per cent. in the diphtheria death rate since the campaign opened. Diphtheria mortality in New York city has been steadily declining for sixty years, but since 1927 or thereabouts, thanks to such propaganda, the curve of fall has become an almost vertical drop to a level which would not have been reached until 1945 had the previous steady declension continued at the same rate. Proceeding on much more modest lines in his own area of Heston and Isleworth, where he is medical officer of health, Dr. Nash has undertaken a poster and a school campaign, with excellent results. He has also enlisted the cinematograph film. Dr. Nash has noticed that American films illustrating immunization never show the instant of puncture, so that spectators are left to infer something disagreeable. But in the 16 mm. film taken by Kodak Ltd. in his own clinic the whole operation is photographed, and although now and then there may be a grimace or a hint of nervousness, there is certainly no crying or resistance. The children in the film, quite unrehearsed, behave perfectly—samples of the 4,000 children who have been immunized in this district. A dish of sweetmeats perhaps contributes to the happy result. Dr. Nash insists that the nurses shall not wear their ordinary uniform, but only a blue overall, and the doctor shall not wear a white coat, so that there is no reminder of the hospital. Moreover, the children are never taken separately, but half a dozen of them are in the room at once, and those waiting are able to observe the facial reactions of the others. It is an excellent film, and should do much to dispel parental apprehensions.

HEAT AND VENTILATION

Chilly folk who come to this country from across the Atlantic or who spend part of their winter on the Mediterranean are apt to complain that central heating is very much better done abroad than it is here. Mr. J. L. Musgrave, past president of the Institution of Heating and Ventilating Engineers, told the Royal Society of Arts the other day that practically all the important developments in house-warming have come from British firms, but that people will not yet apply the latest devices to their houses. Public buildings are on the whole adequately heated and ventilated, and the reason for this is partly the willingness of public bodies to incur initial expenditure of which the private householder is often frightened, so that he has an inferior installation when a few more pounds on the advice of a reputable firm would have given him a really satisfactory one. We are still, Mr. Musgrave thinks, suffering from the Puritan impression that the softening influence on the body of comfort and warmth *denies the mortification of the flesh necessary to the* soul. On the whole, he thinks that the average layman knows little or nothing about the recent developments of the science, and he gave a very interesting exposition of the various modern methods of warming rooms. The familiar radiator has been much improved of late years, and the transfer of heat is 80 to 90 per cent. convection and 20 to 10 per cent. radiation. The panel warming system was first introduced on a large scale in the Royal Liver Building, Liverpool, in 1908. Nowadays pipes are fixed in the ceilings, which are plastered in the normal way with a good quality plaster, or electrically welded coils are embedded in the concrete of a floor or screwed to the upper side of the joists in a wooden floor. The water circulates through the system at 95° to 100° F., and practically the whole of the heat is diffused as radiant heat. The system is particularly economical in its consumption of fuel, and it does not interfere with the decoration of ceilings and walls. In University College Hospital patients can sit in the fresh air in quite cold weather as a result of warmth radiated from the ceiling in this way. Mr. Musgrave pointed out that it was of the first importance that the heating system should be a low temperature system—that is, a low air temperature with radiant warmth—for any person suffering from disease of the respiratory system. Yet, he complained, some hospitals are still introducing high temperature methods, such as vapour steam, where the lowest temperature of the warming surface must exceed 170° F. This causes undue drying of the air, and is likely to retard recovery of health. One medical officer has charge of two schools, in one of which the panel system is used in the sanatorium, whereas the other is heated by more old-fashioned methods. He reported that the influenza patients recovered in three days in the first school, but were ill for ten days or a fortnight in the other, though he used precisely the same treatment for them all. It is always desirable, if possible, to have an automatic temperature control, as a period of warm sunshine in an otherwise cloudy day, or a period of darkness during which electric lights are turned on, may considerably affect the temperature in a room. Mr. Musgrave showed charts indicating the significant difference in the temperature of a room full of people at the end of a day's work when thermo-

static control was installed and when the room was heated without control. The efficiency of the workers towards the end of the day is definitely increased by preventing overheating.

NUTRITION OF LONDON CHILDREN

The London County Council has been undertaking an inquiry to ascertain whether the nutrition of children in the poorer districts is suffering as a result of the present financial stringency. Taking three groups—namely, boys and girls on entrance to school, at 8 years of age, and at 12 years of age—it is found that in 1932 there were in these groups 4.9 per cent. of children suffering from subnormal nutrition. This number compares with 4.8 in 1931 and 1930, with 6.3 in 1925, and with 6.7 in 1920. Thus one in a thousand more children were found to be subnormal in 1932 than in the previous year. This slight deterioration is due to the larger proportion of the entrant infants (principally boys) who were found to be subnormal, and in considering the condition of the new entrants it has to be remembered that the infant population had just been subjected to the effects of a widespread epidemic of measles, and these fell almost entirely upon the children of 5 years old and below. A certain disparity between the figures for infant boys and for infant girls, it is considered, may be ascribed to the greater vulnerability to adverse influences of the males. Thus, for instance, the number of boy babies is always greater than the number of girl babies born, yet fewer of the boys survive the perils of infancy, so that the female population is in the end considerably in excess of the male. The children in the 8-year and 12-year-old groups were found, in 1932, in better condition than in 1931, and these figures bear out the experience of the school medical service that, while at school, children under stress are promptly noticed and means taken to prevent ill nourishment.

STATISTICS OF ABORTION

Not long ago (February 4th, p. 198) we drew attention to an admirable informative report of a birth control clinic in London. We may supplement this by reference to the fifth Report of the Bureau for Contraceptive Advice, Baltimore, and especially to the statistical report therein, by Professor Raymond Pearl of the Department of Biology, School of Hygiene and Public Health of Johns Hopkins University. This report consists almost wholly of statistical tables analysing in various ways the 1,152 cases in which advice has been given during the five years under consideration. (Professor Pearl's paper discussing the data from the point of view of the relation between fertility and economic status was mentioned in an annotation published in our issue of March 18th, page 474.) The numbers reviewed are not large enough to permit of any very pronounced or reliable conclusions, nor—with one exception—do the tables disclose results of much importance. That relating to abortions and miscarriages, however, has a suggestive bearing on one of the points to which attention was directed in the report of the London clinic. It was there stated that attempts at abortion, sometimes successful, had been found to be very common among that particular clientele, and might be held to have a widespread influence on maternal mortality and morbidity. Professor Pearl's table shows that his 1,152 patients had had altogether 6,441 pregnancies, and that these pregnancies had resulted in the birth of 5,435 children and in 1,006 abortions or miscarriages—that is, the percentage of abortions was 15.6. The table further shows that as the number of pregnancies which a woman has had increases, so does the proportion of abortions or miscarriages increase also. For women who have had less than ten pregnancies the percentage of abortions is 12.6; for those with ten or more pregnancies it is 22.9. The report makes a comment which is of the first importance in this connexion, and which must be borne in mind in relation to all such statistics, and to such impressions as are produced by work at any birth control clinic.

"It should be clearly understood that these women do not represent a random sample of married women in general. They constitute a selected group of women who were referred for advice presumably partly because they were endowed with high innate fertility. It would be unwarranted to overlook this selective element in the data, and to generalize as to either fertility rates or abortion and miscarriage rates in the general population."

CRIME AND THE PRESS

The psychological student of crime cannot afford to underrate the effect of the newspaper press. Life in a highly industrialized society is for most of us very dull and unadventurous. We are therefore eager to take an interest in the adventures of others and to imagine ourselves in their places. Hence the market for detective stories and the wide circulation of those Sunday papers which are largely devoted to news of crimes, particularly those with a strong sexual content. Mr. Kingsley Martin, the editor of the *New Statesman and Nation*, in a lecture he gave recently to the Institute for the Scientific Treatment of Delinquency, did not regard this passion for crime as at all humorous, but as a definite menace to progress. Teriolo crime is a disease, and he holds the view that the a jucure for it is to study it scientifically, to discover its causes, and to try to eradicate them by a slow and painful process of education, not so much of the individual as of the race. Scientific study, however, demands an objective and detached view. The scientific attitude requires steadiness of judgement and an unemotional frame of mind. It is anathema to the sensational press, for if it were universally adopted the occupation of these organs would be gone. The natural primitive untamed reaction to crime is that the detective or policeman is a hunter and a hero and the criminal a villain. Public opinion instinctively demands what is known as justice—that so much crime should be wiped out by so much suffering. The more crime that is brought to its notice the better pleased it is, especially if all the details are served up in an exciting and seeming-moral way. It is not difficult to see why, as Mr. Martin pointed out, this attitude of mind, encouraged and cultivated by all the resources of the sensational press, is bad for the community. He gave a significant instance of the way in which a newspaper will deliberately instigate or invent a murder sensation—an attempt to have an exhumation and a second inquest in a case in which there could have been no

possible reason for it. In two recent cases of contempt of court the statement was made that information highly prejudicial to an accused man came to the knowledge of the newspapers concerned from Scotland Yard itself. In one of these cases the Lord Chief Justice said that it was bewildering that any paper should deliberately gather together and write up information likely to prejudice a jury against a prisoner, and hinted that this kind of cynical indifference to the interests of accused persons might find itself rewarded with imprisonment. When he was told that the information had been supplied gratuitously by the "Press Bureau" at Scotland Yard Lord Hewart said that it was the first time he had ever heard of this institution, and he hoped it might be the last. It would obviously not be in the public interest that the reports of murder trials should be restricted as divorce reports have been. Divorce, as Mr. Martin points out, is a private affair, but criminal charges concern the whole of society. The usual arguments for publicity, however, do not affect the preliminary hearing before the magistrates, and all the public need know is that the accused person has or has not been committed for trial. Magistrates already possess the power to exclude the Press from preliminary hearings; no new legislation is required, but only a definite lead from the Home Office.

DENTAL CARIES AND BLOOD GROUPS

Some years ago every child was instructed that it must clean its teeth regularly and vigorously at least once every twenty-four hours, preferably with the aid of some dentifrice, or else those teeth would decay. Then arose the sceptic who pointed out that the best and soundest teeth were found among races which had never known a toothbrush, and that the most fanatical devotee of oral hygiene might present a mouthful of carious teeth. Of recent years there has been a tendency to explain caries as a constitutional weakness related to the diet taken long before the time of eruption—at the time of the formation of the dental germ. An apparently quite unrelated problem of the human constitution has now converged on this question of dental caries. A vast deal of work has been done on the four blood groups and the various subgroups which are found in the human species, and Professor V. Suk of the Masaryk University, Czechoslovakia, has pointed out in a recent paper[1] that a correlation can be drawn between blood groups and caries. Professor Suk is a vigorous opponent of modern tooth drill, which he stigmatizes as absolute nonsense, and of the so-called antiseptic dentifrices, which he regards as futile for the purpose for which they are intended. He points out that the nasal sinuses must be natural culture tubes, and yet they are not attacked daily with washes and brushes and do not grow many bacteria. Therefore there must be some natural method of defence which is no doubt just as active in the mouth as it is in the inaccessible regions of the nasal mucosa. He is convinced that caries depends on some constitutional factor and not on any care of the mouth and teeth. In the course of his studies of the blood groups he happened to compare the various groups with the dental condition in about seven hundred young men between 18 and 22 years of age, who were mostly students and soldiers. He found that those whose blood belonged to Group O showed the greatest percentage of teeth without decay. Good teeth were found in 26.8 per cent. of the O group, in 18.9 per cent. of the A group, in 16.2 per cent. of the B group, and in 21.8 per cent. of the AB group. Professor Suk thinks the differences are significant, and suggests that both the blood groups and the presence of dental caries may prove on further study to be constitutional characteristics, not particularly related to race. Nevertheless, he points out that perfect teeth and the O group are both more common among primitive people than among whites, and that the white races are gradually losing this quality as civilization goes on.

[1] *Publications de la Faculté des Sciences de l'Université Masaryk.* No. 125.

BRITISH CONGRESS OF OBSTETRICS AND GYNAECOLOGY

The ninth British Congress of Obstetrics and Gynaecology assembles next week in Birmingham under the presidency of Professor Beckwith Whitehouse. The official guests are Professors Fraenkl of Vienna and Van Rooy of Amsterdam. All the scientific sessions will take place in the Congress Hall of the University at Edgbaston. The main subject for discussion at the morning and afternoon sessions on Wednesday, April 5th, is the uterine action and its abnormalities, introduced by Mr. Aleck Bourne. The morning and afternoon of Thursday and the morning of Friday will be largely devoted to the reading of communications, and Saturday morning to operations and visits to hospitals. The annual meeting of the British College of Obstetricians and Gynaecologists will be held at 5 p.m. on Wednesday, and a meeting of the shareholders of the *Journal of Obstetrics and Gynaecology of the British Empire* on Friday, at 9.30 a.m. The social functions include a luncheon given by the Midland Obstetrical and Gynaecological Society, an evening reception at the Botanical Gardens by the president and Mrs. Whitehouse, a luncheon by the council of the University, and excursions to Messrs. Cadbury's works at Bournville and to Stratford-on-Avon and Warwick Castle. The congress dinner will be held in the Grand Hotel, Birmingham, on Thursday evening.

POST-GRADUATE HOSPITAL AND MEDICAL SCHOOL

The Minister of Health has intimated to the London County Council his great satisfaction at the approval given by the Council to the agreement with the British Post-Graduate Medical School for the utilization of Hammersmith Hospital. The scheme was explained in our issue of March 18th (p. 469). Sir Hilton Young expresses his warm appreciation of the assistance given by the members and officers of the Council. After communication with Sir Austen Chamberlain as chairman of the governing body of the school, he has been authorized by him to convey to the Council his undertaking that the agreement will be duly sealed as soon as the seal of the school is ready.

We regret to announce the death, at the age of 74, of Mr. Jonathan Hutchinson, consulting surgeon to the London Hospital.

ATMOSPHERIC POLLUTION

CAUSES OF FOG AND SMOKE HAZE

According to the eighteenth report on the investigation of atmospheric pollution, issued last week by the Department of Scientific and Industrial Research,[1] the interest taken by local authorities in studying the character, extent, and variation of atmospheric pollution in different areas has been well maintained, in spite of the financial difficulties of the times. Sixty municipal authorities, three industrial undertakings, and one agricultural institute have taken part in the observations, and most of them have contributed to the cost of the work.

During the year ended March 31st, 1932, ninety deposit gauges were in operation. These are bottles of special design into which impurities deposited from the atmosphere are washed by rain. The contents are analysed monthly, and the amounts of the different constituents of the deposit at the particular places of observation are estimated. Referring to the conclusions to be drawn from results obtained with these gauges the report remarks:

"The fact that the deposit obtained at one town is higher than in another seems sometimes to be held to justify an unqualified statement that the atmosphere in the first town is more heavily polluted. The deposit gauge results afford a most valuable indication of the degree of pollution in a particular area, and of whether it is rising or falling (assuming, as is usually the case, the gauges are kept in the same spot over a period of years). They should not, however, be made the basis of further deductions without a careful weighing of the circumstances, especially in cases where, for example, only one gauge is used in towns of considerable size."

IMPROVEMENT IN PURITY OF THE AIR

An attempt has been made to get a single figure representing the degree of improvement or the reverse in the atmosphere of the country, based on the results of stations where a general average figure of atmospheric pollution for several years is available. Taking the forty-seven observing stations where it is possible to calculate averages for the last four or five years, 80 per cent. show an improvement, with the statistical method adopted, in the tar deposit, and 86 per cent. an improvement in the total solids deposited, including tar and animal, vegetable, and mineral dust. It is evident, therefore, that certain stations have definitely improved the condition of their atmosphere. Taking the figures for the year under review alone, the report indicates a reduction in all components of the deposit, including, besides the solids, sulphates and chlorine and ammonia compounds, at stations in Glasgow, Leeds, Marple, Newcastle-on-Tyne, Rochdale, and Wakefield.

In London, on the other hand, the abnormally high deposit of tar at Golden Lane observed in the previous year was repeated. Though the actual annual deposit has gone down from about 7.3 tons per square mile to 5.5 tons, it is still nearly three and a half times greater than the average deposit for the last five years. At Golden Lane other components of the deposit have decreased. It is suggested that the high tar result is due to some special pollution caused by domestic smoke. The report describes the increase as a "somewhat disturbing condition" to be found in London. Of the nine London stations, three show an increase in the tar deposited, three no change, and three a reduction for the year.

SOME GENERAL RESULTS

The figures giving the total deposits for the year and the increase or decrease against the previous general average deposit over four or five years reveal that the tar deposit has either increased or shown no reduction at twenty-four stations.

"It is perhaps not to be expected that an improvement would appear in the quantity of tar, since it is preeminently a product of domestic fires, and there is little reason to think that the amount of smoke emitted from domestic fires has decreased much of recent years."

The maximum annual deposit of tar found in any one gauge was at Ashington in Northumberland, and reached the figure of 22.3 tons per square mile. The minimum, 0.36 ton, was obtained at Whitley, Dewsbury. The deposit of carbonaceous matter other than tar, which includes soot, and animal and vegetable dust blown up from the ground, decreased at thirty-three stations. The maximum annual deposit found at any one place was 137.16 tons per square mile, at Burnley Town Hall. The corresponding minimum was 12 tons at Leicester, Western Park. The deposit of mineral dust from road surfaces and ash from chimneys decreased at thirty-six stations and increased at twelve. The maximum deposit was one of 417.6 tons per square mile, again found in the gauge at Ashington, and the minimum was twenty tons at Temple Newsam, Leeds. Forty stations showed a decline from the previous general average for total solids and nine an increase. The maximum annual deposit was found at Ashington (738 tons per square mile), while the minimum of 86.6 tons was at Leicester.

Deposits of chlorine, compared with the general average, decreased at forty-two stations. The origin of the chlorine deposit is probably due to wind-borne sea salt, and its deposit therefore depends more on weather conditions than on the emission of combustion products. The deposit of ammonia shows a reduction at thirty-two stations and an increase or no change at sixteen. The sulphate deposit—another product of the burning of coal—shows a decrease at thirty-five stations against their previous general average and an increase at eleven. The abnormal deposit of sulphates at Ravenscourt Park observed in 1930–1 was repeated. In that year the deposit increased 290 per cent. over the average for the previous five years, the annual deposit being estimated at 8.8 tons per square mile; in 1931–2 it was 8.72 tons. The report describes this condition as unusually bad, but its cause is still a mystery.

OBSERVATIONS ON FOG

Records with the "automatic filter," which indicates the amount of impurity suspended in the air producing definite smoke haze, have been made at thirteen stations—four in London, five in Glasgow, and one each in Cardiff, Coventry, Kew Observatory, and Stoke-on-Trent. Figures are given showing the days on which definite smoke haze or fog was observed during the winter months (October to March), 1931–2, at any time in the twenty-four hours on any of the days on which observations were made.

"Smoke fogs are brought about by atmospheric conditions in which the ordinary processes (upwards convection and the action of wind) of atmospheric 'ventilation' cease to operate, so that the smoke produced accumulates instead of being carried away as it is emitted. The resultant fogs are of greater or less density according not only to the rate at which the smoke is being produced and the degree of obstruction to its escape, but also to the time for which such particular atmospheric conditions persist. These atmospheric conditions do not, however, usually last for very long, and three hours may be taken as being about an average period. The point which it was desired to emphasize in last year's report is that there is still enough smoke produced in London to cause dense smoke fog to be formed if the unfavourable conditions mentioned should last longer than the average period indicated, and the occurrence of thick fog of the type which was once too familiar, will therefore remain a possibility until there is a substantial further advance in smoke abatement. These remarks have special relevance in relation to the fact that in the last ten years there has been little improvement in the purity of London air. . . . It may, in fact, be stated that since 1921–2 the total deposit has varied very little. On the other hand, the deposit of sulphates has, if anything, increased, and sulphur salts in the air, or sulphuric acid, are believed to be one of the predisposing causes of condensation fog, which very often accompanies smoke haze and aggravates it."

Barnsley, Birmingham, Cardiff, Huddersfield, London, Newcastle-on-Tyne, Salford, and Sheffield are investigating the concentration of sulphur pollution in the air. The two highest concentrations are found at Barnsley (in November, 1931—1.5 parts of SO_2 in a million) and Salford (in February—1.63). The highest average was at Barnsley in November, and amounted to 0.42 part per million. An examination of the influence of weather

[1] Investigation of Atmospheric Pollution: Report on Observations for the Year ended March 31st, 1932. H.M. Stationery Office. (5s. net.)

conditions on the sulphur concentration shows that at Watson House, London, S.E., for example, the amount of sulphur in the air on foggy days was twice that on fine days. The report refers to a new method which has been developed at the Building Research Station, Watford, for determining the effect of any concentrated source of sulphur on the general level of pollution in the neighbourhood.

DOMESTIC SMOKE LEGISLATION

A leading article in the winter issue of *The Journal of the National Smoke Abatement Society* discusses the possibility of promoting legislation which would either prohibit the use or penalize the user of raw coal. Consideration is given only to domestic smoke legislation, because it is believed that action concerning the smoke emitted from dwelling-houses will be among the most difficult pieces of social legislation of the future. A paper entitled "Smoke and public health," which was read by Dr. H. A. Des Voeux at the society's session in last year's Public Health Congress, is reproduced, as also is a memorandum on advisory regional organization for smoke abatement, which the society recently sent to medical officers of health. A circular enclosed announces the early publication by the society of John Evelyn's famous pamphlet on smoke abatement, *Fumifugium*, written by command of Charles II in 1661. It is to be illustrated with wood engravings, and can be obtained from the offices of the society, 23, King Street, Manchester, for the modest sum of 6d. in paper covers, or 1s. 6d. in cloth.

THE PATIENT CURES HIMSELF

HISTORY OF AN ANEURYSM

We are indebted to Dr. K. V. Milburn of Sunderland for sending us the following graphic account, by "Master Mariner," entitled "How I cured myself of aneurysm after three operation failures." Dr. Milburn states that the lesion must have been a cirsoid aneurysm of the supra-orbital artery. "Master Mariner" proceeds:

After relating the above details to a doctor of this town, who became deeply interested, I am now prompted to give the same in writing for future use, if ever required.

In the year 1872 I became Chief Mate of the barque *Mary Ann* of Sunderland, and during the voyage I was struck very lightly by some part of the main tack on the eyebrow above the centre of the eye. It was a clear cut, and possibly 3/4 in. in length, bled freely, but soon closed, leaving a scarcely noticeable mark. In 1877 I got my first command of the brig *Pansy* of Sunderland, bound to Capetown. It was during this voyage I noticed that the little red mark was developing in size and colour. From Capetown we came to Barbados for sugar, and I asked a doctor there to examine the tumour. He did so, and declared it to be an aneurysm. The apex was very thin, and looked as if it could be easily broken. He therefore advised me to have the artery tied before the next voyage, but owing to want of time at London and Cardiff nothing was done. The next voyage was from Martinique to New Orleans, October, 1878. This was during the great yellow fever epidemic, and I contracted a slight touch of the fever passing along the South Coast of Cuba. I backed it with quinine, but owing to the fever the tumour spread alarmingly. At New Orleans I sought the best medical advice. They suggested and tried compression by a pad over the temporal artery and one over the side of the tumour. After four and a half days the doctors took off the bandage and declared "No result!" They then carried out an operation without delay. They cut and tied the temporal artery and put two long pins under the tumour with the long ends outside, under which they wrapped thread tightly, the object being to stop the circulation and cause clotting. Four and a half days later they once more unwrapped—again no cure, but much worse.

I was obliged to sail immediately, and during the voyage experienced the worst weather of my career. One sea swept over the ship and completely wrecked her—boats, galley, and all the bulwarks swept away, and the ship left with a 20 degrees list. It was all hands pump or sink. During this strenuous time my tumour grew exceedingly. We were eventually taken off the wreck by the S.S. *Minstrel* of Newcastle, and landed at Queenstown. On arrival at Sunderland I consulted my doctor, and with the assistance of two others another operation was performed. They took away the tumour, which was found to be one mass of small arteries. They tied six other arteries. Again no cure! Fourteen days later I went through yet another operation, and sixteen arteries were tied. On the fourth day an examination was made and again no cure! Now I was worse off than ever after three operations.

The doctors expressed their sorrow, and fortunately I soon got another ship. We sailed for Rio de Janeiro. Off the Lizard the tumour troubled me so much I seriously considered putting back. Suddenly it flashed across my troubled brain, "Why not try compression?" I soon found that by pressure on the particular artery there was no pulsation in the tumour. I got two pieces of iron about 3 in. × 2 in. × 3/4 in. and put them in a half bucket of water, and stood it on the coolest part of the deck. I sat by the cabin table, elbow on the same, and placed my thumb on the artery with plenty of pressure. The officer of the watch brought me a cool piece of iron every ten minutes, which was placed on the tumour. This was kept up from 8 p.m. to midnight. At the end of that time there was no pulsation. I went to bed a happy man. On awaking I eagerly felt the tumour, and on feeling no pulsation thanked God that I had succeeded where the doctors had failed.

ROYAL MEDICAL BENEVOLENT FUND

ANNUAL GENERAL MEETING

The annual meeting of the Royal Medical Benevolent Fund, which took place under the presidency of Sir Thomas Barlow on March 23rd, was shadowed by the deaths during the year of two distinguished figures in connexion with the Fund, to whom every speaker paid a tribute—namely, Sir Charters Symonds, honorary treasurer for fourteen years, and Sir Percy Sargent, a member of the committee for ten years and honorary secretary for four. Sir Thomas Barlow said that Sir Charters Symonds was a man who did not allow his left hand to know what was done by his right. He interested himself in the personal history of the applicants who came forward for help from the Fund, and by his deep humanity he did much to make its administration, unlike that of some great philanthropies, kindly and sympathetic in every case with which it had to deal.

The annual report of the Fund, presented by Mr. Handfield Jones, the honorary secretary, showed that the income from subscriptions and donations during the year had amounted to £11,821, an increase of over £1,100 on the year, and to this total a further sum of £865 could be added, being income tax recovered on subscriptions from those who had signed the seven-year covenant deed, which is accepted by the Inland Revenue authorities as entitling to remission of income tax. The income from legacies and from investments was also larger, and with this increased income placed at its disposal it had been possible for the Fund to distribute larger sums to its beneficiaries. During the year £11,380 had been voted in grants and £6,383 in annuities, the number of grantees being 434 and of annuitants 221. Of the annuitants, eighteen were medical practitioners, nine of whom received annuities of the value of over £40 and up to £100, and nine received annuities of the value of £40 or under. Forty of the grantees were also medical practitioners, half of whom were in receipt of yearly grants of £40. It had also to be remembered that on the books there were nearly 600 women beneficiaries, the widows and daughters of medical men, to whom the maximum annuity or grant given was only £26 a year. It was deplored that only some 5,000 medical practitioners, or less than 10 per cent. of those on the *Medical Register*, directly subscribed to the Fund. No doubt there is a considerable amount of indirect subscription, and it was stated that seventy-

two medical societies and sixty-seven Panel Committees now give the Fund financial assistance.

The whole-hearted support and co-operation of the British Medical Association, together with its Branches and Divisions, and of the Medical Insurance Agency, was gratefully acknowledged. Sir Thomas Barlow said that it was very gratifying that, during the centenary celebrations of the Association, the Fund was allowed to state its case at a large conference. Dr. Lewis Glover, the treasurer, mentioned that the cost of distributing the benefits of the Fund was under 10 per cent. of the amount disbursed. The total income of the Fund during 1932 was £24,157, of which rather less than one-half was from subscriptions and donations, and rather less than one-sixth was represented by legacies. The book value of the investments stood at £155,429. Sir James Purves-Stewart proposed the adoption of the report and financial statement, and this was seconded by Mr. Bishop Harman, who mentioned the detailed personal work done by the ladies of the Ladies' Guild, which went a long way, he said, to make a success of this really lovable charity.

The re-election of Sir Thomas Barlow as president, Dr. Glover as treasurer, and Mr. Handfield Jones as honorary secretary, and of the members of the Committee of Management was voted, with thanks for their services, on motions by Dr. C. O. Hawthorne and Mr. Howard Stratford, and the president, in closing the meeting, expressed thanks to a number of individuals and bodies, including the medical journals, for publicity given to the Fund.

England and Wales

Venereal Diseases in London

The total number of new cases which were dealt with in 1932 at the hospitals utilized under the London County Council's arrangements for the diagnosis and treatment of venereal disease was 27,952, of which number 11,602 were found to be non-venereal. The new cases represent a rise of 2,000 upon the figure for 1931, when there was a decided drop, but it is pointed out that this is due almost entirely to the alteration by the Ministry of Health of the definition of a "new case," which alteration operated in the year 1931 only. The attendances numbered 983,921, as compared with 930,348 in the previous year. The new cases in 1932 included 4,941 of syphilis, 11,222 of gonorrhoea, and 187 of soft chancre. These figures, of course, are not the full measure of the extent to which venereal diseases come under treatment in London, as a not inconsiderable number of patients receive treatment by general practitioners. During 1932 no fewer than 40,626 pathological examinations were made at the hospitals at the request of and free of cost to medical practitioners for patients from all areas. The facilities afforded by the hospitals and hostels in the County of London are made use of also by the county councils of Buckingham, Essex, Hertford, Kent, Middlesex, and Surrey, and by the corporations of Croydon, East Ham, and West Ham. The L.C.C.'s participation is represented by about 79 per cent. of the whole. On the basis of the continuance of the present participation of these other authorities, provisional grants for 1933–4 amounting to £104,300 are to be made for treatment and pathological work at hospitals, and £6,600 for hostels. A sum of £2,700 will be spent on publicity and propaganda, which sum includes a grant of £2,450 to the British Social Hygiene Council. These amounts are the same as for last year.

Kidderminster General Hospital

At the annual meeting of the Kidderminster and District General Hospital Mr. J. Lionel Stretton was elected president for the tenth consecutive year, and was presented with a silver salver in recognition of his having been a member of the medical staff for fifty years. Mr. Stretton, who was born in 1860, was appointed surgeon to the hospital in 1882, and consulting surgeon in 1922, when he received a presentation from his colleagues. It was estimated by a member of the staff at the meeting that during these fifty years of service Mr. Stretton had performed about 40,000 operations, and had taken a very active part in the business side of the hospital administration. As a further tribute to his work it had been decided some months previously to raise a special testimonial fund in order to clear off the debt in connexion with the new nurses' home and other extensions, and a sum of more than £1,750 has already been subscribed. The mayor remarked that the hospital was itself a monument to its president, whose untiring optimism and zeal had prevailed against the many depressing influences of recent years. The annual report showed a slight financial deficit, which was less than that in previous years; no further administrative economies seemed to be practicable, for the hospital was working at its extreme capacity, and 108 out of its 124 beds were occupied on the average each day. The president, in his speech, concluded that it had become necessary to increase the weekly contributions from twopence to threepence. He did not doubt that the additional support would be forthcoming, although the present economic difficulties were being severely felt in the town. During the previous year these weekly contributors had raised £7,000, and this figure would be increased by about £3,000 if the extra penny rate was generally accepted. Mr. Stretton commented also on the difficulties in obtaining payment for patients admitted to hospital in consequence of motor car accidents. It was often impossible to secure any sums from the insurance societies concerned, owing to the present state of the law relating to such liabilities. In order to meet the various financial requirements the cost of maintenance at the hospital had been reduced to about two guineas a week, which was far below that of some other comparable institutions. The advance of science had necessitated more expenditure on equipment, and the hospital had kept pace with others in this respect also. Mr. Stretton concluded with a warm expression of appreciation of the work of other members of the hospital team, and in this connexion it may be mentioned that he has been three times chairman of the Worcestershire Division of the British Medical Association.

Public Health Congress at Eastbourne

The annual congress of the Royal Institute of Public Health will be held this year at Eastbourne from Tuesday, May 30th, to Sunday, June 4th. There will be five Sections—namely: State medicine and industrial hygiene; women and children and the public health; tuberculosis; pathology, bacteriology, biochemistry, and veterinary medicine; and hydrology and climatology. Sir Allan Powell, president of the first-named Section, will deliver an address on changes and prospects in the public health field; this will be followed by a discussion on the pure milk problem. Sir Josiah Stamp will speak on the economic test of the limits of public health expenditure; and other topics to be considered are the housing problem, industrial welfare under existing conditions, and the principles and practice of health education. Dame Louise McIlroy, president of the second Section, will give a lecture on a maternity service within the reach of patients of moderate means. Other subjects to be dealt with in this Section are the role of the midwife in a national maternity service (opened by Sir Ewen Maclean), biology as a basis for teaching sex hygiene to children, and the study and care of exceptional children. Sir P. Varrier-Jones, president of the Section of Tuberculosis, will deliver an address on the question why this disease still remains a

problem. Discussions are being arranged on the rehabilitation of the tuberculous cripple, open-air hospital schools for tuberculous children, and after-care settlements. Professor A. Fleming will deliver the presidential address in the fourth Section, his subject being the trend of modern research in bacteriology. The centralization or otherwise of pathological laboratory service will be discussed, Sir Frederick Hobday will speak on veterinary medicine in its relation to public health, special papers on cancer will be read, and consideration will be given to the technique of blood transfusion and the organization of a public transfusion service. In the Section of Hydrology and Climatology the president, Sir Gilbert Walker, will review the importance in medicine of airs, waters, and places ; this will be followed by a discussion, and on the next day a second discussion will envisage soil and climate in relation to rheumatic diseases. The congress as a whole is under the presidency of Lord Leverhulme, who will deliver an address at the inaugural meeting on public health in relation to industry. Dr. W. G. Willoughby, late President of the British Medical Association, is one of the two vice-presidents. Special excursions in the surrounding country are being arranged for delegates. Further details may be obtained from the honorary secretaries, the Royal Institute of Public Health, 23, Queen Square, W.C.1.

The Tuberculosis Association at Cardiff

A provincial meeting of the Tuberculosis Association will be held at Cardiff from Thursday, April 6th, to Saturday, April 8th. On the afternoon of the first day Dr. Rist of the Laennec Hospital, Paris, will read a paper on the curative influence of certain pleural effusions in artificial pneumothorax, and Mr. H. Morriston Davies will open a discussion on the after-effects of phrenicotomy. The next morning will be devoted to the consideration of genito-urinary tuberculosis. Professor von Lichtenberg of Berlin will define the guiding principles in its diagnosis, treatment, and prognosis, and Mr. T. E. Hammond will read a paper on the occurrence of this condition in Wales. In the afternoon there will be conducted visits to the National Museum of Wales, and to the Glan Ely and Cefn Mably Hospitals. At 5 p.m. a symposium on the life and work of Dr. Marcus Paterson will be opened by Professor Lyle Cummins, who will be followed by Drs. Wingfield, Heaf, Watson, Blanford, and Gilchrist. All these meetings will take place at University College, Cardiff. On Saturday, April 8th, the annual general meeting of the society will be held at the Institute of Preventive Medicine. This will be followed by an exhibition of apparatus, films, and specimens, and by short reports of cases. No fee is charged to visitors or delegates who are not members of the Tuberculosis Association ; they will be cordially welcomed, and will be invited to take part in the discussions. Further information is obtainable from Dr. J. C. Gilchrist, 10, The Parade, Cardiff, or from Dr. G. T. Hebert, honorary secretary of the Association, St. Thomas's Hospital, S.E.1.

Oxford Ophthalmological Congress

The twenty-third annual meeting of the Oxford Ophthalmological Congress will be held on July 6th to 8th under the Mastership of Mr. Cyril H. Walker. Members will assemble at Keble College on the evening of Wednesday, July 5th, and on the following morning a symposium on the treatment of glaucoma, excluding operative details, will be introduced by Dr. S. Holth of Oslo. The Doyne Memorial Lecture will be delivered on the morning of July 7th by Mr. Bernard Cridland. It is hoped that Dr. R. G. Canti will give another cinematograph demonstration. There will be a discussion on diathermy in ophthalmology, to be opened by Mr. Affleck Greeves with reference to its use in detachment of the retina, and Mr. Frank W. Law as regards the therapeutic aspect. Members wishing to contribute to the discussions are asked to send their names to the honorary secretary, Mr. C. G. Russ Wood, Hill House, Abberbury Road, Iffley, Oxford, at their earliest convenience. There will also be demonstrations in the scientific and commercial museums, at which members are invited to bring forward novelties of ophthalmological interest. Ophthalmologists desirous of admission to membership of the congress should communicate with the honorary secretary, who will send application forms for membership and full details on request. There is no entrance fee or annual subscription, but a contribution of £2 2s. is payable on each occasion that a member attends a congress.

Ireland

Tuberculosis in County Antrim

Dr. C. O. S. Blyth Brooke, chief tuberculosis medical officer, in his report to the County Antrim Tuberculosis Committee, stated that during 1931, the full returns for which had just been made available, there were 198 deaths from the disease in the county—a reduction of twenty-two on the 1930 figures. Preliminary reports gave the number of deaths during 1932 as 183 ; that figure was higher than it otherwise would have been on account of a number of deaths of chronic cases during the second or spring quarter. Detailed examination of the figures for 1931 showed that there was a greater reduction in the death rate from pulmonary tuberculosis than in the death rate from non-pulmonary forms of the disease. The number of deaths in County Antrim from pulmonary tuberculosis fell from 229 in 1924 to 140 in 1931, while the number of deaths from non-pulmonary tuberculosis over the same period fell from seventy-seven to fifty-eight. Although the total numbers on the several registers were higher than before, yet the number of acute cases of which they had knowledge was less than in 1931. There were 967 cases diagnosed as tuberculosis in the county, of which 729 had pulmonary and 238 non-pulmonary manifestations.

Children and Women's Hospital, Belfast

At a meeting of the Ulster Hospital for Children and Women, Templemore Avenue, Belfast, it was stated in the annual report that expenditure for the year somewhat exceeded income, and that the debit balance would have been greater but for the various special sums received from an anonymous donor of £150, and for the fact that over £200 had been received in bonus and commission on war loan conversion. The hospital committee were faced with a reduction in income from war loan of about £250 ; it would therefore be necessary to augment the staple sources of income. For the third year in succession ordinary collections had shown a decrease, and an earnest appeal was made for new subscribers. There were many districts in Belfast and in Northern Ireland entirely untapped. Works subscriptions again showed an increase, but it was disappointing to record a marked falling off in the amount subscribed by patients who had received benefit from the hospital. The extension fund had not increased materially during the year. Work on the new wing had been started in the autumn ; the building was now taking shape, and it was hoped that it would be ready for occupation before the end of the year. This very necessary increase in accommodation would place a further strain on resources, and was an additional ground for appeal for subscriptions. In moving a resolution of thanks to the medical staff for their services, Lady Craigavon

said that they all appreciated those services to the full, and she hoped the public realized the amount of time which the staff gave out of their private practice. Mr. G. R. B. Pruce, chairman of the medical staff, paid a tribute to the nurses; they had undoubtedly one of the best hospital staffs in the kingdom.

A cot in memory of Dr. R. W. Leslie has been subscribed to by friends at the hospital. The inscription reads: "The Leslie Cot, named by Campbellians and other friends in memory of Richard Whytock Leslie, M.D., physician to this hospital, 1891–1925; consultant physician 1925–31." Speaking on behalf of the subscribers Colonel Gibbon, headmaster of Campbell College, said that Dr. Leslie was the medical officer of Campbell for thirty-seven years. During that long period he not only served the college in his professional capacity faithfully and well, but he also took the keenest interest in the fortunes of the college as a whole and of the individuals who were or had been members. His close association as physician with that hospital for children suggested to his Campbell and other friends that there indeed was a fitting place in which to honour his memory. Mr. R. A. Mitchell accepted the cot on behalf of the hospital. It was appropriate, he said, that some memorial should be there.

The Irish Sweepstakes

At the conclusion of the draw for the recent sweepstakes, Sir Joseph Glynn, late chairman of the Irish National Health Commission and a member of the Hospitals Trust Committee, stated that there had been from time to time a certain amount of misinformed criticism in connexion with the money in the hands of the Trust. It had been said that the money was in some way or other under the control of the Government. He wished to dispel that idea. Every penny of the £3,100,000 received from the present sweepstakes had gone into the bank in the names of five persons, who had been appointed for the purpose—Lords Granard and Holmpatrick, Mr. J. Magrath, Mr. T. K. Laidlaw, and Mr. H. Honohan—and every prize that had been issued had gone out under their authority. The Government received only stamp duty on the hospitals' share of the money; it did not get a penny from the prize-winners' money. In the earlier sweepstakes the money had been distributed direct to the hospitals, but in view of the enormous sums now involved, the Government had decided that there should be some scheme of distribution. The committee knew that in the forthcoming Bill the money would still be intact for the hospitals themselves, including the county hospitals, which had been getting their share of the sweepstakes in the last twelve months.

Scotland

Testimonial to Dr. David Rorie

Many readers in Scotland and elsewhere will regret to learn that Dr. David Rorie, D.S.O., president of the Aberdeen Branch of the British Medical Association, has been compelled to give up work on account of his recent serious illness. A proposal is now on foot to make him a presentation, and contributions for this purpose should be sent to Dr. Robert Bruce (Thoresby, Cults, Aberdeenshire) before April 30th. Apart from his distinguished record in the war—he was mobilized as Captain R.A.M.C.(T.F.) in August, 1914, and ended as temporary Colonel A.M.S. and A.D.M.S. 51st (Highland) Division in the Field—Dr. Rorie is well known for his numerous contributions to literature and Scottish verse, and has been joint editor of the *Caledonian Medical Journal* for twenty years. Among the many offices he has held are the presidency of the Edinburgh University Association, the North-East of Scotland Overseas Medical Club, the Aberdeen branch of the British Legion, and the chairmanship of the Aberdeenshire Panel Committee. The presentation will be made in May.

Glasgow Cancer Hospital

At the annual meeting of the Glasgow Royal Cancer Hospital on March 22nd the Lord Dean of Guild, who presided, said that the figures for patients discharged from the hospital well or improved during the past year were encouraging; an important share of the research work into the nature and cure of cancer had been done in this hospital. The report showed that 603 patients had been treated in the wards during the year, the daily average having been fifty-six. The ordinary income had been £8,392, with an expenditure of £10,291; the extraordinary income from legacies and donations had amounted to £10,468. The number of cases treated by radium had been 356.

Glasgow Hospital Sunday Fund

The report to the thirty-ninth annual meeting of contributors to the Glasgow Hospital Sunday Fund showed that last year the collections received from churches, Sunday schools, etc., for hospitals in Glasgow, amounted to £8,638, a decrease of £465 on the sum received for the previous year. The average contribution for each of the 620 churches contributing was £12 6s., as against £13 8s. 3d. in 1931. The allocation in proportion to the number of beds was: to the Royal Infirmary (829 beds) £3,627; to the Western Infirmary (633 beds) £2,769; and to the Victoria Infirmary (435 beds) £1,903. The chairman, Lord Provost Swan, said that while the total subscribed had diminished, the number of people coming in to the general collection had increased. The committee should be able to obtain the amount of £10,000 from this source, and he commended the fund to the citizens of Glasgow.

CORRESPONDENCE

Proposed B.M.A. Committee on Nutrition

SIR,—It is heartening news that a committee is suggested to investigate the question of nutrition, focused by the investigations of Dr. M'Gonigle. For over two years I have been calling attention to the fact that in my opinion the euphemistic reports on the general nutrition were not entirely accurate. It is not given to everyone to have such an opportunity as Dr. M'Gonigle with clear-cut contrasts. I drew attention to the matter in my annual report a year ago in the following terms:

"One has to face the fact that a number of these children are the offspring of parents who are living very definitely below the nutritional line, and the result is that there is recurring illness, which in all probability would not arise were the nutrition of the family adequate. As I pointed out elsewhere, these children are continually short of protein, carbohydrate surfeited, bulky and flabby, and lack the ordinary resistances that the well-fed child possesses."

Again, at the annual Congress of the Royal Sanitary Institute at Brighton last year I called attention to the matter. Only this week in the *Medical Officer* I have again called attention to the condition of the children and mothers. In addition, I have just applied to the Carnegie Trust for a grant of £500 to deal with it experimentally. For me, the numerous mathematical formulae and indices are useless, in that they fail to reveal the class of child I have referred to, which is obvious to those of us who have years of experience in dealing with these cases.

I wish to emphasize again the point I have made from the beginning, and which Dr. M'Gonigle supports, that lack of first-class protein is a vital point. I have indicated what I consider the immediate remedy. Just before the war, owing to the fact that I am a practical cook, I had arranged to cook in public against all the mothers in my area in two competitions, for which I had prizes promised: (1) the best dinner on a gas ring; (2) the best dinner for four for a shilling. In order to draw attention to this matter I have challenged our lady councillor to cook a five-course dinner in public.

My chief trouble is, I cannot make people understand: (*a*) how to buy cheap protein, and (*b*) how to cook it. It can be bought, but is not.

None of the cookery books, nor even Mrs. Arthur Webb's excellent broadcasts, tell the consumption of fuel necessary in the preparation of economical dishes. Among the poorer folk there is a perpetual terror of the hungry maw of the gas meter that swallows up the shillings they can so ill afford. I have been searching for a cookery book that will do what I want, but I find I shall have to compile it myself. Edinburgh has published one, but it, like all the others, is not cheap enough. Dr. M'Gonigle's figure of 4s. 6d. per man unit sounds too attractive. Dr. Crowden's figure of 7s., I am certain, is too high, as, I believe, is the Scottish figure of 6s.

To my mind the problem is urgent. The reports of the school medical officers are too euphemistic, largely because the examining officers have not had the requisite experience with regard to "malnutrition." Like Dr. M'Gonigle, I have been getting budgets from some of these humble homes, and, as Dr. M'Gonigle also finds, protein is the main item that money is saved on. I believe, and have said so often enough, that at the present time one of the most important functions a medical officer of health can perform is to ensure by instruction that money available is spent to proper nutritional advantage. If at long last something tangible will result, I for one shall be grateful indeed.—I am, etc.,

ELWIN H. NASH,
Medical Officer of Health and School Medical Officer, Heston and Isleworth.

Hounslow, March 26th.

"Acetone and Diacetic Acid"

SIR,—Dr. R. D. Lawrence has drawn attention, in your issue of March 18th, to the error of speaking of acetone being present in the urine when aceto-acetic acid is absent. The error partly arose through the observation of Rothera that his modification of the nitroprusside test was given by acetone, but not by aceto-acetic acid, whereas the ferric chloride test was given by aceto-acetic acid and not by acetone. Hurtley showed that Rothera (as he himself discovered a little later) had been misled by not having a pure preparation of aceto-acetic acid. The presence of a small amount of the ester of aceto-acetic acid is sufficient to prevent aceto-acetic acid giving the nitroprusside test. Actually Hurtley showed that it was possible to detect aceto-acetic acid by means of the nitroprusside test in a dilution of 1 in 400,000, while acetone could only be detected in a dilution of 1 in 20,000. The matter has been further simplified by Folin, who showed that acetone was either not present or only present in a very small amount in freshly passed urine, although the latter contained a great deal of aceto-acetic acid. When the urine was allowed to stand some of the aceto-acetic acid decomposed into acetone.

The term "acetonuria" is, therefore, really a misnomer, and it would be a great advantage if it could be replaced by the term "ketonuria." It is correct to speak of the patient's breath smelling of acetone, because acetone is excreted by the lungs.—I am, etc.,

London, W.1, March 21st. GEORGE GRAHAM.

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Antimony Poisoning from Enamel

SIR,—Your most interesting annotation on antimony poisoning from lemonade made in enamel containers prompts me to put on record some similar cases, as I am sure the danger of cooking acid fruits in cheap enamel pie-dishes is not yet fully realized, either by the profession or by the public.

I have recently seen three families in which all the members were suddenly stricken down with sickness and diarrhoea; investigation in each case showed that the symptoms came on shortly after eating rhubarb pie, baked in a cheap new pie-dish. In most people the symptoms passed off rapidly, and were only serious in one case, as follows:

Mrs. X gave a party on Saturday night, for which she brewed a large quantity of lemonade in an enamelled basin. Nineteen out of the twenty-five present were taken ill, but the cause was not suspected. Next day, while clearing up, Mrs. X drank the remains of the lemonade (two glasses); half an hour later she was taken violently ill, with cramps in the stomach and acute diarrhoea. On the Sunday evening the five members of the X family sat down to a supper, which included a cold rhubarb pie which had been baked the day before in an enamelled dish. Within an hour they had all been taken ill with acute abdominal pains and sickness, and Mrs. X (whose third dose of antimony it evidently was) was so collapsed and ill that her condition caused considerable anxiety. Had she been a child instead of an adult I think there is reason to believe that the result might even have been fatal.

I cannot help feeling that the medical profession as a whole should take active steps to warn people of this danger, which, as far as I can see, applies to all acid fruits cooked in such dishes.—I am, etc.,

New Malden, March 24th. HELEN LUKIS, M.D.

Chronic Pulmonary Tuberculosis

SIR,—Dr. R. C. Wingfield in his recent article (February 4th) referred to the diathesis of the patient as a factor influencing the evolution of the tuberculous lesion. What does he mean by this term "diathesis"? Is it an inherited or an acquired state? If inherited, the physician will be unable to influence it. In the *Journal* of January 28th there was an article on the significance of the residuum. This diathesis may be one of the residual phenomena of medicine.

During the past two or three years I have been investigating cases of tuberculosis of the lung among school children and young adults. The evidence gathered is pointing to the following conclusions. The treatment of pulmonary tuberculosis is unsatisfactory because our conception of the aetiology is not clear. Our conception will not be clear until we have devoted more research into the meaning of the diathesis—that is, have studied the whole individual, the soil in which the seed of disease grows. Diathesis from the point of view of biology means maladaptation, and this appears to be of twofold character, partly biochemical or nutritional and partly psychological; the first is probably wholly acquired, and the second mainly acquired but partly inherited.

Diagnosis which limits itself to the determination of the presence of the tubercle bacillus and to the character and extent of the lesion and resultant toxaemia is not

complete, and consequently treatment based on these findings alone will be unsatisfactory. Complete diagnosis must include a knowledge of the factors producing the diathesis or maladaptation. Complete treatment must include a correction of the maladaptation so far as it is acquired—namely, the faulty nutrition and the psychological maladjustment.

In 1930 there came to my dispensary a schoolgirl suffering from tuberculosis of the lung with positive sputum; for many years she had been in the habit of refusing green vegetables. Fifteen other school children with positive sputum have also been studied; 14 of them gave a similar history, many of them refusing fat also. For convenience, this type of patient has been termed a dietetic rebel. All these children have faddy appetites. Dietetic rebels have also been found in other age groups—15–20 and 21–30. This suggests that the character of the lesion may be determined by the duration of deprivation of green vegetables. It is generally agreed that in the younger age groups the lesions tend to be of the intermediate and secondary types, while among older age groups lesions tend to be rather of the fibrotic or tertiary type. Among the older age groups the deprivation of green vegetables is more often of shorter duration, and is associated either with anorexia following some discouragement, or with some gastric condition for the treatment of which a diet deficient in green vegetables has been prescribed. So far *x*-ray findings have not been correlated with the type of the patient.

I would suggest that the basis of sanatorium treatment is neither fresh air nor rest, but diet, or right nutrition, and discipline. The type of patient with finicky appetite (the dietetic rebel) requires sanatorium treatment to cure this habit. Fresh air stimulates metabolism and cures the finicky appetite. The type of patient in whom the deprivation of green vegetables is of short duration, accidental and not habitual, will not require sanatorium treatment. Such patients, who are more likely to have the chronic fibrotic lesion, might therefore be treated either in a convalescent home or in their own homes, provided that their diet is supplemented by milk or butter and green vegetables. As regards the risk to other members of the family, the evidence of the sixteen children with tubercle bacilli in the sputum leads to the conclusion that other members will not develop tuberculosis of the lung in a severe form provided that they have been trained to accept green vegetables and fat as part of their daily diet.

Concerning the psychological maladjustment let it suffice to say that failure to appreciate its presence and failing to correct it will lead to failure in treatment and to relapse, although nutritional maladaptation has been wholly corrected.

Schemes for the prevention of tuberculosis will fail so long as the diathesis remains neglected and unexplored. Every week dietetic rebels attend my clinic; many are not tuberculous, but these are not discharged until the finicky habit has been corrected and a normal appetite established. Dr. Chalmers Watson's letter has prompted me to write this note.—I am, etc.,

P. A. GALPIN,
Tuberculosis Officer,
West Ham.

Plaistow, March 15th.

SIR,—A very valuable article appeared in your issue of February 4th by Dr. R. C. Wingfield, and he claimed, rightly, that a new conception was being put forward. In the subsequent correspondence it appears to me that too little attention has been paid to those very points which formed the important contribution to a new view of the disease. Dr. Wingfield defined a primary lesion, causing trouble by its secondary outbursts, and showed how unsuccessful is our present treatment in dealing with the main infection. He proceeded to make the important suggestion of preventing further outbreaks in the individual by attempting to immunize him against the tubercle bacillus when the secondary lesion has been appropriately and successfully treated.

This suggestion raises other questions which are of great interest. How does the production of immunity to the tubercle bacillus vaccine relate itself to susceptibility to the disease? If the allergic reaction be abolished, what would be the response to a new superinfection? Heimbeck found that tuberculosis developed much more often in nurses with a negative skin reaction to tuberculin than in those with a positive, when working among tuberculous patients.

As to the sanatorium—is it not time to abolish this name? It has, too often, carried with it the assumption that for patients ill with tuberculosis a lower standard of accommodation will do. If a hospital for tuberculosis were duly recognized, then proper equipment for nursing and for medical and surgical treatment, would be provided. The true sanatorium must be quite a small institution even for a large population. It would be, as Dr Wingfield indicates, a convalescent home (with skilled observation and training) entered after a suitable duration of treatment in bed in hospital. The sanatoriums at present provided by the official schemes are in effect hospitals for the tuberculous and homes for the dying—obviously necessary, indeed—but needing different planning from the sanatorium. To accept this, however, means not only changing a name, but also the method of attack in tubercle, and the recognition of the fault of a system built on an imperfect knowledge of the disease and a diagnosis which included many relatively healthy persons who provided good figures for sanatorium treatment.—I am, etc.,

F. A. H. SIMMONDS, M.B., D.P.H.

Harefield, Middlesex, March 23rd.

SIR,—Dr. Wingfield's recent paper has stimulated discussion on the subject of chronic pulmonary tuberculosis, and that in itself is no small merit. In his reply to Dr. Lissant Cox's letter Dr. Wingfield appeared rather to avoid Dr. Cox's question, "What then are we to do?"; but it was perhaps rather too large a question to deal with in a letter. One may hope presently to have an amplification of his views on this pertinent question.

Dr. Burrell has pointed out that the duties of the clinician and the medical officer of health in regard to the sufferer from chronic pulmonary tuberculosis are incompatible, or, in other words, the point of view of the individual and the community are often opposed, a problem that is inherent in civilized society. "If the sanatorium," he says, "is used to serve both these worthy but absolutely opposite purposes [that is, treatment and segregation] the best results are not likely to be obtained in either case." The misuse of sanatoriums to which he and Dr. Wingfield raise objection is perhaps due to an attempt to reconcile these two incompatibles—an attempt that, inasmuch as it may be illogical, is typically English, and possibly, like other illogical English institutions, it does work more or less, though imperfectly no doubt; it is, however, probable that no scheme for dealing with chronic pulmonary tuberculosis will ever be perfect.

It may be argued that, unless treatment and segregation are carried out within the same institution, it will be difficult to obtain voluntary segregation of the consumptive. Your logical hygienist might doubtless attempt a wholesale compulsory segregation of consumptives, and in the process render confusion worse confounded. The modest claim can at least be made that the tuberculosis services in this country, imperfect as they may be, have won the confidence of their public to the extent that folk

readily avail themselves of the facilities provided for diagnosis and treatment, and that incidentally quite a considerable amount of segregation is also effected when and where it is most urgently needed. One cannot help feeling that some confusion of thought arises from the fact that the name "sanatorium" has become commonly applied to any institution set apart for the accommodation of tuberculous patients. I agree that to subject advanced cases of phthisis to rigorous "sanatorium treatment" is futile, and indeed may amount to a refined form of cruelty, but it does not necessarily follow that such cases are subjected to such treatment because the institution to which they are admitted happens to be called a sanatorium. It is perhaps unfortunate that hospitals for the tuberculous should have received a specific label, instead of being referred to simply as hospitals, and the misuse of the term "sanatorium" also serves to perpetuate a certain misconception in the minds of patients and relatives and others, for an echo still lingers of the Lloyd Georgian phrase, "First-class hotels where people will be nursed back to health." Certainly it is not uncommon to meet with the frame of mind that resents the idea of death ever occurring in an institution that happens to be called a sanatorium, while accepting it as a normal phenomenon in a hospital.

Dr. Burrell quotes a case of a patient developing active pulmonary tuberculosis after a period of twelve years' apparent quiescence since the initial symptoms, and states that residence in a sanatorium is no insurance against a recurrence of the disease; true enough, and one is tempted to add that neither will looking carefully right and left as he steps off the pavement to-day insure a man against getting run over next year. Sir Pendrill Varrier-Jones asserts that any course of treatment which is followed by a return to unsatisfactory home conditions "is, in nine cases out of ten, a waste of time and money." That may be true, but it does not apply only to those who are afflicted with tuberculosis, and, with all respect for the admirable work achieved at Papworth and other places that have followed the Papworth example, his contention that this waste of time and money is a proof of the necessity for the development of the Papworth system does not necessarily hold good unless it can be shown that the Papworth system is dealing with the nine sinners and not with the one just man.

A periodic stocktaking and an occasional dose of iconoclasm are healthy for all of us, and an attempt now and then to winnow the grain from the chaff is very necessary, but one may venture to remind those who are unduly impatient of results that tuberculosis is said to have existed in Europe as a chronic infection for more than 6,000 generations, whereas barely one generation has yet elapsed since general anti-tuberculosis efforts were first instituted; we are perhaps still in our infancy in attempting to cope with this problem.—I am, etc.,

Birmingham, March 22nd. J. R. A. TODHUNTER, M.B.

Body and Mind

SIR,—If Dr. S. D. Isaacs will select cases of mental disorder which show the signs or symptoms of tonic hardening of the colon (to which I draw attention in my book upon that subject) and treat them with hyoscyamus (or belladonna) and an intestinal antiseptic, such as salol or my mercury and iron mixture, and the proper dietary, he will find (as Dr. Eve does and I have done for the past thirty years) that treatment of the colon condition does suffice to cure them without the aid of any analytical or other form of psychotherapy whatever.

Such cases as severe mental depression with suicidal tendencies, phobias, and obsessions of various types will yield to this treatment. Sometimes, after months of mental misery, a few weeks of treatment with salol and hyoscyamus will suffice to transform a depressed and weeping patient into a smiling and happy one. Such a result, moreover, may follow no more than two ordinary half-hour visits to the doctor in his consulting-room and nothing of the nature of psychotherapy.—I am, etc.,

Birmingham, March 23rd. T. STACEY WILSON.

Fractures of the Shaft of the Femur

SIR,—Mr. W. J. Eastwood, in his article in the *Journal* of March 4th (p. 359), paints a rosy picture of the treatment of these injuries by the exclusive use of the Thomas bed knee-splint, and a sombre, nay tragic, picture of their treatment by what he calls "skeletal traction." He refers to sixty-one cases treated in hospitals, but I respectfully suggest that these cases are not sufficiently comprehensive in character for him to base an opinion on.

Of the sixty-one cases, fifty-three occurred in children under 14 years of age—86 per cent. of the total number. It is surely well known and hardly worth discussing that the treatment of simple fractured femur in a child is about as easy as any treatment of a severe injury can be. Unless something very exceptional happens a perfect result is obtained every time, whether treatment is by gallows splint, suspension to a Balkan frame, or a Thomas splint with fixed extension. Even if there be an inch of shortening at the end of the treatment the bone grows rapidly to catch up with the other one, and at the end of eighteen months there is no difference. I do not think anyone would bother to show a successful case of treatment of such an injury at a clinical meeting. We are therefore left with six men—whom it is suggested may have been miners, and in whom the treatment was successful—and two women. I submit that this number is far too small to generalize upon.

These cases were all simple (closed) fractures; none of them were compound. The treatment of simple (closed) fracture of the femur is comparatively easy; only when it is compound do the difficulties arise. That is to say, in Mr. Eastwood's series the difficult cases are absent; and this again, in my view, should prevent him from making any generalization.

When we come to examine the "simple" method of Mr. Eastwood for treating this fracture we find that it requires "constant, unremitting attention, by both the surgeon and the nursing staff," and, after application of the extension strappings, "attention to the points of pressure and frequent tightening of the extensions. The latter are tightened at least every three or four hours for the first fourteen days." We find that the "points of pressure are seven in number"; that "it is a simple matter to run the fingers over the ends of the back splint every two or three hours to see that there is no undue pressure there"; that "on the fold of the buttock the skin is pulled up or down every two or three hours night and day to allow a different area to take the pressure"; that "it cannot be too strongly emphasized that this supervision must be carried out, at first, both night and day"; that "the extensions are as tight as a bowstring"; and that "should a sore develop they [the nursing staff] will be held responsible and a searching inquiry be made." Who can agree with Mr. Eastwood that such a treatment can be regarded as "simple" or as foolproof? Yet he says it "can be carried out as well in the patient's own home as in the surgical ward of a hospital." Imagine the difficulties involved in waking up a private patient, turning him over, looking at seven pressure spots, and adjusting his extensions every two hours for fourteen days. How would the poor man get any sleep?

When we come to the other picture, the sombre one of skeletal traction, we find, according to Mr. Eastwood, that the introduction of a piano wire (which he calls a pin) "requires full surgical asepsis, with all its ritual and precautions, and this in itself adds time and anxiety to the treatment." I wonder if Mr. Eastwood has ever seen "wire extension," as I prefer to call it, applied. The actual introduction of the wire is done in fifteen seconds, without any "ritual" except painting the skin on either side of the knee with strong iodine. It is true the wire is boiled before I come into the ward, but I do not change my coat, wash up, or put on gloves, because the wire is never touched before use, being placed ready in Johannsen's introducer. The grasping of the wire in Kirschner's stirrup takes another minute, and the matter is concluded by hooking a cord to the stirrup, carrying it over the pulley at the end of the bed, and attaching a suitable weight. This all takes less time to do than to describe. Mr. Eastwood states that the complication of wire extension is infection: the only reply to this is that it simply does not occur. He suggests that the introduction of a foreign body so near a joint results in a tissue reaction so great that the knee becomes stiff, and several manipulations may be necessary to obtain even flexion to a right angle. Yet the actual fact is that under this treatment the knee is moved from the very first day, and so never becomes stiff. To discredit still further the treatment he says the weight catches on the bar between the legs of the bed; but his never happens when a properly angled pulley rod is used. His concluding shot—a Parthian one—is that stiffness of the knee, want of alignment, necrosis of bone, and non-union are by no means unknown when wire extension is made use of.

The true facts are that, except for minor adjustments, once the wire is inserted and the weight applied, the patient practically treats himself for the next six or seven weeks. There are no pressure points, no disturbance at night, no pain. The pull of the wire is painless. When the weight pulls him down towards the foot of the bed he pulls himself back with his hands grasping the rail at the head. The progress of the case is controlled by frequent *x*-ray pictures. This treatment is applicable to the severest cases of compound fracture, and has been successful in a case of compound fracture of femur, of tibial shaft, and of ankle-joint, all occurring in the same limb. Having used Thomas's splint regularly since 1905 up till the invention of this new method, I can be said to have some working knowledge of the former, and I know that in adults the results obtained by it simply will not bear comparison with those from wire extension. As Dr. de Coulon said to me at Neuchâtel when he showed me the method for the first time two years ago, "Fractured femur, instead of being the house-surgeon's curse, has now become his greatest joy."—I am, etc.,

PAUL BERNARD ROTH, F.R.C.S.
Orthopaedic Surgeon, North Staffordshire Royal Infirmary.

March 18th.

Ante-natal Clinics and Maternal Mortality

SIR,—Dr. Eden, in his address "Midwifery in the home" (*Journal*, March 11th), expresses his disappointment that the work done in the ante-natal clinics had made no impression whatever upon maternal mortality. He gives, however, a valuable hint as to why this is so when he says that ante-natal work requires not only a sound practical knowledge of midwifery, but also a wide acquaintance with practical medicine. He seems loath to criticize public health authorities, although they often favour the appointment of whole-time and often young "specialists" who lack all experience of general practice; and no private business concern would continue to waste money on a department giving so little return for lavish expenditure without trying to find a remedy.

This would be the ideal: that, wherever possible, the ante-natal work should be done by doctors who, in addition to a special training, have at least ten to fifteen years' experience of midwifery and general practice behind them. If something like this were tried there might be some hope of getting better results. There is, or should be, a great deal more in ante-natal work than the mere measuring of pelves and the testing of urine. It requires matured judgement and a cultured foresight, based on a prolonged study of human nature.—I am, etc.,

G. G. GENGE,
Honorary Secretary, Croydon Medical Committee.

March 21st.

Forethought in Midwifery

SIR,—Dr. Oxley has the advantage of me in having heard the evidence given to the Departmental Committee on Maternal Mortality. I have been unable to find any suggestion in the final report that any of the 1,150 deaths due to associated disease had not been under a doctor's care. The report does not go beyond stating that there had been inadequate treatment, and that the facilities for treatment in certain cases were inadequate. The point, however, is the detection of disease in an earlier stage, and possibly in an earlier pregnancy.

I have always taught that when there is any suggestion of ill-health, such as chronic cough, shortness of breath, wasting, etc., the case must be referred to a doctor. A medical examination early in pregnancy is, of course, most desirable, but there will be difficulty in getting the patient to the doctor. Healthy women do not like undergoing compulsory examination; and, after all, over 90 per cent. are perfectly healthy. I feel that there is considerable risk to the ante-natal supervision movement by insisting too soon on examinations which the woman has not yet been educated to appreciate. I still hold that the midwife should be able to recognize abnormality at the thirty-sixth week, or at least to be doubtful of normality, and that she should do her own ante-natal examinations.

In thus venturing to disagree with one of such great experience may I assure Dr. Oxley that I do so with diffidence, and only because I also have the cause of ante-natal care and supervision very much at heart.—I am, etc.,

R. K. WHITE.

Southsea, March 23rd.

Treatment of New Growths by Fluorescein and X Rays

SIR,—In view of Dr. Colwell's statement (in his paper published in the *Journal* of March 18th) as to the improbability of penetrating radiations exerting any action on fluorescent salts, it may be of interest to refer to the outcome of work which has been in progress in the Cancer Research Department of the University of Pennsylvania during the past four years. In September, 1928, I heard from Dr. Ellice McDonald, the director of cancer research, that, following on my communication to the London International Conference of the previous year, his department had entrusted to a team, including a physicist, chemist, biochemist, and physician, an experimental investigation into the nature and effects, on malignant tissues, of action resulting from the irradiation of various fluorescent substances in solution. Of these, as many as seven hundred have since been tested.

Dr. McDonald now informs me that a paper dealing with certain irradiation effects observed was read to the American Chemical Society in September last, and that a full report will shortly appear in the *Journal of the*

Franklin Institute. Meanwhile a brief extract from his recent letter may serve to indicate certain lines on which their investigation has been pursued, and, to a limited extent, the results that have been obtained.

"The further advance we have made is to study the effects of the shorter than visible ultra-violet radiation below 3,132 A.U. *in solutions*, and to correlate the chemical structure with the range of fluorescence in A.U. We have found quite a number of substances which, under *x*-ray excitation, fluoresce in the invisible ultra-violet shorter than 3,132 A.U. Apparently the really lethal effects are below this range, and also, what is still more interesting, various cells seem to have more or less specific ranges for killing purposes. We have chemical substances, of which minute dilutions, when irradiated, will kill cells in fifteen seconds, when controls, treated by large doses of *x* rays alone, do not die at all, and when it takes twelve to fifteen hours of high doses of unfiltered radium to produce lethal effects. We have a film of living cells being killed after this method, which is very illuminating. It shows that the radiation effects are upon the nucleus of the cells, and unless the quanta are absorbed by the nucleus there are no lethal effects."

It must, I think, be evident that something more than the "mild antiseptic action" suggested by Dr. Colwell is needful to explain the phenomena recorded by Dr. McDonald and his colleagues.

During the past few years the research departments of Imperial Chemical Industries, Ltd., and of Messrs. Boots, Ltd., have been good enough to supply me with a considerable number of fluorescent substances, some of which were specially produced, in view of the possibility that some salt might be found which, when irradiated, might eventually prove more serviceable in the treatment of malignant growths than sodium fluorescein, with which, for reasons stated in former communications, our work has hitherto been mainly concerned.—I am, etc.,

London, N.W.3, March 26th. S. MONCKTON COPEMAN.

SIR,—With regard to Dr. Colwell's investigation, undertaken for the Medical Research Council into this method of treating cancer, published on March 18th in the *Journal*, space will only permit of reference to three points, other than those covered by a letter from America, dealt with above by Dr. Copeman, which seems to give a complete refutation of Dr. Colwell's main conclusion.

The first point. Dr. Colwell contends that it was obvious from the start that the action of fluorescein (if any) on cancer cells would not be due to *x* rays or gamma rays. I am heartily in agreement on this point, but this statement shows that Dr. Colwell has apparently failed to understand the basic principle of our work, which, as we have repeatedly stated during the last six years, was originally suggested to us by Professor Lindemann, F.R.S., of Oxford. May we therefore restate this? The principle of irradiated fluorescein is as follows. The cancer cell is destroyed by photo-chemical action, produced by a ray just beyond the ultra-violet band in the electromagnetic spectrum. This ray is produced in the cancer cell itself, when the latter is thoroughly impregnated by a solution of sodium fluorescein (or some other solution in the fluorescein series), and while being irradiated by a dose of *x* rays of moderate penetration—that is, 120 to 130 kV in the case of sodium. I maintain that high voltages alone of *x* rays for curative purposes are comparatively useless; the higher the voltage the more the body penetration but the less the therapeutic effect.

The second point. Dr. Colwell admits that, on the whole, cases treated with *x* rays plus fluorescein have done better than those treated by *x* rays alone.

The third point. Dr. Colwell suggests that any curative effect is merely due to a local antiseptic action of fluorescein. If this is the case, then surely a series of controls with other mild local antiseptics would have been easy to carry out; but apparently this has not been done, and all we have is a pious expression of opinion unsupported by proof.

I wish to thank Dr. Colwell very much for the interest he has taken and for his sincerity of purpose.—I am, etc.,

CLAUDE GOULDESBROUGH, M.A., M.B.

London, W.1, March 27th.

Modified Bendien Reaction

SIR,—I have read with much interest the article by Dr. Cronin Lowe on the modified Bendien reaction in your issue of March 11th. During the last eighteen months I have had some experience of the *unmodified* Bendien chemical test, and although useful for diagnosis in some cases it fails on account of the relatively high percentage of false negatives and the number of results in the doubtful zone. Dr. Lowe's modification appears to remove many of these difficulties. In addition to the conditions such as pregnancy, jaundice, and tuberculosis, which give a positive result with the unmodified technique, I have had strong positive reactions in two cases of pernicious anaemia and in two cases of uraemia, where malignancy was excluded.

Dr. Lowe mentions that it is impossible, even with his modification, to distinguish beween serums from pregnancy and those from malignancy, but does not state specifically whether he is able to distinguish between malignancy and tuberculosis. The unmodified test failed to do this, and the distinction is, of course, of extreme importance.

I feel that Dr. Lowe's views on these points, especially with regard to tuberculosis, would be much appreciated by many who have given the original Bendien test a fair trial.—I am, etc.,

Manchester, March 25th. G. STEWART SMITH, M.D.

Science and Philosophy

SIR,—In your issue of March 18th (p. 488) Professor H. E. Magee says: "If . . . it is *conclusively* shown that a particular biological process occurs in a way contrary to physico-chemical laws, the phenomenon should be regarded as a fact." The logic of his statement is as irrefutable as is that in the assumption: "If it is *conclusively* shown that epilepsy is due to green goblins in the Gasserian ganglion the phenomenon should be regarded as a fact." Following his line of reasoning the professor proceeds to divide the body into two sets of organs and tissues—those that function in accordance with chemical and physical laws, and those that function contrary to them—adding that "very many bodily functions fall into the latter category." He apparently justifies himself for this startling classification on the grounds that in the former the "how" of the functioning is known, in the latter it is not. The physicist does not know the "how" of a falling apple; all he does know is that the mutual approach of earth and apple is dependent upon an "attraction" between the two bodies that is directly proportional to their mass-product and inversely proportional to the square of their distances apart. He does not, however, on that account segregate gravitation in a category "contrary to physical laws" apart from other cosmic phenomena the "how" of which is known. In view of the indubitable fact that every biological discovery has been arrived at from the mechanistic standpoint, the mechanophobia of certain biologists is difficult to understand, unless, indeed, they too have fallen victims to that epidemic malady which has been affecting physical science during the last two decades, and which Professor

Schroedinger has called "Umsturzbedürfnis"—the mania for kicking against the established order of things. Whether in the days of the "rampant materialism" of the last century or in the days of the present century, with its no less rampant neo-vitalism, holism, emergence, entelechy, *élan vital, puissance dormitive*, and indeterminism, the guiding principle of all biological research has ever been mechanism. However mystic his trend outside the laboratory the biologist works on the assumption that the phenomenon confronting him is an effect of an immediately antecedent cause, that the totality of phenomena constitute a cyclic cause-effect sequence; in short, he knows that only with the mechanistic key can he hope to unlock the secrets of living matter. Yet, despite the fact that we owe all the fruits of science to attacks on the unknown via the mechanistic approach, explanations of biological phenomena in terms of mechanism invariably at first arouse fierce opposition, though ultimately they are universally accepted.

Professor Magee suggests that physiologists should rest satisfied with calling biological processes "physiological." Provided the tautology—for it amounts to that—is restricted to biology *qua* biology, no exception need be taken to the expedient, but once the biologist enters the controversial field of epistemology it is imperative that he should show his colours, and this can only be done if the "old shibboleths" "mechanism" and "vitalism" are retained. The professor appears to find solace in the imperfections of knowledge and in the limitations imposed on human effort and inquiry, but, as Dean Inge once remarked, "Those who take refuge in gaps find themselves in a tight place when the gaps begin to close." Ignorance of the *modus operandi* of a phenomenon is no excuse for anthropomorphism, and to seize on some few phenomena not as yet capable of being mapped out in the vast territory of the known and mechanically explainable, and to relegate them to some mystical realm outside and beyond the physico-chemical, is surely an exhibition of disloyalty to that principle of continuity which science has invariably found underlying all nature.—I am, etc.,

CHARLES M. BEADNELL,
Surgeon Rear-Admiral R.N. (ret.).

Ringwood, Hants,
March 25th.

SIR,—In his letter in the *Journal* of March 18th (p. 488) Dr. H. E. Magee has stated our aim as the determination of the method by which any organism or tissue operates, and we must inevitably agree with him that if and when any biological process is *conclusively* shown to occur in a way contrary to physico-chemical laws the phenomenon should be regarded as a fact. Obviously, even the most convinced mechanist must yield this agreement, if only in a theoretical or formal sense and qualified by the condition that the supernatural demonstration to which it refers is an absurdity. Dr. Magee states that very many bodily functions fall into the category of reactions contrary to physical and chemical laws; from his context one presumes and hopes he really means that this contradiction is one not real and absolute, but apparent and temporary, and referring only to the contemporary state of physical knowledge. If this is so he is to be envied his rational detachment from the main controversial field; if not, one is compelled instantly and almost without apology to defend the mechanist philosophy in relation to science. With Teufelsdröckh well may we ask, "What are the Laws of Nature?" Surely no process, physiological or other, of whatever degree of complexity, can lead to denial, but only to confirmation.

True determinism has been periodically hindered by the development of a self-satisfied and incomplete mechanism, or, in medicine, a premature iatro-chemistry or -physics, and the dignity of its philosophy has been frequently injured by false associations with the baser political, social, and scientific materialism of the last century, to which Dr. Magee refers. But the larger creed is one of endless inspiration, and its tenets have been expressed nowhere more satisfyingly than by Sir Peter Chalmers Mitchell in his Herbert Spencer Lecture:

> "The theory known as Materialism assumes that the phenomena of life are special cases of the phenomena of matter, that is to say, that *if we knew all the chemical and physical factors implicated in any living phenomenon*, we could predict the result with the same certainty as when we know the factors in a lifeless material arrangement. . . . The magnitude which cells, tissues, and whole organisms can attain, the rate of their growth, their form, the deposition of skeletal excretions, the arrangement of leaves, the spirals of shells and of horns, the shape of eggs, the relation of form to mechanical efficiency, and a thousand other recurring details of structure require no vital principle to explain their existence. They are the inevitable consequences of mechanical conditions, driving life in defined and determined directions."

Professor A. J. Clark, in his Lister Lecture, has drawn attention to the impression that the simpler the living system studied the more does its behaviour appear as inexplicable by the laws of physical chemistry as at present known. But surely such characters as specific reproduction, apparent purposive response, continuity of energy exchange, or even consciousness itself, may also be regarded as attributes of systems—in the lowest forms of life as in the higher—differing only quantitatively from simple physical ones in their gigantic complexity and in the overwhelming intricacy of their associative and correlative mechanisms. The superficial resemblances between mechanism and predestination on the one hand, and between vitalism and free will on the other, may in this light disappear if we conceive an organization on physical lines so colossal as to admit the possibility of its responding by alternative or selected and centrally controlled reactions to a single stimulus.

"The house is there that men may live in it; but it is also there because the builders have laid one stone on another." And the game of the study and interpretation of life is one which vitalist, holist, or entelechist must inevitably lose.—I am, etc.,

ALEXANDER HADDOW.

Edinburgh, March 21st.

"Proto-duodenitis"

SIR,—In his letter published in your issue of March 25th Dr. J. Jacques Spira refers to himself as having described for the first time the pre-ulcerative stage in the causation of chronic gastro-duodenal ulcers, a stage which Mr. J. S. Kellett Smith describes under the term of "proto-duodenitis." Dr. Spira's publication dates from 1931, and a description of the pre-ulcerative stage in gastro-duodenal ulcers is found in the French literature about fifteen years before that. More precisely, in 1925 Ramond and Darquier described duodenitis as the pre-ulcerative stage of duodenal ulcer. In my book on diseases of the intestines, published in this country in 1927—a book which seems to have escaped the attention of Dr. Spira—I gave the reasons for the separation of the supra-papillary portion of the duodenum into a separate organ, which I called the "proto-duodenum," and in another chapter I described proto-duodenitis—a term which I also was the first to use—indicating that it was this limited inflammatory condition that played a part in the genesis of duodenal ulcer. Mr. Kellett Smith, through his researches, has given definite demonstration of the importance of this new anatomo-clinical syndrome, proto-duodenitis.

The history of the development of the conception of the pre-ulcerative stage of duodenal ulcer and of proto-

duodenitis is thus very straightforward, and I am afraid that Dr. Spira comes late in the series. I think that the separation I advocated many years ago of the supra-papillary portion of the duodenum, the "Brunnerian organ"—an organ which is independent of the rest of the intestine from an embryological, histological, and physiological point of view, and which thus must have a separate pathology—coupled with precision in the history of proto-duodenitis given by the work of Mr. Kellett Smith, represents an advance in the study of intestinal diseases. This conception will help us to understand and to treat better many obscure abdominal conditions.—I am, etc.,

London, W.1, March 27th. A. P. CAWADIAS.

Treatment of Tinnitus and Deafness

SIR,—I noticed in a letter from Mr. Lowndes Yates in last week's *Journal* that tinnitus accompanied by otosclerosis cannot be cured. One swallow does not make a summer, but a late very near relative of mine suffered for years from these complaints. He consulted many eminent otologists in Dublin and London, and had given up all treatment for ten years, as he had been told that there was no cure. I persuaded him to try treatment by the Zund-Burguet electrophonoide method, and I can vouch for his statement that the tinnitus entirely disappeared. The otosclerosis improved sufficiently for him to join in general conversation at table—a thing he had not done for years. This latter condition was a family one, and several of his relatives in Ireland suffered from it.—I am, etc.,

London, March 27th. F. W. GOODBODY.

Recoveries from Pneumococcal Meningitis

SIR,—I have read the reports and discussions on recovery from pneumococcic meningitis by Dr. Arthur F. Hurst (in your issue of February 11th, p. 246), and by Drs. J. McAuley and F. M. Hilliard (January 28th, p. 139, and February 18th, p. 290). May I point out there are perhaps 150 or more cases of recovered pneumococcic meningitis on record in the available medical literature of the world. I take this opportunity to refer to *International Clinics* (Phila.), 1927, Series 37, iii, 155-219 (with 258 references), and to another paper by H. I. Goldstein and H. Z. Goldstein in the *Medical Times* (New York), September, October, and November, 1927, on "Pneumococcic meningitis and endocarditis, report of cases and review of the literature" (with 252 references).—I am, etc.,

HYMAN I. GOLDSTEIN, M.D.

Camden, New Jersey, U.S.A.,
February 28th.

Use of Quinine in Normal Labour

SIR,—In your issue of January 25th, 1930, there was an article on the use of quinine in normal labour, which appealed to me because it was practical, and the treatment definitely "works." But I should like to give details of a case I had recently in order to find out if others have had a similar experience.

A primipara, aged 25, took quinine (1½ grains) three times a day for a week before her confinement. (I meant her to take it for fourteen days beforehand, but labour began some days before it was expected.) The pains were regular and strong, and she delivered herself naturally in twelve hours, and I felt the quinine treatment had definitely helped her; but the placenta would not come away by ordinary expulsion methods. After an hour she became very faint from loss of blood, and the placenta had to be removed manually under general anaesthesia (ether was used). It was found to be held up by a very definite contraction of the lower uterine segment, which had to be dilated by the fingers to allow of the removal of the placenta. The patient remained in a nearly pulseless condition for some hours, and as she vomited everything she was transfused with normal saline and glucose, after which she made a good recovery.

The article referred to above states that "no tendency to retained placenta (with its risk of post-partum haemorrhage) has been found with this method." Could any of your readers who have used quinine before labour tell me if they have had a similar case, because if retention of the placenta did occur at all frequently after this method of treatment it would be a very definite objection to the use of quinine.—I am, etc.,

Swanage, March 17th. W. A. REES.

Training for the Boat Race

SIR,—The near approach of the Oxford and Cambridge Boat Race—perhaps the most truly sporting event of all—has this year, as in past recent years, illustrated the apparently increased liability of those in training for this event to develop influenza. This liability continues certainly to a very late period in the training. The training is twofold—first, to produce the most perfect set of oarsmen possible from the material available, and, secondly, to see that by a system of graduated training the oarsmen on the race day are perfectly physically fit. Why, then, this apparent increased liability to influenza, if this perfect fitness has been obtained?

From a scientific point of view is it not possible, and even probable, that the present method of training, as far as physical fitness is concerned, is faulty? This is a matter of more importance than at first sight may appear, for though it is disappointing enough to an oarsman to lose through the bad luck of illness the honour of representing his university, and though it is equally disappointing to the university whose chances of success are imperilled for the same reason, yet the vital point is that, as the strain of the race is undoubted, perfect physical fitness must be ensured to prevent any risk of permanent damage to the individual. An important point to remember is that some of the oarsmen are young and have not yet reached full physical development, and no training that does not take this into account can be regarded as perfect.—I am, etc.,

North Walsham, March 21st CECIL H. W. PAGE.

British Discoveries in Tropical Medicine

SIR,—May I take issue with Dr. P. Manson-Bahr over a sentence in his paper dealing with British discoveries in tropical medicine during the last hundred years, which appeared in the *Journal* of February 25th (p. 301)? I would preface this letter with the statement that, despite the address from which this is written, I myself am English.

The sentence to which I allude is that in which Dr. Manson-Bahr, while discussing the part the British have played in the work on yellow fever, says: "It was Stokes who first demonstrated the ultra-microscopic nature of the yellow fever virus and its communicability to Macacus monkeys." Now, in the first place, it would appear unfair to mention only the name of Adrian Stokes in this connexion. The work was done and published by Stokes in collaboration with J. H. Bauer and N. P. Hudson,[1] whose names should not be omitted when this basic work is mentioned. Quite apart from this, however, is the fact that Stokes (with Bauer and Hudson) was not the first to demonstrate the ultra-microscopic nature of the yellow fever virus. This had been done by other workers at the very beginning of the twentieth

[1] *Amer. Journ. Trop. Med.*, 1928, viii, 103.

century, a fact which was well recognized by Stokes when he went to Lagos, as the following quotation from the paper of Stokes, Bauer, and Hudson will show: "It has been shown by several workers, Reed, Carroll, Agramonte, and Lazear[1]; Marchoux, Salimbeni, and Simond[2]; and Rosenau, Parker, Francis, and Beyer,[3] that the virus of yellow fever is easily filterable when present in the circulating blood of man."

Since I was in the fortunate position of knowing Adrian Stokes well, I feel myself at liberty to say that he himself would have been the first to acknowledge and make public statement of the facts I have mentioned. He was a man who was so eager to avoid taking to himself undue credit that, as many of his students have reason to know, he avoided taking even that which was his due when he found it possible to efface himself. This being so, I have felt it right to comment on this point in Dr. Manson-Bahr's paper, lest it cause misunderstanding among those who know the facts of the case.—I am, etc.,

Rockefeller Institute for Medical Research, New York, March 9th. G. W. RAKE.

Mirror-Writing

SIR,—There has recently appeared in the *Times* a series of articles about left-handedness which have aroused much interest. In view of this, and of the extreme rarity of the combination of left-handedness and mirror-writing, I thought the case mentioned below worthy of record.

A boy, aged 7 years, was brought to the Eye and Ear Hospital in Shrewsbury because his school teacher thought that his eyes might be defective. She complained that the boy was very backward, and that he appeared to have difficulty in reading and writing—"that he sometimes even wrote things backwards."

Physical examination revealed nothing abnormal, and the boy seemed to be of normal intelligence. The history from the mother, however, revealed the following. At the age of 3 she noticed that her son was left-handed, and, believing this to be wrong, tried to break him of his habit. She found that whenever he was made to use his right hand the boy stammered and used a meaningless and unintelligible language. The family doctor later advised that the child be allowed to continue to use his left hand; but, when he commenced to go to school, the teacher insisted that the right hand be used again, and the mother made no further complaint. At first the boy seemed only dull and stupid, but he soon commenced to write backwards, first letters and figures singly, and then later whole sentences. As an example of this, when asked to write "boys and girls," he wrote "slrig dna syob." Also, when told to add up columns of figures, he commenced to add from the left column first, and carried over to the right.

This state of affairs lasted for about two years, and then slowly he began to improve. When I saw the boy he wrote normally but extremely slowly with his right hand, except on those occasions when he thought he was not being observed; he then relapsed into his mirror-writing. With his reading, too, he was painfully slow, and one could almost picture his rearranging the letters of the word in his mind from his mirror image to the correct arrangement. When writing with his left hand this mirror-writing is also said to occur, but only very seldom; and his teachers have now been instructed to allow the use of the left hand on all occasions.

In cases of stammering following the enforced use of the right hand in left-handed children, it would seem that the strain of stimulating the formation of Broca's area in the left hemisphere is too great. Has this, however, any direct relation to the mirror-writing, and can one deduce that persistence in the formation of a new Broca's area would ultimately bring about cessation of these strange symptoms?—I am, etc.,

Shrewsbury, March 26th. GEOFFREY MOREY.

[1] *Senate Documents*, Washington, D.C., 1911, lxi, No. 822, p. 156.
[2] *Ann. de l'Inst. Pasteur*, 1903, xvii, 665.
[3] *Yellow Fever Institute Bulletin*, 1905, No. 14.

Doctors and Unemployment

SIR,—With reference to Dr. E. I. Puddy's letter in your issue of March 18th (p. 489), may one say that the problem of unemployment is the problem of unpaid leisure. Malthus's doctrine may be of great interest at present, but it has certainly been discredited. In whatever manner the food supply has increased, it certainly has not increased at a lesser rate than the population. The reason why people starve, or live on the borderline of starvation, is not because the food supply is insufficient, but merely because they cannot buy sufficient—quite a different problem. The treatment is, therefore, not to decrease the population but to increase its buying powers.

The problem of economics is the problem of producing and distributing the goods and services required by the population for its well-being. The first part of the problem has been solved by science. The second part—namely, that of distribution or selling—has to do with finance. This has also been solved by an engineer, but not by the general population—he has given the diagnosis and prescribed treatment (such as seems eminently sound to us); but the treatment has not been applied.—I am, etc.,

Aberdeen, March 21st. W. HAROLD EMSLIE, M.B., Ch.B.

British Goods for Hospitals

SIR,—Osler has said that to the Hippocratic school we owe, among other things, the conception and realization of medicine as the profession of a cultivated gentleman. Mr. Fitzwilliams would reduce it to a collection of touts for a narrow nationalism. He can hardly wish the profession to be so mean as merely to be "on the make" economically; he wishes it, one must suppose, to take its little place in a self-contained community, banishing "the foreigner" not merely from our markets, but also from our minds. Why not, then, carry the spirit a little further, and banish the foreigner from our textbooks—Claude Bernard, Koch, Lavoisier, Folin, Virchow, and the rest of them? Is Mr. Fitzwilliams unpatriotic enough to read foreign medical and scientific journals, to have anything to do with the many tests that find their way here from foreign parts, or to perform any operations whose technique owes anything to foreigners?

The profession of medicine transcends barriers of race, class, and nationality; "there is neither Jew nor Greek, bond nor free, but ye are all one." It is sad, therefore, to see this attempt to bring it down into the dusty arena of the modern politico-economic scrap.—I am, etc.,

Liverpool, March 27th. ROBERT COOPE.

Cremation as a Safeguard against Foul Play

SIR,—In view of a possible misapprehension that may arise in the public mind out of a recent inquest proceeding, when it was found necessary to stop a cremation owing to baseless rumours having been spread regarding the circumstances of death and in which the coroner gave his verdict that death was from natural causes, I think it important for your readers to know that it is cremation, and cremation alone, which provides effective safeguards against foul play or death under suspicious circumstances. This was strongly emphasized by the coroner, Dr. Edwin Smith, who stated that, having regard to the necessity for care in connexion with cremation, it is right to mention the superiority of cremation over ordinary burial from the point of view of public safety, in that the safeguards are good in relation to cremation, requiring as they do an inspection of the body and a

certification of the *facts*, as well as the *cause* of death, in every case.

In the case in question the deceased lady had been a member of the Cremation Society for over ten years, so that there was no doubt as to her own wishes, and death was certified by her medical attendant of many years' standing, who was present at death. His certificate was confirmed by a police surgeon, who also examined the body, and, finally, the cremation was authorized by the medical referee after examining these certificates with other essential documents submitted to the cremation authority.

As the late Professor W. E. Dixon, director of Pharmacological Laboratories, Cambridge, stated in his address on cremation and crime: "I firmly believe that cremation is a protection to the public against poisoning, as the nature of the inquiry which is made when cremation is desired is of such an exhaustive character that no guilty person would dare subject himself to it."—I am, etc.,

GEORGE A. NOBLE,
Secretary, Cremation Society.

23, Nottingham Place, W.1,
March 22nd.

The Services

ROYAL NAVY MEDICAL CLUB

The annual dinner of the Royal Navy Medical Club will be held at the Trocadero Restaurant on Wednesday, April 19th, at 8 p.m. General meeting at 7.30 p.m. Information can be obtained on application to the honorary secretary (Surgeon Commander R. J. G. Parnell, R.N.), Medical Department, Admiralty, S.W.1. Club guests: Lord Stanley, M.C., M.P., Surgeon Captain R. J. Willan, M.V.O., O.B.E., V.D., K.H.S., R.N.V.R.

Colonel FitzGerald Gabbett FitzGerald, D.S.O., has succeeded Major General Howard Enson, C.B., C.M.G., C.B.E., D.S.O., as Deputy Director of Medical Services at the Horse Guards, for the Eastern Command, with promotion to major general.

DEATHS IN THE SERVICES

Lieut.-Colonel John MacLaughlin, R.A.M.C. (ret.), died on January 23rd, aged 75. He was born on May 25th, 1857, was educated in the school of the Royal College of Surgeons in Dublin, and took the L.R.C.S.I. in 1879, also graduating M.D. in the Royal University of Ireland in 1880. Entering the R.A.M.C. as surgeon on July 30th, 1881, he became lieutenant-colonel after twenty years' service, and retired on February 19th, 1902. He served in West Africa, in the Tambuku campaign of 1892, including the capture of Tambi, and in the Gambia expedition of the same year, including the capture of Toniataba, in both cases as senior medical officer, was mentioned in dispatches, and received the medal with a clasp. He also served throughout the South African war, from 1899 to 1902, in operations in Cape Colony, was mentioned in dispatches in the *London Gazette* of February 8th, 1901, and received the Queen's medal with three clasps After retirement he was employed at Omagh in 1902, as recruiting medical officer at Bradford in 1907-8, and at Belfast in 1909.

Major Dennis Thomas MacCarthy, R.A.M.C. (ret.), died in Middlesex Hospital on February 20th. He was educated in Ireland, and graduated M.B., B.Ch., and B.A.O. in the Royal University of Ireland in 1906. Entering the Army as lieutenant in 1907, he reached the rank of major on July 30th, 1918, and retired on July 30th, 1926. He served in the war of 1914-18.

Major Douglas Reynolds, M.C., R.A.M.C., died in London on March 10th, aged 49. He was born on June 27th, 1883, the second son of Lewis W. Reynolds of High Wycombe, was educated at Guy's, and graduated M.B., B.S.Lond. in 1908, also taking the M.R.C.S. and L.R.C.P.Lond. in the same year, and subsequently the D.P.H. in 1924. Entering the R.A.M.C. as lieutenant on January 27th, 1911, he became major on January 27th, 1923. He served in the war of 1914-18 (medals), in Afghanistan in 1919 (medal and clasp), and in Waziristan in 1919-21 (medal and clasp, and M.C.).

Medico-Legal

LIBEL AND SLANDER IN MEDICAL PRACTICE.—I

We print below the first of two articles on libel and slander in medical practice, contributed by a legal correspondent. A subsequent article in the same series will deal with the extent to which hospitals and nursing homes are liable for the negligence of their staffs, and general practitioners for that of their assistants and locumtenents.

The medical man, especially the general practitioner and the medical officer of health, is peculiarly exposed by his calling to the risk of being defamed and of defaming others. Just as some of his patients become inordinately attached to him and repose in him the completest confidence, so others, by the law of opposites, develop a violent antagonism, which they do not hesitate to express in damaging allegations. Moreover, a medical man who does his public and private duty conscientiously can hardly help from time to time offending others, and is apt to make bitter enemies. On the other hand, apart from the risks they run of being libelled and slandered, medical men are constantly in danger of unwittingly offending against the law of defamation when for some reason they have to report on the health of one person to another, or when their professional duty compels them to communicate information which may be detrimental to someone. Every practising doctor should therefore know at least the principles of the law on libel and slander.

Libel and slander are both covered by the word "defamation," but libels are written, printed, or portrayed, while slander is spoken or conveyed in significant gestures. The essence of the law is that every man has a right to maintain the estimation in which he stands in the opinion of others unaffected by false statements to his discredit. A man is therefore entitled to damages from a person who makes statements about him which expose him to hatred, ridicule, or contempt, or which tend to injure him in his trade or profession or in any office he may hold. There is, however, a very important difference in law between the written and the spoken word. A libel is actionable if it has that effect on a man's reputation in any form; a slander, however vile it may be and however angry it may make the victim, goes completely unpunished unless it does certain things. It must either cause the injured party damage that is capable of being expressed in money; or it must impute to him a crime for which he can be sent to prison; or it must say that he has leprosy, plague, or venereal disease; or it must be of such a kind that it will naturally injure his reputation in his office, profession, or trade. It is actionable slander against a woman to say that she is unchaste or has committed adultery. Defamatory words are not actionable until they are "published," which means communicated to some person other than the person to whom they relate (except that in Scotland a man can sue for a libel which is read by himself alone). A defamer can escape damages if he can prove that the offending words are true. Libel is, however, a crime as well as a civil wrong, and a person charged with a criminal libel cannot defend himself by proving merely that it was true; he must also show that publication benefited the community. Moreover, even publication is not necessary. It may be a criminal offence to communicate a libel to the injured person only. The test is whether the words would naturally tend to provoke a breach of the peace.

These are the broad principles of the law of libel and slander, but they are governed by a system of very important exceptions. There are certain occasions on which it would be wholly against the general good if a man were not allowed to say what he had good reason to believe to be true and necessary for the fulfilment of a duty. Further than this, there are occasions on which a man can say what he likes, tell what lies he chooses, and be as damaging and scurrilous as he is able, without exposing himself to an

action for libel or slander. The protection which the law gives on these occasions is called "privilege"; in the first case it is qualified, in the second it is absolute. The only occasion of absolute privilege which is likely to concern the medical man arises in judicial proceedings. A witness in the box can say anything he likes, however malicious or unjustifiable, and, provided it is relevant to the matter before the court, he cannot be sued for libel or slander, though he may risk being tried for perjury. He can also say and write what he likes to his own solicitor, provided it is relevant, and to a solicitor who is taking his evidence for the purpose of making the "proof"—the summary of the witness's evidence which the solicitor sends to counsel for his information, to assist him in preparing the case. The same immunity applies to anything he says in an affidavit for use in judicial proceedings. The protection of privilege is therefore very complete, and a medical witness may take courage from knowing that he may do his duty by giving such information as he has reason to believe to be true, no matter how damaging it may be to others, without incurring the law of libel or slander.

The medical man is, however, far more closely and constantly concerned with qualified privilege. This kind of legal protection is given only on condition that the offending statement is made with complete honesty of purpose. It is withdrawn if the person who makes the statement is actuated by any indirect motive other than a sense of duty, a state of mind known to the law as "malice," but bearing no particular relation to malice as ordinary people understand it. Qualified privilege covers statements made in the discharge of a public or private duty, or to further a legitimate interest of the person making them, or an interest common to himself and the person to whom he makes the statement; or to obtain redress for a grievance, or on behalf of the injured person or at his invitation. The field is obviously a very wide one, and the working of privilege can only be illustrated by examples, which will be most usefully given in dealing with situations in which the doctor is likely to find himself.

THE DOCTOR AS DEFENDANT

It is important not to confuse the legal liability of a medical man for libel or slander with his moral and ethical duty to maintain professional confidence. The standing of the medical profession rests very largely on the confidence which patients feel in the ability of a doctor to keep his mouth shut about their affairs. A doctor who betrays a patient's secrets may conceivably have his name erased from the *Register*, but he cannot be made to pay damages unless he has committed libel or slander in the process (Kitson *v.* Playfair, *Times*, March 23rd et seq.; May 1st, 1896). In this connexion the word "privilege" has a totally different meaning from that which it bears in the law of defamation; it signifies the immunity of a professional confidence from disclosure in evidence—an immunity which medical confidences do not in this country possess, although many good authorities hold that they should. The most frequent occasion on which a doctor risks an action for libel is when he makes a report on the health of a patient to another person. In most cases the report is made at the request of, with the consent of, or in the interests of, the patient, and is therefore privileged in so far as it is communicated to persons entitled to receive it. Whenever possible, it is best to give the report to the patient himself. When a medical man is asked to make a report to a third party he must be quite sure that that person has a right to the report. Certificates under the National Health Insurance Act are given in the pursuance of a public duty, and so are protected by qualified privilege in so far as they are an honest expression of medical opinion and not tainted with "malice." The same rule applies to a certificate furnished to an employer in connexion with a claim by an employee under the Workmen's Compensation Act. If the report is made in good faith and communicated only to the person or persons entitled to receive it, with the sole motive of informing them of the condition of the patient, it is privileged.

"SHOULD THE DOCTOR TELL?"

The position is more doubtful when the doctor feels himself faced with a duty which is not specifically covered by any statute, and where he will not be protected by the consent of the patient.

> A servant consulted a general practitioner for a skin complaint and was found to be suffering from syphilis. The practitioner warned him that he was likely to infect his master, but the servant refused either to inform his master or to consent to the practitioner informing him. The master later visited the practitioner and begged to be told whether he and his family were being exposed to any infection. If the practitioner informed the master, would he be liable for damages?

The answer is that the servant would have a prima facie case against the general practitioner. It was decided in Villiers *v.* Monsley (1769, 2 Wils. 403) that it is libellous to write of a man that he has leprosy, plague, or venereal disease; and to say so in as many words constitutes slander, and there is no need for the plaintiff to prove that he suffered special damage that can be assessed in money. This plaintiff would be almost certain to lose his action, for the doctor would easily be able to show that he made the statement to protect the master's health. If, however, the manner in which he makes the statement discloses any malice—that is, any motive other than that of discharging his duty—he might have to pay damages. Lord Riddell, in his book *Medico-Legal Problems*, suggests a whole series of situations of this kind, such as the discovery by a doctor that an engine-driver is suffering from general paralysis, and he quotes the cases of Well-Blundell *v.* Stephens (1920, A.C. 956) and Tournier *v.* National Provincial Bank (1924, 1 K.B. 461) for authority that a professional man may disclose a confidence when he owes a public duty to do so. When a mistress calls in a doctor to see a servant and asks him for a report on her condition the question arises whether he can do so without the patient's consent. Lord Riddell considers that he can, and quotes Weldon *v.* Winslow (reported in the *Times* of March 14th to 19th, 1884). A doctor would, however, be well advised to protect himself in advance, either by obtaining the patient's consent or by legal advice, for unless it is clear that he owes a duty to the mistress to make the report the occasion is not privileged. It sometimes happens that a medical officer of health has to report on his subordinates to the local authority. If the doctor honestly believes his report to be true, and makes it without malice, he is safe from damages, but, as with all cases of qualified privilege, not from legal proceedings. In a case in which a medical officer of health made an unfavourable report on the work of a woman sanitary inspector the jury found malice on the ground that the defendant had often criticized the plaintiff for her work. Fortunately the Court of Appeal reversed the judgement. If it had not, the consequence would have been that no superior would dare to warn a subordinate before he reported him officially.

The working of privilege and malice are well illustrated in the case of Robertson *v.* Miskin (*Journal*, 1930, ii, 1105). A and B were medical men in partnership. B honestly suspected A of taking and consuming narcotic drugs from their common store. It turned out that the real culprit was a nurse, who was subsequently found to be a drug addict. B was able to show that he honestly and reasonably believed his accusation to be true, and that he had been actuated merely by a desire to protect the interests of the partnership. He had communicated his suspicions to a regional medical officer and another doctor. The judge ruled that all the occasions were privileged. A would have succeeded in his action if he had shown that B had used the occasions in some improper way, but the jury could only have found malice if they were satisfied that he did not honestly believe what he had said or that he had intended to injure A or to dissolve the partnership for his own benefit. The jury found that the words did not go against A in his professional capacity, or impute to him the criminal offence of stealing drugs, so that they did not constitute a slander in the absence of proof of special damage. The jury also found that B was not actuated by malice. He was therefore in any event protected by his qualified privilege.

CURE AND PREVENTION

The fact that emerges from a study of qualified privilege and of the cases in which it has been an important issue is that the law will ultimately protect a doctor who has acted in absolutely good faith in the execution of a duty or in the protection of a legitimate interest. If the occasion is privileged, the judge will rule that the jury cannot find a verdict against him unless he has been guilty of an improper motive, and if his motives have been absolutely proper he will get the verdict. Meanwhile, however, he has gone through several months of bitter anxiety and unpleasantness. He has had to bear the ill will of the plaintiff and the threats of his solicitors; his practice may have suffered damage, not only because much of his working energy has been diverted, but also because a certain number of patients will always leave a doctor about whom there is any public gossip whatever; he has had to consult solicitors and pay the costs of their advice and of the services of counsel; he has had to leave his practice in someone else's hands while he attended the hearing of the case; and he has had to undergo the ordeal of cross-examination with the object of proving him a trafficker in malicious falsehoods. If he wins his action he will be awarded costs, but these will not cover the remuneration which his solicitor is quite properly entitled to demand for his services. Still less will they compensate him for the demands the case will have made on his time and nervous energy, and the damage it will have done to his practice. How in the face of these considerations, which can hardly be new to any medical man, there still remain any practitioners who are not members of one of the large protection societies it is impossible to conceive. If a member of one of these bodies is threatened with proceedings for defamation and is innocent, he has only to fall back on the powerful aid of the society, which employs legal advisers specially skilled in all the law relating to medical practice.

LONDON CLINIC AND NURSING HOME

In the Chancery Division, before Mr. Justice Maugham on March 27th, the affairs of the London Clinic and Nursing Home, Limited, of Harley Street and Devonshire Place, again came forward on an application by certain of the unsecured creditors for a winding-up order. (The previous proceedings were reported in the *Journal* of March 11th, p. 438.) It was stated on behalf of these creditors that the evidence as analysed showed that the business was still being carried on at a loss, and that there was no sign of likely sale of the company's property, while at the same time debenture interest was mounting up. The application was opposed by the first and second debenture holders and by certain secured and unsecured creditors—the latter, however, being also debenture holders—on whose behalf it was pointed out that any winding-up order must shake public confidence and prejudice the possibility of sale. It was stated that the average number of patients during the last week or two had been 100, and that there were now 105 patients in the home, and at the average weekly charges there had been no loss during the last three weeks. A summons for sale by tender had been before Mr. Justice Bennett, and was standing over until May 1st. The period of managership by the Receiver had been extended to May 29th. It was important if there was to be a sale that nothing should prejudice the goodwill. With 100 patients at the average room-rate of twelve guineas per week, and including the rents from the under-leases, ordinary running costs would be covered. The nursing home had accommodation for 202 patients.

Mr. Justice Maugham said that he well understood the feeling of indignation which underlay the presentation of the petition by a firm which had supplied goods and equipment to the company. On the other hand, he had to consider the substantial interests of others in the assets. The buildings had been constructed for a special purpose, and it would be almost impossible to convert them except at a disproportionate expenditure. Any immediate step for the purposes of sale, or even sale within a reasonable time, would result in a sum being recovered which would not be more than sufficient to pay the debenture holders in full, even if sufficient to reach that amount. The result of a winding-up order would give no pecuniary advantage to the petitioners or to any other unsecured creditors, and it would be a pity if the court were so logically minded as to shut its eyes to the fact that if a large and important business such as this was being sold by or under supervision of the court it was likely to realize a smaller sum than it would do if the company was still alive and there was hope of some reconstruction or scheme of arrangement. To wind up the company must seriously prejudice the number of future reservations and do considerable damage to the prospects of sale. In view of the fact that a summons for sale by tender would come before Mr. Justice Bennett again on May 1st, his lordship ordered the petition to stand over until the first petition day after May 1st, by which time matters might have been clarified.

Universities and Colleges

UNIVERSITY OF OXFORD

The Radcliffe Prize for the furtherance of medical science in the University has been divided between Dr. R. S Creed, Fellow and Tutor of New College, and Dr. K. J. Franklin, Fellow and Tutor of Oriel College.

Frank Hawkins, B.M., University College, has been elected to the Radcliffe Travelling Fellowship.

UNIVERSITY OF LONDON

Mr. W R. Spurrell has been appointed Reader in Physiology at Guy's Hospital Medical School as from October 1st.

Sir Holburt Waring has been appointed Governor of East London College.

UNIVERSITY OF LIVERPOOL

The following candidates have been approved at the examinations indicated:

DIPLOMA IN MEDICAL RADIOLOGY AND ELECTROLOGY.—*(Part A)*: J. R. Burrows, T. P. Twomey.

D.P.H.—*(Part I)*: P. L. C. Carrier, Mary Coutts, P. P Fox, D. O Hughes, E. R. Jones, D F Morgan, V. T. Naidu.

DIPLOMA IN TROPICAL MEDICINE.—M. M. Ghosh, S Jackson, N A Kuraishy, J. F. Luke, R. B. Mathur, B. S. Nanjiani, E F. Thompson, G. R. Walker, F. Bando, S. S. Banker, Greta Lowe, S. E. Onwu, A. Rosenbloom, E. G. Williams, F. D. Zau.

UNIVERSITY OF LEEDS

The following candidates have been approved at the examinations indicated:

M.D.—G. Armitage, H. Broadbent, D. W. Currie, J. F. Galpine, F. Grundy.

FINAL M.B., CH.B.—*(Part I)*: E C Allibone, Mary Barraclough, J Benn, D. Bickler, F M. Brook, E. Brown, F. B. Coates, I. Cohen, G. M. Davies, D H Drake, H. W. Gothard, J C Hutchinson, R. S. Illingworth, B Jackson, K I. Johnstone, G J. Kearney, M. B Khan, N Lissmore, W. Lomax, O C. Lord, L. Nagley, A. B Raper, H. R Rollin, H. S. Shucksmith, G. N. Watson, L. A. Westwood. *(Part II)*: F. Badrock, G. W Blomfield, Kathleen S. Bruce, F. L. Cane, C. D. Clark, O. E. Fisher, J. Gibson, J. H. Hudson, M. Lask, Vida L. Liddell, K. O. Milner, W. Sharp, S. Suvi, W. H. Tod, J. F Warin, N. Wood. *(Part III)*: *J. Gibson, *K. O. Milner, F. Badrock, G. W. Blomfield, Kathleen S. Bruce, F L. Cane, C D. Clark, H Featherman, O E. Fisher, J. H. Hudson, M. Lask, Vida L. Liddell, S. Suvi, W. H Tod, N. Wood.

D.P.H.—J. N. Hill.

The Infirmary Scholarship and Littlewood Prize has been awarded to J. A. Rhind.

*Second-class honours.

UNIVERSITY OF ST. ANDREWS

Among those chosen by the Senatus Academicus to receive the honorary degree of LL.D. at the graduation ceremony on June 13th is Professor C. Neuberg, director of the Kaiser Wilhelm Institut für Biochemie, Berlin.

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons spent three days this week debating the future constitution of India on a Government motion to set up a Joint Select Committee which will report on that problem. A similar motion will be moved in the House of Lords next week. The committee stage of the Rent and Mortgage Interest Restriction Amendment Bill was also in the business of the week for the House of Commons.

The Housing Financial Provisions Bill was read a second time by the House of Lords on March 23rd, and the Housing Financial Provisions (Scotland) Bill was reported with amendments from a Standing Committee of the House of Commons on the same day.

On March 23rd also the House of Lords read the Pharmacy and Poisons Bill a third time, making draft alterations in it, and the Indian Pay (Temporary Abatements) Bill was reported, with amendments. On March 28th the latter Bill was read a third time by the Lords and passed.

Report on the Enteric Outbreak at Malton

Replying to Sir Francis Fremantle, on March 23rd, Sir HILTON YOUNG stated that he had caused to be published a report on the recent outbreak of enteric fever at Malton (*No. 69 in the series Reports on Public Health and Medical Subjects*). This contained information concerning this and similar outbreaks in the same district. Sir FRANCIS FREMANTLE asked whether similar outbreaks had occurred in the same district for forty years, and that nothing had been done to prevent them arising again. Sir HILTON YOUNG answered that steps had been taken to see that district and county councils did not neglect their duties.

Antimony Poisoning from Enamel Ware

On March 28th Mr. SHAKESPEARE informed Mr. Hutchison that the Minister of Health thought that the memorandum (Medical 171) issued in February last, and the wide publicity given to it, should afford sufficient warning of present dangers of antimony poisoning due to the use of cheap enamelled vessels. A technical officer of his Department was making further investigations to enable the Minister to determine whether any further legislative or other measures were required. Enamelled hollow-ware containing antimony was made in this country and in foreign countries.

Children and Young Persons Bill

In the House of Lords, on March 28th, the Children and Young Persons Bill, which consolidates certain enactments relating to persons under the age of 18, passed through committee on recommitment. It had previously been examined by a Joint Committee of both Houses.

Meals to School Children.—Mr. RAMSBOTHAM told Mr. David Adams, on March 23rd, that the numbers of children receiving meals under the Feeding of School Children Act during January and February, 1932 and 1933, were:

	1932		1933
January:			
Total (excluding London)...	162,631	.....	219,499
London	30,703	.....	34,637
February:			
Total (excluding London)...	172,644	.....	229,162
London	32,137	.....	Not available

Slum Clearance in Manchester.—In reply to Captain Fuller, on March 23rd, Sir HILTON YOUNG said that one slum clearance scheme affecting 199 houses had been completed by the Corporation of Manchester since 1922. In July, 1931, the corporation made a declaration that another area was a clearance area within the scope of Section 1 of the Housing Act, 1930, but it had not yet submitted either clearance or compulsory purchase orders. He would soon deal with this matter generally in a circular to local authorities.

Board of Control and Mental Hospital Plans.—Replying to Mr. Bossom, on March 23rd, Sir HILTON YOUNG stated that the time taken in the consideration of plans of mental hospitals and allied buildings by the Board of Control with a view to approval had been materially reduced in the last few years, but there were still cases in which delay occurred. He would be glad to inquire into any particular case of delay.

Obituary

ALFRED WILLIAM ALCOCK, C.I.E., LL.D., M.B., F.R.S.

Lieutenant-Colonel I.M.S. (ret.); sometime Professor of Medical Zoology in the University of London

We regret to announce the death of Colonel Alcock on March 24th. He will long be remembered as one of the mainstays of the original London School of Tropical Medicine and as one of Manson's chief lieutenants; he therefore belongs to the category of the pioneers of tropical medicine.

Alfred William Alcock, son of Captain John Alcock, was born in Bombay on June 23rd, 1859. After being educated at Blackheath and Westminster School he was sent to an uncle in Southern India to learn coffee planting. Finding this occupation little to his taste, he became a master in St. Paul's School, Darjeeling. Soon, however, he became convinced that he was destined for a medical career and, returning home, he matriculated at the Marischal College in Aberdeen in 1881, and graduated M.B., C.M. in 1885. It was at Aberdeen that he attended the lectures of Sir Alexander Ogston, and there for the first time he heard of Manson's epoch-making discoveries on the life-history of the *Filaria bancrofti*. This entirely new conception of the transmission of disease impressed itself so strongly on his mind that it remained a signpost for the rest of his life, and convinced him more than ever of the correctness of his favourite theme that the foundations of medical science are rooted and grow in biology.

Having completed his medical studies he did a course of instruction at Netley in 1886, and returned to India as an officer in the I.M.S. attached to the military branch. He served with the Punjab Frontier Forces 1886-8, and saw a considerable amount of fighting. He was soon seconded from military duty for more congenial occupation, and was appointed to conduct the zoological section of the Indian Marine Survey of 1888–92 as surgeon-naturalist on board the *Investigator*. He scoured the Indian seas, and visited many unknown and sparsely inhabited islands of the Indian Ocean. He next served on the Pamir Boundary Commission of 1895, and wrote a report, which is still worthy of perusal, on his experiences at those altitudes. There he became familiar with the Tibetan fauna, and also acquired a more than ordinary understanding of the frontier vernacular languages. Alcock was now marked out as the outstanding zoological authority of that great service to which he belonged, and which has provided India with so many scientific investigators. His interests were directed much more to the description of the arthropod fauna than to the treatment of disease. Although an authority on the classification of fish and snakes his main love was the crustaceae, especially the fresh-water forms, and he soon became known as a world authority on this group, and for this work he was elected a Fellow of the Royal Society in 1901. The C.I.E. was conferred on him in 1903.

From 1893 to 1907 he was professor of zoology in the Medical College of Bengal, and he became director of the museum in the Calcutta Medical College, which he entirely resuscitated and modernized, making it the outstanding zoological collection in the Peninsula, if not in the whole of the Far East. He retired from the Indian Medical Service in 1907 and, attracted by the reputation of Manson and his school, joined forces with him as teacher of medical entomology at the Albert Dock in London. Thus Alcock became one of the first teachers in this particular subject, and it was a matter of great gratification to him that he was ultimately honoured by the professorship of medical zoology in the University of London. His book on *Entomology for Medical Officers* reached its second edition in 1920. There are thousands of medical men who can testify to Alcock's charm and attractiveness as a teacher of this difficult subject; not only was he a great teacher, but he became the friend of every man, of whatever nationality, who entered the portals of that school. His loyalty to Manson and to the Mansonian tradition was almost a Holy Grail to him, and in a recent letter he himself wrote: "Manson was the magnet that drew me. I have held the faith and now I have finished my course."

Alcock established the entomological department at the School of Tropical Medicine, and he also organized and amplified the collection of insects, mosquitos, snakes, and indeed all the zoological impedimenta necessary to the study of tropical disease. Not only was Alcock a great naturalist, but he was a lover of literature of the highest type. Every letter he wrote and every article he penned was redolent of the scholastic atmosphere. These classical allusions are to be seen in the reviews that he wrote for many years in the *Tropical Disease Bulletin*. In 1927, together with Dr. P. Manson-Bahr, he collaborated in the *Life and Work of Sir Patrick Manson*, and was therefore given scope for the depiction of this great character. Alcock retired from active work in 1924, and had been living in seclusion at Belvedere in Kent, but his interest in medical zoology never flagged.

J. W. BATTERHAM, M.B., F.R.C.S.

Consulting Surgeon, East Sussex Hospital

On the death of John Williams Batterham at the age of 73 there passed away one of the elder practitioners of East Sussex and the senior consulting surgeon of the Royal East Sussex Hospital. Born in London in 1859, he entered Westminster Hospital in 1876, securing certificates of honour for general proficiency in both of his first two years, a scholarship in his second year, and the Chadwick and Frederick Bird prizes in his fourth. After qualifying M.R.C.S. in 1880 he held the post of assistant house-surgeon, taking his L.S.A. in the following year, and the M.B., B.S.Lond. in 1882. In the latter examination he gained honours in medicine and forensic medicine. After serving as house-physician at the Royal Hospital for Diseases of the Chest, City Road, and house-surgeon at the Wolverhampton General Hospital, he took his F.R.C.S.Eng. in 1885, and soon after settled in practice at Hastings, succeeding the late Dr. Penhall. In 1889 he was elected an assistant surgeon to the East Sussex Hospital, and succeeded to the senior staff in 1903.

As a surgeon Mr. Batterham could be bold when boldness was called for, but his work was always characterized by a sound judgement, a painstaking carefulness, an infinite patience, and an ever-present consideration for the feelings and well-being of his patients. His high sense of duty, the persistence with which he always stuck to a difficult or anxious case, combined with his cheery manner and his somewhat dry humour, frequently served to bring such a case to a successful issue. In the East Sussex Medico-Chirurgical Society he took a very keen interest, and was hardly ever absent from a meeting. In his turn he occupied most of its official posts, including that of president. At the Annual Meeting of the British Medical Association at Brighton in 1913 he was vice-president of the Section of Surgery. When the malady which ultimately proved fatal began to sap his powers in 1916, he wisely determined to retire, and went to live in the near-by village of Northiam. There he enjoyed several years of happy and well-earned leisure, devoting his time to his garden, archaeology, and fishing, besides bicycling with one or other of his children to see places of interest or to visit his large circle of friends. His interest in the hospital remained keen to the last. Elected to the consulting staff on his retirement, he also retained his seat on the General Committee, at whose meetings he was a regular attendant, even up to a few weeks before his death.

The last few years of his life were spent at St. Leonards, where he died on March 21st. In 1892 he married Mabel Caroline, the only daughter of the late Bruce Campbell and Caroline Campbell of Clive Vale, Hastings, and they had a family of four sons and three daughters. His wife died in 1903, and the last year of his life was further saddened by the loss of two of his sons. The eldest is following in his father's footsteps, being in practice at Newton Abbot, South Devon.

The death took place suddenly, at his residence in Aberdeen, on March 22nd, of Dr. JAMES PETER WATT, formerly medical officer of health for the county of Aberdeen. He was born in 1857, the son of the late Rev. William Watt, parish minister of Foveran, Aberdeenshire. After taking the M.A. degree, with honours in classics, at Aberdeen, and acting for a short time as lecturer in classics and history at that university, he went to Edinburgh to study medicine, and graduated M.B., C.M. in 1887. He acted for a short time as resident medical officer at Leith Hospital, and as an assistant in practice, but soon commenced the course of study for the diploma in public health, becoming D.P.H. in 1890, and in the following year being appointed medical officer of health for the county of Aberdeen. For thirty-four years Dr. Watt discharged the duties of this post with great efficiency, interesting himself especially in the open-air treatment of tuberculosis. He was predeceased by his wife some twenty-nine years ago, but is survived by a son and a daughter.

Dr. HENRY THEODORE HODGKIN, who died on March 26th, aged 55, in a Dublin nursing home following a serious operation, was for some time a medical missionary in China. He graduated M.A., M.B., B.Ch.Cantab. in 1905, after studying medicine at St. Thomas's Hospital, and then went to Szechwan Province for the Friends Foreign Mission Association, where he was one of the founders of the West China Union University at Chengtu. He returned to England in 1910 as secretary of the F.F.M.A. (now the Friends Service Council), a position which he held for ten years. After the war he went back to China on a lecture tour, as a result of which he received a pressing invitation to become one of the five secretaries of the National Christian Council of China—a post he held for seven years. In 1929 he went to Philadelphia to start the Quaker religious and social study centre known as Pendle Hill; but in July last year the state of his health forced him to return. He underwent an operation last month, and seemed to be making a slow recovery. The funeral took place on March 29th at Darlington, where he was born. Dr. Hodgkin was one of the best-known figures in the Society of Friends, both in this country and in the United States.

We have to announce the death, at the comparatively early age of 53, of Mr. ANDREW CHARLES, which took place in a Dublin nursing home. Born at Cookstown, Co. Tyrone, he qualified in medicine at the age of 21, and four years later became a Fellow of the Royal College of Surgeons of Ireland. He specialized in diseases of the skin, and gave particular attention to the treatment of cancer. His intensive study of the latter ultimately undermined his constitution. He was a born organizer, and his successful enterprises included the foundation in 1911 of the Skin and Cancer Hospital, Hume Street, Dublin, of which he was medical superintendent, and which is now a fully equipped hospital with all the most recent scientific apparatus for the treatment of cancer, including *x* ray, Finsen light, and radium, and the Erlangen symmetry apparatus. Mr. Charles was a Fellow of the London Dermatological Society. He leaves two sons, one of whom is Dr. R. C. Havelock Charles, and one daughter. His brother is Mr. Richard Charles, surgeon to the East Suffolk and Ipswich Hospital.

Medical News

H.R.H. Prince George has accepted the first presidency of the National Council for Mental Hygiene.

The Executive Committee of the British Orthopaedic Association announces that the Robert Jones gold medal and prize for 1932 has not been awarded.

The University of Bristol has arranged for a course of two lectures to be delivered to medical students and practitioners on the provisions of the National Health Insurance Acts. The lectures will be given by Dr. Jonas of Barnstaple at 3 p.m. on Thursdays, April 27th and May 4th, in the Anatomical Lecture Theatre of the University.

An intensive course in laryngology, rhinology, and otology will be held at the Central London Throat, Nose and Ear Hospital, Gray's Inn Road, W.C.1, from April 24th to May 20th. The course, which is especially suitable for D.L.O. students, will include an anatomy and physiology, and operative surgery classes, a practical course in peroral endoscopy, and a course in pathology and bacteriology.

The British Red Cross Society will hold a course of seven lectures and demonstrations on tropical hygiene on Mondays, Wednesdays, and Fridays, commencing April 21st, at 9, Chesham Street, Belgrave Square, S.W.1, at 5.30 p.m. The course will cover such questions as food, clothing, and medical and sanitary precautions necessary for health in hot countries.

At the next meeting of the Institution of Heating and Ventilating Engineers, on Wednesday, April 5th, at 7 p.m., in the lecture room, Home Office Industrial Museum, Horseferry Road, S.W., Mr. Bernard Oldham will read a paper on the application of refrigeration to air conditioning.

The Fellowship of Medicine and Post-Graduate Medical Association has arranged a series of demonstrations on certain aspects of surgical technique at 11, Chandos Street, W.1, on Wednesdays, at 8.30 p.m., during April. The demonstrations are as follows: April 5th, Mr. W. H. C. Romanis, operations on the brain and spinal cord; April 12th, Mr. Tudor Edwards, thoracic surgery; April 19th, Dr. G. F. Stebbing, radium and operative treatment of malignant glands of the neck; April 26th, Mr. Ernest Miles, abdomino-perineal excision of the rectum, followed by Mr. Lawrence Abel, surgery of the sympathetic nervous system. There will be an afternoon course in psychological medicine at the Maudsley Hospital, Denmark Hill, from April 24th to May 31st; an evening course in physical medicine at the London Clinic and Institute of Physical Medicine on Mondays and Wednesdays at 8 p.m. from April 24th to May 17th; and a week-end course in gynaecology at the Samaritan Hospital for Women, on April 29th and 30th

A post-graduate course in midwifery for practitioners will be held at the Liverpool Maternity Hospital on April 20th, 21st, and 22nd; fee £2 2s. inclusive.

The following courses will be held this year at the Hamburg Institute for Tropical Diseases: June 1st to July 5th, malaria; August 7th to 26th, tropical diseases and medical parasitology (in Spanish); October 2nd to December 16th, tropical pathology and medical parasitology. Lectures will be given by Drs. Fülleborn, Giemsa, Nocht, Martini, Mühlens, Reichenow, and Weiss. Further information can be obtained from the Institute, Bernhard Nochtstrasse 74, Hamburg, 4.

Two courses will be held this year at the School of Malariology in Rome, from July 3rd to September 16th. The first will deal with the agrarian and drainage aspect, and the second with the clinical side. Each course will include lectures, practical demonstrations, and excursions to malarial localities conducted by graduates in the various specialties concerned. At the end of each course diplomas will be awarded. For further details application should be made to the secretary of the Scuola Superiore di Malariologia, Policlinico Umberto 1, Rome.

National Baby Week will be held this year from July 1st to 7th. A conference on maternity and child welfare will take place on July 5th, 6th, and 7th at the Friends' House, Euston Road, London. The executive committee of the National Baby Week Council has commended for special attention during the year the ways and means of preparation for parenthood and the formation of more fathers' committees at infant welfare centres. In the course of the week there will be a display of propaganda films in London. Particulars of the competitions arranged by this council and of the various activities of Baby Week may be obtained from Miss Norah March at the offices of the council, 117, Piccadilly, W.1.

The twenty-fourth Congress of the German Roentgen Society will be held at Bremen under the presidency of Professor R. Kienbock of Vienna from April 22nd to 24th, when papers will be read on the campaign against cancer, by Blumenthal of Berlin; the present state of radiological treatment of malignant tumours, by Holthusen of Hamburg; the methods of Roentgen treatment of tumours, by Schwarz of Vienna; the diagnosis of diseases of the gastro-intestinal canal, by Forssell of Stockholm; contrast methods in neurology, by Peiper of Frankfort; and the physical principles of the biological effect of *x* rays, by Glocken of Stuttgart.

At the meeting of the Zoological Society of London on March 21st Mr. R. W. Harris exhibited, and made remarks upon, a cinematograph film illustrating the use of the Harris trap in the field for the capture of tsetse fly in Zululand.

The Bulletin for 1933 of the Pneumothorax Artificialis Association Internationale will be published shortly. The general secretary requests members to send their annual subscription of 20 lire to Professor Umberto Carpi, Alberto da Giussano, 18, Milano, Italy. Members are also asked to send early information to the secretarial office about: (1) new publications on collapse therapy (2) new technique and apparatus or instruments connected with collapse therapy; (3) any changes in the lists of doctors and establishments where artificial pneumothorax or other pulmonary surgery is practised.

The Cambridge University Press will publish shortly, on behalf of the *British Journal of Ophthalmology*, a book by Mr. R. R. James entitled *Studies in the History of Ophthalmology in England prior to the year 1880.*

The January and February issues of the *Calcutta Medical Journal* are largely devoted to epidemic dropsy, embodying papers read and discussions held on the subject by experts at six clinical meetings of the Calcutta Medical Club. Copies of the two issues, price Rs.2, may be had from the manager of the journal, 62, Bowbazar Street (second floor), Calcutta.

Messrs. H. K. Lewis and Co., Ltd., announce for publication in April a new work entitled *The Anatomy of the Eye and Orbit*, by Mr. Eugene Wolff, with 173 illustrations.

The annual report for 1932 of the council of the Cremation Society contains the information that two new crematoriums (at Southampton and Reading respectively) were established during the year, making twenty-four in all for Great Britain. The number of cremations throughout the country increased by 21.56 per cent., reaching a total of 6,315. Although this figure appears small in comparison with the half-million burials a year, the council anticipates a substantial rise in the number of cremations in the near future. Mention is made in the report of the joint conference of burial and cremation authorities held last July at Brighton, as the result of which steps are now being taken for the institution of a national council for the disposal of the dead. Addresses have been given in various places by the lecturers of the society. Reduced fees for cremation are available for those insured under the national health insurance scheme, and for their dependants; for the most part, the cost of cremation now compares favourably with that of earth burial. The profit and loss account shows a credit balance for the year not far short of £1,000. Lord Horder, Dr. H. T. Herring, and Dr. A. A. Mussen are members of the council of this society, which, it may be recalled, was founded by the late Sir Henry Thompson in 1874.

The Hungarian Ophthalmological Society has elected Mr. Leslie Paton and Mr. A. F. MacCallan as honorary members.

Geh. Rat. Professor Dr. Hans Horst Meyer, formerly professor of pharmacology at Vienna, celebrated his eightieth birthday on March 17th.

Professor A. Eiselsberg, the eminent Vienna surgeon, has been nominated an honorary member of the Société Belge de Chirurgie.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, B.M.A. House, Tavistock Square, W.C.1.**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names, not necessarily for publication.

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of proofs.

All communications with reference to ADVERTISEMENTS, as well as orders for copies of the *Journal*, should be addressed to the Financial Secretary and Business Manager.

The **TELEPHONE NUMBERS** of the British Medical Association and the *British Medical Journal* are MUSEUM 9861, 9862, 9863, and 9864 (internal exchange, four lines).

The **TELEGRAPHIC ADDRESSES** are:
EDITOR OF THE *BRITISH MEDICAL JOURNAL*, *Aitiology Westcent, London.*
FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate Westcent, London.*
MEDICAL SECRETARY, *Medisecra Westcent, London.*

The address of the Irish Office of the British Medical Association is 18, Kildare Street, Dublin (telegrams: *Bacillus, Dublin*; telephone: 62550 Dublin), and of the Scottish Office, 7, Drumsheugh Gardens, Edinburgh (telegrams: *Associate, Edinburgh*; telephone: 24361 Edinburgh).

QUERIES AND ANSWERS

Post-influenzal Tachycardia

"H. I. M." asks for suggestions in treating a case of persistent tachycardia following on an ordinary attack of influenza in December, 1931. Treatment has been rest, iron and arsenic (for acute anaemia now cured), potassium bromide, quinine hydrobromide, and calcium. Septic tonsils were enucleated in August last. General health is now good, but the patient readily tires. The pulse is 114–120 at rest.

Phlebitis after Childbirth

Dr. H. L. MCCORMICK (Dennistoun) writes: I would suggest that "G. N. W." gives an extended trial to S.U.P. 36. This preparation seems to be of greatest value in those prolonged low inflammations of which phlebitis is a good example.

Nail-biting

Dr. F. W. MORTON PALMER (Teignmouth) writes: In reply to Dr. J. Kerr Muir (March 18th, p. 497), nail-biting in children is often caused by the presence of agnails. The cuticle at the base of the nail is stretched by the growing nail, to which it adheres, and splits to form the agnails. The nail is irritated, and the child endeavours to obtain relief by biting the free edge. Daily retraction of this cuticle by an orange stick will often cure the habit.

Income Tax

Purchase of House and Removal

"N. D." had a lease which expired, and a renewal could not be obtained. Being unable to rent suitable premises he bought a thirteen and a half years' lease of a house in the neighbourhood. He inquires as to the allowances due to him.

*** Such portion of the cost of removal as relates to the professional furniture, equipment, etc., is allowable, as the removal was unavoidable. The cost of acquiring the property and of rendering it suitable for professional use is "capital" and is not allowable. Subsequent expenditure on the decoration, etc. (other than improvements), of the professional portion would be allowable. Where new carpets, linos, etc., were bought to replace those formerly in professional use the cost should be claimed and would be allowable except as regards the element of improvement as compared with the sizes, quality, etc., of the original carpets. As the ground rent of the new premises will presumably be less than the amount of the net Schedule A assessment, the proportion of the latter referable to the professional part of the house should be claimed in lieu of a proportion of the rent.

Payment for Wife's Services

"W. McC." inquires whether a deduction may be claimed for "salary paid to one's wife for her assistance in book-keeping and clerical work generally."

*** Yes; such payments can be treated as allowable expenses, but, of course, should be kept down to what would be a reasonable payment for the clerical services rendered. The amounts must be actually paid—a mere book entry that the money is intended, or was intended, to be paid is not sufficient. The wife in such circumstances is assessable under Schedule E on the amount received by her, but is entitled to an allowance of £45 in respect of "wife's earned income." This £45 consequently represents the maximum net deduction obtainable.

Appointment: Subscription to B.M.A.

"J. E. S. L." has been informed by the inspector of taxes that under the case of Simpson *v.* Tate he cannot be allowed to deduct from the amount of his salary his subscription to the B.M.A.

*** In the case quoted it was accepted as the fact that it was not a condition of the appellant's appointment that he should be a member of the society in question, but such membership was customary for county medical officers. On that the deduction was refused by the High Court, but apparently the reverse would have been the case if membership could have been shown to be a definite condition of the appointment.

First Year of New Partnership

"X. Y." became a partner in a firm as from January 1st, 1932; he had formerly been an assistant, apparently in the same practice. He is assessed in respect of his third share in the partnership, and is informed that he cannot deduct his car expenses of 1932. Is this correct?

*** In such circumstances the partners (including any outgoing partner) can combine to require that the practice shall be regarded as having stopped at December 31st, 1931, and started again at January 1st, 1932. If that were done the cash basis would have to be discarded and the new firm would be chargeable for 1932 on its earnings of that year on a bookings basis. The change to that basis would be troublesome, and might, of course, affect the other partners adversely. Further if, as we gather, "X. Y." was an employee in the same practice in 1931, his salary,

etc., were deducted in calculating the profits for that year, which serve as the basis for the 1932-3 assessment, so there would be some set-off against the problematical advantage of assessment for that year on current earnings. Altogether we advise "X. Y." to leave matters as they are; on any basis he must expect to have to pay tax during his early years in the practice on a greater amount of income than he receives *in cash*.

"Tips" for Professional Purposes

"DUBIUS" holds a lease on two rooms in the West End and tips the butler regularly every week. While not legally necessary, the tips are considered by him essential to ensure good service. Can the amounts so paid be deducted as a professional expense?

*** In our opinion they are undoubtedly deductible. They are bona fide paid to secure week-to-week service, and are just as proper subjects of deduction for income tax as, for instance, voluntary Christmas gifts to employees.

LETTERS, NOTES, ETC.

X Rays in Treatment of Graves's Disease

Corrigendum

Dr. G. COOPER (Leeds) writes: Will you kindly allow me to correct a misprint in my letter in your last issue (p. 537)? The doses given should have been shown as "r" units, not as "R" units.

Aluminium and Health

Dr. R. M. LE HUNTE COOPER (London, W.), in the course of a long letter commenting on the leading article on this subject in the *Journal* of March 18th, writes: I wish very forcibly to remove the impression conveyed in your article that I am concerned with infinitesimal quantities. Very far from it. My claim is that the universal use of this metal, not only for personal cooking, but in the preparation of ready-cooked foods, wrapping of cheeses and sweets, and storage of food, etc., by its very quantity endangers our own health, and will still more injure that of succeeding generations.

Prognosis in Pulmonary Tuberculosis

Dr. G. ARBOUR STEPHENS (Swansea), in the course of a letter expressing appreciation of the conclusion reached by Dr. William Stobie in his article published last week, writes: After taking into consideration a large number of factors, Dr. Stobie finds that the only one on which any reliance can be placed is that of a good constitution, well circumstanced, resulting in a small amount of toxaemia. Much, however, depends on the method of estimating the toxaemic condition, and I venture to suggest that the results I obtained by my method of estimating the "basic blood pressure" point to this method as being one that can be readily applied by the majority of practitioners.

Inversion of Uterus: Inversion of Patient

Dr. JOHN PEARCE (Walkden, Manchester) writes: I exclose an extract from a letter from the wife of a missionary in Papua, a lady, by the way, who has had no medical or nursing training or experience: "She gave birth in the scrub; they called me about 9 a.m., an hour after birth, as they could not get the afterbirth away; when I got there she was lying with her feet against a tree and a crowd of women and children round her. The uterus was out on the ground with flies crawling on it. . . . I rushed back to my books, and was told by them to send for a doctor (the nearest is 200 miles away), so I got some native midwives; they lifted the woman and shook her upside down. About 3 p.m. the uterus went back. The mother and child did well, and are well after three months." Comment is inappropriate.

Massage in Europe

Dr. M. C. R. GRAHAME (Burnley) writes: The interesting review of the *History of Chinese Medicine* in the *Journal* of March 4th states on page 373 that: "Massage . . . was not brought to European notice till the eighteenth century. . . ." Is this quite correct? Many years ago I had access to the books of an old country practitioner who dated from mid-Victorian times, and among them was a curiously literal translation into English (by a doctor whose name I have long forgotten) of the works of Celsus. Though Celsus flourished in the reign of Augustus Caesar his works had a vogue till about a century ago. He mentions this very thing—rubbing—and adds that such treatment is better administered by "the little hands" of boys and women than by men. A line of Latin was followed by a verbal translation on the next line, and though I have not seen the book since this century began, some of the quaint expressions have stuck.

*** Sir D'ARCY POWER, to whom we have referred the point, writes: Massage as friction was in constant use amongst all nations and peoples as far back as history reaches. Celsus attributes its introduction as a remedial agent to Asclepiades of Bothynia, a quack who practised successfully in Rome at the beginning of the first century of our era. Massage has at various times fallen into disrepute. It was reintroduced by Fabricius at Aquapendente (1537-1619) and popularized by Paracelsus (1591). The Swedish gymnastic system instituted by Pehr Henrik Ling (1776-1839) is derived from the book of Cong-Fou, the bonze of Tao-sse, for in China the method had long been practised by a professional class.

Iodine Deficiency

Dr. F. J. ALLEN (Shepton Mallet) writes: The experience of Dr. Hassan Bey Shaheen (*British Medical Journal*, March 11th, p. 442) suggests that there is a deficiency of iodine in our food owing to artificial preparation, and that many people would be the better for taking a minute daily dose of iodine in some form. I personally have derived great benefit from taking one grain of potassium iodide daily for the last eighteen months. From the first it relieved chronic bronchitis, and enabled me to recover my weight, which had been severely reduced thereby. One of the modern refinements of food is the use of pure NaCl, instead of sea salt containing iodine and traces of other elements, which may be valuable accessories to our food. Much valuable mineral food is lost by throwing away the water in which vegetables are boiled, also by the over-refinement of flour. As a result most people nowadays are probably living on a deficiency of iodine and calcium, and might be benefited by a small daily dose of these, and possibly other elements. Recent research seems to reveal that many elements formerly supposed to be accidentally present are either necessary or beneficial to animal life: among them are lithium, rubidium, copper, zinc, arsenic—and even molybdenum!

SOS Hostels: An Appeal

A special appeal has reached us from the SOS Society, 49, Doughty Street, W.C.1, requesting our help in the provision of medical practitioners who would be prepared, upon occasion, to examine men on their admission to the society's hostels and also to carry out a periodical medical examination of the hostellers themselves. There are at present three hostels in existence: the Studdert-Kennedy Hostel, 61, Mount Pleasant, Holborn, W.C.1, the Aldgate Hostel, 17, Great Prescot Street, Aldgate, E.1, and the Angel Hostel, 358, City Road, Finsbury, E.C.1, while a fourth will shortly be opened in Camden Road. The society is controlled by a responsible and representative general council, whose members command universal respect; its object is mainly to provide accommodation, supervision, and care for unemployed men who have no visible means of support. In view of the recent appeal which was made by H.R.H. the Prince of Wales for personal service, it seems appropriate that medical practitioners within the areas concerned who can give the necessary time should proffer their services to the general secretary, P. N. Shone, in order to facilitate the successful conduct of this desirable organization engaged upon relief work.

Disclaimer

Dr. ALEXANDER FRANCIS (London, W.1) writes: I have been informed that the husband of a patient of mine inserted a notice in a London paper inviting sufferers from a certain complaint to communicate with him, and then, in reply to inquiries, sent a statement that his wife had been cured by me. I should be grateful if you would allow me to state that this was done entirely without my consent or knowledge, and that I have now taken steps to prevent any further reference to my name.

Vacancies

Notifications of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 45, 46, 47, 48, 49, 52, and 53 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 50 and 51.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 123.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

233 Faber's Anaemia Achylica Simplex

E. Meulengracht (*Ugeskrift for Laeger*, November 24th, 1932, p. 1111) records an analysis of forty-five cases, observed during the past six years, of a disease which he links with the name of Knud Faber, since he was the first, in 1909, to draw attention to the association of gastric achylia with anaemia. Only one of the author's forty-five patients was a male. The ages of most were between 20 and 50, there being a quite definite preference for the ages 40 to 50. The oldest patient was 76, and it may be that this condition is relatively often overlooked in elderly persons, whose anaemia attracts less attention than that of middle-aged women. The most prominent symptom was profound lassitude ; less uniform symptoms were dyspepsia and premature greyness of the hair. The haemoglobin figure was between 23 and 65 per cent., the latter being the figure fixed by the author as his maximum. The number of red cells ranged from 1.6 to 4.7 millions, the average being 3 to 4 millions. The colour index was invariably low, but it did not seem to vary with the degree of the anaemia. The leucocytes were between 1,100 and 8,700, with a tendency to subnormal figures. Among the forty-five were thirty-six hospital patients whose ailments on admission were diagnosed as neurasthenia in five cases, heart disease in four, and such diseases as rheumatism, pyelitis, and metrorrhagia in eight. Many of the certificates of admission contained several alternative diagnoses, but in more than half of all the cases reference was made in the diagnosis to the patient's anaemia. The treatment consisted of the exhibition of massive doses of iron. The immediate results were so uniform and so strikingly good that in their absence the author questions his diagnosis or suspects complications, but the dosage must be massive and the treatment consistent. Treatment with liver extract in five cases was quite ineffective. It would seem that subsequent courses of large doses of iron are necessary from time to time, for the author found that most of the twenty-seven patients whose subsequent careers he was able to follow had become more or less anaemic again.

234 The Origin of Malaria Symptoms

Bonfa (*South African Med. Journ.*, December 24th, 1932, p. 793) offers a tentative explanation of the clinical facts in malaria. He summarizes the life cycle of the plasmodia in human blood as follows. The saliva of the mosquito haemolyses and keeps separate the red blood cells, and destroys the few white blood cells that are present in the small wound. The sporozoites attack and penetrate red blood cells ; thus protected they enter the general circulation through the wound in the blood vessel or through the lymphatic circulation. The sporozoites become amoebulae, grow larger, and take food from the plasma even before the red blood cells are reduced to shells only. The suggestion made by Bonfa is that at this stage these red blood cells are arrested in the capillaries of the brain, since their diameter is a micro-millimetre larger than that of the red blood cell itself. The circulation in the brain is more sluggish than in any other part of the body, for the red cells can travel along the capillaries only in single file. Such sluggishness is further favoured by the fact that there is no active muscular movement. The parasites of subtertian malaria show a remarkable tendency to clump together, and, in addition to this, the red cells containing growing parasites have also a great tendency to stick to the walls of the blood vessels. As soon as the number of parasites is large enough their toxin will enter the general circulation and cause the characteristic pyrexia and an enormous destruction of blood cells, besides a marked Hb diminution of the surviving corpuscles. The life cycle of *P. falciparum* ranges between thirty-six and forty-eight hours, so that after a certain number of days there will be several swarms of plasmodia in the brain, making the blocking of the vessels more continuous. The cerebral symptoms will be more severe because of the limited clearing of the brain blood vessels, the rigor attacks will be relatively less marked, and the pyrexial attacks much more prolonged because the blood vessels will not discharge all the parasites' toxin into the general circulation at the same time. A brain embolism consisting of subtertian parasites has been demonstrated by Manson-Bahr. It is suggested that treatment given on the lines of this theory proves that it is useless to administer quinine to a patient with tertian infection if the fever is at its height, because the plasmodia have then penetrated into red blood cells, where they have sealed themselves and are well protected from antitoxin and quinine in the plasma.

235 Pulmonary Changes in Rheumatic Pericarditis

G. T. Cook (*Brit. Journ. Child. Dis.*, October–December, 1932, p. 264), who reviews the literature and records his observations on thirteen personal cases in patients aged from 7 to 35 years, emphasizes the frequency with which pulmonary signs are found in association with rheumatic pericarditis, being present more frequently on the left than on the right side. The onset, which may occasionally be extremely sudden and severe, may develop quite apart from a pleural or pericardial effusion The histological appearance of the lungs in these cases is one of collapse and passive congestion rather than that of the specific inflammatory condition. Cook suggests that the pulmonary condition is an active massive collapse of a portion of the lung due to a reflex disturbance of the vagus and sympathetic innervation of the lung from inflammation of the pericardium.

236 Nirvanol Sickness

J. F. Madden (*Arch. Derm. and Syph.*, December, 1932, p. 1065) calls attention to the fact that nirvanol (phenylethylhydantoin) always produces cutaneous manifestations, accompanied by a definite symptom-complex, after it has been administered for a certain fixed time and in certain amounts. This drug has been used for the treatment of chorea in children, in epilepsy, and in rheumatism. In chorea the successful results are attributed to a specific reaction which occurs after several days of oral administration ; it has been suggested that this reaction is similar to that of serum sickness, but the exact mechanism has not been determined. There appears to be an alteration in the acid-base equilibrium of the blood. At first there is an alkalosis approaching a pre-anaphylactic tetany. The peripheral nerves share in the general stimulation, which accounts for the increase in the choreic movements. At the moment when the eruption appears the alkalosis is changed into an acidosis, and it is possibly this which has such a marked and beneficial effect on the central nervous system. Poynton states that the usual effect of nirvanol seems to be absent in certain persons, and these are also resistant to the various serums which would cause anaphylactic phenomena in other persons. As regards the rash, the differential diagnosis lies between the acute contagious exanthemata, such as measles and scarlet fever, and nirvanol—a matter of considerable importance when recurrent nirvanol eruptions occur, especially if no mention has been made that the patient has been taking the drug. In the case of nirvanol there are no prodromal symptoms as in measles ; the eruption appears first on the trunk, and not on the face or neck, which it rarely involves ; and there is no tendency to a crescentic arrangement of the morbilliform spots. It is distinguishable from the rash of scarlet fever by the absence of sore throat ; there is no strawberry tongue or general lymphatic enlargement, and no desquamation ensues. The blood shows a true eosinophilia, which reaches its

maximum just before the appearance of the eruption. There is also generally a leucopenia, with a decrease in polymorphonuclears, accompanied by a relative lymphocytosis and monocytosis. After the eruption has disappeared the blood picture returns to normal. The prognosis of nirvanol sickness is good. Complications are few, and usually of no great consequence. The literature contains only a few examples of severe complications that resulted in sepsis or death.

237 Nervous Complications of Varicella

P. BÉRODE (*Thèse de Paris*, 1932, No. 553) has collected seventy-four cases of varicella with nervous complications in patients aged from 4 months to 33 years, most of which have been recorded within the last six years. The onset was sudden. There was almost always an interval of from five to seventeen days between the eruption of varicella and the onset of the nervous symptoms. The attack of varicella was usually normal, and uneventful recovery was the rule; only two of the seventy-four cases proved fatal. All parts of the nervous system may be affected, but the choreo-athetotic cerebellar forms and meningitis were the varieties most frequently encountered. In some cases, including one seen by Bérode, the reaction of deviation of complement performed with an emulsion of recent varicella scabs proved positive. The aetiology of these nervous phenomena is still obscure. It is possible that there is an unknown neurotropic virus, which is roused into activity by the varicella infection, as in the nervous complications of other eruptive fevers. On the other hand, it is possible that the varicella virus itself under certain conditions, such as special susceptibility of the individual, may become neurotropic. Neither of these hypotheses has so far received any anatomical, bacteriological, or serological confirmation.

Surgery

238 Splenectomy in Haemorrhagic Purpura

J. M. ASKEY and C. G. TOLAND (*Arch. of Surg.*, January, 1933, p. 103) record details of a case of typical chronic haemorrhagic purpura in which clinical recovery followed splenectomy, without, however, a return to normal of the blood picture, a leucocytosis persisting. On the day after the operation there was an enormous elevation of the leucocyte figure, due to proliferation of the granular cells. This slowly decreased, but a year later the white count was still elevated. The authors remark that the frequency with which this is found after splenectomy for purpura haemorrhagica suggests the existence of a leucotoxin in addition to the hypothecated lysin that destroys the platelets, but they have no explanation to offer of the continued leucocytosis; as a rule the normal count is regained within one month. There was the usual slower rise in platelets in their case, the maximum being reached about the eighth day after the operation; the response was moderate, however, the count failing to reach the frequent level of 500,000 to 1,000,000. The immediate return to normal of the bleeding time was coincident with the rise of platelets. Over a period of a year and a half after the operation there occurred a gradual reduction in the platelet count, but, nevertheless, the clinical improvement continued, there being a gain in weight and strength, and the patient being able to return to her former occupation—namely, teaching. Thrombocytopenia, the so-called essential factor in the production of the disease, reappeared, but the usual sequel, pathological haemorrhage, did not do so. The blood clot again failed to retract, and there was a shower of petechiae on application of the tourniquet, but no oozing of the gums or menorrhagia was reported; moreover, atypically and peculiarly, the bleeding time was normal. The authors add that there would seem to be an additional factor responsible for this disease other than the thrombocytopenia. Apparently, clinical haemorrhagic purpura can appear when the platelets are normal in number, as in the "thrombasthenic" type, which is usually familial. Conversely, a patient may have a marked reduction of the blood platelets without clinical purpura haemorrhagica. They conclude, therefore, that the sole explanation for the clinical cure of purpura haemorrhagica in the majority of cases by splenectomy cannot be the post-operative elevation of the platelets; it is concomitant with improvement, but the effect of the specific operation is more complex and far-reaching than it has yet been possible to explain. The authors review the salient facts in the literature concerning the so-called chronic essential thrombocytopenic purpura; they cite a number of atypical cases of unusual haemorrhagic disease and emphasize the futility of splenectomy in them. They urge the importance of a meticulous scrutiny of any haemorrhagic patient in order to eliminate the possibility of there being present such conditions as "thrombasthenic" purpura, and point out that thrombocytopenia is apparently not the only factor concerned in purpura haemorrhagica.

239 Reduction of Intussusception

E. v. REDWITZ (*Münch. med. Woch.*, January 13th, 1933, p. 55) describes a simple method of reducing an intussusception. He points out that it is the spasm of the bowel which makes the reduction difficult and involves the use of forcible measures which may result in disaster. Redwitz paints the intussuscipiens with tincture of opium. This is usually followed by a strong contraction and then a rapid relaxation. Sometimes no mechanical methods are needed and the intussusception reduces itself, but if not it can be reduced with ease. The tincture should be sterile, but the author has not found it necessary to sterilize any tincture sent to him from the chemist. It is wise to bear in mind that young children are very susceptible to opium, and it is necessary to try to standardize the amount of opium applied to the bowel. The author uses a pledget of cotton-wool weighing 0.05 gram. He has found that when this pledget is saturated with the tincture it contains 0.01 gram of opium. Since only a fraction of the solution is used, not more than 0.006 gram of opium is applied to the bowel. As a further safeguard against poisoning, the serosa of the bowel is dried when the desired result has been obtained. The author believes that other antispasmodics might be used with benefit and the necessity of mechanical methods of reduction of an intussusception be obviated. He points out that it will still be necessary in all cases to see that the loop of bowel involved is viable. In severe cases he believes resection to be the best treatment, although this carries a high mortality rate.

240 Cysticercus Invasion of the Brain

S. S. ALLEN and H. W. LOVELL (*Ann. of Surg.*, January, 1933, p. 1) report two cases of cysticercus infestation of the brain. In one there was a solitary cyst, producing a secondary type of hydrocephalus and sudden death; in the other a generalized infection involved one cerebral hemisphere, producing the symptoms of brain tumour. The domestic pig is the most frequent carrier of the disease, having the cysticercus usually in the intramuscular connective tissue, but it is also found in the sheep, stag, brown bear, dog, cat, and monkey. In the larval stage it appears as a small, rounded, nodular thick-walled cyst, from 6 to 20 mm. in diameter, which contains a delicate thin membrane belonging to the embryo and enclosing thin watery fluid. Microscopical examination reveals the embryo, which has a head with four rudimentary suckers and a double row of hooklets. Infection by the cysticercus may take place through contaminated food, by auto-infection through uncleanly toilet habits, or as the result of regurgitation from the intestine into the stomach by reverse peristalsis from vomiting. The interval between the time when the ovum is introduced into the stomach until the cysticercus is fully developed is about three months. The organs most frequently invaded are the eyes, brain, and spinal cord, including the meninges, the muscles, the skin, and the subcutaneous tissues. The parasite passes through the wall of the stomach by means of the hooklets, probably entering the blood stream and being carried to various parts of the body. The embryo originates a definite inflammatory reaction, with infiltration of cells, an increase in the vascularization, and a

proliferation of glia if the lesion is in the central nervous system. This gives rise to severe oedema in the brain and increased intracranial pressure. Fibroblasts and monster glia cells form a connective-tissue capsule round the parasite and a dense gliosis surrounding the capsule. When the embryo is fully developed the inflammation subsides. The symptoms are similar to those of an intracranial tumour, with dizziness, vomiting, epileptic seizures, and psychic changes. The course of the disease is intermittent, though sudden death, as in the first case reported, may occur when the lesion is within the ventricles. Lumbar puncture, spinal fluid examination, and *x*-ray investigation may aid diagnosis, but this is seldom complete before operation. In the first case recorded death occurred before treatment could be undertaken, but in the second case the operation relieved the acute symptoms, provided a good temporary result, and made progressive improvement possible.

Therapeutics

241 Complete Control of Polycythaemia Vera by Phenylhydrazine

H. Z. GIFFIN and E. V. ALLEN (*Amer. Journ. Med. Sci.*, January, 1933, p. 1) record the treatment of a series of thirty-seven patients suffering from polycythaemia vera; it was found that, after the initial course of phenylhydrazine hydrochloride had been satisfactorily completed, the disease could often be subsequently controlled by the administration of a very small dose (0.1 to 0.4 gram) of the drug at weekly intervals. Indeed, in some instances the dosage for effective control was found to be as low as 0.006 gram each month. The authors conclude that this fact rather suggests that phenylhydrazine may have another effect on the blood picture, such as an inhibitory effect on the production of erythrocytes, although it has been fairly well proved to have a stimulating effect on the production of leucocytes. They add that some of their patients have been able finally to dispense entirely with the drug and still maintain a normal number of red blood corpuscles. Other patients have found it necessary to use the drug regularly; in some instances subsequent courses of daily doses have had to be resumed. It has been shown that in the case of most patients aged less than 60, who are not in an advanced stage of the disease, phenylhydrazine can safely be administered in the initial course in 0.1-gram doses two or three times daily until a total dosage of from 3 to 4 grams of the drug has been given, or, if less than this dosage is required, until definite clinical evidence of active haemolysis presents itself. The drug in such dosage is cumulative in its action, and haemolysis almost always continues for a week or ten days following its withdrawal. During this initial treatment the patients should be treated as though they were ambulatory, under hospital observation if possible, and every effort should be made to keep the circulation free and active. The drug should, however, be given cautiously, or not at all, in the case of patients with advanced arteriosclerosis and visceral lesions or who are bed-ridden, or when the history is suggestive of active extensive pre-existing thrombosis, or when they are more than 60 years old. In all the authors' cases the response to the initial course of treatment was prompt and satisfactory. There was no evidence of the development of any abnormal tolerance of the drug.

242 Endocrine Therapy in Whooping-cough

O. BAREOUR (*Arch. of Pediat.*, December, 1932, p. 816) records his observations on eighty-five cases of whooping-cough which he had treated during the last eighteen months by various endocrine preparations—namely, suprarenal, or thyroid and suprarenal, or thyroid, suprarenal, and non-specific protein. The results of treatment were as follows. In forty-four cases there was a striking improvement in the symptoms within one or two days and a complete disappearance of the cough within one to four weeks following the use of suprarenal extract. In fourteen cases a prompt relief followed the administration of thyroid and suprarenal extract, and a complete cure ensued within one to four weeks. A group of twenty-three patients responded very well to combined endocrine and protein therapy, with complete disappearance of the cough within two to four weeks. In four cases there was little or no effect. There were no complications or sequels.

243 Irradiated Ergosterol in Osteomalacia

J. DECOURT and S. KAPLAN (*Paris Méd.*, December 3rd, 1932, p. 485) attribute the seeming infrequency of osteomalacia to the fact that the disease is not usually recognized until it is well established. They believe that attenuated forms exist; they are less rapidly progressive and deforming, and are difficult to diagnose. Osteomalacia is characterized by a process of decalcification, leading to softening and fragility of the bones. It occurs almost exclusively in females, especially of adult age (*30 to 50*). Usually the first symptom is pain, deep-seated and excruciating, which is exacerbated by movement and pressure and eased by immobilization. Deformities supervene later and predominate in the trunk and pelvis, the limbs being affected subsequently. Spontaneous fractures often occur. The marked impotence is due to muscular pareses and contractures caused by the pains, and by a neuro-muscular state which seems to be the result of a disturbed calcium metabolism. The blood calcium and phosphorus figures are decreased and a relative acidosis (a lowered alkaline reserve and increased *p*H) is present. Radiographs show an accentuated blurred paleness of the skeleton, due to the intense, often unequal, decalcification, especially at the epiphyses. All treatments to the present have been unsatisfactory, such as the administration of calcium and phosphorus, opotherapy, and ovariectomy, the classical one. Constantly excellent results have followed the use of irradiated ergosterol (*vitamin D*). A case, reported last year by Harvier and Lafitte, is fully described as an illustration. In ten days following the administration of this substance remarkable improvement ensued. The power of movement was re-established, the pains totally disappeared, and the mental state improved. The blood also became normal. *X*-ray examination revealed a marked improvement in the osseous lesions. Similar cases have been reported, especially in Germany, improvement resulting from the daily administration of 5 mg. to 1 cg. of ergosterol daily. Like benefits have also been obtained in the attenuated forms; three such cases are recorded. Owing to the activity of ergosterol an exact dosage is necessary. The authors have found that 3,000 to 5,000 rat (antirachitic) units are well tolerated, even by the aged; this dose should be given four days a week and suspended for the other three to avoid calcium intoxication. Since various factors (calcium deficiency, avitaminosis, and endocrine disturbances) may cause the disease other treatments should be associated with the ergosterol. Calcium and phosphorus salts, cod-liver oil, and in some cases opotherapy, especially ovarian, are valuable adjuvants. A well-balanced diet should be given. Orthopaedic measures are useful in aiding correction of the deformities.

244 Serum Therapy of Pneumonia

J. G. M. BULLOWA (*New York State Journ. Med.*, January 1st, 1933, p. 13) records a study of the results following the use of typed serums in 1,601 pneumonia cases at the Harlem Hospital during the last four seasons. A brief review is given of the various types of pneumococci isolated up to the present time. Type I occurred in about 25 per cent. of all adult cases; of Types II and III approximately 10 per cent. were found of each. Certain types, notably IV and VII, seem to be important, in some cases more than III; others, such as IX, XIV, XVIII, and XXI, are occurring with increasingly relative frequency. Types V and VIII, formerly included in II and III respectively, are different types, requiring different serums; the diseases they cause and their prognosis differ from the case of Types II and III pneumonias. Types XIV and VI are among the most frequent invaders of children, and are becoming more common among adults. Useful serums have been

prepared for fourteen types other than I and II. Multiple infections were found in 3 per cent. of the cases; this may account for some failures in treatment, the serum used not being specific for the causal organism. As Types I and II are concerned in almost 40 per cent. of cases, these serums should be given to all cases pending determination of type. Specific therapy in Type I cases, in both bacteriaemic and other forms, caused approximately a 50 per cent. reduction in mortality with a shortening of the illness and saving of sicker patients. A similar reduction in mortality was noted in serum-treated cases of Types VII and VIII, which together constituted 12 per cent. of the cases. Type II cases showed only a 13 per cent. reduction. The high mortality and poor results in this type indicate the importance of prompt and adequate treatment. Striking results have been obtained with serums of other types, but the cases are insufficient to merit record. Bullowa believes that even late administration of serum is of use; many bacteriaemic cases recovered after treatment as late as the fifteenth day. Successful treatment depends on correct typing, the strength of the serum, adequate dosage, medical, surgical, and nursing care, and on other factors, some unknown. Bullowa emphasizes the need for better serum and uniform standard of potency. Notes on four cases, illustrating various points, are given.

Laryngology

245 Laryngeal Epithelioma in the Young

Laryngeal epithelioma is one of the rarest tumours occurring in youth, the sites usually attacked at this age being the digestive tract, liver, and skin. Only twenty-one cases have been reported in the past thirty-six years. G. PORTMANN and R. PHILIP (*Rev. de Laryngol., d'Otol. et de Rhinol.*, January, 1933, p. 1) believe, however, that its incidence before the age of 30 is increasing, having encountered three further cases in the last three years. In presenting a study of this condition details are given of two of these. The real origin of this tumour is unknown; certain factors, such as constant irritations by continued vocal over-use, such as shouting, the excessive indulgence in alcohol and tobacco, and frequent colds are of some aetiological influence. Syphilis appears to be an important predisposing agent, as is also poor social and hygienic environment. Statistics show that laryngeal cancer occurs more frequently in females before the age of 20; after this age it predominates progressively in males. In the young these neoplasms are frequent sequels of polypi and papillomata. They are usually intrinsic, with a site of predilection on the posterior part of the arytenoids and vocal cords, most frequently the right. The extrinsic type is rare and is generally due to extension of an epithelioma. The tumour is bright red and, when ulcerated, shows yellow spots; the ulcer is irregular with well-defined borders. In all reported cases the tumour was a pavement epithelioma of very great cellular malignancy with feeble stroma reaction. The growth rapidly evolves, the more so the younger the patient. Obstruction of the glottis usually occurs in two months and the duration is from twelve to eighteen months. The first symptom is hoarseness, which fast increases, and a rapidly progressive dyspnoea soon supervenes. Other symptoms are ticklings and tinglings in the throat and a frequent, often paroxysmal, dry cough. Dysphagia is of late appearance. The diagnosis is difficult and can only be made by a biopsy. Among conditions to be differentiated are syphilis, tuberculosis, and benign tumours. Complications are asphyxial crises, perichondritis, haemorrhage, and broncho- and lobar pneumonia. Death usually occurs from one of these causes or from cachexia and tumoral intoxication. The prognosis, always grave, is governed by an early diagnosis, the patient's age, the degree of malignancy, and the extent of the lesion. Three theories have been advanced as to the pathogenesis: the parasitic, Cohnheim's embryonic rest theory, and the irritative. Treatment is essentially surgical; thyrotomy or partial or total laryngectomy according to the extent of the growth should be performed. Radiations should only be employed in inoperable cases; it is yet undecided whether x rays or radium afford better results. Short notes of fourteen of the most typical cases published in the literature are appended.

246 Sphenoidal Sinus Infection and the Cerebral Blood Supply

F. A. PICKWORTH (*Journ. Laryngol. and Otol.*, December, 1932, p. 797) records original work which indicates that the cerebral arteries may be adversely affected by contiguous sepsis of the sphenoidal sinus and nasopharynx, which must be considered, therefore, to be a possible factor in the production of mental disorders as well as the agent in disseminating infection to the lungs, liver, kidneys, and brain. The subject is dealt with under three headings: (1) diffusion of toxins to contiguous tissues, (2) centrifugal spread of organisms from the septic focus, and (3) affection of the sympathetic system and consequent modification of the calibre of the small blood vessels. The literature relating to these matters is freely cited; it would seem to have been rendered evident that soluble substances can diffuse from a sphenoidal sinus infection into the tissues surrounding the carotid artery in amounts sufficient to cause degenerative changes in the smaller arteries of the brain. In one case, of which an illustration is given, Pickworth has demonstrated the local cause of an atheromatous condition of the cerebral arteries which resulted eventually in the death of the patient from cerebral haemorrhage. This patient suffered from chronic mania, and in another case in which there was insanity with epilepsy the carotid arteries at the post-mortem examination were found to be in close relation to sphenoidal sinuses full of yellow pus. Instances are reported of organisms spreading centrifugally to infect the perivascular tissues of the carotid artery. It is suggested that organisms occasionally find their way into the perivascular tissues of the smaller brain arteries, where they disintegrate and originate local pathological changes such as atherosclerosis. Nasopharyngeal sepsis may affect the cerebral arteries through disturbance of the sympathetic system by involvement of the nasal ganglion or of the cerebral branches arising from the main sympathetic trunk in the neck. In addition to the direct effect of sympathetic stimulation upon brain vessels, adrenaline is also liberated into the blood stream, and thus further constricts them. The author has shown also that the pituitary gland may be involved as the result of infection of these sinuses. In its chronic form nasal sinusitis is frequently unaccompanied by local symptoms and its presence may even be overlooked at necropsies unless a special technique is employed. The author pleads for more consideration to be given to these forms of sepsis of the cranial sinuses.

247 Latent Laryngeal Diphtheria in the Adult

C. JAMET (*Thèse de Paris*, 1932, No. 534) has collected five cases in patients aged from 18 to 68, one of which is original, showing that in addition to the ordinary faucial diphtheria, which is easily recognized, rhino-pharyngeal and laryngeal attacks may occur in which the symptoms are merely rhino-pharyngitis, dysphonia, and pharyngitis. In the presence, therefore, of a protracted laryngitis or pharyngitis a culture of the larynx should be taken and a search should be made for diphtherial membrane, which can most readily be detected by posterior rhinoscopy. According to Jamet, diphtheria in the adult without faucial deposit does not show any tendency to extend, but is fairly frequently accompanied by paralysis of the soft palate owing to the absence of treatment. Although immunity to diphtheria is the rule in inhabitants of towns, it may sometimes be entirely absent, or, if incomplete, serves to explain the relatively mild course of these cases. Owing to their being contagious, such cases are more dangerous than patients with faucial diphtheria who are immediately isolated and treated, and also than healthy carriers in whom the bacilli are only feebly virulent. The Schick test should therefore be applied to adults as well as to children, and those who are positive should be immunized.

Obstetrics and Gynaecology

248 Frequency and Mortality of Abortions

L. BALSLEV (*Ugeskrift for Laeger*, January 5th, 1933, p. 16) has been prompted to make a statistical study of the frequency and mortality of criminal abortions in Denmark by the allegations of certain of his colleagues, whose assertions in this domain are said to have lacked solid foundations. A study was made during the ten-year period 1921–30 of all the admissions to public hospitals of cases of abortion in Copenhagen and other parts of Denmark, representing a population of a little over a million—that is, about one-third of the total population of Denmark. There were 16,103 such admissions in the period under review. This represented an average of 164 abortions per year per 100,000 inhabitants. This annual average was 160 during the first five years and 168 during the last five years. There were 126 deaths, 100 of which were probably due to criminal abortion induced by the patient or an accomplice. As many as ninety-eight of these 100 deaths were due to sepsis (peritonitis, etc.), only two being due to drugs. In the remaining twenty-six cases there was insufficient evidence to suggest that death was directly due to criminal abortion, the causes of death being such factors as excessive haemorrhage, tuberculosis, pneumonia, and endocarditis. The author concludes that the incidence of deaths following criminal abortion in Denmark is not such as to justify any outcry in favour of the amendment of existing legislation.

249 Preventable Invalidism after Childbirth

J. C. LITZENBURG (*Journ. Amer. Med. Assoc.*, November 19th, 1932, p. 1740) emphasizes the importance of post-natal supervision as well as of pre-natal care and the taking of precautions during labour. He defines three stages in the puerperium—namely, (1) the immediate, which ends when the patient is able to be up and about again; (2) the intermediate, or period of completion of involution, extending to about six to eight weeks after labour, but sometimes longer; and (3) the remote, a period which ends only when all delayed normal processes have resumed and every complication of pregnancy or labour has been entirely eliminated. At the end of the first of these stages there should be a very careful search for abnormalities. In addition to the prevention of haemorrhage during labour the blood should be examined for signs of subsequent anaemia, which is the commonest cause of slow recovery of health after delivery. A woman with a low haemoglobin percentage and a poor red cell count is in danger of invalidism unless appropriate treatment is instituted. Any indications of toxic trouble during gestation should receive careful consideration after labour in order to make sure that there is no remnant of damage to the kidney. This is especially the case when the disappearance of albumin, casts, and hypertension, and the return of normal renal function have been prolonged. Nearly always, when recovery has been slow, and sometimes even when it has been rapid, albumin and casts may be found in the urine at intervals, and indicate that renal restoration is incomplete—another cause of invalidism which must not be overlooked. Occasionally there will be found also the persistence of some toxic condition which is acting upon a damaged kidney. The bearing of such renal trouble upon future pregnancy has also to be considered. Uterine displacements, especially retroversion, have to be remembered, and a careful examination for them should be made about four to six weeks after labour; any persistence of an abnormal position will require correction by a properly fitting pessary, since delay in this respect may result in a serious morbid condition. The author finds neuroses far from uncommon after pregnancy; he insists, therefore, on the importance of allowing ample time and rest for restoration of the normal health, of dealing with anaemia, and of paying attention to the general and mental hygiene. Mention is made of such serious puerperal complications as pyelitis and pyelonephritis, chronic puerperal infection, and chronic cervicitis with its annoying leucorrhoea. Litzenberg maintains that the primary duty, as regards the prevention of cervical carcinoma, is the securing during the puerperium of an uninfected and perfectly healed cervix, if necessary by the employment of local applications, cauterization, or the repair of lacerations. Close supervision must be maintained until it is certain that health has been completely regained in all respects.

250 Early Diagnosis of Carcinoma of the Uterus

F. V. MIKULICZ-RADECKI (*Monats. f. Krebsbekämpf.*, January, 1933, p. 11) points out that 70 to 80 per cent. of early cases of cancer of the uterus can be saved. In all gynaecological cases symptoms which may be produced by cancer should be carefully investigated in order to exclude this condition. Carcinoma of the cervix occurs in women aged 40 to 50, but 25 per cent. of cases occur before 40. Cancer is to be suspected in cases with haemorrhage occurring after coitus, micturition, defaecation, or gynaecological examination. A malodorous discharge or intractable pruritus may be the only sign. Pain is usually a late symptom. "Sciatica" should not be diagnosed in an elderly patient without making a vaginal examination. On palpation of the cervix a tumour or an ulcer may be felt; papilloma, condyloma, and myoma have to be excluded. Nabothian cysts, when aspirated, are filled with mucus, whereas the cystic masses of early cancer are filled with blood. It is characteristic of early malignancy that on palpation an area of softening is felt surrounded by an area of hardness, and the cervix bleeds easily; the tissues are friable and easily abraded, and round the cancer are harder than the normal cervix. In all cases a biopsy should be performed and a portion of the cervix with an area of healthy tissue be removed. The dangers of haemorrhage, infection, and dissemination of cancer cells make it imperative that the procedure be carried out in hospital. Precancerous states cannot be diagnosed with certainty. The author suggests painting the cervix with iodine; precancerous areas and early cancers are stated not to take on the dark brown colour. Although it has not been proved that leucoplakia of the cervix is a precancerous condition, it is well to keep such cases under supervision. Carcinoma of the uterine body occurs in patients from 50 to 60. They may complain of post-climacteric haemorrhage, of a long-standing whitish or blood-stained discharge, or periodical pains in the lower abdomen due to uterine contractions. Inspection and palpation are often negative. The uterus may be anteflexed, soft, and slightly enlarged. The enlargement may be due to pyometra and not to a tumour, but in all cases of pyometra the possibility of a cancer must be borne in mind. The uterus should be gently curetted and the tissues examined microscopically. In some cases a second curetting may have to be undertaken after the lapse of a few months if the first examination has been negative.

251 The Surgical Menopause after Hysterectomy

J. V. SESSUMS and D. P. MURPHY (*Surg., Gynecol. and Obstet.*, December, 1932, p. 728) have studied the incidence, onset, duration, and severity of the surgical menopause, as indicated by its most important symptom—hot flushes—in ninety-one women after hysterectomy with retention of one or both ovaries, and in fifty-two after hysterectomy and bilateral oophorectomy; in both groups the operation was performed before the age of 36. The surgical menopause was found to occur in more cases, it appeared earlier, and was more severe following hysterectomy with associated bilateral oophorectomy than when one or both ovaries were conserved. It still persisted in three-fourths of the patients when these were last seen, and was complete in the remainder. Its duration was shorter after associated bilateral oophorectomy than after hysterectomy with ovarian conservation. This study indicates that, when hysterectomy is to be performed during the child-bearing period, the patient's best interest is guarded by conservative treatment of ovarian tissue.

Pathology

252 Bacteriological Researches in Abdominal Diseases

S. CIMINO (*Il Policlinico*, December 15th, 1932, p. 721) has bacteriologically examined sixty cases of disease on the right side of the abdomen to discover how far the infection affects adjacent structures. Appendicitis was present in all the cases, sometimes associated with cholecystitis, or gastric or duodenal ulcer. The organs affected, as well as the lymphatic glands, were examined and the various organisms were identified, chief among them being *B. coli*. Some anaerobic microbes were also found. The author believes it is possible for bacteria to pass through the normal intestinal mucous membrane. The chief result of his investigations is to show how widely distributed these organisms are within the abdomen. The ileo-caecal lymphatic glands were invariably found infected with the same organisms as the appendix. In a few cases the glands round the greater curvature of the stomach were similarly affected. In most cases the appendix is the starting focus for these infections. The infection may spread by continuity or via the lymphatics, or in the case of the gall-bladder by the portal channel. The recurrence of appendicular attacks after the appendix has been removed may be explained by the persistence of germs in the adhesions. *B. coli* was the most frequent micro-organism, but staphylococci, streptococci, pneumococci, and others were also seen. In two cases the *B. mesentericus vulgatus* was found, which is not usually held to be pathogenic.

253 Differences in the Property of Acid-fastness

E. DARZINE (*Ann. de l'Inst. Pasteur*, December, 1932, p. 743) has studied such factors as the temperature and time of fixation and the temperature and time of staining on the acid-fastness of a number of saprophytic acid-fast bacilli. All cultures were of the same age, and were on Petroff's medium. Fixation was performed at a temperature between 50° and 200° C. for a time ranging from one to twenty minutes. Staining was by Ziehl solution for three minutes at 90° C. Decolorization was carried out with 2 per cent. sodium sulphite solution. A comparison was made of the rapidity of decolorization of films fixed at different temperatures, and later of films stained with fuchsine of different temperatures. These experiments led to the following conclusions. The higher the temperature of fixation the more rapid is the process of decolorization; the higher the temperature of the staining solution the more rapidly does decolorization occur. In subsequent experiments all films were fixed in an oven at 60° C. for three minutes, and stained for three minutes in a fuchsine bath at 60° C.; the length of time necessary to bring about decolorization with 2 per cent. sodium sulphite solution was then measured. Studying different strains of saprophytic acid-fast bacilli, the author found great differences in the ease with which they were decolorized. At one extreme was Moeller's bacillus, which was not decolorized in twenty-four hours; at the other extreme was Grassberger's bacillus, which was decolorized in five minutes. A more careful study of these two organisms showed a similar difference in their resistance to killing by 10.5 per cent. sulphuric acid. Moeller's bacillus was not destroyed by an exposure of twenty-four hours, while Grassberger's bacillus was killed in five minutes. A chemical analysis was then made on three-weeks-old cultures in 4 per cent. glycerin broth. Before analysis the organisms were dried to constant weight. No appreciable difference was found between the two organisms in their total nitrogen or in their mineral content, but whereas 23.78 per cent. of the dry weight of Moeller's bacillus was soluble in chloroform, only 17.14 per cent. of Grassberger's bacillus was dissolved by this substance. Since, after chloroform extraction, both organisms had lost their acid-fastness, it was concluded that it is the fat dissolved by the chloroform that is responsible for the property of acid-fastness. The fatty material extracted from Moeller's bacillus was more solid, and had a melting point of 45–46° C.; that extracted from Grassberger's solution was more liquid, and had a melting point of 30° C. A study of various fatty acids showed that stearic and palmitic acids easily took up Ziehl's stain, and resisted decolorization for a week, while oleic acid, which is a liquid and is unsaturated, was very easily decolorized. The conclusion is therefore reached that acid-fast bacilli containing fatty acids of high melting point are more resistant to decolorization and to destruction by mineral acids than bacilli having fatty acids of low melting point.

254 The Parotid Carbohydrate Metabolism

E. FLAUM (*Wien. Arch. f. innere Med.*, December 20th, 1932, p. 201) refers to many clinical and experimental observations which prove that the parotid should be classed with the endocrine glands. The total number of clinical observations of parotid affections—chiefly hypertrophy—occurring in endocrine derangements is very large. Seven cases of familial chronic parotid hypertrophy associated with lymphatism and endocrine disorders have been recorded. Many cases of Mikulicz's disease accompanied by obesity have been published, also instances of enormous goitres associated with parotid hypertrophy, suprarenal hyperplasia, and testicular atrophy. Animal experiments have shown that ablation of the salivary glands induces glycosuria, and that this is diminished by subsequent subcutaneous injection of aqueous parotid extract. Ligature of the parotid duct produced a definite reduction in the percentage of blood sugar, while in rabbits the ablation of all four salivary glands was followed in two or three days by an increasing glycosuria. Although injection of an extract of parotid and submaxillary glands produces only a slight diminution of blood sugar, pure parotid extract lowered the content by 30 per cent. These results prove that there is a connexion between parotid swelling and disturbance of parotid metabolism, and that the parotid gland has an internal secretion that exerts a regulating influence on carbohydrate metabolism. Stimulation of this function has a favourable action in human diabetes mellitus. In five cases great improvement followed ligature of the parotid duct. By a combination of dietetic and surgical treatment without insulin diminution of glycosuria has been obtained, even in relatively severe "pre-comatose" cases. Another writer has ligatured the parotid ducts in ten cases and obtained a favourable result in seven patients, although the three remaining patients were not relieved. The mechanism of parotid sugar regulation is still obscure, and further observations are necessary.

255 Vitamin A Deficiency in Castrated Male Rats

MYRA M. SAMPSON and V. KORENCHEVSKY (*Biochem. Journ.*, 1932, vol. xxvi, No. 5, p. 1542) have shown already that vitamin A deficiency in food produces changes in various organs and functions of male rats, and especially degeneration of the seminiferous tubules. They then attempted to elucidate the possible interrelationship of vitamin A and the testicular hormones by feeding (1) castrated rats on an adequate unlimited diet; (2) castrated rats on a vitamin A deficient diet; and (3) normal rats on a vitamin A deficient diet. The results indicate an anabolic principle in vitamin A causing one unit of adequate diet to produce a greater increase in body weight than a similar unit of vitamin A deficient diet. In this respect no difference was observed between normal and castrated rats. When calculated in units of body weight the atrophied sexual organs of castrated rats on the vitamine-intensified diet were heavier than those of castrated rats on adequate diet. This difference had been observed previously in normal rats. The adrenals and hypophyses of castrated rats on the vitaminized diet underwent hypertrophy similar to that which occurs in castrated rats on the usual full diet. Irrespective of the diet, the thymus was larger in castrated than in normal animals, but no essential difference was observed between the glands of castrated rats on adequate diet when compared with those from rats on a diet deficient in vitamin A.

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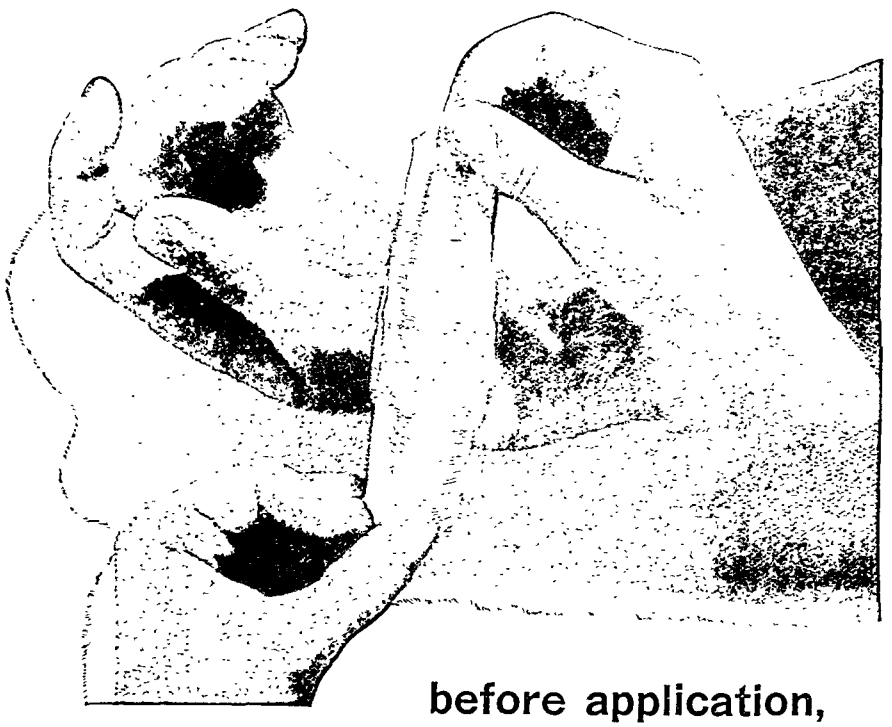

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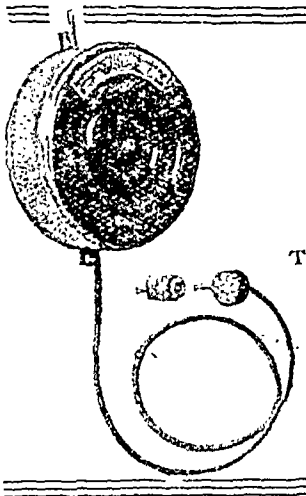

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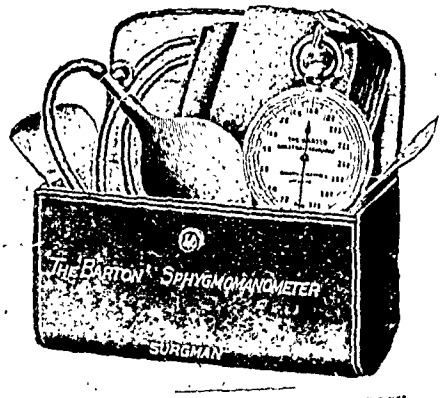

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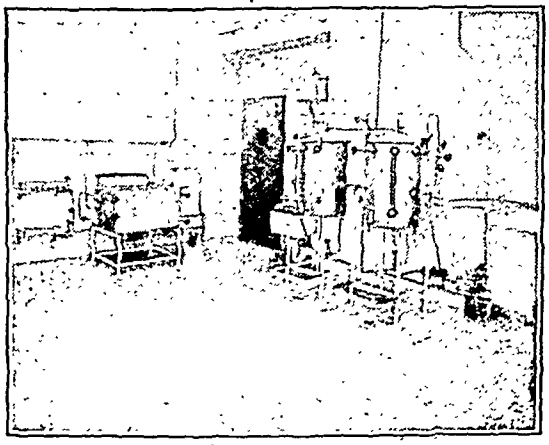

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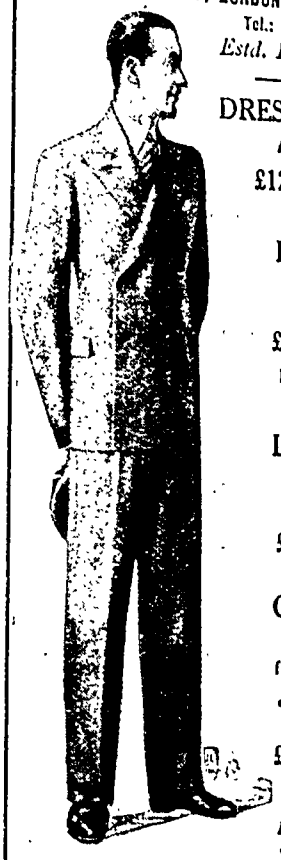

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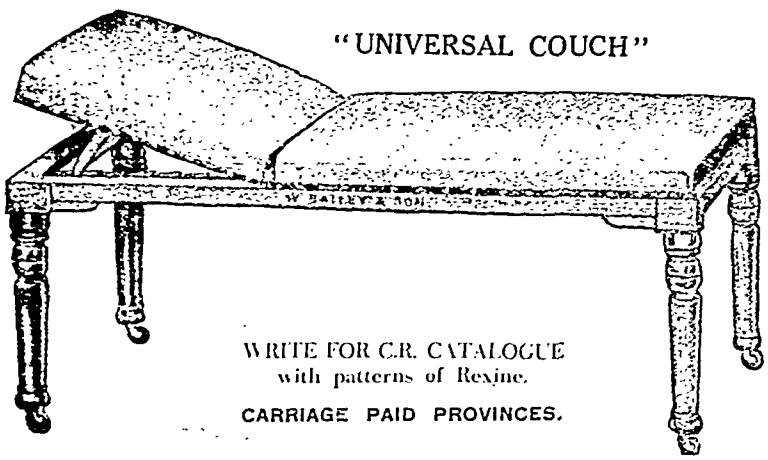

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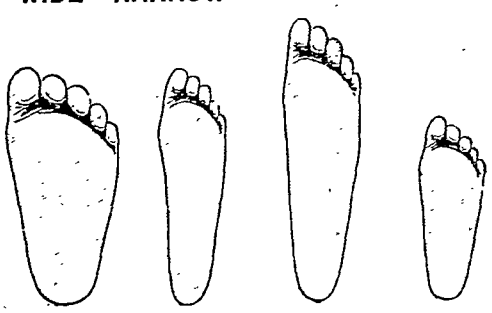

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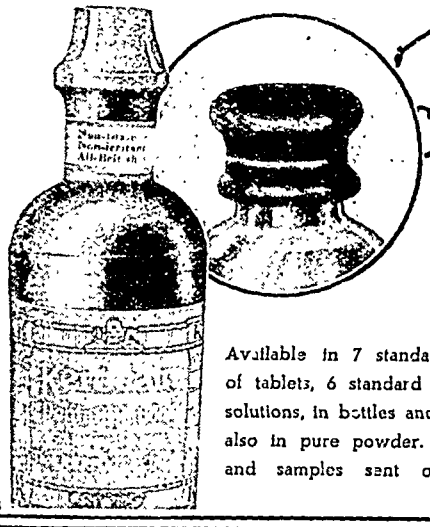

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progress of disorganization may be gauged by repeated x ray examinations

Leucocyte counts appear to be helpful as evidence of the presence of an inflammatory process but they usually fail to indicate pus formation according to accepted standards Lumbar puncture is of the same assistance as in other middle ear infections

The following cases illustrate the four clinical types

Case I Latent Type

On October 28th 1932 the patient a man aged 58 said that fourteen days previously he had had a cold in the head and running nose also slight intermittent pain in the right ear for five days He complained of deafness in the right ear Tinnitus and headache were limited to the right side On admission there was nasal discharge The right drum was pale pink thickened and slightly bulging at the posterior superior quadrant whispering heard at contact Weber to the right The right tube was catheterized and a week later as no improvement followed myringotomy was performed preceded by middle ear aspiration for bacteriological purposes *Pneumococcus mucosus* in pure culture was obtained from the aspirated pus After ten days of scanty mucoid discharge the perforation healed and the drum appeared practically as it did before myringotomy A nasal swab taken on November 15th 1932 gave a growth of *Pneumococcus mucosus* X ray examination after approximately twenty-eight days of illness revealed both mastoids to be well pneumatized The right showed a diffuse clouding less more pronounced at the upper posterior part with distinct loss of definition of intercellular trabeculae Further audiograms ten days later disclosed a slight but definite advance in the destructive process This finding combined with lack of improvement in hearing and tinnitus even in the absence of definite clinical signs of mastoiditis indicated mastoid drainage A leucocyte count did not suggest pus At operation a typical early mucosus mastoiditis was found scattered groups of cells filled with granulations and mucopus and intervening air containing cells with an oedematous mucosal lining The affected cells were situated mostly at the anterior superior system of cells

Case II Subacute Progressive Type

On August 21st 1932 the patient a man aged 38 had had left otalgia lasting twelve hours caused by diving The drum was pink thickened and bulging Myringotomy was performed and he was kept in hospital for eight days At the out patient department two days after his discharge he complained of slight earache there was tinnitus deafness and headache on the affected side accompanied by slight mucoid discharge from a perforation at the posterior superior quadrant Whispering heard at the contact Weber to the affected side His attendance was intermittent depending on the exacerbation of his illness The symptoms gradually increased however until the fiftieth day after onset of the illness when definite signs of mastoiditis appeared The aural discharge which became muco-purulent yielded a few colonies of *Pneumococcus mucosus* amidst a heavy secondary staphylococcal infection Slight pain was present throughout which was worse on some days than others At operation on October 11th a very cellular mastoid with granulations and muco-pus filling the cells was found An abscess in the deep muscles of the neck developed a week later and was opened The pus gave *Pneumococcus mucosus* in pure culture Four weeks later he left hospital with his condition clearing up whispering heard at six feet Except for an occasional rise to 100° the temperature remained between 98·4° and 99° This is a good example of a case unrecognized as to the bacteriological aetiology until late in the course of the disease

Case III Acute Type

A child aged 1½ was brought to the hospital on March 4th 1932 with a swelling behind the left ear which had been noticed by the mother for twenty four hours A left post auricular abscess relatively painless and only slightly tender was found The drum was greyish pink and thickened details were obscured but there was no perforation The temperature was 99° At operation a large subperiosteal collection of pus with a small erosion of the cortex leading to a mastoid cavity containing soft granulation tissue and muco-pus was found *Pneumococcus mucosus* in pure culture was recovered from the pus Five and a half weeks later the child left hospital with the wound almost closed He was brought back in five days with a temperature of 104° and a cellulitis of the scalp but owing to lack of accommodation he was sent to another hospital where death occurred three weeks afterwards The important feature of this case is the presence of a mastoiditis combined with a large subperiosteal abscess of acute onset in the presence of a drum which failed to show changes usually considered to be indicative of an acute mastoiditis

Case IV Benign Type

On October 31st 1931 the patient a girl aged 6 complained of sickness and abdominal pain there were no physical signs temperature was 100°–102° Five days later the temperature returned to normal and the child complained of slight pain in both ears The drums were found to be pink and much thickened by infiltration whispering only heard at contact Aspiration of the middle ears was performed followed by myringotomy and both aspirates gave a pure growth of *Pneumococcus mucosus* A sero-sanguineous discharge developed but the perforations soon closed and ten days after myringotomy both drums regained almost a normal appearance and whispering was heard at a distance of ten feet An *x* ray photograph showed that cell formation was present in both mastoids without abnormal clouding

ANATOMY AND HISTOPATHOLOGY

The course and the termination of any variety of acute otitis media depends not only on the virulence of the organism and the resistance of the individual but also on the anatomical structure of the mastoid process Extension of an acute inflammatory process from the tympanic cavity rarely occurs in a sclerotic acellular mastoid process

Hesse recognized three somewhat artificial anatomical types of pneumatized mastoids (*a*) the normal in which the cells gradually increase in size towards the periphery and contain a normal mucosa (*b*) where the cell system is less extensive and is composed of large and small cells irregularly mixed the mucosa being moderately hyperplastic and (*c*) where the cells are small throughout and the mucosa shows a considerable grade of hyperplasia The following percentages of these types were found in a series of 171 examples of acute mastoiditis *x* rayed before mastoidectomy A 14 per cent B 33·9 per cent C 52·1 per cent Type C is most often attacked by an acute inflammatory process The hyperplastic mucosa facilitates bacterial invasion and the small size of cells favours retention It is attacked by streptococcus and *Pneumococcus mucosus* in almost the same proportion whereas cell formation A is invaded nearly three times as frequently by *Pneumococcus mucosus* as by streptococci

Pneumococcus mucosus induces a subacute proliferative inflammation with an early and pronounced infiltration of mucous membranes accompanied by moderate hyperaemia only In the early stages exudates are sero-sanguineous or mainly mucoid in character Resolution is slow and there is a tendency towards organization and fibrosis Cavities are filled with granulation tissue Pus formation is delayed Applying these details to the middle ear and mastoid process the drum is thickened owing to infiltration and pink only through the mildness of vascular engorgement The embedding of the ossicles in the granulation filled tympanic cavity produces a high grade of deafness which subsides very slowly after cessation of the middle ear inflammation The cells of the mastoid process are irregularly filled with granulation tissue while their mucosal linings show marked cell infiltration As a general rule in the early stages of mastoid infection the peripheral cells are found to be affected first the central

cells still containing air Later, intercellular septa are destroyed by rarefying osteitis, and eventually complete disorganization of the whole cell system is brought about In a well-pneumatized mastoid process the cortex is thin, at any time it may be eroded, giving rise in the one direction to intracranial, in the other to extramastoid, complications The Eustachian tube shows slight inflammatory changes in its osseous part Its cartilaginous portion is free, with a patent lumen

Prognosis

Figures dealing with the incidence of complications and the mortality rate indicate a very unfavourable prognosis as to spontaneous recovery from mucosus otitis Owing to the mild preliminary symptoms there is a tendency to delay surgical measures until considerable destruction of the mastoid cells has occurred with or without other complications The average pre operative history extends to eight weeks, as compared with three to four weeks in streptococcal infections, but early diagnosis and early and thorough surgical measures should forestall further complications and provide better results In any case, if mastoiditis is present a guarded prognosis is inevitable, since the smallest focus of disease that is overlooked may, even after long periods of quiescence, initiate a cycle similar in effect to that of the original otitis All available records suggest that recovery from deafness and tinnitus is a more stubborn affair than in otitis due to streptococcal infection, because of the tendency towards organization and fibrosis

Treatment

The nature of the treatment depends on the degree to which the disease has progressed If seen at an early stage, and the condition is confirmed by bacteriological findings, an immediate myringotomy is indicated provided that a spontaneous perforation has not yet occurred Thereafter a careful watch on the patient must be maintained and in order to keep the case under regular observation the nature of the disease should be explained to the patient and to the practitioner This precaution is necessary because, owing to the absence of pain and malaise, there may be some difficulty in following up the case In the latent stage, if in five or six weeks time the deafness, tinnitus and infiltration of the drum have not improved mastoidectomy should be carried out even in the absence of definite signs of mastoiditis This intervention is justified because 80 per cent of cases develop mastoiditis, and delay is fraught with the risk of intracranial complications It should be emphasized that radiography is a valuable aid to diagnosis, if really good pictures are obtained the operative responsibility is considerably lessened Later still, when signs of mastoiditis are definitely present such as tenderness and sagging of the postero superior deep meatal wall mastoidectomy should be performed without delay, particular care being exercised in the removal of all the diseased groups of cells

Summary

1 Available statistics indicate that otitis media due to *Pneumococcus mucosus* is accompanied by a higher mortality rate and greater incidence of complications than other middle ear infections

2 This is due in part to a mild initial clinical course which is often of such slight embarrassment to the patient that he may not seek advice and in part to the fact that a severe destruction of the mastoid process may occur without clinical signs of mastoiditis

3 An early bacteriological diagnosis by the method described is simple in achievement and essential for control

4 Early operation with a thorough evacuation of the diseased mastoid cells is imperative

In conclusion I must express my appreciation to Mr [illegible] and Mr Hamblen Thomas for their kindness in allowing me to use the material in their clinics to Mr Vlasto also for his valuable help and criticism and to Dr Post for the radiographic examinations

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PSEUDO-CYST OF THE PANCREAS

BY

D J HARRIES D Sc, M D, F R C S

SURGEON CARDIFF ROYAL INFIRMARY

In 1892 Mr Jordan Lloyd published a paper on the pathology of pseudo cysts of the pancreas, in which he showed that these cysts are really collections of fluid in the small sac of the peritoneum, and therefore have no proper cyst wall apart from the peritoneum lining this sac A history of injury or of an attack of acute pancreatitis is generally given in these cases In the case described below such history could be obtained, in spite of the fact that there was free communication between the sac and the pancreatic duct or one of its branches When drained these cysts generally undergo complete obliteration in a few months but sometimes the sinus persists for years In such cases the operation described below should be given a trial, especially as the difficulties are few, and if successful, it will relieve the patient of the discomfort arising out of the condition of the skin round the sinus

A man, aged 57 was admitted into the Cardiff Royal Infirmary on June 22nd 1932, complaining of loss of appetite abdominal discomfort after food and loss of weight He had lost about 30 lb since the commencement of his illness eighteen months previously There was no history of vomiting

On examination a large swelling could be seen and felt occupying the upper abdomen The patient knew of the tumour and he had a strong suspicion that it was one for of cancer The swelling was tense but it showed definite fluctuation

On June 25th the abdomen was opened through a right paramedian incision, and on investigation the cyst was found to be in the lesser sac of the peritoneum with the [illegible] running across its anterior surface well below the [illegible] The cyst was opened through a small incision in the gastro hepatic omentum There was no definite cyst wall separable from the peritoneum lining the lesser sac A drainage tube was stitched in the cyst and brought out through the lower end of the incision A few sutures were inserted to fix the tube anchoring the small omentum to the parietal peritoneum The drainage tube was removed in about a fortnight but the sinus continued discharging thin clear fluid containing pancreatic ferments, which irritated the surrounding skin Examination of this fluid on June 25th and July 12 showed a diastatic index of 4 000 and 6 600 units

Attempts were made to obliterate the cyst by injecting sclerosing fluid down the sinus but the final result was not

interfere with free drainage from the cyst which started refilling until the sinus had been dilated

The patient was discharged on August 31st as he was getting tired of being in hospital He attended regularly for dressing until November 2nd when he was readmitted The discharge had not diminished and the skin round the sinus was still excoriated

On November 19th it was decided to attempt an anastomosis between the sinus and the duodenum or stomach To avoid injuring the sinus wall a rubber catheter was inserted into the sinus before making the abdominal incision The abdomen was opened through the original incision below the sinus and the upper abdomen carefully examined The small omentum was found to be adherent to the parietal peritoneum over an area two inches in diameter with the sinus at its centre The abdominal incision was now extended upwards so as to surround the sinus and not disturb the adhesions between the omentum and parietal peritoneum (Fig 1)

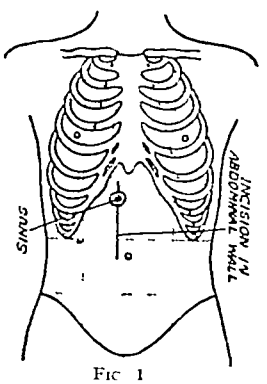

FIG 1

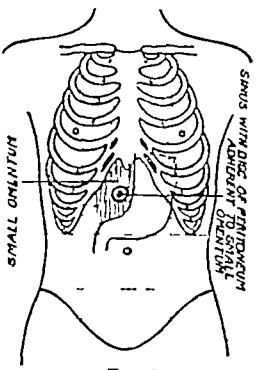

FIG 2

The original intention was to preserve the portion of the sinus in the abdominal wall and use it for the anastomosis in much the same way as the ureter is used in the implantation operation But it was seen that an ordinary anastomosis could be carried out between the pyloric antrum and the sinus if the latter were cut off at the point where it came through the circle of parietal peritoneum adherent to the gastro-hepatic omentum The actual anastomosis presented no difficulties as the mouth of the sinus was now only half an inch away from the stomach Two layers of sutures were used in exactly the same way as in a gastro-jejunostomy (Fig 2)

In spite of the condition of the skin of the abdomen at the time of operation everything healed by first intention On December 17th the patient left hospital with no leakage of fluid and with a healthy abdominal wall He has been seen twice since and is enjoying perfect health

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

SPONTANEOUS ACUTE MYXOEDEMA

The case of spontaneous acute myxoedema reported in the *Journal* of December 24th 1932 by Drs Watney and Douthwaite reminded me so vividly of one I encountered in October 1928 that I looked up my notes

The patient a lady of 55 in perfect health went for a ten days holiday to Scotland at the end of August 1928 She came home feeling tired and became more and more so during September and the beginning of October About October 15th she felt very ill had no energy was blown out short of breath stiff and had lost her power of hand grip so that things were constantly falling from her hands

I saw her on October 17th 1928 In addition to the above symptoms she complained of pain behind the middle of the sternum weakness and a feeling of having quickly aged prematurely She had noticed her face was swollen Her face was puffy and pale her hair was brittle and was getting thin her skin dry her voice toneless and creaky She had large supraclavicular masses of fatty tissue her hands were fat and so was the outline of her lower jaw She had become thick and coarse looking whereas she had usually been trim and dainty All this had developed in six weeks There was nothing remarkable in the family history Her personal history included an attack of scarlet fever as a girl and a menorrhagia at the menopause at 42 years of age Her blood pressure was 140/110 There was no evidence of other visceral or nervous diseases

She was given 1 grain of thyroid extract three times a day (equal to 15 grains fresh gland daily) and improved greatly By some misunderstanding she failed to take the gland for one week and retrogressed much Thereafter the treatment was continued and she steadily improved the dose being gradually reduced until in a few months she was taking 1 grain (dry) daily This she has continued to take and has returned to her usual health and activity

Llandilo Carm J H LLOYD MD

EMBOLISM OF THE ABDOMINAL AORTA ASSOCIATED WITH AURICULAR FIBRILLATION

Mr A H Winchester's account in the *British Medical Journal* of February 18th of a case of embolism of the larger arteries associated with auricular fibrillation prompts me to record a similar case which I encountered a year ago in which the abdominal aorta appeared to be the site of the occlusion The following is a digest of the notes I took at the time

The patient was a healthy stoutish woman of 73 who had received no medical attention whatever for upwards of a quarter of a century No history of previous ill health could be obtained On February 22nd 1932 during an influenza epidemic she sent for me because she thought she had a cold I found her sitting in a chair in the kitchen a little breathless and cyanosed and slightly distressed She had no fever but a very fast and very irregular pulse and on examination I diagnosed her condition as auricular fibrillation I ordered her to bed at once and prescribed 15 minims of tincture of digitalis three times daily All went well and within a day or two the heart slowed down and resumed its normal rhythm She continued to take the digitalis until February 28th when as everything was progressing favourably I stopped it

I saw her at noon on March 3rd and she appeared quite herself again protesting loudly at being kept in bed As the action of the heart was then satisfactory I allowed her to get up Three-quarters of an hour after I had left the house I received an urgent message of recall The story I was told on arrival was that she had dressed herself and walked about the bedroom and while in the act of spreading the counterpane had been seized with agonizing pain in both legs All power left them and she collapsed helpless by the side of the bed The first thing which attracted my attention on entering the bedroom was the appearance of shock which the patient presented An hour previously I had left her bright and smiling now her face was grey and drawn the expression anxious and beads of sweat stood on her brow The breathing was shallow and the pulse feeble and rapid She moaned continually for ease from the pain which was in the lower abdomen and back and down both legs She could not indicate any one place as worse than another the pain being equally severe over all these parts She passed urine unknowingly

On examination I noticed that both legs were much cooler than the rest of the body The skin was white and shining and had none of the feeling of resilience of healthy flesh She could move the left leg a little the right not at all In spite of ten minutes diligent search I could not detect a flicker of a pulsation in either of the femoral arteries Unable to see that I could do anything useful I swathed the legs in warm coverings—placing hot water bottles about them—gave morphine liberally and left her when she was more comfortable Returning eight hours later I found I had reckoned without the insensibility of the legs and the enthusiasm of the

neighbours, who had carried out my instructions about warmth so diligently that when I removed the wrappings of the legs I found a severe and extensive burn from the hot water bottles on the right shin And what was curious was the complete absence of any vital reaction, there was no blistering or redness, only an ivory surface from which the skin peeled at a touch of the finger, showing the underlying flesh dry and ham like in which the blood vessels could be seen collapsed and empty Not a drop of fluid exuded from the bare surface

From that time onwards I had only to fill the role of spectator while the lower half of my patient died and the upper half remained alive All warming measures having been hastily cast aside, the legs speedily lost what little heat remained in them, and grew cold and corpse like Their upper surfaces (the patient lying on her back) were white and shining, and the under of a dusky, mottled hue, very like post mortem lividity Twelve hours later this mottling had spread up the trunk as far as midway between the umbilicus and the pubis and all round the body to that level Though freely dosed with morphine, she complained bitterly of pain in the lower abdomen which was very tender to the touch and was commencing to swell As the hours passed this swelling increased The breathing became shallow and thoracic in type and the classical signs of general peritonitis began to dominate the picture All the appearances remained the same (except that perhaps the dusky colouring grew a little more pronounced) until death ensued forty eight hours after the onset of symptoms the immediate cause of death so far as one could tell, being general peritonitis

Unfortunately no post-mortem examination was obtained, and this precluded a certain diagnosis of the condition, though it is difficult to think of any disease process, other than embolism, which would harmonize with the clinical signs I am assuming that the same clot which blocked the aorta at its bifurcation also blocked the inferior mesenteric artery, cutting off the blood supply to the pelvic colon and giving rise to the terminal peritonitis But it is a marvel to me where a clot of this size could have come from

Upwell Wisbech A J HAWES, M B, Ch B

PAROXYSMAL TACHYCARDIA AND PREGNANCY

In view of the cases of paroxysmal tachycardia as a complication of pregnancy reported in the *British Medical Journal* of February 11th (pp 224 and 225), the following case occurring in labour may be of interest

A primipara aged 27 years was first seen on May 1st, 1932 Labour had been induced (stomach tube) on April 28th Pains were said to have been good on April 29th and 30th and it was not until the morning of May 1st that there was any cause for anxiety Examination about noon showed a small child head well down, perineum bulging with the pains half crown dilatation membranes ruptured The pulse was 140 regular and of good volume General condition excellent

The patient gave a history of several similar attacks of palpitation during the previous twelve months A provisional diagnosis of paroxysmal tachycardia was made and an injection was given of morphin sulph grain 1/4 At 6 p m the patient presented a typical picture of acute heart failure The pulse was 160 and barely countable at the wrist Dyspnoea was severe and moist crepitations could be heard over the greater part of both lungs There had been no further dilatation of the os

The hypodermic injection of morphine was repeated followed by 1/100 grain strophanthin intravenously and under spinal (stovaine) anaesthesia with gas and oxygen the os was dilated manually Delivery of a stillborn child was completed by forceps extraction The pulse was then 204 very irregular and countable only by auscultation Convalescence except for a few days pyrexia was uneventful

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Reports of Societies

DIAPHRAGMATIC HERNIA

At a meeting of the Section of Surgery of the Royal Society of Medicine, held on April 5th, with Mr HUGH LETT in the chair, a discussion on non traumatic diaphragmatic hernia was opened by Mr T P DUNHILL

This condition, he said, was of such gravity that every case ought to be reported A number of cases had been found in children, often at post mortem examination but a good many were now being discovered during life Few cases in adults were reported in the literature of the United Kingdom In London Mr Basil Hume had recently discussed the actiology, and Dr Hurst Mr R P Rowlands, Dr Geoffrey Marshall, and others the clinical condition, Dr Woodburn Morison had studied the bibliography and radiological appearances Dr Leonard Findlay and Dr Brown Kelly had written on shortened oesophagus in children In the United States Hedblom in 1925 had reported nineteen cases in adults, of which ten were non-traumatic, and Harrington had reported twenty-three non-traumatic cases out of a series of thirty These numbers included cases of shortened oesophagus with thoracic stomach It was unlikely that the condition was proportionately more frequent in America than in England Since more cases were reported there the search was possibly more thorough in their large clinics than in ours The extent of the defect at birth was such that the mortality was likely to remain high among cases developing symptoms in infancy Those who survived often failed to develop symptoms for many years Two conditions came under consideration true diaphragmatic hernia, and shortened oesophagus with thoracic stomach He had seen and operated on five cases of non traumatic diaphragmatic hernia in adults, and had seen seven cases of short oesophagus True hernia might occur through the retro xiphoid area, the left dome of the diaphragm or the oesophageal hiatus He described the five cases of diaphragmatic hernia upon which he had operated

Case 1—The patient had suffered for years from attacks of indigestion during which he lost weight the symptoms suggested gastric ulcer Radiography showed the stomach the termination of the ileum the cæcum and the appendix to be in the thorax in front of the pericardium An abdominal incision was made and these viscera were gently withdrawn through the hernial orifice The sternum was split across and the sac dissected down the orifice in the diaphragm was closed and sutures of fascia lata were used to reinforce the posterior part Six months later the patient was well and at work Ten months later some of his symptoms recurred and he was found to have a gastric ulcer, which healed under medical treatment

Case 2—A woman of 60 had had irregular attacks of pain and vomiting for years latterly associated with haematemesis Radiography showed the stomach to be high in the thorax and inverted The results of operation were good

Case 3—The patient had had attacks of indigestion associated with a bursting feeling At operation the stomach and transverse colon were found to be in the thoracic cavity the final result was satisfactory

Case 4—The patient had suffered from flatulent indigestion and a diagnosis of gall stones had been made by a competent authority gall stones were found at operation and dealt with Later she developed pain again and radiography showed a diaphragmatic hernia She recovered well from operation for this condition but died during convalescence apparently from pulmonary embolism

Case 5—A woman of 76, who suffered from asthma attacks associated with vomiting was found to have a diaphragmatic hernia, operation was successful At 81 she was well and enjoying life

Radiograms of cases of shortened oesophagus showed that the condition probably tended to increase in gravity year by year, until a considerable portion of the stomach was ultimately found in the thorax Symptoms seemed to be of two main types In some cases constriction took place at the cardia, comparable to cardiospasm occurring in the normally situated cardia In other cases symptoms were due to angulation of the cardiac end of the stomach round the oesophageal hiatus in the diaphragm Stenosis at the termination of a shorter

oesophagus had been mistaken for carcinoma of the oesophagus Diagnosis of shortened oesophagus could be made on the x ray appearance When the patient was made to swallow barium in the Trendelenburg position the dilated cardiac end of the stomach and the constriction at the lower end of the oesophagus could be seen More over if oesophagoscopy was performed and a snipping of mucous membrane taken from below the constriction it was found to have the characteristics of gastric not oesophageal mucous membrane He had operated on only one case of this kind and had been unsuccessful owing to a failure in technique but when symptoms began to be troublesome he thought there was greater danger in leaving the patient alone than in operating

Mr W SALISBURY described a case of diaphragmatic hernia in which radiography had shown a trilocular stomach lying in an S shaped bend through the aperture in the diaphragm At operation the upper part of the small intestine the transverse colon great omentum spleen and tail of the pancreas were all found to be lying above the diaphragm The results of operation were good

Dr LEONARD FINDLAY thought great caution must be exercised in formulating a diagnosis of congenitally short oesophagus In most recorded cases the diagnosis had been made on clinical and radiological evidence but identical radiological appearances could be obtained by giving a normal child a pultaceous bolus in the recumbent position a dilatation was then observed in what appeared to be the lower end of the oesophagus Moreover if a portion of mucous membrane was removed from this dilated region it was found to be of the gastric type though situated well above the diaphragm In his own series of cases there had always been evidence of obstruc tion at the level of the seventh dorsal vertebra and if this obstruction was at the cardia it was difficult to understand why the shortening of the oesophagus should be so uniform He thought a degree of hiatal hernia of the stomach was a physiological condition

Operation for Hypospadias

Mr ARTHUR EDMUNDS gave a cinematograph demon stration of his operation for hypospadias It was per formed in three stages

Stage 1 —A buttonhole was made in the redundant prepuce to prepare it for transplantation the main vessels were cut and a collateral circulation established through many small ones

Stage 2 —The penis was straightened by dissecting up the open urethra and allowing it to slip towards the scrotum and by division of any tight bands of fibrous tissue The prepuce was transplanted to the under surface of the penis as an irregular sliding flap

Stage 3 —The straightened penis had now been provided with extra skin on either side of the middle line derived from the prepuce this skin was sufficient to form a lining and covering for a new urethra without tension

Mr C A R NITCH asked whether Mr Edmunds found there was a tendency to fistula formation following opera tion Professor GREY TURNER considered Mr Edmunds s operation to be the best devised for the treatment of this condition In replying Mr EDMUNDS said that fistulas were apt to occur but they could always be closed in time

OESTRIN IN SECONDARY AMENORRHOEA

At a meeting of the Edinburgh Obstetrical Society held on March 8th with the president Dr JAMES YOUNG in the chair Dr W F T HAULTAIN read a paper on the clinical use of oestrin in the treatment of functional secondary amenorrhoea

The preparation used was progynon and the sixteen patients treated had secondary amenorrhoea for which no definite cause could be found Dr Haultain remarked that the majority of these women were nulliparae and when married were usually sterile though in one of his cases a pregnancy had resulted after treatment After giving a short history of each case Dr Haultain summed up his results as follows eleven patients were cured (ordinary menstrual habit returned after discontinuance of the treatment) in three cases bleeding had occurred but the menstrual habit had not been regained on dis-continuance of the treatment in two cases no effect had been produced whatsoever The speaker said that latterly he had been giving doses of 1 000 to 10 000 mouse units of progynon ester to patients who had not responded to the ordinary dosage orally or by injection and that in two such cases he had already got a satisfactory result

Bilateral Cortical Necrosis of the Kidneys

Dr R J KELLAR and Dr W M ARNOTT recorded three cases of bilateral cortical necrosis of the kidneys during pregnancy

CASE HISTORIES

The first case was that of a woman aged 26 1 para who was five months pregnant She was admitted with a history of severe hyperemesis since the second month of pregnancy and of anuria of a fortnight s duration Examination on admission revealed slight oedema of the lower limbs no raised blood pressure and no urine in the bladder Administration of abundant fluids failed to stimulate urinary secretion Ab-dominal hysterotomy was performed the foetus and placenta being apparently healthy The patient survived for sixteen days after operation For the first week she appeared to be making progress although the blood urea creatinine and phosphorus were mounting and the alkali reserve dropping During this period there was secretion of a very small quantity of urine During the second week peritonitis and broncho-pneumonia supervened urinary secretion however increased so that on the day prior to death 16 oz were passed During the last three days the blood urea and creatinine showed some diminution Post mortem revealed numerous scattered areas of cortical necrosis in the kidneys Microscopically these areas showed hyaline necrosis with well established calcification but no congestion Remaining cortical tissue was infiltrated with pyelonephritis

The second case was that of a woman aged 30 2 para who was admitted with a history of vaginal bleeding of a few hours duration The blood pressure was 185 135 Shortly after admission there occurred a series of eclamptic fits The patient died undelivered during the fifteenth fit At post mortem it was found that the whole cortex of both kidneys was red swollen and congested Microscopical examination indicated the necrotic cortex to be identical with the initial red stage of infarction Subcapsular haemorrhages were present in the liver but no areas of focal necrosis were seen

The third case was that of a woman aged 29 2 para who was in the sixth month of pregnancy She was admitted with the features of a severe toxaemia gross oedema impaired vision epigastric pain and raised blood pressure During the night of admission there were severe abdominal pain and vaginal bleeding Accidental haemorrhage was suspected and the following day an abdominal hysterotomy was performed The uterus was typical of concealed accidental haemorrhage The patient survived for a week after operation and during this time only 4 oz of urine was secreted in spite of the administration of abundant fluids On the seventh day after the hysterotomy decapsulation of the left kidney was carried out the subcapsular appearances being suggestive of cortical necrosis It was noted that the capsule did not exert any pressure on the renal parenchyma The patient died ten hours after the operation Post mortem confirmed the diagnosis of widespread cortical necrosis Microscopically these areas showed hyaline necrosis with commencing calcifica tion there being pronounced congestion in the boundary zone of each necrotic area

It was pointed out that the great majority of cases of this condition were associated with pregnancy others being noted in conjunction with scarlet fever diphtheria dysentery etc Ten cases had previously been reported to the society A review of the literature showed that this peculiar complication of pregnancy usually supervened during the fifth to the seventh month It showed no special predilection for the primipara Usually there were toxaemic symptoms present such as vomiting headaches oedema dimness of vision etc Some cases had been associated with eclampsia or accidental haemorrhage Anuria or extreme oliguria was the rule A fatal outcome was common the closing stages being marked by extreme nitrogen retention exhaustion and it might be super added infection The pathology of the condition was well exemplified by the three cases recorded The second case showed the early stages of multiple infarcts—that is

extreme congestion and thrombosis of the vessels in areas of commencing necrosis The third case was one in which the process had not been so extensive, the necrotic areas exhibiting advanced hyaline necrosis, thrombosis of the intralobular and afferent glomerular vessels, peripheral congestion, and commencing calcification The first case was an example of a still later stage, necrosis in the infarcted areas being complete, with well-established calcification and absence of congestion It is noteworthy that there was present a large amount of intravascular fat in the first and the third cases In the first patient there was progressive increase in urinary secretion, with some diminution in the degree of nitrogen retention Microscopically, healing of the infarcted areas was in progress, and it seemed reasonable to assume that the remaining cortical tissue might have undergone complete recovery but for the superadded infection Recovery had, following decapsulation of the kidneys, been recorded, the diagnosis not being in doubt as at operation pieces of the kidney had been removed for histological examination The condition seemed to be due to an interference with the blood supply to multiple areas of the renal cortex There was no indication that this was due to emboli, the presence of the intravascular fat globules being explicable on the basis of a toxic lipaemia Thrombosis appeared to be the cause of the infarction The actual cause of the thrombosis was not understood, although it was known that the eclamptic toxin had a selective destructive effect on vascular endothelium The unknown toxic agent which caused the thrombosis must also have a deleterious effect on the rest of the renal substance Recovery depended on (1) the extent of the infarction, (2) the speed of recovery of the remaining cortical tissue, and (3) the avoidance of superadded infection In cases in which the whole of the renal cortex was involved death was certain For treatment decapsulation had been advised, but this operation was so severe and the stage of congestion and increased tension so short, that it was difficult to see the efficacy of this procedure Abundant fluid should be administered and the skin stimulated After some days, by which time it might reasonably be assumed that recovery was in progress, diuretics might be administered

TOXAEMIAS OF PREGNANCY

At a meeting of the Devon and Exeter Medico Chirurgical Society on March 23rd, with the president Dr I C EVANS, in the chair, Dr AUSTIN EAGGER read a paper on the toxaemias of pregnancy

Dr Eagger said that the constant references in the lay press to the incidence of maternal mortality did not represent an idle scare, for out of about 700,000 births in England and Wales each year 3,000 were associated with the death of the mother Sepsis accounted for 1,109, and toxaemia of pregnancy for 524 Since the majority of these could have been saved by efficient treatment, there was a clear need of some definite line of campaign The methods in operation at some ante-natal clinics had been criticized as inadequate to prevent eclampsia, but against this might be set the fact that during the last five years the Exeter clinic had controlled 1 400 births, with a mortality of three—two deaths being due to embolism and one to eclampsia Factors predisposing to pregnancy toxaemia were neurasthenia anaemia, organic hepatic and renal diseases allergic states, disturbed pituitary and thyroid functioning and errors of diet In connexion with the last named it was noteworthy that there had been a 50 per cent fall in the incidence of eclampsia in Germany during the war years when the fats and proteins had been severely restricted This disease was also rare in the Tropics and among vegetarians It had been suggested by Kennedy and others of the Edinburgh school that toxaemia was associated with hyperfunction of the posterior lobe of the pituitary gland they had also found increased thyroid function in normal pregnancy, and diminished function in albuminuria occurring in that state From this they had deduced an antagonistic physiological action of the thyroid to the pituitary gland

Finally, a hypothesis had been reached in which the toxic albuminuria was ascribed to endocrine disturbance probably multi-glandular, but with over production of the posterior pituitary hormones[5] One of the earliest clinical signs of toxaemia in pregnancy was vomiting but the possibility that this might be due to a reflex neurosis resulting from some abnormal uterine displacement should be remembered In cases of protracted or severe vomiting at the Exeter clinic, when this possibility had been eliminated, the blood pressure and urine were examined repeatedly for any special indications In the absence of these the diet was modified, fats and proteins being restricted and glucose substituted Administration of lugosol, thyroid extract, bromide, and luminal had been of use, but recently Dr Eagger had obtained better results from S U P 36, three injections being adequate in his experience Considerable success had also attended intravenous injections of 25 per cent glucose with 20 to 30 units of insulin When treatment on these lines failed, therapeutic abortion should not be delayed The danger signals of pernicious vomiting were diminished output of urine, bile in the urine, a pulse rate over 100 with a low blood pressure, jaundice, marked loss of weight, blood stained vomit, and albuminuria, which was frequently a late sign Hysterotomy by the abdominal route was considered the most commendable treatment at present As regards toxic albuminuria, cases of pre-existing nephritis with raised blood pressure and marked nitrogen retention, if allowed to go to term, resulted in further renal deterioration A raised blood pressure was one of the earliest and most definite signs of toxaemia Dr Eagger said he had found no confirmation of the suggestion that such a rise might occur in an uncomplicated pregnancy In eclamptics it might reach the high figure of 280, a gradual fall was a hopeful sign, but a further sharp rise was a frequent indication of the onset of convulsions and the danger was not passed until the blood pressure had fallen below 140 Oedema was equally important as a sign, and, appearing in the face and hands, had a special significance A rapid increase of albumin in the urine was a serious omen, and it was most important to watch for an excess of bile pigment A diagnosis of toxaemia should not be made too hastily in ante-partum haemorrhage and the renal efficiency should be carefully estimated

Dr Eagger then outlined the treatment of the type common in general practice, in which there was a faint trace of albumin, slight oedema of the feet and ankles and a blood pressure of 130 to 190 Rest in bed was associated with restriction of the diet—at first to water glucose, and fruit juice, with a later diet low in proteins and fats and without added salt A mixture of potassium citrate and sodium bicarbonate was given every four hours and bromide and chloral were used for insomnia Insulin was injected if there was evidence of hepatic failure Failure to respond to treatment within three days was an indication for ending the pregnancy The speaker then detailed the various methods of treating eclampsia and said he employed that of Stroganoff, with the addition of colonic lavage He illustrated his paper with brief notes on cases seen by him at the Exeter City Lying-in Institution

Dr W A ROBB who had undertaken the pathological estimations in Dr Eagger's cases, discussed the various aetiological theories, and agreed with the possibility of there being a placental chorionic origin The presence of casts indicated a renal lesion, but not necessarily a toxaemia The volume of urine passed in twenty four hours was most significant, oliguria with albuminuria indicated toxaemia whereas urine in normal or increased amounts pointed to chronic nephritis In the toxaemic kidney and the kidney of eclampsia the excretion of water was decreased in relation to ingestion nitrogen excretion being as a rule unimpaired in contrast with the findings in chronic nephritis In the vomiting of pregnancy the passing of a small amount of urine of high specific gravity was a bad sign The degree of albuminuria provided a useful index of the severity of the renal lesion, relative was far more possible with damaged tubules than with damaged glomeruli The diastatic index was often

valuable for it was often considerably raised in the pre eclamptic stage while remaining within the average in normal pregnancy This index was low in chronic nephritis and so the test had a differentiating value The blood urea content was not raised unduly in eclampsia and readings of 30 to 40 grams might be associated with the occurrence of fits Dr Robb gave a demonstration of the zinc acetate test for excess of urobilin and commented on the importance of this finding

THE ZONDEK ASCHHEIM TEST

At a meeting of the Section of Pathology of the Royal Academy of Medicine in Ireland on March 24th with the president Dr J McGRATH in the chair Dr W B HAMILTON opened a discussion on the Zondek Aschheim test for pregnancy

The PRESIDENT said that in Edinburgh the Zondek Aschheim test was carried out for 3s a test and he thought that it would be practically impossible to do it for this small sum in Ireland He raised the question whether it might not be helpful if ether was used in order to remove the toxicity of the urine some observers had stated that they had got positive results from the test in cases of carcinoma The value of the test would be seriously interfered with if it was positive in forms of malignant disease other than hydatid mole and chorionic epithelioma Dr C MURPHY referred to the way in which sugar evidently accelerated the test The reason for this might be that the hypodermic injection of sugar stimulated the pancreas and the pituitary gland was secondarily affected He suggested that in cases of Addison's disease or of myxoedema a positive result might be obtained Dr D J CANNON said that conditions other than pregnancy could be diagnosed by the test if blood was used for the purpose but in pregnancy cases only urine gave a result He inquired about the origin of the anterior pituitary hormones which occurred during pregnancy Were they manufactured by the pituitary or by the placenta? Dr NINIAN FALKINER said there was a great deal of evidence to show that the hormones obtained in the urine of pregnant women were not derived from the pituitary body at all In cases of chorionic epithelioma the test was ten times more powerful than in other cases because the substance was more concentrated in the urine A similar result was found in cases of hydatidiform mole where the chorionic epithelioma was increased in amount These points suggested that the origin of the hormones was in the chorion Dr R E STEEN inquired whether the giving of anterior pituitary hormone would be efficacious in a case of hypopituitarism in a female child and also in a male child The hormone was stated to be such a potent substance that he would like to know if any harm might be done to the children by its use Dr F DOYLE said he had only had one case out of many in which the positive result had proved to be wrong Dr R W SHAW said he had used anterior pituitary hormone (Parke Davis) in a case of functional uterine haemorrhage After three injections the bleeding ceased and since then the patient had had normal menstruation She had had a good deal of pain after the injection and after the last injection her eyes and feet had become swollen and she had developed a rash but these symptoms had subsided in the course of forty eight hours

At a meeting of the Society of Public Analysts held in Burlington House on April 5th Mr H G REES gave a summary of the amounts of iron and copper previously recorded for the livers and liver extracts of various animals and showed that these metals had been very incompletely extracted in the aqueous extracts In the author's experiments the proportion of iron was somewhat higher whilst the copper was very much lower than the figures given by Meyer and Eggert The significance of these elements in the therapeutic action of liver extract was discussed

Reviews

ASPECTS OF TUBERCULOSIS

In the second edition of *The Chemistry of Tuberculosis*[1] Professors H GIDEON WELLS and ESMOND LONG (who are respectively directors of the Otho S A Sprague Memorial Institute and of the Henry Phipps Institute for the Study Treatment and Prevention of Tuberculosis) critically review existing knowledge of the chemistry of the tubercle bacillus and its products the chemical changes and processes in the host and the chemical aspects of the treatment of tuberculosis Since the first edition in 1922 Dr Lydia M De Witt has died and the present authors have revised the section on specific and non specific chemotherapy The advance of knowledge has necessitated an almost complete new draft of the first section which deals with the chemistry of acid fast bacteria The new bacteriology of the *Mycobacterium tuberculosis hominis* discovered by Koch in 1882 and the grounds for belief in its filterable stage so highly unorthodox a few years ago are first summarized beginning with the work of Fontes in 1910 It is pointed out that the now acknowledged differences between growth on laboratory media and in the tissues of the body may modify the chemical changes so that the substances produced in the body may differ from those described here as the result of laboratory cultivation The *Mycobacterium tuberculosis* differs from most other bacteria in its relatively large content—a quarter to a third of its dry weight—of a fat like substance which varies somewhat in quantity with the strain and the medium employed and like the protein and polysaccharide fractions has an antigenic action After chapters on tuberculin and on acid fastness an account is given of the chemistry of other acid fast bacteria The second and longest of the three main divisions of the book —the chemical changes in the tuberculous host—deals first with those in caseous and calcified material the latter process according to Wells being dependent on physical rather than on chemical factors The chapter on the changes in the non tuberculous tissues of the tuberculous subject contains an interesting discussion on amyloid infiltration and chondroitin-sulphuric acid In the account of the blood changes it is mentioned that the rate of sedimentation of the red cells is increased in direct proportion to the rate of progress of the disease and has therefore been regarded as the most accurate single means of determining the prognosis The chemical features of the sputum tuberculous effusions urine and the metabolic changes are then considered in detail The introductory remarks on the chemotherapy of tuberculosis make it clear that though it is easy in the test tube to show a bactericidal or growth inhibiting influence of many drugs the conditions are different in the animal body where the tissue cells are usually much less resistant to chemical agents than are the hard wax armoured tubercle bacilli and that the prospect of actually killing tubercle bacilli in tuberculous lesions by any antiseptic seems to be remote or hopeless The various drugs such as dyes creosote chaulmoogra oil metals and iodides are passed in careful review with the conclusion that though a specific chemotherapy of tuberculosis has not yet been found and may on account of the difficulties be long delayed it is not a closed chapter The final section in this most valuable source of reference discusses the non-specific therapy by means of substances such as calcium silica ichthyol and oxygen

[1] *The Chemistry of Tuberculosis* By H Gideon Wells M D Ph D and Esmond R Long M D Ph D Second edition London Baillière Tindall and Cox 1932 (Demy xiii + 481 8 figures 45s net)

It is appropriate that in 1932, the jubilee year of Koch's description of the tubercle bacillus, Professor A FONTES of the Oswaldo Cruz Institute at Rio de Janeiro should have brought out in *L'Ultravirus Tuberculeux*[1] an account of his researches, begun in 1906, carried on till 1930, and recorded in a number of publications since 1908. His early work, inspired by Oswaldo Goncalvez Cruz (1871–1917), on the chemistry and structure of the tubercle bacillus, and on the different reactions obtained by special staining methods in Koch's bacillus and para-tuberculosis bacilli, led to the recognition of the granular stages described by Hans Much in 1907, and of their importance in connexion with the life cycle of the micro organism. The life-cycle of the bacillus includes an absolutely invisible, a finely granular, and a coarsely granular stage, and finally, the ordinary bacillary form. The granular form possesses the power of reproduction, and thus assures the continuity of the species. These somewhat recently recognized polymorphic phases of the *Mycobacterium tuberculosis* are important in producing pathological changes of a kind different from those usually recognized as tuberculous, thus pointing to attenuation of virulence. Inoculation of a guinea pig with the granular form gives rise to cachexia, or to a transient curable change which is recognizable only by a positive tuberculin reaction, but reinoculation may subsequently result in the production of ordinary tuberculous lesions and the appearance of the ordinary bacilli. The ultra-microscopic forms also pass across the placenta to the foetus, and cause latent tuberculosis or the condition spoken of as pre-tuberculosis. The potential importance of the ultravirus of tuberculosis is obvious, and suggests that a larger responsibility for some forms of chronic inflammation may in the future justly be laid at the door of tuberculosis.

In a freely illustrated volume Dr JACQUES STEPHANI of Montana and Dr MAURICE MARCHAL of Paris discuss in considerable detail the radiological diagnosis of incipient pulmonary tuberculosis.[2] In the first place, they wisely insist that all the clinical evidence should be combined with the radiological in arriving at a diagnosis, at the same time they point out that radiology can enable [illegible] positive deductions to be made when neither auscultation nor percussion provides definite guidance, they further deprecate too much reliance being placed on anomalous auscultatory signs, and quote Professor Bezançon to the effect that in two-thirds of the cases weak vesicular breathing is not due to incipient but to old tuberculosis cured or latent. The volume is divided into two parts. The first deals with technique, the normal radiological appearances in the chest, and the boundary lines between the normal and early morbid conditions. The second part is concerned with the radiological and clinical diagnosis of incipient pulmonary tuberculosis. The classification of the early forms is not an easy matter, and the authors' nomenclature is not familiar, at any rate in some instances, to English readers. Thus the term tramite, invented by Professor Bezançon, means a pulmonary lesion in the pre-phthisical stage, confined to the connective tissue of the lung, and unaccompanied by any intra-alveolar exudation or even any nodular formations. this form of incipient pulmonary tuberculosis is also spoken of as the 'diffuse,' and is not to be regarded as a cicatricial fibrosis. The most frequent form is described as the 'apical'—early infiltration, or lobitis—and the third is the 'nodular' form. These three forms are described at some length and are illustrated by diagrams which though rather crude, are clear and radiograms which, it must regretfully be said, are somewhat disappointing.

[1] *L'Ultravirus Tuberculeux*. Nouvelles acquisitions sur la biologie du virus tuberculeux et sur la pathogenie de l'infection tuberculeuse. Par A. Fontes. Paris: Masson et Cie. 1932. (Pp. 108 + 5 coloured plates. 28 fr.)

[2] *Le Diagnostic radiologique de la Tuberculose pulmonaire au Début*. Par Jacques Stephani et Maurice Marchal. Preface du Professeur F. Bezançon. Paris: N. Maloine. 1932. (Pp. xvi + 250. 93 figures. 40 fr.)

NON-TROPICAL SPRUE

The purpose of Dr THAYSEN's book *Non Tropical Sprue*[4] is to describe the clinical picture of a sprue like disease developing in persons who have never been in the Tropics. During the last decade several cases of illness [illegible] resembling sprue in their clinical manifestations have been published under the headings of non tropical sprue, sprue in temperate zones, endogenous sprue, etc. Dr Thaysen is convinced that these are identical with the sprue occurring in the Tropics. Since the cause of sprue is unknown the identity of these two disease groups must rest on the similarity of the clinical picture and laboratory findings. The greater portion of the book is therefore concerned with these comparisons. In any survey of intestinal diseases it is natural that coeliac disease or intestinal infantilism should come in for a good deal of consideration. Dr Thaysen has maintained for many years that tropical sprue, "non tropical sprue" and coeliac disease are very nearly related—probably identical conditions. In fact, he has now reached the conclusion that it is the same disease which occurs in the Tropics as sprue, and outside the Tropics as 'non tropical sprue" in adults and coeliac disease in children.

This book forms a valuable contribution to the study of the group of diseases sometimes referred to as idiopathic steatorrhoea. Whether or not tropical and non-tropical sprue are identical is of great importance in the elucidation of aetiology. The author's arguments are very convincing, and his work is likely to stimulate a great deal of discussion. The book is well illustrated and well translated, except for some mistakes in surnames—for instance on page 43 when Prince Jones should clearly be Price-Jones and Rolleston for Rollstron on page 45 and Whipple for Wipple on page 252.

MUSCULAR EXERCISES

Twenty years ago Dr MORTON SMART published a preliminary account of the treatment of muscles and joints by a method which he called "graduated muscular contractions," and he now gives the result of an experience of thirty years in the use of this method.[5] While it is generally agreed that the best results in stretching and restoring an injured muscle are by the voluntary contraction of that muscle, which also involves the relaxation of its opponents and of those muscles concerned in maintaining posture. But such exercise is not always practicable, and the surgeon, if he wishes to produce contraction of an injured muscle or muscle group may be compelled to use electrical stimuli. Such stimuli produced by the ordinary faradaic coil, if strong enough to cause muscular contractions, are, as Dr Morton Smart points out, painful to the patient. He therefore introduced a modification of the induction coil which enables him to pass from secondary and primary interrupted current and vice versa at will. In such a mixed current the interruptions of the primary constituent are produced by an independent motor, and not by an automatic contact breaker.

[4] *Non Tropical Sprue*. By Th. L. Hess Thaysen, M.D. (Sprue in Idiopathic Steatorrhoea). Copenhagen: Levin and Munksgaard. London: H. Milford, Oxford University Press. 1932. (Pp. 39 figures. Paper 10s. net; cloth 12s. 6d. net.)

[5] *The Principles of Treatment of Muscles and Joints by Muscular Contractions*. By Morton Smart, C.V.O., D.Ch., B.Lond. H. Milford, Oxford University Press. (Pp. ix + 217. 15s. net.)

The apparatus was described in Dr Smart's previous work. The circuit from the power mains operating the motor is entirely separate and distinct from the circuit working the induction coil. There is no electrical connexion between the motor circuit and the source of the primary current of only 2·4 volts. With this apparatus it is claimed that the operator has under his own guidance the power independently of the patient to cause a muscle painlessly to contract and relax and at every stage to control such contraction and relaxation with the greatest accuracy in time and degree. Dr Smart also claims that its use has appreciably shortened the treatment of some painful and disabling post traumatic conditions. The loss of tone which follows on the overstretching or in other words strain of a muscle is particularly slow of repair but Dr Smart has found that with his apparatus he can much shorten the period even if massage has been entirely dispensed with.

A useful and practical chapter is that on the technique of manipulation of a shoulder joint and its after treatment. No joint has been the seat of so many imperfect results as this and no other joint has probably been so useful to the claims of unqualified practitioners. If recent injuries are treated according to the principles here laid down there will be a great reduction in the number of imperfect cures.

TESTICULAR GRAFTING

The works on testicular grafting emanating from the pens of SERGE VORONOFF and his collaborators would now fill a shelf of their own in any library, and *Testicular Grafting from Ape to Man*[1] is the sixth work on the subject published in English. It has the distinction of being written in a more scientific spirit than its predecessors and is virtually a survey and summary of the results obtained during the last twenty years.

The most valuable part of this book is that which deals with the histological examination of simian grafts removed from patients from seven days to four and a half years after implantation. The sections reviewed show that testicular cells survive to a depth of 2 mm. on the side of the graft in contact with the host's tissues. The final statistical summary of 175 cases of simian testicular grafting upon man is less convincing owing to the fact that we possess no certain criterion on which to base a verdict of success or failure. In any case the method of assessment employed by Voronoff is not mentioned in this work.

RESEARCHES AT THE BOSE INSTITUTE

The Transactions of the Bose Research Institute of Calcutta have hitherto been concerned mainly with studies on the movements of plants. The seventh volume now published[2] makes a new departure by including zoological and anthropological subjects in addition to those relating plant physiology. Of several papers dealing with the former subject the most interesting are those describing channels of excitation in the petioles of mimosa. Definite tripetal and centrifugal tracts have been demonstrated showing that plants possess structures which are functionally analogous to the nerves of the animal organism. There are also valuable papers on the proteolytic enzymes of *Carica papaya* and on the chemical characters of the fruit from leguminous pulses. Anthropologists will welcome Mr P. C. Basu's article on Burmese crania. India offers a unique field for the investigation of biological problems relating to man but unfortunately among the most primitive races a rapid depopulation is taking place and some races are fast disappearing. Mr Basu's researches are therefore opportune. The present paper is the first of a series which will deal with the crania of aboriginals and with those of the Mongoloid type and other groups. His article furnishes the detailed measurements and characteristics of thirty-six Burmese crania from an old burial ground. Sir J. C. Bose contributes a single paper on the capture of fish by drugging the streams, a destructive practice which is common to many primitive races in all parts of the world. The author gives a list of the plants used and details of the method of capture. Elaborate experiments are described showing the action of the drugs; these do not appear to be protoplasmic poisons as ordinarily understood but cause a paralysis of the respiratory movements of the mouth and gills from which recovery is possible by means of artificial respiration. Mr G. C. B. Vidyaratna contributes an interesting paper on fish-eating spiders in which the mode of capture is described and illustrated by photographs.

Notes on Books

More than twenty years ago Sir JOHN BLAND-SUTTON wrote an entertaining account of a journey he made in company with Mr Comyns Berkeley to Victoria Nyanza. Starting from Mombasa they travelled on the Uganda railway and explored the gigantic trench known as the Rift Valley 6,300 feet above the level of the sea. His book which has long been out of print contained also the story of a boat journey up the White Nile and Bahr el Gebel as high as Rejaf. Sir John has now been induced to publish a popular account of his observations in the Rift Valley and the country around the head waters of the Nile under the title *Men and Creatures in Uganda*.[3] In this volume illustrated by many delightful wood engravings will be found a description of the Rift Valley with brief but illuminating sketches of the animal and vegetable marvels of Eastern Equatorial Africa as they came before the trained eyes of a surgeon naturalist.

Two little books on chiropody contain a good many hints of practical value in the care of the feet. Mr E. G. V. RUNTING has profited by a long experience and offers to his colleagues in *Chiropody Jottings*[4] another instalment of valuable advice seasoned with reminiscences as well as predictions. Mr HAYHOW'S book with its more pretentious title of *Feet in Health and Disease*[5] is of a much less solid character. Its forty-eight pages can hardly pretend to offer any adequate representation of the anatomy and physiology of the foot or the pathology of its diseases. It contains little about corns and callosities but the ambition of its author seems to be to deal with more deep-seated affections such as club-foot which are generally considered to require surgical intervention of a radical kind.

Praktische Diätetik[6] by Geheimrat Hofrat Dr L. ROEMHELD is yet another of the long series of books on dietetic therapy which have appeared in the last few years. It purports to be written both for doctors and for patients and fulfils its functions admirably. It consists of a little more than 200 pages. Different pathological conditions are discussed and detailed menus as well as more general directions are given.

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[1] *Testicular Grafting, from Ape to Man*. By Serge Voronoff and Ge Alexandrescu. Translated by T. C. Merrill, M.D. London: Jarrolds and Norgate Ltd. 1933. (Pp. xiii + 125; 39 figures. 8s.)

[2] *Transactions of the Bose Research Institute Calcutta*. Edited by Sir J. C. Bose, M.A., D.Sc., LL.D., F.R.S., C.S.I., C.I.E. Record of research carried on in various branches of science. Vol. vii, 1931–2. London, New York, Toronto: Longmans, Green & Co. 1933. (Pp. 343; 161 figures. 20s. net.)

[3] *Men and Creatures in Uganda*. By Sir John Bland Sutton, Bt. London: Hutchinson and Co. (Publishers) Ltd. 1933. (Pp. 320; 94 woodcuts. 12s. 6d. net.)

[4] *Chiropody Jottings*. By E. G. V. Runting, F.I.S.Ch. London: Faber and Faber Ltd. 1933. (Pp. 223; illustrated. 5s. net.)

[5] *Feet in Health and Disease*. By R. R. Hayhow, M.I.S.Ch. London: J. Bale, Sons and Danielsson Ltd. 1933. (Pp. 48; 8 figures. 2s. 6d. net.)

[6] *Praktische Diätetik*. Von Geheimrat Hofrat Dr. L. Roemheld. Leipzig: Fischers Medizinische Buchhandlung. 1933. (Pp. 210. Geb. M. 5·90.)

Dr M L BARKER, who is lecturer in German at the University of Edinburgh, has written a book entitled *Basic German for Science Students*,[12] which will meet the need of many who wish to acquire quickly a working knowledge of this language in order to study German books and periodicals of a scientific nature The first part will help the student to acquire a good vocabulary, without spending an undue amount of time on the study of grammar and so losing interest The second part contains a wide range of short scientific extracts in German relating to medicine chemistry, physics, and other scientific subjects , on the opposite page to each of these is placed an English translation, thus making it possible without reference to a dictionary, to attain facility in reading such articles at sight The book is of handy size and is very well arranged A vocabulary is provided at the end which is not likely to be needed often after the first part of the book has been mastered Medical practitioners with little time to spare, and yet with a desire to read German articles at first hand, will give this volume a warm welcome

[12] *Basic German for Science Students* By M L Barker M A Ph D Cambridge W Heffer and Sons Ltd 1933 (Pp 164 6s net.)

The booklet *Simple Instructions for Diabetic Patients*[13] has been drawn up by Dr DOROTHY HARE for the use of patients in the diabetic clinic of the Royal Free Hospital It fulfils its function clearly and practically and will be of great use to the patients under specialist treatment at the hospital, or to practitioners called in during emergencies

The International Labour Office has published a list of references to the literature of pneumoconiosis,[14] including the morbid results attributable to dusts in general as well as to those caused by silica It is stated that this publication is intended only as a preliminary step leading towards the drawing up of a full bibliography, which might subsequently also cover the questions raised in the field of health and those relating to the subject of legal compensation for diseases due to dusts

[13] *Simple Instructions for Diabetic Patients* By Dorothy C. Hare M D M R C P With prescription sheet for the use of patients nurses and practitioners London H K Lewis and Co Ltd 1933 (Pp 24 1s net)

[14] *Pneumoconiosis* Studies and Report Series N (Industrial Hygiene) No 15 International Labour Office Geneva 1932 League of Nations London P S King and Son Ltd (Pp x 2s net)

Preparations and Appliances

APPARATUS FOR COLLECTING BLOOD FOR TRANSFUSION

Dr G GREGORY KAYNE (assistant medical officer, St Charles's Hospital London , clinical assistant Hospital for Consumption and Diseases of the Chest Brompton) writes

The following modification of apparatus for collecting blood for transfusion by the citrate method has been found of much help in my hands and I venture to publish the details in the hope that it will be tried more extensively It is usual to employ a piece of rubber tubing to connect the French's needle with the collecting flask at the bottom of which is the citrate solution (see Fig 1) Either a long piece is employed extending nearly to the bottom of the flask—this favours clotting—or a short piece which reaches beyond the mouth of the flask only The latter method has two disadvantages (*a*) the free end of the tubing is apt to become dislodged when the bottle is shaken or rotated during the collection of the

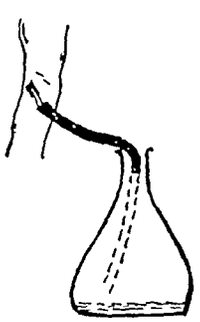


FIG 1

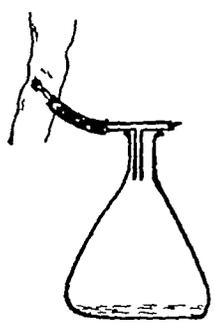


FIG 2

blood resulting in loss of blood and a 'mess' on the bed or floor and (*b*) the free end of the tubing also tends to fall against the sides of the flask so that the blood runs down the side instead of straight into the citrate solution The modification I suggest is depicted in Fig 2 Attached to the end of a short piece of rubber tubing is a T shaped glass connexion The horizontal bar of the latter rests on the mouth of the flask in which the vertical bar is inserted The free end of the horizontal bar is plugged with sterile wool

The advantages of this method are (i) The flask end of the collecting apparatus cannot be dislodged from the flask in shaking (ii) The blood runs straight into the citrate solution without touching the side of the flask thus the maximum amount of unclotted blood is obtained Moreover (iii) it is much easier to note the rate of flow of the blood

In Fig 3 is shown the collecting apparatus actually employed The French's needle is connected to the T shaped connexion by a piece of rubber tubing which is interrupted fairly close to the needle by a very short piece of glass tubing The latter need not be more than half an inch long and indicates immediately whether one is in the vein' after inserting the needle , it can however be omitted if its use is considered to favour clotting The vertical and

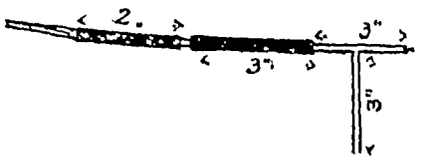


FIG 3

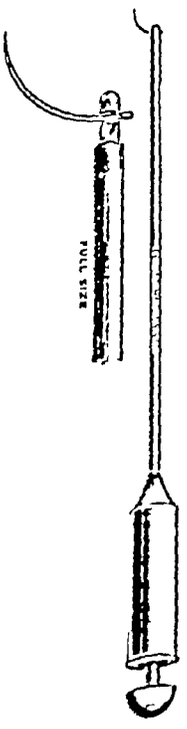
horizontal bars of the T shaped tubing each measure three inches and five sixteenths is a convenient diameter

I think it is useful to boil the whole apparatus as described in citrate solution before use, and keep it in citrate until required

NEEDLE HOLDER FOR SMALL HALF CIRCLE NEEDLES

Mr H W L MOLESWORTH (Folkestone) writes

The well known habit of most needle holders of either breaking or bending the finer sizes or of permitting the needles to turn round in the holder led me to design a needle holder on a new principle, in which the needle is wedged into two narrow slots in a tube by means of a slotted plunger worked by a spring The needle is firmly carried at the end of a small rod which does not get in the way of visual control of suturing



This needle holder has been made for me by the Genito Urinary Manufacturing Company who have helped considerably with the details of design It is easily taken apart for cleaning and sterilization and after a thorough testing I have found it a most useful instrument for suturing in awkward situations such as the common bile duct the gall bladder bed the cardiac end of the stomach and the depths of the pelvis With this needle holder it is an advantage to use needles of half circle pattern with slightly flattened shanks Needles of sizes varying from 1/2 inch radius to 1¼ inch radius of intestinal pattern are firmly held

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AETIOLOGY OF LYMPHADENOMA

Among diseases of which the cause is entirely unknown lymphadenoma or Hodgkin's disease occupies an unusual position Structurally it is a granuloma but in its course and termination it partakes of the characters of a malignant growth If all cases conformed to a well defined type this essential ambiguity would still exist but added difficulties are presented by the frequent coexistence of tuberculous lesions in the tissues attacked and by the occurrence of a type of neoplasm arising in lymphoid tissue from which lymphadenoma can often hardly be distinguished This vague and indeterminate position and the varied characters of the individual case furnish to the investigator a highly complex problem which has hitherto evaded any acceptable solution

All efforts in this direction have assumed that the disease is due to a micro-organism and the best-known results are those of Fraenckel and Much who demonstrated in affected tissues a non acid fast organism otherwise resembling the tubercle bacillus of Negri and Mieremet (confirmed by Bunting and Yates) who found an organism with somewhat similar characters and of l'Esperance who claimed to have demonstrated avian tubercle bacilli in the lesions That such bacteria may have been present need not be disputed but the methods employed for their demonstration were calculated to reveal the presence of exceedingly small numbers and it is not unlikely that these may occur accidentally in the body especially in lymphoid tissue In a concerted investigation recently conducted under the auspices of the Rose Research Fund at St Bartholomew's Hospital the hypothesis of microbic infection in the ordinary sense was reduced at least to a considerable degree of improbability In a long series of cases the claims of the tubercle bacillus spirochaetes and fungi to be regarded as causative agents were successively examined and rejected and in so far as a variety of recognized methods of staining cultivation and animal inoculation may be accepted as excluding the presence of significant bacteria the results may be said to have closed the first chapter in the history of research on this subject

The main obstacle in this work has been that there is no known means of communicating the disease to an animal Deprived of this resource the investigator can neither study adequately the genesis and progress of the disease nor determine the capacity of a suspected micro-organism to produce it nor diagnose the individual case itself by biological experiment The third of these requirements is fulfilled in the work of Dr M H Gordon published in our present issue which describes the first successful attempt to induce characteristic changes in an animal by the inoculation of material from cases of lymphadenoma In his experiments which are confirmed by those of Dr van Rooyen an emulsion of affected gland injected into the brain of a rabbit induces a highly characteristic and frequently fatal condition of which the chief signs are wasting and ataxia This result followed inoculation with material from nineteen out of twenty cases of lymphadenoma in a series of forty one controls with gland tissue from a variety of other conditions it has never been produced That affected tissue should be shown capable of producing any significant effect at all in an animal is itself a noteworthy advance that this effect can be utilized as a diagnostic test gives the achievement an added practical value The deeper implications of the discovery are still obscure It is the belief of Dr Gordon that the pathogenic agent concerned is a virus and this view is supported by the degree of its resistance to heat phenol and ether and does not necessarily conflict with the failure of attempts at filtration On the other hand the failure of transmission in series is contrary to experience with other virus diseases and the nature of the cerebral lesions produced seems largely undetermined

Involving as it does the study of a new form of encephalitis the demonstration of a virus possessing largely unknown properties and a highly restricted field of pathogenicity and perhaps a consideration of the effects of autolysis on a highly complex tissue Dr Gordon's hypothesis promises both interest and difficulties in full measure in its further investigation That interest is not confined to the problem of lymphadenoma alone since the possibility still remains that this disease may have ultimately to be classed as a new growth

BODY MECHANICS AND CHILD HEALTH

The names of an impressive group of medical and scientific contributors appear at the beginning of a volume on child health and development [1] published by the White House Conference on Child Health and Protection which has lately reached us A companion volume on nutrition being the third part of the same report was reviewed in our columns on November 26th 1932 and the critical thoroughness in the examination of data which distinguished Part III is evident also in Part I The scope of this study includes heredity prematurity racial characteristics climatic conditions fatigue and other factors which influence the growth and development of the child In many of these fields scientific observations are scanty and the committee has had to be content to recommend new lines of approach to the problems involved but in the chapters dealing with organized athletics and body mechanics it has many constructive suggestions to offer

Organized athletics in schools the committee points out cater primarily for those who are most able and fit while the physical weaklings who might benefit

[1] *Growth and Development of the Child* Part I *General Considerations* Report of the Committee on Growth and Development New White House Conference on Child Health and Protection New York The Century Company London D Appleton and Co 1933 (15s net)

most by controlled exercise are apt to be rejected completely Moreover, the games which attract chief attention—notably football and baseball in America, and Rugby football and cricket here—are those which there are limited opportunities for playing once a boy has left school, unless he goes to a university or other place of higher education Members of American teams suffer more acutely under the fervour of their coaches than athletes in English schools The committee draws attention to the emotional factors which are introduced in the effort to produce a winning team , among these are the elements of nervous tension, the sense of heavy responsibility, and a feeling of inferiority deliberately induced by coaches on the theory that it makes the boys try harder Readers of *Juan in America* will be reminded of the almost religious passion of the football coach, and the abysmal disgrace which engulfed Juan for messing up a match , and, according to Americans, the characters and situation are not particularly overdrawn It is curious, however, to find among the shortcomings attributed to school athletics by the committee the fact that the games learned at school are played for themselves alone and are not useful in later life This opens up the whole question of the ethical value—if any—of organized games, which cannot be discussed in a few words , but surely it is open to doubt whether games should ever be played for utilitarian purposes, rather than played for themselves alone , too much solemnity has gathered round athletics already without turning them into a business as well as a creed

A more potent objection to the existing system is the fact that those who most need physical education are those who are most neglected , and here the committee makes the really valuable suggestion that boys should be grouped, by means of reliable tests of physical strength and fitness, into different grades Boys with a low index of physical fitness could then be given special remedial drill, while those in the middle range could compete with others of their own level , boys with a high physical fitness index would be allowed to participate in the school teams At first glance this seems to rob the moderately fit boy of the stimulus which the hope of a place in a school team provides , but actually his chances of attaining to the first rank in physical fitness would be higher if his exercise was graded to his capacity than if he was continually striving to hold his own with companions physically abler than himself Fatigue and nervous instability, as the report published recently by the National Council for Mental Hygiene[1] showed, are common at puberty and during adolescence, which are not only times of physical strain, but the periods spent in working for public examinations , in schools where games are taken seriously rest periods are inadequate The revolutionary suggestion was made in this report that a daily period of rest in the horizontal position is as desirable for adolescent examination candidates as for younger children It is unlikely that this will receive much support in the public schools, but the methods advocated by the White House Committee for the improvement of body mechanics seem to offer a more hopeful line of approach to this problem Defects of posture or (as the committee prefers, more accurately if less euphoniously, to call them) "poor body mechanics" are extremely common among children of school age and are, in themselves, fatiguing In a Massachusetts school the experiment was made of giving one group of children instruction in exercises designed to improve body mechanics, while a second group was given only the regulation calisthenics prescribed by the department of physical education Nine times as many children improved under special training as those who received no special training, and the improvement in body mechanics was associated with benefit to health and efficiency as judged by school performance and behaviour, while regularity of attendance increased The grading of children according to physical capacity and attention to the mechanics of posture might do much to relieve the strain of adolescence

[1] *School Life and Nervous Instability* With a foreword by Sir Maurice Craig National Council for Mental Hygiene

ANNUAL MEETING, DUBLIN, 1933

Arrangements are proceeding in orderly fashion for the one hundred and first Annual Meeting of the British Medical Association, to be held in Dublin next summer under the Presidency of Dr T G Moorhead, P R C P I , Regius Professor of Physic in Trinity College The Annual Representative Meeting will begin on Friday, July 21st, and will be continued on the following three weekdays in the Royal Dublin Society's Hall, where Professor Moorhead will deliver his Presidential Address on Tuesday, July 25th, at 4 30 p m The clinical and scientific work is being divided among sixteen Sections which meet on the mornings of Wednesday, Thursday, and Friday in Trinity College and University College Programmes for the Scientific Sections are by no means complete as yet, but it has been thought advisable to announce in our *Supplement* this week the subjects to be discussed, with the names of opening speakers where they have been chosen, and such occasional papers as have been accepted We publish also the names of the officers of all the Sections, and the provisional time table for the Annual Meeting as a whole, from which it will be seen that each day will be fully occupied and that splendid entertainment is in store for the members and ladies who accept the invitation offered them by the Leinster Branch of the Association The journey to Dublin is neither difficult nor tiring, and once there they can count on the hospitable welcome for which the city is famous The headquarters of the meeting will be in the Mansion House, lent by the Lord Mayor and Corporation, and Lord and Lady Iveagh have granted the use of their house in St Stephen's Green as a ladies' club Among the larger social functions of the week may be mentioned an evening reception by the Government in Dublin Castle , a ceremony for conferment of honorary degrees by the University of Dublin , garden parties at Trinity College, the Rotunda Hospital, the Dublin Zoo in Phoenix Park and at Blackrock College , the President's Reception at Lord Iveagh's house , and a reception and dance at University

College The Pathological Museum will be housed at Trinity College and the Annual Exhibition in the Round Room of the Mansion House

PATHOLOGY OF HEPATIC CIRRHOSIS

Modern studies show an increasing tendency to search out the earliest changes in disease processes An excellent example of this type of research is to be found in the monograph by G Albot[1] The experimental parts deal with the cirrhoses produced by lead copper manganese colloidal silica and other agents and also with the effects of biliary obstruction on the liver The teaching in this country has long sustained the view that the primary change in cirrhosis is damage to the liver parenchyma Gye and Purdy[2] however claimed to produce a pure mesenchymal proliferation in the liver by means of colloidal silica and Roessle of Basel believes that in a certain group of human cirrhoses the action of the causative agent may fall primarily upon the supporting tissue of the liver Albot stresses the earliest change indicating toxic action on the liver cells This change consists in margination of the chondriosomes and is possibly not so much a degeneration as a defensive reaction With all the agents used to produce experimental cirrhosis including colloidal silica early parenchymatous changes were demonstrated by the study of the chondriosomes The deleterious action of the toxic agent is at first exerted on the liver cells in the periportal zone Following the damage to the parenchyma the reticulin framework of the liver becomes thickened at first locally round the damaged cells but subsequently spreading into areas where the cells may be histologically normal The thickened reticulin fibres are identical in their staining reaction with collagen Albot is in agreement with his countryman Nageotte who believes reticulin and collagen to be identical substances Following the initial stage comes the stage of lesional asymmetry in which the central zone of the lobule is also attacked The periportal zone is attacked first on account of its position relative to the incoming blood while the central zone is said by Fiessinger to be attacked on account of its fragility The reticular thickening above mentioned does not play more than a secondary part in the new connective tissue development In addition to reticulosis there is a process of cicatricial sclerosis This process never takes its origin in the vicinity of the blood vessels or of the biliary passages but always in relation to the damaged liver cells A cirrhosis is no more portal in its origin than it is arterial or biliary The cicatricial process develops from an infiltration of round cells in the vicinity of damaged liver cells these round cells being transformed into fibroblasts One fact to be noted is that these experimental cirrhoses are seldom obvious to the naked eye This is probably due to a time factor as a hobnailed appearance has been seen in animals in which the duration of the experiment has been extended to eighteen months or two years In order to produce the gross morbid appearances which we see in human cirrhosis it appears essential to have *repeated small doses of toxin acting over a long time* Regeneration of the liver cells is seen particularly in the experiments with tetrachlorethane With regard to human pathology Albot remarks that a purely aetiological classification is as yet impossible Much attention is devoted to the coincidence of hepatitis with cholecystitis as shown by biopsy material taken at the operation of cholecystectomy The hepatitis which Albot studied bore little relation to the severity of the cholecystitis The commonest change was seen in the liver cells themselves —margination of the chondriosomes and clarification In some instances cellular infiltration and connective tissue development was added to these appearances This hepatitis is sometimes cortical only and is probably determined by noxious agents brought by the lymphatics in Glisson's capsule In other cases the hepatitis is more diffuse There is no suggestion that ascending or descending cholangitis plays a part in the association of this form of hepatitis with cholecystitis Ligation of the common bile duct in the rabbit is followed by the appearance of necrotic areas in the liver with subsequent scar tissue formation Necrosis may depend on the degree of hyperbilirubinaemia which results This varies in different animals The rabbit appears to be the only animal which develops cirrhotic change following ligation of the common bile duct In a recent paper on this subject Cameron and Oakley[1] suggest that infection may be responsible for the connective tissue development in the rabbit The rabbit is notoriously subject to hepatitis which may remain latent until its precipitation by experimental interference So far as human pathology is concerned it is unusual to get clear-cut pictures of the effects of pure biliary obstruction on the liver Especially with calculus obstruction infection is liable to complicate the picture either as a pre existing chronic hepatitis or as an ascending cholangitis Definite signs of damage to liver cells and hepatitis are therefore common and if the condition of biliary obstruction persists long enough cirrhotic change may supervene If the obstruction is relieved the process is arrested and a harmless residual cirrhosis remains

[1] *Hépatites et Cirrhoses* Par G Albot Preface du Professeur Roussy Paris Masson et Cie (34 fr)
[2] Gye and Purdy *Brit Journ Exper Path* 1924 v 238

DIET AND PREGNANCY IN INDIA

The importance of a special diet during pregnancy is often grossly exaggerated The diet to which the mother is accustomed is as a rule all that is required and well meaning advice about increasing the bulk of this diet merely leads to indigestion In such a mixed diet as is customary in this country the results of vitamin deficiency are not likely to accrue but the supply of a particular vitamin though sufficient for normal needs may not suffice in pregnancy and lactation In India where the bulk of the diet consists chiefly of grain in some form vitamin deficiency is probable The infant mortality rate is influenced by the incidence of premature birth which is high in India and Wills and Talpade have shown that prematurity is closely related to a deficiency of vitamin B in the mother's diet Drs I M Balfour and S K Talpade[2] in further investigations have compared the diets of mothers in the north and south of India In the north wheat is the staple diet in the south it consists mainly of milled rice with the consequent reduction of vitamin B It is interesting to learn that the incidence of premature birth is three times as high in the south

[1] Cameron and Oakley *Journ Path and B* 1932 xxxv 701
[2] *Indian Medical Gazette* November 1932 p 601

as in the north All the mothers in the south, both of full-time and of premature infants, were in a state of avitaminosis A little extra effort was all that was necessary to bring on labour Mothers of premature infants not only suffered from vitamin deficiency, but the amount of protein in the diet was low The cases of premature birth which occurred in the north were nearly all associated with some material change in the customary diet in the direction of a deficiency in those substances rich in vitamin B Conclusions were reached to the effect that in a diet in which wheat forms more than 50 per cent of the calories, prematurity due to deficiency disease is not likely to occur, but where 50 per cent or more calories are derived from polished rice prematurity is markedly increased It appears necessary that the diet should contain at least 8 ounces of wheat, which is rich in protein and contains a large amount of vitamin B wheat-germ oil also contains a rich supply of vitamin E Whitehouse believes that this vitamin has a strengthening effect on the human germ cell, and, in fact, is necessary for normal fertility It is known that in rats absence of vitamin E causes slowed growth and death of the foetus by the twentieth day If the high incidence of prematurity in India is due to deficiency in vitamin B this can be remedied simply by adding the necessary vitamin in a cheap form , on the other hand, if it is due to deficiency of protein it would mean altering the staple foodstuffs of the people—an almost impossible task

THE REPORT ON HEARING TESTS

A committee of the Section of Otology of the Royal Society of Medicine was appointed in January, 1929, to consider and report on tests of hearing The committee has now issued its report, of which a large part is concerned with the use of tuning-forks The co-operation of the National Physical Laboratory was obtained, through the good offices of Sir William Bragg, in order to define the physical properties of tuning-forks and obtain a standard When a fork is struck, each successive vibration is less by a given fraction than the preceding vibration, and after a certain number of vibrations the amplitude will be reduced to one-half The number of seconds required to reach this point is called the half-intensity period After the lapse of two half-intensity periods the amplitude of the vibration will be one-quarter of that at the beginning, and the fork will be heard at one-half the distance After two more half-intensity periods the fork will be heard at one-quarter of the distance, and its vibrations will be one-sixteenth of the original amplitude The half-intensity period varies for different forks, but by estimating it forks can be calibrated so as to give uniform results, work which the National Physical Laboratory has undertaken Forks marked with a known half-intensity period are now on the market It is claimed that in this way many of the errors arising from the variations in tuning-forks can be eliminated Some criticism has been directed at the report because its authors propose to adopt the half-intensity period, rather than the decibel for measuring the intensity of sound When two telephones are separated by a mile of wire of a certain resistance the sound emitted by them differs in intensity by one bell A decibel is one-tenth of a bell, and one half-intensity unit equals 3 0103 decibels A sudden increase in intensity of one decibel is the smallest increment that can be detected by the human ear The authors suggest, however, that in practical otology the half-intensity unit with which sounds differ in intensity as 1 to 2 is preferable, while for experimental observations in acoustic laboratories the decibel should be used Dr Hallpike of the Ferens Laboratory at the Middlesex Hospital, in a criticism of the report,[1] has put forward the suggestion that calibrated forks should be engraved in terms of both one decibel and of one half intensity period according to the number of seconds corresponding to such a decrement The rest of the report, which includes much abstruse mathematics, is concerned with a detailed review of the numerous methods of testing hearing, and the errors and fallacies connected with their use and interpretation , but in the end the report fails to settle the old question whether the true method of testing for deafness is by forks or by speech It will, however, help otologists to a clearer understanding of the underlying principles and the degree of reliance which can be placed on the tests

GASTROPHOTOGRAPHY

Methods of examining the lining of the stomach are likely to be of much value in diagnosis In a stomach only partially filled with bismuth, pictures of the mucosal texture of the gastric mucous membrane can be obtained by radiography Irregularities thus observed give information about gastritis, the scar of an ulcer or its filling defect caused by a neoplasm In the hands of some specialists observations have been made by direct vision through the gastroscope of the state of the lining of the stomach In spite of a limited field of view many gross pathological conditions can be brought into direct view For some years attempts have been made to obtain photographs of the lining of the stomach by the exposure of photographic films introduced on the end of a sound These were reported on by Professor Porges before the Medical Society in Vienna in 1929 The method was brought to the notice of our readers in January last year in a review of an interesting book by Dr Bécart of Paris,[2] and reference was made to contributions by Professor Pannett and Dr Wyard,[3] who had used the method on their patients in London We are again indebted to a French authority for a good summary of the advances that have been made Dr Bernay[4] of Lyons, using an apparatus made by Heilpern, has been able to take photographs of many pathological conditions of the gastric mucous membrane Perhaps the greatest advantage of this over other methods is in obtaining a permanent record of the vascularity of the stomach lining Dr Bernay's book is profusely illustrated with enlarged prints of the actual photographs In cases of gastritis the engorgement of vessels, submucous haemorrhages, and in some instances photographs of a jet of free haemorrhage are particularly instructive, and this information could be recorded in no other way And yet the method can have only limited application The photographic apparatus must work and record, but the view-finding must be haphazard, so that obtaining significant results is

[1] *Journal of Laryngology*, February, 1933, p. 114
[2] *British Medical Journal* 1932, i, 24
[3] *Lancet* 1931, ii, 174, 177
[4] *La Gastrophotographie*. Par Pierre Bernay. Preface de Ch. Garin. Paris: Masson et Cie. (30 fr.)

natter of luck Dr Bernay s enthusiasm has triumphed ver many difficulties and his hints on the use of the pparatus make his book a necessity for those who ropose to master the technique

THE STRANGEWAYS COLLECTION

The Strangeways Collection which is now housed in the Museum of the Royal College of Surgeons of England ogether with a large number of microscopical prepara- ions photographs and typed manuscript descriptive of the specimens is the product of many years of esearch Dr T S P Strangeways in this research carried o t the idea of segregating some one form of disease for clinical and pathological investigation and concentrating research on it The disease chosen in the first instance was chronic joint disease in its osteo-arthritic and rheumatoid forms and cases and specimens were sent to him from many medical men in different parts of the country who were interested in the work In 1908 a special research hospital was erected in Hills Road Cambridge and between the years 1905 and 1914 Strangeways and his collaborators published nine papers upon various aspects of the subject The work was interrupted by the war and apparently was never resumed by Dr Strangeways who died in 1926 On receiving the collection the Council of the Royal College of Surgeons entrusted o Mr Lawford Knaggs the task of examining and escribing the specimens He has prepared a descriptive atalogue the collection is now available for study nd constitutes a very valuable addition to the Museum Mr Lawford Knaggs devoted three years to the exam- ation of the specimens and, over and above the mere preparation of the catalogue he took the opportunity f converting the task into one of original research, the sults of which are embodied in a report on the Strangeways Collection[1] , this is published in the *British Journal of Surgery* (1932–3 vol xx p 1) In his eport Mr Knaggs discusses the correlation of osteo- rthritis rheumatoid arthritis and gout the causation of nkylosis the histological peculiarities of osteo-arthritis nd rheumatoid arthritis and the pathogenesis of gout nd Charcot s disease

LISTER S LETTERS TO SHARPEY

Mr C R Rudolf L D S recently had the good luck o find in a second-hand bookshop in London eight olograph letters written in the years 1857 to 1864 by Joseph Lister to William Sharpey He has given an unt of his discovery and has published the text f the letters with a commentary and some notes in Nos 77 and 79 of the *British Journal of Surgery* Vol xx 1932–3) Sharpey had been Lister s teacher University College and Hospital and it was on his dvice that Lister after qualification went to Edin- urgh to work under Syme whose daughter afterwards ame Lady Lister The first six letters refer to apers which Lister had submitted to the Royal Society hrough Sharpey who was then its secretary In these ers he discussed the criticism made by James Paget nd John Goodsir (for the most part by Paget) the wo referees to whom the papers had been submitted Their reports were generally very favourable A copy of them drawn from the records of the Royal Society is included in Mr Rudolf s paper The acceptance of these essays in physiological research led to Lister s election to the Fellowship of the Society of which he ultimately became president The communication con- sisted of an introduction four sections and two supple- ments Their subjects were the aggregation of the corpuscles of the blood the structure and function of the blood vessels the effects of irritants upon the circulation and the pigment cells of the frog s web This last named was characterized by Paget as the most valuable of all as giving the best and only visible proof yet discovered that in the early stages of inflam- mation in vascular parts the tissues external to the blood vessels are independently and even primarily affected by the stimulus applied The two supple- ments one On the Influence of the Nervous System on the Arteries and the other On the Pigmentary System of the Frog were both warmly approved and recommended for publication in the *Philosophical Transactions* The seventh letter refers to Lister s candi- dature for the regius professorship of surgery in the University of Glasgow In this he was successful and he removed from Edinburgh to Glasgow in 1860 although the last letter dated 1864 is headed 11 Rutland Street Edinburgh ' In this last letter Lister discusses medical education and qualification Glasgow University and other Scottish schools had remodelled their methods of testing the professional competence of their students by substituting class exam- inations for final examinations of degrees and licences Lister cordially approved of the change which he thought would prove an immense boon to the better class of students He was perhaps unduly optimistic when he foretold nearly seventy years ago that the new system would render any reduction of the curriculum quite unnecessary Unfortunately there are still many complaints of its overloading Mr Rudolf has pre sented these letters to the Royal College of Surgeons of England where they will form part of the collection of Lister s papers in the library

[1] *Report on the Strangeways Collection of Rheumatoid Joints in the Museum of the Royal College of Surgeons* By R Lawford Knaggs M C F R C S With numerous micrographs by G H Bodman M D F R P S Bristol J Wright and Sons Ltd Simpkin Marshall, Ltd.

VOLUNTARY AID SOCIETIES

The following societies have been recognized by His Majesty s Government as voluntary aid societies for the purposes of the International Convention for the Amelioration of the Condition of the Wounded and Sick in Armies of the Field which was signed at Geneva on July 27th 1929 The British Red Cross Society the Grand Priory in the British Realm of the Venerable Order of the Hospital of St John of Jerusalem and the St Andrew s Ambulance Association The Army Council in pursuance of its powers under the Geneva Convention Act of 1911 has permitted these recognized voluntary aid societies subject to certain conditions to make use of the Red Cross emblem which is the distinctive sign of the medical services of armed forces Unauthorized users of the emblem are liable to pro- ceedings under the Geneva Convention Act

We have to announce with deep regret the death of Dr J R Drever late Scottish Medical Secretary of the British Medical Association An obituary notice will appear next week

MEDICAL RESEARCH COUNCIL

ANNUAL REPORT FOR 1931-2[1]

(*Concluded from page 529*)

CLINICAL RESEARCH

Reference has already been made to the endowment by the Rockefeller Foundation of the directorship of the department of clinical research at University College The work of this department has always been closely directed to the problems of cardiac and vascular disorders, but it is not to be thought that this will be its sole occupation in the future The scope of its activities has been deliberately widened There has been, so to speak, a centrifugal spread of research from the special study that for years has been made on the cardiovascular system Investigations of hypertension and cardiac asthma bring in their train problems of kidney function, study of which, in its turn, leads to " a general exploration of the symptom ' headache ' " It has been shown that pain in an active limb muscle deprived of its blood supply is due to a purely chemical or physico chemical stimulus developed in the muscle These researches into the painful effects of ischaemia in limb muscles have an important bearing on the pain of angina pectoris There is now little doubt that the old theory that anginal pain is the result of relative or absolute ischaemia is correct Prolonged obstruction of the blood supply to a human limb brings about paralysis of the limb nerves, and there is a simultaneous motor and sensory paralysis Sir Thomas Lewis, Dr Pickering, and Dr Rothschild have shown how this paralysis occurs On the sensory side loss of sensibility to touch is followed by loss of that to heat, cold, and pain, starting at the extremities and spreading centripetally On the motor side a similar spread occurs, the extensors suffering before the flexors This " ischaemic paralysis " is strikingly similar to that found in peripheral neuritis It has been proved that there is an increased sensibility to oxygen-lack as the nerves pass from their peripheral endings to the central nervous system Experiments by Sir Thomas Lewis and Dr Pickering provide evidence for the existence in human sympathetic nerves of vaso-dilator fibres which are stimulated when the body is warmed The latter's researches indicate that the chief mechanism for maintaining the body temperature constant during changes in the environmental temperature is central, the peripheral skin reflexes being of less importance

EXTERNAL RESEARCH SCHEMES

Dr Carmichael, Professor H H Woollard, and Mr J E H Roberts, in a clinical investigation of referred pain from the diaphragm, have demonstrated that this pain is not altered by local anaesthesia of the painful area This supports the theory that referred pain is central Last year it was shown by Professor E Mellanby and his colleagues that demyelination of the spinal cord similar to that occurring in convulsive ergotism, pellagra, and subacute combined degeneration, followed a diet deficient in vitamin A in the presence of ergot or with a high cereal intake It has now been shown that lathyrism—a nervous disease in those parts of India where lathyrus peas are eaten—can be produced by a diet deficient in vitamin A and containing the lathyrus pea known as Akta The dietetic conditions that produce degenerative changes in the spinal cord also cause demyelination of medullated fibres in peripheral nerves These results may have a bearing on some of the common nervous disorders in this country and Professor Edward Mellanby and his colleagues are now investigating the therapeutic effects of diets rich in vitamin A in disseminated sclerosis and subacute combined degeneration of the cord At the National Hospital, Queen Square, Dr E A Carmichael has had a grant for assistance in studying the effects of diet on epilepsy subacute combined degeneration of the cord, and other nervous diseases Careful sensory tests have revealed a peripheral and a central type of nervous affection in pernicious anaemia, the former also differing from the latter in its favourable response to liver therapy

Dr Dorothy S Russell, working on malignant tumours of the brain has found in the nuclei of many glioma cells eosinophil inclusion bodies indistinguishable from those seen in some virus diseases With the help of Dr S P Bedson an attempt is being made to transmit gliomata experimentally Experimental work at the Cardiff City Mental Hospital, under the general direction of Dr P K McCowan, has shown that there is a relation between the blood sugar level and the emotional tension in manic-depressive patients The effect of narcotics on tissue oxidative processes is being investigated with a view to throwing light on the biochemical mechanism of narcosis

An abnormally high chloride content of the pons has been found in deaths in convulsion, whatever the cause, and at the Epileptic Colony, Lingfield, the relation of the fits in idiopathic epilepsy of diuresis and chloride excretion is being examined Professor J J R Macleod and Dr J M Petersen, studying the nervous control of carbohydrate exchanges, have demonstrated that damage to the brain anterior to the pons is not attended by any change in the blood sugar content Damage to the pons itself, however, is always accompanied by hyperglycaemia

Dr S J Hartfall, working under Dr A F Hurst and Dr L J Witts, has observed that in the crises of pernicious anaemia and aplastic anaemia the phagocytic power of leucocytes is much depressed, while in simple achlorhydric anaemia this depression is much less evident At the Royal Infirmary, Manchester, Dr J F Wilkinson and Dr L Klein have been investigating the activity of a large number of commercial preparations of hog's stomach for the treatment of pernicious anaemia and suggestions as to how to improve these preparations have been made to the manufacturers The improved liver preparation for parenteral administration has continued to give good results Dr Klein is furthering his researches into the effective substance in stomach extracts Professor Stanley Davidson of Aberdeen has succeeded in preparing a highly potent liver extract from fish livers, which may reduce the cost of treatment Dr L G Parsons and Dr E M Hickmans have found that the curative effect of yeast in experimental nutritional anaemia depends upon a combination of iron, copper, and the vitamin B complex In a clinical study of the anaemias of childhood they conclude that these fall into two groups those due to nutritional defects, and those in which increased blood destruction follows infective and other causes At Queen Charlotte's Hospital further work is being done on puerperal fever under the direction of Dr Leonard Colebrook Dr Dora Colebrook is investigating the relation between puerperal fever and throat infections, and the antiseptic methods used in midwifery are being reviewed in the light of modern knowledge The therapeutic effect of the organic arsenicals on puerperal infections is also being studied

BIOLOGICAL STANDARDS

The work on biological standards at the National Institute for Medical Research embraces vitamin standards, pharmacopoeial, sex hormone and insulin standards Quantities of nearly pure carotene, from seven sources Quantities of nearly pure carotene, from seven sources tions in six different countries have been collected

[1] Report of the Medical Research Council for the Year 1931-2. 1933 H M Stationery Office (2 net)

the Institute They have been mixed in a common solution purified by recrystallization and distributed in small sealed ampoules This material is now the international standard for vitamin A The international standards of vitamins D and B are also kept at the Institute and consignments of the three vitamin standards have been sent to some twenty countries An international inquiry is being made into the methods of standardizing the formol toxoid (anatoxine) employed in active immunization against diphtheria A British standard for Type I pneumococcus serum has been distributed to manufacturers in this country and work is now being directed to making a stable standard preparation of Type II antipneumococcus serum The standards required by the new *British Pharmacopoeia* for digitalis strophanthin and strophanthus mixture have been distributed The replacing of the original insulin standard is now under consideration A sample of the ketohydroxy form of the crystalline oestrus producing hormone has been accepted as the international standard The Standards Laboratory at Oxford continues its work of producing and standardizing bacterial suspensions and agglutinating serum for the diagnosis of infections with enteric and dysenteric bacteria Brucella and the pneumococci

LISTER MEMORIAL LECTURE

Sir Charles Ballance who delivered the Lister Memorial Lecture at the Royal College of Surgeons of England on April 5th opened with a warm appreciation of Lister's personal character high ideals and enduring achievement Coming in his early professional life under the influence of men famous in physiology chemistry physics and micro copy Lister had swiftly developed an outstanding aptitude for mental concentration His first studies were naturally directed to the elucidation of the fundamental problems of physiology and pathology as was indicated by the subjects of some of his earlier papers—namely the contractile tissue of the iris the structure of a nerve fibre the coagulation of the blood the early stages of inflammation the nervous mechanism regulating arterial contractions and intestinal movements and the absorption of ligatures by living tissues He had quickly realized the importance of Pasteur's discoveries but it was not until August 1865 that Lister had been able to show in a case of compound fracture that putrefaction in wounds was due to micro-organisms Subsequently he published paper after paper on this subject until August 1880 when he delivered his well known address on the relation of micro-organisms to disease

Sir Charles Ballance then recalled his own personal association with Lister from 1877 As a student he had witnessed the performance by Lister at King's College Hospital of the first operation in London for the repair of transverse fracture of the patella Later after study in Germany Sir Charles had renewed and intensified his personal friendship with Lister which had illumined his life as a struggling young surgeon and in association with the comradeship of Sir James Paget had set the course of his professional career The lecturer then briefly detailed his own more recent work in connexion with the National Institute for Research at Hampstead the laboratories of the Royal College of Surgeons and the Laurelwood Laboratory eighty miles from New York In the last of these the investigation of nerve grafts had been an outstanding feature of his collaboration with Dr Arthur B Duel

SOME RECENT RESEARCHES

The lecturer proceeded to describe with the aid of lantern illustrations certain lines of recent work which would he thought have been of special interest to Lister

The first of these was the observation of the regressive changes in the cells of the facial area of the left Rolandic cortex following experimental interference with the right facial nerve (1) by grafting this nerve to another (2) by substituting a portion of it by a portion of another nerve in the aqueduct of Fallopius and (3) by removing the facial trunk and its continuation in the aqueduct It had been found that the nerve grafting operation in the aqueduct was associated with a much more rapid return of function in the facial muscles than when the facial nerve was anastomosed to another nerve It was probable that in the former case a living connexion through the graft between the Rolandic cortex and the peripheral facial nerve was established long before there was any evidence of return of function in the facial muscles The early regressive changes observed in the large pyramidal cells were (1) the disappearance of the Nissl granules except at the base of the axon (2) diminution of and alteration in the shape of the body of the cell the protoplasm of which became granular (3) loss of the cell processes the axon persisting for a longer time than any of the others and (4) the possible assumption by the nucleus of an eccentric position

The second line of work recalled Lister's first contribution to science being a study of the contractile tissue of the iris Lister had experimentally found evidence supporting the pronouncement by Kolliker in 1848 that all plain muscle tissues had a cellular constitution He had agreed also with Kolliker that the sphincter fibres were readily seen but that the dilator fibres were only to be investigated with difficulty the latter probably consisted of many narrow bundles which ran inwards separately between the vessels and were inserted into the sphincter border Sir Charles Ballance had confirmed these conclusions and agreed that the radial fibres were hard to demonstrate He showed lantern slides of preparations of the iris of the horse and of the albino rabbit these displayed the sphincter and radial muscles and the nerve supply of the iris There were faint indications that the nerve supply of the plain muscle fibres of the iris was comparable with the nerve supply of the plain muscle fibres of the bronchi

An attempt had been made to cultivate the cells of the embryo sciatic nerve in the egg in the subdural space and by the ordinary methods of tissue culture The egg experiments had failed Kanji Arai of Japan had transplanted portions of peripheral nerve into brain tissue and had reported the occurrence of a temporary but definite regeneration of the medullary sheaths The lecturer described one of his own experiments in which a fragment of the sciatic nerve of a kitten had been implanted in the subdural space of a young adult cat When removed and examined twenty nine days later no sign of the presence of axis cylinders was discovered and this contrast with the conclusions of the Japanese observer required further experimental consideration Lantern slides demonstrated the results of tissue culture experiments Myeline was shown to be present in the neurolemma cell and two kinds of cell were discernible in the cultures

Another investigation recalled Lister's work on the application of ligatures to arteries in which he had found that a peritoneal ligature applied to the common carotid artery of a calf was absorbed after thirty days being substituted by a band of living tissue which was continuous in structure with the arterial wall In the words of Lister

> The new tissue takes as a model the old and forms at its expense the old tissue is absorbed by the new and as the old is absorbed new is put down in its place The surgeon may now tie an arterial trunk in continuity close

to a large branch, secure against secondary haemorrhage For my own part I should now without hesitation undertake the ligation of the innominate artery, believing that it would prove a very safe procedure"

Sir Charles narrated the part he had played in this work, and his subsequent extension of it, including the disintegration of such foreign bodies as ligatures by cellular proteolytic ferments and their subsequent absorption

Passing to the consideration of double lateral implantation of the ends of a damaged nerve into the side of a neighbouring intact nerve, the lecturer recalled the frequent occurrence during the war of the destruction of one nerve for a considerable distance, while another lying near it was undamaged The arm, the forearm, the popliteal space, and the brachial plexus had been the sites of these injuries The ends of the destroyed nerve could not be brought together, so they had been united end to side of the neighbouring intact nerve It had been found that the part of the intact nerve lying between the anastomoses acted as a living graft, and that these operations proved to be successful from the functional standpoint when such treatment as movement of the joints and massage was continued intelligently for a long period He had been able to study the sequence of events in such cases, and to find out how recovery had actually occurred He believed that this procedure would become of increasing surgical importance, for it was obviously better to employ a living nerve as a graft than to transfer a portion of nerve from some other region of the body, and to inveigle it into position between the two ends of a divided nerve

The last of the investigations mentioned by Sir Charles Ballance related to the histology of sterile incubated carcinomatous and healthy tissue, a line of work he had begun in 1885 in co operation with Professor Shattock It had been found that there was a projection of chromatiniferous granules from the nuclei of the carcinomatous cells, which had been likened to the phenomena attending the working of a process of sexual division Such a projection had never been seen in normal tissues incubated under the same conditions The negative results obtained by grafting experiments did not necessarily disprove the presence of an infective agent in carcinoma, but only implied that the method employed to demonstrate it was unsuitable It remained possible that the migration of chromatiniferous granules from the carcinomatous nuclei had some bearing on the problem of cancer aetiology

RECOLLECTIONS OF PRE LISTERIAN SURGERY

In two notes appended to the lecture Sir Charles Ballance describes briefly pre-Listerian surgery, and recounts some personal memories of the years 1880 to 1890 In 1875, when he had entered St Thomas's Hospital, nearly all the few operation cases were complicated by infected wounds one patient had died a week after an operation for haemorrhoids as the result of secondary haemorrhage pyaemia and tetanus Yet some recovered, after having been treated as a rule by numerous incisions, chlorinated-soda poultices and the internal administration of ferric perchloride and unlimited brandy

Those who have recently joined the profession cannot in any way realize the paralysis of surgery sixty years ago in the presence of suppuration cellulitis erysipelas septicaemia pyaemia acute traumatic gangrene and tetanus for which diseases there was as yet no means of prevention and no remedy

In 1880 as a house surgeon he had performed an amputation using Listerian antisepsis and Neuber's decalcified bone drainage tubes The dressing was removed on the fourteenth day and the wound was found to have healed without pain or fever The tubes could not be extracted, having become firmly fixed within the stump by the living cells, which were beginning to absorb and replace them, the ends were consequently cut off with scissors flush with the surface

In the same year he had attended a lecture by Sir John Burdon Sanderson in which the results of an investigation were described to show that scrofula could not be a specific disease, since it could not be held conceivable that the specific agent could be in three different places at the same time Sir Charles Ballance had been present also at the meeting of the Physiological Section of the International Medical Congress in 1881, when Ferrier had demonstrated the truth of the doctrine of cerebral localization During his stay in Germany the lecturer had attended the first class in bacteriology in Leipzig each member had to prove the specificity of each known pathological organism by himself carrying out to the satisfaction of the lecturer (Becker) Koch's four postulates Other work undertaken by him in that city included arterial ligation and other surgical procedures and the obtaining of the anatomical models of organs prepared by His for St Thomas's Hospital In 1886 he had visited the Pasteur Laboratory in Paris when work on rabies was in progress, considerable confusion at that time being caused by the fact that the tetanus bacillus had not been identified

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY

The annual general meeting of the Medical Sickness Annuity and Life Assurance Society was held at the First Avenue Hotel, High Holborn W C on April 5th, under the presidency of Dr F C MARTLEY

CHAIRMAN'S ADDRESS

The chairman said that owing to the closing date of the financial year having been changed to December 31st to meet the requirements of the Companies Acts, they met to receive the directors' report for six months to December 31st 1932 It was gratifying to note that in spite of exceptional difficulties the volume of new business was quite satisfactory The investment position occupied a great deal of the directors' time and was one of their most difficult problems Since the last general meeting the pension and insurance scheme applicable to practitioners working under the National Health Insurance Act had been launched by the Insurance Acts Committee of the British Medical Association, and the society was one of the companies chosen to undertake insurance in connexion with the scheme It had been found that in the drafting of policies to be issued the society in certain circumstances became trustees in dealing with the benefits As the society did not possess the special powers to undertake this class of business it was considered advisable to apply for such powers at the earliest possible moment and to make the necessary alterations in the Memorandum of Association The directors also thought it desirable to extend their power to include the issue of what were known as capital redemption or sinking fund policies which were frequently required in connexion with various leasehold properties and other business arrangements If the meeting approved the proposed alterations a formal application would have to be made to the courts before the resolution could become operative

On the motion of the chairman the directors' report for the six months ending December 31st 1932 was unanimously adopted Dr W Knowsley Sibley and Dr G de Bec Turtle were re elected directors, and Messrs Sturges Fraser Cave and Co as auditors The meeting unanimously approved the proposed alteration in the Memorandum of Association recommended by the directors The recommendation to pay an interim bonus on all with profit policies for permanent and accident insurance and life assurances becoming claims during 1933 was approved

On the motion of Sir William Willcox a vote of thanks was accorded to Dr Martley for his work on behalf of the

South Africa

[FROM OUR CORRESPONDENT IN PRETORIA]

Gold Medal for Meritorious Services

The Gold Medal for Meritorious Services of the Medical Association of South Africa (British Medical Association) has been awarded on two occasions only the second recipient being Dr A J Orenstein the retiring president of the Federal Council His services to the present Association have been so conspicuous that his selection for the medal met with immediate enthusiastic approval throughout the profession in South Africa His first appointment as president was for a period of three years at the end of that time he was unanimously re-elected His successor is Mr T Lindsay Sandes of Capetown another very popular appointment

Bacterial Food Poisoning

An outbreak of food poisoning which occurred on the Durban–Johannesburg train on February 9th attracted much public attention and the subsequent inquiry was closely followed by the local press Of the twenty four passengers who partook of the dinner provided in the dining saloon nine became ill one subsequently dying All the fifteen members of the train staff who were supplied with food from the saloon developed symptoms In every case there was acute gastro-intestinal irritation with vomiting and diarrhoea as well as constitutional symptoms high temperature prostration and cramps suggesting that Salmonella organisms had been ingested with a considerable quantity of their toxins Stools from nine of the patients were examined by the South African Institute for Medical Research and from eight of these *Bacillus aertrycke* was isolated Blood serum collected from the ninth patient on the eighth day after onset showed that he too had suffered from *B aertrycke* food poisoning His serum agglutinated the institute's stock strain of the bacillus and also the strain isolated from the stool of one of the other patients Samples of foodstuffs eaten by the patients of the ice and water carried on the train swabs from various receptacles mice caught in railway food depots etc were also bacteriologically examined *B aertrycke* was recovered only from the ice and from certain food substances (veal and green peas) which had been placed in the ice box after cooking The surface of the block of ice from which the bacilli were isolated had been previously treated with boiling water and placed in a sterilized receptacle It became evident that blocks of ice infected with the organism had been taken on the train at Durban and put in the ice box of the saloon Food was placed in close contact with the melting blocks and the contamination could thus be accounted for

Health of Natives on Witwatersrand Mines

As a result of the Union's departure from the gold standard the mining industry has reaped considerable benefit an immediate effect of which is an increase in the native labour complement Much native labour is available owing to the general financial depression and also to the Government's civilized labour policy of putting unemployed Europeans on to railway and road construction very largely at the expense of the native labourers previously employed Increased development on the gold mines therefore will bring considerable relief to the native territories where living conditions have of recent years sunk very low in times of drought reaching starvation level requiring extensive Government succour The gold mines of the Witwatersrand employ a quarter of a million Bantus recruited from the native territories These natives leave their homes and families for the period of their contract which never exceeds a year There is therefore a complete turnover of native labour at least once a year While on the mines the natives are housed in compounds each accommodating on an average about 3 000 Gold mining is a hazardous occupation and the maintenance of the health of such a large army of uncivilized labourers presents many problems Successful mining of the relatively low grade ore of the Witwatersrand depends very considerably on cheap labour The margin for improvements in diet and housing is therefore small Nevertheless extensive improvements have been made during recent years and the standard of health of these workers is now very high This is the more creditable when it is realized that the bulk of them arrive on the mines in a very badly nourished condition due to the fact that they will not present themselves to the recruiter until driven to do so by sheer hunger It is a well known fact that the native returns to the territories after serving a period of contract on the mines weighing considerably more than when he left The malnourished recruit readily succumbs to scurvy if put on to hard work at once and to prevent this antiscorbutics in the form of vegetables and germinated beans are added to the maize meal porridge on which the native largely subsists Scurvy once a widespread condition on the mines is now of very low incidence and is confined largely to recent recruits

The medical services of the Central Mining or Corner House group of mines which employs some 90 000 natives are directed from one central office Eleven mine medical and one research medical officer are employed with Dr A J Orenstein as superintendent of sanitation for the whole group Dr Orenstein's report for the year 1932 shows a considerable improvement in the morbidity and mortality rates of the previous two years The death rate per 1 000 from disease was 9 85 in 1931 and 7 74 in 1932 from accidents 2 98 in 1931 and 2 65 in 1932 The total number of working days lost through disease and accidents was 533 or 6 35 per 1 000 as against 7 1 per 1 000 in 1931 The commonest disease among these labourers is pneumonia which was responsible for 33 per cent of the total mortality from disease in 1932 Various measures were tried during the year in the treatment of pneumonia the most important being the use of concentrated vitamin A because of its presumed anti infective value Preparations were obtained with the assistance of the Medical Research Council and the Union Government The experiment covered 764 cases and was conducted simultaneously in three different hospitals Unfortunately the results proved entirely negative Dr Fox biochemist to the South African Institute for Medical Research carried out investigations at the same time on the vitamin A content of the livers of native mine workers and town workers His findings confirmed the conclusion based on the treatment experiment that vitamin A has no obvious effect on the course of pneumonia There was a creditable drop in the pulmonary tuberculosis incidence from 6 52 in 1929 to 3 11 in the year under review and only forty five cases of miners phthisis were recorded as compared with 117 in 1929 The number of cases of typhoid which very accurately reflects hygienic conditions fell from 571 cases (or 6 9 per 1 000) in 1931 to 234 (or 2 8 per 1 000) in 1932 The preventive measures against ankylostomiasis which consist in the intensive treatment of underground latrines with salt have proved most effective A large proportion of the labourers recruited in Mozambique arrive on the mines infested with hookworm Unless precautions are taken the warm moist and dark conditions encountered underground favour rapid spread The effectiveness of the

preventive measures is best gauged by the number of new cases reported among the European miners in 1928 this was 205, in 1932 it had been reduced to 53

To minimize the risk of heat stroke in the very deep, hot levels recruits are put through an acclimatization process lasting about fourteen days They start with light work in less hot stopes and work up gradually to full work in the hottest stopes In spite of this precaution some natives appear to be specially susceptible to heat, and an experiment was initiated to ascertain whether it would be possible to eliminate such individuals After various methods had been tried a chamber was improvised on the City Deep in which a temperature of about 94° F could be maintained in a water-saturated atmosphere A technique has now been devised whereby the recruits are divided into three groups those showing no special susceptibility to heat, those who are slightly susceptible, and those who are markedly so During 1932 the recruits allocated to the first group were put into an acclimatization gang for only five days, those of the second group for seven days, and those of the third for the full fourteen days Results have entirely justified this procedure not only has there been a reduction in heat stroke incidence, but there has been a great saving in working shifts at the mine The chamber is now being reconstructed on an improved plan, and a second one is being erected at another deep level mine There is every reason to believe that more accurate classification of recruits will become possible, with a further reduction in the number of heat stroke cases and a shortening of the total period now taken up in acclimatization

Ireland

National Health Insurance Bill

The National Health Insurance Bill was introduced in the Dail on April 4th, and its contents have now been circulated among the members The main object of the Bill is the unification of all the approved societies in the Free State, and the work hitherto done by the various national health societies will be carried out by a single statutory committee called the Committee of Management of the Unified Society It will be constituted as follows (1) the three trustees of the Unified Society, (2) nine persons representative of members of the Unified Society, and (3) three persons representative of employers of insured persons The members' representatives shall be elected by the Unified Society, and the employers' representatives shall be appointed by the Minister and be removable by him Every member of the committee of management of the Unified Society shall be paid by the society such allowances as the Minister may determine There shall be three trustees of the Unified Society Until these are appointed the members of the provisional committee shall act as the trustees of the Unified Society The following provisions shall have effect in relation to the trustees of the Unified Society when they have been appointed (*a*) the said trustees shall be appointed by the Minister (*b*) each trustee shall unless he dies, resigns, or is removed from office by the Minister, hold office for the prescribed period but shall be eligible for reappointment The trustees of the Unified Society may (1) sell or lease any land held by them on behalf of the Unified Society and (2) purchase or take on lease land on behalf of the society The powers conferred on the trustees of the society shall not be exercised except with the consent of the Minister There shall be a full-time secretary and treasurer of the society the treasurer shall also be the assistant secretary These officers, subject to the approval of the Minister, shall be appointed by the committee of management A member of the committee of management, or an officer or an employee of the Unified Society, shall not be a member of the committee of management or board of directors of any society or company transacting insurance business, or be employed by such a company

Sir Patrick Dun's Hospital, Dublin

At the annual general meeting of Sir Patrick Dun's Hospital reference was made in the annual report which was presented by Dr T G Moorhead chairman of the board of governors, to the need for extensions and reconstruction, and this, it was stated, was borne out by the Committee of Reference of the Public Charitable Hospitals (Amendment) Act, 1931 The sum asked for the hospital in the claim sent to the Committee of Reference was £527,033, and the total award was £348 331, of which £146,625 was allotted for endowment The governors, however, felt that £274,216 would be required for endowment Up to the end of 1932 the amount received was £134,191, and the governors considered that they should advance with caution, and did not therefore, intend to proceed with further building until a sufficient sum had been obtained The report mentioned that references had been frequently made to the fact that poor patients found difficulty in gaining admittance to Dublin hospitals No conclusive evidence in support of this assertion appeared to have been produced, the matter, however, merited careful investigation So far as that hospital was concerned, the governors wished to state most emphatically that sickness and suitability for hospital treatment had first claims Intern patients treated absolutely free constituted 40 75 per cent of the total admissions in 1932 This fact, Dr Moorhead said, should warrant them in still asking for the support of the charitable public He said that subscriptions had fallen off in a serious manner and it was indicated that the corporation was going to cut down its grants this year The governors in their report, expressed the opinion that amalgamation of some of the smaller Dublin hospitals would be advantageous or, failing that, some scheme of co-ordination or federation The report concluded with an expression of deep regret at the loss of Sir William Taylor and Dr Walter G Smith

County Dublin Medical Officer of Health

At a recent meeting of the County Dublin Board of Health, arising out of a report from Dr Harbison county medical officer of health, Mr Rollins said they would have to consider the appointment of an assistant county medical officer of health The Dun Laoghaire Borough scheme school medical inspection, etc, were held up owing to the impossibility of the county medical officer of health being in several places at the same time The secretary read a letter from the Minister of Local Government and Public Health concerning the appointment of an assistant county medical officer of health, stating that the Minister did not consider that the duties of the existing district medical officers related to matters the same as or similar to the duties of an assistant county medical officer of health and he could not, therefore, approve the appointment being made by the board from amongst its existing medical officers The secretary said that, with a view to having the appointment left in the hands of the board, he had been making some private inquiries, and he believed the Department of Local Government and Public Health could not see its way to allow the board to make the appointment from its own district medical officer If the board wanted its school medical service scheme developed it would have to give way and ask the Appointments Commissioners to make the appointment

CORRESPONDENCE

X Rays in Treatment of Graves's Disease

SIR —The correspondence which has recently appeared in the *Journal* on the treatment of toxic goitre was less illuminating than it might have been since with the notable exception of Dr G R Murray's letter it partook rather of the nature of a controversy in which the protagonists made extreme statements according to their particular bias In clinical medicine and surgery extreme statements seldom represent the truth In effect the surgical side on the one hand claimed that radiology in toxic goitre is useless (if not actually harmful) and the radiological side on the other that surgery is superfluous (if not actually dangerous) It seems to me to be necessary therefore to attempt to state the position in a somewhat more judicial manner than has yet been done

Although writing as a surgeon I am perfectly ready to admit that excellent results may sometimes be obtained by *x* rays when they are applied by an expert and that no damage to the skin or other tissues need follow On more than one occasion in patients of mine in whom for one reason or another treatment by surgery could not be completed satisfactory results have followed *x* ray treatment with diminution in the size of the gland Other patients whom I have seen had been very greatly benefited by *x* rays alone On the other hand I have operated on a number of patients in whom *x* ray treatment had produced little or no improvement and I have under treatment at the present time a patient with an extensive epithelioma of the neck following an *x* ray burn The treatment in this case had not only burnt the skin but had also failed to cure the toxic goitre Clearly therefore it is a gross exaggeration to state as was done in one of the preceding letters that *x* ray treatment is the treatment of choice It would be equally untrue to say that surgery is the treatment of choice since therapeutic measures must always be adapted to the needs of the individual patient

There is however this to be said in favour of surgery that the results are obtained in a fraction of the time required by the radiological treatment Many patients cannot or are unwilling to endure the weeks or months of invalidism entailed by non surgical measures and are thankful to suffer two or three days of pain or discomfort in order to obtain the more rapid benefits of surgery Also it is necessary now to deny that operation for toxic goitre is any longer a dangerous procedure An immediate operative mortality of 1 per cent such as I have experienced in a consecutive series of over 200 operations does not constitute a serious danger Some of these patients moreover were so ill that they would shortly have died had they not received a drastic form of treatment such as surgery What of the patients who die of the disease while awaiting the result of *x* ray treatment? These constitute a *non operative mortality* concerning which there is nothing but silence Those patients particularly with fibrillating or otherwise damaged hearts cannot be kept waiting since the heart demands immediate relief

It appears to me therefore that both *x* rays and surgery have their place in the treatment of toxic goitre Neither method effects a cure but both can claim to place patients on a new and better level of existence My own bias is towards the one of which I have had more experience and which gives on the whole results that may be regarded as highly satisfactory and are obtained with the minimum delay I do not deny however the great value of the other method in suitable cases —I am etc

London April 7th GEOFFREY KEYNES

Treatment of New Growths by Fluorescein and X Rays

SIR —A short holiday must be my excuse for not replying to Dr S Monckton Copeman's letter before The news from America to which he refers will be of great interest to all who are concerned with biophysical problems and it is good to hear that further information on the subject will soon be forthcoming Nevertheless if some specific secondary radiation is produced in sodium fluorescein solutions by *x* rays I should have expected more definite evidence thereof in my own series of clinical cases and of animal experiments In the former as I said the effects of the fluorescein were practically negligible in the latter microscopical examination of the tissues showed no difference between specimens irradiated with or without fluorescein

As regards Dr C Gouldesbrough's comments the dogmatic statements in his letter are his not mine I did not once use the expression obvious from the first His last paragraph wherein he thanks me for my sincerity of purpose is indeed gratifying I can only say with Dr Johnson that to be so distinguished is an honour which being very little accustomed to favours from the great I know not well how to receive or in what terms to acknowledge —I am etc

London W 1 April 8th HECTOR A COLWELL

Duodenal Feeding

SIR —As the radiologist concerned in the examination of most or all of Dr Harold Pritchard's experimental group of cases of duodenal feeding I can assure Dr Ernest Young I saw the films demonstrated at the Medical Society of London and listened to the discussion afterwards but did not join in owing to the late hour at which it terminated Dr Pritchard's cases were strictly comparable with those shown by Dr Cordiner and the only selection was I believe to exclude complications such as perforations with fixation and excavation of the pancreas or possible carcinoma where surgical treatment was more appropriate Dr Cordiner's cases did not suggest any complicated ones either Size was no drawback in Dr Pritchard's group

Whatever the clinical results may have been I have never discovered any advantages from the *x* ray point of view from duodenal feeding The films shown by Dr Cordiner did not demonstrate any advantage gained by this method The large majority of uncomplicated gastric ulcers yield readily to adequate medical treatment a few are obstinate On two occasions I saw one ulcer heal while another developed near by or some distance away Unfortunately the same cannot be said of the duodenal ulcer where I can detect definite *x* ray evidence for long periods after the subsidence of symptoms Such cases take three to twelve months or longer to heal up permanently It is only right to add however that the detection of such evidence requires considerable refinement in technique which is not published in any textbook I know of Apparent *x* ray cure is obtained in shorter periods

I believe that duodenal feeding is founded on a definite fallacy—namely that reversed peristalsis in the duodenum is an abnormality This is not so for to-and-fro peristalsis is essential to secure proper admixture of chyme with bile and pancreatic and duodenal juices Duodenal ulceration or inflammation only exaggerates this peristalsis in most cases though in varying degree The tube should proceed into the fourth stage or the jejunum to be effective —I am etc

London W 1 April 6th JOHN R WYLIE

Reaction after Injection of Sodium Morrhuate

SIR,—I had read with interest the recent correspondence concerning the untoward sequels following the injection of sodium morrhuate, but remained unconvinced. Having used the drug on a large number of cases, with entirely favourable results and without trouble, I felt that there must be some explanation to account for these cases, and that the risk was not a very real one in ordinary circumstances. This contempt, bred of familiarity, has led me to use the drug once too often, and, without wishing at this point to enter into any controversy as to the nature of the collapse, I append the following brief case history as a warning to others, being convinced that until the true explanation is forthcoming, so that further and similar trouble may be avoided, this drug should not again be used for the injection treatment of varicose veins.

A healthy man, 45 years of age, suffering from varicose veins below the knee of moderate severity, had the first injection on March 12th—2 c.cm. sodium morrhuate. There was no interference with ordinary activity and an excellent result. A second similar injection on March 19th produced a fair result. On April 2nd the third injection, 3 c.cm., was given into an empty vein. It was followed in about one and a half minutes by a sense of discomfort and pain in the tongue and mouth spreading rapidly over the entire body. The face quickly became blotchy red and suffused, and a profuse sweat involving the whole body and associated with flushing of the skin occurred. The hands and forearms became blanched and cold, the radial pulse could not be felt, nor could the heart beat be heard. There was no interference with respiration, and consciousness was not completely lost. The axillary temperature was not sufficient to move the mercury from 94° F. The patient was laid flat, with the feet raised, and cardiazol and camphor in oil 1 c.cm. of each were injected as stimulants. The patient was very restless and after a few minutes began to complain of colicky pains which continued and increased throughout the attack. At the end of about one and a half hours the heart beat could again be heard faintly, but the radial pulse was still impalpable at the end of three hours. About two and a half hours after the onset there was a copious vomit (some spirits and coffee had been taken by the mouth) and at the same time a very free loose evacuation of the bowels. The general condition at this time ceased to give cause for any great anxiety, but the abdominal pains continued. About an hour later the patient fell asleep, and six hours after the onset it was possible to remove him to his home, where he continued to improve.

It is of great practical interest to observe that this patient received his dose from the same bottle as that which had been used on previous occasions—both for him and for other patients—and also that he had, in exactly similar circumstances, received on two previous occasions injections without any untoward consequences at all.—I am, etc.,

Liverpool, April 3rd. C. ALEX. WELLS.

Puerperal Pyrexia

SIR,—The report from Queen Charlotte's Hospital Isolation Block, which was read by Mr. Carnac Rivett at the Royal Society of Medicine and appears in the *British Medical Journal* of April 8th, is of great value and interest. It shows the difficulty of elucidating the most important or the most common cause—if there be one—of acute puerperal infection. The presence of anaerobic streptococci in the blood stream, as proved by Dr. Colebrook, is a fact of considerable importance. The result of the paper and discussion shows that the mortality from acute puerperal infection is high and that no new specific treatment is yet available. I should, however, like to draw attention to the importance of the early diagnosis and treatment of all cases of puerperal pyrexia so as to prevent the mild cases from becoming acute or fatal, and if possible aborting the infection in its early stages. It is agreed that the important—perhaps the most important—factor is the general resistance of the patient, and that good nursing, fresh air, and nourishing food are essential. In addition to this I think that, as a routine medicinal treatment, quinine bihydrochloride given by intravenous or intramuscular injections is the most useful of all drugs. It has been my custom for many years to recommend it at the very onset of pyrexia after labour or miscarriage, and the reaction and results have been most satisfactory. Its exact mode of action has not yet been elucidated, but I hope that Dr. Colebrook will be able to do some experimental work with this drug in the course of the very valuable work he is now doing.—I am, etc.,

Bournemouth, April 8th. S. GORDON LUKER.

Caecostomy

SIR,—I was much interested to read Mr. Wilfrid Adams's letter (*Journal*, March 25th, p. 539) commenting upon my advocacy of caecostomy for obstruction of the colon. He raises a point of great importance, for if the colon cannot be cleared of faecal matter above the obstructing lesion by means of a caecostomy then the value of this procedure in cases of obstruction is very materially reduced. My own experience has been that at the second operation performed for the obstruction, lesion the bowel above the lesion has always been sufficiently empty to prevent any interference with a resection operation. I have never found solid or semi-solid faeces in the colon between the caecostomy and the obstructing lesion. In the case of an obstruction very low down in the rectum or lower end of the sigmoid, the colon above the obstruction cannot always be emptied by a caecostomy. Nor can this be done with certainty by a colostomy in the upper part of the sigmoid, but the contents can be entirely liquefied, and in most cases a large part, if not all, of the contents will have been evacuated by the rectum, if it has not passed back and escaped via the caecostomy. Very few obstructions are really complete, and, after the relief of the pressure above the liquefied contents often pass through readily.

My procedure is apparently not identical with that of Mr. Wilfrid Adams. I do not use a Paul's tube, or stitch the caecal wall to the parietes. I use a rubber tube about eight inches long and a quarter of an inch in diameter. This tube is passed into the caecum for two or three inches through a small incision and stitched with catgut (No. 1) to the caecum itself. A purse-string suture is then placed in the caecal wall so that when tied it turns in about half to three-quarters of an inch of the caecal wall around the tube. This method was described by me in the *Lancet* (1927, i, 1117). The caecum is then drawn up against the inner surface of the abdominal wall and the ends of the purse-string suture are passed through the peritoneum and aponeurosis, and tied so as to fix the caecum to the neighbourhood of the wound. The incision in the abdominal wall is closed, but not tightly so as to leave some drainage besides the tube. It will be noted that no part of the caecum is brought into the wound, much less to the skin. The advantage of this is that the opening will close without trouble and without secondary operation after the tube is removed, while the drainage of the caecum is just as effectual as if a Paul's tube had been used. When the operation is completed a long piece of soft rubber Paul's tubing is attached to the projecting end of the rubber drainage tube by wrapping thread round for a couple of inches. This makes a watertight joint. The end of the Paul's tubing is of course allowed to drain into a bowl put under the bed. The nurse is instructed to run [illegible] of water into the caecum every two hours. This is readily done by putting a glass funnel into the free end of the

Paul's tubing and it makes sure that the rubber tube into the caecum does not get blocked After twenty four hours half an ounce to an ounce of magnesium sulphate dissolved in one pint of water is run into the caecum and this is repeated as often as necessary In my experience this is very effectual in clearing the colon out through the tube In the course of two or three days I have seen enormous quantities of faecal matter which had clearly come from the distal colon cleared out in this way by the small tube in the caecum

I believe the important factor is the use of salts put straight into the colon which soon liquefies all the contents and readily allows it to escape by the temporary caecostomy A caecostomy done in this way is quite watertight for eight or nine days and I have never known the opening fail to close of itself I believe that if Mr Adams will try the method of irrigating the colon with a strong solution of magnesium sulphate he will find that the colon can be effectually cleared by a temporary caecostomy It is a matter of considerable importance that some certainty should be arrived at in this matter as in my opinion temporary caecostomy is a valuable means of saving life in cases of colonic obstruction but if the colon cannot be cleared in this way it loses more than half its value —I am etc

J P LOCKHART MUMMERY F R C S

London W April 3rd

Modified Bendien Reaction

SIR —Dr G Stewart Smith (*Journal* April 1st p 585) asks for comparative details with regard to the modified bendien reaction in cases of tuberculosis and pernicious anaemia and also mentions that with the unmodified chemical test which he has employed he has obtained positive reactions in cases of pregnancy jaundice and uraemia

I have found that except in pregnancy most of these conditions may be differentiated from malignancy by the modified three phase method which I have described although as regards first tube precipitation they may give positive reactions in the unheated serum phase The following are groups of cases which I think will illustrate these findings

Tuberculous Cases Colloidal Vanadium Reaction

	Malignant	Non malignant	
1	1.6/5	—	Pulmonary T B with recent carcinoma
2	—	1 25/15	Pulmonary T B cavitation sputum ++
3	—	1 7/52	" " "
4	—	2.10/23	" "
5	5.48/10	—	Chronic pulmonary T B with recent carcinoma of tonsil
6	3.5./20	—	Chronic pulmonary T B with carcinoma of lung
7	2.29,27	—	Carcinoma lung with T B in sputum
8	—	3 20/30	T B lung with sputum +++
9	—	7 0/27	T B larynx
10	1 9/7	—	Carcinoma of lung with T B in sputum
11	—	4 20/25	T B ulcer of fauces
12	—	3 30/57	Tuberculous salpingitis

In the above twelve cases it will be seen that seven were definitely tuberculous of more or less advanced degree six of which give first precipitations in the first second third and fourth tubes and therefore on the unmodified test would be read as positive results but on the differentiating fraction b the three phase modification all gave inflammatory and non malignant reactions The other five cases were also positive in that the first precipitation occurred in the first second third and fifth tubes but differed from the previous seven referred to in that the fraction was of the malignant type by the three phase method and in each of these tuberculosis was associated with malignancy

Anaemia Colloidal Vanadium Reaction

	Malignant	Non malignant	
1	—	8.24/30	Early pernicious anaemia
2	—	5 0/29	Definite moderate pernicious anaemia
3	—	6 19 28	Early pernicious anaemia
4	—	5 0 40	Moderate pernicious anaemia
5	—	4 20/..0	Secondary anaemia
6	—	5 4/9	" "
7	—	6 0/23	" "
8	—	7 21/29	" "
9	—	4 25/35	Splenomedullary leukaemia
10	—	1.5/15	Banti's splenomegaly very severe
11	—	6.35/40	Banti's splenomegaly general condition good
12	2..0.5	—	Hodgkin's disease

As shown above twelve cases of anaemia are detailed in all of which although the reaction varies from a first precipitation in Tube 1 to a first precipitation in Tube 8 eleven are of the non malignant type by the differentiating three phase reaction The first four proved to be cases of pernicious anaemia but not of the most advanced type The next four were all cases of secondary anaemia and the last four were associated with splenomegaly two being cases of Banti's disease one being splenomedullary leukaemia and the last a case of Hodgkin's disease which gave a malignant reaction

Diabetes Colloidal Vanadium Reaction

	Malignant	Non malignant	
1	—	2 25/47	Diabetes advanced
2	—	4 0/23	Diabetes definite
3	—	5 23 .5	Diabetes early mild
4	2 25/10	—	Diabetes with carcinoma of cervix
5	1 18/12	—	Glycosuria with carcinoma of pancreas

Of these five cases four were definite diabetes the first three in varying degrees of severity and although the first tube reaction was positive in each—that is gave a first precipitation in tubes lower than six—they were all of the non malignant type The fourth case gave a malignant type of reaction with a first precipitation in the second tube and in this case diabetes was associated with carcinoma of the cervix The fifth case was one of glycosuria associated with carcinoma of the pancreas and also gave a strongly positive reaction of malignant type

As regards cases of various types of renal disease in cases of uraemia have been examined Chronic nephritis with hyperpiesia has in five cases given non malignant type of reactions In two cases of enlarged prostate associated with high non protein nitrogen blood content the reaction has been of the malignant type though no evidence of malignancy has been found at operation This compares with six cases of carcinoma of the prostate in which the reaction was definitely malignant and in eight cases of enlarged prostate with blood non protein nitrogen content not higher than 60 mg per cent in which the reaction was non malignant and agreed with the pathological findings after prostatectomy

As regards gall bladder conditions eight cases of chronic cystitis gall stones with more or less jaundice gave first reactions with unheated serum varying from the first tube to the seventh but all of the non malignant character of the three phase reaction Carcinoma of the gall bladder has given a definitely malignant finding In one case chronic cholecystitis with gall stones gave a positive malignant finding in the fifth tube but no evidence of malignancy was found at operation

As pointed out in my paper the primary tube reaction is an indication of the degree of the pathological

condition present The differentiation between inflammatory and malignant pathology is shown very accurately by the differentiating details of the three phase reaction —I am, etc ,

Liverpool April 3rd E CRONIN LOWE

Treatment of Tinnitus and Deafness

SIR,—In his reply to my letter of March 4th Mr Lowndes Yates (March 25th, p 538) writes " In justice to the authors it should be stated that the tinnitus in these last two forms has never been ' cured ' in the experience of otologists, though sometimes it spontaneously disappears synchronously with the function of the cochlea " In the cases described in my book, as well as the two mentioned in my letter, the tinnitus was cured and yet the cochlea did not cease to function as the hearing improved Dr Goodbody's letter of April 1st substantiates these claims Mr Lowndes Yates's principal argument against trying the electrophonoide method is based on a saying of a former teacher, " that if we found that we had cured by some form of treatment conditions generally believed to be incurable we should consider we had cured a case in which our diagnosis had been incorrect until we had conclusively proved the contrary ' An attitude such as this would put an end to all progress in medicine

Again, in regard to re-training, Mr Lowndes Yates tells us " re-training does not aim at increasing the acuity of hearing , its object is to increase the ability of the patient to use the hearing he possesses " The electrophonoide method not only increases the ability to listen, it also increases the acuity of the hearing It does that, too, without any of the untoward consequences which, as I understand his letter, he seems to have observed as a sequel to his ' more simple method of re training in the patient's home —I am, etc ,

London, W 1, April 8th GEORGE C CATHCART

Body and Mind

SIR —Dr Stacey Wilson's standards of cure for his cases of mental disorder with tonic hardening of the colon (April 1st, p 583) are not in accordance with most modern psychiatric views What he describes is merely a superficial change in the character of his patients' symptoms In my letter of March 6th I used the term ' improvement " , I should be extremely chary of using the word ' cure " for any psychiatric case, except perhaps in childhood Dr Stacey Wilson's views are but another unfortunate example of a hypothetical primarily physical pathology, where there is ample evidence for a primarily psychopathological explanation —I am, etc ,

Birmingham April 5th S D ISAACS

Consultation by Telephone

SIR —Although one realizes the value of advertising in all its branches, one regrets to see the Post Office Telephone Service advertising at the expense of the medical profession In their advertisement in the *Radio Times* of March 31st they say

> How many bills for needless visits does the telephone save! How many groundless fears does it dispel! In times of doubt you ring up your doctor and in a few moments that reassuring voice will be telling you what you should do and whether the cost of a visit need be incurred

I venture to suggest that should a doctor under contract with the Ministry of Health—another Government Department—use this method suggested and thereby save a ' needless visit to an insured person under the National Health Insurance Acts, such doctor would be severely reprimanded by the Ministry if some unfortunate circumstance arose through neglect of visitation due to accepting a lay opinion received over the 'phone

Admittedly such procedure may be of advantage at times, but one does feel that it is unreasonable for the Post Office Telephone Service to attempt to educate the public in a procedure which would be severely deprecated by the Ministry of Health

With regard to private practice the profession is compelled on some occasions to give advice over the telephone, but here again should any case arise public opinion would be severely against the doctor concerned for advising without seeing the patient One is undoubtedly voicing the general opinion of the profession when one says that the principle of giving advice without seeing the patient is not conducive to the highest standards of medical work —I am, etc ,

S ALFRED FORBES, M R C S , L R C P

South Croydon April 4th

SIR,—I beg to enclose a copy of a letter I have addressed to the secretary of the General Post Office, and of the advertisement referred to —I am, etc ,

Cambridge March 25th W LANGDON BROWN

*** Professor Langdon Brown's letter to the G P O runs as follows

" I beg strongly to protest against the advertisement issued by the Post Office Telephone Service in to day's *Daily Express* It is most unfair of a Government Department deliberately to incite members of the public to extract gratuitous advice of the medical profession A doctor's advice is the principal commodity out of which he has to make his living and I cannot see why that advice should not be paid for whether given by letter, telephone, or word of mouth You fail to take into consideration the enormous amount of extra gratuitous work the telephone has already imposed upon the medical profession , and to appear to give official sanction to the view that advice so given should be gratuitous is, in my opinion, grossly unfair to a hard worked group of men I am sending the advertisement to the *British Medical Journal* for their comments "

British Goods for Hospitals

SIR,—When a doctor is in need of drugs or equipment how should he decide on the kind to purchase? He should not let himself be guided by political interests of one country or another , let him put himself in the place of the unfortunate invalid He will quickly and invariably decide to buy that commodity which is best for the patient, regardless of its source Acting on this rule, he will do the greatest good to, and earn the greatest gratitude of, his patients This seems the natural solution of the vexed question discussed by Mr Fitzwilliams and Dr Coope in your correspondence columns recently —I am, etc ,

Clifton Bristol, April 8th A WILFRID ADAMS

SIR,—The letter published in your issue of March 25th has aroused great interest among members of the Surgical Instrument Manufacturers' Association The making of surgical instruments in this country is a handicraft which requires long training Practically every workman engaged in the trade must pass through a long apprenticeship of six or seven years before he becomes efficient in any of the branches into which the work is subdivided, such as " edge-work," " spring work," " bow work," etc The traveller or salesman who waits upon the surgeon must be a man of receptive intelligence and long training and in the principal houses an assistant is only permitted to deal direct with the surgeon after some years' trial

experience in the trade The efficient service given by these highly skilled men to the surgical profession is proved by the very large number of special instruments which are produced week by week and even then it secures only a very moderate remuneration It is the original carrying out of these new ideas that involves so much care and skill and it is often impossible to cover the cost of the time involved

All English steel instruments are made from hand forgings and finished by hand but those made abroad are usually made from stampings which are not so reliable New instruments produced in this country generally bear the name of the surgeon for whom they have been first made but when these models become standardized they are frequently imported afterwards from abroad of a cheaper type still bearing the same name so that surgeons do not know the source of manufacture This association applied to the Government under the Merchandise Marks Act to have all instruments and appliances marked on importation but failed to secure an order only obtaining a sales order requiring such goods to bear a label at the time of sale This is next to useless as it often happens that the stick-on or tied-on label becomes detached or lost before the instrument comes to the surgeon

The industry is certainly not a money making one but extremely interesting and generally carried on from father to son It also numbers several medical men and sons of medical men among its personnel There is much unemployment at the present time due greatly to foreign competition with which it is impossible to deal on equal terms without the active co-operation of the medical profession Without wishing to trespass too far on your space I should like to point out that the manufacture of aseptic hospital furniture is also an allied industry and carried out in the same workshops and there is certainly no higher standard than that of the British made aseptic hospital furniture

Mr Fitzwilliams's suggestions appear most timely and it is trusted that they will receive the support of the medical profession —I am etc

W T REGINALD BECKETT
Honorary Secretary Surgical Instrument
London E C 1 April 3rd Manufacturers Association

Consultants and Specialists, L C C

SIR —Sir Frederick Menzies tells us in your issue of April 8th that he and (he believes) many other members of the Association are questioning the activities of the Medical Secretary in connexion with the controversy over the Consultant Service of the L C C I feel that a more pertinent question is raised by Sir Frederick's own letter and one that I regret he did not ask himself before writing I refer to his attitude towards those with whom he disagrees and in particular to the insinuation that the chairman of the Consultants Committee has no more serious claim to notice than as a wild Irishman fighting not for his ostensible cause but simply out of a wanton love for a fight The introduction of considerations of this kind can have no other result than the creation of prejudice where it is most harmful It is not relevant to the discussion of a medical matter and it can only kill the spirit of good will so essential to a solution of the present difficulty

By a very proper convention gibes of this order are not allowed to intrude into public discussions No chairman of a medical meeting would tolerate such a comment and no man of good will would make it Nevertheless since Sir Frederick has seen fit to introduce this note into the controversy it may not be amiss to point the moral of his letter It is an ironic commentary upon the lot of those native inhabitants of London who seek within the L C C hospitals the cure and relief of their sufferings that he should be at pains to make it seem as though their welfare hung upon the issue of a world warfare between a wild Irishman and a wild Scotsman If this were really so the Englishman might well thank Providence for having made him so long suffering a creature

But clearly this is not the level—even though it be one of Sir Frederick's own choosing—on which this discussion can be usefully or decorously conducted and I believe that he must regret having introduced so uncalled for an element of discord Indeed if we were to take his letter as truly representing his normal reaction to differences of opinion with his professional brethren what a chilling reflection it would be for those of them who may contemplate joining as consultants a service of which Sir Frederick is Chief Medical Officer *Absit omen!* —I am etc

London W 1 April th F M R WALSHE

SIR —From the letter signed by Sir Charlton Bruce and others which appears in the *Journal* of April 8th I extract the following words

> We are not concerned here with the justice or injustice of the actual terms of appointment To us the disturbing feature of the London County Council's action has been its unwillingness to co-operate in free and open discussion with the consultants so that a competent and well-organized consultant service should be at the disposal of the ratepayers of London It is surely to the advantage of the London County Council that such co-operation and consultation as have been offered to it by the consultants should be exploited to the full How could it be otherwise

Would Sir Charlton and his co-signatories tell us with whom the L C C should have conferred Would they be prepared to accept the so-called Consultants Committee of the B M A as a suitable body to represent the views of the consultants of London?—I am etc

London S W 3 April 7th FREDERICK MENZIES

SIR —I have read the comments by the Medical Secretary (pages 129 and 130 of the *Supplement* issued to-day) The only conclusions I can possibly come to as a result are (1) that Dr Anderson has never carefully studied the L C C scheme for consultants and specialist services and (2) that he has very little if indeed any experience and knowledge of the procedure and standing orders of local authorities in this country as well as the ordinary rules which officials of public authorities are rightly expected to observe in dealing with reports to those authorities

In these circumstances it is useless for me to attempt to educate him on quite a number of the points mentioned in his comments I can only suggest that the next time he contemplates launching an attack or taking part in a raging tearing campaign against a public authority he should make a particular point of taking counsel beforehand with the wise men from the North (Sir Robert Bolam and Dr Cox) instead of the wild Irish from the East End (Dr O Donovan) —I am etc

London S W 3 April 8th FREDERICK MENZIES

*** No one we imagine will regret more the tone of his letter of April 8th than Sir Frederick Menzies in calmer mood Personalities are to be deprecated in a grave issue of this kind We are glad to recall here the closing passages of the commentary by the Medical Secretary printed in last week's *Supplement* Finally even at this late stage it cannot be too emphatically stated that the consultants and specialists are still anxious to

co operate with the L C C in order to secure an efficient and harmoniously working service May I express the hope that the L C C, either of itself or through its Chief Medical Officer, will respond to this offer?" Of good augury also is the resolution passed on April 6th by the London Voluntary Hospitals Committee "That this Committee is of opinion that in the interests of the sick poor an amicable settlement of the dispute between a number of consultants and the London County Council is most desirable, and with that end in view offers its services to bring about such a settlement"

Medico-Legal

LUNACY CERTIFICATION PROTECTION FOR THE CERTIFYING PRACTITIONER

An application heard in the Court of Appeal, with Lord Justice Scrutton presiding, was the first of the kind which has arisen since the Mental Treatment Act gave increased protection to the medical profession against claims alleging negligent certification in lunacy proceedings It will be remembered that no civil or criminal action can now be brought against a doctor in this respect without leave of the High Court, which leave is not granted unless the court is satisfied that there is a substantial ground for alleging bad faith or lack of reasonable care

The applicant in this case was a married woman, aged 45 who applied for leave to bring civil proceedings against a district medical officer in the North of England, claiming damages for having negligently certified on June 2nd, 1932 that she was a person of unsound mind and properly to be taken charge of and detained under care and treatment As a result she was admitted to a county mental hospital and detained there until August 2nd, when she was discharged, on the application of her brother, under Section 79 of the Lunacy Act, 1890 The application was resisted on behalf of the doctor by the Medical Defence Union, with Messrs Hempsons acting as solicitors

The application came first before a Master in Chambers on February 14th The Master inclined to the view that the applicant should have leave to bring her action unless the case should prove to be such as a judge could not safely leave to a jury He intimated that on the facts before him which seemed consistent with applicant's sanity, if he were a judge trying the case he would be justified in awarding damages The doctor at once appealed to set aside the Master's order giving leave for a writ of summons to be issued against him, and the appeal was heard before the Judge in Chambers on February 21st His lordship decided that the order must be set aside, and leave to issue the writ of summons refused He said that the section of the Act was clear, and he did not think that the criterion to be applied was whether or not the case was a proper one to be left to a jury He said, further, that he was not satisfied that there was substantial ground for the contention that the doctor had acted in bad faith or without reasonable care, and he refused to give the applicant leave to appeal against his decision The applicant's advisors then applied for leave to appeal to the Court of Appeal, where the application was dismissed Lord Justice Scrutton, who said that the matter was one of public interest, drew attention to the safeguards for the protection of those who had to decide whether a person suspected of being of unsound mind should be detained He said that under the Mental Treatment Act the protection of those who had to administer the lunacy laws was made more extensive Just as a judge was protected against an action by a disappointed litigant so, though in smaller degree, protection was accorded to those who were called upon to certify for lunacy In the present case, he said, it seemed clear from the statements before the court, that the applicant suffered from persecution mania She had not satisfied the court that there was substantial ground for her contention that the doctor had acted in bad faith or without reasonable care

The evidence in proceedings of this kind is not made public, it consists of affidavits a number of which were put in on behalf of the applicant being sworn statements by herself and her friends and neighbours and other persons directed, no doubt, to proving her soundness of mind On behalf of the doctor also a number of affidavits were put in He declared that in June, 1932, as a result of instructions received from the relieving officer for the area, he had an interview with the applicant lasting an hour and a half, in the presence of her husband and daughter He conducted his examination in accordance with precedent and the medical works of accepted authorities, addressing himself particularly to the perceptive capacity, ideative processes, attention, memory, will, and emotions of the patient, as well as to her general health, and bearing in mind her previous history From her attitude, which was violent, and her answers he came to the conclusion that her mental instability was such that for her own safety and the safety of others she should be under restraint His affidavit was supported by others from the medical superintendent of the county mental hospital, assistant medical officers there (who confirmed the opinion that the patient was suffering from ideas of a persecutory nature), the matron and a nurse, the woman's husband and daughter, and a doctor whom she had consulted a year or two previously

As stated, the Court of Appeal refused leave to issue a writ in the action, a result upon which the practitioner and those concerned in his defence are to be congratulated, and one also which is very satisfactory as proving that the safeguard inserted in the Mental Treatment Act has substance and can stand the test of legal proceedings

The Services

INDIAN MEDICAL SERVICE DINNER

The annual dinner of the Indian Medical Service will be held at the Trocadero Restaurant, London, on Wednesday June 14th, at 7.15 p.m. Air Vice-Marshal Sir David Munro K.C.B., C.I.E. (I.M.S., ret.) has been invited to take the chair Tickets and all particulars may be had from the joint honorary secretary Major Sir Thomas Carey Evans, Hammersmith Hospital, Ducane Road, W.12

DEATHS IN THE SERVICES

Surgeon-General Percy Hugh Benson Madras Medical Service (ret.) died on April 2nd at St Aubyns Jersey, aged 81 He was born on February 1st 1852 in London the son of Lieut.-General R. Benson of the Indian Army and was educated at Shrewsbury at Bart's, where he won the treasurer's prize for senior practical anatomy, and at Aberdeen where he graduated M.B. and C.M. with honours in 1873 also taking the M.R.C.S. in the same year Entering the I.M.S. as surgeon on March 31st, 1874 he reached the rank of colonel on October 11th 1904 and surgeon-general of the Madras Medical Service on April 1st 1908 retiring on July 26th, 1911 In 1875, soon after he went to India, he was in medical charge of the Prince of Wales's camp during his tour in India In 1876-7 he served in the Madras famine, and received the thanks of the Chief Commissioner of Mysore for his services In 1881 he was appointed Civil Surgeon of Mysore and on the rendition of that State to the Indian ruling family he was appointed medical officer to the maharaja As colonel he filled the post of inspector-general of hospitals in Burma After retirement he served in France during the war of 1914-18 and was mentioned in dispatches He received a good service pension on April 1st 1908 He was twice married and had two sons and four daughters After retirement he did a good deal of work for the British Medical Association he served on the Council from 1910 to 1917 was vice-president of the Section of Naval and Military Medicine at the Aberdeen Meeting of 1914 just before the war, and in 1923-4 was chairman of the Jersey Division.

Obituary

JOHN HERBERT FISHER F R C S

Consulting Ophthalmic Surgeon to St Thomas's Hospital

By the death of Herbert Fisher after a short illness British ophthalmology has been deprived of one of its foremost figures Early in life it was evident that he was destined for a distinguished career A scholar and exhibitioner at school he entered St Thomas's Hospital as Tite scholar in 1887 and became subsequently Musgrove scholar and prizeman so that in later life he was able to say that his education from childhood to qualification had cost his parents nothing After graduating as gold medallist and university scholar in surgery in the London B S examination his inclination was at first towards general surgery but later coming under the influence of Edward Nettleship he decided to devote himself to ophthalmic surgery Election as ophthalmic surgeon at St Thomas's and to the staff of the Royal London Ophthalmic Hospital followed soon afterwards the former appointment being resigned in 1924 after twenty eight years service and the latter in 1927 At the time of his death Fisher was consultant to both hospitals Other offices held were those of president of the Ophthalmological Society of the United Kingdom president of the Council of British Ophthalmologists member of the Council of the Royal College of Surgeons of England and Hunterian Professor and Bradshaw Lecturer at the Royal College of Surgeons As recently as three months ago he took an active part in the work of the Prevention of Blindness Committee as representative of the Council of British Ophthalmologists During the war he served on the staff of the 5th London General Hospital with the rank of captain (T F) At St Thomas's Fisher took an active part in the life and work of the medical school—in the early days as a cricketer and a member of the victorious Rugby football teams of those days later as demonstrator of anatomy president of the Medical and Physical Society president of the Rugby football club lecturer in ophthalmology and dean of the medical school

In his strong personality the predominant quality was that of thoroughness which characterized all his actions and was exemplified in his clinical work by a physical examination so meticulous and an anamnesis so exhaustive as to make his clinical records a model difficult to emulate and also by the careful forethought taken to meet possible difficulties or dangers in an operation case likely to present unusual features From this same quality was derived the stimulus that enabled him to carry on with his work during an attack of migraine from which he was for many years a frequent sufferer Fisher was not one who suffered fools gladly and elementary ignorance or evidence of careless work was likely to evoke a scathing rebuke but the victim would have no grounds for questioning the justice of the criticism To friends sufficiently intimate to get beneath the surface was revealed the essential kindliness of his nature and a rich fund of sympathetic understanding and wise advice As chairman or member of a committee his services were constantly in demand on account of his wide experience clearness of thought and judicial mind to which was added the gift of expressing his views with exceptional terseness and lucidity In controversial matters personal inclination and the possibilities of unpleasant consequences were powerless to deter him from the advocacy of what he believed to be the right course As an after-dinner speaker he was fluent humorous and epigrammatic

Fisher's appreciation of the importance of a sound knowledge of anatomy as a foundation for the study of ophthalmic physiology and surgery was evidenced by the publication in 1904 of *Ophthalmological Anatomy* His contributions to the ophthalmic journals and to the *Transactions* of the Ophthalmological Society of the United Kingdom and the Ophthalmological Section of the Royal Society of Medicine were very numerous amongst the most important being those based on a study of defects of vision attributable to chiasmal lesions Of especial interest in this connexion are the observations on migraine and Leber's optic atrophy Fisher having been the first to suggest pituitary swelling as the primary abnormality in these conditions

He leaves behind him a widow and one son Lieut Commander Benjamin Fisher R N

SIR JOHN H PARSONS writes

Ophthalmology has suffered another grievous loss in the death of Fisher—for he was Fisher to his friends without any frills' Though he had retired for several years from active practice his interest in ophthalmology was as great as ever and he devoted much of his leisure to promoting its welfare in many directions and with an assiduity which is an example to others Fisher was a typical example of the best type of British clinician which is to say of the best type of clinician He was indeed a specialist but if all specialists had his exhaustive training in all branches of medicine and surgery and the capacity to utilize it with his care perseverance and breadth of view there would be no grounds for decrying specialism Like most past demonstrators of anatomy he revelled in the signposts which an accurate knowledge of anatomical relations affords for the elucidation of pathological conditions hence his interest in ocular palsies and cognate subjects—recorded in his book on ophthalmological anatomy—and in lesions of the pituitary body He resembled Treacher Collins whom he survived by so short a time in his abhorrence of all humbug He was straight as a die and indeed his straightness made him sometimes appear brusque but his bruqueness hid a warm heart and those of us who knew him intimately had not only deep affection for him but also esteem for his noble qualities

PERCY T HUGHES M B C M D P H

Medical Superintendent Worcestershire Mental Hospital
Lecturer on Mental Diseases University of Birmingham

The death of Dr P T Hughes on March 29th after a few days illness will be deeply regretted by his many friends in the medical profession and will be felt especially by those who have devoted themselves to the care and treatment of the mentally afflicted

Percy Theodore Hughes was born on March 31st 1872 and was educated at Haileybury and at Edinburgh University He graduated M B C M in 1894 and there after held a number of resident posts in Edinburgh and in or near London In 1899 he obtained the D P H and joined the staff of the London County Mental Hospital at Bexley He was appointed medical superintendent of the Worcestershire Mental Hospital at Barnsley Hall Bromsgrove in 1906 At that time the hospital was unfinished and it was not opened until the following year

Hughes was well fitted, both by his natural gifts and by his training and experience, to carry out the task which now lay before him He was a remarkably capable organizer and administrator, and he had those attributes of personality and of character which won the loyal support and unstinted co-operation of his officers and staff He was thorough in all he undertook The hospital in 1907 was up to date, but its functions were not suffered to become stereotyped Suggestions for improvement were constantly being considered, and, if approved, they were adopted as soon as practicable Hughes fully realized the importance of skilled nursing in the treatment of mental diseases, and he paid great attention to the training of the nursing staff In 1909 he contributed a valuable article on mental nursing to *The Science and Art of Nursing*

Barnsley Hall was one of the first mental hospitals to possess its own permanent cinematograph installation Dr Hughes always did his utmost to promote the welfare and comfort of his patients, and he was rewarded by their confidence in and affection for him He loved good music, and took a keen interest in training and practising with the choir of the hospital chapel He was lecturer on mental diseases in the University of Birmingham, and his advice in consultation was frequently sought throughout a wide area A H F

For the following personal appreciation we are indebted to Sir HUBERT BOND

Percy Hughes was one of a group of some half-dozen men each of whom was at Haileybury and all of whom went up to Edinburgh about the same time Their Haileybury friendship served as a close bond, reflected in the fact that, throughout their undergraduate days, they used to meet once a week in each others' "digs" by turn At Edinburgh Hughes was very popular, no doubt because, notwithstanding that he was a hard and earnest worker, of his fondness and zest for games, of his high spirits and infectious gaiety, and not least because of his sterling qualities of straightness and readiness to help others He excelled at football, and played for "The Wanderers" He was house-physician at the Royal Infirmary to Alexander James, a clinician of the first rank and a most inspiring teacher Before leaving Edinburgh he was also resident surgeon at the Royal Hospital for Sick Children—a clinical experience which, although not directly connected with mental hospital practice, is of no small value in overcoming difficulties in the examination of certain types of mental disorder It was not long after graduating in medicine that he became attracted to its mental branch and to mental hospital service as a career It was, in fact, to equip himself more thoroughly for this work, and with an eye especially to securing a vacancy at the new Bexley (County of London) Mental Hospital, that he secured a post in one of the metropolitan fever hospitals and worked for and obtained the D P H In those days there was no D P M ten years were to pass before any diploma in psychological medicine was instituted, and twenty years before the custom of proceeding to one became general among medical officers in mental hospitals If the especially valuable experience Hughes had at Bexley was a strong recommendation to the committee of the new Worcestershire Mental Hospital in their decision to appoint him as their first medical superintendent, he was not lacking in personal assets and claims of his own He had a striking personality both strong and of peculiar charm, and a general appearance upon which responsibility obviously sat well He possessed a stimulating enthusiasm and had thrown himself into every scheme and effort to develop Bexley on modern and progressive lines In all this he was not only a loyal supporter of the work of his seniors, but he had many original suggestions of his own to offer In particular, it was largely he who suggested that a trial might be made of various new forms of occupations for the patients which hitherto had not been practised in mental hospitals, and, being given a considerably free hand in these endeavours, it was in no small measure due to his tireless efforts that Bexley won the fame it did as an example of what could be done for the systematic organization of occupations for the patients—different, however, from the conception now commonly spoken of as occupational therapy He was an active and valued member of the Departmental Committee set up by the Board of Control in 1922 to inquire into mental hospital dietaries The work and recommendations of this committee have done much to advance the health and comfort of patients in mental hospitals

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On March 29th there passed away, at the age of 70, an old and faithful member of the British Medical Association—Dr WILLIAM ARTHUR JOHNSTON of Ravenglass Cumberland He was for many years a member of the Furness Division and North Lancashire and South Westmorland Branch, having been divisional chairman in 1921 and branch president in 1923, he also served on various committees In spite of his isolated position, and the scattered nature of the Branch, he could almost always be found at the meetings, wherever held He was born at Hawkshead, where his father was in practice, and was one of four medical brothers, well known in Lakeland A student of the Royal College of Surgeons of Ireland he obtained the L R C S I in 1885 and L R C P I in 1886 A colleague writes He was a very fine type of country practitioner, who never forgot the dignity of his profession or the courtesy due to a colleague His friends regretted the various adversities which made his last years difficult He is survived by his widow, who was always a very staunch partner Dr Johnston was laid to rest in the peaceful cemetery of Muncaster, in the presence of his friends on a beautiful afternoon, when the sun shone down on a peaceful scene with the lovely Cumberland hills surrounding us A good man has gone

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The death took place on March 23rd of Dr ARTHUR BRYANS, who had practised in Middlesbrough for over thirty years Dr Bryans was a native of Sunderland, and after obtaining the Scottish triple qualification in 1900 went into partnership with, and ultimately succeeded, the late Dr Young in Middlesbrough For many years a member of the British Medical Association, he had served the Cleveland Division on its Executive Committee, as honorary secretary, and as chairman He was a member of the Middlesbrough Panel Committee from its inception, and for two years had been chairman of the local Public Medical Service For thirty years he was medical officer to Middlesbrough Football Club Despite the demands of a large general practice, Dr Bryans's outside interests were many and varied He was a keen golfer—for some years he had been president of the Middlesbrough Golf Club—and an enthusiastic photographer, he was interested in Rotary and rarely missed a meeting of the local Rotary club During the war he served in the R A M C, and after a period as battalion medical officer did much valuable work at Brighton Grove Hospital, Newcastle-on-Tyne Dr Bryans is survived by two daughters The funeral, which took place on March 25th was attended by a large number of friends, including many of his medical colleagues

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Dr WILLIAM RUSSELL WATSON, who died at the age of 46 at Sandymount, Dublin, after two years' illness was the third son of the late Samuel Henry Watson, Dublin, a much-beloved member of the Society of Friends Dr Watson graduated at Trinity College, Dublin, in 1910 as M B, B Ch, and also obtained the Liverpool diploma in tropical medicine Three years later he became a

Fellow of the Royal College of Surgeons in Ireland winning the Hudson gold medal at the Adelaide Hospital for surgery In 1919 he proceeded M D All his medical study had as its aim and object the hope of going abroad as a foreign missionary and in 1913 he was appointed medical director of the Friends Hospital Akasaka Tokyo where he won the esteem and love of all his fellow workers In 1920 while home on furlough Dr Watson specialized in *x* ray work in which he became proficient and in the following year he went to Hangchow Hospital under the C M S for a period of fifteen months in order to give the veteran missionary Dr Main a much needed furlough He took out an *x* ray machine with him and installed it in the hospital taking over the charge of the *x* ray and pathological departments where he delighted in instructing the Chinese medical students his wife meantime instructing them in English He then returned with his family to Japan where they stayed till the great earthquake of September 1923 made it almost impossible for foreigners to remain in Tokyo Dr Watson was the first British doctor to enter the city after the earthquake He got there partly by train partly on his bicycle and then had to wheel his bicycle for miles through the burning city He succeeded in getting his motor car out and lent it to the Akasaka officials They kept it running night and day with a white flag flying carrying doctors and nurses all over the city Since 1924 Dr Watson had practised at Haverstock Hill London and later in Dublin

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We regret to announce the death of Mr W H MARTINDALE Ph D F C S head of the well known pharmaceutical firm at 10 New Cavendish Street and for more than thirty years editor of Martindale and Westcott's *Extra Pharmacopoeia*

The following well known foreign medical men have recently died Dr O W KONDRATOWITCH professor of therapeutics in the second medical institute of Leningrad of angina pectoris Dr I M KRAUSMANN a Leningrad urologist aged 72 Dr OSCAR SAMTER extraordinary professor of surgery and orthopaedics at Königsberg University aged 74 and Dr BERNHARD HEILE editor of Bruns's *Beitrage zur klinischen Chirurgie* and the *Deutsche Zeitschrift für Chirurgie* aged 60

Universities and Colleges

UNIVERSITY OF OXFORD

At a congregation held on April 8th the following medical degrees were conferred

B M—G G M Edelsten H A Treble H J B Atkins

The late Miss Alice Mary May bequeathed to the University funds for the establishment of a Fellowship to provide assistance in preparing candidates for the examinations for the B M degree

UNIVERSITY OF LONDON

UNIVERSITY COLLEGE

The examination for the Bucknill Scholarship value 160 guineas and for two exhibitions value 55 guineas each will begin on May 15th The subjects for the examination are chemistry physics botany and zoology The scholarship and the two exhibitions are tenable at University College London Entry forms should be obtained from the secretary of University College not later than April 29th

The Bayliss-Starling Memorial Scholarship has been founded by old students friends and admirers in commemoration of Professor Sir William Maddock Bayliss and Professor Ernest Henry Starling The annual value of the scholarship is about £120 with exemption from tuition fees and is tenable at University College London The scholar will be required to follow a course of study approved by the Jodrell Professor of Physiology involving a training in the principles of and methods of research in physiology and/or biochemistry Applications must reach the secretary of University College not later than Saturday May 13th

ROYAL COLLEGE OF SURGEONS OF ENGLAND

A quarterly Council meeting was held on April 6th when the president Sir Holburt Waring was in the chair

The following Members of twenty years standing were elected to the Fellowship Charles Henry Hough William Henry Dolamore

Diplomas

The Diploma of Membership was granted to Miss Vida Louisa Liddell Diplomas in Tropical Medicine and Hygiene were granted jointly with the Royal College of Physicians to the following twenty one candidates

D R Belletty J F E Bloss Virginia M Cobb V C Dalzell B P Datta R T S Goodchild R Jeremiah K Kanagaretnam C C Kapila *Flight Lieut F E Lipscomb R A F I V Mohamed D Nagarajan J P Perera B H Sayed L B E Seneviratne M Shankhla A R Sikund C R Tisseresinghe A V M Wajih F L Wheaton H S Yusef

* All candidates with the exception of the one marked with an asterisk pursued courses of study at the London School of Hygiene and Tropical Medicine

Scholarships and Prizes

Leverhulme Scholarships were awarded to (1) Geoffrey Curtton Knight F R C S (St Bartholomew's Hospital) Research investigation of nerve supply and control of cardiac sphincter with relation to the aetiology of idiopathic cardiospasm comparison of end results of surgical procedures adopted for relief of idiopathic cardiospasm criticism of rationale (2) David Slome M B B Ch (Capetown University) Research (*a*) the effect of hypophysectomy in preventing the development of the diabetic syndrome on removal of the pancreas (*b*) the blood calcium in relation to haemorrhage and wound shock

Laurence John Honeywill (University College) was appointed Begley Student for the ensuing three years

The John Tomes Prize for 1930–2 was awarded to Dr Eric Wilfred Fish for his original work in connexion with the physiology of the dental tissues

The Jacksonian Prize for 1932 was awarded to Harold Clifford Edwards F R C S for his dissertation on The Pathology Diagnosis and Treatment of Diverticula of the Large and Small Intestine The subject for the Jacksonian Prize for 1933 is The Pathology Diagnosis and Treatment of Localized Rarefying Changes in Bones as illustrated by Perthes's (or Legge's) Disease Schlatter's Disease Kümmell's Disease and Allied Diseases The subject for the Jacksonian Prize for 1934 is The Pathology Diagnosis and Surgical Treatment of the Various Forms of Splenomegaly

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ROYAL COLLEGE OF PHYSICIANS OF IRELAND

At the monthly business meeting of the College held on April 5th P T J O Farrell and Yang Lin were elected Fellows of the College Lord Dawson of Penn whose name had been proposed by the president Dr T G Moorhead on March 3rd was unanimously elected an Honorary Fellow of the College

It was agreed to comply with the request of Cyril Randolph Wallace asking to have his name changed on the College roll to Cyril Randolph Lutze Wallace

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

Before rising for the Easter Recess both Houses of Parliament agreed to resolutions naming the personnel of the Joint Select Committee on Indian Constitutional Reform Debate arose in the Commons on the Housing (Financial Provisions) Scotland Bill the London Passenger Transport Bill unemployment and the call for the State to assume responsibility for maintaining the able bodied under 65 and also on foreign affairs The Pharmacy and Poisons Bill was read a second time in the House of Commons on April 10th having previously passed the House of Lords

On April 7th Mr Stanley presented the Road and Rail Traffic Bill This is a Government measure and includes proposals to amend the provisions of the Road Traffic Act 1930 relating to the wages hours etc of persons employed in connexion with certain motor vehicles

The Protection of Animals Bill, to enable courts to disqualify from keeping dogs persons convicted of cruelty to them, was presented by Sir Robert Gower on April 6th, and has been printed

The text is issued of the Nurses Registration Act (1919) Amendment Bill, presented by Mr Batey on April 3rd The second reading of this Bill was put down for April 12th A memorandum attached to the Bill states that it

"The Nurses Registration Act, 1919 provided that existing nurses should apply for registration within a period of two years For various reasons including absence abroad upwards of twenty thousand nurses failed to register and the purpose of this Bill is to give these nurses, who have followed their honourable occupation for many years, a further opportunity of enrolling with their colleagues'

The Bill would authorize persons possessing the qualifications described in the Act of 1919 to make application within one year of its passage to be admitted to the register of nurses Certain bodies representing the nursing profession are understood to oppose it

The Protection of Dogs Bill has been withdrawn

Aerial Navigation and Disease

On April 10th Mr SHAKESPEARE replying to Captain Cunningham Reid said he was aware of the warnings issued by the Ross Institute and the Institute of Microbiology regarding the danger of diseases such as yellow fever being introduced into this country by mosquitos in aeroplanes The possibility of carriage in aeroplanes of the infection of yellow fever had been carefully considered for several years by the International Office of Public Health and its Yellow Fever Commission Proposals for dealing with this danger and with other infectious diseases were embodied in an International Sanitary Convention for Aerial Navigation which awaited ratification The Minister of Health was advised that the danger referred to by Captain Cunningham Reid did not apply to this country, but to countries where yellow fever could develop if introduced Mr LUNN asked if there was no danger of yellow fever being introduced in this way Mr SHAKESPEARE The danger is extremely remote I am informed that the air liners of the Imperial Air Services have two breaks The new machines start from Paris minus mosquitos

Small pox in the British Army in India

Sir S HOARE replying on April 10th to Mr Groves, said that in 1923 three officers of the British Army in India were admitted to hospital suffering from small pox of whom one died There were fourteen admissions among the men, of whom three died Five women and two children with the Army were admitted, and one child died In 1924, of thirty-one men admitted four died, of eight women and seven children admitted two children died In 1925 two officers and twenty four men were admitted and three of the men died of eighteen women and six children admitted one woman and one child died In 1926 one officer was admitted of eleven men admitted, two died of eleven women and seven children admitted one woman died In 1927 five men three women and four children were admitted, and one woman and one child died In 1928 two men one woman, and three children were admitted but there were no deaths In 1929 one officer and four men were admitted, but there were no deaths of three women and four children one woman and one child died In 1930 one officer and five children were admitted none of them died

On April 10th Sir S HOARE also told Mr Groves that the final figures for small-pox deaths in British India for 1927 and 1928 were 118 197 and 96 123 respectively

Misrepresentation of English Vaccination Law — Mr GROVES on April 10th asked the Minister of Health whether his attention had been called to the misrepresentation of the English conscience clauses in the Epidemiological Report R E 131 issued by the Health Organization of the League of Nations, and whether he would instruct the representative of this country on that organization to take steps to have a correct statement of the English vaccination law published Sir HILTON YOUNG replied that he agreed that the document referred to the effect of Section 2 of the Vaccination Act of 1898 was incorrectly stated but as the section was repealed in 1907 and the substance of the amendment which replaced it was correctly reproduced he did not think it necessary to call attention to the inaccuracy These reports were issued solely on the responsibility of the Health Section of the Secretariat of the League of Nations and not on that of the Health Committee of the League

Alleged Lung Disease from Chromium plating—Sir JOHN GILMOUR told Mr Pike, on April 5th that investigations being made into an alleged outbreak of a lung disease among female workers operating a process of chromium plating in Sheffield He was not aware that he had any power to secure that particulars of specific cases should be made public but he would look into the matter

Coal gas Suicides—Replying on April 6th to Sir PERCY HURD Dr BURGIN said the Home Secretary's attention had been called to the increasing number of suicides from gas poisoning The possible use of chemical or other means to remove this method of self destruction was investigated in 1929 by the Departmental Committee on Deaths from Coal Poisoning whose report was published in 1930

Rural Water Supplies—In reply to Sir Gifford Fox on April 6th, Sir HILTON YOUNG said a record of villages in Great Britain having no proper water supply was being accumulated by his officers in the course of their work The cost of a special investigation, comprehensive enough to be of value, would not be justified by any advantage in comparison with the regular work now in progress He proposed issuing a circular shortly on rural water supplies

Discharges from Mental Hospitals—Sir HILTON YOUNG told Mr D Grenfell, on April 6th, that if he would give him particulars of a case where the pasting up of notices acquainting friends of inmates in mental institutions how to facilitate the discharge of inmates to the care of their friends under Section 79 of the Lunacy Act resulted in many applications being made and discharges effected he would be glad to consider what inferences could be drawn from it as a measure for improving the accommodation in asylums

Certification in Workmen's Compensation Claims—Mr HACKING told Mr A Ramsay on April 6th that the Workmen's Compensation Act provided that workers contracting industrial diseases must, unless the employer dispensed with it, obtain a certificate from the certifying factory surgeon This system was designed to prevent disputes between employer and workman by providing for certification by an independent doctor with special knowledge of industrial disease This would not be achieved if certification by the workman's own medical adviser were substituted Mr RAMSAY asked whether the Home Secretary would remove the obligation on the workman to pay a fee of 5s Mr Hacking replied by pointing out that whereas under the Health Insurance Acts weekly contributions were paid by the workers, under the Workmen's Compensation Act the whole of the compensation was found by the employer

Battersea Power Station—Mr OLIVER STANLEY stated on April 10th that the London Power Company had applied to the Electricity Commissioners for consent to install an additional generator unit at the Battersea Power Station The Commissioners sanction to the proposal would be coupled with a condition limiting the output to a figure within the capacity of the existing plant The Minister of Health and the First Commissioner of Works concurred with him that there was no objection to the additional generator unit being sanctioned, and he had informed the Electricity Commissioners accordingly

Notes in Brief

During the last twelve months the Ministry of Agriculture has received complaints of pollution in respect of twenty-two rivers including the Warwickshire Avon Chess Arun Ribble Oxford Canal Lodden Lark Cuckmere Itchen Axe Winsbeck Tone Medway and Tern

Medical News

At the next meeting of the Royal Microscopical Society at B.M.A. House Tavistock Square W.C. on Wednesday April 19th at 5.30 p.m. the following papers will be read and discussed: Mr. John Smiles: Dark-Ground Illumination in Ultra-Violet Microscopy. Dr. Reginald Clay and Mr. Thomas Court: Note on the Introduction of the Field Lens in the Microscope. Dr. Henry Power and his Letters.

The Queen's University Club, London, will hold its annual spring dinner at the Dorchester Hotel, Park Lane, W., on Thursday, May 4th, at 7.30 for 8 p.m. Tickets can be obtained from the honorary secretaries, 101, Harley Street, W.1. The price is 12s. 6d. each, which will be collected at the dinner.

The next monthly clinical meeting for medical practitioners will be given at the Hospital for Epilepsy and Paralysis, Maida Vale, W.9, on Thursday, April 27th, at 3 o'clock. Dr. Douglas McAlpine will demonstrate: The Cerebral Symptoms of Arterial Hypertension and their Treatment. Tea will be provided, and it will be a convenience if those intending to be present will send a card to the secretary.

The first C. E. Wallis Lecture before the Sections of Odontology and History of Medicine of the Royal Society of Medicine will be delivered on Monday, April 24th, at 8 p.m. by Mrs. Lilian Lindsay, L.D.S., on The Sun, the Tooth Drawer, and the Saint.

The National Institute of Industrial Psychology has arranged three public lectures on Applications of Industrial Psychology to Office Work, to be given at the London School of Economics, Houghton Street, W.C., on Mondays, April 24th, May 1st, and 8th, at 6 p.m. Admission free without ticket.

The London Insurance Practitioners' annual dinner and dance will be held at the Waldorf Hotel, Aldwych, W.C., on Thursday, April 27th, at 7.30 p.m. Reception, 7 p.m. Tickets for dinner and dance, 17s. 6d. each (exclusive of wines but including light refreshments during the dance), or six for £4 10s.; tickets for dance only, 7s. 6d. each (inclusive of light refreshments during the dance), or six for £2 2s. Accommodation will be provided for those non-dancers who would like to play cards. Tickets can be obtained from Dr. C. L. Batteson, 17, Russell Square, W.C.1, or from any member of the London Panel Committee.

The third and fourth demonstrations in the series Certain Aspects of Surgical Technique, arranged by the Fellowship of Medicine and Post-Graduate Medical Association, will be given at 11, Chandos Street, W., on April 19th, at 8.30 p.m. Mr. Ernest Miles—abdominoperineal excision of the rectum, followed by Mr. Lawrence Abel—technique of the surgery of the sympathetic nervous system. A demonstration of *x* ray films on April 20th, at 4.30 p.m., at 11, Chandos Street, is specially suitable for M.R.C.P. candidates. An all-day course in urology for advanced post-graduate students will be given at St. Peter's Hospital from May 8th to 20th. Demonstrations on plastic surgery will be given at the Hammersmith Hospital on April 25th and 28th. There will be a week-end course in gynaecology at the Samaritan Hospital for Women on April 29th and 30th. An evening course in physical medicine will be given from April 24th to May 19th at the London Clinic and Institute of Physical Medicine, Ranelagh Road, and an afternoon course in psychological medicine at the Maudsley Hospital, Denmark Hill, from April 24th to May 31st. Courses, lectures and demonstrations arranged by the Fellowship are open only to members and associates.

The seventh Congress of the French Societies of Oto-neuro-ophthalmology will be held from June 2nd to 4th at Limoges under the presidency of Professor Duverger. Further information can be obtained from the general secretary, Dr. Auguste Tournan, 81, Rue St. Lazare, Paris IXe.

The seventh International Congress of Military Medicine and Pharmacy will be held at Madrid from May 29th to June 4th, at the same time as the second International Congress of Sanitary Aviation and will be followed by the third session of the International Office of Documentation for Military Medicine which will be held at Seville from June 6th to 8th.

A meeting of the general committee of the British Empire Leprosy Relief Association will be held at the India Office on Thursday, April 20th, at 4 p.m. The speakers will include Sir Edward Gait, Sir Leonard Rogers, Sir Frank Carter, and the Rev. P. B. Clayton.

Messrs. Edward Arnold and Co. announce for early publication the seventh edition of Dr. Robert Hutchison's *Food and the Principles of Dietetics*, largely rewritten with the help of Professor V. H. Mottram.

A small monthly periodical *Lekarz Tybetanski*, which has been published in Warsaw since last July, deals with Tibetan medicine and in its February issue there is a summary in French of the practice of medicine in Tibet since A.D. 685. In 1857 a Tibetan medical practitioner of princely rank settled in St. Petersburg and his descendants have since practised there and in Warsaw. Information about the principles of Tibetan therapy may be obtained from Dr. W. Badmajeff, Jerozolimska Street 23/3, Warszawa, Poland.

An advisory committee of experts appointed last year by the Children's Bureau of the United States Department of Labor, Washington, to study employment of minors in hazardous occupations and to form standards for their protection has now published its report. The general recommendations strongly endorse those of the 1930 White House Conference on Child Health and Protection that State Boards be empowered to determine what are dangerous and injurious occupations and prohibit employment of minors therein, that minors be given full protection through Child Labor Law Administration, that adequate inspection forces be established, and that employers be required to pay double compensation to minors injured while irregularly employed. Specific recommendations deal with the occupations in which exposure of minors should be prohibited.

CONSULTANTS AND THE L.C.C.

Another largely attended meeting of London consultants and specialists was held at B.M.A. House on April 11th with Mr. H. S. SOUTTAR in the chair to determine what action should be taken in connexion with the L.C.C.'s proposals for its part-time specialist service. The following resolutions were adopted:

1. This general meeting of consultants, realizing the far-reaching importance of the principle in dispute between the Consultants and the L.C.C., requests the Council of the British Medical Association to take further action on behalf of the Consultants particularly in view of the offer of the Voluntary Hospitals Committee for London to act as mediator, and instructs the committee not to proceed at present with the plan of withdrawal.

2. That this meeting of medical and surgical consultants and specialists practising in London, having received the report of the committee relative to the medical services of the L.C.C., expresses its appreciation of the activities of the committee recorded therein, and thanks in particular the chairman (Dr. O. Donovan) and the Medical Secretary of the Association (Dr. G. C. Anderson).

3. That this meeting in reappointing the committee repeats its regret that representatives of the consultants and specialists were not afforded an opportunity prior to its adoption of considering the scheme recently approved by the L.C.C., for had this course been followed the meeting is convinced that in several respects modifications advisable in the public interest and necessary to engage the good will of the medical profession could have been secured, and the large volume of correspondence and the expressed opinion of many senior consultants received by the committee abundantly justifies this conclusion.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal B M A House, Tavistock Square W C.1**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication

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QUERIES AND ANSWERS

Nocturnal Incontinence of Urine

DOCTORMAN" (Kingston) asks for suggestions for the treatment of nocturnal incontinence of urine which has continued since infancy in a girl now aged 11½ She is of a somewhat nervous disposition given to occasional nightmares and terrifying dreams but otherwise healthy bright and intelligent learns well at school but no genius good at sports and physical exercises at carpentry and things mechanical A sound sleeper she is habitually taken up at night but seldom really awakens Hexamine has sometimes been helpful

Glycosuria and Incontinence

G N M (Gloucestershire) asks for information on the following case In a man aged 54 rather stout energetic and abstemious sugar was accidentally discovered in the urine six years ago when he was consulting a surgeon for occasional nocturnal incontinence The glycosuria was promptly dispelled by the taking of herbs obtained for rheumatism and dieting More interesting still is the fact that the herbs alone will do the same I do not know what the herbs are Occasionally the patient is drowsy He puts on weight when he is not dieting There is no polyuria or thirst appetite is moderate His only worry is the incontinence The prostate is normal as shown by cystoscope urethroscope and rectal examination Wassermann reaction is negative sugar tolerance curve is high The urea is normal

*** This would appear to be a typical case of mild diabetes in an obese and middle aged man Such cases are often non progressive for some years especially when periods of dieting are followed as appears to happen in this case It is very unusual to say the least for herbal treatment to have any effect on diabetes and most doctors would require very complete and controlled proof before accepting this as a fact It is not likely that the incontinence has any connexion with the glycosuria unless it disappears when the urine becomes sugar free on diet

Case of ? Tuberculoma

Dr L M CLARKE (Jamaica) asks for suggestions in the treatment of a man aged 29 who complains of severe headaches at frequent intervals lasting one or two days The only drug tried which has any effect is morphine (1/2 grain) In November 1926 he was in bed for six weeks with irregular fever and severe headaches he was then well for six months and since then has had periodic attacks In January 1930 he had an operation in Panama for left frontal sinus done through the nose In July 1931 in England he had a conservative operation for left frontal sinus Pus was found and three months later an x ray of the skull was negative Cerebro spinal fluid—no record He had an attack three weeks after the last frontal sinus operation In August 1931 a pulped stone in the left upper wisdom was extracted He was on reduced carbohydrate diet for two and a half months in 1931 Present condition *X* ray (September 1932) shows opaque patch in midline near vertex of skull Cerebro-spinal fluid—350 cells per c mm mostly small lymphocytes present increased Lung x ray—one old calcified node Provisional diagnosis—calcifying localized tuberculous meningitis

Arteriosclerosis Subjective Symptoms

Dr LAWRIE (Shelton Stoke on Trent) in reply to "Taxpayer" writes I suggest that if the ears have not been examined this should be done I had as a patient one old gentleman getting on towards 80 years of age who was suffering from incurable giddiness supposed to be due to arteriosclerosis and he was cured by syringing out two plugs of wax from his ears

Income Tax

Allowance for Disused Car

'A C' used one car up to 1924 and since then found two cars necessary He has now reverted to one car only and the inspector of taxes declines to make any obsolescence allowance for the discarded car because it has not been replaced Depreciation on both cars was allowed up to 1931 inclusive The obsolete car is unsaleable

*** The inspector is legally correct and if A C does not intend to use two cars in future there is no means of obtaining the obsolescence allowance If however there is a prospect of two cars being used again he might ask the inspector whether he will allow the claim in the year when a second car is purchased

LETTERS, NOTES, ETC

Voluntary Sterilization

Dr B DUNLOP (London S W) writes I beg that in view of what is said in two items (pp 481 and 483) you will again allow me to demur to the proposal to legalize voluntary sterilization merely for mental defectives As the mental deficiency evil is (1) mainly a carrier' one and (2) only part of the very serious phenomenon of transmissible defectiveness the scientific as well as liberal procedure would be to make voluntary sterilization (and I should add abortion) by medical practitioners entirely legal or else legal for any person who has two children

Caveat Emptor

Information that has reached us from Birmingham suggests that busy and preoccupied doctors ought to be on their guard against the blandishments of an itinerant canvasser who may try to get their signature to an order form for a high sounding encyclopaedia in several volumes with 'research privileges The book and the service may or may not be worth the subscription but whoever is attracted by offers of this kind would do well to read the terms carefully before signing any document

Number Plates and Brakes

Motorists are reminded by the Automobile Association of the importance of keeping their number plates clearly distinguishable as required by law Numerous prosecutions for this offence have recently been instituted by the police in various parts of the country A further point to which the police have recently devoted considerable attention is the maintenance of an efficient braking system and frequent tests are being carried out The usual procedure is for the driver to be asked to apply the brakes and in the event of their not holding the sequel usually takes place in the local police court The maximum penalty for both of the infringements mentioned is £20

"Endometriomata" Correction

Lieut Colonel V B GREEN ARMYTAGE asks us to correct a slip which occurred in his article *Journal* April 8th p 660 Partridge's egg'—column 2 line 12—should read "partridge's eye

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 45 46 47 48 49 and 51 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 50 and 51

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 110

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

273 Thyroid Diseases

From observations based upon a series of over twelve thousand cases I Bram (*Med Journ and Record* January 4th 1933 p 22) pleads for a more precise terminology in the description of goitrous affections He considers Graves s disease to be in itself a clinical entity which should not be called exophthalmic goitre since both the signs of bulging eyes and swollen neck may be absent from the otherwise typical clinical picture that the term exophthalmic goitre ' is supposed to designate Graves s disease involves the entire body in aetiological and clinical aspects It may be defined as a katabolic neuro-endocrine dysfunction in which the entire chain of duct less glands and the autonomic nervous system are con cerned The syndrome is characterized by a heightened metabolic rate afebrile heart hurry emotional disturb-ances tremor loss in weight weakness dermographia relative susceptibility to cinchonism and usually also by a hyperplastic swelling of the thyroid gland and exoph thalmos General widespread therapeutic management is therefore indicated in Graves s disease and not local treatment It is the body that makes the thyroid sick The involvement of the thyroid in the clinical picture is a mere incident in a complex constitutional affection The term toxic adenoma indicates the superimposition of a state of thyroid toxicity upon an old standing tumour of this organ Toxic goitre hyperthyroidism and thyro-toxicosis may be employed as synonyms of toxic adenoma since they all imply an excess of thyroid hormone in the blood and embrace a local condition in which it is the thyroid which makes the body sick The need for local operative treatment in such cases is therefore indicated

274 The Sciatic Syndrome

W P Gardner (*Minnesota Med* January 1933 p 36) insists that the term sciatica is inadvisable since the condition is not a clinical entity but rather a syndrome of which four chief varieties are distinguishable—namely a form secondary to general disease or gross pressure true sciatic neuritis a form due to myositis or fibro-myositis and a variety resulting from neurodocitis In order to ensure that a rational line of treatment is pursued the essential cause must be identified in each instance by obtaining a detailed clinical history and per forming a thorough clinical examination with special refer ence to the rectum pelvis and general nervous condition Almost every case will require radiography of the pelvis and lower part of the spine and often of the teeth sinuses gall bladder and alimentary canal Laboratory investigations of the blood and urine are also essential The possibility of syphilis lead poisoning diabetes and alcoholism must be excluded osteo-arthritis is too often overlooked even when such symptoms as perineal pain and muscular wasting are present True sciatic pen neuritis is rare but the presence of myositis or fibro-myositis is common its most usual site being the lumbar and gluteal muscles In neurodocitis the pain is due to stimulation of the nerve concerned by a bony foramen or canal—for example sacralization of the fifth lumbar vertebra and irregularities of the posterior spinal articula tions Perfect radiograms and expert examiners are therefore indispensable If rest in bed and the employ ment of heat and analgesic drugs do not relieve the pain and there are no such extrinsic causes discernible at first the injection of 60 to 100 c cm of sterile normal saline solution into the sacral epidural space may be effective provided that the patient subsequently remains quietly on the affected side for about three quarters of an hour and is kept in bed for a day or longer Larger quantities should not be employed since they often give rise to severe pain and even paraesthesia or temporary loss of sphincter control The mechanism of the relief of pain in these patients is stretching of the component roots of the sciatic nerve This simple procedure may be repeated if desired at intervals of two days Again the nerves may be blocked paravertebrally by the injection of weak solutions of alcohol or neocaine The mere relief of pain should never be allowed to distract the medical practitioner from tracking down the essential cause of the sciatic syndrome In the case of sciatic neuritis rest diathermy and the injection into the nerve sheath of neocaine and saline solution are often useful For cases of arthritis of the intervertebral foramina or sprain and subluxation of the sacro-iliac or lumbo-sacral joints the guiding principle is immobilization Details are given of the most successful lines of treatment of each of the four named varieties of the sciatic syndrome

275 Traumatic Auricular Flutter

A Jervell (*Norsk Mag f Laegevid* January 1933 p 14) records the case of a man who was treated for fistula in 1928 when he showed no signs of cardiac disease In December 1930 he was knocked down and sustained a violent blow in the back at the level of the left scapula On examination the heart s action was found to be very frequent and irregular Under treatment by rest in bed and the administration of digitalis and diuretin he made a good recovery and was able to resume his work in six weeks time though he was not capable of exertion so well as before On examination in August 1931 for a pension cardiac arrhythmia was found and the follow ing month an electrocardiogram showed the presence of auricular flutter which was cured by quinidine treatment The trauma was undoubtedly the cause of the condition giving rise to a small haemorrhage in the auricular musculature

Surgery

276 Fractures of the Vertebrae

J Dunlop and C H Parker (*Journ of Bone and Joint Surg* January 1933 p 153) describe these characteristic symptoms of compression fractures of the vertebrae and record details of the treatment in fifty eight cases of com pressed or impacted fractures The patient usually gives a history of trauma followed by sudden severe localized pain with continued girdle pain and discomfort The reduction method of treatment was employed and was found to be very satisfactory Reduction of the frac ture restores the normal alignment of the vertebral bodies it eliminates kyphosis and lateral deviations thus improving the general posture As the normal rela tions of the articular facets are restored there is free movement of the spine without irritation It was also found that the hyperextension diminished the pain and a flexible spine without bone spurs resulted In many cases the normal architecture was completely restored and the site of the fracture could not be recognized by x ray examination In no case was there any injury to the spinal cord as a result of the reduction and post operative symptoms were limited to localized pain nausea and vomiting for two or three days due to the hyperextension in the cast and to the anaesthetic In the series two patients died from other causes some time after treatment The operative procedure consists of the breaking up of the impaction or overcoming the com pression by forcible hyperextension during traction of reduction by placing the patient in marked hyperextension on a Goldthwait frame and of the application of a plaster jacket for permanent fixation in the corrected position The patient is kept in the cast for a minimum of fifteen weeks to ensure the healing of the spongy and

porous bone, which makes up most of the structure of the vertebral body During this time the patient is kept supine, but for nursing purposes may be turned 80 degrees from this At the end of fifteen weeks the cast is removed, complete reproduction of the bone is confirmed by radiography, and a Taylor back brace is fitted, which must be worn for a year from the time of injury Reduction is not so perfect where there is much depression of the lateral portions of the vertebral bodies or where there have been central depressions Fractures of the dorsal vertebrae above the ninth have not yielded as good results as when the injuries were below this point

277 Static Lumbago

A SAXL (*Wien klin Woch*, December 2nd, 1932 p 1504) describes static lumbago as a strain of the lumbo-sacral joint, more common in women than in men, and characterized by pain over the lumbo sacral joint radiating into the flanks in more severe cases, and demonstrated by extension of the muscles of the spine Negative *x*-ray findings and the absence of tenderness of muscles and of limitation to lateral and forward movements of the spinal column serve to differentiate the condition from spondylarthritis and myalgia, except where lumbago is complicated by either of these Treatment consists of radiant heat for the relief of pain and massage and remedial exercises to improve the condition of the supporting muscles, especially the abdominal ones In enteroptosis, where the drag of the abdominal contents on the spinal column affects the weakened lumbo-sacral joint, a belt which grips the pelvis firmly and sufficiently supports the abdomen is advised This support should be extra deep behind, reaching up to the lower angle of the scapula Where the condition is due to faulty posture—for example, arising from flat feet—correction of such a deformity will be sufficient to relieve the condition of the lumbo-sacral joint

278 Experimental Immobilization of the Thorax

R PIZZAGLI and G LUCARELLI (*Arch Ital di Chir* January, 1933, p 37), as the result of experiments on dogs and rabbits, came to the following conclusions A persistent diminution of respiratory movements occurred in animals which had undergone resection of the scalenus anticus and the diminution became still more pronounced when all three scaleni had been resected Neurectomy of the intercostal nerves also produced a reduction of respiratory amplitude on the side on which the operation had been performed The respiratory diminution, however, was less than that observed after scalenectomy, but was usually permanent Alcoholization of the intercostal nerves first caused respiratory irregularity, which became less pronounced two months after the operation Isolated phrenicectomy caused only a slight diminution of the thoracic excursions When the two operations were combined, the most pronounced diminution of the respiratory movements was obtained by scalenectomy and intercostal neurectomy, and then in a decreasing scale by phrenicectomy and scalenectomy, and phrenicectomy and intercostal resection The maximum reduction of thoracic respiratory activity was obtained by a combination of phrenicectomy, scalenectomy, and intercostal neurectomy

Therapeutics

279 Digitalis in Heart Disease

H A CHRISTIAN (*New Eng Journ Med*, January 12th, 1933 p 66) states that digitalis enters the cells or fibres of the myocardium during its passage along the coronary capillaries and through the cardiac cavities, in a few seconds it is firmly bound to the heart muscle A latent period follows, after which the digitalis is split into two components, an aglykone or genin which exerts the digitalis action and a sugar which is inert This splitting is a gradual process and doses repeated at too short intervals may result in a cumulative toxic effect The fixation of digitalis is directly proportionate to its concentration and time of flow Skeletal muscle the liver and kidneys also fix digitalis, but the lungs do not When digitalis is given intravenously the heart receives the full dose, and fixes an amount proportionate to its concentration in the brief time that it circulates through the heart muscle The portion which escapes into the general circulation is absorbed by the liver, kidney and skeletal muscle If digitalis is given by the mouth it passes into the portal circulation, where the liver fixes about as much as the heart But absorption through the gastro-intestinal mucosa is so prolonged that digitalis remains in the circulation for a much longer time The dosage and therapeutic effect are, therefore, much the same whether it is given intravenously or by the mouth During cardiac decompensation, where the coronary as well as the peripheral circulation is slowed, the contact between digitalis in the circulation and the myocardium is prolonged, and more digitalis is fixed just when the heart needs it most A hypertrophied heart fixes more digitalis than one of normal weight Cloetta has suggested that digitalis retards cardiac hypertrophy and retards detrimental effects on cardiac function The present author believes that cardiac hypertrophy is an undesirable process and advocates "tonic doses" of 0 1 to 0 15 gram of powdered digitalis leaves daily to patients with enlarging hearts even before there is evidence of decreasing function Digitalis is more effective in older than in younger patients When there is slight breathlessness on exertion particularly in the older ranges of life, or when early decompensation has developed, digitalis must be given day in and day out for the rest of the patient's life The author has found pills of the powdered leaves a very satisfactory preparation of the drug

280 Desensitization of Hay Fever by Mixed Pollen Extracts

K HANSEN (*Deut med Woch* February 10th, 1933 p 208) reports considerable success in the prophylactic treatment of hay fever during 1932 by the use of a mixed extract of various grass pollens Having concluded from previous work that prophylaxis is the only rational treatment in this condition, and that the preparation of specific extracts for individual cases is not easily practicable, the author decided to prepare an extract of a series of grass pollens (Helisen) which should have prophylactic properties in a large proportion of allergic cases Rye pollen was excluded from this mixed antigen but further investigations revealed the necessity for its inclusion particularly since large tracts of land in Prussia and Bavaria are under rye In 1932, 316 patients were treated with this new antigen, and a questionary card was sent to each of them to obtain information as to progress Of these, 28 per cent remained completely free from symptoms, 42 per cent were definitely improved, 20 per cent were slightly improved, and 10 per cent were unaffected Although quantitative data were not obtained on such matters as the severity of hay fever in untreated cases during 1932, or the degree of pollen dissemination, study of individual cases, which had been continued for several years, led to the conclusion that these figures gave a true picture of the value of the new antigen The period of protection ranged from a month to more than a year The greatest success was obtained when the treatment was undertaken between February 1st and April 1st In 122 cases the treatment was carried out without any allergic reactions, but the percentages of success were not significantly different in this group from those in the complete series Particular attention is drawn to the fact that in no single case was there an attack of asthma, which in cases of pollen allergy so frequently take a very serious form Comparison of this method with symptomatic treatment in 271 cases showed a remarkable preponderance of successes in the former Great care must be exercised in undertaking the treatment in cases of pregnancy since, should shock follow the injections, there may be considerable danger of oedema of the placenta, and abortion Prophylactic treatment may be applied to children, who, with care, will tolerate considerable doses of the antigen

Radiology

281 X Ray Stimulation of Carotid Sinus in Hypertension

V CARULLA J G QUERALTO and P M GONZALEZ (*Journ de Radiol et d Electrol* December 1932 p 581) have had remarkable results—in some cases definite improvement persisting for over three months—from this method of treatment in a frequently intractable condition There are many divergent views concerning the anatomy and physiology of the carotid sinus Mechanical and chemical stimuli produce transient and uncertain results but *x* ray stimulation has a surprising effect when employed in minimal doses—that is one twentieth of the erythema dose Allowing for diffusion this dose is equivalent to 45 or 50 r when applied unilaterally or bilaterally A simetric apparatus is used having a spark gap of 16 inches and a filter of 1/50-inch zinc and 2/25 inch aluminium After delimitation of the sinus and estimation of blood pressure the tube is placed sixteen inches from the patient so that the field is 2 4 inches in diameter The initial dose is 110 r producing usually a slight transient initial rise of blood pressure On reduction of the dosage to 80 r the blood pressure falls Optimum results are obtained with still smaller doses (45–50 r) A further reduction to 25 or 30 r produces an immediate though transient result Bilateral irradiation (with 50 r) yields results inferior to unilateral irradiation Bilateral dosage of 25 r is as efficacious as unilateral applications of 50 r The number of seances required to produce prolonged lowering of blood pressure varies greatly Some patients obtain relief from one or two treatments while others require several irradiations In some cases the blood pressure falls gradually after the termination of treatment If after one or two irradiations the blood pressure does not fall it is recommended that treatment should be continued after one day's interval Caution is necessary because too frequent treatment may cause disturbances of rhythm The writers have not observed bradycardia or syncope—results that have been noted by some other observers The present writers believe that irradiation of the carotid sinus is absolutely innocuous

282 Radiographical Diagnosis of Duodenal Ulcer

G PETER (*Radiology* December 1932 p 360) discusses the various views held as regards the possibility of diagnosing the presence of duodenal ulcer definitely by means of radiography and claims that during twenty months employment of Berg's method he has been able to demonstrate sure and objective signs of this disease with much greater frequency and precision than ever before In 294 suspected cases duodenal ulcers were detected in 107 the diagnosis being confirmed in every case which came to operation Peter finds also that the signs seen in the *x* ray films correspond exactly with Berg's objective signs and that the adoption of an adequate technique helps to detect them without fail The radiologist must however be sufficiently expert to distinguish between a slow peristaltic wave and a constant retraction a constant niche and a mass of barium retained between the normal foldings of the mucosa a normal recess and a duodenal pouch caused by dilatation and a deformity due to internal defects and one resulting from external compression or simple peristalsis The author discusses the signs and terminology postulated by Akerlund and Berg some cases present them all but in others for various reasons only a certain number can be demonstrated These signs of duodenal ulcer are listed as constancy of the niche found both in profile and anteriorly biconcavity of the surroundings of the niche as seen in profile halo round the ulcer seen anteriorly retraction—namely loss of the convexity of the wall opposite to the ulcer convergence of the folds of the mucosa towards the niche in the form of a star duodenal pouch due to narrowness produced by the swollen mucosa and shortening of the whole bulb accompanied by deformity Peter considers that the absence of direct radiographical signs should be taken as a contraindication to operation if the signs change from one film to another—are inconstant—duodenal ulcer should be excluded Berg urges the importance of operating in the case of chronic ulcers with relapse and showing a tendency toward the development of deformities strictures duodenal pouches and shortening If there is undue delay the approximation of the surrounding organs may render impossible the radical resection of the diseased area and may negative the benefit of a palliative operation by permitting the appearance of the too common post-operative ulcer

283 Inflammatory Complications of Radium Therapy

Wallon has shown the gravity of infectious complications in the radium treatment of cervical cancers R BERNARD (*Bull Soc d Obstét et de Gynécol de Paris* December 1932 p 731) believes that though serious they are of infrequent occurrence and may be avoided by employing proper care and technique Inflammatory reactions are due to traumatism rather than to the action of the radium Pre-operative preparation is important Bernard gives daily injections of Dakin's solution for some days before the application and also propidon to prevent attacks of lymphangitis Exuberant lesions are destroyed by electro-coagulation When applying the radium after the uterine sound colpostat and radium containers are placed *in situ* two small drains are inserted and kept in place at the base of the vagina by two or three loosely packed compresses Four or five vaginal injections are given every twenty hours and the compresses changed every two days without disturbing the apparatus Changing of the compresses permits the removal of the products of vaginal desquamation disturbance of the apparatus can be largely avoided by covering it with a thick layer of paraffin Though a rise of temperature and other symptoms may occur during the first days of treatment these abate without interrupting the treatment owing to the absence of daily traumatism by the method described Bernard believes that these inflammatory manifestations are due to lymphangitis originating in the uterus with a maximum intensity in the parametrium and with or without peritoneal reactions Another grave inflammatory condition is salpingitis In these cases physiotherapy becomes impossible and surgical operation is the only method of treatment This consists in a double castration terminated by a simple Mikulicz procedure which permits the commencement of radium treatment on the third day after operation Bernard has had two such cases in one the period of survival was eighteen months in the other two years

Obstetrics and Gynaecology

284 Kraurosis Vulvae

M A GOLDBERGER (*Amer Journ Obstet and Gynecol* January 1933 p 58) records a series of thirteen cases of kraurosis vulvae and emphasizes the necessity of vulvectomy for its cure and the prevention of carcinoma The condition is usually found after the menopause but may occur in young women Deficiency of the ovarian hormone has been suspected as the cause but in Goldberger's cases specific hormone therapy on these lines gave temporary relief in only a very few cases and in no instance changed the clinical or local condition In the first stage of the disease the vulva appears swollen and reddened Histological examination reveals a pronounced acanthosis an increased keratosis and an infiltration with round cells and leucocytes The second stage is reached about a year after the onset The skin becomes white and firm and there may be excoriations from scratching The acanthosis persists accompanied by heaping up of the keratin layer and a chronic inflammation of the connective tissue with scattered areas of collagen and numerous plasma cells In the third stage the labia majora flatten out the labia

minora completely disappear, the clitoris and prepuce shrink, and the vulval orifice contracts until it will barely admit the finger-tip The skin assumes the appearance of thin parchment, it is pearly white, dry, and cracks easily This condition may at times involve only one area of a labium, or be unilateral The microscopical picture shows a low epithelial layer, the papillary processes are absent, eleidin granules are sparse, the connective tissue is densely collagenous, and there are islands of round cells The elastic tissue is decreased, broken up, and appears as bundles of twigs The most common symptoms at first are pruritus and dyspareunia, but dysuria and frequency of micturition may occur These symptoms have to be differentiated from similar ones due to other causes, such as diabetes, parasitic infections of the vulva, dermatological lesions, and psychoneurosis Vulvectomy was performed in eight cases of the author's series Five patients have remained cured for from three to five years, two were operated upon too recently for an opinion as to cure to be justifiable, and in one instance there was a recurrence Unsuspected carcinoma was found to be present in two of these cases The author adds that the expectation of carcinoma in kraurosis, both in his own series and in others in the literature, may be taken as about 50 per cent, indicating the urgent need of early radical treatment

285 Artificial Pneumothorax and Pregnancy

Y BINET (*Thèse de Paris*, 1932 No 620) who records sixty-five cases of artificial pneumothorax associated with pregnancy in patients aged from 17 to 40, comes to the following conclusions The prognosis of tuberculosis in pregnancy which was so unfavourable before the introduction of artificial pneumothorax, has since considerably improved When an artificial pneumothorax has produced a clinical cure of tuberculosis, pregnancy occurring a few months or years after cessation of treatment does not appear to lead to recurrence of the disease In tuberculous patients treated by artificial pneumothorax who become pregnant in the course of the treatment aggravation of the tuberculous process is all the less likely the later its occurrence after the commencement of pneumothorax treatment Tuberculosis which has been roused into activity or aggravated by pregnancy should be treated by artificial pneumothorax or chrysotherapy In women subjected to artificial pneumothorax at the onset of pregnancy an unfavourable prognosis cannot be formed as regards the influence of pregnancy on the tuberculous lesions In tuberculous subjects who have been treated by pneumothorax, and have had their pregnancy interrupted, it is impossible to come to a definite conclusion as to any favourable influence of the operation on tuberculosis In each case the following important factors have to be considered the form of tuberculosis in the affected lung, the state of the opposite lung, the success of pneumothorax, which in some cases will be greater if oleothorax is substituted, the regularity and continuity of the treatment the complications peculiar to artificial pneumothorax and the social or moral environment of the patient in the course of a long-continued treatment

Pathology

286 The Blood Sugar in Diphtheria

A BREMS (*Acta Med Scand*, December 14th, 1932, p 1) investigated the blood sugar in twenty-five diphtheria patients nine of whom had mild attacks or were merely carriers while sixteen had more or less severe attacks, and mostly showed signs of toxaemia The results were as follows In the acute stage the patients fairly frequently showed a moderate increase of blood sugar In severe cases the administration of glucose by mouth in the acute stage was frequently followed by an abnormal blood sugar curve shown by very high maximal values and usually very prolonged hyperglycaemia often resembling the condition found in diabetes mellitus This abnormality of the alimentary blood sugar curve is not caused by the rise of temperature, but by a toxic disturbance in the regulation of the blood sugar when functional changes occur, especially in the suprarenals, liver, and pancreas Two or three weeks after the last administration of glucose by mouth the blood sugar curve becomes more or less normal In the acute stage of severe diphtheria an attack of glycosuria often occurs spontaneously, while after the administration of glucose it is almost constantly present

287 Renal Function Tests

H C A LASSEN (*Acta Med Scand* December 30th 1932 p 275) has based investigations on Rehberg's modification of the Ludwig Cushny filtration reabsorption theory, according to which the glomeruli give off a protein-free ultrafiltrate of the crystalloids of the blood in the same concentration as in the plasma This filtrate is concentrated in the tubules, especially in the upper part, through the active reabsorption of water In concentration the crystalloids can diffuse more readily through the walls of the tubules back into the blood again This back-diffusion is further dependent upon two more factors—namely, the specific diffusibility of the particular crystalloid and the permeability of the walls of the tubules to it—factors which vary greatly with different substances There is practically no diffusing back or active absorption of creatinine Rehberg's estimations require two presuppositions (1) that creatinine filters through the glomeruli in the same concentration as that in which it is present in the plasma, and (2) that no creatinine disappears from the filtrate during its passage through the tubules It is claimed for the creatinine test that it not only serves to estimate the capacity of the kidneys for the excretion of creatinine—in itself a non-essential function—but that it gives detailed information as to the most important function of the kidney—the filtration-reabsorption of water Further, the passage of other substances through the kidneys may be studied by the simultaneous determination of their concentration in the plasma and the urine, and the effect of substances which influence kidney function may be localized and estimated The filtration was determined on twenty-one young normal individuals in two or three consecutive periods of one hour—a total of forty eight determinations In 60 to 70 per cent of the determinations the calculated filtration was between 100 and 200 c cm per minute The average filtration volume was below 100 c cm per minute only in one case Filtration determinations made under greatly different conditions of fluid intake showed that the filtration increased somewhat with an increase of the diuresis, and that it fell off again with excessive diuresis Filtration values less than 100 c cm per minute were always found with relatively high creatinine concentration in the plasma, whereas the creatinine concentration of the plasma was low when the filtration was more than 200 c cm per minute

288 A Concentrated Diphtherial Anatoxin

R ZAVDEL (*C R Soc de Biol* January 6th 1933 p 1029) describes a method of preparing purified concentrated anatoxin by a process of ultrafiltration The technique employed is a double filtration through collodion membranes—the first time through a 4 per cent membrane, the second through a 10 per cent one The thick deposit on the filter is then washed with physiological serum until the filtrate is colourless The resulting anatoxin, which is of high concentration can finally be diluted to the required strength The advantages claimed for this technique are its greater simplicity over other methods, the absence of foreign bodies in the product which is not inferior to that obtained with aluminium sulphate and its lessened content of nitrogenous substances From animal experiments and clinical observations, H SPARROW and MAYZNER (ibid p 1031) conclude that an anatoxin prepared as described above is a very efficacious therapeutic agent It is superior to unpurified, non concentrated anatoxins and to the concentrated by chemical means since it causes only minimal post-vaccinal reactions

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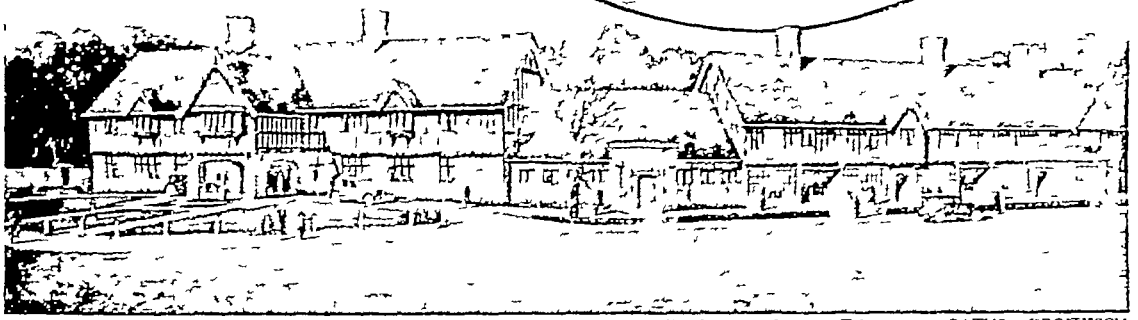

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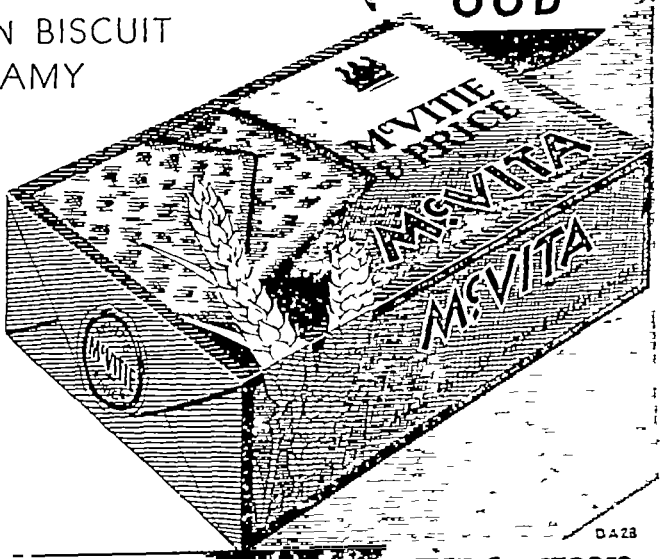

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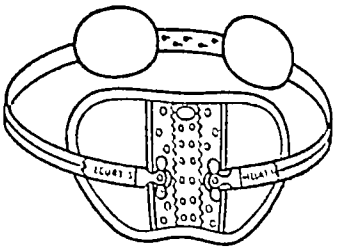

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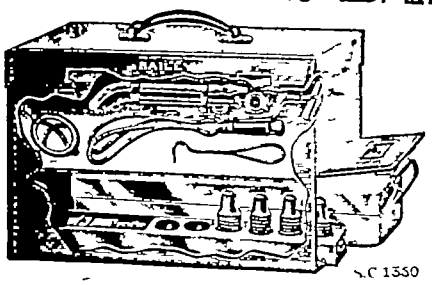

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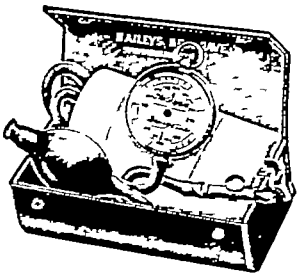

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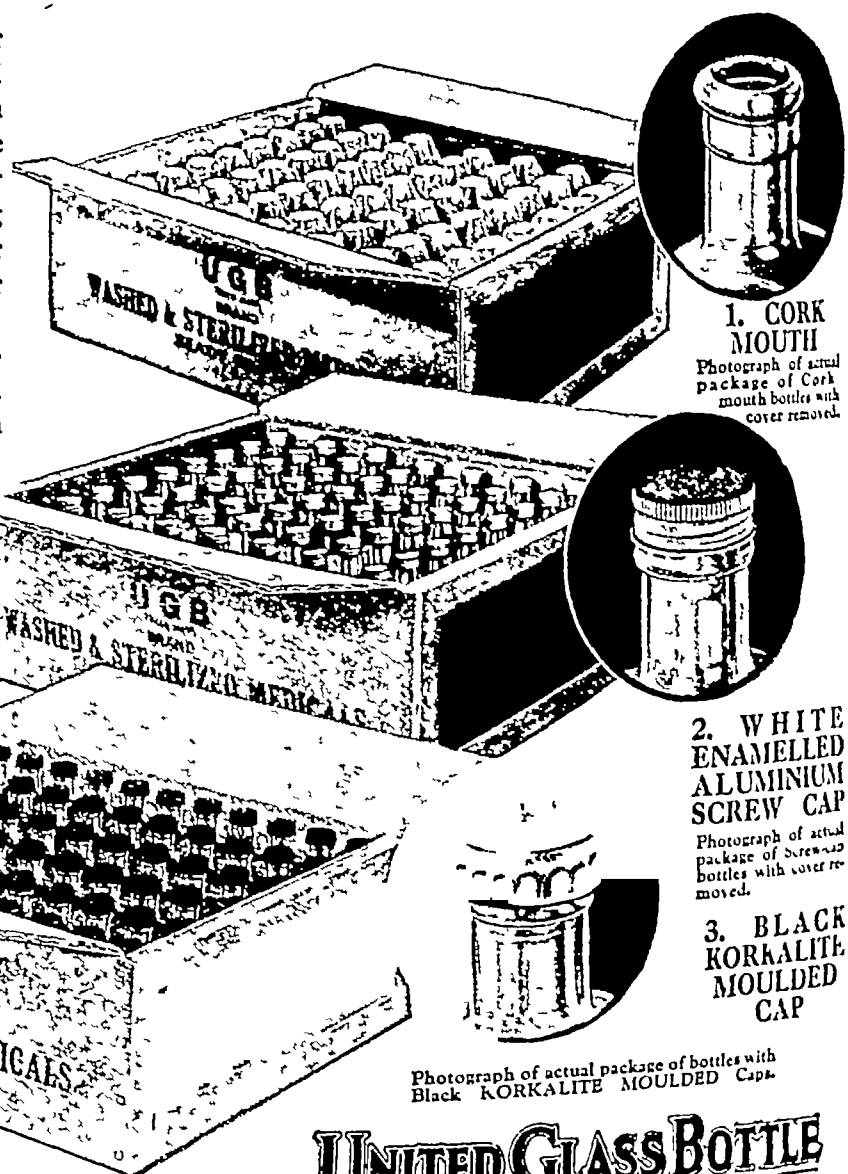

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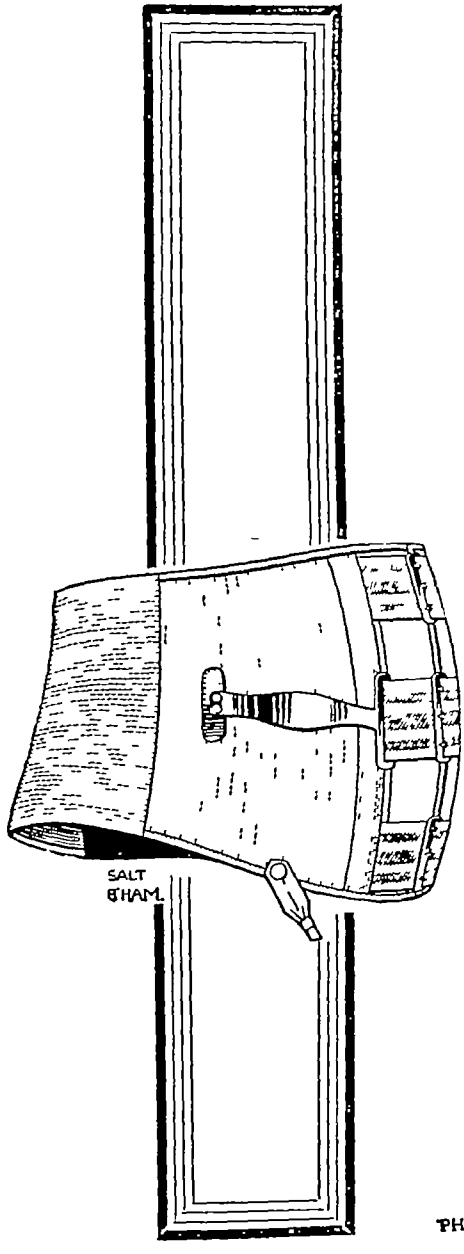

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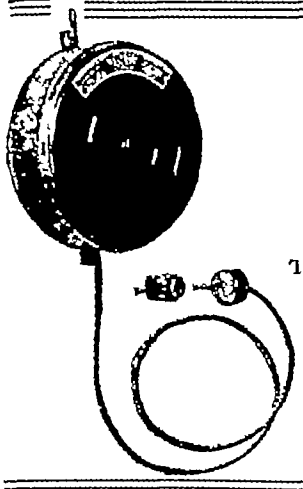

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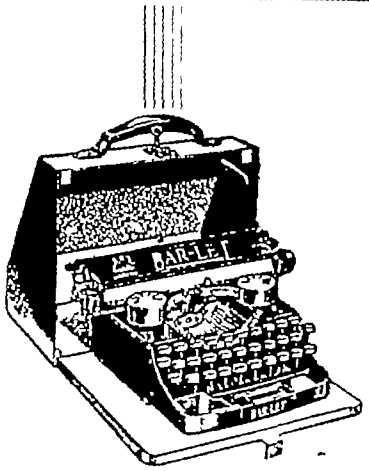

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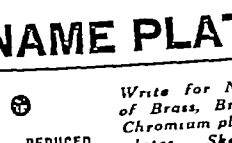

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Terms include (with rare exceptions) all forms of treatment for which unusual facilities exist—there being a staff of consultant specialists and the central laboratories of London County Mental Hospitals being attached to the Hospital. Inquiries of EDWARD MAPOTHER M.D., F.R.C.P. F.R.C.S. Medical Superintendent

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Mr W K Irwin	The Diagnosis and Treatment of some important Bladder Conditions	April 26th (Wed.)
Mr H P Winsbury-White	The Causes of Frequency of Micturition, with Special Reference to Diagnosis and Treatment	May 3rd (Wed.)
Dr T Jenner Hoskin	Blood Pressure Its Significance in Operations on the Prostate Gland	May 10th (Wed.)
Dr R John Clausen	Anæsthesia in Genito-Urinary Surgery	May 17th (Wed.)
Mr C H Mills	Some interesting Urological Cases, with Demonstration of Pathological Specimens and Radiograms of same	May 24th (Wed.)
	NO LECTURE ON DERBY DAY, MAY 31st.	
Mr R Jocelyn Swan	The Diagnosis and Treatment of New Growths in the Urinary Tract	June 7th (Wed.)
Mr Stanford Cade	Radiation Treatment in Malignant Disease of the Bladder	June 14th (Wed.)
Dr G R Mather Cordiner	The Role of Radiology in the Diagnosis of Urinary Calculus	June 21st (Wed.)

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IN CONNECTION WITH THE UNIVERSITY AND ROYAL COLLEGES, 1933

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(2) A GENERAL SURGICAL COURSE from August 14th to September 9th

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Post-Graduate Teaching, West London Hospital.

Continuous Clinical Instruction daily from 10 a.m. to 4 p.m.—Post Graduates may enrol at any time for any period from 1 week to 3 months.—Special facilities for "Study Leave," and for those wishing to take a course under the "Grant-aided Scheme for Post Graduate Study by Insurance Practitioners."—Anæsthetic Courses—Clinical Assistantships—Annual Membership Tickets at Special Terms available for General Practitioners who wish to attend the Hospital Practice at irregular intervals

Prospectus from the DEAN, West London Hospital, Hammersmith, W 6

QUEEN CHARLOTTE'S MATERNITY HOSPITAL

MARYLEBONE ROAD, N W 1

Medical Students and Qualified Practitioners admitted to the Practice of this Hospital Unusual opportunities are afforded of seeing Obstetrical Complications and Operative Midwifery (about one half of the total admission being primiparous cases) Over 2 700 patients are admitted to the Wards annually, and in the Ante-natal Department there are over 20,000 attendances per annum

Certificates awarded as required by the various Examining Bodies
For rules fees etc apply H B STOKES Secretary Superintendent

D O M S EXAMINATION.

ROYAL EYE HOSPITAL

Intensive evening revision course, covering all sections of the D O M S Examination for June 1933 commencing
Part II May 15th Hours 8—10 p m
Part I May 29th Hours 6—7 p m
Fees Part II £10 10s Part I £5 5s
Individual sections may be taken separately
Part II—Clinical £6 6s
Part I—Any one of the three subjects £2 2s each
Operative Surgery, Lectures in special subjects and Pathology £2 2s each section
All particulars can be obtained from the Dean The Royal Eye Hospital St George's Circus, S E 1

F.R C.S (Edin.)

PREP COURSE with daily Lecture-Demonstrations of Museum Specimens of Surg Path for next Exam will commence shortly POSTAL TUITION at any time—Further particulars H C. ORAM F R C S., Surgeons Hall Edinburgh.

STAMMERING, SPEECH DEFECTS

BEHNKE METHOD Estab 1883 Cases non resident treated at 39, Earl's Court Square S W 5 and in residence in the Summer holidays at Miss BEHNKE'S house on the Chilterns.

Pre-eminent success in the education and treatment of stammering and other speech defects. — Times.
Thoroughly physiological principles — Lancet.
The method is scientifically correct and perfectly effective — Guy's Hospital Gazette

STAMMERING CLEFT PALATE SPEECH, LISPING 3/9
of Miss BEHNKE 39 Earl's Court Sq S.W 5

MASTERY OF MIDWIFERY.

Examinations for the Diploma of the Mastery of Midwifery of the Society of Apothecaries of London will be held beginning Monday May 15th and Monday November 20th 1933

For regulations apply to the Registrar of the Society Water Lane E.C 4

UNIVERSITY of CAMBRIDGE

DIPLOMA IN MEDICAL RADIOLOGY AND ELECTROLOGY

New Regulations for the Diploma come into force on October 1st, 1933 and apply to all candidates who have not been admitted to the examination for the Diploma before that date. The course which occupies nine months in all begins on October 4th 1933 and comprises
(a) Four months instruction in Clinical Radiology, Electrology, and Pathology
(b) Three months further instruction in Radiology and Electrology to include three months clinical work in the Radiological Department of a hospital approved by the Managing Committee for the Diploma
(b) Three months further instruction in the Radiological Department of a hospital approved by the Committee Hospitals in London in the Provinces and Overseas have been approved as part of the course

Examinations for Part I (Physics and Pathology) will be held in February and July, 1934 and for Part II (Radiology Electrology) and Pathology) July and October, 1934

The courses are open to men and women whose medical qualifications are approved by the General Medical Council for the purposes of registration and who satisfy the Board that they have had sufficient practical clinical experience

Further information as to the courses may be obtained from C. STEAD M.A. Secretary to the Diploma Committee Addenbrooke's Hospital or the General Secretary British Institute of Radiology, 32 Welbeck Street London W 1

UNIVERSITY EXAMINATION POSTAL INSTITUTION

7, RED LION SQ LONDON, W C 1

(FOUNDED IN 1882.)

rincipal Mr E. S WEYMOUTH M.A (Lond.)
OSTAL OR ORAL PREPARATION FOR ALL MEDICAL EXAMINATIONS

SOME SUCCESSES

1 D (Lond.),	1901-32 (9 Gold Medallists during 1913-32)	368
1 S (Lond.),	1901-32 (including 4 Gold Medallists)	22
1 B, B S (Lond.)	*Final* 1918 32 (Completed Exam.)	206
R C S (Eng.),	*Primary* 1919-32	146
	Final	155
1 R C P (Lond.),	1919-32	215
) P H	(*Various*) 1906 32 (Completed Exam.)	316
R C S (Edin.),	1918-32	53
1 R C S, L.R C P	*Final* 1919-32 (Completed Exam.)	456
1 D	Various By Thesis	Numerous successes

Preparation for the above also for Medical reliminary and all examinations leading up) M.R.C.S. L.R.C.P or M B of various Uni ersities also for M R C P (Edin.) D P M O.M.S. D.T.M. & H. D.L.O. D.G.O. D.M.R.E. L.M.S.A., L.M.S.S.A. etc. Many successes.

ORAL CLASSES

M.R.C.P. M.D. Primary and Final F.R.C.S. F.R.C.S.(Edin.) also Final M.B. B.S. and M.R.C.S. L.R.C.P. Museum and Microscope Work. Also Private Tuition.

MEDICAL PROSPECTUS (48pp.)

ONTENTS.—The method and the cost of enter n the Medical Profession. *Particulars of all Medical Examinations* Postal Courses and Oral lasses. Suggestions for the Higher Medical xaminations. Suggestions for the Higher Sur ical Examinations. Suggestions for the Special iploma Examinations. Refresher Courses. Open ings for Women. Hints for writing theses. Medical Prospectus gratis along with list of Tutors, etc., on application to the Principal, Mr E. S. WEYMOUTH M.A. 17 Red Lion Sq London W C 1 (Telephone HOLBORN 6313.)

UNIVERSITY OF LONDON, UNIVERSITY COLLEGE

FACULTY OF MEDICAL SCIENCES.

An EXAMINATION for the following will be held in May next:

1. BUCKNILL SCHOLARSHIP value 160 gns.
2. and 3. TWO EXHIBITIONS value 55 gns. each.

Intending candidates should apply to the undersigned for particular and entry forms as early as possible and not later than April 29th 1933.

C O G DOBLE,
University College Secretary.
London (Gower St W C 1)

UNIVERSITY OF LONDON

The UNIVERSITY STUDENTSHIP IN PHYSIOLOGY of the value of £100 is offered to a Student qualified to undertake research in Physiology. Applications must reach the Academic Registrar, *University of London*, South Kensington, S.W 7 (*from whom* further particulars may be obtained) not later than May 31st 1933.

April 7th 1933.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN
Waterloo Road, S.E.1

There will be a vacancy on May 1st for a HOUSE PHYSICIAN (male) at the above Hospital. The appointment is in the first instance for a period of six months. Salary at the rate of £100 per annum with board and residence. Applications with copies of testimonials should be forwarded not later than Thursday morning April 20th to the Secretary at the above address from whom further particulars can be obtained.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

ELECTION OF EXAMINERS UNDER THE CONJOINT EXAMINING BOARD IN ENGLAND

Notice is hereby given that the Council in June will proceed to the election of four Examiners in Elementary Biology for the Pre-Medical Examination, three Examiners in Anatomy, two Examiners in Physiology, four Examiners in Midwifery and four Examiners in Pathology for the Diplomas of L R C P. M R C S., two Examiners for the Diploma in Public Health, two Examiners for the Diploma in Tropical Medicine and Hygiene, three Examiners for the Diploma in Ophthalmic Medicine and Surgery, one Examiner for the Diploma in Psychological Medicine, three Examiners for the Diploma in Laryngology and Otology, one Examiner for the Diploma in Gynaecology, and Obstetrics, and two Examiners for the Diploma in Medical Radiology.

The present Examiners are eligible for re-election except one Examiner in Anatomy, one Examiner in Physiology, one Examiner for Part II of the Examination for the Diploma in Ophthalmic Medicine and Surgery, and one Examiner for Part I of the Examination for the Diploma in Laryngology and Otology.

Candidates for the Examinership in Anatomy must be Fellows or Members of the College, and candidates for the Examinership in Physiology must hold a medical qualification registrable in this country.

Candidates must make written application to the Secretary before Monday, May 1st.

S. FORREST COWELL,
April 8th 1933 Secretary.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

BOARD OF EXAMINERS IN DENTAL SURGERY

Notice is hereby given that the Council in June will proceed to the election of six Members of the Surgical Section of the Board of Examiners in Dental Surgery.

Four of the present Examiners are eligible for re-election.

The Examiners will be required to examine candidates in *General* Anatomy and Physiology and in General Surgery and Pathology.

Candidates must be Fellows of the College and must make application in writing to the Secretary before Monday, May 1st.

S. FORREST COWELL,
April 8th 1933 Secretary.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

ELECTION OF EXAMINERS IN ANATOMY AND PHYSIOLOGY FOR THE FELLOWSHIP

Notice is hereby given that the Council in June will proceed to the election of four Examiners in Anatomy and four Examiners in Physiology.

The present Examiners are eligible for re-election except one Examiner in Anatomy.

Candidates for the Examinership in Anatomy must be Fellows of the College.

Candidates must make written application to the Secretary before Monday, May 1st.

S. FORREST COWELL,
April 8th 1933 Secretary.

INSTITUTE OF CHILD PSYCHOLOGY

Applications are invited for the post of HONORARY PHYSICIAN in the Parent Department. Applicants (men or women) must be registered Medical Practitioners and should have a thorough experience of psychological methods in the diagnosis and treatment of adult cases, preferably some experience of gynaecology. Particulars may be obtained from the Secretary, 20 Warwick Crescent, W 2 and all application with testimonials must be sent in by April 24th.

B. WHITING, Secretary.

EASTBOURNE PRINCESS ALICE MEMORIAL HOSPITAL (116 Bed.)

Applications are invited for the post of HOUSE SURGEON (male). Salary at the rate of £150 per annum with board, lodging and laundry. There are two residents and the appointment is for six months.

Candidates must be unmarried, fully qualified and registered. Applications stating age, qualifications etc. accompanied by not more than three testimonials (one of which should be from Medical School) should be sent at once to the Secretary.

THE BAYLISS-STARLING MEMORIAL SCHOLARSHIP

(*Founded* in 1929 to commemorate Professor Sir William Maddock Bayliss and Professor Ernest Henry Starling.)

This Scholarship of the annual value of about £120 (with exemption from tuition fees) tenable at UNIVERSITY COLLEGE LONDON may be awarded by the University College Committee.

Candidates must be Graduates of the University of London or any other University approved by the College *Committee for the* purpose or Undergraduates of the University of London or any other University approved as *aforesaid* of suitable standing in Science or in Medicine.

The Scholar will be required to follow a course of study approved by the Joint Professors of Physiology during a training in the methods of research in [illegible]

[illegible] make application on a form obtainable from the Secretary of the College, entering on the prescribed course of study and the names and addresses of not more than three persons as to whom inquiries as to character and fitness may be made, and return the same (from whom copies of the Regulations may be obtained) not later than Saturday, May 13th.

University College, C O G DOBLE,
London (Gower St W C 1) Secretary.

BOROUGH OF BARKING

SPECIALIST CONSULTANT—OBSTETRICS & GYNAECOLOGY

The Council invite applications for the appointment of Specialist Consultant to carry out special consultant work:—

1. At an Antenatal Clinic to be held ten times a year.
2. As a consultant in cases of Puerperal Fever.
3. As a *consultant* in cases of difficult labour.

A fee of 20 guineas per annum will be paid to cover the work under 1 and 2, and [illegible] arrangements will be made to [illegible] in connection with consultations in cases of difficult labour.

Applicants must be Fellows of one of the *Royal Colleges* of Surgeons of Great Britain and must be attached to a Special Hospital for *Diseases* of Women or to a Special Hospital for *the conditions* outlined above or to [illegible] ding Special Department of a General Hospital.

The duties will consist of attending the Consultant Clinic and of attending in consultation with medical practitioners or *either general practitioners* or the medical officers of the Council—in cases arising under the Puerperal Fever and Puerperal Pyrexia Regulations or in cases of difficult labour.

The gentleman appointed will be required to provide his own locum tenens during holiday and absence.

Application with copies of three recent testimonials should be made to the undersigned not later than April 27th and marked Specialist Consultant.

Town Hall, S. A. JEWERS,
Barking Town Clerk.
April 5th 1933

THE WELSH NATIONAL SCHOOL OF MEDICINE.
UNIVERSITY OF WALES

Applications are invited for the full-time post of JUNIOR ASSISTANT in the Surgical Unit.

Salary £450 per annum rising by annual [illegible] after one year's service to a maximum of £500 per annum. Duties to commence as soon as possible. The appointment will be for a period not exceeding two years in the first instance and to be subject to three months' notice on either side. Further particulars may be obtained from the undersigned.

Six copies of applications with names of [illegible] by copies of not more than four testimonials must be received by April 25th.

[illegible] EDWARDS, Secretary.
Welsh National School of Medicine,
The Parade, Cardiff.

THE FRIENDS' RETREAT, YORK

Applications are invited for the post of JUNIOR MEDICAL OFFICER (Woman) at the above registered Mental Hospital (240 beds). The appointment is for three years. The commencing salary is £360 per annum with board, residence and laundry. An additional salary of £50 per annum is paid to any assistant who holds or who obtains the D.P.M. The appointment is subject to the provisions of the Medical Superannuation Scheme.

There are two other Medical Officers on the Staff. Previous hospital experience is desirable.

Applications with copies of three recent testimonials stating qualifications, experience, age, nationality and religion to be sent on or before April 19th to the Medical Superintendent.

LONDON COUNTY COUNCIL

Registered Medical Practitioners required of at least one years standing as TEMPORARY DISTRICT MEDICAL OFFICERS at undermentioned districts.

Candidates appointed required to reside in or near district to carry out duties prescribed by Public Assistance Order to work under general direction of medical superintendent of hospital most conveniently situated and to provide at own expense approved deputy during absence from any cause In the case of a woman, marriage terminates contract of service Remuneration and conditions subject to review

Area I—District J (Poplar)—Provisional salary £275 a year
Area I—District L (Poplar)—Provisional salary £300 a year
Area II—District B (Hackney)—Provisional salary £140 a year
Area II—District D (Hackney)—Provisional salary £140 a year
Area II—District E (Hackney)—Provisional salary £200 a year
Area III—District J (Islington)—Provisional salary £200 a year
Area III—District K (Islington)—Provisional salary £125 a year
Area IV—District D (St Pancras)—Provisional salary £125 a year
Area IV—District E (St Pancras)—Provisional salary £200 a year
Area IV—District G (St Pancras)—Provisional salary £140 a year
Area IV—District H (St Pancras)—Provisional salary £200 a year
Area IV—District J (St Pancras)—Provisional salary £125 a year
Area V—District D (Fulham)—Provisional salary £200 a year
Area VII—District C (Lambeth) Provisional salary £125 a year
Area VII—District G (Battersea)—Provisional salary £140 a year
Area VII—District H (Wandsworth)—Provisional salary £140 a year
Area VII—District M (Wandsworth)—Provisional salary £125 a year
Area VIII—District J (Camberwell)—Provisional salary £200 a year
Area IX—District B (Deptford)—Provisional salary £250 a year
Area IX—District E (Deptford)—Provisional salary £175 a year
Area IX—District G (Lewisham)—Provisional salary £135 a year
Area IX—District I (Lewisham)—Provisional salary £150 a year
Area X—District C (Greenwich)—Provisional salary £200 a year

Application forms obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a) County Hall Westminster Bridge S E 1 returnable by April 21st Canvassing disqualifies

CITY OF BIRMINGHAM

PUBLIC HEALTH DEPARTMENT

LITTLE BROMWICH HOSPITAL FOR INFECTIOUS DISEASES

JUNIOR ASSISTANT MEDICAL OFFICER

Junior Assistant Medical Officer required Candidates must be single and have held previous resident posts in General or Children s Hospitals

Salary at the rate of £300 per annum together with board etc. This appointment is limited to twelve months and is subject to one month s notice on either side. The salary and emoluments will be subject to the voluntary abatement approved by the Council in respect of its officers

The officer appointed will be required to pay to the Council all fees allowances, and emoluments (other than the foregoing) received by him

It is not feasible to attend classes for Part I of the D P H in conjunction with this appointment

Forms of application may be obtained from the Medical Superintendent Little Bromwich Hospital Birmingham 9 and should be returned to him on or before Monday April 24th

F H C WILTSHIRE,
The Council House, Town Clerk
Birmingham

CITY OF BIRMINGHAM

MATERNITY AND CHILD WELFARE DEPARTMENT

Three TEMPORARY MEDICAL OFFICERS are required from July 7th to October 3rd (approximately) and a fourth TEMPORARY MEDICAL OFFICER from July 7th to September 5th

Applications are invited from ladies who have held a resident post in a Maternity Hospital and in a Children s Hospital The salary offered is £9 10s. per week.

The appointment cannot be terminated within the period named except for health reasons.

Applications should be sent on or before April 29th to the Medical Officer of Health Council House Birmingham 3

CITY OF MANCHESTER

PUBLIC HEALTH DEPARTMENT

BAGULEY SANATORIUM

APPOINTMENT OF SENIOR ASSISTANT MEDICAL OFFICER

The Public Health Committee invites applications from qualified Medical Men for the position of Senior Assistant Medical Officer at the Baguley Sanatorium (333 beds), Baguley Manchester

Every applicant must be a registered medical practitioner and unmarried

Applicants, whose age must not exceed 40 years must have held resident hospital and sanatorium appointments and have had practical experience in the diagnosis and modern methods of treatment of tuberculosis practical experience in X ray work is desirable

Salary £500 per annum subject to a temporary deduction of £19 per annum The amount payable is therefore £481 per annum, with board residence and laundry in addition subject to the terms and conditions of the Corporation Grading Scheme No bonus

Applications stating fully the age training qualifications and experience of the candidate, with copies of three recent testimonials and endorsed on the envelope Assistant Medical Officer Baguley Sanatorium ' must be addressed to the Medical Officer of Health Civic Buildings 1, Mount Street Manchester 2 only, and not to members of the Committee or Council and must be received by him not later than Saturday April 22nd

The candidate appointed will be required to commence duty as soon as possible after appointment to devote the whole of his time to the duties of the position, to pass a medical examination to contribute to the Corporation Superannuation Fund and to execute the Deed of Service

Canvassing in any form oral or written direct or indirect is prohibited

F E WARBRECK HOWELL
Town Hall Town Clerk
Manchester 2
March 30th 1933

BOROUGH OF TWICKENHAM

ASSISTANT MEDICAL OFFICER

Applications are invited from duly qualified Medical Practitioners (men or women) for the appointment of Assistant Medical Officer The work will include duties connected with Maternity and Child Welfare Medical Inspection and Treatment of School Children, and the Borough Hospital for Infectious Diseases

Special experience of Ante natal and Maternity and Child Welfare Clinics is obligatory and the possession of a Diploma in Public Health will be an additional recommendation

Salary £550 per annum rising by annual increments of £25 to £700 subject to a temporary deduction, which amounts to £17 10s. from the commencing salary

The successful candidate must pass a medical examination before appointment and contribute to the superannuation fund under the Local Government and Other Officers Superannuation Act 1922 The officer will be required to work under the direction and supervision of the Medical Officer of Health to devote whole time to the service of the Corporation and to reside within the Borough of Twickenham

Forms of application can be obtained from the Medical Officer of Health Dr G H DUPONT, Municipal Offices Twickenham to whom applications accompanied by not more than three dated testimonials, are to be sent on or before April 25th

Municipal Offices, EDWIN G STRAY
Twickenham Town Clerk
April, 1933

BOROUGH OF MANSFIELD

ASSISTANT (FEMALE) MEDICAL OFFICER OF HEALTH

Applications are invited for the appointment of Assistant (Female) Medical Officer of Health for the Borough of Mansfield at a salary of £500 per annum rising to £700 by annual increments of £25

The duties will include the Medical Inspection of school children work in connection with Maternity and Child Welfare Centres, Ante natal Clinics etc

Candidates must be registered Medical Practitioners, hold a Diploma of Public Health and have had at least three years experience of post graduate work

The successful candidate will be required to devote the whole of her time to the duties of the office and reside in the Borough

Applications, which must be made on forms obtainable from the undersigned accompanied by copies of three recent testimonials endorsed Assistant Medical Officer of Health ' must be received at my office not later than April 28th.

A C SHEPHERD, Town Clerk
Town Clerk s Office
Carr Bank Mansfield

CITY OF MANCHESTER

PUBLIC HEALTH DEPARTMENT

APPOINTMENT OF FIRST ASSISTANT RESIDENT MEDICAL OFFICER

The Public Health Committee invites applications from qualified Medical Men for the position of First Assistant Resident Medical Officer at MONSALL HOSPITAL (600 beds) Newton Heath, Manchester

Every applicant must be a registered Medical Practitioner and unmarried Applicants age must be between 30 and 40 years, must have held resident appointments at a general hospital and must hold or have held appointments at a large fever hospital. A knowledge of clinical bacteriology and laboratory work is essential

The hospital contains 600 beds, including special wards for puerperal fever and other complications

Salary £600 per annum subject to a temporary deduction of £25 15s. per annum The amount payable is, therefore £574 5s. per annum with board, residence and laundry in addition subject to the terms and conditions of the Corporation Grading Scheme No bonus

Applications stating fully the age training qualifications, and experience of the candidate with copies of three recent testimonials, and endorsed on the envelope First Assistant Resident Medical Officer Monsall Hospital" must be addressed to the Medical Officer of Health Civic Buildings 1, Mount Street Manchester 2, only, and not to members of the Committee or Council, and must be received by him not later than Saturday April 22nd

The candidate appointed will be required to commence duty as soon as possible after appointment to devote the whole of his time to the duties of the position, to pass a medical examination to contribute to the Corporation Superannuation Fund and to execute the Deed of Service

Canvassing in any form oral or written direct or indirect is prohibited.

F E WARBRECK HOWELL,
Town Hall Town Clerk.
Manchester March 31st 1933

COUNTY BOROUGH OF EASTBOURNE

ASSISTANT TO THE MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

The Council invites applications from duly qualified and registered Medical Practitioners (male or female) for appointment to the post of Assistant to the Medical Officer of Health and School Medical Officer, to act under his direction and supervision

The duties will especially include the Medical Inspection of School Children and attendance at the Clinics in connection therewith and attendance at the Maternity and Child Welfare Centres The officer appointed will also assist the Medical Officer of Health in other duties when required

Preference will be given to candidates who have had previous experience in similar duties

The salary will be at the rate of £350 per annum, rising by annual increments of £25 per annum to £700 per annum (subject to the present temporary deduction which at the commencing salary is at the rate of £23 10s per annum) Travelling allowance will also be payable in certain circumstances.

Forms of application can be obtained from the undersigned to whom applications accompanied by copies of not more than three testimonials must be sent not later than April 22nd

Canvassing is not permitted, and will be a disqualification

W C WILLOUGHBY
Public Health Dept, Medical Officer of Health
Avenue House,
The Avenue Eastbourne

ELIZABETH GARRETT ANDERSON HOSPITAL,

Euston Road, London, N W 1

Applications are invited from fully qualified Medical Women for the post of

ASSISTANT OBSTETRICIAN

Yearly appointment maximum two years Duties to commence in May further particulars of the post can be obtained from the undersigned to whom applications with copies of three testimonials should be sent by Friday April 21st

JEAN R MURRAY Secretary

DUNDEE ROYAL INFIRMARY

The Directors invite applications for the appointment to the Honorary Staff of an ASSISTANT VISITING SURGEON Particulars of duties etc may be obtained from the Medical Superintendent and applications accompanied by twenty four copies of at least three testimonials should be received by the undersigned not later than May 5th.

WM F FERGUSON Secretary

April 8th 1933

ROYAL VICTORIA INFIRMARY NEWCASTLE UPON TYNE. (677 Beds)

The House Committee declare vacant the office of HONORARY ASSISTANT PHYSICIAN

According to statutory provision every candidate must be a registered Graduate in Medicine of any University recognised by the General Council of Medical Education and Registration of the United Kingdom or a registered Fellow or Member of one of the Colleges of Physicians of the United Kingdom provided that he is practising as a Physician and not as a General practitioner

Applications, stating age qualifications and previous experience must be sent to the House Governor and Secretary Royal Victoria Infirmary Newcastle-upon-Tyne not later than Saturday April 29th

The appointment will be made on Thursday May 4th

Candidates may if they so desire forward to each member of the House Committee a copy of their application and testimonial

Personal canvassing will be considered a disqualification of office

S DUNSTAN
House Governor & Secretary

April 7th 1933

ROYAL VICTORIA INFIRMARY NEWCASTLE UPON TYNE. (677 Beds)

WHOLE TIME JUNIOR SURGICAL REGISTRAR (Open Appointment.)

Applications are invited for the post of Whole-time Junior Surgical Registrar (open appointment).

This appointment is intended for Graduates who desire to gain surgical experience and who have already held a post as House Surgeon certain duties in the allied Departments of the College of Medicine will offer opportunities of post-graduate study

The appointment which will commence on May 8th, will in no case extend beyond three years and will be for one year in the first instance renewable for two further periods

The rate of remuneration is £150 per annum subject to a reduction of 4 per cent)

Applications with copies of not more than three recent testimonials must be lodged on or before Monday April 24th with the House Governor & Secretary Royal Victoria Infirmary Newcastle, from whom further particulars may be obtained.

S DUNSTAN
House Governor & Secretary

April 7th 1933

KING GEORGE HOSPITAL ILFORD
(8 miles from London)

Wanted a HOUSE SURGEON to commence duty on May 1st for a period of ten months two months a Casualty Officer six months as House Surgeon and two months as Deputy Resident Medical Officer in charge of the Casualty Department Salary £100 per annum £10 bonus on completion of appointment and two weeks holiday Candidates should send their applications with three recent testimonials and call on the members of the Honorary Medical Staff indicated by the Secretary by April 24th

G AUSTIN HEPWORTH Secretary

ROYAL BUCKINGHAMSHIRE HOSPITAL, AYLESBURY

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) for six months. To commence duty on May 1st Salary £200 per annum with board residence and laundry Candidates must be fully qualified and registered.

Applications stating age qualifications and experience with copies of not more than three testimonials should be sent to the undersigned on or before April 18th

M W BROWN Secretary

SCARBOROUGH HOSPITAL & DISPENSARY
(70 Beds)

Wanted May 1st one HOUSE SURGEON (male) Duties include Home Visiting Salary £175 per annum with board residence etc. Appointment for six months

Applications stating age with copies of testimonials and essential particulars to be sent to the Hon Secretaries at once from whom further particulars may be obtained.

ROYAL BERKSHIRE HOSPITAL, READING

CASUALTY OFFICER required as from May 2nd for six months. The candidates (male) must be fully qualified and registered Remuneration at the rate of £150 per annum with board residence and laundry Applications with copies of testimonials should be sent to the undersigned on or before Monday April 24th.

F A LYON Secretary

LONDON HOMOEOPATHIC HOSPITAL
(Incorporated by Royal Charter)
Great Ormond Street and Queen Square
Bloomsbury W C 1
(A General Hospital—200 Beds)

POST OF RESIDENT MEDICAL OFFICER

The periodical vacancies for the Three Resident Medical Officers male or female occur in February June and October in each year the appointment being for twelve months Four months as House Surgeon four months a Gynaecological and Casualty Officer and four months a Medical Officer with salary at the rate of £100 per annum and board, apartments and laundry

Candidates must be legally qualified and registered

Applications for June appointment stating age with copies of testimonials to be sent to the Secretary

EDWARD A ATTWOOD Secretary

BURY INFIRMARY LANCS
(127 Beds.)

Applications are invited for the post of THIRD HOUSE SURGEON (male) who must have both Medical and Surgical qualifications. The appointment is for six months at a salary at the rate of £150 per annum with board residence and laundry The successful applicant will be required to commence duties beginning of May

Applications stating age qualifications and nationality with copies of three recent testimonial to be sent to the undersigned not later than April 21st

Particulars of duties may be had on application

ALEX. W MAITLAND
Hon Secretary

MINEHEAD AND WEST SOMERSET HOSPITAL, MINEHEAD SOMERSET
(58 Beds.)

Applications are invited for the post of RESIDENT HOUSE SURGEON (male or female) to this Hospital

Duty to commence on May 21st Appointment for a period of six months Salary £150 per annum with board residence and laundry

Application stating age nationality experience and qualifications accompanied by copies of three recent testimonials to be sent to the undersigned not later than May 5th.

W H P RODDA Secretary

LIVERPOOL HAHNEMANN HOSPITAL
Hope Street (52 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER to the above Institution which falls vacant on May 1st Appointment is for six months, renewable. Salary at the rate of £100 per annum. Duties include some casualties occasional anaesthetics and assisting at operations general gynaecological aural and ophthalmic

Apply stating age sex nationality and previous experience and enclosing copies of recent testimonials to the Registrar before April 24th

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL
Woodchurch Road BIRKENHEAD

SECOND HOUSE SURGEON

The Board invite applications for the post of Second House Surgeon until September 30th Honorarium at the rate of £75 per annum with board residence and laundry

Applications together with copies of testimonials to be addressed to the Hon Secretary at the Hospital not later than April 22nd

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN
St. Quintin Avenue North Kensington W 10
(58 Beds)

The Board of Management invite applications for the post of HONORARY ASSISTANT SURGEON with beds Applicants must hold the F R C S.(Eng) and the candidate appointed will be required to see Out patients at 2 sessions a week Applications from members of either sex accompanied by copies of three testimonials will be received by the Secretary at the Hospital up to Monday May 1st.

THE GLASGOW EYE INFIRMARY

The Directors invite applications from registered Medical Practitioners for the post of RESIDENT ASSISTANT HOUSE SURGEON Salary £150 per annum with apartments and board

Application with ten copies of testimonial should be lodged with the undersigned April 17th

WM M MOORE, Secretary

171 West Regent Street
Glasgow C 2. April 6th 1933.

NORWICH INFIRMARY

RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited for the Resident Assistant Medical Officer at the Norwich Infirmary The present salary will be £480 per annum rising by annual increments of £24 to £576 per annum (which represent £500 per annum rising to £600 per annum after having been subjected to a temporary adjustment) from which a deduction at the rate of £150 per annum will be made for residential allowances The salary may be subject to further temporary adjustments but the total amount of reductions from the gross salary will not exceed 10 per cent. For further particulars and stamped addressed envelope to the Medical Officer Norwich Infirmary Bowthorpe Road Norwich.

ROYAL HALIFAX INFIRMARY

Wanted a THIRD HOUSE SURGEON (male unmarried). Candidates must be duly qualified and registered. The appointment will be for six months from May 1st. Trial & promotion if satisfactory Salaries of Resident Medical Staff are as follows Resident Surgical Officer £250 First House Surgeon £200 Second House Surgeon £175 Third House Surgeon £150 per annum with residence board and laundry The Hospital contains 250 beds including Maternity Department and Paying Patients Block. There is also a Pathological Laboratory and a large Eye Ear Nose and Throat Department.

Particulars of duties may be obtained from the undersigned to whom applications should be sent.

A MIDGLEY
Secretary

April 4th 1933

THE ROYAL HOSPITAL WOLVERHAMPTON
(Incorporated under Charter)

HOUSE SURGEON required Duties in Orthopaedic Surgery as well as General Surgery

The Hospital contains 300 beds and is the clinical special department and practice organized for the various Examining Boards for a part of the requisite attendance in Medical and Surgical Practice.

Candidates must be registered under the Medical Acts and unmarried

The appointment is for six months Salary at the rate of £100 per annum board furnished rooms and laundry provided.

Application with copies of testimonial to be forwarded to the undersigned

WOLVERHAMPTON W H HARPER
April 3rd 1933 House Governor

BRISTOL GENERAL HOSPITAL.

A Meeting of the Election Committee will be held at the Hospital on Wednesday May 10th at 1 o'clock p m to appoint an HONORARY ASSISTANT SURGEON

Candidates are requested to send their application with copies of testimonials and proof of qualification to the undersigned not later than Monday May 8th next from whom further particulars may be obtained Every candidate is also required to forward copy of his application and testimonial to each member of the Election Committee.

By Order of the Committee
THOMAS W GREGG Secretary

BRISTOL GENERAL HOSPITAL

The Committee invites applications from fully qualified and registered Medical Practitioners for the post of HONORARY MEDICAL REGISTRAR The appointment will be held for two months and the holder will be eligible for re-election Application to be accompanied by copies of testimonials etc and copies of two testimonial to be delivered to the undersigned on or before Tuesday April 18th from whom further particulars as to the duties attached to the post may be obtained

THOMAS W GREGG Secretary

CHARING CROSS HOSPITAL

HONORARY ANAESTHETIST

Applications are invited for the post of Honorary Anaesthetist to the Hospital which should be sent to the undersigned together with copies of three recent testimonials to be received not later than Saturday April 29th.

PHILIP INMAN
Charing Cross Hospital
Strand W C 2.

THE KIDDERMINSTER AND DISTRICT GENERAL HOSPITAL (70 Beds)

HOUSE SURGEON (Male) required for one year at £150 per annum with residence board and laundry Applications to be sent to the Secretary three testimonials to be sent to Mr SYDNEY SMITH, South Cliff Kidderminster

NORTH WALES COUNTIES MENTAL HOSPITAL, DENBIGH

JUNIOR ASSISTANT MEDICAL OFFICER

The Committee of Visitors of the above Institution invite applications from duly qualified male candidates, married or unmarried, for the post of Resident Junior Assistant Medical Officer Commencing salary, which will be subject to statutory deductions under the Provisions of the Asylums Officers Superannuation Act, 1909 will be £350 rising by annual increments of £25 to £450 per annum, together with emoluments valued at £125 per annum for superannuation purposes If unmarried, full board residence laundry and attendance If married an unfurnished house with light water, rent and rates provided free, valued at £75 per annum for purposes of superannuation, the difference being made up in salary The appointment to be terminable upon one month's written notice on either side Practical experience of the modern treatment of mental conditions together with a knowledge of the Welsh language will be deemed desirable The person appointed will also be paid in addition to his salary the sum ' he holds the Diploma of

Applications stating , and accompanied by three recent testimonials are to be sent to the Chairman of the Visiting Committee endorsed Junior Medical Officer not later than Monday, the 24th instant

Dated this 6th day of April 1933

WM BARKER
Clerk to the Visiting Committee

LONDON JEWISH HOSPITAL, Stepney Green E 1
(General Hospital—108 beds)

Applications are invited for the following posts —

RESIDENT MEDICAL OFFICER AND HOUSE PHYSICIAN Salary at the rate of £150 per annum with board and residence Appointment for six months

HOUSE SURGEON Salary at the rate of £100 per annum with board and residence Appointment for six months

CASUALTY OFFICER (non resident) Salary at the rate of £150 per annum with luncheon and tea Appointment for six months The holder will be required to attend the Out patient Department from 9 a m to 5 p m

Applications with copies of three recent testimonials to be sent to the Secretary on or before Friday April 28th The successful candidates will be required to take up their duties on June 1st

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CITY OF MANCHESTER

POLICE SURGEON

Applications are invited for the above mentioned position at a commencing salary of £800 per annum rising by four annual increments of £50 per annum (subject to satisfactory service) to £1 000 per annum together with £150 per annum for travelling expenses Two guineas per day will also be allowed for 28 days each year for the services of a locum Tenens during annual holidays. No payment will be made for the services of a locum Tenens under any other circumstances

Particulars as to duties terms and conditions of appointment can be obtained from the undersigned

Applications endorsed Police Surgeon ' are to be delivered not later than May 6th

F E WARBRECK HOWELL
Town Clerk

BEXHILL HOSPITAL

Applications are invited from Medical Practitioners who must be of recognized Consultant or Specialist Status for the undermentioned APPOINTMENTS to the HONORARY STAFF

(a) TWO CONSULTING SURGEONS
(b) ONE OPHTHALMOLOGIST,
(c) ONE PATHOLOGIST
(d) TWO RADIOLOGISTS
(e) ONE EAR NOSE, AND THROAT SPECIALIST

Applications should be addressed to the undersigned at the Hospital Office, 4 Devonshire Road Bexhill on Sea to reach him on or before Saturday, April 29th

JAMES B DUNCAN
Hon Secretary

UNIVERSITY COLLEGE HOSPITAL Gower Street W C 1

Applications are invited for the post of REGISTRAR to the ROYAL EAR HOSPITAL (Ear Nose and Throat Department of University College Hospital) and should reach the Secretary University College Hospital Gower Street W C 1 by noon on Friday April 28th

Post non resident Salary £250 per annum Whole time duties to commence May 22nd

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COUNTY BOROUGH OF BLACKBURN

PUBLIC ASSISTANCE COMMITTEE

RESIDENT JUNIOR ASSISTANT MEDICAL OFFICER

Applications are invited from Medical Practitioners (male) for the appointment of a Resident Junior Assistant Medical Officer at QUEEN'S PARK INSTITUTION AND INFIRMARY The applicants must be registered as Medical Practitioners.

The Staff consists of a Resident Medical Officer a Resident Assistant Medical Officer a Consulting Surgeon a Laboratory Assistant and X ray Attendant.

There is a separate Infirmary, a separate Mental block and a separate Sanatorium for Children, and there is opportunity for experience in all departments including medical, surgical and midwifery cases An X ray apparatus is installed

The person appointed will be required to devote his whole time to the duties, and also to act as may be directed by the Resident Medical Officer

The appointment will be limited to a term not exceeding one year

Salary for the first six months at the rate of £150 per annum (subject to a temporary economy deduction of £3 5s) and thereafter at the rate of £200 per annum (subject to a temporary economy deduction of £4 15s), together with board, apartments and attendance

Applications stating age qualifications, and experience and accompanied by copies of not more than three recent testimonials must be sent so as to reach the Public Assistance Officer, Public Assistance Offices, Cardwell Place, Blackburn, not later than April 25th

Town Hall BRIGGS H MARSDEN
Blackburn Town Clerk
April 10th 1933

BOROUGH OF JARROW

ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited for the above appointment at a salary of £500 per annum (less the temporary deduction authorised by the Council) rising by annual increments of £25 to £700 per annum

Applicants must be registered Medical Practitioners and must have had at least three years experience

Preference will be given to those holding the D P H

Forms on which application must be made may be obtained from the undersigned

W FORSYTH HEDLEY
Town Clerk's Office Acting Town Clerk
7 Grange Road West
Jarrow April 10th, 1933

THE GENERAL INFIRMARY AT LEEDS

HONORARY ASSISTANT PHYSICIAN

Notice is hereby given that a meeting of the Special Election Committee will be held in the Board Room on May 5th 1933 at 3 p m, to elect an Honorary Assistant Physician

Information as to the duties and necessary qualifications for the office will be supplied on request to the House Governor

Thirty two copies of applications, each accompanied by copies of three recent testimonials, to be addressed to the Chairman at the Infirmary should be sent in on or before April 25th

By Order of the Board of Management,
S CLAYTON FRYERS
House Gov & Secretary

THE GUEST HOSPITAL, DUDLEY
(General Hospital—107 Beds)

Applications are invited for the post of ASSISTANT HOUSE SURGEON Salary £170 per annum, with furnished apartments board and laundry Candidates must be fully qualified and registered Applications stating age qualifications and experience and accompanied by copies of testimonials, to be sent to the undersigned

H RAYMOND HURST
April 7th, 1933 House Governor & Sec

CLAYTON HOSPITAL WAKEFIELD
(General Hospital—166 Beds)

There are vacancies for TWO HOUSE SURGEONS (male British) for which posts applications are invited The appointments are for six months in the first instance and the salary for each is at the rate of £175 per annum, together with board residence and laundry

Applications, stating age qualifications and experience, together with copies of three recent testimonials should be sent to the undersigned as early as possible.

H J LANCASTER, Gen Supt. & Sec.

CITY OF LIVERPOOL

DEPUTY MEDICAL SUPERINTENDENT SMITHDOWN ROAD HOSPITAL

Applications are invited for the appointment of a full time Resident Deputy Medical Superintendent at the Smithdown Road Hospital (approximately 1,200 beds) at a salary of £ per annum (subject to a temporary deduction as authorised by the Council) with the usual residential allowances valued at £ per annum Any fees received in connection with the appointment to be handed over to the City Council Applicants must be registered and qualified and have had considerable Hospital experience since qualification The person appointed will be required to assist the Medical Superintendent in the administration of the Hospital, training of nurses and will assume control in the absence of the Medical Superintendent

Preference will be given to candidates who have qualifications and experience in medical rather than the surgical side and a knowledge of mental diseases will be an additional recommendation

Applications, upon forms obtainable from the Medical Officer of Health Municipal Offices Liverpool, to be endorsed Deputy Medical Superintendent and addressed to the undersigned so as to be received not later than April 30th

Canvassing of members of the Council will be regarded as a disqualification

Municipal Buildings, WALTER MOSS
Liverpool Town Clerk.
April 1933

ISLE OF WIGHT COUNTY MENTAL HOSPITAL NEWPORT I.O.W.

CLINICAL ASSISTANT (male) required for resident post tenable for six months with board lodgings laundry and attendance and an honorarium of £21 Duties light ample time for Post graduate study, particularly in Psychological Medicine If desired, Out patient Clinics and other applications of Mental Treatment Act afford scope for study of early Mental illness. Applications, together with copies of recent testimonials stating age qualifications and when free to be addressed to the Medical Superintendent Whitecroft, Newport I.o.W. before April 30th and from whom further particulars can be obtained.

WEST SUFFOLK GENERAL HOSPITAL, BURY ST EDMUNDS
(108 Beds.)

SENIOR RESIDENT MEDICAL OFFICER wanted May 1st for surgical beds Applicants must be fully qualified and registered and should have had experience and have passed Hospital appointment Salary £180 per annum with board residence and laundry

Applications with copies of recent testimonials, to be sent to the undersigned

L E HARDWICKE,
March 31st 1933. Secretary

CHARTERHOUSE RHEUMATISM CLINIC
Crosby Row, Long Lane S.E.1

Applications are invited for TWO HONORARY CLINICAL ASSISTANTS Appointments will be made for three months. Attendance will be required for one afternoon per week. Practitioners who desire an insight into the methods in use at the C R C, are particularly invited to apply

Address in the first place the Secretary C R C 94 Hallam Street W 1

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN (100 Beds)

HOUSE PHYSICIAN (male) required Salary at the rate of £100 per annum with board lodging and washing No canvassing To commence duties on May 22nd

Applications in writing accompanied by testimonials should be sent to PERCY F SMITH Secretary

April 8th 1933

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN (100 Beds)

HOUSE SURGEON (male) required Salary at the rate of £100 per annum with board lodging and laundry No canvassing To commence duties on June 16th

Applications in writing accompanied by testimonials should be sent to PERCY F SMITH Secretary

April 8th 1933.

THE WEYMOUTH AND DISTRICT HOSPITAL WEYMOUTH. (86 Beds and Cots)

Wanted April 28th HOUSE SURGEON (European) Salary £180 per annum with board residence and laundry Applicants stating age qualifications and experience to be sent to the undersigned testimonials to be sent to the undersigned not later than April 19th

MORRIS LODGE, Hon. Sec.

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh).

(a) British Islands

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH**
EBBW VALE, MON. *(Workmen's Medical Society.)*	MARDY, GLAMORGAN *(Workmen's Medical Scheme.)*	KENT COUNTY COUNCIL. LENHAM SANATORIUM *(Male Assistant Medical Officer.)*
GILFACH GOCH, GLAMORGAN *(Workmen's Medical Scheme.)*	NEATH AND DISTRICT *(Medical Aid Association.)*	FARNBOROUGH INSTITUTION HOSPITAL. *(Resident Assistant Medical Officer.)*
LLWYNPIA, CLYDACH VALE, PENYGRAIG, GLAMORGAN *(Workmen's Medical Scheme.)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association.)*	WORCESTER COUNTY AND CITY MENTAL HOSPITAL. *(Junior Assistant Medical Officer.)*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer.)*	OGMORE VALLEY, GLAMORGAN *(Wyndham Colliery Medical Aid Society.)* *(Workmen's Medical Scheme.)*	LLANTRISANT AND LLANTWIT FARDRE RURAL DISTRICT COUNCIL. (1) *Medical Officer of Health (part-time.)* (2) *Medical Officer (woman—part time) for Maternity and Child Welfare.*

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. G. HUNTER (Medical Secretary, New South Wales Branch), 135, Macquarie St., Sydney, N.S.W.	**QUEENSLAND** *(Brisbane Associated Friendly Societies Institute.)* *(Toowoomba Associated Friendly Societies Medical Institute, Toowoomba.)*	The Hon. Sec., Queensland Branch, British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	**WELLINGTON, NEW ZEALAND** *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec., New Zealand Branch), British Medical Association, P.O. Box 156, Wellington, New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch, British Medical Association), Medical Society Hall, East Melbourne, Victoria.			**WESTERN AUSTRALIA.** *(Contract and Lodge Practices.)*	Hon. Sec., Western Australian Branch, British Medical Association, No. 6 Bank of N.S.W. Chambers, St. George's Terr., Perth, Western Australia.

April 11th, 1933. By Order of the Council. G. C. ANDERSON, Medical Secretary.

BETHLEM HOSPITAL, MONKS ORCHARD, Eden Park, Beckenham, KENT.

Wanted, ONE RESIDENT HOUSE PHYSICIAN (Gentleman unmarried) recently qualified in Medicine and Surgery.

The term of residence is for six months from May 1st; apartments, complete board and laundry being provided and an honorarium at the rate of £150 per annum will be paid for the first three months, rising if commendable service be given to the rate of £200 per annum for the second period of three months.

Written applications with testimonials are to be forwarded to the Physician Superintendent at the Hospital from whom copies of the duties can be obtained.

ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.

PATHOLOGIST (full time male) required to establish and organise a Pathological Institute for the Hospital and district. Duties to commence on July 1st. Emoluments guaranteed at £800 per annum for first two years, afterwards by arrangement. For further particulars apply to the undersigned. Applications must be received not later than May 1st.

HY. TRUSSON, Secretary.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.2.

REFRACTION OFFICER required for one session weekly (Wed. morning) of approximately 2½ hours. Salary £1 16s. per session. Applications, giving qualifications and details of experience should be sent to the undersigned as soon as possible.

March 30th, 1933. C. H. BESSELL, Secretary.

COVENTRY & WARWICKSHIRE HOSPITAL.
(Main Hospital, 307 Beds.
Convalescent Hospital, 40 Beds.)
Seven Resident Medical Officers.

Applications are invited for the post of HOUSE SURGEON for the Aural and Ophthalmic Departments.

The appointment for six months renewable. Salary £125 per annum with board, residence and laundry. Candidates must be duly qualified and registered.

Applications stating age and enclosing copies of recent testimonials to be sent to the undersigned immediately.

(Mrs.) R. HOOPER, Secretary.

MACCLESFIELD GENERAL INFIRMARY.
(General Hospital—100 Beds.)

Applications are invited for the appointment of SECOND HOUSE SURGEON (male) for a period of six months. Salary £150 per annum with board and residence. Candidates must have had experience in administration of Anæsthetics.

Applications with copies of three testimonials should be sent to the undersigned at once.

A. E. J. SAPLIN, Secretary.

ROYAL LANCASTER INFIRMARY.

SENIOR and JUNIOR HOUSE SURGEON (male) wanted for a period of six months commencing May 1st.

Salary £175 and £150 per annum respectively with board, residence, and laundry.

Application from British graduates stating age, experience, and qualifications, together with copies of testimonials, should be sent not later than April 18th to Secretary, Medical Committee.

WEST LONDON HOSPITAL, Hammersmith, W.6. (234 Beds.)

Required ONE NON-RESIDENT HOUSE OFFICER (part-time) for Children's Department for six months from May 1st next, subject to one month's notice on either side. Applicants may be male or female. Salary at the rate of £150 per annum. Candidates must be registered under the Medical Act, and should have passed or be in the Children's Diploma of the Royal Hospital.

Applications, and copies of three testimonials, which must be made payable, should be sent to the Medical Superintendent, from whom further information may be obtained, not later than Friday, April 21st. Selected candidates will be required to attend for interview at a Meeting of the Medical Staff, to be held in attendance at a Meeting of the Medical Committee on Friday, April 28th, at 4.30 p.m. The Committee Meeting at 5 p.m. the same day will make the appointment, which will be announced.

H. A. MADGE, Secretary.

ASCOTS HOSPITAL AND CONVALESCENT HOME, GREAT WARFORD, ALDERLEY EDGE.

Applications are invited for the post of HONORARY VISITING PHYSICIAN to the above Institution, at an honorarium of £50 per annum. Applications, stating age, qualifications, etc., to be sent to the undersigned by April 19th next, accompanied by three recent testimonials, and to be forwarded to the Committee, from whom all particulars can be obtained.

By Order of the Board,
HERBERT J. DAFFORNE,
Gen. Supt. & Secretary.

British Medical Journal
BRITISH MEDICAL ASSOCIATION HOUSE,
TAVISTOCK SQ, LONDON, W C 1
T/A ARTICULATE, WESTCENT, LONDON
Tel MUSEUM 9861 (4 lines)

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YACHT CRUISING FOR CONVALESCENTS and others Complete mental and physical change from usual occupation and environment Owner of 35 ft Yawl wishes to ARRANGE small PARTIES to CRUISE Inexpensive —Address, No 2408 B M A House, Tavistock Sq W C 1

ASSISTANCIES

WANTED — ASSISTANTSHIP OR LOCUM engagement (with or without view) by M R C P, British Indian, young, energetic, ab tainer, exp G P and panel Drive car Refs and testimonials Free now —Address, No 2302, B M A House, Tavistock Sq, W C 1

WANTED — ASSISTANT, AT ONCE, ENG lish or Scotch Mixed Practice in Mid land City Salary £350, with furnished rooms and attendance and petrol allowance Good prospects if required to suit man with capital —No 2418 B M A House, Tavistock Sq, W C 1

WANTED — ASSISTANT, WITH VIEW TO Partnership, in a mixed Practice in Lancs Town Panel over 3,000 Unmarried Partnership after six months if suitable — Address, No 2413, B M A House, Tavistock Square, W C 1

WANTED —ASSISTANT, OUTDOOR, EARLY in May for large Practice in Midland County Town Male or female Salary £400 per annum Usual bond Full particulars — Address, No 2412 B M A House, Tavistock Square, W C 1

WANTED — OUTDOOR ASSISTANT, Country Town (Cheshire), male, single, British or Irish Saloon car for use in Practice Dispenser kept Usual bond Salary according to experience — Address No 2425, B M A House Tavistock Square W C 1

WANTED — ASSISTANT, END OF MAY industrial country Practice in Cornwall Salary £375 outdoor Usual bond Able to drive car —Address No 2424, B M A House, Tavistock Square, W C 1

WANTED -ASSISTANTSHIP BY M B, CH B, young, energetic thoroughly experienced, large general hospital (two years) and good class G P (two years) Married —Address No 2426, B M A House Tavistock Square, W C 1

WANTED — ASSISTANTSHIP BY WOMAN Doctor at once, 6 years G P Own car Free now Small partnership or any other medical post entertained — Address No 2421, B M A House, Tavistock Square W C 1

WANTED IMMEDIATELY — INDOOR AND outdoor ASSISTANTS for Town and Country Practices with and without view Good salaries State full particulars —BRITISH MEDICAL BUREAU 33 Cross St, Manchester, 2

LADY DOCTOR ASSISTANT WANTED FOR small private Mental Hospital near London Salary according to experience — Address No 2405, B M A House Tavistock Square W C 1

M D, AGED 39 UNMARRIED, ABSTAINER, seeks ASSISTANTSHIP in London, full or part time permanent or temporary outdoor preferred but not essential —Address, No 2416, B M A House, Tavistock Square, W C 1

MEDICAL WOMAN, M B, CH B D P H, age 33, Scottish, desires ASSISTANTSHIP, preferably outdoor with good prospects, in or near London or Birmingham C H S 3 years experience general practice — Address No 2403 B M A House Tavistock Square, W C 1

OPHTHALMIC SURGEON IN SMALL TOWN requires an ASSISTANT—young, energetic man of good appearance and manner Some ophthalmic experience desirable Probable eventual Partnership for a suitable man — No 2410 B M A House, Tavistock Sq, W C 1

PART TIME ASSISTANTSHIP WANTED BY ex R M O, B S H P aged 34, Hospitals and G P exper Special Work, Children's E N & T V D Avail week ends, morn after noons or evenings as arrgd Keen well rec — No 2423 B M A House Tavistock Sq W C 1

LOCUMS

FOR LOCUM TENENS APPLY TO
PERCIVAL TURNER, Ltd
The oldest and only Agent who for 50 years has supplied substitutes at short notice without fee to principals
4, ADAM ST, Strand, London, W C 2
Telegrams 'Phone
Epsomian, Lond" Temple Bar 9011
After Office Hours Epsom 9142.

WANTED —LOCUMS (PRIV OR HOSP) OR Assistantship (with or without view capital avail) by Conj man act 30, 4 yrs' exp G P, active, reliable, well rec Lond or Lancs pref not essen Free now Terms 7 gns p w —No 2428, B M A House Tavistock Sq W C 1

LOCUM TENENS — LONDON M B, EXPERI enced in all varieties of Practice, is free up to May 11th and in June and July —Address, stating terms, No 2415 B M A House, Tavistock Square, W C 1

MEDICAL WOMAN REQUIRES LOCUMS for July Experience in general practice (private and panel) Motorist —Address No 2429 B M A House, Tavistock Square, W C 1

PARTNERSHIPS

WANTED, A PARTNERSHIP OR PRACTICE in a good middle and better class Practice within about 30 miles of London, by experienced Graduate, with ample means to purchase Income £1,200 or more Married — Details in first instance to (No 45—88) PERCIVAL TURNER LTD, 4, Adam St, Adelphi, Strand, London, W C 2

WANTED BY M B, B S, SCHOLAR AND Medallist, aged 30, married, experienced in good class G P with ample capital, a PARTNERSHIP in Practice, in good residential district, with social amenities, preferably Home Counties Replies treated in confidence —Add, No 2431, B M A House, Tavistock Sq, W C 1

WANTED —A PARTNER IN AN OLD, GOOD class, large suburban Practice, near Birmingham, healthy locality and extending rapidly One third or two fifths share, 2 years' purchase Average £2,400 Moderate panel Suitable house to rent — Address No 2419, B M A House Tavistock Square, W C 1

WANTED BY M B, CH B EDIN (1922), married, aged 33, PARTNERSHIP £1,000 minimum, with substantial panel, preferably in Southern half of England. Disposing of own practice in Yorkshire. — Address No 2225, B M A House, Tavistock Square, W C 1

CAMBRIDGE GRADUATE, HOLDING F R C S (England) and experienced in Surgery desires PARTNERSHIP Home Counties preferred — Address No 2406 B M A House, Tavistock Square, W C 1

EXPERIENCED G P ANAESTHETIST (AGE 40) seeks sound PARTNERSHIP in Autumn. Multiple firm in small town, South or West preferred —Address No 2124, B M A House Tavistock Square, W C 1

M R C S, L R C P AGE 33, EX R M O H P, and H S with ample exper of C P requires PARTNERSHIP or PRACTICE of about £1 000 in Provincial or Country Town, within 2 hours of London —Address No. 2404, B M A House, Tavistock Square, W C 1

PARTNER WANTED TO PURCHASE 1/3rd SHARE in an Ideal and Therapeutical Practice within South London Fully equipped for Therapy Radiography and all Electro Therapy Applicant must be Graduate in Radiology —Address No. 2401 B.M.A. Tavistock Square W C 1

URGENTLY WANTED PARTNER Good-class or mixed if good district London or Home Counties Practitioner exceptional qualifications G P Major Surgery Share £1,000 Assistantship considered — HARDY & Co 49, Chancery Lane W C 2

YOUNG ACTIVE MAN WITH MODERATE capital and prepared to develop Established Practice in Midlands can secure PARTNERSHIP on favourable terms—Write 2407 B M A House Tavistock Square W C 1

MEDICAL POSTS DISPENSERS etc

A LADY DISPENSER BOOKKEEPER supplied immediately on request, qualified and with practical experience in first class practice and dispensary work also trained Bacteriological Laboratories of the B M A COLLEGE OF PHARMACY FOR WOMEN Preparation for Examinations — Write or 'phone (Bayswater 0969), Secretary 4 Bourne Park Road, W 2

DOCTORS REQUIRING QUALIFIED Dispensers Nurse Dispensers Secretary Dispensers or Chauffeuse-Dispensers, are invited to write wire, or phone Temple Bar 5s 8, The DISPENSERS' BUREAU, 3 Lindsay House 176 Shaftesbury Avenue London W C 2

LADY DISPENSER, BOOKKEEPER, 6 Yrs experience private and panel qual (Hall), also fond of gardening requires Post Good testimonials —Address No 2417 B.M.A. House, Tavistock Square, W C 1

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2. EASTERN COUNTIES.—PARTNERSHIP IN OLD ESTABLISHED mixed Practice in Town with population about 35,000. Cash receipts average £3,789 p.a., including panel over 3,100. Very nice house (4 bedrooms), garage, and small garden to rent. Premium one third share 2 years purchase.

3. HOME COUNTIES.—PARTNERSHIP IN OLD ESTABLISHED Practice in first rate Residential Country District about 20 miles from London. Cottage Hospital. Applicant should be aged 28—30 and a Graduate of Oxford or Cambridge. Share worth about £1,000 p.a. at 2 years purchase.

4. S. OF ENGLAND.—OLD ESTABLISHED GOOD CLASS PRACTICE of about £2,000 in favourite Seaside Resort. Small Panel. Large modern residence for sale. Scope for increase. Prem. £2,700.

5. KENT.—PARTNERSHIP IN MIDDLE AND WORKING CLASS Practice averaging nearly £4,450 p.a. in an industrial Town under 25 miles of London. Panel about 2,600. Detached house (4 bedrooms) with garden to rent. Plenty of scope for increase. Premium one fifth share 2 years purchase.

6. S. OF ENGLAND.—PARTNERSHIP IN OLD ESTABLISHED Practice of nearly £1,950 p.a. in important town within 80 miles of London. No panel. Attractive corner residence (7 bed and dressing rooms) in half acre of walled in garden with garage, etc. for sale. Ample scope for increase. Premium one half share 2 years purchase.

7. ESSEX.—OLD ESTABLISHED PRACTICE OF ABOUT £600 P.A. in Suburban District. Panel 500. Well situated detached house (6 bedrooms) standing in own grounds with nice garden, garage, and stabling for sale. Scope for increase. Premium £650.

8. DEATH VACANCY.—WELL-ESTABLISHED OPHTHALMIC PRACTICE of over £1,600 p.a. (in addition to General Surgery) in first rate town within 60 miles of London. Well qualified man would have every chance of being elected Hon. Surgeon in charge of the Ophthalmic Department of the local Hospital. Excellently situated house to rent on lease.

9. S.W. OF ENGLAND.—WELL ESTABLISHED MIDDLE AND better class PRACTICE of between £1,200 and £1,300 p.a. in Seaside Resort. Panel 500. Excellent and well situated large detached corner house with every modern convenience, to rent on lease. Very good Educational facilities. Sport of all kinds including golf, yachting, etc. Premium £2,000.

10. LONDON, S.W.—OLD ESTABLISHED PRACTICE ABOUT £650 p.a. in well populated area. Panel 850. Separate Surgery and private residence to be purchased. Scope for increase. Premium £1,100.

11. SURREY.—PARTNERSHIP IN SOUND OLD ESTABLISHED good mixed class Practice about £3,000 p.a. in the Croydon area. Small panel. Very little midwifery. Suitable house could be obtained. Scope for increase. One fourth share at first at 2 years purchase, with option to increase.

12. S.E. COAST.—MIDDLE AND WORKING CLASS PRACTICE OF £1,000 p.a. in favourite summer resort. Panel over 1,000. Corner house (4 bedrooms) with garage and garden, for sale. Premium one and a half years purchase.

13. S. MIDLANDS.—VERY OLD ESTABLISHED PRACTICE ABOUT £500 p.a. in a town of about 50,000 inhabitants. Panel 450. Very good detached double-fronted house with 7 bed and dressing rooms, garage, and good garden. Great scope for an energetic man. Premium, freehold house and Practice £4,000.

14. ESSEX COAST.—PARTNERSHIP IN PRACTICE OF £2,500 p.a. in small Seaside Town. Panel 2,300. Modern house in good position facing Sea with 4 bedrooms for sale. Scope for increase. Premium one fourth share £1,250, and further share later.

15. ESSEX.—PRACTICE ABOUT £1,150 P.A. IN DEVELOPING district in the Thames Estuary. Panel 350. House with ample accommodation. Electric light, main drainage, garage and very nice garden to rent. Yachting. Plenty of scope for increase. Premium £1,600.

16. LONDON, W.—STEADILY INCREASING NUCLEUS OF PRACtice in the Maida Vale district. Bookings for 11 months £249, of which about £100 has been received. Rent of consulting and waiting rooms 30/- weekly. Good scope. Premium £300.

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Practices and Partnerships for Disposal (continued)

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18 LONDON, E.C.—PARTNERSHIP IN OLD-ESTABLISHED PRACTICE in the City. Receipts at present about £1,650 p.a. including appointments and panel worth over £500 p.a. Premium one-half share £1,000.

19 NORTH OF ENGLAND.—INLAND HEALTH RESORT.—NON-DISPENSING PRACTICE of about £1,000 p.a. Small select panel. House (7 bedrooms) with large garden for sale. Premium—Practice—£750.

20 HOME COUNTIES.—PARTNERSHIP (AFTER PRELIMINARY Assistantship) in large mixed Practice in growing district within 20 miles N.W. of London. Applicant should be a keen and energetic young Englishman.

21 LONDON, E.C.—NUCLEUS OF PRACTICE (ABOUT FOUR fifths Ophthalmic) in the City. Cash receipts average £268 p.a. Fees for Consultation £1 1s. to £2 2s. Consulting and waiting room to rent. Premium £100.

22 HOME COUNTIES.—WELL ESTABLISHED PRACTICE OF £700 p.a. in first rate Country Town under 40 miles from London. Panel about 250. Fees 5/- to £1 1s. Large well built residence (about 6 bedrooms) with modern conveniences. Beautiful garden, meadow, orchard etc. in all about 24 acres. Excellent hunting. Premium for Practice and House £4,500 (or near offer) which is less than the value of the house alone.

23 EASTERN COUNTIES.—OLD ESTABLISHED PRACTICE about £2,750 p.a. in beautiful country district. Panel 1,150. Good house (6 bedrooms) with electric light and central heating in large grounds for sale. Good scope.

24 MIDLANDS.—PARTNERSHIP IN WELL ESTABLISHED AND increasing Practice of nearly £1,550 p.a. in growing residential neighbourhood on outskirts of first rate town. Panel 1,830. House (4 bedrooms etc.) in acre of garden for sale or rent. Excellent prospects of increase. Premium one-half share 2 years purchase.

25 S. AFRICA.—RADIOLOGICAL PRACTICE IN A MOST DElightful town with excellent climate. Cash receipts last year £1,450. Scope. Premium to include furniture, carpets accessories etc. £2,200.

26 PRIVATE MENTAL HOME (FOR LADIES ONLY).—EXCEPtionally nice house and grounds. A considerable sum required for the purchase. Further particulars on application.

27 EASTERN COUNTIES.—OLD ESTABLISHED COUNTRY PRACTICE. Cash receipts about £720 p.a. including appointments over £150 and a panel of about 590. Detached house (5 bedrooms) in grounds of 1 acre for sale. Prem. for Practice £650.

28 EAST COAST.—PRACTICE OF BETWEEN £750 AND £800 p.a. in a purely Residential Seaside District within 40 miles from London. Small Panel. Detached house (5 bedrooms) for sale. Scope for increase as district is growing.

29 SOUTH AFRICA (CAPE PROVINCE).—PRACTICE OF OVER £2,600 p.a. in Residential District on outskirts of one of the Principal Coastal Towns. Good house (5 bedrooms etc.) to rent. Scope for Surgery. Premium £1,750 or offer.

30 LANCASHIRE.—OLD-ESTABLISHED PRACTICE IN SMALL Manufacturing Town. Cash receipts last 12 months £750 including a panel of over 1,650. Detached house (5 bedrooms) with garage and good garden to rent. Premium 1½ years purchase or near offer.

31 SURREY.—PRACTICE OF £1,000 P.A. IN RAPIDLY GROWing Residential District within 15 miles of London. Panel 400. Suitable house with separate professional accommodation for sale. Scope for considerable increase. Premium £1,600.

32 LONDON, W.—GOOD MIDDLE-CLASS PRACTICE £700 P.A. in suburb within easy access of the West End. Panel over 100. Attractive double fronted house with nice garden for sale. Scope for increase. Premium 1½ years purchase.

33 CORNWALL.—VERY OLD-ESTABLISHED PRACTICE OF OVER £1,100 p.a. in delightfully situated seaside village near St. Ives. Panel about 550. Well built house (7 bedrooms) overlooking sea in half acre of ground for sale. Some additional building is going on. Premium 1½ years purchase.

34 LONDON, N.—PARTNERSHIP IN PRACTICE ABOUT £500 p.a. in thickly populated Suburban District. Panel 2,000 to 3,000. One fourth or one third share at 2 years purchase.

35 HOME COUNTIES.—OPHTHALMIC PRACTICE BETWEEN £300 and £400 p.a. in desirable Residential Town, under 15 miles from London. Good detached house (4 bedrooms) with large garden for sale. Good reasons for plenty of scope for increase. Premium £300.

36 LONDON, E.C.—OLD-ESTABLISHED LOCUM PRACTICE of £646 p.a. Panel 459. Living accommodation to rent if desired. Premium £1,000.

37 S. AFRICA.—OPHTHALMIC AND GENERAL PRACTICE about £1,400 p.a. (about 60 per cent. Ophthalmic) including appointments £400. No Ophthalmic opposition. Premium £400.

38 CO. DURHAM.—PRACTICE OVER £500 P.A. IN RESIDENtial colliery district near two large towns. Panel 1,350. Certainly situated 7-roomed house, with good Surgery and Dispensary for sale or rent. Practice could be very quickly substantially increased. Premium £650.

39 N. OF ENGLAND.—OPHTHALMIC PRACTICE OF [illegible] £1,600 p.a. in an important [illegible] Excellent [illegible] keen on clinical and operative [illegible] Lease [illegible] first-class condition for sale. Purchase [illegible] Premium £2,500.

40 S. AFRICA.—PRACTICE OF ABOUT £1,000 P.A. IN famous town. Pleasantly situated [illegible] rooms), garage and [illegible] private wards). Premium £1,100.

41 LONDON WEST END.—[illegible] public Practice. Rent £[illegible] venient flat at moderate rent, on lease. Premium £[illegible] in populous district. Panel 2,000. Present income £[illegible] Premium £[illegible] purchase.

42 LONDON, E.—CASH AND PANEL PRACTICE £[illegible] P.A. in populous district. Panel 2,000. Lease [illegible] Premium £[illegible] purchase.

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1 NORTH EAST COAST —PARTNERSHIP —A one half share is offered in an old established better and middle class Practice situated in suburb of favourite residential town Practice is steadily increasing with good scope for further development Gross cash receipts for last 12 months £1 700 Panel of 700 Fees from 3/6 Very nice house, with 2 reception 4 bedrooms etc One acre of garden Garage for two cars Rent on lease £80 p a Sport of all kinds and good schools Premium for share only 1½ years purchase

2 MIDDLESEX —In a very pleasant new and rapidly developing district within 15 miles of London PRACTICE established by Vendor about 18 months ago is for disposal owing to ill health Cash receipts for past 12 months £360 including panel 120 Good house with large garden, garage etc Price freehold £1,728 (practically all on mortgage) Premium one years purchase Exceptionally good prospects

3 CHELSEA AREA —LOCK UP SURGERY —Old established and averaging about £450 p a including panel of 140 Hours 9 30 to 12 and 5 to 7 p m Consultations 2/6 to 10/6 Very little visiting at 5/ upwards Rent of two rooms £84 p a Total expenses just over £100 p a Premium £650 Ill health reason for sale

4 PARTNERSHIP —In a well populated pleasant South Eastern suburb within ten miles of London the half share of an old established mixed class Practice is for disposal owing to the retirement of the junior partner Held by the remaining partner 30 years Cash receipts averaging £2 765 p a including panel of 1 800 and appts worth £150 Very little midwifery Pleasant semi detached corner house with ample accommodation Garden Price leasehold (over 900 years at ground rent of £7 p a), £1 050 Premium 2 years purchase Scottish graduate preferred

5 NORTH EAST COAST —FAVOURITE TOWN —Old established good mixed general Practice offering considerable scope for increase Gross cash receipts for the past twelve months approximately £1 900 Selected panel of 100 Fees 5/ to 7/6 Very little midwifery Well situated house with 3 reception 5 to 6 bedrooms etc and separate professional rooms Electric light Garage Price £2 500 large part on mortgage Good opportunity for Eye work and Ear Nose and Throat work if desired Sport of all kinds and excellent schools Premium £2 800

6 MANCHESTER —Old established middle and working class PRACTICE averaging about £1 300 p a including panel of nearly 1 800 Visits from 3/6 Moderate expenses Suitable house with 3 bed rooms and 3 good sized attics etc Price for freehold £1 150 Premium 1½ years purchase

7 MANCHESTER —Old established middle and working class PRACTICE producing for the last twelve months about £650 including panel of 790 Fees from 3/6 Convenient house with 2 reception 4 to 5 bedrooms bathroom, etc Rent on lease £60 Premium £950, to include furniture

8 LADY DOCTORS PRACTICE —MIDLANDS —Suburb of good town Practice has been established over five years and is situated in a growing district with scope for increase Gross cash receipts over £700 p a including panel of 240 and appts Very nice house with attractive garden Can be rented or bought Premium 1½ years purchase or near offer

9 LONDON NORTH WEST — Middle class PRACTICE, in new and developing district producing last year £400 and this year at the rate of about £600 Panel of 230 Fees 2/6 and 3/6 visits from 5/ Six roomed house with bathroom electric light Garage Garden Price for freehold £1 000 £850 on mortgage Prem £650

10 LONDON SOUTH WEST —Old established middle and working class PRACTICE producing about £1 100 p a including panel of about 1 150 Visits 3/6 to 5/ Suitable corner house with 2 reception 4 bedrooms bathroom and separate professional accommodation Can be rented on lease Premium £1 750 Easily worked, and offering very good scope for increase

11 CENTRAL LONDON —Middle and better class PRACTICE averaging for the last two years about £500 p a including small panel of 180 Fees 3/6 to 21/ Professional accommodation can be rented at £200 p a Premium £300 to include furniture, drugs, instruments etc

12 NORTH LONDON —Middle and working class PRACTICE, in well populated residential district, averaging about £1 300 p a Panel of about 1 300 Appts consist of Medical Officer to two Missions and these will only transfer to a suitable successor of evangelical principles House can be rented also Branch Surgery

13 SOUTH WEST OF ENGLAND —In a thriving and pleasant seaport town with beautiful surrounding country a well established increasing PRACTICE worth last year over £1 100 including panel producing £286 and appts £200 Visits 3/6 to 21/ Midwifery practically refused Good house in excellent position with ample accommodation small garden and garage Price freehold £2 100 or would be let on lease at £127 p a Premium £2 000 or near offer

14 LANCASHIRE —LARGE TOWN —Old established chiefly working class PRACTICE averaging for the last three years nearly £1 900 Panel of 2 950 Advice and medicine from 3/6 Surgery can be rented at £55 p a Premium £3 000 or near offer

15 MIDDLESEX —ASSISTANTSHIP, with view to Partnership offered in a large mixed general Practice after a preliminary period of six months Ingoing partner must be English and experienced.

16 SOUTH EAST LONDON —Good middle and working-class PRACTICE producing for twelve months nearly £950 Panel of 986. Suitable house with 2 reception 4 to 5 bedrooms etc Rent on lease £70 p a Premium to include drugs etc, and surgery fittings and furniture £1 150

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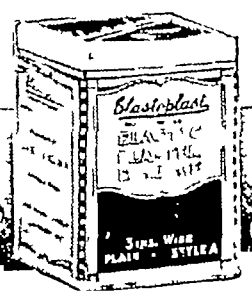

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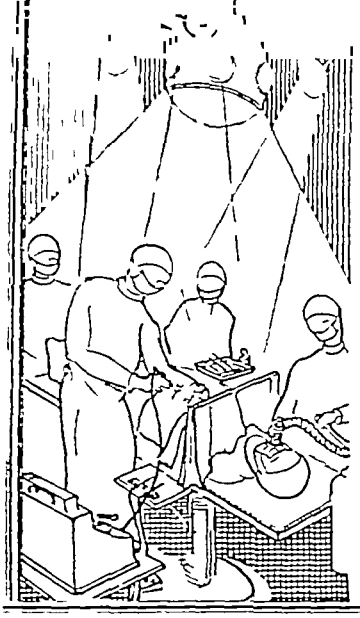

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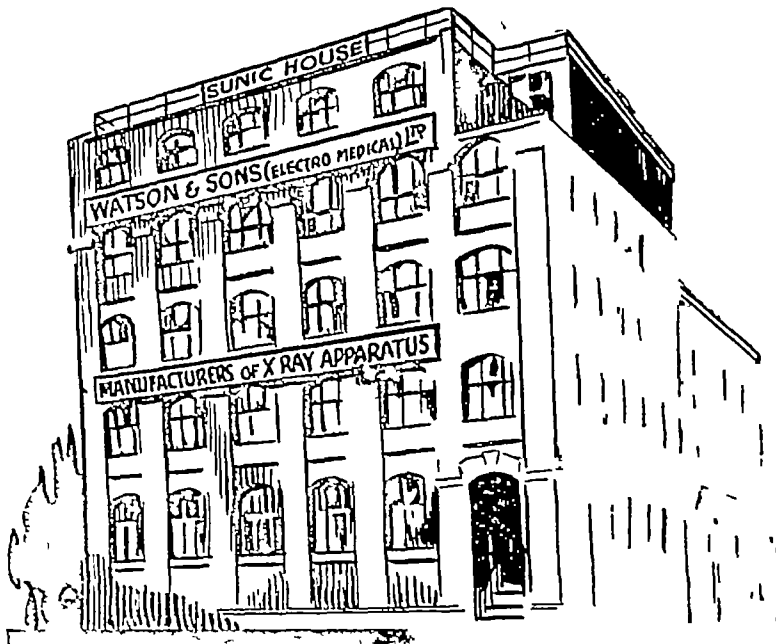

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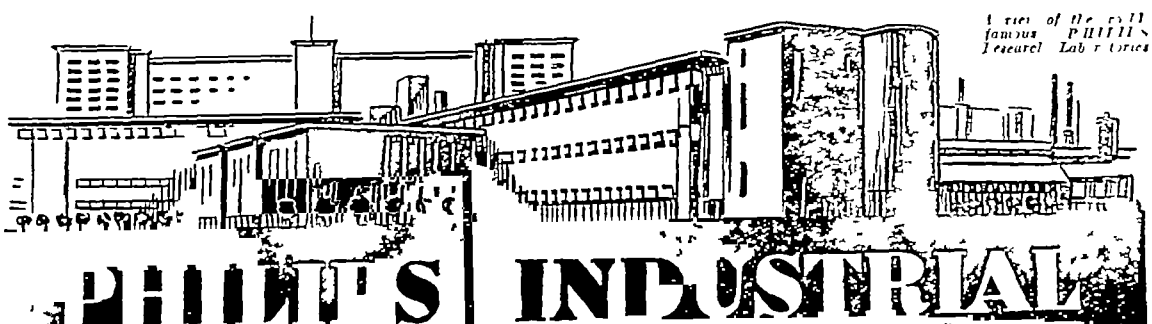

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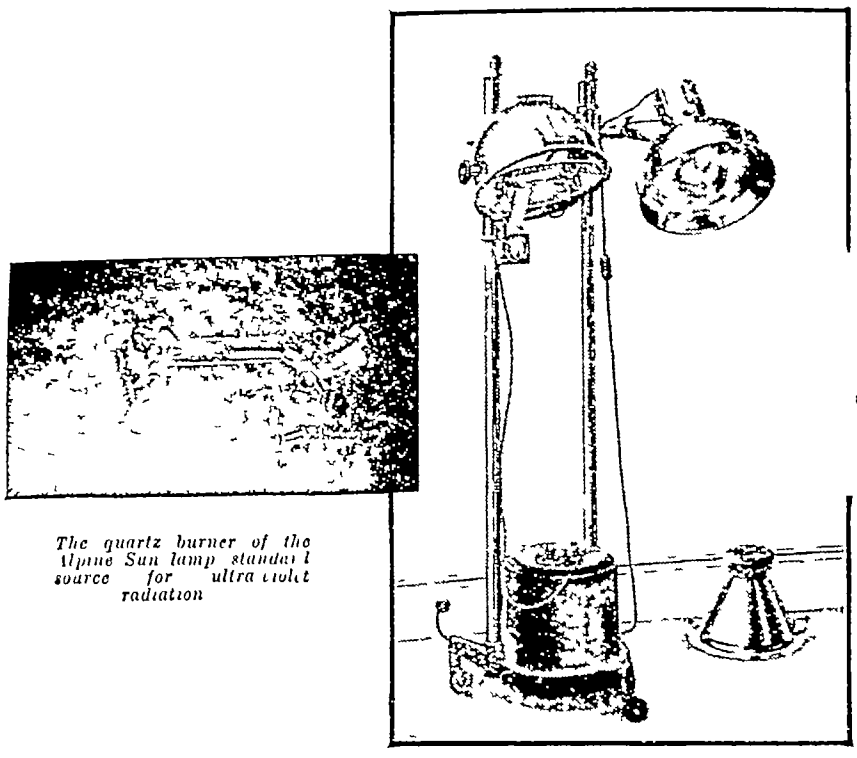

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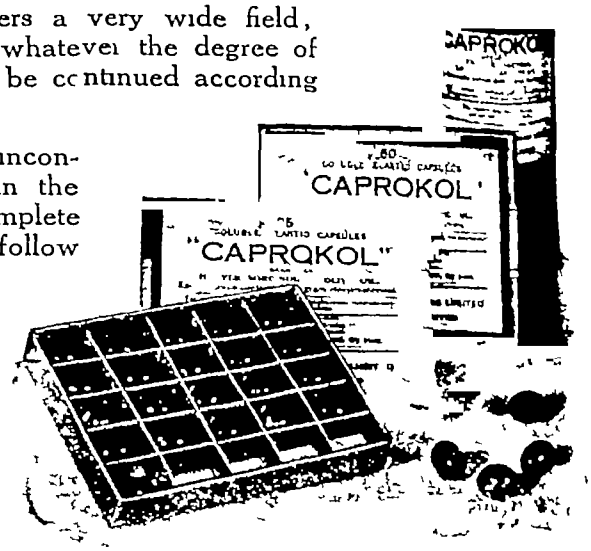

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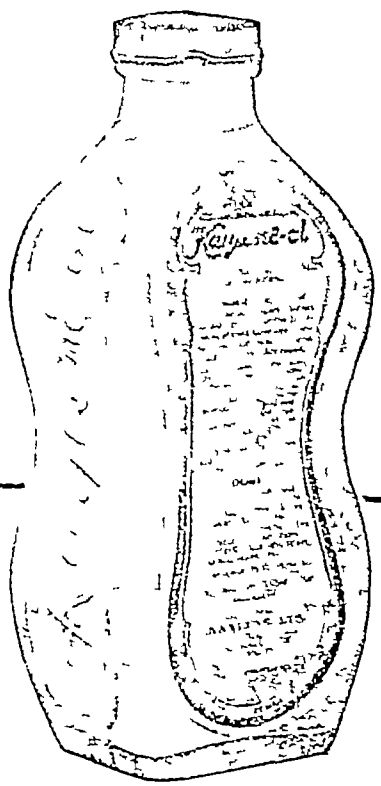

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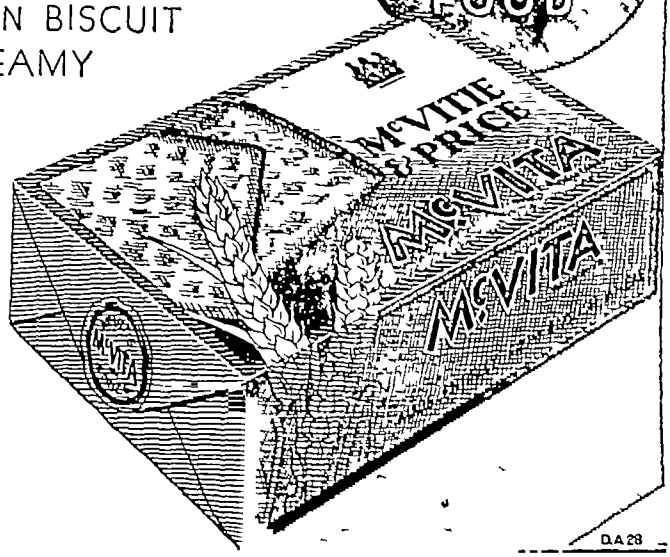

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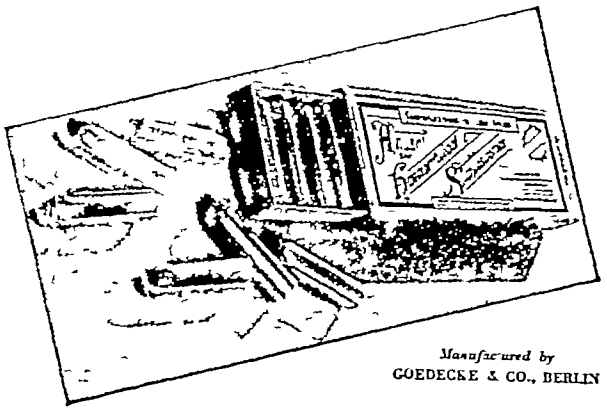

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M 230

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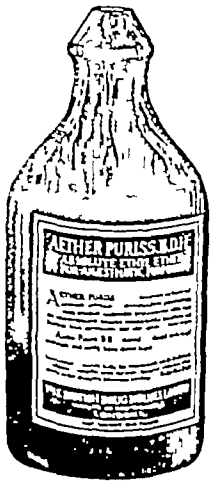

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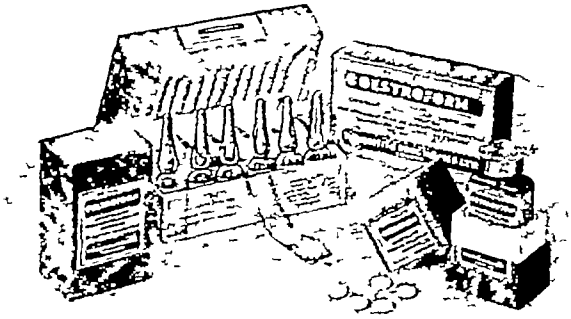

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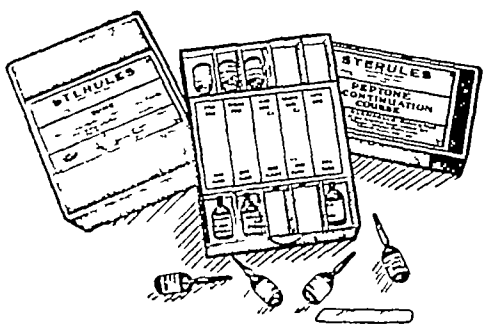

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Lancet April 11th, 1931 p 805 *Leaflet on application*

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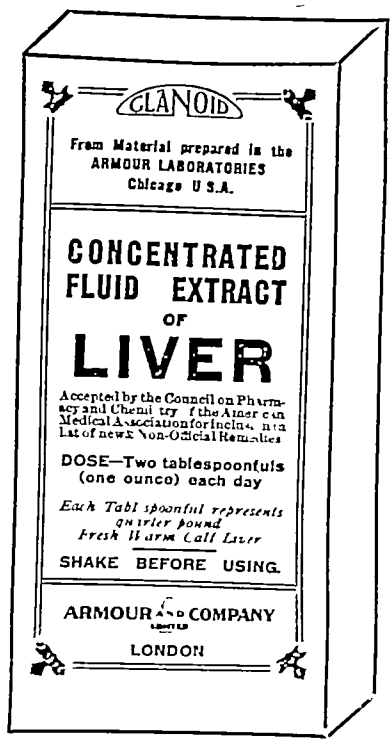

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is the most potent concentrate of Vitamin A so far marketed, having a Blue Value of 2000, i e 200 times that of a good cod liver oil It has been perfected after many years of research in the Biological Laboratories of Lever Brothers Limited

Used in a comprehensive series of tests under the auspices of the Medical Research Council (Annual Report 1929/30), Essogen (Lever's Preparation Y) is now offered to the medical profession as a well authenticated and accurately standardised preparation of the anti-infective Vitamin A

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BECAUSE THEY CONTAIN A BRIGHT CLEAR SOLUTION OF SODIUM MORRHUATE (THE RESULT OF A SPECIAL PROCESS OF MANUFACTURE) WHICH HAS A HIGH IODINE VALUE AND DOES NOT CRYSTALLISE ON KEEPING

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"Eucortone"

(Extract of Suprarenal Cortex)

In the treatment of

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Efficacy established by biological tests and clinical use

(*Journal of Physiology*, June 6, 1931 *Proc. Physiol Soc.* May 2, pp 4, 5, and 9)

"Eucortone" is prepared by the method of Swingle and Pfiffner, and is highly successful in the treatment of Addison's Disease Particularly striking is the rapid restoration of appetite, weight, strength, and feeling of well-being Biological tests and clinical use show that "Eucortone" contains the long-sought cortical hormone in an active state and is free from adrenal n activity The extract contains no irritant or toxic substance, and is sterile

1 c cm is equivalent to 30 grams of cortex In rubber capped bottles of 25 c cm

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Digitalin Granules "A. & H."

gr $\frac{1}{240}$ ($\frac{1}{4}$ mg)

gr. $\frac{1}{600}$ ($\frac{1}{10}$ mg.)

Physiologically Standardized

Digitalin Granules, "A & H," a British preparation, consist of the *Digitaline cristallisée* of the French Pharmacopœia This substance is the most active principle of digitalis leaves, and, because of its reputation for uniform activity, it has long been popular, particularly on the Continent Its use is recommended by high authority in cases where galenical preparations of digitalis have failed

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In tubes, containing 40 granules, 2/6 each
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Baby Ryan has won 2 silver cups, 1 silver medal and 10 other prizes. He is typical of thousands of fine children who have been weaned on Robinson's 'Patent' Groats and milk

The weaning diet of infants is all-important. From the age of six months, the delicate digestive organs must be educated to the task of digesting easily and properly the solids which ultimately become the staple diet For this purpose Robinson's 'Patent' Groats and milk is ideally suitable It is easily assimilated and contributes materially to the development of bone and muscle The slightly laxative properties of the Groats counteract any constipating tendencies of the milk. Robinson's 'Patent' Groats also supplies carbohydrate in a form which does not ferment as do the ordinary sugars—a factor of importance in the prevention of diarrhoea and vomiting in children

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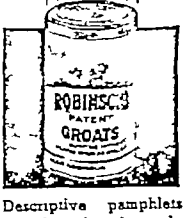

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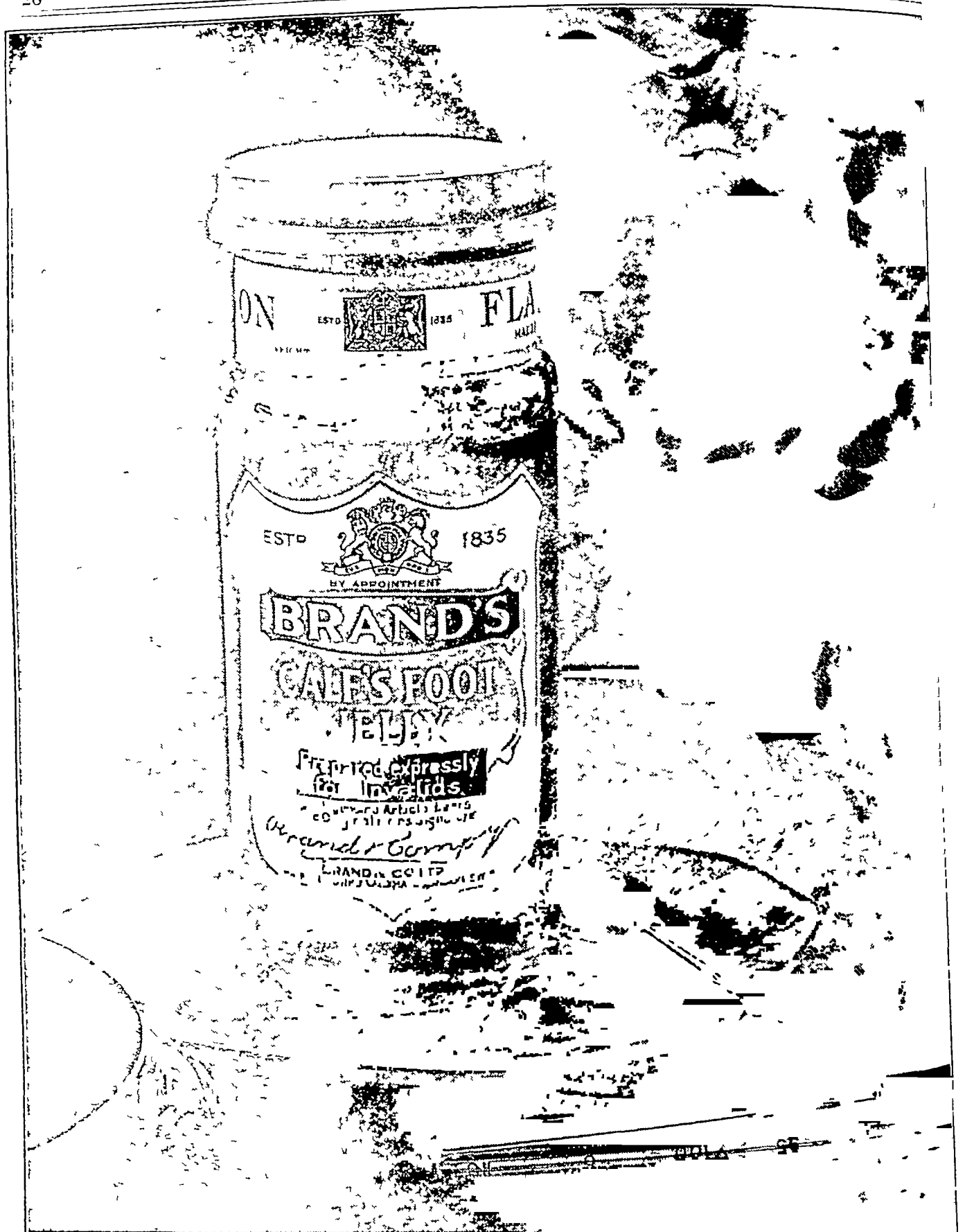

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EVEN human milk does not invariably contain "the alphabet of vitamins" in sufficient quantity, it is well known that cases of scurvy occur in breast-fed infants In their content of vitamin C neither breast milk nor cow's milk is satisfactory.

Anti-scorbutic vitamin C in adequate quantity is essential to infant health This is the least stable of the vitamins it is readily destroyed by heat and oxidation. The nursing mother may provide a sufficient supply in her milk, but broadly, all infants, whether breast-fed or hand-fed, require to be given daily doses of fruit juice rich in vitamin C.

Exact present-day knowledge of deficiency diseases and their causes has clarified the position in regard to scurvy It is sufficient to say that all infants, whether nursed or brought up on the "Allenburys" Modified Milk Foods, require additional vitamin C.

This announcement regarding the 'Allenburys' Foods is No. 5 of a series which will be continued.

(Aesculapius)

MASSIVE IRON THERAPY

It has recently been shown that certain types of anaemia respond to iron, when administered in very large doses only.

COLLIRON

This is a most satisfactory form of iron for oral administration, especially where large doses are required It is a colloidal iron preparation in palatable form, containing 10 per cent. metallic iron

Issued in—

8-oz bottle	16 oz bottle	80 oz. bottle
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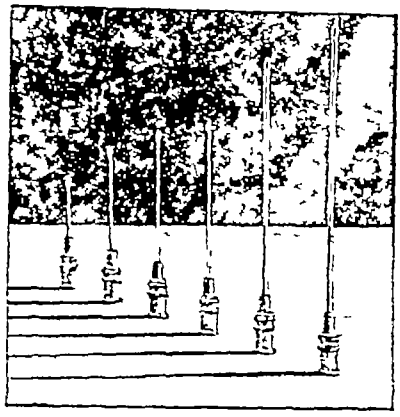

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Non-corrosive—Resist action of sterilising agents, alkalis, etc

Non-clogging—Surface of lumen is rendered non-corrosive

Exceptionally sharp—Due to absence of plating

Correct temper—Ensures durability

Portable—Packed in metal tubes

Four examples from the wide range of Needles available

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No 218 25 mm S W G 25 6*d each*

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No 213 34 mm S W G 22 7*d each*

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London Prices to the Medical Profession

S W G means Standard Wire Gauge

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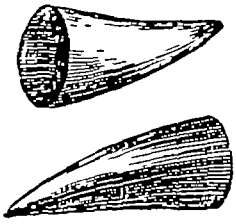
O O O O O

CUPPING HORNS USED BY NATIVE RACES IN RELIGIO-MEDICAL TREATMENT.—Bleeding is practised by many aboriginals with the object of drawing out the ghost or demon causing the sickness. A vein is opened or cupping horns, such as those here depicted from Africa, are used.



For headache, the part above the pain is shaved and washed and a number of scratches or incisions are made. The medicine man applies the cup, which generally consists of the tip of a cow's horn perforated at the apex, and sucks out the air. Removing it when he thinks sufficient blood has been withdrawn, he shows the awed patient some foreign body, asserting that this has been extracted from his head with the blood. For coughing, they cup the lungs from the back, and for pleurisy from the side.

Date: Present day

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The debilitated patient and the athlete . . . .

Even these extremes meet in their need for (a) immediately accessible energy, i e glucose, (b) elements to nourish and control their nerve cells and reflexes, i e calcium and phosphorus, (c) vitamin D to ensure the assimilation of these elements

Glucose-D is richly supplied with all these components Whenever glucose is prescribed—whether as a therapeutic agent or as a product for everyday use, as a remedy for acidosis or a source of nourishment in fevers, as additional energy during periods of physical and mental strain or a "nutrient tonic" for debilitated adults and children—

Glucose-D, the reinforced calcium vitamin glucose, is the preparation of choice **1 lb tins—1/9 7 lb tins—10/6**

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New . . . vitamins A and D EMULSION

This NEW preparation is a delicious creamy emulsion of the now well-established Adexolin Liquid It contains the vitamins A and D equivalent of its own volume of high-grade cod-liver oil† and calcium lactate in the proportion of seven and a half grains to each fluid ounce Its form and flavour will appeal to the most debilitated and fastidious child or adult

Adexolin Emulsion is specially recommended for run-down, under-nourished patients, many of whom cannot take preparations of cod-liver oil—particularly in the warm months of the year In this product the technical problems of preparing a pleasant emulsion of vitamins A and D of guaranteed content are solved for the first time

Adexolin Emulsion is invaluable in convalescence—for infants, children and adults The combination of vitamins safeguards the patient against infection and acts at the same time as a powerful tonic

8 oz bottles — 2/6 4 oz bottles — 1/6

USUAL PROFESSIONAL DISCOUNT

Each fluid ounce of Adexolin Emulsion contains 56 000 units of vitamin A and 2,800 international units of vitamin D

ADEXOLIN EMULSION

GLAXO LABORATORIES, 56, OSNABURGH STREET, LONDON, N W 1

GL20

Observations
on
NUTRITION IN RELATION TO ANAEMIA

BY

L S P DAVIDSON B A M D F R C P Ed
H W FULLERTON M A M B Ch B
DEPARTMENT OF MEDICINE UNIVERSITY OF ABERDEEN

JAMES W HOWIE M B Ch B
JOHN M CROLL M B Ch B
DEPARTMENT OF BACTERIOLOGY UNIVERSITY OF ABERDEEN

J B ORR *D S O M C* M A D Sc M D F R S
W GODDEN B Sc A R C S F I C
ROWETT RESEARCH INSTITUTE ABERDEEN

Recent advances in haematology clearly indicate that nutrition may play an important part in the production of anaemia. The evidence on which this statement is based is obtained from experimental work on animals and from clinical investigations in human beings. Thus Waddell, Hart, Steenbock and Elvehjem[1] have shown that when rats are fed for some weeks on milk alone a hypochromic anaemia invariably develops while the rate of growth of the animals is seriously reduced. So constant is this effect that anaemia produced in this way is regularly used for the assay of therapeutic agents. That the anaemia is nutritional in origin is shown by the fact that the addition of iron and traces of copper to the diet will prevent the occurrence of the anaemia or if it is already present will rapidly effect a cure. A similar type of hypochromic anaemia has been shown by Helen Mackay[2] to be present in many infants of the poorer classes who are fed exclusively and over prolonged periods on cow's milk. Prevention and cure are readily obtained by the addition to the diet of a few grains of iron and ammonium citrate daily. While it is admitted therefore that milk is probably the nearest approach to a complete food that we have, it is certainly deficient in its blood building qualities.

Evidence on the importance of iron in relation to anaemia and general health has also been obtained in the case of the larger domestic animals. McGowan and Crichton[3] found that unless given access to iron-rich food sucking pigs develop anaemia which can be cured or prevented by iron salts. This condition appears to be common. Professor Knox of Guelph, Canada, in a recent personal communication to one of us states that in Ontario the death rate of young pigs was very high until iron feeding was instituted since when the mortality has been reduced to normal. A condition of acute anaemia also occurs in various parts of the world in cattle grazing on a special type of pasture which according to Aston[4] is poor in iron. This anaemia can also be prevented or cured by iron salts (Aston[4] Orr and others[5]). It is well recognized that after famines especially in tropical countries anaemia, defective growth, poor resistance to infection etc. are widespread. A similar condition of affairs was observed in Central Europe after the war. In view of the gross quantitative and qualitative deficiencies in a diet during times of famine it would be difficult to allocate these ill effects to individual defects in the dietary.

These anaemias may be classified as direct deficiency diseases resulting from a definite deficit of iron in the dietary but in human beings recent researches indicate that some very important types of anaemia should be classed as *conditioned* or *virtual* deficiency diseases. Pernicious anaemia is probably the best example. Minot and Murphy[6] have shown that this anaemia develops as a result of the deficiency of a substance (the specific anti-anaemic factor) which is found in liver and which has been shown to be necessary for normal blood formation. Castle and others have shown that this factor is elaborated in the stomach as the result of an interaction of an enzyme-like substance (the intrinsic factor) secreted by the stomach with the protein of foodstuffs (the extrinsic factor). If the intrinsic factor is totally lacking normal or even excessive quantities of protein are of no value in preventing the development of anaemia. For this reason pernicious anaemia is classified as a conditioned deficiency disease. Simple achlorhydric anaemia[7] in which the blood picture is of the hypochromic type indicating iron deficiency may be similarly classified. The cause is attributed to defective iron absorption from the gut consequent on alteration of the hydrogen ion content secondary to achlorhydria. This form of anaemia develops on a diet with a normal iron content and continues until large amounts of iron are given therapeutically. The deficiency therefore is a virtual one.

From what has been said it is clear that anaemia can be occasioned either directly or indirectly by dietary deficiency and no modern classification of the anaemias would be acceptable which did not attempt to define this aspect. In a recent paper on the classification and treatment of anaemia[8] nutrition as an aetiological factor has been fully discussed.

A problem of immediate and practical importance however still remains to be considered. The world crisis with its dislocation of trade and consequent widespread unemployment has produced a marked lowering of the standard of living of the working classes. In this country thanks to unemployment funds and organized relief no person need approach the stage of starvation. Nevertheless the unemployed man with a family must be dangerously near the lowest economic level at which satisfactory growth and health can be maintained. The problem of the relation of this lowered standard of living to the health of the future generation has assumed the greatest importance. In this paper however it is proposed to deal solely with one aspect—namely the relation of nutrition to anaemia. An investigation was undertaken with the object of ascertaining whether anaemia was prevalent among the poor and if so whether (1) its origin lay primarily in dietary deficiency (2) such factors as menstruation pregnancy and infection etc. were of major importance (3) the anaemia responded successfully to iron therapy and also to ascertain the measures to be adopted for its prevention.

INCIDENCE OF ANAEMIA

Through the courtesy of the directors of the Aberdeen Dispensary which is attended by those unable to pay for private medical attendance and who are not qualified to enrol under the panel system an opportunity was given of examining a large number of poor persons under suitable conditions and with the willing assistance of the medical officers of the dispensary. The majority of the cases investigated belonged to families in which the wage earner was unemployed.

Methods.—A clinical history was obtained from those who volunteered to have a blood examination. The great majority of these were apparently healthy individuals and had presented themselves at the institution not for medical attention but as escorts to their children or friends for whom advice was sought. In the case of women detailed information concerning menstruation pregnancies and parturition was recorded. Five hundred

persons were examined, of whom 455 were women and forty five men In addition 100 children from families in the same class of the community were examined, the children being taken equally from families in which the mothers were anaemic and non anaemic Lastly, 650 children were investigated by Dr Sutherland of Peterhead as part of an experiment which is being undertaken by him in conjunction with the department of medicine with reference to vitamin A as a prophylactic agent in regard to infection While no blood tests were performed, Dr Sutherland carefully examined on two occasions the skin and mucous membranes of every child for clinical evidence of anaemia

Haemoglobinometer and Standard — The standard haemoglobinometer used was the Haldane carboxyhaemoglobinometer, calibrated so that a reading of 100 per cent was equivalent to an oxygen carrying capacity of 18 5 per cent or 13 8 grams haemoglobin per 100 c cm of blood This is the standard used by Price-Jones in his observations on normal people The instrument was carefully examined by him and found to give accurate readings when compared with those obtained by the van Slyke method The normal figures obtained by Price-Jones by this method of haemoglobin estimation were, in 100 men, 105 per cent and in a similar number of women, 95 per cent These figures were therefore accepted as standards of normality

Arrangement of Results —Cases with haemoglobin values of 85 per cent or over were placed in Group I, those with 70 to 84 per cent in Group II, which may be held to constitute mild anaemia cases, and those under 70 per cent in Group III In this last group many severe cases of anaemia were present and members were advised to attend Professor Davidson's department of the Aberdeen Royal Infirmary, where they underwent full physical and blood examination, as well as gastric analysis by fractional test meals whenever possible Additional data were thus made available concerning them

TABLE I*

	Total	Group I	Group II	Group III
A Children	100	98%	2%	0
	650	99%	1% (approx)	0
B Adult males	45	88 9%	6 7%	4 4%
C Adult females	455	53 2%	33 0%	13 8%

* All cases of anaemia found in this investigation were of the microcytic hypochromic type

† *Degrees of Anaemia in Decimal Ranges of Haemoglobin*

Haemoglobin	85 and over	84-75	74-65	64-55	54-45	44-35	34-25	24-15	Total
No of cases	242	118	45	19	14	9	7	1	455

Of the forty five adult males only five were found to be anaemic Three had haemoglobin levels between 70 and 85 per cent while two were below 70 per cent At the time of blood investigation one was suffering from a bleeding duodenal ulcer, another from a recent haemoptysis while a third was 69 years old with arteriosclerosis and chronic bronchitis Of the 455 adult females mainly between the ages of 18 and 55 213 (46 8 per cent) had haemoglobin values below 85 per cent and of these sixty three (13 8 per cent) were below 70 per cent haemoglobin Only two of the 100 children from poor families were found to have a haemoglobin percentage below 85, and of the 650 children in Peterhead only six were found to be anaemic in the first examination and eight in the second

This part of the investigation indicates that anaemia is relatively uncommon in children between the ages of 5 and 14 years and in adult males, but that it is very prevalent among women of child bearing age of the poorer classes, since it was found to be present in nearly half the cases examined

DIETARY SURVEY

An attempt was then made to ascertain whether this incidence of anaemia could be correlated with the iron content of the diet Information was collected concerning the food consumption over a period of fifteen days of forty-nine families in Aberdeen of which twenty five mothers were anaemic and twenty-four had a normal blood level In addition, a similar investigation among sixty six families from the poorest classes in Peterhead was undertaken, it was from these latter that a considerable proportion of the 650 children mentioned above was drawn The method used was similar to that employed by Orr and Clark,[10] except that the period was fifteen days instead of one week In the calculations no allowance was made for waste in cooking The figures given in the table, therefore, show the amount of food entering the home, and not the amount actually consumed In accordance with the estimate of the Food Committee of the Royal Society[11] of allowance for waste, 10 per cent should be deducted from the figures given below

Cathcart's[12] standards of relative food requirements were used in computing the man value of each family and no account was taken of occupation In this method each individual of the family is assessed according to age and sex in terms of one man as a unit, thus a child of 2 is reckoned as 0 4 of a man The average food consumption per man value per day for iron and for other important constituents, as well as the income and milk consumption, are shown in the following table For the sake of comparison the results obtained in the Aberdeen and Peterhead surveys during 1926–7 are included

TABLE II —*Average Consumption per Man Value per Day*

	Aberdeen			Peterhead	
	Present Survey		Previous Survey	Present Survey	Previous Survey
	Anaemic	Non Anaemic			
Calories	2584 0	2375 0	3531 0	2 29 0	4120 0
Protein (grams)	84 1	75 4	107 9	80 5	125 1
Carbohydrate (grams)	395 3	377 6	561 0	431 9	685 7
Fat (grams)	65 8	55 7	84 8	55 9	85 2
Calcium (grams)	0 712	0 703	0 97	0 683	1 19
Phosphorus (grams)	1 313	1 197	1 75	1 252	2 11
Iron (grams)	0 0114	0 0100	0 015	0 0115	0 020
Copper (milligrams)	3 21	2 88	—	3 43	—
Milk per man value per day (pint)	0 51	0 44	0 57	0 36	0 56
Income (shillings)	1 49	1 41	1 80	1 18	1 52

It is interesting to note that the intake of all the constituents is lower in the present investigation than it was in the corresponding dietaries surveyed in 1926–7 With the increase in industrial depression since 1926 the dietary of the poorer classes of the community has become

ferentely worse The lack of employment as indicated by the lowering of the income per man value has resulted in a lower purchasing power which is reflected in the food intake In both towns there is a fall of about 30 per cent in the average total income per man value and a fall of 26 to 30 per cent in each of the individual constituents of the diet If the income were assessed as per person and not as per man value the figure would be even lower and for Aberdeen would average 11 shillings per day While it is true that there has been a fall in the cost of food it is apparent that this has not been sufficient to counterbalance the fall in income This is probably due to the fact that expenditure on other items such as rent clothing fuel and amusement has not fallen proportionately The average diet of the families with cases of anaemia is very similar to that of families with no cases of anaemia The differences appearing in the above table between the two classes can be regarded as within the limits of experimental error in this method of survey although it is interesting to note that on the whole the anaemic families were taking a slightly better dietary than the non anaemic Both diets are poor in caloric intake and each individual constituent being in most cases below or on the borderline of the following generally accepted standards calories 3 000 to 3 500 protein 100 grams calcium (Sherman) 0 68 gram phosphorus (Sherman[13]) 1 32 grams iron 0 015 gram per man value per day

It is obviously impossible to assess the vitamin content with any degree of accuracy It must however have been comparatively low since the bulk of the dietary in nearly all cases consisted of white bread and other wheat flour foods potatoes and sugar with some meat and fish The intake of fresh fruit green vegetables and milk was low the consumption of milk per man value being barely half a pint per day

More detailed information with regard to the diet in the anaemic and non anaemic families of the Aberdeen survey is given in the following distribution tables Table III gives the energy yielding constituents and Table IV the mineral content The results for the Peterhead survey are not set out in this manner as they show a very similar distribution and the figures would accordingly be redundant

TABLE III

Calories	Anaemic	Non anaemic	Protein	Anaemic	Non anaemic	Carbohydrate	Anaemic	Non anaemic	Fat	Anaemic	Non anaemic
			grams			grams			grams		
1 500–1 750	3	2	40–50	—	1						
1 750–2,000	1	5	50–60	2	6	250–300	3	5			
2,000 2,250	4	6	60–70	3	4	300–350	5	8	20– 0	1	1
2,250–2,500	3	2	70–80	8	3	350–400	7	3	30–40	—	3
2,5 0-2 750	7	3	80–90	3	5	400–450	5	1	40–50	4	7
2,750–3 000	3	4	90 100	5	3	450–500	3	4	50–60	5	6
3 000–3,250	2	—	100–110	2	1	500–550	1	2	60–70	5	4
3,250 3,500	2	—	110–120	1	—	550–600	—	—	70–80	4	1
3,500 3 750	—	1	120 130	—	1	600–550	1	1	80–90	2	—
3,750–4 000	—	1	130–140	1	—				90–100	2	—
4 000–4 250	1	—							100–110	1	1
									110–120	1	—
									120–1.0	—	1
	25	24		25	24		25	24		25	24

TABLE IV

Calcium	Anaemic	Non anaemic	Phosphorus	Anaemic	Non anaemic	Iron	Anaemic	Non anaemic	Copper	Anaemic	Non anaemic
grams			grams			mgs.			mgs.		
						5.– 6.0	0	4			
						6.0– 7.5	4	4			
			0 600–0 750	—	3	7.5– 9.0	3	2			
			0 750 0 900	2	4	9 0–10.5	5	6			
0 150–0.300	—	2	0 900–1.050	4	2	10.5–12.0	4	2			
0..00–0 450	4	2	1.050–1.200	4	4	12.0–13.5	2	2	1.5–2 0	1	3
0 450–0 600	7	6	1.200–1.350	6	3	13.5–15 0	2	2	2.0–2.5	3	8
0 600–0 750	6	5	1.3.0–1.500	4	1	15.0–16 5	1	—	2.5–3.0	8	3
0 750–0 900	1	4	1.500–1 650	—	5	16.5–18.0	3	1	3.0 3.5	5	4
0 900–1 050	4	1	1.650–1 800	1	1	18.0 19.5	—	—	3.5–4 0	6	4
1 0.0 1.200	1	2	1 800–1.950	2	—	19.5–21.0	—	—	4.0–4.5	1	—
1.200–1.3.0	1	2	1 9.0–2.100	1	1	21.0–22.5	1	—	4.5–5 0	—	2
1.350–1..00	—	—	2.100–2.2.0	—	—	22.5–23.2	—	1	5.0 5.5	—	—
1.500–1 650	1	—	2.250–2.400	1	—				5.5–6.0	—	—
									6.0–6.5	1	—
	25	24		25	24		25	24		25	24

An examination of the tables shows that there is no correlation between the incidence of anaemia and any of the dietary constituents In particular it should be noted that there is no correlation between the iron content of the diet and the haemoglobin content of the blood The lowest iron intake between 5 and 6 mg per man value per day was found in four families in which there was no anaemia One family of five had normal haemoglobin values with a daily intake of less than 6 mg From experimental data on iron elimination it has been suggested that 15 mg per day should be taken as a safe standard of the requirement of iron It is obvious from the results of the present investigation that a normal blood picture can be maintained at a much lower level

Although there is no information in the literature as to the copper requirements of human beings it is of interest in view of the possible connexion between copper supply and iron metabolism that the copper intake of the two groups of the Aberdeen families and of the Peterhead families was at approximately the same level These results show that on dietaries of this type the copper intake averages about 3 mg per man value per day and a normal blood level may be maintained on a lower intake than this

Importance of Factors other than Dietary in Causation of Anaemia

The distribution of the 455 women examined in the dispensary is recorded in three groups in Table I The different groups will now be considered in regard to the question of disability This term is intended to indicate possible factors other than diet in the causation of the anaemia

Menorrhagia —This disability is based entirely on the history elicited from the case An attempt to differentiate between slight moderate and heavy menorrhagia was found to be so arbitrary as to be of little value Nevertheless it appeared that heavy menorrhagia was most frequent in Group III and least frequent in Group I

Pregnancy and Childbirth—A patient was considered to be associated with this "disability" when she was pregnant at the time of examination or had had a child or miscarriage within a year previous to examination

"*Infection*"—This term is taken to indicate a heterogeneous group of conditions such as syphilis, bronchitis, pharyngitis, cystitis, pneumonia, tuberculosis, etc For convenience, recent operations, kidney disease, haemorrhage other than uterine, etc, are also included under this heading

It must be pointed out that such symptoms as pallor, weakness and breathlessness on exertion, which might be due to anaemia, are not included under the term "disability" Practically all the cases in Group III complained of such symptoms on being questioned The role of achlorhydria as a causal factor is considered separately The relation of "disability" to the three groups is summarized in Table V From a study of Table V it

TABLE V

Group	Haemoglobin per cent	Number of Cases	History of Disability	*Menorrhagia	Pregnancy or Childbirth		Infection	Average Number of Pregnancies	Average Weekly Income per Person
					Recent	Present			
I	80 and over	242	50 (20 7%)	21	10	3	16	4 6	7s 8¾d
II	70-84	150	84 (56%)	31	18	10	25	4 9	7s 10d
III	Less than 70	63	47 (74 6%)	26	10	6	5	5 9	7s 1½d

* In Group I five of the thirty four cases of menorrhagia and pregnancy were associated with infection in addition in Group II the figures were five out of fifty nine and in Group III four out of forty two

will be seen that the proportion of disabilities is lowest in Group I (20 7 per cent) and highest in Group III (74 6 per cent) Menorrhagia and pregnancy or recent childbirth are the factors which appear to bear the most direct relation to the degree of anaemia Fourteen per cent of cases in Group I are associated with these conditions 39 per cent in Group II, and 67 per cent in Group III Since 'infection' is a factor common to children and adult males as well as females, and since it is less frequent in cases of severe anaemia than it is in cases having no anaemia or only a mild form, we are of opinion that the role of "infection" in the production of the anaemia is only of subsidiary importance

ACHLORHYDRIA

In addition to the disabilities discussed above, the role of gastric secretion (in relation to anaemia) was investigated whenever possible Test meals were performed in twenty eight cases belonging to Group III Of these, twenty five showed achlorhydria in the fasting-juice, and, out of these twenty five seventeen maintained achlorhydria in response to the gruel, including thirteen which remained achlorhydric even after histamine injection The remaining eight of these twenty-five cases showed definite hypo-acidity Of the other three cases two showed a normal curve and one had hyperacidity It is interesting to note that these last three gave histories of recent blood loss One had had severe menorrhagia with periods lasting for fourteen days, another had a history of menorrhagia and had had a child two months previously, while the third dated all symptoms of anaemia from excessive blood loss at the birth of a child two weeks previously As a control experiment test meals were performed on nine women who had a haemoglobin value of not less than 80 per cent None of these cases gave a history suggestive of a gastric lesion One case showed complete achlorhydria even after histamine injection The remaining eight responded to gruel the lowest maximum figure for free hydrochloric acid being 16

It is thus seen that over 89 per cent of women of the anaemic group on whom gastric analysis was performed had achlorhydria or hypochlorhydria, as compared with 11 per cent of non-anaemic women If defective gastric secretion is considered along with menorrhagia, pregnancy, and "infection" under the term "disability" over 90 per cent of the women in the severely anaemic group give a history of "disability" as opposed to 20 7 per cent in the non-anaemic group The importance of the role of achlorhydria in the production of hypochromic anaemia is now generally admitted, but it is a moot point, and one which we do not propose to discuss in this paper whether the achlorhydria (through its effect in decreasing iron absorption) leads to anaemia, or whether anaemia by itself causes achlorhydria consequent on the poor blood supply to the gastric glands

RESULTS OF ADMINISTRATION OF IRON SALTS TO ANAEMIC SUBJECTS

Table VI shows the results obtained by administration in twenty cases of Group III of 30 grains of iron and ammonium citrate three times a day (For a full report of fifty cases see *Proceedings of the Royal Society of Medicine*, March 1933)[14]

TABLE VI

	Initial Blood Count		Duration of Treatment in Days	Subsequent Blood Count	
	Haemoglobin %	R B C 10^6 per c mm		Haemoglobin %	R B C 10^6 per c mm.
1	19	2 20	44	80	4 90
2	24	3 13	27	70	4 42
3	31	4 01	60	80	4.88
4	30	3 52	34	65	4 13
5	45	3 87	35	72	5.23
6	45	3 58	40	75	3.83
7	45	2 65	83	92	4 60
8	47	3 00	14	70	4.24
9	30	2.50	96	85	4 31
10	26	3 50	49	70	4.59
11	45	3.52	64	88	4 57
12	55	4 64	28	83	5 05
13	32	3 25	21	85	4 60
14	35	3 13	51	100	5.50
15	32	2 14	50	100	5 02
16	35	3 47	60	92	4 71
17	40	5 09	54	80	4 83
18	38	3 72	16	74	4 15
19	50	3 68	30	76	5 67
20	43	3 57	97	80	5 03

DISCUSSION

The figures generally accepted for the iron content of an average diet are based on the studies made by Sherman of 150 American dietaries The iron content was found to vary from 14 to 20 mg of iron per man value daily From his metabolic studies he concludes that an adult requires from 6 to 16 mg of iron daily McLester[15] rightly points out that this investigation does not take into consideration all contingencies For instance the iron-sparing qualities of calcium are of practical impor-

ince it is definitely known that a normal blood level n be maintained on a diet rich in calcium and moderate iron but that anaemia will occur on the same iron ake if the calcium is reduced Again women need ore iron than men to meet the demands of menstrua on pregnancy and lactation For these reasons it is nerally agreed that the food ingested daily should con in at least 15 mg of iron

The dietary survey of 115 families of the poorest classes Aberdeen and Peterhead indicates that the daily iron ntake is markedly below this figure since an average of 1 mg of iron daily was ingested Nevertheless many ersons were found to be in good health with normal blood vels on a daily intake of iron of 6 7 or 8 mg In hort provided no demands for additional iron were present (such as are discussed in the following paragraph) o person was found to be taking a diet so poor in iron hat an anaemia could be attributed to direct iron defi iency The minimum iron requirement therefore must lie below 6 mg daily The figure is all the more surprising ince the average calcium intake was low so that the bsence of anaemia could not be explained on the grounds f the iron sparing properties of calcium

At this stage then since there appears to be no correla ion between the incidence of anaemia and direct iron leficiency in diet it might be presumed that diet plays ittle or no part in the prevention or production of naemia A consideration of additional information at ur disposal however places the problem in a different light In this investigation the subjects could be divided to two groups (1) 750 children between the ages of and 14 years and forty five adult males (2) 455 adult emales mainly between the ages of 18 and 55 In Group I anaemia was conspicuous by its relative absence while in Group II nearly half the individuals were anaemic It is obvious therefore that some function of womanhood must be the deciding factor in the production of the anaemia and the data we have already discussed makes it abundantly clear that blood loss during menstruation and following pregnancy and the increased demands for iron for the foetus during pregnancy and for the mother during lactation together with defective iron absorption secondary to achlorhydria are the deciding factors in the production of anaemia in women If the iron content of the dietary were adequate to meet these hazards anaemia would be relatively infrequent except where the degree of blood loss was so excessive and continuous that no diet could reasonably be expected to make good the haemoglobin deficiency It appears to us not unreasonable that a higher iron intake in the diet would probably raise the majority of the slightly anaemic women in Group II to normal levels That the anaemia is due to iron deficiency and further that the diet cannot adequately supply the deficiency is abundantly clear from the dramatic effects which are produced by the treatment of these individuals with large doses of iron and ammonium citrate without any alteration in the diet (Vide Table VI)

With regard to the children between the ages of 5 and 14 years it was found that the iron required for haemoglobin formation and growth was adequately met by the daily iron intake in the food The figure therefore for the iron requirements of growing children is much smaller than was formerly believed to be necessary We are unable to express any definite views about the body's reserve stores of iron in children and adult males since increased demands for iron to meet eventualities were seldom seen in these classes in this investigation Information could be obtained only by studying the rate of blood regeneration in persons suffering from anaemia secondary to blood loss such as occurs in peptic ulcer who belonged to groups drawn from the poorest class of the community and from a class having good economic status Similarly for the experiment in women to be complete we should have to compare the blood condition of 500 women of the poorest classes with that of a similar number of women from a better economic level where the iron intake would be approximately 20 mg daily No figures are available but we are unable to believe from our clinical experience that 46 per cent of women in the upper classes between the ages of 18 and 55 are anaemic

In conclusion we may say that dietaries containing from one third to one half the usually accepted iron content will suffice to maintain a normal blood level provided as is usually the case in children and adult males there are no additional demands for haemoglobin In all nutritional studies it is necessary to distinguish minimal from optimal dietaries The latter should be adequate for the maintenance of health and to meet periodic and increased demands consequent on the hazards of life It is certain that for women the dietaries in this investigation were iron-deficient as judged by the high percentage of anaemic persons and by the response of the anaemia to iron administration The iron requirement for women is obviously tidal it corresponds with certain functions of womanhood already discussed and at such times may be very much higher than normal

Lastly certain extremely important aspects of preventive medicine must be considered If the percentage of anaemic women found in Aberdeen is present in the industrial areas of the South (and we believe that anaemia may be even more severe there since economic conditions are worse and the cost of living higher) then the loss of economic efficiency of the working-class mothers of this country must be enormous It is true that most of the women investigated complained of few if any symptoms of ill health but this was due to the fact that they had become accustomed to living subnormal lives for years and had really forgotten the joy of good health They invariably admitted that this was so when after efficient treatment their blood level had been restored to normal It is also certain that anaemic persons are more liable to infection and other forms of illness than persons with a normal blood level as has been shown by the researches of Helen Mackay [2] For the maintenance of health during infancy the natural stores of iron must be adequate since the infant makes his blood from the rich iron deposit in the liver stocked during gestation A liver poor in iron allows anaemia to develop rapidly in an infant on a milk diet On the grounds of economic efficiency and of health the prevention of anaemia in working class women and infants has become a major problem and one which demands immediate attention It is suggested that a glass of milk (half a pint which would supply 0 34 gram of calcium and 0 28 gram of phosphorus) and a penny worth of iron and ammonium citrate without any additional change in the diet of pregnant women of the poorest classes would produce remarkably beneficial results to mother and infant This is at present being investigated in Aberdeen

SUMMARY

1 Anaemia is prevalent among nearly half the women of the poorest classes in Aberdeen but is not common among men or school children

2 The anaemia appears to be mainly due to increased demands for iron as a result of (*a*) frequent pregnancies (*b*) excessive blood loss during menstruation and at parturition

3 This anaemia cannot be directly correlated with the iron content of the diet

4 The dietaries investigated are minimal not optimal since they are incapable of meeting the iron requirements under the conditions referred to above (No 2)

5 The anaemia can be rapidly cured, with marked improvement of general health, by the administration of iron salts

6 The relation of these findings to preventive medicine is discussed

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EXPERIMENTAL SHOCK

WITH SPECIAL REFERENCE TO ANAESTHESIA*

BY

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The problem of why persons subjected to physical trauma should pass into a condition of shock is one which has long been of interest to surgeons Nowadays, indeed, shock rivals sepsis in its importance in surgical operations

During the war the study of the subject received a great deal of attention, and many valuable conclusions were reached, but there still remains, especially on the clinical side, a state of great confusion The present state may, I think be indicated by the fact that the College last year divided one of its valuable prizes between two surgeons whose views on the treatment of so called surgical shock were a direct contradiction one of the other

Now it happens that shock can be produced with great ease in laboratory animals and in the time at my disposal I propose to put forward evidence to you which will emphasize that shock is not a single entity, but may be produced experimentally and clinically from a variety of causes and that any single remedy used without understanding of the case in hand is bound to give most contrary results

DEFINITION OF SHOCK

We may define shock in an animal as the state which results from a fall of arterial blood pressure, which, if severe may lead to death from oxygen want Its onset may, however be preceded by a compensated or even over compensated stage in which the body succeeds in maintaining the blood pressure against the forces which would cause it to fall

From our knowledge of the circulation then we must consider that shock may occur from cardiac failure, from loss of blood, from increased capacity of the circulation—that is from an undue opening up of vessels which are normally closed—or from a reduction of the peripheral resistance to the flow of blood from the arterial system From the point of view of surgery however, it is probably best to group the various experimental procedures under headings which are indicative of the cause In dealing with the detail I shall deliberately omit a large number of minor points, because I feel that if there was a clearer understanding of the principles involved the literature would not be in the confused state that we find it in to-day for I am convinced that much of the excellent clinical literature appears discordant purely because the observers concerned are writing about a variety of different conditions but all under the same title of "surgical shock" There is evidence which indicates that the patient who dies from gross tissue damage such as burning, the patient who dies from minor mechanical injuries, and those who die after prolonged surgical operations may be deaths from distinctly different states I hope you do not think I dwell too much on patients who die—many recover—but there are still thousands who die annually who might be saved if the subject was more systematically studied

SHOCK FROM HAEMORRHAGE

I do not propose to spend much time in discussing this variety of shock, as its cause is obvious I should, however, like to emphasize that many of the mechanisms by which the body attempts to compensate for haemorrhage are nervous and depend on the carriage of afferent impulses to the vasomotor centres, which in turn send out impulses to constrict the spleen and blood vessels generally What is particularly important from a surgical point of view is that, being nervous, these mechanisms can be relatively easily anaesthetized, and the effect of the haemorrhage therefore becomes enhanced, and there is abundant evidence that a low blood pressure, say of 60 mm of mercury, if allowed to persist for half an hour, is liable to bring about permanent changes, which may be fatal Every attempt should therefore be made to restore the blood pressure before administering an anaesthetic

DIRECT ACTION OF TOXINS ON PERIPHERAL VESSELS

Histamine or Toxic Shock—Great attention has, since the war, been focused on this variety of shock since the discovery of the dramatic phenomenon of histamine shock by Dale and Laidlaw By some it has been hailed as the complete solution of the shock problem, but it is only fair to say that the authors themselves have never made this claim On the other hand, no one will deny that toxaemia is a most important factor in shock, and probably the most important factor when the onset of the shock is delayed

The special importance of histamine lies in the fact that it is present in watery extracts of practically all tissues, as it is a simple derivative of the amino-acid histidine, and its effect when injected in minute quantities into the circulation of anaesthetized cats and dogs produces in a few minutes a condition of shock The shock produced is comparable with that variety of shock in man in which the onset of the symptoms may have been delayed and have apparently depended on the absorption of toxins from damaged tissues

The skin has been shown to contain relatively large amounts of histamine or its precursor indeed, there is reason from the work of Lewis to believe that the production of this or a similar substance is a physiological method by which the skin is flushed subsequent to minor injuries The delayed shock of severe burns is probably produced by the absorption of such a substance

Dale and Richards showed that histamine acts by dilating the capillaries, and this has been since confirmed by many others As a result of the capillary dilatation there is a relative insufficiency of blood—the animal is as it were, bleeding into its own capillaries, which have become opened up The state is like that of haemorrhage only the animal bleeds into its own vessels But the

* An Arris and Gale Lecture delivered at the Royal College of Surgeons of England on February 15th, 1933

illaries are not necessarily congested for in becoming ated they apparently become more permeable and the od plasma rapidly passes into the tissues leaving und as shown by many observers a concentrated ood The finding of a concentrated blood clinically is ngly suggestive that the case is one due to capillary ntation

Now we may ask ourselves Does this variety of shock ur clinically? The matter was really settled for us by Shock Committee of the Medical Research Council here is abundant evidence that this is a common rm of shock so common indeed that it has almost n allowed to overshadow the other varieties I can t summarize the evidence that such chemical shock sts The shock is delayed in its onset the greater the ue damage the more liable it is to occur It may cur acutely if a tourniquet is removed from a severely maged limb and the products of damaged tissue allowed enter the circulation The shock is enhanced by cold d anaesthesia with ether or chloroform Typically we this variety of shock after severe burns and when ge masses of tissue are destroyed the patients going to shock not immediately but after several hours or e days when there has been considerable absorption of e products of dead or dying tissues

It has been pointed out particularly by Zachary Cope at clinically this variety of shock is commonly pre ded by a rise of blood pressure and by some this has en considered evidence against it being due to capillary ltration On the contrary this is exactly what might expected for I have demonstrated that under suitable nditions this rise of blood pressure can be brought about histamine exactly as in haemorrhage It is indeed erely an over compensation to a circumstance which nds to cause a fall of blood pressure This over com ensation may be seen both in the response to haemor rhage and to posture as pointed out by Leonard Hill In e case of histamine Dale and Burn have shown that n increased secretion of adrenaline is called forth The rterial constriction which has been noted clinically by Malcolm is part of the ordinary reaction to a loss of lood volume I have shown that it occurs with small ses of histamine as with small haemorrhages We see his in the progressive fall of venous pressure which curs on the injection of non shock doses of histamine y the increased velocity of the pulse wave the de creasing capability of the animal to withstand the maximum dose of histamine which may be recovered rom and the diminution in the volume of a limb which ucceeds a histamine dilatation

The importance of the suprarenals in relation to hista ine shock has been now conclusively shown by Dale nd also by Kellaway and Cowell in that if they are le troyed histamine shock may be caused in unanaes ch tized carnivora which are otherwise very resistant Herein no doubt lies the importance of cold in relation to shock for subsequent experiments by Cramer and by Crowden have demonstrated that cold exhausts the supra renal glands The necessity for keeping a shocked patient warm is already so well recognized in surgical practice that I am surprised to learn that operating tables are no longer heated except by hot water bottles

The Effect of Anaesthetics—That brings me to the relation of anaesthetics to histamine shock Normally animals can withstand histamine in large doses but carnivora become sensitive to histamine if anaesthetized as was shown by Dale and Laidlaw An anaesthetic such as ether probably acts by dilating vessels by in creasing their permeability and by paralysing the normal mechanism of compensation This is undoubtedly a point of enormous practical importance the more so as the effect of the ether at the time of the operation may be masked by the stimulating action which the ether exerts by irritating the respiratory tract In a narcotized animal it is easy to demonstrate the vaso-dilator action of ether We must therefore consider that the individual who administers ether or chloroform to a severely damaged patient is guilty of a crime but he would probably escape censure as the patient may not die immediately Probably the anaesthetic has been responsible for many fatal cases of obstruction or strangulated hernia which have been operated upon late I don t think I am saying too much when I say that many such deaths could have been avoided May I hope that modern surgeons will not be like their predecessors who continued to remove the thyroid gland for twenty years after physiologists had shown that its total removal led to death from myxoedema We must not smile It is already fourteen years since Dale and his colleagues did this work but although it is mentioned in some surgical books its importance does not yet receive general recognition If such patients must have a general anaesthetic then nitrous oxide is the anaesthetic of choice since it has been shown by Dale that this anaesthetic does not render an animal so sensitive to histamine shock as ether It is however not such an easy anaesthetic to administer nor from the point of view of relaxation so satisfactory as ether or chloroform indeed we must frankly state that we are as yet without an ideal anaesthetic Personally I believe that we shall see a greatly extended and routine use of local anaesthetics for this class of case in surgery It will be agreed that spinal anaesthesia does not meet the case as it interferes with the nervous control of the vessels and also causes vaso-dilatation

Loss of Central Control of Blood Vessels

Damage to Vasomotor Paths—All the blood vessels of the body are under the control of the vasomotor centre and the majority are maintained in a state of partial contraction by its activity It is evident then that interference with the pathway between these centres and the blood vessels must bring about vaso-dilatation and a fall of blood pressure In this category must come the shock produced by injury to the spinal cord also fat embolism in the medulla which has been described as a sequel to fractures The shock which is liable to occur in high spinal anaesthesia is somewhat similar in that the paths from the vasomotor centre to the abdomen and lower limbs are blocked and vaso-dilatation results

I do not propose to spend time on such obvious causes of shock but to pass on to the very interesting form of shock of nervous origin which results from operation or injury in which the tissue damage is negligible but the shock is profound

Concussion of the Vasomotor Centre—I should like however to mention that concussion as a cause of shock may be more common clinically than is commonly supposed It may be produced experimentally by simply jarring the head In accident cases there is obvious probability that it exists

We now come to those varieties of shock which depend on afferent impulses

Acapnic Shock—The vasomotor centre may be thrown out of action by a loss of carbon dioxide The fact that the carbon dioxide of the arterial blood was somehow responsible for the arterial blood pressure was first pointed out by Yandell Henderson Unfortunately Henderson postulated at the same time a somewhat remarkable veno-pressor mechanism which made his theory an easy prey for critics and his views even as late as 1923 received very little attention if we may judge by Cannon s book Henderson showed that in etherized dogs as a

result of the stimulation of afferent nerves, there might be over-breathing to an extent sufficient to lower blood pressure

In 1923 the essential fact was confirmed by Dale and Evans, who also showed that the carbon dioxide of the arterial blood was responsible for maintaining the normal activity of the vasomotor centre in the medulla, and that a reduction of the carbon dioxide of the blood in an etherized animal led to a fall of blood pressure I have since shown that the capability of an animal to adapt its circulation to changes in posture, such as being placed in a vertical position, depends on the presence of carbon dioxide The fact that the vasomotor centre requires carbon dioxide must now be accepted, and we have to ask ourselves, Can this variety of shock occur clinically? The answer is again " Yes, certainly in etherized persons," for I have shown that in a limited number of animals under chloralose over-ventilation does not bring about a fall of blood pressure , a fall occurs if the animal is etherized In man, over-breathing sufficient to cause apnoea (thus showing that the CO_2 has been washed out) does not necessarily cause a fall of blood pressure (Densham and Wells), because of compensatory constriction of vessels due to increased alkalinity I do not, of course, deny that very violent over-breathing, which often is not followed by apnoea, does cause a fall, because this actually interferes with the circulation through the lungs Mr Wakeley has kindly allowed me to look over his records of operation cases, and among them I found many examples of increased respiration being associated with a fall of blood pressure In further support of the existence of such washing out of carbon dioxide is the common practice for anaesthetists themselves now to administer carbon dioxide with their anaesthetics as advised by Henderson

How far acapnia may be an important factor in shock in unanaesthetized patients is difficult to say since any fall of blood pressure might cause over-breathing The fall due to histamine, however, does not usually cause such breathing, because of the bronchial constriction What I do want to emphasize, however, is that even if the acapnia is not a primary factor in shock, it cannot be ignored for the evidence is complete that it reduces the activity of the vasomotor centre by which the body attempts to compensate for a fall of blood pressure Every effort must be made, therefore, to reduce the effect of sensory stimulation during operation It seems to me that herein lies the great value of morphine which many surgeons still use in all accident cases I shall return to the question of anaesthetics when I have dealt with depressor shock

THE VASOMOTOR CENTRE MAY BE INHIBITED

Depressor Shock —There is a class of case met with clinically which appears to fit into none of the categories already mentioned I refer to severe shock from an apparently trivial injury such as a bullet wound through the hand or, as I saw recorded recently, a snowball on the eye The amount of tissue damage is negligible, and from what I have said of acapnia, it is difficult to see that acapnia is wholly responsible without the occurrence of obvious over breathing Here we must believe that there is definite inhibition of the vasomotor system by afferent impulses The possibility of this occurrence was first put forward by Guthrie but he did not have any clear idea where the inhibition took place , Meltzer apparently thought it peripheral and Guthrie thought it psychic

The possibility that afferent impulses might be concerned in shock was first suggested by Crile, but unfortunately he claimed that all shock was produced in this way His view was that the afferent impulses stimulated the vasomotor centre, which became exhausted ... he bolstered up his view by so much erroneous argu... that his theory fell into disrepute The fact, however ... incontrovertible that certain afferent impulses cause ... Anyone who reads the clinical literature of the sub... will see quite easily that the shock which is so w... described by Lockhart-Mummery is not the second... wound shock on which the Wound Shock Commit... worked It is an entirely different entity For examp... Lockhart-Mummery, in his Hunterian Lectures in th... place in 1905, emphasized the importance of the l... destructive manipulations such as tractions in a pedi... or ligament and nerves The Shock Committee empha... sized the importance of gross destruction of tissue

When men take the trouble to make observations the... are usually true, but the deductions may be false I thi... that on the whole Lockhart-Mummery supported Cri... view that the centre was exhausted, but his observation... were none the less very valuable We must however, re... member that the absence of any knowledge of histamin... shock in 1905 made the whole problem much more difficult and confused Actually the centre is remarkably resistant to exhaustion, and Porter and others have shown that the centre is not exhausted in shock and could often be made to raise the blood pressure afferent by stimulation of an afferent nerve This fact has caused the Crile-Mummery view to pass into abeyance, and what good there has remained of it has been taken over by the supporters of the acapnic theory There is now, however, definite evidence that, apart from acapnia, shock may be produced not as a result of exhaustion, but by nervous inhibition of the vasomotor centre by certain afferent stimuli, especially mechanical stimuli The occurrence of inhibition of the vasomotor centre is well known in physiology The centre may be inhibited not only by special depressor nerves, but also by stimulation of many mixed nerves at a slow rate This depression may be counteracted by stimulation of another region with a fast rate of stimulation, which stimulates pressor rather than depressor fibres in a mixed nerve because of the different excitability of the fibres There is then no real conflict between Porter and Crile or Lockhart Mummery but merely a lack of full understanding on both sides The question naturally arises, however, how far the results of Crile and Lockhart-Mummery might be due to loss of carbon dioxide due to over-ventilation, which commonly occurs at the same time

It may be shown that this depression of the vasomotor mechanism produced by mechanical stimulation is not due primarily to acapnia, for it can be produced in an animal with the chest open and under artificial respiration No doubt, however, acapnia does enhance the effect, so that from the point of view of prevention we can take acapnic and depressor shock together They are both *preventable by deep anaesthesia* This gives support to the view that the prevention of primary shock is possible by deep anaesthesia This has long been claimed, but the claim did not rest on much experimental data It is interesting to remark that in Beattie and Choyce's *Textbook of Surgery*, however, I find it stated that some times anaesthesia causes improvement in shock cases Here we have then, a great difference between shock produced by chemical and nervous stimuli, a difference which has an enormous importance in anaesthesia

In an experiment under dial, the piercing of the fore limb with a sharp instrument caused a profound shock, which was recovered from under deep ether anaesthesia, during which no depression could be produced Electrical stimulation of an afferent nerve at a fast rate brought about a temporary recovery of blood during a fall of blood pressure I have also obtained a fall of blood pressure by merely tapping a tibia, while in other animals

ock has been produced by mere dissection of the sciatic ve which would be quite innocuous under deep ether nesthesia In my experiments I have found that umination of the carotid sinuses and the vagi enhances depressor responses but the exact significance of this int I have not yet made out

This variety of shock together with that produced by s of carbon dioxide is probably what has hitherto been own as primary shock—a state well recognized to be ndamentally different from secondary wound shocks by orkers such as Cowell Bayliss Dale and Wallace But e experiments which I have just quoted suggest that s variety of shock may be more important in accident ses and in the operating theatre than is generally sup osed In relation to operations an interesting piece of ork has recently been published by Richet and Dubn in showing that the vaso dilator centre seems to velop a preliminary higher excitability under anaes ics It seems likely that the pressor mechanisms come anaesthetized before the depressor mechanisms

Now a very interesting point is that experimentally nder apparently similar states of anaesthesia depressor ock cannot always be demonstrated This time last ar I had no difficulty in producing it indeed my ttention was drawn to it by the fact that on many ccasions I produced it accidentally by operations which re usually innocuous On the ground of these experi nts which appeared so certain I decided to give this xture its present title but when I began to prepare for t in detail in September and October I found myself otally unable to produce shock in this way It was ather disconcerting The results were so clear cut in ebruary and September that I decided to wait for a few months Now I am relieved to find that I can produce he depressor shock easily again but as yet I have not een able to define exactly the circumstances under which arises The difference may be due to the seasonal vari bility in the sympathetic system of cats or may be solely question of exhaustion by cold This is however by no eans solely a purely experimental point but one of clinical importance because it is found that some patients re much more easily shocked than others and that fear motion and cold which stimulate the sympathetic and may cause exhaustion of the suprarenals are definitely looked upon as aggravating causes (Fraser)

Mixed Shock.—From what has been said it is almost obvious that in some instances the varieties of shock must overlap—for example chemical shock may supervene on nervous shock indeed it may almost be assumed that it will if a nervous shock is allowed to persist because oxygen want will of itself lead to tissue death and capillary dilatation

Conclusion

The whole clinical problem now requires to be completely reinvestigated in the light of modern experimental facts with a view to finding methods for diagnosis of the different varieties A large amount of the existing literature is completely valueless I do not pretend that what I have said is in any way final and a large number of the facts are not new all I hope is that it may serve as a simple basis from which systematic clinical study may be made But I think you will agree that a fuller knowledge of the experimental facts makes the general approach to the subject easier

I have omitted those methods of producing shock which I do not think are related to surgical practice and (as I said at the beginning of the lecture) I have also deliberately omitted a large number of facts regarding shock Many are secondary to the fall of blood pressure acidosis loss of muscle tone lowered metabolism etc I have done so because I want to make it quite clear that a number of clear cut varieties of shock exist experimentally Clinically they have not been differentiated except very crudely as primary and secondary although as I have indicated there is every reason to believe that distinct varieties exist To the physiologist and biochemist may be left the problem of how best to deal with histamine a solution to which is one of the most important requirements of modern surgery But meantime we also want in relation to shock a better clinical surgery capable of making a more adequate differential diagnosis—not the dramatic surgery of the operating theatre but the unexciting and unremunerative study of the patient in bed the work which is too often left to anybody willing to do it the surgery which involves a careful study of available experimental data which would be a stepping stone to a new surgery If more surgeons came into the physiological laboratories and saw the different varieties of shock for themselves there would be a much better appreciation of the facts and soon we should have the clinical investigations which are so desirable

Summary

Experimental shock may be divided into several distinct varieties which apart from that produced by haemorrhage and cardiac failure may be divided into chemical and nervous

The chemical variety is typified by histamine shock experimentally and clinically by a delayed shock associated with gross destruction of tissue This variety is enhanced by anaesthetics

The nervous varieties may result from physical damage to the vasomotor centre or its efferent paths from afferent impulses leading to loss of carbon dioxide (acapnia) or from inhibition of the centre Acapnia and inhibition account for the shock which follows immediately on injury Shock dependent on afferent impulses is prevented by deep anaesthesia and reduced by morphine The chemical and nervous varieties may coexist and enhance each other

INSULIN AND GLUCOSE IN THE TREATMENT OF HEART DISEASE

WITH SPECIAL REFERENCE TO ANGINA PECTORIS

BY

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The past twenty years have witnessed an increasing interest in the therapeutic nutrition of the heart The fact that digitalis is the outstanding means of combating serious heart disease and failure is indisputable but in certain types of heart failure particularly those associated with normal rhythm this drug confers but slight or transient benefit Attention has therefore become focused upon intensive glucose administration as a supporting measure or sometimes a last resort Dangerous states of circulatory insufficiency often occur in the second half of life when arterial and specially coronary degenerations have frequently set in and in such circumstances it is reasonable to suppose that an increased content of nutritive material in the blood should be beneficial It may well be also that a relative failure of carbohydrate utilization from endocrine causes may constitute part of the disability in chronic myocardial disease Furthermore the continued overaction of the heart and the enhanced basal metabolic rate in congestive failure demand ample supplies of carbohydrate which may not be forthcoming unless special provision be made

One of the earliest reports on glucose therapy was published before the war by Goulston [1] who recorded definite benefit resulting from oral glucose administration in cardiac failure These observations were confirmed by Budingen,[2] who claimed that glucose therapy supplemented the action of digitalis Intravenous administration of glucose has been employed by Klewitz and Kirchheim,[3] who reported subjective improvement both in patients suffering from chronic heart failure and in anginal syndromes These observers also found, by animal experimentation, that alternation of the heart could be relieved by addition of glucose to the perfusion fluid their records received support from the work of Edwards and Page,[4] who were able to produce alternation in the course of experimental hypoglycaemia in dogs, and to relieve this arrhythmia by the subsequent provision of glucose From the clinical standpoint the disappearance of alternation during glucose therapy has been recorded by Kisthinios and Gomez,[5] and Loeper, Lemaire, and Mougeot [6] Loeper and Lemaire[7] brought forward clinical evidence to suggest that the action of digitalis, strophanthin, and quinidine is augmented by the daily administration of 50 grams of sugar The intravenous injection of glucose solution has been claimed by Marvin[8] to be of value in the treatment of paroxysmal cardiac dyspnoea Both this condition and alternation must be regarded as expressions of grave myocardial damage or stress, and the fact that they may be relieved by glucose administration would suggest either that a relatively inadequate nutrition was previously available, or that a superfluity of glucose in the myocardial irrigation is in some way remedial

Glucose-Insulin Therapy

The advent of insulin in 1922 opened up new possibilities in the treatment of cardiovascular diseases, and as early as 1924 the potentialities of glucose-insulin therapy were envisaged by Pick [9] Two years later Osato[10] published an account of the favourable effect of such treatment upon six patients suffering from congestive failure More recently Kisthinios and Gomez[5] have found that although sugar administration often provokes diuresis in heart failure, benefit may accrue even when this does not occur These authors applied the remedy to patients who had been under treatment with digitalis on previous occasions and they concluded that glucose had a direct action upon the heart muscle, and that, with or without insulin it might be efficacious in failure when other remedies had been unsuccessful They observed the abolition of bigeminy in one case, and considered that insulin therapy might be usefully applied even when failure was of thyrotoxic origin Rimbaud Balmès, and Anselme-Martin[11] treated twenty one patients with congestive failure with glucose and insulin They found that in irreducible failure this method could produce valuable results either alone or in conjunction with digitalis, but that little if any benefit was to be expected in thyrotoxic myocardial disease The technique in their investigations was as follows five units of insulin subcutaneously, followed in fifteen minutes by 50 grams of glucose or lævulose by the mouth daily If no benefit ensued in five days the doses of insulin and sugar were doubled, and the treatment continued for ten or twelve days Similar methods have been adopted by Macchioro,[12] Weiner [13] Jorge and Sobrinho [14] and Loeper, Lemaire, and Degos[15] with corresponding results The electrocardiographic changes in patients treated by insulin and glucose for heart disease have been studied by Mathieu, Colleson and Simonin [16] Among ten patients suffering from chronic myocardial disease of whom three also had renal impairment they found a shortening of the QRS complex and increasing amplitude of the R wave in all leads In two instances the reappearance of T waves previously absent was observed These changes were noticed after periods of treatment varying from eight to twenty one days

It has been said concerning new remedies that it is sufficient for the introducers to record benefit or cure in 100 per cent of their cases confirmatory investigations must also give positive results in other hands The reports reviewed above constitute an important body of evidence suggesting that glucose insulin therapy is valuable in heart disease and failure There is however no consensus of opinion in this matter Carusi[17] has found no beneficial results from the treatment of failure by glucose and insulin Moreover, Lasch[18] has formed the opinion that these remedies are not only useless in this sphere, but also possibly harmful

Angina Pectoris and Pancreatic Extracts

It was observed by Hetenyi[19] that the insulin treatment of diabetics who also suffered from angina pectoris sometimes resulted in relief from the anginal attacks The application of this finding to the treatment of non-diabetics with angina pectoris was made by Ambard, Schmid, and Humbert,[20] who reported a case in which attacks had ceased after treatment with insulin and glucose Beale[21] has observed a comparable instance in which anginal attacks ceased after injection of small doses of insulin, while Bickel [22] has reported a similar result using insulin and glucose Vaquez has extended these investigations to the treatment of related conditions such as peripheral arterial disease, but has obtained inconstant results, which he attributed partly to variations in the content of pancreatic extracts other than insulin in the preparations he employed These results led him, in collaboration with Giroux and Kisthinios,[23] to use a de-insulinized pancreatic extract (angioxyl) prepared according to the researches of Gley and Kisthinios [24] He found that in fourteen out of twenty cases of angina pectoris treated with injections of angioxyl no further attacks occurred The therapeutic action of angioxyl has been subsequently investigated by Woolf, Findlay, and Dessen,[25] and Nuzum and Elliot [26] Their results were in general agreement with those obtained by Vaquez, Giroux, and Kisthinios

It appears from the account given by Vaquez of his investigations that he attributes the influence of insulin on the cardiovascular system to the hypotensive substances that it contains in greater or less amount If one takes the view that anginal pain is of aortic origin and is precipitated by excessive pressure in the aorta it is naturally attractive to view the action of insulin in this light, further, since it has been frequently demonstrated that a transitory elevation of blood pressure accompanies some attacks of angina pectoris, it follows that substances producing a reduction of blood pressure will relieve some sufferers from angina pectoris More and more evidence is accumulating to show that anginal pain in general arises not in the aorta, but in the heart muscle, and is attributable essentially to deficiency in coronary blood or blood flow rather than to alterations in blood pressure Granting this coronary hypothesis, the results obtained by Vaquez are readily explicable on the ground that hypotensive substances produce a fall in blood pressure by virtue of generalized arterial dilatation in which the coronary arteries share

Glucose-Insulin Therapy in Angina Pectoris

Few diseases are more variable in their response to treatment than angina pectoris Every physician must recall certain patients who, despite every care in investigation, management, and treatment, have failed to experi-

nce diminution in frequency or severity of attacks urther the course of the disease is commonly one of nexplained exacerbations modifications and remissions ven in the absence of any treatment whatsoever Angina pectoris thus belongs to the group of maladies in which pontaneous changes for better or worse render t assessment of the value of any particular remedy extremely difficult In these circumstances any medicament or method of treatment which gives a prospect of possible benefit deserves consideration and trial It is for this reason and in the hope that other clinicians may apply the method described below that I venture to publish the following case reports Certain investigations that have been made by myself and others into the metabolic and radiographic aspects of the problem of cardiac nutrition will be discussed subsequently but it may be mentioned here that insulin and glucose were applied to the treatment of angina pectoris in the belief that a defect of carbohydrate combustion in the heart muscle is at the root of anginal pain and in the hope that by this means normal glycogen utilization in the heart might be promoted and the pain thus avoided

During the past year upwards of forty patients suffering from angina pectoris have been considered from the standpoint of treatment by insulin and glucose For reasons put forward above and since it was required to assess the value of the treatment it was considered advisable to treat only patients who fulfilled certain rigid criteria (1) the patients were suffering from undoubted coronary syndromes (2) they were subject to frequent attacks usually several attacks in a week or daily attacks (3) the attacks were of at least one or two months duration (4) the clinical condition at the time of treatment was static—neither improving nor deteriorating In most of the patients one or more remedies had already been tried without avail—rest vaso dilators sedatives etc

The circumstances and technique of treatment were also definitely decided upon The patients continued taking any remedies that they had previously been taking They continued in the same regime of work or rest during as before treatment Records of frequency severity and duration of attacks were kept for the period prior to during and after treatment The method consisted in giving five units of insulin before breakfast and before the evening meal each dose being followed by 30 grams of glucose taken with the meal This treatment was administered over periods varying from two weeks to seventeen weeks In certain patients otherwise suitable for treatment practical difficulties prevented the application of this systematic technique In such cases the treatment was not instituted

Case Reports

Case 1.—Male aged 57 Arteriosclerosis angina pectoris Onset in January 1932 of left supramammary pain on effort Pain relieved by five to ten minutes rest The frequency of the attacks increased to one daily Diuretin trinitrin luminal and rest in bed had all failed to prevent attacks Without altering in any way the mode of life insulin treatment was started in June Within one week he was free from definite attacks although slight mammary pain occurred occasionally on effort He was kept on the treatment for seventeen weeks and at the end of this time his effort tolerance had very much improved Very slight mammary pains occurred occasionally on effort the duration being a minute as compared with the previous duration of about fifteen minutes In October he discontinued the treatment continuing the same regime and within a week he had had two severe anginal attacks Insulin treatment was reinstated and he has remained well since

Case 2.—Male aged 52 Hypertension angina pectoris chronic bronchitis and emphysema This patient had been under treatment for the lung condition for one year when he began to notice numbness and oppression in the centre and left side of the chest and in the left arm These symptoms were concisely related to effort and always relieved in a minute or so by rest In July 1932 after two months of unchanging symptoms insulin treatment was instituted the patient continuing his usual mode of life exactly After six weeks the symptoms were much less easily evoked and much less intense After thirteen weeks he was completely free from symptoms and has remained so since discontinuance of insulin and glucose on October 11th

Case 3.—Female aged 43 Syphilitic aortitis aortic incompetence chronic bronchitis For three and a half years the patient had experienced attacks of pain in the left of the sternum spreading down the inner side of the left arm and forearm Pain usually related to exertion but sometimes on getting up in the morning Duration fifteen to twenty minutes relieved by rest Despite two and a half months in bed in hospital patient constantly woke with pain and had two or three slight attacks during the day trinitrin iodide and mercury giving no relief At this stage insulin and glucose treatment was started For one week slight pain was felt while washing in the morning but during the following month the patient remained completely free from pain except for one bout at the onset of an attack of tonsillitis Some oedema which had appeared prior to treatment rapidly disappeared and the patient was discharged fit to be up and about her home For the first months after her discharge insulin treatment was discontinued she wrote The pain all came back down the left arm but after starting the injections in about a week the pain went again and she has been free since

Case 4.—Male aged 70 Hypertension and arteriosclerosis aortic atheroma angina pectoris In the summer of 1930 onset of attacks of pain just to the right of the mid sternum always brought on by exertion with a tendency to radiation across the sternum and up to the throat Relief from rest and amyl nitrite Sedatives diuretin trinitrin and glucose alone gave a slight relief and he was still getting attacks most days when insulin treatment was started He continued with it for six weeks At the end of this period he was able to walk four miles without getting pain whereas fifty yards had previously been sufficient to induce an attack Very slight pains occurred occasionally but although he has discontinued the insulin for six months his great improvement is maintained

Case 5.—Male aged 56 Syphilitic aortitis For eighteen months prior to admission to hospital there had been oppression over the lower third of the sternum on effort There had also been nocturnal attacks in which the patient awoke with pain spreading across the left costal margin amyl nitrite giving relief He was admitted with some oedema of the legs and in four weeks up to the end of October he had four nocturnal attacks Insulin and glucose treatment was then instituted and thereafter up to the time of his discharge five weeks later he had only one attack of pain and has felt very marked subjective improvement

Case 6.—Male aged 48 Angina pectoris recent cardiac infarction angina decubitus The patient whose father died of angina pectoris was well until eighteen months ago when he began to notice pain at the upper third of the sternum during exertion Early in February 1933 he had an extremely severe attack at night lasting six hours which almost certainly represented an acute coronary occlusion After that he remained in bed for four weeks and was troubled nearly every night with attacks of sternal pain and oppression which would awaken him from sleep and compel him to sit up Various remedies had given no relief and for the first ten days of March he was given five units of insulin and two heaped tablespoonfuls of glucose daily No further nocturnal attacks were experienced after the first day of this treatment nor have they recurred since it was discontinued

Discussion

I have recently drawn attention[1] to a group of conditions in which diffuse parenchymatous myocardial damage exists independently of any disease of the coronary system Examples of these states are general malnutrition or starvation hypoglycaemia myxoedema and severe diabetes The evidence that perversion of myocardial

function accompanies these disorders of malnutrition consists in a characteristic deformity of the electrocardiogram, which shows depression of the RT interval or inversion of the T wave in one or two or all leads It is clear that an important distinction has to be drawn between these changes (which are throughout in the direction of depression or inversion) and those produced by focal myocardial damage as in coronary sclerosis In the latter condition the changes produced in Lead I are in general opposite in sense to those produced in Lead III In all of the above mentioned nutritional disorders the electrocardiographic abnormality disappears when the metabolic fault is rectified

In a discussion of the electrocardiographic changes occurring during the control of severe diabetes, I have indicated in collaboration with R A Hickling,[28] that a defect of nutrition underlies these electrical phenomena, and that deficient glycogen utilization is probably the important factor Reasons have also been given in these publications for the belief that defective glycogen utilization is the cause of the electrocardiographic abnormalities in the other conditions of disordered metabolism already mentioned Allusion to the fact that disturbances of general glycogen metabolism, as in diabetes and hypoglycaemia, may give rise to anginal pain has been made elsewhere,[27] and the significance of these facts was then fully discussed But if anginal pain has a basis of deficient glycogen utilization in some instances, it seems likely that this factor may play a part in anginal syndromes brought about by local ischaemia, as in coronary spasm or sclerosis Further, the recent work of Lewis[29] has thrown important emphasis upon the metabolic origins of anginal pain in contradistinction to anoxaemic factors The attempt to inhibit anginal pain by the administration of glucose and insulin was the natural outcome of the foregoing researches and considerations

Conclusion

It is here suggested that such influence as ordinary insulin exerts upon heart disease in general is by virtue of insulin *per se* as distinct from the effect of incidental hypotensive substances contained in the pancreatic extract Reference has been made to the considerable body of clinical reports bearing witness to the efficacy of glucose-insulin therapy in chronic heart disease and congestive failure The fact that opinion is not unanimous suggests that selection of cases is necessary upon a basis hitherto unrecognized, but does not throw serious doubt upon the value of this therapeutic measure It will be observed that the use of insulin and glucose in the treatment has not been empirical, but is based upon the belief that the promotion of glycogen utilization in the heart may prevent the accumulation of substances producing anginal pain

But there are almost certainly other factors concerned If insulin benefited patients with arterial disorders entirely by its effect on glycogen utilization (or even by a hypotensive action as Vaquez suggests) it might be expected that the results would be immediate and at once maximal This is not found to be the case For example, in Cases 1 2 and 3 already described, the frequency and severity of attacks progressively diminished over periods of one to several weeks It is clear that freedom from attacks is *per se* beneficial, but it cannot be doubted that the facts and arguments presented indicate that insulin has a further effect upon functional efficiency and nutrition of the coronary arteries It is well known that accumulations of fat in the deeper layers of the intima constitute one of the earliest stages of atheroma When such fatty depositions are accompanied by cell necrosis the degenerative process is, as Aschoff[30] has stated irremediable On the other hand, the accumulations of fat in the early atheromatous processes are removable, as has been shown by Anitschkow and Chalatow[31] in dieting experiments It is here suggested that the removal of such fat is part of the action of insulin in angina pectoris Evidence in support of this view is forthcoming from the work of Himwich and Spiers,[32] who have shown in experiments upon dogs that injections of insulin cause reduction of plasma fat Insulin promotes glycogen utilization and by virtue of this effect stimulates the proper combustion of fats Such an action on the coronary arteries would explain the cumulative benefit sometimes seen in the course of treatment by insulin and glucose

Summary

1 The evolution of glucose and glucose insulin therapy in cardiovascular disease is reviewed

2 While there is evidence that these methods are of value in congestive heart failure, it appears that glucose-insulin therapy is likely to be of special benefit in arterial, and particularly coronary, syndromes

3 An account is given of the successful treatment by insulin and glucose of patients suffering from intractable angina pectoris, and six case reports are given

4 Reasons are given for believing that anginal pain is related to faulty carbohydrate metabolism in the heart It is held that insulin acts immediately by its stimulating effect upon glycogen metabolism in the heart and progressively by promotion of the combustion of fat this process leading to resolution of early atheromatous changes in the coronary arteries

5 A technique for the application of glucose insulin therapy in angina pectoris is described, and it is suggested that this method deserves careful and extended trial

For their kindness in allowing me to treat patients under their care I am indebted to Dr F G Chandler and Dr V S Hodson of the Victoria Park Hospital

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AETIOLOGY OF ACUTE RHEUMATISM

BY

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During the last few years certain new conceptions have arisen in regard to rheumatism which shed fresh light on the old and much disputed views of the origin of the disease. The old idea of a specific infection may have to be modified, and a portion directed away from the bacterium and focused more on to the tissue reactions of the patient. For the purposes of this discussion two types of the disease will be considered—rheumatism of childhood and more briefly rheumatoid arthritis.

ACUTE RHEUMATISM*

Influence of Infection

After watching innumerable rheumatic children through the most severe attacks of carditis and pericarditis often with associated inflammation of the lung and pleura, it would take a great deal to convince me that infection played no part. Post-mortem findings can only confirm this view; yet the original streptococcal theory of Poynton and Payne has not been universally accepted. In an endeavour to reproduce these early researches the quest has always been for a living streptococcus circulating in the blood stream and settling itself into the tissues there to work its pathological destiny. The results have been so conflicting that many have come to regard the time-honoured streptococcus as a secondary invader in the wake of a still unknown rheumatic virus. This view is a retrograde step, and there is surely sufficient evidence to consider the streptococcus as the fundamental cause.

Streptococcal Theories

Those who believe in a *specific* streptococcus point out that rheumatism is pre-eminently a specific disease and therefore most likely to have its own particular organism with strict cultural characteristics. It is difficult to reconcile this view with the complete reversal of bacteriological opinion that has occurred in the last two years. Until quite recently we had come to associate a *non haemolytic* streptococcus with rheumatism, and on the various occasions when an organism had been isolated from the blood, the heart, a lymph gland, or a joint this was the type. Now with equal vehemence some bacteriologists insist that a *haemolytic* streptococcus is really the root of the evil. This *volte face* certainly shakes one's faith in a specific organism, and one is tempted to think that too much stress has been laid on small cultural differences on the laboratory agar plate and insufficient on the effect of bacteria in the living tissues. Bacteria are now known to be composed of carbohydrate and protein, part of the nucleoprotein being common to the various types and strains of each particular group of organisms. It is not unlikely that this part of the streptococcus will prove to be the important factor, and that therefore the possibility of a *multiple* streptococcal aetiology of rheumatism must be accepted.

The close relationship of acute tonsillitis and rheumatism was realized by some of the earliest authorities. More recently the real significance of these throat infections has been brought to light. It appears that acute rheumatism, especially a relapse in old cases, nearly always follows a streptococcal sore throat after a *silent period* of ten to twenty-one days. First attacks of rheumatism may also have the same sequence of events. In children at any rate the term sore throat is quite misleading as often there are no subjective symptoms and the whole nasopharyngeal infection is so mild and fleeting that it might easily pass unnoticed if a close watch on the temperature is not being kept. Whether or not the tonsils have been previously removed appears to make little difference; if they have, acute pharyngitis is just as likely to lead to a rheumatic relapse as tonsillitis. Obviously the majority of such acute infections of the upper respiratory tract are not followed by fresh outbursts of rheumatism, but it is impossible to predict in which it will occur. Any form of rheumatism may appear, from the mildest to the most severe and fatal. Some patients only pass through a short bout of renewed pyrexia unaccompanied by any other symptoms, but others are attacked by the most virulent type of pericarditis imaginable. Arthritis, chorea, nodules, and further myocarditis or endocarditis have all been observed. Curiously, patients who have long been convalescent from an acute attack of rheumatism are particularly likely to relapses after fresh tonsillitis. Acute rheumatism following scarlet fever has the same silent period before its appearance. In this case the scarlatinal streptococcal tonsillitis is responsible and probably initiates the same train of events as other forms of streptococcal throat infections. It is significant that rheumatic subjects are much more prone to fresh rheumatism during scarlet fever than people who have never suffered before.

Certainly these observations do incriminate the streptococcus, but there still remains the problem how such nasopharyngeal infections manage to light up rheumatism in far distant areas of the body. The repeated failure of attempts to demonstrate streptococci in the inflammatory lesions of rheumatism is strong evidence against the idea of a great exodus of living bacteria from the inflamed throat into the general circulation. There must be some other way in which these violent inflammatory reactions are brought about.

Bacterial Allergy in Rheumatism

The explanation which appears most hopeful is that of bacterial allergy on the lines of serum disease. In a non-fatal microbic infection the responsible micro-organisms are attacked by certain tissue cells and broken down. The patient thus becomes cured of the infection, but during the process the body may become sensitized to these disintegrated products consisting largely of nucleoprotein and will react in characteristic fashion should a fresh invasion and disintegration of the same organisms take place. Ample opportunity exists in childhood through minor throat infections for the tissues to become sensitized to streptococci. At the time these may only give rise to a deterioration in general health and pass unnoticed, but the train has been laid and it needs merely a closely following acute tonsillitis to set off the explosion. The word explosion is used figuratively as best describing those fulminating cases of pericarditis which either rapidly reach a fatal issue or else leave a previously healthy child a permanent cardiac cripple. Other cases are undoubtedly more insidious in onset and apparently without any preceding history of tonsillitis. Apart from the frequent symptomless character of these nasopharyngeal infections there are other common illnesses which are associated although less obviously with a streptococcal sore throat. Thus rheumatism and rheumatic endocarditis can often be dated from an attack of scarlet fever, influenza, diphtheria, measles, or pneumonia. These diseases are even more frequently the starting point of a severe relapse in mildly or definitely rheumatic subjects.

In the course of a relapse a silent period of ten to twenty-one days has been mentioned. It is an important

* Abstract of paper read before the South Middlesex Division of the British Medical Association on November 30th 1932.

observation which as yet is improperly understood, although several ingenious explanations have been offered The one that fits in best with the allergic theory just propounded is that the patient's defence mechanism only comes into full force ten to twenty-one days after the throat infection, and there is a violent reaction One of the difficulties of explaining the basis of rheumatism through the agency of streptococcal infections is the fact that this organism flourishes equally in all classes of the community Tonsillitis is endemic to the same degree in the public school as in the council school, and yet the incidence of acute rheumatism is very different in these two institutions This raises one of the points foreshadowed at the beginning of this paper that is, the importance of taking into consideration the patient's tissues—the soil, as it were, in contrast to the seed of infection which may become implanted

Predisposing Causes

Certain environmental features of rheumatism have stood the test of clinical and statistical inquiry so steadfastly that they may now be regarded with some certainty as predisposing causes One of the chief factors is the atmosphere Damp has rightly been blamed, but rapid changes of temperature can play an equally important part Poverty no doubt has much to answer for, but in regard to rheumatism it is probably the overcrowding, improper sanitation, and general lack of hygiene that are at fault If, as some suggest, diet is a predisposing cause, there is no evidence that the disease appears for lack of food, although its quality may be open to question Certain debilitated children with chronic ill-health are particularly predisposed to rheumatism The truest picture of such a child is one whose lymphoid tissues are in a permanently catarrhal state, whose nervous system is easily upset, and whose digestion has been disordered by lack of protein and excess of carbohydrate The emotional and highly strung nature of rheumatic children is proverbial, and it is therefore not surprising to find a disproportionately high incidence of chorea among Jewish children The nervous strain of city life must have some effect, and no doubt accounts to some extent for the greater liability to acute rheumatism of the children of large towns as compared with their country cousins Race and heredity also play a considerable part Rheumatism certainly runs in families, and the children of rheumatic parents seem often to be born with an inherited predisposition of the tissues to the disease a state probably best described by the term 'diathesis"

In considering these various factors it soon becomes apparent that there is no one predisposing cause, but a combination of many Together they produce a minor state of ill health in the patient, so that he is unable properly to overcome the common infections A bad cold, tonsillitis, or otitis, for example, instead of rapidly clearing up in such children, tends to pass from an acute into a chronic state The chapter of each acute streptococcal attack remains unclosed, the patient's defence mechanism is continually overworked, and this is probably why his tissues reach that hypersensitive state already described Along these lines the streptococcal theory and the varied predisposing causes can be brought into harmony, but further research is required before the whole problem is completely elucidated

Rheumatoid Arthritis

Fortunately for our theories there are many cases of rheumatoid arthritis in which acute infection is obvious Still's disease in children with pyrexia, leucocytosis enlargement of the spleen and lymphatic glands and frequently pericarditis at necropsy, is sufficient evidence of this Adults may suffer from a very similar acute form, but usually the infective element is not so much in evidence Nervous strain has been mentioned as a predisposing cause of chorea, and it is interesting to note the same influence in some cases of rheumatoid arthritis It is perhaps encountered most frequently in young women, who, after some mental shock or anxiety due to domestic or commercial worries, promptly become afflicted by this incapacitating malady How this is brought about is largely a mystery but it is thought by some that a disturbed sympathetic or autonomic nervous system plays a part by upsetting the balance of the endocrine secretions Still the most tenable hypothesis in rheumatoid arthritis, as in acute rheumatism is again that of bacterial allergy, acting in this case through the more localized agency of hypersensitive joint tissues

Conclusion

In the foregoing remarks an endeavour has been made to correlate some of the salient points about rheumatism and to suggest that the disease may be the outcome of an overacting response on the part of the tissues There are indications of these excesses of nature, this perversion of the once physiological defence mechanism, in serum disease and anaphylaxis Viewed in the same light, the exanthemata—and measles in particular—would present a new aspect, and complications such as scarlatinal nephritis and otitis following tonsillectomy might be explained Graves's disease is another example of the occasional effect of an emergency call precipitating a disaster In this case, in answer to some alarm or extra exertion, the endocrine and sympathetic nervous system overstep the mark and are not able to return to a normal state of balance

Innumerable further instances might be given, but a great deal of research will be required along the lines indicated before we can go further than hint at a new conception of disease

AN UNUSUAL CASE OF LYMPHATIC LEUKAEMIA

BY

W E COOKE, M D , M R C P

WIGAN

The many points of interest presented by this case will obtrude themselves as the narrative proceeds

History of Case

A male 11 years old was taken by his mother to a doctor's surgery at 7 p m on December 24th 1932 He complained of feeling faint and vomited some dark material which was found to contain blood The doctor ordered him to bed and visited the boy at 10 40 p m the same day he was asleep of good colour, and breathing regularly At 1 45 a m on December 25th the boy died The doctor reported the case to the coroner, who ordered a necropsy (What follows is an abstract of the mother's statement)

The boy had never been attended by the family doctor had always appeared healthy and had gone to school regularly On Wednesday December 14th he was caned across the buttocks by the schoolmaster He had not complained but on December 19th when his mother asked him about some bruises on his legs he told her about the caning After breakfast on the same day he complained of feeling sick and vomited The vomit contained streaks of blood He went to school as usual He vomited once on December 20th and once on December 21st but attended school He was sick once on December 23rd and twice on December 24th—at 6 p m after a meal which consisted of shredded wheat and milk, and at about 7 40 p m in the doctor's surgery He

was put to bed at 8 30 p m complained of feeling tired and went to sleep At 1 15 a m on December 25th his mother noticed that he was breathing heavily and he died at 1 45 a m

Post Mortem Findings

At the necropsy performed on December 27th the boy appeared well nourished The colour of the lips gums and conjunctivae was little paler than normal Petechiae were present in the skin of the neck chest and abdomen Numerous small circular bruises of varying ages were present on the arms thighs and legs No bruise suggestive of being caused by a cane was found There was no bruise on the head The lymphatic glands of the neck axillae and groins were palpable but not prominent

Petechiae were present in the peritoneum omentum and visceral pleurae The stomach contained blood stained mucus The mucous membrane presented innumerable petechial haemorrhages The liver appeared enlarged and pale The spleen was almost three times the size of a normal spleen and on section firm The Malpighian bodies could not be discerned The convolutions of the left cerebral hemisphere were flattened The left temporal and occipital lobes were the seat of an extensive haemorrhage which had ruptured into the lateral ventricle and had spread to the third and right lateral ventricles The thymus was bilobed and weighed 80 grams The tonsils the mediastinal mesenteric and preaortic lymph glands and Peyer's patches were enlarged The other organs appeared normal

Histology

Films made from the blood of the right auricle showed enormous numbers of lymphocytes It is impossible to give even an approximate estimate but in comparison with other cases the number of lymphocytes present would appear to be more than 150 000 per c mm The vast majority of the cells were of the small type large lymphocytes being comparatively few The boy had been dead for fifty eight hours and most of the cell bodies had undergone degeneration and partial solution but even in some of the polymorphs which were extremely scarce the cell bodies were intact Many nuclei especially those of the larger lymphocytes had undergone partial karyolysis

In addition to the presence of well marked perivascular lymphomata there was considerable lymphatic infiltration throughout the lobules of the liver Sections of the kidney showed aggregations of lymphocytes with marked diffuse infiltration throughout the organ The structure of the thymus spleen and lymph glands was indistinguishable being obliterated by the lymphatic hyperplasia In the case of the lymph glands lymphocytes had invaded the capsule and infiltrated the surrounding tissues

COMMENTARY

The blood films and sections point to the diagnosis of chronic lymphatic leukaemia and support the view held by many that even in children these cases are often not seen until late in the disease For how long the boy would have continued to attend school and take part in rough and tumble games if the most unusual complication—cerebral haemorrhage—had not occurred it is impossible to say But it is a fact that he did attend school up to a few days before his death with the disease well advanced and was apparently healthy and vigorous up to December 19th or even later

The almost complete absence of symptoms was a remarkable feature The only symptom was vomiting due most probably to the cerebral haemorrhage but he vomited only six times in six days and on one of these days did not vomit at all The vomiting did not appear to be cerebral in type but had a direct relation to food this was definite on two occasions—December 19th and 24th—and probably also on the 20th and 21st when according to his mother he vomited but attended school. Presumably this vomiting occurred after breakfast and before school time Many cases of leukaemia bruise very readily and the presence of so many bruises on the legs and arms suggests that the case was of that type The unobserving mother her attention focused on the boy only when he vomited ascribed the bruises to maltreatment Fortunately for the master concerned she was specific in her charge— he was caned across the buttocks This statement was corroborated If on the other hand a general charge of maltreatment including say a smack on the head or rough handling in any degree had been preferred the master would in all probability have been confronted with an indictment for felony The difficulties of the defence to a charge of manslaughter in such a case are from a medical standpoint obvious

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

RECURRENCE OF PAPILLOMA OF THE BLADDER TWENTY FIVE YEARS AFTER OPERATION

In May 1907 a man aged 30 years was sent to me at the Royal Victoria Hospital Belfast suffering from haematuria On cystoscopy a villous growth composed of a large number of tentacles could be seen at the left side of the internal urethral orifice The growth did not involve the trigone The bladder was somewhat trabeculated A portion of the growth was washed out by catheter and a microscopical examination showed the typical appearance of a simple papilloma

On July 4th 1907 the bladder was opened suprapubically and a villous tumour about the size of a horse chestnut was removed from its wall a little to the left of the internal meatus The tumour was sessile and was dissected out with an elliptical area of surrounding mucous membrane The resulting wound in the mucous membrane was closed with catgut sutures Convalescence was uneventful and I heard nothing of the patient till he presented himself on January 9th 1933 with a recurrence of haematuria He states that since his operation he had no urinary symptoms whatever until January 3rd 1933 when he noticed dark red blood with clots in his urine Cystoscopy showed a typical sessile papilloma about the size of a hazel nut medial to and posterior to the left ureteral orifice A minute baby papilloma was seen just medial to the main mass Both of these growths were apparently simple The bladder wall elsewhere was healthy except for slight trabeculation The papillomata were destroyed by fulguration

I have called this a recurrence but it may be a new development and quite unconnected with the growth I removed from this man's bladder twenty five and a half years ago The first operation was performed before the discovery by Beer of the value of diathermy in these cases

Belfast. ANDREW FULLERTON

NECATOR SUILLUS AS A HUMAN INFECTION

The occurrence in the pig of hookworms designated *Necator suillus* by Ackert and Payne in 1923 has given rise to several attempts to infect pigs experimentally with the closely related human species *Necator americanus* Although with one exception (cf Goodey 1923) such attempts have not been quite conclusive the general belief is that the pig is not a suitable host for *N. americanus* and therefore not an important factor in the spread of hookworm disease I attempted the converse of these experiments—namely the production of a human infection with *N. suillus*—in Trinidad during the summer of 1932 with a positive result

In order to make a pure culture of infective larvae of *N. suillus* numbers of the adult worms were collected from

pigs slaughtered at the abattoir in Port of Spain and eggs obtained from the female worms were cultured to the infective larval stage in a medium of sterilized pig's faeces and soil The infection was induced cutaneously, the larvae being applied to the forearm in drops of water which were allowed to evaporate Eleven separate applications were made, the majority during August, and averaged about eighty larvae each The first was given on July 29th and the last early in September The number of larvae which entered the skin as indicated by the inflammatory lesions at the points of entry, was estimated at about sixty Hookworm eggs were first noted in the faeces on September 21st, fifty four days after the first application and continued to be passed during the following four months at the end of which time three necators two females and one male were evacuated after treatment with oil of chenopodium These worms were identified as *N suillus*

It may be concluded from this experiment that *N suillus* is a potential human parasite and by virtue of the close association of pigs and human beings in some tropical countries this may be assumed to be an occasional if hitherto unrecorded natural infection in man Owing to the close resemblance between *N suillus* and *N americanus* such infections might easily be overlooked for *N suillus* is readily mistaken by naked eye examination alone for an incompletely grown *N americanus* Microscopical examination of all suspected specimens would be necessary in order to estimate the incidence of *N suillus* in human beings The low infection rate as indicated by this experiment, would appear to suggest however that *N suillus* is not a frequent occurrence in man and that it is probably to be regarded only as an occasional human infection

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ACUTE YELLOW ATROPHY OF THE LIVER FOLLOWING TREATMENT WITH QUINOPHAN

Although treatment with atophan and quinophan is by no means a recent development, acute yellow atrophy of the liver following its exhibition is fortunately uncommon Reah (*Lancet* 1932, ii, 504) mentioned thirty-five cases of this complication, eighteen of which were fatal, and in this series of fatal cases the doses of atophan given before toxic symptoms appeared varied from several thousand grains to 60 Although the dose of quinophan given in the case recorded below exceeds his minimum dose, the rarity of the condition and the small doses carefully given over a long time seem to make this case worthy of record especially when one considers that these synthetic quinoline derivatives are readily purchased on demand in many chemists shops

Case History.—The patient a woman aged 48 had suffered over a long period with chronic rheumatoid arthritis affecting principally the small joints of the hands and feet but also involving the knees and elbows This disease prevented her from working and even sometimes from getting about She had had many different treatments but none had produced more than temporary relief In October, 1932 her medical attendant decided to try the effect of quinophan and she was given twelve tablets of this drug of 5 grains each These she was directed to take as follows two tablets daily for three days one tablet daily for three days omit altogether for a week and then take the remaining tablets one daily With each dose she had a large drink of water During this use of the drug she felt slight nausea which passed off on completing the course and the arthritic symptoms were much improved In December 1932 her pains had become worse again and a second course of quinophan was started This was given in the same amount and doses as before with no immediate ill effect During December she complained of slight indigestion and nausea and one week later vomiting commenced but was slight at first On January 4th 1933 she was first noticed to be jaundiced, but not feeling really ill she did not visit her doctor until January 7th At this time a serious view was not taken of the case and general treatment was prescribed On January 10th, however the jaundice was deeper the vomiting had become intractable and her mental condition was impaired She was admitted to St George's Hospital on January 11th in a semi comatose condition On admission she was deeply jaundiced and physical examination revealed only a mild degree of mitral stenosis some ascites, and an extensor plantar response She was able to take fluids well for a few hours and did not vomit during this time A few hours after admission she rapidly became stuporose, and died in hyperpyrexia fourteen hours later in spite of intravenous infusions of glucose and alkali Her pulmonary condition before death was suggestive of pulmonary oedema but this reacted well to injections of atropine

Post mortem Findings.—There was an extreme degree of atrophy of the liver (weight 24 ounces) showing typical necrotic and haemorrhagic areas The peritoneal cavity contained 2 to 3 pints of straw coloured fluid Most striking also was the presence of innumerable petechial haemorrhages in the omentum and mesentery and beneath the parietal peritoneum In both lungs there was a considerable degree of oedema, with basal collapse, and there were also many subpleural petechiae The heart showed early mitral stenosis with petechiae beneath both pericardial layers also a few subendocardial petechiae The brain showed no haemorrhages but these were present in the fat throughout the body in the skeletal muscles and beneath the gastro-intestinal mucosa but the latter showed no signs of necrosis such as might have been caused by an irritant poison

This case is particularly interesting from the point of view of the doses and time intervals, and also of the extremely rapid progress of toxaemia This rapid effect of the drug was presumably due entirely to idiosyncrasy of the patient, as there was no history suggestive of any previous hepatic damage or insufficiency, while the cardiac lesion did not appear severe enough to have produced alterations in the liver

I am indebted to Dr Anthony Feiling under whose care this patient was while in St George's Hospital and to Dr John Taylor who made the post mortem examination for permission to publish this case

HERBERT C WADGE L R C P, M R C S,
House-physician St George's Hospital

Reports of Societies

DIABETES

At a meeting of the London Jewish Hospital Medical Society, held at Stepney Green on March 9th, with the president Mr HAROLD KISCH, in the chair, a symposium on diabetes took place

In opening, Dr OTTO LEYTON said that it was his duty to indicate the directions which discussion should traverse rather than to record his own observations, experiences, and conclusions He emphasized the fact that hyperglycaemic glycosuria was not necessarily diabetes mellitus, and discussed very briefly five methods of making a diagnosis in mild cases without symptoms The treatment he advocated was insulin as soon as an undoubted diagnosis had been arrived at, along with a diet suited to the individual He considered it a medical impertinence to dictate to the patient the proportions of carbohydrate, protein, and fat in his diet, and that it should rather depend upon the idiosyncrasies of the individual Most cases demanded at least 150 grams of carbohydrate, and many might receive much more with benefit The doses of insulin should be adequate to keep the sugar content of the blood between 0 05 and 0 15 per cent If the patient rested his pancreas in that manner and did not stimulate it by taking alcohol he ran a good chance of being able to cease taking insulin after a few years As regards the effect of infections upon the action of

injected insulin he had found that cases which were well controlled by very frequent injections of insulin were controlled for only a few hours if the same dose of insulin was injected continuously A possible explanation was that the local inflammatory reaction of the needle might destroy the insulin He advised liberal amounts of glucose and heroic doses of insulin in diabetic coma and intravenous injections of saline with great caution Dealing with the site of amputation when diabetic gangrene necessitated the removal of septic tissue he said that he had seen several cases in which Syme's amputations had succeeded when endarteritis obliterans had made a tourniquet quite superfluous none of the vessels being patent

Dr HUGH GAINSBOROUGH said that in the treatment of complications a high carbohydrate diet was preferable for it provided the patient with food which was more in keeping with his natural desires reduced the danger of ketosis and gave incomparably better results With the corresponding insulin dosage this was only a reasonable attempt to bring the disordered sugar metabolism back to a normal level He dealt with the fallacies of the usual food analysis and thought it better to obtain a reasonable accuracy in estimation of carbohydrate intake by providing the bulk of this as bread biscuit and cereals with some root vegetables or legumes the lesser portion to consist of food of more variable composition Protein foods could generally be allowed and standardized at whatever level the patient desired fats however should be quantitatively restricted Insulin requirements with such diets were at first high but in the course of time progressive reduction of insulin dosage became possible Neuritis pruritus dermatitis retinitis and early albuminuria generally showed rapid improvement under such treatment Sepsis and gangrene had lost many of their terrors and in the majority of cases could be treated by conservative methods with excellent results

CLINICAL ASPECTS OF CALCIUM

At a pathological meeting of the Liverpool Medical Institution held on April 6th with the president Dr H R HURTER in the chair Dr R W BROOKFIELD read a paper on The Clinical Significance of Calcium

Dr Brookfield commented on the signal services rendered to clinical medicine and surgery in the last few years by biochemistry and then discussed those aspects of the metabolism of calcium which appeared to be of special importance from the clinical standpoint The known functions of calcium were enumerated the part played by the element in the maintenance of correct ionic balance being particularly stressed The factors controlling the absorption and intermediate metabolism of calcium were next passed in review Absorption of calcium was favoured by an acid reaction of the upper intestinal tract and the presence of bile therein while it was hindered by an excess of phosphorus in the diet and by alkalis The effects of vitamin D ultra violet light and the parathyroid hormone under physiological conditions and in overdosage were briefly described The speaker referred to his own work on the effects of magnesium on the intermediate metabolism of calcium Injection of a magnesium salt caused a prompt lowering of the serum calcium and in rabbits he had found a distinct inverse relation between the magnesium and calcium of the serum when the figures for the two elements were followed from day to day The bearing of various physiological considerations on the successful treatment of states showing disorder of the metabolism of calcium was next pointed out Calcium would be best absorbed in the interdigestive period when the reaction of the upper intestinal tract was slightly acid Its availability to the tissues was favoured by the simultaneous exhibition of ammonium chloride The merits and demerits of various calcium salts were discussed Calcium gluconate and calcium laevulinate were commended because of their solubility and freedom from irritant effects when given either by mouth or subcutaneously The need of giving calcium in adequate doses was stressed many failures to produce the effects desired being attributable to the small doses employed The usefulness of the parathyroid hormone was strictly limited because while it raised the serum calcium it did so at the expense of the calcium reserves in the skeleton In the final section of his paper Dr Brookfield dealt briefly with the more important pathological states in which an abnormality of the metabolism of calcium had either been proved or assumed Rickets tetany renal rickets and chronic parenchymatous nephritis were referred to in turn Two conditions characterized by hypercalcaemia—osteitis fibrosa cystica and insolation—were discussed the significance of the latter in the formation of urinary calculi being mentioned The effects of calcium therapy in those diseases where evidence of abnormality of calcium was less definite were examined In the hands of some clinicians calcium had proved of value in the treatment of inflammatory and other effusions allergic conditions and chilblains In jaundice calcium appeared to be of definite value in minimizing bleeding at operation and work by Minot and Cutler on acute yellow atrophy produced by carbon tetrachloride indicated that intensive calcium therapy was likely to find an extremely useful field in toxic hepatic disorders generally Calcium though no cure all might be regarded as a useful remedy which would produce effective results in those conditions where there was a definite indication for its use

Dr G GRAHAM MACPHEE commented on the diagrams shown of the relation of phosphorus to calcium indicating that high blood phosphorus caused low blood calcium and he asked whether a low blood phosphorus caused a high blood calcium (Dr Brookfield replied that the converse did not hold good) Dr Macphee then cited the recent work of Kay and Guyat of Toronto They found that rats fed on a McCollom stock diet which did not cause rickets could be made to develop rickets by the simple addition of beryllium carbonate to the diet The addition of beryllium phosphate did not cause rickets Their explanation of the production of this so-called beryllium rickets by giving the carbonate and not the phosphate was that the phosphate was an insoluble salt and was excreted unchanged from the bowel whereas beryllium carbonate was converted into beryllium phosphate thereby using up some of the animal's store of phosphorus and upsetting the phosphorus–calcium ratio with the result that rickets ensued The fact that no beryllium was found to be stored in the animal's bones or body supported this The question arose whether phosphorus was not the chief regulator in calcium metabolism

Dr C ALLAN BIRCH said that although many clinical pictures were associated with a low serum calcium it was a striking fact that so far only two conditions—hyperparathyroidism and excessive ultra violet radiation—were known to have a high serum calcium In these conditions the high serum calcium was not itself responsible for the disease and Dr Birch inquired if there was any syndrome known which could be ascribed to a hypercalcaemia itself Dr R H MOLE emphasized the close relation of the endocrine glands to the metabolism of phosphorus and calcium instancing the mobilization of calcium by parathyroid hormone the rarefaction of bone due to thyroid hormone in exophthalmic goitre and the diminution of blood phosphorus with rise of blood calcium due to insulin injections Dr EDNA MAWSON said that recent experimental work on hypervitaminosis D suggested that although overdoses of vitamin D might raise the blood calcium other factors were concerned in the production of calcium phosphate calculi in the genito-urinary tract Certain investigators had recorded that they were unable to produce calculi by feeding rats on large quantities of irradiated ergosterol if the diet contained vitamin A A little milk added to the diet daily would prevent their formation Dr Mawson said that this might cast some light on the geographical distribution of stone In the East where calcium phosphate calculi were common among badly fed native children they were almost unknown among well fed European children exposed to similar climatic conditions

Reviews

ANKYLOSTOMIASIS

Having had more than four years' experience of ankylostomiasis in the mining districts of Roche-la-Molière and Firminy in the basin of the Loire, Drs GARIN, ROUSSET, and GONTHIER have written a book[1] in the hope that it will be of assistance to others who may have this disease to contend with. The book, which is divided into three parts, is a complete treatise on the subject. The first part describes the worm in all stages of its development and life-history, its biological characteristics, and the methods of infection; the second part deals with the disease itself, its pathology, symptomatology, diagnosis, and treatment; while the third gives an account of the prophylactic measures which in the authors' hands have produced the best results.

The book is well illustrated, and contains numerous drawings and photographs of the eggs, larvae, and adults of *Ankylostoma duodenale*, *Necator americanus*, and other helminths. Pictures and plans of the clinics where diagnosis and treatment are carried out are also included. The fact that such special clinics are necessary is in itself an indication of the seriousness of the infection amongst the miners. Though the percentage of individuals infected may be high, many of these are healthy carriers, and it is only those with heavy infections who show signs of anæmia and are actually ill. These severe cases show over 200 eggs in a single preparation of concentrated faeces, a red blood count of under three millions, and a haemoglobin index of below 50 per cent. If these severe cases are identified by periodical surveys and faecal examinations, and are then treated, it is remarkable how rapidly the sickness rate due to ankylostomiasis diminishes. In actual practice this method of dealing with the more serious cases and leaving the healthy carriers alone has proved highly satisfactory. In addition, however, it is advised that steps be taken to prevent as far as possible pollution of the mines. The infection occurs almost entirely among those whose duties take them into the mines themselves. Cases occur but rarely amongst the surface workers. For treatment the authors prefer thymol or the more recently introduced tetrachlorethylene to carbon tetrachloride, which they regard as being too toxic and uncertain in action.

This is essentially a practical book. It gives all the necessary details for carrying out the various measures recommended. It will undoubtedly prove of value to all those who undertake the duty of controlling the disease among labour gangs or groups of workers who can be subjected to a certain degree of discipline.

OPERATIVE SURGERY

A new textbook of *Operative Surgery*[2] has been written by Mr ALEXANDER MILES and Professor D. P. D. WILKIE replacing the authors' book on the same subject, which was a companion volume to their manual of surgery. Within the compass of some six hundred pages the whole field of operative technique is covered, with a view to meeting the requirements of those who are learning its practice. There are, however, no signs of undue compression; this has been obviated by omitting procedures of only historic interest and describing typical improvements in present use. A large number of writers have again been [illegible] Professor John Fraser and Mr Henry Wade, and the list, in fact, includes the greater number of the surgical staff, senior and assistant, of the Edinburgh Royal Infirmary and of the municipal hospitals. Those who are acquainted with the Edinburgh surgical school will expect a discriminating production and one of high teaching value, and the expectation is fulfilled. The sections on regional surgery, notable among which are articles by Mr Norman Dott on the brain and spinal cord, are each prefaced by anatomical paragraphs in which the Basel nomenclature is used. The uniformity of the sections is remarkable in a volume to which so many have contributed, and is a testimony to skilful planning. The authors have been well served by those who have been responsible for the illustrations, and the acknowledgement of this in the preface is well merited.

The book commences with vascular surgery, and after a short article on the lymph glands the surgery of the peripheral nerves is described, including procedures which concern the autonomic system. Orthopædic operations occupy four chapters, and an article on repair and one on amputations complete the general part. The anatomical paragraphs introducing the essays on brain and spinal cord are notably valuable. The manner in which space has been conserved is illustrated by the fact that only Langenbeck's method for the treatment of cleft palate is described, in most other textbooks of our acquaintance space is devoted to other procedures seldom practised. The same remark applies to the section on tongue operations, and also elsewhere. The article on the thyroid gland is a particular example of a short but adequate essay full of practical points. Abdominal surgery is prefaced by a general article on technique, preparation, complications, and after-treatment, following which the visceral operations are considered in turn, the illustrations here are particularly good. The selection of the methods described gives the reader an impression of the wide experience which lies behind it. Following an admirable little article on splenectomy come those on the genito-urinary system. They are notable for an adequate description of after-treatment and of minor details of technique, in these respects they compare favourably with some larger treatises. Gynæcological operations are not included.

The volume as a whole is a reliable guide book for the surgeon who is learning his art, and well represents the stage which it has reached to-day.

FIRST LINES ON RADIUM THERAPY

Miss CLEPHAN and Mrs HILL are to be congratulated upon their *Elementary Handbook on Radium and Its Clinical Use*.[3] Too often books about radium show a lamentable ignorance of the fundamental principles of the subject. This one, however, is clear, concise, comprehensive, and authoritative. As the authors state in their preface, it was originally designed at the suggestion of Professor Russ for the use of technical assistants and nurses working in radium departments. Perhaps it has as its writers observe, somewhat outgrown its originally intended limit, but technical workers in radium departments form a class of the community from whom much is required. At the present time, when the radium treatment of malignant disease is so much to the fore, it is essential that every medical practitioner should have some elementary acquaintance with the subject. Doubtless he has no intention of entering upon radium therapy himself, but it is necessary that when consulted by patients he should at any rate be acquainted with an outline of what such treatment will involve.

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[1] *Ankylostomiase*. By Garin, J. Rousset, et B. Gonthier. Paris: Masson et Cie. 1932. (Pp. 128. 56 figures. 36 fr.)

[2] *Operative Surgery*. By Alexander Miles, M.D., LL.D., F.R.C.S., and D. P. D. Wilkie, M.D., F.R.C.S. London: H. Milford, Oxford University Press. 1933. (Pp. 590. 321 figures. 21s. net.)

[3] *An Elementary Handbook on Radium and its Clinical Use*. By D. F. Clephan and H. M. Hill. London: H. Milford, Oxford University Press. 1933. (Pp. 164. 16 figures. 7s. 6d. net.)

The brief physical introduction occupies only twenty five pages the rest of the book deals with the different aspects of the clinical problems which have to be considered Practical points in the use and care of radium and radon the fundamental principles of radium therapy and the methods of application are all reviewed in detail before a general outline of the radium treatment of malignant disease in different situations is dealt with Of especial value are the excellent bibliographies given with most of the chapters From time to time present and past workers in the Barnato-Joel Laboratories of the Middlesex Hospital have contributed works of standard importance to the subject of x rays and radium This little book is a worthy addition to the number

FUNCTIONAL NERVOUS DISEASES

The detailed management and successful treatment of patients suffering from conditions to which such terms as asthenia and neurasthenia are applied have engaged many students and many writers and the recently published fourth edition of *Les Maladies de l Énergie*[4] by MM A DESCHAMPS and J VINCHON deserves a high place in the list of contributions made to these subjects One of its most valuable features is the attention which it pays to treatment in the widest sense of this term The whole field is covered and the discussion is a reasoned not an arbitrary one Moreover every method is described in relation to the circumstances it is intended to meet and is presented with all the details necessary for its application Even had the book no other qualification it could confidently be recommended as a valuable practical guide to the art of therapeutics in a peculiarly difficult field of medical treatment Not that there is any suggestion of short cuts to success or of empirical certainty On the contrary the way is recognized often to be long and tedious and the physician who would lead his patient to a happy issue must equip himself not only with medicines and methods but also with personal qualities of which patience is not the least In short a special feature of all the chapters on treatment is that they express themselves in precise and detailed terms and leave to the reader neither hesitation nor uncertainty

The earlier part of the book is concerned with definition and description and it includes and sums up a long series of personal studies dealing with such questions as aetiology pathogeny clinical features and diagnosis not omitting an Introduction where some philosophical relations come to the surface The reader cannot fail to appreciate the note of sincerity and of earnestness which marks all the chapters while the composition and style display the engaging qualities which we associate with writings that come to us from our French colleagues The book well deserves the attention and gratitude of the many practitioners who desire to deal successfully with the classes of patients discussed in its pages

PIONEERS OF ANALYTICAL CHEMISTRY

Fifty Years of the Society of Public Analysts[5] describes the men by whom the society was formed and those who afterwards took a prominent part in its development and its proceedings The part relating to the men themselves is written by Dr BERNARD DYER while Dr AINSWORTH MITCHELL contributes an account of the society s activities Dyer we think must be one of the last of the group who took part in the foundation of the society and is perhaps the only one remaining who has yet enough energy to record its history Nothing could have been more fortunate than that this story of men notable in analytical chemistry should have been written while their memory is still fresh in the mind of one who knew them Dyer s story is full of human interest There are probably few students of chemistry who do not know the name of Newlands and of his discovery of the periodic law of the elements as well as the derision with which his thesis was first received One of the contributors to the discussion that followed the reading of Newlands s paper inquired ironically whether Newlands had tried the effect of a grouping founded on an arrangement of the elements in alphabetical order! But there are not many who know that Newlands had served as a volunteer in his younger days with Garibaldi s army and that he was a convivial companion at the social gatherings of the founders of the society Wanklyn loses none of the respect of the succeeding generation from the story of his readiness to quarrel with those with whom he came into contact and of how his disapproval of Frankland s methods of water analysis found expression in an implacable hostility to Frankland himself Dyer claims as being unique the record that he himself retained Wanklyn s friendship without a bickering to the last

Of the men who took part in the society s early activities there were many whose names are still familiar to the present generation in consequence of the lasting fame of their work Such are Redwood Hassall Stevenson Allen and Dupré to mention only a few of the notable men of the period Others are also introduced like Letheby and Tidy who were not members of the society Much of interest connected with the human side of these men is described along with an account of their individual contributions to analytical exploration Links with the older analysts are also found among eminent men of the present time Sir F Gowland Hopkins professor of biochemistry at Cambridge is one who was formerly an assistant of Stevenson In the second part of the volume Mitchell describes the work of the society and its influence on contemporary practices of adulteration Mitchell has adopted the plan of giving the history in sections one decade at a time and of summarizing the matters of importance under headings which include kindred subject matters Thus under such titles as tea water rubber etc are accounts of legislation of decisions of courts of law on cases of alleged adulteration of new analytical methods and of the occurrence of spurious varieties of the commodities

SYPHILOLOGY

Clinical Studies in Syphilology[6] by Dr E SCHOLTZ consists of a collection of fifteen articles or monographs on a diversity of subjects connected with syphilis They vary—not to mention them all categorically—from the importance of the patient s history in the diagnosis and prognosis of his disease to pruritus and syphilis and from chancreless syphilis to criteria of cure While admitting the importance of the history the author quotes the old adage *omnis mendax syphiliticus* and reminds his readers that many of these patients avoid the family doctor He points out that an infected person may transmit the disease before the appearance of the chancre and quotes several authorities for this Syphilis of the nervous system without changes in the cerebro-spinal fluid is a difficult problem perhaps the explanation lies in a primary affection of the parenchyma Asthenia of syphilis is apparently often due to involvement of the various ductless glands

[4] *Les Maladies de l Énergie* Par A Deschamps et J Vinchon Les Asthenies et la Neurasthénie Quatrième edition Paris Felix Alcan 1932. (Pp 423 40 fr)

[5] *The Society of Public Analysts and other Analytical Chemists* By Bernard Dyer D Sc F I C and C Ainsworth Mitchell M A D Sc F I C Also called *Fifty Years of the Society of Public Analysts* Cambridge W Heffer and Sons, Ltd. 1932. (Pp 278 6 figures 12s 6d net)

[6] *Études Cliniques de Syphiligraphie* Par E Scholtzmann. Préface du Dr A Sezary Paris Masson et Cie. 1932. (Pp 290 18 figures 40 fr)

especially suprarenals and thyroid, but may be caused by bismuth therapy How many gastric ulcers are of syphilitic origin? We gather that the author thinks quite a large proportion Serological syphilis, herpes and syphilis, and natural immunity in syphilis all receive attention, and myxoedema is said to be caused frequently by this disease The difficult problem of tuberculosis and syphilis and the effect each may have on the other is discussed at length , French opinion would appear to place more importance on their interrelation than English

This is a book for the expert rather than for the general practitioner Most of the subjects are of great interest, and the diverse views are well discussed and documented Much of the subject-matter is very debatable, but at least it should impart new ideas and give the reader food for thought References are numerous, but mainly to French authors

Notes on Books

On the lighter side we may welcome the recent edition of *Living Machinery*,[7] by Professor A V HILL It is by no means so mechanistic in conception or treatment is its title—which was evidently intended to catch the eye—would lead one to suppose It is, in fact, a popular account of the physiological work which Professor Hill has from time to time been himself engaged upon, and very readable it is too The material was ready to hand in the form of six lectures which were delivered at the Royal Institution in or about 1926 Though strongly personal in treatment, there is much of value in it, particularly on the more purely physical side, in which the author is an acknowledged authority The account of various athletic performances is one of the most attractive features of the book The illustrations, many of them in the form of plates, are well executed, and the book is not devoid of humour—often unconscious It would make a suitable present for an intelligent adolescent, and could be perused with profit by physiologists, if only to show them how interesting their subject can be made

The fifteenth edition of *Piersol's Normal Histology*[8] has now appeared In its preparation Professor W H F ADDISON of the University of Pennsylvania has endeavoured to proceed still further with his attempt in previous editions to supply sufficiently detailed descriptions of the normal human tissues to serve as a good basis for the study of morbid histology Special attention has again been devoted to those organs which are most frequently of importance at necropsies, and emphasis is laid upon their more characteristic histological features In this respect the number and high quality of the illustrations can be particularly commended The parts of the book relating to nerve endings, glands, the biliary passages the epithelium of the male urethra, and cyclic changes in the endometrium have been rewritten, and a number of new drawings and photographs have been included Another improvement is the revision of the description of practical lines for investigation of living cells recent advances in the technique being recorded in the appendix while the results thus obtained are detailed in the appropriate parts of the body of the volume

In a pamphlet of forty two pages on the Hygiene of the Foot[9] Professor F SCHEDE of Leipzig expresses the opinion that flat-foot and all other weaknesses of the lower extremity are only part of an affection of the general muscular system and, with other postural defects, are to be corrected more by general than by local means Not only are faulty habits of standing to blame for causing malpositions and malformations in children, but also bad sitting postures have their evil effects In the schoolroom the child's feet must not be allowed to dangle and so become congested, but they should be properly supported The air and illumination of the school play their parts, either good or bad, in preventing or causing a vicious circle Professor Schede is an enthusiastic advocate of hygienic footwear, recognizing however, the fact that civilization does not allow of ideal treatment of the feet and legs, and pleading for as much freedom from the restraint of hard or ill-shaped shoes and exposure to fresh air and sunlight as possible This pamphlet is more concerned with statements of general principles than with details of curative measures but it contains several lists of the kind of exercises which the author has found of use

A series of French monographs, published by Masson et Cie of Paris under the general title of 'Practical Medicine and Surgery," has been appearing since 1926, and four recent additions represent a variety of interest Dr R GOIFFON writes on the Clinical Study of Acid Base Regulation by Analysis of Urine,[10] Drs F RAMOND and J DIMITRESCO-POPOVICI on Aerophagy,[11] Drs M CHIRAY and R STIEFFEL on Constipation,[12] and Drs D and J OLMER on that curious exanthematous fever met with on the shores of the Mediterranean which has similarities with typhus and Brill's disease, which they called fievre boutonneuse [13] Of these books the second is the best, since the subject lends itself to the simple monograph form, and the malady has been specially studied by French workers

[7] *Living Machinery* By A V Hill M A , D Sc F R S Bell's Popular Science Series London G Bell and Sons Ltd 1933 (Pp x + 256 24 plates 50 figures 4s 6d net.)

[8] *Piersol's Normal Histology* By W H F Addison B A M D Fifteenth edition Special reference to the structure of the human body Philadelphia and London J B Lippincott Company (Pp 478 435 figures 43 being in colour 25s net)

[9] *Hygiene des Fusses* Von Professor Dr F Schede Leipzig G Thieme 1933 (Pp 42 M 1 50)

[10] *Exploration Clinique de l'Equilibre Acide Base par l'Analyse d'Urine* Par R Goiffon (Collection medecine de chirurgie pratiques No 53) (16 fr)

[11] *L'Aerophagie et son Traitement* Par F Ramond et J Dimitresco-Popovici, avec la collaboration de H Dary (No 58) (17 fr)

[12] *Les Constipations* Par M Chiray et R Stieffel (No 59) (20 fr)

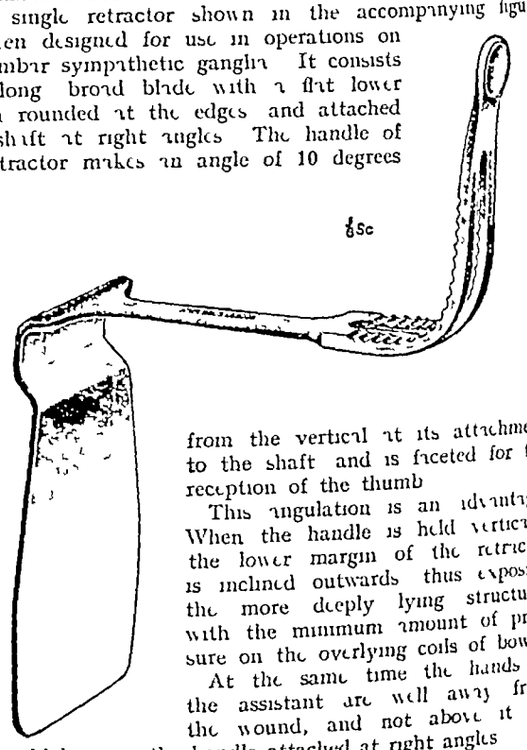
[13] *Fievre Boutonneuse* Par D et J Olmer (No 57) (17 fr)

Preparations and Appliances

ABDOMINAL RETRACTOR

Mr RALPH BROOKE M S F R C S (Worthing) writes

The single retractor shown in the accompanying figure has been designed for use in operations on the lumbar sympathetic ganglia It consists of a long broad blade with a flat lower margin rounded at the edges and attached to a shaft at right angles The handle of the retractor makes an angle of 10 degrees



from the vertical at its attachment to the shaft and is faceted for the reception of the thumb

This angulation is an advantage When the handle is held vertically the lower margin of the retractor is inclined outwards thus exposing the more deeply lying structures with the minimum amount of pressure on the overlying coils of bowel

At the same time the hands of the assistant are well away from the wound, and not above it as they would be were the handle attached at right angles

The instrument has been made to my design by Messrs Down Bros Ltd , St Thomas's Street, S E 1

British Medical Journal

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DIET AND ANAEMIA

It is established that anaemia can be produced in young animals such as rats and pigs by a diet consisting mainly of milk. It has also been shown that a similarly preventable type of hypochromic anaemia may be present in infants of the poorer classes fed over prolonged periods on cow's milk, and that both these forms of nutritional anaemia are prevented when iron with traces of copper is added to the milk. The striking curative effect of liver and of certain other viscera in pernicious anaemia further demonstrates the relation between diet and blood formation. In the one group of anaemias iron deficiency is directly responsible, whereas in the other some other food principle necessary for blood formation is missing.

These facts have led many to the belief that faulty feeding may be an important aetiological factor in anaemia, and especially that inadequate diet is responsible for those forms of this disease which are prevalent among the poorer classes. But these are merely suppositions, at least in so far as iron deficiency anaemias are concerned, and an article appearing in the opening pages of our present issue shows as a matter of fact that the range through which the diet may vary in iron content without causing anaemia is much wider than had been supposed, and that factors of an entirely different type are mainly responsible for anaemia among the poorer classes. This article is contributed by a team composed of physicians and nutrition experts, the former attached to the medical school of the University of Aberdeen and the latter to the Rowett Institute for Research in Animal Nutrition. The patients were of the poorest classes, ineligible under the national health insurance system for medical care, and most of them from families in which the wage earner was unemployed. Six hundred persons were submitted to clinical and haematological investigation. Of these 455 were women and 45 men, the remaining 100 being children belonging to the same families and chosen so that about one-half of them came from families in which the mother was anaemic. Most of the adults examined were persons acting as escorts to those seeking medical advice and had not come to the dispensary seeking medical aid. They constituted therefore a fair cross-section of the poorer working classes, and from each of them a blood specimen and a clinical history was obtained, which in the case of women gave details as to menstruation, pregnancy and parturition. These observations were supplemented by others of a more general character carried out on 650 school children of the working classes in Peterhead.

The amounts of food entering the homes of about fifty of the families in Aberdeen were ascertained—half of them having some member suffering from anaemia—and from accurate analyses of the food used the total consumption per diem of each individual with regard to energy value, proteins, fats and carbohydrates, and iron, calcium, phosphorus and copper was computed. A similar survey of sixty-six families in Peterhead was also carried out. It is interesting here to note that in a dietetic survey on corresponding lines conducted in 1926–7 in the same cities by the Rowett Institute the values for all the above constituents were found to be higher than at present, showing that with increase in industrial depression the dietaries of the poorer classes have become definitely worse. But the most important result in the present investigation is that the average diet of the families having cases of anaemia is practically identical with those having no such cases. Both diets are poor in every respect, the iron content being often far below the usually accepted standard for this mineral (15 mg.) and there is no correlation between the diet and the incidence of anaemia, the lowest intake of iron per head per day was found in the case of four families in which there was no anaemia. These findings do not necessarily mean however that diet is not a factor in the aetiology of anaemia. It is indeed a factor, but not by any means the only one, and it is shown in the present investigation that the great majority of the anaemia cases were among women in whom the demands for iron had become magnified because of frequent pregnancies or excessive blood loss during menstruation and at parturition. Thus in a group of 750 children and 45 adult males anaemia was practically absent, whereas in a group of 455 adult females it was present in about half the cases. That this anaemia is due to iron deficiency is abundantly clear from the dramatic effects which are produced by the treatment of the individuals with large doses of iron and ammonium citrate without any alteration of the diet. The diet therefore was a minimal one and not an optimal one in so far as its blood forming powers were concerned.

It is imagined by some that in the investigation of disease nowadays elaborate biochemical and bacteriological analyses are essential. The present investigation clearly shows that this is not the case, and that what is needed is team work by groups of individuals each taking his share in a carefully planned scheme and each thoroughly conversant with the purpose of the whole inquiry. The ideal conditions for investigations of this character are abundantly provided in such a university centre as Aberdeen where those working in the hospitals and dispensaries have at their disposal if they go about things in the right way the advice and assistance of their colleagues in the scientific departments of the University and in neighbouring research institutes. The close collaboration between a group of physicians working among hospital and dispensary patients and a laboratory specializing in the study of problems and animal nutrition such as the Rowett Institute under the general guidance of the head of the department of medicine in the University has

in this particular investigation, yielded results of unquestioned importance They indicate how the diet of the poorer classes should be supplemented to prevent anaemia, and they also demonstrate how problems in the aetiology of disease should be investigated

TREATMENT OF SYPHILIS BY ARTIFICIAL PYREXIA

Experiments that indicate the possibility of inducing and controlling artificial pyrexia for the treatment of syphilis by means of irradiation with short radio waves have been discussed recently in a series of papers by Messrs Carpenter, Boak, and Warren [1] Should this method of inducing fever prove to be both safe and easy of control it will be of the greatest interest to the physician Artificial pyrexia is often used as a therapeutic measure, though the methods leave much to be desired from the point of view of control and of the safety and comfort of the patient During the last few years a considerable amount of work has been done on the use of high-frequency oscillations for attaining the required degree of pyrexia this work has been surveyed by Szymanowski and Hicks [2] A paper by J C McLennan and A C Burton on selective heating by short radio waves and its application to electrotherapy[3] describes experiments in which they showed that by using suitable wave-lengths the rise in temperature was considerably greater in some tissues than in others For example, at a wave-length of twenty-five metres the temperature of the yolk of an egg rose from 27° C to 48° C , whereas that of the white only rose to 42° C They also found differences in the case of the heart and liver and in the different parts of the chick embryo

Whether the lethal effect on living micro-organisms is merely the result of a rise in temperature of the host, or whether it is due to some molecular change within the micro-organism itself, is naturally of great theoretical and practical interest Szymanowski and Hicks[2] conclude that on the evidence so far available it is not possible to say whether the result is due to the rise in temperature, to some other action, or to both It appears that bacterial toxin, although the temperature of the solution is not allowed to rise, is attenuated when placed within the high-frequency field these results certainly suggest that some direct molecular effect may be produced Carpenter, Boak, and Warren have conducted a careful series of experiments designed to test the effect of the irradiation on normal rabbits and on rabbits infected with *T pallidum* They have also investigated *in vitro* thermal death time of *T pallidum*, using extracts testicular lesions in rabbits In the case of on of normal rabbits they find that repeated body temperature by this method is a safe temperatures greater than those within " physiological limits " are not employed They found no injurious effect on growth, mating, fertilization, or on the development of the young *in utero* The most interesting paper of their series is that dealing with the effect of irradiation on lesions caused by *T pallidum in vivo* Rabbits were used for these tests, some thirty seven being infected with *T pallidum* , about half of these were kept as controls and not treated The presence or absence of infection was determined by the injection into normal rabbits of extracts prepared from the testes and popliteal lymph nodes of the animals under test The animals were exposed in a wooden box in the electrostatic field of a high-frequency oscillator operating at a frequency of 10,000 kilocycles (thirty metres) The following experimental findings are reported Multiple unsustained fevers (41–42° C about twenty exposures, totalling seventeen to sixty six hours) destroyed *T pallidum* in rabbits with active syphilitic lesions, but one continuous febrile period of six hours was also effective The infection in the control series of animals persisted as long as 395 days after inoculation, and it was found that the time interval between inoculation and fever treatment, or between the end of fever treatment and reinoculation, did not affect the results The treatment was effective at any stage of experimental syphilis in rabbits

It is to be hoped that work on corresponding lines will be continued by these and other investigators Here is a field which may well develop to one of great practical importance, and it is a good example of the growing tendency for the physicist, biologist, and physician to co-operate

SOCIAL PROBLEMS IN BELGIUM

Perhaps the most complete and effective survey, within relatively small compass, of the social conditions in any country is that contained in a report entitled *La Belgique Sociale*, by Dr René Sand [1] It is in many respects a remarkable document Comprehensive and authoritative, up to date in its facts , clear, orderly, and logical in its exposition , sane, practical, wise in its conclusions , easy, smooth, vivid in its style and language by these qualities alone, and without any striving after eloquence, it transforms a purely intellectual presentation into a very powerful emotional appeal It should not only have a beneficial influence in Belgium itself, but should prove of interest and value to all English readers who have any concern with public health, with medico-sociology, or with social welfare in general The subtitle is " An inventory and a plan of action," and both are admirably provided Belgium, like England, is a country with a population of great density and largely industrialized Though it entered the industrial field later than this country, and has lagged even further behind in adjusting itself to, and making provision for, the change of social conditions thereby brought about, the problems presented and the

[2] and Warren *Journ Lab Med* 1932 lvi 5
[2] and Hicks R V *Journ Infect Dis*
[3] *Canadian Journ Research*, 1931, v 550

[1] *La Belgique Sociale* Par Dr René Sand Avec une preface de Professeur Ernest Mahaim 1933 Office de Publicite J Lebegue et Cie, 36 Rue Neuve, Bruxelles

general plan of action required are almost identical in the two countries though happily in Great Britain we have already advanced some considerable distance towards carrying that plan into effect

After a most instructive survey of the population of Belgium and its economic and social conditions Dr Sand gives an outline of the social and sanitary development of the country during the past century Then follow three chapters on public health organization (including housing and town planning food supervision infectious diseases mental disorders alcoholism and drug addiction maternity and child welfare and physical education) on social and industrial insurance (including workmen's compensation occupational diseases old age and widows' pensions sickness and unemployment insurance factory inspection and family allowances) and on public assistance (including the Poor Law provision and child protection) Conclusions as to the needs demonstrated and the action required in relation to these several fields are given in the respective chapters but there is a final chapter dealing with the situation more widely and urging the co-ordination or unification of all these social and health services under a single Ministerial department

Apart from the fascination of the whole picture or theme isolated items of interest can be culled from a great many of the pages As mere examples we may note a few in passing The Flemish population is growing more rapidly than the Walloon Examination for the Army shows that 38 per cent of the young male population are unfit for service and from this and other factors it is reasonable to calculate that 50 per cent of the whole population are physically or mentally below par It was not until 1914 that elementary education was made compulsory and even to-day school medical inspection is non existent or negligible in half the communes of the country Belgium and the United States are the only industrial nations which have not yet instituted a system of compulsory health insurance In this connexion Dr Sand's whole argument in favour of the establishment of such a system is very powerful and may be commended to the consideration of the medical profession not only in this country but more particularly just now in America This part of the book and that on the arrangements for public assistance and the reform of the Poor Law with regard to institutional provision and domiciliary attendance contain many observations very apposite here and the attention of those interested in family allowances may be drawn to the two pages in which a succinct and clear description is given of the Belgian scheme for a social provision which we do not favour Finally as an example of parallelism we may quote what is said in respect to the voluntary system of insurance through friendly societies Il en reste trop souvent a cette médecine rapide élémentaire palliative dont on a dit qu elle était une consolation plus qu un traitement Sollicité par ses clients le médecin manque parfois de rigueur dans ses certificats aussi voit-on les journées de chômage payées se multiplier les dimanches et atteindre les jours de fete locale des proportions fantastiques And in view of similar pronouncements in the *Journal* the following sentence is noteworthy

Curatif préventif et constructif à la fois le service social actuel a pour objet de restituer ou de garantir a tous des conditions d existence favorables permettant le plein développement de la personnalite

CONSULTANTS AND THE L.C.C.

At the request of a general meeting of London consultants and specialists held on April 11th [1] and of the Metropolitan Counties Branch Council of the British Medical Association the Council of the Association on April 12th decided to intervene in the dispute between the London County Council and the consultants As will be seen from the report of the Council meeting published in our *Supplement* this week (p 142) a special committee (consisting of the Chairman of Council Dr C O Hawthorne Sir Ewen Maclean and Mr H S Souttar) was set up with power to act on behalf of the Council On the instructions of the Council a letter was sent to the chairman of the Central Public Health Committee of the London County Council expressing the hope that the L C C would give further consideration to the matter and in spite of misunderstandings would accept the offer of a friendly conference through suitably appointed representatives with the view to a solution which would ensure the widest possible field of applicants to fill positions in the service and the greatest efficiency of the service for the benefit of those whom it is established to serve

RESUSCITATION OF THE NEWBORN

While many advances have been made in recent times in regard to the physiology of respiration there is little sign of their being applied to displace the time honoured warm and cold baths ineffective attempts at suction and post-natal spanking which comprise the usual methods adopted to stimulate a newborn baby's respiration In a valuable paper [2] Dr W E Brown has recently set out three important physiological facts which have a bearing on the problem and he shows also how they may be applied to the resuscitation of the asphyxiated infant In the first place he explains how expansion of the lungs after birth is a slow rather than a sudden process and how persistence of atelectasis may lead to a certain amount of resistance to respiration with serious consequences The first of these is a decrease in the oxygen tension and increase in the carbon dioxide tension in the lungs The respiratory centre is stimulated and a period of hyperventilation results with washing out of carbon dioxide and a great lowering of its tension in the alveoli Periods of apnoea occur even when the normal carbon dioxide tension in the blood may fail to stimulate the respiratory centre which has become adjusted to the increased tension The second fact of importance is that with a lowered carbon dioxide tension in the blood the dissociation curve for oxyhaemoglobin reaches a low level so that although cyanosis may decrease a state of tissue anoxaemia may develop The third point is in connexion with the Hering-Breuer reflex which indicates that distension of the lungs appears to

[1] *British Medical Journal* April 15th p 683
[2] *Canadian Med Assoc Journ* February 1933

stimulate expiration and deflation to stimulate inspiration That is to say, positive-pressure rhythmic insufflation through the trachea is of much greater value in resuscitation than any form of manipulation applied to the chest wall Dr Brown then proceeds to consider the modern methods available in the light of these facts He thinks the Drinker apparatus too costly and elaborate, it fails to give a high carbon dioxide content in the inspired air, and it does not help in producing a rapid opening up of the alveoli The use of a mask and appropriate mixtures of oxygen and carbon dioxide is more suitable, but it, also, fails to secure patency of the respiratory passages For asphyxiated babies who breathe badly, with long intervals of apnoea, he urges the prompt use of a tracheal tube to aspirate the trachea, followed by the administration of suitable oxygen and carbon dioxide mixtures under measured pressure to overcome the atelectasis This should be continued until the respiratory centre is sufficiently stimulated to take up its normal function The ordinary mild type of gasping respiration in a baby with good muscle tone can, in Dr Brown's opinion, usually be turned into normal breathing by external stimulation, followed by the administration of oxygen and carbon dioxide mixtures through a mask The struggling and crying attendant upon such procedures probably soon overcomes the atelectasis The more severe types, including perhaps the curious and rare form described by Still[1] under the heading of arrested respiration in the newly born, will require the more elaborate measures outlined above Dr Brown thinks that this department of obstetrics should be looked after by the anaesthetists, since "they are eminently qualified to be of immeasurable assistance to the obstetrician in cases of failure of respiration of the newborn"

QUICKER SLUM CLEARANCE

In some areas remarkable advances have been made in clearing bad tenement houses and re-establishing their occupants in modern flats This is a matter which has been dear to the heart of the Ministry of Health for many years, and it has constantly urged local authorities to proceed The efforts in St Pancras are a lesson to the whole country of what can be done when people of good will get together Those who remember the horrors of Somers Town ten or twenty years ago can hardly believe their eyes when they see the pleasant-looking grey blocks that have sprung from the ashes of hideous tumble-down hovels Yet the association which has wrought the change is actually paying a reasonable interest on the money put forward, and the inhabitants of the new buildings have not found the rents increased beyond their ability to pay Other districts are not so fortunate, however, and the Ministry has just issued an official circular to local authorities urging on them a concerted effort, together with the Central Government, to insure a speedier end to the slum evil This circular maintains that the slum problem is strictly limited and that the time and cost required for its solution can be measured, and, further, that indirect influences cannot be relied upon to solve it The Minister trusts that local authorities will prepare a definite schedule of work to be completed within a fixed time, and hopes to receive a programme from every one of them before the end of September next He points out that there can be few, if any, towns and villages where some urgent action under the 1930 Act is not called for He asks for a list of the areas in which clearance is necessary, together with the number of houses to be demolished in each and the number of inhabitants thus rendered homeless, for similar information about the areas where improvement is desirable, and for time-tables for the work of clearance and the work of co-ordinated rehousing London, he says, stands by itself, and the time needed will necessarily be greater, but he hopes that the metropolitan borough councils will confer with the London County Council and co-ordinate proposals Loans will be granted for a reasonable proportion of the rehousing necessary, and will, it is hoped, shorten the aggregate time taken over the process of dealing with bad areas The circular points out that the present is an excellent time, since building costs are low and money is cheap With the aid of the subsidy payable under the Act, houses can be let at rents well within the capacity of the poorest If local authorities wish to maintain a reputation for efficiency and progressiveness they must make haste to respond to the Minister's call

THE TRAFFIC IN NARCOTIC DRUGS

The report of T W Russell Pasha to the Egyptian Government on the work of the Central Narcotics Intelligence Bureau for the year 1932[1] affords valuable insight into the control of traffic in dangerous drugs, as well as into the magnitude and ingenuity of the illicit commerce in narcotics If the energy and vigilance of Russell Pasha's bureau were practised by all the parties to the Hague and Geneva Conventions the restriction of the production and distribution of the scheduled drugs to medical and scientific requirements would be within measurable distance of achievement It is truly said that up till now the contraband trade "has battened on international bickerings, jealousies, sovereign rights, and lack of real determination to stop narcotic traffic" When one source of the illicit supply has been shut down another has been opened up The report congratulates Turkey on having closed the factories of heroin and morphine in Istanbul and on resolving henceforth to limit the production of raw opium to legitimate purposes But, alas, "the European centre for the manufacture of heroin destined entirely for the illicit trade has now shifted from Istanbul to the capital of Bulgaria, Sofia," notwithstanding the fact that Bulgaria is a full member of the League of Nations and a party to the Geneva Convention of 1925 The report, which extends to 170 pages, is well documented and illustrated Portraits of "the drug barons of Europe," as the Pasha calls them, are furnished, and the story of the notorious Ehopoulos organization is related in racy language It appears that in seven months of 1931 no less a sum than £240,000 was transmitted from an agent in Tientsin to the headquarters in Paris of this gang of drug traffickers Full details of other exposures and of seizures of contraband are vouchsafed as well as the methods successfully adopted in Egypt for restricting the excessive prevalence of addiction in that country As judged by the analysis of 500 prisoner addicts it would appear that hashish is the narcotic mostly in favour, next heroin, and then opium, morphine and cocaine being little employed by addicts

[1] *Lancet* 1923, i, 431

[1] Cairo Government Press 1933

in Egypt The chief source of the illicit hashish is Syria where owing to the French law not forbidding its possession tons of this drug are smuggled into Egypt The perverted ingenuity of the drug traffickers is illustrated *inter alia* by the discovery of considerable quantities of heroin concealed in the tubes and knobs of a brass bedstead and of 320 grams of the same alkaloid found in the soles and heels of the shoes of a passenger on s s *Roumania* Russell Pasha is no fanatic he recognizes the medicinal value of narcotics and says no one wishes to stop a river of pure water but means must be found to dry up these insidious and persistent streams of poison He shares with his Genevan colleagues the hope that the Limitation Convention of 1931 may not fail of ratification this month and that it may be followed by limitation of poppy cultivation as has indeed been advocated by this *Journal* for some twenty years past

"PIVOTAL" VALUES OF HOSPITAL PATIENTS

In one of the most interesting chapters of his monograph on *Human Values in Psychological Medicine* [1] Dr C P Blacker describes an investigation which was designed to discover in a series of patients who attended a large London hospital the nature of the values which unify and justify life give it coherence and make it on the balance worth living Perhaps the most surprising discovery was that most of these patients had no such pivotal values or even a conscious need for them They had of course interests—the men in sport and politics for example the women in fashions domestic economics and the doings of Royalty particularly their illnesses marriages and procreation and to both sexes crimes and criminal trials scandals sexual subjects such as birth control and the ways of modern youth and religion as set forth by notabilities in the popular press were matters of the deepest concern But their general reaction to life could have been summed up in the words of a woman of 50 the mother of twelve live children who said You have to take what is coming to you and ask no questions It will depend on the reader's own pivotal values whether he finds reason for satisfaction or sorrow in the prevalence of such an attitude As for the rest the minority of patients with religious philosophical or other values they fell into three main categories not indeed sharply defined from each other but distinct enough to justify the author's classification In the first category were those who had pivotal values but never consciously needed them in the second were those who needed such values and had found them without difficulty and in the third (a large and heterogeneous group) were those patients who needing pivotal values had either failed to find them or had found them only after much searching It is not surprising to learn that members of the first group were rarely neurotic they were for the most part well balanced people efficient and unimaginative and their values were vocational or recreational rather than religious or philosophical Nor was there much neurosis in the second group which consisted chiefly of people in whom religious needs were combined with a faculty for uncritical belief But in the third group mental illnesses were common It was an illuminating observation that some of these illnesses could themselves constitute a pivotal value the intensity with which patients clung to even the most distressing symptoms being an indication of how unconscious forces could co-ordinate and unify life At this point and in the differentiation of abnormal mental states according to their capacity for expressing pivotal value the argument takes a definitely Freudian turn the author recognizing in the neuroses and psychoses compromise-formations which in so far as they are attempts admittedly bad attempts to co-ordinate life may be regarded as expressing the values that form the subject of his study The monograph in its general tendency is non-Freudian but the author's indebtedness to Freud is manifest and freely acknowledged Nothing he writes at the end of a devastating criticism of the Freudian hypothesis of death instincts could be farther from my wish than to be identified with those people who having adopted Freud's cardinal ideas about conflict and repression who having mounted the now safe vantage points along the road that he has hewn throw stones at him while he is still hewing the road

[1] *Human Values in Psychological Medicine* By C P Blacker M D London Oxford University Press 1933 (8s. 6d. net.)

BRITISH HEALTH RESORTS

We have received a copy of the first official handbook of the British Health Resorts Association (published by Messrs J and A Churchill price 1s) This contains authoritative information about the spas and seaside resorts of the country and is based on the information collected for many years by its editor Dr Fortescue Fox well known as a leading authority on climatology and balneology It is intended for the use of doctors in choosing the places at which their patients are most likely to get the kind of air baths and other treatment they may require and it is the aim of the B H R A which is largely a medical body to improve the information given from year to year so as to make this at least the equal of any handbook issued on the Continent The book which is attractively printed and illustrated will also be of service to the general public because almost every health resort in the country is described and it contains much useful information not to be found elsewhere Sir Humphry Rolleston contributes a short preface The association was formed to strengthen the appeal made by the Government that the people of this country should buy at home in preference to going abroad for things that can be got at home and it is convinced that the British Isles possess spas and inland and seaside resorts which are not surpassed by those of any country in the world Inquiries from any who are interested in the movement will be welcomed by the general secretary Dr Alfred Cox 199 Piccadilly W 1

MEDICAL RESEARCH COUNCIL

By an Order of the Committee of Privy Council made after consultation with the Medical Research Council and with the President of the Royal Society Sir Thomas Lewis C B E M D D Sc F R S Director of the Department of Clinical Research in University College Hospital London is appointed a member of the Medical Research Council in succession to Professor J J R Macleod M B D Sc F R S University of Aberdeen

The telephone number of the British Medical Association and the *British Medical Journal* has been changed to Euston 2111 (four lines)

ONE HUNDRED AND FIRST ANNUAL MEETING
of the

British Medical Association

DUBLIN, 1933

THE one hundred and first Annual Meeting of the British Medical Association will be held in Dublin this summer under the presidency of Dr T Gillman Moorhead, Regius Professor of Physic, Trinity College who will deliver his address to the Association on the afternoon of Tuesday July 25th The sectional meetings for scientific and clinical work will be held, as usual on the three following days, the morning sessions being given up to discussions and the reading of papers, and the afternoon to demonstrations The Annual Representative Meeting for the transaction of medico-political business will begin on the previous Friday July 21st The list of officers of the sixteen Scientific Sections and the subjects for discussion was published in the SUPPLEMENT *of April 15th Other details of the arrangements for the Annual Meeting will be given in later issues We publish below the second of a series of descriptive articles on Dublin and its medical institutions A preliminary note appeared in our issue of December 3rd, 1932 (p 1026), and an article on the History of Dublin on March 18th, 1933 (p 476)*

THE DUBLIN OF TO-DAY

By WILLIAM DOOLIN M B , F R C S I

To those who have not yet made her acquaintance Dublin is but the name of a city whence emanate countless thousands of sweepstakes tickets, barrels of Guinness's stout, and endless matter for futile political argument But upon those strangers who, in the phrase of the mediaeval annalist, have been " vomited up out of the sea on to the shores of Eireann," the city and its associations have ever exerted a most potent charm Dublin has known many conquerors but she has in turn conquered them all Gael, Dane, Norman, and Englishman have left their mark upon the city But that centuries-long story has been outlined in a previous article in these columns here we shall attempt to give a brief impression of what modern Dublin has to offer by way of interest and attraction to the visitor in July of 1933

Of the several ways of reaching Dublin from England — half a dozen at least—there is one we would most insistently recommend to the visitor First impressions count for much and the approach to Dublin by the mail boat from Holyhead on a late July afternoon is an impression likely to remain long in the fortunate traveller's memory For even the most timid of sailors the sea journey is a short one—less than three hours from port to port—and in July the Irish sea is never uncivil to visitors! As the boat enters Dublin Bay which is bounded by the wooded headlands of Howth and Killiney, those on deck get their first glimpse of the city , almost at the water's edge it nestles beneath a range of encircling hills The ship's prow presses on towards Dun Laoghaire—the King's Town—where the outflung piers of the harbour seem in the slanting rays of the sun as a pair of white arms stretching out to greet the stranger about to enter Ireland of the Welcomes There are other routes, by rail from Rosslare in the south or from Belfast in the north the visitor may also come by the same route overnight, or enter Liffey's mouth in the morning from Liverpool , but for him who comes with pleasurable anticipation of a week's visit to the city, such anticipation will be heightened by approaching Dublin by the route I have recommended

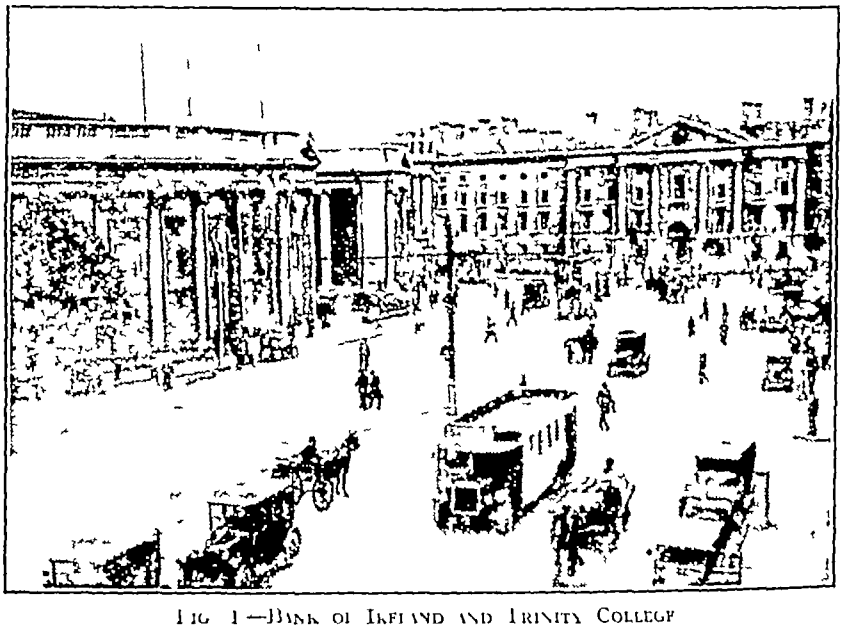


FIG 1.—BANK OF IRELAND AND TRINITY COLLEGE

Dun Laoghaire, the chief harbour of Leinster, lies some seven miles south of the city A pleasant drive through the outskirts leads the visitor by tree lined roads past the suburban dwellings of Dublin's more prosperous citizens, past colleges and the spacious premises of the Royal Dublin Society—scene of how many brilliant Horse Shows—into the heart of a modernized eighteenth century city For its outward appearance and general conformation, as well as for much that is beautiful in the interior decoration of its public buildings, the Dublin of to-day has to thank the town-planners and builders of an earlier Irish Parliament, whose activities were brought to a standstill by the passing of the Act of Union Dubliners owe a debt of civic gratitude to the vision and determination of John Beresford—the family name has the knack of cropping up periodically in both Irish and English history—who for thirty years held the post of Commissioner of the Revenues in Grattan's Parliament In the earlier years of that Parliament Dublin was still the walled mediaeval town of the days of Charles II Two memorials of the Restoration era flourish in Dublin to-day they are the chief recreation grounds of the citizens—the Phoenix Park, a Viceregal gift, and St Stephen's Green, the creation of the municipality Another Stuart memorial is the Royal Hospital at Kilmainham, built on the site of the ancient hospital of the Knights of St John Of all the public buildings in which Dubliners take just pride, this hospital alone (save for the two Cathedrals of Christ Church and St Patrick) existed in the seventeenth century

SOME HISTORICAL BUILDINGS

In its essential architectural features in almost all that attracts the eye of the observant visitor the Dublin of to-day is fundamentally the creation of the closing years of Grattan's Parliament That Parliament erected at its own cost the great façade of Trinity College facing Parliament House (now the Bank of Ireland) across College Green It is here we would have our visitor come for a second unforgettable impression of our city Let him stroll by moonlight down from Grafton Street past the Provost's House to seek the *coup d'œil* made by the front of the Bank with the corner angle of Trinity College at the conjunction of College Street and Westmoreland Street There he may feast his eyes on a Whistler like nocturne in stone He is at the heart and centre of the city (Fig 1) From here under Beresford's direction the Commissioners of Grattan's day drove great streets north west and south The Liffey was spanned by Carlisle (now O Connell) Bridge linking up Westmoreland Street with Sackville (now O Connell) Street the latter (150 feet wide) has been aptly described as one of the four finest streets in Europe (Fig 2) Westwards Dame Street (so called from an ancient mill dam near the old Eastern Gate) leading from College Green to Dublin Castle was widened Grafton Street and Dawson Street were opened up to

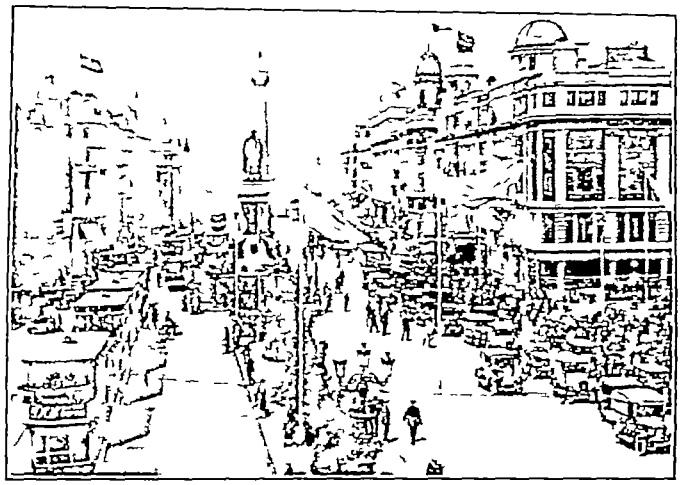


FIG 2—O CONNELL STREET DUBLIN

others in the neighbouring squares Dublin's leading hotel the Shelbourne on the north side of St Stephen's Green stands on the site of the former residence of Sir William Petty master of the Down Survey it took its name from Sir William's son who became Earl of Shelbourne Across the Green lived the notorious Buck Whaley whose residence became in 1854 the seat of Newman's University College forerunner of the present National University On the east side St Vincent's Hospital was then the residence of the Earls of Meath and Westmeath while Henry Grattan leader of the Parliament lived next door For the lake and gardens that beautify The Green to-day Dublin is indebted to a benefactor of a more recent generation—Lord Ardilaun head of the well known house of Guinness The two large squares nearby—Merrion and Fitzwilliam Squares now are the main the professional quarter of the city—owe their origin to the wave of fashion which followed the erection of Leinster House the passing of the Act of Union led to the dispersal of their first aristocratic occupants For nearly a century past Merrion Square has been the fashionable medical centre Of the many medical luminaries whose work made the Dublin school of medicine renowned in the latter half of the nineteenth century we would allude in passing to Sir Philip Crampton—whose monument now stands on the site of the old Danish

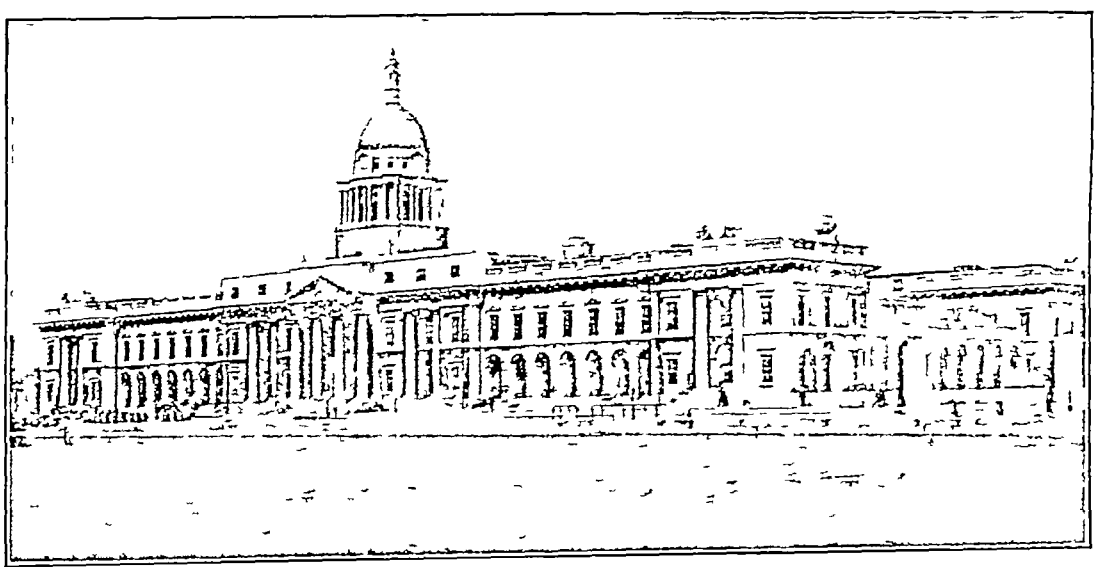


FIG 3—CUSTOMS HOUSE DUBLIN

connect the town with the Green Park of St Stephen to the south then rapidly growing fashionable as a residential centre for the aristocracy of the day In the years preceding the Act of Union Dublin society followed the lead of the Duke of Leinster and moved to the south side of the river The Duke's building Leinster House is to-day the seat of the Legislature of the Irish Free State Its erection was speedily followed by that of many

Steyne the oldest landmark in Dublin—to Sir William Wilde to Graves Stokes Corrigan and a host of others At Mornington House (now the offices of the Irish Land Commission) in the short street that links both Green and Square tradition has it that the Iron Duke first saw the light

The Houses of Parliament were left untenanted by the passing of the Act of Union (1800) two years later they

CONGRESS OF OBSTETRICS AND GYNAECOLOGY

The ninth British Congress of Obstetrics and Gynaecology was held at the University of Birmingham on April 5th, 6th and 7th, under the presidency of Professor BECKWITH WHITEHOUSE. The foreign visitors were Professor Oskar Fraenkl of Vienna, Professor Van Rooy of Amsterdam, and Professor Birger Lundqvist of Gothenburg.

UTERINE ACTION AND ITS ABNORMALITIES

At the morning session on April 5th, with Professor Whitehouse in the chair, Mr ALEOK BOURNE read the opening paper "The Uterine Action and its Abnormalities." He said that feeble contractions were the cause of many of the disasters of labour. For the child the long labour was a considerable risk. He had searched the clinical histories of over 4,500 consecutive deliveries at Queen Charlotte's Hospital, and had classified as "long labours" all cases in which the first stage had lasted for more than forty-eight hours. There were forty-nine cases of genuine primary uterine inertia, thirty-six occurred at full term, and it would appear that inertia was not influenced by maturity. The condition was five times more common in primigravidae. Malpresentation was not a predisposing factor. In this series there was an unduly high number of cases of albuminuria. The membranes ruptured prematurely in thirty out of the forty-nine cases. Manual removal of the placenta was performed eight times. In less than half the cases delivery was spontaneous. There was no relation between the weight of the child and the occurrence of inertia. Sedatives had been employed in over half the cases, and a combination of pituitrin and sedatives in eleven. In only two cases had manual dilatation of the cervix been performed. The maternal mortality was 10 per cent., and morbidity 40 per cent., three of the maternal deaths being due to sepsis. He demonstrated a graph which recorded the intrauterine pressure at the thirty-sixth week of pregnancy. After an injection of two units of pitocin contractions resembling first-stage labour pains were registered, they were not felt by the patient, nor did the cervix dilate. Normal labour depended on fundal contraction and cervical dilatation. The speaker said that FitzGibbon had emphasized the importance of the engaging head and its pressure upon the cervix as the cause of the onset of labour. He was convinced that external stimuli influenced uterine action by way of the nervous system. Non-engagement of the head was often associated with inertia. He had attempted to induce labour by injection of tri-hydroxy oestrin in castor oil, but without success; the injection did not affect the milk secretion. He was uncertain of the part played by oestrin in labour. In an estimation of the oestrin content of the urine in two cases of uterine inertia, the amount of this hormone had not been found to be definitely diminished. Pituitary extract did not induce premature labour. By means of hysterograms he demonstrated that adrenaline inhibited fundal contraction during labour in the human being. Microscopical slides were shown of portions of the cervix removed at the time of delivery from two cases of rigid cervix which terminated in circumferential tears. An excess of fibrous tissue was seen. Fear, Mr Bourne said, played a very great part in causing weak contractions; a contented and care-free woman had a spontaneous labour. In the more civilized grades of society emotion and anxiety were most important factors in modifying the course of normal labour. It was essential for the medical attendant to obtain the confidence of the mother, particularly during the ante-natal period, and thus help to annihilate the dread of labour.

Professor W BLAIR-BELL, Dr M M DAVIDOW, and Dr J K JEFFCOATE presented a paper on the mechanism of uterine action and its disorders. *In vivo* and *in vitro* experiments on animals were described and graphs of uterine contractions shown. In woman the anterior pituitary hormone was in excess in the early months but diminished as pregnancy continued, and by the fourth month the influence of the corpus luteum was on the wane. The function of the corpus luteum varied quantitatively and qualitatively in different animals. Neither oestrin nor "antuitrin S" had any effect on the isolated uterus; oestrin sensitized the uterus to respond to infundibulin, and it assisted in bringing about hypertrophy and increased vascularity of the uterine musculature during pregnancy. The hormone of the corpus luteum inhibited uterine activity, but after the first two months it was not essential for the maintenance of pregnancy in the human subject. The view was put forward that the hormones of the anterior lobe of the pituitary assisted and might even replace, the corpus luteum in causing inhibition. Primary uterine inertia was due to lack of sensitization of the uterus by oestrin, and to insufficiency of the pressor substances in the maternal blood. The onset of labour and the occurrence of many cases of abortion were associated with an excess of oestrin in the circulation. Uterine inertia was not due to muscle fatigue. In abortion oestrin was found in large quantities in the urine, with a disappearance of prolan B. Abortion in its early stages had been averted by the injection of corpus luteum and "antuitrin S". Premature labour was usually due to powerful emotions through sympathetic stimulation, as well as to foetal influences. An increased amount of pressor substances was present in the blood in tonic contraction, and magnesium sulphate had an immediate effect.

Dr J M ROBSON dealt with some of the recent hormonic advances underlying uterine activity. He had experimented with strips of human uterus removed at the time of a Caesarean section. When these were exposed to the action of oxytocin there was no effect in the early months of pregnancy, but, on the other hand, vasopressin caused contractions. Strips removed late in pregnancy required only a very small amount of oxytocin to induce a contraction, and those removed during labour required a still smaller dose. Response to either oxytocin or vasopressin was absent in menstruation. In pregnant rabbits a strip of uterine muscle removed during the puerperium required one hundred times as much oxytocin to produce the same amount of contraction as that occurring during pregnancy. After injection of oestrin the uterus showed a marked reactivity to the action of oxytocin, corpus luteum had a reverse effect.

Mr WENTWORTH TAYLOR in a paper on the anomalies of uterine action, said that dilatation of the cervix was not solely a mechanical process, and he described the lower uterine segment as the middle segment of the "birth sleeve." The walls of the uterus before labour were of equal thickness throughout. Incoordinate contraction might be due to several causes: psychic, hormonic, mechanical, ante-partum infection of the liquor amnii, and the administration of oxytocic drugs. Sympathy of action between the various parts of the uterus determined normal labour. A well-fitting dilator caused sympathetic action between the body of the uterus and the cervix. Spasm of the uterus was due to obstetrical intervention. For this condition he advocated early trial of sedatives. In the presence of foetal distress, tenseness of the uterus, and little or no cervical dilatation Caesarean section was the method of treatment. In the dystrophic individual who could not be cured by a course of hormonic extracts,

in occipito posterior positions and with a large child in whom flexibility was below normal anomalies in uterine action were to be expected

AFTERNOON SESSION

At the afternoon session with Dr J P Hedley in the chair Mrs BERTRAM LLOYD and Mr P J GANNER described a case of fundal rupture of the uterus in a primipara aged 26 during premature labour at the thirty-sixth week The first labour was normal Professor FRAENKEL (Vienna) remarked on a somewhat similar case

Mr W GILLIATT in a paper on contraction ring of the uterus in labour described fourteen cases he had seen Premature rupture of the membranes and intervention predisposed to it but uterine inertia was not a definite contributing factor Sedative treatment was disappointing but amyl nitrite in a dose of three minims relieved the contraction in one case He advised Caesarean section when the cervix was undilated and when there was little risk of sepsis The maternal death rate was 14·2 per cent and the foetal 20 per cent Mr L C RIVETT thought that differences in the thickness of the uterine wall was the cause of irregular uterine action and the endocrine system had a very definite role in influencing uterine action In one case of rigidity of the os he had made small multiple incisions in the cervix and was thus able to extract the child in half an hour In another case in which the os was half a crown dilated he incised the cervix applied forceps and attached a weight to them delivery took place twenty three hours later Dr D READE emphasized the importance of the mental aspect of the patient and the function of the sympathetic nervous system in labour Most women suffered from an anxiety state before labour began By a mathematical explanation he was able to demonstrate the effect of relaxation of the circular muscle of the external os The sympathetic acted on this muscle and its action could be inhibited when there was complete mental and physical relaxation on the part of the patient Labour was facilitated when the influence of the sympathetic system was excluded Professor MILES PHILLIPS agreed with Mr Bourne about the part played by fear Disillusionment during the ante natal period was necessary In cases in which the uterus was flabby during the ante partum period he had found that calcium increased uterine tone He regretted the confusion which existed in textbooks on this subject He differentiated between the sluggish and the colicky uterus In the latter the pain was of an excruciating nature

Mr CHASSAR MOIR demonstrated graphs of uterine contractions on the seventh day of the puerperium He had inserted a small bag into the body of the uterus and another in the cervix The contraction of the cervix occurred fifteen to seventeen seconds after that of the uterus It would appear that a wave of peristalsis passed over the uterus In another case he found that the cervix contracted quite independently of the body of the uterus Mr A C BELL thought it was dangerous to conclude that a woman would react in the same way as an animal He said that adrenaline inhibited the uterus in labour and that the oxytocic principle did augment uterine contraction A mechanical factor played a definite part in causing anomalous uterine action Mr BOURNE asked whether oestrin purely crystalline did increase the reactivity of the uterus to pituitrin He had used adrenaline in two cases of tonic contraction in one it had had no effect He was of the opinion that tonic contraction was a myogenic spasm whereas rhythmic contraction depended on a neuro-muscular mechanism Professor BLAIR BELL said that there were enormous differences between normal and abnormal phenomena the latter were absent in animals The importance of the emotional factor in the human being must never be overlooked In reply to Mr Bourne he said that oestrin in a purely crystalline form increased the reactivity of the uterus to pituitrin and was a sensitizing agent He thought that further investigation into the source of the lutein cells was necessary If the corpus luteum developed from follicular cells why had it such a different secretion? He was certain that polarity of the uterus was a definite entity and he thought that during involution of the uterus polarity might be replaced by a peristaltic action He realized that calcium was an important prophylactic agent in uterine inertia It was essential for uterine tone

MISCELLANEOUS PAPERS

On April 6th when Dr James Young presided at the morning session Professor OSKAR FRAENKEL (Vienna) described the isthmus uteri He concluded that the isthmus was a well characterized part of the uterus which grossly belonged to the cervix but with regard to its mucous membrane it resembled the body and might be recognized and limited nearly always by naked eye and always microscopically Premenstrual changes were slight or even absent Correspondingly in pregnancy there was no true decidua He discussed the various pathological conditions which might be associated with this region Adenomyomata rarely transgressed the anatomical internal os The isthmus mucosa seemed to have an immunity against cancer of the body of the uterus

Mr VICTOR BONNEY described a method of performing the lower uterine segment Caesarean section by means of a cervical compressor He extracted the foetal head by the application of Willett's forceps

Professor GILBERT STRACHAN presented a paper on the main pathological conditions of the cervix After the menopause the cervix atrophied due to reduction of circulation Trauma could not be prevented at normal labour Absence of healing in a cervical wound was due to constant reinfection Cervical carcinoma was rarely associated with procidentia

Mr L C RIVETT gave an account of ten cases of hydramnios in which he had performed paracentesis He had endeavoured to ascertain whether the liquor amnii was absorbed into the mother's system but he had failed He advised this method of paracentesis as there was little danger in it Professor MUNRO KERR said that he had injected uroselectan into the amniotic sac and had then taken x ray photographs By this means placenta praevia could be diagnosed Unfortunately this method was associated with the risk of premature labour

With Professor Leyland Robinson presiding at the afternoon session Professor VAN ROOY (Amsterdam) read a paper on the obstetrical significance of transverse contraction of the pelvis He had investigated cases in which the head had been well flexed but floating dilatation had been normal but intervention of some sort had been necessary in order to complete delivery He found contraction of the transverse diameter of the brim in this type of case This contraction should be suspected if the ilio-pectineal ridges were prominent and the external measurements were diminished Only by x ray pelvimetry could the superior strait be measured satisfactorily He gave details of forty three cases In these labour had lasted for forty hours with good uterine contractions there had been delay in engagement of the head instruments were applied the true conjugate was greater than 11 cm and the weight of the foetus had been less than 3 500 grams Pelvimetry had shown in 44 per cent of these cases a diminution of the transverse diameter of 1½ cm the sacral wings were denser He was uncertain whether

the condition was due to abnormal congenital ossification or to osteo-arthritis of the sacro iliac joints It was only by *x*-ray examination that the condition could be diagnosed He referred to the importance of collaboration between the radiological and ante-natal departments Professor MUNRO KERR said that alteration of the flexion of the head by transverse diameter contraction might necessitate Caesarean section Professor MILES PHILLIPS, Mrs R H B ADAMSON, Professors DOUGAL, FLETCHER SHAW, and LEYLAND ROBINSON contributed to the discussion

In Dr E L Fahmy's absence, Professor R W JOHNSTON read a paper on an analysis of 1,000 cases of post-menopausal haemorrhage Carcinoma of the cervix accounted for one-quarter of the total , ovarian dysfunction was the next most frequent cause High blood pressure rarely caused bleeding from the uterus, and malignancy should be suspected if haemorrhage had been constant over many weeks

Professor LEONARD PARSONS and Dr R J GITTINS read papers on the anaemia of pregnancy and its effect upon the foetus They had administered vitamin B (in the form of sterilized wheat-germ " yestamin "), iron, and a combination of these, before and after parturition By excessive restriction of diet during the ante-natal period there was a real danger of causing an anaemia Particularly was this likely to happen in toxaemia of pregnancy, which was always treated by vigorous dietetic measures

CONCLUDING SESSION

With Professor James Hendry presiding at the final session on April 7th, Mr R G MALIPHANT read a paper on the histological classification of cancers of the uterine cervix and the relation between cellular structure and prognosis after radium treatment He had examined 236 cases of cancer of the uterine cervix treated with radium He adopted Martzloff's method of histological classification which was based on the microscopical appearance of the individual cell Ten of the 236 growths (4 2 per cent) were adenocarcinomata, and of the remaining 226 solid cancers 30 9 per cent belonged to the highly differentiated spinal-cell group and 13 3 per cent to the spindle-cell group, while there was a large intermediate group, comprising 55 8 per cent of the cases, in which the tumour was mainly composed of transitional cells The three-year survival rate had been studied in a group of 151 cases treated more than three years ago The differences in the three-year survival rates in the various structural groups were examined, but the differences shown were too small to be of much significance The spindle cell cancers, though apparently the most malignant type gave at least as good results with radium as those given by the more benign spinal-cell growths They were the most radio sensitive The conclusion reached was that microscopical examination was of no assistance in arriving at the ultimate prognosis

Dr E BULMER made a small communication on osteomalacia Dr DUGALD BAIRD described a method of studying the tone of the human ureter during pregnancy The patients were also examined by intravenous pyelography and dye methods In this way stasis could be determined In albuminuria of pregnancy there was good ureteric tone He had never seen a case of albuminuria of pregnancy and pyelitis coexisting in the same patient Mr A A DAVIS described the innervation of the uterus, his paper being illustrated by lantern slides of dissections

At the conclusion of this session Mr T G STEVENS recorded a vote of thanks to the University of Birmingham Professor DOUGAL thanked the Midland Obstetrical Society and the chairman, Professor HENDRY, congratulated Professor Beckwith Whitehouse on the success of the meeting

France

[FROM OUR CORRESPONDENT IN PARIS]

Conjugal Tuberculosis

The subject of conjugal tuberculosis was discussed on March 5th at a meeting in Paris of the Assemblée Française de Médecine Générale, a body which though only a year old, promises to become a powerful institution, rallying the general practitioners throughout France into a scientific organization for the advancement of medicine The subjects chosen for research and discussion a year or so in advance of a general meeting are first thrashed out by local branches, whose members pool their experiences, gained, in many instances, in country practices which have been handed down from father to son for several generations It might be thought that conjugal tuberculosis was a subject *par excellence* on which a gathering of general practitioners could throw much useful light But is it? Your correspondent has unearthed a reprint of a paper by William Bulloch and Major Greenwood read before the Royal Society of Medicine in May, 1911 An extract reads

'It may be pointed out however that in the period immediately following Koch's discovery great activity was manifested in civilized countries to settle the question of the contagiosity of phthisis Collective investigations, so called were instituted in America, Germany France Italy and England The results of the opinions of some 50 000 doctors who participated in this gigantic undertaking have been described by Cornet as 'mehr als bescheiden' "

It is perhaps idle to ask now if those who were responsible for the choice of conjugal tuberculosis for study and discussion would have selected it had the " mehr als bescheiden " harvest of earlier efforts at collective mass research been prominent in their minds Be this as it may, the discussion at the Hôtel-Dieu on March 9th was quite brisk and, now and again, illuminating It was reported that in one area conjugal tuberculosis affected barely 10 per cent of those exposed to it , in another this ratio was reduced to 2 per cent In one locality it had been noticed that there were many more widows than widowers surviving tuberculous partners in matrimony, while in another women were found to suffer more than men The meeting, which was attended by between 100 and 200 doctors, unanimously adopted a resolution which, while not dismissing conjugal tuberculosis as a figment of the imagination emphasized the much greater danger of infection in childhood

Cobra Venom as an Analgesic in Cancer

Early in 1929 Dr Monaelesser of New York had his attention drawn to the case of a Cuban leper whose pain, due to neuritis, was greatly relieved after he had been bitten by a tarantula This was the starting point of investigations which brought Dr Monaelesser to the Pasteur Institute in October, 1929 Here he secured the co operation of Professor Calmette, whose earliest work on cobra venom dates back many years In October, 1930, Dr Monaelesser and a Parisian colleague Dr Taguet, approached Professor Gosset of the Salpêtrière with the request that he would co operate with them in studying the influence of cobra venom on certain cases of cancer under his care On March 14th, 1933 Professor Gosset presented to the French Academy of Medicine a report by Dr Monaelesser and Dr Taguet on 115 cases including fifteen of cancer of the stomach and twenty-five of cancer of the breast They were consecutive and not selected in any sense There were severe cases which had been operated on with or without

recurrence of the disease There were also inoperable cases and those which had been unsuccessfully treated with x rays or radium Most of these patients were dead their cachexia having been extreme when the treatment was started but in almost all these cases the treatment had afforded some degree of relief Of the remainder there were several whose disease was stabilized and some in whom regression of the disease was demonstrable with complete cicatrization The authors of this report concluded

We consider that the treatment with cobra venom should be used in all the algias notably in those connected with benign or malignant tumour and that the course of the latter is beneficially influenced

In the discussion which followed Professor Calmette suggested that when cobra venom in a sublethal dose came into contact with a nerve cell a reaction occurred which led to the suppression of the sense of pain without the motor conductivity of the nerve being impaired He also referred to the possibility of this treatment being extended to obstinate cases of sciatica As Professor Gosset pointed out cobra venom may be able to replace injections of morphine when the action of the latter has ceased to be effective

Pharmaceutical Specialties in Public Hospitals

The searching audits and budgetary stringencies to which public hospitals are subjected are beginning to focus attention on a comparatively new and quite important source of expenditure—namely the pharmaceutical specialty protected by letters patent There are also the latest improvements of highly specialized instruments and other equipment In a recent report to the Commission Administrative des Hospices d Orleans Dr Georges Petit the vice president outlined a rather summary method for dealing with this problem Two things must he said be considered—the utility and the cost of pharmaceutical specialties In 1931 a government circular ordered insurance societies to refund up to 85 per cent of payments made for pharmaceutical specialties the sale of which was legalized by the State or to be more precise by the Laboratoire National de Contrôle des Medicaments Only twenty years ago French hospital pharmacopoeias were dominated by the *Codex* a guide to the composition preparation dosage and administration of drugs in current use The gradual invasion of the hospital by new specialties was brought about in the following way Their sponsors would approach the head of a hospital service with the request that he investigate clinically a new preparation supplied free of charge in large quantities He would be told its formula and that its composition was guaranteed When the stock of free samples ran out and the preparation had to be obtained at a price then a clash would come between the medical and the administrative authorities of the hospital Dr Petit classified these drugs as the useless the useful and the indispensable He would like to see every hospital board (commission administrative) appoint a committee of specialties whose three members would be (1) a representative of the hospital board (2) the head of a hospital service and (3) the head of the pharmaceutical department Whenever the head of a service or a manufacturer requested the introduction of a new specialty into the hospital this request made in writing and supported by arguments and evidence would be submitted to the committee whose opinion thereon would be communicated to the hospital board for action The committee would also have to publish annually a list of the preparations accepted by the hospital board on the recommendation of doctors Each hospital would have its own list and any attempt to edit one for the whole hospital world to endorse *en bloc* would in Dr Petit's view be a grave financial moral and medical error

Cancer Houses

The stigma cancer house must often inflict serious pecuniary losses on the owners of the house in question For this and other reasons it would be well if the case for or against the cancer house could be put on a more scientific footing than it is at present The subject has been much discussed recently in France The Assemblee Française de Medecine Generale devoted a whole session to it and came to the conclusion that though cancer houses may exist they are certainly rare In *Le Journal Médical Français* for March there are several papers on the subject by prominent members of the medical profession Professor G Roussy refers to two investigations carried out in Paris in 1910 and 1928 The latter showed that the distribution of cancer deaths throughout the city unlike the distribution of tuberculosis deaths was comparatively even If cancer were a contagious disease then the segregation of cancer patients in special centres such as that at Villejuif outside Paris ought assuredly to have yielded some illustrative cases But since Villejuif was opened in 1921 Professor Roussy has not observed a single case that could be interpreted as one of contagion and he is frankly sceptical as to the existence of any scientific evidence in support of the cancer house Dr Lumiere and Dr Vigne in their recent communication to the Academy of Medicine have shown that the cancer deaths in Lyons are distributed in the same apparently haphazard manner as are the births marriages and deaths from all causes These big statistical investigations are however stultified to a large extent by certain grave inherent sources of error In towns as distinct from the country there is a tendency to move from one house to another or from one flat to another and since the average duration of malignant disease is anything from three to ten years (Menetrier) one and the same cancer patient may have enjoyed the hospitality of several houses before attaching the stigma of the cancer house to the dwelling in which he or she ultimately died So it is left to the isolated country district with a relatively stable population to contribute more accurate information on this subject

England and Wales

The Home Ambulance Service

The fourteenth annual report of the Home Service Ambulance Committee of the Joint Council of the Order of St John of Jerusalem and the British Red Cross Society covers the year 1932 and embodies the information in the returns of the 319 stations of this service The work is steadily growing and each quarter shows an increase in the number of patients carried by each ambulance as compared with the corresponding quarter in the previous year Over 1 860 000 cases have been conveyed thus since the service was inaugurated and the number for the year was 117 153 It is estimated that during the thirteen years of its existence the number of in patients treated annually in voluntary hospitals has risen by 520 000 and of out patients by nearly two and a half millions figures which provide some explanation of the yearly expanding volume of work for which the ambulances are responsible A proposed further line of assistance to hospitals is the organization of a private motor car service for the transport of patients who are not strictly ambulance cases to and from hospitals and

institutions for periodical treatment, to and from convalescent homes, and to the seaside Already, through the generosity of certain private owners, work of this nature has been undertaken in several districts, it is hoped that units of the Order and the Society will endeavour to enlist the help of more motorists, and extend the scheme until every district is thus served It is suggested in the report that first-aid units and ambulance stations should afford the necessary machinery for intercommunication between doctors or hospitals and the car owners Thus much useful work, supplementary to that carried on by the ambulances, can be accomplished in providing for the sick and injured, for convalescents, for children after minor operations, and for patients attending orthopaedic and rheumatic clinics Several new first-aid posts were equipped last year, and have proved very useful The number of persons injured on the roads in Great Britain increased in the twelve months by over 4,000, although the number of persons killed was forty less than the figure for the previous year Every day in England and Wales on an average sixteen persons are killed and 530 injured The mobile x-ray units have also intensified their activities, in the five years from 1925 to 1930 the number of radiographs made in proportion to the total number of cases treated increased by 33 per cent The apparatus employed is specially designed for the new tele-radiographic technique The report contains details of the regulation for the conduct of the ambulance service Copies may be obtained from the offices of the Joint Council, 12, Grosvenor Crescent, Hyde Park Corner, S W 1

Maternity Work in Manchester

A report for 1929 of the maternity work carried on in the institutions grouped together under the title of St Mary's Hospitals for Women and Children, Manchester, has been recently issued, it is the work of the registrar, Dr J W A Hunter During the year 3,346 maternity patients were treated by the hospital, 2,136 in the wards and 1,210 in their own homes Of the 1 221 booked ante-natal cases treated in the wards 1,104 were delivered at or near term, 111 were discharged undelivered, one patient died undelivered, and there were five cases of abortion Of the twenty-two emergency cases from the hospital district fourteen were admitted on account of delayed and obstructed labour, five because of ante-partum haemorrhage, two for diseases complicating pregnancy and one for post partum haemorrhage Of 893 emergency cases 447 were delivered at or near full term, forty were admitted after delivery, 158 were discharged undelivered, eleven died undelivered, eighteen were cases of ectopic pregnancy, 212 were cases of abortion, and seven cases of tumour were operated upon during pregnancy There were forty-five deaths following delivery in the wards during the year, of these, seven were in booked ante-natal cases and thirty-eight in emergency cases This represents a mortality of 2 21 per cent of the 2 136 total in-patients The mortality among the total booked ante-natal cases (seven deaths) was 0 57 per cent, and of the total deliveries at term 0 63 per cent There were no deaths among the district cases The mortality rate in emergency cases was 4 25 per cent of the total The report contains clinical details of these maternal deaths There were 232 cases of maternal morbidity (B M A standard), including cases admitted after delivery and of abortion, giving a maternal morbidity rate of 12 6 per cent Of these 232 cases 125 were in ante natal cases and 107 in cases admitted as emergencies This indicates a percentage morbidity of 11 26 in ante-natal cases and 15 07 in emergency cases These morbidity cases are classified according to their type, and statistical details are recorded of the incidence and treatment of posterior positions of the vertex, twin pregnancy, breech presentations, prolapse of the cord, and other abnormalities During the year 329 cases of contracted pelvis were treated in the hospital In the 272 which were dealt with before labour there was one maternal death, in the fifty-seven emergency cases there was one maternal death Twenty cases of tubal pregnancy were treated by abdominal section, all the patients recovered

London Council Hospital Out patient Charges

Under the general rules for the management of London Council hospitals out-patient examination and treatment may be given in the following cases casualties, accidents, and other emergencies, continuation or after care treatment of former in-patients, consultation concerning patients referred by medical officers of the London County Council, ante-natal and post natal examination and treatment, patients entitled to outdoor relief, and cases or classes of cases where special examination or treatment is authorized by the medical officer of health At present out-patients are assessed and charged on minimum scales laid down by the old boards of guardians, and there is much lack of uniformity The average cost per attendance at hospitals which have large and active out-patient departments has been found to be about 1s 6d, and it is proposed that, except for x ray examinations, this shall be the uniform charge for attendance It is proposed that no charge shall be made in the following cases examination after former in patient treatment, ante-natal and post-natal attendance, and any first attendance (except for x-ray examination), after which a large proportion of out-patients are referred elsewhere The 1s 6d charged in other cases for each attendance will cover medical and surgical consultations and treatment, including massage and electrical treatment, also dental attendances, providing that treatment is actually given, and excluding attendances for the provision and fitting of dentures With regard to x ray examinations, 7s 6d is to be charged for screening and the same for the first film exposed, and 2s 6d for each additional film taken at the same sitting For a barium swallow with screening or a barium swallow with first film exposed, 10s 6d is to be charged and for a barium meal or enema and complete examination, 30s If a film is taken away an additional 2s 6d will be levied With regard to surgical appliances, for such as are used by the patient while undergoing treatment no additional charge is to be made, but the permanent retention of such appliances after treatment is held to justify an assessment being made up to the cost of the apparatus

Mental Deficiency in London

During 1931 the London County Council received information of 2,053 cases of mental deficiency, as compared with 1,796 in the previous year Of the 1 879 which were dealt with by institutional care, guardianship, or supervision, 58 per cent were of high grade, trainable, and tractable, and 19 per cent of middle grade and tractable Low grade (idiots) was represented by less than 1 5 per cent Those described as "troublesome" in high or middle grade numbered only twenty-three, while 144 were epileptic, and sixty-three were blind or deaf or dumb, or both deaf and dumb The total number of defectives so far ascertained as subject to be dealt with under the Act, or as those who might become subject stood at the end of 1931 at 14,085, a ratio of 3 23 per 1,000 of the population of the county Of this number, 9,106 were either in institutions provided by the Council or elsewhere under statutory supervision, or awaiting presentation of a petition for an order

Society for Relief of Widows and Orphans of Medical Men

A quarterly court of the directors of the Society for Relief of Widows and Orphans of Medical Men was held on April 12th with Mr V Warren Low president in the chair The expenses of the quarter amounted to £9 18s and the sum of £145 was voted as special grants to enable orphans to continue their education A striking example of the advantages of membership of the society was reported by the secretary A medical man joined the society in 1864 he died in 1866 having paid £6 6s in subscriptions His widow and two children came on the funds The widow and her two children received in grants £2 900 The widow died in 1909 One of the children who was an invalid came on the Copeland Fund a special fund for such cases she died in January 1933 and had received in grants £2 350 Thus the late member's family had received in grants a total of £5 450 The redrafted by laws were carefully considered by the directors and with very slight alterations were passed They will be submitted to the members at a special general meeting to be held on May 12th and if approved will be confirmed at the annual general meeting on May 24th Full particulars of the society may be obtained from the secretary at its offices 11 Chandos Street Cavendish Square W 1

CORRESPONDENCE

Dry Bronchiectasis

SIR —The article on dry bronchiectasis by Drs Hall and Hoyle in the *Journal* of April 8th exemplifies in a striking fashion the great variations in the manifestations of this disease a point which must be thoroughly appreciated or the condition will often be missed This feature of bronchiectasis was pointed out in 1925 by Armand Delille who showed that broadly there were four types of case (*a*) that with both signs and symptoms (*b*) that with signs but no symptoms (*c*) that with symptoms but no signs and (*d*) that with neither signs nor symptoms One could of course subdivide each of these larger groups according to the presence or absence of one of the classical symptoms or signs but such a further classification would seem to have little if any value either from the point of view of aetiology or of pathology

In the article referred to a group of cases of bronchiectasis with a special nomenclature is brought together because of the absence of sputum and apparently—also on this account—a new pathogenesis is suggested In passing it may be remarked that the list of cases without sputum quoted from the literature could have been enlarged by the inclusion of examples recorded in some of the articles referred to in the bibliography In the first place I would point out that in two of the twenty cases recorded by the authors bronchiectasis was never definitely demonstrated In the second place of the eighteen remaining cases sputum was present in ten so that only eight can be legitimately described as dry It may be contended that the sputum was not abundant but anyone who has had much experience of the condition must appreciate that the amount of sputum is a most variable factor This certainly is true of the cases occurring during the earlier years of life For example in the presence of undoubted bronchiectasis with extensive fibrosis sputum may not be demonstrable for as long as eighteen months after its inception and after having been present for many years it may along with the cough entirely disappear Indeed it was this latter occurrence which caused certain authors in pre-lipiodol days to conclude that the condition might not infrequently be recovered from Undoubtedly recovery from bronchiectasis may occasionally occur but it is in the early and mild degree of the lesion as in Case 12 in the list of Drs Hall and Hoyle that this happens As a rule the bronchiectatic condition steadily becomes more extensive even although the symptoms may diminish or entirely disappear

An analysis of the clinical records of the eighteen undoubted cases of so-called dry bronchiectasis recorded by Drs Hall and Hoyle reveals the usual premonitory history the usual localization of the mischief at the base of the lung and particularly the left base and the usual physical signs

In eleven cases the period of ill health dated from pneumonia complicating measles or whooping-cough in one case there was a pre existing pleurisy (another generally recognized aetiological factor) and in four cases there had been measles or whooping-cough and although a complicating pneumonia is not mentioned it is always possible that such had been present In ten cases the mischief was limited to the left lower lobe in four to the right lower lobe and in four cases both lower lobes were involved On physical examination dullness to percussion was present in sixteen of the eighteen patients and although the radiograph did not show either a shadow or displacement of the mediastinum it most probably indicated fibrosis

It thus seems unnecessary to incriminate any other aetiological factor than pulmonary fibrosis Certainly the pathogenesis suggested by Drs Hall and Hoyle is difficult to understand Surely the extra volume of the lung ensuing from dilatation of the bronchi would be infinitesimal and the capacity of the thorax could be more readily filled by emphysema developing in the neighbouring unaffected pulmonary tissue —I am etc

London W 1 April 10th LEONARD FINDLAY

'Disordered Traffic in the Gut"

SIR —In your issue of March 4th you published an article by Dr F C Eve entitled Disordered Regulation of Traffic in the Gut This is a very interesting and successful attempt to make the subject clear to the average physician but I believe Dr Eve is in error as to the mechanism of the disturbance at some of the robots

In particular the high pressure chamber in the pyloric portion of the stomach has not been seen even during pain by several experienced radiologists whom I have consulted In the case of duodenal ulcer the situation is even clearer As I pointed out in 1928 (*Arch Int Med* xli 633) many patients with duodenal ulcer have no peristalsis *during pain* and the pyloric sphincter is not firmly contracted Subsequent observations have confirmed these findings The most logical interpretation of this work is that the pain is due to sustained contraction or spasm of muscle fibres of the duodenum and not to so-called achalasia of the pyloric sphincter —I am etc

Toronto March 29th MALCOLM WILSON M A M D F R C P Can

Fractures of the Shaft of the Femur

SIR —I have read with interest the correspondence on the above subject I agree entirely with all that Mr Wardle has said I have never seen fractures of the shaft of the femur treated in plaster but have always considered it a difficult and unreliable method Mr Wardle has evidently seen some and his experience supports my belief

Mr Monro's letter has much that is instructive His suspension of the Thomas splint from a Balkan beam was, of course, used with success during the war, and I would have no hesitation in using it if I thought it necessary I do not agree with him that it requires a very well trained nurse, to whose care tightening of extensions could safely be left, my own experience has been that most people can master the art of pulling extensions in a couple of days When in doubt a windlass can be used, but I have rarely had occasion to resort to this

In my article I purposely emphasized the care necessary when using a Thomas bed knee-splint, taking as my example the most troublesome of the cases in the series, so that, if by chance anyone wished to use the method, he would be in a position, as Mr Wardle puts it, "to demonstrate his own capability of carrying out the treatment he expects the nursing staff to undertake" Many far abler articles have been written on the Thomas bed knee-splint, but all have tended to ignore any nursing difficulties which may arise in the course of its use, and it was for this reason that I laid stress on the maximum amount of attention necessary This emphasis has produced a little arithmetic from Mr Monro and some dogmatism from Mr Roth I wonder from where the latter obtained his impression that there were no compound fractures in my list of cases Certainly not from my article, in which I made no mention as to whether the fracture was simple or compound, for I do not consider the presence of a compound injury adds greatly to the difficulty of treating a fracture of the femur on a Thomas splint

Mr Roth also points out that 86 per cent of my series were under the age of 14 years, but surely Mr Roth, with the profound knowledge of the use of the Thomas splint which he indicates in his letter, realizes that it is as easy to treat an adult on this splint as it is a child To satisfy him on this point, however, I have added at the end of this paragraph the results of a further twenty cases picked at random, but all over the required age of 14 years I wonder whether these results "simply will not bear comparison" with his own"

Nellie H	15 years	Full length
Mollie C	18	1/4 inch lengthening
James P	23	1/4 inch lengthening
Chris B	24	1 2 inch lengthening
Maggie C	27	1'4 inch lengthening
John McA	28	3/4 inch lengthening
Percy S	34	Full length
John G	35	3/4 inch lengthening
George G	36	1/4 inch shortening
Mary F	37	Full length
John C	41	1/2 inch lengthening
Harry C	42	Full length
Seth L	43	Full length
John G	45	Full length
Sarah S	45	Elongation of femur 1 inch obtained
Edward B	50	1/2 inch lengthening
Alice P	56	Full length
Richard D	59	Full length
Mary L	71	1/2 inch shortening
John T	72	1/2 inch lengthening

Mr Roth is quite right in assuming I have never seen wire extension applied as he describes it, and yet it seems so simple to put a wire through the lower end of the femur and then dismiss the patient from notice, leaving him to his own resources Has Mr Roth never seen a lateral bowing at the site of fracture, or has he never been troubled with infection in the region of the implanted wire? I hardly think that he would answer both these questions in the negative

It is disappointing to note that in spite of Mr Roth's twenty-odd years' experience with a Thomas splint he still thinks it is necessary to turn a patient over to get at the points of pressure Are his patients turned over to have the ordinary nursing attention to the back, usual when a patient is lying in bed, or is even this attention not necessary when wire extension is used? It was just such misapprehensions as these that made me venture to add to the literature already written on the Thomas bed knee-splint —I am, etc,

Liverpool April 9th W J EASTWOOD

Consultants and Specialists, L C C

SIR —In your issue of April 8th (pages 129 and 130 of the *Supplement*) there appear certain comments by the Medical Secretary, Dr Anderson, which may give an entirely wrong impression of the attitude of the Central Public Health Committee of the London County Council on important matters—for example

1 It is not correct to say that the London County Council "prepared and approved its plan for a new consultant service without affording the consultants an opportunity for discussing or commenting on its plan On January 20th Dr Anderson telephoned the Medical Officer asking for an interview on the subject of the scheme for a consultant service, which he understood was shortly to be submitted to the Central Public Health Committee The Medical Officer of Health responded by asking Dr Anderson to come and see him that day On February 9th Dr Anderson, by telephone, asked the Medical Officer of Health to see representatives of "a Consultants' Committee" with reference to the scheme A memorandum was forwarded to the Medical Officer of Health by the "Consultants' Committee," and a conference between the Medical Officer of Health and the "Consultants Committee" was held on February 13th The position, therefore, is that the "Consultants' Committee" asked for an interview with the Medical Officer of Health, and the interview took place The Central Public Health Committee of the London County Council was never at any time asked by the "Consultants' Committee," or by anyone else, to receive a deputation for this purpose until some time after the scheme had been passed by the Council, although the "Consultants' Committee" knew perfectly well on February 13th, and indeed some time before that date, that the Central Public Health Committee was about to receive a report thereon from the Council's Medical Officer of Health I would add that, when the British Medical Association knew that the Medical Officer of Health was about to present a report on district medical work to the Central Public Health Committee, it asked the Central Public Health Committee to receive a deputation on the subject The deputation was heard on January 26th Had the "Consultants' Committee" similarly asked the Central Public Health Committee for an interview prior to the passing of the scheme for a consultant service it would have been granted

2 It does not appear to be appreciated by the "Consultants' Committee" that the Council's Medical Officer of Health could not disclose the details of his proposals to the "Consultants' Committee," or anyone else, until they had been submitted to the Central Public Health Committee for its consideration

3 On page 130 the following paragraph appears with the comment "No action"

"It is hoped that the Council will adapt its machinery of selection and appointment so as to secure that the merits

of applicants for consultant posts are judged by men whose professional standing and contact with clinical medicine enable them fairly to estimate their professional worth

As I have already stated in answer to questions in the Council chamber when the Medical Officer of Health submitted his scheme to the Central Public Health Committee his report contained the following paragraph

I think it would be advisable for the Committee to authorize me to submit a list of applicants to the Presidents of the Royal Colleges of Physicians and Surgeons so that I may have the advantage of their advice before submitting my recommendations to the Staff Subcommittee for their approval

The Central Public Health Committee however decided that the Medical Officer should not be restricted to consultation with the Presidents of the Royal Colleges of Physicians and Surgeons but should be authorized to confer with any person whom he thought was likely to be able to afford him the assistance he desired in connexion with his recommendations for the appointment of consultants and specialists which it was his duty to submit to the committee in due course I think it might be desirable to add that in fact this has been the recognized practice of the Council's Medical Officer of Health during the last three years in connexion with any appointments of an important character in the Council's Hospital Service A recent example is in connexion with the appointment of a group pathologist at Mile End Hospital when the Medical Officer of Health obtained the advice and assistance of several distinguished pathologists both in and out of London —I am etc

F BARRIE LAMBERT
Chairman of the Central Public Health Committee of the London County Council

The County Hall S E 1 April 10th

* The letter from Dr Barrie Lambert (received too late for insertion last week) is now perhaps of less importance than at the time it was written since it may be hoped that the conciliatory letter sent by the Council of the British Medical Association will lead to a friendly discussion of the points raised It is easy to see how misunderstandings may have arisen The interview of the Chief Medical Officer of the County Council with a deputation of consultants on February 13th seems to have been regarded by the Public Health Committee of the L C C as a sufficient consultation about the Council's new scheme whereas it was regarded by the deputation as the submission by them of a few points on which they were concerned without any detailed knowledge of that scheme Dr Barrie Lambert indeed says that the Medical Officer could not disclose the details of his proposals until they had been submitted to the Central Public Health Committee but it is evident that that committee might have given permission for such disclosure and discussion before it actually adopted the proposals This seems to have been what those who represented the consultants expected when they stated in their memorandum that they would welcome an opportunity of examining the proposals for reorganization and of making considered comments thereon before the final plan is settled and they were encouraged in their expectation by the fact that a similar method of pre-consultation has for years been adopted by the Ministry of Health and other Government Departments when changes affecting the relation of the medical profession to public health services have been under consideration and by the fact that the Ministry has urged the desirability of such consultation upon local authorities Perhaps the sentence quoted from their memorandum never reached the Public Health Committee or possibly the statement that they would welcome an opportunity was not taken to be equivalent to a request that such an opportunity should be afforded At any rate they were disappointed that they did not in fact obtain any detailed knowledge of the Council's scheme until it had actually been finally adopted Further though it is now clear that the Medical Officer was authorized and perhaps expected to take advice from others before making his recommendations for particular appointments there may well be a difference of opinion on the relative advantage of taking such advice from a few eminent persons chosen haphazard or from a suitably chosen body of persons who would be considered as representative Lastly with regard to the deputation on district medical work which was so courteously received by the Central Public Health Committee it should be appreciated that this was only on the subject of the general method by which domiciliary medical attendance on the poor could most advantageously be given and that the district medical officers in the service of the L C C like the consultants were faced with accomplished facts without being allowed any adequate opportunity of collective representation in regard to the terms and conditions on which they were to serve The situation which has arisen through these misunderstandings is capable of adjustment and the Council of the British Medical Association has made a sincere offer of help in this direction It is greatly to be hoped that this spirit will be reciprocated

Diagnosis of Tuberculous Meningitis

SIR —I have read with interest Dr James Cook's report on tuberculous meningitis resembling cerebro-spinal fever While agreeing that these cases are of great interest I regret that I can see no evidence whatever for regarding them as tuberculous There is stated to be a complete lack of family history of tuberculosis and no source of infection could be elicited Yet the one obvious source of infection that was present is completely disregarded and that was the mother's influenzal attack one week previously It is not definitely stated what this attack really was it may have been genuine influenza or conceivably a *forme fruste* of encephalitis epidemica Bearing this in mind it is quite easy to see why no tubercle bacilli were found The pathological report on the cerebro-spinal fluids is stated to be the only evidence in favour of the diagnosis of tuberculous meningitis but such a report as this is valueless What does a trace of albumin mean? Normal cerebro spinal fluid contains a trace of albumin (10 to 30 mg per 100 c cm) Again what time interval was allowed to elapse between the collection of the cerebro spinal fluids and testing them for sugar? In other words in such a report is there evidence by which we may exclude spontaneous glycolysis? How many cells per cubic millimetre does numerous represent and what media were employed for cultural investigations?

On clinical grounds alone it is almost an incredibly rare occurrence to have two cases of tuberculous meningitis occurring almost simultaneously in any one family and in which death is the outcome in such a short time as described in the note but an influenzal or epidemic encephalitic infection would readily account for such a picture I submit on the evidence adduced in the article that there is no justification for diagnosing tuberculosis in any form and a strong presumptive case can be made for a diagnosis of (*a*) influenzal polio-encephalitis or (*b*) genuine epidemic encephalitis

I am convinced it is grossly misleading to record such cases as tuberculous meningitis without (*a*) accurate and complete investigation of the cerebro-spinal fluid and/or (*b*) a complete post mortem examination with demonstration of characteristic tuberculous lesions by a competent pathologist —I am etc

DAVID H HALER

The Infants Hospital Vincent Square April 10th

X Rays in the Treatment of Asthma

SIR —I am interested in Dr Gilbert Scott's letter in your issue of April 8th (p 629), on x rays in the treatment of asthma The particular point of interest to me is why Dr Scott so carefully excludes the thorax from direct influence of the x rays, not only by limiting his field of radiation to the abdomen, but also by his careful protection of the thorax by means of lead rubber Dr Scott does not say so, but I suppose the irradiation to the back is confined to the lumbar region

It is well known that the effect of x rays sometimes acts beneficially reflexly I once treated a case of rodent ulcer at the outer canthus of the eye the patient had exophthalmic goitre, which became cured, although the rays were applied solely to the region of the eye This was, of course, an unexpected result, but Dr Scott appears to have had some special reason for excluding the thorax The first patient with asthma who received benefit by x rays at my hands was under treatment after removal of the left breast , she suffered from asthma, but during the course of x-ray treatment the asthma left her She died two years later from secondary cancer of the lung I have since treated asthma with x rays in a routine manner by direct irradiation to the thorax, with very gratifying results —I am, etc ,

London, W 1, April 7th CHRISTOPHER KEMPSTER

Modified Bendien Reaction

SIR —I have read with great interest Dr Cronin Lowe's account of his modification of the Bendien reaction Dr Cronin Lowe expresses his findings in the test as a fraction, of which the numerator is C — A (that is, the difference between the degree of precipitation of the other treated serum " C " and the untreated serum " A ") The denominator of the fraction is A — B (that is, the difference in the degree of precipitation between the untreated serum " A " and the heated serum " B ")

Dr Cronin Lowe finds that in malignant disease this fraction $\frac{C-A}{A-B}$ is greater than unity, whereas in the case of normal and pathological serums other than malignant ones this fraction is less than unity It is obvious that any factor which would increase the difference between " C " and " A " would tend to keep the fraction high by raising the value of the numerator, and vice versa In trying to explain the variations in the precipitation of the C ' reaction, Dr Cronin Lowe suggests that this may depend in part upon the lipoid content of malignant serums being higher than normal (Benso, 1930) these observations, however, have not been confirmed , and he proceeds to consider other theories

As a matter of fact it has long been known that one of the lipoid substances of the blood, indeed the most important lipoid—namely, cholesterol—is present in unduly high amounts in the blood in cases of malignant disease (Luden [1] 1916) Further, Luden believes that a high cholesterol content of the blood is an important factor in the aetiology of malignant disease According to Robertson and Burnett[2] (1913), cholesterol promotes cell multiplication, for these workers have found that injections of cholesterol cause an increase in the rapidity of growth of tumour transplantations in rats Moreover, Dr Cronin Lowe has obtained a malignant type of reaction in cases of pregnancy, and it is well known that the cholesterol content of the blood is high in pregnancy (Chauffard, Laroche, and Grigaut[3] (1911), Shiskin[4] (1922), and others) In addition Dr Cronin Lowe finds that in malignant disease associated with marked secondary infection the blood serum does not give a malignant type of reaction Here again the cholesterol content of the blood in these cases might be the explanation Chauffard and many others (Landau,[5] Barbary,[6] Small,[7] and MacAdam and Shiskin[8]) have demonstrated that serious infections are always accompanied by a marked hypocholesterolaemia The effect of this would be to lower the value of the numerator (C — A) and thus give a fraction below unity —that is, a non-malignant type of reaction

The view expressed above—namely, that the variations in the precipitation of the " C " reaction depend, in part at least, upon the cholesterol content of the blood—appears not only plausible, but also offers an explanation for Dr Cronin Lowe's findings in pregnancy and the " non correspondence " of the test in cases of malignancy associated with gross sepsis —I am, etc

London, L 17 April 7th CECILIA SHISKIN

REFERENCES

[1] Luden *Journ Lab and Clin Med* 1918–19 iv 662
[2] Robertson and Burnett *Journ Exper Med* 1913 xvii 44
[3] Chauffard, Laroche, and Grigaut *Obstétrique* 1911 iv 481
[4] Shiskin C Thesis Glasgow University 1922
[5] Landau *Deut med Woch* 1913 xxxix 546
[6] Barbary *Bull de l'Acad de Med* Paris 1916 lxxvi 221
[7] Small *Journ Lab and Clin Med* 1915–16 i 869
[8] MacAdam and Shiskin *Brit Journ of Surg* 1925 xii 46

Symptoms of Acute Neurasthenia

SIR —During the last few days several doctors, in the course of conversation, have expressed to me their surprise, even mystification, at the statements made at the Moscow " trial " by Mr Macdonald and, to a lesser degree, at those of Mr Thornton It seems to me a fortunate circumstance that in this very week's *Journal* you should have published an article by Dr A F Tredgold, one portion of which, headed " Acute Neurasthenia," on page 618, so excellently describes the condition from which these men must have been suffering, and details so appositely the symptoms and consequences which characterize that condition —I am, etc ,

London, N W 11, April 15th HENRY B BRACKENBURY

Science and Philosophy

SIR,—Admiral Beadnell and Dr Haddow, in your issue of April 1st, have both agreed that my letter was logical, which is very comforting to know in the present not very logical age They are both apparently mechanists, which means, presumably, that they merely think it probable that the forces actuating living matter are identical with those responsible for the activities exhibited by inanimate things They can hardly *believe* that this is so , because to believe one must have facts and not theories to rely on And yet how often are theories taken as a basis for the formulation of fresh theories! It is curious how theories, through frequent repetition, have a habit of becoming magnified into doctrines Very often the trouble begins through the misuse of a word or phrase Take the word " evolution," for example At present it seems to mean anything from growth or development, which is its true meaning, to the god of the Monist—from a mere description of a natural phenomenon to a deity with creative and directive powers The mechanistic view of life was such a theory , in the past it gained in size and apparent importance after the fashion of a snowball , but the snow is beginning to melt—in fact, has melted considerably Every physiologist engaged on research, when he comes down to the activities of living cells, is bound to admit, in Gray's words (*Physiology of the Cell*), that " no single activity of the living cell has yet been analysed in physical terms " It is, of course, true that some physiological phenomena, generally of the grosser type, such as the energy exchanges, are apparently in conformity with physical and chemical laws , but the deeper we inquire into the cause of these phenomena the more forcibly are we struck with the truth of the above

quotation The words of Lovatt Evans are here also appropriate The pretty conceits of a century ago appear as absurd to us as our fancied omniscience will seem to our successors a century hence

It should also be noted that the great bulk of explanations of life come from those least qualified to speak on the subject Thus we have explanations from chemists morphologists geologists and others but how very few from the man whose business it is to study the functions of living animals The physiologist knows only too well that the phenomena of life cannot fundamentally speaking be described in terms of the physical sciences much less explained The scientist does not *explain* things he describes them he observes Nature's activities classifies them finds how they interact and dissociates cause from effect but he does not explain phenomena A colleague of mine has said that the man who can explain the growth of a blade of grass can explain the universe He would indeed be a rash prophet to predict that this will ever be done by man's ingenuity alone —I am etc

Aberdeen April 9th H E MAGEE

Doctors and Unemployment

SIR —I am gratified to note the growing interest of doctors in the major economic problems of to-day It is high time that the medical profession realized that as one of the principal groups in the class of the intelligentsia it has the capacity to study the solutions of these problems and a fair amount of power to help to resolve these solutions For too long has the catch phrase leave politics to the politicians held sway with disastrous results It is imperative that the intelligentsia step in and seek a solution the muddle headed politicians have had their way long enough

We must realize that these problems have also a profound bearing on medicine as well as on our economic lives Let us take tuberculosis as an example In spite of endless research in sanatorium pneumothorax and gold treatment it will always remain the scourge of mankind whilst there are slums unemployment and hunger First we must realize in the presence of the swiftly changing events of to-day that the economic system in which we live is crumbling and collapsing before our eyes its very foundations dissolving beneath our feet We must act now and not as armchair critics We must ally ourselves with the forces of progress rather than fall unwittingly into a barbaric faction and be submerged in the ruins —I am etc

London E 2 April 8th S LEFF M B B S

The Services

DEATHS IN THE SERVICES

Lieutenant-Colonel James Walker Jones D S O Indian Medical Service died recently of pneumonia at Rangoon aged 45 He was born on December 22nd 1887 the son of Professor Sir Henry Jones of Glasgow University and was educated at the Glasgow High School and University where he graduated M B and Ch B in 1910 Entering the I M S as lieutenant on January 27th 1912 he became lieutenant colonel after twenty years service He served in the war of 1914–18 on the North West Frontier of India in the Mohmand and Swat campaigns in 1915–16 and in Iraq in 1916–18 and was mentioned in dispatches in the *London Gazette* of September 22nd and October 19th 1916 He received the D S O on September 22nd 1916 For conspicuous gallantry and presence of mind in closing with a soldier who had lost his reason and was moving along a trench prior to an attack with a bomb in each hand Realizing the situation Captain Jones closed with him and wrenched one bomb from his hand It immediately started to burn Captain Jones threw it some yards away and it burst on touching the ground Two officers were injured by the explosion and several others might have been injured but for this prompt and courageous action He held the appointment of physician to the Rangoon General Hospital

Medico-Legal

LIBEL AND SLANDER IN MEDICAL PRACTICE

II —THE DOCTOR AS INJURED PARTY*

Before and during the war doctors were troubled as often by libels and slanders as they were by accusations of mal praxis Nowadays actions in which a doctor has to defend his reputation by attacking a defamer are almost rare This happy improvement is undoubtedly due to the efforts of the large protection societies A recent annual report issued by one of these bodies shows that in 1914 its solicitors dealt with no fewer than fifty two cases in which doctors complained of attacks on their reputation by way of libel and slander as against forty cases in which doctors were charged with malpraxis In 1930 this body consulted its solicitors on complaints of defamation only seven times and in 1931 it did not consult them once

A doctor especially a general practitioner is inevitably bothered with a good deal of gossip and tittle tattle in the place where he works and a sensible man disregards most of it entirely Some patients are never satisfied and let their criticism play freely over a doctor's personal and professional characteristics Professional rivalry is unfortunately apt to express itself in a way that comes very near to the borderline of actionable slander Institutional life though it has its attractions is not seldom associated with a continuous interplay of derogatory gossip and criticism Generally speaking the more fuss a doctor makes about this kind of thing the more colour he gives to the idea that there is some truth in it Now and again however a doctor manages to make a real enemy who concentrates his energy on doing as much damage as he can It is then a great mistake to remain idle for a moment and the doctor should at once invoke the help of his protection society One of the chief benefits of membership of a society of this kind is that a medical man can at any time obtain expert and confidential advice on whether a libel or a slander should be dealt with or ignored and on the way to deal with it out of court If the offender is another medical man especially if he is a member of the same society the matter can often be settled with comparative ease

A fairly common experience for a medical practitioner is to receive a letter abusing him in all the uncomplimentary terms at the writer's disposal and accusing him of every crime from negligence to illegal operation and adultery with his patients In English law the doctor in this case cannot claim damages for the letter is not published —no one but himself has seen it (In Scotland such a letter constitutes a libel whether anyone else sees it or not) Nevertheless the writer is open to a prosecution for criminal libel which is sometimes a most effective deterrent This form of action however has the disadvantage that libel can only be tried at Assizes a proceeding which entails some delay and expense A much more convenient method of dealing with the writer of abusive letters was that employed recently by a protection society by prosecution under Section 25 of the Summary Jurisdiction Act of 1879 for conduct of a character calculated to produce a breach of the peace[1]

* The first part of this article on libel and slander in medical practice appeared in the *Journal* of April 1st (p 559) A subsequent article in the same series will deal with the extent to which hospitals and nursing homes are liable for the negligence of their staff and general practitioners for that of their assistants and locumtenents

[1] Haylocke *v* Sparke (17 J P 262)

This offence can be tried by a bench of magistrates at once, and they can bind over the offender or remand him (or her) for observation, or in default of security send him to prison If the magistrates consent, the doctor's name need not be mentioned By this procedure an insane person, as so many abusive letter writers are, may come under certificate with little delay, especially if he repeats the offence after being bound over

When Slander is not Slander

The law of slander affords another example of a matter in which Scotland does things better In that country there is no need for a slandered person to prove special damage, he has the same right to redress for verbal as for written defamation In England, unless a slander comes within the heads enumerated at the beginning of this article, it is not actionable For obvious reasons a doctor is not likely to find it easy to prove that a given slander has caused him actual monetary loss, he will probably be able more easily to show that it would naturally tend to injure his professional reputation A study of the decided cases shows that some quite surprising statements have been held by the courts to be not actionable as not going directly against professional reputation In Clay *v* Roberts (1863, 8 L T. 397) B said of a physician A that he had met homœopathists (presumably unqualified ones) in consultation This happened to be a libel and not a slander case, but the point is the same B said of A something which, if proved before the General Medical Council, was quite sufficient to constitute infamous conduct in a professional respect and to ensure the removal of A from the *Register* Nevertheless, Pollock, Chief Baron, held that no action lay, that A was accused merely of a breach of conventional etiquette and not of anything illegal or sinful In Beaney *v* Fitzgerald (1863, 2 W and W (Vict) 184) B said of a medical man A that he was an advertising doctor Chief Justice Stawell held that, although sensitive and honourable medical men might regard these words as imputing quackery, yet the court could not say that they would be so regarded by the public at large The principle is that the words spoken must be capable of producing a bad impression on the minds of average reasonable men, and not merely on the minds of medical men This case, however, was decided a long time ago, and the public is now far more familiar with medical qualifications and ethical standards than it was seventy years ago It is probable, as Dr Clement Gatley submits in his excellent textbook *Libel and Slander in a Civil Action*, that such a statement nowadays would tend to lower the reputation of a medical man in the estimation of the general public and would therefore be actionable Medical men have often of course, been given substantial damages for libel and slander which imputed to them recklessness or gross ignorance in treatment

In Dockrell *v* Dougall (1899, 80 L T 558) B, a manufacturer of a quack medicine, used in an advertisement the name of A, a medical practitioner, in such a way as to induce the public to think that A prescribed or recommended it the court held that this constituted a libel And to call a medical man—or even, for that matter, an unqualified practitioner—a "quack" has always been held actionable Mr L Le M Minty, in the preface to his book *The Legal and Ethical Aspects of Medical Quackery*, quotes the case of Chisholm *v* Grant (1914, S C 289) in which B the town clerk of Banff, was alleged to have said of A, the unqualified superintendent of a mental hospital "What does that mannie know about treating lunatics? He is just a quack We will sack him yet!" The court held that these words were defamatory and meant that A was unfit for his duties as superintendent and ought to be dismissed If a medical man is accused by word of mouth simply of adultery with a married woman, and does not show special damage, he cannot succeed in an action for slander In Ayre *v* Craven (1834, 2 A and E 2) a physician gained the verdict in such a case, but judgement was arrested because he could not show how the speaker of the words connected the imputation with the physician's professional conduct On the other hand, if a doctor is said to have committed adultery with one of his patients, the words go against his professional conduct and are actionable

Just as proceedings before a judicial tribunal recognized by law are absolutely privileged, so all preliminary matters are covered by the same protection If an enemy writes to the Registrar of the General Medical Council making charges against a doctor that are absolutely false and bear evidence of the most unspeakable malice, the doctor has no redress, for such a letter is considered to form part of the proceedings of the Council (Lilley *v* Roney, 1892, 61 L J Q B 727) But a similar charge made to the Ethical Committee of the British Medical Association, or to the secretary of the Medical Defence Union or of the London and Counties Medical Protection Society, would not be covered by absolute privilege (Hope *v* I'Anson and Weatherby, 1901, 18 T L R 201 (C A)) The injured practitioner would have a right of action against the writer, and, if he could prove an improper motive, would be entitled to damages As, however, such letters are usually protected by the confidence of the bodies to whom they are addressed, the point is not likely to arise

Substantial Damages

That the law can give very effective protection when a doctor's reputation is seriously injured by libel or slander was shown last year in the case of Owen *v* Barham,[1] heard at the Pembroke Assizes

B, a householder spread statements against A a general practitioner and medical officer of health that he had misconducted himself with a girl of 17, a servant of B's, and that he had performed an illegal operation on her also that he had neglected his patients and was unfit to be a medical practitioner A was able to prove that he had never seen the girl alone, and B, although the girl denied the truth of the allegations and he was unable to produce any evidence supporting them, declined to withdraw his statements Counsel for the plaintiff described the case as "dripping with malice" from beginning to end The jury gave A £5 000 damages and the court granted an injunction restraining B from repeating the slander

The effect of an injunction is to render anyone who disobeys it liable to imprisonment, it is often asked and granted together with damages A protection society received a complaint from a medical practitioner that one of his women patients had suddenly become extremely hostile to him and had started writing him most scurrilous letters She had extended her correspondence to the principal residents in the neighbourhood and to the member's fiancée and her relatives The society proceeded against the woman for criminal libel at the Assizes, and she was bound over to come up for judgement if called upon

In both these cases the medical man would have been at an enormous disadvantage if he had not been able to rely on the aid of a protection society, and the value of membership of one of these bodies is equally great whether a medical man is sued for defaming another person unwittingly or is made the victim of libellous or slanderous attacks Practitioners who contemplate taking proceedings against a slanderer should, however, remember one important factor To prove a slander depends on the evidence of witnesses who have heard it spoken Memory is unreliable, especially when the hearer does not much want to give evidence, and several doctors have found to their dismay that as soon as legal proceedings have become a concrete possibility their trusted witnesses have gone back on them They are then worse off than they were, because to start slander proceedings and drop them lays the plaintiff open at least to the suggestion that the offending remarks were true enough to make him afraid to face a public investigation For this reason at least one defence society refuses even to threaten proceedings for slander unless its member can produce written statements from the witnesses and a doctor who decides to proceed should make it his first concern to obtain the signed testimony of as many reliable witnesses as possible

[1] *British Medical Journal* 1932, i, 174

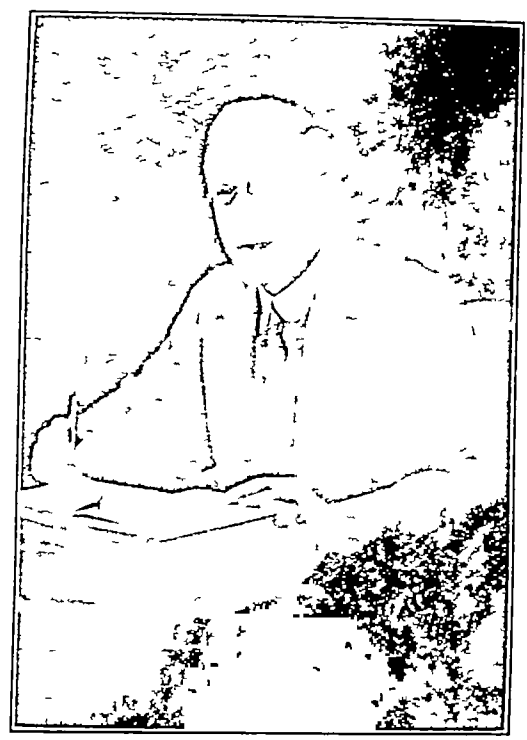
Obituary

J R DREVER M A M B F R C P Ed

Late Scottish Medical Secretary British Medical Association

We had to announce last week with great regret the sudden death on April 7th at his residence in Merchiston Crescent Edinburgh of Dr James R Drever formerly Scottish Medical Secretary of the British Medical Association Dr Drever had been in ill health for some time and had retired from his post in November 1931

James Richan Drever was born in 1873 at Alexandria on the Clyde and after preliminary education he entered the Faculty of Arts at Glasgow University with the object of taking up the teaching profession There he graduated M A in 1893 but after holding various teaching appointments he was attracted by the profession of medicine which he decided to embrace and accordingly he returned to Glasgow University where he graduated M B Ch B in 1900 After graduation he entered upon general practice in Glasgow and a little later took up ear nose and throat work as a specialty in addition to his practice being connected with both the Royal and the Western Infirmaries He was later appointed surgeon for this special department to Bellahouston Dispensary He early began to take an interest in the work of the British Medical Association which he joined in 1907 and with which he later became intimately connected Becoming a member of the executive committee of the Glasgow Southern Division in 1912 he was elected assistant secretary to that Division in 1913 and at the same time became a member of the Glasgow and West of Scotland Branch Council He was a valued member of the Insurance Acts Committee from 1914 and of the Insurance Acts Subcommittee for Scotland from 1917 being elected chairman of the latter body in 1918 and 1919 Drever's increasing interest in the activities of the British Medical Association was evinced by his becoming a member of its Scottish Committee in 1917 and his election as chairman of that body in 1918 and 1919 In 1918 he also became a member of the Central Council of the Association All these posts he continued to hold until the Association resolved to appoint a Scottish Medical Secretary and in September 1919 he was quite naturally elected to this post He continued as a member of the Organization Committee of the Association in 1920 and 1921



Although he had obtained a considerable measure of success in practice Drever was regarded by those who knew him as pre-eminently an organizer When he became Scottish Medical Secretary the Scottish Office in Rutland Square Edinburgh was situated in somewhat obscure and unsatisfactory premises and he almost immediately set about looking for a more worthy home for the Scottish business of the Association As a result mainly of his activity the Association decided in 1925 to acquire a house in Drumsheugh Gardens which was later expanded by the purchase of the adjoining house into the fine premises now occupied by the Scottish House of the Association The planning of this and the financial success that has followed upon the inclusion of premises let as suites of offices was largely due to Drever's foresight Undoubtedly the prestige of the Association in Scotland has been greatly advanced by this undertaking

In addition to his work for the British Medical Association Drever was connected with numerous cognate activities In the early days of the war he was secretary to the Glasgow Local Medical War Committee and later he became a member of the Scottish Medical and Allied Services Consultative Council He had been in his early days of practice a member of the Glasgow Education Authority and he served as a member of the important departmental committee which under the chairmanship of Lord Mackenzie reported in 1926 on the state of Scotland in regard to hospital facilities and the needs of this country for their extension He joined the Royal College of Physicians of Edinburgh as a Member in 1922 and proceeded to the Fellowship in 1926

Despite the large amount of work in which Drever was engaged for the development of medical services in connexion with the Association's work in Scotland he was always ready to place his advice and help at the disposal of individual practitioners and his sage counsel and wide experience were in constant requisition and greatly valued by those who sought them His kindly and helpful disposition and the great amount of valuable though unobtrusive work which he did rendered him highly popular with all those with whom he came in contact and the illness which necessitated his retirement from the post of Scottish Medical Secretary in 1931 after twelve years tenure of it was greatly deplored During the last two years although debarred by his illness from transacting the arduous business in which he had previously engaged he was still equal to the ordinary activities of life and his advice and help were freely placed at the disposal of professional colleagues He was succeeded in the post by Dr Robert W Craig

Dr Drever leaves a widow and a son who is a student of medicine

The funeral took place on April 10th at Morningside Cemetery Edinburgh It was attended by representatives of the general public the medical profession and the Department of Health for Scotland The Council of the British Medical Association was represented by Dr J B Miller Dr John Young Dr Wilkie Millar and Dr Keppie Paterson represented the Edinburgh Branch the Scottish Committee was represented by Dr Martine of Haddington and Dr Simpson of Golspie

Dr R W CRAIG writes

The death of Dr Drever will be greatly regretted in all parts of Scotland He was a well-known personality, and medical men throughout the length and breadth of the country will greatly regret the loss of a wise counsellor and friend Quiet and unassuming by nature, his sterling qualities impressed themselves on one the better one knew him He had a wide experience in various spheres before he was appointed as Scottish Medical Secretary This stood him in good stead in the varied duties that have to be dealt with in the Scottish Office

Drever was the fortunate possessor of an orderly, logical, and relevant mind His advice was greatly valued He was never in a hurry He never spoke without thinking In conversation with him one was sometimes tempted to think that he took a long time to give an opinion, but one soon came to recognize that this was largely the reason that his advice was so useful and his judgement so sound He had a most retentive memory, and, whilst endowed with the capacity of taking the broad view on any question, he was also able to deal efficiently with the details, and visualize the repercussions which any new developments involved In taking leave of the Scottish Committee he wrote 'It is a great trust that is placed in the hands of the committee, and I trust that wise counsels will always prevail" As his successor in office I have had special opportunity of appreciating the value of his work for the Association and for the medical services in Scotland I shall greatly miss his friendly advice and help

[The photograph reproduced is by E Holford Debenham, Edinburgh]

W H MARTINDALE, PH D, F C S

Editor of the *Extra Pharmacopoeia*

As briefly announced in our last issue, W Harrison Martindale died at his home in Brondesbury on April 8th, aged 58 The son of William Martindale, who founded the pharmaceutical business in New Cavendish Street in 1873, he was educated at University College, and at Marburg University under Professor E Schmidt The thesis for his Ph D degree was on "Researches on Corydaline which was read before the Philosophical Faculty of the university in 1898 Subsequent communications by him to various journals included papers on salvarsan (1911—in conjunction with Dr W Wynn Westcott) on digitalis assay lactic acid bacilli, organic arsenic compounds, essential oils in relation to antiseptic powers, atomic weights basic quinine and other alkaloidal injections emetine preparations, and on the treatment of amoebic dysentery—the last two in conjunction with Dr J Graham Willmore in 1926 Dr Martindale took over the business on his father's death in 1902 Soon afterwards he transferred the wholesale and manufacturing departments to large premises at the back of the old shop and from his laboratory there went forth during the ensuing years a constant stream of new chemical and pharmaceutical preparations many of them introduced at the suggestion of medical friends He was one of the first to realize the value of issuing liquids for injection in the form of sealed ampoules and installed his own glass blowing department

Dr Martindale's life-work was the *Extra Pharmacopoeia* After the death of his father he carried on the work through eight editions in collaboration with Dr Wynn Westcott until the latter died in 1925, and since then with occasional assistance from medical friends Few except those intimately connected with the book can have any conception of the immense labour entailed in revising it for each new edition The unremitting work at high pressure necessary to the production of volume 1 of the twentieth edition, which appeared last September, was in large measure responsible for the breakdown in health which followed its publication In the light of his subsequent fatal illness there is a tragic ring in the closing words of the preface "The writer hopes that some of the information embodied in this edition may prove helpful to suffering humanity in regaining and retaining—to borrow the phrase of an old friend—that priceless blessing—good health" As we said in the review published on October 29th, there are few books that have maintained so great a popularity among members of our profession as the *Extra Pharmacopoeia* and we assured its editor that the profession appreciated very highly the result of his labours We would like to add here that on innumerable occasions W H Martindale, and his father before him, gave ready help to the Editorial Department of the *British Medical Journal*, in answering queries from readers and supplying information on matters pharmaceutical and pharmacological The ready good nature with which he drew upon his vast store of accurate knowledge will long be remembered gratefully in this office

Universities and Colleges

UNIVERSITY OF OXFORD

THE MAY FELLOWSHIP

A fund amounting to approximately £11 000 the bequest of the late Miss Alice Mary May was accepted by Congregation on April 8th It is to be devoted to the establishment and maintenance of a Fellowship in the University for the provision of assistance in the preparation of candidates for the examination of the degree of Bachelor of Medicine and to be awarded for knowledge and proficiency in the higher branches of medical and surgical science and research The duty of the Fellow in addition to that of providing assistance to B M candidates is to conduct research The Fellowship is confined to British subjects who are Bachelors of Medicine of the University of Oxford or who hold an equivalent degree of some other British university or who are Members of the Royal College of Physicians of London or Fellows of the Royal College of Surgeons of England The holder, who is to be styled "the May Reader in Medicine" retains office for seven years and is subject to the jurisdiction of the Visitatorial Board He must reside within the University for at least six months in each academic year The Fellowship is tenable with a stipendiary Fellowship at a College or with a University Demonstratorship but not with both it is not tenable with a University Readership or Lectureship The stipend is provisionally fixed at £400 per annum The first Reader is to hold office only until the first day of the Michaelmas Term, 1935

UNIVERSITY OF LONDON

The degree of Ph D in Biochemistry in the Faculty of Science has been awarded to S W Johnson (Lister Institute of Preventive Medicine) and the degree of D Sc in Physiology to R J Lythgoe (University College)

The regulations for the second examination for medical degrees, Part II, have been amended by the addition of the following after the first paragraph on page 211 of the Red Book, 1932-3, and after the second paragraph on page 256 of the Blue Book, September, 1932

Candidates who are referred in one subject only at the First Examination for medical degrees in July or December and pass in that subject at the next following First Examination for Medical Degrees will be permitted to proceed to the Second Examination for Medical Degrees Part II as though they had completed the First Examination for Medical Degrees in July or December respectively provided they have completed the prescribed course of study

Professor M E Delafield has been appointed representative at the sixth Imperial Social Hygiene Congress to be held in London from July 3rd to 7th The ceremony of presentation for degrees will take place at the Royal Albert Hall on Wednesday May 10th at 2 30 p m The annual service for members of the University will be held at Westminster Abbey at 5 30 p m when the Rev Canon C Jenkins will preach The graduation dinner will take place in the evening at the Drapers Hall when the Chancellor will preside

Mr Hope Carlton, M Ch F R C S, has been appointed Warden of Connaught Hall as from January 1st

Sir John Rose Bradford Bt M D and Lord Meston have been re-elected chairman and vice-chairman respectively of the University College Committee for the year 1933–4

Applications for *grants from* (1) the Dixon Fund for investigating scientific investigations and (2) the Thomas Smythe Hughes and Beverbrook Medical Research Funds for assisting original medical research must be received by May 15th Particulars from the Academic Registrar

Studentships

The Geoffrey E Duveen Travelling Studentship in oto-rhino-laryngology of the value of £450 will be awarded annually The tenure shall in the first instance be for one year part of which will be spent in study abroad in accordance with a scheme approved by the Geoffrey E Duveen Student ship Board but it may be extended for one or two years and during the extended period the student may be allowed to undertake research at the Royal Ear Hospital or some other laboratory approved for the purpose Grants for promotion of research in oto-rhino-laryngology or in any part thereof may also be made by the Trust Fund Full particulars can be obtained from the Academic Registrar South Kensington S W 7 and prescribed forms of application must reach him not later than June 12th together with a statement of the nature of the research proposed and a scheme of study for the approval of the Board

A University Studentship in Physiology of the value of £100 for one year and tenable in a physiological laboratory of the University will be awarded to a student qualified to undertake research in physiology Applications must be received by the principal by May 31st from whom full regulations may be obtained

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE

The following special lectures will be given in the Public Health Division April 20th and 21st at 4 p m Dr B M Macewen maternity and child welfare April 25th and 26th at 12 noon Sir Francis E Fremantle M P parliamentary procedure April 28th at 4 p m Mr A T Pike town planning May 5th 12th 19th 26th and June 2nd at 3 15 p m Dr E L Middleton industrial hygiene May 8th and 10th at 2 p m Dr C F White port work May 17th at 3 15 p m Dr R H Crowley child guidance May 23rd at 3 15 p m Dr L P Lockhart industrial medicine as a function of public health May 29th and 29th at 5 p m Dr C J Thomas physically defective children May 30th and June 1st at 5 p m Dr F C Shrubsall mental deficiency June 2nd at 2 p m Mr R R Hyde industrial welfare June 8th at 2 p m and June 9th at 3 p m Sir George Buchanan international hygiene June 9th at 2 p m Dr F Radcliffe factory medical work June 9th at 5 p m Dr N Howard Mummery the practice of industrial medicine

The following candidates have been approved at the examination indicated

ACADEMIC DIPLOMA IN PUBLIC HEALTH—(*Part I*) A A Birrell W L Blakemore C F Caldwell R C Chen J C Curnow I C Curnow Hilda M Davis J D Dimock J C St G Earl C L S Ferdinand A M Goodman J M Henderson J Kemp Laura H Macfarlane A M Mian B C Nicholson B O'Brien T B Pahlajani J G Paley C H C Southwell Sander J M Talati A J Teal Kathleen C Vost G A Wilson

LONDON HOSPITAL MEDICAL COLLEGE

One of the open entrance scholarships (£100) offered by the London Hospital Medical College has been awarded to B B Hickey University College Oxford

UNIVERSITY OF BIRMINGHAM

A course of five William Withering Memorial Lectures on The Methods of Clinical Genetics will be given by Professor Lancelot Hogben D Sc in the large theatre of the Medical Faculty Buildings Edmund Street on Wednesdays April 26th May 3rd 10th 17th and 24th at 4 p m Members of the medical profession are invited to attend

The Ingleby Lectures 1933 on The Fat-soluble Vitamins will be given on Tuesday June 27th and Thursday June 29th at 4 p m in the Medical Lecture Theatre by Dr Alfred F Hess of New York Lecture I will deal with vitamin A in relation to nutrition and infection and Lecture II will appraise the prophylactic measures against rickets

UNIVERSITY OF GLASGOW

The following candidates have been approved at the examination indicated

FINAL M B CH B—Mabel S Ainslie R C Anderson P B Angus A K Boyle J A Brown W Brown T Bryson R Calderwood A A Cameron J C Campbell J Cordiner D F Craig D C Dewar I N Dunn D B Fauld J Fleming *G Forbes R Gibson A M Goldie R K Grassick A Guthrie Lily C Hall J C Henderson I Hoppenstein J S Hutchison R F Jamieson S R Jamieson Alice K Killin W Livingstone P J M Moon J E M Clement N M Macdonald R G MacGregor J M Intosh J Mackenna D A Lachlan Mary H M Laren E R M Laughlin M M Lellan J L M Lachie D J N M Nab R Neilson Mary C Orr A Russell H R Shiels J A Sweeney J G Thomson H Warshaw J Watson John Watson J P Williamson Jean D Wilson Agnes B L Wright

* With distinction in surgery

ROYAL COLLEGE OF PHYSICIANS OF LONDON

At a meeting of the Royal College of Physicians held on April 10th Lord Dawson of Penn was re-elected President

Lord Dawson was appointed to represent the College at the laying of the foundation stone of the new buildings of the University of London in June next Sir Francis Fremantle to represent the College at the sixth Imperial Social Hygiene Congress Professor W W Jameson at the congress of the Royal Sanitary Institute and Dr Rupert Waternouse on the advisory committee of the British Health Resorts Association

Diplomas in Ophthalmic Medicine and Surgery were granted jointly with the Royal College of Surgeons to the following candidates A J Boase A J Cameron J L Connacher K G Das L P J Evans F S Flynn G S Forrester A C Ghosh A L Khow Djung Lin Du C A Pittar A B Purvis S V Rao O L F Senaratne S P Srivastava

BRITISH COLLEGE OF OBSTETRICIANS AND GYNAECOLOGISTS

At its quarterly meeting held in Birmingham on April 4th with the president Dr J S Fairbairn in the chair the Council appointed Mr Comyns Berkeley a special treasurer to take charge of the appeal for the Endowment Fund

The following were admitted to the membership of the College *in absentia* Alexander Broido (South Africa) Doris Clayton Gordon (New Zealand) Reginald Francis Matters (Australia) Subodh Mitrah and Stephen Alphonsus McSwiney (India)

The following were elected to the membership Leslie Cecil Lloyd Averill (New Zealand) Keith Duff (London) William Smith O'Loughlin (Romford) Kenneth Wilson (Brisbane)

The annual general meeting of the College was held in the University Birmingham on April 5th The president Dr J S Fairbairn was in the chair and thirty four Fellows and Members were present

The president formally admitted to the Fellowship John Hewitt (Glasgow) John St George Wilson (Liverpool) and to the Membership Samuel Saxon Barton (Liverpool) John William H M Beattie (London) Jajneswar Chakravarti (India) John Cecil Dowse (Gibraltar) Richard Victor Dowse (Dublin) Wallace Freeborn John Chassar Moir William Charles Wallace Nixon and James Vincent O'Sullivan (London) Robert Watson (Liverpool) Ralph Kuper White (Southsea) Nellie Wilkes (Derby)

The following were elected to the Council to fill the vacancies caused by the statutory retirement in rotation of one third of the members of the Council and two casual vacancies *Representative of the Fellows* Daniel Dougal (Manchester) Thomas Watts Eden (London) Robert William Johnstone (Edinburgh) Charles Gibson Lorrey (Belfast) Arthur Leyland Robinson (Liverpool) Thomas George Stevens (London) *Representatives of the Members* Douglas Miller (Edinburgh) Louis Carnac Rivett (London)

The president briefly outlined the many activities of the College present and prospective He also pointed out that the number both of those applying for and admitted to membership had increased by about 50 per cent during the past year These applications and admissions from the various areas of this country and the Dominions thus proving that the College was not merely an English but a British College The president stressed the necessity of maintaining its characteristic

In moving the adoption of the annual report of the Council the honorary secretary Professor William Fletcher Shaw referred to the large number of candidates from the Dominions who were training in this country for the Membership In moving the adoption of the financial report and balance sheet the honorary treasurer Dr Eardley Holland explained that whilst the balance sheet showed that the finances of the College were sound the necessity for raising an endowment fund must not be overlooked and he asked for the support of the Fellows and Members in this direction Many had already subscribed and he hoped more would find it possible to do so

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

On April 13th, before Parliament rose for Easter the Royal Assent was signified to the Children and Young Persons Act London Passenger Transport Act, Doncaster Drainage Act, Army and Air Force (Annual) Act, and the Russian Goods (Import Prohibition) Act The Children and Young Persons Bill had originated in the House of Lords, and on April 11th the Commons had passed it through committee, report, and third reading The Bill is a consolidating measure

The Budget will be opened in the House of Commons on Tuesday, April 25th

Water Supply of Malton

On April 11th Mr TOM WILLIAMS asked if the Minister of Health was aware that the water supplied by Norton (East Riding of Yorkshire) to Malton had been declared by the Malton medical officer to be unfit for human consumption Mr SHAKESPEARE said that a single sample of the water supplied by Norton to Malton was found on analysis to be unsatisfactory and the supply was discontinued Subsequent tests by three independent analysts showed the water to be satisfactory and the supply had now been resumed The arrangements between the two councils were temporary and the Malton Council would at an early date submit to the Minister a scheme for a permanent supply

Mr T WILLIAMS asked if Mr Shakespeare was aware that in this district where there had been twenty five deaths and three other very bad cases of fever the people were terrified and were collecting water from a pump in a brewery yard Ought not the Minister to persuade the local authorities to do something in the matter? Mr SHAKESPEARE replied that the Ministry had had frequent consultations with the local authorities to decide which of the three sources was the best water supply

Housing Reform

On April 11th Mr SHAKESPEARE circulated a statement as follows on the number of houses returned by local authorities as having been completed in England and Wales by local authorities and private enterprise since January 1st 1919

	By Local Authorities	By Private Enterprise	Total
With State assistance			
Housing and Town Planning, etc Act 1919	170,090	4 545	174 635
Housing (Additional Powers) Act 1919	—	39 186	39 186
Housing, etc Act 1923	73 309	362 738	438 047
Housing (Financial Provisions) Act 1924	445 521	11 953	457 474
Housing Act 1930	7 800	6	7 806
Total to February 28th 1933	698 720	418,428	1 117 148
Without State assistance (to September 30th 1932)	8 140	852 255	860 395
Grand total—houses completed	706 860	1 270 683	1 977 543

In addition 13 343 houses have been provided to re-house persons displaced under improvement and reconstruction schemes confirmed prior to the Act of 1930

On the same date Mr SKELTON furnished details of housing in Scotland showing that from 1919 to February 28th 1933 the latest date for which information is available 111 336 houses were completed under State assisted schemes by local authorities in Scotland and 31 897 by private enterprise In addition 2 552 steel houses were completed in that period by the Second Scottish National Housing Company The number of houses completed by unassisted private enterprise between 1919 and December 31st 1932 the latest date for which information is available is 20 904 As regards the last part of the question 20 356 of the local authority houses already mentioned were provided with State assistance under the provisions of Subsection 3 of Section 1 of the Housing etc, Act 1923 and under the Housing (Scotland) Act 1930 for the replacement of unfit houses

Answering Mrs Runge on April 11th Mr SHAKESPEARE said Sir Hilton Young had arranged that his officers should be available for consultation by individual authorities on all aspects of work under the Slum Clearance Act of 1930 but the circumstances of different towns varied so greatly that he could not at present usefully offer any further general advice on this subject

Mortality, Housing, and Unemployment

Mr SHAKESPEARE told Mr J J Lawson on April 12th that the Minister of Health had received a copy of a report of the inquiry by the medical officer of health for Stockton on Tees into the causes of the standardized death rate for the Mount Pleasant area which averaged 33 55 per 1 000 of the population over the past five years, compared with a standardized death rate over the same period of 10 9 for England and Wales The report was under consideration. Mr LAWSON asked if Mr Shakespeare was aware that the M O H concluded by saying that the high death rate was the result of small incomes due to unemployment Sir FRANCIS FREMANTLE asked whether the medical officer had not attributed the high death rate to high rents of houses built under the 1925 Housing Act Mr SHAKESPEARE said it was true that under a pre-1930 housing scheme the rents were higher The tenants might therefore have less to spend on food The general experience of the Ministry of Health showed a remarkable increase in the health vitality and appetite of children who were moved out of slum areas Low income resulting from unemployment would be one factor in Mount Pleasant

Experiments on Dogs

Sir JOHN GILMOUR told Sir Robert Gower, on April 12th that a copy of a petition from the Canine Defence League praying that experiments on dogs be prohibited had been forwarded to the Home Office by the Select Committee on Public Petitions He was informed that 276 594 signatures were appended In this matter the Government must be guided by considerations of the general interest Having regard to the reasoned opinion expressed in the memorandum of the Medical Research Council presented to Parliament in 1927 and to the valuable results in the prevention and treatment of canine and human diseases achieved by experiments on dogs he was not prepared to introduce legislation on the subject

Antimony in Enamel Ware.—Mr Geoffrey Mander was informed on April 13th by Mr SHAKESPEARE that two outbreaks of illness said to be caused by antimony in enamelled vessels had been brought to the notice of the Minister of Health since the issue last month of a departmental memorandum on antimony poisoning As soon as he received the report of the technical officer of the Department who was investigating the question the Minister would decide whether further legislative or other measures were necessary

Health Visitors.—On April 12th Mr SHAKESPEARE said he was aware that a committee of the Plymouth local authority had recommended a reduction in the staff of health visitors from twelve to eight, and that although this recommendation had not been adopted two vacancies arising last October and November had not been filled Sir Hilton Young was addressing a communication to the council on the matter

Hygiene of Shops.—Answering Mr Rhys Davies on April 12th, Sir JOHN GILMOUR said the question of temperature and sanitary accommodation in shops was being considered in connexion with proposals for amending legislation but there was no prospect of introducing such legislation in the present session At his request the Ministry of Health had carried out inquiries into these matters

Medical News

The attention of readers is called to the fact that the telephone number of the British Medical Association and the *British Medical Journal* has been changed to Euston 2111 (four lines)

At a meeting held in the Mansion House on April 20th with the Lord Mayor in the chair a resolution endorsing the selection by the British Empire Red Cross Conference of Florence Nightingale's birthday—May 12th—as Red Cross Day was adopted on the proposal of Sir George Newman Chief Medical Officer Ministry of Health

At the Princess Elizabeth of York Hospital for Children Shadwell E on Wednesday April 26th at 8.45 p.m. Mr T. Pomfret Kilner will give a lantern lecture entitled Plastic and Reconstructive Surgery. The chair will be taken by Sir Cuthbert Wallace late surgeon to the hospital

At the meeting of the Medico-Legal Society on Thursday April 27th at 1 Wimpole Street W. at 8.30 p.m. a paper will be read by Mr Henry C. Dickens on Negligence in Hospitals and its Legal Consequences. Discussion will follow. Guests may be introduced on production of a member's visiting card

The annual meeting of the Institute of Medical Psychology will be held at the Wharncliffe Rooms Hotel Great Central Marylebone Road N.W.1 on Monday May 1st at 12.15 p.m. when Sir Henry Brackenbury will preside. It will be followed by a luncheon at 1 p.m.

At a meeting of the Chelsea Clinical Society to be held at the Hotel Rembrandt Thurloe Place S.W. on Tuesday April 25th at 8.30 p.m. Mr A. Lawrence Abel will open a discussion on the surgery of the autonomic nervous system with cinematograph demonstration. The meeting will be preceded by dinner (price 5s.) at 7.30 p.m.

The next evening reception by the Royal Society of Medicine will be held at 1 Wimpole Street on Wednesday May 17th when Fellows and their friends will be received in the Library at 8.30 p.m. by the President and Mrs Warren Low. At 9.15 Dr R. G. Canti will show his film The Cultivation of Living Tissue Cells *in vitro*. Admission is by ticket only obtainable from the secretary

Dr W. Fletcher Shaw professor of clinical obstetrics and gynaecology in the University of Manchester and honorary secretary of the British College of Obstetricians and Gynaecologists has accepted the invitation of the American Gynecological Society to be the guest of honour at its annual congress in Washington on May 8th 9th and 10th

A meeting of local authorities in the Merseyside and South-West Lancashire district held at Liverpool on April 10th decided to form a regional advisory committee for this area to deal with the smoke problem. As a result of the efforts of the National Smoke Abatement Society similar advisory committees which have for their object the more uniform administration of the law relating to the emission of smoke and educational work including classes for stokers have already been established in the Midlands the Manchester district and London. Dr W. M. Frazer medical officer of health for Liverpool Alderman W. Melland chairman of the National Smoke Abatement Society and Mr Arnold Marsh secretary of the society were the chief speakers. It is hoped that as a result of a memorandum addressed by the society to 130 local authorities similar committees will be set up for Tyneside Tees-side North East Lancashire and the Potteries

The first French Congress of Phoniatrics will be held in Paris under the presidency of Dr Moure formerly professor of oto-rhino-laryngology at Bordeaux on May 6th when MM. Tarneaud and Viela will read a paper on tonsillectomy and singing. Further information can be obtained from the general secretary 27 Rue de la Grande Armée Paris 18e

The next International Congress of Hydrology will be held at Toulouse in October under the presidency of Dr Ferreyrolles of La Bourboule

Lord Horder has accepted the position of honorary consulting editor to the *British Journal of Physical Medicine*. For reasons of health Dr King Brown has given up the medical editorship and his duties will be taken over by Dr W. Kerr Russell in association with Surgeon Rear-Admiral Richard A. Ross

The opening pages of this month's *Practitioner* forming half of the issue are devoted to five papers on anaesthesia

Dr Harry Campbell has retired from the editorship of the *Medical Press and Circular* which he has held for the past fifteen years

A scheme has been drawn up between the Royal Bath Hospital Harrogate and the University of Leeds for the institution of research fellowship in rheumatism as soon as funds are available. The hospital authorities are making themselves responsible for the collection of the necessary sum and as soon as this has been secured an appointment will be made

According to the Vancouver correspondent of the *Times* an Act permitting the sterilization of mental defectives under certain conditions has been passed in British Columbia. The consent of the patient parent or guardian is necessary before the operation can be performed under the authority of a Supreme Court judge an alienist and a social worker and then only on the patient's release from an institution

Professor Peter Mühlens head of the Hamburg Institute for Tropical Hygiene has been invited to deliver lectures in Hong Kong Shanghai Canton and Peiping

Mr Charles Goulden has been appointed ophthalmic surgeon to the Royal Surgical Aid Society

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal B.M.A. House Tavistock Square W.C.1**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication.

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager British Medical Association House Tavistock Square W.C.1 on receipt of proofs.

All communications with reference to ADVERTISEMENTS as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager.

The **TELEPHONE NUMBER** of the British Medical Association and the *British Medical Journal* is EUSTON 2111 (internal exchange four lines).

The **TELEGRAPHIC ADDRESSES** are
EDITOR OF THE *BRITISH MEDICAL JOURNAL* Articulate, *Westcent London*
FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements etc.) *Articulate Westcent London*
MEDICAL SECRETARY *Mediscera Westcent London*

The address of the Irish Office of the British Medical Association is 18 Kildare Street Dublin (telegrams *Bacterius Dublin* telephone 62550 Dublin) and of the Scottish Office 7 Drumsheugh Gardens Edinburgh (telegrams *Associate Edinburgh* telephone 24361 Edinburgh).

QUERIES AND ANSWERS

Injection of Varicose Veins

Dr GEORGE GILLETT (Edgware) writes: I shall be interested to hear whether any reader has had an experience similar to the following. On February 15th I started a course of injections for varicose veins on a man aged 37 years. I injected 1 c.cm. of colloso-l sodium morrhuate (5 per cent.) into the great saphenous vein just above the knee. Six days later the patient returned stating that he had had pain up the whole thigh since the injection and on examination I found the whole varicose vein clotted from about three inches below the knee to within two inches of the fossa ovalis a distance of about seventeen inches

Injection of External Piles

'LANCS writes Is there any real contraindication to the injection of external piles (prolapsed piles of the lower anal region and skin piles) with say quinine and urethane or the carbolic solution used for true internal piles? In my experience for every one case of disability and discomfort from high internal haemorrhoids one encounters many who suffer from the prolapsed anal margin and skin varieties May not these be injected?

Dry Mouth

Mr J H BADCOCK (London W 1) writes If 'Retired" can breathe through his nose he should get his dental surgeon to make him a mouth valve a thin shield of vulcanite or metal which fits between the lips and teeth and so prevents mouth breathing Dropping of the jaw can be prevented by wearing a head and a chin cap very easily made from one inch webbing as follows—a strip to encircle the head to which are joined a longitudinal and a transverse strip over the crown This is connected to a chin cap by strips in front of the ears in which elastic may be inserted if desirable

Nocturnal Incontinence of Urine

Dr D L S CUNNINGHAM (Lower Gornal) replying to 'Doctorman s" inquiry (*Journal*, April 15th, p 684) suggests a mixture with ext ergot liq mx5–10 ind immon brom grains v t d s He writes I saw this in a medical journal three years ago and have not known it to fail

Dr A PATTON (Widnes) writes Presumably 'Doctorman" has tried bromides and evening restriction of fluids It is important that the child should be thoroughly aroused on the occasion—that is quite awake In my experience liquid extract of ergot is the most generally useful drug but as the new *B P* extract has poor keeping qualities on admixture with water the liquid extract should be prescribed in 7 or 8 minim doses added to a little water at the time of taking twice a day

'W F L (Windsor) writes Nocturnal incontinence of urine in children from 5 to 12 years of age can be successfully treated by hypnotic suggestion

Income Tax

Certified Accounts

F G has received a notice' either from the inspector of taxes or the Clerk to the Commissioners asking for a *certified* copy of his accounts for the last year Is he bound to incur the expense of going to a professional accountant?

*** There may be businesses so large or intricate that the employment of a professional accountant would be a reasonable requirement but the accounts of a medical man are comparatively simple and unless there are quite unusual circumstances in F G s case we see no reason why an independent certificate should be regarded as necessary We therefore advise him to prepare his accounts carefully and send in a copy certified by himself—that is certified that they have been prepared from whatever books may be the basis of the accounts—and are correct to the best of his knowledge and belief

Services of Wife as Book-keeper

'H McL refers to a reply on this question in our issue of April 1st and inquires whether it affects 'the full one sixth allowance for running the expenses of his practice"

*** We see no reason why it should but shall be pleased to advise further if any specific objection should be raised by the inspector in the future

Basis of Assessment

'G P s income for 1929–30 was under £200 derived from work as assistant and locumtenent—employment not continuous For 1930–1 he earned £300 and is being assessed thereon the inspector of taxes declines to adopt the previous year s basis because the employment then was discontinuous and did not represent a full year s income Is this correct?

*** Yes Strictly each employment stands by itself and justifies in law the dropping of the previous year s basis when it occurs This strict rule is not usually applied where a change of employer does not involve any substantial change in status or the nature of the employment but would correctly apply to such a case as this where the income of the two years is not really similar

Obsolescence of Car New Practice

'J S"—A partnership is being treated as newly set up as from September 30th 1931 Both partners replaced their cars during the year ending September 1932 The inspector of taxes refuses to allow obsolescence on the ground that the expense of replacement relates back to years prior to the commencement of the present practice

*** The inspector is apparently correct in law but the partners can reopen their previous six years assessments to claim depreciation on their cars against the tax paid by them for those years—see Section 24 of the Finance Act 1923 as extended by Section 27 of the Finance Act of 1926

Naval Gratuity on Retirement

"J W R" has retired from the Royal Navy after serving as a short service surgeon lieutenant for three years, and has received the usual gratuity of £300 in a lump sum Is that amount liable to income tax?

*** If it was an expressed or implied condition of the service contract that the gratuity should be paid at the end of three years' approved service there would seem to be good legal grounds for regarding it as assessable We are not however, sufficiently familiar with the precise terms of the contract to express a more definite opinion

LETTERS, NOTES, ETC

Mr Bronte on Accidental Ignition

Dr C MABLL DUGFRLEY (honorary secretary of the Bronte Society) writes With reference to the statistics given in the article on burns and scalds in a recent issue of the *British Medical Journal* it is interesting to note that nearly ninety years ago the Rev Patrick Bronte father of the distinguished sisters of Haworth had made a statistical study of deaths by burns from another point of view This is shown by the following extract from a letter from him to the *Leeds Mercury* dated March 16th, 1844

> If women and children in general were to have their garments made of silk or wool there would be little danger of their losing their lives by accidental ignition I have been at Haworth for more than twenty years and during that time have performed the funeral service over ninety or a hundred children who were burned to death in consequence of their clothes having taken fire and on inquiry found in every case that the sufferers were clothed in either cotton or linen

A Thank offering

We have often had grateful messages from readers thanking us for the answers to their professional and business conundrums published on this page but the following letter is unique in our experience It comes from a country doctor, and we should be delighted to receive others to the same effect 'I am extremely obliged for your advice in reply to my income tax query You will be interested and pleased to hear that we won our appeal entirely, I believe, on the ground that no fresh discovery' had been made Our accountant had not thought of that point My partners and I enclose a cheque for £3 3s and shall be glad if you will hand it to whichever medical charity you consider the most deserving" We have handed this generous gift to the B M A Charities Committee for distribution among the professional benevolent funds

Number Plates and Brakes

Dr R J CLAUSEN (St John's Wood N W) writes The communication from the Automobile Association in your issue of April 15th (p 684) throws an interesting light on the mentality of those responsible for the policy of this large and probably influential organization Medical practitioners, who are presumably reasonably intelligent persons are reminded to exercise care on these points not because it is obviously desirable for them to do so nor in the interest of public safety, nor in order that they may comply with the law, but only because police prosecutions have recently followed their neglect

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 46 47 48 49 52 and 53 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 50 and 51

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 152

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

289 Congenital Stenosis of the Aortic Arch

W EVANS (*Quart Journ Med* January 1933 p 1) reports a study of twenty eight cases of congenital stenosis (coarctation) atresia and interruption of the aortic arch all but two of these cases had been examined at necropsy The incidence of these congenital abnormalities among subjects of post mortem examinations was found to be approximately 1 in 1 000 The average age of the patients in the present series was 11 4 years and there was a slightly increased incidence for the male sex Evans defines six types based on considerations as regards the site nature and extent of the constriction the condition of the aorta proximal to the site of stenosis the patency or otherwise of the ductus arteriosus and the relationship of the systemic and pulmonary circulations He claims that the recognition of such a classification facilitates the interpretation of the clinical findings and appearances elicited by radioscopy and obviates the necessity for postulating two or more theories to explain the pathogenesis of what he regards as anatomical varieties arising from a common process The diagnosis of aortic stenosis is discussed with special reference to the symptoms heart signs vascular signs blood pressure readings radial and femoral tracings and radioscopy A short note is added on the prognosis and the manner of death in patients presenting this congenital anomaly One of his cases serves to exemplify the importance of taking precautions in symptom free applicants for life insurance if the examiner finds a raised blood pressure excessive pulsation in the neck a forcible apex beat and an obscure cardiac murmur Four desiderata in determining the degree of stenosis present are the extent to which the system of collateral circulation has been established the absence of the aortic knuckle to the left and the prominence of the ascending aorta to the right as determined by radioscopy the degree of hypertrophy of the left ventricle and the prominence or otherwise of erosion of the ribs The frequent occurrence of infection in the walls of abnormal arteries associated with this condition influences the prognosis unfavourably leading to aneurysmal dilatation and rupture

290 Meningitis Haemorrhagica after Sunstroke

G A HOPPE (*Deut med Woch* January 27th 1933, p 133) reports an unusual case of haemorrhagic meningitis after excessive exposure to the sun Four days before being brought to hospital a somewhat bald man of 45 in whose previous history nothing of special note was found had been working in his garden under a very hot sun without any covering to his head No symptoms appeared for some hours except some slight complaint of sunburn on his head Later in the evening stabbing pains were felt in the head especially in the occipital region The pain gradually increased and later there was vomiting fever and great perspiration Next day the pain was worse but was not so severe in the recumbent position as in the erect. Fever continued and on the following day there was stiffness of the neck with mild opisthotonos Kernig's and Lasegue's signs were positive Except for somewhat brisk tendon reflexes no other signs were elicited Lumbar puncture was then performed and the cerebro-spinal fluid was found to be under a pressure of 220 mm of water diminishing to 160 mm The fluid was very haemorrhagic The Wassermann and Meinicke reactions were negative but the Nonne-Apelt and Pandy reactions were positive No tubercle bacilli were present The patient felt much better after the puncture and the headache was much diminished The temperature was raised and there was a leucocytosis of 16 000 A week later Kernig's sign was still present but less marked Three days subsequently the patient felt much better and Kernig's sign had disappeared A lumbar puncture now revealed a pressure of 20 to 110 mm water the fluid was clear and the Nonne Apelt and Pandy reactions were both negative There ensued a steady and uninterrupted recovery three weeks after admission he was discharged from hospital without any symptoms and quite capable of resuming work In the differential diagnosis the question of rupture of a cerebral aneurysm had to be considered but the gradual onset the rise in temperature the leucocytosis and the increased cerebro-spinal pressure pointed to an inflammatory process The possibilities of trauma alcoholism syphilis and cerebral tumour were all ruled out It was therefore concluded that the condition was a true meningitis haemorrhagica of an unusually severe form directly following excessive insolation

291 Santonin Erythema

K A ROMBACH (*Nederl Tijdschr v Geneesk* February 4th 1933 p 519) records two illustrative cases in a woman and a girl aged 7 years who had been treated by santonin for *Ascaris lumbricoides* In both cases the condition was at first mistaken for scarlet fever owing to the injection of the palate and conjunctivae and slight rise of temperature According to Abram idiosyncrasy to santonin is rare The rash may vary in character is accompanied by little or no constitutional disturbance and rapidly disappears without any ill effect as was the case with Rombach's patients

Surgery

292 Contractions of the Neck after Burns

C G MIXTER (*New England Journ Med* January 26th 1933 p 190) describes a procedure for dealing with the severe contractions of the neck which not infrequently follow burns in children The deformity is very disfiguring and if untreated may cause retardation of growth and development of the mandible and distortion of the bones of the face The chin is anchored to the chest near the sterno-clavicular junction and the lower lip is drawn downwards and outwards To release the chin the scar both deep and superficial must be widely excised and an enormous deficiency results To close this gap pedicle flaps may be taken from the skin over the shoulders and upper part of the back if unaffected by the original burn but the resultant scarring of the back is a serious handicap in many cases Mixter suggests therefore that it is better to employ full thickness skin flaps with the underlying fat these are removed from the lower lateral chest wall on one or both sides In determining the amount of skin to be thus transferred it must be remembered that the defect to be filled after excision of the scar will be far greater than is anticipated The transference is accomplished by the tube graft method of Gillies the flap being raised and converted into a tube leaving both ends attached until sufficient circulation has been established from the end to be left when the other end is inserted into its new position This is usually a matter of five or six weeks The greatest width of chest wall that can be lifted from a child and still permit approximation of the skin beneath the tube is about three inches It is as well not to have the tube more than three times as long as the width of the flap on account of the danger of ischaemic necrosis Illustrations are given of the various stages of this procedure with which the author claims to be able to obtain sufficient tissue to fill the defect with but little scarring

293 Operations on Typhoid Carriers

N V SWENSSON (*Tidsskr f d Norske Laegefor*, January 15th, 1933, p 63) prefaces his account of fourteen typhoid carriers, on whose gall-bladders operations were performed, with the general proposition that the source of every case of typhoid and paratyphoid is a carrier In theory it should be sufficient to control carriers so effectively that they are no danger to the community But in practice carriers are apt to fail to report themselves, and sooner or later they behave as if they were not a danger to their neighbours Of the fourteen cases under review only three were typhoid carriers, the remainder were paratyphoid carriers There were only two men to twelve women, and as many as twelve suffered from gall-stones Cholecystostomy was performed in two cases, and cholecystectomy in the remaining twelve There were three operation deaths, five, two, and nineteen days respectively after the operation All three were elderly folk, on whom the operation was not urged by the hospital authorities, it was undertaken at the express wish of the patients and their relatives Of the survivors, one had been operated on too recently for results yet to be claimed There thus remained ten patients, nine of whom had ceased to discharge typhoid or paratyphoid bacilli after the operation In the one case in which the cholecystectomy was a failure, gall-stones as well as paratyphoid bacilli were found in the gall-bladder This observation provides no support for the theory that the success of this operation on carriers depends on the removal of gall-stones, the presence of which in the gall-bladder is supposed to encourage the persistence of typhoid or paratyphoid bacilli In seven cases there had been signs of disease of the gall-bladder before the operation, and in these cases the greater justification for it helped the author to decide to perform it Before doing so he tried to sterilize the gall-bladders of all his fourteen patients by giving them thymol, iodine, and animal charcoal, invariably without effect As many as seven of the patients (six cases of paratyphoid and one of typhoid) did not remember having suffered from any disease—an observation which shows how easy it is to overlook a carrier

294 Tuberculosis of the Thyroid Gland

A VAN RAVENSWAAY and A C VAN RAVENSWAAY (*Amer Journ Surg*, January, 1933, p 128) record a case of tuberculosis of the thyroid gland, which they describe as a chronic specific process rarely of clinical importance, and seldom diagnosed before operation It is usually confused with malignancy, chronic non-specific thyroiditis, or some form of goitre Occurring at any age, it is rarely associated with signs of tuberculosis elsewhere, although tuberculous lesions of the gland have been reported in 4 to 12 per cent of patients dying from active tuberculosis and in an average of 0 34 per cent of thyroid glands removed at operation for all causes The authors state that among the factors which may be concerned in the development of this condition are pre-existing goitre, the presence of lymphoid tissue within the gland, hyperthyroidism and a normally high tissue resistance to tuberculosis The types of lesion seen range between two extreme types (1) a necrotic type, with caseation or liquefaction, and (2) a fibrotic type, associated with giant and lymphoid cells A pre operative diagnosis is only possible by aspiration of a cold abscess or by examining material from a draining sinus The prognosis following surgical treatment is usually good If, however, a large amount of thyroid tissue is destroyed or removed, myxoedema may result In untreated cases sinuses occasionally form which may penetrate to the skin the trachea, the oesophagus, or the mediastinum The case recorded by the present authors was the only one in a series of 590 thyroidectomies, the pre-operative diagnosis was Riedel's struma or early malignancy Macroscopical examination of the removed gland suggested carcinoma, but a microscopical study clinched the diagnosis as tuberculosis

Therapeutics

295 Treatment of Cardiac Arrhythmia by Potassium Salts

J J SAMPSON and E M ANDERSON (*Journ Amer Med Assoc* December 31st, 1932, p 2257) administered orally potassium salts to a group of fifty-eight patients who were known to have auricular or ventricular ectopic beats or paroxysmal auricular or ventricular tachycardia for an appreciable length of time Five different salts were tried—namely, the chloride, iodide, bromide citrate, and acetate, all with apparently identical effects when applied to the same patient As a control measure sodium acetate was given, and was found to produce no change in the arrhythmia One patient received in addition an intravenous injection of potassium chloride without ill effect, but with no demonstrable advantage over the oral route In twenty-nine cases complete eradication of the arrhythmia followed the exhibition of potassium salts, two patients in this series had ventricular ectopic beats accompanying an overdose of digitalis Improvement began within twenty to ninety minutes of the administration, and the effect so obtained was found to last about three to eight hours The dosage ranged from 1 to 16 grams Increased age and the presence of organic heart disease seemed to lower the threshold of demonstrable effects, and smaller doses were effective No serious clinical disturbances were caused apart from some intestinal bleeding after diarrhoea in one case Gastric distress, abdominal cramps, and diarrhoea were rare, and, contrary to anticipation, definite diuresis was uncommon A considerable individual variation in responding to the treatment was found to exist, and some of the possible reasons for this are discussed Apart from too small doses being tried in some cases at first, certain questions such as the relation of calcium to the potassium concentration in the serum and the tissues are being studied

296 Specific Treatment of Pneumonia

P MARTINI (*Münch med Woch*, January 20th, 1933, p 100), considering the serum treatment of pneumonia, emphasizes certain difficulties incidental to the method The absolute necessity for type specific serums and the extremely large doses required (100–200 c cm) make the treatment very expensive Secondly, the fact that the serum is properly effective only in the earliest stages of the disease makes it more or less inapplicable in the great majority of the cases, since they are available for treatment only relatively late in the development of the infection Specific serum treatment, while to a great extent preventing the further advance of the pulmonary processes, does not lead to immediate resolution, so that the earlier the treatment is begun the less will pathological changes become established in the lungs Moreover, there is some doubt as to the time during which serum retains its potency *in vitro*, the serum of patients convalescing after pneumonia may lose all such properties in a relatively short time For such reasons as these serum therapy is rarely used in Germany Specific anti pneumococcal therapy includes, as well as type specific serums, certain quinine compounds, among which optochin (ethyl hydrocupreine) and solvochin (a quinine urethane compound) are widely used in Germany and America Analysis of the results of Cahn-Bronner shows a fall in mortality from 20 per cent to 5 per cent as a result of the application of the latter compound In the hands of the present author solvochin and optochin reduced the mortality from 27 per cent to 19 and 13 per cent respectively These compounds were found by Park, Bullowa, and Rosenblüth to reduce the mortality in Type I pneumococcal infection from 33 per cent to 19 per cent, but relatively little success was met with in Types II III, or IV In a series of observations on 277 cases of pneumonia Martini treated eighty three with solvochin and twenty-three with optochin, and found that in order to obtain a satisfactory crisis it was necessary to institute

treatment during the first three days later than this the temperature fell by lysis and the subsequent progress was less satisfactory While the use of optochin is not without risk this is minimal if the basic form is used The author regards solvochin therapy as the method of choice until a wider applicability of the serum treatment becomes possible

297 Quinine Insufflation in Trichomonas Vaginitis

Vaginitis due to infection by *Trichomonas vaginalis* infection is resistant to ordinary antiseptic treatment but according to J H SURE and J E BERCEY (*Amer Journ Obstet and Gynecol* January 1933 p 136) responds splendidly to quinine insufflations They record seven cases of this condition six of which had been previously treated without success by various other applications The usual amount of quinine sulphate which was introduced into the vagina was about 15 grains The insufflation was repeated at daily intervals for three or four days after which no living protozoa were discoverable The symptoms cleared up with similar rapidity Even after long intervals without subsequent treatment there was no return of the symptoms or of the protozoa Although the number of cases is small the fact that cure was invariably obtained has led the authors to commend this simple treatment for trial on a larger scale in general practice

Anaesthetics

298 General Anaesthesia with Avertin

J M WOLLESEN (*Hospitalstidende* November 10th and 24th 1932 pp 1320 and 1375) reports from the Nakskov Hospital in Denmark his experiences of 100 cases of avertin anaesthesia It was employed only in those cases in which it was anticipated that local or lumbar anaesthesia would not be adequate When avertin was first introduced it was anticipated that the local action of the drug on the rectum and colon would be injurious and provoke colitis but in none of the 100 cases was there any sign of local irritation such as diarrhoea or even tenesmus No pulmonary complications followed the anaesthesia and operation and the author concludes that with proper technique and dosage avertin anaesthesia may be considered free from danger He remarks however that the great hopes entertained of avertin as an anaesthetic free from discomforts and risks to the patient and providing the best working conditions for the operator have been only partially realized Complete anaesthesia can be achieved only by doses which are apt to be dangerous On the other hand avertin has the advantage of giving the operator free access to the patient's head and in conjunction with a few cubic centimetres of ether it ensures satisfactory relaxation of the muscles On psychic grounds it is a useful anaesthetic for nervous patients and children the anaesthesia it induces is not followed by nausea vomiting or headache While the technique of its administration is simple satisfactory ether anaesthesia requires a highly skilled anaesthetist The tendency of avertin to paralyse respiration can be met by the inhalation of a little ether The general anaesthesia induced by avertin lasts a couple of hours and the operator is therefore not hurried Wollesen thinks that avertin anaesthesia presents so many advantages over the older methods that its introduction must be regarded as epoch making

299 Spinal Anaesthesia

T GRUESCO and A DRAGOS (*Lyon Chir* January–February 1933 p 48) give a detailed report of the conclusions formed during 25 years of experience with spinal anaesthesia in 8 000 cases Stovaine was used in 4 500 cases novocain in 3 300 cases and sinecaine or tutocaine in the remaining 200 cases Formerly local anaesthesia was much used for operations for inguinal hernia but this is now being replaced by spinal anaesthesia which is very quick to take effect and gives perfect relaxation of the abdominal muscles with far less danger of suppuration Five minutes after the injection of 1 c cm of fluid it is possible for the operation to begin This type of operation accounted for 73 6 per cent of the cases in this series It was also found that spinal anaesthesia was very satisfactory for abdominal operations such as laparotomy for appendicitis splenectomy genital prolapse nephrectomy or intestinal obstruction There were 4 3 per cent of these cases the anaesthesia was in every case found to be sufficient and without complication It was also used for operations on the lower limbs on the genital organs and in the ano-perineal region but was abandoned for high operations in favour of a local anaesthetic Until 1913 stovaine (0 12 cg) either employed alone or in conjunction with strychnine was the anaesthetic most commonly used but this has since been largely replaced by novocain and in consequence after complications have been considerably reduced Headache occurred in about 8 per cent of cases retention in 3 per cent nausea in 10 per cent and vomiting in 5 per cent. of the whole series There was no death or permanent disability It is emphasized that the amount of cerebrospinal fluid withdrawn after the puncture should be as little as possible in order to avoid the risk of headache The authors conclude that they have found no ocain in 8 to 10 per cent solution to be the ideal spinal anaesthetic for the majority of operations on the abdomen the genital organs and the lower limbs

300 Administration of Anaesthetics in New York

Basing his conclusions on a questionary distributed to the hospitals in the State of New York F BORTONE (*Amer Journ Surg* January 1933 p 59) criticizes the present incompleteness and inadequacy of anaesthesia records and advocates the more widespread employment of qualified anaesthetists He found that nurses administered the greater number of anaesthesias and that their mortality rate was 35 76 per cent higher than that of the physician anaesthetist General anaesthesias far exceeded in number regional induction gas-oxygen-ether being the most popular and having a mortality rate ten times lower than that of neocaine (including novocain) the most common regional anaesthetic Yet he argues there is a large field awaiting the regional specialist but he should be a physician rather than a surgeon as is at present too often the case The mortality rate would probably be reduced considerably if such were the common practice for spinal anaesthesia is more hazardous than is always realized Bortone regards the training in administration of anaesthetics as being lamentably inadequate and emphasizes the importance of appointing more physician anaesthetists several hospitals being still entirely lacking in this respect

Obstetrics and Gynaecology

301 Termination of Pregnancy by X Rays

H WINTZ (*Münch med Woch* February 3rd 1933 p 172) reviews the present position of the radiological production of abortion Ganzoni and Widmer induced spontaneous abortion in sixty five out of seventy three cases and Harris and Kean obtained the same result in thirty seven out of forty cases These workers however found that there was a latent period of some four to five weeks before the uterus emptied and the subsequent haemorrhage might continue for from five to thirty five days It is thus understandable Wintz remarks that some of the patients sought other means of abortion in the period of waiting The efficacy of this method depends on the fact that young and growing cells are much more sensitive to *x* rays than the older cells of slower metabolic activity hence the developing foetus can be fatally injured without any accompanying injury to the uterus Careful consideration must however be given to the relative *x* ray dosage required for abortion and ovarian injury (castration dose) Here Wintz differs from Ganzoni and Widmer The last authors state that

after abortion had been induced there was in some cases only a temporary amenorrhoea, and a later pregnancy occurred, but, as Wintz points out, the majority became permanently sterile He therefore deduces that the dose of radiation to which the foetus was exposed was definitely greater than the castration dose The result produced by x-radiation is really that of a missed abortion, and the long latent period before expulsion of the uterine content cannot be regarded without anxiety It would therefore increase the value of the method if, by employing a somewhat greater dose and a wider area of application so great a radiation of the ovaries ensued that the corpus luteum might degenerate more quickly, but the period before expulsion would still be about fourteen days An especial danger of radiation abortion is the possibility of the foetus going to full term after inadequate radiation, followed by the delivery of a child severely injured by the rays Cases are cited in which monsters have actually been delivered as a result of this type of mishap Special stress is laid on the necessity for extreme caution in using the method in young women under the age of 30 unless the indications for emptying the uterus are absolutely unequivocal, for castration is almost certain In cases of pulmonary tuberculosis, where the possibility of future pregnancies is best avoided, the method is definitely indicated Treatment in hospital is regarded as absolutely essential The choice of the method should never be made a matter for the patient, but should only be reached as a result of careful consultation with the appropriate specialist

302 Radiographical Pelvimetry in Pregnancy

G E MOORE (*Surg., Gynecol and Obstet*, January, 1933, p 101) commends the procedure of estimating the pelvic measurements during pregnancy, with a view to detecting any abnormalities or any disproportion between the maternal passage and the foetal head He believes that such an estimation should be made in the case of all primiparae as soon as pregnancy is diagnosed, and in all multiparae with histories of difficult labours All obstetrical cases should be examined thus just before reaching term, if there is any evidence of disproportion cephalometry should be performed Moore describes the method he has devised, it is similar to that of Thoms in that a sheet lead scale is superimposed in the plane of the pelvic strait, but the type of scale is different, as is also his way of making the measurements He discusses others of the numerous methods in vogue, and concludes that any of the good recognized ones is sufficiently accurate for all practical purposes In this way, he remarks, there might be brought about some manifest reduction in the obstetrical death rate H THOMS (ibid, p 97) insists that at present an accurate survey of the superior pelvic strait in the living subject can only be secured by radiographical pelvimetry He describes a type of pelvis which he has found to be intimately associated with the incidence of occipito-posterior positions The chief variation from the normal is a prolongation of the antero-posterior diameter in combination with a moderate shortening of the transverse diameter, such an abnormality is said to be more common than is usually suspected Thoms concludes that, unless an accurate survey is made of the pelvis of every primiparous patient, obstetrics cannot be considered to be scientific

303 The Anterior Lobe of the Pituitary and Mammary Secretion

S MANISCALCO (*Ann di Ostet e Ginecol*, November 30th, 1932, p 1617) describes the case of a 3-para, aged 31, who continued to secrete milk for five months after spontaneous abortion in the third month The appearance of a "pregnancy mask" had persisted, and was unusually well marked The facial and skull bones suggested the appearances of acromegaly, and the urine contained the anterior pituitary hormone in considerable quantities Radiologically the sella turcica did not appear abnormal It is suggested that this hormone may be closely related to the lipoid galactogenic hormone extracted by Gentili from the decidua

Pathology

304 Dogs and Weil's Disease

A KLARENBEEK and J VOET (*Nederl Tijdschr v Geneesk* January 28th 1933, p 398) state that Weil's disease in the dog is by no means rare In Holland it has been known for many years and all cases of acute jaundice in the animal can be regarded as of this nature Epidemics, however, have never occurred in Holland as they have in England and in Switzerland, but the cases have always been sporadic In the Dutch Indies, and especially Sumatra, many cases have been seen The disease chiefly occurs in the autumn It often runs an acute course, and this differs little from Weil's disease in man Jaundice may occur, but is often absent, and the symptoms are then merely those of nephritis The diagnosis is made by the laboratory methods employed for the human disease, such as inoculation of guinea pigs cultures, dark-ground illumination, and the determination of lysins A passage of leptospirae into the urine takes place, but is not a chronic condition, as in the rat The authors are of the opinion that in some cases the dog serves as a source of infection for man

305 The Normal Renal Threshold for Dextrose

R A CAMPBELL, E E OSGOOD, and H D HASKINS (*Arch Int Med*, December, 1932, p 952) report a series of experiments designed to determine as nearly as possible the normal renal threshold for dextrose, in view of the fact that there has been hitherto no agreement in this respect Healthy male medical students were examined between the ages of 20 and 32, in none of these had there been any previous glycosuria Varying amounts of dextrose were administered, starting with 150 grams in a 50 per cent solution and increasing to 300 grams In five out of six subjects to whom 300 grams were given positive results were obtained, but, since gastric haemorrhage occurred in one of these, the amount was reduced to 250 grams, and no more such accidents occurred After the dextrose had been taken the subject was asked to urinate every five minutes A control specimen taken before the experiment, and those taken during it, were boiled for two minutes in Benedict's solution directly over a flame When the test became faintly positive venous blood was withdrawn for sugar estimation The time between urination and the completed withdrawal of the blood averaged about five minutes In several cases which did not show glycosuria blood was withdrawn at thirty and at forty-five minutes to determine the maximum blood sugar level reached Out of thirty four subjects four could not urinate, eight did not have glycosuria, and twenty-two gave satisfactory results The authors remark that, while the series is not large, it was clearly evident that there was a marked variation in the normal renal threshold for dextrose, and that the threshold was variable in the same subject Filtrates obtained by the zinc sulphate-sodium hydroxide method of precipitating blood proteins were found to give true sugar values within a range of about 7 mg per 100 c cm Filtrates obtained by the tungstate precipitation method gave results within a narrow range, averaging 21 mg higher than the true sugar figure The authors conclude, therefore, that tungstate methods are clinically satisfactory, and this factor (21 mg) can be used to transpose results from one method to the other They add that it seems to be impossible to produce an alimentary glycosuria in some normal persons, even when large amounts of dextrose are ingested The renal threshold for true sugar ranges from 99 to 228 mg per 100 c cm, 80 per cent of cases have values between 140 and 190 mg Any statement as to a normal renal threshold should therefore allow for wide variation The authors suggest, from a calculated probable error of 15 5 mg and the mean of 151 mg in this series, that there is a likely range of 105 to 200 mg for true sugar, or from 125 to 200 mg if the tungstate precipitation method is employed

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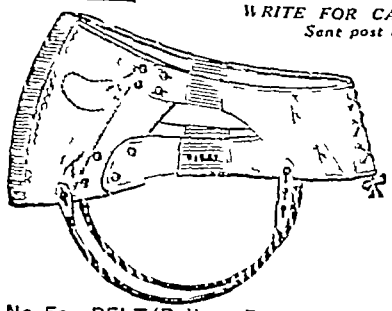

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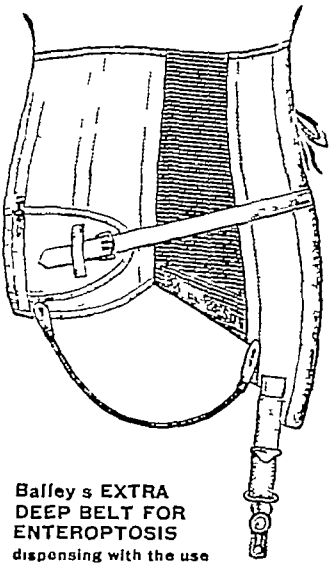

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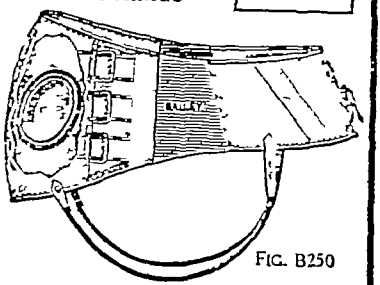


FIG. B250
(Showing Interior of Cup.)
SPECIAL BELT FOR AFTER COLOSTOMY

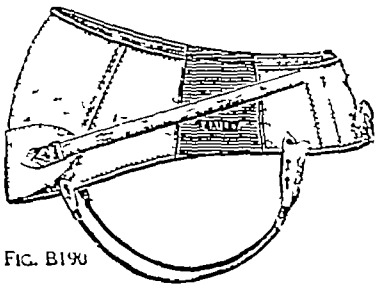
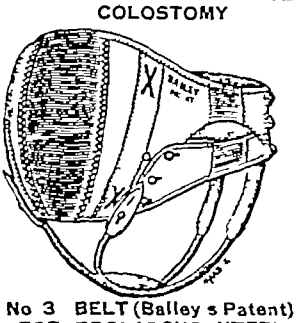


FIG. B190
BELT FOR ENTEROPTOSIS



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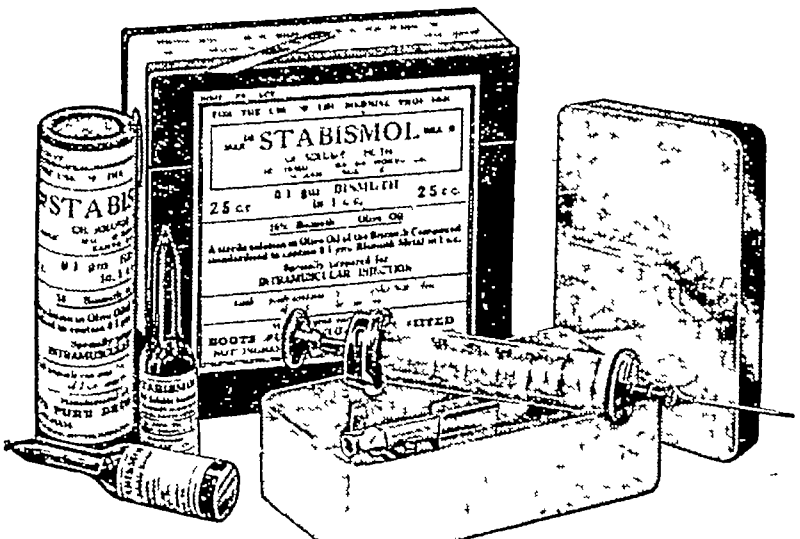

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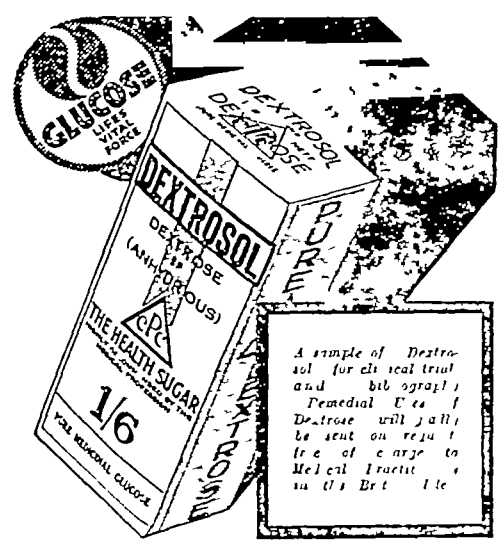

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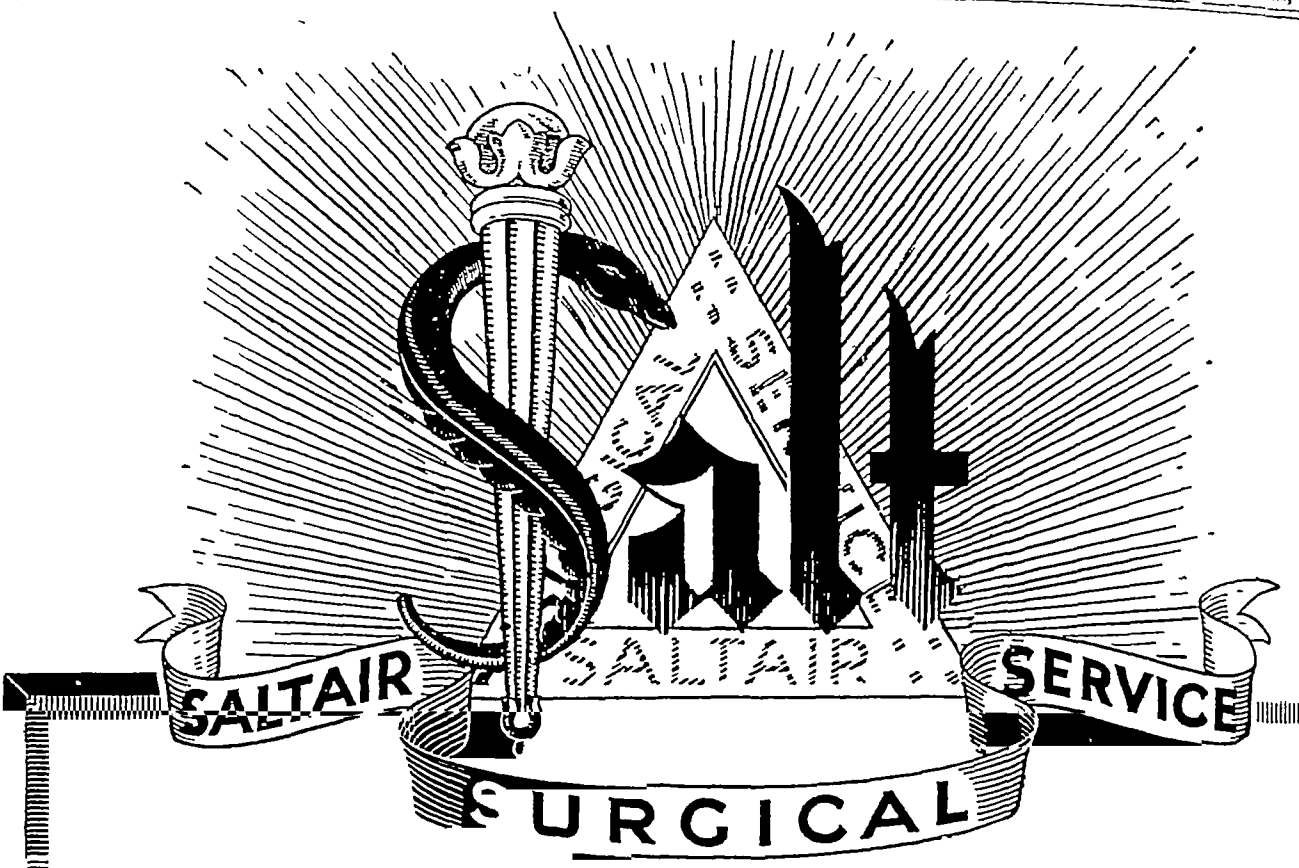

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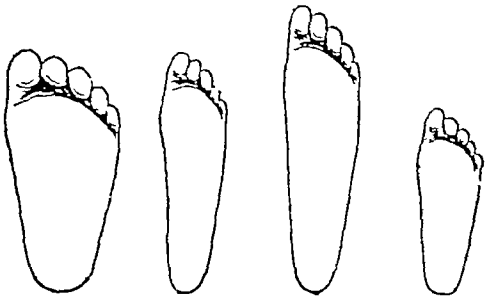

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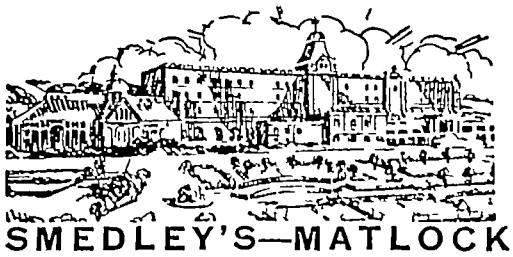

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Reg Tel Address Bethlem, Beckenham *Telephone* Springpark 1180 1181
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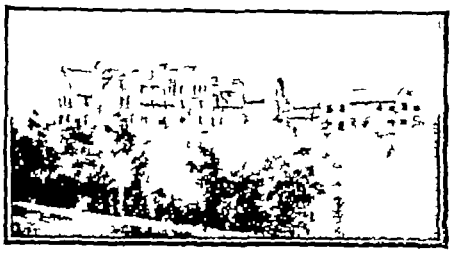

Medical Director David Lawson, M.D., F.R.S.E.

FULLY EQUIPPED WITH EVERY MODERN APPLIANCE FOR THE DIAGNOSIS AND TREATMENT OF ALL FORMS OF TUBERCULOSIS AND ALLIED DISEASES

Physician Superintendent J. M. JOHNSTON M.B. D.P.H., etc.

Full particulars and Prospectus on application to the Secretary

Inclusive Terms SEVEN GUINEAS A WEEK.

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PENMAENMAWR

Established 1900 for the treatment of Tuberculosis Miles of carefully graduated walks through pine-clad hills with sea and mountain views Modern treatment including ARTIFICIAL PNEUMOTHORAX SANOCRYSIN etc X-ray plant electric light central heating wireless Special milk supply from tuberculin tested herd Full day and night nursing staff On L.M.S. Main Line to Holyhead 4½ hours from London Resident Physicians DENISON PICKERING M.D. (Cantab) J. V. HENNESEY M.B. Ch.B. Matron Miss S. A. EDDY S.R.N. Late Sister-in-Charge Royal Hospital Annexe Sheffield

For particulars apply to the SECRETARY Pendyffryn Hall Penmaenmawr N. Wales ('Phone 20)

THE COTSWOLD SANATORIUM

First opened in 1898 and rebuilt in 1929 On the Cotswold Hills seven miles from Cheltenham for the treatment of Pulmonary and all other forms of Tuberculosis Aspect S.S.W. sheltered from North and East elevation 800 feet Pure bracing air Special Treatment by artificial Pneumothorax (X-ray controlled) Tuberculins Medicated Inhalations by means of the Apneu Inhalation Installation and Ultra Violet Rays is available when necessary without extra charge X-ray plant Electric light Radiators hot and cold basins and Wireless in all rooms

Full day and night Nursing Staff.

Medical Superintendent GEOFFREY A. HOFFMAN B.A. M.B. T.C.Dub *Assistant Physician* MARGARET A. HARRISON M.B., B.S.Lond.
Consulting Laryngologist SIDNEY BERNSTEIN M.R.C.S.Eng. L.R.C.P.Lond. (Attends Regularly)

Apply The Secretary The Cotswold Sanatorium Cranham Gloucester *Telephone* 41 WITCOMBE. *Telegrams* HOFFMAN BIRDLIP

KINGUSSIE, N.B.

THE GRAMPIAN SANATORIUM

Situated in the upper Speyside district of Inverness-shire. One of the highest inhabited districts in Britain— The Switzerland of the British Isles Bracing and dry mountain climate Well sheltered Sanatorium specially built for the Open air Treatment of Tuberculosis opened in 1901 Elevation 860 ft. above sea level. Electric light throughout buildings and in rest shelters. Central heating Fully equipped X-ray Plant. All forms of treatment available including Artificial Pneumothorax and Ultra Violet Rays for surgical cases of Tubercul sis. Terms £4 7s. 6d to £6 6s. per week inclusive No extras.

MEDICAL SUPT. FELIX SAVY M.D. For particulars apply to the Secretary

HOSPITAL FOR CONSUMPTION

AND DISEASES OF THE CHEST, BROMPTON, and FRIMLEY SANATORIUM

PAYING PATIENTS RECEIVED

BOTH MEDICAL and SURGICAL CASES.

4 to 8 guineas per week at the Hospital 3 to 4 guineas per week at the Sanatorium.

APPLY TO THE SECRETARY—BROMPTON HOSPITAL, S.W.3.

LLANDRINDOD WELLS

The famous Welsh Spa magnificent scenery glorious mountain air Healing medicinal waters every modern treatment. Superb motoring centre Write to the modern hotel for particulars.

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YE WELLS HOTEL

NATIONAL HOSPITAL

For Diseases of the Nervous System, QUEEN SQUARE, W C 1 **MEDICAL SCHOOL**

M R C P

A course of **Demonstrations** in **Neurology** for candidates for the M R C P examinations will be held from **May 9th** to **June 29th**, on **Tuesdays** and **Thursdays**, at 6 p m

Fee for 16 demonstrations £6 6s Special Terms can be arranged for those unable to take the whole course of Lectures

Applications should be made to the Secretary J G GREENFIELD, Dean of the Medical School.

UNIVERSITY EXAMINATION POSTAL INSTITUTION

17, RED LION SQ , LONDON, W C 1

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Principal Mr F S WEYMOUTH M A (Lond)

POSTAL OR ORAL PREPARATION FOR ALL MEDICAL EXAMINATIONS

SOME SUCCESSES

M D (Lond),	1901 32 (9 Gold Medallists during 1913-32)	368
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M B, B S (Lond),	*Final* 1918 32 (Completed Exam)	206
F R C S (Eng),	*Primary* 1919 32	146
	Final	155
M R C P (Lond),	1919 32	215
D P H	(*Various*) 1906 32 (Completed Exam)	316
F R C S (Edin),	1918 32	53
M R C S, L R C P	*Final* 1919 32 (Completed Exam)	456
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Preparation for the above also for Medical Preliminary and all examinations leading up to M R C S L R C P, or M B of various Universities also for M R C P (Edin) D P M D O M S D T M & H D L O D G O D M R E M M S A L M S S A etc Many successes

ORAL CLASSES

M R C P, M D Primary and Final F R C S F R C S (Edin) also Final M B, B S and M R C S L R C P Museum and Microscope Work Also Private Tuition

MEDICAL PROSPECTUS (48pp)

CONTENTS —The method and the cost of entering the Medical Profession *Particulars of all Medical Examinations* Postal Courses and Oral the Higher Medical for the Higher Surgical Diploma Examinations Refresher Courses Openings for Women Hints for writing theses

Medical Prospectus gratis along with list of Tutors etc on application to the Principal, Mr E. S WEYMOUTH M A 17 Red Lion Sq, London W C 1 (Telephone HOLBORN 6313)

Church Missionary Society

The ANNUAL MEETING of the MEDICAL MISSION AUXILIARY OF THE C M S will be held in the CENTRAL HALL WESTMINSTER at 7 p m on Wednesday, May 3rd, 1933

The Chair will be taken by

COL SIR CUSACK WALTON, D S O

and the speakers will be

A T SCHOFIELD, Esq, M A Camb, M R C S, L R C P (Mengo Uganda)

S D STURTON Esq M D B Ch M A Camb, D T M Liv (Hangchow Chekiang)

THE REV W WILSON CASH D S O, O B E (General Secretary of C M S)

Tickets of admission may be obtained from the Superintendent Loan Department Church Missionary Society Salisbury Square E C 4

There will be a small number of reserved seats at 1s each

ST THOMAS'S HOSPITAL MEDICAL SCHOOL

(University of London)

DEMONSTRATOR IN PHYSIOLOGY

Applications are invited for this appointment to date as from September 1st 1933 at a salary of £400 per annum

Applications with testimonials and Academic Record should be forwarded to the Dean of the Medical School by May 27th

ST MARY'S HOSPITAL MEDICAL SCHOOL, W 2

(University of London)

The SUMMER SESSION will begin on Tuesday, April 25th, 1933

The Medical School is being entirely rebuilt and the new buildings will be occupied at this Summer Session

Courses in Preliminary Intermediate, and Final Subjects are provided and Students can join at once after matriculation

SITUATION Between a large population providing clinical material and one of the best residential districts thus enabling students to live in close proximity to their work

CLINICAL UNITS IN MEDICINE AND SURGERY Certain members of the medical and surgical staff devote their whole time to teaching and research

Nearly 1 000 beds available for teaching, additional clinical material being provided by affiliation to an Infirmary and other Institutions

ENTRANCE AND RESEARCH SCHOLARSHIPS to the value of £1 400 are awarded annually

APPOINTMENTS varying in value up to £750 per annum, open to students after qualification

For further particulars and illustrated prospectus apply to the School Secretary

C M WILSON (M C) M D F R C P
Dean

LIVERPOOL SCHOOL OF TROPICAL MEDICINE

(UNIVERSITY OF LIVERPOOL.)

COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on October 2nd 1933 and January 3rd, 1934 and for the Diploma in Tropical Hygiene on January 11th and April 26th 1934 (Candidates for the D T H must possess the D P M of this University)

For particulars apply to the Hon Dean, Liverpool School of Tropical Medicine Pembroke Place Liverpool

M.D. THESIS

(Camb , Edin , Glas , Durham, &c)

SKILLED COACHING GUIDANCE and ADVICE from Special Tutors in conformity with the Regulations of the various Universities.

Apply for particulars and free booklet, Hints on Writing a Thesis for the M D Degree, to the SECRETARY Medical Correspondence College 19 Welbeck Street, London W 1

STAMMERING, SPEECH DEFECTS

BEHNKE METHOD Estab 1882 Cases non resident treated at 39 Earl's Court Square S W 5 and in residence in the Summer holidays, at Miss BEHNKE'S house on the Chilterns

Pre-eminent success in the education and treatment of stammering and other speech defects — Times
Thoroughly physiological principles. — Lancet.
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The Practice of the Hospital is limited to Medical Practitioners. Particulars from J BROWNING ALEXANDER M D Dean

Medical and Dental Students

Special Classes for Pre Medical and Dental Exams Matric, and Prelims
Chemistry Physics and Biology Labs.
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327 Oxford Road Manchester

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PREP COURSE with daily Lecture-Demonstrations of Museum Specimens of Surg Path for next Exam will commence shortly POSTAL TUITION at any time —Further particulars H C ORRIN, F R C S, Surgeons Hall, Edinburgh

MEDICAL CORRESPONDENCE COLLEGE

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PROVIDES HIGHLY SUCCESSFUL ORAL AND POSTAL COACHING FOR ALL MEDICAL EXAMINATIONS

Special Preparations for all Surgical Qualifications

F R C S ENGLAND (Primary & Final.) **M C.CANTAB, M.S LONDON.**

F R C S EDINBURGH

And all other Surgical Degrees and Diplomas

¶ The remarkable success of Students of the Medical Correspondence College at the higher Surgical Examinations is specially worthy

¶ Both at the Primary and Final F R C S England the majority of our Students are successful at the first attempt and candidates who have failed at these Examinations on several previous occasions get through without difficulty after going through our courses

¶ The Surgical Tutors of the College all hold either the M S Lond. or F R C S.Eng and are both, and are highly experienced teachers

¶ The Postal Courses are thoroughly clear concise and up to date and the test questions are carefully selected from those set at previous Examinations so as to embrace all parts of the subject By working systematically through the Course the Student is brought up to the examination standard in the minimum time and much unnecessary reading is saved

VALUABLE BOOK

How to Pass the F R C S, free on application to the Secretary

UNIVERSITY OF BIRMINGHAM

Faculty of Medicine

WILLIAM WITHERING MEMORIAL LECTURESHIP

A COURSE OF FIVE LECTURES on "*Methods of Clinical Genetics*" will be delivered by Professor LANCELOT HOGBEN M A D Sc Professor of Social Biology The London School of Economics and Political Science (University of London) in the Large Theatre of the Medical Faculty Buildings Edmund Street during the Summer Term, 1933, on the following dates at 4 p m viz. WEDNESDAYS APRIL 26th MAY 3rd 10th 17th and 24th

Members of the Medical Profession are invited to attend

A card giving further information of the Course may be obtained on application to the Dean

STANLEY BARNES, M D, D Sc F R C P
Dean

UNIVERSITY OF BIRMINGHAM

FACULTY OF MEDICINE.

LECTURER IN PATHOLOGY

Applications are invited for the post of Lecturer in Pathology to Dental Students and Pathologist to the Queen's Hospital Birmingham, at a stipend of £400 per annum

Applications with three testimonials should be sent on or before May 10th to the undersigned from whom further particulars may be obtained

C G BURTON
Secretary

The University,
Birmingham
April, 1933.

MANCHESTER ROYAL INFIRMARY

Applications are invited for the DICKINSON PATHOLOGY SCHOLARSHIP value £75 tenable for one year. Candidates must be Graduates who have taken out their full Clinical instruction in the Manchester Royal Infirmary.

A copy of the regulations governing the scholarship can be obtained from the undersigned to whom six copies of an application should be sent not later than Saturday May 6th.

FRANK C. HAZELL,
Secretary to the Trustees.

MANCHESTER ROYAL INFIRMARY

Applications are invited for the DICKINSON RESEARCH TRAVELLING SCHOLARSHIP IN MEDICINE, value £300 tenable for one year. Candidates must be University Graduates who have taken out the full course of Clinical instruction in the Manchester Royal Infirmary.

A copy of the Regulations governing the scholarship can be obtained from the undersigned to whom six copies of application should be sent not later than Saturday May 6th.

FRANK C. HAZELL,
Secretary to the Trustees.

MANCHESTER ROYAL INFIRMARY

MEDICAL OFFICER TO OUT PATIENTS

The Board of Management invite application from registered Medical Practitioners for the above appointment.

The duties are to assist in the treatment of Medical Out patients on two mornings per week. The appointment (not retiring) is for one year but the holder of the office will be for re-election on two subsequent occasions for a similar period. Salary £35. Candidates must state age and send twelve copies of their application and testimonials to the undersigned on or before 9 a.m. on Thursday April 27th.

By Order,
FRANK C. HAZELL,
Gen. Supt. & Secretary.

MANCHESTER ROYAL INFIRMARY

RESIDENT SURGICAL OFFICER

The Board of Management invite application for the above appointment which will become vacant on June 1st. Applicants must not be less than 25 years of age. They must be registered and hold a Medical and Surgical qualification.

Appointment is for twelve months renewable for a further period of one year subject to the provision of the Bye-law as to notice. Salary £230 per annum with allowance for laundry.

Full information if obtainable from the undersigned to whom applicants must send twelve copies of their application and testimonials by Thursday May 4th.

By Order,
FRANK G. HAZELL,
Gen. Supt. & Secretary.

COUNTY BOROUGH OF TYNEMOUTH

Preston Hospital (400 beds) Public Assistance Institution and Children's Homes.

ASSISTANT MEDICAL OFFICER (WOMAN)

The Council of the County Borough of Tynemouth invite applications for the appointment for a period of six months in the first instance of an Assistant Medical Officer (Woman) for the Public Assistance Institution Preston Road North Shields and the Children's Homes.

Salary £200 per annum inclusive of vaccination and all other fees plus residence which will include board lodging etc. The officer appointed will be required to pay to the Council all fees received by her for inquests certifying lunatics etc. to devote the whole of her time to the duties of the office (which include the training of Probationer Nurses) to reside in the apartments provided by the Council and to act under the direction of the Medical Officer.

Applicant must be duly registered under the Medical Acts and be qualified by law to practise in medicine and surgery in England and Wales and the candidate appointed will be required to produce her licences diploma or certificates to the Council. Experience in the treatment of Venereal Diseases is desirable.

Applications must be made on a printed form which may be obtained from the Public Assistance Officer 4 Northumberland Square North Shields on receipt of a stamped addressed foolscap envelope and must be returned to me accompanied by copies of testimonials as to professional ability and personal character by first post on May 1st.

Canvassing either directly or indirectly will be a disqualification.

Dated this 22nd day of April 1933.

C. C. HENDERSON,
Town Clerk's Office, Town Clerk.
Tynemouth.

CITY AND COUNTY OF KINGSTON UPON HULL.

ASSISTANT MEDICAL OFFICER OF HEALTH.

The Corporation of Hull invite applications from duly qualified Medical Men under the age of 40 years and of not less than three years' standing in their profession for the post of Assistant Medical Officer of Health.

Preference will be given to candidates in possession of the Diploma in Public Health or equivalent qualification.

Salary £600 per annum rising by annual increments of £25 to £700 subject to a temporary deduction authorised by the City Council.

The appointment is subject to the provisions of the Local Government and Other Officers Superannuation Act 1922.

The successful candidate will be required to devote the whole of his time to the duties of the office which consist mainly of work in the School Medical Department but may also include duty in any section of the Health Service of the City or Port.

Experience in refraction work is essential.

A form of application may be obtained from the undersigned and must be returned to the Medical Officer of Health (in an envelope endorsed "Assistant Medical Officer of Health") together with copies of three recent testimonials not later than the first post on Friday May 5th.

N. CEBBIE,
Health Dept., Medical Officer of
Guildhall, Hull. Health.
April 1933.

LIVERPOOL COUNTY BOROUGH

LOCAL EDUCATION AUTHORITY

JUNIOR ASSISTANT SCHOOL MEDICAL OFFICER.

Applications are invited for a Junior Assistant School Medical Officer at a salary of £500 per annum (less the temporary deduction authorised by the City Council) rising by annual increments of £25 to £700 per annum.

Applicants must be registered Medical Practitioners and must have had at least three years' experience. It is desirable that they should have had some special experience in school hygiene and in diseases of children.

The officer appointed will be required to devote whole time to the service of the Education Authority under the direction of the Medical Officer to the Education Authority and will be required to reside within the City. The officer will not be allowed to undertake private practice.

Form of application which may be had by forwarding a stamped addressed foolscap envelope should be returned together with copies of three recent testimonials to the undersigned not later than Monday May 1st and endorsed "Junior Assistant School Medical Officer."

The canvassing of members of the Education Committee or the City Council is strictly prohibited and will be considered a disqualification.

Municipal Buildings, WALTER MOON,
Liverpool. Town Clerk and Clerk to
the Local Education Authority.
April 8th, 1933.

BOROUGH OF MANSFIELD

ASSISTANT (FEMALE) MEDICAL OFFICER OF HEALTH.

Applications are invited for the appointment of Assistant (Female) Medical Officer of Health for the Borough of Mansfield at a salary of £500 per annum rising to £700 by annual increments of £25.

The duties will include the Medical Inspection of school children, work in connection with Maternity and Child Welfare Centres Ante-natal Clinics etc.

Candidates must be registered Medical Practitioners hold a Diploma of Public Health and have had at least three years experience of post-graduate work.

The successful candidate will be required to devote the whole of her time to the duties of the office and reside in the Borough.

Applications which must be made on forms obtainable from the undersigned accompanied by copies of three recent testimonials endorsed "Assistant Medical Officer of Health," must be received at my office not later than April 28th.

A. C. SHEPHERD, Town Clerk.
Town Clerk's Office,
Carr Bank, Mansfield.

ROYAL WEST SUSSEX HOSPITAL, CHICHESTER.

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON vacant May 1st. Salary £125 per annum with board residence and laundry.

Applications stating age with three recent testimonials, should be sent to the undersigned as soon as possible.

HERBERT S. AYLMORE,
Secretary.

BOROUGH OF BAKEWELL

ASSISTANT MEDICAL OFFICER (MALE).

Applications from qualified Medical Practitioners (married or women not) for the appointment of Assistant Medical Officer. The work will include duties connected with Maternity and Child Welfare Medical Inspection and Treatment of School Children and the Borough Hospital for Infectious Diseases.

Special experience of Antenatal and Maternity and Child Welfare Clinics is obligatory and the possession of a Diploma in Public Health will be an additional recommendation.

Salary £550 per annum rising by annual increments of £25 to £700 subject to a temporary deduction which amounts to £17 10s. from the commencing salary.

The successful candidate must pass a medical examination before appointment and contribute to the superannuation fund under the Local Government and Other Officers Superannuation Act 1922. The officer will be required to work under the direction and supervision of the Medical Officer of Health to devote whole time to the service of the Corporation and to reside within the Borough of Twickenham.

Forms of application can be obtained from the Medical Officer of Health, Dr. G. H. DUDGEON, Municipal Offices Twickenham to whom applications accompanied by not more than three dated testimonials are to be sent on or before April 25th.

Municipal Offices, EDWIN G. STRAY,
Twickenham. Town Clerk.
April, 1933.

CITY OF BIRMINGHAM.

DUDLEY ROAD HOSPITAL. (920 Beds.)

Applications are invited from fully qualified Medical Practitioners for the following appointment as CASUALTY OFFICER (male) at the Dudley Road Hospital Birmingham. The appointment will be for a period of six months but may be extended for a further period of no exceeding six months. Salary at the rate of £200 per annum and full residential emoluments subject to any voluntary abatement in force from time to time. The officer appointed will be required to refund to the Council all fees allowances and emoluments (other than the foregoing) received by him.

Further particulars may be obtained from the Medical Superintendent at Dudley Road Hospital to whom applications stating age experience and qualifications with copies of testimonials should be forwarded not later than May 4th.

CITY OF BIRMINGHAM.

MATERNITY AND CHILD WELFARE DEPARTMENT.

Three TEMPORARY MEDICAL OFFICERS are required from July 7th to October 3rd (approximately) and a Fourth TEMPORARY MEDICAL OFFICER from July 7th to September 30th.

Applications are invited from ladies who have held a resident post in a Maternity Hospital and in a Children's Hospital. The salary offered is £9 10s. per week.

The appointment cannot be terminated within the period named, except for health reasons.

Applications should be sent on or before April 29th to the Medical Officer of Health Council House Birmingham 3.

LONDON HOMOEOPATHIC HOSPITAL
Great Ormond Street W C 1
(A General Hospital—200 Beds.)

POST OF RESIDENT MEDICAL OFFICER

The periodical vacancies for the Three Resident Medical Officers (either sex) occur in February, June, and October in each year the appointment being for twelve months Four months as House Surgeon four months as Gynaecological and Casualty Officer, and four months as Medical Officer, with salary at the rate of £100 per annum and board, apartments, and laundry

Candidates must be legally qualified and registered

Applications for JUNE APPOINTMENT, stating age with copies of testimonials, to be sent to the Secretary

EDWARD A ATTWOOD Secretary

NATIONAL HOSPITAL FOR DISEASES OF THE HEART,
Westmoreland St Marylebone, W 1

OUT PATIENTS MEDICAL OFFICER.

Applications are invited for the post of Out patients Medical Officer (Non resident, male) The appointment is for the period May 22nd to September 30th Salary at the rate of £125 per annum Candidates, who must be duly registered Medical Practitioners will not be expected to call on the Honorary Medical Staff, but to send their applications, with copies of three recent testimonials to me at the Hospital, not later than Saturday May 6th The Out patients Medical Officer will be required to assist the Honorary Medical Staff on five afternoons weekly

ROBERT G E WHITNEY
Secretary

ST BARTHOLOMEW'S HOSPITAL
ROCHESTER (126 Beds.)
Rochester, Chatham, Gillingham, and District

The House and Finance Committee invite applications for the post of HOUSE SURGEON who will act as Casualty Officer and have charge of the Orthopaedic Cases, which will become vacant on June 1st.

Candidates must be unmarried, qualified, and registered Medical Men The appointment is for six months Salary at the rate of £175 per annum with board residence, and laundry

Applications stating age, qualifications, experience etc accompanied by copies of three recent testimonials must be received by the Secretary not later than May 4th

Canvassing the Honorary Staff will disqualify

THE ROYAL INFIRMARY, SHEFFIELD
(500 Beds)

The Weekly Board of Management invite applications for the post of ASSISTANT AURAL AND OPHTHALMIC HOUSE SURGEON The appointment is tenable for the residue of the term of six months ending June 30th next, but the successful applicant will be eligible for re-election to this or one of the other thirteen House appointments Salary £80 per annum with board and residence rising after six months service to £100 per annum

Applications together with copies of testimonials to be sent to the undersigned forth with

Board Room JNO W BARNES F C I S,
March 28th 1933 Gen Supt & Sec.

ELIZABETH GARRETT ANDERSON HOSPITAL,
Euston Road London N W 1

Applications are invited from fully qualified Medical Women for the post of
ASSISTANT OBSTETRICIAN
Yearly appointment maximum two years Duties to commence in May Further particulars of the post can be obtained from the undersigned to whom applications with copies of three testimonials should be sent by Friday, April 28th

JEAN R MURRAY Secretary

EVELINA HOSPITAL FOR SICK CHILDREN,
Southwark, S E 1

CLINICAL ASSISTANT (HONORARY), required for Medical Out patient Department on Tuesday and Friday afternoons.

Applications giving details of qualifications together with copies of recent testimonials, should be sent to the undersigned as soon as possible

W H SIDNELL,
April 13th 1933. Secretary Supt

CHESTER ROYAL INFIRMARY
(211 Beds.)

HOUSE PHYSICIAN (male) required for June 5th Salary £160 per annum with board lodging and washing Application list closes May 5th

Application forms may be obtained from W H Grieve M D M R C P Hon Superintendent of the Resident Medical Staff

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THE LONDON LOCK HOSPITAL.

Applications are invited for the appointment of SURGICAL REGISTRAR (male or female) to the Female Lock Hospital Candidates must be a Fellow (or Member) of the Royal College of Surgeons of England or a Surgical Graduate of a University of the United Kingdom, and have had previous obstetrical experience The appointment is for one year in the first instance commencing May 5th, with honorarium at the rate of £100 per annum Applications with three copies (only) of testimonials must be submitted to the undersigned not later than 10 a m on Monday May 1st from whom copies of the Laws and By laws relating to the appointment may be obtained

By Order of the Board
283 Harrow Rd, W 9 J F MORTON Secretary
April 8th, 1933

TUNBRIDGE WELLS AND COUNTIES GENERAL HOSPITAL.

Wanted, HOUSE SURGEON (male) Candidates must be unmarried and duly qualified in Medicine and Surgery May be required to lecture to Nursing Staff (Two residents.)

In patients number over 1,400 Yearly Out patients 6 000, with 50 000 attendances

Salary £160 per annum, with board, residence, and laundry, in the Hospital

This Hospital is approved by the University of London for the purposes of the M D and M S examinations.

Applications stating qualifications with certificate of registration, and copies of testimonials should be sent immediately to the undersigned Vacancy occurs May 14th

TOM B HARRISON, Secretary

BURY INFIRMARY, LANCS
(137 Beds)

Applications are invited for the post of THIRD HOUSE SURGEON (male), who must have both Medical and Surgical qualifications. The appointment is for six months at a salary at the rate of £150 per annum, with board residence and laundry The successful applicant will be required to commence duties beginning of May

Applications, stating age qualifications, and nationality, with copies of three recent testimonials to be sent to the undersigned not later than April 28th

Particulars of duties may be had on application

ALEX. W MAITLAND
Hon Secretary

BEXHILL HOSPITAL

Applications are invited from Medical Practitioners who must be of recognized Consultant or Specialist Status for the undermentioned APPOINTMENTS to the HONORARY STAFF

(a) TWO CONSULTING SURGEONS,
(b) ONE OPHTHALMOLOGIST,
(c) ONE PATHOLOGIST
(d) TWO RADIOLOGISTS
(e) ONE EAR NOSE, AND THROAT SPECIALIST

Applications should be addressed to the undersigned at the Hospital Office 4 Devonshire Road Bexhill on Sea to reach him on or before Saturday, April 29th

JAMES B DUNCAN
Hon Secretary

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL
Gray's Inn Road, W C 1

ASSISTANTS IN THE OUT PATIENT DEPT

There are vacancies for a Second Assistant to attend on Wednesdays at 2 p m, and for a Third Assistant to attend on Tuesdays at 5 p m The duties are to assist the Surgeons in seeing the patients, and the posts are honorary ones

Applications may be for periods of three, six, or twelve months, and should be sent to the undersigned immediately

JOHN H YOUNG,
Secretary Superintendent

THE STOCKPORT INFIRMARY

HOUSE PHYSICIAN (male) required Salary £150 per annum, with board, residence, and laundry

Applications with copies of three recent testimonials stating age, University or Medical School and experience to be delivered to the undersigned immediately

EDWIN J PEARCE,
Secretary Superintendent

TAUNTON AND SOMERSET HOSPITAL, TAUNTON (104 Beds)

LADY HOUSE SURGEON required June 1st. Three Residents on Staff Six months appointment Salary at the rate of £100 per annum

Applications, with testimonials to—

F J J STACEY, Secretary

HEREFORDSHIRE GENERAL HOSPITAL
(140 Beds.)

Applications are invited for the post of HOUSE SURGEON and CASUALTY OFFICER (male)

Salary at the rate of £100 per annum with board, residence and laundry

The appointment will be for a period of six months commencing June 1st The successful candidate will subject to satisfactory service be eligible to succeed to the Resident Surgical Officer's post, with a salary at the rate of £150 per annum

Applications stating age qualifications and experience together with copies of three recent testimonials should reach the undersigned on or before May 6th

T W UPTON, Secretary

ROYAL SAMARITAN HOSPITAL FOR WOMEN, GLASGOW

The Governors invite applications from registered Medical Practitioners for the post RADIOLOGIST in the Hospital

Particulars as to duties honorarium etc may be obtained from the undersigned with whom applicants are requested to lodge as soon one copies of their application along with copies of three testimonials, not later than April 29th

Candidates are informed that canvassing is not allowed

T MASON MACQUARER
191 West George St, Glasgow C 2 Secretary & Treasurer
April 14th, 1933

LINCOLN COUNTY HOSPITAL

Wanted JUNIOR HOUSE SURGEON male unmarried Salary at the rate of £150 per annum rising to £200 per annum at the conclusion of six months' approved service Board residence, and washing will also be provided

Every candidate for the appointment must be registered under the Medical Acts

Applications, stating age and other particulars, with copies of not more than three testimonials are to be sent to the undersigned from whom further particulars may be obtained.

Lincoln ARTHUR MOORE,
April 12th 1933 Secretary-Supt

THE PRINCE OF WALES HOSPITAL FOR LIMBLESS AND CRIPPLED CARDIFF
(CARDIFF AND CROSSWAYS—130 Beds.)

A LOCUM TENENS for the Resident Surgeon will be required for eight weeks from May 18th. It is desirable that applicants shall have had experience as a resident in an Orthopaedic Hospital The remuneration will be four Guineas a week

Applications, stating age, qualifications, and experience, accompanied by copies of two recent testimonials, should be sent to the Secretary Mr GILBERT D SHEPHERD, F C A., by April 30th

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ROYAL CHEST HOSPITAL
City Road E C 1
(Royal Northern Group of Hospitals.)

The post of HOUSE PHYSICIAN will be vacant on June 1st The appointment is for six months. Salary at the rate of £100 per annum, with board residence, and laundry

Applications, with copies of testimonials, should be sent on or before May 3rd, to the undersigned from whom forms of application rules, and further particulars can be obtained.

GILBERT C PAYNTER, Secretary

Royal Northern Hospital,
Holloway Road N 7

ROYAL INFIRMARY BLACKBURN
(340 Beds—five Residents.)

FOURTH HOUSE SURGEON (male) required at a salary of £150 per annum, rising to £250 with board residence laundry, etc To commence duties as soon as possible

Applications, with copies of testimonials stating age nationality experience, etc to be sent at once to the undersigned

Royal Infirmary, Blackburn NATHAN A SMITH Gen Supt & Secretary

This Institution is recognized for the Surgical Practice required for the F R C S final examination

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DERBYSHIRE ROYAL INFIRMARY DERBY
(General Hospital—347 Beds)

Applications are invited for the post of OPHTHALMIC HOUSE SURGEON AND ANAESTHETIST Candidates must be qualified and registered under the Medical Acts

Salary will be £150 per annum with apartments board, etc

Applications, with copies of testimonials, to be sent to the undersigned

WALTER RYAN
Supt & Secretary

March 30th 1933.

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B.M.A. House Tavistock Square W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary 7 Drumsheugh Garden Edinburgh)

(a) British Islands

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** (contd.)	**PUBLIC HEALTH**
EBBW VALE MON. (*Workmen's Medical Society*)	MARDY GLAMORGAN (*Workmen's Medical Scheme*)	KENT COUNTY COUNCIL. LENHAM SANATORIUM (*Male Assistant Medical Officer*)
GILFACH GOCH GLAMORGAN (*Workmen's Medical Scheme*)	NEATH AND DISTRICT (*Medical Aid Association.*)	FARNBOROUGH INSTITUTION HOSPITAL. (*Resident Assistant Medical Officer*)
LLWYNPIA CTADACH VALE PENYCRAIG GLAMORGAN (*Workmen's Medical Scheme*)	OAKDALE, MON. (*Medical Officer for Medical Aid Association.*)	WORCESTER COUNTY AND CITY MENTAL HOSPITAL. (*Junior Assistant Medical Officer*)
LOWESTOFT MEDICAL INSTITUTE. (*Medical Officer*)	OGMORE VALLEY GLAMORGAN (*Wyndham Colliery Medical Aid Society*) (*Workmen's Medical Scheme*)	LLANTRISANT AND LLANTWIT FARDRE RURAL DISTRICT COUNCIL. (1) *Medical Officer of Health (part time)* (2) *Medical Officer (woman—part time) for Maternity and Child Welfare*

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B.M.A. House Tavistock Square W.C.1

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. (*All Friendly Society Appointments.*)	Dr. J. G. HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St. Sydney N.S.W.	**QUEENSLAND** (*Brisbane Associated Friendly Societies Institute*) (*Toowoomba Associated Friendly Societies Medical Institute Toowoomba*)	The Hon. Sec. Queensland Branch British Medical Association B.M.A. Building Adelaide St. Brisbane.	**WELLINGTON NEW ZEALAND** (*Contract Practice Appointments*)	Dr. G. F. V. ANSON (Hon. Sec. New Zealand Branch) British Medical Association P.O. Box 156 Wellington New Zealand
VICTORIA. (*All Institute or Medical Dispensaries*)	Dr. J. P. MAJOR (Hon. Sec. Victorian Branch British Medical Association) Medical Society Hall East Melbourne Victoria			**WESTERN AUSTRALIA.** (*Contract and Lodge Practices*)	Hon. Sec. Western Australian Branch British Medical Association No. 6 Bank of N.S.W. Chambers St. George's Terr. Perth Western Australia.

April 19th 1933 By Order of the Council. G. C. ANDERSON Medical Secretary

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KING GEORGE HOSPITAL ILFORD
(8 miles from London)

Wanted a HOUSE SURGEON to commence duty on May 1st for a period of ten months two months as Casualty Officer six months as House Surgeon and two months as Deputy Resident Medical Officer in charge of the Casualty Department Salary £100 per annum £10 bonus on completion of appointment and two weeks holiday Candidates should send their applications with three recent testimonials and call on the members of the Honorary Medical Staff indicated by the Secretary by April 24th

G. AUSTIN HEPWORTH Secretary

SCARBOROUGH HOSPITAL & DISPENSARY
(70 Beds)

Wanted May 1st one HOUSE SURGEON (female) Duties include Home Visiting Salary £175 per annum with board residence etc. Appointment for six months

Applications stating age, with copies of testimonials and essential particulars to be sent to the Hon. Secretaries at once, from whom further particulars may be obtained

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ROYAL BERKSHIRE HOSPITAL READING

CASUALTY OFFICER required as from May 2nd for six months The candidates (male) must be fully qualified and registered Remuneration at the rate of £150 per annum with board residence and laundry Applications with copies of testimonials should be sent to the undersigned on or before Monday April 24th.

F. A. LYON Secretary

COVENTRY & WARWICKSHIRE HOSPITAL.
(Main Hospital 307 Beds
Convalescent Hospital 40 Beds)
Seven Resident Medical Officers.

Applications are invited for the post of HOUSE SURGEON for the Aural and Ophthalmic Departments

The appointment for six months renewable Salary £125 per annum with board residence and laundry Candidates must be duly qualified and registered

Applications stating age and enclosing copies of recent testimonials to be sent to the undersigned immediately.

(Miss) R. HOOPER Secretary

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN (100 Beds)

HOUSE PHYSICIAN (male) required. Salary at the rate of £100 per annum with board lodging and washing No canvassing allowed To commence duties on May 22nd

Applications in writing accompanied by testimonials should be sent to PERCY F. SPOONER Secretary

April 8th 1933

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN (100 Beds.)

HOUSE SURGEON (male) required. Salary at the rate of £100 per annum with board lodging and laundry No canvassing allowed To commence duties on June 10th

Applications in writing accompanied by testimonials should be sent to PERCY F. SPOONER, Secretary

April 8th, 1933.

LONDON JEWISH HOSPITAL,
Stepney Green E.1
(General Hospital—108 Beds)

Applications are invited for the following posts—

RESIDENT MEDICAL OFFICER AND HOUSE PHYSICIAN Salary at the rate of £150 per annum with board and residence Appointment for six months

HOUSE SURGEON Salary at the rate of £100 per annum with board and residence Appointment for six months.

CASUALTY OFFICER (non-resident). Salary at the rate of £150 per annum with luncheon and tea. Appointment for six months The holder will be required to attend the Out-patient Department from 9 a.m. to 5 p.m.

Applications with copies of three recent testimonials to be sent to the Secretary not later before Friday April 28th The successful candidates will be required to take up their duties on June 1st

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MINEHEAD AND WEST SOMERSET HOSPITAL, MINEHEAD SOMERSET
(58 Beds)

Applications are invited for the post of RESIDENT HOUSE SURGEON (male or female) to the Hospital

Duty to commence on May 21st Appointment for a period of six months Salary £150 per annum with board residence and laundry

Application stating age, nationality, experience and qualifications accompanied by copies of three recent testimonials to be sent to the undersigned not later than May 5th.

W. H. P. RODDA Secretary

(*Appointments continued on p. 52.*)

NOT CLASSIFIED

BARNES, PRIVATE HOTEL, 25, CASTEL NAU, Capt and Mrs Rogers OFFER superior ACCOMMODATION, every home comfort, garden tennis garage Ex bus service 3 mins West London Hospital Recommended Terms moderate — Phone Riverside 3371

YACHT CRUISING FOR CONVALESCENTS and others Complete mental and physical change from usual occupation and environment Owner of 35 ft Yawl wishes to ARRANGE small PARTIES to CRUISE. Inexpensive —Address, No 2539 B M A House, Tavistock Sq W C 1

ASSISTANCIES

WANTED—ASSISTANT END OF MAY OR beginning of June, 14 miles NW of London Own car, practice expenses of same paid £400 p a with furnished flat—Address stating age, experience, etc and sending copy of testimonials No 2527, B M A House, Tavistock Square W C 1

WANTED—ASSISTANT, EX H S OR H P, with experience of Lumbar punctures, in a *sound private practice* Married or single Six guineas weekly with board and residence State experience height and capital (if with view) Easy terms Send photo—Address No 2524 B M A House Tavistock Square W C 1

WANTED — ASSISTANT AT ONCE, English or Scotch Mixed Practice in Midland City Salary £350, with furnished rooms and attendance and petrol allowance Good prospects if required to suit man with capital —No 2418 B M A House Tavistock Sq W C 1

WANTED—ASSISTANTSHIP, WITH VIEW by M B Ch.B Edin, 1924, act 34, married, ex H P, etc, wide experience Just disposed own practice South England, London, or coast pref By June or July would suit—No 2513 B M A House, Tavistock Sq, W C 1

WANTED — ASSISTANT, WITH VIEW TO Partnership, in a mixed Practice in Lancs Town Panel over 3 000 Unmarried Partnership after six months if suitable—Address No 2413, B M A House Tavistock Square W C 1

WANTED — ASSISTANTSHIP OR LOCUMS near London or Cardiff by M R C S, L R C P, D P M & H ex H S H P Good experience G P Going abroad end of year—Address, No 2558, B M A House, Tavistock Square W C 1

WANTED IMMEDIATELY INDOOR ASSISTANT in London by Indian Doctor, experienced midwifery able to drive car Salary according to experience Usual bond Full particulars.—Address No 2519 B M A House, Tavistock Square W C 1

WANTED IMMEDIATELY, ASSISTANT (male about 30 years) with early view to share worth £1 000 gross Pleasant city Panel 4 000 Little midwifery and night work —Address No 2511 B M A House Tavistock Square W C 1

WANTED—MALE INDOOR ASSISTANT FOR mixed Practice in Midland Town Scottish English or Irish Salary £250—£300 according to experience References, etc Usual bond — Address No 2532, B M A House, Tavistock Square W C 1

WANTED — ASSISTANTSHIP BY M B Ch B (Indian) experienced G P, Refractions Midwifery keen, energetic. Drive car — Address No 2554, B M A House Tavistock Square W C 1

WANTED — ASSISTANTSHIP (PREFERably with view) by Irish Graduate, aged 34 Six years experience General Practice Own car Free May 1st—Address No 2503, B M A House Tavistock Square W C 1

WANTED — ASSISTANT END OF MAY industrial country Practice in Cornwall Salary £375 outdoor Usual bond Able to drive car—Address No 2424 B M A House Tavistock Square W C 1

WANTED — ASSISTANTSHIP BY WOMAN Doctor at once 6 years C P Own car Free now Small partnership or any other medical post entertained — Address No 2421 B M A House Tavistock Square W C 1

WANTED IMMEDIATELY — INDOOR AND outdoor ASSISTANTS for Town and Country Practices with and without view Good salaries State full particulars—BRITISH MEDICAL BUREAU 33 Cross St. Manchester 2

EX H S OBSTETRIC AND GYNAEC H S H P desires PART TIME ASSISTANTSHIP in Manchester area Experience G P Willing to do night work and weekends in turn for keep — Address No 2504 B M A House Tavistock Square W C 1

OPHTHALMIC SURGEON IN SMALL TOWN requires an ASSISTANT—young energetic man of good appearance and manner Some ophthalmic experience desirable Probable eventual Partnership for a suitable man—No 2410 B M A House Tavistock Sq W C 1

ASSISTANTSHIP WANTED BY M B, Ch B ex H P and H S, exper G P driver single Free May 1st — Address No 2516 B M A House, Tavistock Square W C 1

WOMAN DOCTOR WISHES TO HEAR OF ASSISTANTSHIP or LOCUMS South or South East *preferred*, reliable, keen, experienced C P and H P Well received excellent testimonials Interview Free May 1st—Address, No 2514, B M A House Tavistock Sq W C 1

LOCUMS

FOR LOCUM TENENS APPLY TO
PERCIVAL TURNER, Ltd
The oldest and only Agent who for 50 years has supplied substitutes at short notice without fee to principals
4, ADAM ST, Strand, London, W C 2

Telegrams	Phone
Epsomian Lond	Temple Bar 9011
After Office Hours	Epsom 9142

WANTED, G P ST BARTS, 35 MARRIED, two children, recently sold own practice would like hospitality LOCUM at seaside before commencing practice again Nominal salary only Full particulars—Address No 2553 B M A House Tavistock Square W C 1

CRANTOCK CORNWALL — EXPERIENCED man does LOCUMS *for any required period* Highest recent refs London and Provinces Seaside or Country Practices Usual terms. Interview if desired — Write or wire Dr MARTIN Crantock

LOCUM TENENS — LONDON M B, EXPERIenced in all *varieties of Practice*, is free up to May 11th and in June and July—Address, stating terms, No 2415, B M A House, Tavistock Square W C 1

LOCUM TENENS — EXPERIENCED PRACTItioner recently retired open to do LOCUMS between July 1st and Sept 30th Own car if desired — Address, stating terms No 2559, B M A House Tavistock Square W C 1

LOCUM TENENCY WANTED BY SCOT, Bachelor Just sold own practice. Young strong active Own car Partnership considered — Address No 2526, B M A House, Tavistock Square W C 1

MEDICAL WOMAN, EXPERIENCED G P, panel and private, ex H S, requires posts as LOCUM TENENS during the summer Free middle of May — Address No 2522, B M A House Tavistock Square W C 1

TUBERCULOSIS SANATORIUM — PRACTItioner with specialized post graduate study, seeks opportunity for LOCUM TENENS or ASSISTANTSHIP—Address No 2528, B M A House Tavistock Square W C 1

PARTNERSHIPS

WANTED BY M B, B S, SCHOLAR AND Medallist aged 30, married, experienced in good class C I with ample capital a PARTNERSHIP in Practice, in good residential *district, with social amenities preferably Home Counties* No objection preliminary Assistantship Replies treated in confidence—Address, No 2431 B M A House Tavistock Sq W C 1

WANTED BY M B, CH B EDIN (1922) married, aged 33, PARTNERSHIP £1,000 *minimum with substantial panel*, preferably in Southern half of England Disposing of own practice in Yorkshire — Address, No 2225 B M A House Tavistock Square W C 1

WANTED—PARTNERSHIP OR ASSISTANTSHIP with view, Brighton, Hove or Worthing district, by M B, B S, M R C P Public School Hospital and G P experience Age 27 single. Sufficient capital — Address, No 2501 B M A House, Tavistock Sq W C 1

A FIRST CLASS OPPORTUNITY OCCURS for an energetic and capable man to secure a PARTNERSHIP with an old established firm of Surgeons near London, where there is enormous scope for increase A small share to commence with with suitable option to take further share from time to time. The price is 2 years purchase on certified cash takings of last two years Applicant to state full particulars of age experience etc, and capital available References will be given and required and only principals or their solicitors replied to—Address No 2552, B M A House, Tavistock Square, W C 1

CAMBRIDGE GRADUATE, HOLDING F R C S (England) and experienced in Surgery desires PARTNERSHIP Home Counties preferred — Address No 2406 B M A House, Tavistock Square W C 1

KENT — PARTNER REQUIRED IN OLD established country practice Half share amounting to about £1 200 now, opportunity for larger share and perhaps succession in a few years London or Cambridge Graduate aged 30—35 pref Experience essential Good appts Attractive house and neighbourhood—No 2525, B M A House Tavistock Sq, W C 1

F R C S (ENG) WITH EXTENSIVE EXPERIence seeks PARTNERSHIP (Gen) major surgery preferably Southern England Address, No 2534 B M A House Tavistock Square W C 1

NORTHERN CITY —EAR NOSE & THROAT —PARTNER wanted urgently (1) operator most essential Present partner retiring very suddenly through illness Trade £4 000—£5,000 p a — Address No 2521 B M A House Tavistock Square W C 1

NORTH WALES—SEASIDE RESORT, CHEMISTS PARTNERSHIP (1/2 SHARE) at 2 years purchase £2,800 a year (audited) Middle class Stating age, experience, etc—Address CHEMISTS 40 Hamilton St Hoole Chester

PARTNER WANTED TO PURCHASE HALF SHARE in an X-ray and Electro-Therapeutical Practice within 20 miles of South London Fully equipped for X-ray Therapy Radiography, and all branches of Electro Therapy Applicant must hold a Diploma in Radiology —Address No 2401 B M A House Tavistock Square, W C 1

PARTNER WANTED FOR MIXED GENERAL Practice in London Good income and panel approx 4 500 Half share for capital now and remainder at early date 2 years purchase Nice house on long lease—Address with full particulars and state amount of capital available, No 2531 B M A House Tavistock Square, W C 1

PARTNERSHIP WANTED BY WELL QUALified St Thomas's and Public School man aged 30, London or Home Counties £1 250—£1,500 p a 10 years experience. Free now Capital avail Or would buy large Practice £3 000 p a —No 2517 B M A House Tavistock Sq W C 1

WESTERN CITY — PARTNERSHIP — TWO-FIFTHS SHARE of old established Practice Receipts over £2 325 p a. Panel 3,900 Prem 2 years purchase Might sell further share later—THE WESTERN MEDICAL AGENCY 22 Clare Street Bristol 1

YOUNG ACTIVE MAN WITH MODERATE capital and prepared to develop old established Practice in Midlands, can secure PARTNERSHIP on favourable terms—Address No 2407 B M A House Tavistock Square W C 1

MEDICAL POSTS DISPENSERS etc

WANTED—POSITION AS DISPENSER TO a firm of Doctors with plenty of work. Experienced hand — Miss DEWAR, 19 Holly Gardens Brixton Hill London S.W 2

A LADY DISPENSER BOOKKEEPER supplied immediately on request, qualified and with practical experience in Private *practice and dispensary work*, also trained in Bacteriological Laboratories of the LONDON COLLEGE OF PHARMACY FOR WOMEN Preparation for Examinations — Write wire or phone (Bayswater 0969) Secretary 7 Westbourne Park Road W 2

DOCTORS *REQUIRING* QUALIFIED Dispensers Nurse-Dispensers Secretary Dispensers or Chauffeuse Dispensers, are invited to write wire or phone Temple Bar 5858 THE DISPENSERS BUREAU, 3, Lindsay House 171, Shaftesbury Avenue London W C 2.

LADY DISPENSER, BOOK KEEPER (MRS' experience private and panel qualified (Hall) also fond of gardening requires POST Good testimonials—Address No. 2515 B M A House, Tavistock Square W C 1

LADY SECRETARY DISPENSER (HALL) desires POST with Doctor Country preferred 35/ a week non resident—Address No 2512 B M A House Tavistock Sq W C 1

QUALIFIED DISPENSER, WITH EXPERIence of book keeping, requires POST daughter of M R C S, or would act as Receptionist to Doctor or Dentist Good reference—Address No 2505, B M A House Tavistock Square W C 1

THE ROYAL ARMY MEDICAL CORPS ASSOCIATION 85 Eccleston Square S W 1 (Telephone Victoria 2722) supplies qualified Dispensers, Book keepers Laboratory Assistants Sanitary Assistants Male Nurses Mental and Special Treatment Orderlies Dental Clerk Orderlies Porters Caretakers etc without charge to prospective employers.

TRAINED NURSE WITH A BOY 8 YRS OLD wishes POST take charge Nursing Home or Doctor's house Excellent experience and testimonials. Resident, with small salary or non resident—Address No. 2551, B M A House Tavistock Square W C 1

TYPEWRITING, DUPLICATING AND TRANSlations Experts in Medical work TESTIMONIALS THESES, etc. copied in style that commands attention Accuracy guaranteed—WOBURN BUREAU 3 Upper Woburn Pl W C 1 (Adjoining B M A. House) Museum 4475

WOMAN DOCTOR ENGLISH CONJOINT qualification M A (Hons) Oxon special experience in general medicine V D child welfare school hygiene WORK Is mounted outside views Salary 3 sundays consideration —Address No 2510 B M A House Tavistock Sq W C 1

PRACTICES

WANTED—BETTER CLASS PRACTICE OR PARTNERSHIP by young married Edinburgh Graduate (Hons) Experienced in India and best references Income £1 000 minimum desirable provincial town Pleasant house essential Capital—Address No 2414 B M A House Tavistock Square W C 1

WANTED BY EXPERIENCED PRACTITIONER country town in Midland or South Lincolnshire well established PRACTICE of £1 000 plus Must have private house with electric light Substantial capital available Replies confidential—Address No 2502 B M A House Tavistock Square W C 1

WANTED BY EXPERIENCED PRACTITIONER age 43 good middle-class PRACTICE in London S W or W Income £1 500 upward Could purchase partnership if right Ample capital available —Address No 2505 B M A House Tavistock Square W C 1

WANTED — GENERAL PRACTICE IN London £1 500 or over Large panel essential North of River Ample capital available Good premium would be paid for right Practice — Address No 2520 B M A House Tavistock Square W C 1

WANTED—GOOD-CLASS MIXED PRACTICE or PARTNERSHIP in town or country preferably Midlands or South England £1 300—£2 500 House to rent or purchase —Address No 2212 B M A House Tavistock Square W C 1

WANTED IMMEDIATELY PRACTICE (OR PARTNERSHIP) by experienced M B (Cla) married age 33 Good panel essential Just disposed of own practice Any district Replies confidential—Address No 2507 B M A House Tavistock Square W C 1

WANTED IN CHESHIRE, LIVERPOOL, OR West Lancashire Coast good-class private and panel PRACTICE approximating £1 600 per annum and scope with good house surgery etc Ample capital and experience—No 2420 B M A House Tavistock Sq W C 1

WANTED BY ELDERLY PRACTITIONER PRACTICE about £1 000 p a Country Town in Bucks Beds Herts Essex or Suffolk House to let. — Address No 2533 B M A House Tavistock Square W C 1

WANTED — WORKING-CLASS OR MIXED PRACTICE in London area Income £750—£1 000 per annum Capital available —Address No 2506 B M A House Tavistock Square W C 1

COUNTRY PRACTICE FOR DISPOSAL Certified receipts over £1 100 Equally worked Panel about 600 Apprt about £225 Modern house good garage and garden Lease Pleasant southerly district—Address No 2500 B M A House Tavistock Square W C 1

MIDDLE-CLASS PRACTICE REQUIRED IN Southern or Home Counties or London suburb Income £1 500 or over with good panel Small modern house and garden preferred—HARDY & HARDY 49 Chancery Lane W C 2

MIDLANDS — WELL ESTABLISHED PRACTICE averaging £1 800 p a in prosperous town Panel over 1 600 Sport and educational facilities. Good scope Premium £2 850 Suitable doctor's house attached (5 bedrooms) garage, all conveniences for sale—No. 2529 B M A House Tavistock Sq W C 1

OLD ESTABLISHED PRACTICE IN NORTH University town Certified assts average under £1 200 Panel 1 250 Midwifery not encouraged (10 last year) House £56 S parate surgery entrance Prem 1½ yrs purchase—No 2557 B M A House Tavistock Sq W C 1

PRACTICE WANTED BY WOMAN DOCTOR experienced keen medical and psychiatric respiratory diseases. Non panel non dispensing with prelim assistancy or locum preferred Partnership with succession considered—All No 2427 B M A House Tavistock Sq W C 1

FOR DISPOSAL—URGENT SALE—ON THE Thames — Old-established Family PRACTICE in favourite residential Riverside resort returning about £1 300 a year Growing district Moderate panel Conservative Corgian practice 6 bedrooms, large garden and breakwater to river and boathouse. Premium for goodwill 2 000 guineas House freehold 2 000 guineas or will let—Apply in first instance to No 9151 PERCIVAL TURNER LTD 4 Adam Street Strand W C 2

PRACTICE TOWN OR COUNTRY WANTED Must have good panel and house with good garden schools near South or S Midlands Over £1 500 — Address No 2503 B M A House Tavistock Square W C 1

WEST END — URGENT — HIGH-CLASS Surgical PRACTICE in excellent position returning over £1 000 a year and increasing Fee from £2 2s operations 10 to 100 guineas Good introduction given Excellent residential flat with 3 bedrooms on lease at moderate rental Premium for quick sale only £2 000 or offers Valuable equipment at valuation if desired. Purchasers with necessary capital and surgical qualification and used to good-class practice necessary—Apply in first instance to No 7722 THE LANCET Offices Adam Street Adelphi Strand London W C 2

RETIRING — FOR IMMEDIATE DISPOSAL, old-established PRACTICE private and panel Average receipts for last three years £725 6s Excellent house and garden. Rent £140 p a Premium £1 000—Address No 2422 B M A House Tavistock Sq W C 1

TO PURCHASERS — DO NOT BUY without expert assistance With 50 yrs experience Mr PERCIVAL TURNER can advise in all cases Terms free on application to 4 Adam St Strand W C 2 Telephone Temple Bar 9011 Telegrams Epsomian London

TORQUAY—WANTED PRACTICE OR PARTNERSHIP by M B B Ch ex H S H P cap G P lost training thereto Capital—Address No 2530 B M A House Tavistock Square W C 1

UNIQUE OPPORTUNITY — EXCELLENT Training for Doctor or Dental Surgeon in well-populated and rapidly growing London suburb For full particulars apply T B REES Station Approach Hanwell Middx Telephone Pinner 1538

WEST RIDING (LARGE TOWN) — GOOD middle and working class PRACTICE £1 900 Panel 1 500 Good reason for sale Premium 2 years or nearest offer House (garage) will or lease —Address No 2523 B M A House Tavistock Square W C 1

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SPECIALISTS IN PROFESSIONAL HOUSES AND CONSULTING ROOMS

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BOARD RESIDENCE OR APARTMENTS with attendance in lady's well appointed private house best residential part Brighton—Address No. 1957 B M A House Tavistock Square W C 1

BOURNEMOUTH 5 MILES FREEHOLD Country RESIDENCE highly suitable for NURSING HOME 18 bedrooms 3 bathrooms 5 reception rooms gas main water electric light available Six acres delightful ground Bargain £2 500—HIBBS Surveyor Parkstone Dorset

CONSULTING ROOMS TO LET — HARLEY Street Wimpole Street and district. Whole and part time. Lists sent on application. Rooms wanted in Harley Street district — ELGOOD & Co 10 Henrietta St Cavendish Sq W 1 Langham 2691

FOR SALE—EXCELLENT HOUSE ON MAIN road in good residential suburb South Manchester NUCLEUS PRACTICE, with scope for extension leaving solely on account of health — Address No 2518 B M A. House Tavistock Square W C 1

GLORIOUS CORNWALL. MOST HEALTHY district on edge of Caradon Moor RESIDENCE of a Medical Man who has benefitted so much that he is selling and starting Practice again Ideal for a retired Professional Man Bungalow (detached) freehold concrete block cavity walls 6 rooms Indoor sanitation Garage large garden dampproof course £700 — Moorcot Upton Cross Callington Cornwall

GROUND FLOOR MAISONETTE, 40 PORTland Place W —TO BE LET on Lease no premium six reception rooms ante-room two bathrooms kitchen etc two maids rooms central heating etc —Tel Langham 1153

HARLEY ST (ADJOINING) — BACHELOR APARTMENT comfortably furnished sitting room with closed up bed large private bath dressing room constant hot water lift 2½ gns inclusive of service Breakfast optional —No 101 B M A House Tavistock Sq W C 1

LONDON POPLAR EAST INDIA DOCK RD — Convenient RESIDENCE of 10 rooms in excellent main road position 30 year practice just ceased Rent £100 per annum and rates or freehold could be acquired Splendid opportunity—Apply KNIGHT & CLARK, Estate Agents and Surveyors 174 East India Dock Road Poplar E.

Telephone East 0430.

HARLEY STREET—CONSULTING ROOM TO Let. Unusually well appointed Ground floor Owners only other plate Secretary's room available.—Address No 2504 B M A House, Tavistock Square W C 1

MIDLANDS—SMALL HOME FOR MENTAL Cases well established. Profits £1 300 per annum FOR SALE, with freehold and furniture and private house for Licensee Terms on negotiation — Address No 2219 B M A House Tavistock Square W C 1

QUEEN ANNE STREET — ONLY £40 PER annum secures PART TIME USE of hard some CONSULTING ROOM with use of waiting room attendance and all services including plate on door — Address No 2402 B M A. House, Tavistock Square, W C 1

SOUTH COAST — NEWLY EQUIPPED NURSING AND REST HOME, 22 bedrooms 6 bathrooms Lounge Hall Part furnished and main modern — Address No 2225 B M A House Tavistock Square W C 1

ST JOHN'S WOOD — DOCTOR MOVING TO WEST End wishes to DISPOSE of LEASE of attractive small inner HOUSE, main road where he has established Practice over 2 years Low rent Suit some body with Practice elsewhere — Address No. 2509 B M A House Tavistock Square W C 1

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APPOINTMENTS—Contd

HERTFORDSHIRE COUNTY COUNCIL
PUBLIC ASSISTANCE
WATFORD GUARDIANS COMMITTEE AREA

COUNTY INSTITUTION SHRODELLS, WATFORD

APPOINTMENT OF HOUSE SURGEON

Applications are invited for the post of House Surgeon at the above Institution

The appointment will be for six months duration renewable for a further six months The salary will be at the rate of £150 per annum with an allowance of three guineas per week until such time as board and residence can be provided in the Institution In the event of the appointment being renewed the salary will be at the rate of £175 per annum for the second period of six months

The salary will be subject to a temporary reduction of 5 per cent under the terms of the resolution of the County Council affecting the salaries of officers generally

The House Surgeon must reside near the Institution at an address to be approved by the Guardians Committee.

Candidates must be duly qualified and registered

Applications stating age qualifications and experience with copies of not more than three recent testimonials should be sent to the Clerk of the Watford Guardians Committee 7 Church Street Watford (from whom particulars of the duties of the post may be obtained) so as to be received by him not later than first post on Saturday *April 29th*

ELTON LONGMORE,
Hertford Clerk of the County
April 18th 1933 Council

CITY OF MANCHESTER

POLICE SURGEON

Applications are invited for the above mentioned position at a commencing salary of £800 per annum, rising by four annual increments of £50 per annum (subject to satisfactory service) to £1 000 per annum together with £150 per annum for travelling expenses Two guineas per day will also be allowed for 28 days each year for the services of a Locum Tenens during annual holidays. No payment will be made for the services of a Locum Tenens under any other circumstances

Particulars as to duties terms and conditions of appointment can be obtained from the undersigned

Applications endorsed Police Surgeon are to be delivered not later than May 6th

F E. WARBRECK HOWELL
Town Clerk

COUNTY BOROUGH OF WEST HAM

PUBLIC ASSISTANCE COMMITTEE

The Council invite applications for the appointment of DEPUTY MEDICAL SUPERINTENDENT at their FOREST GATE HOSPITAL Forest Lane Forest Gate, E 7, at the salary of £525 per annum rising by annual increments of £25 to a maximum of £600 per annum, with the usual residential allowances, subject to an abatement in accordance with the resolutions of the Council for the time being in force at present 2½ per cent. from the first £200 3¾ per cent from the next £100, 5 per cent from the next £250 and 7½ per cent from the remainder The salary is inclusive and all fees received must be paid to the Borough Treasurer

Candidates must be fully qualified and registered Medical Practitioners and have had previous hospital and maternity work experience The person appointed will be required to take charge of the Hospital during the absence of the Medical Superintendent and should occasion arise to act in any other Institution under the control of the Council

The patients at the Hospital comprise chronic sick, epileptics, and mental defectives, with three maternity blocks

The successful candidate will be required to pass a medical examination and the appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 at the rate of 5 per cent. or the Poor Law Officers Superannuation Act, 1896

Forms upon which application must be made can be obtained from the Medical Officer of Health Municipal Health Offices Romford Rd Stratford E 15 on the receipt of stamped and addressed foolscap envelope and should be returned to the undersigned not later than 10 a m on May 6th

CHARLES E CRANFIELD
Public Assistance Offices Town Clerk.
Union Road Leytonstone, E.11
April 12th 1933

CITY OF MANCHESTER

PUBLIC HEALTH DEPARTMENT

APPOINTMENT OF TEMPORARY DISTRICT MEDICAL OFFICER—CRUMPSALL DISTRICT

The Public Health Committee invites applications from qualified Medical Men now residing within the Crumpsall district for the appointment of temporary District Medical Officer The successful candidate will be required to maintain a surgery within the district

The salary attached to the position will be at the rate of £50 per annum

Applications stating fully the age qualifications, and experience of the candidate and the proposed hours of attendance at the surgery endorsed on the envelope District Medical Officer should be addressed to the Medical Officer of Health Civic Buildings 1 Mount Street Manchester, 2 only and not to members of the Committee or Council and must be received by him not later than Saturday, April 29th *Details of the duties* of the office may be obtained on application to the Medical Officer of Health at the above address.

Canvassing in any form oral or written, direct or indirect is prohibited

F E WARDBRECK HOWELL
Town Hall Town Clerk
Manchester 2
April 18th 1933

BOOTLE GENERAL HOSPITAL, *BOOTLE, LIVERPOOL,* 20 (100 Beds)

HOUSE PHYSICIAN

Applications are invited for the above post, tenable until September 30th

The salary attached to the post is £150 per annum with board residence, and laundry

Applications, with copies of three testimonials, to be sent to me immediately

A J COOPER Secretary Supt

BRADFORD ROYAL INFIRMARY

HOUSE SURGEON (male) wanted from July 1st to November 30th Candidates *must be single* and legally qualified Salary £135 per annum with board residence, and washing There are 215 beds and six Resident Officers

Applications stating age, qualifications and previous experience, if any with copies of recent testimonials to be received by the undersigned *not later than May 2nd*

J J BARRON,
April 18th 1933 Secretary Supt

THE *GENERAL HOSPITAL, BIRMINGHAM*

HOUSE SURGEON required at once for Throat and Ear Department Salary £70 per annum

Applications, with details as to qualifications and experience, to—

A H IRANCY
April 18th, 1933 House Governor

COUNTY BOROUGH OF WEST HAM

PUBLIC ASSISTANCE COMMITTEE

The [illegible] from [illegible] tered [illegible] the [illegible] RESIDI [illegible] OFFICER [illegible] their [illegible] OOD ESSEX (Accommodation 160 beds.)

The appointment is for a period of one year at a salary of £250 per annum plus emoluments valued at £150 per annum, subject to an abatement of 2½ per cent. from the first £200, 3¾ per cent from the next £100 and 5 per cent. from the next £250 in accordance with the resolutions of the Council

The person appointed must give the whole of his time to the service of the Council and will work under the direction of the Medical Officer of *Health*

The successful candidate will be required to pass a medical examination and the appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922 at the rate of 5 per cent or the Poor Law Officers Superannuation Act, 1896

Forms upon which application must be made can be obtained from the Medical Officer of Health Municipal Health Offices, Romford Rd, Stratford E 15, on the receipt of a stamped addressed foolscap envelope, and should be returned to the undersigned not later than 10 a m on May 6th

CHARLES E. CRANFIELD
Public Assistance Offices Town Clerk.
Union Road Leytonstone, E 11
April 13th, 1933

METROPOLITAN BOROUGH OF STEPNEY

APPOINTMENT OF MEDICAL OFFICER OF HEALTH AND CHIEF ADMINISTRATIVE TUBERCULOSIS OFFICER.

The Council of the Metropolitan Borough of Stepney hereby invite applications for the appointment of a whole time Medical Officer of Health for the Borough at a commencing salary at the rate of £1 200 per annum, rising by annual increments of £50 to a salary at the rate of £1,400 per annum The person to be appointed will also be required to hold under the Council the office of Chief Administrative Tuberculosis Officer at a salary at the rate of £100 per annum

Candidates must possess the qualifications prescribed by the Public Health (London) Act 1891, and the Sanitary Officers Order, 1926.

The appointment will be subject to the approval of the Minister of Health to the provisions of the Stepney Borough Council (Superannuation) Acts 1905 to 1931 and to the satisfactory passing of a medical examination as required by the Council as to constitutional *fitness.*

Applications must be made upon forms to be obtained from me and must be forwarded in envelopes endorsed Appointment of Medical Officer of *Health* so as to reach me not later than 12 o'clock noon on Saturday May 6th

Canvassing members or officers of the Council in any manner whatsoever is prohibited and will disqualify candidates.

The Council do not bind themselves to appoint any of the candidates.

By Order,
Municipal Offices WM MCCARTY
Raine Street Town Clerk.
Old Gravel Lane, E.1
April 18th 1933

CITY OF STOKE ON TRENT

MEDICAL OFFICER OF VENEREAL DISEASES CENTRE.

The City Council invite applications for the appointment of a Medical Officer of the Venereal Diseases Centre at a salary of £750 per annum rising by annual increments of £25 to £937 10s, subject to a temporary reduction

The person appointed will be required to devote the whole of his time to the service of the Corporation which will not necessarily be confined to work in connection with venereal disease The appointment will be subject to the approval of the Ministry of Health

Applicants must be fully qualified medical men with at least six months general hospital experience and have had special experience in modern methods of the diagnosis and treatment of Venereal Diseases. The possession of the Diploma in Public Health will be considered an advantage

Further particulars may be obtained on application to the Medical Officer of Health at Peters Chambers Clebe Street, Stoke on Trent

Applications, stating age qualifications and experience accompanied by copies of not more than three recent testimonials and endorsed "M O H" to be delivered to the Medical Officer of Health on or before Friday, May 5th at 10 a m

E. B SHARRATT
Town Hall Town Clerk.
Stoke on Trent

BOROUGH OF JARROW

ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER.

Applications are invited for the above appointment at a salary of £500 per annum (less the temporary deduction authorised by the Council) rising by annual increments of £25 to £700 per annum

Applicants must be registered Medical Practitioners and must have had at least three years experience

Preference will be given to the holding the D P H

Forms on which application must be made may be obtained from the undersigned

W FORSYTH HEDLEY
Town Clerk's Office Acting Town Clerk
Grange Road West
Jarrow April 10th 1933

TYNEMOUTH VICTORIA JUBILEE INFIRMARY

HOUSE SURGEON (male) required May 1st Applicants must be doubly qualified and registered Salary £150 per annum with board residence and laundry

Applications stating age and other essential particulars and accompanied by copies of recent testimonials to be addressed to the undersigned from whom all particulars may be obtained

The Hospital has two resident House Surgeons and contains 80 beds and cots, an X Ray Department and an Out patient Department where accident cases are received.

CHARLES ROWELL,
Assistant Secretary
1 Northumberland Place North Shields

CHELTENHAM GENERAL AND EYE HOSPITALS

The Board of Management invite applications for the post of HOUSE SURGEON (male) at the General Hospital

Candidates must be unmarried and have a registered qualification in Medicine and Surgery

Salary £200 p a with board lodging and laundry

Applications with copies of testimonials to be sent in sealed envelopes marked House Surgeon to the undersigned not later than April 29th.

J CUMMING SMITH F C I S
The General Hospital Secretary
Cheltenham April 18th 1933

CARDIFF ROYAL INFIRMARY
(Associated with Welsh National School of Medicine)
(Number of available beds—490)

Applications are invited for the post of CASUALTY SURGICAL OFFICER

Salary is at the rate of £75 per annum to an applicant with previous Hospital experience and £50 per annum without. The appointment is for six months

Applications, with copies of three recent testimonials should be submitted at the earliest moment as the post is now vacant

R ARMSTRONG
April 18th 1933 Medical Supt

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY

Applications are invited for the post of HOUSE PHYSICIAN (six months appointment) Salary at the rate of £150 per annum with board residence and laundering

Applications, stating age training qualifications and accompanied by recent testimonials should be forwarded to the undersigned immediately

JOHN GIBSON
Superintendent & Secretary

LEICESTER ROYAL INFIRMARY
(472 Beds)

CASUALTY HOUSE SURGEON

A Casualty House Surgeon is required Salary at the rate of £125 per annum Applicants must have held a resident Hospital post or had similar experience of Hospital work

Applications to the House Governor and Secretary

April 1st 1933

MACCLESFIELD GENERAL INFIRMARY
(General Hospital—100 Beds)

Applications are invited for the appointment of SECOND HOUSE SURGEON (male) for a period of six months. Salary £150 per annum with board and residence Candidates must have had experience in administration of Anæsthetics

Applications with copies of three testimonials should be sent to the undersigned at once

A E HANRAHAN Secretary

BRACEBRIDGE MENTAL HOSPITAL, Near LINCOLN

SECOND ASSISTANT MEDICAL OFFICER

The Committee of Visitors invite applications for the above whole-time appointment from gentlemen under 40 years of age who are duly qualified and registered Medical Practitioners Previous Mental Hospital experience essential

The commencing salary will be £425 per annum plus the usual residential emoluments of board lodging laundry and attendance valued for superannuation purposes at £125 per annum The Committee are at present considering the plans for the provision of houses for Two Medical Officers. When the houses are available for occupation a revision of the value of emolument will be necessary

Subject to 12 months service satisfactory to the Committee an increase of £25 will be granted and thereafter increases of £25 per annum up to a maximum salary of £525 An additional £50 per annum will be paid to the holder of the D P M qualification or to a person obtaining the D P M after appointment

The successful candidate will be required to pass satisfactorily a medical examination an to join the scheme under the Asylums Officers Superannuation Act 1909 The appointment is subject to one month's notice on either side

Applications stating full particulars of qualification experience and appointments held accompanied by copies of three recent testimonials must be addressed to the Medical Superintendent Bracebridge Mental Hospital near Lincoln so as to be received not later than May 6th

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LONDON N W — VERY FINE OUTLYING district About £1 000 p a. No panel taken but ample scope Some dispensing Expenses low Corner house in excellent position on main road 4 bedrooms etc Long leasehold for sale at £2 220 Vendor giving up general practice Premium for goodwill 1½ year purchase—No. 9149

MANCHESTER. — ABOUT £650 P A INcreasing old-established PRACTICE. Panel 790 Opposition less than usual Visiting fees 4/5 and 5/ Lowest surgery fee 2/6 House off main road 4/5 beds 2 recep and sep. surgery Rent £60 on lease.—No 9144

YORKSHIRE — OUTSKIRTS OF LARGE town. Old-established middle and better class PRACTICE averaging £980 p.a. Panel 400 Visits 3 6 to 21 Very little midwifery Specially built house 2 recep 6 bed Surgery with separate entrance etc On lease at £100 Premium £1 350—No 914.

CHANNEL ISLANDS — URGENT SALE through ill health of Vendor Private PRACTICE in best part of Island overlooking sea averaging £367 p.a. No midwifery taken Fees 3/6 to 7/6 med extra. Choice of houses and others building Good schools Sea and trout fishing Freeh 1½ years purch—No 910

LONDON E C — AVERAGE OVER £640 I A Panel about 500 rapidly increasing Visiting fees 3 6 to 10 6 No midwifery Small house at £95 p a incl on long lease Could be run as lock up Freeh 1½ yrs' purch—No. 9136

WITHIN 10 MILES OF LONDON — BUSY Town Small PRACTICE worth over £500 with great scope for energetic man Selling through ill health. Price of house & practice £4 000 Might can be arranged. No 9135

NORTHERN UNIVERSITY CITY — £1 700 a year Old-established PRACTICE in best position in residential district. Opportunity not strong Appt worth £130 Panel of 700 Fees 5/ up Ex house with 5 beds. 3 recep well designed professional offices etc To rent a fine Would suit gentleman of some experience—No 9134

ITALIAN COAST — DELIGHTFUL SPOT — About £500 p.a. Scope to increase Good opening in neighbouring town No English opposition Fees 12/6 to 35/ Flat to rent at under £100 2 recep 3 bed. cons. room and usual offices. Furniture etc can be bought if desired. Goodwill £750 cash—No 9129

RESIDENTIAL SEASIDE RESORT—WITHIN easy reach of London £700—£800 p a suffered through Vendor's ill health Ample scope. New estate building Small panel. No dispensing Midwifery not sought Attractive freehold house built by Vendor 5 bed. etc. garden and garage—No 9127

SOUTH WALES—MINING PRACTICE WORTH £1 250 p.a. mostly panel and contract Scope to increase further Mids. 2—3 guineas Visits 3/6 House with 2 rec 4 bed to rent Colliery working full time Opposition not severe Prem £1 500—No 9125

LANCS MANUFACTURING TOWN — £725 p.a. Panel over 1 050 No appts. Mixed dispensing PRACTICE. Detached house 5 bed. 2 recep surg etc. with separate entrance Garden and garage To rent on lease—No. 9120.

BERKS — OLD ESTABLISHED — COUNTRY PRACTICE, about £700 p.a. has been £1 100 Panel about 500 Visiting fees 2/6 to 7/6 Very little midwifery Splendid house, specially built for Vendor with two acres of grounds 2 reception rooms 6 bedrooms surgery and waiting rooms etc. Consider £4 000 offer for Practice & house freehold—No. 9100.

WEST OF ENGLAND — UNIQUE OPPORtunity — A Doctor's House can be rented or purchased in popular residential district on fringe of moor Situated on main road in centre of town—No. 9145

WANTED

WANTED FOR M D B CH D P H PRACTICE of £1 200—£1 600 p.a. in West South or South Midlands especially Bristol Plymouth or Exeter—No 282.

WANTED FOR M D CH B EDIN., NON dispensing PRACTICE, with at 3rd interests in Southern half of England, preferably near London Panel not objected to. Income of £2 000—£3 000 p.a.—No. 282.

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LONDON S E —Well-established mixed G P situate in middle class residential locality Medium sized house to rent at £110 p a Receipts £750 Panel 1,100 Fees 2/6 up Premium £1,250 or near offer

NEWCASTLE (near) —Well established middle class and club PRACTICE Medium sized house to rent Receipts over £450 Panel 500 Fees 2/6 up Premium £775, to include drugs, instruments, surgery fittings, etc

LONDON, E.C —Mixed Cash and Panel Lock up PRACTICE with living accommodation if desired, facing main thoroughfare held on lease at £95 p a—Receipts nearly £700 Panel 450 (scope) Fees 1/6 to 10/6 Midwifery not undertaken Premium £1,000

YORKSHIRE —Town PRACTICE in industrial locality Medium sized house (5 bedrooms) Receipts approx £700 Panel 520 Fees 2/6 up Premium for Practice and freehold house, £2 000 cash

LONDON, E —Suburban middle-class G P Medium sized house to rent on lease at the low rental of £30 p a Fees 2/ up Average receipts £516 Panel 350 Fx cellent scope for young man Premium for Practice and lease £1,050 cash or near offer

HANTS —Middle class Country PRACTICE Practically unopposed Great scope for increase Receipts £450 Panel 94 Fees 2/6 up Premium £450

We have numerous applications for Practices and Partnerships, both Town and Country, with incomes from £400 to £6,000

Prospective vendors are invited to send particulars

BEDFORDSHIRE.—NUCLEUS middle class Country Practice Conveniently situated house available to be rented on lease at £50 p a or purchased for £900 Receipts over £500 Panel 100 (increasing) Scope for increase Premium £500 for quick sale.

DURHAM —Middle class and industrial PRACTICE. Average receipts approx £500 Panel 370 Medium sized house Branch Surgery Fees 2/6 up Premium £725 or offer Excellent scope

YORKSHIRE (Near Coast) — Agricultural Locality — Attractive house separate entrance for surgery for sale freehold Receipts average approx £800 p a Panel 620 Fees 3/6 up Premium 1½ years purchase for Practice house £900

CHESHIRE —Well established mixed middle and working-class PRACTICE. Semi detached house (6 bedrooms) with garden to rent at £70 p a Receipts approx £556 Panel 527 Fees 2/6 up. Premium £700 or near offer

MANCHESTER — Old established Industrial PRACTICE Medium sized house to be rented on lease Receipts approx £650 increasing Panel nearly 800 Fees 2/6 up Premium £950, to include furniture

MIDLANDS —PARTNERSHIP (after 12 months Preliminary Assistantship) in old established Country Town Practice Receipts £1 800 Panel 700 (not encouraged) Fees 3/6 up Several appointments Premium for one half share 2 years purchase.

LIVERPOOL — PARTNERSHIP in good middle class G P in Suburban District Excellent detached house for rent (furnished or unfurnished) garden garage Receipts over £2 000 Panel 700—800 Fees 3/6 up Hospital appointment. Excellent scope Premium for one half share (to include car) £2 400

LONDON, N — Well-established mixed, middle, and working-class Lock up PRACTICE, situated on main thoroughfare in thickly populated locality Professional accommodation may be rented on lease Receipts average £450 p a Panel 550 Fees 2/ to 10/6 One appointment Premium 1½ years purchase

LANCS (Large Town) —Good-class G P situated in residential locality Medium sized house to rent Receipts over £1 600 Panel approx 700 Fees 3/6 up Premium 1½ years purchase.

N W —Lock up NUCLEUS situated in residential locality Suitable accommodation if desired Receipts £250 Panel 180 Fees 2/6 upwards Premium 1½ years purchase or near offer

WEST END — ELECTRO-THERAPEUTIC PRACTICE, complete with very full equipment Rooms rented on agreement Fees 10/6 upwards Trained staff Receipts average £800 p a Suitable to either sex Premium £1,000 or near offer

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1 WALES Large Town —DEATH VACANCY — Well established PRACTICE Receipts about £900 including panel about 1 000 Reasonable offers considered

2 LARGE MIDLAND TOWN — Old established PRACTICE Receipts average £650 p a, panel nearly 800 Nice house £60 p a Premium 1½ years purchase

3 Near NEASDEN N W — Well-established PRACTICE steadily increasing Receipts should be £550 this year including fair panel increasing Premium £600 Excellent scope

4 Near CHICKLEWOOD N W — Well established PRACTICE Receipts £200 p a panel 140 Nice house on lease Premium £300 Not been actively worked

5 5 MINS BAKER STRLET W — WELL established PRACTICE Receipts average about £210 per annum panel 130 Good scope for anyone devoting whole time Premium £175 Suit lady or gentlemen

6 BEDS —Old established Country PRACTICE Receipts about £300 p a panel 100 Nice house rent £56 p a Excellent scope for increase Premium £500

7 Near KEW — Old established mixed class PRACTICE. Receipts average £1 000 p a including good panel Nice house on rental Premium about 1½ years purchase

8 ESSEX 15 MILES LONDON — Well established PRACTICE in rapidly developing part Receipts at rate of £500 p a good panel Nice house on rental Prem £350

9 YORKS — Large Town — Old estab mixed class PRACTICE Average income £980 panel 400 Nice house on rental Premium £1 350 Vendor moving to London

No charge to purchasers or for enquiries

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RELIABLE AND EFFICIENT LOCUMS SUPPLIED AT SHORT NOTICE also ASSISTANTS

WANTED TO PURCHASE.

1 BIRMINGHAM (or within 50 miles thereof) —Mixed PRACTICE with a panel of 1,500 upwards and receipts of £1 500—£3 000 Urgently required Capital available

2. BLACKPOOL —Mixed PRACTICE Receipts £1 200—£2 000 with approx 40 per cent. panel Capital available

3 HALIFAX (or within easy reach thereof)—Mixed PRACTICE preferably with surgical scope Receipts from £700—£1 700 Capital available

FOR DISPOSAL.

1 LANCS —Well established mixed panel and private PRACTICE Receipts last year £[illegible] Panel 1 050 Good house to rent, 5 bedrooms etc.

2 MANCHESTER — Well-estab mainly industrial panel and private PRACTICE Receipts about £1,200 p a Panel over 1 200 and both increasing Nice modern house to rent Five beds. etc

3. LANCS — FASHIONABLE RESIDENTIAL & SEASIDE TOWN — Good class non dispensing panel and private PRACTICE. Receipts £871 Good house for sale Garage etc.

4 NORTH OF ENGLAND —Panel Colliery and Club PRACTICE. Receipts about £500 p a. Panel about 500 Appointments £200 p a. Good house to rent. Cons. scope for energetic man Low premium for quick sale.

FINANCIAL ASSISTANCE afforded to approved applicants for the purchase of Practices or Partnerships on very reasonable terms. Full particulars on application.

RELIABLE AND EFFICIENT LOCUMS SUPPLIED AT SHORTEST NOTICE.

NORTHERN BRANCH

BRITISH MEDICAL BUREAU

(THE SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LIMITED)

33, Cross Street, MANCHESTER

Telephones { MANCHESTER BLACKFRIARS 3925
MANCHESTER RUSHOLME 2549 (Night calls)

Telegrams "LOCUM, MANCHESTER."

Recommended with every confidence to the profession by the BRITISH MEDICAL ASSOCIATION as a thoroughly trustworthy medium for the transaction of all Medical Agency business

TRANSFER OF PRACTICES & PARTNERSHIPS
INTRODUCTION OF RELIABLE ASSISTANTS & LOCUMTENENTS
VALUATION AND INVESTIGATION OF PRACTICES ETC.

Practices & Partnerships Wanted — **Large List of Bona-fide Purchasers with Ample Capital Available**

FOR DISPOSAL

Full Particulars Free on Request.

MANCHESTER.—Established panel and private PRACTICE, average takings about £1,300 p.a. Panel 1,800. Good scope. Excellent house in main road, 3/4 bedrooms, 2 reception rooms and professional rooms. Price for freehold £1,150. Premium 1½ years purchase.—No. 451.

LAKE DISTRICT.—Small S. aside Town.—Middle-class PRACTICE. Cash receipts over £800 p.a. Panel 250. Excellent house (freehold) on sea front, 3 reception, 7 bedrooms. Garage and nice garden. All kinds of sport. Vendor retiring. Premium—Practice—1 year purchase.—No. 388.

NORTH WEST COAST. — Large residential and seaside town.—Old-established PRACTICE. Cash receipts about £1,200 p.a. Panel 1,500. Excellent detached corner house (freehold), 3 professional rooms, 5 beds. and 2 recep. rooms, garage and good garden for sale. Premium—Practice—1½ years purchase.—No. 417.

NR. MANCHESTER.—Old-established mixed PRACTICE offering great scope. Average cash receipts over £500 p.a. Panel 625. Good house in main road, 2 reception, 4 bedrooms. Rent £49 p.a. Premium £530. Vendor retiring.—No. 450.

LANCS. TOWN near Country.—Old-established mixed PRACTICE. Cash receipts last year £725. Panel about 1,000. Excellent detached corner house, 3 reception, 6 bedrooms, garage and large garden. To rent on lease. Premium 1 year purchase or near offer.—No. 403.

ITALY. — Seasonal PRACTICE in beautiful district averaging £600 p.a. Good accommodation, near sea front, 3/4 bedrooms, 2 reception rooms to rent. Premium—Practice, house-hold furniture, car, drug, etc. £1,110.—No. 462.

MANCHESTER.—Middle-class PRACTICE in pleasant suburb. Cash receipts last year £1,327. Panel 528. Charming house to rent, 3 reception, 6 bedrooms, billiard room. Large garden and garage. Premium—Practice—1½ years purchase.—No. 322.

NORTH WALES. — Old-established mixed PRACTICE, in Country Town near coast. Cash receipts last year £700. Panel 538. Small for increase as the Practice has been neglected. Excellent house, 3 reception, 5 bedrooms, garage and large garden. Not to rent £50 p.a. Good sport and educational facilities. Welsh not essential. Cottage Hospital. Premium £800.—No. 412.

NEWCASTLE ON TYNE. — PARTNERSHIP in sound industrial Practice. Average cash receipts £4,866 p.a. Panel 4,500. Suitable house available at low rental. Premium—one-quarter or one-third share—2 years purchase. Further share in 2—3 years.—No. 357.

NR. MANCHESTER.—PARTNERSHIP in excellent mixed PRACTICE. Cash receipts last year £2,414. Panel 2,670. Suit Irish Graduate. Scope for increase. Good accommodation can be secured. Premium—one-third share—2 years purchase (to include half of book debts).—No. 448.

NEAR NEWCASTLE ON TYNE.—Mixed General PRACTICE averaging £800—£850 p.a. Panel 600. Scope for increase. Good house, 3 recep., 5 beds., garage and garden. Premium £950.—No. 422.

MANCHESTER. — Middle-class PRACTICE in good residential district which is rapidly developing. Average cash receipts £1,427 p.a. excluding appointment £120 to £150 p.a. Panel 700. Excellent corner house, 3 reception, 5 bedroom, 3 professional room, garage to rent or for sale. Premium—Practice—1½ years purchase.—No. 438.

N. STAFFS.—Old-established Country PRACTICE in charming district averaging £900 p.a. Panel 632. Appointments (transferable) £100 p.a. Practically unopposed. Scope for increase. Excellent house with ample accommodation, garage and garden, rent £84 p.a. Premium 1½ years purchase.—No. 426.

MANCHESTER.—Old-established panel and private PRACTICE. Cash receipts last year £642. Panel 788. Scope. Good corner house, 2 reception, 4 bedrooms, garage. Rent £60 p.a. Premium 1½ year purchase or near offer.—No. 437.

EAST YORKS. — Country Town near Coast. — Unopposed mixed PRACTICE. Cash receipts last year £960. Panel 630. Excellent detached house, 3 reception, 4 bedrooms, garage and large garden. Premium 1½ years purchase.—No. 346.

CO. DURHAM. — Small PRACTICE offering great scope in beautiful country district. Cash receipts £500 p.a. Panel 380. Good semi-detached house (3 bedrooms) to rent at £50 p.a. Garden. Premium £350.—No. 440.

DEATH VACANCY. — CHESHIRE Coast Town near Liverpool.—Cash receipts £500/£550 p.a. Panel. Good house, 3 rec., 5 bedrooms, garage and garden. Rent £80 p.a. Premium by order.—No. 429.

MEDICAL WOMAN'S PRACTICE.—MANCHESTER.—Cash receipts last year £645. Panel 450. Good scope. Excellent house, 3 reception, 6 bedrooms, garage. Rent £60 p.a. or to sell. Premium best offer.—No. 330.

BLACKPOOL. — NUCLEUS established 4 months in rapidly developing district. Cash receipts £13+ (slightly more). Panel 500. Exceptional scope. Important centre. Goodwill household and all other furniture, etc. £600.—No. 444.

SCOTLAND.—Mixed PRACTICE, profits now £700 p.a. Valuable appointment £+00 p.a. Panel 226. Practice well situated with modern conveniences. Rent £16 p.a. Premium £+00.—No. 434.

NORTH WEST COAST.—Large Seaside Town.—Individual (non-dispensing) PRACTICE. Cash receipts £874 p.a. Small panel of 250. Excellent house (freehold), 2 reception, 5 bedrooms, garage and garden.—No. 266.

WANTED IMMEDIATELY.—INDOOR AND OUTDOOR ASSISTANTS FOR TOWN AND COUNTRY PRACTICES WITH OR WITHOUT VIEW. Good salaries offered. State full particulars.

LOCUMTENENTS (male and female) SHOULD REGISTER AT ONCE FOR ENGAGEMENTS.

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YORKSHIRE
Phoenix Chambers, South Parade, Leeds.
(Tel. 26771.)

NORTHERN IRELAND
72 High Street, Belfast.
(Tel. 7636/7. Grams. Vouch Belfast.)

All communications to be addressed to the Branch Manager BRITISH MEDICAL BUREAU 33 CROSS ST., MANCHESTER, 2

British Medical Bureau

(THE SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD.)

(FOUNDED 1880)

12, Stratford Place,

Oxford Street, W.1.

Tele Address
Triform Wesdo—London

Telephone: Mayfair { 1782 / 1783

The Association has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful Agency for the transaction of every description of Medical, Scholastic and Accountancy business, and the BRITISH MEDICAL ASSOCIATION has every confidence in recommending its members to consult Mr A V STOREY, the General Manager, in all transactions requiring the services of a Medical Agent

Members of the British Medical Association may take advantage of a reduced scale of charges applicable to them

NORTHERN BRANCH

The Manchester Medical Agency, lately under the control and Management of the Manchester Medical Committee, has now been taken over by the British Medical Bureau as their Northern Branch

Medical Practitioners in the North requiring the services of the Bureau are recommended to consult the Branch Manager, at the Offices, 33, Cross Street, Manchester

Telephones BLACKFRIARS 3925 after Office Hours RUSHOLME 2549
Telegrams LOCUM, MANCHESTER.

Practices and Partnerships for Disposal. Full particulars sent free.

1 DEATH VACANCY, LONDON S E—PRACTICE OVER £500 p a in well populated suburb Panel 740 Suitable house with garage and small garden to rent

2 HOME COUNTIES—PARTNERSHIP IN STEADILY INCREASing Practice about £1 700 p a in growing residential district, within 15 miles of London Panel 500—600 Suitable accommodation could be had Great scope as district is rapidly developing Premium two fifths share 2 years purchase

3 S OF ENGLAND—OLD ESTABLISHED PRACTICE AVERAGing nearly £1,430 p a in small town close to coast and favourite Health Resort Panel 775 Large charming modernised house in grounds about two acres, including paddock, for sale or rent. Premium 1½ years purchase

4 S E COAST — PARTNERSHIP IN STEADILY INCREASING non-dispensing Practice averaging nearly £1 700 p a in popular Seaside Resort Panel 650 Partner should be English or Scotch Premium one half share 2 years purchase

5 S WALES — PRACTICE BETWEEN £250—£300 P A IN beautifully situated village about 4 miles from important town Small panel Nice house (6 bedrooms) electric light, gas and company's water Premium house and Practice, drugs, etc, £1 950

6 EASTERN COUNTIES—PARTNERSHIP IN OLD ESTABLISHED mixed Practice in Town with population about 35 000 Cash receipts average £3 789 p a, including panel over 3 100 Very nice house (4 bedrooms) garage, and small garden to rent. Premium one-third share 2 years purchase

7 HOME COUNTIES — PARTNERSHIP IN OLD ESTABLISHED Practice in first rate Residential Country District about 20 miles from London Cottage Hospital Applicant should be aged 28—30 and a Graduate of Oxford or Cambridge Share worth about £1 000 p a, at 2 years purchase.

8 N OF ENGLAND—OLD ESTABLISHED GOOD CLASS PRACTICE of about £2 000 in favourite Seaside Resort Small Panel Large modern residence for sale. Scope for increase Prem £2,700

9 KENT—PARTNERSHIP IN MIDDLE AND WORKING CLASS Practice averaging nearly £4,450 p a, in an industrial Town under 25 miles of London Panel about 2 600 Detached house (4 bedrooms) with garden to rent. Plenty of scope for increase Premium one fifth share 2 years purchase.

10 S OF ENGLAND — PARTNERSHIP IN OLD ESTABLISHED Practice of nearly £1,950 p a. in important town within 80 miles of London No panel Attractive corner residence (7 bed and dressing rooms) in half acre of walled in garden, with garage, etc. for sale Ample scope for increase. Premium one-half share 2 years purchase

11 ESSEX OLD ESTABLISHED PRACTICE OF ABOUT £600 P A in Suburban District Panel 500 Well situated detached house (6 bedrooms) standing in own grounds with nice garden garage and stabling for sale Scope for increase Premium £650

12 S W OF ENGLAND — WELL ESTABLISHED MIDDLE AND better class PRACTICE of between £1 200 and £1,300 p.a. in Seaside Resort. Panel 500 Excellent and well situated large detached corner house with every modern convenience to rent on lease Very good Educational facilities Sport of all kinds including golf yachting, etc. Premium £2,000

13 LONDON S W—OLD ESTABLISHED PRACTICE ABOUT £650 p a in well populated area. Panel 850 Separate Surgery and private residence to be purchased Scope for increase Premium £1 100

14 SURREY—PARTNERSHIP IN SOUND OLD ESTABLISHED good mixed class Practice about £3 000 p a in the Croydon area. Small panel Very little midwifery Suitable house could be obtained Scope for increase One fourth share at first at 2 years purchase with option to increase.

15 S E. COAST—MIDDLE AND WORKING CLASS PRACTICE OF £1 000 p a. in favourite summer resort. Panel over 1 000 Corner house (4 bedrooms) with garage and garden for sale Premium one and a half years purchase.

16 ESSEX COAST—PARTNERSHIP IN PRACTICE OF £2 500 p a in small Seaside Town Panel 2 300 Modern house in good position facing Sea with 4 bedrooms for sale. Scope for increase Premium one fourth share £1,250, and further share later

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Oxford Street, W 1

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Triform Wesdo—London

Telephone Mayfair {1782 / 1783

Practices and Partnerships for Disposal (continued)

17 ESSEX.—PRACTICE ABOUT £1 150 P A IN DEVELOPING district in the Thames Estuary Panel 350 House with ample accommodation Electric light main drainage garage and very nice garden to rent Yachting Plenty of scope for increase Premium £1 600

18 LONDON W —STEADILY INCREASING NUCLEUS OF PRACtice in the Maida Vale district. Bookings for 11 months £249 of which about £100 has been received Rent of consulting and waiting rooms 30/ weekly Good scope Premium £300

19 WEST OF ENGLAND —PARTNERSHIP IN OLD-ESTABLISHED PRACTICE over £2 200 p a in County Town. Panel about 1 000 Premium one half share 2 years purchase. Good prospects for well-qualified physician (preferably M R C P) who should be an R C and who would have opportunity of getting on Staff of Hospital in near future

20 LONDON E.C —PARTNERSHIP IN OLD ESTABLISHED PRACtice in the City Receipts average about £1 650 p a. including appointment and panel worth over £500 p.a. Premium one-half share £1 000

21 NORTH OF ENGLAND — INLAND HEALTH RESORT — NON dispensing PRACTICE of about £1 000 p a. Small select panel. House (7 bedrooms) with large garden for sale Premium—Practice—£750

22 LONDON E.C — NUCLEUS OF PRACTICE (ABOUT FOUR fifths Ophthalmic) in the City Cash receipts at rate £268 p a Fees for Consultations £1 1s to £2 2s Consulting and waiting room to rent Premium £100

23 HOME COUNTY —WELL-ESTABLISHED PRACTICE OF £700 p.a. in first rate Country Town under 40 miles from London Panel about 250 Fees 5/ to £1 1s. Large well built residence (about 6 bedrooms) with modern conveniences Beautiful garden meadow orchard etc in all about 24 acres. Excellent hunting Premium Practice and house £4,500 (or near offer) which is less than the value of the house alone.

24 EASTERN COUNTIES — OLD ESTABLISHED PRACTICE about £...750 p.a. in beautiful country district. Panel 1 150 Good house (6 bedrooms) with electric light and central heating in large grounds for sale. Good scope

25 S AFRICA —RADIOLOGICAL PRACTICE IN A MOST DElightful town with excellent climate Cash receipts last year £1 450 Scope. Premium to include furniture carpets accessories etc £2 200

26 PRIVATE MENTAL HOME (FOR LADIES ONLY).—EXCEPtionally nice house and grounds A considerable sum required for the purchase Further particulars on application.

27 EASTERN COUNTIES — OLD ESTABLISHED COUNTRY PRACTICE. Cash receipts about £720 p.a. including appointments over £150 and a panel of about 590 Detached house (6 bedrooms) in grounds of 1 acre for sale. Prem. for Practice £650.

28 EAST COAST —PRACTICE OF BETWEEN £750 AND £800 p.a. in a purely Residential Seaside District within 40 miles from London Small Panel Detached house (5 bedrooms) for sale Scope for increase as district is growing

29 LANCASHIRE — OLD-ESTABLISHED PRACTICE IN SMALL Manufacturing Town Cash receipts last 12 months £725 including a panel of over 1 050 Detached house (5 bedrooms) with garage and good garden to rent. Premium 1½ years purchase or near offer

30 SURREY —PRACTICE OF £1 000 P.A IN RAPIDLY GROWing Residential District within 15 miles of London. Panel 400. Suitable house with separate professional accommodation, for sale Scope for considerable increase. Premium £1 600

31 LONDON W —GOOD MIDDLE-CLASS PRACTICE £400 P A in suburb within easy access of the West End Panel over 100. Attractive double-fronted house with nice garden for sale. Scope for increase. Premium 1½ years purchase.

32 CORNWALL—VERY OLD ESTABLISHED PRACTICE OF OVER £1 100 p a in delightfully situated seaside village on West Coast Panel about 550 Well built house (7 bed and dressing rooms) standing in half acre of ground for sale. Scope as building is going on Premium 1½ years purchase

33 LONDON N —PARTNERSHIP IN PRACTICE, ABOUT £5 250 p a in thickly populated Suburban District. Panel about 800 One fourth or one third share at 2 years purchase.

34 HOME COUNTIES — OPHTHALMIC PRACTICE BETWEEN £300 and £400 p.a. in desirable Residential Town under 15 miles from London Good detached house (4 bedrooms) with large garden for sale. Good reasons for plenty of scope for increase. Premium £300

35 LONDON E.C —OLD ESTABLISHED LOCK UP PRACTICE of £646 p.a Panel 459 Living accommodation to rent if desired. Premium £1 000

36 S AFRICA — OPHTHALMIC AND GENERAL PRACTICE about £1 400 p.a. (about 60 per cent. Ophthalmic) including appointments £400 No Ophthalmic opposition. Premium £400

37 CO DURHAM —PRACTICE OVER £500 P A IN RESIDENtial colliery district near two large towns Panel 370 Centrally situated 7 roomed house, with good Surgery and Dispensary for sale or rent. Practice could be very quickly substantially increased Premium £650.

38 N OF ENGLAND — OPHTHALMIC PRACTICE OF OVER £1 600 p.a in an important town. Excellent scope for one keen on clinical and operative Ophthalmology Large house in first-class condition for sale Purchaser should be well qualified Premium £2 500

39 S AFRICA — PRACTICE OF ABOUT £2,000 P.A IN A famous town Pleasantly situated detached bungalow 5 (6 room) garage and small garden for sale Good hospital (with private wards) Premium £1 100.

40 LONDON WEST END — X RAY AND ELECTRO-THERApeutic Practice Receipts 1931 nearly £620 Suitable and convenient flat at moderate rent on lease. Premium £925

41 LONDON E.—CASH AND PANEL PRACTICE OF £860 P A in populous district Panel 570 Small house to rent on lease. Premium 1½ years purchase.

MEDICAL PARTNERSHIPS TRANSFER AND ASSISTANTSHIPS (BARNARD & STOCKER). *Post free* 12/6.

All communications to be addressed to Mr A V STOREY General Manager

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Telegrams BOVMEDICAL, LESQUARE LONDON Telephone TEMPLE BAR 1616 (3 Lines)

Under the personal directorship of Dr J FIELD HALL and J C NEEDES

who have both had many years' experience as Medical Transfer Agents.

The commission chargeable in respect of any practice or partnership in Great Britain placed exclusively in the hands of this Agency has been fixed on an exceptionally favourable scale, the maximum chargeable on any transfer being fifty pounds (£50) Full Schedule of Terms and Conditions will be forwarded on application.

Accountancy and legal services furnished by the Agency, where desired, at moderate inclusive charges. No charge is made to Principals for the introduction of Locum Tenens or Assistants

1 PARTNERSHIP—WITHIN TEN MILES OF LONDON—In a pleasant and rapidly growing residential suburb, the half share is offered owing to the retirement of the Junior Partner, in a well established and increasing Practice having good future prospects Gross cash receipts for last 12 months about £1,600 Panel of 1,600 Appts worth £140, not included in receipts. Very nice house, with 2 reception, 5 bedrooms and dressing room, 2 maids rooms and usual offices Large garden with tennis lawn Price for freehold £1,700 Premium 2 years purchase

2 LONDON NORTH WEST — OUTLYING RESIDENTIAL SUBURB—PRACTICE is situated in a very pleasant and rapidly developing district where a big Estate is being opened up of good class residents Established 6 years and held by Vendor (who is only leaving to join a friend in Partnership) for 2½ years Gross cash receipts for immediate past 12 months nearly £750 Selected panel of 100 Fees 3/6 to 7/6 Midwifery 7 to 10 guineas Detached corner house, with 2 reception, 4 bedrooms etc Garden Garage Price, freehold, £2,150 £1 500 on mortgage Premium £1 100 Sport of all kinds, and good schools Hospital and Vendor on staff

3 DEATH VACANCY—LONDON SOUTH EAST—Old established chiefly panel Practice held by late Incumbent for past 12 years Gross cash receipts average nearly £500 p a Panel of 740 Low expenses Surgery premises can be rented at £160 p a

4 OUTLYING NORTHERN SUBURB—Very old established middle and working class PRACTICE in pleasant and increasing residential district. Cash receipts average £1 342 including panel of 1 356 Very attractive house with 2 reception 6 bedrooms etc., and large garden Garage Price for freehold £2,500, or can be rented on lease Premium 1½ years purchase

5 MIDDLESEX—In a very pleasant new and rapidly developing district within 15 miles of London, PRACTICE established by Vendor about 18 months ago is for disposal owing to ill health Cash receipts for past 12 months £360 including panel 120 Good house with large garden garage, etc Price freehold £1,728 (practically all on mortgage) Premium one years purchase Exceptionally good prospects

6 CHELSEA AREA—LOCK UP SURGERY—Old established and averaging about £450 p a including panel of 140 Hours 9 30 to 12 and 5 to 7 p m Consultations 2/6 to 10/6 Very little visiting at 5/ upwards Rent of two rooms £84 p a Total expenses just over £100 p a Premium £650 Ill health reason for sale

7 PARTNERSHIP—In a well populated pleasant South Eastern suburb within ten miles of London the half share of an old established mixed class Practice is for disposal owing to the retirement of the junior partner Held by the remaining partner 30 years Cash receipts average £2 765 p a including panel of 1 800 and appts worth £150 Very little midwifery Pleasant semi detached corner house with ample accommodation garden Price leasehold (over 900 years, at ground rent of £7 p a) £1,050 Premium 2 years purchase Scottish graduate preferred

8 MANCHESTER—Old established middle and working class PRACTICE averaging about £1 300 p a, including panel of nearly 1 800 Visits from 3/6 Moderate expenses Suitable house, with 3 bed rooms and 3 good sized attics, etc Price for freehold £1 150 Premium 1½ years purchase

9 NORTH EAST COAST—FAVOURITE TOWN—Old established good mixed general Practice offering considerable scope for increase Gross cash receipts for the past twelve months approximately £1 800 Selected panel of 100 Fees 5/ to 7/6 Very little midwifery Well situated house with 3 reception, 5 to 6 bedrooms etc and separate professional rooms Electric light Garage Price £2 500, large part on mortgage Good opportunity for Eye work, and Ear Nose and Throat work if desired Sport of all kinds and excellent schools Premium £2 800

10 MANCHESTER—Old established middle and working class PRACTICE producing for the last twelve months about £650, including panel of 790 Fees from 3/6 Convenient house, with 2 reception 4 to 5 bedrooms bathroom etc Rent on lease £60 Premium £950, to include furniture

11 LONDON NORTH WEST — Middle-class PRACTICE in new and developing district producing last year £400 and this year at the rate of about £600 Panel of 230 Fees 2/6 and 3/6 visits from 5/ Six-roomed house with bathroom electric light Garage Garden Price for freehold £1 000 £850 on mortgage Prem £650

12 LONDON SOUTH WEST—Old established middle and working class PRACTICE producing about £1 100 p a including panel of about 1 150 Visits 3/6 to 5/ Suitable corner house with 2 reception, 4 bedrooms bathroom and separate professional accommodation Can be rented on lease Premium £1 750 Easily worked and offering very good scope for increase

13 CENTRAL LONDON—Middle and better class PRACTICE averaging for the last two years about £500 p a including small panel of 180 Fees 3/6 to 21/ Professional accommodation can be rented at £200 p a Premium £300 to include furniture drugs, instruments, etc

14 NORTH LONDON—Middle and working class PRACTICE in well populated residential district, averaging about £1 300 p a Panel of about 1 300 Appts consist of Medical Officer to two Missions and these will only transfer to a suitable successor of evangelical principles House can be rented also Branch Surgery

15 SOUTH WEST OF ENGLAND—In a thriving and pleasant market town with beautiful surrounding country, a well established increasing PRACTICE worth last year over £1,100 including panel producing £286 and appts £200 Visits 3/6 to 21/ Midwifery practically refused Good house in excellent position with accommodation small garden and garage Price, freehold £2,100 or would be let on lease at £127 p a Premium £2 000 or near offer

16 SOUTH EAST LONDON—Good middle and working-class PRACTICE producing last twelve months nearly £950 Panel of 936 Surgery house with 2 reception 4 to 5 bedrooms, etc Rent on lease £ 0 p a Premium to include drugs etc and surgery fittings and furniture £1 450

17 HOME COUNTIES—ASSISTANTSHIP with view to Partnership offered in a better class Practice in residential town Ingoing partner must have experience of general Practice and be able to undertake major surgery and preferably hold a Fellowship.

18 NORTH WALES—Old established middle and working-class PRACTICE averaging for the last three years over £1 700, including panel of about 1 300 Fees from 2/6 Visits from 3/6 with occasional extra Suitable house with good professional accommodation Electric light. Garage for two cars. Small garden Rent on lease £100 p a Premium £2 500, £1,700 down balance by instalments Good sport etc A knowledge of Welsh is not necessary

19 RIVIERA—Old established PRACTICE the receipts from which have averaged over £1 600 p a, but have decreased recently owing to Vendor's ill health Very good prospects of extension Fees from £1 1s Very easy work Suitable flat can be rented at £160 p a Premium £4 000

20 MIDLANDS—Old established middle and better class PRACTICE in clean and attractive manufacturing city Cash receipts average over £1 600 p a including appt. worth £165 (transferable) and panel of 1 220 Visits 5/ to 2 gns. Midwifery discouraged fee 5 to 15 gns Exceptionally good house, in its own grounds with ample accommodation fitted with every labour saving device and economically run Situated in the best residential part. A cottage in the grounds is let at £37 a year Price freehold £5 000 (£3 500 on mortgage) Premium £3 500 Scope for active man

21 WESTERN SUBURB—Well-established PRACTICE producing £600 p a including panel of nearly 600 Suitable house available. Premium 1½ years purchase

22 LANCS—Well established mixed class PRACTICE producing for the last 12 months £725 Panel of 1 055 Fees from 3/6 House contains 3 reception 5 bedrooms etc Rent on lease £85 p a. Premium 1½ years purchase

23 LANCS — LARGE TOWN — Old-established upper and middle-class PRACTICE situated in purely residential district and averaging about £1 700 p a including appt of £130, and panel of 700. Visits 5/ upwards Very little midwifery at 5 to 10 guineas. Expenses low Excellent and well built house ideally situated, having ample accommodation (surgery waiting room and dispensary 3 reception 5 bedrooms, etc.) Rent on lease £120 Premium £2,000. Good educational facilities

24 EGYPT—Well established PRACTICE, producing about £960 p a and offering good scope for increase Fees 10/6 to 2 guineas. Excellent accommodation can be rented at £16 10s. monthly Premium to include all furniture drugs drug bottles instruments, etc., £2 000

FOREIGN APPOINTMENT—SOUTH AMERICA—MEDICAL OFFICER required for Company Must be well up in Surgery and have some knowledge of Tropical Diseases and if possible Sanitary matters Three years agreement Salary £750, rising annually to £1 000. First class passage out and home Aged 30 to 35 Married or single

ASSISTANTS REQUIRED—(1) BRISTOL. Outdoor, £350 p a all found Scottish Graduate preferred and must be single. (2) LEICESTER Outdoor £350 p a, with rooms and attendance View to Partnership in 12 months. Single preferred (3) LONDON Indoor £300 p a (4) LINCS Outdoor Assistantship Married or single General country Practice Salary £400 p a (5) YORKS Outdoor English or Scottish single, and not over 30 Salary £300 p a all found. (6) WALES Outdoor, £400 p a (7) LONDON E. £300 p a

WANTED TO PURCHASE.

1 OUTLYING SUBURB—Middle and working class PRACTICE bringing in about £1 500 p a. with panel of 1 000 upwards. Nice house and garden Capital available

2 BUCKS BERKS or near locality—Better class PRACTICE averaging about £1 500 p a with good scope Panel not necessary Ample capital for purchase of house and Practice

3 SOUTH OF ENGLAND—Good town, with educational facilities Income £1 200 to £1,800, with substantial panel Fair sized house with garden

4 SOUTH COAST TOWN, or near locality—PRACTICE averaging about £1 500 p a, with panel of 1 000 or thereabouts Small house preferably on rental Capital available

5 LONDON OR SUBURBS—PRACTICE producing £1 400 to £1 600 p a with panel of 1 500 Good house with garden

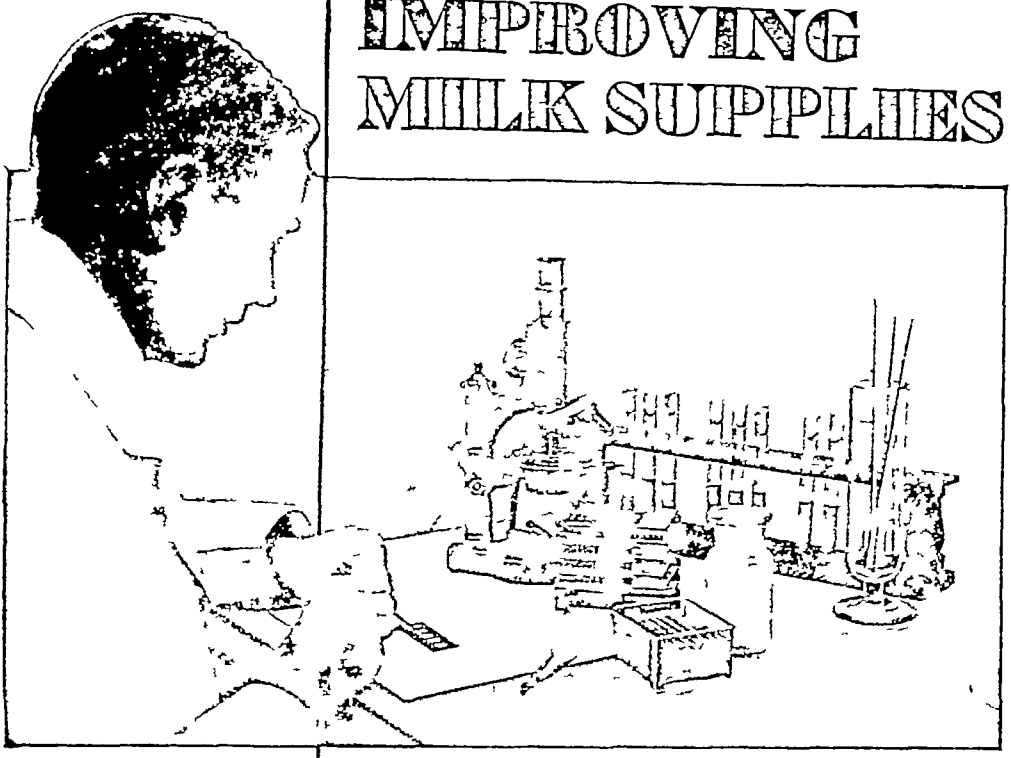
6 COUNTRY PRACTICE within 60 to 80 miles of London Income from £1 000 upwards

7 PRACTICE or PARTNERSHIP, suitable for LADY DOCTOR within easy reach of London Income approximately £800 Capital available

The Agency has made arrangements for special facilities, on very favourable terms, to be afforded to approved purchasers for the advance of part of the premium for any suitable practice or partnership Full details on application

Printed and published by the British Medical Association at their Office Tavistock Square in the Parish of St Pancras in the County of London.

IMPROVING MILK SUPPLIES



Reference has been made in previous advertisements to the institution at our Factories of a Bonus Scheme for farmers in order that only the highest quality milk shall be used in the preparation of our Foods

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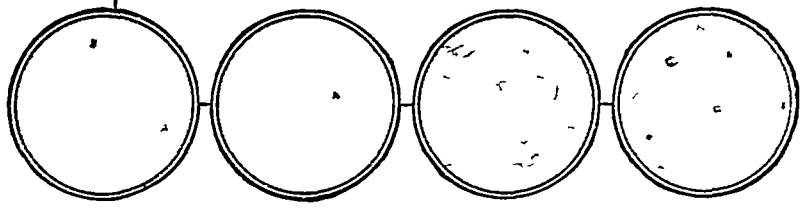

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progress of disorganization may be gauged by repeated x ray examinations

Leucocyte counts appear to be helpful as evidence of the presence of an inflammatory process but they usually fail to indicate pus formation according to accepted standards Lumbar puncture is of the same assistance as in other middle ear infections

The following cases illustrate the four clinical types

Case I Latent Type

On October 28th 1932 the patient a man aged 58 said that fourteen days previously he had had a cold in the head and running nose also slight intermittent pain in the right ear for five days He complained of deafness in the right ear Tinnitus and headache were limited to the right side On admission there was nasal discharge The right drum was pale pink thickened and slightly bulging at the posterior superior quadrant whispering heard at contact Weber to the right The right tube was catheterized and a week later as no improvement followed myringotomy was performed preceded by middle ear aspiration for bacteriological purposes *Pneumococcus mucosus* in pure culture was obtained from the aspirated pus After ten days of scanty mucoid discharge the perforation healed and the drum appeared practically as it did before myringotomy A nasal swab taken on November 15th 1932 gave a growth of *Pneumococcus mucosus* X ray examination after approximately twenty-eight days of illness revealed both mastoids to be well pneumatized The right showed a diffuse clouding less more pronounced at the upper posterior part with distinct loss of definition of intercellular trabeculae Further audiograms ten days later disclosed a slight but definite advance in the destructive process This finding combined with lack of improvement in hearing and tinnitus even in the absence of definite clinical signs of mastoiditis indicated mastoid drainage A leucocyte count did not suggest pus At operation a typical early mucosus mastoiditis was found scattered groups of cells filled with granulations and mucopus and intervening air containing cells with an oedematous mucosal lining The affected cells were situated mostly at the anterior superior system of cells

Case II Subacute Progressive Type

On August 21st 1932 the patient a man aged 38 had had left otalgia lasting twelve hours caused by diving The drum was pink thickened and bulging Myringotomy was performed and he was kept in hospital for eight days At the out patient department two days after his discharge he complained of slight earache there was tinnitus deafness and headache on the affected side accompanied by slight mucoid discharge from a perforation at the posterior superior quadrant Whispering heard at the contact Weber to the affected side His attendance was intermittent depending on the exacerbation of his illness The symptoms gradually increased however until the fiftieth day after onset of the illness when definite signs of mastoiditis appeared The aural discharge which became muco-purulent yielded a few colonies of *Pneumococcus mucosus* amidst a heavy secondary staphylococcal infection Slight pain was present throughout which was worse on some days than others At operation on October 11th a very cellular mastoid with granulations and muco-pus filling the cells was found An abscess in the deep muscles of the neck developed a week later and was opened The pus gave *Pneumococcus mucosus* in pure culture Four weeks later he left hospital with his condition clearing up whispering heard at six feet Except for an occasional rise to 100° the temperature remained between 98·4° and 99° This is a good example of a case unrecognized as to the bacteriological aetiology until late in the course of the disease

Case III Acute Type

A child aged 1½ was brought to the hospital on March 4th 1932 with a swelling behind the left ear which had been noticed by the mother for twenty four hours A left post auricular abscess relatively painless and only slightly tender was found The drum was greyish pink and thickened details were obscured but there was no perforation The temperature was 99° At operation a large subperiosteal collection of pus with a small erosion of the cortex leading to a mastoid cavity containing soft granulation tissue and muco-pus was found *Pneumococcus mucosus* in pure culture was recovered from the pus Five and a half weeks later the child left hospital with the wound almost closed He was brought back in five days with a temperature of 104° and a cellulitis of the scalp but owing to lack of accommodation he was sent to another hospital where death occurred three weeks afterwards The important feature of this case is the presence of a mastoiditis combined with a large subperiosteal abscess of acute onset in the presence of a drum which failed to show changes usually considered to be indicative of an acute mastoiditis

Case IV Benign Type

On October 31st 1931 the patient a girl aged 6 complained of sickness and abdominal pain there were no physical signs temperature was 100°–102° Five days later the temperature returned to normal and the child complained of slight pain in both ears The drums were found to be pink and much thickened by infiltration whispering only heard at contact Aspiration of the middle ears was performed followed by myringotomy and both aspirates gave a pure growth of *Pneumococcus mucosus* A sero-sanguineous discharge developed but the perforations soon closed and ten days after myringotomy both drums regained almost a normal appearance and whispering was heard at a distance of ten feet An *x* ray photograph showed that cell formation was present in both mastoids without abnormal clouding

ANATOMY AND HISTOPATHOLOGY

The course and the termination of any variety of acute otitis media depends not only on the virulence of the organism and the resistance of the individual but also on the anatomical structure of the mastoid process Extension of an acute inflammatory process from the tympanic cavity rarely occurs in a sclerotic acellular mastoid process

Hesse recognized three somewhat artificial anatomical types of pneumatized mastoids (*a*) the normal in which the cells gradually increase in size towards the periphery and contain a normal mucosa (*b*) where the cell system is less extensive and is composed of large and small cells irregularly mixed the mucosa being moderately hyperplastic and (*c*) where the cells are small throughout and the mucosa shows a considerable grade of hyperplasia The following percentages of these types were found in a series of 171 examples of acute mastoiditis *x* rayed before mastoidectomy A 14 per cent B 33·9 per cent C 52·1 per cent Type C is most often attacked by an acute inflammatory process The hyperplastic mucosa facilitates bacterial invasion and the small size of cells favours retention It is attacked by streptococcus and *Pneumococcus mucosus* in almost the same proportion whereas cell formation A is invaded nearly three times as frequently by *Pneumococcus mucosus* as by streptococci

Pneumococcus mucosus induces a subacute proliferative inflammation with an early and pronounced infiltration of mucous membranes accompanied by moderate hyperaemia only In the early stages exudates are sero-sanguineous or mainly mucoid in character Resolution is slow and there is a tendency towards organization and fibrosis Cavities are filled with granulation tissue Pus formation is delayed Applying these details to the middle ear and mastoid process the drum is thickened owing to infiltration and pink only through the mildness of vascular engorgement The embedding of the ossicles in the granulation filled tympanic cavity produces a high grade of deafness which subsides very slowly after cessation of the middle ear inflammation The cells of the mastoid process are irregularly filled with granulation tissue while their mucosal linings show marked cell infiltration As a general rule in the early stages of mastoid infection the peripheral cells are found to be affected first the central

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cells still containing air Later, intercellular septa are destroyed by rarefying osteitis, and eventually complete disorganization of the whole cell system is brought about In a well-pneumatized mastoid process the cortex is thin, at any time it may be eroded, giving rise in the one direction to intracranial, in the other to extramastoid, complications The Eustachian tube shows slight inflammatory changes in its osseous part Its cartilaginous portion is free, with a patent lumen

Prognosis

Figures dealing with the incidence of complications and the mortality rate indicate a very unfavourable prognosis as to spontaneous recovery from mucosus otitis Owing to the mild preliminary symptoms there is a tendency to delay surgical measures until considerable destruction of the mastoid cells has occurred with or without other complications The average pre operative history extends to eight weeks, as compared with three to four weeks in streptococcal infections, but early diagnosis and early and thorough surgical measures should forestall further complications and provide better results In any case, if mastoiditis is present a guarded prognosis is inevitable, since the smallest focus of disease that is overlooked may, even after long periods of quiescence, initiate a cycle similar in effect to that of the original otitis All available records suggest that recovery from deafness and tinnitus is a more stubborn affair than in otitis due to streptococcal infection, because of the tendency towards organization and fibrosis

Treatment

The nature of the treatment depends on the degree to which the disease has progressed If seen at an early stage, and the condition is confirmed by bacteriological findings, an immediate myringotomy is indicated provided that a spontaneous perforation has not yet occurred Thereafter a careful watch on the patient must be maintained and in order to keep the case under regular observation the nature of the disease should be explained to the patient and to the practitioner This precaution is necessary because, owing to the absence of pain and malaise, there may be some difficulty in following up the case In the latent stage, if in five or six weeks time the deafness, tinnitus and infiltration of the drum have not improved mastoidectomy should be carried out even in the absence of definite signs of mastoiditis This intervention is justified because 80 per cent of cases develop mastoiditis, and delay is fraught with the risk of intracranial complications It should be emphasized that radiography is a valuable aid to diagnosis, if really good pictures are obtained the operative responsibility is considerably lessened Later still, when signs of mastoiditis are definitely present such as tenderness and sagging of the postero superior deep meatal wall mastoidectomy should be performed without delay, particular care being exercised in the removal of all the diseased groups of cells

Summary

1 Available statistics indicate that otitis media due to *Pneumococcus mucosus* is accompanied by a higher mortality rate and greater incidence of complications than other middle ear infections

2 This is due in part to a mild initial clinical course which is often of such slight embarrassment to the patient that he may not seek advice and in part to the fact that a severe destruction of the mastoid process may occur without clinical signs of mastoiditis

3 An early bacteriological diagnosis by the method described is simple in achievement and essential for control

4 Early operation with a thorough evacuation of the diseased mastoid cells is imperative

In conclusion I must express my appreciation to Mr [illegible] and Mr Hamblen Thomas for their kindness in allowing me to use the material in their clinics to Mr Vlasto also for his valuable help and criticism and to Dr Post for the radiographic examinations

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PSEUDO-CYST OF THE PANCREAS

BY

D J HARRIES D Sc, M D, F R C S

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In 1892 Mr Jordan Lloyd published a paper on the pathology of pseudo cysts of the pancreas, in which he showed that these cysts are really collections of fluid in the small sac of the peritoneum, and therefore have no proper cyst wall apart from the peritoneum lining this sac A history of injury or of an attack of acute pancreatitis is generally given in these cases In the case described below such history could be obtained, in spite of the fact that there was free communication between the sac and the pancreatic duct or one of its branches When drained these cysts generally undergo complete obliteration in a few months but sometimes the sinus persists for years In such cases the operation described below should be given a trial, especially as the difficulties are few, and if successful, it will relieve the patient of the discomfort arising out of the condition of the skin round the sinus

A man, aged 57 was admitted into the Cardiff Royal Infirmary on June 22nd 1932, complaining of loss of appetite abdominal discomfort after food and loss of weight He had lost about 30 lb since the commencement of his illness eighteen months previously There was no history of vomiting

On examination a large swelling could be seen and felt occupying the upper abdomen The patient knew of the tumour and he had a strong suspicion that it was one for of cancer The swelling was tense but it showed definite fluctuation

On June 25th the abdomen was opened through a right paramedian incision, and on investigation the cyst was found to be in the lesser sac of the peritoneum with the [illegible] running across its anterior surface well below the [illegible] The cyst was opened through a small incision in the gastro hepatic omentum There was no definite cyst wall separable from the peritoneum lining the lesser sac A drainage tube was stitched in the cyst and brought out through the lower end of the incision A few sutures were inserted to fix the tube anchoring the small omentum to the parietal peritoneum The drainage tube was removed in about a fortnight but the sinus continued discharging thin clear fluid containing pancreatic ferments, which irritated the surrounding skin Examination of this fluid on June 25th and July 12 showed a diastatic index of 4 000 and 6 600 units

Attempts were made to obliterate the cyst by injecting sclerosing fluid down the sinus but the final result was not

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interfere with free drainage from the cyst which started refilling until the sinus had been dilated

The patient was discharged on August 31st as he was getting tired of being in hospital He attended regularly for dressing until November 2nd when he was readmitted The discharge had not diminished and the skin round the sinus was still excoriated

On November 19th it was decided to attempt an anastomosis between the sinus and the duodenum or stomach To avoid injuring the sinus wall a rubber catheter was inserted into the sinus before making the abdominal incision The abdomen was opened through the original incision below the sinus and the upper abdomen carefully examined The small omentum was found to be adherent to the parietal peritoneum over an area two inches in diameter with the sinus at its centre The abdominal incision was now extended upwards so as to surround the sinus and not disturb the adhesions between the omentum and parietal peritoneum (Fig 1)

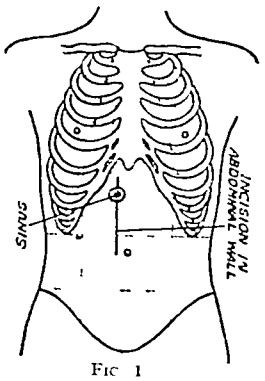

FIG 1

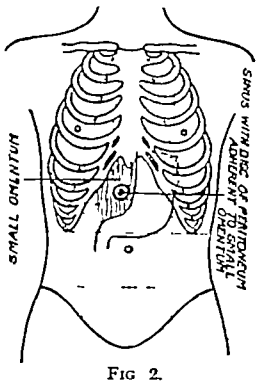

FIG 2.

The original intention was to preserve the portion of the sinus in the abdominal wall and use it for the anastomosis in much the same way as the ureter is used in the implantation operation But it was seen that an ordinary anastomosis could be carried out between the pyloric antrum and the sinus if the latter were cut off at the point where it came through the circle of parietal peritoneum adherent to the gastro-hepatic omentum The actual anastomosis presented no difficulties as the mouth of the sinus was now only half an inch away from the stomach Two layers of sutures were used in exactly the same way as in a gastro-jejunostomy (Fig 2)

In spite of the condition of the skin of the abdomen at the time of operation everything healed by first intention On December 17th the patient left hospital with no leakage of fluid and with a healthy abdominal wall He has been seen twice since and is enjoying perfect health

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

SPONTANEOUS ACUTE MYXOEDEMA

The case of spontaneous acute myxoedema reported in the *Journal* of December 24th 1932 by Drs Watney and Douthwaite reminded me so vividly of one I encountered in October 1928 that I looked up my notes

The patient a lady of 55 in perfect health went for a ten days holiday to Scotland at the end of August 1928 She came home feeling tired and became more and more so during September and the beginning of October About October 15th she felt very ill had no energy was blown out short of breath stiff and had lost her power of hand grip so that things were constantly falling from her hands

I saw her on October 17th 1928 In addition to the above symptoms she complained of pain behind the middle of the sternum weakness and a feeling of having quickly aged prematurely She had noticed her face was swollen Her face was puffy and pale her hair was brittle and was getting thin her skin dry her voice toneless and creaky She had large supraclavicular masses of fatty tissue her hands were fat and so was the outline of her lower jaw She had become thick and coarse looking whereas she had usually been trim and dainty All this had developed in six weeks There was nothing remarkable in the family history Her personal history included an attack of scarlet fever as a girl and a menorrhagia at the menopause at 42 years of age Her blood pressure was 140/110 There was no evidence of other visceral or nervous diseases

She was given 1 grain of thyroid extract three times a day (equal to 15 grains fresh gland daily) and improved greatly By some misunderstanding she failed to take the gland for one week and retrogressed much Thereafter the treatment was continued and she steadily improved the dose being gradually reduced until in a few months she was taking 1 grain (dry) daily This she has continued to take and has returned to her usual health and activity

Llandilo Carm J H LLOYD M D

EMBOLISM OF THE ABDOMINAL AORTA ASSOCIATED WITH AURICULAR FIBRILLATION

Mr A H Winchester's account in the *British Medical Journal* of February 18th of a case of embolism of the larger arteries associated with auricular fibrillation prompts me to record a similar case which I encountered a year ago in which the abdominal aorta appeared to be the site of the occlusion The following is a digest of the notes I took at the time

The patient was a healthy stoutish woman of 73 who had received no medical attention whatever for upwards of a quarter of a century No history of previous ill health could be obtained On February 22nd 1932 during an influenza epidemic she sent for me because she thought she had a cold I found her sitting in a chair in the kitchen a little breathless and cyanosed and slightly distressed She had no fever but a very fast and very irregular pulse and on examination I diagnosed her condition as auricular fibrillation I ordered her to bed at once and prescribed 15 minims of tincture of digitalis three times daily All went well and within a day or two the heart slowed down and resumed its normal rhythm She continued to take the digitalis until February 28th when as everything was progressing favourably I stopped it

I saw her at noon on March 3rd and she appeared quite herself again protesting loudly at being kept in bed As the action of the heart was then satisfactory I allowed her to get up Three-quarters of an hour after I had left the house I received an urgent message of recall The story I was told on arrival was that she had dressed herself and walked about the bedroom and while in the act of spreading the counterpane had been seized with agonizing pain in both legs All power left them and she collapsed helpless by the side of the bed The first thing which attracted my attention on entering the bedroom was the appearance of shock which the patient presented An hour previously I had left her bright and smiling now her face was grey and drawn the expression anxious and beads of sweat stood on her brow The breathing was shallow and the pulse feeble and rapid She moaned continually for ease from the pain which was in the lower abdomen and back and down both legs She could not indicate any one place as worse than another the pain being equally severe over all these parts She passed urine unknowingly

On examination I noticed that both legs were much cooler than the rest of the body The skin was white and shining and had none of the feeling of resilience of healthy flesh She could move the left leg a little the right not at all In spite of ten minutes diligent search I could not detect a flicker of a pulsation in either of the femoral arteries Unable to see that I could do anything useful I swathed the legs in warm coverings—placing hot water bottles about them—gave morphine liberally and left her when she was more comfortable Returning eight hours later I found I had reckoned without the insensibility of the legs and the enthusiasm of the

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neighbours, who had carried out my instructions about warmth so diligently that when I removed the wrappings of the legs I found a severe and extensive burn from the hot water bottles on the right shin And what was curious was the complete absence of any vital reaction, there was no blistering or redness, only an ivory surface from which the skin peeled at a touch of the finger, showing the underlying flesh dry and ham like in which the blood vessels could be seen collapsed and empty Not a drop of fluid exuded from the bare surface

From that time onwards I had only to fill the role of spectator while the lower half of my patient died and the upper half remained alive All warming measures having been hastily cast aside, the legs speedily lost what little heat remained in them, and grew cold and corpse like Their upper surfaces (the patient lying on her back) were white and shining, and the under of a dusky, mottled hue, very like post mortem lividity Twelve hours later this mottling had spread up the trunk as far as midway between the umbilicus and the pubis and all round the body to that level Though freely dosed with morphine, she complained bitterly of pain in the lower abdomen which was very tender to the touch and was commencing to swell As the hours passed this swelling increased The breathing became shallow and thoracic in type and the classical signs of general peritonitis began to dominate the picture All the appearances remained the same (except that perhaps the dusky colouring grew a little more pronounced) until death ensued forty eight hours after the onset of symptoms the immediate cause of death so far as one could tell, being general peritonitis

Unfortunately no post-mortem examination was obtained, and this precluded a certain diagnosis of the condition, though it is difficult to think of any disease process, other than embolism, which would harmonize with the clinical signs I am assuming that the same clot which blocked the aorta at its bifurcation also blocked the inferior mesenteric artery, cutting off the blood supply to the pelvic colon and giving rise to the terminal peritonitis But it is a marvel to me where a clot of this size could have come from

Upwell Wisbech A J HAWES, M B, Ch B

PAROXYSMAL TACHYCARDIA AND PREGNANCY

In view of the cases of paroxysmal tachycardia as a complication of pregnancy reported in the *British Medical Journal* of February 11th (pp 224 and 225), the following case occurring in labour may be of interest

A primipara aged 27 years was first seen on May 1st, 1932 Labour had been induced (stomach tube) on April 28th Pains were said to have been good on April 29th and 30th and it was not until the morning of May 1st that there was any cause for anxiety Examination about noon showed a small child head well down, perineum bulging with the pains half crown dilatation membranes ruptured The pulse was 140 regular and of good volume General condition excellent

The patient gave a history of several similar attacks of palpitation during the previous twelve months A provisional diagnosis of paroxysmal tachycardia was made and an injection was given of morphin sulph grain 1/4 At 6 p m the patient presented a typical picture of acute heart failure The pulse was 160 and barely countable at the wrist Dyspnoea was severe and moist crepitations could be heard over the greater part of both lungs There had been no further dilatation of the os

The hypodermic injection of morphine was repeated followed by 1/100 grain strophanthin intravenously and under spinal (stovaine) anaesthesia with gas and oxygen the os was dilated manually Delivery of a stillborn child was completed by forceps extraction The pulse was then 204 very irregular and countable only by auscultation Convalescence except for a few days pyrexia was uneventful

D A MITCHELL M D Lond, F R C S Ed

Louth P W MCKEAG M D

Reports of Societies

DIAPHRAGMATIC HERNIA

At a meeting of the Section of Surgery of the Royal Society of Medicine, held on April 5th, with Mr HUGH LETT in the chair, a discussion on non traumatic diaphragmatic hernia was opened by Mr T P DUNHILL

This condition, he said, was of such gravity that every case ought to be reported A number of cases had been found in children, often at post mortem examination but a good many were now being discovered during life Few cases in adults were reported in the literature of the United Kingdom In London Mr Basil Hume had recently discussed the aetiology, and Dr Hurst Mr R P Rowlands, Dr Geoffrey Marshall, and others the clinical condition, Dr Woodburn Morison had studied the bibliography and radiological appearances Dr Leonard Findlay and Dr Brown Kelly had written on shortened oesophagus in children In the United States Hedblom in 1925 had reported nineteen cases in adults, of which ten were non-traumatic, and Harrington had reported twenty-three non-traumatic cases out of a series of thirty These numbers included cases of shortened oesophagus with thoracic stomach It was unlikely that the condition was proportionately more frequent in America than in England Since more cases were reported there the search was possibly more thorough in their large clinics than in ours The extent of the defect at birth was such that the mortality was likely to remain high among cases developing symptoms in infancy Those who survived often failed to develop symptoms for many years Two conditions came under consideration true diaphragmatic hernia, and shortened oesophagus with thoracic stomach He had seen and operated on five cases of non traumatic diaphragmatic hernia in adults, and had seen seven cases of short oesophagus True hernia might occur through the retro xiphoid area, the left dome of the diaphragm or the oesophageal hiatus He described the five cases of diaphragmatic hernia upon which he had operated

Case 1—The patient had suffered for years from attacks of indigestion during which he lost weight the symptoms suggested gastric ulcer Radiography showed the stomach the termination of the ileum the caecum and the appendix to be in the thorax in front of the pericardium An abdominal incision was made and these viscera were gently withdrawn through the hernial orifice The sternum was split across and the sac dissected down the orifice in the diaphragm was closed and sutures of fascia lata were used to reinforce the posterior part Six months later the patient was well and at work Ten months later some of his symptoms recurred and he was found to have a gastric ulcer, which healed under medical treatment

Case 2—A woman of 60 had had irregular attacks of pain and vomiting for years latterly associated with haematemesis Radiography showed the stomach to be high in the thorax and inverted The results of operation were good

Case 3—The patient had had attacks of indigestion associated with a bursting feeling At operation the stomach and transverse colon were found to be in the thoracic cavity the final result was satisfactory

Case 4—The patient had suffered from flatulent indigestion and a diagnosis of gall stones had been made by a competent authority gall stones were found at operation and dealt with Later she developed pain again and radiography showed a diaphragmatic hernia She recovered well from operation for this condition but died during convalescence apparently from pulmonary embolism

Case 5—A woman of 76, who suffered from asthma attacks associated with vomiting was found to have a diaphragmatic hernia, operation was successful At 81 she was well and enjoying life

Radiograms of cases of shortened oesophagus showed that the condition probably tended to increase in gravity year by year, until a considerable portion of the stomach was ultimately found in the thorax Symptoms seemed to be of two main types In some cases constriction took place at the cardia, comparable to cardiospasm occurring in the normally situated cardia In others symptoms were due to angulation of the cardiac end of the stomach round the oesophageal hiatus in the diaphragm Stenosis at the termination of a hernial

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oesophagus had been mistaken for carcinoma of the oesophagus Diagnosis of shortened oesophagus could be made on the x ray appearance When the patient was made to swallow barium in the Trendelenburg position the dilated cardiac end of the stomach and the constriction at the lower end of the oesophagus could be seen More over if oesophagoscopy was performed and a snipping of mucous membrane taken from below the constriction it was found to have the characteristics of gastric not oesophageal mucous membrane He had operated on only one case of this kind and had been unsuccessful owing to a failure in technique but when symptoms began to be troublesome he thought there was greater danger in leaving the patient alone than in operating

Mr W SALISBURY described a case of diaphragmatic hernia in which radiography had shown a trilocular stomach lying in an S shaped bend through the aperture in the diaphragm At operation the upper part of the small intestine the transverse colon great omentum spleen and tail of the pancreas were all found to be lying above the diaphragm The results of operation were good

Dr LEONARD FINDLAY thought great caution must be exercised in formulating a diagnosis of congenitally short oesophagus In most recorded cases the diagnosis had been made on clinical and radiological evidence but identical radiological appearances could be obtained by giving a normal child a pultaceous bolus in the recumbent position a dilatation was then observed in what appeared to be the lower end of the oesophagus Moreover if a portion of mucous membrane was removed from this dilated region it was found to be of the gastric type though situated well above the diaphragm In his own series of cases there had always been evidence of obstruction at the level of the seventh dorsal vertebra and if this obstruction was at the cardia it was difficult to understand why the shortening of the oesophagus should be so uniform He thought a degree of hiatal hernia of the stomach was a physiological condition

Operation for Hypospadias

Mr ARTHUR EDMUNDS gave a cinematograph demonstration of his operation for hypospadias It was performed in three stages

Stage 1 —A buttonhole was made in the redundant prepuce to prepare it for transplantation the main vessels were cut and a collateral circulation established through many small ones

Stage 2 —The penis was straightened by dissecting up the open urethra and allowing it to slip towards the scrotum and by division of any tight bands of fibrous tissue The prepuce was transplanted to the under surface of the penis as an irregular sliding flap

Stage 3 —The straightened penis had now been provided with extra skin on either side of the middle line derived from the prepuce this skin was sufficient to form a lining and covering for a new urethra without tension

Mr C A R NITCH asked whether Mr Edmunds found there was a tendency to fistula formation following operation Professor GREY TURNER considered Mr Edmunds's operation to be the best devised for the treatment of this condition In replying Mr EDMUNDS said that fistulas were apt to occur but they could always be closed in time

OESTRIN IN SECONDARY AMENORRHOEA

At a meeting of the Edinburgh Obstetrical Society held on March 8th with the president Dr JAMES YOUNG in the chair Dr W F T HAULTAIN read a paper on the clinical use of oestrin in the treatment of functional secondary amenorrhoea

The preparation used was progynon and the sixteen patients treated had secondary amenorrhoea for which no definite cause could be found Dr Haultain remarked that the majority of these women were nulliparae and when married were usually sterile though in one of his cases a pregnancy had resulted after treatment After giving a short history of each case Dr Haultain summed up his results as follows eleven patients were cured (ordinary menstrual habit returned after discontinuance of the treatment) in three cases bleeding had occurred but the menstrual habit had not been regained on discontinuance of the treatment in two cases no effect had been produced whatsoever The speaker said that latterly he had been giving doses of 1 000 to 10 000 mouse units of progynon ester to patients who had not responded to the ordinary dosage orally or by injection and that in two such cases he had already got a satisfactory result

Bilateral Cortical Necrosis of the Kidneys

Dr R J KELLAR and Dr W M ARNOTT recorded three cases of bilateral cortical necrosis of the kidneys during pregnancy

CASE HISTORIES

The first case was that of a woman aged 26 1 para who was five months pregnant She was admitted with a history of severe hyperemesis since the second month of pregnancy and of anuria of a fortnight's duration Examination on admission revealed slight oedema of the lower limbs no raised blood pressure and no urine in the bladder Administration of abundant fluids failed to stimulate urinary secretion Abdominal hysterotomy was performed the foetus and placenta being apparently healthy The patient survived for sixteen days after operation For the first week she appeared to be making progress although the blood urea creatinine and phosphorus were mounting and the alkali reserve dropping During this period there was secretion of a very small quantity of urine During the second week peritonitis and bronchopneumonia supervened urinary secretion however increased so that on the day prior to death 16 oz were passed During the last three days the blood urea and creatinine showed some diminution Post mortem revealed numerous scattered areas of cortical necrosis in the kidneys Microscopically these areas showed hyaline necrosis with well established calcification but no congestion Remaining cortical tissue was infiltrated with pyelonephritis

The second case was that of a woman aged 30 2 para who was admitted with a history of vaginal bleeding of a few hours duration The blood pressure was 185 135 Shortly after admission there occurred a series of eclamptic fits The patient died undelivered during the fifteenth fit At post mortem it was found that the whole cortex of both kidneys was red swollen and congested Microscopical examination indicated the necrotic cortex to be identical with the initial red stage of infarction Subcapsular haemorrhages were present in the liver but no areas of focal necrosis were seen

The third case was that of a woman aged 29 2 para who was in the sixth month of pregnancy She was admitted with the features of a severe toxaemia gross oedema impaired vision epigastric pain and raised blood pressure During the night of admission there were severe abdominal pain and vaginal bleeding Accidental haemorrhage was suspected and the following day an abdominal hysterotomy was performed The uterus was typical of concealed accidental haemorrhage The patient survived for a week after operation and during this time only 4 oz of urine was secreted in spite of the administration of abundant fluids On the seventh day after the hysterotomy decapsulation of the left kidney was carried out the subcapsular appearances being suggestive of cortical necrosis It was noted that the capsule did not exert any pressure on the renal parenchyma The patient died ten hours after the operation Post mortem confirmed the diagnosis of widespread cortical necrosis Microscopically these areas showed hyaline necrosis with commencing calcification there being pronounced congestion in the boundary zone of each necrotic area

It was pointed out that the great majority of cases of this condition were associated with pregnancy others being noted in conjunction with scarlet fever diphtheria dysentery etc Ten cases had previously been reported to the society A review of the literature showed that this peculiar complication of pregnancy usually supervened during the fifth to the seventh month It showed no special predilection for the primipara Usually there were toxaemic symptoms present such as vomiting headaches oedema dimness of vision etc Some cases had been associated with eclampsia or accidental haemorrhage Anuria or extreme oliguria was the rule A fatal outcome was common the closing stages being marked by extreme nitrogen retention exhaustion and it might be superadded infection The pathology of the condition was well exemplified by the three cases recorded The second case showed the early stages of multiple infarcts—that is

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extreme congestion and thrombosis of the vessels in areas of commencing necrosis The third case was one in which the process had not been so extensive, the necrotic areas exhibiting advanced hyaline necrosis, thrombosis of the intralobular and afferent glomerular vessels, peripheral congestion, and commencing calcification The first case was an example of a still later stage, necrosis in the infarcted areas being complete, with well-established calcification and absence of congestion It is noteworthy that there was present a large amount of intravascular fat in the first and the third cases In the first patient there was progressive increase in urinary secretion, with some diminution in the degree of nitrogen retention Microscopically, healing of the infarcted areas was in progress, and it seemed reasonable to assume that the remaining cortical tissue might have undergone complete recovery but for the superadded infection Recovery had, following decapsulation of the kidneys, been recorded, the diagnosis not being in doubt as at operation pieces of the kidney had been removed for histological examination The condition seemed to be due to an interference with the blood supply to multiple areas of the renal cortex There was no indication that this was due to emboli, the presence of the intravascular fat globules being explicable on the basis of a toxic lipaemia Thrombosis appeared to be the cause of the infarction The actual cause of the thrombosis was not understood, although it was known that the eclamptic toxin had a selective destructive effect on vascular endothelium The unknown toxic agent which caused the thrombosis must also have a deleterious effect on the rest of the renal substance Recovery depended on (1) the extent of the infarction, (2) the speed of recovery of the remaining cortical tissue, and (3) the avoidance of superadded infection In cases in which the whole of the renal cortex was involved death was certain For treatment decapsulation had been advised, but this operation was so severe and the stage of congestion and increased tension so short, that it was difficult to see the efficacy of this procedure Abundant fluid should be administered and the skin stimulated After some days, by which time it might reasonably be assumed that recovery was in progress, diuretics might be administered

TOXAEMIAS OF PREGNANCY

At a meeting of the Devon and Exeter Medico Chirurgical Society on March 23rd, with the president Dr T C EVANS, in the chair, Dr AUSTIN EAGGER read a paper on the toxaemias of pregnancy

Dr Eagger said that the constant references in the lay press to the incidence of maternal mortality did not represent an idle scare, for out of about 700,000 births in England and Wales each year 3,000 were associated with the death of the mother Sepsis accounted for 1,109, and toxaemia of pregnancy for 524 Since the majority of these could have been saved by efficient treatment, there was a clear need of some definite line of campaign The methods in operation at some ante-natal clinics had been criticized as inadequate to prevent eclampsia, but against this might be set the fact that during the last five years the Exeter clinic had controlled 1 400 births, with a mortality of three—two deaths being due to embolism and one to eclampsia Factors predisposing to pregnancy toxaemia were neurasthenia anaemia, organic hepatic and renal diseases allergic states, disturbed pituitary and thyroid functioning and errors of diet In connexion with the last named it was noteworthy that there had been a 50 per cent fall in the incidence of eclampsia in Germany during the war years when the fats and proteins had been severely restricted This disease was also rare in the Tropics and among vegetarians It had been suggested by Kennedy and others of the Edinburgh school that toxaemia was associated with hyperfunction of the posterior lobe of the pituitary gland they had also found increased thyroid function in normal pregnancy, and diminished function in albuminuria occurring in that state From this they had deduced an antagonistic physiological action of the thyroid to the pituitary gland Finally, a hypothesis had been reached in which the toxic albuminuria was ascribed to endocrine disturbance probably multi-glandular, but with over production of the posterior pituitary hormones One of the earliest clinical signs of toxaemia in pregnancy was vomiting but the possibility that this might be due to a reflex neurosis resulting from some abnormal uterine displacement should be remembered In cases of protracted or severe vomiting at the Exeter clinic, when this possibility had been eliminated, the blood pressure and urine were examined repeatedly for any special indications In the absence of these the diet was modified, fats and proteins being restricted and glucose substituted Administration of lugosol, thyroid extract, bromide, and luminal had been of use, but recently Dr Eagger had obtained better results from S U P 36, three injections being adequate in his experience Considerable success had also attended intravenous injections of 25 per cent glucose with 20 to 30 units of insulin When treatment on these lines failed, therapeutic abortion should not be delayed The danger signals of pernicious vomiting were diminished output of urine, bile in the urine, a pulse rate over 100 with a low blood pressure, jaundice, marked loss of weight, blood stained vomit, and albuminuria, which was frequently a late sign Hysterotomy by the abdominal route was considered the most commendable treatment at present As regards toxic albuminuria, cases of pre-existing nephritis with raised blood pressure and marked nitrogen retention, if allowed to go to term, resulted in further renal deterioration A raised blood pressure was one of the earliest and most definite signs of toxaemia Dr Eagger said he had found no confirmation of the suggestion that such a rise might occur in an uncomplicated pregnancy In eclamptics it might reach the high figure of 280, a gradual fall was a hopeful sign, but a further sharp rise was a frequent indication of the onset of convulsions and the danger was not passed until the blood pressure had fallen below 140 Oedema was equally important as a sign, and, appearing in the face and hands, had a special significance A rapid increase of albumin in the urine was a serious omen, and it was most important to watch for an excess of bile pigment A diagnosis of toxaemia should not be made too hastily in ante-partum haemorrhage and the renal efficiency should be carefully estimated

Dr Eagger then outlined the treatment of the type common in general practice, in which there was a faint trace of albumin, slight oedema of the feet and ankles and a blood pressure of 130 to 190 Rest in bed was associated with restriction of the diet—at first to water glucose, and fruit juice, with a later diet low in proteins and fats and without added salt A mixture of potassium citrate and sodium bicarbonate was given every four hours and bromide and chloral were used for insomnia Insulin was injected if there was evidence of hepatic failure Failure to respond to treatment within three days was an indication for ending the pregnancy The speaker then detailed the various methods of treating eclampsia and said he employed that of Stroganoff, with the addition of colonic lavage He illustrated his paper with brief notes on cases seen by him at the Exeter City Lying-in Institution

Dr W A ROBB who had undertaken the pathological estimations in Dr Eagger's cases, discussed the various aetiological theories, and agreed with the possibility of there being a placental chorionic origin The presence of casts indicated a renal lesion, but not necessarily a toxaemia The volume of urine passed in twenty four hours was most significant, oliguria with albuminuria indicated toxaemia whereas urine in normal or increased amounts pointed to chronic nephritis In the toxaemic kidney and the kidney of eclampsia the excretion of water was decreased in relation to ingestion nitrogen excretion being as a rule unimpaired in contrast with the findings in chronic nephritis In the vomiting of pregnancy the passing of a small amount of urine of high specific gravity was a bad sign The degree of albuminuria provided a useful index of the severity of the renal lesion, recovery was far more possible with damaged tubules than with damaged glomeruli The diastatic index was often

valuable for it was often considerably raised in the pre eclamptic stage while remaining within the average in normal pregnancy This index was low in chronic nephritis and so the test had a differentiating value The blood urea content was not raised unduly in eclampsia and readings of 30 to 40 grams might be associated with the occurrence of fits Dr Robb gave a demonstration of the zinc acetate test for excess of urobilin and commented on the importance of this finding

THE ZONDEK ASCHHEIM TEST

At a meeting of the Section of Pathology of the Royal Academy of Medicine in Ireland on March 24th with the president Dr J McGRATH in the chair Dr W B HAMILTON opened a discussion on the Zondek Aschheim test for pregnancy

The PRESIDENT said that in Edinburgh the Zondek Aschheim test was carried out for 3s a test and he thought that it would be practically impossible to do it for this small sum in Ireland He raised the question whether it might not be helpful if ether was used in order to remove the toxicity of the urine some observers had stated that they had got positive results from the test in cases of carcinoma The value of the test would be seriously interfered with if it was positive in forms of malignant disease other than hydatid mole and chorionic epithelioma Dr C MURPHY referred to the way in which sugar evidently accelerated the test The reason for this might be that the hypodermic injection of sugar stimulated the pancreas and the pituitary gland was secondarily affected He suggested that in cases of Addison's disease or of myxoedema a positive result might be obtained Dr D J CANNON said that conditions other than pregnancy could be diagnosed by the test if blood was used for the purpose but in pregnancy cases only urine gave a result He inquired about the origin of the anterior pituitary hormones which occurred during pregnancy Were they manufactured by the pituitary or by the placenta? Dr NINIAN FALKINER said there was a great deal of evidence to show that the hormones obtained in the urine of pregnant women were not derived from the pituitary body at all In cases of chorionic epithelioma the test was ten times more powerful than in other cases because the substance was more concentrated in the urine A similar result was found in cases of hydatidiform mole where the chorionic epithelioma was increased in amount These points suggested that the origin of the hormones was in the chorion Dr R E STEEN inquired whether the giving of anterior pituitary hormone would be efficacious in a case of hypopituitarism in a female child and also in a male child The hormone was stated to be such a potent substance that he would like to know if any harm might be done to the children by its use Dr F DOYLE said he had only had one case out of many in which the positive result had proved to be wrong Dr R W SHAW said he had used anterior pituitary hormone (Parke Davis) in a case of functional uterine haemorrhage After three injections the bleeding ceased and since then the patient had had normal menstruation She had had a good deal of pain after the injection and after the last injection her eyes and feet had become swollen and she had developed a rash but these symptoms had subsided in the course of forty eight hours

At a meeting of the Society of Public Analysts held in Burlington House on April 5th Mr H G REES gave a summary of the amounts of iron and copper previously recorded for the livers and liver extracts of various animals and showed that these metals had been very incompletely extracted in the aqueous extracts In the author's experiments the proportion of iron was somewhat higher whilst the copper was very much lower than the figures given by Meyer and Eggert The significance of these elements in the therapeutic action of liver extract was discussed

Reviews

ASPECTS OF TUBERCULOSIS

In the second edition of *The Chemistry of Tuberculosis*[1] Professors H GIDEON WELLS and ESMOND LONG (who are respectively directors of the Otho S A Sprague Memorial Institute and of the Henry Phipps Institute for the Study Treatment and Prevention of Tuberculosis) critically review existing knowledge of the chemistry of the tubercle bacillus and its products the chemical changes and processes in the host and the chemical aspects of the treatment of tuberculosis Since the first edition in 1922 Dr Lydia M De Witt has died and the present authors have revised the section on specific and non specific chemotherapy The advance of knowledge has necessitated an almost complete new draft of the first section which deals with the chemistry of acid fast bacteria The new bacteriology of the *Mycobacterium tuberculosis hominis* discovered by Koch in 1882 and the grounds for belief in its filterable stage so highly unorthodox a few years ago are first summarized beginning with the work of Fontes in 1910 It is pointed out that the now acknowledged differences between growth on laboratory media and in the tissues of the body may modify the chemical changes so that the substances produced in the body may differ from those described here as the result of laboratory cultivation The *Mycobacterium tuberculosis* differs from most other bacteria in its relatively large content—a quarter to a third of its dry weight—of a fat like substance which varies somewhat in quantity with the strain and the medium employed and like the protein and polysaccharide fractions has an antigenic action After chapters on tuberculin and on acid fastness an account is given of the chemistry of other acid fast bacteria The second and longest of the three main divisions of the book —the chemical changes in the tuberculous host—deals first with those in caseous and calcified material the latter process according to Wells being dependent on physical rather than on chemical factors The chapter on the changes in the non tuberculous tissues of the tuberculous subject contains an interesting discussion on amyloid infiltration and chondroitin-sulphuric acid In the account of the blood changes it is mentioned that the rate of sedimentation of the red cells is increased in direct proportion to the rate of progress of the disease and has therefore been regarded as the most accurate single means of determining the prognosis The chemical features of the sputum tuberculous effusions urine and the metabolic changes are then considered in detail The introductory remarks on the chemotherapy of tuberculosis make it clear that though it is easy in the test tube to show a bactericidal or growth inhibiting influence of many drugs the conditions are different in the animal body where the tissue cells are usually much less resistant to chemical agents than are the hard wax armoured tubercle bacilli and that the prospect of actually killing tubercle bacilli in tuberculous lesions by any antiseptic seems to be remote or hopeless The various drugs such as dyes creosote chaulmoogra oil metals and iodides are passed in careful review with the conclusion that though a specific chemotherapy of tuberculosis has not yet been found and may on account of the difficulties be long delayed it is not a closed chapter The final section in this most valuable source of reference discusses the non-specific therapy by means of substances such as calcium silica ichthyol and oxygen

[1] *The Chemistry of Tuberculosis* By H Gideon Wells M D Ph D and Esmond R Long M D Ph D Second edition London Baillière Tindall and Cox 1932 (Demy xiii + 481 8 figures 45s net)

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It is appropriate that in 1932, the jubilee year of Koch's description of the tubercle bacillus, Professor A FONTES of the Oswaldo Cruz Institute at Rio de Janeiro should have brought out in *L'Ultravirus Tuberculeux*[1] an account of his researches, begun in 1906, carried on till 1930, and recorded in a number of publications since 1908 His early work, inspired by Oswaldo Goncalvez Cruz (1871–1917), on the chemistry and structure of the tubercle bacillus, and on the different reactions obtained by special staining methods in Koch's bacillus and para-tuberculosis bacilli, led to the recognition of the granular stages described by Hans Much in 1907, and of their importance in connexion with the life cycle of the micro organism The life-cycle of the bacillus includes an absolutely invisible, a finely granular, and a coarsely granular stage, and finally, the ordinary bacillary form The granular form possesses the power of reproduction, and thus assures the continuity of the species These somewhat recently recognized polymorphic phases of the *Mycobacterium tuberculosis* are important in producing pathological changes of a kind different from those usually recognized as tuberculous, thus pointing to attenuation of virulence Inoculation of a guinea pig with the granular form gives rise to cachexia, or to a transient curable change which is recognizable only by a positive tuberculin reaction, but reinoculation may subsequently result in the production of ordinary tuberculous lesions and the appearance of the ordinary bacilli The ultra-microscopic forms also pass across the placenta to the foetus, and cause latent tuberculosis or the condition spoken of as pre-tuberculosis The potential importance of the ultravirus of tuberculosis is obvious, and suggests that a larger responsibility for some forms of chronic inflammation may in the future justly be laid at the door of tuberculosis

In a freely illustrated volume Dr JACQUES STEPHANI of Montana and Dr MAURICE MARCHAL of Paris discuss in considerable detail the radiological diagnosis of incipient pulmonary tuberculosis[2] In the first place, they wisely insist that all the clinical evidence should be combined with the radiological in arriving at a diagnosis, at the same time they point out that radiology can enable [illegible] positive de[illegible] be made when neither auscultation nor percussion provides definite guidance, they further deprecate too much reliance being placed on anomalous auscultatory signs, and quote Professor Bezançon to the effect that in two-thirds of the cases weak vesicular breathing is not due to incipient but to old tuberculosis cured or latent The volume is divided into two parts The first deals with technique, the normal radiological appearances in the chest, and the boundary lines between the normal and early morbid conditions The second part is concerned with the radiological and clinical diagnosis of incipient pulmonary tuberculosis The classification of the early forms is not an easy matter, and the authors nomenclature is not familiar, at any rate in some instances, to English readers Thus the term tramite, invented by Professor Bezançon, means a pulmonary lesion in the pre-phthisical stage, confined to the connective tissue of the lung, and unaccompanied by any intra-alveolar exudation or even any nodular formations this form of incipient pulmonary tuberculosis is also spoken of as the 'diffuse,' and is not to be regarded as a cicatricial fibrosis The most frequent form is described as the 'apical —early infiltration, or lobitis— and the third is the 'nodular' form These three forms are described at some length and are illustrated [illegible] diagrams which, though rather crude, are clear and [illegible] radiograms which, it must regretfully be said, are [illegible] what disappointing

[1] *L'Ultravirus Tuberculeux* Nouvelles acquisitions sur la biologie du virus tuberculeux et sur la pathogenie de l'infection tuberculeuse Par A Fontes Paris Masson et Cie 1932 (Pp 108 5 coloured plates 28 fr)

[2] *Le Diagnostic radiologique de la Tuberculose pulmonaire au Début* Par Jacques Stephani et Maurice Marchal Preface du Professeur F Bezançon Paris N Maloine 1932 (Pp xvi + 250 93 figures 40 fr)

NON-TROPICAL SPRUE

The purpose of Dr THAYSEN's book *Non Tropical Sprue*[4] is to describe the clinical picture of a sprue like disease developing in persons who have never been in the Tropics During the last decade several cases of illness [illegible] resembling sprue in their clinical manifestations have been published under the headings of non tropical sprue in temperate zones, endogenous sprue etc Dr Thaysen is convinced that these are identical with the sprue occurring in the Tropics Since the cause of sprue is unknown the identity of these two disease groups must rest on the similarity of the clinical picture and laboratory findings The greater portion of the book is therefore concerned with these comparisons In any survey of intestinal diseases it is natural that coeliac disease or intestinal infantilism should come in for a good deal of consideration Dr Thaysen has maintained for many years that tropical sprue, "non tropical sprue" and coeliac disease are very nearly related—probably identical conditions In fact, he has now reached the conclusion that it is the same disease which occurs in the Tropics as sprue, and outside the Tropics as 'non tropical sprue" in adults and coeliac disease in children

This book forms a valuable contribution to the study of the group of diseases sometimes referred to as idiopathic steatorrhoea Whether or not tropical and non tropical sprue are identical is of great importance in the elucidation of aetiology The author's arguments are very convincing, and his work is likely to stimulate a good deal of discussion The book is well illustrated and translated, except for some mistakes in surnames — for instance on page 43 when Prince Jones should of course be Price-Jones and Rolleston for Rollstron on page [illegible] and Whipple for Wipple on page 252

[4] *Non Tropical Sprue* By Th L Hess Thaysen, M D in Idiopathic Steatorrhoea Copenhagen Levin and Munksgaard London H Milford Oxford University Press 1932 39 figures Paper 10s net, cloth 12s 6d net)

MUSCULAR EXERCISES

Twenty years ago Dr MORTON SMART published a preliminary account of the treatment of muscles and [illegible] by a method which he called "graduated resisted exercises," and he now gives the result of another [illegible] of thirty years in the use of this method[5] [illegible] it is generally agreed that the best results in strengthening and restoring an injured muscle are by the voluntary contraction of that muscle, which also involves the contraction of its opponents and of those muscles concerned in maintaining posture But such exercise is not always practicable, and the surgeon, if he wishes to produce contraction of an injured muscle or muscle group may be compelled to use electrical stimuli Such stimuli produced by the ordinary faradaic coil, if strong enough to cause visible contractions, are, as Dr Morton Smart points out, painful to the patient He therefore introduced a modification of the induction coil which enables him to pass from secondary and primary interrupted current and to vary its strength at will In such a mixed current the interruptions of the primary constituent are produced by an independent motor, and not by an automatic contact breaker

[5] *The Principles of Treatment of Muscles and Joints by Muscular Contractions* By Morton Smart C V O D S O Ch B London H Milford Oxford University Press ix + 217 15s net)

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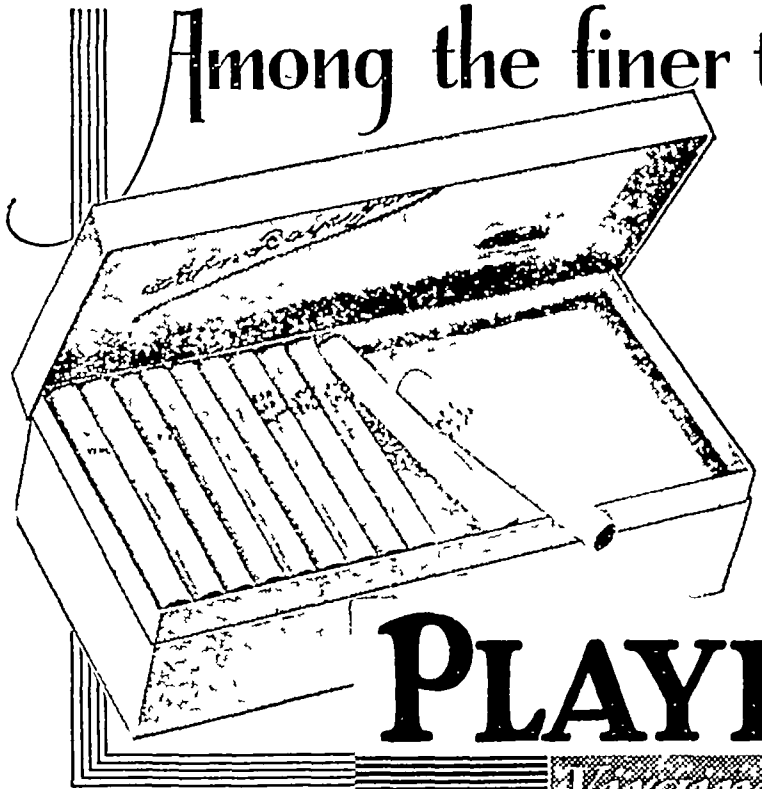

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The apparatus was described in Dr Smart's previous work. The circuit from the power mains operating the motor is entirely separate and distinct from the circuit working the induction coil. There is no electrical connexion between the motor circuit and the source of the primary current of only 2·4 volts. With this apparatus it is claimed that the operator has under his own guidance the power independently of the patient to cause a muscle painlessly to contract and relax and at every stage to control such contraction and relaxation with the greatest accuracy in time and degree. Dr Smart also claims that its use has appreciably shortened the treatment of some painful and disabling post traumatic conditions. The loss of tone which follows on the overstretching or in other words strain of a muscle is particularly slow of repair but Dr Smart has found that with his apparatus he can much shorten the period even if massage has been entirely dispensed with.

A useful and practical chapter is that on the technique of manipulation of a shoulder joint and its after treatment. No joint has been the seat of so many imperfect results as this and no other joint has probably been so useful to the claims of unqualified practitioners. If recent injuries are treated according to the principles here laid down there will be a great reduction in the number of imperfect cures.

TESTICULAR GRAFTING

The works on testicular grafting emanating from the pens of SERGE VORONOFF and his collaborators would now fill a shelf of their own in any library and *Testicular Grafting from Ape to Man*[1] is the sixth work on the subject published in English. It has the distinction of being written in a more scientific spirit than its predecessors and is virtually a survey and summary of the results obtained during the last twenty years.

The most valuable part of this book is that which deals with the histological examination of simian grafts removed from patients from seven days to four and a half years after implantation. The sections reviewed show that testicular cells survive to a depth of 2 mm. on the side of the graft in contact with the host's tissues. The final statistical summary of 175 cases of simian testicular grafting upon man is less convincing owing to the fact that we possess no certain criterion on which to base a verdict of success or failure. In any case the method of assessment employed by Voronoff is not mentioned in this work.

RESEARCHES AT THE BOSE INSTITUTE

The Transactions of the Bose Research Institute of Calcutta have hitherto been concerned mainly with studies on the movements of plants. The seventh volume now published[2] makes a new departure by including zoological and anthropological subjects in addition to those relating plant physiology. Of several papers dealing with the former subject the most interesting are those describing channels of excitation in the petioles of mimosa. Definite tripetal and centrifugal tracts have been demonstrated showing that plants possess structures which are functionally analogous to the nerves of the animal organism. There are also valuable papers on the proteolytic enzymes of *Carica papaya* and on the chemical characters of the fats from leguminous pulses. Anthropologists will welcome Mr P. C. Basu's article on Burmese crania. India offers a unique field for the investigation of biological problems relating to man but unfortunately among the most primitive races a rapid depopulation is taking place and some races are fast disappearing. Mr Basu's researches are therefore opportune. The present paper is the first of a series which will deal with the crania of aboriginals and with those of the Mongoloid type and other groups. His article furnishes the detailed measurements and characteristics of thirty-six Burmese crania from an old burial ground. Sir J. C. Bose contributes a single paper on the capture of fish by drugging the streams, a destructive practice which is common to many primitive races in all parts of the world. The author gives a list of the plants used and details of the method of capture. Elaborate experiments are described showing the action of the drugs; these do not appear to be protoplasmic poisons as ordinarily understood but cause a paralysis of the respiratory movements of the mouth and gills from which recovery is possible by means of artificial respiration. Mr G. C. B. Vidyaratna contributes an interesting paper on fish eating spiders in which the mode of capture is described and illustrated by photographs.

[1] *Testicular Grafting, from Ape to Man.* By Serge Voronoff and Ion Alexandrescu. Translated by T. C. Merrill, M.D. London: Adams and Norgate, Ltd. 1933. (Pp. viii + 125; 39 figures. 8s.)

[2] *Transactions of the Bose Research Institute, Calcutta.* Edited by Sir J. C. Bose, M.A., D.Sc., LL.D., F.R.S., C.S.I., C.I.E. Record of research carried on in various branches of science. Vol. vii, 1931–2. London, New York, Toronto: Longmans, Green & Co. 1933. (Pp. 343; 161 figures. 25s. net.)

Notes on Books

More than twenty years ago Sir JOHN BLAND-SUTTON wrote an entertaining account of a journey he made in company with Mr Comyns Berkeley to Victoria Nyanza. Starting from Mombasa they travelled on the Uganda railway and explored the gigantic trench known as the Rift Valley, 6,300 feet above the level of the sea. His book, which has long been out of print, contained also the story of a boat journey up the White Nile and Bahr el Gebel as high as Rejaf. Sir John has now been induced to publish a popular account of his observations in the Rift Valley and the country around the head waters of the Nile under the title *Men and Creatures in Uganda*.[3] In this volume illustrated by many delightful wood engravings will be found a description of the Rift Valley, with brief but illuminating sketches of the animal and vegetable marvels of Eastern Equatorial Africa as they came before the trained eyes of a surgeon naturalist.

Two little books on chiropody contain a good many hints of practical value in the care of the feet. Mr E. G. V. RUNTING has profited by a long experience and offers to his colleagues in *Chiropody Jottings*[4] another instalment of valuable advice seasoned with reminiscences as well as predictions. Mr HAYHOW's book with its more pretentious title of *Feet in Health and Disease*[5] is of a much less solid character. Its forty-eight pages can hardly pretend to offer any adequate representation of the anatomy and physiology of the foot or the pathology of its diseases. It contains little about corns and callosities, but the ambition of its author seems to be to deal with more deep-seated affections such as club-foot which are generally considered to require surgical intervention of a radical kind.

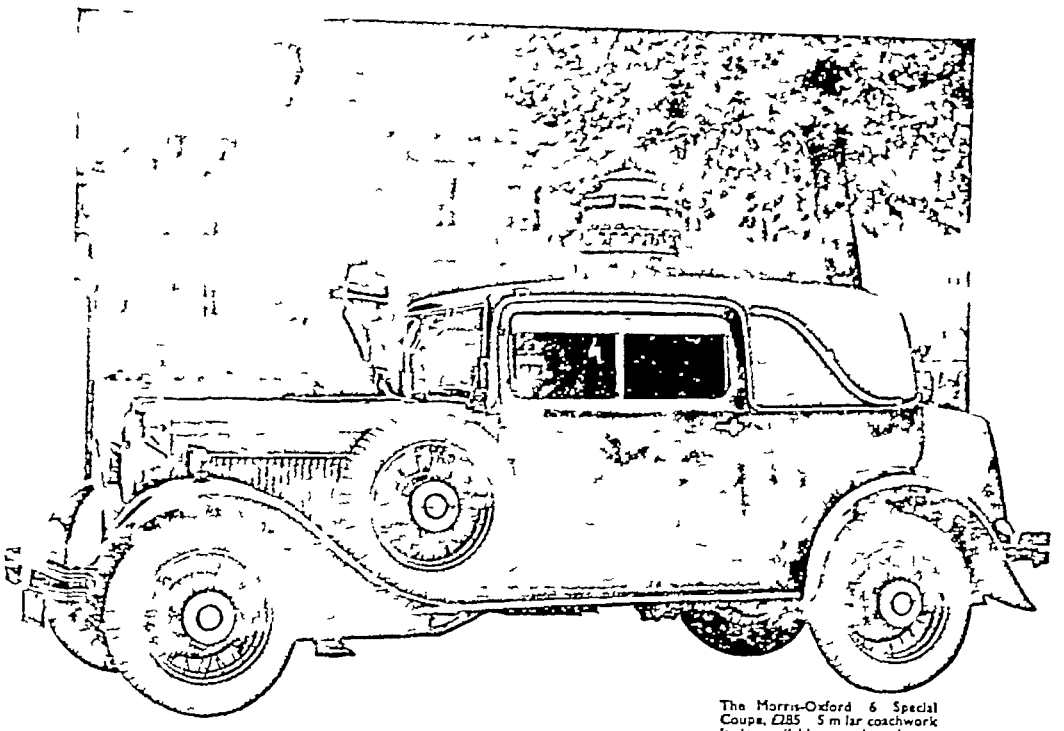
Praktische Diätetik[6] by Geheimrat Hofrat Dr L. ROEMHELD is yet another of the long series of books on dietetic therapy which have appeared in the last few years. It purports to be written both for doctors and for patients and fulfils its functions admirably. It consists of a little more than 200 pages. Different pathological conditions are discussed and detailed menus as well as more general directions are given.

[3] *Men and Creatures in Uganda.* By Sir John Bland Sutton, Bt. London: Hutchinson and Co. (Publisher) Ltd. 1933. (Pp. 288; 94 woodcuts. 12s. 6d. net.)

[4] *Chiropody Jottings.* By E. G. V. Runting, F.I.S.Ch. London: Faber and Faber, Ltd. 1933. (Pp. 223; illustrated. 5s. net.)

[5] *Feet in Health and Disease.* By R. R. Hayhow, M.I.S.Ch. London: J. Bale, Sons and Danielsson, Ltd. 1933. (Pp. 48; 8 figures. 2s. 6d. net.)

[6] *Praktische Diätetik.* Von Geheimrat Hofrat Dr. L. Roemheld. Leipzig: Fischers Medizinische Buchhandlung. 1933. (Pp. 210. Geb. M. 9·90.)



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Dr M L BARKER, who is lecturer in German at the University of Edinburgh, has written a book entitled *Basic German for Science Students*,[12] which will meet the need of many who wish to acquire quickly a working knowledge of this language in order to study German books and periodicals of a scientific nature The first part will help the student to acquire a good vocabulary, without spending an undue amount of time on the study of grammar and so losing interest The second part contains a wide range of short scientific extracts in German relating to medicine chemistry, physics, and other scientific subjects , on the opposite page to each of these is placed an English translation, thus making it possible without reference to a dictionary, to attain facility in reading such articles at sight The book is of handy size and is very well arranged A vocabulary is provided at the end which is not likely to be needed often after the first part of the book has been mastered Medical practitioners with little time to spare, and yet with a desire to read German articles at first hand, will give this volume a warm welcome

[12] *Basic German for Science Students* By M L Barker M A Ph D Cambridge W Heffer and Sons Ltd 1933 (Pp 164 6s net.)

The booklet *Simple Instructions for Diabetic Patients*[13] has been drawn up by Dr DOROTHY HARE for the use of patients in the diabetic clinic of the Royal Free Hospital It fulfils its function clearly and practically and will be of great use to the patients under specialist treatment at the hospital, or to practitioners called in during emergencies

The International Labour Office has published a list of references to the literature of pneumoconiosis,[14] including the morbid results attributable to dusts in general as well as to those caused by silica It is stated that this publication is intended only as a preliminary step leading towards the drawing up of a full bibliography, which might subsequently also cover the questions raised in the field of health and those relating to the subject of legal compensation for diseases due to dusts

[13] *Simple Instructions for Diabetic Patients* By Dorothy C. Hare M D M R C P With prescription sheet For the use of patients nurses and practitioners London H K Lewis and Co Ltd 1933 (Pp 24 1s net)

[14] *Pneumoconiosis* Studies and Report Series N (Industrial Hygiene) No 15 International Labour Office Geneva 1932 League of Nations London P S King and Son Ltd (Pp vi 2s net)

Preparations and Appliances

APPARATUS FOR COLLECTING BLOOD FOR TRANSFUSION

Dr G GREGORY KAYNE (assistant medical officer, St Charles's Hospital London , clinical assistant Hospital for Consumption and Diseases of the Chest Brompton) writes

The following modification of apparatus for collecting blood for transfusion by the citrate method has been found of much help in my hands and I venture to publish the details in the hope that it will be tried more extensively It is usual to employ a piece of rubber tubing to connect the French's needle with the collecting flask at the bottom of which is the citrate solution (see Fig 1) Either a long piece is employed extending nearly to the bottom of the flask—this favours clotting—or a short piece which reaches beyond the mouth of the flask only The latter method has two disadvantages (*a*) the free end of the tubing is apt to become dislodged when the bottle is shaken or rotated during the collection of the

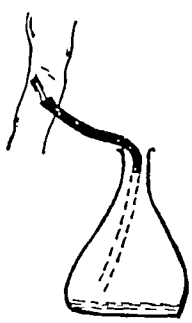

FIG 1

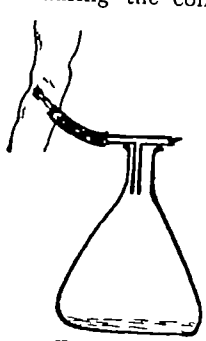

FIG 2

blood resulting in loss of blood and a 'mess' on the bed or floor and (*b*) the free end of the tubing also tends to fall against the sides of the flask so that the blood runs down the side instead of straight into the citrate solution The modification I suggest is depicted in Fig 2 Attached to the end of a short piece of rubber tubing is a T shaped glass connexion The horizontal bar of the latter rests on the mouth of the flask in which the vertical bar is inserted The free end of the horizontal bar is plugged with sterile wool

The advantages of this method are (i) The flask end of the collecting apparatus cannot be dislodged from the flask in shaking (ii) The blood runs straight into the citrate solution without touching the side of the flask thus the maximum amount of unclotted blood is obtained Moreover (iii) it is much easier to note the rate of flow of the blood

In Fig 3 is shown the collecting apparatus actually employed The French's needle is connected to the T shaped connexion by a piece of rubber tubing which is interrupted fairly close to the needle by a very short piece of glass tubing The latter need not be more than half an inch long and indicates immediately whether one is in the vein after inserting the needle , it can however be omitted if its use is considered to favour clotting The vertical and

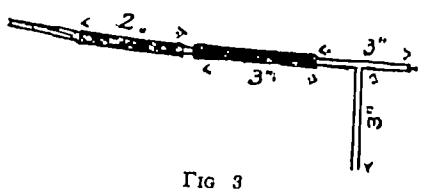

FIG 3

horizontal bars of the T shaped tubing each measure three inches and five sixteenths is a convenient diameter

I think it is useful to boil the whole apparatus as described in citrate solution before use, and keep it in citrate until required

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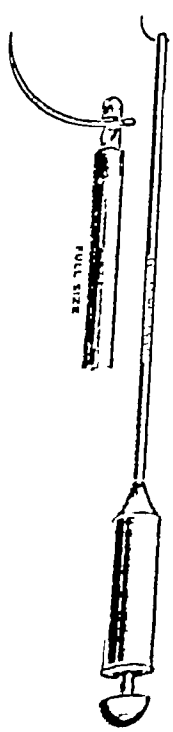
Mr H W L MOLESWORTH (Folkestone) writes

The well known habit of most needle holders of either breaking or bending the finer sizes or of permitting the needles to turn round in the holder led me to design a needle holder on a new principle, in which the needle is wedged into two narrow slots in a tube by means of a slotted plunger worked by a spring The needle is firmly carried at the end of a small rod which does not get in the way of visual control of suturing



This needle holder has been made for me by the Genito Urinary Manufacturing Company who have helped considerably with the details of design It is easily taken apart for cleaning and sterilization and after a thorough testing I have found it a most useful instrument for suturing in awkward situations such as the common bile duct the gall bladder bed the cardiac end of the stomach and the depths of the pelvis With this needle holder it is an advantage to use needles of half circle pattern with slightly flattened shanks Needles of sizes varying from 1/2 inch radius to 1¼ inch radius of intestinal pattern are firmly held

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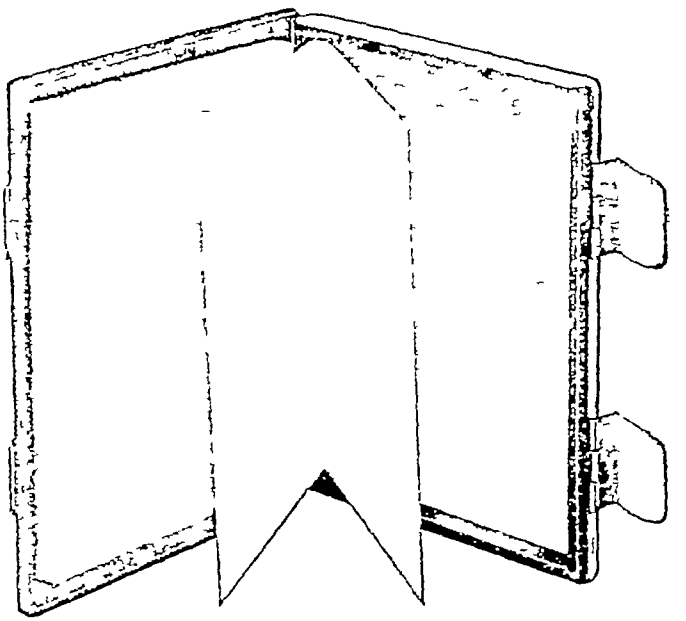

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British Medical Journal

SATURDAY, APRIL 15th 1933

AETIOLOGY OF LYMPHADENOMA

Among diseases of which the cause is entirely unknown lymphadenoma or Hodgkin's disease occupies an unusual position Structurally it is a granuloma but in its course and termination it partakes of the characters of a malignant growth If all cases conformed to a well defined type this essential ambiguity would still exist but added difficulties are presented by the frequent coexistence of tuberculous lesions in the tissues attacked and by the occurrence of a type of neoplasm arising in lymphoid tissue from which lymphadenoma can often hardly be distinguished This vague and indeterminate position and the varied characters of the individual case furnish to the investigator a highly complex problem which has hitherto evaded any acceptable solution

All efforts in this direction have assumed that the disease is due to a micro-organism and the best-known results are those of Fraenckel and Much who demonstrated in affected tissues a non acid fast organism otherwise resembling the tubercle bacillus of Negri and Mieremet (confirmed by Bunting and Yates) who found an organism with somewhat similar characters and of l'Esperance who claimed to have demonstrated avian tubercle bacilli in the lesions That such bacteria may have been present need not be disputed but the methods employed for their demonstration were calculated to reveal the presence of exceedingly small numbers and it is not unlikely that these may occur accidentally in the body especially in lymphoid tissue In a concerted investigation recently conducted under the auspices of the Rose Research Fund at St Bartholomew's Hospital the hypothesis of microbic infection in the ordinary sense was reduced at least to a considerable degree of improbability In a long series of cases the claims of the tubercle bacillus spirochaetes and fungi to be regarded as causative agents were successively examined and rejected and in so far as a variety of recognized methods of staining cultivation and animal inoculation may be accepted as excluding the presence of significant bacteria the results may be said to have closed the first chapter in the history of research on this subject

The main obstacle in this work has been that there is no known means of communicating the disease to an animal Deprived of this resource the investigator can neither study adequately the genesis and progress of the disease nor determine the capacity of a suspected micro-organism to produce it nor diagnose the individual case itself by biological experiment The third of these requirements is fulfilled in the work of Dr M H Gordon published in our present issue which describes the first successful attempt to induce characteristic changes in an animal by the inoculation of material from cases of lymphadenoma In his experiments which are confirmed by those of Dr van Rooyen an emulsion of affected gland injected into the brain of a rabbit induces a highly characteristic and frequently fatal condition of which the chief signs are wasting and ataxia This result followed inoculation with material from nineteen out of twenty cases of lymphadenoma in a series of forty one controls with gland tissue from a variety of other conditions it has never been produced That affected tissue should be shown capable of producing any significant effect at all in an animal is itself a noteworthy advance that this effect can be utilized as a diagnostic test gives the achievement an added practical value The deeper implications of the discovery are still obscure It is the belief of Dr Gordon that the pathogenic agent concerned is a virus and this view is supported by the degree of its resistance to heat phenol and ether and does not necessarily conflict with the failure of attempts at filtration On the other hand the failure of transmission in series is contrary to experience with other virus diseases and the nature of the cerebral lesions produced seems largely undetermined

Involving as it does the study of a new form of encephalitis the demonstration of a virus possessing largely unknown properties and a highly restricted field of pathogenicity and perhaps a consideration of the effects of autolysis on a highly complex tissue Dr Gordon's hypothesis promises both interest and difficulties in full measure in its further investigation That interest is not confined to the problem of lymphadenoma alone since the possibility still remains that this disease may have ultimately to be classed as a new growth

BODY MECHANICS AND CHILD HEALTH

The names of an impressive group of medical and scientific contributors appear at the beginning of a volume on child health and development [1] published by the White House Conference on Child Health and Protection which has lately reached us A companion volume on nutrition being the third part of the same report was reviewed in our columns on November 26th 1932 and the critical thoroughness in the examination of data which distinguished Part III is evident also in Part I The scope of this study includes heredity prematurity racial characteristics climatic conditions fatigue and other factors which influence the growth and development of the child In many of these fields scientific observations are scanty and the committee has had to be content to recommend new lines of approach to the problems involved but in the chapters dealing with organized athletics and body mechanics it has many constructive suggestions to offer

Organized athletics in schools the committee points out cater primarily for those who are most able and fit while the physical weaklings who might benefit

[1] *Growth and Development of the Child* Part I *General Considerations* Report of the Committee on Growth and Development White House Conference on Child Health and Protection New York The Century Company London D Appleton and Co 1933 (15s net.)

most by controlled exercise are apt to be rejected completely Moreover, the games which attract chief attention—notably football and baseball in America, and Rugby football and cricket here—are those which there are limited opportunities for playing once a boy has left school, unless he goes to a university or other place of higher education Members of American teams suffer more acutely under the fervour of their coaches than athletes in English schools The committee draws attention to the emotional factors which are introduced in the effort to produce a winning team , among these are the elements of nervous tension, the sense of heavy responsibility, and a feeling of inferiority deliberately induced by coaches on the theory that it makes the boys try harder Readers of *Juan in America* will be reminded of the almost religious passion of the football coach, and the abysmal disgrace which engulfed Juan for messing up a match , and, according to Americans, the characters and situation are not particularly overdrawn It is curious, however, to find among the shortcomings attributed to school athletics by the committee the fact that the games learned at school are played for themselves alone and are not useful in later life This opens up the whole question of the ethical value—if any—of organized games, which cannot be discussed in a few words , but surely it is open to doubt whether games should ever be played for utilitarian purposes, rather than played for themselves alone , too much solemnity has gathered round athletics already without turning them into a business as well as a creed

A more potent objection to the existing system is the fact that those who most need physical education are those who are most neglected , and here the committee makes the really valuable suggestion that boys should be grouped, by means of reliable tests of physical strength and fitness, into different grades Boys with a low index of physical fitness could then be given special remedial drill, while those in the middle range could compete with others of their own level , boys with a high physical fitness index would be allowed to participate in the school teams At first glance this seems to rob the moderately fit boy of the stimulus which the hope of a place in a school team provides , but actually his chances of attaining to the first rank in physical fitness would be higher if his exercise was graded to his capacity than if he was continually striving to hold his own with companions physically abler than himself Fatigue and nervous instability, as the report published recently by the National Council for Mental Hygiene[1] showed, are common at puberty and during adolescence, which are not only times of physical strain, but the periods spent in working for public examinations , in schools where games are taken seriously rest periods are inadequate The revolutionary suggestion was made in this report that a daily period of rest in the horizontal position is as desirable for adolescent examination candidates as for younger children It is unlikely that this will receive much support in the public schools, but the methods advocated by the White House Committee for the improvement of body mechanics seem to offer a more hopeful line of approach to this problem Defects of posture or (as the committee prefers, more accurately if less euphoniously, to call them) " poor body mechanics " are extremely common among children of school age and are, in themselves, fatiguing In a Massachusetts school the experiment was made of giving one group of children instruction in exercises designed to improve body mechanics, while a second group was given only the regulation calisthenics prescribed by the department of physical education Nine times as many children improved under special training as those who received no special training, and the improvement in body mechanics was associated with benefit to health and efficiency as judged by school performance and behaviour, while regularity of attendance increased The grading of children according to physical capacity and attention to the mechanics of posture might do much to relieve the strain of adolescence

[1] *School Life and Nervous Instability* With a foreword by Sir Maurice Craig National Council for Mental Hygiene

ANNUAL MEETING, DUBLIN, 1933

Arrangements are proceeding in orderly fashion for the one hundred and first Annual Meeting of the British Medical Association, to be held in Dublin next summer under the Presidency of Dr T G Moorhead, P R C P I , Regius Professor of Physic in Trinity College The Annual Representative Meeting will begin on Friday, July 21st, and will be continued on the following three weekdays in the Royal Dublin Society's Hall, where Professor Moorhead will deliver his Presidential Address on Tuesday, July 25th, at 4 30 p m The clinical and scientific work is being divided among sixteen Sections which meet on the mornings of Wednesday, Thursday, and Friday in Trinity College and University College Programmes for the Scientific Sections are by no means complete as yet, but it has been thought advisable to announce in our *Supplement* this week the subjects to be discussed, with the names of opening speakers where they have been chosen, and such occasional papers as have been accepted We publish also the names of the officers of all the Sections, and the provisional time table for the Annual Meeting as a whole, from which it will be seen that each day will be fully occupied and that splendid entertainment is in store for the members and ladies who accept the invitation offered them by the Leinster Branch of the Association The journey to Dublin is neither difficult nor tiring, and once there they can count on the hospitable welcome for which the city is famous The headquarters of the meeting will be in the Mansion House, lent by the Lord Mayor and Corporation, and Lord and Lady Iveagh have granted the use of their house in St Stephen's Green as a ladies' club Among the larger social functions of the week may be mentioned an evening reception by the Government in Dublin Castle , a ceremony for conferment of honorary degrees by the University of Dublin , garden parties at Trinity College, the Rotunda Hospital, the Dublin Zoo in Phoenix Park and at Blackrock College , the President's Reception at Lord Iveagh's house , and a reception and dance at University

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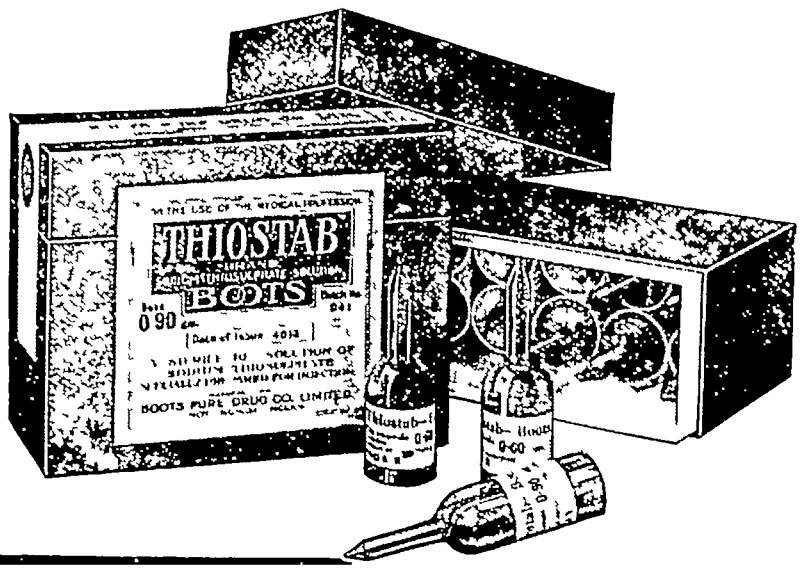

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PATHOLOGY OF HEPATIC CIRRHOSIS

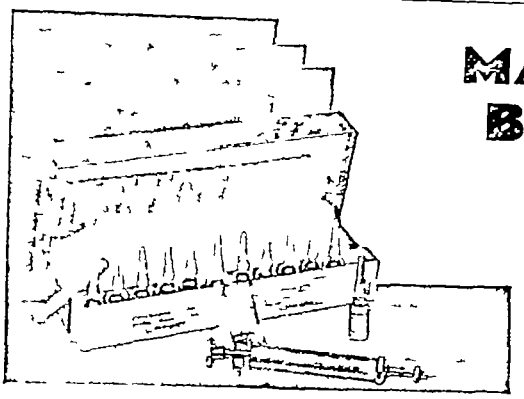
Modern studies show an increasing tendency to search out the earliest changes in disease processes An excellent example of this type of research is to be found in the monograph by G Albot[1] The experimental parts deal with the cirrhoses produced by lead copper manganese colloidal silica and other agents and also with the effects of biliary obstruction on the liver The teaching in this country has long sustained the view that the primary change in cirrhosis is damage to the liver parenchyma Gye and Purdy[2] however claimed to produce a pure mesenchymal proliferation in the liver by means of colloidal silica and Roessle of Basel believes that in a certain group of human cirrhoses the action of the causative agent may fall primarily upon the supporting tissue of the liver Albot stresses the earliest change indicating toxic action on the liver cells This change consists in margination of the chondriosomes and is possibly not so much a degeneration as a defensive reaction With all the agents used to produce experimental cirrhosis including colloidal silica early parenchymatous changes were demonstrated by the study of the chondriosomes The deleterious action of the toxic agent is at first exerted on the liver cells in the periportal zone Following the damage to the parenchyma the reticulin framework of the liver becomes thickened at first locally round the damaged cells but subsequently spreading into areas where the cells may be histologically normal The thickened reticulin fibres are identical in their staining reaction with collagen Albot is in agreement with his countryman Nageotte who believes reticulin and collagen to be identical substances Following the initial stage comes the stage of lesional asymmetry in which the central zone of the lobule is also attacked The periportal zone is attacked first on account of its position relative to the incoming blood while the central zone is said by Fiessinger to be attacked on account of its fragility The reticular thickening above mentioned does not play more than a secondary part in the new connective tissue development In addition to reticulosis there is a process of cicatricial sclerosis This process never takes its origin in the vicinity of the blood vessels or of the biliary passages but always in relation to the damaged liver cells A cirrhosis is no more portal in its origin than it is arterial or biliary The cicatricial process develops from an infiltration of round cells in the vicinity of damaged liver cells these round cells being transformed into fibroblasts One fact to be noted is that these experimental cirrhoses are seldom obvious to the naked eye This is probably due to a time factor as a hobnailed appearance has been seen in animals in which the duration of the experiment has been extended to eighteen months or two years In order to produce the gross morbid appearances which we see in human cirrhosis it appears essential to have *repeated small doses of toxin acting over a long time* Regeneration of the liver cells is seen particularly in the experiments with tetrachlorethane With regard to human pathology Albot remarks that a purely aetiological classification is as yet impossible Much attention is devoted to the coincidence of hepatitis with cholecystitis as shown by biopsy material taken at the operation of cholecystectomy The hepatitis which Albot studied bore little relation to the severity of the cholecystitis The commonest change was seen in the liver cells themselves —margination of the chondriosomes and clarification In some instances cellular infiltration and connective tissue development was added to these appearances This hepatitis is sometimes cortical only and is probably determined by noxious agents brought by the lymphatics in Glisson's capsule In other cases the hepatitis is more diffuse There is no suggestion that ascending or descending cholangitis plays a part in the association of this form of hepatitis with cholecystitis Ligation of the common bile duct in the rabbit is followed by the appearance of necrotic areas in the liver with subsequent scar tissue formation Necrosis may depend on the degree of hyperbilirubinaemia which results This varies in different animals The rabbit appears to be the only animal which develops cirrhotic change following ligation of the common bile duct In a recent paper on this subject Cameron and Oakley[1] suggest that infection may be responsible for the connective tissue development in the rabbit The rabbit is notoriously subject to hepatitis which may remain latent until its precipitation by experimental interference So far as human pathology is concerned it is unusual to get clear-cut pictures of the effects of pure biliary obstruction on the liver Especially with calculus obstruction infection is liable to complicate the picture either as a pre existing chronic hepatitis or as an ascending cholangitis Definite signs of damage to liver cells and hepatitis are therefore common and if the condition of biliary obstruction persists long enough cirrhotic change may supervene If the obstruction is relieved the process is arrested and a harmless residual cirrhosis remains

[1] *Hépatites et Cirrhoses* Par G Albot Preface du Professeur Roussy Paris Masson et Cie (34 fr)
[2] Gye and Purdy *Brit Journ Exper Path* 1924 v 238

DIET AND PREGNANCY IN INDIA

The importance of a special diet during pregnancy is often grossly exaggerated The diet to which the mother is accustomed is as a rule all that is required and well meaning advice about increasing the bulk of this diet merely leads to indigestion In such a mixed diet as is customary in this country the results of vitamin deficiency are not likely to accrue but the supply of a particular vitamin though sufficient for normal needs may not suffice in pregnancy and lactation In India where the bulk of the diet consists chiefly of grain in some form vitamin deficiency is probable The infant mortality rate is influenced by the incidence of premature birth which is high in India and Wills and Talpade have shown that prematurity is closely related to a deficiency of vitamin B in the mother's diet Drs I M Balfour and S K Talpade[2] in further investigations have compared the diets of mothers in the north and south of India In the north wheat is the staple diet in the south it consists mainly of milled rice with the consequent reduction of vitamin B It is interesting to learn that the incidence of premature birth is three times as high in the south

[1] Cameron and Oakley *Journ Path and B* 1932 xxxv 701
[2] *Indian Medical Gazette* November 1932 p 601



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as in the north All the mothers in the south, both of full-time and of premature infants, were in a state of avitaminosis A little extra effort was all that was necessary to bring on labour Mothers of premature infants not only suffered from vitamin deficiency, but the amount of protein in the diet was low The cases of premature birth which occurred in the north were nearly all associated with some material change in the customary diet in the direction of a deficiency in those substances rich in vitamin B Conclusions were reached to the effect that in a diet in which wheat forms more than 50 per cent of the calories, prematurity due to deficiency disease is not likely to occur, but where 50 per cent or more calories are derived from polished rice prematurity is markedly increased It appears necessary that the diet should contain at least 8 ounces of wheat, which is rich in protein and contains a large amount of vitamin B wheat-germ oil also contains a rich supply of vitamin E Whitehouse believes that this vitamin has a strengthening effect on the human germ cell, and, in fact, is necessary for normal fertility It is known that in rats absence of vitamin E causes slowed growth and death of the foetus by the twentieth day If the high incidence of prematurity in India is due to deficiency in vitamin B this can be remedied simply by adding the necessary vitamin in a cheap form , on the other hand, if it is due to deficiency of protein it would mean altering the staple foodstuffs of the people—an almost impossible task

THE REPORT ON HEARING TESTS

A committee of the Section of Otology of the Royal Society of Medicine was appointed in January, 1929, to consider and report on tests of hearing The committee has now issued its report, of which a large part is concerned with the use of tuning-forks The co-operation of the National Physical Laboratory was obtained, through the good offices of Sir William Bragg, in order to define the physical properties of tuning-forks and obtain a standard When a fork is struck, each successive vibration is less by a given fraction than the preceding vibration, and after a certain number of vibrations the amplitude will be reduced to one-half The number of seconds required to reach this point is called the half-intensity period After the lapse of two half-intensity periods the amplitude of the vibration will be one-quarter of that at the beginning, and the fork will be heard at one-half the distance After two more half-intensity periods the fork will be heard at one-quarter of the distance, and its vibrations will be one-sixteenth of the original amplitude The half-intensity period varies for different forks, but by estimating it forks can be calibrated so as to give uniform results, work which the National Physical Laboratory has undertaken Forks marked with a known half-intensity period are now on the market It is claimed that in this way many of the errors arising from the variations in tuning-forks can be eliminated Some criticism has been directed at the report because its authors propose to adopt the half-intensity period, rather than the decibel for measuring the intensity of sound When two telephones are separated by a mile of wire of a certain resistance the sound emitted by them differs in intensity by one bell A decibel is one-tenth of a bell, and one half-intensity unit equals 3 0103 decibels A sudden increase in intensity of one decibel is the smallest increment that can be detected by the human ear The authors suggest, however, that in practical otology the half-intensity unit with which sounds differ in intensity as 1 to 2 is preferable, while for experimental observations in acoustic laboratories the decibel should be used Dr Hallpike of the Ferens Laboratory at the Middlesex Hospital, in a criticism of the report,[1] has put forward the suggestion that calibrated forks should be engraved in terms of both one decibel and of one half intensity period according to the number of seconds corresponding to such a decrement The rest of the report, which includes much abstruse mathematics, is concerned with a detailed review of the numerous methods of testing hearing, and the errors and fallacies connected with their use and interpretation , but in the end the report fails to settle the old question whether the true method of testing for deafness is by forks or by speech It will, however, help otologists to a clearer understanding of the underlying principles and the degree of reliance which can be placed on the tests

GASTROPHOTOGRAPHY

Methods of examining the lining of the stomach are likely to be of much value in diagnosis In a stomach only partially filled with bismuth, pictures of the shadow texture of the gastric mucous membrane can be obtained by radiography Irregularities thus observed give information about gastritis, the scar of an ulcer or the filling defect caused by a neoplasm In the hands of some specialists observations have been made by direct vision through the gastroscope of the state of the lining of the stomach In spite of a limited field of view many gross pathological conditions can be brought into direct view For some years attempts have been made to obtain photographs of the lining of the stomach by the exposure of photographic films introduced on the end of a sound These were reported on by Professor Porges before the Medical Society in Vienna in 1929 The method was brought to the notice of our readers in January last year in a review of an interesting book by Dr Bécart of Paris,[2] and reference was made to contributions by Professor Pannett and Dr Wyard,[3] who had used the method on their patients in London We are again indebted to a French authority for a brief summary of the advances that have been made in this Dr Bernay[4] of Lyons, using an apparatus made by Heilpern, has been able to take photographs of many pathological conditions of the gastric mucous membrane Perhaps the greatest advantage of this over other methods is in obtaining a permanent record of the vascularity of the stomach lining Dr Bernay's book is profusely illustrated with enlarged prints of the actual photographs In cases of gastritis the engorgement of vessels, submucous haemorrhages, and in some instances photographs of a jet of free haemorrhage are particularly instructive, and this information could be recorded in no other way And yet the method can have only limited application The photographic apparatus must work and record, but the view-finding must not be haphazard, so that obtaining significant results by

[1] *Journal of Laryngology*, February, 1933, p 114
[2] *British Medical Journal* 1932 i, 24
[3] *Lancet* 1931 ii 174, 177
[4] *La Gastrophotographie* Par Pierre Bernay Preface de Ch Garin Paris Masson et Cie (50 fr)

natter of luck Dr Bernay s enthusiasm has triumphed ver many difficulties and his hints on the use of the pparatus make his book a necessity for those who ropose to master the technique

THE STRANGEWAYS COLLECTION

The Strangeways Collection which is now housed in the Museum of the Royal College of Surgeons of England ogether with a large number of microscopical prepara- ions photographs and typed manuscript descriptive of the specimens is the product of many years of esearch Dr T S P Strangeways in this research carried o t the idea of segregating some one form of disease for clinical and pathological investigation and concentrating research on it The disease chosen in the first instance was chronic joint disease in its osteo-arthritic and rheumatoid forms and cases and specimens were sent to him from many medical men in different parts of the country who were interested in the work In 1908 a special research hospital was erected in Hills Road Cambridge and between the years 1905 and 1914 Strangeways and his collaborators published nine papers upon various aspects of the subject The work was interrupted by the war and apparently was never resumed by Dr Strangeways who died in 1926 On receiving the collection the Council of the Royal College of Surgeons entrusted o Mr Lawford Knaggs the task of examining and escribing the specimens He has prepared a descriptive atalogue the collection is now available for study nd constitutes a very valuable addition to the Museum Mr Lawford Knaggs devoted three years to the exam- ation of the specimens and, over and above the mere preparation of the catalogue he took the opportunity f converting the task into one of original research, the sults of which are embodied in a report on the Strangeways Collection[1] , this is published in the *British Journal of Surgery* (1932–3 vol xx p 1) In his eport Mr Knaggs discusses the correlation of osteo- rthritis rheumatoid arthritis and gout the causation of nkylosis the histological peculiarities of osteo-arthritis nd rheumatoid arthritis and the pathogenesis of gout nd Charcot s disease

LISTER S LETTERS TO SHARPEY

Mr C R Rudolf L D S recently had the good luck o find in a second-hand bookshop in London eight olograph letters written in the years 1857 to 1864 by Joseph Lister to William Sharpey He has given an unt of his discovery and has published the text f the letters with a commentary and some notes in Nos 77 and 79 of the *British Journal of Surgery* Vol xx 1932–3) Sharpey had been Lister s teacher University College and Hospital and it was on his dvice that Lister after qualification went to Edin- urgh to work under Syme whose daughter afterwards ame Lady Lister The first six letters refer to apers which Lister had submitted to the Royal Society hrough Sharpey who was then its secretary In these ers he discussed the criticism made by James Paget nd John Goodsir (for the most part by Paget) the wo referees to whom the papers had been submitted Their reports were generally very favourable A copy of them drawn from the records of the Royal Society is included in Mr Rudolf s paper The acceptance of these essays in physiological research led to Lister s election to the Fellowship of the Society of which he ultimately became president The communication con- sisted of an introduction four sections and two supple- ments Their subjects were the aggregation of the corpuscles of the blood the structure and function of the blood vessels the effects of irritants upon the circulation and the pigment cells of the frog s web This last named was characterized by Paget as the most valuable of all as giving the best and only visible proof yet discovered that in the early stages of inflam- mation in vascular parts the tissues external to the blood vessels are independently and even primarily affected by the stimulus applied The two supple- ments one On the Influence of the Nervous System on the Arteries and the other On the Pigmentary System of the Frog were both warmly approved and recommended for publication in the *Philosophical Transactions* The seventh letter refers to Lister s candi- dature for the regius professorship of surgery in the University of Glasgow In this he was successful and he removed from Edinburgh to Glasgow in 1860 although the last letter dated 1864 is headed 11 Rutland Street Edinburgh ' In this last letter Lister discusses medical education and qualification Glasgow University and other Scottish schools had remodelled their methods of testing the professional competence of their students by substituting class exam- inations for final examinations of degrees and licences Lister cordially approved of the change which he thought would prove an immense boon to the better class of students He was perhaps unduly optimistic when he foretold nearly seventy years ago that the new system would render any reduction of the curriculum quite unnecessary Unfortunately there are still many complaints of its overloading Mr Rudolf has pre sented these letters to the Royal College of Surgeons of England where they will form part of the collection of Lister s papers in the library

[1] *Report on the Strangeways Collection of Rheumatoid Joints in the Museum of the Royal College of Surgeons* By R Lawford Knaggs M C F R C S With numerous micrographs by G H Bodman M D F R P S Bristol J Wright and Sons Ltd Simpkin Marshall, Ltd.

VOLUNTARY AID SOCIETIES

The following societies have been recognized by His Majesty s Government as voluntary aid societies for the purposes of the International Convention for the Amelioration of the Condition of the Wounded and Sick in Armies of the Field which was signed at Geneva on July 27th 1929 The British Red Cross Society the Grand Priory in the British Realm of the Venerable Order of the Hospital of St John of Jerusalem and the St Andrew s Ambulance Association The Army Council in pursuance of its powers under the Geneva Convention Act of 1911 has permitted these recognized voluntary aid societies subject to certain conditions to make use of the Red Cross emblem which is the distinctive sign of the medical services of armed forces Unauthorized users of the emblem are liable to pro- ceedings under the Geneva Convention Act

We have to announce with deep regret the death of Dr J R Drever late Scottish Medical Secretary of the British Medical Association An obituary notice will appear next week

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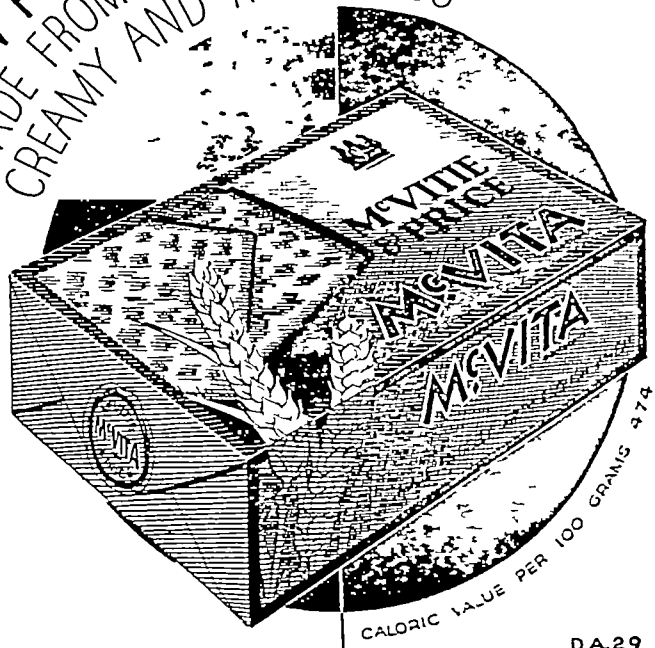

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MEDICAL RESEARCH COUNCIL

ANNUAL REPORT FOR 1931-2[1]

(*Concluded from page 529*)

CLINICAL RESEARCH

Reference has already been made to the endowment by the Rockefeller Foundation of the directorship of the department of clinical research at University College The work of this department has always been closely directed to the problems of cardiac and vascular disorders, but it is not to be thought that this will be its sole occupation in the future The scope of its activities has been deliberately widened There has been, so to speak, a centrifugal spread of research from the special study that for years has been made on the cardiovascular system Investigations of hypertension and cardiac asthma bring in their train problems of kidney function, study of which, in its turn, leads to " a general exploration of the symptom ' headache ' " It has been shown that pain in an active limb muscle deprived of its blood supply is due to a purely chemical or physicochemical stimulus developed in the muscle These researches into the painful effects of ischaemia in limb muscles have an important bearing on the pain of angina pectoris There is now little doubt that the old theory that anginal pain is the result of relative or absolute ischaemia is correct Prolonged obstruction of the blood supply to a human limb brings about paralysis of the limb nerves, and there is a simultaneous motor and sensory paralysis Sir Thomas Lewis, Dr Pickering, and Dr Rothschild have shown how this paralysis occurs On the sensory side loss of sensibility to touch is followed by loss of that to heat, cold, and pain, starting at the extremities and spreading centripetally On the motor side a similar spread occurs, the extensors suffering before the flexors This " ischaemic paralysis " is strikingly similar to that found in peripheral neuritis It has been proved that there is an increased sensibility to oxygen-lack as the nerves pass from their peripheral endings to the central nervous system Experiments by Sir Thomas Lewis and Dr Pickering provide evidence for the existence in human sympathetic nerves of vaso-dilator fibres which are stimulated when the body is warmed The latter's researches indicate that the chief mechanism for maintaining the body temperature constant during changes in the environmental temperature is central, the peripheral skin reflexes being of less importance

EXTERNAL RESEARCH SCHEMES

Dr Carmichael, Professor H H Woollard, and Mr J E H Roberts, in a clinical investigation of referred pain from the diaphragm, have demonstrated that this pain is not altered by local anaesthesia of the painful area This supports the theory that referred pain is central Last year it was shown by Professor E Mellanby and his colleagues that demyelination of the spinal cord similar to that occurring in convulsive ergotism, pellagra, and subacute combined degeneration, followed a diet deficient in vitamin A in the presence of ergot or with a high cereal intake It has now been shown that lathyrism—a nervous disease in those parts of India where lathyrus peas are eaten—can be produced by a diet deficient in vitamin A and containing the lathyrus pea known as Akta The dietetic conditions that produce degenerative changes in the spinal cord also cause demyelination of medullated fibres in peripheral nerves These results may have a bearing on some of the common nervous disorders in this country and Professor Edward Mellanby and his colleagues are now investigating the therapeutic effects of diets rich in vitamin A in disseminated sclerosis and subacute combined degeneration of the cord At the National Hospital, Queen Square, Dr E A Carmichael has had a grant for assistance in studying the effects of diet on epilepsy subacute combined degeneration of the cord, and other nervous diseases Careful sensory tests have revealed a peripheral and a central type of nervous affection in pernicious anaemia, the former also differing from the latter in its favourable response to liver therapy

Dr Dorothy S Russell, working on malignant tumours of the brain has found in the nuclei of many gliomata eosinophil inclusion bodies indistinguishable from those seen in some virus diseases With the help of Dr S P Bedson an attempt is being made to transmit gliomata experimentally Experimental work at the Cardiff City Mental Hospital, under the general direction of Dr P K McCowan, has shown that there is a relation between the blood sugar level and the emotional tension in manic-depressive patients The effect of narcotics on nervous oxidative processes is being investigated with a view to throwing light on the biochemical mechanism of narcosis

An abnormally high chloride content of the pons has been found in deaths in convulsion, whatever the cause, and at the Epileptic Colony, Lingfield, the relation between the fits in idiopathic epilepsy of diuresis and chloride excretion is being examined Professor J J R Macleod and Dr J M Petersen, studying the nervous control of carbohydrate exchanges, have demonstrated that damage to the brain anterior to the pons is not attended by any change in the blood sugar content Damage to the pons itself, however, is always accompanied by hyperglycaemia

Dr S J Hartfall, working under Dr A F Hurst and Dr L J Witts, has observed that in the crises of pernicious anaemia and aplastic anaemia the phagocytic power of leucocytes is much depressed, while in simple achlorhydric anaemia this depression is much less evident At the Royal Infirmary, Manchester, Dr J F Wilkinson and Dr L Klein have been investigating the activities of a large number of commercial preparations of hog's stomach for the treatment of pernicious anaemia and suggestions as to how to improve these preparations have been made to the manufacturers The improved liver preparation for parenteral administration has continued to give good results Dr Klein is furthering his researches into the effective substance in stomach extracts Professor Stanley Davidson of Aberdeen has succeeded in preparing a highly potent liver extract from fish livers, which may reduce the cost of treating pernicious anaemia Dr L G Parsons and Dr E M Hickmans have found that the curative effect of yeast in experimental nutritional anaemia depends upon a combination of iron, copper, and the vitamin B complex In a clinical study of the anaemias of childhood they conclude that these fall into two groups those due to nutritional defects, and those in which increased blood destruction follows infective and other causes At Queen Charlotte's Hospital further work is being done on puerperal fever under the direction of Dr Leonard Colebrook Dr Dora Colebrook is investigating the relation between puerperal fever and throat infections, and the antiseptic methods used in midwifery are being reviewed in the light of modern knowledge The therapeutic effects of the organic arsenicals on puerperal infections are being studied

BIOLOGICAL STANDARDS

The work on biological standards at the National Institute for Medical Research embraces vitamin A, pharmacopoeial, sex hormone and insulin standards Quantities of nearly pure carotene, from seven sources in six different countries have been collected

[1] Report of the Medical Research Council for the Year 1931-2. 1933 H M Stationery Office (2 net)

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LISTER MEMORIAL LECTURE

Sir Charles Ballance who delivered the Lister Memorial Lecture at the Royal College of Surgeons of England on April 5th opened with a warm appreciation of Lister's personal character high ideals and enduring achievement Coming in his early professional life under the influence of men famous in physiology chemistry physics and micro copy Lister had swiftly developed an outstanding aptitude for mental concentration His first studies were naturally directed to the elucidation of the fundamental problems of physiology and pathology as was indicated by the subjects of some of his earlier papers—namely the contractile tissue of the iris the structure of a nerve fibre the coagulation of the blood the early stages of inflammation the nervous mechanism regulating arterial contractions and intestinal movements and the absorption of ligatures by living tissues He had quickly realized the importance of Pasteur's discoveries but it was not until August 1865 that Lister had been able to show in a case of compound fracture that putrefaction in wounds was due to micro-organisms Subsequently he published paper after paper on this subject until August 1880 when he delivered his well known address on the relation of micro-organisms to disease

Sir Charles Ballance then recalled his own personal association with Lister from 1877 As a student he had witnessed the performance by Lister at King's College Hospital of the first operation in London for the repair of transverse fracture of the patella Later after study in Germany Sir Charles had renewed and intensified his personal friendship with Lister which had illumined his life as a struggling young surgeon and in association with the comradeship of Sir James Paget had set the course of his professional career The lecturer then briefly detailed his own more recent work in connexion with the National Institute for Research at Hampstead the laboratories of the Royal College of Surgeons and the Laurelwood Laboratory eighty miles from New York In the last of these the investigation of nerve grafts had been an outstanding feature of his collaboration with Dr Arthur B Duel

SOME RECENT RESEARCHES

The lecturer proceeded to describe with the aid of lantern illustrations certain lines of recent work which would he thought have been of special interest to Lister

The first of these was the observation of the regressive changes in the cells of the facial area of the left Rolandic cortex following experimental interference with the right facial nerve (1) by grafting this nerve to another (2) by substituting a portion of it by a portion of another nerve in the aqueduct of Fallopius and (3) by removing the facial trunk and its continuation in the aqueduct It had been found that the nerve grafting operation in the aqueduct was associated with a much more rapid return of function in the facial muscles than when the facial nerve was anastomosed to another nerve It was probable that in the former case a living connexion through the graft between the Rolandic cortex and the peripheral facial nerve was established long before there was any evidence of return of function in the facial muscles The early regressive changes observed in the large pyramidal cells were (1) the disappearance of the Nissl granules except at the base of the axon (2) diminution of and alteration in the shape of the body of the cell the protoplasm of which became granular (3) loss of the cell processes the axon persisting for a longer time than any of the others and (4) the possible assumption by the nucleus of an eccentric position

The second line of work recalled Lister's first contribution to science being a study of the contractile tissue of the iris Lister had experimentally found evidence supporting the pronouncement by Kolliker in 1848 that all plain muscle tissues had a cellular constitution He had agreed also with Kolliker that the sphincter fibres were readily seen but that the dilator fibres were only to be investigated with difficulty the latter probably consisted of many narrow bundles which ran inwards separately between the vessels and were inserted into the sphincter border Sir Charles Ballance had confirmed these conclusions and agreed that the radial fibres were hard to demonstrate He showed lantern slides of preparations of the iris of the horse and of the albino rabbit these displayed the sphincter and radial muscles and the nerve supply of the iris There were faint indications that the nerve supply of the plain muscle fibres of the iris was comparable with the nerve supply of the plain muscle fibres of the bronchi

An attempt had been made to cultivate the cells of the embryo sciatic nerve in the egg in the subdural space and by the ordinary methods of tissue culture The egg experiments had failed Kanji Arai of Japan had transplanted portions of peripheral nerve into brain tissue and had reported the occurrence of a temporary but definite regeneration of the medullary sheaths The lecturer described one of his own experiments in which a fragment of the sciatic nerve of a kitten had been implanted in the subdural space of a young adult cat When removed and examined twenty nine days later no sign of the presence of axis cylinders was discovered and this contrast with the conclusions of the Japanese observer required further experimental consideration Lantern slides demonstrated the results of tissue culture experiments Myeline was shown to be present in the neurolemma cell and two kinds of cell were discernible in the cultures

Another investigation recalled Lister's work on the application of ligatures to arteries in which he had found that a peritoneal ligature applied to the common carotid artery of a calf was absorbed after thirty days being substituted by a band of living tissue which was continuous in structure with the arterial wall In the words of Lister

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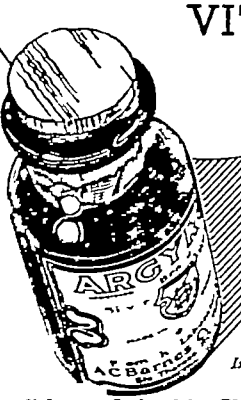

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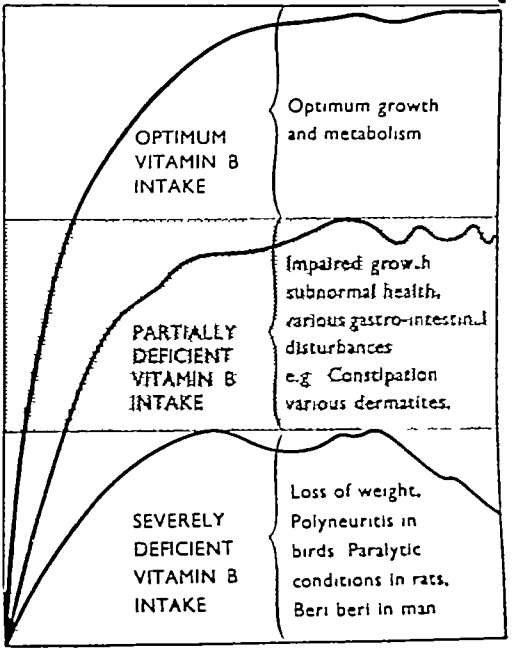

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to a large branch, secure against secondary haemorrhage For my own part I should now without hesitation undertake the ligation of the innominate artery, believing that it would prove a very safe procedure"

Sir Charles narrated the part he had played in this work, and his subsequent extension of it, including the disintegration of such foreign bodies as ligatures by cellular proteolytic ferments and their subsequent absorption

Passing to the consideration of double lateral implantation of the ends of a damaged nerve into the side of a neighbouring intact nerve, the lecturer recalled the frequent occurrence during the war of the destruction of one nerve for a considerable distance, while another lying near it was undamaged The arm, the forearm, the popliteal space, and the brachial plexus had been the sites of these injuries The ends of the destroyed nerve could not be brought together, so they had been united end to side of the neighbouring intact nerve It had been found that the part of the intact nerve lying between the anastomoses acted as a living graft, and that these operations proved to be successful from the functional standpoint when such treatment as movement of the joints and massage was continued intelligently for a long period He had been able to study the sequence of events in such cases, and to find out how recovery had actually occurred He believed that this procedure would become of increasing surgical importance, for it was obviously better to employ a living nerve as a graft than to transfer a portion of nerve from some other region of the body, and to inveigle it into position between the two ends of a divided nerve

The last of the investigations mentioned by Sir Charles Ballance related to the histology of sterile incubated carcinomatous and healthy tissue, a line of work he had begun in 1885 in co operation with Professor Shattock It had been found that there was a projection of chromatiniferous granules from the nuclei of the carcinomatous cells, which had been likened to the phenomena attending the working of a process of sexual division Such a projection had never been seen in normal tissues incubated under the same conditions The negative results obtained by grafting experiments did not necessarily disprove the presence of an infective agent in carcinoma, but only implied that the method employed to demonstrate it was unsuitable It remained possible that the migration of chromatiniferous granules from the carcinomatous nuclei had some bearing on the problem of cancer aetiology

RECOLLECTIONS OF PRE LISTERIAN SURGERY

In two notes appended to the lecture Sir Charles Ballance describes briefly pre-Listerian surgery, and recounts some personal memories of the years 1880 to 1890 In 1875, when he had entered St Thomas's Hospital, nearly all the few operation cases were complicated by infected wounds one patient had died a week after an operation for haemorrhoids as the result of secondary haemorrhage pyaemia and tetanus Yet some recovered, after having been treated as a rule by numerous incisions, chlorinated-soda poultices and the internal administration of ferric perchloride and unlimited brandy

Those who have recently joined the profession cannot in any way realize the paralysis of surgery sixty years ago in the presence of suppuration cellulitis erysipelas septicæmia pyaemia acute traumatic gangrene and tetanus for which diseases there was as yet no means of prevention and no remedy

In 1880 as a house surgeon he had performed an amputation using Listerian antisepsis and Neuber's decalcified bone drainage tubes The dressing was removed on the fourteenth day and the wound was found to have healed without pain or fever The tubes could not be extracted, having become firmly fixed within the stump by the living cells, which were beginning to absorb and replace them, the ends were consequently cut off with scissors flush with the surface

In the same year he had attended a lecture by Sir John Burdon Sanderson in which the results of an investigation were described to show that scrofula could not be a specific disease, since it could not be held conceivable that the specific agent could be in three different places at the same time Sir Charles Ballance had been present also at the meeting of the Physiological Section of the International Medical Congress in 1881, when Ferrier had demonstrated the truth of the doctrine of cerebral localization During his stay in Germany the lecturer had attended the first class in bacteriology in Leipzig each member had to prove the specificity of each known pathological organism by himself carrying out to the satisfaction of the lecturer (Becker) Koch's four postulates Other work undertaken by him in that city included arterial ligation and other surgical procedures and the obtaining of the anatomical models of organs prepared by His for St Thomas's Hospital In 1886 he had visited the Pasteur Laboratory in Paris when work on rabies was in progress, considerable confusion at that time being caused by the fact that the tetanus bacillus had not been identified

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE SOCIETY

The annual general meeting of the Medical Sickness Annuity and Life Assurance Society was held at the First Avenue Hotel, High Holborn W C on April 5th, under the presidency of Dr F C MARTLEY

CHAIRMAN'S ADDRESS

The chairman said that owing to the closing date of the financial year having been changed to December 31st to meet the requirements of the Companies Acts, they met to receive the directors' report for six months to December 31st 1932 It was gratifying to note that in spite of exceptional difficulties the volume of new business was quite satisfactory The investment position occupied a great deal of the directors' time and was one of their most difficult problems Since the last general meeting the pension and insurance scheme applicable to practitioners working under the National Health Insurance Act had been launched by the Insurance Acts Committee of the British Medical Association, and the society was one of the companies chosen to undertake insurance in connexion with the scheme It had been found that in the drafting of policies to be issued the society in certain circumstances became trustees in dealing with the benefits Until the society did not possess the special powers to undertake this class of business it was considered advisable to apply for such powers at the earliest possible moment and to make the necessary alterations in the Memorandum of Association The directors also thought it desirable to extend their power to include the issue of what were known as capital redemption or sinking fund policies which were frequently required in connexion with various leasehold properties and other business arrangements If the meeting approved the proposed alterations a formal application would have to be made to the courts before the resolution could become operative

On the motion of the chairman the directors report for the six months ending December 31st 1932 was unanimously adopted Dr W Knowsley Sibley and Dr G de Bec Turtle were re elected directors, and Messrs Sturges Fraser Cave and Co as auditors The meeting unanimously approved the proposed alteration in the Memorandum of Association recommended by the directors The recommendation to pay an interim bonus on all with profit policies for permanent and accident insurance and life assurances becoming claims during 1933 was approved

On the motion of Sir William Willcox a vote of thanks was accorded to Dr Martley for his work on behalf of the

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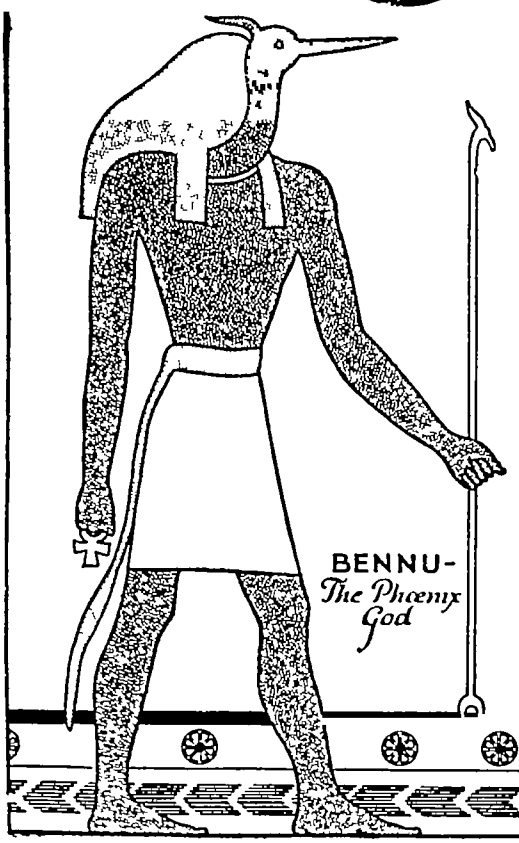

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South Africa

[FROM OUR CORRESPONDENT IN PRETORIA]

Gold Medal for Meritorious Services

The Gold Medal for Meritorious Services of the Medical Association of South Africa (British Medical Association) has been awarded on two occasions only the second recipient being Dr A J Orenstein the retiring president of the Federal Council His services to the present Association have been so conspicuous that his selection for the medal met with immediate enthusiastic approval throughout the profession in South Africa His first appointment as president was for a period of three years at the end of that time he was unanimously re-elected His successor is Mr T Lindsay Sandes of Capetown another very popular appointment

Bacterial Food Poisoning

An outbreak of food poisoning which occurred on the Durban–Johannesburg train on February 9th attracted much public attention and the subsequent inquiry was closely followed by the local press Of the twenty four passengers who partook of the dinner provided in the dining saloon nine became ill one subsequently dying All the fifteen members of the train staff who were supplied with food from the saloon developed symptoms In every case there was acute gastro-intestinal irritation with vomiting and diarrhoea as well as constitutional symptoms high temperature prostration and cramps suggesting that Salmonella organisms had been ingested with a considerable quantity of their toxins Stools from nine of the patients were examined by the South African Institute for Medical Research and from eight of these *Bacillus aertrycke* was isolated Blood serum collected from the ninth patient on the eighth day after onset showed that he too had suffered from *B aertrycke* food poisoning His serum agglutinated the institute's stock strain of the bacillus and also the strain isolated from the stool of one of the other patients Samples of foodstuffs eaten by the patients of the ice and water carried on the train swabs from various receptacles mice caught in railway food depots etc were also bacteriologically examined *B aertrycke* was recovered only from the ice and from certain food substances (veal and green peas) which had been placed in the ice box after cooking The surface of the block of ice from which the bacilli were isolated had been previously treated with boiling water and placed in a sterilized receptacle It became evident that blocks of ice infected with the organism had been taken on the train at Durban and put in the ice box of the saloon Food was placed in close contact with the melting blocks and the contamination could thus be accounted for

Health of Natives on Witwatersrand Mines

As a result of the Union's departure from the gold standard the mining industry has reaped considerable benefit an immediate effect of which is an increase in the native labour complement Much native labour is available owing to the general financial depression and also to the Government's civilized labour policy of putting unemployed Europeans on to railway and road construction very largely at the expense of the native labourers previously employed Increased development on the gold mines therefore will bring considerable relief to the native territories where living conditions have of recent years sunk very low in times of drought reaching starvation level requiring extensive Government succour The gold mines of the Witwatersrand employ a quarter of a million Bantus recruited from the native territories These natives leave their homes and families for the period of their contract which never exceeds a year There is therefore a complete turnover of native labour at least once a year While on the mines the natives are housed in compounds each accommodating on an average about 3 000 Gold mining is a hazardous occupation and the maintenance of the health of such a large army of uncivilized labourers presents many problems Successful mining of the relatively low grade ore of the Witwatersrand depends very considerably on cheap labour The margin for improvements in diet and housing is therefore small Nevertheless extensive improvements have been made during recent years and the standard of health of these workers is now very high This is the more creditable when it is realized that the bulk of them arrive on the mines in a very badly nourished condition due to the fact that they will not present themselves to the recruiter until driven to do so by sheer hunger It is a well known fact that the native returns to the territories after serving a period of contract on the mines weighing considerably more than when he left The malnourished recruit readily succumbs to scurvy if put on to hard work at once and to prevent this antiscorbutics in the form of vegetables and germinated beans are added to the maize meal porridge on which the native largely subsists Scurvy once a widespread condition on the mines is now of very low incidence and is confined largely to recent recruits

The medical services of the Central Mining or Corner House group of mines which employs some 90 000 natives are directed from one central office Eleven mine medical and one research medical officer are employed with Dr A J Orenstein as superintendent of sanitation for the whole group Dr Orenstein's report for the year 1932 shows a considerable improvement in the morbidity and mortality rates of the previous two years The death rate per 1 000 from disease was 9 85 in 1931 and 7 74 in 1932 from accidents 2 98 in 1931 and 2 65 in 1932 The total number of working days lost through disease and accidents was 533 or 6 35 per 1 000 as against 7 1 per 1 000 in 1931 The commonest disease among these labourers is pneumonia which was responsible for 33 per cent of the total mortality from disease in 1932 Various measures were tried during the year in the treatment of pneumonia the most important being the use of concentrated vitamin A because of its presumed anti infective value Preparations were obtained with the assistance of the Medical Research Council and the Union Government The experiment covered 764 cases and was conducted simultaneously in three different hospitals Unfortunately the results proved entirely negative Dr Fox biochemist to the South African Institute for Medical Research carried out investigations at the same time on the vitamin A content of the livers of native mine workers and town workers His findings confirmed the conclusion based on the treatment experiment that vitamin A has no obvious effect on the course of pneumonia There was a creditable drop in the pulmonary tuberculosis incidence from 6 52 in 1929 to 3 11 in the year under review and only forty five cases of miners phthisis were recorded as compared with 117 in 1929 The number of cases of typhoid which very accurately reflects hygienic conditions fell from 571 cases (or 6 9 per 1 000) in 1931 to 234 (or 2 8 per 1 000) in 1932 The preventive measures against ankylostomiasis which consist in the intensive treatment of underground latrines with salt have proved most effective A large proportion of the labourers recruited in Mozambique arrive on the mines infested with hookworm Unless precautions are taken the warm moist and dark conditions encountered underground favour rapid spread The effectiveness of the

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preventive measures is best gauged by the number of new cases reported among the European miners in 1928 this was 205, in 1932 it had been reduced to 53

To minimize the risk of heat stroke in the very deep, hot levels recruits are put through an acclimatization process lasting about fourteen days They start with light work in less hot stopes and work up gradually to full work in the hottest stopes In spite of this precaution some natives appear to be specially susceptible to heat, and an experiment was initiated to ascertain whether it would be possible to eliminate such individuals After various methods had been tried a chamber was improvised on the City Deep in which a temperature of about 94° F could be maintained in a water-saturated atmosphere A technique has now been devised whereby the recruits are divided into three groups those showing no special susceptibility to heat, those who are slightly susceptible, and those who are markedly so During 1932 the recruits allocated to the first group were put into an acclimatization gang for only five days, those of the second group for seven days, and those of the third for the full fourteen days Results have entirely justified this procedure not only has there been a reduction in heat stroke incidence, but there has been a great saving in working shifts at the mine The chamber is now being reconstructed on an improved plan, and a second one is being erected at another deep level mine There is every reason to believe that more accurate classification of recruits will become possible, with a further reduction in the number of heat stroke cases and a shortening of the total period now taken up in acclimatization

Ireland

National Health Insurance Bill

The National Health Insurance Bill was introduced in the Dail on April 4th, and its contents have now been circulated among the members The main object of the Bill is the unification of all the approved societies in the Free State, and the work hitherto done by the various national health societies will be carried out by a single statutory committee called the Committee of Management of the Unified Society It will be constituted as follows (1) the three trustees of the Unified Society, (2) nine persons representative of members of the Unified Society, and (3) three persons representative of employers of insured persons The members' representatives shall be elected by the Unified Society, and the employers' representatives shall be appointed by the Minister and be removable by him Every member of the committee of management of the Unified Society shall be paid by the society such allowances as the Minister may determine There shall be three trustees of the Unified Society Until these are appointed the members of the provisional committee shall act as the trustees of the Unified Society The following provisions shall have effect in relation to the trustees of the Unified Society when they have been appointed (*a*) the said trustees shall be appointed by the Minister (*b*) each trustee shall unless he dies, resigns, or is removed from office by the Minister, hold office for the prescribed period but shall be eligible for reappointment The trustees of the Unified Society may (1) sell or lease any land held by them on behalf of the Unified Society and (2) purchase or take on lease land on behalf of the society The powers conferred on the trustees of the society shall not be exercised except with the consent of the Minister There shall be a full-time secretary and treasurer of the society the treasurer shall also be the assistant secretary These officers, subject to the approval of the Minister, shall be appointed by the committee of management A member of the committee of management, or an officer or an employee of the Unified Society, shall not be a member of the committee of management or board of directors of any society or company transacting insurance business, or be employed by such a company

Sir Patrick Dun's Hospital, Dublin

At the annual general meeting of Sir Patrick Dun's Hospital reference was made in the annual report which was presented by Dr T G Moorhead chairman of the board of governors, to the need for extensions and reconstruction, and this, it was stated, was borne out by the Committee of Reference of the Public Charitable Hospitals (Amendment) Act, 1931 The sum asked for the hospital in the claim sent to the Committee of Reference was £527,033, and the total award was £348 331, of which £146,625 was allotted for endowment The governors, however, felt that £274,216 would be required for endowment Up to the end of 1932 the amount received was £134,191, and the governors considered that they should advance with caution, and did not therefore, intend to proceed with further building until a sufficient sum had been obtained The report mentioned that references had been frequently made to the fact that poor patients found difficulty in gaining admittance to Dublin hospitals No conclusive evidence in support of this assertion appeared to have been produced, the matter, however, merited careful investigation So far as that hospital was concerned, the governors wished to state most emphatically that sickness and suitability for hospital treatment had first claims Intern patients treated absolutely free constituted 40 75 per cent of the total admissions in 1932 This fact, Dr Moorhead said, should warrant them in still asking for the support of the charitable public He said that subscriptions had fallen off in a serious manner and it was indicated that the corporation was going to cut down its grants this year The governors in their report, expressed the opinion that amalgamation of some of the smaller Dublin hospitals would be advantageous or, failing that, some scheme of co-ordination or federation The report concluded with an expression of deep regret at the loss of Sir William Taylor and Dr Walter G Smith

County Dublin Medical Officer of Health

At a recent meeting of the County Dublin Board of Health, arising out of a report from Dr Harbison county medical officer of health, Mr Rollins said they would have to consider the appointment of an assistant county medical officer of health The Dun Laoghaire Borough scheme school medical inspection, etc, were held up owing to the impossibility of the county medical officer of health being in several places at the same time The secretary read a letter from the Minister of Local Government and Public Health concerning the appointment of an assistant county medical officer of health, stating that the Minister did not consider that the duties of the existing district medical officers related to matters the same as or similar to the duties of an assistant county medical officer of health and he could not, therefore, approve the appointment being made by the board from amongst its existing medical officers The secretary said that, with a view to having the appointment left in the hands of the board, he had been making some private inquiries, and he believed the Department of Local Government and Public Health could not see its way to allow the board to make the appointment from its own district medical officer If the board wanted its school medical service scheme developed it would have to give way and ask the Appointments Commissioners to make the appointment

CORRESPONDENCE

X Rays in Treatment of Graves's Disease

SIR —The correspondence which has recently appeared in the *Journal* on the treatment of toxic goitre was less illuminating than it might have been since with the notable exception of Dr G R Murray's letter it partook rather of the nature of a controversy in which the protagonists made extreme statements according to their particular bias In clinical medicine and surgery extreme statements seldom represent the truth In effect the surgical side on the one hand claimed that radiology in toxic goitre is useless (if not actually harmful) and the radiological side on the other that surgery is superfluous (if not actually dangerous) It seems to me to be necessary therefore to attempt to state the position in a somewhat more judicial manner than has yet been done

Although writing as a surgeon I am perfectly ready to admit that excellent results may sometimes be obtained by *x* rays when they are applied by an expert and that no damage to the skin or other tissues need follow On more than one occasion in patients of mine in whom for one reason or another treatment by surgery could not be completed satisfactory results have followed *x* ray treatment with diminution in the size of the gland Other patients whom I have seen had been very greatly benefited by *x* rays alone On the other hand I have operated on a number of patients in whom *x* ray treatment had produced little or no improvement and I have under treatment at the present time a patient with an extensive epithelioma of the neck following an *x* ray burn The treatment in this case had not only burnt the skin but had also failed to cure the toxic goitre Clearly therefore it is a gross exaggeration to state as was done in one of the preceding letters that *x* ray treatment is the treatment of choice It would be equally untrue to say that surgery is the treatment of choice since therapeutic measures must always be adapted to the needs of the individual patient

There is however this to be said in favour of surgery that the results are obtained in a fraction of the time required by the radiological treatment Many patients cannot or are unwilling to endure the weeks or months of invalidism entailed by non surgical measures and are thankful to suffer two or three days of pain or discomfort in order to obtain the more rapid benefits of surgery Also it is necessary now to deny that operation for toxic goitre is any longer a dangerous procedure An immediate operative mortality of 1 per cent such as I have experienced in a consecutive series of over 200 operations does not constitute a serious danger Some of these patients moreover were so ill that they would shortly have died had they not received a drastic form of treatment such as surgery What of the patients who die of the disease while awaiting the result of *x* ray treatment? These constitute a *non operative mortality* concerning which there is nothing but silence Those patients particularly with fibrillating or otherwise damaged hearts cannot be kept waiting since the heart demands immediate relief

It appears to me therefore that both *x* rays and surgery have their place in the treatment of toxic goitre Neither method effects a cure but both can claim to place patients on a new and better level of existence My own bias is towards the one of which I have had more experience and which gives on the whole results that may be regarded as highly satisfactory and are obtained with the minimum delay I do not deny however the great value of the other method in suitable cases —I am etc

London April 7th GEOFFREY KEYNES

Treatment of New Growths by Fluorescein and X Rays

SIR —A short holiday must be my excuse for not replying to Dr S Monckton Copeman's letter before The news from America to which he refers will be of great interest to all who are concerned with biophysical problems and it is good to hear that further information on the subject will soon be forthcoming Nevertheless if some specific secondary radiation is produced in sodium fluorescein solutions by *x* rays I should have expected more definite evidence thereof in my own series of clinical cases and of animal experiments In the former as I said the effects of the fluorescein were practically negligible in the latter microscopical examination of the tissues showed no difference between specimens irradiated with or without fluorescein

As regards Dr C Gouldesbrough's comments the dogmatic statements in his letter are his not mine I did not once use the expression obvious from the first His last paragraph wherein he thanks me for my sincerity of purpose is indeed gratifying I can only say with Dr Johnson that to be so distinguished is an honour which being very little accustomed to favours from the great I know not well how to receive or in what terms to acknowledge —I am etc

London W 1 April 8th HECTOR A COLWELL

Duodenal Feeding

SIR —As the radiologist concerned in the examination of most or all of Dr Harold Pritchard's experimental group of cases of duodenal feeding I can assure Dr Ernest Young I saw the films demonstrated at the Medical Society of London and listened to the discussion afterwards but did not join in owing to the late hour at which it terminated Dr Pritchard's cases were strictly comparable with those shown by Dr Cordiner and the only selection was I believe to exclude complications such as perforations with fixation and excavation of the pancreas or possible carcinoma where surgical treatment was more appropriate Dr Cordiner's cases did not suggest any complicated ones either Size was no drawback in Dr Pritchard's group

Whatever the clinical results may have been I have never discovered any advantages from the *x* ray point of view from duodenal feeding The films shown by Dr Cordiner did not demonstrate any advantage gained by this method The large majority of uncomplicated gastric ulcers yield readily to adequate medical treatment a few are obstinate On two occasions I saw one ulcer heal while another developed near by or some distance away Unfortunately the same cannot be said of the duodenal ulcer where I can detect definite *x* ray evidence for long periods after the subsidence of symptoms Such cases take three to twelve months or longer to heal up permanently It is only right to add however that the detection of such evidence requires considerable refinement in technique which is not published in any textbook I know of Apparent *x* ray cure is obtained in shorter periods

I believe that duodenal feeding is founded on a definite fallacy—namely that reversed peristalsis in the duodenum is an abnormality This is not so for to-and-fro peristalsis is essential to secure proper admixture of chyme with bile and pancreatic and duodenal juices Duodenal ulceration or inflammation only exaggerates this peristalsis in most cases though in varying degree The tube should proceed into the fourth stage or the jejunum to be effective —I am etc

London W 1 April 6th JOHN R WYLIE

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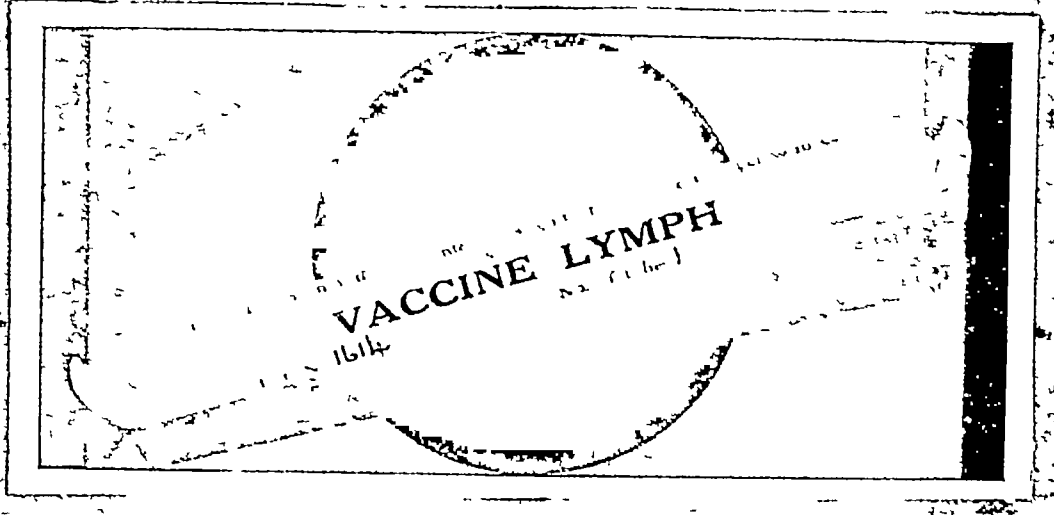

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Reaction after Injection of Sodium Morrhuate

SIR,—I had read with interest the recent correspondence concerning the untoward sequels following the injection of sodium morrhuate, but remained unconvinced. Having used the drug on a large number of cases, with entirely favourable results and without trouble, I felt that there must be some explanation to account for these cases, and that the risk was not a very real one in ordinary circumstances. This contempt, bred of familiarity, has led me to use the drug once too often, and, without wishing at this point to enter into any controversy as to the nature of the collapse, I append the following brief case history as a warning to others, being convinced that until the true explanation is forthcoming, so that further and similar trouble may be avoided, this drug should not again be used for the injection treatment of varicose veins.

A healthy man, 45 years of age, suffering from varicose veins below the knee of moderate severity, had the first injection on March 12th—2 c.cm. sodium morrhuate. There was no interference with ordinary activity and an excellent result. A second similar injection on March 19th produced a fair result. On April 2nd the third injection, 3 c.cm., was given into an empty vein. It was followed in about one and a half minutes by a sense of discomfort and pain in the tongue and mouth spreading rapidly over the entire body. The face quickly became blotchy red and suffused, and a profuse sweat involving the whole body and associated with flushing of the skin occurred. The hands and forearms became blanched and cold, the radial pulse could not be felt, nor could the heart beat be heard. There was no interference with respiration, and consciousness was not completely lost. The axillary temperature was not sufficient to move the mercury from 94° F. The patient was laid flat, with the feet raised, and cardiazol and camphor in oil 1 c.cm. of each were injected as stimulants. The patient was very restless and after a few minutes began to complain of colicky pains which continued and increased throughout the attack. At the end of about one and a half hours the heart beat could again be heard faintly, but the radial pulse was still impalpable at the end of three hours. About two and a half hours after the onset there was a copious vomit (some spirits and coffee had been taken by the mouth) and at the same time a very free loose evacuation of the bowels. The general condition at this time ceased to give cause for any great anxiety, but the abdominal pains continued. About an hour later the patient fell asleep, and six hours after the onset it was possible to remove him to his home, where he continued to improve.

It is of great practical interest to observe that this patient received his dose from the same bottle as that which had been used on previous occasions—both for him and for other patients—and also that he had, in exactly similar circumstances, received on two previous occasions injections without any untoward consequences at all.—I am, etc.,

Liverpool, April 3rd. C. ALEX. WELLS.

Puerperal Pyrexia

SIR,—The report from Queen Charlotte's Hospital Isolation Block, which was read by Mr. Carnac Rivett at the Royal Society of Medicine and appears in the *British Medical Journal* of April 8th, is of great value and interest. It shows the difficulty of elucidating the most important or the most common cause—if there be one—of acute puerperal infection. The presence of anaerobic streptococci in the blood stream, as proved by Dr. Colebrook, is a fact of considerable importance. The result of the paper and discussion shows that the mortality from acute puerperal infection is high and that no new specific treatment is yet available. I should, however, like to draw attention to the importance of the early diagnosis and treatment of all cases of puerperal pyrexia so as to prevent the mild cases from becoming acute or fatal, and if possible aborting the infection in its early stages. It is agreed that the important—perhaps the most important—factor is the general resistance of the patient, and that good nursing, fresh air, and nourishing food are essential. In addition to this I think that, as a routine medicinal treatment, quinine bihydrochloride given by intravenous or intramuscular injections is the most useful of all drugs. It has been my custom for many years to recommend it at the very onset of pyrexia after labour or miscarriage, and the reaction and results have been most satisfactory. Its exact mode of action has not yet been elucidated, but I hope that Dr. Colebrook will be able to do some experimental work with this drug in the course of the very valuable work he is now doing.—I am, etc.,

Bournemouth, April 8th. S. GORDON LUKER.

Caecostomy

SIR,—I was much interested to read Mr. Wilfrid Adams's letter (*Journal*, March 25th, p. 539) commenting upon my advocacy of caecostomy for obstruction of the colon. He raises a point of great importance, for if the colon cannot be cleared of faecal matter above the obstructing lesion by means of a caecostomy then the value of this procedure in cases of obstruction is very materially reduced. My own experience has been that at the second operation performed for the obstruction, lesion the bowel above the lesion has always been sufficiently empty to prevent any interference with a resection operation. I have never found solid or semi-solid faeces in the colon between the caecostomy and the obstructing lesion. In the case of an obstruction very low down in the rectum or lower end of the sigmoid, the colon above the obstruction cannot always be emptied by a caecostomy. Nor can this be done with certainty by a colostomy in the upper part of the sigmoid, but the contents can be entirely liquefied, and in most cases a large part, if not all, of the contents will have been evacuated by the rectum, if it has not passed back and escaped via the caecostomy. Very few obstructions are really complete, and, after the relief of the pressure above the liquefied contents often pass through readily.

My procedure is apparently not identical with that of Mr. Wilfrid Adams. I do not use a Paul's tube, or stitch the caecal wall to the parietes. I use a rubber tube about eight inches long and a quarter of an inch in diameter. This tube is passed into the caecum for two or three inches through a small incision and stitched with catgut (No. 1) to the caecum itself. A purse-string suture is then placed in the caecal wall so that when tied it turns in about half to three-quarters of an inch of the caecal wall around the tube. This method was described by me in the *Lancet* (1927, i, 1117). The caecum is then drawn up against the inner surface of the abdominal wall and the ends of the purse-string suture are passed through the peritoneum and aponeurosis, and tied so as to fix the caecum to the neighbourhood of the wound. The incision in the abdominal wall is closed, but not tightly so as to leave some drainage besides the tube. It will be noted that no part of the caecum is brought into the wound, much less to the skin. The advantage of this is that the opening will close without trouble and without secondary operation after the tube is removed, while the drainage of the caecum is just as effectual as if a Paul's tube had been used. When the operation is completed a long piece of soft rubber Paul's tubing is attached to the projecting end of the rubber drainage tube by wrapping thread round for a couple of inches. This makes a watertight joint. The end of the Paul's tubing is of course allowed to drain into a bowl put under the bed. The nurse is instructed to run [illegible] of water into the caecum every two hours. This is readily done by putting a glass funnel into the free end of the

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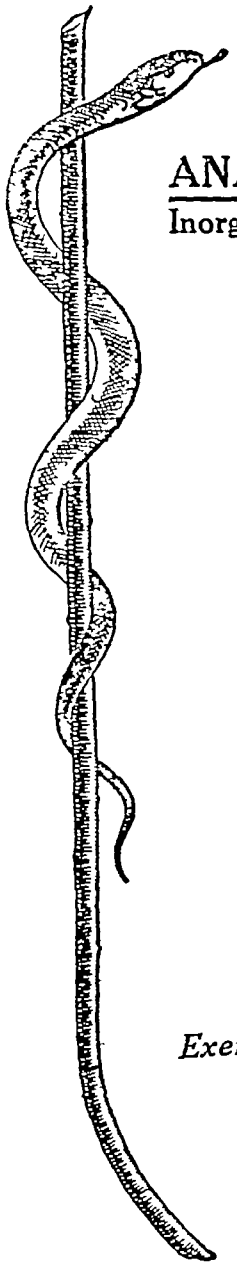

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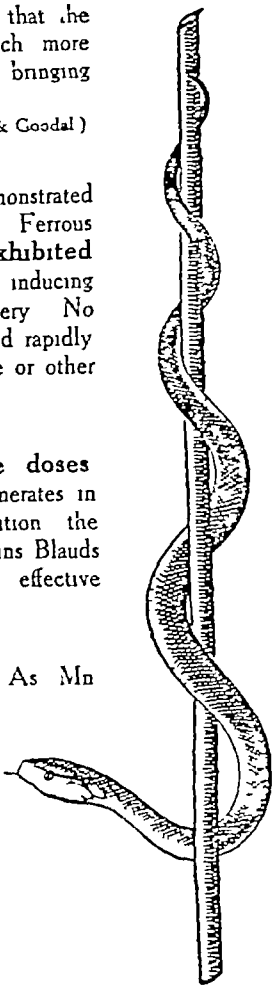

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Paul's tubing and it makes sure that the rubber tube into the caecum does not get blocked After twenty four hours half an ounce to an ounce of magnesium sulphate dissolved in one pint of water is run into the caecum and this is repeated as often as necessary In my experience this is very effectual in clearing the colon out through the tube In the course of two or three days I have seen enormous quantities of faecal matter which had clearly come from the distal colon cleared out in this way by the small tube in the caecum

I believe the important factor is the use of salts put straight into the colon which soon liquefies all the contents and readily allows it to escape by the temporary caecostomy A caecostomy done in this way is quite watertight for eight or nine days and I have never known the opening fail to close of itself I believe that if Mr Adams will try the method of irrigating the colon with a strong solution of magnesium sulphate he will find that the colon can be effectually cleared by a temporary caecostomy It is a matter of considerable importance that some certainty should be arrived at in this matter as in my opinion temporary caecostomy is a valuable means of saving life in cases of colonic obstruction but if the colon cannot be cleared in this way it loses more than half its value —I am etc

J P LOCKHART MUMMERY F R C S

London W April 3rd

Modified Bendien Reaction

SIR —Dr G Stewart Smith (*Journal* April 1st p 585) asks for comparative details with regard to the modified bendien reaction in cases of tuberculosis and pernicious anaemia and also mentions that with the unmodified chemical test which he has employed he has obtained positive reactions in cases of pregnancy jaundice and uraemia

I have found that except in pregnancy most of these conditions may be differentiated from malignancy by the modified three phase method which I have described although as regards first tube precipitation they may give positive reactions in the unheated serum phase The following are groups of cases which I think will illustrate these findings

Tuberculous Cases Colloidal Vanadium Reaction

	Malignant	Non malignant	
1	1.6/5	—	Pulmonary T B with recent carcinoma
2	—	1 25/15	Pulmonary T B cavitation sputum ++
3	—	1 7/52	" " "
4	—	2.10/23	" "
5	5.48/10	—	Chronic pulmonary T B with recent carcinoma of tonsil
6	3.5./20	—	Chronic pulmonary T B with carcinoma of lung
7	2.29,27	—	Carcinoma lung with T B in sputum
8	—	3 20/30	T B lung with sputum +++
9	—	7 0/27	T B larynx
10	1 9/7	—	Carcinoma of lung with T B in sputum
11	—	4 20/25	T B ulcer of fauces
12	—	3 30/57	Tuberculous salpingitis

In the above twelve cases it will be seen that seven were definitely tuberculous of more or less advanced degree six of which give first precipitations in the first second third and fourth tubes and therefore on the unmodified test would be read as positive results but on the differentiating fraction b the three phase modification all gave inflammatory and non malignant reactions The other five cases were also positive in that the first precipitation occurred in the first second third and fifth tubes but differed from the previous seven referred to in that the fraction was of the malignant type by the three phase method and in each of these tuberculosis was associated with malignancy

Anaemia Colloidal Vanadium Reaction

	Malignant	Non malignant	
1	—	8.24/30	Early pernicious anaemia
2	—	5 0/29	Definite moderate pernicious anaemia
3	—	6 19 28	Early pernicious anaemia
4	—	5 0 40	Moderate pernicious anaemia
5	—	4 20/..0	Secondary anaemia
6	—	5 4/9	" "
7	—	6 0/23	" "
8	—	7 21/29	" "
9	—	4 25/35	Splenomedullary leukaemia
10	—	1.5/15	Banti's splenomegaly very severe
11	—	6.35/40	Banti's splenomegaly general condition good
12	2..0.5	—	Hodgkin's disease

As shown above twelve cases of anaemia are detailed in all of which although the reaction varies from a first precipitation in Tube 1 to a first precipitation in Tube 8 eleven are of the non malignant type by the differentiating three phase reaction The first four proved to be cases of pernicious anaemia but not of the most advanced type The next four were all cases of secondary anaemia and the last four were associated with splenomegaly two being cases of Banti's disease one being splenomedullary leukaemia and the last a case of Hodgkin's disease which gave a malignant reaction

Diabetes Colloidal Vanadium Reaction

	Malignant	Non malignant	
1	—	2 25/47	Diabetes advanced
2	—	4 0/23	Diabetes definite
3	—	5 23 .5	Diabetes early mild
4	2 25/10	—	Diabetes with carcinoma of cervix
5	1 18/12	—	Glycosuria with carcinoma of pancreas

Of these five cases four were definite diabetes the first three in varying degrees of severity and although the first tube reaction was positive in each—that is gave a first precipitation in tubes lower than six—they were all of the non malignant type The fourth case gave a malignant type of reaction with a first precipitation in the second tube and in this case diabetes was associated with carcinoma of the cervix The fifth case was one of glycosuria associated with carcinoma of the pancreas and also gave a strongly positive reaction of malignant type

As regards cases of various types of renal disease in cases of uraemia have been examined Chronic nephritis with hyperpiesia has in five cases given non malignant type of reactions In two cases of enlarged prostate associated with high non protein nitrogen blood content the reaction has been of the malignant type though no evidence of malignancy has been found at operation This compares with six cases of carcinoma of the prostate in which the reaction was definitely malignant and in eight cases of enlarged prostate with blood non protein nitrogen content not higher than 60 mg per cent in which the reaction was non malignant and agreed with the pathological findings after prostatectomy

As regards gall bladder conditions eight cases of chronic cystitis gall stones with more or less jaundice gave first reactions with unheated serum varying from the first tube to the seventh but all of the non malignant character of the three phase reaction Carcinoma of the gall bladder has given a definitely malignant finding In one case chronic cholecystitis with gall stones gave a positive malignant finding in the fifth tube but no evidence of malignancy was found at operation

As pointed out in my paper the primary tube reaction is an indication of the degree of the pathological

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condition present The differentiation between inflammatory and malignant pathology is shown very accurately by the differentiating details of the three phase reaction —I am, etc ,

Liverpool April 3rd E CRONIN LOWE

Treatment of Tinnitus and Deafness

SIR,—In his reply to my letter of March 4th Mr Lowndes Yates (March 25th, p 538) writes " In justice to the authors it should be stated that the tinnitus in these last two forms has never been ' cured ' in the experience of otologists, though sometimes it spontaneously disappears synchronously with the function of the cochlea " In the cases described in my book, as well as the two mentioned in my letter, the tinnitus was cured and yet the cochlea did not cease to function as the hearing improved Dr Goodbody's letter of April 1st substantiates these claims Mr Lowndes Yates's principal argument against trying the electrophonoide method is based on a saying of a former teacher, " that if we found that we had cured by some form of treatment conditions generally believed to be incurable we should consider we had cured a case in which our diagnosis had been incorrect until we had conclusively proved the contrary " An attitude such as this would put an end to all progress in medicine

Again, in regard to re-training, Mr Lowndes Yates tells us " re-training does not aim at increasing the acuity of hearing , its object is to increase the ability of the patient to use the hearing he possesses " The electrophonoide method not only increases the ability to listen, it also increases the acuity of the hearing It does that, too, without any of the untoward consequences which, as I understand his letter, he seems to have observed as a sequel to his ' more simple method of re training in the patient's home —I am, etc ,

London, W 1, April 8th GLORGE C CATHCART

Body and Mind

SIR —Dr Stacey Wilson's standards of cure for his cases of mental disorder with tonic hardening of the colon (April 1st, p 583) are not in accordance with most modern psychiatric views What he describes is merely a superficial change in the character of his patients' symptoms In my letter of March 6th I used the term ' improvement " , I should be extremely chary of using the word ' cure " for any psychiatric case, except perhaps in childhood Dr Stacey Wilson's views are but another unfortunate example of a hypothetical primarily physical pathology, where there is ample evidence for a primarily psychopathological explanation —I am, etc ,

Birmingham April 5th S D ISAACS

Consultation by Telephone

SIR —Although one realizes the value of advertising in all its branches, one regrets to see the Post Office Telephone Service advertising at the expense of the medical profession In their advertisement in the *Radio Times* of March 31st they say

> How many bills for needless visits does the telephone save! How many groundless fears does it dispel! In times of doubt you ring up your doctor and in a few moments that reassuring voice will be telling you what you should do and whether the cost of a visit need be incurred

I venture to suggest that should a doctor under contract with the Ministry of Health—another Government Department—use this method suggested and thereby save a ' needless visit to an insured person under the National Health Insurance Acts, such doctor would be severely reprimanded by the Ministry if some unfortunate circumstance arose through neglect of visitation due to accepting a lay opinion received over the 'phone

Admittedly such procedure may be of advantage at times, but one does feel that it is unreasonable for the Post Office Telephone Service to attempt to educate the public in a procedure which would be severely deprecated by the Ministry of Health

With regard to private practice the profession is compelled on some occasions to give advice over the telephone, but here again should any case arise public opinion would be severely against the doctor concerned for advising without seeing the patient One is undoubtedly voicing the general opinion of the profession when one says that the principle of giving advice without seeing the patient is not conducive to the highest standards of medical work —I am, etc ,

South Croydon April 4th S ALFC FORBES, M R C S , L R C P

SIR,—I beg to enclose a copy of a letter I have addressed to the secretary of the General Post Office, and of the advertisement referred to —I am, etc ,

Cambridge March 25th W LANGDON BROWN

*** Professor Langdon Brown's letter to the G P O runs as follows

" I beg strongly to protest against the advertisement issued by the Post Office Telephone Service in to day s *Daily Express* It is most unfair of a Government Department deliberately to incite members of the public to extract gratuitous advice of the medical profession A doctor s advice is the principal commodity out of which he has to make his living and I cannot see why that advice should not be paid for whether given by letter, telephone, or word of mouth You fail to take into consideration the enormous amount of extra gratuitous work the telephone has already imposed upon the medical profession , and to appear to give official sanction to the view that advice so given should be gratuitous is, in my opinion, grossly unfair to a hard worked group of men I am sending the advertisement to the *British Medical Journal* for their comments "

British Goods for Hospitals

SIR,—When a doctor is in need of drugs or equipment how should he decide on the kind to purchase? He should not let himself be guided by political interests of one country or another , let him put himself in the place of the unfortunate invalid He will quickly and invariably decide to buy that commodity which is best for the patient, regardless of its source Acting on this rule, he will do the greatest good to, and earn the greatest gratitude of, his patients This seems the natural solution of the vexed question discussed by Mr Fitzwilliams and Dr Coope in your correspondence columns recently —I am, etc ,

Clifton Bristol, April 4th A WILFRID ADAMS

SIR,—The letter published in your issue of March 25th has aroused great interest among members of the Surgical Instrument Manufacturers' Association The making of surgical instruments in this country is a handicraft which requires long training Practically every workman engaged in the trade must pass through a long apprenticeship of six or seven years before he becomes efficient in any of the branches into which the work is subdivided, such as " edge-work," " spring work," " bow work," etc The traveller or salesman who waits upon the surgeon must be a man of receptive intelligence and long training and in the principal houses an assistant is only permitted to deal direct with the surgeon after some years' trial

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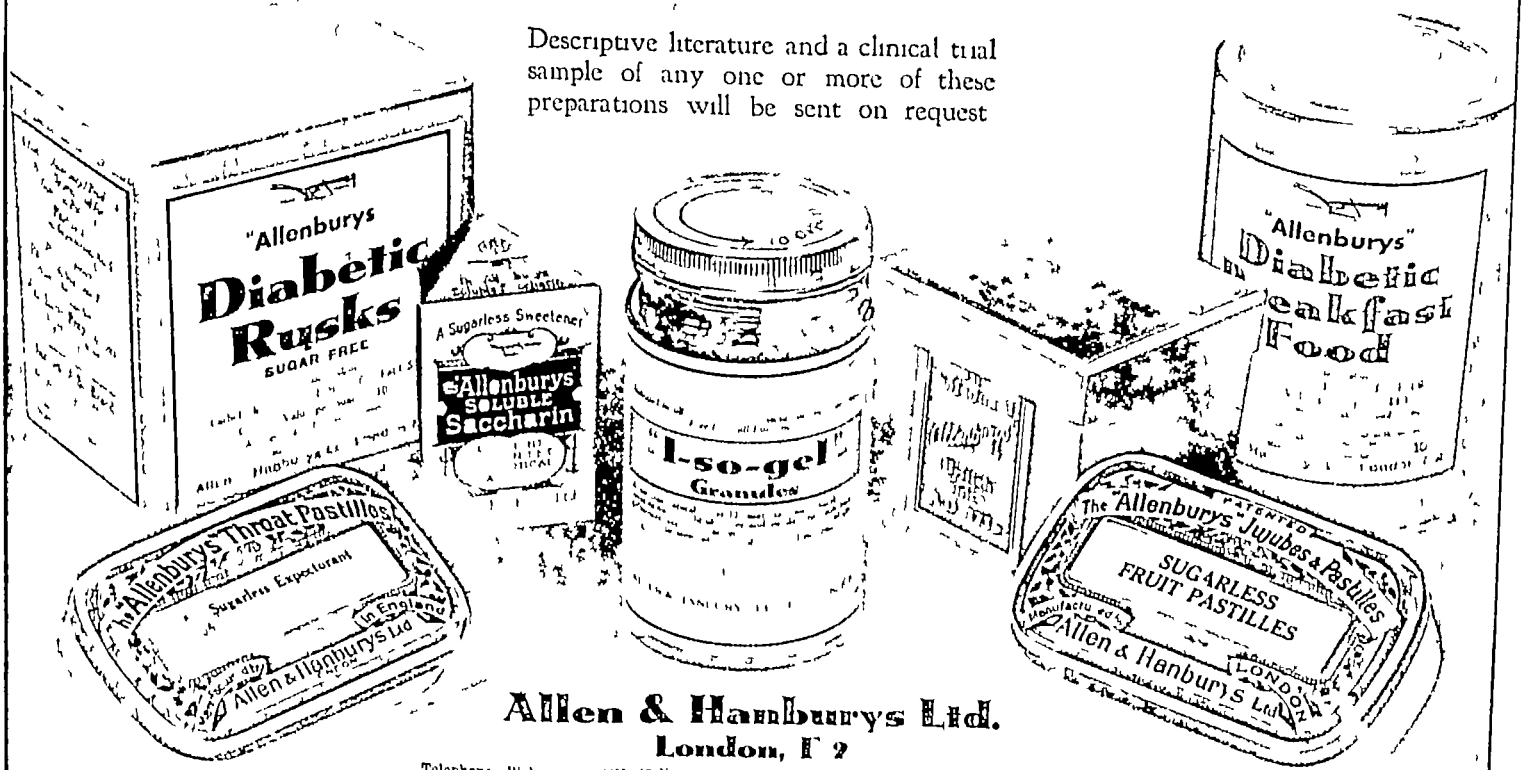

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experience in the trade The efficient service given by these highly skilled men to the surgical profession is proved by the very large number of special instruments which are produced week by week and even then it secures only a very moderate remuneration It is the original carrying out of these new ideas that involves so much care and skill and it is often impossible to cover the cost of the time involved

All English steel instruments are made from hand forgings and finished by hand but those made abroad are usually made from stampings which are not so reliable New instruments produced in this country generally bear the name of the surgeon for whom they have been first made but when these models become standardized they are frequently imported afterwards from abroad of a cheaper type still bearing the same name so that surgeons do not know the source of manufacture This association applied to the Government under the Merchandise Marks Act to have all instruments and appliances marked on importation but failed to secure an order only obtaining a sales order requiring such goods to bear a label at the time of sale This is next to useless as it often happens that the stick on or tied-on label becomes detached or lost before the instrument comes to the surgeon

The industry is certainly not a money making one but extremely interesting and generally carried on from father to son It also numbers several medical men and sons of medical men among its personnel There is much unemployment at the present time due greatly to foreign competition with which it is impossible to deal on equal terms without the active co-operation of the medical profession Without wishing to trespass too far on your space I should like to point out that the manufacture of aseptic hospital furniture is also an allied industry and carried out in the same workshops and there is certainly no higher standard than that of the British made aseptic hospital furniture

Mr Fitzwilliams's suggestions appear most timely and it is trusted that they will receive the support of the medical profession —I am etc

W T REGINALD BECKETT
Honorary Secretary Surgical Instrument
London E C 1 April 3rd Manufacturers Association

Consultants and Specialists, L C C

SIR —Sir Frederick Menzies tells us in your issue of April 8th that he and (he believes) many other members of the Association are questioning the activities of the Medical Secretary in connexion with the controversy over the Consultant Service of the L C C I feel that a more pertinent question is raised by Sir Frederick's own letter and one that I regret he did not ask himself before writing I refer to his attitude towards those with whom he disagrees and in particular to the insinuation that the chairman of the Consultants Committee has no more serious claim to notice than as a wild Irishman fighting not for his ostensible cause but simply out of a wanton love for a fight The introduction of considerations of this kind can have no other result than the creation of prejudice where it is most harmful It is not relevant to the discussion of a medical matter and it can only kill the spirit of good will so essential to a solution of the present difficulty

By a very proper convention gibes of this order are not allowed to intrude into public discussions No chairman of a medical meeting would tolerate such a comment and no man of good will would make it Nevertheless since Sir Frederick has seen fit to introduce this note into the controversy it may not be amiss to point the moral of his letter It is an ironic commentary upon the lot of those native inhabitants of London who seek within the L C C hospitals the cure and relief of their sufferings that he should be at pains to make it seem as though their welfare hung upon the issue of a wild warfare between a wild Irishman and a wild Scotsman If this were really so the Englishman might well thank Providence for having made him so long suffering a creature

But clearly this is not the level—even though it be one of Sir Frederick's own choosing—on which this discussion can be usefully or decorously conducted and I believe that he must regret having introduced so uncalled for an element of discord Indeed if we were to take his letter as truly representing his normal reaction to differences of opinion with his professional brethren what a chilling reflection it would be for those of them who may contemplate joining as consultants a service of which Sir Frederick is Chief Medical Officer *Absit omen!* —I am etc

London W 1 April th F M R WALSHE

SIR —From the letter signed by Sir Charlton Bri coe and others which appears in the *Journal* of April 8th I extract the following words

> We are not concerned here with the justice or injustice of the actual terms of appointment To us the disturbing feature of the London County Council's action has been its unwillingness to co-operate in free and open discussion with the consultants so that a competent and well organized consultant service should be at the disposal of the ratepayers of London It is surely to the advantage of the London County Council that such co-operation and consultation as have been offered to it by the consultants should be exploited to the full How could it be otherwise

Would Sir Charlton and his co-signatories tell us with whom the L C C should have conferred Would they be prepared to accept the so-called Consultants Committee of the B M A as a suitable body to represent the views of the consultants of London?—I am etc

London S W 3 April 7th FREDERICK MENZIES

SIR —I have read the comments by the Medical Secretary (pages 129 and 130 of the *Supplement* issued to-day) The only conclusions I can possibly come to as a result are (1) that Dr Anderson has never carefully studied the L C C scheme for consultants and specialist services and (2) that he has very little if indeed any experience and knowledge of the procedure and standing orders of local authorities in this country as well as the ordinary rules which officials of public authorities are rightly expected to observe in dealing with reports to those authorities

In these circumstances it is useless for me to attempt to educate him on quite a number of the points mentioned in his comments I can only suggest that the next time he contemplates launching an attack or taking part in a raging tearing campaign against a public authority he should make a particular point of taking counsel beforehand with the wise men from the North (Sir Robert Bolam and Dr Cox) instead of the wild Irish from the East End (Dr O Donovan) —I am etc

London S W 3 April th FREDERICK MENZIES

*** No one we imagine will regret more the tone of his letter of April 8th than Sir Frederick Menzies in calmer mood Personalities are to be deprecated in a grave issue of this kind We are glad to recall here the closing passages of the commentary by the Medical Secretary printed in last week's *Supplement* Finally even at this late stage it cannot be too emphatically stated that the consultants and specialists are still anxious to

co operate with the L C C in order to secure an efficient and harmoniously working service May I express the hope that the L C C, either of itself or through its Chief Medical Officer, will respond to this offer?" Of good augury also is the resolution passed on April 6th by the London Voluntary Hospitals Committee "That this Committee is of opinion that in the interests of the sick poor an amicable settlement of the dispute between a number of consultants and the London County Council is most desirable, and with that end in view offers its services to bring about such a settlement"

Medico-Legal

LUNACY CERTIFICATION PROTECTION FOR THE CERTIFYING PRACTITIONER

An application heard in the Court of Appeal, with Lord Justice Scrutton presiding, was the first of the kind which has arisen since the Mental Treatment Act gave increased protection to the medical profession against claims alleging negligent certification in lunacy proceedings It will be remembered that no civil or criminal action can now be brought against a doctor in this respect without leave of the High Court, which leave is not granted unless the court is satisfied that there is a substantial ground for alleging bad faith or lack of reasonable care

The applicant in this case was a married woman, aged 45 who applied for leave to bring civil proceedings against a district medical officer in the North of England, claiming damages for having negligently certified on June 2nd, 1932 that she was a person of unsound mind and properly to be taken charge of and detained under care and treatment As a result she was admitted to a county mental hospital and detained there until August 2nd, when she was discharged, on the application of her brother, under Section 79 of the Lunacy Act, 1890 The application was resisted on behalf of the doctor by the Medical Defence Union, with Messrs Hempsons acting as solicitors

The application came first before a Master in Chambers on February 14th The Master inclined to the view that the applicant should have leave to bring her action unless the case should prove to be such as a judge could not safely leave to a jury He intimated that on the facts before him which seemed consistent with applicant's sanity, if he were a judge trying the case he would be justified in awarding damages The doctor at once appealed to set aside the Master's order giving leave for a writ of summons to be issued against him, and the appeal was heard before the Judge in Chambers on February 21st His lordship decided that the order must be set aside, and leave to issue the writ of summons refused He said that the section of the Act was clear, and he did not think that the criterion to be applied was whether or not the case was a proper one to be left to a jury He said, further, that he was not satisfied that there was substantial ground for the contention that the doctor had acted in bad faith or without reasonable care, and he refused to give the applicant leave to appeal against his decision The applicant's advisors then applied for leave to appeal to the Court of Appeal, where the application was dismissed Lord Justice Scrutton, who said that the matter was one of public interest, drew attention to the safeguards for the protection of those who had to decide whether a person suspected of being of unsound mind should be detained He said that under the Mental Treatment Act the protection of those who had to administer the lunacy laws was made more extensive Just as a judge was protected against an action by a disappointed litigant so, though in smaller degree, protection was accorded to those who were called upon to certify for lunacy In the present case, he said, it seemed clear from the statements before the court, that the applicant suffered from persecution mania She had not satisfied the court that there was substantial ground for her contention that the doctor had acted in bad faith or without reasonable care

The evidence in proceedings of this kind is not made public, it consists of affidavits a number of which were put in on behalf of the applicant being sworn statements by herself and her friends and neighbours and other persons directed, no doubt, to proving her soundness of mind On behalf of the doctor also a number of affidavits were put in He declared that in June, 1932, as a result of instructions received from the relieving officer for the area, he had an interview with the applicant lasting an hour and a half, in the presence of her husband and daughter He conducted his examination in accordance with precedent and the medical works of accepted authorities, addressing himself particularly to the perceptive capacity, ideative processes, attention, memory, will, and emotions of the patient, as well as to her general health, and bearing in mind her previous history From her attitude, which was violent, and her answers he came to the conclusion that her mental instability was such that for her own safety and the safety of others she should be under restraint His affidavit was supported by others from the medical superintendent of the county mental hospital, assistant medical officers there (who confirmed the opinion that the patient was suffering from ideas of a persecutory nature), the matron and a nurse, the woman's husband and daughter, and a doctor whom she had consulted a year or two previously

As stated, the Court of Appeal refused leave to issue a writ in the action, a result upon which the practitioner and those concerned in his defence are to be congratulated, and one also which is very satisfactory as proving that the safeguard inserted in the Mental Treatment Act has substance and can stand the test of legal proceedings

The Services

INDIAN MEDICAL SERVICE DINNER

The annual dinner of the Indian Medical Service will be held at the Trocadero Restaurant, London, on Wednesday June 14th, at 7.15 p.m. Air Vice-Marshal Sir David Munro K.C.B., C.I.E. (I.M.S., ret.) has been invited to take the chair Tickets and all particulars may be had from the joint honorary secretary Major Sir Thomas Carey Evans, Hammersmith Hospital, Ducane Road, W.12

DEATHS IN THE SERVICES

Surgeon-General Percy Hugh Benson Madras Medical Service (ret.) died on April 2nd at St Aubyns Jersey, aged 81 He was born on February 1st 1852 in London the son of Lieut.-General R. Benson of the Indian Army and was educated at Shrewsbury at Bart's, where he won the treasurer's prize for senior practical anatomy, and at Aberdeen where he graduated M.B. and C.M. with honours in 1873 also taking the M.R.C.S. in the same year Entering the I.M.S. as surgeon on March 31st, 1874 he reached the rank of colonel on October 11th 1904 and surgeon-general of the Madras Medical Service on April 1st 1908 retiring on July 26th, 1911 In 1875, soon after he went to India, he was in medical charge of the Prince of Wales's camp during his tour in India In 1876-7 he served in the Madras famine, and received the thanks of the Chief Commissioner of Mysore for his services In 1881 he was appointed Civil Surgeon of Mysore and on the rendition of that State to the Indian ruling family he was appointed medical officer to the maharaja As colonel he filled the post of inspector-general of hospitals in Burma After retirement he served in France during the war of 1914-18 and was mentioned in dispatches He received a good service pension on April 1st 1908 He was twice married and had two sons and four daughters After retirement he did a good deal of work for the British Medical Association he served on the Council from 1910 to 1917 was vice-president of the Section of Naval and Military Medicine at the Aberdeen Meeting of 1914 just before the war, and in 1923-4 was chairman of the Irish Division.

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Obituary

JOHN HERBERT FISHER F R C S

Consulting Ophthalmic Surgeon to St Thomas's Hospital

By the death of Herbert Fisher after a short illness British ophthalmology has been deprived of one of its foremost figures Early in life it was evident that he was destined for a distinguished career A scholar and exhibitioner at school he entered St Thomas's Hospital as Tite scholar in 1887 and became subsequently Musgrove scholar and prizeman so that in later life he was able to say that his education from childhood to qualification had cost his parents nothing After graduating as gold medallist and university scholar in surgery in the London B S examination his inclination was at first towards general surgery but later coming under the influence of Edward Nettleship he decided to devote himself to ophthalmic surgery Election as ophthalmic surgeon at St Thomas's and to the staff of the Royal London Ophthalmic Hospital followed soon afterwards the former appointment being resigned in 1924 after twenty eight years service and the latter in 1927 At the time of his death Fisher was consultant to both hospitals Other offices held were those of president of the Ophthalmological Society of the United Kingdom president of the Council of British Ophthalmologists member of the Council of the Royal College of Surgeons of England and Hunterian Professor and Bradshaw Lecturer at the Royal College of Surgeons As recently as three months ago he took an active part in the work of the Prevention of Blindness Committee as representative of the Council of British Ophthalmologists During the war he served on the staff of the 5th London General Hospital with the rank of captain (T F) At St Thomas's Fisher took an active part in the life and work of the medical school—in the early days as a cricketer and a member of the victorious Rugby football teams of those days later as demonstrator of anatomy president of the Medical and Physical Society president of the Rugby football club lecturer in ophthalmology and dean of the medical school

In his strong personality the predominant quality was that of thoroughness which characterized all his actions and was exemplified in his clinical work by a physical examination so meticulous and an anamnesis so exhaustive as to make his clinical records a model difficult to emulate and also by the careful forethought taken to meet possible difficulties or dangers in an operation case likely to present unusual features From this same quality was derived the stimulus that enabled him to carry on with his work during an attack of migraine from which he was for many years a frequent sufferer Fisher was not one who suffered fools gladly and elementary ignorance or evidence of careless work was likely to evoke a scathing rebuke but the victim would have no grounds for questioning the justice of the criticism To friends sufficiently intimate to get beneath the surface was revealed the essential kindliness of his nature and a rich fund of sympathetic understanding and wise advice As chairman or member of a committee his services were constantly in demand on account of his wide experience clearness of thought and judicial mind to which was added the gift of expressing his views with exceptional terseness and lucidity In controversial matters personal inclination and the possibilities of unpleasant consequences were powerless to deter him from the advocacy of what he believed to be the right course As an after-dinner speaker he was fluent humorous and epigrammatic

Fisher's appreciation of the importance of a sound knowledge of anatomy as a foundation for the study of ophthalmic physiology and surgery was evidenced by the publication in 1904 of *Ophthalmological Anatomy* His contributions to the ophthalmic journals and to the *Transactions* of the Ophthalmological Society of the United Kingdom and the Ophthalmological Section of the Royal Society of Medicine were very numerous amongst the most important being those based on a study of defects of vision attributable to chiasmal lesions Of especial interest in this connexion are the observations on migraine and Leber's optic atrophy Fisher having been the first to suggest pituitary swelling as the primary abnormality in these conditions

He leaves behind him a widow and one son Lieut Commander Benjamin Fisher R N

SIR JOHN H PARSONS writes

Ophthalmology has suffered another grievous loss in the death of Fisher—for he was Fisher to his friends without any frills' Though he had retired for several years from active practice his interest in ophthalmology was as great as ever and he devoted much of his leisure to promoting its welfare in many directions and with an assiduity which is an example to others Fisher was a typical example of the best type of British clinician which is to say of the best type of clinician He was indeed a specialist but if all specialists had his exhaustive training in all branches of medicine and surgery and the capacity to utilize it with his care perseverance and breadth of view there would be no grounds for decrying specialism Like most past demonstrators of anatomy he revelled in the signposts which an accurate knowledge of anatomical relations affords for the elucidation of pathological conditions hence his interest in ocular palsies and cognate subjects—recorded in his book on ophthalmological anatomy—and in lesions of the pituitary body He resembled Treacher Collins whom he survived by so short a time in his abhorrence of all humbug He was straight as a die and indeed his straightness made him sometimes appear brusque but his bruqueness hid a warm heart and those of us who knew him intimately had not only deep affection for him but also esteem for his noble qualities

PERCY T HUGHES M B C M D P H

Medical Superintendent Worcestershire Mental Hospital
Lecturer on Mental Diseases University of Birmingham

The death of Dr P T Hughes on March 29th after a few days illness will be deeply regretted by his many friends in the medical profession and will be felt especially by those who have devoted themselves to the care and treatment of the mentally afflicted

Percy Theodore Hughes was born on March 31st 1872 and was educated at Hailebury and at Edinburgh University He graduated M B C M in 1894 and there after held a number of resident posts in Edinburgh and in or near London In 1899 he obtained the D P H and joined the staff of the London County Mental Hospital at Bexley He was appointed medical superintendent of the Worcestershire Mental Hospital at Barnsley Hall Bromsgrove in 1906 At that time the hospital was unfinished and it was not opened until the following year

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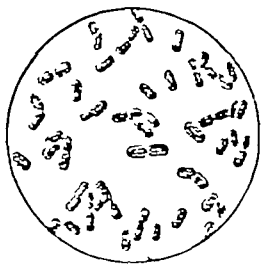

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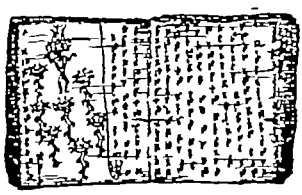
MAGIC BOOK OF BARK CONTAINING CHARMS IN NATIVE SCRIPT.—In common with most native tribes, those of Sumatra practise a homely kind of medicine consisting in the application of simples but in both the prevention and the cure of disease they put their faith chiefly in the use of charms



These are recited to ward off the attacks of adverse disease—inflicting spirits, and for exorcising them should they have succeeded in gaining possession. The incoherent verses are often accompanied by fanciful drawings as here seen in this book of charms from Sumatra. These books are also consulted in the divination rites which form part of Indonesian religio-medical practices in general.

DATE Present day

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Hughes was well fitted, both by his natural gifts and by his training and experience, to carry out the task which now lay before him He was a remarkably capable organizer and administrator, and he had those attributes of personality and of character which won the loyal support and unstinted co-operation of his officers and staff He was thorough in all he undertook The hospital in 1907 was up to date, but its functions were not suffered to become stereotyped Suggestions for improvement were constantly being considered, and, if approved, they were adopted as soon as practicable Hughes fully realized the importance of skilled nursing in the treatment of mental diseases, and he paid great attention to the training of the nursing staff In 1909 he contributed a valuable article on mental nursing to *The Science and Art of Nursing*

Barnsley Hall was one of the first mental hospitals to possess its own permanent cinematograph installation Dr Hughes always did his utmost to promote the welfare and comfort of his patients, and he was rewarded by their confidence in and affection for him He loved good music, and took a keen interest in training and practising with the choir of the hospital chapel He was lecturer on mental diseases in the University of Birmingham, and his advice in consultation was frequently sought throughout a wide area A H F

For the following personal appreciation we are indebted to Sir HUBERT BOND

Percy Hughes was one of a group of some half-dozen men each of whom was at Haileybury and all of whom went up to Edinburgh about the same time Their Haileybury friendship served as a close bond, reflected in the fact that, throughout their undergraduate days, they used to meet once a week in each others' "digs" by turn At Edinburgh Hughes was very popular, no doubt because, notwithstanding that he was a hard and earnest worker, of his fondness and zest for games, of his high spirits and infectious gaiety, and not least because of his sterling qualities of straightness and readiness to help others He excelled at football, and played for "The Wanderers" He was house-physician at the Royal Infirmary to Alexander James, a clinician of the first rank and a most inspiring teacher Before leaving Edinburgh he was also resident surgeon at the Royal Hospital for Sick Children—a clinical experience which, although not directly connected with mental hospital practice, is of no small value in overcoming difficulties in the examination of certain types of mental disorder It was not long after graduating in medicine that he became attracted to its mental branch and to mental hospital service as a career It was, in fact, to equip himself more thoroughly for this work, and with an eye especially to securing a vacancy at the new Bexley (County of London) Mental Hospital, that he secured a post in one of the metropolitan fever hospitals and worked for and obtained the D P H In those days there was no D P M ten years were to pass before any diploma in psychological medicine was instituted, and twenty years before the custom of proceeding to one became general among medical officers in mental hospitals If the especially valuable experience Hughes had at Bexley was a strong recommendation to the committee of the new Worcestershire Mental Hospital in their decision to appoint him as their first medical superintendent, he was not lacking in personal assets and claims of his own He had a striking personality both strong and of peculiar charm, and a general appearance upon which responsibility obviously sat well He possessed a stimulating enthusiasm and had thrown himself into every scheme and effort to develop Bexley on modern and progressive lines In all this he was not only a loyal supporter of the work of his seniors, but he had many original suggestions of his own to offer In particular, it was largely he who suggested that a trial might be made of various new forms of occupations for the patients which hitherto had not been practised in mental hospitals, and, being given a considerably free hand in these endeavours, it was in no small measure due to his tireless efforts that Bexley won the fame it did as an example of what could be done for the systematic organization of occupations for the patients—different, however, from the conception now commonly spoken of as occupational therapy He was an active and valued member of the Departmental Committee set up by the Board of Control in 1922 to inquire into mental hospital dietaries The work and recommendations of this committee have done much to advance the health and comfort of patients in mental hospitals

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On March 29th there passed away, at the age of 70, an old and faithful member of the British Medical Association—Dr WILLIAM ARTHUR JOHNSTON of Ravenglass Cumberland He was for many years a member of the Furness Division and North Lancashire and South Westmorland Branch, having been divisional chairman in 1921 and branch president in 1923, he also served on various committees In spite of his isolated position, and the scattered nature of the Branch, he could almost always be found at the meetings, wherever held He was born at Hawkshead, where his father was in practice, and was one of four medical brothers, well known in Lakeland A student of the Royal College of Surgeons of Ireland he obtained the L R C S I in 1885 and L R C P I in 1886 A colleague writes He was a very fine type of country practitioner, who never forgot the dignity of his profession or the courtesy due to a colleague His friends regretted the various adversities which made his last years difficult He is survived by his widow, who was always a very staunch partner Dr Johnston was laid to rest in the peaceful cemetery of Muncaster, in the presence of his friends on a beautiful afternoon, when the sun shone down on a peaceful scene with the lovely Cumberland hills surrounding us A good man has gone

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The death took place on March 23rd of Dr ARTHUR BRYANS, who had practised in Middlesbrough for over thirty years Dr Bryans was a native of Sunderland, and after obtaining the Scottish triple qualification in 1900 went into partnership with, and ultimately succeeded, the late Dr Young in Middlesbrough For many years a member of the British Medical Association, he had served the Cleveland Division on its Executive Committee, as honorary secretary, and as chairman He was a member of the Middlesbrough Panel Committee from its inception, and for two years had been chairman of the local Public Medical Service For thirty years he was medical officer to Middlesbrough Football Club Despite the demands of a large general practice, Dr Bryans's outside interests were many and varied He was a keen golfer—for some years he had been president of the Middlesbrough Golf Club—and an enthusiastic photographer, he was interested in Rotary and rarely missed a meeting of the local Rotary club During the war he served in the R A M C, and after a period as battalion medical officer did much valuable work at Brighton Grove Hospital, Newcastle-on-Tyne Dr Bryans is survived by two daughters The funeral, which took place on March 25th was attended by a large number of friends, including many of his medical colleagues

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Dr WILLIAM RUSSELL WATSON, who died at the age of 46 at Sandymount, Dublin, after two years' illness was the third son of the late Samuel Henry Watson, Dublin, a much-beloved member of the Society of Friends Dr Watson graduated at Trinity College, Dublin, in 1910 as M B, B Ch, and also obtained the Liverpool diploma in tropical medicine Three years later he became a

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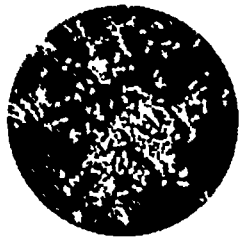

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Fellow of the Royal College of Surgeons in Ireland winning the Hudson gold medal at the Adelaide Hospital for surgery In 1919 he proceeded M D All his medical study had as its aim and object the hope of going abroad as a foreign missionary and in 1913 he was appointed medical director of the Friends Hospital Akasaka Tokyo where he won the esteem and love of all his fellow workers In 1920 while home on furlough Dr Watson specialized in *x* ray work in which he became proficient and in the following year he went to Hangchow Hospital under the C M S for a period of fifteen months in order to give the veteran missionary Dr Main a much needed furlough He took out an *x* ray machine with him and installed it in the hospital taking over the charge of the *x* ray and pathological departments where he delighted in instructing the Chinese medical students his wife meantime instructing them in English He then returned with his family to Japan where they stayed till the great earthquake of September 1923 made it almost impossible for foreigners to remain in Tokyo Dr Watson was the first British doctor to enter the city after the earthquake He got there partly by train partly on his bicycle and then had to wheel his bicycle for miles through the burning city He succeeded in getting his motor car out and lent it to the Akasaka officials They kept it running night and day with a white flag flying carrying doctors and nurses all over the city Since 1924 Dr Watson had practised at Haverstock Hill London and later in Dublin

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We regret to announce the death of Mr W H MARTINDALE Ph D F C S head of the well known pharmaceutical firm at 10 New Cavendish Street and for more than thirty years editor of Martindale and Westcott's *Extra Pharmacopoeia*

The following well known foreign medical men have recently died Dr O W KONDRATOWITCH professor of therapeutics in the second medical institute of Leningrad of angina pectoris Dr I M KRAUSMANN a Leningrad urologist aged 72 Dr OSCAR SAMTER extraordinary professor of surgery and orthopaedics at Königsberg University aged 74 and Dr BERNHARD HEILE editor of Bruns's *Beitrage zur klinischen Chirurgie* and the *Deutsche Zeitschrift für Chirurgie* aged 60

Universities and Colleges

UNIVERSITY OF OXFORD

At a congregation held on April 8th the following medical degrees were conferred

B M—G G M Edelsten H A Treble H J B Atkins

The late Miss Alice Mary May bequeathed to the University funds for the establishment of a Fellowship to provide assistance in preparing candidates for the examinations for the B M degree

UNIVERSITY OF LONDON

UNIVERSITY COLLEGE

The examination for the Bucknill Scholarship value 160 guineas and for two exhibitions value 55 guineas each will begin on May 15th The subjects for the examination are chemistry physics botany and zoology The scholarship and the two exhibitions are tenable at University College London Entry forms should be obtained from the secretary of University College not later than April 29th

The Bayliss-Starling Memorial Scholarship has been founded by old students friends and admirers in commemoration of Professor Sir William Maddock Bayliss and Professor Ernest Henry Starling The annual value of the scholarship is about £120 with exemption from tuition fees and is tenable at University College London The scholar will be required to follow a course of study approved by the Jodrell Professor of Physiology involving a training in the principles of and methods of research in physiology and/or biochemistry Applications must reach the secretary of University College not later than Saturday May 13th

ROYAL COLLEGE OF SURGEONS OF ENGLAND

A quarterly Council meeting was held on April 6th when the president Sir Holburt Waring was in the chair

The following Members of twenty years standing were elected to the Fellowship Charles Henry Hough William Henry Dolamore

Diplomas

The Diploma of Membership was granted to Miss Vida Louisa Liddell Diplomas in Tropical Medicine and Hygiene were granted jointly with the Royal College of Physicians to the following twenty one candidates

D R Belletty J F E Bloss Virginia M Cobb V C Dalzell B P Datta R T S Goodchild R Jeremiah K Kanagaretnam C C Kapila *Flight Lieut F E Lipscomb R A F I V Mohamed D Nagarajan J P Perera B H Sayed L B E Seneviratne M Shankhla A R Sikund C R Tisseresinghe A V M Wajih F L Wheaton H S Yusef

* All candidates with the exception of the one marked with an asterisk pursued courses of study at the London School of Hygiene and Tropical Medicine

Scholarships and Prizes

Leverhulme Scholarships were awarded to (1) Geoffrey Curtton Knight F R C S (St Bartholomew's Hospital) Research investigation of nerve supply and control of cardiac sphincter with relation to the aetiology of idiopathic cardiospasm comparison of end results of surgical procedures adopted for relief of idiopathic cardiospasm criticism of rationale (2) David Slome M B B Ch (Capetown University) Research (*a*) the effect of hypophysectomy in preventing the development of the diabetic syndrome on removal of the pancreas (*b*) the blood calcium in relation to haemorrhage and wound shock

Laurence John Honeywill (University College) was appointed Begley Student for the ensuing three years

The John Tomes Prize for 1930–2 was awarded to Dr Eric Wilfred Fish for his original work in connexion with the physiology of the dental tissues

The Jacksonian Prize for 1932 was awarded to Harold Clifford Edwards F R C S for his dissertation on The Pathology Diagnosis and Treatment of Diverticula of the Large and Small Intestine The subject for the Jacksonian Prize for 1933 is The Pathology Diagnosis and Treatment of Localized Rarefying Changes in Bones as illustrated by Perthes's (or Legge's) Disease Schlatter's Disease Kümmell's Disease and Allied Diseases The subject for the Jacksonian Prize for 1934 is The Pathology Diagnosis and Surgical Treatment of the Various Forms of Splenomegaly

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ROYAL COLLEGE OF PHYSICIANS OF IRELAND

At the monthly business meeting of the College held on April 5th P T J O Farrell and Yang Lin were elected Fellows of the College Lord Dawson of Penn whose name had been proposed by the president Dr T G Moorhead on March 3rd was unanimously elected an Honorary Fellow of the College

It was agreed to comply with the request of Cyril Randolph Wallace asking to have his name changed on the College roll to Cyril Randolph Lutze Wallace

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

Before rising for the Easter Recess both Houses of Parliament agreed to resolutions naming the personnel of the Joint Select Committee on Indian Constitutional Reform Debate arose in the Commons on the Housing (Financial Provisions) Scotland Bill the London Passenger Transport Bill unemployment and the call for the State to assume responsibility for maintaining the able bodied under 65 and also on foreign affairs The Pharmacy and Poisons Bill was read a second time in the House of Commons on April 10th having previously passed the House of Lords

On April 7th Mr Stanley presented the Road and Rail Traffic Bill This is a Government measure and includes proposals to amend the provisions of the Road Traffic Act 1930 relating to the wages hours etc of persons employed in connexion with certain motor vehicles

Remarks

ON THE

PRINCIPLES OF TREATMENT IN PULMONARY TUBERCULOSIS

BY

L S T BURRELL M D CAMB F R C P LOND

SENIOR PHYSICIAN ROYAL FREE HOSPITAL AND PHYSICIAN TO THE BROMPTON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST

It has been seriously suggested that tuberculosis should be regarded as a classic in the teaching of medicine So many are its manifestations that anyone with a sound general knowledge of tuberculosis would certainly have a solid foundation on which to base his study of other diseases In the lung it may appear as an acute broncho-pneumonia which rapidly proves fatal as a subacute infection progressing to a fatal issue by stages of remission and relapse as a chronic disease allowing the patient many years of life and even full activity but exposing him to the risks of periods of ill health due to such complications as haemoptysis or pleurisy Tuberculosis may produce scar tissue in the lungs which is obvious on post mortem examination but which gave rise to no symptoms during life so that the patient may have died of old age after an active life during which he was quite unaware of ever having been ill In this last type of case there is surely no need for treatment even if by modern methods of examination the lesion in the lung is detected during life Many people have their lives impaired by prolonged treatment which is quite unnecessary and vast sums of money are spent owing to the failure to distinguish between infection which requires no treatment and that which if untreated will lead to actual disease In civilized countries the great majority of people react to tuberculin but this evidence of infection cannot be taken as an indication for treatment since comparatively few develop the disease

PRETUBERCULOUS STAGE

Some authorities speak of a pretuberculous stage by which they mean a state of health or environment tending to produce tuberculosis I have recently seen a family in which two children died of acute tuberculous bronchopneumonia and one of tuberculous meningitis two are alive and apparently well In the same poor quarters lives their grandfather who has had a cough for years and whose sputum contains tubercle bacilli I agree that these two children are pretuberculous and require not treatment but change of environment In the same sense I agree with a friend of mine who thinks of a child climbing a ladder as in the pre fracture stage I do not however agree with the word pre tuberculous when used to imply that a delicate child or adult is liable to become consumptive When the lives of these delicate children are followed it is found that the incidence of tuberculosis is not appreciably greater among them than among their robust brothers or sisters If we approach the problem from the other angle and inquire into the past history of the adult consumptive it is exceptional to find one who was specially delicate as a child Not uncommonly the robust member of a family is attacked The athlete is just as likely as the bookworm to become consumptive

An abundance of good food and fresh air a regular life and absence of strain make up the road to longevity The stronger the constitution of the individual the less the danger of ignoring some or all of these rules of health but the more delicate he is especially if he has some definite disability such as tuberculosis the greater the risk of living unwisely I agree therefore that all children should be taught how to lead a healthy life and be given the chance of leading it but I do not agree that this is a problem of tuberculosis or that large sums of money allocated for the prevention and treatment of tuberculosis should be spent in keeping delicate children or adults for long periods in public institutions

The pretuberculous stage however is one of prevention and does not come within the scope of this paper so I shall pass on to consider the various stages of the actual disease It is important to remember that it does not progress uniformly from stage to stage and one cannot always speak of an early or late case according to the actual state of the disease Healing takes place by fibrosis and acuteness or chronicity depends upon the balance between infection on the one hand and fibrous tissue formation on the other In a very acute case there is practically no fibrosis but a rapid breaking down of lung tissue in a very chronic case there is a steady formation of fibrous tissue and little if any toxaemia from the tuberculous infection The principles of treatment vary with the different stages which I will discuss under the following headings

NON CLINICAL PULMONARY TUBERCULOSIS THE ALARM

In this stage a definite diagnosis is made but there is no direct evidence of present or past activity in the lung Pleural effusion or haemoptysis of unexplained origin may be mentioned as examples

The patient should be told to observe the ordinary rules of health but apart from this no treatment may be required He should however be kept under careful observation including regular *x* ray examination for at least three years As a rule it is unwise to advise a change of occupation and one should avoid the mistake of regarding a sedentary life as unsuitable A tuberculous patient is more likely to break down while carting hay on a farm than while working in a city office If after haemoptysis the patient feels perfectly well and there are no *x* ray or other signs or symptoms he may be allowed to keep on with his occupation under medical supervision Haemoptysis does not always indicate activity indeed it is especially common in the fibrotic type of tuberculosis and in bronchiectasis or other non tuberculous forms of fibrosis After pleural effusion the case is a little different because the effusion is evidence of activity in the lung Time therefore should be given to allow the healing of the lesion to consolidate and a course of sanatorium routine is most beneficial This type of case is especially suitable for Switzerland A study of after histories shows that a considerable proportion of patients who have had haemoptysis or pleural effusion develop active pulmonary tuberculosis whereas those who have had surgical tuberculosis or were delicate and called pretuberculous in childhood have no greater tendency to become consumptive than has the normal individual

EARLY PROGRESSIVE STAGE THE ATTACK

This stage is by far the most important as regards treatment because it almost always proceeds to a fatal issue if neglected but responds well to proper management Inman's classification—(*a*) resting febrile (*b*) resting afebrile ambulant febrile (*c*) ambulant afebrile—may well be applied to this stage but as treatment is not entirely dependent on the temperature one should regard these three groups as indicating disease which is (*a*) acute—that is rapid invasion of the lung tissue with little if any formation of fibrous tissue (*b*) subacute—

The Protection of Animals Bill, to enable courts to disqualify from keeping dogs persons convicted of cruelty to them, was presented by Sir Robert Gower on April 6th, and has been printed

The text is issued of the Nurses Registration Act (1919) Amendment Bill, presented by Mr Batey on April 3rd The second reading of this Bill was put down for April 12th A memorandum attached to the Bill states that

"The Nurses Registration Act, 1919 provided that existing nurses should apply for registration within a period of two years For various reasons including absence abroad upwards of twenty thousand nurses failed to register and the purpose of this Bill is to give these nurses, who have followed their honourable occupation for many years, a further opportunity of enrolling with their colleagues"

The Bill would authorize persons possessing the qualifications described in the Act of 1919 to make application within one year of its passage to be admitted to the register of nurses Certain bodies representing the nursing profession are understood to oppose it

The Protection of Dogs Bill has been withdrawn

Aerial Navigation and Disease

On April 10th Mr SHAKESPEARE replying to Captain Cunningham Reid said he was aware of the warnings issued by the Koss Institute and the Institute of Microbiology regarding the danger of diseases such as yellow fever being introduced into this country by mosquitos in aeroplanes The possibility of carriage in aeroplanes of the infection of yellow fever had been carefully considered for several years by the International Office of Public Health and its Yellow Fever Commission Proposals for dealing with this danger and with other infectious diseases were embodied in an International Sanitary Convention for Aerial Navigation which awaited ratification The Minister of Health was advised that the danger referred to by Captain Cunningham Reid did not apply to this country, but to countries where yellow fever could develop if introduced Mr LUNN asked if there was no danger of yellow fever being introduced in this way Mr SHAKESPEARE The danger is extremely remote I am informed that the air liners of the Imperial Air Services have two breaks The new machines start from Paris minus mosquitos

Small pox in the British Army in India

Sir S HOARE replying on April 10th to Mr Groves, said that in 1923 three officers of the British Army in India were admitted to hospital suffering from small pox of whom one died There were fourteen admissions among the men, of whom three died Five women and two children with the Army were admitted, and one child died In 1924, of thirty-one men admitted four died, of eight women and seven children admitted two children died In 1925 two officers and twenty four men were admitted and three of the men died of eighteen women and six children admitted one woman and one child died In 1926 one officer was admitted of eleven men admitted, two died of eleven women and seven children admitted one woman died In 1927 five men three women and four children were admitted, and one woman and one child died In 1928 two men one woman, and three children were admitted but there were no deaths In 1929 one officer and four men were admitted, but there were no deaths of three women and four children one woman and one child died In 1930 one officer and five children were admitted none of them died

On April 10th Sir S HOARE also told Mr Groves that the final figures for small-pox deaths in British India for 1927 and 1928 were 118 197 and 96 123 respectively

Misrepresentation of English Vaccination Law — Mr GROVES on April 10th asked the Minister of Health whether his attention had been called to the misrepresentation of the English conscience clauses in the Epidemiological Report R E 131 issued by the Health Organization of the League of Nations, and whether he would instruct the representative of this country on that organization to take steps to have a correct statement of the English vaccination law published Sir HILTON YOUNG replied that he agreed that the document referred to the effect of Section 2 of the Vaccination Act of 1898 was incorrectly stated but as the section was repealed in 1907 and the substance of the amendment which replaced it was correctly reproduced he did not think it necessary to call attention to the inaccuracy These reports were issued solely on the responsibility of the Health Section of the Secretariat of the League of Nations and not on that of the Health Committee of the League

Alleged Lung Disease from Chromium plating — Sir H. GILMOUR told Mr Pike, on April 5th that investigation was being made into an alleged outbreak of a lung disease among female workers operating a process of chromium plating in Sheffield He was not aware that he had any power to secure that particulars of specific cases should be made public but he would look into the matter

Coal gas Suicides — Replying on April 5th to Sir Percy Hurd Dr BURGIN said the Home Secretary's attention had been called to the increasing number of suicides from gas poisoning The possible use of chemical or other means to remove this method of self destruction was investigated in 1929 by the Departmental Committee on Deaths from Poisoning whose report was published in 1930

Rural Water Supplies — In reply to Sir Gifford Fox on April 6th, Sir HILTON YOUNG said a record of villages in Great Britain having no proper water supply was being accumulated by his officers in the course of their work The cost of a special investigation, comprehensive enough to be of value, would not be justified by any advantage in comparison with the regular work now in progress He proposed issuing a circular shortly on rural water supplies

Discharges from Mental Hospitals — Sir HILTON YOUNG told Mr D Grenfell, on April 6th, that if he would give him particulars of a case where the passing up of letters requesting friends of inmates in mental institutions had to facilitate the discharge of inmates to the care of their friends under Section 79 of the Lunacy Act resulted in many applications being made and discharges effected he would be glad to consider what inferences could be drawn from it as a measure for improving the accommodation in asylums

Certification in Workmen's Compensation Claims — Mr HACKING told Mr A Ramsay on April 6th that the Workmen's Compensation Act provided that workers contracting industrial diseases must, unless the employer dispensed with it, obtain a certificate from the certifying factory surgeon This system was designed to prevent disputes between employer and workman by providing for certification by an independent doctor with special knowledge of industrial disease This would not be achieved if certification by the workman's own medical adviser were substituted Mr RAMSAY asked whether the Home Secretary would remove the obligation on the workman to pay a fee of 5s Mr Hacking replied by pointing out that whereas under the Health Insurance Acts weekly contributions were paid by the workers, under the Workmen's Compensation Act the whole of the compensation was found by the employer

Battersea Power Station — Mr OLIVER STANLEY stated on April 10th that the London Power Company had applied to the Electricity Commissioners for consent to install an additional generator unit at the Battersea Power Station The Commissioners sanction to the proposal would be coupled with a condition limiting the output to a figure within the capacity of the existing plant The Minister of Health and the First Commissioner of Works concurred with him that there was no objection to the additional generator unit being sanctioned, and he had informed the Electricity Commissioners accordingly

Notes in Brief

During the last twelve months the Ministry of Agriculture has received complaints of pollution in respect of twenty rivers including the Warwickshire Avon Chess Arun Rother Oxford Canal Lodden Lark Cuckmere Frome Axe Winsbeck Tone Medway and Tern

fibrosis and breaking down of lung tissue taking place side by side, (c) chronic—fibrosis the predominant factor with little if any breaking down of lung tissue

I have called this stage "the attack" because the patients are curable if the disease is properly attacked The patient has the upper hand More mistakes in treatment are made in this than in any other stage, and mistakes are much more serious for the patient than at any other period in the disease The patient often feels fairly well, and does not understand the necessity for strict treatment The doctor rightly feels that an optimistic outlook is part of the cure and does not wish to alarm the patient, and hence there is a danger of consent being given to some such suggestion as a sea voyage, a few months in the country, or sanatorium treatment at home The prognosis is well known to be good in patients whose first symptom is haemoptysis, and I am sure that this is because such patients are frightened and willing to undergo any treatment to prevent a recurrence of the haemorrhage Many patients will say, 'You tell me that I have the disease so slightly that it can hardly be detected, and yet you propose to treat me like an advanced consumptive" In reality, of course, the treatment is intended to prevent him from becoming an "advanced consumptive'

A patient suffers a great shock when he first realizes that he has tuberculosis, and he should be treated gently and every consideration given to his wishes Fortunately the initial treatment in this important stage is rest, and it is usually safe to send him to bed at home or wherever he likes to go for the first few weeks After that time most patients are much more amenable to reason, and will consent to sanatorium or other treatment Details of treatment depend on the degree of activity of the disease

1 In the resting febrile or acute phase absolute rest in bed is indicated If the disease is unilateral and sufficiently advanced for crepitations to be heard artificial pneumothorax should be induced at once In some cases this should be done on *x*-ray evidence before crepitations or other definite signs appear It is a mistake to wait for evidence of a cavity before inducing pneumothorax If both lungs are affected bilateral pneumothorax or pneumothorax of the most acutely affected lung and sanocrysin for the other may be advised, but sanocrysin must be given very cautiously in acute cases If the temperature does not settle and the physical signs increase, small doses of sanocrysin tuberculin, or other substances to produce shock may be tried Rest in bed should be continued for at least three months, and longer if the temperature is unstable When the patient begins to get up sanatorium treatment is essential

2 In the subacute phase the temperature is normal only when the patient is resting in bed, and he should not be allowed up As in the acute phase treatment consists of rest in bed, and possibly artificial pneumothorax or sanocrysin Shock treatment may be tried in certain cases but the possibility of doing harm must be borne in mind

3 The chronic or ambulant afebrile phase may follow the previous ones, but very often the patient has never been through the acute or subacute stage When first seen he has slight cough and sputum containing tubercle bacilli There may or may not be a history of recent loss of energy or weight, but there is no pyrexia and often no history of any febrile attack In this case sanatorium routine is indicated, and, if the patient refuses, a few weeks rest in bed at home should be advised Most patients will agree to this especially if it is called a period of observation, afterwards as I have already said they are often more ready to agree to sanatorium treatment

Some will refuse to go into an English sanatorium but are willing to go abroad Switzerland is considered the Mecca by many It is usually best to start treatment in an English sanatorium, but the patient may be allowed to go abroad provided a good sanatorium is chosen The cold dry air of the Alps is exhilarating, especially in the winter, and it undoubtedly helps many patients Some, however, find Switzerland depressing, and are homesick and prefer to remain in England Whether he goes abroad or stays at home the patient should have confidence in the treatment If he firmly believes that Switzerland will effect a cure he should be encouraged in the belief, and sent to a good sanatorium there unless there are definite contraindications If, on the other hand, he objects to going to Switzerland or cannot afford to go, it is a mistake to urge him to do so or to give him the impression that he is unwise to stay in England The psychological element is of the utmost importance in pulmonary tuberculosis, and unfortunately it is a much neglected part of the treatment In this phase of the disease treatment is essential, but where it is given is immaterial, apart from the psychological aspect The objections to Switzerland in this phase of the disease are (1) The patient is apt to think that the fact of his being there is in itself treatment, and consequently to live less carefully than he would at home (2) Discipline in most Swiss sanatoriums is bad In some, of course, it is good, so that this objection does not apply if the sanatorium is carefully selected from personal knowledge, and one must remember that what suits one patient will not suit another (3) Patients are apt to acquire the Swiss habit, that is to say, they go year after year until they are really unable to get through a winter without spending several months in the Alps (4) Post-tuberculous neurasthenia is more common in Swiss treated than in English treated cases (5) Recovery is no quicker in Switzerland than in England, and expenses are greater

The advantages are (1) The dry cold air and bright skies have an exhilarating effect on the patient, and make him feel better (2) Many patients insist on leaving an English sanatorium after a few months because they say they can get just the same treatment at home The fact that the majority of relapses occur in the first few months after leaving sanatorium shows that this is not so, but the patient (and sometimes his doctor also) may not appreciate this It is much easier to persuade a patient to carry treatment to the stage of cure in Switzerland (3) The psychological effect on those who believe that there is a charm for the cure of tuberculosis in the Swiss air

Whether the patient should be sent to a foreign or an English sanatorium depends largely on his temperament, the important thing is to send him to a good sanatorium, and not allow him to go alone into the country or for a sea voyage, or to drift into the incurable stage of the disease Sanatorium treatment consists in the judicious combination of rest, gentle exercise, and routine, so that life is perfectly regular The progress of the disease is watched by physical and *x*-ray examination, and by methods such as the sedimentation and vital capacity tests Improvement usually indicates the need for increased exercise, whereas failure to improve or a relapse necessitates more rest, artificial pneumothorax, sanocrysin, phrenic evulsion, or some other form of treatment Sanatorium routine should be continued until the disease is arrested or has passed into the later stage After arrest, a few months in Switzerland are often most beneficial in order to consolidate the cure, or at this period the patient may be allowed a sea voyage or quiet country holiday before resuming work He should be kept under observation for at least two years, and regarded as in what I have called the "non clinical" stage

LATE PROGRESSIVE STAGE THE DEFENCE

By this is meant the chronic consumptive stage and it is as a rule the outcome of the previous stage The disease now has the upper hand and the patient is on the defensive He may live for several years but apart from a few exceptional cases eventually dies of tubercu losis It is to prevent the patient from passing into this stage that thorough treatment is so urgently needed in the previous one No hard and fast line can be drawn between these two stages Some patients obviously belong to one or the other but there is a large intermediate group Patients who recover usually respond early and readily to treatment If they do not respond at first they do so after a few months There are exceptions of course but if one placed in this late progressive stage all patients who still have active disease after two years thorough treatment one would not make many mistakes I trust I shall not be misunderstood in this matter There is no doubt that many patients in this stage of the disease improve sufficiently to have several years of active or useful life some actually recover and much can be done for them by modern treatment From my own experience however and from the extensive literature describing the late results of patients who have reached this stage it is not open to doubt that a large proportion of them do die of the disease and a great many within a few years To remain blind to this fact is a common mistake I feel that the happiness of the patient is too often disregarded and he is subjected to confinement in a sanatorium or to some drastic treatment which renders his last years irksome and does not offer any real hope of benefit

In the previous stage the patient's temporary unhappi ness or inconvenience is not so important because one can offer a very real hope of recovery As a practical physician I continually find the greatest difficulty in persuading a patient in the early stage to submit to a strict course of treatment and he is often supported by his doctor who takes the view that he is not bad enough for this or that treatment They do not realize the extreme gravity of the condition when it has passed the early stage When once the patient has reached what I call the late progressive stage he will submit to any treat-ment and I want to make it quite clear that even then much can be done The point I wish to emphasize is the enormous importance of strict treatment in the early phase

The principles of treatment in this late progressive stage depend on the ratio between the breaking down of lung tissue on one hand and the formation of fibrous tissue on the other The more the fibrosis the greater the expectation of life In exudative cases with but little ability to form fibrous tissue artificial pneumothorax is indicated but it becomes of less value the more the fibrosis until in most chronic fibroid cases of tuberculosis life is actually shortened by it The reverse is true for phrenic evulsion and more especially for thoracoplasty which are often of great value in cases where fibrosis is the predominant feature but are actually harmful in the more acute phases of the disease Tuberculin or shock therapy may help in certain cases in this stage If for example the disease is only slowly progressive and the patient appears to be holding his own but tends to get pyrexia on the slightest exertion tuberculin may render the temperature stable and aid the formation of fibrous tissue In most cases in this stage treatment is mainly symptomatic and one of the most common symptoms is the mental state of the patient He is often unsettled self centred and neurasthenic especially if he has had prolonged sanatorium treatment For these cases work is the best solution Life is more often prolonged than shortened by suitable occupation in this stage of the disease

CHRONIC FIBROID STAGE THE AFTERMATH

This may be the outcome of one of the previous stages and here again no hard and fast line can be drawn In the previous stages however the patient has his good and bad times but is never really free from symptoms In the chronic fibroid phase however the patient often has years of nearly if not completely good health I have one patient of 76 who has a large cavity at one apex and fibrosis around it and according to her notes at Brompton Hospital has had much the same physical signs for over fifty years In some cases fibrosis is found in a patient who has never had any acute or subacute manifestation of tuberculosis Such a patient seeks advice owing to sudden haemoptysis dyspnoea or loss of energy and an extensive fibrosis is found There is a popular belief that such an insidious onset is common in tuberculosis whereas it is rare and in the majority of cases the patient can date the onset of his disease at any rate to within a few weeks In this stage the patient should be allowed to lead a normal life but must be warned that he is more likely than a normal individual to suffer from any break of the ordinary rules of health

Treatment becomes necessary (1) if the fibrosis is steadily increasing (2) for repeated haemoptysis which is not uncommon in this type of case and (3) for recurrent attacks of pyrexia Phrenic evulsion and thoracoplasty are usually indicated when special treatment is needed in this stage of the disease Artificial pneumothorax is suitable only in exceptional cases One must remember that prognosis is good in the average chronic fibroid case and may be made worse by treatment One common mistake is to try and collapse a portion of the lung by pneumothorax or operation simply because there are physical signs or *x* ray evidence of a cavity The safest rule is to keep the chronic fibroid case under careful supervision but to leave well alone and not initiate any special treatment unless there are any special symptoms which must be controlled

Complications and symptoms may arise and need treat ment at any stage of the disease but the following table indicates the principles of treatment which usually apply to different stages

1 *Non clinical Pulmonary Tuberculosis*	Medical supervision Sanatorium Switzerland
2. *Early Progressive Stage*	
(*a*) Acute	Absolute rest Artificial pneumothorax Shock therapy
(*b*) Subacute	Rest Artificial pneumothorax Sanatorium Shock therapy
(*c*) Chronic ..	Sanatorium Switzerland Artificial pneumothorax Sanatorium Phrenic evulsion
3 *Late Progressive Stage* ..	Controlled rest and exercise Occupation Phrenic evulsion Thoracoplasty Shock therapy
4 *Chronic Fibroid Stage*	Supervision Occupation Phrenic evulsion Thoracoplasty

The chief point I wish to emphasize in this paper is the urgent necessity for strict treatment in the early pro-gressive stage In the later phases much can be done for the patient but his chance of recovery is only a fraction of his chance in the earlier stage Everything possible should be done therefore to prevent him from passing into the late stage

Medical News

At the next meeting of the Royal Microscopical Society at B.M.A. House Tavistock Square W.C. on Wednesday April 19th at 5.30 p.m. the following papers will be read and discussed: Mr. John Smiles: Dark-Ground Illumination in Ultra-Violet Microscopy. Dr. Reginald Clay and Mr. Thomas Court: Note on the Introduction of the Field Lens in the Microscope. Dr. Henry Power and his Letters.

The Queen's University Club, London, will hold its annual spring dinner at the Dorchester Hotel, Park Lane, W., on Thursday, May 4th, at 7.30 for 8 p.m. Tickets can be obtained from the honorary secretaries, 101, Harley Street, W.1. The price is 12s. 6d. each, which will be collected at the dinner.

The next monthly clinical meeting for medical practitioners will be given at the Hospital for Epilepsy and Paralysis, Maida Vale, W.9, on Thursday, April 27th, at 3 o'clock. Dr. Douglas McAlpine will demonstrate: The Cerebral Symptoms of Arterial Hypertension and their Treatment. Tea will be provided, and it will be a convenience if those intending to be present will send a card to the secretary.

The first C. E. Wallis Lecture before the Sections of Odontology and History of Medicine of the Royal Society of Medicine will be delivered on Monday, April 24th, at 8 p.m. by Mrs. Lilian Lindsay, L.D.S., on The Sun, the Tooth Drawer, and the Saint.

The National Institute of Industrial Psychology has arranged three public lectures on Applications of Industrial Psychology to Office Work, to be given at the London School of Economics, Houghton Street, W.C., on Mondays, April 24th, May 1st, and 8th, at 6 p.m. Admission free without ticket.

The London Insurance Practitioners' annual dinner and dance will be held at the Waldorf Hotel, Aldwych, W.C., on Thursday, April 27th, at 7.30 p.m. Reception, 7 p.m. Tickets for dinner and dance, 17s. 6d. each (exclusive of wines but including light refreshments during the dance), or six for £4 10s.; tickets for dance only, 7s. 6d. each (inclusive of light refreshments during the dance), or six for £2 2s. Accommodation will be provided for those non-dancers who would like to play cards. Tickets can be obtained from Dr. C. L. Batteson, 17, Russell Square, W.C.1, or from any member of the London Panel Committee.

The third and fourth demonstrations in the series Certain Aspects of Surgical Technique, arranged by the Fellowship of Medicine and Post-Graduate Medical Association, will be given at 11, Chandos Street, W., on April 19th, at 8.30 p.m. Mr. Ernest Miles—abdominoperineal excision of the rectum, followed by Mr. Lawrence Abel—technique of the surgery of the sympathetic nervous system. A demonstration of *x* ray films on April 20th, at 4.30 p.m., at 11, Chandos Street, is specially suitable for M.R.C.P. candidates. An all-day course in urology for advanced post-graduate students will be given at St. Peter's Hospital from May 8th to 20th. Demonstrations on plastic surgery will be given at the Hammersmith Hospital on April 25th and 28th. There will be a week-end course in gynaecology at the Samaritan Hospital for Women on April 29th and 30th. An evening course in physical medicine will be given from April 24th to May 19th at the London Clinic and Institute of Physical Medicine, Ranelagh Road, and an afternoon course in psychological medicine at the Maudsley Hospital, Denmark Hill, from April 24th to May 31st. Courses, lectures and demonstrations arranged by the Fellowship are open only to members and associates.

The seventh Congress of the French Societies of Oto-neuro-ophthalmology will be held from June 2nd to 4th at Limoges under the presidency of Professor Duverger. Further information can be obtained from the general secretary, Dr. Auguste Tournan, 81, Rue St. Lazare, Paris IXe.

The seventh International Congress of Military Medicine and Pharmacy will be held at Madrid from May 29th to June 4th, at the same time as the second International Congress of Sanitary Aviation and will be followed by the third session of the International Office of Documentation for Military Medicine which will be held at Seville from June 6th to 8th.

A meeting of the general committee of the British Empire Leprosy Relief Association will be held at the India Office on Thursday, April 20th, at 4 p.m. The speakers will include Sir Edward Gait, Sir Leonard Rogers, Sir Frank Carter, and the Rev. P. B. Clayton.

Messrs. Edward Arnold and Co. announce for early publication the seventh edition of Dr. Robert Hutchison's *Food and the Principles of Dietetics*, largely rewritten with the help of Professor V. H. Mottram.

A small monthly periodical *Lekarz Tybetanski*, which has been published in Warsaw since last July, deals with Tibetan medicine and in its February issue there is a summary in French of the practice of medicine in Tibet since A.D. 685. In 1857 a Tibetan medical practitioner of princely rank settled in St. Petersburg and his descendants have since practised there and in Warsaw. Information about the principles of Tibetan therapy may be obtained from Dr. W. Badmajeff, Jerozolimska Street 23/3, Warszawa, Poland.

An advisory committee of experts appointed last year by the Children's Bureau of the United States Department of Labor, Washington, to study employment of minors in hazardous occupations and to form standards for their protection has now published its report. The general recommendations strongly endorse those of the 1930 White House Conference on Child Health and Protection that State Boards be empowered to determine what are dangerous and injurious occupations and prohibit employment of minors therein, that minors be given full protection through Child Labor Law Administration, that adequate inspection forces be established, and that employers be required to pay double compensation to minors injured while irregularly employed. Specific recommendations deal with the occupations in which exposure of minors should be prohibited.

CONSULTANTS AND THE L.C.C.

Another largely attended meeting of London consultants and specialists was held at B.M.A. House on April 11th with Mr. H. S. SOUTTAR in the chair to determine what action should be taken in connexion with the L.C.C.'s proposals for its part-time specialist service. The following resolutions were adopted:

1. This general meeting of consultants, realizing the far-reaching importance of the principle in dispute between the Consultants and the L.C.C., requests the Council of the British Medical Association to take further action on behalf of the Consultants particularly in view of the offer of the Voluntary Hospitals Committee for London to act as mediator, and instructs the committee not to proceed at present with the plan of withdrawal.

2. That this meeting of medical and surgical consultants and specialists practising in London, having received the report of the committee relative to the medical services of the L.C.C., expresses its appreciation of the activities of the committee recorded therein, and thanks in particular the chairman (Dr. O. Donovan) and the Medical Secretary of the Association (Dr. G. C. Anderson).

3. That this meeting in reappointing the committee repeats its regret that representatives of the consultants and specialists were not afforded an opportunity prior to its adoption of considering the scheme recently approved by the L.C.C., for had this course been followed the meeting is convinced that in several respects modifications advisable in the public interest and necessary to engage the good will of the medical profession could have been secured, and the large volume of correspondence and the expressed opinion of many senior consultants received by the committee abundantly justifies this conclusion.

BLOOD PHOSPHATASE AND THE VAN DEN BERGH REACTION IN THE DIFFERENTIATION OF THE SEVERAL TYPES OF JAUNDICE

BY

W MORRELL ROBERTS, M D , D Sc , M R C P

PHYSICIAN AND PATHOLOGIST PARK HOSPITAL DAVYHULME , MEDICAL TUTOR AND MEDICAL OFFICER TO OUT PATIENTS MANCHESTER ROYAL INFIRMARY , MEDICAL REGISTRAR ANCOATS HOSPITAL

When icterus unaccompanied by other definite signs or symptoms, develops in an elderly patient, it is frequently a matter of difficulty to decide whether obstruction of the extrahepatic bile ducts—more particularly by malignant disease of the pancreas—is present, or whether the case is one of simple catarrhal jaundice It may be that the diagnosis is made with certainty only after an interval of several weeks, by observation of the general progress of the case and of the jaundice Again, to distinguish an obstructive from a toxic jaundice may be a troublesome problem in the early stages of the condition, since the onset and symptoms may be alike, and in both there may be pale stools, bilinria, and a direct van den Bergh reaction

It was claimed for the van den Bergh reaction, on its introduction, that it distinguished obstructive jaundice on the one hand, from catarrhal, toxic, and infective jaundice on the other—the obstructive variety giving a " direct reaction, the others a " biphasic " or an " indirect " Extensive clinical trial has shown that while the reaction is useful in other ways this particular claim is untenable, since any type of reaction may be obtained in catarrhal and toxic jaundice, the direct reaction being the most frequent finding in the author's experience In these circumstances it seems that the use of another method of distinguishing gross obstructive jaundice from the other varieties is desirable The main purpose of this paper is to describe a method which has been found to be very reliable in the examination of fifty-two consecutive cases of jaundice In addition, some relevant constructive criticism of the modern theory of icterus and of the van den Bergh reaction is offered The van den Bergh reaction was carried out on all the cases of the series, and the results are shown in the table

THE VAN DEN BERGH REACTION

It is convenient at this point to make some observations on the subject of the reaction itself The "direct" reaction was described by van den Bergh [1] and has passed into a number of textbooks as characterized by a blue violet colour maximal in thirty seconds, resulting from mixing equal parts of icteric serum and reagent In actual practice a result answering this description is seldom met with , the author has not yet seen one in the course of several hundred tests The usual finding with direct-action serums ' is that a colour change begins at once on the addition of the reagent and progresses through a reddish shade to a red-violet or violet It is probably owing to this that the colour is described in other textbooks as violet, red-violet, red, pink, and rose Moreover the colour change takes up to half an hour to reach its final shade, as can be readily demonstrated by putting on a second test half an hour after the first and noting the time taken for the colours to become equal These remarks apply to serums tested as soon as possible after collection If the serums are allowed to stand for some time the reaction takes place more slowly The direct reaction in its usual form, therefore would be more correctly described as a change of colour from the original yellow, through red, to a red-violet or violet, beginning at once on addition of the reagent, the whole process taking several minutes and sometimes as long as half an hour But this is essentially the description of a ' biphasic " reaction as given by van den Bergh—namely, " a red colour appearing at once and gradually deepening to violet " This is unfortunate, since the significance of a biphasic reaction may be very different from that of a direct reaction

In order to avoid this difficulty the author now makes use of the following facts

(1) The pigment in obstructive jaundice serums is insoluble in chloroform

(2) The pigment in indirect reaction serums is soluble in chloroform

(3) The biphasic reaction is thought, on good experimental grounds, to be a combination of the other two types

The reaction is said to be *direct* therefore, when the colour change begins on the addition of the reagent, whilst not more than a trace of the total pigment is extracted when another sample of the serum is shaken with an equal volume of chloroform (judged by the colour of the chloroform layer as compared with the colour of the serum) The reaction is said to be *biphasic* when the colour change begins on the addition of the reagent, whilst an appreciable proportion of the pigment is extracted by the chloroform This was found to be more satisfactory in practice than endeavouring to name the type of reaction solely from the final colour obtained and the time occupied in reaching it, and it is in this sense that the terms ' direct ' and " biphasic " are used in the table An *indirect* reaction is one in which no change of colour occurs with the reagent until after the addition of alcohol to the serum Hence there is no difficulty in recognizing this type, and the fact that the pigment may be completely extracted by chloroform is not made use of

It will be observed on reference to the table that not only did all the cases of obstructive jaundice give a direct reaction, but most of the toxic and all the catarrhal cases reacted in a like manner It would not have been possible to classify these cases by the colour obtained in the van den Bergh test, as in every one the final shade was more or less violet This accords with the view already widely held, that the reaction gives little assistance in differentiating obstructive jaundice from the other varieties, with the exception of the haemolytic type, which gives the indirect reaction

The quantity of bilirubin in the serum was estimated in every case by van den Bergh's method but this method suffers from the disadvantage that varying quantities of pigment are carried down with the protein precipitate on the addition of alcohol, and so are not included in the final estimation This is more particularly the case in serums giving a direct reaction In addition, the adsorption in different serums is not proportional to the total pigment present On this account Thannhauser and Andersen's modified method, in which the whole of the bilirubin is estimated, was also carried out The figures for both methods are given for purposes of comparison and reference The bilirubin content of normal serum is 0 2 to 0 5 unit

BLOOD PHOSPHATASE

The property possessed by certain body tissues and organs of hydrolysing phosphoric esters into the free alcohol and phosphoric acid is attributed to the presence of enzymes, to which the name of phosphatases has been given One or more of such enzymes are normally present in blood, and the ability of the blood to split phosphoric esters in the above way is referred to as the phosphatase

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal B M A House, Tavistock Square W C.1**

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QUERIES AND ANSWERS

Nocturnal Incontinence of Urine

DOCTORMAN" (Kingston) asks for suggestions for the treatment of nocturnal incontinence of urine which has continued since infancy in a girl now aged 11½ She is of a somewhat nervous disposition given to occasional nightmares and terrifying dreams but otherwise healthy bright and intelligent learns well at school but no genius good at sports and physical exercises at carpentry and things mechanical A sound sleeper she is habitually taken up at night but seldom really awakens Hexamine has sometimes been helpful

Glycosuria and Incontinence

G N M (Gloucestershire) asks for information on the following case In a man aged 54 rather stout energetic and abstemious sugar was accidentally discovered in the urine six years ago when he was consulting a surgeon for occasional nocturnal incontinence The glycosuria was promptly dispelled by the taking of herbs obtained for rheumatism and dieting More interesting still is the fact that the herbs alone will do the same I do not know what the herbs are Occasionally the patient is drowsy He puts on weight when he is not dieting There is no polyuria or thirst appetite is moderate His only worry is the incontinence The prostate is normal as shown by cystoscope urethroscope and rectal examination Wassermann reaction is negative sugar tolerance curve is high The urea is normal

*** This would appear to be a typical case of mild diabetes in an obese and middle aged man Such cases are often non progressive for some years especially when periods of dieting are followed as appears to happen in this case It is very unusual to say the least for herbal treatment to have any effect on diabetes and most doctors would require very complete and controlled proof before accepting this as a fact It is not likely that the incontinence has any connexion with the glycosuria unless it disappears when the urine becomes sugar free on diet

Case of ? Tuberculoma

Dr L M CLARK (Jamaica) asks for suggestions in the treatment of a man aged 29 who complains of severe headaches at frequent intervals lasting one or two days The only drug tried which has any effect is morphine (1/2 grain) In November 1926 he was in bed for six weeks with irregular fever and severe headaches he was then well for six months and since then has had periodic attacks In January 1930 he had an operation in Panama for left frontal sinus done through the nose In July 1931 in England he had a conservative operation for left frontal sinus Pus was found and three months later an x ray of the skull was negative Cerebro spinal fluid—no record He had an attack three weeks after the last frontal sinus operation In August 1931 a pulped stone in the left upper wisdom was extracted He was on reduced carbohydrate diet for two and a half months in 1931 Present condition *X* ray (September 1932) shows opaque patch in midline near vertex of skull Cerebro-spinal fluid—350 cells per c mm mostly small lymphocytes pressure increased Lung x ray—one old calcified node Provisional diagnosis—calcifying localized tuberculous meningitis

Arteriosclerosis Subjective Symptoms

Dr LAWRIE (Shelton Stoke on Trent) in reply to "Taxpayer" writes I suggest that if the ears have not been examined this should be done I had as a patient one old gentleman getting on towards 80 years of age who was suffering from incurable giddiness supposed to be due to arteriosclerosis and he was cured by syringing out two plugs of wax from his ears

Income Tax

Allowance for Disused Car

'A C' used one car up to 1924 and since then found two cars necessary He has now reverted to one car only and the inspector of taxes declines to make any obsolescence allowance for the discarded car because it has not been replaced Depreciation on both cars was allowed up to 1931 inclusive The obsolete car is unsaleable

*** The inspector is legally correct and if A C does not intend to use two cars in future there is no means of obtaining the obsolescence allowance If however there is a prospect of two cars being used again he might ask the inspector whether he will allow the claim in the year when a second car is purchased

LETTERS, NOTES, ETC

Voluntary Sterilization

Dr B DUNLOP (London S W) writes I beg that in view of what is said in two items (pp 481 and 483) you will again allow me to demur to the proposal to legalize voluntary sterilization merely for mental defectives As the mental deficiency evil is (1) mainly a carrier' one and (2) only part of the very serious phenomenon of transmissible defectiveness the scientific as well as liberal procedure would be to make voluntary sterilization (and I should add abortion) by medical practitioners entirely legal or else legal for any person who has two children

Caveat Emptor

Information that has reached us from Birmingham suggests that busy and preoccupied doctors ought to be on their guard against the blandishments of an itinerant canvasser who may try to get their signature to an order form for a high sounding encyclopaedia in several volumes with research privileges The book and the service may or may not be worth the subscription but whoever feels attracted by offers of this kind would do well to read the terms carefully before signing any document

Number Plates and Brakes

Motorists are reminded by the Automobile Association of the importance of keeping their number plates clearly distinguishable as required by law Numerous prosecutions for this offence have recently been instituted by the police in various parts of the country A further point to which the police have recently devoted considerable attention is the maintenance of an efficient braking system and frequent tests are being carried out The usual procedure is for the driver to be asked to apply the brakes and in the event of their not holding the sequel usually takes place in the local police court The maximum penalty for both of the infringements mentioned is £20

"Endomotriomata" Correction

Lieut Colonel V B GREEN ARMYTAGE asks us to correct a slip which occurred in his article (*Journal* April 8th p 602) Partridge's egg'—column 2 line 12—should read "partridge's eye

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 45 46 47 48 49 and 51 of the advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 50 and 51

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 110

activity of the blood Experimental evidence has been brought forward by Robison and his associates[2] to show that phosphatase plays an important part in the formation of bone and it appears that this enzyme may also be a factor in carbohydrate metabolism

It was found by Kay[3] and by Roberts[4] working independently that the phosphatase activity of the blood is greatly increased in osteitis deformans and Kay showed further that a marked increase also occurs in other conditions in which extensive bony changes are taking place In the varied series of cases investigated by Roberts were included two cases of obstructive jaundice and one case of catarrhal jaundice The two cases of obstructive jaundice showed an increase in blood phosphatase activity as great as that noticed in some of the cases of osteitis deformans whereas the catarrhal jaundice figure was only slightly raised above the normal This difference between the two forms of jaundice seemed to merit further investigation the result of which has been to establish the fact that in cases of gross obstructive jaundice such as may result from a gall stone in the common bile duct or a pancreatic carcinoma the blood phosphatase figure is invariably high whereas in all other varieties of jaundice the figure is but slightly raised and may even be normal though the patient may be deeply jaundiced The results on which this statement is based are shown in the table and the method used in obtaining these results will now be described

Technique and Present Investigation

About 10 c cm of blood was removed from the patient's arm vein in the usual way Of this 5 c cm was allowed to clot to yield serum for the van den Bergh test and 5 c cm was oxalated for the phosphatase determination Should it be preferred to use plasma for the van den Bergh test the whole of the blood can be oxalated and after the removal of the 4 c cm required for the phosphatase the remainder can be centrifuged for plasma

The phosphatase activity was estimated by the author's method[4] which consists in determining the increase in inorganic phosphorus (that is the amount of hydrolysis) on incubating the blood with excess of sodium beta glycerophosphate for two hours at 38–40° C at *p*H 8·9 The phosphorus is determined before and after incubation by Benedict's colorimetric method as described in Myer's *Practical Chemical Analysis of Blood* The results are expressed in units of phosphatase per 100 c cm blood one unit being the amount of enzyme that will liberate 1 mg phosphorus in two hours under the above conditions The method sacrifices a certain amount of accuracy in order to be easily applicable and to diminish time consumption so that the exact limits of normality are not precise but a result not exceeding 5·5 units may be taken as normal

In the description of the method in the original paper it was stated that the minimal quantity of oxalate should be used to prevent clotting as it was noticed that excess of oxalate led to lower results for the blood phosphatase It has since been found that this is because the oxalate interferes with the determination of the phosphorus though it does not appear to affect the activity of the enzyme This was shown by carrying out the phosphatase procedure on three portions of blood under identical conditions except that a little additional powdered oxalate was added to portion 2 before incubation After incubation and protein precipitation had been carried out on the three specimens an amount of oxalate was added to specimen 3 equal to that previously added to specimen 2 The inorganic phosphorus was then determined in each the results being (1) 15·4 mg (2) 14·6 mg (3) 14·6 mg Thus the effect of oxalate is produced during the phosphorus determination not during the incubation When excess of oxalate is used the effect is more noticeable the greater the concentration of phosphorus so that the error does not vanish in computing the increase in phosphorus concentration but leads to a lower value for the phosphatase If a great excess of oxalate is added no colour at all develops in the phosphorus determination but the small quantity necessary to inhibit clotting makes no essential difference to the result

Although the phosphatase figure is often alone sufficient to distinguish the obstructive nature of a jaundice it is an advantage to carry out a quantitative bilirubin estimation at the same time in order to obtain a numerical expression of the jaundice to compare with the phosphatase figure The degree of skin pigmentation is not a reliable index of the bilirubin content of the blood and it is on the relation between this content and the phosphatase activity that the differentiation really depends Thus a phosphatase figure which would indicate toxic jaundice if the bilirubin content of the serum was high might favour a diagnosis of obstructive jaundice if the serum bilirubin was low (Compare Cases 6 and 24)

Remarks on Cases

The cases are arranged in the table into obstructive toxic and infective catarrhal and haemolytic jaundice and a small unclassified group With the exception of one or two of the last named the diagnosis in every instance was clearly established either on clinical grounds or as a result of operation or necropsy

It is obvious from a perusal of the figures that the cases fall definitely into obstructive or non-obstructive groups Only one case in the obstructive group shows a phosphatase figure of less than 10 units and in this case the jaundice was relatively slight (2·7 units of bilirubin) On the other hand none of the toxic and catarrhal cases has a phosphatase figure above 10 with the exception of Case 37 which will be referred to later The fact that several of the toxic cases were deeply jaundiced emphasizes the distinction The essentially obstructive nature of the icterus in Cases 3 and 7 was apparent from the macroscopical and microscopical findings at necropsy

No.	Diagnosis	Units of phosphatase	Type of van den Bergh reaction	Units of Bilirubin: van den Bergh mg. per 100 c.cm.	Units of Bilirubin: Total mg. per 100 c.cm.
	Obstructive				
1	Carcinoma pancreas	13·5	Direct	12·0	—
2	" stomach with jaundice	19·6	"	1·5	15·4
3	Miliary tuberculosis with jaundice	10·9	"	10·7	15·0
4	Stone in common bile duct and ruptured cystic duct	11·3	"	6·5	9
5	Pancreatic cirrhosis—cholecystostomy	20·4	"	1·0	13·5
6	Carcinoma bile duct—six days after operation	9·4	"	2·5	2·7
7	Hodgkin's disease with jaundice	13·4	"	11·5	14·9
8	Cholelithiasis	14·6	"	11·3	15·5
9	Carcinoma pancreas	16·0	"	13·8	17·4
10	"	12·6	"	5·0	5
11	Obstructive jaundice	22·9	"	1·2	17·3
12	Cholelithiasis	14·7	"	1·5	3
13	Carcinoma stomach with jaundice	13·6	"	13·5	21
14	Carcinoma pancreas	12·1	"	6·7	9·3
15	"	16·8	"	17·4	23·4
16	"	17·3	"	15·8	15
17	Cholelithiasis	20·3	"	13·9	15·0
18	Carcinoma bile ducts	17·0	"	11·3	16·6
19	" stomach with jaundice	18·6	"	13·0	14·1
20	Cholelithiasis	16·2	"	8·2	11·1
21	Carcinoma pancreas	21·3	"	14·1	19·9

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

273 Thyroid Diseases

From observations based upon a series of over twelve thousand cases I Bram (*Med Journ and Record* January 4th 1933 p 22) pleads for a more precise terminology in the description of goitrous affections He considers Graves s disease to be in itself a clinical entity which should not be called exophthalmic goitre since both the signs of bulging eyes and swollen neck may be absent from the otherwise typical clinical picture that the term exophthalmic goitre ' is supposed to designate Graves s disease involves the entire body in aetiological and clinical aspects It may be defined as a katabolic neuro-endocrine dysfunction in which the entire chain of duct less glands and the autonomic nervous system are con cerned The syndrome is characterized by a heightened metabolic rate afebrile heart hurry emotional disturb-ances tremor loss in weight weakness dermographia relative susceptibility to cinchonism and usually also by a hyperplastic swelling of the thyroid gland and exoph thalmos General widespread therapeutic management is therefore indicated in Graves s disease and not local treatment It is the body that makes the thyroid sick The involvement of the thyroid in the clinical picture is a mere incident in a complex constitutional affection The term toxic adenoma indicates the superimposition of a state of thyroid toxicity upon an old standing tumour of this organ Toxic goitre hyperthyroidism and thyro-toxicosis may be employed as synonyms of toxic adenoma since they all imply an excess of thyroid hormone in the blood and embrace a local condition in which it is the thyroid which makes the body sick The need for local operative treatment in such cases is therefore indicated

274 The Sciatic Syndrome

W P Gardner (*Minnesota Med* January 1933 p 36) insists that the term sciatica is inadvisable since the condition is not a clinical entity but rather a syndrome of which four chief varieties are distinguishable—namely a form secondary to general disease or gross pressure true sciatic neuritis a form due to myositis or fibro-myositis and a variety resulting from neurodocitis In order to ensure that a rational line of treatment is pursued the essential cause must be identified in each instance by obtaining a detailed clinical history and per forming a thorough clinical examination with special refer ence to the rectum pelvis and general nervous condition Almost every case will require radiography of the pelvis and lower part of the spine and often of the teeth sinuses gall bladder and alimentary canal Laboratory investigations of the blood and urine are also essential The possibility of syphilis lead poisoning diabetes and alcoholism must be excluded osteo-arthritis is too often overlooked even when such symptoms as perineal pain and muscular wasting are present True sciatic pen neuritis is rare but the presence of myositis or fibro-myositis is common its most usual site being the lumbar and gluteal muscles In neurodocitis the pain is due to stimulation of the nerve concerned by a bony foramen or canal—for example sacralization of the fifth lumbar vertebra and irregularities of the posterior spinal articula tions Perfect radiograms and expert examiners are therefore indispensable If rest in bed and the employ ment of heat and analgesic drugs do not relieve the pain and there are no such extrinsic causes discernible at first the injection of 60 to 100 c cm of sterile normal saline solution into the sacral epidural space may be effective provided that the patient subsequently remains quietly on the affected side for about three quarters of an hour and is kept in bed for a day or longer Larger quantities should not be employed since they often give rise to severe pain and even paraesthesia or temporary loss of sphincter control The mechanism of the relief of pain in these patients is stretching of the component roots of the sciatic nerve This simple procedure may be repeated if desired at intervals of two days Again the nerves may be blocked paravertebrally by the injection of weak solutions of alcohol or neocaine The mere relief of pain should never be allowed to distract the medical practitioner from tracking down the essential cause of the sciatic syndrome In the case of sciatic neuritis rest diathermy and the injection into the nerve sheath of neocaine and saline solution are often useful For cases of arthritis of the intervertebral foramina or sprain and subluxation of the sacro-iliac or lumbo-sacral joints the guiding principle is immobilization Details are given of the most successful lines of treatment of each of the four named varieties of the sciatic syndrome

275 Traumatic Auricular Flutter

A Jervell (*Norsk Mag f Laegevid* January 1933 p 14) records the case of a man who was treated for fistula in 1928 when he showed no signs of cardiac disease In December 1930 he was knocked down and sustained a violent blow in the back at the level of the left scapula On examination the heart s action was found to be very frequent and irregular Under treatment by rest in bed and the administration of digitalis and diuretin he made a good recovery and was able to resume his work in six weeks time though he was not capable of exertion so well as before On examination in August 1931 for a pension cardiac arrhythmia was found and the follow ing month an electrocardiogram showed the presence of auricular flutter which was cured by quinidine treatment The trauma was undoubtedly the cause of the condition giving rise to a small haemorrhage in the auricular musculature

Surgery

276 Fractures of the Vertebrae

J Dunlop and C H Parker (*Journ of Bone and Joint Surg* January 1933 p 153) describe these characteristic symptoms of compression fractures of the vertebrae and record details of the treatment in fifty eight cases of com pressed or impacted fractures The patient usually gives a history of trauma followed by sudden severe localized pain with continued girdle pain and discomfort The reduction method of treatment was employed and was found to be very satisfactory Reduction of the frac ture restores the normal alignment of the vertebral bodies it eliminates kyphosis and lateral deviations thus improving the general posture As the normal rela tions of the articular facets are restored there is free movement of the spine without irritation It was also found that the hyperextension diminished the pain and a flexible spine without bone spurs resulted In many cases the normal architecture was completely restored and the site of the fracture could not be recognized by x ray examination In no case was there any injury to the spinal cord as a result of the reduction and post operative symptoms were limited to localized pain nausea and vomiting for two or three days due to the hyperextension in the cast and to the anaesthetic In the series two patients died from other causes some time after treatment The operative procedure consists of the breaking up of the impaction or overcoming the com pression by forcible hyperextension during traction of reduction by placing the patient in marked hyperextension on a Goldthwait frame and of the application of a plaster jacket for permanent fixation in the corrected position The patient is kept in the cast for a minimum of fifteen weeks to ensure the healing of the spongy and

No	Diagnosis	Units of phosphatase	Type of van den Bergh reaction	Units of Bilirubin	
				v d B method	T & A method
	Toxic and Infective				
22	Toxic jaundice—patient died	8 7	Biphasic	17 0	—
23	Jaundice following N A B	5 0	Direct	13 5	17 6
24	5th day	6 6	,	9 8	16 0
	10 days later	9 4	,,	21 7	30 0
	7	7 9		18 5	25 5
25	Toxic jaundice	8 9	,,	28 0	35 0
26	Jaundice following N A B 21st day	5 5	,,	13 2	20 3
27	Suppurative cholangitis	7 5	,	55 0	—
28	In	7 7	,,	3 6	5 0
29	In cystectomy for gall stones	8 1	Biphasic	14 6	19 2
30	Jaundice following N A B	5 1	Direct	6 2	10 2
31	Subacute yellow atrophy	8 2	Biphasic	18 0	20 6
32	Jaundice following N A B	6 9	Direct	21 0	26 5
	Catarrhal				
33	Catarrhal jaundice	4 7	Direct	17 5	20 3
34		4 2	,	2 5	6 9
35	,,	5 0	,,	5 0	7 3
36	,,	3 7	,,	3 7	5 1
37	,, (patient aged 3)	13 9	,,	2 7	—
38	,,	4 8		10 0	13 9
39	,, 1 week after onset	6 6	,	23 9	27 7
	3 weeks	8 9	,,	17 4	23 8
40		5 2		13 7	17 9
	Haemolytic				
41	Pernicious anaemia	2 7	Indirect	5 0	—
42	Severe secondary anaemia	5 5	Delayed direct	1 6	—
43	Secondary anaemia	2 2		1 9	1 7
44	Acholuric jaundice	3 2	Indirect	6.8	7 0
45	Pernicious anaemia	3 3		3 0	—
	Unclassified Cases				
46	Portal cirrhosis	21 9	Biphasic	1 2	1 6
47		6 0		1 3	1 5
48	Cirrhosis or carcinoma liver	7 6		0 9	1 2
49	Chronic hepatitis	9 1	Direct	0 5	0.5
50	Catarrhal jaundice (?)	6 7		5 0	7 3
51	Acute onset infective endocarditis in case of Graves's disease	6 8	Biphasic	2 7	2 9
52	? (Enlarged spleen—positive W R)	7 4	Direct	1 4	2 0

Case 11 was clinically one of obstructive jaundice, but the patient left the hospital before the nature of the obstruction had been ascertained In Cases 22 and 25 there was again no question as to the nature of the jaundice, though the actual "toxin" was not discovered It will be noted that five cases of so called 'haemolytic" jaundice are included (Cases 41 to 45), in each of which the phosphatase figure is normal The unclassified cases are so grouped either because the clinical diagnosis was in doubt or because the class into which the jaundice should be put on pathological grounds is open to dispute!

Case 46—Male aged 31 with enlarged liver and spleen There was a lack of unanimity of opinion in the diagnosis of this case as it closely resembled the mythical Hanot's cirrhosis The phosphatase figure is exceptionally high in comparison with the slight degree of the jaundice and it is probable that some factor other than gross biliary obstruction is involved This case was encountered at the outset of the research and when later its exceptional nature was recognized an attempt was made to get into touch with the patient in order that a more thorough investigation might be made This proved impossible as the patient had died in the interval

Case 47—Male Portal cirrhosis with hob nail liver and history of ascites and Talma-Morrison operation Kay[3] found a slightly increased blood phosphatase in a case of portal cirrhosis but he does not mention the presence or absence of jaundice

Case 48—Male An obscure case with a greatly enlarged liver, diagnosed provisionally as carcinoma liver or cirrhosis

Case 49—A woman aged 43, who had had 'catarrhal jaundice" four months previously, and who still showed an icteric tint and an enlarged liver

Case 50—A woman, aged 25, diagnosed as catarrhal jaundice at the time of the test (with which diagnosis the figures are in agreement), but as the jaundice was still present several weeks later the case has been left unclassified

Case 51—A girl, aged 20 who had been under observation and treatment for some months for thyrotoxicosis and who then became suddenly worse with intense pain in the legs, vomiting and jaundice This proved to be the onset of infective endocarditis, which ended fatally a few weeks later It is probable that such a jaundice would be toxic in nature but the case is complicated by the fact that the blood phosphatase is liable to be slightly increased in Graves's disease

Case 52—Another obscure case A woman aged 43 with an enlarged spleen and a positive Wassermann reaction who left the hospital before a satisfactory diagnosis had been made

In several of the cases in the main groups the method described was of value in establishing the diagnosis and it is perhaps permissible to refer to one such case as an example A man, aged 67, was admitted to hospital complaining of increasing jaundice of three weeks' duration No symptoms of any significance were present On examination there was nothing abnormal found except the jaundice The stools were pale, bilirubin was marked, and the van den Bergh test was direct, the serum containing 20 3 units of bilirubin A diagnosis of carcinoma pancreas was made Against this was the fact that the phosphatase activity of the blood was normal On further investigation of the case the Wassermann reaction was found to be positive, whereupon the patient admitted that he had been having "injections" on this account When he was seen two months later the jaundice had cleared up and the serum gave an indirect reaction (0 4 unit bilirubin) The case is No 26 in the table

The cases of catarrhal jaundice are shown in the table separately from other jaundices of toxic and infective nature At first sight Case 37 would appear from its phosphatase figure to belong to the obstructive group, but this is not necessarily so, since the patient was a child of 3 years of age, and the normal blood phosphatase in children is nearly double that for an adult, though the actual limits of variation have not been worked out by the author's method A blood phosphatase estimation on a child of 5, convalescent after pneumonia, carried out at the same time as the above, gave a value of 8 2 units Nevertheless catarrhal jaundice of an obstructive nature cannot be excluded in this case In this connexion it may be mentioned that it is probably a mistake to regard catarrhal jaundice as a pathological entity Klemperer, Killian, and Heyd[4] divide it into three classes

(1) Due to obstruction of the ostium of the common bile duct from gastro-intestinal catarrh

(2) By degeneration of the liver with multiple necrosis—a sort of mild yellow atrophy

(3) Due to cholangitis

Cases of the first class would show the objective signs of an obstructive jaundice, and the phosphatase method would presumably fail to differentiate such a jaundice from that due to other forms of obstruction, but apart from the doubtful case referred to above the difficulty was not met with in this investigation The fact that the phosphatase value was low in all the other cases supports the view widely held at the present time that most cases of catarrhal jaundice are of the nature of a hepatitis

DISCUSSION

Although the reason for the relation between the phosphatase activity of the blood and the type of jaundice is not as yet altogether manifest, there are a few points bearing on the matter which may be discussed at this

porous bone, which makes up most of the structure of the vertebral body During this time the patient is kept supine, but for nursing purposes may be turned 80 degrees from this At the end of fifteen weeks the cast is removed, complete reproduction of the bone is confirmed by radiography, and a Taylor back brace is fitted, which must be worn for a year from the time of injury Reduction is not so perfect where there is much depression of the lateral portions of the vertebral bodies or where there have been central depressions Fractures of the dorsal vertebrae above the ninth have not yielded as good results as when the injuries were below this point

277 Static Lumbago

A SAXL (*Wien klin Woch*, December 2nd, 1932 p 1504) describes static lumbago as a strain of the lumbo-sacral joint, more common in women than in men, and characterized by pain over the lumbo sacral joint radiating into the flanks in more severe cases, and demonstrated by extension of the muscles of the spine Negative *x*-ray findings and the absence of tenderness of muscles and of limitation to lateral and forward movements of the spinal column serve to differentiate the condition from spondylarthritis and myalgia, except where lumbago is complicated by either of these Treatment consists of radiant heat for the relief of pain and massage and remedial exercises to improve the condition of the supporting muscles, especially the abdominal ones In enteroptosis, where the drag of the abdominal contents on the spinal column affects the weakened lumbo-sacral joint, a belt which grips the pelvis firmly and sufficiently supports the abdomen is advised This support should be extra deep behind, reaching up to the lower angle of the scapula Where the condition is due to faulty posture—for example, arising from flat feet—correction of such a deformity will be sufficient to relieve the condition of the lumbo-sacral joint

278 Experimental Immobilization of the Thorax

R PIZZAGLI and G LUCARELLI (*Arch Ital di Chir* January, 1933, p 37), as the result of experiments on dogs and rabbits, came to the following conclusions A persistent diminution of respiratory movements occurred in animals which had undergone resection of the scalenus anticus and the diminution became still more pronounced when all three scaleni had been resected Neurectomy of the intercostal nerves also produced a reduction of respiratory amplitude on the side on which the operation had been performed The respiratory diminution, however, was less than that observed after scalenectomy, but was usually permanent Alcoholization of the intercostal nerves first caused respiratory irregularity, which became less pronounced two months after the operation Isolated phrenicectomy caused only a slight diminution of the thoracic excursions When the two operations were combined, the most pronounced diminution of the respiratory movements was obtained by scalenectomy and intercostal neurectomy, and then in a decreasing scale by phrenicectomy and scalenectomy, and phrenicectomy and intercostal resection The maximum reduction of thoracic respiratory activity was obtained by a combination of phrenicectomy, scalenectomy, and intercostal neurectomy

Therapeutics

279 Digitalis in Heart Disease

H A CHRISTIAN (*New Eng Journ Med*, January 12th, 1933 p 66) states that digitalis enters the cells or fibres of the myocardium during its passage along the coronary capillaries and through the cardiac cavities, in a few seconds it is firmly bound to the heart muscle A latent period follows, after which the digitalis is split into two components, an aglykone or genin which exerts the digitalis action and a sugar which is inert This splitting is a gradual process and doses repeated at too short intervals may result in a cumulative toxic effect The fixation of digitalis is directly proportionate to its concentration and time of flow Skeletal muscle the liver and kidneys also fix digitalis, but the lungs do not When digitalis is given intravenously the heart receives the full dose, and fixes an amount proportionate to its concentration in the brief time that it circulates through the heart muscle The portion which escapes into the general circulation is absorbed by the liver, kidney and skeletal muscle If digitalis is given by the mouth it passes into the portal circulation, where the liver fixes about as much as the heart But absorption through the gastro-intestinal mucosa is so prolonged that digitalis remains in the circulation for a much longer time The dosage and therapeutic effect are, therefore, much the same whether it is given intravenously or by the mouth During cardiac decompensation, where the coronary as well as the peripheral circulation is slowed, the contact between digitalis in the circulation and the myocardium is prolonged, and more digitalis is fixed just when the heart needs it most A hypertrophied heart fixes more digitalis than one of normal weight Cloetta has suggested that digitalis retards cardiac hypertrophy and retards detrimental effects on cardiac function The present author believes that cardiac hypertrophy is an undesirable process and advocates "tonic doses" of 0 1 to 0 15 gram of powdered digitalis leaves daily to patients with enlarging hearts even before there is evidence of decreasing function Digitalis is more effective in older than in younger patients When there is slight breathlessness on exertion particularly in the older ranges of life, or when early decompensation has developed, digitalis must be given day in and day out for the rest of the patient's life The author has found pills of the powdered leaves a very satisfactory preparation of the drug

280 Desensitization of Hay Fever by Mixed Pollen Extracts

K HANSEN (*Deut med Woch* February 10th, 1933 p 208) reports considerable success in the prophylactic treatment of hay fever during 1932 by the use of a mixed extract of various grass pollens Having concluded from previous work that prophylaxis is the only rational treatment in this condition, and that the preparation of specific extracts for individual cases is not easily practicable, the author decided to prepare an extract of a series of grass pollens (Helisen) which should have prophylactic properties in a large proportion of allergic cases Rye pollen was excluded from this mixed antigen but further investigations revealed the necessity for its inclusion particularly since large tracts of land in Prussia and Bavaria are under rye In 1932, 316 patients were treated with this new antigen, and a questionary card was sent to each of them to obtain information as to progress Of these, 28 per cent remained completely free from symptoms, 42 per cent were definitely improved, 20 per cent were slightly improved, and 10 per cent were unaffected Although quantitative data were not obtained on such matters as the severity of hay fever in untreated cases during 1932, or the degree of pollen dissemination, study of individual cases, which had been continued for several years, led to the conclusion that these figures gave a true picture of the value of the new antigen The period of protection ranged from a month to more than a year The greatest success was obtained when the treatment was undertaken between February 1st and April 1st In 122 cases the treatment was carried out without any allergic reactions, but the percentages of success were not significantly different in this group from those in the complete series Particular attention is drawn to the fact that in no single case was there an attack of asthma, which in cases of pollen allergy so frequently take a very serious form Comparison of the method with symptomatic treatment in 271 cases showed a remarkable preponderance of successes in the former Great care must be exercised in undertaking the treatment in cases of pregnancy since, should shock follow the injections, there may be considerable danger of oedema of the placenta, and abortion Prophylactic treatment may be applied to children, who, with care, will tolerate considerable doses of the antigen

Radiology

281 X Ray Stimulation of Carotid Sinus in Hypertension

V CARULLA J G QUERALTO and P M GONZALEZ (*Journ de Radiol et d Electrol* December 1932 p 581) have had remarkable results—in some cases definite improvement persisting for over three months—from this method of treatment in a frequently intractable condition There are many divergent views concerning the anatomy and physiology of the carotid sinus Mechanical and chemical stimuli produce transient and uncertain results but *x* ray stimulation has a surprising effect when employed in minimal doses—that is one twentieth of the erythema dose Allowing for diffusion this dose is equivalent to 45 or 50 r when applied unilaterally or bilaterally A simetric apparatus is used having a spark gap of 16 inches and a filter of 1/50-inch zinc and 2/25 inch aluminium After delimitation of the sinus and estimation of blood pressure the tube is placed sixteen inches from the patient so that the field is 2 4 inches in diameter The initial dose is 110 r producing usually a slight transient initial rise of blood pressure On reduction of the dosage to 80 r the blood pressure falls Optimum results are obtained with still smaller doses (45–50 r) A further reduction to 25 or 30 r produces an immediate though transient result Bilateral irradiation (with 50 r) yields results inferior to unilateral irradiation Bilateral dosage of 25 r is as efficacious as unilateral applications of 50 r The number of seances required to produce prolonged lowering of blood pressure varies greatly Some patients obtain relief from one or two treatments while others require several irradiations In some cases the blood pressure falls gradually after the termination of treatment If after one or two irradiations the blood pressure does not fall it is recommended that treatment should be continued after one day's interval Caution is necessary because too frequent treatment may cause disturbances of rhythm The writers have not observed bradycardia or syncope—results that have been noted by some other observers The present writers believe that irradiation of the carotid sinus is absolutely innocuous

282 Radiographical Diagnosis of Duodenal Ulcer

G PETER (*Radiology* December 1932 p 360) discusses the various views held as regards the possibility of diagnosing the presence of duodenal ulcer definitely by means of radiography and claims that during twenty months employment of Berg's method he has been able to demonstrate sure and objective signs of this disease with much greater frequency and precision than ever before In 294 suspected cases duodenal ulcers were detected in 107 the diagnosis being confirmed in every case which came to operation Peter finds also that the signs seen in the *x* ray films correspond exactly with Berg's objective signs and that the adoption of an adequate technique helps to detect them without fail The radiologist must however be sufficiently expert to distinguish between a slow peristaltic wave and a constant retraction a constant niche and a mass of barium retained between the normal foldings of the mucosa a normal recess and a duodenal pouch caused by dilatation and a deformity due to internal defects and one resulting from external compression or simple peristalsis The author discusses the signs and terminology postulated by Akerlund and Berg some cases present them all but in others for various reasons only a certain number can be demonstrated These signs of duodenal ulcer are listed as constancy of the niche found both in profile and anteriorly biconcavity of the surroundings of the niche as seen in profile halo round the ulcer seen anteriorly retraction—namely loss of the convexity of the wall opposite to the ulcer convergence of the folds of the mucosa towards the niche in the form of a star duodenal pouch due to narrowness produced by the swollen mucosa and shortening of the whole bulb accompanied by deformity Peter considers that the absence of direct radiographical signs should be taken as a contraindication to operation if the signs change from one film to another—are inconstant—duodenal ulcer should be excluded Berg urges the importance of operating in the case of chronic ulcers with relapse and showing a tendency toward the development of deformities strictures duodenal pouches and shortening If there is undue delay the approximation of the surrounding organs may render impossible the radical resection of the diseased area and may negative the benefit of a palliative operation by permitting the appearance of the too common post-operative ulcer

283 Inflammatory Complications of Radium Therapy

Wallon has shown the gravity of infectious complications in the radium treatment of cervical cancers R BERNARD (*Bull Soc d Obstét et de Gynécol de Paris* December 1932 p 731) believes that though serious they are of infrequent occurrence and may be avoided by employing proper care and technique Inflammatory reactions are due to traumatism rather than to the action of the radium Pre-operative preparation is important Bernard gives daily injections of Dakin's solution for some days before the application and also propidon to prevent attacks of lymphangitis Exuberant lesions are destroyed by electro-coagulation When applying the radium after the uterine sound colpostat and radium containers are placed *in situ* two small drains are inserted and kept in place at the base of the vagina by two or three loosely packed compresses Four or five vaginal injections are given every twenty hours and the compresses changed every two days without disturbing the apparatus Changing of the compresses permits the removal of the products of vaginal desquamation disturbance of the apparatus can be largely avoided by covering it with a thick layer of paraffin Though a rise of temperature and other symptoms may occur during the first days of treatment these abate without interrupting the treatment owing to the absence of daily traumatism by the method described Bernard believes that these inflammatory manifestations are due to lymphangitis originating in the uterus with a maximum intensity in the parametrium and with or without peritoneal reactions Another grave inflammatory condition is salpingitis In these cases physiotherapy becomes impossible and surgical operation is the only method of treatment This consists in a double castration terminated by a simple Mikulicz procedure which permits the commencement of radium treatment on the third day after operation Bernard has had two such cases in one the period of survival was eighteen months in the other two years

Obstetrics and Gynaecology

284 Kraurosis Vulvae

M A GOLDBERGER (*Amer Journ Obstet and Gynecol* January 1933 p 58) records a series of thirteen cases of kraurosis vulvae and emphasizes the necessity of vulvectomy for its cure and the prevention of carcinoma The condition is usually found after the menopause but may occur in young women Deficiency of the ovarian hormone has been suspected as the cause but in Goldberger's cases specific hormone therapy on these lines gave temporary relief in only a very few cases and in no instance changed the clinical or local condition In the first stage of the disease the vulva appears swollen and reddened Histological examination reveals a pronounced acanthosis an increased keratosis and an infiltration with round cells and leucocytes The second stage is reached about a year after the onset The skin becomes white and firm and there may be excoriations from scratching The acanthosis persists accompanied by heaping up of the keratin layer and a chronic inflammation of the connective tissue with scattered areas of collagen and numerous plasma cells In the third stage the labia majora flatten out the labia

stage In the first place the differences observed in the phosphatase are not due to any variation of hydrogen ion concentration in the incubation mixtures This point was disposed of at once by incubating several well buffered specimens of icteric bloods at different *p*H values when the distinction between the two main types of blood was maintained Nor is there any reason for postulating the presence of phosphatase inhibitory substances in toxic jaundice blood since a mixture of equal parts of such blood and high phosphatase blood from a case of osteitis deformans gave the exactly average value of its two components

It was thought that the explanation might be found in the fact that bile contains phosphatase so that on the occurrence of biliary obstruction the entry of bile into the blood would increase the phosphatase activity of the latter as well as its bilirubin content There are however two reasons why this alone will not explain the facts In the first place on testing the point experimentally it was found that the phosphatase activity of bile is in itself insufficient to account for the high figures obtained Several tests were carried out in which cadaver bile or bile draining from the gall bladder or from the bile ducts after operation was added to normal blood of which the following will serve as a typical example

Normal blood was mixed with fresh bile in the proportion of 3 to 1 A van den Bergh test on the mixture was direct and 13 3 units of bilirubin were present as estimated by van den Bergh's method (colour comparison was impossible when Thannhauser and Andersen's method was used) The phosphatase activity of the original blood was 2 8 units and of the mixture 3 6 units (estimated at optimum *p*H by a slight modification of the method used for blood) from which it may be deduced mathematically that the activity of the bile was about 6 units Direct determination of the bile phosphatase could not be accomplished as turbidity developed during the phosphorus determination Thus an artificial obstructive jaundice serum of 13 3 units showed the blood phosphatase activity of a toxic jaundice In one case a small proportion of dark viscous cadaver bile from the gall bladder was used which resulted in a phosphatase value for the mixture of 12 2 units but the bilirubin figure was far in excess of any likely to occur in practice

The second reason against the bile phosphatase hypothesis is that it is inconsistent with the low phosphatase figures found in toxic jaundice if the modern view of this condition be accepted—namely that the jaundice is in part due to biliary obstruction or to necrosis of liver cells by which free passage of bile constituents into the blood is made possible thus accounting for the direct or biphasic van den Bergh reaction the frequently pale stools and the bilinria According to van den Bergh bilinria is always indicative of obstruction

The modern explanation of the van den Bergh reaction and jaundice has however never appeared entirely satisfactory to the author but with the slight modification about to be tentatively put forward it seems to fit the facts better and to allow of an explanation of the phosphatase figures It is at present thought that indirect reaction pigment is produced from haemoglobin by the cells of the reticulo endothelial system is conveyed to the liver in the blood where it is taken up by the polygonal cells and converted into direct reaction pigment in which form it is excreted into the bile When bile is reabsorbed into the blood in obstructive jaundice a direct van den Bergh reaction is therefore obtained If for any reason the liver cells are unable to deal with all the pigment produced by the reticulo-endothelial cells this will accumulate in the blood and result in an indirect reaction In toxic jaundice both these factors are supposed to be at work with the result that the blood contains both types of pigment and so gives a biphasic reaction

A MODIFICATION OF EXISTING VAN DEN BERGH THEORY

The suggested amendment is that indirect reaction pigment is converted into direct reaction pigment not in the polygonal cells but in the blood in or even outside the liver so that the function of the polygonal cells is simply to transfer the direct reaction pigment from the blood into the bile Some support is afforded to this view by the fact that direct reaction pigment is readily dialysable whereas indirect reaction pigment which is probably present in the colloidal form will not dialyse [1] Accumulation of direct reaction pigment in the blood could then occur in one of two ways (1) by obstruction to the bile ducts so that the liver no longer removes bilirubin from the blood (2) by functional inefficiency of the liver cells such as occurs in toxic or catarrhal jaundice

In either of these eventualities the blood would show a direct reaction which is what actually occurs in practice The idea of the circular tour undergone by the bile pigment in obstructive jaundice—that is from the blood through the liver cells and back into the blood via the lymphatics or the hepatic capillaries—may be retained in addition if desired The explanation of the biphasic reaction and of its occurrence from time to time in toxic jaundice remains essentially as before the accumulation of the indirect reaction component being due to an insufficiency of the agent in the blood necessary for its conversion to direct reaction pigment which suggests that this agent originates mainly or entirely in the liver This amended explanation gets over an awkward point in Mann's work on bile pigment formation which does not appear to have been noticed Mann[2] found that when the liver was removed in dogs jaundice developed after an interval of six hours the blood showing first an indirect reaction and later a biphasic This would clearly be impossible on current theories—that a biphasic reaction indicates direct plus indirect reaction pigment and that direct reaction pigment is due to the passage of the indirect reaction type through the liver cells

The modified theory also makes it possible to explain the relation between blood bilirubin and blood phosphatase in jaundice This will differ according as the phosphatase be assumed to originate in the liver cells or elsewhere If it originates in the liver cells then in obstructive jaundice it either passes into the blood instead of into the bile when the biliary secretion ceases or it joins the circular tour with the bilirubin and in this manner reaches the blood In toxic jaundice it passes into the bile in the normal way whereas the bilirubin is held back in the blood in varying degree by the functional incapacity of the liver cells If on the other hand we assume that the phosphatase originates outside the liver and reaches it in the blood stream its accumulation in the blood in biliary obstruction is accounted for in the same way as the rise in pigment content whilst in toxic jaundice the liver must be supposed to excrete phosphatase more readily than pigment From a biochemical investigation into bile and jaundice's rums which it is hoped to publish in due course it would appear that the actual details of bile pigment metabolism are more complex than this account suggests but the latter offers a solution of the present problems without contravening any of the established facts

The point which remains for explanation is why the blood phosphatase figures in obstructive jaundice should exceed those found for bile This may be accounted for by noting that whereas bile pigment is readily excreted in the urine phosphatase is not hence the phosphatase figure will soon rise relatively and absolutely Kay[3] has shown that the urinary phosphatase excretion is not greatly increased above the normal in Paget's disease with high blood phosphatase and the author has

confirmed this observation and has noted further that the phosphatase excretion in all types of jaundice is also but slightly increased This implies that an early case of obstructive jaundice would show a relatively low phosphatase figure, but no case of obstructive jaundice of less than a week's duration has been met with in the course of the work The point might be settled by ligature of the common bile duct in animals, but opportunity to do this has not occurred At the same time, the idea that the whole of the differences observed may be accounted for solely on the duration of the jaundice is untenable, since several of the toxic cases were of long duration The optimum *p*H for the blood phosphatase in jaundice is the same as that for the phosphatase in osteitis deformans, and it may well be that the same enzyme is concerned in the two conditions, being produced in the liver and concentrated at the site of bone formation In this connexion it is interesting to recall the observation of Buchbinder and Kern,[10] who found that a low blood calcium and osteoporosis followed the ligature of the common bile duct in dogs which findings have been attributed to inefficient absorption of calcium from the intestine owing to the absence of bile Reasons are given by Kay[3] for thinking that in bony diseases the high blood phosphatase is a result, not a cause but in obstructive jaundice the high blood phosphatase precedes any bony change, so that it is possible that in these cases the increased blood phosphatase leads to some disturbance of calcium-phosphorus metabolism

Finally it is necessary to draw attention to two classes of case in which the phosphatase activity of the blood may not elucidate the cause of jaundice

1 When the patient is already suffering from a disease in which the phosphatase is raised, as in Case 51, already discussed in which jaundice developed during the course of Graves's disease Apart from obstructive jaundice however, the phosphatase is considerably raised only in conditions in which extensive bony changes are occurring [4 5]

2 Cases in which the jaundice is slight, where there may be difficulty in deciding whether the phosphatase figure is raised or not, owing to the fact that the method of phosphatase estimation has a fair margin of error The accurate but more elaborate method described by Kay[11] might be of use in such cases Further, the final phosphatase figure depends to some extent on the initial figure before the onset of jaundice so that a low initial phosphatase and a trifling obstructive jaundice might leave the figure within normal limits This, however, is not the class of case in which the type of jaundice is of great practical importance, whilst it is clear that the method is capable of differentiating correctly most of the cases ordinarily met with On this account it seemed worth while reporting it at this stage in order that it might be applied and further tested by others interested in the subject

SUMMARY

1 The current description of the direct and biphasic van den Bergh reactions is criticized and suggestions made for its improvement The results of the reaction in a series of cases of jaundice are presented as evidence in support of the view that the reaction fails to differentiate obstructive from toxic and catarrhal jaundice

2 The obstructive nature of a jaundice can be recognized by the increased phosphatase activity of the blood, which occurs strikingly in this type alone The procedure adopted to recognize this increase is outlined and the results obtained in a series of fifty-two consecutive cases reported These results demonstrate that, by the method described toxic infective and catarrhal jaundice may be readily distinguished from jaundice of the obstructive type

3 The relation between the phosphatase activity of the blood and its bilirubin content is discussed A modification of the modern theory of jaundice and the van den Bergh reaction is proposed, which appears to explain the facts better that the present view, and to allow also of an explanation of the above relationship

The earlier portion of this work was carried out at Sheffield Royal Infirmary during the tenure of a maintenance grant from the Medical Research Council I would like also to acknowledge the readiness with which the various physicians and surgeons allowed my access to their icteric patients the assiduity of the house physicians in collecting icteric blood and the kindness of Professor H S Raper in reading through the original manuscript of this paper

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RELATION OF EXCESSIVE CARBOHYDRATE INGESTION TO CATARRHS AND OTHER DISEASES *

BY

J H P PATON, M D

Elsewhere[1] attention has been drawn to the fact that in a large boarding school for girls the incidence of cases of catarrhal illness of more than seven days duration was greatly reduced during the war years The following table shows the average incidence of such illness in the ten years 1904–13 and in the four years 1914–17

	1904-13	1914-17
	Per cent	Per cent.
Spring terms	4 15	0 6
Summer terms	1 1	0.5
Autumn terms	2 05	1 3
Average per annum	2 6	0 8

This suggests that perhaps the duration of catarrhal illness is affected by some article of diet the consumption of which was reduced during the war Do we know of any foodstuffs which in excess aggravate this condition? Many observers believe that children who have a low tolerance for carbohydrates are especially prone to catarrhal affections H C Cameron[2] has described the catarrhal child as having an excess of water in the body, and has attributed the tendency to lymphoid hyperplasia in all situations and to catarrhal inflammation of the 'swollen and oedematous mucous membranes" to this cause He finds that evident and permanent improvement follows restriction of carbohydrate food

McClendon[3] has demonstrated water retention after high glucose feeding both in man and in animals Ramsay[4] has described the occurrence of visible congestion and exudate in the retinas of patients whose carbohydrate intake is in excess of what they can tolerate, and has pointed out that this is an index of the state of the capillaries elsewhere in the body Occasional albuminuria (so

* Read to the Fife Branch of the British Medical Association, December 8th, 1932

minora completely disappear, the clitoris and prepuce shrink, and the vulval orifice contracts until it will barely admit the finger-tip The skin assumes the appearance of thin parchment, it is pearly white, dry, and cracks easily This condition may at times involve only one area of a labium, or be unilateral The microscopical picture shows a low epithelial layer, the papillary processes are absent, eleidin granules are sparse, the connective tissue is densely collagenous, and there are islands of round cells The elastic tissue is decreased, broken up, and appears as bundles of twigs The most common symptoms at first are pruritus and dyspareunia, but dysuria and frequency of micturition may occur These symptoms have to be differentiated from similar ones due to other causes, such as diabetes, parasitic infections of the vulva, dermatological lesions, and psychoneurosis Vulvectomy was performed in eight cases of the author's series Five patients have remained cured for from three to five years, two were operated upon too recently for an opinion as to cure to be justifiable, and in one instance there was a recurrence Unsuspected carcinoma was found to be present in two of these cases The author adds that the expectation of carcinoma in kraurosis, both in his own series and in others in the literature, may be taken as about 50 per cent, indicating the urgent need of early radical treatment

285 Artificial Pneumothorax and Pregnancy

Y BINET (*Thèse de Paris*, 1932 No 620) who records sixty-five cases of artificial pneumothorax associated with pregnancy in patients aged from 17 to 40, comes to the following conclusions The prognosis of tuberculosis in pregnancy which was so unfavourable before the introduction of artificial pneumothorax, has since considerably improved When an artificial pneumothorax has produced a clinical cure of tuberculosis, pregnancy occurring a few months or years after cessation of treatment does not appear to lead to recurrence of the disease In tuberculous patients treated by artificial pneumothorax who become pregnant in the course of the treatment aggravation of the tuberculous process is all the less likely the later its occurrence after the commencement of pneumothorax treatment Tuberculosis which has been roused into activity or aggravated by pregnancy should be treated by artificial pneumothorax or chrysotherapy In women subjected to artificial pneumothorax at the onset of pregnancy an unfavourable prognosis cannot be formed as regards the influence of pregnancy on the tuberculous lesions In tuberculous subjects who have been treated by pneumothorax, and have had their pregnancy interrupted, it is impossible to come to a definite conclusion as to any favourable influence of the operation on tuberculosis In each case the following important factors have to be considered the form of tuberculosis in the affected lung, the state of the opposite lung, the success of pneumothorax, which in some cases will be greater if oleothorax is substituted, the regularity and continuity of the treatment the complications peculiar to artificial pneumothorax and the social or moral environment of the patient in the course of a long-continued treatment

Pathology

286 The Blood Sugar in Diphtheria

A BREMS (*Acta Med Scand*, December 14th, 1932, p 1) investigated the blood sugar in twenty-five diphtheria patients nine of whom had mild attacks or were merely carriers while sixteen had more or less severe attacks, and mostly showed signs of toxaemia The results were as follows In the acute stage the patients fairly frequently showed a moderate increase of blood sugar In severe cases the administration of glucose by mouth in the acute stage was frequently followed by an abnormal blood sugar curve shown by very high maximal values and usually very prolonged hyperglycaemia often resembling the condition found in diabetes mellitus This abnormality of the alimentary blood sugar curve is not caused by the rise of temperature, but by a toxic disturbance in the regulation of the blood sugar when functional changes occur, especially in the suprarenals, liver, and pancreas Two or three weeks after the illness administration of glucose by mouth the blood sugar curve becomes more or less normal In the acute stage of severe diphtheria an attack of glycosuria often occurs spontaneously, while after the administration of glucose it is almost constantly present

287 Renal Function Tests

H C A LASSEN (*Acta Med Scand* December 30th 1932 p 275) has based investigations on Rehberg's modification of the Ludwig Cushny filtration reabsorption theory, according to which the glomeruli give off a protein-free ultrafiltrate of the crystalloids of the blood in the same concentration as in the plasma This filtrate is concentrated in the tubules, especially in the upper part, through the active reabsorption of water In concentration the crystalloids can diffuse more readily through the walls of the tubules back into the blood again This back-diffusion is further dependent upon two main factors—namely, the specific diffusibility of the particular crystalloid and the permeability of the walls of the tubules to it—factors which vary greatly with different substances There is practically no diffusing back or active absorption of creatinine Rehberg's estimations require two presuppositions (1) that creatinine filters through the glomeruli in the same concentration as that in which it is present in the plasma, and (2) that no creatinine disappears from the filtrate during its passage through the tubules It is claimed for the creatinine test that it not only serves to estimate the capacity of kidneys for the excretion of creatinine—in itself a non-essential function—but that it gives detailed information as to the most important function of the kidney—the filtration-reabsorption of water Further, the passage of other substances through the kidneys may be studied by the simultaneous determination of their concentration in the plasma and the urine, and the effect of substances which influence kidney function may be localized and estimated The filtration was determined on twenty-one young normal individuals in two or three consecutive periods of one hour—a total of forty eight determinations In 60 to 70 per cent of the determinations the calculated filtration was between 100 and 200 c cm per minute The average filtration volume was below 100 c cm per minute only in one case Filtration determinations made under greatly different conditions of fluid intake showed that the filtration increased somewhat with an increase of the diuresis, and that it fell off again with excessive diuresis Filtration values less than 100 c cm per minute were always found with relatively high creatinine concentration in the plasma, whereas the creatinine concentration of the plasma was low when the filtration was more than 200 c cm per minute

288 A Concentrated Diphtherial Anatoxin

R ZAVDEL (*C R Soc de Biol* January 6th 1933 p 1029) describes a method of preparing purified concentrated anatoxin by a process of ultrafiltration The technique employed is a double filtration through collodion membranes—the first time through a 4 per cent membrane, the second through a 10 per cent one The three deposit on the filter is then washed with physiological serum until the filtrate is colourless The resulting anatoxin, which is of high concentration can finally be diluted to the required strength The advantages claimed for this technique are its greater simplicity over other methods, the absence of foreign bodies in the product which is not inferior to that obtained with aluminium sulphate and its lessened content of nitrogenous substances From animal experiments and clinical observations, H SPARROW and MAYZNER (ibid p 1031) conclude that an anatoxin prepared as described above is a very efficacious therapeutic agent It is superior to unpurified, non concentrated anatoxins and to the concentrated by chemical means since it causes only minimal post-vaccinal reactions

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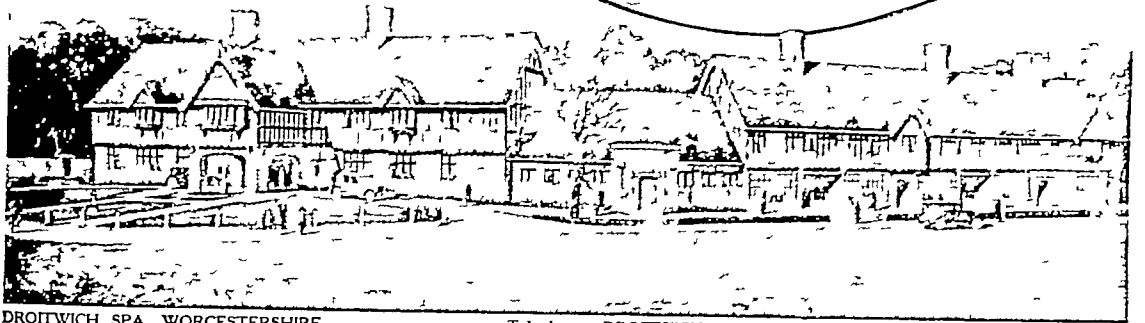

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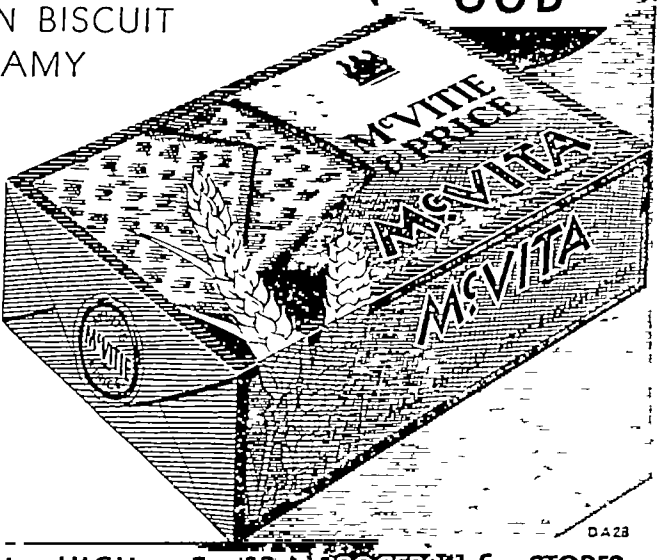

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often observed in children of the exudative diathesis) and the state of the lymphoid tissues and mucous membranes described by Cameron afford evidence of this Ramsay has further shown that phlyctenular ophthalmia —a condition only found in children of the exudative or catarrhal diathesis—is rapidly benefited by the restriction of carbohydrates and the withdrawal of all sugar from the diet Not only does the ocular condition rapidly improve on such a dietary but the associated retinal congestion albuminuria and catarrhal states disappear It is of interest to note that the initial lesion in the phlyctenule consists of capillary congestion and exudation of lymphocytes and that the complications such as ulcer of the cornea are invariably associated (like the catarrhal states of the respiratory mucosa) with the pathogenic activity of cocci The well known susceptibility of the diabetic to severe coccal infection indicates some association between the latter and hyperglycaemia

Observers[4] from the Rowett Research Institute have recorded that a study of the diet and health of two East African tribes revealed the fact that the mortality from bronchitis and pneumonia was ten times as great in one tribe which was cereal eating as it was in the other which was mainly carnivorous in habit

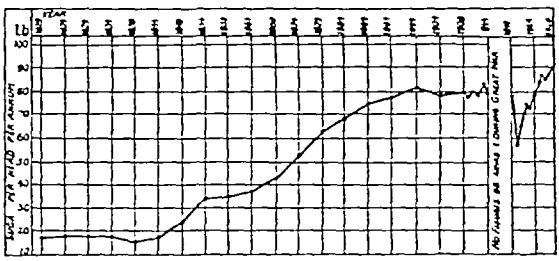
It may be concluded that the tendency to suffer from a variety of chronic catarrhal and exudative processes [3] is associated with intolerance of carbohydrates especially of sugar As a corollary to this it may be assumed that even in persons of high tolerance a similar liability to chronic catarrhal inflammation will result if the absorption of carbohydrates is sufficiently excessive

NATIONAL CONSUMPTION OF CARBOHYDRATES AND ITS MODIFICATION DURING THE WAR

The carbohydrate part of our diet consists of the cereals and all starch-containing foods on the one hand and of sugar (sucrose) on the other During the war there was little restriction of our starchy foods indeed we were encouraged to eat more of these than in peace time There was however a great restriction in the supply of sugar Imports of this commodity fell from 32 to 18 million hundredweights although the military ration was maintained at a high level

Is there any evidence that our consumption of sugar in peace time is excessive? Sugar has only been in use in any quantity within comparatively recent times It was unknown in Northern Europe until the eleventh century and was first brought to England from Mexico by Admiral Hawkins in 1563 Even in Pepys's day it was a rarity because he records in his diary that Hither came Gilb Holland and brought me a stick rapier and Shelton a sugar loaf (7 lb) Indeed up to the end of the eighteenth century sugar was not in common use At the beginning of the nineteenth century the manufacture of sugar from beet was encouraged in France by subsidies granted by Napoleon From 1819 to about 1845 the consumption of sugar in Great Britain was in the neighbourhood of 17 lb per head per annum but since that time it has increased enormously as is shown in the accompanying graph During the war and in 1921 (owing to trouble in the Continental beet industry) consumption fell Since 1928 it has increased still further and in 1931 we consumed in this country 96 lb per head per annum

In a boarding school for girls (about 350 pupils) I found the consumption of sugar to be at the rate of over 2 lb a week per head [7] Individual houses showed variations between 1 2 lb and 2 2 lb It is suggestive that for the term when these figures were obtained the house with the lowest sugar consumption had a catarrhal rate of 5 5 per cent while the house with the highest sugar consumption had a catarrhal rate of 24 6 per cent The rate in the other houses was roughly proportional to the sugar intake It was further observed that after a week-end holiday during which an increased quantity of sweets was consumed cane sugar could be demonstrated in the urine of more than half of the girls examined on return. Since that time several cases of chronic tonsillar hypertrophy and of chronic nasal catarrh which were highly resistant to local treatment have shown rapid improvement when sugar in every shape and form was withdrawn



Estimated quantity of sugar consumed per head of the population of the United Kingdom during each of the years indicated Figures from Statistical Office of Custom House London (From *Edinburgh Medical Journal* 1932 xxxix 9 p 557)

from their diet There are therefore good grounds for assuming as a working hypothesis that excessive consumption of sugar favours the persistence of the catarrhal state and that the rationing of this substance during the war was the factor which determined the reduction in duration of catarrhal illness in this school

It may be objected that since the utilizable product of all carbohydrates is glucose the case against sugar in particular falls to the ground Many arguments however indicate that sucrose may be especially harmful when consumed to excess

1 It is a pure chemical substance ($C_{12}H_2O_{11}$) devoid of all those accessory food factors (vitamins salts etc) with which it is associated in the vegetables from which we extract it

2 If absorbed unchanged (as has been shown to occur when consumed to excess) it is excreted by the kidney but it is not impossible that it exerts a toxic effect in its passage through the blood

3 Its digestion and absorption (as invert sugar) is attained with much greater rapidity than is the case with starches As MacLeod Ramsay and others have pointed out velocity of glucose absorption is of even more importance than weight

4 The laevulose fraction of invert sugar may if it reaches the systemic blood exercise a toxic effect But apart from that it is evident that the absorption of 50 lb of laevulose annually (the product of 100 lb of sucrose) which is greatly in excess of the amount derived from all natural foods must throw an unwonted strain upon hepatic activity

5 So far as sugar displaces natural foodstuffs vitamin and other deficiency must result

There is however no evidence of a corresponding decrease in the consumption of other carbohydrates and therefore the bulk of the sugar we eat must be regarded as surplus—a surplus which raises the resting level of the blood sugar to an unnatural extent and at an abnormal rate Excessive use of sugar is favoured by its pleasant taste its value as a preservative its failure to satisfy appetite either in virtue of its bulk or its vitamin content and above all by its cheapness Of the carbohydrates which we consume it is probably the most harmful when consumed in large quantity

I suggest from the foregoing therefore that restriction in the use of sugar would result in improvement in the national health as regards catarrhal illness

It is not to be supposed however that the evil effects of excessive carbohydrate intake are limited to the

aggravation of catarrhal illness A consideration of some of the results which may follow the habitual absorption of an excess of glucose into the blood seems justifiable even though at present it is largely speculative

EFFECTS UPON THE PANCREAS

Habitual excessive absorption of glucose must be met by habitual hyperinsulinism [4]

(*a*) In these circumstances any sudden reduction in glucose absorption (as, for example, at the onset of an acute febrile illness) will result in a comparative hypoglycaemia with the production of diacetic and oxybutyric acids from incomplete combustion of fats May not the habitual over-consumption of carbohydrates be responsible for the increasing frequency of acidosis among modern children?

(*b*) The undoubted benefit which many modern children derive from glucose feeding can only be explained by some degree of hypoglycaemia, indicating (since in starvation hypoglycaemia does not occur) over-activity of the islets of Langerhans

(*c*) Many cases of severe spontaneous hypoglycaemia are now being reported in adults In some of these the symptoms which were temporarily relieved by glucose or adrenaline administration, have disappeared when a partial pancreatectomy was performed

(*d*) Actual enlargement of the islets has[9] been demonstrated in many cases

(*e*) Since over-activity of an organ is apt to be followed by failure of function, and hypertrophy by atrophy, the increasing frequency of diabetes may be subject to a similar explanation Each of these states may be traced to over stimulation of the islets of Langerhans as a result of habitual excessive glucose absorption

EFFECTS UPON THE SUPRARENAL AND PITUITARY SECRETIONS

(*a*) The chief physiological antagonist of insulin is suprarenal secretion Habitual hyperinsulinism will thus be associated with habitual hyperadrenalism A second antagonist is pituitary secretion In addition to their actions upon blood sugar both of these secretions have pressor effects May not the increasing frequency of hyperpiesia be attributable to over activity of these glands?

(*b*) Adrenaline encourages the production of abnormal lipoids from cholesterol Recent work indicates that the earliest change in arteriosclerosis is a deposit of lipoids in the vessel walls This suggests that arteriosclerosis too may have some relation to excessive carbohydrate ingestion

EFFECTS ON FAT STORAGE

Apart from endocrine disturbances we know that when glucose is absorbed in excess of the normal capacity of the liver and muscle to store glycogen, that excess is deposited as fat In America where the consumption of sugar (112 lb per head per annum several years ago) is considerably higher than our own, the increasing frequency of obesity is causing alarm

Thus there is a group of diseased conditions—obesity, arteriosclerosis and diabetes—which have long been associated clinically, and which are increasing in modern times although the general death rate is falling Is it not possible that this increase is directly associated with excessive carbohydrate intake which is largely, if not entirely due to the prodigious increase in the use of sugar?

EFFECTS ON DIGESTION

A further result of excessive ingestion of carbohydrate food is the occurrence of indigestion Not only may those processes fail which are concerned with the conversion of starch into glucose and sucrose into invert sugar, but when active they may give rise to abnormal fermentative reactions in the intestine Substances are thus produced and absorbed which are capable of toxic effects such as the capillary disturbance described by Maitland Ramsay If the failure of digestion is sufficiently severe only a fraction of the ingested carbohydrate becomes available for absorption, and in the midst of plenty there is famine In such cases, as the following will show, the patients, though large eaters, are undernourished

The patient was a girl, aged 15 listless pale with a muddy complexion and a frequent sufferer from febrile catarrhal attacks She was thin and failed to gain weight though a heavy eater especially of starches and sweets In 1931 she developed renal glycosuria As this persisted to an unusual extent she was seen by a specialist who greatly reduced her starchy intake and prohibited sugar He warned me that the amount of carbohydrate he had permitted was probably quite insufficient for her school activities, and that the latter would have to be restricted to prevent loss of weight On the altered diet however she began to gain weight rapidly, became more alert and active and was able to play all games Her appearance and complexion rapidly improved and in the last year she has only suffered from one slight cold and has been free of glycosuria As I interpret it she had suffered from carbohydrate indigestion with its accompanying toxaemia and, when her digestion improved as a result of carbohydrate restriction her malnutrition disappeared

CONCLUSION

I submit that our carbohydrate intake is excessive, and that such excess is mainly due to the prodigious increase in the consumption of sugar in the last half century Clinical data have been advanced with regard to catarrhal illness but I must leave it to others to supply them for or against the association between sugar consumption and the diabetic group of diseases referred to It is from the general practitioners that such data must be obtained

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PATHOLOGICAL CHANGES IN ACUTE PANCREATITIS SEEN DURING LIFE

BY

STANFORD HOWARD F R C S

SURGICAL FIRST ASSISTANT AND REGISTRAR LONDON HOSPITAL

The following three cases of acute pancreatitis are described because the appearances in the abdomen seen at operation differed from those which have so far been seen at necropsy in the Bernhard Baron Institute of the London Hospital, and also from any given in the literature to which I have had access

CASE I

Female aged 52 Complete removal of right breast for carcinoma five years before For three weeks before admission she had been suffering from vague indigestion and flatulence and had noticed that the stools were pale and bulky Two days before admission she was seized with violent upper abdominal pain referred to the back and to the left shoulder which caused her to collapse She vomited twice at the onset On admission she appeared to be very ill

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Temperature 101° F pulse 140 and respiration 32 The tongue was dry and furred The abdomen was held rigid with no respiratory movement whatsoever On palpation there was board like rigidity of the upper abdomen with great tenderness Palpation revealed slight increase of liver dullness The diagnosis of a posterior perforation of a gastric ulcer into the lesser sac was made and immediate laparotomy was decided upon Upper abdominal section was performed and the peritoneal cavity was found to contain a moderate amount of clear blood stained fluid some of which was collected for pathological examination The gall bladder was normal but emptied slowly and there was no ulcer on the stomach or duodenum The great omentum and transverse mesocolon contained large distended areas of an opaque greyish jelly like material and the peritoneum of the posterior abdominal wall was bulged forward with a large collection of a similar mucinoid substance The pancreas was greatly enlarged and oedematous and was entirely surrounded by this jelly like substance The gland itself gave a peculiar granular and at the same time soggy feeling on palpation Two small areas of fat necrosis were found one in the gastro-hepatic omentum and the other in the great omentum No drainage was performed and the patient was sewn up and put back to bed The following day the urine showed 200 units of diastase Within a week the diastatic index had dropped to 100 and on discharge on the seventeenth day it had dropped to 30 Recovery was completely uneventful

CASE II

Female aged 36 For three weeks she had been suffering from pain in the epigastrium referred to the back and to the point of the right shoulder with frequent attacks of vomiting On the day of admission she had a very severe attack of pain similar in situation but enough to cause collapse Her temperature was 98° pulse 120 and respiration 32 There was no jaundice The abdomen exhibited extreme tenderness and rigidity all over most marked in the hypogastrium and right hypochondrium The liver dullness was normal At operation there was a very grossly enlarged gall bladder containing a number of calculi The omentum exhibited areas of distension with a greyish mucinoid material which separated the layers into large blebs The peritoneum of the posterior abdominal wall was similarly affected and the pancreas lay in a mass of the same jelly like material There were no areas of fat necrosis The gall bladder was emptied of stones and muco-purulent fluid and drained The common duct was patent The lesser sac was drained by a large tube passing through the transverse mesocolon and the abdomen was closed The tube in the lesser sac was removed on the third day as no discharge was being evacuated through it The gall bladder tube was removed on the sixth day Recovery was uneventful the patient being discharged well on the fifteenth day Unfortunately the urine diastase was not estimated

CASE III

Male aged 54 For one month he had been suffering from vague dyspepsia with pain in the abdomen referred through to the back Two days before admission the pain had become much more severe and was accompanied by vomiting On the day of admission all the symptoms were increased and there was slight jaundice present The patient's temperature was 99 6° pulse 130 and respiration 40 Abdominal respiration was absent The abdomen evinced board like rigidity in the upper half with marked tenderness all over On laparotomy the gall bladder was found to be distended and there were several small calculi present The common duct was dilated and one small stone with a large amount of biliary mud was found As in the two other cases the great omentum was distended into blebs with the greyish mucinoid material The pancreas itself was surrounded by similar material and the peritoneum of the posterior abdominal wall was also raised by a collection of the jelly like material behind it There were three small areas of fat necrosis The gall bladder was drained the common duct opened and cleared and also drained No drainage of the lesser sac was carried out The diastatic index in this case was 180 which fell in eight days to normal Recovery was uneventful the patient being discharged on the sixteenth day

REMARKS

Only two small fat necroses of typical appearance were seen in Case I and three in Case II In all three cases the retroperitoneal tissue round the pancreas in the great omentum and upon the posterior abdominal wall showed large focal or diffuse expansions occupied by an opaque greyish jelly like substance In Case I the mesocolon was similarly affected whilst the pancreas was greatly swollen and oedematous Professor Turnbull tells me that he and his colleagues have not observed this gelatinous substance at necropsy but have found in similar positions masses of an opaque pultaceous or putty-like substance containing fibres suggesting a soft plaster mixed with hair The colour has been in general white yellow or grey but to a greater or less extent dirty grey brown black or brown red from altered blood This putty like substance containing fibres is obviously digested adipose tissue in which the digestion of the fibrous stroma is incomplete This substance found at necropsy might be described as butter but not as jelly It is possible that the appearances shown during life alter after death This however appears to be an unlikely explanation because Professor Turnbull remembers cases in which masses of pultaceous substance were removed from the lesser sac during dressings after laparotomy It is more probable that the gelatinous condition seen in these three cases during life represents a preliminary stage in digestion Although the symptoms had come on acutely and there was severe interference with pancreatic function all three patients recovered It is impossible therefore to know whether complete digestion ever occurred

My thanks are due to Professor H M Turnbull for his kind help with the post mortem description of this condition and to Mr Russell Howard for permission to publish the details of these cases

TOTAL HYSTERECTOMY FOR NON-MALIGNANT CONDITIONS

BY

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The very valuable paper on total abdominal hysterectomy for myoma of the uterus by Dr Herbert Spencer in the *British Medical Journal* of June 25th 1932 prompts me to make an addition to it which I consider of importance No one has done so much as Dr Spencer in calling attention to the real danger of cancer attacking the cervix which is left after subtotal hysterectomy In the *Medical Journal of Australia* of June 23rd 1917 I published a short series of such cases and have known of many others I think it is generally admitted all over the world that 2 per cent would be a conservative estimate of such untoward happenings Notwithstanding Dr Herbert Spencer's irrefutable arguments in favour of total hysterectomy I am convinced that it will never be as popular as the subtotal method until the Doyen technique (which I have seen both Doyen and Dr Spencer perform and which Dr Spencer still advocates) gives way to one infinitely simpler safer and with much better ultimate results Such a method I published in the *American Journal of Obstetrics and Gynecology for December* 1917

My first operation by this method was performed on June 14th 1914 and my 532nd on July 29th 1932 There have been three deaths—two due to accidents from the disorganization of the Sydney Hospital staff during the war The third was due to acidosis in a drug addict This patient lived out of the city and her case was

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insufficiently studied prior to operation The mortality rate is thus 0 563 per cent as compared with Spencer's 1 8 and Lockyer's 1 58, which Spencer says has never been surpassed If my technique be closely adhered to it is impossible to wound bladder or ureters, except in the case of cervical myomata, or where there is subserous development

I have had the privilege of demonstrating the operation to three surgeons of very large experience—namely W I Mayo Franklin Martin, and Alfred Smith Dr Mayo's comment was That is a very pretty hysterectomy Dr Masson of Rochester and Dr Geo Gray Ward of New York have written to me to say they were favourably impressed and would give the method a trial My colleagues here and in Melbourne have, generally speaking adopted this operation It will be a pity if a method which has been proved to be an advance should not be made known to, and tried out by British surgeons

The operation originated in my dissatisfaction with the results of subtotal hysterectomy not alone because of the not uncommon tragic development of cancer but because of the frequency with which women after this operation still complain of discharge and general ill health due to the septic focus As a consequence the after-results are comparable to those following successful prostatectomy, the patient seems to take a new lease of life A factor in this sense of well being is that the ovaries are always preserved unless the woman has passed the menopause

In this series I have included every hysterectomy for non malignant conditions of the uterus whether myoma or bleeding uterus but I have not included eighteen performed in the course of operation for pelvic suppuration I have alluded to these in my address on pelvic suppuration to the American College of Surgeons, which was published in *Surgery Gynecology and Obstetrics* for 1925 All the patients recovered It may perhaps be not irrelevant to say here that inasmuch as radium in addition to the impossibility of diagnosing all contraindications to its use atrophies the ovaries leaves untouched the septic focus in the cervix, and affords no security against the subsequent development of cancer it must be held to be altogether inferior to the modern total hysterectomy for myoma and the condition known as fibrosis or bleeding uterus

In the following account of the technique it will be noted that this is not a coming out method but the reverse as the dissection approaches the external os instead of narrowing it expands so as to include every vestige of gland bearing tissue The immunity from embolism in this series is remarkable I am inclined to attribute it to three things (1) The avoidance of transfixation and the substitution for it of the method of clip and tie which I described in the *Journal of Obstetrics and Gynaecology of the British Empire* (May, 1912) (2) The use of plain catgut instead of the silk recommended by Dr Spencer (3) The insistence on the patient taking five or six deep breaths every hour throughout each day also moving the legs up and down

TECHNIQUE

After etherization the bladder is emptied the vagina scrubbed and disinfected and a syringeful of freshly made tincture of iodine slowly injected into the uterine cavity In some cases the os is closed with catgut sutures in addition

The abdomen is opened in the median line my reflecting retractor placed in the lower angle of the wound and each round ligament held up clipped and divided Through the space thus opened up in the anterior layer of each broad ligament the finger is thrust the vascular arch above the finger containing the ovarian vessels is divided between clips on the uterine side of the ovaries which are always allowed to remain if healthy The peritoneum between the cut round ligaments is divided and the bladder pushed down with the scissors The uterine vessels bared of all tissues are clamped on each side a shade below the inner os With a blunt scissors bent not curved on the flat the musculature of the cervix is then incised all around penetrating about halfway toward the canal the direction of the cut is then altered from inward to downward until the external os is reached when the circumference of the cut is expanded so as to include all the external os The mucosa of the vagina is united to the serosa anteriorly by a figure of eight catgut suture the same is done posteriorly These two sutures are used as tractors by which to pull up the field of operation nearer to the operator Another figure of eight on each side closes the lateral angles of the opening into the vagina and checks all oozing in these situations and the tying of the two traction sutures closes the central portion of the opening All artery clamps having been replaced by ligatures a purse string suture on each side closes up the broad ligaments, takes in the stump of the round ligaments and unites these to the rim of the cervix When tied these sutures secure the ovaries and tubes a little further out than the rim of the cervix, so that their vascular supply is not unfavourably affected

When infection is present drainage can readily be made by not completely closing the vaginal opening The parietal wound is closed by five tiers of sutures including silkworm gut passed through all structures except the peritoneum and tied over a fold of gauze which prevents all cutting

Without any attempt at haste the procedure outlined above can be carried through in from thirty to sixty minutes, according to the absence or presence of complications

Haemorrhage is very slight because the cut is made inside the vessels supplying the cervix It is also inside the attachments of the utero sacral ligaments and endopelvic fascia The keystone of the vaginal vault is not weakened Subsequent examination discloses no vaginal shortening The firm ring formed by that part of the cervical muscle which has been left is plainly felt All glandular epithelium has been removed, there is no longer any danger of cancer development Convalescence is easy

MATERNITY AND CHILD WELFARE SERVICES IN THEIR RELATION TO PUBLIC HEALTH

BY

DONALD PATERSON, M.D., F.R.C.P.

PHYSICIAN TO OUT-PATIENTS HOSPITAL FOR SICK CHILDREN GREAT ORMOND STREET PHYSICIAN IN CHARGE OF DISEASES OF CHILDREN WESTMINSTER HOSPITAL

There can be no doubt about the very great progress made in the public health, attributable to the efforts of the maternity and child welfare services The following remarks coming from a physician especially interested in the diseases and welfare of children but not himself in the public health service, are intended to offer some criticism and provocative observations on the present state of affairs, and possibly to suggest methods for its improvement I think it is true to say that nothing is more potent for good than the advice of a painstaking welfare medical officer who has careful health visitors to assist him This team can do more towards educating the mothers to a high standard of infant care, and can also get directly at the home problems more easily than any other means we have—especially among the very poor The modern general practitioner has a much better insight into infant feeding and care than his predecessor and there is no doubt that he is much more capable of dealing with those cases not eligible for welfare centres

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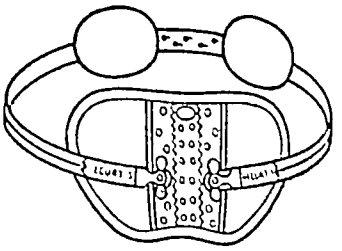

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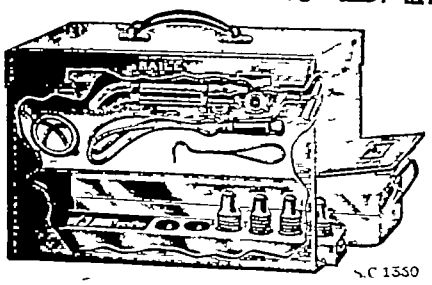

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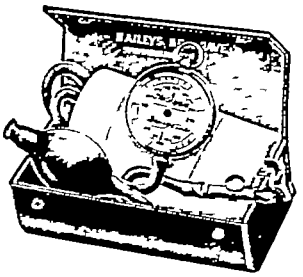

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TONSILS AND ADENOIDS

By far the commonest causes of morbidity in the young child seen at the out patient department of a children's hospital are nasopharyngeal infections Among the well to-do where living conditions are better and the process of natural vaccination against disease is brought about slowly various catarrhal and other infections are so spaced that a child has time to recover completely between each illness Among the poor however where overcrowding is prevalent the infant and the very young child are inundated with infections—one tonsillar infection after another—until the lymphoid tissue of the nasopharynx is quite unable to cope with the various germs and they escape through and into the glandular system giving rise to a multitude of complications The fundamental problem is of course to improve the housing conditions and general nutrition of the child but much can be and is being done to prevent the after effects of these repeated infections The public health services have provided clinics for the removal of septic tonsils and adenoids and for the care of children with discharging ears The facilities however are quite inadequate and it falls on the voluntary hospitals to deal with the majority of cases Cases must sometimes wait many months All cases should as far as possible be done in the summer months and be kept in hospital for one night at least The public health service should maintain the highest possible standard of surgery and in addition continue to augment and improve the facilities for these operations

SCHOOLS

Personally I am daily struck by the necessity for more kindergarten schools At present the authorities generally speaking insist on a child having reached his fifth birthday before he is allowed to attend school Between the ages of 3 and 5 therefore the child spends most of his day on his legs and is thrown either too much in the company of adults or is too much confined indoors in bad home surroundings From the age of 5 upwards when he is much stronger he spends his day almost entirely off his legs and his health improves in leaps and bounds To me a very great step forward would be the lowering of the school age to 4 years and the establishment of more kindergarten schools from the age of 3 for selected cases In this way the younger child would come under observation much earlier and preventive medicine could then be brought into play at an earlier age As a rule it is in the pre school age that lasting damage is done to the child and mistakes in feeding and upbringing are made

FEEDING

Milk is too expensive in this country Figures have recently been quoted by Dr A Moncrieff to show that an infant can safely be fed in Germany for 1s 5½d per week while in England to feed a child on so-called safe children's milk or dried milk costs 5s per week There is much to be said for the abolition of all grading of milk and concentration on a good quality of ordinary milk which before being given to children should be boiled

A vast number of infants are brought to hospital for malnutrition when in fact they are being underfed The diet frequently ordered is a dried milk and even at the special rates which are often given through welfare centres the mother cannot afford to provide sufficient for the infant's needs The advantages of breast feeding have been pointed out to the mothers with great benefit to the community and this has been one of the most valuable steps in lowering our infant mortality

Of those infants who are artificially fed a considerable proportion are brought up on dried milk The directions on the tin are followed with regard to times and quantities Very great improvement has been made in the wording of these directions with consequently much better results but there are a number of dried milks and patent foods still on the market the directions of which are hopelessly inadequate and it is a matter of primary importance from a public standpoint that such directions should be brought up to date and made intelligible and safe for the public

The importance of vitamins in the diet of a child cannot be overestimated Some antirachitic—either as fresh milk butter or margarine to which vitamins A and D have been added—should be available for every child I confess I do not share the views of some that artificial sunlight is of no value No physician can but be struck by the improvement seen in the health of infants when real sunshine appears while with artificial sunlight a similar improvement can be seen in the puny and ailing infant with a tendency to rickets The giving of small doses of iron as advocated by Dr Helen McKay is another important step forward and will unquestionably prevent the anaemia of early infancy which has always been taken for granted previously Every breast fed and bottle fed baby for the first six or nine months of its life would benefit by the addition of iron to its diet just as it does by the addition of one of the cod liver oil preparations and artificial or real sunlight together with fresh fruit juice

FEVERS TUBERCULOSIS AND OTHER DISEASES

The public health service has done much in preventing acute infectious fevers and has also facilitated the treatment of these The wider application of immunization to diphtheria is to be looked for Much recent work has been done in the prevention and treatment of whooping cough and the giving of convalescent whooping cough serum as a prophylaxis against this devastating disease is now practicable The provision of convalescent serums from cases of infantile paralysis measles and whooping-cough would be a very great step forward and these should be available for both hospital and general practitioners etc The difficulties of having a central depot or pool from which to draw these serums do not appear to me to be insurmountable For instance the notification of a disease such as whooping cough the visiting of the home and the inoculation of the members of the family who have not had the disease would either prevent those members from having it at all or allow them a very mild and attenuated form of it

The mortality from tuberculosis slowly decreases Although one favours a ceaseless effort to improve the milk supply it is well to keep reminding the public health authorities and others that in almost 100 per cent of the fatal cases of tuberculosis seen in childhood and admitted to the children's hospitals the source can be traced to an infected individual who is in direct contact with the child at home Separation from young children of those infected is still incomplete The vaccination of children in this country with the B C G vaccine has not been practised and it would appear that we still require greater assurance from experimental work before embarking on this treatment

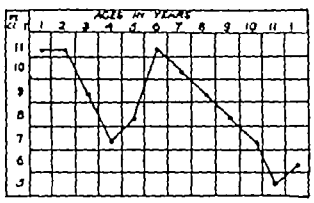
As to rheumatism steady progress can be said to have been made with regard to this disease in recent years The establishment of rheumatism clinics throughout the country is of special value as there the diagnosis of rheumatism can either be confirmed or refuted and the children brought under continuous observation It would appear according to Glover that acute rheumatic fever is an infectious disease similar in many respects to cerebro-spinal meningitis and ought therefore to be

amenable to the same preventive measures In my opinion it would be an important step in the right direction if the public health services could arrange for this disease to be made notifiable

Along with the improvement in general hygiene and knowledge of infant feeding, the mortality and morbidity from infantile diarrhoea has improved With further knowledge of dietetics cleanliness and improved milk supply boiling of milk, and the use of dried milks, the mortality from this source will be steadily and further diminished

OUT-PATIENTS AND ADMISSIONS AT GREAT ORMOND STREET HOSPITAL

The chart shows that between the ages of 3 and 6—in other words, the pre school age—there is a reduction in the number of attendances It is possible that this may be due to the fact that at this age children come less under the attention of the welfare services and schools than either before or after, and fewer are therefore referred to the Great Ormond Street Hospital Certainly it is a striking drop In the table the figures explain themselves, and, except in a few instances, one can derive much comfort from their perusal



Out patient attendances

Numbers of Patients Admitted to the Wards of the Hospital for Sick Children Great Ormond Street

	1911		1921		1931	
	Under 2 years	Over 2 years	Under 2 years	Over 2 years	Under 2 years	Over 2 years
Generalized T B	16	18	11	42	7	3
Pulmonary T B	7	61	1	1	2	5
Abdominal T B	16	72	1	31	5	1
T B meningitis	10	22	6	10	6	9
T B glands in neck	15	111	—	22	—	10
T B of bones and spine	8	174	5	54	3	25
Rheumatism and chorea	—	118	1	12	2	123
Cardiac diseases	3	81	11	49	10	58
Rickets	7	9	11	18	18	89
Scurvy	4	—	7	—	13	—
Congenital syphilis	8	2	11	6	10	—
Asthma	—	—	—	4	4	171
Bronchitis	15	18	16	21	25	31
Empyema	—	—	6	23	6	4
Bronchopneumonia	38	6	31	19	30	32
Lobar pneumonia	14	43	4	15	9	19
Purpura	1	7	—	4	—	23
Appendicitis	1	49	—	48	1	56
Gastro-enteritis	67	13	125	22	67	21
Pyloric stenosis	21	—	50	—	53	—
Nephritis	2	19	1	19	4	42
Acute poliomyelitis	9	39	8	105	—	4
Mastoid	9	44	14	46	20	124
Otitis media	5	26	2	19	22	77
Tonsils and adenoids	3	95	6	190	92	3947

All cases of tonsils and adenoids are now admitted to hospital for one night at least.

CONCLUSION

We in this country cannot help but feel proud of the progress we have made in the lowering of infant mortality and in the general standard of the health of the child The establishment of the maternity and child welfare services has unquestionably played the greatest part in this reduction, and one can feel confident that these great services will continue to use all that is best in science to approach further the ideal to which we all aspire

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

ADDISON S DISEASE COMPLICATING SPINAL CARIES

The case reported below is presented for publication on account of the following points of interest Addison s disease complicating spinal caries is a rare condition, the acuteness of the course of the disease (no pigmentation was found until a few days before the patient s admission to hospital), the close resemblance at one time to a case of intestinal obstruction, and the fact that the patient survived for so many years after what must have been severe pulmonary trouble

The patient a man aged 40 was admitted to the Royal Cripples Hospital Birmingham (Woodlands Branch) on October 22nd 1932 with the history that he had suffered from lumbago and sciatica for two years which have been relieved by rest in bed He was admitted to the Birmingham General Hospital on June 10th, 1932—where he was in in patient until his admission to Woodlands—with a large swelling in the left loin, this was a cold abscess from which three quarters of a pint of pus was aspirated A radiogram of the spine at that time showed caries of the twelfth thoracic vertebra with some involvement of the eleventh and first lumbar The abscess filled up again and the following month it was opened the sinus was excised and the walls were scraped Tubercle bacilli were found in the pus The patient was in Yardley Sanatorium twenty years ago with phthisis

On examination the patient looked ill and had a slight deep brown pigmentation which was general over the body, but was most marked on the exposed skin surfaces and on the buccal mucous membrane In the mouth the pigmentation was much more intense, but unlike that of the skin, was patchy in distribution There was a granulating wound oval in shape measuring 2 in by 3/4 in in the left loin but this appeared healthy There was tenderness over the lower dorsal spine but no kyphosis was present A large hard liver with a smooth edge was felt three and a half inches below the costal margin There was nothing abnormal about the nervous system and there were no abnormal constituents in the urine X rays confirmed the diagnosis of caries of the twelfth dorsal and first lumbar vertebrae and suggested active spinal caries, there being a good deal of recent bone erosion

On October 26th the patient had an attack of bilious vomiting which lasted all day but there was no complaint of pain Three days later he had a similar attack but this time he complained of pain in the right iliac fossa There was some tenderness in that region on deep palpation but no rigidity or hyperaesthesia and Cope s psoas and obturator signs were negative Rectal examination revealed some ballooning but no other abnormality The attack lasted twelve hours Bowels opened naturally On October 31st the patient started vomiting again Examination revealed no surgical cause and an enema yielded a good result A troublesome hiccup developed and proved very intractable but was finally relieved by cocaine and bismuth mixture Meanwhile the pigmentation was becoming rapidly more intense vomiting and hiccup continued, and by November 1st

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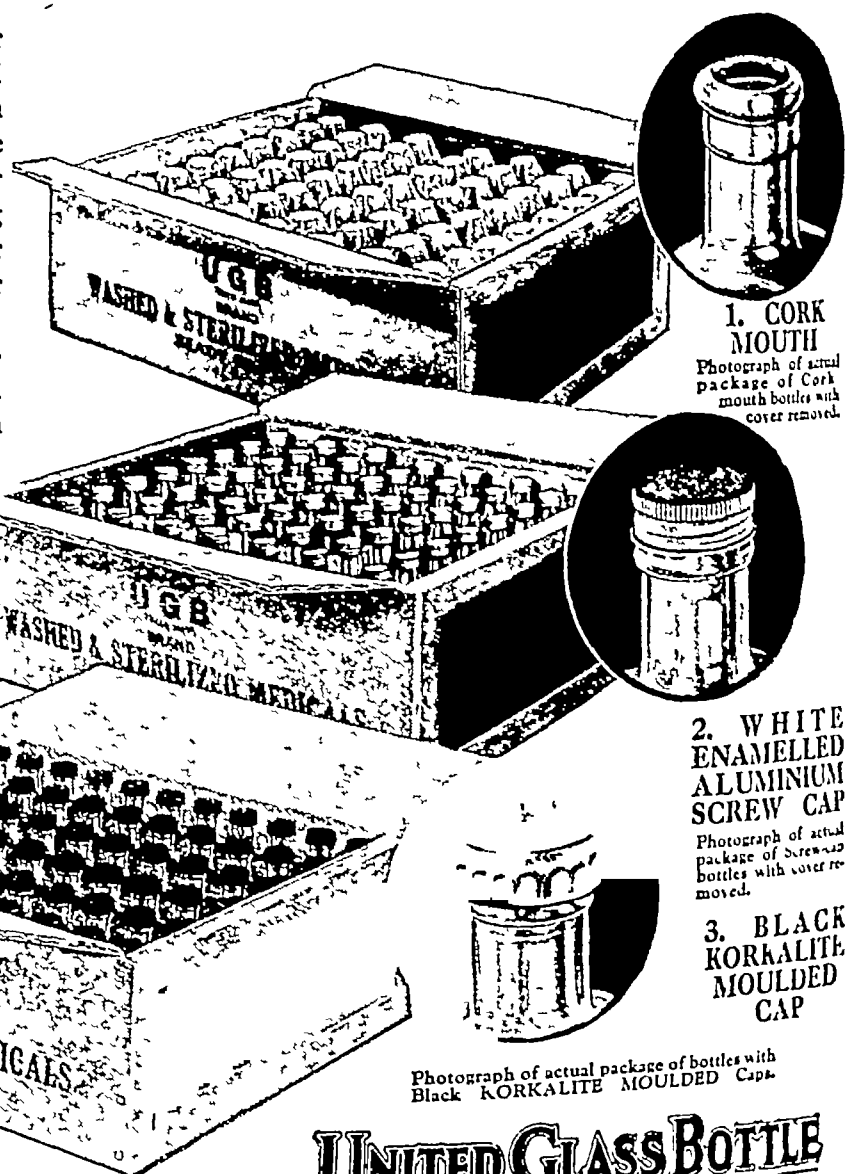

1. CORK MOUTH
Photograph of actual package of Cork mouth bottles with cover removed.

2. WHITE ENAMELLED ALUMINIUM SCREW CAP
Photograph of actual package of Screw-cap bottles with cover removed.

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Photograph of actual package of bottles with Black KORKALITE MOULDED Caps.

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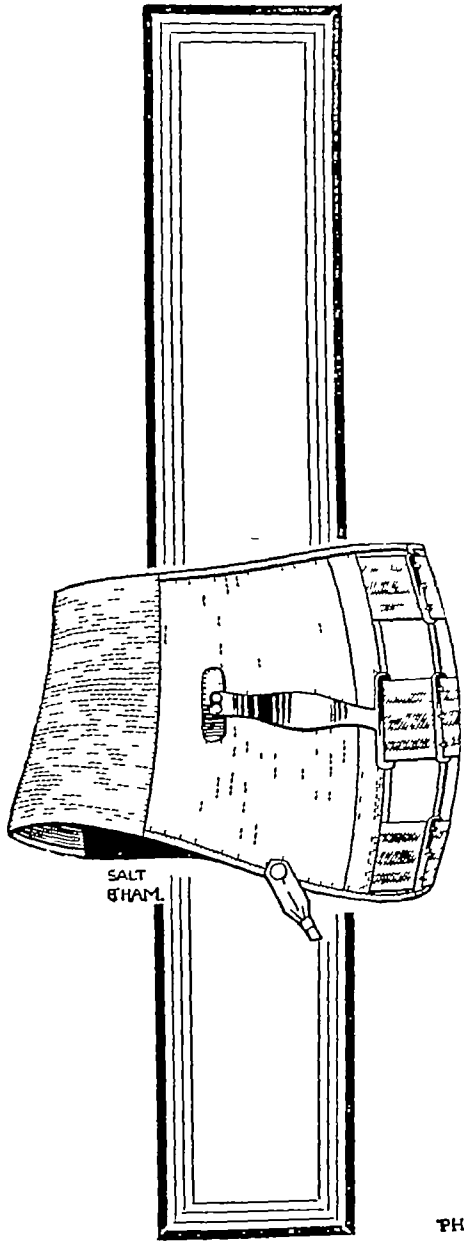

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the patient presented a deep brown coloration Blood pressure was maximum systolic 96 diastolic 72 The patient became drowsy by November 5th comatose three days later and died without recovering consciousness early on the morning of November 9th

A necropsy performed by Dr Smellie revealed the following facts The adrenal bodies were enlarged nodular and surrounded by a mass of adhesions On section they showed complete disintegration into typical tuberculous caseous material The terminal event was found to be a purulo-plastic pericarditis and there were about three ounces of thin pus in that cavity as well as numerous recent adhesions between parietal and visceral surfaces The liver showed fatty degeneration and cloudy swelling and similar changes were found in the kidneys The spleen was soft and diffluent The appendix was seven inches long somewhat kinked but otherwise devoid of pathological anomalies Both pleural cavities were obliterated by dense adhesions except at their extreme bases No cavities were found in the lungs but they were broken up by dense fibrous tissue

I am indebted to Mr Percival Mills for permission to publish this case to Dr Smellie for his invaluable advice and help and to the General Hospital for the notes and x ray reports

HENRY J KNIGHT M B B S
House Surgeon Royal Cripples Hospital Birmingham

Reports of Societies

OSTEOPATHIC METHODS

At a meeting of the West London Medico-Chirurgical Society held at the West London Hospital on April 7th with Dr JULIUS BURNFORD presiding a demonstration of osteopathic methods was given by Dr THOMAS MARLIN

Dr Marlin who carried out his demonstration with the help of two lady assistants said that manipulative skill was not to be acquired by reading though it might be acquired by watching other people s methods There were innumerable things to be learned as for example the position of the patient the amount and direction of force exercised and the velocity of the movement applied There was a knack in it just as there was a knack in turning a key in a refractory lock He began his demonstration by illustrating the grip hold on the scapula which was of great use in the treatment of stiff shoulders Before any joint manipulation was done there must be complete relaxation of the soft tissues Another useful manipulation was the occiput pull in headache which he had found effective in all kinds of headaches except in migraine Inhibition of the phrenic nerve was often effective in stopping hiccup Dr Marlin next demonstrated a manipulation for extending the ankle joint In all work on the foot the task of physiotherapy was to overcome contraction of the tendo Achillis He showed a number of manipulations of the spine mentioning that the upper dorsal region was more easy to manipulate than any other a balancing manipulation of the sacro-iliac joint and the strap technique for manipulating the cartilage of the knee The mechanism at work in these manipulations was possibly a deep massage on the joint surfaces If there was anything out of place Nature was all the time trying to put it straight and at the moment of separation due to the manipulation a chance was given for the return of the parts to their proper alignment Often the x ray picture showed no change after manipulation and yet the contracted tissue around the joint had evidently disappeared and the spasm no longer occurred

Mr W MCADAM ECCLES said that even such straps as had been shown that evening were used when he was a student in many fixed and badly dislocated joints In those days owing to the fact that brute force was often in evidence rather than scientific skill broken bones not infrequently resulted The scapula grip was known in England as long ago as 1890 It was not the shoulder-joint that was wrong in many of these cases but the prescapular tissue As for the occipital pull there should be careful diagnosis before this was employed but he had seen it used vigorously for months in a patient who was afterwards proved to have been suffering from intracranial tumour so that valuable time had been lost. In pressure on the phrenic nerve it was necessary to be careful not to excite bilaterally the vagus nerve In dealing with the ankle joint the first necessity was to make perfectly certain that there was not a fractured bone which had to be dealt with differently from a sprain tearing the soft tissues Mere pulling on the foot would never reduce a fracture-dislocation nor would it give the separation of joint surfaces What was really concerned was the separation of articular cartilages rather than bone that was the primary thing to be brought about in those cases in which there were said to be adhesions inside the joint The bone he had to pick with osteopaths was that they would not speak anatomically There was some excuse in his own student days when there was no x ray method of examination but now the movements of the joints could be observed on the fluorescent screen and the muscles actuating them were known

Dr MORTON SMART related some experiences with osteopaths and their claims and showed how they got it across The medical profession because of its inability to advertise was at a disadvantage as compared with the osteopath who boldly proclaimed his success Dr CAPPER JOHNSON suggested that general practitioners should make a determined effort to relieve certain simple conditions which came before them in general practice Some of the small manipulations and corrections which Dr Marlin had carried out could be done quite easily by general practitioners and it was unlikely that harm would result in any case Dr VAUGHAN PENDRED was sceptical about the osteopath s frequent statements as to the dislocation of the spine Dr H H MILLS thought it very necessary in carrying out these manipulative movements to go a little further into the study of the pathology of injuries Dr HEWITSON asked Dr Marlin how he would deal with tennis elbow Dr W S C COPEMAN said that when a patient was disabled by some lesion which he chose to describe as a dislocation and was cured by the osteopath and not by the doctor it was time the profession looked into the matter as the Society was doing that evening Patients were often diagnosed as suffering from rheumatism and were ineffectively treated afterwards going to the osteopath who achieved some success He spoke of personal experience of the value of the occipital manipulation as a cure for persistent occipital headache Mr G B WOOD-WALKER asked what manipulations were of use in lesions of the jaw Dr CLEMENT NICORY felt that osteopaths attempted too much in treating every departure from health by one method Certain definite indications in manipulation of the spine had been found useful as a result of experience Dr DONALD BARLOW said that one of the greatest difficulties in respect to osteopaths was that of correlating their terminology with their results A further examination of the whole question of terminology was of the greatest importance Dr A CAWADIAS referred to the medical aspect of osteopathy He thought it possible that osteopaths might have determined some of the reflex zones and have exploited their reactions Physicians thought it beneath them to use their hands yet the hand had a sort of psychological effect on the patient In the modern development of therapeutics he believed that physicians would be encouraged to use their hands for bloodless intervention

Dr MARLIN in reply said that he had been able by manipulation to help people who had had long standing constipation and asthma The use of the hands in treatment was very important There were men engaged in practice who appeared to have no feel in their hands The contact unconsciously made the patient antagonistic Sympathetic hands were needed There were no manipulative methods of value in treatment of the jaw the best

thing was diathermy As for tennis elbow, osteopaths said that this was due to a rotation of the head of the radius, and, working on that assumption, it was possible to evolve a suitable manipulation, which he proceeded to demonstrate

RADIUM THERAPY IN THE PELVIS

At an open meeting of the London Association of the Medical Women's Federation, held on March 28th, with Professor M LUCAS-KEENE presiding Dr B DAVIDINE PULLINGER read a paper on the action of radium as seen in the pelvis

Dr Pullinger discussed the generally accepted theories of the biological action of radium and x rays She said that in order to understand the local therapeutic effect it was necessary to know whether damage and destruction were direct and whether they were selective for malignant cells These two distinct issues were frequently confused Evidence in support of the one was considered to be proof for the other and on the whole most authorities considered that destructive action was both direct and selective Present day theory could be illustrated by analogy with a game of ninepins in which normal cells were represented by white and malignant ones by black ninepins Radiations (γ waves and β particles) selected and were able to knock down the black ones only The analogy however, failed on the biological side because cells were not independent isolated units, but in the adult organism were dependent upon a blood and lymph circulation for growth and maintenance Apart from that consideration ample evidence for the "direct hit" idea could be found, notably in Dr R G Canti's film of sarcoma cells in tissue culture But evidence in favour of a direct hit did not afford evidence of selective action No comparative irradiation tests between malignant and normal cells *in vitro* had been published, so that it was not known whether a dose which would damage the one would leave the other unscathed Comparison of the behaviour of epithelium along these lines was impossible owing to the limitations of tissue culture The assumption of a selective destructive action was a recent one Earlier workers in Germany were divided in opinion on this point and were aware of conflicting evidence provided by the production of burns, and of the extreme sensitivity of certain normal structures—namely haemopoietic and reproductive cells hair follicles and sweat glands It was nowadays maintained that general destructive action when seen was due to ineffective screenage from beta particles, and that modern gamma radiation avoided non selective damage This selection Dr Pullinger maintained could be shown to be apparent not real normal structures did suffer Even under modern conditions it was possible, for example to make out a case that haemopoietic cells were much more sensitive than malignant ones If, however, an explanation was to be sought of what appeared to be a selective action it was necessary to observe what actually happened in treated tissues When this was done one stage or another of a constantly occurring process was always to be found Dr Pullinger from personal observation of more than 100 specimens both from operation and from necropsy could say that the first morphological change was hyperaemia which proceeded to damage of blood vessels exudation of serum haemorrhage, and thrombosis End results of this process were anaemic necrosis and proliferation of fibrous tissue These events had been described by numerous previous workers many of whom attributed death of the tumour to them But two objections had always existed to accepting this process as an explanation of tumour destruction The first was that the sequence of events described was always observed in tissue which was the seat of previous pathological change and could equally well be ascribed to other pathological influences This objection had been met by the work of Bashford Cramer and Murray and also by Dr Pullinger's own experimental demonstration of thrombosis in blood vessels in normal rabbits in deep tissues in the absence of any other previous demonstrable lesion The second objection was that the vascular process failed to account for apparent selective destruction of malignant tissue and apparent immunity of normal structures The speaker then showed lantern slides made from sections of the uterus to illustrate her thesis that destructive action due to vascular lesions affects normal tissue in the same way as malignant tissue She maintained that destruction of tumours when it occurred to a greater extent than the destruction of normal surrounding tissue was due to the concentration of dosage upon the tumour, and to its more vulnerable and incomplete capillary vascular supply But if damage to normal cells was sought for it could always be found though it might be of no practical importance Carcinoma of the cervix was a favourable site for treatment by irradiation because there was a chance to make an early diagnosis, it was relatively easy of access, and its natural development was delayed so that metastasis beyond the pelvis was usually late This meant that the disease was limited for a long time to an accessible site

Professor SIDNEY RUSS said that it seemed extraordinary for anyone to challenge the main facts of selective action, as they formed the basis of the whole of radiotherapy He was frankly critical in view of the complete lack of information on the quantitative side, of the claims which the speaker had made for the part played by thrombosis in the reaction of tumours to radiation

Professor E H KETTLE thought that Dr Pullinger's work was a valuable contribution to the subject He had always felt a little sceptical about the selective action of radium upon the malignant cell, for it seemed to him that the wish was possibly father to the thought He did not know of any essential reason why the malignant cell should be especially vulnerable to x rays and should seem in many conditions to tolerate insults which non malignant cells were unable to resist In some tumours he had examined some weeks after irradiation—for example, mammary cancer—he had found apparently healthy malignant tissue which had a very different appearance from the degenerated cells of the remaining breast acini No one denied that radium had a remarkable local effect on malignant tumours, but this did not necessarily imply a specific action on the tumour cell which would seem to be essential if radium therapy was to deal successfully with anything more than purely local growth

Dr HELEN CHAMBERS said that it was a commonplace that any living tissue could be necrosed by radiation if sufficiently heavy dosage were employed, and from the sections shown by Dr Pullinger the tissues looked as if they had been heavily overdosed The presence of vascular lesions was to be expected as a result of direct injury, or as an after effect of the necrosis produced, and could not be looked upon as a necessary precursor to the malignant cells disappearing The problem could be studied by the experimental method with careful measurement of the radiation using only just enough to cause tumours to disappear When this was done necrosis of the tissues did not occur, and the overlying skin of a tumour need not even be permanently epilated The tumour cells could be killed and the skin through which the radiation had been applied which had consequently received the largest dose, could be left undamaged Dr DOROTHY RUSSELL said that the only clinical material to which she had had access consisted of gliomas exposed to radiation It was well known that the most malignant form, medulloblastoma was particularly susceptible to radium This was difficult to get going in culture Capillary haemangioblastomas when plugged with radon seeds showed extraordinary regression The form of glioma known as spongioblastoma multiforme which was also susceptible to radiation, was generally very vascular

Dr PULLINGER, in reply to Professor Russ, said that she had been dealing with lethal action which in her opinion was not selective for tumour cells and that she had endeavoured to show that normal structures also were destroyed Thrombosis could be found in tissues treated

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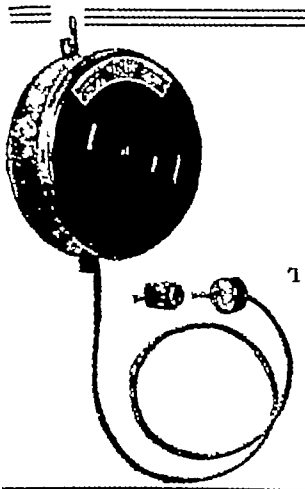

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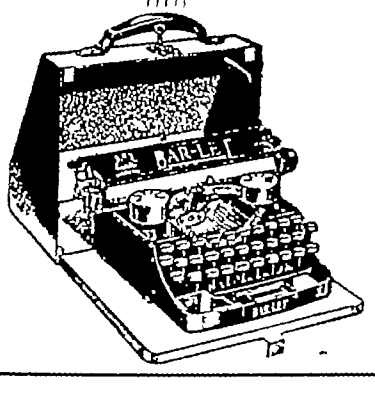

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by the therapeutic doses commonly used She agreed that the hyperaemia might be evidence of a high degree of selective damage to endothelium and vessel walls but she was of the opinion that it was a response to some chemical substance of histamine like nature produced in the irradiated area

PERINEORRHAPHY

At a meeting of the North of England Obstetrical and Gynaecological Society held in Liverpool on March 31st the president Mr LEYLAND ROBINSON read a paper on perineorrhaphy

The object of plastic work he said was twofold to repair the damaged structure and to restore the impaired function He pointed out that in plastic gynaecological surgery good mechanical results were often only obtained by sacrificing the functional capacity of the operation area Frequently prolapse was permanently cured by lengthening the perineum and narrowing the vagina but only at the expense of the sexual functions The best results were to be obtained by restricting the sacrifice of tissue and the degree of mechanical correction to the minimum that was compatible with the relief of symptoms He thought that in many modern operations for prolapse no attention had been paid to restoration of the vulva He pointed out that in nulliparae the two labia majora were in contact and that this apposition formed a natural barrier between the vaginal walls and the exterior In multiparae a state of ectropion vaginae was frequently present as the result of birth trauma and with the loss of the natural protective barrier a certain degree of infective vaginitis almost always resulted Such vaginitis could maintain the bearing-down symptoms even after uterine descent itself had been cured He thought that one of the most important parts of the operation was an anatomical restoration of the vulva The President then demonstrated the various steps of the operation he performed for reconstruction of the perineum illustrating them by means of lantern slides

Unusual Cases

Dr M DATNOW showed a specimen of complete absence of anus rectum and kidneys in a child born alive

At birth the baby breathed and cried quite normally but was very blue the blueness increased until the time it died—thirty hours later The external genitalia were normally developed and the right testis was present in the scrotum The anal opening was absent At the post mortem examination he found complete absence of the lower part of the colon rectum and anus The lower end of the pole terminated in what appeared to be the bladder which was only represented by a thick fibrous cord Both kidneys were absent and no renal vessels could be found The suprarenal capsules were normal

Dr Datnow pointed out that in this case there was complete absence of the parts developed from the metanephros and mesonephros

Dr JEFFCOATE showed a case of pseudo-hermaphroditism in a foetus

The foetus which was stillborn showed typical male external genitalia The sex of the foetus was never questioned until the post mortem examination when a uterus didelphys was found Each half of the uterus was well developed and had a normal ovary associated with it There was no anus and the rectum ended in a fibrous structure attached to the posterior wall of the bladder Both kidneys were absent but the suprarenal glands were present in their normal position Examination revealed hypertrophy of the cortices of a suprarenal gland

Dr Jeffcoate concluded that these changes in the adrenal gland were responsible for the masculine appearance of the external genitalia

Miss R NICHOLSON and Professor DIBLE reported a case of gas gangrene occurring during labour

The patient a multipara was admitted to hospital with a history of bleeding twice during the previous five hours She was thirty four weeks pregnant with a vertex presentation and on vaginal examination it was found that the os was one finger dilated that the membranes were unruptured and that a partial placenta praevia was present The membranes were artificially ruptured and a tight binder was applied there was no further haemorrhage Forty-eight hours later labour commenced and the patient was delivered normally in four hours of a stillborn child weighing 4 lb the placenta following half an hour later together with some retroplacental clot Two and a half hours after the beginning of labour she had a rigor and was restless and excitable The temperature rose to 101° pulse was 104 A few hours later she was jaundiced the liver edge was palpable and her general condition became rapidly worse The whole skin was deeply suffused almost to a copper colour the abdomen became distended and tympanitic and the patient passed a small amount of black urine She died twenty five hours after delivery Post mortem examination showed that the condition was due to gas gangrene and cultures gave a pure growth of *Bacillus welchii*

VARIATION IN ANAEROBIC BACTERIA

At a meeting of the Pathological Society of Manchester held on April 12th Mr C A MCGAUGHEY discussed variations of *Cl welchii* He said that few observations had been made on the significance of variation in an aerobic bacteria Two variants isolated from an authentic strain of *Cl welchii* by selection and repeated subculture of colonies had remained stable for about five years The variants differed from the parent strain and from each other in form of colony growth in broth the size and shape of individual bacilli sporulation and formation of capsule They did however resemble the parent strain and each other in fermentation reactions One variant produced little or no toxin the other from three to six times as much toxin as the parent strain The production of haemolysin in culture followed exactly changes in the production of toxin Agglutination tests showed that the antigens of both variants differed completely from the parent strain though the antigens of the two variants were closely related perhaps identical The importance of these results in the production of *Cl welchii* toxin and their possible application to the study of *Cl welchii* infection and immunity were discussed

Dr D T ROBINSON read a paper on the *gravis mitis* and intermediate types of *B diphtheriae* and their relation to diphtheria The results of the investigation of 230 cases were given and the incidence of the types in Manchester was compared with the incidence in the Leeds area and elsewhere The criteria for the differentiation of the three types were mentioned and difficulties in classification discussed Dr Robinson emphasized the importance of the types described by each worker being strictly comparable since any inconsistencies in this respect would affect the results of correlation of type with case severity and deaths He gave instances in which such inconsistencies would seem to have arisen He discussed the results of animal experimentation with the various strains and mentioned the propositions that had been advanced to account for the apparent differences between the strains in their action on man and other animals

FRACTURE OF FEMORAL NECK

At a meeting of the Section of Surgery of the Royal Academy of Medicine in Ireland held on March 31st with Mr R ATKINSON STONEY in the chair Mr ARTHUR CHANCE read a paper on the radiological interpretation of fractures of the neck of the femur based on a study of the *x* ray films taken before and after reduction in the last twelve cases in his wards

Mr Chance said that for a knowledge of the exact pathology of this fracture he had been fortunate in obtaining a recent specimen from an old woman who died on admission and from whom he removed the neck of the femur on both sides for purposes of comparison The fragments at the site of any fracture were subject to the following displacements side-to-side angular shortening and rotatory These were easily interpreted in ordinary

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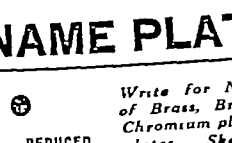

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limb fractures where antero-posterior and lateral plates were possible, but in the neck of the femur only an antero posterior plate was feasible The mechanism of the injury—that is, outward rotation of the lower limb—resulted in the following displacements (1) the lower fragment was displaced upwards and backwards , the limb was adducted in full extension, and outwardly rotated , (2) the upper fragment might be adducted or abducted, and its fractured surface might look forward or backward The two fragments therefore formed with one another an angle open backwards and an angle open inwards As regards the lower fragment, the degree of shortening was difficult to estimate, because (1) the actual line of fracture could seldom be seen , (2) the relation of the great trochanter to the acetabulum varied with the adduction or abduction of the limb Measurement of the limbs was a surer method of estimating the shortening Backward displacement was difficult to gauge Outward rotation was assessed by the prominence of the lesser and the breadth of the greater trochanter In considering the upper fragment abduction or adduction was readily gauged by the amount of the articular surface which projected beyond the acetabulum It was impossible to tell whether the fractured surface looked forward or backward, but from the mechanism of the injury it was reasonable to assume that it looked forward The apparent disappearance of the neck and inability to see the fracture line was due to the fact that the fractured surfaces looked forward and were consequently foreshortened These difficulties of interpretation would be surmounted were a lateral plate possible, and stereoscopic pictures would also be helpful In reading the post-reduction x-ray one should be certain that the neck was full length as compared with the opposite side These points were demonstrated on a series of x ray films, and also on the specimen

The CHAIRMAN said that, unless the fracture occurred low down in the neck, the main displacement was in the lower fragment One of the main things about the lower fragment was the marked eversion Nothing was more remarkable than the appearance of the lesser trochanter before reduction and its disappearance when reduction was complete Mr T J D LANE said that one of the important things which Mr Chance brought out was the fact that in the treatment of fractures it was necessary to go very deeply into the subject if one wanted to get a really good result In these cases a very great deal of help was obtained from x rays The mechanism of the production of fractures was frequently very difficult to explain Dr F G STEWART referred to the difficulty of lateral examination of the hip and said that this could be overcome by putting the tube in the perineum and tilting it downwards

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The Directory of Maternity and Child Welfare Centres in the United Kingdom which has been recently published at 2s 6d contains a list of more than 3,400 addresses of these centres Educational classes for mothers are being conducted at about 800 of them Only a comparatively few centres hold special sessions at which mothers are seen during the first six weeks after confinement with a view to ensuring that no obstetrical complication persists but there are 1 085 addresses of places where post natal consultations are held in association with ante natal supervision and instruction The Directory takes the place of the list issued in March 1925 by the Ministry of Health which covered England only The annual report for the Association of Maternity and Child Welfare Centres for 1932 announces the sale during that year of over 330 000 copies of its publications the organization of practical competitions among parents attending the local centres and the training of students at its nursery schools and babies' convalescent homes The work of the association has increased in spite of the greater statutory powers conferred on local authorities in respect of maternity and child welfare but the financial position remains difficult The two publications can be obtained from the offices of the association at Carnegie House 117 Piccadilly W 1

Reviews

PHARMACOLOGY THE MODERN APPROACH

Professor A J CLARK describes pharmacology as one of the youngest of the biological sciences The fact that it can be approached along the lines which he has adopted in his recent book *The Mode of Action of Drugs on Cells* [1] is evidence that its progress has reached a certain definite stage—one at which phenomena are studied on quantitative as well as qualitative lines Physics and chemistry long ago reached that position , biology, as a whole, is only just beginning to attain it

Generally speaking, advances in many branches of biology are still being made by what may be called the method of " the critical experiment " In the approach to a problem conditions are more and more sharply defined until it is possible finally to devise an experiment the result of which will enable an unequivocal " yes " or " no " to be given to some crucial question When a method such as this is applicable, it must appeal as perhaps the most satisfying of all to the experimenter Problems, however, often present themselves in a form which does not yield to cross examination of this type, because it is impossible to define the conditions with sufficient sharpness It is possible, for instance, to show that a given substance contains vitamin C, because one can arrange an experiment in such a way that all the guinea pigs in one group remain normal, while all the controls develop scurvy But when it comes to deciding how much vitamin C is contained in one type of foodstuff as compared with another, the problem is far less simple Individual variations in the animals cannot be controlled, and experiments must be carried out on a statistical basis and subjected as far as possible to mathematical analysis This is an example of the biological assay of a vitamin, but the same principles apply to almost all quantitative work with drugs It is to the analysis of the results which can be obtained by the quantitative methods available to the pharmacologist that Professor Clark devotes a large part of his book With the many pertinent questions which he raises, the pathologist, not less than the pharmacologist, is concerned A population of animals shows wide variations between individuals An apparently homogeneous tissue, such as a nerve or a muscle, may be considered as a population of cells, and those cells show individual variations to a marked degree Similarly, a culture of bacteria is anything but homogeneous Not only do bacteria show the phenomenon of individual variation, but also, in any growing culture, there will be a wide range of age difference, the younger bacteria predominating This fact, again, introduces many complications into the interpretation of results, whether these have to do with the action of drugs on the organisms or the behaviour of the latter towards other agents Experiments have thus to be performed on a statistical basis and results subjected to proper statistical treatment

The author often, and rightly, stresses the point that, compared with the systems ordinarily dealt with by the physical chemist, the living cell can boast of a truly appalling complexity " There is no question of trying to explain all the reactions that occur between drugs and cells , the question is whether a certain proportion of these can be explained by the known laws of physical chemistry without making highly improbable assumptions " One is inclined to expect of a " law " that it is capable of being enunciated in mathematical form On page 5 however, it is pointed out that even one of the

[1] *The Mode of Action of Drugs on Cells* By A J Clark M D, F R C P F R S London E Arnold and Co 1933 (Pp 298, 62 figures 18 tables 18s net)

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simplest of the kinetic formulae—namely concentration × time = a constant —cannot be applied without reserve to the action of drugs on living cells since it implies both that the drug will produce an action at infinite dilution in infinite time and that sufficiently high concentrations will produce instantaneous action Both these postulates are commonly untrue At high—but certainly finite—dilutions the drug effect is usually counterbalanced by repair processes in the cells so that no action can be demonstrated while there is almost always a lower limit to the time in which action can be produced In another sense too mathematical interpretation may be misleading Curves which are plotted from experimental results can rarely cover more than about 40 per cent of the maximum value of both of the variables and plus or minus 5 per cent is a relatively small margin of error in view of the technical limitations imposed by biological material Yet it is possible within these limits to draw as Professor Clark has done three curves representing respectively a parabola a hyperbola and an exponential variation This means that a single set of values might reasonably be interpreted as fitting three separate and mutually exclusive laws These pages should serve as an awful warning to the too ardent mathematician!

Considerations of the size of drugs and of cells lead to some interesting conclusions For instance the ratio of size between a molecule of phenol and a coccus is similar to that between a milligram and a ton In the case of many drugs it is possible to calculate that an action is produced on a cell by an amount of drug which could cover only a very small portion of the cell surface Hence it is difficult to escape from the conclusion that there must be certain active points on the surface at which the drug action is produced The conception of active centres on the cell surface at which enzyme action probably takes place is already current among biochemists There is a tendency among biologists some of whom perhaps are tempted to emulate the physicist to strain after the mathematical interpretations of their data Professor Clark who is a realist has no hesitation in pointing out that biological data are rarely sufficiently accurate to bear such treatment and that often as a result of the attempt serious errors are obscured Apart from this mathematical formulae are evolved not infrequently which either have no physical meaning or involve assumptions which are patently ridiculous His realism and common sense as expressed in this book will do much to counteract a dangerous tendency at the same time he shows how by paying proper regard to the laws of statistics when interpreting data the worker may avoid many of the pitfalls that beset his path

SURGERY OF THE HAND

Dr MARC ISELIN of Paris has made a special study of injuries wounds and infections of the hand and fingers [1] To qualify himself to write the present book he spent a year in the United States studying the work of Sterling Bunnell who in 1929 had had a vast experience including more than 600 reparative operations chiefly of tendons Dr Iselin also followed the clinical work at Johns Hopkins University and Sauerbruch's prosthetic and reparative methods at Berlin With this experience he was well equipped to take charge of the out patient casualties of hands and fingers at the Hôpital St Louis in Paris in 1929 where he was able to collect in 1930 the records of 217 whitlows and 130 serious wounds of fingers etc

The importance of the subject is considerable Neglect of early treatment and of the adoption of the correct treatment may have the most disastrous results from the point of view of industrial efficiency and may involve loss of limb or even of life Examination under anaesthesia and thorough search for septic foci are also important as well as *x* ray examination which may reveal quite unexpected injuries of bone in cases of violent injury In France antitetanic inoculation in all punctured or foul wounds is the routine procedure In lacerated wounds free excision of damaged tissue and free drainage is the rule

The first part of the book deals with wounds of the fingers and thumb and their complications not omitting those troublesome and obstinate conditions due to puncture by an aniline pencil for the complete cure of which ultra violet rays are recommended after free removal of all aniline material The second part deals with infections of the hand and particularly whitlows both superficial and deep the various kinds and situations of which are fully discussed The third part treats of reparative surgery both orthopaedic by means of splints and by surgical procedures The chapter on skin grafting and autoplastic procedures is instructive and those on repair of tendons and on reconstruction of the thumb are notable The bibliography contains 271 titles

This work based as it is on a vast experience by an accomplished surgeon must have great weight and it will no doubt be treated as an authoritative book of reference by every surgeon who finds himself faced with a problem in the treatment of the hands and fingers

MODERN THERAPY IN BRIEF

Professor KREHL's book on medical treatment [2] is the third volume of a series which represents his considered views after a lifetime of work in experimental and clinical medicine Krehl's earlier book on pathological physiology went through several editions and was translated from the German into several languages It proved a useful stepping stone from physiology to medicine for many generations of students The present work is not an enlarged edition of the earlier one though the orderly habit of mind which formulated the early book inspires the one now under review The first volume of the series dealt with the genesis of disease and traced the morbid processes as anomalies and divergences from the normal physiological conditions of health In the second volume followed in natural sequence a description of the way these morbid processes affect the patient and cause his symptoms The pathological process was thus analysed according to the subjective sensations of the sick person Professor Krehl had hoped in the third volume to discuss the treatment of disease according to the underlying principles of pathological physiology He confesses at once that this hope was a dream which has not been and in the present state of knowledge cannot be fulfilled His analysis of the situation showed that only relatively few patients and then only some of their complaints could be treated according to the information we have of the underlying disease processes and as a logical consequence of our knowledge of pathological physiology Nevertheless the proper understanding of the disease processes is an essential though the art of medicine comprises that and much more The physician's work is to help the patient and each patient reacts in an individual way to the disease It is necessary to envisage the whole person as well as his complaint in order to lay down a sound course of treatment In general

[1] *Chirurgie de la Main* Par Marc Iselin Preface du Professeur Lenormant Paris Masson et Cie 1933 (Pp 340 111 figures 55 fr)

[2] *Entstehung Erkennung und Behandlung Innerer Krankheiten* Von Dr Ludolf Krehl Band III *Die Behandlung Innerer Krankheiten* Berlin F C W Vogel 1933 (Pp 289 RM 18 Geb RM 20)

therefore, the physician must seek for the causes of disease in his patient, especially infection, poisoning of external or endogenous origin and over-stress of bodily functions or mental energy, deficiency of secretions of internal organs or of vitamin intake, and the reactions of the tissues to foreign proteins that are shown in allergic phenomena These derangements can often be adjusted when the cause is known, and surgery, too, can be called in to remove or repair a diseased part Often, however, treatment must consist in raising of tone or resistance by physical methods—climate, hydrotherapy, massage, gymnastics and exercise Diet is important, especially when the object is to gain or lose weight the preparation and amounts of the various foodstuffs must be prescribed Among the general measures psychotherapy has a distinct place Professor Krehl insists that in each case treatment should not be made from day to day, but that a settled plan should be followed, modifiable but not arbitrarily After this wise introduction the reader is led on to consider the treatment of system diseases The author says his book is quite simple, and makes no appeal to professors and the erudite He is too modest It is a good summary of modern therapy which will well repay study It is masterly, simple, and sufficient

THE SOVIET EXPERIMENT

Soviet Economics[4] edited by Dr GERHARD DOBBERT, consists of a series of essays written upon various aspects of the economic plans of the ruling powers in Russia There are fourteen essays by writers each of whom has a personal knowledge of his subject On the cover it is stated that the contributors pass judgement on Soviet economics from the capitalist point of view This statement is less than just to the essayists, who, for the most part have fulfilled the editor s plan set out in the introduction to present information and leave the reader to form an independent judgement The authors present a vivid picture of the attempt that is being made to mould a population of 165 millions into a scheme propounded by a social theorist In reality the period actually governed by Marxist philosophy came to an end when Lenin instituted his new economic policy being forced thereto by the threatened collapse of the economic machine Stalin and his associates have nominally returned to a purer Marxism, declaring that the new economic policy was but a temporary expedient in Lenin's mind but Stalin s own recent alteration of a fundamental Marxist dictum shows that he, too, has had to trim his sails Instead of from each according to his ability to each according to his needs " the new version reads from each according to his special ability to each according to his special *achievement* The change is radical Various plans are now in force to stimulate the workers to production, chief among which are the creation of shock brigades from those who bind themselves to do more than the ordinary allotment of work in return for special privileges in respect of food and clothing and of bands formed from the Union of Communist Youth which visit unannounced various institutions and report alleged cases of neglect of duty Agricultural policy has varied as well as industrial policy, the plan in operation at present being that of absorbing all peasant labour into State farms and collectivist associations Apparently no progress has yet been made towards raising the standard of living in fact, the tendency has been in the opposite direction since 1927, and is reflected in the extreme shortage of many foodstuffs and manufactured articles It is stated that soap tea, and sugar cannot be obtained in the country districts The workers have, however, been promised an improvement in these matters under the Second Five-year Plan which has now begun Meanwhile, the administrative apparatus has assumed gigantic proportions, resources for its schemes come from its monopoly of foreign trade and from State lotteries, to which the number of subscribers in 1931 was thirty-three millions

The authors present a detailed picture of an experiment which has grown out of the theory that so long as private ownership remains an incentive to human nature so long must the standard of living of the masses be low The experiment has been forced to recognize that human beings, like all other living beings employ and develop their abilities only under the influence of incentive The primary influence of hunger can be relied upon to promote a minimum of activity, but it will not uphold the exercise of human ability in its full range In the early days of the revolution the impulse to destroy the existing regime supplied a strong urge, to-day this is derived from the fear of attack by other nations present in the minds of " virtually the whole nation ' It is impossible to read this book without being stirred to hope that the patient nation which is the subject of this experiment will ultimately reach the goal of well being

PURE AND WHOLESOME WATER

The fourth edition of Dr J C THRESH's book on the examination of waters[5] follows the third at an interval of eight years With Dr Thresh, whose own long record of distinguished work has been closed by death, are joined in its authorship Dr J F BEALE and Dr E V SUCKLING Water supply as a health problem becomes more pressing as populations grow, and dubious sources hitherto avoided may have perforce to be drawn upon That such sources, especially rivers, can be safely used for public supplies is due to effective purification under the vigilance of water examiners In the work under notice the physical, chemical, biological, and bacteriological technique for the examination of water is set forth with completeness A section is devoted to the interpretation of results, and attention is called to the need in this country of a standard notation for water analyses, together with a recognized code for applying the bacteriological tests The reputation of the so-called poisonous metals in the production of illness in consumers has altered little in recent years Lead is still regarded as the outstanding offender, iron, manganese, zinc, and copper are for practical purposes harmless, while aluminium, lately under suspicion, is also classed as innocuous Bacteriologically the greatest importance is attached to the *B coli* test, though a final judgement must be made on wider considerations *B coli* habitually absent from 100 c cm of water is a guarantee of purity and wholesomeness *quâ* bacteriology, while *B coli* present in all or the majority of samples of 20 c cm or less should be taken to indicate recent and possibly dangerous pollution Among the methods of purification reviewed are storage, filtration, and the employment of hydrogen peroxide, ozone, catadyn silver, chlorine, chloramine, and excess lime There are excellent statements also of the uses of zeolite, silicate with lime, copper sulphate, and activated carbon The concluding article deals informatively with the water of swimming baths The work, which very ably sustains the high achievement of its predecessors, can be recommended to medical officers, water analysts, and bacteriologists They will find it up to date and reliable

[4] *Soviet Economics* A symposium edited by Dr Gerhard Dobbert Translated from the German by Malcolm Campbell London John Lane, The Bodley Head Ltd 1933 (Pp ix + 343 7s 6d)

[5] *The Examination of Waters and Water Supplies* By J C Thresh D Sc M D D P H J F Beale M A M R C S, F R C P D P H and J V Suckling M B B S, D P H Fourth edition revised and enlarged London J and A Churchill 1933 (Pp xvii + 1 824, 35 plates 42s net)

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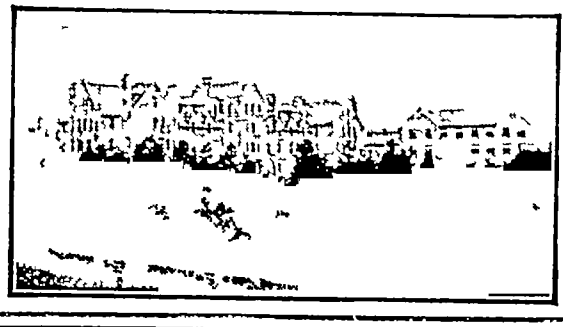

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Notes on Books

A new edition the twenty first of HALE WHITE'S *Materia Medica*[1] appeared simultaneously with the publication of the new *British Pharmacopoeia* The drastic revision undergone by the official work called for radical change not only in the contents but also in the general arrangement of this ever popular book which now appears again under the editorship of Dr DOUTHWAITE Following the plan of Cushny's *Text Book of Pharmacology* it is now divided into two main parts the first relating to substances used chiefly for their local action the second to those used chiefly for their action after absorption The publishers also have introduced changes both in the format and in typography

The A B C of Chemistry[2] is not a royal road to chemistry no royal road to chemistry has yet been prepared Yet J G CROWTHER'S little book is a very practical attempt to bring chemistry within the reach of those to whom it is a strange science Little in fact is needed—the bare foundations of chemistry are enough—to qualify any reader to derive a full measure of the enlightenment which the author has presented on the subject And this amounts to very much more than might have been expected from a first glance at the size of the book The treatment is based generally on the plan of showing how the earlier conceptions of chemical theory have grown into modern form and how the views of mankind have changed regarding the significance of the facts known to them This theme is so well developed as to render the book highly interesting even to educated chemists The author is a scholar of no mean attainment in the history of the science as well as in its technical development and has a talent for presentation which should earn for the book a widespread appreciation

The book entitled *Alcohol and Man*[3] edited by Dr HAVEN EMERSON of the De Lamar Institute of Public Health Columbia University New York is the work of twenty two contributors It is divided into six parts devoted respectively to the effects of alcohol on human functions the effects of alcohol on the cell and in heredity the toxicology and therapeutic aspects of alcohol alcohol and the body resistance to infection and the pathology of acute and chronic alcoholism the psychological and criminological aspects of alcohol and the relation of alcohol to longevity mortality and morbidity The chapter on alcohol and the body's resistance to infection has been written by Dr T S Langmead and T C Hunt and has been reprinted from *A Review of the Effects of Alcohol on Man* The other contributors are well known American professors clinicians and statisticians Although primarily intended for the lay reader for whose benefit a glossary is appended this book can be read with profit by the medical practitioner and student particularly as it contains much that is not as readily available elsewhere Its dispassionate character and wealth of documentation render it a valuable contribution to the literature of the alcohol problem

The *Directory of Guy's Men*[4] (Medical and Dental) has been brought up to date in the eleventh issue dated 1933 It contains a list of the governors and the medical surgical dental and teaching staffs of the hospital together with alphabetical lists of medical practitioners who were trained at Guy's and are practising in various parts of the world The annual subscription for the *Directory* and *Guy's Hospital Gazette* is 12s 6d payable to the manager of the *Gazette* at the hospital

[1] *Materia Medica* Pharmacy Pharmacology and Therapeutics By Sir William Hale-White K B E M D L L D Twenty first edition revised by A H Douthwaite M D F R C P London J and A Churchill 1932 (Pp x + 547 10s 6d)

[2] *The A B C of Chemistry* By J C Crowther London Kegan Paul and Co Ltd 1932 (Pp vi + 248 26 figures 4 6d net)

[3] *Alcohol and Man* The Effects of Alcohol on Man in Health and Disease Edited by Haven Emerson M D New York The Macmillan Company 1932 (Pp 491 18s net.)

[4] *Directory of Guy's Men* (Medical and Dental) Incorporating life members of the Clubs Union London Ash and Co Ltd 1933 (Pp xxxvi + 178.)

TEMPLE CROSS RESEARCH FELLOWSHIPS IN TUBERCULOSIS

The Dorothy Temple Cross Research Fellowships in Tuberculosis for the academic year 1933-4 will shortly be awarded by the Medical Research Council and applications should be lodged with the Council not later than June 1st

The object of these Fellowships as defined in the trust deed is to give special opportunities for study and research to persons intending to devote themselves to the advancement by teaching or research of curative or preventive treatment of tuberculosis in all or any of its forms Candidates must be British subjects and must possess suitable medical veterinary or scientific qualifications They must also be able to produce satisfactory evidence of their ability to make good use of the opportunities offered by the Fellowships

The Fellowships will preferably be awarded to candidates who wish to make their studies or inquiries outside the borders of Great Britain They will be awarded for one year as a rule but in special cases may be renewed The value of the Fellowships awarded will depend in each case upon the standing and qualifications of the candidate but will not be less than £350 per annum payable monthly in advance Travelling and some incidental expenses will be paid in addition It may also be possible to award a Senior Fellowship of considerably greater value to a specially well-qualified candidate wishing to undertake an intensive study of some particular problem of tuberculosis at a chosen centre of work in another country

Further particulars and forms of application are obtainable from the Secretary Medical Research Council 38 Old Queen Street Westminster S W 1

MEDICAL CONGRESSES, 1933

The following congresses and conferences on medical and allied subjects have been announced for 1933 Particulars are given below in the following order date name of organizing body place of meeting name of person to whom inquiries should be addressed More detailed information about these meetings is given from time to time as it becomes available in the news columns of the *British Medical Journal*

May 29—International Congress of Military Medicine Madrid

May 30–June 4—Royal Institute of Public Health Eastbourne Secretary of Institute 37 Russell Square W C 1

June 6–8—German Dermatological Society Vienna

June 17–24—Royal Sanitary Institute Blackpool Secretary of Institute 90 Buckingham Palace Road S W 1

June 28–July 3—International Hospital Association Knocke-sur Mer Belgium

June—German Pathological Society Rostock

June—German Physiological Society Innsbruck

June—German Society of Neurologists Munich

June—German Medical Association Bremen

July 4–9—International Union for the Protection of Childhood Paris Comité National de l'Enfance 26 Boulevard de Vaugirard Paris XV

July 13–15—National Association for the Prevention of Tuberculosis Cardiff Secretary of Association Tavistock House (North) Tavistock Square W C 1

July 19–22—International Society of Orthopaedic Surgery London

July 20–22—International Congress of Paediatrics London Dr L Findlay 61 Harley Street, W 1

July 25–29—British Medical Association Dublin. Medical Secretary B.M.A House Tavistock Square W C 1

September 7–9—Association Professionnelle Internationale des Médecins London Dr F Decourt Mitry Mory France

September 25–27—German Society for the Study of Diseases of Digestion and Metabolism Berlin

September 25–30—South African Medical Congress Capetown Dr A W S Sichel Capetown

September—International Congress of Mental Hygiene (European Reunion) Rome

September—Societe Anonyme des Eaux Minerales d'Evian les-Bains Evian les-Bains Secretary of Society 21 Rue de Londres Paris IX

October—International Society of Medical Hydrology Toulouse Secretary of Society 55 Wellington Road N W 8

1933—Anti War Congress (Meeting of International Medical Conference) London

1933—Italian Ophthalmological Congress Rome.

Nova et Vetera

THE WARRINGTON ACADEMY (1757-86) AND ITS INFLUENCE UPON MEDICINE AND SCIENCE

While on a visit to this country Dr John F Fulton of the Yale University School of Medicine, attracted by a leader in the *Times* of August 5th 1932, referring to the will of a public-spirited alderman of Warrington—the late Mr Arthur Bennett—visited Warrington and obtained material for an interesting paper on the Warrington Academy which he read before the Johns Hopkins Medical History Club, Baltimore, on November 28th, 1932 [1] Space only permits a summary and some significant extracts, but to be fully appreciated the whole paper should be read

Baltimore he said "was the first place in this country where medical history really took root so now through a series of fortunate and highly appropriate circumstances it has become the chief centre for the intensive study of history of medicine and science For some years I have been growing more and more impatient with those scholars who assume that the only thing that matters in science and philosophy is the development of ideas and that great contributions should be recorded dispassionately and independently of the lives of those who created them My conviction is that an idea cannot be fully understood or evaluated unless one has studied the soil from which it grew The most intimate and important part of the idea is in my opinion the man who created it—how he lived who his friends were and what perchance he took for his breakfast or his dinner

What forces were at work upon him in his childhood who were his contemporaries and teachers what was the art and literature upon which he was brought up and finally was his mind fettered or inspired by religious convictions? No one has expressed this broad point of view as related to scientific history more effectively than Dr Sigerist in his recent book *Man and Medicine*

Why was it Dr Fulton asks that many of the most important contributions to English medicine and science in the eighteenth century came from a rather restricted district in and about the county of Lancashire He believes this to be due to the religious unrest of the time which brought the Warrington Academy into being The object of the Academy was to provide a liberal education, free from religious tests, to those dissenters who wished to enter the professions or who desired the higher education of a university The universities of England were closed to dissenters up to the year 1880 "Michael Foster, for example could not be appointed professor of physiology at Cambridge in 1878 because he was a fervent nonconformist (Baptist)' The Academy continued actively for twenty seven years but finally dissolved in 1786 The subjects taught were divinity classics, languages and belles lettres languages and natural history natural philosophy and mathematics Joseph Priestley is the most famous name associated with the Academy He taught languages and belles lettres from 1761 to 1767 He conducted experiments on electricity and wrote a *History of Electricity* at Warrington Priestley was also a pioneer in the teaching of history, for at that time history was not a fully recognized subject of university study Dr Fulton says 'Little wonder that historians of science and medicine have only recently become prominent in university life

During its twenty seven years of active life 393 students were trained at the Academy and of these twenty entered medicine seven are mentioned in the *Dictionary of National Biography* and three became Fellows of the Royal College of Physicians Of the medical men who attained fame the most prominent are John Aikin, Thomas Percival and Caleb Hillier Parry John Aikin (1747–1822) "of the English practitioners of medicine in the eighteenth century no one unless perhaps Richard Mead, carried higher the tradition of scholar physician than John Aikin" His father, the Rev John Aikin, was one of the founders of the Academy He studied medicine at Edinburgh and practised in Chester, Warrington, and Manchester He was apprenticed to Dr John White of Manchester, who wrote on the 'Management of Pregnant and Lying-in Women" Aikin wrote a small work, *Thoughts on Hospitals* and in this expressed his belief in wound infection by a viable agent conveyed by air He deplored the bad results of the treatment of compound fractures in hospitals, and advocated adequate ventilation to minimize the dangers He also wrote on lead as a therapeutic agent In general literature he wrote a ten-volume dictionary of biography—the predecessor of the *National Dictionary*, the *Biographical Memoirs of Medicine in Great Britain*, and several other works Thomas Percival (1740–1804), the first pupil of the Warrington Academy, studied medicine at Edinburgh and practised in Warrington and Manchester He founded the Manchester Literary and Philosophical Society He also "wrote the greatest work on medical ethics that has appeared in English, and in addition made scientific contributions of the first importance to public health and problems of putrefaction" Caleb Hillier Parry (1755-1822), the celebrated Bath physician, who wrote on the arterial pulse and angina pectoris, studied the breeding of sheep to improve wool production Of other pupils of the Academy the most famous is Thomas Robert Malthus F R S whose famous *Essay on Population* led to the Malthusian doctrine and indirectly through Darwin and Wallace to the theory of natural selection

After the Academy's cessation at Warrington, it moved to Manchester, remaining until 1803 Then to York for thirty-seven years, but returned to Manchester again until 1853, when it moved to London

During these migrations the college exerted through its liberal teachings a profound effect upon the life of the nation and it produced the commanding figure of James Martineau From London the college moved in 1889 to Oxford, and in 1893 came to occupy the new and beautiful buildings of Manchester College The chapel with its Burne Jones windows and the library with its statue of Martineau portrait of Priestley and above all its celebrated Warrington window give vivid testimony of its past, of its unfettered minds and the rich intellectual life with which it has been so long associated The college is no longer directly concerned with the teaching of science but I would urge that the movement that brought Manchester College into being did much also to promote the renaissance of scientific thinking among English speaking people Indeed it has been from the soil of free thinking that much of English science has grown since the time that Warrington closed its doors'

This imperfect summary of Dr Fulton's paper would be very incomplete without reference to the link between Baltimore and Warrington This link consists in the library of the Warrington Dispensary, which was bought by Osler in 1906 and taken to Johns Hopkins Hospital It now forms part of the Welch Library The library was gathered together by some of the men connected with the Warrington Academy, and Osler refers to the purchase in an address on 'The Library of a Medical School" in the *Johns Hopkins Bulletin*, July, 1907 After describing how the library came to his knowledge he said

I may mention in passing that the library is very rich in English medical pamphlets of the seventeenth and eighteenth centuries, and contains a large number of the works of classical medical authors which we had not in the library

I think it will be generally agreed that Dr Fulton deserves the thanks of the medical profession of this country for his eloquent and timely effort to stay the shadow of time from darkening a bright period in the history of English medicine and science and by so doing he has forged another link between British and American medicine

J S MANSON

[1] *Bulletin of the Institute of the History of Medicine* February 1933 vol i No 2 p 50 (Supplement to the *Bulletin of the Johns Hopkins Hospital* February 1933 vol lii No 2.)

POST-GRADUATE COURSE IN GENITO-URINARY DISEASES

(Free to Registered Medical Practitioners and Students)

ST PAUL'S HOSPITAL, ENDELL STREET (off Shaftesbury Ave), W C 2

LECTURER	SUBJECT	On the following dates at 4 30 p m
Mr Kenneth Walker	The Diagnosis and Treatment of Testicular Swellings	April 19th (Wed)
Mr W K Irwin	The Diagnosis and Treatment of some important Bladder Conditions	April 26th (Wed)
Mr H P Winsbury-White	The Causes of Frequency of Micturition, with Special Reference to Diagnosis and Treatment	May 3rd (Wed)
Dr T Jenner Hoskin	Blood Pressure Its Significance in Operations on the Prostate Gland	May 10th (Wed)
Dr R John Clausen	Anæsthesia in Genito-Urinary Surgery	May 17th (Wed)
Mr C H Mills	Some interesting Urological Cases, with Demonstration of Pathological Specimens and Radiograms of same	May 24th (Wed)
	NO LECTURE ON DERBY DAY, MAY 31st.	
Mr R Jocelyn Swan	The Diagnosis and Treatment of New Growths in the Urinary Tract	June 7th (Wed)
Mr Stanford Cade	Radiation Treatment in Malignant Disease of the Bladder	June 14th (Wed)
Dr G R Mather Cordiner	The Role of Radiology in the Diagnosis of Urinary Calculus	June 21st (Wed)

No fee will be charged for attendance at the lectures etc Registered Medical Practitioners and Students are invited to attend any branch of the work in which they are interested Tea will be served at 4 p m

EDINBURGH POST-GRADUATE COURSES IN MEDICINE

IN CONNECTION WITH THE UNIVERSITY AND ROYAL COLLEGES, 1933

The POST GRADUATE COURSES to be held this year comprise

(1) A GENERAL PRACTITIONERS' COURSE from August 14th to September 9th

(2) A GENERAL SURGICAL COURSE from August 14th to September 9th

The composite fee for each Course will be £10 10s for the four weeks or £6 6s for either the first or second fortnight.

(3) A COURSE IN OBSTETRICS AND GYNAECOLOGY AND CHILD LIFE AND HEALTH, from July 17th to Aug 19th Fee £10 10s. (Minimum number 12)

In addition to the above the following *Special Courses* have been arranged SUMMER TERM

SURGICAL PATHOLOGY—May 9th Fee £4 4s | OPHTHALMOSCOPY—May 1st Fee £5 5s. Minimum number 5

SUMMER AUTUMN AND SPRING TERMS

CLINICAL SURGERY (including Radiology)—Royal Infirmary Fee £4 4s
CLINICAL MEDICINE—Royal Infirmary (May and October) Fee £3 3s
CHILD LIFE AND HEALTH (May and October)—6 Clinical Demonstrations. Fee £1 1s
DISEASES OF EAR NOSE AND THROAT—Royal Infirmary Minimum number 5 Fee £10 10s
VENEREAL DISEASES—Royal Infirmary Minimum number 5 Fee £10 10s
DISEASES OF EAR NOSE, and Throat Dispensary Cambridge Street Fee £4 4s
DISORDERS OF SPEECH and Autumn only)—Minimum number 8 Fee £3 3s.
UROLOGICAL SURGERY A[illegible] PATIENT OF FRACTURES (Spring Term)—Fee £3 3s
NEUROLOGICAL SURGERY (March) Fee £2 2s
ORTHOPAEDIC SURGERY (Summer and Autumn) Fee £4 4s

DURING THE PERIOD OF THE GENERAL COURSES (AUGUST SEPTEMBER)

UROLOGICAL SURGERY AND TREATMENT OF FRACTURES—Fee £3 3s
DISEASES OF THE BLOOD—Fee £3 3s
X RAY PHYSICS AND ELECTRO TECHNICS—Fee £3 3s
ULTRA VIOLET RADIATIONS AND THEIR USES—Fee £3 3s
NEUROLOGICAL SURGERY (September) Fee £2 2s
MODERN DIAGNOSTIC METHODS—Minimum number 6. Fee £4 4s.
OPHTHALMOSCOPY—Minimum number 5 Fee £5 5s.
GENETICS IN RELATION TO MEDICINE—Fee £3 3s

Further particulars may be had on application to the Hon Secretary Post Graduate Courses in Medicine University New Buildings Edinburgh.

Post-Graduate Teaching, West London Hospital.

Continuous Clinical Instruction daily from 10 a m. to 4 p m.—Post Graduates may enrol at any time for any period from 1 week to 3 months.—Special facilities for "Study Leave," and for those wishing to take a course under the "Grant aided Scheme for Post Graduate Study by Insurance Practitioners."—Anæsthetic Courses—Clinical Assistantships—Annual Membership Tickets at Special Terms available for General Practitioners who wish to attend the Hospital Practice at irregular intervals

Prospectus from the DEAN, West London Hospital, Hammersmith, W 6

QUEEN CHARLOTTE'S MATERNITY HOSPITAL

MARYLEBONE ROAD, N W 1

Medical Students and Qualified Practitioners admitted to the Practice of this Hospital Unusual opportunities are afforded of seeing Obstetrical Complications and Operative Midwifery (about one half of the total admission being primiparous cases) Over 2 700 patients are admitted to the Wards annually, and in the Ante-natal Department there are over 20,000 attendances per annum

Certificates awarded as required by the various Examining Bodies

For rules fees etc apply H B STOKES Secretary Superintendent

D O M S EXAMINATION.

ROYAL EYE HOSPITAL

Intensive evening revision course, covering all sections of the D O M S Examination for June 1933 commencing

Part II May 15th Hours 8—10 p m
Part I May 29th Hours 5—7 p m
Fees Part II £10 10s Part I £5 5s
Individual sections may be taken separately
Part II—Clinical £6 6s
Part I—Any one of the three subjects £2 2s each

Operative Surgery, Lectures in special subjects and Pathology £2 2s each section

All particulars can be obtained from the Dean The Royal Eye Hospital St George's Circus, S E 1

F.R C.S (Edin.)

PREP COURSE with daily Lecture-Demonstrations of Museum Specimens of Surg Path for next Exam will commence shortly POSTAL TUITION at any time—Further particulars H C ORAM F R C S., Surgeons Hall Edinburgh.

STAMMERING, SPEECH DEFECTS

BEHNKE METHOD Estab 1883 Cases non resident treated at 39, Earl's Court Square S W 5 and in residence in the Summer holidays at Miss BEHNKE'S house on the Chilterns.

Pre-eminent success in the education and treatment of stammering and other speech defects. — Times. Thoroughly physiological principles — Lancet. The method is scientifically correct and perfectly effective — Guy's Hospital Gazette

STAMMERING CLEFT PALATE SPEECH, LISPING 3/9

at Miss BEHNKE 39 Earl's Court Sq S.W 5

MASTERY OF MIDWIFERY.

Examinations for the Diploma of the Mastery of Midwifery of the Society of Apothecaries of London will be held beginning Monday May 15th and Monday November 20th 1933

For regulations apply to the Registrar of the Society Water Lane E.C 4

UNIVERSITY of CAMBRIDGE

DIPLOMA IN MEDICAL RADIOLOGY AND ELECTROLOGY

New Regulations for the Diploma come into force on October 1st, 1933 and apply to all candidates who have not been admitted to the examination for the Diploma before that date. The course which occupies nine months in all begins on October 4th 1933 and comprises

(a) Four months instruction in [illegible] Radiology, Electrology, and Pathology

(b) Three months further instruction in Radiology and Electrology to include three months clinical work in the Radiological Department of a hospital approved by the Managing Committee for the Diploma

(b) Three months further instruction in Pathology in the Radiological Department of a hospital approved by the Committee Hospitals in London in the Provinces and Overseas have been approved for part of the course

Examinations for Part I (Physics and Pathology) will be held in February and July, 1934 and for Part II (Radiology Electrology) and Pathology) July and October, 1934

The courses are open to medical graduates whose medical qualifications are registrable by the General Medical Council for the purposes of registration and who satisfy the Board that they have had sufficient practical and clinical experience

Further information as to the courses and may be obtained from C SHEAD M A Secretary to the Diploma (Cavendish Laboratory Free School Lane) or the General Secretary British Institute of Radiology, 32 Welbeck Street London W 1

UNIVERSITY EXAMINATION POSTAL INSTITUTION

7, RED LION SQ LONDON, W C 1

(FOUNDED IN 1882.)

rincipal Mr E. S WEYMOUTH M.A (*Lond*)

OSTAL OR ORAL PREPARATION FOR ALL MEDICAL EXAMINATIONS

SOME SUCCESSES

1 D (Lond),	1901-32 (9 Gold Medallists during 1913-32)	368
1 S (Lond),	1901-32 (including 4 Gold Medallists)	22
1 B, B S (Lond)	*Final* 1918 32 (Compl ted Exam.)	206
R C S (Eng),	*Primary* 1919-32	146
	Final	155
1 R C P (Lond),	1919-32	215
) P H	(*Various*) 1906 32 (Compl ted Exam)	316
R C S (Edin),	1918-32	53
1 R C S, L R C P	*Final* 1919-32 (Completed Exam)	456
1 D	Various By Thesis	Numerous successes

Preparation for the above also for Medical reliminary and all examinations leading up M.R.C.S. L.R.C.P or M B of various Universities also for M.R.C.P (Edin) D P M O.M.S. D.T.M. & H. D.L.O. D.G.O. D.M.R.E. L.M.S.A., L.M.S.S.A. etc. Many successes.

ORAL CLASSES

M.R.C.P M.D Primary and Final F.R.C.S F.R.C.S.(Edin.) also Final M.B B.S and M.R.C.S L.R.C.P Museum and Microscope Work. Also Private Tuition.

MEDICAL PROSPECTUS (48pp)

ONTENTS —The method and the cost of enter n the Medical Profession *Particulars of all Medical Examinations* Postal Courses and Oral lasses. Suggestions for the Higher Medical examinations. Suggestions for the Higher Surgical Examinations. Suggestions for the Special Diploma Examinations. Refresher Courses Open ospitals for Women Hints for writing theses Medical Prospectus gratis along with list of tutors, etc., on application to the Principal, Mr E. S. WEYMOUTH M.A 17 Red Lion Sq ondon W C 1 (Telephone HOLBORN 6313)

UNIVERSITY OF LONDON, UNIVERSITY COLLEGE

FACULTY OF MEDICAL SCIENCES.

An EXAMINATION for the following will be held in May next

1 BUCKNILL SCHOLARSHIP value 160 gns
2. and 3. TWO EXHIBITIONS value 55 gns each.

Intending candidates should apply to the undersigned for particular and entry forms as early as possible and not later than April 29th 1933

C O G DOLLE
University College Secretary
London (Gower St W C 1)

UNIVERSITY OF LONDON

The UNIVERSITY STUDENTSHIP IN PHYSIOLOGY of the value of £100 is offered to a Student qualified to undertake research in Physiology Applications must reach the Academic Registrar University of London South Kensington S.W 7 (*from whom* further particulars may be obtained) not later than May 31st 1933

April 7th 1933.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN
Waterloo Road, S E 1

There will be a vacancy on May 1st for a HOUSE PHYSICIAN (male) at the above Hospital. The appointment is in the first instance for a period of six months Salary at the rate of £100 per annum with board and residence Applications with copies of testimonials should be forwarded not later than Thursday morning April 20th to the Secretary at the above address from whom further particulars can be obtained

ROYAL COLLEGE OF SURGEONS OF ENGLAND

ELECTION OF EXAMINERS UNDER THE CONJOINT EXAMINING BOARD IN ENGLAND

Notice is hereby given that the Council in June will proceed to the election of four Examiners in Elementary Biology for the Preliminary Examination three Examiners in Anatomy two Examiners in Physiology four Examiners in Midwifery and four Examiners in Pathology for the Diplomas of L R C P M R C S two Examiners for the Diploma in Public Health two Examiners for the Diploma in Tropical Medicine and Hygiene, three Examiners for the Diploma in Ophthalmic Medicine and Surgery one Examiner for the Diploma in Psychological Medicine three Examiners for the Diploma in Laryngology and Otology one Examiner for the Diploma in Gynaecology and Obstetrics and two Examiners for the Diploma in Medical Radiology

The Present Examiners are eligible for re election except one Examiner in Anatomy one Examiner in Physiology one Examiner for Part II of the Examination for the Diploma in Ophthalmic Medicine and Surgery and one Examiner for Part I of the Examination for the Diploma in Laryngology and Otology

Candidates for the Examinership in Anatomy must be Fellows or Members of the College and candidates for the Examinership in Physiology must hold a medical qualification registrable in this country

Candidates must make written application to the Secretary before Monday May 1st

S FORREST COWELL,
April 8th 1933 Secretary

ROYAL COLLEGE OF SURGEONS OF ENGLAND

BOARD OF EXAMINERS IN DENTAL SURGERY

Notice is hereby given that the Council in June will proceed to the election of six Members of the Surgical Section of the Board of Examiners in Dental Surgery

Four of the present Examiners are eligible for re-election

The Examiners will be required to examine candidates in *General* Anatomy and Physiology and in General Surgery and Pathology

Candidates must be Fellows of the College and must make application in writing to the Secretary before Monday May 1st

S FORREST COWELL
April 8th 1933 Secretary

ROYAL COLLEGE OF SURGEONS OF ENGLAND

ELECTION OF EXAMINERS IN ANATOMY AND PHYSIOLOGY FOR THE FELLOWSHIP

Notice is hereby given that the Council in June will proceed to the election of four Examiners in Anatomy and four Examiners in Physiology

The present Examiners are eligible for re-election except one Examiner in Anatomy

Candidates for the Examinership in Anatomy must be Fellows of the College

Candidates must make written application to the Secretary before Monday May 1st

S. FORREST COWELL.
April 8th 1933 Secretary

INSTITUTE OF CHILD PSYCHOLOGY

Applications are invited for the post of HONORARY PHYSICIAN in the Parent Department Applicants (men or women) must be registered Medical Practitioners and should have a thorough experience of psychological methods in the diagnosis and treatment of adult also, preferably some experience of gynaecology Particulars may be obtained from the Secretary 20 Warwick Crescent W 2 and all application with testimonials must be sent in by April 24th

B WHITING Secretary

EASTBOURNE PRINCESS ALICE MEMORIAL HOSPITAL (116 Bed)

Applications are invited for the post of HOUSE SURGEON (male) Salary at the rate of £150 per annum with board lodging and laundry There are two residents and the appointment is for six months

Candidates must be unmarried fully qualified and registered Applications stating age qualifications etc. accompanied by not more than three testimonials (one of which should be from Medical School) should be sent at once to the Secretary

THE BAYLISS-STARLING MEMORIAL SCHOLARSHIP

(Founded in 1929 to commemorate Professor Sir William Maddock Bayliss and Professor Ernest Henry Starling)

This Scholarship of the annual value of about £120 (with exemption from tuition fees) tenable at UNIVERSITY COLLEGE LONDON may be awarded by the University College Committee

Candidates must be Graduates of the University of London or any other University approved by the College Committee for the purpose or Undergraduates of the University of London or any other University approved as aforesaid of suitable standing in Science or in Medicine

The Scholar will be required to follow a course of study approved by the Joint Professor of Physiology during a training in the methods of research in

make application in writing entering on the prescribed course of study and the names and addresses of not more than three persons as to reach the undersigned (from whom copies of the Regulations may be obtained) not later than Saturday May 13th

C O G DOLLE,
University College Secretary
London (Gower St W C 1)

BOROUGH OF BARKING

SPECIALIST CONSULTANT—OBSTETRICS & GYNAECOLOGY

The Council invite applications for the appointment of Specialist Consultant to carry out special consultant work —

1 At an Antenatal Clinic to be held ten times a year
2. As a consultant in cases of Puerperal Fever
3 As a consultant in cases of difficult labour

A fee of 20 guineas per annum will be paid to cover the work under heads 1 and 2 and special arrangements will be entered into in connection with consultations in cases of difficult labour

Applicants must be Fellows of the Royal Colleges of Surgeons of Great Britain and must be attached to a Special Hospital for Diseases of Women or to a Special Hospital for the conditions outlined above or to a recognised Special Department of a General Hospital

The duties will consist of attending the Consultant Clinic and of attending in consultation with medical practitioners—either general practitioners or the medical officers of the Council—in cases arising under the Puerperal Fever and Puerperal Pyrexia Regulations or in cases of difficult labour

The gentleman appointed will be required to provide his own locum tenens during holidays and absence

Application with copies of three recent testimonials should be made to the undersigned not later than April 27th and mark Specialist Consultant

S A JEWERS
Town Hall Town Clerk
Barking
April 5th 1933

THE WELSH NATIONAL SCHOOL OF MEDICINE.
UNIVERSITY OF WALES

Applications are invited for the full-time post of JUNIOR ASSISTANT in the Surgical Unit

Salary £450 per annum to be increased after one year's service to a maximum of £500 per annum. Duties to commence as soon as possible. The appointment will be for a period not exceeding two years in the first instance and to be subject to three months' notice on either side Further particulars may be obtained from the undersigned

Six copies of applications which are accompanied by copies of not more than four testimonials must be received by April 25th

J. E. EDWARDS Secretary
Welsh National School of Medicine
The Parade Cardiff

THE FRIENDS' RETREAT YORK

Applications are invited for the post of JUNIOR MEDICAL OFFICER (Woman) at the above registered Mental Hospital (200 beds). The appointment is for three years The commencing salary is £360 per annum with board residence and laundry An additional salary of £50 per annum is paid to Assistants who hold or who obtain the D P M. The appointment is subject to the provisions of the Federated Superannuation Scheme

There are two Medical Officers on the Staff Previous hospital experience desirable

Applications with copies of three recent testimonials stating qualifications experience age nationality and religion to be sent on or before April 19th to the Medical Superintendent.

British Medical Journal

SATURDAY, APRIL 29th, 1933

SURGICAL TREATMENT OF PHTHISIS

It is significant of the changes that from time to time take place in treatment that whereas operations for joint tuberculosis have enormously diminished in number those for the cure or amelioration of pulmonary tuberculosis have considerably increased On superficial consideration doubt might be thrown on the justification for this change and upon the theoretical or practical value of surgical operations which bring about collapse of the chest wall Rest is probably the most important factor in the healing of tuberculous lesions and in the case of joints this is most easily attained by efficient external splinting whereas rest to the lung in so far as it can be attained can only be brought about by operations which collapse the lung either locally or generally The breaking down of caseous nodules and the discharge by expectoration results in the formation of cavities The natural result of healing is for the walls of the cavity to become approximated adherent and eventually replaced by fibrous tissue This is obtained when the cavities are limited the chest wall soft and the mediastinum flexible, by these factors permitting some diminution in the capacity of the hemithorax In many cases however relaxation of surrounding structures is not enough to allow of obliteration of the cavities and displacement of the mediastinal structures to the affected side may be of such a degree as to interfere with the heart s action It is for these reasons that one or other form of operative measure—from the simple artificial pneumothorax to the more radical procedure of thoracoplasty—is indicated

The success of adequate collapse treatment by artificial pneumothorax has drawn attention to the possibility of producing similar results by other measures when localized or generalized adhesions interfere with the successful issue of a pneumothorax Localized adhesions found between visceral and parietal pleura after the induction of pneumothorax are most commonly in close relation to cavities and prevent their collapse to secure which is the primary object of the operation Division of adhesions is therefore essential if the value of this form of therapy is not to be considerably restricted When they are not too widespread or not largely composed of pulmonary tissue the operation of cauterization is indicated the adhesions being divided by electric or diathermic cautery under thoracoscopic control This procedure appears to be of definite value in a limited group of cases Ill-judged attempts at the operation in unsuitable cases are likely to result in the development of pleuro-pulmonary fistula causing secondarily infected pyopneumothorax—always a serious and often a fatal complication Paralysis of one-half of the diaphragm produced by evulsion of the phrenic nerve is an operation without appreciable risk and has unquestionably attained a place in the treatment of pulmonary tuberculosis It often precedes thoracoplasty and is used in conjunction with other measures such as artificial pneumothorax but there appears to be much evidence that as an independent measure it is often valuable Head Schlack and Marx[1] state that as a result of a comparison of seventy-five patients submitted to the operation with a similar unoperated group as a control a primary phrenicectomy much decreases the number of cases in which artificial pneumothorax is indicated that it militates against extrapulmonary complications , that it lessens the risk of spread to the opposite lung and the lighting-up of arrested or quiescent processes and that active disease in the opposite lung is more likely to clear up Another interesting observation by these authors and contrary to the generally accepted view is that phrenicectomy discourages rather than favours the formation of pleural adhesions Although little was originally expected from phrenicectomy in apical cavitation experience has shown that in many cases especially those with thin-walled cavities complete collapse and obliteration may follow operation

In the presence of tuberculous disease localized to the apex of the lung when artificial pneumothorax is impossible the fact that a complete thoracoplasty will collapse and put out of action a considerable area of relatively healthy lung in the mid-zone and base has brought forth other operations These consist of localized thoracoplasties confined to the upper two ribs which are completely removed or of subtotal resections of the upper three four or five ribs according to indication The value of these localized operations is still somewhat debatable but on the whole they appear to have a definite place in the surgical treatment of apical disease A second method of producing the collapse of apical cavities is by apicolysis In this the parietal and visceral pleurae previously proved to be adherent are separated by blunt dissection from the chest wall and the space which is left is filled with fat muscle or sterile paraffin wax The muscle filling necessitates an anterior incision and the use of the pectoral muscle whereas when fat or wax is employed anterior posterior or axillary approaches may be used according to the necessities of the case and the desire of the operator The insertion of wax sometimes provokes a sterile extrapleural effusion which coming to the surface beneath the scar may cause an external discharge of the wax The operation of apicolysis most attractive in theory has not yet really established itself on a solid basis for the treatment of apical lesions A recent addition to the group of operations for apical

[1] *Amer Rev Tub* December 1932, p 603

disease is that known as scalenotomy or division of the scalene muscles This procedure is said to result in marked reduction of the respiratory excursion of the upper portion of the chest, a movement which is particularly exaggerated after phrenic evulsion and is probably compensatory Clyne[1] reports fifty-two cases operated upon, in twenty of which phrenic evulsion had been performed from six months to three years previously and "improvement had stopped" Of these twenty cases, ten were improved by the operation and ten were unchanged Of twenty-nine cases in which phrenic evulsion and scalenotomy were done at the same sitting, improvement was observed in nineteen and no improvement in ten Three patients had scalenotomy without phrenic evulsion, of whom two were definitely benefited This work suggests that the operation may be of value in a somewhat restricted group of cases and warrants a more extended trial

What is the ultimate fate of patients with extensive unilateral disease in whom pneumothorax is indicated but impossible? In other words, what is the prognosis in patients who need thoracoplasty but who miss the most favourable time for this treatment? Coryllos,[2] in justification for the operation, states that "without operation, out of 100 patients with caseous pneumonic tuberculosis in which pneumothorax was not effective, 50 per cent died within a year, 30 per cent more within two years, 10 per cent more within three years, and only 10 per cent survived over four years" According to Barnes and Barnes, in 1,465 cases with cavitations, the average span of life was 15 8 months, and 80 per cent died within one year Out of 100 similar cases submitted to thoracoplasty (Nissen) "fifty were completely cured—that is, within one to two years after operation they were able to perform a full day's work without fever, cough or expectoration, and were permanently bacilli-free' In summing up the advantages of thoracoplasty Coryllos says "In other words, of 100 patients doomed without thoracoplasty to certain death obliged in the meantime to spend their life in sanatoriums, and constituting a real danger to the community sixty to seventy were able to return to active life and became an asset instead of a liability to society" Thoracoplasty has been and is regarded as a mutilating surgical procedure by those only whose knowledge and experience of the modern operation is limited Similarly, operative mortality has been greatly reduced within the last ten or twelve years, so that to-day it lies between 5 and 15 per cent, varying with the experience of the surgeon the type of the disease, and the condition of the patient at the time of operation The operative treatment of pulmonary tuberculosis has firmly established itself for certain types of the disease, the indications are becoming more generally recognized, and the future will no doubt show an increase in the numbers of patients submitted to operation It is much to be hoped that such valuable measures may not be embarrassed and prejudiced by their employment in unsuitable cases

[1] *Amer Journ Surg* December 1932 p 771
[2] *Amer Journ Surg* December 1932 p 494

CAUSATION OF THE COMMON COLD

One might infer from what appears in the lay press from time to time that the problem of the causation and prophylaxis of the common cold, and the closely allied disease influenza, has remained unsolved because the medical profession was either callously indifferent to the whole question or quite incapable of tackling it It is not suggested that any reply to such onslaughts on medical research is necessary criticism of this kind can only come from those who are grossly ignorant of the nature of the problem and its inherent difficulties But if those who felt inclined to criticize in this way purchased and read volume viii of the Annals of the Pickett-Thomson Research Laboratory[1] they might be enlightened Even though they failed to understand much of it, good would still have been done, for they would have helped to alleviate the financial loss which publication on so sumptuous a scale has entailed This monograph is devoted to the common cold Its authors, Drs David and Robert Thomson, have achieved a monumental task Not only have they produced a digest of some two thousand papers dealing with investigations on the common cold and allied respiratory infections like influenza, but they have incorporated their own work, which has extended over many years There are some forty-eight chapters, each dealing with a special aspect of the problem, and in each one the procedure is the same The available literature is passed in review, the authors then state their own findings, and finally sum up the situation

It is impossible in a work of this magnitude to deal critically with all that it contains, but perhaps those parts which concern the causation of the common cold might be referred to, particularly in view of the prominence given to this aspect of the subject by the recent work of Dochez and his colleagues in America Thomson and Thomson are convinced that the cold is the work of a number of different agents Putting aside the nasopharyngeal catarrhs of non-infectious origin, such as hay fever and the infective catarrhal conditions found in specific infections like measles—in fact, limiting consideration to what is known as the common cold—the authors' view is that there are as many different types of cold as there are pathogenic bacteria present in the nasal discharge in this state Thus according to them there are streptococcal colds, pneumococcal colds, colds due to *Micrococcus catarrhalis*, the influenza bacillus, and so on, the filterable virus being reduced to the same status as any of these other organisms—that is, the prime causal agent of some colds only They are not alone in holding this view of multiple causation, and of course from the clinical point of view it would be as reasonable to suggest that the picture presented by the common cold pleaded in favour of a single prime causal agent as to argue that all cases of vulvo-vaginitis or urethritis must necessarily be due to the gonococcus It must be pointed out, however,

[1] *The Common Cold* With special reference to the part played by streptococci pneumococci and other organisms By D and R Thomson London Baillière, Tindall and Cox (£3 3s net)

LONDON COUNTY COUNCIL

Registered Medical Practitioners required of at least one year's standing as TEMPORARY DISTRICT MEDICAL OFFICERS at undermentioned districts.

Candidates appointed required to reside in or near district to carry out duties prescribed by Public Assistance Order to work under general direction of medical superintendent of hospital most conveniently situated and to provide at own expense approved deputy during absence from any cause In the case of a woman, marriage terminates contract of service Remuneration and conditions subject to review

Area I—District J (Poplar)—Provisional salary £275 a year
Area I—District L (Poplar)—Provisional salary £300 a year
Area II—District B (Hackney)—Provisional salary £140 a year
Area II—District D (Hackney)—Provisional salary £140 a year
Area II—District E (Hackney)—Provisional salary £200 a year
Area III—District J (Islington)—Provisional salary £200 a year
Area III—District K (Islington)—Provisional salary £125 a year
Area IV—District D (St Pancras)—Provisional salary £125 a year
Area IV—District E (St Pancras)—Provisional salary £200 a year
Area IV—District G (St Pancras)—Provisional salary £140 a year
Area IV—District H (St Pancras)—Provisional salary £200 a year
Area IV—District J (St Pancras)—Provisional salary £125 a year
Area V—District D (Fulham)—Provisional salary £200 a year
Area VII—District C (Lambeth) Provisional salary £125 a year
Area VII—District G (Battersea)—Provisional salary £140 a year
Area VII—District H (Wandsworth)—Provisional salary £140 a year
Area VII—District M (Wandsworth)—Provisional salary £125 a year
Area VIII—District J (Camberwell)—Provisional salary £200 a year
Area IX—District B (Deptford)—Provisional salary £250 a year
Area IX—District E (Deptford)—Provisional salary £175 a year
Area IX—District G (Lewisham)—Provisional salary £135 a year
Area IX—District I (Lewisham)—Provisional salary £150 a year
Area X—District C (Greenwich)—Provisional salary £200 a year

Application forms obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a) County Hall Westminster Bridge S E 1 returnable by April 21st Canvassing disqualifies

CITY OF BIRMINGHAM

PUBLIC HEALTH DEPARTMENT

LITTLE BROMWICH HOSPITAL FOR INFECTIOUS DISEASES

JUNIOR ASSISTANT MEDICAL OFFICER

Junior Assistant Medical Officer required Candidates must be single and have held previous resident posts in General or Children's Hospitals

Salary at the rate of £300 per annum together with board etc. This appointment is limited to twelve months and is subject to one month's notice on either side. The salary and emoluments will be subject to the voluntary abatement approved by the Council in respect of its officers

The officer appointed will be required to pay to the Council all fees allowances, and emoluments (other than the foregoing) received by him

It is not feasible to attend classes for Part I of the D P H in conjunction with this appointment

Forms of application may be obtained from the Medical Superintendent Little Bromwich Hospital Birmingham 9 and should be returned to him on or before Monday April 24th

F H C WILTSHIRE,
The Council House, Town Clerk
Birmingham

CITY OF BIRMINGHAM

MATERNITY AND CHILD WELFARE DEPARTMENT

Three TEMPORARY MEDICAL OFFICERS are required from July 7th to October 3rd (approximately) and a fourth TEMPORARY MEDICAL OFFICER from July 7th to September 5th

Applications are invited from ladies who have held a resident post in a Maternity Hospital and in a Children's Hospital The salary offered is £9 10s. per week.

The appointment cannot be terminated within the period named except for health reasons.

Applications should be sent on or before April 29th to the Medical Officer of Health Council House Birmingham 3

CITY OF MANCHESTER

PUBLIC HEALTH DEPARTMENT

BAGULEY SANATORIUM

APPOINTMENT OF SENIOR ASSISTANT MEDICAL OFFICER

The Public Health Committee invites applications from qualified Medical Men for the position of Senior Assistant Medical Officer at the Baguley Sanatorium (333 beds), Baguley Manchester

Every applicant must be a registered medical practitioner and unmarried

Applicants, whose age must not exceed 40 years must have held resident hospital and sanatorium appointments and have had practical experience in the diagnosis and modern methods of treatment of tuberculosis practical experience in X ray work is desirable

Salary £500 per annum subject to a temporary deduction of £19 per annum The amount payable is therefore £481 per annum, with board residence and laundry in addition subject to the terms and conditions of the Corporation Grading Scheme No bonus

Applications stating fully the age training qualifications and experience of the candidate, with copies of three recent testimonials and endorsed on the envelope 'Assistant Medical Officer Baguley Sanatorium' must be addressed to the Medical Officer of Health Civic Buildings 1, Mount Street Manchester 2 only, and not to members of the Committee or Council and must be received by him not later than Saturday April 22nd

The candidate appointed will be required to commence duty as soon as possible after appointment to devote the whole of his time to the duties of the position, to pass a medical examination to contribute to the Corporation Superannuation Fund and to execute the Deed of Service

Canvassing in any form oral or written direct or indirect is prohibited

Town Hall F E WARBRECK HOWELL
Manchester 2 Town Clerk
March 30th 1933

BOROUGH OF TWICKENHAM

ASSISTANT MEDICAL OFFICER

Applications are invited from duly qualified Medical Practitioners (men or women) for the appointment of Assistant Medical Officer The work will include duties connected with Maternity and Child Welfare Medical Inspection and Treatment of School Children, and the Borough Hospital for Infectious Diseases

Special experience of Ante natal and Maternity and Child Welfare Clinics is obligatory and the possession of a Diploma in Public Health will be an additional recommendation

Salary £550 per annum rising by annual increments of £25 to £700 subject to a temporary deduction, which amounts to £17 10s. from the commencing salary

The successful candidate must pass a medical examination before appointment and contribute to the superannuation fund under the Local Government and Other Officers Superannuation Act 1922 The officer will be required to work under the direction and supervision of the Medical Officer of Health to devote whole time to the service of the Corporation and to reside within the Borough of Twickenham

Forms of application can be obtained from the Medical Officer of Health Dr G H DUPONT, Municipal Offices Twickenham to whom applications accompanied by not more than three dated testimonials, are to be sent on or before April 25th

Municipal Offices, EDWIN G STRAY
Twickenham Town Clerk
April, 1933

BOROUGH OF MANSFIELD

ASSISTANT (FEMALE) MEDICAL OFFICER OF HEALTH

Applications are invited for the appointment of Assistant (Female) Medical Officer of Health for the Borough of Mansfield at a salary of £500 per annum rising to £700 by annual increments of £25

The duties will include the Medical Inspection of school children work in connection with Maternity and Child Welfare Centres, Ante natal Clinics etc

Candidates must be registered Medical Practitioners, hold a Diploma of Public Health and have had at least three years experience of post graduate work

The successful candidate will be required to devote the whole of her time to the duties of the office and reside in the Borough

Applications, which must be made on forms obtainable from the undersigned accompanied by copies of three recent testimonials endorsed 'Assistant Medical Officer of Health' must be received at my office not later than April 28th.

A C SHEPHERD, Town Clerk
Town Clerk's Office
Carr Bank Mansfield

CITY OF MANCHESTER

PUBLIC HEALTH DEPARTMENT

APPOINTMENT OF FIRST ASSISTANT RESIDENT MEDICAL OFFICER

The Public Health Committee invites applications from qualified Medical Men for the position of First Assistant Resident Medical Officer at MONSALL HOSPITAL (600 beds) Newton Heath, Manchester

Every applicant must be a registered Medical Practitioner and unmarried Applicants, whose age must be between 30 and 40 years, must have held resident appointments at a general hospital and must hold or have held appointments at a large fever hospital. A knowledge of clinical bacteriology and laboratory methods is essential

The hospital contains 600 beds, including special wards for puerperal fever and other complications

Salary £600 per annum subject to a temporary deduction of £25 15s. per annum The amount payable is, therefore £574 5s. per annum with board, residence and laundry in addition subject to the terms and conditions of the Corporation Grading Scheme No bonus

Applications stating fully the age training qualifications, and experience of the candidate with copies of three recent testimonials, endorsed on the envelope First Assistant Resident Medical Officer Monsall Hospital" must be addressed to the Medical Officer of Health Civic Buildings 1, Mount Street Manchester 2, only, and not to members of the Committee or Council, and must be received by him not later than Saturday April 22nd

The candidate appointed will be required to commence duty as soon as possible after appointment to devote the whole of his time to the duties of the position, to pass a medical examination to contribute to the Corporation Superannuation Fund and to execute the Deed of Service

Canvassing in any form oral or written direct or indirect is prohibited.

F E WARBRECK HOWELL,
Town Hall Town Clerk
Manchester March 31st 1933

COUNTY BOROUGH OF EASTBOURNE

ASSISTANT TO THE MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

The Council invites applications from duly qualified and registered Medical Practitioners (male or female) for appointment to the office of Assistant to the Medical Officer of Health and School Medical Officer, to act under his direction and supervision

The duties will especially include the Medical Inspection of School Children and attendance at the Clinics in connection therewith and attendance at the Maternity and Child Welfare Centres The officer appointed will also assist the Medical Officer of Health in other duties when required

Preference will be given to candidates who have had previous experience in similar work

The salary will be at the rate of £350 per annum, rising by annual increments of £25 per annum to £700 per annum (subject to the present temporary deduction which at the commencing salary is at the rate of £23 1os. per annum) Travelling allowance will also be payable in certain circumstances.

Forms of application can be obtained from the undersigned to whom applications accompanied by copies of not more than three testimonials must be sent not later than April 22nd

Canvassing, is not permitted, and will be a disqualification

W C WILLOUGHBY
Public Health Dept., Medical Officer of Health
Avenue House,
The Avenue Eastbourne

ELIZABETH GARRETT ANDERSON HOSPITAL,

Euston Road, London, N W 1

Applications are invited from fully qualified Medical Women for the post of

ASSISTANT OBSTETRICIAN

Yearly appointment maximum two years Duties to commence in May Further particulars of the post can be obtained from the undersigned to whom applications with copies of three testimonials should be sent by Friday April 28th

JEAN R MURRAY Secretary

DUNDEE ROYAL INFIRMARY

The Directors invite applications for the appointment to the Honorary Staff of an ASSISTANT VISITING SURGEON Particulars of duties etc may be obtained from the Medical Superintendent and applications accompanied by twenty four copies of at least three testimonials should be received by the undersigned not later than May 5th.

WM F FERGUSON Secretary

April 8th 1933

ROYAL VICTORIA INFIRMARY NEWCASTLE UPON TYNE. (677 Beds)

The House Committee declare vacant the office of HONORARY ASSISTANT PHYSICIAN

According to statutory provision every candidate must be a registered Graduate in Medicine of any University recognised by the General Council of Medical Education and Registration of the United Kingdom or a registered Fellow or Member of one of the Colleges of Physicians of the United Kingdom provided that he is practising as a Physician and not as a General practitioner

Applications, stating age qualifications and previous experience must be sent to the House Governor and Secretary Royal Victoria Infirmary Newcastle-upon-Tyne not later than Saturday April 29th

The appointment will be made on Thursday May 4th

Candidates may if they so desire forward to each member of the House Committee a copy of their application and testimonial

Personal canvassing will be considered a disqualification of office

S DUNSTAN
House Governor & Secretary

April 7th 1933

ROYAL VICTORIA INFIRMARY NEWCASTLE UPON TYNE. (677 Beds)

WHOLE TIME JUNIOR SURGICAL REGISTRAR (Open Appointment.)

Applications are invited for the post of Whole-time Junior Surgical Registrar (open appointment).

This appointment is intended for Graduates who desire to gain surgical experience and who have already held a post as House Surgeon certain duties in the allied Departments of the College of Medicine will offer opportunities of post-graduate study

The appointment which will commence on May 8th, will in no case extend beyond three years and will be for one year in the first instance renewable for two further periods

The rate of remuneration is £150 per annum subject to a reduction of 4 per cent)

Applications with copies of not more than three recent testimonials must be lodged on or before Monday April 24th with the House Governor & Secretary Royal Victoria Infirmary Newcastle, from whom further particulars may be obtained.

S DUNSTAN
House Governor & Secretary

April 7th 1933

KING GEORGE HOSPITAL ILFORD
(8 miles from London)

Wanted a HOUSE SURGEON to commence duty on May 1st for a period of ten months two months a Casualty Officer six months as House Surgeon and two months as Deputy Resident Medical Officer in charge of the Casualty Department Salary £100 per annum £10 bonus on completion of appointment and two weeks holiday Candidates should send their applications with three recent testimonials and call on the members of the Honorary Medical Staff indicated by the Secretary by April 24th

G AUSTIN HEPWORTH Secretary

ROYAL BUCKINGHAMSHIRE HOSPITAL, AYLESBURY

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) for six months. To commence duty on May 1st Salary £200 per annum with board residence and laundry Candidates must be fully qualified and registered.

Applications stating age qualifications and experience with copies of not more than three testimonials should be sent to the undersigned on or before April 18th

M W BROWN Secretary

SCARBOROUGH HOSPITAL & DISPENSARY
(70 Beds)

Wanted May 1st one HOUSE SURGEON (male) Duties include Home Visiting Salary £175 per annum with board residence etc. Appointment for six months

Applications stating age with copies of testimonials and essential particulars to be sent to the Hon Secretaries at once from whom further particulars may be obtained.

ROYAL BERKSHIRE HOSPITAL, READING

CASUALTY OFFICER required as from May 2nd for six months. The candidates (male) must be fully qualified and registered Remuneration at the rate of £150 per annum with board residence and laundry Applications with copies of testimonials should be sent to the undersigned on or before Monday April 24th.

F A LYON Secretary

LONDON HOMOEOPATHIC HOSPITAL
(Incorporated by Royal Charter)
Great Ormond Street and Queen Square
Bloomsbury W C 1
(A General Hospital—200 Beds)

POST OF RESIDENT MEDICAL OFFICER

The periodical vacancies for the Three Resident Medical Officers male or female occur in February June and October in each year the appointment being for twelve months Four months as House Surgeon four months a Gynaecological and Casualty Officer and four months a Medical Officer with salary at the rate of £100 per annum and board, apartments and laundry

Candidates must be legally qualified and registered

Applications for June appointment stating age with copies of testimonials to be sent to the Secretary

EDWARD A ATTWOOD Secretary

BURY INFIRMARY LANCS
(127 Beds.)

Applications are invited for the post of THIRD HOUSE SURGEON (male) who must have both Medical and Surgical qualifications. The appointment is for six months at a salary at the rate of £150 per annum with board residence and laundry The successful applicant will be required to commence duties beginning of May

Applications stating age qualifications and nationality with copies of three recent testimonial to be sent to the undersigned not later than April 21st

Particulars of duties may be had on application

ALEX. W MAITLAND
Hon Secretary

MINEHEAD AND WEST SOMERSET HOSPITAL, MINEHEAD SOMERSET
(58 Beds.)

Applications are invited for the post of RESIDENT HOUSE SURGEON (male or female) to this Hospital

Duty to commence on May 21st Appointment for a period of six months Salary £150 per annum with board residence and laundry

Application stating age nationality experience and qualifications accompanied by copies of three recent testimonials to be sent to the undersigned not later than May 5th.

W H P RODDA Secretary

LIVERPOOL HAHNEMANN HOSPITAL
Hope Street (52 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER to the above Institution which falls vacant on May 1st Appointment is for six months, renewable. Salary at the rate of £100 per annum. Duties include some casualties occasional anaesthetics and assisting at operations general gynaecological aural and ophthalmic

Apply stating age sex nationality and previous experience and enclosing copies of recent testimonials to the Registrar before April 24th

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL
Woodchurch Road BIRKENHEAD

SECOND HOUSE SURGEON

The Board invite applications for the post of Second House Surgeon until September 30th Honorarium at the rate of £75 per annum with board residence and laundry

Applications together with copies of testimonials to be addressed to the Hon Secretary at the Hospital not later than April 22nd

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN
St. Quintin Avenue North Kensington W 10
(58 Beds)

The Board of Management invite applications for the post of HONORARY ASSISTANT SURGEON with beds Applicants must hold the F R C S.(Eng) and the candidate appointed will be required to see Out patients at 2 sessions a week Applications from members of either sex accompanied by copies of three testimonials will be received by the Secretary at the Hospital up to Monday May 1st.

THE GLASGOW EYE INFIRMARY

The Directors invite applications from registered Medical Practitioners for the post of RESIDENT ASSISTANT HOUSE SURGEON Salary £150 per annum with apartments and board

Application with ten copies of testimonial should be lodged with the undersigned April 17th

WM M MOORE, Secretary

171 West Regent Street
Glasgow C 2. April 6th 1933.

NORWICH INFIRMARY

RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited for the Resident Assistant Medical Officer at the Norwich Infirmary The present salary will be £480 per annum rising by annual increments of £24 to £576 per annum (which represent £500 per annum rising to £600 per annum after having been subjected to a temporary adjustment) from which a deduction at the rate of £150 per annum will be made for residential allowances The salary may be subject to further temporary adjustments but the total amount of reductions from the gross salary will not exceed 10 per cent. For further particulars and stamped addressed envelope to the Medical Officer Norwich Infirmary Bowthorpe Road Norwich.

ROYAL HALIFAX INFIRMARY

Wanted a THIRD HOUSE SURGEON (male unmarried). Candidates must be duly qualified and registered. The appointment will be for six months from May 1st. Trial & promotion if satisfactory Salaries of Resident Medical Staff are as follows Resident Surgical Officer £250 First House Surgeon £200 Second House Surgeon £175 Third House Surgeon £150 per annum with residence board and laundry The Hospital contains 250 beds including Maternity Department and Paying Patients Block. There is also a Pathological Laboratory and a large Eye Ear Nose and Throat Department.

Particulars of duties may be obtained from the undersigned to whom applications should be sent.

A MIDGLEY
Secretary

April 4th 1933

THE ROYAL HOSPITAL WOLVERHAMPTON
(Incorporated under Charter)

HOUSE SURGEON required Duties in Orthopaedic Surgery as well as General Surgery

The Hospital contains 300 beds and is the clinical special department and practice organized for the various Examining Boards for a part of the requisite attendance in Medical and Surgical Practice.

Candidates must be registered under the Medical Acts and unmarried

The appointment is for six months Salary at the rate of £100 per annum board furnished rooms and laundry provided.

Application with copies of testimonial to be forwarded to the undersigned

WOLVERHAMPTON W H HARPER
April 3rd 1933 House Governor

BRISTOL GENERAL HOSPITAL.

A Meeting of the Election Committee will be held at the Hospital on Wednesday May 10th at 1 o'clock p m to appoint an HONORARY ASSISTANT SURGEON

Candidates are requested to send their application with copies of testimonials and proof of qualification to the undersigned not later than Monday May 8th next from whom further particulars may be obtained Every candidate is also required to forward copy of his application and testimonial to each member of the Election Committee.

By Order of the Committee
THOMAS W GREGG Secretary

BRISTOL GENERAL HOSPITAL

The Committee invites applications from fully qualified and registered Medical Practitioners for the post of HONORARY MEDICAL REGISTRAR The appointment will be held for two months and the holder will be eligible for re-election Application to be accompanied by copies of testimonials etc and copies of two testimonial to be delivered to the undersigned on or before Tuesday April 18th from whom further particulars as to the duties attached to the post may be obtained

THOMAS W GREGG Secretary

CHARING CROSS HOSPITAL

HONORARY ANAESTHETIST

Applications are invited for the post of Honorary Anaesthetist to the Hospital which should be sent to the undersigned together with copies of three recent testimonials to be received not later than Saturday April 29th.

PHILIP INMAN
Charing Cross Hospital
Strand W C 2.

THE KIDDERMINSTER AND DISTRICT GENERAL HOSPITAL (70 Beds)

HOUSE SURGEON (Male) required for one year at £150 per annum with residence board and laundry Applications to be sent to the Secretary three testimonials to be sent to Mr SYDNEY SMITH, South Cliff Kidderminster

that extensive investigations of the bacterial flora of the nasopharynx of healthy people and of those with colds have not pointed definitely to any of these bacteria as the prime cause of this condition Dochez and his colleagues went into this aspect of the problem carefully before passing to a consideration of the possibility of colds being due to a filterable virus and they concluded that none of the aerobic organisms are of primary aetiological significance because none appear for the first time or in significantly increased numbers during the early days of the cold The authors discount much of this evidence on the grounds that it is the outcome of mass investigations in which insufficient attention was paid to the identification of the individual strains of bacteria isolated

None the less the filterable virus conception of the aetiology of the common cold now rests on a basis of considerable solidity The earlier studies of Kruse and Foster have been supported by the admirable investigations of Dochez These in turn have been corroborated both in America and in this country and though these findings do not impose the conclusion that all infective colds are due primarily to a filterable virus they make it necessary to exclude the filterable virus before accepting a cultivable bacterium as the causal agent however soon and in whatever numbers that bacterium may appear in the nasopharyngeal discharges In this respect the recent work of Shope on swine influenza is of considerable significance In this disease a filterable virus and an influenza bacillus are both present from the beginning The latter, however when isolated in pure culture, is devoid of pathogenicity for swine whilst the former only produces a mild febrile condition But the two together give rise to the complete clinical picture of swine influenza and are passed together in nature from animal to animal Whether or not one disagrees with the views expressed by Thomson and Thomson it must be admitted that they have done most useful work in collecting and collating the vast literature of the subject Their monograph though unwieldy, is well printed It contains a complete bibliography and a good index as well as some remarkable photographs of cultures made by the authors from cases investigated by them

THE HEART IN HYPERTHYROIDISM

A recent number of the *American Heart Journal* (1932 viii, No 1) is devoted to a symposium on the effects of hyperthyroidism on the heart and circulation The subject is dealt with widely and a good deal of interesting information is brought together When hyperthyroidism is present the circulation is carried on in a manner very different from the normal There is an increase in the output of the heart per minute this is associated with the familiar tachycardia and is also due to the increased force of the heart beat It is probable that under the influence of excess of thyroxine the heart empties itself more completely early in systole and fills more completely early in diastole the rate of the circulation is thus increased This abnormal behaviour on the part of the heart is caused by the direct action of thyroxine on its muscle fibres It has been shown that thyroxine causes fragments of heart muscle removed from chick embryos to pulsate more quickly and sometimes to fibrillate any action through the medium of the nerves to the heart is thus excluded The tachycardia of hyperthyroidism persists during sleep, and may thus be distinguished from the tachycardia of neurosis Laxity of the vessels manifested by the high pulse pressure capillary pulsation and throbbing in the arteries is associated with diminished peripheral resistance which may account for the absence in many cases of hypertrophy of the heart even after several years the increase in the metabolic demands of the tissues is met by increase in peripheral glow There is also a definite increase in the blood volume and in the venous return to the heart this may account for the increase in size of the conus arteriosus of the right ventricle The heart is therefore required to do more work over very long periods of time, and considerable study has been made on the effects of this prolonged overaction on the myocardium From time to time cases have been described in which pathological changes have been found in the heart muscle post mortem and in some instances it is true cellular infiltration and fibrosis have been noted but such changes are by no means common or characteristic Such as may be present are probably due to coexistent disease of some other nature One finding is constant and that is the absence of glycogen in hearts which have been subjected to experimentally produced hyperthyroidism From a clinical point of view it would appear that enlargement of the heart is present in about a third of the cases but it is remarkable how long the disease may persist without any obvious changes being found Owing to the enhanced action of the heart it is difficult to gauge accurately by physical examination the presence of enlargement There is no doubt that changes in the heart are most likely to be found in the elderly woman in whom high blood pressure is not infrequently associated with hyperthyroidism thus imposing an additional strain upon the heart A study of the cardiac status after prolonged thyrotoxicosis shows that thyro-cardiac disease is seldom if ever found in young people and it is thought that in the elderly the cardiac reserve is likely to be encroached upon by degenerative cardiovascular processes Auricular fibrillation is well known to be a fairly common manifestation in the later stages of hyperthyroidism in the elderly and a study of patients who died of heart failure associated with hyperthyroidism showed that auricular fibrillation or flutter occurred in practically every case The electrocardiogram reveals no constant changes in hyperthyroidism Sometimes variations in the T wave are observed but there is nothing constant enough to be of any clinical value As regards treatment there is fairly general agreement that the best way to prevent the occurrence of circulatory complications and to restore efficiency to the heart is by removal of a sufficient amount of the gland after adequate medical preparation Auricular fibrillation does not contraindicate operation Most observers agree that the patient should be brought well under digitalis before the gland is removed and afterwards with or without the help of quinidine there is every prospect of a normal rhythm being resumed If quinidine is used it should be administered within

a week of the operation later, it is less likely to be effective If artery disease or high blood pressure is present the defects due to these will still be apparent after operation, though perhaps they may be of less significance There can be little doubt that in thyrotoxicosis the heart plays its part, in difficult circumstances, extremely well for a remarkably long time When defects arise they are often due to associated conditions It would seem fairly well established that effective operation, following adequate preliminary medical treatment, should be tried in hyperthyroidism much sooner than is the practice at present

BACTERIOLOGY OF SUMMER DIARRHOEA

The fact that outbreaks of severe diarrhoea in the warmer months of the year among young infants are not now so grave as they used to be does not remove the necessity for some solution of the aetiological problems, for acute intestinal disorders in babies still occur all the year round, and, while there is evidence to suggest that these are in many instances a secondary manifestation, there are still far too many cases in which a direct primary infection seems the likely explanation, an infection all too often picked up in a hospital ward after admission for some other less serious complaint In a recent issue of the *Archives of Disease in Childhood*[1] Drs Nabarro and Signy brought forward evidence which stressed the importance of the Sonne type of dysentery organisms in this connexion, and confirmation of this view comes in a careful study from Toronto by Drs Marion Johnston, Alan Brown and Miss Mildred Kaake[2] During the autumn of 1930 the stools of sixty-seven infants, admitted for the most part with a diagnosis of acute intestinal intoxication, were examined, and 63 per cent yielded pathogenic organisms, mostly of the dysentery series Some of the stools showed blood and pus, or either alone, while some did not, and, despite various alternative labels for other cases, such as infectious diarrhoea, fermentative diarrhoea, or even dysentery, the finding of organisms was evenly distributed in other words, there was little clinical possibility of picking out the cases in which dysentery would be likely to be present Agglutination reactions proved unsatisfactory and the serological investigations are being repeated In twenty-nine older children, with similar acute bowel trouble, dysentery or paratyphoid organisms were discovered in 76 per cent Out of seven cases in which Sonne dysentery bacilli had been isolated, positive agglutination reactions in the serum were obtained in six In the autumn of 1931 a similar but less extensive investigation was also undertaken, and for the two series combined it was observed that in 67 per cent of the infants under 2 years, and in 60 per cent of older children the stools contained pathogenic organisms mainly of the dysentery type It is of interest to note that Sonne dysentery infections also occurred in three adults one of whom was a nurse in the out patient department of the hospital In carrying the matter a stage further this group of workers found that similar dysentery infection could be detected among infants with diarrhoea not ill enough to be admitted to hospital, and among stools obtained at random from infants attending the "well" baby clinic From a stool sent to the hospital from a small town in Ontario the Sonne organism was isolated, indicating that this infection may also be present in less populous districts In certain instances stools were obtained from members of households from whence infants with pathogenic organisms in the excreta had come, and, while the number of positive results observed was small, there were sufficient to justify the conclusion that "the clinical conditions produced by these micro-organisms are infections acquired by the hospitalized patient from carriers or other cases" The mode of spread is indicated by the fact that when the contents of feeding bottles brought to the hospital were examined bacteriologically, in six instances none was sterile, and flies caught in households in which the infant was infected yielded pathogenic organisms in more than one case, while even domestic animals were found to harbour them These findings give much food for thought, and also provide a hopeful outlook, for if infantile diarrhoea is essentially an infective process, with identifiable organisms, its prevention should not be too difficult a matter For a start, spread of such infection in hospitals might be tackled, as it is essentially a problem in nursing

[1] *Arch. Dis. Childhood* 1932 vii 327
[2] *Amer. Journ. Dis. Child.* 1933 xlv 498

THE BUDGET

The framing of a British Budget calls for a high degree of courage and resource Always there are requests for, and rumours of, concessions to various interests, and usually in these days there are growing commitments that call for increased financial provision Over caution may prove definitely harmful, rashness may bring disaster This year the problem is complicated by international factors The immediate one—whether money will have to be found for the debt payments to the United States—the Chancellor has dealt with by ignoring it, for the Government takes the view that pending a resettlement of the debt question any such payments should be regarded as on account of capital Apart, however, from this particular question, international finance is likely to have a momentous bearing on international trade and therefore on the general trade of this country, and its indirect effects on the Exchequer receipts from customs and stamp duties, payment of unemployment benefit, and afterwards on income tax receipts, will be of grave importance When these considerations are added to the multifarious elements of the Chancellor's problem, it will be seen that Mr Neville Chamberlain has done his work under a heavy load of responsibility and difficulty The gross deficit last year was £32,000,000, but if allowance be made for the fact that the gross expenditure included £29,000,000 paid to America and £17,000,000 paid into the Sinking Fund (less £3,000,000 interest charged to capital account) the actual balance is £11,000,000 excess of income over expenditure That, we think, represents the true position more nearly than a deficit of £32,000,000 Repayment of debt is nearly always one of the primary duties of a Government, only by such a policy can the national credit be fully maintained and the rate of interest payable kept down at an economical

NORTH WALES COUNTIES MENTAL HOSPITAL, DENBIGH

JUNIOR ASSISTANT MEDICAL OFFICER

The Committee of Visitors of the above Institution invite applications from duly qualified male candidates, married or unmarried, for the post of Resident Junior Assistant Medical Officer Commencing salary, which will be subject to statutory deductions under the Provisions of the Asylums Officers Superannuation Act, 1909 will be £350 rising by annual increments of £25 to £450 per annum, together with emoluments valued at £125 per annum for superannuation purposes If unmarried, full board residence laundry and attendance If married an unfurnished house with light water, rent and rates provided free, valued at £75 per annum for purposes of superannuation, the difference being made up in salary The appointment to be terminable upon one month's written notice on either side Practical experience of the modern treatment of mental conditions together with a knowledge of the Welsh language will be deemed desirable The person appointed will also be paid in addition to his salary the sum ' he holds the Diploma of

Applications stating and accompanied by three recent testimonials are to be sent to the Chairman of the Visiting Committee endorsed Junior Medical Officer not later than Monday, the 24th instant

Dated this 6th day of April 1933

WM BARKER
Clerk to the Visiting Committee

LONDON JEWISH HOSPITAL, Stepney Green E 1
(General Hospital—108 beds)

Applications are invited for the following posts —

RESIDENT MEDICAL OFFICER AND HOUSE PHYSICIAN Salary at the rate of £150 per annum with board and residence Appointment for six months

HOUSE SURGEON Salary at the rate of £100 per annum with board and residence Appointment for six months

CASUALTY OFFICER (non resident) Salary at the rate of £150 per annum with luncheon and tea Appointment for six months The holder will be required to attend the Out patient Department from 9 a m to 5 p m

Applications with copies of three recent testimonials to be sent to the Secretary on or before Friday April 28th The successful candidates will be required to take up their duties on June 1st

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CITY OF MANCHESTER

POLICE SURGEON

Applications are invited for the above mentioned position at a commencing salary of £800 per annum rising by four annual increments of £50 per annum (subject to satisfactory service) to £1 000 per annum together with £150 per annum for travelling expenses Two guineas per day will also be allowed for 28 days each year for the services of a Locum Tenens during annual holidays. No payment will be made for the services of a Locum Tenens under any other circumstances

Particulars as to duties terms and conditions of appointment can be obtained from the undersigned

Applications endorsed Police Surgeon ' are to be delivered not later than May 6th

F E WARBRECK HOWELL
Town Clerk

BEXHILL HOSPITAL

Applications are invited from Medical Practitioners who must be of recognized Consultant or Specialist Status for the undermentioned APPOINTMENTS to the HONORARY STAFF

(a) TWO CONSULTING SURGEONS
(b) ONE OPHTHALMOLOGIST,
(c) ONE PATHOLOGIST
(d) TWO RADIOLOGISTS
(e) ONE EAR NOSE, AND THROAT SPECIALIST

Applications should be addressed to the undersigned at the Hospital Office, 4 Devonshire Road Bexhill on Sea to reach him on or before Saturday, April 29th

JAMES B DUNCAN
Hon Secretary

UNIVERSITY COLLEGE HOSPITAL
Gower Street W C 1

Applications are invited for the post of REGISTRAR to the ROYAL EAR HOSPITAL (Ear Nose and Throat Department of University College Hospital) and should reach the Secretary (University College Hospital Gower Street W C 1) by noon on Friday April 28th

Post non resident Salary £250 per annum Whole time duties to commence May 22nd

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COUNTY BOROUGH OF BLACKBURN

PUBLIC ASSISTANCE COMMITTEE

RESIDENT JUNIOR ASSISTANT MEDICAL OFFICER

Applications are invited from Medical Practitioners (male) for the appointment of a Resident Junior Assistant Medical Officer at QUEEN'S PARK INSTITUTION AND INFIRMARY The applicants must be registered as Medical Practitioners.

The Staff consists of a Resident Medical Officer a Resident Assistant Medical Officer a Consulting Surgeon a Laboratory Assistant and X ray Attendant.

There is a separate Infirmary, a separate Mental block and a separate Sanatorium for Children, and there is opportunity for experience in all departments including medical, surgical and midwifery cases An X ray apparatus is installed

The person appointed will be required to devote his whole time to the duties, and also to act as may be directed by the Resident Medical Officer

The appointment will be limited to a term not exceeding one year

Salary for the first six months at the rate of £150 per annum (subject to a temporary economy deduction of £3 5s) and thereafter at the rate of £200 per annum (subject to a temporary economy deduction of £4 15s), together with board, apartments and attendance

Applications stating age qualifications, and experience and accompanied by copies of not more than three recent testimonials must be sent so as to reach the Public Assistance Officer, Public Assistance Offices, Cardwell Place, Blackburn, not later than April 25th

Town Hall BRIGGS H MARSDEN
Blackburn Town Clerk
April 10th 1933

BOROUGH OF JARROW

ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited for the above appointment at a salary of £500 per annum (less the temporary deduction authorised by the Council) rising by annual increments of £25 to £700 per annum

Applicants must be registered Medical Practitioners and must have had at least three years experience

Preference will be given to those holding the D P H

Forms on which application must be made may be obtained from the undersigned

W FORSYTH HEDLEY
Town Clerk's Office Acting Town Clerk
7 Grange Road West
Jarrow April 10th, 1933

THE GENERAL INFIRMARY AT LEEDS

HONORARY ASSISTANT PHYSICIAN

Notice is hereby given that a meeting of the Special Election Committee will be held in the Board Room on May 5th 1933 at 3 p m, to elect an Honorary Assistant Physician

Information as to the duties and necessary qualifications for the office will be supplied on request to the House Governor

Thirty two copies of applications, each accompanied by copies of three recent testimonials, to be addressed to the Chairman at the Infirmary should be sent in on or before April 25th

By Order of the Board of Management,
S CLAYTON FRYERS
House Cov & Secretary

THE GUEST HOSPITAL, DUDLEY
(General Hospital—107 Beds)

Applications are invited for the post of ASSISTANT HOUSE SURGEON Salary £170 per annum, with furnished apartments board and laundry Candidates must be fully qualified and registered Applications stating age qualifications and experience and accompanied by copies of testimonials, to be sent to the undersigned

H RAYMOND HURST
April 7th, 1933 House Governor & Sec

CLAYTON HOSPITAL WAKEFIELD
(General Hospital—166 Beds)

There are vacancies for TWO HOUSE SURGEONS (male British) for which posts applications are invited The appointments are for six months in the first instance and the salary for each is at the rate of £175 per annum, together with board residence and laundry

Applications, stating age qualifications and experience, together with copies of three recent testimonials should be sent to the undersigned as early as possible.

H J LANCASTER, Gen Supt. & Sec.

CITY OF LIVERPOOL

DEPUTY MEDICAL SUPERINTENDENT SMITHDOWN ROAD HOSPITAL

Applications are invited for the appointment of a full time Resident Deputy Medical Superintendent at the Smithdown Road Hospital (approximately 1,200 beds) at a salary of £ per annum (subject to a temporary deduction as authorised by the Council) with usual residential allowances valued at £ per annum Any fees received in connection with the appointment to be handed over to the City Council Applicants must be single qualified and registered and have had able Hospital experience since qualifying The person appointed will be required to assist the Medical Superintendent in the administration of the Hospital, training of nurses and will assume control in the absence of the Medical Superintendent

Preference will be given to candidates who have qualifications and experience in medical rather than the surgical side and knowledge of mental diseases will be an additional recommendation

Applications, upon forms obtainable from the Medical Officer of Health Municipal Buildings Liverpool, to be endorsed Deputy Medical Superintendent and addressed to the undersigned so as to be received not later than April 30th

Canvassing of members of the Council will be regarded as a disqualification

Municipal Buildings, WALTER MOSS
Liverpool Town Clerk
April 1933

ISLE OF WIGHT COUNTY MENTAL HOSPITAL NEWPORT I O W

CLINICAL ASSISTANT (male) required for resident post tenable for six months with full board lodgings laundry and attendance and an honorarium of £21 Duties light ample free time for Post graduate study, particularly in Psychological Medicine If desired, Out patient Clinics and other applications of Mental Treatment Act afford scope for study of early Mental illness. Applications, together with copies of recent testimonials stating age qualifications and when free to be addressed to the Medical Superintendent Whitecroft, Newport I O W before April 30th and from whom further particulars can be obtained.

WEST SUFFOLK GENERAL HOSPITAL, BURY ST EDMUNDS.
(108 Beds.)

SENIOR RESIDENT MEDICAL OFFICER wanted May 1st for surgical beds Applicants must be fully qualified and registered, and should have had experience and have held Hospital appointment Salary £180 per annum with board residence and laundry

Applications with copies of recent testimonials, to be sent to the undersigned

L E HARDWICK,
March 31st 1933. Secretary

CHARTERHOUSE RHEUMATISM CLINIC
Crosby Row, Long Lane S E 1

Applications are invited for TWO HONORARY CLINICAL ASSISTANTS Appointments will be made for three months. Attendance will be required for one afternoon per week Practitioners who desire an insight into the methods in use at the C R C, are particularly invited to apply

Address in the first place the Secretary C R C 94 Hallam Street W 1

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN (100 Beds)

HOUSE PHYSICIAN (male) required at the rate of £100 per annum with board lodging and washing No canvassing To commence duties on May 22nd

Applications in writing accompanied by testimonials should be sent to PERCY F SHAW Secretary

April 8th 1933

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN (100 Beds)

HOUSE SURGEON (male) required at the rate of £100 per annum with board lodging and laundry No canvassing To commence duties on June 10th

Applications in writing accompanied by testimonials should be sent to PERCY F SHAW Secretary

April 8th 1933.

THE WEYMOUTH AND DISTRICT HOSPITAL WEYMOUTH (86 Beds and Cots)

Wanted April 28th HOUSE SURGEON (European) Salary £180 with board residence and laundry Applications stating age qualifications and copies of testimonials to be sent to the undersigned not later than April 19th

MORRIS LODGE, Hon. Sec.

figure But there are exceptions even to that rule Last year's Budget was necessarily subordinated to one of the major financial enterprises of the Government—the conversion of the 5 per cent War Loan to a 3½ per cent basis—and any suspension of established Sinking Fund arrangements might have affected that project adversely That aim has now been accomplished and there will be a consensus of opinion that in these exceptional times the British taxpayer cannot fairly be asked to do more than pay his way suspending for the moment the further task of lightening the burden of national debt for the benefit of posterity In less abnormal times estimates of expenditure and of receipts vary within comparatively narrow margins A noticeable feature of this year's Budget is the wide variation in many items from last year's figures The suspension of the Sinking Fund and the saving in War Loan interest give a great advantage over last year on the other hand increased expenditure on old age and widows' pensions housing and unemployment has to be provided for and the full year's consequences of the Irish Free State default have to be met. Add to these considerations the fact that the yield of the income tax and surtax is falling and will continue to fall during the financial year and the advantages are very heavily discounted In one or two directions some increased taxation will be applied but only those derived from road transport in the form of increased licence charges on heavy road vehicles and heavy oils are likely to produce substantial results On balance Mr Chamberlain anticipates a surplus of £17 000 000—if no reductions were made in existing taxes He is able to make some remission and as was generally anticipated the first reduction is in the beer duty which from the Exchequer's point of view seems to have been raised to a point at which the effect on consumption was too drastic It was expected that something would be done to lighten the income tax payers burden A reduction in the standard rate of 5s in the £ was perhaps too much to hope for but our readers will share the general disappointment that the present scales of allowances are to be maintained The reversion to the former arrangement under which tax on earned income is due in moieties in January and July as compared with the recent basis of three-quarters in January and one-quarter in July will be welcome when the income-tax collector sends his demands out next winter but the financial stringency which so many taxpayers are feeling to-day can hardly be expected to have passed away in 1934 and a deferment of 25 per cent of the tax for six months is a poor substitute for any appreciable reduction of the total amount We think that this feature of the Budget will attract adverse criticism The national accounts are kept on a 'cash basis and any postponement of receipts to a date outside the financial year is thus as effective as a real reduction in disposing of an estimated Budget surplus But it is not the same thing from the taxpayers point of view When the change was made to the heavier January payment the Government stated that special consideration would be given to particular cases of hardship Assuming that that was done and can be continued the present basis is unpleasant but not intolerable and it seems unfortunate that what constitutes a loss to the Exchequer in 1933–4 should bring only a moderate and purely temporary advantage to the taxpayer If I have not produced a spectacular Budget said Mr Chamberlain I have produced an honest one No one will wish to question this description of the Budget and most people will recognize that it was framed with great care in a time of peculiar difficulty But many taxpayers are looking forward with impatience to the time when the clearing away of the clouds of trade depression and international dispute will give scope to those qualities of imagination and constructive statesmanship which find so little opportunity to-day

JEWISH DOCTORS IN GERMANY

The Medical Secretary of the British Medical Association has received a number of letters from Jewish doctors in Germany or from their friends in this country inquiring about the prospects of medical practice in Great Britain for those who are now precluded from following their profession at home The position of these medical practitioners is very difficult indeed and must command general sympathy among their colleagues because Medicine as such knows no frontiers and makes no distinctions on grounds of race or religion or nationality Nevertheless the right to practise medicine is governed by laws which vary in different countries and freedom of domicile for foreigners is subject to restriction in this and many other countries It must be borne in mind that there is no medical reciprocity between Germany and Great Britain that is to say qualifications admitting to licensed practice in the one country give no privilege or very little in the other Hence the degrees or diplomas of German universities which have entitled Jewish doctors to practise in Germany are not registrable qualifications under our Medical Acts In replying to correspondents the Medical Secretary has therefore had to point out that two conditions must be fulfilled by colleagues who by reason of the political situation to-day can no longer practise freely in Germany First they must obtain a British qualification with all that that entails secondly they must comply with the requirements of the Aliens Act as administered by the Home Office In the ordinary way permission is readily given to reputable foreigners who wish to pursue medical studies here but the official procedure might conceivably change if large numbers of applications came from one country and the attitude of the medical schools and examining bodies also would have to be reckoned with in such circumstances The English friends of those unfortunate Jewish doctors whose eyes are now turning hopefully towards England would thus do well to ascertain the view of the Home Office before holding out encouragement to them

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We regret to announce the death of Dr David Shannon lecturer in gynaecology in the University of Glasgow and senior surgeon to the Glasgow Royal Samaritan Hospital for Women

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Sir George Newman will deliver four lectures on health and industry illustrated by lantern slides at Gresham College Basinghall Street E C 2 on May 2nd 3rd 4th and 5th at 6 p m Admission free

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh).

(a) British Islands

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH**
EBBW VALE, MON. *(Workmen's Medical Society.)*	MARDY, GLAMORGAN *(Workmen's Medical Scheme.)*	KENT COUNTY COUNCIL. LENHAM SANATORIUM *(Male Assistant Medical Officer.)*
GILFACH GOCH, GLAMORGAN *(Workmen's Medical Scheme.)*	NEATH AND DISTRICT *(Medical Aid Association.)*	FARNBOROUGH INSTITUTION HOSPITAL. *(Resident Assistant Medical Officer.)*
LLWYNPIA, CLYDACH VALE, PENYGRAIG, GLAMORGAN *(Workmen's Medical Scheme.)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association.)*	WORCESTER COUNTY AND CITY MENTAL HOSPITAL. *(Junior Assistant Medical Officer.)*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer.)*	OGMORE VALLEY, GLAMORGAN *(Wyndham Colliery Medical Aid Society.) (Workmen's Medical Scheme.)*	LLANTRISANT AND LLANTWIT FARDRE RURAL DISTRICT COUNCIL. (1) *Medical Officer of Health (part-time).* (2) *Medical Officer (woman—part time) for Maternity and Child Welfare.*

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. G. HUNTER (Medical Secretary, New South Wales Branch), 135, Macquarie St., Sydney, N.S.W.	**QUEENSLAND** *(Brisbane Associated Friendly Societies Institute.)*	The Hon. Sec., Queensland Branch, British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	**WELLINGTON, NEW ZEALAND** *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec., New Zealand Branch), British Medical Association, P.O. Box 156, Wellington, New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch, British Medical Association), Medical Society Hall, East Melbourne, Victoria.	*(Toowoomba Associated Friendly Societies Medical Institute, Toowoomba.)*		**WESTERN AUSTRALIA.** *(Contract and Lodge Practices.)*	Hon. Sec., Western Australian Branch, British Medical Association, No. 6, Bank of N.S.W. Chambers, St. George's Terr., Perth, Western Australia.

April 11th, 1933. By Order of the Council. G. C. ANDERSON, Medical Secretary.

BETHLEM HOSPITAL, MONKS ORCHARD, Eden Park, Beckenham, KENT.

Wanted ONE RESIDENT HOUSE PHYSICIAN (Gentleman unmarried) recently qualified in Medicine and Surgery.

The term of residence is for six months from May 1st in apartments, complete board and laundry being provided and an honorarium at the rate of £150 per annum will be paid for the first three months rising if commendable service be given to the rate of £200 per annum for the second period of three months.

Written applications with testimonials are to be forwarded to the Physician Superintendent at the Hospital from whom copies of the duties can be obtained.

ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.

PATHOLOGIST (full time male) required to establish and organise a Pathological Institute for the Hospital and district. Duties to commence on July 1st. Emoluments guaranteed at £800 per annum for first two years, after wards by arrangement. For further particulars apply to the undersigned. Applications must be received not later than May 1st.

HY. TRUSSON, Secretary.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.2.

REFRACTION OFFICER required for one session weekly (Wed. morning) of approximately 2½ hours. Salary £1 16s. per session. Applications, giving qualifications and details of experience should be sent to the undersigned as soon as possible.

March 30th, 1933. C. H. BESSELL, Secretary.

COVENTRY & WARWICKSHIRE HOSPITAL. (Main Hospital, 307 Beds; Convalescent Hospital, 40 Beds.) Seven Resident Medical Officers.

Applications are invited for the post of HOUSE SURGEON for the Aural and Ophthalmic Departments.

The appointment for six months, renewable. Salary £125 per annum with board, residence and laundry. Candidates must be duly qualified and registered.

Applications, stating age and enclosing copies of recent testimonials, to be sent to the undersigned immediately.

(Mrs.) R. HOOPER, Secretary.

MACCLESFIELD GENERAL INFIRMARY. (General Hospital—100 Beds.)

Applications are invited for the appointment of SECOND HOUSE SURGEON (male) for a period of six months. Salary £150 per annum with board and residence. Candidates must have had experience in administration of Anæsthetics.

Applications with copies of three testimonials should be sent to the undersigned at once.

A. E. LANGLAN, Secretary.

ROYAL LANCASTER INFIRMARY.

SENIOR and JUNIOR HOUSE SURGEON (male) wanted for a period of six months commencing May 1st.

Salary £175 and £150 per annum respectively, with board, residence, and laundry.

Application from British graduates, stating age, experience, and qualifications, together with copies of testimonials, should be sent not later than April 18th to Secretary, Medical Committee.

WEST LONDON HOSPITAL, Hammersmith, W.6. (234 Beds.)

Required ONE NON-RESIDENT HOUSE OFFICER (part-time) for Children's Department for six months from May 1st next, subject to one month's notice on either side. Applicants may be male or female. Salary at the rate of £150 per annum. Candidates must be registered under the Medical Acts, and have had experience in the Children's Department of a General Hospital.

Applications, and copies of three testimonials, to be sent to the Medical Superintendent, from whom further particulars may be obtained, not later than first post on Friday, April 21st. Selected candidates will be required to attend the Medical Staff Committee, which will be in attendance at a Meeting, to be held at 1 p.m. on Friday, April 28th, at 4.30 p.m. The Hospital Committee Meeting at 5 p.m. the same day, when the appointment will be made.

H. A. MADGE, Secretary.

ANCOATS HOSPITAL, CONVALESCENT HOME, GREAT WARFORD, ALDERLEY EDGE.

Applications are invited for the post of HONORARY VISITING PHYSICIAN to the above Institution, which has an accommodation for 50 patients. Applicants should be qualified to practise, and should state age, qualifications, etc., to reach the undersigned not later than April 19th next, accompanied by three recent testimonials, and to whom they should be forwarded, from whom all particulars can be obtained.

By Order of the Board,
HERBERT J. DAFFORNE,
Gen. Supt. & Secretary.

Ireland

Vital Statistics for the Irish Free State

The summary of the vital statistics for the Irish Free State for the year 1932 shows a decline in the birth rate, the figure being 18 9 per 1,000 estimated population, as against 19 3 for 1931 and an average of 20 2 for the ten years 1922–31 This rate however is higher than the corresponding rate for England and Wales of 15 3, and for Scotland of 18 6 The death rate, based on a total of 42 957 deaths in the year, was 14 4 the rate for 1931 and the average for the ten year period having been 14 5 Infant mortality was 71 per 1 000 births registered as against 69 for 1931 and an average of 70 for the period 1922–31 There is no outstanding feature in the mortality rates from the principal diseases, although most of them show a slight decrease on the rates for 1931 and for the five year period 1927–31 The death rate from tuberculosis for example was 1 2 as compared with 1 3 in 1931 and 1 4 for the five year period , from puerperal conditions 4 2 as against 4 3 for 1931 and a five-year average of 4 5 from cancer 1 07 as against 1 11 in 1931 and 1 09 for the five year period The death rate from influenza of 0 5 shows no change

Allocation of Sweepstakes Money

A commission is to be set up by the Government to recommend to the Minister for Local Government and Public Health the allocation of the moneys accruing to hospitals from the sweepstakes This commission will be established under the Hospitals Bill—shortly to be read a second time in the Dail—and will supersede the present Committee of Reference It is understood that it will consider not only schemes of co-ordination, but also schemes for amalgamation of hospitals The moneys so far withheld are Grand National, 1932 £694 096 , Derby 1932 £774 001 , Cesarewitch, 1932 £679 584 , Grand National 1933 £581,497 Under the scheme in operation hitherto one third of the amount would go to the county hospitals and two-thirds to the voluntary hospitals Up to and including the November Handicap 1931 the amount actually distributed among the hospitals was £1 770 000 A deputation from the Hospitals Committee to the Minister for Local Government and Public Health stated that their committee was of the opinion that the coming legislation should only apply to future sweepstakes and they asked that the money now in hand should be distributed among the participating hospitals The Minister in reply pointed out that the Committee of Reference in its first report, had referred to the necessity for a survey of the hospital accommodation in the country and to the flaws in the system of voluntary hospitals due to lack of collaboration and co ordination with the public health services The main purpose of the Government he said was to set up a body which would carry out this survey The committee need feel no uneasiness with regard to the statements that had been published to the effect that it was intended to divert some of the moneys from the hospitals The commission would necessarily have regard to the work of the Committee of Reference

Admission of Poor Patients to Dublin Hospitals

There have been letters in the Press recently from some of the city hospitals denying the accuracy of the statement made at a meeting of the Dublin Board of Assistance (Poor Law) to the effect that poor patients experience great difficulty in gaining admission to those hospitals Dr T G Moorhead chairman of the board of governors of Sir Patrick Dun s Hospital stated in one of these letters that if a poor patient, or a patient able to pay something, was at any time refused admission, the refusal was due to the fact that at the time of application there was no bed available or that the applicant was not suitable for hospital treatment As a proof of this he quoted from the report of the hospital for the year 1932 which showed that, out of 1,924 patients admitted during the year, 784, or 40 75 per cent , were treated absolutely free of all charge, while a further 331, or 17 per cent , were treated for 10s a week or less Mr William Doolin, St Vincent s Hospital, Dublin, stated that on the day the charge was made it fell to his lot, as surgeon on duty, to perform five emergency operations in the two city hospitals to which he was attached In each of these five cases the patient was a " poor person ' or the child of a ' poor person," who had been admitted to the hospital immediately on application and operated upon within a very short time of admission An inquiry at St Vincent's Hospital elicited the following facts On the date of his statement April 19th twelve ' poor " (non paying) patients were admitted to the wards of the hospital Of the total available beds in the hospital (176) 158 were occupied owing to the absence on vacation of certain members of the hospital staff, two small wards were temporarily closed Of the 158 beds 118 were occupied by ' free " patients, sixteen by " paying ' patients, and twenty-four by patients whose maintenance charges were defrayed by public bodies

Australia

[FROM OUR CORRESPONDENT IN SYDNEY]

The Late Sir Charles Clubbe

Sir Charles Percy Barlee Clubbe who died on November 20th, 1932 (see obituary notice in the *Journal* of December 24th p 1169), has left a name that is honoured, a memory that is cherished, and a record of noble work that will form a proud chapter in the history of medicine in Australia After serving in the Zulu war of 1879 he came to New South Wales, where he remained for the rest of a long and useful life Shortly after his arrival in Australia he was appointed to the honorary surgical staff of the Royal Prince Alfred Hospital, Sydney, and was for many years one of the lecturers in clinical surgery at the University of Sydney As a teacher he was gifted, and possessed a skill that enabled him to instil an orderly system of thought in the minds of his students Clubbe s greatest work, and the work that he will be most remembered by, was done in the cause of the sick children of New South Wales He was largely responsible for the establishment of the Royal Alexandra Hospital for Children , in fact, he gave a personal guarantee for the sum necessary to commence the building For thirty-six years he was an honorary surgeon on the staff of this hospital, and for twenty eight years its president During this period it grew until it had a capacity of 351 beds , its equipment improved, its methods developed, and it became of immeasurable value to the community, not only as an institution for the care of sick children, but also as a training school for nurses and medical undergraduates Its development was moulded largely by Clubbe s guiding hand As an appreciation of his good work the directors of the hospital have decided to name the new isolation block The Charles Clubbe Block " It was while he was on the staff of the Royal Alexandra Hospital that Clubbe gained the vast experience in intussusception that enabled him to write his well known book on the subject This book is a classic and is known the world over , the diagnostic and therapeutic methods it teaches are generally accepted as the best Clubbe s teaching has not been in

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vain in New South Wales at any rate for intussusception in a late stage is rarely seen now in the hospitals in Sydney Within recent years at an age when most men would be content to sit back and contemplate the work they had already done Clubbe performed an excellent service to the State in the organization of the Infantile Paralysis Committee It was largely through his interest and efforts that supplies of immune serum were made available in Sydney and at various county centres Clubbe was president of the New South Wales Branch of the British Medical Association in 1897–8 and was for many years a member of the council of the Branch He was chairman of the executive committee of the Bush Nursing Association from 1911 to 1930 and president of that association from 1930 until his death He was also president of the Royal Society for the Welfare of Mothers and Babies and was trustee and chairman of the District Nursing Association At the time of his death he was honorary consulting surgeon to the Deaf Dumb and Blind Institute the Coast Hospital and the Greycliffe Hospital for Babies He was a Fellow of the American College of Surgeons and a Foundation Fellow of the Royal Australasian College of Surgeons Clubbe was strong and courageous he was a skilled surgeon a kindly doctor a courteous gentleman and a beloved friend His death will be mourned by all who knew him

New South Wales Medical Board

Considerable interest has been taken by the public and the members of the medical profession in New South Wales in the action of the Minister for Health (Mr R W D Weaver) in summarily cancelling the appointments of the members of the New South Wales Medical Board and making new appointments The daily press which is remarkably interested in medical matters has made the most of the news provided by the incident in some instances sensationalism has been approached

The public has not been acquainted with all the facts Early in December 1932 the Minister for Health wrote to the individual members of the Board expressing his appreciation of the work they had done and informing them that he had come to the conclusion that the Board as then constituted should cease to function and that the time had arrived for a general reconstruction of the Board He went on to say that he deemed it expedient for the appointment of all members of the existing Board to be terminated He concluded by suggesting that the members should hand in their resignations On receipt of this communication the available members of the Board met and decided that as no reason for requesting their resignations had been given they should not move until they had an opportunity of discussing the matter at a full and properly constituted meeting Thereupon in a letter dated December 5th the secretary of the Board informed the Minister for Health that as the matter was important they would not deal with his communication until after their next monthly meeting on December 14th On December 10th a statement appeared in a daily newspaper to the effect that the members of the Medical Board would have to retire under the policy adopted by Mr Weaver as they had reached the age of 65 years It should be noted that there had been no mention of a retiring age in Mr Weaver's communication On December 14th it was announced in the daily press that Mr Weaver had issued a minute signed by the Governor declaring all seats on the Board vacant and that seven medical practitioners had been appointed to take the place of those who had retired In the meantime the retiring members of the Board had received no further communication from Mr Weaver

The reconstruction of the New South Wales Medical Board may or may not be expedient Possibly the Minister for Health is the best judge of that certainly it is quite permissible for him to make what alterations he considers fitting within the legislation provided But most people will agree that the retiring members have been discourteously treated It must be remembered that they have served the State gratuitously for many years The retiring members are Drs E J Jenkins W H Crago G H Abbott J A Dick W G Armstrong and A Murray-Will The newly appointed members are Drs R B Wade (chairman) A W Holmes a Court H J Ritchie H R G Poate H M Moran E H Molesworth and F A Maguire They are all esteemed and prominent members of the medical profession in New South Wales and will have the confidence of medical practitioners An early important function of the newly constituted Board was the registration on January 25th 1933 of forty-one recent graduates of the University of Sydney The ceremony of registration was held in the Executive Council Chamber The function represented a change in the procedure of registration which hitherto has been a matter devoid of any semblance of ceremony

Scotland

Clinical Research by Practitioners

The Department of Health for Scotland published last month a preliminary survey of the statistical data on heart disease furnished by Scottish insurance practitioners under the inquiry M R 2 The inquiry deals with cases of heart disease coming to the notice of practitioners during the early part of 1932 and includes observations on early symptoms age sex and previous history of 1 860 cases of valvular disease It was found that 11 per cent of cases showed no symptoms before coming under observation and were discovered accidentally The symptom of which complaint was most frequently made was shortness of breath this was experienced in from 63 per cent in aortic cases to 78 9 per cent in cases with combined aortic and mitral lesions Pain was discovered in 30 per cent of aortic cases palpitation in 22 per cent and general lassitude in about 15 per cent With regard to causation a previous history of acute or subacute rheumatism figured in 60 per cent of cases showing mitral and aortic lesions influenza in 36 per cent septic teeth in 17 per cent tonsillitis in 15 per cent and scarlet fever in 14 per cent As to sex the crude rate per million of the insured population showed mitral disease as affecting 1 020 females and 407 males while aortic disease affected 109 males as against 67 females Noteworthy points demonstrated by the research were that the incidence of heart disease as a whole increased with advancing age that the female rate at each age was higher than the corresponding male rate and that the relative amount of this excess varied at different ages the greatest difference being observed at ages between 20 and 40 The results of this inquiry although somewhat limited indicate the possibility of much useful knowledge being derived from this hitherto almost untapped source of information upon some of the wider non specialist problems of medicine

The research upon the subject of maternal morbidity to which attention was directed in these columns in November last (p 895) is now in progress and the draft form M R 3 for the further inquiry into heart disease has been submitted to the Panel Committees for general consideration and explanation to insurance practitioners A conference of representatives of Scottish Medical and Panel Committees held on October 5th 1932 resolved to represent to the Department of Health that the cardiac inquiry (M R 2) should be continued for a further period subject to minor modifications with regard especially to treatment A committee comprising medical representatives of the Department of Health and representatives from the Scottish Committee of the B.M A drew up a form for this inquiry which the Insurance Acts Subcommittee approved at its meeting on March 14th This form

British Medical Bureau

(THE SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD.)
(FOUNDED 1880.)

12, Stratford Place,
Oxford Street, W.1.

Tele Address: Triform Wesdo—London

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The Association has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful Agency for the transaction of every description of Medical, Scholastic and Accountancy business and the BRITISH MEDICAL ASSOCIATION has every confidence in recommending its members to consult Mr. A. V. STORLY, the General Manager, in all transactions requiring the services of a Medical Agent.

Members of the British Medical Association may take advantage of a reduced scale of charges applicable to them.

The business undertaken by the British Medical Bureau is divided under the following heads—

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1. DEATH VACANCY.—MIDLANDS.—OLD ESTABLISHED PRACTICE averaging £1,166 p.a. in Industrial Town. Panel 1,794. Large house standing in about an acre of ground with garage, etc. to be let or sold. Locum Tenens in charge.

2. EASTERN COUNTIES.—PARTNERSHIP IN OLD ESTABLISHED mixed Practice in Town with population about 35,000. Cash receipts average £3,789 p.a., including panel over 3,100. Very nice house (4 bedrooms), garage, and small garden to rent. Premium one third share 2 years purchase.

3. HOME COUNTIES.—PARTNERSHIP IN OLD ESTABLISHED Practice in first rate Residential Country District about 20 miles from London. Cottage Hospital. Applicant should be aged 28—30 and a Graduate of Oxford or Cambridge. Share worth about £1,000 p.a. at 2 years purchase.

4. S. OF ENGLAND.—OLD ESTABLISHED GOOD CLASS PRACTICE of about £2,000 in favourite Seaside Resort. Small Panel. Large modern residence for sale. Scope for increase. Prem. £2,700.

5. KENT.—PARTNERSHIP IN MIDDLE AND WORKING CLASS Practice averaging nearly £4,450 p.a. in an industrial Town under 25 miles of London. Panel about 2,600. Detached house (4 bedrooms) with garden to rent. Plenty of scope for increase. Premium one fifth share 2 years purchase.

6. S. OF ENGLAND.—PARTNERSHIP IN OLD ESTABLISHED Practice of nearly £1,950 p.a. in important town within 80 miles of London. No panel. Attractive corner residence (7 bed and dressing rooms) in half acre of walled in garden with garage, etc. for sale. Ample scope for increase. Premium one half share 2 years purchase.

7. ESSEX.—OLD ESTABLISHED PRACTICE OF ABOUT £600 P.A. in Suburban District. Panel 500. Well situated detached house (6 bedrooms) standing in own grounds with nice garden, garage, and stabling for sale. Scope for increase. Premium £650.

8. DEATH VACANCY.—WELL-ESTABLISHED OPHTHALMIC PRACTICE of over £1,600 p.a. (in addition to General Surgery) in first rate town within 60 miles of London. Well qualified man would have every chance of being elected Hon. Surgeon in charge of the Ophthalmic Department of the local Hospital. Excellently situated house to rent on lease.

9. S.W. OF ENGLAND.—WELL ESTABLISHED MIDDLE AND better class PRACTICE of between £1,200 and £1,300 p.a. in Seaside Resort. Panel 500. Excellent and well situated large detached corner house with every modern convenience, to rent on lease. Very good Educational facilities. Sport of all kinds including golf, yachting, etc. Premium £2,000.

10. LONDON, S.W.—OLD ESTABLISHED PRACTICE ABOUT £650 p.a. in well populated area. Panel 850. Separate Surgery and private residence to be purchased. Scope for increase. Premium £1,100.

11. SURREY.—PARTNERSHIP IN SOUND OLD ESTABLISHED good mixed class Practice about £3,000 p.a. in the Croydon area. Small panel. Very little midwifery. Suitable house could be obtained. Scope for increase. One fourth share at first at 2 years purchase, with option to increase.

12. S.E. COAST.—MIDDLE AND WORKING CLASS PRACTICE OF £1,000 p.a. in favourite summer resort. Panel over 1,000. Corner house (4 bedrooms) with garage and garden, for sale. Premium one and a half years purchase.

13. S. MIDLANDS.—VERY OLD ESTABLISHED PRACTICE ABOUT £500 p.a. in a town of about 50,000 inhabitants. Panel 450. Very good detached double-fronted house with 7 bed and dressing rooms, garage, and good garden. Great scope for an energetic man. Premium, freehold house and Practice £4,000.

14. ESSEX COAST.—PARTNERSHIP IN PRACTICE OF £2,500 p.a. in small Seaside Town. Panel 2,300. Modern house in good position facing Sea with 4 bedrooms for sale. Scope for increase. Premium one fourth share £1,250, and further share later.

15. ESSEX.—PRACTICE ABOUT £1,150 P.A. IN DEVELOPING district in the Thames Estuary. Panel 350. House with ample accommodation. Electric light, main drainage, garage and very nice garden to rent. Yachting. Plenty of scope for increase. Premium £1,600.

16. LONDON, W.—STEADILY INCREASING NUCLEUS OF PRACtice in the Maida Vale district. Bookings for 11 months £249, of which about £100 has been received. Rent of consulting and waiting rooms 30/- weekly. Good scope. Premium £300.

has now been warmly approved by a considerable number of Panel Committees in Scotland While it affords a great deal of information the time taken to record the series of observations made at one examination of a cardiac case is only some three minutes This has been secured by the method of asking for the presence or absence of certain specified signs and symptoms, and for definite facts regarding diet, muscular activity, and the main drugs used in treatment, all the answers being supplied by the plus or *minus* sign The questions are so arranged that the plus sign is always indicative of a deviation from the normal The attention of practitioners is specially drawn to the importance of answering every question by one or other of these signs , in the previous inquiry ambiguity was introduced because the answer to certain questions was left blank The form provides space for several successive examinations at different dates, and the inquiry is limited to recording the period when any of the given data appear or disappear during the course of treatment the time factor being thus capable of evaluation as the result of the treatment administered The facts in regard to which information is asked are those ordinarily observed by the practitioner in the general course of his examination , nothing novel or of a specialist nature is incorporated, although space is left at the end for any additional data which the practitioner desires to record Since only valvular forms of heart disease are included, it is expected that the average number of cases per doctor to be recorded will probably amount to about four per annum The results which it is hoped that returns from a large body of practitioners will afford will include a review of the various methods of treatment actually in use among general practitioners , a comparison of the varieties of treatment in use at different stages of heart disease , data by which the relative merits of different methods of treatment can be compared , and a comparative survey of the incidence of specified symptoms and signs

Chair of Forensic Medicine at Aberdeen

At a meeting of the general council of Aberdeen University on April 15th, when Principal Sir George Adam Smith presided a discussion took place on the proposal of the University Court to abolish the chair of forensic medicine The University Court had already passed an ordinance providing for the abolition of the professorship Forensic medicine is taught to students in a short course of lectures occupying one summer term only so that as the ordinance states, the duties might be adequately discharged by a lecturer The chair was established as the result of a bequest by Alexander Henderson of Caskieben in 1857, whereby he gave £1,000 of capital stock of the Bank of England to Marischal College Aberdeen for the endowment of a professorship of medical logic and medical jurisprudence The yearly income from this sum is the only endowment of the chair Dr A G Anderson moved that the council should disapprove of the recommendation of its Business Committee to support the ordinance and Dr Alexander Cormack, in seconding this motion presented an appeal on behalf of several families descended from the founder of the chair, who contended that the professorship should be continued, and called to mind several other gifts which had been made by Dr Henderson to the university The Rev Dr Gordon J Murray in moving that the council should support the University Court said that there would be no diversion of the money for it would still go to the teaching of forensic medicine in the university It was believed that it would be in the best interests of the university to substitute a lectureship for the chair, which is now dissociated from the post of medical officer of health to the city of Aberdeen The endowment provided a totally inadequate salary for a chair On a vote being taken, it was agreed that the proposal for the abolition of the chair should not be supported

Royal Victoria Tuberculosis Trust

The annual meeting of the Royal Victoria Hospital Tuberculosis trust was held in Edinburgh, Sir Robert Philip, vice president of the Trust occupying the chair Sir Ralph Anstruther, in moving the adoption of the report, pointed out that one of the principal objectives of the committee managing this Trust was the development of research in tuberculosis Dr Robert Thin, President of the Royal College of Physicians of Edinburgh said that he was one of those who could remember the beginnings of the work of this Trust over forty years ago Its growth showed how soundly the foundations of the work had been laid by Sir Robert Philip If they wished to stamp out tuberculosis the care of children must be one of the first considerations Sir Robert Philip stated that since the National Health Insurance Act many people were now inclined to ask why any voluntary effort should be made There were, however, hiatuses in the problem of tuberculosis that must be covered by organizations such as this Trust, which, for example, had been able to ease the burden of persons to whom the incidence of tuberculosis in a household constituted a great financial difficulty The report of the Trust for the past year showed that 4,124 persons had died of tuberculosis in Scotland during 1932, and from this it could be calculated that at least 42,000 persons were at present affected by this disease In 1912 the death rate from all forms of tuberculosis had been 172 per 100,000 of the population , in 1932 it had fallen to 84 per 100,000 Reference is made in the report to the opening last May of a new pavilion for children at Southfield Sanatorium Colony, which is now in active operation Patients had been received at the Sanatorium Colony from all parts of Scotland to the number of 391, including 123 children Of these, 113 were cases of pulmonary tuberculosis, eighty-nine of glandular tuberculosis, seventy of abdominal tuberculosis, and fifty two of bone and joint tuberculosis The accounts of the Trust showed an ordinary income of £4,343, with an expenditure of £4,704 during the year, while legacies had totalled £5,199

England and Wales

Maternity and Child Welfare Services Allocation of Grants

By the Local Government Act, 1929, the Minister of Health at the beginning of each grant period is empowered to make a scheme determining the voluntary maternity and child welfare services in London in respect of which the London County Council shall contribute, and those in respect of which a contribution shall be made by the metropolitan borough councils The Minister has accordingly formulated a scheme setting out what grants are to be made annually by these various authorities in respect of the four-year period commencing April 1st, 1933 About fifty associations are to be subsidized by the London County Council to the total annual amount of about £31,000, and about one hundred and fifty associations by the metropolitan borough councils, their total annual contribution being in the neighbourhood of £90 500 The services to which the County Council contributes are mostly those providing homes for mothers and infants, together with some district midwifery and maternity nursing, and those to which the metropolitan borough councils contribute consist mainly of infant welfare centres and day nurseries The conditions

attached to the payment of the contributions are that the county or borough council shall be satisfied as to the efficiency of the service and that it is being used for a reasonable number of the persons for whom it was provided that no reduction or alteration of the service is made without its consent that the service is open to inspection and that the council receives the annual report and statement of accounts Some of the associations receive very large subsidies The Violet Melchett Infant Welfare Centre at Chelsea with its day nursery and mothercraft training home is to receive £3 035 a year the Royal College of St Katharine at Poplar which maintains three centres £4 442 and the Maternity Hospital of the Salvation Army at Clapton £3 034 These however are outstanding allocations and most of the bodies receive much smaller sums No doubt the allocations have been very carefully worked out but at first glance there appear to be remarkable differences between London boroughs In Islington for example ten centres and observation wards receive between them a total sum of £11 232 while Battersea with three centres and a day nursery receives only £1 687 and Bermondsey similarly provided £1 727 The borough with the largest number of infant welfare centres is Wandsworth which has eighteen followed closely by Kensington with sixteen Some of the East End boroughs are poorly off Shoreditch with four Poplar with three and Bethnal Green with only two

Queen's Hospital Birmingham

A satisfactory financial statement was presented at the annual meeting of the Queen's Hospital Birmingham The ordinary income was only £1 100 short of the ordinary expenditure and with the portion of legacies allotted for general purposes (£2 500) and a sum of £6 500 accruing from the joint appeal with the General and the Ear and Throat Hospitals the accumulated deficit had been reduced by £7 900 The Queen's Hospital had actually received as its share of the appeal £10 040 but only £6 530 was shown in the accounts for 1932 the remaining amount having come in during the early months of this year The Lord Mayor who presided over the meeting commended the valuable work of the Birmingham Hospitals Contributory Association there being forthcoming a regular source of income which showed a substantial increase due to the extra penny a week contribution With the improvement in the financial position of the hospital it had been possible towards the end of last year to adopt the nurses and hospital officers superannuation scheme He announced the receipt of a legacy from the estate of the late Ernest Joseph Gamgee of Australia (a son of Samson Gamgee) to found a prize in surgery this would become available at the end of the present year Other events of the year under review included the appointment of a full time biochemist the extension of the x ray department and blood transfusion service and the success of the nursing staff in the State examinations In respect of the new Birmingham Hospital Centre in which the institution was co-operating with the General Hospital a satisfactory agreement had been reached An amalgamated board of the two hospitals would have complete control of the new institution and so the creation of a new hospital authority would be obviated The honorary treasurer pointed out that the average cost of each in patient had risen from £2 18s 7¼d a week in 1931 to £2 19s 9d and he feared that there was little chance of reducing this Indeed expenditure might well rise by £1 000 at least during the current year The percentage of Contributory Association patients was steadily rising and was now 68·6 of the in patients It was mentioned later in the meeting that the association had collected one million pounds in the last five years and had disbursed £707 000 to the voluntary hospitals

CORRESPONDENCE

British Health Resorts Association

SIR,—From time to time the medical journals have given publicity to the activities of the British Health Resorts Association but it is time that its objects and aims should be brought more specifically before the medical profession because the movement is in essence a medical one its personnel is predominantly medical and it must depend very largely for its success on the support given to it by the profession

Started in response to the appeal of the Government that we should all buy at home those things that can be got at home in preference to going abroad for them the association in its earlier days devoted itself to a campaign in favour of wintering in England holding successful conferences at Paignton Hastings and Bournemouth These received wide publicity and were followed by a conference at Llandrindod Wells and one at Bath in conjunction with other organizations with similar objects A further conference is being held at Leamington Spa on April 29th at which eminent medical authorities will discuss the uses of the spas in various forms of disease and it is hoped in September to meet at Scarborough in conjunction with the Yorkshire Branch of the Society of Medical Officers of Health As a result of the encouragement received the association was incorporated in August last as a company limited by guarantee (that is it cannot make any profits) and with widened aims

It will be sufficient here to condense the objects of the association into the statement that it is its aim by various means so to develop and organize the natural health resources of this country as to put them at least on a level with those on the Continent We have no ill will to the latter indeed we hope to induce many Continental visitors to come in search of health to our resorts of whose existence they seem hardly aware at present We recognize that it is the duty of the doctor to advise his patient to go wherever the doctor thinks he will get the most good We know however that in recent years our health resorts have spent a great deal of money in bringing themselves up to date not only as regards provision for balneology thalassotherapy and physiotherapy but as regards amusements and general amenities And yet it is true to say that by reason of the better organization and advertisement of foreign resorts many of them are better known to the doctors of this country than are our own

The association proposes to establish a firm medical basis for the claims of our home resorts It has adopted and published as its official handbook (*British Spas and Seaside Resorts*) the valuable information collected for many years by Dr Fortescue Fox and published as part of Churchill's *Medical Directory* This information will be scrutinized and elaborated by means first of the help of the medical profession in each of the resorts and secondly by our Medical Advisory Committee on which will be found the names of many of the men best known to the profession for their interest in climatology balneology and physiotherapy The Royal College of Physicians of London the Royal College of Surgeons of England the British Medical Association the Spa Practitioners Group of that Association the Society of Medical Officers and the British Spas Federation have each nominated a member of this committee The information thus obtained will be placed at the disposal of the medical profession so that in future every doctor in advising his patients as to choice of a health resort will be able to consult authoritative and impartial sources of information

Through its conferences and the promulgation of its literature and by other means the association hopes to in

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Practices and Partnerships for Disposal (continued)

17 WEST OF ENGLAND.—PARTNERSHIP IN OLD-ESTABLISHED PRACTICE over £2,500 p.a. in County Town. Panel about 1,000. Premium one-half share 2 years purchase. Good prospects for well-qualified physician (preferably M.R.C.P.) who should be an R.C. and who would have opportunity of getting on Staff of Hospital in near future.

18 LONDON E.C.—PARTNERSHIP IN OLD-ESTABLISHED PRACTICE in the City. Receipts average about £1,650 p.a. including appointment and panel worth over £500 p.a. Premium one-half share £1,000.

19 NORTH OF ENGLAND.—INLAND HEALTH RESORT.—NON-RESIDENTIAL PRACTICE of about £1,000 p.a. Small select panel. House (7 bedrooms) with large garden for sale. Premium—Practice—£750.

20 HOME COUNTIES.—PARTNERSHIP (AFTER PRELIMINARY Assistantship) in large mixed Practice in growing district well in 20 miles N.W. of London. Applicant should be a keen and energetic young Englishman.

21 LONDON E.C.—NUCLEUS OF PRACTICE (ABOUT FOUR fifths Ophthalmic) in the City. Cash receipts average £268 p.a. Fees for Consultation £1 1s. to £2 2s. Consulting and waiting room to rent. Premium £100.

22 HOME COUNTIES.—WELL ESTABLISHED PRACTICE OF £700 p.a. in first-rate Country Town under 40 miles from London. Panel about 250. Fees 5/- to £1 1s. Large well-built residence (about 6 bedrooms) with modern conveniences. Beautiful garden, meadow, orchard, etc., in all about 24 acres. Excellent hunting. Premium for Practice and House £4,500 (or near offer) which is less than the value of the house alone.

23 EASTERN COUNTIES.—OLD ESTABLISHED PRACTICE about £2,750 p.a. in beautiful country district. Panel 1,150. Good house (6 bedrooms) with electric light and central heating in large grounds for sale. Good scope.

24 MIDLANDS.—PARTNERSHIP IN WELL ESTABLISHED AND increasing Practice of nearly £1,550 p.a. in growing residential neighbourhood on outskirts of first-rate town. Panel 1,830. House (4 bedrooms etc.) in acre of garden for sale or rent. Excellent prospects of increase. Premium one-half share 2 years purchase.

25 S. AFRICA.—RADIOLOGICAL PRACTICE IN A MOST DELIGHTFUL town with excellent climate. Cash receipts last year £1,450. Scope. Premium to include furniture, carpets, accessories, etc. £2,200.

26 PRIVATE MENTAL HOME (FOR LADIES ONLY).—EXCEPTIONALLY nice house and grounds. A considerable sum required for the purchase. Further particulars on application.

27 EASTERN COUNTIES.—OLD ESTABLISHED COUNTRY PRACTICE. Cash receipts about £720 p.a. including appointments over £150 and a panel of about 590. Detached house (5 bedrooms) in grounds of 1 acre for sale. Prem. for Practice £650.

28 EAST COAST.—PRACTICE OF BETWEEN £750 AND £800 p.a. in a purely Residential Seaside District within 40 miles from London. Small Panel. Detached house (5 bedrooms) for sale. Scope for increase as district is growing.

29 SOUTH AFRICA (CAPE PROVINCE).—PRACTICE OF OVER £2,600 p.a. in Residential District on outskirts of one of the Principal Coastal Towns. Good house (5 bedrooms etc.) to rent. Scope for Surgery. Premium £1,750 or offer.

30 LANCASHIRE.—OLD-ESTABLISHED PRACTICE IN SMALL Manufacturing Town. Cash receipts last 12 months £750 including a panel of over 1,650. Detached house (5 bedrooms) with garage and good garden to rent. Premium 1½ years purchase or near offer.

31 SURREY.—PRACTICE OF £1,000 P.A. IN RAPIDLY GROWING Residential District within 15 miles of London. Panel 400. Suitable house with separate professional accommodation for sale. Scope for considerable increase. Premium £1,600.

32 LONDON W.—GOOD MIDDLE-CLASS PRACTICE £400 P.A. in suburb within easy access of the West End. Panel over 100. Attractive double-fronted house with nice garden for sale. Scope for increase. Premium 1½ years purchase.

33 CORNWALL.—VERY OLD-ESTABLISHED PRACTICE OF OVER £1,100 p.a. in delightfully situated seaside village on West Coast. Panel about 550. Well-built house (7 bedrooms) and garage) standing in half-acre of ground for sale. Some building is going on. Premium 1½ years purchase.

34 LONDON N.—PARTNERSHIP IN PRACTICE, ABOUT £500 p.a. in thickly populated Suburban District. Panel 1,800. One-fourth or one-third share at 2 years purchase.

35 HOME COUNTIES.—OPHTHALMIC PRACTICE BETWEEN £300 and £400 p.a. in desirable Residential Town, under 15 miles from London. Good detached house (4 bedrooms) with large garden for sale. Good reasons for giving up. Plenty of scope for increase. Premium £300.

36 LONDON E.C.—OLD-ESTABLISHED LOCUM PRACTICE of £646 p.a. Panel 459. Living accommodation to rent if desired. Premium £1,000.

37 S. AFRICA.—OPHTHALMIC AND GENERAL PRACTICE about £1,400 p.a. (about 60 per cent. Ophthalmic) including appointments £400. No Ophthalmic opposition. Premium £400.

38 CO. DURHAM.—PRACTICE OVER £500 P.A. IN PRESENTIAL colliery district near two large towns. Panel 1,300. Centrally situated 7-roomed house, with good Surgery and Dispensary to be kept on (unfurnished and operating table included). Lease for sale or rent. Practice could be very quickly substantially increased. Premium £650.

39 N. OF ENGLAND.—OPHTHALMIC PRACTICE [illegible] £1,600 p.a. in an important market [illegible]. Excellent [illegible] keen on clinical and operative [illegible]. Lease [illegible] first-class position for sale. Purchase [illegible] Premium £2,500.

40 S. AFRICA.—PRACTICE OF ABOUT £600 P.A. IN A famous town. Pleasantly situated [illegible] rooms), garage and [illegible] private wards). Premium £1,100.

41 LONDON WEST END.—A PAY AND EXPENSES [illegible] points. Practice Receipts 1931 [illegible]. Convenient flat at moderate rent, on lease. Premium £950.

42 LONDON E.—CASH AND PANEL PRACTICE [illegible] PA. in populous district. Panel 2,000. [illegible] Premium 1½ years purchase.

MEDICAL PARTNERSHIPS, TRANSFER AND ASSISTANTSHIPS (BARNARD'S [illegible] free.

All communications to be addressed to Mr A. V. STOREY General Manager

fluence the growing interest in natural methods of prevention and treatment of disease, and thus to help those health resorts in which this country is so rich It is believed that there are few, if any, forms of physical treatment which could not be provided in this country, and with a greater interest on the part of the profession, followed by increased clientele at our home resorts it should be possible before long to place their health-giving virtues, hitherto often regarded as the preserve of the rich, at the disposal of every class of the community

At its inaugural luncheon in November last the association had messages of encouragement on patriotic grounds from H R H the Duke of Connaught and the Prime Minister On these grounds as well as those of professional interest we appeal for the moral and financial support of the medical profession They can help us by influencing their local authorities to subscribe to our funds and by themselves subscribing It is obvious that if the movement is successful all who are concerned in the prosperity of our health resorts will benefit—the doctors not least If this financial support is not forthcoming soon the movement must be discontinued and is not likely to be revived again in our generation The subscription to the association is £1 1s a year, life membership £10 Inquiries will be welcomed by the general secretary at 199, Piccadilly —We are, etc,

MESTON,
Chairman of Council
R H ELLIOT
Chairman of Executive
W BYAM,
Chairman of Medical Advisory Committee
ALFRED COX
General Secretary

London April 21st

Diet and Pregnancy

SIR —The annotation on 'Diet and Pregnancy in India" in the *Journal* of April 15th (p 665) raises a matter of considerable importance to this country I have not had an opportunity of consulting the full text of the paper by Drs Balfour and Talpade in which comparison is made between the diets of mothers in the north and south of India but from your annotation it would appear that the virtue of the northern diet lies in the vitamin B content of the wheat and it may therefore be presumed that whole wheat is eaten in that part of India Among the poorer classes in England there is probably a shortage in the intake of vitamin B owing to the practice of eating bread made from highly milled flour Among these classes in England there is a high incidence of abortion, miscarriage and premature birth The group of vitamins known as B is very complex, and the position is further complicated by vitamin E

For about two years I have used, at an ante natal centre a wheat germ oil extract prepared for me by the Glaxo Laboratories in cases which gave a history of abortions miscarriages and premature births The results have been distinctly encouraging but a further extended trial is necessary before sufficient clinical material will be available to form the basis of a detailed article on the subject My experience in maternity and child welfare work suggests that the diets of the poorer classes are of such a nature as to produce what one may loosely describe as a general avitaminosis either potential or actual A deficiency of any one vitamin alone is unlikely to occur For some years I have added vitamins A and D to the diets of pregnant women in certain cases I have in addition given vitamin E (wheat germ extract) Must I now add the B group?

It must be perfectly obvious that the only reasonable way to obtain good nutrition is by a satisfactory basal diet, and that the addition of half a dozen vitamins, in a group of assorted mineral salts, to an inadequate diet is but a makeshift The causes of the purchase and ingestion of unsatisfactory diets are partly ignorance, but very largely economic necessity —I am etc,

Stockton on Tees, April 18th G C M M'GONIGLE

Dry Bronchiectasis

SIR —The paper on dry bronchiectasis, by Drs Cecil Wall and J C Hoyle, in the *Journal* of April 8th (p 697), and the letter of Dr Leonard Findlay in your issue of April 22nd (p 719) raise once more the controversy as to the aetiology of bronchiectasis—in this case the dry form Dr Findlay supports fibrosis as the principal aetiological factor it is possible that in some post inflammatory cases this may in part be true, but we agree with Drs Wall and Hoyle that other factors must be considered In our original paper in 1930 on this condition in eight of the nine cases the disease was confined to the lower lobe adjacent to the mediastinum, and most cases subsequently reported have been found in the same position Since our article Dr Kerley has put forward very suggestive evidence that these lobes, which so often appear to be the site of an atelectatic bronchiectasis, are in fact rudimentary fourth or third lobes, and that the bronchiectasis in them is due to a congenital failure of development In the course of our investigations on some 130 cases of bronchiectasis we have observed facts which tend to support Dr Kerley's supposition, and which are definitely antagonistic to the fibrosis theory, in these cases of dry bronchiectasis

In order that fibrosis may exert a pull on the bronchi sufficient to produce dilatation the lung must be fixed by adhesions to the surrounding thoracic wall, otherwise the fibrosis simply pulls the bronchi together Moreover the pull of such a fibrosis will be tangential as well as direct and it is difficult to see how this mixed force could dilate a bronchus It is a fact that the lungs in many cases of bronchiectasis (particularly the dry cases) in children and adults may be collapsed with an artificial pneumothorax proving the absence of peripheral adhesions In two children with dry bronchiectasis which had become infected we have made a thoracoscopic examination after induction of artificial pneumothorax, and they have shown pigment in the collapsed lobes, whilst in two cases of congenital bronchiectasis (so called cystic lung) that we have examined thoracoscopically pigment has been absent, suggesting that the first is disease developing in a congenitally defective lobe, whereas in the second the congenital abnormality is of an entirely different nature

The suggestion put forward in support of the fibrosis theory—that in the majority of cases a previous pneumonic attack can be ascertained in the past history—is not so significant as it might at first appear, as the atelectatic lung at the time of a coincident infection will give such signs as to lead the observer to conclude that the condition is one of primary pneumonia, this applies with even greater force to those cases in which there is a history of recurrent pneumonias In our experience atelectatic dry bronchiectasis is always demonstrated by lipiodol injection to be of the cylindrical type, whilst in those cases of bronchiectasis which have followed an inflammatory condition such as lung abscess or suppuration behind a blocked bronchus, lipiodol has shown irregular and lobulated dilatations These cases of dry bronchiectasis seldom come to necropsy at the time when they are dry although we have watched two such cases become infected, the patients dying within two years

The actiology of dry bronchiectasis is still in doubt but in our opinion all cases of bronchiectasis have not the same pathogenesis, some being undoubtedly due to sup-

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6 MANCHESTER —Old established middle and working class PRACTICE averaging about £1 300 p a including panel of nearly 1 800 Visits from 3/6 Moderate expenses Suitable house with 3 bed rooms and 3 good sized attics etc Price for freehold £1 150 Premium 1½ years purchase

7 MANCHESTER —Old established middle and working class PRACTICE producing for the last twelve months about £650 including panel of 790 Fees from 3/6 Convenient house with 2 reception 4 to 5 bedrooms bathroom, etc Rent on lease £60 Premium £950, to include furniture

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11 CENTRAL LONDON —Middle and better class PRACTICE averaging for the last two years about £500 p a including small panel of 180 Fees 3/6 to 21/ Professional accommodation can be rented at £200 p a Premium £300 to include furniture, drugs, instruments etc

12 NORTH LONDON —Middle and working class PRACTICE, in well populated residential district, averaging about £1 300 p a Panel of about 1 300 Appts consist of Medical Officer to two Missions and these will only transfer to a suitable successor of evangelical principles House can be rented also Branch Surgery

13 SOUTH WEST OF ENGLAND —In a thriving and pleasant seaport town with beautiful surrounding country a well established increasing PRACTICE worth last year over £1 100 including panel producing £286 and appts £200 Visits 3/6 to 21/ Midwifery practically refused Good house in excellent position with ample accommodation small garden and garage Price freehold £2 100 or would be let on lease at £127 p a Premium £2 000 or near offer

14 LANCASHIRE —LARGE TOWN —Old established chiefly working class PRACTICE averaging for the last three years nearly £1 900 Panel of 2 950 Advice and medicine from 3/6 Surgery can be rented at £55 p a Premium £3 000 or near offer

15 MIDDLESEX —ASSISTANTSHIP, with view to Partnership offered in a large mixed general Practice after a preliminary period of six months Ingoing partner must be English and experienced.

16 SOUTH EAST LONDON —Good middle and working class PRACTICE, producing for twelve months nearly £950 Panel of 986. Suitable house with 2 reception 4 to 5 bedrooms etc Rent on lease £70 p a Premium to include drugs etc, and surgery fittings and furniture £1 150

17 HOME COUNTIES —ASSISTANTSHIP with view to Partnership is offered in a better class Practice in residential town Ingoing partner must have experience of general Practice and be able to undertake major surgery and preferably hold a Fellowship.

18 NORTH WALES —Old established middle and working class PRACTICE averaging for the last three years over £1 700, including panel of about 1 300 Fees from 2/6* Visits from 3/6 with medicine extra Suitable house with good professional accommodation Electric light Garage for two cars Small garden Rent on lease £100 p a Premium £2 500, £1 700 down balance by instalments Good sport etc A knowledge of Welsh is not necessary

19 RIVIERA —Old established PRACTICE the receipts from which have averaged over £1 000 p a but have decreased recently owing to Vendor's ill health Very good prospects of extension Fees from £1 1s Very easy work Suitable flat can be rented at £160 p a Premium £4 000

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puration with or without obstruction whilst some may be due to fibrosis In the case of the dry variety we suspect the causation to be completely different and are in favour of the congenital abnormality or of its occurrence in an atelectatic lobe or lobule which has persisted from some other cause —We are etc

A J SCOTT PINCHIN
London W 1 April 22nd. H V MORLOCK

Bilateral Cortical Necrosis of the Kidneys

SIR —I think it greatly to be regretted that Dr Kellar and Dr Arnott in their paper on the above subject as reported in your issue of April 15th (p 657) should have stated that abundant fluid should be given in these cases It is the worst thing to do Physicians have recognized that the pushing of fluids in acute nephritis whether a sequel of scarlet fever or not is bad So far from pushing fluids restriction of fluids in acute nephritis is insisted on Much more should fluids be restricted in cases of cortical necrosis for the pathology of these two conditions is the same except for the degree to which the pathological process has advanced In acute nephritis the condition is such as to give rise to an oliguria which however bad is not so bad as anuria the sign of the other

How does cortical necrosis arise? The authors conclude it is due to an interference with the blood supply to multiple areas of the renal cortex Emboli are dismissed Thrombosis appears to be the cause of the infarction the cause of the thrombosis is not understood But the thrombosis is a secondary affair occurring late—I think I showed that in 1929 (*Journ Obstet and Gynaecol British Empire* 1929 xxxvi 341) that it is so is demonstrated by the recovery of patients with complete restoration of renal function if treatment is early enough The blood supply to the cortex is shut off naturally urine cannot be formed and anuria results To try to overcome this by giving fluids abundantly whether by mouth or intravenously is to make the circulatory block in the kidney worse and defeat the object The treatment of anuria due to the cause considered—a block in the kidney itself—is to limit fluids to reduce the volume of the blood as much as possible and to facilitate the blood flow through the kidney by appropriate measures

Drs Kellar and Arnott refer to decapsulation of the kidney but state that the operation is so severe and the stage of congestion and increased tension so short that it is difficult to see the efficacy of the procedure Naturally if decapsulation is delayed until the seventh day of the anuria (as in their third case) when large tracts in the cortex must have been as dead as mutton it is not likely to succeed and certainly after such a time during which the patient had only passed four ounces of urine it must have been a hazardous affair But why wait until the patient is nearly dead with only at the most four days more to live? Done at the time of the hysterotomy or Caesarean section decapsulation is not hazardous It is a little difficult to sew up the peritoneum over the kidney after splitting its capsule from the median incision but if that is too difficult for the surgeon he had better give up surgery I can recall three cases in which I have done the operation—not indeed for anuria but for eclamptic oliguria—with complete success in all three

But decapsulation of the kidney may not be necessary I had a case in which anuria developed abruptly in a man he had had his appendix removed subsequently suffered from a plastic peritonitis and developed anuria after a two months convalescence whilst in hospital In twenty four hours he passed only one ounce of urine which boiled solid He was treated with spinal anaesthesia limitation of fluids enemas and nothing else After two injections of tropacocaine the second given twelve hours after the first (and a third at the same time interval would have been better) he passed thirteen ounces of urine containing hardly any albumin and rapidly got well In fulminant eclampsia the same sort of result occurs in eclampsia in which the kidneys have been impaired for some time it seems insufficient in such if emptying the uterus does not succeed instead of giving abundance of fluid the blood volume should be reduced by venesection not simply to relieve the heart but much more to relieve the kidneys —I am etc

Rugby April 15th R H PARAMORE F R C S

Proto duodenitis

SIR —The paper by Mr Kellett Smith and Dr Arthur Tom on proto-duodenitis published in the issue of March 4th (p 362) contains interesting suggestions about the origin of duodenal ulcer Inflammation is thought to precede ulceration and the choice of site—first or second stage—is regarded as probably the result of the presence of Brunner's glands in this region The authors suggest that these glands become inflamed either by the excretion of some toxic agent or by direct irritation of relatively stagnant bile and acid a sequel to partial obstruction at the duodeno-jejunal flexure The latter is assumed to be the direct consequence of visceroptosis The malign influence of visceroptosis is a bogy which died hard in surgery but still lingers on in radiology simply because radiologists will not study their normal duodenum with sufficient detail The illustrations which the authors give are to me perfectly normal in appearance so far as the second third and fourth stages are concerned and the first stage may or may not be normal The duodeno-jejunal flexure is also normal in appearance

Radiologists are often vividly conscious of the risks of excessive screening or in some cases are overworked and have to hurry through them while others do not find screening appeals to them The result in all these instances is a rather too rapid examination which impairs accuracy The duodenum presents a emarkable contrast from the behaviour of the stomach and since most lesions are confined to the first stage the examination of the remainder is all too apt to be slurred over This is important because experience is lost The normal variations of the duodenum both in appearance and in behaviour are surprisingly wide and therefore confusing when one's attention is suddenly drawn to some particular point Another point not often appreciated is that the different stages behave quite differently for functional reasons Tenderness is not always present in duodenitis and is not the most reliable evidence of this condition I believe x ray evidence can be always demonstrated if the examination is sufficiently detailed —I am etc

London W 1 April 20th JOHN R WYLIE

Hernia and Appendicectomy

SIR —Mr Henry J Wade's article in your issue of April 1st (p 561) reporting his work on the function of the ilio-inguinal nerve and discussing the relation between McBurney's muscle splitting incision for appendicectomy and the subsequent development of inguinal hernia is of great interest He repeats the statement which unfortunately has crept into the textbooks that the McBurney incision may be the immediate cause of inguinal hernia this statement so far as the indirect type of hernia is concerned is to my mind entirely without proof When one considers how few are the cases of indirect inguinal hernia giving a history of previous appendicectomy and how many are those without any previous

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William James,
Sized man up rightly
As a creature of habit.
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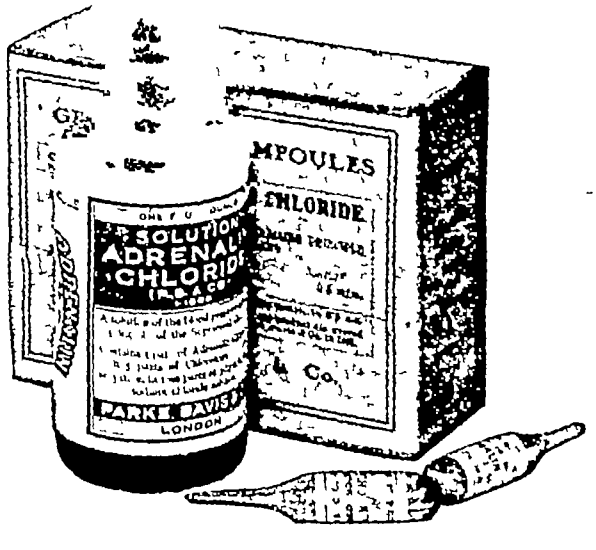

In

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operation at all, the hypothesis seems not only without proof but without reason Indeed, it would be strange if two such common conditions did not sometimes affect the same individual As I understand it, the theory holds that injury to the ilio-inguinal nerve so weakens the conjoined tendon that a pouching of peritoneum occurs, and so a hernia develops This may be true for the acquired direct type of hernia but not so for the indirect inguinal hernia Hamilton Russell maintained that this latter type developed by virtue of a pre-existing sac as yet unfilled The sac may never become filled but if it does do so the onset is quite frequently sudden, the patient being able to recall the precise moment during some muscular exertion at which he experienced pain in the groin and on examining himself, discovered a bulge This catastrophic onset is not due to a weakened muscle, but to the presence of a pre-existing sac in a person doing heavy work Experience with children proves the same theory At the Birmingham Children's Hospital I see between 250 and 300 infants with inguinal hernia each year None of these receives operation unless a year or more old they are provided with rubber trusses The majority of these patients appear to be cured by this means and the explanation is presumably that the neck of the sac no longer stretched by omentum and gut becomes sealed off by light adhesions yet the sac is still present and if the work of later life is heavy in character the adhesions may give and the sac fill Another observation in over one thousand cases of inguinal hernia in children is that two-thirds are right sided and one-third are left-sided, the preponderance of right sided herniae in adults therefore, is no argument in favour of a gridiron incision for appendicectomy being a contributory factor

I was also interested in Mr R J McNeill Love's letter in your issue of April 8th (p 629) supporting Mr Wade's views as to the direct relation between the McBurney incision and the development of inguinal hernia, but giving it as his opinion that the commonest cause of injury to the nerve was scar tissue resulting from sepsis, particularly encouraged by a drainage tube In a personal experience of over 500 cases of acute appendicitis operated on through the muscle-splitting incision I can truthfully say that no case of subsequent inguinal hernia has come to my notice I never drain through the loin, but always if needed, through the outer and upper end of the wound and, to my mind drainage of the pelvis is much safer by this method than by a suprapubic stab, as the tube lies against the side wall of the pelvis and not among coils of small intestine—the commonest cause of adhesions Where the pelvis collection is large a second tube is passed down along the left wall of the pelvis through a similar but shorter wound in the left iliac fossa —I am etc

Birmingham, April 19th F A R STAMMERS

Shock and Spinal Anaesthesia

SIR —In the summary of his lecture in the *Journal* (April 22nd, p 693) Professor McDowall says

Experimental shock may be divided into several distinct varieties which apart from that produced by haemorrhage and cardiac failure may be divided into chemical and nervous The chemical variety is typified by histamine shock experimentally and clinically by a delayed shock associated with gross destruction of tissue This variety is enhanced by anaesthetics The nervous varieties may result from physical damage to the vasomotor centre or its efferent paths from afferent impulses leading to loss of carbon dioxide (acapnia) or from inhibition of the centre Shock dependent on afferent impulses is prevented by deep anaesthesia and reduced by morphine

First of all as regards chemical shock What anaesthetic could add less to the toxaemia than 5 grains of novocain? But Professor McDowall objects to spinal anaesthesia because it interferes with the nervous control of the blood vessels and causes vaso-dilatation Spinal anaesthesia can be so managed with preliminary ephedrine as to interfere very little with the control of blood vessels and possibly not at all with the volume flow of the circulation What it does do is to stop the passage of pressor impulses Consequently the blood pressure does not go down till the abdomen is opened and the surgeon manipulates the abdominal contents This fall of blood pressure is almost certainly due to (1) cardiac depression through the vagus (2) possibly mechanical interference with the heart's action If manipulations are gentle it by no means always occurs Kremer and Wright have shown that one can cut the splanchnics in dogs with little or no fall of blood pressure and it is seldom that a spinal anaesthetic of the heavy variety affects the anterior roots higher than the fifth dorsal So the objection that spinal anaesthesia interferes with the control of the blood vessels to such an extent as to cause a serious fall of blood pressure does not hold good clinically Experimentally in cats it does because the spinal theca in the cat is of small capacity, so that even 1 c cm of injected fluid will bathe the anterior roots

It is interesting to recall another Arris and Gale Lecture (1912) where the lecturers conclude with these words

'We hope to have convinced you that surgeons should cease to rely on a high blood pressure as an indication of the absence of shock or on a low one as necessarily symptomatic of its presence And if you hold that we have adduced strong evidence in support of the plea for the adoption of nerve blocking (spinal anaesthesia) as a means of controlling shock particularly in toxaemic children we shall be amply repaid

What deeper anaesthetic is there than spinal? What anaesthetic protects so well against damaging afferent impulses?'—I am, etc,

April 23rd E FALKNER HILL, Lecturer in Anaesthetics University of Manchester

Modified Bendien Reaction

SIR —On account of the interest that has been taken in my modification of the original Bendien reaction I would like this opportunity of informing anyone wishing to take up the test that there is now available a standard sodium vanadate solution This has been prepared in collaboration with the British Drug Houses as a standard synthetic product which, as the result of controls with numerous blood serums conforms in every respect with the requirements of the colloidal acid vanadate reaction The British Drug Houses are prepared to supply series of reagents ready mixed for use which have been controlled and found to be entirely satisfactory, and mixtures have proved to keep quite well for at least six months This arrangement saves a considerable amount of trouble for those who do not wish to make the reagents up themselves and also provides an assurance with regard to their standardization, and should make for conformity between the results of the various laboratories

I have also suggested that, as Bendien's original numerical designation does not in any way describe the contents of the reagent mixtures the method employed by Begg and Aitken (*Journal of Experimental Pathology* 1932, xii, No 6) should be followed This method, I suggest, should be known as the British numerical designation of the colloidal acid vanadate reaction, by means of which each reagent is designated by the number of cubic centimetres of decinormal standard sodium vanadate required in 200 c cm of each acid sodium vanadate mixture For ordinary clinical purposes, therefore, when using the British Drug Houses decinormal standard sodium

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vanadate the reagents required run from No 23 to No 30 and correspond in reaction to the original Bendien reagents No 1 to No 8 This method of designation allows of the ready employment of lower or higher reagents whose numbers will run in direct sequence with the others more often employed for clinical purposes and in the leaflet sent out by the British Drug Houses a table is given which clearly shows the relation between their standard sodium vanadate reagents and those of the original Bendien reagents —I am etc

Liverpool April 18th E CRONIN LOWE

SIR —In your issue of April 22nd (p 722) Dr Shiskin made some very interesting theoretical observations concerning cholesterol as an important factor in determining the degree of the ether effect in the numerator of the fraction evolved in the modified Bendien reaction This I find is also borne out in practice but forms only part of the question The light shaking with ether at the *p*H of blood serum only removes the free cholesterol the bound cholesterol remaining attached to certain globulin elements This as has been shown by Theorell [1] at the *p*H of the Bendien reaction becomes dissociated and connected with the albumins The cholesterol acts as an antagonistic agent to various lipins which by themselves would be precipitated in conjunction with euglobulin [2] I have shown previously [3] that the bound cholesterol is diminished in cancer and hence a greater lipin precipitating factor is present after the removal of the free cholesterol The effect is shown well by the modified Bendien reaction for in cancer and pregnant serums as Dr Shiskin remarks there is frequently hypercholesterolaemia the increase being in the free cholesterol—hence a much greater difference in the ether treated serum since proportionally a much greater antagonistic effect is removed

Almost exactly the same remarks apply to the free and bound calcium content of serum [4] as antagonistic factors to the potassium magnesium and sodium So that one sees that although the cholesterol factor mentioned by Dr Shiskin is an important one there are numerous other and complicated systems likewise involved —I am etc

A F H COKE M R C S L R C P

St Mary's Hospital W April 23rd

REFERENCES

[1] Theorell *Biochem Zeit* 1930 ccxxiii 1
[2] Handovsky and Wagner Idem 1911 xxvi 32.
[3] Coke *Journ State Med* 1933 xli 105
[4] Moritz *Journ Biol Chem* 1925 lxiv 81

Adenocarcinoma of the Kidney

SIR —I have read with pleasure the article entitled "New Growths of the Kidney" by Mr Jocelyn Swan in the *Journal* of April 8th In his series of sixty five cases I notice that the youngest was a woman of 27 and this prompts me to record a case which I think is unusual

In November 1929 a mother brought her baby (female) aged 9 months to see me at the Hackney Hospital London It appeared that the child's abdomen was increasing in size and although it was losing weight the child had developed a voracious appetite which was causing alarm to the mother There was a history of haematuria for a few weeks On examination there was a huge swelling occupying most of the abdominal cavity which was movable The urine contained blood A diagnosis of a tumour of the left kidney was made probably the rhabdo-myosarcoma of infants No swelling was felt in the right kidney An incision was made extending from the umbilicus to the outer border of erector spinae and a tumour almost the size of a Rugby football was removed I have never seen such a large kidney tumour even in an adult During the operation the renal vein at one time appeared to be perilously near tearing point but eventually the tumour was successfully removed There was naturally a great deal of shock and this prevented the removal of enlarged glands along the ureter Radium was not available The specimen was kindly examined by Sir Arthur Keith who reported that this was a case of adenocarcinoma of the kidney substance The specimen can be seen in the museum of the Royal College of Surgeons The child made an uninterrupted recovery and in the weeks which followed gained weight The growth was certainly encapsulated but enlarged glands were left behind along the course of the ureter Nevertheless although it is three and a half years since the operation the patient is perfectly well appears to be free from recurrence and has grown into a fine child —I am etc

Swindon April 21st J EWART SCHOFIELD

Aetiology and Treatment of Asthma

SIR —The most striking feature in your report of a recent discussion on asthma and hay fever (*Journal* April 8th p 614) is the difficulty under which the speakers laboured because they were obsessed by the old idea that asthma is the result of bronchial spasm and that allergy is the root cause of the trouble If investigators could realize that asthma is merely a manifestation of vasomotor disturbance and that allergy supplies only one of the many irritants which disturb the vasomotor balance more progress would be made It becomes almost ludicrous to see the vain attempts to immunize a patient by giving injections weekly for month after month because of the erroneous belief that asthma is an allergic disease Proteins may certainly supply the exciting causes of the circulatory disturbance but that is all

I could quote many instances in which allergic irritants have lost all their disturbing power as soon as the vasomotor system has been made stable The following case shows how secondary is the part played by allergy

In 1929 I saw a lady who suffered severely from asthma and it had been found that she was hypersensitive to five different proteins but her asthma had steadily got worse in spite of attempts to immunize her I cauterized her nasal septum three times and for the last three and a half years not only has she had no asthma but she was at once able to take any of the offending proteins without causing the slightest disturbance

I am pleased to see that Mr Diggle agreed that cauterization seemed to produce the best results in apparently normal nasal passages Undoubtedly the removal of nasal abnormalities and the draining of infected sinuses etc in certain cases relieves asthmatic trouble but this is not due to removing a nasal form of allergism as Mr Diggle expresses it but to getting rid of a toxic or other form of irritant affecting the vasomotor system Autogenous and other vaccines are I am convinced even more harmful than desensitizing injections They frequently give relief for a time but before long the asthma returns in an aggravated form This is only what might be expected because although the protein shock of the vaccine may give temporary relief its ultimate effect is to lower the general resistance and thereby allow the vasomotor system to be more easily disturbed —I am etc

London W April 18th ALEXANDER FRANCIS

Diagnosis of Tuberculous Meningitis

SIR —I agree with Dr Haler (April 22nd p 721) that Dr James Cook (April 8th p 613) has small justification on the evidence adduced in the two cases recently reported by him to make a diagnosis of tuberculous meningitis I pointed out in June 1930 (*Arch Dis Child*) and again in November 1932 (*Proc Roy Soc Med*) that by Smith's method tubercle bacilli may be demonstrated in the cerebro-spinal fluid in tuberculous meningitis almost without exception —I am etc

London April 24th. TEMPLE GREY

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A graduation ceremony was held on April 22nd, when the following degrees, among others, were conferred

D Sc—R C Garry M B Ch B
M D—*W A Burnett *I Gilchrist *P Hutchison *A Sharman †S M Allan †M J Bastible †J C Hendrie, †I M Hunter †A B Smith I Dymock C M Fleming J A Imrie L J MacIntyre J W Wilson
B Sc—A C Lendrum (with first-class honours in pathology)
M B Ch B—The list of successful candidates for these degrees was printed in our issue of April 22nd (p 727)

* With high commendation † With commendation

QUEEN'S UNIVERSITY, BELFAST

The Senate has appointed Mr P T Crymble M B F R C S to the Chair of Surgery in succession to Professor Andrew Fullerton M D M Ch F R C S I

ROYAL COLLEGE OF PHYSICIANS OF IRELAND

At the monthly meeting of the College held on April 10th Ying Lin M B Hong Kong and P J O Farrell were admitted to the Fellowship

The following successful candidates at the Conjoint Final Examination with the Royal College of Surgeons in Ireland were admitted to the Licences in Medicine and Midwifery C Crowe W G Deeny E A Joyce M E M King P J Murray O F M Ormsby D J Riordan

Obituary

DR KENNETH L BATES of St Albans died on April 20th, at the early age of 44 He had been seriously ill with pneumonia and pleurisy, and was beginning to get over it, but a pulmonary embolism caused an unexpected death He received his medical training at Guy's Hospital and finished his work there with a house surgeoncy He served in France during the war as a temporary captain R A M C Entering then general practice, he joined his father, Dr Leslie Bates, and Dr Eustace Lipscomb as a partner in the oldest medical firm in the city of St Albans and he remained an active worker up to the time of his illness He was an honorary physician to the St Albans Hospital and also police surgeon A colleague "S C," writes Music to him was a great delight and at one time he was a member of the St Albans Cathedral choir At the time of his death he was president of the Rotary Club, in which he took great interest Everyone knew him as "Dr Kenneth" to distinguish him from his father, who is still connected with the practice Kenneth" was always genial and good company, and he could be as amusing as any of his colleagues So his sudden death has come as a great shock to his wide circle of friends He married a daughter of the late Canon and Mrs Glossop of St Albans, and he leaves a widow with two little girls, for whom there is much sympathy

DR RICHARD OXLEY BOWMAN, M B E who died on March 28th in his sixty-ninth year had practised in Ulverston for more than forty years He received his medical education at the Manchester Royal Infirmary, and obtained the diplomas M R C S L R C P in 1888 In the following year he graduated M B Lond with honours and proceeded M D in 1892 His earlier medical appointments included those of resident medical officer to the Children's Hospital Pendlebury house physician to the Manchester Royal Infirmary and assistant medical officer to the Monsall Fever Hospital He was also an associate of Owens College Manchester, and a member of the Manchester Pathological Society He had held a commission as medical officer of the 1st Volunteer Battalion which subsequently became the 4th Territorial Battalion of the King's Own Regiment Always keenly interested in the work of hospital development he urged the advisability of inaugurating a new hospital in Ulverston as a war memorial He served on various committees was president of the Ulverston Hospital Saturday Parade and took a very active share otherwise in the work of raising funds for the new hospital In 1908 he was chairman of the Furness Division of the British Medical Association During the war he was a member of the local medical war committee A prominent Freemason, he was a Past Master of the Furness Lodge, Past Provincial Grand Registrar for West Lancs, P P Grand Registrar Royal Arch Degree, and P P Grand Master Overseer Mark Degree In his youth he had attained international rank as a lacrosse player, and was subsequently one of the finest local lawn tennis players He was a promising Rugby player until incapacitated by an injury Dr Bowman's funeral was attended by representatives of the leading organizations of the town and several medical and hospital colleagues, who esteemed him highly for his devotion to duty and enthusiasm for deserving causes

Medico-Legal

THE NEGLIGENCE OF A SUBORDINATE*

A doctor owes his patient the duty of exercising towards him the degree of care and skill which is reasonably to be expected of him in the circumstances If he does not fulfil this duty he is liable to pay damages for negligence It is obvious that what constitutes negligence depends on the particular circumstances of every case and also largely on the view which the jury takes of the doctor's conduct as shown by the evidence, particularly of the doctor himself Apart, however, from his own negligence a doctor may be held liable for that of a technical assistant or a nurse, and a hospital or nursing home may be liable for the negligence of its employees This liability may often be a very serious matter, and it is important that every corporation and every doctor who employs assistants or who delegates work to others should have a clear idea of the extent to which the employer may be held liable. The foundation of this liability is in the ancient maxims "Qui facit per alium facit per se" and respondeat superior' as a general rule a man is responsible for any wrongful act done by his agent or subordinate provided such act is within the reasonable scope of their employment The present law as stated by the learned editors of *Halsbury's Laws of England* (1931, 1, 285) is as follows

'The principal is responsible jointly and severally with the agent if a wrongful act is committed by the agent in the course of his employment as agent or within the ostensible scope of his authority when his ordinary duties are considered'

In Barwick *v* English Joint Stock Bank (L R 2 Ex 259) a bank was held liable for a fraud committed by one of its managers acting in the course of his business Mr Justice Willes, in his judgement, said

'With respect to the question whether a principal is liable for the act of his agent in the course of his master's business and for his master's benefit no sensible distinction can be drawn between the case of fraud and the case of any other wrong The general rule is that the master is answerable for every such wrong of the servant or agent as is committed in the course of the service and for the master's benefit though no express command or privity of the master be proved. He has not authorized the particular act but he has put the agent in his place to do that class of acts, and he must be answerable for the manner in which the agent has conducted himself in doing the business which it was the act of his master to place him in'

It does not matter if the act was not expressly authorized, or even, apparently if the principal expressly forbade it The principal is, however, not responsible when the act falls entirely outside the scope of the agent's employment The doctor who employs a locumtenent or assistant, or the institution which employs a staff of nurses and appoints a staff of medical advisers, might appear therefore to be open to serious liability If these persons are in fact agents—that is if they are doing for

* Earlier articles in the same series by a legal correspondent appeared in the *Journal* of April 1st (p 589) and April 22nd (p 723) The topic therein discussed was libel and slander in medical practice

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the doctor or the hospital what he or it has undertaken to do for patients—then it might seem that every negligent act of the locumtenent or assistant or of the nursing and professional staff can be visited upon the owner of the practice in one case and the governors of the hospital or nursing home in the other There are however several important exceptions which bring this liability within more or less reasonable limits and they are most clearly shown in the leading cases in which patients have sued the managing boards of hospitals for the negligence of consultants and of the nursing staff These cases show that a practitioner a hospital or a nursing home is not always responsible for the negligence of those whom it appoints to carry out medical and nursing duties In fact the law does not seem to regard the medical and surgical staff of a hospital as agents at all and it does not seem to regard even nurses as agents when they are concerned with what have been called in a famous judgement that will be quoted later matters of professional skill

THE LIABILITY OF HOSPITALS

The first important case concerning the liability of a hospital is Evans *v* Liverpool Corporation (1906)

A child with scarlet fever was sent to the infectious diseases hospital maintained by the Liverpool Corporation under the Public Health Act 1875 The boy was discharged by the visiting physician while he was still in an infectious condition and when he got home gave scarlet fever to three other children of the family The jury found that the visiting physician in discharging the child had not shown a degree of skill and care which was reasonable in the circumstances—that is that he had been negligent This visiting physician was an officer appointed by the Liverpool Corporation to act under the general direction of the Hospitals Committee and the rules provided that he should be responsible for the treatment of the patients from the beginning to the end of their stay and also for their freedom from infection when discharged

Here was apparently an agent performing a wrongful act within the scope of his employment Nevertheless it was held by the Court that the legal obligation of the Liverpool Corporation extended only to the provision of reasonably skilful and competent medical attendants for the patients and that the Corporation had discharged that duty The Corporation had made no absolute undertaking nor was it under any absolute obligation to see that no patient should be discharged by the visiting physician while still in a condition which might cause infection As Halsbury states it

> If the local authority appoints and pays an officer to perform certain duties even duties which the authority is obliged to see are performed it will not be responsible for the wrongful acts of the officer done in the course of his duties if they are done in the course of skilled and technical service which the authority is not competent to direct or to supervise The authority is not liable if it has exercised care and skill in the selection of a competent officer

So long therefore as a corporation—which means equally the hospitals committee of a local authority or the managing board of a voluntary hospital—exercises due care and skill in selecting officers who are to perform specially skilled services it is not responsible for isolated acts of negligence Presumably however if an officer showed habitual negligence and incompetence and the corporation allowed him to continue in its service it would no longer be protected from liability Although it might have exercised reasonable care in selecting the officer once it had good reason to believe that its confidence had been misplaced it would retain him at its own risk

The great landmark to which all questions of the liability of hospitals are referred is the case of Hillyer *v* St Bartholomew s Hospital (1908) The plaintiff was as it happened a medical man he had suffered misfortune and a breakdown of health in West Africa and had returned destitute He had entered St Bartholomew s Hospital for an operation and had actually chosen the surgeon who performed it He complained that while he was unconscious on the table his left arm had been allowed to be burnt by some vessels containing hot water and his right arm had been pressed with great force against the edge of the table and badly bruised Traumatic neuritis had set in both arms had been paralysed and he had been unable to carry out his work as medical practitioner ever since The Court of Appeal reaffirmed the principle that the only duty undertaken by the governors of a public hospital towards a patient who is treated in the hospital is to use due care and skill in selecting their medical staff The physicians and surgeons who give their services at the hospital are not the servants of the governing body Further and more important the court held that an operation creates a special set of circumstances Although the nurses and other attendants are ordinarily servants of the hospital the moment the door of the operating theatre closes behind them they cease for the time to be the servants of the governors inasmuch as they take their orders from the operating surgeon alone and not from the hospital authorities This recognition that an operation team stands completely outside the legal liability of the hospital governors is very important.

SKILLED AND ADMINISTRATIVE DUTIES

The third step the Court of Appeal took in this case was to distinguish between two classes of nursing duties (1) matters of professional skill and (2) purely ministerial or administrative duties For the discharge of skilled duties the governors are not responsible but for the discharge of the second class of duties they are What exactly this second class includes is a question of some difficulty and a very serious one for boards of hospital management Lord Justice Kennedy said

> The governors of a public hospital by their admission of the patient to enjoy in the hospital the gratuitous benefit of its care undertake that the patient whilst there shall be treated only by experts whether surgeons physicians or nurses of whose professional competence the governors have taken reasonable care to assure themselves and further that these experts shall have at their disposal for the care and treatment of the patient fit and proper apparatus or appliances But I see no ground for holding it to be a right legal inference from the circumstances of the relation of hospital and patient that the hospital authority makes itself liable in damages if members of its professional staff of whose competence there is no question act negligently towards the patient in some matter of professional care or skill or neglect to use or use negligently in their treatment the apparatus or appliances which are at their disposal I am speaking only of the conduct of the hospital staff in matters of professional skill in which the governors of the hospital neither do nor could properly interfere either by rule or by supervision It may well be that the hospital authority is legally responsible to the patients for the due performance by their servants within the hospital of their purely ministerial or administrative duties such as for example the summoning of medical aid in cases of emergency the supply of proper food and the like The management of a hospital ought to make and does make its own regulations in respect of such matters and it is in my judgement legally responsible to the patients for their sufficiency their propriety and observance of them by the servants

The distinction between purely ministerial and administrative duties and matters of professional skill has been further emphasized in a recent Scots case Anderson or Lavelle *v* Glasgow Royal Infirmary (1930)

A woman attended the Glasgow Royal Infirmary for ultra violet treatment She alleged that on the instructions of the nurse she undressed and was placed in the ultra violet room and ordered to walk round the lamps until she was told to come out She stayed there from 10 a m to 10 45 a m but no one told her to come out and she finally left of her own accord She claimed damages for burning due to over exposure At the hearing before the Court of Session her counsel claimed that the nurse was the servant of the Infirmary except when under the orders of a surgeon at an operation and that this nurse had failed in an administrative not in a skilled duty The defendants argued that the Infirmary provided it supplied a competent staff and proper apparatus was not liable for the negligence of a nurse moreover that the treatment was given under the instructions of the superintendent of the electrical department

The Court held that there was no distinction between the position of a nurse at an operation and the position of a nurse giving electrical treatment under the directions of the superintendent of the department that the nurse

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was not acting as the servant of the governors of the Infirmary, and that the patient's claim for damages must be dismissed. The case came before the House of Lords, who sent it back to the Court of Session for further information on the facts. The second hearing established that the managers of the hospital did not control treatment and that the nurses were engaged, supervised, and might be suspended by the matron. The electrical department was under the control of a director, and its staff included several qualified nurses. It was the director's practice to prescribe treatment by ultra-violet light, but not the time. The usual time for the first exposure was ten minutes, and it was supervised by a nurse. At this hearing the court held not only that the hospital was not responsible, but that the nurse had in fact not been negligent. The Scottish Law Lords were very emphatic in their interpretation of the relation between a hospital board and its employees. Lord Hunter quoted the remarks of Lord Dunedin in Scottish Insurance Commissioners *v* Edinburgh Royal Infirmary (1913):

"The managers of a hospital do not go to the public with a profession of themselves operating on or nursing or treating patients. They only hold themselves out as providing an institution where patients will be able to meet with skilled persons who will do these things."

In this case, Lord Hunter observed, the nurse was not doing that which it was the business of the governors to do; she was rendering a service which they had arranged that she should render.

REGULATION AND SUPERVISION

So much for "matters of professional skill," in which the medical and nursing staff cannot involve the hospital in liability. The difficult question is where the law draws the line between matters of professional skill and "purely ministerial or administrative duties" in the performance of which nurses act as the servants or agents of the hospital authorities and so render the authorities legally liable for their negligence. In the Lavelle case the nurse hardly had to do more than watch a clock; yet the court regarded this duty as a matter of professional skill. From Lord Justice Kennedy's words the test seems to be:

"Is the duty in question one in which the governors of the hospital can properly interfere by rule or supervision?" He seems to have been sure that the governors of St Bartholomew's did or could have properly supervised or regulated the summoning of medical aid in an emergency or the supply of proper food to the patients. Would he have considered they could supervise or regulate the placing by a nurse of hot water bottles in a patient's bed after operation? If so, then the hospital management is responsible when a nurse burns an unconscious patient after an operation by letting a hot water bottle rest against his body.

In the Canadian case of Nyberg *v* Provost Municipal Hospital Board (1927) a patient who had just left the operating theatre on a wheeled couch and who passed the night in the adjoining hall which was being used as a ward was badly burnt by a hot water bottle. The nurse was held to have been guilty of negligence in failing to investigate the state of the bottles, and the hospital was held liable in damages. Another Canadian case where the hospital was held liable for the negligence of a nurse was Harkies *v* Lord Dufferin Hospital (1931). A child was admitted suffering from pneumonia and was put in a steam crib—a cot closed in by a sheet having led into it a length of garden hose connected with a steam kettle, which on this occasion stood on an adjacent chair. The hose projected about three inches into the crib and was fastened to the framework. The doctor who had ordered the treatment examined the contrivance and left the ward. The nurse in charge went to an adjoining room for a few minutes and was suddenly recalled by the child's cries of agony; she ran back and found that the child had been badly scalded; but on examining the apparatus neither she nor the sister could find anything wrong. Moreover instead of being injured in the face and hands as it might have been if it had meddled with the pipe, the child was scalded down its back and on its left leg to the ankle. Several medical men gave evidence that the same apparatus was used continually in other hospitals with complete satisfaction. The judge held that the obligation undertaken by the hospital was not merely to supply properly qualified nurses but to nurse the patient. He quoted Mr Justice Farwell's statement in Hillyer's case (above) that a public body and a private individual were under the same liability. There was no evidence to prove directly that the nurse or anyone else had been negligent, but the judge said that he had felt, when the evidence was closed, that there was more to be said, and he found that the nurse had been negligent on the principle of *res ipsa loquitur*. When an inanimate thing, such as a piece of machinery, an appliance, or even a barrel in the upper story of a warehouse, is safe and proper if used with care, and there happens an accident such as in the ordinary course of things does not happen if proper care is used, and the persons responsible cannot explain it, it follows that the accident arose from want of care. In other words, when a normally safe piece of apparatus goes unaccountably wrong the people in charge are liable for any damage it does (Scott *v* London & St Katherine Docks Co., 1865). (The injuries in Hillyer's case were held to raise prima facie presumption of negligence.)

Now, admitting that the nurse in each of these Dominion cases had committed an act of negligence, was it good law to hold the hospital responsible? This question is, to say the least of it, debatable. To take the hot water bottle accident: if the use of hot bottles after operation can properly be regulated by the management, it is a purely ministerial or administrative duty, and the management is responsible for its proper performance. But is it a duty of this kind? Suppose that the nurse instead of burning the patient, had failed to put enough blankets on his bed and he had caught pneumonia, would the hospital have been liable? Could it, in other words properly have regulated or supervised the amount of covering a patient should have in every condition of temperature, immediately after operation? Take moreover, the accident in which the child was scalded in the steam crib, and the nurse, in the absence of an explanation was held negligent. If the hospital did or could properly have supervised or regulated her use of the crib it was responsible at law. But many medical men with hospital experience will consider that such a matter is one of professional skill, and some will think that professional skill is required to judge the temperature of a hot-water bottle or the proper covering required by an unconscious patient. If this view is correct the nurse alone is responsible. The judge, in the steam crib case, held that the hospital was obliged not only to provide properly qualified nurses, but to nurse the patient. This view is not borne out by Lord Justice Kennedy's words and is directly contradicted by the words of Lord Dunedin quoted above: "The managers do not go to the public with the profession of themselves nursing patients."

Many duties are laid upon qualified nurses, and some of them require a much higher degree of skill than arranging hot bottles in a patient's bed. In some hospitals nurses are deputed to take out perineal stitches, in some they give intravenous injections. Whether a given duty can properly be allotted to a nurse depends on whether the jury finds from the evidence that to do so was the practice of the hospital and that this practice was a reasonable one in the circumstances. Assuming that these two duties can properly be performed by nurses is the management liable for injury due to their negligent performance? Lord Justice Kennedy's words do not seem to suggest that it is liable. If, as seems likely, the hospital is not liable for any of the injuries in these hypothetical cases, the natural consequence is that the patient is left without a remedy for a nurse's negligence, for the medical man in charge of the case is not liable if he is not present and able to control the action (Perionowsky *v* Freeman, 1886), and the nurse herself is not likely to be able to make reparation. This aspect of the matter is one that needs settling, either by a judicial decision that would bring within the scope of "purely ministerial and administrative duties" all nursing duties not under the immediate control of a medical man in the sense of Hillyer's and Lavelle's cases, or by some form of compulsory third-party insurance for nurses. Fortunately, nurses in this country are so highly trained that such accidents are rare

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons reassembled on April 25th and Mr NEVILLE CHAMBERLAIN opened the Budget He proposed that in the financial year 1933–4 the rate of income tax should not be altered but that the taxpayers should pay an instalment of half their assessments in January and half in July This arrangement is estimated to equal a postponement of 1s 3d in £1 of the income tax Mr Chamberlain also proposed a new scale of beer duty to permit the lowering of the retail price by 1d a pint and an increase in gravity The licence duties on heavy motor vehicles conveying goods by road are to be increased and an import duty of 1d a gallon is imposed on heavy fuel oils other heavy hydrocarbon oils and kerosene The Customs duty on matches is increased as also the duties on mechanical lighters The silk duties are to be revised The existing allowances for repairs under Schedule A for income tax are continued for three years to 1936

Discussion of the Budget continued on later days of the week

Medical News

At the invitation of the Mayor (Dr W Edmund Jones) and Corporation of Royal Leamington Spa the British Health Resorts Association is holding a conference at Leamington this week-end

The annual dinner of the University of London Medical Graduates Society will be held at the Langham Hotel on Tuesday May 9th

At the annual meeting of the Society for the Study of Inebriety on April 11th Sir Humphry Rolleston was elected president for the ensuing year The next meeting will be held on July 11th when Dr J D Rolleston will read a paper entitled Alcoholism in Mediaeval England

The University College (late Queen's College) Galway North of England and Midlands Alumni Association will hold its seventh annual medical reunion at the Queen's Hotel Piccadilly Manchester on Saturday May 6th at 7 30 p m Dinner at 8 The subscription is one guinea which includes the dinner cost of organization printing etc Graduates intending to be present should write immediately to the honorary secretaries Dr Patrick J Webb 127 Rochdale Road Harpurhey Manchester or Dr Bernard Shea 15 Manchester Road Shaw Lancs Recently qualified graduates are specially invited

A series of mock trials in aid of King Edward's Hospital Fund will be held on Tuesdays at 5 30 p m at the London School of Economics Houghton Street Aldwych from May 2nd to 30th and on June 13th Tickets may be obtained from the secretary King's Fund 10 Old Jewry E C 2 or at the doors

The British Institute of Philosophy announces that a course of six lectures on contemporary movements in psychology will be given by Professor F Aveling on May 3rd 10th 17th 24th and 31st and June 7th at 5 45 p m in the University Hall 14 Gordon Square W C Fee 13s 6d members free

A course of three lectures on Principles of Critical Analysis in Relation to Modern Psychology will be given at Bedford College (Regent's Park N W) by Professor E A Bott of the University of Toronto on May 3rd 4th and 5th at 5 15 p m The lectures are addressed to students of the University of London and to others interested in the subject Admission free without ticket

The attention of readers is called to the fact that the telephone number of the British Medical Association and the *British Medical Journal* has been changed to Euston 2111 (four lines)

From May 1st the offices of the American Society for the Control of Cancer will be at 1250 Sixth Avenue Rockefeller Center New York N Y to which address all communications should be directed

The Eugenics Society announces that Dr Aubrey J Lewis will lecture on the inheritance of mental disorders on Wednesday May 3rd at 5 p m in the rooms of the Royal Society Burlington House W Tea at 4 30 Fellows and members may bring guests to tea and to the lecture

M Georges Milsom Director of the Junior Division of the League of the Red Cross Societies will lecture on What the Junior Red Cross is Doing in the World To-day at 14 Grosvenor Crescent S W on Thursday May 4th at 6 p m Lady Northcote will preside

An international Congress for the Protection of Childhood will be held in Paris from July 4th to 9th under the presidency of M Paul Strauss Senator of the Seine former Minister of Health and member of the Académie de Médecine

The Medical School of the National Hospital Queen Square has arranged a course of demonstrations in neurology for candidates for the M R C P examinations on Tuesdays and Thursdays at 6 p m from May 9th to June 29th Fee for sixteen demonstrations £6 6s Special terms can be arranged for those unable to take the whole course Applications should be made to the secretary

The Fellowship of Medicine and Post-Graduate Medical Association has arranged a week end course in cardiology at the City of London Hospital Victoria Park on May 6th and 7th A whole-day course in urology for advanced post graduates (limited to eight) will be given at St Peter's Hospital from May 8th to 20th An intensive week end course on rheumatic disorders and applied hydrotherapy will be given at the Royal Mineral Water Hospital Bath on May 13th and 14th An all-day course in diseases of children will be given at the Queen's Hospital Bethnal Green from May 15th to 27th Forthcoming courses include gynaecology May 22nd to June 3rd obstetrics (week end) May 20th and 21st venereal disease May 22nd to June 17th M R C P evening clinical course May 23rd to June 16th (Tuesdays and Thursdays) Two lectures on cataract extraction for general practitioners will be given by Colonel R H Elliot on May 24th and 31st

A special two weeks holiday post graduate course has been arranged by the Faculty of Medicine of the University of Paris commencing Monday June 19th and devoted to the medical and hydrological treatment of renal vascular and metabolic derangements The practical side of these subjects will be emphasized and there will be facilities for clinical and laboratory studies Detailed summaries of each session will be supplied to those attending the course and a certificate will be obtainable at its conclusion Three main sections have been defined the various renal vascular and glandular syndromes and their treatment the therapeusis concerned with certain nephritic and other diseases and the correlation of hydrotherapy with general medical treatment The greater part of the course will be held at the Necker Hospital under the direction of Professor Maurice Villaret the last three days of it will be spent at Evian For further details application should be made to the Laboratory of Therapeutical Hydrology and Climatology of the Paris Faculty of Medicine

Professor Hans Eppinger director of the medical clinic at Cologne has succeeded to the direction of the first medical clinic at Vienna which has been vacant since the retirement of Professor Wenckebach some years ago

The Cambridge University Press announces for publication next month a book by Dr Karin Stephen entitled *Psycho-Analysis and Medicine A Study of the Wish to Fall Ill* for which Dr Ernest Jones has written a preface

Dr Rist of Paris has been elected an ordinary member and Dr Belou of Buenos Aires and Dr Demoor of Brussels foreign corresponding members of the Académie de Medecine

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QUERIES AND ANSWERS

Dermatitis from Water Softeners

'J N T' asking for information on this subject writes Has anyone experienced dermatitis resulting from the use of domestic water softeners and is this likely to arise when the softener is acting efficiently or only when it has gone out of order? Could an excess of salt used in the process lead to the dermatitis?

Nasal Desiccators

C B N writes In my part of the world Portsmouth it is a season of minor colds—a particularly distressing complaint during the brilliant weather we are enjoying There are many new preparations on the market for drying up the nasal discharges at the source and some of them are available to the public without prescription Could anyone who has studied the question give an opinion as to whether this drying up process is not very harmful to the mucous membrane of the nose and accessory parts?

Proteinuria in Pregnancy

Dr ANDREW S BARR (Glasgow) writes I would like to add my experience to that of Dr V Newton (April 8th p 639) who asks about the significance of a heavy cloud that appears after heating the urine of pregnant women but not until the acetic acid has been added I have had three such cases in two years Like Dr Newton I could find little clue as to its significance in the literature but unlike his cases all mine ran an abnormal course with high blood pressure and pre eclamptic symptoms In all three, the condition cleared up a month or so after labour

Nocturnal Incontinence of Urine

Dr R HASTINGS MOORE (Bristol) in reply to 'Doctorman' writes First of all do skin tests for common articles of diet such as wheat pork tea cabbage fish beef etc and also for feathers and sheep's wool If any results are positive remove the offending article from the child's diet or surroundings Give 1/2 grain of ephedrine when the child goes to bed and 1/2 grain when the parents go to bed I have had several good results from treatment based on allergic principles

Income Tax

Retirement from Practice

J L M retired from practice as at June 30th 1932 On what basis should his liability be computed for his last three months?

*** If he was in sole practice the liability is on the actual amount of his earnings for that period of three months If however he was in partnership the answer depends on whether the whole of the individuals concerned—that is partners immediately before and after June 30th 1932—combine to elect to have the practice treated as having ceased and recommenced *de novo* at that date If they so elect then J L M is in the same position as if he carried on a sole practice if they do not then no change in basis occurs because the practice is continuous the 1932-3 liability is determined by the 1931-2 earnings and J L M's one quarter is affected accordingly

Payments to Dispenser

PERPLEXED employs a lady dispenser at £3 10s per week and usually pays her an additional £3 at midsummer and £5 at Christmas How should these additional payments be regarded?

*** They are paid for services rendered and are liable to assessment in the dispenser's hands Consequently they should be treated by 'Perplexed' as professional expenses and returned by him on the Form 46 as remuneration

LETTERS, NOTES, ETC

Turpentine Idiosyncrasy

Dr C J B BUCHAN (London S E 12) in reference to Dr W W Jeudwine's case reported in the *Journal* of March 25th (p 513) writes to say he had a similar case in 1932 The patient a young woman aged 29 years sustained a sprain of the left ankle on April 26th 1932 Two days later lin terebinth was used to rub her ankle She was able to walk on May 12th, when some blebs appeared over the ankle A vesicular eruption rapidly spread up the leg and thigh and appeared on the right leg and thigh and both arms and forearms The blisters were very large and the limbs became swollen red hot and painful Lot calamin was first prescribed then 10 per cent resorcin lotion but without good results On May 20th lot calamin c ichthyol was used but the eruption remained until June 17th when she was able to resume her work as a clerk Her general condition remained good all the time The skin healed but was not perfectly normal until six weeks after the appearance of the eruption

Experimental Shock

Mr J E R MCDONAGH (London W 1) in the course of a letter referring to Professor McDowall's Arris and Gale Lecture on experimental shock published in the *British Medical Journal* of April 22nd (p 690) writes My experimental work of recent years has thrown light on the subject sufficient to enable me to devote a chapter to it in the second number of *The Nature of Disease Journal* which is now in the press

A Warning

Dr EDITH HARRIS (*née* Abbott) asks us to publish a warning with description of a woman who has been impersonating her recently describing herself as 'Dr Edith Abbott medical officer of health in the L C C Education Service' She is 5 ft 6 in in height usually wears a black tailor made coat and skirt in strict masculine style and has a grey felt hat with a feather at the side She wears pince-nez has fair bobbed hair and a thin face usually wears a shirt blouse and red tie grey stockings and black patent shoes She has been frequenting the Chelsea and the West Central areas

Corrigenda

We are asked to draw attention to the fact that a house-surgeon (male) is wanted at the Bradford Royal Infirmary from June 1st to November 30th not July 1st to November 30th as stated in the advertisement which appeared last week

An obvious misprint in the *Epitome* of March 25th para 232, which dealt with *Br abortus* in milk recorded the pasteurization temperatures as Centigrade instead of Fahrenheit

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals, will be found at pages 40 41 42 43 46 and 47 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 44 and 45

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page *191*

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EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

306 Cranio-hypophyseal Xanthomatosis

After a short review of the literature E LESNÉ J A LIÈVRE and Y BOQUIEN (*Presse Méd* January 25th 1933 p 138) present condensed histories of two cases of cranio-hypophyseal xanthomatosis This disease primarily one of childhood usually occurs between the ages of 3 and 6 most frequently before puberty adults being rarely attacked Males are chiefly affected in the ratio of 3 to 1 The cardinal symptoms are lacunae in the cranial bones a usually intense diabetes insipidus exophthalmos and disorders of development The lacunae not always evident at first—the diabetes being the first symptom to attract attention—are found particularly in the frontal parietal and temporal bones From one to ten in number they may fuse and produce a large depression with polycyclic borders Areas of decalcification may also be found at the base especially in the mastoids These lesions are often palpable and give a membranous sensation the bone completely disappearing Often a cerebral protrusion occurs These cranial modifications cause a peculiar facial aspect Lacunae may also be present in the orbital walls and maxillae and osteoporosis may develop in other bones notably the ilia and femora Exophthalmos almost a constant symptom is very intense and often unilateral Arrest of growth is always marked Secondary signs are ganglionic swellings increased hepatic or splenic volume and a pulmonary condition due to the fibrous reaction following the xanthomatosis Localized or generalized xanthomata may be present The blood cholesterol and lipaemic coefficients are raised The basal metabolism is normal If untreated the disease is usually progressive becomes accentuated and cachexia and death supervene The prognosis is not necessarily hopeless however appropriate treatment having a favourable effect The diagnosis easy in characteristic cases is difficult in atypical forms and must be established by a biopsy The exact pathogenesis is as yet unknown and the authors believe it to be connected with the formation of the xanthomatosis various theories (hypercholesterolaemia the neoplasic theory of Virchow and toxic factors) are cited Treatment is purely symptomatic Thyroid extract post hypophyseal opotherapy and a non fatty diet favourably influence the diabetes and radiotherapy produces a rapidly beneficial effect on the osseous lesions and general development Definite cure is rare recurrences being frequent

307 Pain in Angina Pectoris

S DIETRICH and H SCHWIEGK (*Klin Woch* January 28th 1933 p 135) were led to associate an attack of anginal pain with a marked depression of the S T interval towards the isoelectric line of the electrocardiogram in Leads 1 and 2 with flattening or reversal of the T wave in Lead 3 there was in some cases a high and acute T wave Experiments on animals were performed to see if similar electrocardiographic changes could be produced by interference with the blood supply of the heart muscle It was found that these changes did not so much depend upon the absolute amount of the coronary blood flow as upon the degree to which this blood flow and hence the oxygen and blood supply to the heart muscle was commensurate with the work demanded from the heart Such changes in the electrocardiogram could be produced by ergotamine or pituitrin through constriction of the coronary vessels even with unchanged work of the heart by the action of adrenaline which while increasing the work of the heart does not allow of a correspondingly increased coronary flow or by anoxaemia (direct limitation of oxygen supply to the heart) This last could be definitely demonstrated as an exciting cause of anginal attacks with acute pain by allowing patients to do a certain amount of rather heavy work or by keeping them for some minutes in a respiration chamber containing 8 per cent. oxygen and 92 per cent nitrogen In these ways symptoms of angina were produced and at the same time the electrocardiograph took on the more or less characteristic changes The conclusion is drawn that the essential cause of anginal pain is defective oxygenation of the heart muscle

308 Intermittent Hemiplegia

G POTIER (*These de Paris* 1932 No 607) records eleven illustrative cases of essential intermittent hemiplegia three of which are original in patients aged from 9 to 48 years The condition is explained by the presence of a spasm of the cerebral arteries The attacks of hemiplegia are sometimes associated with Jacksonian epilepsy or migraine In some cases such as those recorded by Michell Clarke several members of the family may be affected Spontaneous recovery may ensue with or without sequels Treatment consists in the administration of antispasmodics especially acetyl-choline

309 Meningococcal Meningitis followed by Tuberculous Meningitis

M SCHUMAN (*Med Journ and Record* January 4th 1933 p 8) records the case of a boy aged 6 years who developed an abortive attack of meningococcal meningitis three weeks after measles An injection of 15 c cm of anti meningococcus serum was given intrathecally and rapid recovery ensued but about three weeks later symptoms of meningitis recurred and tubercle bacilli were found in the cerebro-spinal fluid Death followed within a month The author states that the attack of measles appears to have activated a dormant tuberculous infection in this case

Surgery

310 Surgery of Rectal and Rectosigmoidal Cancers

F W RANKIN (*Minnesota Med* January 1933 p 23) defines the rectosigmoid as the last 5 or 6 cm of the terminal sigmoid and the upper 5 or 6 cm of the extraperitoneal rectum the rectosigmoid juncture is the annular portion of intestine at which the abdominal peritoneum is reflected off the rectum As compared with rectal tumours cancers of this region are difficult to palpate and require different measures for their eradication The rectosigmoid is the commoner site of rectal cancers in ninety cases Rankin found sixty seven in this area twenty-one in the rectum proper and two in the anal canal A better consideration of the lymphatic drainage of this portion of the intestine has influenced operative procedures This drainage which is both intra and extra mural and divides the zones of upward lateral and downward extension differs in the case of tumours high in the rectum from that of those in the anal canal Growths in the latter metastasize forward into the groin those higher toward the sigmoidal mesentery and through lymphatic anastomosis involve the nodes in the ischiorectal fossa in the base of the broad ligaments and around the base of the prostate At their onset the significant symptoms of these cancers in the order of importance are change in the bowel habit and the appearance of bleeding and pain of these bleeding is the chief complaint Diagnosis is usually easy the possibility of syphilis and tuberculosis owing to their rarity can be ignored at first but chronic ulcerative colitis must be excluded A biopsy with prompt cauterization of the wound should be performed as a routine and *x* ray examination of the region beyond the mid sigmoid is

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311 Primary Malignant Growths of the Trachea

J E BARTOUX (*Thèse de Paris* 1932 No 614) states that although malignant tumours in the trachea are rare he has collected fifty-six cases in patients aged from 18 to 82, two of which are original which have been published since Lombard and Baldenweck's paper in 1914 In thirty eight the growth was an epithelioma, in three a sarcoma in two endothelioma in one carcinosarcoma, and in twelve the histological diagnosis was doubtful, though clinically the growth was malignant The clinical signs are late and scanty The predominant symptom, however, is a noisy dyspnoea which is both inspiratory and expiratory The diagnosis is difficult It is important not to attribute the dyspnoea to a pulmonary affection Treatment is disappointing In some cases an urgent tracheotomy is required, or excision of the tumour, as a remedy for the dyspnoea Radiotherapy is only palliative The course of the disease is progressive, and in the great majority of the cases death occurs sooner or later Epithelioma runs its course in three or four years while that of sarcoma is much slower

312 Post Operative Pulmonary Complications

D S KING (*Surg Gynecol and Obstet* January, 1933 p 43) presents a series of statistics based upon two years personal observation of the post operative pulmonary complications occurring in the Massachusetts General Hospital, within the first three or four days after the operation, and accompanied by pyrexia leucocytosis cough, and purulent expectoration Apart from a few cases of true bronchopneumonia and still fewer of massive pulmonary collapse the majority of the cases fell into a large group which is termed "pneumonitis" and in which the alveolar exudate was caused by a relatively avirulent type of pneumococcus was lacking in fibrin and was therefore speedily absorbed In the differential diagnosis between this low grade pneumonia and a lobar or lobular atelectasis radiology and the critical estimation of the physical signs are stated to be of special value King reports that purulent bronchitis and "pneumonitis" were present in nearly all the patients suffering from pulmonary complication atelectasis was associated with the infection in about half the instances, but severe and fatal cases proved usually to be true bronchopneumonias without evidence of atelectasis at any stage He found that complications occurred especially in males after operations on the stomach, duodenum gall-bladder and intestines Pre operative sepsis and perforation, as well as malignancy and a poor general condition, were clearly important factors but seasonal conditions and pre existing respiratory infections were of minor significance The type of anaesthesia employed seemed also to have no bearing on the incidence of complications Pneumonia "pneumonitis" or collapse ensued in 6 per cent of all operations, in 14 per cent of laparotomies and in 7 2 per cent of thyroid operations The pulmonary complication was regarded as being primarily responsible for, or a major contributory cause of death in 0 5 per cent of the total operations performed, and in 1 2 per cent of the laparotomies and hernia operations The percentage of pulmonary complications was at least twice as high for men as for women Among males the incidence of complications following operations on the stomach and duodenum was 46 8 per cent, on the gall bladder, 35 6 per cent, and on the intestines 26 2 per cent This group was consequently designated as the "bad risk" After drained appendix operations the percentage of complications was 22 5, as compared with 6 6 for simple appendicectomy The seasonal curve did not run parallel with that for lobar pneumonia or show any constant rise at any special time of the year

Therapeutics

313 Therapeutic Use of Digitalis Preparations

ELSIE PORTER (*Quart Journ Med* January, 1933 p 93) records a study of the various ways of utilizing the digitalis group of drugs for patients suffering from auricular fibrillation She finds that a massive calculated dose of the tincture of digitalis, at the rate of 0 125 c cm per pound of the body weight of the patient, when administered by mouth in a single draught is the method of choice in this condition, because a perfectly good result can be obtained with certainty in six to eight hours In cases of vomiting resulting from cardiac failure an equally good result may follow the administration of a similar massive dose by the rectum calculated at the rate of 0 1 c cm for each pound of body weight In very urgent cases where a still more rapid action is required, comparable benefit is apparent within thirty minutes from the intravenous injection of a single dose of 1/33 gram of strophanthin The author adds that the line of action is similar, whichever route of administration is adopted all these drugs act through the medium of the vagus, as can be proved by controlling their effects experimentally with the exhibition of atropine She urges the importance of treating all cases of auricular fibrillation by one or other of these massive methods in order that the discomfort of the patients may be relieved in a single day, the older methods involve a continuance of the distress for as long as a week As regards strophanthin, the patients in the author's series were of average weight and it is suggested that although precise accuracy of dosage may be impossible to determine at present this drug can nevertheless be relied on for rapidity of action and certainty of effect, even when the patient is suffering from repeated vomiting of congestive cardiac origination

314 Failure of Bismarsen in Established Syphilis

J L GRUND (*Arch Derm and Syph*, December 1932 p 1074) records that forty patients with positive Wassermann reactions received prolonged treatment—a course of twenty injections—with bismarsen (bismuth arsphenamine sulphonate) Of these in only one case did the serum become persistently negative To each of three other patients was given a course of forty injections with no result, and it was evident that prolongation of this line of treatment was of no avail The author's procedure comprised the intramuscular injection into the buttocks once a week of 0 2 gram of bismarsen powder, dissolved in 2 5 c cm of a solvent containing 0 25 per cent of butyn until the total number of injections had been reached At the end of an interval of a month, during which no antisyphilitic therapy was conducted the Wassermann, Kahn, and Hinton tests were performed on the blood In two cases in which the blood became negative after twenty injections the positive reaction returned within three months In view of these results the author condemns the use of bismarsen in such serum positive cases of syphilis, though he admits that there might have been a higher percentage of successes had his series been larger He cites the parallel disappointing results reported by Stokes and his collaborators in the *Archives* of April, 1931

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From The "British Medical Journal," April 18th, 1931, p 692

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Dermatology

315 Arsenical Vesiculo-Oedematous Erythrodermia

A SÉZARY and G MAURIC (*Presse Méd* January 21st 1933 p 115) discuss the possible role of cutaneous allergy in the pathogenesis of the vesiculo-oedematous erythrodermia which frequently follows arsenical therapy in syphilitics basing their conclusions on a study of seven cases The various tests employed are described Using solutions of novarsenobenzol and acetylarsan as antigens the following reactions were tested the cuti- intradermo- and epidermo-reactions the reaction of Prausnitz Küstner and its variations and the reaction of Koenigstein Urbach The cuti reactions were always negative The intradermo-reactions were usually positive in patients in whom cure had been established for about six weeks and most frequently negative when practised before this time It is concluded therefore that there exists a negative phase (temporary cutaneous anergy) this explains the diverse results in cutaneous tests in these conditions negative results occurring during this phase of anergy Convalescence and repeated cutaneous tests are the chief causes of this negative phase Epidermo-reactions roughly obey the same laws as the preceding ones This indicates that in cutaneous tests it is the epidermis that reacts and not the dermis The remaining reactions were always negative Tests were also made of the functioning of the cutaneous vasomotor system with adrenaline and horse serum and proved normal This apparently indicates that the vasomotor troubles noted in this dermatosis are secondary to and not the cause of the lesion For reasons which are cited the authors do not agree with two theories advanced as to the pathogenesis of this condition the anaphylactic and toxic and maintain that an epidermal allergy is concerned The aspect of the lesions is similar to that which characterizes the last named and they consider that the affection is due to epidermal tissue intolerance this is not always only cutaneous but may be evidenced in other systems by homologous tissue reactions hence the complexity of symptoms in certain cases Commenting on the treatment, Sézary and Mauric do not advise desensitizing the patient and agree with the unanimous opinion that a recommencement of arsenical therapy is dangerous in subjects who have suffered from an erythrodermia even though they doubt its toxic origin

316 Epidermophyton interdigitale

S LOMHOLT (*Ugeskrift for Laeger* January 26th 1933 p 97) states that the mycosis so notorious in the United States as to earn the popular term athletic feet has now assumed serious proportions in Denmark In most cases it runs a mild course with only a little desquamation between the toes and with an occasional fissure In more serious cases eczema with vesicles appears and the itching may disturb the patient day and night He may find long walks not only discomforting but actually painful There is often an associate disease of the hands where however the fungus is very seldom demonstrable It is commonly assumed that this condition of the hands is an allergic reaction to small particles of the fungus which have travelled from the feet to the hands by the blood stream but have not found local conditions favourable to multiplication If whenever a patient complains of a vesicular eruption on the fingers and palms of the hands a point is made of examining the spaces between the toes the primary seat of the disease will be located here with surprising frequency The author has made a systematic survey in a students hostel where ninety seven out of 102 students were examined In thirty nine cases there was no clinical sign of the disease but in eighteen cass there was dry desquamation between the toes in twenty five there were fissures and vesicles and in fifteen there was extensive eczema In four cases definite onychia was demonstrable and in three of these cases the *Epidermophyton interdigitale* was obtained in pure culture from the nails One of the difficulties of combating this infectious condition is the ability of the fungus to survive not only on slippers and boards in public baths but also in the wet sand in open bathing places Much can however be done by daily disinfection of the floors of public baths by avoiding communal principles in the use of slippers and other footwear and by not walking barefoot in the dressing rooms of baths Tincture of iodine will effect a cure provided that the skin has not become too thickened and it can tolerate a daily painting with a 5 per cent. solution Another effective treatment is painting with 0 5 per cent crystal violet in 30 per cent alcohol

317 Aetiology of Pityriasis Rosea

L W LORD (*Arch Derm and Syph* December 1932 p 981) who records two cases of pityriasis rosea in a mother and child suggests the possibility of this condition being really a feebly infectious disease the causative organism of which has not yet been discovered He discusses the various theories that have been put forward to explain its occurrence and concludes that the most likely is the one which regards it as a specific exanthem with a special incubation period a stage of evolution and a stage of decline The herald patch is presumably the portal of entry although there is evidence that the tonsils may be concerned in this respect The disease is comparatively rare its rate of incidence being under 4 per cent *of skin affections Yet the literature contains* records of no fewer than nineteen instances of the eruption appearing simultaneously in two or more members of a family In one of Lord s cases the use of *x* rays cut the disease short the herald patch disappearing seventeen days later and no signs of generalized disease following The author compares pityriasis with syphilis in respect of its having a primary lesion at the portal of entry followed after a period of incubation by a general exanthem with or without general symptoms and adenopathy including enlargement of the tonsillar tissues as part of such adenoid involvement He expresses no opinion as to whether the infecting organism is a micrococcus a fungus or a filterable virus but believes that work on the lines of Wile (reproducing the disease by inoculation of artificially obtained blister fluid from the herald patch) will eventually lead to its identification The clinical value of treating this patch with a single exposure to *x* rays is emphasized

Obstetrics and Gynaecology

318 Clinical Features of Endometriosis

L SEITZ (*Zentralbl f Gynak* January 7th 1933 p 1) points out that whereas all cases of endometriosis are characterized by the presence of ectopic endometrium which has an inclination to infiltrate neighbouring tissues and which responds to the ovarian hormone by cyclical phenomena such as occur in the uterine mucosa the clinical features differ widely partly on account of the varying situations of the heterotope endometrium and partly because it shows a variable tendency to infiltrate and to respond to the hormonic stimulus Three forms of endometriosis have fairly characteristic clinical symptoms—namely endometriosis of the myometrium (internal endometriosis) retrocervical endometriosis and endometriosis of the ovaries tubes and pelvic peritoneum with formation of chocolate cysts and conglomeration tumours In *endometriosis interna* the chief complaint is of increased and prolonged menstrual bleedings which are probably the mechanical result of pressure in spite of the somewhat frequent association with myoma and adnexal inflammation dysmenorrhoea beginning a few days before and lasting during the first days of the menses is frequently present The uterus is symmetrically enlarged and universally hard In the differential diagnosis curetting serves to exclude a polypus or (usually) a small submucous myoma but the endometrium is not found to be different from that of haemorrhagic metropathy In

treatment *x* radiation is justifiable in those approaching the climacteric, but total extirpation may afterwards be necessary Retrocervical endometriosis is detected by retrovaginal examination, which shows behind the cervix a tender mass, swelling at the menses which projects towards or penetrates the posterior fornix, and advances towards the rectum and utero-sacral ligaments The infiltrative properties are specially well marked in this region, and resemble those of a malignant tumour, stenosis of the rectum or ureters may be produced In the early stages a small circumscribed retrocervical endometrioma may be removed per vaginam, but the infiltrating tumours need radical excision of the uterus and utero sacral ligaments—an operation which is often extremely difficult, and which it is sometimes wise to replace by *x* radiation in massive doses (as for carcinoma) Prolonged and careful after control is requisite In intraperitoneal (external) endometriosis the pain is definitely cyclical The pre menstrual and menstrual phases are associated with signs of peritoneal irritation and perhaps vesical or rectal tenesmus and the dysmenorrhoea persists throughout the period becoming more severe during successive menses The diagnosis is usually confused with that of subacute and chronic adnexal and pelvic peritoneal inflammation Endometriosis is indicated in the absence of gonorrhoeal or appendicular infection, and when the symptoms increase in severity in spite of lengthy conservative treatment *X*-radiation in castration doses brings about relief About 10 per cent of cases of endometriosis fail to show improvement after the menopause, natural or induced

319 Prevention of Puerperal Thrombosis

D G WESSELINK (*Nederl Tijdschr v Geneesk* February 11th 1933, p 667) states that the incidence of puerperal thrombosis can be greatly diminished by improvement in the circulation as was shown by his experience at the Rotterdam Obstetrical Institute Before 1929 all the patients lay flat on their back in bed, and were allowed up on the tenth day Since 1929 inclusive it is only during the first twelve hours after delivery that they have been kept on their back with a cushion for their head Subsequently they are encouraged to move about in their bed as much as they like though they are kept in bed as formerly till the tenth day No bad results were observed from the change of method but the actual number of cases of thrombosis has fallen from thirteen in 1924 to one each in 1930 1931, and 1932 It is probable that the administration of a freshly prepared solution of ergot is also partly responsible for this good result

Pathology

320 Experimental Food Poisoning in Monkeys

O C WOOLPERT and G M DACK (*Journ Infect Dis* January–February 1933 p 6) record experiments in which typical food poisoning was produced in *Macacus rhesus* monkeys by feeding with filtrates of *Staphylococcus aureus* cultures At the commencement it was found that monkeys proved insusceptible to staphylococcal filtrates which were definitely toxic to human beings The authors therefore made use of observations recorded by previous workers that more potent toxic filtrates can be produced by growing the organisms in an atmosphere of 20 to 25 per cent carbon dioxide Two- to three day cultures on 1 per cent agar, *p*H 6, in this concentration of CO_2 were filtered under moderate pressure through gauze the resulting fluid was centrifuged and either filtered through a Berkefeld N candle or treated with 0 5 per cent phenol Twenty one monkeys were fed with 2 to 20 c cm per kilo of body weight with preparations from four different strains of *Staphylococcus aureus* With one exception every monkey developed typical symptoms of food poisoning generally commencing within two or three hours The symptoms consisted of initial pallor increased salivation and regurgitation, these were followed by vomiting which was often profuse and projectile, and tended to recur in paroxysms Diarrhoea was frequently a marked accompanying symptom Recovery set in rather abruptly after some hours and the following day the animal appeared normal except for loss of weight Comparison of the so called "enterotoxin with the haemolytic, dermal, and rabbit killing toxins elaborated by the organisms failed to show any exact correlation between them The fact that the enterotoxin is more resistant to heat and to adsorption, and has a lower antigenic capacity, suggests that it is of simpler chemical constitution than the other toxins

321 The Antigenic Value of Anatoxin

By previously recorded comparative animal experiments of flocculation *in vitro* and immunization *in vivo* Ramon has demonstrated that the flocculating and immunizing properties are in direct mutual relation, and that the reaction of flocculation fixes the antigenic value of the anatoxin G RAMON and P NÉLIS (*Ann de l Inst Pasteur* January, 1933, p 67) record a series of experiments to determine the real immunizing value for man of an anatoxin and the direct parallelism between the antigenic and immunizing properties of a given strain Animal experiments showed considerable individual differences in the elaboration of antitoxin which rendered all computation of dosage difficult The results however indicated that there was an undoubted relation between the flocculating and immunizing values of the different anatoxins Vaccinations were performed on children under similar conditions with anti diphtherial anatoxins of a high antigenic value and of different strains It was found that of the many anatoxins employed that which showed the highest flocculating power gave the greatest percentage of immunizations (negative Schick reactions), and that a direct relation did exist between the flocculating and immunizing powers of the anatoxin The former—namely its intrinsic antigenic value expressed in anatoxic units—represents the most important factor in anti diphtherial immunization The progress in anti diphtherial vaccination has been due to the use of anatoxins of high intrinsic antigenic value From an experimental study of the role of different factors in active anti diphtherial immunization P NÉLIS (ibid, p 79) confirms the foregoing conclusions Other non specific factors, such as the addition of calcium chloride, increase the antigenic value Since these, however, give intense reactions their use is inadvisable

322 Calcification of the Myocardium

G W PARADE and F KUHLMANN (*Münch med Woch*, January 20th, 1933, p 99) report four cases of calcification of the connective tissue of the heart which were diagnosed by *x*-ray examination This 'cardiac skeleton' consists of the connective tissue between the auricles and ventricles, giving support to the auriculo-ventricular valves on the one hand and origin to the great vessels on the other Between the fibrous mitral and tricuspid rings and the aortic valves the cardiac skeleton is somewhat enlarged, and forms the trigonum sinistrum and dextrum The bundle of His passes through the latter In old subjects these areas are composed of fibrous tissue relatively poor in nuclei and undergoing collagenous changes, so that degeneration and sclerosis readily set in In one of the cases reported the patient was a man aged 72, with carcinoma of the prostate but without any cardiac symptoms A radioscopical examination of the heart, however showed a half-moon shaped, dark, calcified area undergoing lively movement The post mortem diagnosis was calcification of the posterior part of the mitral ring Calcification of the aortic valve was diagnosed in a female subject with aortic stenosis, the skiagram showing a shadow of ring-shaped, irregularly calcified tissue, which moved towards the apex during systole and towards the base during diastole The authors state that these calcifications do not interfere with the action of the valves unless the process actually involves them If the process spreads to the right trigonum disturbances of auriculo ventricular conduction may follow as a result of interference with the bundle of His

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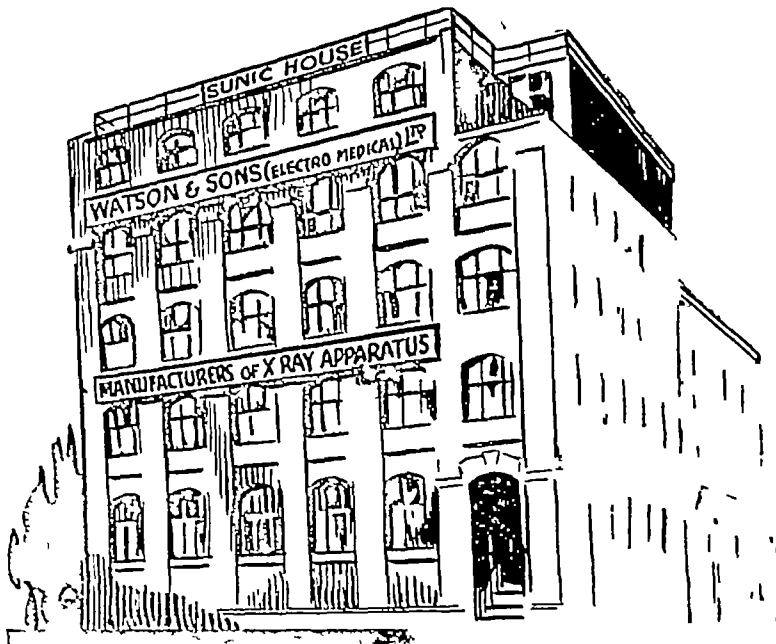

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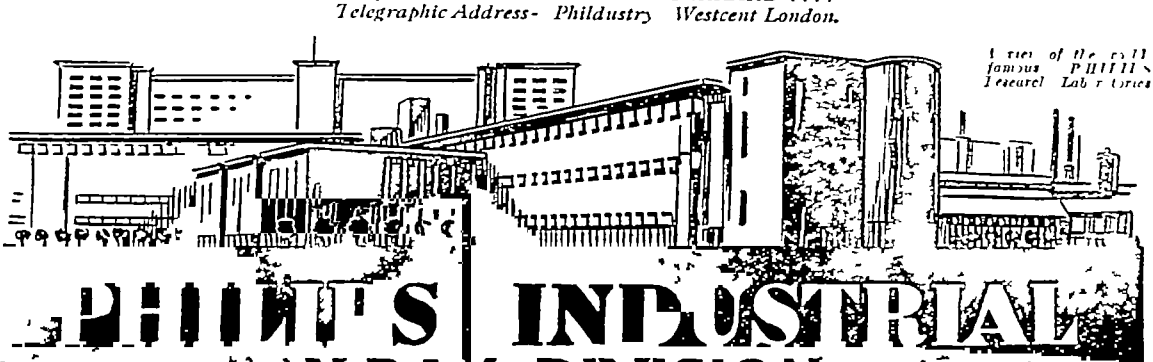

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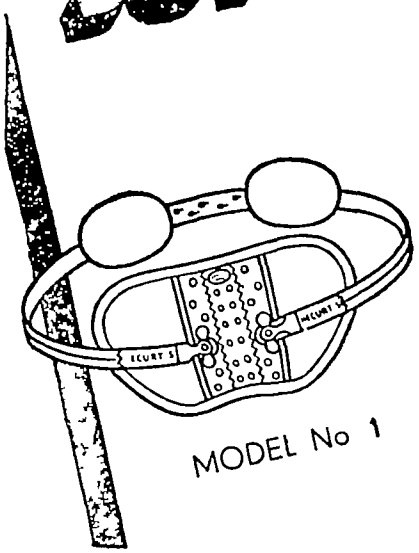

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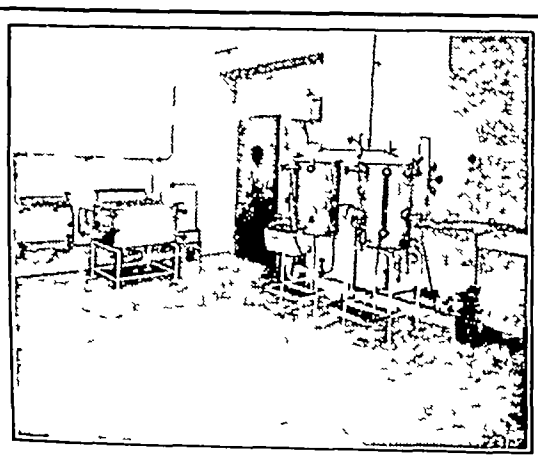

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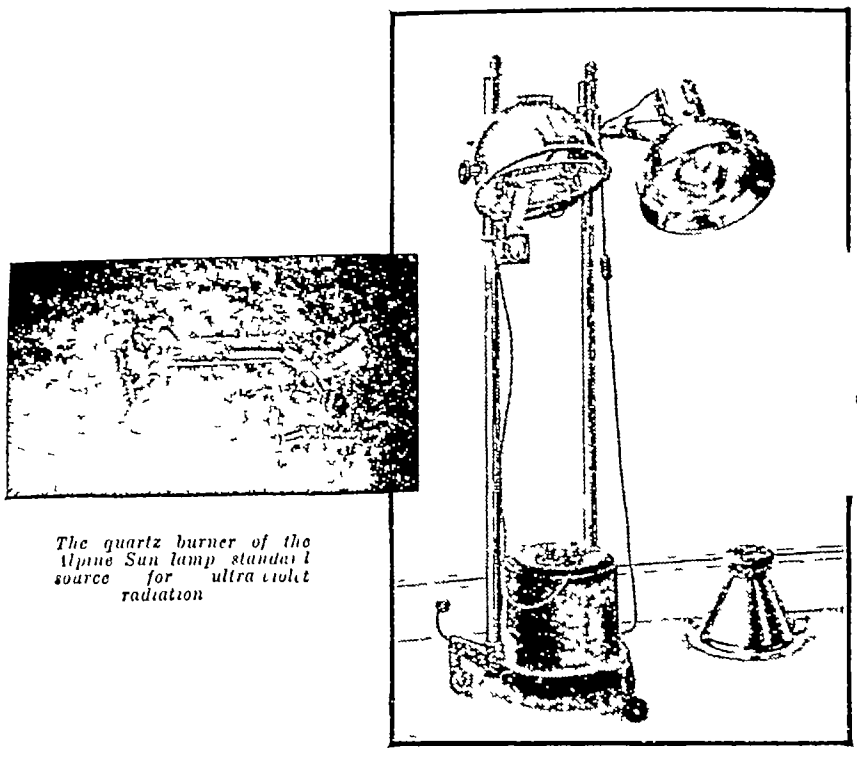

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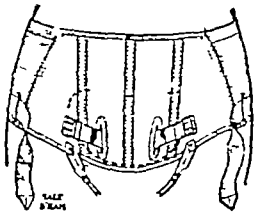

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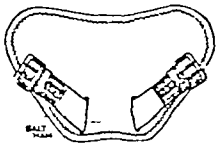

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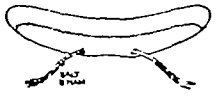

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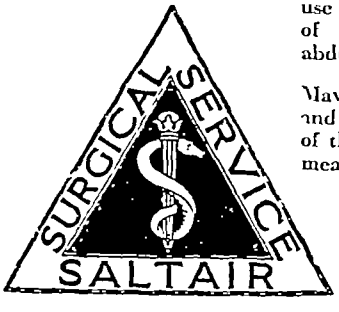

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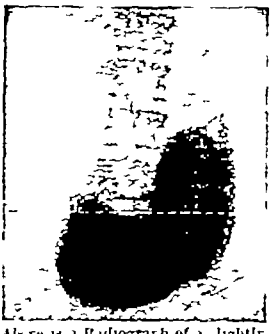

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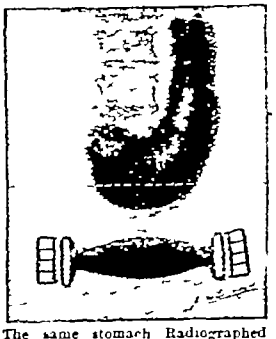

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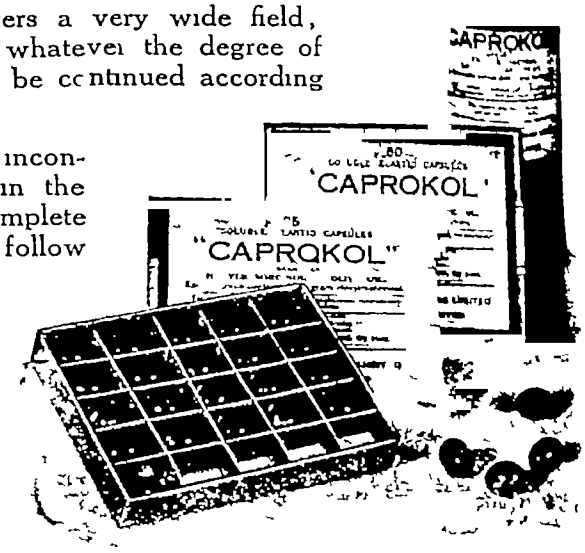

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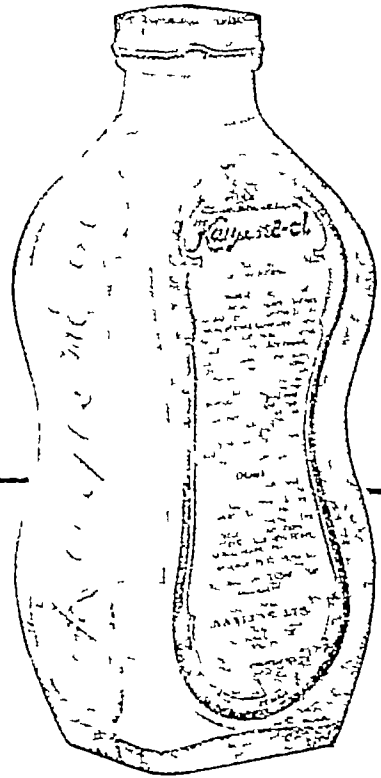

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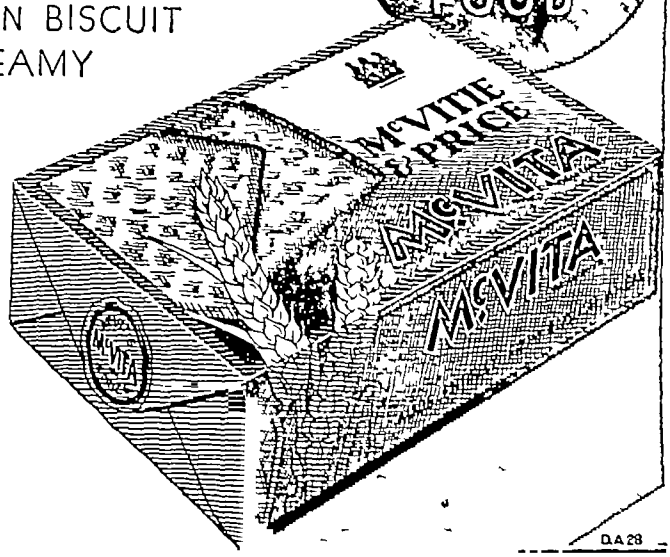

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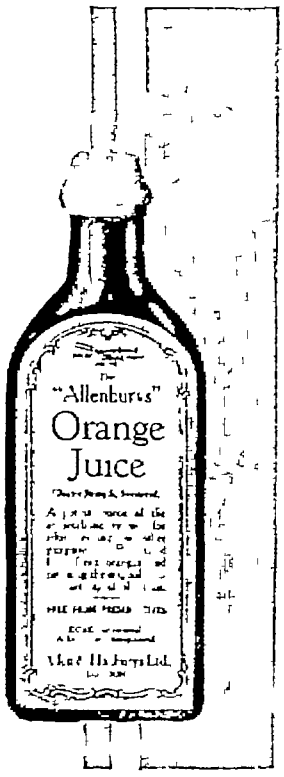

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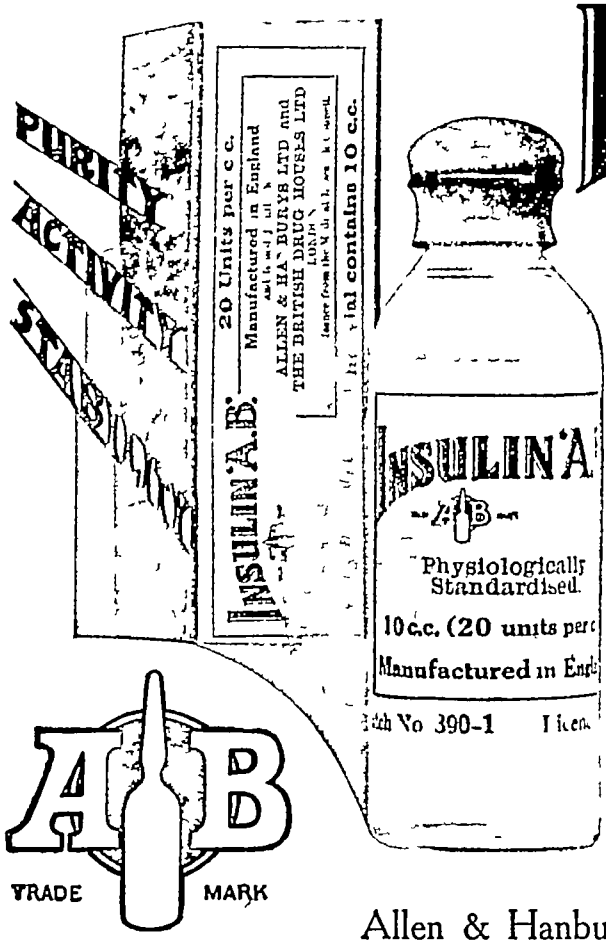

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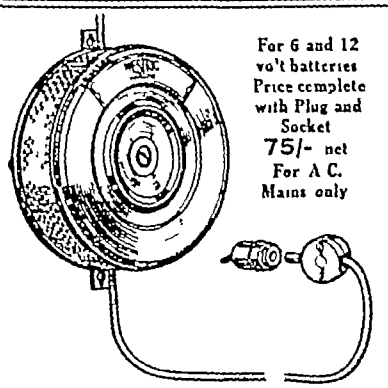

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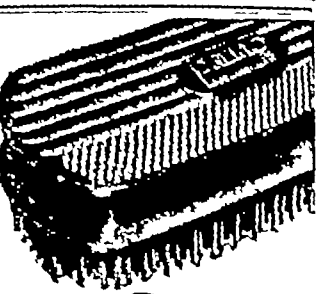

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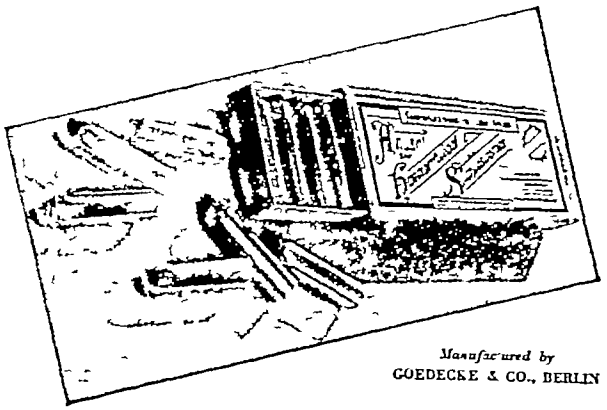

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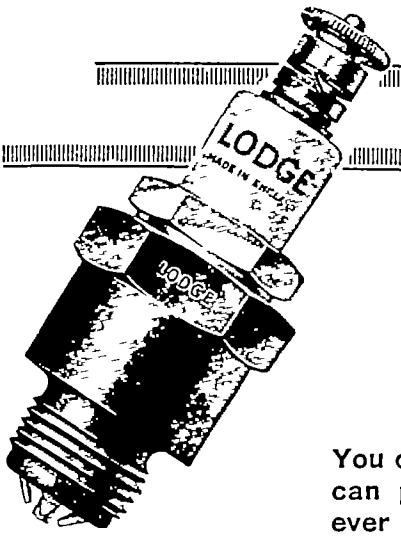

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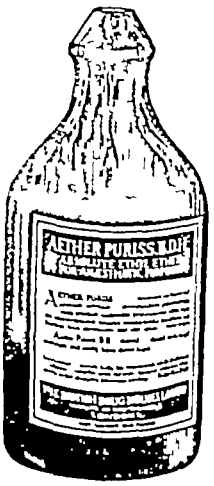

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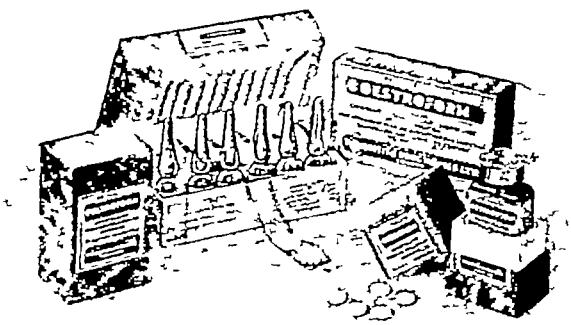

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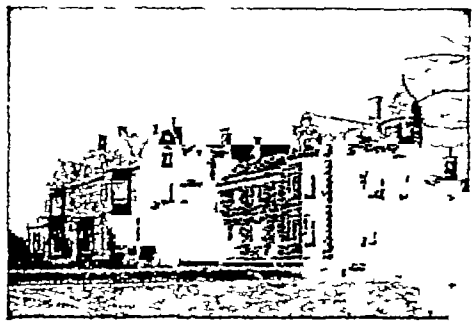

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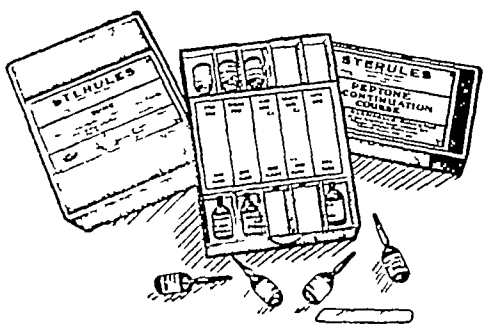

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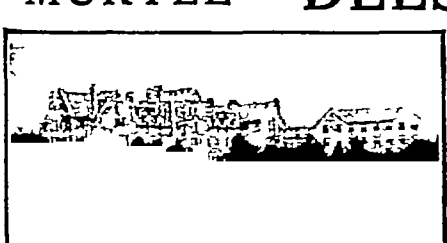

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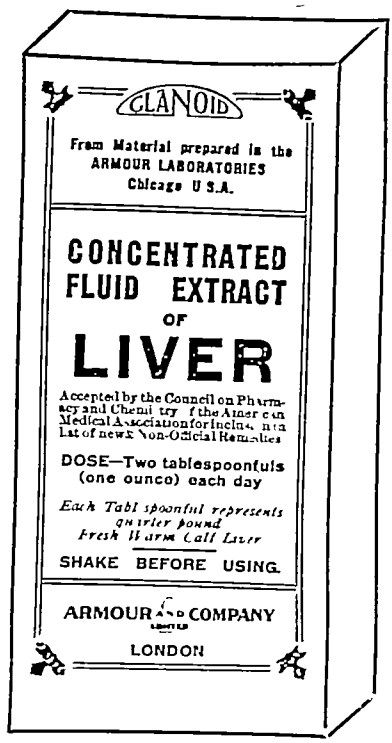

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SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN

A SPECIAL GENERAL MEETING of the Members of this Society will be held at 11 Chandos Street Cavendish Square on FRIDAY MAY 12th at 5 p m to consider the revised and redrafted By laws copies of which, together with copies of the present By laws are being sent out with the notices convening the meeting

11 Chandos Street EDWARD J BLACKETT
Cavendish Square W 1 Secretary
April 28th 1933

ST THOMAS'S HOSPITAL MEDICAL SCHOOL

(University of London)

DEMONSTRATOR IN PHYSIOLOGY

Applications are invited for this appointment to date as from September 1st 1933, at a salary of £400 per annum

Applications with testimonials and Academic Record should be forwarded to the Dean of the Medical School by May 27th

FOUR LECTURES ON HEALTH AND INDUSTRY illustrated with lantern slides will be delivered by Sir GEORGE NEWMAN, K C B M D D C L on MAY 2nd 3rd 4th and 5th 1933 at Gresham College Basinghall Street E.C 2, at six o clock. Admission free

UNIVERSITY EXAMINATION POSTAL INSTITUTION

17, RED LION SQ., LONDON, W C 1

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Principal Mr F S WEYMOUTH, M A (Lond.)

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SOME SUCCESSES

M D (Lond.),	1901-32 (9 Gold Medallists during 1913-32)	368
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M B, B S (Lond),	*Final* 1918-32 (Completed Exam.)	206
F R C S (Eng.),	*Primary* 1919-32	146
	Final	155
M R C P (Lond.),	1919-32	215
D P H	(*Various*) 1906-32 (Completed Exam.)	316
F R C S (Edin.),	1918-32	53
M R C S, L R C P	*Final* 1919-32 (Completed Exam.)	456
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Preparation for the above, also for Medical Preliminary and all examinations leading up to M R C S L R C P, or M B of various Universities also for M R C P (Edin.) D P M D O M S D T M & H D L O D G O D M R E M M S A L M S S A etc Many successes.

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M R C P M D Primary and Final F R C S I R C S (Edin.) also Final M B B.S. and M R C S L R C P Museum and Microscope Work Also Private Tuition

MEDICAL PROSPECTUS (48pp.)

CONTENTS —The method and the cost of entering *Particulars of all* I Courses, and Oral to Higher Medical or the Higher Surgeries for the Special other Courses. Open Lings for Women Hints for writing theses

Medical Prospectus gratis along with list of Tutors etc on application to the Principal Mr F S WEYMOUTH M A 17 Red Lion Sq London W C 1 (Telephone HOLBORN 6315)

Royal College of Physicians of London

Dr F ARNOLD CARMICHAEL will deliver the OLIVER SHARPEY LECTURES on May 2nd and 4th at 5 o'clock at the College Pall Mall East S W 1

Subject *The Peripheral Pathway for Sensation*

Any Member of the Medical Profession admitted on presentation of card

By Order of the President,
H M BARLOW, Secretary

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EDINBURGH POST-GRADUATE COURSES IN MEDICINE

IN CONNECTION WITH THE UNIVERSITY AND ROYAL COLLEGES 1933

The POST GRADUATE COURSES to be held this year comprise

(1) A GENERAL PRACTITIONERS COURSE from August 14th to September 9th

(2) A GENERAL SURGICAL COURSE from August 14th to September 9th

The composite fee for each Course will be £10 10s. for the four weeks, or £6 6s for either the first or second fortnight.

(3) A COURSE IN OBSTETRICS AND GYNAECOLOGY AND CHILD LIFE AND HEALTH from July 17th to Aug 12th Fee £10 10s. (Minimum number 12)

In addition to the above, the following *Special Courses* have been arranged SUMMER TERM

SURGICAL PATHOLOGY —May 9th Fee £4 4s | OPHTHALMOSCOPY —May 1st Fee £5 5s. Minimum number 5.

SUMMER AUTUMN AND SPRING TERMS.

CLINICAL SURGERY (including Radiology).—Royal Infirmary Fee £4 4s
CLINICAL MEDICINE.—Royal Infirmary (May and October). Fee £3 3s.
CHILD LIFE AND HEALTH (May and October).—6 Clinical Demonstrations. Fee £1 1s.
DISEASES OF EAR NOSE AND THROAT.—Royal Infirmary Minimum number 5. Fee £10 10s
VENEREAL DISEASES.—Royal Infirmary Minimum number 5 Fee £10 10s.
DISEASES OF EAR NOSE, AND THROAT.—Ear and Throat Dispensary Cambridge Street. Fee £4 4s
DISORDERS OF SPEECH AND VOICE (Summer and Autumn only).—Minimum number 8. Fee £3 3s.
UROLOGICAL SURGERY AND TREATMENT OF FRACTURES (Spring Term).—Fee £3 3s.
NEUROLOGICAL SURGERY (March). Fee £2 2s.
ORTHOPAEDIC SURGERY (Summer and Autumn) Fee £4 4s.

DURING THE PERIOD OF THE GENERAL COURSES. (AUGUST SEPTEMBER).

UROLOGICAL SURGERY AND TREATMENT OF FRACTURES.—Fee £5 5s
DISEASES OF THE BLOOD.—Fee £3 3s.
X RAY PHYSICS AND ELECTRO-TECHNICS.—Fee £3 3s.
ULTRA VIOLET RADIATIONS AND THEIR USES.—Fee £3 3s.
NEUROLOGICAL SURGERY (September) Fee £2 2s.
MODERN DIAGNOSTIC METHODS.—Minimum number 6 Fee £4 4s.
OPHTHALMOSCOPY.—Minimum number 5 Fee £5 5s.
GENETICS IN RELATION TO MEDICINE.—Fee £3 3s.

Further particulars may be had on application to the Hon Secretary Post Graduate Courses in Medicine, University New Buildings Edinburgh.

POST-GRADUATE COURSES:

Open only to Members of the Fellowship of Medicine. Annual Subscription £1 1s.

DERMATOLOGY (St. John's Hospital May 1st 27th afternoons) CARDIOLOGY (Victoria Park Hospital May 6th and 7th week end, all day) UROLOGY (St. Peter's Hosp advanced May 8th 20th all day) RHEUMATISM (Bath Som May 13th and 14th week-end all day) CHILDREN (Queen's Hosp., May 15th 27th all day) OBSTETRICS (City of London Maternity Hosp., May 20th and 21st, week end all day) M.R.C.P EVENING COURSES (Clinical and Patho'ogical Tues and Thurs May 23rd June 15th)

Apply— *Clinical instruction available daily by Panel of Teachers.*

FELLOWSHIP OF MEDICINE, 1, Wimpole Street, London, W 1 (Langham 4266.)

Post-Graduate Teaching, West London Hospital.

Continuous Clinical Instruction daily from 10 a.m. to 4 p.m.—Post-Graduates may enrol at any time for any period from 1 week to 3 months.—Special facilities for "Study Leave, and for those wishing to take a course under the "Grant aided Scheme for Post-Graduate Study by Insurance Practitioners."—Anaesthetic Courses.—Clinical Assistantships.—Annual Membership Tickets at Special Terms available for General Practitioners who wish to attend the Hospital Practice at irregular intervals.

Prospectus from the DEAN, West London Hospital, Hammersmith, W 6

NATIONAL HOSPITAL

For Diseases of the Nervous System, QUEEN SQUARE W C 1 MEDICAL SCHOOL

M R C P

A course of Demonstrations in Neurology for candidates for the M.R.C.P examinations will be held from May 9th to June 29th, on Tuesdays and Thursdays, at 6 p.m.

Fee for 16 demonstrations £6 6s. Special Terms can be arranged for those unable to take the whole course of Lectures.

Applications should be made to the Secretary J. G. GREENFIELD Dean of the Medical School.

QUEEN CHARLOTTE'S MATERNITY HOSPITAL

MARYLEBONE ROAD, N W 1

Medical Students and Qualified Practitioners admitted to the Practice of this Hospital. Unusual opportunities are afforded of seeing Obstetrical Complications and Operative Midwifery (about one half of the total admission being primiparous cases). Over 2,700 patients are admitted to the Wards annually and in the Ante-natal Department there are over 20 000 attendances per annum

Certificates awarded as required by the various Examining Bodies.

For rules fees, etc. apply H B STOKES Secretary Superintendent.

MASTERY OF MIDWIFERY

Examinations for the Diploma of the Mastery of Midwifery of the Society of Apothecaries of London will be held beginning Monday May 15th and Monday November 20th 1933.

For regulations apply to the Registrar of the Society Water Lane E.C.4

Medical and Dental Students

Special Classes for Pre-Medical and Dental Exams. Matric. and Prelims.

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PREP COURSE with daily Lecture-Demonstrations of Museum Specimens of Surg., Path for next Exam. will commence shortly POSTAL TUITION at any time.—Further partics. H. C. ORAM F.R.C.S Surgeons Hall, Edinburgh.

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BEHNKE METHOD Estab. 1882. Cases non resident. treated at 39 Earl's Court Square S W 5 and in residence in the Summer holidays at Miss BEHNKE'S house on the Chilterns.

"Pre-eminent success in the education and treatment of stammering and other speech defects."—"Times."

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of Miss BEHNKE, 39 Earl's Court Sq. S W.5

Preliminary Examinations

The COLLEGE OF PRECEPTORS holds Preliminary Examinations for Medical and Dental Students in London and at Provincial Centres in March June, September and December For Regulations apply to the Secretary College of Preceptors. Bloomsbury Square, London W C 1

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Apply for particulars and free booklet Hints on Writing a Thesis for the M.D Degree, to the SECRETARY Medical Correspondence College 19 Wellbeck Street London W 1.

DEFECTIVE SPEECH.

Remedial Instruction on approved lines for Stammer Aphonia, Cleft Palate, Tracheotomy and disturbed or retarded Co-ordination.

Appreciations from Eton and Harrow

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Scholarship Examination May 27th, 1933. Two Scholarships of fifty guineas and Two of thirty five guineas per annum open to boys and girls between the ages of eight and fourteen years. For particulars apply to the Headmaster

MEDICAL CORRESPONDENCE COLLEGE,

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CONJOINT BOARD EXAMINATIONS

Candidates taking the First, Second, or Final Conjoint Examinations should make sure of passing at the first attempt by enrolling for the short intensive Revision Courses of the College

POSTAL, ORAL, PRACTICAL, CLINICAL COURSES.
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Church Missionary Society

The ANNUAL MEETING of the MEDICAL MISSION AUXILIARY OF THE C M S will be held in the CENTRAL HALL WESTMINSTER at 7 p m on Wednesday May 3rd 1933

The Chair will be taken by
COL SIR CUSACK WALTON, D S O
and the speakers will be
A I SCHOFIELD Esq M A Camb M R C S L R C P (Mengo Uganda)
S D STURTON Esq M D B Ch M A Camb D T M Liv (Hangchow Chekiang)
THE REV W WILSON CASH D S O O B E (General Secretary of C M S)

Tickets of admission may be obtained from the Superintendent Loan Department Church Missionary Society Salisbury Square E C 4

There will be a small number of reserved seats at 1s each

UNIVERSITY OF BIRMINGHAM

FACULTY OF MEDICINE.

LECTURER IN PATHOLOGY

Applications are invited for the post of Lecturer in Pathology to Dental Students and Pathologist to the Queen's Hospital Birmingham at a stipend of £400 per annum

Applications with three testimonials should be sent on or before May 15th to the undersigned from whom further particulars may be obtained

The University, Birmingham. April 1933. C G BURTON, Secretary

THE UNIVERSITY OF SHEFFIELD

FACULTY OF MEDICINE

The Council of the University and the Board of Management of the Royal Infirmary Sheffield acting conjointly are about to make an appointment to the post of ASSISTANT PATHOLOGIST to the Infirmary and DEMONSTRATOR OF PATHOLOGY in the University The salary offered is £500 per annum Applications accompanied by the names of three referees should be sent on or before May 17th to the undersigned from whom further details may be obtained

W M GIBBONS Registrar

UNIVERSITY OF LONDON

THOMAS SMYTHE HUGHES MEDICAL RESEARCH FUND

Application for grants from the Thomas Smythe Hughes Fund for assisting Medical Research accompanied by the names and addresses of two references must be made (on a prescribed form) to the Academic Registrar University of London, South Kensington S W 7 (from whom further particulars may be obtained) not later than May 15th 1933

March 16th 1933

COUNTY BOROUGH OF DEWSBURY

ASSISTANT SCHOOL MEDICAL OFFICER AND ASSISTANT MEDICAL OFFICER OF HEALTH

Applications are invited from duly qualified and registered Medical Practitioners (men or women) for the post of Assistant School Medical Officer and Assistant Medical Officer of Health

Applicants should have had at least three years experience since qualification Experience in eye work and refractions is essential The possession of the D P H and previous experience in School Medical Inspection and the work of a School Clinic, and in Tuberculosis and Child Welfare will be considered important additional qualifications

The salary scale will be £500 per annum rising by annual increments of £25 to £700 per annum, subject to a temporary percentage reduction Particulars of the duties and terms and conditions of appointment together with application forms may be obtained from Dr J GREENWOOD WILSON, Medical Officer of Health Municipal Buildings Halifax Road Dewsbury to whom all applications accompanied by copies of not more than three recent testimonials should be delivered not later than Saturday May 13th

Canvassing in any form will be a disqualification

Town Hall, Dewsbury. April 1933. HOLLAND BOOTH, Town Clerk

CITY OF PLYMOUTH

ASSISTANT RESIDENT MEDICAL OFFICER

(AMENDED ADVERTISEMENT)

Applications are invited from duly qualified and registered male Medical Practitioners for the post of Resident Medical Officer at the City Hospital Plymouth—a general Hospital of 577 beds The person appointed will work under the control of the Medical Superintendent Candidates should have had previous experience as House Surgeons or House Physicians

The appointment will be for twelve months at a salary of £350 per annum (subject to a temporary reduction of 7½ per cent) and quarters food etc will be provided The appointment will be terminable by one months notice on either side

Forms of application will not be provided but candidates should state their age their previous experience and present appointment if any Canvassing will disqualify

Applications endorsed Resident Medical Officer together with copies of three recent testimonials must be received by the undersigned by first post Monday May 8th

F PEIRSON M D M R C S D P H
Town Hall, Stone House, Plymouth. April 21st 1933. Medical Officer of Health

ROYAL FREE HOSPITAL

Gray's Inn Road W C 1

Applications are invited from medical women who have had previous V D experience for the post of ASSISTANT MEDICAL OFFICER in the V D Department Salary at the rate of £350 per annum part time appointment is for twelve months from July 1st next Intending candidates should submit applications stating age and experience with copies of three recent testimonials to the undersigned on or before May 10th

REGINALD R GARRATT Secretary

ROYAL FREE HOSPITAL

Gray's Inn Road W C 1

Applications are invited from duly qualified male medical candidates for the post of SENIOR RESIDENT MEDICAL OFFICER vacant June 1st and tenable for one year Salary £150 per annum and emoluments of about £90 per annum with board and residence Intending candidates should submit applications stating age and experience accompanied by copies of three recent testimonials to the undersigned on or before May 8th

REGINALD R GARRATT Secretary

COACHING GIVEN IN MEDICINE PATHOLOGY and PHYSIOLOGY by M B B S (Lond) M R C P (Lond) B Sc Honours (Lond) Physiology, experienced Desirous of beginning small classes in London — Address No. 2598, B M A House Tavistock Square W C 1

DEPARTMENT OF HEALTH FOR SCOTLAND

APPOINTMENT OF REGIONAL MEDICAL OFFICER

The Department of Health for Scotland are prepared to receive applications from registered Medical Practitioners for appointment as Regional Medical Officer to be employed on combined clinical and administrative duties in connection with the National Health Insurance Medical Service and otherwise

DUTIES

The successful candidates will be required to perform such duties as may be assigned to him/her from time to time by the Department including

(a) Clinical work arising out of questions of incapacity for work of diagnosis and treatment among insured persons
(b) Administrative work in connection with the insurance medical service

RESIDENCE.

The Regional Medical Officer will be required to reside in such part of Scotland as the Department may determine

REMUNERATION

The rate of remuneration will be £800 by annual increments of £30 to £1 100 per annum No cost of living bonus will be payable in addition thereto and meantime the salary will be subject to a reduction of 10 per cent

Applicants must be medical practitioners of standing in the profession and with experience in hospital and general practice They must be not more than 35 years of age on May 15th Consideration will be given to extra diplomas in special branches of medicine

Further particulars and forms of application may be had from the Secretary Department of Health for Scotland 125 Georg Street Edinburgh 2 Letters applying for forms of application should have the words Regional Medical Officer boldly written in the top left hand corner of the envelope No applications can be considered if received after May 15th.

CITY AND COUNTY OF KINGSTON UPON HULL

ASSISTANT MEDICAL OFFICER OF HEALTH

The Corporation of Hull invite applications from duly qualified Medical Men under the age of 40 years and of not less than three years standing in their profession for the post of Assistant Medical Officer of Health

Preference will be given to candidates in possession of the Diploma in Public Health or equivalent qualification

Salary £600 per annum rising by annual increments of £25 to £700 subject to a temporary deduction authorised by the City Council

The appointment is subject to the provisions of the Local Government and Other Officers Superannuation Act 1922

The successful candidate will be required to devote the whole of his time to the duties of the office which consist mainly of work in the School Medical Department, but may also include duty in any section of the Health Services of the City or Port

Experience in refraction work is essential.

A form of application may be obtained from the undersigned, and must be returned to the Medical Officer of Health (in an envelope endorsed Assistant Medical Officer of Health) together with copies of three recent testimonials not later than the first post on Friday May 5th

A CHEW, Medical Officer of Health.
Health Dept, Guildhall, Hull. April 1933.

ROCHDALE INFIRMARY AND DISPENSARY

(110 Beds.)

The Board of Management invite applications for the appointment of JUNIOR HOUSE SURGEON The salary attached to the appointment is £200 per annum *including* board residence and laundry

Applications stating age nationality etc together with copies of three recent testimonials, to be sent to the Secretary endorsed House Surgeon Particulars of duties and conditions of appointment may be had on application to the Secretary

Infirmary Office, Rochdale Lancs. W WYNN, Secretary

ROYAL CHEST HOSPITAL,

City Road E C 1
(Royal Northern Group of Hospitals.)

The post of HOUSE PHYSICIAN will be vacant on June 1st The appointment is for six months. Salary at the rate of £100 per annum with board residence and laundry

Applications with copies of testimonials should be sent on or before May 3rd to the undersigned from whom forms of application rules and further particulars can be obtained.

CHERRY C PANTER, Secretary
Royal Northern Hospital, Holloway Road, N 7

"Eucortone"

(Extract of Suprarenal Cortex)

In the treatment of

Addison's Disease

Efficacy established by biological tests and clinical use

(*Journal of Physiology*, June 6, 1931 *Proc. Physiol Soc.* May 2, pp 4, 5, and 9)

"Eucortone" is prepared by the method of Swingle and Pfiffner, and is highly successful in the treatment of Addison's Disease Particularly striking is the rapid restoration of appetite, weight, strength, and feeling of well-being Biological tests and clinical use show that "Eucortone" contains the long-sought cortical hormone in an active state and is free from adrenalin activity The extract contains no irritant or toxic substance, and is sterile

1 c cm is equivalent to 30 grams of cortex In rubber capped bottles of 25 c cm

Further particulars on application

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Digitalin Granules "A. & H."

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Physiologically Standardized

Digitalin Granules, "A & H," a British preparation, consist of the *Digitaline cristallisée* of the French Pharmacopœia This substance is the most active principle of digitalis leaves, and, because of its reputation for uniform activity, it has long been popular, particularly on the Continent Its use is recommended by high authority in cases where galenical preparations of digitalis have failed

For Prescribing
In tubes, containing 40 granules, 2/6 each
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In bottles, containing 250 granules, 12/6 each
Subject to the usual professional discount

Descriptive literature and clinical trial sample will be sent post free on application

Allen & Hanburys Ltd., London, E.2.

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"YES, A PRIZE WINNER—
BUT NOT A SPECIAL CASE . . ."

Baby Ryan has won 2 silver cups, 1 silver medal and 10 other prizes. He is typical of thousands of fine children who have been weaned on Robinson's 'Patent' Groats and milk

The weaning diet of infants is all-important. From the age of six months, the delicate digestive organs must be educated to the task of digesting easily and properly the solids which ultimately become the staple diet For this purpose Robinson's 'Patent' Groats and milk is ideally suitable It is easily assimilated and contributes materially to the development of bone and muscle The slightly laxative properties of the Groats counteract any constipating tendencies of the milk. Robinson's 'Patent' Groats also supplies carbohydrate in a form which does not ferment as do the ordinary sugars—a factor of importance in the prevention of diarrhoea and vomiting in children

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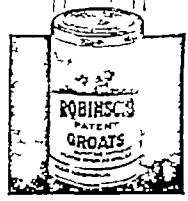
"PATENT" GROATS



Descriptive pamphlets and clinical trial sample will gladly be sent on application.

KEEN, ROBINSON & CO LTD, CARROW WORKS, NORWICH

CVS—83

THE HOSPITAL FOR SICK CHILDREN
Great Ormond Street London W C 1

A RESIDENT MEDICAL SUPERINTENDENT is required on July 1st.

Gentlemen are invited to send in their applications to the Secretary before 12 o clock on Monday May 15th accompanied by copies of not more than three testimonials given specially for the purpose.

The appointment is made for one year but may be held, subject to re-election for a period of three years.

Salary £300 per annum with board residence in the Hospital, £10 allowance for laundry and £18 18s. for the purpose of providing a substitute during annual leave.

Candidates mu t be unmarried and possess a legal qualification to practice and mu t have held a responsible Hospital appointment at a General Hospital.

All candidates must be in attendance on Wednesday May 17th at 4 45 p m. precisely to appear before the Joint Committee if required.

Forms of application and copies of the Rules may be obtained from the Secretary at the Hospital.

By Order of the Board of Management
H. F RUTHERFORD
April, 1933. Secretary

ROYAL SALOP INFIRMARY SHREWSBURY
(150 Beds.)

APPOINTMENT OF CASUALTY OFFICER AND RESIDENT ANAESTHETIST

Applications are invited from fully qualified men for the appointment of Casualty Officer and Resident Anaesthetist now vacant

The appointment is for a period of six months subject to re-appointment for a further period of six months at a salary of £160 per annum with board residence etc Resident Staff comprises Resident Surgical Officer House Physician and Casualty Officer

Applications stating age qualifications experience, nationality and accompanied by copies of three recent testimonials to be sent to the undersigned forthwith.

Board Room J W NOBLE,
Secretary Superintendent

THE ROYAL HOSPITAL WOLVERHAMPTON
(Incorporated under Charter)

HOUSE SURGEON required for Ear Throat and Nose Department duties to commence forthwith.

The Hospital contains 300 beds includes the usual special department, and is recognised by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice.

Candidates must be registered under the Medical Acts and unmarried.

The appointment is for six months Salary at the rate of £100 per annum board furnished rooms, and laundry provided

Applications, with copies of testimonials to be forwarded to the undersigned.

Wolverhampton. W H HARPER
March 24th 1933. House Governor

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Church Street BIRMINGHAM

OUT PATIENT OFFICER.

An Out patient Officer is required at the above Hospital to attend on certain appointed mornings each week Salary at the rate of One Guinea per Session Candidates must be registered Medical Practitioners. Appointment will be for a period of one year with eligibility to re-election

Applications, with testimonials, stating age and qualifications should be sent to the undersigned not later than May 9th next

Copy of rules governing the posts can be obtained on application

J W PEARCE
April 21st 1933. Acting Secretary

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Church St. BIRMINGHAM

HOUSE SURGEON required at the above Hospital Salary £110 per annum and £10 laundry allowance.

Applications together with copies of not more than three testimonials should be received not later than first post on Tuesday May 9th Further particulars can be obtained from the undersigned.

J W PEARCE, Acting Secretary

NATIONAL TEMPERANCE HOSPITAL, Hampstead Road N W 1

A fully trained LADY DIETICIAN is required Candidates should hold the B.Sc degree and have had practical hospital experience. The position will be full time and non resident Salary £120 per annum with meals.

Applications, together with copies of testimonials, must be addressed to the Matron by Thursday May 4th.

LONDON HOMOEOPATHIC HOSPITAL
Great Ormond Street W C 1 (200 Beds)

The Board of Management invite applications for the following appointment

ASSISTANT PHYSICIAN TO THE HOSPITAL.

The successful candidate must possess or obtain a registrable University Degree and be or become a Member of the British Homoeopathic Society It is required that successful candidates for posts on the Honorary Medical and Surgical Staff of the Hospital should show evidence of knowledge of the Theory and Practice of Homoeopathy within one year of appointment by having attended one or more of the Systematic Courses of Lectures at the Hospital Any candidates canvassing the Members of the Board Medical Council or Medical Committee are thereby disqualified.

Candidates will be required to attend a meeting of the Medical Committee.

Applications stating age qualifications and experience with thirty five copies of application and thirty five copies of each testimonial should be sent addressed to—

EDWARD A ATTWOOD Secretary

WESTMINSTER HOSPITAL,
Broad Sanctuary S W 1

Applications are invited for the office of ASSISTANT PATHOLOGIST Candidates must be registered Medical Practitioners who have held a pathological appointment.

The commencing salary is at the rate of £350 per annum The appointment is a full time one but the Committee may give permission for private work to be undertaken

The successful candidate will be appointed in the first place for six months and thereafter the appointment will be subject to re-election annually

Applications (nine copies) together with nine copies of not less than three recent testimonials should be sent in to the undersigned not later than Friday May 5th

CHARLES M. POWER Secretary

MILDMAY MISSION HOSPITAL,
Austin St Bethnal Green E.2

Applications are invited for the post of ASSISTANT CASUALTY OFFICER (Female) which becomes vacant on July 3rd The appointment is non resident and for six months Salary £125 per annum. Dinner tea and supper when on duty

Candidates mu t be registered under the Medical Acts and the Mildmay Council is anxious that they should be fully in sympathy with the religious work of the Hospital

Applications, with copies of recent testimonials should be sent to the Medical Superintendent by May 8th.

STOCKTON AND THORNABY HOSPITAL, STOCKTON-ON-TEES
(140 Beds—Three Residents.)

Applications are invited for the posts of SENIOR and JUNIOR RESIDENT MEDICAL OFFICERS (male) for a period of at least six months commencing May 19th. Salary £200 and £175 p.a. respectively with board residence and laundry

Candidates must be duly qualified and unmarried Applications, stating age nationality qualifications and experience together with copies of three recent testimonials to be sent to the undersigned.

J WILKINSON Secretary

ST JOHN'S HOSPITAL LEWISHAM S.E.13.

There is a vacancy for an HONORARY GYNAECOLOGICAL SURGEON to take charge of beds and to see Out patient

Candidates who must be Fellows of the Royal College of Surgeons (England) should send applications with copies of not more than three recent testimonials to reach the undersigned on or before Wednesday May 10th. A Selection Committee will sit on Tuesday May 16th.

J C GILBERT
Secretary Superintendent

THE MARIE CURIE HOSPITAL,
2 Fitzjohn's Avenue N W 3.

Applications are invited from fully qualified Medical Women for the post of RADIOLOGIST in charge of the Deep X Ray Therapy Dept

Applicants must hold a Diploma in Radiology

The appointment will be for one year eligible for re-election alary £500 per annum non resident. Applications with copies of testimonials, should be sent to the Secretary at the Hospital on or before Saturday May 20th.

ROYAL SURREY COUNTY HOSPITAL, GUILDFORD (182 Beds)

Wanted June 1st HOUSE SURGEON Salary £150 per annum with board, residence and laundry Applications stating essential particulars with copies of not more than three testimonials to be sent to the Secretary Superintendent on or before May 9th.

MANCHESTER ROYAL INFIRMARY

RESIDENT SURGICAL OFFICER.

The Board of Management invite applications for the above appointment which will become vacant on June 1st. Applicants must not be less than 25 years of age. They must be registered and hold a Medical and Surgical qualification

Appointment is for twelve months, renewable for a further period of one year subject to the provision of the By laws as to notice. Salary £200 per annum with allowance for laundry

Full information is obtainable from the undersigned to whom applicants must send twelve copies of their application and testimonials by Thursday May 4th

By Order
FRANK G HAZELL,
Gen. Supt. & Secretary

THE LONDON LOCK HOSPITAL.

Applications are invited for the appointment of SURGICAL REGISTRAR (male or female) to the Female Lock Hospital. Candidates must be a Fellow (or Member) of the Royal College of Surgeons of England or a Surgical Graduate of a University of the United Kingdom and have had previous obstetrical experience The appointment is for one year in the first instance commencing May 5th with honorarium at the rate of £100 per annum Applications with three copies (only) of testimonials must be submitted to the undersigned not later than 10 a.m. on Monday May 1 t from whom copies of the Laws and By laws relating to the appointment may be obtained.

By Order of the Board.
283 Harrow Rd. J F MORTON
W 9 Secretary
April 8th 1933

QUEEN MARY'S HOSPITAL FOR THE EAST END E.15

Applications are invited for the post of DENTAL ANAESTHETIST to the above Hospital

Applications accompanied by copies of testimonials, from male candidates only should be forwarded to the undersigned on or before Wednesday May 3rd.

The Anaesthetist will be required to attend on Tuesday morning at 9 a.m and the appointment carries with it an honorarium of £25 per annum

RAPHAEL JACKSON (Major)
Secretary

SWANSEA HOSPITAL
(316 Beds)

SENIOR RESIDENT OFFICER wanted gentleman single previous Hospital experience essential Duties to include that of House Surgeon to the Honorary Gynaecologist Salary £300 per annum rising by annual increments of £50 to £500 per annum with board, residence and laundry

Applications stating age nationality qualifications, and experience together with copies of three recent testimonials to be forwarded to the undersigned.

O C HOWELLS
Secretary Superintendent

THE STAFFORDSHIRE GENERAL INFIRMARY STAFFORD

HOUSE SURGEON required Salary £200 per annum with board residence. The appointment must be held for at last six months The selected candidate will be required to take up duties as early as possible The Hospital has 100 beds and there are two Resident.

Applications stating age and accompanied by copies of three recent testimonials and to qualifications and experience should be sent at once to the undersigned

A E COLLINS
Stafford. Secretary
April 24th 1933.

THE ROYAL INFIRMARY SUNDERLAND
(230 Beds)

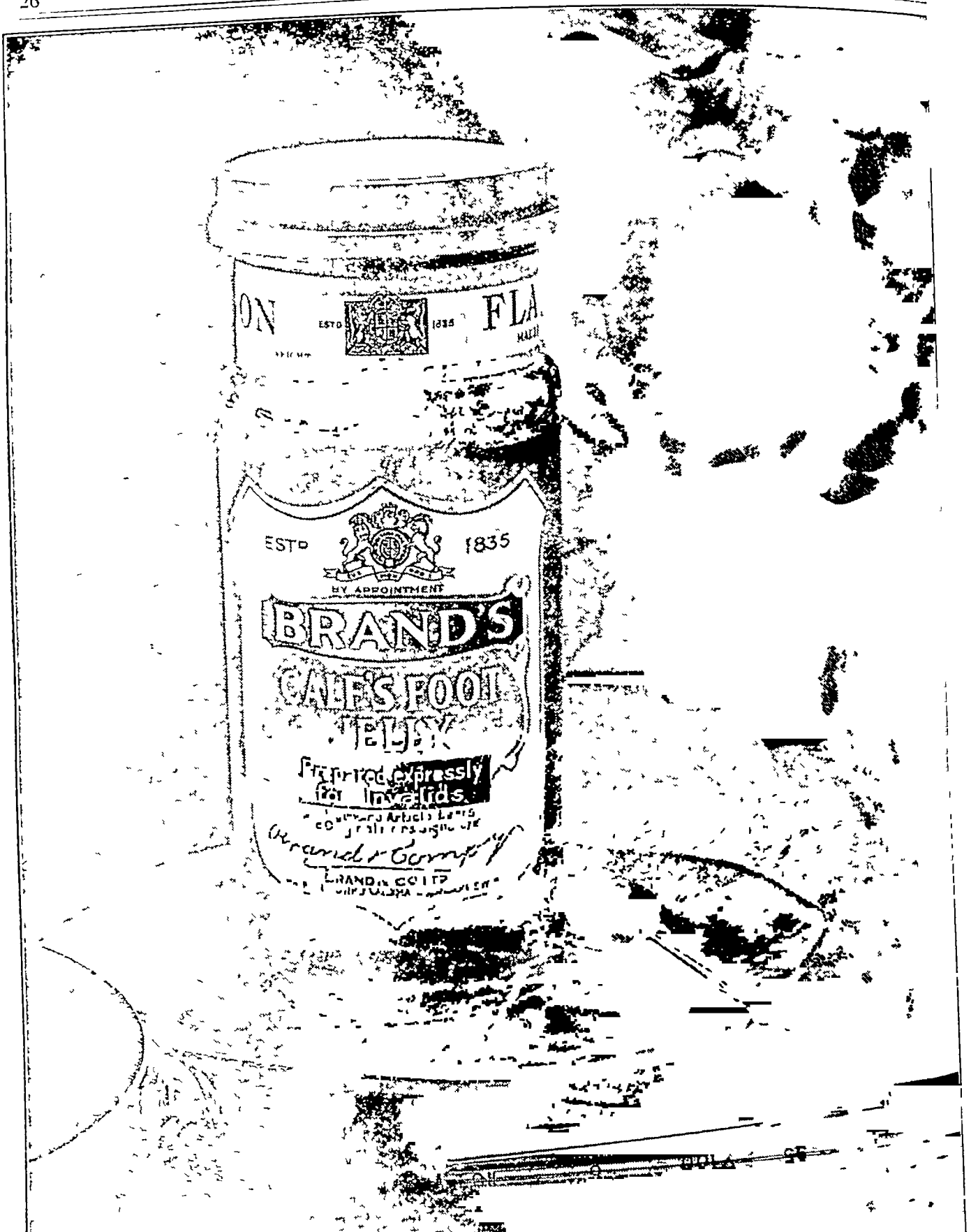
ONE HOUSE SURGEON and ONE HOUSE PHYSICIAN (male) required at once Salaries £140 per annum with board residence, and laundry Applications stating age qualifications and accompanied by copies of testimonials to be sent to the undersigned immediately

J A BEARDSALL,
House Governor & Secretary

LEEDS PUBLIC DISPENSARY

Notice is hereby given that the Special Election Committee is prepared to receive applications for the post of HONORARY PHYSICIAN Applications with copies of testimonials to be addressed to the Chairman of the Election Committee Public Dispensary North Street, Leeds on or before Monday May 15th.

By Order of the Board
CHARLES F J MALBY
Secretary & Superintendent.



SAMPLE SUPPLIES of any PREPARATIONS ILLUSTRATED HERE will be sent with pleasure Brand & Co Ltd, Dept. B M 21, Mayfair Works, South Lambeth Road, London, S W 8

BY APPOINTMENT

BRAND'S INVALID FOODS

COUNTY BOROUGH OF WEST HAM

PUBLIC ASSISTANCE COMMITTEE

The Council invite applications for the appointment of DEPUTY MEDICAL SUPERINTENDENT at their FOREST GATE HOSPITAL Forest Lane Forest Gate E 7 at the salary of £525 per annum rising by annual increments of £25 to a maximum of £600 per annum, with the usual residential allowances subject to an abatement in accordance with the resolutions of the Council for the time being in force at present 2½ per cent from the first £200 3½ per cent from the next £100 5 per cent from the next £250 and 7½ per cent from the remainder The salary is inclusive and all fees received must be paid to the *Borough Treasurer*

Candidates must be fully qualified and registered Medical Practitioners, and have had previous hospital and maternity work experience The person appointed will be required to take charge of the Hospital during the absence of the Medical Superintendent and should occasion arise to act in any other Institution under the control of the Council

The patients at the Hospital comprise chronic sick epileptics and mental defectives with three maternity blocks.

The successful candidate will be required to pass a medical examination and the appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 at the rate of 5 per cent or the Poor Law Officers Superannuation Act 1896

Forms upon which application must be made can be obtained from the Medical Officer of Health Municipal Health Offices Romford Rd Stratford E 15 on the receipt of stamped and addressed foolscap envelope and should be returned to the undersigned not later than 10 a m on May 6th

CHARLES E CRANFIELD
Public Assistance Offices Town Clerk
Union Road Leytonstone E 11
April 12th 1933

CITY OF BIRMINGHAM

DUDLEY ROAD HOSPITAL (926 Beds)

Applications are invited from fully qualified Medical Practitioners for whole time appointment as CASUALTY OFFICER (male) at the Dudley Road Hospital Birmingham The appointment will be for a period of six months but may be extended for a further period of not exceeding six months Salary at the rate of £200 per annum and full residential emoluments subject to any voluntary abatement in force from time to time The officer appointed will be required to refund to the Council all fees allowances and emoluments (other than the forgoing) received by him

Further particulars may be obtained from the Medical Superintendent at Dudley Road Hospital to whom applications stating age experience and qualifications with copies of recent testimonials should be forwarded not later than May 4th

CENTRAL LONDON THROAT, NOSE AND EAR HOSPITAL
Gray's Inn Road W C 1

RESIDENT HOUSE SURGEON (MALE)

There will be a vacancy for a Third Resident House Surgeon to enter on duty on June 1st next

The appointment will be for a period of nine months three months as Third House Surgeon three months as Second House Surgeon and three months as First House Surgeon Remuneration at the rate of £75 per annum

Applications accompanied by copies of not more than three testimonials should be sent to the undersigned on or before May 8th

JOHN H YOUNG
Secretary Superintendent

ST LAUS HOSPITAL FOR DISEASES (INCLUDING CANCER) OF THE GENITO URINARY ORGANS AND SKIN, Endell Street Holborn W C 2

CLINICAL ASSISTANTS FOR UROLOGICAL WORK Vacancies will occur on May 1st next for Clinical Assistants in the Out Patient Department to the following Surgeons

Mr C H MILLS
Mr H P WINSBURY WHITE
Mr W K IRWI

Each appointment is for six months and is subject to renewal up to a period of two years The fee of £5 5s is payable at the time of the first appointment

Applications should be addressed to the Secretary

THE MOUNT VERNON HOSPITAL

Vacancy for ASSISTANT RADIOLOGIST chiefly for therapy but also some diagnostic work three half days per week also holiday duty in the absence of Senior Radiologist

Salary according to experience Applications to the Secretary Offices 32 Fitzroy Sq W 1

COUNTY BOROUGH OF WEST HAM

PUBLIC ASSISTANCE COMMITTEE

The Council invite applications from registered Medical Practitioners for the post of RESIDENT ASSISTANT MEDICAL OFFICER at their Hospital at HAROLD WOOD, ESSEX (Accommodation 160 beds)

The appointment is for a period of one year at a salary of £260 per annum plus emoluments valued at £150 per annum subject to an abatement of 2½ per cent. from the first £200 3½ per cent from the next £100 and 5 per cent from the next £250 in accordance with the resolutions of the Council

The person appointed must give the whole of his time to the service of the Council and will work under the direction of the Medical Officer of Health

The successful candidate will be required to pass a medical examination and the appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 at the rate of 5 per cent or the Poor Law Officers Superannuation Act 1896

Forms upon which application must be made can be obtained from the Medical Officer of Health Municipal Health Offices Romford Rd Stratford, E 15 on the receipt of a stamped addressed foolscap envelope and should be returned to the undersigned not later than 10 a m on May 6th

CHARLES F CRANFIELD
Public Assistance Offices Town Clerk
Union Road Leytonstone E.11
April 13th 1933

CITY OF STOKE ON TRENT

MEDICAL OFFICER OF VENEREAL DISEASES CENTRE

The City Council invite applications for the appointment of a Medical Officer of the Venereal Diseases Centre at a salary of £750 per annum rising by annual increments of £25 to £937 10s., subject to a temporary reduction

The person appointed will be required to devote the whole of his time to the service of the Corporation which will not necessarily be confined to work in connection with venereal disease The appointment will be subject to the approval of the *Ministry of Health*

Applicants must be fully qualified medical men with at least six months general hospital experience and have had special experience in modern methods of the diagnosis and treatment of Venereal Diseases The possession of the Diploma in Public Health will be considered an advantage

Further particulars may be obtained on application to the Medical Officer of Health St Peters Chambers Glebe Street Stoke on Trent

Applications stating age qualifications and experience accompanied by copies of not more than three recent testimonials and endorsed Medical Officer V D to be delivered to the undersigned on or before Friday, May 5th at 10 a m

Town Hall E B SHARPLEY
Stoke on Trent Town Clerk

WORCESTER ROYAL INFIRMARY
(142 Beds)

Applications are invited for the post of THIRD HOUSE SURGEON

The Hospital is equipped with new Operating Theatres Pathological Laboratories Orthopaedic Department E N T Department up to date X ray Department etc

Salary at the rate of £120 per annum together with board residence

The post offers exceptional scope for medical and surgical experience

The successful candidate will be eligible for the posts of Second and First House Surgeons which will later become vacant (salaries £150 and £180 per annum respectively)

Applications should state full particulars as to age whether married or single qualifications etc and should be accompanied by copies of three testimonials

Applications to be received by the undersigned not later than first post on Thursday May 10th

PERCY V CLASS
Superintendent Secretary

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST VENTNOR ISLE OF WIGHT

JUNIOR ASSISTANT RESIDENT MEDICAL OFFICER (male), unmarried, required for six months commencing June 1st

Salary at the rate of £300 per annum with board residence, and laundry allowance

Candidates must be duly registered Medical Practitioners Previous experience in Tuberculosis also Bacteriological work desirable

Applications in candidate's own handwriting, stating age and qualifications (with one copy of three recent testimonials) to be sent to the Medical Superintendent Royal National Hospital for Consumption Ventnor, I O W, not later than May 12th.

WARWICKSHIRE AND COVENTRY JOINT COMMITTEE FOR TUBERCULOSIS.

KING EDWARD VII MEMORIAL SANATORIUM HEATHFORD HILL near WARWICK.

Applications are invited for the post of JUNIOR ASSISTANT MEDICAL OFFICER (male) at the Memorial Sanatorium, near Warwick of 195 beds The successful candidate will be appointed for six months and will have special opportunity of gaining experience in treatment by Artificial Pneumothorax by ultra violet Light and in X ray work.

The salary will be at the rate of £200 per annum with board lodging and laundry and promotion is probable at the end of six months.

Applications, with recent testimonials, should be forwarded direct to the Medical Superintendent at the Sanatorium by not later than Monday May 15th

Shire Hall L. EDGAR STEPHENS,
Warwick Clerk of the Joint
April 1933 Committee

KING GEORGE HOSPITAL, ILFORD
(8 miles from London)

Wanted a HOUSE SURGEON to commence duty at once May for a period of ten months two months as Casualty Officer six months as House Surgeon and two months as Deputy Resident Medical Officer in charge of the Casualty Department Salary £100 per annum £10 bonus on completion of appointment and two weeks holiday Candidates should send their applications with three recent testimonials and call on the members of the Honorary Medical Staff indicated by the Secretary as soon as possible

C AUSTIN HEPWORTH Secretary

LINCOLN COUNTY HOSPITAL.

Wanted HOUSE SURGEON, male unmarried. Salary at the rate of £150 per annum rising to £200 per annum at the conclusion of six months approved service Board residence and washing, will also be provided

Every candidate for the appointment must be registered under the Medical Acts

Applications stating age and other particulars with copies of not more than three testimonials, are to be sent to the undersigned from whom further particulars may be obtained.

Lincoln ARTHUR MOORE,
April 25th 1933 Secretary Supt

WESTERN OPHTHALMIC HOSPITAL, Marylebone Road, London, N W 1

Applications are invited for the post of JUNIOR NON RESIDENT HOUSE SURGEON The salary is at the rate of £100 per annum and the appointment for six months The Junior House Surgeon is provided with board but not lodging Some previous Ophthalmic experience is required The selected candidate will be required to take up duty at an early date

Applications accompanied by copies of not less than three testimonials should be sent in at once, and not later than May 10th

H W BURRIDGE Hon Secretary

SOUTH DEVON AND EAST CORNWALL HOSPITAL PLYMOUTH (240 Beds.)

RESIDENT SURGICAL OFFICER (Male) Salary £150 per annum with board residence, and laundry *Appointment tenable for six* months and subject to renewal Duties to commence June 1st Candidates must be registered under the Medical Acts.

Applications stating age and qualifications, together with copies of recent testimonials, to reach the undersigned by May 10th

ARTHUR R CASH
April 25th 1933 Gen Supt & Sec

CLAYTON HOSPITAL, WAKEFIELD
(General Hospital—166 Beds)

There are vacancies for TWO HOUSE SURGEONS (male British) for which posts applications are invited The appointments are for six months in the first instance and the salary for each is at the rate of £175 per annum together with board residence and laundry

Applications stating age qualifications, and experience together with copies of three recent testimonials should be sent to the undersigned as early as possible

H J LANCASTER
Gen Supt & Secretary

EASTBOURNE PRINCESS ALICE MEMORIAL HOSPITAL (116 Beds)

Applications are invited for the post of HOUSE SURGEON (male) Salary at the rate of £150 per annum with board, lodging and laundry There are two residents and the appointment is for six months.

Candidates must be unmarried fully qualified and registered Applications stating age qualifications etc accompanied by not more than three testimonials (one of which should be from Medical School), should be sent at once to the Secretary

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B.M.A. House Tavistock Square, W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary 7 Drumsheugh Gardens, Edinburgh)

(a) British Islands

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH** *(contd.)*
EBBW VALE, MON *(Workmen's Medical Society)*	NEATH AND DISTRICT *(Medical Aid Association.)*	WORCESTER COUNTY AND CITY MENTAL HOSPITAL. *(Junior Assistant Medical Officer)*
GILFACH GOCH GLAMORGAN *(Workmen's Medical Scheme)*	OAKDALE, MON *(Medical Officer for Medical Aid Association.)*	LLANTRISANT AND LLANTWIT FARDRE RURAL DISTRICT COUNCIL. (1) *Medical Officer of Health (part-time.)* (2) *Medical Officer (woman—part time) for Maternity and Child Welfare*
LLWYNPIA CLYDACH VALE, PENYGRAIG GLAMORGAN *(Workmen's Medical Scheme.)*	OGMORE VALLEY GLAMORGAN *(Wyndham Colliery Medical Aid Society)* *(Workmen's Medical Scheme)*	
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer)*	**PUBLIC HEALTH**	COUNTY BOROUGH OF SOUTH SHIELDS HARTON INSTITUTION AND CLEADON COTTAGE HOMES *(Medical Officer)*
MARDY GLAMORGAN *(Workmen's Medical Scheme)*	KENT COUNTY COUNCIL. LENHAM SANATORIUM. *(Male Assistant Medical Officer)* FARNBOROUGH INSTITUTION HOSPITAL. *(Resident Assistant Medical Officer)*	

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B.M.A. House Tavistock Square W.C.1

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. G. HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St., Sydney N.S.W.	QUEENSLAND *(Brisbane Associated Friendly Societies Institute)* *(Toowoomba Associated Friendly Societies Medical Institute Toowoomba.)*	The Hon. Sec. Queensland Branch British Medical Association, B.M.A. Building Adelaide St. Brisbane.	WELLINGTON NEW ZEALAND *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec. New Zealand Branch) British Medical Association P.O. Box 156 Wellington New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch British Medical Association, Medical Society Hall East Melbourne, Victoria.			WESTERN AUSTRALIA. *(Contract and Lodge Practices.)*	Hon. Sec. Western Australian Branch British Medical Association No. 6 Bank of N.S.W. Chambers St. George's Terr. Perth, Western Australia.

April 26th, 1933 By Order of the Council. G. C. ANDERSON Medical Secretary

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NATIONAL HOSPITAL FOR DISEASES OF THE HEART
Westmoreland St. Marylebone W.1

OUT PATIENTS MEDICAL OFFICER.

Applications are invited for the post of Out patients Medical Officer (Non resident male). The appointment is for the period May 22nd to September 30th. Salary at the rate of £125 per annum. Candidates who must be duly registered Medical Practitioners will not be expected to call on the Honorary Medical Staff but to send their applications with copies of three recent testimonials to me at the Hospital not later than Saturday May 6th. The Out patients Medical Officer will be required to assist the Honorary Medical Staff on five afternoons weekly.

ROBERT G. E. WHITNEY
Secretary

HEREFORDSHIRE GENERAL HOSPITAL.
(140 Beds.)

Applications are invited for the post of HOUSE SURGEON and CASUALTY OFFICER (male).

Salary at the rate of £100 per annum with board residence and laundry.

The appointment will be for a period of six months commencing June 1st. The successful candidate will, subject to satisfactory service, be eligible to succeed to the Resident Surgical Officer's post with a salary at the rate of £150 per annum.

Applications, stating age qualifications, and experience together with copies of three recent testimonial should reach the undersigned on or before May 6th.

T. W. UPTON Secretary

MINEHEAD AND WEST SOMERSET HOSPITAL, MINEHEAD SOMERSET
(58 Beds.)

Applications are invited for the post of RESIDENT HOUSE SURGEON (male or female) to this Hospital.

Duty to commence on May 21st. Appointment for a period of six months. Salary £150 per annum with board residence and laundry.

Applications, stating age, nationality, experience and qualifications accompanied by copies of three recent testimonials to be sent to the undersigned not later than May 5th.

W. H. P. RODDA Secretary.

BRADFORD ROYAL INFIRMARY

HOUSE SURGEON (male) wanted from June 1st to November 30th. Candidates must be single and legally qualified. Salary £135 per annum with board residence and washing. There are 215 beds and six Resident Officers.

Applications stating age, qualifications and previous experience if any, with copies of recent testimonials to be received by the undersigned not later than May 2nd.

J. J. BARRON
April 18th 1933. Secretary Supt.

THE STOCKPORT INFIRMARY

HOUSE PHYSICIAN (male) required. Salary £150 per annum with board residence and laundry.

Applications with copies of three recent testimonials stating age, University or Medical School and experience to be delivered to the undersigned immediately.

EDWIN J. PEARCE,
Secretary Superintendent.

CENTRAL LONDON THROAT NOSE, AND EAR HOSPITAL.
Gray's Inn Road W.C.1.

ASSISTANTS IN THE OUT PATIENT DEPT.

There are vacancies for a Second Assistant to attend on Wednesdays at 2 p.m. and for a Third Assistant to attend on Tuesdays at 5 p.m. The duties are to assist the Surgeons in seeing the patients and the posts are honorary ones.

Applications may be for periods of three six or twelve months and should be sent to the undersigned immediately.

JOHN H. YOUNG
Secretary Superintendent.

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN
St. Quintin Avenue W.10 (58 Beds.)

HOUSE SURGEON (male or female) required from May 18th to June 30th. Salary at the rate of £75 p.a. with board residence and laundry. It is desirable that applicants should have held a responsible Hospital post. Applications, with copies of two testimonials, should be submitted on a form to be obtained from the Secretary at the Hospital, and must reach him not later than Wednesday May 10th.

CHESTER ROYAL INFIRMARY
(211 Beds.)

HOUSE PHYSICIAN (male) required for June 5th. Salary £150 per annum with board lodging and washing. Application list closes May 5th.

Application forms may be obtained from W. H. GRACE, M.D., M.R.C.P., Hon. Superintendent of the Resident Medical Staff.

(Appointments continued on p. 46.)

EVEN human milk does not invariably contain "the alphabet of vitamins" in sufficient quantity, it is well known that cases of scurvy occur in breast-fed infants In their content of vitamin C neither breast milk nor cow's milk is satisfactory.

Anti-scorbutic vitamin C in adequate quantity is essential to infant health This is the least stable of the vitamins it is readily destroyed by heat and oxidation. The nursing mother may provide a sufficient supply in her milk, but broadly, all infants, whether breast-fed or hand-fed, require to be given daily doses of fruit juice rich in vitamin C.

Exact present-day knowledge of deficiency diseases and their causes has clarified the position in regard to scurvy It is sufficient to say that all infants, whether nursed or brought up on the "Allenburys" Modified Milk Foods, require additional vitamin C.

This announcement regarding the 'Allenburys' Foods is No. 5 of a series which will be continued.

(Aesculapius)

MASSIVE IRON THERAPY

It has recently been shown that certain types of anaemia respond to iron, when administered in very large doses only.

COLLIRON

This is a most satisfactory form of iron for oral administration, especially where large doses are required It is a colloidal iron preparation in palatable form, containing 10 per cent. metallic iron

Issued in—

8-oz bottle	16 oz bottle	80 oz. bottle
5/-	9/6	40/-

Literature on application.

Evans Sons Lescher & Webb Ltd.

Manufacturers of Fine Chemicals, Pharmaceutical & Biological Products

LIVERPOOL, LONDON AND DUBLIN

British Medical Journal
BRITISH MEDICAL ASSOCIATION HOUSE,
TAVISTOCK SQ., LONDON, W.C.1
Tel. ARTICULATE, WESTCENT, LONDON
EUSTON 2111 (4 lines)

SMALL ADVERTISEMENT RATES

Up to Six Lines (32 Words) 9s
Each Additional Line, 1s 6d
(*a line averages 5 words*)
Address must be paid for

All advertisements should reach the above address by not later than first post TUESDAY preceding publication

NOT CLASSIFIED

WANTED URGENTLY — ADDRESS OF Nursing Home Can any reader kindly recommend HOME preferably in country, South of London taking only one to three patients, for lady physically seriously ill (doctor's mother)—Address No 2624 B M A House, Tavistock Square, W C 1

SUMMER HOLIDAYS — JOIN OUR CONducted Party to the HIGHLANDS AND EDINBURGH June 2—15 or to the ENGADINE and out of the way parts of Switzerland June 16—30 Write for prospectus of CONDUCTED TOURS all through the summer Or let us make an INDEPENDENT ITINERARY for you or make your arrangements for CRUISING Having travelled widely ourselves we can give you valuable advice about interesting and lovely places to visit Call or write CAMPS AND TOURS UNION (Dr C F FORHERGILL) 126 Baker Street London W 1 Welbeck 7688

OWNERS OF COUNTRY ESTATE WISH TO TAKE slightly MENTAL or INFIRM CASE with attendants in their comfortable modernized house electric light central heating etc Home farm produce good cooking and attend—No 2604 B M A House, Tavistock Sq, W C 1

RADIOLOGIST WITHIN 2 MILES OF WEST End good address OFFERS PART TIME USE of his fully equipped PLANT to suitable man Rental by arrangement—Address No 2615 B M A House, Tavistock Square, W C 1

AN IDEAL HOLIDAY
600 YEARS OLD OAK BEAMED SUSSEX INN and TEA GARDENS The joy of real country delightful sands and safe bathing (*new of beach hut*) and the *comforts of* indoor sanitation bathroom electric light, and an excellent chef Meals any time you like and what you like Children can run wild and be really happy Most moderate terms Business girls specially catered for Car meets train free of charge—Box 575 WHITELEYS W 2

ASSISTANCIES

WANTED — AN ASSISTANTSHIP BY L M S S A London reading for Final Conjoint and London degree Married *no* children age 31 T T experience in general practice —Address No 2646 B M A House, Tavistock Square W C 1

WANTED — ASSISTANTSHIP OR LOCUMS near London or Cardiff by M R C S L R C P D T M & H ex H S H P Good experience G P Going abroad end of year—Address No 2645 B M A House, Tavistock Square W C 1

WANTED — ASSISTANTSHIP BY WOMAN Doctor Scotch Graduate now Country preferred (non industrial) Scotland or South of England Experience hospital general (2 years) children's (1 yr) G P Can drive car —No 2637 B M A House Tavistock Sq, W C 1

WANTED — ASSISTANTSHIP OR LOCUM engagement (with or without view) by M R C P British Indian young energetic obtained exp G P and panel Drive car Refs and testimonials Free now—Address, No 2625 B M A House Tavistock Sq W C 1

WANTED — ASSISTANTSHIP, PREFER non South Wales or Monmouthshire, by L R C P and S I 1932 aged 30 single 4 months exper of G P keen energetic & abstainer Able to drive car Free middle of May —No 2638, B M A House, Tavistock Sq, W C 1

WANTED—INDOOR ASSISTANT IN JUNE in an industrial and appointments Practice *Some* experience energetic T T car provided Work light Salary according to experience — Address No 2612 B M A House, Tavistock Square W C 1

WANTED—MALE INDOOR ASSISTANT FOR mixed Practice in Midland Town Scottish, English or Irish Salary £250—£300 according to experience References etc *Usual* bond — Address No 2632 B M A House, Tavistock Square W C 1

WANTED MALE OUTDOOR ASSISTANT for branch middle and working class Practice in modern industrial village £400 and car or allowance and view possible to right man — Address No 2625, B M A House, Tavistock Square W C 1

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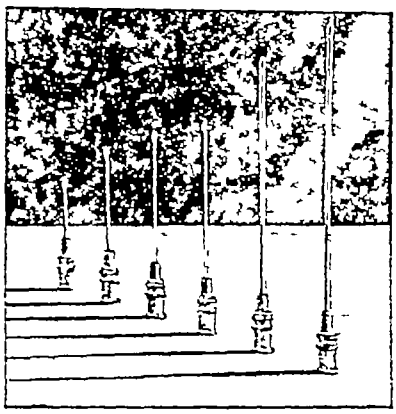

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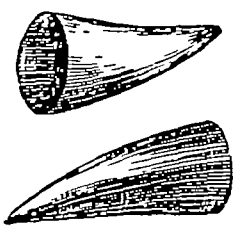

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Applications stating age qualifications, and experience with copies of not more than three recent testimonials should be sent to the Clerk of the Watford Guardians Committee 7 Church Street Watford (from whom particulars of the duties of the post may be obtained) so as to be received by him not later than first post on Saturday May 6th
ELTON LONGMORE
Hertford Clerk of the County Council
April 25th 1933

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GORDON ILLICO
Public Health Dept Medical Officer
1 Derwent Street, Health.
Derby

Observations on NUTRITION IN RELATION TO ANAEMIA

BY

L S P DAVIDSON B A M D F R C P Ed
H W FULLERTON M A M B Ch B
DEPARTMENT OF MEDICINE UNIVERSITY OF ABERDEEN

JAMES W HOWIE M B Ch B
JOHN M CROLL M B Ch B
DEPARTMENT OF BACTERIOLOGY UNIVERSITY OF ABERDEEN

J B ORR *D S O M C* M A D Sc M D F R S
W GODDEN B Sc A R C S F I C
ROWETT RESEARCH INSTITUTE ABERDEEN

Recent advances in haematology clearly indicate that nutrition may play an important part in the production of anaemia The evidence on which this statement is based is obtained from experimental work on animals and from clinical investigations in human beings Thus Waddell Hart Steenbock and Elvehjem[1] have shown that when rats are fed for some weeks on milk alone a hypochromic anaemia invariably develops while the rate of growth of the animals is seriously reduced So constant is this effect that anaemia produced in this way is regularly used for the assay of therapeutic agents That the anaemia is nutritional in origin is shown by the fact that the addition of iron and traces of copper to the diet will prevent the occurrence of the anaemia or if it is already present will rapidly effect a cure A similar type of hypochromic anaemia has been shown by Helen Mackay[2] to be present in many infants of the poorer classes who are fed exclusively and over prolonged periods on cow's milk Prevention and cure are readily obtained by the addition to the diet of a few grains of iron and ammonium citrate daily While it is admitted therefore that milk is probably the nearest approach to a complete food that we have it is certainly deficient in its blood building qualities

Evidence on the importance of iron in relation to anaemia and general health has also been obtained in the case of the larger domestic animals McGowan and Crichton[3] found that unless given access to iron rich food sucking pigs develop anaemia which can be cured or prevented by iron salts This condition appears to be common Professor Knox of Guelph Canada in a recent personal communication to one of us states that in Ontario the death rate of young pigs was very high until iron feeding was instituted since when the mortality has been reduced to normal A condition of acute anaemia also occurs in various parts of the world in cattle grazing on a special type of pasture which according to Aston[4] is poor in iron This anaemia can also be prevented or cured by iron salts (Aston[4] Orr and others[5]) It is well recognized that after famines especially in tropical countries anaemia defective growth poor resistance to infection etc are widespread a similar condition of affairs was observed in Central Europe after the war In view of the gross quantitative and qualitative deficiencies in a diet during times of famine it would be difficult to allocate these ill effects to individual defects in the dietary

These anaemias may be classified as direct deficiency diseases resulting from a definite deficit of iron in the dietary but in human beings recent researches indicate that some very important types of anaemia should be classed as *conditioned* or *virtual* deficiency diseases Pernicious anaemia is probably the best example Minot and Murphy[6] have shown that this anaemia develops as a result of the deficiency of a substance (the specific anti anaemic factor) which is found in liver and which has been shown to be necessary for normal blood formation Castle and others have shown that this factor is elaborated in the stomach as the result of an interaction of an enzyme like substance (the intrinsic factor) secreted by the stomach with the protein of foodstuffs (the extrinsic factor) If the intrinsic factor is totally lacking normal or even excessive quantities of protein are of no value in preventing the development of anaemia For this reason pernicious anaemia is classified as a conditioned deficiency disease Simple achlorhydric anaemia[4] in which the blood picture is of the hypochromic type indicating iron deficiency may be similarly classified The cause is attributed to defective iron absorption from the gut consequent on alteration of the hydrogen ion content secondary to achlorhydria This form of anaemia develops on a diet with a normal iron content and continues until large amounts of iron are given therapeutically The deficiency therefore is a virtual one

From what has been said it is clear that anaemia can be occasioned either directly or indirectly by dietary deficiency and no modern classification of the anaemias would be acceptable which did not attempt to define this aspect In a recent paper on the classification and treatment of anaemia[7] nutrition as an aetiological factor has been fully discussed

A problem of immediate and practical importance however still remains to be considered The world crisis with its dislocation of trade and consequent widespread unemployment has produced a marked lowering of the standard of living of the working classes In this country thanks to unemployment funds and organized relief no person need approach the stage of starvation Nevertheless the unemployed man with a family must be dangerously near the lowest economic level at which satisfactory growth and health can be maintained The problem of the relation of this lowered standard of living to the health of the future generation has assumed the greatest importance In this paper however it is proposed to deal solely with one aspect—namely the relation of nutrition to anaemia An investigation was undertaken with the object of ascertaining whether anaemia was prevalent among the poor and if so whether (1) its origin lay primarily in dietary deficiency (2) such factors as menstruation pregnancy and infection etc were of major importance (3) the anaemia responded successfully to iron therapy and also to ascertain the measures to be adopted for its prevention

INCIDENCE OF ANAEMIA

Through the courtesy of the directors of the Aberdeen Dispensary which is attended by those unable to pay for private medical attendance and who are not qualified to enrol under the panel system an opportunity was given of examining a large number of poor persons under suitable conditions and with the willing assistance of the medical officers of the dispensary The majority of the cases investigated belonged to families in which the wage earner was unemployed

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TOM B HARRISON Secretary

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H SEYMOUR HADWEN Secretary

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H J CLOUT General Superintendent.

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April 25th 1933 Secretary Supt.

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persons were examined, of whom 455 were women and forty five men In addition 100 children from families in the same class of the community were examined, the children being taken equally from families in which the mothers were anaemic and non anaemic Lastly, 650 children were investigated by Dr Sutherland of Peterhead as part of an experiment which is being undertaken by him in conjunction with the department of medicine with reference to vitamin A as a prophylactic agent in regard to infection While no blood tests were performed, Dr Sutherland carefully examined on two occasions the skin and mucous membranes of every child for clinical evidence of anaemia

Haemoglobinometer and Standard — The standard haemoglobinometer used was the Haldane carboxyhaemoglobinometer, calibrated so that a reading of 100 per cent was equivalent to an oxygen carrying capacity of 18 5 per cent or 13 8 grams haemoglobin per 100 c cm of blood This is the standard used by Price-Jones in his observations on normal people The instrument was carefully examined by him and found to give accurate readings when compared with those obtained by the van Slyke method The normal figures obtained by Price-Jones by this method of haemoglobin estimation were, in 100 men, 105 per cent and in a similar number of women, 95 per cent These figures were therefore accepted as standards of normality

Arrangement of Results —Cases with haemoglobin values of 85 per cent or over were placed in Group I, those with 70 to 84 per cent in Group II, which may be held to constitute mild anaemia cases, and those under 70 per cent in Group III In this last group many severe cases of anaemia were present and members were advised to attend Professor Davidson's department of the Aberdeen Royal Infirmary, where they underwent full physical and blood examination, as well as gastric analysis by fractional test meals whenever possible Additional data were thus made available concerning them

TABLE I*

	Total	Group I	Group II	Group III
A Children	100	98%	2%	0
	650	99%	1% (approx)	0
B Adult males	45	88 9%	6 7%	4 4%
C Adult females	455	53 2%	33 0%	13 8%

* All cases of anaemia found in this investigation were of the microcytic hypochromic type

† *Degrees of Anaemia in Decimal Ranges of Haemoglobin*

Haemoglobin	85 and over	84-75	74-65	64-55	54-45	44-35	34-25	24-15	Total
No of cases	242	118	45	19	14	9	7	1	455

Of the forty five adult males only five were found to be anaemic Three had haemoglobin levels between 70 and 85 per cent while two were below 70 per cent At the time of blood investigation one was suffering from a bleeding duodenal ulcer, another from a recent haemoptysis while a third was 69 years old with arteriosclerosis and chronic bronchitis Of the 455 adult females mainly between the ages of 18 and 55 213 (46 8 per cent) had haemoglobin values below 85 per cent and of these sixty three (13 8 per cent) were below 70 per cent haemoglobin Only two of the 100 children from poor families were found to have a haemoglobin percentage below 85, and of the 650 children in Peterhead only six were found to be anaemic in the first examination and eight in the second

This part of the investigation indicates that anaemia is relatively uncommon in children between the ages of 5 and 14 years and in adult males, but that it is very prevalent among women of child bearing age of the poorer classes, since it was found to be present in nearly half the cases examined

DIETARY SURVEY

An attempt was then made to ascertain whether this incidence of anaemia could be correlated with the iron content of the diet Information was collected concerning the food consumption over a period of fifteen days of forty-nine families in Aberdeen of which twenty five mothers were anaemic and twenty-four had a normal blood level In addition, a similar investigation among sixty six families from the poorest classes in Peterhead was undertaken, it was from these latter that a considerable proportion of the 650 children mentioned above was drawn The method used was similar to that employed by Orr and Clark,[10] except that the period was fifteen days instead of one week In the calculations no allowance was made for waste in cooking The figures given in the table, therefore, show the amount of food entering the home, and not the amount actually consumed In accordance with the estimate of the Food Committee of the Royal Society[11] of allowance for waste, 10 per cent should be deducted from the figures given below

Cathcart's[12] standards of relative food requirements were used in computing the man value of each family and no account was taken of occupation In this method each individual of the family is assessed according to age and sex in terms of one man as a unit, thus a child of 2 is reckoned as 0 4 of a man The average food consumption per man value per day for iron and for other important constituents, as well as the income and milk consumption, are shown in the following table For the sake of comparison the results obtained in the Aberdeen and Peterhead surveys during 1926–7 are included

TABLE II —*Average Consumption per Man Value per Day*

	Aberdeen			Peterhead	
	Present Survey		Previous Survey	Present Survey	Previous Survey
	Anaemic	Non Anaemic			
Calories	2584 0	2375 0	3531 9	2 29 0	4120 0
Protein (grams)	84 1	75 4	107 9	80 5	125.1
Carbohydrate (grams)	395 3	377 6	561 0	431 9	682.7
Fat (grams)	65 8	55 7	84 8	55 9	85 2
Calcium (grams)	0 712	0 703	0 97	0 633	1 19
Phosphorus (grams)	1 313	1 197	1 75	1 282	2.11
Iron (grams)	0 0114	0 0100	0 015	0 0115	0.020
Copper (milligrams)	3 21	2 88	—	3 43	—
Milk per man value per day (pint)	0 51	0 44	0 57	0.36	0.56
Income (shillings)	1 49	1 41	1 80	1.18	1.52

It is interesting to note that the intake of all the constituents is lower in the present investigation than it was in the corresponding dietaries surveyed in 1926–7 With the increase in industrial depression since 1926 the dietary of the poorer classes of the community has become

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NORTH WEST COAST — Large residential and seaside town.—Old-established PRACTICE. Cash receipts about £1,200 p.a. Panel 1,500. Excellent detached corner house (freehold) 3 professional rooms 5 beds and 2 recep. rooms, garage and good garden for sale. Premium—Practice—1½ yrs. purch.—No. 417.

NORTH WALES — Old-established mixed PRACTICE in Country Town near Coast. Cash receipts last year £700. Panel 538. Scope for increase as the Practice has been neglected. Excellent house 3 reception 5 bedrooms garage and large garden. Net rent £50 p.a. Good sport and educational facilities. Welsh not essential. Cottage Hospital. Premium £800.—No. 412.

NR MANCHESTER.—Old-established mixed PRACTICE, offering great scope. Average cash receipts over £500 p.a. Panel 625. Good house in main road 2 reception 4 bedroom. Rent £49 p.a. Premium, best offer. Vendor retiring.—No. 450.

LAKE DISTRICT.—Small Seaside Town.—Middle-class PRACTICE. Cash receipts over £800 p.a. Panel 250. Excellent house (freehold) on sea front 3 reception 7 bedrooms. Garage and nice garden. All kinds of sport. Vendor retiring. Premium—Practice—1½ years purchase.—No. 388.

NEWCASTLE ON TYNE. — PARTNERSHIP in sound industrial Practice. Average cash receipts £4,866 p.a. Panel 4,500. Suitable house available at low rental. Premium—one-quarter or one-third share—2 years purchase. Further share in 2—3 years.—No. 357.

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NEAR NEWCASTLE-ON-TYNE.—Mixed General PRACTICE, averaging £800—£850 p.a. Panel 600. Scope for increase. Good house 3 recep. 5 beds. garage and garden. Premium £950.—No. 422.

MEDICAL WOMAN'S PRACTICE.—MANCHESTER.—Cash receipts last year £645. Panel 450. Good scope. Excellent house 3 reception 6 bedroom garage. Rent £80 p.a. on lease. Premium best offer.—No. 330.

N. STAFFS.—Old-established Country PRACTICE in charming district averaging £900 p.a. Panel 632. Appointments (transferable) £100 p.a. Practically unopposed. Scope for increase. Excellent house with ample accommodation garage and garden. Rent £84 p.a. Premium 1½ years purchase.—No. 426.

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MANCHESTER.—Old-established panel and private PRACTICE. Cash receipts last year £642. Panel 388. Scope. Good corner house 2 reception 4 bedrooms garage. Rent £60 p.a. Premium 1½ year purchase or near offer.—No. 437.

NORTH WEST COAST.—Large Seaside Town.—Middle-class (non-dispensing) PRACTICE. Cash receipts £874 p.a. Select panel of 250. Excellent house (freehold) 2 reception 5 bedrooms garage and garden.—No. 260.

DEATH VACANCY.—Cheshire Coast Town near Liverpool.—Cash receipts £500 £550 p.a. Panel 100. Good house 3 reception 5 bedroom. garage and garden. Rent £80 p.a. Premium best offer.—No. 429.

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ferentely worse The lack of employment as indicated by the lowering of the income per man value has resulted in a lower purchasing power which is reflected in the food intake In both towns there is a fall of about 30 per cent in the average total income per man value and a fall of 26 to 30 per cent in each of the individual constituents of the diet If the income were assessed as per person and not as per man value the figure would be even lower and for Aberdeen would average 11 shillings per day While it is true that there has been a fall in the cost of food it is apparent that this has not been sufficient to counterbalance the fall in income This is probably due to the fact that expenditure on other items such as rent clothing fuel and amusement has not fallen proportionately The average diet of the families with cases of anaemia is very similar to that of families with no cases of anaemia The differences appearing in the above table between the two classes can be regarded as within the limits of experimental error in this method of survey although it is interesting to note that on the whole the anaemic families were taking a slightly better dietary than the non anaemic Both diets are poor in caloric intake and each individual constituent being in most cases below or on the borderline of the following generally accepted standards calories 3 000 to 3 500 protein 100 grams calcium (Sherman) 0 68 gram phosphorus (Sherman[13]) 1 32 grams iron 0 015 gram per man value per day

It is obviously impossible to assess the vitamin content with any degree of accuracy It must however have been comparatively low since the bulk of the dietary in nearly all cases consisted of white bread and other wheat flour foods potatoes and sugar with some meat and fish The intake of fresh fruit green vegetables and milk was low the consumption of milk per man value being barely half a pint per day

More detailed information with regard to the diet in the anaemic and non anaemic families of the Aberdeen survey is given in the following distribution tables Table III gives the energy yielding constituents and Table IV the mineral content The results for the Peterhead survey are not set out in this manner as they show a very similar distribution and the figures would accordingly be redundant

TABLE III

Calories	Anaemic	Non anaemic	Protein	Anaemic	Non anaemic	Carbohydrate	Anaemic	Non anaemic	Fat	Anaemic	Non anaemic
			grams			grams			grams		
1 500–1 750	3	2	40–50	—	1						
1 750–2,000	1	5	50–60	2	6	250–300	3	5			
2,000 2,250	4	6	60–70	3	4	300–350	5	8	20– 0	1	1
2,250–2,500	3	2	70–80	8	3	350–400	7	3	30–40	—	3
2,5 0-2 750	7	3	80–90	3	5	400–450	5	1	40–50	4	7
2,750–3 000	3	4	90 100	5	3	450–500	3	4	50–60	5	6
3 000–3,250	2	—	100–110	2	1	500–550	1	2	60–70	5	4
3,250 3,500	2	—	110–120	1	—	550–600	—	—	70–80	4	1
3,500 3 750	—	1	120 130	—	1	600–550	1	1	80–90	2	—
3,750–4 000	—	1	130–140	1	—				90–100	2	—
4 000–4 250	1	—							100–110	1	1
									110–120	1	—
									120–1.0	—	1
	25	24		25	24		25	24		25	24

TABLE IV

Calcium	Anaemic	Non anaemic	Phosphorus	Anaemic	Non anaemic	Iron	Anaemic	Non anaemic	Copper	Anaemic	Non anaemic
grams			grams			mgs.			mgs.		
						5.– 6.0	0	4			
						6.0– 7.5	4	4			
			0 600–0 750	—	3	7.5– 9.0	3	2			
			0 750 0 900	2	4	9 0–10.5	5	6			
0 150–0.300	—	2	0 900–1.050	4	2	10.5–12.0	4	2			
0..00–0 450	4	2	1.050–1.200	4	4	12.0–13.5	2	2	1.5–2 0	1	3
0 450–0 600	7	6	1.200–1.350	6	3	13.5–15 0	2	2	2.0–2.5	3	8
0 600–0 750	6	5	1.3.0–1.500	4	1	15.0–16 5	1	—	2.5–3.0	8	3
0 750–0 900	1	4	1.500–1 650	—	5	16.5–18.0	3	1	3.0 3.5	5	4
0 900–1 050	4	1	1.650–1 800	1	1	18.0 19.5	—	—	3.5–4 0	6	4
1 0.0 1.200	1	2	1 800–1.950	2	—	19.5–21.0	—	—	4.0–4.5	1	—
1.200–1.3.0	1	2	1 9.0–2.100	1	1	21.0–22.5	1	—	4.5–5 0	—	2
1.350–1..00	—	—	2.100–2.2.0	—	—	22.5–23.2	—	1	5.0 5.5	—	—
1.500–1 650	1	—	2.250–2.400	1	—				5.5–6.0	—	—
									6.0–6.5	1	—
	25	24		25	24		25	24		25	24

An examination of the tables shows that there is no correlation between the incidence of anaemia and any of the dietary constituents In particular it should be noted that there is no correlation between the iron content of the diet and the haemoglobin content of the blood The lowest iron intake between 5 and 6 mg per man value per day was found in four families in which there was no anaemia One family of five had normal haemoglobin values with a daily intake of less than 6 mg From experimental data on iron elimination it has been suggested that 15 mg per day should be taken as a safe standard of the requirement of iron It is obvious from the results of the present investigation that a normal blood picture can be maintained at a much lower level

Although there is no information in the literature as to the copper requirements of human beings it is of interest in view of the possible connexion between copper supply and iron metabolism that the copper intake of the two groups of the Aberdeen families and of the Peterhead families was at approximately the same level These results show that on dietaries of this type the copper intake averages about 3 mg per man value per day and a normal blood level may be maintained on a lower intake than this

Importance of Factors other than Dietary in Causation of Anaemia

The distribution of the 455 women examined in the dispensary is recorded in three groups in Table I The different groups will now be considered in regard to the question of disability This term is intended to indicate possible factors other than diet in the causation of the anaemia

Menorrhagia —This disability is based entirely on the history elicited from the case An attempt to differentiate between slight moderate and heavy menorrhagia was found to be so arbitrary as to be of little value Nevertheless it appeared that heavy menorrhagia was most frequent in Group III and least frequent in Group I

Pregnancy and Childbirth—A patient was considered to be associated with this "disability" when she was pregnant at the time of examination or had had a child or miscarriage within a year previous to examination

"*Infection*"—This term is taken to indicate a heterogeneous group of conditions such as syphilis, bronchitis, pharyngitis, cystitis, pneumonia, tuberculosis, etc For convenience, recent operations, kidney disease, haemorrhage other than uterine, etc, are also included under this heading

It must be pointed out that such symptoms as pallor, weakness and breathlessness on exertion, which might be due to anaemia, are not included under the term "disability" Practically all the cases in Group III complained of such symptoms on being questioned The role of achlorhydria as a causal factor is considered separately The relation of "disability" to the three groups is summarized in Table V From a study of Table V it

TABLE V

Group	Haemoglobin per cent	Number of Cases	History of Disability	*Menorrhagia	Pregnancy or Childbirth		Infection	Average Number of Pregnancies	Average Weekly Income per Person
					Recent	Present			
I	85 and over	242	50 (20 7%)	21	10	3	16	4 6	7s 8½d
II	70-84	150	84 (56%)	31	18	10	25	4 9	7s 10d
III	Less than 70	63	47 (74 6%)	26	10	6	5	5 9	7s 1½d

* In Group I five of the thirty four cases of menorrhagia and pregnancy were associated with infection in addition in Group II the figures were five out of fifty nine and in Group III four out of forty two

will be seen that the proportion of disabilities is lowest in Group I (20 7 per cent) and highest in Group III (74 6 per cent) Menorrhagia and pregnancy or recent childbirth are the factors which appear to bear the most direct relation to the degree of anaemia Fourteen per cent of cases in Group I are associated with these conditions 39 per cent in Group II, and 67 per cent in Group III Since 'infection' is a factor common to children and adult males as well as females, and since it is less frequent in cases of severe anaemia than it is in cases having no anaemia or only a mild form, we are of opinion that the role of "infection" in the production of the anaemia is only of subsidiary importance

ACHLORHYDRIA

In addition to the disabilities discussed above, the role of gastric secretion (in relation to anaemia) was investigated whenever possible Test meals were performed in twenty eight cases belonging to Group III Of these, twenty five showed achlorhydria in the fasting-juice, and, out of these twenty five seventeen maintained achlorhydria in response to the gruel, including thirteen which remained achlorhydric even after histamine injection The remaining eight of these twenty-five cases showed definite hypo-acidity Of the other three cases two showed a normal curve and one had hyperacidity It is interesting to note that these last three gave histories of recent blood loss One had had severe menorrhagia with periods lasting for fourteen days, another had a history of menorrhagia and had had a child two months previously, while the third dated all symptoms of anaemia from excessive blood loss at the birth of a child two weeks previously As a control experiment test meals were performed on nine women who had a haemoglobin value of not less than 80 per cent None of these cases gave a history suggestive of a gastric lesion One case showed complete achlorhydria even after histamine injection The remaining eight responded to gruel the lowest maximum figure for free hydrochloric acid being 16

It is thus seen that over 89 per cent of women of the anaemic group on whom gastric analysis was performed had achlorhydria or hypochlorhydria, as compared with 11 per cent of non-anaemic women If defective gastric secretion is considered along with menorrhagia, pregnancy, and "infection" under the term "disability" over 90 per cent of the women in the severely anaemic group give a history of "disability" as opposed to 20 7 per cent in the non-anaemic group The importance of the role of achlorhydria in the production of hypochromic anaemia is now generally admitted, but it is a moot point, and one which we do not propose to discuss in this paper whether the achlorhydria (through its effect in decreasing iron absorption) leads to anaemia, or whether anaemia by itself causes achlorhydria consequent on the poor blood supply to the gastric glands

RESULTS OF ADMINISTRATION OF IRON SALTS TO ANAEMIC SUBJECTS

Table VI shows the results obtained by administration in twenty cases of Group III of 30 grains of iron and ammonium citrate three times a day (For a full report of fifty cases see *Proceedings of the Royal Society of Medicine*, March 1933)[14]

TABLE VI

	Initial Blood Count		Duration of Treatment in Days	Subsequent Blood Count	
	Haemoglobin %	R B C 10^6 per c mm		Haemoglobin %	R B C 10^6 per c mm.
1	19	2 20	44	80	4 90
2	24	3 13	27	70	4 42
3	31	4 01	60	80	4.83
4	30	3 52	34	65	4 13
5	45	3 87	35	72	5.23
6	45	3 58	40	75	3.83
7	45	2 65	83	92	4 60
8	47	3 00	14	70	4.24
9	30	2.50	96	85	4 31
10	26	3 50	49	70	4.59
11	45	3.52	64	88	4 57
12	55	4 64	28	83	5 05
13	32	3 25	21	85	4 60
14	35	3 13	51	100	5.50
15	32	2 14	50	100	5 03
16	35	3 47	60	92	4 74
17	40	5 09	54	80	4 83
18	38	3 72	16	74	4 15
19	50	3 68	30	76	5 67
20	43	3 57	97	80	5 03

DISCUSSION

The figures generally accepted for the iron content of an average diet are based on the studies made by Sherman of 150 American dietaries The iron content was found to vary from 14 to 20 mg of iron per man value daily From his metabolic studies he concludes that an adult requires from 6 to 16 mg of iron daily McLester[15] rightly points out that this investigation does not take into consideration all contingencies For instance the iron-sparing qualities of calcium are of practical impor-

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14 ESSEX OLD ESTABLISHED ... POINT £600 P A
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(6 bedrooms) standing in own g ... garage
and stabling for sale Scope for increase ... 0

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33 LONDON N.—PARTNERSHIP IN PRACTICE. ABOUT £5 250 p.a. in thickly populated Suburban District. Panel about 800. One-fourth or one third share at 2 years purchase.

34 HOME COUNTIES.—OPHTHALMIC PRACTICE BETWEEN £300 and £400 p.a. in desirable Residential Town, under 15 miles from London. Good detached house (4 bedrooms) with large garden for sale. Good reasons for plenty of scope for increase. Premium £300.

35 LONDON E.C.—OLD ESTABLISHED LOCUM PRACTICE of £646 p.a. Panel 459. Living accommodation to rent if desired. Premium £1 000.

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mce it is definitely known that a normal blood level n be maintained on a diet rich in calcium and moderate iron but that anaemia will occur on the same iron ake if the calcium is reduced Again women need ore iron than men to meet the demands of menstrua on pregnancy and lactation For these reasons it is nerally agreed that the food ingested daily should con in at least 15 mg of iron

The dietary survey of 115 families of the poorest classes Aberdeen and Peterhead indicates that the daily iron ntake is markedly below this figure since an average of 1 n, of iron daily was ingested Nevertheless many ersons were found to be in good health with normal blood vels on a daily intake of iron of 6 7 or 8 mg In hort provided no demands for additional iron were resent (such as are discussed in the following paragraph) o person was found to be taking a diet so poor in iron hat in anaemia could be attributed to direct iron defi ency The minimum iron requirement therefore must be low 6 mg daily The figure is all the more surprising nce the average calcium intake was low so that the absence of anaemia could not be explained on the grounds f the iron sparing properties of calcium

At first sight then since there appears to be no correla on between the incidence of anaemia and direct iron leficiency in diet it might be presumed that diet plays ttle or no part in the prevention or production of naemia A consideration of additional information at ur disposal however places the problem in a different ight In this investigation the subjects could be divided to two groups (1) 750 children between the ages of and 14 years and forty five adult males (2) 455 adult emales mainly between the ages of 18 and 55 In Group I anaemia was conspicuous by its relative absence while in Group II nearly half the individuals were anaemic It is obvious therefore that some function of womanhood must be the deciding factor in the production of the anaemia and the data we have already discussed makes it abundantly clear that blood loss during menstruation and following pregnancy and the increased demands for iron for the foetus during pregnancy and for the mother during lactation together with defective iron absorption secondary to achlorhydria are the deciding factors in the production of anaemia in women If the iron content of the dietary were adequate to meet these hazards anaemia would be relatively infrequent except where the degree of blood loss was so excessive and continuous that no diet could reasonably be expected to make good the haemoglobin deficiency It appears to us not unreasonable that a higher iron intake in the diet would probably raise the majority of the slightly anaemic women in Group II to normal levels That the anaemia is due to iron deficiency and further that the diet cannot adequately supply the deficiency is abundantly clear from the dramatic effects which are produced by the treatment of these individuals with large doses of iron and ammonium citrate without any alteration in the diet (Vide Table VI)

With regard to the children between the ages of 5 and 14 years it was found that the iron required for haemoglobin formation and growth was adequately met by the daily iron intake in the food The figure therefore for the iron requirements of growing children is much smaller than was formerly believed to be necessary We are unable to express any definite views about the body's reserve stores of iron in children and adult males since increased demands for iron to meet eventualities were seldom seen in these classes in this investigation Information could be obtained only by studying the rate of blood regeneration in persons suffering from anaemia secondary to blood loss such as occurs in peptic ulcer who belonged to groups drawn from the poorest class of the community and from a class having good economic status Similarly for the experiment in women to be complete we should have to compare the blood condition of 500 women of the poorest classes with that of a similar number of women from a better economic level where the iron intake would be approximately 20 mg daily No figures are available but we are unable to believe from our clinical experience that 46 per cent of women in the upper classes between the ages of 18 and 55 are anaemic

In conclusion we may say that dietaries containing from one third to one half the usually accepted iron content will suffice to maintain a normal blood level provided as is usually the case in children and adult males there are no additional demands for haemoglobin In all nutritional studies it is necessary to distinguish minimal from optimal dietaries The latter should be adequate for the maintenance of health and to meet periodic and increased demands consequent on the hazards of life It is certain that for women the dietaries in this investigation were iron-deficient as judged by the high percentage of anaemic persons and by the response of the anaemia to iron administration The iron requirement for women is obviously tidal it corresponds with certain functions of womanhood already discussed and at such times may be very much higher than normal

Lastly certain extremely important aspects of preventive medicine must be considered If the percentage of anaemic women found in Aberdeen is present in the industrial areas of the South (and we believe that anaemia may be even more severe there since economic conditions are worse and the cost of living higher) then the loss of economic efficiency of the working-class mothers of this country must be enormous It is true that most of the women investigated complained of few if any symptoms of ill health but this was due to the fact that they had become accustomed to living subnormal lives for years and had really forgotten the joy of good health They invariably admitted that this was so when after efficient treatment their blood level had been restored to normal It is also certain that anaemic persons are more liable to infection and other forms of illness than persons with a normal blood level as has been shown by the researches of Helen Mackay [2] For the maintenance of health during infancy the natural stores of iron must be adequate since the infant makes his blood from the rich iron deposit in the liver stocked during gestation A liver poor in iron allows anaemia to develop rapidly in an infant on a milk diet On the grounds of economic efficiency and of health the prevention of anaemia in working class women and infants has become a major problem and one which demands immediate attention It is suggested that a glass of milk (half a pint which would supply 0 34 gram of calcium and 0 28 gram of phosphorus) and a penny worth of iron and ammonium citrate without any additional change in the diet of pregnant women of the poorest classes would produce remarkably beneficial results to mother and infant This is at present being investigated in Aberdeen

SUMMARY

1 Anaemia is prevalent among nearly half the women of the poorest classes in Aberdeen but is not common among men or school children

2 The anaemia appears to be mainly due to increased demands for iron as a result of (*a*) frequent pregnancies (*b*) excessive blood loss during menstruation and at parturition

3 This anaemia cannot be directly correlated with the iron content of the diet

4 The dietaries investigated are minimal not optimal since they are incapable of meeting the iron requirements under the conditions referred to above (No 2)

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2 PARTNERSHIP—Residential Town, within easy reach of London—A one third share is for disposal owing to the retirement of the senior of three Partners in a well established mixed class Practice Gross cash receipts for the last 12 months £4 400 Panel of 2 500 Fees 3/6 to 21/ Midwifery from £5 5s Very nice house available Ingoing Partner should be experienced, accustomed to better class work and able to [illegible] erence will be given to one holding

3 PARTNE[illegible] OF LONDON—In a pleasant and rap[illegible] [illegible]rb the half share is offered owing to the retirement of the Junior Partner, in a well established and increasing Practice having good future prospects Gross cash receipts for last 12 months about £1 600 Panel of 1 600 Appts worth £140 not included in receipts Very nice house with 2 reception 5 bedrooms and dressing room 2 maids rooms and usual offices Large garden with tennis lawn Price for freehold £1,700 Premium 2 years purchase

4 LONDON NORTH WEST — OUTLYING RESIDENTIAL SUBURB—PRACTICE is situated in a very pleasant and rapidly developing district where a big Estate is being opened up of good class residents Established 6 years, and held by Vendor (who is only leaving to join a friend in Partnership) for 2½ years Gross cash receipts for immediate past 12 months nearly £750 Selected panel of 100 Fees 3/6 to 7/6 Midwifery 7 to 10 guineas. Detached corner house with 2 reception 4 bedrooms etc Garden Garage Price freehold £2 150 £1 500 on mortgage Premium £1,100 Sport of all kinds, and good schools Hospital and Vendor on staff

5 MIDDLESEX—In a very pleasant new and rapidly developing district within 15 miles of London, PRACTICE established by Vendor about 18 months ago is for disposal owing to ill health Cash receipts for past 12 months £360, including panel 120 Good house with large garden garage etc Price freehold £1,728 (practically all on mortgage) Premium one years purchase Exceptionally good prospects

6 CHELSEA AREA—LOCK UP SURGERY—Old established and averaging about £450 p a, including panel of 140 Hours 9 30 to 12 and 5 to 7 p m Consultations 2/6 to 10/6 Very little visiting at 5 upwards Rent of two rooms £84 p a Total expenses just over £100 p a Premium £650 Ill health reason for sale

7 PARTNERSHIP—In a well populated pleasant South Eastern suburb within ten miles of London the half share of an old established mixed class Practice is for disposal owing to the retirement of the junior partner Held by the remaining partner 30 years Cash receipts average £2 765 p a including panel of 1 800 and appts worth £150 Very little midwifery Pleasant semi-detached corner house with ample accommodation garden Price leasehold (over 900 years, at ground rent of £7 p a) £1,050 Premium 2 years purchase Scottish graduate preferred

8 MANCHESTER—Old established middle and working class PRACTICE averaging about £1 300 p a including panel of nearly 1 800 Visits from 3/6 Moderate expenses Suitable house with 3 bedrooms and 3 good sized attics, etc Price for freehold £1 150 Premium 1½ years purchase

9 NORTH EAST COAST—FAVOURITE TOWN—Old established good mixed general Practice offering considerable scope for increase Gross cash receipts for the past twelve months approximately £1 800 Selected panel of 100 Fees 5/ to 7/6 Very little midwifery Well situated house with 3 reception 5 to 6 bedrooms etc and separate professional rooms Electric light Garage Price £2 500 large part on mortgage Good opportunity for Eye work and Ear Nose and Throat work if desired Sport of all kinds and excellent schools Premium £2 800

10 MANCHESTER—Old-established middle and working-class PRACTICE producing for the last twelve months about £650, including panel of 790 Fees from 3/6 Convenient house with 2 reception 4 to 5 bedrooms bathroom etc Rent on lease £60 Premium £950 to include furniture

11 LONDON NORTH WEST — Middle class PRACTICE in new and developing district producing last year £400 and this year at the rate of about £600 Panel of 230 Fees 2/6 and 3/6 visits from 5/ Six roomed house with bathroom electric light Garage Garden Price for freehold £1,000 £850 on mortgage Prem £650

12 LONDON SOUTH WEST—Old-established middle and working class PRACTICE, producing about £1,100 p a, including panel of about 1 150 Visits 3/6 to 5/ Suitable corner house with 2 reception 4 bedrooms bathroom and separate professional accommodation Can be rented on lease Premium £1 750 Easily worked and offering very good scope for increase

13 CENTRAL LONDON—Middle and better class PRACTICE, averaging for the last two years about £500 p a including small panel of 180 Fees 3/6 to 21/ Professional accommodation can be rented at £200 p a Premium £300 to include furniture drugs instruments etc

14 NORTH LONDON—Middle and working-class PRACTICE, in well populated residential district, averaging about £1 300 p a Panel of about 1 300 Appts consist of Medical Officer to two Missions and these will only transfer to a suitable successor of evangelical principles. House can be rented also Branch Surgery

15 SOUTH WEST OF ENGLAND—In a thriving and pleasant seaport town with beautiful surrounding country, a well-established increasing PRACTICE worth last year over £1,100 including panel producing £286 and appts £200 Visits 3/6 to 21/ Midwifery practically refused Good house in excellent position with ample accommodation small garden and garage Price freehold £2,100 or would be let on lease at £127 p a Premium £2 000 or near offer

16 SOUTH EAST LONDON—Good middle and working-class PRACTICE, producing last twelve months nearly £950 Panel of 986 Suitable house with 2 reception 4 to 5 bedrooms, etc Rent on lease £70 p.a. Prem to include drugs etc and surgery fittings and furn. £1 450

17 HOME COUNTIES—ASSISTANTSHIP, with view to Partnership is offered in a better class Practice in residential town Ingoing partner must have experience of general Practice and be able to undertake major surgery and preferably hold a Fellowship

18 NORTH WALES—Old established middle and working-class PRACTICE averaging for the last three years over £1 700, including panel of about 1 300 Fees from 2/6 Visits from 3/6 with medicine extra Suitable house with good professional accommodation. Electric light Garage for two cars Small garden Rent on lease £100 p a Premium £2 500 £1 700 down, balance by instalments Good sport, etc A knowledge of Welsh is not necessary

19 RIVIERA—Old established PRACTICE the receipts from which have averaged over £1 000 p a but have decreased recently owing to Vendor's ill health Very good prospects of extension Fees from £1 1s Very easy work Suitable flat can be rented at £100 p.a. Premium £4 000

20 MIDLANDS—Old established middle and better-class PRACTICE in clean and attractive manufacturing city Cash receipts average over £1 000 p a including appt worth £165 (transferable) and panel of 1 220 Visits 5/ to 3 gns Midwifery discouraged fees 5 to 15 gns Exceptionally good house, in its own grounds with ample accommodation fitted with every labour saving device and economically run Situated in the best residential part Village in the groun[illegible] [illegible] rice freehold £5 000 (£3 500 on mortgage [illegible]e for active man

21 WESTERN [illegible] PRACTICE producing £600 p a including panel of nearly 600 Suitable house available Premium 1½ years purchase

22 LANCS—Well established mixed class PRACTICE, producing for the last 12 months £725 Panel of 1 055 Fees from 3/6 House contains 3 reception 5 bedrooms etc Rent on lease £85 p.a. Premium 1½ years purchase

23 LANCS — LARGE TOWN — Old-established upper and middle-class PRACTICE situated in purely residential district and averaging about £1,700 p a including appt of £130 and panel of 700. [illegible]ery little midwifery at 5 to 10 guineas. [illegible] and well built house, ideally situated having [illegible] surgery waiting room and dispensary 3 recepti[illegible] [illegible] Rent on lease £120. Premium £2 500. Good

24 EGY[illegible] PRACTICE, producing about £960 p.a. and offering good scope for increase Fees 10/6 to 2 guineas. Excellent accommodation can be rented at £16 10s monthly Premium [illegible] run, bottles instruments etc. £2 000

25 [illegible] East Town and Pleasure Resort (pop [illegible] and increasing PRACTICE annual [illegible], averaging £1 644 p.a., including appt worth £70 and panel of 1 200 Visits 5/ to 21/ medicine extra Good house (5 bedrooms etc) with garden and garage Price (leasehold of about 60 years to run ground rent £3 p.a.) £1,800 £1 200 on mortgage Educational facilities and sport. A knowledge of surgery desirable is definite scope for this work

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5 The anaemia can be rapidly cured, with marked improvement of general health, by the administration of iron salts

6 The relation of these findings to preventive medicine is discussed

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EXPERIMENTAL SHOCK

WITH SPECIAL REFERENCE TO ANAESTHESIA*

BY

R J S McDOWALL, D Sc M B, F R C P Ed

PROFESSOR OF PHYSIOLOGY KING'S COLLEGE UNIVERSITY OF LONDON

The problem of why persons subjected to physical trauma should pass into a condition of shock is one which has long been of interest to surgeons Nowadays, indeed, shock rivals sepsis in its importance in surgical operations

During the war the study of the subject received a great deal of attention, and many valuable conclusions were reached, but there still remains, especially on the clinical side, a state of great confusion The present state may, I think be indicated by the fact that the College last year divided one of its valuable prizes between two surgeons whose views on the treatment of so called surgical shock were a direct contradiction one of the other

Now it happens that shock can be produced with great ease in laboratory animals and in the time at my disposal I propose to put forward evidence to you which will emphasize that shock is not a single entity, but may be produced experimentally and clinically from a variety of causes and that any single remedy used without understanding of the case in hand is bound to give most contrary results

DEFINITION OF SHOCK

We may define shock in an animal as the state which results from a fall of arterial blood pressure, which, if severe may lead to death from oxygen want Its onset may, however be preceded by a compensated or even over compensated stage in which the body succeeds in maintaining the blood pressure against the forces which would cause it to fall

From our knowledge of the circulation then we must consider that shock may occur from cardiac failure, from loss of blood, from increased capacity of the circulation—that is from an undue opening up of vessels which are normally closed—or from a reduction of the peripheral resistance to the flow of blood from the arterial system From the point of view of surgery however, it is probably best to group the various experimental procedures under headings which are indicative of the cause In dealing with the detail I shall deliberately omit a large number of minor points, because I feel that if there was a clear understanding of the principles involved the literature would not be in the confused state that we find it in to-day for I am convinced that much of the excellent clinical literature appears discordant purely because those concerned are writing about a variety of different conditions but all under the same title of "surgical shock" There is evidence which indicates that the patient who dies from gross tissue damage such as burning, the patient who dies from minor mechanical injuries, and those who die after prolonged surgical operations may be deaths from distinctly different states I hope you do not think I dwell too much on patients who die—many recover—but there are still thousands who die annually who might be saved if the subject was more systematically studied

SHOCK FROM HAEMORRHAGE

I do not propose to spend much time in discussing this variety of shock, as its cause is obvious I should, however, like to emphasize that many of the mechanisms by which the body attempts to compensate for haemorrhage are nervous and depend on the carriage of afferent impulses to the vasomotor centres, which in turn send out impulses to constrict the spleen and blood vessels generally What is particularly important from a surgical point of view is that, being nervous, these mechanisms can be relatively easily anaesthetized, and the effect of the haemorrhage therefore becomes enhanced, and there is abundant evidence that a low blood pressure, say of 60 mm of mercury, if allowed to persist for half an hour, is liable to bring about permanent changes, which may be fatal Every attempt should therefore be made to restore the blood pressure before administering an anaesthetic

DIRECT ACTION OF TOXINS ON PERIPHERAL VESSELS

Histamine or Toxic Shock—Great attention has, since the war, been focused on this variety of shock since the discovery of the dramatic phenomenon of histamine shock by Dale and Laidlaw By some it has been hailed as the complete solution of the shock problem, but it is only fair to say that the authors themselves have never made this claim On the other hand, no one will deny that toxaemia is a most important factor in shock, and probably the most important factor when the onset of the shock is delayed

The special importance of histamine lies in the fact that it is present in watery extracts of practically all tissues, as it is a simple derivative of the amino-acid histidine, and its effect when injected in minute quantities into the circulation of anaesthetized cats and dogs produces in a few minutes a condition of shock The shock produced is comparable with that variety of shock in man in which the onset of the symptoms may have been delayed and have apparently depended on the absorption of toxins from damaged tissues

The skin has been shown to contain relatively large amounts of histamine or its precursor indeed, there is reason from the work of Lewis to believe that the production of this or a similar substance is a physiological method by which the skin is flushed subsequent to minor injuries The delayed shock of severe burns is probably produced by the absorption of such a substance

Dale and Richards showed that histamine acts by dilating the capillaries, and this has been since confirmed by many others As a result of the capillary dilatation there is a relative insufficiency of blood—the animal is as it were, bleeding into its own capillaries, which have become opened up The state is like that of haemorrhage only the animal bleeds into its own vessels But the

* An Arris and Gale Lecture delivered at the Royal College of Surgeons of England on February 15th, 1933

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all tracts are not necessarily congested for in becoming ted they apparently become more permeable and the od plasma rapidly passes into the tissues leaving und as shown by many observers a concentrated ood The finding of a concentrated blood clinically is ongly suggestive that the case is one due to capillary ntation

Now we may ask ourselves Does this variety of shock ur clinically? The matter was really settled for us by Shock Committee of the Medical Research Council here is abundant evidence that this is a common ety of fact so common indeed that it has almost n allowed to overshadow the other varieties I can t summarize the evidence that such chemical shock sts The shock is delayed in its onset the greater the sue damage the more liable it is to occur It may cur acutely if a tourniquet is removed from a severely maged limb and the products of damaged tissue allowed enter the circulation The shock is enhanced by cold d anaesthesia with ether or chloroform Typically we this variety of shock after severe burns and when se masses of tissue are destroyed the patients going to shock not immediately but after several hours or en days when there has been considerable absorption of e products of dead or dying tissues

It has been pointed out particularly by Zachary Cope at clinically this variety of shock is commonly pre ded by a rise of blood pressure and by some this has en considered evidence against it being due to capillary ltation On the contrary this is exactly what might expected for I have demonstrated that under suitable nditions this rise of blood pressure can be brought about histamine exactly as in haemorrhage It is indeed erely an over compensation to a circumstance which ads to cause a fall of blood pressure This over com ensation may be seen both in the response to haemor rhage and to posture as pointed out by Leonard Hill In e case of histamine Dale and Burn have shown that n increased secretion of adrenaline is called forth The rterial con triction which has been noted clinically by Malcolm is part of the ordinary reaction to a loss of lood volume I have shown that it occurs with small ses of histamine as with small haemorrhages We see his in the progressive fall of venous pressure which) curs on the injection of non shock doses of histamine) the increased velocity of the pulse wave the de creasing capability of the animal to withstand the maximum dose of histamine which may be recovered rom and the diminution in the volume of a limb which ucceeds a histamine dilatation

The importance of the suprarenals in relation to hista ine shock has been now conclusively shown by Dale nd also by Kellaway and Cowell in that if they are le troyed histamine shock may be caused in unanaes ch tized carnivora which are otherwise very resistant Herein no doubt lies the importance of cold in relation to shock for subsequent experiments by Cramer and by Crowden have demonstrated that cold exhausts the supra renal glands The necessity for keeping a shocked patient warm is already so well recognized in surgical practice that I am surprised to learn that operating tables are no longer heated except by hot water bottles

The Effect of Anaesthetics—That brings me to the relation of anaesthetics to histamine shock Normally animals can withstand histamine in large doses but carnivora become sensitive to histamine if anaesthetized as was shown by Dale and Laidlaw An anaesthetic such as ether probably acts by dilating vessels by in creasing their permeability and by paralysing the normal mechanism of compensation This is undoubtedly a point of enormous practical importance the more so as the effect of the ether at the time of the operation may be masked by the stimulating action which the ether exerts by irritating the respiratory tract In a narcotized animal it is easy to demonstrate the vaso-dilator action of ether We must therefore consider that the individual who administers ether or chloroform to a severely damaged patient is guilty of a crime but he would probably escape censure as the patient may not die immediately Probably the anaesthetic has been responsible for many fatal cases of obstruction or strangulated hernia which have been operated upon late I don t think I am saying too much when I say that many such deaths could have been avoided May I hope that modern surgeons will not be like their predecessors who continued to remove the thyroid gland for twenty years after physiologists had shown that its total removal led to death from myxoedema We must not smile It is already four teen years since Dale and his colleagues did this work but although it is mentioned in some surgical books its importance does not yet receive general recognition If such patients must have a general anaesthetic then nitrous oxide is the anaesthetic of choice since it has been shown by Dale that this anaesthetic does not render an animal so sensitive to histamine shock as ether It is however not such an easy anaesthetic to administer nor from the point of view of relaxation so satisfactory as ether or chloroform indeed we must frankly state that we are as yet without an ideal anaesthetic Personally I believe that we shall see a greatly extended and routine use of local anaesthetics for this class of case in surgery It will be agreed that spinal anaesthesia does not meet the case as it interferes with the nervous control of the vessels and also causes vaso-dilatation

Loss of Central Control of Blood Vessels

Damage to Vasomotor Paths—All the blood vessels of the body are under the control of the vasomotor centre and the majority are maintained in a state of partial contraction by its activity It is evident then that interference with the pathway between these centres and the blood vessels must bring about vaso-dilatation and a fall of blood pressure In this category must come the shock produced by injury to the spinal cord also fat embolism in the medulla which has been described as a sequel to fractures The shock which is liable to occur in high spinal anaesthesia is somewhat similar in that the paths from the vasomotor centre to the abdomen and lower limbs are blocked and vaso-dilatation results

I do not propose to spend time on such obvious causes of shock but to pass on to the very interesting form of shock of nervous origin which results from operation or injury in which the tissue damage is negligible but the shock is profound

Concussion of the Vasomotor Centre—I should like however to mention that concussion as a cause of shock may be more common clinically than is commonly supposed It may be produced experimentally by simply jarring the head In accident cases there is obvious probability that it exists

We now come to those varieties of shock which depend on afferent impulses

Acapnic Shock—The vasomotor centre may be thrown out of action by a loss of carbon dioxide The fact that the carbon dioxide of the arterial blood was somehow responsible for the arterial blood pressure was first pointed out by Yandell Henderson Unfortunately Henderson postulated at the same time a somewhat remarkable veno-pressor mechanism which made his theory an easy prey for critics and his views even as late as 1923 received very little attention if we may judge by Cannon s book Henderson showed that in etherized dogs as a

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result of the stimulation of afferent nerves, there might be over-breathing to an extent sufficient to lower blood pressure

In 1923 the essential fact was confirmed by Dale and Evans, who also showed that the carbon dioxide of the arterial blood was responsible for maintaining the normal activity of the vasomotor centre in the medulla, and that a reduction of the carbon dioxide of the blood in an etherized animal led to a fall of blood pressure I have since shown that the capability of an animal to adapt its circulation to changes in posture, such as being placed in a vertical position, depends on the presence of carbon dioxide The fact that the vasomotor centre requires carbon dioxide must now be accepted, and we have to ask ourselves, Can this variety of shock occur clinically? The answer is again " Yes, certainly in etherized persons," for I have shown that in a limited number of animals under chloralose over-ventilation does not bring about a fall of blood pressure , a fall occurs if the animal is etherized In man, over-breathing sufficient to cause apnoea (thus showing that the CO_2 has been washed out) does not necessarily cause a fall of blood pressure (Densham and Wells), because of compensatory constriction of vessels due to increased alkalinity I do not, of course, deny that very violent over-breathing, which often is not followed by apnoea, does cause a fall, because this actually interferes with the circulation through the lungs Mr Wakeley has kindly allowed me to look over his records of operation cases, and among them I found many examples of increased respiration being associated with a fall of blood pressure In further support of the existence of such washing out of carbon dioxide is the common practice for anaesthetists themselves now to administer carbon dioxide with their anaesthetics as advised by Henderson

How far acapnia may be an important factor in shock in unanaesthetized patients is difficult to say since any fall of blood pressure might cause over-breathing The fall due to histamine, however, does not usually cause such breathing, because of the bronchial constriction What I do want to emphasize, however, is that even if the acapnia is not a primary factor in shock, it cannot be ignored for the evidence is complete that it reduces the activity of the vasomotor centre by which the body attempts to compensate for a fall of blood pressure Every effort must be made, therefore, to reduce the effect of sensory stimulation during operation It seems to me that herein lies the great value of morphine which many surgeons still use in all accident cases I shall return to the question of anaesthetics when I have dealt with depressor shock

THE VASOMOTOR CENTRE MAY BE INHIBITED

Depressor Shock.—There is a class of case met with clinically which appears to fit into none of the categories already mentioned I refer to severe shock from an apparently trivial injury such as a bullet wound through the hand or, as I saw recorded recently, a snowball on the eye The amount of tissue damage is negligible, and from what I have said of acapnia, it is difficult to see that acapnia is wholly responsible without the occurrence of obvious over breathing Here we must believe that there is definite inhibition of the vasomotor system by afferent impulses The possibility of this occurrence was first put forward by Guthrie but he did not have any clear idea where the inhibition took place , Meltzer apparently thought it peripheral and Guthrie thought it psychic

The possibility that afferent impulses might be concerned in shock was first suggested by Crile, but unfortunately he claimed that all shock was produced in this way His view was that the afferent impulses stimulated the vasomotor centre, which became exhausted [illegible] he bolstered up his view by so much erroneous argument that his theory fell into disrepute The fact, however, incontrovertible that certain afferent impulses cause [illegible] Anyone who reads the clinical literature of the subject will see quite easily that the shock which is so often described by Lockhart-Mummery is not the second wound shock on which the Wound Shock Committee worked It is an entirely different entity For example Lockhart-Mummery, in his Hunterian Lectures in the place in 1905, emphasized the importance of the local destructive manipulations such as tractions in a pedicle or ligament and nerves The Shock Committee emphasized the importance of gross destruction of tissue

When men take the trouble to make observations they are usually true, but the deductions may be false I think that on the whole Lockhart-Mummery supported Crile's view that the centre was exhausted, but his observations were none the less very valuable We must however, remember that the absence of any knowledge of histamine shock in 1905 made the whole problem much more difficult and confused Actually the centre is remarkably resistant to exhaustion, and Porter and others have shown that the centre is not exhausted in shock and could often be made to raise the blood pressure afferent by stimulation of an afferent nerve This fact has caused the Crile-Mummery view to pass into abeyance, and what good there has remained of it has been taken over by the supporters of the acapnic theory There is now, however, definite evidence that, apart from acapnia, shock may be produced not as a result of exhaustion, but by nervous inhibition of the vasomotor centre by certain afferent stimuli, especially mechanical stimuli The occurrence of inhibition of the vasomotor centre is well known in physiology The centre may be inhibited not only by special depressor nerves, but also by stimulation of many mixed nerves at a slow rate This depression may be counteracted by stimulation of another region with a fast rate of stimulation, which stimulates pressor rather than depressor fibres in a mixed nerve because of the different excitability of the fibres There is then no real conflict between Porter and Crile or Lockhart Mummery but merely a lack of full understanding on both sides The question naturally arises, however, how far the results of Crile and Lockhart-Mummery might be due to loss of carbon dioxide due to over-ventilation, which commonly occurs at the same time

It may be shown that this depression of the vasomotor mechanism produced by mechanical stimulation is not due primarily to acapnia, for it can be produced in an animal with the chest open and under artificial respiration No doubt, however, acapnia does enhance the effect, so that from the point of view of prevention we can take acapnic and depressor shock together They are both *preventable by deep anaesthesia* This gives support to the view that the prevention of primary shock is possible by deep anaesthesia This has long been claimed, but the claim did not rest on much experimental data It is interesting to remark that in Beattie and Choyce's *Textbook of Surgery*, however, I find it stated that sometimes anaesthesia causes improvement in shock cases Here we have then, a great difference between shock produced by chemical and nervous stimuli, a difference which has an enormous importance in anaesthesia

In an experiment under dial, the piercing of the fore limb with a sharp instrument caused a profound shock, which was recovered from under deep ether anaesthesia, during which no depression could be produced Electrical stimulation of an afferent nerve at a fast rate brought about a temporary recovery of blood during a fall of blood pressure I have also obtained a fall of blood pressure by merely tapping a tibia, while in other animals

ock has been produced by more dissection of the sciatic ve which would be quite innocuous under deep ether nesthe ia In my experiments I have found that umi ation of the carotid sinuses and the vagi enhances depres or re ponses but the exact significance of this oint I have not yet made out

This variety of shock together with that produced by s of carbon dioxide is probably what has hitherto been known as primary shock—a state well recognized to be ndamentally different from secondary wound shocks by orkers such a Cowell Bayliss Dale and Wallace But e experiments which I have just quoted suggest that s variety of shock may be more important in accident ies and in the operating theatre than is generally sup osed In relation to operations an interesting piece of ork has recently been published by Richet and Dubin showing that the vaso dilator centre seems to velop a preliminary higher excitability under anaes ietics It seems likely that the pressor mechanisms ecome anaesthetized before the depressor mechanisms Now a very interesting point is that experimentally nder apparently similar states of anaesthesia depressor ock cannot always be demonstrated This time last ear I had no difficulty in producing it indeed my ttention was drawn to it by the fact that on many ccasions I produced it accidentally by operations which re usually innocuous On the ground of these experi nts which appeared so certain I decided to give this ecture its present title but when I began to prepare for t in detail in September and October I found myself otally unable to produce shock in this way It was ather disconcerting The results were so clear cut in ebruary and September that I decided to wait for a few months Now I am relieved to find that I can produce he depressor shock easily again but as yet I have not een able to define exactly the circumstances under which arises The difference may be due to the seasonal vari bility in the sympathetic system of cats or may be solely question of exhaustion by cold This is however by no eans solely a purely experimental point but one of linical importance because it is found that some patients re much more easily shocked than others and that fear motion and cold which stimulate the sympathetic and may cause exhaustion of the suprarenals are definitely looked upon as aggravating causes (Fraser)

Mixed Shock.—From what has been said it is almost obvious that in some instances the varieties of shock must overlap—for example chemical shock may supervene on nervous shock indeed it may almost be assumed that it will if a nervous shock is allowed to persist because oxygen want will of itself lead to tissue death and capillary dilatation

Conclusion

The whole clinical problem now requires to be completely reinvestigated in the light of modern experimental facts with a view to finding methods for diagnosis of the different varieties A large amount of the existing literature is completely valueless I do not pretend that what I have said is in any way final and a large number of the facts are not new all I hope is that it may serve as a simple basis from which systematic clinical study may be made But I think you will agree that a fuller knowledge of the experimental facts makes the general approach to the subject easier

I have omitted those methods of producing shock which I do not think are related to surgical practice and (as I said at the beginning of the lecture) I have also deliberately omitted a large number of facts regarding shock Many are secondary to the fall of blood pressure acidosis loss of muscle tone lowered metabolism etc I have done so because I want to make it quite clear that a number of clear cut varieties of shock exist experimentally Clinically they have not been differentiated except very crudely as primary and secondary although as I have indicated there is every reason to believe that distinct varieties exist To the physiologist and biochemist may be left the problem of how best to deal with histamine a solution to which is one of the most important requirements of modern surgery But meantime we also want in relation to shock a better clinical surgery capable of making a more adequate differential diagnosis—not the dramatic surgery of the operating theatre but the unexciting and unremunerative study of the patient in bed the work which is too often left to anybody willing to do it the surgery which involves a careful study of available experimental data which would be a stepping stone to a new surgery If more surgeons came into the physiological laboratories and saw the different varieties of shock for themselves there would be a much better appreciation of the facts and soon we should have the clinical investigations which are so desirable

Summary

Experimental shock may be divided into several distinct varieties which apart from that produced by haemorrhage and cardiac failure may be divided into chemical and nervous

The chemical variety is typified by histamine shock experimentally and clinically by a delayed shock associated with gross destruction of tissue This variety is enhanced by anaesthetics

The nervous varieties may result from physical damage to the vasomotor centre or its efferent paths from afferent impulses leading to loss of carbon dioxide (acapnia) or from inhibition of the centre Acapnia and inhibition account for the shock which follows immediately on injury Shock dependent on afferent impulses is prevented by deep anaesthesia and reduced by morphine The chemical and nervous varieties may coexist and enhance each other

INSULIN AND GLUCOSE IN THE TREATMENT OF HEART DISEASE

WITH SPECIAL REFERENCE TO ANGINA PECTORIS

BY

K SHIRLEY SMITH M.D. B.Sc. M.R.C.P.

ASSISTANT PHYSICIAN AND PHYSICIAN IN CHARGE OF THE ELECTRO-CARDIOGRAPHIC DEPARTMENT CHARING CROSS HOSPITAL PHYSICIAN TO OUT PATIENTS CITY OF LONDON HOSPITAL FOR DISEASES OF THE HEART AND LUNGS VICTORIA PARK

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One of the earliest reports on glucose therapy was published before the war by Goulston [1] who recorded definite benefit resulting from oral glucose administration in cardiac failure These observations were confirmed by Budingen,[2] who claimed that glucose therapy supplemented the action of digitalis Intravenous administration of glucose has been employed by Klewitz and Kirchheim,[3] who reported subjective improvement both in patients suffering from chronic heart failure and in anginal syndromes These observers also found, by animal experimentation, that alternation of the heart could be relieved by addition of glucose to the perfusion fluid their records received support from the work of Edwards and Page,[4] who were able to produce alternation in the course of experimental hypoglycaemia in dogs, and to relieve this arrhythmia by the subsequent provision of glucose From the clinical standpoint the disappearance of alternation during glucose therapy has been recorded by Kisthinios and Gomez,[5] and Loeper, Lemaire, and Mougeot [6] Loeper and Lemaire[7] brought forward clinical evidence to suggest that the action of digitalis, strophanthin, and quinidine is augmented by the daily administration of 50 grams of sugar The intravenous injection of glucose solution has been claimed by Marvin[8] to be of value in the treatment of paroxysmal cardiac dyspnoea Both this condition and alternation must be regarded as expressions of grave myocardial damage or stress, and the fact that they may be relieved by glucose administration would suggest either that a relatively inadequate nutrition was previously available, or that a superfluity of glucose in the myocardial irrigation is in some way remedial

Glucose-Insulin Therapy

The advent of insulin in 1922 opened up new possibilities in the treatment of cardiovascular diseases, and as early as 1924 the potentialities of glucose-insulin therapy were envisaged by Pick [9] Two years later Osato[10] published an account of the favourable effect of such treatment upon six patients suffering from congestive failure More recently Kisthinios and Gomez[5] have found that although sugar administration often provokes diuresis in heart failure, benefit may accrue even when this does not occur These authors applied the remedy to patients who had been under treatment with digitalis on previous occasions and they concluded that glucose had a direct action upon the heart muscle, and that, with or without insulin it might be efficacious in failure when other remedies had been unsuccessful They observed the abolition of bigeminy in one case, and considered that insulin therapy might be usefully applied even when failure was of thyrotoxic origin Rimbaud Balmès, and Anselme-Martin[11] treated twenty one patients with congestive failure with glucose and insulin They found that in irreducible failure this method could produce valuable results either alone or in conjunction with digitalis, but that little if any benefit was to be expected in thyrotoxic myocardial disease The technique in their investigations was as follows five units of insulin subcutaneously, followed in fifteen minutes by 50 grams of glucose or lævulose by the mouth daily If no benefit ensued in five days the doses of insulin and sugar were doubled, and the treatment continued for ten or twelve days Similar methods have been adopted by Macchioro,[12] Weiner [13] Jorge and Sobrinho [14] and Loeper, Lemaire, and Degos[15] with corresponding results The electrocardiographic changes in patients treated by insulin and glucose for heart disease have been studied by Mathieu, Colleson and Simonin [16] Among ten patients suffering from chronic myocardial disease of whom three also had renal impairment they found a shortening of the QRS complex and increasing amplitude of the R wave in all leads In two instances the reappearance of T waves previously absent was observed These changes were noticed after periods of treatment varying from eight to twenty one days

It has been said concerning new remedies that it is sufficient for the introducers to record benefit or cure in 100 per cent of their cases confirmatory investigations must also give positive results in other hands The reports reviewed above constitute an important body of evidence suggesting that glucose insulin therapy is valuable in heart disease and failure There is however no consensus of opinion in this matter Carusi[17] has found no beneficial results from the treatment of failure by glucose and insulin Moreover, Lasch[18] has formed the opinion that these remedies are not only useless in this sphere, but also possibly harmful

Angina Pectoris and Pancreatic Extracts

It was observed by Hetenyi[19] that the insulin treatment of diabetics who also suffered from angina pectoris sometimes resulted in relief from the anginal attacks The application of this finding to the treatment of non-diabetics with angina pectoris was made by Ambard, Schmid, and Humbert,[20] who reported a case in which attacks had ceased after treatment with insulin and glucose Beale[21] has observed a comparable instance in which anginal attacks ceased after injection of small doses of insulin, while Bickel [22] has reported a similar result using insulin and glucose Vaquez has extended these investigations to the treatment of related conditions such as peripheral arterial disease, but has obtained inconstant results, which he attributed partly to variations in the content of pancreatic extracts other than insulin in the preparations he employed These results led him, in collaboration with Giroux and Kisthinios,[23] to use a de-insulinized pancreatic extract (angioxyl) prepared according to the researches of Gley and Kisthinios [24] He found that in fourteen out of twenty cases of angina pectoris treated with injections of angioxyl no further attacks occurred The therapeutic action of angioxyl has been subsequently investigated by Woolf, Findlay, and Dessen,[25] and Nuzum and Elliot [26] Their results were in general agreement with those obtained by Vaquez, Giroux, and Kisthinios

It appears from the account given by Vaquez of his investigations that he attributes the influence of insulin on the cardiovascular system to the hypotensive substances that it contains in greater or less amount If one takes the view that anginal pain is of aortic origin and is precipitated by excessive pressure in the aorta it is naturally attractive to view the action of insulin in this light, further, since it has been frequently demonstrated that a transitory elevation of blood pressure accompanies some attacks of angina pectoris, it follows that substances producing a reduction of blood pressure will relieve some sufferers from angina pectoris More and more evidence is accumulating to show that anginal pain in general arises not in the aorta, but in the heart muscle, and is attributable essentially to deficiency in coronary blood or blood flow rather than to alterations in blood pressure Granting this coronary hypothesis, the results obtained by Vaquez are readily explicable on the ground that hypotensive substances produce a fall in blood pressure by virtue of generalized arterial dilatation in which the coronary arteries share

Glucose-Insulin Therapy in Angina Pectoris

Few diseases are more variable in their response to treatment than angina pectoris Every physician must recall certain patients who, despite every care in investigation, management, and treatment, have failed to experi-

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nce diminution in frequency or severity of attacks urther the course of the disease is commonly one of inexplained exacerbations modifications and remissions ven in the absence of any treatment whatsoever Angina pectoris thus belongs to the group of maladies in which pontaneous changes for better or worse render t assessment of the value of any particular remedy extremely difficult In these circumstances any medicament or method of treatment which gives a prospect of possible benefit deserves consideration and trial It is for this reason and in the hope that other clinicians may apply the method described below that I venture to publish the following case reports Certain investigations that have been made by myself and others into the metabolic and cardiographic aspects of the problem of cardiac nutrition will be discussed subsequently but it may be mentioned here that insulin and glucose were applied to the treatment of angina pectoris in the belief that a defect of carbohydrate combustion in the heart muscle is at the root of anginal pain and in the hope that by this means normal glycogen utilization in the heart might be promoted and the pain thus avoided

During the past year upwards of forty patients suffering from angina pectoris have been considered from the standpoint of treatment by insulin and glucose For reasons put forward above and since it was required to assess the value of the treatment it was considered advisable to treat only patients who fulfilled certain rigid criteria (1) the patients were suffering from undoubted coronary syndromes (2) they were subject to frequent attacks usually several attacks in a week or daily attacks (3) the attacks were of at least one or two months duration (4) the clinical condition at the time of treatment was static—neither improving nor deteriorating In most of the patients one or more remedies had already been tried without avail—rest vasodilators sedatives etc

The circumstances and technique of treatment were also definitely decided upon The patients continued taking any remedies that they had previously been taking They continued in the same regime of work or rest during as before treatment Records of frequency severity and duration of attacks were kept for the period prior to during and after treatment The method consisted in giving five units of insulin before breakfast and before the evening meal each dose being followed by 30 grams of glucose taken with the meal This treatment was administered over periods varying from two weeks to seventeen weeks In certain patients otherwise suitable for treatment practical difficulties prevented the application of this systematic technique In such cases the treatment was not instituted

Case Reports

Case 1.—Male aged 57 Arteriosclerosis angina pectoris Onset in January 1932 of left supramammary pain on effort Pain relieved by five to ten minutes rest The frequency of the attacks increased to one daily Diuretin trinitrin luminal and rest in bed had all failed to prevent attacks Without altering in any way the mode of life insulin treatment was started in June Within one week he was free from definite attacks although slight mammary pain occurred occasionally on effort He was kept on the treatment for seventeen weeks and at the end of this time his effort tolerance had very much improved very slight mammary pains occurred occasionally on effort the duration being a minute as compared with the previous duration of about fifteen minutes In October he discontinued the treatment continuing the same regime and within a week he had had two severe anginal attacks Insulin treatment was reinstated and he has remained well since

Case 2.—Male aged 52 Hypertension angina pectoris chronic bronchitis and emphysema This patient had been under treatment for the lung condition for one year when he began to notice numbness and oppression in the centre and left side of the chest and in the left arm These symptoms were concisely related to effort and always relieved in a minute or so by rest In July 1932 after two months of unchanging symptoms insulin treatment was instituted the patient continuing his usual mode of life exactly After six weeks the symptoms were much less easily evoked and much less intense After thirteen weeks he was completely free from symptoms and has remained so since discontinuance of insulin and glucose on October 11th

Case 3.—Female aged 43 Syphilitic aortitis aortic incompetence chronic bronchitis For three and a half years the patient had experienced attacks of pain in the left of the sternum spreading down the inner side of the left arm and forearm Pain usually related to exertion but sometimes on getting up in the morning Duration fifteen to twenty minutes relieved by rest Despite two and a half months in bed in hospital patient constantly woke with pain and had two or three slight attacks during the day trinitrin iodide and mercury giving no relief At this stage insulin and glucose treatment was started For one week slight pain was felt while washing in the morning but during the following month the patient remained completely free from pain except for one bout at the onset of an attack of tonsillitis Some oedema which had appeared prior to treatment rapidly disappeared and the patient was discharged fit to be up and about her home For the first months after her discharge insulin treatment was discontinued she wrote The pain all came back down the left arm but after starting the injections in about a week the pain went again and she has been free since

Case 4.—Male aged 70 Hypertension and arteriosclerosis aortic atheroma angina pectoris In the summer of 1930 onset of attacks of pain just to the right of the mid sternum always brought on by exertion with a tendency to radiation across the sternum and up to the throat Relief from rest and amyl nitrite Sedatives diuretin trinitrin and glucose alone gave a slight relief and he was still getting attacks most days when insulin treatment was started He continued with it for six weeks At the end of this period he was able to walk four miles without getting pain whereas fifty yards had previously been sufficient to induce an attack Very slight pains occurred occasionally but although he has discontinued the insulin for six months his great improvement is maintained

Case 5.—Male aged 56 Syphilitic aortitis For eighteen months prior to admission to hospital there had been oppression over the lower third of the sternum on effort There had also been nocturnal attacks in which the patient awoke with pain spreading across the left costal margin amyl nitrite giving relief He was admitted with some oedema of the legs and in four weeks up to the end of October he had four nocturnal attacks Insulin and glucose treatment was then instituted and thereafter up to the time of his discharge five weeks later he had only one attack of pain and has felt very marked subjective improvement

Case 6.—Male aged 48 Angina pectoris recent cardiac infarction angina decubitus The patient whose father died of angina pectoris was well until eighteen months ago when he began to notice pain at the upper third of the sternum during exertion Early in February 1933 he had an extremely severe attack at night lasting six hours which almost certainly represented an acute coronary occlusion After that he remained in bed for four weeks and was troubled nearly every night with attacks of sternal pain and oppression which would awaken him from sleep and compel him to sit up Various remedies had given no relief and for the first ten days of March he was given five units of insulin and two heaped tablespoonfuls of glucose daily No further nocturnal attacks were experienced after the first day of this treatment nor have they recurred since it was discontinued

Discussion

I have recently drawn attention [7] to a group of conditions in which diffuse parenchymatous myocardial damage exists independently of any disease of the coronary system Examples of these states are general malnutrition or starvation hypoglycaemia myxoedema and severe diabetes The evidence that perversion of myocardial

function accompanies these disorders of malnutrition consists in a characteristic deformity of the electrocardiogram, which shows depression of the RT interval or inversion of the T wave in one or two or all leads It is clear that an important distinction has to be drawn between these changes (which are throughout in the direction of depression or inversion) and those produced by focal myocardial damage as in coronary sclerosis In the latter condition the changes produced in Lead I are in general opposite in sense to those produced in Lead III In all of the above mentioned nutritional disorders the electrocardiographic abnormality disappears when the metabolic fault is rectified

In a discussion of the electrocardiographic changes occurring during the control of severe diabetes, I have indicated in collaboration with R A Hickling,[28] that a defect of nutrition underlies these electrical phenomena, and that deficient glycogen utilization is probably the important factor Reasons have also been given in these publications for the belief that defective glycogen utilization is the cause of the electrocardiographic abnormalities in the other conditions of disordered metabolism already mentioned Allusion to the fact that disturbances of general glycogen metabolism, as in diabetes and hypoglycaemia, may give rise to anginal pain has been made elsewhere,[27] and the significance of these facts was then fully discussed But if anginal pain has a basis of deficient glycogen utilization in some instances, it seems likely that this factor may play a part in anginal syndromes brought about by local ischaemia, as in coronary spasm or sclerosis Further, the recent work of Lewis[29] has thrown important emphasis upon the metabolic origins of anginal pain in contradistinction to anoxaemic factors The attempt to inhibit anginal pain by the administration of glucose and insulin was the natural outcome of the foregoing researches and considerations

CONCLUSION

It is here suggested that such influence as ordinary insulin exerts upon heart disease in general is by virtue of insulin *per se* as distinct from the effect of incidental hypotensive substances contained in the pancreatic extract Reference has been made to the considerable body of clinical reports bearing witness to the efficacy of glucose-insulin therapy in chronic heart disease and congestive failure The fact that opinion is not unanimous suggests that selection of cases is necessary upon a basis hitherto unrecognized, but does not throw serious doubt upon the value of this therapeutic measure It will be observed that the use of insulin and glucose in the treatment has not been empirical, but is based upon the belief that the promotion of glycogen utilization in the heart may prevent the accumulation of substances producing anginal pain

But there are almost certainly other factors concerned If insulin benefited patients with arterial disorders entirely by its effect on glycogen utilization (or even by a hypotensive action as Vaquez suggests) it might be expected that the results would be immediate and at once maximal This is not found to be the case For example, in Cases 1 2 and 3 already described, the frequency and severity of attacks progressively diminished over periods of one to several weeks It is clear that freedom from attacks is *per se* beneficial, but it cannot be doubted that the facts and arguments presented indicate that insulin has a further effect upon functional efficiency and nutrition of the coronary arteries It is well known that accumulations of fat in the deeper layers of the intima constitute one of the earliest stages of atheroma When such fatty depositions are accompanied by cell necrosis the degenerative process is, as Aschoff[30] has stated irremediable On the other hand, the accumulations of fat in the early atheromatous processes are removable, as has been shown by Anitschkow and Chalatow[31] in dieting experiments It is here suggested that the removal of such fat is part of the action of insulin in angina pectoris Evidence in support of this view is forthcoming from the work of Himwich and Spiers,[32] who have shown in experiments upon dogs that injections of insulin cause reduction of plasma fat Insulin promotes glycogen utilization and by virtue of this effect stimulates the proper combustion of fats Such an action on the coronary arteries would explain the cumulative benefit sometimes seen in the course of treatment by insulin and glucose

SUMMARY

1 The evolution of glucose and glucose insulin therapy in cardiovascular disease is reviewed

2 While there is evidence that these methods are of value in congestive heart failure, it appears that glucose-insulin therapy is likely to be of special benefit in arterial, and particularly coronary, syndromes

3 An account is given of the successful treatment by insulin and glucose of patients suffering from intractable angina pectoris, and six case reports are given

4 Reasons are given for believing that anginal pain is related to faulty carbohydrate metabolism in the heart It is held that insulin acts immediately by its stimulating effect upon glycogen metabolism in the heart and progressively by promotion of the combustion of fat this process leading to resolution of early atheromatous changes in the coronary arteries

5 A technique for the application of glucose insulin therapy in angina pectoris is described, and it is suggested that this method deserves careful and extended trial

For their kindness in allowing me to treat patients under their care I am indebted to Dr F G Chandler and Dr V S Hodson of the Victoria Park Hospital

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AETIOLOGY OF ACUTE RHEUMATISM

BY

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During the last few years certain new conceptions have arisen in regard to rheumatism which shed fresh light on the old and much disputed views of the origin of the disease. The old idea of a specific infection may have to be modified and attention directed away from the bacterium and focused more on to the tissue reactions of the patient. For the purposes of this discussion two types of the disease will be considered—rheumatism of childhood and more briefly rheumatoid arthritis.

ACUTE RHEUMATISM

Influence of Infection

After watching innumerable rheumatic children through the most severe attacks of carditis and pericarditis often with associated inflammation of the lung and pleura, it would take a great deal to convince me that infection played no part. Post-mortem findings can only confirm this view; yet the original streptococcal theory of Poynton and Payne has not been universally accepted. In an endeavour to reproduce these early researches the quest has always been for a living streptococcus circulating in the blood stream and settling itself into the tissues there to work its pathological destiny. The results have been so conflicting that many have come to regard the time-honoured streptococcus as a secondary invader in the wake of a still unknown rheumatic virus. This view is a retrograde step, and there is surely sufficient evidence to consider the streptococcus as the fundamental cause.

Streptococcal Theories

Those who believe in a *specific* streptococcus point out that rheumatism is pre-eminently a specific disease and therefore most likely to have its own particular organism with strict cultural characteristics. It is difficult to reconcile this view with the complete reversal of bacteriological opinion that has occurred in the last two years. Until quite recently we had come to associate a *non-haemolytic* streptococcus with rheumatism and on the various occasions when an organism had been isolated from the blood, the heart, a lymph gland, or a joint this was the type. Now with equal vehemence some bacteriologists insist that a *haemolytic* streptococcus is really the root of the evil. This *volte face* certainly shakes one's faith in a specific organism, and one is tempted to think that too much stress has been laid on small cultural differences on the laboratory agar plate and insufficient on the effect of bacteria in the living tissues. Bacteria are now known to be composed of carbohydrate and protein, part of the nucleoprotein being common to the various types and strains of each particular group of organisms. It is not unlikely that this part of the streptococcus will prove to be the important factor, and that therefore the possibility of a *multiple* streptococcal aetiology of rheumatism must be accepted.

The close relationship of acute tonsillitis and rheumatism was realized by some of the earliest authorities. More recently the real significance of these throat infections has been brought to light. It appears that acute rheumatism, especially a relapse in old cases, nearly always follows a streptococcal sore throat after a *silent period* of ten to twenty one days. First attacks of rheumatism may also have the same sequence of events. In children at any rate the term sore throat is quite misleading as often there are no subjective symptoms and the whole nasopharyngeal infection is so mild and fleeting that it might easily pass unnoticed if a close watch on the temperature is not being kept. Whether or not the tonsils have been previously removed appears to make little difference; if they have, acute pharyngitis is just as likely to lead to a rheumatic relapse as tonsillitis. Obviously the majority of such acute infections of the upper respiratory tract are not followed by fresh outbursts of rheumatism, but it is impossible to predict in which it will occur. Any form of rheumatism may appear from the mildest to the most severe and fatal. Some patients only pass through a short bout of renewed pyrexia unaccompanied by any other symptoms, but others are attacked by the most virulent type of pericarditis imaginable. Arthritis, chorea, nodules, and further myocarditis or endocarditis have all been observed. Curiously, patients who have long been convalescent from an acute attack of rheumatism are particularly likely to relapses after fresh tonsillitis. Acute rheumatism following scarlet fever has the same silent period before its appearance. In this case the scarlatinal streptococcal tonsillitis is responsible and probably initiates the same train of events as other forms of streptococcal throat infections. It is significant that rheumatic subjects are much more prone to fresh rheumatism during scarlet fever than people who have never suffered before.

Certainly these observations do incriminate the streptococcus, but there still remains the problem how such nasopharyngeal infections manage to light up rheumatism in far distant areas of the body. The repeated failure of attempts to demonstrate streptococci in the inflammatory lesions of rheumatism is strong evidence against the idea of a great exodus of living bacteria from the inflamed throat into the general circulation. There must be some other way in which these violent inflammatory reactions are brought about.

Bacterial Allergy in Rheumatism

The explanation which appears most hopeful is that of bacterial allergy on the lines of serum disease. In a non-fatal microbic infection the responsible micro-organisms are attacked by certain tissue cells and broken down. The patient thus becomes cured of the infection, but during the process the body may become sensitized to these disintegrated products consisting largely of nucleoprotein, and will react in characteristic fashion should a fresh invasion and disintegration of the same organisms take place. Ample opportunity exists in childhood through minor throat infections for the tissues to become sensitized to streptococci. At the time these may only give rise to a deterioration in general health and pass unnoticed, but the train has been laid and it needs merely a closely following acute tonsillitis to set off the explosion. The word explosion is used figuratively as best describing those fulminating cases of pericarditis which either rapidly reach a fatal issue or else leave a previously healthy child a permanent cardiac cripple. Other cases are undoubtedly more insidious in onset and apparently without any preceding history of tonsillitis. Apart from the frequent symptomless character of these nasopharyngeal infections there are other common illnesses which are associated although less obviously with a streptococcal sore throat. Thus rheumatism and rheumatic endocarditis can often be dated from an attack of scarlet fever, influenza, diphtheria, measles, or pneumonia. These diseases are even more frequently the starting point of a severe relapse in mildly or definitely rheumatic subjects.

In the course of a relapse a silent period of ten to twenty one days has been mentioned. It is an important

* Abstract of paper read before the South Middlesex Division of the British Medical Association on November 30th 1932.

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observation which as yet is improperly understood, although several ingenious explanations have been offered The one that fits in best with the allergic theory just propounded is that the patient's defence mechanism only comes into full force ten to twenty-one days after the throat infection, and there is a violent reaction One of the difficulties of explaining the basis of rheumatism through the agency of streptococcal infections is the fact that this organism flourishes equally in all classes of the community Tonsillitis is endemic to the same degree in the public school as in the council school, and yet the incidence of acute rheumatism is very different in these two institutions This raises one of the points foreshadowed at the beginning of this paper that is, the importance of taking into consideration the patient's tissues—the soil, as it were, in contrast to the seed of infection which may become implanted

Predisposing Causes

Certain environmental features of rheumatism have stood the test of clinical and statistical inquiry so steadfastly that they may now be regarded with some certainty as predisposing causes One of the chief factors is the atmosphere Damp has rightly been blamed, but rapid changes of temperature can play an equally important part Poverty no doubt has much to answer for, but in regard to rheumatism it is probably the overcrowding, improper sanitation, and general lack of hygiene that are at fault If, as some suggest, diet is a predisposing cause, there is no evidence that the disease appears for lack of food, although its quality may be open to question Certain debilitated children with chronic ill-health are particularly predisposed to rheumatism The truest picture of such a child is one whose lymphoid tissues are in a permanently catarrhal state, whose nervous system is easily upset, and whose digestion has been disordered by lack of protein and excess of carbohydrate The emotional and highly strung nature of rheumatic children is proverbial, and it is therefore not surprising to find a disproportionately high incidence of chorea among Jewish children The nervous strain of city life must have some effect, and no doubt accounts to some extent for the greater liability to acute rheumatism of the children of large towns as compared with their country cousins Race and heredity also play a considerable part Rheumatism certainly runs in families, and the children of rheumatic parents seem often to be born with an inherited predisposition of the tissues to the disease a state probably best described by the term 'diathesis"

In considering these various factors it soon becomes apparent that there is no one predisposing cause, but a combination of many Together they produce a minor state of ill health in the patient, so that he is unable properly to overcome the common infections A bad cold, tonsillitis, or otitis, for example, instead of rapidly clearing up in such children, tends to pass from an acute into a chronic state The chapter of each acute streptococcal attack remains unclosed, the patient's defence mechanism is continually overworked, and this is probably why his tissues reach that hypersensitive state already described Along these lines the streptococcal theory and the varied predisposing causes can be brought into harmony, but further research is required before the whole problem is completely elucidated

Rheumatoid Arthritis

Fortunately for our theories there are many cases of rheumatoid arthritis in which acute infection is obvious Still's disease in children with pyrexia, leucocytosis enlargement of the spleen and lymphatic glands and frequently pericarditis at necropsy, is sufficient evidence of this Adults may suffer from a very similar acute form, but usually the infective element is not so much in evidence Nervous strain has been mentioned as a predisposing cause of chorea, and it is interesting to note the same influence in some cases of rheumatoid arthritis It is perhaps encountered most frequently in young women, who, after some mental shock or anxiety due to domestic or commercial worries, promptly become afflicted by this incapacitating malady How this is brought about is largely a mystery but it is thought by some that a disturbed sympathetic or autonomic nervous system plays a part by upsetting the balance of the endocrine secretions Still the most tenable hypothesis in rheumatoid arthritis, as in acute rheumatism is again that of bacterial allergy, acting in this case through the more localized agency of hypersensitive joint tissues

Conclusion

In the foregoing remarks an endeavour has been made to correlate some of the salient points about rheumatism and to suggest that the disease may be the outcome of an overacting response on the part of the tissues There are indications of these excesses of nature, this perversion of the once physiological defence mechanism, in serum disease and anaphylaxis Viewed in the same light, the exanthemata—and measles in particular—would present a new aspect, and complications such as scarlatinal nephritis and otitis following tonsillectomy might be explained Graves's disease is another example of the occasional effect of an emergency call precipitating a disaster In this case, in answer to some alarm or extra exertion, the endocrine and sympathetic nervous system overstep the mark and are not able to return to a normal state of balance

Innumerable further instances might be given, but a great deal of research will be required along the lines indicated before we can go further than hint at a new conception of disease

AN UNUSUAL CASE OF LYMPHATIC LEUKAEMIA

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WIGAN

The many points of interest presented by this case will obtrude themselves as the narrative proceeds

History of Case

A male 11 years old was taken by his mother to a doctor's surgery at 7 p m on December 24th 1932 He complained of feeling faint and vomited some dark material which was found to contain blood The doctor ordered him to bed and visited the boy at 10 40 p m the same day he was asleep of good colour, and breathing regularly At 1 45 a m on December 25th the boy died The doctor reported the case to the coroner, who ordered a necropsy (What follows is an abstract of the mother's statement)

The boy had never been attended by the family doctor had always appeared healthy and had gone to school regularly On Wednesday December 14th he was caned across the buttocks by the schoolmaster He had not complained but on December 19th when his mother asked him about some bruises on his legs he told her about the caning After breakfast on the same day he complained of feeling sick and vomited The vomit contained streaks of blood He went to school as usual He vomited once on December 20th and once on December 21st but attended school He was sick once on December 23rd and twice on December 24th—at 6 p m after a meal which consisted of shredded wheat and milk, and at about 7 40 p m in the doctor's surgery He

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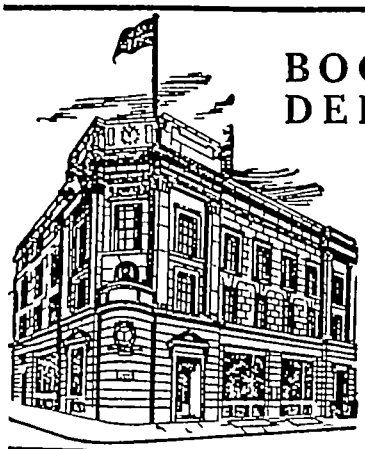

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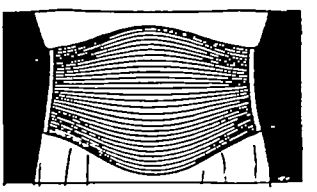

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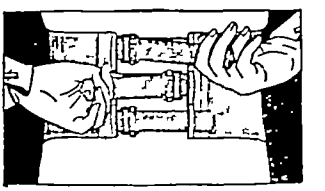

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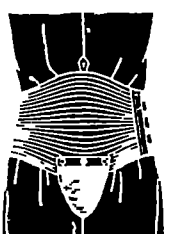

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was put to bed at 8 30 p m complained of feeling tired and went to sleep At 1 15 a m on December 25th his mother noticed that he was breathing heavily and he died at 1 45 a m

Post Mortem Findings

At the necropsy performed on December 27th the boy appeared well nourished The colour of the lips gums and conjunctivae was little paler than normal Petechiae were present in the skin of the neck chest and abdomen Numerous small circular bruises of varying ages were present on the arms thighs and legs No bruise suggestive of being caused by a cane was found There was no bruise on the head The lymphatic glands of the neck axillae and groins were palpable but not prominent

Petechiae were present in the peritoneum omentum and visceral pleurae The stomach contained blood stained mucus The mucous membrane presented innumerable petechial haemorrhages The liver appeared enlarged and pale The spleen was almost three times the size of a normal spleen and on section firm The Malpighian bodies could not be discerned The convolutions of the left cerebral hemisphere were flattened The left temporal and occipital lobes were the seat of an extensive haemorrhage which had ruptured into the lateral ventricle and had spread to the third and right lateral ventricles The thymus was bilobed and weighed 80 grams The tonsils the mediastinal mesenteric and preaortic lymph glands and Peyer's patches were enlarged The other organs appeared normal

Histology

Films made from the blood of the right auricle showed enormous numbers of lymphocytes It is impossible to give even an approximate estimate but in comparison with other cases the number of lymphocytes present would appear to be more than 150 000 per c mm The vast majority of the cells were of the small type large lymphocytes being comparatively few The boy had been dead for fifty eight hours and most of the cell bodies had undergone degeneration and partial solution but even in some of the polymorphs which were extremely scarce the cell bodies were intact Many nuclei especially those of the larger lymphocytes had undergone partial karyolysis

In addition to the presence of well marked periportal lymphomata there was considerable lymphatic infiltration throughout the lobules of the liver Sections of the kidney showed aggregations of lymphocytes with marked diffuse infiltration throughout the organ The structure of the thymus spleen and lymph glands was indistinguishable being obliterated by the lymphatic hyperplasia In the case of the lymph glands lymphocytes had invaded the capsule and infiltrated the surrounding tissues

COMMENTARY

The blood films and sections point to the diagnosis of chronic lymphatic leukaemia and support the view held by many that even in children these cases are often not seen until late in the disease For how long the boy would have continued to attend school and take part in rough and tumble games if the most unusual complication—cerebral haemorrhage—had not occurred it is impossible to say But it is a fact that he did attend school up to a few days before his death with the disease well advanced and was apparently healthy and vigorous up to December 19th or even later

The almost complete absence of symptoms was a remarkable feature The only symptom was vomiting due most probably to the cerebral haemorrhage but he vomited only six times in six days and on one of these days did not vomit at all The vomiting did not appear to be cerebral in type but had a direct relation to food this was definite on two occasions—December 19th and 24th—and probably also on the 20th and 21st when according to his mother he vomited but attended school Presumably this vomiting occurred after breakfast and before school time Many cases of leukaemia bruise very readily and the presence of so many bruises on the legs and arms suggests that the case was of that type The unobserving mother her attention focused on the boy only when he vomited ascribed the bruises to maltreatment Fortunately for the master concerned she was specific in her charge— he was caned across the buttocks This statement was corroborated If on the other hand a general charge of maltreatment including say a smack on the head or rough handling in any degree had been preferred the master would in all probability have been confronted with an indictment for felony The difficulties of the defence to a charge of manslaughter in such a case are from a medical standpoint obvious

Memoranda

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RECURRENCE OF PAPILLOMA OF THE BLADDER TWENTY FIVE YEARS AFTER OPERATION

In May 1907 a man aged 30 years was sent to me at the Royal Victoria Hospital Belfast suffering from haematuria On cystoscopy a villous growth composed of a large number of tentacles could be seen at the left side of the internal urethral orifice The growth did not involve the trigone The bladder was somewhat trabeculated A portion of the growth was washed out by catheter and a microscopical examination showed the typical appearance of a simple papilloma

On July 4th 1907 the bladder was opened suprapubically and a villous tumour about the size of a horse chestnut was removed from its wall a little to the left of the internal meatus The tumour was sessile and was dissected out with an elliptical area of surrounding mucous membrane The resulting wound in the mucous membrane was closed with catgut sutures Convalescence was uneventful and I heard nothing of the patient till he presented himself on January 9th 1933 with a recurrence of haematuria He states that since his operation he had no urinary symptoms whatever until January 3rd 1933 when he noticed dark red blood with clots in his urine Cystoscopy showed a typical sessile papilloma about the size of a hazel nut medial to and posterior to the left ureteral orifice A minute baby papilloma was seen just medial to the main mass Both of these growths were apparently simple The bladder wall elsewhere was healthy except for slight trabeculation The papillomata were destroyed by fulguration

I have called this a recurrence but it may be a new development and quite unconnected with the growth I removed from this man's bladder twenty five and a half years ago The first operation was performed before the discovery by Beer of the value of diathermy in these cases

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pigs slaughtered at the abattoir in Port of Spain and eggs obtained from the female worms were cultured to the infective larval stage in a medium of sterilized pig's faeces and soil The infection was induced cutaneously, the larvae being applied to the forearm in drops of water which were allowed to evaporate Eleven separate applications were made, the majority during August, and averaged about eighty larvae each The first was given on July 29th and the last early in September The number of larvae which entered the skin as indicated by the inflammatory lesions at the points of entry, was estimated at about sixty Hookworm eggs were first noted in the faeces on September 21st, fifty four days after the first application and continued to be passed during the following four months at the end of which time three necators two females and one male were evacuated after treatment with oil of chenopodium These worms were identified as *N suillus*

It may be concluded from this experiment that *N suillus* is a potential human parasite and by virtue of the close association of pigs and human beings in some tropical countries this may be assumed to be an occasional if hitherto unrecorded natural infection in man Owing to the close resemblance between *N suillus* and *N americanus* such infections might easily be overlooked for *N suillus* is readily mistaken by naked eye examination alone for an incompletely grown *N americanus* Microscopical examination of all suspected specimens would be necessary in order to estimate the incidence of *N suillus* in human beings The low infection rate as indicated by this experiment, would appear to suggest however that *N suillus* is not a frequent occurrence in man and that it is probably to be regarded only as an occasional human infection

J J C BUCKLEY,
Wandsworth Research Scholar of the London School of Hygiene and Tropical Medicine Trinidad

ACUTE YELLOW ATROPHY OF THE LIVER FOLLOWING TREATMENT WITH QUINOPHAN

Although treatment with atophan and quinophan is by no means a recent development, acute yellow atrophy of the liver following its exhibition is fortunately uncommon Reah (*Lancet* 1932, ii, 504) mentioned thirty-five cases of this complication, eighteen of which were fatal, and in this series of fatal cases the doses of atophan given before toxic symptoms appeared varied from several thousand grains to 60 Although the dose of quinophan given in the case recorded below exceeds his minimum dose, the rarity of the condition and the small doses carefully given over a long time seem to make this case worthy of record especially when one considers that these synthetic quinoline derivatives are readily purchased on demand in many chemists shops

Case History.—The patient a woman aged 48 had suffered over a long period with chronic rheumatoid arthritis affecting principally the small joints of the hands and feet but also involving the knees and elbows This disease prevented her from working and even sometimes from getting about She had had many different treatments but none had produced more than temporary relief In October, 1932 her medical attendant decided to try the effect of quinophan and she was given twelve tablets of this drug of 5 grains each These she was directed to take as follows two tablets daily for three days one tablet daily for three days omit altogether for a week and then take the remaining tablets one daily With each dose she had a large drink of water During this use of the drug she felt slight nausea which passed off on completing the course and the arthritic symptoms were much improved In December 1932 her pains had become worse again and a second course of quinophan was started This was given in the same amount and doses as before with no immediate ill effect During December she complained of slight indigestion and nausea and one week later vomiting commenced but was slight at first On January 4th 1933 she was first noticed to be jaundiced, but not feeling really ill she did not visit her doctor until January 7th At this time a serious view was not taken of the case and general treatment was prescribed On January 10th, however the jaundice was deeper the vomiting had become intractable and her mental condition was impaired She was admitted to St George's Hospital on January 11th in a semi comatose condition On admission she was deeply jaundiced and physical examination revealed only a mild degree of mitral stenosis some ascites, and an extensor plantar response She was able to take fluids well for a few hours and did not vomit during this time A few hours after admission she rapidly became stuporose, and died in hyperpyrexia fourteen hours later in spite of intravenous infusions of glucose and alkali Her pulmonary condition before death was suggestive of pulmonary oedema but this reacted well to injections of atropine

Post mortem Findings.—There was an extreme degree of atrophy of the liver (weight 24 ounces) showing typical necrotic and haemorrhagic areas The peritoneal cavity contained 2 to 3 pints of straw coloured fluid Most striking also was the presence of innumerable petechial haemorrhages in the omentum and mesentery and beneath the parietal peritoneum In both lungs there was a considerable degree of oedema, with basal collapse, and there were also many subpleural petechiae The heart showed early mitral stenosis with petechiae beneath both pericardial layers also a few subendocardial petechiae The brain showed no haemorrhages but these were present in the fat throughout the body in the skeletal muscles and beneath the gastro-intestinal mucosa but the latter showed no signs of necrosis such as might have been caused by an irritant poison

This case is particularly interesting from the point of view of the doses and time intervals, and also of the extremely rapid progress of toxaemia This rapid effect of the drug was presumably due entirely to idiosyncrasy of the patient, as there was no history suggestive of any previous hepatic damage or insufficiency, while the cardiac lesion did not appear severe enough to have produced alterations in the liver

I am indebted to Dr Anthony Feiling under whose care this patient was while in St George's Hospital and to Dr John Taylor who made the post mortem examination for permission to publish this case

HERBERT C WADGE L R C P, M R C S,
House-physician St George's Hospital

Reports of Societies

DIABETES

At a meeting of the London Jewish Hospital Medical Society, held at Stepney Green on March 9th, with the president Mr HAROLD KISCH, in the chair, a symposium on diabetes took place

In opening, Dr OTTO LEYTON said that it was his duty to indicate the directions which discussion should traverse rather than to record his own observations, experiences, and conclusions He emphasized the fact that hyperglycaemic glycosuria was not necessarily diabetes mellitus, and discussed very briefly five methods of making a diagnosis in mild cases without symptoms The treatment he advocated was insulin as soon as an undoubted diagnosis had been arrived at, along with a diet suited to the individual He considered it a medical impertinence to dictate to the patient the proportions of carbohydrate, protein, and fat in his diet, and that it should rather depend upon the idiosyncrasies of the individual Most cases demanded at least 150 grams of carbohydrate, and many might receive much more with benefit The doses of insulin should be adequate to keep the sugar content of the blood between 0 05 and 0 15 per cent If the patient rested his pancreas in that manner and did not stimulate it by taking alcohol he ran a good chance of being able to cease taking insulin after a few years As regards the effect of infections upon the action of

injected insulin he had found that cases which were well controlled by very frequent injections of insulin were controlled for only a few hours if the same dose of insulin was injected continuously A possible explanation was that the local inflammatory reaction of the needle might destroy the insulin He advised liberal amounts of glucose and heroic doses of insulin in diabetic coma and intravenous injections of saline with great caution Dealing with the site of amputation when diabetic gangrene necessitated the removal of septic tissue he said that he had seen several cases in which Syme's amputations had succeeded when endarteritis obliterans had made a tourniquet quite superfluous none of the vessels being patent

Dr HUGH GUNSBOROUGH said that in the treatment of complications a high carbohydrate diet was preferable for it provided the patient with food which was more in keeping with his natural desires reduced the danger of ketosis and gave incomparably better results With the corresponding insulin dosage this was only a reasonable attempt to bring the disordered sugar metabolism back to a normal level He dealt with the fallacies of the usual food analysis and thought it better to obtain a reasonable accuracy in estimation of carbohydrate intake by providing the bulk of this as bread biscuit and cereals with some root vegetables or legumes the lesser portion to consist of food of more variable composition Protein foods could generally be allowed and standardized at whatever level the patient desired fats however should be quantitatively restricted Insulin requirements with such diets were at first high but in the course of time progressive reduction of insulin dosage became possible Neuritis pruritus dermatitis retinitis and early albuminuria generally showed rapid improvement under such treatment Sepsis and gangrene had lost many of their terrors and in the majority of cases could be treated by conservative methods with excellent results

CLINICAL ASPECTS OF CALCIUM

At a pathological meeting of the Liverpool Medical Institution held on April 6th with the president Dr H R HURTER in the chair Dr R W BROOKFIELD read a paper on The Clinical Significance of Calcium

Dr Brookfield commented on the signal services rendered to clinical medicine and surgery in the last few years by biochemistry and then discussed those aspects of the metabolism of calcium which appeared to be of special importance from the clinical standpoint The known functions of calcium were enumerated the part played by the element in the maintenance of correct ionic balance being particularly stressed The factors controlling the absorption and intermediate metabolism of calcium were next passed in review Absorption of calcium was favoured by an acid reaction of the upper intestinal tract and the presence of bile therein while it was hindered by an excess of phosphorus in the diet and by alkalis The effects of vitamin D ultra violet light and the parathyroid hormone under physiological conditions and in overdosage were briefly described The speaker referred to his own work on the effects of magnesium on the intermediate metabolism of calcium Injection of a magnesium salt caused a prompt lowering of the serum calcium and in rabbits he had found a distinct inverse relation between the magnesium and calcium of the serum when the figures for the two elements were followed from day to day The bearing of various physiological considerations on the successful treatment of states showing disorder of the metabolism of calcium was next pointed out Calcium would be best absorbed in the interdigestive period when the reaction of the upper intestinal tract was slightly acid Its availability to the tissues was favoured by the simultaneous exhibition of ammonium chloride The merits and demerits of various calcium salts were discussed Calcium gluconate and calcium laevulinate were commended because of their solubility and freedom from irritant effects when given either by mouth or subcutaneously The need of giving calcium in adequate doses was stressed many failures to produce the effects desired being attributable to the small doses employed The usefulness of the parathyroid hormone was strictly limited because while it raised the serum calcium it did so at the expense of the calcium reserves in the skeleton In the final section of his paper Dr Brookfield dealt briefly with the more important pathological states in which an abnormality of the metabolism of calcium had either been proved or assumed Rickets tetany renal rickets and chronic parenchymatous nephritis were referred to in turn Two conditions characterized by hypercalcaemia—osteitis fibrosa cystica and insolation—were discussed the significance of the latter in the formation of urinary calculi being mentioned The effects of calcium therapy in those diseases where evidence of abnormality of calcium was less definite were examined In the hands of some clinicians calcium had proved of value in the treatment of inflammatory and other effusions allergic conditions and chilblains In jaundice calcium appeared to be of definite value in minimizing bleeding at operation and work by Minot and Cutler on acute yellow atrophy produced by carbon tetrachloride indicated that intensive calcium therapy was likely to find an extremely useful field in toxic hepatic disorders generally Calcium though no cure all might be regarded as a useful remedy which would produce effective results in those conditions where there was a definite indication for its use

Dr G GRAHAM MACPHEE commented on the diagrams shown of the relation of phosphorus to calcium indicating that high blood phosphorus caused low blood calcium and he asked whether a low blood phosphorus caused a high blood calcium (Dr Brookfield replied that the converse did not hold good) Dr Macphee then cited the recent work of Kay and Guyat of Toronto They found that rats fed on a McCollom stock diet which did not cause rickets could be made to develop rickets by the simple addition of beryllium carbonate to the diet The addition of beryllium phosphate did not cause rickets Their explanation of the production of this so-called beryllium rickets by giving the carbonate and not the phosphate was that the phosphate was an insoluble salt and was excreted unchanged from the bowel whereas beryllium carbonate was converted into beryllium phosphate thereby using up some of the animal's store of phosphorus and upsetting the phosphorus–calcium ratio with the result that rickets ensued The fact that no beryllium was found to be stored in the animal's bones or body supported this The question arose whether phosphorus was not the chief regulator in calcium metabolism

Dr C ALLAN BIRCH said that although many clinical pictures were associated with a low serum calcium it was a striking fact that so far only two conditions—hyperparathyroidism and excessive ultra violet radiation—were known to have a high serum calcium In these conditions the high serum calcium was not itself responsible for the disease and Dr Birch inquired if there was any syndrome known which could be ascribed to a hypercalcaemia itself Dr R H MOLE emphasized the close relation of the endocrine glands to the metabolism of phosphorus and calcium instancing the mobilization of calcium by parathyroid hormone the rarefaction of bone due to thyroid hormone in exophthalmic goitre and the diminution of blood phosphorus with rise of blood calcium due to insulin injections Dr EDNA MAWSON said that recent experimental work on hypervitaminosis D suggested that although overdoses of vitamin D might raise the blood calcium other factors were concerned in the production of calcium phosphate calculi in the genito-urinary tract Certain investigators had recorded that they were unable to produce calculi by feeding rats on large quantities of irradiated ergosterol if the diet contained vitamin A A little milk added to the diet daily would prevent their formation Dr Mawson said that this might cast some light on the geographical distribution of stone In the East where calcium phosphate calculi were common among badly fed native children they were almost unknown among well fed European children exposed to similar climatic conditions

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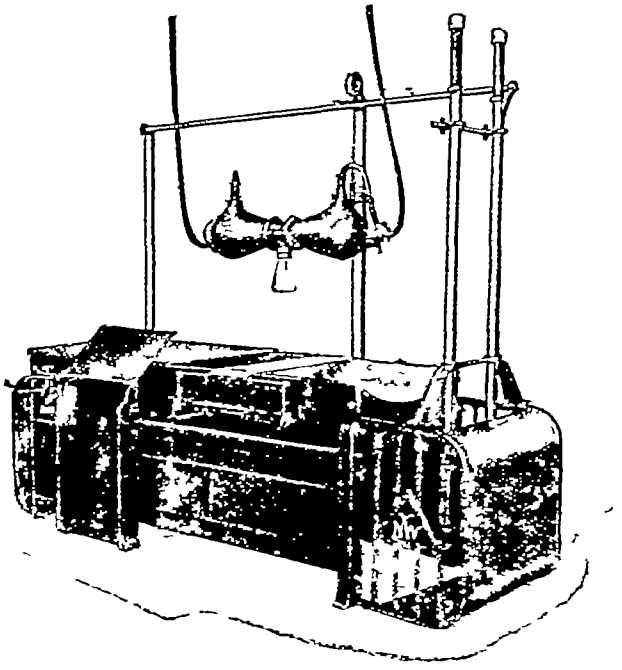

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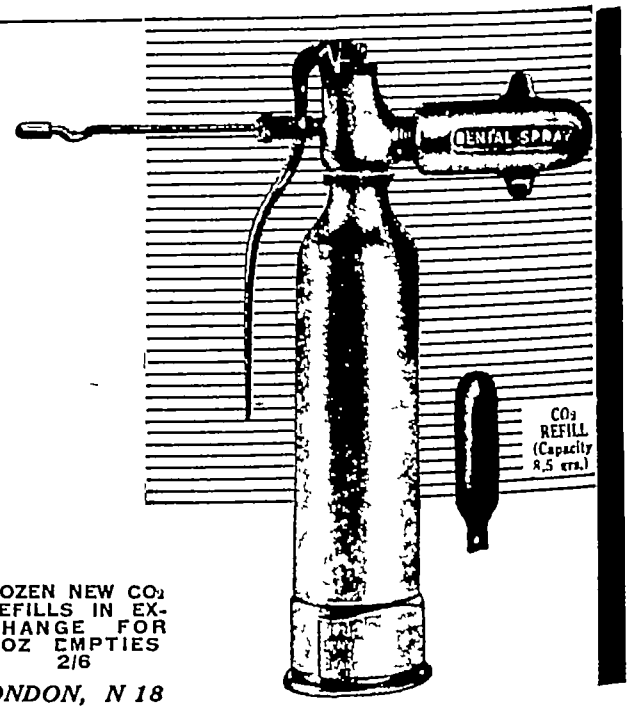

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Reviews

ANKYLOSTOMIASIS

Having had more than four years' experience of ankylostomiasis in the mining districts of Roche-la-Molière and Firminy in the basin of the Loire, Drs GARIN, ROUSSET, and GONTHIER have written a book[1] in the hope that it will be of assistance to others who may have this disease to contend with. The book, which is divided into three parts, is a complete treatise on the subject. The first part describes the worm in all stages of its development and life-history, its biological characteristics, and the methods of infection; the second part deals with the disease itself, its pathology, symptomatology, diagnosis, and treatment; while the third gives an account of the prophylactic measures which in the authors' hands have produced the best results.

The book is well illustrated, and contains numerous drawings and photographs of the eggs, larvae, and adults of *Ankylostoma duodenale*, *Necator americanus*, and other helminths. Pictures and plans of the clinics where diagnosis and treatment are carried out are also included. The fact that such special clinics are necessary is in itself an indication of the seriousness of the infection amongst the miners. Though the percentage of individuals infected may be high, many of these are healthy carriers, and it is only those with heavy infections who show signs of anæmia and are actually ill. These severe cases show over 200 eggs in a single preparation of concentrated faeces, a red blood count of under three millions, and a haemoglobin index of below 50 per cent. If these severe cases are identified by periodical surveys and faecal examinations, and are then treated, it is remarkable how rapidly the sickness rate due to ankylostomiasis diminishes. In actual practice this method of dealing with the more serious cases and leaving the healthy carriers alone has proved highly satisfactory. In addition, however, it is advised that steps be taken to prevent as far as possible pollution of the mines. The infection occurs almost entirely among those whose duties take them into the mines themselves. Cases occur but rarely amongst the surface workers. For treatment the authors prefer thymol or the more recently introduced tetrachlorethylene to carbon tetrachloride, which they regard as being too toxic and uncertain in action.

This is essentially a practical book. It gives all the necessary details for carrying out the various measures recommended. It will undoubtedly prove of value to all those who undertake the duty of controlling the disease among labour gangs or groups of workers who can be subjected to a certain degree of discipline.

OPERATIVE SURGERY

A new textbook of *Operative Surgery*[2] has been written by Mr ALEXANDER MILES and Professor D. P. D. WILKIE replacing the authors' book on the same subject, which was a companion volume to their manual of surgery. Within the compass of some six hundred pages the whole field of operative technique is covered, with a view to meeting the requirements of those who are learning its practice. There are, however, no signs of undue compression, this has been obviated by omitting procedures of only historic interest and describing typical improvements in present use. A large number of writers have again been enlisted, Professor John Fraser and Mr Henry Wade, and the list, in fact, includes the greater number of the surgical staff, senior and assistant, of the Edinburgh Royal Infirmary and of the municipal hospitals. Those who are acquainted with the Edinburgh surgical school will expect a discriminating production and one of high teaching value, and the expectation is fulfilled. The sections on regional surgery, notable among which are articles by Mr. Norman Dott on the brain and spinal cord, are each prefaced by anatomical paragraphs in which the Basel nomenclature is used. The uniformity of the sections is remarkable in a volume to which so many have contributed, and is a testimony to skilful planning. The authors have been well served by those who have been responsible for the illustrations, and the acknowledgement of this in the preface is well merited.

The book commences with vascular surgery, and after a short article on the lymph glands the surgery of the peripheral nerves is described, including procedures which concern the autonomic system. Orthopaedic operations occupy four chapters, and an article on repair and one on amputations complete the general part. The anatomical paragraphs introducing the essays on brain and spinal cord are notably valuable. The manner in which space has been conserved is illustrated by the fact that only Langenbeck's method for the treatment of cleft palate is described, in most other textbooks of our acquaintance space is devoted to other procedures seldom practised. The same remark applies to the section on tongue operations, and also elsewhere. The article on the thyroid gland is a particular example of a short but adequate essay full of practical points. Abdominal surgery is prefaced by a general article on technique, preparation, complications, and after-treatment, following which the visceral operations are considered in turn, the illustrations here are particularly good. The selection of the methods described gives the reader an impression of the wide experience which lies behind it. Following an admirable little article on splenectomy come those on the genito-urinary system. They are notable for an adequate description of after-treatment and of minor details of technique, in these respects they compare favourably with some larger treatises. Gynæcological operations are not included.

The volume as a whole is a reliable guide book for the surgeon who is learning his art, and well represents the stage which it has reached to-day.

FIRST LINES ON RADIUM THERAPY

Miss CLEPHAN and Mrs HILL are to be congratulated upon their *Elementary Handbook on Radium and Its Clinical Use*.[3] Too often books about radium show a lamentable ignorance of the fundamental principles of the subject. This one, however, is clear, concise, comprehensive, and authoritative. As the authors state in their preface, it was originally designed at the suggestion of Professor Russ for the use of technical assistants and nurses working in radium departments. Perhaps it has as its writers observe, somewhat outgrown its originally intended limit, but technical workers in radium departments form a class of the community from whom much is required. At the present time, when the radium treatment of malignant disease is so much to the fore, it is essential that every medical practitioner should have some elementary acquaintance with the subject. Doubtless he has no intention of entering upon radium therapy himself, but it is necessary that when consulted by patients he should at any rate be acquainted with an outline of what such treatment will involve.

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[1] Garin, J. Rousset et B. Gonthier. (Pp. 128. 56 figures. 36 fr.)

[2] *Operative Surgery*. By Alexander Miles, M.D., LL.D., F.R.C.S., and D. P. D. Wilkie, M.D., F.R.C.S. London: H. Milford, Oxford University Press. 1933. (Pp. 590. 321 figures. 21s. net.)

[3] *An Elementary Handbook on Radium and its Clinical Use*. By D. F. Clephan and H. M. Hill. London: H. Milford, Oxford University Press. 1933. (Pp. 164. 16 figures. 7s. 6d. net.)

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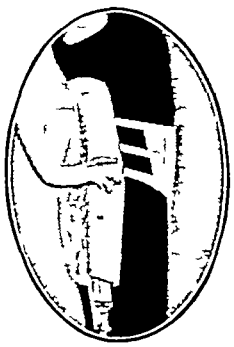

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The brief physical introduction occupies only twenty five pages the rest of the book deals with the different aspects of the clinical problems which have to be considered Practical points in the use and care of radium and radon the fundamental principles of radium therapy and the methods of application are all reviewed in detail before a general outline of the radium treatment of malignant disease in different situations is dealt with Of special value are the excellent bibliographies given with most of the chapters From time to time present and past workers in the Barnato-Joel Laboratories of the Middlesex Hospital have contributed works of standard importance to the subject of x rays and radium This little book is a worthy addition to the number

FUNCTIONAL NERVOUS DISEASES

The detailed management and successful treatment of patients suffering from conditions to which such terms as asthenia and neurasthenia are applied have engaged many students and many writers and the recently published fourth edition of *Les Maladies de l'Énergie*[4] by MM A DESCHAMPS and J VINCHON deserves a high place in the list of contributions made to these subjects One of its most valuable features is the attention which it pays to treatment in the widest sense of this term The whole field is covered and the discussion is a reasoned not an arbitrary one Moreover every method is described in relation to the circumstances it is intended to meet and is presented with all the details necessary for its application Even had the book no other qualification it could confidently be recommended as a valuable practical guide to the art of therapeutics in a peculiarly difficult field of medical treatment Not that there is any suggestion of short cuts to success or of empirical certainty On the contrary the way is recognized often to be long and tedious and the physician who would lead his patient to a happy issue must equip himself not only with medicines and methods but also with personal qualities of which patience is not the least In short a special feature of all the chapters on treatment is that they express themselves in precise and detailed terms and leave to the reader neither hesitation nor uncertainty

The earlier part of the book is concerned with definition and description and it includes and sums up a long series of personal studies dealing with such questions as aetiology pathogeny clinical features and diagnosis not omitting an Introduction where some philosophical relations come to the surface The reader cannot fail to appreciate the note of sincerity and of earnestness which marks all the chapters while the composition and style display the engaging qualities which we associate with writings that come to us from our French colleagues The book well deserves the attention and gratitude of the many practitioners who desire to deal successfully with the classes of patients discussed in its pages

PIONEERS OF ANALYTICAL CHEMISTRY

Fifty Years of the Society of Public Analysts[5] describes the men by whom the society was formed and those who afterwards took a prominent part in its development and its proceedings The part relating to the men themselves is written by Dr BERNARD DYER while Dr AINSWORTH MITCHELL contributes an account of the society's activities Dyer we think must be one of the last of the group who took part in the foundation of the society and is perhaps the only one remaining who has yet enough energy to record its history Nothing could have been more fortunate than that this story of men notable in analytical chemistry should have been written while their memory is still fresh in the mind of one who knew them Dyer's story is full of human interest There are probably few students of chemistry who do not know the name of Newlands and of his discovery of the periodic law of the elements as well as the derision with which his thesis was first received One of the contributors to the discussion that followed the reading of Newlands's paper inquired ironically whether Newlands had tried the effect of a grouping founded on an arrangement of the elements in alphabetical order! But there are not many who know that Newlands had served as a volunteer in his younger days with Garibaldi's army and that he was a convivial companion at the social gatherings of the founders of the society Wanklyn loses none of the respect of the succeeding generation from the story of his readiness to quarrel with those with whom he came into contact and of how his disapproval of Frankland's methods of water analysis found expression in an implacable hostility to Frankland himself Dyer claims as being unique the record that he himself retained Wanklyn's friendship without a bickering to the last

Of the men who took part in the society's early activities there were many whose names are still familiar to the present generation in consequence of the lasting fame of their work Such are Redwood Hassall Stevenson Allen and Dupré to mention only a few of the notable men of the period Others are also introduced like Letheby and Tidy who were not members of the society Much of interest connected with the human side of these men is described along with an account of their individual contributions to analytical exploration Links with the older analysts are also found among eminent men of the present time Sir F Gowland Hopkins professor of biochemistry at Cambridge is one who was formerly an assistant of Stevenson In the second part of the volume Mitchell describes the work of the society and its influence on contemporary practices of adulteration Mitchell has adopted the plan of giving the history in sections one decade at a time and of summarizing the matters of importance under headings which include kindred subject matters Thus under such titles as tea water rubber etc are accounts of legislation of decisions of courts of law on cases of alleged adulteration of new analytical methods and of the occurrence of spurious varieties of the commodities

SYPHILOLOGY

Clinical Studies in Syphilology[6] by Dr E SCHAUMANN consists of a collection of fifteen articles or monographs on a diversity of subjects connected with syphilis They vary—not to mention them all categorically—from the importance of the patient's history in the diagnosis and prognosis of his disease to pruritus and syphilis and from chancreless syphilis to criteria of cure While admitting the importance of the history the author quotes the old adage *omnis mendax syphiliticus* and reminds his readers that many of these patients avoid the family doctor He points out that an infected person may transmit the disease before the appearance of the chancre and quotes several authorities for this Syphilis of the nervous system without changes in the cerebro-spinal fluid is a difficult problem perhaps the explanation lies in a primary affection of the parenchyma Asthenia of syphilis is apparently often due to involvement of the various ductless glands

[4] *Les Maladies de l'Énergie* Par A Deschamps et J Vinchon Les Asthenies et la Neurasthénie Quatrième edition Paris Felix Alcan 1932. (Pp 423 40 fr)

[5] *The Society of Public Analysts and other Analytical Chemists* By Bernard Dyer D Sc F I C and C Ainsworth Mitchell M A D Sc F I C Also called *Fifty Years of the Society of Public Analysts* Cambridge W Heffer and Sons, Ltd. 1932. (Pp 278 4 figures 12s 6d net)

[6] *Études Cliniques de Syphiliographie* Par E Schaumann. Préface du Dr A Sezary Paris Masson et Cie. 1932. (Pp 290 18 figures 40 fr)

especially suprarenals and thyroid, but may be caused by bismuth therapy How many gastric ulcers are of syphilitic origin? We gather that the author thinks quite a large proportion Serological syphilis, herpes and syphilis, and natural immunity in syphilis all receive attention, and myxoedema is said to be caused frequently by this disease The difficult problem of tuberculosis and syphilis and the effect each may have on the other is discussed at length, French opinion would appear to place more importance on their interrelation than English

This is a book for the expert rather than for the general practitioner Most of the subjects are of great interest, and the diverse views are well discussed and documented Much of the subject-matter is very debatable, but at least it should impart new ideas and give the reader food for thought References are numerous, but mainly to French authors

Notes on Books

On the lighter side we may welcome the recent edition of *Living Machinery*,[7] by Professor A V HILL It is by no means so mechanistic in conception or treatment as its title—which was evidently intended to catch the eye—would lead one to suppose It is, in fact, a popular account of the physiological work which Professor Hill has from time to time been himself engaged upon, and very readable it is too The material was ready to hand in the form of six lectures which were delivered at the Royal Institution in or about 1926 Though strongly personal in treatment, there is much of value in it, particularly on the more purely physical side, in which the author is an acknowledged authority The account of various athletic performances is one of the most attractive features of the book The illustrations, many of them in the form of plates, are well executed, and the book is not devoid of humour—often unconscious It would make a suitable present for an intelligent adolescent, and could be perused with profit by physiologists, if only to show them how interesting their subject can be made

The fifteenth edition of *Piersol's Normal Histology*[8] has now appeared In its preparation Professor W H F ADDISON of the University of Pennsylvania has endeavoured to proceed still further with his attempt in previous editions to supply sufficiently detailed descriptions of the normal human tissues to serve as a good basis for the study of morbid histology Special attention has again been devoted to those organs which are most frequently of importance at necropsies, and emphasis is laid upon their more characteristic histological features In this respect the number and high quality of the illustrations can be particularly commended The parts of the book relating to nerve endings, glands, the biliary passages the epithelium of the male urethra, and cyclic changes in the endometrium have been rewritten, and a number of new drawings and photographs have been included Another improvement is the revision of the description of practical lines for investigation of living cells recent advances in the technique being recorded in the appendix while the results thus obtained are detailed in the appropriate parts of the body of the volume

In a pamphlet of forty two pages on the Hygiene of the Foot[9] Professor F SCHEDE of Leipzig expresses the opinion that flat-foot and all other weaknesses of the lower extremity are only part of an affection of the general muscular system and, with other postural defects, are to be corrected more by general than by local means Not only are faulty habits of standing to blame for causing malpositions and malformations in children, but also bad sitting postures have their evil effects In the schoolroom the child's feet must not be allowed to dangle and so become congested, but they should be properly supported The air and illumination of the school play their parts, either good or bad, in preventing or causing a vicious circle Professor Schede is an enthusiastic advocate of hygienic footwear, recognizing however, the fact that civilization does not allow of ideal treatment of the feet and legs, and pleading for as much freedom from the restraint of hard or ill-shaped shoes and exposure to fresh air and sunlight as possible This pamphlet is more concerned with statements of general principles than with details of curative measures but it contains several lists of the kind of exercises which the author has found of use

A series of French monographs, published by Masson et Cie of Paris under the general title of 'Practical Medicine and Surgery,'' has been appearing since 1926, and four recent additions represent a variety of interest Dr R GOIFFON writes on the Clinical Study of Acid Base Regulation by Analysis of Urine,[10] Drs F RAMOND and J DIMITRESCO-POPOVICI on Aerophagy,[11] Drs M CHIRAY and R STIEFFEL on Constipation,[12] and Drs D and J OLMER on that curious exanthematous fever met with on the shores of the Mediterranean which has similarities with typhus and Brill's disease, which they called fievre boutonneuse [13] Of these books the second is the best, since the subject lends itself to the simple monograph form, and the malady has been specially studied by French workers

[7] *Living Machinery* By A V Hill M A, D Sc F R S Bell's Popular Science Series London G Bell and Sons Ltd 1933 (Pp x + 256 24 plates 50 figures 4s 6d net.)

[8] *Piersol's Normal Histology* By W H F Addison B A M D Fifteenth edition Special reference to the structure of the human body Philadelphia and London J B Lippincott Company (Pp 478 435 figures 43 being in colour 25s net)

[9] *Hygiene des Fusses* Von Professor Dr F Schede Leipzig G Thieme 1933 (Pp 42 M 1 50)

[10] *Exploration Clinique de l'Equilibre Acide Base par l'Analyse d'Urine* Par R Goiffon (Collection medecine de chirurgie pratiques No 53) (16 fr)

[11] *L'Aérophagie et son Traitement* Par F Ramond et J Dimitresco-Popovici, avec la collaboration de H Dary (No 58) (17 fr)

[12] *Les Constipations* Par M Chiray et R Stieffel (No 59) (20 fr)

[13] *Fievre Boutonneuse* Par D et J Olmer (No 57) (17 fr)

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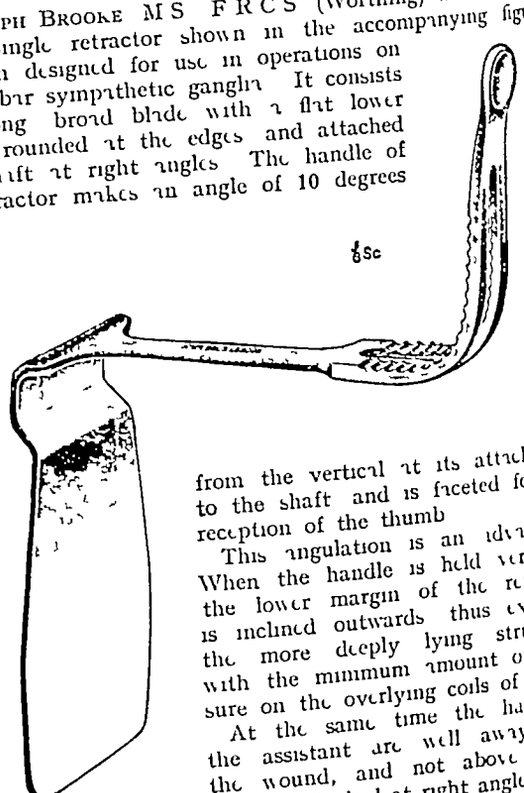

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British Medical Journal

SATURDAY APRIL 22nd, 1933

DIET AND ANAEMIA

It is established that anaemia can be produced in young animals such as rats and pigs by a diet consisting mainly of milk It has also been shown that a similarly preventable type of hypochromic anaemia may be present in infants of the poorer classes fed over prolonged periods on cow's milk and that both these forms of nutritional anaemia are prevented when iron with traces of copper is added to the milk The striking curative effect of liver and of certain other viscera in pernicious anaemia further demonstrates the relation between diet and blood formation In the one group of anaemias iron deficiency is directly responsible whereas in the other some other food principle necessary for blood formation is missing

These facts have led many to the belief that faulty feeding may be an important aetiological factor in anaemia and especially that inadequate diet is responsible for those forms of this disease which are prevalent among the poorer classes But these are merely suppositions at least in so far as iron deficiency anaemias are concerned and an article appearing in the opening pages of our present issue shows as a matter of fact that the range through which the diet may vary in iron content without causing anaemia is much wider than had been supposed and that factors of an entirely different type are mainly responsible for anaemia among the poorer classes This article is contributed by a team composed of physicians and nutrition experts the former attached to the medical school of the University of Aberdeen and the latter to the Rowett Institute for Research in Animal Nutrition The patients were of the poorest classes ineligible under the national health insurance system for medical care and most of them from families in which the wage earner was unemployed Six hundred persons were submitted to clinical and haematological investigation Of these 455 were women and 45 men the remaining 100 being children belonging to the same families and chosen so that about one-half of them came from families in which the mother was anaemic Most of the adults examined were persons acting as escorts to those seeking medical advice and had not come to the dispensary seeking medical aid They constituted therefore a fair cross-section of the poorer working classes and from each of them a blood specimen and a clinical history was obtained which in the case of women gave details as to menstruation pregnancy and parturition These observations were supplemented by others of a more general character carried out on 650 school children of the working classes in Peterhead

The amounts of food entering the homes of about fifty of the families in Aberdeen were ascertained—half of them having some member suffering from anaemia—and from accurate analyses of the food used the total consumption per diem of each individual with regard to energy value proteins fats and carbohydrates and iron calcium phosphorus and copper was computed A similar survey of sixty six families in Peterhead was also carried out It is interesting here to note that in a dietetic survey on corresponding lines conducted in 1926–7 in the same cities by the Rowett Institute the values for all the above constituents were found to be higher than at present showing that with increase in industrial depression the dietaries of the poorer classes have become definitely worse But the most important result in the present investigation is that the average diet of the families having cases of anaemia is practically identical with those having no such cases Both diets are poor in every respect the iron content being often far below the usually accepted standard for this mineral (15 mg) and there is no correlation between the diet and the incidence of anaemia the lowest intake of iron per head per day was found in the case of four families in which there was no anaemia These findings do not necessarily mean however that diet is not a factor in the aetiology of anaemia It is indeed a factor but not by any means the only one and it is shown in the present investigation that the great majority of the anaemia cases were among women in whom the demands for iron had become magnified because of frequent pregnancies or excessive blood loss during menstruation and at parturition Thus in a group of 750 children and 45 adult males anaemia was practically absent whereas in a group of 455 adult females it was present in about half the cases That this anaemia is due to iron deficiency is abundantly clear from the dramatic effects which are produced by the treatment of the individuals with large doses of iron and ammonium citrate without any alteration of the diet The diet therefore was a minimal one and not an optimal one in so far as its blood forming powers were concerned

It is imagined by some that in the investigation of disease nowadays elaborate biochemical and bacteriological analyses are essential The present investigation clearly shows that this is not the case and that what is needed is team work by groups of individuals each taking his share in a carefully planned scheme and each thoroughly conversant with the purpose of the whole inquiry The ideal conditions for investigations of this character are abundantly provided in such a university centre as Aberdeen where those working in the hospitals and dispensaries have at their disposal if they go about things in the right way the advice and assistance of their colleagues in the scientific departments of the University and in neighbouring research institutes The close collaboration between a group of physicians working among hospital and dispensary patients and a laboratory specializing in the study of problems and animal nutrition such as the Rowett Institute under the general guidance of the head of the department of medicine in the University has

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in this particular investigation, yielded results of unquestioned importance They indicate how the diet of the poorer classes should be supplemented to prevent anaemia, and they also demonstrate how problems in the aetiology of disease should be investigated

TREATMENT OF SYPHILIS BY ARTIFICIAL PYREXIA

Experiments that indicate the possibility of inducing and controlling artificial pyrexia for the treatment of syphilis by means of irradiation with short radio waves have been discussed recently in a series of papers by Messrs Carpenter, Boak, and Warren [1] Should this method of inducing fever prove to be both safe and easy of control it will be of the greatest interest to the physician Artificial pyrexia is often used as a therapeutic measure, though the methods leave much to be desired from the point of view of control and of the safety and comfort of the patient During the last few years a considerable amount of work has been done on the use of high-frequency oscillations for attaining the required degree of pyrexia this work has been surveyed by Szymanowski and Hicks [2] A paper by J C McLennan and A C Burton on selective heating by short radio waves and its application to electrotherapy[3] describes experiments in which they showed that by using suitable wave-lengths the rise in temperature was considerably greater in some tissues than in others For example, at a wave-length of twenty-five metres the temperature of the yolk of an egg rose from 27° C to 48° C, whereas that of the white only rose to 42° C They also found differences in the case of the heart and liver and in the different parts of the chick embryo

Whether the lethal effect on living micro-organisms is merely the result of a rise in temperature of the host, or whether it is due to some molecular change within the micro-organism itself, is naturally of great theoretical and practical interest Szymanowski and Hicks[2] conclude that on the evidence so far available it is not possible to say whether the result is due to the rise in temperature, to some other action, or to both It appears that bacterial toxin, although the temperature of the solution is not allowed to rise, is attenuated when placed within the high-frequency field these results certainly suggest that some direct molecular effect may be produced Carpenter, Boak, and Warren have conducted a careful series of experiments designed to test the effect of the irradiation on normal rabbits and on rabbits infected with *T pallidum* They have also investigated *in vitro* the thermal death time of *T pallidum*, using extracts testicular lesions in rabbits In the case of on of normal rabbits they find that repeated body temperature by this method is a safe temperatures greater than those within " physiological limits " are not employed They found no injurious effect on growth, mating, fertilization, or on the development of the young *in utero* The most interesting paper of their series is that dealing with the effect of irradiation on lesions caused by *T pallidum in vivo* Rabbits were used for these tests, some thirty seven being infected with *T pallidum*, about half of these were kept as controls and not treated The presence or absence of infection was determined by the injection into normal rabbits of extracts prepared from the testes and popliteal lymph nodes of the animals under test The animals were exposed in a wooden box in the electrostatic field of a high-frequency oscillator operating at a frequency of 10,000 kilocycles (thirty metres) The following experimental findings are reported Multiple unsustained fevers (41–42° C about twenty exposures, totalling seventeen to sixty six hours) destroyed *T pallidum* in rabbits with active syphilitic lesions, but one continuous febrile period of six hours was also effective The infection in the control series of animals persisted as long as 395 days after inoculation, and it was found that the time interval between inoculation and fever treatment, or between the end of fever treatment and reinoculation, did not affect the results The treatment was effective at any stage of experimental syphilis in rabbits

It is to be hoped that work on corresponding lines will be continued by these and other investigators Here is a field which may well develop to one of great practical importance, and it is a good example of the growing tendency for the physicist, biologist, and physician to co-operate

SOCIAL PROBLEMS IN BELGIUM

Perhaps the most complete and effective survey, within relatively small compass, of the social conditions in any country is that contained in a report entitled *La Belgique Sociale*, by Dr René Sand [1] It is in many respects a remarkable document Comprehensive and authoritative, up to date in its facts, clear, orderly, and logical in its exposition, sane, practical, wise in its conclusions, easy, smooth, vivid in its style and language by these qualities alone, and without any striving after eloquence, it transforms a purely intellectual presentation into a very powerful emotional appeal It should not only have a beneficial influence in Belgium itself, but should prove of interest and value to all English readers who have any concern with public health, with medico-sociology, or with social welfare in general The subtitle is " An inventory and a plan of action," and both are admirably provided Belgium, like England, is a country with a population of great density and largely industrialized Though it entered the industrial field later than this country, and has lagged even further behind in adjusting itself to, and making provision for, the change of social conditions thereby brought about, the problems presented and the

[1] *La Belgique Sociale* Par Dr René Sand Avec une préface de Professeur Ernest Mahaim 1933 Office de Publicité J Lebègue et Cie, 36 Rue Neuve, Bruxelles

[illegible] and Warren *Journ Exp Med* 1932 lvi 5
[illegible] and Hicks R *Journ Infect Dis*
Canadian Journ Research, 1931, v 550
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general plan of action required are almost identical in the two countries though happily in Great Britain we have already advanced some considerable distance towards carrying that plan into effect

After a most instructive survey of the population of Belgium and its economic and social conditions Dr Sand gives an outline of the social and sanitary development of the country during the past century Then follow three chapters on public health organization (including housing and town planning food supervision infectious diseases mental disorders alcoholism and drug addiction maternity and child welfare and physical education) on social and industrial insurance (including workmen's compensation occupational diseases old age and widows' pensions sickness and unemployment insurance factory inspection and family allowances) and on public assistance (including the Poor Law provision and child protection) Conclusions as to the needs demonstrated and the action required in relation to these several fields are given in the respective chapters but there is a final chapter dealing with the situation more widely and urging the co-ordination or unification of all these social and health services under a single Ministerial department

Apart from the fascination of the whole picture or theme isolated items of interest can be culled from a great many of the pages As mere examples we may note a few in passing The Flemish population is growing more rapidly than the Walloon Examination for the Army shows that 38 per cent of the young male population are unfit for service and from this and other factors it is reasonable to calculate that 50 per cent of the whole population are physically or mentally below par It was not until 1914 that elementary education was made compulsory and even to-day school medical inspection is non existent or negligible in half the communes of the country Belgium and the United States are the only industrial nations which have not yet instituted a system of compulsory health insurance In this connexion Dr Sand's whole argument in favour of the establishment of such a system is very powerful and may be commended to the consideration of the medical profession not only in this country but more particularly just now in America This part of the book and that on the arrangements for public assistance and the reform of the Poor Law with regard to institutional provision and domiciliary attendance contain many observations very apposite here and the attention of those interested in family allowances may be drawn to the two pages in which a succinct and clear description is given of the Belgian scheme for a social provision which we do not favour Finally as an example of parallelism we may quote what is said in respect to the voluntary system of insurance through friendly societies Il en reste trop souvent a cette médecine rapide elémentaire palliative dont on a dit qu elle était une consolation plus qu un traitement Sollicité par ses clients le médecin manque parfois de rigueur dans ses certificats aussi voit-on les journées de chômage payées se multiplier les dimanches et atteindre les jours de fete locale des proportions fantastiques And in view of similar pronouncements in the *Journal* the following sentence is noteworthy

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CONSULTANTS AND THE L.C.C.

At the request of a general meeting of London consultants and specialists held on April 11th [1] and of the Metropolitan Counties Branch Council of the British Medical Association the Council of the Association on April 12th decided to intervene in the dispute between the London County Council and the consultants As will be seen from the report of the Council meeting published in our *Supplement* this week (p 142) a special committee (consisting of the Chairman of Council Dr C O Hawthorne Sir Ewen Maclean and Mr H S Souttar) was set up with power to act on behalf of the Council On the instructions of the Council a letter was sent to the chairman of the Central Public Health Committee of the London County Council expressing the hope that the L C C would give further consideration to the matter and in spite of misunderstandings would accept the offer of a friendly conference through suitably appointed representatives with the view to a solution which would ensure the widest possible field of applicants to fill positions in the service and the greatest efficiency of the service for the benefit of those whom it is established to serve

RESUSCITATION OF THE NEWBORN

While many advances have been made in recent times in regard to the physiology of respiration there is little sign of their being applied to displace the time honoured warm and cold baths ineffective attempts at suction and post-natal spanking which comprise the usual methods adopted to stimulate a newborn baby's respiration In a valuable paper [2] Dr W E Brown has recently set out three important physiological facts which have a bearing on the problem and he shows also how they may be applied to the resuscitation of the asphyxiated infant In the first place he explains how expansion of the lungs after birth is a slow rather than a sudden process and how persistence of atelectasis may lead to a certain amount of resistance to respiration with serious consequences The first of these is a decrease in the oxygen tension and increase in the carbon dioxide tension in the lungs The respiratory centre is stimulated and a period of hyperventilation results with washing out of carbon dioxide and a great lowering of its tension in the alveoli Periods of apnoea occur even when the normal carbon dioxide tension in the blood may fail to stimulate the respiratory centre which has become adjusted to the increased tension The second fact of importance is that with a lowered carbon dioxide tension in the blood the dissociation curve for oxyhaemoglobin reaches a low level so that although cyanosis may decrease a state of tissue anoxaemia may develop The third point is in connexion with the Hering-Breuer reflex which indicates that distension of the lungs appears to

[1] *British Medical Journal* April 15th p 683
[2] *Canadian Med Assoc Journ* February 1933

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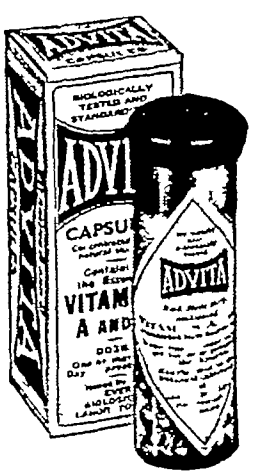

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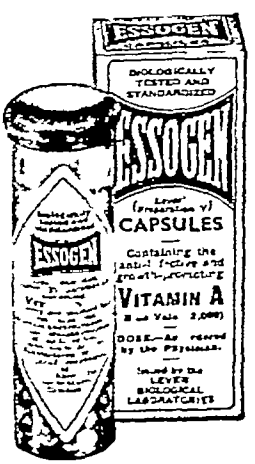

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stimulate expiration and deflation to stimulate inspiration That is to say, positive-pressure rhythmic insufflation through the trachea is of much greater value in resuscitation than any form of manipulation applied to the chest wall Dr Brown then proceeds to consider the modern methods available in the light of these facts He thinks the Drinker apparatus too costly and elaborate, it fails to give a high carbon dioxide content in the inspired air, and it does not help in producing a rapid opening up of the alveoli The use of a mask and appropriate mixtures of oxygen and carbon dioxide is more suitable, but it, also, fails to secure patency of the respiratory passages For asphyxiated babies who breathe badly, with long intervals of apnoea, he urges the prompt use of a tracheal tube to aspirate the trachea, followed by the administration of suitable oxygen and carbon dioxide mixtures under measured pressure to overcome the atelectasis This should be continued until the respiratory centre is sufficiently stimulated to take up its normal function The ordinary mild type of gasping respiration in a baby with good muscle tone can, in Dr Brown's opinion, usually be turned into normal breathing by external stimulation, followed by the administration of oxygen and carbon dioxide mixtures through a mask The struggling and crying attendant upon such procedures probably soon overcomes the atelectasis The more severe types, including perhaps the curious and rare form described by Still[1] under the heading of arrested respiration in the newly born, will require the more elaborate measures outlined above Dr Brown thinks that this department of obstetrics should be looked after by the anaesthetists, since "they are eminently qualified to be of immeasurable assistance to the obstetrician in cases of failure of respiration of the newborn"

QUICKER SLUM CLEARANCE

In some areas remarkable advances have been made in clearing bad tenement houses and re-establishing their occupants in modern flats This is a matter which has been dear to the heart of the Ministry of Health for many years, and it has constantly urged local authorities to proceed The efforts in St Pancras are a lesson to the whole country of what can be done when people of good will get together Those who remember the horrors of Somers Town ten or twenty years ago can hardly believe their eyes when they see the pleasant-looking grey blocks that have sprung from the ashes of hideous tumble-down hovels Yet the association which has wrought the change is actually paying a reasonable interest on the money put forward, and the inhabitants of the new buildings have not found the rents increased beyond their ability to pay Other districts are not so fortunate, however, and the Ministry has just issued an official circular to local authorities urging on them a concerted effort, together with the Central Government, to insure a speedier end to the slum evil This circular maintains that the slum problem is strictly limited and that the time and cost required for its solution can be measured, and, further, that indirect influences cannot be relied upon to solve it The Minister trusts that local authorities will prepare a definite schedule of work to be completed within a fixed time, and hopes to receive a programme from every one of them before the end of September next He points out that there can be few, if any, towns and villages where some urgent action under the 1930 Act is not called for He asks for a list of the areas in which clearance is necessary, together with the number of houses to be demolished in each and the number of inhabitants thus rendered homeless, for similar information about the areas where improvement is desirable, and for time-tables for the work of clearance and the work of co-ordinated rehousing London, he says, stands by itself, and the time needed will necessarily be greater, but he hopes that the metropolitan borough councils will confer with the London County Council and co-ordinate proposals Loans will be granted for a reasonable proportion of the rehousing necessary, and will, it is hoped, shorten the aggregate time taken over the process of dealing with bad areas The circular points out that the present is an excellent time, since building costs are low and money is cheap With the aid of the subsidy payable under the Act, houses can be let at rents well within the capacity of the poorest If local authorities wish to maintain a reputation for efficiency and progressiveness they must make haste to respond to the Minister's call

THE TRAFFIC IN NARCOTIC DRUGS

The report of T W Russell Pasha to the Egyptian Government on the work of the Central Narcotics Intelligence Bureau for the year 1932[1] affords valuable insight into the control of traffic in dangerous drugs, as well as into the magnitude and ingenuity of the illicit commerce in narcotics If the energy and vigilance of Russell Pasha's bureau were practised by all the parties to the Hague and Geneva Conventions the restriction of the production and distribution of the scheduled drugs to medical and scientific requirements would be within measurable distance of achievement It is truly said that up till now the contraband trade "has battened on international bickerings, jealousies, sovereign rights, and lack of real determination to stop narcotic traffic" When one source of the illicit supply has been shut down another has been opened up The report congratulates Turkey on having closed the factories of heroin and morphine in Istanbul and on resolving henceforth to limit the production of raw opium to legitimate purposes But, alas, "the European centre for the manufacture of heroin destined entirely for the illicit trade has now shifted from Istanbul to the capital of Bulgaria, Sofia," notwithstanding the fact that Bulgaria is a full member of the League of Nations and a party to the Geneva Convention of 1925 The report, which extends to 170 pages, is well documented and illustrated Portraits of "the drug barons of Europe," as the Pasha calls them, are furnished, and the story of the notorious Ehopoulos organization is related in racy language It appears that in seven months of 1931 no less a sum than £240,000 was transmitted from an agent in Tientsin to the headquarters in Paris of this gang of drug traffickers Full details of other exposures and of seizures of contraband are vouchsafed as well as the methods successfully adopted in Egypt for restricting the excessive prevalence of addiction in that country As judged by the analysis of 500 prisoner addicts it would appear that hashish is the narcotic mostly in favour, next heroin, and then opium, morphine and cocaine being little employed by addicts

[1] *Lancet* 1923, i, 431

[1] Cairo Government Press 1933

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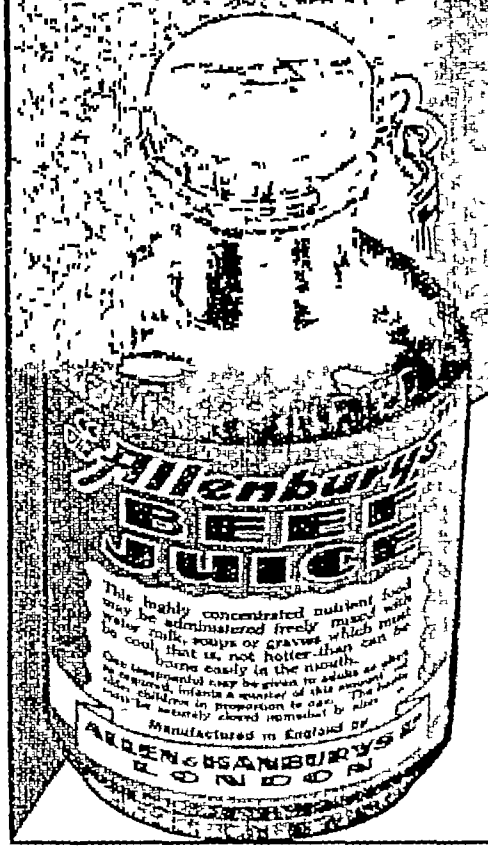

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in Egypt The chief source of the illicit hashish is Syria where owing to the French law not forbidding its possession tons of this drug are smuggled into Egypt The perverted ingenuity of the drug traffickers is illustrated *inter alia* by the discovery of considerable quantities of heroin concealed in the tubes and knobs of a brass bedstead and of 320 grams of the same alkaloid found in the soles and heels of the shoes of a passenger on s s *Roumania* Russell Pasha is no fanatic he recognizes the medicinal value of narcotics and says no one wishes to stop a river of pure water but means must be found to dry up these insidious and persistent streams of poison He shares with his Genevan colleagues the hope that the Limitation Convention of 1931 may not fail of ratification this month and that it may be followed by limitation of poppy cultivation as has indeed been advocated by this *Journal* for some twenty years past

"PIVOTAL" VALUES OF HOSPITAL PATIENTS

In one of the most interesting chapters of his monograph on *Human Values in Psychological Medicine* [1] Dr C P Blacker describes an investigation which was designed to discover in a series of patients who attended a large London hospital the nature of the values which unify and justify life give it coherence and make it on the balance worth living Perhaps the most surprising discovery was that most of these patients had no such pivotal values or even a conscious need for them They had of course interests—the men in sport and politics for example the women in fashions domestic economics and the doings of Royalty particularly their illnesses marriages and procreation and to both sexes crimes and criminal trials scandals sexual subjects such as birth control and the ways of modern youth and religion as set forth by notabilities in the popular press were matters of the deepest concern But their general reaction to life could have been summed up in the words of a woman of 50 the mother of twelve live children who said You have to take what is coming to you and ask no questions It will depend on the reader's own pivotal values whether he finds reason for satisfaction or sorrow in the prevalence of such an attitude As for the rest the minority of patients with religious philosophical or other values they fell into three main categories not indeed sharply defined from each other but distinct enough to justify the author's classification In the first category were those who had pivotal values but never consciously needed them in the second were those who needed such values and had found them without difficulty and in the third (a large and heterogeneous group) were those patients who needing pivotal values had either failed to find them or had found them only after much searching It is not surprising to learn that members of the first group were rarely neurotic they were for the most part well balanced people efficient and unimaginative and their values were vocational or recreational rather than religious or philosophical Nor was there much neurosis in the second group which consisted chiefly of people in whom religious needs were combined with a faculty for uncritical belief But in the third group mental illnesses were common It was an illuminating observation that some of these illnesses could themselves constitute a pivotal value the intensity with which patients clung to even the most distressing symptoms being an indication of how unconscious forces could co-ordinate and unify life At this point and in the differentiation of abnormal mental states according to their capacity for expressing pivotal value the argument takes a definitely Freudian turn the author recognizing in the neuroses and psychoses compromise-formations which in so far as they are attempts admittedly bad attempts to co-ordinate life may be regarded as expressing the values that form the subject of his study The monograph in its general tendency is non-Freudian but the author's indebtedness to Freud is manifest and freely acknowledged Nothing he writes at the end of a devastating criticism of the Freudian hypothesis of death instincts could be farther from my wish than to be identified with those people who having adopted Freud's cardinal ideas about conflict and repression who having mounted the now safe vantage points along the road that he has hewn throw stones at him while he is still hewing the road

[1] *Human Values in Psychological Medicine* By C P Blacker M D London Oxford University Press 1933 (8s. 6d. net.)

BRITISH HEALTH RESORTS

We have received a copy of the first official handbook of the British Health Resorts Association (published by Messrs J and A Churchill price 1s) This contains authoritative information about the spas and seaside resorts of the country and is based on the information collected for many years by its editor Dr Fortescue Fox well known as a leading authority on climatology and balneology It is intended for the use of doctors in choosing the places at which their patients are most likely to get the kind of air baths and other treatment they may require and it is the aim of the B H R A which is largely a medical body to improve the information given from year to year so as to make this at least the equal of any handbook issued on the Continent The book which is attractively printed and illustrated will also be of service to the general public because almost every health resort in the country is described and it contains much useful information not to be found elsewhere Sir Humphry Rolleston contributes a short preface The association was formed to strengthen the appeal made by the Government that the people of this country should buy at home in preference to going abroad for things that can be got at home and it is convinced that the British Isles possess spas and inland and seaside resorts which are not surpassed by those of any country in the world Inquiries from any who are interested in the movement will be welcomed by the general secretary Dr Alfred Cox 199 Piccadilly W 1

MEDICAL RESEARCH COUNCIL

By an Order of the Committee of Privy Council made after consultation with the Medical Research Council and with the President of the Royal Society Sir Thomas Lewis C B E M D D Sc F R S Director of the Department of Clinical Research in University College Hospital London is appointed a member of the Medical Research Council in succession to Professor J J R Macleod M B D Sc F R S University of Aberdeen

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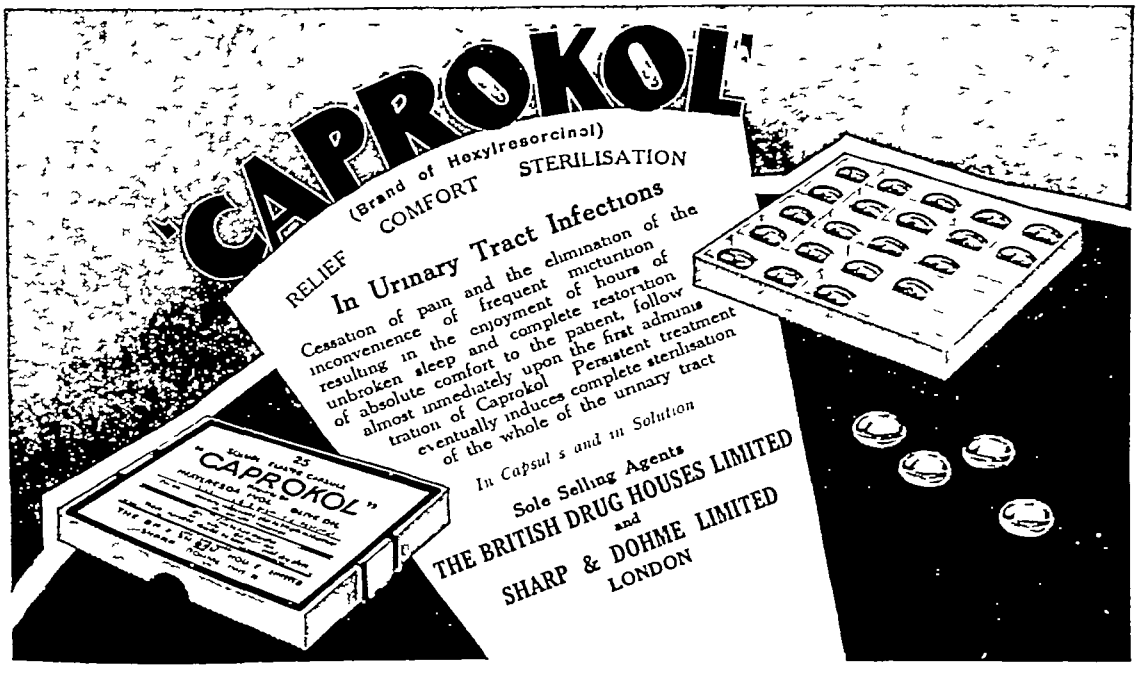

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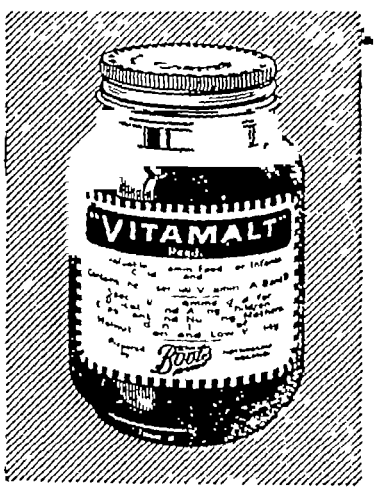

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ONE HUNDRED AND FIRST ANNUAL MEETING
of the
British Medical Association
DUBLIN, 1933

THE one hundred and first Annual Meeting of the British Medical Association will be held in Dublin this summer under the presidency of Dr T Gillman Moorhead, Regius Professor of Physic, Trinity College who will deliver his address to the Association on the afternoon of Tuesday July 25th The sectional meetings for scientific and clinical work will be held, as usual on the three following days, the morning sessions being given up to discussions and the reading of papers, and the afternoon to demonstrations The Annual Representative Meeting for the transaction of medico-political business will begin on the previous Friday July 21st The list of officers of the sixteen Scientific Sections and the subjects for discussion was published in the SUPPLEMENT *of April 15th Other details of the arrangements for the Annual Meeting will be given in later issues We publish below the second of a series of descriptive articles on Dublin and its medical institutions A preliminary note appeared in our issue of December 3rd, 1932 (p 1026), and an article on the History of Dublin on March 18th, 1933 (p 476)*

THE DUBLIN OF TO-DAY

By WILLIAM DOOLIN M B , F R C S I

To those who have not yet made her acquaintance Dublin is but the name of a city whence emanate countless thousands of sweepstakes tickets, barrels of Gunness's stout, and endless matter for futile political argument But upon those strangers who, in the phrase of the mediaeval annalist, have been " vomited up out of the sea on to the shores of Eireann," the city and its associations have ever exerted a most potent charm Dublin has known many conquerors but she has in turn conquered them all Gael, Dane, Norman, and Englishman have left their mark upon the city But that centuries-long story has been outlined in a previous article in these columns here we shall attempt to give a brief impression of what modern Dublin has to offer by way of interest and attraction to the visitor in July of 1933

Of the several ways of reaching Dublin from England — half a dozen at least—there is one we would most insistently recommend to the visitor First impressions count for much and the approach to Dublin by the mail boat from Holyhead on a late July afternoon is an impression likely to remain long in the fortunate traveller's memory For even the most timid of sailors the sea journey is a short one—less than three hours from port to port—and in July the Irish sea is never uncivil to visitors! As the boat enters Dublin Bay which is bounded by the wooded headlands of Howth and Killiney, those on deck get their first glimpse of the city , almost at the water's edge it nestles beneath a range of encircling hills The ship's prow presses on towards Dun Laoghaire—the King's Town—where the outflung piers of the harbour seem in the slanting rays of the sun as a pair of white arms stretching out to greet the stranger about to enter Ireland of the Welcomes There are other routes, by rail from Rosslare in the south or from Belfast in the north the visitor may also come by the same route overnight, or enter Liffey's mouth in the morning from Liverpool , but for him who comes with pleasurable anticipation of a week's visit to the city, such anticipation will be heightened by approaching Dublin by the route I have recommended

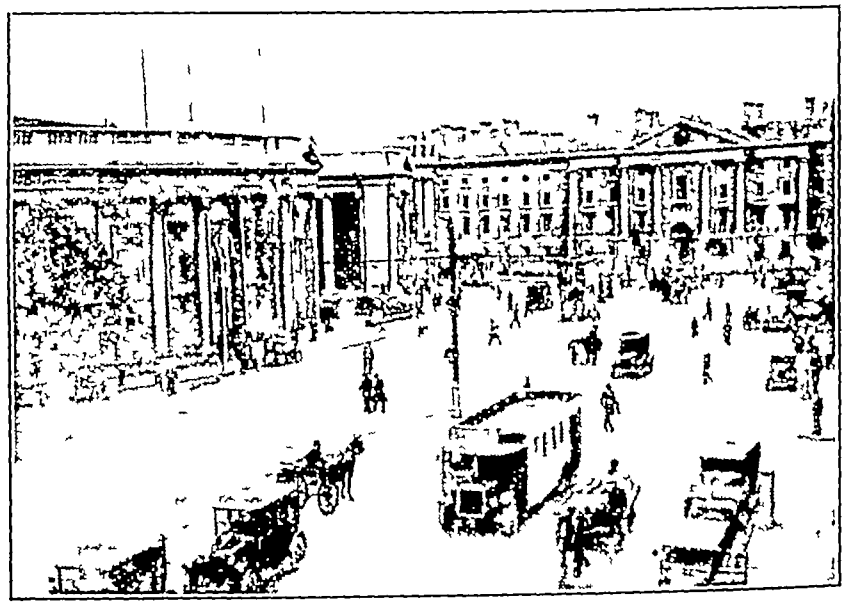


FIG 1—BANK OF IRELAND AND TRINITY COLLEGE

Dun Laoghaire, the chief harbour of Leinster, lies some seven miles south of the city A pleasant drive through the outskirts leads the visitor by tree lined roads past the suburban dwellings of Dublin's more prosperous citizens, past colleges and the spacious premises of the Royal Dublin Society—scene of how many brilliant Horse Shows—into the heart of a modernized eighteenth century city For its outward appearance and general conformation, as well as for much that is beautiful in the interior decoration of its public buildings, the Dublin of to-day has to thank the town-planners and builders of an earlier Irish Parliament, whose activities were brought to a standstill by the passing of the Act of Union Dubliners owe a debt of civic gratitude to the vision and determination of John Beresford—the family name has the knack of cropping up periodically in both Irish and English history—who for thirty years held the post of Commissioner of the Revenues in Grattan's Parliament In the earlier years of that Parliament Dublin was still the walled mediaeval town of the days of Charles II Two memorials of the Restoration era flourish in Dublin to day they are the chief recreation grounds of the citizens—the Phoenix Park, a Viceregal gift, and St Stephen's Green, the creation of the municipality Another Stuart memorial is the Royal Hospital at Kilmainham, built on the site of the ancient hospital of the Knights of St John Of all the public buildings in which Dubliners take just pride, this hospital alone (save for the two Cathedrals of Christ Church and St Patrick) existed in the seventeenth century

SOME HISTORICAL BUILDINGS

In its essential architectural features in almost all that attracts the eye of the observant visitor the Dublin of to-day is fundamentally the creation of the closing years of Grattan's Parliament. That Parliament erected at its own cost the great façade of Trinity College facing Parliament House (now the Bank of Ireland) across College Green. It is here we would have our visitor come for a second unforgettable impression of our city. Let him stroll by moonlight down from Grafton Street past the Provost's House to seek the *coup d'œil* made by the front of the Bank with the corner angle of Trinity College at the conjunction of College Street and Westmoreland Street. There he may feast his eyes on a Whistler-like nocturne in stone. He is at the heart and centre of the city (Fig. 1). From here under Beresford's direction the Commissioners of Grattan's day drove great streets north, west and south. The Liffey was spanned by Carlisle (now O'Connell) Bridge linking up Westmoreland Street with Sackville (now O'Connell) Street, the latter (150 feet wide) has been aptly described as one of the four finest streets in Europe (Fig. 2). Westwards Dame Street (so called from an ancient mill dam near the old Eastern Gate) leading from College Green to Dublin Castle was widened. Grafton Street and Dawson Street were opened up to connect the town with the Green. Park of St. Stephen to the south, then rapidly growing fashionable as a residential centre for the aristocracy of the day. In the years preceding the Act of Union Dublin society followed the lead of the Duke of Leinster and moved to the south side of the river. The Duke's building, Leinster House, is to-day the seat of the Legislature of the Irish Free State. Its erection was speedily followed by that of many others in the neighbouring squares. Dublin's leading hotel, the Shelbourne on the north side of St. Stephen's Green, stands on the site of the former residence of Sir William Petty, master of the Down Survey; it took its name from Sir William's son, who became Earl of Shelbourne. Across the Green lived the notorious Buck Whaley, whose residence became in 1854 the seat of Newman's University College, forerunner of the present National University. On the east side St. Vincent's Hospital was then the residence of the Earls of Meath and Westmeath, while Henry Grattan, leader of the Parliament, lived next door. For the lake and gardens that beautify The Green to-day Dublin is indebted to a benefactor of a more recent generation—Lord Ardilaun, head of the well-known house of Guinness. The two large squares nearby—Merrion and Fitzwilliam Squares now form the main the professional quarter of the city—owe their origin to the wave of fashion which followed the erection of Leinster House; the passing of the Act of Union led to the dispersal of their first aristocratic occupants. For nearly a century past Merrion Square has been the fashionable medical centre. Of the many medical luminaries whose work made the Dublin school of medicine renowned in the latter half of the nineteenth century we would allude in passing to Sir Philip Crampton—whose monument now stands on the site of the old Danish Steyne, the oldest landmark in Dublin—to Sir William Wilde, to Graves, Stokes, Corrigan and a host of others. At Mornington House (now the offices of the Irish Land Commission) in the short street that links both Green and Square tradition has it that the Iron Duke first saw the light.

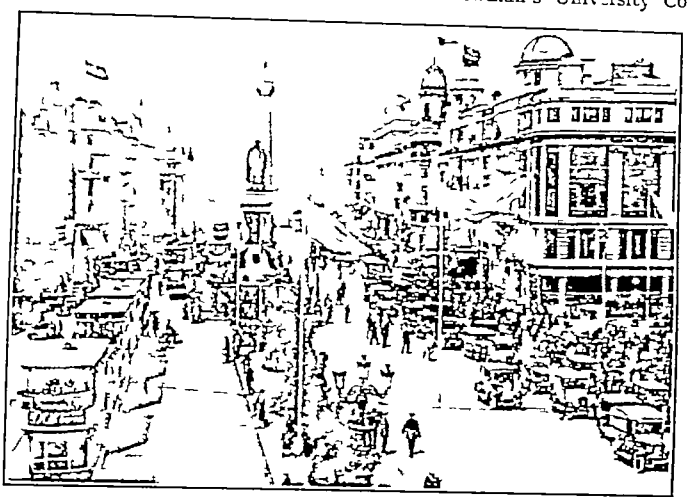


FIG. 2.—O'CONNELL STREET, DUBLIN.

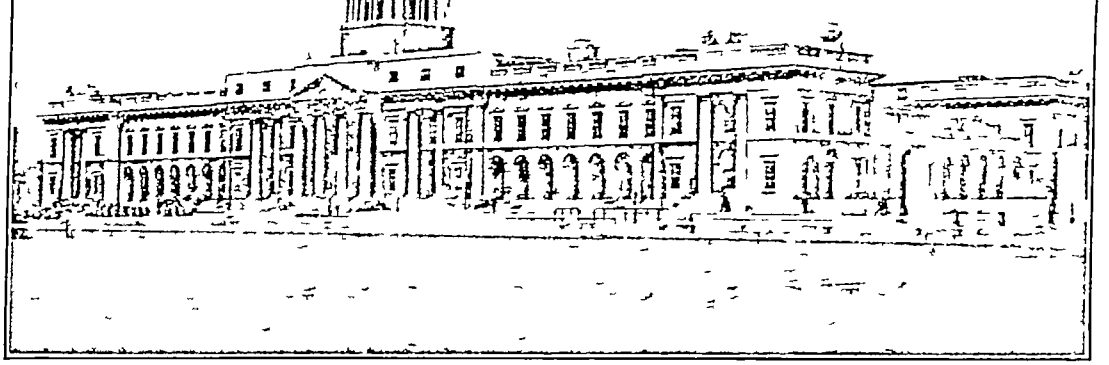
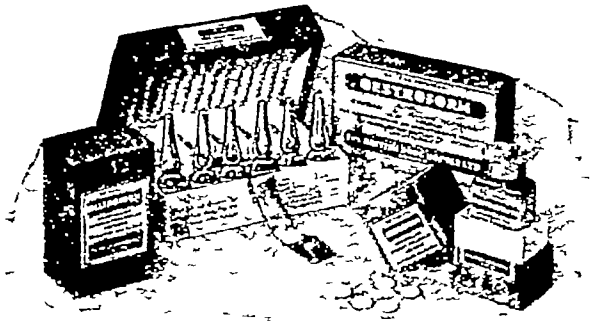


FIG. 3.—CUSTOMS HOUSE, DUBLIN.

The Houses of Parliament were left untenanted by the passing of the Act of Union (1800) two years later they



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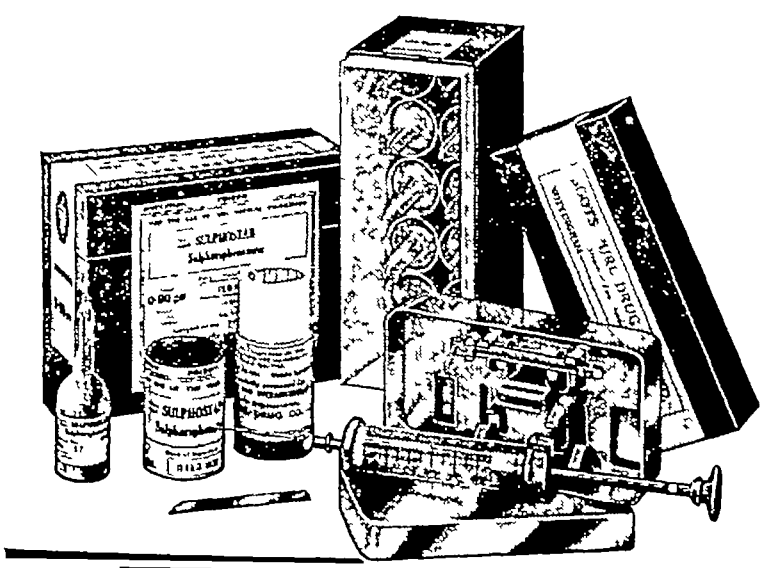

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CONGRESS OF OBSTETRICS AND GYNAECOLOGY

The ninth British Congress of Obstetrics and Gynaecology was held at the University of Birmingham on April 5th, 6th and 7th, under the presidency of Professor BECKWITH WHITEHOUSE. The foreign visitors were Professor Oskar Fraenkl of Vienna, Professor Van Rooy of Amsterdam, and Professor Birger Lundqvist of Gothenburg.

UTERINE ACTION AND ITS ABNORMALITIES

At the morning session on April 5th, with Professor Whitehouse in the chair, Mr ALEC BOURNE read the opening paper "The Uterine Action and its Abnormalities." He said that feeble contractions were the cause of many of the disasters of labour. For the child the long labour was a considerable risk. He had searched the clinical histories of over 4,500 consecutive deliveries at Queen Charlotte's Hospital, and had classified as "long labours" all cases in which the first stage had lasted for more than forty-eight hours. There were forty-nine cases of genuine primary uterine inertia, thirty-six occurred at full term, and it would appear that inertia was not influenced by maturity. The condition was five times more common in primigravidae. Malpresentation was not a predisposing factor. In this series there was an unduly high number of cases of albuminuria. The membranes ruptured prematurely in thirty out of the forty-nine cases. Manual removal of the placenta was performed eight times. In less than half the cases delivery was spontaneous. There was no relation between the weight of the child and the occurrence of inertia. Sedatives had been employed in over half the cases, and a combination of pituitrin and sedatives in eleven. In only two cases had manual dilatation of the cervix been performed. The maternal mortality was 10 per cent., and morbidity 40 per cent., three of the maternal deaths being due to sepsis. He demonstrated a graph which recorded the intrauterine pressure at the thirty-sixth week of pregnancy. After an injection of two units of pitocin contractions resembling first-stage labour pains were registered, they were not felt by the patient, nor did the cervix dilate. Normal labour depended on fundal contraction and cervical dilatation. The speaker said that FitzGibbon had emphasized the importance of the engaging head and its pressure upon the cervix as the cause of the onset of labour. He was convinced that external stimuli influenced uterine action by way of the nervous system. Non-engagement of the head was often associated with inertia. He had attempted to induce labour by injection of tri-hydroxy oestrin in castor oil, but without success; the injection did not affect the milk secretion. He was uncertain of the part played by oestrin in labour. In an estimation of the oestrin content of the urine in two cases of uterine inertia, the amount of this hormone had not been found to be definitely diminished. Pituitary extract did not induce premature labour. By means of hysterograms he demonstrated that adrenaline inhibited fundal contraction during labour in the human being. Microscopical slides were shown of portions of the cervix removed at the time of delivery from two cases of rigid cervix which terminated in circumferential tears. An excess of fibrous tissue was seen. Fear, Mr Bourne said, played a very great part in causing weak contractions; a contented and care-free woman had a spontaneous labour. In the more civilized grades of society emotion and anxiety were most important factors in modifying the course of normal labour. It was essential for the medical attendant to obtain the confidence of the mother, particularly during the antenatal period, and thus help to annihilate the dread of labour.

Professor W. BLAIR-BELL, Dr M. M. DAVIS, and Dr J. K. JERVOISE presented a paper on the mechanism of uterine action and its disorders. *In vivo* and *in vitro* experiments on animals were described and graphs of uterine contractions shown. In woman the anterior pituitary hormone was in excess in the early months but diminished as pregnancy continued, and by the fourth month the influence of the corpus luteum was on the wane. The function of the corpus luteum varied quantitatively and qualitatively in different animals. Neither oestrin nor "antuitrin S" had any effect on the isolated uterus; oestrin sensitized the uterus to respond to infundibulin, and it assisted in bringing about hypertrophy and increased vascularity of the uterine musculature during pregnancy. The hormone of the corpus luteum inhibited uterine activity, but after the first two months it was not essential for the maintenance of pregnancy in the human subject. The view was put forward that the hormones of the anterior lobe of the pituitary assisted and might even replace, the corpus luteum in causing inhibition. Primary uterine inertia was due to lack of sensitization of the uterus by oestrin, and to insufficiency of the pressor substances in the maternal blood. The onset of labour and the occurrence of many cases of abortion were associated with an excess of oestrin in the circulation. Uterine inertia was not due to muscle fatigue. In abortion oestrin was found in large quantities in the urine, with a disappearance of prolan B. Abortion in its early stages had been averted by the injection of corpus luteum and "antuitrin S". Premature labour was usually due to powerful emotions through sympathetic stimulation, as well as to foetal influences. An increased amount of pressor substances was present in the blood in tonic contraction, and magnesium sulphate had an immediate effect.

Dr J. M. ROBSON dealt with some of the recent hormonic advances underlying uterine activity. He had experimented with strips of human uterus removed at the time of a Caesarean section. When these were exposed to the action of oxytocin there was no effect in the early months of pregnancy, but, on the other hand, vasopressin caused contractions. Strips removed late in pregnancy required only a very small amount of oxytocin to induce a contraction, and those removed during labour required a still smaller dose. Response to either oxytocin or vasopressin was absent in menstruation. In pregnant rabbits a strip of uterine muscle removed during the puerperium required one hundred times as much oxytocin to produce the same amount of contraction as that occurring during pregnancy. After injection of oestrin the uterus showed a marked reactivity to the action of oxytocin, corpus luteum had a reverse effect.

Mr WENTWORTH TAYLOR in a paper on the anomalies of uterine action, said that dilatation of the cervix was not solely a mechanical process, and he described the lower uterine segment as the middle segment of the "birth sleeve". The walls of the uterus before labour were of equal thickness throughout. Incoordinate contraction might be due to several causes: psychic, hormonic, mechanical, ante-partum infection of the liquor amnii, and the administration of oxytocic drugs. Sympathy of action between the various parts of the uterus determined normal labour. A well-fitting dilator caused sympathetic action between the body of the uterus and the cervix. Spasm of the uterus was due to obstetrical intervention; for this condition he advocated early trial of sedatives. In the presence of foetal distress, tenseness of the uterus, and little or no cervical dilatation Caesarean section was the method of treatment. In the dystrophic individual who could not be cured by a course of hormonic extracts,

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in occipito posterior positions and with a large child in whom flexibility was below normal anomalies in uterine action were to be expected

AFTERNOON SESSION

At the afternoon session with Dr J P Hedley in the chair Mrs BERTRAM LLOYD and Mr P J GANNER described a case of fundal rupture of the uterus in a 2-para aged 26 during premature labour at the thirty-sixth week The first labour was normal Professor FRAENKL (Vienna) remarked on a somewhat similar case

Mr W GILLIATT in a paper on contraction ring of the uterus in labour described fourteen cases he had seen Premature rupture of the membranes and intervention predisposed to it but uterine inertia was not a definite contributing factor Sedative treatment was disappointing but amyl nitrite in a dose of three minims relieved the contraction in one case He advised Caesarean section when the cervix was undilated and when there was little risk of sepsis The maternal death rate was 14·2 per cent and the foetal 20 per cent Mr L C RIVETT thought that differences in the thickness of the uterine wall was the cause of irregular uterine action and the endocrine system had a very definite role in influencing uterine action In one case of rigidity of the os he had made small multiple incisions in the cervix and was thus able to extract the child in half an hour In another case in which the os was half a crown dilated he incised the cervix applied forceps and attached a weight to them delivery took place twenty three hours later Dr L READE emphasized the importance of the mental aspect of the patient and the function of the sympathetic nervous system in labour Most women suffered from an anxiety state before labour began By a mathematical explanation he was able to demonstrate the effect of relaxation of the circular muscle of the external os The sympathetic acted on this muscle and its action could be inhibited when there was complete mental and physical relaxation on the part of the patient Labour was facilitated when the influence of the sympathetic system was excluded Professor MILES PHILLIPS agreed with Mr Bourne about the part played by fear Disillusionment during the ante natal period was necessary In cases in which the uterus was flabby during the ante partum period he had found that calcium increased uterine tone He regretted the confusion which existed in textbooks on this subject He differentiated between the sluggish and the colicky uterus In the latter the pain was of an excruciating nature

Mr CHASSAR MOIR demonstrated graphs of uterine contractions on the seventh day of the puerperium He had inserted a small bag into the body of the uterus and another in the cervix The contraction of the cervix occurred fifteen to seventeen seconds after that of the uterus It would appear that a wave of peristalsis passed over the uterus In another case he found that the cervix contracted quite independently of the body of the uterus Mr A C BELL thought it was dangerous to conclude that a woman would react in the same way as an animal He said that adrenaline inhibited the uterus in labour and that the oxytocic principle did augment uterine contraction A mechanical factor played a definite part in causing anomalous uterine action Mr BOURNE asked whether oestrin purely crystalline did increase the reactivity of the uterus to pituitrin He had used adrenaline in two cases of tonic contraction in one it had had no effect He was of the opinion that tonic contraction was a myogenic spasm whereas rhythmic contraction depended on a neuro-muscular mechanism Professor BLAIR BELL said that there were enormous differences between normal and abnormal phenomena the latter were absent in animals The importance of the emotional factor in the human being must never be overlooked In reply to Mr Bourne he said that oestrin in a purely crystalline form increased the reactivity of the uterus to pituitrin and was a sensitizing agent He thought that further investigation into the source of the lutein cells was necessary If the corpus luteum developed from follicular cells why had it such a different secretion? He was certain that polarity of the uterus was a definite entity and he thought that during involution of the uterus polarity might be replaced by a peristaltic action He realized that calcium was an important prophylactic agent in uterine inertia It was essential for uterine tone

MISCELLANEOUS PAPERS

On April 6th when Dr James Young presided at the morning session Professor OSKAR FRAENKL (Vienna) described the isthmus uteri He concluded that the isthmus was a well characterized part of the uterus which grossly belonged to the cervix but with regard to its mucous membrane it resembled the body and might be recognized and limited nearly always by naked eye and always microscopically Premenstrual changes were slight or even absent Correspondingly in pregnancy there was no true decidua He discussed the various pathological conditions which might be associated with this region Adenomyomata rarely transgressed the anatomical internal os The isthmus mucosa seemed to have an immunity against cancer of the body of the uterus

Mr VICTOR BONNEY described a method of performing the lower uterine segment Caesarean section by means of a cervical compressor He extracted the foetal head by the application of Willett's forceps

Professor GILBERT STRACHAN presented a paper on the main pathological conditions of the cervix After the menopause the cervix atrophied due to reduction of circulation Trauma could not be prevented at normal labour Absence of healing in a cervical wound was due to constant reinfection Cervical carcinoma was rarely associated with procidentia

Mr L C RIVETT gave an account of ten cases of hydramnios in which he had performed paracentesis He had endeavoured to ascertain whether the liquor amnii was absorbed into the mother's system but he had failed He advised this method of paracentesis as there was little danger in it Professor MUNRO KERR said that he had injected uroselectan into the amniotic sac and had then taken *x* ray photographs By this means placenta praevia could be diagnosed Unfortunately this method was associated with the risk of premature labour

With Professor Leyland Robinson presiding at the afternoon session Professor VAN ROOY (Amsterdam) read a paper on the obstetrical significance of transverse contraction of the pelvis He had investigated cases in which the head had been well flexed but floating dilatation had been normal but intervention of some sort had been necessary in order to complete delivery He found contraction of the transverse diameter of the brim in this type of case This contraction should be suspected if the ilio-pectineal ridges were prominent and the external measurements were diminished Only by *x* ray pelvimetry could the superior strait be measured satisfactorily He gave details of forty three cases In these labour had lasted for forty hours with good uterine contractions there had been delay in engagement of the head instruments were applied the true conjugate was greater than 11 cm and the weight of the foetus had been less than 3 500 grams Pelvimetry had shown in 44 per cent of these cases a diminution of the transverse diameter of 1½ cm the sacral wings were denser He was uncertain whether

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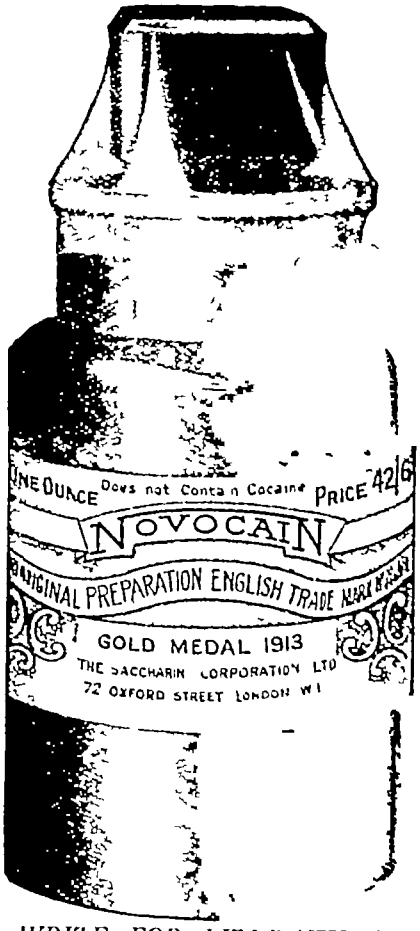

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the condition was due to abnormal congenital ossification or to osteo-arthritis of the sacro-iliac joints It was only by *x*-ray examination that the condition could be diagnosed He referred to the importance of collaboration between the radiological and ante-natal departments Professor MUNRO KERR said that alteration of the flexion of the head by transverse diameter contraction might necessitate Caesarean section Professor MILES PHILLIPS, Mrs R H B ADAMSON, Professors DOUGAL, FLETCHER SHAW, and LEYLAND ROBINSON contributed to the discussion

In Dr E L Fahmy's absence, Professor R W JOHNSTON read a paper on an analysis of 1,000 cases of post-menopausal haemorrhage Carcinoma of the cervix accounted for one-quarter of the total , ovarian dysfunction was the next most frequent cause High blood pressure rarely caused bleeding from the uterus, and malignancy should be suspected if haemorrhage had been constant over many weeks

Professor LEONARD PARSONS and Dr R J GITTINS read papers on the anaemia of pregnancy and its effect upon the foetus They had administered vitamin B (in the form of sterilized wheat-germ " yestamin "), iron, and a combination of these, before and after parturition By excessive restriction of diet during the ante-natal period there was a real danger of causing an anaemia Particularly was this likely to happen in toxaemia of pregnancy, which was always treated by vigorous dietetic measures

CONCLUDING SESSION

With Professor James Hendry presiding at the final session on April 7th, Mr R G MALIPHANT read a paper on the histological classification of cancers of the uterine cervix and the relation between cellular structure and prognosis after radium treatment He had examined 236 cases of cancer of the uterine cervix treated with radium He adopted Martzloff's method of histological classification which was based on the microscopical appearance of the individual cell Ten of the 236 growths (4 2 per cent) were adenocarcinomata, and of the remaining 226 solid cancers 30 9 per cent belonged to the highly differentiated spinal-cell group and 13 3 per cent to the spindle-cell group, while there was a large intermediate group, comprising 55 8 per cent of the cases, in which the tumour was mainly composed of transitional cells The three-year survival rate had been studied in a group of 151 cases treated more than three years ago The differences in the three-year survival rates in the various structural groups were examined, but the differences shown were too small to be of much significance The spindle cell cancers, though apparently the most malignant type gave at least as good results with radium as those given by the more benign spinal-cell growths They were the most radio sensitive The conclusion reached was that microscopical examination was of no assistance in arriving at the ultimate prognosis

Dr E BULMER made a small communication on osteomalacia Dr DUGALD BAIRD described a method of studying the tone of the human ureter during pregnancy The patients were also examined by intravenous pyelography and dye methods In this way stasis could be determined In albuminuria of pregnancy there was good ureteric tone He had never seen a case of albuminuria of pregnancy and pyelitis coexisting in the same patient Mr A A DAVIS described the innervation of the uterus, his paper being illustrated by lantern slides of dissections

At the conclusion of this session Mr T G STEVENS recorded a vote of thanks to the University of Birmingham Professor DOUGAL thanked the Midland Obstetrical Society and the chairman, Professor HENDRY, congratulated Professor Beckwith Whitehouse on the success of the meeting

France

[FROM OUR CORRESPONDENT IN PARIS]

Conjugal Tuberculosis

The subject of conjugal tuberculosis was discussed on March 5th at a meeting in Paris of the Assemblée Française de Médecine Générale, a body which though only a year old, promises to become a powerful institution, rallying the general practitioners throughout France into a scientific organization for the advancement of medicine The subjects chosen for research and discussion a year or so in advance of a general meeting are first thrashed out by local branches, whose members pool their experiences, gained, in many instances, in country practices which have been handed down from father to son for several generations It might be thought that conjugal tuberculosis was a subject *par excellence* on which a gathering of general practitioners could throw much useful light But is it? Your correspondent has unearthed a reprint of a paper by William Bulloch and Major Greenwood read before the Royal Society of Medicine in May, 1911 An extract reads

> 'It may be pointed out however that in the period immediately following Koch's discovery great activity was manifested in civilized countries to settle the question of the contagiosity of phthisis Collective investigations, so called were instituted in America, Germany France Italy and England The results of the opinions of some 50 000 doctors who participated in this gigantic undertaking have been described by Cornet as 'mehr als bescheiden' "

It is perhaps idle to ask now if those who were responsible for the choice of conjugal tuberculosis for study and discussion would have selected it had the " mehr als bescheiden " harvest of earlier efforts at collective mass research been prominent in their minds Be this as it may, the discussion at the Hôtel-Dieu on March 9th was quite brisk and, now and again, illuminating It was reported that in one area conjugal tuberculosis affected barely 10 per cent of those exposed to it, in another this ratio was reduced to 2 per cent In one locality it had been noticed that there were many more widows than widowers surviving tuberculous partners in matrimony, while in another women were found to suffer more than men The meeting, which was attended by between 100 and 200 doctors, unanimously adopted a resolution which, while not dismissing conjugal tuberculosis as a figment of the imagination emphasized the much greater danger of infection in childhood

Cobra Venom as an Analgesic in Cancer

Early in 1929 Dr Monaelesser of New York had his attention drawn to the case of a Cuban leper whose pain, due to neuritis, was greatly relieved after he had been bitten by a tarantula This was the starting point of investigations which brought Dr Monaelesser to the Pasteur Institute in October, 1929 Here he secured the co-operation of Professor Calmette, whose earliest work on cobra venom dates back many years In October, 1930, Dr Monaelesser and a Parisian colleague Dr Taguet, approached Professor Gosset of the Salpêtrière with the request that he would co-operate with them in studying the influence of cobra venom on certain cases of cancer under his care On March 14th, 1933 Professor Gosset presented to the French Academy of Medicine a report by Dr Monaelesser and Dr Taguet on 115 cases including fifteen of cancer of the stomach and twenty-five of cancer of the breast They were consecutive and not selected in any sense There were severe cases which had been operated on with or without

recurrence of the disease There were also inoperable cases and those which had been unsuccessfully treated with x rays or radium Most of these patients were dead their cachexia having been extreme when the treatment was started but in almost all these cases the treatment had afforded some degree of relief Of the remainder there were several whose disease was stabilized and some in whom regression of the disease was demonstrable with complete cicatrization The authors of this report concluded

We consider that the treatment with cobra venom should be used in all the algias notably in those connected with benign or malignant tumour and that the course of the latter is beneficially influenced

In the discussion which followed Professor Calmette suggested that when cobra venom in a sublethal dose came into contact with a nerve cell a reaction occurred which led to the suppression of the sense of pain without the motor conductivity of the nerve being impaired He also referred to the possibility of this treatment being extended to obstinate cases of sciatica As Professor Gosset pointed out cobra venom may be able to replace injections of morphine when the action of the latter has ceased to be effective

Pharmaceutical Specialties in Public Hospitals

The searching audits and budgetary stringencies to which public hospitals are subjected are beginning to focus attention on a comparatively new and quite important source of expenditure—namely the pharmaceutical specialty protected by letters patent There are also the latest improvements of highly specialized instruments and other equipment In a recent report to the Commission Administrative des Hospices d Orleans Dr Georges Petit the vice president outlined a rather summary method for dealing with this problem Two things must he said be considered—the utility and the cost of pharmaceutical specialties In 1931 a government circular ordered insurance societies to refund up to 85 per cent of payments made for pharmaceutical specialties the sale of which was legalized by the State or to be more precise by the Laboratoire National de Contrôle des Medicaments Only twenty years ago French hospital pharmacopoeias were dominated by the *Codex* a guide to the composition preparation dosage and administration of drugs in current use The gradual invasion of the hospital by new specialties was brought about in the following way Their sponsors would approach the head of a hospital service with the request that he investigate clinically a new preparation supplied free of charge in large quantities He would be told its formula and that its composition was guaranteed When the stock of free samples ran out and the preparation had to be obtained at a price then a clash would come between the medical and the administrative authorities of the hospital Dr Petit classified these drugs as the useless the useful and the indispensable He would like to see every hospital board (commission administrative) appoint a committee of specialties whose three members would be (1) a representative of the hospital board (2) the head of a hospital service and (3) the head of the pharmaceutical department Whenever the head of a service or a manufacturer requested the introduction of a new specialty into the hospital this request made in writing and supported by arguments and evidence would be submitted to the committee whose opinion thereon would be communicated to the hospital board for action The committee would also have to publish annually a list of the preparations accepted by the hospital board on the recommendation of doctors Each hospital would have its own list and any attempt to edit one for the whole hospital world to endorse *en bloc* would in Dr Petit's view be a grave financial moral and medical error

Cancer Houses

The stigma cancer house must often inflict serious pecuniary losses on the owners of the house in question For this and other reasons it would be well if the case for or against the cancer house could be put on a more scientific footing than it is at present The subject has been much discussed recently in France The Assemblee Française de Medecine Generale devoted a whole session to it and came to the conclusion that though cancer houses may exist they are certainly rare In *Le Journal Médical Français* for March there are several papers on the subject by prominent members of the medical profession Professor G Roussy refers to two investigations carried out in Paris in 1910 and 1928 The latter showed that the distribution of cancer deaths throughout the city unlike the distribution of tuberculosis deaths was comparatively even If cancer were a contagious disease then the segregation of cancer patients in special centres such as that at Villejuif outside Paris ought assuredly to have yielded some illustrative cases But since Villejuif was opened in 1921 Professor Roussy has not observed a single case that could be interpreted as one of contagion and he is frankly sceptical as to the existence of any scientific evidence in support of the cancer house Dr Lumiere and Dr Vigne in their recent communication to the Academy of Medicine have shown that the cancer deaths in Lyons are distributed in the same apparently haphazard manner as are the births marriages and deaths from all causes These big statistical investigations are however stultified to a large extent by certain grave inherent sources of error In towns as distinct from the country there is a tendency to move from one house to another or from one flat to another and since the average duration of malignant disease is anything from three to ten years (Menetrier) one and the same cancer patient may have enjoyed the hospitality of several houses before attaching the stigma of the cancer house to the dwelling in which he or she ultimately died So it is left to the isolated country district with a relatively stable population to contribute more accurate information on this subject

England and Wales

The Home Ambulance Service

The fourteenth annual report of the Home Service Ambulance Committee of the Joint Council of the Order of St John of Jerusalem and the British Red Cross Society covers the year 1932 and embodies the information in the returns of the 319 stations of this service The work is steadily growing and each quarter shows an increase in the number of patients carried by each ambulance as compared with the corresponding quarter in the previous year Over 1 860 000 cases have been conveyed thus since the service was inaugurated and the number for the year was 117 153 It is estimated that during the thirteen years of its existence the number of in patients treated annually in voluntary hospitals has risen by 520 000 and of out patients by nearly two and a half millions figures which provide some explanation of the yearly expanding volume of work for which the ambulances are responsible A proposed further line of assistance to hospitals is the organization of a private motor car service for the transport of patients who are not strictly ambulance cases to and from hospitals and

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institutions for periodical treatment, to and from convalescent homes, and to the seaside Already, through the generosity of certain private owners, work of this nature has been undertaken in several districts, it is hoped that units of the Order and the Society will endeavour to enlist the help of more motorists, and extend the scheme until every district is thus served It is suggested in the report that first-aid units and ambulance stations should afford the necessary machinery for intercommunication between doctors or hospitals and the car owners Thus much useful work, supplementary to that carried on by the ambulances, can be accomplished in providing for the sick and injured, for convalescents, for children after minor operations, and for patients attending orthopaedic and rheumatic clinics Several new first-aid posts were equipped last year, and have proved very useful The number of persons injured on the roads in Great Britain increased in the twelve months by over 4,000, although the number of persons killed was forty less than the figure for the previous year Every day in England and Wales on an average sixteen persons are killed and 530 injured The mobile x-ray units have also intensified their activities, in the five years from 1925 to 1930 the number of radiographs made in proportion to the total number of cases treated increased by 33 per cent The apparatus employed is specially designed for the new tele-radiographic technique The report contains details of the regulation for the conduct of the ambulance service Copies may be obtained from the offices of the Joint Council, 12, Grosvenor Crescent, Hyde Park Corner, S W 1

Maternity Work in Manchester

A report for 1929 of the maternity work carried on in the institutions grouped together under the title of St Mary's Hospitals for Women and Children, Manchester, has been recently issued, it is the work of the registrar, Dr J W A Hunter During the year 3,346 maternity patients were treated by the hospital, 2,136 in the wards and 1,210 in their own homes Of the 1 221 booked ante-natal cases treated in the wards 1,104 were delivered at or near term, 111 were discharged undelivered, one patient died undelivered, and there were five cases of abortion Of the twenty-two emergency cases from the hospital district fourteen were admitted on account of delayed and obstructed labour, five because of ante-partum haemorrhage, two for diseases complicating pregnancy and one for post partum haemorrhage Of 893 emergency cases 447 were delivered at or near full term, forty were admitted after delivery, 158 were discharged undelivered, eleven died undelivered, eighteen were cases of ectopic pregnancy, 212 were cases of abortion, and seven cases of tumour were operated upon during pregnancy There were forty-five deaths following delivery in the wards during the year, of these, seven were in booked ante-natal cases and thirty-eight in emergency cases This represents a mortality of 2 21 per cent of the 2 136 total in-patients The mortality among the total booked ante-natal cases (seven deaths) was 0 57 per cent, and of the total deliveries at term 0 63 per cent There were no deaths among the district cases The mortality rate in emergency cases was 4 25 per cent of the total The report contains clinical details of these maternal deaths There were 232 cases of maternal morbidity (B M A standard), including cases admitted after delivery and of abortion, giving a maternal morbidity rate of 12 6 per cent Of these 232 cases 125 were in ante natal cases and 107 in cases admitted as emergencies This indicates a percentage morbidity of 11 26 in ante-natal cases and 15 07 in emergency cases These morbidity cases are classified according to their type, and statistical details are recorded of the incidence and treatment of posterior positions of the vertex, twin pregnancy, breech presentations, prolapse of the cord, and other abnormalities During the year 329 cases of contracted pelvis were treated in the hospital In the 272 which were dealt with before labour there was one maternal death, in the fifty-seven emergency cases there was one maternal death Twenty cases of tubal pregnancy were treated by abdominal section, all the patients recovered

London Council Hospital Out patient Charges

Under the general rules for the management of London Council hospitals out-patient examination and treatment may be given in the following cases casualties, accidents, and other emergencies, continuation or after care treatment of former in-patients, consultation concerning patients referred by medical officers of the London County Council, ante-natal and post natal examination and treatment, patients entitled to outdoor relief, and cases or classes of cases where special examination or treatment is authorized by the medical officer of health At present out-patients are assessed and charged on minimum scales laid down by the old boards of guardians, and there is much lack of uniformity The average cost per attendance at hospitals which have large and active out-patient departments has been found to be about 1s 6d, and it is proposed that, except for x ray examinations, this shall be the uniform charge for attendance It is proposed that no charge shall be made in the following cases examination after former in patient treatment, ante-natal and post-natal attendance, and any first attendance (except for x-ray examination), after which a large proportion of out-patients are referred elsewhere The 1s 6d charged in other cases for each attendance will cover medical and surgical consultations and treatment, including massage and electrical treatment, also dental attendances, providing that treatment is actually given, and excluding attendances for the provision and fitting of dentures With regard to x ray examinations, 7s 6d is to be charged for screening and the same for the first film exposed, and 2s 6d for each additional film taken at the same sitting For a barium swallow with screening or a barium swallow with first film exposed, 10s 6d is to be charged and for a barium meal or enema and complete examination, 30s If a film is taken away an additional 2s 6d will be levied With regard to surgical appliances, for such as are used by the patient while undergoing treatment no additional charge is to be made, but the permanent retention of such appliances after treatment is held to justify an assessment being made up to the cost of the apparatus

Mental Deficiency in London

During 1931 the London County Council received information of 2,053 cases of mental deficiency, as compared with 1,796 in the previous year Of the 1 879 which were dealt with by institutional care, guardianship, or supervision, 58 per cent were of high grade, trainable, and tractable, and 19 per cent of middle grade and tractable Low grade (idiots) was represented by less than 1 5 per cent Those described as "troublesome" in high or middle grade numbered only twenty-three, while 144 were epileptic, and sixty-three were blind or deaf or dumb, or both deaf and dumb The total number of defectives so far ascertained as subject to be dealt with under the Act, or as those who might become subject stood at the end of 1931 at 14,085, a ratio of 3 23 per 1,000 of the population of the county Of this number, 9,106 were either in institutions provided by the Council or elsewhere under statutory supervision, or awaiting presentation of a petition for an order

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Society for Relief of Widows and Orphans of Medical Men

A quarterly court of the directors of the Society for Relief of Widows and Orphans of Medical Men was held on April 12th with Mr V Warren Low president in the chair The expenses of the quarter amounted to £9 18s and the sum of £145 was voted as special grants to enable orphans to continue their education A striking example of the advantages of membership of the society was reported by the secretary A medical man joined the society in 1864 he died in 1866 having paid £6 6s in subscriptions His widow and two children came on the funds The widow and her two children received in grants £2 900 The widow died in 1909 One of the children who was an invalid came on the Copeland Fund a special fund for such cases she died in January 1933 and had received in grants £2 550 Thus the late member's family had received in grants a total of £5 450 The redrafted by laws were carefully considered by the directors and with very slight alterations were passed They will be submitted to the members at a special general meeting to be held on May 12th and if approved will be confirmed at the annual general meeting on May 24th Full particulars of the society may be obtained from the secretary at its offices 11 Chandos Street Cavendish Square W 1

CORRESPONDENCE

Dry Bronchiectasis

SIR —The article on dry bronchiectasis by Drs Hall and Hoyle in the *Journal* of April 8th exemplifies in a striking fashion the great variations in the manifestations of this disease a point which must be thoroughly appreciated or the condition will often be missed This feature of bronchiectasis was pointed out in 1925 by Armand Delille who showed that broadly there were four types of case (*a*) that with both signs and symptoms (*b*) that with signs but no symptoms (*c*) that with symptoms but no signs and (*d*) that with neither signs nor symptoms One could of course subdivide each of these larger groups according to the presence or absence of one of the classical symptoms or signs but such a further classification would seem to have little if any value either from the point of view of aetiology or of pathology

In the article referred to a group of cases of bronchiectasis with a special nomenclature is brought together because of the absence of sputum and apparently—also on this account—a new pathogenesis is suggested In passing it may be remarked that the list of cases without sputum quoted from the literature could have been enlarged by the inclusion of examples recorded in some of the articles referred to in the bibliography In the first place I would point out that in two of the twenty cases recorded by the authors bronchiectasis was never definitely demonstrated In the second place of the eighteen remaining cases sputum was present in ten so that only eight can be legitimately described as dry It may be contended that the sputum was not abundant but anyone who has had much experience of the condition must appreciate that the amount of sputum is a most variable factor This certainly is true of the cases occurring during the earlier years of life For example in the presence of undoubted bronchiectasis with extensive fibrosis sputum may not be demonstrable for as long as eighteen months after its inception and after having been present for many years it may along with the cough entirely disappear Indeed it was this latter occurrence which caused certain authors in pre-lipiodol days to conclude that the condition might not infrequently be recovered from Undoubtedly recovery from bronchiectasis may occasionally occur but it is in the early and mild degree of the lesion as in Case 12 in the list of Drs Hall and Hoyle that this happens As a rule the bronchiectatic condition steadily becomes more extensive even although the symptoms may diminish or entirely disappear

An analysis of the clinical records of the eighteen undoubted cases of so-called dry bronchiectasis recorded by Drs Hall and Hoyle reveals the usual premonitory history the usual localization of the mischief at the base of the lung and particularly the left base and the usual physical signs

In eleven cases the period of ill health dated from pneumonia complicating measles or whooping-cough in one case there was a pre-existing pleurisy (another generally recognized aetiological factor) and in four cases there had been measles or whooping-cough and although a complicating pneumonia is not mentioned it is always possible that such had been present In ten cases the mischief was limited to the left lower lobe in four to the right lower lobe and in four cases both lower lobes were involved On physical examination dullness to percussion was present in sixteen of the eighteen patients and although the radiograph did not show either a shadow or displacement of the mediastinum it most probably indicated fibrosis

It thus seems unnecessary to incriminate any other aetiological factor than pulmonary fibrosis Certainly the pathogenesis suggested by Drs Hall and Hoyle is difficult to understand Surely the extra volume of the lung ensuing from dilatation of the bronchi would be infinitesimal and the capacity of the thorax could be more readily filled by emphysema developing in the neighbouring unaffected pulmonary tissue —I am etc

London W 1 April 10th LEONARD FINDLAY

'Disordered Traffic in the Gut"

SIR —In your issue of March 4th you published an article by Dr F C Eve entitled Disordered Regulation of Traffic in the Gut This is a very interesting and successful attempt to make the subject clear to the average physician but I believe Dr Eve is in error as to the mechanism of the disturbance at some of the robots

In particular the high-pressure chamber in the pyloric portion of the stomach has not been seen even during pain by several experienced radiologists whom I have consulted In the case of duodenal ulcer the situation is even clearer As I pointed out in 1928 (*Arch Int Med* xli 633) many patients with duodenal ulcer have no peristalsis *during pain* and the pyloric sphincter is not firmly contracted Subsequent observations have confirmed these findings The most logical interpretation of this work is that the pain is due to sustained contraction or spasm of muscle fibres of the duodenum and not to so-called achalasia of the pyloric sphincter —I am etc

Toronto March 29th MALCOLM WILSON M A M D F R C P Can

Fractures of the Shaft of the Femur

SIR —I have read with interest the correspondence on the above subject I agree entirely with all that Mr Wardle has said I have never seen fractures of the shaft of the femur treated in plaster but have always considered it a difficult and unreliable method Mr Wardle has evidently seen some and his experience supports my belief

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Mr Monro's letter has much that is instructive His suspension of the Thomas splint from a Balkan beam was, of course, used with success during the war, and I would have no hesitation in using it if I thought it necessary I do not agree with him that it requires a very well trained nurse, to whose care tightening of extensions could safely be left, my own experience has been that most people can master the art of pulling extensions in a couple of days When in doubt a windlass can be used, but I have rarely had occasion to resort to this

In my article I purposely emphasized the care necessary when using a Thomas bed knee-splint, taking as my example the most troublesome of the cases in the series, so that, if by chance anyone wished to use the method, he would be in a position, as Mr Wardle puts it, "to demonstrate his own capability of carrying out the treatment he expects the nursing staff to undertake" Many far abler articles have been written on the Thomas bed knee-splint, but all have tended to ignore any nursing difficulties which may arise in the course of its use, and it was for this reason that I laid stress on the maximum amount of attention necessary This emphasis has produced a little arithmetic from Mr Monro and some dogmatism from Mr Roth I wonder from where the latter obtained his impression that there were no compound fractures in my list of cases Certainly not from my article, in which I made no mention as to whether the fracture was simple or compound, for I do not consider the presence of a compound injury adds greatly to the difficulty of treating a fracture of the femur on a Thomas splint

Mr Roth also points out that 86 per cent of my series were under the age of 14 years, but surely Mr Roth, with the profound knowledge of the use of the Thomas splint which he indicates in his letter, realizes that it is as easy to treat an adult on this splint as it is a child To satisfy him on this point, however, I have added at the end of this paragraph the results of a further twenty cases picked at random, but all over the required age of 14 years I wonder whether these results "simply will not bear comparison" with his own"

Nellie H	15 years	Full length
Mollie C	18	1/4 inch lengthening
James P	23	1/4 inch lengthening
Chris B	24	1 2 inch lengthening
Maggie C	27	1'4 inch lengthening
John McA	28	3/4 inch lengthening
Percy S	34	Full length
John G	35	3/4 inch lengthening
George G	36	1/4 inch shortening
Mary F	37	Full length
John C	41	1/2 inch lengthening
Harry C	42	Full length
Seth L	43	Full length
John G	45	Full length
Sarah S	45	Elongation of femur 1 inch obtained
Edward B	50	1/2 inch lengthening
Alice P	56	Full length
Richard D	59	Full length
Mary L	71	1/2 inch shortening
John T	72	1/2 inch lengthening

Mr Roth is quite right in assuming I have never seen wire extension applied as he describes it, and yet it seems so simple to put a wire through the lower end of the femur and then dismiss the patient from notice, leaving him to his own resources Has Mr Roth never seen a lateral bowing at the site of fracture, or has he never been troubled with infection in the region of the implanted wire? I hardly think that he would answer both these questions in the negative

It is disappointing to note that in spite of Mr Roth's twenty-odd years' experience with a Thomas splint he still thinks it is necessary to turn a patient over to get at the points of pressure Are his patients turned over to have the ordinary nursing attention to the back, usual when a patient is lying in bed, or is even this attention not necessary when wire extension is used? It was just such misapprehensions as these that made me venture to add to the literature already written on the Thomas bed knee-splint —I am, etc,

Liverpool April 9th W J EASTWOOD

Consultants and Specialists, L C C

SIR —In your issue of April 8th (pages 129 and 130 of the *Supplement*) there appear certain comments by the Medical Secretary, Dr Anderson, which may give an entirely wrong impression of the attitude of the Central Public Health Committee of the London County Council on important matters—for example

1 It is not correct to say that the London County Council "prepared and approved its plan for a new consultant service without affording the consultants an opportunity for discussing or commenting on its plan On January 20th Dr Anderson telephoned the Medical Officer asking for an interview on the subject of the scheme for a consultant service, which he understood was shortly to be submitted to the Central Public Health Committee The Medical Officer of Health responded by asking Dr Anderson to come and see him that day On February 9th Dr Anderson, by telephone, asked the Medical Officer of Health to see representatives of "a Consultants' Committee" with reference to the scheme A memorandum was forwarded to the Medical Officer of Health by the "Consultants' Committee," and a conference between the Medical Officer of Health and the "Consultants Committee" was held on February 13th The position, therefore, is that the "Consultants' Committee" asked for an interview with the Medical Officer of Health, and the interview took place The Central Public Health Committee of the London County Council was never at any time asked by the "Consultants' Committee," or by anyone else, to receive a deputation for this purpose until some time after the scheme had been passed by the Council, although the "Consultants' Committee" knew perfectly well on February 13th, and indeed some time before that date, that the Central Public Health Committee was about to receive a report thereon from the Council's Medical Officer of Health I would add that, when the British Medical Association knew that the Medical Officer of Health was about to present a report on district medical work to the Central Public Health Committee, it asked the Central Public Health Committee to receive a deputation on the subject The deputation was heard on January 26th Had the "Consultants' Committee" similarly asked the Central Public Health Committee for an interview prior to the passing of the scheme for a consultant service it would have been granted

2 It does not appear to be appreciated by the "Consultants' Committee" that the Council's Medical Officer of Health could not disclose the details of his proposals to the "Consultants' Committee," or anyone else, until they had been submitted to the Central Public Health Committee for its consideration

3 On page 130 the following paragraph appears with the comment "No action"

"It is hoped that the Council will adapt its machinery of selection and appointment so as to secure that the merits

of applicants for consultant posts are judged by men whose professional standing and contact with clinical medicine enable them fairly to estimate their professional worth

As I have already stated in answer to questions in the Council chamber when the Medical Officer of Health submitted his scheme to the Central Public Health Committee his report contained the following paragraph

I think it would be advisable for the Committee to authorize me to submit a list of applicants to the Presidents of the Royal Colleges of Physicians and Surgeons so that I may have the advantage of their advice before submitting my recommendations to the Staff Subcommittee for their approval

The Central Public Health Committee however decided that the Medical Officer should not be restricted to consultation with the Presidents of the Royal Colleges of Physicians and Surgeons but should be authorized to confer with any person whom he thought was likely to be able to afford him the assistance he desired in connexion with his recommendations for the appointment of consultants and specialists which it was his duty to submit to the committee in due course I think it might be desirable to add that in fact this has been the recognized practice of the Council's Medical Officer of Health during the last three years in connexion with any appointments of an important character in the Council's Hospital Service A recent example is in connexion with the appointment of a group pathologist at Mile End Hospital when the Medical Officer of Health obtained the advice and assistance of several distinguished pathologists both in and out of London —I am etc

F BARRIE LAMBERT
Chairman of the Central Public Health Committee of the London County Council

The County Hall S E 1 April 10th

* The letter from Dr Barrie Lambert (received too late for insertion last week) is now perhaps of less importance than at the time it was written since it may be hoped that the conciliatory letter sent by the Council of the British Medical Association will lead to a friendly discussion of the points raised It is easy to see how misunderstandings may have arisen The interview of the Chief Medical Officer of the County Council with a deputation of consultants on February 13th seems to have been regarded by the Public Health Committee of the L C C as a sufficient consultation about the Council's new scheme whereas it was regarded by the deputation as the submission by them of a few points on which they were concerned without any detailed knowledge of that scheme Dr Barrie Lambert indeed says that the Medical Officer could not disclose the details of his proposals until they had been submitted to the Central Public Health Committee but it is evident that that committee might have given permission for such disclosure and discussion before it actually adopted the proposals This seems to have been what those who represented the consultants expected when they stated in their memorandum that they would welcome an opportunity of examining the proposals for reorganization and of making considered comments thereon before the final plan is settled and they were encouraged in their expectation by the fact that a similar method of pre-consultation has for years been adopted by the Ministry of Health and other Government Departments when changes affecting the relation of the medical profession to public health services have been under consideration and by the fact that the Ministry has urged the desirability of such consultation upon local authorities Perhaps the sentence quoted from their memorandum never reached the Public Health Committee or possibly the statement that they would welcome an opportunity was not taken to be equivalent to a request that such an opportunity should be afforded At any rate they were disappointed that they did not in fact obtain any detailed knowledge of the Council's scheme until it had actually been finally adopted Further though it is now clear that the Medical Officer was authorized and perhaps expected to take advice from others before making his recommendations for particular appointments there may well be a difference of opinion on the relative advantage of taking such advice from a few eminent persons chosen haphazard or from a suitably chosen body of persons who would be considered as representative Lastly with regard to the deputation on district medical work which was so courteously received by the Central Public Health Committee it should be appreciated that this was only on the subject of the general method by which domiciliary medical attendance on the poor could most advantageously be given and that the district medical officers in the service of the L C C like the consultants were faced with accomplished facts without being allowed any adequate opportunity of collective representation in regard to the terms and conditions on which they were to serve The situation which has arisen through these misunderstandings is capable of adjustment and the Council of the British Medical Association has made a sincere offer of help in this direction It is greatly to be hoped that this spirit will be reciprocated

Diagnosis of Tuberculous Meningitis

SIR —I have read with interest Dr James Cook's report on tuberculous meningitis resembling cerebro-spinal fever While agreeing that these cases are of great interest I regret that I can see no evidence whatever for regarding them as tuberculous There is stated to be a complete lack of family history of tuberculosis and no source of infection could be elicited Yet the one obvious source of infection that was present is completely disregarded and that was the mother's influenzal attack one week previously It is not definitely stated what this attack really was it may have been genuine influenza or conceivably a *forme fruste* of encephalitis epidemica Bearing this in mind it is quite easy to see why no tubercle bacilli were found The pathological report on the cerebro-spinal fluids is stated to be the only evidence in favour of the diagnosis of tuberculous meningitis but such a report as this is valueless What does a trace of albumin mean? Normal cerebro spinal fluid contains a trace of albumin (10 to 30 mg per 100 c cm) Again what time interval was allowed to elapse between the collection of the cerebro spinal fluids and testing them for sugar? In other words in such a report is there evidence by which we may exclude spontaneous glycolysis? How many cells per cubic millimetre does numerous represent and what media were employed for cultural investigations?

On clinical grounds alone it is almost an incredibly rare occurrence to have two cases of tuberculous meningitis occurring almost simultaneously in any one family and in which death is the outcome in such a short time as described in the note but an influenzal or epidemic encephalitic infection would readily account for such a picture I submit on the evidence adduced in the article that there is no justification for diagnosing tuberculosis in any form and a strong presumptive case can be made for a diagnosis of (*a*) influenzal polio-encephalitis or (*b*) genuine epidemic encephalitis

I am convinced it is grossly misleading to record such cases as tuberculous meningitis without (*a*) accurate and complete investigation of the cerebro-spinal fluid and/or (*b*) a complete post mortem examination with demonstration of characteristic tuberculous lesions by a competent pathologist —I am etc

DAVID H HALER

The Infants Hospital Vincent Square April 10th.

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NATIVE SHAMAN OF THE YENESEI BASIN WITH HIS MATERIA MEDICA.—The shaman heals in virtue of his power to summon the spirits and to wrestle with them, he claims to be able also to visit their abode to negotiate with them The drum and drum-stick with which he summons the spirits are the most essential items of the shaman's pharmacopœia He uses the drum stick to rub over the affected part In addition, his coat is hung with mystic figures, with rings, rattle, pieces of iron and indeed with many things that jingle and clatter His costume and stockings are often embroidered with symbolic designs.

Date Present day

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X Rays in the Treatment of Asthma

SIR,—I am interested in Dr Gilbert Scott's letter in your issue of April 8th (p 629), on x rays in the treatment of asthma The particular point of interest to me is why Dr Scott so carefully excludes the thorax from direct influence of the x rays, not only by limiting his field of radiation to the abdomen, but also by his careful protection of the thorax by means of lead rubber Dr Scott does not say so, but I suppose the irradiation to the back is confined to the lumbar region

It is well known that the effect of x rays sometimes acts beneficially reflexly I once treated a case of rodent ulcer at the outer canthus of the eye the patient had exophthalmic goitre, which became cured, although the rays were applied solely to the region of the eye This was, of course, an unexpected result, but Dr Scott appears to have had some special reason for excluding the thorax The first patient with asthma who received benefit by x rays at my hands was under treatment after removal of the left breast , she suffered from asthma, but during the course of x-ray treatment the asthma left her She died two years later from secondary cancer of the lung I have since treated asthma with x rays in a routine manner by direct irradiation to the thorax, with very gratifying results —I am, etc ,

London, W 1, April 7th CHRISTOPHER KEMPSTER

Modified Bendien Reaction

SIR —I have read with great interest Dr Cronin Lowe's account of his modification of the Bendien reaction Dr Cronin Lowe expresses his findings in the test as a fraction, of which the numerator is C – A (that is, the difference between the degree of precipitation of the other treated serum " C " and the untreated serum " A ") The denominator of the fraction is A – B (that is, the difference in the degree of precipitation between the untreated serum " A " and the heated serum " B ")

Dr Cronin Lowe finds that in malignant disease this fraction $\frac{C-A}{A-B}$ is greater than unity, whereas in the case of normal and pathological serums other than malignant ones this fraction is less than unity It is obvious that any factor which would increase the difference between " C " and " A " would tend to keep the fraction high by raising the value of the numerator, and vice versa In trying to explain the variations in the precipitation of the C ' reaction, Dr Cronin Lowe suggests that this may depend in part upon the lipoid content of malignant serums being higher than normal (Benso, 1930) these observations, however, have not been confirmed , and he proceeds to consider other theories

As a matter of fact it has long been known that one of the lipoid substances of the blood, indeed the most important lipoid—namely, cholesterol—is present in unduly high amounts in the blood in cases of malignant disease (Luden [1] 1916) Further, Luden believes that a high cholesterol content of the blood is an important factor in the aetiology of malignant disease According to Robertson and Burnett[2] (1913), cholesterol promotes cell multiplication, for these workers have found that injections of cholesterol cause an increase in the rapidity of growth of tumour transplantations in rats Moreover, Dr Cronin Lowe has obtained a malignant type of reaction in cases of pregnancy, and it is well known that the cholesterol content of the blood is high in pregnancy (Chauffard, Laroche, and Grigaut[3] (1911), Shiskin[4] (1922), and others) In addition Dr Cronin Lowe finds that in malignant disease associated with marked secondary infection the blood serum does not give a malignant type of reaction Here again the cholesterol content of the blood in these cases might be the explanation Chauffard and many others (Landau,[5] Barbary,[6] Small,[7] and MacAdam and Shiskin[8]) have demonstrated that serious infections are always accompanied by a marked hypocholesterolæmia The effect of this would be to lower the value of the numerator (C – A) and thus give a fraction below unity —that is, a non-malignant type of reaction

The view expressed above—namely, that the variations in the precipitation of the " C " reaction depend, in part at least, upon the cholesterol content of the blood—appears not only plausible, but also offers an explanation for Dr Cronin Lowe's findings in pregnancy and the " non correspondence " of the test in cases of malignancy associated with gross sepsis —I am, etc

London, L 17 April 7th CECILIA SHISKIN

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2 Robertson and Burnett *Journ Exper Med* 1913 xvii 44
3 Chauffard, Laroche and Grigaut *Obstétrique* 1911 iv 481
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Symptoms of Acute Neurasthenia

SIR —During the last few days several doctors, in the course of conversation, have expressed to me their surprise, even mystification, at the statements made at the Moscow " trial " by Mr Macdonald and, to a lesser degree, at those of Mr Thornton It seems to me a fortunate circumstance that in this very week's *Journal* you should have published an article by Dr A F Tredgold, one portion of which, headed " Acute Neurasthenia," on page 618, so excellently describes the condition from which these men must have been suffering, and details so appositely the symptoms and consequences which characterize that condition —I am, etc ,

London, N W 11, April 15th HENRY B BRACKENBURY

Science and Philosophy

SIR,—Admiral Beadnell and Dr Haddow, in your issue of April 1st, have both agreed that my letter was logical, which is very comforting to know in the present not very logical age They are both apparently mechanists, which means, presumably, that they merely think it probable that the forces actuating living matter are identical with those responsible for the activities exhibited by inanimate things They can hardly *believe* that this is so , because to believe one must have facts and not theories to rely on And yet how often are theories taken as a basis for the formulation of fresh theories! It is curious how theories, through frequent repetition, have a habit of becoming magnified into doctrines Very often the trouble begins through the misuse of a word or phrase Take the word " evolution," for example At present it seems to mean anything from growth or development, which is its true meaning, to the god of the Monist—from a mere description of a natural phenomenon to a deity with creative and directive powers The mechanistic view of life was such a theory , in the past it grimed in size and apparent importance after the fashion of a snowball , but the snow is beginning to melt—in fact, has melted considerably Every physiologist engaged on research, when he comes down to the activities of living cells, is bound to admit, in Gray's words (*Physiology of the Cell*), that " no single activity of the living cell has yet been analysed in physical terms " It is, of course, true that some physiological phenomena, generally of the grosser type, such as the energy exchanges, are apparently in conformity with physical and chemical laws , but the deeper we inquire into the cause of these phenomena the more forcibly are we struck with the truth of the above

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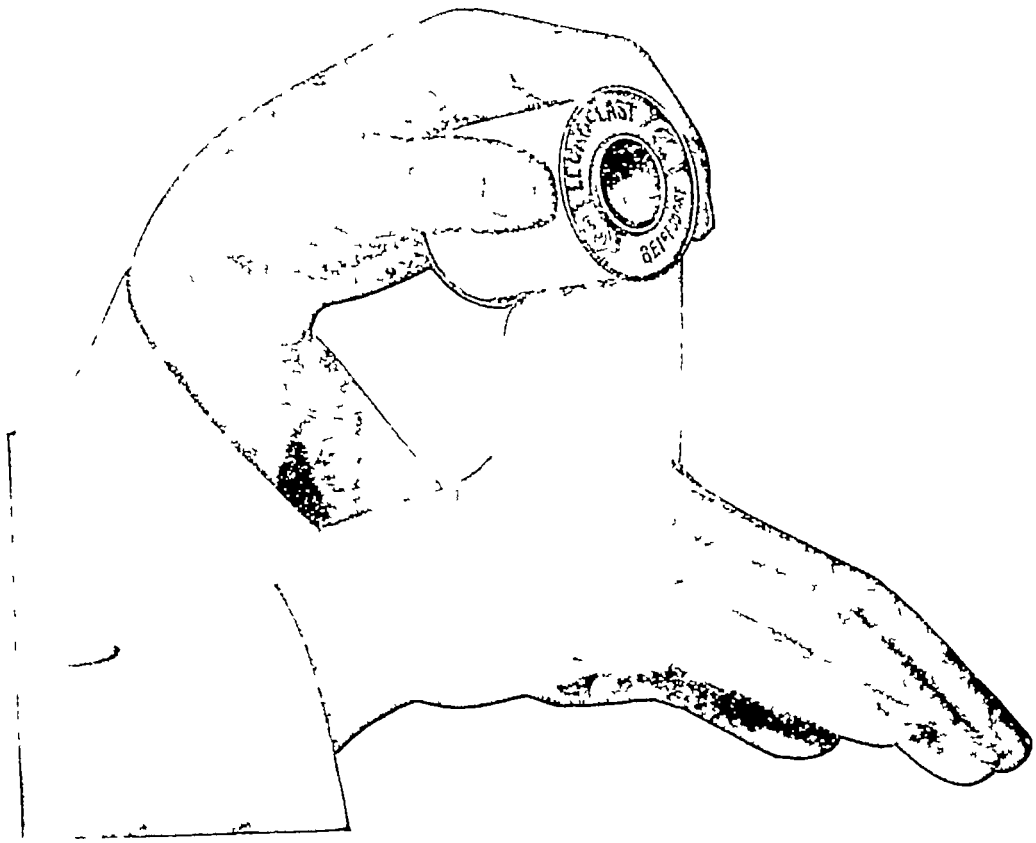

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An Address
ON
INDICATIONS FOR SURGICAL TREATMENT IN PEPTIC ULCER*

BY
D P D WILKIE CHM FRCS
PROFESSOR OF SURGERY UNIVERSITY OF EDINBURGH

(With Special Plate)

There is perhaps no subject on which opinion is so divided as that of the surgical treatment of gastric and duodenal ulcer On the one hand we find the enthusiasts for medical treatment who consider perforation to be the only indication for surgery who record the cure of large penetrating ulcers by strict medical measures and who point to the derelicts of surgery who consult them On the other we find the advocates of surgical measures who cite the many cases of perforation which have occurred during the course of medical treatment the precarious health of the person relieved but not cured by medicine and the inability of the majority of the population to fulfil the requirements of an adequate medical regime Among surgeons there is a wide divergence of opinion as to, whether extensive resections or more conservative measures should be the rule in the operative treatment of ulcer

My object in this address is to review the data on which treatment is based and to endeavour to define the indications for surgical help in such treatment and the lines which surgical aid should take The idea that physicians and surgeons should be ranged in opposing camps in regard to the treatment of peptic ulcer is contrary to the whole spirit of modern medicine and to the best interests of the patients

Increase in Ulcer Cases —All are agreed as to the frequency of peptic ulcer and the ill health disability and misery to which it gives rise It would appear to be on the increase and to have changed in type and incidence Even when we allow for the greater knowledge and capacity for recognition of the condition and for the consequent change in outlook of the medical profession statistics would seem to indicate that the incidence of peptic ulcer has increased during the past twenty years Table I gives the figures for the Royal Infirmary Edinburgh for the two-year periods October 1910-12 and 1930-2

TABLE I

	No. of Cases 1910-12	No. of Cases 1930-2
Medical Wards		
Gastric ulcer	191	247
Duodenal ulcer	41	382
Surgical Wards		
Gastric ulcer	111	77
Perforated gastric ulcer	44	38
Simple pyloric stenosis	84	301
Duodenal ulcer	58	
Perforated duodenal ulcer	47	300
Total	576	1,345

It is seen that the cases diagnosed as ulcer have multiplied nearly two and a half times the increase being almost entirely in cases of duodenal ulcer While this is undoubtedly due in part to improved diagnosis based largely on radiology the increase in the number of perforated ulcers—338 as against ninety-one—cannot thus be accounted for With the reputed improvement in medical treatment with the much greater number of cases treated surgically and with the establishment of many well-equipped provincial hospitals dealing with emergency cases which formerly would have come to Edinburgh the natural expectation would be that the number of cases of perforated ulcer would decrease Since they have multiplied nearly fourfold we may reasonably infer that peptic ulcer is on the increase

Incidence —Twenty years ago gastric ulcer was regarded as a common disease of the anaemic female and duodenal ulcer a relatively rare disease of the male To-day we know that both gastric and duodenal ulcer are more frequent in the male that duodenal ulcer is more frequent than gastric ulcer in both sexes and that coincident duodenal and gastric ulcers are by no means uncommon As the last two points have been disputed I will give briefly my own experience

Duodenal Ulcer in the Female —It is still maintained by many that gastric ulcer is common and duodenal ulcer rare in the female I have found that duodenal ulcer is more than twice as common as gastric ulcer in the female Table II gives the figures of all cases of ulcer on which I have operated in both hospital and private practice during the past twelve years

TABLE II

Duodenal Ulcer Alone		Gastric Ulcer Alone		Coincident Gastric and Duodenal Ulcer	
Male	Female	Male	Female	Male	Female
438	176	37	43	55	26

In this series of cases duodenal ulcer was two and three quarter times as common as gastric ulcer in the female That this was not a local incidence peculiar to the South East of Scotland is proved by an analysis of the figures In my hospital cases over 90 per cent of which were drawn from the South East of Scotland the figures for peptic ulcer in the female were duodenal ulcer 105 gastric ulcer fifty-one a ratio of two to one In cases in private practice of which less than 50 per cent came from this area the figures were duodenal ulcer ninety seven gastric ulcer twenty three a ratio of over four to one My belief is that duodenal ulcer is a malady very frequently overlooked in the female the symptoms often being attributed to gall bladder disease

Cholecysto-duodenal Syndrome —Some years ago I described under this term a symptom-complex which is found almost exclusively in female patients in which the history given by the patient appears to point to gall bladder disease but accurate investigation or operation reveals a chronic duodenal ulcer The patient is usually a stout housewife whose chief complaints are of flatulence and attacks of epigastric pain She states that the pain has no constant relation to the taking of food and she has not noticed the periodicity so characteristic of duodenal ulcer She has excluded potatoes and fried foods from her dietary because of the flatulence and discomfort which they induce She describes attacks of acute pain lasting for a few hours suggestive of biliary colic These attacks however have not the intensity of true biliary colic Not infrequently she gives a history of faint and transient jaundice (duodenitis) Only with the greatest difficulty and after repeated cross-questioning

* An address (abridged) delivered to the Aberdeen Branch of the British Medical Association on March 10th 1933

quotation The words of Lovatt Evans are here also appropriate The pretty conceits of a century ago appear as absurd to us as our fancied omniscience will seem to our successors a century hence

It should also be noted that the great bulk of explanations of life come from those least qualified to speak on the subject Thus we have explanations from chemists morphologists geologists and others but how very few from the man whose business it is to study the functions of living animals The physiologist knows only too well that the phenomena of life cannot fundamentally speaking be described in terms of the physical sciences much less explained The scientist does not *explain* things he describes them he observes Nature's activities classifies them finds how they interact and dissociates cause from effect but he does not explain phenomena A colleague of mine has said that the man who can explain the growth of a blade of grass can explain the universe He would indeed be a rash prophet to predict that this will ever be done by man's ingenuity alone —I am etc

Aberdeen April 5th H E MAGEE

Doctors and Unemployment

SIR —I am gratified to note the growing interest of doctors in the major economic problems of to-day It is high time that the medical profession realized that as one of the principal groups in the class of the intelligentsia it has the capacity to study the solutions of these problems and a fair amount of power to help to resolve these solutions For too long has the catch phrase leave politics to the politicians held sway with disastrous results It is imperative that the intelligentsia step in and seek a solution the muddle headed politicians have had their way long enough

We must realize that these problems have also a profound bearing on medicine as well as on our economic lives Let us take tuberculosis as an example In spite of endless research in sanatorium pneumothorax and gold treatment it will always remain the scourge of mankind whilst there are slums unemployment and hunger First we must realize in the presence of the swiftly changing events of to-day that the economic system in which we live is crumbling and collapsing before our eyes its very foundations dissolving beneath our feet We must act now and not as armchair critics We must ally ourselves with the forces of progress rather than fall unwittingly into a barbaric faction and be submerged in the ruins —I am etc

London E 2 April 8th S LEFF M B B S

The Services

DEATHS IN THE SERVICES

Lieutenant-Colonel James Walker Jones D S O Indian Medical Service died recently of pneumonia at Rangoon aged 45 He was born on December 22nd 1887 the son of Professor Sir Henry Jones of Glasgow University and was educated at the Glasgow High School and University where he graduated M B and Ch B in 1910 Entering the I M S as lieutenant on January 27th 1912 he became lieutenant-colonel after twenty years service He served in the war of 1914–18 on the North West Frontier of India in the Mohmand and Swat campaigns in 1915–16 and in Iraq in 1916–18 and was mentioned in dispatches in the *London Gazette* of September 22nd and October 19th 1916 He received the D S O on September 22nd 1916 For conspicuous gallantry and presence of mind in closing with a soldier who had lost his reason and was moving along a trench prior to an attack with a bomb in each hand Realizing the situation Captain Jones closed with him and wrenched one bomb from his hand It immediately started to burn Captain Jones threw it some yards away and it burst on touching the ground Two officers were injured by the explosion and several others might have been injured but for this prompt and courageous action He held the appointment of physician to the Rangoon General Hospital

Medico-Legal

LIBEL AND SLANDER IN MEDICAL PRACTICE

II —THE DOCTOR AS INJURED PARTY*

Before and during the war doctors were troubled as often by libels and slanders as they were by accusations of malpraxis Nowadays actions in which a doctor has to defend his reputation by attacking a defamer are almost rare This happy improvement is undoubtedly due to the efforts of the large protection societies A recent annual report issued by one of these bodies shows that in 1914 its solicitors dealt with no fewer than fifty two cases in which doctors complained of attacks on their reputation by way of libel and slander as against forty cases in which doctors were charged with malpraxis In 1930 this body consulted its solicitors on complaints of defamation only seven times and in 1931 it did not consult them once

A doctor especially a general practitioner is inevitably bothered with a good deal of gossip and tittle tattle in the place where he works and a sensible man disregards most of it entirely Some patients are never satisfied and let their criticism play freely over a doctor's personal and professional characteristics Professional rivalry is unfortunately apt to express itself in a way that comes very near to the borderline of actionable slander Institutional life though it has its attractions is not seldom associated with a continuous interplay of derogatory gossip and criticism Generally speaking the more fuss a doctor makes about this kind of thing the more colour he gives to the idea that there is some truth in it Now and again however a doctor manages to make a real enemy who concentrates his energy on doing as much damage as he can It is then a great mistake to remain idle for a moment and the doctor should at once invoke the help of his protection society One of the chief benefits of membership of a society of this kind is that a medical man can at any time obtain expert and confidential advice on whether a libel or a slander should be dealt with or ignored and on the way to deal with it out of court If the offender is another medical man especially if he is a member of the same society the matter can often be settled with comparative ease

A fairly common experience for a medical practitioner is to receive a letter abusing him in all the uncomplimentary terms at the writer's disposal and accusing him of every crime from negligence to illegal operation and adultery with his patients In English law the doctor in this case cannot claim damages for the letter is not published —no one but himself has seen it (In Scotland such a letter constitutes a libel whether anyone else sees it or not) Nevertheless the writer is open to a prosecution for criminal libel which is sometimes a most effective deterrent This form of action however has the disadvantage that libel can only be tried at Assizes a proceeding which entails some delay and expense A much more convenient method of dealing with the writer of abusive letters was that employed recently by a protection society by prosecution under Section 25 of the Summary Jurisdiction Act of 1879 for conduct of a character calculated to produce a breach of the peace[1]

* The first part of this article on libel and slander in medical practice appeared in the *Journal* of April 1st (p 588) A subsequent article in the same series will deal with the extent to which hospitals and nursing homes are liable for the negligence of their staff and general practitioners for that of their assistants and locumtenents

[1] Haylocke *v* Sparke (17 J P 262)

can any history of periodicity or of hunger pain be elicited It will be found on inquiring as to habits that these patients habitually take 'snacks' between their regular meals and, by thus anticipating the onset of hunger pain, mask the clinical picture The female patient employed in office or factory, however, gives the typical history which we meet with in the male During the past few years we have found, particularly in hospital practice that quite 10 per cent of the female patients referred as cases of cholecystitis were in fact suffering from duodenal ulcer In not a few both conditions were present In the majority x-ray investigation by cholecystography and barium meal cleared up the diagnosis In those cases in which the history had appeared so typical of gall-bladder trouble that x-ray investigation had been omitted, the duodenal lesion was revealed at operation

Coincident Gastric and Duodenal Ulcer—I find in my earlier records no mention of this condition Eleven years ago I had it brought forcibly to my notice by two cases in one of which I failed to discover a large penetrating gastric ulcer when doing a gastro-enterostomy for a duodenal ulcer which had previously perforated, and in the second another surgeon had done a sleeve resection for an hour-glass stomach and had failed to notice that the patient also had a duodenal ulcer with stenosis Since then I have operated on eighty one cases in which there were coincident ulcers in stomach and duodenum These occurred in a total of 780 ulcer cases In my series out of a total of 695 patients with duodenal ulcer, eighty one or 11 6 per cent, had a coincident gastric ulcer and out of 166 patients with gastric ulcer eighty-one or 49 per cent, had a coincident duodenal ulcer The two lessons I draw from these observations are, that the aetiology of the two types of ulcer must be the same and that assessment of the total pathology should invariably be the first step of an abdominal operation

AETIOLOGY

While it cannot be claimed that we possess anything approaching a full understanding of the causes of chronic peptic ulcer we do know that certain factors contribute to its onset and persistence Rational surgical treatment must take cognizance of these factors We have abundant evidence that there is a type of individual peculiarly prone to ulcer and that heredity plays a part I have often found that three or four members of the same family have suffered from ulcer, I have operated for duodenal ulcer on a man and his two sons, and in another family on three sisters The 'ulcer type," usually male, is the sthenic active, anxious minded worker whose profession or business takes precedence over meals or sleep, and who is often a pace-maker in our unnatural modern civilization Were ulcer confined to the extreme examples of this type with their hereditary predisposition there would be no justification for this lecture since surgery must be held in check and operation undertaken only after the most serious consideration in this dangerous ulcer forming type There are, however a very large number of sufferers from ulcer who constitutionally must be placed between this and the stout phlegmatic type in which ulcer is comparatively rare

Important factors in causation are irregular meals, lack of open air and sunshine lack of sleep, and excessive use of tobacco all of which tend to produce an autonomic instability with a hyperactive hypersecreting stomach Given some factor which produces a local necrosis or a lowering of vitality at some point in the stomach or first part of the duodenum with the development of an acute ulcer the persistence and development of the latter into a chronic lesion will be greatly favoured by these conditions

We know that various toxic and infective conditions are apt to be associated with acute ulceration in the stomach or duodenum—for example, the toxaemia from extensive burns and in fatal peritonitis A slight toxic lesion in the stomach or duodenum, which under ordinary circumstances would heal rapidly, may, in the predisposed individual with his autonomic instability induced by the hurry and worry of modern life, lead on to a chronic and irritable ulcer Focal infection, be it in teeth, tonsils, air sinuses, or appendix, is, in my opinion, not without significance It is, however, but one factor, and that not the most important, in the maintenance of ulceration How often have we seen complete symptomatic cure of ulcer result from a country holiday, without removal of focal sepsis, without alkalis, without care in diet, and without any ban on tobacco Can any treatment of ulcer be of permanent effect which does not also prescribe fresh air, sunlight, and exercise? My reason for referring briefly to these points in aetiology is to emphasize at the outset the essential fact that surgery, where deemed necessary, must be but an incident in the treatment of a condition so largely dependent on constitution and on habit

THE RATIONALE OF THE SURGERY OF ULCER

I regard an ulcer of the stomach or duodenum as essentially a condition requiring treatment on medical lines Surgery may be called in to help when the reparative process has led to stenosis and mechanical difficulty when, in spite of the maximum care which the patient can give, the ulcer breaks down repeatedly, when repeated haemorrhages cause prolonged disability or endanger life, and when a chronic ulcer, failing to heal, threatens malignancy Probably there would be little ground for controversy had gastric surgery been restricted to its primary field of relieving obstruction and of removing malignant or potentially malignant ulcers It was the very success of the early cases of gastro-enterostomy for stenosis that led to the abuse of this most beneficent operation Its employment as a short cut to cure in irritable ulcer, as a 'hit at random" in cases with no ulcer but with similar symptoms, as a "drainage operation" in cases of visceroptosis and of atonic stomach, led to an accumulation of surgical derelicts, bitter complainers, the driftwood of an uncontrolled springtide of surgery Even when confined to genuine ulcer cases the sequel of stomal or jejunal ulcer in a certain proportion of patients, variously estimated as from 2 to 30 per cent, turned the minds of surgeons to some alternative operation and the non surgically minded to more intensive and prolonged medical treatment On the Continent the balance inclined to more and yet more radical surgery—the removal of the whole ulcer bearing area, in this country and in America, by associating the names of Sippy and MacLean with a somewhat stricter observance of an old-time medical regime, it swung to the conservative extreme

A considerable residue of stenosing and refractory ulcers which medicine has failed to cure has again brought the surgical treatment of ulcer to the fore Before embarking on any operation for ulcer certain points must be observed Dental sepsis must be dealt with, and any bronchial irritation must be allowed to subside completely otherwise chest complications will assuredly set in An x-ray examination to determine the presence and degree of stenosis, the activity of the gastric musculature and the emptying of the stomach, must be carried out A chemical analysis of the gastric secretion, to determine the degree of acidity, is indispensable

This offence can be tried by a bench of magistrates at once, and they can bind over the offender or remand him (or her) for observation, or in default of security send him to prison If the magistrates consent, the doctor's name need not be mentioned By this procedure an insane person, as so many abusive letter writers are, may come under certificate with little delay, especially if he repeats the offence after being bound over

When Slander is not Slander

The law of slander affords another example of a matter in which Scotland does things better In that country there is no need for a slandered person to prove special damage , he has the same right to redress for verbal as for written defamation In England, unless a slander comes within the heads enumerated at the beginning of this article, it is not actionable For obvious reasons a doctor is not likely to find it easy to prove that a given slander has caused him actual monetary loss , he will probably be able more easily to show that it would naturally tend to injure his professional reputation A study of the decided cases shows that some quite surprising statements have been held by the courts to be not actionable as not going directly against professional reputation In Clay *v* Roberts (1863, 8 L T. 397) B said of a physician A that he had met homoeopathists (presumably unqualified ones) in consultation This happened to be a libel and not a slander case, but the point is the same B said of A something which, if proved before the General Medical Council, was quite sufficient to constitute infamous conduct in a professional respect and to ensure the removal of A from the *Register* Nevertheless, Pollock, Chief Baron, held that no action lay , that A was accused merely of a breach of conventional etiquette and not of anything illegal or sinful In Beaney *v* Fitzgerald (1863, 2 W and W (Vict) 184) B said of a medical man A that he was an advertising doctor Chief Justice Stawell held that, although sensitive and honourable medical men might regard these words as imputing quackery, yet the court could not say that they would be so regarded by the public at large The principle is that the words spoken must be capable of producing a bad impression on the minds of average reasonable men, and not merely on the minds of medical men This case, however, was decided a long time ago, and the public is now far more familiar with medical qualifications and ethical standards than it was seventy years ago It is probable, as Dr Clement Gatley submits in his excellent textbook *Libel and Slander in a Civil Action*, that such a statement nowadays would tend to lower the reputation of a medical man in the estimation of the general public and would therefore be actionable Medical men have often of course, been given substantial damages for libel and slander which imputed to them recklessness or gross ignorance in treatment

In Dockrell *v* Dougall (1899, 80 L T 558) B, a manufacturer of a quack medicine, used in an advertisement the name of A, a medical practitioner, in such a way as to induce the public to think that A prescribed or recommended it the court held that this constituted a libel And to call a medical man—or even, for that matter, an unqualified practitioner—a "quack" has always been held actionable Mr L Le M Minty, in the preface to his book *The Legal and Ethical Aspects of Medical Quackery*, quotes the case of Chisholm *v* Grant (1914, S C 289) in which B the town clerk of Banff, was alleged to have said of A, the unqualified superintendent of a mental hospital "What does that mannie know about treating lunatics? He is just a quack We will sack him yet!" The court held that these words were defamatory and meant that A was unfit for his duties as superintendent and ought to be dismissed If a medical man is accused by word of mouth simply of adultery with a married woman, and does not show special damage, he cannot succeed in an action for slander In Ayre *v* Craven (1834, 2 A and E 2) a physician gained the verdict in such a case, but judgement was arrested because he could not show how the speaker of the words connected the imputation with the physician's professional conduct On the other hand, if a doctor is said to have committed adultery with one of his patients, the words go against his professional conduct and are actionable

Just as proceedings before a judicial tribunal recognized by law are absolutely privileged, so all preliminary matters are covered by the same protection If an enemy writes to the Registrar of the General Medical Council making charges against a doctor that are absolutely false and bear evidence of the most unspeakable malice, the doctor has no redress, for such a letter is considered to form part of the proceedings of the Council (Lilley *v* Roney , 1892, 61 L J Q B 727) But a similar charge made to the Ethical Committee of the British Medical Association, or to the secretary of the Medical Defence Union or of the London and Counties Medical Protection Society, would not be covered by absolute privilege (Hope *v* I'Anson and Weatherby , 1901, 18 T L R 201 (C A)) The injured practitioner would have a right of action against the writer, and, if he could prove an improper motive, would be entitled to damages As, however, such letters are usually protected by the confidence of the bodies to whom they are addressed, the point is not likely to arise

Substantial Damages

That the law can give very effective protection when a doctor's reputation is seriously injured by libel or slander was shown last year in the case of Owen *v* Barham,[1] heard at the Pembroke Assizes

> B, a householder spread statements against A a general practitioner and medical officer of health that he had misconducted himself with a girl of 17, a servant of B's, and that he had performed an illegal operation on her also that he had neglected his patients and was unfit to be a medical practitioner A was able to prove that he had never seen the girl alone, and B, although the girl denied the truth of the allegations and he was unable to produce any evidence supporting them, declined to withdraw his statements Counsel for the plaintiff described the case as "dripping with malice" from beginning to end The jury gave A £5 000 damages and the court granted an injunction restraining B from repeating the slander

The effect of an injunction is to render anyone who disobeys it liable to imprisonment , it is often asked and granted together with damages A protection society received a complaint from a medical practitioner that one of his women patients had suddenly become extremely hostile to him and had started writing him most scurrilous letters She had extended her correspondence to the principal residents in the neighbourhood and to the member's fiancée and her relatives The society proceeded against the woman for criminal libel at the Assizes, and she was bound over to come up for judgement if called upon

In both these cases the medical man would have been at an enormous disadvantage if he had not been able to rely on the aid of a protection society, and the value of membership of one of these bodies is equally great whether a medical man is sued for defaming another person unwittingly or is made the victim of libellous or slanderous attacks Practitioners who contemplate taking proceedings against a slanderer should, however, remember one important factor To prove a slander depends on the evidence of witnesses who have heard it spoken Memory is unreliable, especially when the hearer does not much want to give evidence, and several doctors have found to their dismay that as soon as legal proceedings have become a concrete possibility their trusted witnesses have gone back on them They are then worse off than they were, because to start slander proceedings and drop them lays the plaintiff open at least to the suggestion that the offending remarks were true enough to make him afraid to face a public investigation For this reason at least one defence society refuses even to threaten proceedings for slander unless its member can produce written statements from the witnesses and a doctor who decides to proceed should make it his first concern to obtain the signed testimony of as many reliable witnesses as possible

[1] *British Medical Journal* 1932, i, 174

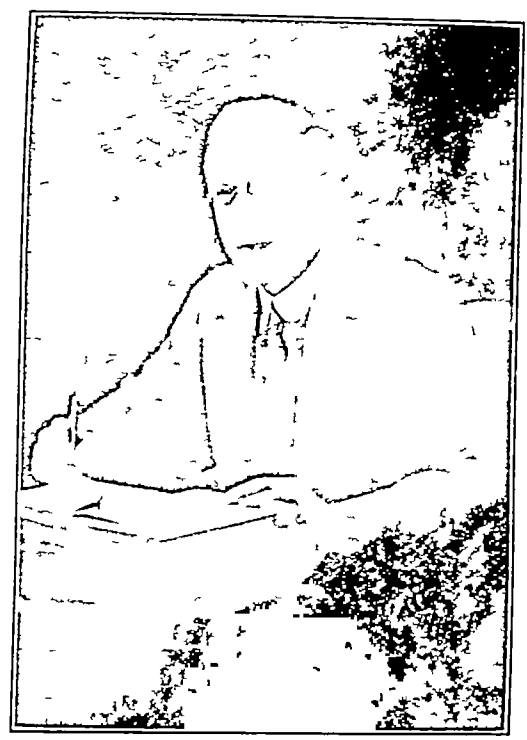
Obituary

J R DREVER M A M B F R C P Ed

Late Scottish Medical Secretary British Medical Association

We had to announce last week with great regret the sudden death on April 7th at his residence in Merchiston Crescent Edinburgh of Dr James R Drever formerly Scottish Medical Secretary of the British Medical Association Dr Drever had been in ill health for some time and had retired from his post in November 1931

James Richan Drever was born in 1873 at Alexandria on the Clyde and after preliminary education he entered the Faculty of Arts at Glasgow University with the object of taking up the teaching profession There he graduated M A in 1893 but after holding various teaching appointments he was attracted by the profession of medicine which he decided to embrace and accordingly he returned to Glasgow University where he graduated M B Ch B in 1900 After graduation he entered upon general practice in Glasgow and a little later took up ear nose and throat work as a specialty in addition to his practice being connected with both the Royal and the Western Infirmaries He was later appointed surgeon for this special department to Bellahouston Dispensary He early began to take an interest in the work of the British Medical Association which he joined in 1907 and with which he later became intimately connected Becoming a member of the executive committee of the Glasgow Southern Division in 1912 he was elected assistant secretary to that Division in 1913 and at the same time became a member of the Glasgow and West of Scotland Branch Council He was a valued member of the Insurance Acts Committee from 1914 and of the Insurance Acts Subcommittee for Scotland from 1917 being elected chairman of the latter body in 1918 and 1919 Drever's increasing interest in the activities of the British Medical Association was evinced by his becoming a member of its Scottish Committee in 1917 and his election as chairman of that body in 1918 and 1919 In 1918 he also became a member of the Central Council of the Association All these posts he continued to hold until the Association resolved to appoint a Scottish Medical Secretary and in September 1919 he was quite naturally elected to this post He continued as a member of the Organization Committee of the Association in 1920 and 1921



Although he had obtained a considerable measure of success in practice Drever was regarded by those who knew him as pre-eminently an organizer When he became Scottish Medical Secretary the Scottish Office in Rutland Square Edinburgh was situated in somewhat obscure and unsatisfactory premises and he almost immediately set about looking for a more worthy home for the Scottish business of the Association As a result mainly of his activity the Association decided in 1925 to acquire a house in Drumsheugh Gardens which was later expanded by the purchase of the adjoining house into the fine premises now occupied by the Scottish House of the Association The planning of this and the financial success that has followed upon the inclusion of premises let as suites of offices was largely due to Drever's foresight Undoubtedly the prestige of the Association in Scotland has been greatly advanced by this undertaking

In addition to his work for the British Medical Association Drever was connected with numerous cognate activities In the early days of the war he was secretary to the Glasgow Local Medical War Committee and later he became a member of the Scottish Medical and Allied Services Consultative Council He had been in his early days of practice a member of the Glasgow Education Authority and he served as a member of the important departmental committee which under the chairmanship of Lord Mackenzie reported in 1926 on the state of Scotland in regard to hospital facilities and the needs of this country for their extension He joined the Royal College of Physicians of Edinburgh as a Member in 1922 and proceeded to the Fellowship in 1926

Despite the large amount of work in which Drever was engaged for the development of medical services in connexion with the Association's work in Scotland he was always ready to place his advice and help at the disposal of individual practitioners and his sage counsel and wide experience were in constant requisition and greatly valued by those who sought them His kindly and helpful disposition and the great amount of valuable though unobtrusive work which he did rendered him highly popular with all those with whom he came in contact and the illness which necessitated his retirement from the post of Scottish Medical Secretary in 1931 after twelve years tenure of it was greatly deplored During the last two years although debarred by his illness from transacting the arduous business in which he had previously engaged he was still equal to the ordinary activities of life and his advice and help were freely placed at the disposal of professional colleagues He was succeeded in the post by Dr Robert W Craig

Dr Drever leaves a widow and a son who is a student of medicine

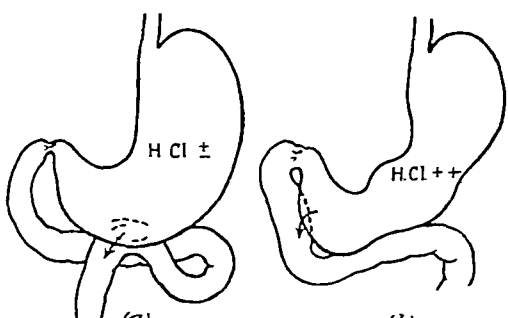
The funeral took place on April 10th at Morningside Cemetery Edinburgh It was attended by representatives of the general public the medical profession and the Department of Health for Scotland The Council of the British Medical Association was represented by Dr J B Miller Dr John Young Dr Wilkie Millar and Dr Keppie Paterson represented the Edinburgh Branch the Scottish Committee was represented by Dr Martine of Haddington and Dr Simpson of Golspie

SURGERY OF GASTRIC ULCER

The indications for surgery are threefold (1) stenosis hour glass stomach (2) penetrating ulcer failing to yield to medical treatment—potentially malignant (3) bleeding ulcer where two or more haemorrhages have occurred In (2) and (3) operation must include the ablation of the ulcer whether it be by local excision followed by gastro-enterostomy or by partial gastrectomy the latter though more radical is often the easier and more satisfactory operation In dealing with hour glass stomach we find that the ulcer is often partially healed of old standing and showing as we know from experience little if any tendency to malignancy We are therefore justified in these cases in performing a suitable short-circuiting operation in place of radical excision if the patient's condition seems to render this more prudent The low acidity associated with the majority of cases of gastric ulcer makes the development of a stomal or jejunal ulcer unlikely

SURGERY OF DUODENAL ULCER

In an old standing case with stenosis and relatively low acidity the operation of choice is a posterior gastro-jejunostomy No operation in surgery gives such gratifying results only a technical fault can lead to failure



(*a*) Type of case suitable for gastro-jejunostomy (*b*) Type of case in which gastro-duodenostomy is preferable

At the opposite extreme we have the irritable recurrent ulcer with hyperactive stomach and high acid content often in the lean anxious type of individual Only when the physician has exhausted his therapeutic measures will the surgeon undertake to intervene This type the ulcer former must be treated as a special problem with operation as a questionable incident in and adjuvant to his medical cure To perform a gastro-jejunostomy in such cases is to court the formation of a stomal or jejunal ulcer It is for this type that the operation of gastro-duodenostomy is to be preferred (see figure above)

Gastro duodenostomy

This operation while short-circuiting the ulcer bearing area of the first part of the duodenum deflects the acid gastric content into the second part of the duodenum a region more alkaline in content and more tolerant of acid than the jejunum A certain amount of regurgitation of duodenal content into the stomach occurs lowering the acidity and stasis from pyloric spasm is removed The operation is admittedly more difficult to perform than gastro-jejunostomy It requires adequate mobilization of the second and the commencement of the third portion of the duodenum with division of the peritoneum and fascia propria which hold these parts The operation should be performed without clamps to eliminate any risk of devitalization of tissue near the suture line (Fig 1 on Plate)

I have performed this operation in 159 persons—seventy eight males and eighty-one females—mainly in cases deemed unsuitable for gastro-jejunostomy owing to high acidity and absence of true stenosis The results as one might expect do not equal those of gastro-jejunostomy In a recent review of cases at periods of from one to twelve years after operation the results were excellent in 64 per cent the patient was relieved but not cured in 25 per cent and in 11 per cent the patient was still complaining of dyspepsia Two cases of stomal ulcer occurred in both symptoms had persisted without intermission since operation although the gastric acidity had been lowered Both received immediate and lasting relief from a secondary gastro-jejunostomy In two cases bilious vomiting persisted after gastro-duodenostomy owing to axial rotation of the duodenum through inadequate mobilization a secondary gastro-jejunostomy gave lasting relief So gratifying have been the ultimate results after the twofold anastomosis that I have seriously considered performing the double operation in cases with high acidity and a somewhat fixed duodenum

Associated Duodenal Ileus—The radiological demonstration of duodenal stasis in cases of duodenal gastric or stomal ulcer cannot be ignored with impunity Whatever form of gastric anastomosis is decided on a duodeno-jejunal anastomosis should be added Little time is required for its performance and the patient's convalescence will be smooth and his comfort afterwards ensured Particularly in cases of jejunal ulcer with induration in the mesocolon and root of the mesentery no matter what procedure is adopted duodenal stasis should be relieved (Fig 3 on Plate) I have never had reason to regret supplementing a gastric anastomosis by a duodeno-jejunostomy I have on several occasions regretted its omission

Eradication of Other Infective Foci—Whatever be the significance of infection as a primary factor in the cause of ulcer and I believe it to be considerable there can be no doubt of the almost constant presence of a streptococcus usually obtainable in pure culture in the base of a peptic ulcer Reference has already been made to the necessity for attention to oral sepsis as a pre operative measure It should indeed be a first step in medical treatment No operation for peptic ulcer is complete which does not include a search for other infective foci in the abdomen particularly in the appendix and gall-bladder The appendix will frequently be found diseased and should be removed in all but aged patients Not infrequently the gall bladder will be found to be the seat of infection as well

The Abdominal Triad—The coincident presence of active lesions in the stomach or duodenum or both in the gall bladder and in the appendix gives rise to a clinical picture difficult to interpret if the frequency of this triad of lesions be not borne in mind I have operated on twenty nine cases in which active lesions were found in all three situations and were all dealt with (Fig 2 on Plate) In several cases a streptococcus of the same type has been grown from all three lesions Failure to remove an infected gall bladder or appendix or both will not only tend to post-operative residual symptoms but will favour a recurrence of peptic ulceration and more especially the development of a stomal ulcer The gall bladder the appendix and the lymph follicles of the stomach and duodenum would appear to be the seat of election for streptococcal settlement In the case of the gall bladder and appendix an indolent infection results in the gastro-duodenal site digestion leads to open ulceration Short of any effective specific therapy comprehensive and radical surgical treatment offers the surest promise of durable relief

SURGERY OF THE BLEEDING ULCER

The problem of the bleeding ulcer is one of undoubted difficulty Whether and when active surgical intervention should replace expectant therapy is a question to which no dogmatic answer can be given There is a general but false belief that bleeding from a peptic ulcer is very seldom fatal Bulmer found that of a total of 249 cases of haematemesis due to chronic peptic ulcer, death occurred in twenty-nine (11 6 per cent), out of eighty-nine males fifteen died (16 8 per cent) My practice has been to advise medical treatment for the first haemorrhage and at the second to wait for ten days and then operate To my chagrin I have seen three patients die during this period of waiting

When a second haemorrhage occurs in males an immediate operation preceded and followed by a blood transfusion should be seriously considered When the ulcer is gastric excision or ligation of the main blood vessels, followed by gastro-enterostomy should be performed when the ulcer is duodenal, narrowing of the pylorus and gastro jejunostomy should suffice The after results of operation for bleeding ulcer are not altogether favourable In one-third of my cases there has been a return of bleeding in one case as long as six years after operation

After-treatment.—Many of the unsatisfactory results following the surgical treatment of ulcer are traceable to a neglect of after care Hyperacidity in the immediate post-operative period may determine the onset of jejunal ulcer, and any evidence of it in the shape of discomfort and heartburn must be rigidly controlled by alkalis and belladonna A regulated diet excluding all spices and salt-cured articles of diet must be persevered with for six months, and smoking should be regulated Care at this period will be well repaid

SUMMARY

1 Peptic ulcer would appear to be an increasingly common disease

2 It requires constitutional rather than local treatment

3 Surgery must supplement and not replace medicine in its treatment

4 Stenosis, intractability recurring haemorrhage, and associated abdominal lesions are the indications for surgical intervention

5 For gastric ulcer ablation of the ulcer, preferably by partial gastrectomy, is desirable in view of potential malignancy

6 For duodenal ulcer with stenosis and low gastric acidity, posterior gastro-jejunostomy gives uniformly good results

7 For recurring duodenal ulcer, with high acidity and no stenosis gastro-duodenostomy should be preferred

8 Associated duodenal ileus should be relieved by duodeno-jejunostomy

9 Lesions in the appendix and gall bladder should be looked for and, if found dealt with radically

10 Recurring haemorrhage in a male subject may call for immediate operation preceded and followed by transfusion

11 After care with a rigid control of acidity is essential

THE TREATMENT OF ARTHRITIS*

BY

CHARLES W BUCKLEY, M D, F R C P

PHYSICIAN TO THE DEVONSHIRE HOSPITAL FOR RHEUMATIC DISEASES BUXTON MEMBER OF THE ARTHRITIS COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION

To attempt to deal exhaustively with the many methods for the treatment of arthritis which have been put forward would occupy far more time than can be given to a single lecture I shall therefore deal only with such as appear to be of practical value or which have a popular vogue even then I may be guilty of omissions due to lack of personal acquaintance with some methods or failure to put others to a sufficient test

CLASSIFICATION

Some definition of the limits of my subject is necessary, and for this purpose three heads may be adopted

1 *Rheumatoid Arthritis*.—This is a crippling disease affecting many joints predominantly those of the extremities and varying in the degree of acuteness, in some cases it is mildly pyrexial and rapidly progressive, in others apyrexial and chronic Once it attacks a joint it rarely leaves it without irreparable damage, even if slight differing in this respect notably from rheumatic fever or subacute rheumatism While many varieties are described it is not necessary to detail them, since the treatment of all proceeds upon the same lines There is usually a septic focus and the disease commonly begins in the first half of adult life

2 *Metabolic Arthritis*.—The two chief forms are (*a*) climacteric arthritis which mainly affects the knee joints of women at the menopause and (*b*) gout which is outside our present subject

3 *Osteo arthritis*.—This is a chronic disease of later years degenerative in character which may be limited to one joint, and never attacks many unless an infective or metabolic factor is also present It usually involves large joints and is commoner in men Climacteric arthritis if untreated, will develop into osteo arthritis, and some clinicians hold that malum coxae senile is climacteric in nature

INFECTIVE FACTORS

Rheumatoid arthritis is the product of three aetiological factors which may be defined as the seed, the soil and the environment Treatment, to be logical should be directed to one or more of these factors, except in so far as it is required for the relief of symptoms such as pain and deformity

As I have already said, a septic focus is present in most if not all cases, from which is derived the seed of the disease, and to look for and deal with foci is the first step in treatment Such a focus may be easy to recognize—for example septic teeth or tonsils—or it may be difficult, calling for radiological examination of the tooth sockets or expert investigation of the tonsils pharynx, and nasal sinuses, though some indication of the probable source will usually be found in the course of an ordinary clinical examination I have seen a few cases in which the source of infection was a small septic lesion in the extremities, such as a septic nail bed Where there has been a long continuance of septic conditions in the mouth, nose, or throat, it is almost inevitable that there will be secondary foci established in other parts of the digestive tract—the gall bladder, the appendix or the colon—which will be more difficult to deal with Where a definite focus is found and eradicated the results are sometimes very striking, and the patient is cured though possibly left with one or more joints crippled in a minor degree Apart from gonorrhoea it is uncommon in my experience, for the uro-genital tract to provide the focus of infection, but it must not be overlooked in the course of examination It may prove very difficult to find a focus, and there is a form of arthritis recognized by some

* British Medical Association Lecture to the Preston Division on March 7th

Dr R W CRAIG writes

The death of Dr Drever will be greatly regretted in all parts of Scotland He was a well-known personality, and medical men throughout the length and breadth of the country will greatly regret the loss of a wise counsellor and friend Quiet and unassuming by nature, his sterling qualities impressed themselves on one the better one knew him He had a wide experience in various spheres before he was appointed as Scottish Medical Secretary This stood him in good stead in the varied duties that have to be dealt with in the Scottish Office

Drever was the fortunate possessor of an orderly, logical, and relevant mind His advice was greatly valued He was never in a hurry He never spoke without thinking In conversation with him one was sometimes tempted to think that he took a long time to give an opinion, but one soon came to recognize that this was largely the reason that his advice was so useful and his judgement so sound He had a most retentive memory, and, whilst endowed with the capacity of taking the broad view on any question, he was also able to deal efficiently with the details, and visualize the repercussions which any new developments involved In taking leave of the Scottish Committee he wrote 'It is a great trust that is placed in the hands of the committee, and I trust that wise counsels will always prevail" As his successor in office I have had special opportunity of appreciating the value of his work for the Association and for the medical services in Scotland I shall greatly miss his friendly advice and help

[The photograph reproduced is by E Holford Debenham, Edinburgh]

W H MARTINDALE, PH D, F C S

Editor of the *Extra Pharmacopoeia*

As briefly announced in our last issue, W Harrison Martindale died at his home in Brondesbury on April 8th, aged 58 The son of William Martindale, who founded the pharmaceutical business in New Cavendish Street in 1873, he was educated at University College, and at Marburg University under Professor E Schmidt The thesis for his Ph D degree was on "Researches on Corydaline which was read before the Philosophical Faculty of the university in 1898 Subsequent communications by him to various journals included papers on salvarsan (1911—in conjunction with Dr W Wynn Westcott) on digitalis assay lactic acid bacilli, organic arsenic compounds, essential oils in relation to antiseptic powers, atomic weights basic quinine and other alkaloidal injections emetine preparations, and on the treatment of amoebic dysentery—the last two in conjunction with Dr J Graham Willmore in 1926 Dr Martindale took over the business on his father's death in 1902 Soon afterwards he transferred the wholesale and manufacturing departments to large premises at the back of the old shop and from his laboratory there went forth during the ensuing years a constant stream of new chemical and pharmaceutical preparations many of them introduced at the suggestion of medical friends He was one of the first to realize the value of issuing liquids for injection in the form of sealed ampoules and installed his own glass blowing department

Dr Martindale's life-work was the *Extra Pharmacopoeia* After the death of his father he carried on the work through eight editions in collaboration with Dr Wynn Westcott until the latter died in 1925, and since then with occasional assistance from medical friends Few except those intimately connected with the book can have any conception of the immense labour entailed in revising it for each new edition The unremitting work at high pressure necessary to the production of volume i of the twentieth edition, which appeared last September, was in large measure responsible for the breakdown in health which followed its publication In the light of his subsequent fatal illness there is a tragic ring in the closing words of the preface "The writer hopes that some of the information embodied in this edition may prove helpful to suffering humanity in regaining and retaining—to borrow the phrase of an old friend—that priceless blessing—good health" As we said in the review published on October 29th, there are few books that have maintained so great a popularity among members of our profession as the *Extra Pharmacopoeia* and we assured its editor that the profession appreciated very highly the result of his labours We would like to add here that on innumerable occasions W H Martindale, and his father before him, gave ready help to the Editorial Department of the *British Medical Journal*, in answering queries from readers and supplying information on matters pharmaceutical and pharmacological The ready good nature with which he drew upon his vast store of accurate knowledge will long be remembered gratefully in this office

Universities and Colleges

UNIVERSITY OF OXFORD

THE MAY FELLOWSHIP

A fund amounting to approximately £11 000 the bequest of the late Miss Alice Mary May was accepted by Congregation on April 8th It is to be devoted to the establishment and maintenance of a Fellowship in the University for the provision of assistance in the preparation of candidates for the examination of the degree of Bachelor of Medicine and to be awarded for knowledge and proficiency in the higher branches of medical and surgical science and research The duty of the Fellow in addition to that of providing assistance to B M. candidates is to conduct research The Fellowship is confined to British subjects who are Bachelors of Medicine of the University of Oxford or who hold an equivalent degree of some other British university or who are Members of the Royal College of Physicians of London or Fellows of the Royal College of Surgeons of England The holder, who is to be styled "the May Reader in Medicine" retains office for seven years and is subject to the jurisdiction of the Visitatorial Board He must reside within the University for at least six months in each academic year The Fellowship is tenable with a stipendiary Fellowship at a College or with a University Demonstratorship but not with both it is not tenable with a University Readership or Lectureship The stipend is provisionally fixed at £400 per annum The first Reader is to hold office only until the first day of the Michaelmas Term, 1935

UNIVERSITY OF LONDON

The degree of Ph D in Biochemistry in the Faculty of Science has been awarded to S W Johnson (Lister Institute of Preventive Medicine) and the degree of D Sc in Physiology to R J Lythgoe (University College)

The regulations for the second examination for medical degrees, Part II, have been amended by the addition of the following after the first paragraph on page 211 of the Red Book, 1932-3, and after the second paragraph on page 256 of the Blue Book, September, 1932

Candidates who are referred in one subject only at the First Examination for medical degrees in July or December and pass in that subject at the next following First Examination for Medical Degrees will be permitted to proceed to the Second Examination for Medical Degrees Part II as though they had completed the First Examination for Medical Degrees in July or December respectively provided they have completed the prescribed course of study

Professor M C Delafield has been appointed representative at the sixth Imperial Social Hygiene Congress to be held in London from July 3rd to 7th The ceremony of presentation for degrees will take place at the Royal Albert Hall on Wednesday May 10th at 2 30 p m The annual service for members of the University will be held at Westminster Abbey at 5 30 p m when the Rev Canon C Jenkins will preach The graduation dinner will take place in the evening at the Drapers Hall when the Chancellor will preside

Mr Hope Carlton, M Ch F R C S, has been appointed Warden of Connaught Hall as from January 1st

authorities as primary to distinguish it from the cases in which the joint symptoms are clearly secondary to a known source of infection The two are however difficult to differentiate clinically and it is not unlikely that as our knowledge extends it will be discovered that these so-called primary forms are secondary to some infection as yet unrecognized

The microbe most commonly found in septic foci associated with arthritis is the strain of streptococcus termed *viridans* from the greenish colour of its growth on some media It must be noted however that some workers regard a staphylococcus allied to if not identical with the common epidermal coccus as the more common cause of rheumatoid arthritis and the streptococcus as causing osteo-arthritis while others incriminate the *Bacillus coli* and other intestinal flora These conflicting views associated with the fact that all microbes accused of causing non specific arthritis may be met with in normal individuals suggests that the infecting agent is more or less universal but becomes pathogenic only in special circumstances The effect of shock anxiety long spells of nursing (especially relatives) work under unfavourable conditions and the like will be familiar to all as predisposing to the onset of arthritis as well as of many other diseases There is also another important consideration which has of late come into prominence It is held that the effect of a septic focus anywhere in the system is to permit the absorption of minute doses of toxin continuously for long periods These long-continued toxaemias are believed to sensitize the tissues lowering their resistance to microbic invasion until breakdown occurs It may be that in such circumstances the joints or other tissues are attacked by microbes which are harmless to those in normal health such as the skin micrococci or the strains of streptococci commonly met with in the alimentary tract or elsewhere or even that microbes growing under exceptionally favourable conditions may acquire a pathogenicity which they do not normally possess

VACCINES

Such a process of sensitization is met with in other diseases of allergic type and there is already some evidence that rheumatic fever may be allergic and that arthritis comes in the same category If this is accepted it must add to the perplexities already met with in vaccine treatment where the object is to immunize by the administration of repeated doses of bacterial toxin It will be admitted by those who have had much experience of vaccines in arthritis that it is very easy to overstep the mark in dosage and instead of evoking an increased resistance to meet with the reverse—sensitization a result which may be disastrous Vaccine treatment has however given very good results in the hands of experienced workers but it is by no means invariably successful The vaccine used may be made from a septic focus found in the patient and thus be autogenous or it may be a mixture of a number of strains from different cases While the autogenous vaccine is generally preferred some find better results from mixed stock vaccines

The initial dose must always be small and the effect carefully watched The results will differ according to whether the septic foci have been effectively treated or still remain active in the latter case dosage must be smaller than in the former lest auto-inoculation be stimulated It is often wise to give three or four small doses of a suitable vaccine before proceeding to the operative treatment of septic foci—extraction of teeth enucleation of tonsils etc In most cases I prefer to begin with a dose of 50 000 and to double it every fourth or fifth day until there are indications of a reaction when the dose may be reduced a little or maintained at the same level for a few doses until reaction ceases to be evoked and then gradually to increase the dose again A course may continue for a year or longer The response to a vaccine will vary there may be a definite sense of relief with a slight return of pain and stiffness after three or four days or an immediate exacerbation of symptoms local general or both In the first case the dose should be increased steadily the aim being to secure the same type of response to each dose in the second the dose should be diminished until no more symptoms follow and then be increased again very cautiously Whenever possible a chart should be kept recording morning and evening temperatures and all variations of symptoms Vaccine treatment along these lines is reasonably free from risk and likely to produce improvement in cases of arthritis associated with a focus of infection and even in long standing osteo-arthritic conditions by raising the immunity of the body to the toxins but improvement in the damage to bone or cartilage which may already have taken place is not to be expected Since physical methods of treatment may cause auto-inoculation it is better to omit them on the day of inoculation and the two following days The question of an autogenous or stock vaccine is of less importance than care in dosage and administration

PHYSICAL METHODS OF TREATMENT

These methods are of great importance in the treatment of arthritis but vary widely in their efficacy and in their suitability for any particular case They are designed to improve the general health and thus to raise immunity both by direct action and indirectly by causing auto-inoculation to relieve pain to reduce swelling and to correct deformity etc They comprise the various forms of hydrotherapy massage electricity light heat etc

Hydrotherapy

Hydrotherapy might with advantage be employed to a much greater extent in ordinary practice For example baths may be given at home though ordinary water will not by any means produce the same result as suitable mineral waters The soothing effect of a bath about body temperature for ten or fifteen minutes is well known At a higher temperature it will dilate the capillaries and improve the circulation which is a matter of much importance owing to the capillary stasis in and around arthritic joints and to the cold extremities and general sluggishness of the circulation in such cases The cautious application of cold water by means of a sponge at the end of such baths will by contracting the arterioles add a stimulating and tonic effect Rest in bed should follow when relaxation will take place and the tissues again be flushed with blood Precision in adapting the temperature duration and frequency of such baths and the amount of rest will be essential if the best results are to be obtained

Similarly local baths will be useful and especially the contrast bath This is given with two basins or tubs one containing hot water and the other cold The limb to be treated is immersed in each alternately The details must be varied to suit the case but useful temperatures are 50° for the cold and 100°–105° for the hot bath with immersion in the latter for forty to sixty seconds followed by ten to twenty seconds in the former this may be repeated five to ten times I have found this a very useful procedure for the hands and feet Vapour baths are also easily given at home and may be used alone or as a preliminary to an immersion bath At the spas these methods are enhanced by the nature of the mineral water and by douches packs and massage in the water

Sir John Rose Bradford Bt M D and Lord Meston have been re-elected chairman and vice-chairman respectively of the University College Committee for the year 1933–4

Applications for grants from (1) the Dixon Fund for assisting scientific investigations and (2) the Thomas Smythe Hughes and Beaverbrook Medical Research Funds for assistance in original medical research must be received by May 15th Particulars from the Academic Registrar

Studentships

The Geoffrey E Duveen Travelling Studentship in oto-rhino-laryngology of the value of £450 will be awarded annually The tenure shall in the first instance be for one year part of which will be spent in study abroad in accordance with a scheme approved by the Geoffrey E Duveen Student ship Board but it may be extended for one or two years and during the extended period the student may be allowed to undertake research at the Royal Ear Hospital or some other laboratory approved for the purpose Grants for promotion of research in oto-rhino-laryngology or in any part thereof may also be made by the Trust Fund Full particulars can be obtained from the Academic Registrar South Kensington S W 7 and prescribed forms of application must reach him not later than June 12th together with a statement of the nature of the research proposed and a scheme of study for the approval of the Board

A University Studentship in Physiology of the value of £100 for one year and tenable in a physiological laboratory of the University will be awarded to a student qualified to undertake research in physiology Applications must be received by the principal by May 31st from whom full regulations may be obtained

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE

The following special lectures will be given in the Public Health Division April 20th and 21st at 4 p m Dr B M Macewen maternity and child welfare April 25th and 26th at 12 noon Sir Francis E Fremantle M P parliamentary procedure April 28th at 4 p m Mr A T Pike town planning May 5th 12th 19th 26th and June 2nd at 3 15 p m Dr E L Middleton industrial hygiene May 8th and 10th at 2 p m Dr C F White port work May 17th at 3 15 p m Dr R H Crowley child guidance May 23rd at 3 15 p m Dr L P Lockhart industrial medicine as a function of public health May 25th and 29th at 5 p m Dr C J Thomas physically defective children May 30th and June 1st at 5 p m Dr F C Shrubsall mental deficiency June 2nd at 2 p m Mr R R Hyde industrial welfare June 8th at 2 p m and June 9th at 3 p m Sir George Buchanan international hygiene June 9th at 2 p m Dr F Radcliffe factory medical work June 9th at 5 p m Dr N Howard Mummery the practice of industrial medicine

The following candidates have been approved at the examination indicated

ACADEMIC DIPLOMA IN PUBLIC HEALTH—(Part I) A A Birrell W L Blakemore C F Caldwell R C Chen J C Curnow I C Curnow Hilda M Davis J D Dimock T C St G Earl C L S Ferdinand A M Goodman J M Henderson J Kemp Laura H Macfarlane A M Mian B C Nicholson B O Brien T B Pahlajani J G Paley C H C Southwell Sander J M Talati A J Teal Kathleen C Vost G A Wilson

LONDON HOSPITAL MEDICAL COLLEGE

One of the open entrance scholarships (£100) offered by the London Hospital Medical College has been awarded to B B Hickey University College Oxford

UNIVERSITY OF BIRMINGHAM

A course of five William Withering Memorial Lectures on The Methods of Clinical Genetics will be given by Professor Lancelot Hogben D Sc in the large theatre of the Medical Faculty Buildings Edmund Street on Wednesdays April 26th May 3rd 10th 17th and 24th at 4 p m Members of the medical profession are invited to attend

The Ingleby Lectures 1933 on The Fat-soluble Vitamins will be given on Tuesday June 27th and Thursday June 29th at 4 p m in the Medical Lecture Theatre by Dr Alfred F Hess of New York Lecture I will deal with vitamin A in relation to nutrition and infection and Lecture II will appraise the prophylactic measures against rickets

UNIVERSITY OF GLASGOW

The following candidates have been approved at the examination indicated

FINAL M B CH B—Mabel S Ainslie R C Anderson P B Angus A K Boyle J A Brown W Brown T Bryson R Calderwood A A Cameron J C Campbell J Cordiner D F Craig D C Dewar I N Dunn D B Fauld J Fleming G Forbes R Gibson A M Goldie R K Grosart A Guthrie Lily C Hall J C Henderson I Hoppenstein J S Houchin R F Jamieson S R Jamieson Alice K Killin W Livingstone P J M Moon J E M Clemont A M Macdonald R G MacGregor J M Intosh J Mackenna D A Mackinnon Mary H M Laren E R M Laughlin M M Lellan J L M Lachie D J N M Nab R Nelson Mary C Orr A Russell H R Shiels J A Sweeney J G Thomson H Warshaw J Watson John Watson J P Williamson Jean D Wilson Agnes B L Wright

* With distinction in surgery

ROYAL COLLEGE OF PHYSICIANS OF LONDON

At a meeting of the Royal College of Physicians held on April 10th Lord Dawson of Penn was re-elected President

Lord Dawson was appointed to represent the College at the laying of the foundation stone of the new buildings of the University of London in June next Sir Francis Fremantle to represent the College at the sixth Imperial Social Hygiene Congress Professor W W Jameson at the congress of the Royal Sanitary Institute and Dr Rupert Waternouse on the advisory committee of the British Health Resorts Association

Diplomas in Ophthalmic Medicine and Surgery were granted jointly with the Royal College of Surgeons to the following candidates A J Boase A J Cameron J L Connacher K G Das L P J Evans F S Flynn G S Forrester A C Ghosh A L Khow Djung Lin Du C A Pittar A B Purvis S V Rao O L F Senaratne S P Srivastava

BRITISH COLLEGE OF OBSTETRICIANS AND GYNAECOLOGISTS

At its quarterly meeting held in Birmingham on April 4th with the president Dr J S Fairbairn in the chair the Council appointed Mr Comyns Berkeley a special treasurer to take charge of the appeal for the Endowment Fund

The following were admitted to the membership of the College *in absentia* Alexander Brodo (South Africa) Doris Clayton Gordon (New Zealand) Reginald Francis Matters (Australia) Subodh Mitrah and Stephen Alphonsus McSwiney (India)

The following were elected to the membership Leslie Cecil Lloyd Averill (New Zealand) Keith Duff (London) William Smith O Loughlin (Romford) Kenneth Wilson (Brisbane)

The annual general meeting of the College was held in the University Birmingham on April 5th The president Dr J S Fairbairn was in the chair and thirty four Fellows and Members were present

The president formally admitted to the Fellowship John Hewitt (Glasgow) John St George Wilson (Liverpool) and to the Membership Samuel Saxon Barton (Liverpool) John William H M Beattie (London) Jajneswar Chakravarti (India) John Cecil Dowse (Gibraltar) Richard Victor Dowse (Dublin) Wallace Freeborn John Chassar Moir William Charles Wallace Nixon and James Vincent O'Sullivan (London) Robert Watson (Liverpool) Ralph Kuper White (Southsea) Nellie Wilkes (Derby)

The following were elected to the Council to fill the vacancies caused by the statutory retirement in rotation of one third of the members of the Council and two casual vacancies—*Representative of the Fellows* Daniel Dougal (Manchester) Thomas Watts Eden (London) Robert William Johnstone (Edinburgh) Charles Gibson Lorrie (Belfast) Arthur Leyland Robinson (Liverpool) Thomas George Stevens (London) *Representatives of the Members* Douglas Miller (Edinburgh) Louis Carnac Rivett (London)

The president briefly outlined the many activities of the College present and prospective He also pointed out that the number both of those applying for and admitted to membership had increased by about 30 per cent during the past year These applications and admissions were from all areas of this country and the Dominions thus proving that the College was not merely an English but a British college The president stressed the necessity of maintaining its characteristic

In moving the adoption of the annual report of the Council the honorary secretary Professor William Fletcher Shaw referred to the large number of candidates from the Dominions who were training in this country for the Membership In moving the adoption of the financial report and balance sheet the honorary treasurer Dr Eardley Holland explained that whilst the balance sheet showed that the finances of the College were sound the necessity for raising an endowment fund must not be overlooked and he asked for the support of the Fellows and Members in this direction Many had already subscribed and he hoped more would find it possible to do so

Heat

Heat may be applied generally by vapour baths or by radiant heat apparatus, which is available in many large towns Such treatment must be employed with great caution, if at all in rheumatoid arthritis, as the patients are often already debilitated and may be weakened further , but for climacteric arthritis and osteo arthritis it will often be found beneficial Local applications are, however free from this objection, and may be made by poultices, etc , or by simple apparatus Infra-red rays, which are the most penetrating, can be applied by various patterns of lamps for electricity, gas, or paraffin, and a portable apparatus of this kind is a very useful addition to the armamentarium of a country practitioner The effect of such measures is to increase the circulation, and thus to remove toxins and improve the nutrition of the joints Diathermy, if available, is sometimes of help , it heats the interior rather than the exterior of the joint or limb if skilfully administered, but except for osteo arthritis—more particularly of the hip—I find it less useful than the other methods I have referred to Heating treatments must not be overdone or they will do more harm than good Ultra-violet light has not proved of value in my hands in the local treatment of joints, but if care is taken to avoid overdosage, to which rheumatoid patients are very susceptible, it may as a general application be advantageous in raising the level of bodily resistance The same considerations apply to exposure to natural sunlight

Ionization

This is also a method which may readily be employed in private practice, and it is of great value in the relief of pain and stiffness of the joints Many substances have been tried, but the best are salicylate of soda for the relief of pain, and potassium iodide, or chlorine ions in the form of ' T C P ,' for effusion into the joints or tendon sheaths or for periarticular thickening It is most effective in the wrists, knees, and shoulders, the hip being too deeply seated to be reached by this method How far the effect is due to the actual ions of the drugs applied, and how far to the action of the current on the tissues and tissue fluids, is open to question, but I think there is no doubt that the latter is important The negative electrode is the active one with the drugs mentioned and should be applied with as large a pad as is convenient for the joint under treatment, with the positive over a pad at a distance or in an arm or leg bath of weak saline If potassium iodide is used it is a common practice to paint the joint with tincture of iodine before applying the pad soaked in the solution of the iodide The colour of the iodine disappears during the passage of the current which gives rise to the idea that the iodine has been absorbed , but not infrequently considerable irritation of the skin is set up, rendering it necessary to stop the treatment for a time It is probable that any advantage to be derived from the use of the iodine is limited to the counter-irritation, and chemical action is just as effective with potassium iodide alone

Massage

Massage is a method of treatment often abused In arthritis its application should generally be limited to the muscles to restore tone and maintain circulation Where there is any active inflammation in a joint it is futile to expect to improve the wasted muscles by this means, and rest is indicated till the inflammation has subsided

The second group of physical measures are those designed to prevent or correct deformity This group necessarily also includes many of the procedures already referred to in the first group

Rest

Rest is one of the most important points, though it may seem surprising to regard it as a method of physical treatment During the acutely painful inflammatory stage, a joint should be kept at rest and if necessary, light splints applied to prevent the development of deformities In dealing with painful knee joints especially those with a tendency to flexion, which may easily go on to more or less posterior subluxation, weight extension with rest in bed may be necessary for a time Light stroking massage to help the circulation may be used In osteo-arthritis of the hip special attention is required to prevent contraction of the capsule and limitation of the range of movement from this cause or from the formation of osteophytes round the joints In such a chronic condition, rest in bed with weight extension, while it might relieve, is obviously undesirable for many other reasons If it can be borne, a light walking calliper splint is the most useful method of relieving pressure on the irritated joint surfaces in both knee- and hip joint cases At the same time care must be taken to retain as wide a range of movement as possible by active and passive movements Where there is laxity of the knee joint often due to damage to the crucial ligaments, or if the joint tends to give way, a Howard-Marsh knee splint is often of very great assistance and may be worn for years

Movements

Movements are another important part of treatment They may be active or passive but the former are generally to be preferred, and may be started as soon as active inflammation has subsided An increase of pain after the movement, or a lessened mobility, is an indication for further rest , such symptoms will often be associated with some degree of auto-inoculation and consequently general symptoms pain at night may be due to over exercise during the day In carrying out movements of the knee, elbow, and wrist, particularly, attention should be given to securing extension, since it is possible to obtain an apparent greater range of movement and to find that this is due to increased flexion only, while extension is lessened in such a case further rest, combined with suitable splinting to correct the tendency may be indicated Forced movement, with or without anaesthesia, may be required in later stages to break down adhesions and to restore mobility, but must on no account be attempted until all signs of active mischief have subsided

Counter irritation

Counter-irritation may be applied locally or at a distant point along the spine or nerve trunks The latter method has had enthusiastic exponents and is sometimes useful, though how it acts is less easily explained The usual method is to apply a blister or a cautery point over a small area, generally over the cervical or lumbar spine, thus stimulating the posterior nerve roots this is carried on for many weeks or months By similar methods local counter-irritation is applied over the joints themselves It serves to promote the absorption of effusions and exudates Firm bandaging over a layer of cotton wool should be used in conjunction if there is much fluid in the joint Bier's bandaging, producing congestion of the distal portion of the limb, is sometimes beneficial—if maintained for half an hour or an hour there is generally a subsequent small rise of temperature, suggesting that it causes a slight auto inoculation

GENERAL MEASURES

Since our object is to raise the constitutional resistance of the patient attention to the general health is of

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

On April 13th, before Parliament rose for Easter the Royal Assent was signified to the Children and Young Persons Act London Passenger Transport Act, Doncaster Drainage Act, Army and Air Force (Annual) Act, and the Russian Goods (Import Prohibition) Act The Children and Young Persons Bill had originated in the House of Lords, and on April 11th the Commons had passed it through committee, report, and third reading The Bill is a consolidating measure

The Budget will be opened in the House of Commons on Tuesday, April 25th

Water Supply of Malton

On April 11th Mr TOM WILLIAMS asked if the Minister of Health was aware that the water supplied by Norton (East Riding of Yorkshire) to Malton had been declared by the Malton medical officer to be unfit for human consumption Mr SHAKESPEARE said that a single sample of the water supplied by Norton to Malton was found on analysis to be unsatisfactory and the supply was discontinued Subsequent tests by three independent analysts showed the water to be satisfactory and the supply had now been resumed The arrangements between the two councils were temporary and the Malton Council would at an early date submit to the Minister a scheme for a permanent supply

Mr T WILLIAMS asked if Mr Shakespeare was aware that in this district where there had been twenty five deaths and three other very bad cases of fever the people were terrified and were collecting water from a pump in a brewery yard Ought not the Minister to persuade the local authorities to do something in the matter? Mr SHAKESPEARE replied that the Ministry had had frequent consultations with the local authorities to decide which of the three sources was the best water supply

Housing Reform

On April 11th Mr SHAKESPEARE circulated a statement as follows on the number of houses returned by local authorities as having been completed in England and Wales by local authorities and private enterprise since January 1st 1919

	By Local Authorities	By Private Enterprise	Total
With State assistance			
Housing and Town Planning etc Act 1919	170,090	4 545	174 635
Housing (Additional Powers) Act 1919	—	39 186	39 186
Housing etc Act 1923	73 309	362 738	438 047
Housing (Financial Provisions) Act 1924	445 521	11 953	457 474
Housing Act 1930	7 800	6	7 806
Total to February 28th 1933	698 720	418,428	1 117 148
Without State assistance (to September 30th 1932)	8 140	852 255	860 395
Grand total—houses completed	706 860	1 270 683	1 977 543

In addition 13 343 houses have been provided to re-house persons displaced under improvement and reconstruction schemes confirmed prior to the Act of 1930

On the same date Mr SKELTON furnished details of housing in Scotland showing that from 1919 to February 28th 1933 the latest date for which information is available 111 336 houses were completed under State assisted schemes by local authorities in Scotland and 31 897 by private enterprise In addition 2 552 steel houses were completed in that period by the Second Scottish National Housing Company The number of houses completed by unassisted private enterprise between 1919 and December 31st 1932 the latest date for which information is available is 20 904 As regards the last part of the question 20 356 of the local authority houses already mentioned were provided with State assistance under the provisions of Subsection 3 of Section I of the Housing etc , Act 1923 and under the Housing (Scotland) Act 1930 for the replacement of unfit houses

Answering Mrs Runge on April 11th Mr SHAKESPEARE said Sir Hilton Young had arranged that his officers should be available for consultation by individual authorities on all aspects of work under the Slum Clearance Act of 1930 but the circumstances of different towns varied so greatly that he could not at present usefully offer any further general advice on this subject

Mortality, Housing, and Unemployment

Mr SHAKESPEARE told Mr J J Lawson on April 12th that the Minister of Health had received a copy of a report of the inquiry by the medical officer of health for Stockton on Tees into the causes of the standardized death rate for the Mount Pleasant area which averaged 33 55 per 1 000 of the population over the past five years, compared with a standardized death rate over the same period of 10 5 for England and Wales The report was under consideration. Mr LAWSON asked if Mr Shakespeare was aware that the M O H concluded by saying that the high death rate was the result of small incomes due to unemployment Sir FRANCIS FREMANTLE asked whether the medical officer had not attributed the high death rate to high rents of houses built under the 1925 Housing Act Mr SHAKESPEARE said it was true that under a pre-1930 housing scheme the rents were higher The tenants might therefore have less to spend on food The general experience of the Ministry of Health showed a remarkable increase in the health vitality and appetite of children who were moved out of slum areas Low income resulting from unemployment would be one factor in Mount Pleasant

Experiments on Dogs

Sir JOHN GILMOUR told Sir Robert Gower, on April 12th that a copy of a petition from the Canine Defence League praying that experiments on dogs be prohibited had been forwarded to the Home Office by the Select Committee on Public Petitions He was informed that 276 594 signatures were appended In this matter the Government must be guided by considerations of the general interest Having regard to the reasoned opinion expressed in the memorandum of the Medical Research Council presented to Parliament in 1927 and to the valuable results in the prevention and treatment of canine and human diseases achieved by experiments on dogs he was not prepared to introduce legislation on the subject

Antimony in Enamel Ware.—Mr Geoffrey Mander was informed on April 13th by Mr SHAKESPEARE that two outbreaks of illness said to be caused by antimony in enamelled vessels had been brought to the notice of the Minister of Health since the issue last month of a departmental memorandum on antimony poisoning As soon as he received the report of the technical officer of the Department who was investigating the question the Minister would decide whether further legislative or other measures were necessary

Health Visitors.—On April 12th Mr SHAKESPEARE said he was aware that a committee of the Plymouth local authority had recommended a reduction in the staff of health visitors from twelve to eight, and that although this recommendation had not been adopted two vacancies arising last October and November had not been filled Sir Hilton Young was addressing a communication to the council on the matter

Hygiene of Shops.—Answering Mr Rhys Davies on April 12th, Sir JOHN GILMOUR said the question of temperature and sanitary accommodation in shops was being considered in connexion with proposals for amending legislation but there was no prospect of introducing such legislation in the present session At his request the Ministry of Health had carried out inquiries into these matters

Medical News

The attention of readers is called to the fact that the telephone number of the British Medical Association and the *British Medical Journal* has been changed to Euston 2111 (four lines)

At a meeting held in the Mansion House on April 20th with the Lord Mayor in the chair a resolution endorsing the selection by the British Empire Red Cross Conference of Florence Nightingale's birthday—May 12th—as Red Cross Day was adopted on the proposal of Sir George Newman Chief Medical Officer Ministry of Health

At the Princess Elizabeth of York Hospital for Children Shadwell E on Wednesday April 26th at 8.45 p.m. Mr T. Pomfret Kilner will give a lantern lecture entitled Plastic and Reconstructive Surgery. The chair will be taken by Sir Cuthbert Wallace late surgeon to the hospital

At the meeting of the Medico-Legal Society on Thursday April 27th at 1 Wimpole Street W. at 8.30 p.m. a paper will be read by Mr Henry C. Dickens on Negligence in Hospitals and its Legal Consequences. Discussion will follow. Guests may be introduced on production of a member's visiting card

The annual meeting of the Institute of Medical Psychology will be held at the Wharncliffe Rooms Hotel Great Central Marylebone Road N.W.1 on Monday May 1st at 12.15 p.m. when Sir Henry Brackenbury will preside. It will be followed by a luncheon at 1 p.m.

At a meeting of the Chelsea Clinical Society to be held at the Hotel Rembrandt Thurloe Place S.W. on Tuesday April 25th at 8.30 p.m. Mr A. Lawrence Abel will open a discussion on the surgery of the autonomic nervous system with cinematograph demonstration. The meeting will be preceded by dinner (price 5s.) at 7.30 p.m.

The next evening reception by the Royal Society of Medicine will be held at 1 Wimpole Street on Wednesday May 17th when Fellows and their friends will be received in the Library at 8.30 p.m. by the President and Mrs Warren Low. At 9.15 Dr R. G. Canti will show his film The Cultivation of Living Tissue Cells *in vitro*. Admission is by ticket only obtainable from the secretary.

Dr W. Fletcher Shaw professor of clinical obstetrics and gynaecology in the University of Manchester and honorary secretary of the British College of Obstetricians and Gynaecologists has accepted the invitation of the American Gynecological Society to be the guest of honour at its annual congress in Washington on May 8th 9th and 10th.

A meeting of local authorities in the Merseyside and South-West Lancashire district held at Liverpool on April 10th decided to form a regional advisory committee for this area to deal with the smoke problem. As a result of the efforts of the National Smoke Abatement Society similar advisory committees which have for their object the more uniform administration of the law relating to the emission of smoke and educational work including classes for stokers have already been established in the Midlands the Manchester district and London. Dr W. M. Frazer medical officer of health for Liverpool Alderman W. Melland chairman of the National Smoke Abatement Society and Mr Arnold Marsh secretary of the society were the chief speakers. It is hoped that as a result of a memorandum addressed by the society to 130 local authorities similar committees will be set up for Tyneside Tees-side North-East Lancashire and the Potteries.

The first French Congress of Phoniatrics will be held in Paris under the presidency of Dr Moure formerly professor of oto-rhino-laryngology at Bordeaux on May 6th when MM. Tarneaud and Viela will read a paper on tonsillectomy and singing. Further information can be obtained from the general secretary 27 Rue de la Grande Armée Paris 18e.

The next International Congress of Hydrology will be held at Toulouse in October under the presidency of Dr Terreyrolles of La Bourboule.

Lord Horder has accepted the position of honorary consulting editor to the *British Journal of Physical Medicine*. For reasons of health Dr King Brown has given up the medical editorship and his duties will be taken over by Dr W. Kerr Russell in association with Surgeon Rear-Admiral Richard A. Ross.

The opening pages of this month's *Practitioner* forming half of the issue are devoted to five papers on anaesthesia.

Dr Harry Campbell has retired from the editorship of the *Medical Press and Circular* which he has held for the past fifteen years.

A scheme has been drawn up between the Royal Bath Hospital Harrogate and the University of Leeds for the institution of research fellowship in rheumatism as soon as funds are available. The hospital authorities are making themselves responsible for the collection of the necessary sum and as soon as this has been secured an appointment will be made.

According to the Vancouver correspondent of the *Times* an Act permitting the sterilization of mental defectives under certain conditions has been passed in British Columbia. The consent of the patient parent or guardian is necessary before the operation can be performed under the authority of a Supreme Court judge an alienist and a social worker and then only on the patient's release from an institution.

Professor Peter Mühlens head of the Hamburg Institute for Tropical Hygiene has been invited to deliver lectures in Hong Kong Shanghai Canton and Peiping.

Mr Charles Goulden has been appointed ophthalmic surgeon to the Royal Surgical Aid Society.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal B.M.A. House Tavistock Square W.C.1**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication.

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager British Medical Association House Tavistock Square W.C.1 on receipt of proofs.

All communications with reference to ADVERTISEMENTS as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager.

The **TELEPHONE NUMBER** of the British Medical Association and the *British Medical Journal* is EUSTON 2111 (internal exchange four lines).

The **TELEGRAPHIC ADDRESSES** are:
EDITOR OF THE *BRITISH MEDICAL JOURNAL* *Articulate Westcent London*
FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements etc.) *Articulate Westcent London*
MEDICAL SECRETARY *Medisecra Westcent London*

The address of the Irish Office of the British Medical Association is 18 Kildare Street Dublin (telegrams *Bacillus Dublin* telephone 62550 Dublin) and of the Scottish Office 7 Drumsheugh Gardens Edinburgh (telegrams *Associate Edinburgh* telephone 24361 Edinburgh).

QUERIES AND ANSWERS

Injection of Varicose Veins

Dr GEORGE GILLETT (Edgware) writes: I shall be interested to hear whether any reader has had an experience similar to the following. On February 15th I started a course of injections for varicose veins on a man aged 37 years. I injected 1 c.cm. of collosol sodium morrhuate (5 per cent.) into the great saphenous vein just above the knee. Six days later the patient returned stating that he had had pain up the whole thigh since the injection and on examination I found the whole varicose vein clotted from about three inches below the knee to within two inches of the fossa ovalis a distance of about seventeen inches.

importance and the first step is to improve where possible the general conditions of life Dampness of site or dwellings sunless rooms and deficient ventilation must all receive such attention as can be given and this is more important or at least more practicable in most cases than change of climate It is a great mistake to think that a warm climate is necessary the optimum climate is the one which stimulates the latent powers of resistance of the patient within the limits of his capacity

Diet

Diet is a subject upon which there is a great diversity of opinion and error is extremely prevalent especially among patients friends and the popular press In rheumatoid conditions the first essential is an adequate diet of simple digestible food and there is no justification for forbidding any article of food which the patient finds easy of digestion and to which there is no idiosyncrasy This question of idiosyncrasy is important and careful inquiry should be made Some patients appear to suffer more pain etc after articles of food termed acid — certain fruits and wines—and sometimes after malt liquors though these effects are more usual in fibrositis than in arthritis Others do well on them and stout for example is usually well borne and found beneficial in asthenic subjects of arthritis No general rule can be laid down If there is a tendency to put on weight as in climacteric arthritis and osteo-arthritis carbohydrates must be kept within limits

Importance has of late years come to be attached to vitamins in diet they have a practical application in arthritis and the best rule is to see that the diet has its due proportion of these substances Where it is readily assimilated milk is of great service both for its nutrient value and for its vitamin content Fresh fruit and vegetables are also important and not always easily obtained by the poorer classes Attention should be given to the supply of vitamin B—brown bread wheat germ legumes etc Vitamin A can be added in the form of cod liver oil or its derivatives to raise the resistance to infection and vitamin D is indicated very strongly in rheumatoid arthritis since the osteoporosis which is shown in the rarefaction of the bones indicates calcium wastage due not so much to deficiency of calcium in the food as to inability of the tissues to assimilate it Thus the diet in rheumatoid arthritis should comprise milk butter cheese eggs fish and meat easily digested and including liver and some fats whole meal bread and yeast extract in the form of marmite bemax or the like fresh fruit and vegetables raw or cooked and including peas beans lentils etc and in season young carrots and turnips Foods outside this list are not necessarily prohibited and may be taken to gratify taste or appetite so long as adequate amounts of the more important foods are included

Constipation

In many cases constipation is probably a contributory factor in the production of arthritis The long retention of putrefactive matter in the colon leads to irritation of the epithelial lining reducing its protective functions and facilitating absorption of toxins which tend to lessen tissue resistance It is therefore essential to treat it by attention to diet and by inculcating regular habits The dietetic treatment demands a sufficient amount of bulky residue such as is supplied by the cellulose of fruit and vegetables and an adequate supply of vitamin B It is important to ensure that a sufficient amount of fluid is taken—not less than three pints of total fluids per day

When constipation has become chronic or there is clear evidence of toxic absorption undue fermentation etc lavage of the colon is often helpful if not carried too far It should be given by means of a douche can and with a pressure never exceeding two feet the quantity of fluid injected being usually one and a half to two pints The technique is described elsewhere and need not detain us now Simple saline solution or a very weak permanganate are the most useful fluids for injection From three to six treatments on alternate days should suffice in one course and may be repeated after an interval

DRUGS

I have left this part of the subject till the last the place it should always occupy in the doctor's mind when called on to treat a case of arthritis though the patient is apt to put it first and foremost A patient whose arthritis is being treated chiefly or entirely by drugs is a reproach to his physician This is not to say drugs should not be employed in their proper place but they have no specific action in these diseases

In the more acute forms especially in younger subjects I regard cod liver oil as a sheet anchor in treatment and I believe its action is due to its high content of vitamins A and D which raise resistance and improve calcium metabolism and general nutrition Where it cannot be tolerated in the ordinary form its place may be taken by the many derivatives or compounds now on the market If the patient does not take enough milk it may be well to administer calcium in an assimilable form to endeavour to make good the wastage of this element The addition of arsenic is beneficial for its tonic effect and iron may also be useful The syrup of iodide of iron is an old fashioned remedy in arthritis which has something in its favour Iodine is of value especially in the more chronic forms possibly by stimulating thyroid action I prefer a saturated solution in rectified spirit beginning with one drop in milk three times a day and increasing gradually to five drops Occasional intervals should be allowed Thyroid is of help in arthritis of the climacteric type and wherever there is a tendency to put on weight unduly it also seems to act beneficially in some cases of osteo-arthritis Sulphur sometimes exercises a favourable influence especially when there is constipation but it is more frequently indicated in fibrositis than in arthritis

Intestinal antiseptics have been much given and guaiacol carbonate is probably the best It must be administered over a long period and may be prescribed in conjunction with iodine or other remedies A combination of 5 grains of guaiacol carbonate with 5 grains of aspirin or calcium acetyl salicylate is often very useful In my experience other salicylates are of no service

For the relief of pain aspirin is of great value and its action in unstiffening the limbs is often remarkable though unfortunately transitory It is essential to remember that habit forming drugs should be avoided If aspirin alone is insufficient it may be combined with phenacetin and caffeine The opium derivatives as well as the barbiturates are to be avoided but in very severe cases codeine may be prescribed with aspirin and phenacetin and this combination is often very helpful Protein shock therapy has been extensively tried and sometimes yields strikingly good results though the cases generally relapse after a short time unless the effect can be followed up by other and more lasting methods It is usually given by means of intramuscular injections of sterile milk peptone or colloidal sulphur or by a non specific vaccine (T A B being generally preferred) injected intravenously The method is not entirely free from risk and the reaction may be alarming

Injection of External Piles

'LANCS writes Is there any real contraindication to the injection of external piles (prolapsed piles of the lower anal region and skin piles) with say quinine and urethane or the carbolic solution used for true internal piles? In my experience for every one case of disability and discomfort from high internal haemorrhoids one encounters many who suffer from the prolapsed anal margin and skin varieties May not these be injected?

Dry Mouth

Mr J H BADCOCK (London W 1) writes If 'Retired" can breathe through his nose he should get his dental surgeon to make him a mouth valve a thin shield of vulcanite or metal which fits between the lips and teeth and so prevents mouth breathing Dropping of the jaw can be prevented by wearing a head and a chin cap very easily made from one inch webbing as follows—a strip to encircle the head to which are joined a longitudinal and a transverse strip over the crown This is connected to a chin cap by strips in front of the ears in which elastic may be inserted if desirable

Nocturnal Incontinence of Urine

Dr D L S CUNNINGHAM (Lower Gornal) replying to 'Doctorman s" inquiry (*Journal*, April 15th, p 684) suggests a mixture with ext ergot liq mx5–10 and ammon brom grains v t d s He writes I saw this in a medical journal three years ago and have not known it to fail

Dr A PATTON (Widnes) writes Presumably 'Doctorman" has tried bromides and evening restriction of fluids It is important that the child should be thoroughly aroused on the occasion—that is quite awake In my experience liquid extract of ergot is the most generally useful drug but as the new *B P* extract has poor keeping qualities on admixture with water the liquid extract should be prescribed in 7 or 8 minim doses added to a little water at the time of taking twice a day

'W F L (Windsor) writes Nocturnal incontinence of urine in children from 5 to 12 years of age can be successfully treated by hypnotic suggestion

Income Tax

Certified Accounts

F G has received a notice' either from the inspector of taxes or the Clerk to the Commissioners asking for a *certified* copy of his accounts for the last year Is he bound to incur the expense of going to a professional accountant?

*** There may be businesses so large or intricate that the employment of a professional accountant would be a reasonable requirement but the accounts of a medical man are comparatively simple and unless there are quite unusual circumstances in F G s case we see no reason why an independent certificate should be regarded as necessary We therefore advise him to prepare his accounts carefully and send in a copy certified by himself—that is certified that they have been prepared from whatever books may be the basis of the accounts—and are correct to the best of his knowledge and belief

Services of Wife as Book-keeper

'H McL refers to a reply on this question in our issue of April 1st and inquires whether it affects 'the full one sixth allowance for running the expenses of his practice"

*** We see no reason why it should but shall be pleased to advise further if any specific objection should be raised by the inspector in the future

Basis of Assessment

'G P s income for 1929–30 was under £200 derived from work as assistant and locumtenent—employment not continuous For 1930–1 he earned £300 and is being assessed thereon the inspector of taxes declines to adopt the previous year s basis because the employment then was discontinuous and did not represent a full year s income Is this correct?

*** Yes Strictly each employment stands by itself and justifies in law the dropping of the previous year s basis when it occurs This strict rule is not usually applied where a change of employer does not involve any substantial change in status or the nature of the employment but would correctly apply to such a case as this where the income of the two years is not really similar

Obsolescence of Car New Practice

'J S"—A partnership is being treated as newly set up as from September 30th 1931 Both partners replaced their cars during the year ending September 1932 The inspector of taxes refuses to allow obsolescence on the ground that the expense of replacement relates back to years prior to the commencement of the present practice

*** The inspector is apparently correct in law but the partners can reopen their previous six years assessments to claim depreciation on their cars against the tax paid by them for those years—see Section 24 of the Finance Act 1923 as extended by Section 27 of the Finance Act of 1926

Naval Gratuity on Retirement

"J W R" has retired from the Royal Navy after serving as a short service surgeon lieutenant for three years, and has received the usual gratuity of £300 in a lump sum Is that amount liable to income tax?

*** If it was an expressed or implied condition of the service contract that the gratuity should be paid at the end of three years' approved service there would seem to be good legal grounds for regarding it as assessable We are not however, sufficiently familiar with the precise terms of the contract to express a more definite opinion

LETTERS, NOTES, ETC

Mr Bronte on Accidental Ignition

Dr C MABEL EDGERLEY (honorary secretary of the Bronte Society) writes With reference to the statistics given in the article on burns and scalds in a recent issue of the *British Medical Journal* it is interesting to note that nearly ninety years ago the Rev Patrick Bronte father of the distinguished sisters of Haworth had made a statistical study of deaths by burns from another point of view This is shown by the following extract from a letter from him to the *Leeds Mercury* dated March 16th, 1844

> If women and children in general were to have their garments made of silk or wool there would be little danger of their losing their lives by accidental ignition I have been at Haworth for more than twenty years and during that time have performed the funeral service over ninety or a hundred children who were burned to death in consequence of their clothes having taken fire and on inquiry found in every case that the sufferers were clothed in either cotton or linen

A Thank offering

We have often had grateful messages from readers thanking us for the answers to their professional and business conundrums published on this page but the following letter is unique in our experience It comes from a country doctor, and we should be delighted to receive others to the same effect 'I am extremely obliged for your advice in reply to my income tax query You will be interested and pleased to hear that we won our appeal entirely, I believe, on the ground that no fresh discovery' had been made Our accountant had not thought of that point My partners and I enclose a cheque for £3 3s and shall be glad if you will hand it to whichever medical charity you consider the most deserving" We have handed this generous gift to the B M A Charities Committee for distribution among the professional benevolent funds

Number Plates and Brakes

Dr R J CLAUSEN (St John's Wood N W) writes The communication from the Automobile Association in your issue of April 15th (p 684) throws an interesting light on the mentality of those responsible for the policy of this large and probably influential organization Medical practitioners, who are presumably reasonably intelligent persons are reminded to exercise care on these points not because it is obviously desirable for them to do so nor in the interest of public safety, nor in order that they may comply with the law, but only because police prosecutions have recently followed their neglect

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 46 47 48 49 52 and 53 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 50 and 51

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 152

SPA THERAPY

I have referred to spa treatment briefly when discussing physical measures, and do not propose to go deeply into this aspect of treatment, although in many cases it proves to be very advantageous Few patients can give the time or afford the expense of a long stay at a spa, and long treatment is essential in arthritis At the same time the effect of rest and change to a healthy and stimulating climate even for a short period, combined with the treatment only to be obtained at a well-equipped spa, is often of the greatest value, and may start the patient on the road to recovery Many considerations will influence the choice of a spa a bracing and stimulating effect is to be sought rather than a relaxing one The kind of water is less important than the efficiency with which it is adapted to the particular patient, and there is a real risk in too strenuous treatment

Time has not permitted of an exhaustive examination of the subject, but I hope the general principles and indications I have outlined will prove of some assistance to you in dealing with the different problems which arthritis presents to the practitioner

HIGH GASTRIC ULCER

A SUGGESTED OPERATION

BY

C ALEX WELLS, M B F R C S

HONORARY ASSISTANT SURGEON ROYAL SOUTHERN HOSPITAL LIVERPOOL
JUNIOR LECTURER IN SURGERY UNIVERSITY OF LIVERPOOL

(With Special Plate)

This short paper is to introduce an operation which so far as is known has not previously been described, and which from the results obtained seems well worth while bearing in mind as a possible solution when the surgeon is faced with the problem of dealing with a really high and difficult gastric ulcer Briefly, the proposal is to perform a partial gastrectomy below the level of the ulcer

SURGERY IN THE TREATMENT OF ULCER

An attempt to summarize the literature was soon abandoned on account of the enormous bulk of work which has been contributed to the subject of the treatment of gastric ulcer All that seems possible is a comparatively bald statement of what would appear to be the most widely and commonly accepted views on the matter—namely (1) that medical and surgical treatment should be complementary, but (2) that a recent ulcer, wherever situated is not suitable for surgical treatment except there be cause to suspect malignancy, whilst (3) in the present incomplete state of our knowledge a chronic ulcer wherever situated is best treated surgically

The third of these statements requires a little amplification It seems unlikely that the surgical treatment of ulcer will survive the test of time The condition must be preventable and when the aetiology is a little better understood the rational means of avoiding its occurrence will in all probability appear and the surgery of the upper abdomen will to a large extent disappear Until that time however surgery will probably hold the field, because its methods though crude give good, quick, and permanent results The question naturally arises as to how these results are obtained, and disregarding detail, it seems arguable that there are two broad factors—the mechanical and the chemical *Mechanically* all the operations in which the stomach is anastomosed to the duodenum or jejunum lead to a more rapid emptying of the stomach, and the ulcer is either removed entirely or side-tracked from the main food stream Partial gastrectomy removes the ulcer and the surviving stomach empties rapidly *Chemically* all these operations tend to diminish gastric acidity by the free admission of the alkaline contents of the small gut In addition gastrectomy in all its forms also removes part of the acid secreting mucosa

THE PROBLEM

For a chronic gastric ulcer the majority of surgeons favour, whenever possible a partial gastrectomy The alternatives are excision and gastro-enterostomy or cautery and gastro enterostomy , but in whichever direction the surgeon's choice may lie *all* these procedures are easy when the ulcer is accessible The operation and the problem become difficult only when the ulcer is high Gastro enterostomy alone is looked upon with disfavour because, despite statistics to the contrary, surgeons in general are dissatisfied with the results obtained It may be that the drainage and the chemical change are too far removed from the ulcer The combination of excision or cauterization with gastro enterostomy when dealing with extremely high ulcers is most difficult and not a little dangerous Gastrectomy *can* be done, but needs to be almost or quite ' total " This is not impossible, and cases have been reported where a complete gastrectomy has been done for simple ulcer The only total gastrectomy the writer has done himself was for a leather bottle malignant stomach The patient survived two years, but was quite miserable for the whole of that time Complete gastrectomy is probably never worth while, and is certainly not justifiable for simple ulceration As regards the danger of unrecognized malignant disease, a growth in the position under consideration cannot be successfully removed and is better not attempted This possibility therefore does not justify complete gastrectomy As a compromise it has been suggested elsewhere that, in performing the partial gastrectomy the general level of resection should be below that of the ulcer but that a tongue of tissue should be taken up the lesser curve to include the ulcer itself This operation resembles excision and cautery in that it is difficult, dangerous, and shocking

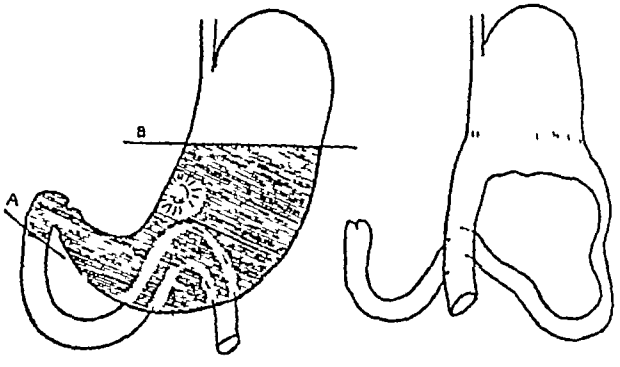


FIG 1.—Partial gastrectomy the standard operation The shaded portion between the lines A and B is removed The jejunum is anastomosed at B

THE PROPOSED OPERATION

The solution suggested is simply to perform a standardized Polya-Moynihan partial gastrectomy below the level of the ulcer The technique requires very little description The pyloric end or the duodenum is divided and the stomach turned up in the usual way It may be only at this stage that the surgeon discovers that to complete his operation as it was first intended would

require the total removal of the stomach or it may be that from the first he has recognized the impossibility of resecting the ulcer together with that part of the stomach which already he has isolated In either event the decision is made to remove as much stomach as possible up to but not including the area in which the ulcer lies In order to facilitate the anastomosis it may be desirable to dissect an adherent ulcer from its surrounding tissues and this in turn may lead to its perforation I have not hesitated to perform such a freeing of the ulcer and in one of the cases to be described a perforation occurred which was immediately closed and caused no embarrassment The anastomosis itself may be made with or without clamps according to the choice of the operator but if he is accustomed to their use it is helpful to employ an instrument made for me by Messrs Thackray of Leeds which gives a parallel grip and is particularly

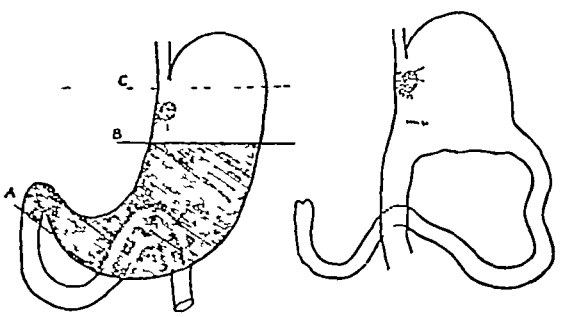


FIG 2.—The proposed operation The shaded portion between A and B is removed exactly as in the standard operation except that the ulcer is left behind Gastrectomy to include the ulcer (at the broken line C) would involve the sacrifice of the whole stomach.

useful in this special operation in which the tissues dealt with are usually much thickened in the region of the lesser curve and are difficult to hold with clamps of more ordinary type

The theoretical consequences of this operation considered by criteria similar to those employed above are that (1) *mechanically* the ulcer is left in a portion of the stomach in which the food lies for a very short time indeed and (2) *chemically*, much acid bearing fundus mucosa is removed and the alkaline jejunal content is brought into direct contact with the ulcer The possibility of an operation of this kind had been borne in mind for some months before the first patient suitable for such treatment presented himself some three years ago Since that time three other similar cases have been dealt with and a further three cases could with advantage have been treated in this way but were subjected to more serious and dangerous measures on account of the uncertainty attaching to the new method These figures drawn from one man's comparatively small practice will illustrate that the indications for the operation are by no means rare In considering these figures it is most important that it should be clearly understood that the operation has been strictly confined to really high ulcers which could not be removed together with the stomach except with the sacrifice of almost all of that organ and at great risk to the patient

REPORTS OF CASES

Case 1 —A man operated upon in February 1930 at the age of 51 Had had severe symptoms for three years becoming worse Marked hour glass deformity A gland sent for section showned *no* malignancy Is a ship's cook Has been in constant employment and excellent health since operation *X ray findings* (1) before operation (February 1930) pronounced hour glass deformity obscuring large high ulcer deformity due almost entirely to spasm (2) two years after operation immediately after food—food passes rapidly through stoma no *x* ray evidence of ulcer (3) two years after operation and 1½ hours after food—stomach empty except for a few scattered shadows and a trace of barium in the new floor formed by the jejunum

Case 2 —A woman operated upon in November 1930 at the age of 44 There was a large ulcer astride the lesser curve and one inch from the oesophagus admitting the finger tip No glands Stringy adhesions to the liver and a dense plaque of adhesions to the pancreas It was impossible to get the usual pack above the fundus Operation—resection three quarters of an inch below the ulcer At least two-thirds of the stomach removed Seen in December 1932 this patient had mitral disease with failing compensation but was perfectly happy so far as concerned appetite digestion body weight etc *X ray findings* (1) before operation (October 1930)—only small niche of ulcer showed (2) two years after operation immediately after food—meal passes rapidly through stoma no *x* ray evidence of old ulcer (3) two years after operation and 1½ hours after food—only very small trace of food remains in loop of jejunum forming bottom of stomach

Case 3 —A man operated upon in June 1931 at the age of 50 The ulcer easily admitted the end of the thumb and extended to within half an inch of the oesophagus Had it been malignant the case was clearly hopeless A gland sent for resection did *not* show malignancy Operation—resection half an inch below the ulcer No trouble with his food after leaving hospital Slight flatulence after heavy cycling or long walking but *within a month* he began a full day's work His work is very arduous as he makes concrete and lifts heavy timbers Has a good appetite Breakfast consists of fresh egg fresh bread tea and a round of toast dinner a bowl of soup potatoes and vegetables sometimes fowl or rabbit no other sort of meat tea boiled egg bread and butter and tea supper a mug of cocoa and a round of toast There is no pain or flatulence bowels are regular He takes no medicine of any sort and feels about 20 years old He has gained a lot in weight and looks and feels well *X ray findings* see Special Plate

Case 4 —A nigger keen for work but finds no work for him Operated upon in February 1932 at the age of 56 Had had symptoms since the war days Previous laparotomy at another hospital—nothing found At operation an ulcer was seen on the posterior surface of the lesser curve admitting the thumb it was adherent above the pancreas Partial gastrectomy was commenced and the ulcer perforated deliberately Above the ulcer impenetrable adhesions were found The perforation was sutured and gastrectomy performed below that level Seen in December 1932 this patient declared that he felt young and ate anything and everything which he could get *X ray findings* see Special Plate

DISCUSSION AND SUMMARY

It is apparent from the *x* ray evidence that rapid and satisfactory healing of the ulcer is promoted by this operation without stenosis of the opening into the small intestine The remaining stomach empties as speedily as is usual in partial gastrectomy generally and the post-operative pictures do not in fact suggest that any variation from the classical procedure has been made Symptomatically the four patients—admittedly an extremely small group—have spoken for themselves in so enthusiastic a fashion as to render any amplification of their testimony unnecessary These practical considerations would seem to outweigh the manifest theoretical objections that could be raised and to justify the putting forward of this procedure as a serious proposal in the surgical treatment of the most difficult type of gastric ulcer

1 The present-day attitude towards peptic ulcers is briefly summarized
2 The difficulty of dealing with very high ulcers is described
3 A new operation for this type of ulcer is proposed
4 Four cases are reported

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

289 Congenital Stenosis of the Aortic Arch

W Evans (*Quart Journ Med* January 1933 p 1) reports a study of twenty eight cases of congenital stenosis (coarctation) atresia and interruption of the aortic arch all but two of these cases had been examined at necropsy The incidence of these congenital abnormalities among subjects of post mortem examinations was found to be approximately 1 in 1 000 The average age of the patients in the present series was 11 4 years and there was a slightly increased incidence for the male sex Evans defines six types based on considerations as regards the site nature and extent of the constriction the condition of the aorta proximal to the site of stenosis the patency or otherwise of the ductus arteriosus and the relationship of the systemic and pulmonary circulations He claims that the recognition of such a classification facilitates the interpretation of the clinical findings and appearances elicited by radioscopy and obviates the necessity for postulating two or more theories to explain the pathogenesis of what he regards as anatomical varieties arising from a common process The diagnosis of aortic stenosis is discussed with special reference to the symptoms heart signs vascular signs blood pressure readings radial and femoral tracings and radioscopy A short note is added on the prognosis and the manner of death in patients presenting this congenital anomaly One of his cases serves to exemplify the importance of taking precautions in symptom free applicants for life insurance if the examiner finds a raised blood pressure excessive pulsation in the neck a forcible apex beat and an obscure cardiac murmur Four desiderata in determining the degree of stenosis present are the extent to which the system of collateral circulation has been established the absence of the aortic knuckle to the left and the prominence of the ascending aorta to the right as determined by radioscopy the degree of hypertrophy of the left ventricle and the prominence or otherwise of erosion of the ribs The frequent occurrence of infection in the walls of abnormal arteries associated with this condition influences the prognosis unfavourably leading to aneurysmal dilatation and rupture

290 Meningitis Haemorrhagica after Sunstroke

G A Hoppe (*Deut med Woch* January 27th 1933, p 133) reports an unusual case of haemorrhagic meningitis after excessive exposure to the sun Four days before being brought to hospital a somewhat bald man of 45 in whose previous history nothing of special note was found had been working in his garden under a very hot sun without any covering to his head No symptoms appeared for some hours except some slight complaint of sunburn on his head Later in the evening stabbing pains were felt in the head especially in the occipital region The pain gradually increased and later there was vomiting fever and great perspiration Next day the pain was worse but was not so severe in the recumbent position as in the erect. Fever continued and on the following day there was stiffness of the neck with mild opisthotonos Kernig's and Lasegue's signs were positive Except for somewhat brisk tendon reflexes no other signs were elicited Lumbar puncture was then performed and the cerebro-spinal fluid was found to be under a pressure of 220 mm of water diminishing to 160 mm The fluid was very haemorrhagic The Wassermann and Meinicke reactions were negative but the Nonne-Apelt and Pandy reactions were positive No tubercle bacilli were present The patient felt much better after the puncture and the headache was much diminished The temperature was raised and there was a leucocytosis of 16 000 A week later Kernig's sign was still present but less marked Three days subsequently the patient felt much better and Kernig's sign had disappeared A lumbar puncture now revealed a pressure of 20 to 110 mm water the fluid was clear and the Nonne Apelt and Pandy reactions were both negative There ensued a steady and uninterrupted recovery three weeks after admission he was discharged from hospital without any symptoms and quite capable of resuming work In the differential diagnosis the question of rupture of a cerebral aneurysm had to be considered but the gradual onset the rise in temperature the leucocytosis and the increased cerebro-spinal pressure pointed to an inflammatory process The possibilities of trauma alcoholism syphilis and cerebral tumour were all ruled out It was therefore concluded that the condition was a true meningitis haemorrhagica of an unusually severe form directly following excessive insolation

291 Santonin Erythema

K A Rombach (*Nederl Tijdschr v Geneesk* February 4th 1933 p 519) records two illustrative cases in a woman and a girl aged 7 years who had been treated by santonin for *Ascaris lumbricoides* In both cases the condition was at first mistaken for scarlet fever owing to the injection of the palate and conjunctivae and slight rise of temperature According to Abram idiosyncrasy to santonin is rare The rash may vary in character is accompanied by little or no constitutional disturbance and rapidly disappears without any ill effect as was the case with Rombach's patients

Surgery

292 Contractions of the Neck after Burns

C G Mixter (*New England Journ Med* January 26th 1933 p 190) describes a procedure for dealing with the severe contractions of the neck which not infrequently follow burns in children The deformity is very disfiguring and if untreated may cause retardation of growth and development of the mandible and distortion of the bones of the face The chin is anchored to the chest near the sterno-clavicular junction and the lower lip is drawn downwards and outwards To release the chin the scar both deep and superficial must be widely excised and an enormous deficiency results To close this gap pedicle flaps may be taken from the skin over the shoulders and upper part of the back if unaffected by the original burn but the resultant scarring of the back is a serious handicap in many cases Mixter suggests therefore that it is better to employ full thickness skin flaps with the underlying fat these are removed from the lower lateral chest wall on one or both sides In determining the amount of skin to be thus transferred it must be remembered that the defect to be filled after excision of the scar will be far greater than is anticipated The transference is accomplished by the tube graft method of Gillies the flap being raised and converted into a tube leaving both ends attached until sufficient circulation has been established from the end to be left when the other end is inserted into its new position This is usually a matter of five or six weeks The greatest width of chest wall that can be lifted from a child and still permit approximation of the skin beneath the tube is about three inches It is as well not to have the tube more than three times as long as the width of the flap on account of the danger of ischaemic necrosis Illustrations are given of the various stages of this procedure with which the author claims to be able to obtain sufficient tissue to fill the defect with but little scarring

293 Operations on Typhoid Carriers

N V SWENSSON (*Tidsskr f d Norske Laegefor*, January 15th, 1933, p 63) prefaces his account of fourteen typhoid carriers, on whose gall-bladders operations were performed, with the general proposition that the source of every case of typhoid and paratyphoid is a carrier In theory it should be sufficient to control carriers so effectively that they are no danger to the community But in practice carriers are apt to fail to report themselves, and sooner or later they behave as if they were not a danger to their neighbours Of the fourteen cases under review only three were typhoid carriers, the remainder were paratyphoid carriers There were only two men to twelve women, and as many as twelve suffered from gall-stones Cholecystostomy was performed in two cases, and cholecystectomy in the remaining twelve There were three operation deaths, five, two, and nineteen days respectively after the operation All three were elderly folk, on whom the operation was not urged by the hospital authorities, it was undertaken at the express wish of the patients and their relatives Of the survivors, one had been operated on too recently for results yet to be claimed There thus remained ten patients, nine of whom had ceased to discharge typhoid or paratyphoid bacilli after the operation In the one case in which the cholecystectomy was a failure, gall-stones as well as paratyphoid bacilli were found in the gall-bladder This observation provides no support for the theory that the success of this operation on carriers depends on the removal of gall-stones, the presence of which in the gall-bladder is supposed to encourage the persistence of typhoid or paratyphoid bacilli In seven cases there had been signs of disease of the gall-bladder before the operation, and in these cases the greater justification for it helped the author to decide to perform it Before doing so he tried to sterilize the gall-bladders of all his fourteen patients by giving them thymol, iodine, and animal charcoal, invariably without effect As many as seven of the patients (six cases of paratyphoid and one of typhoid) did not remember having suffered from any disease—an observation which shows how easy it is to overlook a carrier

294 Tuberculosis of the Thyroid Gland

A VAN RAVENSWAAY and A C VAN RAVENSWAAY (*Amer Journ Surg*, January, 1933, p 128) record a case of tuberculosis of the thyroid gland, which they describe as a chronic specific process rarely of clinical importance, and seldom diagnosed before operation It is usually confused with malignancy, chronic non-specific thyroiditis, or some form of goitre Occurring at any age, it is rarely associated with signs of tuberculosis elsewhere, although tuberculous lesions of the gland have been reported in 4 to 12 per cent of patients dying from active tuberculosis and in an average of 0 34 per cent of thyroid glands removed at operation for all causes The authors state that among the factors which may be concerned in the development of this condition are pre-existing goitre, the presence of lymphoid tissue within the gland, hyperthyroidism and a normally high tissue resistance to tuberculosis The types of lesion seen range between two extreme types (1) a necrotic type, with caseation or liquefaction, and (2) a fibrotic type, associated with giant and lymphoid cells A pre operative diagnosis is only possible by aspiration of a cold abscess or by examining material from a draining sinus The prognosis following surgical treatment is usually good If, however, a large amount of thyroid tissue is destroyed or removed, myxoedema may result In untreated cases sinuses occasionally form which may penetrate to the skin the trachea, the oesophagus, or the mediastinum The case recorded by the present authors was the only one in a series of 590 thyroidectomies, the pre-operative diagnosis was Riedel's struma or early malignancy Macroscopical examination of the removed gland suggested carcinoma, but a microscopical study clinched the diagnosis as tuberculosis

Therapeutics

295 Treatment of Cardiac Arrhythmia by Potassium Salts

J J SAMPSON and E M ANDERSON (*Journ Amer Med Assoc* December 31st, 1932, p 2257) administered orally potassium salts to a group of fifty-eight patients who were known to have auricular or ventricular ectopic beats or paroxysmal auricular or ventricular tachycardia for an appreciable length of time Five different salts were tried—namely, the chloride, iodide, bromide citrate, and acetate, all with apparently identical effects when applied to the same patient As a control measure sodium acetate was given, and was found to produce no change in the arrhythmia One patient received in addition an intravenous injection of potassium chloride without ill effect, but with no demonstrable advantage over the oral route In twenty-nine cases complete eradication of the arrhythmia followed the exhibition of potassium salts, two patients in this series had ventricular ectopic beats accompanying an overdose of digitalis Improvement began within twenty to ninety minutes of the administration, and the effect so obtained was found to last about three to eight hours The dosage ranged from 1 to 16 grams Increased age and the presence of organic heart disease seemed to lower the threshold of demonstrable effects, and smaller doses were effective No serious clinical disturbances were caused apart from some intestinal bleeding after diarrhoea in one case Gastric distress, abdominal cramps, and diarrhoea were rare, and, contrary to anticipation, definite diuresis was uncommon A considerable individual variation in responding to the treatment was found to exist, and some of the possible reasons for this are discussed Apart from too small doses being tried in some cases at first, certain questions such as the relation of calcium to the potassium concentration in the serum and the tissues are being studied

296 Specific Treatment of Pneumonia

P MARTINI (*Münch med Woch*, January 20th, 1933, p 100), considering the serum treatment of pneumonia, emphasizes certain difficulties incidental to the method The absolute necessity for type specific serums and the extremely large doses required (100–200 c cm) make the treatment very expensive Secondly, the fact that the serum is properly effective only in the earliest stages of the disease makes it more or less inapplicable in the great majority of the cases, since they are available for treatment only relatively late in the development of the infection Specific serum treatment, while to a great extent preventing the further advance of the pulmonary processes, does not lead to immediate resolution, so that the earlier the treatment is begun the less will pathological changes become established in the lungs Moreover, there is some doubt as to the time during which serum retains its potency *in vitro*, the serum of patients convalescing after pneumonia may lose all such properties in a relatively short time For such reasons as these serum therapy is rarely used in Germany Specific anti pneumococcal therapy includes, as well as type specific serums, certain quinine compounds, among which optochin (ethyl hydrocupreine) and solvochin (a quinine urethane compound) are widely used in Germany and America Analysis of the results of Cahn-Bronner shows a fall in mortality from 20 per cent to 5 per cent as a result of the application of the latter compound In the hands of the present author solvochin and optochin reduced the mortality from 27 per cent to 19 and 13 per cent respectively These compounds were found by Park, Bullowa, and Rosenbluth to reduce the mortality in Type I pneumococcal infection from 33 per cent to 19 per cent, but relatively little success was met with in Types II III, or IV In a series of observations on 277 cases of pneumonia Martini treated eighty three with solvochin and twenty-three with optochin, and found that in order to obtain a satisfactory crisis it was necessary to institute

THE REPAIR OF SKULL DEFECTS BY A NEW PEDICLE BONE-GRAFT OPERATION *

BY

R WATSON JONES, B SC, M CH ORTH, F R C S

LIVERPOOL

The very considerable increase in the number of road accidents during the last ten years has led to a corresponding increase in the incidence of severe head injury with compound and comminuted fracture of the vault of the skull The *débridement* of wounds and the removal of depressed fragments is in these cases a matter of urgency Moreover, in a region where infection and pressure from displaced bone may be of the utmost significance, the emergency surgeon is usually justified in abandoning the conservative methods which he would apply to compound fractures elsewhere In actual practice displaced and detached fragments of bone are freely removed It follows that we are seeing to day an increasing number of patients with skull defects These defects, through which may be seen and felt the pulse of the cerebral circulation, are associated with a certain definite risk of injury to the unprotected meninges and cerebrum It may be true that the risk is not in all cases a serious one but from the patient s point of view it cannot be overestimated He is always conscious of his vulnerability, and lives in constant fear of further injury The lay-man s point of view may be judged by the jealous care with which the average mother will guard the fontanelle of her infant and by the very high damages which special juries will award in cases where the only demonstrable abnormality is a hole in the skull

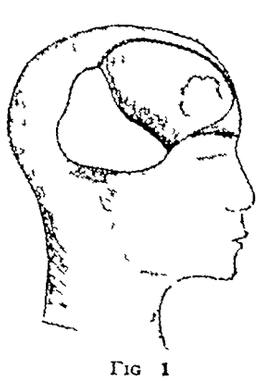


FIG 1

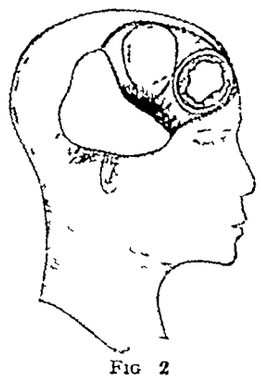


FIG 2

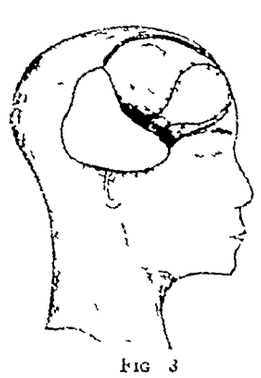


FIG 3

FIG 1—Flap of scalp turned back to expose the skull defect and an equal area of healthy bone behind it

FIG 2—The margin of the defect is cleared of pericranium and the bone freshened A flap of bone and pericranium is marked out of exactly the same size and shape as the defect A pedicle attachment to the temporal fascia is preserved

FIG 3—The pedicle bone graft is swung across and stitched into its new position

CHOICE OF TREATMENT

It must be acknowledged that as a device of modern surgery nothing could be more crude than the skull cap which incorporates a curved metal plate to cover the gap in the skull It may be that while it is actually worn the brain is adequately protected, but such an appliance does nothing to relieve the associated psychological disturbance On the contrary, it provides the patient with a constant reminder that he must exercise due care to avoid injury, and it inevitably excites the curiosity and the morbid sympathy of his fellow men Not only so, but it is a protection applicable only to men, and an increasing number of these cases are occurring in women Finally, in cases where the injury has involved the frontal region there is a serious facial disfigurement which remains unrelieved

In order to overcome the disadvantages of the skull cap attempts have been made to repair gaps in the cranium by operative treatment, using either plates of foreign material or bone transplanted from the ribs the scapula, or the pelvis There has, however, been a tendency to regard all methods of operative repair with some disfavour, owing to the reputed frequence of persistent post-operative headache It is probable that this is largely due to the use which has been made of foreign material Provided that there is no increase in the intracranial tension, it is inconceivable that the simple closure of a gap in the skull should account for persistent headache But if the gap is repaired with foreign material which will give rise to irritative fibrosis and scar tissue formation, the thickening and adhesion of the meninges could readily account for such symptoms The transplantation of bone from other parts of the skeleton presents very real difficulties If the gap to be closed is a large one, the possible sources of bone are limited to the scapula and the ilium, and in neither case is it possible to cut a graft with the normal curved contour of the skull This is quite essential with large grafts if there is to be good contact between the periphery of the graft and the margin of the defect, without any pressure being exerted on the meninges and brain in the centre of the defect Moreover, in frontal injuries the disfiguring depression can only be cured with a completely successful cosmetic result if the graft is convex Not only are there difficulties in securing grafts of suitable size and of suitable shape, but there is the further problem of fixation of the graft to its bed The gap in the skull is unlike any other ununited fracture, and none of the methods of fixation applicable elsewhere can be applied to the skull

The demands of a successful bone grafting operation are

1 The graft must be of autogenous bone
2 It must be possible to cut a graft of any size up to three or four inches in diameter
3 The graft must have the same curved contour as the skull
4 There must be firm contact between the periphery of the graft and the margin of the defect, and there must be contact of raw bone with raw bone
5 No pressure must be exerted on the exposed meninges and brain
6 The graft must be completely immobilized

Consideration of these problems made it obvious that there was only one possible source for such a graft, and that was from the cranium itself Only in the skull itself is there available an unlimited area of bone with the necessary convex curve Would it be possible to fashion a graft of bone from the outer table, keeping the plane of division strictly to the diploë and leaving the inner table intact and uninjured? If this is technically possible all the difficulties of the operation are solved The graft, which is of autogenous bone may be cut of any size and will be of the correct shape There is no difficulty in securing apposition of the raw surface of the

* Based on a clinical demonstration (with cinematograph film) at a meeting of the Liverpool Medical Institution November 10th 1932.

graft with the raw freshened margin of the defect The pericranium which may be left attached to the graft and projecting beyond it as a surrounding fringe will facilitate fixation in the new position The last step in the evolution of the operation was the preservation of a blood supply by leaving the flap of pericranium and bone attached by a pedicle to the temporal region so that the vitality of the transplanted tissues was maintained

TECHNIQUE OF OPERATION

A flap of scalp is turned back with its base over the temporal region exposing the defect in the skull and a corresponding area of uninjured bone either behind or in front of the defect (Fig 1) The incision is planned in such a way that any puckered broad or adherent scar remaining from the emergency operation is excised The greater part of the scar will subsequently be covered with hair and in frontal injuries the lower incision should follow the line of the eyebrow The gap in the bone is defined the pericranium is removed round its margin and the exposed bone freshened and rawed A flap of pericranium equal in size and shape to the area which has

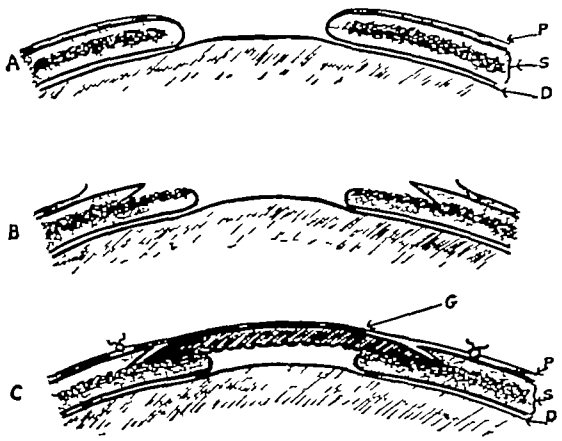


FIG 4—Further fixation of the graft is secured by undercutting the margin of the rawed bone (B) and slotting the graft under the overhanging edge (C) P pericranium S outer table diploe and inner table of skull D dura mater G graft.

been cleared is marked out and left attached by a pedicle to the temporal region (Fig 2) The pericranium is raised for a third of an inch round the whole circumference of the flap but apart from this narrow free edge its attachment to underlying bone is not disturbed A very sharp thin bladed osteotome is used to elevate the outer table care being taken to keep strictly to the plane of the diploë so that on the one hand the graft is not unduly thin and on the other hand the inner table is not encroached upon A pedunculated flap is now raised consisting of bone exactly equal in size and shape to the defect and having a third of an inch projecting fringe of fibrous pericranium The flap is swung across and stitched in its new position (Fig 3) Extra fixation may be secured by undercutting the margin of the freshened area of bone round the defect and slotting the edge of the graft beneath the overhanging rim (Fig 4)

REPORT OF A CASE

A youth aged 22 was referred to me by Dr Reid of Wrexham He had been kicked on the head by a horse and had sustained a compound comminuted depressed fracture of the right frontal bone The wound had been excised by Dr Reid and the depressed fragments of bone removed An excellent recovery had been made and there were no intracranial complications There was however a disfiguring puckered scar above the right eyebrow with a very obvious depression of the forehead above this The gap in the skull measured two by two and a half inches and cerebral pulsation was clearly visible The reconstruction operation was deferred until six months after the injury A pedicle bone graft was then transplanted from the parietal to the frontal region Convalescence was uneventful and now six months after operation the youth regards himself as completely cured. There is no cosmetic defect the graft being firmly fused in its new position and capable of withstanding heavy pressure and percussion without symptoms There have been no headaches and no other symptoms since operation. The parietal region from which the graft was removed cannot be distinguished from normal bone either clinically or radiologically

SUMMARY

A new operation is described for the repair of defects in the vault of the skull by a pedicle bone graft The advantages of the operation are that the graft may be cut of any size it has the same curved contour as the skull it lives through its pedicle there is excellent fixation of the graft to its bed and no pressure is exerted on the exposed meninges and cerebrum A case is reported in which the operation has been successfully performed

PEDUNCULATED THROMBUS OCCLUDING THE LEFT AURICLE

BY

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(With Special Plate)

Apart from the vegetations of endocarditis true intracardiac thrombi are uncommon Two types are known loose ball thrombi and pedunculated thrombi which may become detached and persist as ball thrombi Ball thrombi do not become organized are frequently multiple and rarely give rise to symptoms Mitral stenosis is usually an associated lesion Pedunculated thrombi on the contrary are generally organized frequently give rise to symptoms similar to or even indistinguishable from those of mitral stenosis and are found in a heart which except for the local effects of the thrombus—thickening of the valves due to trauma and compensatory dilatation of the right ventricle—would otherwise be normal The left auricle is the more usual situation for intracardiac pedunculated thrombi The following case of a pedunculated thrombus of the left auricle is of interest both clinically and pathologically

Clinical History

A woman aged 39 a screw turner was admitted to the Queen's Hospital Birmingham on April 18th 1932 she was anaemic in appearance but showed no evidence of cardiac failure Her symptoms began eighteen months previously when owing to frequent attacks of tonsillitis her tonsils were removed Since then she had complained of increasing weakness fatigue and shortness of breath on the slightest exertion with the result that she had been compelled to stop work a frequent symptom was a feeling of extreme faintness on bending down During the last four months she had been more or less bed ridden on account of these symptoms but there was no evidence of cardiac disease until a week before admission the development of a presystolic apical murmur suggested a clinical diagnosis of mitral stenosis without cardiac failure There was no history of rheumatic disease

Examination

The patient was a small pale woman wasted and with slight exophthalmos slight oedema of the ankles was also present Blood pressure was 110/74 pulse rate 90–100 regular rhythm small volume poor tension The apex beat

treatment during the first three days later than this the temperature fell by lysis and the subsequent progress was less satisfactory While the use of optochin is not without risk this is minimal if the basic form is used The author regards solvochin therapy as the method of choice until a wider applicability of the serum treatment becomes possible

297 Quinine Insufflation in Trichomonas Vaginitis

Vaginitis due to infection by *Trichomonas vaginalis* infection is resistant to ordinary antiseptic treatment but according to J H SURE and J E BERCEY (*Amer Journ Obstet and Gynecol* January 1933 p 136) responds splendidly to quinine insufflations They record seven cases of this condition six of which had been previously treated without success by various other applications The usual amount of quinine sulphate which was introduced into the vagina was about 15 grains The insufflation was repeated at daily intervals for three or four days after which no living protozoa were discoverable The symptoms cleared up with similar rapidity Even after long intervals without subsequent treatment there was no return of the symptoms or of the protozoa Although the number of cases is small the fact that cure was invariably obtained has led the authors to commend this simple treatment for trial on a larger scale in general practice

Anaesthetics

298 General Anaesthesia with Avertin

J M WOLLESEN (*Hospitalstidende* November 10th and 24th 1932 pp 1320 and 1375) reports from the Nakskov Hospital in Denmark his experiences of 100 cases of avertin anaesthesia It was employed only in those cases in which it was anticipated that local or lumbar anaesthesia would not be adequate When avertin was first introduced it was anticipated that the local action of the drug on the rectum and colon would be injurious and provoke colitis but in none of the 100 cases was there any sign of local irritation such as diarrhoea or even tenesmus No pulmonary complications followed the anaesthesia and operation and the author concludes that with proper technique and dosage avertin anaesthesia may be considered free from danger He remarks however that the great hopes entertained of avertin as an anaesthetic free from discomforts and risks to the patient and providing the best working conditions for the operator have been only partially realized Complete anaesthesia can be achieved only by doses which are apt to be dangerous On the other hand avertin has the advantage of giving the operator free access to the patient's head and in conjunction with a few cubic centimetres of ether it ensures satisfactory relaxation of the muscles On psychic grounds it is a useful anaesthetic for nervous patients and children the anaesthesia it induces is not followed by nausea vomiting or headache While the technique of its administration is simple satisfactory ether anaesthesia requires a highly skilled anaesthetist The tendency of avertin to paralyse respiration can be met by the inhalation of a little ether The general anaesthesia induced by avertin lasts a couple of hours and the operator is therefore not hurried Wollesen thinks that avertin anaesthesia presents so many advantages over the older methods that its introduction must be regarded as epoch making

299 Spinal Anaesthesia

T GRUESCO and A DRAGOS (*Lyon Chir* January–February 1933 p 48) give a detailed report of the conclusions formed during 25 years of experience with spinal anaesthesia in 8 000 cases Stovaine was used in 4 500 cases novocain in 3 300 cases and sinecaine or tutocaine in the remaining 200 cases Formerly local anaesthesia was much used for operations for inguinal hernia but this is now being replaced by spinal anaesthesia which is very quick to take effect and gives perfect relaxation of the abdominal muscles with far less danger of suppuration Five minutes after the injection of 1 c cm of fluid it is possible for the operation to begin This type of operation accounted for 73 6 per cent of the cases in this series It was also found that spinal anaesthesia was very satisfactory for abdominal operations such as laparotomy for appendicitis splenectomy genital prolapse nephrectomy or intestinal obstruction There were 4 3 per cent of these cases the anaesthesia was in every case found to be sufficient and without complication It was also used for operations on the lower limbs on the genital organs and in the ano-perineal region but was abandoned for high operations in favour of a local anaesthetic Until 1913 stovaine (0 12 cg) either employed alone or in conjunction with strychnine was the anaesthetic most commonly used but this has since been largely replaced by novocain and in consequence after complications have been considerably reduced Headache occurred in about 8 per cent of cases retention in 3 per cent nausea in 10 per cent and vomiting in 5 per cent. of the whole series There was no death or permanent disability It is emphasized that the amount of cerebrospinal fluid withdrawn after the puncture should be as little as possible in order to avoid the risk of headache The authors conclude that they have found novocain in 8 to 10 per cent solution to be the ideal spinal anaesthetic for the majority of operations on the abdomen the genital organs and the lower limbs

300 Administration of Anaesthetics in New York

Basing his conclusions on a questionary distributed to the hospitals in the State of New York F BORTONE (*Amer Journ Surg* January 1933 p 59) criticizes the present incompleteness and inadequacy of anaesthesia records and advocates the more widespread employment of qualified anaesthetists He found that nurses administered the greater number of anaesthesias and that their mortality rate was 35 76 per cent higher than that of the physician anaesthetist General anaesthesias far exceeded in number regional induction gas-oxygen-ether being the most popular and having a mortality rate ten times lower than that of neocaine (including novocain) the most common regional anaesthetic Yet he argues there is a large field awaiting the regional specialist but he should be a physician rather than a surgeon as is at present too often the case The mortality rate would probably be reduced considerably if such were the common practice for spinal anaesthesia is more hazardous than is always realized Bortone regards the training in administration of anaesthetics as being lamentably inadequate and emphasizes the importance of appointing more physician anaesthetists several hospitals being still entirely lacking in this respect

Obstetrics and Gynaecology

301 Termination of Pregnancy by X Rays

H WINTZ (*Münch med Woch* February 3rd 1933 p 172) reviews the present position of the radiological production of abortion Ganzoni and Widmer induced spontaneous abortion in sixty five out of seventy three cases and Harris and Kean obtained the same result in thirty seven out of forty cases These workers however found that there was a latent period of some four to five weeks before the uterus emptied and the subsequent haemorrhage might continue for from five to thirty five days It is thus understandable Wintz remarks that some of the patients sought other means of abortion in the period of waiting The efficacy of this method depends on the fact that young and growing cells are much more sensitive to *x* rays than the older cells of slower metabolic activity hence the developing foetus can be fatally injured without any accompanying injury to the uterus Careful consideration must however be given to the relative *x* ray dosage required for abortion and ovarian injury (castration dose) Here Wintz differs from Ganzoni and Widmer The last authors state that

after abortion had been induced there was in some cases only a temporary amenorrhoea, and a later pregnancy occurred, but, as Wintz points out, the majority became permanently sterile He therefore deduces that the dose of radiation to which the foetus was exposed was definitely greater than the castration dose The result produced by x-radiation is really that of a missed abortion, and the long latent period before expulsion of the uterine content cannot be regarded without anxiety It would therefore increase the value of the method if, by employing a somewhat greater dose and a wider area of application so great a radiation of the ovaries ensued that the corpus luteum might degenerate more quickly, but the period before expulsion would still be about fourteen days An especial danger of radiation abortion is the possibility of the foetus going to full term after inadequate radiation, followed by the delivery of a child severely injured by the rays Cases are cited in which monsters have actually been delivered as a result of this type of mishap Special stress is laid on the necessity for extreme caution in using the method in young women under the age of 30 unless the indications for emptying the uterus are absolutely unequivocal, for castration is almost certain In cases of pulmonary tuberculosis, where the possibility of future pregnancies is best avoided, the method is definitely indicated Treatment in hospital is regarded as absolutely essential The choice of the method should never be made a matter for the patient, but should only be reached as a result of careful consultation with the appropriate specialist

302 Radiographical Pelvimetry in Pregnancy

G E MOORE (*Surg., Gynecol and Obstet*, January, 1933, p 101) commends the procedure of estimating the pelvic measurements during pregnancy, with a view to detecting any abnormalities or any disproportion between the maternal passage and the foetal head He believes that such an estimation should be made in the case of all primiparae as soon as pregnancy is diagnosed, and in all multiparae with histories of difficult labours All obstetrical cases should be examined thus just before reaching term, if there is any evidence of disproportion cephalometry should be performed Moore describes the method he has devised, it is similar to that of Thoms in that a sheet lead scale is superimposed in the plane of the pelvic strait, but the type of scale is different, as is also his way of making the measurements He discusses others of the numerous methods in vogue, and concludes that any of the good recognized ones is sufficiently accurate for all practical purposes In this way, he remarks, there might be brought about some manifest reduction in the obstetrical death rate H THOMS (ibid, p 97) insists that at present an accurate survey of the superior pelvic strait in the living subject can only be secured by radiographical pelvimetry He describes a type of pelvis which he has found to be intimately associated with the incidence of occipito-posterior positions The chief variation from the normal is a prolongation of the antero-posterior diameter in combination with a moderate shortening of the transverse diameter, such an abnormality is said to be more common than is usually suspected Thoms concludes that, unless an accurate survey is made of the pelvis of every primiparous patient, obstetrics cannot be considered to be scientific

303 The Anterior Lobe of the Pituitary and Mammary Secretion

S MANISCALCO (*Ann di Ostet e Ginecol*, November 30th, 1932, p 1617) describes the case of a 3-para, aged 31, who continued to secrete milk for five months after spontaneous abortion in the third month The appearance of a "pregnancy mask" had persisted, and was unusually well marked The facial and skull bones suggested the appearances of acromegaly, and the urine contained the anterior pituitary hormone in considerable quantities Radiologically the sella turcica did not appear abnormal It is suggested that this hormone may be closely related to the lipoid galactogenic hormone extracted by Gentili from the decidua

Pathology

304 Dogs and Weil's Disease

A KLARENBEEK and J VOET (*Nederl Tijdschr v Geneesk* January 28th 1933, p 398) state that Weil's disease in the dog is by no means rare In Holland it has been known for many years and all cases of acute jaundice in the animal can be regarded as of this nature Epidemics, however, have never occurred in Holland as they have in England and in Switzerland, but the cases have always been sporadic In the Dutch Indies, and especially Sumatra, many cases have been seen The disease chiefly occurs in the autumn It often runs an acute course, and this differs little from Weil's disease in man Jaundice may occur, but is often absent, and the symptoms are then merely those of nephritis The diagnosis is made by the laboratory methods employed for the human disease, such as inoculation of guinea pigs cultures, dark-ground illumination, and the determination of lysins A passage of leptospirae into the urine takes place, but is not a chronic condition, as in the rat The authors are of the opinion that in some cases the dog serves as a source of infection for man

305 The Normal Renal Threshold for Dextrose

R A CAMPBELL, E E OSGOOD, and H D HASKINS (*Arch Int Med*, December, 1932, p 952) report a series of experiments designed to determine as nearly as possible the normal renal threshold for dextrose, in view of the fact that there has been hitherto no agreement in this respect Healthy male medical students were examined between the ages of 20 and 32, in none of these had there been any previous glycosuria Varying amounts of dextrose were administered, starting with 150 grams in a 50 per cent solution and increasing to 300 grams In five out of six subjects to whom 300 grams were given positive results were obtained, but, since gastric haemorrhage occurred in one of these, the amount was reduced to 250 grams, and no more such accidents occurred After the dextrose had been taken the subject was asked to urinate every five minutes A control specimen taken before the experiment, and those taken during it, were boiled for two minutes in Benedict's solution directly over a flame When the test became faintly positive venous blood was withdrawn for sugar estimation The time between urination and the completed withdrawal of the blood averaged about five minutes In several cases which did not show glycosuria blood was withdrawn at thirty and at forty-five minutes to determine the maximum blood sugar level reached Out of thirty four subjects four could not urinate, eight did not have glycosuria, and twenty-two gave satisfactory results The authors remark that, while the series is not large, it was clearly evident that there was a marked variation in the normal renal threshold for dextrose, and that the threshold was variable in the same subject Filtrates obtained by the zinc sulphate-sodium hydroxide method of precipitating blood proteins were found to give true sugar values within a range of about 7 mg per 100 c cm Filtrates obtained by the tungstate precipitation method gave results within a narrow range, averaging 21 mg higher than the true sugar figure The authors conclude, therefore, that tungstate methods are clinically satisfactory, and this factor (21 mg) can be used to transpose results from one method to the other They add that it seems to be impossible to produce an alimentary glycosuria in some normal persons, even when large amounts of dextrose are ingested The renal threshold for true sugar ranges from 99 to 228 mg per 100 c cm, 80 per cent of cases have values between 140 and 190 mg Any statement as to a normal renal threshold should therefore allow for wide variation The authors suggest, from a calculated probable error of 15 5 mg and the mean of 151 mg in this series, that there is a likely range of 105 to 200 mg for true sugar, or from 125 to 200 mg if the tungstate precipitation method is employed

was in the fifth space, three and a half inches from the midline and was forceful and heaving A presystolic thrill was felt all over the praecordium more marked at the cardiac apex At the mitral area the first sound was loud and slapping and was preceded by a crescendo presystolic murmur At the pulmonary area the second sound was accentuated Electrocardiogram sinus rhythm 80, normal auriculo ventricular conduction times right ventricular preponderance, angle 120 degrees, slurring of QRS in Lead III, inverted T wave in I and II, P wave diphasic

Respiratory system was normal, except for a few rales and rhonchi at bases and in axillae The liver and spleen were not palpable, and there was no ascites Blood picture 4 140 000 red cells per c mm haemoglobin 48 per cent, colour index 0 58, white blood cells 22,000 per c mm, polymorphs 83 25 per cent

Progress

On the second day after admission, since the patient was reasonably well and able to be moved without discomfort, she was sent to the *x*-ray department There she suddenly become dyspnoeic and distressed she was very pale, with a cold clammy skin and air-hunger was marked the general appearance resembling the picture seen in severe haemorrhage The pulse was feeble and rapid the heart sounds extremely faint no thrill was felt and no murmur was audible Stimulant treatment provoked no response Oedema of the lungs developed and the patient died about fifteen hours after the onset of these severe symptoms At no time was her pallor replaced by cyanosis

Post-mortem Findings

The pericardium contained a slight excess of fluid The right auricle and right ventricle were dilated but there was no ante mortem thrombus The left ventricle was normal The left auricle was filled by a mass the size of a large hen's egg attached by a firm pedicle to the interauricular septum at an area posterior to the foramen ovale, which was not completely closed The tumour (Fig 1) measuring 6 × 3 5 × 3 5 cm was slightly lobulated yellowish brown in colour gelatinous in consistence and contained areas of haemorrhage The mitral valve appeared slightly thickened but there were no old or recent vegetations and the mitral orifice was of normal size There was no evidence of any primary valvular disorder Microscopically the auricular tumour " showed areas of red and white blood cells granular debris and fibrin In the more completely organized areas were polymorphonuclear and plasma cells, newly formed thin-walled blood vessels and fibroblasts In places the scanty rather stellate fibroblasts in a clear matrix resembled myxomatous tissue (Figs 2 3 and 4)

COMMENTS

There are certain features in this case which belie the presumptive diagnosis of mitral stenosis One would expect cyanosis and venous congestion in a case of mitral stenosis which was so severe as to cause the patient to be bed ridden The pallor can be explained by the intermittent blocking of the mitral orifice, there was no continuous damming of the venous circulation, yet sufficient impediment to cause an anaemia of the tissues A feeling of faintness on bending down was in all probability due to the alteration of position causing the thrombus to rest on the mitral orifice and to occlude it, so producing a sudden systemic anaemia

Of particular interest is the comparatively sudden death which does not usually occur in uncomplicated mitral stenosis On changing the position of the patient the mobile tumour occluded the mitral orifice, the tumour had by then attained such a size that it could not be dislodged and the patient died from failure of the blood to pass through the mitral orifice Although the latter was normal in size, electrocardiographic examination showed a diphasic P wave which has been considered characteristic of mitral stenosis due to valvular disease

A common feature of previously reported cases has been transitory discoloration of the extremities with a state of mild shock Occasionally gangrene of all the fingers and toes has been noted These signs have been considered diagnostic of intracardiac thrombi Although this patient had attacks of faintness or mild shock there was never any discoloration of the extremities No cause could be found for the origin of the " tumour " there were no dilated veins on the interauricular septum the auricular contractions were quite regular, the mitral orifice of normal size, and the only abnormality was a slight patency of the foramen ovale

I am greatly indebted to Dr Cloake for permission to publish this case, and also for his kind assistance and that of Dr Neale

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Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

CERVICAL RIB WITH VASCULAR COMPLICATIONS

(With Special Plate)

Cervical ribs causing vascular complications are rare In a recent paper Professors Telford and Stopford[1] have reported three such cases The conclusions they draw are that the arterial condition is one of spasm followed by thrombosis, the spasm being induced by the continued irritation of those sympathetic nerves supplying the artery The sympathetic nerve supply of the artery below the insertion of the pectoralis major is received from the main nerve trunks, and it is these sympathetic fibres which are compressed against the cervical rib and consequently irritated while still an undistributed bundle on the under surface of the lowest trunk of the plexus They have shown that the vascular complications depend entirely upon the distribution of the sympathetic nerve fibres in the lowest trunk The old view that these complications are due to actual mechanical compression of the subclavian artery would still appear to have certain advocates, and in a recent paper Gladstone and Wakeley[2] have stated that " the symptoms caused by cervical ribs are those due to pressure upon the subclavian artery and brachial nerve trunks " Professors Telford and Stopford have, I think, proved conclusively that actual mechanical pressure on the artery does not occur in those cases where the vascular symptoms are predominant In view of the fact that these conclusions do not appear to be generally accepted, I feel that an account of the following case, which entirely corroborates their finding, is justified

On October 2nd 1931 a man aged 24 consulted me and gave the following history Twelve months previously he first noticed a feeling of general tightness of the left arm and hand whenever he became excited In February 1931 while riding a motor cycle he felt a sudden pain in his left arm and hand and noticed that the latter had become cold and very blue At frequent intervals after this date he developed attacks of cramp in all the fingers associated with a dead white appearance of the skin The cramp would pass off after a short time and as the fingers regained their normal colour he would feel a tingling sensation

On examination the left hand was cold and blue, there was no definite wasting of the thenar or hypothenar muscles There was slight anaesthesia chiefly to pin prick over the dorsum of the terminal phalanx of the middle finger but otherwise no involvement of the sensory nerves was manifest

[1] Telford E D and Stopford J S B *Brit Journ Surg* 1931 xviii No 72
[2] Gladstone, R J, and Wakeley, P G *Journ Anat* April 1933 p 334

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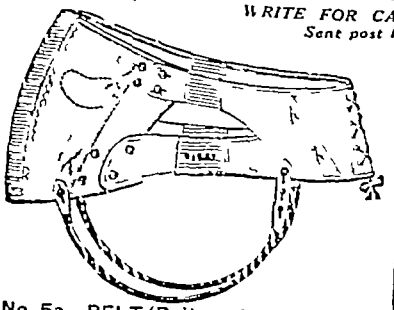
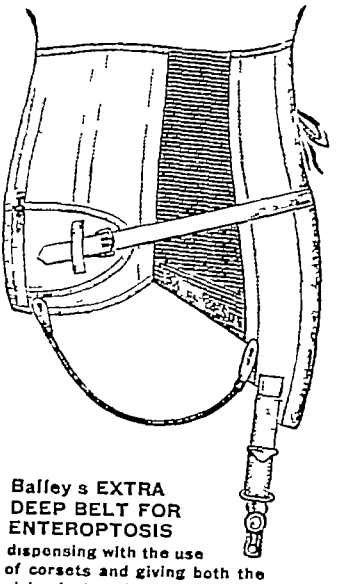


No 5a BELT (Bailey s Patent) FOR FLOATING KIDNEY



Bailey s EXTRA DEEP BELT FOR ENTEROPTOSIS
dispensing with the use of corsets and giving both the abdominal and waist support.

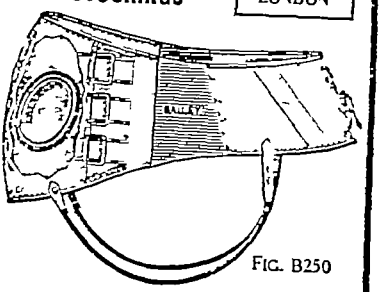


FIG. B250
(Showing Inte ior of Cup.)
SPECIAL BELT FOR AFTER COLOSTOMY

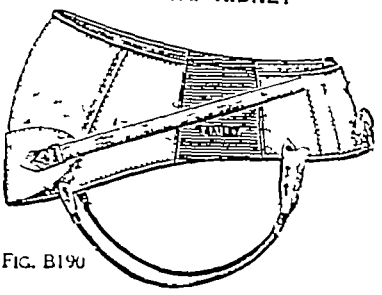
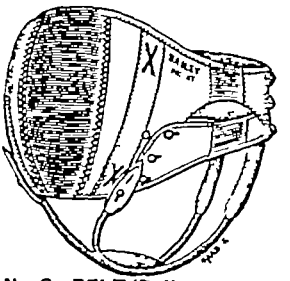


FIG. B190
BELT FOR ENTEROPTOSIS



No 3 BELT (Bailey s Patent) FOR PROLAPSUS UTERI

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The subclavian and axillary arteries showed excessive pulsation The pulsation of the brachial artery was however markedly diminished and the pulsation of the radial artery at the wrist was barely perceptible Three weeks later just prior to operation I was unable to detect any pulsation in the radial artery or in the brachial artery below the insertion of the pectoralis major Apparently during the period of three weeks after my first examination and just prior to the operation he had experienced a sudden intense pain in his arm while putting on his coat This symptom undoubtedly indicated the rapid spread of the thrombosis which completely obliterated the pulse On examination of the neck a well marked cervical rib could be palpated on both sides This was confirmed by an *x* ray photograph (See Plate)

On October 25th I explored the left cervical rib under general anaesthesia The subclavian artery showed no sign of compression against the cervical rib in fact it showed what appeared to be excessive pulsation right into the axilla It could be easily moved away from the cervical rib and was not in actual contact with it The lower cord of the brachial plexus however was lying in close and tight contact with the cervical rib The cervical rib was about two inches in length and was fixed by a very broad bony attachment to the first rib The lower cord and artery were gently retracted outwards and the rib was shaved off at its attachment to the first rib the cord and artery were then retracted inwards and the upper end of the rib cleaned and resected The upper end was in addition smoothed with bone-cutting forceps The rib and its periosteum were then removed The artery did not alter its position but it was noticed that the lower cord of the brachial plexus now appeared to be quite free from all tension

After history.—One day later the hand and arm were completely free from pain When discharged on November 6th 1931 slight pulsation was noticed at the wrist On February 6th 1932 there was no pain and no anaesthesia the pulse at the wrist and elbow was equal to that of the right hand and the circulation of the hand was normal

Conclusions

1 It would appear that this is an earlier case than those reported by Professors Telford and Stopford and had not reached the stage of gangrene of the fingers

2 The spread of the thrombosis is extremely rapid when it once begins in the main vessels In this case when first seen the pulse was perceptible but in three weeks time it had completely disappeared

3 The complete recovery of pulsation in the brachial and radial arteries after operation shows that an early thrombus can be absorbed

4 The necessity for early operation is apparent otherwise gangrene of the fingers is an inevitable sequel

Manchester R. L Newell M D F R C S

RETROPERITONEAL SARCOMA

(With Special Plate)

The photograph reproduced is of a retroperitoneal tumour which involved and embedded the right kidney It was removed from a man of 55 a bus conductor His subjective symptoms were those of gastric irritation simulating nothing definite in the way of a lesion of the stomach Curiously enough he went to his doctor only for this complaint which had begun to trouble him some six months before He had always had so far as he could remember a feeling of heaviness on the right side but this did not seem to affect him he was never off work He was very thin and the mass filled up almost the whole of the abdomen extending deep into the pelvis and across to the left lumbar and iliac regions The disproportion between the size of the individual and that of the mass was extraordinary it seemed rather as if be were attached to it. On palpation there was a suggestion of fluctuation The man had lived in the Tropics for a number of years and a tentative but erroneous diagnosis of a liver tumour was made The stomach symptoms were probably due to displacement of that organ by the mass The tumour could not be freed from the kidney which was removed with it The man made an uninterrupted recovery and is back at work On section the tumour showed a flesh-coloured bossy surface suggesting sarcoma Sections were sent to Mr D M Greig of the Royal College of Surgeons of Edinburgh who reported it to be a sarcoma of the fibroblastic type with no indication of renal tissue present A kidney of more or less normal size is placed beside it for comparison

Torquay Devon Donald MacLeod F R C S Ed

FRACTURE SEPARATION OF EPIPHYSIS OF LESSER TROCHANTER OF FEMUR

(With Special Plate)

Owing to the rarity of this injury and to the paucity of information concerning it in most current textbooks a short account of a case recently under my care may prove of interest The *x* ray photographs clearly demonstrate the injury and the result of two months treatment

The patient a boy aged 16 slipped and fell while playing tennis on August 10th in Guernsey On attempting to rise he experienced acute pain in the left groin and was unable to move the left leg He was examined by Dr R E Gibson of Guernsey No shortening or other sign of gross bony injury was found but Dr Gibson was particularly impressed by the patient's inability to flex the thigh on the abdomen He concluded that the injury was probably a rupture of the ilio-psoas muscle The first *x* ray photograph taken on August 18th clearly demonstrates a fracture separation of the epiphysis of the lesser trochanter On August 23rd the patient was transported from Guernsey to his home in Dover by boat and rail He was put in a carrying chair with his left thigh fixed by bandages in a position of extreme flexion The journey was accomplished satisfactorily the patient experiencing no pain and little discomfort. At home he was treated in bed Relaxation of the left ilio-psoas muscle was maintained for five weeks by a suitable arrangement of back rest pillows and foot rest Passive movements were then instituted for a week after which he was permitted to do graduated exercises Eight weeks after injury he was able to walk without a limp The second *x* ray photograph was taken on October 21st A few days later he was allowed to return to school and to resume his normal life with the exception of playing games The functional result is most satisfactory The second *x* ray photograph shows union of the epiphysis to the shaft of the femur about one inch above its original seat

Dover A R Fisher M R C S L R C P

ACUTE STREPTOCOCCAL PERITONITIS WITH RECOVERY

In the *Journal* of February 18th 1933 (p 270) Messrs G Gordon Bruce and Norman J Logie recorded three cases of acute streptococcal peritonitis that recovered after operation The following notes of another case may be of interest in view of the infrequency of this happy outcome

The patient was a girl of 8 who had had umbilical pain for twelve hours and had vomited six hours before the onset of pain she had passed a loose slimy stool Temperature was 101° and pulse rate 130 The abdomen was slightly distended with hyperaesthesia in the right lower quadrant. There was slight rigidity in the right iliac fossa and above the

pubes and tenderness over the lower abdomen very marked over McBurney's point She was admitted to a nursing home as a case of acute appendicitis, and was operated on sixteen hours after the onset of the pain No free fluid was present in the pelvis or general peritoneal cavity The appendix showed only a mild superficial engorgement and was removed All other abdominal and pelvic organs seemed normal and the abdomen was closed without drainage

After operation several slimy stools were passed one of them blood stained, and abdominal tenderness and distension increased For a week the temperature ranged round 102° On the ninth day signs appeared in the lower lobe of the left lung and acute pneumonia developed Pure cultures of haemolytic streptococci were obtained from the blood stream and from the sputum The temperature fell by lysis in ten days On the twentieth day after operation there was a small discharge of pus from the laparotomy wound, and on the thirty first day after three days of increasing tenderness over the whole lower abdomen, this recurred During the following six days more than a pint of pus was discharged from which haemolytic streptococci were cultured From this point onwards a steady convalescence was established

It seems that in this case acute streptococcal peritonitis was mistaken for acute appendicitis Laparotomy was performed before any appreciable pus had formed, and the wound thus made afforded a path of lowered resistance for the subsequent escape of the pus, and had the effect of a delayed operation for drainage

North Finchley A W M ROOKE, M B , B S

COMPLETE TORSION OF THE OMENTUM

Complete torsion of the omentum occurs with sufficient rarity to make the following case worthy of record In Keen's *Text-Book of Surgery* it is stated that "torsion of the great omentum, with sufficient constriction of the blood vessels to produce gangrene, occurs in rare instances The symptoms are much like those of intestinal obstruction"

A man aged 26 was admitted to the Leeds Jewish Hospital on February 20th 1933 He had had a right inguinal hernia for the past eighteen months This was badly controlled by an inefficient truss but had not caused the patient any trouble During the week preceding admission he had experienced vague abdominal discomfort and on February 19th complained of severe pain around the umbilicus followed by vomiting The pain then became worse and was felt in the right iliac fossa The bowels had been constipated, but an action was secured on the day of admission by the use of castor oil previously taken by the patient

On admission the pulse was 120, temperature 100 6° F The face was flushed and the tongue coated There was a large right inguinal hernia easily reducible and presenting no untoward signs There was rigidity and marked tenderness in the right iliac fossa and pressure in the left iliac region and the right hypochondrium caused pain to be felt in the region of the appendix There was marked cutaneous hyperaesthesia over the appendix and rectal examination revealed tenderness high up on the right side but a mass was not felt

A diagnosis of acute appendicitis was made The abdomen was opened by a right paramedian incision the rectus muscle being displaced outwards On opening the peritoneum a little blood stained free fluid escaped and a mass was felt in the abdomen which on delivery was found to be the twisted omentum It had undergone three complete turns and the lower portion was intensely congested with haemorrhage into the tissues The mass was untwisted and as its viability was in doubt the greater portion of the omentum was ligated in sections and removed Appendicectomy was performed and the abdomen closed without drainage The patient made an uninterrupted recovery

I am indebted to Dr Samuel under whose care the patient was admitted for permission to publish this case

Leeds L BRILL, M B , Ch B

Reports of Societies

SIMPLE GOITRE IN DERBYSHIRE

At a meeting of the Section of Epidemiology and State Medicine of the Royal Society of Medicine on April 28th with Dr WILLIAM BUTLER in the chair, a paper was read by Dr P H J TURTON on the distribution of simple goitre in Derbyshire

Dr Turton said that although goitre had been endemic in Derbyshire for many centuries, the references to the disease in the county were scanty Erasmus Darwin in 1796 said that the "inferior people" of Derby town were much affected In 1887 Mr (now Sir) James Berry made the first detailed tour of inquiry Dr Turton himself had spent much time during the last eight years in studying the distribution of simple goitre among school children in Derbyshire of the age group 8–13, and over 40,000 such children had been examined He dismissed from his survey all cases of incipient goitre, in which a slight thickening at the neck was only observed on close inspection or seen on deglutition His cases comprised simple goitre, in which the enlargement caused a definite alteration in the condition of the neck, medium goitre, with definite lateral or anterior bulging, and large goitre the Derbyshire "thick neck," once so common He discussed with the aid of maps of the county the relation of goitre to the various geological formations and sources of water supply The carboniferous limestone region had always been a goitrous one, in the millstone grit region the incidence was much less In the parts of Derbyshire occupied by coal measures goitre was formerly very common, but had lessened since the water supply had been derived from upland sources In the magnesium limestone goitre was fairly common, especially where surface wells were in use for drinking water It was very rare indeed at Buxton, and many doctors there had never seen a case native to the town The goitre incidence was approximately as follows among school children

Regions from which the public water supply is derived	
Carboniferous limestone	2·0 to 2·5 %
Coal measures and limestone shales	1·5 to 2·0 %
Millstone grit	1·0 to 1·5 %
Surface Glacial, Bunter Keuper and Permian	0·5 to 1·0 %

In discussing the causes of goitre Dr Turton dismissed the iodine deficiency theory Suggestions had been made that Derbyshire was deprived of iodine because of its distance from the sea, but in fact the source of the iodine was the land, and not the sea There was no definite correlation between the iodine content of the water or the soil and the incidence of goitre If iodine deficiency were the cause the administration of the element in the form of sweets to children and iodizing the water supply might be expected to have some effect, but this had been done at Heanor, and the results were not encouraging No case had been made out for the promiscuous administration of iodine amongst either children or adults An improperly balanced diet was likely to be one of the factors, perhaps more important than was commonly supposed Not only was thyroid disease related to vitamin deficiency, but to mineral imbalance in the diet But there was also a good deal of evidence in Derbyshire to support the view that drinking water was a very powerful agency in the production of the disease, and there were numerous instances of the disappearance of goitre from a locality following the introduction of improved water supply At Heanor and Ilkeston a striking fall in incidence had occurred after the water supply was efficiently filtered and continuously chlorinated But while the water supply was an important factor, it was certain that there were other factors in operation

The president, Dr BUTLER spoke as one who had suffered from goitre, from which he had recovered, thanks to Sir James Berry His own case suggested that there was a hereditary and familial element No member of his family who had had goitre had lived in goitrous districts nor had they all lived in the same district, but an ancestor had come from Derbyshire, and there was a tradition of goitre in his line

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Sir JAMES BERRY did not think that diet had anything to do with the production of ordinary endemic goitre Endemic goitre was produced by a poison in the water and not by anything else He was glad to hear ridicule poured upon the iodine deficiency theory Dr SCOTT WILLIAMSON pointed out that in Holland where there was no endemic goitre and where the goitre was largely of the toxic variety 80 per cent of the people who acquired toxic goitre were the descendants of Swiss immigrants Around each endemic zone whether in Switzerland or America was a fringe where the incidence of vascular goitre began to decline and there was an increase in incidence of other mixed types beginning with hypertrophic enlargement in early youth and going on to the adeno-parenchymatous type in later life One was driven to the conclusion that the causal factor whatever it might be was continually exhibited in the central zone with the intermittent application of the causal factor on the fringe In the centre of the zone the individual patients showed first an extremely low blood iodine and also a low concentration of iodine in the large vascular goitre itself but the total amount of iodine contained in the gland was invariably higher than normal sometimes almost double It looked therefore as though the causal agent whatever it might be reduced the necessity for a high iodine threshold It was very difficult to believe that there was any connexion with the concentration of iodine in the environment Such concentration was low in the environment of the majority of these patients but it did not necessarily approximate to an absolute deficiency He thought that diet was probably as important as water supply Dr FRANCES PEARSE who has been working on the subject with Dr Williamson mentioned a case of goitre in a hospital patient who after discharge and undergoing a period of semi starvation owing to unemployment showed signs of scurvy on readmission

Mr C A JOLL thought that all the goitres of which Dr Turton had spoken and which he had called hypertrophic were really particular varieties of colloid goitre Lymphadenoid goitres were practically always met with in middle-aged women and were far more common in the sporadic goitre of towns than in endemic zones He doubted whether diet deficiency could account for either lymphadenoid or any other goitre Dr GARDINER HILL mentioned a case to illustrate the hereditary and sex factor A woman who herself had goitre had eight children six of whom (daughters) developed goitre Five of these developed goitre after leaving the area to be married three of them during pregnancy and two during the climacteric None of their children showed goitre The one who had remained in the area married there and produced six children two of whom developed goitre outside the area Dr CLARK TROTTER was of opinion that the iodine question was not yet settled The chances were that there was some iodine deficiency in modern diet and he thought it a good thing to use iodized salt which however was difficult to obtain

LEGAL LIABILITY OF HOSPITALS

At a meeting of the Medico-Legal Society on April 27th with Lord RIDDELL the president in the chair Mr H C DICKENS read a paper on negligence in hospitals and its consequences

Mr Dickens first explained the liability of members of the medical staff for the negligence of subordinates and nurses expressing the strong opinion that a surgeon conducting an operation ought to be allowed to rely upon his theatre sister for a correct count of the instruments and swabs In support of this opinion he quoted the judgement of the South African Supreme Court in Van Wyk *v* Lewis (1926) Dealing with the liability of the hospital governors for the negligence of members of their staff he quoted the judgement of the Court of Appeal in Hillyer *v* St Bartholomew's Hospital (1909) to show that they were not liable for injury suffered by a patient during operation at which the surgeon was presumed to be in complete command Hospital governors had long been held immune from liability for the acts of qualified medical men but the judgement of Lord Justice Kennedy in this case suggested that they were not responsible for negligence even of a nurse in matters of professional skill but only in the discharge of ministerial or administrative duties The fact that a patient was paying for his bed did not Mr Dickens thought make any difference In conclusion the lecturer suggested that all hospitals would do well to insure against their legal liability

Mr OSWALD HEMPSON quoted the judgement of Lord Justice Farwell in Hillyer's case in support of his suggestion that hospitals might not even be liable for the negligence of a nurse in performing a purely administrative duty He considered it possible that a hospital which accepted payment also accepted a larger measure of risk but never such a risk as that incurred by a nursing home which undertook to nurse patients for money He did not think that a board could be held liable for the efficiency of its apparatus to a greater extent than for the competence of its skilled staff

Mr D H KITCHIN remarked that the judgement in the Van Wyk case had established a rule of law which was never likely to be adopted by the English courts in which the question of whether a surgeon had been negligent in accepting the theatre sister's word for the count was left for the jury to decide taking all the facts and evidence of custom into account He quoted the Lord Chief Justice's summing up in Crotch *v* Miles The hospital's liability for harm caused by a student should he thought depend on whether the particular task could reasonably be considered within the competence of that student at the time The member of the staff supervising the student might also be held responsible Paying patients probably did not yet realize that they could not expect redress from the hospital for negligence in professional matters and the realization might lead to dissatisfaction if the position were not made clear

Mr C E BEDWELL thought that the payment of a fee would make patients still more critical and Mr H W BURLEIGH agreed Sir WILLIAM WILLCOX mentioned several points of administration in which a hospital should take more care The PRESIDENT doubted whether patients were as critical as had been suggested and thought that on the whole they understood the position well

UTERINE HAEMORRHAGE AND THE ENDOCRINES

At a meeting of the Medical Women's Federation on April 11th with Dr LETITIA FAIRFIELD in the chair Professor OSKAR FRAENKEL of the Universitäts Frauenklinik at Vienna gave an address on the endocrine basis of uterine bleeding

Uterine bleeding Professor Fraenkl said was an important factor in the lives of both the gynaecologist and the general practitioner At one time the treatment was stereotyped but nowadays more was known about the causation of uterine bleeding and treatment could be differentiated accordingly In order to have a proper understanding of pathological bleeding it was necessary to consider the origin of menstrual bleeding The old physicians used to say The uterus makes woman what she is Later they modified their view and said The ovary makes woman what she is It was now recognized that the ovary was not an independent gland both ovaries might be congenitally absent and yet the secondary sexual characters might appear To-day it could be said The pituitary makes men and women what they are Following menstruation the uterine mucous membrane remained quiescent for a day or two and then began to grow thicker the glands increased in size and during the second half of the intermenstrual period started to secrete In the ovary maturation of an ovum was initiated as soon as a menstrual period ended and ovulation occurred as a rule between the twelfth and the fourteenth day of the menstrual cycle The corpus luteum formed during the second half of the cycle and degenerated before the onset of the next menstrual period unless the ovum was fertilized Degeneration of the corpus luteum and the termination of its function as an endocrine body followed upon death of the ovum The Graafian

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follicle elaborated a hormone which had been named severally folliculin, progynon, oestrin, and theelin the corpus luteum produced luteohormone Every month one of the primordial follicles in the ovary developed into a Graafian follicle At the same time five or six other primordial follicles began to form but failed to mature, instead, they gave rise to cystic atresic follicles, which, like the mature follicle, secreted folliculin Two or three days after the end of a menstrual period the folliculin secreted in the ovary stimulated the resting mucous membrane of the uterus by improving the blood supply, and, as a result, the glands began to show signs of activity When the Graafian follicle had ruptured a corpus luteum was formed in the ovary, and secreted luteohormone into the blood stream Luteohormone consisted of two principles hyperemmenin, which caused hyperaemia of the uterine mucous membrane, and progestin, which stimulated the development of the glands and prepared the mucous membrane for the reception of the ovum These processes did not occur independently, but took place under the influence of hormones derived from the anterior lobe of the pituitary The anterior lobe hormones were ossein, prolan A, and prolan B Prolan A controlled the maturation of the Graafian follicles and the formation of cystic atresic follicles, and prolan B governed the development of the corpus luteum

Why then, did menstrual bleeding occur? It followed upon death of the ovum and involution of the corpus luteum As the corpus luteum degenerated the stimulus of luteohormone to the mucous membrane ceased, it was not therefore, hyperaemia, as was formerly supposed, that provoked the menstrual flow, but the sudden onset of anaemia the secretion of the glands digested the vessel walls and liberated the blood At one time chronic metritis was regarded as a common cause of pathological bleeding but this condition was now known to be rare it was usually a sequel of abortion of sepsis, and commonly fatal The cases formerly grouped under this heading were now classed as haemorrhagic metropathia In this condition the mucous membrane of the uterus was usually thickened—often enormously so—and so irregular as to appear polypoid, while the muscle wall was hyperaemic Most cases of haemorrhagic metropathia were due to a superficial inflammation of the ovary, but a small number were due to pituitary conditions Inflammation of the ovary acted as a stimulus, and provoked the growth of fifty to a hundred primordial follicles at the same time these active follicles all produced folliculin in the same way as the four or five cystic atresic follicles in the normal ovary In consequence, a lasting hyperaemia of the uterine mucosa was set up, and this continuous passive congestion ultimately injured the vessel walls and led to bleeding In the small group of cases the enlarged pituitary secreted an abundance of prolan A, which brought about uterine bleeding by its influence on the ovaries Another example of bleeding due to endocrine action was to be seen in Graves's disease, where the abnormal thyroid secretion might provoke, first, spontaneous uterine bleeding and later, amenorrhoea

There remained various causes of uterine bleeding which were not endocrine in origin Adenomyosis was a condition in which hyperplastic glandular tissue appeared in the muscle of the uterus In these cases, Professor Fraenkl believed bleeding was produced mechanically the glandular tissue pressed on the vessels and by inducing a continuous hyperaemia eventually led to degeneration of the vessel wall and bleeding Nor did he think that haemorrhage due to myoma was endocrine in origin, although there was probably some relation between the development of fibroids and the endocrine system bleeding however was probably produced mechanically by pressure on the vessels Carcinoma, sarcoma, and tuberculosis of the uterus had no connexion with the ductless glands Granulosa-cell tumours occurring in the ovary, sometimes caused intense uterine haemorrhage These tumours arose from cell groups having the same histological origin as the lining of the Graafian follicles, they consisted of round or spindle cells surrounding lacunae which contained homogeneous material, and had rather the appearance of ova The resemblance to ovarian tissue was also functional, for these tumours produced folliculin and gave rise to a condition of the uterus identical with haemorrhagic metropathia Tumours of the thyroid might also provoke uterine bleeding through their endocrine action When the patient could afford it, haemorrhagic metropathia might be treated by rest and extract of ergot given hypodermically corpus luteum extracts had not fulfilled the hopes which had been entertained for them *X*-ray treatment gave beneficial results but the flushes, sweats, and tachycardia attendant on an artificially induced menopause were so much worse than the condition itself that he had abandoned this form of treatment Poorer patients who were anxious to return to work should be treated by vaginal hysterectomy In adenomyosis surgical treatment was again necessary *X* rays and radium should be used for the treatment of myomata only when surgical treatment was refused Carcinoma, sarcoma, and tuberculosis should be treated by operation whenever possible

Professor T J STEVENS said that there were a large number of cases in which bleeding appeared in multiparae between the ages of 40 and 50 He had always taught that these were the result of chronic subinvolution On microscopical examination the muscular coats of the smaller arteries were found to be replaced by elastic tissue, and he had always considered that the bleeding was mechanical in origin, the arteries having lost their muscular control He did not think that these cases could be explained on an endocrine basis

Professor FRAENKL, in reply, said that they could be regarded as a late result of haemorrhagic metropathia On examination a fine superficial ovaritis was usually found in such cases, but the active stage—and with it the exaggerated production of hormone and the hyperaemia of the uterine mucosa—might have subsided before the patient came for treatment He had found no increase in elastic tissue in the walls of the arteries, but had observed an increase of connective tissue Subinvolution certainly existed, but was not to be identified with fibrosis Dr G F STEBBING was inclined to agree with Professor Stevens that many cases of bleeding resulted from subinvolution The patient usually had a history of abortion or complicated delivery, followed later by haemorrhage The uterus was then found to be enlarged, and had the appearance of an organ which had suffered for years from passive congestion Whatever view was taken of the cause, he shared Professor Fraenkl's opinions on treatment, though he took a more favourable view of the value of radium and *x* ray therapy Dr A N MACBETH, referring to the findings in haemorrhagic metropathia, asked whether the "active follicles" mentioned by Professor Fraenkl were all cystic atresic follicles without luteinization

Professor FRAENKL replied that normal Graafian follicles were also to be found In reply to Dr Stebbing, he said that a certain number of cases of bleeding were due to subinvolution, but the importance of these must not be exaggerated, as cases due to haemorrhagic metropathia were much more numerous

FACIO HYPOGLOSSAL ANASTOMOSIS

At a meeting of the Section of Laryngology and Otology of the Royal Academy of Medicine in Ireland, on April 7th, with the president, Dr P DEMPSEY, in the chair, Dr T G WILSON showed a case in which four years previously he had performed facio hypoglossal anastomosis for facial paralysis

Dr Wilson said that the patient now had a normal response to galvanism and faradism in all the facial muscles, and there was also a considerable amount of voluntary movement The ansa hypoglossi had at the same time been united to the distal end of the divided hypoglossal nerve, but this had not succeeded in preventing atrophy of the tongue

The PRESIDENT reviewed Ballance's experimental work on nerve grafting, and said that he considered this the ideal operation Dr P J KEOGH emphasized the importance of mimic movements in the after-treatment Dr J B HORGAN (Cork) mentioned two cases of facial para

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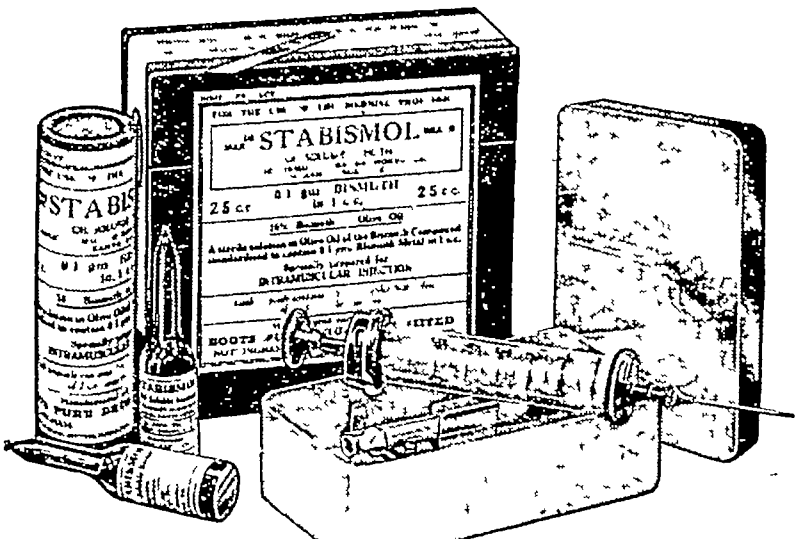

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lysis after mastoidectomy in which recovery had started six months later and had been complete in twelve months Dr T O GRAHAM quoted a number of cases in which he had performed nerve anastomosis for this condition In answer to the question of how long after the occurrence of the palsy one could successfully operate he told of a child who had sustained a facial paralysis early in infancy and upon whom he had successfully operated nine years later

Mastoiditis

Dr R R WOODS read a communication on acute mastoiditis He said that before deciding upon treatment the pathological conditions present must be considered He classified acute mastoiditis into four groups (1) Acute empyema appearing during the first week of acute suppurative otitis media (2) acute osteitis arising during the third week or at any time in an acute exacerbation of chronic suppurative otitis media (3) subacute mastoiditis caused by stagnation and occurring at any time from the fifth or sixth week onwards (4) chronic mastoiditis due to chronic osteitis complicating chronic otitis media The treatment advocated consisted mainly of complete closure of the post auricular wound with the insertion of two drainage tubes—one in the lower end of the wound and one passed through the posterior meatal wall after removal of bone After a week both tubes were removed and the cavity lightly packed with iodoform gauze passed through the meatal wound The advantages claimed were complete absence of pain at dressings primary union of the wound and reduction of hospitalization After radical mastoidectomy the cavity was packed at operation with iodoform gauze in a finger stall and a week later the cavity was Thiersch grafted

CORK CLINICAL SOCIETY

At the April meeting of the CORK Clinical Society with Professor DUNDON in the chair Dr G HEGARTY opened a discussion on the treatment of fractures in ordinary practice He considered that sometimes fractures were taken too casually bad results following and he drew attention to the importance of employing the aid of the *x* rays both before and after reduction and during the treatment when necessary He had watched the treatment of fractures for many years the tendency for operative intervention plating and grafting etc had risen and fallen now he found that conservative measures appeared to yield the best results and this he regarded as the accepted view

Dr O HEA CUSSEN in a paper on foreign bodies in the air passages drew attention to the debt the profession owed to Chevalier Jackson and other pioneers in this subject He considered that too often these cases were overlooked In children in the acute stage with the foreign body below the glottis laryngeal diphtheria was simulated Its differentiation could require the use of *x* rays and bronchoscopy If the foreign body passed into the lung the differential diagnosis from pulmonary abscess chronic bronchitis nasal tuberculosis bronchiectasis etc often presented extreme difficulty again requiring both *x* rays and bronchoscopy and also a careful investigation of the history and examination of the expectoration He felt that a number of puzzling terminal lung conditions that resembled chronic tuberculosis with negative expectoration could require the use of Radiology if the foreign body was not opaque was sometimes confusing He considered that closer co-operation between radiologist and bronchoscopist was indicated

Dr J FIELDING gave a comprehensive account of the history symptoms and cause of achalasia of the cardia The different theories as to causation that had been held from time to time were mentioned and the more recent view of inflammatory changes in Auerbach's plexus which he supported X-ray demonstrations of three cases aged 8 18 and 47 years were shown and a case of carcinoma of the cardia for differential diagnosis A detailed account of the treatment with rubber mercury bougies was followed by discussion

Reviews

FACSIMILES OF PLAGUE PAPERS

The Shakespeare Association has issued as No 7 of the series of rare texts of Shakespeare's day black-letter facsimiles of several plague publications under the title *Present Remedies against the Plague etc*[1] The earliest known copy of the tractate which gives its name to this volume was issued in 1594 but the facsimile here reproduced is taken from the practically identical edition of 1603 The anonymous but very learned and approoued Phisition who penned the original begins with the wise warning that streets and houses must be kept free from all that may ingender stincking savours or breede infection Dogs he tells us are most apt cattell to take infection and then to bring it into the house The belief universal in the age that dogs served as active vectors of plague infection may well have had some foundation in fact for the reviewer has recovered from a dog at one time more than forty non-canine fleas of a species implicated in the spread of plague Other preventive measures advocated by the nameless Phisition are concerned with the disinfection of rooms and clothing and probably would have been effective against fleas contained in either He gives no clinical description of plague for doubtless those whom he addressed were but too familiar with its manifestations and mentions only in passing Botches Carbuncles and God's tokens swell ing The medical and surgical treatment advised in cludes nothing original and in principle and often in detail is merely that employed at the time of the Black Death

The second portion of the volume gives the Orders issued by the Queen and the Privy Council in 1592 for the control of plague elsewhere than in the capital together with an accompanying Advise by the best learned in Physicke within the Realme for the prevention and treatment of the disease The Orders direct the justices of each county to keep themselves informed of all outbreaks of plague and empower them to levy special taxes to meet the cost of their preventive measures These include the appointment of viewers —representing the searchers of later Orders—watchmen to guard infected houses and bring food to the occupants and the provision of a special burial ground in every parish for plague victims Further the justices of each county are authorized to devise and put into execution any additional orders that may seem likely to preserve Her Majesty's subjects from infection The appended advise follows the general lines familiar in plague writings of the time but the measures of active treatment laid down are markedly inferior judged by modern ideas to those advocated earlier by Ambroise Paré

In none of the texts here republished is there any mention of an associated mortality among rats and we miss too the significant and pathetic warning of approaching plague given by contemporary writers— When we see yonge Children flocke themselues together in companyes and then will faine some one of their company to be dead amongst them and so will solemnize the burial in a mournefull sorte this is a token which hathe bene well observed in our age to foreshew great mortalitie at hand The children's game of plague funerals once played in a mournful sort in the streets of London is more eloquent of health conditions of the past than any number of printed books

[1] *Present Remedies against the Plague etc* Shakespeare Association Facsimiles No 7 Edited by Dr G B Harrison With an introduction by W P Barrett London Oxford University Press 1933 (Pp xix + 26 6s net)

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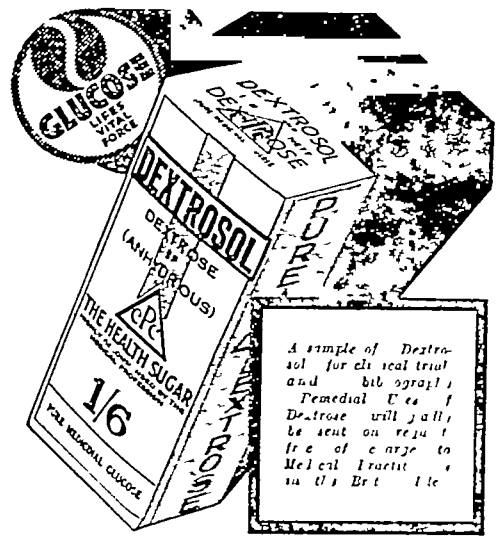

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EXPERIMENTAL PATHOLOGY

The value of laboratory handbooks of experimental physiology for the use of students has long been fully recognized. Students of a former generation will recall to mind Burdon-Sanderson's well known book, those of to-day have the benefit of such works as the *Practical Physiology* of Anrep and Harris and Sherrington's *Mammalian Physiology*. With the introduction of experimental pathology into the curriculum the provision of similar handbooks on that subject will become necessary, and a preliminary attempt in this direction has been made by Drs WAGONER and CUSTER in their recently published *Handbook of Experimental Pathology*.[2] This is likely to prove a practical and reliable guide, since it is based on the experience gained during several years, in the course which they have arranged for their students. It gives detailed instruction on the technique of operations, on anæsthetization, and on the general care of experimental animals. This is followed by descriptions of experiments in general pathology such as inflammation and immunity, and on the special pathology of the various systems.

Those who are opposed to animal experimentation may be recommended to study the account given of the methods in use in operations on animals, they will be found to be identical with those adopted in the case of human beings. Absolute asepsis, general anæsthesia, and similar precautions are carried out with as strict conscientiousness as in the human operating clinic and as regards the spirit in which these operations are undertaken special attention may be called to the rules laid down on page 31. It is there stated that animals in the laboratory shall receive every consideration for their bodily comfort, they shall be treated kindly, properly fed, and their surroundings kept in the best possible sanitary condition. Where the continuance of the animal's life after the operation is necessary to determine the result of an experiment, the same care shall be taken to minimize discomfort during convalescence as in a hospital for human beings. It may be said that any shortcoming in respect of these particulars would receive the unqualified condemnation of the whole profession.

PELVIMETRY AND CEPHALOMETRY

In this country there is no question about the truth of the statement made by Dr JULIUS JARCHO in the preface to his book *The Pelvis in Obstetrics*[3] that "the trend of recent years has been toward the neglect of pelvic measurements. The need for an exhaustive study of his subject, including pelvimetry and cephalometry with their clinical applications, is justified on the ground that this trend has led to dependence on "the dangerous test of labour in many cases where the possession of exact data might save lives or diminish morbidity." The growing tendency to decry the value of pelvic mensuration except as a rough guide in selecting ante-natal cases for closer observation must not, however, be ascribed only to the inexactitude of the data obtained. It has arisen rather from a general recognition of the part played by other factors—some of which are incapable of exact estimation—that influence the decision as to the probable outcome of labour in cases where the disproportion is not extreme. Intrauterine measurements of the fœtal head are even less reliable than those of the pelvic diameters, and the degree of moulding and of activity of the uterine forces are variables precluding accurate prognostication. It is because of these and other variables that "trial labour" under hospital conditions has been advocated as the scientific method of discovering what the natural powers can do in borderline cases.

Whitridge Williams's statement is quoted—namely, that 'the ideal treatment of disproportion by all wise obstetricians would consist in such ideal pre-natal care as to permit the differentiation of all patients into those who will require Cæsarean section and those who will not, with the performance of the classical section before the onset of labour in the former, and with spontaneous labour in the latter. Unfortunately such prognostic ability is unattainable, and, if it were, it is safe to say that most of us would find it difficult to live in the same world with those possessing it. The purpose of this book is to stimulate interest in the methods of pelvic and cephalic mensuration, especially in view of the advances in pelvic skiagraphy and to indicate how greater accuracy in differentiating between these two groups may be attained. There is a wide discussion of methods other than those adopted by the author, and our only criticism is that with the number described their relative value is scarcely made sufficiently obvious.

The book is lavishly illustrated, so that all methods can be readily understood and applied, and an extensive bibliography makes it a valuable work of reference. There can be no doubt that Dr Jarcho has performed an important service in drawing attention to an aspect of obstetric practice that has fallen into less prominence than it merits.

SKIN DISEASES IN THE TROPICS

Dr E. C. SMITH has laid his colleagues in tropical countries, particularly those who work in Africa, under a considerable obligation by the production of an *Atlas of Skin Diseases in the Tropics*.[4] As the word 'atlas' implies, the greater part of the volume consists of the hundred excellent plates illustrating the various dermatoses which are found in such abundance in the Tropics, and which afflict both natives and Europeans, but more especially the natives owing to their lower standard of hygiene. With the exception of two coloured drawings, one of which is a very life-like representation of that scourge of hot climates known as prickly heat, all the plates are photographs specially produced for this book, and for them we have nothing but praise. The author evidently knows his tropical dermatology exceedingly well, and his clinical skill is built on a sound pathological foundation. Moreover, he has done some useful original experimental work on both prickly heat and on tropical ulcers. In view of the increasing importance now being attached to the pathogenic powers of yeast-like organisms, it is interesting to note that Dr Smith has been able to grow a Monilia from the desquamating scales of patients suffering from prickly heat, and, moreover, has been able to reproduce it artificially both in man and in monkeys by the application of lint soaked in cultures of the Monilia to the healthy skin. Many of the illustrations are devoted to the different clinical varieties of tinea, but the author has wisely abandoned the attempt to classify the various fungi associated with this very common condition. He draws special attention, however, to the trichophytic granuloma of the head which is often incorrectly diag-

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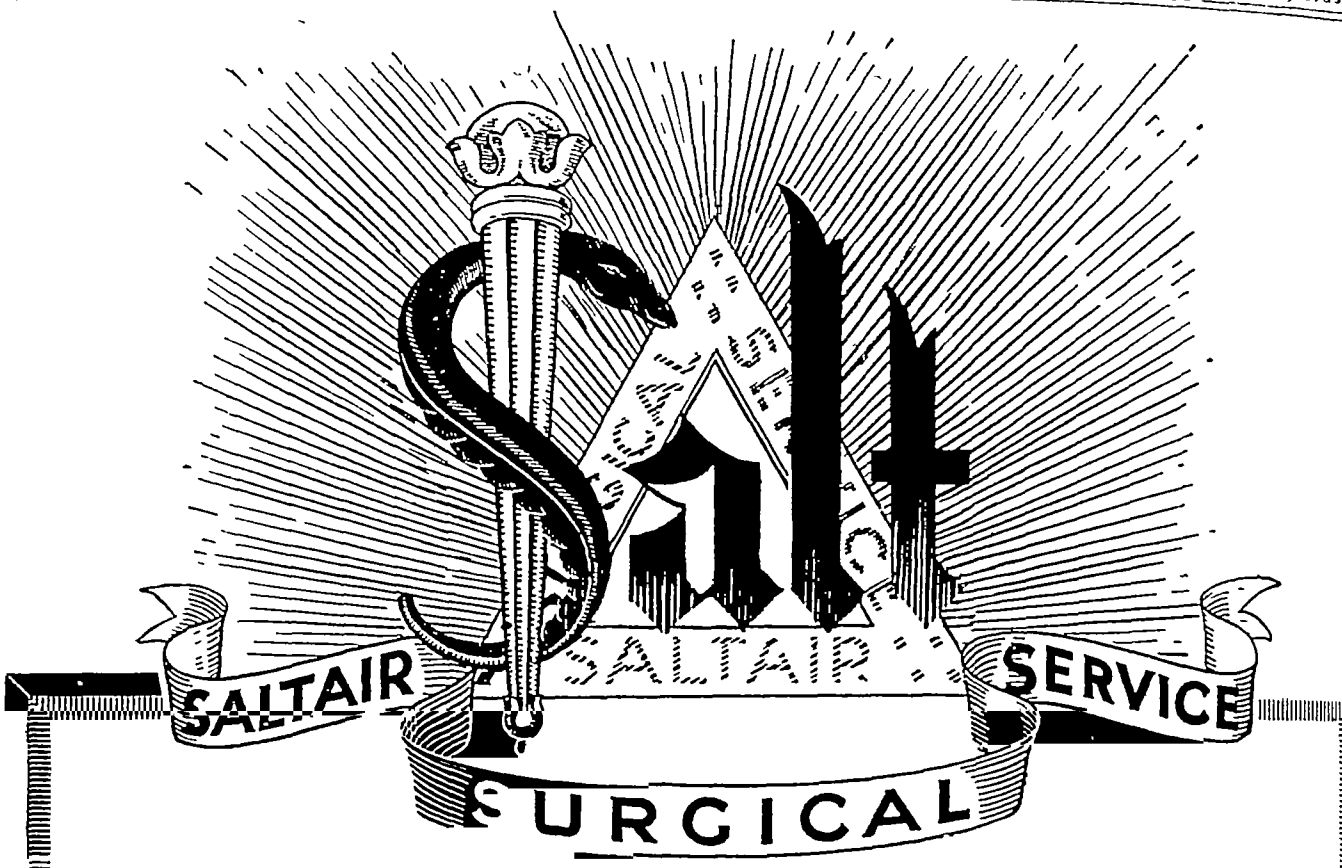
[2] *A Handbook of Experimental Pathology*. By G. Wagoner, M.D., and R. P. Custer, M.D. Illustrations by I. F. Faber. London: Bailliere, Tindall and Cox. 1933. (Pp. xvi + 160, 22 figures. 23s.)

[3] *The Pelvis in Obstetrics*. By J. Jarcho, M.D., F.A.C.S. A practical manual of pelvimetry and cephalometry including chapters on roentgenological measurement. New York: Paul B. Hoeber, Inc. 1933. (Pp. 381. 140 figures, 51 tables. 6 dollars.)

[4] *An Atlas of Skin Diseases in the Tropics*. By E. C. Smith, B.A., M.D., D.P.H., D.T.M. and H. London: J. Bale, Sons and Danielsson, Ltd. 1932. (Pp. 60, 253 figures. 21s. net.)



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nosed as a real neoplasm but which shrinks away promptly under the application of strong iodine It may be likened to an exaggerated form of kerion an inflamed and purulent form of ringworm of the head not very infrequently found in European countries The letter press supplied by Dr Smith to his atlas is very short but it is very much to the point and adds greatly to the usefulness of his book which should be in the hands of all those who are likely to work in the Tropics and will be found of great interest by all dermatologists

DIABETES IN CHILDHOOD

Dr PRISCILLA WHITE s book on diabetes in childhood[1] ranks high among the other publications from Dr Joslin s clinic and should be read by every serious student of the subject The author has not only studied these cases medically but lived with her young patients and friends and the book gathers real value from such intimate experience It is a magnificent testimony to the change in diabetic therapy since the introduction of insulin In his foreword Dr Joslin mentions how in the Naunyn era until 1914 he used to count the *days* his diabetic children lived in the Allen epoch the months they survived and now it seems that having lived ten years they are likely to fulfil their natural span of life

The book deals exhaustively with the whole subject starting with a historical outline and ending with an attempt to foresee the future of these diabetic children as they grow up In all 750 children have been studied and most of these mature normally since insulin treatment is available Their height and weight are up to the normal their sexual development is assured and some have already become parents Such results are known to diabetic workers all over the world but from no other clinic is such a convincing bulk of evidence available Insulin is given to all the diabetic children and doses of from one to 100 units a day have been employed The number of injections varies from one to four a day although two or three are more usual It is a common practice (which seems rather distressing to English minds) to give a dose of insulin between 10 p m and 5 a m to control hyperglycaemia in the morning This morning rise in blood sugar seems to develop in most cases with the duration of the diabetes and would indicate a progression of the severity of the disease and decrease of endogenous insulin production up to a certain point The carbohydrate of the diet varies between 100 and 150 grams and the total calories are fairly low

Separate chapters are devoted to every aspect of the disease—physiological pathological and practical The significance of hypercholesterolaemia is discussed without any new conclusions It is interesting to note that the typical lesions in the adult pancreas hydropic and hyaline degeneration are absent in childhood and replaced by lymphocytic infiltration of the islets A whole chapter is devoted to heredity and the mathematical attempt to prove that diabetes is due to a simple Mendelian recessive characteristic seems the most unconvincing thesis in the book Perhaps the most interesting is the last chapter dealing with school exercise home life and holidays No diabetic child should be given a physician s certificate to excuse him from school This phrase is eloquent of the attitude of the book and perhaps gives more convincing evidence of the high normal achievements in health and education that this clinic maintains than the two photographs of fine diabetic youths clearing five barred gates on equally magnificent horses

[1] *Diabetes in Childhood and Adolescence* By Priscilla White M D Foreword by E P Joslin M D London Henry Kimpton 1933 (Pp 236 25 engravings and 1 coloured plate 18s net.)

CAREERS FOR WOMEN

In a foreword to *300 Careers for Women*[2] compiled by VYRNWY BISCOE Miss Margaret Bondfield commends the book to all who are seeking the starting point of careers for the young generation and we can heartily endorse her recommendation for it is no small boon to the inquirer to have so wide a field of selection reviewed so concisely Something should surely be found amongst the selected careers to suit the capacities tastes and financial resources of every candidate for employment The plan of the book is admirable The information given in each case covers a brief statement as to the initial qualifications required from candidates the cost and duration of training the scholarships and other forms of financial help available in case of need the prospects of obtaining employment the range of remuneration to be hoped for publications dealing with the subject and the address of the recognized body if any from which further information may be obtained

All things that are lawful and profitable may not be expedient and the compiler has perhaps erred somewhat on the side of catholicity and omitted some warnings that would serve a useful end but she would doubtless reply to this criticism that it has been her business to describe the existing demand not to criticize it It is certainly interesting to learn that the prospects of astrology as a career are *improving* that the *osteopath may hope to* make from £750 a year in private practice while her humbler medical sister who has spent considerably more on her initial training will expect from £400 in private and consulting practice and that ophthalmic therapy with or without the addition of nasal hygiene is a science which is gradually obtaining recognition practitioners requiring a training of from four months upwards at a cost of from £40

Notes on Books

Dr R J BATTY has written a useful little book on *Enuresis or Bed wetting*[3] which is singularly free from fads and does not set out any new fangled method of cure The author has apparently read widely in the huge literature on this subject and he presents his facts well basing his views upon an experience of over 200 cases personally investigated in detail The historical features of the condition and an account of the anatomy and physiology of micturition lead up to a section on the cause of the complaint which the author thinks is mostly lack of training in infancy combined with bad home conditions This view does not preclude him from giving a wide range of methods of treatment including those founded upon the most modern view that enuresis may have an allergic basis The book is less than a hundred pages and its useful advice should be taken by all practitioners who are daily having to deal with this troublesome condition

The preface to the 1933 edition of *The South and East African Year Book and Guide*[4] states that there has been a considerable recrudescence of malaria in a limited area of the Union The sections devoted to public health and climate provide some useful information about those diseases which are of peculiar interest to visitors and residents including hints on the preventive measures to be adopted This guide book contains sixty four pages of excellent coloured maps and we are informed by the publishers embodies some 4 000 amendments and additions to the previous issue

[2] *300 Careers for Women* By Vyrnwy Biscoe Introduction by the Right Hon Margaret Bondfield. London Lovat, Dickson Ltd 1932. (Pp 225 2s 6d net)

[3] *Enuresis or Bed wetting* By R J Batty M.D B Sc. D P H London J Bale Sons and Danielsson Ltd. 1933 (Pp 91 3s 6d net.)

[4] *The South and East African Year Book and Guide for 1933* With Atlas Thirty ninth issue London The Union-Castle Mail Steamship Company Ltd (Pp 1353 maps and charts 2s 6d)

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In his Buenos Aires thesis on the Cerebro-spinal Fluid in General Paralytics under Malariotherapy[9] Dr J P KÄFER reviews the literature and records seventeen personal cases in patients aged from 27 to 49 Four stages of the disease are described—namely (1) a malarial stage, during which there was a fall in the tension and the pleocytosis of the cerebro-spinal fluid, (2) an early post-malarial stage, represented by the first year following cessation of the fever, (3) a second post-malarial stage, represented by the following year, and (4) a late stage, starting two years after termination of the fever In the last three stages there was a progressive diminution of the pleocytosis while in the fourth stage the globulin and Wassermann reactions became negative and the Lange reaction became attenuated or completely negative

The *Transactions of the American Gynecological Society*[10] for 1932 have now been published, the general lines of this compilation following those adopted by British societies but the volume is much larger and contains more articles of clinical significance Many of the contributors deal with obstetrical problems, and the contrast between certain American and British methods is well brought out

A second edition has now been published of the Hand-List of Periodicals in the Library of the London School of Hygiene and Tropical Medicine[11] revised to January 31st, 1933 The last ten pages comprise an index to societies and institutions

Dr ERWIN LICK of Danzig contributes a semi-popular book—*Krebsverbreitung Krebsbekämpfung Krebsverhütung*[12]—to the literature of malignant disease The spread of cancer the war against cancer, and the prevention of cancer are the headings under which as his title indicates he deals with the subject The book contains little if anything new, but it is written in a pleasant and easy style

[9] *Estudio del liquido cefalo raquideo en los paraliticos generales malarizados* By Dr Jose Pereyra Kafer Buenos Aires Colegio Parroquial San José de Flores 1932 (Pp 76)

[10] *Transactions of the American Gynecological Society* 1932 Vol lvii Edited by Otto H Schwarz M D St Louis C V Mosby Company 1933 (Pp xxxi + 351 illustrated)

[11] Printed by Wightman and Co Ltd Dugdale Street S E 5 (1s 3d)

[12] *Krebsverbreitung Krebsbekämpfung Krebsverhütung* Von I Lick München J I Lehmanns 1932 (Pp 252, Geb M 5 Lwd M 6 50)

Preparations and Appliances

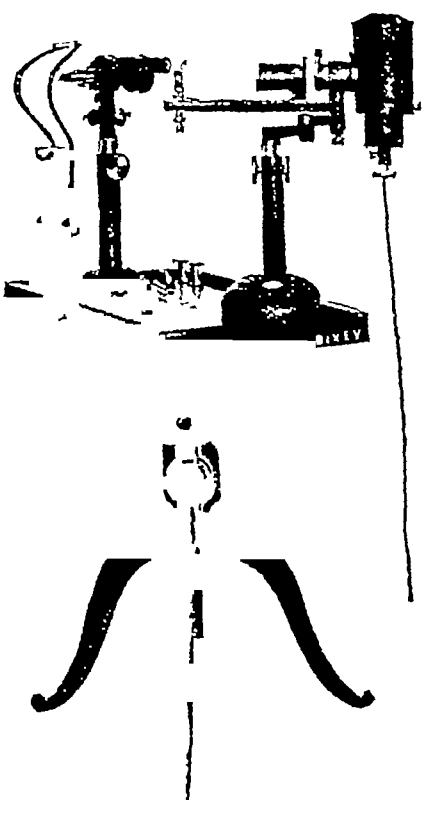
A SLIT-LAMP

Mr E GORDON MACKIE (Sheffield) writes

The slit lamp has not hitherto been so widely used as it deserves This is no doubt partly due to its many complicated adjustments which necessarily increase the cost of the apparatus Quite a number of these are but rarely used in working the lamp and some of them can be rendered unnecessary and expense thus saved by improvement in design Its real value can only be appreciated by regular use and with the hope of inducing more of my colleagues to adopt this aid to their work I venture to bring to their notice the instrument here illustrated

It has been made in accordance with the above ideas and having now been in use for over eighteen months and satisfied certain experienced slit lamp observers may be said to be more than an experiment The light source is a home cinema projection lamp used direct on the house current without resistance and stocked by most electrical dealers The optical system selects one of the filaments of the lamp grid and projects it in the Vogt manner the beam being controlled by an adjustable slit fine adjustment focusing screw and Arruga (vertical) screw in the ordinary way The selection of the filament is made in mounting the lamp in its housing the selected position is maintained by two clamping screws and remains indefinitely A feeble light is a source of much unrewarded slit lamp observation and replacement of the old Nernst lamp by the Nitra lamp (of three the light value) was a landmark in the history of the instrument Taking the latter lamp as a standard the system adopted has been found to give 91 per cent of the light value from a Nitra source at the point under examination This is fully adequate for all clinical purposes For special purposes certain workers may require the highest degree of illumination obtainable and this is now provided for by an alternative lighting system which, however necessitates the use of a rheostat

The lamp and microscope are alike mounted on bases to slide on the glass topped table This method is less speedy than a mechanical device for lateral transit of the lamp but it affords great steadiness and when the beam is adjusted it does not tend to pivot off its mark so that there is no need to hold it constantly in position The beam can be applied all round the stand and I am obliged for a suggestion to this end made by Mr Harrison Butler The microscope affords a flat field and the magnification of × 20 has been chosen as that of greatest usefulness for standard supply Other magnifications are available (preferably by additional objectives) but are not required in routine work



If it is desired to study the endothelial cells the addition of objective 32 mm provides a magnification of × 28 which is suitable for this purpose

The instrument was made for me by Messrs C W Dixey and Son Ltd, of 15 Old Bond Street W 1, who were responsible for many devices for simplifying mechanical design and for the successful means of cooling the 100-watt lamp I am indebted to them for much painstaking work experiment and ingenuity As the complete instrument costs half the usual price it may permit of more extended use of this valuable means of ocular examination

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Allen and Hanburys Ltd have lately introduced two new milk foods Of these *Allenburys milk food half cream* is intended for babies who are found to suffer from fat indigestion or symptoms of ketosis if they are given a full cream food The other new preparation *Allenburys milk food with additional iron* contains 900 parts of iron per million as iron and ammonium citrate and is intended for use in the treatment of nutritional anaemia in infants It is prepared in accordance with the findings of the Medical Research Council's Special Report No 157 on that disease These two foods are issued in one size only at 2s a tin It may be added that the ordinary Allenburys foods Nos 1 2 and 3 contain approximately the proportion of iron normally present in human milk

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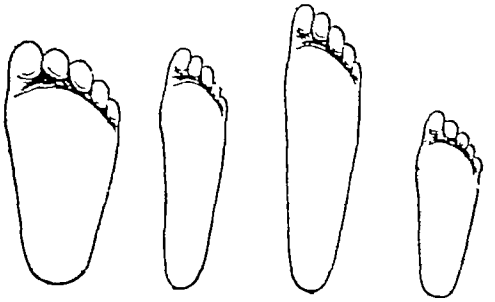

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British Medical Journal

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PROGRESS IN CARDIOLOGY

The tide of progress in medicine inevitably casts up relics of exploded fallacies and hypotheses that have outworn their usefulness In no field of medical science is this more evident than in cardiology where modern views and nomenclature are to some extent foreign to those whose ideas are founded upon the principles of fifty years ago Although a certain historical value attaches to old views and old terminology definite harm may accrue from their preservation Thus if a certain phrase implies the truth of conceptions which are now known to be false phraseology must be adjusted or progress must be delayed The ghosts of many erstwhile cardiological fancies have been laid it is hoped for all time by Sir Thomas Lewis in his recent exposition of *Diseases of the Heart* [1] He has further demonstrated the importance of clear thinking and true reasoning based upon sound physiological principles In this compact volume are laid down the fundamental principles of circulatory derangement as they are understood to-day In protest against the welter usual in textbooks of catchwords named signs and hypotheses he has kept his text almost completely devoid of names dates references and theories Moreover he has insisted upon the practice of cardiology at the bedside and the use of the eye and the hand in diagnosis

A mischievous and deeply rooted fallacy is the belief that strenuous exertion may damage a normal heart An individual undertakes some unwonted effort suffers thereafter from palpitation faintness and dyspnoea on comparatively trivial exertion and his heart is consequently labelled as dilated and therefore damaged The degree of neurosis and invalidism that may result from such an outlook must be considerable to say the least As Sir Thomas Lewis points out the first reaction of the normal heart to effort is a diminution in bulk while conclusive radiographic evidence to suggest that prolonged and strenuous exertion causes cardiac dilatation has never been produced Furthermore if the healthy cardiac muscle does dilate under extremely unfavourable conditions (as in bouts of paroxysmal tachycardia) the return to normal size at the end of the attack is almost immediate while the restoration of the usual effort tolerance is also very rapid Nor is there reason to suppose that the slight hypertrophy induced by long-continued strenuous occupation is anything but physiological The expression dilatation of the heart is therefore one that is used far too frequently and with undesirable results It is true that the migration of the apex beat into the axilla in paroxysmal tachycardia is the sign of an acute dilatation but this is a relatively uncommon happening Chronic dilatation is, in general the outcome of inefficient ventricular contractions brought about by myocardial malnutrition as in coronary sclerosis or chronic anaemia In other words the dilatation is an attempt to remedy the failing force of the heart beat Now it has in the past been assumed that dilatation is the primary injurious event and that hypertrophy or compensation must ensue to remedy the defect This as Sir Thomas Lewis points out is the soil in which the plant of 'compensation and decompensation took root These terms not only connote an illegitimate idea of remedial hypertrophy in valvular disease for example but also the erroneous conception of dilatation provoking hypertrophy It is for these reasons that ideas of failing or broken compensation should and will fall into disuse Decompensation is commonly used as synonymous with venous congestion but even here it is undesirable To quote from the work under review a plain observation is garnished with an assumption and served up in an unrecognizable form the diagnosis of venous congestion is within reach of all the diagnosis of broken compensation in its proper sense is within the reach of none Sir Thomas Lewis has provided English cardiologists and clinicians with a work for which many must have been waiting In the concluding chapter of his masterly review he has devised a system of prognostic groupings Under each of five categories he lists common cardiopathies in their various degrees of severity For example auricular fibrillation and moderate enlargement is held to warrant an expectation of three to six years while the patient suffering from angina pectoris unrelieved by rest may survive precariously up to one or occasionally two years This plan is clearly only a broad indication of prognosis and relative gravity of different conditions but as such it should be of great value to those who are capable of arriving at a fairly exact clinical assessment of the patient

A comparison of the seventh edition of *Clinical Disorders of the Heart Beat* [2] by Sir Thomas Lewis with the third edition reveals how little two decades have modified our clinical interpretation of cardiac irregularities In this branch of cardiology an important aspect which usually receives scant attention is that of alternation of the heart This phenomenon indicates that the heart muscle whether relatively healthy or obviously diseased is grappling with a burden almost too heavy for it to bear It is not generally recognized that in the majority of instances a succession of strong and weak beats is not discoverable at the pulse or on auscultation nor is it generally appreciated that intermittent or lesser degrees of alternation are of important and serious significance The author therefore holds that in circumstances in which alternation might be expected a search for it with the sphygmomanometer should be made if premature contractions are occurring the few succeeding beats should be scrutinized since alternation may first be manifested in them It may be

[1] *Diseases of the Heart* By Sir Thomas Lewis C B E F R S M D D Sc L L D F R C P London Macmillan and Co Ltd 1933 (12s 6d net)

[2] *Clinical Disorders of the Heart Beat* By Sir Thomas Lewis Seventh edition London Shaw and Sons Ltd 1933 (6s 6d net)

that the lesser grades of this arrhythmia bear a less ominous significance than has hitherto been believed, but with few exceptions the established condition presages early and sometimes sudden death It is usual to decry the application of animal experiment to clinical medicine, and vice versa, but it may be mentioned that alternation may be induced in the isolated heart by depriving it of sugar, while the administration of glucose to patients showing alternation has sometimes abolished the irregularity

There comes a time in the evolution of every branch of medicine when it seems that finality has been reached An authoritative voice proclaimed not long ago that surgery had reached its zenith, but a glance at the earliest results of the surgery of the sympathetic nervous system is sufficient to suggest the vast curative and prophylactic possibilities in this field yet unexplored The future of cardiology is a diverting speculation There can be no doubt that prophylaxis against rheumatic infection and coronary sclerosis are the most urgent needs and the most promising fields of research at the present time For the prevention of rheumatic infection and consequent crippling of the heart we must look to the bacteriologist and immunologist The day when the normal and pathological metabolism of the heart will be fully understood appears yet far distant, but the prevention of degenerative disease in the coronary arteries and myocardium undoubtedly awaits the solution of these problems

MILK AND PASTEURIZATION

At a time when the lay public, and even many members of the medical profession, are so woefully misinformed as to the effect of pasteurization on milk, a report by Drs J D Stirling and J H Blackwood of the Hannah Dairy Research Institute[1] is peculiarly welcome The director of the institute, Dr Norman C Wright, lays emphasis in his preface on the fact that the report is a review of *evidence*, not a summary of *opinions* It is concerned mainly with the changes in the composition of milk brought about by pasteurization, and with a study of the possible diminution in the nutritive value of milk submitted to this process Before embarking on their task the authors make it clear that they are referring to low-temperature pasteurization by the holder process—namely, the maintenance of milk in a closed container at 145° to 150° F for thirty minutes with subsequent cooling, and not to flash pasteurization, boiling, or sterilization

Briefly, the changes undergone by milk during, or as the result of, the process of pasteurization may be summarized as follows The ability of the fat globules to separate out is impaired, so that a slight diminution occurs in the cream line, about 5 per cent of the albumin is coagulated, there is an alteration in the equilibrium between the calcium and the phosphate ions, a diminution of about 5 per cent occurring in the soluble fractions, the sensitivity of calcium caseinate to rennin coagulation is affected, the coagulation time being shorter in freshly pasteurized than in raw milk, and longer in milk that has been pasteurized some hours previously, the rennin coagulum in pasteurized is of looser texture than that in raw milk, vitamin C is partly destroyed, the degree of destruction being estimated, even under favourable conditions, as about 50 per cent, the pathogenic organisms that may be present, along with a variable proportion of non pathogenic bacteria, are killed Suggestions that the effect of heat on enzymes, bactericidal property, antibodies, and lactic acid bacteria of milk should be taken into account have been dismissed as irrelevant There is no evidence that milk enzymes are of any importance in nutrition, it being highly probable that they are destroyed in the gastro-intestinal tract The bactericidal property of fresh milk is lost long before the milk has reached the consumer Antibodies are present in milk only in the colostral period, and the idea that pasteurization of bulk milk may destroy such bodies is based on a misapprehension There is no foundation for the suggestion that pasteurization destroys all the lactic acid bacteria and lays the milk open to subsequent putrefaction, some of the lactic bacteria survive, and pasteurized milk sours in the same way as a good quality fresh milk

With regard to the effect of feeding pasteurized milk, it is pointed out in the report that, while the risk of milk-borne disease is diminished, the only positive disease that has been shown to follow its use in human infants is scurvy Fresh milk is at the best a poor source of supply for vitamin C, and the partial destruction of this factor that occurs during pasteurization renders it even less satisfactory The exact effect of heat on vitamin D is not known with certainty, but since fresh cow's milk has an antirachitic potency only 1/500 of that of cod-liver oil, it is clearly dangerous to rely on milk for the proper development of the bones and teeth of the growing child After a careful review of the most important feeding experiments carried out on children and on animals, the authors come to the following conclusion "There are, therefore, strong grounds for the belief that infants can satisfy all their requirements on diets of adequate amounts of pasteurized milk provided that extra vitamin D, and, of course, vitamin C, are added to the diet" As regards older children they say "There do not appear to be any good grounds for the belief that pasteurized milk is a less valuable component of the diet than raw milk for children who satisfy the bulk of their nutritive requirements from sources other than milk" The bacteriological and epidemiological evidence is overwhelmingly in favour of the value of pasteurization of the liquid milk supply, and even the most rigid advocates of raw milk cannot dispute this evidence without gross perversion of the facts There has, however, been a serious doubt in the minds of some workers that

[1] *The Nutritive Properties of Milk in Relation to Pasteurisation* By J D Stirling, B Sc Ph D and J H Blackwood B Sc Ph D The Hannah Dairy Research Institute Bulletin 5 Glasgow Aird and Coghill Ltd 1933 (4s net)

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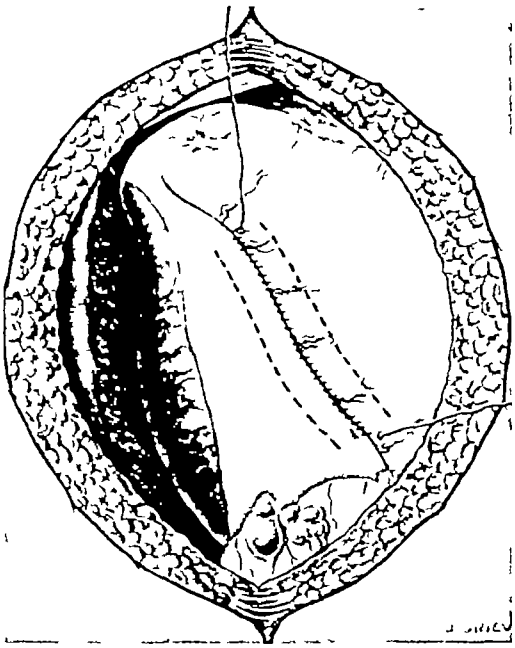

FIG 1.—Gastro-duodenostomy Duodenum mobilized. First row of sutures inserted. Dotted lines indicate the position of openings in stomach and duodenum

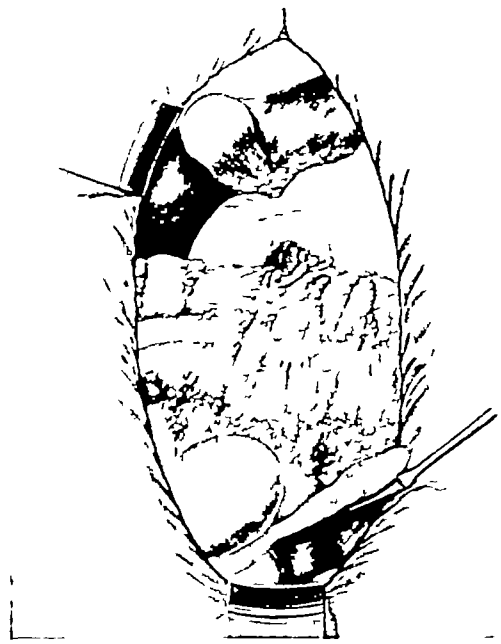

FIG 2.—The abdominal triad Chronic cholecystitis with gall stones, stenosing duodenal ulcer and subacute appendicitis.

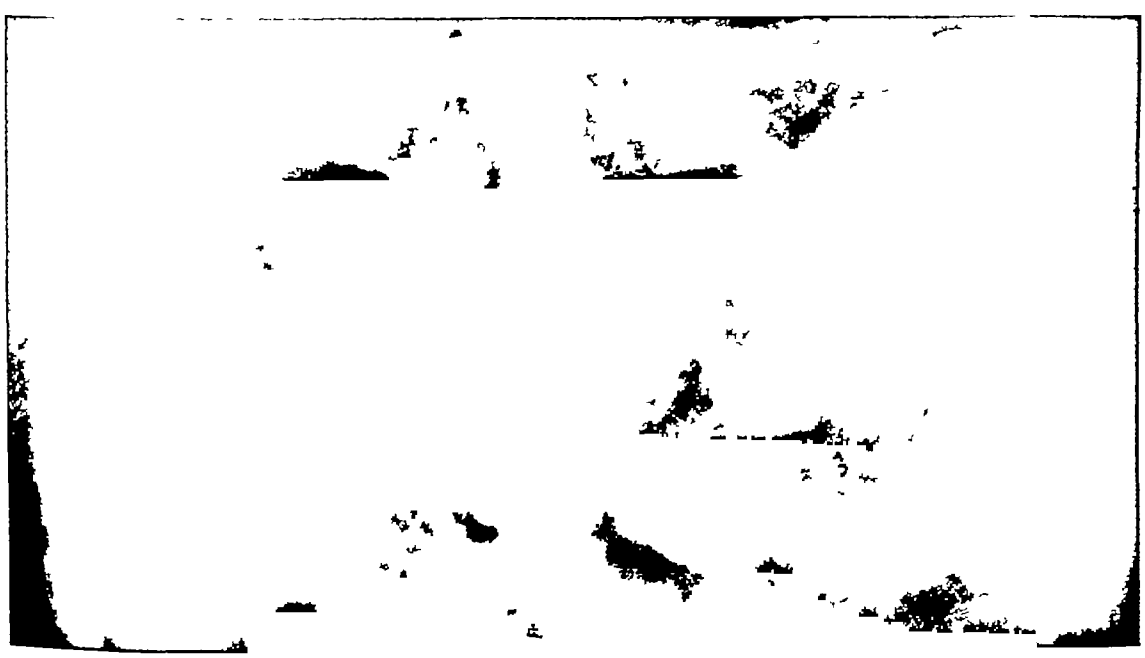

FIG 3.—Gross duodenal ileus associated with stomal ulcer following gastro-enterostomy

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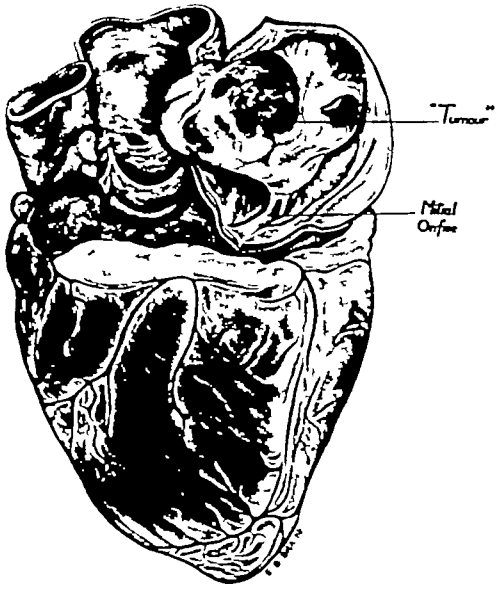


FIG 1.—A large pedunculated thrombus filling the left auricle.

FIG 2.—Fibroblasts resembling stellate cells of a myxoma.

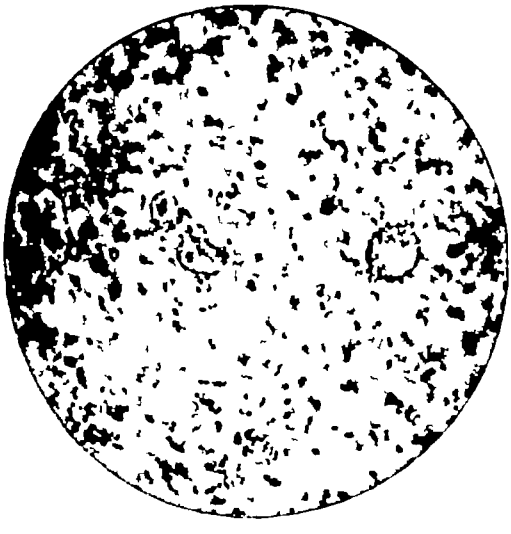
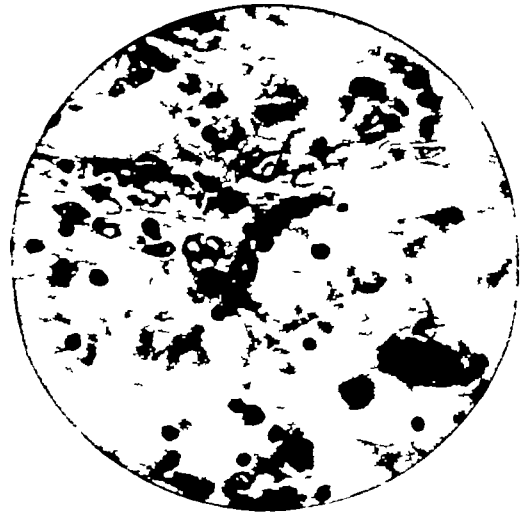


FIG 3.—Low power Thin walled newly formed blood vessels



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This registered Hospital is situated in 120 acres of park and pleasure grounds. Voluntary patients who are suffering from incipient mental disorders or who wish to prevent recurrent attacks of mental trouble temporary patients and certified patients of both sexes are received for treatment. Careful clinical biochemical bacteriological and pathological examinations. Private rooms with special nurses male or female in the Hospital or in one of the numerous villas in the grounds of the various branches can be provided.

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This is a Reception Hospital in detached grounds with a separate entrance to which patients can be admitted. It is equipped with all the apparatus for the most modern treatment of Mental and Nervous Disorders. It contains special departments for hydrotherapy by various methods including Turkish and Russian baths the prolonged immersion bath Vichy Douche Scotch Douche Electrical bath, Plombières treatment etc. There is an Operating Theatre a Dental Surgery an X-ray room an Ultra-violet Apparatus and a Department for Diathermy and High Frequency treatment. It also contains Laboratories for biochemical bacteriological and pathological research.

MOULTON PARK.

Two miles from the Main Hospital there are several branch establishments and villas situated in a park and farm of 650 acres. Milk meat, fruit and vegetables are supplied to the Hospital from the farm gardens and orchards of Moulton Park. Occupation therapy is a feature of this branch and patients are given every facility for occupying themselves in farming gardening and fruit growing.

BRYN-Y-NEUADD HALL

The seaside house of St. Andrew's Hospital is beautifully situated in a Park of 330 acres Llanfairfechan amidst the finest scenery in North Wales. On the North-West side of the Estate a mile of sea coast forms the boundary. Patients may visit this branch for a short seaside change or for longer periods. The Hospital has its own private bathing house on the seashore. There is trout fishing in the park.

At all the branches of the Hospital there are cricket grounds, football and hockey grounds lawn tennis courts (grass and hard courts) croquet grounds golf courses, and bowling greens. Ladies and gentlemen have their own gardens and facilities are provided for handicrafts such as carpentry etc.

For terms and further particulars apply to the Medical Superintendent (Telephone No. 2356 and 2357 Northampton) who can be seen in London by appointment.

THE COPPICE, NOTTINGHAM.

HOSPITAL FOR MENTAL DISEASES

This Institution is exclusively for the reception of a limited number of Private Patients of both sexes of the Upper and Middle Classes at moderate rates of payment. It is beautifully situated in its own grounds on an eminence a short distance from Nottingham and from its singularly healthy position and comfortable arrangements affords every facility for the relief and cure of those mentally afflicted. Voluntary and Temporary Patients received.

Tel. 64117 *For terms etc., apply to the Medical Superintendent.*

COURT HALL, KENTON, EXETER,

SOUTH DEVON

For the care and treatment of Ladies suffering from Mental Disease. Limited to eight patients. Telephone Starcross 59.

CLIFFDEN TEIGNMOUTH in connection with Court Hall, for early and convalescent cases. Cliffden is a large well appointed house with lovely views of the South Devon Coast. It is beautifully situated in grounds of 24 acres. The gardens are very attractive and there is a private road to the beach.

Resident Physicians BERTHA M. MULES M.D. B.S. ANNIE S. MULES M.R.C.S. L.R.C.P.

Telephone Teignmouth 289

TYKEFORD ABBEY, NEWPORT PAGNELL,

BUCKS

FUNCTIONAL NERVOUS DISORDERS, MEDICAL & CONVALESCENT CASES

An Approved Nursing Home for reception of Female Cases under the Mental Treatment Act

The Home is a Mansion of Historical interest standing in 9 acres of garden and grounds and is situated 14 miles from Northampton and 12 miles from Bedford on the main Londo to Northampton Road fifty miles from London. Both sexes are accommodated. Psychotherapeutic Treatment is used extensively in suitable cases. Radiant Heat, X-Ray and Ultra-violet Light. Diathermy and Foam Baths. Billiards tennis etc. Fees from five gns. per week.

Apply Dr. D. E. M. DOUGLAS-MORRIS. Telephone Newport Pagnell 121.

HAYDOCK LODGE,

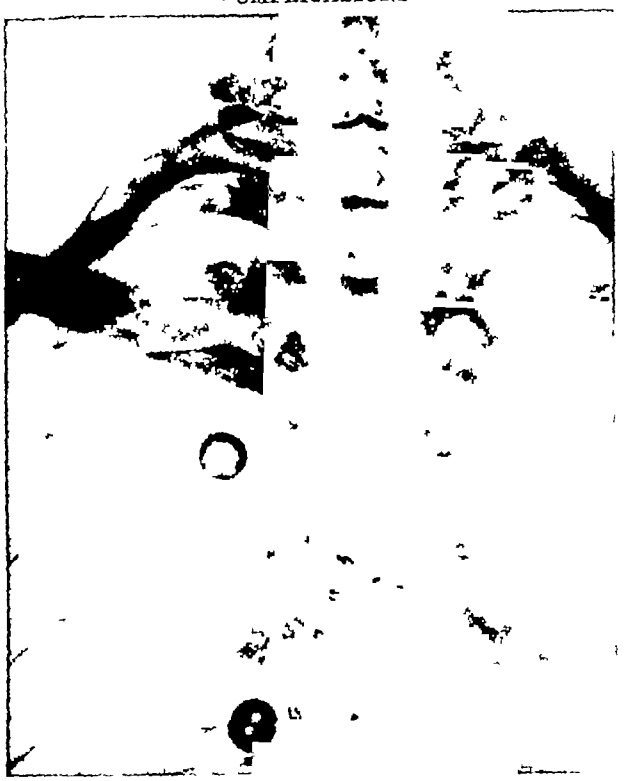
NEWTON-LE-WILLOWS, LANCASHIRE

Hons. 11 Ashton-in-Makerfield.

For the reception and treatment of PRIVATE PATIENTS of both sexes of the UPPER AND MIDDLE CLASSES suffering from mental and nervous diseases, either voluntarily or under Certificate. Patients are classified in separate buildings according to their mental condition.

Situated in park and grounds of 400 acres. Self supported by its own farm and gardens in which patients are encouraged to occupy themselves. Every facility for indoor and outdoor recreation. For terms, prospectus, etc. apply MEDICAL SUPERINTENDENT.

R L NEWELL CERVICAL RIB WITH VASCULAR COMPLICATIONS



Skiagram showing cervical rib on left side

DONALD MACLEOD RETROPERITONEAL SARCOMA

Photograph of tumour, with normal kidney beside it for comparison.

A R FISHER FRACTURE SEPARATION OF EPIPHYSIS OF LESSER TROCHANTER OF FEMUR

FIG 1.—Skiagram, August 18th 1932.

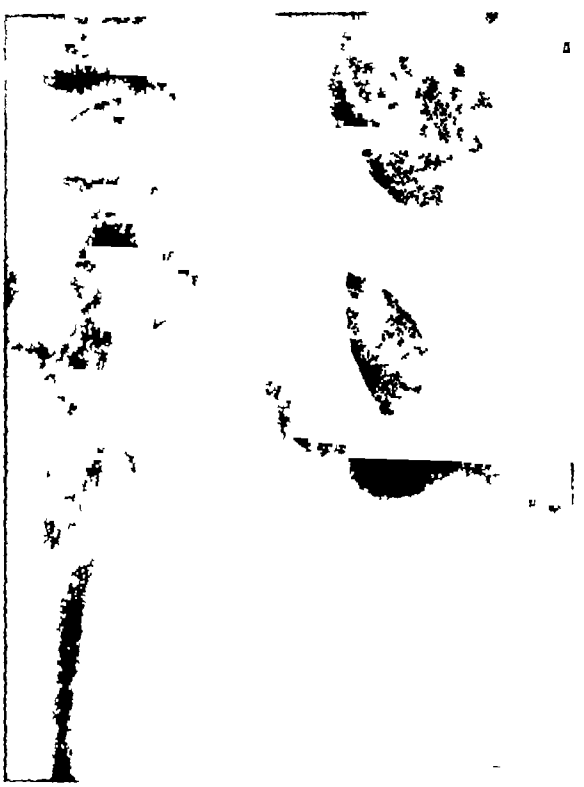


FIG 2.—Skiagram, October 21st, 1932

BETHLEM ROYAL HOSPITAL, for Nervous and Mental Disorders,

Monks Orchard, Monks Orchard Road, Eden Park, Beckenham, Kent.

Reg Tel Address Bethlem, Beckenham *Telephone* Springpark 1180 1181

Station Eden Park (Southern Railway)

President LORD WAKEFIELD OF HYTHE, C B E, LL D
Treasurer SIR LIONEL FAUDEL PHILLIPS Bart
Physician Supt J G PORTER PHILLIPS, M D, F R C P

This Registered Hospital is now situated at Monks Orchard in some 250 acres of park, pleasure and farm grounds. Applications can be considered on behalf of patients of the educated classes in a presumably curable condition With a view to early treatment voluntary or uncertified patients are admitted

Patients who can contribute 5 guineas weekly towards the cost of treatment and maintenance may be received as vacancies arise The Committee will also consider applications for admission at lower rates, and in certain cases will be prepared to admit patients free of charge

Every facility for specialized investigation and treatment is provided in the Lord Wakefield Science and Treatment Unit. In this unit is found the X ray and Dental Departments and the Bio-Chemical, Pathological and Psychological Laboratories

Furthermore provision is made for Electro-Therapy and Hydro-Therapy to be carried out in all their forms and Occupational Therapy under competent instruction is encouraged

In addition to the Resident Medical Staff Consultants in special branches of Medicine and Surgery are available whenever required. The comfort of sensitive patients is greatly enhanced by the fact that the majority are given single bedrooms

For forms and further particulars apply to the Physician Superintendent at the Hospital

THE OLD MANOR SALISBURY

A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS

Extensive grounds Detached Villas Chapel Garden and dairy produce from own farm Terms very moderate.

CONVALESCENT HOME at BOURNEMOUTH

Detached Villas standing in 12 acres of ornamental grounds with tennis courts etc which Voluntary Temporary or Certified Patients may visit by arrangement for long or short periods

Illustrated Brochure on application to the Medical Superintendent, The Old Manor, Salisbury Telephone 51

CHEADLE ROYAL MENTAL HOSPITAL,

CHEADLE, CHESHIRE

This REGISTERED HOSPITAL, with a SEASIDE BRANCH at Colwyn Bay N Wales, is for the treatment and care of those of the Upper and Middle Classes suffering from MENTAL and NERVOUS DISEASES

The Hospital is governed by a COMMITTEE, appointed by the TRUSTEES of the Manchester Royal Infirmary

In addition to the Main Building there are separate villas Extensive grounds Hard and grass tennis courts cricket and croquet grounds, and a court for badminton There are also wireless installations Golf may be had within easy distance Occupational Therapy

VOLUNTARY, TEMPORARY AND CERTIFIED PATIENTS received

The Hospital is nine miles from Manchester, 50 minutes by rail from Liverpool and 3½ hours from London

For terms and further particulars apply to the Medical Superintendent J A C ROY, M B who may be seen in Manchester by APPOINTMENT

Telephone GATLEY 2231 (3 lines)

NORTHUMBERLAND HOUSE,

GREEN LANES, FINSBURY PARK, N 4

Telegrams SUBSIDIARY, LONDON *Telephone* NORTH 0888.

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses Conveniently situated four miles from Charing Cross Easy access from all parts Six acres of ground highly situated, facing Finsbury Park Private Suites Voluntary Patients and Temporary Patients received without certification.

Convalescent Home **Kearsney Court, Dover** For further particulars, apply to the **Medical Superintendent**

CAMBERWELL HOUSE, 33, Peckham Road, London, S.E.5.

Telegrams PSYCHOLIA LONDON *Telephone* RODNEY 4731—4732

FOR THE TREATMENT OF MENTAL DISORDERS

Also completely detached Villas for mild cases, with private suites if desired Voluntary Patients received Twenty acres of grounds Hard and Grass Tennis Courts Putting Greens Bowls Croquet, Squash Rackets, and all indoor amusements including Wireless and other Concerts Occupational Therapy Callisthenics and Dancing Classes X ray and Actino therapy Prolonged Immersion Baths, Operating Theatre, Pathological Laboratory Dental Surgery and Ophthalmic Dept Chapel Senior Physician Dr HUBERT JAMES NORMAN, assisted by three Medical Officers also resident and visiting Consultants

An illustrated Prospectus giving fees which are strictly moderate may be obtained upon application to the Secretary

The Convalescent Branch is HOVE VILLA, BRIGHTON, and is 200 feet above sea-level

PECKHAM HOUSE, 112, Peckham Road, London, S.E.15.

Telegrams "Alleviated, London" Telephone Rodney 4741-4742

The above House, which was established in 1826, is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders Certified voluntary and temporary patients are received Separate houses for treatment and accommodation of special cases adjoin the Institution There is a seaside branch Kearsney Court near Dover, to which patients may be sent for treatment or on holiday Motor and carriage exercise is provided as required Patients can avail themselves of a course of physical drill Tennis Courts Entertainments, dances, and indoor amusements held throughout the year Terms from £3 3s per week

Illustrated prospectus and further particulars can be obtained from the Medical Superintendent

DARTMOOR CONVALESCENT HOME.

750 FEET ABOVE SEA LEVEL

Established 1903 for Treatment of Pulmonary and other forms of Tuberculosis Sheltered Situation on the slopes of the bracing moorland Radiographic Installation Electric Light Central Heating Separate Bedrooms Efficient Treatment combined with individual comfort and minimum restrictions Illustrated Prospectus on request to the Resident Physician C H BERRY M R C S, L R C P Torr House Chagford Devonshire *Telephone* 11 CHAGFORD *Telegrams* TORR CHAGFORD

pasteurization might bring about a significant decrease in the essential nutritive properties of milk The conclusions reached in this report are of particular interest in showing that no diminution in nutritive value occurs as the result of pasteurization that cannot easily be remedied by the simple addition of orange or lemon juice and cod-liver oil

CLEARING HOUSES OF SCIENCE

Readers will recall that during the Imperial Agricultural Research Conference in 1927 seven new imperial bureaux were established as clearing-houses of scientific information throughout the British Empire These seven bureaux were organized on lines somewhat similar to the three imperial bureaux then in existence dealing with entomology mycology, and tropical diseases and like the older establishments most have begun the production of abstracting journals Of these newer journals two are especially important to medical sciences—namely those dealing with parasitology and animal health—while two others (animal nutrition and animal genetics) deal with sciences which are also of fundamental interest to human medicine The parasitology bureau under the energetic directorship of Professor Leiper, in addition to publishing a series of monographs on parasites important to animals (and to a lesser degree to man) is responsible for the material contained in *Helminthological Abstracts*, a journal published five times yearly at a cost of 16s 6d post free This journal abstracts every paper on helminthology which appears in every publication and language under the headings of journals and, besides giving the worker adequate summaries of all that is taking place in the science furnishes libraries with a completely annotated yearly bibliography of the parasitic worms Its London office is at the Tropical School, and its low price makes it available to everyone It is already proving of first-rate importance to every laboratory studying helminthology throughout the world—especially those situated at some distance from library centres The Imperial Bureau of Animal Health (at Weybridge Surrey) is also issuing a monthly abstracting journal—*The Veterinary Bulletin*—at an annual cost of £2 This is less specialized than the helminthological bulletin but is broader in its outlook dealing with all the various aspects of veterinary medicine and containing much of value to both human and comparative medicine as well as to public health This bureau at Weybridge is also proposing to issue in quarterly parts an *Index Veterinarius* running to 1 600 mimeographed pages with about 10 000 references yearly These would be adequately cross-indexed but would of course be references only The Bureau of Genetics (under Professor Crew) and the Bureau of Animal Nutrition (under Dr Orr) similarly issue reviews and bulletins dealing with their interests These bureaux are essentially imperial in their outlook Their governing committee has representatives from the home countries the Dominions and the Colonies Their cost is out of all proportion to the valuable services they are rendering to agriculture and other biological sciences throughout the British Empire and we trust that the present economic crisis will not be allowed to interfere with their successful development

THE ECONOMIC ASPECT OF LEPROSY

Special attention is drawn in the report for 1932 of the British Empire Leprosy Association [1] to the economic problem created by this disease and consideration is given to information received from British Guiana where schemes are being initiated to put the coping-stone on an already efficient system of prophylaxis Dr Rose medical superintendent of the leprosy hospital in that colony estimates that of the 360 000 population 560 persons are alive who are or were at some time suffering from this infection while fifty-five young persons of all races are freshly infected each year two-thirds of these new patients being males Before the discovery of the hydnocarpus oil treatment the colony had to spend about £10 000 a year on the care of these patients with special regard to their segregation so as to minimize the risk of infecting others Assessing the value to the community of these 560 potential producers at an average of two shillings a day—the wage of an ordinary labourer there—the financial loss to the community by their withdrawal from it would amount to about £20 000 and the total reach the figure of £30 000 a sum which is almost half the amount spent by the Government of British Guiana on the education of children or one-quarter of the cost of the whole medical department in a year On this basis it is possible to conjecture the immensity of the financial and economic loss sustained in other parts of the Empire such as India where the population is vastly larger The British Empire Leprosy Association was brought into being some nine years ago to stimulate and assist the various Governments to attack this problem and from its own small resources has continued to finance local endeavour wherever effective measures of control are contemplated or in operation For example a doctor in Africa cabled to England for a supply of hydnocarpus oil for injection As soon as it became known that he had the medicine he received ten patients in a week In four weeks a hundred came to him and in the next four weeks five hundred A colony has now been established with more than a thousand patients Such occurrences are said to be typical The further that investigations are pushed the more prevalent does leprosy appear to be in the tropical parts of the Empire In order to deal with this scourge which is beyond the power of unaided Governments to combat an income of at least £15 000 a year is required The work has been handicapped by the fact that little support can at present be given by Governments to leprosy relief activities but the Leprosy Association contrived to supply about £1 460 in grants during 1932 The sum allocated to the purchase of drugs amounted to £886 in comparison with £801 so provided in the previous year and £632 in 1930 An appeal is therefore made for more generous support for this work Other information supplied in this annual report relates to the work in progress in various parts of the Empire including India where there are seventeen branches of the Leprosy Association A survey is proceeding in Southern Rhodesia in one area the incidence of the disease was estimated as 5 8 per 1 000 population and in another as 1 per 1 000 In Northern Rhodesia lack of money has hindered further extension of the campaign but there are six centres for treatment and two

[1] To be obtained from the Association 29 Dorset Square N W 1

Bad Reichenhall

Climatic Spa

for diseases of the respiratory organs

Saline Spa in the Bavarian Alps 1,600 feet above sea level.

Indications Bronchitis emphysema asthma diseases of the nose, throat and larynx heart trouble children's and women's diseases Largest installation in the world for pneumatic chambers and inhalation in modern curative establishments Walks 280 km. long lead to the mountains (walking cure) Saline springs containing 26% brine Potable springs All kinds of sport and entertainments Information and prospectus from the "Kurverein."

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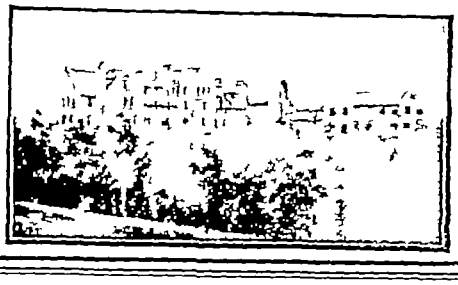
TOR-NA-DEE SANATORIUM

MURTLE DEESIDE ABERDEENSHIRE



Medical Director David Lawson, M.D., F.R.S.E.

FULLY EQUIPPED WITH EVERY MODERN APPLIANCE FOR THE DIAGNOSIS AND TREATMENT OF ALL FORMS OF TUBERCULOSIS AND ALLIED DISEASES

Physician Superintendent J. M. JOHNSTON, M.B., D.P.H., etc.

Full particulars and Prospectus on application to the Secretary

Inclusive Terms SEVEN GUINEAS A WEEK.

PENDYFFRYN HALL SANATORIUM

PENMAENMAWR

Established 1900 for the treatment of Tuberculosis Miles of carefully graduated walks through pine-clad hills with sea and mountain views Modern treatment including ARTIFICIAL PNEUMOTHORAX SANOCRYSIN etc X-ray plant electric light central heating wireless Special milk supply from tuberculin tested herd Full day and night nursing staff On L.M.S. Main Line to Holyhead 4½ hours from London Resident Physicians DENISON PICKERING M.D. (Cantab) J. V. HENNESEY M.B., Ch.B. Matron Miss S. A. EDDY S.R.N. Late Sister in-Charge Royal Hospital Annexe Sheffield

For particulars apply to the SECRETARY Pendyffryn Hall Penmaenmawr N. Wales ('Phone 20)

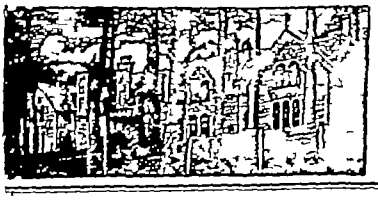
THE COTSWOLD SANATORIUM

First opened in 1898 and rebuilt in 1925 On the Cotswold Hills seven miles from Cheltenham for the treatment of Pulmonary and all other forms of Tuberculosis Aspect S.S.W. sheltered from North and East elevation 800 feet Pure bracing air Special Treatment by artificial Pneumothorax (X-ray controlled) Tuberculins Medicated Inhalations by means of the Apneu Inhalation Installation and Ultra Violet Rays is available when necessary without extra charge X-ray plant Electric light Radiators hot and cold basins and Wireless in all rooms

Full day and night Nursing Staff.

Medical Superintendent GEOFFREY A. HOFFMAN B.A., M.B., T.C.Dub. *Assistant Physician* MARGARET A. HARRISON M.B., B.S.Lond. *Consulting Laryngologist* SIDNEY BERNSTEIN M.R.C.S.Eng. L.R.C.P.Lond. (Attends Regularly)

Apply The Secretary The Cotswold Sanatorium Cranham Gloucester *Telephone* 41 WITCOMBE. *Telegrams* HOFFMAN BIRDLIP



KINGUSSIE, N.B.

THE GRAMPIAN SANATORIUM

Situated in the upper Speyside district of Inverness-shire. One of the highest inhabited districts in Britain— The Switzerland of the British Isles Bracing and dry mountain climate Well sheltered Sanatorium specially built for the Open air Treatment of Tuberculosis Opened in 1901 Elevation 860 ft. above sea level. Electric light throughout buildings and in shelters. Central heating Fully equipped X-ray Plant. All forms of treatment available including Artificial Pneumothorax and Ultra Violet Rays for surgical cases of Tuberculosis Terms £4 7s. 6d to £6 6s. per week inclusive No extras.

MEDICAL SUPT. FELIX SAVY M.D. For particulars apply to the Secretary

HOSPITAL FOR CONSUMPTION

AND DISEASES OF THE CHEST, BROMPTON, and FRIMLEY SANATORIUM

PAYING PATIENTS RECEIVED

BOTH MEDICAL and SURGICAL CASES.

4 to 8 guineas per week at the Hospital 3 to 4 guineas per week at the Sanatorium.

APPLY TO THE SECRETARY—BROMPTON HOSPITAL, S.W.3.

LLANDRINDOD WELLS

The famous Welsh Spa magnificent scenery glorious mountain air Healing medicinal waters every modern treatment. Superb motoring centre Write to the modern hotel for particulars.

M. J. BRYAN SMITH

YE WELLS HOTEL

colonies In Nigeria four settlements are being maintained by the Government, twenty by native administrations, and seven by religious missions, and three large new settlements are under construction An appendix to the report reproduces an appeal letter by the wife of the Governor of British Guiana for funds to promote a scheme for protecting children in that colony from leprosy The establishment of a home for the children of leprous parents undergoing treatment should ensure progressive decline in the incidence of a disease now fully recognized as preventable Indeed, at the annual meeting in London on April 20th of the Leprosy Association Sir Leonard Rogers, its honorary medical secretary, insisted that the disease could be greatly reduced in a decade by examining the house contacts of discovered infectious cases, and instituting treatment with chaulmoogra and hydnocarpus oils Proof of this had been recently obtained, he added, in the Island of Nauru and in the Southern Sudan Whereas in India ten years ago only 7,000 leper patients were being cared for, 50,000 were now being treated in clinics as outpatients in the Central Provinces and Madras alone, at a total cost in the latter province of 4s a year Sir Leonard Rogers stated that with an annual income of £5,000 to £7,000 the British Empire Leprosy Association had supplied half a million doses of the new therapeutic preparations each year, had published the well-known *Leprosy Review*, had distributed abstracts of literature on the disease, and had provided the seeds from which several thousand hydnocarpus trees were now flourishing from the West Indies and Africa to Fiji The campaign of the association along these lines, he concluded, could be doubled if a few thousand pounds of additional income were raised

"LADY MARY" AND MEDICINE

Dr Robert Hutchison has contributed to the *London Hospital Gazette* for March an interesting paper on "Lady Mary Wortley Montagu and Medicine," in which he pleasantly comments on the relations of that gifted but rather eccentric woman with our profession as a whole and with certain particular members of it As is well known Lady Mary went with her husband to reside at Adrianople when he was ambassador, and it was there that she became aware of the practice of inoculation for small-pox, which she introduced into Western Europe The first British subject to be so treated was her infant son in 1717, who was to have such an eccentric career in after years Eccentricity was not surprising in the child of a woman so unusual as Lady Mary and a man so queer as Edward Wortley Montagu, who became a notable miser Horace Walpole has described the unusual habits (in both senses of the word) of Lady Mary in her later days, and she herself has characterized her son as, among other things, "an excellent linguist and a thorough liar" As Dr Hutchison shows, Lady Mary was not sparing in her condemnation of doctors in general, although she made exceptions of Sir Samuel Garth and of Mr Maitland, the physician to the Embassy at Constantinople, while a certain Italian practitioner seems to have made a conquest over her critical, rebellious spirit She was a literary lady and an *esprit fort*, but she is not to be confused with a later celebrated Mrs Montagu, generally known under the sobriquet of "Bluestocking," although she was not the first or only woman to be so distinguished Dr Hutchison concludes his paper by the reflection that Lady Mary would have made a great woman doctor No doubt she had many qualities which would have served her in such a calling, but we question whether she would ever have found her stock of patience adequate for medical practice She was intolerant of what she considered to be folly

THE OSTEOPATHS BILL AGAIN

In February, 1931, a Bill to regulate the practice of osteopathy and to prescribe the qualifications of osteopathic practitioners was introduced by a group of private M P 's and later withdrawn As pointed out in our issue of March 28th of that year (p 548) this attempt to get osteopathy recognized by law was framed on the model of the Dentists Act, the Midwives Acts, and the Venereal Diseases Act, as opposed to that of the Medical Acts—that is to say, it sought not only to regulate the assumption of titles, the holding out of practitioners as duly qualified, and the recovery of fees, but to prohibit practice of the cult or specialty by persons not on the proposed register Indeed, it went a good deal further than that in a number of ways which it would be tedious now to recapitulate Not the least striking feature of a remarkable Bill was that if enacted without safeguarding clauses it would have deprived duly qualified medical practitioners of the right to undertake work in any of the multifarious subjects included under "the practice of osteopathy" as defined in Section 2 (2) and Schedule 2 Now, two years later, an identical Bill has been introduced again in the House of Commons, and it is backed by an admiral, three knights, a colonel and a captain, and five other members No doubt the Parliamentary Medical Committee has its eye on this bold company, and the Minister of Health will have something cogent and well informed to say if their little Bill comes to second reading

"HANDEDNESS"

Recent correspondence in the *Times* upon the effects of teaching left-handed children to use their right hands lends special interest to the research reported by Charles A Selzer under the title of *Lateral Dominance and Visual Fusion* [1] A number of children who had difficulty in reading were referred to the Harvard Laboratory of Educational Psychology for investigation They were all school children of average or superior intelligence, who, despite the efforts of teachers and parents, were having serious trouble in learning to read Some were "mirror readers," others reversed letters or omitted or added them The mirror readers were usually found to be either left-dominant or equally dominant for both right and left hands Those who made mistakes with letters were not left-handed, so another cause had to be sought for It occurred to the author that ocular muscle imbalance or latent squint might possibly be a cause of the mistakes, owing to

[1] *Lateral Dominance and Visual Fusion* By C Selzer No 12 Harvard Monographs in Education Cambridge Mass Harvard University Press 1933 (6s net)

a difficulty of binocular fixation in reading On examination it was found that of thirty-five non-readers no fewer than thirty-three showed defects of lateral imbalance whereas an unselected group of 100 school children showed a very small percentage of imbalance Use of prismatic glasses in some cases of non readers was followed by distinct improvement and dislike of reading was overcome Four cases of pronounced stammering were also examined None of these showed left-dominance by either eye or hand tests Each however showed the same heterophoric condition as the non-readers Other findings cast doubt upon the theory that stammering is due solely to transfer of handedness The fact that many persons have been transferred from left to right hand without speech disturbance tends to indicate that the transfer without accompanying conditions does not explain the phenomenon The evil effects of a transfer of handedness tend to be even more discredited when it is found by means of the *manoptoscope* dynamometer and other tests that nearly half the human race show some left-dominant tendencies The author thinks that if the left-handed child were taught in early childhood to use the right hand in all its performances there would be no bad effects but to permit it to continue its left-handed tendencies in other performances and then require it to write with the right hand seems neither logical nor fair to the child If a glove were placed on the left hand of a sinistral child during the time it acquires handedness it is quite likely that right handedness would develop without a disturbance This monograph gives an excellent account of previous investigations into the subject and a useful bibliography while the investigations undertaken by Mr Selzer in his particular research are set out in ample detail

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TYPHOID FEVER IN 1931 2

The January–February issue of the Epidemiological Report of the Health Section of the League of Nations contains a survey of the incidence and mortality of typhoid fever throughout the world during the last two years The lowest typhoid death rates per 100 000 population were found in Germany England Scotland Norway New Zealand Holland Sweden and Switzerland where the rate was 1 per 100 000 or less The next group where the death rate fluctuated between 1 and 2 9 comprised Australia Austria Denmark the Irish Free State Northern Ireland and the Union of South Africa Then came Belgium France Canada and the United States with a death rate varying from 3 to 4 9 In Canada Quebec had the highest mortality and in the United States the Southern States although considerable improvement has recently taken place in both countries Next to Canada and the United States come Czechoslovakia Poland and Uruguay which had a typhoid mortality of between 5 and 9 The countries in which the death rate is between 10 and 14 9 per 100 000 are Chili Spain the Straits Settlements and Japan in all these countries however there has been a fall in recent years The same remark applies to Greece Hungary Italy and Portugal where the typhoid mortality is still over 15 per 100 000 In Greece in particular there has been a considerable reduction in the typhoid mortality since the epidemic coinciding with the arrival of refugees from Asia Minor in 1923 Generally speaking 1931 was a relatively good year as regards typhoid fever in Europe whereas in 1932 a remarkable increase occurred in many countries particularly Germany England the Irish Free State France Italy Lithuania Norway Holland Sweden and Czechoslovakia The increase however was highest in Bulgaria Hungary Malta Poland Rumania and Jugoslavia There was in fact a sort of typhoid pandemic in the Balkan States and Eastern Europe at the end of last year whereas the European territories of Soviet Russia were not affected In extra-European countries the towns of Nagasaki Alexandria, and Teheran considerably exceeded their average mortality of recent years owing to the occurrence of epidemics in 1931 and 1932

THE ROYAL ACADEMY

Except in military circles The R A stands for one thing only—the annual summer exhibition of the Royal Academy of Arts at Burlington House in London The 165th of the series opened on Monday and the genuine art critics (how few they are!) and the press writers (whose name is legion) have already pronounced judgement in accordance with their own views or with what they imagine to be the tastes of their public A rapid tour of the galleries gives the impression that the hanging committee has performed its difficult task with an open mind towards contemporary art The old right wing and centre are adequately represented while moderate specimens of left-wing practice by artists who have condescended to obey the elementary rules will be found in every room It would be impertinent for us to say more about the way in which the exhibits have been chosen or on their merit as works of art but they are certainly well displayed with a minimum of crowding From the narrow professional point of view this year's Academy has not much medical interest There is a very competent portrait in oils of the Master of the Rotunda Hospital Dublin in aseptic operating kit by John Keating and a smaller portrait by Sir John Lavery R A of Dr Max Porges of Marienbad A stuckit doctor —Mr W Somerset Maugham—appears in two interesting pictures (painted twenty-one years apart) by Gerald Kelly R A The Architectural Room has four or five drawings of hospitals and medical institutions of various kinds and to make a short story longer we might add that three of the principal figures at the opening of the B M A House in 1925 are represented among the sculptures in the Lecture Room—H M the King the late Archbishop of Canterbury and Sir Edwin Lutyens

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The title of Lord Horder's Oration at the annual general meeting of the Medical Society of London on Monday May 8th at 8 30 p m is New Treatments for Old

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We have to announce with regret the death at his home in Birmingham after a long illness of the veteran ophthalmologist Professor Joseph Priestley Smith LL D F R C S

NATIONAL HOSPITAL

For Diseases of the Nervous System, QUEEN SQUARE, W C 1 **MEDICAL SCHOOL**

M R C P

A course of Demonstrations in Neurology for candidates for the M R C P examinations will be held from May 9th to June 29th, on Tuesdays and Thursdays, at 6 p m

Fee for 16 demonstrations £6 6s Special Terms can be arranged for those unable to take the whole course of Lectures

Applications should be made to the Secretary J G GREENFIELD, Dean of the Medical School.

UNIVERSITY EXAMINATION POSTAL INSTITUTION

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(FOUNDED IN 1882)

Principal Mr F S WEYMOUTH M A (Lond)

POSTAL OR ORAL PREPARATION FOR ALL MEDICAL EXAMINATIONS

SOME SUCCESSES

M D (Lond),	1901 32 (9 Gold Medallists during 1913-32)	368
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M B, B S (Lond),	*Final* 1918 32 (Completed Exam)	206
F R C S (Eng),	*Primary* 1919 32	146
	Final	155
M R C P (Lond),	1919 32	215
D P H	(*Various*) 1906 32 (Completed Exam)	316
F R C S (Edin),	1918 32	53
M R C S, L R C P	*Final* 1919 32 (Completed Exam)	456
M D	Various By Thesis. Numerous successes	

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M R C P, M D Primary and Final F R C S F R C S (Edin) also Final M B, B S and M R C S L R C P Museum and Microscope Work Also Private Tuition

MEDICAL PROSPECTUS (48pp)

CONTENTS —The method and the cost of entering the Medical Profession *Particulars of all Medical Examinations* Postal Courses and Oral the Higher Medical for the Higher Surgestions for the Special Diploma Examinations Refresher Courses Openings for Women Hints for writing theses Medical Prospectus gratis along with list of Tutors etc on application to the Principal, Mr E. S WEYMOUTH M A 17 Red Lion Sq, London W C 1 (Telephone HOLBORN 6313)

Church Missionary Society

The ANNUAL MEETING of the MEDICAL MISSION AUXILIARY OF THE C M S will be held in the CENTRAL HALL WESTMINSTER at 7 p m on Wednesday, May 3rd, 1933

The Chair will be taken by
COL SIR CUSACK WALTON, D S O
and the speakers will be
A T SCHOFIELD, Esq, M A Camb, M R C S, L R C P (Mengo Uganda)
S D STURTON Esq M D B Ch M A Camb, D T M Liv (Hangchow Chekiang)
THE REV W WILSON CASH D S O, O B E (General Secretary of C M S)

Tickets of admission may be obtained from the Superintendent Loan Department Church Missionary Society Salisbury Square E C 4

There will be a small number of reserved seats at 1s each

ST THOMAS'S HOSPITAL MEDICAL SCHOOL

(University of London)

DEMONSTRATOR IN PHYSIOLOGY

Applications are invited for this appointment to date as from September 1st 1933 at a salary of £400 per annum

Applications with testimonials and Academic Record should be forwarded to the Dean of the Medical School by May 27th

ST MARY'S HOSPITAL MEDICAL SCHOOL, W 2

(University of London)

The SUMMER SESSION will begin on Tuesday, April 25th, 1933

The Medical School is being entirely rebuilt and the new buildings will be occupied at this Summer Session

Courses in Preliminary Intermediate, and Final Subjects are provided and Students can join at once after matriculation

SITUATION Between a large population providing clinical material and one of the best residential districts thus enabling students to live in close proximity to their work

CLINICAL UNITS IN MEDICINE AND SURGERY Certain members of the medical and surgical staff devote their whole time to teaching and research

Nearly 1 000 beds available for teaching, additional clinical material being provided by affiliation to an Infirmary and other Institutions

ENTRANCE AND RESEARCH SCHOLARSHIPS to the value of £1 400 are awarded annually

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C M WILSON (M C) M D F R C P
Dean

LIVERPOOL SCHOOL OF TROPICAL MEDICINE

(UNIVERSITY OF LIVERPOOL.)

COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on October 2nd 1933 and January 3rd, 1934 and for the Diploma in Tropical Hygiene on January 11th and April 26th 1934 (Candidates for the D T H must possess the D P M of this University)

For particulars apply to the Hon Dean, Liverpool School of Tropical Medicine Pembroke Place Liverpool

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SKILLED COACHING GUIDANCE and ADVICE from Special Tutors in conformity with the Regulations of the various Universities.

Apply for particulars and free booklet, Hints on Writing a Thesis for the M D Degree, to the SECRETARY Medical Correspondence College 19 Welbeck Street, London W 1

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Pre-eminent success in the education and treatment of stammering and other speech defects — Times
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The Practice of the Hospital is limited to Medical Practitioners. Particulars from J BROWNING ALEXANDER M D Dean

Medical and Dental Students

Special Classes for Pre Medical and Dental Exams Matric, and Prelims
Chemistry Physics and Biology Labs.
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F R C S (Edin).

PREP COURSE with daily Lecture-Demonstrations of Museum Specimens of Surg Path for next Exam will commence shortly POSTAL TUITION at any time —Further particulars H U ORRIN, F R C S, Surgeons Hall, Edinburgh

MEDICAL CORRESPONDENCE COLLEGE

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PROVIDES HIGHLY SUCCESSFUL ORAL AND POSTAL COACHING FOR ALL MEDICAL EXAMINATIONS

Special Preparations for all Surgical Qualifications

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(Primary & Final.) **M.S LONDON.**

F.R.C S EDINBURGH

And all other Surgical Degrees and Diplomas

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VALUABLE BOOK

How to Pass the F.R.C.S., free on application to the Secretary

UNIVERSITY OF BIRMINGHAM

Faculty of Medicine

WILLIAM WITHERING MEMORIAL LECTURESHIP

A COURSE OF FIVE LECTURES on *'Methods of Clinical Genetics'* will be delivered by Professor LANCELOT HOGBEN M A D Sc Professor of Social Biology The London School of Economics and Political Science (University of London) in the Large Theatre of the Medical Faculty Buildings Edmund Street during the Summer Term, 1933, on the following dates at 4 p m viz. WEDNESDAYS APRIL 26th MAY 3rd 10th 17th and 24th

Members of the Medical Profession are invited to attend

A card giving further information of the Course may be obtained on application to the Dean

STANLEY BARNES, M D, D Sc F R C P
Dean

UNIVERSITY OF BIRMINGHAM

FACULTY OF MEDICINE.

LECTURER IN PATHOLOGY

Applications are invited for the post of Lecturer in Pathology to Dental Students and Pathologist to the Queen's Hospital Birmingham, at a stipend of £400 per annum, at the rate of £1 per annum

Applications with three testimonials should be sent on or before May 10th to the undersigned from whom further particulars may be obtained

C G BURTON
Secretary

The University,
Birmingham
April, 1933.

MANCHESTER ROYAL INFIRMARY

Applications are invited for the DICKINSON PATHOLOGY SCHOLARSHIP value £75 tenable for one year. Candidates must be Graduates who have taken out their full Clinical instruction in the Manchester Royal Infirmary.

A copy of the regulations governing the scholarship can be obtained from the undersigned to whom six copies of an application should be sent not later than Saturday May 6th.

FRANK C. HAZELL,
Secretary to the Trustees.

MANCHESTER ROYAL INFIRMARY

Applications are invited for the DICKINSON RESEARCH TRAVELLING SCHOLARSHIP IN MEDICINE, value £300 tenable for one year. Candidates must be University Graduates who have taken out the full course of Clinical instruction in the Manchester Royal Infirmary.

A copy of the Regulations governing the scholarship can be obtained from the undersigned to whom six copies of application should be sent not later than Saturday May 6th.

FRANK C. HAZELL,
Secretary to the Trustees.

MANCHESTER ROYAL INFIRMARY

MEDICAL OFFICER TO OUT PATIENTS

The Board of Management invite application from registered Medical Practitioners for the above appointment.

The duties are to assist in the treatment of Medical Out patients on two mornings per week. The appointment (not retiring) is for one year but the holder of the office will be for re-election on two subsequent occasions for a similar period. Salary £35. Candidates must state age and send twelve copies of their application and testimonials to the undersigned on or before 9 a.m. on Thursday April 27th.

By Order,
FRANK C. HAZELL,
Gen. Supt. & Secretary.

MANCHESTER ROYAL INFIRMARY

RESIDENT SURGICAL OFFICER

The Board of Management invite application for the above appointment which will become vacant on June 1st. Applicants must not be less than 25 years of age. They must be registered and hold a Medical and Surgical qualification.

Appointment is for twelve months renewable for a further period of one year subject to the provision of the Bye-law as to notice. Salary £230 per annum with allowance for laundry.

Full information if obtainable from the undersigned to whom applicants must send twelve copies of their application and testimonials by Thursday May 4th.

By Order,
FRANK G. HAZELL,
Gen. Supt. & Secretary.

COUNTY BOROUGH OF TYNEMOUTH

Preston Hospital (400 beds) Public Assistance Institution and Children's Homes.

ASSISTANT MEDICAL OFFICER (WOMAN)

The Council of the County Borough of Tynemouth invite applications for the appointment for a period of six months in the first instance of an Assistant Medical Officer (Woman) for the Public Assistance Institution Preston Road North Shields and the Children's Homes.

Salary £200 per annum inclusive of vaccination and all other fees plus residence which will include board lodging etc. The officer appointed will be required to pay to the Council all fees received by her for inquests certifying lunatics etc. to devote the whole of her time to the duties of the office (which include the training of Probationer Nurses) to reside in the apartments provided by the Council and to act under the direction of the Medical Officer.

Applicant must be duly registered under the Medical Acts and be qualified by law to practise in medicine and surgery in England and Wales and the candidate appointed will be required to produce her licences diploma or certificates to the Council. Experience in the treatment of Venereal Diseases is desirable.

Applications must be made on a printed form which may be obtained from the Public Assistance Officer 4 Northumberland Square North Shields on receipt of a stamped addressed foolscap envelope and must be returned to me accompanied by copies of testimonials as to professional ability and personal character by first post on May 1st.

Canvassing either directly or indirectly will be a disqualification.

Dated this 22nd day of April 1933.

C. C. HENDERSON,
Town Clerk's Office, Town Clerk.
Tynemouth.

CITY AND COUNTY OF KINGSTON UPON HULL.

ASSISTANT MEDICAL OFFICER OF HEALTH.

The Corporation of Hull invite applications from duly qualified Medical Men under the age of 40 years and of not less than three years' standing in their profession for the post of Assistant Medical Officer of Health.

Preference will be given to candidates in possession of the Diploma in Public Health or equivalent qualification.

Salary £600 per annum rising by annual increments of £25 to £700 subject to a temporary deduction authorised by the City Council.

The appointment is subject to the provisions of the Local Government and Other Officers Superannuation Act 1922.

The successful candidate will be required to devote the whole of his time to the duties of the office which consist mainly of work in the School Medical Department but may also include duty in any section of the Health Service of the City or Port.

Experience in refraction work is essential.

A form of application may be obtained from the undersigned and must be returned to the Medical Officer of Health (in an envelope endorsed "Assistant Medical Officer of Health") together with copies of three recent testimonials not later than the first post on Friday May 5th.

N. CEBBIE,
Health Dept., Medical Officer of
Guildhall, Hull. Health.
April 1933.

LIVERPOOL COUNTY BOROUGH

LOCAL EDUCATION AUTHORITY

JUNIOR ASSISTANT SCHOOL MEDICAL OFFICER.

Applications are invited for a Junior Assistant School Medical Officer at a salary of £500 per annum (less the temporary deduction authorised by the City Council) rising by annual increments of £25 to £700 per annum.

Applicants must be registered Medical Practitioners and must have had at least three years' experience. It is desirable that they should have had some special experience in school hygiene and in diseases of children.

The officer appointed will be required to devote whole time to the service of the Education Authority under the direction of the Medical Officer to the Education Authority and will be required to reside within the City. The officer will not be allowed to undertake private practice.

Form of application which may be had by forwarding a stamped addressed foolscap envelope should be returned together with copies of three recent testimonials to the undersigned not later than Monday May 1st and endorsed "Junior Assistant School Medical Officer."

The canvassing of members of the Education Committee or the City Council is strictly prohibited and will be considered a disqualification.

Municipal Buildings, WALTER MOON,
Liverpool. Town Clerk and Clerk to
the Local Education Authority.
April 8th, 1933.

BOROUGH OF MANSFIELD

ASSISTANT (FEMALE) MEDICAL OFFICER OF HEALTH.

Applications are invited for the appointment of Assistant (Female) Medical Officer of Health for the Borough of Mansfield at a salary of £500 per annum rising to £700 by annual increments of £25.

The duties will include the Medical Inspection of school children, work in connection with Maternity and Child Welfare Centres Ante-natal Clinics etc.

Candidates must be registered Medical Practitioners hold a Diploma of Public Health and have had at least three years experience of post-graduate work.

The successful candidate will be required to devote the whole of her time to the duties of the office and reside in the Borough.

Applications which must be made on forms obtainable from the undersigned accompanied by copies of three recent testimonials endorsed "Assistant Medical Officer of Health," must be received at my office not later than April 28th.

A. C. SHEPHERD, Town Clerk.
Town Clerk's Office,
Carr Bank, Mansfield.

ROYAL WEST SUSSEX HOSPITAL, CHICHESTER.

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON vacant May 1st. Salary £125 per annum with board residence and laundry.

Applications stating age with three recent testimonials, should be sent to the undersigned as soon as possible.

HERBERT S. AYLMORE,
Secretary.

BOROUGH OF BAKEWELL

ASSISTANT MEDICAL OFFICER (MALE).

Applications from qualified Medical Practitioners (married or women not) for the appointment of Assistant Medical Officer. The work will include duties connected with Maternity and Child Welfare Medical Inspection and Treatment of School Children and the Borough Hospital for Infectious Diseases.

Special experience of Antenatal and Maternity and Child Welfare Clinics is obligatory and the possession of a Diploma in Public Health will be an additional recommendation.

Salary £550 per annum rising by annual increments of £25 to £700 subject to a temporary deduction which amounts to £17 10s. from the commencing salary.

The successful candidate must pass a medical examination before appointment and contribute to the superannuation fund under the Local Government and Other Officers Superannuation Act 1922. The officer will be required to work under the direction and supervision of the Medical Officer of Health to devote whole time to the service of the Corporation and to reside within the Borough of Twickenham.

Forms of application can be obtained from the Medical Officer of Health, Dr. G. H. DUDGEON, Municipal Offices Twickenham to whom applications accompanied by not more than three dated testimonials are to be sent on or before April 25th.

Municipal Offices, EDWIN G. STRAY,
Twickenham. Town Clerk.
April, 1933.

CITY OF BIRMINGHAM.

DUDLEY ROAD HOSPITAL. (920 Beds.)

Applications are invited from fully qualified Medical Practitioners for the following appointment as CASUALTY OFFICER (male) at the Dudley Road Hospital Birmingham. The appointment will be for a period of six months but may be extended for a further period of no exceeding six months. Salary at the rate of £200 per annum and full residential emoluments subject to any voluntary abatement in force from time to time. The officer appointed will be required to refund to the Council all fees allowances and emoluments (other than the foregoing) received by him.

Further particulars may be obtained from the Medical Superintendent at Dudley Road Hospital to whom applications stating age experience and qualifications with copies of testimonials should be forwarded not later than May 4th.

CITY OF BIRMINGHAM.

MATERNITY AND CHILD WELFARE DEPARTMENT.

Three TEMPORARY MEDICAL OFFICERS are required from July 7th to October 3rd (approximately) and a Fourth TEMPORARY MEDICAL OFFICER from July 7th to September 30th.

Applications are invited from ladies who have held a resident post in a Maternity Hospital and in a Children's Hospital. The salary offered is £9 10s. per week.

The appointment cannot be terminated within the period named, except for health reasons.

Applications should be sent on or before April 29th to the Medical Officer of Health Council House Birmingham 3.

THE BRITISH HEALTH RESORTS

CONFERENCE AT LEAMINGTON

A letter in last week's *Journal*, signed by Lord Meston and three medical men who are actively concerned with the movement drew attention to the work of the British Health Resorts Association, and insisted that for success two things are needed—the interest and co operation of the medical profession and financial support by local authorities It is becoming more widely recognized that our home resorts, if they are to compete with the best foreign stations, must have a firm medical basis for their claims and that the amenities form part of a "cure" The principal inland spas are well aware of this and through their own Federation have identified themselves with the forward movement It remains for every seaside watering-place that is something more than a mere pleasure-ground to contribute to the funds of an organization which can give expert guidance in the development of natural resources and make known to the medical profession the peculiar advantages of each resort for different types of patient

A further conference, more strictly medical in scope than its predecessors was held last week end at Royal Leamington Spa by invitation of the mayor and corporation On the evening of Friday, April 28th, the members were entertained at a reception in the Pump Room by the mayor, Dr W EDMUND JONES, and were afterwards conducted round the bathing establishment, which in recent years has been brought thoroughly up to date On the following evening there was a large dinner party at the Regent Hotel, the speakers including Dr Edmund Jones, Dr W G Willoughby Dr Ernest Young, and Dr Alfred Cox, and on Sunday the visitors drove to Stratford on Avon, where they were met by Dr D S Murray and went over Shakespeare's birthplace and the Memorial Theatre

HOME SPAS THE LONG AND THE SHORT VIEW

Both business sessions were held on Saturday in the Town Hall under the chairmanship of the mayor, who welcomed his many colleagues from London and elsewhere, and expressed the corporation's pleasure at this medical visit to their beautiful garden town The proceedings began with a statement of the objects and work of the British Health Resorts Association by Mr E EMRYS-JONES Ph D, a member of the council The bulk of the general public, he said, were still largely ignorant of the range and possibilities of hydrotherapy and the average medical practitioner was not much better acquainted with the subject Their association originated in the fertile brain of Colonel R H Elliot, who was convinced that thousands of people went abroad every year for their health either because they were ill advised or because they did not know that the benefits they went to seek could be obtained quite as well in this country The first thing was to establish an information bureau to supply doctors with accurate knowledge about British resorts The guarantee behind the information given was the names of those who formed the Medical Advisory Committee To anyone who objected that their association was largely a medical body and could not do much to advertise watering places he would point out that there could be no better advertisement for any place than the instructed good will of the 40 000 members of the medical profession in this country It was a stroke of great good fortune that Dr Alfred Cox who had done so much to make the British Medical Association what it was had consented to become their secretary Mr Emrys Jones ended with a well-timed homily on long and short views The chaos in currency exchanges and the fall in the value of the £ abroad had led thousands of people who normally went to foreign spas to give British spas a trial while for the same reasons foreigners had been taking the opportunity to visit this country, here was a fine chance for a prudent short view which took in the possibilities of a passing situation The long view was this machinery and the great development in production were going to give people more leisure, that leisure would be spent away from where the workers performed their toil—in places where they could gain a sense of ease and comfort amid beautiful surroundings How many health resorts had grasped what this would mean to them and how it should be met?

INVALIDS FROM THE TROPICS

Lieut.-Colonel WILLIAM BYAM, opening a discussion on the treatment at spas of invalids from the Tropics said that Britain controlled more of the Tropics than any other nation, and accordingly more invalids from tropical countries came here than elsewhere, hence the facilities for their diagnosis and treatment should be the best No country could boast so experienced a personnel as England Here was an opportunity for the home spas, but it must be borne in mind that skilled guidance was needed for invalids and health seekers from hot climates Some degree of differentiation was necessary all spas should not claim to cater for the tropical invalid Dr PHILIP MANSON-BAHR spoke of the need for looking at the matter from the point of view of the patient, who, rightly or wrongly, thought of a spa as the antithesis of his dreams of home Every case from the Tropics should be thoroughly examined by an expert before going to any watering-place Harm was done by indiscriminate routine 'cures" at Continental spas on the way home The average spa treatment, as he understood it, was quite unsuitable for the acute stages of malaria, amoebic dysentery, sprue, and many parasitic infestations of the intestine There was, however, ample scope for spa treatment in the convalescent stages of these diseases when the main infection had been eradicated It seemed to Dr Manson Bahr that Leamington was peculiarly fitted to meet the requirements he had outlined for cases that would benefit by spa treatment Dr N HAMILTON FAIRLEY said that the fault would be ours if we did not organize our unique national advantages for the benefit of invalids from the Tropics We had the experts, the societies, the laboratories, schools, and museums, all these resources should be called in aid for improving the spa treatment of this class of patient Diagnosis must come first, and this needed team work Dr V S HODSON said that as he had spent twenty two years in tropical and sub tropical countries he could enter into Dr Manson Bahr's point of view Life in the Tropics to day was nothing like as harsh for Europeans as it was, but it had a deleterious effect on resistance On returning to Europe rehabilitation was needed The keystone of cure in such cases was elimination, a process enhanced by judicious spa treatment A point made by each of these four speakers was the frequency of multiple infections in the same patient from the Tropics

Dr DOUGLAS STANLEY pointed to the neglect of dietetics at home resorts a careful regimen should be prescribed for every patient Dr C B HEALD deprecated haphazard electrotherapeutics Dr FRANK CLAYTON from personal experience at Leamington, noted how helpful were patients from the Tropics in the investigation and treatment of their disorders, and they expected thoroughness in return Casual diagnosis and prescription of balneotherapy was not good enough in these days Dr WORTHINGTON confirmed the view that patients suffering from the after effects of tropical disease and from indeterminate ill health were particularly amenable to spa treatment

SPA TREATMENT OF CIRCULATORY DISEASES

The afternoon session was given up to a discussion on the treatment of circulatory diseases at spas and its future development in this country, opened by Lord HORDER He grouped his remarks under three heads (1) the material—that is, the type of case, (2) indication for treatment, and (3) the facilities now available, and how these could be improved and extended The cases unsuitable to be transferred to spas were patients in the acute stage of heart disease or with acute toxic conditions also cases of severe congestive failure and of anginoid

LONDON HOMOEOPATHIC HOSPITAL
Great Ormond Street W C 1
(A General Hospital—200 Beds.)

POST OF RESIDENT MEDICAL OFFICER

The periodical vacancies for the Three Resident Medical Officers either sex, occur in February, June, and October in each year the appointment being for twelve months four months as House Surgeon four months as Gynaecological and Casualty Officer, and four months as Medical Officer, with salary at the rate of £100 per annum and board, apartments, and laundry

Candidates must be legally qualified and registered

Applications for JUNE APPOINTMENT, stating age with copies of testimonials, to be sent to the Secretary

EDWARD A ATTWOOD Secretary

NATIONAL HOSPITAL FOR DISEASES OF THE HEART,
Westmoreland St Marylebone, W 1

OUT PATIENTS MEDICAL OFFICER.

Applications are invited for the post of Out patients Medical Officer (Non resident, male) The appointment is for the period May 22nd to September 30th Salary at the rate of £125 per annum Candidates, who must be duly registered Medical Practitioners will not be expected to call on the Honorary Medical Staff, but to send their applications, with copies of three recent testimonials to me at the Hospital, not later than Saturday May 6th The Out patients Medical Officer will be required to assist the Honorary Medical Staff on five afternoons weekly

ROBERT G E WHITNEY
Secretary

ST BARTHOLOMEW'S HOSPITAL
ROCHESTER (126 Beds.)
Rochester, Chatham, Gillingham, and District

The House and Finance Committee invite applications for the post of HOUSE SURGEON who will act as Casualty Officer and have charge of the Orthopaedic Cases, which will become vacant on June 1st.

Candidates must be unmarried, qualified, and registered Medical Men The appointment is for six months Salary at the rate of £175 per annum with board residence, and laundry

Applications stating age, qualifications, experience etc accompanied by copies of three recent testimonials must be received by the Secretary not later than May 4th

Canvassing the Honorary Staff will disqualify

THE ROYAL INFIRMARY, SHEFFIELD
(500 Beds)

The Weekly Board of Management invite applications for the post of ASSISTANT AURAL AND OPHTHALMIC HOUSE SURGEON The appointment is tenable for the residue of the term of six months ending June 30th next, but the successful applicant will be eligible for re-election to this or one of the other thirteen House appointments Salary £80 per annum with board and residence rising after six months service to £100 per annum

Applications together with copies of testimonials to be sent to the undersigned forth with

Board Room JNO W BARNES F C I S,
March 28th 1933 Gen Supt & Sec.

ELIZABETH GARRETT ANDERSON HOSPITAL,
Euston Road London N W 1

Applications are invited from fully qualified Medical Women for the post of

ASSISTANT OBSTETRICIAN

Yearly appointment maximum two years Duties to commence in May Further particulars of the post can be obtained from the undersigned to whom applications with copies of three testimonials should be sent by Friday, April 28th

JEAN R MURRAY Secretary

EVELINA HOSPITAL FOR SICK CHILDREN,
Southwark, S E 1

CLINICAL ASSISTANT (HONORARY), required for Medical Out patient Department on Tuesday and Friday afternoons.

Applications giving details of qualifications together with copies of recent testimonials, should be sent to the undersigned as soon as possible

W H SIDNELL,
April 13th 1933. Secretary Supt

CHESTER ROYAL INFIRMARY
(211 Beds.)

HOUSE PHYSICIAN (male) required for June 5th Salary £150 per annum with board lodging and washing Application list closes May 5th

Application forms may be obtained from W H GRACE M D M R C P Hon Superintendent of the Resident Medical Staff

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THE LONDON LOCK HOSPITAL.

Applications are invited for the appointment of SURGICAL REGISTRAR (male or female) to the Female Lock Hospital Candidates must be a Fellow (or Member) of the Royal College of Surgeons of England or a Surgical Graduate of a University of the United Kingdom, and have had previous obstetrical experience The appointment is for one year in the first instance commencing May 5th, with honorarium at the rate of £100 per annum Applications with three copies (only) of testimonials must be submitted to the undersigned not later than 10 a m on Monday May 1st from whom copies of the Laws and By laws relating to the appointment may be obtained

By Order of the Board
283 Harrow Rd, W 9 J F MORTON Secretary
April 8th, 1933

TUNBRIDGE WELLS AND COUNTIES GENERAL HOSPITAL.

Wanted, HOUSE SURGEON (male) Candidates must be unmarried and duly qualified in Medicine and Surgery May be required to lecture to Nursing Staff (Two residents.)

In patients number over 1,400 Yearly Out patients 6 000, with 50 000 attendances

Salary £160 per annum, with board, residence, and laundry, in the Hospital

This Hospital is approved by the University of London for the purposes of the M D and M S examinations.

Applications stating qualifications with certificate of registration, and copies of testimonials should be sent immediately to the undersigned Vacancy occurs May 14th

TOM B HARRISON, Secretary

BURY INFIRMARY, LANCS
(127 Beds)

Applications are invited for the post of THIRD HOUSE SURGEON (male), who must have both Medical and Surgical qualifications. The appointment is for six months at a salary at the rate of £150 per annum, with board residence and laundry The successful applicant will be required to commence duties beginning of May

Applications, stating age qualifications, and nationality, with copies of three recent testimonials to be sent to the undersigned not later than April 28th

Particulars of duties may be had on application

ALEX. W MAITLAND
Hon Secretary

BEXHILL HOSPITAL

Applications are invited from Medical Practitioners who must be of recognized Consultant or Specialist Status for the undermentioned APPOINTMENTS to the HONORARY STAFF

(a) TWO CONSULTING SURGEONS,
(b) ONE OPHTHALMOLOGIST,
(c) ONE PATHOLOGIST
(d) TWO RADIOLOGISTS
(e) ONE EAR NOSE, AND THROAT SPECIALIST

Applications should be addressed to the undersigned at the Hospital Office 4 Devonshire Road Bexhill on Sea to reach him on or before Saturday, April 29th

JAMES B DUNCAN
Hon Secretary

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL
Gray's Inn Road, W C 1

ASSISTANTS IN THE OUT PATIENT DEPT

There are vacancies for a Second Assistant to attend on Wednesdays at 2 p m, and for a Third Assistant to attend on Tuesdays at 5 p m The duties are to assist the Surgeons in seeing the patients, and the posts are honorary ones

Applications may be for periods of three, six, or twelve months, and should be sent to the undersigned immediately

JOHN H YOUNG,
Secretary Superintendent

THE STOCKPORT INFIRMARY

HOUSE PHYSICIAN (male) required Salary £150 per annum; with board, residence, and laundry

Applications with copies of three recent testimonials stating age, University or Medical School and experience to be delivered to the undersigned immediately

EDWIN J PEARCE,
Secretary Superintendent

TAUNTON AND SOMERSET HOSPITAL, TAUNTON (104 Beds)

LADY HOUSE SURGEON required June 1st. Three Residents on Staff Six months appointment Salary at the rate of £100 per annum

Applications, with testimonials to—

F J J STACEY, Secretary

HEREFORDSHIRE GENERAL HOSPITAL
(140 Beds.)

Applications are invited for the post of HOUSE SURGEON and CASUALTY OFFICER (male)

Salary at the rate of £100 per annum with board, residence and laundry

The appointment will be for a period of six months commencing June 1st The successful candidate will subject to satisfactory service be eligible to succeed to the Resident Surgical Officer's post, with a salary at the rate of £150 per annum

Applications stating age qualifications, and experience together with copies of three recent testimonials should reach the undersigned not later than or before May 6th

T W UPTON, Secretary

ROYAL SAMARITAN HOSPITAL FOR WOMEN, GLASGOW

The Governors invite applications from registered Medical Practitioners for the post RADIOLOGIST in the Hospital

Particulars as to duties honorarium etc may be obtained from the undersigned with whom applicants are requested to lodge twenty one copies of their application along with copies of three testimonials, not later than April 29th

Candidates are informed that canvassing is not allowed

T MASON MACQUARER
191 West George St, Glasgow C 2 Secretary & Treasurer
April 14th, 1933

LINCOLN COUNTY HOSPITAL

Wanted JUNIOR HOUSE SURGEON married Salary at the rate of £150 per annum rising to £200 per annum at the conclusion of six months approved service Board residence, and washing will also be provided

Every candidate for the appointment must be registered under the Medical Acts

Applications, stating age and other particulars, with copies of not more than three testimonials are to be sent to the undersigned from whom further particulars may be obtained.

ARTHUR MOORE,
Lincoln Secretary-Supt
April 12th 1933

THE PRINCE OF WALES HOSPITAL FOR LIMBLESS AND CRIPPLED CARDIFF (CARDIFF AND CROSSWAYS—136 Beds.)

A LOCUM TENENS for the Resident Surgeon will be required for eight weeks from May 18th. It is desirable that applicants shall have had experience as a resident in an Orthopaedic Hospital The remuneration will be Four Guineas a week

Applications, stating age, qualifications, and experience, accompanied by copies of two recent testimonials, should be sent to the Secretary Mr GILBERT D SHEPHERD, F C A., by April 30th

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ROYAL CHEST HOSPITAL,
City Road E C 1
(Royal Northern Group of Hospitals)

The post of HOUSE PHYSICIAN will be vacant on June 1st The appointment is for six months. Salary at the rate of £100 per annum, with board residence, and laundry

Applications, with copies of testimonials, should be sent on or before May 3rd, to the undersigned from whom forms of application rules, and further particulars can be obtained.

GILBERT C PAYNTER, Secretary

Royal Northern Hospital,
Holloway Road N 7

ROYAL INFIRMARY BLACKBURN
(340 Beds—Five Residents.)

FOURTH HOUSE SURGEON (male) required at a salary of £150 per annum, rising to £250 with board residence laundry, etc To commence duties as soon as possible

Applications, with copies of testimonials stating age nationality experience, etc to be sent at once to the undersigned

Royal Infirmary, NATHAN A SMITH
Blackburn Gen Supt & Secretary

This Institution is recognized for the Surgical Practice required for the F R C S final examination

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DERBYSHIRE ROYAL INFIRMARY
DERBY
(General Hospital—347 Beds)

Applications are invited for the post of OPHTHALMIC HOUSE SURGEON AND ANAESTHETIST Candidates must be qualified and registered under the Medical Acts

Salary will be £150 per annum with apartments board, etc

Applications, with copies of testimonials, to be sent to the undersigned

WALTER BANKS
Supt & Secretary

March 30th 1933.

disturbances Suitable cases were the convalescent patient whose circulatory system showed a lag in recovery and patients with what for convenience might be referred to as tired heart toxic heart and irritable heart. Besides these functional derangements there were cases of organic heart disease which benefited at spas Arteriosclerosis and chronic subacute septic endocarditis (both of which seemed to be more prevalent nowadays) might furnish appropriate material for general treatment at a spa In all cases of circulatory disease Lord Horder said the first indication was organized rest What rest meant in a heart case was not generally appreciated mental and emotional as well as physical unrest must be abolished Later would come graduated exercise—rest being a means to health not health itself It was not so much any special virtue in a mineral spring that was needed in these cases as a comprehensive mode of treatment there must be the maximum of care skill and team work on the spot and the importance of the doctor's personal influence on heart cases should never be overlooked Since there were patients with circulatory disease whom spas helped very much why were the facilities for such cases so meagre in this country? How had Nauheim with no particular name on account of its water gained a reputation for treating diseases of the heart and circulation? Lord Horder's answer was that the chronic heart invalid was specially catered for at Nauheim the physician knew the sort of treatment his patient would get there and who would apply it Were those British spas which had the same facilities prepared to give all that Nauheim gave and in the same spirit? This would mean venturing a little way along the lines of specialization It was really an anomaly that British medicine which had led the world in the study and diagnosis of cardiovascular disease during the past twenty five years should allow its heart patients to go to foreign spas

Dr H E RHODES explained the facilities available at Leamington for treatment of such cases He made a special appeal to practitioners sending patients to spas to ensure beforehand that sources of septic infection were removed it was most discouraging to the spa doctor to find a mouthful of evil teeth or septic tonsils which it was impossible to attend to within the limited time at disposal Thus the patient returned home little better for balneotherapy and the spa was discredited Dr J STRICKLAND GOODALL saw no reason why British spas should not be able to give all the treatments given on the Continent but inquiry would soon show why English people went abroad for cures The success of spa treatment depended on a great deal more than mineral waters and baths He suggested that the political circumstances in Germany to-day made this a good opportunity for providing accommodation at British spas for orthodox Jews who had hitherto gone to Nauheim

ROCKEFELLER MEDICAL FELLOWSHIPS

The Rockefeller Medical Fellowships for the academic year 1933–4 will shortly be awarded by the Medical Research Council and applications should be lodged with the Council not later than June 1st These fellowships are provided from a fund with which the Medical Research Council has been entrusted by the Rockefeller Foundation Fellowships are awarded by the Council in accordance with the desire of the Foundation to graduates who have had some training in research work in the primary sciences of medicine or in clinical medicine or surgery and are likely to profit by a period of work at a university or other chosen centre in the United States before taking up positions for higher teaching or research in the British Isles In special circumstances the fellowships may be tenable at centres of research not in America

A fellowship held in America will have the value of not less than £350 a year for a single Fellow with extra allowance for a married Fellow payable monthly in advance Travelling expenses and some other allowances will be paid in addition Full particulars and forms of application are obtainable from the Secretary Medical Research Council 38 Old Queen Street Westminster S W 1

INSTITUTE OF MEDICAL PSYCHOLOGY

ANNUAL MEETING AND LUNCHEON

The annual meeting of the Institute of Medical Psychology (the Tavistock Clinic) was held at the Wharncliffe Rooms Marylebone Road on May 1st

In taking the chair at the preliminary meeting Sir HENRY BRACKENBURY said that years ago it was not recognized in medical education and experience how far the disturbances of the mental faculties entered into physical illness To-day the attitude of the medical profession and of the public towards mental disorders in their earliest stages was such that it was possible to take a much more hopeful view of preventing these insanities and of making much more comfortable and useful in life those who were *beginning to suffer from emotional or mental* disorder That was the work which thirteen years ago the Tavistock Clinic set out to do It had now entered into excellent premises in Torrington Place it had a splendid staff of medical men and others a superabundance of material and unfortunately a very long waiting list A waiting list was even more to be regretted with such an institution than with an ordinary hospital because these cases required skilled treatment at a very early stage The only thing necessary for complete success of the Institute was money which was hard to come by and indeed much more generous financial support was essential if this magnificent work was to continue

Mr H M ABRAHAMS chairman of the Finance Committee followed with some account of the financial position mentioning that last year the income fell short of expenditure by some £1 300 and in addition there was the heavy outlay incurred in connexion with the new building To run the Institute efficiently between £5 000 and £6 000 a year was needed

Dr H CRICHTON MILLER the honorary director said that work such as the Institute was doing was likely to be an increasingly essential factor if civilization was going to hold out That might sound rather a pretentious claim but he did not think it was so altogether because civilization was rather a sick man just at present and unless some better methods could be devised it was not unlikely *to crash somehow or other From all sides ominous warn*ings were heard and in the whole of that situation of a creaking civilization the work done under the aegis of medical psychology had a definite place In a situation where the creative was killed by the repetitive (which meant more for human discord and dissatisfaction than was commonly supposed) where the craftsman had been replaced by the robot where the personal had been overwhelmed by the *impersonal where the instincts of men* and women especially the procreative were interfered with by the exigencies of society and especially of economics there was surely need for the witness and the work of an Institute of Medical Psychology The community had had offered to it in generous measure every form of medical and surgical help for physical ills but that was not all that it required We were living in an age in which the function that psychotherapy in the broadest sense of the term ought to fulfil became of ever-increasing importance

At the luncheon which followed and which again was presided over by Sir Henry Brackenbury the principal guest was Mr John Buchan M P Lord High Commissioner for the Church of Scotland A company of about 200 assembled

A LAYMAN LOOKS AT MODERN PSYCHOLOGY

Mr JOHN BUCHAN said that the Institute was engaged in a most vital branch of science Its task was both therapeutic and educational While he professed profound ignorance of the art of healing he had been interested in psychology for many years A wholly new branch of knowledge had come into being with a terminology of its own Of the value of that new knowledge it was not for him to speak he could only humbly recognize it. But he condoled with the psychologists on the unfortunate fact that it had become so popular it had become what

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B.M.A. House Tavistock Square W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary 7 Drumsheugh Garden Edinburgh)

(a) British Islands

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** (contd.)	**PUBLIC HEALTH**
EBBW VALE MON. (*Workmen's Medical Society*)	MARDY GLAMORGAN (*Workmen's Medical Scheme*)	KENT COUNTY COUNCIL. LENHAM SANATORIUM (*Male Assistant Medical Officer*)
GILFACH GOCH GLAMORGAN (*Workmen's Medical Scheme*)	NEATH AND DISTRICT (*Medical Aid Association.*)	FARNBOROUGH INSTITUTION HOSPITAL. (*Resident Assistant Medical Officer*)
LLWYNPIA CTADACH VALE PENYCRAIG GLAMORGAN (*Workmen's Medical Scheme*)	OAKDALE, MON. (*Medical Officer for Medical Aid Association.*)	WORCESTER COUNTY AND CITY MENTAL HOSPITAL. (*Junior Assistant Medical Officer*)
LOWESTOFT MEDICAL INSTITUTE. (*Medical Officer*)	OGMORE VALLEY GLAMORGAN (*Wyndham Colliery Medical Aid Society*) (*Workmen's Medical Scheme*)	LLANTRISANT AND LLANTWIT FARDRE RURAL DISTRICT COUNCIL. (1) *Medical Officer of Health (part time)* (2) *Medical Officer (woman—part time) for Maternity and Child Welfare*

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B.M.A. House Tavistock Square W.C.1

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. (*All Friendly Society Appointments.*)	Dr. J. G. HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St. Sydney N.S.W.	**QUEENSLAND** (*Brisbane Associated Friendly Societies Institute*) (*Toowoomba Associated Friendly Societies Medical Institute Toowoomba*)	The Hon. Sec. Queensland Branch British Medical Association B.M.A. Building Adelaide St. Brisbane.	**WELLINGTON NEW ZEALAND** (*Contract Practice Appointments*)	Dr. G. F. V. ANSON (Hon. Sec. New Zealand Branch) British Medical Association P.O. Box 156 Wellington New Zealand
VICTORIA. (*All Institute or Medical Dispensaries*)	Dr. J. P. MAJOR (Hon. Sec. Victorian Branch British Medical Association) Medical Society Hall East Melbourne Victoria			**WESTERN AUSTRALIA.** (*Contract and Lodge Practices*)	Hon. Sec. Western Australian Branch British Medical Association No. 6 Bank of N.S.W. Chambers St. George's Terr. Perth Western Australia.

April 19th 1933 By Order of the Council. G. C. ANDERSON Medical Secretary

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KING GEORGE HOSPITAL ILFORD
(8 miles from London)

Wanted a HOUSE SURGEON to commence duty on May 1st for a period of ten months two months as Casualty Officer six months as House Surgeon and two months as Deputy Resident Medical Officer in charge of the Casualty Department Salary £100 per annum £10 bonus on completion of appointment and two weeks holiday Candidates should send their applications with three recent testimonials and call on the members of the Honorary Medical Staff indicated by the Secretary by April 24th

G. AUSTIN HEPWORTH Secretary

SCARBOROUGH HOSPITAL & DISPENSARY
(70 Beds)

Wanted May 1st one HOUSE SURGEON (female) Duties include Home Visiting Salary £175 per annum with board residence etc. Appointment for six months

Applications stating age, with copies of testimonials and essential particulars to be sent to the Hon. Secretaries at once, from whom further particulars may be obtained

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ROYAL BERKSHIRE HOSPITAL READING

CASUALTY OFFICER required as from May 2nd for six months The candidates (male) must be fully qualified and registered Remuneration at the rate of £150 per annum with board residence and laundry Applications with copies of testimonials should be sent to the undersigned on or before Monday April 24th.

F. A. LYON Secretary

COVENTRY & WARWICKSHIRE HOSPITAL.
(Main Hospital 307 Beds
Convalescent Hospital 40 Beds)
Seven Resident Medical Officers.

Applications are invited for the post of HOUSE SURGEON for the Aural and Ophthalmic Departments

The appointment for six months renewable Salary £125 per annum with board residence and laundry Candidates must be duly qualified and registered

Applications stating age and enclosing copies of recent testimonials to be sent to the undersigned immediately.

(Miss) R. HOOPER Secretary

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN (100 Beds)

HOUSE PHYSICIAN (male) required. Salary at the rate of £100 per annum with board lodging and washing No canvassing allowed To commence duties on May 22nd

Applications in writing accompanied by testimonials should be sent to PERCY F. SPOONER Secretary

April 8th 1933

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN (100 Beds.)

HOUSE SURGEON (male) required. Salary at the rate of £100 per annum with board lodging and laundry No canvassing allowed To commence duties on June 10th

Applications in writing accompanied by testimonials should be sent to PERCY F. SPOONER, Secretary

April 8th, 1933.

LONDON JEWISH HOSPITAL,
Stepney Green E.1
(General Hospital—108 Beds)

Applications are invited for the following posts—

RESIDENT MEDICAL OFFICER AND HOUSE PHYSICIAN Salary at the rate of £150 per annum with board and residence Appointment for six months

HOUSE SURGEON Salary at the rate of £100 per annum with board and residence Appointment for six months.

CASUALTY OFFICER (non-resident). Salary at the rate of £150 per annum with luncheon and tea. Appointment for six months The holder will be required to attend the Out-patient Department from 9 a.m. to 5 p.m.

Applications with copies of three recent testimonials to be sent to the Secretary not later before Friday April 28th The successful candidates will be required to take up their duties on June 1st

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MINEHEAD AND WEST SOMERSET HOSPITAL, MINEHEAD SOMERSET
(58 Beds)

Applications are invited for the post of RESIDENT HOUSE SURGEON (male or female) to the Hospital

Duty to commence on May 21st Appointment for a period of six months Salary £150 per annum with board residence and laundry

Application stating age, nationality, experience and qualifications accompanied by copies of three recent testimonials to be sent to the undersigned not later than May 5th.

W. H. P. RODDA Secretary

(*Appointments continued on p. 52.*)

journalists called "news," and the verity of psychological conclusions was now part of the stock-in-trade of the uneducated It was a thing to be regretted when the language of exact science became a popular jargon The same development had been seen in respect to the doctrine of relativity brought forward by Professor Einstein, it had been adopted with a formula, in order to confuse knowledge, by many who had not the remotest notion of what it meant Psychology had provided the formula for foolish people to explain everything and thereby to avoid the rigour of thought Complexes, repressions, inhibitions, and all the rest had become the slogans of the novelist, to the overthrow of common sense and to the degradation of the English tongue The more reason why the work of those who were endeavouring to keep this new learning in the paths of rigorous science should be exalted Psychology was not, like metaphysics and logic, an academic subject, it was immensely practical Every human being was compounded of flesh and spirit, and the relations between the two had been a conundrum for all ages It was not too much to say that psychological science was facing the fundamental problem of the modern world That problem as he saw it was this that while mechanical apparatus had been enormously extended and the pace of life had been speeded up, while the old vehicles of thought had been destroyed, and people had been compelled to the difficult task of a new analysis conditions had been created to which human nature found it hard to adjust itself, yet at the same time upon such adjustment depended the future of the world These problems had been created by the questing spirit of man, and only the questing spirit of man could solve them They were problems of old standing They began to arise when the secure cosmogony of our forefathers was first shattered, and the horizons of what had hitherto been a sheltered world were widened out into the unknown That process went on through the nineteenth century, and was enormously accelerated by many scientific inventions Long before the war it was stated that many human beings were not properly adjusted to their environment The war speeded up the process, and threw down bulwarks and destroyed more foundations Since 1918 the problem had become more urgent, and during the last three or four years the world-wide economic confusion, which might be regarded as a belated phase of the war had accentuated it No conquest of bodily diseases, however triumphant could really ameliorate human life, unless at the same time the human spirit were strengthened and clarified Mr Buchan then mentioned certain departments of the work of the Institute, including child guidance, and the social services consequent upon it He spoke of the complete revulsion from the old view of repression and punishment Everyone was aware how often youth had been warped and retarded as the result of these wrong notions It was now realized that the only way of dealing with this kind of condition was by patience and intelligence The days of the blustering schoolmaster and the heavy-handed doctor were over It was now seen that humanity and sympathy in this province were not the same thing as sentimental weakness Not less important was the work of the Institute in respect to adult life Nothing had impressed him more than the way in which men in middle life—competent and even distinguished men—suddenly cracked In many cases no doubt this was entirely the result of the war, but in others which he had known there had been no severe war experience, it was simply the result of the stress and perturbation of modern life, and here again only intelligence and patience would serve, and repression and isolation were no good at all He thought that to day it was realized that it was possible to be too simple in diagnosis Our forefathers used to divide all men into sane and insane It was now realized that in the most normal people there were queer irrational elements and in the most abnormal, material which, by skill and patience and the grace of God, might be used to bring them back to mental health He added, in conclusion that this work of the Institute bore a close resemblance to the task of those statesmen who were trying to mend world conditions A sound instinct for psychological truth was at the bottom of all leadership The work of the statesman was to persuade and to regulate, and to do that he must have a clear understanding of the popular mind The business of a leader was not to put quality into humanity, but to elicit the quality already there

Dr J R REES, deputy director of the Institute, gave some further account of its work He mentioned that in the cramped old premises in Tavistock Square the Institute had seven consulting rooms—all very inadequate In its new quarters in Torrington Place it had seventeen all excellently equipped, together with proper laboratories, library, refectory, and children's department When the Institute began in 1920 it had nine doctors, and in that first year 2,300 hours were spent on the treatment of patients This last quarter—the only complete quarter in the new premises—the staff had been working at the rate of 15,000 hours of doctors' time in a year and in addition to that many thousands of hours had been spent on the work by lay psychologists, social workers occupation therapists and others in interviews and visits At present fifty-one doctors were working part time in the Institute building, without taking account of the honorary physicians, the pathologist, and others while in addition there were twenty-one technical lay workers and an administrative staff of fourteen Altogether a team of approximately 100 people were working in the Institute, more than half of them in an honorary capacity There was a waiting list of over 250 patients, and many of these people—especially if they could only come in the evening—would, he feared, have to wait six or nine months before starting treatment

Ireland

Touring and Fishing in Ireland

Ireland is a small country—one could comfortably motor from Fair Head to Cape Clear in a couple of long summer days, and tour the entire coast-line in a week But in its small compass this island to be visited by the British Medical Association in July, holds a wealth of natural beauty which makes it an ideal touring ground Sportsmen will find good fishing, good rough shooting and good hunting at very reasonable rates or in many cases free For golfing enthusiasts there are nearly 200 golf clubs affiliated to the Golfing Union of Ireland, and these courses include many famous links, to say nothing of more modest courses attached to the hotels Antiquarians will find a rich field for their interest, relics of remote antiquity abound, and mediaeval ruins, both civil and ecclesiastical, are scattered in profusion through the country Geological formation and custom have formed the selection of a few regions as the principal touring districts, but, in truth, the whole country is one splendid tourist resort The mountains and lakes of Kerry, the fascinating barrenness of Connemara, the wild highlands of Donegal, no doubt merit their fame, and there are a score of other equally attractive districts—the glens of Antrim and the glens of Wicklow, the coast of Clare and the coast of Cork, the river scenery of Shannon, Blackwater, and Lee, the inland beauties of Kilkenny or Tipperary, and the rolling hills of Down, the mountains of Mourne, the Galtees or the Comeraghs, the great loughs of Mayo, Galway, and Fermanagh Some dismal folk say that the centre of Ireland, with its great expanses of dreary bogs, is dull and uninteresting But the fascination of the bog-land grows, and the dreary expanse has its alluring and insistent charm, which brings men to love its wide spaces and rich colouring, its soft, rolling contours, and its wonderful flora and fauna, as they love the reek of its pungent turf-smoke The rivers Shannon Boyne, and Erne flow through this flat centre, and are surrounded with ancient interests Broadly speaking,

NOT CLASSIFIED

BARNES, PRIVATE HOTEL, 25, CASTEL NAU, Capt and Mrs Rogers OFFER superior ACCOMMODATION, every home comfort, garden tennis garage Ex bus service 3 mins West London Hospital Recommended Terms moderate—Phone Riverside 3371

YACHT CRUISING FOR CONVALESCENTS and others Complete mental and physical change from usual occupation and environment Owner of 35 ft Yawl wishes to ARRANGE small PARTIES to CRUISE. Inexpensive—Address, No 2539 B M A House, Tavistock Sq W C 1

ASSISTANCIES

WANTED—ASSISTANT END OF MAY OR beginning of June, 14 miles N W of London Own car, practice expenses of same paid £400 p a with furnished flat—Address stating age, experience, etc and sending copy of testimonials No 2527, B M A House, Tavistock Square W C 1

WANTED—ASSISTANT, EX H S OR H P, with experience of Lumbar punctures, in a sound private practice Married or single Six guineas weekly with board and residence State experience height and capital (if with view) Easy terms Send photo—Address No 2524 B M A House Tavistock Square W C 1

WANTED — ASSISTANT AT ONCE, English or Scotch Mixed Practice in Midland City Salary £350, with furnished rooms and attendance and petrol allowance Good prospects if required to suit man with capital —No 2418 B M A House Tavistock Sq W C 1

WANTED—ASSISTANTSHIP, WITH VIEW by M B Ch.B Edin, 1924, aet 34, married, ex H P, etc, wide experience Just disposed own practice South England, London, or coast pref By June or July would suit—No 2513 B M A House, Tavistock Sq, W C 1

WANTED — ASSISTANT, WITH VIEW TO Partnership, in a mixed Practice in Lancashire Town Panel over 3 000 Unmarried Partnership after six months if suitable—Address No 2413, B M A House Tavistock Square W C 1

WANTED — ASSISTANTSHIP OR LOCUMS near London or Cardiff by M R C S, L R C P, D P M & H ex H S H P Good experience G P Going abroad end of year—Address, No 2558, B M A House, Tavistock Square W C 1

WANTED IMMEDIATELY INDOOR ASSISTANT in London by Indian Doctor, experienced midwifery able to drive car Salary according to experience Usual bond Full particulars.—Address No 2519 B M A House, Tavistock Square W C 1

WANTED IMMEDIATELY, ASSISTANT (male about 30 years) with early view to share worth £1 000 gross Pleasant city Panel 4 000 Little midwifery and night work —Address No 2511 B M A House Tavistock Square W C 1

WANTED—MALE INDOOR ASSISTANT FOR mixed Practice in Midland Town Scottish English or Irish Salary £250—£300 according to experience References, etc Usual bond — Address No 2532, B M A House, Tavistock Square W C 1

WANTED — ASSISTANTSHIP BY M B Ch B (Indian) experienced G P, Refractions Midwifery Keen, energetic. Drive car — Address No 2554, B M A House Tavistock Square W C 1

WANTED — ASSISTANTSHIP (PREFERably with view) by Irish Graduate, aged 34 Six years experience General Practice Own car Free May 1st—Address No 2503, B M A House Tavistock Square W C 1

WANTED — ASSISTANT END OF MAY Industrial country Practice in Cornwall Salary £375 outdoor Usual bond Able to drive car—Address No 2424 B M A House Tavistock Square W C 1

WANTED — ASSISTANTSHIP BY WOMAN Doctor at once 6 years G P Own car Free now Small partnership or any other medical post entertained — Address No 2421 B M A House Tavistock Square W C 1

WANTED IMMEDIATELY — INDOOR AND outdoor ASSISTANTS for Town and Country Practices with and without view Good salaries State full particulars—BRITISH MEDICAL BUREAU 33 Cross St. Manchester 2

EX H S OBSTETRIC AND GYNAEC H S H P desires PART TIME ASSISTANTSHIP in Manchester area Experience G P Willing to do night work and week-ends in return for keep — Address No 2504 B M A House Tavistock Square W C 1

OPHTHALMIC SURGEON IN SMALL TOWN requires an ASSISTANT—young energetic man of good appearance and manner Some ophthalmic experience desirable Probable eventual Partnership for a suitable man—No 2410 B M A House Tavistock Sq W C 1

ASSISTANTSHIP WANTED BY M B, Ch B ex H P and H S, expér G P driver single Free May 1st — Address No 2516 B M A House, Tavistock Square W C 1

WOMAN DOCTOR WISHES TO HEAR OF ASSISTANTSHIP or LOCUMS South or South East preferred, reliable, keen, experienced G P and H P Well received excellent testimonials. Interview Free May 1st—Address, No 2514, B M A House Tavistock Sq W C 1

LOCUMS

FOR LOCUM TENENS APPLY TO
PERCIVAL TURNER, Ltd
The oldest and only Agent who for 50 years has supplied substitutes at short notice without fee to principals
4, ADAM ST, Strand, London, W C 2
Telephone Phone
Epsomian Lond Temple Bar 9011
After Office Hours Epsom 9142

WANTED, G P ST BARTS, 35 MARRIED, two children, recently sold own practice would like hospitality LOCUM at seaside before commencing practice again Nominal salary only Full particulars—Address No 2553 B M A House Tavistock Square W C 1

CRANTOCK CORNWALL — EXPERIENCED man does LOCUMS for any required period Highest recent refs London and Provinces Seaside or Country Practices Usual terms. Interview if desired — Write or wire Dr MARTIN Crantock

LOCUM TENENS — LONDON M B, EXPERIenced in all varieties of Practice, is free up to May 11th and in June and July—Address, stating terms, No 2415, B M A House, Tavistock Square W C 1

LOCUM TENENS — EXPERIENCED PRACTItioner recently retired open to do LOCUMS between July 1st and Sept 30th Own car if desired — Address, stating terms No 2559, B M A House Tavistock Square W C 1

LOCUM TENENCY WANTED BY SCOT, Bachelor Just sold own practice. Young strong active Own car Partnership considered — Address No 2526, B M A House, Tavistock Square W C 1

MEDICAL WOMAN, EXPERIENCED G P, panel and private, ex H S, requires posts as LOCUM TENENS during the summer Free middle of May — Address No 2522, B M A House Tavistock Square W C 1

TUBERCULOSIS SANATORIUM — PRACTItioner with specialized post graduate study, seeks opportunity for LOCUM TENENS or ASSISTANTSHIP—Address No 2528, B M A House Tavistock Square W C 1

PARTNERSHIPS

WANTED BY M B, B S, SCHOLAR AND Medallist aged 30, married, experienced in good class G P with ample capital a PARTNERSHIP in Practice, in good residential district, with social amenities preferably Home Counties No objection preliminary Assistantship Replies treated in confidence—Address, No 2431 B M A House Tavistock Sq W C 1

WANTED BY M B, CH B EDIN (1922) married, aged 33, PARTNERSHIP £1,000 minimum with substantial panel, preferably in Southern half of England Disposing of own practice in Yorkshire — Address, No 2225 B M A House Tavistock Square W C 1

WANTED—PARTNERSHIP OR ASSISTANTSHIP with view, Brighton, Hove or Worthing district, by M B, B S, M R C P Public School Hospital and G P experience Age 27 single. Sufficient capital — Address, No 2501 B M A House, Tavistock Sq W C 1

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climatic conditions in Ireland do not differ materially from those prevailing in other parts of the British Isles The average rainfall for the whole of the country is approximately equal to that of England and lower than that of Scotland The rainfall is less on the eastern seaboard than in the mountainous districts in the south and west but the temperature in the latter districts is higher by reason of the Gulf Stream striking the south western seaboard For this reason this part of the country offers special attractions as a touring ground at times of the year when conditions are unfavourable in more northern latitudes and the corresponding latitudes of England The traditional emerald green of the country is seen at its best in the first half of the year but at all seasons Ireland is The Emerald Isle

The Automobile Association in its *Road Book of Ireland* has outlined nine touring districts with a short account of places of interest to be visited from the various centres From the point of view of fishing around the coast of Ireland is a veritable anglers paradise Once the angler arrives in a fishing district he will have no difficulty in obtaining all the information he requires from hotel-keepers and local enthusiasts But in order to assist him in deciding where he shall fish he will be well advised to procure beforehand a copy of the *Angler's Guide to the Irish Free State* published by the Free State Stationery Office (price 2s) and obtainable through any bookseller This book gives advice in the choice of a district according to the kind of fish the angler hopes to catch on the best season for each water and on free water hotel waters ticket waters and fisheries let on lease on coarse fishing and on sea fishing The fishing is then described under the centre from which it can be most conveniently fished and where there is accommodation Maps of the most important fishing districts are included as well as a river map for the whole of Ireland Lists of rivers and lakes with their open seasons are given and other information useful to the visiting angler *The Angler's Guide* only deals with the Irish Free State for those who propose to fish in Northern Ireland the guide *Where to Fish* published by the *Field* (price 5s) is recommended Ireland is divided into twenty seven fishery districts as follows Dublin Wexford Waterford Lismore Cork Bandon Skibbereen Bantry Kenmare Killarney Waterville Limerick Galway Connemara Ballinakill Bangor Ballina Sligo Ballyshannon Letterkenny Moville Londonderry Enniskillen Co'eraine Ballycastle Drogheda and Dundalk Full details of these districts are given in the two books mentioned above and a note on the fishing in each district will be found in the A A's *Road Book*

Weak minded Children

The report presented to the annual meeting of the Stewart Institution Dublin stated that 1932 had been a successful year the income having been well maintained Subscriptions and donations had increased slightly payments received on account of pupils maintenance was the only item which showed a decrease the reduction having been £245 accounted for by the loss during the year of five full paid pupils whose places had not yet been filled The hospital for mental diseases run in conjunction with the Institution showed a profit of £402 as against a loss in 1931 of £177 Last year the question of participating in the Hospitals Trust Sweepstakes Scheme came before the committee and it was decided not to apply To many that might seem a matter for regret but the committee believed that its decision would voice the wish of the large majority of the friends and supporters of the Institution It was earnestly hoped that those who had withdrawn subscriptions from other charities on account of participation in the sweepstakes scheme would remember the Stewart Institution Dr G H Keane medical superintendent said it was estimated that there were upwards of 40 000 mentally defective children in Ireland Of that number about 5 000 were idiots and low grade imbeciles The Stewart Institution was the only one in Ireland which tried to cope with the need for training mental defectives

Scotland

Edinburgh Branch of the British Medical Association

The clinical meeting of the Edinburgh Branch and other Scottish Branches which is held annually in the spring was organized by the secretaries Mr W A Cochrane and Dr John Young on April 26th The forenoon was devoted to various demonstrations in the Royal Infirmary of Edinburgh these included recent advances in radiography by Dr Duncan White clinical cases illustrating treatment of various types of venereal disease by Dr David Lees the present position of the vitamins by Dr Chalmers Watson and blood films and clinical cases illustrating diseases of the blood by Dr A Goodall and Dr Colin Campbell A visit to the Hospital for Crippled Children had also been arranged by Mr W A Cochrane The clinical meeting took place in the afternoon in the large surgical theatre of the Royal Infirmary various members of the staff demonstrating cases In the evening a dinner was held in the British Medical Association House 6 Drumsheugh Gardens at which Dr John D Comrie president of the Branch presided and Sir Henry Bracken bury Chairman of Council of the Association was the chief guest There was a large attendance including Sir Thomas Whitson chairman of the Board of Managers of the Royal Infirmary and other members of the Royal Infirmary management and representatives from the Department of Health for Scotland The chairman in proposing the toast of The Guests said that when a cynical member of the Association asked what the Association gave him in return for his annual subscription one of the most effective and convincing answers was

The services of Sir Henry Brackenbury Every insurance practitioner was grateful to him for the part he had played as chairman of the Insurance Acts Committee in bringing to a successful issue the arbitration between the Ministry of Health and the Association regarding the remuneration of these practitioners In recent years he had taken a special interest in the changes that were taking place in hospital arrangements as they affected the public and the medical profession The chairman also pointed out that Edinburgh possessed in its Royal Infirmary the largest voluntary hospital in Britain and one which for over 200 years had been affording charitable assistance to the sick poor It had now become the earnest hope of a large section of the community and of the medical profession that before long the motto of the hospital Patet omnibus (It is open to all) might be literally fulfilled and the hospital open to those who were able and willing to pay either collectively or individually for treatment Sir Henry Brackenbury in reply said that there had been great changes in the last few years in the hospital system of the country The voluntary hospitals had been passing from institutions established by a charitable public for the care of those unable to pay anything at all to institutions where provision was made by the public on a self supporting basis for members of the same public who required treatment Another great change was that the demand to go into hospital was not now exclusively confined to those who needed

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specialist treatment many persons required to be admitted because owing to conditions in their own homes, treatment in hospital would be easier, more comfortable, and more successful During the last ten years these changes had greatly accelerated, and the policy which the British Medical Association had been formulating during that time had developed along with the accelerating pace of the changes The pace had been greatly quickened, for example, by the Local Government Acts of 1929 Sir Henry then expounded four of the principles contained in the hospital scheme of the Association The first, he said concerned the need for institutional treatment in which attention could be given by the general practitioner to the class of case which required this type of treatment in an institution The second concerned the staff fund, it was now generally recognized that there ought to be payment in one form or another for the voluntary staff of the hospitals The hospitals were passing away from the charitable institution in which everybody concerned gave his services in order that he might help the poor As long as that continued and to whatever degree, the medical staff would be perfectly willing to give their services for the sake of such persons At the present time, however the number of such persons entering voluntary hospitals was very small, and nearly everyone was expected to pay something according to his means These payments were not made primarily for board and lodging, but for medical and surgical treatment, and there was no reason why the doctor should be the last person to be removed from a charitable to a paying basis The British Medical Association said that a proportion—it suggested 20 per cent —of whatever payment was made, in whatever way should be set aside for a staff fund to be given to the members of the voluntary staff, this applied equally to contributions paid through contributory schemes The third principle concerned the establishment of paying wards in hospitals of all types It was recognized that there was a class of person who could quite well pay for treatment and it would be to the advantage of the public and of the medical profession if every hospital had paying wards or beds to which such patients could be admitted The Association wished to allow the patient the freest possible choice of consultant or specialist The last principle concerned the character and appointment of the staff of hospitals transferred from the Poor Law under county and borough councils The B M A believed that it would be a great advantage if these hospitals, like the voluntary hospitals could have the advantage of a visiting staff and it strongly favoured co operation of the hospitals which had been under the Poor Law with neighbouring voluntary hospitals, so that the former could benefit from the services of medical and surgical specialists He emphasized the fact that the policy of the Association was an expression of the opinion of the great majority of medical men in the country The toast of 'The City of Edinburgh was proposed by Mr W J Stuart, Sir Thomas Whitson replying and that of 'The British Medical Association by Mrs Monson Millar convener of the Edinburgh Public Health Committee, to which Dr John Orr replied

Edinburgh Post Graduate Courses in Medicine

The syllabus of the post graduate courses in medicine to be held at Edinburgh during the summer which has just been issued contains special information concerning the instruction obtainable in July August and September From July 17th to August 12th there will be a course in obstetrics gynaecology and child life and health at the Royal Maternity Hospital the gynaecological wards of the Royal Infirmary and the Royal Hospital for Sick Children fee £10 10s A general practitioners course will be held from August 14th to September 9th, it will include such subjects as applied anatomy clinical medicine, infectious diseases, clinical surgery, clinical gynaecology, diseases of the eye, diseases of the ear, nose, and throat, and dermatology, fee £10 10s for four weeks or £6 6s for two weeks A general surgical course is to be held concurrently with the former, and will include applied anatomy, general surgery, diagnosis and treatment of renal disease, abdominal surgery gynaecological operations, surgical pathology and physiology, venereal diseases and radiology, fee £10 10s for four weeks, or £6 6s for two weeks Various limited courses will also be held from time to time at fees which range from £2 2s to £5 5s, on such subjects as modern diagnostic methods, diseases of the blood, x-ray physics, ultra-violet radiation, ophthalmoscopy, urological surgery neurological surgery, diseases of the nose and throat, disorders of speech, venereal diseases, and surgical pathology A course on clinical medicine, including radiology, has been arranged to take place daily during the month of May and again in October, and a similar course in clinical surgery, including radiology, will be held during each academic term for a period of six weeks The two latter courses will be conducted by members of the medical and surgical staffs of the Royal Infirmary Graduates may obtain the syllabus on application to the secretary of post graduate courses, New University Buildings, Edinburgh

Grades of Milk

A meeting of producers of "certified" milk was held in Glasgow last month to consider alterations that had been suggested by the Reorganization Commission of Milk for the names of the official grades of milk The Commission had recommended that the milk at present known as Grade A (T T) should in future be known as "special" milk, and that the present "certified" milk should bear the same name with the addition of the words "bottled on the farm" After some discussion the meeting resolved that the name "certified' should be retained, because the public were just beginning to understand that this meant the highest grade of milk produced A deputation was appointed by the meeting to interview officials of the Department of Health with a view to avoiding a change in the name of certified milk, and was instructed to impress on the Department the desirability of tightening up the regulations governing its production The meeting also agreed with the Commission's proposal that the term at present applied to the third grade of milk (that is Grade A) was misleading, and that this should be abolished The deputation subsequently had an interview with the Department of Health for Scotland, and was assured of its sympathy and that the matter would be taken up at once with the Ministry of Health in England

Nursing Conference at Aberdeen

The annual conference of the College of Nursing began at Aberdeen on April 27th, and continued on the following two days The first day included an exhibition of the work of student nurses at which Miss M E Sparshott (London), president of the College, presided It was pointed out that the College of Nursing was an association of State-registered nurses with more than 28 000 members and over eighty branches, and that it had done a great deal to improve the conditions of the nursing profession and to benefit nurses Mrs E M Rome was elected president of the College for the ensuing year, and in submitting the annual report she referred to the loss sustained through the death of Viscountess Cowdray who had been president of the Aberdeen branch and had regarded an expert nursing service as of the greatest

importance to the community Mr Comyns Berkeley said that the expenditure in connexion with the building of the College and Cowdray Club had been £19 165 The purchase of premises at Cavendish Square and Henrietta Street, London had cost £42 117 The endowment fund now stood at £125 490 and it was desirable that the membership of the College should be considerably enlarged In the evening a civic reception to welcome the delegates was given by Lord Provost Alexander and the magistrates of Aberdeen The second day was occupied by business meetings and visits to the Rowett Research Institute Woodend Hospital and the occupational department of the Royal Mental Hospital as well as by various social functions Miss L G Duff Grant of the Manchester Royal Infirmary gave an address on how to secure the best type of nurse and expressed the opinion that the solution of this difficulty lay with the hospital itself Hours of employment might be reduced and arrangements made so that nurses had not less than three hours off duty each day The amount of purely domestic work as distinct from nursing which the probationer was required to carry out might also be reduced

England and Wales

Co-ordination of Research at Leeds

Another useful illustration has been given of the way in which co-operation promotes the planning and prosecuting of sound lines of progressive research Within the walls of the recently opened Algernon Firth Pathological Institute in Leeds will now be housed the university departments of pathology bacteriology and cancer research thus co-ordinating investigation and teaching as well as facilitating the application of new scientific discoveries to the social and industrial needs of the community Including its equipping the provision of the building has cost approximately £50 000 Half of this sum was offered by Sir Algernon Firth at the instigation of Lord Moynihan on condition that in the new building there shou'd be suitable accommodation for cancer research Sir Algernon who opened it mentioned that he fully realized the continuing value to humanity of a research building under the control and care of so permanent an organization as the University of Leeds Cancer research might diminish or even terminate with the attainment of success in its objective but the need for persistence in other investigations to reduce the sum of human unhappiness would still remain Isolating one special scientific line of study was undesirable for more than one reason Again the value of the application of science in its many forms to industry was becoming daily more apparent The adequate equipping and efficient maintenance of the activities of the University must be regarded therefore as an obligation on all whose future depended on industrial progress Sir Algernon added that apart from its immediate work for the hospitals another line in which the Institute could render most effective service was the investigation of the causes of disease and the determination of the most effective lines of treatment Facilities for this would now be available what was wanted was hard thinking combined with imagination The Pro-Chancellor Colonel C H Tetley accepting the definition of the Firth Institute as the keystone of a structure which had been built up gradually insisted that the achievement had only been rendered possible by the collaboration with the University of the City Council the General Infirmary and other Leeds hospitals and the Yorkshire Council for Cancer Research He hoped that the one remaining unfinished part of the scheme—namely the furnishing and equipping of the pathological museum would be accomplished before long by yet another instance of co-operation Professor Robert Muir of Glasgow summing up the outlook of the Institute said that since it was impossible to vest in one person both clinical knowledge and the faculty of applying scientific methods the information resulting from these two lines of observation should be fused so far as was possible The Institute would make it one of its obligations to promote the close co-operation of physicians and surgeons with laboratory scientists involving an interchange of ideas and would combine routine hospital pathological inquiries teaching and research The number of problems capable of being attacked by independent workers was rapidly diminishing The many problems that remained demanded a combined effort on the part of workers possessing very different scientific qualifications Co-operation and organization Professor Muir added were becoming more and more essential and there was no disease which could not be more clearly elucidated thus The determination of the presence of cancer in its earliest stage in any part of the body was a goal which was being keenly approached by workers starting from various points and applying different branches of scientific research Vast benefits would accrue to the whole community when these co-ordinated though very diverse activities attained their joint objective

National Society for Prevention of Tuberculosis

The provisional programme has now been issued of the nineteenth annual conference of the National Association for the Prevention of Tuberculosis which will be held at Cardiff from July 13th to 15th inclusive The main discussion will relate to the part played in the production of this disease respectively by infection and environmental conditions It will include references to the findings of the Tyneside inquiry of the National Association and to the investigation by the Welsh National Memorial Association into the high death rate from tuberculosis in Carnarvon and Merioneth Delegates to the conference will thus be afforded an excellent opportunity to study the plan and the methods of campaign which have been followed by the Welsh Association addresses on the history and organization of which will be delivered by Lord Davies of Llandinam Professor Lyle Cummins and Dr D A Powell principal medical officer The annual meeting of this association will be held as usual in the course of the conference On the third day a demonstration will be given for medical members on the pathology and bacteriology of tuberculosis and there will be an exhibition of x ray films by Professor Cummins and Dr Tytler at the tuberculosis department of the Institute of Preventive Medicine All-day trips are being arranged to the South Wales Sanatorium at Talgarth and the Adelina Patti Hospital at Craig y Nos and half-day trips to the Glen Ely Hospital which has a very complete department for light treatment and to the Cefn Mably Hospital A civic reception and dance will be given by the City Corporation on Thursday July 13th Railway tickets to Cardiff at reduced rates will be available for those attending the conference and sanctions for the payment of delegates from local authorities will be obtainable on the usual lines from the Ministry of Health The fee for membership of the conference is one guinea including the provision of a report of the proceedings All interested persons are admissible whether members of the association or not The names of delegates and private members should be sent as soon as possible to the secretary of the National Association for the Prevention of Tuberculosis Tavistock House North Tavistock Square W C 1

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APPOINTMENTS—Contd

HERTFORDSHIRE COUNTY COUNCIL
PUBLIC ASSISTANCE
WATFORD GUARDIANS COMMITTEE AREA

COUNTY INSTITUTION SHRODELLS, WATFORD

APPOINTMENT OF HOUSE SURGEON

Applications are invited for the post of House Surgeon at the above Institution

The appointment will be for six months duration renewable for a further six months The salary will be at the rate of £150 p a annum with an allowance of three guineas per week until such time as board and residence can be provided in the Institution In the event of the appointment being renewed the salary will be at the rate of £175 per annum for the second period of six months

The salary will be subject to a temporary reduction of 5 per cent under the terms of the resolution of the County Council affecting the salaries of officers generally

The House Surgeon must reside near the Institution at an address to be approved by the Guardians Committee.

Candidates must be duly qualified and registered

Applications stating age qualifications and experience with copies of not more than three recent testimonials should be sent to the Clerk of the Watford Guardians Committee 7 Church Street Watford (from whom particulars of the duties of the post may be obtained) so as to be received by him not later than first post on Saturday April 29th

ELTON LONGMORE,
Clerk of the County Council

Hertford
April 18th 1933

CITY OF MANCHESTER

POLICE SURGEON

Applications are invited for the above mentioned position at a commencing salary of £800 per annum, rising by four annual increments of £50 per annum (subject to satisfactory service) to £1 000 per annum together with £150 per annum for travelling expenses Two guineas per day will also be allowed for 28 days each year for the services of a Locum Tenens during annual holidays. No payment will be made for the services of a Locum Tenens under any other circumstances

Particulars as to duties terms and conditions of appointment can be obtained from the undersigned

Applications endorsed Police Surgeon are to be delivered not later than May 6th

F E. WARBRECK HOWELL
Town Clerk

COUNTY BOROUGH OF WEST HAM

PUBLIC ASSISTANCE COMMITTEE

The Council invite applications for the appointment of DEPUTY MEDICAL SUPERINTENDENT at their FOREST GATE HOSPITAL Forest Lane Forest Gate, E 7, at the salary of £525 per annum rising by annual increments of £25 to a maximum of £600 per annum, with the usual residential allowances, subject to an abatement in accordance with the resolutions of the Council for the time being in force at present 2½ per cent. from the first £200 3¾ per cent from the next £100, 5 per cent from the next £250 and 7½ per cent from the remainder The salary is inclusive and all fees received must be paid to the Borough Treasurer

Candidates must be fully qualified and registered Medical Practitioners and have had previous hospital and maternity work experience The person appointed will be required to take charge of the Hospital during the absence of the Medical Superintendent and should occasion arise to act in any other Institution under the control of the Council

The patients at the Hospital comprise chronic sick, epileptics, and mental defectives, with three maternity blocks

The successful candidate will be required to pass a medical examination and the appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 at the rate of 5 per cent. or the Poor Law Officers Superannuation Act, 1896

Forms upon which application must be made can be obtained from the Medical Officer of Health Municipal Health Offices Romford Rd Stratford E 15 on the receipt of stamped and addressed foolscap envelope and should be returned to the undersigned not later than 10 a m on May 6th

CHARLES E CRANFIELD
Public Assistance Offices Town Clerk.
Union Road Leytonstone, E.11
April 12th 1933

CITY OF MANCHESTER

PUBLIC HEALTH DEPARTMENT

APPOINTMENT OF TEMPORARY DISTRICT MEDICAL OFFICER—CRUMPSALL DISTRICT

The Public Health Committee invites applications from qualified Medical Men now residing within the Crumpsall district for the appointment of temporary District Medical Officer The successful candidate will be required to maintain a surgery within the district

The salary attached to the position will be at the rate of £50 per annum

Applications stating fully the age qualifications, and experience of the candidate and the proposed hours of attendance at the surgery endorsed on the envelope District Medical Officer should be addressed to the Medical Officer of Health Civic Buildings 1 Mount Street Manchester, 2 only and not to members of the Committee or Council and must be received by him not later than Saturday, April 29th Details of the duties of the office may be obtained on application to the Medical Officer of Health at the above address.

Canvassing in any form oral or written, direct or indirect is prohibited

F E WARDBRECK HOWELL
Town Clerk

Town Hall
Manchester 2
April 18th 1933

BOOTLE GENERAL HOSPITAL, BOOTLE, LIVERPOOL, 20 (100 Beds)

HOUSE PHYSICIAN

Applications are invited for the above post, tenable until September 30th

The salary attached to the post is £150 per annum with board residence, and laundry

Applications, with copies of three testimonials, to be sent to me immediately

A J COOPER Secretary Supt

BRADFORD ROYAL INFIRMARY

HOUSE SURGEON (male) wanted from July 1st to November 30th Candidates must be single and legally qualified Salary £135 per annum with board residence, and washing There are 215 beds and six Resident Officers

Applications stating age, qualifications and previous experience, if any with copies of recent testimonials to be received by the undersigned not later than May 2nd

J J BARRON,
Secretary Supt

April 18th 1933

THE GENERAL HOSPITAL, BIRMINGHAM

HOUSE SURGEON required at once for Throat and Ear Department Salary £70 per annum

Applications, with details as to qualifications and experience, to—

A H FRANCE
House Governor

April 18th, 1933

COUNTY BOROUGH OF WEST HAM

PUBLIC ASSISTANCE COMMITTEE.

The [illegible] from [illegible] tered the [illegible] RESIDENT OFFICER [illegible] their [illegible] OOD ESSEX.
(Accommodation 160 beds.)

The appointment is for a period of one year at a salary of £250 per annum plus emoluments valued at £150 per annum, subject to an abatement of 2½ per cent. from the first £200, 3¾ per cent from the next £100 and 5 per cent. from the next £250 in accordance with the resolutions of the Council

The person appointed must give the whole of his time to the service of the Council and will work under the direction of the Medical Officer of Health

The successful candidate will be required to pass a medical examination and the appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922 at the rate of 5 per cent or the Poor Law Officers Superannuation Act, 1896

Forms upon which application must be made can be obtained from the Medical Officer of Health Municipal Health Offices, Romford Rd, Stratford E 15, on the receipt of a stamped addressed foolscap envelope, and should be returned to the undersigned not later than 10 a m on May 6th

CHARLES E. CRANFIELD
Public Assistance Offices Town Clerk.
Union Road Leytonstone, E 11
April 13th, 1933

METROPOLITAN BOROUGH OF STEPNEY

APPOINTMENT OF MEDICAL OFFICER OF HEALTH AND CHIEF ADMINISTRATIVE TUBERCULOSIS OFFICER.

The Council of the Metropolitan Borough of Stepney hereby invite applications for the appointment of a whole time Medical Officer of Health for the Borough at a commencing salary at the rate of £1 200 per annum, rising by annual increments of £50 to a salary at the rate of £1,400 per annum The person to be appointed will also be required to hold under the Council the office of Chief Administrative Tuberculosis Officer at a salary at the rate of £100 per annum

Candidates must possess the qualifications prescribed by the Public Health (London) Act 1891, and the Sanitary Officers Order, 1926.

The appointment will be subject to the approval of the Minister of Health to the provisions of the Stepney Borough Council (Superannuation) Acts 1905 to 1931 and to the satisfactory passing of a medical examination as required by the Council as to constitutional fitness.

Applications must be made upon forms to be obtained from me and must be forwarded in envelopes endorsed Appointment of Medical Officer of Health so as to reach me not later than 12 o'clock noon on Saturday May 6th

Canvassing members or officers of the Council in any manner whatsoever is prohibited and will disqualify candidates.

The Council do not bind themselves to appoint any of the candidates.

By Order,
WM McCARTY
Town Clerk.

Municipal Offices
Raine Street
Old Gravel Lane, E.1
April 18th 1933

CITY OF STOKE ON TRENT

MEDICAL OFFICER OF VENEREAL DISEASES CENTRE.

The City Council invite applications for the appointment of a Medical Officer of the Venereal Diseases Centre at a salary of £750 per annum rising by annual increments of £25 to £937 10s, subject to a temporary reduction

The person appointed will be required to devote the whole of his time to the service of the Corporation which will not necessarily be confined to work in connection with venereal disease The appointment will be subject to the approval of the Ministry of Health

Applicants must be fully qualified medical men with at least six months general hospital experience and have had special experience in modern methods of the diagnosis and treatment of Venereal Diseases. The possession of the Diploma in Public Health will be considered an advantage

Further particulars may be obtained on application to the Medical Officer of Health at St Peters Chambers Clebo Street, Stoke on Trent

Applications, stating age qualifications and experience accompanied by copies of not more than three recent testimonials and endorsed Medical Officer V D to be delivered to the undersigned on or before Friday, May 5th at 10 a m

E. B SHARRATT
Town Clerk.

Town Hall
Stoke on Trent

BOROUGH OF JARROW

ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER.

Applications are invited for the above appointment at a salary of £500 per annum (less the temporary deduction authorised by the Council) rising by annual increments of £25 to £700 per annum

Applicants must be registered Medical Practitioners and must have had at least three years experience

Preference will be given to the holding the D P H

Forms on which application must be made may be obtained from the undersigned

W FORSYTH HEDLEY
Town Clerk's Office Acting Town Clerk
Orange Road West
Jarrow April 10th 1933

TYNEMOUTH VICTORIA JUBILEE INFIRMARY

HOUSE SURGEON (male) required May 1st Applicants must be doubly qualified and registered Salary £150 per annum with board residence and laundry

Applications stating age and other essential particulars and accompanied by copies of recent testimonials to be addressed to the undersigned from whom all particulars may be obtained

The Hospital has two resident House Surgeons and contains 80 beds and cots, an X Ray Department and an Out patient Department where accident cases are received.

CHARLES ROWELL,
Assistant Secretary
1 Northumberland Place North Shields

CHELTENHAM GENERAL AND EYE HOSPITALS

The Board of Management invite applications for the post of HOUSE SURGEON (male) at the General Hospital.

Candidates must be unmarried and have a registered qualification in Medicine and Surgery

Salary £200 p a with board lodging and laundry

Applications with copies of testimonials to be sent in sealed envelopes marked House Surgeon to the undersigned not later than April 29th.

J CUMMING SMITH F C I S
The General Hospital Secretary
Cheltenham April 18th 1933

CARDIFF ROYAL INFIRMARY
(Associated with Welsh National School of Medicine)
(Number of available beds—490)

Applications are invited for the post of CASUALTY SURGICAL OFFICER

Salary is at the rate of £75 per annum to an applicant with previous Hospital experience and £50 per annum without. The appointment is for six months

Applications, with copies of three recent testimonials should be submitted at the earliest moment as the post is now vacant

R ARMSTRONG
April 18th 1933 Medical Supt

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY

Applications are invited for the post of HOUSE PHYSICIAN (six months appointment) Salary at the rate of £150 per annum with board residence and laundering

Applications, stating age training qualifications and accompanied by recent testimonials should be forwarded to the undersigned immediately

JOHN GIBSON
Superintendent & Secretary

LEICESTER ROYAL INFIRMARY
(472 Beds)

CASUALTY HOUSE SURGEON

A Casualty House Surgeon is required Salary at the rate of £125 per annum Applicants must have held a resident Hospital post or had similar experience of Hospital work

Applications to the House Governor and Secretary

April 1st 1933

MACCLESFIELD GENERAL INFIRMARY
(General Hospital—100 Beds)

Applications are invited for the appointment of SECOND HOUSE SURGEON (male) for a period of six months. Salary £150 p r annum with board and residence Candidates must have had experience in administration of Anæsthetics

Applications with copies of three testimonials should be sent to the undersigned at once

A E HANRAHAN Secretary

BRACEBRIDGE MENTAL HOSPITAL, Near LINCOLN

SECOND ASSISTANT MEDICAL OFFICER

The Committee of Visitors invite applications for the above whole-time appointment from gentlemen under 40 years of age who are duly qualified and registered Medical Practitioners Previous Mental Hospital experience essential

The commencing salary will be £425 per annum plus the usual residential emoluments of board lodging laundry and attendance valued for superannuation purposes at £125 per annum The Committee are at present considering the plans for the provision of houses for Two Medical Officers. When the houses are available for occupation a revision of the value of emolument will be necessary

Subject to 12 months service satisfactory to the Committee an increase of £25 will be granted and thereafter increases of £25 per annum up to a maximum salary of £525 An additional £50 per annum will be paid to the holder of the D P M qualification or to a person on obtaining the D P M after appointment

The successful candidate will be required to pass satisfactorily a medical examination and to join the scheme under the Asylums Officers Superannuation Act 1909 The appointment is subject to one month's notice on either side

Applications stating full particulars of qualification experience and appointments held accompanied by copies of three recent testimonials must be addressed to the Medical Superintendent Bracebridge Mental Hospital near Lincoln so as to be received not later than May 6th

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MANCHESTER. — ABOUT £650 P A INcreasing old-established PRACTICE. Panel 790 Opposition less than usual. Visiting fees 4/5 and 5/ Lowest surgery fee 2/6 House off main road 4/5 beds 2 recep and rep. surgery Rent £60 on lease.—No 9144

YORKSHIRE. — OUTSKIRTS OF LARGE town. Old-established middle and better class PRACTICE averaging £980 p.a. Panel 400 Visits 3 6 to 21 Very little midwifery Specially built house 2 recep 6 bed Surgery with separate entrance etc On lease at £100 Premium £1 350—No 9145

CHANNEL ISLANDS — URGENT SALE through ill health of Vendor Private PRACTICE in best part of Island overlooking sea averaging £567 p.a. No midwifery taken Fees 3/6 to 7/6 med extra. Choice of houses and others building Good schools Sea and trout fishing Rent 1½ years purchase—No 9107

LONDON E C — AVERAGE OVER £640 P A Panel about 500 rapidly increasing Visiting fees 3 6 to 10 6 No midwifery Small house at £95 p a incl on long lease Could be run as lock up Rent 1½ yrs. purchase—No 9136

WITHIN 10 MILES OF LONDON — RUSY Town Small PRACTICE worth over £500 with great scope for energetic man Selling through ill health. Price of house and practice £4 000 Mortgage can be arranged—No 9135

NORTHERN UNIVERSITY CITY — £1 700 a year Old-established PRACTICE in best position in residential district Opportunity strong Appt worth £130 Panel of 700 Fees 5/ up Ex house with 5 beds. 3 recep well designed professional offices etc To rent or lease Would suit gentleman of some experience—No 9134

ITALIAN COAST — DELIGHTFUL SPOT — About £500 p.a. Scope to increase Good opening in neighbouring town No English opposition Fees 12/6 to 35/ Flat to rent at under £100 2 recep 3 bed. cons. room and usual offices. Furniture etc can be bought if desired. Goodwill £750 cash—No 9129

RESIDENTIAL SEASIDE RESORT—WITHIN easy reach of London £7 00—£800 p a suffered through Vendor's ill health Ample scope. New estate building Small panel No dispensing. Must not sell Attractive freehold house built by Vendor 5 bed etc. garden and garage—No 9127

SOUTH WALES—MINING PRACTICE WORTH £1 250 p.a. mostly panel contract Scope to increase further Mids. 2—3 guinea Visits 3/6 House with 2 recep 4 bed to rent Colliery working full time Opposition not severe Prem £1 500—No 9125

LANCS MANUFACTURING TOWN — £725 p.a. Panel over 1 050 No appts. Mixed dispensing PRACTICE. Detached house 5 bed. 2 recep surg etc. with separate entrance Garden and garage. To rent on lease—No 9120.

BERKS — OLD ESTABLISHED — COUNTRY PRACTICE, about £700 p.a. has been £1,100 Panel about 500 Visiting fees 2/6 to 7/6 Very little midwifery Splendid house, specially built by Vendor with two acres of grounds 2 reception rooms 6 bedrooms surgery and waiting rooms etc. Consider £4 000 offer for Practice a house freehold—No 9100.

WEST OF ENGLAND — UNIQUE OPPORtunity—A Doctor's House can be rented or purchased in popular residential district on fringe of moor Situated on main road in centre of town—No 9145

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WANTED FOR M D CH B EDIN., NON dispensing PRACTICE, without partnerships in Southern half of England, preferably near London Panel not objected to. Income of £2 000—£3 000 p.a.—No. 282.

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CORRESPONDENCE

Body Mechanics and Child Health

SIR,—A leading article in the *Journal* of April 15th (p 663) on the report of the American Committee on Growth and Development of the Child raises the important question of methods of physical training in schools, and also, I would submit, of our attitude to body mechanics in general, since, if they are bad in the child, their effects are likely to be cumulative with increasing years Our profession has done much to improve systems of physical training, especially in the fighting services It cannot, however, be denied that on looking over any assembly, child or adult, examples of poor posture and bad body mechanics are painfully numerous The war showed that the national physique was lower than we thought Unemployment is doing nothing to improve it We have quite recently seen a whole generation adopt an attitude—the "debutante's droop"—which breaks every rule of correct posture! At any rate, some medical officers of schools are dissatisfied with present methods of physical training, and they feel they should have much more to say about intensive athletics This was clearly brought out at a recent discussion on the assessment of physical fitness in the Section of Physical Medicine of the Royal Society of Medicine

The necessity for formal physical training is largely due to the disabilities of the upright position Its chief aim, I take it, is a body held (good posture) and used (good body mechanics) correctly Our methods encourage exercise, rhythm, balance and discipline, and so far are good, but they do little toward the chief aim, and once the ten minutes a day or the hour a week of drill are over, the child is left to sit, stand, and walk very much as it likes As to the effects of bad body mechanics, they may be seen at any age but especially in later life They offend our aesthetic sense, and range from a lowered level of health to states of chronic ill-health They make the relief of many chronic conditions infinitely more difficult At the same time bad posture may be the result and not the cause of fatigue or illness Goldthwait in particular, working in Massachusetts—the State in which much of the investigation you discuss was made—has studied them and their treatment Work at a spa suggests that they are not receiving the attention which they deserve, that in the pursuit of less obvious problems the body as a whole is not being studied enough It seems elementary to say that in treating any chronic condition the first step should be to see that the great physiological systems are working to the best advantage

As regards the child it is suggested that physical training should concentrate first and foremost on good posture and body mechanics It should not be limited to a set of perfunctory movements at infrequent intervals, but should aim at a body held and used correctly both in and out of school Those who have charge of children should be able to supplement the formal training Children should be taught to take pride in their physical make-up Seats, desks and lighting should get more attention than they do To the fundamental training any useful exercises could be added they would not be so important, however as free moving games for the majority for a minority as you point out they would be necessary

Teach a child and you teach a multitude' Is it too much to hope that in course of time good posture will become as estimable as cleanliness good clothes, and temperance?

In medical practice it is suggested that the prevention, effects and correction of poor posture and body mechanics deserve more attention especially by the teaching section of the profession There is nothing in this letter which has not been said before and better said It is written to emphasize my hope that your article and the report it reviews will lead to increased interest in the subject with which they deal—I am, etc,

Droitwich, April 24th A R NELIGAN, M D

Total Hysterectomy for Uterine Myoma

SIR,—I am much obliged to Dr Ralph Worrall for his complimentary reference in the *Journal* of April 29th (p 741) to my paper on the above subject, published in your issue of June 25th, 1932, and to "my irrefutable arguments in favour of total hysterectomy" Somewhat surprised, therefore, was I to find him publishing, under the heading of total hysterectomy, a series of cases treated by *subtotal* hysterectomy, with coring of the cervix, which he says is 'infinitely simpler, safer, and with much better ultimate results" than true total hysterectomy by Doyen's method, advocated by me There may be methods of performing total hysterectomy simpler and safer than Doyen's, though I do not know one, but Dr Worrall, who has only been employing his method of subtotal (erroneously called total) hysterectomy for about eighteen years, is not justified in stating that the ultimate results of his subtotal hysterectomies are much better, since cancer has been observed in the cervical stump thirty years after that operation

Subtotal hysterectomy with coring the cervix has been advocated, and abandoned, by several gynaecologists, but is inapplicable in cases of myoma of the portio and cervix, and entails danger in cases of sarcoma and early cancer of the cervical canal A careful study of 325 myomatous uteri removed by total hysterectomy and hardened in formalin solution has shown that by Worrall's method it is sometimes impossible to remove completely all the glandular tissue by coring I have found the cervix to measure four inches in length and to be not thicker than a lead pencil in a case of retrocervical myoma, many times the cervical glands penetrate deeply into the wall and have cystic dilatations, bigger than peas, which would be cut across by his scissors His method can, of course, be carried out in small "bleeding uteri," with which my paper had nothing to do, but in a considerable number of large myomatous uteri I can assure Dr Worrall that he is mistaken in believing that he has removed the whole of the glandular tissue

Dr Worrall's paper is not limited to cases of myoma, as my paper was, but includes other non malignant conditions—"fibrosis" and "bleeding uterus"—which in my opinion and experience never require the mutilating operation of hysterectomy the same remark applies generally to *small* myomatous uteri, unless they are complicated with malignant or tubal disease, in which case vaginal hysterectomy has many advantages over the abdominal operation If Dr Worrall will eliminate these cases from his list of subtotal hysterectomies with coring of the cervix and give the information contained in my paper—namely, the number of ovariotomies for tumour done in the same period, and the length of time the patient remained under observation in hospital or home—he will furnish information which will enable a comparison to be made with the complete series of total hysterectomies I published In that paper I gave the results obtained by three English gynaecologists who, over a long period (up to twenty-seven years), had performed 719 genuine cases of total abdominal hysterectomy for myoma with a mortality rate of 1 9 per cent, a result which, from an extensive reading on the subject, I consider not unsatisfactory Dr Worrall misquotes me regarding Dr Lockyer's results in cases of myoma What I said was "Lockyer's mortality rate for total abdominal hyster

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ectomy (1 54 per cent) has so far as I know not been surpassed in any series (195 cases) so large and complete Dr Worrall's series is not limited to cases of myoma is not complete and is not total hysterectomy

With regard to Dr Worrall's views on embolism I agree with two of his suggestions (avoidance of transfixion mentioned in my paper and movement of the limbs) but doubt the efficacy of taking five or six deep breaths every hour and I totally disagree with his suggestion of catgut as a cause If Dr Worrall with his large experience of other operations with catgut has observed his patients for twenty four days afterwards and has never had a case of embolism I venture to state that his experience is unique I would like to congratulate him on the excellent results he has obtained by his subtotal hysterectomies with coring of the cervix which lead me to believe that his skill is such that he will get even better final results if instead of writing total hysterectomy he will do it —I am etc

London W 1 April 30th HERBERT R SPENCER

Hernia and Appendicectomy

SIR —I have followed with much interest the recent correspondence on hernia and appendicectomy as I was to some extent responsible for Mr H J Wade's work in this connexion Mr R J McNeill Love in his letter (April 8th p 629) confirms what I had previously suggested in my original article in the *Journal* of February 14th 1931—namely that following the McBurney incision the ilio-inguinal nerve may be damaged by inclusion in a suture or by scar tissue where infection has been present Mr F A R Stammers (April 29th p 763) on the other hand appears to doubt that the development of a right inguinal hernia after appendicectomy has any connexion with the McBurney muscle splitting incision

It is surely suggestive that in the reported cases the presence of the hernia was first noticed six to twelve months after the operation for appendicectomy and that well marked signs of degeneration were demonstrated histologically in the ilio-inguinal nerves This theory has now been carried a stage further by Mr Wade's work and he has proved conclusively that the lower fibres of the internal oblique and transversalis muscles receive their innervation from the ilio-inguinal and ilio-hypogastric nerves and that damage to these nerves will lead to appreciable muscle weakness round the internal abdominal ring This weakness must inevitably predispose to the development of an inguinal hernia —I am etc

Manchester April 29th A H SOUTHAM

Dry Bronchiectasis

SIR —We regret that Dr Leonard Findlay in his letter to the *Journal* of April 22nd (p 719) seems to have misunderstood the purport of our paper on dry bronchiectasis We wished to draw attention to a condition which we believe to be common and to present practical problems in prognosis and treatment We selected twenty cases which had been under the care of one of us in the London and Brompton Hospitals during a period of two years and for the purpose of comparison we analysed the reports of thirty more collected from the somewhat meagre literature on the subject

Dr Findlay points out quite correctly that bronchiectasis may exist for as long as eighteen months without any appreciable quantity of sputum some of our records suggest longer periods even up to forty seven years We agree with his statement that recovery from wet bronchiectasis occurs occasionally but except in those cases in which the cause is removable we believe that such recovery is extremely rare We shall be much interested if Dr Findlay will produce evidence in support of his statement that as a rule the bronchiectatic condition steadily becomes more extensive even although the symptoms may diminish or entirely disappear' Should this assertion be correct it would have an important bearing upon the prognosis and treatment of the condition

We are not able to accept fully the statement that dullness on percussion without either a shadow in the radiogram or displacement of the mediastinum most probably indicates fibrosis Other explanations are possible Our suggestion of the mechanism which leads to bronchial dilatation is that if for any reason the air cannot enter the alveoli during inspiration the muscular effort tends to expand the bronchi We did not suggest that the bronchi dilated sufficiently to replace the space vacated by the collapsed lung —We are etc

CECIL WALL
London Hospital April 29th. CLIFFORD HOYLE

Excessive Carbohydrate

SIR —Deviation from the normal balance of an optimum diet must be accompanied by diminution of certain constituents of the diet Dr Paton's interesting article on the relation of excessive carbohydrate to catarrhs and other diseases in your issue of April 29th (p 738) leaves unsolved the basal problem of whether excessive carbohydrate *per se* is the cause of the increase in catarrhal conditions recorded or whether these catarrhs were attributable to depletion of other constituents of the diet The ingestion of 2 lb of sugar per head per week by the schoolgirls referred to by Dr Paton would if their ages fell between 8 and 12 years provide from one-quarter to one fifth of their total daily calorie requirements One may assume therefore that their vitamin and mineral requirements had to be met from the remaining three-quarters or four fifths of their foodstuffs

Excessive consumption of sugar by children is often associated with a distaste for fat Diminution of the sugar intake is usually followed by an increase in the desire for fat It may be that a shortage of vitamin A is the causal factor in the high incidence of catarrh and a shortage of this vitamin is likely to occur on a diet deficient in fat The administration of vitamin A to catarrhal children has proved of value in ameliorating the condition It must also be remembered that the bread eaten during the war possessed owing to the regulations controlling the milling of flour a higher vitamin (B and E) and mineral content than is the case to-day Is excessive carbohydrate ingestion specific in the causation of catarrhal conditions or does it act merely as a depleting agent on other constituents of the diet?—I am etc

Stockton-on-Tees May 1st. G C M M GONIGLE

Nutrition in Relation to Anaemia

SIR —In the article in the *Journal* of April 22nd (p 685) on nutrition in relation to anaemia by Davidson and others the impression is conveyed that my work was subsidiary to and dependent on that of Waddell and others and on that of Mackay The date of appearance of my paper for one thing shows that this is not so and t may not be out of place to point out that I was the first to direct attention to the importance of this subject and that my work on iron deficiency in pigs formed the starting point for the modern work on anaemia produced in this way including specifically that of the Wisconsin investigators

Reference is made to Aston's work on anaemic conditions occurring in cattle grazing on certain pastures which are curable by iron salts and Orr and others are quoted

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MANCHESTER.—Old-established panel and private PRACTICE. Cash receipts last year £642. Panel 788. Scope. Good corner house, 2 reception, 4 bedroom, garage. Rent £60 p.a. Premium 1½ year purchase or near offer.—No. 437.

EAST YORKS. — Country Town near Coast. — Unopposed mixed *PRACTICE*. Cash receipts last year £960. Panel 630. Excellent detached house, 3 reception, 4 bedrooms, garage and large garden. Premium 1½ years purchase.—No. 3[illegible]6.

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as having obtained similar results (date of reference is 1931) It is opportune to point out that, while in no way questioning the priority of Aston in this matter, I myself around 1922–3, independently and without knowledge of Aston's work recognized a condition in sheep in the Border District of Scotland, and known as "piming," as an anaemia, and treated it by the administration of iron salts Subsequently, in the beginning of 1925, I found in the literature a reference to a condition occurring in animals in New Zealand and known as "bush sickness," a disease at which Aston had been working for some considerable time, and in this connexion it needs to be emphasized that "piming" was first identified with "bush sickness," and not vice versa, and that I was the first to do this

The work, referred to here, was carried out in the Rowett Research Institute —I am, etc,

Aberdeen April 22nd J P McGOWAN

Body and Mind

SIR —In his letter in your issue of April 15th, Dr Isaacs questions my right to use the word "cure" in connexion with mental cases which I believe to be of colon origin In answer I can refer to four clinical histories which are given in my book on *Tonic Hardening of the Colon* (Oxford Medical Publications, pp 68, 125, 126, and 128), in all of which I think that any clinician would say that a cure of a mental abnormality had occurred I will only refer to the first of these

The patient was the travelling partner of a cheese making firm who for six months had been subject to attacks, lasting about two hours in which he lost all consciousness of his surroundings although he appears to have acted in a normal manner and kept a record of the business he transacted during these times The attacks had steadily increased in frequency until when he consulted me they were occurring two or three times a week and he feared complete loss of identity if they continued to get worse The colon was definitely hard and tender but gave rise to no symptoms other than the mental disturbance In this case I did not even give him the hope of a cure by my colon treatment for I had never before seen such a case Nevertheless the mercury iron, and hyoscyamus mixture and the usual diet immediately stopped the attacks and he never again lost himself while on his business rounds Fifteen years afterwards he reported that there had been no return of any mental symptoms

Surely no one can deny that in this case an abnormal mental state of the nature of double personality was cured by colon treatment? Dr Isaacs also offers the criticism that I mistake a superficial change in symptoms for the cure of an abnormal mental state, and he also states that my colon treatment deals with a purely physical condition and does not deal with the psychopathological element in the cases which gives them a faulty attitude to the problems of life" In this connexion the case recorded on pages 126 and 127 of my book gives a decisive answer in the negative I could give many cases where a "faulty attitude to the problems of life" was completely rectified by colon treatment Sometimes the change takes place comparatively suddenly As soon as the disturbing nervous impulses which arise in the colon cease the mental cloud is dissipated and the patient's outlook on life and touch with outward surroundings becomes normal In one striking case a woman who for months had been so out of touch with her surroundings that husband and children and home were nothing to her and it seemed as if some other woman and not herself was living at with them' could give the hour and minute at which the barrier was suddenly swept away, and she was once more herself with a normal interest in her loved ones and her home Here is a recent case where the patient's outlook on life suddenly changed after some weeks of colon treatment

A lady, for six months after her only child was born suffered from increasing and groundless fear as to the child's welfare, with mental depression and fear that it would die There was definite tonic hardening of the colon and the symptoms pointed to this being the cause of the abnormal mental state After some weeks of treatment by the mercury iron and hyoscyamus mixture and dieting she telephoned to me one morning to say that she now felt to be a new woman and that "it was as if a load had been lifted off her' The return to a normal attitude towards her surroundings, after months of absorption in her obsession was most striking and she wished to start spring cleaning her house immediately instead of taking the two months of absolute change of scene and rest upon which I insisted in order to obviate the possibility of her new-found interest in life leading to overtaxing her nervous vigour, which could not be otherwise than very deficient after the nervous stress of the past months

As I have said before, I do not ask that these statements of mine should bring conviction, but I hope they will lead any who are inclined to doubt them to put their truth to the test by trying the treatment advocated upon all cases where a mental abnormality, which is presumably not due to organic disease, is associated with hardness and tenderness of the colon in the right or left iliac fossa or where symptoms are distressing between midnight and 4 a m I feel confident that such a testing of my statements will show that mental distress of various types is very frequently due to abnormal muscular activity in the colon, and is curable by medicinal and dietetic treatment, without the aid of psychotherapy —I am, etc,

Birmingham, April 24th T STACEY WILSON

Pulmonary Tuberculosis and Sun Exposure

SIR —With the approach of the summer months I feel it would not be out of place to draw attention to a fact which does not seem to be sufficiently recognized among the profession generally—namely, the danger of allowing patients with active or quiescent lesions of pulmonary tuberculosis to expose themselves indiscriminately to the sun's rays

Heliotherapy may have beneficial results in certain types of cases, if controlled under expert supervision, but irreparable harm has often been done by uncontrolled and rash exposure Fenton and Burrell, in their book *Diseases of the Chest* state

"There is no doubt that over exposure to the direct rays of the sun is apt to produce a reaction, which may cause an acute exacerbation of disease, and do considerable harm so that patients should be advised to sit in the shade rather than the direct sunlight"

Maurice Fishberg, reviewing the subject in the recent edition of his book, says

'I have seen patients with quiescent lesions, on the road to complete recovery suffer from a sudden acute reactivation of the process, after spending a day on the seashore under the baking sun and having their skin burned The average person may become merely sunburnt, but the tuberculous suffer from an activation of the process in the lung"

With these writers I think all physicians who specialize in this disease will agree Too often have we seen exhaustion, tachycardia, acute exacerbation, and sometimes haemorrhage undoubtedly caused by unauthorized and long exposure to the sun's rays

I have recently been reviewing the histories of patients who have come under my care during the past eighteen months Many of them had had a period of "home treatment," or had waited some time after diagnosis before coming here, or again, had had a period under suspicion before a definite diagnosis was made I was astonished to find how many of them had been told by their doctors to get into the open air and spend as much time lying in the sun as possible One patient, with extensive active lesions, said to me "I used to feel

absolutely exhausted after doing so and wanted to rebel but my family compelled me to continue because the doctor had ordered it When these patients come for treatment and find they are not allowed to lie in the sun they want to know the reason why and when told the reason are apt to be resentful towards their former medical advisers I do feel therefore that in the interests of all concerned an effort should be made to make the possible dangers of sun exposure to sufferers from pul monary tuberculosis more widely known than appears o be the case at present —I am etc

Nordrach upon Mendip April 24th C F ASHBY

Turpentine Idiosyncrasy

SIR —Turpentine idiosyncrasy is in no wise so unusual as Dr W W Jeudwine in his communication on page 513 of the *British Medical Journal* of March 25th seems to imagine The contact dermatitis to which turpentine gives rise is decidedly common in the experience of my colleagues and myself Turpentine causes rubefaction and vesiculation on any skin if applied sufficiently concen trated it will cause this irritation in some individuals in very small dosage

In a susceptible person the irritation is not limited to the site of application but a papular urticarial rash which may become oozing and eczematous appears at the periphery of the point of contact and may become quite generalized affecting by predilection the flexures of the elbows and knees the sides of the neck and the face This observation was made at least as long ago as 1870 by Hebra who described these phenomena as noted upon application of croton oil and other irritants

We have seen persons so sensitive of turpentine that to walk through a newly painted room resulted in lachry mation conjunctivitis and erysipelatous swelling of the face oedema of the eyelids and an itching rash on the arms and trunk Vesiculation may follow and result in a picture resembling ivy poisoning It is our firm belief that the application of turpentine to the skin is a pro cedure containing a real and inescapable element of danger which should be more generally recognized than it is —I am etc

RICHARD L SUTTON JUN

Kansas City Mo U S A April 7th

Strychnine Poisoning

SIR —Dr Keith s letter in the *Journal* of March 25th (p 541) and the previous correspondence were considered by the Textbook Revision Committee of the St John Ambulance Association at its last meeting The com mittee is of opinion that Dr Keith has either missed the point of my letter of February 28th or has overlooked the fact that the textbook of the association at page 157 to which he refers is speaking in general terms in order to put the ' first aider on his guard whereas at pages 171 and 176 the textbook enters into detail

The medical members of the committee are satisfied that they are correct in stating that during convulsions caused by strychnine poisoning the patient is insensible — I am etc

A N CAHUSAC
Chief Secretary St John Ambulance Association

St. John s Gate Clerkenwell E C 1 April 12th

SIR —With reference to a letter in your issue of February 25th (p 341) and with due deference to its writer (Dr John R Keith) I would urge that there is a phase of unconsciousness in poisoning by strychnine Further it is one that alternates with consciousness During this phase which occurs at the end of a spasm the pupils contract the pulse becomes imperceptible respiration almost ceases and cyanosis immediately before death becomes increasingly marked —I am etc

C A VAN ROOYEN L R C P M R C S

Haputale Ceylon March 27th

*** We have referred the letters printed above to a leading authority on pharmacology who writes

The outstanding feature of a case of strychnine poison ing is that the patient retains consciousness until near the end and in consequence suffers tortures I have looked up half a dozen standard reference books and every one actually mentions this characteristic and distressing feature The spasms prevent breathing cause asphyxia and in consequence produce unconsciousness if sufficiently prolonged I have no doubt that Dr Van Rooyen s observation is quite correct and that at the end of most spasms there is a *short* period of unconsciousness The important practical fact is that the first thing that strikes the untrained (or trained) observer in a case of strychnine poisoning is that the patient is conscious and is suffering tortures It is therefore unwise to suggest in a popular manual that strychnine poisoning is associated with un consciousness Moreover the St John Ambulance manual is technically incorrect because it states that strychnine can cause insensibility when breathing is present whereas the unconsciousness occurs when breathing is arrested For these reasons I suggest that it would be wisest for the St John Ambulance Association to leave out of its excellent manual the statement under dispute Even if it were technically exact it would be likely to mislead an untrained observer

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons this week discussed in com mittee and on report the Budget resolutions varying taxation The House also approved reductions in British import duties which had been promised in the Anglo-German Trade Agreement

On April 26th the Protection of Animals Bill was read a second time in the House of Commons without debate and the Protection of Birds Bill was passed by the House of Lords The Blind Voters Bill was read a third time by the House of Commons on April 27th and a first time in the House of Lords on May 2nd

The Parliamentary Medical Committee has arranged to meet a deputation from the British Social Hygiene Council at the House of Commons on May 11th and a deputation from the British Medical Association on May 18th The latter deputation is to discuss the superannuation allow ances of local government officers

At the House of Commons on April 26th Dr Thost a German who was introduced as Herr Hitler s repre-sentative in England addressed a meeting of M P s and gave an explanation of the treatment of Jews in Germany Despite this statement the meeting carried a resolution deploring the German Government s attitude towards Jews in Germany

Medical Qualifications in Ceylon

Mr R J DAVIES on April 25th asked the Secretary for the Colonies if as the Government had been in consulta tion with the General Medical Council on the qualifications of those entering the Government Medical Service in Ceylon he would bring the matter to the consideration of medical practitioners in Ceylon before any decision was taken Mr MALCOLM MACDONALD replied that he was not aware that the qualifications of persons entering the Government Medical Service in Ceylon had been discussed recently with the General

British Medical Bureau

(THE SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD.)

(FOUNDED 1880)

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The Association has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful Agency for the transaction of every description of Medical, Scholastic and Accountancy business, and the BRITISH MEDICAL ASSOCIATION has every confidence in recommending its members to consult Mr A V STOREY, the General Manager, in all transactions requiring the services of a Medical Agent

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NORTHERN BRANCH

The Manchester Medical Agency, lately under the control and Management of the Manchester Medical Committee, has now been taken over by the British Medical Bureau as their Northern Branch

Medical Practitioners in the North requiring the services of the Bureau are recommended to consult the Branch Manager, at the Offices, 33, Cross Street, Manchester

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Practices and Partnerships for Disposal. Full particulars sent free.

1 DEATH VACANCY, LONDON S E—PRACTICE OVER £500 p a in well populated suburb Panel 740 Suitable house with garage and small garden to rent

2 HOME COUNTIES—PARTNERSHIP IN STEADILY INCREASing Practice about £1 700 p a in growing residential district, within 15 miles of London Panel 500—600 Suitable accommodation could be had Great scope as district is rapidly developing Premium two fifths share 2 years purchase

3 S OF ENGLAND—OLD ESTABLISHED PRACTICE AVERAGing nearly £1,430 p a in small town close to coast and favourite Health Resort Panel 775 Large charming modernised house in grounds about two acres, including paddock, for sale or rent. Premium 1½ years purchase

4 S E COAST — PARTNERSHIP IN STEADILY INCREASING non-dispensing Practice averaging nearly £1 700 p a in popular Seaside Resort Panel 650 Partner should be English or Scotch Premium one half share 2 years purchase

5 S WALES — PRACTICE BETWEEN £250—£300 P A IN beautifully situated village about 4 miles from important town Small panel Nice house (6 bedrooms) electric light, gas and company's water Premium house and Practice, drugs, etc, £1 950

6 EASTERN COUNTIES—PARTNERSHIP IN OLD ESTABLISHED mixed Practice in Town with population about 35 000 Cash receipts average £3 789 p a, including panel over 3 100 Very nice house (4 bedrooms) garage, and small garden to rent. Premium one-third share 2 years purchase

7 HOME COUNTIES — PARTNERSHIP IN OLD ESTABLISHED Practice in first rate Residential Country District about 20 miles from London Cottage Hospital Applicant should be aged 28—30 and a Graduate of Oxford or Cambridge Share worth about £1 000 p a, at 2 years purchase.

8 N OF ENGLAND—OLD ESTABLISHED GOOD CLASS PRACTICE of about £2 000 in favourite Seaside Resort Small Panel Large modern residence for sale. Scope for increase Prem £2,700

9 KENT—PARTNERSHIP IN MIDDLE AND WORKING CLASS Practice averaging nearly £4,450 p a, in an industrial Town under 25 miles of London Panel about 2 600 Detached house (4 bedrooms) with garden to rent. Plenty of scope for increase Premium one fifth share 2 years purchase.

10 S OF ENGLAND — PARTNERSHIP IN OLD ESTABLISHED Practice of nearly £1,950 p a. in important town within 80 miles of London No panel Attractive corner residence (7 bed and dressing rooms) in half acre of walled in garden, with garage, etc. for sale Ample scope for increase. Premium one-half share 2 years purchase

11 ESSEX OLD ESTABLISHED PRACTICE OF ABOUT £600 P A in Suburban District Panel 500 Well situated detached house (6 bedrooms) standing in own grounds with nice garden garage and stabling for sale Scope for increase Premium £650

12 S W OF ENGLAND — WELL ESTABLISHED MIDDLE AND better class PRACTICE of between £1 200 and £1,300 p.a. in Seaside Resort. Panel 500 Excellent and well situated large detached corner house with every modern convenience to rent on lease Very good Educational facilities Sport of all kinds including golf yachting, etc. Premium £2,000

13 LONDON S W—OLD ESTABLISHED PRACTICE ABOUT £650 p a in well populated area. Panel 850 Separate Surgery and private residence to be purchased Scope for increase Premium £1 100

14 SURREY—PARTNERSHIP IN SOUND OLD ESTABLISHED good mixed class Practice about £3 000 p a in the Croydon area. Small panel Very little midwifery Suitable house could be obtained Scope for increase One fourth share at first at 2 years purchase with option to increase.

15 S E. COAST—MIDDLE AND WORKING CLASS PRACTICE OF £1 000 p a. in favourite summer resort. Panel over 1 000 Corner house (4 bedrooms) with garage and garden for sale Premium one and a half years purchase.

16 ESSEX COAST—PARTNERSHIP IN PRACTICE OF £2 500 p a in small Seaside Town Panel 2 300 Modern house in good position facing Sea with 4 bedrooms for sale. Scope for increase Premium one fourth share £1,250, and further share later

Medical Council The Ceylon Government had under consideration the recommendations made by Sir Richard Needham who reported on behalf of the General Medical Council on the technical education provided by the Ceylon Medical College and the Council had been informed of the measures which the Ceylon Government contemplated in furtherance of those recommendations The extent to which medical practitioners in that island were to be consulted regarding such measures was a matter for the Ceylon Government to decide

Deaths during Anaesthesia

Sir HILTON YOUNG told Mr Maclean on April 27th that during the calendar year 1931 the number of deaths registered in England and Wales which were certified as having taken place under or in connexion with the administration of an anaesthetic was 729 Certifying medical practitioners were advised that when death occurred during anaesthesia or was in any degree attributable thereto a reference to the anaesthetic should be made on the certificate If Mr Maclean knew of any case where a patient had died while under an anaesthetic and the fact did not appear on the death certificate Sir Hilton would be glad to have it brought to his attention

On May 2nd Mr SKELTON informed Mr Maclean that the number of deaths registered in Glasgow during 1932 which were certified to have occurred during or following the administration of chloroform was fifteen There were also twenty four deaths where the anaesthetic was chloroform and ether and one death where the anaesthetic was ethyl chloride chloroform and ether Mr MACLEAN asked whether in the case of death occurring under an anaesthetic the only statement on the certificate sometimes was that death took place from heart failure Mr SKELTON said he would like more specific notice so that he could inquire into the question

References to Regional Medical Officers

On May 2nd Sir HILTON YOUNG told Mr Rhys Davies that in 1923 165 719 insured persons in England Scotland, and Wales were referred to the regional medical officers by approved societies Insurance Committees and doctors In 1932 the number was 687 331 These references were disposed of as follows Of the insured persons who did not attend for examination in 1923 29 867 declared off the funds before examination and in 1932 173 353 Other cases were in 1923 36 831 and in 1932 130 106 Of the insured persons examined in 1923 26 697 were found capable of work and in 1932 114 421 These figures included references brought forward from the previous year and disposed of and excluded references made during the year and still under consideration at the close

Reduction in Health Services Grant

On May 2nd Mr R J DAVIES asked the Chancellor of the Exchequer to explain the reduction of £13 000 from £162 000 to £149 000 in the estimated grant on account of health services as set forth in Table B of the Financial Statement 1933-4 Mr CHAMBERLAIN said that the item in the tables to which Mr Davies referred was made up of ten small grants for certain health services not absorbed in the general block grants under the Local Government Act 1929 The main reason for the net decrease of £13 000 was a decrease of £12 490 in the capital grants for sanatoriums on the practical completion in 1932 of the liquidation of commitments which remained to be met when the main scheme of capital grants ceased in 1921

Botanic Medicine —On April 25th Sir HILTON YOUNG informed Mr Tinker that a letter addressed to him from the Secretary of the Institute of Botano therapy asking for a legal status to be given to qualified practitioners of the botanic school of medicine was received by his Department on April 24th He would send Mr Tinker a copy of his reply in due course

Slum Clearance in Scotland —Sir G COLLINS states that it is estimated that from 1919 to March 31st 1933 24 100 houses in Scotland were demolished in schemes promoted by local authorities for State assistance specifically for rehousing persons from unfit houses

Obituary

SIR ARTHUR WHITELEGGE, K C B

M D F R C P

Late H M Chief Inspector of Factories

We regret to announce the sudden death on April 25th of Sir Arthur Whitelegge, who for twenty one years held the post of Chief Inspector of Factories and Workshops and was the author, with Sir George Newman, of a manual of hygiene and public health which has passed through thirteen editions

Benjamin Arthur Whitelegge was born on October 17th, 1852, son of Henry Whitelegge of Tideswell, Derbyshire He studied medicine at University College, London (of which he was later elected a Fellow) and graduated B Sc Lond in 1874 He qualified as M R C S in 1876, and proceeded to the M D degree in 1881, in which year he obtained the Cambridge D P H In 1884 he was appointed medical officer of health for Nottingham, and five years later became county medical officer of health for the West Riding of Yorkshire, a post he held until 1896, combining with it that of chief sanitary officer to the West Riding Rivers Board During that part of his career he was also for five years lecturer on hygiene and public health at Charing Cross Hospital Medical School In 1893 he was chosen by the Royal College of Physicians of London to give the Milroy Lectures in State medicine and public health , his subject was " Changes of Type in Epidemic Disease "

In March, 1896, Whitelegge was appointed H M Chief Inspector of Factories at the Home Office, and retired in October, 1917 He was elected a Fellow of the Royal College of Physicians in 1898, received the honour of C B in 1902, and was created K C B in 1911 He had been a member of the Departmental Committee on Factory Statistics in 1893, and of the Committee on Wool Sorting and Kindred Industries appointed by the Home Secretary in 1895 He was also a member of the Royal Commission on Arsenical Poisoning in 1901, and of the Lighting of Factories Committee in 1913 When a Section of Industrial Hygiene and Diseases of Occupation was held for the first time at an Annual Meeting of the British Medical Association in 1902, the Council appointed him president It was appropriate that one who had already done admirable work in connexion with the prevention of trade diseases and accidents should have been chosen to preside over this section, which met in Manchester on the centenary of the first Factory Act, and in the first year of an important consolidating and extending Factory Act "We are now," he said in his opening speech, " working under better and more intelligible laws than ever before, and it remains for us to do our best to apply them Our branch of State Medicine is one of growing importance, both in itself and in the number of the profession upon whom it has claims "

Sir Arthur Whitelegge married Fanny Marian, daughter of the well-known painter John Calcott Horsley, R A , and was thus a brother-in law of Sir Victor Horsley He was a man of kindly and sympathetic disposition, loyal to his colleagues, and free from any trace of affectation or self advertisement

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Practices and Partnerships for Disposal (continued)

17 ESSEX.—PRACTICE ABOUT £1,150 P.A. IN DEVELOPING district in the Thames Estuary. Panel 350. House with ample accommodation. Electric light, main drainage, garage and very nice garden to rent. Yachting. Plenty of scope for increase. Premium £1,600.

18 LONDON, W.—STEADILY INCREASING NUCLEUS OF PRACtice in the Maida Vale district. Bookings for 11 months £249 of which about £100 has been received. Rent of consulting and waiting rooms 30/- weekly. Good scope. Premium £300.

19 WEST OF ENGLAND.—PARTNERSHIP IN OLD-ESTABLISHED PRACTICE over £2,200 p.a. in County Town. Panel about 1,000. Premium one-half share 2 years' purchase. Good prospects for well-qualified physician (preferably M.R.C.P.) who should be an R.C. and who would have opportunity of getting on Staff of Hospital in near future.

20 LONDON, E.C.—PARTNERSHIP IN OLD ESTABLISHED PRACtice in the City. Receipts average about £1,650 p.a. including appointment and panel worth over £500 p.a. Premium one-half share £1,000.

21 NORTH OF ENGLAND.—INLAND HEALTH RESORT.—NON-dispensing PRACTICE of about £1,000 p.a. Small select panel. House (7 bedrooms) with large garden for sale. Premium—Practice—£750.

22 LONDON, E.C.—NUCLEUS OF PRACTICE (ABOUT FOUR-fifths Ophthalmic) in the City. Cash receipts at present £268 p.a. Fees for Consultations £1 1s. to £2 2s. Consulting and waiting room to rent. Premium £100.

23 HOME COUNTIES.—*WELL-ESTABLISHED PRACTICE* OF £700 p.a. in first-rate Country Town under 40 miles from London. Panel about 250. Fees 5/- to £1 1s. Large well-built residence (about 6 bedrooms) with modern conveniences. Beautiful garden, meadow orchard, etc., in all about 24 acres. Excellent hunting. Premium. Practice and house £4,500 (or near offer) which is less than the value of the house alone.

24 EASTERN COUNTIES.—*OLD ESTABLISHED PRACTICE* about £1,750 p.a. in beautiful country district. Panel 1,150. Good house (6 bedrooms) with electric light and central heating in large grounds for sale. Good scope.

25 S. AFRICA.—RADIOLOGICAL PRACTICE IN A MOST DElightful town with excellent climate. Cash receipts last year £1,450. Scope. Premium to include furniture, carpets, accessories, etc. £2,200.

26 PRIVATE MENTAL HOME (FOR LADIES ONLY).—EXCEPtionally nice house and grounds. A considerable sum required for the purchase. Further particulars on application.

27 EASTERN COUNTIES.—OLD ESTABLISHED COUNTRY PRACTICE. Cash receipts about £720 p.a. including appointments over £150 and a panel of about 590. Detached house (6 bedrooms) in grounds of 1 acre for sale. Prem. for Practice £650.

28 EAST COAST.—PRACTICE OF BETWEEN £750 AND £800 p.a. in a purely Residential Seaside District within 40 miles from London. Small Panel. Detached house (5 bedrooms) for sale. Scope for increase as district is growing.

29 LANCASHIRE.—OLD-ESTABLISHED PRACTICE IN SMALL Manufacturing Town. Cash receipts last 12 months £725 including a panel of over 1,050. Detached house (5 bedrooms) with garage and good garden to rent. Premium 1½ years' purchase or near offer.

30 SURREY.—PRACTICE OF £1,000 P.A. IN RAPIDLY GROWing Residential District within 15 miles of London. Panel 400. Suitable house with separate professional accommodation, for sale. Scope for considerable increase. Premium £1,600.

31 LONDON, W.—GOOD MIDDLE-CLASS PRACTICE £400 P.A. in suburb within easy access of the West End. Panel over 100. Attractive double-fronted house with nice garden for sale. Scope for increase. Premium 1½ years' purchase.

32 CORNWALL.—VERY OLD ESTABLISHED PRACTICE OF OVER £1,100 p.a. in delightfully situated seaside village on West Coast. Panel about 550. Well-built house (7 bed and dressing rooms) standing in half acre of ground for sale. Scope as building is going on. Premium 1½ years' purchase.

33 LONDON, N.—PARTNERSHIP IN PRACTICE, ABOUT £5,250 p.a. in thickly populated Suburban District. Panel about 800. One-fourth or one-third share at 2 years' purchase.

34 HOME COUNTIES.—OPHTHALMIC PRACTICE BETWEEN £300 and £400 p.a. in desirable Residential Town under 15 miles from London. Good detached house (4 bedrooms) with large garden for sale. Good reasons for plenty of scope for increase. Premium £300.

35 LONDON, E.C.—OLD ESTABLISHED LOCK-UP PRACTICE of £646 p.a. Panel 459. Living accommodation to rent if desired. Premium £1,000.

36 S. AFRICA.—OPHTHALMIC AND GENERAL PRACTICE about £1,400 p.a. (about 60 per cent. Ophthalmic) including appointments £400. No Ophthalmic opposition. Premium £400.

37 CO. DURHAM.—PRACTICE OVER £500 P.A. IN RESIDENtial colliery district near two large towns. Panel 3,700. Centrally situated 7-roomed house, with good Surgery and Dispensary for sale or rent. Practice could be very quickly substantially increased. Premium £650.

38 N. OF ENGLAND.—OPHTHALMIC PRACTICE OF OVER £1,600 p.a. in an important town. Excellent scope for one keen on clinical and operative Ophthalmology. Large house in first-class condition for sale. Purchaser should be well qualified. Premium £2,500.

39 S. AFRICA.—PRACTICE OF ABOUT £2,000 P.A. IN A famous town. Pleasantly situated detached bungalow (5 living room) garage and small garden for sale. Good hospital (with private wards). Premium £1,100.

40 LONDON, WEST END.—X-RAY AND ELECTRO-THERAPeutic Practice. Receipts 1931 nearly £620. Suitable and convenient flat at moderate rent on lease. Premium £925.

41 LONDON, E.—CASH AND PANEL PRACTICE OF £860 P.A. in populous district. Panel 570. Small house to rent on lease. Premium 1½ years' purchase.

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All communications to be addressed to Mr A. V. STOREY, General Manager

DAVID SHANNON M B F C O G

Senior Surgeon Royal Samaritan Hospital for Women Glasgow and Lecturer in Gynaecology University of Glasgow

Our last issue contained a short announcement of the death of Dr David Shannon the distinguished obstetrician and gynaecologist which took place on April 20th at his residence in Woodside Place Glasgow

David Shannon was born at Greenock fifty six years ago the son of Mr James Shannon a prominent merchant in that shipping centre During his undergraduate career at Glasgow University he took a leading part in the social life of the student community, and while secretary of the Students Union went off to the South African war as a senior N C O with the Scottish Hospital which was organized by the late Sir G T Beatson He returned to graduate M B Ch B in 1901 and thereafter set off to prepare himself for specialist practice by a long period of post graduate study at the Rotunda Hospital Dublin and in Berlin Having established himself in practice in Glasgow he was appointed to the visiting staff of the Royal Maternity and Women s Hospital and of the Royal Samaritan Hospital for Women He was promoted to the charge of wards in the Samaritan Hospital at the unusually early age of 35 In 1920 a year after his return from active service in the war he was appointed to the charge of wards in the Maternity Hospital and lecturer in clinical obstetrics in the university In 1926 when the great extension of the Samaritan Hospital was completed he was appointed to the charge of the new wing containing some eighty beds probably the largest gynaecological unit in the country At the same time he was appointed to the newly founded Samaritan Hospital lectureship in gynaecology in the university This appointment necessitated his retirement from the active staff of the Maternity Hospital and in recognition of his valuable services to that institution the directors appointed him honorary obstetric surgeon

Shannon maintained an extremely busy consulting practice in obstetrics and gynaecology in the West of Scotland He was a sound clinician and a skilful operator He was a most enthusiastic teacher—not only an impressive lecturer but also a most attractive clinical master His teaching hours were probably the greatest joy of his busy professional life and the interest he took in his students extended far beyond the lecture room or hospital ward For over twelve years he had been an examiner first in clinical obstetrics and then in clinical gynaecology for the University of Glasgow While his chief interest throughout had been in the clinical side of his specialties he was always ready to encourage and support those of his colleagues and assistants who were able to devote time to the more scientific side He was not a prolific writer but his contributions made chiefly to the obstetrical societies of Edinburgh and Glasgow contained the mature judgements of many years of clinical experience His favourite theme was the management of cases of contracted pelvis The appreciation of his services to obstetrics and gynaecology was shown in his appointment as a Foundation Fellow of the British College of Obstetricians and Gynaecologists

He gave eager service to all the societies which came within his range of interest For many years he acted as secretary of the Glasgow Obstetrical and Gynaecological Society and later served his term as president He was a frequent visitor to the Edinburgh Obstetrical Society and seldom missed a meeting of the Gynaecological Visiting Society either at home or abroad Since its formation at the end of the war he had been secretary of the Glasgow and West of Scotland Overseas Medical Club Just two years ago it was his honour to be president of the eighth British Congress of Obstetrics and Gynaecology then assembled in Glasgow his attractive personality went far to make that meeting the great success it proved to be

Shannon continued the interest in the Army Medical Services which he had shown during the South African war A captain in one of the Lowland field ambulances he was mobilized in August 1914 went out with the Lowland Division to the Dardanelles and afterwards served in Egypt Palestine and Salonica The rigours of war service in the Middle East impaired his health very seriously but even after the armistice he continued his service and was promoted lieut.-colonel R A M C in 1921 His public services were honoured by his appointment in 1926 as a deputy lieutenant of the County of the City of Glasgow of which he was also a justice of the peace

While his health had been unsatisfactory for some time he continued his work with the greatest courage and persisting cheerfulness It was a great blow to his many friends to realize a few months ago that he was desperately ill and that neither the consulting room the hospital nor the lecture room would ever see him again He is survived by his wife a graduate in medicine of his own university who has been for many years a member of the staff of the Royal Hospital for Sick Children On April 24th a funeral service was held in St George s Church Glasgow attended by representatives of the various institutions with which he had been connected and by a very large assembly of personal friends Thereafter the interment took place in his own home town of Greenock

Shannon s death has left a very large gap in the medical profession in the West of Scotland He had the gift of friendliness and delighted in the society of his fellows His patients entertained towards him a most wonderful devotion He was always an enthusiast and gave unselfish and unstinted support to any cause in which he was interested His hospital directors owe much to his ability his energy and his loyalty Senior medical students have lost a brilliant teacher and the university a most progressive lecturer It is a tragedy that such a friend should have been taken from us at the zenith of his powers

J H

The death took place on April 18th at Stonehaven after a prolonged illness of Dr W A MACNAUGHTON who for nearly forty years had acted as medical officer of health for the county of Kincardine William Alexander Macnaughton was a native of Perthshire and after graduating M A at Edinburgh University in 1876 at the age of 20 studied medicine and graduated M B in 1878 proceeding to the M.D degree in 1881 For a few years he engaged in private practice in the North of England but determining to devote himself to public health work he took the D P H of Cambridge in 1889 and in the following year was appointed medical officer of health for the county of Kincardine a post which he held until he retired in 1940 He was thus one of the sixteen full time medical officers appointed under Scottish county councils when the Local Government (Scotland) Act 1890 came into force Dr Macnaughton was held in very high esteem by the people of Stonehaven and throughout the county of Kincardine In addition to various contributions to periodical literature connected with his special department Dr Macnaughton was distinguished as having founded in collaboration with the late Dr S R McPhail the Caledonian Medical Society and the *Caledonian Medical Journal* He continued to act as one of the editors of this periodical up to the time of his death He was a keen archaeologist and took particular interest in the early and historical associations of the district in which he lived One of his recent historical studies published in the *Caledonian Medical Journal* consisted of a record of the medical men who were out in the rebellion of 1745

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1 PARTNERSHIP—WITHIN TEN MILES OF LONDON—In a pleasant and rapidly growing residential suburb, the half share is offered owing to the retirement of the Junior Partner, in a well established and increasing Practice having good future prospects Gross cash receipts for last 12 months about £1,600 Panel of 1,600 Appt worth £140, not included in receipts. Very nice house, with 2 reception, 5 bedrooms and dressing room, 2 maids rooms and usual offices Large garden with tennis lawn Price for freehold £1,700 Premium 2 years purchase

2 LONDON NORTH WEST — OUTLYING RESIDENTIAL SUBURB—PRACTICE is situated in a very pleasant and rapidly developing district where a big Estate is being opened up of good class residents Established 6 years and held by Vendor (who is only leaving to join a friend in Partnership) for 2½ years Gross cash receipts for immediate past 12 months nearly £750 Selected panel of 100 Fees 3/6 to 7/6 Midwifery 7 to 10 guineas Detached corner house, with 2 reception, 4 bedrooms etc Garden Garage Price, freehold, £2,150 £1 500 on mortgage Premium £1 100 Sport of all kinds, and good schools Hospital and Vendor on staff

3 DEATH VACANCY—LONDON SOUTH EAST—O'd established chiefly panel Practice held by late Incumbent for past 12 years Gross cash receipts average nearly £500 p a Panel of 740 Low expenses Surgery premises can be rented at £160 p a

4 OUTLYING NORTHERN SUBURB—Very old established middle and working class PRACTICE in pleasant and increasing residential district. Cash receipts average £1 342 including panel of 1 356 Very attractive house with 2 reception 6 bedrooms etc., and large garden Garage Price for freehold £2,500, or can be rented on lease Premium 1½ years purchase

5 MIDDLESEX—In a very pleasant new and rapidly developing district within 15 miles of London, PRACTICE established by Vendor about 18 months ago is for disposal owing to ill health Cash receipts for past 12 months £360 including panel 120 Good house with large garden garage, etc Price freehold £1,728 (practically all on mortgage) Premium one year's purchase Exceptionally good prospects

6 CHELSEA AREA—LOCK UP SURGERY—Old established and averaging about £450 p a including panel of 140 Hours 9 30 to 12 and 5 to 7 p m Consultations 2/6 to 10/6 Very little visiting at 5/ upwards Rent of two rooms £84 p a Total expenses just over £100 p a Premium £650 Ill health reason for sale

7 PARTNERSHIP—In a well populated pleasant South Eastern suburb within ten miles of London the half share of an old established mixed class Practice is for disposal owing to the retirement of the junior partner Held by the remaining partner 30 years Cash receipts average £2 765 p a including panel of 1 800 and appts worth £150 Very little midwifery Pleasant semi detached corner house with ample accommodation garden Price leasehold (over 900 years, at ground rent of £7 p a) £1,050 Premium 2 years purchase Scottish graduate preferred

8 MANCHESTER—Old established middle and working class PRACTICE averaging about £1 300 p a, including panel of nearly 1 800 Visits from 3/6 Moderate expenses Suitable house, with 3 bedrooms and 3 good sized attics, etc Price for freehold £1 150 Premium 1½ years purchase

9 NORTH EAST COAST—FAVOURITE TOWN—Old established good mixed general Practice offering considerable scope for increase Gross cash receipts for the past twelve months approximately £1 800 Selected panel of 100 Fees 5/ to 7/6 Very little midwifery Well situated house with 3 reception, 5 to 6 bedrooms etc and separate professional rooms Electric light Garage Price £2 500, large part on mortgage Good opportunity for Eye work, and Ear Nose and Throat work if desired Sport of all kinds and excellent schools Premium £2 800

10 MANCHESTER—Old established middle and working class PRACTICE producing for the last twelve months about £650, including panel of 790 Fees from 3/6 Convenient house, with 2 reception 4 to 5 bedrooms bathroom etc Rent on lease £60 Premium £950, to include furniture

11 LONDON NORTH WEST — Middle-class PRACTICE in new and developing district producing last year £400 and this year at the rate of about £600 Panel of 250 Fees 2/6 and 3/6 visits from 5/ Six roomed house with bathroom electric light Garage Garden Price for freehold £1 000 £850 on mortgage Prem £650

12 LONDON SOUTH WEST—O'd established middle and working class PRACTICE producing about £1 100 p a including panel of about 1 150 Visits 3/6 to 5/ Suitable corner house with 2 reception, 4 bedrooms bathroom and separate professional accommodation Can be rented on lease Premium £1 750 Easily worked and offering very good scope for increase

13 CENTRAL LONDON—Middle and better class PRACTICE averaging for the last two years about £500 p a including small panel of 180 Fees 3/6 to 21/ Professional accommodation can be rented at £200 p a Premium £300 to include furniture drugs, instruments, etc

14 NORTH LONDON—Middle and working class PRACTICE in well populated residential district, averaging about £1 300 p a Panel of about 1 300 Appts consist of Medical Officer to two Missions and these will only transfer to a suitable successor of evangelical principles House can be rented also Branch Surgery

15 SOUTH WEST OF ENGLAND—In a thriving and pleasant market town with beautiful surrounding country, a well established increasing PRACTICE worth last year over £1,100 including panel producing £286 and appts £200 Visits 3/6 to 21/ Midwifery practically refused Good house in excellent position with accommodation small garden and garage Price, freehold £2,150 or would be let on lease at £127 p a Premium £2 000 or near offer

16 SOUTH EAST LONDON—Good middle and working-class PRACTICE producing last twelve months nearly £960 Panel of 936 Surgery house with 2 reception 4 to 5 bedrooms, etc Rent on lease £ 0 p a Premium to include drugs etc and surgery fittings and furniture £1 450

17 HOME COUNTIES—ASSISTANTSHIP with view to Partnership is offered in a better class Practice in residential town Ingoing partner must have experience of general Practice and be able to undertake major surgery and preferably hold a Fellowship.

18 NORTH WALES—Old established middle and working-class PRACTICE averaging for the last three years over £1 700, including panel of about 1 300 Fees from 2/6 Visits from 3/6 with occasional extra Suitable house with good professional accommodation Electric light. Garage for two cars. Small garden Rent on lease £100 p a Premium £2 500, £1,700 down balance by instalments Good sport etc A knowledge of Welsh is not necessary

19 RIVIERA—Old established PRACTICE the receipts from which have averaged over £1 600 p a, but have decreased recently owing to Vendor's ill health Very good prospects of extension Fees from £1 1s Very easy work Suitable flat can be rented at £160 p a Premium £4 000

20 MIDLANDS—Old established middle and better class PRACTICE in clean and attractive manufacturing city Cash receipts average over £1 600 p a including appt. worth £165 (transferable) and panel of 1 220 Visits 5/ to 2 gns. Midwifery discouraged fee 5 to 15 gns Exceptionally good house, in its own grounds with ample accommodation fitted with every labour saving device and economically run Situated in the best residential part. A cottage in the grounds is let at £37 a year Price freehold £5 000 (£3 500 on mortgage) Premium £3 500 Scope for active man

21 WESTERN SUBURB—Well-established PRACTICE producing £600 p a including panel of nearly 600 Suitable house available Premium 1½ years purchase

22 LANCS—Well established mixed class PRACTICE producing for the last 12 months £725 Panel of 1 055 Fees from 3/6 House contains 3 reception 5 bedrooms etc Rent on lease £85 p a. Premium 1½ years purchase

23 LANCS — LARGE TOWN — Old-established upper and middle-class PRACTICE situated in purely residential district and averaging about £1 700 p a including appt of £130, and panel of 700. Visits 5/ upwards Very little midwifery at 5 to 10 guineas. Expenses low Excellent and well built house ideally situated, having ample accommodation (surgery waiting room and dispensary 3 reception 5 bedrooms, etc.) Rent on lease £120 Premium £2,000. Good educational facilities

24 EGYPT—Well established PRACTICE, producing about £960 p a and offering good scope for increase Fees 10/6 to 2 guineas. Excellent accommodation can be rented at £16 10s. monthly Premium to include all furniture drugs drug bottles instruments, etc., £2 000

FOREIGN APPOINTMENT—SOUTH AMERICA—MEDICAL OFFICER required for Company Must be well up in Surgery and have some knowledge of Tropical Diseases and if possible Sanitary matters Three years agreement Salary £750, rising annually to £1 000. First class passage out and home Aged 30 to 35 Married or single

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WANTED TO PURCHASE.

1 OUTLYING SUBURB—Middle and working class PRACTICE bringing in about £1 500 p a. with panel of 1 000 upwards. Nice house and garden Capital available

2 BUCKS BERKS or near locality—Better class PRACTICE averaging about £1 500 p a with good scope Panel not necessary Ample capital for purchase of house and Practice

3 SOUTH OF ENGLAND—Good town, with educational facilities Income £1 200 to £1,800, with substantial panel Fair sized house with garden

4 SOUTH COAST TOWN, or near locality—PRACTICE averaging about £1 500 p a, with panel of 1 000 or thereabouts Small house preferably on rental Capital available

5 LONDON OR SUBURBS—PRACTICE producing £1 400 to £1 600 p a with panel of 1 500 Good house with garden

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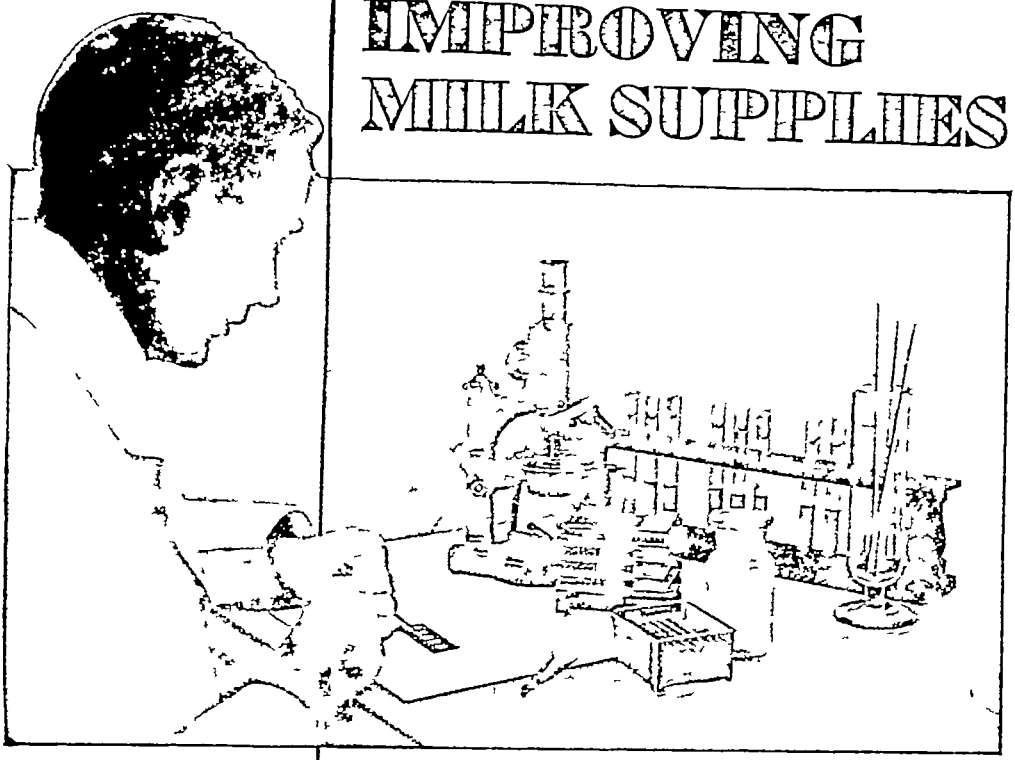
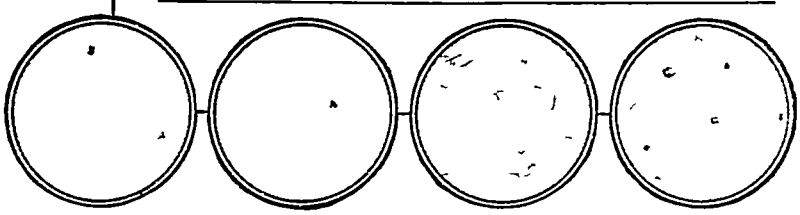


Reference has been made in previous advertisements to the institution at our Factories of a Bonus Scheme for farmers in order that only the highest quality milk shall be used in the preparation of our Foods

In addition to the Official Ministry of Health plate methods we are adopting as part of the routine the Breed method of bacteria testing which has been used extensively and successfully in the U.S.A. The method of scoring is based on the Ministry of Agriculture's scoring lists for clean milk competitions (Bulletin No 46 Ministry of Agriculture and Fisheries)

The photographs displayed below are typical of the microscopical fields obtained and enable us to indicate visibly to farmers where their supplies are not up to standard



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Universities and Colleges

UNIVERSITY OF CAMBRIDGE

At a congregation held on April 29th the following medical degrees were conferred

M D—*J E Semple
M B B Chir—J H Bulby R W C Murray L D Ward, J R W Price
M B—*R O Lee R A Ratcliff C J K Hamilton

* By proxy

The following candidates have been approved at the examination indicated

DIPLOMA IN MEDICAL RADIOLOGY AND ELECTROLOGY—(*Part I*) S S Alam A Cawadias W O Neill M Singh P J Sinnoth (*Part II*) J S Austin L R B Birt I G Blair H J Davies, C C Divanji I Fine R McWhirter W W Main R F May R J L O Donoghue R F Phillips E J Rawnsley F W H Shawcross W Sowerby J Z Walker B W Windeyer

UNIVERSITY OF LONDON

The following candidate has been approved at the examination indicated

DIPLOMA IN PSYCHOLOGICAL MEDICINE (*with Special Knowledge of Psychiatry*)—Marjorie Low

UNIVERSITY OF LEEDS

The Council of the University announces the gift of £1 000 by Mr C R Brotherton nephew of the late Lord Brotherton for equipment of the museum at the Algernon Firth Pathological Institute, which was formally opened last week (see page 801)

UNIVERSITY OF DUBLIN

TRINITY COLLEGE

At the first summer commencements held on April 26th the following degrees in the Faculty of Medicine were conferred

M D—W R Johnston T J O Reilly V St G Vaughan
M B B Ch B A O—C C Langford

NATIONAL UNIVERSITY OF IRELAND

At a meeting of the Senate on April 27th with the Chancellor Mr Eamon de Valéra in the chair the reports of the examiners on the results of the medical and dental examinations spring 1933 were considered and passes honours etc, were awarded in connexion therewith

The following appointments were made in University College Dublin James J O Kelly M B B Ch M A O lecturer in obstetrics, Reginald J White F R C S I lecturer in gynaecology

ROYAL COLLEGE OF PHYSICIANS OF LONDON

A meeting of the Royal College of Physicians was held on April 27th with the President Lord Dawson of Penn in the chair

Fellowship

The following Members were elected Fellows of the College

Robert Alexander Gibbons M D Ed (London) Arthur Douglas Heath M D Lond (Birmingham) Julius Meyer Burnford M B Lond (London) Herbert Chavasse Squires C M G M D Oxf (London) Sir Robert Stanton Woods M D Lond (London) Frank Clayton M D Camb (Leamington) Elkin Percy Cumberbatch M B Oxf (London) Bernhard Ehrenfried Myers C M G M D Ed (London) William Rees Thomas M D Lond (London) Joseph le Fleming Coy Burrow M B Ed (Leeds) Edmund Walter Neill Hobhouse M D Oxf (London) John Cadman Tull M D McGill (Singapore) Tom Watson Wadsworth M D Liverp (Liverpool) Joseph Wilkie Scott M C M D Glasg (Nottingham) Egerton Llewellyn Pope M D McGill (Edmonton Alberta) William Siegfried Dawson M D Oxf (Sydney) Geoffrey Barrow Dowling M D Lond (London) Theo Jenner Hooper Hoskin M D Camb (London) Frederick Craig Hobson D S O M D Oxf (Oxford) Matthew Sydney Thomson M D Camb (London) Cecil Charles Worster Drought M D Camb (London) Arthur Griffith Maitland Jones O B E M C M D Lond (London) Harold Esmond Armson Boldero M D Oxf (London) Gerald Tyler Burke M D Lond (Lucknow) Charles William Buckley M D Lond (Buxton) Charles Keith Johnstone Hamilton M C M B Oxf (London) Arthur Arnold Osman D S C (London) Leslie Barrett Cole M D Camb (Cambridge) James Livingstone Livingstone M D Lond (London), Samson Wright M D Lond (London) Wilfrid Percy Henry Sheldon M D Lond (London) Hugh Barber M D Lond (Derby) Claude Wilson, M D Ld (Tunbridge Wells) William Fletcher M D Camb (London) Sydney Wentworth Patterson M D Melb (Ruthin Castle) Thomas Arthur Ross, M D Ld (Penshurst) Alexander Mills Kennedy M D Glasg (Cardiff) Kenneth Shirley Smith, M D Lond (London) George Frederick Buchan M D Glasg (London), Edward Charles Dodds M V O M D Lond (London) Arthur Cecil Hampson M C M D Camb (London) James Alison Clover O B E M D Camb (London), Lionel Ernest Howard Whitby, C V O, M C, M D Camb (London) Sheldon Francis Dudley O B E M D Lond (Chatham), Richard Robertson Trail, M C M D Aberd (Midhurst)

Sir Robert William Philip M D Ed (Edinburgh) and Captain Stewart Ranken Douglas F R S (London), were elected Fellows under By-law XXXVIII (*b*)

Membership

The following were admitted Members of the College

Arthur Doyne Courtenay Bell M B Oxf George William Bray, M B Sydney John Rennie Braybrooks M B Oxf, John Ritchie Cilmour L R C P, Gopal Hardas L M S Singapore Henry Albert Harris M B Lond Gordon Barrett Mitchell Heggs M D Lond Eric Boxall Jackson M B Lond James Balfour Kirk M B Ed Gordon Ormsby Lambert M D Camb Paul McGregor Moffatt M B Lond Alfred Patrick Menzies Page M B Lond Frances Edward Pilkington L R C P Joseph Alexander Purser M B Melb Ursula Shelley, M D Lond Indar Singh M B Punjab Brian Stanley M B Lond, William George Adrian Swan M B Durh James Oliver Terry M B Leeds Janet Maria Vaughan M D Oxf Reginald Lawson Waterfield, M B Lond

Appointments

Dr W Mitchell Stevens was appointed to represent the College at the forthcoming nineteenth Conference of the National Association for the Prevention of Tuberculosis at Cardiff

Professor Edward Mellanby will deliver the Croonian Lectures on Nutrition and Disease—the Interaction of Clinical and Experimental Investigations on June 8th, 13th, and 15th, at 5 p m

Licences

Licences to practise were granted to the following candidates

E H Allen I G Anderson I B Asafu Adjaye D R Ashton, A D Aveling Kashi G Awati J L M Ayoub G Barns N H R Bathurst F G Beauchamp R Bolton S G Browne F J K Brownlees H R Carr A Carling L I Cohen I H Coleman J Collinson R E C Copithorne T M Cuthbert T J Davies J J A Embleton A B Evans C J Evans Helen M Evans G D Galwankar, V V Garde P H R Ghey T Gibson P R Goodfellow G P Goodwin J Gordon G J Hardman C V Harries Edith K Harris W H Hughes A H Ismail E R James J L S James J I Jarvis N H Jones T J Jones A Kekwick, A B King A H Knowles S B Lange S Lee S B Levy Vida L Liddell M J Lindsey Money Low J N McArthur V B McGregor J P Mackenzie W S McKenzie H I McNickle T C Maling R L Mansi J V Matthews C R Mayou H N Miles K O Milner S C Mistri J Montgomerie, C C Morgans H J V Morton P D Mulkern W B Mumford J A W Musson Kowkab H Nassif L C Nicholas D D O Callaghan, W L Ogle L C Oliver G S W Organe R M M C Orpwood H E S Pearson M I Platt A K Price, A U Prodhan, S A Propert J N N Robinson K Robson H P Russell R D Scriven G H Shaw P P Sheth H S Shoham R F Simcox K H Singh F J Smith D W Smithers J G C Spencer J T W Spindion Iliszczewski F R Store F W Taylor B A Thomas I W Thomas W H D Trubshaw I K Van Langenberg C F Walker G N Wardle C E M Ware V C McD Weddell C S Whitehouse A Wilcox R H H Williams J Wilson C W Wollaston, Tamsin M Wynter, E C Zorab

The names of the recipients of the Diploma in Tropical Medicine and Hygiene conferred jointly with the Royal College of Surgeons, were printed in our issue of April 15th (p 681)

Diplomas in Gynaecology and Obstetrics were granted jointly with the Royal College of Surgeons, to H Sobhi and N J Thanavala

SOCIETY OF APOTHECARIES OF LONDON

The following candidates have passed in the subjects indicated

SURGERY—W H Elam L I F Kerridge T Morgan S G Nathan
MEDICINE—P A Diemer P M Hershberg R Sugarman
FORENSIC MEDICINE—A L Chavdil V S Rosuck E C Rowlands R P K Sen
MIDWIFERY—S Adams N I Bishai V F Hassan M Sourasky R H Wheeler F H Williams

The diploma of the Society has been granted to Messrs P A Diemer, R H Wheeler and M Sourasky

The Services

NAVAL COMPASSIONATE FUND

At the quarterly meeting of the directors of the Naval Medical Compassionate Fund held on April 19th Surgeon Vice Admiral R St G S Bond C B K H P Medical Director General of the Navy in the chair the sum of £225 was distributed among the several applicants

The King has conferred the Territorial Decoration on Lieut.-Colonel H C Smeeth R A M C (ret.) and the Efficiency Decoration on Lieut.-Colonel F R Harris R A M C and Major and Brevet Lieut.-Colonel E W Matthews R.A.M.C.

Medical News

The eighty ninth half yearly dinner of the Aberdeen University Club London will be held at the Trocadero Restaurant at 7 for 7.30 p.m. on Thursday May 18th under the chairmanship of Mr J. Hall Barron Secretary's address 9 Addison Gardens W.14.

The Glasgow University Club London will dine at the Trocadero Restaurant Piccadilly on Friday May 26th at 7.15 for 7.30 p.m. Professor Ralph Stockman of Glasgow University is to be in the chair. Any Glasgow University men who though not members of the club desire to attend are requested to communicate with the honorary secretaries 62 Harley House N.W.1.

At a meeting of the Royal Sanitary Institute in the Town Hall Weston-super-Mare on Friday May 12th at 5 p.m. a discussion on Prevention of Human Tuberculosis of Bovine Origin will be opened by Dr W. G. Savage medical officer of health Somerset County Council and Mr S. V. Golledge county veterinary officer Wiltshire.

A course of demonstrations in neurology for candidates for the M.R.C.P. examinations will be held on Tuesdays and Thursdays from May 9th to June 29th at 6 p.m. at the National Hospital Queen Square W.C.1.

The Fellowship of Medicine and Post-Graduate Medical Association has arranged a whole-day course in advanced urology at St. Peter's Hospital from May 8th to 20th. An intensive week-end course of instruction on rheumatic disorders and applied hydrotherapy will be given at the Royal Mineral Water Hospital Bath on May 13th and 14th. An all day course in diseases of children will be given at the Queen's Hospital Bethnal Green from May 15th to 27th. There will be a week-end course in obstetrics at the City of London Maternity Hospital on May 20th and 21st. Forthcoming courses include gynaecology at the Chelsea Hospital May 22nd to June 3rd venereal Diseases at the London Lock Hospital May 22nd to June 17th M.R.C.P. evening course Tuesdays and Thursdays May 23rd to June 16th.

During the course of the annual conference of Rotarians which is being held at Scarborough from May 5th to 9th Dr H. C. Jonas of Barnstaple will preside over a vocational meeting of medical Rotarians in Great Britain when a discussion will take place on the four following topics (1) How can we organize better for service (*a*) nationally and (*b*) internationally (2) Has the crisis affected our profession (*a*) either ethically (especially as regards unfair practices and bribery) and (*b*) commercially? (3) Do we do everything in our power to ensure that medical etiquette is primarily to the advantage of the public? (4) What are the admitted evils of our profession and how should we attempt to combat them?

The thirteenth International Congress of Neurology will be held at La Salpétrière Paris on May 30th and 31st when the subjects for discussion will be serous cerebral and spinal meningitis introduced by Claude of Paris Boschi of Florence Barré of Strasbourg and Petit Dutaillis of Paris and exploration of the cerebral cavities by means of air introduced by Clovis Vincent assisted by David and Puech for ventriculography and Berdet and Rappoport for encephalography. Further information can be obtained from the general secretary Dr Crouzon Avenue de Jéna 70 bis Paris 16e.

The second Italian Congress of Sport Medicine will be held at Bologna from May 20th to 22nd when the following subjects will be discussed renal function in sport introduced by Professor Aiello of Milan diet in sport introduced by Professor Del Guerra of Pisa and training introduced by Dr Poggi Longostravi of Milan.

The Cardiological Society of Czechoslovakia will hold a congress in Prague from June 2nd to 4th (Whitsuntide) under the patronage of the President of the Republic Dr T. G. Masaryk. The president of the congress is Professor V. Libensky with Sir Thomas Lewis (London) Professor F. Mares (Prague) and Professor H. Vaquez (Paris) as presidents of honour. The subject for consideration is myocardial disease its physiology pathology and treatment. At the opening session on the morning of Friday June 2nd in the Institute of Physiology and Histology Professor Libensky will give his inaugural address the secretary Dr S. Mentl will present his report and a number of communications will be made by delegates the official rapporteur from London being Dr T. F. Cotton. On Sunday June 4th visits will be paid to the principal Czechoslovakian spas. All inquiries about the congress should be addressed to Dr S. Mentl Myslikova 7 Prague II.

The forty eighth German Balneological Congress was held at Baden-Baden from April 4th to 8th under the presidency of Professor Dietrich when the principal subjects for discussion were the importance of diagnosis in spa practice and the position of climatology.

We are asked to state that the course of lectures on pathological research in its relation to medicine usually held at this time of year at the Institute of Pathology and Research of St. Mary's Hospital has been postponed until the autumn. The new lecture theatre will not be completed in time for these lectures to be given in the spring and early summer.

The March issue of the *Radiological Review* is the annual radium number.

The April issue of *Jahrbuch für Kinderheilkunde* is dedicated to Professor Adalbert Czerny on the occasion of his sixtieth birthday.

In the March number of the *Quarterly Bulletin* of the Health Organization of the League of Nations is a report of the conference on economic depression and malnutrition held in Berlin last December at which representatives from the following countries were present Austria Belgium Denmark France Germany Italy the United Kingdom and the United States of America. In the same number of the *Bulletin* there is an instructive article by Dr W. R. Aykroyd on diet in relation to small incomes.

The current issue of the *Liverpool Medico-Chirurgical Journal* (vol. xli Part 1) includes a tribute to the memory of Sir Robert Jones by Dr T. P. McMurray a report of a discussion at the Liverpool Medical Institution on avoidable wastage in connexion with industrial injuries opened by Dr H. E. Moore also the text of papers read before the institution and a review on intestinal intoxication by the editor Dr Robert Coope.

Additional lists of articles chargeable with duty under Part I of the Safeguarding of Industries Act 1921 have been issued by the Board of Trade and will take effect as from May 12th 1933. These lists refer to articles under the following headings optical instruments scientific glassware scientific instruments synthetic organic and other fine chemicals. Copies of the lists may be obtained from H.M. Stationary Office (2d. net).

Dr. George F. Buchan has been elected chairman of the council of the Royal Sanitary Institute for the session 1933–4 in succession to Dr Charles Porter whose term of office has expired.

Dr James Gairdner now aged 87 has retired from the position of certifying factory surgeon for the Crieff district after holding it for sixty two years.

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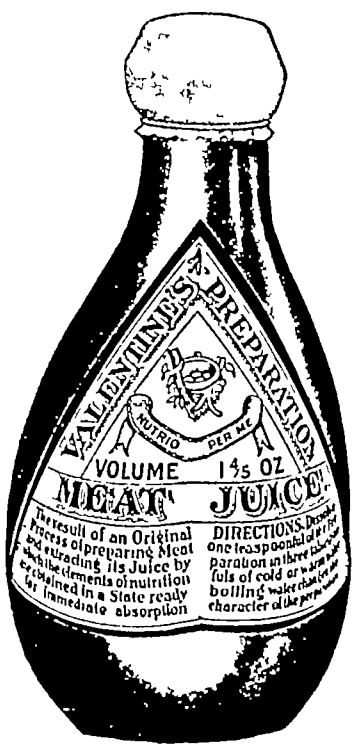

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All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal B M A House, Tavistock Square W C 1**

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All communications with reference to ADVERTISEMENTS as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager

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QUERIES AND ANSWERS

Oedema of Toes

Dr H WILSON MILLER (Barrow in Furness) asks for suggestions regarding causation and treatment of persistent bilateral slight oedema of the toes in an active and otherwise healthy male patient just over 60 years Sleep has been disturbed by a sensation of heat over the oedematous areas Heart and urine are normal, and there are no varicose veins

Income Tax

Gratuity on Retirement

'P Q R retired from the West African Medical Service and received £510 as a gratuity in July 1932 as compensation for compulsory retirement necessitated by the Colony's financial difficulties' No such grant was mentioned in the original condition of appointment and the payment was presumably in act of grace

*** In our opinion this payment is a capital sum made as compensation for premature termination of the appointment and does not appear to be a payment of salary for a term in lieu of notice If our view is correct the amount in question is not income and need not be shown on the income tax declaration

A correspondent refers to our reply to J W R in the issue of April 22nd and states that after lengthy correspondence with the authorities they agreed that his gratuity as Captain (Temporary) R A M C was *not* liable to income tax and he adds that he understands that this will apply to regular officers

Obsolescence Allowance

D S C bought a car in 1927 for £203 and sold it in 1932 for £42 10s when he bought another car for £176 He has been allowed £106 10s depreciation for the old car during the past five years less the 10 per cent deduction for private running What should he claim for obsolescence and depreciation allowances?

*** The transaction will affect the liability for 1933-4 not 1932 3 The aggregate depreciation allowance given before exclusion of the 10 per cent for private use was presumably ten months of £106 10s say £118 10s and the gross obsolescence allowance will therefore be £203 – (£118 10s + £42 10s =) £161 that is £42 or after exclusion of the one tenth £38 The depreciation allowance for 1933-4 will be 15 per cent of £176—that is £26 10s less one tenth =£2 10s net £24

LETTERS, NOTES, ETC

Abraham Flexner Lectureship

The third Abraham Flexner lecturer in the Vanderbilt University School of Medicine Nashville Tennessee was Professor F R Fraser, physician to St Bartholomew's Hospital and director of the Medical Professorial Unit who, in accordance with the terms of the lectureship spent February and March this year in residence at Nashville Besides delivering five formal lectures he came into close contact with the various departmental heads of the medical school, discussing with them such subjects as the maintenance of proper standards of scholarship from the standpoints of teaching and research He took part in conferences in the laboratories discussions in the Vanderbilt Medical Society ward rounds and special consultations and meetings of various subsidiary societies and groups The establishment of the lectureship three years ago was designed to promote a general stimulation of scientific and clinical practice, and its objectives appear to have been successfully realized For his five formal lectures Professor Fraser chose as his subject the principles of treatment In his first lecture he dealt with the history of therapeutics The second and third were devoted to causative treatments including passive immunity, active immunity, deficiency diseases and vitamins glandular hormones and chemotherapy Symptomatic treatment was considered in the fourth lecture and the final one related to the care of the patient At its end Dr W S Leathers dean of the Vanderbilt School of Medicine (to whom we are indebted for the above information) paid a high tribute to the value of the series which had he said, been lucid and stimulating as well as clinically constructive

Small pox and Vaccination

A Lichtenstein (*Hygeia* February 28th) publishes eleven tables and much other information in the text concerning small pox and vaccination in Sweden and other countries He is one of the experts officially appointed in Sweden in 1930 to inquire into the workings of the machinery for dealing with claims by conscientious objectors for exemption from vaccination This machinery has functioned in such a way that it allowed only 4 per cent of all the claims (6 out of 150) made in the period 1917 to 1922 and as great a proportion as 19 6 per cent (125 out of 316) in the period 1929 to 1931 The experts whose unanimous report was published in November 1932 explicitly dissociate themselves from the English principle of letting the opinion of the individual on the merits of vaccination play a decisive part in the granting of his claim for exemption The experts hold on the contrary that it is the community not the isolated individual who must have the last word in this matter They recommend the transfer of claims for exemption from the police to the local medical authorities and the cancelling of regulations which prevent the admission to schools and 'homes' of persons who have not been vaccinated They are also in favour of a more vigorous educational propaganda

Diphtheria in Immunized Patients

Attention has been drawn to a translator's error in the *Epitome* of March 11th para 174 The opening sentence should read 'J Tomesik reports the after histories of 100 000 children who were immunized three times with diphtheria toxoid (anatoxin) the morbidity amongst the immunized cases was 10 per cent of the expected morbidity in the control group

Muscular Exercises

In the review of Dr Morton Smart's book *The Principles of Treatment of Muscles and Joints by Graduated Muscular Contractions* published under this heading on April 15th the current used by the author to produce the muscular contractions was described as "a mixed secondary and primary interrupted current' Dr Smart wishes to point out that the current he uses is not a mixed current

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospital will be found at pages 48, 49 50 51 and 54 of our advertisement columns and advertisements as to partnerships assistantships, and locumtenencies at pages 52 and 53

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 211

ANNUAL REPORT OF COUNCIL

See "Supplement"

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Vide *British Medical Journal* March 15 1930 pp 488-9 and 495 6 and April 5 1930 pp 669 70 *The Lancet* March 15 1930 pp 573 4 and 587 *British Journal of Anaesthesia* April and July 1930 and January 1931 *Proceedings of the Royal Society of Medicine* May 1930 pp 919 928 *British Journal of Urology* June 1930 pp 129 130 and 179 *Edinburgh Medical Journal* April 1931 *St Bartholomew's Hospital Journal* February 1931 pp 93 96 etc etc

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EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

323 Age of Death in Rheumatic Heart Disease

D DAVIS and S WEISS (*Amer Heart Journ* December 1932 p 182) have found that in a series of 5 215 consecutive necropsies at the Boston City Hospital rheumatic heart disease was the direct cause of death in 164 instances Although the largest number of deaths occurred in the fourth and fifth decades 23 per cent were delayed until the sixth and seventh decades a fact which is not generally appreciated in clinical medicine Among forty seven patients dying from subacute bacterial endocarditis all but six gave evidence of underlying rheumatic heart disease Subacute bacterial endocarditis occurred at all ages from 15 to 75 and in forty of the forty seven cases before the age of 50 In a small group of necropsies on patients suffering from acute malignant endocarditis death took place always before the age of 40 The authors have made a graphic comparison between age at death in rheumatic heart disease the age distribution among 5 060 of the whole necropsy series and the age distribution of death in the urban population of Massachusetts It was found that in the hospital population the deaths predominated between the fourth and seventh decades this may be attributed to the fact that middle aged individuals are more likely to seek hospital treatment than older people who largely die in their homes Further examination of the curves revealed that in the second decade about 20 per cent of the total necropsied deaths showed evidence of rheumatic heart disease In 114 rheumatic heart deaths the first symptoms of the infection occurred before the age of 21 years in seventy six cases The authors have estimated the expected frequency of fatal rheumatic heart disease among the living population of Massachusetts This frequency must be only a small proportion of the total prevalence of rheumatic heart disease which in many instances will not be the ultimate cause of death

324 Small pox Vaccination in Sweden

C KLING (*Svenska Läkaresällsk Förhandl* December 31st 1932 p 300) gives an account of the mass vaccinations carried out early in 1932 in Malmö a town of about 130 000 inhabitants in response to the appearance of small pox introduced from Russia The first case which reached Malmö before the true nature of the disease was recognized gave rise to a second case which in its turn was responsible for the next eight cases This second case was that of an infant only 4 months old and of the eighteen persons in its immediate neighbourhood as many as seven contracted small pox although with one exception they had not actually touched the infant but had merely spent a little time in the same room with it All the 170 persons who had been in contact with these ten patients were promptly vaccinated or revaccinated The fact that none of them developed small pox is clearly traceable to this precaution In a few days 115 000 persons living in Malmö were vaccinated by a staff of sixty doctors and medical students at the rate of forty to fifty an hour per vaccinator In the hurry the abrasions were sometimes made too long and too close together and this may perhaps partly have accounted for the complications which ensued Elsewhere in Sweden about 26 000 persons were vaccinated on the same occasion (12 000 first vaccinations and 14 000 revaccinations) The same lymph was used as in Malmö In all but two cases the vaccination ran its normal course in the 12 000 children In the two exceptions the secondary infections which arose could be traced to manipulations by the parents H DAVIDE (ibid p 324) has performed numerous bacteriological tests of the various stocks of lymph used at Malmö and other stocks obtained from abroad His investigations were particularly directed to the part played in the secondary infections of vaccination by various strains of staphylococci present in the lymph or already on the patient's skin With regard to the former question he comes to the conclusion that they play no important part in the reaction following vaccination but he considers it most desirable that lymph for vaccination should be prepared under conditions assuring its sterility

325 A Clinical Sign of Pericardial Calcification

C LIAN M MARCHAL and J PALTRAT (*Bull et Mém Soc Méd des Hôp de Paris* January 23rd 1933 p 20) describe a clinical sign which they consider to be indicative of pericardial calcification If owing to the presence of this sign such a condition is suspected it can generally be verified by radiological examination The sign which they have observed and confirmed as met with in this condition is a vibrating bruit occurring in early diastole It is surprisingly loud which can be explained by the fact that it is produced immediately under the examining ear It occurs just after the second heart sound and therefore causes a triple rhythm although it is much louder than the normal heart sounds It is readily distinguishable from the *bruit de galop* by its intensity and by its vibratory quality The third heart sound which is heard sometimes in the young only can be distinguished by its character and by the fact that it is inconstant Physiological reduplication of the second sound is also differentiated by its basal position and irregular appearance Confirmation by radiological examination should be directed towards the lower border of the right ventricle which is the most usual site of calcification The density caused by the calcification is feeble the form is long regular and slightly convex the mobility is that of the heart The position of choice for examination is the left anterior oblique in complete inspiration The presence of such a clinical sign as that described enables a diagnosis hitherto reserved to radiology and necropsy to be made

Surgery

326 Diverticula of the Oesophagus

A PARCELIER and A CHEVLT (*Bordeaux Chir* January 1933 p 25) comment on the rarity of diverticula of the intrathoracic oesophagus on the gravity of the condition and on the difficulty of successful surgical treatment There are two distinct types of deep diverticula of the oesophagus diverticula due to traction and to pressure Of these the former is the more common type and is found near the bronchial bifurcation These diverticula are usually small and give rise to few symptoms unless perforation occurs when severe pulmonary complications such as mediastinitis pulmonary abscess or gangrene pyopneumothorax or suppurative pericarditis may follow Pressure diverticula are generally situated in the lower part of the thoracic oesophagus and may range in size from a pigeon's egg to that of two fists The largest known had a capacity of 500 c cm They may be found on either side of the oesophagus but are most common on the left side or the posterior aspect They may be similar in structure to the oesophagus being composed of mucosa and muscle or may contain mucous membrane and fibrous tissue only Diverticula may be latent without symptoms and remain unrevealed by radioscopy or examination until some grave complication occurs Another form may be clinically latent but be discovered by x rays while a third type causes definite symptoms of difficulty of deglutition Dysphagia in these cases continues until the diverticulum is evacuated during the course of the meal Two cases are reported and various

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methods of operative treatment discussed The authors come to the conclusion that resection of the diverticulum in simple cases gives the best result and advocate a right posterior mediastinotomy when the diverticulum is situated on the right side of the oesophagus A certain number of cases of diverticulitis occur in which a megaoesophagus is also present, and the two conditions should be treated surgically whenever possible It is suggested that the high operative mortality which exists at present will be lowered as surgical technique improves

327 Ligature of the Saphenous Vein

G DE TAKÁTS and L QUILLIN (*Arch of Surg*, January, 1933, p 72) discuss the value of ligaturing the saphenous vein in the treatment of varicosity, having had experience of this procedure in 200 cases They consider that this procedure is indicated (1) in valvular incompetence of the long saphenous vein above the lower third of the thigh, (2) in valvular incompetence of the anastomotic branches if resistant to injection treatment, and (3) in ascending thrombophlebitis of this vein The procedure is contraindicated (1) when the vein is not involved above the knee, (2) when there are multiple incompetent valves in the communicating branches which cannot all be tied, and (3) when there is evidence of insufficient deep venous return owing to an old deep phlebitis or a deep valvular insufficiency In the authors' series 95 per cent of the patients were between the ages of 20 and 60 There were ninety four female and 106 male patients, so that no feminine prevalence was indicated Most gave histories of long hours on their feet, or of hard manual labour in the upright position After the operation sixty-five patients developed a massive thrombosis distal to the ligature, and in forty of these the obliteration was complete, obviating the necessity for any subsequent injections Complications occurred in five cases—namely, a procaine hydrochloride reaction, a haematoma, post-operative haemorrhage owing to the slipping of the proximal ligature, wound infection (streptococcal, and followed by death) and another slight wound infection, with abscess, which cleared up in eleven days The authors remark that the high saphenous ligature protects the treated veins from fluctuations of abdominal and hydrostatic pressure, thus preventing canalization of the thrombi It also reduces the number of injections necessary, and places the occluding ligature close to the sapheno femoral junction There was no case of embolism in the entire series This is attributed to two factors—namely, the ambulatory management of the cases and the shortness of the proximal stump The classic description of ligaturing of the saphenous vein, which involved splinting and three months immobilization in bed, showed the alarming percentage of 0 7 fatal pulmonary embolisms The authors do not, however, assume that this risk has been entirely removed but they are satisfied that it has been markedly reduced by their procedure The complications they encountered are in their opinion all preventable The sequels of the operation, which was combined with injection treatment, included a far smaller percentage of recurrences than was obtained with any other form of treatment of varicose veins

328 Appendicitis in Measles

C L THWAITE M HIRSHBERG, and V CENCI (*Arch of Pediat* January 1933, p 28) review the literature and record six cases of appendicitis which occurred among 171 cases of measles admitted to the Hartford Isolation Hospital Connecticut in the course of ten years The ages of the patients ranged from 5 to 6 years Three were boys and three girls One was in the prodromal and five in the eruptive stage An operation was performed in each case and all the patients recovered The complication may be a mere coincidence or be due either to mechanical pressure upon the blood vessels by the hyperplastic lymphoid tissue in the appendix or to a possible relation between streptococcal pharyngitis and appendicitis

Therapeutics

329 Cod liver Oil by Rectum

CHRISTOU and RICHEZ (*Bull Soc de Thér* February 8th, 1933, p 60) state that, owing to its disagreeable taste and indigestible character, cod liver oil is often refused by both adults and children They therefore made trial of rectal administration in twenty four cases of tuberculosis of bone in adults and also in cases of rickets in children After a rectal wash out 120 c cm of cod liver oil for adults and 60 c cm for children was given by rectum The patients retained the enema the whole day and no bad effects were observed On the other hand a rapid return of appetite, increase of weight and general improvement were observed, and in the rickety children a clinical and radiographical disappearance of the lesions took place The injections were suspended for eight days every month and then resumed The writers conclude that cod-liver oil should be given by rectum whenever there is difficulty in getting the patient to take it by mouth

330 Splenic Extract in Pulmonary Tuberculosis

M MASTROENI (*Lotta Contro la Tuberculosis* December, 1932, p 1290) treated five cases of pulmonary tuberculosis in various stages of activity by hypodermic injection of splenic autolysates with the following results In one case, in addition to a considerable improvement in the local and general condition, there was an immediate and lasting effect produced in the blood picture The other cases show a slight transient rise in the percentage of haemoglobin but no increase of weight, fall of temperature, or local or general improvement As regards the leucocyte picture, leucocytosis was never observed but only a slight neutrocytosis was found There was a diminution of leucocytes and a total or partial disappearance of eosinophils, especially in the more severe forms The Arneth scheme showed a shift to the left in proportion to the severity of the disease The nuclear index was always low, and remained at about 200

331 Treatment of Spinal Symptoms in Pernicious Anaemia

E MEULENGRACHT (*Svenska Lakaresällsk Förhandl*, Supplementary Number, 1932, p 363) draws attention to the frequency with which funicular myelitis, combined degeneration of the cord, and allied conditions of the spine are found in association with pernicious anaemia This was so before the introduction in 1927 of liver treatment While this therapy has been most effective as regards the other manifestations of the disease, the spinal symptoms have proved refractory, and have become relatively more prominent if not more numerous Since 1927 the author has treated 136 patients, of whom twenty eight have died, at first, raw liver was given daily In 1928 liver extracts were to a great extent substituted, and since 1930 all new patients have been treated with dried, defatted stomach substance daily Among the twenty-eight patients who died were four with spinal symptoms Among the 108 patients still living there were as many as thirty eight who had, or had had, spinal symptoms In eighteen of these cases the spinal symptoms had begun or were already well developed when the treatment was first instituted The fact that as many as twenty developed myelopathic phenomena only after treatment had been instituted raised grave doubts as to its efficacy A comparison of the liver treated with the stomach treated patients suggested that the latter were much better off in this respect The conclusion to which the author comes is that the dosage of liver and stomach has not hitherto been uniformly high enough to prevent or cure spinal symptoms The dosage of liver should be kept at 200 to 300 grams, and that of stomach at 20 to 30 grams daily He prefers the latter, since its cost is approximately half that of liver

extract and because he has seen spinal symptoms yield dramatically to stomach medication. When spinal symptoms begin to appear the dosage should be increased and the increase maintained for a long time because the symptoms take months to disappear. With regard to the costs he notes that in Denmark a Government regulation was adopted in 1930 according to which chemists cannot charge more than 10 per cent in excess of the purchase price of stomach and liver preparations.

Ophthalmology

332 Treatment of Chronic Glaucoma

E. L. GAULT (*Med. Journ. of Australia* December 17th 1932, p. 735) denies that simple chronic glaucoma can exist without increased intraocular pressure. He believes that cupping of the optic disk and its attendant loss of vision are always produced by such a rise in pressure apart from cases of congenital coloboma or of simple atrophy of the optic nerve accompanying such diseases as tabes and disseminated sclerosis. The treatment of chronic glaucoma must comprise therefore measures directed towards providing relief of tension by opening up new channels of escape for the intraocular fluids. Gault reviews the literature briefly and concludes that the raised pressure may be reduced to the normal or subnormal by the establishment of a new channel of drainage between the anterior chamber and the subconjunctival tissues although it is still doubtful whether the progressive loss of vision can invariably be arrested thus. In the majority of untreated cases blindness supervenes within five years of the onset of glaucoma and any post-operative prolongation of vision beyond this time limit can be attributed to the operation. The author does not believe that a rapid loss of central vision is ever likely to be precipitated by operation and would not hesitate to operate merely because the field of vision had contracted to near the fixation point. He has had no experience of late infection which has sometimes been regarded as a danger especially besetting Elliot's operation. He records a series of cases treated by this procedure by Lagrange's method and in other ways. He insists that the evidence is conclusive that vision may be preserved without appreciable change for the worse in a large number of cases over periods extending to as long as nineteen years. In many instances the tension is kept within the normal limits and the field of vision remains unchanged. To wait until eserine or pilocarpine has proved ineffectual is, he adds, most inadvisable. The ultimate issue of blindness is inevitable and an operation should be performed as soon as the diagnosis has been established. He always advises this in all cases of chronic glaucoma unless complications such as advanced old age or serious illness are present and places the responsibility for refusal on the patient.

333 Conjunctival Pigmentation in Vitamin A Deficiency

A. PILLAT (*Arch. of Ophthalmol.* January 1933, p. 25) states that in many Chinese patients suffering from the various stages of vitamin A deficiency (night blindness, pre-xerosis corneae, xerosis epithelialis and adult keratomalacia) a characteristic pigmentation of the cornea appears. Its intensity varies greatly in different cases and at the different zones of the conjunctiva. It is most marked in the lower fornix—first in the circular fold then in the plica, the conjunctiva of the lower half of the bulbus, the lower lid, and the upper half of the bulbus—and finally in the upper fornix and the upper lid. On histological examination the conjunctival fissure shows a varying amount of pigment usually corresponding to the stage of vitamin A deficiency. In each case the pigment production depends more on the duration of vitamin A deficiency than on the stage of the disease. All the pigment is produced in the conjunctival epithelium by the conjunctival cells, the dendritic cells or melanoblasts in the basal cell layer being the first to show pigment, though the ordinary epithelium is later affected similarly. This pigmentation disappears as the result of the administration of cod-liver oil but more slowly than the other signs of vitamin A deficiency. The pigmented cells are carried towards the surface of the epithelium and are gradually exfoliated. There seems to be no evidence that the pigment is dissolved and carried away to the subepithelial tissues. The long duration of pigmentation in the conjunctiva after the acute condition has ended renders it possible sometimes to determine the aetiology of a leukoma adhaerens or of a staphyloma corneae as a sequel of vitamin A deficiency. The author adds that the main purpose of pigmentation in deficiency disease is to protect the epithelial cells of the conjunctiva which are greatly altered and weakened as regards their metabolism from being injured by sun and daylight. The conjunctival epithelium is thus changed to a pigment epithelial layer giving some protection also to the retina the normal function of which is already affected (night blindness).

334 Superficial Punctate Keratitis

J. H. DOGGART (*Brit. Journ. Ophthalmol.* February 1933, p. 65) claims that, to avoid confusion the term superficial punctate keratitis should not have the narrow definition laid down by Fuchs but should embrace a larger number of types. He reviews the literature and points out how the series of cases of each observer differs in pathology, bacteriology and aetiology. There is nevertheless a basic resemblance and he divides the condition for descriptive purposes into (*a*) non-recurrent superficial keratitis with lesions in the anterior layers of the substantia propria, (*b*) multiple epithelial erosions with or without involvement of the substantia propria and (*c*) miscellaneous conditions with multiple superficial lesions. Examples of each type are discussed and in the comments upon them the importance of a slit lamp examination is apparent both in diagnosis and in prognosis.

Obstetrics and Gynaecology

335 Operative Treatment of Uterine Displacements

In discussing uterine retroversion and retroflexion R. POLLART (*La Gynécol.* December 1932, p. 641) describes the uterine statics as being a guide to operative procedures. The uterus is maintained in a normal position by both suspensory and supporting structures, the former are the large and round ligaments, the latter the whole pelvic floor or diaphragm. The ideal position in the erect posture is a slight anteflexion of a uterus in anteversion. The pelvis is closed at its lower part by two planes of tissues—each with an osseous attachment at its circumference—which form a fibro-muscular diaphragm. The lower plane is formed by the levator ani muscles and their anterior and posterior prolongations. In normal conditions the zone of least resistance (that containing the rectal, vaginal and urethral openings) is well supported by its inclination outside the direct line of intra-abdominal pressure by the direction of the vagina which is closed rather than opened by this pressure by the fibrous plane above it and by the body of the uterus. The upper diaphragm situated above the vaginal plane includes a vesical and uterine segment each containing an organ with its fibro-connective tissue sheath. In the latter are found the large ligaments laterally, the utero-sacral ligaments behind, the utero-pubic fascia in front with connective tissue fibres completing the plane diagonally. These supporting planes directly resist the abdominal pressure but their efficiency intimately depends on the position of the uterus. If displaced backwards the uterus no longer surmounts the vagina, hence the abdominal pressure falls on the bladder, uterine body and Douglas's pouch. Uterine retroversion and prolapse is due rather to weakness of the utero-sacral ligaments than to lengthening of the round. If the former have lost their tonus they should be shortened if they still

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possess some elasticity traction on the round ligaments suffices Pollart briefly describes his technique for both these operations, by which he claims to restore more efficiently the uterus to its normal position This method of uterine fixation is especially indicated in cases before the menopause, at least one of the adnexa being conserved In the great majority of his cases thus treated no ill after-effects or complications have occurred, good health has been maintained, pregnancy has evolved normally, and after labour the uterus has retained its normal position

336 Avertin Analgesia in Midwifery

G G COCHRANE (*Amer Journ Obstet and Gynecol*, December 1932, p 849) describes satisfactory results in 150 deliveries, in 114 of which the forceps was used, under avertin analgesia As a rule, a supplemental inhalation of nitrous oxide and oxygen was given at the time of actual delivery and for perineal repair A combination of morphine gr 1/8 and scopolamine gr 1/200 was injected at two hourly intervals from the commencement of dilatation to the achievement of one-inch dilatation avertin was now given through a catheter passed high into the rectum soon after a uterine contraction Dosage seemed important After doses of 80 mg per kilogram of body weight the pains were noted to become weaker and less frequent, after doses of 50 mg analgesia and amnesia were insufficient, a dose of 60 mg per kilogram gave excellent results manifested in fifteen minutes After three hours, if necessary, a second dose was given without hesitation, it was required in thirty-five cases of this series Only twenty-five of the patients reported a clear memory of their confinement Since avertin appears to be detoxicated in the liver, it was not used in patients showing evidence of pregnancy toxaemia

337 Carcinoma of the Cervix after Subtotal Hysterectomy

B S STEFANIK (*Bratislavské Lekarske Listy* January 1933 p 31) records a case in which carcinoma developed in the cervix years after a subtotal hysterectomy This gave rise to the question whether total hysterectomy would not be preferable in every case The author has compiled the statistics of post-operative mortality in total and subtotal hysterectomy The post-operative mortality after total abdominal hysterectomy was 6 per cent, and after subtotal hysterectomy only 3 1 per cent The possibility of development of carcinoma in the cervical stump is he considers, very remote, and the danger does not justify the more serious operation of total hysterectomy in cases where a subtotal would be sufficient The author advises examinations at regular intervals of all cases where subtotal hysterectomy has been performed

Pathology

338 Biopsy in Cancer Diagnosis

Since the finding of a serological or a blood test for early cancer still appears to be remote, the advantages and disadvantages of biopsy are discussed by B T SIMPSON (*Canadian Med Assoc Journ* January, 1933, p 62) An absolutely definite clinical diagnosis cannot be made in more than 70 per cent of cases, and the macroscopical appearance by itself can be expected to afford diagnosis in a little more than 80 per cent As the result of the present intensive educational propaganda concerning cancer persons are now asking for medical advice in respect of lesions which are clinically impossible of a definite diagnosis and, therefore, the percentage of correct clinical interpretations is sure to be decreased as time goes on Microscopical examination is by far the most reliable diagnostic procedure at present The practical application of biopsy varies under different circumstances—namely (1) diagnostic biopsy in general practice, and only when a diagnosis cannot be made by other methods (2) therapeutic biopsy when it is undertaken for the purpose of determining the type and amount of treatment, (3) routine biopsy, as is practised in research institutions, where a biopsy is performed on nearly every patient not only for the purposes of diagnosis and determination of the type of treatment, but to provide a permanent record—especially after radiation, where otherwise no histological details would be available The dangers that have been ascribed to biopsy are haemorrhage and infection, these are minor, and occur but rarely if proper precautions are taken Dissemination and acceleration of the growth of a malignant lesion have to be considered, but laboratory experiments and clinical observations go to prove that cutting a malignant tumour does not stimulate metastasis Since, however there are theoretical grounds for considering the procedure not entirely free from danger, it is advisable that the interval between the time of taking the tissue and the performing of a necessary operation should be as short as possible Notwithstanding the fact that the malignant nature of a lesion is known, biopsy is often advisable for the purpose of ascertaining whether or not the neoplasm is radio-sensitive As regards bone lesions the procedure is still open to controversy, and the present author does not employ it for bone lesions or melanomas He is convinced that if every patient could have the advantage of expert biopsy, the mortality from cancer would be greatly reduced An expert pathologist must be prepared to give an opinion upon the grade of malignancy and the degree of radio sensitivity

339 Epidemiological Features of Pneumococcal Infections

A S M MACGREGOR (*Public Health* January, 1933, p 117) records an investigation into the incidence of various types of pneumococci in lobar pneumonia during the past three years in 1,077 hospital patients in Glasgow Pneumococci of Type I were present in 38 per cent, of Type II in 36 per cent, of Type III in 4 per cent, and of Group IV in 22 per cent The Type II incidence is rather high, but otherwise the figures resemble those in the country generally, as do the case mortalities—namely, Type I, 10 7 per cent of cases so infected, Type II, 19 6 per cent, Type III, 42 9 per cent, and Group IV, 8 4 per cent, the total mortality rate being 14 7 per cent The case mortality was found to rise rapidly with age Type II was shown to be almost twice as fatal as Type I at all ages Group IV infections, the least serious, occurred more frequently in the young and the old, while Type III, more common in later years, proved to be the most serious of all pneumococcal strains Alterations in type incidence were not noted to the same extent as has been reported elsewhere, and the question how far the case mortality fluctuations depend on type incidence at different times in the year remains to be worked out The author recalls the fact that the possibility of transmutation of types seems to have been established, and urges caution, therefore, in attributing to Types I and II any paramount importance in the spread of pneumonia It was confirmed in this investigation that pneumococci might persist in the nasopharynx of convalescent patients for long periods, and are readily found in nurses and contact patients in the wards, but there is little evidence of direct infection so resulting Macgregor concludes, therefore, that there may exist a wide susceptibility to the carrier state and a low susceptibility to the disease itself Lobar pneumonia appears to show a periodic peak as regards seasonal incidence in the months February to April, remaining at a lower level during the rest of the year Bronchopneumonia tends to pursue an erratic course as regards incidence, and to exhibit wide and irregular fluctuations The author remarks that this attempt to dissociate the incidence of the two forms of pneumonia is based on insufficient data, but permits the suggestion that lobar pneumonia has distinct specific epidemiological features He considers it probable that some unknown epidemiological factor, other than weather conditions alone comes into play in determining the incidence of bronchopneumonia from year to year

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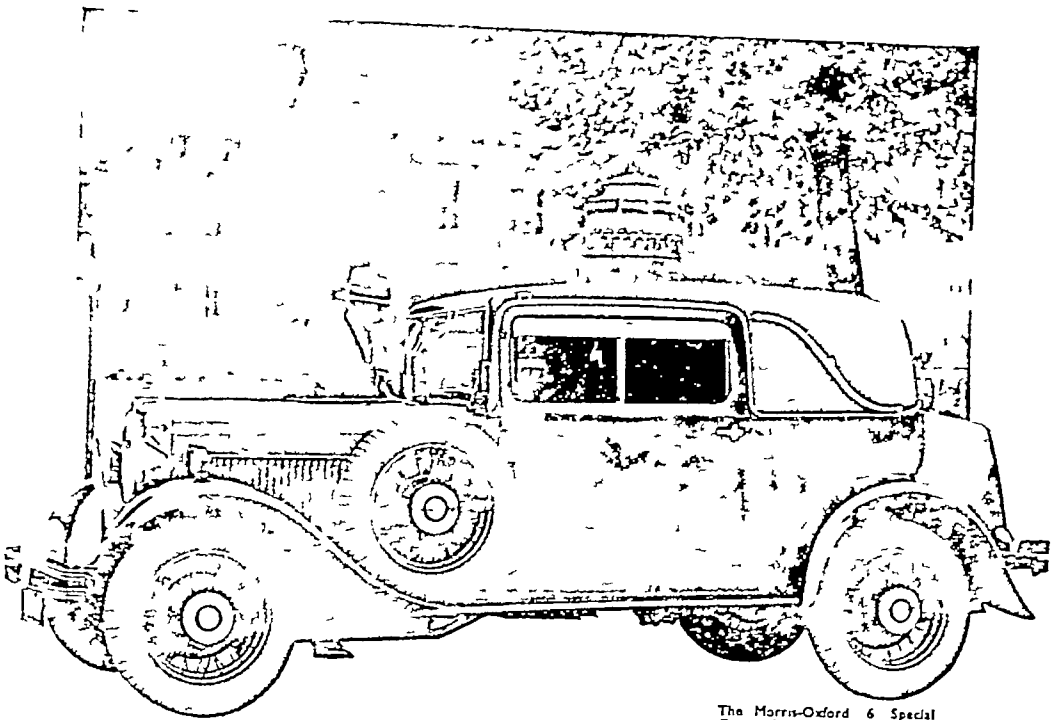

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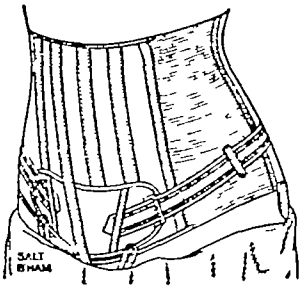

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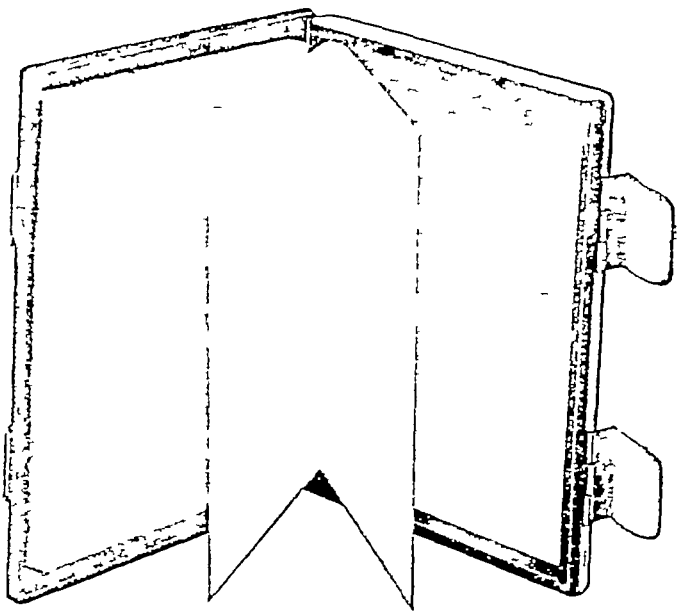

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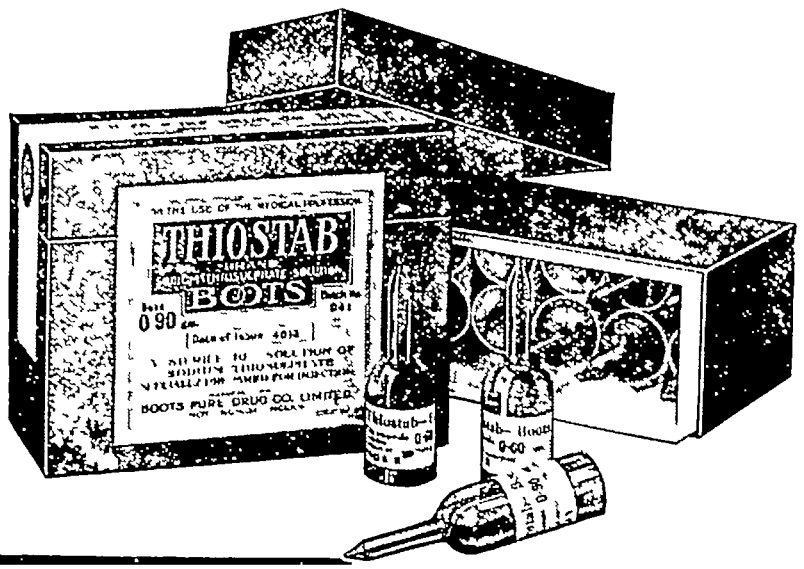

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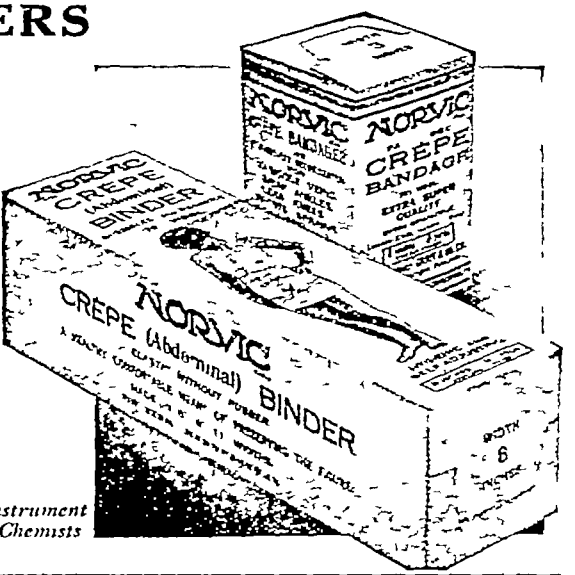

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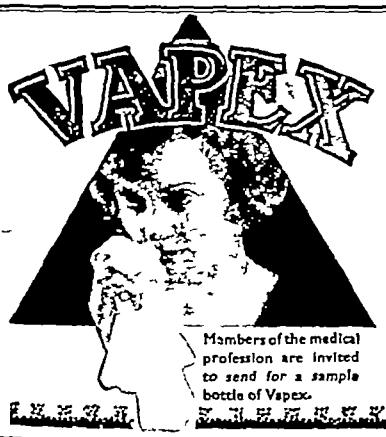

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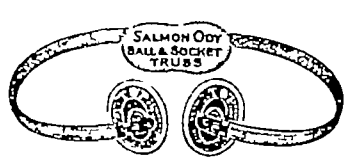

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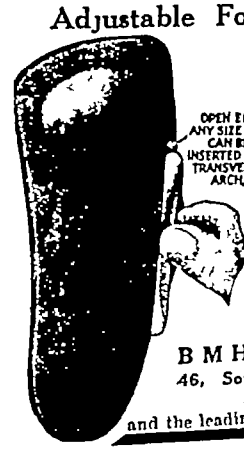

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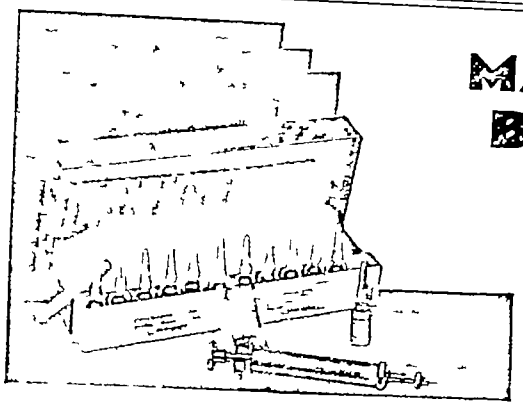

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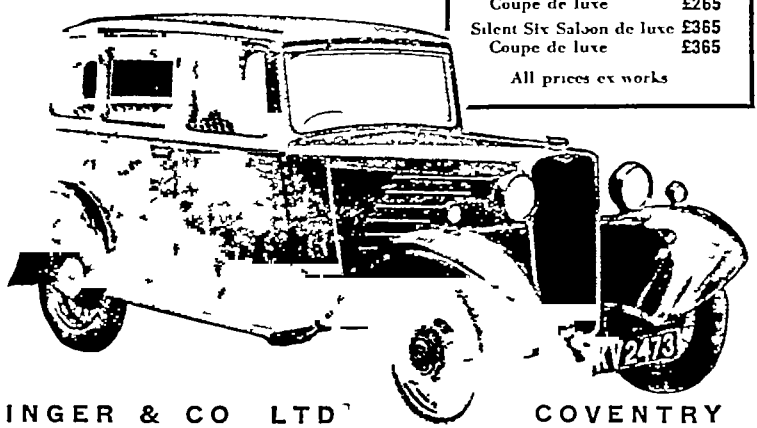

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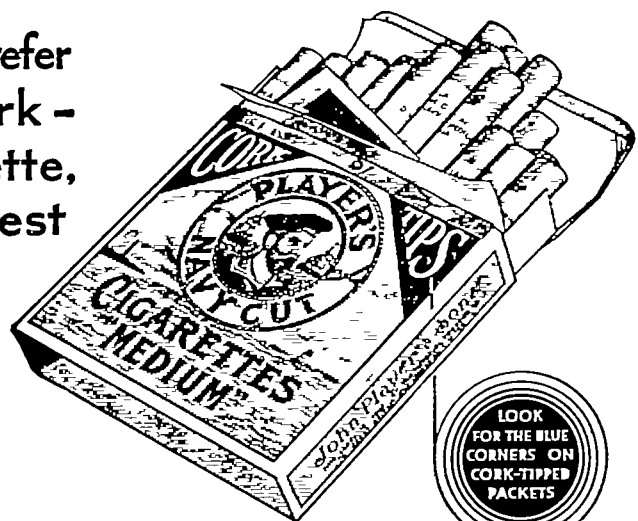

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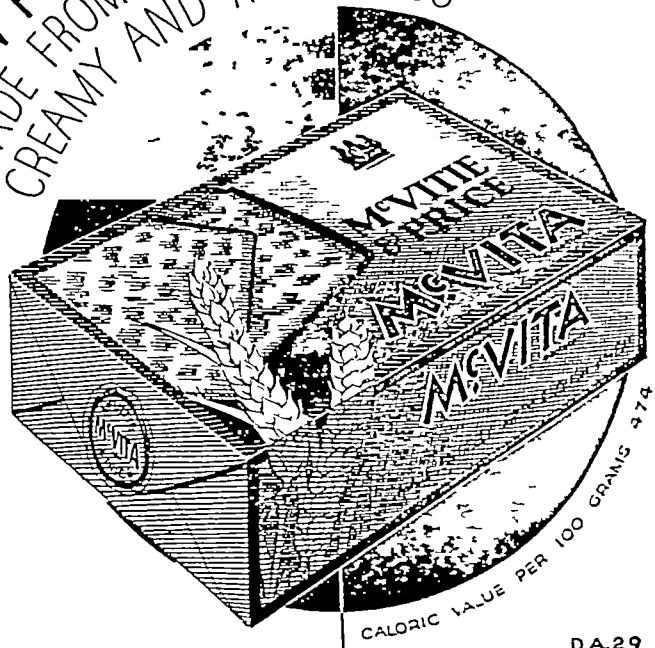

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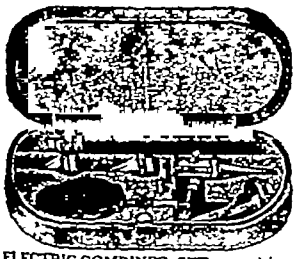

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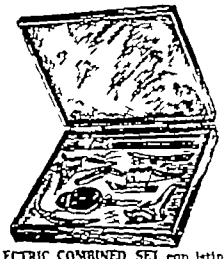

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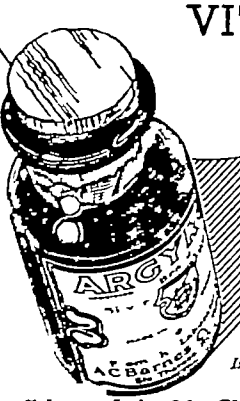

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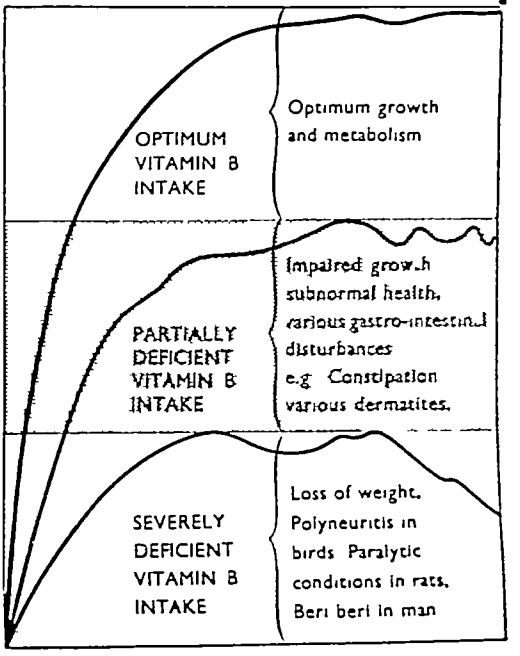

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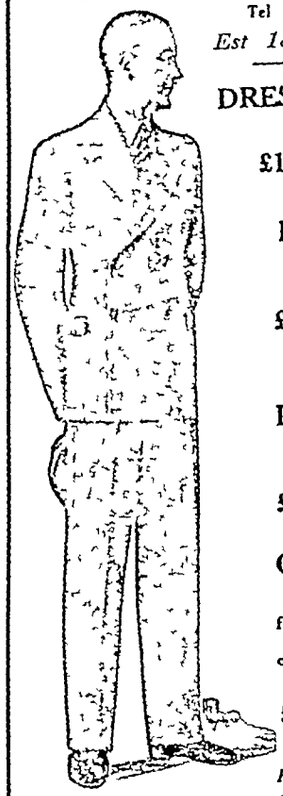

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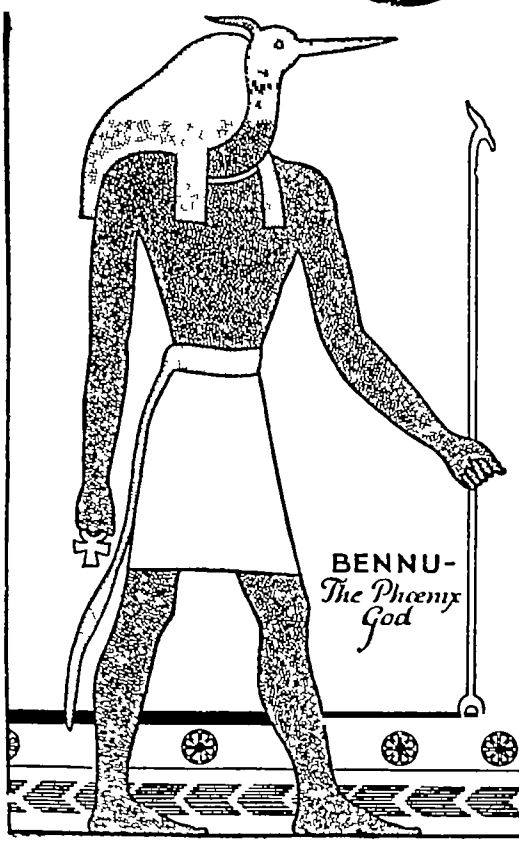

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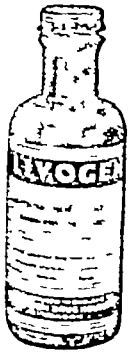

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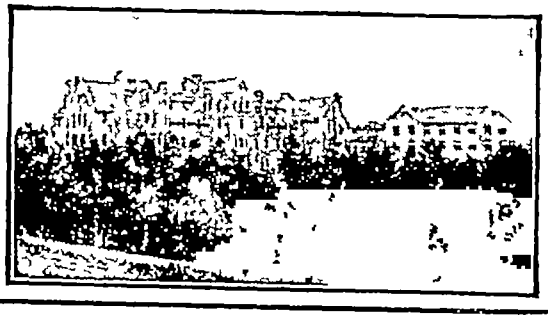

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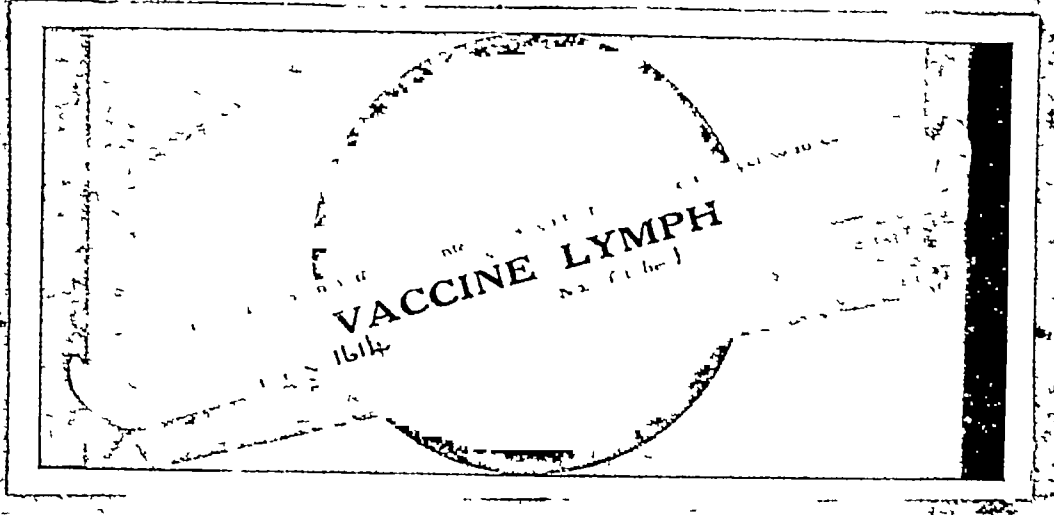

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A course of Demonstrations in Neurology for candidates for the M.R.C.P. examinations will be held from May 9th to June 29th, on Tuesdays and Thursdays at 6 p.m.

Fee for 16 demonstrations £6 6s. Special Terms can be arranged for those unable to take the whole course of Lectures.

Applications should be made to the Secretary. J. G. GREENFIELD, Dean of the Medical School.

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F.R.C.S. (Eng.),	*Primary* 1919-32	146
	Final	155
M.R.C.P. (Lond.),	1919-32	215
D.P.H.	(*Various*) 1906-32 (Completed Exam.)	316
F.R.C.S. (Edin.),	1918-32	53
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UNIVERSITY COLLEGE HOSPITAL MEDICAL SCHOOL

RADCLIFFE CROCKER TRAVELLING SCHOLARSHIP IN DERMATOLOGY

The Committee of University College Hospital invite applications for the Radcliffe Crocker Travelling Scholarship in Dermatology.

The Scholarship is of the approximate value of £280 tenable for a period of twelve months to be spent at some place of study named by the School Committee outside of the United Kingdom.

Candidates must be British subjects students of a London Medical School and graduates of a University in the United Kingdom.

Applications must be submitted on or before June 30th.

For further particulars apply to the Dean, University College Hospital Medical School, University Street, W.C.1.

April 27th, 1933.

THE LONDON SCHOOL OF DERMATOLOGY

St. John's Hospital for Diseases of the Skin
49 Leicester Square, W.C.2.

Conducted by the Honorary Staff of the Hospital, together with the Physicians in charge of the Dermatological Departments of the London Teaching Hospitals. Lectures and Demonstrations every Tuesday and Thursday at 5 p.m., from October to March and four times weekly during May. General Practitioners desiring to attend any particular lecture or lectures can do so without paying a fee. Clinics daily at 2 p.m. and 6 p.m. Saturdays 2 p.m. only. Pathological Laboratory for Instruction or Research Work.

For further particulars fees etc. apply to J. E. M. WIGLEY, M.B., Dean.

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For further particulars apply The Secretary.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE
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For particulars apply to the Hon. Dean, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool.

F.R.C.S. (Edin.)

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ROYAL COLLEGE OF SURGEONS OF ENGLAND

ELECTION OF PROFESSORS AND LECTURERS

Notice is hereby given that the Council is prepared to [illegible] election to the office of [illegible] ARRIS AND GALE LECTURER, and ARNOTT DEMONSTRATOR for the ensuing year.

Candidates for the Hunterian Professorship must be Fellows or Members of the College.

Under the Erasmus Wilson Trust and the Arnott Bequest six demonstrations in each case will be allotted to two or more demonstrators.

Application in writing must be made to the Secretary on or before Monday, May 29th, at 1. Candidates are requested to furnish a synopsis of the one or more Lectures or Demonstrations which they propose to give.

S. FORREST COWELL,
May 6th, 1933. Secretary.

CHELTENHAM COLLEGE

TWELVE SCHOLARSHIPS AND EXHIBITIONS (not open to Members of College or Junior School). These include Five of £80 (increased to £100 for special merit). James of Hereford Scholarship of £35 for Boys born or brought up in Herefordshire. Also R.A.M.C. Scholarship of £50 (preference to sons of Fallen Officers). Awards made for all round excellence or special proficiency in any main subject including music. Preliminary Examination (at Candidates' own Schools) on Monday and Tuesday, May 22nd and 23rd, 1933. Final Examination (at Cheltenham) on Tuesday and Wednesday, May 30th and 31st, 1933. Apply Bursar, Cheltenham College.

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THE UNIVERSITY OF SHEFFIELD

FACULTY OF MEDICINE

The Council of the University and the Board of Management of the Royal Infirmary Sheffield acting conjointly are about to make an appointment to the post of ASSISTANT PATHOLOGIST to the Infirmary and DEMONSTRATOR OF PATHOLOGY in the University The salary offered is £500 per annum Applications accompanied by the names of three referees should be sent on or before May 17th to the undersigned from whom further details may be obtained

W M GIBBONS Registrar

THE UNIVERSITY OF SHEFFIELD

DEPARTMENT OF BACTERIOLOGY

The Council are about to appoint a JUNIOR ASSISTANT BACTERIOLOGIST and DEMONSTRATOR Salary £300 during the first year and £330 for the second year

Application must be received by the undersigned from whom further particulars may be obtained if not later than May 26th

W M GIBBONS Registrar

UNIVERSITY OF LONDON, UNIVERSITY COLLEGE

SHARPEY PHYSIOLOGICAL SCHOLARSHIP

The College Committee will shortly proceed to elect a Sharpey Physiological Scholar

The Sharpey Scholar will be a member of the Academic Staff of the College and will work in the Department of Physiology and Biochemistry under the direction of Professor C A LOVATT EVANS

The Sharpey Scholar will be expected to carry out original investigations

The emoluments of the Sharpey Scholarship will be £200 a year

The appointment is tenable for one year, but is renewable

Candidates should send in their applications together with a full statement of their academic training and list of publications if any so as to reach the undersigned not later than May 27th

C O G DOUIE
University College Secretary
London (Gower Street, W C 1)

UNIVERSITY OF BIRMINGHAM

FACULTY OF MEDICINE.

LECTURER IN PATHOLOGY

Applications are invited for the post of Lecturer in Pathology to Dental Students and Pathologist to the Queen's Hospital Birmingham at a stipend of £400 per annum

Applications with three testimonials should be sent on or before May 15th to the undersigned from whom further particulars may be obtained

The University, C G BURTON,
Birmingham Secretary
April 1933

GOVERNMENT OF SOUTHERN RHODESIA

APPOINTMENT OF MEDICAL SUPERINTENDENT MENTAL HOSPITAL, BULAWAYO

Applications are invited from male Medical Practitioners, for the post of Medical Superintendent of the Mental Hospital, Bulawayo Southern Rhodesia Applicants must have had suitable experience in mental disease and will be expected to commence duty in October, 1933 or shortly after Candidates should be in possession of the Diploma in Psychological Medicine

The successful candidate will also be required to undertake certain routine medical duties in Bulawayo in connection with the Government Medical Service

Salary £600 per annum rising by £40 per annum to £1 000 per annum (subject to temporary deductions in terms of the Public Services Economy Act 1931") plus a pensionable allowance of £200 per annum for unfurnished quarters light and water, for which purpose a house is provided in the vicinity of the hospital Consultant practice but not private practice will be allowed The post is pensionable in terms of the Public Services Act 1931

Application forms and further information regarding the terms of appointment and conditions of service can be obtained from the Official Secretary, Office of the High Commissioner for Southern Rhodesia, Crown House, Aldwych London W C 2 to whom applications should be sent not later than May 31st

COUNTY BOROUGH OF DEWSBURY

ASSISTANT SCHOOL MEDICAL OFFICER AND ASSISTANT MEDICAL OFFICER OF HEALTH

Applications are invited from duly qualified and registered Medical Practitioners (men or women) for the post of Assistant School Medical Officer and Assistant Medical Officer of Health

Applicants should have had at least three years experience since qualification Experience in eye work and refractions is essential The possession of the D P H, and previous experience in School Medical Inspection and the work of a School Clinic, and in Tuberculosis and Child Welfare will be considered important additional qualifications

The salary scale will be £500 per annum rising by annual increments of £25 to £700 per annum subject to a temporary percentage reduction Particulars of the duties and terms and conditions of appointment together with application forms may be obtained from Dr J GREENWOOD WILSON Medical Officer of Health Municipal Buildings Halifax Road Dewsbury to whom all applications accompanied by copies of not more than three recent testimonials should be delivered not later than Saturday May 13th

Canvassing in any form will be a disqualification

Town Hall HOLLAND BOOTH
Dewsbury Town Clerk
April, 1933

THE NATIONAL BIRTH CONTROL ASSOCIATION.

(Incorporating the Birth Control Investigation Committee)

A MEDICAL CONFERENCE ON CONTRACEPTIVES

WILL BE HELD IN LONDON

on July 8th, 1933

Further particulars will appear in due course.

FELLOWSHIPS IN PSYCHIATRY

THE CHILD GUIDANCE COUNCIL offers two Fellowships in Psychiatry tenable at the London Child Guidance Clinic, 1 Canonbury Place N.1 on the basis of six months full time or twelve months half time training Candidates should be registered Medical Practitioners of either sex and should possess the Diploma in Psychological Medicine or be able to produce evidence of psychiatric experience The financial value of the Fellowships will not be less than £150 the actual financial value depending upon the qualifications and experience of the applicant. Further particulars and forms of application may be obtained from the Acting Secretary Child Guidance Council 7 Buckingham Palace Gardens, S W 1 Applications must reach the Secretary not later than May 20th

ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION

REMINDER

Examination for GASKELL GOLD MEDAL AND PRIZE
FICATE IN
be held at
Hill London on Friday and Saturday, MAY 26th and 27th, 1933 Latest date for entry Saturday May 20th

Application for entry to be made to the Registrar R M P A, St Andrews Hospital Northampton

INDIAN RESEARCH FUND ASSOCIATION

Wanted for service with the Malaria Survey of India a competent RESEARCH WORKER medical qualifications preferred capable of undertaking independent inquiries on Malaria in the field and in the laboratory Special consideration will be given to candidates with previous experience of research work more especially in relation to Malaria. Appointment will be made on the basis of three-years contract subject to one year's probation Salary Rs 1 500 per mensem rising by Rs 100 annual increments to Rs 1 700 in last year of contract (equivalent at present rate of exchange to about £1 340 to £1 520 per annum but is subject to the 5 per cent emergency cut so long as it lasts) with usual departmental travelling allowance and halting allowance salary to start from date of landing in India Free passage out and home first-class B P & O or equivalent at termination of contract or period of employment return passage also paid if first year's probation not satisfactory Usual service conditions regarding leave i.e. one months leave with full pay after eleven months service or equivalent proportion cumulative with usual casual leave not exceeding 15 days in the year Suitable man would have every prospect of renewing agreement or obtaining suitable equivalent employment Apply stating qualifications and experience with copies of relevant testimonials to the Secretary Indian Research Fund Association Similar India, from whom any further information as to qualifications most desired or on other point can be obtained The applications should reach the Secretary Indian Research Fund Association by July 31st at the latest

BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN

HOUSE SURGEON (man or woman) wanted for six months from July 1st Salary to be at the rate of £75 per annum Applications with full particulars and copies of testimonials to be sent not later than May 20th to HUGH C. ASTON, 45, Newhall Street, Birmingham

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COUNTY BOROUGH OF DERBY

RESIDENT ASSISTANT MEDICAL OFFICER. (Female)

Applications are invited from qualified women (age not to exceed 40 years) for the post of Resident Assistant Medical Officer. Salary £350 per annum rising by annual increments of £25 to £450 *per annum* (subject to temporary economy deduction as follows up to £100 per annum—nil on next £200—1¼ per cent. on next £200—2½ per cent. etc.) plus emoluments valued at £150 per annum.

The successful candidate will be required to reside at the Borough Isolation Hospital and Sanatorium.

Forms of application can be obtained from the undersigned and applications together with three copies of recent testimonials should be forwarded to the undersigned not later than Tuesday May 9th.

Public Health Dept, 1 Derwent Street, Derby. CORDON LITTLE, Medical Officer of Health.

WARWICKSHIRE AND COVENTRY JOINT COMMITTEE FOR TUBERCULOSIS

KING EDWARD VII MEMORIAL SANATORIUM, HERTFORD HILL, near WARWICK

Applications are invited for the post of JUNIOR ASSISTANT MEDICAL OFFICER (male) at the Memorial Sanatorium near Warwick of 195 beds. The successful candidate will be appointed for six months and will have special opportunity of gaining experience in treatment by Artificial Pneumothorax by ultra violet Light and in X ray work.

The salary will be at the rate of £200 per *annum* with board lodging and laundry and promotion is probable at the end of six months.

Applications with recent testimonials should be forwarded direct to the Medical Superintendent at the Sanatorium by not later than Monday May 15th.

Shire Hall, Warwick. April 1933. L. EDGAR STEPHENS, Clerk of the Joint Committee.

EARSDON URBAN DISTRICT COUNCIL.

APPOINTMENT OF A TEMORARY PART TIME MEDICAL OFFICER OF HEALTH

The above Council invite applications from duly qualified persons for the temporary appointment of Medical Officer of Health of their district at a salary of £100 per annum.

The appointment which is part time is subject to the provisions of the Sanitary Officers Order 1926 and to the approval of the Minister of Health.

Applications stating age experience qualifications together with copies of recent testimonials should be addressed so as to reach me not later than first post on Tuesday May 16th.

Dated this 28th day of April 1933.

J. W. CUTHBERTSON, Clerk to the Council. 40 Bridge Street, Blyth, Northumberland.

THE STAFFORDSHIRE GENERAL INFIRMARY, STAFFORD

HOUSE SURGEON required. Salary £200 per annum with board residence. The appointment must be held for at least six months. The selected candidate will be required to take up duties as early as possible. The Hospital has 100 beds and there are two Residents.

Applications stating age accompanied by copies of three recent testimonials as to qualifications and experience should be sent at once to the undersigned.

Stafford, April 24th 1933. A. E. COLLINS, Secretary.

HULL ROYAL INFIRMARY

The Appointing Committee invite applications for the office of HONORARY PHYSICIAN to the Institution.

Applicants must have obtained a degree in Medicine at one of the Universities of the United Kingdom be a Fellow or Member of the Royal College of Physicians of London, Edinburgh or Ireland and be duly registered under the Medical Acts.

Honorary Physicians are appointed for a period not exceeding twenty years or until attaining 60 years of age (whichever event occurs first) and in accordance with the terms of the Royal Charter.

Applicants are prohibited from personally canvassing but may send copies of their applications and testimonials to the members of the Appointing Committee.

Applications should be addressed to the Chairman of the Managing Committee and should reach him by May 15th.

May 1st 1933. R. J. CARLESS, House Governor.

MILLER GENERAL HOSPITAL, Greenwich Road, S.E.10

Applications are invited for the following *posts*

HOUSE SURGEON Salary £100 per annum.

HOUSE PHYSICIAN Salary £100 per annum.

CASUALTY OFFICER Salary £150 per annum.

Board residence and laundry are provided.

OUT PATIENT OFFICER who is required to see Medical and Surgical cases. Attendance daily (except Sunday) from 9 to 1. Tuesdays 9 to 5. Salary £150 per annum and lunch.

Candidates (male) must be unmarried. The appointments are for six months from July 1st next. There are six Resident Officers.

Applications stating age nationality qualifications and experience *accompanied by copies* of not more than three recent testimonials, to be sent to the Acting Secretary not later than May 24th.

May 2nd 1933.

NEW SUSSEX HOSPITAL FOR WOMEN AND CHILDREN, Windlesham Rd., BRIGHTON

Applications are invited from qualified Medical Women for the post of HOUSE PHYSICIAN (duties to commence June 14th) and HOUSE SURGEON (duties to commence June 14th). Salary at the rate of £100 per annum.

Applications in writing accompanied by recent testimonials should be sent on or before Friday May *19th, to*—

Board Room, April 27th 1933. PERCY F. SPOONER, Secretary.

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN, St. Quintin Avenue, North Kensington, W.10 (58 Beds)

The Board of Management invite applications for the post of HONORARY DERMATOLOGIST. Candidates must hold the M.R.C.P. Application accompanied by copies of three testimonials should be addressed to the undersigned at the Hospital and should reach him not later than Monday May 22nd.

H. J. ELEY, Secretary.

NEWCASTLE-UPON-TYNE EYE HOSPITAL.

Wanted for July 1st a RESIDENT HOUSE SURGEON (female). Salary £75 per annum together with board lodgings and laundry. Applications stating experience if any and age with copies of recent testimonials to be sent to CHARLES E. V. UPTON, Secretary.

WEST NORFOLK AND KING'S LYNN GENERAL HOSPITAL.

HOUSE PHYSICIAN

Applications (male or female) are invited for the above post which will become vacant May 19th. Salary £125 per annum. To have charge of Medical and Ophthalmic beds also to act as Casualty Officer and Resident Anaesthetist. This post which is for six months in the first instance offers valuable experience in both In Patient and Out Patient work.

Applications, stating age, experience etc. *should be sent* to the undermentioned as early as possible.

JOSEPH E. SEARJEANT, F.C.C.S., House Governor & Secretary.

PRESTON AND COUNTY OF LANCASTER QUEEN VICTORIA ROYAL INFIRMARY

The Board of Management invite applications from unmarried gentlemen doubly qualified and registered for the post of HOUSE PHYSICIAN. Salary at the rate of £150 per annum with board residence and laundering.

The Hospital is recognised for the Post-Graduate Examinations of the Royal College of Physicians and Surgeons (England).

Applications stating age qualification and experience together with copies of recent testimonials should be addressed to the undersigned on or before May 11th.

JOHN GIBSON, Supt. and Secretary.

LIVERPOOL HAHNEMANN HOSPITAL, HOPE STREET (52 Beds)

Applications are invited for the post of *RESIDENT MEDICAL OFFICER* to the above Institution which falls vacant on May 16th. Appointment is for six month renewable. Salary at the rate of £100 per annum. Duties include casualties, occasional anaesthetics and assisting at operations general gynaecological aural and ophthalmic.

Apply stating age sex nationality and previous experience, and enclosing copies of recent testimonials to the Registrar before May 16th.

LIVERPOOL MATERNITY HOSPITAL, OXFORD STREET

HOUSE SURGEON required for the six months commencing July 1st next. Salary at the rate of £90 *per annum* with board residence and laundry. Previous experience as House Surgeon essential. Membership of a Medical Defence Society is a condition of appointment.

Applications stating age qualifications and experience together with copies of testimonials to be sent to the Hon. Secretary of the Medical Board on or before May 26th.

ROYAL WEST SUSSEX HOSPITAL, CHICHESTER

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON vacant May 1st. Salary £125 per annum with board residence and laundry.

Applications stating age with three recent testimonials should be sent to the undersigned as soon as possible.

HERBERT S. WILMORE, Secretary.

MANCHESTER ROYAL EYE HOSPITAL.

Vacancy occurs at once for JUNIOR HOUSE SURGEON. Salary £120 per annum with residence board etc. Applications (with copies of testimonial) endorsed House Surgeon to be addressed to the Chairman of the Board of *Management*.

H. R. NORTH, Secretary.

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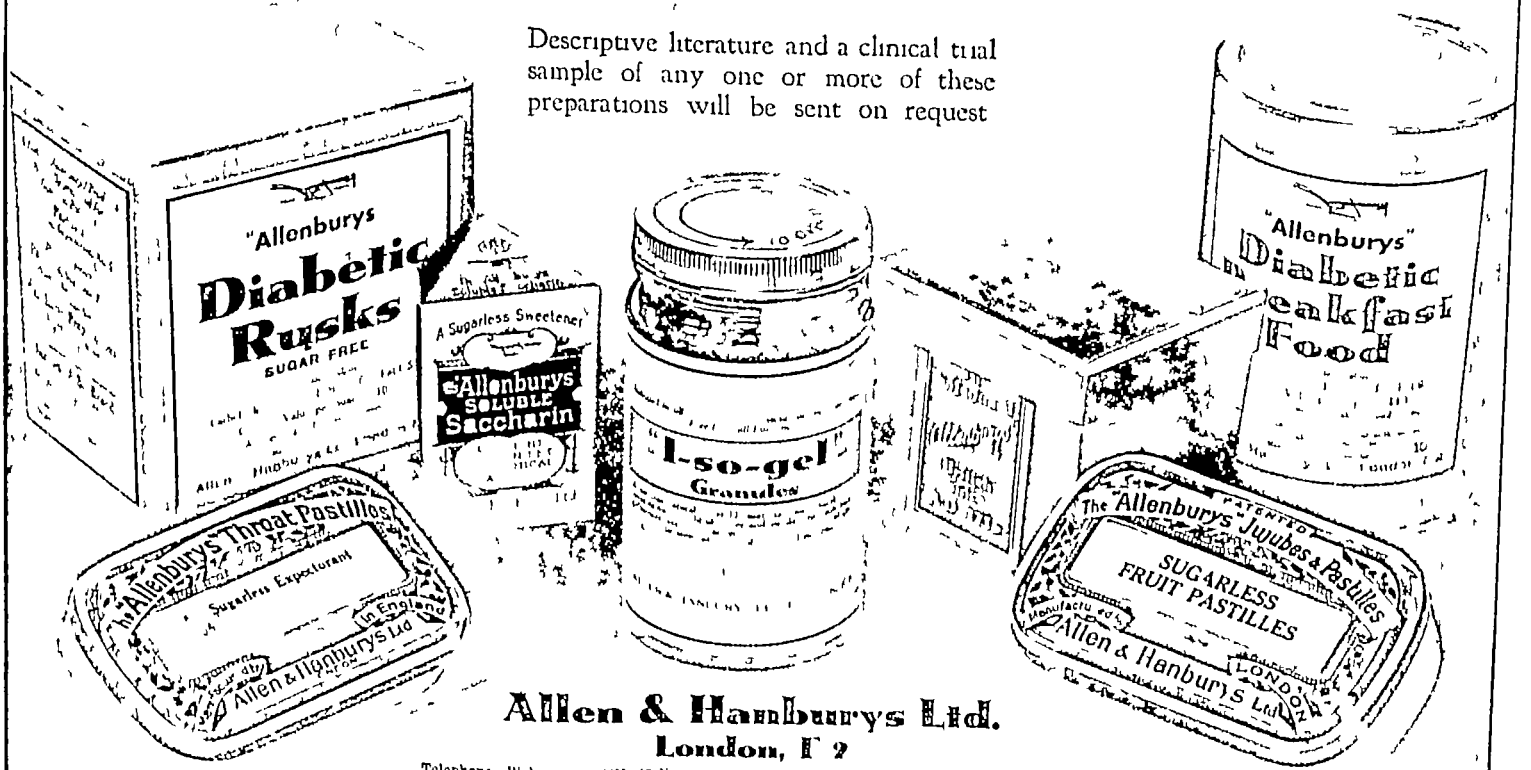
and those on a restricted carbohydrate regime

Descriptive literature and a clinical trial sample of any one or more of these preparations will be sent on request



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WORCESTERSHIRE MENTAL HOSPITAL
DARNSLEY HALL BROMSGROVE.

DEPUTY MEDICAL SUPERINTENDENT

Applications for this post are invited from duly qualified registered Medical Practitioners who have had previous Mental Hospital experience

Commencing salary £450 rising by annual increments of £25 to £550 with furnished quarters board laundry, and attendance If the successful candidate is unmarried these emoluments are valued at £90 if married partly furnished quarters are available and the emoluments are valued at £187 of which £52 is paid in cash in lieu of board and attendance

An additional £50 per annum will be paid to the holder of the D P M qualification

The usual deduction will be made in accordance with the Superannuation Act, 1909 and a temporary deduction under the National Economy Scheme at present amounting to £16 5s on the initial salary Forms of application may be obtained from the Medical Superintendent and they should be returned to him accompanied by copies of three recent testimonials before Monday May 15th

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ROYAL GWENT HOSPITAL, NEWPORT, MON
(NEWPORT AND MONMOUTHSHIRE HOSPITAL)

HONORARY EAR NOSE AND THROAT SURGEON

The Directors require an Honorary Ear, Nose, and Throat Surgeon and applications are invited for the position

Applicants must be Graduates of a University or Fellows of a Royal College of Surgeons and should have had some special experience in Ear Nose and Throat work

The successful candidate will be required to hold the office subject to the Rules and Regulations of the Hospital

Further particulars may be obtained from the undersigned to whom applications, with copies of testimonials should be sent before May 13th

J K MILLWARD
May 1st 1933 Secretary Supt

THE ROYAL GWENT HOSPITAL, NEWPORT MON (160 Beds)

Wanted a Junior Resident Medical Officer to act as HOUSE SURGEON to Out patients and as House Physician

Salary £135 with board lodgings and laundry Resident Medical Staff 5 Eligible for promotion

Large Out patient Department

Applications stating age and qualifications with copies of three recent testimonials, to be sent to the undersigned

Applications from ladies not entertained

J K MILLWARD,
May 1st 1933 Secretary Supt

ROCHDALE INFIRMARY AND DISPENSARY
(110 Beds)

The Board of Management invite applications for the appointment of JUNIOR HOUSE SURGEON The salary attached to the appointment is £200 per annum including board residence and laundry

Applications stating age nationality etc together with copies of three recent testimonials to be sent to the Secretary endorsed House Surgeon Particulars of duties, and conditions of appointment may be had on application to the Secretary

Infirmary Office W WYNNE
Rochdale Lanes Secretary

BOLINGBROKE HOSPITAL
Wandsworth Common S W 11
(121 Beds)

HOUSE SURGEON (male) required The appointment is for six months commencing on June 1 t Salary £120 per annum with board, residence and laundry

Candidates must be fully qualified and registered

Applications stating age qualifications and experience with copies of not more than three recent testimonials should be sent to the undersigned for May 11th

W S RANDOLPH BISS
Secretary Superintendent

ANCOATS HOSPITAL MANCHESTER

RESIDENT MEDICAL OFFICER required to commence duties on June 1st One having held a previous house appointment essential Appointment for six months Salary at the rate £150 per annum with board residence etc Applications stating age qualifications experience together with copies of three recent testimonials to be forwarded to the undersigned on or before May 17th

By Order of the Board
HERBERT J DAFFORNE
Gen Supt & Secretary

THE HOSPITAL FOR SICK CHILDREN, Great Ormond Street London W C 1

A RESIDENT MEDICAL SUPERINTENDENT is required on July 1st

Gentlemen are invited to send in their applications to the Secretary, before 12 o clock on Monday, May 15th accompanied by copies of not more than three testimonials given specially for the purpose

The appointment is made for one year, but may be held, subject to re-election, for a period of three years

Salary £300 per annum with board, residence in the Hospital £10 allowance for laundry, and £18 18s for the purpose of providing a substitute during annual leave

Candidates must be unmarried and possess a legal qualification to practice, and must have held a responsible Hospital appointment at a General Hospital

All candidates must be in attendance on Wednesday, May 17th, at 4 45 p m precisely to appear before the Joint Committee, if required

Forms of application and copies of the Rules may be obtained from the Secretary, at the Hospital

By Order of the Board of Management,
H F RUTHERFORD
April 1933 Secretary

ROYAL SALOP INFIRMARY, SHREWSBURY
(156 Beds)

APPOINTMENT OF CASUALTY OFFICER AND RESIDENT ANAESTHETIST

Applications are invited from fully qualified men for the appointment of Casualty Officer and Resident Anaesthetist now vacant

The appointment is for a period of six months, subject to re appointment for a further period of six months at a salary of £160 per annum with board residence etc Resident Staff comprises Resident Surgical Officer, House Physician, and Casualty Officer

Applications stating age qualifications experience, nationality, and accompanied by copies of three recent testimonials, to be sent to the undersigned forthwith

Board Room J W NORTE
Secretary Superintendent

WARRINGTON INFIRMARY AND DISPENSARY

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON (male) unmarried

Applicants who must be of British nationality must be duly qualified medical practitioners. Salary £175 per annum, with board, apartments and laundry

Applications stating age, with copies of three recent testimonials, should be sent in at once to the undersigned The appointment to date from June 1st

By Order
HENRY L BOOT
April 29th 1933 Supt & Secretary

ROYAL NATIONAL ORTHOPAEDIC HOSPITAL
(Country Branch Brockley Hill, Stanmore, Middlesex)
(280 Beds—75 per cent for the treatment of Surgical Tuberculosis)

Applications are invited for the post of HOUSE SURGEON (TWO) Salary £150 per annum with board quarters and laundry The appointment is for six months from June 1st renewable for a further period of six months on the recommendation of the Medical Board Applications with copies of testimonials should reach the Secretary 234 Gt Portland Street London, W 1 not later than May 15th

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ROYAL FREE HOSPITAL,
Gray s Inn Road, W C 1

Applications are invited from medical women who have had previous V D experience for the post of ASSISTANT MEDICAL OFFICER in the V D Department Salary at the rate of £350 per annum part time appointment is for twelve months from July 1st next Intending candidates should submit applications stating age and experience with copies of three recent testimonials to the undersigned on or before May 10th

REGINALD R GARRATT Secretary

ROYAL FREE HOSPITAL,
Gray s Inn Road W C 1

Applications are invited from duly qualified male medical candidates for the post of SENIOR RESIDENT MEDICAL OFFICER, vacant June 1st and tenable for one year Salary £150 per annum and emoluments of about £90 per annum with board and residence Intending candidates should submit applications stating age and experience accompanied by copies of three recent testimonials to the undersigned on or before May 8th

REGINALD R GARRATT Secretary

MONTAGU HOSPITAL, MEXBOROUGH YORKS

Applications are invited for the position of SENIOR HOUSE SURGEON and JUNIOR HOUSE SURGEON, at the above Hospital The commencing salary attached to each post is £120 and £100 respectively, with board, residence, laundry, etc One months holiday is allowed annually

The bed accommodation is as follows Surgical 64 Maternity 20 A further 20 beds for medical cases will shortly be brought into commission The appointments become vacant beginning of June

Applications giving full particulars including experience in the administering of anaesthetics, together with recent testimonial should be forwarded without delay to the undersigned

DONALD WILSON Secretary

THE HOSTEL OF ST LUKE (CLERGY Nursing Home) 14, Fitzroy Square, London, W 1

The Committee of Management invite applications for the post of RESIDENT MEDICAL OFFICER (male) to the above Hostel

Candidates must have had previous experience as House Surgeon at a general hospital The appointment is for six months and may be renewable for a further period of six months Salary at the rate of £200 per annum with board, residence and laundry A fortnight s holiday will be allowed every six months and the locum will be paid by the Committee of the Hostel

Applications and enquiries should be addressed to the Secretary of the Hostel at 14 Fitzroy Square London W 1 and reach him before May 20th The successful applicant will be required to take up his duties on June 1st

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STOCKTON AND THORNABY HOSPITAL, STOCKTON ON TEES
(140 Beds—Three Residents.)

Applications are invited for the posts of SENIOR and JUNIOR RESIDENT MEDICAL OFFICERS (male) for a period of at least six months commencing May 19th Salary £200 and £175 p a respectively, with board residence, and laundry

Candidates must be duly qualified and unmarried Applications stating age nationality qualifications and experience, together with copies of three recent testimonials to be sent to the undersigned

J WILKINSON Secretary

RADCLIFFE INFIRMARY AND COUNTY HOSPITAL, OXFORD

Applications are invited for the post of RESIDENT MEDICAL OFFICER (Female) at the TUBERCULOSIS BRANCH of the RADCLIFFE INFIRMARY The Osler Pavilion, Headington, Oxford, as from July 1st

The appointment will be for six months in the first instance Salary at the rate of £100 per annum

Applications, with copies of testimonials, should be forwarded to the undersigned at the Radcliffe Infirmary not later than Monday May 29th

A C E SANCTUARY
Administrator

ROYAL NORTHERN HOSPITAL,
Holloway, N 7

Applications are invited for the post of HOUSE SURGEON (male) The appointment is for nine months (six months as House Surgeon and three months as Casualty Officer) from June 15th Salary at the rate of £70 p r annum with board residence and laundry

Applications with copies of testimonials should be sent by May 13th to the undersigned, from whom forms of application and rules can be obtained

GILBERT G PANTER Secretary

COSSHAM MEMORIAL HOSPITAL, KINGSWOOD BRISTOL.

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) Salary £150 p a with board residence, and laundry To remain for six months in the first in later Applicants should be British nationality, thoroughly qualified and registered

Applications not later than May 22nd to—

F J HAWKINS Secretary

EAST SUFFOLK AND IPSWICH HOSPITAL
(282 Beds—7 Residents)

Wanted June 1st HOUSE PHYSICIAN (British male) Salary at the rate of £120 per annum

Applications stating age qualifications and experience to be sent to the undersigned together with copies of three recent testimonials

The Hospital, ARTHUR GRIFFITHS
Ipswich Secretary

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary 7 Drumsheugh Gardens, Edinburgh).

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH** *(contd.)*
EBBW VALE, MON. *(Workmen's Medical Society)*	NEATH AND DISTRICT *(Medical Aid Association.)*	WORCESTER COUNTY AND CITY MENTAL HOSPITAL. *(Junior Assistant Medical Officer)*
GILFACH GOCH, GLAMORGAN *(Workmen's Medical Scheme)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association)*	
LLWYNPIA, CLYDACH VALE, PENYGRAIG, GLAMORGAN *(Workmen's Medical Scheme)*	OGMORE VALLEY, GLAMORGAN *(Wyndham Colliery Medical Aid Society)* *(Workmen's Medical Scheme)*	COUNTY BOROUGH OF SOUTH SHIELDS HARTON INSTITUTION AND CLEADON COTTAGE HOMES *(Medical Officer)*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer)*	**PUBLIC HEALTH**	
MARDY, GLAMORGAN *(Workmen's Medical Scheme)*	KENT COUNTY COUNCIL. LENHAM SANATORIUM *(Male Assistant Medical Officer)* FARNBOROUGH INSTITUTION HOSPITAL. *(Resident Assistant Medical Officer)*	CITY OF STOKE-ON-TRENT *(Venereal Diseases Officer)*

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B.M.A. House, Tavistock Square, W.C.1.

Town or District	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District	Hon. Sec. of Division or Branch.
NEW SOUTH WALES *(All Friendly Society Appointments)*	Dr. J. G. HUNTER (Medical Secretary New South Wales Branch) 133, Macquarie St., Sydney, N.S.W.	QUEENSLAND *(Brisbane Associated Friendly Societies Institute)* *(Toowoomba Associated Friendly Societies Medical Institute, Toowoomba.)*	The Hon. Sec. Queensland Branch British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	WELLINGTON, NEW ZEALAND *(Contract Practice Appointments)*	Dr. G. F. V. ANSON (Hon. Sec. New Zealand Branch) British Medical Association, P.O. Box 156, Wellington, New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch British Medical Association), Medical Society Hall, East Melbourne, Victoria.			WESTERN AUSTRALIA. *(Contract and Lodge Practices)*	Hon. Sec., Western Australian Branch British Medical Association, No. 6 Bank of N.S.W. Chambers, St. George's Terr., Perth, Western Australia.

May 3rd, 1933. By Order of the Council. G. C. ANDERSON, Medical Secretary.

WORCESTER ROYAL INFIRMARY (142 Beds.)

Applications are invited for the post of THIRD HOUSE SURGEON.

The Hospital is equipped with new Operating Theatres, Pathological Laboratories, Orthopaedic Department, E.N.T. Department, up-to-date X-ray Department, etc.

Salary at the rate of £120 per annum together with board and residence.

The post offers exceptional scope for medical and surgical experience.

The successful candidate will be eligible for the posts of Second and First House Surgeons which will later become vacant (salaries £150 and £180 per annum respectively).

Applications should state full particulars as to age, whether married or single, qualifications, etc., and should be accompanied by copies of three testimonials.

Applications to be received by the undersigned not later than first post on Thursday, May 10th.

PERCY N. CLASS,
Superintendent Secretary.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH. (240 Beds.)

RESIDENT SURGICAL OFFICER (Male). Salary £150 per annum with board, residence and laundry. Appointment tenable for six months, and subject to renewal. Duties to commence June 1st. Candidates must be registered under the Medical Acts.

Applications, stating age and qualifications, together with copies of recent testimonials, to reach the undersigned by May 10th.

ARTHUR J. CASH,
April 25th, 1933. Gen. Supt. & Sec.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, VENTNOR, ISLE OF WIGHT.

JUNIOR ASSISTANT RESIDENT MEDICAL OFFICER (male) unmarried required for six months commencing June 1st.

Salary at the rate of £300 per annum with board, residence and laundry allowance.

Candidates must be duly registered Medical Practitioners. Previous experience in Tuberculosis also Bacteriological work desirable.

[illegible] own handwriting [illegible]ns (with one copy of [illegible] to be sent to the Medical Superintendent, Royal National Hospital for Consumption, Ventnor, I.O.W., not later than May 12th.

THE MARIE CURIE HOSPITAL, 2, Fitzjohn's Avenue, N.W.3.

Applications are invited from fully qualified Medical Women for the post of RADIOLOGIST in charge of the Deep X-Ray Therapy Dept.

Applicants must hold a Diploma in Radiology.

The appointment will be for one year eligible for re-election, salary £500 per annum non-resident. Application with copies of testimonials should be sent to the Secretary at the Hospital on or before Saturday, May 20th.

ROYAL SURREY COUNTY HOSPITAL, GUILDFORD. (182 Beds.)

Wanted June 1st HOUSE SURGEON. Salary £150 per annum with board, residence and laundry. Applications stating essential particulars with copies of not more than three testimonials to be sent to the Secretary, Superintendent on or before May 9th.

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN,
St. Quintin Avenue, W.10. (58 Beds.)

HOUSE SURGEON (male or female) required from May 18th to June 30th. Salary at the rate of £75 p.a. with board, residence and laundry. It is desirable that applicants should have held a responsible Hospital post. Application with copies of two testimonials should be submitted on a form to be obtained from the Secretary at the Hospital, and must reach him not later than Wednesday, May 10th.

ST. JOHN'S HOSPITAL, LEWISHAM, S.E.13.

There is a vacancy for an HONORARY GYNAECOLOGICAL SURGEON to take charge of bed and to see Out-patients.

Candidates who must be Fellows of the Royal College of Surgeons (England) should send applications with copies of not more than three recent testimonials to reach the undersigned on or before Wednesday, May 10th. A Selection Committee will sit on Tuesday, May 16th.

J. C. GILBERT,
Secretary Superintendent.

ROYAL BERKSHIRE HOSPITAL.

HOUSE SURGEON (male) required from June 1st for six months. The candidates must be fully qualified and registered, and must rank at the rate of £150 per annum with board, residence and laundry. Applications with copies of testimonials to be sent to the undersigned on or before May 19th.

F. A. LYON,
Reading. Secretary.

(Appointments continued on p. 54.)

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4 Add 10 c c Antimony Trichloride solution (B P 32)

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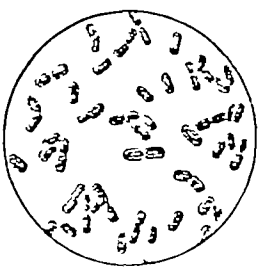

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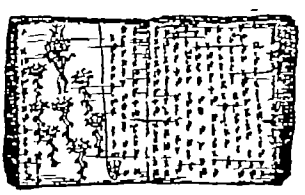
O O O O O

MAGIC BOOK OF BARK CONTAINING CHARMS IN NATIVE SCRIPT.—In common with most native tribes, those of Sumatra practise a homely kind of medicine consisting in the application of simples but in both the prevention and the cure of disease they put their faith chiefly in the use of charms



These are recited to ward off the attacks of adverse disease—inflicting spirits, and for exorcising them should they have succeeded in gaining possession. The incoherent verses are often accompanied by fanciful drawings as here seen in this book of charms from Sumatra. These books are also consulted in the divination rites which form part of Indonesian religio-medical practices in general.

DATE Present day

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WANTED A YOUNG UNMARRIED MALE British outdoor ASSISTANT for Branch Colliery Practice near Newcastle on Tyne Salary £400 p a with furnished house coals light and attendance — Address No 2725 B M A House Tavistock Square W C 1

WANTED BY EXPERIENCED WOMAN Doctor ASSISTANTSHIP preferably with view Keen midwifery References. Own car London preferred but not essential Interview —Address No 2719 B M A House Tavistock Square W C 1

WANTED — INDOOR ASSISTANT IN JUNE in an industrial and appointments Practice Some experience energetic T T car provided Work light Salary according to experience — Address No 2612 B M A House, Tavistock Square W C 1

WANTED IMMEDIATELY — INDOOR AND Outdoor ASSISTANTS for Town and Country Practices with and without view Good salaries State full particulars —BRITISH MEDICAL BUREAU 33 Cross St Manchester 2

PART TIME ASSISTANT WANTED WEEK ends and two evenings — Address No 2014 B M A House Tavistock Square W C 1

WANTED, INDOOR ASSISTANT, MALE IN mixed country town Practice Salary £300 p a Car provided for work Usual bond State age and experience —Address No 2717, B M A House Tavistock Square W C 1

WANTED — MALE INDOOR ASSISTANT, single for East London, near City, work light no midwifery Salary £250 to £300 all found, according to experience Usual bond — Address, No 2724, B M A. House, Tavistock Square W C 1

WANTED —ASSISTANT (INDOOR) (EITHER sex), preferably one just qualified State essential particulars — Address No 2708, B M A House Tavistock Square W C 1

WANTED — JUNIOR ASSISTANT SINGLE, British nationality Salary £300 per annum, with rooms coal gas and attendance —Address No 2721, B M A House, Tavistock Square W C 1

WANTED —OUTDOOR ASSISTANT SINGLE, British County Town, 20 miles from Liverpool Use of saloon car for work Usual bond Dispenser kept — Address, No 2838 B M A House, Tavistock Square W C 1

WANTED — OUTDOOR ASSISTANT, British, for Colliery Practice S Wales Salary £400 p a —Address No 2839 B M A House Tavistock Square W C 1

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M B, CH B (EDIN), AET 33, EXPERIenced G P ex H S H P, good Obstetrician, desires ASSISTANTSHIP or LOCUMS Accustomed sole charge Excellent testimonials Free now Interview if desired —Address No 2720, B M A House Tavistock Square, W C 1

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PARTNER WITH VIEW TO SUCCESsion required owing to ill health for old established Glamorgan Colliery Practice Average audited receipts approx £2,500 Panel nearly 2 300 Premium for half share £1 500 —No 2713 B M A House Tavistock Sq W C 1

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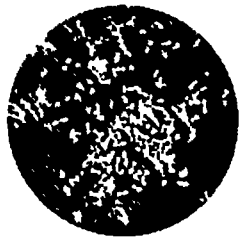

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Remarks

ON THE

PRINCIPLES OF TREATMENT IN PULMONARY TUBERCULOSIS

BY

L S T BURRELL M D CAMB F R C P LOND

SENIOR PHYSICIAN ROYAL FREE HOSPITAL AND PHYSICIAN TO THE BROMPTON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST

It has been seriously suggested that tuberculosis should be regarded as a classic in the teaching of medicine So many are its manifestations that anyone with a sound general knowledge of tuberculosis would certainly have a solid foundation on which to base his study of other diseases In the lung it may appear as an acute broncho-pneumonia which rapidly proves fatal as a subacute infection progressing to a fatal issue by stages of remission and relapse as a chronic disease allowing the patient many years of life and even full activity but exposing him to the risks of periods of ill health due to such complications as haemoptysis or pleurisy Tuberculosis may produce scar tissue in the lungs which is obvious on post mortem examination but which gave rise to no symptoms during life so that the patient may have died of old age after an active life during which he was quite unaware of ever having been ill In this last type of case there is surely no need for treatment even if by modern methods of examination the lesion in the lung is detected during life Many people have their lives impaired by prolonged treatment which is quite unnecessary and vast sums of money are spent owing to the failure to distinguish between infection which requires no treatment and that which if untreated will lead to actual disease In civilized countries the great majority of people react to tuberculin but this evidence of infection cannot be taken as an indication for treatment since comparatively few develop the disease

PRETUBERCULOUS STAGE

Some authorities speak of a pretuberculous stage by which they mean a state of health or environment tending to produce tuberculosis I have recently seen a family in which two children died of acute tuberculous bronchopneumonia and one of tuberculous meningitis two are alive and apparently well In the same poor quarters lives their grandfather who has had a cough for years and whose sputum contains tubercle bacilli I agree that these two children are pretuberculous and require not treatment but change of environment In the same sense I agree with a friend of mine who thinks of a child climbing a ladder as in the pre fracture stage I do not however agree with the word pre tuberculous when used to imply that a delicate child or adult is liable to become consumptive When the lives of these delicate children are followed it is found that the incidence of tuberculosis is not appreciably greater among them than among their robust brothers or sisters If we approach the problem from the other angle and inquire into the past history of the adult consumptive it is exceptional to find one who was specially delicate as a child Not uncommonly the robust member of a family is attacked The athlete is just as likely as the bookworm to become consumptive

An abundance of good food and fresh air a regular life and absence of strain make up the road to longevity The stronger the constitution of the individual the less the danger of ignoring some or all of these rules of health but the more delicate he is especially if he has some definite disability such as tuberculosis the greater the risk of living unwisely I agree therefore that all children should be taught how to lead a healthy life and be given the chance of leading it but I do not agree that this is a problem of tuberculosis or that large sums of money allocated for the prevention and treatment of tuberculosis should be spent in keeping delicate children or adults for long periods in public institutions

The pretuberculous stage however is one of prevention and does not come within the scope of this paper so I shall pass on to consider the various stages of the actual disease It is important to remember that it does not progress uniformly from stage to stage and one cannot always speak of an early or late case according to the actual state of the disease Healing takes place by fibrosis and acuteness or chronicity depends upon the balance between infection on the one hand and fibrous tissue formation on the other In a very acute case there is practically no fibrosis but a rapid breaking down of lung tissue in a very chronic case there is a steady formation of fibrous tissue and little if any toxaemia from the tuberculous infection The principles of treatment vary with the different stages which I will discuss under the following headings

NON CLINICAL PULMONARY TUBERCULOSIS THE ALARM

In this stage a definite diagnosis is made but there is no direct evidence of present or past activity in the lung Pleural effusion or haemoptysis of unexplained origin may be mentioned as examples

The patient should be told to observe the ordinary rules of health but apart from this no treatment may be required He should however be kept under careful observation including regular *x* ray examination for at least three years As a rule it is unwise to advise a change of occupation and one should avoid the mistake of regarding a sedentary life as unsuitable A tuberculous patient is more likely to break down while carting hay on a farm than while working in a city office If after haemoptysis the patient feels perfectly well and there are no *x* ray or other signs or symptoms he may be allowed to keep on with his occupation under medical supervision Haemoptysis does not always indicate activity indeed it is especially common in the fibrotic type of tuberculosis and in bronchiectasis or other non tuberculous forms of fibrosis After pleural effusion the case is a little different because the effusion is evidence of activity in the lung Time therefore should be given to allow the healing of the lesion to consolidate and a course of sanatorium routine is most beneficial This type of case is especially suitable for Switzerland A study of after histories shows that a considerable proportion of patients who have had haemoptysis or pleural effusion develop active pulmonary tuberculosis whereas those who have had surgical tuberculosis or were delicate and called pretuberculous in childhood have no greater tendency to become consumptive than has the normal individual

EARLY PROGRESSIVE STAGE THE ATTACK

This stage is by far the most important as regards treatment because it almost always proceeds to a fatal issue if neglected but responds well to proper management Inman's classification—(*a*) resting febrile (*b*) resting afebrile ambulant febrile (*c*) ambulant afebrile—may well be applied to this stage but as treatment is not entirely dependent on the temperature one should regard these three groups as indicating disease which is (*a*) acute—that is rapid invasion of the lung tissue with little if any formation of fibrous tissue (*b*) subacute—

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Lower Clapton Road, Clapton E 5

Applications are invited from Medical Women for the post of SENIOR RESIDENT MEDICAL OFFICER vacant July 1st Salary £150 per annum with board residence and laundry The appointment is for twelve months Applications with testimonials must be sent to the Secretary on or before May 17th
EDGAR DIBDEN Secretary

THE SALVATION ARMY,
THE MOTHERS HOSPITAL
Lower Clapton Road Clapton E 5

Applications are invited from Medical Women for the post of JUNIOR RESIDENT MEDICAL OFFICER vacant August 1st Salary £60 per annum with board residence and laundry The appointment is for six months Applications with testimonials must be sent to the Secretary on or before July 17th
EDGAR DIBDEN Secretary

THE LIVERPOOL EYE EAR & THROAT INFIRMARY MYRTLE STREET

Applications are invited for the post of OPHTHALMIC HOUSE SURGEON (male) to the above Institution to take up duty immediately Salary £120 per annum Applications with copies of not more than three recent testimonials should be made before May 12th to the Chairman CHARLES W WRIGHT, ESQ, 9, Harrington Street Liverpool

ROYAL CHEST HOSPITAL,
City Road E C 1
(Royal Northern Group of Hospitals)

A vacancy occurs for a PHYSICIAN Candidates must possess the degree of M D or M B obtained by examination at a British University, and be Fellows or Members of the Royal College of Physicians of London

Full particulars of the appointment, and details with regard to the submission of testimonials etc may be obtained from the undersigned to whom applications should be sent not later than May 31st
GILBERT G PAINTER Secretary

KING GEORGE HOSPITAL, ILFORD
(8 miles from London)

Wanted a HOUSE SURGEON to commence duty at once for a period of ten months two months as Casualty Officer six months as House Surgeon and two months as Deputy Resident Medical Officer in charge of the Casualty Department Salary £100 per annum £10 bonus on completion of appointment and two weeks holiday Candidates should send their applications with three recent testimonials and call on the members of the Honorary Medical Staff indicated by the Secretary as soon as possible
C AUSTIN HEPWORTH Secretary

SEAMENS HOSPITAL SOCIETY,
Greenwich

HOUSE PHYSICIAN and HOUSE SURGEON required at DREADNOUGHT HOSPITAL Greenwich for six months from July 1st Salary £110 per annum and a proportion of fees with board residence and laundry Candidates must be male Applications with copies of three testimonials to be sent in by May 30th to the undersigned
Greenwich R E V BAX
April 27th 1933 Secretary

LONDON HOSPITAL, E 1

There is a vacancy for the post of ASSISTANT DIRECTOR of the Medical Unit he shall also be an Assistant Physician to the Hospital

Applications should be sent to the House Governor from whom further information as to salary and other particulars may be obtained and should reach him on or before Wednesday, June 14th
A G ELLIOTT
May 2nd 1933 House Governor

SOUTHEND ON SEA GENERAL HOSPITAL
(221 Beds—6 Residents.)

Wanted a HOUSE SURGEON and CASUALTY OFFICER to commence immediately Salaries £100 per annum with board residence and laundry Applications invited at once from British (male single) candidates stating age qualifications and experience accompanied or followed by three recent testimonials, to be sent to the Joint Secretaries

JEWISH MATERNITY HOSPITAL,
Underwood Street, E.1

Applications are invited for the post of RESIDENT MEDICAL OFFICER Duties commence June 1st for a period of six months Salary *at the rate of £50 per annum*

Applications together with copies of three recent testimonials to be sent to the undersigned not later than May 16th
ALICE MODEL Secretary

THE GENERAL HOSPITAL, BIRMINGHAM

Applications are invited for the following Resident appointments vacant immediately
RESIDENT ANAESTHETIST Salary £120 per annum (£70 per annum if a first Resident appointment)
HOUSE SURGEON Salary £70 per annum
Applications giving full details of qualifications should be sent to the undersigned as soon as possible
A H LEANEY,
May 1st 1933 House Governor

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RESIDENT MEDICAL OFFICER required August 1st next or earlier for one year Eligible for re-appointment Salary £300 p a rising £50 yearly to £400 p a F R C S (Eng) preferred Previous surgical and administrative experience essential Applications as early as possible not later than May 31st to the Joint Secretaries

COUNTY COUNCIL OF ORKNEY

Wanted a MEDICAL OFFICER for the Islands of South Ronaldsay and Burray, to take up duty on August 1st

For particulars apply with testimonials and references to the County Clerk, Commercial Bank Buildings Kirkwall

Kirkwall April 25th, 1933.

LONDON COUNTY COUNCIL

Applications invited for appointment of Ho[illegible] at DIGNAL OFFICERS by Duties a general and include the necessary assistance at other establishments under control of the Council Valuation of emoluments is subject to temporary reduction Candidates must be registered Medical Practitioners of at least one year's standing and have held a resident appointment in a general hospital for at least six months

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1 ST MARY ABBOTS HOSPITAL, Marloes Road Kensington W 8 —Senior Assistant Medical Officer (Grade II) Salary £500 a year rising annually by £25 to £600 a year with board lodging and washing Preference will be given to candidates who have special experience in obstetrics and general surgery

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3 NEW END HOSPITAL New End Hampstead N W 3 — †Assistant Medical Officer (Grade I) Candidates must have had experience in midwifery and in anaesthetics.

*Salary £350 rising annually by £25 to £425 a year with board lodging and washing

†There is no accommodation for a married man or for a woman at the hospitals

Forms of application obtainable (stamped, addressed foolscap envelope necessary) from Medical Officer of Health. Last day for receipt of application May 19th

Candidates should specify position or positions for which they desire to apply Canvassing disqualifies Further enquiries should be addressed to the Medical Superintendent at the respective hospitals

THE CHILDREN'S HOSPITAL, BIRMINGHAM

RESIDENT SURGICAL OFFICER

Applications are invited for the above post Candidates must be qualified and registered.

The salary attaching to the post is at the rate of £175 per annum with board residence and laundry The appointment is tenable for one year as from July 16th

Candidates must forward their applications with certificate of registration and any credentials which they may desire to offer to the undersigned on or before May 27th and from whom further particulars may be obtained.
HAROLD F SHRIMPTON
May 2nd 1933 House Governor

THE CHILDREN'S HOSPITAL, BIRMINGHAM

HOUSE SURGEON

Applications are invited for the above post.

The appointment is tenable for six months as from June 1st

The salary attaching to the post is at the rate of £75 per annum, with board residence and laundry

Candidates must forward their applications with certificate of registration and any credentials which they may desire to offer to the undersigned and from whom further particulars may be obtained
HAROLD F SHRIMPTON
May 2nd 1933 House Governor

THE GUEST HOSPITAL DUDLEY
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Applications are invited for the post of ASSISTANT HOUSE SURGEON Salary £140 per annum with furnished apartments board and laundry

Applications, stating age qualifications and experience and accompanied by copies of testimonials, to be sent to the undersigned
H RAYMOND HURST
The Guest Hospital, House Governor
Dudley (Secretary)
April 28th 1933

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Candidates must be fully qualified and registered

Applications stating age nationality and qualifications together with a copy of three recent testimonials should reach the Secretary Acton Hospital Cunnersbury Lane W 3 by Wednesday, May 17th
DONALD C. D SWORD Secretary

May 3rd 1933.

fibrosis and breaking down of lung tissue taking place side by side, (*c*) chronic—fibrosis the predominant factor with little if any breaking down of lung tissue

I have called this stage "the attack" because the patients are curable if the disease is properly attacked The patient has the upper hand More mistakes in treatment are made in this than in any other stage, and mistakes are much more serious for the patient than at any other period in the disease The patient often feels fairly well, and does not understand the necessity for strict treatment The doctor rightly feels that an optimistic outlook is part of the cure and does not wish to alarm the patient, and hence there is a danger of consent being given to some such suggestion as a sea voyage, a few months in the country, or sanatorium treatment at home The prognosis is well known to be good in patients whose first symptom is haemoptysis, and I am sure that this is because such patients are frightened and willing to undergo any treatment to prevent a recurrence of the haemorrhage Many patients will say, 'You tell me that I have the disease so slightly that it can hardly be detected, and yet you propose to treat me like an advanced consumptive" In reality, of course, the treatment is intended to prevent him from becoming an "advanced consumptive'

A patient suffers a great shock when he first realizes that he has tuberculosis, and he should be treated gently and every consideration given to his wishes Fortunately the initial treatment in this important stage is rest, and it is usually safe to send him to bed at home or wherever he likes to go for the first few weeks After that time most patients are much more amenable to reason, and will consent to sanatorium or other treatment Details of treatment depend on the degree of activity of the disease

1 In the resting febrile or acute phase absolute rest in bed is indicated If the disease is unilateral and sufficiently advanced for crepitations to be heard artificial pneumothorax should be induced at once In some cases this should be done on *x*-ray evidence before crepitations or other definite signs appear It is a mistake to wait for evidence of a cavity before inducing pneumothorax If both lungs are affected bilateral pneumothorax or pneumothorax of the most acutely affected lung and sanocrysin for the other may be advised, but sanocrysin must be given very cautiously in acute cases If the temperature does not settle and the physical signs increase, small doses of sanocrysin tuberculin, or other substances to produce shock may be tried Rest in bed should be continued for at least three months, and longer if the temperature is unstable When the patient begins to get up sanatorium treatment is essential

2 In the subacute phase the temperature is normal only when the patient is resting in bed, and he should not be allowed up As in the acute phase treatment consists of rest in bed, and possibly artificial pneumothorax or sanocrysin Shock treatment may be tried in certain cases but the possibility of doing harm must be borne in mind

3 The chronic or ambulant afebrile phase may follow the previous ones, but very often the patient has never been through the acute or subacute stage When first seen he has slight cough and sputum containing tubercle bacilli There may or may not be a history of recent loss of energy or weight, but there is no pyrexia and often no history of any febrile attack In this case sanatorium routine is indicated, and, if the patient refuses, a few weeks rest in bed at home should be advised Most patients will agree to this especially if it is called a period of observation, afterwards as I have already said they are often more ready to agree to sanatorium treatment

Some will refuse to go into an English sanatorium but are willing to go abroad Switzerland is considered the Mecca by many It is usually best to start treatment in an English sanatorium, but the patient may be allowed to go abroad provided a good sanatorium is chosen The cold dry air of the Alps is exhilarating, especially in the winter, and it undoubtedly helps many patients Some, however, find Switzerland depressing, and are homesick and prefer to remain in England Whether he goes abroad or stays at home the patient should have confidence in the treatment If he firmly believes that Switzerland will effect a cure he should be encouraged in the belief, and sent to a good sanatorium there unless there are definite contraindications If, on the other hand, he objects to going to Switzerland or cannot afford to go, it is a mistake to urge him to do so or to give him the impression that he is unwise to stay in England The psychological element is of the utmost importance in pulmonary tuberculosis, and unfortunately it is a much neglected part of the treatment In this phase of the disease treatment is essential, but where it is given is immaterial, apart from the psychological aspect The objections to Switzerland in this phase of the disease are (1) The patient is apt to think that the fact of his being there is in itself treatment, and consequently to live less carefully than he would at home (2) Discipline in most Swiss sanatoriums is bad In some, of course, it is good, so that this objection does not apply if the sanatorium is carefully selected from personal knowledge, and one must remember that what suits one patient will not suit another (3) Patients are apt to acquire the Swiss habit, that is to say, they go year after year until they are really unable to get through a winter without spending several months in the Alps (4) Post-tuberculous neurasthenia is more common in Swiss treated than in English treated cases (5) Recovery is no quicker in Switzerland than in England, and expenses are greater

The advantages are (1) The dry cold air and bright skies have an exhilarating effect on the patient, and make him feel better (2) Many patients insist on leaving an English sanatorium after a few months because they say they can get just the same treatment at home The fact that the majority of relapses occur in the first few months after leaving sanatorium shows that this is not so, but the patient (and sometimes his doctor also) may not appreciate this It is much easier to persuade a patient to carry treatment to the stage of cure in Switzerland (3) The psychological effect on those who believe that there is a charm for the cure of tuberculosis in the Swiss air

Whether the patient should be sent to a foreign or an English sanatorium depends largely on his temperament, the important thing is to send him to a good sanatorium, and not allow him to go alone into the country or for a sea voyage, or to drift into the incurable stage of the disease Sanatorium treatment consists in the judicious combination of rest, gentle exercise, and routine, so that life is perfectly regular The progress of the disease is watched by physical and *x*-ray examination, and by methods such as the sedimentation and vital capacity tests Improvement usually indicates the need for increased exercise, whereas failure to improve or a relapse necessitates more rest, artificial pneumothorax, sanocrysin, phrenic evulsion, or some other form of treatment Sanatorium routine should be continued until the disease is arrested or has passed into the later stage After arrest, a few months in Switzerland are often most beneficial in order to consolidate the cure, or at this period the patient may be allowed a sea voyage or quiet country holiday before resuming work He should be kept under observation for at least two years, and regarded as in what I have called the "non clinical" stage

DERBYSHIRE HOSPITAL FOR WOMEN FRIAR GATE, DERBY (54 Beds.)

Applications are invited for the post of HOUSE SURGEON (a medical woman with Obstetrical experience preferred). Salary £150 per annum with apartments board etc The appointment is tenable for six months with a possibility of extension for a further period of six months.

Application, with copies of not more than three testimonials to be sent to the undersigned not later than May 15th. Duties to commence May 25th.

W T COCKER Secretary

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Applications are invited for the post of DENTAL ANAESTHETIST to the above Hospital.

Applications accompanied by copies of testimonials from male candidates only should be forwarded to the undersigned on or before Wednesday May 10th.

The Anaesthetist will be required to attend on Tuesday morning at 9 a.m. and the appointment carries with it an honorarium of £25 per annum.

RAPHAEL JACKSON (Major) Secretary

BRADFORD ROYAL INFIRMARY

HOUSE SURGEON (male) wanted from June 1st to November 30th. Candidates must be single and legally qualified. Salary £135 per annum with board residence and washing. There are 215 beds and six Resident Officers.

Applications stating age qualification and previous experience (if any) with copies of recent testimonials to be received by the undersigned not later than May 9th.

J J BARRON
May 2nd 1933 Secretary Supt

BRADFORD ROYAL INFIRMARY

HOUSE PHYSICIAN (male) wanted from June 1st to November 30th. Candidates must be single and legally qualified. Salary £135 per annum with board, residence and washing. There are 215 beds and six Resident Officers.

Applications stating age qualifications and previous experience (if any) with copies of recent testimonials, to be received by the undersigned not later than May 9th.

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RADCLIFFE INFIRMARY AND COUNTY HOSPITAL, OXFORD

Applications are invited for the following post which will become vacant on July 1st

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The appointment is for six months with salary at the rate of £120 per annum with board lodgings etc. Candidates must be male and qualified.

Applications, with four copies of three testimonials, should be sent to the undersigned on or before Monday May 29th.

A G E SANCTUARY Administrator

BURTON-ON-TRENT GENERAL INFIRMARY (142 Beds.)

Applications are invited for the post of SENIOR HOUSE SURGEON (male). Salary at the rate of £200 per annum with board residence and laundry.

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E. W THORNLEY Secretary

THE HOSPITAL FOR SICK CHILDREN Great Ormond Street W.C.1.

There are several vacancies for HONORARY MEDICAL and SURGICAL CLINICAL ASSISTANTS in the Out patients Department of this Hospital.

Applications are invited from gentlemen legally qualified to practise who will be willing to offer their services on two mornings a week from 9 a.m. until about 12.30 p.m.

Candidates should apply personally to the Medical Registrar to Out patients

H F RUTHERFORD
May 2nd 1933 Secretary

THE KIDDERMINSTER AND DISTRICT GENERAL HOSPITAL (120 Beds.)

HOUSE SURGEON (male) required. Salary £150 per annum with residence board and laundry. Applications with not more than three testimonials to be sent to the Secretary, Miss SUSAN SMITH, South Cliff, Kidderminster

UNIVERSITY COLLEGE HOSPITAL, Gower Street, W.C.1

Applications are invited for the Honorary post of ASSISTANT SURGEON to University College Hospital in the Ear Nose and Throat Department (Royal Ear Hospital)

Applications accompanied by evidence of fitness for the post must reach the Secretary by noon on Friday May 26th

UNIVERSITY COLLEGE HOSPITAL, Gower Street W.C.1

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LATE PROGRESSIVE STAGE THE DEFENCE

By this is meant the chronic consumptive stage and it is as a rule the outcome of the previous stage The disease now has the upper hand and the patient is on the defensive He may live for several years but apart from a few exceptional cases eventually dies of tubercu losis It is to prevent the patient from passing into this stage that thorough treatment is so urgently needed in the previous one No hard and fast line can be drawn between these two stages Some patients obviously belong to one or the other but there is a large intermediate group Patients who recover usually respond early and readily to treatment If they do not respond at first they do so after a few months There are exceptions of course but if one placed in this late progressive stage all patients who still have active disease after two years thorough treatment one would not make many mistakes I trust I shall not be misunderstood in this matter There is no doubt that many patients in this stage of the disease improve sufficiently to have several years of active or useful life some actually recover and much can be done for them by modern treatment From my own experience however and from the extensive literature describing the late results of patients who have reached this stage it is not open to doubt that a large proportion of them do die of the disease and a great many within a few years To remain blind to this fact is a common mistake I feel that the happiness of the patient is too often disregarded and he is subjected to confinement in a sanatorium or to some drastic treatment which renders his last years irksome and does not offer any real hope of benefit

In the previous stage the patient's temporary unhappi ness or inconvenience is not so important because one can offer a very real hope of recovery As a practical physician I continually find the greatest difficulty in persuading a patient in the early stage to submit to a strict course of treatment and he is often supported by his doctor who takes the view that he is not bad enough for this or that treatment They do not realize the extreme gravity of the condition when it has passed the early stage When once the patient has reached what I call the late progressive stage he will submit to any treat-ment and I want to make it quite clear that even then much can be done The point I wish to emphasize is the enormous importance of strict treatment in the early phase

The principles of treatment in this late progressive stage depend on the ratio between the breaking down of lung tissue on one hand and the formation of fibrous tissue on the other The more the fibrosis the greater the expectation of life In exudative cases with but little ability to form fibrous tissue artificial pneumothorax is indicated but it becomes of less value the more the fibrosis until in most chronic fibroid cases of tuberculosis life is actually shortened by it The reverse is true for phrenic evulsion and more especially for thoracoplasty which are often of great value in cases where fibrosis is the predominant feature but are actually harmful in the more acute phases of the disease Tuberculin or shock therapy may help in certain cases in this stage If for example the disease is only slowly progressive and the patient appears to be holding his own but tends to get pyrexia on the slightest exertion tuberculin may render the temperature stable and aid the formation of fibrous tissue In most cases in this stage treatment is mainly symptomatic and one of the most common symptoms is the mental state of the patient He is often unsettled self centred and neurasthenic especially if he has had prolonged sanatorium treatment For these cases work is the best solution Life is more often prolonged than shortened by suitable occupation in this stage of the disease

CHRONIC FIBROID STAGE THE AFTERMATH

This may be the outcome of one of the previous stages and here again no hard and fast line can be drawn In the previous stages however the patient has his good and bad times but is never really free from symptoms In the chronic fibroid phase however the patient often has years of nearly if not completely good health I have one patient of 76 who has a large cavity at one apex and fibrosis around it and according to her notes at Brompton Hospital has had much the same physical signs for over fifty years In some cases fibrosis is found in a patient who has never had any acute or subacute manifestation of tuberculosis Such a patient seeks advice owing to sudden haemoptysis dyspnoea or loss of energy and an extensive fibrosis is found There is a popular belief that such an insidious onset is common in tuberculosis whereas it is rare and in the majority of cases the patient can date the onset of his disease at any rate to within a few weeks In this stage the patient should be allowed to lead a normal life but must be warned that he is more likely than a normal individual to suffer from any break of the ordinary rules of health

Treatment becomes necessary (1) if the fibrosis is steadily increasing (2) for repeated haemoptysis which is not uncommon in this type of case and (3) for recurrent attacks of pyrexia Phrenic evulsion and thoracoplasty are usually indicated when special treatment is needed in this stage of the disease Artificial pneumothorax is suitable only in exceptional cases One must remember that prognosis is good in the average chronic fibroid case and may be made worse by treatment One common mistake is to try and collapse a portion of the lung by pneumothorax or operation simply because there are physical signs or *x* ray evidence of a cavity The safest rule is to keep the chronic fibroid case under careful supervision but to leave well alone and not initiate any special treatment unless there are any special symptoms which must be controlled

Complications and symptoms may arise and need treat ment at any stage of the disease but the following table indicates the principles of treatment which usually apply to different stages

1 *Non clinical Pulmonary Tuberculosis*	Medical supervision Sanatorium Switzerland
2. *Early Progressive Stage*	
(*a*) Acute	Absolute rest Artificial pneumothorax Shock therapy
(*b*) Subacute	Rest Artificial pneumothorax Sanatorium Shock therapy
(*c*) Chronic ..	Sanatorium Switzerland Artificial pneumothorax Sanatorium Phrenic evulsion
3 *Late Progressive Stage* ..	Controlled rest and exercise Occupation Phrenic evulsion Thoracoplasty Shock therapy
4 *Chronic Fibroid Stage*	Supervision Occupation Phrenic evulsion Thoracoplasty

The chief point I wish to emphasize in this paper is the urgent necessity for strict treatment in the early pro-gressive stage In the later phases much can be done for the patient but his chance of recovery is only a fraction of his chance in the earlier stage Everything possible should be done therefore to prevent him from passing into the late stage

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BLOOD PHOSPHATASE AND THE VAN DEN BERGH REACTION IN THE DIFFERENTIATION OF THE SEVERAL TYPES OF JAUNDICE

BY

W MORRELL ROBERTS, M D , D Sc , M R C P

PHYSICIAN AND PATHOLOGIST PARK HOSPITAL DAVYHULME , MEDICAL TUTOR AND MEDICAL OFFICER TO OUT PATIENTS MANCHESTER ROYAL INFIRMARY , MEDICAL REGISTRAR ANCOATS HOSPITAL

When icterus unaccompanied by other definite signs or symptoms, develops in an elderly patient, it is frequently a matter of difficulty to decide whether obstruction of the extrahepatic bile ducts—more particularly by malignant disease of the pancreas—is present, or whether the case is one of simple catarrhal jaundice It may be that the diagnosis is made with certainty only after an interval of several weeks, by observation of the general progress of the case and of the jaundice Again, to distinguish an obstructive from a toxic jaundice may be a troublesome problem in the early stages of the condition, since the onset and symptoms may be alike, and in both there may be pale stools, bilinria, and a direct van den Bergh reaction

It was claimed for the van den Bergh reaction, on its introduction, that it distinguished obstructive jaundice on the one hand, from catarrhal, toxic, and infective jaundice on the other—the obstructive variety giving a " direct " reaction, the others a " biphasic " or an " indirect " Extensive clinical trial has shown that while the reaction is useful in other ways this particular claim is untenable, since any type of reaction may be obtained in catarrhal and toxic jaundice, the direct reaction being the most frequent finding in the author's experience In these circumstances it seems that the use of another method of distinguishing gross obstructive jaundice from the other varieties is desirable The main purpose of this paper is to describe a method which has been found to be very reliable in the examination of fifty-two consecutive cases of jaundice In addition, some relevant constructive criticism of the modern theory of icterus and of the van den Bergh reaction is offered The van den Bergh reaction was carried out on all the cases of the series, and the results are shown in the table

THE VAN DEN BERGH REACTION

It is convenient at this point to make some observations on the subject of the reaction itself The "direct" reaction was described by van den Bergh [1] and has passed into a number of textbooks as characterized by a blue violet colour maximal in thirty seconds, resulting from mixing equal parts of icteric serum and reagent In actual practice a result answering this description is seldom met with , the author has not yet seen one in the course of several hundred tests The usual finding with direct-action serums ' is that a colour change begins at once on the addition of the reagent and progresses through a reddish shade to a red-violet or violet It is probably owing to this that the colour is described in other textbooks as violet, red-violet, red, pink, and rose Moreover the colour change takes up to half an hour to reach its final shade, as can be readily demonstrated by putting on a second test half an hour after the first and noting the time taken for the colours to become equal These remarks apply to serums tested as soon as possible after collection If the serums are allowed to stand for some time the reaction takes place more slowly The direct reaction in its usual form, therefore would be more correctly described as a change of colour from the original yellow, through red, to a red-violet or violet, beginning at once on addition of the reagent, the whole process taking several minutes and sometimes as long as half an hour But this is essentially the description of a ' biphasic " reaction as given by van den Bergh—namely, " a red colour appearing at once and gradually deepening to violet " This is unfortunate, since the significance of a biphasic reaction may be very different from that of a direct reaction

In order to avoid this difficulty the author now makes use of the following facts

(1) The pigment in obstructive jaundice serums is insoluble in chloroform

(2) The pigment in indirect reaction serums is soluble in chloroform

(3) The biphasic reaction is thought, on good experimental grounds, to be a combination of the other two types

The reaction is said to be *direct* therefore, when the colour change begins on the addition of the reagent, whilst not more than a trace of the total pigment is extracted when another sample of the serum is shaken with an equal volume of chloroform (judged by the colour of the chloroform layer as compared with the colour of the serum) The reaction is said to be *biphasic* when the colour change begins on the addition of the reagent, whilst an appreciable proportion of the pigment is extracted by the chloroform This was found to be more satisfactory in practice than endeavouring to name the type of reaction solely from the final colour obtained and the time occupied in reaching it, and it is in this sense that the terms ' direct ' and " biphasic " are used in the table An *indirect* reaction is one in which no change of colour occurs with the reagent until after the addition of alcohol to the serum Hence there is no difficulty in recognizing this type, and the fact that the pigment may be completely extracted by chloroform is not made use of

It will be observed on reference to the table that not only did all the cases of obstructive jaundice give a direct reaction, but most of the toxic and all the catarrhal cases reacted in a like manner It would not have been possible to classify these cases by the colour obtained in the van den Bergh test, as in every one the final shade was more or less violet This accords with the view already widely held, that the reaction gives little assistance in differentiating obstructive jaundice from the other varieties, with the exception of the haemolytic type, which gives the indirect reaction

The quantity of bilirubin in the serum was estimated in every case by van den Bergh's method but this method suffers from the disadvantage that varying quantities of pigment are carried down with the protein precipitate on the addition of alcohol, and so are not included in the final estimation This is more particularly the case in serums giving a direct reaction In addition, the adsorption in different serums is not proportional to the total pigment present On this account Thannhauser and Andersen's modified method, in which the whole of the bilirubin is estimated, was also carried out The figures for both methods are given for purposes of comparison and reference The bilirubin content of normal serum is 0 2 to 0 5 unit

BLOOD PHOSPHATASE

The property possessed by certain body tissues and organs of hydrolysing phosphoric esters into the free alcohol and phosphoric acid is attributed to the presence of enzymes, to which the name of phosphatases has been given One or more of such enzymes are normally present in blood, and the ability of the blood to split phosphoric esters in the above way is referred to as the phosphatase

activity of the blood Experimental evidence has been brought forward by Robison and his associates[2] to show that phosphatase plays an important part in the formation of bone and it appears that this enzyme may also be a factor in carbohydrate metabolism

It was found by Kay[3] and by Roberts[4] working independently that the phosphatase activity of the blood is greatly increased in osteitis deformans and Kay showed further that a marked increase also occurs in other conditions in which extensive bony changes are taking place In the varied series of cases investigated by Roberts were included two cases of obstructive jaundice and one case of catarrhal jaundice The two cases of obstructive jaundice showed an increase in blood phosphatase activity as great as that noticed in some of the cases of osteitis deformans whereas the catarrhal jaundice figure was only slightly raised above the normal This difference between the two forms of jaundice seemed to merit further investigation the result of which has been to establish the fact that in cases of gross obstructive jaundice such as may result from a gall stone in the common bile duct or a pancreatic carcinoma the blood phosphatase figure is invariably high whereas in all other varieties of jaundice the figure is but slightly raised and may even be normal though the patient may be deeply jaundiced The results on which this statement is based are shown in the table and the method used in obtaining these results will now be described

TECHNIQUE AND PRESENT INVESTIGATION

About 10 c cm of blood was removed from the patient's arm vein in the usual way Of this 5 c cm was allowed to clot to yield serum for the van den Bergh test and 5 c cm was oxalated for the phosphatase determination Should it be preferred to use plasma for the van den Bergh test the whole of the blood can be oxalated and after the removal of the 4 c cm required for the phosphatase the remainder can be centrifuged for plasma

The phosphatase activity was estimated by the author's method[4] which consists in determining the increase in inorganic phosphorus (that is the amount of hydrolysis) on incubating the blood with excess of sodium beta glycerophosphate for two hours at 38–40° C at *p*H 8 9 The phosphorus is determined before and after incubation by Benedict's colorimetric method as described in Myer's *Practical Chemical Analysis of Blood* The results are expressed in units of phosphatase per 100 c cm blood one unit being the amount of enzyme that will liberate 1 mg phosphorus in two hours under the above conditions The method sacrifices a certain amount of accuracy in order to be easily applicable and to diminish time consumption so that the exact limits of normality are not precise but a result not exceeding 5 5 units may be taken as normal

In the description of the method in the original paper it was stated that the minimal quantity of oxalate should be used to prevent clotting as it was noticed that excess of oxalate led to lower results for the blood phosphatase It has since been found that this is because the oxalate interferes with the determination of the phosphorus though it does not appear to affect the activity of the enzyme This was shown by carrying out the phosphatase procedure on three portions of blood under identical conditions except that a little additional powdered oxalate was added to portion 2 before incubation After incubation and protein precipitation had been carried out on the three specimens an amount of oxalate was added to specimen 3 equal to that previously added to specimen 2 The inorganic phosphorus was then determined in each the results being (1) 15 4 mg (2) 14 6 mg (3) 14 6 mg Thus the effect of oxalate is produced during the phosphorus determination not during the incubation When excess of oxalate is used the effect is more noticeable the greater the concentration of phosphorus so that the error does not vanish in computing the increase in phosphorus concentration but leads to a lower value for the phosphatase If a great excess of oxalate is added no colour at all develops in the phosphorus determination but the small quantity necessary to inhibit clotting makes no essential difference to the result

Although the phosphatase figure is often alone sufficient to distinguish the obstructive nature of a jaundice it is an advantage to carry out a quantitative bilirubin estimation at the same time in order to obtain a numerical expression of the jaundice to compare with the phosphatase figure The degree of skin pigmentation is not a reliable index of the bilirubin content of the blood and it is on the relation between this content and the phosphatase activity that the differentiation really depends Thus a phosphatase figure which would indicate toxic jaundice if the bilirubin content of the serum was high might favour a diagnosis of obstructive jaundice if the serum bilirubin was low (Compare Cases 6 and 24)

REMARKS ON CASES

The cases are arranged in the table into obstructive toxic and infective catarrhal and haemolytic jaundice and a small unclassified group With the exception of one or two of the last named the diagnosis in every instance was clearly established either on clinical grounds or as a result of operation or necropsy

It is obvious from a perusal of the figures that the cases fall definitely into obstructive or non-obstructive groups Only one case in the obstructive group shows a phosphatase figure of less than 10 units and in this case the jaundice was relatively slight (2 7 units of bilirubin) On the other hand none of the toxic and catarrhal cases has a phosphatase figure above 10 with the exception of Case 37 which will be referred to later The fact that several of the toxic cases were deeply jaundiced emphasizes the distinction The essentially obstructive nature of the icterus in Cases 3 and 7 was apparent from the macroscopical and microscopical findings at necropsy

No.	Diagnosis	Units of phosphatase	Type of van den Bergh reaction	Units of Bilirubin: Van den Bergh	Units of Bilirubin: Thudichum
	Obstructive				
1	Carcinoma pancreas	13.5	Direct	12.0	—
2	" stomach with jaundice	19.6	"	1.5	1.4
3	Miliary tuberculosis with jaundice	10.9	"	10.7	15.0
4	Stone in common bile duct and ruptured cystic duct	11.8	"	6.5	0
5	Pancreatic cirrhosis—cholecystotomy	20.4	"	1.0	13.5
6	Carcinoma bile duct—six days after operation	9.4	"	2.5	2.7
7	Hodgkin's disease with jaundice	13.4	"	11.6	11.9
8	Cholelithiasis	14.6	"	11.3	12.5
9	Carcinoma pancreas	16.0	"	13.8	12.4
10	"	12.6	"	6.0	5
11	Obstructive jaundice	22.9	"	1.2	17.3
12	Cholelithiasis	14.7	"	1.5	0
13	Carcinoma stomach with jaundice	13.6	"	12.5	9.1
14	Carcinoma pancreas	12.1	"	6.7	9.3
15	"	16.8	"	17.4	13.4
16	"	17.3	"	12.8	11.5
17	Cholelithiasis	20.3	"	13.9	15.0
18	Carcinoma bile ducts	17.0	"	11.3	16.6
19	" stomach with jaundice	18.6	"	10.0	14.1
20	Cholelithiasis	16.5	"	8.2	11.1
21	Carcinoma pancreas	21.3	"	14.1	13.9

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No	Diagnosis	Units of phosphatase	Type of van den Bergh reaction	Units of Bilirubin	
				v d B method	T & A method
	Toxic and Infective				
22	Toxic jaundice—patient died	8 7	Biphasic	17 0	—
23	Jaundice following N A B	5 0	Direct	13 5	17 6
24	5th day	6 6	,	9 8	16 0
	10 days later	9 4	,,	21 7	30 0
	7	7 9		18 5	25 5
25	Toxic jaundice	8 9	,,	28 0	35 0
26	Jaundice following N A B 21st day	5 5	,,	13 2	20 3
27	Suppurative cholangitis	7 5	,	55 0	—
28	In	7 7	,,	3 6	5 0
29	In cystectomy for gall stones	8 1	Biphasic	14 6	19 2
30	Jaundice following N A B	5 1	Direct	6 2	10 2
31	Subacute yellow atrophy	8 2	Biphasic	18 0	20 6
32	Jaundice following N A B	6 9	Direct	21 0	26 5
	Catarrhal				
33	Catarrhal jaundice	4 7	Direct	17 5	20 3
34		4 2	,	2 5	6 9
35	,,	5 0	,,	5 0	7 3
36	,,	3 7	,,	3 7	5 1
37	,, (patient aged 3)	13 9	,,	2 7	—
38	,,	4 8		10 0	13 9
39	,, 1 week after onset	6 6	,	23 9	27 7
	3 weeks	8 9	,,	17 4	23 8
40		5 2		13 7	17 9
	Haemolytic				
41	Pernicious anaemia	2 7	Indirect	5 0	—
42	Severe secondary anaemia	5 5	Delayed direct	1 6	—
43	Secondary anaemia	2 2		1 9	1 7
44	Acholuric jaundice	3 2	Indirect	6.8	7 0
45	Pernicious anaemia	3 3		3 0	—
	Unclassified Cases				
46	Portal cirrhosis	21 9	Biphasic	1 2	1 6
47		6 0		1 3	1 5
48	Cirrhosis or carcinoma liver	7 6		0 9	1 2
49	Chronic hepatitis	9 1	Direct	0 5	0.5
50	Catarrhal jaundice (?)	6 7		5 0	7 3
51	Acute onset infective endocarditis	6 8	Biphasic	2 7	2 9
52	In case of Graves's disease ? (Enlarged spleen—positive W R)	7 4	Direct	1 4	2 0

Case 11 was clinically one of obstructive jaundice, but the patient left the hospital before the nature of the obstruction had been ascertained In Cases 22 and 25 there was again no question as to the nature of the jaundice, though the actual "toxin" was not discovered It will be noted that five cases of so called 'haemolytic" jaundice are included (Cases 41 to 45), in each of which the phosphatase figure is normal The unclassified cases are so grouped either because the clinical diagnosis was in doubt or because the class into which the jaundice should be put on pathological grounds is open to dispute!

Case 46—Male aged 31 with enlarged liver and spleen There was a lack of unanimity of opinion in the diagnosis of this case as it closely resembled the mythical Hanot's cirrhosis The phosphatase figure is exceptionally high in comparison with the slight degree of the jaundice and it is probable that some factor other than gross biliary obstruction is involved This case was encountered at the outset of the research and when later its exceptional nature was recognized an attempt was made to get into touch with the patient in order that a more thorough investigation might be made This proved impossible as the patient had died in the interval

Case 47—Male Portal cirrhosis with hob nail liver and history of ascites and Talma-Morrison operation Kay[3] found a slightly increased blood phosphatase in a case of portal cirrhosis but he does not mention the presence or absence of jaundice

Case 48—Male An obscure case with a greatly enlarged liver, diagnosed provisionally as carcinoma liver or cirrhosis

Case 49—A woman aged 43, who had had 'catarrhal jaundice" four months previously, and who still showed an icteric tint and an enlarged liver

Case 50—A woman, aged 25, diagnosed as catarrhal jaundice at the time of the test (with which diagnosis the figures are in agreement), but as the jaundice was still present several weeks later the case has been left unclassified

Case 51—A girl, aged 20 who had been under observation and treatment for some months for thyrotoxicosis and who then became suddenly worse with intense pain in the legs, vomiting and jaundice This proved to be the onset of infective endocarditis, which ended fatally a few weeks later It is probable that such a jaundice would be toxic in nature but the case is complicated by the fact that the blood phosphatase is liable to be slightly increased in Graves's disease

Case 52—Another obscure case A woman aged 43 with an enlarged spleen and a positive Wassermann reaction who left the hospital before a satisfactory diagnosis had been made

In several of the cases in the main groups the method described was of value in establishing the diagnosis and it is perhaps permissible to refer to one such case as an example A man, aged 67, was admitted to hospital complaining of increasing jaundice of three weeks' duration No symptoms of any significance were present On examination there was nothing abnormal found except the jaundice The stools were pale, bilirubin was marked, and the van den Bergh test was direct, the serum containing 20 3 units of bilirubin A diagnosis of carcinoma pancreas was made Against this was the fact that the phosphatase activity of the blood was normal On further investigation of the case the Wassermann reaction was found to be positive, whereupon the patient admitted that he had been having "injections" on this account When he was seen two months later the jaundice had cleared up and the serum gave an indirect reaction (0 4 unit bilirubin) The case is No 26 in the table

The cases of catarrhal jaundice are shown in the table separately from other jaundices of toxic and infective nature At first sight Case 37 would appear from its phosphatase figure to belong to the obstructive group, but this is not necessarily so, since the patient was a child of 3 years of age, and the normal blood phosphatase in children is nearly double that for an adult, though the actual limits of variation have not been worked out by the author's method A blood phosphatase estimation on a child of 5, convalescent after pneumonia, carried out at the same time as the above, gave a value of 8 2 units Nevertheless catarrhal jaundice of an obstructive nature cannot be excluded in this case In this connexion it may be mentioned that it is probably a mistake to regard catarrhal jaundice as a pathological entity Klemperer, Killian, and Heyd[4] divide it into three classes

(1) Due to obstruction of the ostium of the common bile duct from gastro-intestinal catarrh

(2) By degeneration of the liver with multiple necrosis —a sort of mild yellow atrophy

(3) Due to cholangitis

Cases of the first class would show the objective signs of an obstructive jaundice, and the phosphatase method would presumably fail to differentiate such a jaundice from that due to other forms of obstruction, but apart from the doubtful case referred to above the difficulty was not met with in this investigation The fact that the phosphatase value was low in all the other cases supports the view widely held at the present time that most cases of catarrhal jaundice are of the nature of a hepatitis

DISCUSSION

Although the reason for the relation between the phosphatase activity of the blood and the type of jaundice is not as yet altogether manifest, there are a few points bearing on the matter which may be discussed at this

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9 PARTNERSHIP —Residential Town within easy reach of London — A one third share is for disposal owing to the retirement of the senior of three Partners in a well-established mixed class Practice Gross cash receipts for the last 12 months £4 400 Panel of 2 500 Fees 3/6 to 21/ Midwifery from £5 5s Very nice house available Ingoing Partner should be experienced, accustomed to better class work and able to undertake major surgery Preference will be given to one holding the F R C S Premium £3 000

10 PARTNERSHIP —WITHIN TEN MILES OF LONDON —In a pleasant and rapidly growing residential suburb the half share is offered owing to the retirement of the Junior Partner in a well established and increasing Practice having good future prospects Gross cash receipts for last 12 months about £1 600 Panel of 1 600 Appt worth £140 not included in receipts Very nice house with 2 reception 5 bedrooms and dressing room 2 maids rooms and usual offices. Large garden with tennis lawn Price for freehold £1,700 Premium 2 years purchase

11 PARTNERSHIP —In a well populated pleasant South Eastern suburb within ten miles of London the half share of an old established mixed class Practice is for disposal owing to the retirement of the junior partner Held by the remaining partner 30 years Cash receipts average £2 765 p a including panel of 1 800 and appts worth £150 Very little midwifery Pleasant semi-detached corner house with ample accommodation garden Price leasehold (over 900 years at ground rent of £7 p a) £1 050 Premium 2 years purchase Scottish graduate preferred

12 MANCHESTER —Old-established middle and working class PRACTICE averaging about £1 300 p a including panel of nearly 1 800 Visits from 3 6 Moderate expenses Suitable house with 3 bed rooms and 3 good sized attics etc Price for freehold £1 150 Premium 1½ years purchase

13 NORTH EAST COAST —FAVOURITE TOWN —Old-established good mixed general Practice offering considerable scope for increase Gross cash receipts for the past twelve months approximately £1 800 Selected panel of 100 Fees 5/ to 7/6 Very little midwifery Well situated house with 3 reception 5 to 6 bedrooms, etc, and separate professional rooms Electric light Garage Price £2 500 large part on mortgage Good opportunity for Eye work and Ear Nose and Throat work if desired Sport of all kinds and excellent schools Premium £2,800

14 MANCHESTER —Old-established middle and working-class PRACTICE producing for the last twelve months about £650, including panel of 790 Fees from 3/6 Convenient house with 2 reception 4 to 5 bedrooms bathroom, etc Rent on lease £60 Premium £950 to include furniture

15 LONDON, NORTH WEST — Middle class PRACTICE in new and developing district producing last year £400 and this year at the rate of about £600 Panel of 230 Fees 2/6 and 3/6 visits free 5/ Six roomed house with bathroom electric light Cars Garden Price for freehold £1 000 £850 on mortgage Prem £650

16 CENTRAL LONDON —Middle and better class PRACTICE, average for the last two years about £500 p a including small panel of 180 Fees 3/6 to 21/ Professional accommodation can be rented at £200 p a Premium £300 to include furniture drugs instruments etc

17 CO DURHAM —PARTNERSHIP —7/12 share is offered in a well established very sound mixed class Practice the gross cash receipts of which average approximately £2 400 p a Panel produces £850 p a and Public Medical Service £750 p a Appointments worth £120 Succession to the whole Practice within 4 years or sooner as agreed Very good house, specially built with ample accommodation for sale Practice is situated in a growing area and offers excellent scope for Premium for share 2 years purchase

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19 SOUTH EAST LONDON —Good middle and working-class PRACTICE producing last twelve months nearly £950 Panel of 986 Suitable house with 2 reception 4 to 5 bedrooms etc Rent on lease £70 p a Premium to include drugs etc and surgery fittings and furn £1 450

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stage In the first place the differences observed in the phosphatase are not due to any variation of hydrogen ion concentration in the incubation mixtures This point was disposed of at once by incubating several well buffered specimens of icteric bloods at different *p*H values when the distinction between the two main types of blood was maintained Nor is there any reason for postulating the presence of phosphatase inhibitory substances in toxic jaundice blood since a mixture of equal parts of such blood and high phosphatase blood from a case of osteitis deformans gave the exactly average value of its two components

It was thought that the explanation might be found in the fact that bile contains phosphatase so that on the occurrence of biliary obstruction the entry of bile into the blood would increase the phosphatase activity of the latter as well as its bilirubin content There are however two reasons why this alone will not explain the facts In the first place on testing the point experimentally it was found that the phosphatase activity of bile is in itself insufficient to account for the high figures obtained Several tests were carried out in which cadaver bile or bile draining from the gall bladder or from the bile ducts after operation was added to normal blood of which the following will serve as a typical example

Normal blood was mixed with fresh bile in the proportion of 3 to 1 A van den Bergh test on the mixture was direct and 13 3 units of bilirubin were present as estimated by van den Bergh's method (colour comparison was impossible when Thannhauser and Andersen's method was used) The phosphatase activity of the original blood was 2 8 units and of the mixture 3 6 units (estimated at optimum *p*H by a slight modification of the method used for blood) from which it may be deduced mathematically that the activity of the bile was about 6 units Direct determination of the bile phosphatase could not be accomplished as turbidity developed during the phosphorus determination Thus an artificial obstructive jaundice serum of 13 3 units showed the blood phosphatase activity of a toxic jaundice In one case a small proportion of dark viscous cadaver bile from the gall bladder was used which resulted in a phosphatase value for the mixture of 12 2 units but the bilirubin figure was far in excess of any likely to occur in practice

The second reason against the bile phosphatase hypothesis is that it is inconsistent with the low phosphatase figures found in toxic jaundice if the modern view of this condition be accepted—namely that the jaundice is in part due to biliary obstruction or to necrosis of liver cells by which free passage of bile constituents into the blood is made possible thus accounting for the direct or biphasic van den Bergh reaction the frequently pale stools and the bilirubinuria According to van den Bergh bilirubinuria is always indicative of obstruction

The modern explanation of the van den Bergh reaction and jaundice has however never appeared entirely satisfactory to the author but with the slight modification about to be tentatively put forward it seems to fit the facts better and to allow of an explanation of the phosphatase figures It is at present thought that indirect reaction pigment is produced from haemoglobin by the cells of the reticulo endothelial system is conveyed to the liver in the blood where it is taken up by the polygonal cells and converted into direct reaction pigment in which form it is excreted into the bile When bile is reabsorbed into the blood in obstructive jaundice a direct van den Bergh reaction is therefore obtained If for any reason the liver cells are unable to deal with all the pigment produced by the reticulo-endothelial cells this will accumulate in the blood and result in an indirect reaction In toxic jaundice both these factors are supposed to be at work with the result that the blood contains both types of pigment and so gives a biphasic reaction

A MODIFICATION OF EXISTING VAN DEN BERGH THEORY

The suggested amendment is that indirect reaction pigment is converted into direct reaction pigment not in the polygonal cells but in the blood in or even outside the liver so that the function of the polygonal cells is simply to transfer the direct reaction pigment from the blood into the bile Some support is afforded to this view by the fact that direct reaction pigment is readily dialysable whereas indirect reaction pigment which is probably present in the colloidal form will not dialyse[1] Accumulation of direct reaction pigment in the blood could then occur in one of two ways (1) by obstruction to the bile ducts so that the liver no longer removes bilirubin from the blood (2) by functional inefficiency of the liver cells such as occurs in toxic or catarrhal jaundice

In either of these eventualities the blood would show a direct reaction which is what actually occurs in practice The idea of the circular tour undergone by the bile pigment in obstructive jaundice—that is from the blood through the liver cells and back into the blood via the lymphatics or the hepatic capillaries—may be retained in addition if desired The explanation of the biphasic reaction and of its occurrence from time to time in toxic jaundice remains essentially as before the accumulation of the indirect reaction component being due to an insufficiency of the agent in the blood necessary for its conversion to direct reaction pigment which suggests that this agent originates mainly or entirely in the liver This amended explanation gets over an awkward point in Mann's work on bile pigment formation which does not appear to have been noticed Mann[2] found that when the liver was removed in dogs jaundice developed after an interval of six hours the blood showing first an indirect reaction and later a biphasic This would clearly be impossible on current theories—that a biphasic reaction indicates direct plus indirect reaction pigment and that direct reaction pigment is due to the passage of the indirect reaction type through the liver cells

The modified theory also makes it possible to explain the relation between blood bilirubin and blood phosphatase in jaundice This will differ according as the phosphatase be assumed to originate in the liver cells or elsewhere If it originates in the liver cells then in obstructive jaundice it either passes into the blood instead of into the bile when the biliary secretion ceases or it joins the circular tour with the bilirubin and in this manner reaches the blood In toxic jaundice it passes into the bile in the normal way whereas the bilirubin is held back in the blood in varying degree by the functional incapacity of the liver cells If on the other hand we assume that the phosphatase originates outside the liver and reaches it in the blood stream its accumulation in the blood in biliary obstruction is accounted for in the same way as the rise in pigment content whilst in toxic jaundice the liver must be supposed to excrete phosphatase more readily than pigment From a biochemical investigation into bile and jaundice sera which it is hoped to publish in due course it would appear that the actual details of bile pigment metabolism are more complex than this account suggests but the latter offers a solution of the present problems without contravening any of the established facts

The point which remains for explanation is why the blood phosphatase figures in obstructive jaundice should exceed those found for bile This may be accounted for by noting that whereas bile pigment is readily excreted in the urine phosphatase is not hence the phosphatase figure will soon rise relatively and absolutely Kay[3] has shown that the urinary phosphatase excretion is not greatly increased above the normal in Paget's disease with high blood phosphatase and the author has

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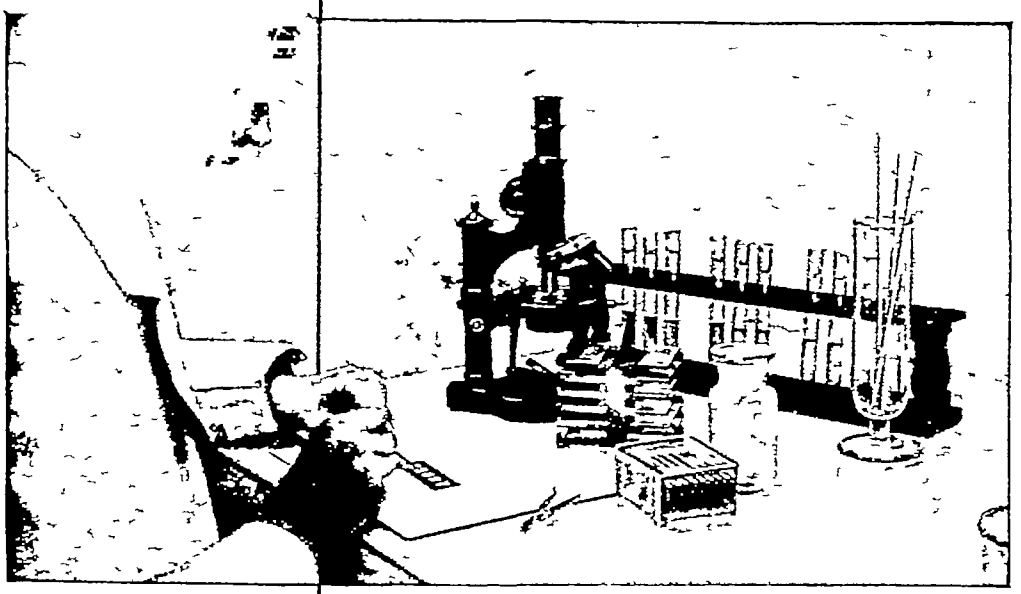

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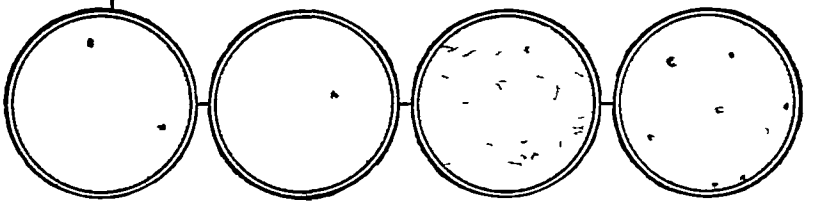

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confirmed this observation and has noted further that the phosphatase excretion in all types of jaundice is also but slightly increased This implies that an early case of obstructive jaundice would show a relatively low phosphatase figure, but no case of obstructive jaundice of less than a week's duration has been met with in the course of the work The point might be settled by ligature of the common bile duct in animals, but opportunity to do this has not occurred At the same time, the idea that the whole of the differences observed may be accounted for solely on the duration of the jaundice is untenable, since several of the toxic cases were of long duration The optimum *p*H for the blood phosphatase in jaundice is the same as that for the phosphatase in osteitis deformans, and it may well be that the same enzyme is concerned in the two conditions, being produced in the liver and concentrated at the site of bone formation In this connexion it is interesting to recall the observation of Buchbinder and Kern,[10] who found that a low blood calcium and osteoporosis followed the ligature of the common bile duct in dogs which findings have been attributed to inefficient absorption of calcium from the intestine owing to the absence of bile Reasons are given by Kay[5] for thinking that in bony diseases the high blood phosphatase is a result, not a cause but in obstructive jaundice the high blood phosphatase precedes any bony change, so that it is possible that in these cases the increased blood phosphatase leads to some disturbance of calcium–phosphorus metabolism

Finally it is necessary to draw attention to two classes of case in which the phosphatase activity of the blood may not elucidate the cause of jaundice

1 When the patient is already suffering from a disease in which the phosphatase is raised, as in Case 51, already discussed in which jaundice developed during the course of Graves's disease Apart from obstructive jaundice however, the phosphatase is considerably raised only in conditions in which extensive bony changes are occurring [4 5]

2 Cases in which the jaundice is slight, where there may be difficulty in deciding whether the phosphatase figure is raised or not, owing to the fact that the method of phosphatase estimation has a fair margin of error The accurate but more elaborate method described by Kay[11] might be of use in such cases Further, the final phosphatase figure depends to some extent on the initial figure before the onset of jaundice so that a low initial phosphatase and a trifling obstructive jaundice might leave the figure within normal limits This, however, is not the class of case in which the type of jaundice is of great practical importance, whilst it is clear that the method is capable of differentiating correctly most of the cases ordinarily met with On this account it seemed worth while reporting it at this stage in order that it might be applied and further tested by others interested in the subject

SUMMARY

1 The current description of the direct and biphasic van den Bergh reactions is criticized and suggestions made for its improvement The results of the reaction in a series of cases of jaundice are presented as evidence in support of the view that the reaction fails to differentiate obstructive from toxic and catarrhal jaundice

2 The obstructive nature of a jaundice can be recognized by the increased phosphatase activity of the blood, which occurs strikingly in this type alone The procedure adopted to recognize this increase is outlined and the results obtained in a series of fifty-two consecutive cases reported These results demonstrate that, by the method described toxic infective and catarrhal jaundice may be readily distinguished from jaundice of the obstructive type

3 The relation between the phosphatase activity of the blood and its bilirubin content is discussed A modification of the modern theory of jaundice and the van den Bergh reaction is proposed, which appears to explain the facts better that the present view, and to allow also of an explanation of the above relationship

The earlier portion of this work was carried out at Sheffield Royal Infirmary during the tenure of a maintenance grant from the Medical Research Council I would like also to acknowledge the readiness with which the various physicians and surgeons allowed my access to their icteric patients the assiduity of the house physicians in collecting icteric blood and the kindness of Professor H S Raper in reading through the original manuscript of this paper

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RELATION OF EXCESSIVE CARBOHYDRATE INGESTION TO CATARRHS AND OTHER DISEASES *

BY

J H P PATON, M D

Elsewhere[1] attention has been drawn to the fact that in a large boarding school for girls the incidence of cases of catarrhal illness of more than seven days duration was greatly reduced during the war years The following table shows the average incidence of such illness in the ten years 1904–13 and in the four years 1914–17

	1904–13	1914–17
	Per cent	Per cent.
Spring terms	4 15	0 6
Summer terms	1 1	0 5
Autumn terms	2 05	1 3
Average per annum	2 6	0 8

This suggests that perhaps the duration of catarrhal illness is affected by some article of diet the consumption of which was reduced during the war Do we know of any foodstuffs which in excess aggravate this condition? Many observers believe that children who have a low tolerance for carbohydrates are especially prone to catarrhal affections H C Cameron[2] has described the catarrhal child as having an excess of water in the body, and has attributed the tendency to lymphoid hyperplasia in all situations and to catarrhal inflammation of the 'swollen and oedematous mucous membranes" to this cause He finds that evident and permanent improvement follows restriction of carbohydrate food

McClendon[3] has demonstrated water retention after high glucose feeding both in man and in animals Ramsay[4] has described the occurrence of visible congestion and exudate in the retinas of patients whose carbohydrate intake is in excess of what they can tolerate, and has pointed out that this is an index of the state of the capillaries elsewhere in the body Occasional albuminuria (so

* Read to the Fife Branch of the British Medical Association, December 8th, 1932

often observed in children of the exudative diathesis) and the state of the lymphoid tissues and mucous membranes described by Cameron afford evidence of this Ramsay has further shown that phlyctenular ophthalmia —a condition only found in children of the exudative or catarrhal diathesis—is rapidly benefited by the restriction of carbohydrates and the withdrawal of all sugar from the diet Not only does the ocular condition rapidly improve on such a dietary but the associated retinal congestion albuminuria and catarrhal states disappear It is of interest to note that the initial lesion in the phlyctenule consists of capillary congestion and exudation of lymphocytes and that the complications such as ulcer of the cornea are invariably associated (like the catarrhal states of the respiratory mucosa) with the pathogenic activity of cocci The well known susceptibility of the diabetic to severe coccal infection indicates some association between the latter and hyperglycaemia

Observers[4] from the Rowett Research Institute have recorded that a study of the diet and health of two East African tribes revealed the fact that the mortality from bronchitis and pneumonia was ten times as great in one tribe which was cereal eating as it was in the other which was mainly carnivorous in habit

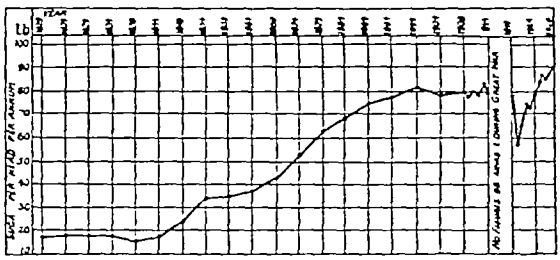
It may be concluded that the tendency to suffer from a variety of chronic catarrhal and exudative processes is associated with intolerance of carbohydrates especially of sugar As a corollary to this it may be assumed that even in persons of high tolerance a similar liability to chronic catarrhal inflammation will result if the absorption of carbohydrates is sufficiently excessive

NATIONAL CONSUMPTION OF CARBOHYDRATES AND ITS MODIFICATION DURING THE WAR

The carbohydrate part of our diet consists of the cereals and all starch-containing foods on the one hand and of sugar (sucrose) on the other During the war there was little restriction of our starchy foods indeed we were encouraged to eat more of these than in peace time There was however a great restriction in the supply of sugar Imports of this commodity fell from 32 to 18 million hundredweights although the military ration was maintained at a high level

Is there any evidence that our consumption of sugar in peace time is excessive? Sugar has only been in use in any quantity within comparatively recent times It was unknown in Northern Europe until the eleventh century and was first brought to England from Mexico by Admiral Hawkins in 1563 Even in Pepys's day it was a rarity because he records in his diary that Hither came Gilb Holland and brought me a stick rapier and Shelton a sugar loaf (7 lb) Indeed up to the end of the eighteenth century sugar was not in common use At the beginning of the nineteenth century the manufacture of sugar from beet was encouraged in France by subsidies granted by Napoleon From 1819 to about 1845 the consumption of sugar in Great Britain was in the neighbourhood of 17 lb per head per annum but since that time it has increased enormously as is shown in the accompanying graph During the war and in 1921 (owing to trouble in the Continental beet industry) consumption fell Since 1928 it has increased still further and in 1931 we consumed in this country 96 lb per head per annum

In a boarding school for girls (about 350 pupils) I found the consumption of sugar to be at the rate of over 2 lb a week per head[7] Individual houses showed variations between 1 2 lb and 2 2 lb It is suggestive that for the term when these figures were obtained the house with the lowest sugar consumption had a catarrhal rate of 5 5 per cent while the house with the highest sugar consumption had a catarrhal rate of 24 6 per cent The rate in the other houses was roughly proportional to the sugar intake It was further observed that after a week-end holiday during which an increased quantity of sweets was consumed cane sugar could be demonstrated in the urine of more than half of the girls examined on return. Since that time several cases of chronic tonsillar hypertrophy and of chronic nasal catarrh which were highly resistant to local treatment have shown rapid improvement when sugar in every shape and form was withdrawn



Estimated quantity of sugar consumed per head of the population of the United Kingdom during each of the years indicated Figures from Statistical Office of Custom House London (From *Edinburgh Medical Journal* 1932 xxxix 9 p 557)

from their diet There are therefore good grounds for assuming as a working hypothesis that excessive consumption of sugar favours the persistence of the catarrhal state and that the rationing of this substance during the war was the factor which determined the reduction in duration of catarrhal illness in this school

It may be objected that since the utilizable product of all carbohydrates is glucose the case against sugar in particular falls to the ground Many arguments however indicate that sucrose may be especially harmful when consumed to excess

1 It is a pure chemical substance ($C_{12}H_2O_{11}$) devoid of all those accessory food factors (vitamins salts etc) with which it is associated in the vegetables from which we extract it

2 If absorbed unchanged (as has been shown to occur when consumed to excess) it is excreted by the kidney but it is not impossible that it exerts a toxic effect in its passage through the blood

3 Its digestion and absorption (as invert sugar) is attained with much greater rapidity than is the case with starches As MacLeod Ramsay and others have pointed out velocity of glucose absorption is of even more importance than weight

4 The laevulose fraction of invert sugar may if it reaches the systemic blood exercise a toxic effect But apart from that it is evident that the absorption of 50 lb of laevulose annually (the product of 100 lb of sucrose) which is greatly in excess of the amount derived from all natural foods must throw an unwonted strain upon hepatic activity

5 So far as sugar displaces natural foodstuffs vitamin and other deficiency must result

There is however no evidence of a corresponding decrease in the consumption of other carbohydrates and therefore the bulk of the sugar we eat must be regarded as surplus—a surplus which raises the resting level of the blood sugar to an unnatural extent and at an abnormal rate Excessive use of sugar is favoured by its pleasant taste its value as a preservative its failure to satisfy appetite either in virtue of its bulk or its vitamin content and above all by its cheapness Of the carbohydrates which we consume it is probably the most harmful when consumed in large quantity

I suggest from the foregoing therefore that restriction in the use of sugar would result in improvement in the national health as regards catarrhal illness

It is not to be supposed however that the evil effects of excessive carbohydrate intake are limited to the

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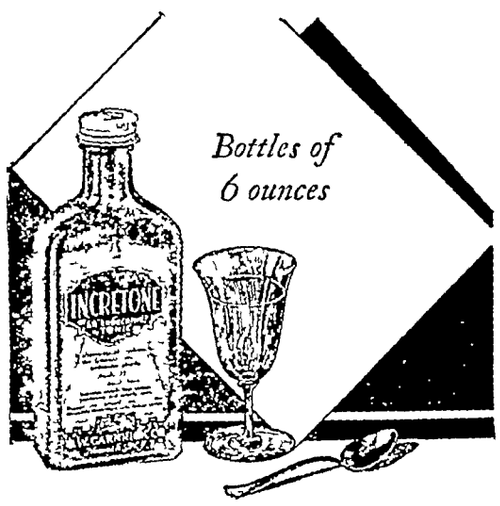

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aggravation of catarrhal illness A consideration of some of the results which may follow the habitual absorption of an excess of glucose into the blood seems justifiable even though at present it is largely speculative

EFFECTS UPON THE PANCREAS

Habitual excessive absorption of glucose must be met by habitual hyperinsulinism [4]

(*a*) In these circumstances any sudden reduction in glucose absorption (as, for example, at the onset of an acute febrile illness) will result in a comparative hypoglycaemia with the production of diacetic and oxybutyric acids from incomplete combustion of fats May not the habitual over-consumption of carbohydrates be responsible for the increasing frequency of acidosis among modern children?

(*b*) The undoubted benefit which many modern children derive from glucose feeding can only be explained by some degree of hypoglycaemia, indicating (since in starvation hypoglycaemia does not occur) over-activity of the islets of Langerhans

(*c*) Many cases of severe spontaneous hypoglycaemia are now being reported in adults In some of these the symptoms which were temporarily relieved by glucose or adrenaline administration, have disappeared when a partial pancreatectomy was performed

(*d*) Actual enlargement of the islets has[9] been demonstrated in many cases

(*e*) Since over-activity of an organ is apt to be followed by failure of function, and hypertrophy by atrophy, the increasing frequency of diabetes may be subject to a similar explanation Each of these states may be traced to over stimulation of the islets of Langerhans as a result of habitual excessive glucose absorption

EFFECTS UPON THE SUPRARENAL AND PITUITARY SECRETIONS

(*a*) The chief physiological antagonist of insulin is suprarenal secretion Habitual hyperinsulinism will thus be associated with habitual hyperadrenalism A second antagonist is pituitary secretion In addition to their actions upon blood sugar both of these secretions have pressor effects May not the increasing frequency of hyperpiesia be attributable to over activity of these glands?

(*b*) Adrenaline encourages the production of abnormal lipoids from cholesterol Recent work indicates that the earliest change in arteriosclerosis is a deposit of lipoids in the vessel walls This suggests that arteriosclerosis too may have some relation to excessive carbohydrate ingestion

EFFECTS ON FAT STORAGE

Apart from endocrine disturbances we know that when glucose is absorbed in excess of the normal capacity of the liver and muscle to store glycogen, that excess is deposited as fat In America where the consumption of sugar (112 lb per head per annum several years ago) is considerably higher than our own, the increasing frequency of obesity is causing alarm

Thus there is a group of diseased conditions—obesity, arteriosclerosis and diabetes—which have long been associated clinically, and which are increasing in modern times although the general death rate is falling Is it not possible that this increase is directly associated with excessive carbohydrate intake which is largely, if not entirely due to the prodigious increase in the use of sugar?

EFFECTS ON DIGESTION

A further result of excessive ingestion of carbohydrate food is the occurrence of indigestion Not only may those processes fail which are concerned with the conversion of starch into glucose and sucrose into invert sugar, but when active they may give rise to abnormal fermentative reactions in the intestine Substances are thus produced and absorbed which are capable of toxic effects such as the capillary disturbance described by Maitland Ramsay If the failure of digestion is sufficiently severe only a fraction of the ingested carbohydrate becomes available for absorption, and in the midst of plenty there is famine In such cases, as the following will show, the patients, though large eaters, are undernourished

The patient was a girl, aged 15 listless pale with a muddy complexion and a frequent sufferer from febrile catarrhal attacks She was thin and failed to gain weight though a heavy eater especially of starches and sweets In 1931 she developed renal glycosuria As this persisted to an unusual extent she was seen by a specialist who greatly reduced her starchy intake and prohibited sugar He warned me that the amount of carbohydrate he had permitted was probably quite insufficient for her school activities, and that the latter would have to be restricted to prevent loss of weight On the altered diet however she began to gain weight rapidly, became more alert and active and was able to play all games Her appearance and complexion rapidly improved and in the last year she has only suffered from one slight cold and has been free of glycosuria As I interpret it she had suffered from carbohydrate indigestion with its accompanying toxaemia and, when her digestion improved as a result of carbohydrate restriction her malnutrition disappeared

CONCLUSION

I submit that our carbohydrate intake is excessive, and that such excess is mainly due to the prodigious increase in the consumption of sugar in the last half century Clinical data have been advanced with regard to catarrhal illness but I must leave it to others to supply them for or against the association between sugar consumption and the diabetic group of diseases referred to It is from the general practitioners that such data must be obtained

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PATHOLOGICAL CHANGES IN ACUTE PANCREATITIS SEEN DURING LIFE

BY

STANFORD HOWARD F R C S

SURGICAL FIRST ASSISTANT AND REGISTRAR LONDON HOSPITAL

The following three cases of acute pancreatitis are described because the appearances in the abdomen seen at operation differed from those which have so far been seen at necropsy in the Bernhard Baron Institute of the London Hospital, and also from any given in the literature to which I have had access

CASE I

Female aged 52 Complete removal of right breast for carcinoma five years before For three weeks before admission she had been suffering from vague indigestion and flatulence and had noticed that the stools were pale and bulky Two days before admission she was seized with violent upper abdominal pain referred to the back and to the left shoulder which caused her to collapse She vomited twice at the onset On admission she appeared to be very ill

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Temperature 101° F pulse 140 and respiration 32 The tongue was dry and furred The abdomen was held rigid with no respiratory movement whatsoever On palpation there was board like rigidity of the upper abdomen with great tenderness Palpation revealed slight increase of liver dullness The diagnosis of a posterior perforation of a gastric ulcer into the lesser sac was made and immediate laparotomy was decided upon Upper abdominal section was performed and the peritoneal cavity was found to contain a moderate amount of clear blood stained fluid some of which was collected for pathological examination The gall bladder was normal but emptied slowly and there was no ulcer on the stomach or duodenum The great omentum and transverse mesocolon contained large distended areas of an opaque greyish jelly like material and the peritoneum of the posterior abdominal wall was bulged forward with a large collection of a similar mucinoid substance The pancreas was greatly enlarged and oedematous and was entirely surrounded by this jelly like substance The gland itself gave a peculiar granular and at the same time soggy feeling on palpation Two small areas of fat necrosis were found one in the gastro-hepatic omentum and the other in the great omentum No drainage was performed and the patient was sewn up and put back to bed The following day the urine showed 200 units of diastase Within a week the diastatic index had dropped to 100 and on discharge on the seventeenth day it had dropped to 30 Recovery was completely uneventful

CASE II

Female aged 36 For three weeks she had been suffering from pain in the epigastrium referred to the back and to the point of the right shoulder with frequent attacks of vomiting On the day of admission she had a very severe attack of pain similar in situation but enough to cause collapse Her temperature was 98° pulse 120 and respiration 32 There was no jaundice The abdomen exhibited extreme tenderness and rigidity all over most marked in the hypogastrium and right hypochondrium The liver dullness was normal At operation there was a very grossly enlarged gall bladder containing a number of calculi The omentum exhibited areas of distension with a greyish mucinoid material which separated the layers into large blebs The peritoneum of the posterior abdominal wall was similarly affected and the pancreas lay in a mass of the same jelly like material There were no areas of fat necrosis The gall bladder was emptied of stones and muco-purulent fluid and drained The common duct was patent The lesser sac was drained by a large tube passing through the transverse mesocolon and the abdomen was closed The tube in the lesser sac was removed on the third day as no discharge was being evacuated through it The gall bladder tube was removed on the sixth day Recovery was uneventful the patient being discharged well on the fifteenth day Unfortunately the urine diastase was not estimated

CASE III

Male aged 54 For one month he had been suffering from vague dyspepsia with pain in the abdomen referred through to the back Two days before admission the pain had become much more severe and was accompanied by vomiting On the day of admission all the symptoms were increased and there was slight jaundice present The patient's temperature was 99 6° pulse 130 and respiration 40 Abdominal respiration was absent The abdomen evinced board like rigidity in the upper half with marked tenderness all over On laparotomy the gall bladder was found to be distended and there were several small calculi present The common duct was dilated and one small stone with a large amount of biliary mud was found As in the two other cases the great omentum was distended into blebs with the greyish mucinoid material The pancreas itself was surrounded by similar material and the peritoneum of the posterior abdominal wall was also raised by a collection of the jelly like material behind it There were three small areas of fat necrosis The gall bladder was drained the common duct opened and cleared and also drained No drainage of the lesser sac was carried out The diastatic index in this case was 180 which fell in eight days to normal Recovery was uneventful the patient being discharged on the sixteenth day

REMARKS

Only two small fat necroses of typical appearance were seen in Case I and three in Case II In all three cases the retroperitoneal tissue round the pancreas in the great omentum and upon the posterior abdominal wall showed large focal or diffuse expansions occupied by an opaque greyish jelly like substance In Case I the mesocolon was similarly affected whilst the pancreas was greatly swollen and oedematous Professor Turnbull tells me that he and his colleagues have not observed this gelatinous substance at necropsy but have found in similar positions masses of an opaque pultaceous or putty-like substance containing fibres suggesting a soft plaster mixed with hair The colour has been in general white yellow or grey but to a greater or less extent dirty grey brown black or brown red from altered blood This putty like substance containing fibres is obviously digested adipose tissue in which the digestion of the fibrous stroma is incomplete This substance found at necropsy might be described as butter but not as jelly It is possible that the appearances shown during life alter after death This however appears to be an unlikely explanation because Professor Turnbull remembers cases in which masses of pultaceous substance were removed from the lesser sac during dressings after laparotomy It is more probable that the gelatinous condition seen in these three cases during life represents a preliminary stage in digestion Although the symptoms had come on acutely and there was severe interference with pancreatic function all three patients recovered It is impossible therefore to know whether complete digestion ever occurred

My thanks are due to Professor H M Turnbull for his kind help with the post mortem description of this condition and to Mr Russell Howard for permission to publish the details of these cases

TOTAL HYSTERECTOMY FOR NON-MALIGNANT CONDITIONS

BY

RALPH WORRALL M D M CH
F R A C S Hon F A C S
CONSULTING GYNAECOLOGIST TO THE SYDNEY HOSPITAL

The very valuable paper on total abdominal hysterectomy for myoma of the uterus by Dr Herbert Spencer in the *British Medical Journal* of June 25th 1932 prompts me to make an addition to it which I consider of importance No one has done so much as Dr Spencer in calling attention to the real danger of cancer attacking the cervix which is left after subtotal hysterectomy In the *Medical Journal of Australia* of June 23rd 1917 I published a short series of such cases and have known of many others I think it is generally admitted all over the world that 2 per cent would be a conservative estimate of such untoward happenings Notwithstanding Dr Herbert Spencer's irrefutable arguments in favour of total hysterectomy I am convinced that it will never be as popular as the subtotal method until the Doyen technique (which I have seen both Doyen and Dr Spencer perform and which Dr Spencer still advocates) gives way to one infinitely simpler safer and with much better ultimate results Such a method I published in the *American Journal of Obstetrics and Gynecology for December* 1917

My first operation by this method was performed on June 14th 1914 and my 532nd on July 29th 1932 There have been three deaths—two due to accidents from the disorganization of the Sydney Hospital staff during the war The third was due to acidosis in a drug addict This patient lived out of the city and her case was

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insufficiently studied prior to operation The mortality rate is thus 0 563 per cent as compared with Spencer's 1 8 and Lockyer s 1 58, which Spencer says has never been surpassed If my technique be closely adhered to it is impossible to wound bladder or ureters, except in the case of cervical myomata, or where there is subserous development

I have had the privilege of demonstrating the operation to three surgeons of very large experience—namely W I Mayo Franklin Martin, and Alfred Smith Dr Mayo s comment was That is a very pretty hysterectomy Dr Masson of Rochester and Dr Geo Gray Ward of New York have written to me to say they were favourably impressed and would give the method a trial My colleagues here and in Melbourne have, generally speaking adopted this operation It will be a pity if a method which has been proved to be an advance should not be made known to, and tried out by British surgeons

The operation originated in my dissatisfaction with the results of subtotal hysterectomy not alone because of the not uncommon tragic development of cancer but because of the frequency with which women after this operation still complain of discharge and general ill health due to the septic focus As a consequence the after-results are comparable to those following successful prostatectomy, the patient seems to take a new lease of life A factor in this sense of well being is that the ovaries are always preserved unless the woman has passed the menopause

In this series I have included every hysterectomy for non malignant conditions of the uterus whether myoma or bleeding uterus but I have not included eighteen performed in the course of operation for pelvic suppuration I have alluded to these in my address on pelvic suppuration to the American College of Surgeons, which was published in *Surgery Gynecology and Obstetrics* for 1925 All the patients recovered It may perhaps be not irrelevant to say here that insomuch as radium in addition to the impossibility of diagnosing all contraindications to its use atrophies the ovaries leaves untouched the septic focus in the cervix, and affords no security against the subsequent development of cancer it must be held to be altogether inferior to the modern total hysterectomy for myoma and the condition known as fibrosis or bleeding uterus

In the following account of the technique it will be noted that this is not a coning out method but the reverse as the dissection approaches the external os instead of narrowing it expands so as to include every vestige of gland bearing tissue The immunity from embolism in this series is remarkable I am inclined to attribute it to three things (1) The avoidance of transfixation and the substitution for it of the method of clip and tie which I described in the *Journal of Obstetrics and Gynaecology of the British Empire* (May, 1912) (2) The use of plain catgut instead of the silk recommended by Dr Spencer (3) The insistence on the patient taking five or six deep breaths every hour throughout each day also moving the legs up and down

Technique

After etherization the bladder is emptied the vagina scrubbed and disinfected and a syringeful of freshly made tincture of iodine slowly injected into the uterine cavity In some cases the os is closed with catgut sutures in addition

The abdomen is opened in the median line my reflecting retractor placed in the lower angle of the wound and each round ligament held up clipped and divided Through the space thus opened up in the anterior layer of each broad ligament the finger is thrust the vascular arch above the finger containing the ovarian vessels is divided between clips on the uterine side of the ovaries which are always allowed to remain if healthy The peritoneum between the cut round ligaments is divided and the bladder pushed down with the scissors The uterine vessels bared of all tissues are clamped on each side a shade below the inner os With a blunt scissors bent not curved on the flat the musculature of the cervix is then incised all around penetrating about halfway toward the canal the direction of the cut is then altered from inward to downward until the external os is reached when the circumference of the cut is expanded so as to include all the external os The mucosa of the vagina is united to the serosa anteriorly by a figure of eight catgut suture the same is done posteriorly These two sutures are used as tractors by which to pull up the field of operation nearer to the operator Another figure of eight on each side closes the lateral angles of the opening into the vagina and checks all oozing in these situations and the tying of the two traction sutures closes the central portion of the opening All artery clamps having been replaced by ligatures a purse string suture on each side closes up the broad ligaments, takes in the stump of the round ligaments and unites these to the rim of the cervix When tied these sutures secure the ovaries and tubes a little further out than the rim of the cervix, so that their vascular supply is not unfavourably affected

When infection is present drainage can readily be made by not completely closing the vaginal opening The parietal wound is closed by five tiers of sutures including silkworm gut passed through all structures except the peritoneum and tied over a fold of gauze which prevents all cutting

Without any attempt at haste the procedure outlined above can be carried through in from thirty to sixty minutes, according to the absence or presence of complications

Haemorrhage is very slight because the cut is made inside the vessels supplying the cervix It is also inside the attachments of the utero sacral ligaments and endopelvic fascia The keystone of the vaginal vault is not weakened Subsequent examination discloses no vaginal shortening The firm ring formed by that part of the cervical muscle which has been left is plainly felt All glandular epithelium has been removed, there is no longer any danger of cancer development Convalescence is easy

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MATERNITY AND CHILD WELFARE SERVICES IN THEIR RELATION TO PUBLIC HEALTH

BY

DONALD PATERSON, M D, F R C P

PHYSICIAN TO OUT PATIENTS HOSPITAL FOR SICK CHILDREN GREAT ORMOND STREET PHYSICIAN IN CHARGE OF DISEASES OF CHILDREN WESTMINSTER HOSPITAL

There can be no doubt about the very great progress made in the public health, attributable to the efforts of the maternity and child welfare services The following remarks coming from a physician especially interested in the diseases and welfare of children but not himself in the public health service, are intended to offer some criticism and provocative observations on the present state of affairs, and possibly to suggest methods for its improvement I think it is true to say that nothing is more potent for good than the advice of a painstaking welfare medical officer who has careful health visitors to assist him This team can do more towards educating the mothers to a high standard of infant care, and can also get directly at the home problems more easily than any other means we have—especially among the very poor The modern general practitioner has a much better insight into infant feeding and care than his predecessor and there is no doubt that he is much more capable of dealing with those cases not eligible for welfare centres

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TONSILS AND ADENOIDS

By far the commonest causes of morbidity in the young child seen at the out patient department of a children's hospital are nasopharyngeal infections Among the well to-do where living conditions are better and the process of natural vaccination against disease is brought about slowly various catarrhal and other infections are so spaced that a child has time to recover completely between each illness Among the poor however where overcrowding is prevalent the infant and the very young child are inundated with infections—one tonsillar infection after another—until the lymphoid tissue of the nasopharynx is quite unable to cope with the various germs and they escape through and into the glandular system giving rise to a multitude of complications The fundamental problem is of course to improve the housing conditions and general nutrition of the child but much can be and is being done to prevent the after effects of these repeated infections The public health services have provided clinics for the removal of septic tonsils and adenoids and for the care of children with discharging ears The facilities however are quite inadequate and it falls on the voluntary hospitals to deal with the majority of cases Cases must sometimes wait many months All cases should as far as possible be done in the summer months and be kept in hospital for one night at least The public health service should maintain the highest possible standard of surgery and in addition continue to augment and improve the facilities for these operations

SCHOOLS

Personally I am daily struck by the necessity for more kindergarten schools At present the authorities generally speaking insist on a child having reached his fifth birthday before he is allowed to attend school Between the ages of 3 and 5 therefore the child spends most of his day on his legs and is thrown either too much in the company of adults or is too much confined indoors in bad home surroundings From the age of 5 upwards when he is much stronger he spends his day almost entirely off his legs and his health improves in leaps and bounds To me a very great step forward would be the lowering of the school age to 4 years and the establishment of more kindergarten schools from the age of 3 for selected cases In this way the younger child would come under observation much earlier and preventive medicine could then be brought into play at an earlier age As a rule it is in the pre school age that lasting damage is done to the child and mistakes in feeding and upbringing are made

FEEDING

Milk is too expensive in this country Figures have recently been quoted by Dr A Moncrieff to show that an infant can safely be fed in Germany for 1s 5½d per week while in England to feed a child on so-called safe children's milk or dried milk costs 5s per week There is much to be said for the abolition of all grading of milk and concentration on a good quality of ordinary milk which before being given to children should be boiled

A vast number of infants are brought to hospital for malnutrition when in fact they are being underfed The diet frequently ordered is a dried milk and even at the special rates which are often given through welfare centres the mother cannot afford to provide sufficient for the infant's needs The advantages of breast feeding have been pointed out to the mothers with great benefit to the community and this has been one of the most valuable steps in lowering our infant mortality

Of those infants who are artificially fed a considerable proportion are brought up on dried milk The directions on the tin are followed with regard to times and quantities Very great improvement has been made in the wording of these directions with consequently much better results but there are a number of dried milks and patent foods still on the market the directions of which are hopelessly inadequate and it is a matter of primary importance from a public standpoint that such directions should be brought up to date and made intelligible and safe for the public

The importance of vitamins in the diet of a child cannot be overestimated Some antirachitic—either as fresh milk butter or margarine to which vitamins A and D have been added—should be available for every child I confess I do not share the views of some that artificial sunlight is of no value No physician can but be struck by the improvement seen in the health of infants when real sunshine appears while with artificial sunlight a similar improvement can be seen in the puny and ailing infant with a tendency to rickets The giving of small doses of iron as advocated by Dr Helen McKay is another important step forward and will unquestionably prevent the anaemia of early infancy which has always been taken for granted previously Every breast fed and bottle fed baby for the first six or nine months of its life would benefit by the addition of iron to its diet just as it does by the addition of one of the cod liver oil preparations and artificial or real sunlight together with fresh fruit juice

FEVERS TUBERCULOSIS AND OTHER DISEASES

The public health service has done much in preventing acute infectious fevers and has also facilitated the treatment of these The wider application of immunization to diphtheria is to be looked for Much recent work has been done in the prevention and treatment of whooping cough and the giving of convalescent whooping cough serum as a prophylaxis against this devastating disease is now practicable The provision of convalescent serums from cases of infantile paralysis measles and whooping-cough would be a very great step forward and these should be available for both hospital and general practitioners etc The difficulties of having a central depot or pool from which to draw these serums do not appear to me to be insurmountable For instance the notification of a disease such as whooping cough the visiting of the home and the inoculation of the members of the family who have not had the disease would either prevent those members from having it at all or allow them a very mild and attenuated form of it

The mortality from tuberculosis slowly decreases Although one favours a ceaseless effort to improve the milk supply it is well to keep reminding the public health authorities and others that in almost 100 per cent of the fatal cases of tuberculosis seen in childhood and admitted to the children's hospitals the source can be traced to an infected individual who is in direct contact with the child at home Separation from young children of those infected is still incomplete The vaccination of children in this country with the B C G vaccine has not been practised and it would appear that we still require greater assurance from experimental work before embarking on this treatment

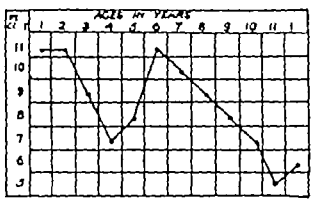
As to rheumatism steady progress can be said to have been made with regard to this disease in recent years The establishment of rheumatism clinics throughout the country is of special value as there the diagnosis of rheumatism can either be confirmed or refuted and the children brought under continuous observation It would appear according to Glover that acute rheumatic fever is an infectious disease similar in many respects to cerebro-spinal meningitis and ought therefore to be

amenable to the same preventive measures In my opinion it would be an important step in the right direction if the public health services could arrange for this disease to be made notifiable

Along with the improvement in general hygiene and knowledge of infant feeding, the mortality and morbidity from infantile diarrhoea has improved With further knowledge of dietetics cleanliness and improved milk supply boiling of milk, and the use of dried milks, the mortality from this source will be steadily and further diminished

OUT-PATIENTS AND ADMISSIONS AT GREAT ORMOND STREET HOSPITAL

The chart shows that between the ages of 3 and 6—in other words, the pre school age—there is a reduction in the number of attendances It is possible that this may be due to the fact that at this age children come less under the attention of the welfare services and schools than either before or after, and fewer are therefore referred to the Great Ormond Street Hospital Certainly it is a striking drop In the table the figures explain themselves, and, except in a few instances, one can derive much comfort from their perusal



Out patient attendances

Numbers of Patients Admitted to the Wards of the Hospital for Sick Children Great Ormond Street

	1911		1921		1931	
	Under 2 years	Over 2 years	Under 2 years	Over 2 years	Under 2 years	Over 2 years
Generalized T B	16	18	11	42	7	3
Pulmonary T B	7	61	1	1	2	5
Abdominal T B	16	72	1	31	5	1
T B meningitis	10	22	6	10	6	9
T B glands in neck	15	111	—	22	—	10
T B of bones and spine	8	174	5	54	3	25
Rheumatism and chorea	—	118	1	12	2	123
Cardiac diseases	3	81	11	49	10	58
Rickets	7	9	11	18	18	89
Scurvy	4	—	7	—	13	—
Congenital syphilis	8	2	11	6	10	—
Asthma	—	—	—	4	4	171
Bronchitis	15	18	16	21	25	31
Empyema	—	—	6	23	6	4
Bronchopneumonia	38	6	31	19	30	32
Lobar pneumonia	14	43	4	15	9	19
Purpura	1	7	—	4	—	23
Appendicitis	1	49	—	48	1	56
Gastro-enteritis	67	13	125	22	67	21
Pyloric stenosis	21	—	50	—	53	—
Nephritis	2	19	1	19	4	42
Acute poliomyelitis	9	39	8	105	—	4
Mastoid	9	44	14	46	20	124
Otitis media	5	26	2	19	22	77
Tonsils and adenoids	3	95	6	190	92	3947

All cases of tonsils and adenoids are now admitted to hospital for one night at least.

CONCLUSION

We in this country cannot help but feel proud of the progress we have made in the lowering of infant mortality and in the general standard of the health of the child The establishment of the maternity and child welfare services has unquestionably played the greatest part in this reduction, and one can feel confident that these great services will continue to use all that is best in science to approach further the ideal to which we all aspire

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

ADDISON S DISEASE COMPLICATING SPINAL CARIES

The case reported below is presented for publication on account of the following points of interest Addison s disease complicating spinal caries is a rare condition, the acuteness of the course of the disease (no pigmentation was found until a few days before the patient s admission to hospital), the close resemblance at one time to a case of intestinal obstruction, and the fact that the patient survived for so many years after what must have been severe pulmonary trouble

The patient a man aged 40 was admitted to the Royal Cripples Hospital Birmingham (Woodlands Branch) on October 22nd 1932 with the history that he had suffered from lumbago and sciatica for two years which have been relieved by rest in bed He was admitted to the Birmingham General Hospital on June 10th, 1932—where he was in in patient until his admission to Woodlands—with a large swelling in the left loin, this was a cold abscess from which three quarters of a pint of pus was aspirated A radiogram of the spine at that time showed caries of the twelfth thoracic vertebra with some involvement of the eleventh and first lumbar The abscess filled up again and the following month it was opened the sinus was excised and the walls were scraped Tubercle bacilli were found in the pus The patient was in Yardley Sanatorium twenty years ago with phthisis

On examination the patient looked ill and had a slight deep brown pigmentation which was general over the body, but was most marked on the exposed skin surfaces and on the buccal mucous membrane In the mouth the pigmentation was much more intense, but unlike that of the skin, was patchy in distribution There was a granulating wound oval in shape measuring 2 in by 3/4 in in the left loin but this appeared healthy There was tenderness over the lower dorsal spine but no kyphosis was present A large hard liver with a smooth edge was felt three and a half inches below the costal margin There was nothing abnormal about the nervous system and there were no abnormal constituents in the urine X rays confirmed the diagnosis of caries of the twelfth dorsal and first lumbar vertebrae and suggested active spinal caries, there being a good deal of recent bone erosion

On October 26th the patient had an attack of bilious vomiting which lasted all day but there was no complaint of pain Three days later he had a similar attack but this time he complained of pain in the right iliac fossa There was some tenderness in that region on deep palpation but no rigidity or hyperaesthesia and Cope s psoas and obturator signs were negative Rectal examination revealed some ballooning but no other abnormality The attack lasted twelve hours Bowels opened naturally On October 31st the patient started vomiting again Examination revealed no surgical cause and an enema yielded a good result A troublesome hiccup developed and proved very intractable but was finally relieved by cocaine and bismuth mixture Meanwhile the pigmentation was becoming rapidly more intense vomiting and hiccup continued, and by November 1st

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the patient presented a deep brown coloration Blood pressure was maximum systolic 96 diastolic 72 The patient became drowsy by November 5th comatose three days later and died without recovering consciousness early on the morning of November 9th

A necropsy performed by Dr Smellie revealed the following facts The adrenal bodies were enlarged nodular and surrounded by a mass of adhesions On section they showed complete disintegration into typical tuberculous caseous material The terminal event was found to be a purulo-plastic pericarditis and there were about three ounces of thin pus in that cavity as well as numerous recent adhesions between parietal and visceral surfaces The liver showed fatty degeneration and cloudy swelling and similar changes were found in the kidneys The spleen was soft and diffluent The appendix was seven inches long somewhat kinked but otherwise devoid of pathological anomalies Both pleural cavities were obliterated by dense adhesions except at their extreme bases No cavities were found in the lungs but they were broken up by dense fibrous tissue

I am indebted to Mr Percival Mills for permission to publish this case to Dr Smellie for his invaluable advice and help and to the General Hospital for the notes and x ray reports

HENRY J KNIGHT M B B S
House Surgeon Royal Cripples Hospital Birmingham

Reports of Societies

OSTEOPATHIC METHODS

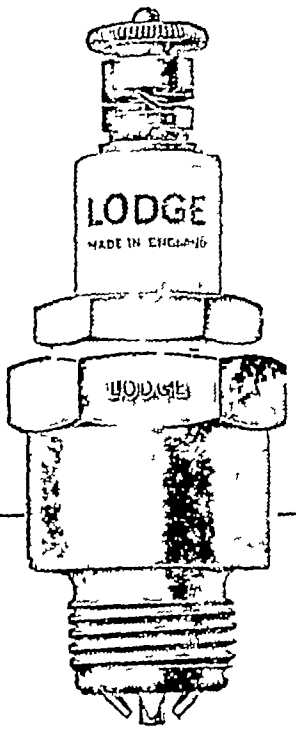
At a meeting of the West London Medico-Chirurgical Society held at the West London Hospital on April 7th with Dr JULIUS BURNFORD presiding a demonstration of osteopathic methods was given by Dr THOMAS MARLIN

Dr Marlin who carried out his demonstration with the help of two lady assistants said that manipulative skill was not to be acquired by reading though it might be acquired by watching other people s methods There were innumerable things to be learned as for example the position of the patient the amount and direction of force exercised and the velocity of the movement applied There was a knack in it just as there was a knack in turning a key in a refractory lock He began his demonstration by illustrating the grip hold on the scapula which was of great use in the treatment of stiff shoulders Before any joint manipulation was done there must be complete relaxation of the soft tissues Another useful manipulation was the occiput pull in headache which he had found effective in all kinds of headaches except in migraine Inhibition of the phrenic nerve was often effective in stopping hiccup Dr Marlin next demonstrated a manipulation for extending the ankle joint In all work on the foot the task of physiotherapy was to overcome contraction of the tendo Achillis He showed a number of manipulations of the spine mentioning that the upper dorsal region was more easy to manipulate than any other a balancing manipulation of the sacro-iliac joint and the strap technique for manipulating the cartilage of the knee The mechanism at work in these manipulations was possibly a deep massage on the joint surfaces If there was anything out of place Nature was all the time trying to put it straight and at the moment of separation due to the manipulation a chance was given for the return of the parts to their proper alignment Often the x ray picture showed no change after manipulation and yet the contracted tissue around the joint had evidently disappeared and the spasm no longer occurred

Mr W MCADAM ECCLES said that even such straps as had been shown that evening were used when he was a student in many fixed and badly dislocated joints In those days owing to the fact that brute force was often in evidence rather than scientific skill broken bones not infrequently resulted The scapula grip was known in England as long ago as 1890 It was not the shoulder-joint that was wrong in many of these cases but the prescapular tissue As for the occipital pull there should be careful diagnosis before this was employed but he had seen it used vigorously for months in a patient who was afterwards proved to have been suffering from intracranial tumour so that valuable time had been lost. In pressure on the phrenic nerve it was necessary to be careful not to excite bilaterally the vagus nerve In dealing with the ankle joint the first necessity was to make perfectly certain that there was not a fractured bone which had to be dealt with differently from a sprain tearing the soft tissues Mere pulling on the foot would never reduce a fracture-dislocation nor would it give the separation of joint surfaces What was really concerned was the separation of articular cartilages rather than bone that was the primary thing to be brought about in those cases in which there were said to be adhesions inside the joint The bone he had to pick with osteopaths was that they would not speak anatomically There was some excuse in his own student days when there was no x ray method of examination but now the movements of the joints could be observed on the fluorescent screen and the muscles actuating them were known

Dr MORTON SMART related some experiences with osteopaths and their claims and showed how they got it across The medical profession because of its inability to advertise was at a disadvantage as compared with the osteopath who boldly proclaimed his success Dr CAPPER JOHNSON suggested that general practitioners should make a determined effort to relieve certain simple conditions which came before them in general practice Some of the small manipulations and corrections which Dr Marlin had carried out could be done quite easily by general practitioners and it was unlikely that harm would result in any case Dr VAUGHAN PENDRED was sceptical about the osteopath s frequent statements as to the dislocation of the spine Dr H H MILLS thought it very necessary in carrying out these manipulative movements to go a little further into the study of the pathology of injuries Dr HEWITSON asked Dr Marlin how he would deal with tennis elbow Dr W S C COPEMAN said that when a patient was disabled by some lesion which he chose to describe as a dislocation and was cured by the osteopath and not by the doctor it was time the profession looked into the matter as the Society was doing that evening Patients were often diagnosed as suffering from rheumatism and were ineffectively treated afterwards going to the osteopath who achieved some success He spoke of personal experience of the value of the occipital manipulation as a cure for persistent occipital headache Mr G B WOOD-WALKER asked what manipulations were of use in lesions of the jaw Dr CLEMENT NICORY felt that osteopaths attempted too much in treating every departure from health by one method Certain definite indications in manipulation of the spine had been found useful as a result of experience Dr DONALD BARLOW said that one of the greatest difficulties in respect to osteopaths was that of correlating their terminology with their results A further examination of the whole question of terminology was of the greatest importance Dr A CAWADIAS referred to the medical aspect of osteopathy He thought it possible that osteopaths might have determined some of the reflex zones and have exploited their reactions Physicians thought it beneath them to use their hands yet the hand had a sort of psychological effect on the patient In the modern development of therapeutics he believed that physicians would be encouraged to use their hands for bloodless intervention

Dr MARLIN in reply said that he had been able by manipulation to help people who had had long standing constipation and asthma The use of the hands in treatment was very important There were men engaged in practice who appeared to have no feel in their hands The contact unconsciously made the patient antagonistic Sympathetic hands were needed There were no manipulative methods of value in treatment of the jaw the best



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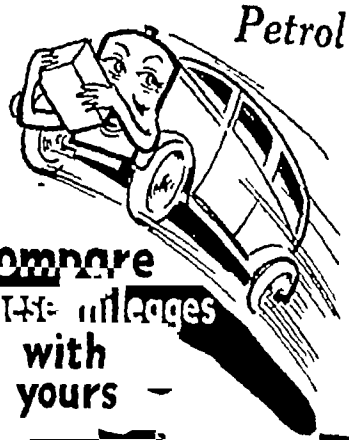

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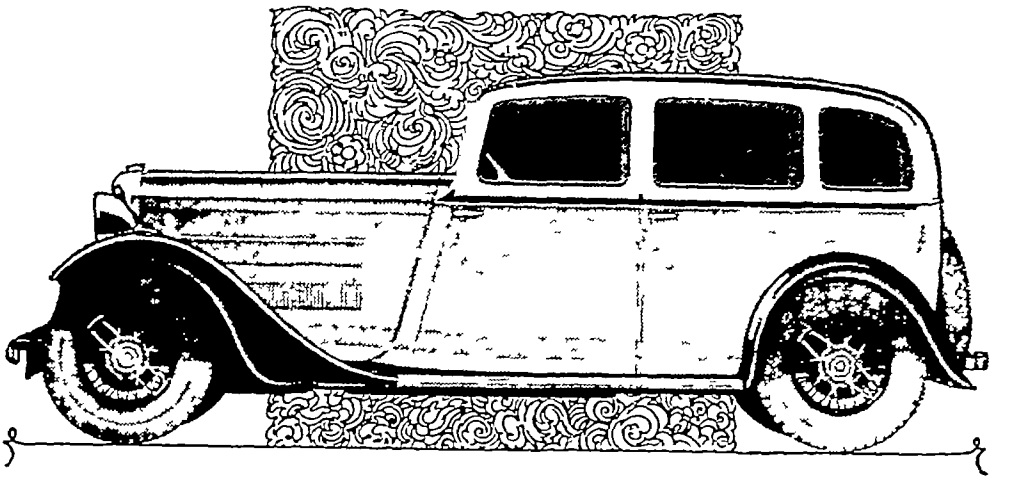

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thing was diathermy As for tennis elbow, osteopaths said that this was due to a rotation of the head of the radius, and, working on that assumption, it was possible to evolve a suitable manipulation, which he proceeded to demonstrate

RADIUM THERAPY IN THE PELVIS

At an open meeting of the London Association of the Medical Women's Federation, held on March 28th, with Professor M LUCAS-KEENE presiding Dr B DAVIDINE PULLINGER read a paper on the action of radium as seen in the pelvis

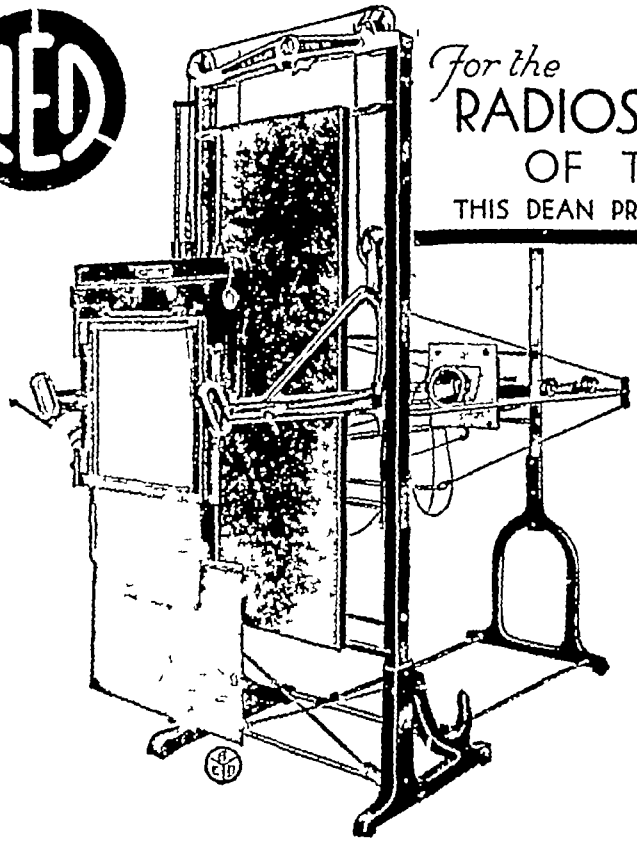
Dr Pullinger discussed the generally accepted theories of the biological action of radium and x rays She said that in order to understand the local therapeutic effect it was necessary to know whether damage and destruction were direct and whether they were selective for malignant cells These two distinct issues were frequently confused Evidence in support of the one was considered to be proof for the other and on the whole most authorities considered that destructive action was both direct and selective Present day theory could be illustrated by analogy with a game of ninepins in which normal cells were represented by white and malignant ones by black ninepins Radiations (γ waves and β particles) selected and were able to knock down the black ones only The analogy however, failed on the biological side because cells were not independent isolated units, but in the adult organism were dependent upon a blood and lymph circulation for growth and maintenance Apart from that consideration ample evidence for the "direct hit" idea could be found, notably in Dr R G Canti's film of sarcoma cells in tissue culture But evidence in favour of a direct hit did not afford evidence of selective action No comparative irradiation tests between malignant and normal cells *in vitro* had been published, so that it was not known whether a dose which would damage the one would leave the other unscathed Comparison of the behaviour of epithelium along these lines was impossible owing to the limitations of tissue culture The assumption of a selective destructive action was a recent one Earlier workers in Germany were divided in opinion on this point and were aware of conflicting evidence provided by the production of burns, and of the extreme sensitivity of certain normal structures—namely haemopoietic and reproductive cells hair follicles and sweat glands It was nowadays maintained that general destructive action when seen was due to ineffective screenage from beta particles, and that modern gamma radiation avoided non selective damage This selection Dr Pullinger maintained could be shown to be apparent not real normal structures did suffer Even under modern conditions it was possible, for example to make out a case that haemopoietic cells were much more sensitive than malignant ones If, however, an explanation was to be sought of what appeared to be a selective action it was necessary to observe what actually happened in treated tissues When this was done one stage or another of a constantly occurring process was always to be found Dr Pullinger from personal observation of more than 100 specimens both from operation and from necropsy could say that the first morphological change was hyperaemia which proceeded to damage of blood vessels exudation of serum haemorrhage, and thrombosis End results of this process were anaemic necrosis and proliferation of fibrous tissue These events had been described by numerous previous workers many of whom attributed death of the tumour to them But two objections had always existed to accepting this process as an explanation of tumour destruction The first was that the sequence of events described was always observed in tissue which was the seat of previous pathological change and could equally well be ascribed to other pathological influences This objection had been met by the work of Bashford Cramer and Murray and also by Dr Pullinger's own experimental demonstration of thrombosis in blood vessels in normal rabbits in deep tissues in the absence of any other previous demonstrable lesion The second objection was that the vascular process failed to account for apparent selective destruction of malignant tissue and apparent immunity of normal structures The speaker then showed lantern slides made from sections of the uterus to illustrate her thesis that destructive action due to vascular lesions affects normal tissue in the same way as malignant tissue She maintained that destruction of tumours when it occurred to a greater extent than the destruction of normal surrounding tissue was due to the concentration of dosage upon the tumour, and to its more vulnerable and incomplete capillary vascular supply But if damage to normal cells was sought for it could always be found though it might be of no practical importance Carcinoma of the cervix was a favourable site for treatment by irradiation because there was a chance to make an early diagnosis, it was relatively easy of access, and its natural development was delayed so that metastasis beyond the pelvis was usually late This meant that the disease was limited for a long time to an accessible site

Professor SIDNEY RUSS said that it seemed extraordinary for anyone to challenge the main facts of selective action, as they formed the basis of the whole of radiotherapy He was frankly critical in view of the complete lack of information on the quantitative side, of the claims which the speaker had made for the part played by thrombosis in the reaction of tumours to radiation

Professor E H KETTLE thought that Dr Pullinger's work was a valuable contribution to the subject He had always felt a little sceptical about the selective action of radium upon the malignant cell, for it seemed to him that the wish was possibly father to the thought He did not know of any essential reason why the malignant cell should be especially vulnerable to *x* rays and should seem in many conditions to tolerate insults which non malignant cells were unable to resist In some tumours he had examined some weeks after irradiation—for example, mammary cancer—he had found apparently healthy malignant tissue which had a very different appearance from the degenerated cells of the remaining breast acini No one denied that radium had a remarkable local effect on malignant tumours, but this did not necessarily imply a specific action on the tumour cell which would seem to be essential if radium therapy was to deal successfully with anything more than purely local growth

Dr HELEN CHAMBERS said that it was a commonplace that any living tissue could be necrosed by radiation if sufficiently heavy dosage were employed, and from the sections shown by Dr Pullinger the tissues looked as if they had been heavily overdosed The presence of vascular lesions was to be expected as a result of direct injury, or as an after effect of the necrosis produced, and could not be looked upon as a necessary precursor to the malignant cells disappearing The problem could be studied by the experimental method with careful measurement of the radiation using only just enough to cause tumours to disappear When this was done necrosis of the tissues did not occur, and the overlying skin of a tumour need not even be permanently epilated The tumour cells could be killed and the skin through which the radiation had been applied which had consequently received the largest dose, could be left undamaged Dr DOROTHY RUSSELL said that the only clinical material to which she had had access consisted of gliomas exposed to radiation It was well known that the most malignant form, medulloblastoma was particularly susceptible to radium This was difficult to get going in culture Capillary haemangioblastomas when plugged with radon seeds showed extraordinary regression The form of glioma known as spongioblastoma multiforme which was also susceptible to radiation, was generally very vascular

Dr PULLINGER, in reply to Professor Russ, said that she had been dealing with lethal action which in her opinion was not selective for tumour cells and that she had endeavoured to show that normal structures also were destroyed Thrombosis could be found in tissues treated



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by the therapeutic doses commonly used She agreed that the hyperaemia might be evidence of a high degree of selective damage to endothelium and vessel walls but she was of the opinion that it was a response to some chemical substance of histamine like nature produced in the irradiated area

PERINEORRHAPHY

At a meeting of the North of England Obstetrical and Gynaecological Society held in Liverpool on March 31st the president Mr LEYLAND ROBINSON read a paper on perineorrhaphy

The object of plastic work he said was twofold to repair the damaged structure and to restore the impaired function He pointed out that in plastic gynaecological surgery good mechanical results were often only obtained by sacrificing the functional capacity of the operation area Frequently prolapse was permanently cured by lengthening the perineum and narrowing the vagina but only at the expense of the sexual functions The best results were to be obtained by restricting the sacrifice of tissue and the degree of mechanical correction to the minimum that was compatible with the relief of symptoms He thought that in many modern operations for prolapse no attention had been paid to restoration of the vulva He pointed out that in nulliparae the two labia majora were in contact and that this apposition formed a natural barrier between the vaginal walls and the exterior In multiparae a state of ectropion vaginae was frequently present as the result of birth trauma and with the loss of the natural protective barrier a certain degree of infective vaginitis almost always resulted Such vaginitis could maintain the bearing-down symptoms even after uterine descent itself had been cured He thought that one of the most important parts of the operation was an anatomical restoration of the vulva The President then demonstrated the various steps of the operation he performed for reconstruction of the perineum illustrating them by means of lantern slides

Unusual Cases

Dr M DATNOW showed a specimen of complete absence of anus rectum and kidneys in a child born alive

At birth the baby breathed and cried quite normally but was very blue the blueness increased until the time it died—thirty hours later The external genitalia were normally developed and the right testis was present in the scrotum The anal opening was absent At the post mortem examination he found complete absence of the lower part of the colon rectum and anus The lower end of the pole terminated in what appeared to be the bladder which was only represented by a thick fibrous cord Both kidneys were absent and no renal vessels could be found The suprarenal capsules were normal

Dr Datnow pointed out that in this case there was complete absence of the parts developed from the metanephros and mesonephros

Dr JEFFCOATE showed a case of pseudo-hermaphroditism in a foetus

The foetus which was stillborn showed typical male external genitalia The sex of the foetus was never questioned until the post mortem examination when a uterus didelphys was found Each half of the uterus was well developed and had a normal ovary associated with it There was no anus and the rectum ended in a fibrous structure attached to the posterior wall of the bladder Both kidneys were absent but the suprarenal glands were present in their normal position Examination revealed hypertrophy of the cortices of a suprarenal gland

Dr Jeffcoate concluded that these changes in the adrenal gland were responsible for the masculine appearance of the external genitalia

Miss R NICHOLSON and Professor DIBLE reported a case of gas gangrene occurring during labour

The patient a multipara was admitted to hospital with a history of bleeding twice during the previous five hours She was thirty four weeks pregnant with a vertex presentation and on vaginal examination it was found that the os was one finger dilated that the membranes were unruptured and that a partial placenta praevia was present The membranes were artificially ruptured and a tight binder was applied there was no further haemorrhage Forty-eight hours later labour commenced and the patient was delivered normally in four hours of a stillborn child weighing 4 lb the placenta following half an hour later together with some retroplacental clot Two and a half hours after the beginning of labour she had a rigor and was restless and excitable The temperature rose to 101° pulse was 104 A few hours later she was jaundiced the liver edge was palpable and her general condition became rapidly worse The whole skin was deeply suffused almost to a copper colour the abdomen became distended and tympanitic and the patient passed a small amount of black urine She died twenty five hours after delivery Post mortem examination showed that the condition was due to gas gangrene and cultures gave a pure growth of *Bacillus welchii*

VARIATION IN ANAEROBIC BACTERIA

At a meeting of the Pathological Society of Manchester held on April 12th Mr C A MCGAUGHEY discussed variations of *Cl welchii* He said that few observations had been made on the significance of variation in an aerobic bacteria Two variants isolated from an authentic strain of *Cl welchii* by selection and repeated subculture of colonies had remained stable for about five years The variants differed from the parent strain and from each other in form of colony growth in broth the size and shape of individual bacilli sporulation and formation of capsule They did however resemble the parent strain and each other in fermentation reactions One variant produced little or no toxin the other from three to six times as much toxin as the parent strain The production of haemolysin in culture followed exactly changes in the production of toxin Agglutination tests showed that the antigens of both variants differed completely from the parent strain though the antigens of the two variants were closely related perhaps identical The importance of these results in the production of *Cl welchii* toxin and their possible application to the study of *Cl welchii* infection and immunity were discussed

Dr D T ROBINSON read a paper on the *gravis mitis* and intermediate types of *B diphtheriae* and their relation to diphtheria The results of the investigation of 230 cases were given and the incidence of the types in Manchester was compared with the incidence in the Leeds area and elsewhere The criteria for the differentiation of the three types were mentioned and difficulties in classification discussed Dr Robinson emphasized the importance of the types described by each worker being strictly comparable since any inconsistencies in this respect would affect the results of correlation of type with case severity and deaths He gave instances in which such inconsistencies would seem to have arisen He discussed the results of animal experimentation with the various strains and mentioned the propositions that had been advanced to account for the apparent differences between the strains in their action on man and other animals

FRACTURE OF FEMORAL NECK

At a meeting of the Section of Surgery of the Royal Academy of Medicine in Ireland held on March 31st with Mr R ATKINSON STONEY in the chair Mr ARTHUR CHANCE read a paper on the radiological interpretation of fractures of the neck of the femur based on a study of the *x* ray films taken before and after reduction in the last twelve cases in his wards

Mr Chance said that for a knowledge of the exact pathology of this fracture he had been fortunate in obtaining a recent specimen from an old woman who died on admission and from whom he removed the neck of the femur on both sides for purposes of comparison The fragments at the site of any fracture were subject to the following displacements side-to-side angular shortening and rotatory These were easily interpreted in ordinary

limb fractures where antero-posterior and lateral plates were possible, but in the neck of the femur only an antero posterior plate was feasible The mechanism of the injury—that is, outward rotation of the lower limb—resulted in the following displacements (1) the lower fragment was displaced upwards and backwards , the limb was adducted in full extension, and outwardly rotated , (2) the upper fragment might be adducted or abducted, and its fractured surface might look forward or backward The two fragments therefore formed with one another an angle open backwards and an angle open inwards As regards the lower fragment, the degree of shortening was difficult to estimate, because (1) the actual line of fracture could seldom be seen , (2) the relation of the great trochanter to the acetabulum varied with the adduction or abduction of the limb Measurement of the limbs was a surer method of estimating the shortening Backward displacement was difficult to gauge Outward rotation was assessed by the prominence of the lesser and the breadth of the greater trochanter In considering the upper fragment abduction or adduction was readily gauged by the amount of the articular surface which projected beyond the acetabulum It was impossible to tell whether the fractured surface looked forward or backward, but from the mechanism of the injury it was reasonable to assume that it looked forward The apparent disappearance of the neck and inability to see the fracture line was due to the fact that the fractured surfaces looked forward and were consequently foreshortened These difficulties of interpretation would be surmounted were a lateral plate possible, and stereoscopic pictures would also be helpful In reading the post-reduction *x*-ray one should be certain that the neck was full length as compared with the opposite side These points were demonstrated on a series of *x* ray films, and also on the specimen

The CHAIRMAN said that, unless the fracture occurred low down in the neck, the main displacement was in the lower fragment One of the main things about the lower fragment was the marked eversion Nothing was more remarkable than the appearance of the lesser trochanter before reduction and its disappearance when reduction was complete Mr T J D LANE said that one of the important things which Mr Chance brought out was the fact that in the treatment of fractures it was necessary to go very deeply into the subject if one wanted to get a really good result In these cases a very great deal of help was obtained from *x* rays The mechanism of the production of fractures was frequently very difficult to explain Dr F G STEWART referred to the difficulty of lateral examination of the hip and said that this could be overcome by putting the tube in the perineum and tilting it downwards

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The Directory of Maternity and Child Welfare Centres in the United Kingdom which has been recently published at 2s 6d contains a list of more than 3,400 addresses of these centres Educational classes for mothers are being conducted at about 800 of them Only a comparatively few centres hold special sessions at which mothers are seen during the first six weeks after confinement with a view to ensuring that no obstetrical complication persists but there are 1 085 addresses of places where post natal consultations are held in association with ante natal supervision and instruction The Directory takes the place of the list issued in March 1925 by the Ministry of Health which covered England only The annual report for the Association of Maternity and Child Welfare Centres for 1932 announces the sale during that year of over 330 000 copies of its publications the organization of practical competitions among parents attending the local centres and the training of students at its nursery schools and babies' convalescent homes The work of the association has increased in spite of the greater statutory powers conferred on local authorities in respect of maternity and child welfare but the financial position remains difficult The two publications can be obtained from the offices of the association at Carnegie House 117 Piccadilly W 1

Reviews

PHARMACOLOGY THE MODERN APPROACH

Professor A J CLARK describes pharmacology as one of the youngest of the biological sciences The fact that it can be approached along the lines which he has adopted in his recent book *The Mode of Action of Drugs on Cells*[1] is evidence that its progress has reached a certain definite stage—one at which phenomena are studied on quantitative as well as qualitative lines Physics and chemistry long ago reached that position , biology, as a whole, is only just beginning to attain it

Generally speaking, advances in many branches of biology are still being made by what may be called the method of " the critical experiment " In the approach to a problem conditions are more and more sharply defined until it is possible finally to devise an experiment the result of which will enable an unequivocal " yes " or " no " to be given to some crucial question When a method such as this is applicable, it must appeal as perhaps the most satisfying of all to the experimenter Problems, however, often present themselves in a form which does not yield to cross examination of this type, because it is impossible to define the conditions with sufficient sharpness It is possible, for instance, to show that a given substance contains vitamin C, because one can arrange an experiment in such a way that all the guinea pigs in one group remain normal, while all the controls develop scurvy But when it comes to deciding how much vitamin C is contained in one type of foodstuff as compared with another, the problem is far less simple Individual variations in the animals cannot be controlled, and experiments must be carried out on a statistical basis and subjected as far as possible to mathematical analysis This is an example of the biological assay of a vitamin, but the same principles apply to almost all quantitative work with drugs It is to the analysis of the results which can be obtained by the quantitative methods available to the pharmacologist that Professor Clark devotes a large part of his book With the many pertinent questions which he raises, the pathologist, not less than the pharmacologist, is concerned A population of animals shows wide variations between individuals An apparently homogeneous tissue, such as a nerve or a muscle, may be considered as a population of cells, and those cells show individual variations to a marked degree Similarly, a culture of bacteria is anything but homogeneous Not only do bacteria show the phenomenon of individual variation, but also, in any growing culture, there will be a wide range of age difference, the younger bacteria predominating This fact, again, introduces many complications into the interpretation of results, whether these have to do with the action of drugs on the organisms or the behaviour of the latter towards other agents Experiments have thus to be performed on a statistical basis and results subjected to proper statistical treatment

The author often, and rightly, stresses the point that, compared with the systems ordinarily dealt with by the physical chemist, the living cell can boast of a truly appalling complexity " There is no question of trying to explain all the reactions that occur between drugs and cells , the question is whether a certain proportion of these can be explained by the known laws of physical chemistry without making highly improbable assumptions " One is inclined to expect of a " law " that it is capable of being enunciated in mathematical form On page 5 however, it is pointed out that even one of the

[1] *The Mode of Action of Drugs on Cells* By A J Clark M D, F R C P F R S London E Arnold and Co 1933 (Pp 298, 62 figures 18 tables 18s net)

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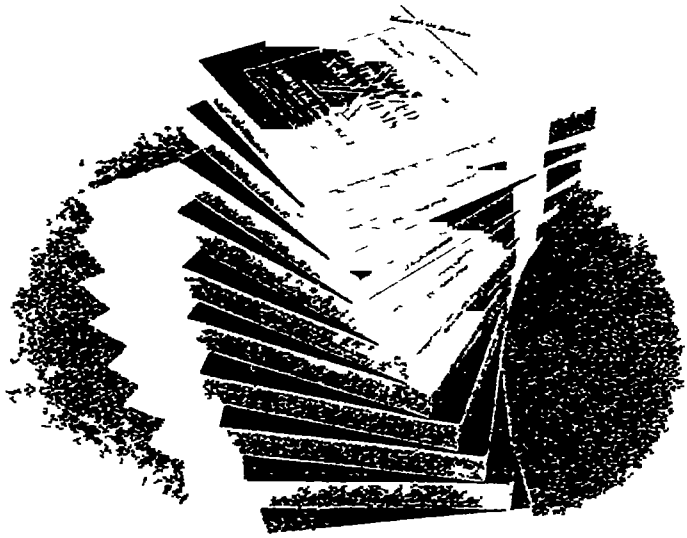

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simplest of the kinetic formulae—namely concentration × time = a constant —cannot be applied without reserve to the action of drugs on living cells since it implies both that the drug will produce an action at infinite dilution in infinite time and that sufficiently high concentrations will produce instantaneous action Both these postulates are commonly untrue At high—but certainly finite—dilutions the drug effect is usually counterbalanced by repair processes in the cells so that no action can be demonstrated while there is almost always a lower limit to the time in which action can be produced In another sense too mathematical interpretation may be misleading Curves which are plotted from experimental results can rarely cover more than about 40 per cent of the maximum value of both of the variables and plus or minus 5 per cent is a relatively small margin of error in view of the technical limitations imposed by biological material Yet it is possible within these limits to draw as Professor Clark has done three curves representing respectively a parabola a hyperbola and an exponential variation This means that a single set of values might reasonably be interpreted as fitting three separate and mutually exclusive laws These pages should serve as an awful warning to the too ardent mathematician!

Considerations of the size of drugs and of cells lead to some interesting conclusions For instance the ratio of size between a molecule of phenol and a coccus is similar to that between a milligram and a ton In the case of many drugs it is possible to calculate that an action is produced on a cell by an amount of drug which could cover only a very small portion of the cell surface Hence it is difficult to escape from the conclusion that there must be certain active points on the surface at which the drug action is produced The conception of active centres on the cell surface at which enzyme action probably takes place is already current among biochemists There is a tendency among biologists some of whom perhaps are tempted to emulate the physicist to strain after the mathematical interpretations of their data Professor Clark who is a realist has no hesitation in pointing out that biological data are rarely sufficiently accurate to bear such treatment and that often as a result of the attempt serious errors are obscured Apart from this mathematical formulae are evolved not infrequently which either have no physical meaning or involve assumptions which are patently ridiculous His realism and common sense as expressed in this book will do much to counteract a dangerous tendency at the same time he shows how by paying proper regard to the laws of statistics when interpreting data the worker may avoid many of the pitfalls that beset his path

SURGERY OF THE HAND

DR MARC ISELIN of Paris has made a special study of injuries wounds and infections of the hand and fingers [2] To qualify himself to write the present book he spent a year in the United States studying the work of Sterling Bunnell who in 1929 had had a vast experience including more than 600 reparative operations chiefly of tendons Dr Iselin also followed the clinical work at Johns Hopkins University and Sauerbruch's prosthetic and reparative methods at Berlin With this experience he was well equipped to take charge of the out patient casualties of hands and fingers at the Hôpital St Louis in Paris in 1929 where he was able to collect in 1930 the records of 217 whitlows and 130 serious wounds of fingers etc

The importance of the subject is considerable Neglect of early treatment and of the adoption of the correct treatment may have the most disastrous results from the point of view of industrial efficiency and may involve loss of limb or even of life Examination under anaesthesia and thorough search for septic foci are also important as well as *x* ray examination which may reveal quite unexpected injuries of bone in cases of violent injury In France antitetanic inoculation in all punctured or foul wounds is the routine procedure In lacerated wounds free excision of damaged tissue and free drainage is the rule

The first part of the book deals with wounds of the fingers and thumb and their complications not omitting those troublesome and obstinate conditions due to puncture by an aniline pencil for the complete cure of which ultra violet rays are recommended after free removal of all aniline material The second part deals with infections of the hand and particularly whitlows both superficial and deep the various kinds and situations of which are fully discussed The third part treats of reparative surgery both orthopaedic by means of splints and by surgical procedures The chapter on skin grafting and autoplastic procedures is instructive and those on repair of tendons and on reconstruction of the thumb are notable The bibliography contains 271 titles

This work based as it is on a vast experience by an accomplished surgeon must have great weight and it will no doubt be treated as an authoritative book of reference by every surgeon who finds himself faced with a problem in the treatment of the hands and fingers

MODERN THERAPY IN BRIEF

Professor KREHL'S book on medical treatment [3] is the third volume of a series which represents his considered views after a lifetime of work in experimental and clinical medicine Krehl's earlier book on pathological physiology went through several editions and was translated from the German into several languages It proved a useful stepping stone from physiology to medicine for many generations of students The present work is not an enlarged edition of the earlier one though the orderly habit of mind which formulated the early book inspires the one now under review The first volume of the series dealt with the genesis of disease and traced the morbid processes as anomalies and divergences from the normal physiological conditions of health In the second volume followed in natural sequence a description of the way these morbid processes affect the patient and cause his symptoms The pathological process was thus analysed according to the subjective sensations of the sick person Professor Krehl had hoped in the third volume to discuss the treatment of disease according to the underlying principles of pathological physiology He confesses at once that this hope was a dream which has not been and in the present state of knowledge cannot be fulfilled His analysis of the situation showed that only relatively few patients and then only some of their complaints could be treated according to the information we have of the underlying disease processes and as a logical consequence of our knowledge of pathological physiology Nevertheless the proper understanding of the disease processes is an essential though the art of medicine comprises that and much more The physician's work is to help the patient and each patient reacts in an individual way to the disease It is necessary to envisage the whole person as well as his complaint in order to lay down a sound course of treatment In general

[2] *Chirurgie de la Main* Par Marc Iselin Preface du Professeur Lenormant Paris Masson et Cie 1933 (Pp 340 111 figures 55 fr)

[3] *Entstehung Erkennung und Behandlung Innerer Krankheiten* Von Dr Ludolf Krehl Band III *Die Behandlung Innerer Krankheiten* Berlin F C W Vogel 1933 (Pp 289 RM 18 Geb RM 20)

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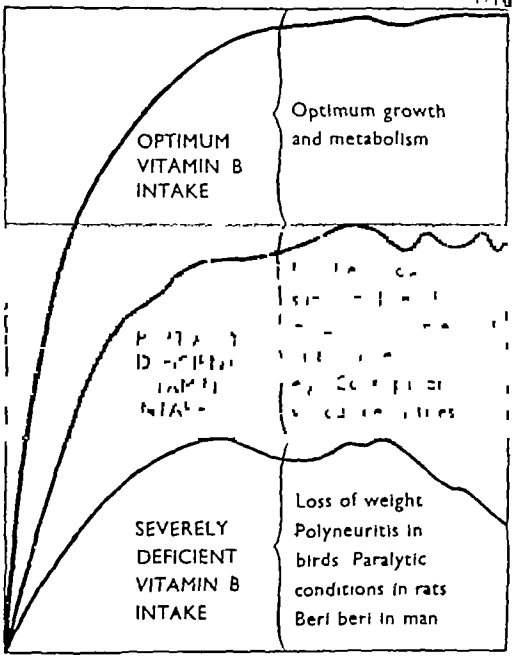

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therefore, the physician must seek for the causes of disease in his patient, especially infection, poisoning of external or endogenous origin and over-stress of bodily functions or mental energy, deficiency of secretions of internal organs or of vitamin intake, and the reactions of the tissues to foreign proteins that are shown in allergic phenomena These derangements can often be adjusted when the cause is known, and surgery, too, can be called in to remove or repair a diseased part Often, however, treatment must consist in raising of tone or resistance by physical methods—climate, hydrotherapy, massage, gymnastics and exercise Diet is important, especially when the object is to gain or lose weight the preparation and amounts of the various foodstuffs must be prescribed Among the general measures psychotherapy has a distinct place Professor Krehl insists that in each case treatment should not be made from day to day, but that a settled plan should be followed, modifiable but not arbitrarily After this wise introduction the reader is led on to consider the treatment of system diseases The author says his book is quite simple, and makes no appeal to professors and the erudite He is too modest It is a good summary of modern therapy which will well repay study It is masterly, simple, and sufficient

THE SOVIET EXPERIMENT

Soviet Economics[1] edited by Dr GERHARD DOBBERT, consists of a series of essays written upon various aspects of the economic plans of the ruling powers in Russia There are fourteen essays by writers each of whom has a personal knowledge of his subject On the cover it is stated that the contributors pass judgement on Soviet economics from the capitalist point of view This statement is less than just to the essayists, who, for the most part have fulfilled the editor s plan set out in the introduction to present information and leave the reader to form an independent judgement The authors present a vivid picture of the attempt that is being made to mould a population of 165 millions into a scheme propounded by a social theorist In reality the period actually governed by Marxist philosophy came to an end when Lenin instituted his new economic policy being forced thereto by the threatened collapse of the economic machine Stalin and his associates have nominally returned to a purer Marxism, declaring that the new economic policy was but a temporary expedient in Lenin's mind but Stalin s own recent alteration of a fundamental Marxist dictum shows that he, too, has had to trim his sails Instead of from each according to his ability to each according to his needs " the new version reads from each according to his special ability to each according to his special *achievement* The change is radical Various plans are now in force to stimulate the workers to production, chief among which are the creation of shock brigades from those who bind themselves to do more than the ordinary allotment of work in return for special privileges in respect of food and clothing and of bands formed from the Union of Communist Youth which visit unannounced various institutions and report alleged cases of neglect of duty Agricultural policy has varied as well as industrial policy, the plan in operation at present being that of absorbing all peasant labour into State farms and collectivist associations Apparently no progress has yet been made towards raising the standard of living in fact, the tendency has been in the opposite direction since 1927, and is reflected in the extreme shortage of many foodstuffs and manufactured articles It is stated that soap tea, and sugar cannot be obtained in the country districts The workers have, however, been promised an improvement in these matters under the Second Five-year Plan which has now begun Meanwhile, the administrative apparatus has assumed gigantic proportions, resources for its schemes come from its monopoly of foreign trade and from State lotteries, to which the number of subscribers in 1931 was thirty-three millions

The authors present a detailed picture of an experiment which has grown out of the theory that so long as private ownership remains an incentive to human nature so long must the standard of living of the masses be low The experiment has been forced to recognize that human beings, like all other living beings employ and develop their abilities only under the influence of incentive The primary influence of hunger can be relied upon to promote a minimum of activity, but it will not uphold the exercise of human ability in its full range In the early days of the revolution the impulse to destroy the existing regime supplied a strong urge, to-day this is derived from the fear of attack by other nations present in the minds of " virtually the whole nation ' It is impossible to read this book without being stirred to hope that the patient nation which is the subject of this experiment will ultimately reach the goal of well being

PURE AND WHOLESOME WATER

The fourth edition of Dr J C THRESH's book on the examination of waters[2] follows the third at an interval of eight years With Dr Thresh, whose own long record of distinguished work has been closed by death, are joined in its authorship Dr J F BEALE and Dr E V SUCKLING Water supply as a health problem becomes more pressing as populations grow, and dubious sources hitherto avoided may have perforce to be drawn upon That such sources, especially rivers, can be safely used for public supplies is due to effective purification under the vigilance of water examiners In the work under notice the physical, chemical, biological, and bacteriological technique for the examination of water is set forth with completeness A section is devoted to the interpretation of results, and attention is called to the need in this country of a standard notation for water analyses, together with a recognized code for applying the bacteriological tests The reputation of the so-called poisonous metals in the production of illness in consumers has altered little in recent years Lead is still regarded as the outstanding offender, iron, manganese, zinc, and copper are for practical purposes harmless, while aluminium, lately under suspicion, is also classed as innocuous Bacteriologically the greatest importance is attached to the *B coli* test, though a final judgement must be made on wider considerations *B coli* habitually absent from 100 c cm of water is a guarantee of purity and wholesomeness *quâ* bacteriology, while *B coli* present in all or the majority of samples of 20 c cm or less should be taken to indicate recent and possibly dangerous pollution Among the methods of purification reviewed are storage, filtration, and the employment of hydrogen peroxide, ozone, catadyn silver, chlorine, chloramine, and excess lime There are excellent statements also of the uses of zeolite, silicate with lime, copper sulphate, and activated carbon The concluding article deals informatively with the water of swimming baths The work, which very ably sustains the high achievement of its predecessors, can be recommended to medical officers, water analysts, and bacteriologists They will find it up to date and reliable

[1] *Soviet Economics* A symposium edited by Dr Gerhard Dobbert Translated from the German by Malcolm Campbell London John Lane, The Bodley Head Ltd 1933 (Pp ix + 343 7s 6d)

[2] *The Examination of Waters and Water Supplies* By J C Thresh D Sc M D D P H J F Beale M A M R C S, F R C P D P H and E V Suckling M B B S, D P H Fourth edition revised and enlarged London J and A Churchill 1933 (Pp xvii + 1 824, 35 plates 42s net)

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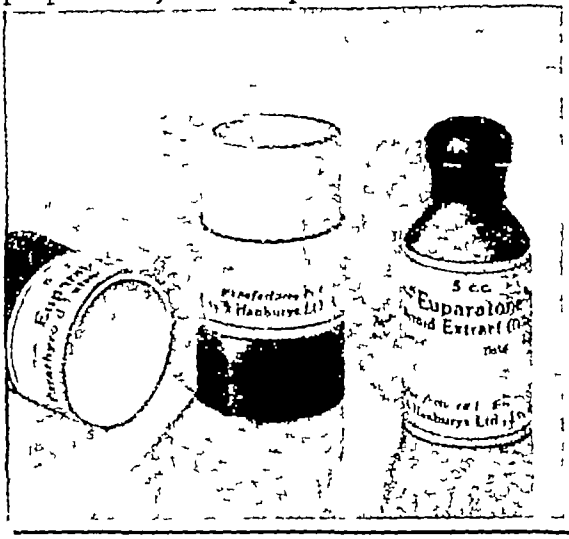

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Notes on Books

A new edition the twenty first of HALE WHITE'S *Materia Medica*[1] appeared simultaneously with the publication of the new *British Pharmacopoeia* The drastic revision undergone by the official work called for radical change not only in the contents but also in the general arrangement of this ever popular book which now appears again under the editorship of Dr DOUTHWAITE Following the plan of Cushny's *Text Book of Pharmacology* it is now divided into two main parts the first relating to substances used chiefly for their local action the second to those used chiefly for their action after absorption The publishers also have introduced changes both in the format and in typography

The A B C of Chemistry[2] is not a royal road to chemistry no royal road to chemistry has yet been prepared Yet J G CROWTHER'S little book is a very practical attempt to bring chemistry within the reach of those to whom it is a strange science Little in fact is needed—the bare foundations of chemistry are enough—to qualify any reader to derive a full measure of the enlightenment which the author has presented on the subject And this amounts to very much more than might have been expected from a first glance at the size of the book The treatment is based generally on the plan of showing how the earlier conceptions of chemical theory have grown into modern form and how the views of mankind have changed regarding the significance of the facts known to them This theme is so well developed as to render the book highly interesting even to educated chemists The author is a scholar of no mean attainment in the history of the science as well as in its technical development and has a talent for presentation which should earn for the book a widespread appreciation

The book entitled *Alcohol and Man*[3] edited by Dr HAVEN EMERSON of the De Lamar Institute of Public Health Columbia University New York is the work of twenty two contributors It is divided into six parts devoted respectively to the effects of alcohol on human functions the effects of alcohol on the cell and in heredity the toxicology and therapeutic aspects of alcohol alcohol and the body resistance to infection and the pathology of acute and chronic alcoholism the psychological and criminological aspects of alcohol and the relation of alcohol to longevity mortality and morbidity The chapter on alcohol and the body's resistance to infection has been written by Dr F S Langmead and T C Hunt and has been reprinted from *A Review of the Effects of Alcohol on Man* The other contributors are well known American professors clinicians and statisticians Although primarily intended for the lay reader for whose benefit a glossary is appended this book can be read with profit by the medical practitioner and student particularly as it contains much that is not as readily available elsewhere Its dispassionate character and wealth of documentation render it a valuable contribution to the literature of the alcohol problem

The *Directory of Guy's Men*[4] (Medical and Dental) has been brought up to date in the eleventh issue dated 1933 It contains a list of the governors and the medical surgical dental and teaching staffs of the hospital together with alphabetical lists of medical practitioners who were trained at Guy's and are practising in various parts of the world The annual subscription for the *Directory* and *Guy's Hospital Gazette* is 12s 6d payable to the manager of the *Gazette* at the hospital

[1] *Materia Medica* Pharmacy Pharmacology and Therapeutics By Sir William Hale-White K B E M D LL D Twenty first edition revised by A H Douthwaite M D F R C P London J and A Churchill 1932 (Pp x + 547 10s 6d)

[2] *The A B C of Chemistry* By J C Crowther London Kegan Paul and Co Ltd 1932 (Pp xi + 248 26 figures 4 6d net)

[3] *Alcohol and Man* The Effects of Alcohol on Man in Health and Disease Edited by Haven Emerson M D New York The Macmillan Company 1932 (Ip 491 18s net.)

[4] *Directory of Guy's Men* (Medical and Dental) Incorporating life members of the Clubs Union London Ash and Co Ltd 1933 (Pp xxxvi + 178.)

TEMPLE CROSS RESEARCH FELLOWSHIPS IN TUBERCULOSIS

The Dorothy Temple Cross Research Fellowships in Tuberculosis for the academic year 1933–4 will shortly be awarded by the Medical Research Council and applications should be lodged with the Council not later than June 1st

The object of these Fellowships as defined in the trust deed is to give special opportunities for study and research to persons intending to devote themselves to the advancement by teaching or research of curative or preventive treatment of tuberculosis in all or any of its forms Candidates must be British subjects and must possess suitable medical veterinary or scientific qualifications They must also be able to produce satisfactory evidence of their ability to make good use of the opportunities offered by the Fellowships

The Fellowships will preferably be awarded to candidates who wish to make their studies or inquiries outside the borders of Great Britain They will be awarded for one year as a rule but in special cases may be renewed The value of the Fellowships awarded will depend in each case upon the standing and qualifications of the candidate but will not be less than £350 per annum payable monthly in advance Travelling and some incidental expenses will be paid in addition It may also be possible to award a Senior Fellowship of considerably greater value to a specially well-qualified candidate wishing to undertake an intensive study of some particular problem of tuberculosis at a chosen centre of work in another country

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MEDICAL CONGRESSES, 1933

The following congresses and conferences on medical and allied subjects have been announced for 1933 Particulars are given below in the following order date name of organizing body place of meeting name of person to whom inquiries should be addressed More detailed information about these meetings is given from time to time as it becomes available in the news columns of the *British Medical Journal*

May 29—International Congress of Military Medicine Madrid

May 30–June 4—Royal Institute of Public Health Eastbourne Secretary of Institute 37 Russell Square W C 1

June 6–8—German Dermatological Society Vienna

June 17–24—Royal Sanitary Institute Blackpool Secretary of Institute 90 Buckingham Palace Road S W 1

June 28–July 3—International Hospital Association Knocke-sur Mer Belgium

June—German Pathological Society Rostock

June—German Physiological Society Innsbruck

June—German Society of Neurologists Munich

June—German Medical Association Bremen

July 4–9—International Union for the Protection of Childhood Paris Comité National de l'Enfance 26 Boulevard de Vaugirard Paris XV

July 13–15—National Association for the Prevention of Tuberculosis Cardiff Secretary of Association Tavistock House (North) Tavistock Square W C 1

July 19–22—International Society of Orthopaedic Surgery London

July 20–22—International Congress of Paediatrics London Dr L Findlay 61 Harley Street, W 1

July 25–29—British Medical Association Dublin. Medical Secretary B M A House Tavistock Square W C 1

September 7–9—Association Professionnelle Internationale des Médecins London Dr F Decourt Mitry Mory France

September 25–27—German Society for the Study of Diseases of Digestion and Metabolism Berlin

September 25–30—South African Medical Congress Capetown Dr A W S Sichel Capetown

September—International Congress of Mental Hygiene (European Reunion) Rome

September—Societe Anonyme des Eaux Minerales d Evian les-Bains Evian les-Bains Secretary of Society 21 Rue de Londres Paris IX

October—International Society of Medical Hydrology Toulouse Secretary of Society 5a Wellington Road N W 8

1933—Anti War Congress (Meeting of International Medical Conference) London

1933—Italian Ophthalmological Congress Rome.

Nova et Vetera

THE WARRINGTON ACADEMY (1757-86) AND ITS INFLUENCE UPON MEDICINE AND SCIENCE

While on a visit to this country Dr John F Fulton of the Yale University School of Medicine, attracted by a leader in the *Times* of August 5th 1932, referring to the will of a public-spirited alderman of Warrington—the late Mr Arthur Bennett—visited Warrington and obtained material for an interesting paper on the Warrington Academy which he read before the Johns Hopkins Medical History Club, Baltimore, on November 28th, 1932.[1] Space only permits a summary and some significant extracts, but to be fully appreciated the whole paper should be read

Baltimore he said "was the first place in this country where medical history really took root so now through a series of fortunate and highly appropriate circumstances it has become the chief centre for the intensive study of history of medicine and science For some years I have been growing more and more impatient with those scholars who assume that the only thing that matters in science and philosophy is the development of ideas and that great contributions should be recorded dispassionately and independently of the lives of those who created them My conviction is that an idea cannot be fully understood or evaluated unless one has studied the soil from which it grew The most intimate and important part of the idea is in my opinion the man who created it—how he lived who his friends were and what perchance he took for his breakfast or his dinner

What forces were at work upon him in his childhood who were his contemporaries and teachers what was the art and literature upon which he was brought up and finally was his mind fettered or inspired by religious convictions? No one has expressed this broad point of view as related to scientific history more effectively than Dr Sigerist in his recent book *Man and Medicine*

Why was it Dr Fulton asks that many of the most important contributions to English medicine and science in the eighteenth century came from a rather restricted district in and about the county of Lancashire He believes this to be due to the religious unrest of the time which brought the Warrington Academy into being The object of the Academy was to provide a liberal education, free from religious tests, to those dissenters who wished to enter the professions or who desired the higher education of a university The universities of England were closed to dissenters up to the year 1880 "Michael Foster, for example could not be appointed professor of physiology at Cambridge in 1878 because he was a fervent nonconformist (Baptist)' The Academy continued actively for twenty seven years but finally dissolved in 1786 The subjects taught were divinity classics, languages and belles lettres languages and natural history natural philosophy and mathematics Joseph Priestley is the most famous name associated with the Academy He taught languages and belles lettres from 1761 to 1767 He conducted experiments on electricity and wrote a *History of Electricity* at Warrington Priestley was also a pioneer in the teaching of history, for at that time history was not a fully recognized subject of university study Dr Fulton says 'Little wonder that historians of science and medicine have only recently become prominent in university life

During its twenty seven years of active life 393 students were trained at the Academy and of these twenty entered medicine seven are mentioned in the *Dictionary of National Biography* and three became Fellows of the Royal College of Physicians Of the medical men who attained fame the most prominent are John Aikin, Thomas Percival and Caleb Hillier Parry John Aikin (1747–1822) "of the English practitioners of medicine in the eighteenth century no one unless perhaps Richard Mead, carried higher the tradition of scholar physician than John Aikin" His father, the Rev John Aikin, was one of the founders of the Academy He studied medicine at Edinburgh and practised in Chester, Warrington, and Manchester He was apprenticed to Dr John White of Manchester, who wrote on the 'Management of Pregnant and Lying-in Women" Aikin wrote a small work, *Thoughts on Hospitals* and in this expressed his belief in wound infection by a viable agent conveyed by air He deplored the bad results of the treatment of compound fractures in hospitals, and advocated adequate ventilation to minimize the dangers He also wrote on lead as a therapeutic agent In general literature he wrote a ten-volume dictionary of biography—the predecessor of the *National Dictionary*, the *Biographical Memoirs of Medicine in Great Britain*, and several other works Thomas Percival (1740–1804), the first pupil of the Warrington Academy, studied medicine at Edinburgh and practised in Warrington and Manchester He founded the Manchester Literary and Philosophical Society He also "wrote the greatest work on medical ethics that has appeared in English, and in addition made scientific contributions of the first importance to public health and problems of putrefaction" Caleb Hillier Parry (1755–1822), the celebrated Bath physician, who wrote on the arterial pulse and angina pectoris, studied the breeding of sheep to improve wool production Of other pupils of the Academy the most famous is Thomas Robert Malthus F R S whose famous *Essay on Population* led to the Malthusian doctrine and indirectly through Darwin and Wallace to the theory of natural selection

After the Academy's cessation at Warrington, it moved to Manchester, remaining until 1803 Then to York for thirty-seven years, but returned to Manchester again until 1853, when it moved to London

During these migrations the college exerted through its liberal teachings a profound effect upon the life of the nation and it produced the commanding figure of James Martineau From London the college moved in 1889 to Oxford, and in 1893 came to occupy the new and beautiful buildings of Manchester College The chapel with its Burne Jones windows and the library with its statue of Martineau portrait of Priestley and above all its celebrated Warrington window give vivid testimony of its past, of its unfettered minds and the rich intellectual life with which it has been so long associated The college is no longer directly concerned with the teaching of science but I would urge that the movement that brought Manchester College into being did much also to promote the renaissance of scientific thinking among English speaking people Indeed it has been from the soil of free thinking that much of English science has grown since the time that Warrington closed its doors'

This imperfect summary of Dr Fulton's paper would be very incomplete without reference to the link between Baltimore and Warrington This link consists in the library of the Warrington Dispensary, which was bought by Osler in 1906 and taken to Johns Hopkins Hospital It now forms part of the Welch Library The library was gathered together by some of the men connected with the Warrington Academy, and Osler refers to the purchase in an address on 'The Library of a Medical School" in the *Johns Hopkins Bulletin*, July, 1907 After describing how the library came to his knowledge he said

I may mention in passing that the library is very rich in English medical pamphlets of the seventeenth and eighteenth centuries, and contains a large number of the works of classical medical authors which we had not in the library

I think it will be generally agreed that Dr Fulton deserves the thanks of the medical profession of this country for his eloquent and timely effort to stay the shadow of time from darkening a bright period in the history of English medicine and science and by so doing he has forged another link between British and American medicine

J S MANSON

[1] *Bulletin of the Institute of the History of Medicine* February 1933 vol i No 2 p 50 (Supplement to the *Bulletin of the Johns Hopkins Hospital* February 1933 vol lii No 2.)

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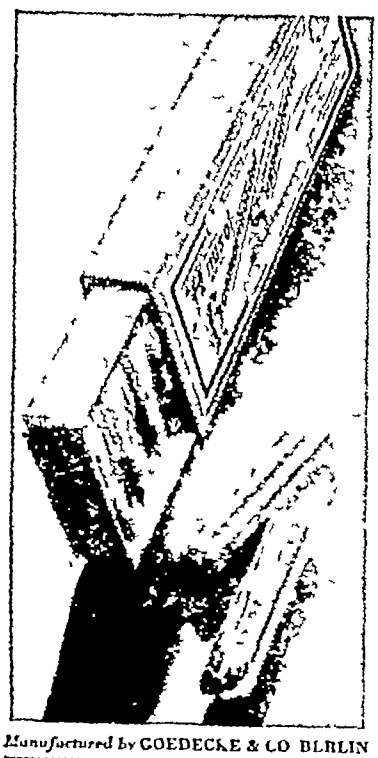

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British Medical Journal

SATURDAY, APRIL 29th, 1933

SURGICAL TREATMENT OF PHTHISIS

It is significant of the changes that from time to time take place in treatment that whereas operations for joint tuberculosis have enormously diminished in number those for the cure or amelioration of pulmonary tuberculosis have considerably increased On superficial consideration doubt might be thrown on the justification for this change and upon the theoretical or practical value of surgical operations which bring about collapse of the chest wall Rest is probably the most important factor in the healing of tuberculous lesions and in the case of joints this is most easily attained by efficient external splinting whereas rest to the lung in so far as it can be attained can only be brought about by operations which collapse the lung either locally or generally The breaking down of caseous nodules and the discharge by expectoration results in the formation of cavities The natural result of healing is for the walls of the cavity to become approximated adherent and eventually replaced by fibrous tissue This is obtained when the cavities are limited the chest wall soft and the mediastinum flexible, by these factors permitting some diminution in the capacity of the hemithorax In many cases however relaxation of surrounding structures is not enough to allow of obliteration of the cavities and displacement of the mediastinal structures to the affected side may be of such a degree as to interfere with the heart s action It is for these reasons that one or other form of operative measure—from the simple artificial pneumothorax to the more radical procedure of thoracoplasty—is indicated

The success of adequate collapse treatment by artificial pneumothorax has drawn attention to the possibility of producing similar results by other measures when localized or generalized adhesions interfere with the successful issue of a pneumothorax Localized adhesions found between visceral and parietal pleura after the induction of pneumothorax are most commonly in close relation to cavities and prevent their collapse to secure which is the primary object of the operation Division of adhesions is therefore essential if the value of this form of therapy is not to be considerably restricted When they are not too widespread or not largely composed of pulmonary tissue the operation of cauterization is indicated the adhesions being divided by electric or diathermic cautery under thoracoscopic control This procedure appears to be of definite value in a limited group of cases Ill-judged attempts at the operation in unsuitable cases are likely to result in the development of pleuro-pulmonary fistula causing secondarily infected pyopneumothorax—always a serious and often a fatal complication Paralysis of one-half of the diaphragm produced by evulsion of the phrenic nerve is an operation without appreciable risk and has unquestionably attained a place in the treatment of pulmonary tuberculosis It often precedes thoracoplasty and is used in conjunction with other measures such as artificial pneumothorax but there appears to be much evidence that as an independent measure it is often valuable Head Schlack and Marx[1] state that as a result of a comparison of seventy-five patients submitted to the operation with a similar unoperated group as a control a primary phrenicectomy much decreases the number of cases in which artificial pneumothorax is indicated that it militates against extrapulmonary complications , that it lessens the risk of spread to the opposite lung and the lighting-up of arrested or quiescent processes and that active disease in the opposite lung is more likely to clear up Another interesting observation by these authors and contrary to the generally accepted view is that phrenicectomy discourages rather than favours the formation of pleural adhesions Although little was originally expected from phrenicectomy in apical cavitation experience has shown that in many cases especially those with thin-walled cavities complete collapse and obliteration may follow operation

In the presence of tuberculous disease localized to the apex of the lung when artificial pneumothorax is impossible the fact that a complete thoracoplasty will collapse and put out of action a considerable area of relatively healthy lung in the mid-zone and base has brought forth other operations These consist of localized thoracoplasties confined to the upper two ribs which are completely removed or of subtotal resections of the upper three four or five ribs according to indication The value of these localized operations is still somewhat debatable but on the whole they appear to have a definite place in the surgical treatment of apical disease A second method of producing the collapse of apical cavities is by apicolysis In this the parietal and visceral pleurae previously proved to be adherent are separated by blunt dissection from the chest wall and the space which is left is filled with fat muscle or sterile paraffin wax The muscle filling necessitates an anterior incision and the use of the pectoral muscle whereas when fat or wax is employed anterior posterior or axillary approaches may be used according to the necessities of the case and the desire of the operator The insertion of wax sometimes provokes a sterile extrapleural effusion which coming to the surface beneath the scar may cause an external discharge of the wax The operation of apicolysis most attractive in theory has not yet really established itself on a solid basis for the treatment of apical lesions A recent addition to the group of operations for apical

[1] *Amer Rev Tub* December 1932, p 603

disease is that known as scalenotomy or division of the scalene muscles This procedure is said to result in marked reduction of the respiratory excursion of the upper portion of the chest, a movement which is particularly exaggerated after phrenic evulsion and is probably compensatory Clyne[1] reports fifty-two cases operated upon, in twenty of which phrenic evulsion had been performed from six months to three years previously and "improvement had stopped" Of these twenty cases, ten were improved by the operation and ten were unchanged Of twenty-nine cases in which phrenic evulsion and scalenotomy were done at the same sitting, improvement was observed in nineteen and no improvement in ten Three patients had scalenotomy without phrenic evulsion, of whom two were definitely benefited This work suggests that the operation may be of value in a somewhat restricted group of cases and warrants a more extended trial

What is the ultimate fate of patients with extensive unilateral disease in whom pneumothorax is indicated but impossible? In other words, what is the prognosis in patients who need thoracoplasty but who miss the most favourable time for this treatment? Coryllos,[2] in justification for the operation, states that "without operation, out of 100 patients with caseous pneumonic tuberculosis in which pneumothorax was not effective, 50 per cent died within a year, 30 per cent more within two years, 10 per cent more within three years, and only 10 per cent survived over four years" According to Barnes and Barnes, in 1,465 cases with cavitations, the average span of life was 15 8 months, and 80 per cent died within one year Out of 100 similar cases submitted to thoracoplasty (Nissen) "fifty were completely cured—that is, within one to two years after operation they were able to perform a full day's work without fever, cough or expectoration, and were permanently bacilli-free' In summing up the advantages of thoracoplasty Coryllos says "In other words, of 100 patients doomed without thoracoplasty to certain death obliged in the meantime to spend their life in sanatoriums, and constituting a real danger to the community sixty to seventy were able to return to active life and became an asset instead of a liability to society" Thoracoplasty has been and is regarded as a mutilating surgical procedure by those only whose knowledge and experience of the modern operation is limited Similarly, operative mortality has been greatly reduced within the last ten or twelve years, so that to-day it lies between 5 and 15 per cent, varying with the experience of the surgeon the type of the disease, and the condition of the patient at the time of operation The operative treatment of pulmonary tuberculosis has firmly established itself for certain types of the disease, the indications are becoming more generally recognized, and the future will no doubt show an increase in the numbers of patients submitted to operation It is much to be hoped that such valuable measures may not be embarrassed and prejudiced by their employment in unsuitable cases

[1] *Amer Journ Surg* December 1932 p 771
[2] *Amer Journ Surg* December 1932 p 494

CAUSATION OF THE COMMON COLD

One might infer from what appears in the lay press from time to time that the problem of the causation and prophylaxis of the common cold, and the closely allied disease influenza, has remained unsolved because the medical profession was either callously indifferent to the whole question or quite incapable of tackling it It is not suggested that any reply to such onslaughts on medical research is necessary criticism of this kind can only come from those who are grossly ignorant of the nature of the problem and its inherent difficulties But if those who felt inclined to criticize in this way purchased and read volume viii of the Annals of the Pickett-Thomson Research Laboratory[1] they might be enlightened Even though they failed to understand much of it, good would still have been done, for they would have helped to alleviate the financial loss which publication on so sumptuous a scale has entailed This monograph is devoted to the common cold Its authors, Drs David and Robert Thomson, have achieved a monumental task Not only have they produced a digest of some two thousand papers dealing with investigations on the common cold and allied respiratory infections like influenza, but they have incorporated their own work, which has extended over many years There are some forty-eight chapters, each dealing with a special aspect of the problem, and in each one the procedure is the same The available literature is passed in review, the authors then state their own findings, and finally sum up the situation

It is impossible in a work of this magnitude to deal critically with all that it contains, but perhaps those parts which concern the causation of the common cold might be referred to, particularly in view of the prominence given to this aspect of the subject by the recent work of Dochez and his colleagues in America Thomson and Thomson are convinced that the cold is the work of a number of different agents Putting aside the nasopharyngeal catarrhs of non-infectious origin, such as hay fever and the infective catarrhal conditions found in specific infections like measles—in fact, limiting consideration to what is known as the common cold—the authors' view is that there are as many different types of cold as there are pathogenic bacteria present in the nasal discharge in this state Thus according to them there are streptococcal colds, pneumococcal colds, colds due to *Micrococcus catarrhalis*, the influenza bacillus, and so on, the filterable virus being reduced to the same status as any of these other organisms—that is, the prime causal agent of some colds only They are not alone in holding this view of multiple causation, and of course from the clinical point of view it would be as reasonable to suggest that the picture presented by the common cold pleaded in favour of a single prime causal agent as to argue that all cases of vulvo-vaginitis or urethritis must necessarily be due to the gonococcus It must be pointed out, however,

[1] *The Common Cold* With special reference to the part played by streptococci pneumococci and other organisms By D and R Thomson London Baillière, Tindall and Cox (£3 3s net)

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that extensive investigations of the bacterial flora of the nasopharynx of healthy people and of those with colds have not pointed definitely to any of these bacteria as the prime cause of this condition Dochez and his colleagues went into this aspect of the problem carefully before passing to a consideration of the possibility of colds being due to a filterable virus and they concluded that none of the aerobic organisms are of primary aetiological significance because none appear for the first time or in significantly increased numbers during the early days of the cold The authors discount much of this evidence on the grounds that it is the outcome of mass investigations in which insufficient attention was paid to the identification of the individual strains of bacteria isolated

None the less the filterable virus conception of the aetiology of the common cold now rests on a basis of considerable solidity The earlier studies of Kruse and Foster have been supported by the admirable investigations of Dochez These in turn have been corroborated both in America and in this country and though these findings do not impose the conclusion that all infective colds are due primarily to a filterable virus they make it necessary to exclude the filterable virus before accepting a cultivable bacterium as the causal agent however soon and in whatever numbers that bacterium may appear in the nasopharyngeal discharges In this respect the recent work of Shope on swine influenza is of considerable significance In this disease a filterable virus and an influenza bacillus are both present from the beginning The latter, however when isolated in pure culture, is devoid of pathogenicity for swine whilst the former only produces a mild febrile condition But the two together give rise to the complete clinical picture of swine influenza and are passed together in nature from animal to animal Whether or not one disagrees with the views expressed by Thomson and Thomson it must be admitted that they have done most useful work in collecting and collating the vast literature of the subject Their monograph though unwieldy, is well printed It contains a complete bibliography and a good index as well as some remarkable photographs of cultures made by the authors from cases investigated by them

THE HEART IN HYPERTHYROIDISM

A recent number of the *American Heart Journal* (1932 viii, No 1) is devoted to a symposium on the effects of hyperthyroidism on the heart and circulation The subject is dealt with widely and a good deal of interesting information is brought together When hyperthyroidism is present the circulation is carried on in a manner very different from the normal There is an increase in the output of the heart per minute this is associated with the familiar tachycardia and is also due to the increased force of the heart beat It is probable that under the influence of excess of thyroxine the heart empties itself more completely early in systole and fills more completely early in diastole the rate of the circulation is thus increased This abnormal behaviour on the part of the heart is caused by the direct action of thyroxine on its muscle fibres It has been shown that thyroxine causes fragments of heart muscle removed from chick embryos to pulsate more quickly and sometimes to fibrillate any action through the medium of the nerves to the heart is thus excluded The tachycardia of hyperthyroidism persists during sleep, and may thus be distinguished from the tachycardia of neurosis Laxity of the vessels manifested by the high pulse pressure capillary pulsation and throbbing in the arteries is associated with diminished peripheral resistance which may account for the absence in many cases of hypertrophy of the heart even after several years the increase in the metabolic demands of the tissues is met by increase in peripheral glow There is also a definite increase in the blood volume and in the venous return to the heart this may account for the increase in size of the conus arteriosus of the right ventricle The heart is therefore required to do more work over very long periods of time, and considerable study has been made on the effects of this prolonged overaction on the myocardium From time to time cases have been described in which pathological changes have been found in the heart muscle post mortem and in some instances it is true cellular infiltration and fibrosis have been noted but such changes are by no means common or characteristic Such as may be present are probably due to coexistent disease of some other nature One finding is constant and that is the absence of glycogen in hearts which have been subjected to experimentally produced hyperthyroidism From a clinical point of view it would appear that enlargement of the heart is present in about a third of the cases but it is remarkable how long the disease may persist without any obvious changes being found Owing to the enhanced action of the heart it is difficult to gauge accurately by physical examination the presence of enlargement There is no doubt that changes in the heart are most likely to be found in the elderly woman in whom high blood pressure is not infrequently associated with hyperthyroidism thus imposing an additional strain upon the heart A study of the cardiac status after prolonged thyrotoxicosis shows that thyro-cardiac disease is seldom if ever found in young people and it is thought that in the elderly the cardiac reserve is likely to be encroached upon by degenerative cardiovascular processes Auricular fibrillation is well known to be a fairly common manifestation in the later stages of hyperthyroidism in the elderly and a study of patients who died of heart failure associated with hyperthyroidism showed that auricular fibrillation or flutter occurred in practically every case The electrocardiogram reveals no constant changes in hyperthyroidism Sometimes variations in the T wave are observed but there is nothing constant enough to be of any clinical value As regards treatment there is fairly general agreement that the best way to prevent the occurrence of circulatory complications and to restore efficiency to the heart is by removal of a sufficient amount of the gland after adequate medical preparation Auricular fibrillation does not contraindicate operation Most observers agree that the patient should be brought well under digitalis before the gland is removed and afterwards with or without the help of quinidine there is every prospect of a normal rhythm being resumed If quinidine is used it should be administered within

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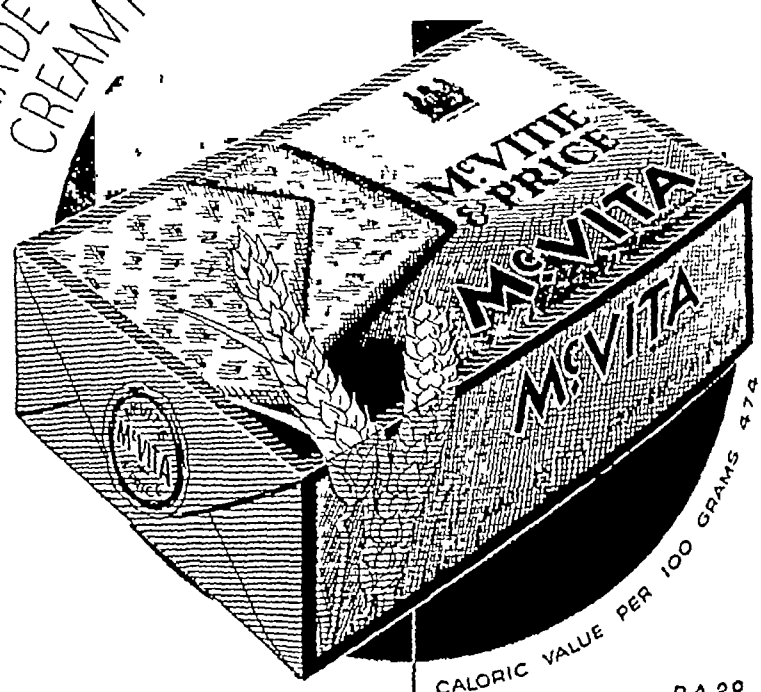

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a week of the operation later, it is less likely to be effective If artery disease or high blood pressure is present the defects due to these will still be apparent after operation, though perhaps they may be of less significance There can be little doubt that in thyrotoxicosis the heart plays its part, in difficult circumstances, extremely well for a remarkably long time When defects arise they are often due to associated conditions It would seem fairly well established that effective operation, following adequate preliminary medical treatment, should be tried in hyperthyroidism much sooner than is the practice at present

BACTERIOLOGY OF SUMMER DIARRHOEA

The fact that outbreaks of severe diarrhoea in the warmer months of the year among young infants are not now so grave as they used to be does not remove the necessity for some solution of the aetiological problems, for acute intestinal disorders in babies still occur all the year round, and, while there is evidence to suggest that these are in many instances a secondary manifestation, there are still far too many cases in which a direct primary infection seems the likely explanation, an infection all too often picked up in a hospital ward after admission for some other less serious complaint In a recent issue of the *Archives of Disease in Childhood*[1] Drs Nabarro and Signy brought forward evidence which stressed the importance of the Sonne type of dysentery organisms in this connexion, and confirmation of this view comes in a careful study from Toronto by Drs Marion Johnston, Alan Brown and Miss Mildred Kaake[2] During the autumn of 1930 the stools of sixty-seven infants, admitted for the most part with a diagnosis of acute intestinal intoxication, were examined, and 63 per cent yielded pathogenic organisms, mostly of the dysentery series Some of the stools showed blood and pus, or either alone, while some did not, and, despite various alternative labels for other cases, such as infectious diarrhoea, fermentative diarrhoea, or even dysentery, the finding of organisms was evenly distributed in other words, there was little clinical possibility of picking out the cases in which dysentery would be likely to be present Agglutination reactions proved unsatisfactory and the serological investigations are being repeated In twenty-nine older children, with similar acute bowel trouble, dysentery or paratyphoid organisms were discovered in 76 per cent Out of seven cases in which Sonne dysentery bacilli had been isolated, positive agglutination reactions in the serum were obtained in six In the autumn of 1931 a similar but less extensive investigation was also undertaken, and for the two series combined it was observed that in 67 per cent of the infants under 2 years, and in 60 per cent of older children the stools contained pathogenic organisms mainly of the dysentery type It is of interest to note that Sonne dysentery infections also occurred in three adults one of whom was a nurse in the out patient department of the hospital In carrying the matter a stage further this group of workers found that similar dysentery infection could be detected among infants with diarrhoea not ill enough to be admitted to hospital, and among stools obtained at random from infants attending the "well" baby clinic From a stool sent to the hospital from a small town in Ontario the Sonne organism was isolated, indicating that this infection may also be present in less populous districts In certain instances stools were obtained from members of households from whence infants with pathogenic organisms in the excreta had come, and, while the number of positive results observed was small, there were sufficient to justify the conclusion that "the clinical conditions produced by these micro-organisms are infections acquired by the hospitalized patient from carriers or other cases" The mode of spread is indicated by the fact that when the contents of feeding bottles brought to the hospital were examined bacteriologically, in six instances none was sterile, and flies caught in households in which the infant was infected yielded pathogenic organisms in more than one case, while even domestic animals were found to harbour them These findings give much food for thought, and also provide a hopeful outlook, for if infantile diarrhoea is essentially an infective process, with identifiable organisms, its prevention should not be too difficult a matter For a start, spread of such infection in hospitals might be tackled, as it is essentially a problem in nursing

[1] *Arch. Dis. Childhood* 1932 vii 327
[2] *Amer. Journ. Dis. Child.* 1933 xlv 498

THE BUDGET

The framing of a British Budget calls for a high degree of courage and resource Always there are requests for, and rumours of, concessions to various interests, and usually in these days there are growing commitments that call for increased financial provision Over caution may prove definitely harmful, rashness may bring disaster This year the problem is complicated by international factors The immediate one—whether money will have to be found for the debt payments to the United States—the Chancellor has dealt with by ignoring it, for the Government takes the view that pending a resettlement of the debt question any such payments should be regarded as on account of capital Apart, however, from this particular question, international finance is likely to have a momentous bearing on international trade and therefore on the general trade of this country, and its indirect effects on the Exchequer receipts from customs and stamp duties, payment of unemployment benefit, and afterwards on income tax receipts, will be of grave importance When these considerations are added to the multifarious elements of the Chancellor's problem, it will be seen that Mr Neville Chamberlain has done his work under a heavy load of responsibility and difficulty The gross deficit last year was £32,000,000, but if allowance be made for the fact that the gross expenditure included £29,000,000 paid to America and £17,000,000 paid into the Sinking Fund (less £3,000,000 interest charged to capital account) the actual balance is £11,000,000 excess of income over expenditure That, we think, represents the true position more nearly than a deficit of £32,000,000 Repayment of debt is nearly always one of the primary duties of a Government, only by such a policy can the national credit be fully maintained and the rate of interest payable kept down at an economical

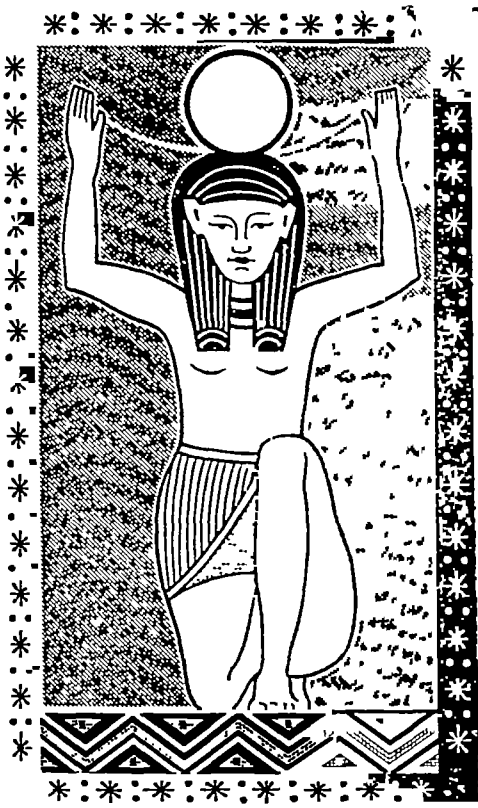

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figure But there are exceptions even to that rule Last year s Budget was necessarily subordinated to one of the major financial enterprises of the Government—the conversion of the 5 per cent War Loan to a 3½ per cent basis—and any suspension of established Sinking Fund arrangements might have affected that project adversely That aim has now been accomplished and there will be a consensus of opinion that in these exceptional times the British taxpayer cannot fairly be asked to do more than pay his way suspending for the moment the further task of lightening the burden of national debt for the benefit of posterity In less abnormal times estimates of expenditure and of receipts vary within comparatively narrow margins A noticeable feature of this year s Budget is the wide variation in many items from last year s figures The suspension of the Sinking Fund and the saving in War Loan interest give a great advantage over last year on the other hand increased expenditure on old age and widows' pensions housing and unemployment has to be provided for and the full year s consequences of the Irish Free State default have to be met. Add to these considerations the fact that the yield of the income tax and surtax is falling and will continue to fall during the financial year and the advantages are very heavily discounted In one or two directions some increased taxation will be applied but only those derived from road transport in the form of increased licence charges on heavy road vehicles and heavy oils are likely to produce substantial results On balance Mr Chamberlain anticipates a surplus of £17 000 000—if no reductions were made in existing taxes He is able to make some remission and as was generally anticipated the first reduction is in the beer duty which from the Exchequer s point of view seems to have been raised to a point at which the effect on consumption was too drastic It was expected that something would be done to lighten the income tax payers burden A reduction in the standard rate of 5s in the £ was perhaps too much to hope for but our readers will share the general disappointment that the present scales of allowances are to be maintained The reversion to the former arrangement under which tax on earned income is due in moieties in January and July as compared with the recent basis of three-quarters in January and one-quarter in July will be welcome when the income-tax collector sends his demands out next winter but the financial stringency which so many taxpayers are feeling to-day can hardly be expected to have passed away in 1934 and a deferment of 25 per cent of the tax for six months is a poor substitute for any appreciable reduction of the total amount We think that this feature of the Budget will attract adverse criticism The national accounts are kept on a ' cash basis and any postponement of receipts to a date outside the financial year is thus as effective as a real reduction in disposing of an estimated Budget surplus But it is not the same thing from the taxpayers point of view When the change was made to the heavier January payment the Government stated that special consideration would be given to particular cases of hardship Assuming that that was done and can be continued the present basis is unpleasant but not intolerable and it seems unfortunate that what constitutes a loss to the Exchequer in 1933–4 should bring only a moderate and purely temporary advantage to the taxpayer If I have not produced a spectacular Budget said Mr Chamberlain I have produced an honest one No one will wish to question this description of the Budget and most people will recognize that it was framed with great care in a time of peculiar difficulty But many taxpayers are looking forward with impatience to the time when the clearing away of the clouds of trade depression and international dispute will give scope to those qualities of imagination and constructive statesmanship which find so little opportunity to-day

JEWISH DOCTORS IN GERMANY

The Medical Secretary of the British Medical Association has received a number of letters from Jewish doctors in Germany or from their friends in this country inquiring about the prospects of medical practice in Great Britain for those who are now precluded from following their profession at home The position of these medical practitioners is very difficult indeed and must command general sympathy among their colleagues because Medicine as such knows no frontiers and makes no distinctions on grounds of race or religion or nationality Nevertheless the right to practise medicine is governed by laws which vary in different countries and freedom of domicile for foreigners is subject to restriction in this and many other countries It must be borne in mind that there is no medical reciprocity between Germany and Great Britain that is to say qualifications admitting to licensed practice in the one country give no privilege or very little in the other Hence the degrees or diplomas of German universities which have entitled Jewish doctors to practise in Germany are not registrable qualifications under our Medical Acts In replying to correspondents the Medical Secretary has therefore had to point out that two conditions must be fulfilled by colleagues who by reason of the political situation to-day can no longer practise freely in Germany First they must obtain a British qualification with all that that entails secondly they must comply with the requirements of the Aliens Act as administered by the Home Office In the ordinary way permission is readily given to reputable foreigners who wish to pursue medical studies here but the official procedure might conceivably change if large numbers of applications came from one country and the attitude of the medical schools and examining bodies also would have to be reckoned with in such circumstances The English friends of those unfortunate Jewish doctors whose eyes are now turning hopefully towards England would thus do well to ascertain the view of the Home Office before holding out encouragement to them

We regret to announce the death of Dr David Shannon lecturer in gynaecology in the University of Glasgow and senior surgeon to the Glasgow Royal Samaritan Hospital for Women

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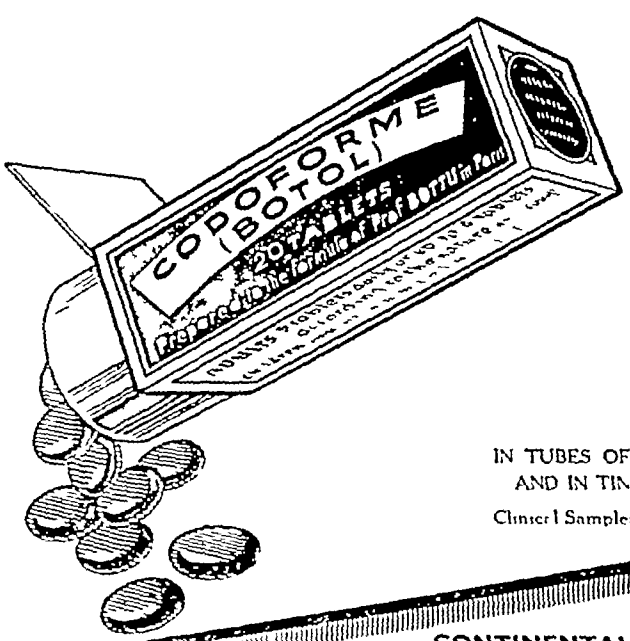

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Ireland

Vital Statistics for the Irish Free State

The summary of the vital statistics for the Irish Free State for the year 1932 shows a decline in the birth rate, the figure being 18 9 per 1,000 estimated population, as against 19 3 for 1931 and an average of 20 2 for the ten years 1922–31 This rate however is higher than the corresponding rate for England and Wales of 15 3, and for Scotland of 18 6 The death rate, based on a total of 42 957 deaths in the year, was 14 4 the rate for 1931 and the average for the ten year period having been 14 5 Infant mortality was 71 per 1 000 births registered as against 69 for 1931 and an average of 70 for the period 1922–31 There is no outstanding feature in the mortality rates from the principal diseases, although most of them show a slight decrease on the rates for 1931 and for the five year period 1927–31 The death rate from tuberculosis for example was 1 2 as compared with 1 3 in 1931 and 1 4 for the five year period , from puerperal conditions 4 2 as against 4 3 for 1931 and a five-year average of 4 5 from cancer 1 07 as against 1 11 in 1931 and 1 09 for the five year period The death rate from influenza of 0 5 shows no change

Allocation of Sweepstakes Money

A commission is to be set up by the Government to recommend to the Minister for Local Government and Public Health the allocation of the moneys accruing to hospitals from the sweepstakes This commission will be established under the Hospitals Bill—shortly to be read a second time in the Dail—and will supersede the present Committee of Reference It is understood that it will consider not only schemes of co-ordination, but also schemes for amalgamation of hospitals The moneys so far withheld are Grand National, 1932 £694 096 , Derby 1932 £774 001 , Cesarewitch, 1932 £679 584 , Grand National 1933 £581,497 Under the scheme in operation hitherto one third of the amount would go to the county hospitals and two-thirds to the voluntary hospitals Up to and including the November Handicap 1931 the amount actually distributed among the hospitals was £1 770 000 A deputation from the Hospitals Committee to the Minister for Local Government and Public Health stated that their committee was of the opinion that the coming legislation should only apply to future sweepstakes and they asked that the money now in hand should be distributed among the participating hospitals The Minister in reply pointed out that the Committee of Reference in its first report, had referred to the necessity for a survey of the hospital accommodation in the country and to the flaws in the system of voluntary hospitals due to lack of collaboration and co ordination with the public health services The main purpose of the Government he said was to set up a body which would carry out this survey The committee need feel no uneasiness with regard to the statements that had been published to the effect that it was intended to divert some of the moneys from the hospitals The commission would necessarily have regard to the work of the Committee of Reference

Admission of Poor Patients to Dublin Hospitals

There have been letters in the Press recently from some of the city hospitals denying the accuracy of the statement made at a meeting of the Dublin Board of Assistance (Poor Law) to the effect that poor patients experience great difficulty in gaining admission to those hospitals Dr T G Moorhead chairman of the board of governors of Sir Patrick Dun s Hospital stated in one of these letters that if a poor patient, or a patient able to pay something, was at any time refused admission, the refusal was due to the fact that at the time of application there was no bed available or that the applicant was not suitable for hospital treatment As a proof of this he quoted from the report of the hospital for the year 1932 which showed that, out of 1,924 patients admitted during the year, 784, or 40 75 per cent , were treated absolutely free of all charge, while a further 331, or 17 per cent , were treated for 10s a week or less Mr William Doolin, St Vincent s Hospital, Dublin, stated that on the day the charge was made it fell to his lot, as surgeon on duty, to perform five emergency operations in the two city hospitals to which he was attached In each of these five cases the patient was a " poor person " or the child of a " poor person," who had been admitted to the hospital immediately on application and operated upon within a very short time of admission An inquiry at St Vincent's Hospital elicited the following facts On the date of his statement April 19th twelve " poor " (non paying) patients were admitted to the wards of the hospital Of the total available beds in the hospital (176) 158 were occupied owing to the absence on vacation of certain members of the hospital staff, two small wards were temporarily closed Of the 158 beds 118 were occupied by " free " patients, sixteen by " paying " patients, and twenty-four by patients whose maintenance charges were defrayed by public bodies

Australia

[FROM OUR CORRESPONDENT IN SYDNEY]

The Late Sir Charles Clubbe

Sir Charles Percy Barlée Clubbe who died on November 20th, 1932 (see obituary notice in the *Journal* of December 24th p 1169), has left a name that is honoured, a memory that is cherished, and a record of noble work that will form a proud chapter in the history of medicine in Australia After serving in the Zulu war of 1879 he came to New South Wales, where he remained for the rest of a long and useful life Shortly after his arrival in Australia he was appointed to the honorary surgical staff of the Royal Prince Alfred Hospital, Sydney, and was for many years one of the lecturers in clinical surgery at the University of Sydney As a teacher he was gifted, and possessed a skill that enabled him to instil an orderly system of thought in the minds of his students Clubbe s greatest work, and the work that he will be most remembered by, was done in the cause of the sick children of New South Wales He was largely responsible for the establishment of the Royal Alexandra Hospital for Children , in fact, he gave a personal guarantee for the sum necessary to commence the building For thirty-six years he was an honorary surgeon on the staff of this hospital, and for twenty eight years its president During this period it grew until it had a capacity of 351 beds , its equipment improved, its methods developed, and it became of immeasurable value to the community, not only as an institution for the care of sick children, but also as a training school for nurses and medical undergraduates Its development was moulded largely by Clubbe s guiding hand As an appreciation of his good work the directors of the hospital have decided to name the new isolation block The Charles Clubbe Block " It was while he was on the staff of the Royal Alexandra Hospital that Clubbe gained the vast experience in intussusception that enabled him to write his well known book on the subject This book is a classic and is known the world over , the diagnostic and therapeutic methods it teaches are generally accepted as the best Clubbe s teaching has not been in

vain in New South Wales at any rate for intussusception in a late stage is rarely seen now in the hospitals in Sydney Within recent years at an age when most men would be content to sit back and contemplate the work they had already done Clubbe performed an excellent service to the State in the organization of the Infantile Paralysis Committee It was largely through his interest and efforts that supplies of immune serum were made available in Sydney and at various county centres Clubbe was president of the New South Wales Branch of the British Medical Association in 1897–8 and was for many years a member of the council of the Branch He was chairman of the executive committee of the Bush Nursing Association from 1911 to 1930 and president of that association from 1930 until his death He was also president of the Royal Society for the Welfare of Mothers and Babies and was trustee and chairman of the District Nursing Association At the time of his death he was honorary consulting surgeon to the Deaf Dumb and Blind Institute the Coast Hospital and the Greycliffe Hospital for Babies He was a Fellow of the American College of Surgeons and a Foundation Fellow of the Royal Australasian College of Surgeons Clubbe was strong and courageous he was a skilled surgeon a kindly doctor a courteous gentleman and a beloved friend His death will be mourned by all who knew him

New South Wales Medical Board

Considerable interest has been taken by the public and the members of the medical profession in New South Wales in the action of the Minister for Health (Mr R W D Weaver) in summarily cancelling the appointments of the members of the New South Wales Medical Board and making new appointments The daily press which is remarkably interested in medical matters has made the most of the news provided by the incident in some instances sensationalism has been approached

The public has not been acquainted with all the facts Early in December 1932 the Minister for Health wrote to the individual members of the Board expressing his appreciation of the work they had done and informing them that he had come to the conclusion that the Board as then constituted should cease to function and that the time had arrived for a general reconstruction of the Board He went on to say that he deemed it expedient for the appointment of all members of the existing Board to be terminated He concluded by suggesting that the members should hand in their resignations On receipt of this communication the available members of the Board met and decided that as no reason for requesting their resignations had been given they should not move until they had an opportunity of discussing the matter at a full and properly constituted meeting Thereupon in a letter dated December 5th the secretary of the Board informed the Minister for Health that as the matter was important they would not deal with his communication until after their next monthly meeting on December 14th On December 10th a statement appeared in a daily newspaper to the effect that the members of the Medical Board would have to retire under the policy adopted by Mr Weaver as they had reached the age of 65 years It should be noted that there had been no mention of a retiring age in Mr Weaver's communication On December 14th it was announced in the daily press that Mr Weaver had issued a minute signed by the Governor declaring all seats on the Board vacant and that seven medical practitioners had been appointed to take the place of those who had retired In the meantime the retiring members of the Board had received no further communication from Mr Weaver

The reconstruction of the New South Wales Medical Board may or may not be expedient Possibly the Minister for Health is the best judge of that certainly it is quite permissible for him to make what alterations he considers fitting within the legislation provided But most people will agree that the retiring members have been discourteously treated It must be remembered that they have served the State gratuitously for many years The retiring members are Drs E J Jenkins W H Crago G H Abbott J A Dick W G Armstrong and A Murray-Will The newly appointed members are Drs R B Wade (chairman) A W Holmes a Court H J Ritchie H R G Poate H M Moran E H Molesworth and F A Maguire They are all esteemed and prominent members of the medical profession in New South Wales and will have the confidence of medical practitioners An early important function of the newly constituted Board was the registration on January 25th 1933 of forty-one recent graduates of the University of Sydney The ceremony of registration was held in the Executive Council Chamber The function represented a change in the procedure of registration which hitherto has been a matter devoid of any semblance of ceremony

Scotland

Clinical Research by Practitioners

The Department of Health for Scotland published last month a preliminary survey of the statistical data on heart disease furnished by Scottish insurance practitioners under the inquiry M R 2 The inquiry deals with cases of heart disease coming to the notice of practitioners during the early part of 1932 and includes observations on early symptoms age sex and previous history of 1 860 cases of valvular disease It was found that 11 per cent of cases showed no symptoms before coming under observation and were discovered accidentally The symptom of which complaint was most frequently made was shortness of breath this was experienced in from 63 per cent in aortic cases to 78 9 per cent in cases with combined aortic and mitral lesions Pain was discovered in 30 per cent of aortic cases palpitation in 22 per cent and general lassitude in about 15 per cent With regard to causation a previous history of acute or subacute rheumatism figured in 60 per cent of cases showing mitral and aortic lesions influenza in 36 per cent septic teeth in 17 per cent tonsillitis in 15 per cent and scarlet fever in 14 per cent As to sex the crude rate per million of the insured population showed mitral disease as affecting 1 020 females and 407 males while aortic disease affected 109 males as against 67 females Noteworthy points demonstrated by the research were that the incidence of heart disease as a whole increased with advancing age that the female rate at each age was higher than the corresponding male rate and that the relative amount of this excess varied at different ages the greatest difference being observed at ages between 20 and 40 The results of this inquiry although somewhat limited indicate the possibility of much useful knowledge being derived from this hitherto almost untapped source of information upon some of the wider non specialist problems of medicine

The research upon the subject of maternal morbidity to which attention was directed in these columns in November last (p 895) is now in progress and the draft form M R 3 for the further inquiry into heart disease has been submitted to the Panel Committees for general consideration and explanation to insurance practitioners A conference of representatives of Scottish Medical and Panel Committees held on October 5th 1932 resolved to represent to the Department of Health that the cardiac inquiry (M R 2) should be continued for a further period subject to minor modifications with regard especially to treatment A committee comprising medical representatives of the Department of Health and representatives from the Scottish Committee of the B.M A drew up a form for this inquiry which the Insurance Acts Subcommittee approved at its meeting on March 14th This form

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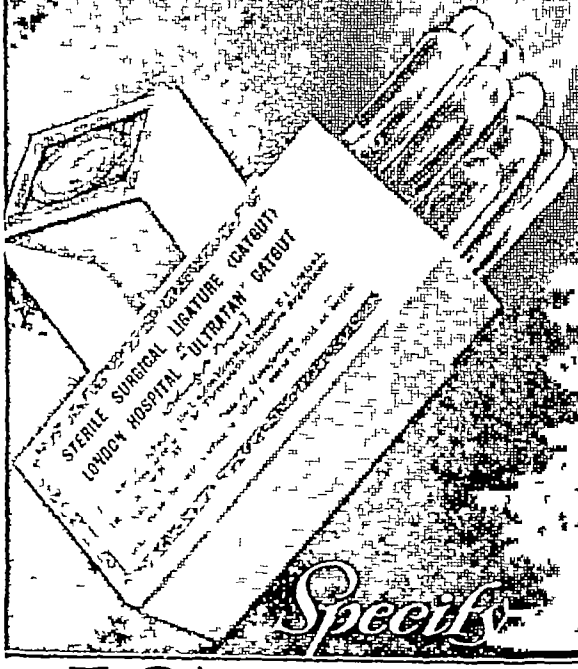

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has now been warmly approved by a considerable number of Panel Committees in Scotland While it affords a great deal of information the time taken to record the series of observations made at one examination of a cardiac case is only some three minutes This has been secured by the method of asking for the presence or absence of certain specified signs and symptoms, and for definite facts regarding diet, muscular activity, and the main drugs used in treatment, all the answers being supplied by the plus or minus sign The questions are so arranged that the plus sign is always indicative of a deviation from the normal The attention of practitioners is specially drawn to the importance of answering every question by one or other of these signs , in the previous inquiry ambiguity was introduced because the answer to certain questions was left blank The form provides space for several successive examinations at different dates, and the inquiry is limited to recording the period when any of the given data appear or disappear during the course of treatment the time factor being thus capable of evaluation as the result of the treatment administered The facts in regard to which information is asked are those ordinarily observed by the practitioner in the general course of his examination , nothing novel or of a specialist nature is incorporated, although space is left at the end for any additional data which the practitioner desires to record Since only valvular forms of heart disease are included, it is expected that the average number of cases per doctor to be recorded will probably amount to about four per annum The results which it is hoped that returns from a large body of practitioners will afford will include a review of the various methods of treatment actually in use among general practitioners , a comparison of the varieties of treatment in use at different stages of heart disease , data by which the relative merits of different methods of treatment can be compared , and a comparative survey of the incidence of specified symptoms and signs

Chair of Forensic Medicine at Aberdeen

At a meeting of the general council of Aberdeen University on April 15th, when Principal Sir George Adam Smith presided a discussion took place on the proposal of the University Court to abolish the chair of forensic medicine The University Court had already passed an ordinance providing for the abolition of the professorship Forensic medicine is taught to students in a short course of lectures occupying one summer term only so that as the ordinance states, the duties might be adequately discharged by a lecturer The chair was established as the result of a bequest by Alexander Henderson of Caskieben in 1857, whereby he gave £1,000 of capital stock of the Bank of England to Marischal College Aberdeen for the endowment of a professorship of medical logic and medical jurisprudence The yearly income from this sum is the only endowment of the chair Dr A G Anderson moved that the council should disapprove of the recommendation of its Business Committee to support the ordinance and Dr Alexander Cormack, in seconding this motion presented an appeal on behalf of several families descended from the founder of the chair, who contended that the professorship should be continued, and called to mind several other gifts which had been made by Dr Henderson to the university The Rev Dr Gordon J Murray in moving that the council should support the University Court said that there would be no diversion of the money for it would still go to the teaching of forensic medicine in the university It was believed that it would be in the best interests of the university to substitute a lectureship for the chair, which is now dissociated from the post of medical officer of health to the city of Aberdeen The endowment provided a totally inadequate salary for a chair On a vote being taken, it was agreed that the proposal for the abolition of the chair should not be supported

Royal Victoria Tuberculosis Trust

The annual meeting of the Royal Victoria Hospital Tuberculosis trust was held in Edinburgh, Sir Robert Philip, vice president of the Trust occupying the chair Sir Ralph Anstruther, in moving the adoption of the report, pointed out that one of the principal objectives of the committee managing this Trust was the development of research in tuberculosis Dr Robert Thin, President of the Royal College of Physicians of Edinburgh said that he was one of those who could remember the beginnings of the work of this Trust over forty years ago Its growth showed how soundly the foundations of the work had been laid by Sir Robert Philip If they wished to stamp out tuberculosis the care of children must be one of the first considerations Sir Robert Philip stated that since the National Health Insurance Act many people were now inclined to ask why any voluntary effort should be made There were, however, lhatuses in the problem of tuberculosis that must be covered by organizations such as this Trust, which, for example, had been able to ease the burden of persons to whom the incidence of tuberculosis in a household constituted a great financial difficulty The report of the Trust for the past year showed that 4,124 persons had died of tuberculosis in Scotland during 1932, and from this it could be calculated that at least 42,000 persons were at present affected by this disease In 1912 the death rate from all forms of tuberculosis had been 172 per 100,000 of the population , in 1932 it had fallen to 84 per 100,000 Reference is made in the report to the opening last May of a new pavilion for children at Southfield Sanatorium Colony, which is now in active operation Patients had been received at the Sanatorium Colony from all parts of Scotland to the number of 391, including 123 children Of these, 113 were cases of pulmonary tuberculosis, eighty-nine of glandular tuberculosis, seventy of abdominal tuberculosis, and fifty two of bone and joint tuberculosis The accounts of the Trust showed an ordinary income of £4,343, with an expenditure of £4,704 during the year, while legacies had totalled £5,199

England and Wales

Maternity and Child Welfare Services Allocation of Grants

By the Local Government Act, 1929, the Minister of Health at the beginning of each grant period is empowered to make a scheme determining the voluntary maternity and child welfare services in London in respect of which the London County Council shall contribute, and those in respect of which a contribution shall be made by the metropolitan borough councils The Minister has accordingly formulated a scheme setting out what grants are to be made annually by these various authorities in respect of the four-year period commencing April 1st, 1933 About fifty associations are to be subsidized by the London County Council to the total annual amount of about £31,000, and about one hundred and fifty associations by the metropolitan borough councils, their total annual contribution being in the neighbourhood of £90 500 The services to which the County Council contributes are mostly those providing homes for mothers and infants, together with some district midwifery and maternity nursing, and those to which the metropolitan borough councils contribute consist mainly of infant welfare centres and day nurseries The conditions

attached to the payment of the contributions are that the county or borough council shall be satisfied as to the efficiency of the service and that it is being used for a reasonable number of the persons for whom it was provided that no reduction or alteration of the service is made without its consent that the service is open to inspection and that the council receives the annual report and statement of accounts Some of the associations receive very large subsidies The Violet Melchett Infant Welfare Centre at Chelsea with its day nursery and mothercraft training home is to receive £3 035 a year the Royal College of St Katharine at Poplar which maintains three centres £4 442 and the Maternity Hospital of the Salvation Army at Clapton £3 034 These however are outstanding allocations and most of the bodies receive much smaller sums No doubt the allocations have been very carefully worked out but at first glance there appear to be remarkable differences between London boroughs In Islington for example ten centres and observation wards receive between them a total sum of £11 232 while Battersea with three centres and a day nursery receives only £1 687 and Bermondsey similarly provided £1 727 The borough with the largest number of infant welfare centres is Wandsworth which has eighteen followed closely by Kensington with sixteen Some of the East End boroughs are poorly off Shoreditch with four Poplar with three and Bethnal Green with only two

Queen's Hospital Birmingham

A satisfactory financial statement was presented at the annual meeting of the Queen's Hospital Birmingham The ordinary income was only £1 100 short of the ordinary expenditure and with the portion of legacies allotted for general purposes (£2 500) and a sum of £6 500 accruing from the joint appeal with the General and the Ear and Throat Hospitals the accumulated deficit had been reduced by £7 900 The Queen's Hospital had actually received as its share of the appeal £10 040 but only £6 530 was shown in the accounts for 1932 the remaining amount having come in during the early months of this year The Lord Mayor who presided over the meeting commended the valuable work of the Birmingham Hospitals Contributory Association there being forthcoming a regular source of income which showed a substantial increase due to the extra penny a week contribution With the improvement in the financial position of the hospital it had been possible towards the end of last year to adopt the nurses and hospital officers superannuation scheme He announced the receipt of a legacy from the estate of the late Ernest Joseph Gamgee of Australia (a son of Samson Gamgee) to found a prize in surgery this would become available at the end of the present year Other events of the year under review included the appointment of a full time biochemist the extension of the x ray department and blood transfusion service and the success of the nursing staff in the State examinations In respect of the new Birmingham Hospital Centre in which the institution was co-operating with the General Hospital a satisfactory agreement had been reached An amalgamated board of the two hospitals would have complete control of the new institution and so the creation of a new hospital authority would be obviated The honorary treasurer pointed out that the average cost of each in patient had risen from £2 18s 7¼d a week in 1931 to £2 19s 9d and he feared that there was little chance of reducing this Indeed expenditure might well rise by £1 000 at least during the current year The percentage of Contributory Association patients was steadily rising and was now 68 6 of the in patients It was mentioned later in the meeting that the association had collected one million pounds in the last five years and had disbursed £707 000 to the voluntary hospitals

CORRESPONDENCE

British Health Resorts Association

SIR —From time to time the medical journals have given publicity to the activities of the British Health Resorts Association but it is time that its objects and aims should be brought more specifically before the medical profession because the movement is in essence a medical one its personnel is predominantly medical and it must depend very largely for its success on the support given to it by the profession

Started in response to the appeal of the Government that we should all buy at home those things that can be got at home in preference to going abroad for them the association in its earlier days devoted itself to a campaign in favour of wintering in England holding successful conferences at Paignton Hastings and Bournemouth These received wide publicity and were followed by a conference at Llandrindod Wells and one at Bath in conjunction with other organizations with similar objects A further conference is being held at Leamington Spa on April 29th at which eminent medical authorities will discuss the uses of the spas in various forms of disease and it is hoped in September to meet at Scarborough in conjunction with the Yorkshire Branch of the Society of Medical Officers of Health As a result of the encouragement received the association was incorporated in August last as a company limited by guarantee (that is it cannot make any profits) and with widened aims

It will be sufficient here to condense the objects of the association into the statement that it is its aim by various means so to develop and organize the natural health resources of this country as to put them at least on a level with those on the Continent We have no ill will to the latter indeed we hope to induce many Continental visitors to come in search of health to our resorts of whose existence they seem hardly aware at present We recognize that it is the duty of the doctor to advise his patient to go wherever the doctor thinks he will get the most good We know however that in recent years our health resorts have spent a great deal of money in bringing themselves up to date not only as regards provision for balneology thalassotherapy and physiotherapy but as regards amusements and general amenities And yet it is true to say that by reason of the better organization and advertisement of foreign resorts many of them are better known to the doctors of this country than are our own

The association proposes to establish a firm medical basis for the claims of our home resorts It has adopted and published as its official handbook (*British Spas and Seaside Resorts*) the valuable information collected for many years by Dr Fortescue Fox and published as part of Churchill's *Medical Directory* This information will be scrutinized and elaborated by means first of the help of the medical profession in each of the resorts and secondly by our Medical Advisory Committee on which will be found the names of many of the men best known to the profession for their interest in climatology balneology and physiotherapy The Royal College of Physicians of London the Royal College of Surgeons of England the British Medical Association the Spa Practitioners Group of that Association the Society of Medical Officers and the British Spas Federation have each nominated a member of this committee The information thus obtained will be placed at the disposal of the medical profession so that in future every doctor in advising his patients as to choice of a health resort will be able to consult authoritative and impartial sources of information

Through its conferences and the promulgation of its literature and by other means the association hopes to in

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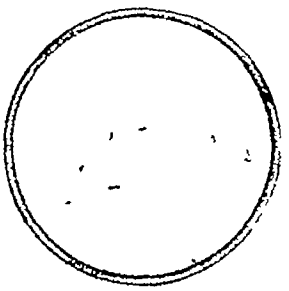

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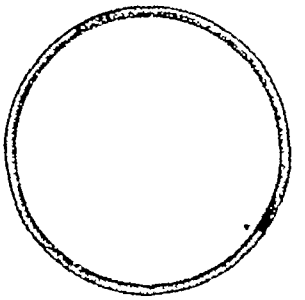

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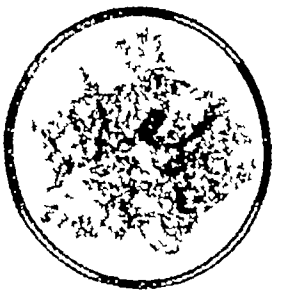

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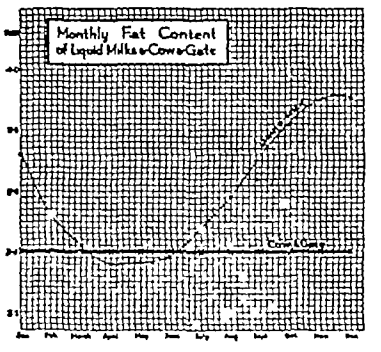
'Two licences were granted to local retailers to sell milk designated as Grade A' in bottles only as received from the supplier Seven samples of this milk were examined for bacteria, coli and dirt and three came below the standard prescribed and in one instance appeared to indicate evidence of disease in one or more of the cows supplying the milk" *M O H Report 1930*



The above graph shows the large fluctuations in the fat content of liquid milks throughout the year as compared with the unvarying fat content of Cow & Gate which is based on the fat content of average healthy Breast Milk

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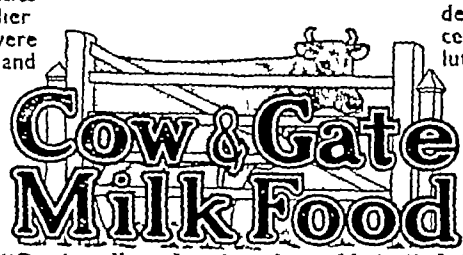
In the present state of milk supply the feeding of infants on raw cow's milk must be condemned Even the highest grade certificated milk cannot be absolutely guaranteed tubercle free, although everything possible is done to make it so" *Dr R J., Annual Tuberculosis Conference 1931*



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fluence the growing interest in natural methods of prevention and treatment of disease, and thus to help those health resorts in which this country is so rich It is believed that there are few, if any, forms of physical treatment which could not be provided in this country, and with a greater interest on the part of the profession, followed by increased clientele at our home resorts it should be possible before long to place their health-giving virtues, hitherto often regarded as the preserve of the rich, at the disposal of every class of the community

At its inaugural luncheon in November last the association had messages of encouragement on patriotic grounds from H R H the Duke of Connaught and the Prime Minister On these grounds as well as those of professional interest we appeal for the moral and financial support of the medical profession They can help us by influencing their local authorities to subscribe to our funds and by themselves subscribing It is obvious that if the movement is successful all who are concerned in the prosperity of our health resorts will benefit—the doctors not least If this financial support is not forthcoming soon the movement must be discontinued and is not likely to be revived again in our generation The subscription to the association is £1 1s a year, life membership £10 Inquiries will be welcomed by the general secretary at 199, Piccadilly —We are, etc,

MESTON,
Chairman of Council
R H ELLIOT
Chairman of Executive
W BYAM,
Chairman of Medical Advisory Committee
ALFRED COX
General Secretary

London April 21st

Diet and Pregnancy

SIR —The annotation on 'Diet and Pregnancy in India" in the *Journal* of April 15th (p 665) raises a matter of considerable importance to this country I have not had an opportunity of consulting the full text of the paper by Drs Balfour and Talpade in which comparison is made between the diets of mothers in the north and south of India but from your annotation it would appear that the virtue of the northern diet lies in the vitamin B content of the wheat and it may therefore be presumed that whole wheat is eaten in that part of India Among the poorer classes in England there is probably a shortage in the intake of vitamin B owing to the practice of eating bread made from highly milled flour Among these classes in England there is a high incidence of abortion, miscarriage and premature birth The group of vitamins known as B is very complex, and the position is further complicated by vitamin E

For about two years I have used, at an ante natal centre a wheat germ oil extract prepared for me by the Glaxo Laboratories in cases which gave a history of abortions miscarriages and premature births The results have been distinctly encouraging but a further extended trial is necessary before sufficient clinical material will be available to form the basis of a detailed article on the subject My experience in maternity and child welfare work suggests that the diets of the poorer classes are of such a nature as to produce what one may loosely describe as a general avitaminosis either potential or actual A deficiency of any one vitamin alone is unlikely to occur For some years I have added vitamins A and D to the diets of pregnant women in certain cases I have in addition given vitamin E (wheat germ extract) Must I now add the B group?

It must be perfectly obvious that the only reasonable way to obtain good nutrition is by a satisfactory basal diet, and that the addition of half a dozen vitamins, in a group of assorted mineral salts, to an inadequate diet is but a makeshift The causes of the purchase and ingestion of unsatisfactory diets are partly ignorance, but very largely economic necessity —I am etc,

Stockton on Tees, April 18th G C M M'GONIGLE

Dry Bronchiectasis

SIR —The paper on dry bronchiectasis, by Drs Cecil Wall and J C Hoyle, in the *Journal* of April 8th (p 697), and the letter of Dr Leonard Findlay in your issue of April 22nd (p 719) raise once more the controversy as to the aetiology of bronchiectasis—in this case the dry form Dr Findlay supports fibrosis as the principal actiological factor it is possible that in some post inflammatory cases this may in part be true, but we agree with Drs Wall and Hoyle that other factors must be considered In our original paper in 1930 on this condition in eight of the nine cases the disease was confined to the lower lobe adjacent to the mediastinum, and most cases subsequently reported have been found in the same position Since our article Dr Kerley has put forward very suggestive evidence that these lobes, which so often appear to be the site of an atelectatic bronchiectasis, are in fact rudimentary fourth or third lobes, and that the bronchiectasis in them is due to a congenital failure of development In the course of our investigations on some 130 cases of bronchiectasis we have observed facts which tend to support Dr Kerley's supposition, and which are definitely antagonistic to the fibrosis theory, in these cases of dry bronchiectasis

In order that fibrosis may exert a pull on the bronchi sufficient to produce dilatation the lung must be fixed by adhesions to the surrounding thoracic wall, otherwise the fibrosis simply pulls the bronchi together Moreover the pull of such a fibrosis will be tangential as well as direct and it is difficult to see how this mixed force could dilate a bronchus It is a fact that the lungs in many cases of bronchiectasis (particularly the dry cases) in children and adults may be collapsed with an artificial pneumothorax proving the absence of peripheral adhesions In two children with dry bronchiectasis which had become infected we have made a thoracoscopic examination after induction of artificial pneumothorax, and they have shown pigment in the collapsed lobes, whilst in two cases of congenital bronchiectasis (so called cystic lung) that we have examined thoracoscopically pigment has been absent, suggesting that the first is disease developing in a congenitally defective lobe, whereas in the second the congenital abnormality is of an entirely different nature

The suggestion put forward in support of the fibrosis theory—that in the majority of cases a previous pneumonic attack can be ascertained in the past history—is not so significant as it might at first appear, as the atelectatic lung at the time of a coincident infection will give such signs as to lead the observer to conclude that the condition is one of primary pneumonia, this applies with even greater force to those cases in which there is a history of recurrent pneumonias In our experience atelectatic dry bronchiectasis is always demonstrated by lipiodol injection to be of the cylindrical type, whilst in those cases of bronchiectasis which have followed an inflammatory condition such as lung abscess or suppuration behind a blocked bronchus, lipiodol has shown irregular and lobulated dilatations These cases of dry bronchiectasis seldom come to necropsy at the time when they are dry although we have watched two such cases become infected, the patients dying within two years

The actiology of dry bronchiectasis is still in doubt but in our opinion all cases of bronchiectasis have not the same pathogenesis, some being undoubtedly due to sup-

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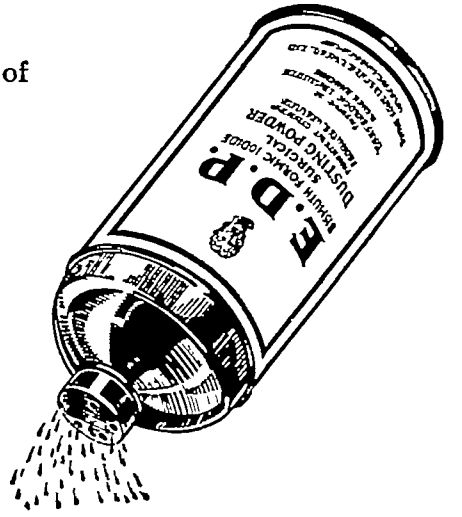

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puration with or without obstruction whilst some may be due to fibrosis In the case of the dry variety we suspect the causation to be completely different and are in favour of the congenital abnormality or of its occurrence in an atelectatic lobe or lobule which has persisted from some other cause —We are etc

A J SCOTT PINCHIN
H V MORLOCK

London W 1 April 22nd.

Bilateral Cortical Necrosis of the Kidneys

SIR —I think it greatly to be regretted that Dr Kellar and Dr Arnott in their paper on the above subject as reported in your issue of April 15th (p 657) should have stated that abundant fluid should be given in these cases It is the worst thing to do Physicians have recognized that the pushing of fluids in acute nephritis whether a sequel of scarlet fever or not is bad So far from pushing fluids restriction of fluids in acute nephritis is insisted on Much more should fluids be restricted in cases of cortical necrosis for the pathology of these two conditions is the same except for the degree to which the pathological process has advanced In acute nephritis the condition is such as to give rise to an oliguria which however bad is not so bad as anuria the sign of the other

How does cortical necrosis arise? The authors conclude it is due to an interference with the blood supply to multiple areas of the renal cortex Emboli are dismissed Thrombosis appears to be the cause of the infarction the cause of the thrombosis is not understood But the thrombosis is a secondary affair occurring late—I think I showed that in 1929 (*Journ Obstet and Gynaecol British Empire* 1929 xxxvi 341) that it is so is demonstrated by the recovery of patients with complete restoration of renal function if treatment is early enough The blood supply to the cortex is shut off naturally urine cannot be formed and anuria results To try to overcome this by giving fluids abundantly whether by mouth or intravenously is to make the circulatory block in the kidney worse and defeat the object The treatment of anuria due to the cause considered—a block in the kidney itself—is to limit fluids to reduce the volume of the blood as much as possible and to facilitate the blood flow through the kidney by appropriate measures

Drs Kellar and Arnott refer to decapsulation of the kidney but state that the operation is so severe and the stage of congestion and increased tension so short that it is difficult to see the efficacy of the procedure Naturally if decapsulation is delayed until the seventh day of the anuria (as in their third case) when large tracts in the cortex must have been as dead as mutton it is not likely to succeed and certainly after such a time during which the patient had only passed four ounces of urine it must have been a hazardous affair But why wait until the patient is nearly dead with only at the most four days more to live? Done at the time of the hysterotomy or Caesarean section decapsulation is not hazardous It is a little difficult to sew up the peritoneum over the kidney after splitting its capsule from the median incision but if that is too difficult for the surgeon he had better give up surgery I can recall three cases in which I have done the operation—not indeed for anuria but for eclamptic oliguria—with complete success in all three

But decapsulation of the kidney may not be necessary I had a case in which anuria developed abruptly in a man he had had his appendix removed subsequently suffered from a plastic peritonitis and developed anuria after a two months convalescence whilst in hospital In twenty four hours he passed only one ounce of urine which boiled solid He was treated with spinal anaesthesia limitation of fluids enemas and nothing else After two injections of tropacocaine the second given twelve hours after the first (and a third at the same time interval would have been better) he passed thirteen ounces of urine containing hardly any albumin and rapidly got well In fulminant eclampsia the same sort of result occurs in eclampsia in which the kidneys have been impaired for some time it seems insufficient in such if emptying the uterus does not succeed instead of giving abundance of fluid the blood volume should be reduced by venesection not simply to relieve the heart but much more to relieve the kidneys —I am etc

R H PARAMORE F R C S

Rugby April 15th

Proto duodenitis

SIR —The paper by Mr Kellett Smith and Dr Arthur Tom on proto-duodenitis published in the issue of March 4th (p 362) contains interesting suggestions about the origin of duodenal ulcer Inflammation is thought to precede ulceration and the choice of site—first or second stage—is regarded as probably the result of the presence of Brunner's glands in this region The authors suggest that these glands become inflamed either by the excretion of some toxic agent or by direct irritation of relatively stagnant bile and acid a sequel to partial obstruction at the duodeno-jejunal flexure The latter is assumed to be the direct consequence of visceroptosis The malign influence of visceroptosis is a bogy which died hard in surgery but still lingers on in radiology simply because radiologists will not study their normal duodenum with sufficient detail The illustrations which the authors give are to me perfectly normal in appearance so far as the second third and fourth stages are concerned and the first stage may or may not be normal The duodeno-jejunal flexure is also normal in appearance

Radiologists are often vividly conscious of the risks of excessive screening or in some cases are overworked and have to hurry through them while others do not find screening appeals to them The result in all these instances is a rather too rapid examination which impairs accuracy The duodenum presents a remarkable contrast from the behaviour of the stomach and since most lesions are confined to the first stage the examination of the remainder is all too apt to be slurred over This is important because experience is lost The normal variations of the duodenum both in appearance and in behaviour are surprisingly wide and therefore confusing when one's attention is suddenly drawn to some particular point Another point not often appreciated is that the different stages behave quite differently for functional reasons Tenderness is not always present in duodenitis and is not the most reliable evidence of this condition I believe x ray evidence can be always demonstrated if the examination is sufficiently detailed —I am etc

JOHN R WYLIE

London W 1 April 20th

Hernia and Appendicectomy

SIR —Mr Henry J Wade's article in your issue of April 1st (p 561) reporting his work on the function of the ilio-inguinal nerve and discussing the relation between McBurney's muscle splitting incision for appendicectomy and the subsequent development of inguinal hernia is of great interest He repeats the statement which unfortunately has crept into the textbooks that the McBurney incision may be the immediate cause of inguinal hernia this statement so far as the indirect type of hernia is concerned is to my mind entirely without proof When one considers how few are the cases of indirect inguinal hernia giving a history of previous appendicectomy and how many are those without any previous

operation at all, the hypothesis seems not only without proof but without reason Indeed, it would be strange if two such common conditions did not sometimes affect the same individual As I understand it, the theory holds that injury to the ilio-inguinal nerve so weakens the conjoined tendon that a pouching of peritoneum occurs, and so a hernia develops This may be true for the acquired direct type of hernia but not so for the indirect inguinal hernia Hamilton Russell maintained that this latter type developed by virtue of a pre existing sac as yet unfilled The sac may never become filled but if it does do so the onset is quite frequently sudden, the patient being able to recall the precise moment during some muscular exertion at which he experienced pain in the groin and on examining himself, discovered a bulge This catastrophic onset is not due to a weakened muscle, but to the presence of a pre-existing sac in a person doing heavy work Experience with children proves the same theory At the Birmingham Children's Hospital I see between 250 and 300 infants with inguinal hernia each year None of these receives operation unless a year or more old they are provided with rubber trusses The majority of these patients appear to be cured by this means and the explanation is presumably that the neck of the sac no longer stretched by omentum and gut becomes sealed off by light adhesions yet the sac is still present and if the work of later life is heavy in character the adhesions may give and the sac fill Another observation in over one thousand cases of inguinal hernia in children is that two-thirds are right sided and one-third are left-sided, the preponderance of right sided herniae in adults therefore, is no argument in favour of a gridiron incision for appendicectomy being a contributory factor

I was also interested in Mr R J McNeill Love's letter in your issue of April 8th (p 629) supporting Mr Wade's views as to the direct relation between the McBurney incision and the development of inguinal hernia, but giving it as his opinion that the commonest cause of injury to the nerve was scar tissue resulting from sepsis, particularly encouraged by a drainage tube In a personal experience of over 500 cases of acute appendicitis operated on through the muscle-splitting incision I can truthfully say that no case of subsequent inguinal hernia has come to my notice I never drain through the loin, but always if needed, through the outer and upper end of the wound and, to my mind drainage of the pelvis is much safer by this method than by a suprapubic stab, as the tube lies against the side wall of the pelvis and not among coils of small intestine—the commonest cause of adhesions Where the pelvis collection is large a second tube is passed down along the left wall of the pelvis through a similar but shorter wound in the left iliac fossa —I am etc

Birmingham April 19th F A R STAMMERS

Shock and Spinal Anaesthesia

SIR —In the summary of his lecture in the *Journal* (April 22nd p 693) Professor McDowall says

Experimental shock may be divided into several distinct varieties which apart from that produced by haemorrhage and cardiac failure may be divided into chemical and nervous The chemical variety is typified by histamine shock experimentally and clinically by a delayed shock associated with gross destruction of tissue This variety is enhanced by anaesthetics The nervous varieties may result from physical damage to the vasomotor centre or its efferent paths from afferent impulses leading to loss of carbon dioxide (acapnia) or from inhibition of the centre Shock dependent on afferent impulses is prevented by deep anaesthesia and reduced by morphine

First of all as regards chemical shock What anaesthetic could add less to the toxaemia than 5 grains of novocain? But Professor McDowall objects to spinal anaesthesia because it interferes with the nervous control of the blood vessels and causes vaso-dilatation Spinal anaesthesia can be so managed with preliminary ephedrine as to interfere very little with the control of blood vessels and possibly not at all with the volume flow of the circulation What it does do is to stop the passage of pressor impulses Consequently the blood pressure does not go down till the abdomen is opened and the surgeon manipulates the abdominal contents This fall of blood pressure is almost certainly due to (1) cardiac depression through the vagus (2) possibly mechanical interference with the heart's action If manipulations are gentle it by no means always occurs Kremer and Wright have shown that one can cut the splanchnics in dogs with little or no fall of blood pressure and it is seldom that a spinal anaesthetic of the heavy variety affects the anterior roots higher than the fifth dorsal So the objection that spinal anaesthesia interferes with the control of the blood vessels to such an extent as to cause a serious fall of blood pressure does not hold good clinically Experimentally in cats it does because the spinal theca in the cat is of small capacity, so that even 1 c cm of injected fluid will bathe the anterior roots

It is interesting to recall another Arris and Gale Lecture (1912) where the lecturers conclude with these words

'We hope to have convinced you that surgeons should cease to rely on a high blood pressure as an indication of the absence of shock or on a low one as necessarily symptomatic of its presence And if you hold that we have adduced strong evidence in support of the plea for the adoption of nerve blocking (spinal anaesthesia) as a means of controlling shock particularly in toxaemic children we shall be amply repaid

What deeper anaesthetic is there than spinal? What anaesthetic protects so well against damaging afferent impulses?'—I am, etc,

April 23rd E FALKNER HILL, Lecturer in Anaesthetics University of Manchester

Modified Bendien Reaction

SIR —On account of the interest that has been taken in my modification of the original Bendien reaction I would like this opportunity of informing anyone wishing to take up the test that there is now available a standard sodium vanadate solution This has been prepared in collaboration with the British Drug Houses as a standard synthetic product which, as the result of controls with numerous blood serums conforms in every respect with the requirements of the colloidal acid vanadate reaction The British Drug Houses are prepared to supply series of reagents ready mixed for use which have been controlled and found to be entirely satisfactory, and mixtures have proved to keep quite well for at least six months This arrangement saves a considerable amount of trouble for those who do not wish to make the reagents up themselves and also provides an assurance with regard to their standardization, and should make for conformity between the results of the various laboratories

I have also suggested that, as Bendien's original numerical designation does not in any way describe the contents of the reagent mixtures the method employed by Begg and Aitken (*Journal of Experimental Pathology* 1932, xii, No 6) should be followed This method, I suggest, should be known as the British numerical designation of the colloidal acid vanadate reaction, by means of which each reagent is designated by the number of cubic centimetres of decinormal standard sodium vanadate required in 200 c cm of each acid sodium vanadate mixture For ordinary clinical purposes, therefore, when using the British Drug Houses decinormal standard sodium

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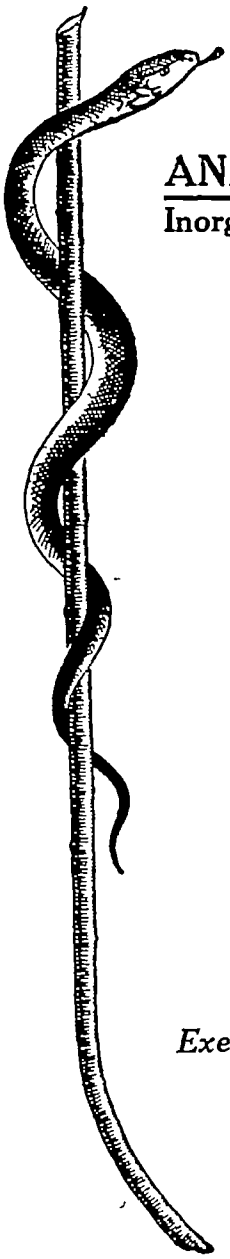

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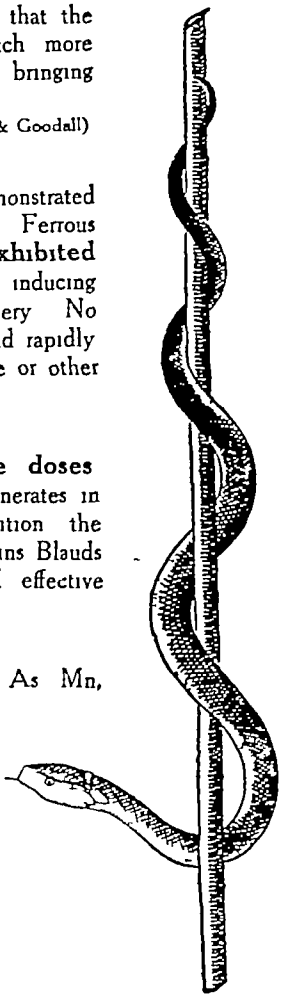

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vanadate the reagents required run from No 23 to No 30 and correspond in reaction to the original Bendien reagents No 1 to No 8 This method of designation allows of the ready employment of lower or higher reagents whose numbers will run in direct sequence with the others more often employed for clinical purposes and in the leaflet sent out by the British Drug Houses a table is given which clearly shows the relation between their standard sodium vanadate reagents and those of the original Bendien reagents —I am etc

Liverpool April 18th E CRONIN LOWE

SIR —In your issue of April 22nd (p 722) Dr Shiskin made some very interesting theoretical observations concerning cholesterol as an important factor in determining the degree of the ether effect in the numerator of the fraction evolved in the modified Bendien reaction This I find is also borne out in practice but forms only part of the question The light shaking with ether at the *p*H of blood serum only removes the free cholesterol the bound cholesterol remaining attached to certain globulin elements This as has been shown by Theorell [1] at the *p*H of the Bendien reaction becomes dissociated and connected with the albumins The cholesterol acts as an antagonistic agent to various lipins which by themselves would be precipitated in conjunction with euglobulin [2] I have shown previously [3] that the bound cholesterol is diminished in cancer and hence a greater lipin precipitating factor is present after the removal of the free cholesterol The effect is shown well by the modified Bendien reaction for in cancer and pregnant serums as Dr Shiskin remarks there is frequently hypercholesterolaemia the increase being in the free cholesterol—hence a much greater difference in the ether treated serum since proportionally a much greater antagonistic effect is removed

Almost exactly the same remarks apply to the free and bound calcium content of serum [4] as antagonistic factors to the potassium magnesium and sodium So that one sees that although the cholesterol factor mentioned by Dr Shiskin is an important one there are numerous other and complicated systems likewise involved —I am etc

A F H COKE M R C S L R C P

St. Mary's Hospital W April 23rd

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[1] Theorell *Biochem Zeit* 1930 ccxxiii 1
[2] Handovsky and Wagner Idem 1911 xxvi 32.
[3] Coke *Journ State Med* 1933 xli 105
[4] Moritz *Journ Biol Chem* 1925 lxiv 81

Adenocarcinoma of the Kidney

SIR —I have read with pleasure the article entitled "New Growths of the Kidney" by Mr Jocelyn Swan in the *Journal* of April 8th In his series of sixty five cases I notice that the youngest was a woman of 27 and this prompts me to record a case which I think is unusual

In November 1929 a mother brought her baby (female) aged 9 months to see me at the Hackney Hospital London It appeared that the child's abdomen was increasing in size and although it was losing weight the child had developed a voracious appetite which was causing alarm to the mother There was a history of haematuria for a few weeks On examination there was a huge swelling occupying most of the abdominal cavity which was movable The urine contained blood A diagnosis of a tumour of the left kidney was made probably the rhabdo-myosarcoma of infants No swelling was felt in the right kidney An incision was made extending from the umbilicus to the outer border of erector spinae and a tumour almost the size of a Rugby football was removed I have never seen such a large kidney tumour even in an adult During the operation the renal vein at one time appeared to be perilously near tearing point but eventually the tumour was successfully removed There was naturally a great deal of shock and this prevented the removal of enlarged glands along the ureter Radium was not available The specimen was kindly examined by Sir Arthur Keith who reported that this was a case of adenocarcinoma of the kidney substance The specimen can be seen in the museum of the Royal College of Surgeons The child made an uninterrupted recovery and in the weeks which followed gained weight The growth was certainly encapsulated but enlarged glands were left behind along the course of the ureter Nevertheless although it is three and a half years since the operation the patient is perfectly well appears to be free from recurrence and has grown into a fine child —I am etc

Swindon April 21st J EWART SCHOFIELD

Aetiology and Treatment of Asthma

SIR —The most striking feature in your report of a recent discussion on asthma and hay fever (*Journal* April 8th p 614) is the difficulty under which the speakers laboured because they were obsessed by the old idea that asthma is the result of bronchial spasm and that allergy is the root cause of the trouble If investigators could realize that asthma is merely a manifestation of vasomotor disturbance and that allergy supplies only one of the many irritants which disturb the vasomotor balance more progress would be made It becomes almost ludicrous to see the vain attempts to immunize a patient by giving injections weekly for month after month because of the erroneous belief that asthma is an allergic disease Proteins may certainly supply the exciting causes of the circulatory disturbance but that is all

I could quote many instances in which allergic irritants have lost all their disturbing power as soon as the vasomotor system has been made stable The following case shows how secondary is the part played by allergy

In 1929 I saw a lady who suffered severely from asthma and it had been found that she was hypersensitive to five different proteins but her asthma had steadily got worse in spite of attempts to immunize her I cauterized her nasal septum three times and for the last three and a half years not only has she had no asthma but she was at once able to take any of the offending proteins without causing the slightest disturbance

I am pleased to see that Mr Diggle agreed that cauterization seemed to produce the best results in apparently normal nasal passages Undoubtedly the removal of nasal abnormalities and the draining of infected sinuses etc in certain cases relieves asthmatic trouble but this is not due to removing a nasal form of allergism as Mr Diggle expresses it but to getting rid of a toxic or other form of irritant affecting the vasomotor system Autogenous and other vaccines are I am convinced even more harmful than desensitizing injections They frequently give relief for a time but before long the asthma returns in an aggravated form This is only what might be expected because although the protein shock of the vaccine may give temporary relief its ultimate effect is to lower the general resistance and thereby allow the vasomotor system to be more easily disturbed —I am etc

London W April 18th ALEXANDER FRANCIS

Diagnosis of Tuberculous Meningitis

SIR —I agree with Dr Haler (April 22nd p 721) that Dr James Cook (April 8th p 613) has small justification on the evidence adduced in the two cases recently reported by him to make a diagnosis of tuberculous meningitis I pointed out in June 1930 (*Arch Dis Child*) and again in November 1932 (*Proc Roy Soc Med*) that by Smith's method tubercle bacilli may be demonstrated in the cerebro-spinal fluid in tuberculous meningitis almost without exception —I am etc

London April 24th. TEMPLE GREY

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A graduation ceremony was held on April 22nd, when the following degrees, among others, were conferred

D Sc—R C Garry M B Ch B
M D—*W A Burnett *T Gilchrist *P Hutchison *A Sharman †S M Allan †M J Bastible †J C Hendrie, †I M Hunter †A B Smith I Dymock C M Fleming J A Imrie L J MacIntyre J W Wilson
B Sc—A C Lendrum (with first-class honours in pathology)
M B Ch B—The list of successful candidates for these degrees was printed in our issue of April 22nd (p 727)

* With high commendation † With commendation

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The Senate has appointed Mr P T Crymble M B F R C S to the Chair of Surgery in succession to Professor Andrew Fullerton M D M Ch F R C S I

ROYAL COLLEGE OF PHYSICIANS OF IRELAND

At the monthly meeting of the College held on April 10th Ying Lin M B Hong Kong and P J O Farrell were admitted to the Fellowship

The following successful candidates at the Conjoint Final Examination with the Royal College of Surgeons in Ireland were admitted to the Licences in Medicine and Midwifery C Crowe W G Deeny E A Joyce M E M King P J Murray O F M Ormsby D J Riordan

Obituary

Dr KENNETH L BATES of St Albans died on April 20th, at the early age of 44 He had been seriously ill with pneumonia and pleurisy, and was beginning to get over it, but a pulmonary embolism caused an unexpected death He received his medical training at Guy's Hospital and finished his work there with a house surgeoncy He served in France during the war as a temporary captain R A M C Entering then general practice, he joined his father, Dr Leslie Bates, and Dr Eustace Lipscomb as a partner in the oldest medical firm in the city of St Albans and he remained an active worker up to the time of his illness He was an honorary physician to the St Albans Hospital and also police surgeon A colleague 'S C," writes Music to him was a great delight and at one time he was a member of the St Albans Cathedral choir At the time of his death he was president of the Rotary Club, in which he took great interest Everyone knew him as 'Dr Kenneth to distinguish him from his father, who is still connected with the practice Kenneth" was always genial and good company, and he could be as amusing as any of his colleagues So his sudden death has come as a great shock to his wide circle of friends He married a daughter of the late Canon and Mrs Glossop of St Albans, and he leaves a widow with two little girls, for whom there is much sympathy

Dr RICHARD OXLEY BOWMAN, M B E who died on March 28th in his sixty ninth year had practised in Ulverston for more than forty years He received his medical education at the Manchester Royal Infirmary, and obtained the diplomas M R C S L R C P in 1888 In the following year he graduated M B Lond with honours and proceeded M D in 1892 His earlier medical appointments included those of resident medical officer to the Children's Hospital Pendlebury house physician to the Manchester Royal Infirmary and assistant medical officer to the Monsall Fever Hospital He was also an associate of Owens College Manchester, and a member of the Manchester Pathological Society He had held a commission as medical officer of the 1st Volunteer Battalion which subsequently became the 4th Territorial Battalion of the King's Own Regiment Always keenly interested in the work of hospital development he urged the advisability of inaugurating a new hospital in Ulverston as a war memorial He served on various committees was president of the Ulverston Hospital Saturday Parade and took a very active share otherwise in the work of raising funds for the new hospital In 1908 he was chairman of the Furness Division of the British Medical Association During the war he was a member of the local medical war committee A prominent Freemason, he was a Past Master of the Furness Lodge, Past Provincial Grand Registrar for West Lancs, P P Grand Registrar Royal Arch Degree, and P P Grand Master Overseer Mark Degree In his youth he had attained international rank as a lacrosse player, and was subsequently one of the finest local lawn tennis players He was a promising Rugby player until incapacitated by an injury Dr Bowman's funeral was attended by representatives of the leading organizations of the town and several medical and hospital colleagues, who esteemed him highly for his devotion to duty and enthusiasm for deserving causes

Medico-Legal

THE NEGLIGENCE OF A SUBORDINATE*

A doctor owes his patient the duty of exercising towards him the degree of care and skill which is reasonably to be expected of him in the circumstances If he does not fulfil this duty he is liable to pay damages for negligence It is obvious that what constitutes negligence depends on the particular circumstances of every case and also largely on the view which the jury takes of the doctor's conduct as shown by the evidence, particularly of the doctor himself Apart, however, from his own negligence a doctor may be held liable for that of a technical assistant or a nurse, and a hospital or nursing home may be liable for the negligence of its employees This liability may often be a very serious matter, and it is important that every corporation and every doctor who employs assistants or who delegates work to others should have a clear idea of the extent to which the employer may be held liable. The foundation of this liability is in the ancient maxims "Qui facit per alium facit per se' and respondeat superior' as a general rule a man is responsible for any wrongful act done by his agent or subordinate provided such act is within the reasonable scope of their employment The present law as stated by the learned editors of *Halsbury's Laws of England* (1931, 1, 285) is as follows

'The principal is responsible jointly and severally with the agent if a wrongful act is committed by the agent in the course of his employment as agent or within the ostensible scope of his authority when his ordinary duties are considered'

In Barwick *v* English Joint Stock Bank (L R 2 Ex 259) a bank was held liable for a fraud committed by one of its managers acting in the course of his business Mr Justice Willes, in his judgement, said

'With respect to the question whether a principal is liable for the act of his agent in the course of his master's business and for his master's benefit no sensible distinction can be drawn between the case of fraud and the case of any other wrong The general rule is that the master is answerable for every such wrong of the servant or agent as is committed in the course of the service and for the master's benefit though no express command or privity of the master be proved. He has not authorized the particular act but he has put the agent in his place to do that class of acts, and he must be answerable for the manner in which the agent has conducted himself in doing the business which it was the act of his master to place him in'

It does not matter if the act was not expressly authorized, or even, apparently if the principal expressly forbade it The principal is, however, not responsible when the act falls entirely outside the scope of the agent's employment The doctor who employs a locumtenent or assistant, or the institution which employs a staff of nurses and appoints a staff of medical advisers, might appear therefore to be open to serious liability If these persons are in fact agents—that is if they are doing for

* Earlier articles in the same series by a legal correspondent appeared in the *Journal* of April 1st (p 589) and April 22nd (p 723) The topic therein discussed was libel and slander in medical practice

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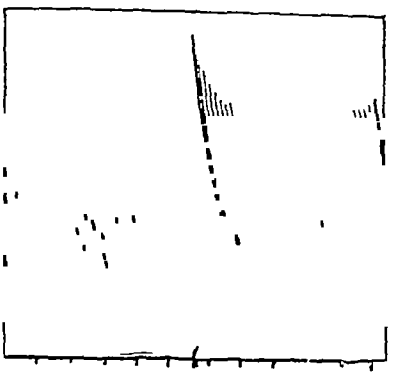

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O O O O O

SHAMAN BELONGING TO MOST NORTHERLY TRIBES OF SIBERIA — The following story illustrates the power of the shaman A Siberian shaman exerted his supposed influence with the spirits in order to doom a man who had offended him, together with his whole family After beating his drum and dancing and leaping, he called upon Etgr, bringer of storms and death to exterminate his enemy Fixing his fiery eyes upon his victim and pointing at him he uttered the curse "He shall live alone among his reindeer—lone as this pointing finger—without child or workmen to bring him aid' Within a few hours the victim's eldest son fell ill and died then his son in law set off to get another shaman to counteract the evil and died murmuring 'lone as a finger" Before the year was out one daughter was dead a second fell mortally ill a third became a prey to melancholia and the remaining son also died All died, repeating dully to their father the fixed idea "You will be left alone."

Date Present day

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the doctor or the hospital what he or it has undertaken to do for patients—then it might seem that every negligent act of the locumtenent or assistant or of the nursing and professional staff can be visited upon the owner of the practice in one case and the governors of the hospital or nursing home in the other There are however several important exceptions which bring this liability within more or less reasonable limits and they are most clearly shown in the leading cases in which patients have sued the managing boards of hospitals for the negligence of consultants and of the nursing staff These cases show that a practitioner a hospital or a nursing home is not always responsible for the negligence of those whom it appoints to carry out medical and nursing duties In fact the law does not seem to regard the medical and surgical staff of a hospital as agents at all and it does not seem to regard even nurses as agents when they are concerned with what have been called in a famous judgement that will be quoted later matters of professional skill

THE LIABILITY OF HOSPITALS

The first important case concerning the liability of a hospital is Evans *v* Liverpool Corporation (1906)

A child with scarlet fever was sent to the infectious diseases hospital maintained by the Liverpool Corporation under the Public Health Act 1875 The boy was discharged by the visiting physician while he was still in an infectious condition and when he got home gave scarlet fever to three other children of the family The jury found that the visiting physician in discharging the child had not shown a degree of skill and care which was reasonable in the circumstances—that is that he had been negligent This visiting physician was an officer appointed by the Liverpool Corporation to act under the general direction of the Hospitals Committee and the rules provided that he should be responsible for the treatment of the patients from the beginning to the end of their stay and also for their freedom from infection when discharged

Here was apparently an agent performing a wrongful act within the scope of his employment Nevertheless it was held by the Court that the legal obligation of the Liverpool Corporation extended only to the provision of reasonably skilful and competent medical attendants for the patients and that the Corporation had discharged that duty The Corporation had made no absolute undertaking nor was it under any absolute obligation to see that no patient should be discharged by the visiting physician while still in a condition which might cause infection As Halsbury states it

> If the local authority appoints and pays an officer to *perform* certain duties even duties which the authority is obliged to see are performed it will not be responsible for the wrongful acts of the officer done in the course of his duties if they are done in the course of skilled and technical service which the authority is not competent to direct or to supervise The authority is not liable if it has exercised care and skill in the selection of a competent officer

So long therefore as a corporation—which means equally the hospitals committee of a local authority or the managing board of a voluntary hospital—exercises due care and skill in selecting officers who are to perform specially skilled services it is not responsible for isolated acts of negligence Presumably however if an officer showed habitual negligence and incompetence and the corporation allowed him to continue in its service it would no longer be protected from liability Although it might have exercised reasonable care in selecting the officer once it had good reason to believe that its confidence had been misplaced it would retain him at its own risk

The great landmark to which all questions of the liability of hospitals are referred is the case of Hillyer *v* St Bartholomew s Hospital (1908) The plaintiff was as it happened a medical man he had suffered misfortune and a breakdown of health in West Africa and had returned destitute He had entered St Bartholomew s Hospital for an operation and had actually chosen the surgeon who performed it He complained that while he was unconscious on the table his left arm had been allowed to be burnt by some vessels containing hot water and his right arm had been pressed with great force against the edge of the table and badly bruised Traumatic neuritis had set in both arms had been paralysed and he had been unable to carry out his work as medical practitioner ever since The Court of Appeal reaffirmed the principle that the only duty undertaken by the governors of a public hospital towards a patient who is treated in the hospital is to use due care and skill in selecting their medical staff The physicians and surgeons who give their services at the hospital are not the servants of the governing body Further and more important the court held that an operation creates a special set of circumstances Although the nurses and other attendants are ordinarily servants of the hospital the moment the door of the operating theatre closes behind them they cease for the time to be the servants of the governors inasmuch as they take their orders from the operating surgeon alone and not from the hospital authorities This recognition that an operation team stands completely outside the legal liability of the hospital governors is very important.

SKILLED AND ADMINISTRATIVE DUTIES

The third step the Court of Appeal took in this case was to distinguish between two classes of nursing duties (1) matters of professional skill and (2) purely ministerial or administrative duties For the discharge of skilled duties the governors are not responsible but for the discharge of the second class of duties they are What exactly this second class includes is a question of some difficulty and a very serious one for boards of hospital management Lord Justice Kennedy said

> The governors of a public hospital by their admission of the patient to enjoy in the hospital the gratuitous benefit of its care undertake that the patient whilst there shall be treated only by experts whether surgeons physicians or nurses of whose professional competence the governors have taken reasonable care to assure themselves and further that these experts shall have at their disposal for the care and treatment of the patient fit and proper apparatus or appliances But I see no ground for holding it to be a right legal inference from the circumstances of the relation of hospital and patient that the hospital authority makes itself liable in damages if members of its professional staff of whose competence there is no question act negligently towards the patient in some matter of professional care or skill or neglect to use or use negligently in their treatment the apparatus or appliances which are at their disposal I am speaking only of the conduct of the hospital staff in matters of professional skill in which the governors of the hospital neither do nor could properly interfere either by rule or by supervision It may well be that the hospital authority is legally responsible to the patients for the due performance by their servants within the hospital of their purely ministerial or administrative duties such as for example the summoning of medical aid in cases of emergency the supply of proper food and the like The management of a hospital ought to make and does make its own regulations in respect of such matters and it is in my judgement legally responsible to the patients for their sufficiency their propriety and observance of them by the servants

The distinction between purely ministerial and administrative duties and matters of professional skill has been further emphasized in a recent Scots case Anderson or Lavelle *v* Glasgow Royal Infirmary (1930)

A woman attended the Glasgow Royal Infirmary for ultra violet treatment She alleged that on the instructions of the nurse she undressed and was placed in the ultra violet room and ordered to walk round the lamps until she was told to come out She stayed there from 10 a m to 10 45 a m but no one told her to come out and she finally left of her own accord She claimed damages for burning due to over exposure At the hearing before the Court of Session her counsel claimed that the nurse was the servant of the Infirmary except when under the orders of a surgeon at an operation and that this nurse had failed in an administrative not in a skilled duty The defendants argued that the Infirmary provided it supplied a competent staff and proper apparatus was not liable for the negligence of a nurse more over that the treatment was given under the instructions of the superintendent of the electrical department

The Court held that there was no distinction between the position of a nurse at an operation and the position of a nurse giving electrical treatment under the directions of the superintendent of the department that the nurse

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was not acting as the servant of the governors of the Infirmary, and that the patient's claim for damages must be dismissed. The case came before the House of Lords, who sent it back to the Court of Session for further information on the facts. The second hearing established that the managers of the hospital did not control treatment and that the nurses were engaged, supervised, and might be suspended by the matron. The electrical department was under the control of a director, and its staff included several qualified nurses. It was the director's practice to prescribe treatment by ultra-violet light, but not the time. The usual time for the first exposure was ten minutes, and it was supervised by a nurse. At this hearing the court held not only that the hospital was not responsible, but that the nurse had in fact not been negligent. The Scottish Law Lords were very emphatic in their interpretation of the relation between a hospital board and its employees. Lord Hunter quoted the remarks of Lord Dunedin in Scottish Insurance Commissioners *v.* Edinburgh Royal Infirmary (1913):

> The managers of a hospital do not go to the public with a profession of themselves operating on or nursing or treating patients. They only hold themselves out as providing an institution where patients will be able to meet with skilled persons who will do these things."

In this case, Lord Hunter observed, the nurse was not doing that which it was the business of the governors to do: she was rendering a service which they had arranged that she should render.

REGULATION AND SUPERVISION

So much for "matters of professional skill," in which the medical and nursing staff cannot involve the hospital in liability. The difficult question is where the law draws the line between matters of professional skill and "purely ministerial or administrative duties" in the performance of which nurses act as the servants or agents of the hospital authorities and so render the authorities legally liable for their negligence. In the Lavelle case the nurse hardly had to do more than watch a clock; yet the court regarded this duty as a matter of professional skill. From Lord Justice Kennedy's words the test seems to be:

> Is the duty in question one in which the governors of the hospital can properly interfere by rule or supervision?'

He seems to have been sure that the governors of St. Bartholomew's did or could have properly supervised or regulated the summoning of medical aid in an emergency or the supply of proper food to the patients. Would he have considered they could supervise or regulate the placing by a nurse of hot water bottles in a patient's bed after operation? If so, then the hospital management is responsible when a nurse burns an unconscious patient after an operation by letting a hot water bottle rest against his body.

In the Canadian case of Nyberg *v.* Provost Municipal Hospital Board (1927) a patient who had just left the operating theatre on a wheeled couch and who passed the night in the adjoining hall which was being used as a ward was badly burnt by a hot water bottle. The nurse was held to have been guilty of negligence in failing to investigate the state of the bottles, and the hospital was held liable in damages. Another Canadian case where the hospital was held liable for the negligence of a nurse was Harkies *v.* Lord Dufferin Hospital (1931). A child was admitted suffering from pneumonia and was put in a steam crib—a cot closed in by a sheet having led into it a length of garden hose connected with a steam kettle, which on this occasion stood on an adjacent chair. The hose projected about three inches into the crib and was fastened to the framework. The doctor who had ordered the treatment examined the contrivance and left the ward. The nurse in charge went to an adjoining room for a few minutes and was suddenly recalled by the child's cries of agony. She ran back and found that the child had been badly scalded, but on examining the apparatus neither she nor the sister could find anything wrong. Moreover, instead of being injured in the face and hands as it might have been if it had meddled with the pipe, the child was scalded down its back and on its left leg to the ankle. Several medical men gave evidence that the same apparatus was used continually in other hospitals with complete satisfaction. The judge held that the obligation undertaken by the hospital was not merely to supply properly qualified nurses but to nurse the patient. He quoted Mr. Justice Farwell's statement in Hillyer's case (above) that a public body and a private individual were under the same liability. There was no evidence to prove directly that the nurse or anyone else had been negligent, but the judge said that he had felt, when the evidence was closed, that there was more to be said, and he found that the nurse had been negligent on the principle of *res ipsa loquitur*. When an inanimate thing, such as a piece of machinery, an appliance, or even a barrel in the upper story of a warehouse, is safe and proper if used with care, and there happens an accident such as in the ordinary course of things does not happen if proper care is used, and the persons responsible cannot explain it, it follows that the accident arose from want of care. In other words, when a normally safe piece of apparatus goes unaccountably wrong the people in charge are liable for any damage it does (Scott *v.* London & St. Katherine Docks Co., 1865). (The injuries in Hillyer's case were held to raise prima facie presumption of negligence.)

Now, admitting that the nurse in each of these Dominion cases had committed an act of negligence, was it good law to hold the hospital responsible? This question is, to say the least of it, debatable. To take the hot water bottle accident: if the use of hot bottles after operation can properly be regulated by the management, it is a purely ministerial or administrative duty, and the management is responsible for its proper performance. But is it a duty of this kind? Suppose that the nurse instead of burning the patient, had failed to put enough blankets on his bed and he had caught pneumonia, would the hospital have been liable? Could it, in other words, properly have regulated or supervised the amount of covering a patient should have in every condition of temperature, immediately after operation? Take moreover, the accident in which the child was scalded in the steam crib, and the nurse, in the absence of an explanation was held negligent. If the hospital did or could properly have supervised or regulated her use of the crib it was responsible at law. But many medical men with hospital experience will consider that such a matter is one of professional skill, and some will think that professional skill is required to judge the temperature of a hot-water bottle or the proper covering required by an unconscious patient. If this view is correct the nurse alone is responsible. The judge, in the steam crib case, held that the hospital was obliged not only to provide properly qualified nurses, but to nurse the patient. This view is not borne out by Lord Justice Kennedy's words and is directly contradicted by the words of Lord Dunedin quoted above: "The managers do not go to the public with the profession of themselves nursing patients."

Many duties are laid upon qualified nurses, and some of them require a much higher degree of skill than arranging hot bottles in a patient's bed. In some hospitals nurses are deputed to take out perineal stitches, in some they give intravenous injections. Whether a given duty can properly be allotted to a nurse depends on whether the jury finds from the evidence that to do so was the practice of the hospital and that this practice was a reasonable one in the circumstances. Assuming that these two duties can properly be performed by nurses is the management liable for injury due to their negligent performance? Lord Justice Kennedy's words do not seem to suggest that it is liable. If, as seems likely, the hospital is not liable for any of the injuries in these hypothetical cases, the natural consequence is that the patient is left without a remedy for a nurse's negligence, for the medical man in charge of the case is not liable if he is not present and able to control the action (Pericnowsky *v.* Freeman, 1886), and the nurse herself is not likely to be able to make reparation. This aspect of the matter is one that needs settling, either by a judicial decision that would bring within the scope of "purely ministerial and administrative duties" all nursing duties not under the immediate control of a medical man in the sense of Hillyer's and Lavelle's cases, or by some form of compulsory third-party insurance for nurses. Fortunately, nurses in this country are so highly trained that such accidents are rare

Observations
ON

ENCEPHALITIS, POLIOENCEPHALITIS, AND VACCINIAL ENCEPHALITIS IN CHILDREN*

BY

C PAGET LAPAGE M D F R C P

SENIOR PHYSICIAN ROYAL MANCHESTER CHILDREN'S HOSPITAL PENDLEBURY PHYSICIAN TO CHILDREN ST MARY'S HOSPITAL MANCHESTER LECTURER ON DISEASES OF CHILDREN MANCHESTER UNIVERSITY

Acute diseases of the brain are not rare in children Apart from epidemics meningitis is more frequently seen than encephalitis and tuberculous meningitis remains much the most common—occurring in my experience in a ratio of 6 to 1 to other acute cerebral lesions With greater attention and better methods of diagnosis much is being brought to light about encephalitis and undoubtedly many cases which were formerly called meningitis were really encephalitis It had been recognized for a long time that encephalitis may occur in infants from the virus of poliomyelitis and the recognition of epidemic encephalitis (lethargica) greatly helped to focus attention on the occurrence of encephalitis as distinct from meningitis Encephalitic diseases show a distinct epidemic tendency even vaccinial encephalitis being seemingly more prevalent at one time than another Encephalitis may follow vaccinia variola varicella[2] zoster encephalitis lethargica and poliomyelitis all of which are virus diseases It may in addition follow pertussis mumps rubella and influenza—all diseases likely to be of virus origin

The pathology of encephalitis is that of widespread and marked degeneration of ganglion cells with vacuolation neurophagy areas of hyperaemia and small haemorrhages The virus reaches the nerve cells via the blood or the perineural lymph vessels and the fluids which surround and protect the nerve tissues[1] Inflammation and hyperaemia occur with exudate so that some nerve cells are put out of action temporarily by pressure These have the power of recovery if pressure is removed but those directly destroyed by the virus are irreplaceable Virus diseases can cause encephalitis either by direct action or by activating a neurotropic virus Most probably they act directly because taking vaccinia as an example the virus of this disease has been demonstrated in the blood of a vaccinated person from the third to the tenth day after vaccination and the onset of vaccinial encephalitis falls usually about the tenth to the thirteenth day The more severe the general disease the greater is the likelihood of encephalitis The virus diseases therefore in all probability cause a direct encephalitis One could better understand a virus disease operating by activation of a neurotropic virus in the case of delayed primary vaccination or of revaccination because the older the child the greater the likelihood of an unsuspected and dormant lesion in the brain Revaccination does cause encephalitis[3] but probably not so often as does primary vaccination All virus diseases show a distinct tendency to a selective action on certain areas of the brain but it is unlikely that each virus infection causing encephalitis is selective of area and further experience is needed before we can decide the question

VACCINIAL ENCEPHALITIS

The occurrence of encephalitis in relation to vaccination was described a long time ago but its recent more frequent—and even epidemic—occurrence is of great interest and importance Quite a number of cases have been reported especially in Holland England and Germany Rolleston[4] shows that out of 5½ million people vaccinated there were roughly 175 cases and 91 died This is one case in 33 000 vaccinations and one death in 60 000 In Holland there were 146 cases and the deaths were 1 in 5 000 It is curious how groups of cases are reported from some countries and not others The lymph is not at fault because in Holland the vaccine was brought in from several different countries Nor is it due to the use of rabbits in the preparation of the lymph because rabbit lymph has been used with no untoward results in Spain The pathological changes are those of a severe disseminated encephalomyelitis evidently caused by a neurotropic virus This has been found in the blood and in the tissues in vaccinated persons but not in the cerebro-spinal fluid unless nervous symptoms have supervened A serum from immune persons has an effect on the virus The inflammation is therefore probably due to the specific virus of vaccinia Thirty to forty per cent of cases die three to ten days after onset with necropsy findings of a severe generalized encephalitis Convulsions are not infrequently seen and local palsies like hemiplegia may result but the tendency is to a general cerebral distribution of the lesion

In one case now under my care for eclampsia vaccination was performed at 23 days old On the second day after vaccination a pustule developed followed by a very severe vaccinia The symptoms of encephalitis began three weeks after vaccination and were those of many slight generalized convulsions a curious semi suppressed hiccup stupor and other brain symptoms Eclamptic attacks and some degree of mental disability have persisted

The symptoms which usually begin some ten to thirteen days after vaccination are those of severe encephalitis of acute onset with headache fever vomiting drowsiness retention of urine constipation and signs varying from convulsive irritation to flaccid paralysis Spinal puncture shows fluid under pressure with usually moderate cell increase of lymphocytes The age of onset is interesting as it is usually from 3 to 13 years This indicates that vaccination should take place in infancy and at as early an age as possible Revaccination is not so likely to cause encephalitis though cases have been reported[3] Immunity from previous vaccination may have disappeared or a neurotropic virus may be activated

Treatment.—If a case occurs every effort should be made to inject serum from an immune person intrathecally if possible Horder[5] gave 5 c cm in his case intrathecally with very good results Hekman[6] records nine cases treated by intravenous injections of serum of the parents vaccinated at the same time with good results Encephalitis occurred in the proportion of 1 to 25 000 in 199 000 cases vaccinated under the age of 2 years and in 1 to 3 570 of 660 000 vaccinated between 2 and 11 years old[7] It is therefore obvious that vaccination is advisable at the earliest age possible when the infant may have some advantage from maternal immunity If vaccination has to be undertaken at a late age the risk of encephalitis (which is really very small) can be still further limited by using a dilute lymph say 1 in 5 by giving a dose of convalescent serum at the same time as the vaccination and by vaccinating in only one place so that the patient can have the disease as mildly as possible The inner side of the upper arm has been recommended as the most protected place and a certain amount of rest when the disease is at its height is advantageous as in other illnesses

POLIOENCEPHALITIS

This is an inflammation of the grey matter due usually to a specific virus which reaches the brain via the perineural lymphatics from the nose and throat or possibly

*Part of a post-graduate lecture St Mary's Hospital Manchester

from the gastro intestinal tract The trachea and bronchi are possible areas also but polioencephalitis tends to occur in the dry, dusty autumn, and not as much in the winter and spring, when chest diseases are common In a typical attack the child may have prodromal pharyngeal catarrh and fever and vomiting Then follow symptoms of an acute brain lesion, with a moderately raised temperature headache, retraction, and perhaps coma, or at least stupor There is, however, much less tendency to stupor in encephalitis than in meningitis In addition there may be neuritic pains the pain making the child apprehensive of movement There is cerebral irritation in both diseases but the irritative apprehensive state of encephalitis is to be distinguished from the irritative stuporose state of meningitis Lumbar puncture shows increased pressure, with, as a rule, a clear cerebrospinal fluid negative for micro-organisms and showing only moderate cell increase , albumin may be increased, but sugar and chlorides remain normal Sometimes the cell increase is very great, and is highly suggestive of tuberculous meningitis The virus is present in dust of rooms inhabited by infected persons and resists drying and sunlight, so that even the dust of the roads may be infective—in fact, epidemics seem to spread along the high roads and occur in the early autumn Carriers are probably numerous during epidemics in the form of those who are in the catarrhal stage of an abortive attack with no paralysis Such an attack is mistaken for a " cold " The incubation period is most commonly five to eight days, but may vary on either side of these figures Children who are having an attack are infectious but not strongly so The disease does not often spread in a ward, and attendants rarely catch it A carrier—that is, a child or person who has the virus present (perhaps intermittently) in his nose and throat—may start an epidemic It is my opinion that some of the children who have had infantile paralysis may become periodically infective This would explain the steady stream of sporadic cases A case with two recurrent attacks of poliomyelitis is reported by Peremans [8] Instances of infection of several members of a family are not very rare, but much rarer than one would anticipate except perhaps in epidemics The following case is of interest in this connexion

H W aged 3 years and 8 months was attended as a case of acute infantile paralysis recovering He was seen in September 1913 and had begun to be ill on July 16th His twin brother was affected on July 17th and died on July 20th after a feverish illness with mucus in the bronchi and furred tongue Death was sudden and due to collapse An elder brother aged 7 began on July 15th with headache and a feverish cold followed by paralysis with sudden collapse and death on July 17th

Food does not appear to be so infective as does dust Poliomyelitis occurs in hot dry (fly) weather, and once the stable fly (*Stomoxys calcitrans*) was under suspicion It is a fly quite unlike the horse fly and like the housefly in shape and size but with black-and-white body stripes Its mode of attack is by puncture and drawing blood It may do so through a thick sock It is not likely to be a carrier because the virus is not transmitted by the blood stream Domestic animals might be carriers Bruno[9] and Lovett and Sheppard[10] reported on epidemics affecting human beings and animals Cleland[11] reported the conveyance of the virus of human acute infective polio encephalitis myelitis occurring in Australia to monkeys sheep a calf and a foal

Treatment —General preventive measures are suggested by the study of epidemics and have been already indicated in the discussion on causation They include prompt isolation of actual cases and of possible carriers, the avoidance of dust from infected rooms or neighbourhoods care with domestic animals and other precautions Local preventive measures, such as douching of mucous membranes unless they have an astringent action, are to my mind ineffective, and may lead to a chronic inflammatory state A healthy undouched nose is possibly more antagonistic to infective agents than is a healthy douched one

We can attack the virus and prevent the spread of destruction of the nerve cells by injection intrathecally and intravenously of 20 to 50 c cm of convalescent serum from a person who has had the disease Convalescent serum has been used extensively in Australia [1] It is not very easy to obtain The need for the Wassermann test is one difficulty, the keeping of the serum another Again, it is usually wanted urgently and in large quantities, but only at infrequent intervals and seasons It is, of course, best kept in the veins of the convalescent but as such is not so readily available One plan is to keep at a children s hospital a regular supply obtained from cases which have recovered from infantile paralysis and have been Wassermann tested Other active measures may include the use of 10 to 15 grains of hexamine four hourly and symptomatic treatment It is extremely important to protect neurones and to prevent undue spread by promoting rest A glance at the pathology of the disease shows this Nerve cells surrounding those destroyed or about to be destroyed, are temporarily put out of action by pressure of exudates Rest will perhaps save them, and haemorrhages may be prevented I have been struck by the fact that a long journey by train or motor has preceded some of my severe cases of infantile paralysis One a girl who died of an acute ascending type, had made a long train journey just before Another, a boy with severe symptoms had ridden a long way with his father in a motor car In both cases the infection had probably taken place some days before the ride, but the shaking of the long journey may have transformed what might have been a mild case into a severe one Rest immediate and prolonged, is therefore of first importance in the early stages Medical examinations should be as few as possible, the room should be quietened and darkened sedatives should be given as soon as the diagnosis is established, and journeys undertaken only when absolutely necessary Nature may aid us in the worst cases by plunging the child into unconsciousness which, though often a precursor of death, may be salutary I have known patients remain unconscious for many weeks and yet recover In such cases the disturbance of lumbar puncture must be avoided whenever possible Cooling applications to the head may soothe Irritative symptoms must be controlled by bromides or luminal Some cases need nasal feeding Orthopaedic rest appliances, like plaster beds or splints, are to be used if necessary

Epidemic Encephalitis (Lethargica)

There may be coma in the severe cases, but most show the peculiar sleepy lethargy which has given the name to the disease Headache is as a rule very persistent, and another characteristic sign, diplopia, is often not mentioned by the child unless special inquiry is made as to its presence Persistent hiccup may be an early sign Myoclonic and paretic cases occur, while on the other hand some cases may be so slight that they are ambulatory, with only lassitude and drowsiness Sequelae of the disease are common, and take the form of irritability, debility, and sleeplessness at night, when the child may whistle, or sing, or be up and doing until the early hours Some have asthmatic attacks, some become mentally unbalanced as regards morals, and some may develop Parkinsonism These peculiarities seem to indicate that the disease is a special form of encephalitis The disease was becoming common, but has been less frequent lately When epidemics occur it is very infectious, and cases may arise at any age, even in early

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons reassembled on April 25th and Mr NEVILLE CHAMBERLAIN opened the Budget He proposed that in the financial year 1933–4 the rate of income tax should not be altered but that the taxpayers should pay an instalment of half their assessments in January and half in July This arrangement is estimated to equal a postponement of 1s 3d in £1 of the income tax Mr Chamberlain also proposed a new scale of beer duty to permit the lowering of the retail price by 1d a pint and an increase in gravity The licence duties on heavy motor vehicles conveying goods by road are to be increased and an import duty of 1d a gallon is imposed on heavy fuel oils other heavy hydrocarbon oils and kerosene The Customs duty on matches is increased as also the duties on mechanical lighters The silk duties are to be revised The existing allowances for repairs under Schedule A for income tax are continued for three years to 1936

Discussion of the Budget continued on later days of the week

Medical News

At the invitation of the Mayor (Dr W Edmund Jones) and Corporation of Royal Leamington Spa the British Health Resorts Association is holding a conference at Leamington this week-end

The annual dinner of the University of London Medical Graduates Society will be held at the Langham Hotel on Tuesday May 9th

At the annual meeting of the Society for the Study of Inebriety on April 11th Sir Humphry Rolleston was elected president for the ensuing year The next meeting will be held on July 11th when Dr J D Rolleston will read a paper entitled Alcoholism in Mediaeval England

The University College (late Queen's College) Galway North of England and Midlands Alumni Association will hold its seventh annual medical reunion at the Queen's Hotel Piccadilly Manchester on Saturday May 6th at 7 30 p m Dinner at 8 The subscription is one guinea which includes the dinner cost of organization printing etc Graduates intending to be present should write immediately to the honorary secretaries Dr Patrick J Webb 127 Rochdale Road Harpurhey Manchester or Dr Bernard Shea 15 Manchester Road Shaw Lancs Recently qualified graduates are specially invited

A series of mock trials in aid of King Edward's Hospital Fund will be held on Tuesdays at 5 30 p m at the London School of Economics Houghton Street Aldwych from May 2nd to 30th and on June 13th Tickets may be obtained from the secretary King's Fund 10 Old Jewry E C 2 or at the doors

The British Institute of Philosophy announces that a course of six lectures on contemporary movements in psychology will be given by Professor F Aveling on May 3rd 10th 17th 24th and 31st and June 7th at 5 45 p m in the University Hall 14 Gordon Square W C Fee 13s 6d members free

A course of three lectures on Principles of Critical Analysis in Relation to Modern Psychology will be given at Bedford College (Regent's Park N W) by Professor E A Bott of the University of Toronto on May 3rd 4th and 5th at 5 15 p m The lectures are addressed to students of the University of London and to others interested in the subject Admission free without ticket

The attention of readers is called to the fact that the telephone number of the British Medical Association and the *British Medical Journal* has been changed to Euston 2111 (four lines)

From May 1st the offices of the American Society for the Control of Cancer will be at 1250 Sixth Avenue Rockefeller Center New York N Y to which address all communications should be directed

The Eugenics Society announces that Dr Aubrey J Lewis will lecture on the inheritance of mental disorders on Wednesday May 3rd at 5 p m in the rooms of the Royal Society Burlington House W Tea at 4 30 Fellows and members may bring guests to tea and to the lecture

M Georges Milsom Director of the Junior Division of the League of the Red Cross Societies will lecture on What the Junior Red Cross is Doing in the World To-day at 14 Grosvenor Crescent S W on Thursday May 4th at 6 p m Lady Northcote will preside

An international Congress for the Protection of Childhood will be held in Paris from July 4th to 9th under the presidency of M Paul Struss Senator of the Seine former Minister of Health and member of the Académie de Médecine

The Medical School of the National Hospital Queen Square has arranged a course of demonstrations in neurology for candidates for the M R C P examinations on Tuesdays and Thursdays at 6 p m from May 9th to June 29th Fee for sixteen demonstrations £6 6s Special terms can be arranged for those unable to take the whole course Applications should be made to the secretary

The Fellowship of Medicine and Post-Graduate Medical Association has arranged a week end course in cardiology at the City of London Hospital Victoria Park on May 6th and 7th A whole-day course in urology for advanced post graduates (limited to eight) will be given at St Peter's Hospital from May 8th to 20th An intensive week end course on rheumatic disorders and applied hydrotherapy will be given at the Royal Mineral Water Hospital Bath on May 13th and 14th An all-day course in diseases of children will be given at the Queen's Hospital Bethnal Green from May 15th to 27th Forthcoming courses include gynaecology May 22nd to June 3rd obstetrics (week end) May 20th and 21st venereal disease May 22nd to June 17th M R C P evening clinical course May 23rd to June 16th (Tuesdays and Thursdays) Two lectures on cataract extraction for general practitioners will be given by Colonel R H Elliot on May 24th and 31st

A special two weeks holiday post graduate course has been arranged by the Faculty of Medicine of the University of Paris commencing Monday June 19th and devoted to the medical and hydrological treatment of renal vascular and metabolic derangements The practical side of these subjects will be emphasized and there will be facilities for clinical and laboratory studies Detailed summaries of each session will be supplied to those attending the course and a certificate will be obtainable at its conclusion Three main sections have been defined the various renal vascular and glandular syndromes and their treatment the therapeusis concerned with certain nephritic and other diseases and the correlation of hydrotherapy with general medical treatment The greater part of the course will be held at the Necker Hospital under the direction of Professor Maurice Villaret the last three days of it will be spent at Evian For further details application should be made to the Laboratory of Therapeutical Hydrology and Climatology of the Paris Faculty of Medicine

Professor Hans Eppinger director of the medical clinic at Cologne has succeeded to the direction of the first medical clinic at Vienna which has been vacant since the retirement of Professor Wenckebach some years ago

The Cambridge University Press announces for publication next month a book by Dr Karin Stephen entitled *Psycho-Analysis and Medicine A Study of the Wish to Fall Ill* for which Dr Ernest Jones has written a preface

Dr Rist of Paris has been elected an ordinary member and Dr Belou of Buenos Aires and Dr Demoor of Brussels foreign corresponding members of the Académie de Médecine

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal B M A. House, Tavistock Square W C 1**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager British Medical Association House Tavistock Square W C 1 on receipt of proofs

All communications with reference to ADVERTISEMENTS as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager

The **TELEPHONE NUMBER** of the British Medical Association and the *British Medical Journal* is EUSTON 2111 (internal exchange four lines)

The **TELEGRAPHIC ADDRESSES** are
EDITOR OF THE *BRITISH MEDICAL JOURNAL* Attiology *Westcent London*
FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements etc) *Articulate Westcent London*
MEDICAL SECRETARY *Medisecra Westcent London*

The address of the Irish Office of the British Medical Association is 18 Kildare Street Dublin (telegrams *Bacillus Dublin* telephone 62550 Dublin) and of the Scottish Office 7 Drumsheugh Gardens Edinburgh (telegrams *Associate Edinburgh* telephone 24361 Edinburgh)

QUERIES AND ANSWERS

Dermatitis from Water Softeners

'J N T' asking for information on this subject writes Has anyone experienced dermatitis resulting from the use of domestic water softeners and is this likely to arise when the softener is acting efficiently or only when it has gone out of order? Could an excess of salt used in the process lead to the dermatitis?

Nasal Desiccators

C B N writes In my part of the world Portsmouth it is a season of minor colds—a particularly distressing complaint during the brilliant weather we are enjoying There are many new preparations on the market for drying up the nasal discharges at the source and some of them are available to the public without prescription Could anyone who has studied the question give an opinion as to whether this drying up process is not very harmful to the mucous membrane of the nose and accessory parts?

Proteinuria in Pregnancy

Dr ANDREW S BARR (Glasgow) writes I would like to add my experience to that of Dr V Newton (April 8th p 639) who asks about the significance of a heavy cloud that appears after heating the urine of pregnant women but not until the acetic acid has been added I have had three such cases in two years Like Dr Newton I could find little clue as to its significance in the literature but unlike his cases all mine ran an abnormal course with high blood pressure and pre eclamptic symptoms In all three, the condition cleared up a month or so after labour

Nocturnal Incontinence of Urine

Dr R HASTINGS MOORE (Bristol) in reply to 'Doctorman' writes First of all do skin tests for common articles of diet such as wheat pork tea cabbage fish beef etc and also for feathers and sheep's wool If any results are positive remove the offending article from the child's diet or surroundings Give 1/2 grain of ephedrine when the child goes to bed and 1/2 grain when the parents go to bed I have had several good results from treatment based on allergic principles

Income Tax

Retirement from Practice

J L M retired from practice as at June 30th 1932 On what basis should his liability be computed for his last three months?

*** If he was in sole practice the liability is on the actual amount of his earnings for that period of three months If however he was in partnership the answer depends on whether the whole of the individuals concerned—that is partners immediately before and after June 30th 1932—combine to elect to have the practice treated as having ceased and recommenced *de novo* at that date If they so elect then J L M is in the same position as if he carried on a sole practice if they do not then no change in basis occurs because the practice is continuous the 1932-3 liability is determined by the 1931-2 earnings and J L M's one quarter is affected accordingly

Payments to Dispenser

PERPLEXED employs a lady dispenser at £3 10s per week and usually pays her an additional £3 at midsummer and £5 at Christmas How should these additional payments be regarded?

*** They are paid for services rendered and are liable to assessment in the dispenser's hands Consequently they should be treated by 'Perplexed' as professional expenses and returned by him on the Form 46 as remuneration

LETTERS, NOTES, ETC

Turpentine Idiosyncrasy

Dr C J B BUCHAN (London S E 12) in reference to Dr W W Jeudwine's case reported in the *Journal* of March 25th (p 513) writes to say he had a similar case in 1932 The patient a young woman aged 29 years sustained a sprain of the left ankle on April 26th 1932 Two days later lin terebinth was used to rub her ankle She was able to walk on May 12th, when some blebs appeared over the ankle A vesicular eruption rapidly spread up the leg and thigh and appeared on the right leg and thigh and both arms and forearms The blisters were very large and the limbs became swollen red hot and painful Lot calamin was first prescribed then 10 per cent resorcin lotion but without good results On May 20th lot calamin c ichthyol was used but the eruption remained until June 17th when she was able to resume her work as a clerk Her general condition remained good all the time The skin healed but was not perfectly normal until six weeks after the appearance of the eruption

Experimental Shock

Mr J E R MCDONAGH (London W 1) in the course of a letter referring to Professor McDowall's Arris and Gale Lecture on experimental shock published in the *British Medical Journal* of April 22nd (p 690) writes My experimental work of recent years has thrown light on the subject sufficient to enable me to devote a chapter to it in the second number of *The Nature of Disease Journal* which is now in the press

A Warning

Dr EDITH HARRIS (*née* Abbott) asks us to publish a warning with description of a woman who has been impersonating her recently describing herself as 'Dr Edith Abbott medical officer of health in the L C C Education Service' She is 5 ft 6 in in height usually wears a black tailor made coat and skirt in strict masculine style and has a grey felt hat with a feather at the side She wears pince-nez has fair bobbed hair and a thin face usually wears a shirt blouse and red tie grey stockings and black patent shoes She has been frequenting the Chelsea and the West Central areas

Corrigenda

We are asked to draw attention to the fact that a house-surgeon (male) is wanted at the Bradford Royal Infirmary from June 1st to November 30th not July 1st to November 30th as stated in the advertisement which appeared last week

An obvious misprint in the *Epitome* of March 25th para 232, which dealt with *Br abortus* in milk recorded the pasteurization temperatures as Centigrade instead of Fahrenheit

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals, will be found at pages 40 41 42 43 46 and 47 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 44 and 45

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 191

infancy. Not many cases make a complete recovery from a severe attack. Robb[13] gives the proportion as 6·8 per cent., but a certain percentage more had only a slight change mentally and nervously. However a large proportion of cases which have encephalitis lethargica are permanently and severely damaged.

Pathologically there may be no naked eye lesions. In the acute stage microscopical lesions are diffuse and tend to be in the basal nuclei, the cerebrum and mid brain especially the latter. Occasionally they are in the cortex cerebri, pons, medulla and posterior cornua of the cord. They are not in the anterior cornua. Later the typical cuffing appearance is seen round the perivascular lymphatic spaces. There is a similarity between the distemper and epidemic encephalitis. This is discussed by Pugh[14] and in articles in the *Lancet*.[15] In the distemper cases there was sleepiness, hiccup and ocular palsies, and there were similar cuff lesions in the brain. This is an argument in favour of the encephalitis syndrome being caused by more than one virus and might even support the idea that encephalitis lethargica is really a variety of influenza.

Treatment consists in alleviating distress, providing rest to the nervous tissues and aiding the elimination of toxins. Lumbar puncture may relieve pressure and various chemical drugs can be given intravenously. Belladonna and hyoscine may be useful in the later stages and for sequelae, but they are not so important for the acute stages. For sequelae trypan blue is the latest drug recommended.[16] Vaccines have been tried[17] and the serum of convalescents is as with other virus diseases perhaps the most likely method of affording some immediate action on the disease and its acute stages. Up to the present however this does not appear to have been tried to any extent.

EXANTHEMATIC ENCEPHALITIS

This may follow an acute infectious disease, especially measles. Encephalitis of measles is often severe in effect at first, but tends to clear up and leave no bad effects.

One patient of mine, a child of 8 years, developed encephalitis after measles. She became unconscious, had a high temperature and a cerebro-spinal fluid under pressure but with only a very moderate cell increase. The optic disks were normal and there were no signs of other disease. She remained blind and semiconscious for some seven or eight days and then slowly improved and made a complete recovery.

Pathologically there are perivascular zones of demyelination in the brain and cord in fatal cases, and the lesion is very like that of vaccinial encephalitis.[18] Measles does not seem to produce such severe after effects as do the neurotropic virus diseases. It may not be a true inflammatory process but rather a toxic condition. Acute toxic encephalitis may occur in diphtheria.[19]

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TREATMENT OF CARCINOMA OF THE BREAST BY RADIUM EMANATION

BY

H. S. SOUTTAR, M.D., M.CH., F.R.C.S.

SURGEON TO THE LONDON HOSPITAL

In writing on any form of radium treatment at the present time one is faced by the dilemma that either one's conclusions are premature or one's methods are out of date. It is however only by the accurate record of new technical methods and of their results that progress can be made and even a small group of cases of the same class treated by the same methods and carefully watched is of definite value. From this point of view the small group of fifty-two cases of carcinoma of the breast here recorded is of interest since all the cases were treated with very nearly the same technique, radon seeds and over a period of three years up to one year ago, more recent cases having been excluded.

The technical advantages of seeds over needles are very obvious to those who have used the former. Yet in this country they have scarcely received the recognition which they deserve, while on the Continent they are almost ignored. It is asserted by those who have not used them that they cannot be introduced with accuracy, and that they act for too short a time to be effective. With proper apparatus however almost mathematical accuracy can be obtained, and the results here recorded are at least evidence of their effectiveness. It will of course be many years before sufficient evidence is accumulated to show whether irradiation or amputation gives the best results, and it is possible that both may be replaced by beam radiation with large quantities of radium or by some other form of treatment. At present however it would seem to be useful to place on record the results which have been obtained by a uniform and systematic technique.

The technique which I now adopt has been slightly modified from that which I described three years ago in an article on the use of radon seeds (*British Medical Journal* August 23rd 1930). Radon seeds are implanted into the tissues beneath the breast in such a manner that the whole of the breast and its lymphatic drainage is exposed to a uniform radiation sufficient to destroy any carcinoma cells whether in the tumour in the breast or in the lymphatics. The seeds are introduced by means of a special introducer described in the article mentioned and consisting essentially of a long hollow needle and a rotating barrel which holds the seeds. The seeds can be introduced to any depth and planted in long columns. Both the columns and the seeds in each column can be accurately spaced from one another; this is of vital importance as otherwise some portion of the suspected tissues may escape irradiation. About 100 seeds may be introduced, each containing 0·5 to 1 millicurie; the precise amount varying with the dimensions of the breast and the bulk of the seeds will lie in the fascia covering the pectoralis major. Through a single puncture it is quite possible by displacing the skin to insert four parallel rows of seeds in the fascia beneath the tumour. Through a second puncture another group can be inserted in the same situation but in lines at right angles to the first

thus forming a kind of grid of seeds beneath the tumour, and actually in the primary area of its lymphatic drainage Where the tumour is very large a layer of seeds may be inserted into its substance but no seeds should be inserted in the more superficial portions of the tumour, as these will only destroy the skin Through a puncture in the axilla two rows of seeds are deposited beneath the pectoralis major about 1 to 2 cm below the line of the axillary vessels, and through the same puncture two parallel rows are introduced along the axillary border of the pectoralis major The whole arrangement aims at a uniform irradiation of the breast itself and of the lymphatic drainage in fact, one should endeavour to perform a complete Halstead by means of radiation The natural tendency to concentrate on the tumour should be avoided, and its disappearance should be used as an index of the adequacy of the radiation as a whole rather than as the immediate object

A few days after the introduction of the seeds it will be noticed that the tumour has become softer, and at the end of a week the tumour will have lost the induration which is so characteristic of carcinoma Small tumours may disappear completely in six weeks and even large fungating masses may have disappeared and the surface have healed in three months Secondary glands and recurrences disappear with greater ease than the original tumour and in the majority of cases all traces of active carcinoma will have disappeared in three months It must not be imagined that this indicates the cure of the patient but it certainly represents a very substantial step in that direction It is an open question whether the patient is any more secure after a complete amputation of the breast

In advanced cases and in elderly patients there can be no possible question but that irradiation by means of seeds presents immense advantages Although a general anæsthetic is required, the whole procedure takes less than fifteen minutes and as it is carried out through a few small punctures the patient may go home the next day In a younger patient with an early carcinoma the problem is more difficult and I am fully aware of the grave responsibility involved in suggesting that under these conditions the breast should not be amputated On the other hand it is a very grave responsibility to advise amputation of the breast if an equally satisfactory result can be obtained by such a simple means as the introduction of radon seeds and with no disfigurement It has been my custom in such cases to advise a trial of radium, with the express condition that if, in three months the result is not completely satisfactory, the breast must be removed

One small point in technique should be remembered Immediately after the insertion of radium the whole of the breast and the surrounding region should be covered with an ointment consisting of equal parts of castor oil and zinc ointment and this should be removed and replaced daily If this is done from the outset there will be little or no skin reaction and the patient will be saved from the discomfort of the ulceration which would otherwise occur

Cases Treated

The cases were divided into three groups—early advanced and inoperable In the early cases a small local tumour was present not adherent to either the skin or the fascia and with no discoverable enlargement of the glands In the advanced group the tumour was attached either to the skin or the fascia and in most instances there were secondary deposits in the glands The inoperable cases showed for the most part large ulcerating masses of carcinoma fixed to the chest wall with secondary deposits in the glands

In the early group there were twelve cases of these four died from generalization over an average period of three and a half years and eight remained alive and well after an average period of two and a half years Of the four who died one failed to respond at all and an amputation was performed four months later In another a local excision followed by radium was satisfactory until the full term of a pregnancy eighteen months later when a local recurrence appeared which was treated satisfactorily for the time being two years later however the patient died of generalization Of the successful cases three had small recurrences which were again treated by radium but they all remain well and free from any further recurrence after more than three years

Of the twenty nine advanced but operable cases seven died from generalization after an average of eighteen months two died from other causes at fifteen months with no recurrence and twenty are alive and well at periods up to four years Of the cases which remain well an amputation was performed in three one for a local recurrence after eighteen months one for a suspected recurrence which however was not present on pathological examination and one because after four months there was no reaction whatever In three other cases small recurrences were again treated with radium with success after periods of twelve, eighteen and twenty months respectively

Of the eleven inoperable cases only one remains alive and well after three years This however, is scarcely surprising considering that the average age of the remaining ten was 71 and that four died of old age and six of generalization (one at 86) In every case the tumour was enormously reduced in size and in most cases complete healing was secured The patient who remains alive and well was a woman of 50 who had a recurrence after a complete Halstead performed twelve years before The recurrence formed a large mass fixed to the costal cartilages and to the skin, but it disappeared entirely with radium and has not recurred Some of these cases were very advanced, one having a huge fungating tumour of four years standing with a large mass of secondary glands in the axilla and a few above the clavicle Complete healing with disappearance of all the glands was obtained in four months, but the patient died of dissemination nineteen months after treatment five and a half years after the onset of the disease

Fifty two Cases of Carcinoma of the Breast treated with Radon Seeds

	Well	Average Period	Died of Generalization	Average Period	Died of Other Causes	Total
Early	8	2½ years	4	3½ years	—	12
Advanced	20	2¼	7	1½	2	29
Inoperable	1	3	6	1 year	4	11

In recording these cases my object is to present the facts as they have emerged, and not to make any claim either for or against radium as contrasted with operation Of the three groups the early cases are definitely disappointing, because although 66 per cent remained free after an average of two and a half years, this is far too short a period on which to base any opinion This short period is due to the fact that it was only after a considerable experience of advanced cases that I ventured to treat those in which the disease was still early My feeling at the moment is that such treatment is justifiable provided the patients are kept under close observation In almost every instance all trace of carcinoma will disappear, but any recurrence would, I feel, be better treated by complete amputation than by a repetition of the radium It is not, however, always possible to obtain consent

The advanced cases show a much more satisfactory result, 70 per cent remaining alive and well after an average of two and a quarter years Moreover, among these only six have required any further treatment In some of these cases very large tumours were present in one the breast was distended by a tumour which had been growing steadily for over a year, but even in this

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

306 Cranio-hypophyseal Xanthomatosis

After a short review of the literature E LESNÉ J A LIÈVRE and Y BOQUIEN (*Presse Méd* January 25th 1933 p 138) present condensed histories of two cases of cranio-hypophyseal xanthomatosis This disease primarily one of childhood usually occurs between the ages of 3 and 6 most frequently before puberty adults being rarely attacked Males are chiefly affected in the ratio of 3 to 1 The cardinal symptoms are lacunae in the cranial bones a usually intense diabetes insipidus exophthalmos and disorders of development The lacunae not always evident at first—the diabetes being the first symptom to attract attention—are found particularly in the frontal parietal and temporal bones From one to ten in number they may fuse and produce a large depression with polycyclic borders Areas of decalcification may also be found at the base especially in the mastoids These lesions are often palpable and give a membranous sensation the bone completely disappearing Often a cerebral protrusion occurs These cranial modifications cause a peculiar facial aspect Lacunae may also be present in the orbital walls and maxillae and osteoporosis may develop in other bones notably the ilia and femora Exophthalmos almost a constant symptom is very intense and often unilateral Arrest of growth is always marked Secondary signs are ganglionic swellings increased hepatic or splenic volume and a pulmonary condition due to the fibrous reaction following the xanthomatosis Localized or generalized xanthomata may be present The blood cholesterol and lipaemic coefficients are raised The basal metabolism is normal If untreated the disease is usually progressive becomes accentuated and cachexia and death supervene The prognosis is not necessarily hopeless however appropriate treatment having a favourable effect The diagnosis easy in characteristic cases is difficult in atypical forms and must be established by a biopsy The exact pathogenesis is as yet unknown and the authors believe it to be connected with the formation of the xanthomatosis various theories (hypercholesterolaemia the neoplasic theory of Virchow and toxic factors) are cited Treatment is purely symptomatic Thyroid extract post hypophyseal opotherapy and a non fatty diet favourably influence the diabetes and radiotherapy produces a rapidly beneficial effect on the osseous lesions and general development Definite cure is rare recurrences being frequent

307 Pain in Angina Pectoris

S DIETRICH and H SCHWIEGK (*Klin Woch* January 28th 1933 p 135) were led to associate an attack of anginal pain with a marked depression of the S T interval towards the isoelectric line of the electrocardiogram in Leads 1 and 2 with flattening or reversal of the T wave in Lead 3 there was in some cases a high and acute T wave Experiments on animals were performed to see if similar electrocardiographic changes could be produced by interference with the blood supply of the heart muscle It was found that these changes did not so much depend upon the absolute amount of the coronary blood flow as upon the degree to which this blood flow and hence the oxygen and blood supply to the heart muscle was commensurate with the work demanded from the heart Such changes in the electrocardiogram could be produced by ergotamine or pituitrin through constriction of the coronary vessels even with unchanged work of the heart by the action of adrenaline which while increasing the work of the heart does not allow of a correspondingly increased coronary flow or by anoxaemia (direct limitation of oxygen supply to the heart) This last could be definitely demonstrated as an exciting cause of anginal attacks with acute pain by allowing patients to do a certain amount of rather heavy work or by keeping them for some minutes in a respiration chamber containing 8 per cent. oxygen and 92 per cent nitrogen In these ways symptoms of angina were produced and at the same time the electrocardiograph took on the more or less characteristic changes The conclusion is drawn that the essential cause of anginal pain is defective oxygenation of the heart muscle

308 Intermittent Hemiplegia

G POTIER (*These de Paris* 1932 No 607) records eleven illustrative cases of essential intermittent hemiplegia three of which are original in patients aged from 9 to 48 years The condition is explained by the presence of a spasm of the cerebral arteries The attacks of hemiplegia are sometimes associated with Jacksonian epilepsy or migraine In some cases such as those recorded by Michell Clarke several members of the family may be affected Spontaneous recovery may ensue with or without sequels Treatment consists in the administration of antispasmodics especially acetyl-choline

309 Meningococcal Meningitis followed by Tuberculous Meningitis

M SCHUMAN (*Med Journ and Record* January 4th 1933 p 8) records the case of a boy aged 6 years who developed an abortive attack of meningococcal meningitis three weeks after measles An injection of 15 c cm of anti meningococcus serum was given intrathecally and rapid recovery ensued but about three weeks later symptoms of meningitis recurred and tubercle bacilli were found in the cerebro-spinal fluid Death followed within a month The author states that the attack of measles appears to have activated a dormant tuberculous infection in this case

Surgery

310 Surgery of Rectal and Rectosigmoidal Cancers

F W RANKIN (*Minnesota Med* January 1933 p 23) defines the rectosigmoid as the last 5 or 6 cm of the extraperitoneal rectum the rectosigmoid juncture is the annular portion of intestine at which the abdominal peritoneum is reflected off the rectum As compared with rectal tumours cancers of this region are difficult to palpate and require different measures for their eradication The rectosigmoid is the commoner site of rectal cancers in ninety cases Rankin found sixty seven in this area twenty-one in the rectum proper and two in the anal canal A better consideration of the lymphatic drainage of this portion of the intestine has influenced operative procedures This drainage which is both intra and extra mural and divides the zones of upward lateral and downward extension differs in the case of tumours high in the rectum from that of those in the anal canal Growths in the latter metastasize forward into the groin those higher toward the sigmoidal mesentery and through lymphatic anastomosis involve the nodes in the ischiorectal fossa in the base of the broad ligaments and around the base of the prostate At their onset the significant symptoms of these cancers in the order of importance are change in the bowel habit and the appearance of bleeding and pain of these bleeding is the chief complaint Diagnosis is usually easy the possibility of syphilis and tuberculosis owing to their rarity can be ignored at first but chronic ulcerative colitis must be excluded A biopsy with prompt cauterization of the wound should be performed as a routine and *x* ray examination of the region beyond the mid sigmoid is

invaluable The frequent relation of polypi to malignancy is emphasized as an aetiological factor Four operative measures may be adopted a one stage combined abdomino peritoneal resection, a similar operation in two stages, colostomy and posterior resection, and local or segmental excision with preservation of the sphincter, or destruction of the growth by cautery or diathermy as a palliative measure Rankin believes that in all cases without hepatic metastasis and fixation of the growth to adjacent structures extirpation should be undertaken, he describes the two stage operation Prognosis is governed by both the extrinsic and intrinsic conditions Among the former are the patient's general state, the site size and duration of the lesion and the presence or absence of metastases More important is the intrinsic condition—the activity of the carcinomatous cells, correct grading permits accurate diagnosis If cancers of moderate grade are radically extirpated more than half the patients have a chance of a relatively long survival

311 Primary Malignant Growths of the Trachea

J E BARTOUX (*Thèse de Paris* 1932 No 614) states that although malignant tumours in the trachea are rare he has collected fifty-six cases in patients aged from 18 to 82, two of which are original which have been published since Lombard and Baldenweck's paper in 1914 In thirty eight the growth was an epithelioma, in three a sarcoma in two endothelioma in one carcinosarcoma, and in twelve the histological diagnosis was doubtful, though clinically the growth was malignant The clinical signs are late and scanty The predominant symptom, however, is a noisy dyspnoea which is both inspiratory and expiratory The diagnosis is difficult It is important not to attribute the dyspnoea to a pulmonary affection Treatment is disappointing In some cases an urgent tracheotomy is required, or excision of the tumour, as a remedy for the dyspnoea Radiotherapy is only palliative The course of the disease is progressive, and in the great majority of the cases death occurs sooner or later Epithelioma runs its course in three or four years while that of sarcoma is much slower

312 Post Operative Pulmonary Complications

D S KING (*Surg Gynecol and Obstet* January, 1933 p 43) presents a series of statistics based upon two years personal observation of the post operative pulmonary complications occurring in the Massachusetts General Hospital, within the first three or four days after the operation, and accompanied by pyrexia leucocytosis cough, and purulent expectoration Apart from a few cases of true bronchopneumonia and still fewer of massive pulmonary collapse the majority of the cases fell into a large group which is termed "pneumonitis" and in which the alveolar exudate was caused by a relatively avirulent type of pneumococcus was lacking in fibrin and was therefore speedily absorbed In the differential diagnosis between this low grade pneumonia and a lobar or lobular atelectasis radiology and the critical estimation of the physical signs are stated to be of special value King reports that purulent bronchitis and "pneumonitis" were present in nearly all the patients suffering from pulmonary complication atelectasis was associated with the infection in about half the instances, but severe and fatal cases proved usually to be true bronchopneumonias without evidence of atelectasis at any stage He found that complications occurred especially in males after operations on the stomach, duodenum gall-bladder and intestines Pre operative sepsis and perforation, as well as malignancy and a poor general condition, were clearly important factors but seasonal conditions and pre existing respiratory infections were of minor significance The type of anaesthesia employed seemed also to have no bearing on the incidence of complications Pneumonia "pneumonitis" or collapse ensued in 6 per cent of all operations, in 14 per cent of laparotomies and in 7 2 per cent of thyroid operations The pulmonary complication was regarded as being primarily responsible for, or a major contributory cause of death in 0 5 per cent of the total operations performed, and in 1 2 per cent of the laparotomies and hernia operations The percentage of pulmonary complications was at least twice as high for men as for women Among males the incidence of complications following operations on the stomach and duodenum was 46 8 per cent, on the gall bladder, 35 6 per cent, and on the intestines 26 2 per cent This group was consequently designated as the "bad risk" After drained appendix operations the percentage of complications was 22 5, as compared with 6 6 for simple appendicectomy The seasonal curve did not run parallel with that for lobar pneumonia or show any constant rise at any special time of the year

Therapeutics

313 Therapeutic Use of Digitalis Preparations

ELSIE PORTER (*Quart Journ Med* January, 1933 p 93) records a study of the various ways of utilizing the digitalis group of drugs for patients suffering from auricular fibrillation She finds that a massive calculated dose of the tincture of digitalis, at the rate of 0 125 c cm per pound of the body weight of the patient, when administered by mouth in a single draught is the method of choice in this condition, because a perfectly good result can be obtained with certainty in six to eight hours In cases of vomiting resulting from cardiac failure an equally good result may follow the administration of a similar massive dose by the rectum calculated at the rate of 0 1 c cm for each pound of body weight In very urgent cases where a still more rapid action is required, comparable benefit is apparent within thirty minutes from the intravenous injection of a single dose of 1/33 gram of strophanthin The author adds that the line of action is similar, whichever route of administration is adopted all these drugs act through the medium of the vagus, as can be proved by controlling their effects experimentally with the exhibition of atropine She urges the importance of treating all cases of auricular fibrillation by one or other of these massive methods in order that the discomfort of the patients may be relieved in a single day, the older methods involve a continuance of the distress for as long as a week As regards strophanthin, the patients in the author's series were of average weight and it is suggested that although precise accuracy of dosage may be impossible to determine at present this drug can nevertheless be relied on for rapidity of action and certainty of effect, even when the patient is suffering from repeated vomiting of congestive cardiac origination

314 Failure of Bismarsen in Established Syphilis

J L GRUND (*Arch Derm and Syph*, December 1932 p 1074) records that forty patients with positive Wassermann reactions received prolonged treatment—a course of twenty injections—with bismarsen (bismuth arsphenamine sulphonate) Of these in only one case did the serum become persistently negative To each of three other patients was given a course of forty injections with no result, and it was evident that prolongation of this line of treatment was of no avail The author's procedure comprised the intramuscular injection into the buttocks once a week of 0 2 gram of bismarsen powder, dissolved in 2 5 c cm of a solvent containing 0 25 per cent of butyn until the total number of injections had been reached At the end of an interval of a month, during which no antisyphilitic therapy was conducted the Wassermann, Kahn, and Hinton tests were performed on the blood In two cases in which the blood became negative after twenty injections the positive reaction returned within three months In view of these results the author condemns the use of bismarsen in such serum positive cases of syphilis, though he admits that there might have been a higher percentage of successes had his series been larger He cites the parallel disappointing results reported by Stokes and his collaborators in the *Archives* of April, 1931

case the tumour disappeared completely leaving an almost normal breast These results compare very favourably with those obtained by amputation

In the inoperable cases where no alternative method of treatment was possible the results quite exceeded expectation large fungating masses disappeared and ulcerating surfaces healed over As most of the patients were 70 years of age or more this was really all that one could ask and in the majority of cases the patient was saved from a distressing condition It is remarkable however that even at the age of 86 extensive generalization can occur It would of course have been impossible if the ulcer had not been treated since the patient would have died of exhaustion

It will be seen then that in inoperable cases radium can give a relief which cannot be otherwise obtained In advanced cases the evidence seems to show that radium can give results at least as good as those obtained by amputation at the cost of far less inconvenience and with no disfigurement In early cases it may certainly be used with a considerable prospect of success on condition that the case is most closely watched and with the stipulation that in the event of a recurrence a complete amputation shall immediately be performed Most surgeons will agree that the wider their experience of carcinoma the less inclined they feel to dogmatize either as to the treatment to adopt or the result which may be expected Sometimes they are surprised by a brilliant result in an apparently hopeless case and have some compensation for the many disappointments they are bound to meet The use of radon seeds in the treatment of carcinoma of the breast furnishes them with a method which is applicable to almost every case There is no case so advanced that local relief is impossible while in the earliest cases I am convinced from my own experience that the surgeon is fully justified in offering this alternative to amputation and that he need have no fears of prejudicing the interests of his patients We are all only too familiar with patients who refuse to ask for help until the condition is so far advanced that it can no longer be concealed and I feel that if the possibilities of radium were more widely known patients would be inclined to seek advice at a much earlier date to their own inestimable advantage

THE INTRADERMAL TUBERCULIN TEST IN NON-TUBERCULOUS ADULTS

BY

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AND

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The investigation here described had for its object the study of the variations in tuberculin sensitivity manifested by adults free from clinically recognizable tuberculosis and the comparison of the findings in non tuberculous with those in clinically tuberculous groups

One of us (S L C) had already published with his colleague Dr S B H Walker the results of preliminary studies on this subject and he makes some further use of the material then collected for the purpose of the present inquiry The other (A C E) as pathologist to the Denbighshire Mental Hospital was in a position to carry out tuberculin tests on a considerable number of patients suffering from mental symptoms only but otherwise in average bodily health

The tests were arranged so as to correspond as closely as possible with those previously carried out in Cardiff One of us (S L C) prepared the dilutions of tuberculin on standard lines and supplied them as required so that they should be used fresh The other (A C E) having worked for some time in the tuberculosis laboratory at Cardiff was in a position to carry out the tests and read the results on lines similar to those applied in the previous series

The tuberculin used was selected for us as of standard strength by Dr R A O Brien director of the Wellcome Physiological Research Laboratories Its description is as follows P T No B 1648 B W and Co Dilutions in tenths were prepared with 0 5 per cent carbolic in normal saline solution ranging from 1 in 10 to 1 in 100 000

Previous observations having satisfied us that all persons giving a definite positive reaction to any given dilution tend to react still more markedly to the next in order of strength we decided to start the tests on each individual with the highest dilution and to excuse all positive reactors from further tests applying successively stronger dilutions to the negatives only In this way we gradually narrowed down the negatives to those failing to react to a dilution of 1 in 10

Control tests with glycerin broth were omitted previous observations having satisfied us that these are always negative until strong concentrations are reached The non specific reactions which tend to occur with very strong concentrations of glycerin broth have been shown by D'Arcy Hart to be confined to those persons who also react to tuberculin so the possibility of non specific reactions need not be taken into account

Intradermal tuberculin tests on these lines were applied to three successive series of persons under treatment in the mental hospital a first male group of 304 a second male group of 141 and a female group of 150 persons In the tables which follow the two male series have been combined into one group of 445 persons for comparison with the female group

The following table shows by sexes the percentages of persons reacting to the various dilutions of tuberculin used

TABLE I.—*Tuberculin sensitivity Variations in Terms of End point of Reactivity in Healthy Persons*

	Dilutions					
	1 in 100,000	1 in 10 000	1 in 1 000	1 in 100	1 in 10	Negative to 1 in 10
Males (445) Positive per cent	14.1	45.8	83.3	9·6	99 1	0 9
Females 150) Positive per cent	21.3	58.0	88 0	93 3	97.3	2.7

The female group while including a larger number of negatives than the male showed a decidedly higher percentage of positive reactors with the higher dilutions It will be noted too that while 85 9 per cent of the males and 78 7 per cent of the females were negative to a dilution of 1 in 100 000 only 11 7 per cent of males and 12 per cent of females were negative to 1 in 1 000 This point is stressed as a reminder of the fact that while positive is an absolute term the expression tuberculin negative is relative only and depends on the technique employed and the dilution of tuberculin used The von Pirquet scarification method for instance when carried out with undiluted old tuberculin has been shown to be not quite so stringent a test as the intradermal inoculation of a 1 in 1 000 dilution of the same tuberculin Negatives to the von Pirquet test therefore may be taken to include at least 10 per cent of persons who would prove to be positive if tested intradermally with 1 in 100 and 1 in 10

For comparison with the above the results of intradermal tuberculin tests in 100 persons forty five males and fifty five females suffering from active pulmonary tuberculosis are set forth in Table Ia

It was not thought safe to give intradermals of 1 in 100 and 1 in 10 to actively tuberculous persons so a final concentration of 1 in 500 was used instead Here again the females included a larger percentage of negatives than the males but in the higher dilutions the findings

Dermatology

315 Arsenical Vesiculo-Oedematous Erythrodermia

A SÉZARY and G MAURIC (*Presse Méd* January 21st 1933 p 115) discuss the possible role of cutaneous allergy in the pathogenesis of the vesiculo-oedematous erythrodermia which frequently follows arsenical therapy in syphilitics basing their conclusions on a study of seven cases The various tests employed are described Using solutions of novarsenobenzol and acetylarsan as antigens the following reactions were tested the cuti- intradermo- and epidermo-reactions the reaction of Prausnitz Küstner and its variations and the reaction of Koenigstein Urbach The cuti reactions were always negative The intradermo-reactions were usually positive in patients in whom cure had been established for about six weeks and most frequently negative when practised before this time It is concluded therefore that there exists a negative phase (temporary cutaneous anergy) this explains the diverse results in cutaneous tests in these conditions negative results occurring during this phase of anergy Convalescence and repeated cutaneous tests are the chief causes of this negative phase Epidermo-reactions roughly obey the same laws as the preceding ones This indicates that in cutaneous tests it is the epidermis that reacts and not the dermis The remaining reactions were always negative Tests were also made of the functioning of the cutaneous vasomotor system with adrenaline and horse serum and proved normal This apparently indicates that the vasomotor troubles noted in this dermatosis are secondary to and not the cause of the lesion For reasons which are cited the authors do not agree with two theories advanced as to the pathogenesis of this condition the anaphylactic and toxic and maintain that an epidermal allergy is concerned The aspect of the lesions is similar to that which characterizes the last named and they consider that the affection is due to epidermal tissue intolerance this is not always only cutaneous but may be evidenced in other systems by homologous tissue reactions hence the complexity of symptoms in certain cases Commenting on the treatment, Sézary and Mauric do not advise desensitizing the patient and agree with the unanimous opinion that a recommencement of arsenical therapy is dangerous in subjects who have suffered from an erythrodermia even though they doubt its toxic origin

316 Epidermophyton interdigitale

S LOMHOLT (*Ugeskrift for Laeger* January 26th 1933 p 97) states that the mycosis so notorious in the United States as to earn the popular term athletic feet has now assumed serious proportions in Denmark In most cases it runs a mild course with only a little desquamation between the toes and with an occasional fissure In more serious cases eczema with vesicles appears and the itching may disturb the patient day and night He may find long walks not only discomforting but actually painful There is often an associate disease of the hands where however the fungus is very seldom demonstrable It is commonly assumed that this condition of the hands is an allergic reaction to small particles of the fungus which have travelled from the feet to the hands by the blood stream but have not found local conditions favourable to multiplication If whenever a patient complains of a vesicular eruption on the fingers and palms of the hands a point is made of examining the spaces between the toes the primary seat of the disease will be located here with surprising frequency The author has made a systematic survey in a students hostel where ninety seven out of 102 students were examined In thirty nine cases there was no clinical sign of the disease but in eighteen cass there was dry desquamation between the toes in twenty five there were fissures and vesicles and in fifteen there was extensive eczema In four cases definite onychia was demonstrable and in three of these cases the *Epidermophyton interdigitale* was obtained in pure culture from the nails One of the difficulties of combating this infectious condition is the ability of the fungus to survive not only on slippers and boards in public baths but also in the wet sand in open bathing places Much can however be done by daily disinfection of the floors of public baths by avoiding communal principles in the use of slippers and other footwear and by not walking barefoot in the dressing rooms of baths Tincture of iodine will effect a cure provided that the skin has not become too thickened and it can tolerate a daily painting with a 5 per cent. solution Another effective treatment is painting with 0 5 per cent crystal violet in 30 per cent alcohol

317 Aetiology of Pityriasis Rosea

L W LORD (*Arch Derm and Syph* December 1932 p 981) who records two cases of pityriasis rosea in a mother and child suggests the possibility of this condition being really a feebly infectious disease the causative organism of which has not yet been discovered He discusses the various theories that have been put forward to explain its occurrence and concludes that the most likely is the one which regards it as a specific exanthem with a special incubation period a stage of evolution and a stage of decline The herald patch is presumably the portal of entry although there is evidence that the tonsils may be concerned in this respect The disease is comparatively rare its rate of incidence being under 4 per cent of skin affections Yet the literature contains records of no fewer than nineteen instances of the eruption appearing simultaneously in two or more members of a family In one of Lord s cases the use of *x* rays cut the disease short the herald patch disappearing seventeen days later and no signs of generalized disease following The author compares pityriasis with syphilis in respect of its having a primary lesion at the portal of entry followed after a period of incubation by a general exanthem with or without general symptoms and adenopathy including enlargement of the tonsillar tissues as part of such adenoid involvement He expresses no opinion as to whether the infecting organism is a micrococcus a fungus or a filterable virus but believes that work on the lines of Wile (reproducing the disease by inoculation of artificially obtained blister fluid from the herald patch) will eventually lead to its identification The clinical value of treating this patch with a single exposure to *x* rays is emphasized

Obstetrics and Gynaecology

318 Clinical Features of Endometriosis

L SEITZ (*Zentralbl f Gynak* January 7th 1933 p 1) points out that whereas all cases of endometriosis are characterized by the presence of ectopic endometrium which has an inclination to infiltrate neighbouring tissues and which responds to the ovarian hormone by cyclical phenomena such as occur in the uterine mucosa the clinical features differ widely partly on account of the varying situations of the heterotope endometrium and partly because it shows a variable tendency to infiltrate and to respond to the hormonic stimulus Three forms of endometriosis have fairly characteristic clinical symptoms—namely endometriosis of the myometrium (internal endometriosis) retrocervical endometriosis and endometriosis of the ovaries tubes and pelvic peritoneum with formation of chocolate cysts and conglomeration tumours In endometriosis interna the chief complaint is of increased and prolonged menstrual bleedings which are probably the mechanical result of pressure in spite of the somewhat frequent association with myoma and adnexal inflammation dysmenorrhoea beginning a few days before and lasting during the first days of the menses is frequently present The uterus is symmetrically enlarged and universally hard In the differential diagnosis curetting serves to exclude a polypus or (usually) a small submucous myoma but the endometrium is not found to be different from that of haemorrhagic metropathy In

were reversed, and the males showed greater reactivity than the females

It is clear that, in the groups tested the tuberculous patients showed a much higher percentage of "reactors"

TABLE I.—*Tuberculin sensitivity Variations in 100 Persons with Active Pulmonary Tuberculosis*

		Dilutions				
		1 in 100 000	1 in 10 000	1 in 1 000	1 in 500	Negative to 1 in 500
Males (45) per cent	Positive	46 6	73 3	93.3	97 8	2 2
Females (55) per cent	Positive	30 9	63 6	87 2	92 7	7 2
Both sexes per cent	Positive	38 0	68 0	90 0	95 0	5 0

to the higher dilutions of tuberculin than did the healthy persons referred to in Table I over three times as many in the case of males to a dilution of 1 in 100 000

The percentages of "negatives" are not comparable, as in the healthy group the non-reactors were negative to 1 in 10 while in the tuberculous group the non-reactors were negative to 1 in 500 only It is probable that *all* the tuberculous group would have been found positive if tested with 1 in 10 tuberculin

The recording of the "end point" reactivity is not, however the only method of evaluating tuberculin sensitivity There is also the size of reaction area, the measurement of which affords a rough index of intensity

In Table II are set forth for the healthy persons of Table I the average sizes of the reaction areas noted in each dilution Only those who had failed to

TABLE II.—*Tuberculin sensitivity Variations in Terms of Average Size of Reaction (Healthy Persons)*

	Dilutions				
	1 in 100 000	1 in 10 000	1 in 1 000	1 in 100	1 in 10
Males (average size in millimetres)	7 7	10 5	14 15	18 5	13 7
Females (average size in millimetres)	12 8	12 8	20 0	16 1	11 7

react to the next highest dilution are included in each average Had the sizes of the reactions in those who had also been positive to a higher end point been included the averages would, of course, have been greater Only the "raised" area, not the red flush, was included in the measurement

Here again it is to be noted that with the three higher dilutions the reactivity of the females was greater than that of the males although with the stronger concentrations it was rather less It looks as if in these Welsh females at least the threshold of reactivity were higher, both in end point and in reaction size than in the corresponding male groups—a circumstance which may perhaps be connected in some way with the fact that they are liable to show a particularly severe type of the disease The reaction size in the actively tuberculous groups corresponded to the above though there was a tendency to rather smaller reaction zones

This problem is approached from a different angle in Table III where the numbers and percentages of different sizes of reaction for each dilution are given under four headings These figures are based on the male groups only and concern the measurements of the reactions in 145 persons

Here the tendency to a weaker and less extensive type of reaction with the higher dilutions is well seen

It is to be noted however that of those found positive even with such a high dilution as 1 in 100 000 of tuberculin two-thirds showed a well marked reactivity and only one third gave weak reactions of a diameter of 5 mm or under

We decided, therefore, to carry our dilutions further and to test the first male group, of 304 patients with dilutions of 1 in 1 million and 1 in 10 million These

TABLE III.—*Tuberculin Reaction Size according to Dilution (Males)*

Dilution	Reaction Size			
	3-5 mm	6-10 mm	11-20 mm	Over 20 mm
1 in 100 000 (63 persons)	Per cent 33	Per cent 44	Per cent 21	Per cent 1
1 in 10 000 (141 persons)	14	40	45	1
1 in 1 000 (189 persons)	6	21	50	23
1 in 100 (34 persons)	6	12	32	50
1 in 10 (12 persons)	8	25	59	8

tests, carried out some two months later, showed seventeen reactors to 1 in 1 million, and seven reactors to 1 in 10 million dilution

The combined results for the whole of this group of 304 males are given in Table IV below

TABLE IV.—*Results of Serial Intradermal Tuberculin Tests in 304 Male Adults*

	Dilutions							
	1 in 10 000 000	1 in 1 000 000	1 in 100 000	1 in 10 000	1 in 1 000	1 in 100	1 in 10	Neg
Positives (per cent)	2 3	5 5	12 4	43 9	85 5	95 4	99 6	0 4
Reaction size (mm)	4 9	5 9	7 7	10 0	14 3	20 7	11 0	–

It is of interest to note, in passing, that the tuberculin reactivity of this group of male adults is far less marked especially in the higher dilutions, that that of South African native mine recruits, as set forth in the recently published Report No XXX (vol v, 1932) of the Publications of the South African Institute for Medical Research in which the percentages giving a positive reaction to varying dilutions are as follows

TABLE V.—*Results of Serial Intradermal Tuberculin Tests in South African Native Mine Recruits (for Comparison with Table II)*

	Dilutions			
	1 in 10 000 000	1 in 1,000 000	1 in 100 000	1 in 10 000
Positives (per cent)	48 6	51 5	55 0	72 5

This marked excess of "end point" reactivity shown by these highly susceptible South African natives over that of European males, as represented by the population of a mental hospital in Wales, is a most interesting phenomenon, more especially in view of the fact that those natives showing marked tuberculin reactions proved, on further observation during their 'contract' periods in the gold mines, to be more likely to develop tuberculosis than those reacting weakly or failing to react to the dilutions used

It will require some years of "follow up" to ascertain whether there is any similar tendency to an association of marked "reactivity" with liability to develop disease in the Welsh group under observation

In this connexion a close scrutiny of the "previous histories" and present condition of the 304 mental cases of the first male series was now undertaken and it was discovered that a history pointing to the occurrence, or possible occurrence, of previous tuberculous disease was present in eighteen of the total In only two of these was there evidence of present activity Both these men had reacted to 1 in 1,000 tuberculin, but not to higher

treatment *x* radiation is justifiable in those approaching the climacteric, but total extirpation may afterwards be necessary Retrocervical endometriosis is detected by retrovaginal examination, which shows behind the cervix a tender mass, swelling at the menses which projects towards or penetrates the posterior fornix, and advances towards the rectum and utero-sacral ligaments The infiltrative properties are specially well marked in this region, and resemble those of a malignant tumour, stenosis of the rectum or ureters may be produced In the early stages a small circumscribed retrocervical endometrioma may be removed per vaginam, but the infiltrating tumours need radical excision of the uterus and utero sacral ligaments—an operation which is often extremely difficult, and which it is sometimes wise to replace by *x* radiation in massive doses (as for carcinoma) Prolonged and careful after control is requisite In intraperitoneal (external) endometriosis the pain is definitely cyclical The premenstrual and menstrual phases are associated with signs of peritoneal irritation and perhaps vesical or rectal tenesmus and the dysmenorrhoea persists throughout the period becoming more severe during successive menses The diagnosis is usually confused with that of subacute and chronic adnexal and pelvic peritoneal inflammation Endometriosis is indicated in the absence of gonorrhoeal or appendicular infection, and when the symptoms increase in severity in spite of lengthy conservative treatment *X*-radiation in castration doses brings about relief About 10 per cent of cases of endometriosis fail to show improvement after the menopause, natural or induced

319 Prevention of Puerperal Thrombosis

D G WESSELINK (*Nederl Tijdschr v Geneesk* February 11th 1933, p 667) states that the incidence of puerperal thrombosis can be greatly diminished by improvement in the circulation as was shown by his experience at the Rotterdam Obstetrical Institute Before 1929 all the patients lay flat on their back in bed, and were allowed up on the tenth day Since 1929 inclusive it is only during the first twelve hours after delivery that they have been kept on their back with a cushion for their head Subsequently they are encouraged to move about in their bed as much as they like though they are kept in bed as formerly till the tenth day No bad results were observed from the change of method but the actual number of cases of thrombosis has fallen from thirteen in 1924 to one each in 1930 1931, and 1932 It is probable that the administration of a freshly prepared solution of ergot is also partly responsible for this good result

Pathology

320 Experimental Food Poisoning in Monkeys

O C WOOLPERT and G M DACK (*Journ Infect Dis* January–February 1933 p 6) record experiments in which typical food poisoning was produced in *Macacus rhesus* monkeys by feeding with filtrates of *Staphylococcus aureus* cultures At the commencement it was found that monkeys proved insusceptible to staphylococcal filtrates which were definitely toxic to human beings The authors therefore made use of observations recorded by previous workers that more potent toxic filtrates can be produced by growing the organisms in an atmosphere of 20 to 25 per cent carbon dioxide Two- to three day cultures on 1 per cent agar, *p*H 6, in this concentration of CO_2 were filtered under moderate pressure through gauze the resulting fluid was centrifuged and either filtered through a Berkefeld N candle or treated with 0 5 per cent phenol Twenty one monkeys were fed with 2 to 20 c cm per kilo of body weight with preparations from four different strains of *Staphylococcus aureus* With one exception every monkey developed typical symptoms of food poisoning generally commencing within two or three hours The symptoms consisted of initial pallor increased salivation and regurgitation, these were followed by vomiting which was often profuse and projectile, and tended to recur in paroxysms Diarrhoea was frequently a marked accompanying symptom Recovery set in rather abruptly after some hours and the following day the animal appeared normal except for loss of weight Comparison of the so called "enterotoxin with the haemolytic, dermal, and rabbit killing toxins elaborated by the organisms failed to show any exact correlation between them The fact that the enterotoxin is more resistant to heat and to adsorption, and has a lower antigenic capacity, suggests that it is of simpler chemical constitution than the other toxins

321 The Antigenic Value of Anatoxin

By previously recorded comparative animal experiments of flocculation *in vitro* and immunization *in vivo* Ramon has demonstrated that the flocculating and immunizing properties are in direct mutual relation, and that the reaction of flocculation fixes the antigenic value of the anatoxin G RAMON and P NÉLIS (*Ann de l'Inst Pasteur* January, 1933, p 67) record a series of experiments to determine the real immunizing value for man of an anatoxin and the direct parallelism between the antigenic and immunizing properties of a given strain Animal experiments showed considerable individual differences in the elaboration of antitoxin which rendered all computation of dosage difficult The results however indicated that there was an undoubted relation between the flocculating and immunizing values of the different anatoxins Vaccinations were performed on children under similar conditions with anti diphtherial anatoxins of a high antigenic value and of different strains It was found that of the many anatoxins employed that which showed the highest flocculating power gave the greatest percentage of immunizations (negative Schick reactions), and that a direct relation did exist between the flocculating and immunizing powers of the anatoxin The former—namely its intrinsic antigenic value expressed in anatoxic units—represents the most important factor in anti diphtherial immunization The progress in anti diphtherial vaccination has been due to the use of anatoxins of high intrinsic antigenic value From an experimental study of the role of different factors in active anti diphtherial immunization P NÉLIS (ibid, p 79) confirms the foregoing conclusions Other non specific factors, such as the addition of calcium chloride, increase the antigenic value Since these, however, give intense reactions their use is inadvisable

322 Calcification of the Myocardium

G W PARADE and F KUHLMANN (*Münch med Woch*, January 20th, 1933, p 99) report four cases of calcification of the connective tissue of the heart which were diagnosed by *x*-ray examination This 'cardiac skeleton' consists of the connective tissue between the auricles and ventricles, giving support to the auriculo-ventricular valves on the one hand and origin to the great vessels on the other Between the fibrous mitral and tricuspid rings and the aortic valves the cardiac skeleton is somewhat enlarged, and forms the trigonum sinistrum and dextrum The bundle of His passes through the latter In old subjects these areas are composed of fibrous tissue relatively poor in nuclei and undergoing collagenous changes, so that degeneration and sclerosis readily set in In one of the cases reported the patient was a man aged 72, with carcinoma of the prostate but without any cardiac symptoms A radioscopical examination of the heart, however showed a half-moon shaped, dark, calcified area undergoing lively movement The post mortem diagnosis was calcification of the posterior part of the mitral ring Calcification of the aortic valve was diagnosed in a female subject with aortic stenosis, the skiagram showing a shadow of ring-shaped, irregularly calcified tissue, which moved towards the apex during systole and towards the base during diastole The authors state that these calcifications do not interfere with the action of the valves unless the process actually involves them If the process spreads to the right trigonum disturbances of auriculo ventricular conduction may follow as a result of interference with the bundle of His

dilutions It may be added that the distribution of these eighteen cases throughout the group in terms of end-point and reaction size was not of a nature appreciably to alter the findings already tabulated The group as a whole though made up of mentally defective persons consisted of individuals in good average health nor did those persons manifesting high reactivity to tuberculin differ appreciably in health from those giving slight or negative reactions This latter point is established by a comparison of the average rate of blood sedimentation in fifty of these mental patients reacting to 1 in 100 000 and fifty selected as negative or giving a weak reaction only when tested with the strongest concentrations of tuberculin

TABLE VI.—*Blood Sedimentation Rate in Strong and Weak Reactors to the Intradermal Tuberculin Test (Healthy Persons)*

Time	"Strong" Reactors. Average "Clear Per Cent"	"Weak" Reactors Average "Clear Per Cent"
After 1 hour	15.0	14.3
After 5 hours	39.7	36.6
After 24 hours	52.0	53.3

N.B.—"Clear per cent" refers to the height of the clear space of fluid remaining above the sedimented red blood corpuscles in a column of fluid 100 mm. high

It will be seen that there is no appreciable difference in the sedimentation rate in the two groups In both the average rate of sedimentation though perhaps rather rapid is within normal limits

In order to emphasize the value of the sedimentation test as an index of normal bodily health the average sedimentation rates of 100 persons with active pulmonary tuberculosis are tabulated for comparison with the above findings

TABLE VII.—*Blood Sedimentation Rate in Strong and Weak Reactors to the Intradermal Tuberculin Test (Persons with Active Tuberculosis)*

Time	"Strong" Reactors Average "Clear Per Cent"	"Weak" Reactors Average Clear Per Cent"
After 1 hour	43.0	6.5
After 5 hours	55.6	65.6
After 24 hours	60.6	68.7

Here it is seen that especially in the first hour the rate of sedimentation is much more rapid in the tuberculous than in the normal groups shown in Table VI It will be noticed too that the weak reactors show a much more rapid sedimentation than the strong reactors indicating that in this tuberculous group the weak and negative results of tuberculin tests are the expression of the anergic state characteristic of the terminal phases of the disease

DISCUSSION

It is easy to suggest an explanation of the individual differences in tuberculin sensitivity manifested by persons suffering from active tuberculosis since we know that the progress of the disease first stimulates and finally damps down the allergic function—a fact which implies marked variation of reactivity in the individuals of a clinically active group When however we attempt to explain the equally marked variation in reactivity shown by individuals free from active disease the problem becomes more complicated as anergy or at least negative anergy cannot be cited as a factor

All the reactions whether manifest to high-dilution end points or to the stronger concentrations of tuberculin must be taken to prove antecedent infection with the tubercle bacillus Animal experiments show that the tuberculo-allergy evoked by infection with strains of low virulence gradually dies out as the lesions undergo spontaneous healing From this it might seem reasonable to conclude that the variations in tuberculin sensitivity in healthy persons depend on individual differences in the degree of spontaneous healing of minute lesions due to early or recent subinfections

It is probable that we all encounter minute doses of tubercle bacillary infection in our daily life and thanks to our resistance to reinfection partly natural and partly acquired through previous contact with Koch's bacillus we kill off these minor invasions at or near the threshold and remain in health

The community under discussion consisting of the inmates of a mental hospital is clearly one in which the handing round of respiratory infections is liable to occur and the well known fact that tuberculosis mortality tends to be high in mental hospitals supports the suggestion that reinfections are common in such institutions and often eventuate in disease

Such reinfection must vary greatly in frequency and extent according to the number of unrecognized open cases in the community and according to accidental factors depending on contact with infected room mates table companions and work associates and accentuated by the prevalence of the spitting habit the breathing in of contaminated dust and so forth

It is probable that these variations in intensity of subinfection suffice to explain the differences in reactivity noted if taken in conjunction with the differences in resistance efficiency possessed by the individuals concerned In this latter connexion the differences observed between males and females are of interest and deserve further investigation

CONCLUSIONS

1 In the groups investigated marked individual variations in cutaneous tuberculin sensitivity were noted

2 These variations were apparent both in regard to end point reactivity with serial dilutions and to the intensity of reaction as evaluated through measurement of the size of the reaction area

3 In the non tuberculous groups—that is to say the groups of persons free from clinically apparent tuberculosis—the variations were not associated with differences in general health as tested by the rate of blood sedimentation in contrasted groups In these healthy groups the females showed a more marked reactivity than the males but both the males and the females of European race showed less reactivity than that recorded for South African native mine recruits in the report of the South African Tuberculosis Research Committee (1932) It is to be noted in this connexion that young adult females in Wales are liable to a more acute and severe type of tuberculosis than corresponding male groups and that South African mine natives exhibit a still more marked liability to fatal acute tuberculosis In other words pronounced cutaneous tuberculin sensitivity in a group appears to be associated with liability to severe tuberculosis

4 In actively tuberculous groups the reactivity of florid cases of the disease is greater than the reactivity of non-tuberculous persons and the reactivity of tuberculous males appears to be greater than that of tuberculous females in the small groups tested Here however the findings are complicated by the gradual onset of anergy as the cases progress in severity and as the systemic disturbance increases—a progression which in Wales tends to be more rapid in young females This perhaps explains their lower sensitivity in the tuberculous group

5 The anergic state in tuberculous persons is associated not only with loss of tuberculin reactivity but with marked increase in the rate of sedimentation of the red blood corpuscles

Our thanks are due to the medical superintendent of the Denbighshire Mental Hospital through whose kind co-operation the observations here recorded were rendered possible

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A REINVESTIGATION OF CHILDREN PREVIOUSLY EXAMINED BY TUBERCULIN TESTS*

BY

W ERNEST LLOYD, M D , M R C P

AND

A MARGARET C MACPHERSON, M D , M R C P

In 1931 a report was published by this department on the incidence of tuberculous infection in children (Brompton Hospital Research Department, Report II) in which there were given the results of a series of von Pirquet and Mantoux tests on 1,220 children up to the age of 15 years As many as possible of these have been retested and examined after an interval of one and a half to two years, with a view to finding whether there was any change in reaction to the tuberculin tests, and whether any of them had developed clinical signs and symptoms of tuberculosis Of those previously tested 700 returned for re examination

In the previous report the children were separated into three groups (1) those who had been in contact with a person known to have had tubercle bacilli in the sputum —that is contacts , (2) those in contact with a person suffering from tuberculosis but without tubercle bacilli in the sputum and (3) those without any known contact It was found that the incidence of tuberculosis as shown by the Mantoux test was practically the same in groups (2) and (3) , therefore in this investigation the children have been divided into two groups—namely, (1) contact, and (2) non contact

Of the 1 220 children tested in 1930–1 200 were tested by the von Pirquet method and the remainder by that of Mantoux with 0 1 c cm of these dilutions of old tuberculin 1 in 10 000 1 in 1 000 and 1 in 100 In the present investigation all the retests were done by the Mantoux method the same brew of old tuberculin used in 1930–1 being employed and in similar dilutions The readings were taken after an interval of forty-eight hours to prevent confusion with non specific reactions these were most frequent after injections with 1 in 100 old tuberculin and usually occurred within twelve to twenty-four hours after injection but in most cases they had disappeared within forty eight hours or only showed very faintly

CHANGES IN REACTION TO TUBERCULIN

A comparison was made between the results of the tests after an interval of one and a half to two years to determine whether sensitivity to tuberculin was retained or lost The results are shown in Table I

Thirty three of these cases which gave a positive von Pirquet in 1930 gave positive Mantoux reactions (1 in 10 000 or 1 in 1 000) in 1932 eighty two were negative to von Pirquet's test and of these sixteen became positive (in varying dilutions) and sixty-six negative (1 in 100) to the Mantoux test In the previous report it was shown that the Mantoux test is more sensitive than the von Pirquet, the latter being equivalent to 0 1 c cm of 1 in 10 000 old tuberculin (O T) given intracutaneously Therefore the number of changes from negative to positive is higher than it would have been if the comparison had been made with the more sensitive Mantoux method in all cases Out of 303 children there were twelve (4 per cent) whose reaction changed from positive to negative An analysis of these cases was made with the following results three of the children tested in 1932 were not seen for the reading but the result was reported by the parent , two were positive to 1 in 1,000 O T in 1930, but the reaction was slight , one was positive to 1 in 10 000 in 1930 and

TABLE I

	Cases Retested					
			Contact		Non-contact	
	No of Cases	Per centage	No of Cases	Per centage	No of Cases	Per centage
Positive 1930–1						
Remaining positive	291	96 0	112	96 6	179	95 6
Becoming negative	12	4 0	4	3 4	8	4.3
Total	303	—	116	—	187	—
Negative 1930–1						
Remaining negative	343	86 4	38	79 2	305	87 4
Becoming positive	54	13 6	10	20 8	44	12.6
Total	397	—	48	—	349	—

negative to 1 in 1,000 in 1932, but it was not possible to test with 1 in 100 , six were positive to 1 in 100 in 1930 and became negative to 1 in 100 in 1932 Therefore there are less than 4 per cent who, without doubt changed from positive to negative and it is questionable if so low a figure as this is of any special significance

In 1930–1 397 children were negative to the tuberculin test, and of these fifty-four (13 6 per cent) became positive in 1932 These fifty-four, of whom ten were contacts were further investigated by inquiry into their clinical history during the interval between the two tests The past occurrence of any acute or definite illness would be ascertained in this way, although, admittedly, minor illnesses and indispositions might be overlooked Six children had a definite history of illness, two having had pneumonia, one acute bronchitis, one tuberculous abscess of the neck, and two measles Two children, both 4 years old were debilitated and much below normal weight and development In eleven cases the symptoms of asthma and chronic pulmonary catarrh, which were present at the first test, persisted The other thirty one children were reported to have been free from symptoms and in these the primary infection by the tubercle bacillus was not accompanied by any disturbance worthy of note by the parents

That thirty-eight of the contact children remained negative is explained by the fact that their exposure to tuberculous infection during the one and a half to two years was slight and in fact, differed little from that of the non contact children Details of the degree of exposure to infection are as follows in twenty-three cases the parent had at one time had tubercle bacilli in the sputum but there had been no known positive sputum test since the birth of the child , therefore it may be argued that these were not strictly contact cases In two instances the parent had died before the first test was done, so that there had been no known contact since that time In no case in which the child remained negative was the parent or other relation known to have had a positive sputum test since 1930–1

CHANGES IN DEGREE OF ALLERGY

Changes in the sensitivity to tuberculin were studied by comparing the lowest concentrations to which the children reacted on the two occasions Each child who had reacted to 0 1 c cm of the 1 in 10 000 O T was retested with this strength, and if negative, was tested

* This investigation was carried out under the direction of the medical staff of the Brompton Hospital and the expenses were defrayed by a grant from the Halley Stewart Trustees to the Research Department of the hospital

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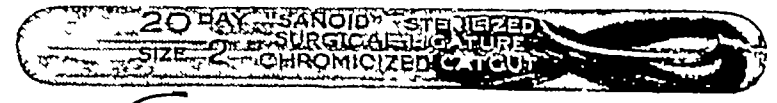

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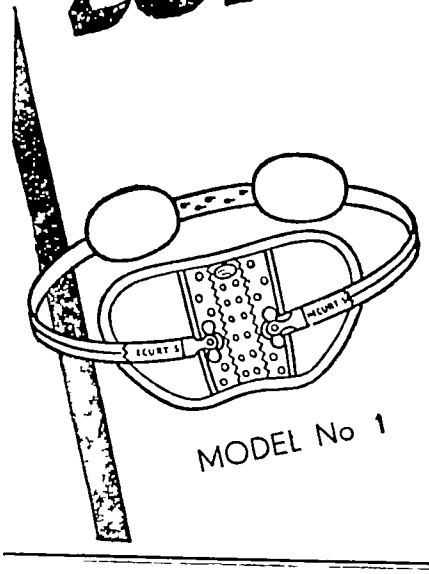

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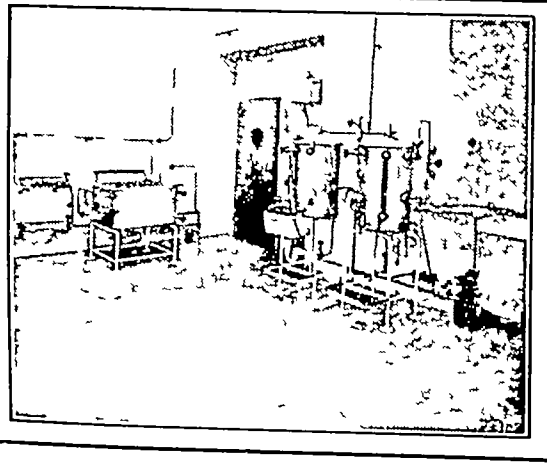

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with 1 in 1 000 and if negative to this with 1 in 100 Those who had been previously positive to 1 in 1 000 or to 1 in 100 were tested with each strength in turn beginning with the 1 in 10 000 dilution and if necessary increasing to 1 in 1 000 or to 1 in 100 until a positive reaction occurred

TABLE II

—	Positive 1 in 10 000 in 1930–1			Positive 1 in 1 000 in 1930–1			Positive 1 in 100 in 1930–1		
	No of Cases	Contact	Non-contact	No of Cases	Contact	Non-contact	No of Cases	Contact	Non-contact
Positive 1932									
1 in 10 000 ..	140	59	81	39	14	25	3	1	2
1 in 1,000 ..	5	2	3	33	12	21	13	1	12
1 in 100 ...	0	0	0	5	0	5	7	0	7
Negative 1932									
1 in 100 ..	1	1	0	2	0	2	5	1	4
1 in 1 000 ..	3	2	1	1	0	1	0	0	0
Total	149	64	85	80	26	54	28	3	25

Eighty children were positive to 1 in 1 000 and negative to 1 in 10 000 in 1930–1 and of these thirty nine (nearly 50 per cent) now react to 1 in 10 000 dilution in twenty eight children a positive reaction was obtained with dilution 1 in 100 only in 1930–1 but in 1932 three react to 1 in 10 000 and thirteen to 1 in 1 000 therefore sixteen (more than 50 per cent) respond to a weaker concentration Out of all those who reacted positively in 1930–1 there are very few who have decreased their degree of allergy as shown by the above figures and in about 50 per cent there is an increase in sensitivity

A comparison of the sensitivity of different age groups was made and for this the result of the first test done on each child was used The figures below are based chiefly on those given in Report II of the Brompton Hospital Research Department Each child reported as positive to 1 in 1 000 or positive to 1 in 100 was negative to 1 in 10 000 or 1 in 1 000 respectively The contact and non contact children were considered separately and were divided into four age groups

TABLE III

Dilutions	Positive Reactors							
	0 to 5 years		5 to 10 years		10 to 15 years		15 yrs & over	
	No of Cases	Per cent	No of Cases	Per cent	No of Cases	Per cent	No of Cases	Per cent
Contact								
1 in 10 000 ..	27	71.1	72	74 2	70	68.5	12	60 0
1 in 1,000 ..	10	26.3	20	20 6	30	27 0	8	40.0
1 in 100	1	2 6	5	5 2	5	4 5	0	—
Non-contact								
1 in 10 000	13	52 0	97	62 8	81	52 6	15	60 0
1 in 1 000	10	40 0	39	25 0	50	32 5	9	36 0
1 in 100 ...	2	8 0	20	12.2	23	14 9	1	4 0

A large percentage of the contact children are positive to 1 in 10 000 at an early age and this percentage varies very little over the period 0–15 years In the non-contact children the percentage positive to 1 in 10 000 in all age groups is comparatively low and never reaches as high as that of the youngest group of the contacts In the contact children there is apparently a quick process of reaching a high degree of allergy while in the non-contact ones there is a smaller percentage which reaches the same high degree of sensitivity It has not been possible for us to test the majority of the contact children at a sufficiently early age to observe the change from negative to positive and to note with which dilution the first reaction after infection is obtained

CLINICAL STUDIES

The second part of the investigation was concerned with the incidence of clinical tuberculosis in the 700 children retested Of these seven were suffering from pulmonary tuberculosis when first tested but when seen at the time of the second test they had all improved and the disease was quiescent Their ages were 8 10 11 (two) 13 (two) and 14 years and four of them had a history of contact with open tuberculosis Besides these seven there were five children with pulmonary tuberculosis who were tested in 1930 only of whom four—13 14 15 and 16 years old respectively in 1930—have died of the disease and one aged 14 years is in a sanatorium at present Of the other 693 none has developed clinical tuberculosis during the interval between the two tests This number includes 303 who were originally positive reactors to von Pirquet or Mantoux tests Their ages are given below and it will be seen that twenty four of these were under the age of 5 years when first tested

TABLE IV

Age	Contact	Non-contact	Total
0 to 5 years	14	10	24
5 to 10 years	62	93	155
10 to 15 years	38	76	114
15 years and over ..	5	5	10

A more detailed investigation of these twenty four children is given below

POSITIVE REACTORS UNDER 5 YEARS OF AGE

The group of positive reactors under 5 years of age consists of twenty four children fourteen of whom were contacts Their ages at the time of the first test are given in the following table

TABLE V

Age	Contact	Non-contact	Total
0 to 1 year	0	0	0
1 to 2 years ...	2	0	2
2 to 3 years	2	3	5
3 to 4 years	2	4	6
4 to 5 years	6	5	11

The history of each child during the interval between the tests the general and pulmonary condition in 1932 and the degree of exposure to tuberculous infection in the case of the contact children were noted In five of the contact cases the infected parent had died before the first test and there had been no known contact since in four the tuberculous relative had apparently been well and had not been known to have had a positive sputum during the past two years in five the parent had had tubercle bacilli in the sputum since 1930–1 and the child had been in close contact Therefore in five cases out of the twenty four there was a history of continuous exposure to tuberculous infection

The history and clinical condition of the twenty-four children was as follows eighteen had had no symptoms or signs during the one and a half or two years and their

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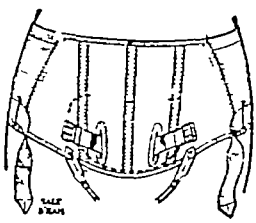
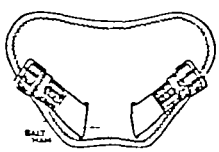


FRONT VIEW

★



FRONT VIEW OF SPRINGS AND PAD

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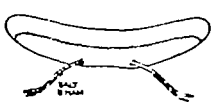

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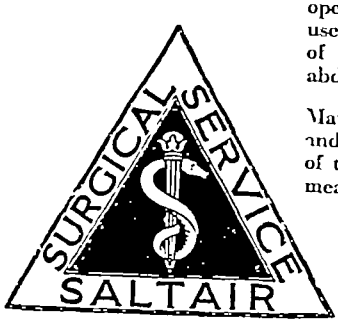

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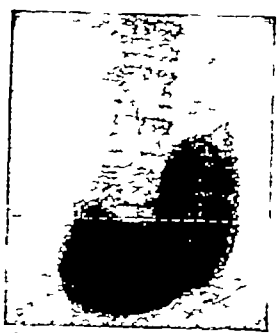
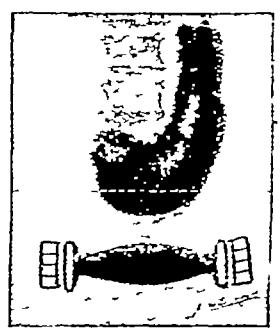


Above is a Radiograph of a highly dilated and much dropped stomach in the upright position immediately after partaking of a Barium (6 oz.) Umbrose meal. The greater curvature projects 3½ in. below a line drawn between the iliac crests.



The same stomach Radiographed 15 mins later the patient having lain upon a couch the bottom feet of which were raised 9 in. The belt was then applied, the patient allowed to walk about 5 or 6 mins. and the Radiograph taken in upright position.

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general and pulmonary condition in 1932 was normal, one child had had no symptoms, but there were signs of fibrosis at the base of one lung following collapse of the lower lobe, which was recognized in 1930 but for which no definite cause was ascertained on investigation, one had had no symptoms, but his general condition was poor, although there were no definite abnormal physical signs, one had bronchitis when the second test was done, one had rheumatic myocarditis at the time of the second test, but had had no pulmonary symptoms during the two years, and there were no abnormal signs in the lungs in 1932, one had enlarged and unhealthy tonsils in 1932, but was otherwise healthy, and one had slightly enlarged discrete cervical glands which had remained unaltered since 1930. Three children under 5 years of age, who were positive in 1930, cannot be traced.

None of the children examined was ill and with one exception their general condition was good. Although the numbers are small it is interesting to note that of these twenty-four children under 5 years (two of whom were under 2) who had been infected with the tubercle bacillus none had had an acute dissemination of the disease, and none, except perhaps the child with cervical adenitis, had clinical tuberculosis.

Conclusions

The results of the repetition of the tuberculin test on 700 children whose ages varied from 1 to 15 years at the time of the first test show that allergy, once it is produced persists in over 96 per cent. of cases throughout childhood.

A comparison of the different dilutions of old tuberculin which will produce a positive tuberculin reaction demonstrates the fact that there is a tendency for the degree of sensitivity to increase after an interval of one and a half to two years. Further on separating the children into contact and non-contact groups, it is evident that a high degree of sensitivity in contact children is reached at an early age whereas in a large percentage of non-contact children this degree of allergy is not reached at any age.

The absence of any development of clinical tuberculosis in 700 children during the period of one and a half to two years is interesting more especially as this number includes two children of 1 to 2 years of age and seven under 3 years. That these children have remained apparently healthy throws doubt on the view which is held by some authors that a positive tuberculin reaction in a child under 2 years of age is evidence of active tuberculous disease.

Summary

1. After an interval of one and a half to two years 700 children, 164 of whom were contact cases, were retested with tuberculin with the Mantoux method, and were examined for signs of tuberculosis.

2. Investigation has shown that in over 96 per cent. of cases positive reactors have remained positive after an interval of one and a half to two years. The change from negative to positive reaction, in at least thirty-one out of fifty-four cases, took place without any notable disturbance to the health of the child.

3. By using dilutions of 1 in 10,000, 1 in 1,000, and 1 in 100 O.T. it was shown that there is a tendency for the reactions to occur with higher dilutions of O.T. after one and a half to two years' interval.

4. Seven of the 700 children had pulmonary tuberculosis when first examined but had improved in 1932. Of the remainder none has developed clinical tuberculosis. This number includes twenty-four who were under 5 years when first positive to the tuberculin test and of these two were under 2 years of age.

We wish to express our thanks to the honorary medical staff of the hospital for permission to make use of their cases and to the Lady Almoner, Miss Marx, for valuable help in tracing the children.

SEVERE ANAEMIA WITH ACHLORHYDRIA*

BY

CHARLES H. MELLAND, M.D., F.R.C.P.

HONORARY CONSULTING PHYSICIAN, MANCHESTER ROYAL INFIRMARY

We come across three different clinical forms of severe anaemia associated with the absence of free hydrochloric acid from the gastric juice: (1) pernicious anaemia, (2) anaemia associated with carcinoma of the stomach, and (3) a form of anaemia of secondary type associated with neither of the above conditions.

I

Pernicious anaemia shows all the characteristic signs and symptoms met with in severe anaemia due to any cause. But it may or may not show, in addition certain other features affecting the alimentary tract as sore tongue, nausea, vomiting, and diarrhoea, or the nervous system as postero-lateral sclerosis. But the final decision must rest on the blood examination, and this is characteristic and absolutely diagnostic. There is great diminution both of the red corpuscles and of the haemoglobin, but the special feature is that the red corpuscles are proportionately more reduced than the haemoglobin, so that each corpuscle on the average contains *more* haemoglobin than does a normal red corpuscle. This is expressed in the statement that the colour index is above 1. Accordingly on examining a film it is recognized that on the average the corpuscles are larger than normal. This may be confirmed by an elaborate process of measurement, though this is rarely necessary. The presence of these large corpuscles, macrocytes, is a characteristic feature of the anaemia, and is found in no other condition, except certain unusual and rarely met with conditions. There is also marked variation in size. In addition to the macrocytes, microcytes—corpuscles smaller than normal—are encountered and their presence makes the macrocytic condition more strikingly evident than even the raised colour index would indicate. In addition to this macrocytosis and anisocytosis there is marked departure from the normal shape—poikilocytosis—and the corpuscles may be oval or pear-shaped or depart still more from the normal rounded form. It is not that an occasional corpuscle here or there departs from its natural form (that may happen in any kind of severe anaemia), but that the great majority do so, and one may have to look carefully for any of the normal round shape. This tendency for the corpuscles to be oval† instead of round is one that I have emphasized for a long time back, and is sometimes even more striking than the large average size. There are other departures from the normal—the presence of nucleated and abnormally staining red corpuscles, departures from the normal proportions of the various forms of leucocytes, and diminution of the blood platelets—but the features of the red corpuscles that I have already described are the most important, and are in themselves diagnostic.

A good many patients with pernicious anaemia appear to digest their food well and maintain their body weight. But on looking through my record of cases over the last twenty or thirty years I come across a fair number of patients with pernicious anaemia in whom anorexia or complete loss of any inclination for food was present. This is a symptom that one had commonly come to associate with absence of free hydrochloric acid from the gastric juice, and accordingly in these patients I was accustomed to use medicinal doses of hydrochloric or

* Post-graduate lecture, Manchester Royal Infirmary, November 29th, 1932.

† On showing a film of his patient's blood to one practitioner who had a clear recollection of his biological days he exclaimed, "Why! it's just like frog's blood."

nitro-hydrochloric acid in the treatment But it was only a comparatively small proportion of the cases that showed these symptoms and it was only in these occasional cases that one judged on clinical grounds achlorhydria to be present Of recent years however since direct chemical investigation by fractional test meals has become more common it has been demonstrated that *all* cases of pernicious anaemia practically without exception have complete achlorhydria although only a minority of them show that anorexia which one commonly associated with achlorhydria It proves in point of fact to be complete achylia gastrica—that is there is absence of pepsin as well—and it seems remarkable that so many of these patients are able to digest and assimilate their food as well as they do

II

The anaemia associated with carcinoma of the stomach closely resembles that of pernicious anaemia and on ordinary clinical grounds there is great difficulty in discriminating between the two They both commonly show symptoms of severe anaemia associated with gastric symptoms pain after food nausea vomiting and anorexia of varying severity If there is a history of sore tongue or of nervous symptoms the diagnosis of pernicious anaemia is indicated but these symptoms are by no means always present

It is becoming more and more fully recognized how frequently these two conditions have in past years been confused I can recall most vividly a patient being picked out in the wards of a Poor Law hospital as a typical case of pernicious anaemia by one of our leading physicians to be utilized in an examination in clinical medicine It was only when the blood was examined actually in the examination room that the true nature of the condition was demonstrated and this was confirmed by necropsy a few months later And the confusion in either direction may lead to most serious and regrettable results I can recall not a few cases of carcinoma of the stomach that have been treated for long periods as being cases of pernicious anaemia naturally without avail In some of these I have seen the patient with the diagnosis already made for me (maybe on the word of a clinical research laboratory) in the hopeful expectation that I should be able to advise a line of treatment that would lead to amelioration and cure and when I came to investigate it the case proved to be rather one of carcinoma of the stomach and I was obliged to give the expectant friends an absolutely hopeless instead of a hopeful prognosis And moreover valuable time had been lost during which perhaps surgical treatment might have been of some avail On the other hand cases that have really been pernicious anaemia have been regarded as carcinoma of the stomach and in the feeling that nothing could be done for them in consequence they have steadily got worse without the effective and successful treatment that was available having received a trial

And yet a suitable blood examination will conclusively discriminate between the two conditions and remove any possibility of confusion The two are from the point of view of the type of anaemia diametrically opposed In carcinoma the haemoglobin is reduced to a greater degree than the number of red corpuscles The colour index therefore is below unity often only 0·5 or 0·6 The red corpuscles accordingly are on the average smaller than normal they appear thin and washed out The majority of the corpuscles are of even size and of the normal round shape there may be *some* variation in size and shape but it is insignificant compared with the degree of variation met with in pernicious anaemia The leucocytes are commonly somewhat increased (as compared with a leucopenia) and there is often a high percentage—12 to 15 per cent—of large mononuclears and the blood platelets are increased instead of being greatly diminished or absent as in pernicious anaemia

The characters of the red corpuscles stamp the condition as typically a microcytic anaemia as also is the anaemia of chlorosis and of all forms of secondary anaemia and indeed of all forms of anaemia with insignificant exceptions other than pernicious anaemia The slides that I show you now of the blood in pernicious anaemia in the anaemia of carcinoma of the stomach and in other forms of secondary anaemia will clearly demonstrate this *

It appears to be cases of carcinoma at the *cardiac end* of the stomach that produce the most profound degrees of anaemia and further as the pylorus is not obstructed the gastric symptoms pain and vomiting are often comparatively inconspicuous and any tumour is concealed under the edge of the ribs and may not be palpable until the very late stages

As the result of accumulated experience of these two types of anaemia one came to assume with considerable confidence that cases of severe anaemia with gastric symptoms in which the blood examination did not reveal the features of pernicious anaemia especially in elderly persons were to be regarded as carcinoma of the stomach And in the main the further course of the illness the resistance to treatment and the steady progress to a fatal termination with or without necropsy confirmed the correctness of the diagnosis With the advance of *x* ray examination of the stomach the detection clinically of early carcinoma was rendered easier and occasionally (unfortunately only too seldom) surgical intervention was possible with greater or less success

III

But as time went on and numbers of cases accumulated occasional exceptions to this generalization began to be noticeable Patients with severe anaemia were seen with the blood showing the features of a secondary type and not of pernicious anaemia who had gastric symptoms and complete achlorhydria but who showed no evidence of carcinoma of the stomach on *x* ray examination and who instead of getting steadily worse and dying made a more or less complete recovery under medicinal treatment And it is especially of recent years when a routine investigation of the gastric activity in all cases of severe anaemia has become more common that the frequency of the condition has become to be generally recognized But the recognition is in point of fact by no means of recent date As far back as 1909 and 1913 a number of cases were very completely described by Knud Faber and since then many writers particularly in Scandinavian literature have described cases and these have been well summarized in a recent paper by E Meulengrath The condition has attracted less attention in this country and in spite of its long recognition has hardly obtained entry to our text books The name which has been most commonly applied to the disease has been simple achylic anaemia but the term simple achlorhydric anaemia has been suggested as more accurate since though the absence of hydrochloric acid is well established it is not quite so definitely proved that pepsin is always absent from the gastric juice † Witts in a recent paper has described cases that have come under his care under the heading of chronic microcytic anaemia The term is an

* The lecture was illustrated by a series of lant m slides of the blood in various forms of anaemia

† The meaning of the word achylia present some uncertaint relation to any proces of gastric digestion it can have no true If it is translated as absence of chyle since the chyle is the product of digestion in the mall intestine If it is translated more literally as absence of juice then achylia gastrica would signify absence of the gastric juice Einhorn appears to have used it as connoting absence of the ferments of the gastric juice which is certainly not what it means literally If we use it to denote absence of the specific digestive power of the gastric juice it would cover an absence of ferments or acid or both

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unfortunate one, since, as I have said, with rare exceptions all cases of anaemia, other than pernicious anaemia, are microcytic, and to appear to limit the term to one specific form seems to me inaccurate and unscientific I see no adequate reason to depart from the established and sufficiently accurate name "simple achylic anaemia"

The condition is met with much more commonly in women than in men, usually between the ages of 30 and 50, and in some it is associated with varying degrees of menorrhagia So far no features of the blood have been described which would distinguish it from any variety of severe secondary anaemia The treatment is generally straightforward and satisfactory Full doses of iron, with or without hydrochloric acid and pepsin, usually produce rapid amelioration Ferri et ammon cit in doses of 20 to 30 grains three times a day has been the form I have employed This is in my experience the blandest and most easily taken form of iron, but it has long been recognized that it must be given in full doses, and that doses of less than 20 grains are much less effective in bringing about an improvement I have tried the addition of small doses of copper and manganese without any apparent benefit, but small doses of arsenic and of digitalis do appear to increase the effectiveness of the iron

I should like to add that preparations of liver and of stomach have no special effect in these cases In pernicious anaemia there is a definite and rapid response on the part of the bone marrow to treatment with these preparations as shown by the appearance of a high proportion of reticulocytes in the blood, but these cases of simple achylic anaemia show no such reticulocyte response to treatment with liver or stomach I resent the action of some of our manufacturing chemists in pushing on the market special and expensive combinations of liver and stomach with iron for the treatment of such cases which are no more effective than the simple and inexpensive pharmacopoeial preparations

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CONGENITAL ABSENCE OF THE VAGINA

BY

NORMAN HODGSON, M.S., F.R.C.S.ED.,

NEWCASTLE-UPON-TYNE

Operative measures for the formation of an artificial vagina are undertaken either to rectify a congenital abnormality or to reconstruct a vagina in cases where the natural canal has been destroyed as a result of parturition or consequent upon inflammation

The purpose of this paper is to record a case of congenital absence of the vagina which I have had the opportunity of treating These cases are so few in number that the recording of every example is important as an aid to surgeons confronted with a similar problem

The patient was a woman 32 years of age, of normal appearance Until her marriage four years previously she was unaware of any abnormality beyond the fact that she had never menstruated She had regular monthly molimenia but no menstrual flow After marriage the impossibility of coitus became apparent and resulted in domestic unhappiness This finally caused her to consult her family practitioner, who discovered the abnormality He invited me to see the patient with a view to rectifying the condition if possible

On examination one found that the secondary sexual characteristics were normal as were also the external genitals When the labia were separated a small depression, suggesting in appearance and position an imperforate hymen was seen There was no evidence of haematocolpos On rectal examination no cervix uteri could be felt and no further information regarding the uterine adnexa was obtained The probability of the absence of the vaginal canal, and the proposed method of forming a vagina, with the operative risks and ultimate possibilities, were explained to the patient, who readily gave consent to the suggested procedure

Three methods of forming an artificial vagina have been described and performed with varying degrees of success (1) Turning in pedicled flaps of skin This method carries the minimum risk, but the subsequent contraction of the new canal makes it the least satisfactory (2) The method described by Schubert of adapting a portion of the rectum (3) The method described by Baldwin in 1904, and successfully performed by him in 1907 of utilizing a loop of small intestine From a survey of the literature this appeared to me to give the most satisfactory permanent results and was therefore employed in this case

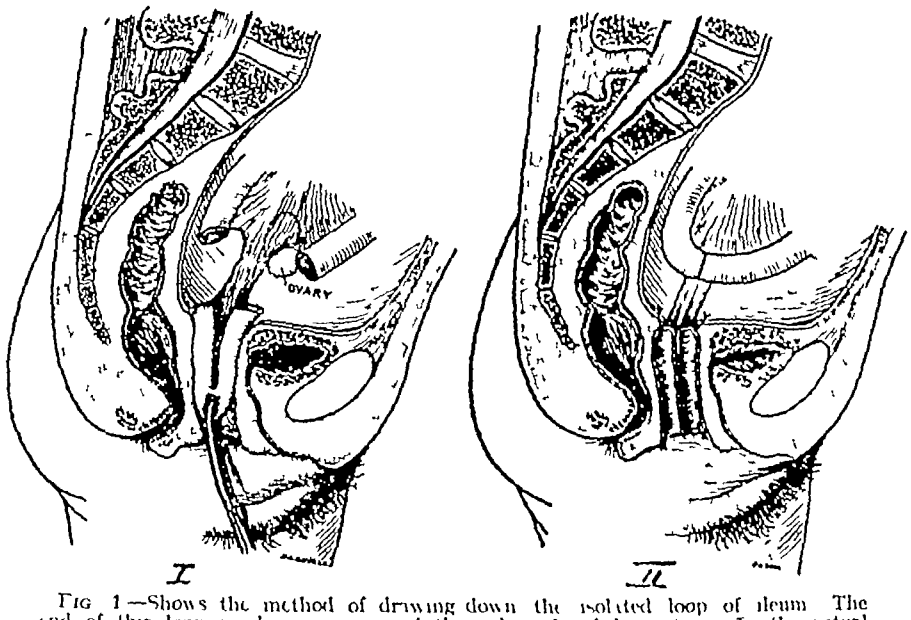

FIG 1—Shows the method of drawing down the isolated loop of ileum The end of this loop is shown open and the other closed by suture In the actual operation both ends were closed before the loop was drawn down, the continuity of the bowel had also been restored before this stage was reached
FIG 2—Shows the operation completed

The operation was carried out as follows The patient was first placed in the lithotomy position and a transverse incision made between the labia minora The cellular tissue between the rectum and bladder opened up easily, but there was no trace of a vaginal canal This separation was carried out to the highest possible point A pair of long artery forceps was then introduced into this space, and fixed securely in position by packing gauze round it The position of the patient was then changed to the Trendelenburg, and the abdomen was opened by a median subumbilical incision

The first striking feature found intraperitoneally was that the left kidney was lying on the brim of the true pelvis This abnormality is mentioned by Pemberton as being present in several of the cases recorded, he suggests, therefore, a preliminary cystoscopy with ureter catheterization and a ray examination to ascertain the location of the ureters On examining the pelvic viscera the ovaries were

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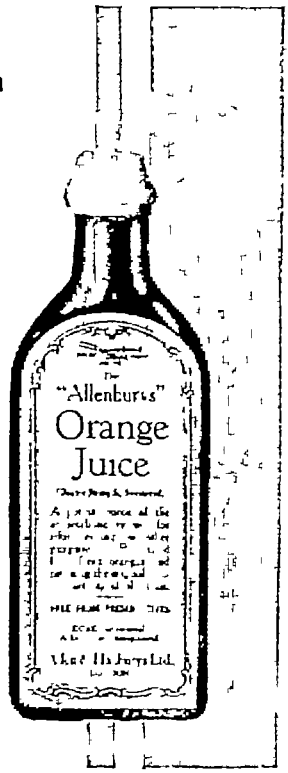

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found lying one in either iliac fossa near the pelvic brim they were normal in appearance and showed evidence of the formation of Graafian follicles There was no trace of a uterus or of any tissue representing it

The technique of the Baldwin operation was followed A loop of small intestine about 7 inches long and about 12 inches from the ileo-caecal valve was selected It was isolated together with its mesentery and the cut ends of the bowel in the loop were permanently closed by purse string sutures of catgut The continuity of the intestinal canal was restored by an end-to-end anastomosis The apex of the U shaped isolated loop was easily pressed to the bottom of the pelvis where it was grasped by the forceps previously introduced from the vulva and drawn to the surface The isolated loop of bowel was now sutured to the pelvic peritoneum but this did not exclude it entirely from the peritoneal cavity as the mesentery passed through the pelvic floor This concluded the intra abdominal part of the operation and the abdomen was closed without drainage

The patient was again placed in the lithotomy position The loop of bowel was of normal colour and there appeared to be no undue tension on its mesentery The convexity of the loop was incised and the cut edges sutured to the skin edges within the labia minora This concluded the operation The patient made a straight forward recovery

It was thought advisable to wait a few months before proceeding with the division of the septum between the tubes of the transplanted bowel At the end of three months the septum had retracted to such an extent that this procedure was unnecessary At first there was a constant discharge of mucus from the vagina but this rapidly diminished in amount

Two years after the operation the patient was examined Her general condition mentally and physically had improved She expressed herself as well satisfied with the result of the operation and there is every reason to believe that coitus can be carried out satisfactorily There is no contraction of the orifice of the vagina which admits two fingers with ease

A collective review of the literature on the formation of an artificial vagina by Frank A Pemberton is to be found in the *American Journal of Obstetrics and Gynecology* for August 1925

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A NOTE ON TREATMENT OF IMPETIGO

BY

J L NEWMAN M B B Ch

ASSISTANT M O H COUNTY BOROUGH AND PORT OF SOUTHAMPTON

Of all the skin diseases that fall within the province of the school medical service impetigo must be given pride of place alike for its commonness and for its effects It is the cause of an enormous amount of loss of education its treatment involves considerable expense and it produces immeasurable results in the way of impairment of health For these reasons any improvement in existing methods is to be welcomed The following notes describe what I believe to be an improvement by means of the already well recognized principle of the occlusive dressing

The subjects of the treatments recorded below were elementary school children treated at the Southampton municipal clinics Three different lines of treatment were adopted

Group I Treatment by the Occlusive Dressing

This consisted simply in the application of a piece of elastoplast bandage to the lesion—whatever its stage of development The lesion was not touched in any other way Crusts if present were left *in situ* superficial pustules were not pricked and the adjacent skin was not cleaned Some selection of patients had to be employed There are situations such as the lip edge on which a dressing cannot conveniently be stuck and there were children who by reason of their irresponsible nature could not be trusted to leave their dressings alone No other method of selection was invoked On the first visit the dressing was applied and the patient was *told not to pull it off* or to wash it Unfortunately—and even surprisingly in respect of the second injunction—these instructions were often ignored and the result has been a considerable diminution of the material available for statistical purposes These failures were sometimes due to the misguided efforts of the parents who would much rather use sulphur ointment than be parties to a revolution More frequently they were due to the natural restlessness of childhood for in point of fact the elastoplast if not interfered with will stand a good deal of immersion in hot water Fifty children have been treated from first to last with elastoplast They were excluded from school at their first visit and not allowed to go back till healing was complete I believe there is very little risk of the infection spreading to others through the dressing but the children were kept from school partly owing to the possibility of fresh lesions developing and partly in order to make sure that they did not vanish from observation The total time lost from school by these fifty children was 486 days giving an average of 9 7 days per child The longest period of exclusion was nineteen days the shortest five days

Group II Treatment by Ung Hyd Ammon Dil

This comprised children who by reason of the situation of the lesion or by their probable or proved irresponsibility were unsuitable for treatment in Group I It also included those treated in the first part of 1932 before the elastoplast treatment had been started The patient was given a box of dilute ammoniated mercury ointment and was told to keep the lesions well covered with it Nothing was said about removal of crusts or any supplementary form of treatment This group included sixty five children and they lost in all 1 208 school days giving an average loss of 18 6 days per child The longest period of exclusion from school was eighty-two days the shortest five days

Group III Intensive Treatment

The fifty children in this group were treated on similar lines to Group II but on a more intensive scale No attempt was made at any sort of selection Crusts if a prominent feature were removed by means of a starch poultice applied either at the school clinic or at home the materials in the latter case being provided and the method of use explained The child then attended the clinic for daily dressings and the parent was given a box of ointment as in the previous group and told to apply it six times a day These fifty children lost 1 127 school days giving an average loss of 22 5 days per child On an average they were dressed at the clinic six times each The longest period of exclusion from school was eighty one days the shortest three days The largest number of dressings in any individual was thirty three the smallest one

Complications

One patient treated with elastoplast for three lesions on the left knee developed an abscess in the subcutaneous tissues of the middle of the left thigh This was opened and recovery was uneventful One patient in Group III—also with the primary focus on the knee—developed an abscess in one of the inguinal lymph glands In this case too recovery was rapid after the abscess had been opened

DISCUSSION

A comparison of these three groups relatively small though they are shows quite clearly the advantages of a policy of non interference in the treatment of simple impetigo Indeed a study of the patients themselves brings home even more forcibly its benefits for a comparison of the lesion which has been kept occluded with another on the same patient from which the dressing has been removed is most striking Another feature but one which it is difficult to express in statistical form is the limitation of spread from one site to another in the individual patient Nor does the occurrence of a subcutaneous abscess in the elastoplast ' group invalidate the claims

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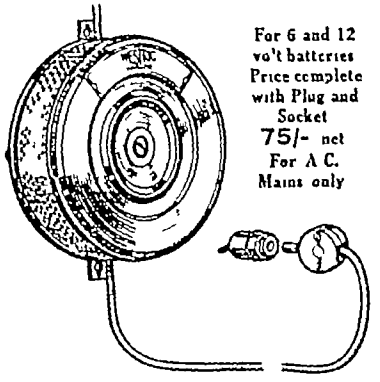

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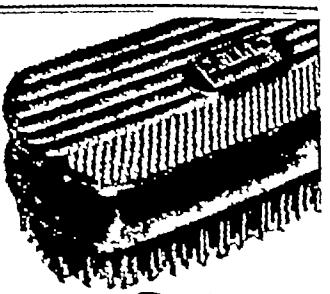

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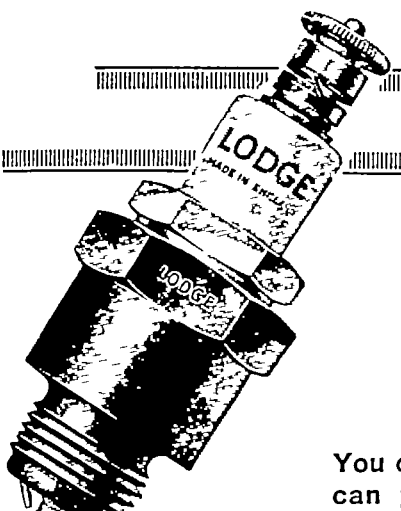

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of the latter, for such a complication may arise in impetigo however treated An increased incidence of such complications would have to be demonstrated in a very much longer series of cases before the very obvious advantages of the method could be seriously decried But there is no need to stress the benefits of the occlusive dressing in superficial infections they are already well enough known to all who have used them An important aspect of impetigo is the administrative one If the disease can be cured so readily with so little treatment the work of the school clinic can be enormously reduced The amount of supervision needed from the medical officer will be lessened, and the school nurse, absolved from the necessity of doing daily dressings, can apply her energies in more useful spheres Adhesive dressings no doubt cost more than ointment, but in the long run their use might well prove to be an economy At any rate the cost is scarcely likely to outweigh their great advantages Finally, the occlusion of the individual lesions is likely to have the effect of limiting the spread of the disease from one member of a household to another

SUMMARY AND CONCLUSIONS

1 Three methods of treating simple impetigo are described—by means of the occlusive dressing, by means of ointment applied intensively, and by means of the same ointment applied in a more desultory way

2 The evidence indicates that the advantage is strongly with the first method of treatment the period of invalidism being almost halved The worst results come from intensive methods

3 This advantage to the patients may also be felt by the school medical service in the form of increased simplification of work The occlusive treatment is likely to diminish the infectivity of the disease

I should like to express my thanks to my colleague Mr J D Dear for permission to use the records of his patients

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

FATAL CEREBRAL HAEMORRHAGE IN A YOUNG ADULT

There are several points of interest in the unusual case described below—the extreme difficulty of diagnosis in the first emergency the occurrence of fatal cerebral haemorrhage in one so young and the presence of glycosuria and albuminuria

I was recently called to attend a young lady of 25 who while dancing had suddenly sunk to the ground On examination she was quite unconscious all reflexes were absent the pulse was very bad but colour was good and there were no obvious signs of injury to the head A stomach wash was done nothing abnormal being found and with oxygen the pulse revived a little Soon after it was noticed that the pupils were becoming unequal and there was some divergence of the left eye The history was entirely negative She had been at her work as a secretary during the day and had been quite herself all the evening For two days during the previous week she had been at home with a slight cold She had had some septic infection of the face some three years before but had never had a serious illness After about two hours it was decided to remove her to a nursing home where a catheter specimen showed a considerable quantity of sugar and some albumin Blood pressure was 190 A few minutes later the left pupil which had been smaller than the right was seen to be dilating The divergence increased and the patient died four hours after being first taken ill Post mortem the only abnormalities found prior to an examination of the skull contents were a few calcareous glands in the abdomen and a slight thickening of the mitral valve suggestive of old vegetations On opening the head the dura mater was found to be rather adherent There was a marked effusion of blood in the subarachnoid space all over both sides of the brain This was slightly more marked in the left fissure of Rolando and left Sylvian fissure than in the right The pons medulla and the lower surface of the brain were all covered with effused blood No ruptured aneurysm could be found but there was so much disorganization that it was difficult to identify the vessels which incidentally did not appear to be unduly thickened

Cerebral haemorrhage in young persons is not so rare as might be expected Allbutt[1] quotes the St Bartholomew's figures of 3,790 necropsies with 134 cases of intracranial haemorrhage, of which 7, or 5 6 per cent, occurred between 21 and 30 In Dr Cookson's interesting series of *eight cases of subarachnoid haemorrhage* recently published in the *Journal*,[2] only one—a boy of 17—was under 30 In the historic work of Charcot and Buchard in 1868 it was considered that haemorrhage came from miliary aneurysms, but according to Osler and Price the view was negatived by Ellis and Pick,[3] and it is now held that the cause is a rupture of a definite aneurysm or of a weak arterial wall, following an infective embolus[4] In this case the history of a septic infection of the face and the suspicious mitral valve are suggestive but there is no explanation of why the rupture took place when it did

The occurrence of the glycosuria and albuminuria is of practical importance as bearing on the diagnosis of cases of sudden unconsciousness My colleague Dr Beare had removed the appendix some two years previously, when the urine was free from sugar and albumin No history of polyuria or diabetic symptoms since then could be obtained, nor were there any naked eye changes in the kidneys post mortem Though the literature on this matter seems scanty, it is generally taught, and held by Munch-Peterson,[6] that such an occurrence is due to interference with some special centre in the brain, probably in the medulla oblongata or corpus striatum None of Dr Cookson's eight cases showed any glycosuria, and in five out of six there was only slight albuminuria It would appear that this centre must be very active, as in the present case urine in the bladder contained a large amount of sugar and albumin within three hours of the onset of the haemorrhage The high blood pressure may have had some similar cause, but it may have been terminal, as it was not taken until just before death

I am indebted to my partner, Dr Max Davison and to my colleague Dr C E Beare for their assistance and to the latter for permission to publish the case

S MORTON MACKENZIE M A
M B, B Ch Cantab

Dorking

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DRUG ERUPTIONS

The extended use of gold and bismuth salts has been followed in some instances by a rash I propose to record here an example of an eruption due to solganol which, so far as I know, has not been recorded in English literature as producing a characteristic rash

Mrs M, aged 46 was admitted under my care at St Mary's Hospital on February 20th, 1933 when she gave the following history She had suffered for some years, probably since early 1929 from an eruption diagnosed as erythema perstans by a dermatologist in charge of a department at a teaching hospital This is described as a gyrate purple eruption on the backs of both legs with a history of having had it at some time upon the face The

eruption disappeared in the summer to recur in the winter She suffers intensely from cold In January 1931 the same dermatologist regarded the eruption which was then upon the face as lupus erythematosus She received four doses of solganol (di sodium salt of sulpho-methyl-amino-auromercaptan benzol sulphuric acid) by intramuscular injection at intervals of a week between each The first injection—0 01 gram—was followed almost immediately by a very extensive eruption closely simulating erythema multiforme With each successive injection—and four in all were given—the rash became more extensive

When seen by me in February the patient was obviously extremely ill She then had a very congestive erythematous eruption like erythema multiforme of the whole face neck upper arms and forearms chest and back Both legs were entirely covered with a thickly set purpuric eruption which persisted long after the erythematous rash had died away Treatment in the hospital was confined to soothing lotions retention in bed and administration of bromide as the patient was sleepless and suffered extreme discomfort from the wide spread congestion of the skin

This patient was shown by me at the meeting of the Dermatological Section of the Royal Society of Medicine on March 16th 1933 when the diagnosis of solganol eruption was generally confirmed She has now made a complete recovery the only traces of the eruption left being some stains upon the legs from the purpura

At the same meeting of the Dermatological Section three cases were exhibited of widespread eruption closely simulating lichen planus and clinically indeed indistinguishable from that disease but with a history of having come on during the administration of bismuth injections I had seen a few weeks previously an eruption in a young man undergoing treatment for syphilis and showing patches upon the face indistinguishable clinically from hypertrophic lichen planus In this case the history was that for the twelve months previous to his coming to me he had been having bismuth injections following upon a course of N A B injections in the previous twelve months during which however he had shown no rash Eruptions simulating lichen planus and following upon bismuth injections are not as far as I can find mentioned in any textbooks and are probably a new observation Our knowledge of the causation of lichen planus is so limited that it may be regarded as a tenable hypothesis that actual lichen planus can itself be produced by drugs just as herpes zoster usually an idiopathic phenomenon can be produced by arsenic

The object of this note is to suggest to practitioners an inquiry into drug antecedents in cases resembling lichen planus erythema multiforme and other skin eruptions the aetiology of which is obscure

St. Mary's Hospital Skin Department. E GRAHAM LITTLE

TWO CASES OF SPONTANEOUS CURE OF CONGENITAL NYSTAGMUS

In view of the poor prognosis associated with congenital nystagmus the following cases may be of interest

A girl aged 5 was brought to me in 1925 suffering from a typical congenital nystagmus The condition had been noticed for some time but the parent hoped the child would grow out of it There was no history of head nodding I could do no more than refract the child under atropine and order glasses but acting on the theory of congenital albinism I had the lenses tinted (Crookes A2) No type vision could be recorded The following year conditions were very similar except that the vision could now be recorded as R E with + 3 D cyl ax 105°—6/24 L E with + 0 50 D sph + 2 5 D cyl ax 90°—6/18 In 1927 there was no change in the nystagmus and the vision remained the same In 1930 the child was brought to me again when to my astonishment no nystagmus could be seen The parent stated that the condition began to improve in 1928 and about a year later the nystagmic movements had disappeared The refraction was then R E + 2 5 D cyl ax 100° which gave a vision of 6/9 partly and L E + 2 D cyl ax 90° which gave a vision of 6/9 New glasses were ordered without any tint and the condition of affairs is still good

A boy aged 6 was suffering from congenital nystagmus when seen by me in 1927 The mother gave a history of eye movements for as long as she could remember no head nodding however had been seen Both fundi were apparently normal and the vision in both eyes was 6/24 with a small hypermetropic astigmatism corrected Glasses were ordered tinted as in the case recorded above and I saw him eighteen months later when no change could be noticed In July 1932 I saw him again but no nystagmus was apparent The mother gave a similar history—namely that about eighteen months previously the condition had begun to improve and six months before I saw the boy the nystagmus had ceased completely The vision was then R E with — 0 5 D cyl ax 90°—6/9 L E with + 0 5 D cyl ax 90°—6 12 Untinted lenses were ordered I saw the boy again in January 1933 and the vision with glasses had improved to 6 6 and 6 9

I can trace no similar cases in the literature

Swansea ROY THOMAS M B F R C S Ed D O M S

Reports of Societies

TREATMENT OF CHRONIC SUPPURATIVE OTITIS

A meeting of the Section of Otology of the Royal Society of Medicine was held on May 5th with Mr J F O MALLEY in the chair when a discussion took place on the treatment of chronic suppurative otitis

Dr T RITCHIE RODGER in opening said that the problem which was social as well as surgical was a reproach to the medical profession in general and to the otologist in particular Although in no other open sinus was there such an element of danger to life yet no other chronic suppurating sinus in any part of the body was treated with the same levity and inaction There were now some hundreds of men engaged in the practice of otology as compared with a mere handful a generation ago but the question might well be asked whether they were making an impression on this unfortunate condition such as their numbers and endeavours might be expected to make The average length of treatment was some criterion of progress and this provided distinct encouragement At school clinics before the appointment of aural surgeons the same patients treated on the old lines used to attend month after month without improvement Now with attention to adenoids improved local treatment and recourse to mastoid operation where necessary the average length of treatment was very much reduced The increased number of mastoid operations performed might perhaps be claimed as an index of progress although critics would say that it was only an evidence of enthusiasm for surgery The most searching test of all was to ask whether the number of intracranial complications had been reduced but this was difficult to answer The otologist had so recently gained his proper position in most cities and towns that a decade or two ago a large proportion of such complications passed into the hands of the general surgeon Therefore statistics by otologists might well show an increase in such complications although the absolute number might be much smaller Dr Rodger said that in the first fifty mastoid operations of all kinds that he performed in his city of Hull he had seventeen intracranial complications The chief explanation of this high ratio was that no special department had previously been in existence in the city and the general surgeons who did the mastoid work received for the most part only those cases in which immediate operation was required His figures for 1932 at the Hull Royal Infirmary where there was now a department similar to the one in Edinburgh showed taking all mastoid operations together a percentage of complications of 10 5 and this was almost identical with the figure in Edinburgh for 1932 At the Children's Hospital in Hull the proportion of complications was smaller—4 2 per cent—and in private cases of all ages it was 7 1 per cent The investigation had brought to light one very weak link in the arrangements for at the two municipal hospitals

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ST. ANDREW'S HOSPITAL

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NORTHAMPTON.

FOR THE UPPER AND MIDDLE CLASSES ONLY

President THE MOST HON. THE MARQUESS OF EXETER C.M.G., V.D.C.

Medical Superintendent DANIEL F. RAMBAUT, M.A., M.D.

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Apply Dr. D. E. M. DOUGLAS MORRIS Telephone Newport Pagnell 121

otherwise quite well equipped, there had been no ear department, the surgeon being called in as required Here the percentage of complications in 1932 was 45 4 He went on to point out that every chronic ear discharge had had an acute stage, and the chronicity was mainly due to mismanagement of that early stage Paracentesis should be performed if opportunity was given Nature s method of relieving the intratympanic pressure of pus in the middle-ear was by a sloughing of part of the membrane, and no control was possible over the size, shape, or site of the perforation This might be too large for restoration or badly situated for drainage The linear incision of a well-performed paracentesis could be relied upon to heal when its purpose had been served The otologist should take pains to explain to the practitioner and the patient that if the paracentesis or spontaneous rupture was not followed by a fairly early cessation of the discharge, even if all other symptoms besides the discharge had subsided, operation must be considered The otologist should make a time limit—four weeks or six or or perhaps longer—and adhere to it, presuming, of course, that the most careful local treatment would be carried out, and that he had an opportunity of seeing that this was efficient before operation was finally advised The end in view was that no acute otitis media should be allowed to pass into the chronic stage In the case in which chronicity was established, the patient should be told that a determined effort was going to be made to get the ear dry by conservative measures but that if within a reasonable time limit these did not succeed, it must be assumed that there was some deeper mischief and that operation would be necessary Here more particularly than in the acute case, it was a duty to advise the patient of the element of danger attaching to every chronic ear suppuration The patient had probably been impressed only by the annoying discharge and the defect in hearing , he must be told of the danger to his life In this matter the otologist must not hesitate to assume the role of guide to the medical attendant, for the otologist was likely to have had personal experience of the tragedies of neglected cases while the average practitioner probably did not see more than once in eight or ten years in his own practice the intracranial complications which made the otologist so much alive to their importance Anything inimical to efficient ventilation of the Eustachian tube must, of course, be corrected whether in nasopharynx or nose For local treatment Dr Rodger used the dry method which he proceeded to describe in detail In résumé his contentions were that chronic otitis media should seldom be seen if the acute stage was efficiently managed , that the otologist should impress on the practitioner and the patient the importance of a time limit, after the expiry of which operation must be considered , that in such chronic cases as did fall to be treated the same principle should be adopted , and, finally that it was the duty of the otologist to explain his point of view for the education of the public and the practitioner

Dr A R FRIEL said that twenty years ago Professor Leduc had taught him the principles and methods of ionization and he had been endeavouring to apply them in otology There was a factor in chronic otorrhoea which was common to all cases—namely, sepsis The sepsis was external in the necrosed area, and did not extend far into the living tissues If a hundred cases of chronic otorrhoea were taken and classified it would be found that in by far the largest class there was sepsis in the tympanum without any other factor being present The sepsis in most cases was accessible , and surely, this being so the treatment for tympanic sepsis should be an antiseptic directly applied to the surface For zinc ionization it could be claimed that it was a remedy for sepsis in the inaccessible area The current made the positive ion travel towards the negative pole so that the positive ions would be driven through the microscopic film of discharge which was adhering to the tympanum The current acted selectively, taking only the positive ions the negative having no action on the tissues The zinc was the antiseptic and when it combined with the albumin it formed a firm precipitate which was a protection between the subjacent tissues and the exterior The ionization treatment was rapid enough to be carried out within a moderate time After the treatment had been completed the solution was allowed to run out of the ear and then he thought it was good practice, if the tissues had been previously congested, to blow some boric powder into the meatus

Mr T B LAYTON agreed with Dr Rodger that this was a social problem, but he thought that he was unduly unkind in saying that the present position was a reproach to the medical profession in general and to the otologist in particular So long as it remained a social problem the hygiene of school and home must be one of the most important factors, and if it was a reproach at all it was a reproach to the whole nation, and not to the medical profession He disagreed with Dr Rodger s remark that ' Nature's method of relieving the intratympanic pressure of pus in the middle ear is by sloughing of part of the membrane " While he did not doubt that this occurred occasionally, usually the perforation caused by Nature was a very small one and there was no sloughing He believed that the change from that condition to the large perforation of the chronic suppurating ear was a slow ulceration around the edge of the perforation, and if that was so it became a race against time The treatment of acute otitis media was far and away the most important part of the treatment of chronic suppuration, and in all this procedure the manner in which the meatus was cleansed was probably the most critical point He also disagreed with Dr Rodger in saying that it did not matter very much what time limit was imposed so long as some time limit was laid down If he was right in suspecting that secondary infection was likely to have occurred by the end of two months, it was desirable to place the time limit at the end of one month in order to have a fortnight for discussion of it with the parents or the patient and for getting the operation done The ordinary simple mastoid operation showed very good results but it was disappointing if it was done after the secondary organisms had got into the mastoid region Dr Rodger had put very ably the disadvantages of the radical mastoid operation but there were one or two points he had left out He had mentioned the risk to life of the chronic ear, and had said that this was a handicap to labour, but had suggested that the person who had had a radical mastoid operation no longer suffered from that handicap Personally the speaker found that in many parts of the labour market, to have had a radical mastoid operation done, even though the result was perfect, was a handicap, and once a radical mastoid operation had been done some people could never be got back into the heavy and dangerous trades

Dr DOUGLAS GUTHRIE referred to the problem in the Army, where chronic suppurative otitis media had been and remained, one of the commonest causes of invalidity and rejection of recruits He himself saw all doubtful ear cases in the troops in Scotland, and he had no hesitation in rejecting any recruit suffering from suppurative otitis even though the ear had become dry It was of no use performing radical mastoid operations in the Army, as one did not get the men fit He also referred to the problem in a children's hospital mentioning that previously in 1926, he had brought forward at the Royal Society of Medicine particulars of 500 cases An endeavour had been made to trace those cases, and, after very considerable trouble, 345 had been followed up Among all the chronic cases only one intracranial complication had been found —a cerebral abscess in a boy aged 9—while among the acute cases 3 or 4 per cent showed intracranial complications Since that time he had seen only one other intracranial complication in a child following the chronic type of case If the tuberculous ears were excluded, 60 per cent of the chronic suppurative otitis media cases were cured, the ear being dried and deafness very slight The results of radical mastoid operation were unfortunate and since that time he had performed very few such operations in children He insisted upon thorough conservative treatment, which one carried out oneself or by means of a skilled assistant, the ear being most carefully inspected at regular and frequent intervals He had found the results of ionization distinctly encouraging, but it required meticulous attention to detail

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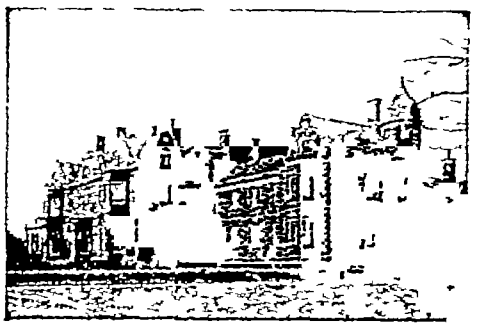

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Proprietors **The Norwood Sanatorium Limited**

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Phone NUNEATON 241

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PRIVATE HOSPITAL for Ladies and Gentlemen suffering from Mental and Nervous Disorders The hospital is situated in nine acres of pleasure grounds. Both voluntary and patients under certificates received. For further particulars apply Dr GERALD JOHNSTON and Dr ERNEST ROLLINS Resident Physician

Doctor's widow in North London

having large house, garden car good staff would like some PAYING GUESTS. Furnished bungalow at the Sea. Terms moderate.—Address No. 371 B.M.A. House, Tavistock Square W.C.1

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Terms include (with rare exceptions) all forms of treatment, for which unusual facilities exist —there being a staff of consultant specialists, and the central laboratory of London County Mental Hospitals being attached to the Hospital. Inquiries of EDWARD MAPOTHER M D F R C P F R C S Medical Superintendent.

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Fees 5—10 guineas. Ample amusements. 25 bedrooms. Annexe for mild cases. Quiet and pleasant situation

Ladies and gentlemen admitted for treatment

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REDUCTION OF FEES

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The fees include medical attendance all scientific investigations that may be needed such as analyses, bacteriological cultures the ordinary x ray examinations, and electrocardiograph readings, all treatment that may be prescribed such as special diets, insulin, artificial sunlight, electrical treatment, baths, massage nursing, medicines or vaccines, board, and lodging

The only extra charge is that for a complete alimentary x ray examination, or for x ray therapy

Many people who would go abroad for health will not do so this winter All the usual forms of treatment are given at Ruthin Castle The climate is mild The annual rainfall is 30 5 inches, that is less than the average for England There is central heating throughout Should the accommodation in the Castle not prove sufficient, comfortable rooms can be obtained near by for those undergoing treatment

Address—THE SECRETARY, Ruthin Castle, North Wales Telegrams CASTLE, RUTHIN Telephone RUTHIN 66

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President: THE RT HON THE EARL OF ATHLONE, K.G P C.

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This REGISTERED HOSPITAL with a SEASIDE BRANCH at Colwyn Bay N Wales is for the treatment and care of those of the Upper and Middle Classes suffering from MENTAL and NERVOUS DISEASES

The Hospital is governed by a COMMITTEE, appointed by the TRUSTEES of the Manchester Royal Infirmary

In addition to the Main Building there are separate villas Extensive grounds. Hard and grass tennis courts cricket and croquet grounds, and a court for badminton There are also wireless installations Golf may be had within easy distance Occupational Therapy

VOLUNTARY TEMPORARY AND CERTIFIED PATIENTS received

The Hospital is nine miles from Manchester 50 minutes by rail from Liverpool and 3½ hours from London

For terms and further particulars apply to the Medical Superintendent J N C Roy M B, who may be seen in Manchester by APPOINTMENT

Telephone GATLEY 2231 (3 lines)

PECKHAM HOUSE, 112, Peckham Road, London, S.E.15.

Telegrams "Alleviated, London" Telephone Rodney 4741-4742

The above House which was established in 1826, is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders Certified voluntary and temporary patients are received Separate houses for treatment and accommodation of special cases adjoin the Institution There is a seaside branch, Kearsney Court near Dover to which patients may be sent for treatment or on holiday Motor and carriage exercise is provided as required Patients can avail themselves of a course of physical drill Tennis Courts Entertainments dances, and indoor amusements held throughout the year Terms from £3 3s per week

Illustrated prospectus and further particulars can be obtained from the Medical Superintendent

NORTHUMBERLAND HOUSE,

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Telegrams SUBSIDIARY LONDON *Telephone* NORTH 0888.

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses Conveniently situated four miles from Charing Cross Easy access from all parts Six acres of ground highly situated, facing Finsbury Park Private Suites Voluntary Patients and Temporary Patients received without certification.

Convalescent Home, **Kearsney Court, Dover** For further particulars, apply to the **Medical Superintendent**

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Telegrams PSYCHOLIA LONDON

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Also completely detached Villas for mild cases, with private suites if desired Voluntary Patients received Twenty acres of grounds Hard and Grass Tennis Courts Putting Greens Bowls Croquet Squash Rackets and all indoor amusements, including Wireless and other Concerts Occupational Therapy Callisthenics and Dancing Classes X ray and Actino therapy Prolonged Immersion Baths Operating Theatre, Pathological Laboratory Dental Surgery and Ophthalmic Dept Chapel Senior Physician Dr HUBERT JAMES NORMAN assisted by three Medical Officers also resident and visiting Consultants

An illustrated Prospectus giving fees which are strictly moderate may be obtained upon application to the Secretary

The Convalescent Branch is HOVE VILLA, BRIGHTON, and is 200 feet above sea-level

THE OLD MANOR SALISBURY

A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS

Extensive grounds Detached Villas Chapel Garden and dairy produce from own farm Terms very moderate

CONVALESCENT HOME at BOURNEMOUTH

Detached Villas standing in 12 acres of ornamental grounds with tennis courts etc. which Voluntary Temporary or Certified Patients may visit by arrangement for long or short periods.

Illustrated Brochure on application to the Medical Superintendent, The Old Manor Salisbury - Telephone 51.

Dr SOPHIA JEVONS said that this was a social problem and that she felt strongly that propaganda by otologists was what was wanted She had a great deal to do with the medically minded lay public but it was almost impossible to make even these people understand the importance of this subject If it was desired to make progress the dangers and the possibilities of cure must be carefully and thoroughly explained Dr THACKER NEVILLE also referred to the necessity of educating the family practitioner He considered that there were far too few articles on this subject in the *British Medical Journal* and the *Lancet* He also mentioned that in Denmark the ear nose and throat specialists constituted panels and saw patients at their own consulting rooms and he thought far better treatment was obtained in this way than at the crowded clinics in this country Dr JAMES ADAM said that for many years he had used the cautery for closing the Eustachian tube in the radical operation Mr GRAHAM BROWN raised the question of the form of operation and showed a case of chronic suppurative otitis media in which transmastoid attico-tympanotomy had been performed and there had been cure with hearing conserved The patient was a female aged 29 with chronic suppuration of the right ear following measles at the age of 12 Attic perforation with granulations was present After operation healing was complete in three weeks and the patient could hear a watch held close to the ear

Sir JAMES DUNDAS GRANT said that he did not think Dr Rodger had dwelt sufficiently on the difference between the postero superior marginal perforation and the antero-inferior one the difference in regard to risk and to curability was very well marked Dr Rodger had referred to antero-inferior perforation as being exceptional This perforation was very important in the respect that it was so benign it indicated a slight trouble in which generally the discharge was coming from the upper part of the Eustachian tube and in such cases a special treatment for the Eustachian tube would sometimes bring about recovery in a very obstinate class of case He had previously shown to the Section a girl with a very large perforation for which she was going to have a radical mastoid operation There was a discharge in this case which he managed to bring to an end by the use of chloride of zinc solution up the Eustachian tube using for the purpose a long silver Eustachian catheter He had had at least one very marked case in which the mucus in the tympanum was so inspissated that it amounted almost to a foreign body and when removed by syringing and suction it accumulated again and again until he employed irrigation through the Eustachian tube That could only be safely carried out when there was a large perforation With regard to polypi which sometimes grew from the edges of the perforation and might remain inside and be larger than the perforation itself he had in one particular case been able to force out a polypus and snare it away without its recurrence and with complete cessation of the discharge afterwards Another treatment which was of value was the use of the fine point of the galvano-cautery but this must be used in careful hands and with a good instrument By this means he had been able on certain occasions to put an end to small polypi that were keeping up a discharge

Dr RODGER in replying said that he had tried ionization but he feared there must be some defect in his technique for he could not get the same results as Dr Friel He got really good results with the old fashioned treatment described in the paper He thought the secret of success with local treatment by the dry method was in the detail The ear must be absolutely clean and dry before the wall of protective antiseptic powder was inserted He had always had the impression that Dr Friel's cases were of exactly the same type as his own—that is to say suppuration was confined to the middle ear If the suppuration went into the antrum and the adjacent cells he did not think any conservative treatment was going to be successful He could not agree with Mr Layton's point about the secondary organisms being a criterion for chronicity He thought chronicity depended upon the point to which the infection had reached no matter whether there was one organism or many

SPEECH AND HEARIN

At a meeting of the Manchester Medical Soc 5th with the president Professor E D TELFO chair Mr and Mrs A W G EWING made a con tion on recent researches in speech and hearing

The present research in the Department of Educatic the Deaf at Manchester University began in 1924 Pra tical experience in the education of partially and function ally deaf children led to a realization of the need for methods of measuring hearing capacity in relation to the physical nature of speech sounds During the post war period there has been what amounted to a revolution in the physics of sound The absolute control and measurement of intensity or loudness had been brought within the scope of all workers A standard unit of intensity had come into common use in all countries Quantitative measurements had been made of the intensity of the sounds of speech and the noises of daily life Human hearing had been explored in terms of intensity By the use of properly calibrated oscillators the average auditory acuity of a number of normal ears could be established and used for comparison with the auditory acuity of individual partially deaf patients Three or four hundred tests of this nature had been made in the Department of Education of the Deaf at Manchester University (The significance of two audiograms was then discussed and illustrated by the use of apparatus) Wegel had discovered that when the intensity or loudness of a tone was progressively increased a level was eventually reached at which its affective quality changed It might produce discomfort and even pain This was obviously a matter of practical importance in investigating the potential value of hearing aids

The authors explained that research on this problem in the Department of Education of the Deaf had been enlarged to its present scope with the help of the Medical Research Council and the Royal Society Aids to hearing had been designed and constructed with a view to efficiency regardless of size and weight Aetiological factors and the phenomena of auditory fatigue and adaptation were being studied The frequency or pitch characteristics of speech sounds could now be demonstrated with suitable apparatus The advantages of vacuum tube oscillators in testing auditory acuity consisted in the possibility of exact quantitative measurements made in a straightforward way the use of the same apparatus for testing almost all audible frequencies and the ability to maintain the intensity of a tone at a constant strength The standard blow problem was eliminated The apparently greater relative sensitivity of some paracusic patients to sounds heard in a telephone receiver than to sounds in free air was probably not mainly due to bone and cartilage conduction The use of amplifiers in the education of congenitally deaf children with some hearing capacity afforded a field for the most drastic test of the potential value of hearing aids especially when the children had no other auditory experience to compensate for any defects in the apparatus

A demonstration with clinical cases followed the reading of Mr and Mrs Ewing's paper

COELIAC DISEASE

At a meeting of the Section of Medicine of the Royal Academy of Medicine in Ireland on April 21st with the president Dr W G HARVEY in the chair Dr R E STEEN read a paper on coeliac disease and showed two patients who were being treated by him

The cases were typical in respect of clinical and biochemical findings and their weight charts showed the typical rises and falls though in both real improvement had already been obtained one patient at the age of 3 years was walking well and was thirty three inches in height In discussing treatment he emphasized the revolution which had been brought about by the introduction of the vitamin concentrates Formerly the physician always found himself between the Scylla of giving too much fat and the Charybdis of producing rickets by starving the child of fat soluble vitamins Now it was

not without interest We notice, for example, that the petrosal nerves are one and all regarded as entirely derived from the facial glosso pharyngeal complex, their connexions with the sympathetic system being noted but receiving no distinctive names The arrangement, again, of the upper intercostal veins admittedly subject to considerable variation is of a type which we in this country would regard as abnormal Among minor differences we observe that the agger nasi is applied to part of the ethmoid and not as with us to part of the superior maxilla and that the thickened part of the shaft of the second rib is attributed to the insertion of the scalenus posticus muscle

The illustrations are almost entirely original and of the highest excellence Nothing could, for instance, be better than the drawings of the tendons and their sheaths in the neighbourhood of the wrist or than certain schematic figures showing the arrangement of the peritoneum In Fig 204 vol i however, both the infra-trochlear and frontal nerves appear to us to be inaccurately related to the superior oblique and levator palpebrae superioris muscles respectively while in Fig 136, vol i the recurrent laryngeal branch of the right vagus—unnamed, by the way—is shown arising from the lateral instead of the medial side of the nerve Finally the work of the publisher should not pass unnoticed, worthily supporting that of the author and artist, with the result that we are presented with a book which reflects the greatest credit on all concerned—a book in many ways standing in a class by itself and one which from the attractiveness of its appearance, may be justly regarded as an *edition de luxe*

ADULTERATION OF FOODS AND DRUGS

In *Adulteration and Analysis of Foods and Drugs*,[5] by J I LIVERSEEGE repetitions from existing literature are notably absent The lively interest for the reader which springs from personal experience of the writer runs through almost every page Mr Liverseege's long experience as public analyst for the city of Birmingham has enabled him to draw an interesting survey of the practical administration of the Food and Drugs Act The subject is here considered systematically on a plan calculated to furnish advice to all who are occupied in an executive capacity including analysts sampling officials and solicitors In treating of procedure with regard to offences the author indicates the methods that tend to avoid a waste of public money He describes the pitfalls which beset the work of a sampling official and suggests means by which his services may become more efficient He describes in detail the formalities which are essential to reports by public analysts the length to which his evidence may extend and the limits to which it should be restricted He also shows the difficulties that may arise from the failure of a witness to appreciate the niceties of a legal distinction Analytical methods are not usually given in extended detail, but numerous instances are provided of improvements and modifications of known methods which have been found in practice to give satisfaction References to original papers describing special analytical methods are plentiful

Many accounts of prosecutions and of the results are quoted in connexion with foods and drugs A considerable number of these are not of recent occurrence but they are not less useful for they afford a means of studying the development and trend of food control Among the various subjects discussed are found colouring matters, preservatives the dispensing of medicines and the microscopy of starches Suggestions are also offered on methods of calculating analytical results There is an appendix supplying descriptions of apparatus, reagents, and tables of factors used in calculations The book is one of a novel kind in its sphere and will be found exceptionally useful to those concerned in the administration of the Food and Drugs Act

A SURVEY OF UROLOGICAL LITERATURE

The output of medical literature in all countries has become so voluminous that there is an ever increasing need for summarizing the most important contributions in medical annuals This has been done in America by the Year Book Publishing Company in their Practical Medicine Series In 1932, for the first time a separate volume has been dedicated to the subject of *Urology*.[6] In it a great deal of space has been allowed for foreign material and British contributions to urology have received generous recognition So many subjects are dealt with within the 464 pages of this book that it is difficult to refer in detail to any one of them In general it may be said that urology, unlike some specialties appears to be progressing along broader lines, and to be concerning itself not only with the effect of lesions of the genito urinary tract on the body as a whole but with the urinary manifestations of disorders arising outside the organs with which urology is more particularly concerned Many of the articles summarized in this volume show that urologists are gaining a better understanding of certain aspects of biophysics and biochemistry, and are utilizing this knowledge for the better control of urinary infections A good instance of this is the use of the ketogenic diet in the treatment of chronic infections of the urinary tract

The editor, Dr CUNNINGHAM is to be congratulated on the extensiveness of his review of the urologic literature of the world and on the skill with which he has accomplished his difficult task

Notes on Books

Mrs LILIAN LINDSAY'S *Short History of Dentistry*[7] maintains the high standard of the previous volumes in this useful little series A history of dentistry has long been wanted, and Mrs Lindsay is well qualified to write it, as she has been interested in the subject for some years and has the practical knowledge necessary to estimate the advances which have been made in recent times She has covered a great deal of ground in eighty eight small pages, but the reader is left with a clear impression of the progress of dentistry from primitive times when the teeth were intimately connected with magic to its present position as a well organized profession She shows evidence of wide reading and has made her story interesting by numerous side-lights Her facts for the most part are correct, and there are only a few inaccuracies, which can easily be corrected in the second edition, which will surely be asked for Foremost among them is the statement on page 27 that 'the first diploma was granted by Henry VII, Robert Anson being the recipient" The sentence should read " the earliest existing diploma was granted to Robert Anson in 1497 during the reign of King Henry VII " This series of short histories is intended for those who are just becoming interested in the history of medicine It might be well therefore, to add to each volume a short list of books dealing at greater length than is possible in a primer with the subject of which it treats Mrs Lindsay mentions some previous histories of dentistry, but only incidentally

[5] *Adulteration and Analysis of Foods and Drugs* By J I Liverseege Birmingham methods and analyses of samples With a foreword by the Right Hon Neville Chamberlain M P formerly Minister of Health London J and A Churchill 1932 (Pp xv + 599 36s)

[6] *Urology* By J H Cunningham M D The Practical Medicine Series of Year Books Series 1932 Chicago The Year Book Publishers Inc 1933 (Pp 464 70 figures)

[7] *A Short History of Dentistry* By Lilian Lindsay L D S Short History Series London J Bale Sons and Danielsson Ltd 1933 (Pp 88 3s 6d net)

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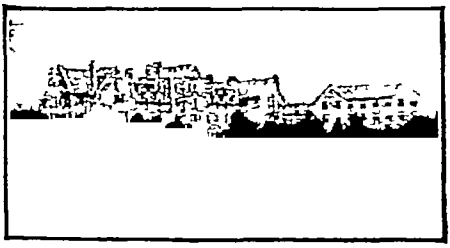

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SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN

A SPECIAL GENERAL MEETING of the Members of this Society will be held at 11 Chandos Street Cavendish Square on FRIDAY MAY 12th at 5 p m to consider the revised and redrafted By laws copies of which, together with copies of the present By laws are being sent out with the notices convening the meeting

11 Chandos Street EDWARD J BLACKETT
Cavendish Square W 1 Secretary
April 28th 1933

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When a medical handbook can boast six editions four reprintings and a Spanish translation it has little either to hope or to fear from the reviewer This is the position of Dr LEONARD WILLIAMS'S *Minor Maladies*[1] and there is every reason to believe that the book will continue its triumphal career Possibly the senior reader may feel unable to allow that practice is quite so simple or cures quite so inevitable or propositions quite so absolute as Dr Williams writes them and at some of the doctrines he presents as authoritative and beyond question the chastened practitioner may well be disposed to hesitate To all such criticisms of manner or degree the book offers an answer that cannot be gainsaid in the shape of a record of practical service and juniors will doubtless continue to find help in its bright and cheerful pages The section dealing with lunacy certification might well have recognized the new position created by the Mental Treatment Act

The twelfth issue of the French Practical Medical Annual[2] (dated 1933 but referring presumably to 1932) is like its predecessors a curious mixture of useful and useless material Dr CAMILLE LIAN the editor continues to allow the vast bulk of the references to be French and the result is a curiously insular outlook on medicine One section deals with congenital syphilis as a cause of nocturnal enuresis two enthusiasts having found evidence of syphilis in the parents or grandparents of 75 per cent of children with this complaint The article in question it is true sums up the evidence on the other side but the inclusion of such a discussion seems worthless and a waste of space On the other hand a most informative article on the various fruits and vegetables valuable as therapeutic agents (for example apple diet for diarrhoea) includes information not collected into such a short space in any other publication

Although the tenth edition of *Black's Medical Dictionary*[3] was only published eighteen months ago it has already been sold out and the eleventh has now appeared completing 87 000 copies Opportunity has been taken by the editor Dr J D COMRIE to introduce a large number of minor changes in order to bring the book thoroughly up to date The new *British Pharmacopoeia* has provided material for four more pages in the article on dosage and there are several other additions in respect of subjects which have lately attracted public attention The increasing interest taken by the general public in measures for the prevention of disease has led to a demand for compilations of this kind The new edition of Black should serve a useful purpose in correcting false ideas which are still far too prevalent and in emphasizing the importance of early medical attention in many cases of illness or accident The text is remarkably free from undefined abstruse technical expressions and the illustrations are useful

[1] *Minor Maladies* By Leonard Williams M D Sixth edition London Baillière Tindall and Cox 1933 (Pp xiii + 420 10s 6d)

[2] *L'Année Médicale Pratique* Publiée sous la direction du Dr Camille Lian Douzième année Paris R. Lépine 1933 (Pp 684 illustrated 26 francs)

[3] *Black's Medical Dictionary* Edited by J D Comrie M A B Sc. M D F R C P Eleventh edition London A. and C Black Ltd 1933 (Pp viii + 1 002 over 500 illustrations 18s net.)

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The activity of the hormone is usually measured in rat units but unfortunately small variations in technique can produce very wide variations in values obtained British Drug Houses have standardized oestroform in terms of a sample of pure keto-hydroxy-oestrin One ten thousandth of a milligram of this substance which produces oestrus in 50 per cent of spayed mice is taken as the unit of activity The makers are to be congratulated on a preparation of sufficient purity to permit the biological test with a definite quantity Oestroform is put up in ampoules containing units per c cm It is also supplied in tablets strength for oral administration There is a statement that oestrin is more effective when injected dermically than when given by mouth

The possible therapeutic applications of oestrin in gynæcology are very wide but investigations have been hindered by the difficulty of obtaining preparations of adequate activity The appearance of one that contains the hormone in a state of chemical purity is therefore a welcome advance

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The special advantages claimed for the preparation are as follows Iron given in livron is well tolerated although the dose is large This large dose of iron salt (90 grains) is the quantity recommended by various authorities who have recently studied the treatment of simple anæmias The combination of iron with liver also has been recommended by various authorities Clinical tests have shown that livron has a powerful action in stimulating haemoglobin formation in anæmias of the secondary and nutritional types

The makers have issued a booklet describing livron and giving a short summary of recent work on anæmia The dramatic advance made in the treatment of pernicious anæmia stimulated interest in the treatment of simple anæmia and knowledge regarding the latter although still imperfect is advancing rapidly The combination of factors prepared by Messrs Boots is well worthy of trial

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Ephedrol (Clay and Abraham Ltd Bold Street Liverpool) is an oily solution containing 1 per cent ephedrine and 2 per cent menthol It is recommended for use in nasal catarrh hay fever etc The solution is packed in a bottle with a narrow orifice which fits the nostril and hence can be sniffed direct from the bottle This simple method of nasal medication seems well adapted for household use The rationale of the mixture is that ephedrine contracts the vessels of the nasal mucosa and thus relieves congestion while menthol is antiseptic and analgesic.

British Medical Journal

SATURDAY, MAY 13th, 1933

MATERNAL MORTALITY AND THE GENERAL PRACTITIONER

In 1928, when the Minister of Health appointed a Departmental Committee on Maternal Mortality and Morbidity, certain statements were publicly made which appeared to reflect upon the practice of midwifery in this country The Annual Representative Meeting of the British Medical Association in that year gave the matter serious consideration, and, realizing that uninformed allegations as to the general practitioners' responsibility in relation to the practice of midwifery could only be countered by collecting reliable data, decided " that members of the medical profession should be encouraged to keep regular and careful records of their midwifery cases " The Head Office acting through the Divisions, invited members to take part in a midwifery and maternity inquiry by supplying confidential records of a series of cases in a form drawn up and supplied by the Association The Council, having now decided that sufficient information is available to form the basis of a report, has terminated the inquiry, and has received from Dr A P Luff (director of the Association's scientific researches) a collation and analysis of the returns made by those practitioners who volunteered to supply them

Dr Luff's report was considered by the Council on April 12th, and copies will be sent to all those whose records have made its compilation possible The Council considers that the interim and final reports of the Departmental Committee on Maternal Mortality furnish a sufficient rejoinder to the earlier criticisms of medical practice to which we have already referred, and, as the Association's own inquiry leads to conclusions similar to those of the Departmental Committee, it is not proposed to print the report as a separate document In some respects however, the results of the inquiry are of special interest The number of practitioners who took part in it was 439, and detailed histories of 15 677 midwifery cases were received Among these sixty-six maternal deaths occurred Of the deaths, forty-two were attributed to puerperal causes—that is " classed to pregnancy and childbearing," or "directly due to child-bearing," the official phraseology of death registration adopted in the Departmental Committee's reports Non-puerperal causes (deaths not primarily due to pregnancy, etc ") gave rise to twenty-four deaths The total maternal mortality was 4 22 per 1,000 live births, as compared with the Registrar-General's rates for England and Wales of 5 59 in 1930 and 5 55 in 1931 If attention is confined to puerperal causes alone, the rates were 2 69 in this inquiry as against 4 40 and 4 11 for the country generally On the other hand, the non-puerperal causes figured rather more prominently in the practitioners' cases, the rate per 1,000 live births being 1 53, while those for England and Wales in 1930 and 1931 were 1 19 and 1 44 respectively When the puerperal causes are separated into septic and non-septic groups, the results of the practitioners taking part in this inquiry are found to be better than those for England and Wales in both classes, sepsis accounting for 0 9 deaths per 1,000 (compared with 1 92 in 1930 and 1 66 in 1931), and other causes accounting for 1 79 deaths per 1,000 (the national figures being 2 48 in 1930 and 2 45 in 1931)

In judging the significance of these figures it is, of course, necessary to bear in mind fallacies inherent in statistics gathered from different sources For one thing, the British Medical Association's inquiry deals, unfortunately, with a very much smaller group of cases and deaths than those which form the basis of the Registrar-General's rates Some allowance must be made, too, for the inevitable variation of classification in the hands of different statisticians , but the high proportion of deaths due to non puerperal causes in the Association's inquiry does not appear to be explained in this way, since such a clearly defined disease as tuberculosis accounts for exactly a third of the non-puerperal deaths, whereas it figured in only 7 2 per cent of the corresponding group analysed by the Departmental Committee Again, the incidence of abortion, which the Departmental Committee showed to exercise a serious influence upon the puerperal mortality, was remarkably low in this series, only twenty four cases occurring and all without fatality On the other hand, primiparae, among whom the risks are known to be greater, constituted as high a proportion as 45 5 per cent of all the practitioners' cases and accounted for 57 1 per cent of the deaths

Perhaps the most unexpected finding of this inquiry is the small proportion of patients who could be said to have received sufficient ante-natal supervision Dr Luff does not accept as readily practicable the Departmental Committee's " minimum scope of ante-natal examinations"—namely, eleven examinations beginning in the sixteenth week of pregnancy On the advice of a consulting obstetrician, he would regard a first examination before the twenty-eighth week and four subsequent examinations as adequate to diminish the risks of childbirth, but for the purpose of this analysis he accepts four examinations at least, after the thirtieth week as sufficient Taking this as his standard he finds that these careful practitioners were able to exercise this degree of supervision in only 8 3 per cent of the 14,614 cases regarding whom information on this point was furnished Some ante-natal care was afforded in 70 3 per cent of these cases, including the 8 3 above mentioned The Association has repeatedly expressed the opinion that ante-natal care properly falls within the province of the practitioner who will be in attendance at confinement rather than of ante-natal clinics staffed by whole-time officers, and the Minister of Health has partially endorsed this policy It is

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CHILD LIFE AND HEALTH (May and October).—6 Clinical Demonstrations. Fee £1 1s.
DISEASES OF EAR NOSE AND THROAT—Royal Infirmary Minimum number 5. Fee £10 10s
VENEREAL DISEASES.—Royal Infirmary Minimum number 5 Fee £10 10s.
DISEASES OF EAR NOSE, AND THROAT.—Ear and Throat Dispensary Cambridge Street. Fee £4 4s
DISORDERS OF SPEECH AND VOICE (Summer and Autumn only).—Minimum number 8. Fee £3 3s.
UROLOGICAL SURGERY AND TREATMENT OF FRACTURES (Spring Term).—Fee £3 3s.
NEUROLOGICAL SURGERY (March). Fee £2 2s.
ORTHOPAEDIC SURGERY (Summer and Autumn) Fee £4 4s.

DURING THE PERIOD OF THE GENERAL COURSES. (AUGUST SEPTEMBER).

UROLOGICAL SURGERY AND TREATMENT OF FRACTURES.—Fee: £5 5s
DISEASES OF THE BLOOD.—Fee £3 3s.
X RAY PHYSICS AND ELECTRO-TECHNICS.—Fee £3 3s.
ULTRA VIOLET RADIATIONS AND THEIR USES.—Fee £3 3s.
NEUROLOGICAL SURGERY (September) Fee £2 2s.
MODERN DIAGNOSTIC METHODS.—Minimum number 6 Fee £4 4s.
OPHTHALMOSCOPY.—Minimum number 5 Fee £5 5s.
GENETICS IN RELATION TO MEDICINE.—Fee £3 3s.

Further particulars may be had on application to the Hon Secretary Post Graduate Courses in Medicine, University New Buildings Edinburgh.

POST-GRADUATE COURSES:

Open only to Members of the Fellowship of Medicine. Annual Subscription £1 1s.

DERMATOLOGY (St. John's Hospital May 1st 27th afternoons) CARDIOLOGY (Victoria Park Hospital May 6th and 7th week end, all day) UROLOGY (St. Peter's Hosp advanced May 8th 20th all day) RHEUMATISM (Bath Som May 13th and 14th week-end all day) CHILDREN (Queen's Hosp., May 15th 27th all day) OBSTETRICS (City of London Maternity Hosp., May 20th and 21st, week end all day) M.R.C.P EVENING COURSES (Clinical and Pathological Tues and Thurs May 23rd June 15th)

Apply— *Clinical instruction available daily by Panel of Teachers.*

FELLOWSHIP OF MEDICINE, 1, Wimpole Street, London, W 1 (Langham 4266.)

Post-Graduate Teaching, West London Hospital.

Continuous Clinical Instruction daily from 10 a.m. to 4 p.m.—Post-Graduates may enrol at any time for any period from 1 week to 3 months.—Special facilities for "Study Leave, and for those wishing to take a course under the "Grant aided Scheme for Post-Graduate Study by Insurance Practitioners."—Anaesthetic Courses.—Clinical Assistantships.—Annual Membership Tickets at Special Terms available for General Practitioners who wish to attend the Hospital Practice at irregular intervals.

Prospectus from the DEAN, West London Hospital, Hammersmith, W 6

NATIONAL HOSPITAL

For Diseases of the Nervous System, QUEEN SQUARE W C 1 MEDICAL SCHOOL

M R C P

A course of Demonstrations in Neurology for candidates for the M.R.C.P examinations will be held from May 9th to June 29th, on Tuesdays and Thursdays, at 6 p.m.

Fee for 16 demonstrations £6 6s. Special Terms can be arranged for those unable to take the whole course of Lectures.

Applications should be made to the Secretary J. G. GREENFIELD Dean of the Medical School.

QUEEN CHARLOTTE'S MATERNITY HOSPITAL

MARYLEBONE ROAD, N W 1

Medical Students and Qualified Practitioners admitted to the Practice of this Hospital. Unusual opportunities are afforded of seeing Obstetrical Complications and Operative Midwifery (about one half of the total admission being primiparous cases). Over 2,700 patients are admitted to the Wards annually and in the Ante-natal Department there are over 20 000 attendances per annum

Certificates awarded as required by the various Examining Bodies.

For rules fees, etc. apply H. B. STOKES Secretary Superintendent.

M.D. THESIS

(Camb Edin Glas Durham, &c.)

SKILLED COACHING GUIDANCE, and ADVICE from Special Tutors in conformity with the Regulations of the various Universities.

Apply for particulars and free booklet Hints on Writing a Thesis for the M.D. Degree, to the SECRETARY Medical Correspondence College 19 Wellbeck Street London W 1.

MASTERY OF MIDWIFERY

Examinations for the Diploma of the Mastery of Midwifery of the Society of Apothecaries of London will be held beginning Monday May 15th and Monday November 20th 1933.

For regulations apply to the Registrar of the Society Water Lane E.C.4

Medical and Dental Students

Special Classes for Pre-Medical and Dental Exams. Matric. and Prelims.

Chemistry Physics and Biology Labs.

MANCHESTER TUTORIAL COLLEGE, 327 Oxford Road Manchester

F R C S (Edin)

PREP COURSE with daily Lecture-Demonstrations of Museum Specimens of Surg., Path for next Exam. will commence shortly POSTAL TUITION at any time.—Further partics. H. C. ORAM F.R.C.S Surgeons Hall, Edinburgh.

STAMMERING SPEECH DEFECTS

BEHNKE METHOD Estab. 1882. Cases non resident treated at 39 Earl's Court Square S W 5 and in residence in the Summer holidays at Miss BEHNKE'S house on the Chilterns.

"Pre-eminent success in the education and treatment of stammering and other speech defects."—"Times."

"Thoroughly physiological principles."—"Lancet."

"The method is scientifically correct and perfectly effective."—"Guy's Hospital Gazette."

STAMMERING CLEFT PALATE SPEECH LISPING 3/9

of Miss BEHNKE, 39 Earl's Court Sq. S W.5

DEFECTIVE SPEECH.

Remedial Instruction on approved lines for Stammer Aphonia, Cleft Palate, Tracheotomy and disturbed or retarded Co-ordination.

Appreciations from Eton and Harrow

ERIC MIALL, A.L.C.M.

Speech Instructor at Middlesex Hospital.

17 CAVENDISH SQ., LONDON, W 1

Telephone Langham 1830

Preliminary Examinations

The COLLEGE OF PRECEPTORS holds Preliminary Examinations for Medical and Dental Students in London and at Provincial Centres in March June, September and December For Regulations apply to the Secretary College of Preceptors. Bloomsbury Square, London W C 1

FRENSHAM HEIGHTS, FARNHAM, SURREY

Scholarship Examination May 27th, 1933. Two Scholarships of fifty guineas and Two of thirty five guineas per annum open to boys and girls between the ages of eight and fourteen years. For particulars apply to the Headmaster

MEDICAL CORRESPONDENCE COLLEGE,

19, Welbeck Street, London, W 1

CONJOINT BOARD EXAMINATIONS

Candidates taking the First, Second, or Final Conjoint Examinations should make sure of passing at the first attempt by enrolling for the short intensive Revision Courses of the College

POSTAL, ORAL, PRACTICAL, CLINICAL COURSES. MICROSCOPE AND MUSEUM WORK

Highly qualified Tutors with accurate knowledge of the special features of these examinations

Write at once for booklet How to Pass the Conjoint Board Examinations Sent free on application

Address: The Secretary
MEDICAL CORRESPONDENCE COLLEGE
19 Welbeck Street London, W 1

Church Missionary Society

The ANNUAL MEETING of the MEDICAL MISSION AUXILIARY OF THE C M S will be held in the CENTRAL HALL WESTMINSTER at 7 p m on Wednesday May 3rd 1933

The Chair will be taken by
COL SIR CUSACK WALTON, D S O
and the speakers will be
A I SCHOFIELD Esq M A Camb M R C S L R C P (Mengo Uganda)
S D STURTON Esq M D B Ch M A Camb D T M Liv (Hangchow Chekiang)
THE REV W WILSON CASH D S O O B E (General Secretary of C M S)

Tickets of admission may be obtained from the Superintendent Loan Department Church Missionary Society Salisbury Square E C 4

There will be a small number of reserved seats at 1s each

UNIVERSITY OF BIRMINGHAM

FACULTY OF MEDICINE

LECTURER IN PATHOLOGY

Applications are invited for the post of Lecturer in Pathology to Dental Students and Pathologist to the Queen's Hospital Birmingham at a stipend of £400 per annum

Applications with three testimonials should be sent on or before May 15th to the undersigned from whom further particulars may be obtained

The University
Birmingham
April 1933

C G BURTON
Secretary

THE UNIVERSITY OF SHEFFIELD

FACULTY OF MEDICINE

The Council of the University and the Board of Management of the Royal Infirmary Sheffield acting conjointly are about to make an appointment to the post of ASSISTANT PATHOLOGIST to the Infirmary and DEMONSTRATOR OF PATHOLOGY in the University The salary offered is £500 per annum Applications accompanied by the names of three referees should be sent on or before May 17th to the undersigned from whom further details may be obtained

W M GIBBONS Registrar

UNIVERSITY OF LONDON

THOMAS SMYTHE HUGHES MEDICAL RESEARCH FUND

Application for grants from the Thomas Smythe Hughes Fund for assisting Medical Research accompanied by the names and addresses of two references must be made (on a prescribed form) to the Academic Registrar University of London South Kensington S W 7 (from whom further particulars may be obtained) not later than May 15th 1933

March 16th 1933

COUNTY BOROUGH OF DEWSBURY

ASSISTANT SCHOOL MEDICAL OFFICER AND ASSISTANT MEDICAL OFFICER OF HEALTH

Applications are invited from duly qualified and registered Medical Practitioners (men or women) for the post of Assistant School Medical Officer and Assistant Medical Officer of Health

Applicants should have had at least three years experience since qualification Experience in eye work and refractions is essential The possession of the D P H and previous experience in School Medical Inspection and the work of a School Clinic, and in Tuberculosis and Child Welfare will be considered important additional qualifications

The salary scale will be £500 per annum rising by annual increments of £25 to £700 per annum, subject to a temporary percentage reduction Particulars of the duties and terms and conditions of appointment together with application forms may be obtained from Dr J GREENWOOD WILSON, Medical Officer of Health Municipal Buildings Halifax Road Dewsbury to whom all applications accompanied by copies of not more than three recent testimonials should be delivered not later than Saturday May 13th

Canvassing in any form will be a disqualification

Town Hall
Dewsbury
April 1933

HOLLAND BOOTH
Town Clerk

CITY OF PLYMOUTH

ASSISTANT RESIDENT MEDICAL OFFICER

(AMENDED ADVERTISEMENT)

Applications are invited from duly qualified and registered male Medical Practitioners for the post of Resident Medical Officer at the City Hospital Plymouth—a general Hospital of 577 beds The person appointed will work under the control of the Medical Superintendent Candidates should have had previous experience as House Surgeons or House Physicians

The appointment will be for twelve months at a salary of £350 per annum (subject to a temporary reduction of 7½ per cent) and quarters food etc will be provided The appointment will be terminable by one months notice on either side

Forms of application will not be provided but candidates should state their age their previous experience and present appointment if any Canvassing will disqualify

Applications endorsed Resident Medical Officer together with copies of three recent testimonials must be received by the undersigned by first post Monday May 8th

F PEIRSON M D M R C S D P H
Town Hall
Stone House
Plymouth April 21st 1933

Medical Officer of Health

ROYAL FREE HOSPITAL

Gray's Inn Road W C 1

Applications are invited from medical women who have had previous V D experience for the post of ASSISTANT MEDICAL OFFICER in the V D Department Salary at the rate of £350 per annum part time appointment is for twelve months from July 1st next Intending candidates should submit applications stating age and experience with copies of three recent testimonials to the undersigned on or before May 10th

REGINALD R GARRATT Secretary

ROYAL FREE HOSPITAL

Gray's Inn Road W C 1

Applications are invited from duly qualified male medical candidates for the post of SENIOR RESIDENT MEDICAL OFFICER vacant June 1st and tenable for one year Salary £150 per annum and emoluments of about £90 per annum with board and residence Intending candidates should submit applications stating age and experience accompanied by copies of three recent testimonials to the undersigned on or before May 8th

REGINALD R GARRATT Secretary

COACHING GIVEN IN MEDICINE PATHOLOGY and PHYSIOLOGY by M B B S (Lond) M R C P (Lond) B Sc Honours (Lond) Physiology, experienced Desirous of beginning small classes in London — Address No. 2598, B M A House Tavistock Square W C 1

DEPARTMENT OF HEALTH FOR SCOTLAND

APPOINTMENT OF REGIONAL MEDICAL OFFICER

The Department of Health for Scotland are prepared to receive applications from registered Medical Practitioners for appointment as Regional Medical Officer to be employed on combined clinical and administrative duties in connection with the National Health Insurance Medical Service and otherwise

DUTIES

The successful candidates will be required to perform such duties as may be assigned to him/her from time to time by the Department including

(a) Clinical work arising out of questions of incapacity for work of diagnosis and treatment among insured persons
(b) Administrative work in connection with the insurance medical service

RESIDENCE.

The Regional Medical Officer will be required to reside in such part of Scotland as the Department may determine

REMUNERATION

The rate of remuneration will be £800 by annual increments of £30 to £1 100 per annum No cost of living bonus will be payable in addition thereto and meantime the salary will be subject to a reduction of 10 per cent

Applicants must be medical practitioners of standing in the profession and with experience in hospital and general practice They must be not more than 35 years of age on May 15th Consideration will be given to extra diplomas in special branches of medicine

Further particulars and forms of application may be had from the Secretary Department of Health for Scotland 125 Georg Street Edinburgh 2 Letters applying for forms of application should have the words Regional Medical Officer boldly written in the top left hand corner of the envelope No applications can be considered if received after May 15th.

CITY AND COUNTY OF KINGSTON UPON HULL

ASSISTANT MEDICAL OFFICER OF HEALTH

The Corporation of Hull invite applications from duly qualified Medical Men under the age of 40 years and of not less than three years standing in their profession for the post of Assistant Medical Officer of Health

Preference will be given to candidates in possession of the Diploma in Public Health or equivalent qualification

Salary £600 per annum rising by annual increments of £25 to £700 subject to a temporary deduction authorised by the City Council

The appointment is subject to the provisions of the Local Government and Other Officers Superannuation Act 1922

The successful candidate will be required to devote the whole of his time to the duties of the office which consist mainly of work in the School Medical Department, but may also include duty in any section of the Health Services of the City or Port

Experience in refraction work is essential

A form of application may be obtained from the undersigned, and must be returned to the Medical Officer of Health (in an envelope endorsed Assistant Medical Officer of Health) together with copies of three recent testimonials not later than the first post on Friday May 5th

A CRIPPS
Medical Officer of Health.

Health Dept
Guildhall Hull
April 1933.

ROCHDALE INFIRMARY AND DISPENSARY

(110 Beds.)

The Board of Management invite applications for the appointment of JUNIOR HOUSE SURGEON The salary attached to the appointment is £200 per annum including board residence and laundry

Applications stating age nationality etc together with copies of three recent testimonials, to be sent to the Secretary endorsed House Surgeon Particulars of duties and conditions of appointment may be had on application to the Secretary

Infirmary Office
Rochdale Lancs.

W WYNNE
Secretary

ROYAL CHEST HOSPITAL,

City Road E C 1

(Royal Northern Group of Hospitals.)

The post of HOUSE PHYSICIAN will be vacant on June 1st The appointment is for six months Salary at the rate of £100 per annum with board residence and laundry

Applications with copies of testimonials should be sent on or before May 3rd to the undersigned from whom forms of application rules and further particulars can be obtained.

GILBERT C PAYNTER, Secretary

Royal Northern Hospital
Holloway Road, N 7

puzzling therefore, and rather disappointing to find that the keenest practitioners have difficulty in persuading their patients to submit themselves to a reasonable measure of ante-natal supervision The reason may be financial It is possible too that women especially primiparae are still reluctant to undergo examinations of this character when they themselves are unconscious of any disease or abnormality

THE CLASSIFICATION OF BRIGHT'S DISEASE

This is a subject of perennial interest and because of its difficulties, it excites endless discussion among physicians physiologists and pathologists So far most of the attempts at classification have been made by clinicians and morbid anatomists and it is well known that the two cannot possibly be made to agree Teachers of clinical medicine have at present to content themselves with giving a double classification and to admit that the cold logic of the post-mortem room often exhibits all too clearly the defects of this double method The question may be asked if it is not now possible for the physiologists to step in and offer us a suitable classification based on the various aspects of renal function and its defects It is certain as the pages of medical and scientific journals show that the study of renal physiology is being intensively investigated in many lands but up to the present it appears to have gone scarcely far enough to offer us a comprehensive classification of nephritis or Bright's disease It is time however that some attempt was made in this direction even if only a tentative one based partly on known facts and partly on deductions or hypotheses The only attempt at classification based on disordered renal function that has so far been of any practical value is the French conception of hydraemic and azotaemic nephritis the former characterized by great oedema and the latter by retention of urea and other nitrogenous substances normally excreted by the kidneys This classification so imperfect and incomplete as scarcely to merit the name actually proved of great value in clinical medicine since it broadly separated two groups of nephritis in which whatever the nature of the morbid anatomy the clinical features were in important ways different and required different lines of treatment But even this simple division based on disordered function valuable as it is only serves to emphasize our lack of knowledge of the basal facts of the metabolic disturbances in Bright's disease

The problems of renal oedema remain in many respects unsolved although progress has been encouraging The question of salt retention which held prominence as an explanation is receding into the background for the time at least and that of the diminished protein content of the plasma is now in the ascendant Obviously however we are not yet approaching the whole truth and no explanation has yet been offered to account for the manifest difference between the oedema of acute nephritis and that of the subacute and chronic varieties Moreover the mechanism of the manifestations of renal failure which we term uraemia still eludes us completely in spite of all the work already done on the chemistry of the blood and tissues in Bright's disease It seems evident that in Bright's disease we must not make the mistake of confining our attention to what the kidney can or cannot excrete but must consider the disturbances of other organs of the body whose failure may impose work on the renal tissues of a quite abnormal kind and so injure them It is a fact that on the whole the types of renal damage with a known aetiology—such as for example those following acute tonsillitis or those following corrosive sublimate poisoning—are just the varieties in which complete recovery is most commonly and hopefully expected On the contrary it is in those examples of Bright's disease in which there is no known aetiology that recovery to normal is rare and these may for all we know be primary affections of some other part of the body producing general metabolic disturbances and incidentally injuring the kidneys In this connexion the problems of eclampsia and of the toxaemias of pregnancy come to mind Here is a generalized metabolic disturbance occurring under very specialized circumstances and involving the liver and central nervous system as well as the kidneys Recovery from one or several attacks in repeated pregnancies may be complete but as is well known chronic and incurable renal disease may ultimately supervene Whoever solves the metabolic problems of eclampsia or of uraemia will set us well on the road to the discovery of the mechanism of the chronic forms of Bright's disease whose aetiology is entirely unknown to us

These remarks on the classification of Bright's disease are suggested by the appearance of the second monograph on this subject published in recent years under the auspices of the Medical Research Council The latest of these is by *Dr John Gray of the* pathology department Aberdeen University [1] His *monograph* as Dr Gray himself indicates inevitably invites comparison with the previous report of Dr Dorothy S Russell (M R C Special Report Series No 142) published four years ago Dr Gray is essentially a morbid anatomist and histologist and his work deals chiefly with the pathological histology of the kidneys which he correlates with the clinical reports provided by the hospitals His aim is like that of Dr Russell, to provide a classification suitable for clinicians and patho'ogists alike as has been indicated earlier this is an impossibility Between Dr Gray and Dr Russell there is little difference in essentials but the former uses on the whole terms familiar to us by long usage and does not employ the descriptions mitis repens and acris repens propo-ed by his predecessor An individual hymn of praise or hatred could be sung about the terms employed in describing nephritis

[1] Medical Research Council Special Report Series No 178 A Study of Nephritis and Allied Lesions By John Gray London H.M. Stationery Office 1933 (2s. 6d net.)

THE HOSPITAL FOR SICK CHILDREN
Great Ormond Street London W C 1

A RESIDENT MEDICAL SUPERINTENDENT is required on July 1st.

Gentlemen are invited to send in their applications to the Secretary before 12 o clock on Monday May 15th accompanied by copies of not more than three testimonials given specially for the purpose.

The appointment is made for one year but may be held, subject to re-election for a period of three years.

Salary £300 per annum with board residence in the Hospital, £10 allowance for laundry and £18 18s. for the purpose of providing a substitute during annual leave.

Candidates must be unmarried and possess a legal qualification to practice and must have held a responsible Hospital appointment at a General Hospital.

All candidates must be in attendance on Wednesday May 17th at 4 45 p.m. precisely to appear before the Joint Committee if required.

Forms of application and copies of the Rules may be obtained from the Secretary at the Hospital.

By Order of the Board of Management
H. F RUTHERFORD
April, 1933. Secretary

ROYAL SALOP INFIRMARY SHREWSBURY
(150 Beds.)

APPOINTMENT OF CASUALTY OFFICER AND RESIDENT ANAESTHETIST

Applications are invited from fully qualified men for the appointment of Casualty Officer and Resident Anaesthetist now vacant

The appointment is for a period of six months subject to re-appointment for a further period of six months at a salary of £160 per annum with board residence etc Resident Staff comprises Resident Surgical Officer House Physician and Casualty Officer

Applications stating age qualifications experience, nationality and accompanied by copies of three recent testimonials to be sent to the undersigned forthwith.

Board Room J W NOBLE,
Secretary Superintendent

THE ROYAL HOSPITAL WOLVERHAMPTON
(Incorporated under Charter)

HOUSE SURGEON required for Ear Throat and Nose Department duties to commence forthwith.

The Hospital contains 300 beds includes the usual special department, and is recognised by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice.

Candidates must be registered under the Medical Acts and unmarried.

The appointment is for six months Salary at the rate of £100 per annum board furnished rooms, and laundry provided

Applications, with copies of testimonials to be forwarded to the undersigned.

Wolverhampton. W H HARPER
March 24th 1933. House Governor

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Church Street BIRMINGHAM

OUT PATIENT OFFICER.

An Out patient Officer is required at the above Hospital to attend on certain appointed mornings each week Salary at the rate of One Guinea per Session Candidates must be registered Medical Practitioners. Appointment will be for a period of one year with eligibility to re-election

Applications, with testimonials, stating age and qualifications should be sent to the undersigned not later than May 9th next

Copy of rules governing the posts can be obtained on application

J W PEARCE
April 21st 1933. Acting Secretary

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Church St. BIRMINGHAM

HOUSE SURGEON required at the above Hospital Salary £110 per annum and £10 laundry allowance.

Applications together with copies of not more than three testimonials should be received not later than first post on Tuesday May 9th Further particulars can be obtained from the undersigned.

J W PEARCE, Acting Secretary

NATIONAL TEMPERANCE HOSPITAL, Hampstead Road N W 1

A fully trained LADY DIETICIAN is required Candidates should hold the B.Sc degree and have had practical hospital experience. The position will be full time and non resident Salary £120 per annum with meals.

Applications, together with copies of testimonials, must be addressed to the Matron by Thursday May 4th.

LONDON HOMOEOPATHIC HOSPITAL
Great Ormond Street W C 1 (200 Beds)

The Board of Management invite applications for the following appointment

ASSISTANT PHYSICIAN TO THE HOSPITAL.

The successful candidate must possess or obtain a registrable University Degree and be or become a Member of the British Homoeopathic Society It is required that successful candidates for posts on the Honorary Medical and Surgical Staff of the Hospital should show evidence of knowledge of the Theory and Practice of Homoeopathy within one year of appointment by having attended one or more of the Systematic Courses of Lectures at the Hospital Any candidates canvassing the Members of the Board Medical Council or Medical Committee are thereby disqualified.

Candidates will be required to attend a meeting of the Medical Committee.

Applications stating age qualifications and experience with thirty five copies of application and thirty five copies of each testimonial should be sent addressed to—

EDWARD A ATTWOOD Secretary

WESTMINSTER HOSPITAL,
Broad Sanctuary S W 1

Applications are invited for the office of ASSISTANT PATHOLOGIST Candidates must be registered Medical Practitioners who have held a pathological appointment.

The commencing salary is at the rate of £350 per annum The appointment is a full time one but the Committee may give permission for private work to be undertaken

The successful candidate will be appointed in the first place for six months and thereafter the appointment will be subject to re-election annually

Applications (nine copies) together with nine copies of not less than three recent testimonials should be sent in to the undersigned not later than Friday May 5th

CHARLES M. POWER Secretary

MILDMAY MISSION HOSPITAL,
Austin St Bethnal Green E.2

Applications are invited for the post of ASSISTANT CASUALTY OFFICER (Female) which becomes vacant on July 3rd The appointment is non resident and for six months Salary £125 per annum. Dinner tea and supper when on duty

Candidates must be registered under the Medical Acts and the Mildmay Council is anxious that they should be fully in sympathy with the religious work of the Hospital

Applications, with copies of recent testimonials should be sent to the Medical Superintendent by May 8th.

STOCKTON AND THORNABY HOSPITAL, STOCKTON-ON TEES
(140 Beds—Three Residents.)

Applications are invited for the posts of SENIOR and JUNIOR RESIDENT MEDICAL OFFICERS (male) for a period of at least six months commencing May 19th. Salary £200 and £175 p.a. respectively with board residence and laundry

Candidates must be duly qualified and unmarried Applications, stating age nationality qualifications and experience together with copies of three recent testimonials to be sent to the undersigned.

J WILKINSON Secretary

ST JOHN'S HOSPITAL LEWISHAM S.E.13.

There is a vacancy for an HONORARY GYNAECOLOGICAL SURGEON to take charge of beds and to see Out patient

Candidates who must be Fellows of the Royal College of Surgeons (England) should send applications with copies of not more than three recent testimonials to reach the undersigned on or before Wednesday May 10th. A Selection Committee will sit on Tuesday May 16th.

J C GILBERT
Secretary Superintendent

THE MARIE CURIE HOSPITAL,
2 Fitzjohn's Avenue N W 3.

Applications are invited from fully qualified Medical Women for the post of RADIOLOGIST in charge of the Deep X Ray Therapy Dept

Applicants must hold a Diploma in Radiology

The appointment will be for one year eligible for re-election Salary £500 per annum non resident. Applications with copies of testimonials, should be sent to the Secretary at the Hospital on or before Saturday May 20th.

ROYAL SURREY COUNTY HOSPITAL, GUILDFORD (182 Beds)

Wanted June 1st HOUSE SURGEON Salary £150 per annum with board, residence and laundry Applications stating essential particulars with copies of not more than three testimonials to be sent to the Secretary Superintendent on or before May 9th.

MANCHESTER ROYAL INFIRMARY

RESIDENT SURGICAL OFFICER.

The Board of Management invite applications for the above appointment which will become vacant on June 1st. Applicants must not be less than 25 years of age. They must be registered and hold a Medical and Surgical qualification

Appointment is for twelve months, renewable for a further period of one year subject to the provision of the By laws as to notice. Salary £200 per annum with allowance for laundry

Full information is obtainable from the undersigned to whom applicants must send twelve copies of their application and testimonials by Thursday May 4th

By Order
FRANK G HAZELL,
Gen. Supt. & Secretary

THE LONDON LOCK HOSPITAL.

Applications are invited for the appointment of SURGICAL REGISTRAR (male or female) to the Female Lock Hospital. Candidates must be a Fellow (or Member) of the Royal College of Surgeons of England or a Surgical Graduate of a University of the United Kingdom and have had previous obstetrical experience The appointment is for one year in the first instance commencing May 5th with honorarium at the rate of £100 per annum Applications with three copies (only) of testimonials must be submitted to the undersigned not later than 10 a.m. on Monday May 1st from whom copies of the Laws and By laws relating to the appointment may be obtained.

By Order of the Board.
283 Harrow Rd. J F MORTON
W 9 Secretary
April 8th 1933

QUEEN MARY'S HOSPITAL FOR THE EAST END E.15

Applications are invited for the post of DENTAL ANAESTHETIST to the above Hospital

Applications accompanied by copies of testimonials, from male candidates only should be forwarded to the undersigned on or before Wednesday May 3rd.

The Anaesthetist will be required to attend on Tuesday morning at 9 a.m and the appointment carries with it an honorarium of £25 per annum

RAPHAEL JACKSON (Major)
Secretary

SWANSEA HOSPITAL.
(316 Beds)

SENIOR RESIDENT OFFICER wanted gentleman single previous Hospital experience essential Duties to include that of House Surgeon to the Honorary Gynaecologist Salary £300 per annum rising by annual increments of £50 to £500 per annum with board, residence and laundry

Applications stating age nationality qualifications, and experience together with copies of three recent testimonials to be forwarded to the undersigned.

O C HOWELLS
Secretary Superintendent

THE STAFFORDSHIRE GENERAL INFIRMARY STAFFORD

HOUSE SURGEON required Salary £200 per annum with board residence. The appointment must be held for at least six months The selected candidate will be required to take up duties as early as possible The Hospital has 100 beds and there are two Resident

Applications stating age accompanied by copies of three recent testimonials as to qualifications and experience should be sent at once to the undersigned

Stafford. A E. COLLINS
April 24th 1933. Secretary

THE ROYAL INFIRMARY SUNDERLAND
(230 Beds)

ONE HOUSE SURGEON and ONE HOUSE PHYSICIAN (male) required at once Salaries £140 per annum with board residence, and laundry Applications stating age qualifications and accompanied by copies of testimonials to be sent to the undersigned immediately

J A BEARDSALL,
House Governor & Secretary

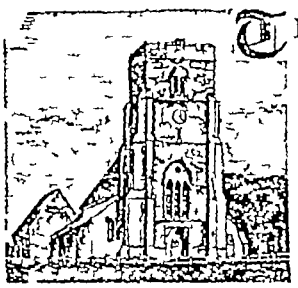
LEEDS PUBLIC DISPENSARY

Notice is hereby given that the Special Election Committee is prepared to receive applications for the post of HONORARY PHYSICIAN Applications with copies of testimonials to be addressed to the Chairman of the Election Committee Public Dispensary North Street, Leeds on or before Monday May 15th.

By Order of the Board
CHARLES F J MAURY
Secretary & Superintendent.

Some love "nephrosis" and all it is supposed to imply, others detest it Some will enjoy the retention by Dr Gray of the term "subacute nephritis", and all will, we hope, rejoice to see in these monographs the disappearance of "parenchymatous" as a descriptive term Dr Gray, however, produces a monster in "nephrotic nephritis," which, it is hoped, may not long survive birth The monograph by Dr Gray represents, as did the previous one by Dr Russell, a sound piece of work for which every praise is due, but unfortunately its ability to advance our knowledge of Bright's disease and even to classify the cases reasonably is limited This Dr Gray admits fully at the commencement of his summary

HARVEY MEMORIAL AT HEMPSTEAD



HEMPSTEAD CHURCH BEFORE 1882

THREE years have gone by since we last mentioned the project to restore the fallen church tower at Hempstead, in Essex, as a memorial to William Harvey, whose remains are deposited there This parish church, seven miles from Saffron Walden and some fifty miles from London, is a fourteenth century building of much interest, it was closely linked with the Harveys, and contains memorials to other members of the family who achieved distinction On January 28th, 1882, two hundred and twenty-five years after William Harvey's death, the massive tower fell towards the south-west, and the stones have been lying in heaps in the churchyard ever since The village of Hempstead must always make a strong appeal to everyone connected with the medical profession, since it is the place of burial of the great exponent of the experimental method in biology and the founder of scientific medicine Now, in 1933, fifty-one years after the tower collapsed, its restoration is being taken in hand All preliminaries have been duly performed, the faculty to proceed has been received, and the architect, Sir Charles Nicholson, holds the contract with the builders The full sum required to complete the work is £5,000 In cash and promises the committee has £3,000 in view, it appeals with every confidence for the remaining £2,000 during the building of the first section Donations should be made payable to the Harvey Memorial Fund, and may be sent to the joint honorary secretary, Dr Arnold Stott, 58, Harley Street, W 1, who will gladly supply printed copies of the appeal to any reader who is willing to circulate them among possible subscribers The chairman of the committee Sir John Rose Bradford, has written eloquently on behalf of the fund in these columns and elsewhere The rebuilding of the fallen church tower was a matter near to the heart of Sir Dawson Williams, late Editor of this *Journal*, and a detailed account of the Harvey Chapel, on the north side of the chancel, written shortly before his death, appeared in our issue of May 12th 1928 when the tercentenary of the publication of *De Motu Cordis* was being celebrated It is hoped that Lord Dawson will lay the foundation stone

L C C CONSULTANTS AND SPECIALISTS

The Central Public Health Committee reported to the London County Council on May 9th that under its scheme for the engagement of consultants and specialists at grouped general hospitals and affiliated special hospitals applications, invited by public advertisement, had been received to the number approximately of 620, of which six had been subsequently withdrawn The applications had been examined by the medical officer of health, who, in selecting candidates, had had the assistance of certain eminent members of the medical profession (twenty of whom are named in the L C C agenda) Approved lists had been prepared, containing in all 188 names, of candidates suitable for engagement as consultants and specialists These lists, not yet completed, would form the basis on which final selections and engagements would be made for the number of sessions a week approved by the L C C on March 7th (*Journal*, March 18th, p 466) The committee had been advised that from the approved panels of selected candidates it would be possible to arrange for engagements and sessions adequate to the needs of the hospital and affiliated services In framing the panels special consideration had been given to the consultant staff at present engaged by the Council The date at which the new scheme was to be brought into operation was originally fixed for July 1st, 1933, but it is now stated that owing to the work entailed, and to the fact that the summer arrangements of many consultants and specialists had already been made, it would probably not be possible for the scheme to be brought fully into working order until some little time after that date It is therefore proposed to retain, in cases in which such a course is necessary, beyond June 30th, but in any event not beyond September 30th, the services of consultants and specialists at present engaged It had been arranged, in order to permit of the bringing of the new scheme into operation, that the engagements of these consultants and specialists should be terminated at the end of June

It will be remembered that in the Memorandum presented to the London County Council in February of this year[1] the part-time consultants and specialists to the Council's hospitals stated "It is hoped that the Council will adapt its machinery of selection and appointment so as to secure that the merits of applicants for consultant posts are judged by men whose professional standing and contact with clinical medicine enable them fairly to estimate their professional worth" It is therefore gratifying to note that the L C C in seeking the assistance of eminent consultants in the selection of candidates has conceded this principle After the consultants and specialists had decided to entrust the Council of the British Medical Association with further negotiations on their behalf a letter was sent on April 13th to the chairman of the Central Public Health Committee of the L C C offering a "friendly conference through suitably appointed representatives" on matters concerning the L C C's specialist service On April 19th a reply was received from the L C C in which details of the proposed points of discussion were asked for These were outlined in a letter sent to the L C C on May 2nd, in which was reiterated the request

[1] See *Supplement* March 25th 1933 p 105

COUNTY BOROUGH OF WEST HAM

PUBLIC ASSISTANCE COMMITTEE

The Council invite applications for the appointment of DEPUTY MEDICAL SUPERINTENDENT at their FOREST GATE HOSPITAL Forest Lane Forest Gate E 7 at the salary of £525 per annum rising by annual increments of £25 to a maximum of £600 per annum, with the usual residential allowances subject to an abatement in accordance with the resolutions of the Council for the time being in force at present 2½ per cent from the first £200 3½ per cent from the next £100 5 per cent from the next £250 and 7½ per cent from the remainder The salary is inclusive and all fees received must be paid to the Borough Treasurer

Candidates must be fully qualified and registered Medical Practitioners, and have had previous hospital and maternity work experience The person appointed will be required to take charge of the Hospital during the absence of the Medical Superintendent and should occasion arise to act in any other Institution under the control of the Council

The patients at the Hospital comprise chronic sick epileptics and mental defectives with three maternity blocks

The successful candidate will be required to pass a medical examination and the appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 at the rate of 5 per cent or the Poor Law Officers Superannuation Act 1896

Forms upon which application must be made can be obtained from the Medical Officer of Health Municipal Health Offices Romford Rd Stratford E 15 on the receipt of stamped and addressed foolscap envelope and should be returned to the undersigned not later than 10 a m on May 6th

CHARLES E CRANFIELD
Public Assistance Offices Town Clerk
Union Road Leytonstone E 11
April 12th 1933

CITY OF BIRMINGHAM

DUDLEY ROAD HOSPITAL (926 Beds)

Applications are invited from fully qualified Medical Practitioners for whole time appointment as CASUALTY OFFICER (male) at the Dudley Road Hospital Birmingham The appointment will be for a period of six months but may be extended for a further period of not exceeding six months Salary at the rate of £200 per annum and full residential emoluments subject to any voluntary abatement in force from time to time The officer appointed will be required to refund to the Council all fees allowances and emoluments (other than the forgoing) received by him

Further particulars may be obtained from the Medical Superintendent at Dudley Road Hospital to whom applications stating age experience and qualifications with copies of recent testimonials should be forwarded not later than May 4th

CENTRAL LONDON THROAT, NOSE AND EAR HOSPITAL
Gray's Inn Road W C 1

RESIDENT HOUSE SURGEON (MALE)

There will be a vacancy for a Third Resident House Surgeon to enter on duty on June 1st next

The appointment will be for a period of nine months three months as Third House Surgeon three months as Second House Surgeon and three months as First House Surgeon Remuneration at the rate of £75 per annum

Applications accompanied by copies of not more than three testimonials should be sent to the undersigned on or before May 5th

JOHN H YOUNG
Secretary Superintendent

ST PAUL'S HOSPITAL FOR DISEASES (INCLUDING CANCER) OF THE GENITO URINARY ORGANS AND SKIN, Red Lion Street Holborn W C 2

CLINICAL ASSISTANTS FOR UROLOGICAL WORK Vacancies will occur on May 1st next for Clinical Assistants in the Out Patient Department to the following Surgeons

Mr C H MILLS
Mr H P WINSBURY WHITE
Mr W K HOWI

Each appointment is for six months and is subject to renewal up to a period of two years The fee of £5 5s is payable at the time of the first appointment

Applications should be addressed to the Secretary

THE MOUNT VERNON HOSPITAL

Vacancy for ASSISTANT RADIOLOGIST chiefly for therapy but also some diagnostic work three half days per week also holiday duty in the absence of Senior Radiologist

Salary according to experience Applications to the Secretary Offices 32 Fitzroy Sq W 1

COUNTY BOROUGH OF WEST HAM

PUBLIC ASSISTANCE COMMITTEE

The Council invite applications from registered Medical Practitioners for the post of RESIDENT ASSISTANT MEDICAL OFFICER at their Hospital at HAROLD WOOD, ESSEX (Accommodation 160 beds)

The appointment is for a period of one year at a salary of £250 per annum plus emoluments valued at £150 per annum subject to an abatement of 2½ per cent. from the first £200 3½ per cent from the next £100 and 5 per cent from the next £250 in accordance with the resolutions of the Council

The person appointed must give the whole of his time to the service of the Council and will work under the direction of the Medical Officer of Health

The successful candidate will be required to pass a medical examination and the appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 at the rate of 5 per cent or the Poor Law Officers Superannuation Act 1896

Forms upon which application must be made can be obtained from the Medical Officer of Health Municipal Health Offices Romford Rd Stratford, E 15 on the receipt of a stamped addressed foolscap envelope and should be returned to the undersigned not later than 10 a m on May 6th

CHARLES F CRANFIELD
Public Assistance Offices Town Clerk
Union Road Leytonstone E.11
April 13th 1933

CITY OF STOKE ON TRENT

MEDICAL OFFICER OF VENEREAL DISEASES CENTRE

The City Council invite applications for the appointment of a Medical Officer of the Venereal Diseases Centre at a salary of £750 per annum rising by annual increments of £25 to £937 10s., subject to a temporary reduction

The person appointed will be required to devote the whole of his time to the service of the Corporation which will not necessarily be confined to work in connection with venereal disease The appointment will be subject to the approval of the Ministry of Health

Applicants must be fully qualified medical men with at least six months general hospital experience and have had special experience in modern methods of the diagnosis and treatment of Venereal Diseases The possession of the Diploma in Public Health will be considered an advantage

Further particulars may be obtained on application to the Medical Officer of Health St Peters Chambers Glebe Street Stoke on Trent

Applications stating age qualifications and experience accompanied by copies of not more than three recent testimonials and endorsed Medical Officer V D to be delivered to the undersigned on or before Friday, May 5th at 10 a m

Town Hall E B SHARPLEY
Stoke on Trent Town Clerk

WORCESTER ROYAL INFIRMARY
(142 Beds)

Applications are invited for the post of THIRD HOUSE SURGEON

The Hospital is equipped with new Operating Theatres Pathological Laboratories Orthopaedic Department E N T Department up-to-date X ray Department etc

Salary at the rate of £120 per annum together with board residence

The post offers exceptional scope for medical and surgical experience

The successful candidate will be eligible for the posts of Second and First House Surgeons which will later become vacant (salaries £150 and £180 per annum respectively)

Applications should state full particulars as to age whether married or single qualifications etc and should be accompanied by copies of three testimonials

Applications to be received by the undersigned not later than first post on Thursday May 10th

PERCY V CLASS
Superintendent Secretary

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST VENTNOR ISLE OF WIGHT

JUNIOR ASSISTANT RESIDENT MEDICAL OFFICER (male), unmarried, required for six months commencing June 1st

Salary at the rate of £300 per annum with board residence, and laundry allowance

Candidates must be duly registered Medical Practitioners Previous experience in Tuberculosis also Bacteriological work desirable

Applications in candidate's own handwriting, stating age and qualifications (with one copy of three recent testimonials) to be sent to the Medical Superintendent Royal National Hospital for Consumption Ventnor, I O W, not later than May 12th.

WARWICKSHIRE AND COVENTRY JOINT COMMITTEE FOR TUBERCULOSIS.

KING EDWARD VII MEMORIAL SANATORIUM HEREFORD HILL near WARWICK.

Applications are invited for the post of JUNIOR ASSISTANT MEDICAL OFFICER (male) at the Memorial Sanatorium, near Warwick of 195 beds The successful candidate will be appointed for six months and will have special opportunity of gaining experience in treatment by Artificial Pneumothorax by ultra violet Light and in X ray work.

The salary will be at the rate of £200 per annum with board lodging and laundry and promotion is probable at the end of six months.

Applications, with recent testimonials, should be forwarded direct to the Medical Superintendent at the Sanatorium by not later than Monday May 15th

Shire Hall L. EDGAR STEPHENS,
Warwick Clerk of the Joint
April 1933 Committee

KING GEORGE HOSPITAL, ILFORD
(8 miles from London)

Wanted a HOUSE SURGEON to commence duty at once May for a period of ten months two months as Casualty Officer six months as House Surgeon and two months as Deputy Resident Medical Officer in charge of the Casualty Department Salary £100 per annum £10 bonus on completion of appointment and two weeks holiday Candidates should send their applications with three recent testimonials and call on the members of the Honorary Medical Staff indicated by the Secretary as soon as possible

C AUSTIN HEPWORTH Secretary

LINCOLN COUNTY HOSPITAL.

Wanted HOUSE SURGEON, male unmarried. Salary at the rate of £150 per annum rising to £200 per annum at the conclusion of six months approved service Board residence and washing will also be provided

Every candidate for the appointment must be registered under the Medical Acts

Applications stating age and other particulars with copies of not more than three testimonials, are to be sent to the undersigned from whom further particulars may be obtained.

Lincoln ARTHUR MOORE.
April 25th 1933 Secretary Supt

WESTERN OPHTHALMIC HOSPITAL, Marylebone Road, London, N W 1

Applications are invited for the post of JUNIOR NON RESIDENT HOUSE SURGEON The salary is at the rate of £100 per annum and the appointment for six months The Junior House Surgeon is provided with board but not lodging Some previous Ophthalmic experience is required The selected candidate will be required to take up duty at an early date

Applications accompanied by copies of not less than three testimonials should be sent in at once, and not later than May 10th

H W BURRIDGE Hon Secretary

SOUTH DEVON AND EAST CORNWALL HOSPITAL PLYMOUTH (240 Beds.)

RESIDENT SURGICAL OFFICER (Male) Salary £150 per annum with board residence and laundry Appointment tenable for six months and subject to renewal Duties to commence June 1st Candidates must be registered under the Medical Acts.

Applications stating age and qualifications, together with copies of recent testimonials, to reach the undersigned by May 10th

ARTHUR R CASH
April 25th 1933 Gen Supt & Sec

CLAYTON HOSPITAL, WAKEFIELD
(General Hospital—166 Beds)

There are vacancies for TWO HOUSE SURGEONS (male British) for which posts applications are invited The appointments are for six months in the first instance and the salary for each is at the rate of £175 per annum together with board residence and laundry

Applications stating age qualifications, and experience together with copies of three recent testimonials should be sent to the undersigned as early as possible

H J LANCASTER
Gen Supt & Secretary

EASTBOURNE DUCHESS OF YORK MEMORIAL HOSPITAL (116 Beds)

Applications are invited for the post of HOUSE SURGEON (male) Salary at the rate of £150 per annum with board, lodging and laundry There are two residents and the appointment is for six months.

Candidates must be unmarried fully qualified and registered Applications stating age qualifications etc accompanied by not more than three testimonials (one of which should be from Medical School), should be sent at once to the Secretary

of the Council of the B M A that the Central Public Health Committee of the L C C should authorize discussion upon any relevant points between representatives appointed by itself and the four members appointed for this purpose by the Council of the Association In a letter from the L C C on May 5th this request was not acceded to but an intimation was given to the effect that the Central Public Health Committee would be pleased to receive a deputation of representatives of the Council of the B M A at County Hall on May 18th It has been decided that the Association's representatives shall attend there on the date mentioned

HUXLEY AND MEDICAL EDUCATION

The memorial lecture to Thomas Huxley was delivered at the Imperial College of Science and Technology on May 4th (the day, by a sad coincidence on which the death of Huxley s eldest son Leonard was announced) The lecturer Professor H E Armstrong under the title of Our Need to honour Huxley s Will allowed himself many characteristic digressions and incorporated some interesting autobiography Over sixty five years ago he himself sat before Huxley s blackboard and watched the great man embroider it most exquisitely with chalks of varied hue Huxley was a marvellous exponent and therefore a bad teacher as are all who are eloquent Under Huxley he was only entertained and soon ceased to attend his courses this failure to attract him was the more noteworthy because at that time young Armstrong was going week after week to St Bartholomew s to witness surgical operations But he says that he made abject apology to Huxley later in life by sending two of his sons on their leaving school not as was usual to first year s chemistry and physics courses but directly to the lectures on biology Professor Armstrong believes that there is great need of an open course on physiology for those who have just left school No school could teach more than the beginnings of real biology and the need of such teaching was most felt and most necessary at the age when school should be left for some place of higher instruction In the course of his lecture he had a tilt at medical education where he said the instructions of Huxley had been most disregarded Huxley gave a considered address on the subject of medical education in 1870 to the medical faculty of University College At that time the conditions under which the preliminary scientific subjects were taught were pitiable but Professor Armstrong is of the opinion that things are not much better to-day because of the far greater burden laid upon the student which makes rational study impossible Most unfortunately to make their own task easier the authorities have allowed schools to teach nominally for the first M B I say nominally because the proper atmosphere cannot possibly be provided in the school nor are the teachers competent He quoted Huxley as complaining of the unsatisfactory character of the teaching in physiology even in medical schools and said that to-day although here and there an attempt is made to teach real physiology it is to unprepared minds the foundation of chemistry being insufficient Chemistry he declared already plays a dominant part in physiology and medicine and in future will be of supreme importance Apart from surgery medicine would be simply chemistry as applied to the living being He was satisfied that it would be necessary to teach it apart in a form suitable for medical students and that the preliminary foundations to be laid in school would need very special consideration

THE CONCENTRATION OF VITAMIN A

The fat-soluble growth promoting factor was one of the first vitamins to be recognized but until a few years ago relatively little advance had been made regarding its nature or its action Since then progress has been very rapid for its chemical nature was established by the discovery that the body formed it from the plant pigment carotene and it attained therapeutic importance from the discovery that lack of this vitamin predisposed to bacterial infection The international unit adopted is 0 001 mg of standard carotene and about four units daily are needed to restore growth in a young rat fed on vitamin A free diet Vitamin A differs in certain obvious respects from carotene—for instance the former is colourless and the latter orange-red moreover the two substances give a different tint of blue with antimony trichloride reaction The biological activity of the purest specimens of vitamin A hitherto isolated has been similar to that of carotene and in view of the extraordinarily small amounts required it seemed likely that these products were chemically pure Carr and Jewell[1] have however succeeded in preparing a more highly active preparation of vitamin A These workers used a very delicate method of fractional distillation under a high vacuum (pressure 10-5 mm) and obtained a product of considerably higher activity than the best previous results The preparations had about twice the biological activity of international standard carotene Analysis gave figures in agreement with the formula suggested by Karrer—namely $C_{20}H_{30}O$—and the alcoholic solution showed no optical rotation The mother substance carotene has the formula $C_{40}H_{56}$ and is optically active The outstanding fact regarding the fat soluble vitamins is the amazing potency of pure preparations The international unit of vitamin D is one ten thousandth of a milligram of irradiated ergosterol and the purest specimens of calciferol have four times this activity Vitamin A in its purest form is only about one tenth as active as vitamin D but even so there are few other substances the minimum effective daily dose of which can compare with these figures

ANOTHER CENTENARY

The vast majority of entomologists are still and will long continue to be collectors and systematists The true naturalist collector has an almost inborn faculty for elucidating the habits of insects and no one but an experienced and often highly specialized systematist is able nowadays to determine accurately the names of the insects brought before him It is on these two bases that applied entomology is founded and no one appreciates the need for good systematics and good ecology—the scientific offspring of the old natural history—better than the agricultural or the medical entomologist It is therefore most proper that the centenary of the Entomological Society of London

[1] *Nature* January 21 st 1933 p 92

henceforward to be known as the Royal Entomological Society of London, which was celebrated last week under the presidency of Professor E B Poulton, F R S , should have been attended by representatives of agriculture and of medicine Although this great society is primarily one of "pure" entomologists it numbers among its fellows many "applied" entomologists from medical, agricultural, and other spheres At the conversazione which formed part of the centenary celebrations, medical entomology was represented directly by an exhibit from the London School of Hygiene and Tropical Medicine, which consisted of insects that are carriers of human diseases They made a formidable array All were shown in the living state, and included, among others, the tsetse fly (*Glossina tachinoides*) which carries sleeping sickness in Northern Nigeria , the yellow fever mosquito *Aedes aegypti* , *Anopheles maculipennis* the chief malaria carrier of Europe , the tropical plague flea *Xenopsylla cheopis* , and the body louse *Pediculus corporis*, the carrier of typhus and relapsing fever Less directly connected with public health was an exhibit from the Imperial College of Science, showing some of the insects which attack and consume the stored foodstuffs of man, and some of the methods which are used for their control There is a natural tendency among those who wish to bring home the importance of a given science to the lay mind to emphasize its practical achievements But it is not to be forgotten that further advances in applied entomology are, to a great extent, waiting upon new knowledge of the ecology and the physiology of insects It is in the fostering of this side of entomology that the Royal Entomological Society of London has done so much during the past century and has still so much to do

SCHOOL OPHTHALMIC WORK IN SCOTLAND

Something of the enthusiasm of the pioneer is shown in a paper by Dr Ernest Thomson on the organization and the administration of school ophthalmic clinics in the county of Lanark, which is printed in the last volume of *Transactions of the Ophthalmological Society* The field of the work provided ample scope for ingenuity of method, for while less than one-half the hundred thousand children in the area attended small town schools, the rest belonged to truly rural schools The work began in 1914 in a more or less permissive fashion, for there was not then unification of authority Now every district is under the Education Committee of the county council The author discloses to his readers the stages of growth of the organization, showing how school medical inspection is conducted and how the treatment in the clinics is provided, and in particular what steps are taken to follow up the treatment ordered so as to ensure that the directions given are carried out In discussing how defective-sighted children may be discovered Dr Thomson claims that there is only one satisfactory way—that is, by expert ophthalmic examination of all the entrants , the other way perforce adopted, by testing visual acuity and noting reports of difficulty made by the teachers, is less efficient Most of the children treated are refraction cases "Obvious cases of eye disease usually find their way straight to the family doctor, and through him to the specialist either in hospital or in private Nevertheless, the school oculist has a good many opportunities that may be denied to others in that he is privileged to see cases of congenital anomalies, the early effects of birth injury, and of early and probable unsuspected fundus disease" Operations and extended treatment are not provided for under the scheme, but most of the ophthalmic staff are also on the staff of the Glasgow Eye Infirmary and make arrangements accordingly "The arrangements, like the British Constitution, are unwritten , there is no definite arrangement between the authority and the committee of the Glasgow Eye Infirmary, but there is a kind of liaison due to the fact that some of the staff of each are common to both" Note is made of the changed attitude of teachers and parents towards school medical work Medical inspection at first was by many held to be "an interference with the liberty of the subject," and the medical staff were obliged to walk warily Now there is as a rule cordial appreciation on the part of all concerned

ROLL OF BIO PHYSICAL ASSISTANTS

We publish this week as a Special Supplement the complete list of names on the *Register of Bio-Physical Assistants*, revised to March 31st It is now nearly five years since the Representative Body of the British Medical Association first drew attention to the need for registration of lay persons to whom medical practitioners could with confidence send their patients for electrical treatment and actinotherapy A small committee of experts was formed to prepare a scheme, which received approval by the Council of the Association Early in 1929 the Court of the Society of Apothecaries of London decided to adopt and to further this scheme for granting diplomas, after examination, to bio-physical assistants, and for the establishment of a roll Regulations were drawn up, and the first *Register of Bio-Physical Assistants* appeared in book form under the Society's direction Our purpose in publishing the revised edition of this register is to make it widely known to members of the medical profession in a form convenient for ready reference The entries in Part I are arranged in alphabetical order, with postal addresses, in Part II the names are regrouped geographically Since the British Medical Association was primarily responsible for the setting up of the roll, we hope that members will preserve this Supplement and send their patients who require treatment by light and electricity to technicians holding the Society's diploma

Sir Almroth Wright will deliver the John Mallet Purser Lecture on "Immunization—the Old Doctrine and the New" in the Department of Physiology, Trinity College, Dublin, on Wednesday, May 17th, at 5 p m

The next session of the General Medical Council will commence on Tuesday, May 23rd, at 2 p m , when the President, Sir Norman Walker, M D , will take the chair and give an address The Council will continue to sit from day to day until the termination of its business

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B.M.A. House Tavistock Square, W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary 7 Drumsheugh Gardens, Edinburgh)

(a) British Islands

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH** *(contd.)*
EBBW VALE, MON *(Workmen's Medical Society)*	NEATH AND DISTRICT *(Medical Aid Association.)*	WORCESTER COUNTY AND CITY MENTAL HOSPITAL. *(Junior Assistant Medical Officer)*
GILFACH GOCH GLAMORGAN *(Workmen's Medical Scheme)*	OAKDALE, MON *(Medical Officer for Medical Aid Association.)*	LLANTRISANT AND LLANTWIT FARDRE RURAL DISTRICT COUNCIL. (1) *Medical Officer of Health (part-time.)* (2) *Medical Officer (woman—part time) for Maternity and Child Welfare*
LLWYNPIA CLYDACH VALE, PENYGRAIG GLAMORGAN *(Workmen's Medical Scheme.)*	OGMORE VALLEY GLAMORGAN *(Wyndham Colliery Medical Aid Society)* *(Workmen's Medical Scheme)*	
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer)*	**PUBLIC HEALTH**	COUNTY BOROUGH OF SOUTH SHIELDS HARTON INSTITUTION AND CLEADON COTTAGE HOMES *(Medical Officer)*
MARDY GLAMORGAN *(Workmen's Medical Scheme)*	KENT COUNTY COUNCIL. LENHAM SANATORIUM. *(Male Assistant Medical Officer)* FARNBOROUGH INSTITUTION HOSPITAL. *(Resident Assistant Medical Officer)*	

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B.M.A. House Tavistock Square W.C.1

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. G. HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St., Sydney N.S.W.	QUEENSLAND *(Brisbane Associated Friendly Societies Institute)* *(Toowoomba Associated Friendly Societies Medical Institute Toowoomba.)*	The Hon. Sec. Queensland Branch British Medical Association, B.M.A. Building Adelaide St. Brisbane.	WELLINGTON NEW ZEALAND *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec. New Zealand Branch) British Medical Association P.O. Box 156 Wellington New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch British Medical Association, Medical Society Hall East Melbourne, Victoria.			WESTERN AUSTRALIA. *(Contract and Lodge Practices.)*	Hon. Sec. Western Australian Branch British Medical Association No. 6 Bank of N.S.W. Chambers St. George's Terr. Perth, Western Australia.

April 26th, 1933 By Order of the Council G. C. ANDERSON Medical Secretary

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NATIONAL HOSPITAL FOR DISEASES OF THE HEART
Westmoreland St. Marylebone W.1

OUT PATIENTS MEDICAL OFFICER.

Applications are invited for the post of Out patients Medical Officer (Non resident male). The appointment is for the period May 22nd to September 30th. Salary at the rate of £125 per annum. Candidates who must be duly registered Medical Practitioners will not be expected to call on the Honorary Medical Staff but to send their applications with copies of three recent testimonials to me at the Hospital not later than Saturday May 6th. The Out patients Medical Officer will be required to assist the Honorary Medical Staff on five afternoons weekly.

ROBERT G. E. WHITNEY
Secretary

HEREFORDSHIRE GENERAL HOSPITAL.
(140 Beds.)

Applications are invited for the post of HOUSE SURGEON and CASUALTY OFFICER (male).

Salary at the rate of £100 per annum with board residence and laundry.

The appointment will be for a period of six months commencing June 1st. The successful candidate will subject to satisfactory service be eligible to succeed to the Resident Surgical Officer's post with a salary at the rate of £150 per annum.

Applications, stating age qualifications, and experience together with copies of three recent testimonials should reach the undersigned on or before May 6th.

T. W. UPTON Secretary

MINEHEAD AND WEST SOMERSET HOSPITAL, MINEHEAD SOMERSET
(58 Beds.)

Applications are invited for the post of RESIDENT HOUSE SURGEON (male or female) to this Hospital.

Duty to commence on May 21st. Appointment for a period of six months. Salary £150 per annum with board residence and laundry.

Applications, stating age nationality experience and qualifications accompanied by copies of three recent testimonials to be sent to the undersigned not later than May 5th.

W. H. P. RODDA Secretary.

BRADFORD ROYAL INFIRMARY

HOUSE SURGEON (male) wanted from June 1st to November 30th. Candidates must be single and legally qualified. Salary £135 per annum with board residence and washing. There are 215 beds and six Resident Officers.

Applications stating age qualifications and previous experience if any with copies of recent testimonials to be received by the undersigned not later than May 2nd.

J. J. BARRON
April 18th 1933. Secretary Supt.

THE STOCKPORT INFIRMARY

HOUSE PHYSICIAN (male) required. Salary £150 per annum with board residence and laundry.

Applications with copies of three recent testimonials stating age, University or Medical School and experience to be delivered to the undersigned immediately.

EDWIN J. PEARCE,
Secretary Superintendent.

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(211 Beds.)

HOUSE PHYSICIAN (male) required for June 5th. Salary £150 per annum with board lodging and washing. Application list closes May 5th.

Application forms may be obtained from W. H. GRACE, M.D. M.R.C.P. Hon. Superintendent of the Resident Medical Staff.

(Appointments continued on p. 46.)

ONE HUNDRED AND FIRST ANNUAL MEETING
of the
British Medical Association
DUBLIN, 1933

THE one hundred and first Annual Meeting of the British Medical Association will be held in Dublin this summer under the presidency of Dr T Gillman Moorhead Regius Professor of Physic Trinity College who will deliver his address to the Association on the afternoon of Tuesday July 25th The sectional meetings for scientific and clinical work will be held as usual on the three following days the morning sessions being given up to discussions and the reading of papers and the afternoon to demonstrations The Annual Representative Meeting for the transaction of medico political business will begin on the previous Friday July 21st The list of officers of the sixteen Scientific Sections and the subjects for discussion was published in the SUPPLEMENT *of April 15th Other details of the arrangements for the Annual Meeting will be given in later issues We publish below the fourth of a series of descriptive articles on Dublin and its medical institutions The first a preliminary note appeared in our issue of December 3rd 1932 (p 1026) the second on the History of Dublin on March 18th 1933 (p 476) and the third on the Dublin of To day on April 22nd (p 710)*

THE UNIVERSITY OF DUBLIN TRINITY COLLEGE *

By GILBERT WATERHOUSE Litt D

At least three ineffective attempts were made in the fourteenth and fifteenth centuries to establish a university in Dublin Then in 1585 an old project of associating a university with St Patrick's Cathedral was revived but had to be abandoned owing to the opposition of Archbishop Loftus No further definite step was taken until 1590 when a group of influential citizens headed by Henry Ussher Archdeacon of Dublin Luke Challoner and two Scots James Fullerton and James Hamilton masters at the Grammar School addressed a petition to the City Council which had long been well disposed to the establishment of a university The council undertook to make representations to the Lord Deputy Fitzwilliam and more particularly to facilitate the scheme by providing a suitable site The Archbishop and the Lord Chief Justice added their recommendations to those of the Lord Deputy the royal sanction was immediately accorded and by letters patent of March 3rd 1591 (commonly called The Foundation Charter) Queen Elizabeth founded the Collegium sanctae et individuae Trinitatis juxta Dublin to be the mother of a university

Early Developments

William Cecil Lord Burghley was appointed chancellor and Archbishop Loftus provost A small endowment was granted but the funds for the erection and equipment of the necessary buildings were raised mainly by public subscription in Ireland The foundation stone was laid by the Mayor of Dublin Thomas Smyth on March 13th 1592 and the college was opened to students in 1593 The original number of students is unfortunately unknown but it rose from sixty five in 1613 to 472 in 1704 733 in 1792 and to 1 300 in 1886 In 1913 the number was 1 285 of whom 211 were women During the war the response to the call to arms—a response which was entirely voluntary—caused the number of men students to drop to 535 There was a temporary return to the pre war total in 1919 and 1920 when several hundred ex service students resumed their studies but the revolutionary period and the progressive impoverishment of the country caused a further decline to 936 in 1924 With the return to more settled conditions numbers have steadily risen to 1 455 in 1931–2 The midsummer entrance for 1930 (162) was higher than in any year with one exception since the famine

The original endowment of Elizabeth was generously supplemented by James I and in 1637 Charles I granted a new charter which forms the basis of the present Consolidated Statutes of Trinity College and the University of Dublin The Foundation Charter of Queen Elizabeth appears to have contemplated a possible multiplication of colleges on the lines of Oxford and Cambridge However that may be all attempts to develop in that way have failed and for practical purposes Dublin University and Trinity College are synonymous terms The framework of a university was undoubtedly created in 1591 by the appointment of a chancellor by provision for the appointment of a vice-chancellor and proctors and by the regulations for the conferring of degrees but the primary executive authority was vested in the provost as head of the college The power of appointment to the provostship originally rested with the Fellows but passed to the Crown under the Charter of 1637 The chancellor is appointed for life by the senate The vice-chancellor is appointed by the chancellor and presides in the absence of the chancellor at commencements or other meetings of the senate This body consists of all doctors and masters who keep their names on the books of Trinity College It is a body corporate distinct from the college and is the final authority in all matters relating to the institution and conferring of degrees The caput of the senate consists of the chancellor (vice-chancellor or pro-vice-chancellor) the provost and the senior master non regent who is elected annually by the senate Any member of the caput may veto any proposed grace for a degree

The regulation of courses and examinations precedent to degrees (except in divinity) and the nomination of the university professors for appointment (with certain exceptions created by Act of Parliament or by the directions of private founders) are the concern of the University Council a small body composed mainly of members of the teaching staff together with representatives of the senate and of the Board of Trinity College All matters relating to the Divinity School are dealt with by the Divinity School Council on which the bishops of the Church of Ireland are represented The provost presides over both the University Council and the Divinity School Council All the acts of these bodies require the sanction of the Board of Trinity College which is the supreme authority in matters of administration discipline and finance It consists of the provost the seven senior fellows two representatives of the junior fellows and two representatives of the university professors

The domestic cares of a residential university are innumerable Rooms in college are naturally in great demand but only about 300 undergraduates can be accommodated The remainder live in registered lodgings or with their parents if their homes are in Dublin or its neighbourhood A hostel for women Trinity Hall was opened in 1908 and now after extension accommoda es

* Reprinted from the series British Universities To-day June 21 October 1930

British Medical Journal
BRITISH MEDICAL ASSOCIATION HOUSE,
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about sixty students. About 300 undergraduates dine in hall daily, luncheon is served at a special buffet during term, and the Dublin University Co-operative Society caters for all ordinary requirements. Indeed, life in Trinity offers many attractions not easily found elsewhere. The spacious grounds form an oasis of some 30 acres in the heart of the city, provide the college clubs with ample facilities for cricket, football, hockey, and tennis and still leave room for quiet walks for flowers, shrubs and stately trees.

TRINITY COLLEGE LIBRARY

A Varied Curriculum

In Trinity Week, about the middle of June, the college races provide one of the principal athletic and social functions in Ireland. Similarly, there is ample scope for intellectual and oratorical activity in the College Historical Society, founded in 1770, the University Philosophical Society (1853), the Theological Society (1830), the Choral Society (1837), the Classical Society and others of more recent foundation. There are advantages also in easy access to the theatres, galleries, libraries, and other institutions of a capital city, while the study and practice of law and medicine in particular are simplified by proximity to the King's Inns and the great Dublin hospitals.

With the passing of the centuries the curriculum of the university has undergone the same changes as in other ancient seats of learning. Sweeping reforms were made during the provostship of Bartholomew Lloyd (1831–7), who opened a new and progressive stage in the history of the college. The school of engineering, the first in any university in the United Kingdom, was opened in 1842, and degrees in engineering were created in 1872. In 18[illegible], when open competition for the Indian Civil Service was introduced, prompt steps were taken to provide the necessary instruction in Oriental languages with the result that hundreds of Dublin graduates have found, and continue to find, their careers in the Imperial services. This widening of academic studies has proceeded so far that students can now obtain degrees not merely in divinity, law, medicine, philosophy, classics and mathematics, but also in modern literature (professorships French and German Italian and Spanish were founded in 177[illegible]), Oriental languages, Celtic languages, music, history and political science, engineering, natural science, experimental science, and commerce.

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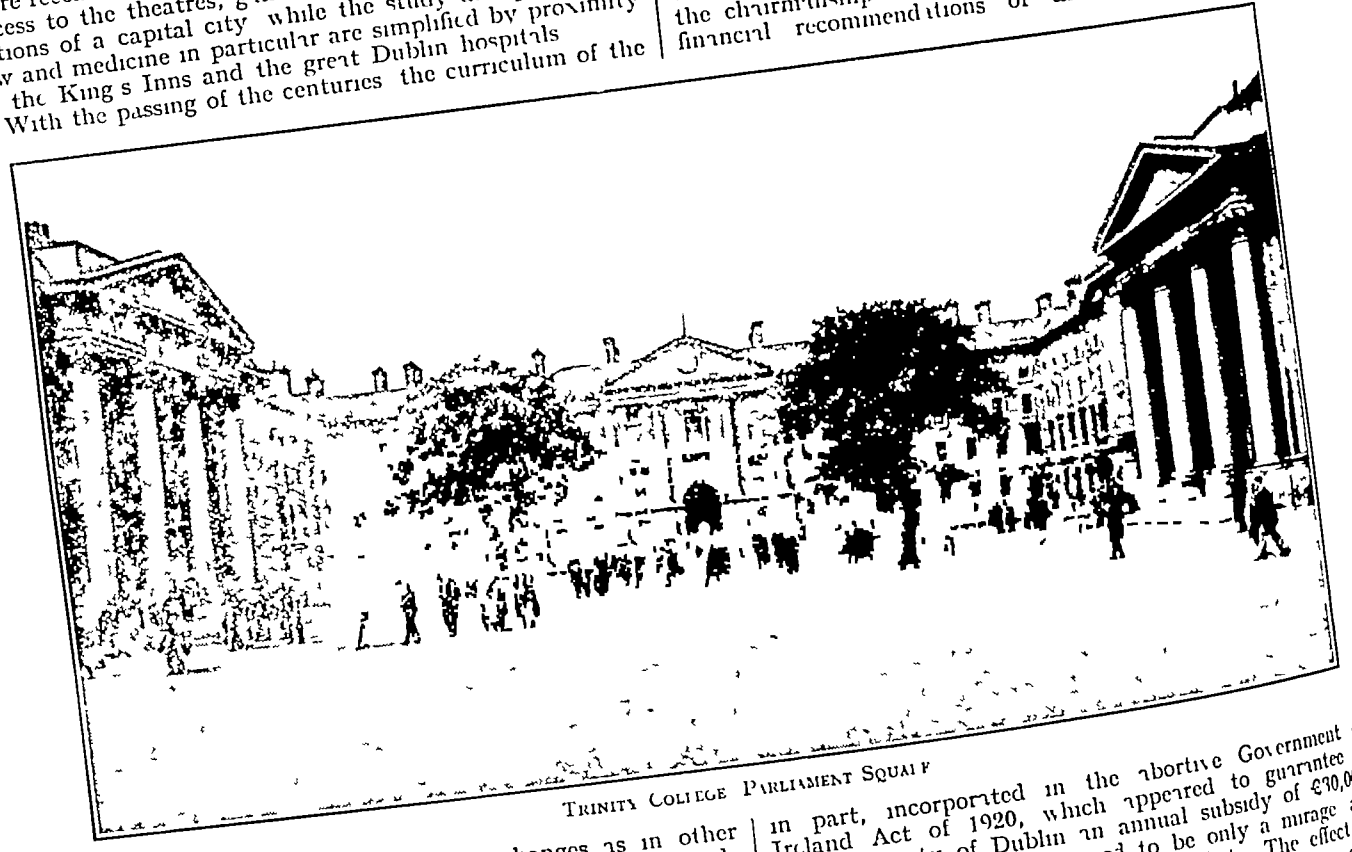
Like other academic bodies throughout the world the Board of Trinity College is constantly engaged on the task of apportioning its limited resources to ever increasing demands for staff, buildings and equipment. The needs of the university, like those of Oxford and Cambridge, were the subject of an inquiry by Royal Commission in 1920 under the chairmanship of the late Sir Archibald Geikie. The financial recommendations of that Commission were, in part, incorporated in the abortive Government of Ireland Act of 1920, which appeared to guarantee to the University of Dublin an annual subsidy of £30,000. This cheering prospect proved to be only a mirage and the guarantee disappeared with the Act. The effect of this disappointment were acutely felt for some years



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APPOINTMENTS—Contd

HERTFORDSHIRE COUNTY COUNCIL PUBLIC ASSISTANCE.
WATFORD GUARDIANS COMMITTEE AREA.

COUNTY INSTITUTION SHRODELLS WATFORD

APPOINTMENT OF HOUSE SURGEON

Applications are invited for the post of House Surgeon at the above Institution

The appointment will be for six months duration, renewable for a further six months The salary will be at the rate of £150 per annum with an allowance of three guineas per week until such time as board and residence can be provided in the Institution In the event of the appointment being renewed the salary will be at the rate of £175 per annum for the second period of six months

The salary will be subject to a temporary reduction of 5 per cent under the terms of the resolution of the County Council affecting the salaries of officers generally

The House Surgeon must reside near the Institution at an address to be approved by the Guardians Committee

Candidates must be duly qualified and registered

Applications stating age qualifications, and experience with copies of not more than three recent testimonials should be sent to the Clerk of the Watford Guardians Committee 7 Church Street Watford (from whom particulars of the duties of the post may be obtained) so as to be received by him not later than first post on Saturday May 6th

ELTON LONGMORE
Hertford Clerk of the County Council
April 25th 1933

COUNTY BOROUGH OF DERBY

RESIDENT ASSISTANT MEDICAL OFFICER. (Female)

Applications are invited from qualified women (age not to exceed 40 years) for the post of Resident Assistant Medical Officer Salary £350 per annum rising by annual increments of £25 to £450 per annum (subject to temporary economy deduction as follows up to £100 per annum—nil on next £200—1½ per cent on next £300—2½ per cent etc) plus emoluments valued at £150 per annum

The successful candidate will be required to reside at the Borough Isolation Hospital and Sanatorium

Forms of application can be obtained from the undersigned, and applications, together with three copies of recent testimonials should be forwarded to the undersigned not later than Tuesday May 9th

GORDON ILLICO
Public Health Dept Medical Officer
1 Derwent Street, Health.
Derby

but there are now signs that relief may come from another source In 1927 an influential committee of graduates reverting to the old maxim that self help is the best help established the Trinity College (Dublin) Educational Endowment Fund as a thank offering to the college for the education received within its walls It is hoped that this fund which takes the form of a perpetual trust will in the course of time assist the university to maintain that academic independence which is the first condition of a healthy existence The University of Dublin sub sisting entirely on its endowments and on its fees thus remains one of the few free universities of Europe acknowledging no obligation save to the cause of learning and offering equal liberty to all who seek its instruction with good will

Trinity College owes much nevertheless to the gener osity of Governments in the past The library (Fig 1) the oldest and largest of the existing buildings was erected in the years 1712 to 1724 at a total cost of £17 000 of which £15 000 was provided by Parliament The collec tion of books had its origin in a subscription of £1 800 from Her Majesty s Army in commemoration of the victory over the Spanish troops at Kinsale in 1601 The private collection of Archbishop Ussher consisting of 10 000 volumes with many valuable manuscripts includ ing the priceless Book of Kells was also a gift from the officers and men of the English Army in Ireland Among the more important additions to the library since 1660 are the collections of Archbishop Palliser Bishop Stearne Dr Claudius Gilbert and Baron Hendrik Fagel In common with the British Museum the university lib raries of Oxford Cambridge and Wales (Aberystwyth) and the Advocates Library of Edinburgh Trinity College enjoys the privilege of receiving a free copy of every book published in the United Kingdom

The cost of the magnificent west front of the College (1759) and the adjacent Parliament Square (Fig 2) was largely defrayed by a grant of £40 000 from the Irish Parliament The two wings of the square are terminated with symmetry and dignity by the Public Theatre or Examination Hall (1787) and the Chapel (1798) Indeed few universities can offer such variety of architectural interest as Trinity College but space permits only a brief reference to the unique Museum Building (1857) the Graduates Memorial Building erected by subscription to commemorate the tercentenary (1893) and the physical and botanical laboratories erected and equipped by the munificence of the late chancellor the first Earl of Iveagh

Famous Men

At some time in the beginning of the nineteenth cen tury Trinity appears to have been reproached as the silent sister as one that contributed nothing to the in tellectual life of the country a charge which drew from Dr Mahaffy the witty comment Among all Irish insti tutions probably the only one ever accused of silence is the University of Dublin It is at least open to doubt whether Oxford and Cambridge were in much better case during that period of war rebellion reaction and unrest which was not unlike the times through which Europe has recently passed At any rate the record of Trinity College as shown by the catalogue of its great men will bear comparison with that of any other university British or foreign Among poets and men of letters it claims Swift Congreve Farquhar Goldsmith and Moore among scholars Ussher Ware Dodwell Malone Hincks Whitley Stokes Lecky Mahaffy Tyrrell Dowden and Bury among philosophers Berkeley among mathematicians Hamilton and McCullagh among scientists Molyneux Lloyd and Fitzgerald among theologians Magee and Salmon among physicians Stokes and Graves among statesmen and orators Burke Grattan Flood Plunket Curran and a host of others The past is full of splen dour only its troubles and dangers are forgotten And what of the future? How will Trinity College face the changing times? The answer must be exactly as it faced the changes of the past that is by the steadfast discharge of a university s supreme function—by single minded devotion to the advancement of knowledge

ARRANGEMENTS FOR LADY VISITORS

Many of those members of the Association who attend the Annual Meetings regularly are almost invariably accompanied by their wives and daughters and it is hoped that those attending the Dublin Meeting will follow this example Ample provision is being made for the comfort and entertainment of lady visitors Their head-quarters will be in Lord Iveagh s house in St Stephen s Green where all ladies will register and procure tickets for the entertainments and excursions arranged for them Here they will find a comfortable place to rest read or write and here they will be supplied (without charge) with morning coffee and with afternoon tea to which they may invite their menfolk when the latter s morning labours are over Lunches are not being supplied at the Ladies Club as it is within a few minutes walk of the sectional meetings reception room and many hotels and restaurants

A number of entertainments have been arranged for the ladies to take place during the meetings of the Repre sentative Body On Friday July 21st there will be a short excursion to the beautiful Walpole s Gardens where visitors will be surprised at the number of subtropical plants which flourish in the mild climate of County Wicklow Tea will be provided at Newcastle Sanatorium which is in the vicinity and which is itself well worth inspection On the following afternoon a similar short excursion will show the beauties of the Phoenix Park the River Liffey and Carton—the demesne of the Duke of Leinster tea will be provided at Carton by the kindness of local ladies These excursions are provided gratis and ladies accompanying representatives are invited to join in On the Friday evening Mrs Barniville chairman of the Ladies Committee will be At Home to all ladies and on the Saturday evening the President and Local Executive invite representatives and their ladies to an At Home to be followed by a dance

On Sunday July 23rd a modest 15s will give repre sentatives and their wives a good view of some of the beautiful scenery of County Wicklow Lunch will be pro vided (without extra payment) at Glendalough where time will be allowed for visitors to explore the lakes and ruins in the Valley of the Seven Churches Tea will b taken at Greystones and the organizers of the trip promi e to arrange their time table so that it terminates in Dublin not later than 6 30 p m

Each morning from Monday to Friday ladies can amuse themselves with visits to the Club or Dublin s shops with short excursions by bus or private car and with golf or tennis On the Wednesday morning the competition for the Notts Ladies Challenge Cup will be played on the celebrated Portmarnock Links On Monday afternoon July 24th Mrs Moorhead wife of the President Elect will be At Home to all ladies and in the evening the ladies as well as repre senta tives will be entertained at the Abbey Theatre to a comedy of Irish life played by the celebrated Abbey Theatre Company called Professor Tim

The President s reception which will be followed by a dance will be held on the evening of Tuesday July 25th Wednesday afternoon will offer a choice of an At Home at Dr Steevens Hospital the oldest of the Dublin hospitals and a garden party at the Zoological Gardens In the evening all visitors will be entertained by the Free State Government at a reception in Dublin Castle

St Ultan s Babies Hospital is inviting lady doctors to lunch on Thursday and some of the ladies will lunch with their husbands at Guinness s brewery at the same time Dublin University will confer honorary degrees on this day the ceremon, being followed by a garden party in the attractive grounds of Trinity College in the centre of the city The evening will be occupied by the annual dinner

Friday afternoon presents the difficulty of deciding which of the three garden parties—at Blackrock College the Rotunda Hospital and the Sunshine Home—should be patronized whichever is chosen the visitors may be assured of pleasant entertainment In the evening many

TUNBRIDGE WELLS AND COUNTIES GENERAL HOSPITAL.

Wanted HOUSE SURGEON (male) Candidates must be unmarried and duly qualified in Medicine and Surgery May be required to lecture to Nursing Staff (Two resident)

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This Hospital is approved by the University of London for the purposes of the M D and M S examinations.

Applications stating qualifications, with certificate of registration and copies of testimonials should be sent immediately to the undersigned. Vacancy occurs May 14th

TOM B HARRISON Secretary

PUTNEY HOSPITAL

APPOINTMENT OF RADIOLOGIST

The Board of Management invite applications for the office of Radiologist which will shortly become vacant

Attendance will be required on two days per week and opportunities are available for fees from private patients.

Applications stating age particulars of degrees, etc should be received by the undersigned by May 15th.

H SEYMOUR HADWEN Secretary

OLDHAM ROYAL INFIRMARY

Applications are invited for the following post

HOUSE SURGEON required for a period of six months.

Salary at the rate of £175 per annum with board residence and laundry

Applications stating age experience and qualifications together with copies of three recent testimonials must be forwarded to the undersigned not later than May 4th.

H J CLOUT General Superintendent.

BRADFORD ROYAL INFIRMARY

HOUSE PHYSICIAN (male) wanted from June 1 to November 30th Candidates must be single and legally qualified.

Salary £135 p.a. with board residence and washing There are 215 beds and six resident officers.

Applications stating age qualifications and previous experience (if any) with copies of recent testimonials to be received by the undersigned not later than May 2nd

J J BARRON

April 25th 1933 Secretary Supt.

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YORKSHIRE. — OUTSKIRTS OF LARGE town Old established middle and better class PRACTICE averaging £980 p.a. Panel 400 Visits 3/6 to 21/ Very little midwifery Specially built house 2 recep., 6 bed Surgery with separate entrance etc. On lease at £100 Premium only £1 200 —No 9141

LADY PARTNER WANTED IN PRACTICE of about £1 000 p.a. in country district in Kent Steadily increasing and ample scope for further extension Panel worth £130 and appts. about £120 Premium for half share £1 000 —No 9140

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ITALIAN COAST — DELIGHTFUL SPOT — About £500 p.a. Scope to increase Good opening in neighbouring town No English opposition Fees 12/6 to 35/ Flat to rent at under £100 2 recep 3 bed cons room and usual offices. Furniture etc can be bought if desired. Goodwill £750 cash.—No. 9129

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The small advertisements section provides a *forum* for the domestic" business of the profession and those wishing to arrange the Sale or Purchase of Practices requiring Assistants or Assistancies and Partners or Partnerships may in these pages reach thousands of their fellow medical men at very economical cost. Such transactions may in addition be protected by the secrecy which the free Box Number service provides

ladies will probably wish to hear Professor Macalister's lecture on "Footprints of History in Ireland" and, if they do, they will be convinced that archaeology is not, as they may previously have thought, a dull subject. Later in the evening honorary degrees will be conferred by the National University and this will be followed by a reception and dance at University College.

The last day, Saturday, July 29th, will be devoted entirely to excursions. It will be difficult to decide on the relative merits of a visit to the "Meeting of the Waters" at Avoca immortalized by Moore, followed by a visit to a hospital and to Shelton Abbey, where the Earl of Wicklow has invited visitors to tea and to see the gardens; and a northern trip, which covers many of Ireland's most celebrated historical and prehistorical remains at Slane, Tara, and on the banks of the Boyne. Either trip may be enjoyed for about 15s., and this price includes lunch and tea.

So conclude the nine days, but it is hoped that they may be for many visitors, but a prelude to a more extended visit to other of Ireland's beauty spots, which may be reached by rail or road. Visitors who bring their cars may be assured that the roads are good, and that comfortable hotels are ready to entertain them at quite reasonable prices. The committees responsible for making arrangements for the Dublin Meeting are not unmindful of the fact that the present financial stringency affects the medical profession as well as other sections of the community, and that travelling expenses will be, for most doctors, heavier than in connexion with many other meetings. They have endeavoured, therefore, to keep the incidental expenses of visitors as low as possible, apart from hotel bills which will be lower than in most cities, visitors will have few expenses. The only entertainments for which payment must be made are the dinners (Annual, Representatives', and Secretaries'), and the excursions on the Sunday and final Saturday; all other entertainments and excursions will be free.

This outline of the programme for ladies will, it is hoped, persuade many to come, as the local ladies are keenly looking forward to their visit, and will do all in their power to make their stay in Dublin both comfortable and pleasant.

THE FREEMASONS' HOSPITAL AND NURSING HOME

NEW BUILDING AT RAVENSCOURT PARK

The New Freemasons' Hospital and Nursing Home at Ravenscourt Park, near Hammersmith, is rapidly approaching completion, and is to be opened on July 17th by the King, who will be accompanied by the Queen. The building is a noteworthy addition to the modern architecture of London, and, as one would expect, an outstanding example of the mason's craft. The trowel, the emblem of freemasonry, has been employed to much advantage, and the result is a building of pleasing red brick. Another feature is the large amount of window space; this is the result of an insistence by the building committee upon the fullest possible provision of light, even to the overriding of aesthetic considerations.

Hitherto the Freemasons' Hospital has been housed in an inadequate building in the Fulham Road, where there are only fifty-nine beds, and where a waiting list of between fifty and sixty patients has been usual. The movement to a site further west and to a building worthy of the benevolence of the society took final shape two years ago under the energetic stimulus of the chairman of the hospital, Lord Wakefield, and the honorary treasurer, Lord Marshall of Chipstead. The new hospital will contain 180 beds; at a superficial glance it might be supposed to contain a much larger number, but the plan has been followed of having many small wards, which necessarily occupy much greater total space. There are no more than eight beds in any ward, and most of the wards are for two or four beds, while a number are single bedrooms. This arrangement will, of course, add to the burden of nursing, and it is expected that the nursing staff will eventually number about 100. It is hoped to use the old hospital as a nurses' home until such time as a home can be built, on ground already acquired in close proximity to the new building.

SPECIAL FEATURES OF THE HOSPITAL

The façade of the hospital is extremely pleasing. The wide frontage to the south, capped by a square clock tower, is extended on either side by projecting wings ending on each floor in large semicircular sun balconies, on which beds can be wheeled out, and from which on the upper floors a view of an immense area of West London is obtainable. In the forecourt and approach to the main entrance are garden strips and a lily pond with fountain. On one side of the hospital, above the patients' entrance, there is some further decorative work, and at roof level there are two large busts representing Aesculapius and Hygeia.

Opening immediately from the principal entrance is a large central hall, with inlaid pavement and galleries above extending almost to the full height of the building. Near by is the administrative block and the council room with its walls panelled in French walnut. The hospital consists of four principal floors, three devoted to the wards, and the uppermost to the kitchens; it is intended to have a different colour scheme for each floor. There are numerous devices for the comfort of the patients. Not only will each patient have a locker by his bedside, but also an ample private cupboard. The windows have been so glazed that while the patients can see out it is not possible to anyone outside to see in. The children's department is distinguished by its zoological frieze and other decorations to delight the child heart; it is overlooked by an observation room for the nurse, and leads out on to a large roof playground. The sisters' rooms are doorless—they are entered through curtains—the idea being that sometimes a closed door may act as a psychological barrier to a nervous patient. There are no bells in the building to jar patients' nerves; a system of buzzers and lights having been installed. Abundant bathroom and lavatory accommodation has been provided, incorporating the latest ideas in sanitary equipment. On each floor there is an excellent well-lighted laboratory.

In the planning and construction of the kitchen care has been taken to ensure that no fumes penetrate to the hospital below, and the lifts communicate only with the service quarters so that there will be a minimum of noise in the corridors adjacent to the wards. Some 25 per cent. of the patients customarily received are of the Jewish faith, special kitchens have therefore been set apart for the preparation of their food, and it is intended to install a Jewish cook. The theatre block, which at the moment is the least finished part of the building, is on a level with the uppermost wards, with easy access from all parts of the hospital by lift and corridor. There are four operating theatres, two to each suite, so that each pair can be in charge of one theatre sister. The x-ray department is also to be well equipped. All the operating theatres, ward service rooms, and the central sterilizing station have been supplied with a special "recessed" type of sterilizing apparatus.

The hospital is, of course, only for the use of Freemasons and their families. Each patient will pay what he can afford. The cases admitted will be mostly surgical ones, the average stay in hospital being about three weeks, but there will be some medical beds, though not specifically allotted. It is not intended to have an out-patient department. The enlargement of the hospital will mean an increase of the resident medical staff to the number of five or six. In addition to the visiting staff, we understand that it will be open to surgeons on the staffs of other London hospitals to come in to perform operations as required.

For the financing of the hospital Freemasons from all parts of the country have contributed in the aggregate very large sums. There have been few exceptionally large donations, most of the contributions being sums of the order of two guineas. In some instances the masonic provinces have made themselves responsible for a stipulated amount, and wards are to be named after these provinces—for example, Kent in the same way certain beds have been endowed.

The architects are Sir John Burnet, Tait, and Lorne, and the consulting engineer Mr. Stinton Jones. The sterilizing

apparatus already mentioned has been supplied by Manlove Alliott and Co Ltd of Nottingham

The writer of this note desires to express his great appreciation of the kindness of Sir D Arcy Power chairman of the Medical Advisory Committee who accompanied him round the entire building and explained the many original or adapted ideas which have been incorporated in the structure and equipment of the hospital

England and Wales

Medical Women's Federation London Association's Dinner

The annual dinner of the London Association of the Medical Women's Federation was held at Claridge's on May 5th with Professor Mary Lucas Keene in the chair In proposing the toast of The Guests Dr Janet Walker C H mentioned first of all the visiting members of the council of the parent body and coupled with the toast the name of the president of the Federation Dr Mabel Ramsay She also expressed pleasure at the presence of representatives of the British Medical Association—Sir Henry Brackenbury the Chairman of Council and the Editor of the *Journal*—saying that the Association had been a faithful friend of the Federation for many years and had given it much assistance She hoped that this state of affairs would continue for he considered it not improbable that before long women would be called upon to oppose some reactionary propositions and would need to look for support to all who would stand by them Replies on behalf of the guests were made by Mrs Sylvia Lynd and Dr Mabel Ramsay Mrs Lynd made some amusing comparisons between the medical and the literary calling (her own) She also as a reviewer discussed the difficulties of the modern novelist pointing out that in a former period of literature it was very easy for the author to make his characters go into a decline but now such was the inquiring spirit of the age readers would want to know from what it was they had died Another marked change that had taken place in novels related to the position of the mother Formerly the mother was a very popular figure in fiction but in the modern book the greater number of mothers who appeared did so only to die Finally Mrs Lynd told a story which must not be considered to apply to reviewers for medical journals A well known reviewer took some books to a second hand bookshop in order to get rid of them finding it impossible to give house room to all the volumes that came his way The young woman in the shop looked at him coldly and said These are not review books These books have been cut ! Dr Mabel Ramsay in her response said that women doctors had now been accepted by the world at large and on the present occasion she recalled their great pioneer Mrs Garrett Anderson who was a woman of vision She knew that registration was but a step in the right direction and that women would never be content until they were able to do things for themselves so that she soon established the Elizabeth Garrett Anderson Hospital with that purpose in view But was it not time the speaker asked for medical women to have their chance in all the hospitals of the country? They had been told first to found a medical school for themselves and they had done that and had staffed their own hospitals but the furthermost development of medical women was being prevented It was the policy of the Medical Women's Federation to secure equal opportunities for women in all the hospitals and all the public services of the country Mr Ralph Straus proposed the toast of The London Association mentioning that he had begun his career as a medical student but had been turned into other paths on discovering that he would be unable to advertise himself until he had received a baronetcy ! Professor Lucas Keene in a happy response announced with what enjoyment she had recently discovered the new unit the decibel the term being a measure of sound She proceeded to assess on this basis the value of the various speeches delivered that evening and contrived in a whimsical way to pay a compliment to all who had spoken

A Port Health Officer's Day

The various duties of a port health officer in the Thames were picturesquely described by Dr Hugh Willoughby in a paper read before the Royal Society of Medicine (Section of Tropical Diseases) on May 4th The fact that immediately after his paper was read he had to return to the boarding launch somewhere off Gravesend with the prospect of inspecting a vessel arriving from a foreign port at 2 a m and another at 3 a m during his twenty four hour spell of duty added to the interest of his narrative Some 15 000 vessels enter the Port of London every year from across the sea together with 12 000 others engaged on coastwise traffic The jurisdiction of the authority extends from Teddington Lock to a point just beyond the Nore Lightship—a distance of seventy miles—and includes the mouth of the Medway The duties of those concerned with the sanitation of the port include the detection of any cases of infectious disease on arriving vessels the inspection of crew accommodation to ensure that certain hygienic standards are observed and the sampling and examination of food cargoes In 1931—the latest year for which statistics are complete—the number of passengers inspected on arrival was 65 079 and of crew 59 601 and the cases of infectious disease occurring on the vessel during the voyage or detected on arrival numbered 620 Those engaged on the work of inspection have at least six hours notice by flying signal or Morse of the approach of a vessel and are already aware of the epidemiological condition of the port from which she comes When a ship which has or has had infectious disease on board arrives in the Thames the passengers are no longer placed in quarantine but they are carefully examined—if it is small pox their condition as to vaccination is noted and vaccination is offered—and telegraphic notification is sent to the medical officer of health of the district to which they are going the onus of their further surveillance resting upon him If as in many cases they can give only a vague address of a bank or tourist agency they are handed *printed cards* to be returned under penalty every fourteen days When a surgeon is carried on board his certificate is accepted to cover all Europeans but not Asiatics who are always inspected on arrival whether a surgeon is carried or not when a surgeon is not carried everybody is examined Fortunately with the most serious cases like small pox the spots show on the wrists hands and forehead and are readily detected and it is generally possible to detect a man with bubo in the groin by watching him clamber over some obstacle Cases of infectious disease are landed at a hospital just beyond Gravesend which has a landing stage on the river Some difficulty arises with passengers who land at Marseilles and complete the journey by railway and Channel boat but this is met by requiring not a list of passengers disembarking but a list of those who have embarked To deal with a case of infectious disease on board ship Dr Willoughby said was less difficult than might be supposed owing to the way in which a ship is compartmented If the case was that of a fireman for example only the other firemen might be regarded as contacts and the firemen's quarters fumigated if a deck hand the deck hands quarters and if a passenger the cabin and the ship's hospital were really the only concern A card index is kept of every vessel showing

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school hours sitting Perchance there are factors other than simply being kept off his legs which improve a child's health when he goes to school There is the irritable child to whom his parents pay too much attention, there is the child who feeds at all hours or the child who for some reason or other is not quite tranquil in his home surroundings The school child has his pleasant routine of breakfast school, dinner school tea

Feeding—Advice given to a mother in respect of feeding is based in the first instance on the weight chart Unreliable weighing is misleading At each weighing it must be the same machine the same weigher, the same time of day If the weighing this week is just after a feed and next week just before a feed a fallacy occurs By the weight chart one can say if a healthy baby is underfed or overfed If a baby is on the breast the mother is advised as to her diet If the baby is bottle fed advice in respect of iron and vitamins is given The most reputable of the dried milks have now iron as an added constituent Fortunately for the unemployed fruit juice to supply the infant's needs need cost nothing either A mother need only run a teaspoon over the cut surface of a raw turnip carrot or apple when she is preparing the family dinner Fortunately also for the toddlers vegetables are cheap and can be given in soups and stews It may be that babies are kept on milk and milk only for too long At the twenty eighth week a baby can have two or three teaspoonfuls of a vegetable soup especially if cabbage and carrot are used At most baby clinics extra vitamin D can be had as ostelin at a penny a week Artificial sunlight is even more important here in the North than it is in the South as the real sunshine is less A puny or ailing bottle fed baby quickly responds to light treatment even though it is only a ten minutes exposure twice a week from a carbon arc lamp Some results are spectacular In the case of a breast fed baby a mother feeds it during the exposure The children over 7 months are given a piece of apple to suck at or to eat according to their age during the exposure

Fevers Tuberculosis and other Diseases—Most of us will have experienced the satisfaction of finding Koplik's spots two days before a measles rash appears and giving advice accordingly That and an early diagnosis of diphtheria from a positive throat swab are the chances a medical officer gets in baby clinics The incidence of infantile diarrhoea is infinitely less here since the dried milks have taken the place of dairy milk Cases of paralysis are quite often seen in baby clinics due to poliomyelitis missed in the acute stage or to a missed slight diphtheria As to tuberculosis prevention by the C G serum our hopes were raised some years ago only to be dashed again Frequently all we can do when there is a case of pulmonary tuberculosis in a household where there are small children is to reiterate each time the mother is seen the methods she can use to help the patient to keep his infection from spreading to the other members of the family particularly to children

Co ordination—In the case of a baby with a temperature or of a baby who looks too sick to be brought to a clinic the mother is advised to call in her own doctor When a child reaches the age of 5 the baby card is sent to the school medical officer when there is any abnormality When hospital treatment is required arrangements are made for a child to be admitted Use is also made of the tuberculosis and venereal diseases dispensaries and of the bacteriologist

It is evident then that the uses of child welfare centres are the preservation of health the prevention of disease, the treatment of such deficiency diseases as rickets, and the sending for treatment of other diseases either to the patient's own doctor or to hospital Many general medical practitioners make use of the centres for their poorer patients knowing often that a pound packet of a dried milk or of cocoa is more indicated than is a bottle of medicine Since the passing of the Local Government Act the onus of giving "extra nourishment" for children under 5 formerly borne by the Poor Law Department, is now borne by the Maternity and Child Welfare Department—I am etc,

GRACE H GIFFEN DUNDAS,
M Hillsborough May 3rd I R C S I D P H

Nomenclature of the Involuntary Nervous System

SIR—The article by Professors E D Telford and J B Stopford on lumbar sympathectomy, in the *Journal* of February 4th (p 173), brings into prominence the nomenclature of the abdominal and pelvic portions of the involuntary nervous system Such terms as "inter mesenteric plexus" and the so called "middle root of the pre-sacral nerves" for what Langley and Gaskell in animals have called respectively the "inferior mesenteric ganglion" and the "hypogastric nerve," are only confusing and not even widely recognized

Hugh Trumble, in the *Medical Journal of Australia* October 3rd, 1931, writes

> Turning now to consider the arrangement in human beings it is at once apparent that there is a close agreement with that in animals It would seem to be eminently desirable that someone with authority in the realms of anatomy should undertake a review of the nomenclature and he could scarcely do better than to adopt that used by those very devoted and painstaking physiological workers Langley and Gaskell"

Telford and Stopford surmise that because there is no deleterious effect of their operation a sympathetic supply remains to the pelvic organs Trumble has shown that total destruction of the sympathetic supply to the bladder prostate, etc "has apparently no very ill effects either in animals or in man Incontinence of urine does not follow nor is bladder or rectal sensation abolished—I am, etc,

Toowoomba Queensland March 16th A S FURNESS M B

First Operations

SIR—To claim priority or novelty in these days of a superabundant medical literature is admittedly difficult, and requires, if one is not prepared to undertake a very considerable and oft-times tedious search, a redoubtable audacity For this reason we should extend our sympathy to those who, in the best of faith, advance a claim for originality which further acquaintance with the subject proves to have been anticipated, perhaps on several occasions

The *Journal* of May 6th provides two instances where such anticipation has occurred Mr Alex Wells, in his article (p 778) on high gastric ulcer proposes partial gastrectomy below the level of the ulcer as "a new operation for this type of ulcer", but I would refer him to an article of my own on the later results of partial gastrectomy (*Lancet*, August, 1928), in which, after a discussion of the *modus operandi* of the operation in the treatment of ulceration, the following appears

> Ulcers of the cardiac end of the stomach are not so uncommon as is sometimes thought Where the ulcer is capable of local excision without danger this should be done combined immediately or subsequently with partial gastrectomy Where the ulcer cannot be excised removal of the pyloric end is nevertheless indicated This method of treatment has been adopted in several cases with complete relief of symptoms and definite radiographic evidence of cure of the ulcer

I make, of course no claim to originality in this statement, since the publication of this letter will doubtless bring forth others from surgeons with still earlier experience of the method

The second and perhaps more marked instance is Mr Watson Jones's description of "a new operation for the repair of defects in the vault of the skull by a pedicle bone graft" The description is that of the classical Müller König operation, of which a complete account will be found in Binnie's *Operative Surgery* (1916, p 12),

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together with a diagram which agrees very closely with that given in the present article This operation was extensively used by surgeons for the closure of skull defects during the war and while I am obviously completely unable to subscribe to Mr Jones's claim to novelty or priority I can as a result of my experience heartily endorse his statement that the method is a useful one although in many instances equally good results are obtained if the pedicle is abandoned and the graft of the outer table is inserted free —I am etc

London W 1 May 6th NORMAN C LAKE

Convalescent Homes and Vaccination

SIR —In the springtime it is natural for a doctor's thoughts to turn to the amelioration of the lot of ailing children Convalescent homes customarily make antecedent vaccination a condition of admission this I consider is not now necessary

All reasonable people know that vaccination protects from small pox but the great majority do not by repeated vaccination keep themselves protected against small pox Why? Because they realize that vaccination is an insurance proposition and that the individual risk of being exposed to serious small pox infection is infinitesimal and so they trust our excellent health service both to detect any small pox which may occur and to protect them from infection should occasion arise by vaccination etc The authorities of convalescent homes have not this trusting spirit despite the fact that the hospitals have it for hospitals do not make antecedent vaccination a condition of admission although those on waiting lists would have plenty of time in which to so occupy themselves

What does this antecedent vaccination condition entail on the children? As only about half the babies born are vaccinated in infancy about half the children for whom convalescent treatment is recommended are either vaccinated immediately prior to admission to the home or are refused admission The reason for insisting on the vaccination of the child must be either in the interest of the child population of the home or in the interest of the unvaccinated child If the first it is largely illusory The unvaccinated child cannot start small pox in the home unless he was already incubating the disease before arrival if he is incubating small pox vaccination will not stop the development of that disease unless performed within the first three days of the incubation period while the small pox will not prevent the vaccination from taking unless the child at the time of vaccination was already suffering from the prodromal symptoms of small-pox

A table from my 1923 Gloucester Small pox Hospital Report illustrates this

Small pox Cases Vaccinated after Catching the Disease

	No of Days between Vaccination and Appearance of Small pox Rash														Total	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Cases where vaccination took	—	—	—	—	—	2	1	2	—	3	—	2	1	—	—	11	16
Cases where it did not take ...	1	2	1	1	—	—	—	—	—	—	—	—	—	—	—	5	

Thus as a preventive of the introduction of small pox into a home successful vaccination cannot be relied on unless it is done a fortnight before admission but this time-condition is not enforced It appears then that the second reason accounts for the rule—that is that the homes require all their children to be vaccinated to guard them from the small pox to which they may be exposed during their stay of a month or less in the home Is this reasonable? What is the risk? We know that for a generation the risk of variola major has been negligible not primarily because of its infrequent introduction into this country but because of the adequate treatment of the introduced cases and their contacts made possible by the Infectious Diseases Notification Act of 1889 We know that variola minor prevalent in certain areas since 1923 now seems to be disappearing that it is a trivial disease for which vaccination has been refused by very large numbers of contacts and that the disease is of low infectivity—for example it must have been introduced year after year into our seaside resorts and yet it has never spread in them It seems erroneous to suppose that during a month's stay at a convalescent home the risk of contracting small pox of either form is a sufficient one to justify making the vaccination of all entrants obligatory When one realizes that these children are ailing and are admitted for the restoration of their health to subject them to another disease even though a mild one —vaccination—seems in the circumstances to be reprehensible

A paragraph of the 1929 Vaccination Order merits the attention of convalescent home authorities After stating that post vaccinal nervous disease occurs mainly among children of school age and adolescents who had never previously been vaccinated it concludes as follows

> The Minister is of opinion that in the present state of knowledge and so long as the small pox prevalent in this country retains its present mild character it is not generally expedient to press for the vaccination of persons of these ages who have not previously been vaccinated unless they have been in personal contact with a case of small pox or directly exposed to small pox infection

At the present time variola minor the mild small pox referred to is no longer prevalent the last variola major cases were the *Tuscania* ones of some years ago The chances of exposure to small pox infection in this country are indeed very remote Surely the time is opportune for the reconsideration of convalescent home policy in regard to vaccination I hope they will disregard the vaccinal condition of their little patients save in the presence of small pox —I am etc

R W JAMESON M R C S D P H
West Wickham April 29th Barrister-at Law

Aspiration of Empyema in Children

SIR —In the *Journal* of December 10th 1932 (p 1067) is written These two points—the question of air in the pleural cavity and the large masses of fibrin—are the main criticisms of the aspiration method I would add to these a major objection that has not been overlooked by the authors of the paper under review—prolonged delay in recovery from an advantageous localization of a general infection I can confidently relegate the two points mentioned to their proper place as difficulties associated with a method that is tedious because wanting in radical features

The alarming mortality revealed by the American Empyema Commission impelled surgeons to resort to closed or intermittent drainage by aspiration Immediately the mortality fell and the low figure of 4 per cent was obtained early but not sustained It cannot be claimed that a mortality now reported as running into double figures is satisfying The deaths are due to the risks attached to the slow design of the technique chosen Its temporizing feature involves the patient in a struggle against a condition demanding salutary relief The long stay in hospital invites cross and intercurrent infections which are so often fatal

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9 S WALES — PRACTICE BETWEEN £250—£300 P A IN beautifully situated village about 4 miles from important town Small panel Nice house (6 bedrooms) electric light gas and company's water Premium house and Practice, drugs, etc £1 950

10 EASTERN COUNTIES—PARTNERSHIP IN OLD ESTABLISHED mixed Practice in Town with population about 35,000 Cash receipts average £3 789 p a including panel over 3 100 Very nice house (4 bedrooms) garage, and small garden to rent. Premium one-third share 2 years purchase

11 N OF ENGLAND—OLD ESTABLISHED GOOD CLASS PRACTICE of about £2 000 in favourite Seaside Resort. Small Panel. Large modern residence for sale Scope for increase Prem £2 700

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14 ESSEX OLD ESTABLISHED ... ABOUT £600 P A ... in Suburban District. Panel 5(... al house (6 bedrooms) standing in own g ... garage and stabling for sale Scope for increas ... 0

15 S W OF ENGLAND — WELL-ESTABLISHED MIDDLE AND better class PRACTICE of between £1 200 and £1,300 p a. in Seaside Resort. Panel 500 Excellent and well situated large detached corner house with every modern convenience to rent on lease Very good Educational facilities Sport of all kinds including golf yachting etc Premium £2 000

I take it that the work of Drs E T McEnery and Joseph Brennemann was designed to show by comparison the superiority of aspiration over all other methods, including variations of that technique According to these authors aspiration has been on trial "for the last ten or fifteen years" and seems to have done its best It is a poor best The immediate effect of aspiration is relief and fall of temperature, but with re-accumulation there is relapse The conditions alternate for weeks The little patient is exhausted by an acute illness prolonged by a complication which we should welcome as an indication that the infection has been overcome and blockaded, yet we treat the situation with vacillation

At this point to justify my statement, I will describe the pathological processes involved as I understand them In the main, all forms of abscess, including empyema, conform to this description After aspiration the relief of tension within the cavity is brief and incomplete, and, the tension still being positive, pus formation does not cease but is actually excited by the tension, variable though it be This statement may not conform to modern views but I will supply ample evidence to support it I fear that it is taught that re-accumulation is the result of bacterial activity and all our efforts at cure are based on that supposition It is not true Admittedly, pus formation is originally excited by continued stimulation provided by the virus, but a point is reached at which this influence wanes and the abscess is said to be ripe Definite localization has been established It is impossible to imagine how cure could result otherwise Beyond this stage increase of size is due to the attempt on the part of the host to throw off the residue of a successful conflict An attempt at physiological repair is made by adding polymorphs and lymph to the mass These outpourings cease when the tension so caused is relieved by an exit being found or by the pus finding its way into yielding tissues In the former case no more pus is formed a serous discharge small and lessening in quantity taking its place In the latter pus production is merely suspended These things could not happen if prevailing beliefs were true In this description it is understood that secondary infection has been rigidly excluded from the draining abscess Unless the discharge remains serous reinfection has occurred which is usual but reprehensible *Hinc illae lachrimae!*

To prove the complete misconceptions held to-day in the pathology of abscess I will refer to the textbooks thereon They say that when an abscess ceases to spread a dense wall of cellular infiltration forms around it—the so-called pyogenic membrane' Why 'pyogenic' if it forms after the pus has arrived? This loose and utterly misleading description focuses the attention on the passive pus as the active influence to the exclusion of the potent energies of the granulation tissue which has been struggling all along to clean up a messy conflict Of course what happens is that granulation tissue forms first and pus exudes from its surface This infiltration tissue is then rightly called "pyogenic" It is not a membrane I think we can now agree on clinical and pathological grounds that the formation of granulation tissue is the first step towards cure This conception must give us as surgeons great heart When granulation tissue is found it is the time to strike and cut to the core, but not to puncture except to find the way

My ground is now clear for a complaint that thoracotomy has not had a fair go In defending it, I do not forget that a proof puncture is the first essential, and in very young infants one aspiration has been known to be followed by cure The conclusion to-day is that thoracotomy with or without rib resection should only be resorted to when there is no other way out In these circumstances the open operation must have a place in the treatment of empyema It is therefore our bounden duty to perform it under proper safeguards Our great and only concern is secondary infection It is an axiom wider than affairs surgical that evacuation must be attended by adequate protection to be safe It is evident that the methods in use to-day are not safe, and in that case no surgeon has a right to perform the operation

It is recorded by Drs McEnery and Brennemann, and it is common knowledge, that pus evacuated through rupture into a bronchus results in rapid cure Can we learn nothing from this?

The explanation is simple The empyema is drained through a tube (the bronchus) that is bactericidal—in other words, protective against secondary infection Surely we can provide an exit for the pus through a wound on the same principle—that it shall be received by a medium that is also bactericidal and therefore protective But we must be watchful as to its efficacy from hour to hour If that is too much for the busy practitioner, he must train someone to do it for him By adopting the open method of drainage we respond axiomatically to a surgical emergency The effect on the patient is dramatic All constitutional symptoms rapidly abate, and if our precautions have been adequate there will be no relapses, but increase in appetite and well being

I could write a lot on the prevailing fear of collapse of the lung on opening the chest wall As a matter of fact it expands and empties the pleural cavity of pus Adhesions, which only form after secondary infection or prolonged and repeated aspirations bind the lung down and in turn contract the chest wall, but these adhesions take weeks to form By the open method the wound would have closed and the abscess healed long before this Treatment by irrigation is the commonest cause of this disability—I am, etc,

A C F HALFORD, M D Melb,
F R A C S

Brisbane Australia

Hernia and Appendicectomy

SIR—It was with great pleasure that I read in your issue of April 29th (p 763) the protest of Mr F A R Stammers at the repetition of what I too believe to be the unfounded idea that the muscle splitting incision for the operation of appendicectomy has any causal connexion with any subsequent appearance of an inguinal hernia It is my practice to use this incision for appendicectomy in any case in which the diagnosis seems to be reasonably certain, and in which no special difficulties are looked for from adhesions or other cause I have carefully looked for an undue proportion of inguinal hernias after many hundreds of these operations, but without result It is, in my view, unfortunate that an attempt should be made to discredit what I believe to be the best incision for straightforward cases, and on grounds which are purely theoretical—I am, etc,

C A MOORE

Clifton May 1st

Persistent Occipito-Posterior Cases

SIR—Professor Bjornson's article in the *Journal* of February 25th raises once more the question of the treatment of persistent occipito-posterior positions of the vertex in labour I should like to question the wisdom and the advisability of his treatment of these cases, and at the same time put forward a method which I have found uniformly simple and successful Professor Bjornson's paper is illustrated by a figure which (Fig 1) is gravely misleading It shows the foetal head in the pelvic cavity together with the whole thickness of the operator's wrist and forearm This is impossible I am stressing this inaccuracy because to do as Professor Bjornson writes means that the foetal head has to be pushed up out of

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22 LONDON E.C.—PARTNERSHIP IN *OLD ESTABLISHED PRAC*tice in the City. Receipts average about £1 650 p.a., including appointments and panel worth over £500 p.a. Premium one half share £1 000.

23 NORTH OF ENGLAND.—INLAND HEALTH RESORT.—NON-dispensing PRACTICE of about £1 000 p.a. Small select panel. House (7 bedrooms) with large garden for sale. Premium—Practice—£750.

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31 LONDON W.—GOOD MIDDLE-CLASS PRACTICE £400 P.A. in suburb within easy access of the West End. Panel over 100. Attractive double-fronted house with nice garden for sale. Scope for increase. Premium 1½ years purchase.

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34 HOME COUNTIES.—OPHTHALMIC PRACTICE BETWEEN £300 and £400 p.a. in desirable Residential Town, under 15 miles from London. Good detached house (4 bedrooms) with large garden for sale. Good reasons for plenty of scope for increase. Premium £300.

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the pelvis till it is free above the brim We should then get a figure as shown (Fig 2) and this makes it obvious that the whole hand and wrist is inside the uterus and the operator s arm up to mid forearm is inside the vagina In

FIG 1

FIG 2.

my opinion this is a most undesirable procedure owing to the great risk of infecting the uterus Inserting the whole hand and part of the forearm into the interior of the uterus is one of the last things one ever wishes to do and the method I am about to describe renders it wholly unnecessary

The foetal head can only be turned when it is either above the brim or else completely in the pelvic cavity it cannot be turned whilst still midway through the brim There are those cases where the liquor has drained away and the uterus has retracted down on the foetus where it is impossible to push the foetal head above the brim Professor Bjornson mentions this class of case and advises turning the head only with the hand in the vagina An assistant then fixes the head in the new position by supra pubic pressure until forceps can be applied He states that this procedure is not over difficult and can be carried out by anyone possessed of even ordinary manual dexterity It would seem natural to ask why he does not adopt this simple method in preference to passing the whole hand and wrist into the uterus as he describes Even his alternative method is only applicable where the head is in the pelvic cavity and would be impossible where the head is fixed in the brim and the uterus has firmly retracted down on the foetus

The method I have invariably and successfully adopted for the past five years is the same whether the head has entered the pelvic cavity or is still half way through the brim when progress has been arrested and it is applicable whether the uterus is firmly retracted on the foetus or whether it allows the head to be pushed up out of the brim before turning It is rotation by means of Kielland s forceps Professor Bjornson summarily dismisses rotation by the forceps and I agree that the pelvic curve of the ordinary forceps makes them unsuitable for the purpose I we apply the ordinary forceps to the posterior occiput with the pelvic curve looking anteriorly after rotation the pelvic curve looks posteriorly and the handles are pressed strongly into the perineum and the forceps have to be removed and reapplied before extraction can be carried out With Kielland s forceps this is not necessary as o begin with the forceps can be applied to the posterior occiput *with the pelvic curve looking posteriorly* In this position they are in their correct anatomical relation to the foetal head and after rotation extraction can be carried out without more ado Only the one application is therefore necessary and only the fingers in the vagina are required exactly as for the application of the ordinary forceps to the head in the simple anterior position

Kielland s forceps are just as easy to apply with the pelvic curve looking posteriorly as they are to apply with the pelvic curve looking anteriorly No hand is ever required to be inserted into the uterus and all manipulations are reduced to the minimum and the risk of sepsis thereby brought to the same level as for a simple forceps operation In Kielland s forceps the fenestrated portion of the blade lies below the level of the handles and the pelvic curve is slight In the ordinary forceps the pelvic curve is pronounced and carries the tip of the blade three inches above the horizontal The cephalic curve is similar in both instruments The accompanying sketch shows the essential difference (Fig 3) There is no risk to the

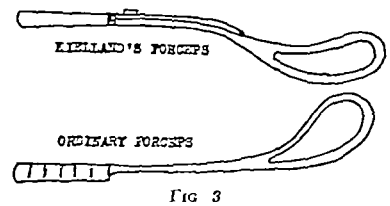

FIG 3

foetus in rotating the head by means of the forceps as the head will easily turn more than 180 degrees neither is there risk to the mother if one thing is borne in mind—*never rotate whilst making traction*

When traction is applied the pelvic structures are fixed to the foetal head and if rotation is forcibly performed the bladder or vagina may be torn from its attachments These were the injuries formerly reported after rotation by the forceps and which brought discredit on the method They were due to an insufficient appreciation of the mechanics involved and not to any fault of the principle I personally always slightly push up the foetal head to loosen its grip on the pelvic walls and have never experienced difficulty nor seen untoward results If the head be eased in this way then rotation requires no force whatever In my opinion it is infinitely easier to rotate the foetal head with forceps than to do so with the hand Indeed every authority acknowledges there are times when the latter fails completely I have discarded Professor Kielland s original method of applying the anterior blade by passing it up behind the symphysis pubis with its cephalic curve looking anteriorly and then obtaining the cephalic apposition by turning the blade on its long axis It is easier to slip the blades round the head until they come to lie against its sides

In conclusion I suggest that the solution of the bogy of the persistent occipito posterior is the application of Kielland s forceps in the reverse position —I am etc

C L SOMERVILLE M D
Surgeon Leicester and Leicestershire Maternity Hospital
Leicester

Treatment of Tuberculosis

SIR —In your issue of April 29th (p 731) you published an article by Dr L S T Burrell on *Principles of Treatment in Tuberculosis* As this was presumably meant to be a guide to the family doctor in his attitude towards tuberculosis in private patients I feel that I cannot allow some of the statements made and the advice given to go unchallenged

Under the heading *Pretuberculous Stage* the impression is given that actual treatment for tuberculosis is rarely necessary in children even if they have been house contacts to a sputum positive case of tuberculosis I am prepared to show that in an unduly high proportion of cases of sputum positive tuberculosis in young adults there has been exposure to tuberculous infection in the home during the first fifteen years of life No further justification is necessary for the policy of endeavouring to prevent this excessive morbidity in young adult life by active treatment during childhood when the disease is localized in the lymphatic system—superficial thoracic or mesenteric With reference to non-clinical pulmonary tuberculosis what use does this term serve? Tuberculosis

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2 PARTNERSHIP—Residential Town, within easy reach of London—A one third share is for disposal owing to the retirement of the senior of three Partners in a well established mixed class Practice Gross cash receipts for the last 12 months £4 400 Panel of 2 500 Fees 3/6 to 21/ Midwifery from £5 5s Very nice house available Ingoing Partner should be experienced, accustomed to better class work and able to [illegible] cience will be given to one holding

3 PARTNE[illegible] OF LONDON—In a pleasant and rap[illegible]rb the half share is offered owing to the retirement of the Junior Partner, in a well established and increasing Practice having good future prospects Gross cash receipts for last 12 months about £1 600 Panel of 1 600 Appt worth £140 not included in receipts Very nice house with 2 reception 5 bedrooms and dressing room 2 maids rooms and usual offices Large garden with tennis lawn Price for freehold £1,700 Premium 2 years purchase

4 LONDON NORTH WEST — OUTLYING RESIDENTIAL SUBURB—PRACTICE is situated in a very pleasant and rapidly developing district where a big Estate is being opened up of good class residents Established 6 years, and held by Vendor (who is only leaving to join a friend in Partnership) for 2½ years Gross cash receipts for immediate past 12 months nearly £750 Selected panel of 100 Fees 3/6 to 7/6 Midwifery 7 to 10 guineas Detached corner house with 2 reception 4 bedrooms etc Garden Garage Price freehold £2 150 £1 500 on mortgage Premium £1,100 Sport of all kinds, and good schools Hospital and Vendor on staff

5 MIDDLESEX—In a very pleasant new and rapidly developing district within 15 miles of London, PRACTICE established by Vendor about 18 months ago is for disposal owing to ill health Cash receipts for past 12 months £360, including panel 120 Good house with large garden garage etc Price freehold £1,728 (practically all on mortgage) Premium one years purchase Exceptionally good prospects

6 CHELSEA AREA—LOCK UP SURGERY—Old established and averaging about £450 p a, including panel of 140 Hours 9 30 to 12 and 5 to 7 p m Consultations 2/6 to 10/6 Very little visiting at 5 upwards Rent of two rooms £84 p a Total expenses just over £100 p a Premium £650 Ill health reason for sale

7 PARTNERSHIP—In a well populated pleasant South Eastern suburb within ten miles of London the half share of an old established mixed class Practice is for disposal owing to the retirement of the junior partner Held by the remaining partner 30 years Cash receipts average £2 765 p a including panel of 1 800 and appts worth £150 Very little midwifery Pleasant semi-detached corner house with ample accommodation garden Price leasehold (over 900 years, at ground rent of £7 p a) £1,050 Premium 2 years purchase Scottish graduate preferred

8 MANCHESTER—Old established middle and working class PRACTICE averaging about £1 300 p a including panel of nearly 1 800 Visits from 3/6 Moderate expenses Suitable house with 3 bedrooms and 3 good sized attics, etc Price for freehold £1 150 Premium 1½ years purchase

9 NORTH EAST COAST—FAVOURITE TOWN—Old established good mixed general Practice offering considerable scope for increase Gross cash receipts for the past twelve months approximately £1 800 Selected panel of 100 Fees 5/ to 7/6 Very little midwifery Well situated house with 3 reception 5 to 6 bedrooms etc and separate professional rooms Electric light Garage Price £2 500 large part on mortgage Good opportunity for Eye work and Ear Nose and Throat work if desired Sport of all kinds and excellent schools Premium £2 800

10 MANCHESTER—Old-established middle and working-class PRACTICE producing for the last twelve months about £650, including panel of 790 Fees from 3/6 Convenient house with 2 reception 4 to 5 bedrooms bathroom etc Rent on lease £60 Premium £950 to include furniture

11 LONDON NORTH WEST — Middle class PRACTICE in new and developing district producing last year £400 and this year at the rate of about £600 Panel of 230 Fees 2/6 and 3/6 Visits from 5/ Six roomed house with bathroom electric light Garage Garden Price for freehold £1,000 £850 on mortgage Prem £650

12 LONDON SOUTH WEST—Old-established middle and working class PRACTICE, producing about £1,100 p a. including panel of about 1 150 Visits 3/6 to 5/ Suitable corner house with 2 reception 4 bedrooms bathroom and separate professional accommodation Can be rented on lease Premium £1 750 Easily worked and offering very good scope for increase

13 CENTRAL LONDON—Middle and better class PRACTICE, averaging for the last two years about £500 p a including small panel of 180 Fees 3/6 to 21/ Professional accommodation can be rented at £200 p a Premium £300 to include furniture drugs instruments etc

14 NORTH LONDON—Middle and working-class PRACTICE, in well populated residential district, averaging about £1 300 p a Panel of about 1 300 Appts consist of Medical Officer to two Missions and these will only transfer to a suitable successor of evangelical principles House can be rented also Branch Surgery

15 SOUTH WEST OF ENGLAND—In a thriving and pleasant seaport town with beautiful surrounding country, a well-established increasing PRACTICE worth last year over £1,100 including panel producing £286 and appts £200 Visits 3/6 to 21/ Midwifery practically refused Good house in excellent position with ample accommodation small garden and garage Price freehold £2,100 or would be let on lease at £127 p a Premium £2 000 or near offer

16 SOUTH EAST LONDON—Good middle and working-class PRACTICE, producing last twelve months nearly £950 Panel of 986 Suitable house with 2 reception 4 to 5 bedrooms, etc Rent on lease £70 p.a. Prem to include drugs etc and surgery fittings and furn. £1 450

17 HOME COUNTIES—ASSISTANTSHIP, with view to Partnership is offered in a better class Practice in residential town Ingoing partner must have experience of general Practice and be able to undertake major surgery and preferably hold a Fellowship

18 NORTH WALES—Old established middle and working-class PRACTICE averaging for the last three years over £1 700, including panel of about 1 300 Fees from 2/6 Visits from 3/6 with medicine extra Suitable house with good professional accommodation, Electric light Garage for two cars Small garden Rent on lease £100 p a Premium £2 500 £1 700 down, balance by instalments Good sport, etc A knowledge of Welsh is not necessary

19 RIVIERA—Old established PRACTICE the receipts from which have averaged over £1 600 p a but have decreased recently owing to Vendor's ill health Very good prospects of extension Fees from £1 1s Very easy work Suitable flat can be rented at £100 p a. Premium £4 000

20 MIDLANDS—Old established middle and better-class PRACTICE in clean and attractive manufacturing city Cash receipts average over £1 600 p a including appt worth £165 (transferable) and panel of 1 220 Visits 5/ to 2 gns Midwifery discouraged fees 5 to 15 gns Exceptionally good house, in its own grounds with ample accommodation fitted with every labour saving device and economically run Situated in the best residential part A cottage in the groun[illegible] rice freehold £5 000 (£2 500 on mortgage [illegible]e for active man

21 WESTERN [illegible] PRACTICE producing £600 p a including panel of nearly 600 Suitable house available Premium 1½ years purchase

22 LANCS—Well established mixed class PRACTICE, producing for the last 12 months £725 Panel of 1 055 Fees from 3/6 House contains 3 reception 5 bedrooms etc Rent on lease £85 p.a. Premium 1½ years purchase

23 LANCS — LARGE TOWN — Old-established upper and middle-class PRACTICE situated in purely residential district and averaging about £1,700 p a including appt of £130 and panel of 700. [illegible]ery little midwifery at 5 to 10 guineas. [illegible] and well built house, ideally situated having [illegible] surgery waiting room and dispensary 3 recepti[illegible] Rent on lease £120. Premium £2 500. Good [illegible]

24 EGYP[illegible] PRACTICE, producing about £960 p.a. and offering good scope for increase Fees 10/6 to 2 guineas. Excellent accommodation can be rented at £16 10s monthly Premium [illegible] run bottles instruments etc. £2 000

25 [illegible] East Town and Pleasure Resort (pop [illegible] and increasing PRACTICE amidst [illegible], averaging £1 644 p.a, including [illegible] appt worth £70 and panel of 1 200 Visits 5/ to 21/ medicine extra Good house (5 bedrooms etc) with garden and garage Price (leasehold of about 60 years to run ground rent £3 p.a) £1,800 £1 200 on mortgage Educational facilities and sport A knowledge of surgery desirable is definite scope for this work

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is either active or quiescent, in the former case treatment is required. As pleurisy with effusion is included under this heading it would seem that non-clinical tuberculosis must mean non-sputum-positive pulmonary tuberculosis. If this is so then Dr. Burrell is teaching that clinical tuberculosis commences when tubercle bacilli appear in the sputum—a sorry postulate for any clinician to adopt, and definitely a retrograde teaching.

The final point to which I must allude is the prominence given to Swiss treatment in the advice Dr. Burrell admits that in Swiss sanatoriums the patient is apt to live carelessly, that sanatorium discipline on the whole is bad, that post-tuberculous neurasthenia is more common in Swiss treated than in English-treated cases, and, finally, that recovery is no quicker in Switzerland, and costs more. After these admissions he still advises Swiss treatment, particularly in early and hopeful cases. There are many excellently managed private sanatoriums in Britain in charge of capable tuberculosis physicians, and I wish to make it quite clear that no patient has anything to gain by leaving Britain in order to have tuberculosis effectively treated. In fairness to our British sanatoriums, however, practitioners should not take Dr. Burrell's advice and send their early and hopeful cases to Switzerland and the other cases, plus the Swiss-treated failures, to British sanatoriums. It is the duty of the family doctor to advise the best treatment for his patient, and not to pander to any popular ideas his patient may have on Swiss treatment. Such popular ideas are, after all, purely the result of intensive advertising to which Dr. Burrell is now adding his quota. Any psychological reactions caused by advocating what is best for the patient rather than what he wants may safely be left to a capable English sanatorium physician to deal with.—I am, etc.,

H. MIDGELEY TURNER,
Clinical Tuberculosis Officer to the City of Sheffield.

May 2nd

Raw and Pasteurized Milk

SIR,—I have read with interest the leading article in your issue of May 6th (p. 792), 'Milk and Pasteurization', giving a review of Bulletin 5 of the Hannah Dairy Research Institute, especially as I find comments in Bulletin 5 on a paper of my own (*Proc. Roy. Soc. Med.* March, 1932). It is on these comments that I, in turn, would also comment.

The authors of Bulletin 5 state:

1. That the children I wrote about were on high grade raw milk: this is imagination on their part, as though some were on Grade A (T.T.) the great majority were on ungraded milk which was produced from a farm medically inspected from time to time, and from which samples were tested in laboratories at frequent intervals for tubercle bacilli, etc. The 750 boys I refer to in that paper were on this milk continuously for six and a half years, and incidentally no case of tuberculosis occurred in any boy after admission during that time. It was observation of the amazing change in the teeth of these children which prompted my investigation, which in itself is a comparison.

2. They also state that no comparable data were given of the effects of raw and pasteurized milk respectively on teeth. This also is incorrect for the following reasons: (*a*) In my Tables I. and VI. which show the incidence of caries in second permanent molars (the specific tooth developing and erupting in those age groups) is found an exact comparison of the incidence of caries in those teeth with raw and pasteurized milk respectively when commenced at such late ages as from 8½ to 10 years. It shows a ratio of eleven carious teeth with raw milk to fifty-nine with pasteurized milk, in spite of an average age difference of 1¼ years in favour of pasteurized milk. (*b*) My Tables II. and VI. give the ratio of caries in these same teeth as eleven carious teeth with raw milk to seventy-seven with pasteurized milk plus cod-liver oil, though as I state the seventy-seven is not meticulously accurate on account of a slight age difference of 1¼ years in favour of raw milk. (*c*) There is the strongest of inferential evidence in the comparison of my children brought up (from their earliest years) on raw milk and having no caries (Tables III. and in effect Table IV.) with those of the rest of the United Kingdom, most of whom are presumably brought up on pasteurized or sterilized milk, and of whom 90 to 95 per cent. show caries with an average of 6·8 carious teeth per head at age 5, as Dr. Wheatley showed.

I can only conclude that the commentators, since they were not dental surgeons, for whom my paper was primarily written and so contains technical dental terms, have misunderstood or missed the comparisons which are clear enough to dental surgeons, as they have often commented on them. Indeed, a partial reproduction of two of my tables in Bulletin 5 omits the essential point on which comparison rests. The above no doubt explains the rather scathing remarks made by the Hannah Dairy Research Institute on Middleburgh's work, which they also refer to, he, being a dental surgeon, appreciated the comparisons at once, and was perfectly correct in drawing such inferences and making such statements as he did. I may add that a considerable amount of evidence confirmatory of my thesis has come to hand since my original paper was written, and some has been published also by dental research workers in the United States of America. No one, so far as I know, has ever suggested that one should rely solely on raw milk after weaning for the proper development of the bones and teeth of the growing child, but only that it should form *part of the diet*, the remainder, of course, should be of an adequate and suitable nature, and notably so from the time when the deciduous cheek teeth erupt. I notice that Bulletin 5 rather decries the value of the work of McCandlish and Black on calves, without taking into account the possibility that those calves fed on pasteurized milk may thereby have had their resistance so lowered as to render them more subject to infection, and died on that account. As far as teeth are concerned, the alteration in the equilibrium between the calcium and phosphate ions on pasteurization may be an important factor in the chemical composition and physical properties of enamel.

As I have at no time advocated the use of raw milk other than Certified or Grade A (T.T.) and (in later papers) from double intradermally tested animals, I should be grateful for information concerning any overwhelming evidence in favour of pasteurization in the case of cleanly produced milks from healthy animals and milkers—such, for instance, as in the case of certified milk—as this too, of course, is part of the "liquid milk supply".—I am, etc.,

EVELYN SPRAWSON.

The London Hospital Dental School, E.1, May 6th.

Surgery in the Treatment of Haematemesis

SIR,—I have read with interest and profit Professor D. P. D. Wilkie's article in your current issue upon the indications for surgery in peptic ulcer. In it he quotes certain of my figures on the mortality from haematemesis (*Lancet*, July 23rd, 1927, and October 1st, 1932).

The analysis of 578 cases admitted to the medical wards of the General Hospital, Birmingham, because of haematemesis during the period 1902–31 showed a total mortality of 10·7 per cent. The males had a death rate of 16·2 per cent. and the females 6·8 per cent., there were negligible differences between acute and chronic cases. In six cases operation was performed for the treatment of active haemorrhage after medical treatment had failed. In the earlier series (1902–25) four patients had a gastroenterostomy performed—2 died, in the later series (1926–31) two cases were operated upon after a blood transfusion. In the first a small gastric ulcer was found and invaginated,

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bleeding was not controlled and the patient died at the necropsy although there was not any external thickening of the stomach a small ulcer was with difficulty found and the bleeding vessel seen this was not the ulcer with which the surgeon had dealt In the second case a small thickened duodenal ulcer was invaginated the bleeding continued and the patient died At the necropsy a second ulcer was found it was a small acute superficial duodenal ulcer with a branch of the gastro-duodenal ulcer exposed in its base

These instances are few to the surgeon they must be discouraging more especially as he no longer regards a simple gastro enterostomy as useful The bleeding point may be elusive and the patient's state too precarious to allow of a minute search even in the post mortem room the finding of the bleeding ulcer may be most difficult As a physician my own practice is not to be tardy in seeking surgical co-operation—a co operation which has so far led to a continuance of conservative treatment often against my own wishes I am of opinion that the only invariable indication for surgical intervention is in the rare case in which haematemesis is followed by the presence of occult blood in the stools for more than a few weeks apart from the radical treatment of the bleeding point the question of malignancy must be decided —I am etc

Birmingham May 6th ERNEST BULMER

Aetiology of Acute Rheumatism

SIR —It is rather disappointing to note that Dr Bernard Schlesinger in his article on acute rheumatism in the *Journal* of April 22nd (p 697) makes no reference to the great difference in the geographical distribution of the disease Generally speaking neither the disease nor its various manifestations occur in the Tropics at or about sea level I think it is quite certain that some years ago rheumatic fever was absent in the Tropics though now it seems possible that a few real cases may be found here and there which is a change of some import but the difference between the distribution of the disease in the temperate climates and the Tropics is so great that it is quite clear that there is some factor common in the one area which is absent or very rare in the other and that the discovery of this factor should mean the discovery of the cause of rheumatic fever

There are certain statements in Dr Schlesinger's article which I hope I may be allowed to criticize from the point of view of geographical distribution He suggests that the old idea of a specific infection may have to be modified but what does the word 'specific' mean? Is specificity in one climate different from what it is in another and does not a difference in geographical distribution suggest specificity? It has not yet been proved that living organisms do not breed true Haemolytic streptococci are not absent from the Tropics though they seem to clear up from the throat of rheumatic cases that are sent from New York to Porto Rico Nor is there reason to think that allergy is different in the Tropics from what it is in temperate climates Dr Schlesinger says that the nervous strain of city life must have some effect but why should it not affect the children of any class in the large cities of the Tropics? And again he says that race and heredity also play a considerable part but on what evidence? The late Dr Carey Coombs (*Rheumatic Heart Disease* 1924 p 17) wrote that there is need for statistical inquiry into the relative liability of the various races of mankind I do not think that any statistical inquiry has been made since that book was written It is place not race that makes the difference

I quite agree that improper sanitation is at fault In fact this is my point and is I believe the clue to the cause of the disease to be obtained from tropical experience Finding that the temperate climate rat flea *Ceratophyllus fasciatus* was absent from the Tropics I was led to its host—the common sewer or brown rat *R norvegicus* which is not a natural denizen of the Tropics—and from this to the sewer—its common habitation—and to the broken drain There are very few places in the Tropics which have sewers and those places which have them are among those in which can be found a few cases of rheumatic fever I suggest that the broken drain is possibly the commonest environment of rheumatic fever and that it provides the cause of the first throat from which may be spread droplet infection The change of opinion from a non haemolytic to a haemolytic streptococcus does not shake one's opinion in an organism but only as to whether a streptococcus in the throat can account for the whole story Something more seems to be wanted

As regards rheumatoid arthritis I think that the geographical incidence is similar to that of rheumatic fever and that just as transfer of the patient to a tropical climate has been shown to have a remarkably beneficial result in rheumatic fever so I am confident would it be found that a visit to the Tropics would be the best treatment for a patient suffering from rheumatoid arthritis —I am etc

J TERTIUS CLARKE
Late Health Officer and Medical Officer Perak F M S

Harrow May 1st

Typhoid Fever in 1931 2

SIR —The annotation under the above heading in your last issue prompts me to beg a little more of your space particularly as the contents support the views expressed in the letter you were good enough to publish for me last January The general consensus of opinion is that the recent outbreak in Malton was due to a contaminated water supply whereas I hold it occurred as a natural sequence of events Typhoid broke out in Denby Dale before the epidemic appeared in Malton and later it occurred in other districts in Yorkshire

The annotation states that in 1932 a remarkable increase of typhoid occurred in many countries and that a sort of typhoid pandemic affected the Balkan States and Eastern Europe at the end of the year Particular note should be taken of the fact that the pandemic occurred at the same time as the districts in Yorkshire were attacked therefore would it not be more logical to infer that the increase in 1932 was due to a common factor rather than to contaminated water supplies in the various places affected?

The increase was predicted several months ago and in my opinion typhoid appears to be no more than a form of so-called influenza It is difficult to account for water being free in 1931 contaminated in 1932 and still contaminated despite the fact that the first epidemic of the new series has vanished and the second has not yet begun —I am etc

London W 1 May 5th J E R MCDONAGH

The Prince of Wales went to the City on Tuesday May 9th to visit the new offices of King Edward's Hospital Fund for London at 10 Old Jewry As President of the Fund His Royal Highness first took the chair at a meeting of the Management Committee and conducted the business through a long agenda which included the preparation for the annual meeting to be held at St James's Palace on May 26th He afterwards went round the new offices inspected the different departments and talked with various members of the staff The whole visit lasted about an hour and a half

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Obituary

PRIESTLEY SMITH, LL D, F R C S

Emeritus Professor of Ophthalmology in the University of Birmingham

Professor Priestley Smith the eminent ophthalmologist, died on April 30th, in his eighty-eighth year, at Edgbaston, where he had been living in retirement The last of many honours came to him only a few weeks ago—the Gullstrand gold medal of the Swedish Medical Society, for his pioneer contributions to our knowledge of glaucoma Apart from that disease the name of Priestley Smith will long be remembered for his researches on the growth of the crystalline lens, for his studies of visual function by means of perimetry, and for his advocacy of the educative treatment of squint

Joseph Priestley Smith was born at Edgbaston on October 29th, 1845, his father, Brooke Smith, had been an active member of the old Birmingham Town Council He left school with the intention of becoming an engineer, but after three or four years medicine claimed him The apprenticeship to mechanical engineering stood him in good stead, for he entered upon medical study with a working knowledge of mechanics and a familiarity with the properties of materials Towards the end of his course at Queen's Hospital, Birmingham, the Franco German war began, and he went out as a dresser under the Red Cross, serving with a field hospital near Cologne In 1871 he obtained the M R C S diploma, and was for two years house-surgeon at the Birmingham and Midland Eye Hospital Then after a period as clinical assistant at Moorfields he went back to Birmingham in 1874 as ophthalmic surgeon to the Queen's Hospital, this appointment he held for thirty years during which time his reputation steadily grew and the name of Priestley Smith became known far beyond the British Isles In 1878 he won the Jacksonian prize of the Royal College of Surgeons of England for his dissertation on glaucoma, its causes, symptoms pathology and treatment ten years later the council of the College appointed him Erasmus Wilson lecturer and in 1890 he was awarded jointly with W A Bruley the Middlemore prize in ophthalmology of the British Medical Association At the Annual Meeting of the Association in 1887 he was vice president of the Section of Ophthalmology and in 1892 president In 1895 he was appointed lecturer in diseases of the eye at the Queen's Faculty of Medicine in Mason College, and in 1900 on the incorporation of the University of Birmingham by Royal Charter he became professor of ophthalmology In the following year the university conferred on him the degrees of M Sc M B, and B Ch, and he was elected a Fellow of the Royal College of Surgeons of England

In 1898 Priestley Smith delivered the Bowman Lecture before the Ophthalmological Society of the United Kingdom on the aetiology and educative treatment of convergent strabismus In 1904 he received the first Nettleship gold medal and a few months later he was elected president of the Ophthalmological Society The Royal College of Surgeons in Ireland made him an honorary Fellow and the Royal Medical Society of Vienna an honorary member On his retirement from active practice in 1916 the University of Birmingham conferred on him the honorary degree of LL D, and he was entertained to dinner by a large number of his former house-surgeons at the Queen's Hospital In 1927 the American Ophthalmological Society at its congress in Quebec unanimously awarded him the Lucian Howe medal and commissioned Dr W H Wilder of Chicago to present it personally This medal (conferred only thrice before—on Kohler, Fuchs, and Edward Jackson) is the highest honour the society can bestow Dr Wilder visited Birmingham on August 18th of that year and spent some time with Priestley Smith, examining his wonderful injections of the eye of the ox, and studying his apparatus for investigating the circulation of the eye At the close of 1928 Priestley Smith was presented with his portrait in oils as a memento of his long association with Queen's Hospital, Birmingham This portrait, an excellent likeness by Harold Speed, now hangs in the board room of the hospital

Priestley Smith was at one time editor of the old *Ophthalmic Review* and many of his important researches are recorded in the volumes of the *British Journal of Ophthalmology* His Jacksonian essay of 1878, on glaucoma was published, soon after delivery, in book form, with illustrations reproduced from the author's original drawings Some twenty years later he contributed the section on the pathogenesis, symptoms, cause, and treatment of glaucoma to Norris and Oliver's *System of Diseases of the Eye*

[The photograph reproduced is by H J Whitlock and Sons Ltd Birmingham]

ALEXANDER DON, M A, M B, C M F R C S Ed

Consulting Surgeon, Ashford Hospital late Surgeon Dundee Royal Infirmary

Mr Alexander Don, who died at Ashford, Kent, on April 16th, was born at Strathdon in 1863, and received his early education at the Old Grammar School, Aberdeen He graduated M A at Aberdeen University (King's College) in 1884, and M B, C M with honours in 1894, having won the Fife Jamieson gold medal in anatomy and the Shepherd gold medal in surgery He was elected a Fellow of the Royal College of Surgeons of Edinburgh after examination in 1900 He held for some years the posts of assistant professor of anatomy and assistant professor of surgery at Aberdeen University, and was also private assistant to the late Sir Alexander Ogston From 1905 to the outbreak of the war he was lecturer on clinical surgery at St Andrews University and honorary surgeon to the Dundee Royal Infirmary Soon after mobilization in 1914 he proceeded to France with the Highland Division as surgeon to the casualty clearing station, which he commanded during 1915 and 1916 He served as officer in charge of various general hospitals in France and Macedonia till 1918, when he was demobilized with the rank of major In 1924 he went to Ashford, Kent where his son was already in practice, and was appointed senior surgeon on the Ashford Hospital staff, and consultant to the hospital in 1928

Mr A B Beresford Jones, surgeon to the Kent and Canterbury Hospital, writes Though he had only been in Kent for nine years, Alexander Don brought a reputation with him, from the war area and from his native shire of Aberdeen which led us to expect an interesting and progressive surgeon and colleague—a reputation in which we were in no way disappointed His skill and charm of manner and kindness will be greatly missed by all in the neighbourhood of Ashford, where he soon built up and carried on an extensive surgical practice As a member of the Kent Association of Surgeons he was much appreciated by his colleagues, by whom he was elected presi

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dent in 1929–31 He was known to them all as a skilful operator with many new ideas based on sound knowledge and experience and one who always had a convincing reason for departures from standard practice His recent enthusiasm for percaine as a spinal anaesthetic led him to depart from usual methods with most encouraging results He was much interested in the use of cinematography for demonstrating surgical operative technique Alexander Don stimulated the energies of the Ashford Division of the British Medical Association shortly after he came to the town and it was entirely his efforts that reorganized its activities—evidenced by many well attended and appreciated meetings He loved country life was a keen golfer and many days during his holidays were spent trout fishing on the rivers of the Scottish Highlands

---

Dr JOHN CRAIG a well known and much respected practitioner in Edinburgh died on April 23rd after a very short illness the result of a septic wound of the hand The son of Dr William Craig for long a lecturer in materia medica in the school of medicine John Craig graduated M B Ch B Ed in 1900 and after gaining additional clinical experience as R M O in Dumfries Infirmary took up general practice in his native city His industry and conscientiousness soon brought him a busy practice and he became the trusted friend as well as medical adviser of his patients He had a great love of Scottish literature and a special interest in medical jurisprudence in which subject he took the class medal as a student He leaves a wife two sons and a daughter his elder son is almost ready to follow his father's and grandfather's profession To all his relatives his many friends extend their sympathy in their sudden and unlooked for bereavement J O

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons has this week discussed the Trade Agreements recently negotiated with certain foreign countries the increase in the Exchange Equalization Account and the subjects to be considered during the World Economic Conference Scottish business was also taken In the House of Lords the Local Government Bill and the Protection of Animals Bill were down for second reading

The University Spurious Degrees (Prohibition of Use and Issue) Bill to make provision with respect to the unauthorized use and issue of university degrees and with respect to the penalties to be imposed with respect to such unauthorized use and issue was presented in the House of Lords by Lord Jessel on May 3rd and read a first time The second reading was set down for May 10th

The Protection of Animals Bill was read a third time by the House of Commons on May 3rd and sent to the House of Lords The Bill proposes to authorize magistrates to prohibit the holding of dog licences by persons convicted of cruelty to dogs

Water Supply

Sir HILTON YOUNG told Mr Chorlton on May 4th that regional water committees had already been formed for South West Lancashire the West Riding of Yorkshire the Sherwood area of Nottinghamshire the Isle of Wight Holland (Lincolnshire) and South Buckinghamshire and the Central Advisory Water Committee was now considering where others should be formed With the supplies of water already available for populated areas it was not likely that many large new schemes would be required in the immediate future Rural supplies presented the greatest difficulty and he was issuing a circular on them in the course of the next few days He was aware of the present scarcity in the water supply of the district of Denby Dale and also of the proposal since rejected for Bradford to supply Kingston upon Hull he was in touch with both these cases but would be glad to consider any special representations concerning them He was of the opinion that existing powers were adequate if properly used

Public Health in Distressed Areas

In reply to Miss Ward on May 4th Sir HILTON YOUNG stated that it was the practice of the Ministry of Health to require medical officers of health in their annual reports to draw attention to any noteworthy conditions prejudicial to the health of their districts and it was customary for school medical officers in their reports to deal with the physical condition of the child population He did not think it necessary therefore to make any further special recommendation on this subject to the local authorities in distressed areas Dr FREESTANTLE asked whether the Minister would make a definite statement with regard to this matter on the discussion of the Ministry of Health Estimates Sir HILTON YOUNG said he would be glad to give information on the subject while it was being debated

Cost of Medical Services of Metropolitan Police

The accounts of the Metropolitan Police Fund from April 1st 1932 to March 31st 1933 were issued as a White Paper on May 5th They show that the salaries of the chief medical officer the consulting surgeon the deputy physician the divisional surgeons the consulting dental surgeon and the dental surgeons amounted to £13 844 The cost of hospital and convalescent home treatment first-aid instruction of police and medical provision for prisoners and for persons injured in street accidents was £15 469 The expenses of the police nursing home were £3 807

Control of Massage Establishments

The Essex County Council Bill which among other purposes seeks powers for the protection of streams the prohibition of pollution and the control and licensing of massage establishments came before a select committee of the House of Lords on May 4th The Bill contains provisions to exempt establishments carried on by medical practitioners Lord REDESDALE presided Dealing with the proposals for the control of establishments for massage and special treatment Mr CRAIG HENDERSON who appeared for the County Council said that in certain cases the special electrical treatment might be a grave danger to health In 1920 the London County Council obtained powers to bring these establishments under control by a system of licensing and registration Other counties had obtained similar powers Counsel for the corporations of Ilford Walthamstow Barking and Leyton while agreeing that there ought to be control of these establishments contended that that control could be better exercised by the local authorities themselves than by the Essex County Council

Mr ALFRED G CHAMINGS said that until 1931 he was chief officer of the Public Control Department of the London County Council and was responsible for carrying out the law relating to establishments for massage and special treatment Persons engaged in this treatment against whom there had been complaints had migrated from London to the neighbouring counties and had carried on their treatment which in some instances was very dangerous It would be unwise to devolve the powers of control upon local authorities in the county His experience in London was that the worst cases would move from district to district often changing their names or getting a fresh man into the firm It was only through the knowledge of officers who covered the whole of London that the London County Council was able to cope with those cases The committee adjourned

Road Accidents and the Driving Test

In reply to Mr Lovat Fraser on May 3rd Mr STANLEY said that the question of subjecting applicants for motor driving licences to a driving test was discussed at length when the Road Traffic Act 1930 was before Parliament he did not at present see sufficient justification for introducing amending

legislation on that point He hoped the inquiry now proceeding into the causes and circumstances of fatal accidents would throw light on the extent to which they were due to any want of capacity such as would be disclosed by a driving test The provisions of the Road and Rail Bill would add to the safety and convenience of users of the highway and the investigation which his department with the help of the police was now carrying out into the causes and circumstances of all fatal road accidents would he hoped provide information on which further remedial action could be based

Sir JOHN GILMOUR told Mr Lunn on May 3rd that 416 persons riding pedal cycles were killed and 17 167 injured, during 1932 in Great Britain in road accidents attributed to motor vehicles other than tramcars and trolley vehicles The corresponding figures for 1931 were 428 and 15 293

Road Accidents in Metropolitan Area —In reply to Mr McEntee on April 27th Mr DOUGLAS HACKING stated that 625 persons were killed and 18 977 injured by motor vehicles in the Metropolitan Police district in the six months ended March 31st last Of the persons killed 115 were under 15 years of age The number of children under 15 injured by all classes of vehicles in the same period was 4,668 Mr Hacking told Mr Parkinson on April 27th that the number of motor accidents known to have occurred in the Metropolitan Police district in the twelve months ended March 31st, 1933 was 99 540 The number attributable to careless or dangerous driving and the number of convictions arising therefrom were not available

Food Impurity —On May 2nd Mr RANKIN asserted that the work of public analysts in detecting food impurities was hindered because in many commodities there was no official definition to work on Sir HILTON YOUNG replied that this matter was within the terms of reference of a committee on the law relating to the composition and description of food The suspension of the work of this committee had been necessary in September 1931 as a measure of economy He did not propose to introduce legislation on the subject at present

Grading of Milk —In reply to General Clifton Brown on April 27th Sir HILTON YOUNG stated that the recommendations of the Milk Reorganization Commission for the grading and designations of milk would involve fresh legislation, which he could not undertake to introduce during the present session Under the existing law a conviction could be obtained for the misuse of a prescribed designation

Sickness and Disablement Benefit Reduction —On May 1st Mr RHYS DAVIES asked the reason for reducing the expected sickness experience of spinsters and widows in the Valuation Regulations of April 14th 1933 under the National Health Insurance Act Sir HILTON YOUNG explained that in this new table an overall improvement of 10 per cent from the level of 1928-30 had been assumed taking sickness and disablement benefits together and the anticipated total saving had been apportioned between the two benefits While in the case of sickness benefit the new rates showed small reductions substantial increases had been made in the number of weeks provided for in disablement benefit

Inoculation in the Malton Outbreak —Replying on May 4th to Mr Groves Sir HILTON YOUNG stated he had no complete information as to how many of the persons who developed typhoid fever in the recent Malton outbreak had been inoculated but at the time of the outbreak he obtained particulars covering approximately 200 patients from eight of the nine isolation hospitals in which patients from Malton were treated Twenty seven of these patients had been inoculated before admission but not before contracting the disease Although the dates of notification and admission to hospital could be ascertained it was impossible to discover the date of appearance of the first symptoms of the disease in each case

Operations under Anaesthesia in Glasgow Hospitals —Mr SKELTON told Mr Neil Maclean on May 4th that the number of operations at which anaesthetics were used in Glasgow during 1932 if completely available could be obtained only by a detailed examination of the records at the individual hospitals In view of the labour involved he would not be justified in asking the hospital authorities to undertake the task He promised to see what could be done to get some form of statistics regarding these operations Mr MACLEAN asserted that there had been certain statements in the Glasgow press concerning operations under anaesthetics

Insanity and Divorce —In the House of Commons on May 5th Mr HOLFORD KNIGHT moved the second reading of the Matrimonial Causes Bill He said it sought to give effect to a recommendation made twenty years ago by a Royal Commission to permit divorce from a person who had been incurably and continuously insane for a period of five years Mr DENMAN seconded the motion Dr O DONOVAN moved the rejection of the Bill Many persons properly certified as unfit for release, he said were conscious of all that was going on in the world around them, and their sufferings would be increased if husband or wife took another partner The practice of the Bill would depend on medical certification Practice in the Divorce Court was not above suspicion He looked with distress on the possibility that some weaker members of the medical profession might be tempted to give certificates, as those who kept hotels and boarding houses were asked to furnish evidence for a divorce One beneficent advance in the treatment of lunatics had been the ease with which in remission of their illness they were allowed to return to their own homes That provision would come to a dead end if this Bill passed Attention was drawn to the absence of a quorum and the House was counted out. Mr Knight put the Bill down again for May 12th

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

The Vice Chancellor has published in the *University Reporter* for May 2nd a letter from the Public Trustee relating to a bequest by Mr Frank Edward Elmore of Boxmoor Herts for scholarships for medical research The testator in his will dated January 24th 1929 bequeathed the income of a trust fund for or towards the provision of scholarships for medical research to male post graduates of British or Colonial birth other than Scottish birth at Cambridge University I exclude graduates of Scottish birth as ample provision is made for them under the Carnegie Trust and in other ways" The trustee has discretion to accumulate the income and if in his opinion the income cannot at any time be advantageously applied in the way proposed he may use it to promote or assist generally the provision of medical education at Cambridge University The estate was sworn for probate at about £76 000 but provision has to be made *inter alia* for two annuities of £600 each and the Public Trustee cannot at the present stage say how much the available income is likely to amount to

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UNIVERSITY OF LONDON

The Court at its meeting on May 3rd learnt with gratification of the following grants made to the University payment being spread over a period of years Haberdashers Company £500 Saddlers' Company 500 guineas and Apothecaries Society £500 It also welcomed a small donation from the Class Sellers Company who expressed its desire to be associated with the Bloomsbury scheme These benefactions will be applied towards meeting the cost of the new Ceremonial Hall to be erected on the University's site in Bloomsbury

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ROYAL COLLEGE OF PHYSICIANS OF LONDON

Licences Supplementary List

Licences to practise have been conferred upon the following candidates who have passed the Final Examinations in Pathology Medicine Surgery, and Midwifery of the Conjoint Board and have complied with the regulations of the Board

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ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH

At a quarterly meeting of the College on May 2nd with the President Dr Robert Thin in the chair Dr Robert Lees (Edinburgh) took his seat as a Fellow and Dr Mohamed Abd El Hamid Gohar (Cairo) Dr Douglas Begbie McCrie Lothian (Larbert) Dr Alfred David Corman (Blackburn) and Dr William Ritchie Russell (Edinburgh) were elected Fellows

The Freeland Barbour Fellowship was awarded to William Muir B Sc Ph D

Dr John Orr was elected a representative of the College on the Committee of Management of the Triple Qualification

Dr Edwin Matthew was elected the representative of the College on the General Medical Council for a period of five years

ROYAL COLLEGE OF PHYSICIANS OF IRELAND

At the invitation of the Department of Local Government and Public Health the College has appointed Professor Joseph W Bigger to be a member of the Therapeutic Substances Advisory Committee

At the monthly meeting held on May 5th Mahmond El Hennawi L R C P and S Ed was admitted to the Licence in Midwifery

Medico-Legal

INQUEST ON CHRISTIAN SCIENCE HOME PATIENT

An inquest was held at Harrow last month by the deputy coroner (Dr J A Gorsky) into the circumstances of the death of an elderly woman Emily Hedges at the Christian Science Nursing Home Sunny Lodge Harrow The husband stated that his wife who was a Christian Scientist had had two strokes within twelve months a doctor attending her on each occasion for about three weeks After the second stroke her mental condition became somewhat difficult and as he could not give her the attention she required at home she was sent to the Christian Science home on March 27th and died there three weeks later Dr B H Barton said that on post mortem examination he found cancer of the liver which was the cause of death but even had this been diagnosed he did not think it would have been possible to do anything to prolong life

Miss Winifred Moir in charge of the home said that she was not a State registered nurse but had such nurses in the home She had conducted the home for three years and previously one at Hampstead for seven years She had an exemption certificate under the Nursing Homes Registration Act whereby the home was inspected not by the county council but by a committee of the Church of Christ Scientist She took in all sorts of cases except mental and maternity Patients were treated by Christian Science practitioners no drugs of any kind were used and great care was taken to give the right food She denied that the deceased was a mental case the patient was only a little confused and had to be humoured Asked how she knew what was wrong with patients Miss Moir replied that experience had taught her In reply to Dr Goddard medical officer of health for Harrow who asked what would happen in a case of appendicitis she said that she would detect the symptoms and keep the patient in bed and warm and give a light diet she would not countenance operation An officer of the Church explained that the treatment received by those who went into the homes was the application of prayer as understood in Christian Science Even appendicitis with abscess would be treated in that way and he had seen relief afforded by such treatment Miss Moir further stated that following on some public protest when she first came to Harrow the members of the local council were invited to inspect the home and came to the conclusion that it was a thoroughly well-organized private nursing home

The deputy coroner commented on the strange procedure whereby Christian Science homes were exempted from inspection and the still more strange fact that people with no medical qualifications should profess to say what was wrong with cases

The jury returned a verdict of *Death from natural causes*

Medical News

The next quarterly meeting of the Royal Medico-Psychological Association will be held at 11 Chandos Street W on Wednesday May 17th at 2 p m At 3 p m in the Barnes Hall of the Royal Society of Medicine 1 Wimpole Street W Dr Adolf Meyer (psychiatrist-in-chief, Phipps Psychiatric Clinic the Johns Hopkins Hospital Baltimore) will deliver the fourteenth Maudsley Lecture on Psychiatry and Mental Hygiene

The next meeting of the Royal Microscopical Society will be held at B M A House Tavistock Square on Wednesday May 17th at 5 30 p m Papers will be read by Mr J E Barnard F R S and Mr F V Welch (Some Further Examples of Dark ground Ultra-violet Microscopy) and by Mr G Dallas Hanna (An Alcohol soluble Resin of High Refractive Index)

The Faculty of Medicine of the University of Birmingham has arranged for two lectures dealing with the regulations appertaining to national health insurance practice to be given by Dr H Guy Dain chairman of the Birmingham Panel Committee on Thursdays May 18th and 25th at 4 p m in the Medical Theatre the University Edmund Street While these lectures are primarily intended for senior medical students medical practitioners are also invited to attend

The next meeting of the Physiological Society will be held in the Physiological Laboratory Cambridge to-day (Saturday May 13th) at 3 30 p m Dinner in Trinity College at 7 15 p m On June 10th the society will meet at Leeds in the Department of Physiology of the School of Medicine

A provincial meeting of the Fever Hospital Medical Services Group of the Society of Medical Officers of Health will be held at the Municipal Buildings Park Gates Poole on Friday May 19th at 4 p m A discussion on the position of the smaller provincial fever hospitals in relation to Section 63 of the Local Government Act 1929 will be introduced by Dr Maule Horne

The annual general meeting of the British Institute of Radiology (incorporated with the Röntgen Society) will be held at 32 Welbeck Street W on May 18th at 8 p m After the business part of the meeting is completed the following papers will be read The Variation in the Response of Animal Tumours after Lethal Doses of X Rays by Professor Sidney Russ and The Biological Response to Gamma Rays of Radium as a Function of the Intensity of Radiation by Dr F G Spear and Mr L G Grimmett On May 19th members are invited to visit the National Hospital for Diseases of the Heart where they will be received by Dr Campbell Golding (in the absence of Dr Gilbert Scott) between 11 a m and 1 p m

In view of the fact that a large number of radium officers from the provinces will be visiting London for a conference on Friday May 19th arrangements have been made to devote the monthly meeting of the medical members of the British Institute of Radiology to a subject of interest to them This meeting will be held at 32 Welbeck Street W 1 on that day at 5 p m when a paper will be read on the treatment of rodent ulcers by radium by Dr N S Finzi and a discussion will follow All radium officers whether members of the Institute or not are invited to attend

The French *Journal Officiel* has just published a decree affecting foreign doctors wishing to practise in France Henceforth no one will be allowed to practise medicine in France who does not hold a French medical degree or who is not a French citizen or subject or a person belonging to a country under the protection of France Citizens of countries in which French doctors are allowed to practise can apply for the benefit of diplomatic conventions which in certain cases enable French nationality to be dispensed with There must however be no disparity in the number of doctors from any foreign country and the number of French doctors practising in that country This decree applies also to dentists

The first of a series of lectures, instituted by the British Science Guild for the purpose of directing attention to the importance of research—both purely scientific and technical—and the utilization of its results in the service of mankind, will be given by Sir Harold Carpenter, D Sc , F R S , in the Carpenters' Hall, Throgmorton Avenue E C , on Tuesday, May 16th, at 4 30 p m The subject of the lecture is metals in the service of human life and industry Tickets are obtainable free of charge from the secretary of the Guild, 6, John Street, Adelphi, W C 2

A post graduate course on diseases of children will be held at the Hospital for Sick Children, Great Ormond Street W C , from May 15th to 27th—mornings 10 a m to 1 p m afternoons (except Saturdays) 2 p m to 4 p m It will consist of fifty clinical lectures and demonstrations and six laboratory demonstrations The fee is £6 6s , and applications to take the course should be addressed to the secretary

At the invitation of the Joint Tuberculosis Council Dr Peter W Edwards medical superintendent, Cheshire Joint Sanatorium, near Market Drayton, Salop, is prepared to give a series of short intensive post-graduate courses on modern methods of therapy in tuberculosis of the respiratory system, with special reference to collapse therapy Methods of sanatorium administration will also be demonstrated and no class will exceed four members in number Suitable arrangements for board and residence can be made within a convenient distance of the sanatorium Details of dates, expenses, etc , will be sent on application being made to Dr William Brand, honorary secretary for post graduate courses, 8, Highway Court, Beaconsfield, Bucks

The Fellowship of Medicine and Post Graduate Medical Association announces that two lectures on cataract extraction from the point of view of the general practitioner will be given by Lieut.-Colonel R H Elliot, on May 24th and 31st, at 5 p m at 11, Chandos Street, W A course of four lectures will be given at 11, Chandos Street on Wednesdays, at 5 p m , as follows June 7th, Dr Leonard Findlay ' Chronic Pulmonary Disease in Childhood June 14th, Dr C P Symonds " The Disturbance of Cerebral Function in Head Injury " June 21st Mr F J McCann " The Repair of Injuries to the Perineum and Vaginal Walls ' (illustrated by epidiascope) June 28th Mr Andrew McAllister " Some Features of Eclampsia Dr G F Stebbings will give a demonstration of selected cases at the Lambeth Hospital, Brook Street on Friday May 26th, at 2 p m Forthcoming courses include venereal disease at the London Lock Hospital May 22nd to June 3rd gynaecology at the Chelsea Hospital for Women, May 22nd to June 3rd , and diseases of the chest (week end) at the Hospital for Consumption Brompton May 27th and 28th

The Friends Provident and Century Life Office held its centenary dinner at the Park Lane Hotel on May 3rd, when the directorate both general and local, and the senior members of the staff were entertained, together with certain selected guests Speeches were made by Mr H J Morland Lord Brocket Mr Arthur Rowntree, Mr H J Tapscott (general manager of the Friends Provident) and Mr J R Little (general manager of the Century) The Friends Provident is one of the principal offices issuing life and permanent sickness policies to doctors and this company issued the first policies under the scheme for the provision of additional capital required for the purchase of a medical partnership or practice A short history of the first hundred years, by Mr Arthur Rowntree appears in *The Friend* of May 5th It is interesting to note that of the first fifty six whole-life policies which were issued one insured declared he had had cow pox or small pox eighteen declared they had had cow pox while the remaining thirty-seven persons had had small pox

According to the *Times* correspondent in Cairo the Egyptian Government has decided to authorize 200 Jewish doctors and lawyers who have been compelled to leave Germany as the result of recent events to take up residence and exercise their professions in Egypt

Letters, Notes, and Answers

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QUERIES AND ANSWERS

Pain in Chronic Gout

Dr C JOYNER (Farnham) writes I would be grateful if any reader could suggest treatment for the alleviation of pains due to chronic gout Atoquinol and novalgin have been tried and dieting but the pains in the ankles and the feet prohibit the patient from walking although the joints have good movements

Oedema of Toes

Dr WALTER GRIPPER (Willingdon Eastbourne) writes In reply to Dr H Wilson Miller s query regarding oedema of the toes (May 6th p 810) I would suggest examining for the *Epidermophyton interdigitale*, especially if there is slight vesication

Income Tax

Proportion of Expenses Chargeable to Practice

" G G " asks what proportion of house rent may be deducted for income tax purposes In his case ' there are only two rooms (excluding the kitchen) on the ground floor one of which is used as a consulting room and the other as a waiting room for patients, though ostensibly a dining room '

*** It is impossible to lay down any general rule with regard to the appropriate proportion One half is usually reasonable, and a larger ratio is not often allowed One useful test is to consider it from the opposite aspect—that is is one half the rent rates etc reasonable for the private use derived from the premises? If similar accommodation could be obtained for less than the one half then there may be some claim to charge a larger ratio against the practice With regard to the more specifically professional expenses mentioned—for example use of car drugs medical subscriptions etc —prima facie these are allowable the only modification being some deduction from the total which fairly represents the value of the private benefit derived from them

Obsolescence Allowance Hire Purchase

" W H K " bought a car in 1926 for £275 In 1932 he sold it for £15 and bought another car for £325 The aggregate amount of wear and tear allowances in respect of the old car is £173 What is the appropriate obsolescence allowance? Can ' hire purchase ' payments be deducted for tax purposes?

*** £275 – (£15 + £173 =) £188—that is, £87 Where a car is bought on the hire purchase system the monthly instalments represent capital payments even though made out of income and are not allowable for income tax purposes

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Income from Abroad Exchange Premium

P W receives dividends from South Africa They are paid into his banking account there and from time to time remittances are made from that account to this country Owing to South Africa remaining on the gold standard these transfers in 1932 were made at a considerable profit The inspector of taxes claims to bring into assessment here not only the profit on remittances but the profit which could have been made by remitting the whole of the income Is this legal?

*** Income from stocks and shares abroad is assessable whether it has been or will be received in the United Kingdom or not on the full amount of the income arising The assessments here must of course be made *in sterling and some rate of exchange must necessarily* be applied to the unremitted income The use of the word arising in the section suggests that the appropriate rate is the one which was in operation when the income arose —that is became available for remittance We understand that that is the basis adopted by the assessing authorities and we are not aware that it has been successfully disputed and P W will apparently have to pay British tax accordingly But he should claim the rate of exchange when the income arose even in the case of remitted income if the rate was less favourable then than when the remittances were actually made

Cash Receipts Change of Proprietorship

A W M has hitherto been assessed on the cash basis As from July 1st 1932 he took his son into partnership and it has been arranged that the new practice shall be treated as set up as from that date During the period July 6th 1932 to April 5th 1933 A W M received £600 in respect of outstanding accounts from the original practice Has he got to pay on those receipts?

*** Presumably after July 1st the new practice will be assessed on the basis of bookings and receipts from former accounts will not come into the computation of any liability (either of the new firm or of A W M) for a subsequent period They represent capital receipts from accumulated accounts of the former practice and are not assessable It is just possible that the authorities may ask for the assessments on the old practice to be revised for the fifteen months from April 5th 1931 to July 1st 1932 to the bookings basis but this should be resisted unless there is some reason to think that the gross earnings of the practice had been increasing as compared with earlier years

Car Expenses Replacement

H K S professional income is derived in part from a hospital appointment including car allowance The car was purchased in August 1932 for £73 and sold in March 1933 for £50 when another car was bought for £123 10s What can he claim?

*** In the first place he should request that the hospital emoluments should be included with his general professional earnings in one assessment He may find it convenient to make up his accounts for the year ending March 31st 1933 The amount allowable in respect of the replacement of the car is £73–£50=£23 any expenditure over that amount is prima facie to improve and not merely to maintain his car equipment The expense allowance received from the hospital should of course be included in the receipts and the whole of the running costs (less any appropriate deduction for private use) deducted as expenses

LETTERS, NOTES ETC

Report of Council Corrigendum

We are asked to correct a misprint in the Honours List published with the Annual Report of Council in the *Supplement* of April 29th (p 154) The name of Sir Frederic Jeune Willans K C V O was misspelt

Catheterization in Mid air

Mr CLIFFORD MORSON writes A letter with the title of the Flying Doctor which has appeared recently in the *Times* prompts me to record another advance in aviation An elderly man living in Kenya was advised by his local medical attendant to return to London to seek expert advice on account of attacks of retention and inflammation of the testicles He decided to fly home by Imperial Airways The journey by this method of transport takes exactly seven days Previous to embarkation he took the precaution of including in his baggage a number of catheters in a metal formalin container Though this man has travelled all over the world and never been seasick during the hop from Nairobi to Khartum he was terribly air sick While so suffering to add to his misery he was seized with retention of urine Nothing daunted he made his way while in mid air to the tiny lavatory in the aeroplane's cabin and proceeded to pass a catheter on himself with complete success In a few weeks this courageous fellow will be returning to Kenya by the leisurely sea route unencumbered by catheter and a peccant prostate

Toxaemia in Acute Obstruction

Dr F A HOPE (Nice) writes In an article on acute obstruction of the colon in your issue of March 11th it is categorically stated that the chief danger and the most frequent cause of death is the toxaemia which results from the obstruction which can best be dealt with by the free administration of fluids May one inquire if there is any surgical reason why detoxication should not be carried out by small rectal enemata—say 100 c.cm of a solution of 1 grain of pure potassium permanganate to a pint of warm water freshly prepared two- or three- or four-hourly either with or without the administration of extract of thyroid gland It is a formula that one feels many physicians would employ unhesitatingly but of course as soon as it appears that surgical intervention is called for such cases pass over to the theatre where angels fear to tread However anyone familiar with the amazingly rapid effects of the thyroid and manganese treatment as the most powerful *detoxicating* agent known would surely agree that in such an emergency the method could be given a trial even in the most desperate cases without any appreciable risk of death from shock if there is no surgical reason against it and thus perhaps the chief danger averted

Beds for Tonsil Cases

Mr THOMAS CLAPHAM secretary to the Belgrave Hospital for Children S W 9 writes In his article on maternity and child welfare services in their relation to public health (April 29th p 742) Dr Donald Paterson emphasizes the importance of children being kept in hospital for two or three days when undergoing an operation for the removal of tonsils and adenoids and urges that they should not be kept waiting The Committee of Management of the Belgrave Hospital heartily agrees with Dr Paterson An aural clinic has been conducted here for the treatment of children from the L C C schools since 1912 and thousands of children have been treated When the clinic was first opened the children were sent home a few hours after operation but it was quickly realized that an improvement in this method was desirable The war intervened and nothing was done until national affairs were on a peace footing again The main difficulty was to set aside a ward for these cases in view of the limited bed accommodation but as a first step the children were sent home in an ambulance accompanied by a nurse instead of being allowed to get home as best they could in public conveyances Eventually in 1921 it was found possible to rearrange the administrative block a room was set apart and adapted as a ward with ten beds The children were admitted the day prior to operation and detained for at least two days

Request for Synovial Fluid

Dr E SHIRLEY JONES (Bentley Hants) writes I shall be grateful for specimens of human synovial fluid They should be taken with absolute asepsis and a note giving condition of joint and total quantity of fluid contained in it will be of added assistance

A new booklet has been published by Cadbury Brothers Ltd describing the organization and work of the laboratories at Bournville Copies may be had from the publication department Bournville Works Birmingham

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 43 44 45 48 49 and 50 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 46 and 47

A short summary of vacant posts notified in the advertisement columns appears at page 857

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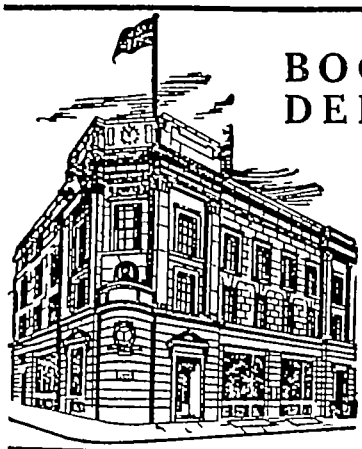

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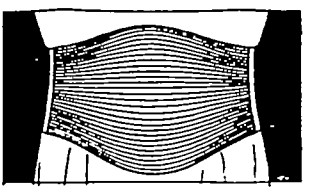
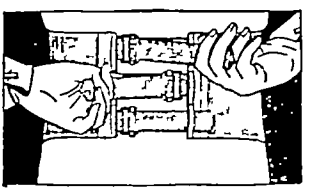
WHILE EXERCISING.—All men, especially those of middle age and older will derive much support and protection against overstrain and possible hernia, by wearing the Linia Belt while indulging in their usual sports or exercises.

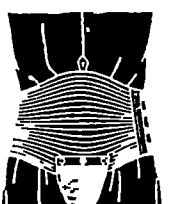
BROKEN DOWN POSTURE.—The Linia Belt is a valuable correcting influence to the habitual stoop which gives to some men the appearance of being broken down. After a reasonable period the lifting action of the front part accustoms the patient to the more normal abdominal position, and the strong pressure of the tough elastic back straightens the shoulders thus improving the entire carriage.



FRONT VIEW.—At the front of the belt the thin non-elastic tricot of great strength can be extended to the required depth so that a gentle pressure is exerted on the full area of the abdomen



BACK VIEW.—The tough lithe horizontal elastic of this special tricot can be regulated to the required tension by means of the buckles. Thus its lifting and massaging powers are easily controlled



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SUSSEX BRANCH BRIGHTON DIVISION.—At Royal Sussex County Hospital Thursday May 18th 3.45 p.m. Clinical meeting.

Naval and Military Appointments

ROYAL NAVAL MEDICAL SERVICE

Surgeon Lieutenant Commander T. Madill and J. J. Major to the *Penelope* for Royal Naval Barracks Chatham. J. P. Patrick to the *Victory* for Royal Naval Barracks Portsmouth. A. I. Walsh to the *President* for Medical Department Admiralty. R. W. Muston to the *Shropshire*. R. A. Craig to the *Malaya*. C. R. Boland to the *Cumberland*.

Surgeon Lieutenants C. Ommaney Davis and J. I. S. Coulter are transferred to permanent list, seniority May 19th 1930 and February 7th 1931 respectively. W. R. S. Lanchester to the *Victory* for Royal Naval Infirmary Portsmouth. A. D. Sinclair to the *Hood*. A. J. A. Cruse to the *Douglas*. H. D. Hamlett to the *Dundalk*. W. J. F. Guild to the *Penelope* for Royal Naval Barracks Chatham.

ROYAL NAVAL VOLUNTEER RESERVE

Surgeon Lieutenant H. M. Willoughby to be Surgeon Lieutenant Commander.

Surgeon Sub-lieutenant J. M. Jarvis to be Surgeon Lieutenant.

Probationary Surgeon Sub-lieutenant A. I. Williams to be Surgeon Sub-lieutenant, seniority December 15th 1931.

ROYAL ARMY MEDICAL CORPS

Lieut.-Col. F. T. Potts, C.M.G., D.S.O., retires on retired pay.

Major A. H. T. Davy to be Lieutenant-Colonel.

Major G. H. Stacke is placed on half-pay list on account of ill health.

Lieutenant A. N. T. Menezes to be Captain.

J. P. Douglas to be Lieutenant (on probation).

ROYAL AIR FORCE MEDICAL SERVICE

Flight Lieutenant J. B. Gregg to be Squadron Leader.

Flight Lieutenants A. R. French is transferred to the Reserve Class D (ii). G. Kinnear relinquishes his temporary commission on completion of service. C. W. Coffey to Station Headquarters Hendon. C. W. Paton to R.A.F. Hospital Cranwell.

Flying Officers A. M. Weston and A. H. Tomkins to be Flight Lieutenants.

ROYAL AIR FORCE RESERVE MEDICAL BRANCH

J. L. H. Easton is granted a commission as Flying Officer.

TERRITORIAL ARMY

ROYAL ARMY MEDICAL CORPS

Lieut.-Col. H. F. Wilkin, M.C., T.D., retires and retains his rank with permission to wear the prescribed uniform.

Captain J. C. C. Howe to be Major.

Captains J. L. Turpie resigns his commission. J. M. Wyatt, having attained the age limit relinquishes his commission and retains his rank.

Lieutenant R. H. Tootill to be Captain.

To be Lieutenant: D. A. Lanchorne (late Lieutenant R.A.M.C.) seniority August 12th 1932. J. W. Lobban.

Supernumerary for Service with the O.T.C.—Lieutenant J. P. Raban to be Captain, supernumerary for service with Medical Unit University of London Contingent Senior Division O.T.C.

TERRITORIAL ARMY RESERVE OF OFFICERS. ROYAL ARMY MEDICAL CORPS

Lieut.-Col. J. E. A. Ryan, T.D., from active list to be Lieutenant-Colonel.

Captain A. Capstaff from active list to be Captain.

INDIAN MEDICAL SERVICE

Lieut.-Col. W. T. McCowen to be Colonel, seniority July 30th 1927.

The services of Lieut.-Col. G. M. Millar are replaced at the disposal of His Excellency the Commander-in-Chief in India from February 23rd.

Lieut.-Col. F. Stevenson is posted as Residency Surgeon and Chief Medical Officer in Baluchistan from February 21st.

Lieut.-Col. J. Morison, Director Pasteur Institute and Medical Research Institute Shillong, to be Inspector-General of Civil Hospitals and Inspector-General of Prisons Assam vice Colonel J. P. Cameron who has been granted leave.

Major W. J. Webster (Medical Research Department) to be a Supernumerary Officer at the King Institute Guindy Madras from March 4th.

The services of Captain B. S. Nat are placed permanently at the disposal of the Punjab Government from November 10th 1932.

To be Captains: Captain (local Major) F. M. Collins from R.A.M.C., seniority September 1st 1929 and to retain local rank of Major while employed as Surgeon to H.F. the Viceroy. Captain C. A. D. Rose from R.A.M.C., seniority October 25th 1932.

To be Captains (on probation): P. A. Karamchandani, seniority February 26th 1926. R. K. Misra, seniority April 2nd 1926. K. R. Saghal, seniority September 26th 1926.

Lieutenant L. F. Burns to be Captain, seniority March 7th 1929.

Lieutenant (on probation) D. Death to be Captain (provisional on probation).

To be Lieutenants: B. A. Porritt, seniority July 26th 1930. M. S. Purvis, seniority February 20th 1932. F. W. Whiteman (remains unseconded). M. F. Kirwan.

To be Lieutenant (on probation): A. S. Morgan.

COLONIAL MEDICAL SERVICES

M. Ellis, M.R.C.S., L.R.C.P., Medical Officer, Nigeria. F. E. R. Bartholomeusz, L.R.C.P. and S., L.F.P. and S., Medical Superintendent, Leper Asylum, Hendala, Ceylon. H. E. Elanayake, L.R.C.P., M.R.C.S., Provincial Surgeon, Ceylon. W. H. Kauntze, M.B.E., M.D., B.Ch., D.P.H., Director of Medical and Sanitary Services, Uganda. A. M. W. Rae, M.D., Ch.B., Senior Medical Officer, Gold Coast. C. Sivasthamparam, L.R.C.P. and S., L.F.P. and S., Provincial Surgeon, Ceylon. L. G. W. Lynch, M.R.C.S., L.R.C.P., D.T.M. and H., Superintendent, Chacachacare Leper Settlement, Trinidad.

APPOINTMENTS

MILLIGAN, C. Guy, M.R.C.S., M.R.C.P., Deputy Medical Superintendent Cell Barnes Colony, St. Albans.

MORRISON, John, M.B., Ch.B., Ophthalmic Specialist, Medical Referee under the Workmen's Compensation Act, 1925, for the Bolton, Bury, Rochdale, Oldham, Salford (Circuit No. 6) and Wigan (Circuit No. 6) County Court Districts.

O'SHAUGHNESSY, Laurence, M.D., F.R.C.S., Surgeon to British Legion Sanatorium, Preston Hall.

WALKER, A. R., M.B., Ch.B., D.P.H., Assistant Medical Officer of Health, County Borough of Walsall.

BENHILL HOSPITAL (to be opened on May 19th).—*Honorary Consulting Surgeon*, David Ligat, F.R.C.S. *Honorary Consulting Ophthalmologist*, C. B. Lowe, M.R.C.S., L.R.C.P., D.O. *Honorary Pathologist*, P. Lazarus-Barlow, M.D. *Honorary Radiologists*, A. Grellier, M.R.C.S., L.R.C.P., T. D. Overend, M.R.C.S., L.R.C.P. *Honorary Oto-rhino-laryngologists*, D. E. O. C. Cuffley, F.R.C.S.Ed.

KING'S COLLEGE HOSPITAL.—*Senior Casualty Officer*, M. L. Brance, M.R.C.S., L.R.C.P. *Second Casualty Officer*, J. D. H. Bird, M.B., B.S. *House Anaesthetist*, A. H. Calley, M.R.C.S., L.R.C.P. *Junior House Anæsthetist*, W. H. Whiles, M.R.C.S., L.R.C.P. *Clinical Pathologist and House Physician to Dermatological Department*, H. E. Donnell, M.R.C.S., L.R.C.P. *Radiologist*, T. A. Crichlow, M.R.C.S., L.R.C.P., D.M.R.E. *House Physicians*, H. T. S. Wise, M.R.C.S., L.R.C.P., R. H. Bailey, M.R.C.S., L.R.C.P., D. H. Fulton, M.B., B.S. *House Surgeons*, R. H. Rushton, M.R.C.S., L.R.C.P., A. H. W. Roffe, M.R.C.S., L.R.C.P., S. O. Jones, M.R.C.S., L.R.C.P. (Urological Department), J. J. Somerset, M.R.C.S., L.R.C.P. (Orthopædic Department and Third Casualty Officer), H. W. Burge, M.R.C.S., L.R.C.P. (Obstetrics and Gynæcology, Senior), A. B. Simmons, M.R.C.S., L.R.C.P. (Junior), Miss J. M. Egerton, M.R.C.S., L.R.C.P. (Aural and Throat Department.) Miss A. E. M. Herbert, M.R.C.S., L.R.C.P. Non-resident appointment. *Junior House Surgeon, Aural and Throat Department*, A. Rothwell, M.R.C.S., L.R.C.P. *Junior House Pathologist*, B. H. Kirman, M.R.C.S., L.R.C.P.

LEICESTER CITY GENERAL HOSPITAL.—*Consulting Physicians*, J. V. C. Braithwaite, M.D., M.R.C.P., R. McD. Cairns, M.D. *Consulting Radiologist*, D. Forbes Lawson, B.Ch., D.M.R.E. *Visiting Anæsthetists*, D. Justin Davies, M.P., Olive M. C. Jones, M.R.C.S. *Senior R.M.O. and Deputy Medical Superintendent*, A. M. Macqueen, M.D.

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ASHTON-UNDER-LYNE DISTRICT INFIRMARY.—H.S.

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BIRMINGHAM GENERAL HOSPITAL.—(1) Surgical Registrar to Gynæcological and Eye Departments. (2) H.S. to Throat and Ear Department. (3) Anæsthetist.

BLACKBURN AND EAST LANCASHIRE ROYAL INFIRMARY.—P.S.O. (male).

BOLTON ROYAL INFIRMARY.—H.S. (female).

BRISTOL COSSHAM MEMORIAL HOSPITAL.—R.M.O. (male).

BURTON-ON-TRENT GENERAL INFIRMARY.—(1) Senior H.S. (2) C.O. and H.P. Male.

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HOSTEL OF ST LUKE, 14 Fitzroy Square, W.—M.O. (male).

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IPSWICH EAST SUFFOLK AND IPSWICH HOSPITAL.—H.P. (male).

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MEDICAL ANNUAL, 1933

A YEAR BOOK OF TREATMENT AND PRACTITIONER'S INDEX

A Review of the Year's Progress in Medicine and Surgery, arranged in Alphabetical order

EDITORS CAREY F COOMBS M.D., F.R.C.P. (the late), and A RENDLE SHORT, M.D., B.S., B.Sc., F.R.C.S.

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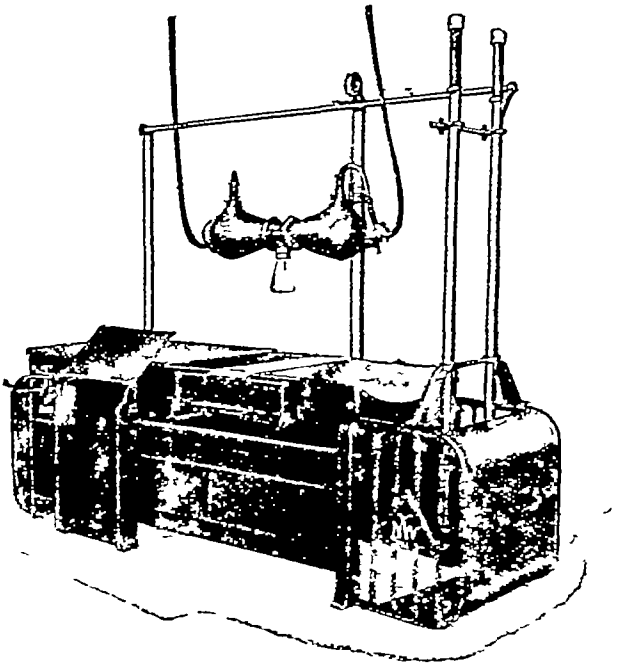

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EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

340 Diagnosis of Acute Pericarditis

HAROLD N SEGALL (*Arch Int Med* January 1933 p 62) describes a new clinical procedure for the detection of the murmur of acute pericarditis The author points out that the discovery of the typical *cri de coeur* murmur is as a rule accidental and it is usual to fail to detect a pericardial friction murmur in suspected acute pericarditis Segall's interest in the problem of eliciting the pericardial friction murmur when not heard during an ordinary careful examination of the heart and of differentiating it from other cardiac murmurs was aroused by a case of rheumatic heart disease occurring in a boy aged 15 The case is described and discussed in full On several occasions the pericardial friction murmur was heard but at other times it was absent It was discovered that the murmur could be elicited by shaking the body of the patient from side to side about half a dozen times in quick succession with the patient in the dorsal recumbent posture The reason for this is thought to be that the shaking causes the heart to swing somewhat in pendulum fashion and thus the two layers of the pericardium are brought into contact for a sufficiently long time to cause a friction murmur A more gentle and equally effective method is to place the patient in the right lateral recumbent position and instruct him to move towards the dorsal and pronc postures back and forwards several times A simpler although not so effective method is to try the effect of deep breathing coughing sighing yawning and sneezing Such respiratory efforts by virtue of the movements of the diaphragm cause changes in the lie of the heart which may elicit the presence or absence of pericardial friction It is concluded therefore that these procedures constitute methods of detecting a friction murmur and of differentiating it from other murmurs which it may resemble

341 Milkers Nodules

V J ASMUS (*These de Paris* 1932 No 624) who records an illustrative case in a woman states that the condition of milkers nodules is a rare form of skin disease of which only three cases have hitherto been published in France by Audry (1898) Hudelo and Rabut (1931) and Maire Woringer and Houot (1932) respectively The condition is found in persons who have been engaged in milking cows suffering from cow pox and is manifested in the form of hard circumscribed nodules situated on the hands The aetiology is obscure As the tubercles do not protect against vaccinia or vice versa the hypothesis of a vaccinial origin for the lesions can be excluded On the other hand the presence of numerous features common to the tubercles and para vaccinia suggests the hypothesis of an identical virus for the two affections which is confirmed by the presence of *Strongyloplasma paravaccinae* in the nodules The tubercles show a tendency to spontaneous recovery and bland topical applications are sufficient treatment

342 B coli Infection and Endocrine Disturbance

P DESGEORGES (*Rev de Méd* January 1933 p 28) believes that many endocrine disturbances are traceable to an enterogenous source—that is to the passage of *B coli* (and less frequently of enterococcus *B paratyphosus B proteus* and of Friedländer's pneumobacillus) into the blood stream Cultures from eighty five cases of bacilluria yielded *B coli* in 82 per cent Desgeorges dissents from the general opinion that bacteria having traversed the damaged caecal and colonic mucosa reach the portal circulation The frequent occurrence of urinary infection has convinced him that the bacilli pass into the lymphatics and thoracic duct thus reaching the general circulation The effects of this bacillaemia are very serious and widespread The writer believes that the suprarenals and thyroid are first attacked Bacterial toxins produce hypotension and other symptoms of suprarenal and thyroid damage Signs of this damage are seen in the characteristic pigmentation of the eyelids and bronzing of the skin of the trunk and limbs Lassitude mental depression and other emotional states tremors tachycardia sweating or sensations of cold are common symptoms frequently associated with exophthalmos and all indicative of lesions of the suprarenals and of the thyroid This endocrine derangement is essentially polyglandular for after the initial invasion of the suprarenals and thyroid other organs—the pituitary ovary and possibly the parathyroid—may be attacked The autonomic nervous system is affected in its turn because it is largely under the control of the internal secretions Finally the autonomic nervous system itself may be infected directly Vagotonia and sympathicotonia may occur alternately although the former appears to predominate The author has found that the majority of these coli bacillaemic patients are of the asthenic type He adds that the elongated form of the thorax induces visceroptosis this ptosis tends to produce intestinal stasis with venous congestion and consequent interference with the nutrition of the mucosa The resultant lesions of the mucosa permit the passage of bacteria this leads to chronic bacillaemia thus a vicious circle is established

343 Immunization in Whooping-cough

L SAUER *Journ Amer Med Assoc* January 28th 1933 p 239) states that during the last four years he has injected about 300 susceptible children aged from 9 months to 3 years with 7 to 8 c cm of a pertussis vaccine (1 c cm containing ten billion organisms) The vaccine was made from five to seven recently isolated haemolytic strains and was given hypodermically in divided weekly doses The local reaction was transient In 60 per cent of the cases the leucocyte count on the day of the last injection ranged from 12 000 to 15 000 per c mm There were eight certain and 127 probable exposures without any child contracting whooping-cough

Surgery

344 Chronic Parotitis

L N PYRAH (*Brit Journ Surg* January 1933 p 508) reports four cases of chronic infection of the parotid gland which were investigated by sialography In one case a chronic stomatitis had preceded the parotitis in another there was an infection of the tonsils whilst an infective focus in the mouth was present in the remainder In some instances of chronic swelling of the parotid gland the infective lesion lies in the ducts All four of the cases reported had an acute or subacute onset and during this stage the gland became hot tender and painful During the chronic phase of the disease there was little discomfort in the gland but varying amounts of pus were discharged from Stenson's duct Remedies consist in the treatment or removal of foci of infection in the mouth in the promotion of secretion from the gland to ensure evacuation of the purulent debris which collects in the ducts and in irrigation of the ducts with some mild antiseptic Drainage of infective material from the ducts may be obtained by massage of the gland which can be carried out by the patient Saliva should be increased by acid drinks and chewing gum Calculi in the gland

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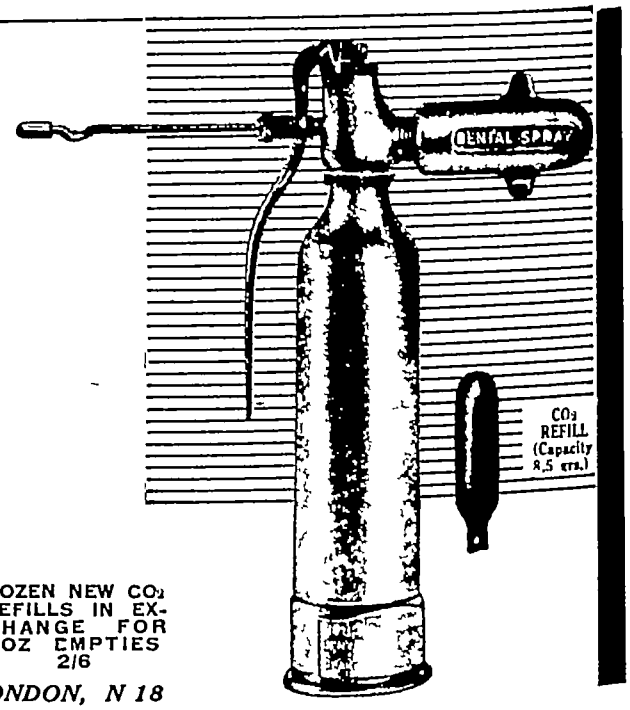

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or duct should be removed and cicatricial narrowings in the duct should be dilated or divided The instillation of 1/2 to 1 c.cm of lipiodol into Stenson's duct proved successful in two of the cases reported The injections should be made weekly, and for short periods may be given on alternate days In three of the cases described marked improvement followed treatment, and the patients appear to be making good recovery In the fourth case there were no foci of infection in the teeth or mouth, but a sialogram showed incomplete filling of the smaller ducts of the parotid due to advanced fibrosis Massage of the glands has been carried out and a prolonged course of lipiodol injections given, but so far no improvement has taken place

345 Inguinal Lymphogranulomatosis

F G CAILOL and M P FLÓ (*Rev. Med. de Barcelona*, December 1932, p. 515), who record ten illustrative cases in men aged from 19 to 40, state that the inguinal lymphogranulomatosis of Nicolas and Favre is not a rare disease in Spain and that the diagnosis is generally easy if one thinks of the condition in the presence of any inguinal adenitis of subacute course Suppuration does not occur *en masse* but in small disseminated foci, and the process is only slightly if at all painful The condition is at first unilateral but subsequently the other groin and iliac chain become affected the constitutional disturbance is slight The differential diagnosis from syphilis, chancroid, tuberculosis plague, and simple adenitis is made by Frei's intradermo reaction the moderate hyperleucocytosis, inoculation of the guinea pig absence of micro-organisms on direct examination or cultivation on the ordinary media the typical histological appearances, the constancy of formogelification of the serum, and fixation of complement The most rapid and successful treatment is surgical operation

346 Arterial Pressure in Shock

Though accidental traumatic shock usually is encountered in healthy persons and operative shock in subjects weakened by disease DESMARREST (*Presse Méd.*, January 28th 1933 p. 155) remarks that in both cases the phenomena of shock are intimately connected with a fall in arterial pressure and that any occurrence which predisposes to arterial hypotension predisposes to shock Such aetiological factors are organic weakness, nervousness hypotensive anaesthetics and rough surgical manipulations the last named act either by freeing harmful albumins from the lacerated tissues or by injuring the nerves, particularly in the splanchic area Local conditions, including haemorrhage and osseous or muscular damage resulting from extensive injuries cause a fall in blood pressure which is aggravated by the nervous shock Desmarrest considers however that these occurrences only act by lowering the blood pressure, which is itself the essential cause of shock and that the lowered blood pressure produces all the physiological phenomena characterizing this condition These phenomena, including insufficient oxygenation of the blood and tissues, abnormal metabolism of the albuminoid substances, and the formation of toxic products by cellular disintegration are briefly discussed and a detailed report of a typical case of shock is given The author recommends the following measures in all cases with lowered blood pressure which are awaiting operation Before surgical intervention the pressure should be brought as nearly to the normal as possible by suitable medication At the operation a hypertensive anaesthetic should be employed, nitrous oxide being the best During the operation the blood pressure should be continuously controlled If the hypotension becomes accentuated an intravenous injection of adrenaline (1 mg.) followed by a similar injection of adrenalinized serum should be given Camphorated oil, ouabaine and digibaine are useful adjuvants The blood pressure should be watched for some days after the operation since it is the best indication of the patient's condition If it rises the prognosis is favourable, if it progressively falls the prognosis is grave

Therapeutics

347 Treatment of Purpura Haemorrhagica

H. W. JONES and L. TOCANTINS (*Journ. Amer. Med. Assoc.* January 14th, 1933, p. 83) call attention to the large number of spontaneous recoveries which occur in purpura haemorrhagica, and also to the marked seasonal tendency—namely, the high incidence of cases in the spring Many therapeutic procedures have been commended, of which blood transfusion seems to be the most generally effective The authors conclude from this that the disease is of the deficiency type It occurs in a person with a "haemorrhagic constitution," the acute phase of which is precipitated by toxins originating from an acute or chronic infectious process which is active, or by substances which affect the capillary permeability Surgical treatment, therefore, should be deferred to allow spontaneous recovery to ensue, or a good response to follow the conduct of the case on medical lines The diet should be investigated, because in many instances a history is elicited of too little meat or a too low protein content There is often a distaste for fresh vegetables and fruit the supply of which induces clinical improvement Vitamin C is beneficial in certain cases and viosterol or halibut-liver oil is commended Liver extract and iron should be administered Search should be made for local infectious processes in order that they may be eliminated The acute progressive case should be treated by small intravenous blood transfusions, repeated frequently In watching a case more attention should be paid to the bleeding time than to the blood platelet count It is imperative that the bleeding time should be kept under control in order that the haemorrhagic phenomena shall not recur and intracranial haemorrhage be prevented In some cases ultra-violet ray therapy and attention to a more outdoor life are useful accessories Indications for splenectomy are (1) the acute progressive case which does not respond to dietetic and medicinal treatment (2) the chronic case with a normal or nearly normal blood count but a long bleeding time and a low platelet count, and (3) the chronic case with anaemia or other manifestations which is not improved by transfusions, the removal of infection, and other forms of treatment As an alternative, ligature of the splenic artery may be preferable, in view of its lower mortality rate, less difficult technique, and the celerity with which it can be performed The authors add that failure to respond to transfusion treatment may be due to too large quantities of blood being used to faulty performance of transfusion, to too long an interval between the transfusions or to the number of these being insufficient to control the bleeding time and relieve the symptoms

348 Insulin Therapy in Heart Disease

J. WIENER (*Bruxelles-Médical* December 18th, 1932, p. 188) holds that cardiovascular disease finds a place among the maladies which, although unrelated to diabetes respond to insulin treatment Ill-judged use of insulin in heart disease has in the past led to untoward and even fatal results, which have hindered the development of this therapeutic measure But Bickal has pointed out that hypoglycaemia is at the root of these troubles, and that provided this is avoided insulin can exert no harmful effects The author recommends the following technique 5 to 10 units of insulin followed in fifteen minutes by 100 grams of glucose It is held that certain cardiac conditions are remarkably benefited by such treatment, notably congestive failure unrelieved by the usual remedies and insufficiency of the left or of the right ventricle Other maladies are but little influenced by insulin therapy, to this category belong the cardiopathy of Graves's disease, the arrhythmias, and high blood pressure The treatment is contraindicated in acute infective heart disease The results that may be obtained by these methods include the disappearance of failure due to valvular disease or coronary sclerosis, the restoration to normal T-waves previously inverted the cessation of bundle-branch and arborization blocks, and the

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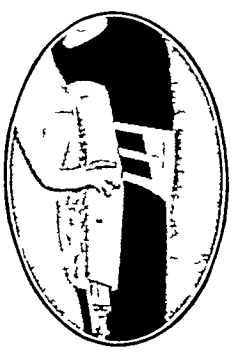

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abatement of dyspnoea and arrhythmia The author cites a patient suffering from emphysema myocarditis and chronic nephritis who received no benefit from the usual measures after a pulmonary infarction Administration of insulin and glucose produced diuresis progressive diminution of dyspnoea and ultimate restoration of a fair degree of effort tolerance

Laryngology

349 Treatment of Chronic Nasal Sinusitis

J G HUNT (*Canadian Med Assoc Journ* January 1933 p 54) attacks the still too frequent empiric treatment of nasal sinusitis without first determining the degree and type of the pathological changes in the sinus mucosa by the use of iodized oil and *x* rays Repeated drainage operations and excisions of polypi have often proved disappointing owing to the neglect to obtain an accurate diagnosis in the beginning He classifies the present therapeutic procedures as (1) the nasal including irrigations astringent applications and cauterization and extensive submucous resection (2) the constitutional consisting of vaccinotherapy light therapy and the prescribing of vitamin containing foods and (3) direct surgical interventions the approach being intranasal for drainage or extranasal for the complete removal of the diseased tissues Hunt insists that there must be a more general recognition by rhinologists that the real cause of both the local catarrhal and the remote organic and constitutional symptoms is the presence within certain of the paranasal cells of an infected fibrosed or polypoid mucosa He argues therefore that constitutional remedies such as vaccines and light therapy cannot possibly be expected to restore to normal or sterilize the thickened mucosa of a paranasal cell while irrigations are obviously futile when a chronic pyogenic infection has given rise to polypoid or fibrotic degeneration Moreover nasal operations for the relief of the obstructed breathing caused by chronic sinusitis are irrational they may even be dangerous when associated with post-operative packing causing sequelæ ranging from haemorrhages and discharges to middle ear disease The indiscriminating attempt to cure all types of chronic antrum disease by nasal puncture and lavage is even more illogical than the attempt to flush polypi from the nasal cavity or tonsils from their beds The author adds that success in radical sinus surgery will vary in direct proportion with the ability of the surgeon to locate the diseased cells He does not imply that every person with a chronically diseased sinus requires a radical operation for in some cases the disease is quiescent and is only accidentally disclosed by an *x* ray examination of the head for other purposes Such cases should be left alone Other patients of this kind who are in good general health and have only mild catarrhal symptoms are best treated by medical measures directed to the relief of the symptoms When however the symptoms are so severe as to indicate the necessity of surgical intervention the radical extranasal removal of all the thick polypoid mucosa is in the author's experience the only permanently effective therapeutic measure for this otherwise intractable disease

350 The Complications of Acute Tonsillitis

L HAYMANN (*Münch med Woch* January 1933 p 107) in an examination of the conditions which have been stated to follow a primary infection of the tonsils defines the following as being without doubt causally related to such a focus renal disease endo- peri and myocarditis pleuritis acute rheumatism appendicitis purpura erythema nodosum iritis and neuritis In a typical case of erythema nodosum the author was able to cure the condition completely by removal of the tonsils He strongly advocates the complete enucleation of the tonsils as the only certain method of removing the primary focus methods such as Röder's aspiration technique being specially condemned In certain cases however where surgical removal is not immediately practicable the aspiration of infected plugs from the tonsillar crypts may ameliorate the condition somewhat Contrary to the view of Schottmüller Haymann considers the tonsils as the site of origin of what he calls tonsillogenic general infection which arises most often from an infection of the tonsils with streptococci staphylococci diplococci and sometimes pathogenic anaerobes In contrast with the severe clinical picture presented by tonsillar sepsis or quinsy the signs and symptoms of the tonsillogenic infection may only become manifest after the acute tonsillitis has subsided The temperature suddenly rises and may be accompanied by rigors There is more or less general discomfort The temperature may be of the high maintained type or take on a pyaemic character in the latter case rigors are frequent Occasionally there may be glandular enlargement in the neck hard infiltration and a painful swelling at the anterior border of the sterno-cleido-mastoid The spleen and the liver are frequently enlarged while haemorrhagic nephritis is common The blood culture is positive in some cases There is marked leucocytosis with a predominance of young cells This general infection may take a slow course and produce occasional bouts of fever Although the condition may disappear more or less spontaneously it usually ends in death if no proper treatment is instituted The differential diagnosis is not always easy A careful study of the history with examination of the whole pharyngeal area and a search for signs of thrombophlebitis as well as a thorough examination of the blood are outstanding factors in the diagnosis The condition is particularly to be distinguished from agranulocytic and monocytic angina in the former there is an almost complete absence of glanular leucocytes and in the latter there may be a monocyte count up to 75 per cent Out of 10 000 post mortem examinations the author states that there were 100 cases of death from tonsillar sepsis The only useful treatment is surgical the aim being a complete removal of any pharyngeal focus of infection Venous thrombosis must be sought for and radical removal practised after appropriate ligature of the vessels

351 Post Diphtheral Laryngeal Stenosis

C H KRIEGER (*Arch of Otolaryngol* January 1933 p 49) reviews the literature and reports six cases of laryngeal stenosis following diphtheria In this series cases of both supraglottic and subglottic lesions are included the aetiology was varied and both conservative and radical methods were necessary to re-establish the airway Krieger is satisfied that post-diphtheral laryngeal stenosis cannot be attributed to any one cause although errors in intubation or tracheotomy too prolonged retention of tubes and diphtheral infection are held to be the chief activating agencies in the order named He commends intubation by direct laryngoscopy because it can be readily learned the risk of trauma to the larynx is lessened and the larynx can be studied at the time of intubation In his opinion tubes should not be retained more than two weeks a shorter period than this he thinks is probably preferable Dilatation should be instituted early if decannulation is impossible since the cicatrix is still soft and responds to dilatation more readily Krieger considers Jackson's method of dilatation and occlusion the procedure of choice wherever practicable when continuous dilatation is necessary or desirable the method of Iglauer seems to him to be the most reliable Before treatment is instituted the nature and extent of the stenosed area must be determined by direct and retrograde laryngoscopy and by radioscopy The prognosis as regards ultimate functional recovery is good if the cartilaginous framework is not entirely destroyed if it has collapsed transplantation of bone and cartilage may be effective but the difficulties are great and Nassau's method of plastic closure following laryngostomy seems to be the best procedure The treatment should be conducted in hospital with the patient under the close supervision of specially trained nurses Since most of these cases of laryngeal stenosis occur in children of pre-school age Krieger urges the adoption of early immunization against diphtheria of the very young

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Obstetrics and Gynaecology

352 Induction of Labour

M Berger (*Zentralbl f Gynäk* January 21st, 1933, p 178) states that at the Magdeburg Stadtischen-Frauenklinik the method used for inducing labour until recently was rupture of the membranes followed by the insertion of an india-rubber bag of 400 to 700 c cm capacity In a series of thirty five cases there was no maternal mortality, but two foetal deaths occurred from prolapse of the cord There were in all four cases of this complication and in two others the presentation ceased to be a vertex Since the occurrence of a maternal death the method has been replaced by simple rupture of the membranes The vagina having been disinfected, the anterior lip of the cervix is instrumentally steadied whilst a clip is introduced which, having encountered the presenting part grasps and tears the membranes Berger believes that introduction of the finger adds to the danger of infection and that to push up the head with the object of increasing the drainage of liquor amnii is to risk prolapse of the cord The use of this method in twenty-six cases of post mature pregnancy and eighteen others led in primiparae to onset of pains an average of three hours later to an average duration of labour of eleven hours and to no (corrected) foetal mortality and no maternal mortality or morbidity In two cases labour failed to ensue The induction of labour by administration of drugs is not recommended—except aperients, which are given trial, associated with enemata, before it is decided to rupture the membranes

353 X Ray Sterilization

Dr Sv Stefanik (*Bratis avské Lekárske Listy* February, 1933 p 53) describes the application of *x* rays to the ovaries in order to produce temporary sterilization in 103 cases and permanent sterilization in 154 cases Theoretically one or the other may be achieved according to the dose of x rays supplied But the treatment was unsuccessful in 12 1 per cent of the cases treated with the view of producing temporary amenorrhoea, and in 6 8 per cent of these cases permanent, instead of temporary, sterilization resulted The method of temporary x-ray sterilization has therefore proved unsafe Furthermore, there is always the possibility of permanent injury to the ovary and to the future progeny The author therefore recommends the method of temporary x ray sterilization in exceptional cases only Permanent *x*-ray sterilization in women approaching the menopause can be carried out very successfully without any ill consequences to the patient

Pathology

354 Vaccination against Yellow Fever

A W Sellards and J Laigret (*Arch de l Inst Pasteur de Tunis* December 1932 p 229) report on the successful vaccination of human beings against yellow fever by the use of a virus that had been adapted by numerous passages to existence in the brain of the mouse Intracerebral inoculation of mice with the particular strain used—a virus recovered originally from a mild case of yellow fever—led after an incubation period of six days, to rapid paralysis and death the majority of the animals dying on the seventh or eighth day The authors were able to confirm the truth of Theiler s statement that the mouse passage virus was incapable of causing fatal disease in the monkey Experiments showed that after subcutaneous or intraperitoneal inoculation, even with large doses monkeys either presented no reaction or developed a mild illness in either event they were found to be subsequently immune to inoculation with a virulent monkey virus The conclusion was drawn that as the result of mouse passage the virulence of the virus had been lowered for monkeys Since vaccination of human beings with killed virus of monkey origin has been found incapable of producing immunity to yellow fever, the authors determined to try the effect of inoculations of living mouse-passage virus Infected mice were killed between the sixth and ninth days after intracerebral inoculation, the brain being removed and ground up in 4 5 c cm of saline containing 10 per cent rabbit serum This 1 in 10 suspension was centrifuged for two minutes to throw down gross particles, and the supernatant fluid was then diluted to the required degree Five persons whose serum was free from protective bodies were inoculated on one or more occasions with varying quantities of the living vaccine None of them became ill, and all of them developed antibodies to the yellow fever virus as tested by the intracerebral mouse inoculation method In a second series of vaccinations on seven subjects, three of the inoculated persons developed an atypical febrile reaction, indicating that the mouse virus is not completely devoid of activity for human beings

355 Temporary Sterilization by Injection of Human Spermatozoa

In a preliminary report M J Baskin (*Amer Journ Obstet and Gynecol*, December, 1932, p 892) claims to have induced temporary sterilization, lasting about one year, in twenty patients injected with human spermatozoa The spermatic fluid, obtained by condom coitus, was injected into the buttock on three occasions at weekly intervals in amounts of 2 to 5 c cm General reactions were absent The spermatocidal properties of the patients serum were tested at three monthly intervals beginning one week after the first injection and, initially well marked, were found to diminish as time went on, in about twelve months the serum had ceased to kill spermatozoa The cervical secretion was invariably non spermatocidal None of the patients became pregnant within twelve months, and revaccination at the end of the year appeared to prolong the immunity for at least twelve months

356 B C.G. Vaccine in the Guinea pig

K E Birkhaug (*Nord Med Tidskrift* January 28th 1933, p 99) gives an account of B C G investigations started three years ago The first question to which he sought an answer was whether B C G was capable of producing tuberculin as effective as that produced by virulent tubercle bacilli Intracutaneous injections of tuberculins made from various strains belonging to one or other of these two main groups were given to tuberculous guinea-pigs There was little difference in the reactions Hence the conclusion that B C G is capable of producing as effective a tuberculin as that derived from virulent human or bovine tubercle bacilli In another series of investigations newborn tuberculin negative guinea-pigs were given B C G by mouth and, six months later, virulent tubercle bacilli by subcutaneous injection The course of the tuberculosis which developed in these guinea-pigs and in controls receiving no B C G by the mouth previous to the injection of virulent tubercle bacilli was approximately the same Hence the conclusion that B C G given by the mouth to the newborn guinea-pig confers no reliable immunity on it Parenteral injections of B C G into guinea-pigs provoked only local lesions without any progressive tuberculosis The degree of immunity to virulent tubercle bacilli thus achieved was greatest when the intracutaneous and subcutaneous routes were followed Other investigations showed that the immunity conferred by B C G lasts longer than the cutaneous allergic properties acquired for even after B C G -inoculated guinea-pigs had again become tuberculin-negative their ability to survive a superinfection with virulent tubercle bacilli was considerably greater than that of the controls It was found that B C G can live for 577 days in the guinea pig's body without developing any tendency to provoke progressive tuberculosis The investigation also suggested that B C G is harmless even in the case of "smooth" strains and when it is grown under partially anaerobic conditions

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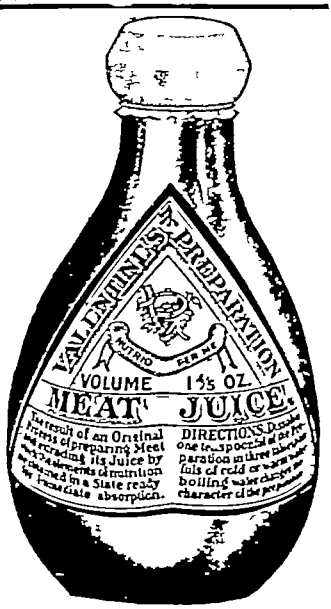

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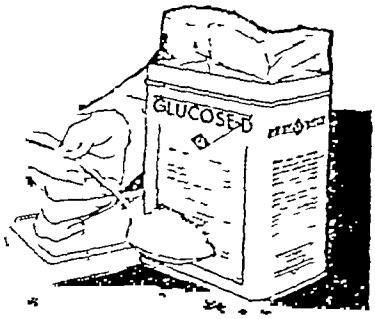

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See B.M.J., September 24th 1932 p 577 et seq

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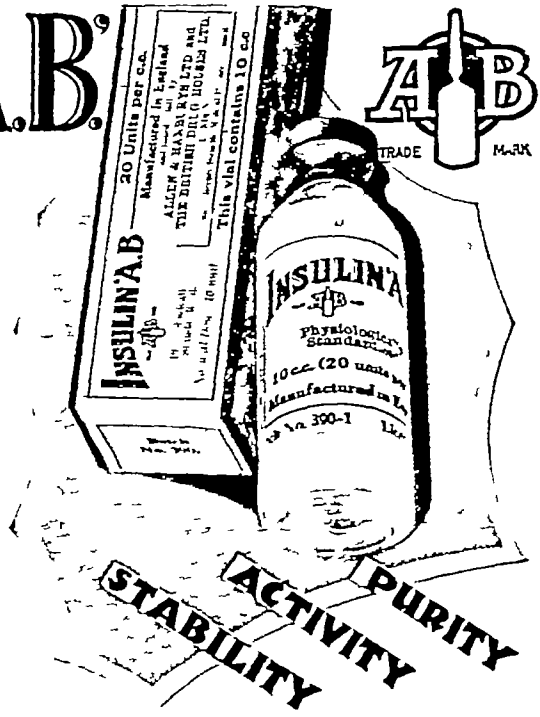

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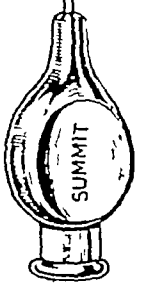

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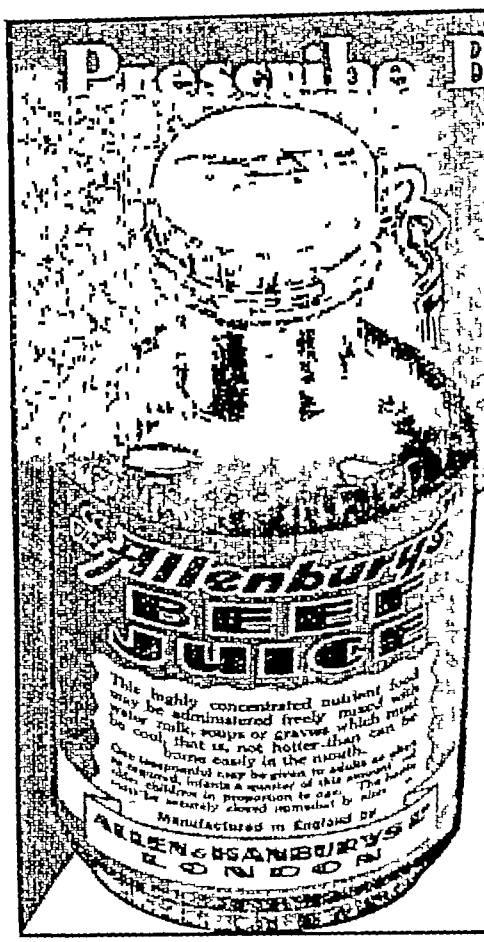

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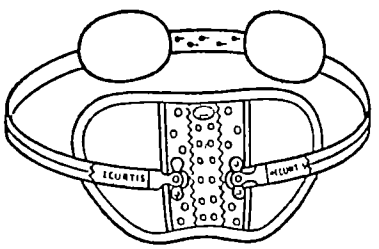

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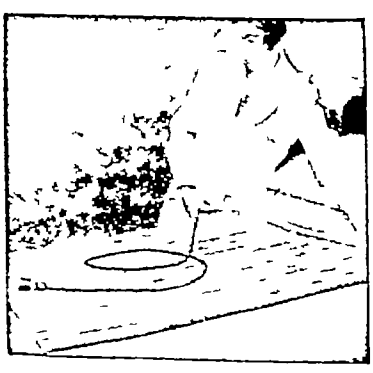

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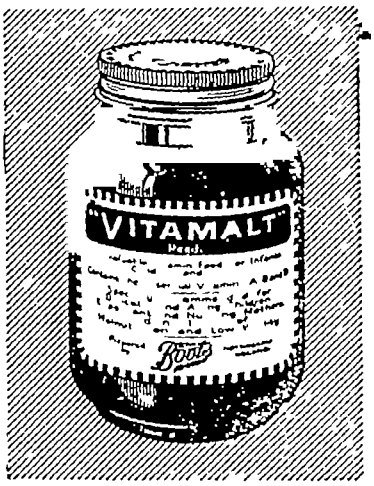

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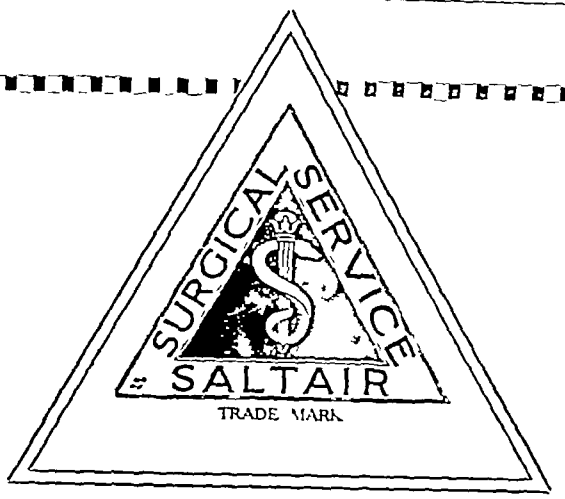

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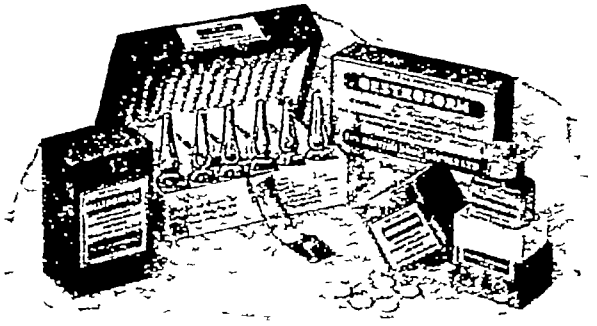

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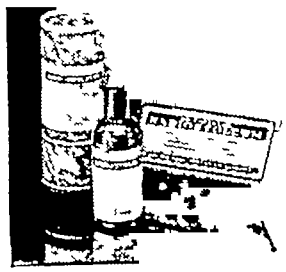

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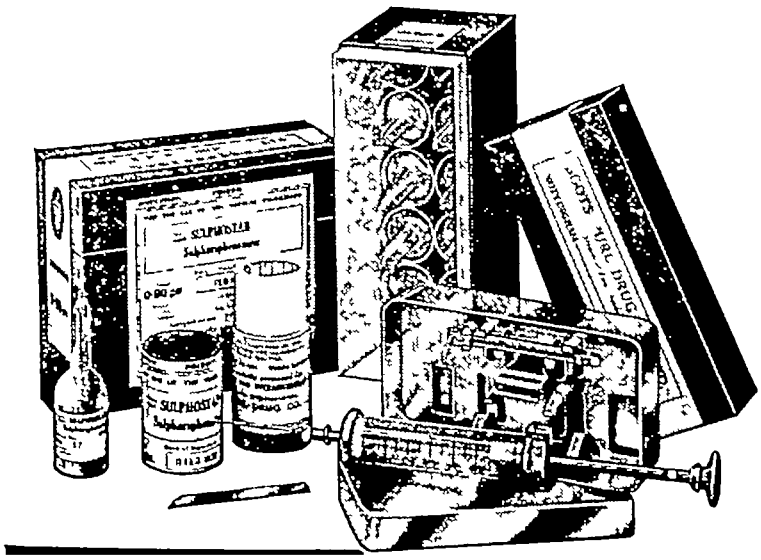

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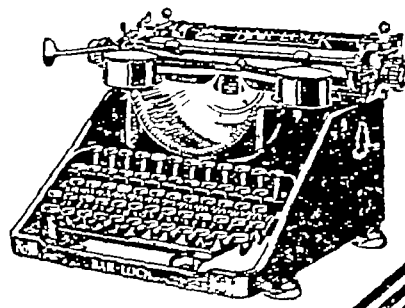

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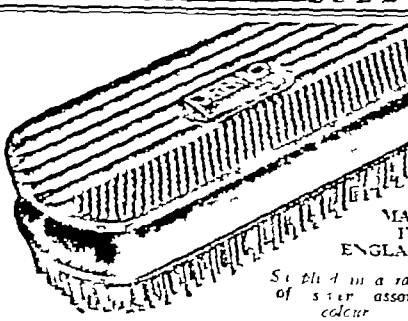

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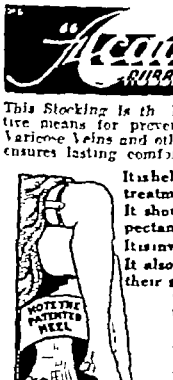

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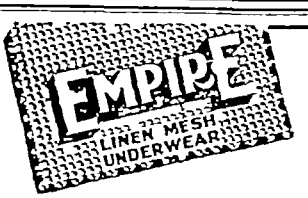

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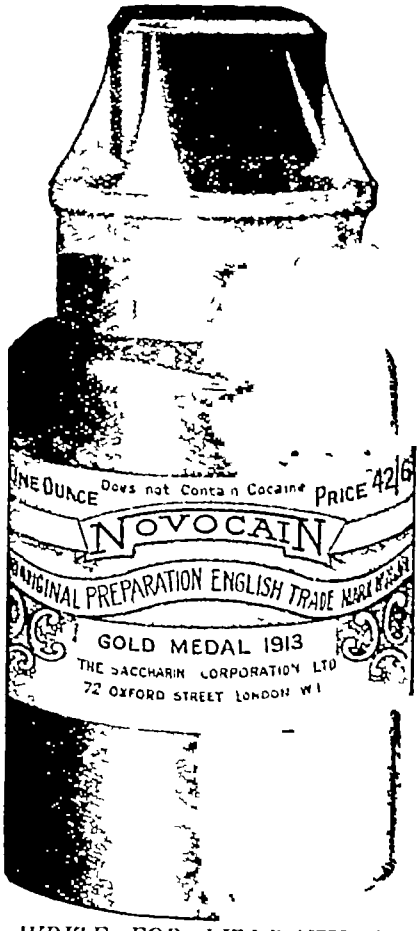

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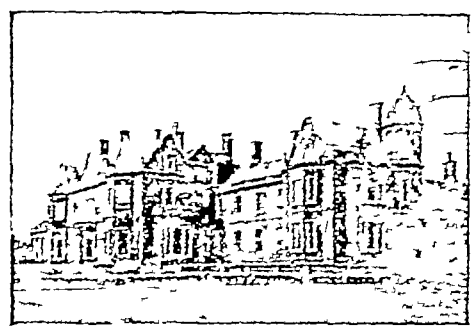

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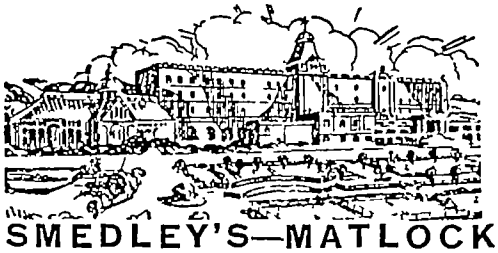

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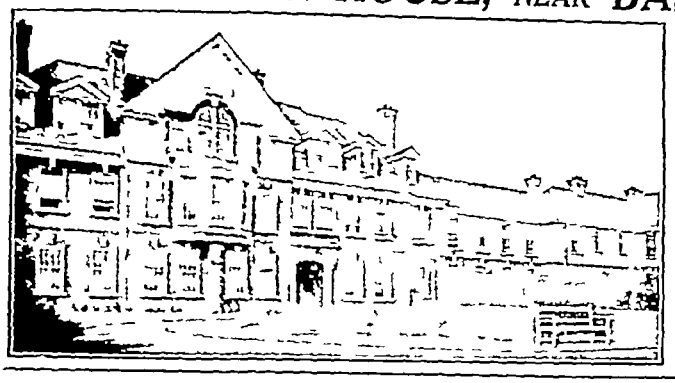

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Application must be received by the undersigned (from whom further particulars may be obtained) not later than May 20th

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THE GOVERNMENT OF INDIA INVITES APPLICATIONS FOR THREE GAZETTED APPOINTMENTS IN THE MEDICAL RESEARCH DEPARTMENT

Applications will be received from Europeans and Indian candidates who must be natural-born British subjects and the children of British subjects or statutory natives of India

Note (a) and (b)—Applicants who must be qualified doctors and must not be members of the Indian Medical Service should have had considerable practical experience in Bacteriology and preferably have undertaken original research. For post (1) at the Haffkine Institute, Bombay a thorough knowledge of animal technique of preparation of Plague vaccine is also required

Terms—Commencing pay will be fixed at a point in the incremental scale of Rs 625—Rs 1 350 a calendar month commensurate with age and qualifications etc and the pay will be subject to such temporary reduction (at present 5 per cent) as may be imposed by Government Sterling equivalent of Rs 625 and Rs 1 350 respectively at present rate of exchange (less 5 per cent.) £534 and £1 154 per annum

Tenure—Permanent subject to satisfactory completion of a probationary period of three years Posts are non pensionable but on confirmation appointees are eligible for the benefits of a special provident fund

Passage—Free first-class passage to India also for candidates of non Asiatic domicile only similar return passage subject to usual conditions

Strict medical examination

Post (c)—Applications are invited from and restricted to officers of the Indian Medical Service The selected officer, who will also be required to serve a probationary period of three years will be eligible for the pay of his rank plus a Bacteriological allowance of Rs 250 a calendar month.

Forms of application may be obtained upon request by post card from the High Commissioner for India General Department India House Aldwych London W C 2 where applications will be received up to July 1st 1933, for transmission eventually to the Recruitment and Appointments Board for the Medical Research Department in India.

Candidates are liable to be required to attend for interview in England

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Applications marked House Physician with copies of three recent testimonials should be sent to the Medical Superintendent at the above address

COUNTY COUNCIL OF ORKNEY

Wanted a MEDICAL OFFICER for the Islands of South Ronaldsay and Burray to take up duty on August 1st

For particulars apply with testimonials and references to the County Clerk Commercial Bank Buildings, Kirkwall

Kirkwall. April 25th 1933.

THE ALL INDIA INSTITUTE OF HYGIENE AND PUBLIC HEALTH CALCUTTA INVITES APPLICATIONS FOR THE FOLLOWING GAZETTED POSTS Viz.

(1) ASSISTANT PROFESSOR OF PUBLIC HEALTH ADMINISTRATION with additional experience in publicity and propaganda work.

(2) ASSISTANT PROFESSOR OF BIO-CHEMISTRY AND NUTRITION

(3) ASSISTANT PROFESSOR OF MALARIOLOGY AND RURAL HYGIENE (including Venereology and Tuberculosis)

(4) ASSISTANT PROFESSOR OF VITAL STATISTICS AND EPIDEMIOLOGY

Terms—Pay Rs 375—35—1 075 a calendar month Pay higher than initial rate might be given having regard to age and qualifications. Emoluments liable to revision if necessary in Services in India or of a decision by Bengal Government to revise rates of pay of similar staff of School of Tropical Medicine Calcutta (Rupee 1 6d approximately) The appointments are non pensionable but appointees will be eligible for the benefits of the Contributory Provident Fund (India)

Tenure—Five years in the first instance subject to six months notice on either side and extensible thereafter at the discretion of Government for such periods at a time as may be agreed upon A formal agreement will be entered into with appointees provided they are not already in Government service in India

Leave—Appointees of non Asiatic domicile will be eligible for leave during agreement in accordance with Model Leave terms those already in Government service in India will be eligible for leave in accordance with Fundamental Rules or such other leave rules applicable to their service to those of Asiatic domicile special leave rules will apply Officers will be bound by the leave rules applicable to them and such revisions thereto as may be made from time to time

Passage—Free first-class passage to India also for candidates of non Asiatic domicile only similar return passage subject to usual condition

All candidates will on appointment be regarded as serving in a vacation department on distinct understanding that withdrawal of this concession if and when found necessary will not entitle them to compensation No private practice including laboratory and consultant practice will be allowed

Forms of application may be obtained upon request by post card from the High Commissioner for India General Department India House Aldwych London W C 2 where applications will be received up to July 1st 1933 for transmission eventually to the Recruitment Board for the All India Institute of Hygiene and Public Health Calcutta.

Candidates are liable to be required to attend for interview in England.

GOVERNMENT OF SOUTHERN RHODESIA.

APPOINTMENT OF MEDICAL SUPERINTENDENT MENTAL HOSPITAL, BULAWAYO

Applications are invited from male Medical Practitioners for the post of Medical Superintendent of the Mental Hospital Bulawayo Southern Rhodesia. Applicants must have had suitable experience in mental disease and will be expected to commence duty in October 1933 or shortly after Candidates should be in possession of the Diploma in Psychological Medicine The successful candidate will also be required to undertake certain routine medical duties in Bulawayo in connection with the Government Medical Service

Salary £600 per annum rising by £40 per annum to £1 000 per annum (subject to temporary deductions in terms of the Public Services Economy Act 1931) plus a pensionable allowance of £200 per annum for unfurnished quarters light and water for which purpose a house is provided in the vicinity of the hospital Consultant practice but not private practice will be allowed The post is pensionable in terms of the Public Services Act 1931

Application forms and further information regarding the terms of appointment and conditions of service can be obtained from the Official Secretary Office of the High Commissioner for Southern Rhodesia, Crown House Aldwych London W C 2 to whom applications should be sent not later than May 31st

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Application with copies of three recent testimonials should be submitted not later than May 22nd next.

R. ARMSTRONG Medical Superintendent.

May 9th 1933

THE ALL INDIA INSTITUTE OF HYGIENE AND PUBLIC HEALTH CALCUTTA INVITES APPLICATIONS FOR THE FOLLOWING GAZETTED POSTS Viz.

(1) PROFESSOR OF BIOCHEMISTRY AND NUTRITION

(2) PROFESSOR OF MALARIOLOGY AND RURAL HYGIENE (including Venereology and Tuberculosis)

(3) PROFESSOR OF VITAL STATISTICS AND EPIDEMIOLOGY

Terms—Pay Rs 375—125 3—1 565—125 3—1 750 a calendar month plus a compensatory allowance of Rs 500 a calendar month in lieu of private practice. Pay higher than initial rate might be given having regard to age and qualification Emoluments liable to revision if necessary in event of any grading down of pay of Public Services in India or of a decision by Bengal Government to revise rates of pay of similar staff of School of Tropical Medicine Calcutta. (Rupee 1s 6d approximately) The appointments are non pensionable but appointees will be eligible for the benefits of the Contributory Provident Fund (India)

Tenure—Five years in the first instance subject to six month notice on either side and extensible thereafter at the discretion of Government for such periods at a time as may be agreed upon A formal agreement will be entered into with appointees provided they are not already in Government service in India

Leave—Appointees of non Asiatic domicile will be eligible for Leave during agreement in accordance with Model Leave terms those already in Government service in India will be eligible for leave in accordance with Fundamental Rules or such other leave rules applicable to their service to those of Asiatic domicile special leave rules will apply Officers will be bound by the leave rules applicable to them and such revisions thereto as may be made from time to time

Passage—Free first-class passage to India also for candidates of non Asiatic domicile only similar return passage subject to usual conditions

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All candidates will on appointment be regarded as serving in a vacation department on distinct understanding that withdrawal of this concession if and when found necessary will not entitle them to compensation No private practice including laboratory and consultant practice will be allowed

Form of application may be obtained upon request by post card from the High Commissioner for India General Department India House Aldwych London W C 2 where applications will be received up to July 1st 1933 for transmission eventually to the Recruitment Board for the All India Institute of Hygiene and Public Health Calcutta

Candidates are liable to be required to attend for interview in England.

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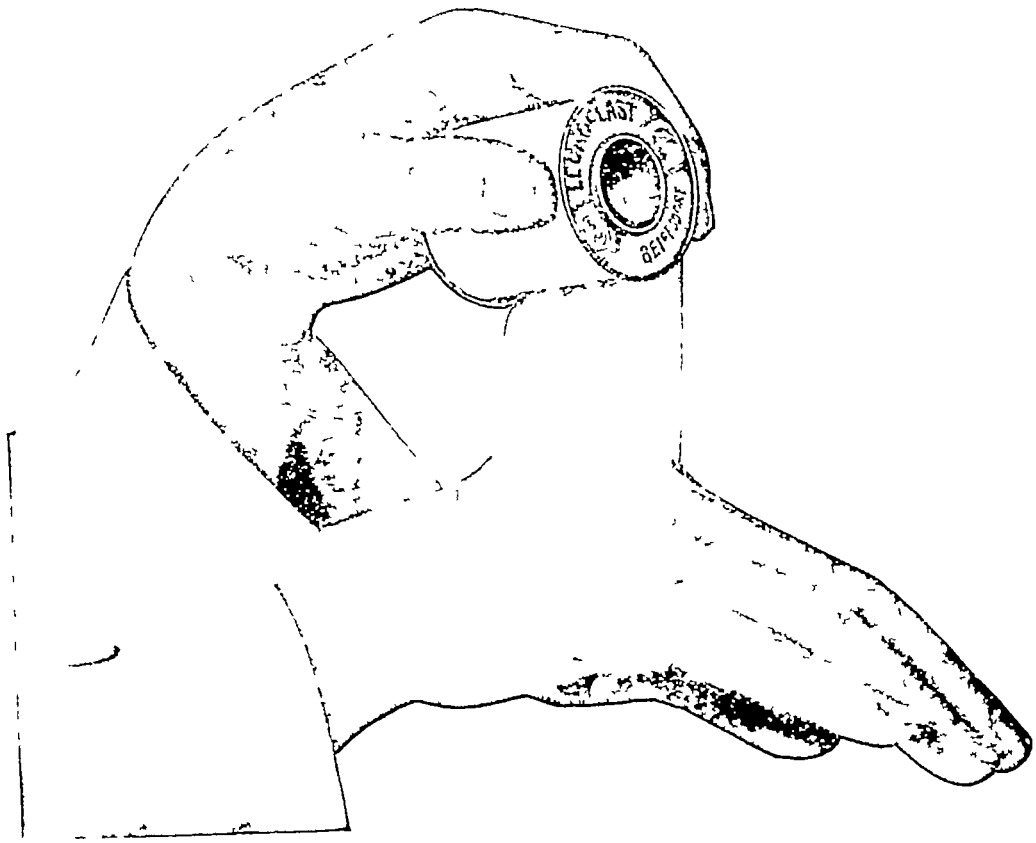

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APPOINTMENTS —Contd

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CITY OF LEICESTER.
RESIDENT MEDICAL OFFICER.

Junior Assistant Medical Officer (male) required at the City General Hospital for a period of twelve months

The Hospital is a modern building with 530 beds and three Resident Medical Officers

Salary £300 per annum together with full residential emoluments The gentleman appointed to the post will be required when requested, to assist at the Institutions of the Public Assistance Committee

Further particulars of the appointment may be obtained from the Medical Superintendent E C HADLEY M D B S Lond F R C S P to the General Hospital Gwendolen Road Leicester

Applications stating age experience and qualifications, accompanied by copies of three recent testimonials must be received by first post on the 23rd instant addressed to—

C KILLICK MILLARD
Health Offices, Medical Officer of Health.
Grey Friars Leicester
May 12th, 1933

SOUTH DEVON AND EAST CORNWALL HOSPITAL PLYMOUTH (240 Beds)

Applications are invited for the TWO vacant POSTS of HOUSE SURGEON

Salary £100 per annum, with board residence and laundry

Appointments are tenable for six months and are subject to renewal Duties to commence on June 8th and 19th respectively

Applicants must be registered under the Medical Acts.

Applications, stating age and qualifications with copies of three recent testimonials, to reach the undersigned by May 25th

ARTHUR R CASH
May 9th, 1933 Gen Supt & Secretary

BOARD OF EDUCATION
APPOINTMENT OF MEDICAL OFFICER.

The Board of Education invite applications from registered Medical Practitioners for appointment as Medical Officer on the staff of the Board

Applicants must be Medical Practitioners preferably between 30 and 40 years of age with a University Medical Degree a Diploma in Public Health, and experience of the School Medical Service

The officer will be required to reside in London or such other area as may be determined by the Board The appointment will carry the normal Civil Service conditions as to pension holidays, etc

The scale of salary will be £726 per annum rising by twelve annual increments to a maximum of £1 043 In special circumstances the minimum salary may be advanced where a candidate has special knowledge and experience

Further particulars together with application forms which must be returned completed not later than Saturday, June 3rd may be obtained on application in writing to the Director of Establishments, Board of Education Whitehall, London S W 1

KELLING SANATORIUM HOLT NORFOLK

JUNIOR ASSISTANT RESIDENT MEDICAL OFFICER (male) unmarried, required at the above Sanatorium First appointment 12 months with 3 months notice on either side

Salary £350, with apartments board and laundry

Candidates must be duly registered Medical Practitioners and have held both surgical and medical House appointments and preferably possess some Bacteriological knowledge

There will be every facility for becoming conversant with the treatment of Pulmonary Tuberculosis in its various forms

Applications in candidate's own handwriting stating age and qualifications (with one copy of three recent testimonials) to be sent to the Medical Superintendent Kelling Sanatorium, Holt Norfolk not later than May 20th

NATIONAL HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM
Queen Square W C 1

HOUSE PHYSICIAN

Applications are invited for the post of House Physician and should be sent to the undersigned accompanied by three recent testimonials not later than Wednesday May 31st The salary is £150 per annum, with board and lodging

GODFREY H HAMILTON Secretary

An Address

ON

INDICATIONS FOR SURGICAL TREATMENT IN PEPTIC ULCER*

BY

D P D WILKIE CHM FRCS

PROFESSOR OF SURGERY UNIVERSITY OF EDINBURGH

(With Special Plate)

There is perhaps no subject on which opinion is so divided as that of the surgical treatment of gastric and duodenal ulcer On the one hand we find the enthusiasts for medical treatment who consider perforation to be the only indication for surgery who record the cure of large penetrating ulcers by strict medical measures and who point to the derelicts of surgery who consult them On the other we find the advocates of surgical measures who cite the many cases of perforation which have occurred during the course of medical treatment the precarious health of the person relieved but not cured by medicine and the inability of the majority of the population to fulfil the requirements of an adequate medical regime Among surgeons there is a wide divergence of opinion as to, whether extensive resections or more conservative measures should be the rule in the operative treatment of ulcer

My object in this address is to review the data on which treatment is based and to endeavour to define the indications for surgical help in such treatment and the lines which surgical aid should take The idea that physicians and surgeons should be ranged in opposing camps in regard to the treatment of peptic ulcer is contrary to the whole spirit of modern medicine and to the best interests of the patients

Increase in Ulcer Cases —All are agreed as to the frequency of peptic ulcer and the ill health disability and misery to which it gives rise It would appear to be on the increase and to have changed in type and incidence Even when we allow for the greater knowledge and capacity for recognition of the condition and for the consequent change in outlook of the medical profession statistics would seem to indicate that the incidence of peptic ulcer has increased during the past twenty years Table I gives the figures for the Royal Infirmary Edinburgh for the two-year periods October 1910-12 and 1930-2

TABLE I

	No. of Cases 1910-12	No. of Cases 1930-2
Medical Wards		
Gastric ulcer	191	247
Duodenal ulcer	41	382
Surgical Wards		
Gastric ulcer	111	77
Perforated gastric ulcer	44	38
Simple pyloric stenosis	84	301
Duodenal ulcer	58	
Perforated duodenal ulcer	47	300
Total	576	1,345

It is seen that the cases diagnosed as ulcer have multiplied nearly two and a half times the increase being almost entirely in cases of duodenal ulcer While this is undoubtedly due in part to improved diagnosis based largely on radiology the increase in the number of perforated ulcers—338 as against ninety-one—cannot thus be accounted for With the reputed improvement in medical treatment with the much greater number of cases treated surgically and with the establishment of many well-equipped provincial hospitals dealing with emergency cases which formerly would have come to Edinburgh the natural expectation would be that the number of cases of perforated ulcer would decrease Since they have multiplied nearly fourfold we may reasonably infer that peptic ulcer is on the increase

Incidence —Twenty years ago gastric ulcer was regarded as a common disease of the anaemic female and duodenal ulcer a relatively rare disease of the male To-day we know that both gastric and duodenal ulcer are more frequent in the male that duodenal ulcer is more frequent than gastric ulcer in both sexes and that coincident duodenal and gastric ulcers are by no means uncommon As the last two points have been disputed I will give briefly my own experience

Duodenal Ulcer in the Female —It is still maintained by many that gastric ulcer is common and duodenal ulcer rare in the female I have found that duodenal ulcer is more than twice as common as gastric ulcer in the female Table II gives the figures of all cases of ulcer on which I have operated in both hospital and private practice during the past twelve years

TABLE II

Duodenal Ulcer Alone		Gastric Ulcer Alone		Coincident Gastric and Duodenal Ulcer	
Male	Female	Male	Female	Male	Female
438	176	37	43	55	26

In this series of cases duodenal ulcer was two and three quarter times as common as gastric ulcer in the female That this was not a local incidence peculiar to the South East of Scotland is proved by an analysis of the figures In my hospital cases over 90 per cent of which were drawn from the South East of Scotland the figures for peptic ulcer in the female were duodenal ulcer 105 gastric ulcer fifty-one a ratio of two to one In cases in private practice of which less than 50 per cent came from this area the figures were duodenal ulcer ninety seven gastric ulcer twenty three a ratio of over four to one My belief is that duodenal ulcer is a malady very frequently overlooked in the female the symptoms often being attributed to gall bladder disease

Cholecysto-duodenal Syndrome —Some years ago I described under this term a symptom-complex which is found almost exclusively in female patients in which the history given by the patient appears to point to gall bladder disease but accurate investigation or operation reveals a chronic duodenal ulcer The patient is usually a stout housewife whose chief complaints are of flatulence and attacks of epigastric pain She states that the pain has no constant relation to the taking of food and she has not noticed the periodicity so characteristic of duodenal ulcer She has excluded potatoes and fried foods from her dietary because of the flatulence and discomfort which they induce She describes attacks of acute pain lasting for a few hours suggestive of biliary colic These attacks however have not the intensity of true biliary colic Not infrequently she gives a history of faint and transient jaundice (duodenitis) Only with the greatest difficulty and after repeated cross-questioning

* An address (abridged) delivered to the Aberdeen Branch of the British Medical Association on March 10th 1933

MILLER GENERAL HOSPITAL
Greenwich Road S.E.10

Applications are invited for the following posts:
HOUSE SURGEON. Salary £100 per annum.
HOUSE PHYSICIAN. Salary £100 per annum.
CASUALTY OFFICER. Salary £150 per annum.
Board, residence and laundry are provided.
OUT-PATIENT OFFICER who is required to see Medical and Surgical cases. Attendance daily (except Sundays) from 9 to 1. Tuesdays 9 to 5. Salary £150 per annum and lunch.

Candidates (male) must be unmarried. The appointments are for six months from July 1st next. There are six Resident Officers.

Applications, stating age, nationality, qualifications and experience, accompanied by copies of not more than three recent testimonials, to be sent to the Acting Secretary not later than May 24th.

May 2nd, 1933.

WESTMINSTER HOSPITAL,
Broad Sanctuary, S.W.1

Applications are invited for the office of ASSISTANT PHYSICIAN FOR DISEASES OF CHILDREN to this Hospital.

Candidates must be Fellows or Members of the Royal College of Physicians. Each candidate is required to transmit a certificate of his age and 30 copies of his application with 30 copies of each of three testimonials to the undersigned not later than Friday, May 26th, and to attend before the House Committee on Tuesday, May 30th, at 4 p.m.

A copy of the Laws relating to the office may be obtained on application to the Secretary.

By Order of the House Committee,
CHARLES M. POWER, Secretary.

ALL SAINTS HOSPITAL (FOR GENITO-URINARY DISEASES),
Aubrey Street, West Square, St. George's Rd.,
S.E.11

RESIDENT HOUSE SURGEON (male) required on July 1st for six months, being three months as Junior House Surgeon with salary at £100 per annum, followed by three months as Senior House Surgeon with salary at £150 per annum.

Applications, giving particulars of age, experience, qualification, and enclosing copies of three recent testimonials, should reach me not later than May 25th.

D. H. EADE, Secretary.

DISTRICT INFIRMARY,
ASHTON-UNDER-LYNE.
(General Hospital—200 Beds; mainly Surgical.)

Wanted, a HOUSE SURGEON. Six months' appointment.

Salary at the rate of £160 per annum, with board, residence and laundry.

The Resident Staff comprises a Resident Surgical Officer and three House Surgeons.

Applications, with testimonials, to be sent at once to the undersigned.

FRANK OLIVER,
May 4th, 1933. Gen. Supt. & Secretary.

THE BOLTON ROYAL INFIRMARY
(301 Beds, including Two Auxiliary Hospitals.)

Applications are invited from Ladies having a registered Medical and Surgical qualification for the post of HOUSE SURGEON. Salary £125 per annum, with board, residence and attendance.

Applications, stating age, nationality and previous experience, together with copies of two testimonials, should be forwarded to the undersigned not later than Monday, May 22nd.

ALBERT E. BRISCOE, Secretary.

THE ROYAL GWENT HOSPITAL, NEWPORT, MON. (160 Beds.)

Wanted a Junior Resident Medical Officer to act as HOUSE SURGEON to Out-patients and as House Physician.

Salary £135, with board, lodgings and laundry. Resident Medical Staff 5. Eligible for promotion.

Large Out-patient Department.

Applications, stating age and qualifications, with copies of three recent testimonials to be sent to the undersigned.

Applications from ladies not entertained.

J. K. MILLWARD,
May 1st, 1933. Secretary-Supt.

THE ST. HELENS HOSPITAL.

Applications are invited for a JUNIOR HOUSE SURGEON (male) to this Hospital at a salary of £150 per annum, plus board, residence and laundry. Application, accompanied by three recent testimonials, to be sent to the Secretary, St. Helens Hospital, Lancs., not later than May 23rd.

THE HOSTEL OF ST. LUKE (CLERGY Nursing Home), 14 Fitzroy Square,
London, W.1

The Committee of Management invite application for the post of RESIDENT MEDICAL OFFICER (male) to the above Hostel.

Candidates must have had previous experience as House Surgeon at a general hospital. The appointment is for six months, and may be renewable for a further period of six months. Salary at the rate of £200 per annum, with board, residence and laundry. A fortnight's holidays will be allowed every six months, and the locum will be paid by the Committee of the Hostel.

Applications and enquiries should be addressed to the Secretary of the Hostel at 14 Fitzroy Square, London, W.1, and reach him before May 20th. The successful applicant will be required to take up his duties on June 1st.

ST. MARY'S HOSPITAL, W.2.

CASUALTY HOUSE SURGEON.

Applications are invited from duly qualified candidates for the post of Casualty House Surgeon. Candidates must have been House Surgeon for a full period of office to this Hospital or to some other general Hospital approved by the Board.

The salary is £100 per annum, with board and residence, and the appointment is for six months.

Applications, with copies of testimonials not exceeding three in number, should reach the undersigned (from whom particulars of the office may be obtained) on or before Saturday, May 20th, 1933.

The successful candidate will be expected to take up the duties on June 1st.

W. PARKES, Sec.

LEICESTER ROYAL INFIRMARY
(472 Beds.)

RESIDENT ASSISTANT ANÆSTHETIST.

Applications are invited. Appointment for six months, with possibility of renewal. Salary £250 per annum, with board and residence. As two of the Resident Anæsthetists are women, applications from qualified and experienced women will be preferred. Particulars of special experience in the administration of anæsthetics supported by testimonials, with particular reference to anæsthetic work to the House Governor and Secretary, forthwith.

May 4th, 1933.

BEDFORD COUNTY HOSPITAL.
(124 Beds.)

Wanted, both a FIRST and SECOND HOUSE SURGEON to take over their duties May 29th for a term of not less than six months.

Salary, First House Surgeon, £165. Second House Surgeon, £140.

They must be fully qualified male unmarried. Board, lodging and laundry.

Applications, stating age, nationality, qualification, together with three recent testimonials, to be sent to the Hon. Secretary, Hon. Medical Staff Committee, as soon as possible.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, BRIGHTON. (100 Beds.)

HOUSE SURGEON (male) required. Salary at the rate of £100 per annum, with board, lodging and laundry. No canvassing allowed. Selected candidates will be asked to attend at the Hospital for interview on June 2nd, the successful applicant taking up the appointment immediately.

Application, in writing, accompanied by testimonials, should be sent to PERCY F. SPOONER, Secretary.

May 6th, 1933.

(AMENDED NOTICE.)

THE SALVATION ARMY
THE MOTHERS' HOSPITAL,
Lower Clapton Road, Clapton, E.5

Applications are invited from Medical Women for the post of SENIOR RESIDENT MEDICAL OFFICER, vacant July 1st. Salary £150 per annum, with board, residence and laundry. The appointment is for twelve months. (In special circumstances a six months' appointment would be considered.) Applications, with testimonials, must be sent to the Secretary on or before May 17th.

EDGAR DIBDEN, Secretary.

THE SALVATION ARMY
THE MOTHERS' HOSPITAL,
Lower Clapton Road, Clapton, E.5

Applications are invited from Medical Women for the post of JUNIOR RESIDENT MEDICAL OFFICER, vacant August 1st. Salary £60 per annum, with board, residence and laundry. The appointment is for six months. Applications, with testimonials, must be sent to the Secretary on or before July 17th.

EDGAR DIBDEN, Secretary.

THE GENERAL HOSPITAL, BIRMINGHAM.

Applications are invited for the following Resident posts:

1. SURGICAL REGISTRAR to the Gynæcological and Eye Departments for twelve months in the first instance, from June 10th, at a salary at the rate of £100—£20—£140 per annum.
2. HOUSE SURGEON to the Throat and Ear Department for three months in the first instance, at a salary at the rate of £70 per annum (vacant immediately).
3. ANÆSTHETIST for three months, at a salary at the rate of £120 per annum (£70 per annum if a first Resident appointment). Vacant immediately.

Applications must reach the undersigned not later than May 22nd.

A. H. LEANEY,
May 5th, 1933. House Governor.

ROYAL NATIONAL ORTHOPÆDIC HOSPITAL,
(Country Branch: Brockley Hill, Stanmore, Middlesex.)
(280 Beds—75 per cent. for the treatment of Surgical Tuberculosis.)

Applications are invited for the post of HOUSE SURGEON (TWO). Salary £150 per annum, with board, quarters and laundry. The appointment is for six months from June 1st, renewable for a further period of six months on the recommendation of the Medical Board. Applications, with copies of testimonials, should reach the Secretary, 234 Gt. Portland Street, London, W.1, not later than May 15th.

THE SCHIFF HOME OF RECOVERY,
COBHAM, SURREY.
(64 Surgical Beds.)

Required from July 7th RESIDENT SURGICAL OFFICER (male). Three months' appointment. Salary, rate £200 per year all found. Must have held position of Resident Surgical Officer or House Surgeon in General Hospital. Particularly suitable for readers. Preference Constituent Hospitals Guy's, St. Thomas', King's College, Middlesex, University College, Charing Cross, West London. Full particulars with testimonials should be received by the Secretary, Supt. not later than June 7th.

RADCLIFFE INFIRMARY AND COUNTY HOSPITAL, OXFORD.

Application are invited for the following post which will become vacant on July 1st:

HOUSE PHYSICIAN.

The appointment is for six months, with salary at the rate of £120 per annum, with board, lodgings, etc. Candidates must be male and qualified.

Applications, with four copies of three testimonial, should be sent to the undersigned on or before Monday, May 29th.

A. C. E. SANCTUARY, Administrator.

GENERAL LYING-IN HOSPITAL,
York Road, Lambeth, S.E.1.

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER AND ANÆSTHETIST. Salary at the rate of £100 per annum, with board, residence and laundry. Appointment for three months, commencing July 1st. The successful candidate will be subject to satisfactory service be required by the Senior Medical Officers for a further three months.

Application, stating age and qualifications, with copies of three recent testimonials, to be sent to the undersigned not later than May 26th.

LILY HEATH, Secretary.

LIVERPOOL HAHNEMANN HOSPITAL,
HOPE STREET. (52 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER to the above Institution which fall vacant on May 16th. Appointment is for six months, renewable. Salary at the rate of £100 per annum. Duties include casualties, occasional anæsthetics and assisting at operations, general, gynæcological and ophthalmic.

Apply, stating age, sex, nationality and previous experience, and enclosing copies of recent testimonials, to the Registrar before May 6th.

BURTON-ON-TRENT GENERAL INFIRMARY.
(142 Beds.)

Applications are invited for the post of SENIOR HOUSE SURGEON (male). Salary at the rate of £200 per annum, with board, residence and laundry.

Also for the post of Casualty Officer and House Physician (male). Salary at the rate of £150 per annum, with board, residence and laundry.

Applications, stating age and qualifications, together with copies of testimonials, to be sent to—

E. W. THORNLEY, Secretary.

can any history of periodicity or of hunger pain be elicited It will be found on inquiring as to habits that these patients habitually take 'snacks' between their regular meals and, by thus anticipating the onset of hunger pain, mask the clinical picture The female patient employed in office or factory, however, gives the typical history which we meet with in the male During the past few years we have found, particularly in hospital practice that quite 10 per cent of the female patients referred as cases of cholecystitis were in fact suffering from duodenal ulcer In not a few both conditions were present In the majority x-ray investigation by cholecystography and barium meal cleared up the diagnosis In those cases in which the history had appeared so typical of gall-bladder trouble that x-ray investigation had been omitted, the duodenal lesion was revealed at operation

Coincident Gastric and Duodenal Ulcer—I find in my earlier records no mention of this condition Eleven years ago I had it brought forcibly to my notice by two cases in one of which I failed to discover a large penetrating gastric ulcer when doing a gastro-enterostomy for a duodenal ulcer which had previously perforated, and in the second another surgeon had done a sleeve resection for an hour-glass stomach and had failed to notice that the patient also had a duodenal ulcer with stenosis Since then I have operated on eighty one cases in which there were coincident ulcers in stomach and duodenum These occurred in a total of 780 ulcer cases In my series out of a total of 695 patients with duodenal ulcer, eighty one or 11·6 per cent, had a coincident gastric ulcer and out of 166 patients with gastric ulcer eighty-one or 49 per cent, had a coincident duodenal ulcer The two lessons I draw from these observations are, that the aetiology of the two types of ulcer must be the same and that assessment of the total pathology should invariably be the first step of an abdominal operation

AETIOLOGY

While it cannot be claimed that we possess anything approaching a full understanding of the causes of chronic peptic ulcer we do know that certain factors contribute to its onset and persistence Rational surgical treatment must take cognizance of these factors We have abundant evidence that there is a type of individual peculiarly prone to ulcer and that heredity plays a part I have often found that three or four members of the same family have suffered from ulcer, I have operated for duodenal ulcer on a man and his two sons, and in another family on three sisters The 'ulcer type," usually male, is the sthenic active, anxious minded worker whose profession or business takes precedence over meals or sleep, and who is often a pace-maker in our unnatural modern civilization Were ulcer confined to the extreme examples of this type with their hereditary predisposition there would be no justification for this lecture since surgery must be held in check and operation undertaken only after the most serious consideration in this dangerous ulcer forming type There are, however a very large number of sufferers from ulcer who constitutionally must be placed between this and the stout phlegmatic type in which ulcer is comparatively rare

Important factors in causation are irregular meals, lack of open air and sunshine lack of sleep, and excessive use of tobacco all of which tend to produce an autonomic instability with a hyperactive hypersecreting stomach Given some factor which produces a local necrosis or a lowering of vitality at some point in the stomach or first part of the duodenum with the development of an acute ulcer the persistence and development of the latter into a chronic lesion will be greatly favoured by these conditions

We know that various toxic and infective conditions are apt to be associated with acute ulceration in the stomach or duodenum—for example, the toxaemia from extensive burns and in fatal peritonitis A slight toxic lesion in the stomach or duodenum, which under ordinary circumstances would heal rapidly, may, in the predisposed individual with his autonomic instability induced by the hurry and worry of modern life, lead on to a chronic and irritable ulcer Focal infection, be it in teeth, tonsils, air sinuses, or appendix, is, in my opinion, not without significance It is, however, but one factor, and that not the most important, in the maintenance of ulceration How often have we seen complete symptomatic cure of ulcer result from a country holiday, without removal of focal sepsis, without alkalis, without care in diet, and without any ban on tobacco Can any treatment of ulcer be of permanent effect which does not also prescribe fresh air, sunlight, and exercise? My reason for referring briefly to these points in aetiology is to emphasize at the outset the essential fact that surgery, where deemed necessary, must be but an incident in the treatment of a condition so largely dependent on constitution and on habit

THE RATIONALE OF THE SURGERY OF ULCER

I regard an ulcer of the stomach or duodenum as essentially a condition requiring treatment on medical lines Surgery may be called in to help when the reparative process has led to stenosis and mechanical difficulty when, in spite of the maximum care which the patient can give, the ulcer breaks down repeatedly, when repeated haemorrhages cause prolonged disability or endanger life, and when a chronic ulcer, failing to heal, threatens malignancy Probably there would be little ground for controversy had gastric surgery been restricted to its primary field of relieving obstruction and of removing malignant or potentially malignant ulcers It was the very success of the early cases of gastro-enterostomy for stenosis that led to the abuse of this most beneficent operation Its employment as a short cut to cure in irritable ulcer, as a 'hit at random" in cases with no ulcer but with similar symptoms, as a "drainage operation" in cases of visceroptosis and of atonic stomach, led to an accumulation of surgical derelicts, bitter complainers, the driftwood of an uncontrolled springtide of surgery Even when confined to genuine ulcer cases the sequel of stomal or jejunal ulcer in a certain proportion of patients, variously estimated as from 2 to 30 per cent, turned the minds of surgeons to some alternative operation and the non surgically minded to more intensive and prolonged medical treatment On the Continent the balance inclined to more and yet more radical surgery-the removal of the whole ulcer bearing area, in this country and in America, by associating the names of Sippy and MacLean with a somewhat stricter observance of an old-time medical regime, it swung to the conservative extreme

A considerable residue of stenosing and refractory ulcers which medicine has failed to cure has again brought the surgical treatment of ulcer to the fore Before embarking on any operation for ulcer certain points must be observed Dental sepsis must be dealt with, and any bronchial irritation must be allowed to subside completely otherwise chest complications will assuredly set in An x-ray examination to determine the presence and degree of stenosis, the activity of the gastric musculature and the emptying of the stomach, must be carried out A chemical analysis of the gastric secretion, to determine the degree of acidity, is indispensable

LONDON COUNTY COUNCIL

Applications invited for appointment of RESIDENT ASSISTANT MEDICAL OFFICERS at undermentioned hospitals Duties assigned by Medical Superintendents and include if necessary assistance at other establishments under control of the Council Valuation of emoluments is subject to temporary reduction Candidates must be registered Medical Practitioners of at least one year's standing and have held a resident appointment in a general hospital for at least six months

Remuneration and conditions subject to review

1 ST MARY ABBOTS HOSPITAL Marloes Road Kensington W 8 —Senior Assistant Medical Officer (Grade II) Salary £500 a year rising annually by £25 to £600 a year with board lodging and washing Preference will be given to candidates who have special experience in obstetrics and general surgery

2 HACKNEY HOSPITAL High Street Homerton, E 9 — Assistant Medical Officer (Grade I) Candidates must have had experience in midwifery and gynaecology and be competent to undertake operative work in these departments Marriage will terminate contract of service if a woman is appointed There is no accommodation for a married man

3 NEW END HOSPITAL New End Hampstead N W 3 — Assistant Medical Officer (Grade I) Candidates must have had experience in midwifery and in anaesthetics

Salary £350 rising annually by £25 to £425 a year with board lodging and washing

There is no accommodation for a married man or for a woman at these hospitals

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health Last day for receipt of application May 19th

Candidates should specify position or positions for which they desire to apply Canvassing disqualifies Further enquiries should be addressed to the Medical Superintendent at the respective hospitals

LONDON COUNTY COUNCIL

Applications invited for appointment of RESIDENT ASSISTANT MEDICAL OFFICER Grade I at PARK (FEVER) HOSPITAL Hither Green Lewisham S E 13

Duties assigned by Medical Superintendent and include if necessary assistance at other establishments under the control of the Council

Remuneration is £350 a year rising annually by £25 to £425 with board lodging and washing and is subject to the temporary reduction made by the Council from the value of the emoluments Candidates must be registered Medical Practitioners of at least one year's standing Experience in a resident appointment in a general hospital and the possession of D P H desirable There is no accommodation for a married man or for a woman The remuneration and conditions are subject to review

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a) County Hall Westminster Bridge S E 1 returnable May 26th Canvassing disqualifies Further inquiries should be addressed to Medical Superintendent at the Hospital

KING EDWARD VII HOSPITAL, WINDSOR
(181 Beds)

TWO HOUSE SURGEONS required (One for Casualty Department) for six months from July 1st Applicants must be fully qualified men or women registered and preferably have held a resident appointment

Salary at the rate of £100 per annum together with board residence and laundry

Applications stating age qualifications and experience accompanied by testimonials should be sent to the undersigned not later than May 27th

ARTHUR E. CHURCHER Secretary

KING EDWARD VII HOSPITAL WINDSOR

A vacancy exists on the Medical Staff of the above Hospital for an HONORARY ANAESTHETIST to administer anaesthetics one day each week Applications stating qualifications and experience accompanied by testimonials, to be sent to the undersigned not later than May 27th

ARTHUR E. CHURCHER Secretary

KENT AND CANTERBURY HOSPITAL
CANTERBURY
(Recognised by the University of London for the purpose of the M S Examination)

HOUSE SURGEON (male) required, to commence duties as soon as possible Six months appointment Salary payable at the rate of £125 per annum plus board residence and laundry Applications stating age and particulars of qualifications and enclosing copies of testimonials should be forwarded to the undersigned immediately

W T SOUTHWOOD,
Superintendent & Secretary

ST THOMAS'S HOSPITAL

VACANCY

The appointment of a SURGICAL REGISTRAR AND TUTOR Candidates must be Fellows of the Royal College of Surgeons

Applications with full details of academic career to be forwarded with copies of testimonials to the Clerk to the Governors not later than May 24th

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CHESHIRE-TOWN PRACTICE WORTH £550 p.a., including panel of 530. Scope for increase midwifery refused Visits 3/6 up Convenient 3 bed 3 attics recep., and professional room Rent £70 Premium £ 00 or near offer —No. 9155

LONDON, N W SUBURB — INCREASING NUCLEUS Receipts last year £400 Panel 230 This year showing increase. Premium £600 Six roomed corner house with small garden Room to enlarge Owners mortgage £150 down secures house —No. 9154

KENT —ABOUT 30 MILES FROM TOWN— Residential country Half share of £2,300 after preliminary Assistance Good fees. Not much midwifery New house specially built, to rent or buy Further share later Partner to be Lond or Camb Graduate, age 30 to 35 —No 9152

SURGICAL.—EXCELLENT OPPORTUNITY TO acquire goodwill of connection established by Vendor over 10 years and returning £1 000 p.a. Income has been more Desirable premises flat in select West End area. Premium £500 down and £700 spread over 3 years.—No. 9150

LONDON, N W — VERY FINE OUTLYING district About £1 000 p.a. No panel taken but ample scope Some dispensing Expenses low Corner house in excellent position on main road 4 bedrooms etc. Long leasehold for sale at £2 220 Vendor giving up general practice Premium for goodwill 11 years purchase —No 9149

MANCHESTER — ABOUT £650 P.A., INcreasing old established PRACTICE. Panel 790 Opposition less than usual. Visiting fees 4/5 and 5/ Lowest surgery fee 2/6. House off main road, 4/5 beds 2 recep., and sp. surgery Rent £60 on lease —No 9144

YORKSHIRE — OUTSKIRTS OF LARGE town Old-established middle and better class PRACTICE averaging £980 p.a. Panel 400 Visits 3/6 to £1/ Very little midwifery Specially built house 2 recep 6 bed Surgery with separate entrance etc On lease at £100 Premium only £1 200 —No 9141

LADY PARTNER WANTED IN PRACTICE of about £1 000 p.a. in country district in Kent Steadily increasing and ample scope for further extension Panel worth £130 and appts about £120 Premium for half share £1 000 —No 9140

CHANNEL ISLANDS — URGENT SALE through ill health of Vendor Private PRACTICE in best part of Island overlooking sea averaging £3o7 p.a. No midwifery taken. Fees 3/6 to 7/6 med extra Choice of houses, and others building Good schools. Sea and trout fishing From 1½ years purch —No 9107

ITALIAN COAST — DELIGHTFUL SPOT — About £500 p.a. Scope to increase Good opening in neighbouring town No English opposition Fees 12/6 to 35/ Flat to rent at under £100 2 recep 3 bed. cons. room and usual offices Furniture, etc., can be bought if desired Goodwill £750 cash.—No. 9129

RESIDENTIAL SEASIDE RESORT—WITHIN easy reach of London £700—£800 p.a. suffered through Vendor's ill health Ample scope. New estate building Small panel No dispensing Mids not sought Attractive freehold house built by Vendor, 5 bed. etc., garden and garage —No 9127

BERKS — OLD ESTABLISHED — COUNTRY PRACTICE about £700 p.a. has been £1 100 Panel about 500. Visiting fees 2/6 to 7/6 Very little midwifery Splendid house, specially built for Vendor with two acres of grounds 2 reception rooms 6 bedrooms surgery and waiting rooms etc. Consider £4 000 offer for Practice & house freehold.—No. 9103.

WANTED

WANTED —MIDDLE AND WORKING-CLASS PRACTICE with good panel preferably London Birmingham or Cardiff or outskirts of large town, not North of Manchester £1 200—£1 500 House, with garden to rent with option to purchase —No. 991

WANTED BY M.B.E.D., AGED 35 — PRACTICE with scope for Surgery small panel £1 500 p.a. in London or South of England House with 5 bed and garden on lease with option —No. 995.

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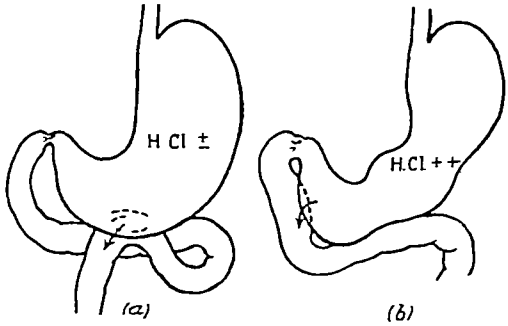
SURGERY OF GASTRIC ULCER

The indications for surgery are threefold (1) stenosis hour glass stomach (2) penetrating ulcer failing to yield to medical treatment—potentially malignant (3) bleeding ulcer where two or more haemorrhages have occurred In (2) and (3) operation must include the ablation of the ulcer whether it be by local excision followed by gastro-enterostomy or by partial gastrectomy the latter though more radical is often the easier and more satisfactory operation In dealing with hour glass stomach we find that the ulcer is often partially healed of old standing and showing as we know from experience little if any tendency to malignancy We are therefore justified in these cases in performing a suitable short-circuiting operation in place of radical excision if the patient's condition seems to render this more prudent The low acidity associated with the majority of cases of gastric ulcer makes the development of a stomal or jejunal ulcer unlikely

SURGERY OF DUODENAL ULCER

In an old standing case with stenosis and relatively low acidity the operation of choice is a posterior gastro-jejunostomy No operation in surgery gives such gratifying results only a technical fault can lead to failure



(*a*) Type of case suitable for gastro-jejunostomy (*b*) Type of case in which gastro-duodenostomy is preferable

At the opposite extreme we have the irritable recurrent ulcer with hyperactive stomach and high acid content often in the lean anxious type of individual Only when the physician has exhausted his therapeutic measures will the surgeon undertake to intervene This type the ulcer former must be treated as a special problem with operation as a questionable incident in and adjuvant to his medical cure To perform a gastro-jejunostomy in such cases is to court the formation of a stomal or jejunal ulcer It is for this type that the operation of gastro-duodenostomy is to be preferred (see figure above)

Gastro duodenostomy

This operation while short-circuiting the ulcer bearing area of the first part of the duodenum deflects the acid gastric content into the second part of the duodenum a region more alkaline in content and more tolerant of acid than the jejunum A certain amount of regurgitation of duodenal content into the stomach occurs lowering the acidity and stasis from pyloric spasm is removed The operation is admittedly more difficult to perform than gastro-jejunostomy It requires adequate mobilization of the second and the commencement of the third portion of the duodenum with division of the peritoneum and fascia propria which hold these parts The operation should be performed without clamps to eliminate any risk of devitalization of tissue near the suture line (Fig 1 on Plate)

I have performed this operation in 159 persons—seventy eight males and eighty-one females—mainly in cases deemed unsuitable for gastro-jejunostomy owing to high acidity and absence of true stenosis The results as one might expect do not equal those of gastro-jejunostomy In a recent review of cases at periods of from one to twelve years after operation the results were excellent in 64 per cent the patient was relieved but not cured in 25 per cent and in 11 per cent the patient was still complaining of dyspepsia Two cases of stomal ulcer occurred in both symptoms had persisted without intermission since operation although the gastric acidity had been lowered Both received immediate and lasting relief from a secondary gastro-jejunostomy In two cases bilious vomiting persisted after gastro-duodenostomy owing to axial rotation of the duodenum through inadequate mobilization a secondary gastro-jejunostomy gave lasting relief So gratifying have been the ultimate results after the twofold anastomosis that I have seriously considered performing the double operation in cases with high acidity and a somewhat fixed duodenum

Associated Duodenal Ileus—The radiological demonstration of duodenal stasis in cases of duodenal gastric or stomal ulcer cannot be ignored with impunity Whatever form of gastric anastomosis is decided on a duodeno-jejunal anastomosis should be added Little time is required for its performance and the patient's convalescence will be smooth and his comfort afterwards ensured Particularly in cases of jejunal ulcer with induration in the mesocolon and root of the mesentery no matter what procedure is adopted duodenal stasis should be relieved (Fig 3 on Plate) I have never had reason to regret supplementing a gastric anastomosis by a duodeno-jejunostomy I have on several occasions regretted its omission

Eradication of Other Infective Foci—Whatever be the significance of infection as a primary factor in the cause of ulcer and I believe it to be considerable there can be no doubt of the almost constant presence of a streptococcus usually obtainable in pure culture in the base of a peptic ulcer Reference has already been made to the necessity for attention to oral sepsis as a pre operative measure It should indeed be a first step in medical treatment No operation for peptic ulcer is complete which does not include a search for other infective foci in the abdomen particularly in the appendix and gall-bladder The appendix will frequently be found diseased and should be removed in all but aged patients Not infrequently the gall bladder will be found to be the seat of infection as well

The Abdominal Triad—The coincident presence of active lesions in the stomach or duodenum or both in the gall bladder and in the appendix gives rise to a clinical picture difficult to interpret if the frequency of this triad of lesions be not borne in mind I have operated on twenty nine cases in which active lesions were found in all three situations and were all dealt with (Fig 2 on Plate) In several cases a streptococcus of the same type has been grown from all three lesions Failure to remove an infected gall bladder or appendix or both will not only tend to post-operative residual symptoms but will favour a recurrence of peptic ulceration and more especially the development of a stomal ulcer The gall bladder the appendix and the lymph follicles of the stomach and duodenum would appear to be the seat of election for streptococcal settlement In the case of the gall bladder and appendix an indolent infection results in the gastro-duodenal site digestion leads to open ulceration Short of any effective specific therapy comprehensive and radical surgical treatment offers the surest promise of durable relief

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MANCHESTER.—Old-established medium trial PRACTICE. Medium-sized house to be rented on Lease. Receipts approx. £650, increasing. Panel nearly 800. Fees 2 6 up. Premium £450 or near offer (to include furniture).

NORTHANTS.—DEATH VACANCY.—Well-established Family and Working-class G.P. situated in Country Town. Suitable detached house available; garden; garage. Receipts £500 p.a. Panel 510. Fees 2 6 upwards. Premium for Practice £750. House £800.

LIVERPOOL.—PARTNERSHIP in good middle-class G.P. in Suburban district. Excellent detached house for all or part (furnished or unfurnished); garden; garage. Receipts approx. £2,000. Panel 700—800. Fees 3 6 up. Hospital appointment. Excellent scope. Premium for one-half share £2,100.

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SURGERY OF THE BLEEDING ULCER

The problem of the bleeding ulcer is one of undoubted difficulty Whether and when active surgical intervention should replace expectant therapy is a question to which no dogmatic answer can be given There is a general but false belief that bleeding from a peptic ulcer is very seldom fatal Bulmer found that of a total of 249 cases of haematemesis due to chronic peptic ulcer, death occurred in twenty-nine (11 6 per cent), out of eighty-nine males fifteen died (16 8 per cent) My practice has been to advise medical treatment for the first haemorrhage and at the second to wait for ten days and then operate To my chagrin I have seen three patients die during this period of waiting

When a second haemorrhage occurs in males an immediate operation preceded and followed by a blood transfusion should be seriously considered When the ulcer is gastric excision or ligation of the main blood vessels, followed by gastro-enterostomy should be performed when the ulcer is duodenal, narrowing of the pylorus and gastro jejunostomy should suffice The after results of operation for bleeding ulcer are not altogether favourable In one-third of my cases there has been a return of bleeding in one case as long as six years after operation

After-treatment.—Many of the unsatisfactory results following the surgical treatment of ulcer are traceable to a neglect of after care Hyperacidity in the immediate post-operative period may determine the onset of jejunal ulcer, and any evidence of it in the shape of discomfort and heartburn must be rigidly controlled by alkalis and belladonna A regulated diet excluding all spices and salt-cured articles of diet must be persevered with for six months, and smoking should be regulated Care at this period will be well repaid

SUMMARY

1 Peptic ulcer would appear to be an increasingly common disease

2 It requires constitutional rather than local treatment

3 Surgery must supplement and not replace medicine in its treatment

4 Stenosis, intractability recurring haemorrhage, and associated abdominal lesions are the indications for surgical intervention

5 For gastric ulcer ablation of the ulcer, preferably by partial gastrectomy, is desirable in view of potential malignancy

6 For duodenal ulcer with stenosis and low gastric acidity, posterior gastro-jejunostomy gives uniformly good results

7 For recurring duodenal ulcer, with high acidity and no stenosis gastro-duodenostomy should be preferred

8 Associated duodenal ileus should be relieved by duodeno-jejunostomy

9 Lesions in the appendix and gall bladder should be looked for and, if found dealt with radically

10 Recurring haemorrhage in a male subject may call for immediate operation preceded and followed by transfusion

11 After care with a rigid control of acidity is essential

THE TREATMENT OF ARTHRITIS*

BY

CHARLES W BUCKLEY, M D, F R C P

PHYSICIAN TO THE DEVONSHIRE HOSPITAL FOR RHEUMATIC DISEASES BUXTON MEMBER OF THE ARTHRITIS COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION

To attempt to deal exhaustively with the many methods for the treatment of arthritis which have been put forward would occupy far more time than can be given to a single lecture I shall therefore deal only with such as appear to be of practical value or which have a popular vogue even then I may be guilty of omissions due to lack of personal acquaintance with some methods or failure to put others to a sufficient test

CLASSIFICATION

Some definition of the limits of my subject is necessary, and for this purpose three heads may be adopted

1 *Rheumatoid Arthritis*.—This is a crippling disease affecting many joints predominantly those of the extremities and varying in the degree of acuteness, in some cases it is mildly pyrexial and rapidly progressive, in others apyrexial and chronic Once it attacks a joint it rarely leaves it without irreparable damage, even if slight differing in this respect notably from rheumatic fever or subacute rheumatism While many varieties are described it is not necessary to detail them, since the treatment of all proceeds upon the same lines There is usually a septic focus and the disease commonly begins in the first half of adult life

2 *Metabolic Arthritis*.—The two chief forms are (*a*) climacteric arthritis which mainly affects the knee joints of women at the menopause and (*b*) gout which is outside our present subject

3 *Osteo arthritis*.—This is a chronic disease of later years degenerative in character which may be limited to one joint, and never attacks many unless an infective or metabolic factor is also present It usually involves large joints and is commoner in men Climacteric arthritis if untreated, will develop into osteo arthritis, and some clinicians hold that malum coxae senile is climacteric in nature

INFECTIVE FACTORS

Rheumatoid arthritis is the product of three aetiological factors which may be defined as the seed, the soil and the environment Treatment, to be logical should be directed to one or more of these factors, except in so far as it is required for the relief of symptoms such as pain and deformity

As I have already said, a septic focus is present in most if not all cases, from which is derived the seed of the disease, and to look for and deal with foci is the first step in treatment Such a focus may be easy to recognize—for example septic teeth or tonsils—or it may be difficult, calling for radiological examination of the tooth sockets or expert investigation of the tonsils pharynx, and nasal sinuses, though some indication of the probable source will usually be found in the course of an ordinary clinical examination I have seen a few cases in which the source of infection was a small septic lesion in the extremities, such as a septic nail bed Where there has been a long continuance of septic conditions in the mouth, nose, or throat, it is almost inevitable that there will be secondary foci established in other parts of the digestive tract—the gall bladder, the appendix or the colon—which will be more difficult to deal with Where a definite focus is found and eradicated the results are sometimes very striking, and the patient is cured though possibly left with one or more joints crippled in a minor degree Apart from gonorrhoea it is uncommon in my experience, for the uro-genital tract to provide the focus of infection, but it must not be overlooked in the course of examination It may prove very difficult to find a focus, and there is a form of arthritis recognized by some

* British Medical Association Lecture to the Preston Division on March 7th

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authorities as primary to distinguish it from the cases in which the joint symptoms are clearly secondary to a known source of infection The two are however difficult to differentiate clinically and it is not unlikely that as our knowledge extends it will be discovered that these so-called primary forms are secondary to some infection as yet unrecognized

The microbe most commonly found in septic foci associated with arthritis is the strain of streptococcus termed *viridans* from the greenish colour of its growth on some media It must be noted however that some workers regard a staphylococcus allied to if not identical with the common epidermal coccus as the more common cause of rheumatoid arthritis and the streptococcus as causing osteo-arthritis while others incriminate the *Bacillus coli* and other intestinal flora These conflicting views associated with the fact that all microbes accused of causing non specific arthritis may be met with in normal individuals suggests that the infecting agent is more or less universal but becomes pathogenic only in special circumstances The effect of shock anxiety long spells of nursing (especially relatives) work under unfavourable conditions and the like will be familiar to all as predisposing to the onset of arthritis as well as of many other diseases There is also another important consideration which has of late come into prominence It is held that the effect of a septic focus anywhere in the system is to permit the absorption of minute doses of toxin continuously for long periods These long-continued toxaemias are believed to sensitize the tissues lowering their resistance to microbic invasion until breakdown occurs It may be that in such circumstances the joints or other tissues are attacked by microbes which are harmless to those in normal health such as the skin micrococci or the strains of streptococci commonly met with in the alimentary tract or elsewhere or even that microbes growing under exceptionally favourable conditions may acquire a pathogenicity which they do not normally possess

VACCINES

Such a process of sensitization is met with in other diseases of allergic type and there is already some evidence that rheumatic fever may be allergic and that arthritis comes in the same category If this is accepted it must add to the perplexities already met with in vaccine treatment where the object is to immunize by the administration of repeated doses of bacterial toxin It will be admitted by those who have had much experience of vaccines in arthritis that it is very easy to overstep the mark in dosage and instead of evoking an increased resistance to meet with the reverse—sensitization a result which may be disastrous Vaccine treatment has however given very good results in the hands of experienced workers but it is by no means invariably successful The vaccine used may be made from a septic focus found in the patient and thus be autogenous or it may be a mixture of a number of strains from different cases While the autogenous vaccine is generally preferred some find better results from mixed stock vaccines

The initial dose must always be small and the effect carefully watched The results will differ according to whether the septic foci have been effectively treated or still remain active in the latter case dosage must be smaller than in the former lest auto-inoculation be stimulated It is often wise to give three or four small doses of a suitable vaccine before proceeding to the operative treatment of septic foci—extraction of teeth enucleation of tonsils etc In most cases I prefer to begin with a dose of 50 000 and to double it every fourth or fifth day until there are indications of a reaction when the dose may be reduced a little or maintained at the same level for a few doses until reaction ceases to be evoked and then gradually to increase the dose again A course may continue for a year or longer The response to a vaccine will vary there may be a definite sense of relief with a slight return of pain and stiffness after three or four days or an immediate exacerbation of symptoms local general or both In the first case the dose should be increased steadily the aim being to secure the same type of response to each dose in the second the dose should be diminished until no more symptoms follow and then be increased again very cautiously Whenever possible a chart should be kept recording morning and evening temperatures and all variations of symptoms Vaccine treatment along these lines is reasonably free from risk and likely to produce improvement in cases of arthritis associated with a focus of infection and even in long standing osteo-arthritic conditions by raising the immunity of the body to the toxins but improvement in the damage to bone or cartilage which may already have taken place is not to be expected Since physical methods of treatment may cause auto-inoculation it is better to omit them on the day of inoculation and the two following days The question of an autogenous or stock vaccine is of less importance than care in dosage and administration

PHYSICAL METHODS OF TREATMENT

These methods are of great importance in the treatment of arthritis but vary widely in their efficacy and in their suitability for any particular case They are designed to improve the general health and thus to raise immunity both by direct action and indirectly by causing auto-inoculation to relieve pain to reduce swelling and to correct deformity etc They comprise the various forms of hydrotherapy massage electricity light heat etc

Hydrotherapy

Hydrotherapy might with advantage be employed to a much greater extent in ordinary practice For example baths may be given at home though ordinary water will not by any means produce the same result as suitable mineral waters The soothing effect of a bath about body temperature for ten or fifteen minutes is well known At a higher temperature it will dilate the capillaries and improve the circulation which is a matter of much importance owing to the capillary stasis in and around arthritic joints and to the cold extremities and general sluggishness of the circulation in such cases The cautious application of cold water by means of a sponge at the end of such baths will by contracting the arterioles add a stimulating and tonic effect Rest in bed should follow when relaxation will take place and the tissues again be flushed with blood Precision in adapting the temperature duration and frequency of such baths and the amount of rest will be essential if the best results are to be obtained

Similarly local baths will be useful and especially the contrast bath This is given with two basins or tubs one containing hot water and the other cold The limb to be treated is immersed in each alternately The details must be varied to suit the case but useful temperatures are 50° for the cold and 100°–105° for the hot bath with immersion in the latter for forty to sixty seconds followed by ten to twenty seconds in the former this may be repeated five to ten times I have found this a very useful procedure for the hands and feet Vapour baths are also easily given at home and may be used alone or as a preliminary to an immersion bath At the spas these methods are enhanced by the nature of the mineral water and by douches packs and massage in the water

Heat

Heat may be applied generally by vapour baths or by radiant heat apparatus, which is available in many large towns Such treatment must be employed with great caution, if at all in rheumatoid arthritis, as the patients are often already debilitated and may be weakened further , but for climacteric arthritis and osteo arthritis it will often be found beneficial Local applications are, however free from this objection, and may be made by poultices, etc , or by simple apparatus Infra-red rays, which are the most penetrating, can be applied by various patterns of lamps for electricity, gas, or paraffin, and a portable apparatus of this kind is a very useful addition to the armamentarium of a country practitioner The effect of such measures is to increase the circulation, and thus to remove toxins and improve the nutrition of the joints Diathermy, if available, is sometimes of help , it heats the interior rather than the exterior of the joint or limb if skilfully administered, but except for osteo arthritis—more particularly of the hip—I find it less useful than the other methods I have referred to Heating treatments must not be overdone or they will do more harm than good Ultra-violet light has not proved of value in my hands in the local treatment of joints, but if care is taken to avoid overdosage, to which rheumatoid patients are very susceptible, it may as a general application be advantageous in raising the level of bodily resistance The same considerations apply to exposure to natural sunlight

Ionization

This is also a method which may readily be employed in private practice, and it is of great value in the relief of pain and stiffness of the joints Many substances have been tried, but the best are salicylate of soda for the relief of pain, and potassium iodide, or chlorine ions in the form of ' T C P ,' for effusion into the joints or tendon sheaths or for periarticular thickening It is most effective in the wrists, knees, and shoulders, the hip being too deeply seated to be reached by this method How far the effect is due to the actual ions of the drugs applied, and how far to the action of the current on the tissues and tissue fluids, is open to question, but I think there is no doubt that the latter is important The negative electrode is the active one with the drugs mentioned and should be applied with as large a pad as is convenient for the joint under treatment, with the positive over a pad at a distance or in an arm or leg bath of weak saline If potassium iodide is used it is a common practice to paint the joint with tincture of iodine before applying the pad soaked in the solution of the iodide The colour of the iodine disappears during the passage of the current which gives rise to the idea that the iodine has been absorbed , but not infrequently considerable irritation of the skin is set up, rendering it necessary to stop the treatment for a time It is probable that any advantage to be derived from the use of the iodine is limited to the counter-irritation, and chemical action is just as effective with potassium iodide alone

Massage

Massage is a method of treatment often abused In arthritis its application should generally be limited to the muscles to restore tone and maintain circulation Where there is any active inflammation in a joint it is futile to expect to improve the wasted muscles by this means, and rest is indicated till the inflammation has subsided

The second group of physical measures are those designed to prevent or correct deformity This group necessarily also includes many of the procedures already referred to in the first group

Rest

Rest is one of the most important points, though it may seem surprising to regard it as a method of physical treatment During the acutely painful inflammatory stage, a joint should be kept at rest and if necessary, light splints applied to prevent the development of deformities In dealing with painful knee joints especially those with a tendency to flexion, which may easily go on to more or less posterior subluxation, weight extension with rest in bed may be necessary for a time Light stroking massage to help the circulation may be used In osteo-arthritis of the hip special attention is required to prevent contraction of the capsule and limitation of the range of movement from this cause or from the formation of osteophytes round the joints In such a chronic condition, rest in bed with weight extension, while it might relieve, is obviously undesirable for many other reasons If it can be borne, a light walking calliper splint is the most useful method of relieving pressure on the irritated joint surfaces in both knee- and hip joint cases At the same time care must be taken to retain as wide a range of movement as possible by active and passive movements Where there is laxity of the knee joint often due to damage to the crucial ligaments, or if the joint tends to give way, a Howard-Marsh knee splint is often of very great assistance and may be worn for years

Movements

Movements are another important part of treatment They may be active or passive but the former are generally to be preferred, and may be started as soon as active inflammation has subsided An increase of pain after the movement, or a lessened mobility, is an indication for further rest , such symptoms will often be associated with some degree of auto-inoculation and consequently general symptoms pain at night may be due to over exercise during the day In carrying out movements of the knee, elbow, and wrist, particularly, attention should be given to securing extension, since it is possible to obtain an apparent greater range of movement and to find that this is due to increased flexion only, while extension is lessened in such a case further rest, combined with suitable splinting to correct the tendency may be indicated Forced movement, with or without anaesthesia, may be required in later stages to break down adhesions and to restore mobility, but must on no account be attempted until all signs of active mischief have subsided

Counter irritation

Counter-irritation may be applied locally or at a distant point along the spine or nerve trunks The latter method has had enthusiastic exponents and is sometimes useful, though how it acts is less easily explained The usual method is to apply a blister or a cautery point over a small area, generally over the cervical or lumbar spine, thus stimulating the posterior nerve roots this is carried on for many weeks or months By similar methods local counter-irritation is applied over the joints themselves It serves to promote the absorption of effusions and exudates Firm bandaging over a layer of cotton wool should be used in conjunction if there is much fluid in the joint Bier's bandaging, producing congestion of the distal portion of the limb, is sometimes beneficial—if maintained for half an hour or an hour there is generally a subsequent small rise of temperature, suggesting that it causes a slight auto inoculation

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importance and the first step is to improve where possible the general conditions of life Dampness of site or dwellings sunless rooms and deficient ventilation must all receive such attention as can be given and this is more important or at least more practicable in most cases than change of climate It is a great mistake to think that a warm climate is necessary the optimum climate is the one which stimulates the latent powers of resistance of the patient within the limits of his capacity

Diet

Diet is a subject upon which there is a great diversity of opinion and error is extremely prevalent especially among patients friends and the popular press In rheumatoid conditions the first essential is an adequate diet of simple digestible food and there is no justification for forbidding any article of food which the patient finds easy of digestion and to which there is no idiosyncrasy This question of idiosyncrasy is important and careful inquiry should be made Some patients appear to suffer more pain etc after articles of food termed acid — certain fruits and wines—and sometimes after malt liquors though these effects are more usual in fibrositis than in arthritis Others do well on them and stout for example is usually well borne and found beneficial in asthenic subjects of arthritis No general rule can be laid down If there is a tendency to put on weight as in climacteric arthritis and osteo-arthritis carbohydrates must be kept within limits

Importance has of late years come to be attached to vitamins in diet they have a practical application in arthritis and the best rule is to see that the diet has its due proportion of these substances Where it is readily assimilated milk is of great service both for its nutrient value and for its vitamin content Fresh fruit and vegetables are also important and not always easily obtained by the poorer classes Attention should be given to the supply of vitamin B—brown bread wheat germ legumes etc Vitamin A can be added in the form of cod liver oil or its derivatives to raise the resistance to infection and vitamin D is indicated very strongly in rheumatoid arthritis since the osteoporosis which is shown in the rarefaction of the bones indicates calcium wastage due not so much to deficiency of calcium in the food as to inability of the tissues to assimilate it Thus the diet in rheumatoid arthritis should comprise milk butter cheese eggs fish and meat easily digested and including liver and some fats whole meal bread and yeast extract in the form of marmite bemax or the like fresh fruit and vegetables raw or cooked and including peas beans lentils etc and in season young carrots and turnips Foods outside this list are not necessarily prohibited and may be taken to gratify taste or appetite so long as adequate amounts of the more important foods are included

Constipation

In many cases constipation is probably a contributory factor in the production of arthritis The long retention of putrefactive matter in the colon leads to irritation of the epithelial lining reducing its protective functions and facilitating absorption of toxins which tend to lessen tissue resistance It is therefore essential to treat it by attention to diet and by inculcating regular habits The dietetic treatment demands a sufficient amount of bulky residue such as is supplied by the cellulose of fruit and vegetables and an adequate supply of vitamin B It is important to ensure that a sufficient amount of fluid is taken—not less than three pints of total fluids per day

When constipation has become chronic or there is clear evidence of toxic absorption undue fermentation etc lavage of the colon is often helpful if not carried too far It should be given by means of a douche can and with a pressure never exceeding two feet the quantity of fluid injected being usually one and a half to two pints The technique is described elsewhere and need not detain us now Simple saline solution or a very weak permanganate are the most useful fluids for injection From three to six treatments on alternate days should suffice in one course and may be repeated after an interval

DRUGS

I have left this part of the subject till the last the place it should always occupy in the doctor's mind when called on to treat a case of arthritis though the patient is apt to put it first and foremost A patient whose arthritis is being treated chiefly or entirely by drugs is a reproach to his physician This is not to say drugs should not be employed in their proper place but they have no specific action in these diseases

In the more acute forms especially in younger subjects I regard cod liver oil as a sheet anchor in treatment and I believe its action is due to its high content of vitamins A and D which raise resistance and improve calcium metabolism and general nutrition Where it cannot be tolerated in the ordinary form its place may be taken by the many derivatives or compounds now on the market If the patient does not take enough milk it may be well to administer calcium in an assimilable form to endeavour to make good the wastage of this element The addition of arsenic is beneficial for its tonic effect and iron may also be useful The syrup of iodide of iron is an old fashioned remedy in arthritis which has something in its favour Iodine is of value especially in the more chronic forms possibly by stimulating thyroid action I prefer a saturated solution in rectified spirit beginning with one drop in milk three times a day and increasing gradually to five drops Occasional intervals should be allowed Thyroid is of help in arthritis of the climacteric type and wherever there is a tendency to put on weight unduly it also seems to act beneficially in some cases of osteo-arthritis Sulphur sometimes exercises a favourable influence especially when there is constipation but it is more frequently indicated in fibrositis than in arthritis

Intestinal antiseptics have been much given and guaiacol carbonate is probably the best It must be administered over a long period and may be prescribed in conjunction with iodine or other remedies A combination of 5 grains of guaiacol carbonate with 5 grains of aspirin or calcium acetyl salicylate is often very useful In my experience other salicylates are of no service

For the relief of pain aspirin is of great value and its action in unstiffening the limbs is often remarkable though unfortunately transitory It is essential to remember that habit forming drugs should be avoided If aspirin alone is insufficient it may be combined with phenacetin and caffeine The opium derivatives as well as the barbiturates are to be avoided but in very severe cases codeine may be prescribed with aspirin and phenacetin and this combination is often very helpful Protein shock therapy has been extensively tried and sometimes yields strikingly good results though the cases generally relapse after a short time unless the effect can be followed up by other and more lasting methods It is usually given by means of intramuscular injections of sterile milk peptone or colloidal sulphur or by a non specific vaccine (T A B being generally preferred) injected intravenously The method is not entirely free from risk and the reaction may be alarming

SPA THERAPY

I have referred to spa treatment briefly when discussing physical measures, and do not propose to go deeply into this aspect of treatment, although in many cases it proves to be very advantageous Few patients can give the time or afford the expense of a long stay at a spa, and long treatment is essential in arthritis At the same time the effect of rest and change to a healthy and stimulating climate even for a short period, combined with the treatment only to be obtained at a well-equipped spa, is often of the greatest value, and may start the patient on the road to recovery Many considerations will influence the choice of a spa a bracing and stimulating effect is to be sought rather than a relaxing one The kind of water is less important than the efficiency with which it is adapted to the particular patient, and there is a real risk in too strenuous treatment

Time has not permitted of an exhaustive examination of the subject, but I hope the general principles and indications I have outlined will prove of some assistance to you in dealing with the different problems which arthritis presents to the practitioner

HIGH GASTRIC ULCER

A SUGGESTED OPERATION

BY

C ALEX WELLS, M B F R C S

HONORARY ASSISTANT SURGEON ROYAL SOUTHERN HOSPITAL LIVERPOOL
JUNIOR LECTURER IN SURGERY UNIVERSITY OF LIVERPOOL

(With Special Plate)

This short paper is to introduce an operation which so far as is known has not previously been described, and which from the results obtained seems well worth while bearing in mind as a possible solution when the surgeon is faced with the problem of dealing with a really high and difficult gastric ulcer Briefly, the proposal is to perform a partial gastrectomy below the level of the ulcer

SURGERY IN THE TREATMENT OF ULCER

An attempt to summarize the literature was soon abandoned on account of the enormous bulk of work which has been contributed to the subject of the treatment of gastric ulcer All that seems possible is a comparatively bald statement of what would appear to be the most widely and commonly accepted views on the matter—namely (1) that medical and surgical treatment should be complementary, but (2) that a recent ulcer, wherever situated is not suitable for surgical treatment except there be cause to suspect malignancy, whilst (3) in the present incomplete state of our knowledge a chronic ulcer wherever situated is best treated surgically

The third of these statements requires a little amplification It seems unlikely that the surgical treatment of ulcer will survive the test of time The condition must be preventable and when the aetiology is a little better understood the rational means of avoiding its occurrence will in all probability appear and the surgery of the upper abdomen will to a large extent disappear Until that time however surgery will probably hold the field, because its methods though crude give good, quick, and permanent results The question naturally arises as to how these results are obtained, and disregarding detail, it seems arguable that there are two broad factors—the mechanical and the chemical *Mechanically* all the operations in which the stomach is anastomosed to the duodenum or jejunum lead to a more rapid emptying of the stomach, and the ulcer is either removed entirely or side-tracked from the main food stream Partial gastrectomy removes the ulcer and the surviving stomach empties rapidly *Chemically* all these operations tend to diminish gastric acidity by the free admission of the alkaline contents of the small gut In addition gastrectomy in all its forms also removes part of the acid secreting mucosa

THE PROBLEM

For a chronic gastric ulcer the majority of surgeons favour, whenever possible a partial gastrectomy The alternatives are excision and gastro-enterostomy or cautery and gastro enterostomy , but in whichever direction the surgeon's choice may lie *all* these procedures are easy when the ulcer is accessible The operation and the

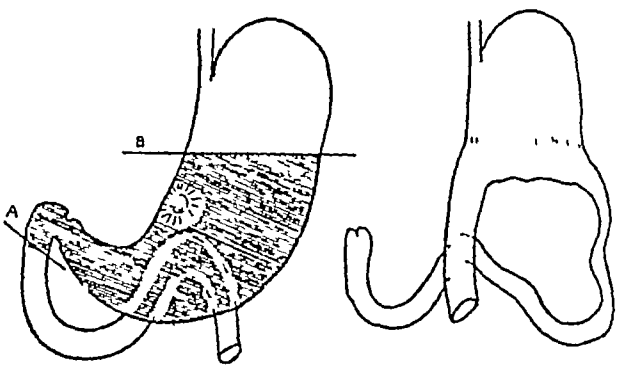

FIG 1—Partial gastrectomy the standard operation The shaded portion between the lines A and B is removed The jejunum is anastomosed at B

problem become difficult only when the ulcer is high Gastro enterostomy alone is looked upon with disfavour because, despite statistics to the contrary, surgeons in general are dissatisfied with the results obtained It may be that the drainage and the chemical change are too far removed from the ulcer The combination of excision or cauterization with gastro enterostomy when dealing with extremely high ulcers is most difficult and not a little dangerous Gastrectomy *can* be done, but needs to be almost or quite ' total " This is not impossible, and cases have been reported where a complete gastrectomy has been done for simple ulcer The only total gastrectomy the writer has done himself was for a leather bottle malignant stomach The patient survived two years, but was quite miserable for the whole of that time Complete gastrectomy is probably never worth while, and is certainly not justifiable for simple ulceration As regards the danger of unrecognized malignant disease, a growth in the position under consideration cannot be successfully removed and is better not attempted This possibility therefore does not justify complete gastrectomy As a compromise it has been suggested elsewhere that, in performing the partial gastrectomy the general level of resection should be below that of the ulcer but that a tongue of tissue should be taken up the lesser curve to include the ulcer itself This operation resembles excision and cautery in that it is difficult, dangerous, and shocking

THE PROPOSED OPERATION

The solution suggested is simply to perform a standardized Polya-Moynihan partial gastrectomy below the level of the ulcer The technique requires very little description The pyloric end or the duodenum is divided and the stomach turned up in the usual way It may be only at this stage that the surgeon discovers that to complete his operation as it was first intended would

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require the total removal of the stomach or it may be that from the first he has recognized the impossibility of resecting the ulcer together with that part of the stomach which already he has isolated In either event the decision is made to remove as much stomach as possible up to but not including the area in which the ulcer lies In order to facilitate the anastomosis it may be desirable to dissect an adherent ulcer from its surrounding tissues and this in turn may lead to its perforation I have not hesitated to perform such a freeing of the ulcer and in one of the cases to be described a perforation occurred which was immediately closed and caused no embarrassment The anastomosis itself may be made with or without clamps according to the choice of the operator but if he is accustomed to their use it is helpful to employ an instrument made for me by Messrs Thackray of Leeds which gives a parallel grip and is particularly

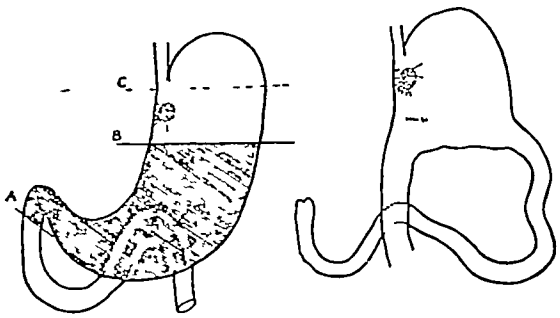


FIG 2.—The proposed operation The shaded portion between A and B is removed exactly as in the standard operation except that the ulcer is left behind Gastrectomy to include the ulcer (at the broken line C) would involve the sacrifice of the whole stomach.

useful in this special operation in which the tissues dealt with are usually much thickened in the region of the lesser curve and are difficult to hold with clamps of more ordinary type

The theoretical consequences of this operation considered by criteria similar to those employed above are that (1) *mechanically* the ulcer is left in a portion of the stomach in which the food lies for a very short time indeed and (2) *chemically*, much acid bearing fundus mucosa is removed and the alkaline jejunal content is brought into direct contact with the ulcer The possibility of an operation of this kind had been borne in mind for some months before the first patient suitable for such treatment presented himself some three years ago Since that time three other similar cases have been dealt with and a further three cases could with advantage have been treated in this way but were subjected to more serious and dangerous measures on account of the uncertainty attaching to the new method These figures drawn from one man's comparatively small practice will illustrate that the indications for the operation are by no means rare In considering these figures it is most important that it should be clearly understood that the operation has been strictly confined to really high ulcers which could not be removed together with the stomach except with the sacrifice of almost all of that organ and at great risk to the patient

REPORTS OF CASES

Case 1.—A man operated upon in February 1930 at the age of 51 Had had severe symptoms for three years becoming worse Marked hour glass deformity A gland sent for section showed *no* malignancy Is a ship's cook Has been in constant employment and excellent health since operation *X ray findings* (1) before operation (February 1930) pronounced hour glass deformity obscuring large high ulcer deformity due almost entirely to spasm (2) two years after operation immediately after food—food passes rapidly through stoma no *x* ray evidence of ulcer (3) two years after operation and 1½ hours after food—stomach empty except for a few scattered shadows and a trace of barium in the new floor formed by the jejunum

Case 2.—A woman operated upon in November 1930 at the age of 44 There was a large ulcer astride the lesser curve and one inch from the oesophagus admitting the finger tip No glands Stringy adhesions to the liver and a dense plaque of adhesions to the pancreas It was impossible to get the usual pack above the fundus Operation—resection three quarters of an inch below the ulcer At least two-thirds of the stomach removed Seen in December 1932 this patient had mitral disease with failing compensation but was perfectly happy so far as concerned appetite digestion body weight etc *X ray findings* (1) before operation (October 1930)—only small niche of ulcer showed (2) two years after operation immediately after food—meal passes rapidly through stoma no *x* ray evidence of old ulcer (3) two years after operation and 1½ hours after food—only very small trace of food remains in loop of jejunum forming bottom of stomach

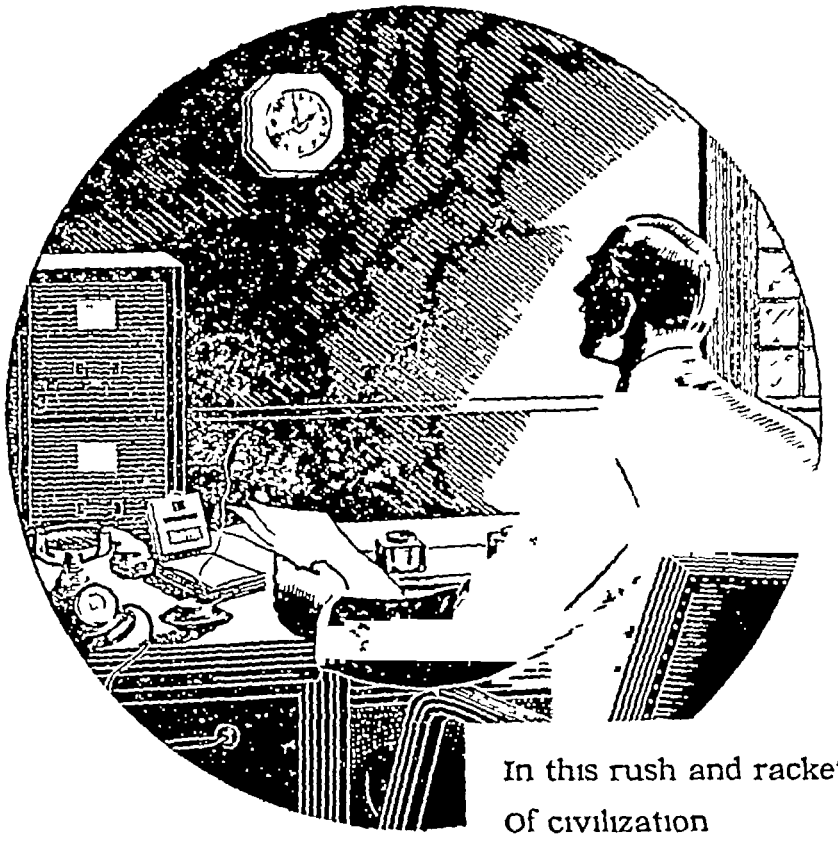
Case 3.—A man operated upon in June 1931 at the age of 50 The ulcer easily admitted the end of the thumb and extended to within half an inch of the oesophagus Had it been malignant the case was clearly hopeless A gland sent for resection did *not* show malignancy Operation—resection half an inch below the ulcer No trouble with his food after leaving hospital Slight flatulence after heavy cycling or long walking but *within a month* he began a full day's work His work is very arduous as he makes concrete and lifts heavy timbers Has a good appetite Breakfast consists of fresh egg fresh bread tea and a round of toast dinner a bowl of soup potatoes and vegetables sometimes fowl or rabbit no other sort of meat tea boiled egg bread and butter and tea supper a mug of cocoa and a round of toast There is no pain or flatulence bowels are regular He takes no medicine of any sort and feels about 20 years old He has gained a lot in weight and looks and feels well *X ray findings* see Special Plate

Case 4.—A nigger keen for work but finds no work for him Operated upon in February 1932 at the age of 56 Had had symptoms since the war days Previous laparotomy at another hospital—nothing found At operation an ulcer was seen on the posterior surface of the lesser curve admitting the thumb it was adherent above the pancreas Partial gastrectomy was commenced and the ulcer perforated deliberately Above the ulcer impenetrable adhesions were found The perforation was sutured and gastrectomy performed below that level Seen in December 1932 this patient declared that he felt young and ate anything and everything which he could get *X ray findings* see Special Plate

DISCUSSION AND SUMMARY

It is apparent from the *x* ray evidence that rapid and satisfactory healing of the ulcer is promoted by this operation without stenosis of the opening into the small intestine The remaining stomach empties as speedily as is usual in partial gastrectomy generally and the post-operative pictures do not in fact suggest that any variation from the classical procedure has been made Symptomatically the four patients—admittedly an extremely small group—have spoken for themselves in so enthusiastic a fashion as to render any amplification of their testimony unnecessary These practical considerations would seem to outweigh the manifest theoretical objections that could be raised and to justify the putting forward of this procedure as a serious proposal in the surgical treatment of the most difficult type of gastric ulcer

1 The present-day attitude towards peptic ulcers is briefly summarized
2 The difficulty of dealing with very high ulcers is described
3 A new operation for this type of ulcer is proposed
4 Four cases are reported



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THE REPAIR OF SKULL DEFECTS BY A NEW PEDICLE BONE-GRAFT OPERATION *

BY

R WATSON JONES, B Sc , M Ch Orth , F R C S

LIVERPOOL

The very considerable increase in the number of road accidents during the last ten years has led to a corresponding increase in the incidence of severe head injury with compound and comminuted fracture of the vault of the skull The *débridement* of wounds and the removal of depressed fragments is in these cases a matter of urgency Moreover, in a region where infection and pressure from displaced bone may be of the utmost significance, the emergency surgeon is usually justified in abandoning the conservative methods which he would apply to compound fractures elsewhere In actual practice displaced and detached fragments of bone are freely removed It follows that we are seeing to day an increasing number of patients with skull defects These defects, through which may be seen and felt the pulse of the cerebral circulation, are associated with a certain definite risk of injury to the unprotected meninges and cerebrum It may be true that the risk is not in all cases a serious one but from the patient s point of view it cannot be overestimated He is always conscious of his vulnerability, and lives in constant fear of further injury The layman s point of view may be judged by the jealous care with which the average mother will guard the fontanelle of her infant and by the very high damages which special juries will award in cases where the only demonstrable abnormality is a hole in the skull

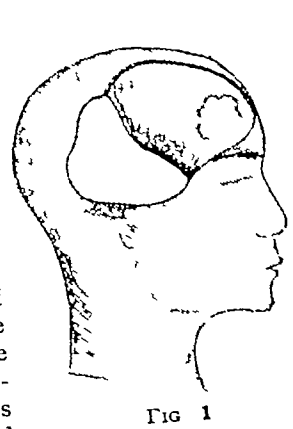

FIG 1

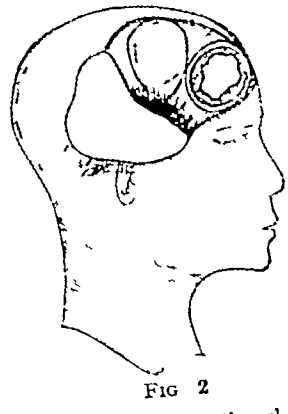

FIG 2

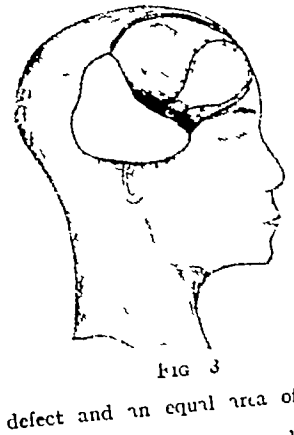

FIG 3

FIG 1.—Flap of scalp turned back to expose the skull defect and an equal area of healthy bone behind it

FIG 2.—The margin of the defect is cleared of pericranium and the bone freshened A flap of bone and pericranium is marked out of exactly the same size and shape as the defect A pedicle attachment to the temporal fascia is preserved

FIG 3.—The pedicle bone graft is swung across and stitched into its new position

CHOICE OF TREATMENT

It must be acknowledged that as a device of modern surgery nothing could be more crude than the skull cap which incorporates a curved metal plate to cover the gap in the skull It may be that while it is actually worn the brain is adequately protected, but such an appliance does nothing to relieve the associated psychological disturbance On the contrary, it provides the patient with a constant reminder that he must exercise due care to avoid injury, and it inevitably excites the curiosity and the morbid sympathy of his fellow men Not only so, but it is a protection applicable only to men, and in increasing number of these cases are occurring in women Finally, in cases where the injury has involved the frontal region there is a serious facial disfigurement which remains unrelieved

In order to overcome the disadvantages of the skull cap attempts have been made to repair gaps in the cranium by operative treatment, using either plates of foreign material or bone transplanted from the ribs the scapula, or the pelvis There has, however, been a tendency to regard all methods of operative repair with some disfavour, owing to the reputed frequence of persistent post-operative headache It is probable that this is largely due to the use which has been made of foreign material Provided that there is no increase in the intracranial tension, it is inconceivable that the simple closure of a gap in the skull should account for persistent headache But if the gap is repaired with foreign material which will give rise to irritative fibrosis and scar tissue formation, the thickening and adhesion of the meninges could readily account for such symptoms The transplantation of bone from other parts of the skeleton presents very real difficulties If the gap to be closed is a large one, the possible sources of bone are limited to the scapula and the ilium, and in neither case is it possible to cut a graft with the normal curved contour of the skull This is quite essential with large grafts if there is to be good contact between the periphery of the graft and the margin of the defect, without any pressure being exerted on the meninges and brain in the centre of the defect Moreover, in frontal injuries the disfiguring depression can only be cured with a completely successful cosmetic result if the graft is convex Not only are there difficulties in securing grafts of suitable size and of suitable shape, but there is the further problem of fixation of the graft to its bed The gap in the skull is unlike any other ununited fracture, and none of the methods of fixation applicable elsewhere can be applied to the skull

The demands of a successful bone grafting operation are

1 The graft must be of autogenous bone

2 It must be possible to cut a graft of any size up to three or four inches in diameter

3 The graft must have the same curved contour as the skull

4 There must be firm contact between the periphery of the graft and the margin of the defect, and there must be contact of raw bone with raw bone

5 No pressure must be exerted on the exposed meninges and brain

6 The graft must be completely immobilized

Consideration of these problems made it obvious that there was only one possible source for such a graft, and that was from the cranium itself Only in the skull itself is there available an unlimited area of bone with the necessary convex curve Would it be possible to fashion a graft of bone from the outer table, keeping the plane of division strictly to the diploë and leaving the inner table intact and uninjured? If this is technically possible all the difficulties of the operation are solved The graft, which is of autogenous bone may be cut of any size and will be of the correct shape There is no difficulty in securing apposition of the raw surface of the

* Based on a clinical demonstration (with cinematograph film) at a meeting of the Liverpool Medical Institution November 10th 1932.

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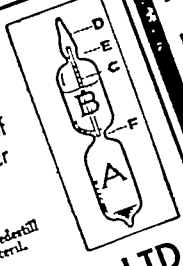

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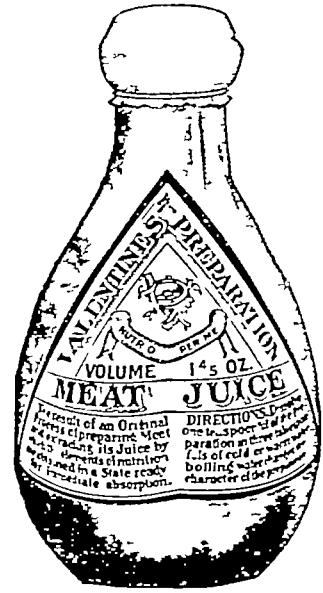

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graft with the raw freshened margin of the defect The pericranium which may be left attached to the graft and projecting beyond it as a surrounding fringe will facilitate fixation in the new position The last step in the evolution of the operation was the preservation of a blood supply by leaving the flap of pericranium and bone attached by a pedicle to the temporal region so that the vitality of the transplanted tissues was maintained

TECHNIQUE OF OPERATION

A flap of scalp is turned back with its base over the temporal region exposing the defect in the skull and a corresponding area of uninjured bone either behind or in front of the defect (Fig 1) The incision is planned in such a way that any puckered broad or adherent scar remaining from the emergency operation is excised The greater part of the scar will subsequently be covered with hair and in frontal injuries the lower incision should follow the line of the eyebrow The gap in the bone is defined the pericranium is removed round its margin and the exposed bone freshened and rawed A flap of pericranium equal in size and shape to the area which has

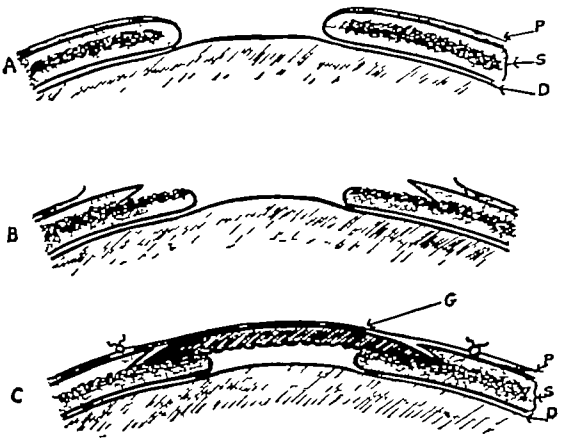

FIG 4—Further fixation of the graft is secured by undercutting the margin of the rawed bone (B) and slotting the graft under the overhanging edge (C) P pericranium S outer table diploe and inner table of skull D dura mater G graft.

been cleared is marked out and left attached by a pedicle to the temporal region (Fig 2) The pericranium is raised for a third of an inch round the whole circumference of the flap but apart from this narrow free edge its attachment to underlying bone is not disturbed A very sharp thin bladed osteotome is used to elevate the outer table care being taken to keep strictly to the plane of the diploë so that on the one hand the graft is not unduly thin and on the other hand the inner table is not encroached upon A pedunculated flap is now raised consisting of bone exactly equal in size and shape to the defect and having a third of an inch projecting fringe of fibrous pericranium The flap is swung across and stitched in its new position (Fig 3) Extra fixation may be secured by undercutting the margin of the freshened area of bone round the defect and slotting the edge of the graft beneath the overhanging rim (Fig 4)

REPORT OF A CASE

A youth aged 22 was referred to me by Dr Reid of Wrexham He had been kicked on the head by a horse and had sustained a compound comminuted depressed fracture of the right frontal bone The wound had been excised by Dr Reid and the depressed fragments of bone removed An excellent recovery had been made and there were no intracranial complications There was however a disfiguring puckered scar above the right eyebrow with a very obvious depression of the forehead above this The gap in the skull measured two by two and a half inches and cerebral pulsation was clearly visible The reconstruction operation was deferred until six months after the injury A pedicle bone graft was then transplanted from the parietal to the frontal region Convalescence was uneventful and now six months after operation the youth regards himself as completely cured. There is no cosmetic defect the graft being firmly fused in its new position and capable of withstanding heavy pressure and percussion without symptoms There have been no headaches and no other symptoms since operation. The parietal region from which the graft was removed cannot be distinguished from normal bone either clinically or radiologically

SUMMARY

A new operation is described for the repair of defects in the vault of the skull by a pedicle bone graft The advantages of the operation are that the graft may be cut of any size it has the same curved contour as the skull it lives through its pedicle there is excellent fixation of the graft to its bed and no pressure is exerted on the exposed meninges and cerebrum A case is reported in which the operation has been successfully performed

PEDUNCULATED THROMBUS OCCLUDING THE LEFT AURICLE

BY

BARBARA WOODHEAD MB MRCS

HOUSE PHYSICIAN THE QUEEN'S HOSPITAL BIRMINGHAM

(With Special Plate)

Apart from the vegetations of endocarditis true intracardiac thrombi are uncommon Two types are known loose ball thrombi and pedunculated thrombi which may become detached and persist as ball thrombi Ball thrombi do not become organized are frequently multiple and rarely give rise to symptoms Mitral stenosis is usually an associated lesion Pedunculated thrombi on the contrary are generally organized frequently give rise to symptoms similar to or even indistinguishable from those of mitral stenosis and are found in a heart which except for the local effects of the thrombus—thickening of the valves due to trauma and compensatory dilatation of the right ventricle—would otherwise be normal The left auricle is the more usual situation for intracardiac pedunculated thrombi The following case of a pedunculated thrombus of the left auricle is of interest both clinically and pathologically

Clinical History

A woman aged 39 a screw turner was admitted to the Queen's Hospital Birmingham on April 18th 1932 she was anaemic in appearance but showed no evidence of cardiac failure Her symptoms began eighteen months previously when owing to frequent attacks of tonsillitis her tonsils were removed Since then she had complained of increasing weakness fatigue and shortness of breath on the slightest exertion with the result that she had been compelled to stop work a frequent symptom was a feeling of extreme faintness on bending down During the last four months she had been more or less bed ridden on account of these symptoms but there was no evidence of cardiac disease until a week before admission the development of a presystolic apical murmur suggested a clinical diagnosis of mitral stenosis without cardiac failure There was no history of rheumatic disease

Examination

The patient was a small pale woman wasted and with slight exophthalmos slight oedema of the ankles was also present Blood pressure was 110/74 pulse rate 90–100 regular rhythm small volume poor tension The apex beat

British Medical Journal

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was in the fifth space, three and a half inches from the midline and was forceful and heaving A presystolic thrill was felt all over the praecordium more marked at the cardiac apex At the mitral area the first sound was loud and slapping and was preceded by a crescendo presystolic murmur At the pulmonary area the second sound was accentuated Electrocardiogram sinus rhythm 80, normal auriculo ventricular conduction times right ventricular preponderance, angle 120 degrees, slurring of QRS in Lead III, inverted T wave in I and II, P wave diphasic

Respiratory system was normal, except for a few rales and rhonchi at bases and in axillae The liver and spleen were not palpable, and there was no ascites Blood picture 4 140 000 red cells per c mm haemoglobin 48 per cent, colour index 0 58, white blood cells 22,000 per c mm, polymorphs 83 25 per cent

Progress

On the second day after admission, since the patient was reasonably well and able to be moved without discomfort, she was sent to the *x*-ray department There she suddenly become dyspnoeic and distressed she was very pale, with a cold clammy skin and air-hunger was marked the general appearance resembling the picture seen in severe haemorrhage The pulse was feeble and rapid the heart sounds extremely faint no thrill was felt and no murmur was audible Stimulant treatment provoked no response Oedema of the lungs developed and the patient died about fifteen hours after the onset of these severe symptoms At no time was her pallor replaced by cyanosis

Post-mortem Findings

The pericardium contained a slight excess of fluid The right auricle and right ventricle were dilated but there was no ante mortem thrombus The left ventricle was normal The left auricle was filled by a mass the size of a large hen's egg attached by a firm pedicle to the interauricular septum at an area posterior to the foramen ovale, which was not completely closed The tumour (Fig 1) measuring 6 × 3 5 × 3 5 cm was slightly lobulated yellowish brown in colour gelatinous in consistence and contained areas of haemorrhage The mitral valve appeared slightly thickened but there were no old or recent vegetations and the mitral orifice was of normal size There was no evidence of any primary valvular disorder Microscopically the auricular tumour" showed areas of red and white blood cells granular debris and fibrin In the more completely organized areas were polymorphonuclear and plasma cells, newly formed thin-walled blood vessels and fibroblasts In places the scanty rather stellate fibroblasts in a clear matrix resembled myxomatous tissue (Figs 2 3 and 4)

COMMENTS

There are certain features in this case which belie the presumptive diagnosis of mitral stenosis One would expect cyanosis and venous congestion in a case of mitral stenosis which was so severe as to cause the patient to be bed ridden The pallor can be explained by the intermittent blocking of the mitral orifice, there was no continuous damming of the venous circulation, yet sufficient impediment to cause an anaemia of the tissues A feeling of faintness on bending down was in all probability due to the alteration of position causing the thrombus to rest on the mitral orifice and to occlude it, so producing a sudden systemic anaemia

Of particular interest is the comparatively sudden death which does not usually occur in uncomplicated mitral stenosis On changing the position of the patient the mobile tumour occluded the mitral orifice, the tumour had by then attained such a size that it could not be dislodged and the patient died from failure of the blood to pass through the mitral orifice Although the latter was normal in size, electrocardiographic examination showed a diphasic P wave which has been considered characteristic of mitral stenosis due to valvular disease

A common feature of previously reported cases has been transitory discoloration of the extremities with a state of mild shock Occasionally gangrene of all the fingers and toes has been noted These signs have been considered diagnostic of intracardiac thrombi Although this patient had attacks of faintness or mild shock there was never any discoloration of the extremities No cause could be found for the origin of the "tumour" there were no dilated veins on the interauricular septum the auricular contractions were quite regular, the mitral orifice of normal size, and the only abnormality was a slight patency of the foramen ovale

I am greatly indebted to Dr Cloake for permission to publish this case, and also for his kind assistance and that of Dr Neale

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Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

CERVICAL RIB WITH VASCULAR COMPLICATIONS

(With Special Plate)

Cervical ribs causing vascular complications are rare In a recent paper Professors Telford and Stopford[1] have reported three such cases The conclusions they draw are that the arterial condition is one of spasm followed by thrombosis, the spasm being induced by the continued irritation of those sympathetic nerves supplying the artery The sympathetic nerve supply of the artery below the insertion of the pectoralis major is received from the main nerve trunks, and it is these sympathetic fibres which are compressed against the cervical rib and consequently irritated while still an undistributed bundle on the under surface of the lowest trunk of the plexus They have shown that the vascular complications depend entirely upon the distribution of the sympathetic nerve fibres in the lowest trunk The old view that these complications are due to actual mechanical compression of the subclavian artery would still appear to have certain advocates, and in a recent paper Gladstone and Wakeley[2] have stated that "the symptoms caused by cervical ribs are those due to pressure upon the subclavian artery and brachial nerve trunks" Professors Telford and Stopford have, I think, proved conclusively that actual mechanical pressure on the artery does not occur in those cases where the vascular symptoms are predominant In view of the fact that these conclusions do not appear to be generally accepted, I feel that an account of the following case, which entirely corroborates their finding, is justified

On October 2nd 1931 a man aged 24 consulted me and gave the following history Twelve months previously he first noticed a feeling of general tightness of the left arm and hand whenever he became excited In February 1931 while riding a motor cycle he felt a sudden pain in his left arm and hand and noticed that the latter had become cold and very blue At frequent intervals after this date he developed attacks of cramp in all the fingers associated with a dead white appearance of the skin The cramp would pass off after a short time and as the fingers regained their normal colour he would feel a tingling sensation

On examination the left hand was cold and blue, there was no definite wasting of the thenar or hypothenar muscles There was slight anaesthesia chiefly to pin prick over the dorsum of the terminal phalanx of the middle finger but otherwise no involvement of the sensory nerves was manifest

[1] Telford E D and Stopford J S B *Brit Journ Surg* 1931 xviii No 72
[2] Gladstone, R J, and Wakeley, P G *Journ Anat* April 1933 p 334

The subclavian and axillary arteries showed excessive pulsation The pulsation of the brachial artery was however markedly diminished and the pulsation of the radial artery at the wrist was barely perceptible Three weeks later just prior to operation I was unable to detect any pulsation in the radial artery or in the brachial artery below the insertion of the pectoralis major Apparently during the period of three weeks after my first examination and just prior to the operation he had experienced a sudden intense pain in his arm while putting on his coat This symptom undoubtedly indicated the rapid spread of the thrombosis which completely obliterated the pulse On examination of the neck a well marked cervical rib could be palpated on both sides This was confirmed by an *x* ray photograph (See Plate)

On October 25th I explored the left cervical rib under general anaesthesia The subclavian artery showed no sign of compression against the cervical rib in fact it showed what appeared to be excessive pulsation right into the axilla It could be easily moved away from the cervical rib and was not in actual contact with it The lower cord of the brachial plexus however was lying in close and tight contact with the cervical rib The cervical rib was about two inches in length and was fixed by a very broad bony attachment to the first rib The lower cord and artery were gently retracted outwards and the rib was shaved off at its attachment to the first rib the cord and artery were then retracted inwards and the upper end of the rib cleaned and resected The upper end was in addition smoothed with bone-cutting forceps The rib and its periosteum were then removed The artery did not alter its position but it was noticed that the lower cord of the brachial plexus now appeared to be quite free from all tension

After history.—One day later the hand and arm were completely free from pain When discharged on November 6th 1931 slight pulsation was noticed at the wrist On February 6th 1932 there was no pain and no anaesthesia the pulse at the wrist and elbow was equal to that of the right hand and the circulation of the hand was normal

CONCLUSIONS

1 It would appear that this is an earlier case than those reported by Professors Telford and Stopford and had not reached the stage of gangrene of the fingers

2 The spread of the thrombosis is extremely rapid when it once begins in the main vessels In this case when first seen the pulse was perceptible but in three weeks time it had completely disappeared

3 The complete recovery of pulsation in the brachial and radial arteries after operation shows that an early thrombus can be absorbed

4 The necessity for early operation is apparent other wise gangrene of the fingers is an inevitable sequel

Manchester R. L NEWELL M D F R C S

RETROPERITONEAL SARCOMA

(With Special Plate)

The photograph reproduced is of a retroperitoneal tumour which involved and embedded the right kidney It was removed from a man of 55 a bus conductor His subjective symptoms were those of gastric irritation simulating nothing definite in the way of a lesion of the stomach Curiously enough he went to his doctor only for this complaint which had begun to trouble him some six months before He had always had so far as he could remember a feeling of heaviness on the right side but this did not seem to affect him he was never off work He was very thin and the mass filled up almost the whole of the abdomen extending deep into the pelvis and across to the left lumbar and iliac regions The disproportion between the size of the individual and that of the mass was extraordinary it seemed rather as if be were attached to it. On palpation there was a suggestion of fluctuation The man had lived in the Tropics for a number of years and a tentative but erroneous diagnosis of a liver tumour was made The stomach symptoms were probably due to displacement of that organ by the mass The tumour could not be freed from the kidney which was removed with it The man made an uninterrupted recovery and is back at work On section the tumour showed a flesh-coloured bossy surface suggesting sarcoma Sections were sent to Mr D M Greig of the Royal College of Surgeons of Edinburgh who reported it to be a sarcoma of the fibroblastic type with no indication of renal tissue present A kidney of more or less normal size is placed beside it for comparison

Torquay Devon DONALD MACLEOD F R C S ED

FRACTURE SEPARATION OF EPIPHYSIS OF LESSER TROCHANTER OF FEMUR

(With Special Plate)

Owing to the rarity of this injury and to the paucity of information concerning it in most current textbooks a short account of a case recently under my care may prove of interest The *x* ray photographs clearly demonstrate the injury and the result of two months treatment

The patient a boy aged 16 slipped and fell while playing tennis on August 10th in Guernsey On attempting to rise he experienced acute pain in the left groin and was unable to move the left leg He was examined by Dr R E Gibson of Guernsey No shortening or other sign of gross bony injury was found but Dr Gibson was particularly impressed by the patient's inability to flex the thigh on the abdomen He concluded that the injury was probably a rupture of the ilio-psoas muscle The first *x* ray photograph taken on August 18th clearly demonstrates a fracture separation of the epiphysis of the lesser trochanter On August 23rd the patient was transported from Guernsey to his home in Dover by boat and rail He was put in a carrying chair with his left thigh fixed by bandages in a position of extreme flexion The journey was accomplished satisfactorily the patient experiencing no pain and little discomfort. At home he was treated in bed Relaxation of the left ilio-psoas muscle was maintained for five weeks by a suitable arrangement of back rest pillows and foot rest Passive movements were then instituted for a week after which he was permitted to do graduated exercises Eight weeks after injury he was able to walk without a limp The second *x* ray photograph was taken on October 21st A few days later he was allowed to return to school and to resume his normal life with the exception of playing games The functional result is most satisfactory The second *x* ray photograph shows union of the epiphysis to the shaft of the femur about one inch above its original seat

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ACUTE STREPTOCOCCAL PERITONITIS WITH RECOVERY

In the *Journal* of February 18th 1933 (p 270) Messrs G Gordon Bruce and Norman J Logie recorded three cases of acute streptococcal peritonitis that recovered after operation The following notes of another case may be of interest in view of the infrequency of this happy outcome

The patient was a girl of 8 who had had umbilical pain for twelve hours and had vomited six hours before the onset of pain she had passed a loose slimy stool Temperature was 101° and pulse rate 130 The abdomen was slightly distended with hyperaesthesia in the right lower quadrant. There was slight rigidity in the right iliac fossa and above the

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pubes and tenderness over the lower abdomen very marked over McBurney's point She was admitted to a nursing home as a case of acute appendicitis, and was operated on sixteen hours after the onset of the pain No free fluid was present in the pelvis or general peritoneal cavity The appendix showed only a mild superficial engorgement and was removed All other abdominal and pelvic organs seemed normal and the abdomen was closed without drainage

After operation several slimy stools were passed one of them blood stained, and abdominal tenderness and distension increased For a week the temperature ranged round 102° On the ninth day signs appeared in the lower lobe of the left lung and acute pneumonia developed Pure cultures of haemolytic streptococci were obtained from the blood stream and from the sputum The temperature fell by lysis in ten days On the twentieth day after operation there was a small discharge of pus from the laparotomy wound, and on the thirty first day after three days of increasing tenderness over the whole lower abdomen, this recurred During the following six days more than a pint of pus was discharged from which haemolytic streptococci were cultured From this point onwards a steady convalescence was established

It seems that in this case acute streptococcal peritonitis was mistaken for acute appendicitis Laparotomy was performed before any appreciable pus had formed, and the wound thus made afforded a path of lowered resistance for the subsequent escape of the pus, and had the effect of a delayed operation for drainage

North Finchley A W M ROOKE, M B , B S

COMPLETE TORSION OF THE OMENTUM

Complete torsion of the omentum occurs with sufficient rarity to make the following case worthy of record In Keen's *Text-Book of Surgery* it is stated that "torsion of the great omentum, with sufficient constriction of the blood vessels to produce gangrene, occurs in rare instances The symptoms are much like those of intestinal obstruction"

A man aged 26 was admitted to the Leeds Jewish Hospital on February 20th 1933 He had had a right inguinal hernia for the past eighteen months This was badly controlled by an inefficient truss but had not caused the patient any trouble During the week preceding admission he had experienced vague abdominal discomfort and on February 19th complained of severe pain around the umbilicus followed by vomiting The pain then became worse and was felt in the right iliac fossa The bowels had been constipated, but an action was secured on the day of admission by the use of castor oil previously taken by the patient

On admission the pulse was 120, temperature 100 6° F The face was flushed and the tongue coated There was a large right inguinal hernia easily reducible and presenting no untoward signs There was rigidity and marked tenderness in the right iliac fossa and pressure in the left iliac region and the right hypochondrium caused pain to be felt in the region of the appendix There was marked cutaneous hyperaesthesia over the appendix and rectal examination revealed tenderness high up on the right side but a mass was not felt

A diagnosis of acute appendicitis was made The abdomen was opened by a right paramedian incision the rectus muscle being displaced outwards On opening the peritoneum a little blood stained free fluid escaped and a mass was felt in the abdomen which on delivery was found to be the twisted omentum It had undergone three complete turns and the lower portion was intensely congested with haemorrhage into the tissues The mass was untwisted and as its viability was in doubt the greater portion of the omentum was ligated in sections and removed Appendicectomy was performed and the abdomen closed without drainage The patient made an uninterrupted recovery

I am indebted to Dr Samuel under whose care the patient was admitted for permission to publish this case

Leeds L BRILL, M B , Ch B

Reports of Societies

SIMPLE GOITRE IN DERBYSHIRE

At a meeting of the Section of Epidemiology and State Medicine of the Royal Society of Medicine on April 28th with Dr WILLIAM BUTLER in the chair, a paper was read by Dr P H J TURTON on the distribution of simple goitre in Derbyshire

Dr Turton said that although goitre had been endemic in Derbyshire for many centuries, the references to the disease in the county were scanty Erasmus Darwin in 1796 said that the "inferior people" of Derby town were much affected In 1887 Mr (now Sir) James Berry made the first detailed tour of inquiry Dr Turton himself had spent much time during the last eight years in studying the distribution of simple goitre among school children in Derbyshire of the age group 8–13, and over 40,000 such children had been examined He dismissed from his survey all cases of incipient goitre, in which a slight thickening at the neck was only observed on close inspection or seen on deglutition His cases comprised simple goitre, in which the enlargement caused a definite alteration in the condition of the neck, medium goitre, with definite lateral or anterior bulging, and large goitre the Derbyshire "thick neck," once so common He discussed with the aid of maps of the county the relation of goitre to the various geological formations and sources of water supply The carboniferous limestone region had always been a goitrous one, in the millstone grit region the incidence was much less In the parts of Derbyshire occupied by coal measures goitre was formerly very common, but had lessened since the water supply had been derived from upland sources In the magnesium limestone goitre was fairly common, especially where surface wells were in use for drinking water It was very rare indeed at Buxton, and many doctors there had never seen a case native to the town The goitre incidence was approximately as follows among school children

Regions from which the public water supply is derived	
Carboniferous limestone	2·0 to 2·5 %
Coal measures and limestone shales	1·5 to 2·0 %
Millstone grit	1·0 to 1·5 %
Surface Glacial, Bunter Keuper and Permian	0·5 to 1·0 %

In discussing the causes of goitre Dr Turton dismissed the iodine deficiency theory Suggestions had been made that Derbyshire was deprived of iodine because of its distance from the sea, but in fact the source of the iodine was the land, and not the sea There was no definite correlation between the iodine content of the water or the soil and the incidence of goitre If iodine deficiency were the cause the administration of the element in the form of sweets to children and iodizing the water supply might be expected to have some effect, but this had been done at Heanor, and the results were not encouraging No case had been made out for the promiscuous administration of iodine amongst either children or adults An improperly balanced diet was likely to be one of the factors, perhaps more important than was commonly supposed Not only was thyroid disease related to vitamin deficiency, but to mineral imbalance in the diet But there was also a good deal of evidence in Derbyshire to support the view that drinking water was a very powerful agency in the production of the disease, and there were numerous instances of the disappearance of goitre from a locality following the introduction of improved water supply At Heanor and Ilkeston a striking fall in incidence had occurred after the water supply was efficiently filtered and continuously chlorinated But while the water supply was an important factor, it was certain that there were other factors in operation

The president, Dr BUTLER spoke as one who had suffered from goitre, from which he had recovered, thanks to Sir James Berry His own case suggested that there was a hereditary and familial element No member of his family who had had goitre had lived in goitrous districts nor had they all lived in the same district, but an ancestor had come from Derbyshire, and there was a tradition of goitre in his line

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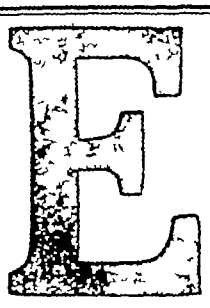

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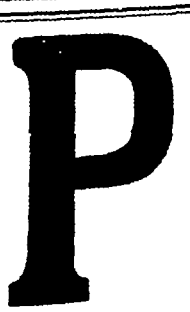

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Sir JAMES BERRY did not think that diet had anything to do with the production of ordinary endemic goitre Endemic goitre was produced by a poison in the water and not by anything else He was glad to hear ridicule poured upon the iodine deficiency theory Dr SCOTT WILLIAMSON pointed out that in Holland where there was no endemic goitre and where the goitre was largely of the toxic variety 80 per cent of the people who acquired toxic goitre were the descendants of Swiss immigrants Around each endemic zone whether in Switzerland or America was a fringe where the incidence of vascular goitre began to decline and there was an increase in incidence of other mixed types beginning with hypertrophic enlargement in early youth and going on to the adeno-parenchymatous type in later life One was driven to the conclusion that the causal factor whatever it might be was continually exhibited in the central zone with the intermittent application of the causal factor on the fringe In the centre of the zone the individual patients showed first an extremely low blood iodine and also a low concentration of iodine in the large vascular goitre itself but the total amount of iodine contained in the gland was invariably higher than normal sometimes almost double It looked therefore as though the causal agent whatever it might be reduced the necessity for a high iodine threshold It was very difficult to believe that there was any connexion with the concentration of iodine in the environment Such concentration was low in the environment of the majority of these patients but it did not necessarily approximate to an absolute deficiency He thought that diet was probably as important as water supply Dr FRANCES PEARSE who has been working on the subject with Dr Williamson mentioned a case of goitre in a hospital patient who after discharge and undergoing a period of semi starvation owing to unemployment showed signs of scurvy on readmission

Mr C A JOLL thought that all the goitres of which Dr Turton had spoken and which he had called hypertrophic were really particular varieties of colloid goitre Lymphadenoid goitres were practically always met with in middle-aged women and were far more common in the sporadic goitre of towns than in endemic zones He doubted whether diet deficiency could account for either lymphadenoid or any other goitre Dr GARDINER HILL mentioned a case to illustrate the hereditary and sex factor A woman who herself had goitre had eight children six of whom (daughters) developed goitre Five of these developed goitre after leaving the area to be married three of them during pregnancy and two during the climacteric None of their children showed goitre The one who had remained in the area married there and produced six children two of whom developed goitre outside the area Dr CLARK TROTTER was of opinion that the iodine question was not yet settled The chances were that there was some iodine deficiency in modern diet and he thought it a good thing to use iodized salt which however was difficult to obtain

LEGAL LIABILITY OF HOSPITALS

At a meeting of the Medico-Legal Society on April 27th with Lord RIDDELL the president in the chair Mr H C DICKENS read a paper on negligence in hospitals and its consequences

Mr Dickens first explained the liability of members of the medical staff for the negligence of subordinates and nurses expressing the strong opinion that a surgeon conducting an operation ought to be allowed to rely upon his theatre sister for a correct count of the instruments and swabs In support of this opinion he quoted the judgement of the South African Supreme Court in Van Wyk *v* Lewis (1926) Dealing with the liability of the hospital governors for the negligence of members of their staff he quoted the judgement of the Court of Appeal in Hillyer *v* St Bartholomew's Hospital (1909) to show that they were not liable for injury suffered by a patient during operation at which the surgeon was presumed to be in complete command Hospital governors had long been held immune from liability for the acts of qualified medical men but the judgement of Lord Justice Kennedy in this case suggested that they were not responsible for negligence even of a nurse in matters of professional skill but only in the discharge of ministerial or administrative duties The fact that a patient was paying for his bed did not Mr Dickens thought make any difference In conclusion the lecturer suggested that all hospitals would do well to insure against their legal liability

Mr OSWALD HEMPSON quoted the judgement of Lord Justice Farwell in Hillyer's case in support of his suggestion that hospitals might not even be liable for the negligence of a nurse in performing a purely administrative duty He considered it possible that a hospital which accepted payment also accepted a larger measure of risk but never such a risk as that incurred by a nursing home which undertook to nurse patients for money He did not think that a board could be held liable for the efficiency of its apparatus to a greater extent than for the competence of its skilled staff

Mr D H KITCHIN remarked that the judgement in the Van Wyk case had established a rule of law which was never likely to be adopted by the English courts in which the question of whether a surgeon had been negligent in accepting the theatre sister's word for the count was left for the jury to decide taking all the facts and evidence of custom into account He quoted the Lord Chief Justice's summing up in Crotch *v* Miles The hospital's liability for harm caused by a student should he thought depend on whether the particular task could reasonably be considered within the competence of that student at the time The member of the staff supervising the student might also be held responsible Paying patients probably did not yet realize that they could not expect redress from the hospital for negligence in professional matters and the realization might lead to dissatisfaction if the position were not made clear

Mr C E BEDWELL thought that the payment of a fee would make patients still more critical and Mr H W BURLEIGH agreed Sir WILLIAM WILLCOX mentioned several points of administration in which a hospital should take more care The PRESIDENT doubted whether patients were as critical as had been suggested and thought that on the whole they understood the position well

UTERINE HAEMORRHAGE AND THE ENDOCRINES

At a meeting of the Medical Women's Federation on April 11th with Dr LETITIA FAIRFIELD in the chair Professor OSKAR FRAENKL of the Universitäts Frauenklinik at Vienna gave an address on the endocrine basis of uterine bleeding

Uterine bleeding Professor Fraenkl said was an important factor in the lives of both the gynaecologist and the general practitioner At one time the treatment was stereotyped but nowadays more was known about the causation of uterine bleeding and treatment could be differentiated accordingly In order to have a proper understanding of pathological bleeding it was necessary to consider the origin of menstrual bleeding The old physicians used to say The uterus makes woman what she is Later they modified their view and said The ovary makes woman what she is It was now recognized that the ovary was not an independent gland both ovaries might be congenitally absent and yet the secondary sexual characters might appear To-day it could be said The pituitary makes men and women what they are Following menstruation the uterine mucous membrane remained quiescent for a day or two and then began to grow thicker the glands increased in size and during the second half of the intermenstrual period started to secrete In the ovary maturation of an ovum was initiated as soon as a menstrual period ended and ovulation occurred as a rule between the twelfth and the fourteenth day of the menstrual cycle The corpus luteum formed during the second half of the cycle and degenerated before the onset of the next menstrual period unless the ovum was fertilized Degeneration of the corpus luteum and the termination of its function as an endocrine body followed upon death of the ovum The Graafian

follicle elaborated a hormone which had been named severally folliculin, progynon, oestrin, and theelin the corpus luteum produced luteohormone Every month one of the primordial follicles in the ovary developed into a Graafian follicle At the same time five or six other primordial follicles began to form but failed to mature, instead, they gave rise to cystic atresic follicles, which, like the mature follicle, secreted folliculin Two or three days after the end of a menstrual period the folliculin secreted in the ovary stimulated the resting mucous membrane of the uterus by improving the blood supply, and, as a result, the glands began to show signs of activity When the Graafian follicle had ruptured a corpus luteum was formed in the ovary, and secreted luteohormone into the blood stream Luteohormone consisted of two principles hyperemmenin, which caused hyperaemia of the uterine mucous membrane, and progestin, which stimulated the development of the glands and prepared the mucous membrane for the reception of the ovum These processes did not occur independently, but took place under the influence of hormones derived from the anterior lobe of the pituitary The anterior lobe hormones were ossein, prolan A, and prolan B Prolan A controlled the maturation of the Graafian follicles and the formation of cystic atresic follicles, and prolan B governed the development of the corpus luteum

Why then, did menstrual bleeding occur? It followed upon death of the ovum and involution of the corpus luteum As the corpus luteum degenerated the stimulus of luteohormone to the mucous membrane ceased, it was not therefore, hyperaemia, as was formerly supposed, that provoked the menstrual flow, but the sudden onset of anaemia the secretion of the glands digested the vessel walls and liberated the blood At one time chronic metritis was regarded as a common cause of pathological bleeding but this condition was now known to be rare it was usually a sequel of abortion of sepsis, and commonly fatal The cases formerly grouped under this heading were now classed as haemorrhagic metropathia In this condition the mucous membrane of the uterus was usually thickened—often enormously so—and so irregular as to appear polypoid, while the muscle wall was hyperaemic Most cases of haemorrhagic metropathia were due to a superficial inflammation of the ovary, but a small number were due to pituitary conditions Inflammation of the ovary acted as a stimulus, and provoked the growth of fifty to a hundred primordial follicles at the same time these active follicles all produced folliculin in the same way as the four or five cystic atresic follicles in the normal ovary In consequence, a lasting hyperaemia of the uterine mucosa was set up, and this continuous passive congestion ultimately injured the vessel walls and led to bleeding In the small group of cases the enlarged pituitary secreted an abundance of prolan A, which brought about uterine bleeding by its influence on the ovaries Another example of bleeding due to endocrine action was to be seen in Graves's disease, where the abnormal thyroid secretion might provoke, first, spontaneous uterine bleeding and later, amenorrhoea

There remained various causes of uterine bleeding which were not endocrine in origin Adenomyosis was a condition in which hyperplastic glandular tissue appeared in the muscle of the uterus In these cases, Professor Fraenkl believed bleeding was produced mechanically the glandular tissue pressed on the vessels and by inducing a continuous hyperaemia eventually led to degeneration of the vessel wall and bleeding Nor did he think that haemorrhage due to myoma was endocrine in origin, although there was probably some relation between the development of fibroids and the endocrine system bleeding however was probably produced mechanically by pressure on the vessels Carcinoma, sarcoma, and tuberculosis of the uterus had no connexion with the ductless glands Granulosa-cell tumours occurring in the ovary, sometimes caused intense uterine haemorrhage These tumours arose from cell groups having the same histological origin as the lining of the Graafian follicles, they consisted of round or spindle cells surrounding lacunae which contained homogeneous material, and had rather the appearance of ova The resemblance to ovarian tissue was also functional, for these tumours produced folliculin and gave rise to a condition of the uterus identical with haemorrhagic metropathia Tumours of the thyroid might also provoke uterine bleeding through their endocrine action When the patient could afford it, haemorrhagic metropathia might be treated by rest and extract of ergot given hypodermically corpus luteum extracts had not fulfilled the hopes which had been entertained for them *X*-ray treatment gave beneficial results but the flushes, sweats, and tachycardia attendant on an artificially induced menopause were so much worse than the condition itself that he had abandoned this form of treatment Poorer patients who were anxious to return to work should be treated by vaginal hysterectomy In adenomyosis surgical treatment was again necessary *X* rays and radium should be used for the treatment of myomata only when surgical treatment was refused Carcinoma, sarcoma, and tuberculosis should be treated by operation whenever possible

Professor T J STEVENS said that there were a large number of cases in which bleeding appeared in multiparae between the ages of 40 and 50 He had always taught that these were the result of chronic subinvolution On microscopical examination the muscular coats of the smaller arteries were found to be replaced by elastic tissue, and he had always considered that the bleeding was mechanical in origin, the arteries having lost their muscular control He did not think that these cases could be explained on an endocrine basis

Professor FRAENKL, in reply, said that they could be regarded as a late result of haemorrhagic metropathia On examination a fine superficial ovaritis was usually found in such cases, but the active stage—and with it the exaggerated production of hormone and the hyperaemia of the uterine mucosa—might have subsided before the patient came for treatment He had found no increase in elastic tissue in the walls of the arteries, but had observed an increase of connective tissue Subinvolution certainly existed, but was not to be identified with fibrosis Dr G F STEBBING was inclined to agree with Professor Stevens that many cases of bleeding resulted from subinvolution The patient usually had a history of abortion or complicated delivery, followed later by haemorrhage The uterus was then found to be enlarged, and had the appearance of an organ which had suffered for years from passive congestion Whatever view was taken of the cause, he shared Professor Fraenkl's opinions on treatment, though he took a more favourable view of the value of radium and *x* ray therapy Dr A N MACBETH, referring to the findings in haemorrhagic metropathia, asked whether the "active follicles" mentioned by Professor Fraenkl were all cystic atresic follicles without luteinization

Professor FRAENKL replied that normal Graafian follicles were also to be found In reply to Dr Stebbing, he said that a certain number of cases of bleeding were due to subinvolution, but the importance of these must not be exaggerated, as cases due to haemorrhagic metropathia were much more numerous

FACIO HYPOGLOSSAL ANASTOMOSIS

At a meeting of the Section of Laryngology and Otology of the Royal Academy of Medicine in Ireland, on April 7th, with the president, Dr P DEMPSEY, in the chair, Dr T G WILSON showed a case in which four years previously he had performed facio hypoglossal anastomosis for facial paralysis

Dr Wilson said that the patient now had a normal response to galvanism and faradism in all the facial muscles, and there was also a considerable amount of voluntary movement The ansa hypoglossi had at the same time been united to the distal end of the divided hypoglossal nerve, but this had not succeeded in preventing atrophy of the tongue

The PRESIDENT reviewed Ballance's experimental work on nerve grafting, and said that he considered this the ideal operation Dr P J KEOGH emphasized the importance of mimic movements in the after-treatment Dr J B HORGAN (Cork) mentioned two cases of facial para

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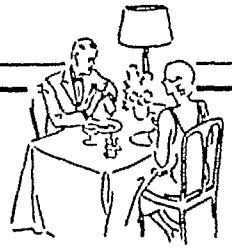

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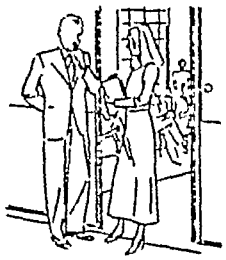

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lysis after mastoidectomy in which recovery had started six months later and had been complete in twelve months Dr T O GRAHAM quoted a number of cases in which he had performed nerve anastomosis for this condition In answer to the question of how long after the occurrence of the palsy one could successfully operate he told of a child who had sustained a facial paralysis early in infancy and upon whom he had successfully operated nine years later

Mastoiditis

Dr R R WOODS read a communication on acute mastoiditis He said that before deciding upon treatment the pathological conditions present must be considered He classified acute mastoiditis into four groups (1) Acute empyema appearing during the first week of acute suppurative otitis media (2) acute osteitis arising during the third week or at any time in an acute exacerbation of chronic suppurative otitis media (3) subacute mastoiditis caused by stagnation and occurring at any time from the fifth or sixth week onwards (4) chronic mastoiditis due to chronic osteitis complicating chronic otitis media The treatment advocated consisted mainly of complete closure of the post auricular wound with the insertion of two drainage tubes—one in the lower end of the wound and one passed through the posterior meatal wall after removal of bone After a week both tubes were removed and the cavity lightly packed with iodoform gauze passed through the meatal wound The advantages claimed were complete absence of pain at dressings primary union of the wound and reduction of hospitalization After radical mastoidectomy the cavity was packed at operation with iodoform gauze in a finger stall and a week later the cavity was Thiersch grafted

CORK CLINICAL SOCIETY

At the April meeting of the CORK Clinical Society with Professor DUNDON in the chair Dr G HEGARTY opened a discussion on the treatment of fractures in ordinary practice He considered that sometimes fractures were taken too casually bad results following and he drew attention to the importance of employing the aid of the *x* rays both before and after reduction and during the treatment when necessary He had watched the treatment of fractures for many years the tendency for operative intervention plating and grafting etc had risen and fallen now he found that conservative measures appeared to yield the best results and this he regarded as the accepted view

Dr O HEA CUSSEN in a paper on foreign bodies in the air passages drew attention to the debt the profession owed to Chevalier Jackson and other pioneers in this subject He considered that too often these cases were overlooked In children in the acute stage with the foreign body below the glottis laryngeal diphtheria was simulated Its differentiation could require the use of *x* rays and bronchoscopy If the foreign body passed into the lung the differential diagnosis from pulmonary abscess chronic bronchitis nasal tuberculosis bronchiectasis etc often presented extreme difficulty again requiring both *x* rays and bronchoscopy and also a careful investigation of the history and examination of the expectoration He felt that a number of puzzling terminal lung conditions that resembled chronic tuberculosis with negative expectoration could require the use of Radiology if the foreign body was not opaque was sometimes confusing He considered that closer co-operation between radiologist and bronchoscopist was indicated

Dr J FIELDING gave a comprehensive account of the history symptoms and cause of achalasia of the cardia The different theories as to causation that had been held from time to time were mentioned and the more recent view of inflammatory changes in Auerbach's plexus which he supported X-ray demonstrations of three cases aged 8 18 and 47 years were shown and a case of carcinoma of the cardia for differential diagnosis A detailed account of the treatment with rubber mercury bougies was followed by discussion

Reviews

FACSIMILES OF PLAGUE PAPERS

The Shakespeare Association has issued as No 7 of the series of rare texts of Shakespeare's day black-letter facsimiles of several plague publications under the title *Present Remedies against the Plague etc*[1] The earliest known copy of the tractate which gives its name to this volume was issued in 1594 but the facsimile here reproduced is taken from the practically identical edition of 1603 The anonymous but very learned and approoued Phisition who penned the original begins with the wise warning that streets and houses must be kept free from all that may ingender stincking savours or breede infection Dogs he tells us are most apt cattell to take infection and then to bring it into the house The belief universal in the age that dogs served as active vectors of plague infection may well have had some foundation in fact for the reviewer has recovered from a dog at one time more than forty non-canine fleas of a species implicated in the spread of plague Other preventive measures advocated by the nameless Phisition are concerned with the disinfection of rooms and clothing and probably would have been effective against fleas contained in either He gives no clinical description of plague for doubtless those whom he addressed were but too familiar with its manifestations and mentions only in passing Botches Carbuncles and God's tokens swell ing The medical and surgical treatment advised in cludes nothing original and in principle and often in detail is merely that employed at the time of the Black Death

The second portion of the volume gives the Orders issued by the Queen and the Privy Council in 1592 for the control of plague elsewhere than in the capital together with an accompanying Advise by the best learned in Physicke within the Realme for the prevention and treatment of the disease The Orders direct the justices of each county to keep themselves informed of all outbreaks of plague and empower them to levy special taxes to meet the cost of their preventive measures These include the appointment of viewers —representing the searchers of later Orders—watchmen to guard infected houses and bring food to the occupants and the provision of a special burial ground in every parish for plague victims Further the justices of each county are authorized to devise and put into execution any additional orders that may seem likely to preserve Her Majesty's subjects from infection The appended advise follows the general lines familiar in plague writings of the time but the measures of active treatment laid down are markedly inferior judged by modern ideas to those advocated earlier by Ambroise Paré

In none of the texts here republished is there any mention of an associated mortality among rats and we miss too the significant and pathetic warning of approaching plague given by contemporary writers— When we see yonge Children flocke themselues together in companyes and then will faine some one of their company to be dead amongst them and so will solemnize the burial in a mournefull sorte this is a token which hathe bene well observed in our age to foreshew great mortalitie at hand The children's game of plague funerals once played in a mournful sort in the streets of London is more eloquent of health conditions of the past than any number of printed books

[1] *Present Remedies against the Plague etc* Shakespeare Association Facsimiles No 7 Edited by Dr G B Harrison With an introduction by W P Barrett London Oxford University Press 1933 (Pp xix + 26 6s net)

EXPERIMENTAL PATHOLOGY

The value of laboratory handbooks of experimental physiology for the use of students has long been fully recognized. Students of a former generation will recall to mind Burdon-Sanderson's well known book, those of to-day have the benefit of such works as the *Practical Physiology* of Anrep and Harris and Sherrington's *Mammalian Physiology*. With the introduction of experimental pathology into the curriculum the provision of similar handbooks on that subject will become necessary, and a preliminary attempt in this direction has been made by Drs WAGONER and CUSTER in their recently published *Handbook of Experimental Pathology*.[2] This is likely to prove a practical and reliable guide, since it is based on the experience gained during several years, in the course which they have arranged for their students. It gives detailed instruction on the technique of operations, on anæsthetization, and on the general care of experimental animals. This is followed by descriptions of experiments in general pathology such as inflammation and immunity, and on the special pathology of the various systems.

Those who are opposed to animal experimentation may be recommended to study the account given of the methods in use in operations on animals, they will be found to be identical with those adopted in the case of human beings. Absolute asepsis, general anæsthesia, and similar precautions are carried out with as strict conscientiousness as in the human operating clinic and as regards the spirit in which these operations are undertaken special attention may be called to the rules laid down on page 31. It is there stated that animals in the laboratory shall receive every consideration for their bodily comfort, they shall be treated kindly, properly fed, and their surroundings kept in the best possible sanitary condition. Where the continuance of the animal's life after the operation is necessary to determine the result of an experiment, the same care shall be taken to minimize discomfort during convalescence as in a hospital for human beings. It may be said that any shortcoming in respect of these particulars would receive the unqualified condemnation of the whole profession.

PELVIMETRY AND CEPHALOMETRY

In this country there is no question about the truth of the statement made by Dr JULIUS JARCHO in the preface to his book *The Pelvis in Obstetrics*[3] that "the trend of recent years has been toward the neglect of pelvic measurements. The need for an exhaustive study of his subject, including pelvimetry and cephalometry with their clinical applications, is justified on the ground that this trend has led to dependence on "the dangerous test of labour in many cases where the possession of exact data might save lives or diminish morbidity." The growing tendency to decry the value of pelvic mensuration except as a rough guide in selecting ante-natal cases for closer observation must not, however, be ascribed only to the inexactitude of the data obtained. It has arisen rather from a general recognition of the part played by other factors—some of which are incapable of exact estimation—that influence the decision as to the probable outcome of labour in cases where the disproportion is not extreme. Intrauterine measurements of the fœtal head are even less reliable than those of the pelvic diameters, and the degree of moulding and of activity of the uterine forces are variables precluding accurate prognostication. It is because of these and other variables that "trial labour" under hospital conditions has been advocated as the scientific method of discovering what the natural powers can do in borderline cases.

Whitridge Williams's statement is quoted—namely, that "the ideal treatment of disproportion by all wise obstetricians would consist in such ideal pre-natal care as to permit the differentiation of all patients into those who will require Cæsarean section and those who will not, with the performance of the classical section before the onset of labour in the former, and with spontaneous labour in the latter. Unfortunately such prognostic ability is unattainable, and, if it were, it is safe to say that most of us would find it difficult to live in the same world with those possessing it. The purpose of this book is to stimulate interest in the methods of pelvic and cephalic mensuration, especially in view of the advances in pelvic skiagraphy and to indicate how greater accuracy in differentiating between these two groups may be attained. There is a wide discussion of methods other than those adopted by the author, and our only criticism is that with the number described their relative value is scarcely made sufficiently obvious.

The book is lavishly illustrated, so that all methods can be readily understood and applied, and an extensive bibliography makes it a valuable work of reference. There can be no doubt that Dr Jarcho has performed an important service in drawing attention to an aspect of obstetric practice that has fallen into less prominence than it merits.

SKIN DISEASES IN THE TROPICS

Dr E. C. SMITH has laid his colleagues in tropical countries, particularly those who work in Africa, under a considerable obligation by the production of an *Atlas of Skin Diseases in the Tropics*.[4] As the word "atlas" implies, the greater part of the volume consists of the hundred excellent plates illustrating the various dermatoses which are found in such abundance in the Tropics, and which afflict both natives and Europeans, but more especially the natives owing to their lower standard of hygiene. With the exception of two coloured drawings, one of which is a very life-like representation of that scourge of hot climates known as prickly heat, all the plates are photographs specially produced for this book, and for them we have nothing but praise. The author evidently knows his tropical dermatology exceedingly well, and his clinical skill is built on a sound pathological foundation. Moreover, he has done some useful original experimental work on both prickly heat and on tropical ulcers. In view of the increasing importance now being attached to the pathogenic powers of yeast like organisms, it is interesting to note that Dr Smith has been able to grow a Monilia from the desquamating scales of patients suffering from prickly heat, and, moreover, has been able to reproduce it artificially both in man and in monkeys by the application of lint soaked in cultures of the Monilia to the healthy skin. Many of the illustrations are devoted to the different clinical varieties of tinea, but the author has wisely abandoned the attempt to classify the various fungi associated with this very common condition. He draws special attention, however, to the trichophytic granuloma of the head which is often incorrectly diag-

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[2] *A Handbook of Experimental Pathology*. By G. Wagoner, M.D., and R. P. Custer, M.D. Illustrations by I. F. Faber. London: Bailliere, Tindall and Cox. 1933. (Pp. xvi + 160, 22 figures. 23s.)

[3] *The Pelvis in Obstetrics*. By J. Jarcho, M.D., F.A.C.S. A practical manual of pelvimetry and cephalometry including chapters on roentgenological measurement. New York: Paul B. Hoeber, Inc. 1933. (Pp. 381. 140 figures, 51 tables. 6 dollars.)

[4] *An Atlas of Skin Diseases in the Tropics*. By E. C. Smith, B.A., M.D., D.P.H., D.T.M. and H. London: J. Bale, Sons and Danielsson, Ltd. 1932. (Pp. 60, 253 figures. 21s. net.)

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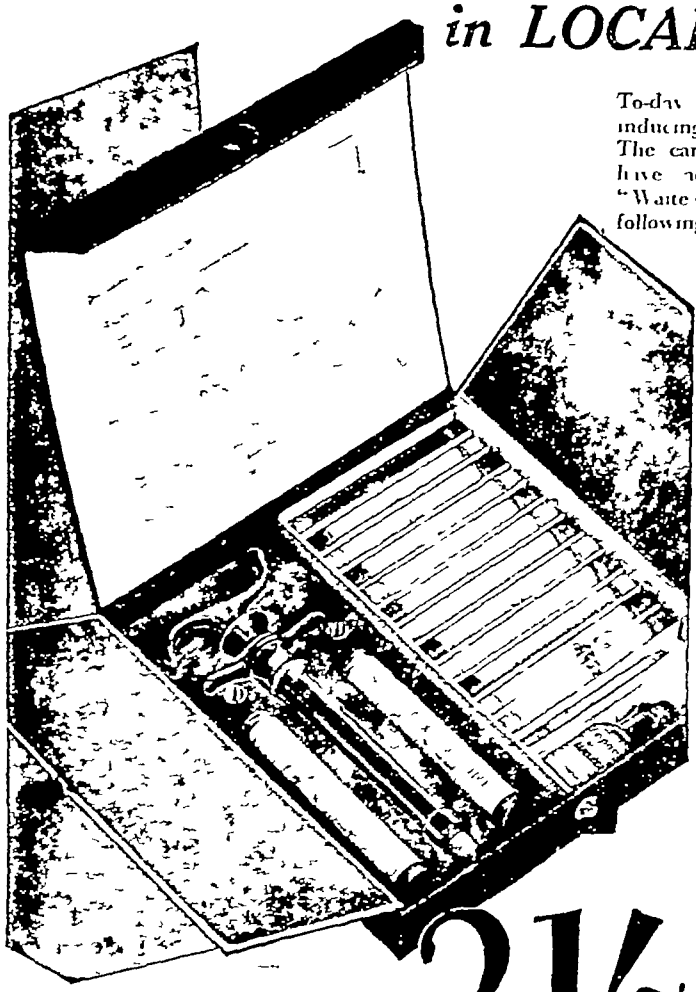

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★ *'Brighton Herald," April 1st*

NEW LIFE-SAVING "GUN'
Gassed Man Restored at Hove

The use by the police of a new life saving gun' brought about the recovery of a well-known Hove business man Mr ——— early on Thursday morning Mr ———, who is 54 years of age was found in a room at his house suffering from coal-gas poisoning He was found by his wife who sent for the police They used the gun' with such success that Mr ———, who had been unconscious recovered

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SUFFERING FROM
COAL GAS
POISONING

★ *"Daily Mirror" April 12th*

GAS GUN SAVES WOMAN'S LIFE
River Police Use New Equipment for First Time

New apparatus for administering carbon dioxide with which the Thames police were recently equipped was successfully used by them to save the life of a woman who fell into the river from Tower Bridge She was rescued unconscious by a waterman Lifted into a police patrol motor boat she was taken to Wapping Station On arrival at the station the gas was administered and after a short time breathing was restored

★

FELL INTO THE
RIVER FROM
TOWER BRIDGE . . .
RESCUED UNCONSCIOUS

★ *'Sunday Dispatch April 23rd*

RESTORED TO LIFE
After Rescue From River—New Apparatus Success

A man drove in a car on to Westminster Bridge late last night stepped out and was seen to fall into the Thames

He was brought out of the river unconscious and revived by the new resuscitator apparatus which has recently been supplied to the River Police

★

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THE THAMES . . .
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OF NO AVAIL

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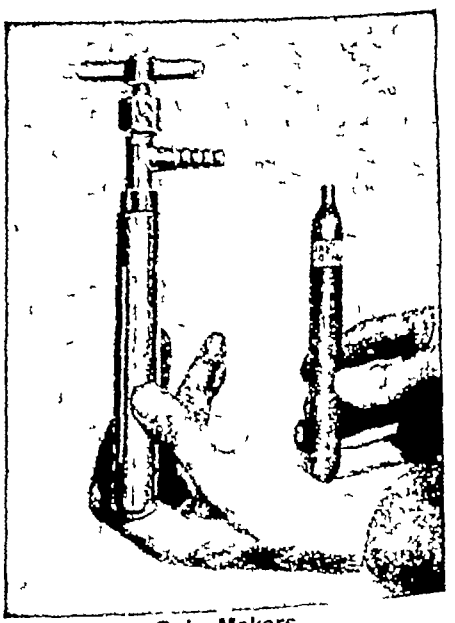

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nosed as a real neoplasm but which shrinks away promptly under the application of strong iodine It may be likened to an exaggerated form of kerion an inflamed and purulent form of ringworm of the head not very infrequently found in European countries The letter press supplied by Dr Smith to his atlas is very short but it is very much to the point and adds greatly to the usefulness of his book which should be in the hands of all those who are likely to work in the Tropics and will be found of great interest by all dermatologists

DIABETES IN CHILDHOOD

Dr PRISCILLA WHITE s book on diabetes in childhood[1] ranks high among the other publications from Dr Joslin s clinic and should be read by every serious student of the subject The author has not only studied these cases medically but lived with her young patients and friends and the book gathers real value from such intimate experience It is a magnificent testimony to the change in diabetic therapy since the introduction of insulin In his foreword Dr Joslin mentions how in the Naunyn era until 1914 he used to count the *days* his diabetic children lived in the Allen epoch the months they survived and now it seems that having lived ten years they are likely to fulfil their natural span of life

The book deals exhaustively with the whole subject starting with a historical outline and ending with an attempt to foresee the future of these diabetic children as they grow up In all 750 children have been studied and most of these mature normally since insulin treatment is available Their height and weight are up to the normal their sexual development is assured and some have already become parents Such results are known to diabetic workers all over the world but from no other clinic is such a convincing bulk of evidence available Insulin is given to all the diabetic children and doses of from one to 100 units a day have been employed The number of injections varies from one to four a day although two or three are more usual It is a common practice (which seems rather distressing to English minds) to give a dose of insulin between 10 p m and 5 a m to control hyperglycaemia in the morning This morning rise in blood sugar seems to develop in most cases with the duration of the diabetes and would indicate a progression of the severity of the disease and decrease of endogenous insulin production up to a certain point The carbohydrate of the diet varies between 100 and 150 grams and the total calories are fairly low

Separate chapters are devoted to every aspect of the disease—physiological pathological and practical The significance of hypercholesterolaemia is discussed without any new conclusions It is interesting to note that the typical lesions in the adult pancreas hydropic and hyaline degeneration are absent in childhood and replaced by lymphocytic infiltration of the islets A whole chapter is devoted to heredity and the mathematical attempt to prove that diabetes is due to a simple Mendelian recessive characteristic seems the most unconvincing thesis in the book Perhaps the most interesting is the last chapter dealing with school exercise home life and holidays No diabetic child should be given a physician s certificate to excuse him from school This phrase is eloquent of the attitude of the book and perhaps gives more convincing evidence of the high normal achievements in health and education that this clinic maintains than the two photographs of fine diabetic youths clearing five barred gates on equally magnificent horses

[1] *Diabetes in Childhood and Adolescence* By Priscilla White M D Foreword by E P Joslin M D London Henry Kimpton 1933 (Pp 236 25 engravings and 1 coloured plate 18s net.)

CAREERS FOR WOMEN

In a foreword to *300 Careers for Women*[2] compiled by VYRNWY BISCOE Miss Margaret Bondfield commends the book to all who are seeking the starting point of careers for the young generation and we can heartily endorse her recommendation for it is no small boon to the inquirer to have so wide a field of selection reviewed so concisely Something should surely be found amongst the selected careers to suit the capacities tastes and financial resources of every candidate for employment The plan of the book is admirable The information given in each case covers a brief statement as to the initial qualifications required from candidates the cost and duration of training the scholarships and other forms of financial help available in case of need the prospects of obtaining employment the range of remuneration to be hoped for publications dealing with the subject and the address of the recognized body if any from which further information may be obtained

All things that are lawful and profitable may not be expedient and the compiler has perhaps erred somewhat on the side of catholicity and omitted some warnings that would serve a useful end but she would doubtless reply to this criticism that it has been her business to describe the existing demand not to criticize it It is certainly interesting to learn that the prospects of astrology as a career are improving that the osteopath may hope to make from £750 a year in private practice while her humbler medical sister who has spent considerably more on her initial training will expect from £400 in private and consulting practice and that ophthalmic therapy with or without the addition of nasal hygiene is a science which is gradually obtaining recognition practitioners requiring a training of from four months upwards at a cost of from £40

[2] *300 Careers for Women* By Vyrnwy Biscoe Introduction by the Right Hon Margaret Bondfield. London Lovat, Dickson Ltd 1932. (Pp 225 2s 6d net)

Notes on Books

Dr R J BATTY has written a useful little book on *Enuresis or Bed wetting*[3] which is singularly free from fads and does not set out any new fangled method of cure The author has apparently read widely in the huge literature on this subject and he presents his facts well basing his views upon an experience of over 200 cases personally investigated in detail The historical features of the condition and an account of the anatomy and physiology of micturition lead up to a section on the cause of the complaint which the author thinks is mostly lack of training in infancy combined with bad home conditions This view does not preclude him from giving a wide range of methods of treatment including those founded upon the most modern view that enuresis may have an allergic basis The book is less than a hundred pages and its useful advice should be taken by all practitioners who are daily having to deal with this troublesome condition

The preface to the 1933 edition of *The South and East African Year Book and Guide*[4] states that there has been a considerable recrudescence of malaria in a limited area of the Union The sections devoted to public health and climate provide some useful information about those diseases which are of peculiar interest to visitors and residents including hints on the preventive measures to be adopted This guide book contains sixty four pages of excellent coloured maps and we are informed by the publishers embodies some 4 000 amendments and additions to the previous issue

[3] *Enuresis or Bed wetting* By R J Batty M.D B Sc. D P H London J Bale Sons and Danielsson Ltd. 1933 (Pp 91 3s 6d net.)

[4] *The South and East African Year Book and Guide for 1933* With Atlas Thirty ninth issue London The Union-Castle Mail Steamship Company Ltd (Pp 1333 maps and charts 2s 6d)

In his Buenos Aires thesis on the Cerebro-spinal Fluid in General Paralytics under Malariotherapy[9] Dr J P KÄFER reviews the literature and records seventeen personal cases in patients aged from 27 to 49 Four stages of the disease are described—namely (1) a malarial stage, during which there was a fall in the tension and the pleocytosis of the cerebro-spinal fluid, (2) an early post-malarial stage, represented by the first year following cessation of the fever, (3) a second post-malarial stage, represented by the following year, and (4) a late stage, starting two years after termination of the fever In the last three stages there was a progressive diminution of the pleocytosis while in the fourth stage the globulin and Wassermann reactions became negative and the Lange reaction became attenuated or completely negative

The *Transactions of the American Gynecological Society*[10] for 1932 have now been published, the general lines of this compilation following those adopted by British societies but the volume is much larger and contains more articles of clinical significance Many of the contributors deal with obstetrical problems, and the contrast between certain American and British methods is well brought out

A second edition has now been published of the Hand-List of Periodicals in the Library of the London School of Hygiene and Tropical Medicine[11] revised to January 31st, 1933 The last ten pages comprise an index to societies and institutions

Dr ERWIN LICK of Danzig contributes a semi-popular book—*Krebsverbreitung Krebsbekampfung Krebsverhütung*[12]—to the literature of malignant disease The spread of cancer the war against cancer, and the prevention of cancer are the headings under which as his title indicates he deals with the subject The book contains little if anything new, but it is written in a pleasant and easy style

[9] *Estudio del liquido cefalo raquideo en los paraliticos generales malarizados* By Dr José Pereyra Kafer Buenos Aires Colegio Parroquial San José de Flores 1932 (Pp 76)

[10] *Transactions of the American Gynecological Society* 1932 Vol lvii Edited by Otto H Schwarz M D St Louis C V Mosley Company 1933 (Pp xxxi + 351 illustrated)

[11] Printed by Wightman and Co Ltd Dugdale Street S E 5 (1s 6d)

[12] *Krebsverbreitung Krebsbekämpfung Krebsverhütung* Von I Lick München J I Lehmanns 1932 (Pp 252, Geb M 5 Lwd M 6 50)

Preparations and Appliances

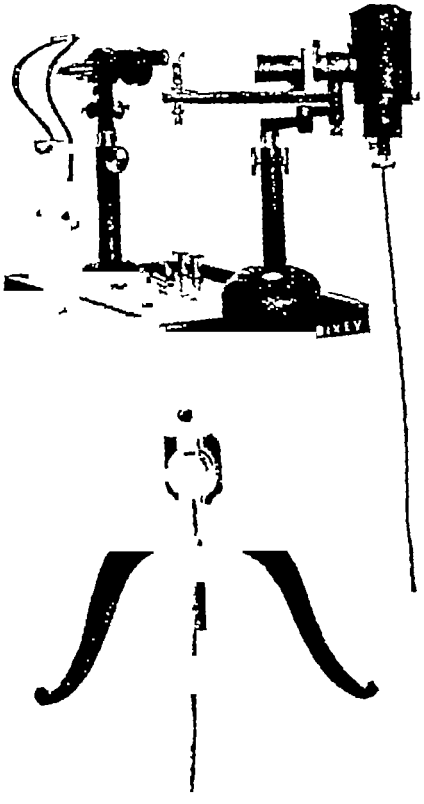
A SLIT-LAMP

Mr E GORDON MACKIE (Sheffield) writes

The slit lamp has not hitherto been so widely used as it deserves This is no doubt partly due to its many complicated adjustments which necessarily increase the cost of the apparatus Quite a number of these are but rarely used in working the lamp and some of them can be rendered unnecessary and expense thus saved by improvement in design Its real value can only be appreciated by regular use and with the hope of inducing more of my colleagues to adopt this aid to their work I venture to bring to their notice the instrument here illustrated

It has been made in accordance with the above ideas and having now been in use for over eighteen months and satisfied certain experienced slit lamp observers may be said to be more than an experiment The light source is a home cinema projection lamp used direct on the house current without resistance and stocked by most electrical dealers The optical system selects one of the filaments of the lamp grid and projects it in the Vogt manner the beam being controlled by an adjustable slit fine adjustment focusing screw and Arruga (vertical) screw in the ordinary way The selection of the filament is made in mounting the lamp in its housing the selected position is maintained by two clamping screws and remains indefinitely A feeble light is a source of much unrewarded slit lamp observation and replacement of the old Nernst lamp by the Nitra lamp (of thrice the light value) was a landmark in the history of the instrument Taking the latter lamp as a standard the system adopted has been found to give 91 per cent of the light value from a Nitra source at the point under examination This is fully adequate for all clinical purposes For special purposes certain workers may require the highest degree of illumination obtainable and this is now provided for by an alternative lighting system which, however necessitates the use of a rheostat

The lamp and microscope are alike mounted on bases to slide on the glass topped table This method is less speedy than a mechanical device for lateral transit of the lamp but it affords great steadiness and when the beam is adjusted it does not tend to pivot off its mark so that there is no need to hold it constantly in position The beam can be applied all round the stand and I am obliged for a suggestion to this end made by Mr Harrison Butler The microscope affords a flat field and the magnification of x 20 has been chosen as that of greatest usefulness for standard supply Other magnifications are available (preferably by additional objectives) but are not required in routine work



If it is desired to study the endothelial cells the addition of objective 32 mm provides a magnification of x 28 which is suitable for this purpose

The instrument was made for me by Messrs C W Dixey and Son Ltd, of 15 Old Bond Street W 1, who were responsible for many devices for simplifying mechanical design and for the successful means of cooling the 100-watt lamp I am indebted to them for much painstaking work experiment and ingenuity As the complete instrument costs half the usual price it may permit of more extended use of this valuable means of ocular examination

MILK FOODS FOR BABIES

Allen and Hanburys Ltd have lately introduced two new milk foods Of these *Allenburys milk food half cream* is intended for babies who are found to suffer from fat indigestion or symptoms of ketosis if they are given a full cream food The other new preparation *Allenburys milk food with additional iron* contains 900 parts of iron per million as iron and ammonium citrate and is intended for use in the treatment of nutritional anaemia in infants It is prepared in accordance with the findings of the Medical Research Council's Special Report No 157 on that disease These two foods are issued in one size only at 2s a tin It may be added that the ordinary Allenburys foods Nos 1 2 and 3 contain approximately the proportion of iron normally present in human milk

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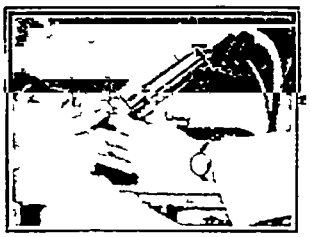

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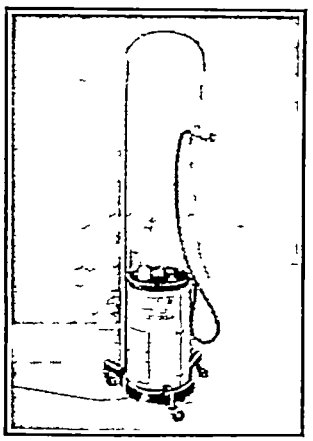

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— M.R.C.S., L.R.C.P., D.M.R.E.

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British Medical Journal

SATURDAY MAY 6th 1933

PROGRESS IN CARDIOLOGY

The tide of progress in medicine inevitably casts up relics of exploded fallacies and hypotheses that have outworn their usefulness In no field of medical science is this more evident than in cardiology where modern views and nomenclature are to some extent foreign to those whose ideas are founded upon the principles of fifty years ago Although a certain historical value attaches to old views and old terminology definite harm may accrue from their preservation Thus if a certain phrase implies the truth of conceptions which are now known to be false phraseology must be adjusted or progress must be delayed The ghosts of many erstwhile cardiological fancies have been laid it is hoped for all time by Sir Thomas Lewis in his recent exposition of *Diseases of the Heart* [1] He has further demonstrated the importance of clear thinking and true reasoning based upon sound physiological principles In this compact volume are laid down the fundamental principles of circulatory derangement as they are understood to-day In protest against the welter usual in textbooks of catchwords named signs and hypotheses he has kept his text almost completely devoid of names dates references and theories Moreover he has insisted upon the practice of cardiology at the bedside and the use of the eye and the hand in diagnosis

A mischievous and deeply rooted fallacy is the belief that strenuous exertion may damage a normal heart An individual undertakes some unwonted effort suffers thereafter from palpitation faintness and dyspnoea on comparatively trivial exertion and his heart is consequently labelled as dilated and therefore damaged The degree of neurosis and invalidism that may result from such an outlook must be considerable to say the least As Sir Thomas Lewis points out the first reaction of the normal heart to effort is a diminution in bulk while conclusive radiographic evidence to suggest that prolonged and strenuous exertion causes cardiac dilatation has never been produced Furthermore if the healthy cardiac muscle does dilate under extremely unfavourable conditions (as in bouts of paroxysmal tachycardia) the return to normal size at the end of the attack is almost immediate while the restoration of the usual effort tolerance is also very rapid Nor is there reason to suppose that the slight hypertrophy induced by long-continued strenuous occupation is anything but physiological The expression dilatation of the heart is therefore one that is used far too frequently and with undesirable results It is true that the migration of the apex beat into the axilla in paroxysmal tachycardia is the sign of an acute dilatation but this is a relatively uncommon happening Chronic dilatation is, in general the outcome of inefficient ventricular contractions brought about by myocardial malnutrition as in coronary sclerosis or chronic anaemia In other words the dilatation is an attempt to remedy the failing force of the heart beat Now it has in the past been assumed that dilatation is the primary injurious event and that hypertrophy or compensation must ensue to remedy the defect This as Sir Thomas Lewis points out is the soil in which the plant of 'compensation and decompensation took root These terms not only connote an illegitimate idea of remedial hypertrophy in valvular disease for example but also the erroneous conception of dilatation provoking hypertrophy It is for these reasons that ideas of failing or broken compensation should and will fall into disuse Decompensation is commonly used as synonymous with venous congestion but even here it is undesirable To quote from the work under review a plain observation is garnished with an assumption and served up in an unrecognizable form the diagnosis of venous congestion is within reach of all the diagnosis of broken compensation in its proper sense is within the reach of none Sir Thomas Lewis has provided English cardiologists and clinicians with a work for which many must have been waiting In the concluding chapter of his masterly review he has devised a system of prognostic groupings Under each of five categories he lists common cardiopathies in their various degrees of severity For example auricular fibrillation and moderate enlargement is held to warrant an expectation of three to six years while the patient suffering from angina pectoris unrelieved by rest may survive precariously up to one or occasionally two years This plan is clearly only a broad indication of prognosis and relative gravity of different conditions but as such it should be of great value to those who are capable of arriving at a fairly exact clinical assessment of the patient

A comparison of the seventh edition of *Clinical Disorders of the Heart Beat* [2] by Sir Thomas Lewis with the third edition reveals how little two decades have modified our clinical interpretation of cardiac irregularities In this branch of cardiology an important aspect which usually receives scant attention is that of alternation of the heart This phenomenon indicates that the heart muscle whether relatively healthy or obviously diseased is grappling with a burden almost too heavy for it to bear It is not generally recognized that in the majority of instances a succession of strong and weak beats is not discoverable at the pulse or on auscultation nor is it generally appreciated that intermittent or lesser degrees of alternation are of important and serious significance The author therefore holds that in circumstances in which alternation might be expected a search for it with the sphygmomanometer should be made if premature contractions are occurring the few succeeding beats should be scrutinized since alternation may first be manifested in them It may be

[1] *Diseases of the Heart* By Sir Thomas Lewis C B E F R S M D D Sc LL D F R C P London Macmillan and Co Ltd 1933 (12s 6d net)

[2] *Clinical Disorders of the Heart Beat* By Sir Thomas Lewis Seventh edition London Shaw and Sons Ltd. 1933 (6s 6d net.)

that the lesser grades of this arrhythmia bear a less ominous significance than has hitherto been believed, but with few exceptions the established condition presages early and sometimes sudden death It is usual to decry the application of animal experiment to clinical medicine, and vice versa, but it may be mentioned that alternation may be induced in the isolated heart by depriving it of sugar, while the administration of glucose to patients showing alternation has sometimes abolished the irregularity

There comes a time in the evolution of every branch of medicine when it seems that finality has been reached An authoritative voice proclaimed not long ago that surgery had reached its zenith , but a glance at the earliest results of the surgery of the sympathetic nervous system is sufficient to suggest the vast curative and prophylactic possibilities in this field yet unexplored The future of cardiology is a diverting speculation There can be no doubt that prophylaxis against rheumatic infection and coronary sclerosis are the most urgent needs and the most promising fields of research at the present time For the prevention of rheumatic infection and consequent crippling of the heart we must look to the bacteriologist and immunologist The day when the normal and pathological metabolism of the heart will be fully understood appears yet far distant, but the prevention of degenerative disease in the coronary arteries and myocardium undoubtedly awaits the solution of these problems

MILK AND PASTEURIZATION

At a time when the lay public, and even many members of the medical profession, are so woefully misinformed as to the effect of pasteurization on milk, a report by Drs J D Stirling and J H Blackwood of the Hannah Dairy Research Institute[1] is peculiarly welcome The director of the institute, Dr Norman C Wright, lays emphasis in his preface on the fact that the report is a review of *evidence*, not a summary of *opinions* It is concerned mainly with the changes in the composition of milk brought about by pasteurization, and with a study of the possible diminution in the nutritive value of milk submitted to this process Before embarking on their task the authors make it clear that they are referring to low-temperature pasteurization by the holder process—namely, the maintenance of milk in a closed container at 145° to 150° F for thirty minutes with subsequent cooling, and not to flash pasteurization, boiling, or sterilization

Briefly, the changes undergone by milk during, or as the result of, the process of pasteurization may be summarized as follows The ability of the fat globules to separate out is impaired, so that a slight diminution occurs in the cream line , about 5 per cent of the albumin is coagulated , there is an alteration in the equilibrium between the calcium and the phosphate ions, a diminution of about 5 per cent occurring in the soluble fractions , the sensitivity of calcium caseinate to rennin coagulation is affected, the coagulation time being shorter in freshly pasteurized than in raw milk, and longer in milk that has been pasteurized some hours previously , the rennin coagulum in pasteurized is of looser texture than that in raw milk , vitamin C is partly destroyed, the degree of destruction being estimated, even under favourable conditions, as about 50 per cent , the pathogenic organisms that may be present, along with a variable proportion of non pathogenic bacteria, are killed Suggestions that the effect of heat on enzymes, bactericidal property, antibodies, and lactic acid bacteria of milk should be taken into account have been dismissed as irrelevant There is no evidence that milk enzymes are of any importance in nutrition, it being highly probable that they are destroyed in the gastro-intestinal tract The bactericidal property of fresh milk is lost long before the milk has reached the consumer Antibodies are present in milk only in the colostral period, and the idea that pasteurization of bulk milk may destroy such bodies is based on a misapprehension There is no foundation for the suggestion that pasteurization destroys all the lactic acid bacteria and lays the milk open to subsequent putrefaction , some of the lactic bacteria survive, and pasteurized milk sours in the same way as a good quality fresh milk

With regard to the effect of feeding pasteurized milk, it is pointed out in the report that, while the risk of milk-borne disease is diminished, the only positive disease that has been shown to follow its use in human infants is scurvy Fresh milk is at the best a poor source of supply for vitamin C, and the partial destruction of this factor that occurs during pasteurization renders it even less satisfactory The exact effect of heat on vitamin D is not known with certainty, but since fresh cow's milk has an antirachitic potency only 1/500 of that of cod-liver oil, it is clearly dangerous to rely on milk for the proper development of the bones and teeth of the growing child After a careful review of the most important feeding experiments carried out on children and on animals, the authors come to the following conclusion "There are, therefore, strong grounds for the belief that infants can satisfy all their requirements on diets of adequate amounts of pasteurized milk provided that extra vitamin D, and, of course, vitamin C, are added to the diet" As regards older children they say "There do not appear to be any good grounds for the belief that pasteurized milk is a less valuable component of the diet than raw milk for children who satisfy the bulk of their nutritive requirements from sources other than milk" The bacteriological and epidemiological evidence is overwhelmingly in favour of the value of pasteurization of the liquid milk supply, and even the most rigid advocates of raw milk cannot dispute this evidence without gross perversion of the facts There has, however, been a serious doubt in the minds of some workers that

[1] *The Nutritive Properties of Milk in Relation to Pasteurisation* By J D Stirling, B Sc Ph D and J H Blackwood B Sc Ph D The Hannah Dairy Research Institute Bulletin 5 Glasgow Aird and Coghill Ltd 1933 (4s net)

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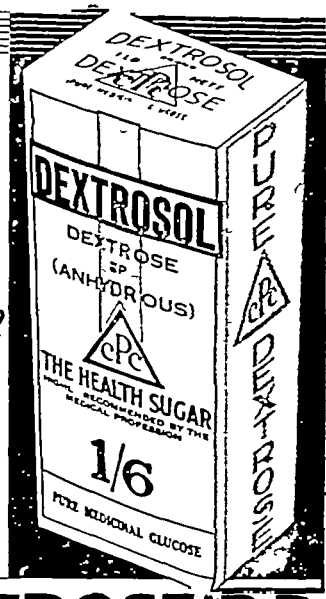

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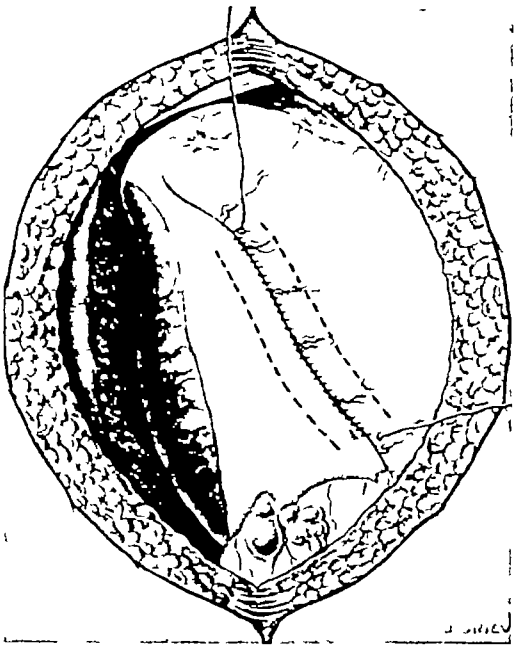


FIG 1.—Gastro-duodenostomy Duodenum mobilized. First row of sutures inserted. Dotted lines indicate the position of openings in stomach and duodenum

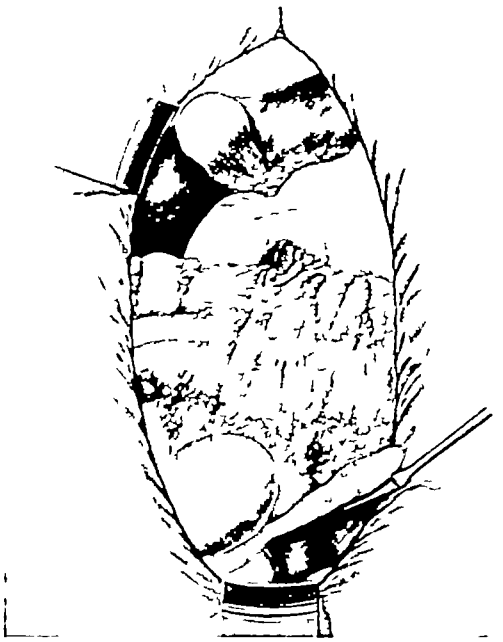


FIG 2.—The abdominal triad Chronic cholecystitis with gall stones, stenosing duodenal ulcer and subacute appendicitis.

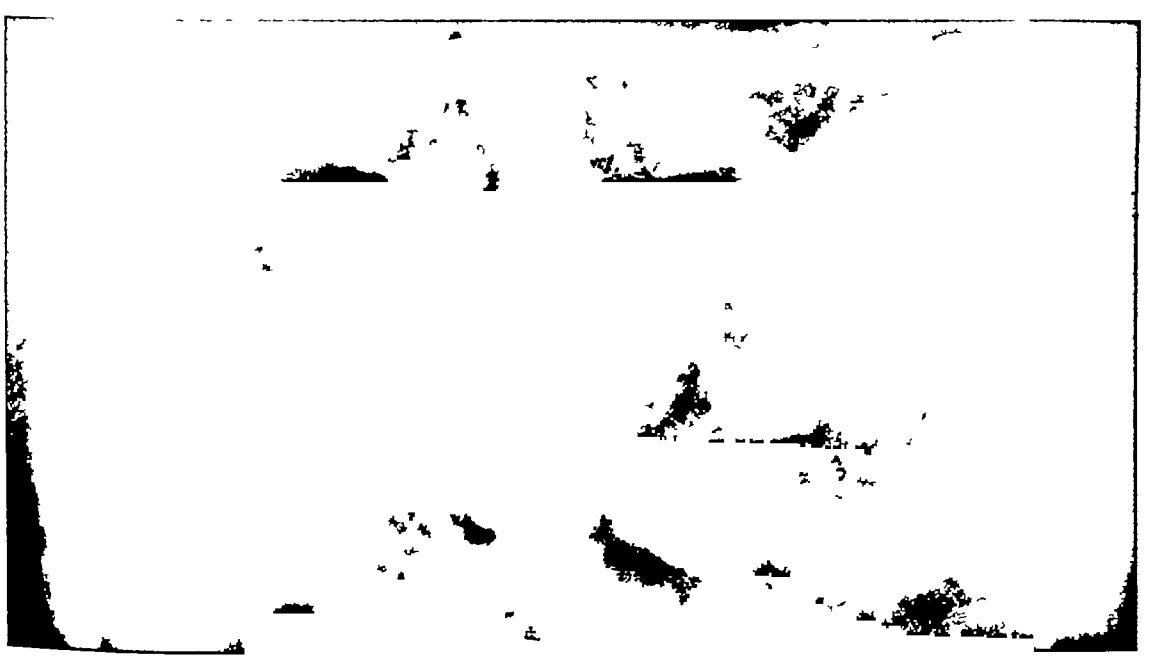
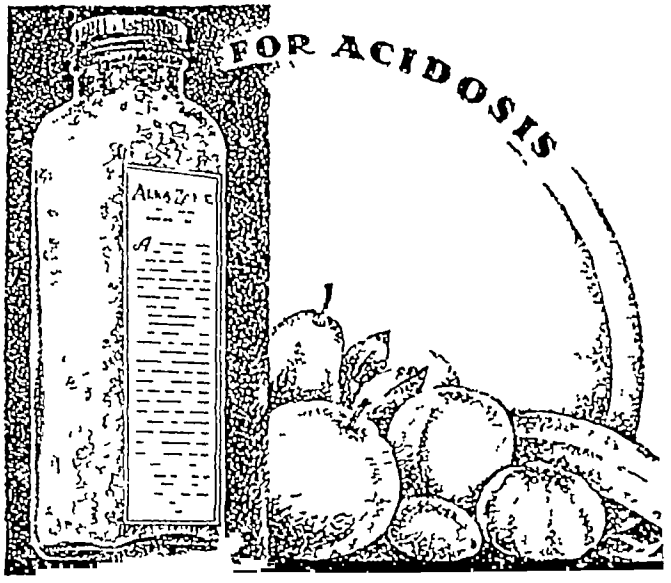


FIG 3.—Gross duodenal ileus associated with stomal ulcer following gastro-enterostomy



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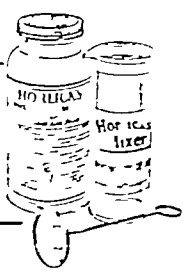


BARBARA WOODHEAD PEDUNCULATED THROMBUS OCCLUDING THE LEFT AURICLE

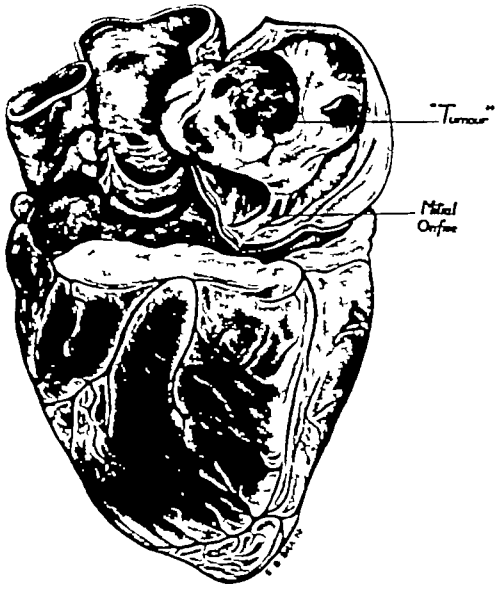


FIG 1.—A large pedunculated thrombus filling the left auricle.

FIG 2.—Fibroblasts resembling stellate cells of a myxoma.

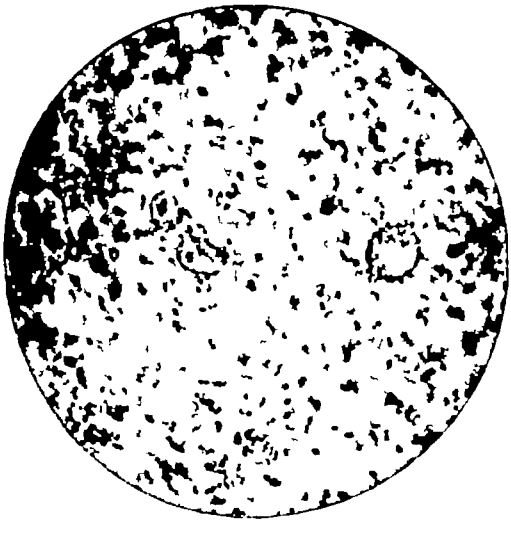


FIG 3.—Low power Thin walled newly formed blood vessels

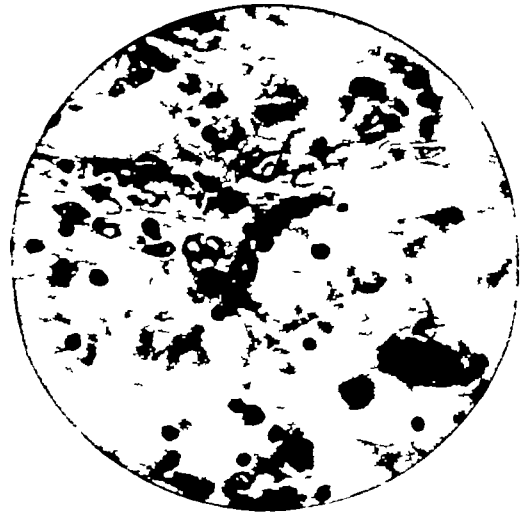
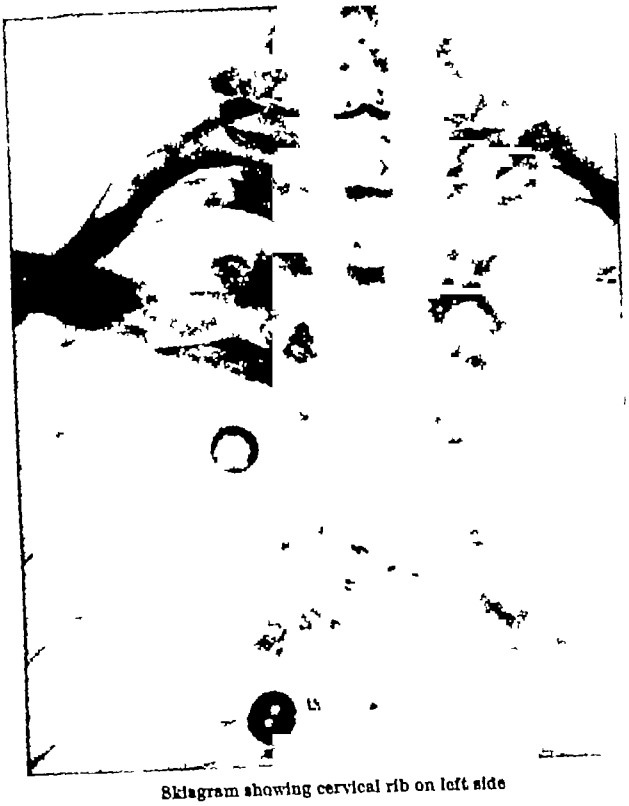


FIG 4.—High power Thin walled blood vessels.

R L NEWELL CERVICAL RIB WITH VASCULAR COMPLICATIONS



Skiagram showing cervical rib on left side

DONALD MACLEOD RETROPERITONEAL SARCOMA

Photograph of tumour, with normal kidney beside it for comparison.

A R FISHER FRACTURE SEPARATION OF EPIPHYSIS OF LESSER TROCHANTER OF FEMUR

FIG 1.—Skiagram, August 18th 1932.

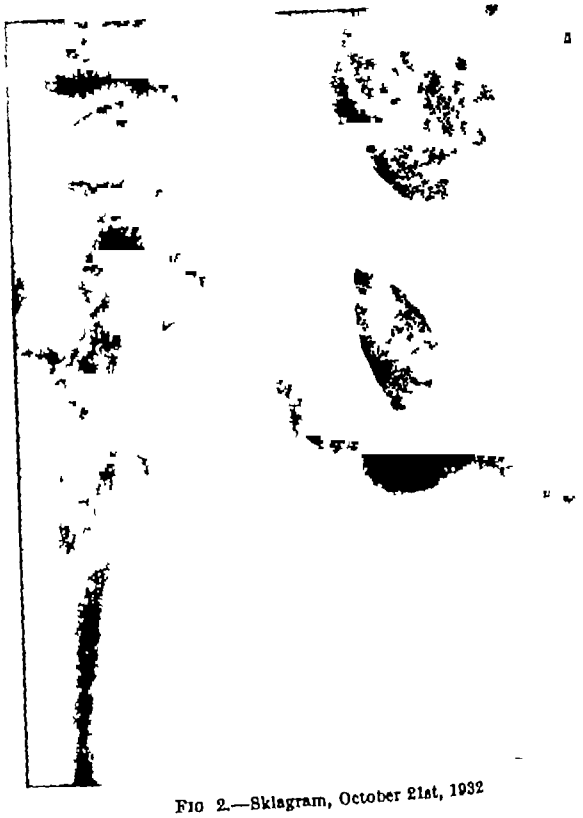


FIG 2.—Skiagram, October 21st, 1932

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pasteurization might bring about a significant decrease in the essential nutritive properties of milk The conclusions reached in this report are of particular interest in showing that no diminution in nutritive value occurs as the result of pasteurization that cannot easily be remedied by the simple addition of orange or lemon juice and cod-liver oil

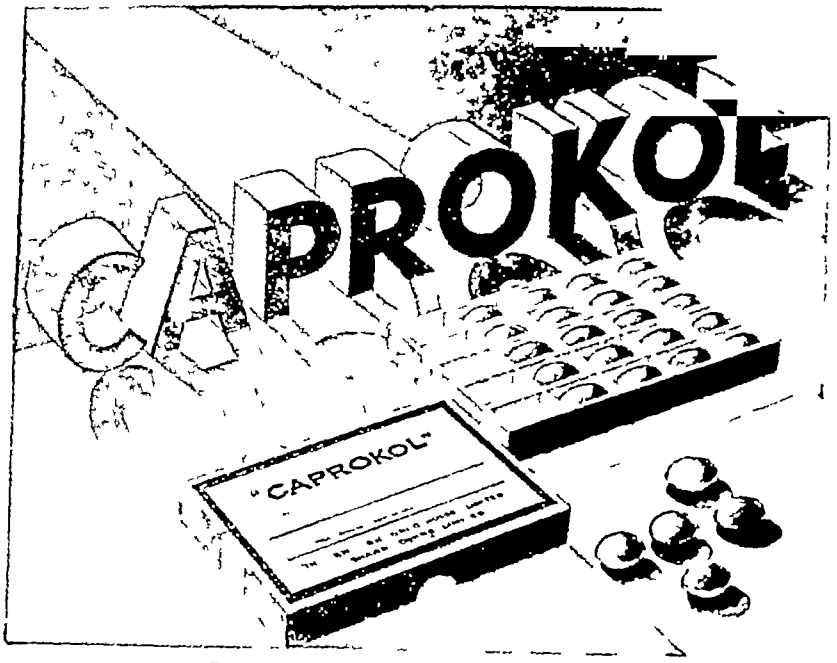
CLEARING HOUSES OF SCIENCE

Readers will recall that during the Imperial Agricultural Research Conference in 1927 seven new imperial bureaux were established as clearing-houses of scientific information throughout the British Empire These seven bureaux were organized on lines somewhat similar to the three imperial bureaux then in existence dealing with entomology mycology, and tropical diseases and like the older establishments most have begun the production of abstracting journals Of these newer journals two are especially important to medical sciences—namely those dealing with parasitology and animal health—while two others (animal nutrition and animal genetics) deal with sciences which are also of fundamental interest to human medicine The parasitology bureau under the energetic directorship of Professor Leiper, in addition to publishing a series of monographs on parasites important to animals (and to a lesser degree to man) is responsible for the material contained in *Helminthological Abstracts*, a journal published five times yearly at a cost of 16s 6d post free This journal abstracts every paper on helminthology which appears in every publication and language under the headings of journals and, besides giving the worker adequate summaries of all that is taking place in the science furnishes libraries with a completely annotated yearly bibliography of the parasitic worms Its London office is at the Tropical School, and its low price makes it available to everyone It is already proving of first-rate importance to every laboratory studying helminthology throughout the world—especially those situated at some distance from library centres The Imperial Bureau of Animal Health (at Weybridge Surrey) is also issuing a monthly abstracting journal—*The Veterinary Bulletin*—at an annual cost of £2 This is less specialized than the helminthological bulletin but is broader in its outlook dealing with all the various aspects of veterinary medicine and containing much of value to both human and comparative medicine as well as to public health This bureau at Weybridge is also proposing to issue in quarterly parts an *Index Veterinarius* running to 1 600 mimeographed pages with about 10 000 references yearly These would be adequately cross-indexed but would of course be references only The Bureau of Genetics (under Professor Crew) and the Bureau of Animal Nutrition (under Dr Orr) similarly issue reviews and bulletins dealing with their interests These bureaux are essentially imperial in their outlook Their governing committee has representatives from the home countries the Dominions and the Colonies Their cost is out of all proportion to the valuable services they are rendering to agriculture and other biological sciences throughout the British Empire and we trust that the present economic crisis will not be allowed to interfere with their successful development

THE ECONOMIC ASPECT OF LEPROSY

Special attention is drawn in the report for 1932 of the British Empire Leprosy Association [1] to the economic problem created by this disease and consideration is given to information received from British Guiana where schemes are being initiated to put the coping-stone on an already efficient system of prophylaxis Dr Rose medical superintendent of the leprosy hospital in that colony estimates that of the 360 000 population 560 persons are alive who are or were at some time suffering from this infection while fifty-five young persons of all races are freshly infected each year two-thirds of these new patients being males Before the discovery of the hydnocarpus oil treatment the colony had to spend about £10 000 a year on the care of these patients with special regard to their segregation so as to minimize the risk of infecting others Assessing the value to the community of these 560 potential producers at an average of two shillings a day—the wage of an ordinary labourer there—the financial loss to the community by their withdrawal from it would amount to about £20 000 and the total reach the figure of £30 000 a sum which is almost half the amount spent by the Government of British Guiana on the education of children or one-quarter of the cost of the whole medical department in a year On this basis it is possible to conjecture the immensity of the financial and economic loss sustained in other parts of the Empire such as India where the population is vastly larger The British Empire Leprosy Association was brought into being some nine years ago to stimulate and assist the various Governments to attack this problem and from its own small resources has continued to finance local endeavour wherever effective measures of control are contemplated or in operation For example a doctor in Africa cabled to England for a supply of hydnocarpus oil for injection As soon as it became known that he had the medicine he received ten patients in a week In four weeks a hundred came to him and in the next four weeks five hundred A colony has now been established with more than a thousand patients Such occurrences are said to be typical The further that investigations are pushed the more prevalent does leprosy appear to be in the tropical parts of the Empire In order to deal with this scourge which is beyond the power of unaided Governments to combat an income of at least £15 000 a year is required The work has been handicapped by the fact that little support can at present be given by Governments to leprosy relief activities but the Leprosy Association contrived to supply about £1 460 in grants during 1932 The sum allocated to the purchase of drugs amounted to £886 in comparison with £801 so provided in the previous year and £632 in 1930 An appeal is therefore made for more generous support for this work Other information supplied in this annual report relates to the work in progress in various parts of the Empire including India where there are seventeen branches of the Leprosy Association A survey is proceeding in Southern Rhodesia in one area the incidence of the disease was estimated as 5 8 per 1 000 population and in another as 1 per 1 000 In Northern Rhodesia lack of money has hindered further extension of the campaign but there are six centres for treatment and two

[1] To be obtained from the Association 29 Dorset Square N W 1



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colonies In Nigeria four settlements are being maintained by the Government, twenty by native administrations, and seven by religious missions, and three large new settlements are under construction An appendix to the report reproduces an appeal letter by the wife of the Governor of British Guiana for funds to promote a scheme for protecting children in that colony from leprosy The establishment of a home for the children of leprous parents undergoing treatment should ensure progressive decline in the incidence of a disease now fully recognized as preventable Indeed, at the annual meeting in London on April 20th of the Leprosy Association Sir Leonard Rogers, its honorary medical secretary, insisted that the disease could be greatly reduced in a decade by examining the house contacts of discovered infectious cases, and instituting treatment with chaulmoogra and hydnocarpus oils Proof of this had been recently obtained, he added, in the Island of Nauru and in the Southern Sudan Whereas in India ten years ago only 7,000 leper patients were being cared for, 50,000 were now being treated in clinics as outpatients in the Central Provinces and Madras alone, at a total cost in the latter province of 4s a year Sir Leonard Rogers stated that with an annual income of £5,000 to £7,000 the British Empire Leprosy Association had supplied half a million doses of the new therapeutic preparations each year, had published the well-known *Leprosy Review*, had distributed abstracts of literature on the disease, and had provided the seeds from which several thousand hydnocarpus trees were now flourishing from the West Indies and Africa to Fiji The campaign of the association along these lines, he concluded, could be doubled if a few thousand pounds of additional income were raised

"LADY MARY" AND MEDICINE

Dr Robert Hutchison has contributed to the *London Hospital Gazette* for March an interesting paper on "Lady Mary Wortley Montagu and Medicine," in which he pleasantly comments on the relations of that gifted but rather eccentric woman with our profession as a whole and with certain particular members of it As is well known Lady Mary went with her husband to reside at Adrianople when he was ambassador, and it was there that she became aware of the practice of inoculation for small-pox, which she introduced into Western Europe The first British subject to be so treated was her infant son in 1717, who was to have such an eccentric career in after years Eccentricity was not surprising in the child of a woman so unusual as Lady Mary and a man so queer as Edward Wortley Montagu, who became a notable miser Horace Walpole has described the unusual habits (in both senses of the word) of Lady Mary in her later days, and she herself has characterized her son as, among other things, "an excellent linguist and a thorough liar" As Dr Hutchison shows, Lady Mary was not sparing in her condemnation of doctors in general, although she made exceptions of Sir Samuel Garth and of Mr Maitland, the physician to the Embassy at Constantinople, while a certain Italian practitioner seems to have made a conquest over her critical, rebellious spirit She was a literary lady and an *esprit fort*, but she is not to be confused with a later celebrated Mrs Montagu, generally known under the sobriquet of "Bluestocking," although she was not the first or only woman to be so distinguished Dr Hutchison concludes his paper by the reflection that Lady Mary would have made a great woman doctor No doubt she had many qualities which would have served her in such a calling, but we question whether she would ever have found her stock of patience adequate for medical practice She was intolerant of what she considered to be folly

THE OSTEOPATHS BILL AGAIN

In February, 1931, a Bill to regulate the practice of osteopathy and to prescribe the qualifications of osteopathic practitioners was introduced by a group of private M P 's and later withdrawn As pointed out in our issue of March 28th of that year (p 548) this attempt to get osteopathy recognized by law was framed on the model of the Dentists Act, the Midwives Acts, and the Venereal Diseases Act, as opposed to that of the Medical Acts—that is to say, it sought not only to regulate the assumption of titles, the holding out of practitioners as duly qualified, and the recovery of fees, but to prohibit practice of the cult or specialty by persons not on the proposed register Indeed, it went a good deal further than that in a number of ways which it would be tedious now to recapitulate Not the least striking feature of a remarkable Bill was that if enacted without safeguarding clauses it would have deprived duly qualified medical practitioners of the right to undertake work in any of the multifarious subjects included under "the practice of osteopathy" as defined in Section 2 (2) and Schedule 2 Now, two years later, an identical Bill has been introduced again in the House of Commons, and it is backed by an admiral, three knights, a colonel and a captain, and five other members No doubt the Parliamentary Medical Committee has its eye on this bold company, and the Minister of Health will have something cogent and well informed to say if their little Bill comes to second reading

"HANDEDNESS"

Recent correspondence in the *Times* upon the effects of teaching left-handed children to use their right hands lends special interest to the research reported by Charles A Selzer under the title of *Lateral Dominance and Visual Fusion* [1] A number of children who had difficulty in reading were referred to the Harvard Laboratory of Educational Psychology for investigation They were all school children of average or superior intelligence, who, despite the efforts of teachers and parents, were having serious trouble in learning to read Some were "mirror readers," others reversed letters or omitted or added them The mirror readers were usually found to be either left-dominant or equally dominant for both right and left hands Those who made mistakes with letters were not left-handed, so another cause had to be sought for It occurred to the author that ocular muscle imbalance or latent squint might possibly be a cause of the mistakes, owing to

[1] *Lateral Dominance and Visual Fusion* By C Selzer No 12 Harvard Monographs in Education Cambridge Mass Harvard University Press 1933 (6s net)

a difficulty of binocular fixation in reading On examination it was found that of thirty-five non-readers no fewer than thirty-three showed defects of lateral imbalance whereas an unselected group of 100 school children showed a very small percentage of imbalance Use of prismatic glasses in some cases of non readers was followed by distinct improvement and dislike of reading was overcome Four cases of pronounced stammering were also examined None of these showed left-dominance by either eye or hand tests Each however showed the same heterophoric condition as the non-readers Other findings cast doubt upon the theory that stammering is due solely to transfer of handedness The fact that many persons have been transferred from left to right hand without speech disturbance tends to indicate that the transfer without accompanying conditions does not explain the phenomenon The evil effects of a transfer of handedness tend to be even more discredited when it is found by means of the manoptoscope dynamometer and other tests that nearly half the human race show some left-dominant tendencies The author thinks that if the left-handed child were taught in early childhood to use the right hand in all its performances there would be no bad effects but to permit it to continue its left-handed tendencies in other performances and then require it to write with the right hand seems neither logical nor fair to the child If a glove were placed on the left hand of a sinistral child during the time it acquires handedness it is quite likely that right handedness would develop without a disturbance This monograph gives an excellent account of previous investigations into the subject and a useful bibliography while the investigations undertaken by Mr Selzer in his particular research are set out in ample detail

TYPHOID FEVER IN 1931 2

The January–February issue of the Epidemiological Report of the Health Section of the League of Nations contains a survey of the incidence and mortality of typhoid fever throughout the world during the last two years The lowest typhoid death rates per 100 000 population were found in Germany England Scotland Norway New Zealand Holland Sweden and Switzerland where the rate was 1 per 100 000 or less The next group where the death rate fluctuated between 1 and 2 9 comprised Australia Austria Denmark the Irish Free State Northern Ireland and the Union of South Africa Then came Belgium France Canada and the United States with a death rate varying from 3 to 4 9 In Canada Quebec had the highest mortality and in the United States the Southern States although considerable improvement has recently taken place in both countries Next to Canada and the United States come Czechoslovakia Poland and Uruguay which had a typhoid mortality of between 5 and 9 The countries in which the death rate is between 10 and 14 9 per 100 000 are Chili Spain the Straits Settlements and Japan in all these countries however there has been a fall in recent years The same remark applies to Greece Hungary Italy and Portugal where the typhoid mortality is still over 15 per 100 000 In Greece in particular there has been a considerable reduction in the typhoid mortality since the epidemic coinciding with the arrival of refugees from Asia Minor in 1923 Generally speaking 1931 was a relatively good year as regards typhoid fever in Europe whereas in 1932 a remarkable increase occurred in many countries particularly Germany England the Irish Free State France Italy Lithuania Norway Holland Sweden and Czechoslovakia The increase however was highest in Bulgaria Hungary Malta Poland Rumania and Jugoslavia There was in fact a sort of typhoid pandemic in the Balkan States and Eastern Europe at the end of last year whereas the European territories of Soviet Russia were not affected In extra-European countries the towns of Nagasaki Alexandria, and Teheran considerably exceeded their average mortality of recent years owing to the occurrence of epidemics in 1931 and 1932

THE ROYAL ACADEMY

Except in military circles The R A stands for one thing only—the annual summer exhibition of the Royal Academy of Arts at Burlington House in London The 165th of the series opened on Monday and the genuine art critics (how few they are!) and the press writers (whose name is legion) have already pronounced judgement in accordance with their own views or with what they imagine to be the tastes of their public A rapid tour of the galleries gives the impression that the hanging committee has performed its difficult task with an open mind towards contemporary art The old right wing and centre are adequately represented while moderate specimens of left-wing practice by artists who have condescended to obey the elementary rules will be found in every room It would be impertinent for us to say more about the way in which the exhibits have been chosen or on their merit as works of art but they are certainly well displayed with a minimum of crowding From the narrow professional point of view this year's Academy has not much medical interest There is a very competent portrait in oils of the Master of the Rotunda Hospital Dublin in aseptic operating kit by John Keating and a smaller portrait by Sir John Lavery R A of Dr Max Porges of Marienbad A stickit doctor —Mr W Somerset Maugham—appears in two interesting pictures (painted twenty-one years apart) by Gerald Kelly R A The Architectural Room has four or five drawings of hospitals and medical institutions of various kinds and to make a short story longer we might add that three of the principal figures at the opening of the B M A House in 1925 are represented among the sculptures in the Lecture Room—H M the King the late Archbishop of Canterbury and Sir Edwin Lutyens

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The title of Lord Horder's Oration at the annual general meeting of the Medical Society of London on Monday May 8th at 8 30 p m is New Treatments for Old

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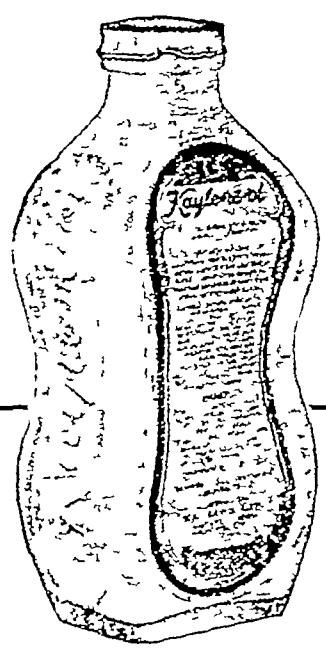

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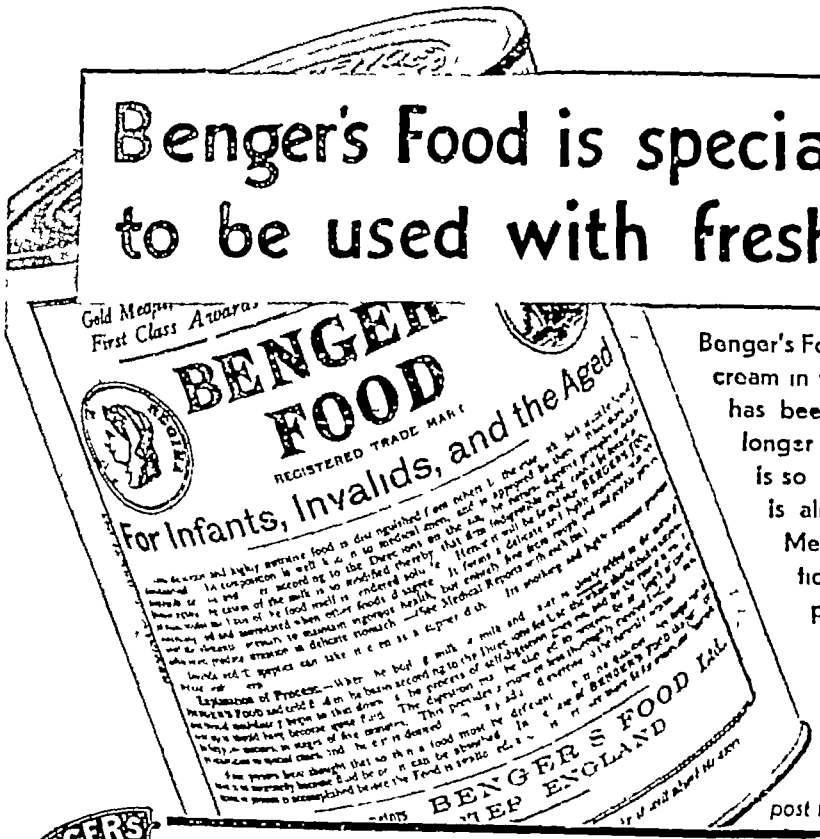

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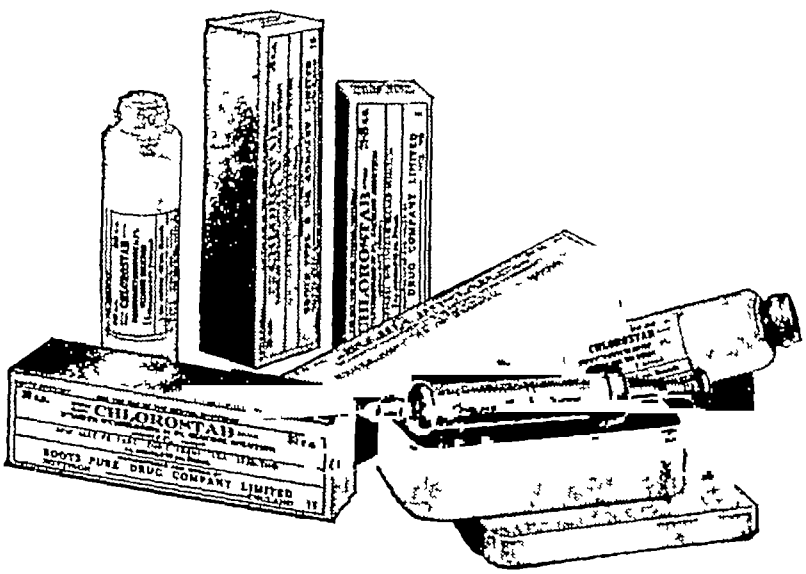

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THE BRITISH HEALTH RESORTS

CONFERENCE AT LEAMINGTON

A letter in last week's *Journal*, signed by Lord Meston and three medical men who are actively concerned with the movement drew attention to the work of the British Health Resorts Association, and insisted that for success two things are needed—the interest and co operation of the medical profession and financial support by local authorities It is becoming more widely recognized that our home resorts, if they are to compete with the best foreign stations, must have a firm medical basis for their claims and that the amenities form part of a "cure" The principal inland spas are well aware of this and through their own Federation have identified themselves with the forward movement It remains for every seaside watering-place that is something more than a mere pleasure-ground to contribute to the funds of an organization which can give expert guidance in the development of natural resources and make known to the medical profession the peculiar advantages of each resort for different types of patient

A further conference, more strictly medical in scope than its predecessors was held last week end at Royal Leamington Spa by invitation of the mayor and corporation On the evening of Friday, April 28th, the members were entertained at a reception in the Pump Room by the mayor, Dr W EDMUND JONES, and were afterwards conducted round the bathing establishment, which in recent years has been brought thoroughly up to date On the following evening there was a large dinner party at the Regent Hotel, the speakers including Dr Edmund Jones, Dr W G Willoughby Dr Ernest Young, and Dr Alfred Cox, and on Sunday the visitors drove to Stratford on Avon, where they were met by Dr D S Murray and went over Shakespeare's birthplace and the Memorial Theatre

HOME SPAS THE LONG AND THE SHORT VIEW

Both business sessions were held on Saturday in the Town Hall under the chairmanship of the mayor, who welcomed his many colleagues from London and elsewhere, and expressed the corporation's pleasure at this medical visit to their beautiful garden town The proceedings began with a statement of the objects and work of the British Health Resorts Association by Mr E EMRYS-JONES Ph D, a member of the council The bulk of the general public, he said, were still largely ignorant of the range and possibilities of hydrotherapy and the average medical practitioner was not much better acquainted with the subject Their association originated in the fertile brain of Colonel R H Elliot, who was convinced that thousands of people went abroad every year for their health either because they were ill advised or because they did not know that the benefits they went to seek could be obtained quite as well in this country The first thing was to establish an information bureau to supply doctors with accurate knowledge about British resorts The guarantee behind the information given was the names of those who formed the Medical Advisory Committee To anyone who objected that their association was largely a medical body and could not do much to advertise watering places he would point out that there could be no better advertisement for any place than the instructed good will of the 40 000 members of the medical profession in this country It was a stroke of great good fortune that Dr Alfred Cox who had done so much to make the British Medical Association what it was had consented to become their secretary Mr Emrys Jones ended with a well-timed homily on long and short views The chaos in currency exchanges and the fall in the value of the £ abroad had led thousands of people who normally went to foreign spas to give British spas a trial while for the same reasons foreigners had been taking the opportunity to visit this country, here was a fine chance for a prudent short view which took in the possibilities of a passing situation The long view was this machinery and the great development in production were going to give people more leisure, that leisure would be spent away from where the workers performed their toil—in places where they could gain a sense of ease and comfort amid beautiful surroundings How many health resorts had grasped what this would mean to them and how it should be met?

INVALIDS FROM THE TROPICS

Lieut.-Colonel WILLIAM BYAM, opening a discussion on the treatment at spas of invalids from the Tropics said that Britain controlled more of the Tropics than any other nation, and accordingly more invalids from tropical countries came here than elsewhere, hence the facilities for their diagnosis and treatment should be the best No country could boast so experienced a personnel as England Here was an opportunity for the home spas, but it must be borne in mind that skilled guidance was needed for invalids and health seekers from hot climates Some degree of differentiation was necessary All spas should not claim to cater for the tropical invalid Dr PHILIP MANSON-BAHR spoke of the need for looking at the matter from the point of view of the patient, who, rightly or wrongly, thought of a spa as the antithesis of his dreams of home Every case from the Tropics should be thoroughly examined by an expert before going to any watering-place Harm was done by indiscriminate routine 'cures" at Continental spas on the way home The average spa treatment, as he understood it, was quite unsuitable for the acute stages of malaria, amoebic dysentery, sprue, and many parasitic infestations of the intestine There was, however, ample scope for spa treatment in the convalescent stages of these diseases when the main infection had been eradicated It seemed to Dr Manson Bahr that Leamington was peculiarly fitted to meet the requirements he had outlined for cases that would benefit by spa treatment Dr N HAMILTON FAIRLEY said that the fault would be ours if we did not organize our unique national advantages for the benefit of invalids from the Tropics We had the experts, the societies, the laboratories, schools, and museums, all these resources should be called in aid for improving the spa treatment of this class of patient Diagnosis must come first, and this needed team work Dr V S HODSON said that as he had spent twenty two years in tropical and sub tropical countries he could enter into Dr Manson Bahr's point of view Life in the Tropics to day was nothing like as harsh for Europeans as it was, but it had a deleterious effect on resistance On returning to Europe rechlorination was needed The keystone of cure in such cases was elimination, a process enhanced by judicious spa treatment A point made by each of these four speakers was the frequency of multiple infections in the same patient from the Tropics

Dr DOUGLAS STANLEY pointed to the neglect of dietetics at home resorts a careful regimen should be prescribed for every patient Dr C B HEALD deprecated haphazard electrotherapeutics Dr FRANK CLAYTON from personal experience at Leamington, noted how helpful were patients from the Tropics in the investigation and treatment of their disorders, and they expected thoroughness in return Casual diagnosis and prescription of balneotherapy was not good enough in these days Dr WORTHINGTON confirmed the view that patients suffering from the after effects of tropical disease and from indeterminate ill health were particularly amenable to spa treatment

SPA TREATMENT OF CIRCULATORY DISEASES

The afternoon session was given up to a discussion on the treatment of circulatory diseases at spas and its future development in this country, opened by Lord HORDER He grouped his remarks under three heads (1) the material—that is, the type of case, (2) indication for treatment, and (3) the facilities now available, and how these could be improved and extended The cases unsuitable to be transferred to spas were patients in the acute stage of heart disease or with acute toxic conditions also cases of severe congestive failure and of anginoid

disturbances Suitable cases were the convalescent patient whose circulatory system showed a lag in recovery and patients with what for convenience might be referred to as tired heart toxic heart and irritable heart. Besides these functional derangements there were cases of organic heart disease which benefited at spas Arteriosclerosis and chronic subacute septic endocarditis (both of which seemed to be more prevalent nowadays) might furnish appropriate material for general treatment at a spa In all cases of circulatory disease Lord Horder said the first indication was organized rest What rest meant in a heart case was not generally appreciated mental and emotional as well as physical unrest must be abolished Later would come graduated exercise—rest being a means to health not health itself It was not so much any special virtue in a mineral spring that was needed in these cases as a comprehensive mode of treatment there must be the maximum of care skill and team work on the spot and the importance of the doctor s personal influence on heart cases should never be overlooked Since there were patients with circulatory disease whom spas helped very much why were the facilities for such cases so meagre in this country? How had Nauheim with no particular name on account of its water gained a reputation for treating diseases of the heart and circulation? Lord Horder s answer was that the chronic heart invalid was specially catered for at Nauheim the physician knew the sort of treatment his patient would get there and who would apply it Were those British spas which had the same facilities prepared to give all that Nauheim gave and in the same spirit? This would mean venturing a little way along the lines of specialization It was really an anomaly that British medicine which had led the world in the study and diagnosis of cardiovascular disease during the past twenty five years should allow its heart patients to go to foreign spas

Dr H E RHODES explained the facilities available at Leamington for treatment of such cases He made a special appeal to practitioners sending patients to spas to ensure beforehand that sources of septic infection were removed it was most discouraging to the spa doctor to find a mouthful of evil teeth or septic tonsils which it was impossible to attend to within the limited time at disposal Thus the patient returned home little better for balneotherapy and the spa was discredited Dr J STRICKLAND GOODALL saw no reason why British spas should not be able to give all the treatments given on the Continent but inquiry would soon show why English people went abroad for cures The success of spa treatment depended on a great deal more than mineral waters and baths He suggested that the political circumstances in Germany to-day made this a good opportunity for providing accommodation at British spas for orthodox Jews who had hitherto gone to Nauheim

ROCKEFELLER MEDICAL FELLOWSHIPS

The Rockefeller Medical Fellowships for the academic year 1933–4 will shortly be awarded by the Medical Research Council and applications should be lodged with the Council not later than June 1st These fellowships are provided from a fund with which the Medical Research Council has been entrusted by the Rockefeller Foundation Fellowships are awarded by the Council in accordance with the desire of the Foundation to graduates who have had some training in research work in the primary sciences of medicine or in clinical medicine or surgery and are likely to profit by a period of work at a university or other chosen centre in the United States before taking up positions for higher teaching or research in the British Isles In special circumstances the fellowships may be tenable at centres of research not in America

A fellowship held in America will have the value of not less than £350 a year for a single Fellow with extra allowance for a married Fellow payable monthly in advance Travelling expenses and some other allowances will be paid in addition Full particulars and forms of application are obtainable from the Secretary Medical Research Council 38 Old Queen Street Westminster S W 1

INSTITUTE OF MEDICAL PSYCHOLOGY

ANNUAL MEETING AND LUNCHEON

The annual meeting of the Institute of Medical Psychology (the Tavistock Clinic) was held at the Wharncliffe Rooms Marylebone Road on May 1st

In taking the chair at the preliminary meeting Sir HENRY BRACKENBURY said that years ago it was not recognized in medical education and experience how far the disturbances of the mental faculties entered into physical illness To-day the attitude of the medical profession and of the public towards mental disorders in their earliest stages was such that it was possible to take a much more hopeful view of preventing these insanities and of making much more comfortable and useful in life those who were beginning to suffer from emotional or mental disorder That was the work which thirteen years ago the Tavistock Clinic set out to do It had now entered into excellent premises in Torrington Place it had a splendid staff of medical men and others a superabundance of material and unfortunately a very long waiting list A waiting list was even more to be regretted with such an institution than with an ordinary hospital because these cases required skilled treatment at a very early stage The only thing necessary for complete success of the Institute was money which was hard to come by and indeed much more generous financial support was essential if this magnificent work was to continue

Mr H M ABRAHAMS chairman of the Finance Committee followed with some account of the financial position mentioning that last year the income fell short of expenditure by some £1 300 and in addition there was the heavy outlay incurred in connexion with the new building To run the Institute efficiently between £5 000 and £6 000 a year was needed

Dr H CRICHTON MILLER the honorary director said that work such as the Institute was doing was likely to be an increasingly essential factor if civilization was going to hold out That might sound rather a pretentious claim but he did not think it was so altogether because civilization was rather a sick man just at present and unless some better methods could be devised it was not unlikely to crash somehow or other From all sides ominous warnings were heard and in the whole of that situation of a creaking civilization the work done under the aegis of medical psychology had a definite place In a situation where the creative was killed by the repetitive (which meant more for human discord and dissatisfaction than was commonly supposed) where the craftsman had been replaced by the robot where the personal had been overwhelmed by the impersonal where the instincts of men and women especially the procreative were interfered with by the exigencies of society and especially of economics there was surely need for the witness and the work of an Institute of Medical Psychology The community had had offered to it in generous measure every form of medical and surgical help for physical ills but that was not all that it required We were living in an age in which the function that psychotherapy in the broadest sense of the term ought to fulfil became of ever-increasing importance

At the luncheon which followed and which again was presided over by Sir Henry Brackenbury the principal guest was Mr John Buchan M P Lord High Commissioner for the Church of Scotland A company of about 200 assembled

A LAYMAN LOOKS AT MODERN PSYCHOLOGY

Mr JOHN BUCHAN said that the Institute was engaged in a most vital branch of science Its task was both therapeutic and educational While he professed profound ignorance of the art of healing he had been interested in psychology for many years A wholly new branch of knowledge had come into being with a terminology of its own Of the value of that new knowledge it was not for him to speak he could only humbly recognize it. But he condoled with the psychologists on the unfortunate fact that it had become so popular it had become what

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journalists called "news," and the verity of psychological conclusions was now part of the stock-in-trade of the uneducated It was a thing to be regretted when the language of exact science became a popular jargon The same development had been seen in respect to the doctrine of relativity brought forward by Professor Einstein, it had been adopted with a formula, in order to confuse knowledge, by many who had not the remotest notion of what it meant Psychology had provided the formula for foolish people to explain everything and thereby to avoid the rigour of thought Complexes, repressions, inhibitions, and all the rest had become the slogans of the novelist, to the overthrow of common sense and to the degradation of the English tongue The more reason why the work of those who were endeavouring to keep this new learning in the paths of rigorous science should be exalted Psychology was not, like metaphysics and logic, an academic subject, it was immensely practical Every human being was compounded of flesh and spirit, and the relations between the two had been a conundrum for all ages It was not too much to say that psychological science was facing the fundamental problem of the modern world That problem as he saw it was this that while mechanical apparatus had been enormously extended and the pace of life had been speeded up, while the old vehicles of thought had been destroyed, and people had been compelled to the difficult task of a new analysis conditions had been created to which human nature found it hard to adjust itself, yet at the same time upon such adjustment depended the future of the world These problems had been created by the questing spirit of man, and only the questing spirit of man could solve them They were problems of old standing They began to arise when the secure cosmogony of our forefathers was first shattered, and the horizons of what had hitherto been a sheltered world were widened out into the unknown That process went on through the nineteenth century, and was enormously accelerated by many scientific inventions Long before the war it was stated that many human beings were not properly adjusted to their environment The war speeded up the process, and threw down bulwarks and destroyed more foundations Since 1918 the problem had become more urgent, and during the last three or four years the world-wide economic confusion, which might be regarded as a belated phase of the war had accentuated it No conquest of bodily diseases, however triumphant could really ameliorate human life, unless at the same time the human spirit were strengthened and clarified Mr Buchan then mentioned certain departments of the work of the Institute, including child guidance, and the social services consequent upon it He spoke of the complete revulsion from the old view of repression and punishment Everyone was aware how often youth had been warped and retarded as the result of these wrong notions It was now realized that the only way of dealing with this kind of condition was by patience and intelligence The days of the blustering schoolmaster and the heavy-handed doctor were over It was now seen that humanity and sympathy in this province were not the same thing as sentimental weakness Not less important was the work of the Institute in respect to adult life Nothing had impressed him more than the way in which men in middle life—competent and even distinguished men—suddenly cracked In many cases no doubt this was entirely the result of the war, but in others which he had known there had been no severe war experience, it was simply the result of the stress and perturbation of modern life, and here again only intelligence and patience would serve, and repression and isolation were no good at all He thought that to day it was realized that it was possible to be too simple in diagnosis Our forefathers used to divide all men into sane and insane It was now realized that in the most normal people there were queer irrational elements and in the most abnormal, material which, by skill and patience and the grace of God, might be used to bring them back to mental health He added, in conclusion that this work of the Institute bore a close resemblance to the task of those statesmen who were trying to mend world conditions A sound instinct for psychological truth was at the bottom of all leadership The work of the statesman was to persuade and to regulate, and to do that he must have a clear understanding of the popular mind The business of a leader was not to put quality into humanity, but to elicit the quality already there

Dr J R REES, deputy director of the Institute, gave some further account of its work He mentioned that in the cramped old premises in Tavistock Square the Institute had seven consulting rooms—all very inadequate In its new quarters in Torrington Place it had seventeen all excellently equipped, together with proper laboratories, library, refectory, and children's department When the Institute began in 1920 it had nine doctors, and in that first year 2,300 hours were spent on the treatment of patients This last quarter—the only complete quarter in the new premises—the staff had been working at the rate of 15,000 hours of doctors' time in a year and in addition to that many thousands of hours had been spent on the work by lay psychologists, social workers occupation therapists and others in interviews and visits At present fifty-one doctors were working part time in the Institute building, without taking account of the honorary physicians, the pathologist, and others while in addition there were twenty-one technical lay workers and an administrative staff of fourteen Altogether a team of approximately 100 people were working in the Institute, more than half of them in an honorary capacity There was a waiting list of over 250 patients, and many of these people—especially if they could only come in the evening—would, he feared, have to wait six or nine months before starting treatment

Ireland

Touring and Fishing in Ireland

Ireland is a small country—one could comfortably motor from Fair Head to Cape Clear in a couple of long summer days, and tour the entire coast-line in a week But in its small compass this island to be visited by the British Medical Association in July, holds a wealth of natural beauty which makes it an ideal touring ground Sportsmen will find good fishing, good rough shooting and good hunting at very reasonable rates or in many cases free For golfing enthusiasts there are nearly 200 golf clubs affiliated to the Golfing Union of Ireland, and these courses include many famous links, to say nothing of more modest courses attached to the hotels Antiquarians will find a rich field for their interest, relics of remote antiquity abound, and mediaeval ruins, both civil and ecclesiastical, are scattered in profusion through the country Geological formation and custom have formed the selection of a few regions as the principal touring districts, but, in truth, the whole country is one splendid tourist resort The mountains and lakes of Kerry, the fascinating barrenness of Connemara, the wild highlands of Donegal, no doubt merit their fame, and there are a score of other equally attractive districts—the glens of Antrim and the glens of Wicklow, the coast of Clare and the coast of Cork, the river scenery of Shannon, Blackwater, and Lee, the inland beauties of Kilkenny or Tipperary, and the rolling hills of Down, the mountains of Mourne, the Galtees or the Comeraghs, the great loughs of Mayo, Galway, and Fermanagh Some dismal folk say that the centre of Ireland, with its great expanses of dreary bogs, is dull and uninteresting But the fascination of the bog-land grows, and the dreary expanse has its alluring and insistent charm, which brings men to love its wide spaces and rich colouring, its soft, rolling contours, and its wonderful flora and fauna, as they love the reek of its pungent turf-smoke The rivers Shannon Boyne, and Erne flow through this flat centre, and are surrounded with ancient interests Broadly speaking,

climatic conditions in Ireland do not differ materially from those prevailing in other parts of the British Isles The average rainfall for the whole of the country is approximately equal to that of England and lower than that of Scotland The rainfall is less on the eastern seaboard than in the mountainous districts in the south and west but the temperature in the latter districts is higher by reason of the Gulf Stream striking the south western seaboard For this reason this part of the country offers special attractions as a touring ground at times of the year when conditions are unfavourable in more northern latitudes and the corresponding latitudes of England The traditional emerald green of the country is seen at its best in the first half of the year but at all seasons Ireland is The Emerald Isle

The Automobile Association in its *Road Book of Ireland* has outlined nine touring districts with a short account of places of interest to be visited from the various centres From the point of view of fishing around the coast of Ireland is a veritable anglers paradise Once the angler arrives in a fishing district he will have no difficulty in obtaining all the information he requires from hotel-keepers and local enthusiasts But in order to assist him in deciding where he shall fish he will be well advised to procure beforehand a copy of the *Angler's Guide to the Irish Free State* published by the Free State Stationery Office (price 2s) and obtainable through any bookseller This book gives advice in the choice of a district according to the kind of fish the angler hopes to catch on the best season for each water and on free water hotel waters ticket waters and fisheries let on lease on coarse fishing and on sea fishing The fishing is then described under the centre from which it can be most conveniently fished and where there is accommodation Maps of the most important fishing districts are included as well as a river map for the whole of Ireland Lists of rivers and lakes with their open seasons are given and other information useful to the visiting angler *The Angler's Guide* only deals with the Irish Free State for those who propose to fish in Northern Ireland the guide *Where to Fish* published by the *Field* (price 5s) is recommended Ireland is divided into twenty seven fishery districts as follows Dublin Wexford Waterford Lismore Cork Bandon Skibbereen Bantry Kenmare Killarney Waterville Limerick Galway Connemara Ballinakill Bangor Ballina Sligo Ballyshannon Letterkenny Moville Londonderry Enniskillen Co'eraine Ballycastle Drogheda and Dundalk Full details of these districts are given in the two books mentioned above and a note on the fishing in each district will be found in the A A's *Road Book*

Weak minded Children

The report presented to the annual meeting of the Stewart Institution Dublin stated that 1932 had been a successful year the income having been well maintained Subscriptions and donations had increased slightly payments received on account of pupils maintenance was the only item which showed a decrease the reduction having been £245 accounted for by the loss during the year of five full paid pupils whose places had not yet been filled The hospital for mental diseases run in conjunction with the Institution showed a profit of £402 as against a loss in 1931 of £177 Last year the question of participating in the Hospitals Trust Sweepstakes Scheme came before the committee and it was decided not to apply To many that might seem a matter for regret but the committee believed that its decision would voice the wish of the large majority of the friends and supporters of the Institution It was earnestly hoped that those who had withdrawn subscriptions from other charities on account of participation in the sweepstakes scheme would remember the Stewart Institution Dr G H Keane medical superintendent said it was estimated that there were upwards of 40 000 mentally defective children in Ireland Of that number about 5 000 were idiots and low grade imbeciles The Stewart Institution was the only one in Ireland which tried to cope with the need for training mental defectives

Scotland

Edinburgh Branch of the British Medical Association

The clinical meeting of the Edinburgh Branch and other Scottish Branches which is held annually in the spring was organized by the secretaries Mr W A Cochrane and Dr John Young on April 26th The forenoon was devoted to various demonstrations in the Royal Infirmary of Edinburgh these included recent advances in radiography by Dr Duncan White clinical cases illustrating treatment of various types of venereal disease by Dr David Lees the present position of the vitamins by Dr Chalmers Watson and blood films and clinical cases illustrating diseases of the blood by Dr A Goodall and Dr Colin Campbell A visit to the Hospital for Crippled Children had also been arranged by Mr W A Cochrane The clinical meeting took place in the afternoon in the large surgical theatre of the Royal Infirmary various members of the staff demonstrating cases In the evening a dinner was held in the British Medical Association House 6 Drumsheugh Gardens at which Dr John D Comrie president of the Branch presided and Sir Henry Bracken bury Chairman of Council of the Association was the chief guest There was a large attendance including Sir Thomas Whitson chairman of the Board of Managers of the Royal Infirmary and other members of the Royal Infirmary management and representatives from the Department of Health for Scotland The chairman in proposing the toast of The Guests said that when a cynical member of the Association asked what the Association gave him in return for his annual subscription one of the most effective and convincing answers was

The services of Sir Henry Brackenbury Every insurance practitioner was grateful to him for the part he had played as chairman of the Insurance Acts Committee in bringing to a successful issue the arbitration between the Ministry of Health and the Association regarding the remuneration of these practitioners In recent years he had taken a special interest in the changes that were taking place in hospital arrangements as they affected the public and the medical profession The chairman also pointed out that Edinburgh possessed in its Royal Infirmary the largest voluntary hospital in Britain and one which for over 200 years had been affording charitable assistance to the sick poor It had now become the earnest hope of a large section of the community and of the medical profession that before long the motto of the hospital Patet omnibus (It is open to all) might be literally fulfilled and the hospital open to those who were able and willing to pay either collectively or individually for treatment Sir Henry Brackenbury in reply said that there had been great changes in the last few years in the hospital system of the country The voluntary hospitals had been passing from institutions established by a charitable public for the care of those unable to pay anything at all to institutions where provision was made by the public on a self supporting basis for members of the same public who required treatment Another great change was that the demand to go into hospital was not now exclusively confined to those who needed

(*Æsculapius*)

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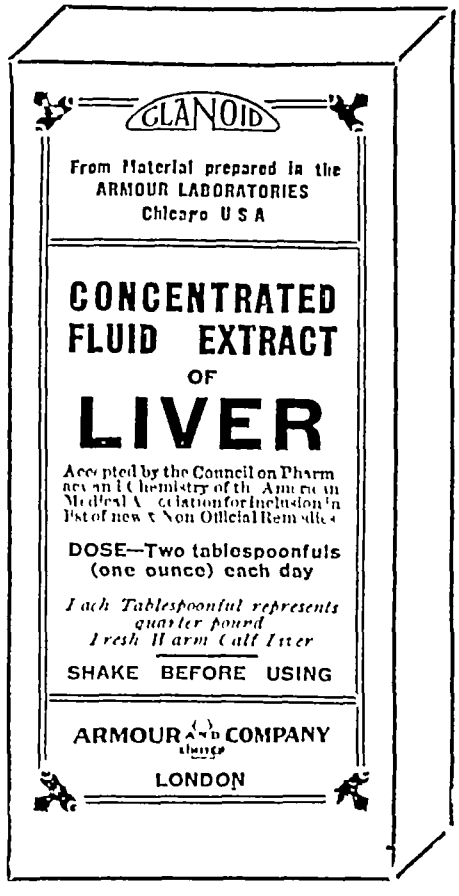

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specialist treatment many persons required to be admitted because owing to conditions in their own homes, treatment in hospital would be easier, more comfortable, and more successful During the last ten years these changes had greatly accelerated, and the policy which the British Medical Association had been formulating during that time had developed along with the accelerating pace of the changes The pace had been greatly quickened, for example, by the Local Government Acts of 1929 Sir Henry then expounded four of the principles contained in the hospital scheme of the Association The first, he said concerned the need for institutional treatment in which attention could be given by the general practitioner to the class of case which required this type of treatment in an institution The second concerned the staff fund, it was now generally recognized that there ought to be payment in one form or another for the voluntary staff of the hospitals The hospitals were passing away from the charitable institution in which everybody concerned gave his services in order that he might help the poor As long as that continued and to whatever degree, the medical staff would be perfectly willing to give their services for the sake of such persons At the present time, however the number of such persons entering voluntary hospitals was very small, and nearly everyone was expected to pay something according to his means These payments were not made primarily for board and lodging, but for medical and surgical treatment, and there was no reason why the doctor should be the last person to be removed from a charitable to a paying basis The British Medical Association said that a proportion—it suggested 20 per cent —of whatever payment was made, in whatever way should be set aside for a staff fund to be given to the members of the voluntary staff, this applied equally to contributions paid through contributory schemes The third principle concerned the establishment of paying wards in hospitals of all types It was recognized that there was a class of person who could quite well pay for treatment and it would be to the advantage of the public and of the medical profession if every hospital had paying wards or beds to which such patients could be admitted The Association wished to allow the patient the freest possible choice of consultant or specialist The last principle concerned the character and appointment of the staff of hospitals transferred from the Poor Law under county and borough councils The B M A believed that it would be a great advantage if these hospitals, like the voluntary hospitals could have the advantage of a visiting staff and it strongly favoured co operation of the hospitals which had been under the Poor Law with neighbouring voluntary hospitals, so that the former could benefit from the services of medical and surgical specialists He emphasized the fact that the policy of the Association was an expression of the opinion of the great majority of medical men in the country The toast of 'The City of Edinburgh was proposed by Mr W J Stuart, Sir Thomas Whitson replying and that of 'The British Medical Association by Mrs Morison Millar convener of the Edinburgh Public Health Committee, to which Dr John Orr replied

Edinburgh Post Graduate Courses in Medicine

The syllabus of the post graduate courses in medicine to be held at Edinburgh during the summer which has just been issued contains special information concerning the instruction obtainable in July August and September From July 17th to August 12th there will be a course in obstetrics gynaecology and child life and health at the Royal Maternity Hospital the gynaecological wards of the Royal Infirmary and the Royal Hospital for Sick Children fee £10 10s A general practitioners course will be held from August 14th to September 9th, it will include such subjects as applied anatomy clinical medicine, infectious diseases, clinical surgery, clinical gynaecology, diseases of the eye, diseases of the ear, nose, and throat, and dermatology, fee £10 10s for four weeks or £6 6s for two weeks A general surgical course is to be held concurrently with the former, and will include applied anatomy, general surgery, diagnosis and treatment of renal disease, abdominal surgery gynaecological operations, surgical pathology and physiology, venereal diseases and radiology, fee £10 10s for four weeks, or £6 6s for two weeks Various limited courses will also be held from time to time at fees which range from £2 2s to £5 5s, on such subjects as modern diagnostic methods, diseases of the blood, x-ray physics, ultra-violet radiation, ophthalmoscopy, urological surgery neurological surgery, diseases of the nose and throat, disorders of speech, venereal diseases, and surgical pathology A course on clinical medicine, including radiology, has been arranged to take place daily during the month of May and again in October, and a similar course in clinical surgery, including radiology, will be held during each academic term for a period of six weeks The two latter courses will be conducted by members of the medical and surgical staffs of the Royal Infirmary Graduates may obtain the syllabus on application to the secretary of post graduate courses, New University Buildings, Edinburgh

Grades of Milk

A meeting of producers of "certified" milk was held in Glasgow last month to consider alterations that had been suggested by the Reorganization Commission of Milk for the names of the official grades of milk The Commission had recommended that the milk at present known as Grade A (T T) should in future be known as "special" milk, and that the present "certified" milk should bear the same name with the addition of the words "bottled on the farm" After some discussion the meeting resolved that the name "certified" should be retained, because the public were just beginning to understand that this meant the highest grade of milk produced A deputation was appointed by the meeting to interview officials of the Department of Health with a view to avoiding a change in the name of certified milk, and was instructed to impress on the Department the desirability of tightening up the regulations governing its production The meeting also agreed with the Commission's proposal that the term at present applied to the third grade of milk (that is Grade A) was misleading, and that this should be abolished The deputation subsequently had an interview with the Department of Health for Scotland, and was assured of its sympathy and that the matter would be taken up at once with the Ministry of Health in England

Nursing Conference at Aberdeen

The annual conference of the College of Nursing began at Aberdeen on April 27th, and continued on the following two days The first day included an exhibition of the work of student nurses at which Miss M E Sparshott (London), president of the College, presided It was pointed out that the College of Nursing was an association of State-registered nurses with more than 28 000 members and over eighty branches, and that it had done a great deal to improve the conditions of the nursing profession and to benefit nurses Mrs E M Rome was elected president of the College for the ensuing year, and in submitting the annual report she referred to the loss sustained through the death of Viscountess Cowdray who had been president of the Aberdeen branch and had regarded an expert nursing service as of the greatest

importance to the community Mr Comyns Berkeley said that the expenditure in connexion with the building of the College and Cowdray Club had been £19 165 The purchase of premises at Cavendish Square and Henrietta Street, London had cost £42 117 The endowment fund now stood at £125 490 and it was desirable that the membership of the College should be considerably enlarged In the evening a civic reception to welcome the delegates was given by Lord Provost Alexander and the magistrates of Aberdeen The second day was occupied by business meetings and visits to the Rowett Research Institute Woodend Hospital and the occupational department of the Royal Mental Hospital as well as by various social functions Miss L G Duff Grant of the Manchester Royal Infirmary gave an address on how to secure the best type of nurse and expressed the opinion that the solution of this difficulty lay with the hospital itself Hours of employment might be reduced and arrangements made so that nurses had not less than three hours off duty each day The amount of purely domestic work as distinct from nursing which the probationer was required to carry out might also be reduced

England and Wales

Co-ordination of Research at Leeds

Another useful illustration has been given of the way in which co-operation promotes the planning and prosecuting of sound lines of progressive research Within the walls of the recently opened Algernon Firth Pathological Institute in Leeds will now be housed the university departments of pathology bacteriology and cancer research thus co-ordinating investigation and teaching as well as facilitating the application of new scientific discoveries to the social and industrial needs of the community Including its equipping the provision of the building has cost approximately £50 000 Half of this sum was offered by Sir Algernon Firth at the instigation of Lord Moynihan on condition that in the new building there shou'd be suitable accommodation for cancer research Sir Algernon who opened it mentioned that he fully realized the continuing value to humanity of a research building under the control and care of so permanent an organization as the University of Leeds Cancer research might diminish or even terminate with the attainment of success in its objective but the need for persistence in other investigations to reduce the sum of human unhappiness would still remain Isolating one special scientific line of study was undesirable for more than one reason Again the value of the application of science in its many forms to industry was becoming daily more apparent The adequate equipping and efficient maintenance of the activities of the University must be regarded therefore as an obligation on all whose future depended on industrial progress Sir Algernon added that apart from its immediate work for the hospitals another line in which the Institute could render most effective service was the investigation of the causes of disease and the determination of the most effective lines of treatment Facilities for this would now be available what was wanted was hard thinking combined with imagination The Pro-Chancellor Colonel C H Tetley accepting the definition of the Firth Institute as the keystone of a structure which had been built up gradually insisted that the achievement had only been rendered possible by the collaboration with the University of the City Council the General Infirmary and other Leeds hospitals and the Yorkshire Council for Cancer Research He hoped that the one remaining unfinished part of the scheme—namely the furnishing and equipping of the pathological museum would be accomplished before long by yet another instance of co-operation Professor Robert Muir of Glasgow summing up the outlook of the Institute said that since it was impossible to vest in one person both clinical knowledge and the faculty of applying scientific methods the information resulting from these two lines of observation should be fused so far as was possible The Institute would make it one of its obligations to promote the close co-operation of physicians and surgeons with laboratory scientists involving an interchange of ideas and would combine routine hospital pathological inquiries teaching and research The number of problems capable of being attacked by independent workers was rapidly diminishing The many problems that remained demanded a combined effort on the part of workers possessing very different scientific qualifications Co-operation and organization Professor Muir added were becoming more and more essential and there was no disease which could not be more clearly elucidated thus The determination of the presence of cancer in its earliest stage in any part of the body was a goal which was being keenly approached by workers starting from various points and applying different branches of scientific research Vast benefits would accrue to the whole community when these co-ordinated though very diverse activities attained their joint objective

National Society for Prevention of Tuberculosis

The provisional programme has now been issued of the nineteenth annual conference of the National Association for the Prevention of Tuberculosis which will be held at Cardiff from July 13th to 15th inclusive The main discussion will relate to the part played in the production of this disease respectively by infection and environmental conditions It will include references to the findings of the Tyneside inquiry of the National Association and to the investigation by the Welsh National Memorial Association into the high death rate from tuberculosis in Carnarvon and Merioneth Delegates to the conference will thus be afforded an excellent opportunity to study the plan and the methods of campaign which have been followed by the Welsh Association addresses on the history and organization of which will be delivered by Lord Davies of Llandinam Professor Lyle Cummins and Dr D A Powell principal medical officer The annual meeting of this association will be held as usual in the course of the conference On the third day a demonstration will be given for medical members on the pathology and bacteriology of tuberculosis and there will be an exhibition of x ray films by Professor Cummins and Dr Tytler at the tuberculosis department of the Institute of Preventive Medicine All-day trips are being arranged to the South Wales Sanatorium at Talgarth and the Adelina Patti Hospital at Craig y Nos and half-day trips to the Glen Ely Hospital which has a very complete department for light treatment and to the Cefn Mably Hospital A civic reception and dance will be given by the City Corporation on Thursday July 13th Railway tickets to Cardiff at reduced rates will be available for those attending the conference and sanctions for the payment of delegates from local authorities will be obtainable on the usual lines from the Ministry of Health The fee for membership of the conference is one guinea including the provision of a report of the proceedings All interested persons are admissible whether members of the association or not The names of delegates and private members should be sent as soon as possible to the secretary of the National Association for the Prevention of Tuberculosis Tavistock House North Tavistock Square W C 1

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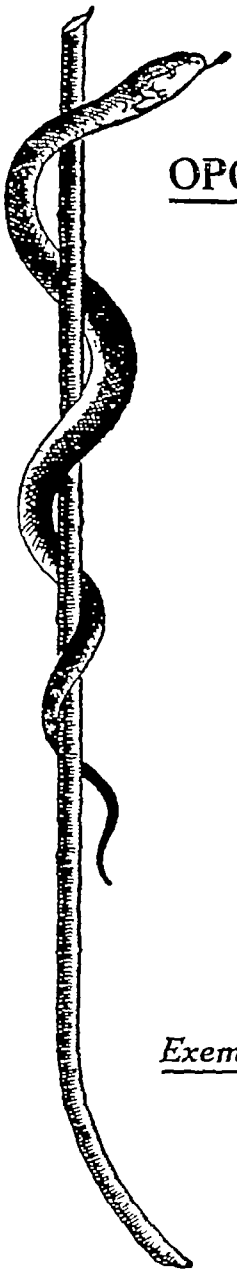

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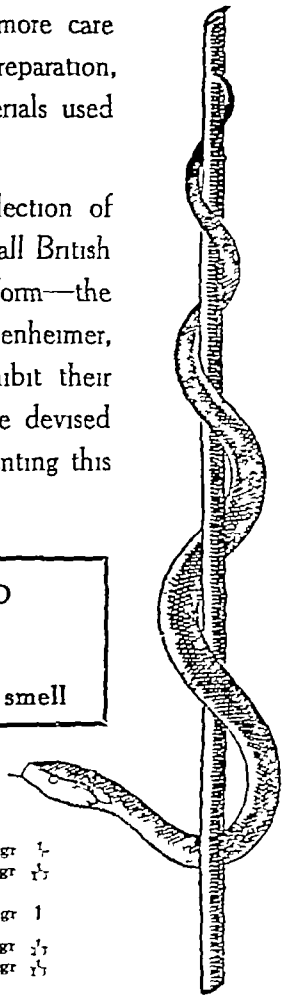

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CORRESPONDENCE

Body Mechanics and Child Health

SIR,—A leading article in the *Journal* of April 15th (p 663) on the report of the American Committee on Growth and Development of the Child raises the important question of methods of physical training in schools, and also, I would submit, of our attitude to body mechanics in general, since, if they are bad in the child, their effects are likely to be cumulative with increasing years Our profession has done much to improve systems of physical training, especially in the fighting services It cannot, however, be denied that on looking over any assembly, child or adult, examples of poor posture and bad body mechanics are painfully numerous The war showed that the national physique was lower than we thought Unemployment is doing nothing to improve it We have quite recently seen a whole generation adopt an attitude—the "debutante's droop"—which breaks every rule of correct posture! At any rate, some medical officers of schools are dissatisfied with present methods of physical training, and they feel they should have much more to say about intensive athletics This was clearly brought out at a recent discussion on the assessment of physical fitness in the Section of Physical Medicine of the Royal Society of Medicine

The necessity for formal physical training is largely due to the disabilities of the upright position Its chief aim, I take it, is a body held (good posture) and used (good body mechanics) correctly Our methods encourage exercise, rhythm, balance and discipline, and so far are good, but they do little toward the chief aim, and once the ten minutes a day or the hour a week of drill are over, the child is left to sit, stand, and walk very much as it likes As to the effects of bad body mechanics, they may be seen at any age but especially in later life They offend our aesthetic sense, and range from a lowered level of health to states of chronic ill-health They make the relief of many chronic conditions infinitely more difficult At the same time bad posture may be the result and not the cause of fatigue or illness Goldthwait in particular, working in Massachusetts—the State in which much of the investigation you discuss was made—has studied them and their treatment Work at a spa suggests that they are not receiving the attention which they deserve, that in the pursuit of less obvious problems the body as a whole is not being studied enough It seems elementary to say that in treating any chronic condition the first step should be to see that the great physiological systems are working to the best advantage

As regards the child it is suggested that physical training should concentrate first and foremost on good posture and body mechanics It should not be limited to a set of perfunctory movements at infrequent intervals, but should aim at a body held and used correctly both in and out of school Those who have charge of children should be able to supplement the formal training Children should be taught to take pride in their physical make-up Seats, desks and lighting should get more attention than they do To the fundamental training any useful exercises could be added they would not be so important, however as free moving games for the majority for a minority as you point out they would be necessary

Teach a child and you teach a multitude' Is it too much to hope that in course of time good posture will become as estimable as cleanliness good clothes, and temperance?

In medical practice it is suggested that the prevention, effects and correction of poor posture and body mechanics deserve more attention especially by the teaching section of the profession There is nothing in this letter which has not been said before and better said It is written to emphasize my hope that your article and the report it reviews will lead to increased interest in the subject with which they deal—I am, etc,

Droitwich, April 24th A R NELIGAN, M D

Total Hysterectomy for Uterine Myoma

SIR,—I am much obliged to Dr Ralph Worrall for his complimentary reference in the *Journal* of April 29th (p 741) to my paper on the above subject, published in your issue of June 25th, 1932, and to "my irrefutable arguments in favour of total hysterectomy" Somewhat surprised, therefore, was I to find him publishing, under the heading of total hysterectomy, a series of cases treated by *subtotal* hysterectomy, with coring of the cervix, which he says is 'infinitely simpler, safer, and with much better ultimate results" than true total hysterectomy by Doyen's method, advocated by me There may be methods of performing total hysterectomy simpler and safer than Doyen's, though I do not know one, but Dr Worrall, who has only been employing his method of subtotal (erroneously called total) hysterectomy for about eighteen years, is not justified in stating that the ultimate results of his subtotal hysterectomies are much better, since cancer has been observed in the cervical stump thirty years after that operation

Subtotal hysterectomy with coring the cervix has been advocated, and abandoned, by several gynaecologists, but is inapplicable in cases of myoma of the portio and cervix, and entails danger in cases of sarcoma and early cancer of the cervical canal A careful study of 325 myomatous uteri removed by total hysterectomy and hardened in formalin solution has shown that by Worrall's method it is sometimes impossible to remove completely all the glandular tissue by coring I have found the cervix to measure four inches in length and to be not thicker than a lead pencil in a case of retrocervical myoma, many times the cervical glands penetrate deeply into the wall and have cystic dilatations, bigger than peas, which would be cut across by his scissors His method can, of course, be carried out in small "bleeding uteri," with which my paper had nothing to do, but in a considerable number of large myomatous uteri I can assure Dr Worrall that he is mistaken in believing that he has removed the whole of the glandular tissue

Dr Worrall's paper is not limited to cases of myoma, as my paper was, but includes other non malignant conditions—"fibrosis" and "bleeding uterus"—which in my opinion and experience never require the mutilating operation of hysterectomy the same remark applies generally to *small* myomatous uteri, unless they are complicated with malignant or tubal disease, in which case vaginal hysterectomy has many advantages over the abdominal operation If Dr Worrall will eliminate these cases from his list of subtotal hysterectomies with coring of the cervix and give the information contained in my paper—namely, the number of ovariotomies for tumour done in the same period, and the length of time the patient remained under observation in hospital or home—he will furnish information which will enable a comparison to be made with the complete series of total hysterectomies I published In that paper I gave the results obtained by three English gynaecologists who, over a long period (up to twenty-seven years), had performed 719 genuine cases of total abdominal hysterectomy for myoma with a mortality rate of 1 9 per cent, a result which, from an extensive reading on the subject, I consider not unsatisfactory Dr Worrall misquotes me regarding Dr Lockyer's results in cases of myoma What I said was "Lockyer's mortality rate for total abdominal hyster

ectomy (1 54 per cent) has so far as I know not been surpassed in any series (195 cases) so large and complete Dr Worrall s series is not limited to cases of myoma is not complete and is not total hysterectomy

With regard to Dr Worrall s views on embolism I agree with two of his suggestions (avoidance of transfixion mentioned in my paper and movement of the limbs) but doubt the efficacy of taking five or six deep breaths every hour and I totally disagree with his suggestion of catgut as a cause If Dr Worrall with his large experience of other operations with catgut has observed his patients for twenty four days afterwards and has never had a case of embolism I venture to state that his experience is unique I would like to congratulate him on the excellent results he has obtained by his subtotal hysterectomies with coring of the cervix which lead me to believe that his skill is such that he will get even better final results if instead of writing total hysterectomy he will do it —I am etc

London W 1 April 30th HERBERT R SPENCER

Hernia and Appendicectomy

SIR —I have followed with much interest the recent correspondence on hernia and appendicectomy as I was to some extent responsible for Mr H J Wade s work in this connexion Mr R J McNeill Love in his letter (April 8th p 629) confirms what I had previously suggested in my original article in the *Journal* of February 14th 1931—namely that following the McBurney incision the ilio-inguinal nerve may be damaged by inclusion in a suture or by scar tissue where infection has been present Mr F A R Stammers (April 29th p 763) on the other hand appears to doubt that the development of a right inguinal hernia after appendicectomy has any connexion with the McBurney muscle splitting incision

It is surely suggestive that in the reported cases the presence of the hernia was first noticed six to twelve months after the operation for appendicectomy and that well marked signs of degeneration were demonstrated histologically in the ilio-inguinal nerves This theory has now been carried a stage further by Mr Wade s work and he has proved conclusively that the lower fibres of the internal oblique and transversalis muscles receive their innervation from the ilio-inguinal and ilio-hypogastric nerves and that damage to these nerves will lead to appreciable muscle weakness round the internal abdominal ring This weakness must inevitably predispose to the development of an inguinal hernia —I am etc

Manchester April 29th A H SOUTHAM

Dry Bronchiectasis

SIR —We regret that Dr Leonard Findlay in his letter to the *Journal* of April 22nd (p 719) seems to have misunderstood the purport of our paper on dry bronchiectasis We wished to draw attention to a condition which we believe to be common and to present practical problems in prognosis and treatment We selected twenty cases which had been under the care of one of us in the London and Brompton Hospitals during a period of two years and for the purpose of comparison we analysed the reports of thirty more collected from the somewhat meagre literature on the subject

Dr Findlay points out quite correctly that bronchiectasis may exist for as long as eighteen months without any appreciable quantity of sputum some of our records suggest longer periods even up to forty seven years We agree with his statement that recovery from wet bronchiectasis occurs occasionally but except in those cases in which the cause is removable we believe that such recovery is extremely rare We shall be much interested if Dr Findlay will produce evidence in support of his statement that as a rule the bronchiectatic condition steadily becomes more extensive even although the symptoms may diminish or entirely disappear ' Should this assertion be correct it would have an important bearing upon the prognosis and treatment of the condition

We are not able to accept fully the statement that dullness on percussion without either a shadow in the radiogram or displacement of the mediastinum most probably indicates fibrosis Other explanations are possible Our suggestion of the mechanism which leads to bronchial dilatation is that if for any reason the air cannot enter the alveoli during inspiration the muscular effort tends to expand the bronchi We did not suggest that the bronchi dilated sufficiently to replace the space vacated by the collapsed lung —We are etc

CECIL WALL
London Hospital April 29th. CLIFFORD HOYLE

Excessive Carbohydrate

SIR —Deviation from the normal balance of an optimum diet must be accompanied by diminution of certain constituents of the diet Dr Paton s interesting article on the relation of excessive carbohydrate to catarrhs and other diseases in your issue of April 29th (p 738) leaves unsolved the basal problem of whether excessive carbohydrate *per se* is the cause of the increase in catarrhal conditions recorded or whether these catarrhs were attributable to depletion of other constituents of the diet The ingestion of 2 lb of sugar per head per week by the schoolgirls referred to by Dr Paton would if their ages fell between 8 and 12 years provide from one-quarter to one fifth of their total daily calorie requirements One may assume therefore that their vitamin and mineral requirements had to be met from the remaining three-quarters or four fifths of their foodstuffs

Excessive consumption of sugar by children is often associated with a distaste for fat Diminution of the sugar intake is usually followed by an increase in the desire for fat It may be that a shortage of vitamin A is the causal factor in the high incidence of catarrh and a shortage of this vitamin is likely to occur on a diet deficient in fat The administration of vitamin A to catarrhal children has proved of value in ameliorating the condition It must also be remembered that the bread eaten during the war possessed owing to the regulations controlling the milling of flour a higher vitamin (B and E) and mineral content than is the case to-day Is excessive carbohydrate ingestion specific in the causation of catarrhal conditions or does it act merely as a depleting agent on other constituents of the diet?—I am etc

Stockton-on-Tees May 1st. G C M M GONIGLE

Nutrition in Relation to Anaemia

SIR —In the article in the *Journal* of April 22nd (p 685) on nutrition in relation to anaemia by Davidson and others the impression is conveyed that my work was subsidiary to and dependent on that of Waddell and others and on that of Mackay The date of appearance of my paper for one thing shows that this is not so and t may not be out of place to point out that I was the first to direct attention to the importance of this subject and that my work on iron deficiency in pigs formed the starting point for the modern work on anaemia produced in this way including specifically that of the Wisconsin investigators

Reference is made to Aston s work on anaemic conditions occurring in cattle grazing on certain pastures which are curable by iron salts and Orr and others are quoted

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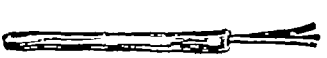

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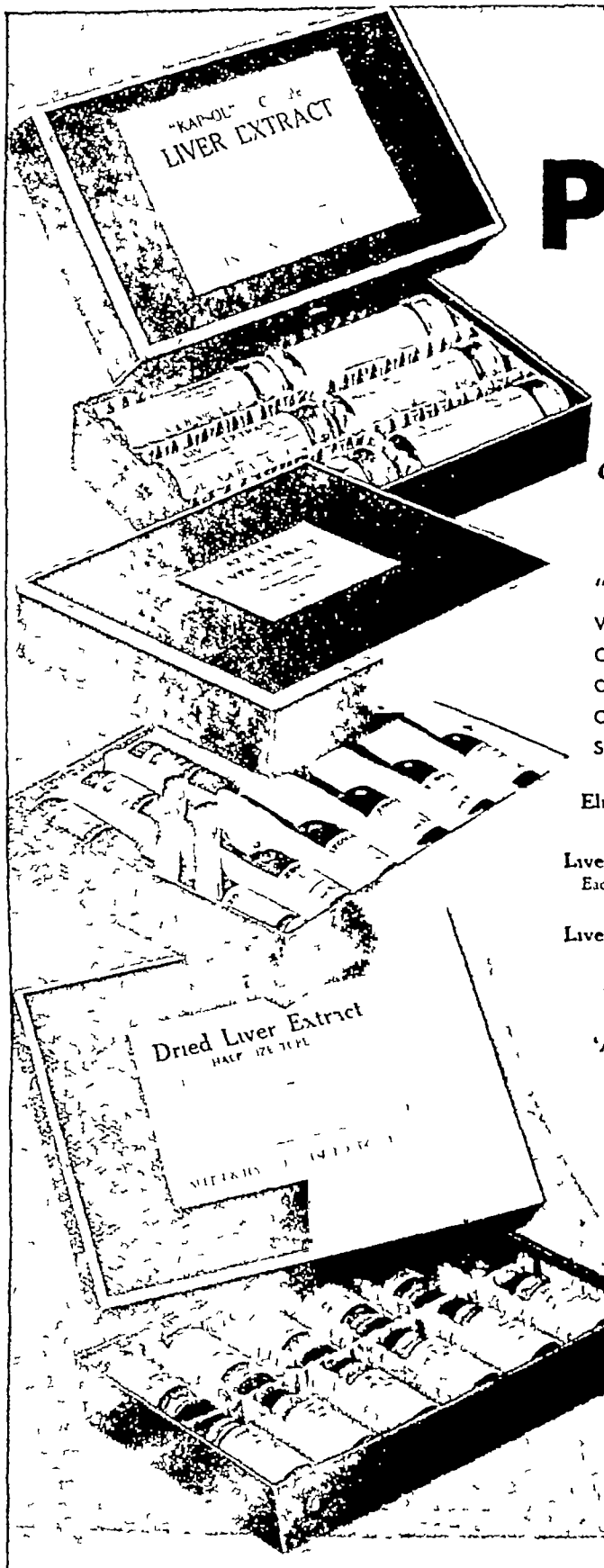

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as having obtained similar results (date of reference is 1931) It is opportune to point out that, while in no way questioning the priority of Aston in this matter, I myself around 1922–3, independently and without knowledge of Aston's work recognized a condition in sheep in the Border District of Scotland, and known as "piming," as an anaemia, and treated it by the administration of iron salts Subsequently, in the beginning of 1925, I found in the literature a reference to a condition occurring in animals in New Zealand and known as "bush sickness," a disease at which Aston had been working for some considerable time, and in this connexion it needs to be emphasized that "piming" was first identified with "bush sickness," and not vice versa, and that I was the first to do this

The work, referred to here, was carried out in the Rowett Research Institute —I am, etc,

Aberdeen April 22nd J P McGOWAN

Body and Mind

SIR —In his letter in your issue of April 15th, Dr Isaacs questions my right to use the word "cure" in connexion with mental cases which I believe to be of colon origin In answer I can refer to four clinical histories which are given in my book on *Tonic Hardening of the Colon* (Oxford Medical Publications, pp 68, 125, 126, and 128), in all of which I think that any clinician would say that a cure of a mental abnormality had occurred I will only refer to the first of these

The patient was the travelling partner of a cheese making firm who for six months had been subject to attacks, lasting about two hours in which he lost all consciousness of his surroundings although he appears to have acted in a normal manner and kept a record of the business he transacted during these times The attacks had steadily increased in frequency until when he consulted me they were occurring two or three times a week and he feared complete loss of identity if they continued to get worse The colon was definitely hard and tender but gave rise to no symptoms other than the mental disturbance In this case I did not even give him the hope of a cure by my colon treatment for I had never before seen such a case Nevertheless the mercury iron, and hyoscyamus mixture and the usual diet immediately stopped the attacks and he never again lost himself while on his business rounds Fifteen years afterwards he reported that there had been no return of any mental symptoms

Surely no one can deny that in this case an abnormal mental state of the nature of double personality was cured by colon treatment? Dr Isaacs also offers the criticism that I mistake a superficial change in symptoms for the cure of an abnormal mental state, and he also states that my colon treatment deals with a purely physical condition and does not deal with the psychopathological element in the cases which gives them a faulty attitude to the problems of life" In this connexion the case recorded on pages 126 and 127 of my book gives a decisive answer in the negative I could give many cases where a "faulty attitude to the problems of life" was completely rectified by colon treatment Sometimes the change takes place comparatively suddenly As soon as the disturbing nervous impulses which arise in the colon cease the mental cloud is dissipated and the patient's outlook on life and touch with outward surroundings becomes normal In one striking case a woman who for months had been so out of touch with her surroundings that husband and children and home were nothing to her and it seemed as if some other woman and not herself was living at with them' could give the hour and minute at which the barrier was suddenly swept away, and she was once more herself with a normal interest in her loved ones and her home Here is a recent case where the patient's outlook on life suddenly changed after some weeks of colon treatment

A lady, for six months after her only child was born suffered from increasing and groundless fear as to the child's welfare, with mental depression and fear that it would die There was definite tonic hardening of the colon and the symptoms pointed to this being the cause of the abnormal mental state After some weeks of treatment by the mercury iron and hyoscyamus mixture and dieting she telephoned to me one morning to say that she now felt to be a new woman and that "it was as if a load had been lifted off her' The return to a normal attitude towards her surroundings, after months of absorption in her obsession was most striking and she wished to start spring cleaning her house immediately instead of taking the two months of absolute change of scene and rest upon which I insisted in order to obviate the possibility of her new-found interest in life leading to overtaxing her nervous vigour, which could not be otherwise than very deficient after the nervous stress of the past months

As I have said before, I do not ask that these statements of mine should bring conviction, but I hope they will lead any who are inclined to doubt them to put their truth to the test by trying the treatment advocated upon all cases where a mental abnormality, which is presumably not due to organic disease, is associated with hardness and tenderness of the colon in the right or left iliac fossa or where symptoms are distressing between midnight and 4 a m I feel confident that such a testing of my statements will show that mental distress of various types is very frequently due to abnormal muscular activity in the colon, and is curable by medicinal and dietetic treatment, without the aid of psychotherapy —I am, etc,

Birmingham, April 24th T STACEY WILSON

Pulmonary Tuberculosis and Sun Exposure

SIR —With the approach of the summer months I feel it would not be out of place to draw attention to a fact which does not seem to be sufficiently recognized among the profession generally—namely, the danger of allowing patients with active or quiescent lesions of pulmonary tuberculosis to expose themselves indiscriminately to the sun's rays

Heliotherapy may have beneficial results in certain types of cases, if controlled under expert supervision, but irreparable harm has often been done by uncontrolled and rash exposure Fenton and Burrell, in their book *Diseases of the Chest* state

"There is no doubt that over exposure to the direct rays of the sun is apt to produce a reaction, which may cause an acute exacerbation of disease, and do considerable harm so that patients should be advised to sit in the shade rather than the direct sunlight"

Maurice Fishberg, reviewing the subject in the recent edition of his book, says

'I have seen patients with quiescent lesions, on the road to complete recovery suffer from a sudden acute reactivation of the process, after spending a day on the seashore under the baking sun and having their skin burned The average person may become merely sunburnt, but the tuberculous suffer from an activation of the process in the lung"

With these writers I think all physicians who specialize in this disease will agree Too often have we seen exhaustion, tachycardia, acute exacerbation, and sometimes haemorrhage undoubtedly caused by unauthorized and long exposure to the sun's rays

I have recently been reviewing the histories of patients who have come under my care during the past eighteen months Many of them had had a period of "home treatment," or had waited some time after diagnosis before coming here, or again, had had a period under suspicion before a definite diagnosis was made I was astonished to find how many of them had been told by their doctors to get into the open air and spend as much time lying in the sun as possible One patient, with extensive active lesions, said to me "I used to feel

absolutely exhausted after doing so and wanted to rebel but my family compelled me to continue because the doctor had ordered it When these patients come for treatment and find they are not allowed to lie in the sun they want to know the reason why and when told the reason are apt to be resentful towards their former medical advisers I do feel therefore that in the interests of all concerned an effort should be made to make the possible dangers of sun exposure to sufferers from pul monary tuberculosis more widely known than appears o be the case at present —I am etc

Nordrach upon Mendip April 24th C F ASHBY

Turpentine Idiosyncrasy

SIR —Turpentine idiosyncrasy is in no wise so unusual as Dr W W Jeudwine in his communication on page 513 of the *British Medical Journal* of March 25th seems to imagine The contact dermatitis to which turpentine gives rise is decidedly common in the experience of my colleagues and myself Turpentine causes rubefaction and vesiculation on any skin if applied sufficiently concen trated it will cause this irritation in some individuals in very small dosage

In a susceptible person the irritation is not limited to the site of application but a papular urticarial rash which may become oozing and eczematous appears at the periphery of the point of contact and may become quite generalized affecting by predilection the flexures of the elbows and knees the sides of the neck and the face This observation was made at least as long ago as 1870 by Hebra who described these phenomena as noted upon application of croton oil and other irritants

We have seen persons so sensitive of turpentine that to walk through a newly painted room resulted in lachry mation conjunctivitis and erysipelatous swelling of the face oedema of the eyelids and an itching rash on the arms and trunk Vesiculation may follow and result in a picture resembling ivy poisoning It is our firm belief that the application of turpentine to the skin is a pro cedure containing a real and inescapable element of danger which should be more generally recognized than it is —I am etc

RICHARD L SUTTON JUN

Kansas City Mo U S A April 7th

Strychnine Poisoning

SIR —Dr Keith s letter in the *Journal* of March 25th (p 541) and the previous correspondence were considered by the Textbook Revision Committee of the St John Ambulance Association at its last meeting The com mittee is of opinion that Dr Keith has either missed the point of my letter of February 28th or has overlooked the fact that the textbook of the association at page 157 to which he refers is speaking in general terms in order to put the ' first aider on his guard whereas at pages 171 and 176 the textbook enters into detail

The medical members of the committee are satisfied that they are correct in stating that during convulsions caused by strychnine poisoning the patient is insensible — I am etc

A N CAHUSAC
Chief Secretary St John Ambulance Association

St. John s Gate Clerkenwell E C 1 April 12th

SIR —With reference to a letter in your issue of February 25th (p 341) and with due deference to its writer (Dr John R Keith) I would urge that there s a phase of unconsciousness in poisoning by strychnine Further it is one that alternates with consciousness During this phase which occurs at the end of a spasm the pupils contract the pulse becomes imperceptible respiration almost ceases and cyanosis immediately before death becomes increasingly marked —I am etc

C A VAN ROOYEN L R C P M R C S

Haputale Ceylon March 27th

*** We have referred the letters printed above to a leading authority on pharmacology who writes

The outstanding feature of a case of strychnine poison ing is that the patient retains consciousness until near the end and in consequence suffers tortures I have looked up half a dozen standard reference books and every one actually mentions this characteristic and distressing feature The spasms prevent breathing cause asphyxia and in consequence produce unconsciousness if sufficiently prolonged I have no doubt that Dr Van Rooyen s observation is quite correct and that at the end of most spasms there is a *short* period of unconsciousness The important practical fact is that the first thing that strikes the untrained (or trained) observer in a case of strychnine poisoning is that the patient is conscious and is suffering tortures It is therefore unwise to suggest in a popular manual that strychnine poisoning is associated with un consciousness Moreover the St John Ambulance manual is technically incorrect because it states that strychnine can cause insensibility when breathing is present whereas the unconsciousness occurs when breathing is arrested For these reasons I suggest that it would be wisest for the St John Ambulance Association to leave out of its excellent manual the statement under dispute Even if it were technically exact it would be likely to mislead an untrained observer

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons this week discussed in com mittee and on report the Budget resolutions varying taxation The House also approved reductions in British import duties which had been promised in the Anglo-German Trade Agreement

On April 26th the Protection of Animals Bill was read a second time in the House of Commons without debate and the Protection of Birds Bill was passed by the House of Lords The Blind Voters Bill was read a third time by the House of Commons on April 27th and a first time in the House of Lords on May 2nd

The Parliamentary Medical Committee has arranged to meet a deputation from the British Social Hygiene Council at the House of Commons on May 11th and a deputation from the British Medical Association on May 18th The latter deputation is to discuss the superannuation allow ances of local government officers

At the House of Commons on April 26th Dr Thost a German who was introduced as Herr Hitler s repre-sentative in England addressed a meeting of M P s and gave an explanation of the treatment of Jews in Germany Despite this statement the meeting carried a resolution deploring the German Government s attitude towards Jews in Germany

Medical Qualifications in Ceylon

Mr R J DAVIES on April 25th asked the Secretary for the Colonies if as the Government had been in consulta tion with the General Medical Council on the qualifications of those entering the Government Medical Service in Ceylon he would bring the matter to the consideration of medical practitioners in Ceylon before any decision was taken Mr MALCOLM MACDONALD replied that he was not aware that the qualifications of persons entering the Government Medical Service in Ceylon had been discussed recently with the General

Annual Oration

ON

NEW TREATMENTS FOR OLD

DELIVERED BEFORE THE MEDICAL SOCIETY OF LONDON MAY 8TH 1933

BY

LORD HORDER K.C.V.O. M.D. F.R.C.P.

PHYSICIAN IN ORDINARY TO H.R.H. THE PRINCE OF WALES; SENIOR PHYSICIAN TO ST. BARTHOLOMEW'S HOSPITAL

I should like to begin with the customary word of appreciation of the honour you pay me in asking me to deliver this Annual Oration—customary and yet by no means perfunctory because I am very sensible of the note of distinction which your choice carries with it. The Medical Society of London provides a unique *milieu* for observations which range rather widely over the field of medicine using this word in its fullest and best sense. And that these observations are being made this evening by one whose sphere of thought and work is also wide—some may say much too wide to be useful—is perhaps not inappropriate having regard to the fact that this society is not sectional but universal in its ambit. I am content with the reflection that our society in its aims and your present Orator in his outlook upon medicine either fall together or together stand justified. The word pathology has been wrested from its original and true meaning has become stunted in its connotation otherwise I would remind you that there is a unity in it which is worth preserving and that though much may be gained by way of progress if we view it compartmentally there is something lost if we do not now and again make the effort to see it steadily and see it whole. And this is what the Medical Society stands for or so I understand its purpose.

Especially do I think this observation true of therapeutics. To get a proper conception of pathology we must not separate off one organ from the rest. To be good therapeutists we must remember the harmony that exists and must be preserved between the various organs and tissues when we seek to restore a state of equilibrium which has been temporarily upset. A good doctor though he may call himself physician surgeon psychologist or immunologist must in spirit be all of these. He must think physiologically and he must think pathologically. Having worked out carefully in his mind the indications for treatment he must meet these indications in the best informed and most skilful manner that he himself together with his colleagues can achieve. It is this thought that induces me to believe that a society like ours which is quite unspecialized is the right place to discuss some changed aspects in therapeutics and to consider their bearings upon the present position of medicine.

THERAPEUTICS AND TECHNIQUE

Our friend the public has no doubt about the progress made by medicine during the last few decades. Nor with all our chafing when faced with incurable disease have we ourselves on serious consideration any doubt. There are certain advances to which we can point and they not only give us hopes for the future but they show the way by which fresh successes may be gained. (I am not to-day including preventive medicine in my purview.) In the realm of therapeutic research the stories of insulin and of liver therapy stand out prominently as having provided us with novel methods of treatment. The dreary lives and outlook of thousands of diabetics and sufferers from pernicious anaemia have been completely changed by these two advances. In both cases the results have been achieved by long and patient research and strict adherence to the principles of physiology and the established facts of histology and chemistry.

The application of technique to therapeutics has led to equally sound new methods. The surgeon has fused his efforts with those of the physician in more than one field: that of pulmonary tuberculosis affords a striking example: artificial pneumothorax phrenic avulsion and thoracoplasty have assisted greatly in securing physiological rest and healing of the diseased lung. Blood transfusion has saved many lives and has assisted greatly in enabling us to exploit methods of treatment which would otherwise fail of their purpose. The technique of the radiotherapist has become highly efficient both in *x* rays and in radium and the overlap of his work with general medicine grows steadily. The physiotherapist too has brought many forms of technical help to a high pitch of usefulness. Indeed he offers us almost an embarrassment of riches and we are perhaps a little in danger of being cluttered up by pieces of machinery which we are tempted to use a little indiscriminately rather as an inexperienced fireman might play with his hose and wield his axe first here then there without much definite purpose and perhaps doing harm as well as good. Only for a hose and an axe we must substitute numerous kinds of implements: ionization diathermy ultra violet rays high frequency the sinusoidal current Finsen light—a whole series of physical methods. The fashionable quack tries all in turn on the same patient hoping by trial and error to get a result before the client gets tired. In ide the profession there is more and more evidence that the man controls the method rather than the method the man. And this is what matters in all such things. So that physiotherapy may be counted upon to go much further and is bound to exercise great influence in modern therapeutics so long as it is guided by physiological principles. It has already changed the aspect of the treatment of many diseases not a little.

We have no difficulty in appreciating that if technique be added to therapeutics in the ways just mentioned and in other ways success to be real and lasting depends upon the subservience of the method to physical principles on the one hand and to physiological principles on the other. Abrams's box is an example of a piece of machinery (save the mark!) which offends against both of these principles: the wires do not join up and nothing demonstrable happens to the patient. But the credulous public so loves a piece of apparatus which it believes capable of eliminating the fallible human element whether in diagnosis or in treatment that the business still goes on and seems likely so to do. We see clearly I say that the skilled physicist to be a therapeutist must wed his physics to the patient's physiology.

WORDS AND PRINCIPLES

I want to touch on some of those more complex fields of therapeutics in which the necessity for this same alliance between the method and the principles though it is equally essential that it be observed is broken and where it may not be very easy to see exactly where the divorce has taken place.

In passing I should like to say that if we get slovenly on the point of terms and definitions it follows that only by a happy accident can we achieve anything. The curse of Babel is not more calculated to prevent concerted action among laymen than is indifference in the use of terms calculated to hold up progress in any branch of science. Take the word specific for example. Until quite recently the meaning of the word was precise and entirely free from ambiguity when used in immunology. But we

have arrived at a state of confusion as regards its connotation in therapeutics—or some people have. If the result of the use of an antigen, or even a drug in the treatment of an acute infection is sufficiently dramatic, whether the result be good or bad, the substance used is called specific," quite regardless of its mode of action. Certain preparations put on the market for use in acute infections of quite different nature, differing as much as influenza differs from furunculosis, are credited with containing 'the specific antibody,' whatever that may mean. But this is merely a protest in passing.

When we think carefully on the question, most of our treatments, and some that are quite successful, are matters of expediency; they are not matters of right or wrong. This arises from the fact that it is always Nature that cures and not we. The disharmony we call disease can only be adjusted by the operation of processes which are already inherent in the body; we cannot substitute new processes, we can only help and control those by which life and health are being already maintained. This basic fact is, I take it, the *raison d'être* of the preliminary studies in the medical student's curriculum. To tamper unduly with these fundamentals would inevitably lead to an extension of what is already—or so I believe—a disastrous tendency in modern therapeutics, the tendency to think that what I may call "direct action" is the best way of getting an ill person restored to health. I am not a believer in the efficacy of direct action in the political sphere, but, however this may be, I am convinced that it is doomed to ultimate failure in the sphere of therapeutics. Moreover, it is becoming more and more popular, and I think it needs to be watched and to be resisted.

Limitations of Direct Action

There are, it is true, some diseases which call for treatment by direct action—action which is urgent, perhaps life saving in its insistency, but for the most part these are accidents rather than disease processes. Acute poisoning calls for prompt elimination and appropriate antidotes. Cessation of breathing demands artificial respiration. A foreign body in the larynx must be extracted as soon as may be. In the "acute abdomen," if the diagnosis favours the rupture of a hollow viscus, the peritoneal cavity must be opened forthwith. But even in the acute abdomen, if the diagnosis is clearly that of an inflammation, direct action is not necessarily indicated. Judging by the closeness of the voting at a recent discussion it would appear that after nearly forty years of familiarity with so common a disease as acute appendicitis no rule of practice carries conviction; two authorities of equal experience and equal technical ability, and both of them surgeons, may decide upon quite different lines of treatment. And it is fairly certain that the mortality incidence in the practice of both men is much the same.

What's in a Name?

Direct action is of course the main appeal of the quack medicine to the credulous public. The reader of the advertisement cannot withhold his confidence in a remedy whose very name suggests that his dominant symptom is its sole and its immediate objective. "Jones's backache pills." "Smith's blood mixture," 'Robinson's asthma cure," and so on. "Purple pellets for pallid persons," in addition to the attraction of alliteration, stresses the appositeness of the remedy for the particular purpose. These things lie outside medicine. The empirics, however, do not monopolize this form of appeal, and though such names as 'spasmalgin" and 'phenodorm" are perhaps admissible, seeing that the main actions of these drugs may be allowed to dictate their names ('morphine" might be advanced as a precedent) and even "regulin" may be forgiven for somewhat similar reasons, what shall we say of 'arthrytin" and 'antibacsyn" and 'antimalignyn"? These names offend not only because they put the doctor's mentality on a level with that of the ignorant layman, but because they suggest that a number of disease processes which are widely different are all of them amenable to the same chemical substance. I do not think that the doctor turned-chemist is of help to us in these matters. I think we have trouble enough as it is to resist the blandishments of the chemist proper. Formerly the chemist was the servant of the doctor, to-day he tends to become the doctor's master. His preparations are so elegant, the troubles for which he offers them are so obviously just those for which we have long been awaiting an efficient remedy, and the presentation of his thesis is so attractive, that we succumb very easily to his dictation.

I recently asked a friend of mine engaged in a busy practice what determined his decision to try any of these new remedies with advertisements of which we are all of us daily bombarded. He said he was governed by two criteria. The first was the reputation of the firm which put the preparation on the market, and the second was the quality of the literature which introduced it, by which he meant the degree to which he was convinced by this literature. Now I believe his first criterion to be a sound one. There are at least a couple of old-established firms trading in this country whose products can not only be counted upon to be pure and accurately assayed, but who spend a large sum of money annually in useful experimental work, and maintain efficient laboratories with a distinguished personnel designed to place their newer preparations upon a sound scientific footing before they recommend them. Of a number of other firms, and some private individuals, the same cannot be said. The tendency to rush a remedy on to the market before it has been brought under scientific control is increasing and should be severely discouraged. The second of my friend's criteria is more difficult to assess, and it is no reflection upon a busy practitioner to suggest that he may not be familiar with the fallacies involved in a specious pamphlet. The alleged actions of a drug which call forth the eloquence of the traveller, untrained as he is in the principles of our work, do not necessarily always appeal to us. The other day I was solicited to give a trial to a new and perfect intestinal disinfectant, that consummation so devoutly to be wished by many. I was told that it rendered the faeces quite sterile. My imagination toyed with the thought of what might happen to a patient with sterile faeces, and my interviewer seemed surprised that I did not share his enthusiasm even if I could not deny his fact.

Doses Large and Small

In the matter of dosage of drugs we have in recent years tended in the direction of the mass attack. In some cases this has proved useful but not, I think, in all. We have seen a revival in popularity of a number of old remedies, some of which though they have never entirely dropped out of use, have come to be employed less frequently and with less confidence in their efficacy. The revival has, in some cases, been accompanied by an effort at greater systematization, and this has undoubtedly been to the good. We cannot accuse all the physicians of the last century of engaging in dilute therapeutics (*pace* our homoeopathic friends), but we have, in some well known instances, gone far beyond them. Even in the use of salicylates in rheumatic fever our doses exceed theirs, and this though we see much less than they did of the severe forms of the disease. The prevalent use of quinine in malaria is another instance of the same tendency. Alkalis were given in peptic ulcer, but the effort now

Medical Council The Ceylon Government had under consideration the recommendations made by Sir Richard Needham who reported on behalf of the General Medical Council on the technical education provided by the Ceylon Medical College and the Council had been informed of the measures which the Ceylon Government contemplated in furtherance of those recommendations The extent to which medical practitioners in that island were to be consulted regarding such measures was a matter for the Ceylon Government to decide

Deaths during Anaesthesia

Sir HILTON YOUNG told Mr Maclean on April 27th that during the calendar year 1931 the number of deaths registered in England and Wales which were certified as having taken place under or in connexion with the administration of an anaesthetic was 723 Certifying medical practitioners were advised that when death occurred during anaesthesia or was in any degree attributable thereto a reference to the anaesthetic should be made on the certificate If Mr Maclean knew of any case where a patient had died while under an anaesthetic and the fact did not appear on the death certificate Sir Hilton would be glad to have it brought to his attention

On May 2nd Mr SKELTON informed Mr Maclean that the number of deaths registered in Glasgow during 1932 which were certified to have occurred during or following the administration of chloroform was fifteen There were also twenty four deaths where the anaesthetic was chloroform and ether and one death where the anaesthetic was ethyl chloride chloroform and ether Mr MACLEAN asked whether in the case of death occurring under an anaesthetic the only statement on the certificate sometimes was that death took place from heart failure Mr SKELTON said he would like more specific notice so that he could inquire into the question

References to Regional Medical Officers

On May 2nd Sir HILTON YOUNG told Mr Rhys Davies that in 1923 165 719 insured persons in England Scotland, and Wales were referred to the regional medical officers by approved societies Insurance Committees and doctors In 1932 the number was 687 331 These references were disposed of as follows Of the insured persons who did not attend for examination in 1923 29 867 declared off the funds before examination and in 1932 173 353 Other cases were in 1923 36 831 and in 1932 130 106 Of the insured persons examined in 1923 26 697 were found capable of work and in 1932 114 421 These figures included references brought forward from the previous year and disposed of and excluded references made during the year and still under consideration at the close

Reduction in Health Services Grant

On May 2nd Mr R J DAVIES asked the Chancellor of the Exchequer to explain the reduction of £13 000 from £162 000 to £149 000 in the estimated grant on account of health services as set forth in Table B of the Financial Statement 1933-4 Mr CHAMBERLAIN said that the item in the tables to which Mr Davies referred was made up of ten small grants for certain health services not absorbed in the general block grants under the Local Government Act 1929 The main reason for the net decrease of £13 000 was a decrease of £12 490 in the capital grants for sanatoriums on the practical completion in 1932 of the liquidation of commitments which remained to be met when the main scheme of capital grants ceased in 1921

Botanic Medicine —On April 25th Sir HILTON YOUNG informed Mr Tinker that a letter addressed to him from the Secretary of the Institute of Botanotherapy asking for a legal status to be given to qualified practitioners of the botanic school of medicine was received by his Department on April 24th He would send Mr Tinker a copy of his reply in due course

Slum Clearance in Scotland —Sir G COLLINS states that it is estimated that from 1919 to March 31st 1933 24 100 houses in Scotland were demolished in schemes promoted by local authorities for State assistance specifically for rehousing persons from unfit houses

Obituary

SIR ARTHUR WHITELEGGE, K C B

M D F R C P

Late H M Chief Inspector of Factories

We regret to announce the sudden death on April 25th of Sir Arthur Whitelegge, who for twenty one years held the post of Chief Inspector of Factories and Workshops and was the author, with Sir George Newman, of a manual of hygiene and public health which has passed through thirteen editions

Benjamin Arthur Whitelegge was born on October 17th, 1852, son of Henry Whitelegge of Tideswell, Derbyshire He studied medicine at University College, London (of which he was later elected a Fellow) and graduated B Sc Lond in 1874 He qualified as M R C S in 1876, and proceeded to the M D degree in 1881, in which year he obtained the Cambridge D P H In 1884 he was appointed medical officer of health for Nottingham, and five years later became county medical officer of health for the West Riding of Yorkshire, a post he held until 1896, combining with it that of chief sanitary officer to the West Riding Rivers Board During that part of his career he was also for five years lecturer on hygiene and public health at Charing Cross Hospital Medical School In 1893 he was chosen by the Royal College of Physicians of London to give the Milroy Lectures in State medicine and public health , his subject was " Changes of Type in Epidemic Disease "

In March, 1896, Whitelegge was appointed H M Chief Inspector of Factories at the Home Office, and retired in October, 1917 He was elected a Fellow of the Royal College of Physicians in 1898, received the honour of C B in 1902, and was created K C B in 1911 He had been a member of the Departmental Committee on Factory Statistics in 1893, and of the Committee on Wool Sorting and Kindred Industries appointed by the Home Secretary in 1895 He was also a member of the Royal Commission on Arsenical Poisoning in 1901, and of the Lighting of Factories Committee in 1913 When a Section of Industrial Hygiene and Diseases of Occupation was held for the first time at an Annual Meeting of the British Medical Association in 1902, the Council appointed him president It was appropriate that one who had already done admirable work in connexion with the prevention of trade diseases and accidents should have been chosen to preside over this section, which met in Manchester on the centenary of the first Factory Act, and in the first year of an important consolidating and extending Factory Act "We are now," he said in his opening speech, " working under better and more intelligible laws than ever before, and it remains for us to do our best to apply them Our branch of State Medicine is one of growing importance, both in itself and in the number of the profession upon whom it has claims "

Sir Arthur Whitelegge married Fanny Marian, daughter of the well-known painter John Calcott Horsley, R A , and was thus a brother-in law of Sir Victor Horsley He was a man of kindly and sympathetic disposition, loyal to his colleagues, and free from any trace of affectation or self advertisement

DAVID SHANNON M B F C O G

Senior Surgeon Royal Samaritan Hospital for Women Glasgow and Lecturer in Gynaecology University of Glasgow

Our last issue contained a short announcement of the death of Dr David Shannon the distinguished obstetrician and gynaecologist which took place on April 20th at his residence in Woodside Place Glasgow

David Shannon was born at Greenock fifty six years ago the son of Mr James Shannon a prominent merchant in that shipping centre During his undergraduate career at Glasgow University he took a leading part in the social life of the student community, and while secretary of the Students Union went off to the South African war as a senior N C O with the Scottish Hospital which was organized by the late Sir G T Beatson He returned to graduate M B Ch B in 1901 and thereafter set off to prepare himself for specialist practice by a long period of post graduate study at the Rotunda Hospital Dublin and in Berlin Having established himself in practice in Glasgow he was appointed to the visiting staff of the Royal Maternity and Women s Hospital and of the Royal Samaritan Hospital for Women He was promoted to the charge of wards in the Samaritan Hospital at the unusually early age of 35 In 1920 a year after his return from active service in the war he was appointed to the charge of wards in the Maternity Hospital and lecturer in clinical obstetrics in the university In 1926 when the great extension of the Samaritan Hospital was completed he was appointed to the charge of the new wing containing some eighty beds probably the largest gynaecological unit in the country At the same time he was appointed to the newly founded Samaritan Hospital lectureship in gynaecology in the university This appointment necessitated his retirement from the active staff of the Maternity Hospital and in recognition of his valuable services to that institution the directors appointed him honorary obstetric surgeon

Shannon maintained an extremely busy consulting practice in obstetrics and gynaecology in the West of Scotland He was a sound clinician and a skilful operator He was a most enthusiastic teacher—not only an impressive lecturer but also a most attractive clinical master His teaching hours were probably the greatest joy of his busy professional life and the interest he took in his students extended far beyond the lecture room or hospital ward For over twelve years he had been an examiner first in clinical obstetrics and then in clinical gynaecology for the University of Glasgow While his chief interest throughout had been in the clinical side of his specialties he was always ready to encourage and support those of his colleagues and assistants who were able to devote time to the more scientific side He was not a prolific writer but his contributions made chiefly to the obstetrical societies of Edinburgh and Glasgow contained the mature judgements of many years of clinical experience His favourite theme was the management of cases of contracted pelvis The appreciation of his services to obstetrics and gynaecology was shown in his appointment as a Foundation Fellow of the British College of Obstetricians and Gynaecologists

He gave eager service to all the societies which came within his range of interest For many years he acted as secretary of the Glasgow Obstetrical and Gynaecological Society and later served his term as president He was a frequent visitor to the Edinburgh Obstetrical Society and seldom missed a meeting of the Gynaecological Visiting Society either at home or abroad Since its formation at the end of the war he had been secretary of the Glasgow and West of Scotland Overseas Medical Club Just two years ago it was his honour to be president of the eighth British Congress of Obstetrics and Gynaecology then assembled in Glasgow his attractive personality went far to make that meeting the great success it proved to be

Shannon continued the interest in the Army Medical Services which he had shown during the South African war A captain in one of the Lowland field ambulances he was mobilized in August 1914 went out with the Lowland Division to the Dardanelles and afterwards served in Egypt Palestine and Salonica The rigours of war service in the Middle East impaired his health very seriously but even after the armistice he continued his service and was promoted lieut.-colonel R A M C in 1921 His public services were honoured by his appointment in 1926 as a deputy lieutenant of the County of the City of Glasgow of which he was also a justice of the peace

While his health had been unsatisfactory for some time he continued his work with the greatest courage and persisting cheerfulness It was a great blow to his many friends to realize a few months ago that he was desperately ill and that neither the consulting room the hospital nor the lecture room would ever see him again He is survived by his wife a graduate in medicine of his own university who has been for many years a member of the staff of the Royal Hospital for Sick Children On April 24th a funeral service was held in St George s Church Glasgow attended by representatives of the various institutions with which he had been connected and by a very large assembly of personal friends Thereafter the interment took place in his own home town of Greenock

Shannon s death has left a very large gap in the medical profession in the West of Scotland He had the gift of friendliness and delighted in the society of his fellows His patients entertained towards him a most wonderful devotion He was always an enthusiast and gave un selfish and unstinted support to any cause in which he was interested His hospital directors owe much to his ability his energy and his loyalty Senior medical students have lost a brilliant teacher and the university a most progressive lecturer It is a tragedy that such a friend should have been taken from us at the zenith of his powers

J H

The death took place on April 18th at Stonehaven after a prolonged illness of Dr W A Macnaughton who for nearly forty years had acted as medical officer of health for the county of Kincardine William Alexander Macnaughton was a native of Perthshire and after graduating M A at Edinburgh University in 1876 at the age of 20 studied medicine and graduated M B in 1878 proceeding to the M.D degree in 1881 For a few years he engaged in private practice in the North of England but determining to devote himself to public health work he took the D P H of Cambridge in 1889 and in the following year was appointed medical officer of health for the county of Kincardine a post which he held until he retired in 1930 He was thus one of the sixteen full time medical officers appointed under Scottish county councils when the Local Government (Scotland) Act 1890 came into force Dr Macnaughton was held in very high esteem by the people of Stonehaven and throughout the county of Kincardine In addition to various contributions to periodical literature connected with his special department Dr Macnaughton was distinguished as having founded in collaboration with the late Dr S R McPhail the Caledonian Medical Society and the *Caledonian Medical Journal* He continued to act as one of the editors of this periodical up to the time of his death He was a keen archaeologist and took particular interest in the early and historical associations of the district in which he lived One of his recent historical studies published in the *Caledonian Medical Journal* consisted of a record of the medical men who were out in the rebellion of 1745

made at alkalinization is relatively new and the picture of alkalosis occasionally seen was probably unknown to our teachers Iron again was given in chlorosis and freely but with the disappearance of that disease and the experience that the metal was of little service in Addisonian anaemia iron dropped very largely out of practice or was only employed as a tonic and chiefly in the form of the scaly preparations We now give iron more frequently and in a variety of anaemias prescribing massive doses The metal has so low a degree of toxicity that even when these large doses are not helpful they do not seem to harm the patient In streptothrix infections we use the iodides or some other form of iodine in much larger doses than did our predecessors and with good results True there was always a school of therapeutists that gave iodides very freely in syphilis though another school took the view that the same good results might be achieved by smaller doses

Of special interest in this connexion is the use of digitalis in cardiac diseases *Digitalization* achieved by giving large doses at frequent intervals until physiological effects are observed has become a familiar method It is interesting to note that this was suggested by Balfour One result of the popularization of this intensive method seems to be that digitalis has fallen into disuse to a large extent in a number of the less dramatic forms of circulatory trouble in which it was formerly employed with benefit The extreme position in this matter is taken up by those who teach that the only indication for digitalis is auricular fibrillation Such a severe limitation to the use of the drug denies to many patients its helpfulness in a number of other conditions—for example in the milder cases of the senile heart and in the circulatory disturbances associated with renal disease No doubt the great relative infrequency of primary mitral incompetence in these days *pari passu* with the infrequency of rheumatic valvulitis of the more acute type denies the younger practitioner the ocular demonstration of the dramatic effect of digitalis with relapse after relapse in such cases (showing no arrhythmia) which was formerly such a common experience In short the apotheosis of mitral stenosis has aroused so much interest in this form of cardiac disease that some of the other forms especially as seen in private practice have been as it were blacked out of the doctor's mind And it is in these forms that smaller doses of the drug are still so effective

The Pendulum of Practice

Thoroughness in treatment always makes a great appeal to me Sceptical by nature my first reflection when I am told that a patient is cured is that he probably is not The dogged persistence of a disease process once started and whether the original irritant be microbe or not—but especially if it be microbic—is a lesson that experience alone teaches us In particular we see this with such infecting agents as those of syphilis tubercle and the less virulent types of the streptococcus and coliform bacillus groups Remissions yes quiescence yes but arrest possibly yes but probably no Anyway better to assume no in the patient's interest and persevere with whatever appropriate remedies we have long after the signs and symptoms have gone and even after specific reactions have disappeared Our fathers knew this and acted accordingly But should it be by intensive methods from time to time or by steady slow persistence with small doses or by intensive methods first and by slow persistence with small doses afterwards? Even to-day this question has not been finally answered The pendulum of practice still swings Syphilis is as we know a pertinent example The arrival of 606 was heralded by the hope of a *sterilisatio magna* But with the reluctant relinquishing of this ideal and the resentment shown in many patients by certain organs and especially the liver to a mass attack a less vigorous onslaught has been made and this even though the modern equivalents of the drug and supplemental or substitutional drugs are much less toxic than was the original The problem indeed is not the simple one that some of us still seem to think it—of a foreign foe invading the home country wandering about the surface of the land and capable either of being rounded up and chased back across the frontier or killed in the open by shrapnel and machine guns The very first symptoms of the disease indicate that the enemy is already dug in more than that he has fraternized with the home troops and with the civilian populace and even with the governing elements themselves

In syphilis which certainly does give us a model for therapeutic exploitation—even though we may not subscribe to that quaint doctrine which holds that there is one disease and syphilis is its name—it is interesting to note a recent tendency to return to the older method of Hutchinson and to treat the patient by small doses of mercury over a period of two years at least This method of using drugs known as alteratives of which mercury was one of the most important was in vogue long before Hutchinson's day The poet Crabbe has a couplet of lines that clearly refer to this custom

> Here alteratives by slow degrees controul
> The chronic habits of the sickly soul

But the method of the storm troops is still the favourite with many—to make a sudden and overwhelming attack Exactly what the human body will stand in this way with damage it is true though with damage which may not be lethal is well illustrated by a patient recently under my care in St Bartholomew's

A healthy young Jew of 22 was admitted on April 4th His history was that he had developed a primary sore and also showed some symptoms of a general infection three years before He went to the venereal department of a London hospital was found to have a positive Wassermann reaction and was treated by arsenic and bismuth He received in the course of three months 4·95 grams of N A B and 8 c.cm of a 20 per cent glucose solution of bismuth His Wassermann reaction was negative at the end of this treatment Five months ago he presented himself again at the same hospital His Wassermann reaction was still negative He was given two injections of neoarsphenamin and as he felt ill this was changed to acetylarsan of which he received 2 c.cm on two occasions He was then given four injections of 0·6 gram each of sulphostab and also four injections of 2 c.cm each of bismuth oxychloride He then complained of irritation and redness of the skin of his lower limbs Two months ago between February 10th and February 24th he received three injections of 0·6 gram each of the same sulphur preparation and three injections of 2 c.cm each of bismuth oxychloride Eight days before admission the patient complained of colicky pains which doubled him up and of constipation and cramps in the legs On admission there was an intense black line on the gums a good deal of gingivitis and all the front teeth were loose Four days after admission deep jaundice appeared My colleague Dr Harrison demonstrated bismuth in as little as 150 c.cm of urine and Dr Archer detected arsenic in 0·25 gram of hair But the patient left hospital on April 28th apparently well

Such thoroughness such an implacable determination to purge the patient of his peccant humour at all costs is reminiscent of the old story of the French dermatologist who accepted the challenge to cure the intractable skin disease—another arsenic story It also reminds me of a candidate whose examination paper I once corrected The question was about anthrax (wool sorters disease) with special reference to its preventive treatment This he said is very important (He might count on full marks thus far at all events) All

view these children form a great test of a school's efficiency for if school is a success the child will make good, if a failure the child will be harmed and further handicapped There is nothing that can replace in its life the benefit of a satisfactory school career

It is about the school life of these children that doctors are so often consulted, and I think that there are many matters causing uneasiness to the minds of parents, of which more is heard by doctors than by the school authorities I propose, therefore, to discuss some of the factors which seem to me to lead to lack of the fullest benefit from school life or even to actual ill success I shall deal with them under the headings of school, home, and health

SCHOOL FACTOR

Choice of School.—Failure to fit in successfully at school is not necessarily the fault of the school or of the child often the wrong type of school has been chosen Generally speaking, boarding school is less of a strain than day school, with its dual interests for the child I am often amazed at the length of day to which parents will submit day-school children After the child returns in the evening there is homework, more hated and harmful than any other part of the day's work and much more strain than prep' in class Boarding school is essential for solitary children, children of widows and delicate town children It is impossible to exaggerate the benefit that may accrue to the latter from years spent in the wonderful air of our health resorts The plan of a weekly boarder is unsatisfactory to the school and difficult for the child although some happy children from sensible homes manage it quite well Mixed day and boarding schools are apt to be hard on the boarders whose hours have to suit the day pupils Co-education schools have not, as yet had the advantage of being patronized by ordinary children of ordinary parents The youngest children may go to kindergartens or pre preparatory schools, but as a rule they go into the bottom classes of ordinary boarding schools where they settle down with a pleasure begotten of pride It is not unimportant where these little folk go for the worst bullying especially at girls schools is apt to occur in the lowest forms A dominating little girl will lead all the others against some harmless child for no reason save that she wishes to show off her power It is not necessarily wise to send a child to a particular school merely because its brothers or sisters have been there before There is more in the selection of a school for an individual child than this plan allows Boarding school offers a fuller life with less strain and greater opportunity for development of character and improvement in health than any other type of school In many instances it is a necessity to the child no alternative is half so good

Climate.—As many children are sent to boarding school primarily for their health it is only common sense to choose the best climate Speaking as I am in Thanet, I need hardly emphasize this point

Extra Care for Delicate Children

A school is not a convalescent home, still less is it a nursing home nevertheless there are many children, needing boarding-school life supremely, who will require extra attention if they are to be made successes In most instances of physical delicacy this is only required for the first term or so for the rest of its school life the child is well and strong Additional rest is one of the needs of most delicate and nervous children as I shall mention later Particular attention should be paid to weight It ought not to be difficult to have a list of children who should be weighed every fortnight or month In any case, to have children weighed only at the beginning and e of term is not enough It is not fair to send a child hor having lost 4 lb and no one to have noticed the chan until the end of term Unless there is some spec reason to the contrary, a child should not be told weight, and should be weighed with its back to the scal

Nervous children who are notoriously bad mixers mu be protected from incidental 'ragging' and bullyin What may be harmless or even good for the ordinary chi may mean disaster for them The same holds good class, the teacher must distinguish the lazy careless chi from the nervous, scatter-brained, and perhaps half scar child, and must know which child will improve wi correction and which will just wilt under it Generall speaking, the nervous child will react only to encourag ment Some have a special horror of certain lessons pa ticularly of mathematics This subject should be taugh by a highly paid professional dunce no mathematicia has any idea of the difficulties which children have ove the elements of the subject

Considerable experience is necessary in handling som of these difficult children How often a trifling inciden will put a child at loggerheads with its teacher! Member of the teaching staffs of schools should not be abov taking advice from the head of the school I have many times known the head to be the only person who coul understand and get round a child To do this to put a nervous little girl on her feet and to get her to take her proper place in the school and to do it without allowing the child to develop a devastating passion for herself is a very clever thing for any mistress to accom plish These passes play havoc with the nerves of children, and must be prevented at all costs

Feeding.—Delicate children may need extra feeding or some modification of the school diet What is more commonly required, however, is that the school should provide a liberal ordinary diet and should see that the child eats it In this matter the school has a great advantage over the home Often indeed the mother of an inveterate non eater has given up the struggle, and has deliberately left it to the school to get the child into better habits There are many interesting medical problems in connexion with such cases but there is no doubt that in many of them habit plays a large part These children, therefore sitting scattered among the others must be carefully watched at meals, in most cases the child forgets its difficulties and goes ahead well And this leads me to speak of the importance of the fourth or evening meal In my opinion, there has been of late years a great improvement in this matter Older children are getting proper meat suppers, and the tea meal has been reduced Something more strengthening and less fattening is required than a surfeit of bread, butter, and jam Even in preparatory schools there will probably be a certain number of older and also delicate children who will do better with a proper fourth meal in the day There is no truth in the idea that children cannot sleep well after a good plain meal at night On the contrary, they sleep quite well, just as they can play games directly after a middle-day meal large enough to immobilize an adult for the afternoon It is to be hoped that these times of financial stringency will not cause any falling away from the high standard of school dietaries

Modern Psychotherapy

It is impossible to speak about difficult or nervous children without making some mention of modern psychology and the methods of treatment based upon it This matter is increasingly exercising the minds of parents Already it is claimed that all peculiarities of school children, whether in temperament or deportment, should

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

At a congregation held on April 29th the following medical degrees were conferred

M D—*J E Semple
M B B Chir—J H Bulby R W C Murray L D Ward, J R W Price
M B—*R O Lee R A Ratcliff C J K Hamilton

* By proxy

The following candidates have been approved at the examination indicated

DIPLOMA IN MEDICAL RADIOLOGY AND ELECTROLOGY—(*Part I*) S S Alam A Cawadias W O Neill M Singh P J Sinnoth (*Part II*) J S Austin L R B Birt I G Blair H J Davies, C C Divanji I Fine R McWhirter W W Main R F May R J L O Donoghue R F Phillips E J Rawnsley F W H Shawcross W Sowerby J Z Walker B W Windeyer

UNIVERSITY OF LONDON

The following candidate has been approved at the examination indicated

DIPLOMA IN PSYCHOLOGICAL MEDICINE (*with Special Knowledge of Psychiatry*)—Marjorie Low

UNIVERSITY OF LEEDS

The Council of the University announces the gift of £1 000 by Mr C R Brotherton nephew of the late Lord Brotherton for equipment of the museum at the Algernon Firth Pathological Institute, which was formally opened last week (see page 801)

UNIVERSITY OF DUBLIN

TRINITY COLLEGE

At the first summer commencements held on April 26th the following degrees in the Faculty of Medicine were conferred

M D—W R Johnston T J O Reilly V St G Vaughan
M B B Ch B A O—C C Langford

NATIONAL UNIVERSITY OF IRELAND

At a meeting of the Senate on April 27th with the Chancellor Mr Eamon de Valéra in the chair the reports of the examiners on the results of the medical and dental examinations spring 1933 were considered and passes honours etc, were awarded in connexion therewith

The following appointments were made in University College Dublin James J O Kelly M B B Ch M A O lecturer in obstetrics, Reginald J White F R C S I lecturer in gynaecology

ROYAL COLLEGE OF PHYSICIANS OF LONDON

A meeting of the Royal College of Physicians was held on April 27th with the President Lord Dawson of Penn in the chair

Fellowship

The following Members were elected Fellows of the College

Robert Alexander Gibbons M D Ed (London) Arthur Douglas Heath M D Lond (Birmingham) Julius Meyer Burnford M B Lond (London) Herbert Chavasse Squires C M G M D Oxf (London) Sir Robert Stanton Woods M D Lond (London) Frank Clayton M D Camb (Leamington) Elkin Percy Cumberbatch M B Oxf (London) Bernhard Ehrenfried Myers C M G M D Ed (London) William Rees Thomas M D Lond (London) Joseph le Fleming Coy Burrow M B Ed (Leeds) Edmund Walter Neill Hobhouse M D Oxf (London) John Cadman Tull M D McGill (Singapore) Tom Watson Wadsworth M D Liverp (Liverpool) Joseph Wilkie Scott M C M D Glasg (Nottingham) Egerton Llewellyn Pope M D McGill (Edmonton Alberta) William Siegfried Dawson M D Oxf (Sydney) Geoffrey Barrow Dowling M D Lond (London) Theo Jenner Hooper Hoskin M D Camb (London) Frederick Craig Hobson D S O M D Oxf (Oxford) Matthew Sydney Thomson M D Camb (London) Cecil Charles Worster Drought M D Camb (London) Arthur Griffith Maitland Jones O B E M C M D Lond (London) Harold Esmond Armson Boldero M D Oxf (London) Gerald Tyler Burke M D Lond (Lucknow) Charles William Buckley M D Lond (Buxton) Charles Keith Johnstone Hamilton M C M B Oxf (London) Arthur Arnold Ormin D S C (London) Leslie Barrett Cole M D Camb (Cambridge) James Livingstone Livingstone M D Lond (London), Samson Wright M D Lond (London) Wilfrid Percy Henry Sheldon M D Lond (London) Hugh Barber M D Lond (Derby) Claude Wilson, M D Ld (Tunbridge Wells) William Fletcher M D Camb (London) Sydney Wentworth Patterson M D Melb (Ruthin Castle) Thomas Arthur Ross, M D Ld (Penshurst) Alexander Mills Kennedy M D Glasg (Cardiff) Kenneth Shirley Smith, M D Lond (London) George Frederick Buchan M D Glasg (London), Edward Charles Dodds M V O M D Lond (London) Arthur Cecil Hampson M C M D Camb (London) James Alison Clover O B E M D Camb (London), Lionel Ernest Howard Whitby, C V O, M C, M D Camb (London) Sheldon Francis Dudley O B E M D Lond (Chatham), Richard Robertson Trail, M C M D Aberd (Midhurst)

Sir Robert William Philip M D Ed (Edinburgh) and Captain Stewart Ranken Douglas I R S (London), were elected Fellows under By-law XXXVIII (*b*)

Membership

The following were admitted Members of the College

Arthur Doyne Courtenay Bell M B Oxf George William Bray, M B Sydney John Rennie Braybrooks M B Oxf, John Ritchie Calmour L R C P, Gopal Handas L M S Singapore Henry Albert Harris M B Lond Gordon Barrett Mitchell Heggs M D Lond Eric Boxall Jackson M B Lond James Balfour Kirk M B Ed Gordon Ormsby Lambert M D Camb Paul McGregor Moffatt M B Lond Alfred Patrick Menzies Page M B Lond Frances Edward Pilkington L R C P Joseph Alexander Purser M B Melb Ursula Shelley, M D Lond Indar Singh M B Punjab Brian Stanley M B Lond, William George Adrian Swan M B Durh James Oliver Terry M B Leeds Janet Maria Vaughan M D Oxf Reginald Lawson Waterfield, M B Lond

Appointments

Dr W Mitchell Stevens was appointed to represent the College at the forthcoming nineteenth Conference of the National Association for the Prevention of Tuberculosis at Cardiff

Professor Edward Mellanby will deliver the Croonian Lectures on Nutrition and Disease—the Interaction of Clinical and Experimental Investigations on June 8th, 13th, and 15th, at 5 p m

Licences

Licences to practise were granted to the following candidates

E H Allen I G Anderson I B Asafu-Adjaye D R Ashton, A D Aveling Kashi G Awati J L M Aycoub G Barns N H R Bathurst F G Beauchamp R Bolton S G Browne F J K Brownlees H R Carr A Carling L I Cohen I H Coleman J Collinson R E C Copithorne T M Cuthbert T J Davies J J A Embleton A B Evans C J Evans Helen M Evans G D Galwankar, V V Garde P H R Ghey T Gibson P R Goodfellow G P Goodwin J Gordon G J Hardman C V Harnes Edith K Harris W H Hughes A H Ismail E R James J L S James J I Jarvis N H Jones T J Jones A Kekwick, A B King A H Knowles S B Lange S Lee S B Levy Vida L Liddell M J Lindsey Monica Low J N McArthur V B McGregor J P Mackenzie W S McKenzie H I McNickle T C Maling R L Mann J V Matthews C R Mayou H N Miles K O Milner S C Mist J Montgomerie, C C Morgans H J V Morton P D Mulkern W B Mumford J A W Musson Rowkab H Nassif L C Nicholas D D O Callaghan, W L Ogle L C Oliver G S W Organe R M M C Orpwood H E S Pearson M I Platt A K Price, A U Prodhan, S A Propert J N N Robinson K Robson H P Russell R D Scriven G H Shaw P P Sheth H S Shoham R F Simcox K H Singh F J Smith D W Smithers J G C Spencer J T W Spiridion Kliszczewski F R Store F W Taylor B A Thomas I W Thomas W H D Trubshaw I K Van Langenberg C F Walker G N Wardle C E M Ware V C McD Weddell C S Whitehouse A Willcox R H H Williams J Wilson C W Wollaston, Tamsin M Wynter, E C Zorab

The names of the recipients of the Diploma in Tropical Medicine and Hygiene conferred jointly with the Royal College of Surgeons, were printed in our issue of April 15th (p 681)

Diplomas in Gynaecology and Obstetrics were granted jointly with the Royal College of Surgeons, to H Sobhi and N J Thanavala

SOCIETY OF APOTHECARIES OF LONDON

The following candidates have passed in the subjects indicated

SURGERY—W H Elam L I F Kerridge T Morgan S G Nathan
MEDICINE—P A Diemer P M Hershberg R Sugarman
FORENSIC MEDICINE—A L Chaudhi V S Rosuck E C Rowlands R P K Sen
MIDWIFERY—S Adams N I Bishai V F Hassan M Sourisky R H Wheeler F H Williams

The diploma of the Society has been granted to Messrs P A Diemer, R H Wheeler and M Sourasky

be referred to the doctor for psychological investigation and treatment The child guidance movement shows us this doctrine at work among the children and in the homes of the poor It is clear that we are in for a phase of it in which extravagances will not be lacking and it will be interesting to see what the scholastic profession will make of it in practice The children of the poor are accustomed to all manner of outside interference in their education from the time they matriculate as it were at the ante natal clinic Children in high class schools are in a different position and these schools should I think oppose the substitution of the doctor for the teacher in minor matters psychological I say this because the teacher's contact with the child is such that the responsibility of understanding its mind cannot be transferred to the doctor and because there is a danger that with a doctor's investigation into its behaviour the child will develop a morbid interest in itself

Sometimes I think schools make the same error as the modern psychologist of treating what is essentially trivial as of great importance All children for instance go through phases of lying and stealing Even in the case of the grossest faults it is seldom wise to ostracize a child or to expose it to the tender mercies of school mates Surely a head should stretch many points to be loyal to a child even in grave misdemeanours The controlling idea should not necessarily be that the child has let the school down may it not be that the school has let the child down? Whatever then may be the value of modern psychological methods in really abnormal children there is possible danger from their use in ordinary children holding their own with more or less success in high-class schools

Home Factor

In order to get the best from school life particularly in the case of delicate or difficult children co-operation between the school and the parents is desirable The difficulties in the attainment of this ideal though not strictly of a medical nature are often made obvious to the doctor and I propose to discuss some of them candidly

The viewpoints of parents and of the head of a school or school house are not quite the same In sending a child to school especially to boarding school parents are doing what is to them a very big thing—namely handing over their child to someone else who will have great influence over it To the parents the child is not only theirs but also distinctly an individual child and they wish it to have individual attention The head of a school however although wishing to give individual attention to each child knows that there is another side to the question—namely that the school as a whole must run satisfactorily He is as it were painting a picture and if the design is a success the children—and for that matter the teaching staff—cannot do better than fit into it It is surely in influencing a child for good by creating the right atmosphere that the art and genius of keeping school lies Parents are disposed to be impatient or jealous of this side of a schoolmaster's work they are all for individual attention and in this they are apt to be unreasonable If parents thought the matter out they would realize that it is the tone of the school which is so important for the child In the right atmosphere the child comes under a discipline which works silently and automatically with the result that it falls into line with a minimum of dragooning and pressure Such an atmosphere spells freedom for the child and at the same time helps it to *choose* to behave reasonably and unselfishly

To turn to quite a different matter could not co-operation between the parents and the school be promoted by the issue of school reports in a form which has something more than hoary antiquity to commend it? Only too often reports seem to be written on the principle of the least said the soonest mended I would urge that the head's report which is the important one especially in preparatory boarding schools should be something fuller than a line at the bottom of a sheet of paper and more illuminating than the usual non-committal Has done well but could do better I suggest that this report should be written separately from the rest so that the child does not necessarily see it It should be full enough to mention the child's successes as well as its difficulties and failures and though not couched in terms of advice should perhaps be some guidance to parents Again might not more use be made of half-term reports? Lastly might it not sometimes be advantageous if parents were expected to report to the school concerning the holidays and for the child to be aware that such a report would be sent? This plan is often of help in dealing with children who behave well at school and outrageously at home and tends towards co-operation between the school and the parents

Should the parents seriously distrust the school the child is better moved elsewhere but how many problems might be solved if parents could or would tell their difficulties to the school! In their relation to parents the schoolmaster and the children's physician have much in common They may merely tolerate the parents or may make an effort to influence them and win them to their views The heads of schools have a reputation for being somewhat intolerant towards parents How far this is so I should not like to say but I think it is certainly true that parents are much more shy of head masters and mistresses than they are of their children's physicians

Health Factor Fatigue

The relation of the physical health of children to their mental reactions to education and school life is a subject of great importance I can however only deal with one aspect of it here—namely fatigue in children I have chosen this because I think it is the commonest and perhaps the least appreciated of the causes of transient or even permanent ill success at school The really psychopathic child is outside my scope for I want to discuss briefly the causes and effects of fatigue in the more or less ordinary children who are adapting themselves to the life of private and public schools with varying degrees of strain and success Generally speaking physical fatigue although obvious to the trained eye in the child's face and carriage shows itself chiefly in nervous and mental symptoms The type of symptom depends upon the type of child The question may be asked if it is possible to over fatigue a normal well balanced child I should be inclined to say that if the child is left to itself this is not possible it would automatically sleep off its physical fatigue and by changing its occupation relieve its mental fatigue Unfortunately as so often happens the child is not left to itself Its lack of attention inaccuracy and stupidity are carefully noted and it is spurred to greater efforts which can only be made at the risk of added fatigue The highly strung nervous child has less reserve and so fatigues more easily than the more normal child and its symptoms are different Instead of becoming dull and apparently lazy it becomes restless emotional irritable scatter brained wildly disobedient and negative Such a child with its bullying selfish ways may be the cause of an extraordinary amount of unhappiness in others When to such symptoms as these are added refusal of food and

The Services

NAVAL COMPASSIONATE FUND

At the quarterly meeting of the directors of the Naval Medical Compassionate Fund held on April 19th Surgeon Vice Admiral R St G S Bond C B K H P Medical Director General of the Navy in the chair the sum of £225 was distributed among the several applicants

The King has conferred the Territorial Decoration on Lieut.-Colonel H C Smeeth R A M C (ret.) and the Efficiency Decoration on Lieut.-Colonel F R Harris R A M C and Major and Brevet Lieut.-Colonel E W Matthews R.A.M.C.

Medical News

The eighty ninth half yearly dinner of the Aberdeen University Club London will be held at the Trocadero Restaurant at 7 for 7.30 p.m. on Thursday May 18th under the chairmanship of Mr J. Hall Barron. Secretary's address 9 Addison Gardens W.14.

The Glasgow University Club London will dine at the Trocadero Restaurant Piccadilly on Friday May 26th at 7.15 for 7.30 p.m. Professor Ralph Stockman of Glasgow University is to be in the chair. Any Glasgow University men who though not members of the club desire to attend are requested to communicate with the honorary secretaries 62 Harley House N.W.1.

At a meeting of the Royal Sanitary Institute in the Town Hall Weston-super-Mare on Friday May 12th at 5 p.m. a discussion on Prevention of Human Tuberculosis of Bovine Origin will be opened by Dr W. G. Savage medical officer of health Somerset County Council and Mr S. V. Golledge county veterinary officer Wiltshire.

A course of demonstrations in neurology for candidates for the M.R.C.P. examinations will be held on Tuesdays and Thursdays from May 9th to June 29th at 6 p.m. at the National Hospital Queen Square W.C.1.

The Fellowship of Medicine and Post-Graduate Medical Association has arranged a whole-day course in advanced urology at St. Peter's Hospital from May 8th to 20th. An intensive week-end course of instruction on rheumatic disorders and applied hydrotherapy will be given at the Royal Mineral Water Hospital Bath on May 13th and 14th. An all day course in diseases of children will be given at the Queen's Hospital Bethnal Green from May 15th to 27th. There will be a week-end course in obstetrics at the City of London Maternity Hospital on May 20th and 21st. Forthcoming courses include gynaecology at the Chelsea Hospital May 22nd to June 3rd venereal Diseases at the London Lock Hospital May 22nd to June 17th M.R.C.P. evening course Tuesdays and Thursdays May 23rd to June 16th.

During the course of the annual conference of Rotarians which is being held at Scarborough from May 5th to 9th Dr H. C. Jonas of Barnstaple will preside over a vocational meeting of medical Rotarians in Great Britain when a discussion will take place on the four following topics (1) How can we organize better for service (*a*) nationally and (*b*) internationally (2) Has the crisis affected our profession (*a*) either ethically (especially as regards unfair practices and bribery) and (*b*) commercially? (3) Do we do everything in our power to ensure that medical etiquette is primarily to the advantage of the public? (4) What are the admitted evils of our profession and how should we attempt to combat them?

The thirteenth International Congress of Neurology will be held at La Salpétrière Paris on May 30th and 31st when the subjects for discussion will be serous cerebral and spinal meningitis introduced by Claude of Paris Boschi of Florence Barré of Strasbourg and Petit Dutaillis of Paris and exploration of the cerebral cavities by means of air introduced by Clovis Vincent assisted by David and Puech for ventriculography and Berdet and Rappoport for encephalography. Further information can be obtained from the general secretary Dr Crouzon Avenue de Jéna 70 bis Paris 16e.

The second Italian Congress of Sport Medicine will be held at Bologna from May 20th to 22nd when the following subjects will be discussed renal function in sport introduced by Professor Aiello of Milan diet in sport introduced by Professor Del Guerra of Pisa and training introduced by Dr Poggi Longostravi of Milan.

The Cardiological Society of Czechoslovakia will hold a congress in Prague from June 2nd to 4th (Whitsuntide) under the patronage of the President of the Republic Dr T. G. Masaryk. The president of the congress is Professor V. Libensky with Sir Thomas Lewis (London) Professor F. Mares (Prague) and Professor H. Vaquez (Paris) as presidents of honour. The subject for consideration is myocardial disease its physiology pathology and treatment. At the opening session on the morning of Friday June 2nd in the Institute of Physiology and Histology Professor Libensky will give his inaugural address the secretary Dr S. Mentl will present his report and a number of communications will be made by delegates the official rapporteur from London being Dr T. F. Cotton. On Sunday June 4th visits will be paid to the principal Czechoslovakian spas. All inquiries about the congress should be addressed to Dr S. Mentl Myslikova 7 Prague II.

The forty eighth German Balneological Congress was held at Baden-Baden from April 4th to 8th under the presidency of Professor Dietrich when the principal subjects for discussion were the importance of diagnosis in spa practice and the position of climatology.

We are asked to state that the course of lectures on pathological research in its relation to medicine usually held at this time of year at the Institute of Pathology and Research of St. Mary's Hospital has been postponed until the autumn. The new lecture theatre will not be completed in time for these lectures to be given in the spring and early summer.

The March issue of the *Radiological Review* is the annual radium number.

The April issue of *Jahrbuch für Kinderheilkunde* is dedicated to Professor Adalbert Czerny on the occasion of his sixtieth birthday.

In the March number of the *Quarterly Bulletin* of the Health Organization of the League of Nations is a report of the conference on economic depression and malnutrition held in Berlin last December at which representatives from the following countries were present Austria Belgium Denmark France Germany Italy the United Kingdom and the United States of America. In the same number of the *Bulletin* there is an instructive article by Dr W. R. Aykroyd on diet in relation to small incomes.

The current issue of the *Liverpool Medico-Chirurgical Journal* (vol. xli. Part 1) includes a tribute to the memory of Sir Robert Jones by Dr T. P. McMurray a report of a discussion at the Liverpool Medical Institution on avoidable wastage in connexion with industrial injuries opened by Dr H. E. Moore also the text of papers read before the institution and a review on intestinal intoxication by the editor Dr Robert Coope.

Additional lists of articles chargeable with duty under Part I. of the Safeguarding of Industries Act 1921 have been issued by the Board of Trade and will take effect as from May 12th 1933. These lists refer to articles under the following headings optical instruments scientific glassware scientific instruments synthetic organic and other fine chemicals. Copies of the lists may be obtained from H.M. Stationary Office (2d. net).

Dr. George F. Buchan has been elected chairman of the council of the Royal Sanitary Institute for the session 1933–4 in succession to Dr Charles Porter whose term of office has expired.

Dr James Gairdner now aged 87 has retired from the position of certifying factory surgeon for the Crieff district after holding it for sixty two years.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal B M A House, Tavistock Square W C 1**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager British Medical Association House Tavistock Square W C 1 on receipt of proofs

All communications with reference to ADVERTISEMENTS as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager

The **TELEPHONE NUMBER** of the British Medical Association and the *British Medical Journal* is EUSTON 2111 (internal exchange four lines)

The **TELEGRAPHIC ADDRESSES** are

EDITOR OF THE *BRITISH MEDICAL JOURNAL* *Aitiology Westcent London*

FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements etc) *Articulate Westcent London*

MEDICAL SECRETARY *Mediocra Westcent London*

The address of the Irish Office of the British Medical Association is 18 Kildare Street Dublin (telegrams *Bacillus Dublin* telephone 62550 Dublin) and of the Scottish Office, 7 Drumsheugh Gardens Edinburgh (telegrams *Associate Edinburgh* telephone 24361 Edinburgh)

QUERIES AND ANSWERS

Oedema of Toes

DR H WILSON MILLER (Barrow in Furness) asks for suggestions regarding causation and treatment of persistent bilateral slight oedema of the toes in an active and otherwise healthy male patient just over 60 years Sleep has been disturbed by a sensation of heat over the oedematous areas Heart and urine are normal, and there are no varicose veins

Income Tax

Gratuity on Retirement

"P Q R" retired from the West African Medical Service and received £510 as a gratuity in July 1932 as compensation for compulsory retirement necessitated by the Colony's financial difficulties' No such grant was mentioned in the original condition of appointment and the payment was presumably in act of grace

*** In our opinion this payment is a capital sum made as compensation for premature termination of the appointment and does not appear to be a payment of salary for a term in lieu of notice If our view is correct the amount in question is not income and need not be shown on the income tax declaration

A correspondent refers to our reply to J W R in the issue of April 22nd and states that after lengthy correspondence with the authorities they agreed that his gratuity as Captain (Temporary) R A M C was *not* liable to income tax and he adds that he understands that this will apply to regular officers

Obsolescence Allowance

D S C bought a car in 1927 for £203 and sold it in 1932 for £42 10s when he bought another car for £176 He has been allowed £106 10s depreciation for the old car during the past five years less the 10 per cent deduction for private running What should he claim for obsolescence and depreciation allowances?

*** The transaction will affect the liability for 1933-4 not 1932-3 The aggregate depreciation allowance given before exclusion of the 10 per cent for private use was presumably ten ninths of £106 10s say £118 10s and the gross obsolescence allowance will therefore be £203 – (£118 10s + £42 10s =) £161 that is £42 or after exclusion of the one tenth £38 The depreciation allowance for 1933-4 will be 15 per cent of £176—that is £26 10s less one tenth =£2 10s net £24

LETTERS, NOTES, ETC

Abraham Flexner Lectureship

The third Abraham Flexner lecturer in the Vanderbilt University School of Medicine Nashville Tennessee was Professor F R Fraser, physician to St Bartholomew's Hospital and director of the Medical Professorial Unit who, in accordance with the terms of the lectureship spent February and March this year in residence at Nashville Besides delivering five formal lectures he came into close contact with the various departmental heads of the medical school, discussing with them such subjects as the maintenance of proper standards of scholarship from the standpoints of teaching and research He took part in conferences in the laboratories discussions in the Vanderbilt Medical Society ward rounds and special consultations and meetings of various subsidiary societies and groups The establishment of the lectureship three years ago was designed to promote a general stimulation of scientific and clinical practice, and its objectives appear to have been successfully realized For his five formal lectures Professor Fraser chose as his subject the principles of treatment In his first lecture he dealt with the history of therapeutics The second and third were devoted to causative treatments including passive immunity, active immunity, deficiency diseases and vitamins glandular hormones and chemotherapy Symptomatic treatment was considered in the fourth lecture and the final one related to the care of the patient At its end Dr W S Leathers dean of the Vanderbilt School of Medicine (to whom we are indebted for the above information) paid a high tribute to the value of the series which had he said, been lucid and stimulating as well as clinically constructive

Small pox and Vaccination

A Lichtenstein (*Hygeia* February 28th) publishes eleven tables and much other information in the text concerning small pox and vaccination in Sweden and other countries He is one of the experts officially appointed in Sweden in 1930 to inquire into the workings of the machinery for dealing with claims by conscientious objectors for exemption from vaccination This machinery has functioned in such a way that it allowed only 4 per cent of all the claims (6 out of 150) made in the period 1917 to 1922 and as great a proportion as 39 6 per cent (125 out of 316) in the period 1929 to 1931 The experts whose unanimous report was published in November 1932 explicitly dissociate themselves from the English principle of letting the opinion of the individual on the merits of vaccination play a decisive part in the granting of his claim for exemption The experts hold on the contrary that it is the community not the isolated individual who must have the last word in this matter They recommend the transfer of claims for exemption from the police to the local medical authorities and the cancelling of regulations which prevent the admission to schools and "homes" of persons who have not been vaccinated They are also in favour of a more vigorous educational propaganda

Diphtheria in Immunized Patients

Attention has been drawn to a translator's error in the *Epitome* of March 11th para 174 The opening sentence should read "J Tomesik reports the after histories of 100 000 children who were immunized three times with diphtheria toxoid (anatoxin) the morbidity amongst the immunized cases was 10 per cent of the expected morbidity in the control group

Muscular Exercises

In the review of Dr Morton Smart's book *The Principles of Treatment of Muscles and Joints by Graduated Muscular Contractions* published under this heading on April 15th the current used by the author to produce the muscular contractions was described as "a mixed secondary and primary interrupted current" Dr Smart wishes to point out that the current he uses is not a mixed current

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospital will be found at pages 48, 49 50 51 and 54 of our advertisement columns and advertisements as to partnerships assistantships, and locumtenencies at pages 52 and 53

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 211

loss of sleep a picture of severe fatigue is presented The point that I want to make here is that the child will hardly ever complain of fatigue, this will be apparent in alterations in application and in behaviour In other words the first to have the opportunity of recognizing the onset of fatigue in a child will be the school teacher, and from this responsibility there is no escape

The causes of fatigue may be in the child or in the school regime Age is significant I should say that children in pre preparatory and preparatory schools are most prone to show fatigue by unsatisfactory behaviour and progress, although in girls fatigue may mar educational effort throughout school life In boys, after a year or two at a public school, fatigue seems to lead more to illness than to nervous symptoms, by this time the boy has learnt to fend for himself and, be they masters or school-fellows, to persecute those who persecute him Rapid growth in height is another strain on the child, and gives rise, also, I think, to diminished resistance to infections

The liability to serious fatigue is greatly increased by any sort of subnormal physical health Although it is not true to say that a child who is kept in good physical health will be free of physical and mental fatigue, yet there is an element of truth in the statement Certainly the physical health of any child showing persistent symptoms of fatigue needs careful investigation Some form of chronic toxaemia—often of obscure origin—may be at work, as for example disease of the tonsils or antrum, disease of the bronchial glands, or, what is perhaps still more frequently found, toxaemia arising from the intestine the condition which in my view, is often falsely called "acidosis" Activity of the endocrine glands may also cause fatigue Severe cases of fatigue are seen in adolescent girls, particularly just now in connexion with the prevailing habit of slimming Many apparently alarming disorders of behaviour and thought at this age may mean nothing unduly serious

The causes of fatigue attributable to school regime are numerous I have already mentioned the choice of school and climate, and have discussed the question of diet and the great importance of ensuring that the child takes a proper quantity of food The amount of rest provided is of the utmost importance The hours devoted to sleep are mainly adequate, except, perhaps, in the upper forms at public schools Rest, however is not merely a matter of sleep Nothing tries the nerves of some children more than the perpetual noise and rowing that may go on Some period of silent rest such as lying down with a book, should be ordered daily, and is often popular Meals, too, should be taken in comparative quiet It must be mentioned that summer time means curtailed sleep for many children

In my opinion the hours of work are far too long, and the harm that these long hours might do is only avoided by the slow pace which is set The clever child learns to work slowly, and so spares itself, but the nervous child must work at high pressure, and thus may come badly to grief Praiseworthy efforts are made in some schools to separate the quicker workers from the slower ones From what I have heard, the Dalton system seems to make an effort to teach a child how to tackle its work and to take its own time over it Some of our public schools for boys still lay themselves open to criticism concerning the activity they exact from the boys before breakfast

Lastly, there is the difficult question of fatigue from examinations When examinations are taken by children in their stride as it were, they are harmless and useful, but public examinations, which have become competitive, are apt to be tests of a good memory and a smart coach Such examinations certainly put an immense strain on some children

As regards the treatment of these tired children the first essential is that the tired ones should be recognized and I have already emphasized upon whom the responsibility for this must necessarily fall The teacher must be able to distinguish between the actual fatigue and natural laziness, wilfulness, incompetence, or the results of fear If in doubt the effect of a day or two in bed should be tried Fatigue should be the first thing to occur to the mind to account for deterioration in work or character and the doctor should be consulted on the possibility of a physical cause For the rest it should be possible especially in preparatory schools, to give the child an occasional day in bed to provide extra rests and perhaps extra food, and to allow breakfast in bed, the latter does not seriously interfere with education, and it materially diminishes fatigue It must always be remembered that a child has a natural tendency to right itself I am sure that drastic alterations in its life, and evidence of concern in its psychology, should be avoided, and that the happiest results will be obtained by minor modifications of the school regime, friendly explanations and sympathetic encouragement, all carried out quietly and with the lightest of touches

MODERN VIEWS ON THE MECHANISM OF GALL-STONE FORMATION

BY

DAVID H PATEY, M S, F R C S

STRATHCLYDE RESEARCH SCHOLAR OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON AND THE ROYAL COLLEGE OF SURGEONS OF ENGLAND

Gall stones are a common cause of pain and disability and therefore a considerable amount of work has been done to determine the causes of their formation and the best methods of treatment The subject has been investigated from various angles—clinical, morbid anatomical bacteriological biochemical, and experimental—and much of the work is scattered about in various types of journal and not readily available to the general reader A brief review of modern views on gall stone formation may therefore be of interest

THE FACTOR OF INFECTION

The first difficulty that arises is the definition of "modern," and how new a view has to be for inclusion in that term In this article an attempt will be made to get over that difficulty by first of all giving Naunyn's classical theory of gall-stone formation, and then discussing in what ways our views have had to be modified as a result of increasing knowledge Although this theory dates from the last century, it was widely accepted in its entirety as the best explanation of the formation of gall stones until a comparatively few years ago According to Naunyn, the essential factor in the formation of all gall stones was infection, the usual infecting organisms being of intestinal origin These organisms acted on the wall of the gall bladder and gave rise to a "lithogenous catarrh" as a result of which cholesterol was formed by the gall bladder wall and shed into the lumen of the gall bladder, together with small quantities of calcium and organic matter If in sufficient concentration these substances in the presence of stasis combined with the pigments of the bile to form a calculus As a result of secondary cholesterolization of a primary mixed calculus, it was postulated that eventually a pure cholesterol calculus might be produced Naunyn appreciated that gall stones were commoner in

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

323 Age of Death in Rheumatic Heart Disease

D DAVIS and S WEISS (*Amer Heart Journ* December 1932 p 182) have found that in a series of 5 215 consecutive necropsies at the Boston City Hospital rheumatic heart disease was the direct cause of death in 164 instances Although the largest number of deaths occurred in the fourth and fifth decades 23 per cent were delayed until the sixth and seventh decades a fact which is not generally appreciated in clinical medicine Among forty seven patients dying from subacute bacterial endocarditis all but six gave evidence of underlying rheumatic heart disease Subacute bacterial endocarditis occurred at all ages from 15 to 75 and in forty of the forty seven cases before the age of 50 In a small group of necropsies on patients suffering from acute malignant endocarditis death took place always before the age of 40 The authors have made a graphic comparison between age at death in rheumatic heart disease the age distribution among 5 060 of the whole necropsy series and the age distribution of death in the urban population of Massachusetts It was found that in the hospital population the deaths predominated between the fourth and seventh decades this may be attributed to the fact that middle aged individuals are more likely to seek hospital treatment than older people who largely die in their homes Further examination of the curves revealed that in the second decade about 20 per cent of the total necropsied deaths showed evidence of rheumatic heart disease In 114 rheumatic heart deaths the first symptoms of the infection occurred before the age of 21 years in seventy six cases The authors have estimated the expected frequency of fatal rheumatic heart disease among the living population of Massachusetts This frequency must be only a small proportion of the total prevalence of rheumatic heart disease which in many instances will not be the ultimate cause of death

324 Small pox Vaccination in Sweden

C KLING (*Svenska Läkaresällsk Förhandl* December 31st 1932 p 300) gives an account of the mass vaccinations carried out early in 1932 in Malmö a town of about 130 000 inhabitants in response to the appearance of small pox introduced from Russia The first case which reached Malmö before the true nature of the disease was recognized gave rise to a second case which in its turn was responsible for the next eight cases This second case was that of an infant only 4 months old and of the eighteen persons in its immediate neighbourhood as many as seven contracted small pox although with one exception they had not actually touched the infant but had merely spent a little time in the same room with it All the 170 persons who had been in contact with these ten patients were promptly vaccinated or revaccinated The fact that none of them developed small pox is clearly traceable to this precaution In a few days 115 000 persons living in Malmö were vaccinated by a staff of sixty doctors and medical students at the rate of forty to fifty an hour per vaccinator In the hurry the abrasions were sometimes made too long and too close together and this may perhaps partly have accounted for the complications which ensued Elsewhere in Sweden about 26 000 persons were vaccinated on the same occasion (12 000 first vaccinations and 14 000 revaccinations) The same lymph was used as in Malmö In all but two cases the vaccination ran its normal course in the 12 000 children In the two exceptions the secondary infections which arose could be traced to manipulations by the parents H DAVIDE (ibid p 324) has performed numerous bacteriological tests of the various stocks of lymph used at Malmö and other stocks obtained from abroad His investigations were particularly directed to the part played in the secondary infections of vaccination by various strains of staphylococci present in the lymph or already on the patient's skin With regard to the former question he comes to the conclusion that they play no important part in the reaction following vaccination but he considers it most desirable that lymph for vaccination should be prepared under conditions assuring its sterility

325 A Clinical Sign of Pericardial Calcification

C LIAN M MARCHAL and J PALTRAT (*Bull et Mém Soc Méd des Hôp de Paris* January 23rd 1933 p 20) describe a clinical sign which they consider to be indicative of pericardial calcification If owing to the presence of this sign such a condition is suspected it can generally be verified by radiological examination The sign which they have observed and confirmed as met with in this condition is a vibrating bruit occurring in early diastole It is surprisingly loud which can be explained by the fact that it is produced immediately under the examining ear It occurs just after the second heart sound and therefore causes a triple rhythm although it is much louder than the normal heart sounds It is readily distinguishable from the *bruit de galop* by its intensity and by its vibratory quality The third heart sound which is heard sometimes in the young only can be distinguished by its character and by the fact that it is inconstant Physiological reduplication of the second sound is also differentiated by its basal position and irregular appearance Confirmation by radiological examination should be directed towards the lower border of the right ventricle which is the most usual site of calcification The density caused by the calcification is feeble the form is long regular and slightly convex the mobility is that of the heart The position of choice for examination is the left anterior oblique in complete inspiration The presence of such a clinical sign as that described enables a diagnosis hitherto reserved to radiology and necropsy to be made

Surgery

326 Diverticula of the Oesophagus

A PARCELIER and A CHEVUT (*Bordeaux Chir* January 1933 p 25) comment on the rarity of diverticula of the intrathoracic oesophagus on the gravity of the condition and on the difficulty of successful surgical treatment There are two distinct types of deep diverticula of the oesophagus diverticula due to traction and to pressure Of these the former is the more common type and is found near the bronchial bifurcation These diverticula are usually small and give rise to few symptoms unless perforation occurs when severe pulmonary complications such as mediastinitis pulmonary abscess or gangrene pyopneumothorax or suppurative pericarditis may follow Pressure diverticula are generally situated in the lower part of the thoracic oesophagus and may range in size from a pigeon's egg to that of two fists The largest known had a capacity of 500 c cm They may be found on either side of the oesophagus but are most common on the left side or the posterior aspect They may be similar in structure to the oesophagus being composed of mucosa and muscle or may contain mucous membrane and fibrous tissue only Diverticula may be latent without symptoms and remain unrevealed by radioscopy or examination until some grave complication occurs Another form may be clinically latent but be discovered by x rays while a third type causes definite symptoms of difficulty of deglutition Dysphagia in these cases continues until the diverticulum is evacuated during the course of the meal Two cases are reported and various

women than in men and attributed this to the greater tendency to biliary stasis in women from the less strenuous character of their occupation the wearing of tight fitting corsets and the bearing of children

Thus the corner stone of Naunyn's theory was infection but opinions on the aetiological importance of this factor have varied widely since Naunyn's day One of the earliest and most persistent opponents of the Naunyn theory was Rovsing a Scandinavian surgeon who based his opinion on the frequency with which in a large personal series of gall stones removed at operation no organisms could be found He held the view that when organisms were to be found in gall stones they were to be regarded as secondary invaders Unfortunately Rovsing had no bacteriological investigations made of the gall bladder wall which we now know is frequently infected when the contained stones are sterile Meanwhile the possible importance of metabolic factors in the formation of gall stones began to be realized particularly by Chauffard and his pupils in France Aschoff approaching the subject particularly from the morbid anatomical standpoint attempted to reconcile conflicting views by describing two types of gall stones one formed as the result of pure metabolic factors the other as the result of infection The trend of opinion was away from the simple direct infection gall stone relation as postulated by Naunyn when in 1916 Rosenow of the Mayo Clinic swung right back again and claimed to find in human gall stones certain specific streptococci which on injection into animals tended to localize electively in the gall bladder and produce gall stones Rosenow's work has been widely quoted but by other workers his findings were not confirmed and his views had not won general acceptance when in 1927 A L Wilkie working in the School of Experimental Surgery at Edinburgh claimed to have produced similar results By both Wilkie and Rosenow the important organisms in gall bladder disease were thought to be not intestinal organisms as had always previously been held but organisms from peripherally situated foci such as the teeth or tonsils Wilkie's work has been strongly criticized however (Williams and McLachlan) and has not been confirmed

It is thus impossible at present to give any dogmatic or final conclusions on the relation between infection and gall stones The general opinion is however that there is some relation between infection and gall stones since the gall-bladder wall is infected in approximately 70 per cent of cases of gall stones the fluid contents in 40 per cent and the gall stones themselves in 30 per cent. (Gordon Taylor and Whitby—collected statistics) Moreover it is widely accepted in opposition to A L Wilkie and Rosenow that the common infecting organisms are intestinal—*B coli B welchii Streptococcus faecalis* and *B typhosus* But there is very little substantial evidence on which it can be determined whether the infection is primary or secondary or the way in which it normally reaches the gall bladder And although it is generally believed that infection is an important aetiological factor in at any rate some types of gall stones the modern view is that it is probably not the simple direct relation that Naunyn postulated but a more complex combination of factors involving alterations in the normal physiological absorptive powers of the gall bladder mucosa and the chemistry of the bile One recent article may be quoted to illustrate this point Andrews and his collaborators state that if the gall bladder is inflamed it not only absorbs water as Rous and McMaster had previously shown but also bile acids It is the bile acids that are chiefly responsible for keeping cholesterol in solution in the bile so that their diminution would predispose to the precipitation of cholesterol If this finding of Andrews is confirmed a very important way in which infection may predispose to gall stones will have been demonstrated

Metabolic Factors

The possible importance of metabolic factors in gall-stone formation has been extensively investigated by modern workers In Naunyn's day the chemical tests for cholesterol and other constituents of gall stones were so crude that practically nothing was known of their metabolism To-day though there are still large gaps our knowledge has been considerably extended It is known for example that even the common mixed gall stones are composed predominantly of cholesterol which constitutes anything from 80 to 98 per cent of the calculus (Peel) that cholesterol may be present in the gall bladder bile in concentrations of anything from 100 to between 800 and 900 mg per 100 c cm (Peel) that it is present in the blood plasma of normal individuals in anything from 80 to 220 mg per 100 c cm with an average of 153 mg per 100 c cm for females and 170 for males (Gardner) that in certain conditions (for example parenchymatous nephritis jaundice pregnancy diabetes) the amount of cholesterol in the plasma may be increased and that this increase may be associated with an increase of cholesterol in the bile excreted by the liver though the last statement is still disputed Chauffard has attempted to relate hypercholesterolaemia directly with gall stones Thus he states that there is a hypercholesterolaemia of pregnancy which is probably related to the relative frequency of gall stones in women and also in the convalescence from typhoid fever which he thinks may be a factor in the occasional development of gall stones after this disease Gardner and Gainsborough however have shown that hypercholesterolaemia is not a constant occurrence in pregnancy though the relation between the amounts of free cholesterol and cholesterol esters in the blood is usually altered Chauffard also stated that gall stones are usually associated with hypercholesterolaemia but it has been shown that this only occurs when the stones are causing obstructive jaundice (Gardner) Gardner has also shown that a condition such as subacute parenchymatous nephritis which is associated with a marked degree of hypercholesterolaemia shows no special tendency to be associated with gall stones Attempts to correlate directly the amount of cholesterol in the blood with gall stones have thus failed and it is probable that before further advance can be made on these lines more will have to be known of the precise place of cholesterol in the metabolism of the body But that the amount of cholesterol in the bile is of fundamental importance in the formation of gall stones is strongly suggested by the fact that gall stones formed predominantly of cholesterol are confined to man and that in animals which have a much lower cholesterol content of the bile cholesterol gall-stones of the type found in man have never been found naturally nor with rare exceptions which will not bear critical analysis have they been produced experimentally In fact Naunyn was one of the first to point out that human gall-stones may become dissolved if placed in the gall bladders of animals

As regards other metabolic factors much attention has been directed to the bile acids and their salts which are responsible for the keeping of cholesterol in solution in the bile Chemically the bile acids appear to be closely related to cholesterol (Gardner) Smyth and Whipple found that the amount of bile acids excreted in the bile of dogs was markedly diminished as the result of quite small doses of chloroform and increased after meat feeds The drugs tested (atropine pilocarpine quinine calomel sodium salicylate and alcohol) had no marked effect either way Andrews and his collaborators

methods of operative treatment discussed The authors come to the conclusion that resection of the diverticulum in simple cases gives the best result and advocate a right posterior mediastinotomy when the diverticulum is situated on the right side of the oesophagus A certain number of cases of diverticulitis occur in which a megaoesophagus is also present, and the two conditions should be treated surgically whenever possible It is suggested that the high operative mortality which exists at present will be lowered as surgical technique improves

327 Ligature of the Saphenous Vein

G DE TAKÁTS and L QUILLIN (*Arch of Surg*, January, 1933, p 72) discuss the value of ligaturing the saphenous vein in the treatment of varicosity, having had experience of this procedure in 200 cases They consider that this procedure is indicated (1) in valvular incompetence of the long saphenous vein above the lower third of the thigh, (2) in valvular incompetence of the anastomotic branches if resistant to injection treatment, and (3) in ascending thrombophlebitis of this vein The procedure is contraindicated (1) when the vein is not involved above the knee, (2) when there are multiple incompetent valves in the communicating branches which cannot all be tied, and (3) when there is evidence of insufficient deep venous return owing to an old deep phlebitis or a deep valvular insufficiency In the authors' series 95 per cent of the patients were between the ages of 20 and 60 There were ninety four female and 106 male patients, so that no feminine prevalence was indicated Most gave histories of long hours on their feet, or of hard manual labour in the upright position After the operation sixty-five patients developed a massive thrombosis distal to the ligature, and in forty of these the obliteration was complete, obviating the necessity for any subsequent injections Complications occurred in five cases—namely, a procaine hydrochloride reaction, a haematoma, post-operative haemorrhage owing to the slipping of the proximal ligature, wound infection (streptococcal, and followed by death) and another slight wound infection, with abscess, which cleared up in eleven days The authors remark that the high saphenous ligature protects the treated veins from fluctuations of abdominal and hydrostatic pressure, thus preventing canalization of the thrombi It also reduces the number of injections necessary, and places the occluding ligature close to the sapheno femoral junction There was no case of embolism in the entire series This is attributed to two factors—namely, the ambulatory management of the cases and the shortness of the proximal stump The classic description of ligaturing of the saphenous vein, which involved splinting and three months immobilization in bed, showed the alarming percentage of 0 7 fatal pulmonary embolisms The authors do not, however, assume that this risk has been entirely removed but they are satisfied that it has been markedly reduced by their procedure The complications they encountered are in their opinion all preventable The sequels of the operation, which was combined with injection treatment, included a far smaller percentage of recurrences than was obtained with any other form of treatment of varicose veins

328 Appendicitis in Measles

C L THRUSH M HIRSHBERG, and V CENCI (*Arch of Pediat* January 1933, p 28) review the literature and record six cases of appendicitis which occurred among 171 cases of measles admitted to the Hartford Isolation Hospital Connecticut in the course of ten years The ages of the patients ranged from 5 to 6 years Three were boys and three girls One was in the prodromal and five in the eruptive stage An operation was performed in each case and all the patients recovered The complication may be a mere coincidence or be due either to mechanical pressure upon the blood vessels by the hyperplastic lymphoid tissue in the appendix or to a possible relation between streptococcal pharyngitis and appendicitis

Therapeutics

329 Cod liver Oil by Rectum

CHRISTOU and RICHEZ (*Bull Soc de Thér* February 8th, 1933, p 60) state that, owing to its disagreeable taste and indigestible character, cod liver oil is often refused by both adults and children They therefore made trial of rectal administration in twenty four cases of tuberculosis of bone in adults and also in cases of rickets in children After a rectal wash out 120 c cm of cod liver oil for adults and 60 c cm for children was given by rectum The patients retained the enema the whole day and no bad effects were observed On the other hand a rapid return of appetite, increase of weight and general improvement were observed, and in the rickety children a clinical and radiographical disappearance of the lesions took place The injections were suspended for eight days every month and then resumed The writers conclude that cod-liver oil should be given by rectum whenever there is difficulty in getting the patient to take it by mouth

330 Splenic Extract in Pulmonary Tuberculosis

M MASTROENI (*Lotta Contro la Tuberculosis* December, 1932, p 1290) treated five cases of pulmonary tuberculosis in various stages of activity by hypodermic injection of splenic autolysates with the following results In one case, in addition to a considerable improvement in the local and general condition, there was an immediate and lasting effect produced in the blood picture The other cases show a slight transient rise in the percentage of haemoglobin but no increase of weight, fall of temperature, or local or general improvement As regards the leucocyte picture, leucocytosis was never observed but only a slight neutrocytosis was found There was a diminution of leucocytes and a total or partial disappearance of eosinophils, especially in the more severe forms The Arneth scheme showed a shift to the left in proportion to the severity of the disease The nuclear index was always low, and remained at about 200

331 Treatment of Spinal Symptoms in Pernicious Anaemia

E MEULENGRACHT (*Svenska Lakaresällsk Förhandl*, Supplementary Number, 1932, p 363) draws attention to the frequency with which funicular myelitis, combined degeneration of the cord, and allied conditions of the spine are found in association with pernicious anaemia This was so before the introduction in 1927 of liver treatment While this therapy has been most effective as regards the other manifestations of the disease, the spinal symptoms have proved refractory, and have become relatively more prominent if not more numerous Since 1927 the author has treated 136 patients, of whom twenty eight have died, at first, raw liver was given daily In 1928 liver extracts were to a great extent substituted, and since 1930 all new patients have been treated with dried, defatted stomach substance daily Among the twenty-eight patients who died were four with spinal symptoms Among the 108 patients still living there were as many as thirty eight who had, or had had, spinal symptoms In eighteen of these cases the spinal symptoms had begun or were already well developed when the treatment was first instituted The fact that as many as twenty developed myelopathic phenomena only after treatment had been instituted raised grave doubts as to its efficacy A comparison of the liver treated with the stomach treated patients suggested that the latter were much better off in this respect The conclusion to which the author comes is that the dosage of liver and stomach has not hitherto been uniformly high enough to prevent or cure spinal symptoms The dosage of liver should be kept at 200 to 300 grams, and that of stomach at 20 to 30 grams daily He prefers the latter, since its cost is approximately half that of liver

found that if the ratio of bile acids to cholesterol falls below 13 precipitation of cholesterol begins In human bile the bile acid-cholesterol ratio is normally in the neighbourhood of 20 or 30, which is dangerously near the critical point In animals, on the other hand, owing to the lower cholesterol content of the bile the ratio is nearer 100, so that the failure of cholesterol stones to be formed in animals is not surprising This difference between the constitution of human and animal bile is one of the greatest difficulties in the way of experimental investigation of the subject and in the interpretation of experimental results

In addition, the factors responsible for variations in the pigment of the bile have been studied Bile pigment is chemically closely related to the blood pigments, and it is well recognized that in acholuric jaundice in which there is excessive haemolysis there is a special liability to pigment calculi Rovsing following Boysen, went so far as to regard all gall stones as primarily due to a breakdown in pigment metabolism with the production of pigment nuclei on which cholesterol became deposited, but this is not generally accepted

It would therefore seem that at present a study of the metabolic factors in gall-stone formation and the possible influence of local infective conditions of the biliary tract on these factors offers a hopeful line of approach to the gall stone problem

The chief surgical contribution to the pathology of gall-stone formation in the last twenty years or so has been the discovery of the "strawberry gall-bladder or cholesterolosis gall-bladder" This is the condition in which deposits of cholesterol are found in the mucosa either as whitish streaks or polypoid masses The history of strawberry gall bladder has recently been reviewed by Elman and Graham and by Illingworth They state that the condition was first described by Moynihan in 1909 the term strawberry being coined by MacCarty a year later Illingworth found that out of a large number of gall bladders removed surgically at the Edinburgh Royal Infirmary one fifth showed these deposits in the mucosa in greater or lesser degree Sometimes they occur in otherwise normal gall bladders *sometimes in inflamed* gall-bladders and sometimes in *association with gall-*stones Precisely how the cholesterol gets *into the* mucosa of the gall bladder is not decided By some it is believed to be absorbed from the bile (Boyd Illingworth) by others to be in process of excretion into the gall-bladder (Elman and Graham) At present strawberry gall bladder affords an important field of study for the aetiology of gall stones

OTHER FACTORS CONSIDERED

Stasis of bile was thought by Naunyn to play an important part in the formation of gall-stones and he considered in detail the various factors, such as lack of exercise and tight lacing which were believed to predispose to stasis But the increased knowledge gained from the modern x ray test of cholecystography has led to considerable alterations in old ideas of how the gall-bladder emptied Whitaker showed that the cause of emptying was a contraction of the musculature of the gall-bladder, and that extrinsic factors such as respiration played little or no part It is now known that the ingestion of different kinds of foodstuffs affects the emptying of the gall bladder in different ways, most potent in causing the gall bladder to contract being fatty foods And the giving of a fatty meal is to day a routine part of the test of cholecystography Westphal and his co workers lay considerable stress on the importance of functional disorders of motility of the gall bladder and biliary passages According to them, stasis in the gall-bladder may result either from hypotonicity of the gall-bladder itself or from hypertonicity of the sphincteric mechanisms They believe that stasis thus produced plays an important part in the production of gall stones As regards pregnancy, since Naunyn's day this has commonly been believed to be the important factor accounting for the well recognized greater frequency of gall stones in women, one of the ways in which it was presumed to act being by the production of biliary stasis But Gross in 1931 published an analysis of a large number of cases of gall stones from the post mortem records of the Leeds General Infirmary, and though she found in accordance with general experience that the condition was twice as *frequent* in women as in men when the proportion of married to single women admitted to the hospital was taken into account the married women were no more liable than the single If Gross's figures are confirmed then some factor other than pregnancy will have to be discovered to explain the greater liability of women to gall stones It is thus interesting that the three chief factors postulated by Naunyn as predisposing to stasis of bile—namely, lack of exercise tight lacing and pregnancy—are all open to serious criticism in the light of modern knowledge

That vitamin deficiency might be a factor in the formation of gall stones was almost bound to be suggested in view of the rapidly growing importance of these accessory food factors but the evidence is very slender It is based on some experimental work by Fujimaki who found that rats fed for prolonged periods on diets deficient in vitamin A developed among other things small concretions in the biliary tract There is no detailed analysis of these concretions and they do not seem to correspond to human gall stones Clinical evidence, too, is against gall-stones being a deficiency disease, as also is the fact that cholesterol gall stones appear to be more common in the more variedly and richly fed peoples of Western civilization than in the East (Miyake, Digby)

Finally, mention must be made of the work of Lichtwitz Schade, and others on the physico chemical aspects of gall stone formation Schade states that all attempts to explain biliary and urinary calculi on simple laws of solution have failed, one important reason being the presence of colloids in body fluids which increase the stability of the solution He also points out that the structure of the various concretions formed in the body does not correspond with that of crystals of the same substances formed in a test tube The pure cholesterol calculus, he states is due to the precipitation of cholesterol from a hypersaturated solution, but it is a special type of precipitation resulting from the presence of small amounts of fatty substances in the bile The common cholesterol pigment gall stone on the other hand, he believes is inflammatory in origin, the inflammation resulting in the presence of an appreciable amount of irreversible colloid in the gall-bladder which acts as a binding material for the crystalloid elements The fact that these inflammatory gall stones are usually multiple he attributes to the formation of numerous calcium-albumin adsorption points as the result of the inflammation Schade's conclusions from his chemical studies thus resemble those of Aschoff who from morbid anatomical considerations, believed in a different causation for the crystalline cholesterol gall stone and the common mixed stone We have little knowledge of the time period required for the formation of the usual human gall-stone, although the structural similarity of different gall stones from the same case makes it almost certain that they are as a rule formed at the same time If any surgeons therefore, have had the experience of finding gall stones in a gall bladder which has been noted at a previous operation to be devoid of stones, their observations would be of value on this point

extract and because he has seen spinal symptoms yield dramatically to stomach medication. When spinal symptoms begin to appear the dosage should be increased and the increase maintained for a long time because the symptoms take months to disappear. With regard to the costs he notes that in Denmark a Government regulation was adopted in 1930 according to which chemists cannot charge more than 10 per cent in excess of the purchase price of stomach and liver preparations

Ophthalmology

332 Treatment of Chronic Glaucoma

E. L. GAULT (*Med. Journ. of Australia* December 17th 1932, p. 735) denies that simple chronic glaucoma can exist without increased intraocular pressure. He believes that cupping of the optic disk and its attendant loss of vision are always produced by such a rise in pressure apart from cases of congenital coloboma or of simple atrophy of the optic nerve accompanying such diseases as tabes and disseminated sclerosis. The treatment of chronic glaucoma must comprise therefore measures directed towards providing relief of tension by opening up new channels of escape for the intraocular fluids. Gault reviews the literature briefly and concludes that the raised pressure may be reduced to the normal or subnormal by the establishment of a new channel of drainage between the anterior chamber and the subconjunctival tissues although it is still doubtful whether the progressive loss of vision can invariably be arrested thus. In the majority of untreated cases blindness supervenes within five years of the onset of glaucoma and any post-operative prolongation of vision beyond this time limit can be attributed to the operation. The author does not believe that a rapid loss of central vision is ever likely to be precipitated by operation and would not hesitate to operate merely because the field of vision had contracted to near the fixation point. He has had no experience of late infection which has sometimes been regarded as a danger especially besetting Elliot's operation. He records a series of cases treated by this procedure by Lagrange's method and in other ways. He insists that the evidence is conclusive that vision may be preserved without appreciable change for the worse in a large number of cases over periods extending to as long as nineteen years. In many instances the tension is kept within the normal limits and the field of vision remains unchanged. To wait until eserine or pilocarpine has proved ineffectual is, he adds, most inadvisable. The ultimate issue of blindness is inevitable and an operation should be performed as soon as the diagnosis has been established. He always advises this in all cases of chronic glaucoma unless complications such as advanced old age or serious illness are present and places the responsibility for refusal on the patient.

333 Conjunctival Pigmentation in Vitamin A Deficiency

A. PILLAT (*Arch. of Ophthalmol.* January 1933, p. 25) states that in many Chinese patients suffering from the various stages of vitamin A deficiency (night blindness, pre-xerosis, corneae xerosis, epithelialis and adult keratomalacia) a characteristic pigmentation of the cornea appears. Its intensity varies greatly in different cases and at the different zones of the conjunctiva. It is most marked in the lower fornix—first in the circular fold, then in the plica, the conjunctiva of the lower half of the bulbus, the lower lid, and the upper half of the bulbus—and finally in the upper fornix and the upper lid. On histological examination the conjunctival fissure shows a varying amount of pigment, usually corresponding to the stage of vitamin A deficiency. In each case the pigment production depends more on the duration of vitamin A deficiency than on the stage of the disease. All the pigment is produced in the conjunctival epithelium by the conjunctival cells, the dendritic cells or melanoblasts in the basal cell layer being the first to show pigment, though the ordinary epithelium is later affected similarly. This pigmentation disappears as the result of the administration of cod-liver oil, but more slowly than the other signs of vitamin A deficiency. The pigmented cells are carried towards the surface of the epithelium and are gradually exfoliated. There seems to be no evidence that the pigment is dissolved and carried away to the subepithelial tissues. The long duration of pigmentation in the conjunctiva after the acute condition has ended renders it possible sometimes to determine the aetiology of a leukoma adhaerens or of a staphyloma corneae as a sequel of vitamin A deficiency. The author adds that the main purpose of pigmentation in deficiency disease is to protect the epithelial cells of the conjunctiva which are greatly altered and weakened as regards their metabolism from being injured by sun and daylight. The conjunctival epithelium is thus changed to a pigment epithelial layer giving some protection also to the retina the normal function of which is already affected (night blindness).

334 Superficial Punctate Keratitis

J. H. DOGGART (*Brit. Journ. Ophthalmol.* February 1933, p. 65) claims that, to avoid confusion, the term superficial punctate keratitis should not have the narrow definition laid down by Fuchs but should embrace a larger number of types. He reviews the literature and points out how the series of cases of each observer differs in pathology, bacteriology and aetiology. There is nevertheless a basic resemblance and he divides the condition for descriptive purposes into (*a*) non-recurrent superficial keratitis with lesions in the anterior layers of the substantia propria, (*b*) multiple epithelial erosions with or without involvement of the substantia propria and (*c*) miscellaneous conditions with multiple superficial lesions. Examples of each type are discussed and in the comments upon them the importance of a slit-lamp examination is apparent both in diagnosis and in prognosis.

Obstetrics and Gynaecology

335 Operative Treatment of Uterine Displacements

In discussing uterine retroversion and retroflexion R. POLLART (*La Gynécol.* December 1932, p. 641) describes the uterine statics as being a guide to operative procedures. The uterus is maintained in a normal position by both suspensory and supporting structures, the former are the large and round ligaments, the latter the whole pelvic floor or diaphragm. The ideal position in the erect posture is a slight anteflexion of a uterus in anteversion. The pelvis is closed at its lower part by two planes of tissues—each with an osseous attachment at its circumference—which form a fibro-muscular diaphragm. The lower plane is formed by the levator ani muscles and their anterior and posterior prolongations. In normal conditions the zone of least resistance (that containing the rectal, vaginal and urethral openings) is well supported by its inclination outside the direct line of intra-abdominal pressure by the direction of the vagina which is closed rather than opened by this pressure by the fibrous plane above it and by the body of the uterus. The upper diaphragm situated above the vaginal plane includes a vesical and uterine segment each containing an organ with its fibro-connective tissue sheath. In the latter are found the large ligaments laterally, the utero-sacral ligaments behind, the utero-pubic fascia in front with connective tissue fibres completing the plane diagonally. These supporting planes directly resist the abdominal pressure but their efficiency intimately depends on the position of the uterus. If displaced backwards the uterus no longer surmounts the vagina, hence the abdominal pressure falls on the bladder, uterine body and Douglas's pouch. Uterine retroversion and prolapse is due rather to weakness of the utero-sacral ligaments than to lengthening of the round. If the former have lost their tonus they should be shortened, if they still

GENERAL SUMMARY

To summarize therefore increasing knowledge has made it obvious that the comparatively simple explanations of gall stone formation of some years back no longer hold but as yet no completely satisfactory alternative explanation has been brought forward Many factors appear to be involved in gall stone formation and it is not yet possible to evaluate their precise position in causation But in spite of this it is true to say that a real increase of knowledge and a clarification of ideas has taken place On the statistical side the most striking contribution is that of Gross especially her conclusion that married women are no more liable than single to gall stones The bacteriology of gall stones has been carefully worked out and the frequency with which the gall bladder wall is infected as compared with the gall stones themselves is generally noted The view that there are certain types of streptococci with an elective affinity for the gall bladder has not won general acceptance but anaerobic organisms have been shown to be not infrequent invaders (Gordon Taylor and Whitby) It is on the biochemical aspect that the biggest advances have been made and this possibly affords the most promising line of investigation at the moment the metabolism of cholesterol the question whether the gall bladder absorbs or secretes cholesterol the factors responsible for the varying amounts of bile acids and cholesterol secreted in the bile by the liver and the effect of inflammatory and other lesions of the liver and biliary passages on these substances all being of great importance in this connexion Schade's work on concretions as a problem in physical chemistry is interesting and although his conclusions are disputed it is a line of work that merits further exploration

Finally the question of course arises whether the increase of knowledge that has taken place has any practical application From the point of view of diagnosis there is no doubt that the modern *x* ray test of cholecystography (Graham) has within the last decade revolutionized the clinical recognition of gall stones But from the point of view of treatment the patient with gall stones has still only two alternatives—to keep them with any trouble they may be causing or to have them removed by a surgical operation Because therefore of the predominant position that surgery occupies to-day in the treatment of gall stones the surgeon's position is a particularly responsible one and although many of the problems may lie outside his immediate interests he may yet do much to initiate work which will lead to an increased knowledge of gall stone formation and advances in treatment along all lines

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THE AETIOLOGY AND TREATMENT OF PERNICIOUS ANAEMIA

BY

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Just a quarter of a century ago I put forward in this *Journal*[1] a theory which was at that time new and heterodox of the aetiology of pernicious anaemia Various and discordant views were then held as to the causation of this disease—that it was due to a toxic haemolysis to repeated small capillary haemorrhages to a specific infection of the alimentary tract to a protozoal infection I suggested that it might be a *deficiency disease due to* a deficient available quantity of those materials which go to form the stroma of the red blood corpuscles This hypothesis was ignored or scouted at the time but it seems that opinion has in recent years veered round to it As my original argument was relatively concise it may be worth restatement exactly as it was given

A THEORY OF THE BLOOD DEFECT IN PERNICIOUS ANAEMIA

The aetiology of idiopathic or pernicious anaemia is still obscure and therapeutic measures are correspondingly inadequate to combat the disease In these circumstances any reasonable suggestion bearing on its pathology or treatment may have some value Pernicious anaemia in regard to blood abnormality is characterized especially by a great diminution in the number with generally a high individual haemoglobin value of the red blood corpuscles It presents in this respect a striking contrast to simple anaemia in which disease while the number of the red blood corpuscles is not conspicuously lessened each individual erythrocyte is markedly poorer in haemoglobin than are the red cells of healthy blood In the case of simple anaemia though the ultimate aetiology of it may be debated thus at least is generally accepted that there is for some reason a deficient supply to the blood forming organs of material available for making haemoglobin and that this defect of material can be made good by the therapeutic administration of iron The facts that in pernicious anaemia there is found abundance of iron in the liver and in other organs and that iron is useless as a remedy would seem to show that in this disease the defect does not lie in the haemoglobin factor of the corpuscles Moreover each erythrocyte contains in many cases a quantity of haemoglobin in excess of that which is found in the erythrocytes of healthy blood May the defect not lie in the other constituent of the red cell—the stroma? There may be supplied to the blood forming organs in a patient suffering from pernicious anaemia a deficient available quantity of those materials which go to form the stroma of the red blood corpuscles There is present as it were in the body haemoglobin enough but not enough material for stroma in which the haemoglobin may find place The stroma of the red blood corpuscles consists largely of lecithin and cholesterin The condition known as pernicious anaemia may be due to a deficiency in the body of lecithin or cholesterin and the administration of these substances may be of some use as a remedy Certain facts go to show that there may be some defect in the stroma of the red cells in this disease For example they do not run into rouleaux in normal fashion It has

been shown that bodies suspended in a watery solution run into rouleaux only when possessed of a fatty covering The absence of this phenomenon in pernicious anaemia may be due to a defect in the stroma of the red blood corpuscles, in the lecithin and cholesterin elements, which though not true fats are yet of a fatty nature The condition of poikilocytosis and abnormal staining of the red cells, sometimes present in pernicious anaemia, may be due partly to the same defect On such a hypothesis of the blood defect in pernicious anaemia, the results of its somewhat empirical treatment may possibly be explained The giving of bone marrow recommended by Fraser may be merely a method of supplying to the blood-forming organs those constituents of stromae which they lack Lecithin is certainly known to exist naturally in the bone marrow Arsenic, which, since its introduction by Byrom Bramwell in this disease, has been found to benefit a certain number of cases, may act on the stroma of the red blood corpuscles in such a way as to remedy this defect and increase their resistance Indeed, lecithin has been found to increase the number of the red cells and some experiments which I have made with regard to the action of arsenic on these cells have gone to show that it increases their resisting power Nor is there any inherent reason, if a deficiency of iron, for example, or of calcium can cause morbid conditions, why disease may not also be set up by a lack of such necessary constituents as lecithin or cholesterin '

The main contention was that pernicious anaemia is due to a lack of ' those materials which go to form the stroma of the red blood corpuscles " Not only this conclusion, but the premisses upon which it was based, seem to resemble very closely those which have later been admitted For example, Whipple[2] wrote in 1922

Our conception of pernicious anaemia is that there is a scarcity of stroma building material or a disease of the stroma forming cells of the marrow which limits the output of red cell framework There is plenty of pigment material (an excess in fact) is evidenced by the high colour index or the saturation of the red cells with haemoglobin "

It is unnecessary here to attempt to recapitulate the recent advances in knowledge of pernicious anaemia, which furnish one of the most brilliant successes of therapeutics The value of liver diet and of liver extracts has been firmly established As to what the substance is which occurring in various organs seems to supply the material lacking for stroma formation, there is still doubt —a doubt which may soon be dispelled There is a good deal of evidence to show that more than one substance, and possibly not always the same substance, may be lacking My original conjecture that the failure to produce red cells in pernicious anaemia might be due specifically to lack of lipoid material seems to have been disproved At any rate this cannot be the sole factor, so far as one can judge from the evidence of liver extracts

A Suggestion Put Forward

My object in publishing this note is, however, not to derive a melancholy satisfaction from the fact that I was nearer the mark than the authorities of my early days were willing to allow, but to make a further suggestion As Whipple says in the paper already quoted " hypotheses are of some value for further work, even if there be little or no truth in them " Having formulated this hypothesis of the causative factor in pernicious anaemia, I attempted in 1908 to proceed to the next obvious step, which was to administer the separated stroma material in pernicious anaemia I tried to obtain this by haemolysing defibrinated ox blood and separating the stroma by centrifuging Having at my disposal only a very small centrifuge, I obtained only an insignificant amount of stroma material Having also no facilities for testing this material clinically, even if I could obtain a sufficient quantity of it, and having little hope of persuading anyone to test the fruits of a discredited hypothesis, I gave up the work, discouraged During recent years, when opinion has come round in the direction of believing that pernicious anaemia is due to some lack of stroma forming substance, I have wondered that no one has done the experiment I originally contemplated, and which still seems to me a crucial experiment It may have been done and escaped my notice In the belief that it has not been tried, I venture to put forward the following considerations in the hope that someone who has the requisite plant and facilities will hazard the gamble

If pernicious anaemia is due, partly or wholly, to a lack of the materials (in the widest sense) necessary for stroma formation, it would seem that the most direct and complete method of supplying this deficiency would be to administer the actual stroma material as a whole and unchanged Presumably all the materials necessary for the ultimate stages of stroma formation are there present As it is impossible to foretell to what extent, if any, the stroma constituents may be destroyed by digestion, a saline suspension of stroma might first be tried intramuscularly It is more than probable that, if this were to be effective at all, it would act quickly in pernicious anaemia

If it did act, it might be easier to obtain the active principle from stroma material than from liver or other organs, because the chemical structure of the stroma must almost certainly be less complicated than that of liver The stroma is only a box, while the liver has many functions to perform other than those concerned with blood metabolism It is possible, however, that, even if the supposition be correct (that pernicious anaemia is due to lack of stroma building material), the administration of completed stroma material will not supply the deficiency because the blood forming organs may deal with the precursors of that material and may not be able to avail themselves of the material in the full and final stage of its synthesis This possibility is, however, not sufficiently deterrent to oust the propriety of trying the administration of stroma material in pernicious anaemia If this proved successful it might provide a therapeutic agent cheaper and more concentrated than liver extract, it might furnish a simpler matrix for extracting the active principle and it would certainly provide further direct evidence as to the aetiology of pernicious anaemia

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CRYPTO-EMPYEMA

BY

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By crypto empyema is meant an empyema that cannot be diagnosed by repeated needling, even under an anæsthetic The term is useful, if for no other reason than that it reminds the practitioner that empyema ought to be diagnosed and treated, on occasion, when pus cannot be found by the exploring needle

Three cases of this condition that have come under my care may be briefly related

Case I

A public school boy developed a left empyema nine days after the onset of pneumonia Temperature was 103° pulse 100 respirations 30 A large empyema was evacuated by rib resection after locating the pus with a needle It contained streptococci and saprophytes For a few days he did well, then the temperature rose again, and the boy looked

possess some elasticity traction on the round ligaments suffices Pollart briefly describes his technique for both these operations, by which he claims to restore more efficiently the uterus to its normal position This method of uterine fixation is especially indicated in cases before the menopause, at least one of the adnexa being conserved In the great majority of his cases thus treated no ill after-effects or complications have occurred, good health has been maintained, pregnancy has evolved normally, and after labour the uterus has retained its normal position

336 Avertin Analgesia in Midwifery

G G COCHRANE (*Amer Journ Obstet and Gynecol*, December 1932, p 849) describes satisfactory results in 150 deliveries, in 114 of which the forceps was used, under avertin analgesia As a rule, a supplemental inhalation of nitrous oxide and oxygen was given at the time of actual delivery and for perineal repair A combination of morphine gr 1/8 and scopolamine gr 1/200 was injected at two hourly intervals from the commencement of dilatation to the achievement of one-inch dilatation avertin was now given through a catheter passed high into the rectum soon after a uterine contraction Dosage seemed important After doses of 80 mg per kilogram of body weight the pains were noted to become weaker and less frequent, after doses of 50 mg analgesia and amnesia were insufficient, a dose of 60 mg per kilogram gave excellent results manifested in fifteen minutes After three hours, if necessary, a second dose was given without hesitation, it was required in thirty-five cases of this series Only twenty-five of the patients reported a clear memory of their confinement Since avertin appears to be detoxicated in the liver, it was not used in patients showing evidence of pregnancy toxaemia

337 Carcinoma of the Cervix after Subtotal Hysterectomy

B S STEFANIK (*Bratislavské Lekarske Listy* January 1933 p 31) records a case in which carcinoma developed in the cervix years after a subtotal hysterectomy This gave rise to the question whether total hysterectomy would not be preferable in every case The author has compiled the statistics of post-operative mortality in total and subtotal hysterectomy The post-operative mortality after total abdominal hysterectomy was 6 per cent, and after subtotal hysterectomy only 3 1 per cent The possibility of development of carcinoma in the cervical stump is he considers, very remote, and the danger does not justify the more serious operation of total hysterectomy in cases where a subtotal would be sufficient The author advises examinations at regular intervals of all cases where subtotal hysterectomy has been performed

Pathology

338 Biopsy in Cancer Diagnosis

Since the finding of a serological or a blood test for early cancer still appears to be remote, the advantages and disadvantages of biopsy are discussed by B T SIMPSON (*Canadian Med Assoc Journ* January, 1933, p 62) An absolutely definite clinical diagnosis cannot be made in more than 70 per cent of cases, and the macroscopical appearance by itself can be expected to afford diagnosis in a little more than 80 per cent As the result of the present intensive educational propaganda concerning cancer persons are now asking for medical advice in respect of lesions which are clinically impossible of a definite diagnosis and, therefore, the percentage of correct clinical interpretations is sure to be decreased as time goes on Microscopical examination is by far the most reliable diagnostic procedure at present The practical application of biopsy varies under different circumstances—namely (1) diagnostic biopsy in general practice, and only when a diagnosis cannot be made by other methods (2) therapeutic biopsy when it is undertaken for the purpose of determining the type and amount of treatment, (3) routine biopsy, as is practised in research institutions, where a biopsy is performed on nearly every patient not only for the purposes of diagnosis and determination of the type of treatment, but to provide a permanent record—especially after radiation, where otherwise no histological details would be available The dangers that have been ascribed to biopsy are haemorrhage and infection, these are minor, and occur but rarely if proper precautions are taken Dissemination and acceleration of the growth of a malignant lesion have to be considered, but laboratory experiments and clinical observations go to prove that cutting a malignant tumour does not stimulate metastasis Since, however there are theoretical grounds for considering the procedure not entirely free from danger, it is advisable that the interval between the time of taking the tissue and the performing of a necessary operation should be as short as possible Notwithstanding the fact that the malignant nature of a lesion is known, biopsy is often advisable for the purpose of ascertaining whether or not the neoplasm is radio-sensitive As regards bone lesions the procedure is still open to controversy, and the present author does not employ it for bone lesions or melanomas He is convinced that if every patient could have the advantage of expert biopsy, the mortality from cancer would be greatly reduced An expert pathologist must be prepared to give an opinion upon the grade of malignancy and the degree of radio sensitivity

339 Epidemiological Features of Pneumococcal Infections

A S M MACGREGOR (*Public Health* January, 1933, p 117) records an investigation into the incidence of various types of pneumococci in lobar pneumonia during the past three years in 1,077 hospital patients in Glasgow Pneumococci of Type I were present in 38 per cent, of Type II in 36 per cent, of Type III in 4 per cent, and of Group IV in 22 per cent The Type II incidence is rather high, but otherwise the figures resemble those in the country generally, as do the case mortalities—namely, Type I, 10 7 per cent of cases so infected, Type II, 19 6 per cent, Type III, 42 9 per cent, and Group IV, 8 4 per cent, the total mortality rate being 14 7 per cent The case mortality was found to rise rapidly with age Type II was shown to be almost twice as fatal as Type I at all ages Group IV infections, the least serious, occurred more frequently in the young and the old, while Type III, more common in later years, proved to be the most serious of all pneumococcal strains Alterations in type incidence were not noted to the same extent as has been reported elsewhere, and the question how far the case mortality fluctuations depend on type incidence at different times in the year remains to be worked out The author recalls the fact that the possibility of transmutation of types seems to have been established, and urges caution, therefore, in attributing to Types I and II any paramount importance in the spread of pneumonia It was confirmed in this investigation that pneumococci might persist in the nasopharynx of convalescent patients for long periods, and are readily found in nurses and contact patients in the wards, but there is little evidence of direct infection so resulting Macgregor concludes, therefore, that there may exist a wide susceptibility to the carrier state and a low susceptibility to the disease itself Lobar pneumonia appears to show a periodic peak as regards seasonal incidence in the months February to April, remaining at a lower level during the rest of the year Bronchopneumonia tends to pursue an erratic course as regards incidence, and to exhibit wide and irregular fluctuations The author remarks that this attempt to dissociate the incidence of the two forms of pneumonia is based on insufficient data, but permits the suggestion that lobar pneumonia has distinct specific epidemiological features He considers it probable that some unknown epidemiological factor, other than weather conditions alone comes into play in determining the incidence of bronchopneumonia from year to year

very ill Twelve days after the first operation an anaesthetic was given and the residual empyema searched for by needle but it could not be found Four inches of the posterior part of the fifth rib and two inches of the fourth were resected and the whole hand was put in to explore On breaking down a long stretch of adhesions posteriorly a cavity containing one ounce of foul pus was opened at the back of the root of the lung The original empyema cavity was quite clean A tube was inserted After a long illness the boy made a perfect recovery

CASE II

A gentleman aged 45 was referred to me by Dr J A Nixon and Dr Dyer He had been ill five weeks with influenzal pneumonia the temperature was still 99° to 100° every night there was dullness at the right base and the patient looked ill A skiagram showed opacity of the right base A needle had been put in three weeks before but found no pus Under ether I needled in five places but found no pus A piece of the ninth rib was resected in the posterior axillary line and the pleura opened it was clean and non adherent The lung was adherent further back and felt firm The clean pleura was closed more rib removed posteriorly and adhesions separated by the finger Two small loculi of pus were found one alongside the vertebral column and another between the lobes of the lung A bifurcated tube was put into these the chest wall sewn tightly around it and the projecting end clamped Twice a day the discharge was drained off under the surface of carbolic lotion In ten days the empyema had healed

CASE III

I was called by Dr C Bernard to see a man aged 60 who had appeared to recover from influenza in the epidemic of January 1933 but after being up a week had to go back to bed with fever shortness of breath and dullness of the base of the right lung with absent breath sounds and diminished vocal fremitus The heart was not displaced A needle was inserted in two places but no pus was found He was removed to the Bristol Royal Infirmary a very sick man Under an anaesthetic the chest was repeatedly needled but no pus was found A piece of rib was resected posteriorly and clean non adherent pleura opened This was closed again and adherent pleura separated back until an abscess containing several ounces of foul pus was opened between the base of the lung and the dome of the diaphragm far in It was treated as in Case II and an excellent recovery followed

The main lesson to be learned from these cases is that one must not be dissuaded from diagnosing empyema because repeated needling fails to strike pus In a patient who has suffered from pneumonia and especially influenzal pneumonia if the temperature keeps up for more than three weeks if dyspnoea and sweating are present and dullness is found at the base of the lung with diminished breath sounds and vocal fremitus that is enough to warrant an exploratory operation and a determined effort to find pus with the finger or if necessary the whole hand inside the chest even if the heart is not displaced A skiagram is useful it will show some opacity but it cannot be relied on to tell us exactly where the abscess is The loculi of pus may be small but they are likely to lead to a long and serious illness if not evacuated

There are two exceptions to the rule just laid down If tubercle bacilli have been demonstrated in the sputum a diagnosis of crypto-empyema would be precarious If the patient is very toxic, bringing up quantities of putrid expectoration and especially if it contains elastic fibres there is probably an open abscess or gangrene of the lung and operation would be too dangerous A closed abscess of the lung might well be confused with crypto-empyema and if the pleura was found non adherent it would be safest to make a two-stage operation of it packing off with gauze at the first intervention so as to promote adhesion of the lung to the chest wall Probably some cases of abscess of the lung are better left alone

It may be objected that the surgeon following this principle will often find himself meddling with an unresolved pneumonia We do not agree When from the so-called unresolved pneumonias with fever and physical signs persisting for three weeks there have been deducted the tubercles the pleuritic effusions the empyemas and the abscesses there is little if anything left

SODIUM SONERYL AS A BASAL HYPNOTIC

A REPORT OF 150 CASES

BY

S E BIRDSALL M A B CH CANTAB
M R C S L R C P

Sodium soneryl is the sodium salt of butyl ethyl barbituric acid and has been used as a basal hypnotic before general anaesthesia in 150 cases at St Bartholomew's Hospital between January 30th and April 14th 1933 Chemically sodium soneryl resembles nembutal which is sodium ethyl (1 methyl butyl) barbiturate clinically it is of lower toxicity and is administered in larger doses The presence of a methyl group may be the cause of the greater toxicity of nembutal The series of cases includes patients whose ages varied from 6 to 70 years and operations were performed for diseases of the ear nose and throat (45) the abdomen (39) the uro-genital tract (36) bone (11) the breast and neck (10) and for hernia (9) In every case the anaesthetic was administered by means of Boyle's nitrous-oxide oxygen-ether apparatus In the ear nose and throat cases and in nearly all the abdominal ones the anaesthetic was given by the endotracheal route comprising in all eighty five cases

Sodium soneryl was taken by the oral route in capsules containing 0 15 gram each In the first eleven cases the dosage was as follows Two capsules (0 3 gram) were given at 8 p m the day before operation this ensured a good night's sleep though in four instances the patients were found to be sweating the next morning On the day of operation sodium soneryl was given one hour before the induction of anaesthesia this dose being regulated according to the weight of the patient Thus from 6 to 8½ stone 0 45 gram (three capsules) from 8½ to 10½ stone 0 6 gram (four capsules) from 10½ to 12½ stone 0 75 gram (five capsules) and above 12½ stone 0 9 gram (six capsules) were administered Gynaecological operations were performed on six of these patients and it was found that they were still drowsy on the morning of the operation so that enemas were imperfectly returned on this account the evening dose was discontinued Doses of 0 45 gram were generally found not to produce sleep in adults and the dosage was therefore again simplified the following scale being adopted for the majority of the cases in the series below 10 stone 0 6 gram between 10 and 12 stone 0 75 gram and above 12 stone 0 9 gram In children (below 12 years) 0 3 gram was given followed by a further dose of 0 15 gram if the child was not asleep or drowsy after half an hour The capsules were given one hour and atropine (grain 1 75) fifteen to thirty minutes before operation No morphine was given except in three cases

EFFECTS OF SODIUM SONERYL

The following effects were noted in ninety seven cases the patient was asleep on reaching the operating theatre in forty six the patient was very sleepy in five no definite effect was noted and in two the patient was excited All arrived in the theatre breathing naturally with no trace of cyanosis and no stertor Sleep was commonly produced in thirty to forty five minutes The induction of anaesthesia was very smooth the length of time taken being the same as in non premedicated patients averaging about six minutes for moderately deep anaesthesia by nitrous oxide oxygen and ether In the majority of

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instances the amount of ether used was considerably less than would otherwise have been necessary In vaginal and urethral operations, and in bone operations, which included two amputations through the thigh, no ether was required In most of the hernia cases gas and oxygen alone was employed In seven cases the breathing was shallow including three in which morphine (grain 1/6) was given, the usual dose of soneryl being diminished by 0 15 gram In the remaining 143 patients there was no obvious depression of respiration, such as usually occurs after nembutal (3 grains) and morphine (1/6 grain) Consequently the induction of anæsthesia following the administration of soneryl was more rapid than after nembutal and morphine, the signs of anæsthesia were not affected

Recovery from the anæsthetic occurred in most cases after two or three hours After being awake for an hour or two the patient usually slept for the next six to twelve hours, and on waking up had no recollection of having been awake previously In eighty cases the average time that elapsed before recovery was two and a half hours the longest recovery period was twelve hours, following a long abdominal operation With nitrous oxide oxygen anæsthesia recovery was particularly rapid Restlessness during recovery was noticed in some patients In fifty consecutive cases the recovery was observed carefully, and in five of these the patients were noisy or excited In all these instances the operation had been over one hour in length and the restlessness was controlled by morphine or omnopon Injection of morphine or omnopon is effective, and is indicated after long anæsthesia with nitrous oxide, oxygen and ether In 130 cases there was no vomiting after the anæsthetic, it occurred in twenty cases, but was not excessive Memory was abolished except for outstanding events With those patients who were asleep on arrival at the theatre nothing was remembered subsequent to the swallowing of the capsules Those who were drowsy but not actually sleeping at the time anæsthesia was induced remembered being lifted out of bed and also remembered the mask being applied to the face, but their condition was one of calm rather than of apprehension at the time of induction

The urine was examined on the day following the administration of soneryl in most of the cases in order to determine the presence or absence of bile pigments or albumin, as these abnormal constituents are said to appear occasionally after the administration of barbiturates In no case was either detected

COMPLICATIONS

Complications and sequelæ were considered in the same order as in Boyd's investigation of nembutal (*St Bartholomew's Hospital Reports*, lxv) (1) Restlessness supervened in about 10 per cent of cases It occurred after prolonged anæsthesia in which ether was used In such cases morphine (grain 1/6) should be given if the patient is at all noisy or restless on recovery, otherwise morphine is unnecessary Restlessness was the most common complication observed (2) There were no cases of post operative pulmonary disease in this series During February and March, 1933, fifty cases in which soneryl was given were compared with fifty cases in which only atropine was given, the types of operation being similar in both series In the latter group there were five cases of bronchitis, in each instance following an abdominal operation It is likely that the smaller amount of ether required in the soneryl group was responsible for the absence of post operative bronchitis, as many patients, including those in whom bronchitis occurred in the control series, had suffered from influenza in the recent epidemic (3) There were no instances of excessive vomiting (4) Cutaneous eruptions were not observed (5) Headache was complained of in two cases but it was not severe (6) Amnesia has never been prolonged, and is not so marked as after nembutal (7) Definite giddiness occurred in four cases In most of the cases drowsiness persisted during the next day

CONCLUSIONS

1 Sodium soneryl is a reliable basal narcotic producing sleep or drowsiness in 95 per cent of cases when administered by mouth one hour before the induction of general anæsthesia

2 The optimum dose varies from 0 6 to 0 9 gram according to the patient's weight

3 Depression of respiration is produced in a few instances, and restlessness occurs in 10 per cent of cases Respiration is depressed far less than by a combination of nembutal (grains 3) with morphine (grain 1/6) and the therapeutic effect desired can be obtained with a much less toxic dosage No other toxic effects have been observed

4 Sodium soneryl has not been administered in cases of (*a*) senility, (*b*) pulmonary disease, (*c*) renal impairment or (*d*) arteriosclerosis

The author wishes to express his indebtedness to Mr A M Boyd at whose suggestion this investigation was undertaken and to Mr H L G Boyd whose advice and guidance made the investigation possible

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

NOTE ON AN OUTBREAK OF PUERPERAL SEPSIS IN A MATERNITY HOSPITAL

The last serious outbreak of puerperal sepsis in the Glasgow Royal Maternity and Women's Hospital occurred between January and March a few years ago The findings of an investigation into the cause are thought to be of general interest and to be suitable for publication The outbreak would appear to be attributable to tonsillitis in one of the house surgeons

The hospital was divided into two units each of which had two house surgeons The outbreak was confined to one unit whose house surgeons we will call A and B, B was the affected one The first three months October to December of B's residence were compared with the second three months January to March The cases were also divided according to whether they were handled by A or B

Table I shows that in the first three months the notifiable pyrexia rates and death rates for the cases of both A and B were approximately the same, but that in the second three months B had a much higher notifiable pyrexia rate and a very much higher death rate The death rate on the total cases for the second three months was approximately three times the death rate for the first three months

TABLE I

	October–December			January–March		
	Total Cases	Notifiable Pyrexia	Deaths	Total Cases	Notifiable Pyrexia	Deaths
H S A	204	21 or 10 3 %	2 or 0 98 %	179	18 or 10 0 %	2 or 1 12 %
H S B	207	20 or 9 7 %	2 or 0 97 %	238	39 or 16 4 %	10 or 4.2 %
Total deaths	4 or 0 97 %			12 or 2 9 %		

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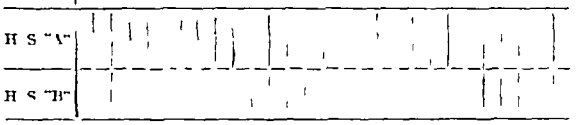
In Table II the deaths are shown according to the date of delivery They were all clinically septicaemias and it is interesting to note that five of the deaths in B s cases in the second three months occurred within three weeks

TABLE II



As the great proportion of fatal puerperal septicaemias is due to the *Streptococcus haemolyticus* from the throats of the attendants and as a recent investigation (Baird and Hart unpublished) into all cases of puerperal sepsis occurring in the Glasgow Royal Maternity and Women s Hospital showed that the unit where masking was most rigorously insisted upon had the least number of cases of streptococcal septicaemia it may be suggested that this type of outbreak of sepsis can largely be avoided by thorough masking

In addition to the assistance offered by Professor Munro Kerr my thanks are particularly due to Dr Dugald Baird and Dr D M Hart for the help they have given me in this investigation

MALCOLM D BLACK M B Ch B
House-surgeon Glasgow Royal Maternity and Women s Hospital

PLEURAL SHOCK DURING ROUTINE ARTIFICIAL PNEUMOTHORAX REFILL

One of us has during his six years here done about 3 500 refills including inductions and has experienced four definite frights The first was on the occasion of his first induction when the girl patient became very pale and then cyanosed Although the pneumothorax needle was withdrawn on reintroducing it a satisfactory pneumothorax was induced and no further trouble was ever experienced The second case was published in the *British Medical Journal* of April 28th 1928 under the heading Diagnosis of Pleural Shock from Cocaine Poisoning (The article was sent to Sir William Willcox who definitely said it was a case of cocaine poisoning and kindly said he might be quoted as saying so) The third was in a well-established case Here the woman complained of a bitter taste in the mouth became cyanosed and then could not speak she recovered very quickly The needle was of course withdrawn at once and the refills were continued a few days after A brief account of the fourth case may be of interest

A pharmaceutical chemist s assistant aged 28 was admitted to the Winsley Sanatorium on November 18th 1932 He had never been strong and the term marasmic describes his history extremely well His private doctor Dr Bourke Cuppage of Bath tells me that to his knowledge the patient had never had any fits of any sort On August 18th he had gone to the Bath Tuberculosis Dispensary to see Dr Heslop on account of a dry cough Pneumonia developed fourteen days later on the left side and then a month afterwards a right sided pleurisy On admission we found right sided disease and some on the left confirmed by the *x* ray screen The temperature fluctuated between 97 6° and 99° F pulse was 96 to 100 there was very little sputum but tubercle bacilli were found in it On January 16th 1933 the temperature shot up to 103° and on the 23rd we induced a right sided artificial pneumothorax and obtained a reasonable collapse On March 13th he was having a routine refill after being screened After the usual 2½ per cent novocain injection had been given and after we had waited about three minutes the artificial pneumothorax needle was inserted A reading was not obtained at once and the operator proceeded the lung—as shown by the appearance of some blood stained sputum after the fit—before getting a −6 −3 reading We then proceeded to put some air in Suddenly the patient said I am going and became very ill with livid face profuse perspiration staring eyes and loss of consciousness The pulse was full and rapid the breathing short and jerky and the face very flushed on the right side This lasted for about fifteen minutes when he regained consciousness The patient stated that before going off he felt pins and needles on the right side of his face He has made a complete recovery and is bitterly disappointed that we are not going on with the artificial pneumothorax treatment

The differential diagnosis would appear to be pleural shock or gas embolus as we are informed that novocain is not likely to produce poisoning The condition seemed unlikely to be a hysterical fit but we should appreciate help in the diagnosis from neurologists and from tuberculosis specialists with much more experience than we have

JAMES D MACFIE M D Ch B
Senior Resident M O
WILLIAM FITZGERALD LYLE M D
Winsley Sanatorium Bath Assistant Resident M O

British Medical Association

CLINICAL AND SCIENTIFIC PROCEEDINGS

PUNJAB BRANCH

Evolution of Public Health in the Punjab

At the annual meeting of the Punjab Branch of the British Medical Association on March 5th the newly elected president Dr K A RAHMAN assistant director of public health in that province delivered an address on the way in which the public health services in the Punjab had developed from the earliest days until the present.

Dr Rahman said that the Punjab comprised an area of 97 280 square miles its population at the last census in 1931 was estimated at a little over 23 millions of which 13 millions were male The first appearance of preventive medicine in it was traceable to the appointment of a superintendent general of vaccination shortly after the annexation of the province This was followed by the appointment of a sanitary commissioner in 1868 Twelve years later the two departments were amalgamated area deputy sanitary commissioners being appointed who were also concerned with vaccination In 1890 a Sanitary Board was created to advise the Government with regard to the execution of sanitary works for local bodies In 1897–8 bubonic plague first occurred in the province and the deputy sanitary commissioner was detailed to act as plague medical officer in addition to his original duties but subsequently a separate department was created and placed under the Inspector General of Civil Hospitals Twelve years later the province was visited by an epidemic of malaria of extreme severity this led to the appointment under the Inspector General of a chief malaria medical officer in charge of the Punjab Malaria Depot Thus up to that time the conduct of public health services was almost entirely concentrated at the headquarters of the Government apart from the vaccination staff and the temporary staff engaged in combating plague Medical officers of health were however functioning at Lahore and Amritsar and in 1905 the Government of India appointed one for Simla but it was not until 1915 that the municipal committees of Lahore Amritsar Multan Rawalpindi Sialkot Ludhiana and Jullundur were required to employ medical officers of health and at least two qualified sanitary inspectors each while twenty nine other such committees were required to employ at least one qualified sanitary inspector Courses for the training of these inspectors were inaugurated and a system of compulsory certification was established

In 1920 the first step was taken towards the provision of a permanent public health establishment in rural areas, and three districts were provided with district medical officers of health at the expense of the Government Propaganda work now began, and an education bureau was brought into being for the preparation of lantern slides to illustrate lectures In the same year the chief plague and malaria medical officers were transferred from the control of the Inspector General of Civil Hospitals to that of the Sanitary Commissioner In 1922 the Public Health Department came into being, incorporating the sanitary department, in the following year further reorganization followed, the Punjab Malaria Bureau becoming the Epidemiological Bureau, with an increased qualified staff In 1926 it was ordered that every district should have its own medical officer of health who should be a Government servant, control being thus centralized Until 1926 it had been the practice to engage large temporary staffs to combat epidemics of plague, cholera, and malaria, but after that year, which was marked by a very severe epidemic of plague, the staff was retained, and had been subsequently engaged in preventive work Its value proved to be so great that its numbers were increased and differentiation of its duties was evolved

Dr Rahman sketched briefly the development of the Punjab Vaccine Institute, with its permanent buildings at Lahore and Murree, the Epidemiological Bureau the Education Bureau, and the Sanitary Board, which now directed the whole general technical public health policy of the province The greater part of its work had been done since the war In 1900 there were only about twelve towns in the Punjab with properly protected water supplies In 1920 the number had increased to eighteen, and the present total was thirty six Special attention had also been paid to water supply schemes for rural areas and fair centres, and drainage works had been installed on a wide scale So far it had not been possible to do very much as regards housing conditions in towns or the amelioration of public health conditions in rural areas One necessity in the latter was the provision of large engineering works in various places to drain swampy tracts of land, to prevent inundations by river floods, to remedy the waterlogging due to excessive irrigation, and to counteract the blocking of natural drainage resulting from the development of canals and railways A Drainage Board had been brought into being in 1918 but little work could be done until 1923, owing to financial stringency Increased activity followed and by 1927 large operations were in progress in eleven out of the twenty-nine districts of the province Reduction in the work was subsequently brought about through scarcity of funds

In 1922 the Punjab Provincial Branch of the Lady Chelmsford Maternity and Child Welfare League opened a training school for women health visitors who could be placed in charge of centres throughout the province Forty two such centres were now in existence, and the demand for more was keen Seventeen of these were situated in rural areas From the beginning of the 1927 financial year the Punjab Health School had been taken over by the Government, but the work of choosing these health visitors and supervising their work at the centres was left to local authorities, the Government making an annual grant in aid A chemical laboratory had been instituted in 1921 by the Punjab Sanitary Board for the systematic examination of rural water supplies and this had extended its activities to include the examination of foods and certain other public health investigations Additional laboratories were required by the larger municipalities which were at present partly assisted by the central laboratory

The president concluded by emphasizing the additional scope for work rendered necessary by the increasing urbanization of the population generally Transport improvements were intensifying the danger of the spread of epidemics and the travels of pilgrims were now an even greater possible source of the dissemination of infection than hitherto Preventive medicine was becoming more and more important and in this connexion the part to be played by the general practitioner was very great

Reports of Societies

BRONCHOSCOPY IN POST OPERATIVE LUNG COMPLICATIONS

At a meeting of the Section of Anaesthetics of the Royal Society of Medicine on May 5th, with Dr C F HADFIELD in the chair, Mr V E NEGUS read a paper on bronchoscopy in the diagnosis and treatment of post operative lung complications

Mr Negus said that all surgeons and anaesthetists were interested in post operative lung complications and were deeply concerned with their avoidance, and this was particularly the case in operations on the upper air passages The nose and throat surgeon had a further field of activity in endoscopy, and, called upon to treat cases of lung suppuration by means of the bronchoscope he could study the normal mechanism of the tracheo-bronchial tree by direct observation Chevalier Jackson in America, had shed light on the causation of suppurative diseases of bronchi and lungs, and had drawn most valuable conclusions as to their prevention and treatment The conditions to be dealt with could be classified in the following way (1) inspiration of a foreign body, (2) diffuse suppurative bronchitis, (3) lung abscess and bronchiectatic abscess, (4) acute massive collapse or atelectasis and (5) multiple bronchiectasis He then discussed the natural defences against infection in the case of the lungs The first of these was protective closure of the larynx which had to be considered in both the conscious and unconscious subject Bronchoscopic observations had been made after tonsillectomy to see whether blood entered the lung, and conclusions had also been drawn by the application of lipiodol to the tonsils before operation Cough, again had to be considered both from the point of view of the duration of the reflex and in relation to the normal respiratory movements of the bronchi Protective closure of the larynx did not offer any real safeguard against bacterial infection, its useful function was concerned with the exclusion of foreign bodies Voluntary closure of the larynx could not be long maintained because the rising amount of carbon dioxide concentration stimulated the respiratory centre and caused the larynx to open During dental extraction the patient might be forced to take an inspiration at the precise moment that a tooth dropped down, and the foreign body be carried by inspired air into the lungs During the induction of anaesthesia voluntary control was obliterated, and a deep inspiratory effect might suck in packing which had not been securely fastened The secretion of mucus was another defensive mechanism, and was of great importance in inhibiting the growth of bacteria It was therefore most desirable that applications such as excessive doses of atropine which dried up the mucus, should be avoided The action of the cilia must also be considered in the mechanism of lung protection Ciliary action was most valuable in removing bacteria before they got a foothold The waving of these cilia took place in one direction, and their action was efficient when a blanket of mucus covered the ciliated surface This action proved especially valuable in emptying the periphery of the lungs

Inspiration of a foreign body might occur during either general or local anaesthesia With the former, the danger of the entrance of a foreign body was greater if operation was carried out with the patient in the sitting position this was especially so in dental extractions and tonsillectomy During tonsillectomy the greatest danger of the inspiration of a foreign body occurred in this posture, for a dislodged tooth or a piece of sponge easily followed the air stream down the trachea Bronchoscopy was the only method of removing foreign bodies Diffuse suppurative bronchitis might arise after general anaesthesia and there occurred expectoration of purulent sputum to a considerable amount The accidental entrance of liquid ether also would cause it Bronchoscopy was of the greatest value in cases of severe post operative suppuration, removal of the pus by aspiration might prevent the patient from drowning in his own secretions The

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most frequent cause of lung abscess and bronchiectatic abscess was the inspiration of infected blood clot or of an infected foreign body such as a tooth or swab The fact of a patient's coughing up a large quantity of pus in a short time was evidence that he had a large reservoir of infected secretion The most important process of draining was carried out by bronchoscopy under local anaesthesia Acute massive collapse of a lung lobe sometimes called for bronchoscopic diagnosis and treatment In many cases the condition was caused by plugging of a bronchus with viscid mucus Massive collapse of lung might occur after any operation particularly after those on the upper abdomen and in this deficient movement of the diaphragm was a powerful factor Multiple bronchiectasis sometimes dated from the time of an operation but often the history was so long that it was difficult to say whether the cause lay in the operation itself or in the disease it was intended the operation should relieve Cocainizing the larynx was a dangerous procedure even when general anaesthesia was employed Packing inside the nose should always be securely anchored because of the danger of its being inspired

Dr I W MAGILL said all anæsthetists experienced difficulty in securing such a condition of affairs in the pharynx as to enable a surgeon to carry out tonsil otomy with ease One way was to induce deep anaesthesia another was to cocainize the larynx in the first instance and then to use a light anaesthetic instead of saturation In his practice he had found the latter free from complication In his view the less ether or chloroform a patient had the better Mr CECIL HUGHES strongly favoured the induction of the minimum amount of anaesthesia for all kinds of cases as it was advantageous not to have to get rid of a lot of ether or chloroform after the operation was concluded and recovery was thereby hastened He favoured the use of rectal oil ether it constituted a valuable basal anaesthetic Dr HAROLD SINGTON said the paper demonstrated the importance of the depth of anaesthesia in each particular case It was most essential to make sure that no bleeding was taking place at the end of the operation In tonsil and adenoid operations unless anaesthesia was complete one could not completely dry the pharynx and especially in the case of children it was very important that the posterior nasopharynx should be dry before the return to bed Light anaesthesia did not secure this so well as deep

Dr T B JOBSON said he had had only two cases of lung abscess and in both the operation was done under general anaesthesia with ether He had performed a large number of tonsil operations under local anaesthesia but in none of those had he experienced any lung complication He wondered whether premedication with such drugs as nembutal and avertin had any influence on the occurrence of operative complications Mr CYRIL HORSFORD was sure every anaesthetist would appreciate Mr Negus's remarks on the prevention and cure of lung complications One of the greatest dangers of nasal and throat surgery was the anaesthetic difficulty not only because the anaesthetist had to carry out his work in the same region as the surgeon but also because of the irritative effects of the various anaesthetics He had recently been pleased with the method of intratracheal gas and-oxygen anaesthesia but if a sedative was given causing the patient to sleep many hours afterwards a rapid cessation of the anaesthesia could not be obtained He had done many tonsillar operations under local anaesthesia the advantage of which was that with sufficient adrenaline the operation could be rendered practically bloodless and if one abstained from using much cocaine there was no need for abolition of the laryngeal reflex He preferred gas and-oxygen to ether chloroform he did not favour nor deep anaesthesia Mr M L FORMBY asked whether there was more danger in operating on a dirty antrum with an intratracheal tube than with an ordinary air way instrument in the mouth Dr R J MINNITT said he worked with a surgeon who wished children to be sat up immediately after guillotine removal of the tonsils as it was thought to stop the bleeding but the speaker considered there was a danger of blood being aspirated He had experimented with the heating of ether in tubes of various lengths and found that when the temperature was 112° at the heated point it was only 80° at a distance of two feet

Mr H E G BOYLE agreed that in throat cases a great deal depended for the success of the operation on the posture of the patient on the table He still thought that the position insisted on long ago by Sir Henry Butlin—with the patient on his side and with the left shoulder raised—was much safer than the extended position for then blood collected in the post nasal space from which it should always be removed His impression was that a number of patients who had blood in that space subsequently developed mastoid disease By giving patients nembutal beforehand all operations could be done under gas and-oxygen using very little ether Mr HOWARD JONES said that the mere passage of a tube into the trachea was no protection against the inhalation of blood by the patient unless it completely filled the trachea

TUMOUR OF LUNG

At a meeting of the Aberdeen Medico-Chirurgical Society on May 4th with the president Dr W CLARK SOUTER in the chair Dr R J DUTHIE read a paper on an unusual case of tumour of the lung illustrated by radiograms taken at different stages

The patient a male shopkeeper aged 58 years had been admitted to hospital with an eight weeks history of shortness of breath and pain in the left side of the chest No relevant family history was obtained and no history in the patient's case of previous pulmonary complaint or of any immoderation in habits The Wassermann reaction of the blood was negative The illness had commenced a few days after catching a chill with breathlessness on exertion and a dull aching pain near the left shoulder blade these symptoms had increased gradually and a week before admission to hospital his doctor had removed 70 ounces of blood-stained fluid from the left side of the chest He had never had much cough and had very little sputum and this never blood stained Night sweats were absent and general tiredness was the only other symptom present

On admission the patient's nutrition was moderately good weight 9 st 3 lb and no pallor cachexia jaundice clubbing of the fingers or enlarged glands were present Nothing abnormal was found in the cardio vascular alimentary renal or nervous systems no anaemia was present and the blood pressure was 122 77 The left side of the chest was practically immobile on respiration and there were all the classical signs of an extensive pleural effusion in the left pleural sac displacing the heart to the right this was confirmed by radiogram An exploratory puncture was made 2 ounces of dark red fluid being withdrawn from the chest this fluid was found to be sterile and a section of the deposit showed lymphocytes and endothelial cell but no evidence of tumour No enlarged glands were found anywhere and after three weeks rest in bed the patient appeared to improve a little the temperature remaining normal and no loss of weight taking place Blood stained fluid to the amount of 1 500 c cm was removed and replaced by 900 c cm of air and radiographic examination showed the upper left lobe partially collapsed and above the level of the fluid two shadows—one like the left border of the heart the other like the upper part of the collapsed lower lobe in this latter however no striae could be seen Two days later further 1 500 c cm of fluid were withdrawn and replaced by 1 100 c cm of air Radiographic examination showed the upper lobe partially collapsed as before and the lower lobe completely collapsed Bulging into the lower part of the pleural cavity was a large cystic looking tumour Lipiodol examination showed the upper lobe filling easily but complete blockage of the bronchus leading to the lower lobe At this period the patient's condition showed no signs of retrogression and his symptoms had disappeared A few days later however a small very hard nodule—about the size of a split pea—was discovered in the left axilla and a similar nodule above the left clavicle The former was removed and the pathological report was adenocarcinoma similar in type to many carcinomata of the bronchi There was subsequently a rapid increase in the pleural effusion

Dr JOHN CRAIG described a case of basophil adenoma of the pituitary in which one feature had been a generalized decalcification and softening of bone illustrating the case by photographs and photomicrographs

A keen discussion followed the papers taken part in by the president Dr W F Croll Professor L S P Davidson Professor Campbell Dr J M Johnston Mr Alexander Mitchell and Dr H Ross Souper

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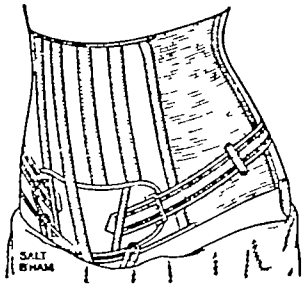

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Reviews

THE MEDICAL ANNUAL, 1933

It has been stated that there are approximately 1,800 medical periodicals in existence and their number tends to increase rather than to diminish The busy general practitioner may find time to read one, or perhaps two The specialist is tempted to confine his reading to technical journals dealing with his own specialty, and so comes to lose touch with what is outside it The student working for a higher medical examination reads either too much or too little and must waste a lot of time in sifting the chaff from the wheat The *Medical Annual*[1] is remarkable in that it has something to offer to all three As a Year Book of Treatment " it should be invaluable to the practitioner who wants to keep abreast of modern developments , as a well documented critical commentary on medicine and surgery it cannot fail to be of interest to the advanced student and the specialist

Medicine is the most catholic of the sciences, receiving whatever may further its progress from chemistry, physics, biology, physiology, etc Chemistry, and particularly biochemistry continues to yield information of value in the diagnosis and treatment of the anaemias, a comprehensive review of which is given by Professor Stanley Davidson and Dr Reginald Miller A potent extract for the treatment of pernicious anaemia has now been obtained from fish liver, and vitamin B has gained a niche in the therapeutics of this disease Large doses of iron are recommended in the treatment of subacute combined degeneration of the cord, while iron deficiency is thought to be responsible for the spoon-shaped nails present in simple achlorhydric anaemia ' In the past twelve months writes Dr J H Anderson in his article on diabetes the swing towards the higher-carbohydrate lower fat diet has continued " This may eventually be reflected in a diminution of the deaths from the cardiovascular complications of arteriosclerosis which " has unexpectedly developed into a problem of major importance in diabetes ' (L W Dunlop) In his review of the ductless glands Professor Langdon Brown includes some interesting plates of adrenal virilism and an account of the virilism associated with basophil adenoma of the pituitary Pneumonia has always taxed the ingenuity of therapeutists and Professor W H Wynn's review contains some interesting suggestions from the various workers in this field Artificial pneumothorax has been recommended on the grounds that it rests the inflamed lung lessens pain by separating the pleural surfaces and interferes with the passage of toxins into the blood stream Yandell Henderson s carbon dioxide and oxygen treatment and the use of antiserums are fully dealt with Carbon dioxide and oxygen is also recommended in the treatment of drowning gas poisoning pulmonary collapse, asphyxia of the newborn and other conditions The value of routine purgation in the treatment of pneumonia has been questioned and a more conservative management of the bowels is advocated Professor Wynn and Mr Tudor Edwards contribute a valuable article on lung abscess, which is best treated by medical measures in the acute stage In his article on heart failure Dr A G Gibson concludes that digitalis is of definite value in cardiac failure with regular rhythm and often gives complete relief in cases of cardiac asthma In his review of the new *British Pharmacopoeia* Dr Ivor Davies includes a complete posological table of the official drugs Nephritis is a perennial problem for both clinician and pathologist and Dr S W Patterson s account of modern ideas on the subject will help the practitioner to a clear understanding of them Geoffrey Evans s classification of albuminuria (reproduced on page 391) is a good practical guide to the diagnosis of the conditions which give rise to this sign

The general practitioner can directly apply most of the advances in medicine, but at the same time he wants to be kept informed of those advances in surgery which may be useful to his patients, although he may not have the special skill necessary to carry them out It is evident that parathyroidectomy and the surgery of the sympathetic nervous system are highly specialized procedures The former has proved of value in generalized osteitis fibrosa, and Sir William Wheeler who reviews the subject, states ' Tumours of the parathyroid body have been regarded as very rare, but they will probably prove to be much more common than was at one time thought " Mr Geoffrey Jefferson says that the number of operations on the sympathetic nervous system is increasing yearly , ganglion chain resections are nowadays preferred to periarterial sympathectomy and are of benefit in Raynaud's disease, thrombo angiitis obliterans, and megacolon Sir William Wheeler, in his article on surgical technique, draws attention to a new styptic called stryphnon, which has received very favourable reports It is also pointed out that tourniquet paralysis can be avoided by the use of a pneumatic tourniquet In his review of the surgery of gastric and duodenal ulcers Professor Rendle Short reproduces the dietetic instructions which Lord Moynihan gave in his article in the *British Medical Journal* of January 1st, 1932 Professor Beckwith Whitehouse gives an interesting account of labour and its complications, and Dr Blomfield of anaesthesia

It has been possible in this review to refer only to a few of the many excellent articles which one expects to find in the *Medical Annual*, the high standard of which is in no small measure due to the enterprise of the publishers and the sound judgement of the editors The *Annual* suffered last year a great loss in the death of one of its editors, Dr Carey Coombs, who " for fourteen years has been largely responsible for the choice of reviewers on medical subjects and for the general direction of the lines to be followed For ten years he himself contributed, very ably, the articles on diseases of the heart "

[1] *The Medical Annual A Year Book of Treatment and Practitioner's Index* Fifty first year Edited by the late Carey F Coombs MD FRCP and A Rendle Short MD BS BSc FRCS Bristol John Wright and Sons Ltd London Simkin Marshall Ltd 1933 (Pp cxv + 628 20s net)

INHERITED SKIN DEFECTS

In his book on *Inherited Abnormalities of the Skin and its Appendages*[2] Dr E A Cockayne has presented us with a mine of information It is the first attempt that has been made to collect in one book the information available on the genetics of all the defects of a single organ The skin is obviously the most suitable part of the body for such a purpose, as the necessary observation of its defects is relatively easy to make It has long been known that certain dermatoses as well as congenital abnormalities of the skin tend to run in families—alopecia areata and psoriasis are good examples of the former while the various types of ichthyosis are familial in character Dr Cockayne is, however, the first investigator who has attempted to explain the mechanism of cutaneous inheritance in general, to discover whether the various inherited peculiarities of the skin are recessive or dominants, and to obtain information which may one day make it possible to advise the individual on the degree of probability that certain conditions may be transmitted to his or her offspring Certainly that day is as yet very far distant

[2] *Inherited Abnormalities of the Skin and its Appendages* By E A Cockayne MD FRCP London H Milford Oxford University Press 1933 (Pp viii + 394 32s net)

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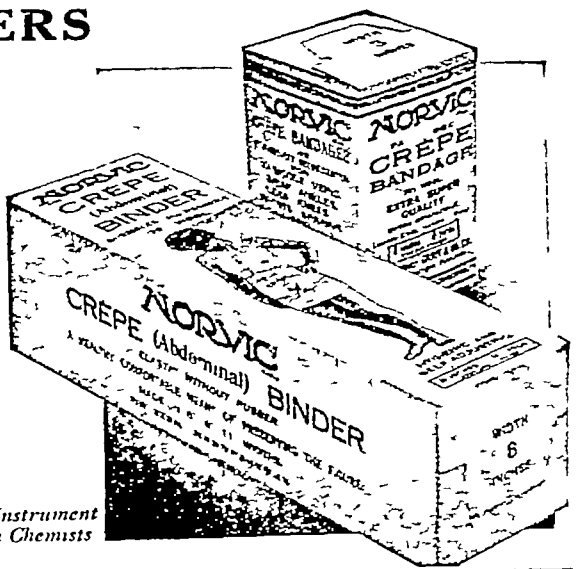

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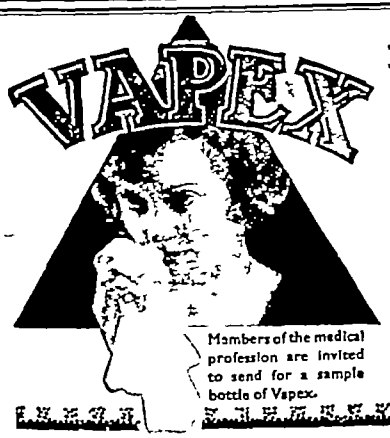

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The immediate object of the author has been to provide a book of reference for dermatologists and to encourage them to record with greater care than they have previously exercised pedigrees and histories of families with inherited defects and secondly to enable geneticists to learn from the data given what defects are suitable for further study Thus armed they will be in a position to elucidate special problems in heredity—for example to determine whether a defect is due to the action of two dominant genes whether in addition an environmental factor is concerned or why some particular defect is sex limited Perhaps the familial disease in which most clinical dermatologists will be particularly interested is psoriasis It appears that though there is strong evidence for the disease being inherited not many pedigrees have actually been published Dr Cockayne has come to the provisional conclusion that the appearance of psoriasis is not dependent solely on some inherited abnormality but needs an external cause as well The inherited factor may however well be a genuine dominant The same appears to be true of alopecia areata.

The whole subject is extremely interesting and very difficult Dr Cockayne has done his best for the vast majority of medical men who have never been taught to think in Mendelian terms by providing a very useful introductory chapter on the general mechanism of inheritance This makes by no means easy reading but it must be studied carefully by anyone who desires to make good use of the vast amount of information that has been collected by the author We have no idea how long he has occupied himself with the subject but some measure of the labour expended can be guessed from the many thousands of references which are given The complexity of the whole subject of inheritance is forbidding Even in forms of life where the numbers of chromosomes are very small—for example certain insects—the mechanism of inheritance is difficult enough and the complications are sufficiently puzzling but in man the problems involved are far more terrific We must congratulate the author on being one of the first to venture into this unbeaten field and we must thank him for providing so vast a quantity of carefully gathered information for those who undeterred by the intricacies of the subject are enterprising enough to follow him

AMERICAN PUBLIC HEALTH

Reflecting as it does American views and practice in public health the fourth edition of Dr MARK F BOYD'S *Preventive Medicine*[1] is both interesting and informative to the English reader The control of leprosy which is endemic in portions of the United States is well summarized the degree of isolation required being aptly described as of a nominal character approaching that suitable to tuberculosis In connexion with hookworm disease reference is made to the mass treatment of the whole population of heavily infested areas without preliminary examination of the stools for the presence of ova in order to lighten the general infestation and so economize time and money in proceeding towards final cure Under tuberculosis the infection of milk is ascribed more to contamination from the faeces of the cow than to tuberculosis of the udder Maternal mortality from all causes according to figures quoted appears recently to have shown a slight downward tendency in the States Puerperal sepsis however keeps high and is said to occasion from 50 to 75 per cent of all maternal deaths The remark that a formidable proportion of confinements in some localities are not attended by physicians but by midwives throws into relief the divergency of status between midwives in America and here The author finds it necessary to recommend that some provision should be made for the formal instruction of midwives in obstetrics and that none should be permitted to practise without a State licence His claim that the sterilization of all feeble minded epileptic insane or criminal persons would produce an enormous reduction in the institutional population in the course of a generation would be questioned by many in this country These comments on apparent differences between American ways and ours are not made in any sense as criticisms of the author whose fourth edition fully maintains the high quality of his previous work

[1] *Preventive Medicine* By M F Boyd M D M S Fourth edition revised Philadelphia and London W B Saunders Company 1932 (Pp 532 149 figures 22s 6d net.)

THE HOSPITALS OF AMSTERDAM

In the year 1913 the mayor and aldermen of Amsterdam determined that the hospitals of their city should be unified and brought up to date and they charged Dr WORTMAN of the municipal hospital service to prepare a report on the conditions of the existing hospitals The war stopped the intended development and only piecemeal changes have been possible Dr Wortman has now published an account of the city's hospital institutions and services[1] both in English and in Dutch the two versions being set in parallel columns and the numerous illustrations having descriptions in both languages

Dr Wortman deplores the fatal influence which the war exerted on the development of the Amsterdam hospitals At one time there was every reason for expecting that a new university hospital would be erected the site having already been chosen and Amsterdam would have maintained a prominent place in regard to social service for the sick Existing and out-of-date hospital buildings could have been diverted to other purposes But as the author points out Amsterdam is not the only city to have suffered in this way He says

> While the world war has delayed the development of hospitals in the pauperized countries of Europe America goes undisturbedly on her way building new ones so that nearly 100 million dollars a year is spent on the purpose

Dr Wortman shows that private and voluntary enterprise has made up for the deficiencies of the municipal service to a considerable extent but he points out that the necessity for better educational institutions and the demand for increased accommodation in the municipal hospitals is a direct consequence of improvements in medical science The hospitals are becoming more and more technical and are losing the character of charitable institutions Improvements in research and in the treatment given by hospitals have resulted in an ever-increasing number of patients

> While in former times only the poorest the homeless vagabonds and foreigners had been admitted the changed circumstances of the times brought ever more and more pressure to bear upon the sick who were finally drawn to the hospitals from all strata of society

This book will doubtless interest British readers especially those connected with hospitals To the author it has been a labour of love and he has conveyed his enthusiasm to his readers The volume is finely produced both type and illustrations being excellent One could have wished however that instead of such an imposing folio volume it had been smaller and more convenient both for reading and for storage

[1] *De Amsterdamsche Ziekenhuizen* B J L C Wortman M D Lochem Holland N V Algemeene Periodieken Maatschappij 1932. (Pp 169 16s)

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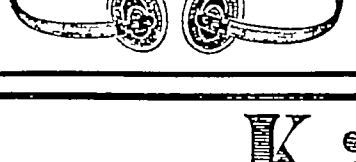

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INTERPRETATION OF ANIMAL BEHAVIOUR

Maternal Behaviour in the Rat,[5] by BERTOLD P WIESNER and NORAH M SHEARD is a monograph belonging to a series which is under the general editorship of Professor F A E Crew and Mr D Ward Cutler It is a record of a large series of observations, chiefly experimental, into maternal behaviour and its relation to physiological factors The authors have employed certain elements of behaviour—nest-building, retrieving of young, suckling—as indicators, and have studied the conditions which appear to influence and modify them They avoid any dogmatic interpretation of their results, but report several that are important and illuminating—such, for example, as that maternal behaviour can be aroused in virgin oöphorectomized rats by injections of anterior lobe pituitary extracts The retrieving response is chiefly relied upon as an indicator in this series They do not attempt to unravel the problem as to how internal "drive" is related to external stimulus, and, without forcing the evidence of experiments into some preconceived hypothesis, this problem is hardly ready for discussion, they do, however, conclude that normal cessation of maternal behaviour is due to the disappearance of the 'young' stimulus as the litter grows

The type of inquiry which this monograph illustrates is transforming much that was guesswork in the interpretation of animal behaviour into a demonstrated sequence, and in this respect it is complementary to the work of Pavlov and his school Although it leaves untouched many fundamental biological problems, it is achieving success in showing the mediate influences under which the organism acts It brings into prominence the fact that the behaviour of the organism is compounded of ability which is characteristic to itself and of the influence of external events This book is a record of laborious work, carried out with meticulous attention to accuracy and to control the authors are to be complimented both upon this and upon the restraint which they show in drawing conclusions from their results

Notes on Books

In *The Psychological Effects of Menstruation*[6] Miss MARY CHADWICK has collected much of the available information on the effects of the menstrual cycle in women and young girls and has added still more from her own experience, gained during the psycho-analytical treatment of children and adults The monograph is short and, in spite of being closely packed with facts, easy to read The first section has an especial interest from the historical point of view In it Miss Chadwick traces the relation between disturbances of menstruation and the accusation of witchcraft made against women in the past and is able to show how the resentment of the disturbed woman against society found its expression in fancied power to do her neighbour injury The enmity which she awakened led to rumours that she practised the Black Art which gave the public "an excellent opportunity to release sadistic impulses of their own Accusations were doubtless usually based on some physical or mental peculiarity of the suspected witch and her behaviour might do little to mitigate suspicion In the section on the menstrual cycle in childhood Miss Chadwick indicates how the changes in the mother's personality at the time of the periods may influence the life of the child She includes in an appendix two case histories which illustrate some of the points mentioned in the monograph The last section deals with psychological disturbances during the adult menstrual period

Irradiated Sterols in Therapeutics,[7] by Dr GERMAINE DREYFUS SEE, is a brochure prepared for the purpose of explaining to the physician the general nature of the innumerable preparations of these substances that are now on the market The author points out that the sudden popularity of irradiated sterols has resulted in their being acclaimed as panaceas, and that it is difficult for the practising physician to estimate their proper place in therapeutics and their value relative to old established remedies such as cod-liver oil The book contains a short account of the chemistry and therapeutic action of irradiated ergosterol and a discussion of its therapeutic uses

The January number of the *Annals of Medical History*[8] contains seven articles of rather exceptional interest It opens with the first of the promised six parts of Dr Kate Campbell Hurd-Mead's introduction to the history of women in medicine Dr H S Denninger of Chicago sets out the palaeopathological evidence of osteitis deformans, based on examination of five skeletons of prehistoric American Indians As confusion with syphilitic bone disease is not unknown, reference may here be made to the list, compiled by Drs E B Krumbhaar and V C Garner, of rare books, portraits, and other articles of interest ("luesiana") exhibited at a special meeting of the College of Physicians of Philadelphia in November 1931 to celebrate the discovery of the *Treponema pallidum* in 1906 by Schaudinn and Hoffmann Dr F M Harrison concludes his essay on psychiatry in historical retrospect by carrying on the survey from the age of feudalism (1000–1400) to the present time As William Beaumont published his *Experiments and Observations on the Gastric Juice and the Physiology of Digestion* in 1833, it is appropriate that his life's activities should be commemorated so thoroughly as Dr W S Miller now does Dr Blanton gives an account of the versatile George Washington's interests in medical matters, his illnesses his medical friends, his care in looking after the health of his slaves, and his advocacy of inoculation for the prevention of small-pox A short sketch of J F Lobstein who was the first professor of pathology ever appointed in a faculty of medicine—that of Strasbourg in 1819—and who coined the words 'arteriosclerosis" and "arterectasia," is contributed by Dr A Brunschwig With much charm and many quotations Dr J B Herrick explains that he reads Chaucer at 70 because of his kindly philosophy, optimism, ever-present humour, and ability to make music of the early English language Among the reviews is one of Professor John Fulton's fine bibliography of Robert Boyle

The seventh edition of *A Compendium of the Pharmacopoeias and Formularies*[9] brings up to date the synopses from British and foreign pharmacopoeias which have rendered previous editions of this useful volume so popular The compiler, Mr. C J S THOMPSON, has revised carefully the whole text, and has found room for the introduction of a considerable amount of new information by shortening some sections and eliminating others of relatively less importance The result is a clearly printed and well-arranged tabulation of therapeutical formulae, with notes on such allied subjects as are likely to be of practical value to general practitioners, pharmacists, and students A summary of the legal regulations concerned is a useful feature The compendium will be found to be a really practical aid to prescribing and dispensing, though it is curious that no reference should be made to tannic acid in the treatment of burns, and there are some other omissions of a like nature

[5] *Maternal Behaviour in the Rat* By B P Wiesner and N M Sheard Biological Monographs and Manuals No XI Editors F A E Crew and D Ward Cutler Edinburgh and London Oliver and Boyd 1933 (Pp ix + 260 3 plates numerous diagrams 12s 6d net)

[6] *The Psychological Effects of Menstruation* By Mary Chadwick Nervous and Mental Disease Monograph Series No 56 New York and Washington Nervous and Mental Disease Publishing Company 1932 (Pp 70 2 dollars)

[7] *Les Stérols irradiés en Thérapeutique* Par Dr Germaine Dreyfus See Les Therapeutiques nouvelles Paris J B Baillière et Fils 1933 (Pp 68 6 fr)

[8] *Annals of Medical History* New series vol v No 1 January 1933 Edited by Francis R Packard M D New York Paul B Hoeber Inc London Baillière Tindall and Cox (Pp 1-102 illustrated Subscription for volume of six numbers £1 8s 6d)

[9] *A Compendium of the Pharmacopoeias and Formularies* (Official and Unofficial) By C J S Thompson M B F Seventh edition London J Bale Sons and Danielsson Ltd 1933 (Pp 881 10s 6d net)

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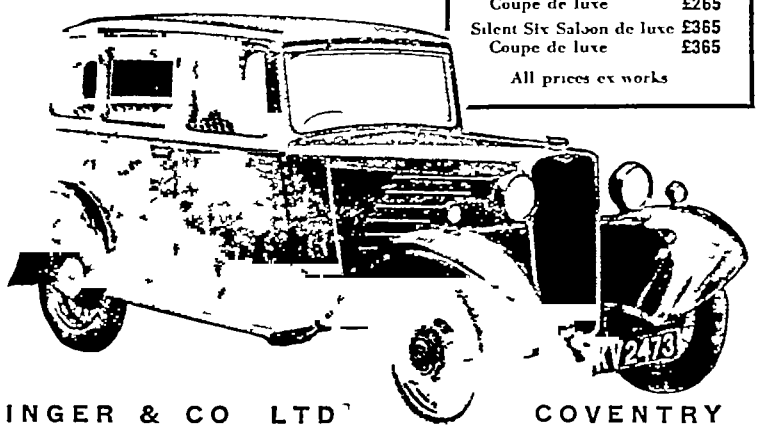

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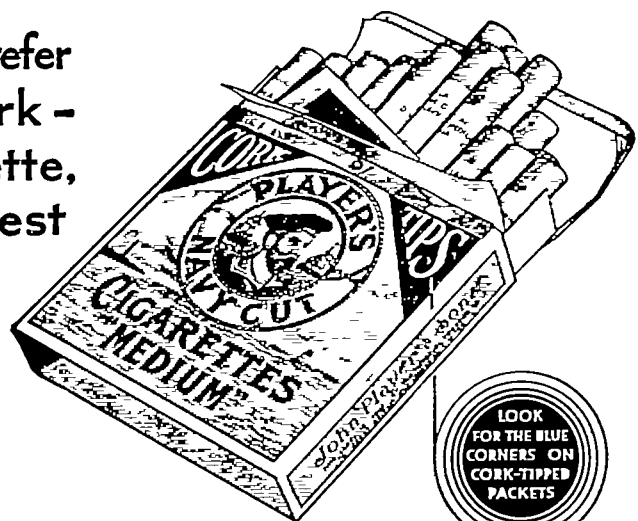

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ANNUAL CONGRESS

The annual congress of the Ophthalmological Society of the United Kingdom was held in London on May 11th 12th and 13th under the presidency of Dr A H H SINCLAIR of Edinburgh Some twenty five papers were read and a discussion took place on heredity and eye disease A few of the papers are abstracted below

RADON FOR INTRAOCULAR DISEASE

Mr R FOSTER MOORE's paper on radon in certain intraocular conditions dealt only with such diseases of the eye as appeared to be amenable to radium emanations in the form of seeds The kinds of disease considered were sarcoma glioma angioma A man aged 65 presented himself with a choroidal sarcoma the fellow eye having been blind since childhood from leukoma adherens Refusal to have his only eye removed led to radium being applied At the end of three and a half years what remained of the growth was less than before treatment there was no extraocular extension and no evidence of dissemination When such growths were accessible sloughing of the sclerotic or other tissues need not be feared and the sarcoma would shrink and remain shrunken under treatment for a long time He had treated five cases of retinal glioma some by interstitial insertion some by scleral application some by a combination of both methods One patient a boy whom Mr Foster Moore had shown at the Royal Society of Medicine had lost a brother from double retinal glioma and the mother not unnaturally declined to allow both eyes to be removed Mr Rupert Scott to whom the case was brought confirmed the diagnosis removed one eye and transferred the boy to Mr Foster Moore's care Now three and a half years later after the insertion of a seed the boy's health was good and he was attending an ordinary school Mr Foster Moore had treated two cases of retinal angioma both by scleral applications and there was a slow subsidence of the condition Central vision was maintained at 6/6 but the scarred area contracted the field He did not recommend the treatment in melanotic sarcoma when the other eye was sound but if a sarcoma could be effectively irradiated the danger of dissemination ceased from that time so that if useful sight could be saved by interstitial irradiation there was probably no greater risk to life than if the eye were removed In a case of unioocular glioma he did not recommend radon seeds as a substitute for enucleation but he insisted on a very thorough examination of the second eye under general anaesthesia lest a small growth be overlooked Binocular glioma was a different matter For retinal angiomata radon was most successful and indeed was the only effective treatment He knew nothing which had any influence on the course of Eales's disease The weakest strength he had used was 1 millicurie the strongest single seed 5 3 millicuries in every case filtration was through 0 5 mm of platinum Mr H B STALLARD read a paper in which he discussed the effects of applying radium emanations in certain selected diseases of the eye

AETIOLOGY OF PRIMARY GLAUCOMA

Mr W S DUKE ELDER who at this meeting was awarded the Nettleship prize for his researches on the physiology of the eye read a paper liberally supported by slides and tracings on the aetiology of primary glaucoma He said that primary glaucoma was probably a heterogeneous clinical group and he set out to discuss chiefly the possible mechanism of a vascular crisis in the eye such as might result in the clinical picture of acute glaucoma The most dramatic crisis which occurred to him was to cause a total cessation of the circulation then to allow it to resume under close observation The first was produced by raising the intraocular pressure to a height above that in the ophthalmic artery by means of the apparatus he showed Within thirty seconds of the resumption of the circulation the vessels in the iris were seen to be maximally dilated the amplitude of the pulse recorded in the tracings became greater and after it had been injected intravenously the appearance of trypan-blue over the surface of the iris and in the anterior chamber evidenced a marked increase in the capillary permeability An increased blood flow was indicated by a rise of temperature in the anterior chamber of from 1° to 2° C the pupil contracted maximally and in one to three minutes the intraocular pressure rose sharply but at a later stage though the increased pressure was maintained the amplitude of the pulse declined These events especially the continued maximal dilatation of the small vessels and the constriction of the pupil seemed to indicate he thought that the cause of the disturbance was the liberation of a histamine like substance in the eye indeed the injection of aqueous humour drawn from such an eye into cats showed that such a vaso-dilator substance was present There seemed to be a close association with the histamine like substance which Sir Thomas Lewis and his colleagues had demonstrated to have potent effects on the skin Mr Duke Elder had therefore conducted experiments the essential feature of which was a stroking of a segment of the iris with the cannula of the manometer as it lay in the anterior chamber The following results were noted a dilatation of the small vessels after a thirty second latent period extending markedly over the area of iris stroked an increased permeability of the minute vessels on the surface of the iris a rise of temperature after a latent period of sixty seconds of from 0 5° to 1 5° C a maximal and constant constriction of the pupil evident thirty seconds after stroking this effect persisting indefinitely a rise in the intraocular pressure Similar research but with 2 per cent cocaine instilled into the conjunctival sac showed that there were two types of response one of local distribution and not dependent on nervous activity the other general in distribution and taking place only when the sensory nerves were allowed to function Hence the suggestion was that in this condition one was dealing with an axon reflex mediated by the trigeminal nerve similar to those described by Bruce in 1910 as occurring in the conjunctiva and the possibility of this was shown by the effects of sensory stimulation of the cornea

DIATHERMY FOR DETACHED RETINA

Mr C DEE SHAPLAND in a paper on diathermy in the treatment of detachment of retina gave the results of treating 131 cases of retinal detachment by this means at the Royal London Ophthalmic Hospital most of them males He divided the cases into five groups emmetropes low myopes intermediate myopes high myopes and aphakics In twenty six of the cases there was a detachment in both eyes nineteen being myopias with an antecedent detachment in the other eye A history of injury direct and indirect was obtained in 33 3 per cent of the emmetropes in 19 8 per cent of the myopes In this series a retinal hole or holes were found in 80 7 per cent 91 2 per cent being in front of the equator of the globe while in 34 5 per cent the rents were multiple The present method used at the hospital was a modification of the Larsson technique by Weiss to the design of Fran Flynn by which the surface of the sclera was kept moist with distilled water during the actual cauterization so avoiding charring of the scleral surface The distribution of the cauterization depended on the size and shape of the retinal defect and must properly cover the estimated margins of the hole and any thin areas of retina in relation with it Of all the cases operated upon by endothermic cauterization 43 5 per cent were cured 13 per cent improved There had been notably few complications following the procedure For cases of retinal dialysis the objective with each type of operative procedure was to produce a barrage of scar tissue immediately behind the rent Mr Shapland considered it had been amply proved that endothermic cauterization was the most satisfactory method yet devised for the treatment of simple detachment of the retina

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Mr L H SAVIN read a paper showing a relation between cases of herpes ophthalmicus and varicella A series of eighteen cases were dealt with, in three, zoster preceded varicella in contacts in two varicella preceded zoster in contacts, in one varicella and herpes appeared almost simultaneously in contacts Six of the eighteen cases of zoster had previously had chicken-pox Complement fixation and inoculation tests suggested a relation between zoster and varicella Mr Savin thought that here there were operative modified strains of the same parent virus, much like vaccinia and variola, but not identical diseases

BARBERS' COMPANY OF LONDON

A REUNION DINNER

For the first time since the Surgeons separated from the Barbers' Company in 1745 a company of distinguished London physicians and surgeons to the number of nearly fifty dined at Barbers' Hall, on May 11th, as guests of the Master, Mr H O SERPELL On the walls of the council room in which the guests were received hung the various Charters received by the Company, the earliest having been granted by Edward IV in 1461, while in the main hall, above the diners, was the famous painting by Holbein, which depicts Henry VIII bestowing on the then Master and Wardens, in 1540 the Charter given when the Company was reincorporated as the Company of Barber-Surgeons The hall which is in Monkwell Street, Cripplegate was one of the few to escape the Great Fire

In proposing the toast of "The Guests," the Master said that about a year ago the idea came to him that it would be pleasant to give a dinner to some of the medical men of London, in view of the fact that the surgeons had once been members of the Company, and therefore, with the help of his friend Dr Graham Hodgson, the present gathering was arranged He offered all the guests the heartiest possible welcome

Lord MOYNIHAN who responded, said that as a Fellow of the Royal College of Surgeons he was delighted to revisit his ancestral home The barbers and the surgeons first came into contact as the result of a quarrel, the barbers in those far off days finding reason to complain of the incompetence of the surgeons The quarrel so started eventually brought them together, and for more than two centuries they remained the warmest friends When eventually the separation came, it was entirely to the advantage of the barbers for they were left in possession of the property while the surgeons "went out naked into the world with no possessions but the intellectual glory inherited from their ancestors and the Arris and Gale bequests Any feeling of animosity, however, had long since passed away, and the surgeons of to-day were no longer tempted, as they might have been two hundred years ago to 'bury the hatchet" in the cranium of the Master

Lord HORDER then proposed the toast of "The Worshipful Company of Barbers of London," and in the course of an amusing speech expressed regret that he had not had the opportunity, which appeared to have been Lord Moynihan's, of preparing a memorable discourse He congratulated the Master and the Company, and expressed the pleasure of all present at meeting in their interesting home in the heart of the City of London Mr FRANCIS WESTON Past Master who responded, gave an outline of the history of the Company From the earliest times he said its members were attached to the Court, and under Henry VIII following the dissolution of the monasteries were made responsible for the health of the City of London which, once the monks had gone, possessed no hospitals and no arrangements for the care of the sick and poor The Company still possessed a book, dating from the time of Henry VII, which must be one of the oldest codes of medical etiquette in the world and which provided that none should 'supplant another's cure" or take his patients away from him, or allow a patient to die without calling in another member to see and advise on the case For an infraction of the latter rule the great Harvey was brought before the Master and Wardens and publicly reprimanded When the separation came in 1745, and a Worshipful Company of Surgeons was formed with a Master and Wardens, the Barbers offered to sell them all the surgical books they had left behind for £15, but they refused to have them if they could not get them for nothing In the end their Company dwindled to a Master and a Clerk, the Master was bed ridden and the Clerk ought to have been in gaol In the year 1800 however, the Act was passed which gave the glorious Royal College of Surgeons the opportunity to break away from the old traditions

During the course of the dinner the massive silver loving-cups were passed round, and the surgeons present had many opportunities of admiring the artistic and other treasures they had lost by their separation from the Company nearly two hundred years ago

Among others present were Dr Brunton Blaikie Mr W R Bristow, Sir John Broadbent, Mr L Bromley, Dr Maxwell Chance, Dr A Landale Clark, Dr H Devine, Dr H Devitt, Dr J A Drake, Mr T P Dunhill, Mr A Tudor Edwards, Mr Arthur Evans Mr H A T Fairbank, Professor G E Gask, Mr W Gilliatt, Sir Harold Gillies, Dr H Graham Hodgson, Dr N G Horner, Dr F D Howitt, Dr J F Jennings, Mr J P Lockhart-Mummery, Professor J Woodburn Morison, Dr N J McCaskie, Dr G G Macdonald, Dr W J McKeand, Dr Desmond MacManus, Dr Nathan Raw Mr C Lane Roberts, Mr H G Bedford Russell Dr J A Ryle, Dr G B Scott, Dr B Shires Mr E G Slesinger, Dr Theodore Thompson, Mr Wilfred Trotter Professor G Grey Turner, Mr C P G Wakeley Dr R H Wagner Dr Cecil Wall (Master of the Apothecaries Society) Sir John Weir, Sir William Willcox, and Sir Russell Wilkinson

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The scholarships will preferably be awarded to young physicians who are already familiar with tuberculosis problems and who wish to improve their knowledge of this branch of medicine The kind of work undertaken at the Institute will be subject to an agreement between the director of the Institute and the candidate The publication expenses resulting from this work may be defrayed partly or entirely by the Institute

Names of candidates, accompanied by particulars as to their age, qualifications, and professional experience, must be sent to the Secretary, National Association for the Prevention of Tuberculosis Tavistock House North Tavistock Square, London, W C 1, not later than June 25th, 1933

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British Medical Journal

SATURDAY, MAY 20th, 1933

A RETURN TO PRINCIPLES

Many doctors appear to be convinced of the truth of the children's rhyme For every evil under the sun there is a remedy or there is none and in the attempt to find the remedy zeal not seldom outruns discretion The whole hearted enthusiast is not content with finding one remedy for each evil With the maximum of hope and the minimum of caution he puts all his therapeutic eggs into one basket one cure for all ills But as Montaigne said 'Our Physitians never remember that *he who will provide for all provideth for nothing* The belief in a panacea dies hard Indeed at the present time if we are to judge by the activities of various purveyors of healing agents to the public either directly or through the medical profession this belief shows no sign of dying At the other end of the scale we find not one but many remedies advocated for the same disease And a plurality of treatments is especially to be found in those diseases which are incurable or which respond only to the effects of time It is worthy of note that the present multiplicity of drugs and new forms of treatment for disease coincides with a growing concern on the part of the profession with health This concern is manifested not only in sanitary science but in the problems of proper diet of correct posture and of mental hygiene More attention is being paid to the question of healthy living

The physician although conscious of his duty to promote the cause of good health is by necessity much preoccupied with what Lord Horder describes in his annual oration to the Medical Society of London (published in our opening pages this week) as the disharmony we call disease and later the deviations from the physiological that constitute disease When it is a question of identifying a physiological disharmony the medical man has at his disposal a well-tried method upon which he can rely The first thing in medicine he has been taught is diagnosis But in the treatment of disease method is still sadly lacking Therapeutics is still largely empirical and therefore on an insecure scientific foundation If it were not so the quack healers would not flourish as they do nor would there exist so much divergency of opinion on treatment among medical practitioners themselves There is be it noted, little dispute as to the correct methods of diagnosis For those—and they must be many—who feel the sands of therapy shifting under their feet Lord Horder's oration will come as a welcome stabilizing influence His scepticism is not a barren scepticism

When we think carefully on the question he says "most of our treatment and some that are quite successful are matters of expediency they are not matters of right or wrong This arises from the fact that it is always Nature that cures and not we Later on he remarks I am sceptical of tendencies that dissociate themselves from known physiological principles Throughout the oration will be found this insistence on physiology and on the need for a return to principles There is no doubt that in the not very remote past the physician was so to speak educated too exclusively in the post-mortem room There is also no doubt that the post-mortem room has a salutary educative influence but a preoccupation with the gross end products of a disease process must tend to obscure the real nature of disease—namely a deviation from physiological harmony It may be that the cumulative force of the morbid anatomy approach to medicine has been responsible for that incursion of the mass-man' and that lust for direct action which Lord Horder deplores A conception of disease in terms of macroscopic pathology is apt to lead to large scale therapeutics

The physician faced with a patient who is importunate that something should be done is often in a dilemma He may know that in order to retain his patient's confidence he must prescribe drugs fully aware of the truth of Lord Horder's saying The trouble is no doubt that we know so little about the way in which drugs act He may then continue to employ one after another all the various therapies that are at his disposal There are nowadays so many things that can be done—and the layman is well aware of them—that in the absence of some guiding principle the practitioner must often feel therapeutically embarrassed And if we read Lord Horder aright this guiding principle should be physiology The questions to be asked are

To what extent will the remedies advocated in such and such a disease help to restore physiological equilibrium? and Are the claims made for this drug based on sound scientific evidence It is however not questioned that there are many excellent remedial measures whose usage is sanctioned not by science but by experience But the medical man should be on his guard against the blandishments of the chemist and against the specific anti-product which is held out as such an effective cure for so many ills A firmer and more critical attitude is needed

Science has thrown so many things into the melting-pot of practical medicine that it is becoming more and more difficult for the working doctor to distinguish good metal from bad Lord Horder towards the end of his oration makes a suggestion rather like one that was put forward a short time ago at a meeting of the British Association I sometimes wonder he says if it would help us to close down our laboratories for a while to hand over the wards to our juniors and to get together and try to see where we are

MECHANISM OF GALL-STONE FORMATION

On its technical side the science of surgery may seem almost to have reached finality, but inasmuch as it concerns itself with the origins of disease requiring surgical intervention it has far to go. A consideration of Mr. D. H. Patey's account (printed at page 866) of past and current beliefs about the mode of formation of gall-stones prompts the reflection that most conditions for which the abdomen is opened are fundamentally unexplained. A similar necessarily inconclusive review might be written on peptic ulceration, and a more slender one—since this subject excites strangely little curiosity—on appendicitis. The problem of cholelithiasis has been by no means neglected, but it has been seriously confused by unwarranted deductions from clinical or experimental data. One aspect of it in which the truth appears to have been obscured in this way is the relation of cholesterol metabolism generally to the cholesterol content of the bile, a subject recently reviewed by Dostal and Andrews.[1] A method of experimentation which has been believed to furnish evidence on this point is the estimation of cholesterol in bile drained from a fistula while the fat content of the diet is varied: this method disregards the fact that in the absence of bile from the intestine fat cannot be absorbed. Conclusions have been based on estimations of cholesterol in bile obtained by duodenal intubation, regardless of the fact that the intestine itself secretes sterols which will vitiate such results, and other observers have ignored the possible effect of starvation, which was shown by Rothschild to increase the cholesterol content of the bile threefold. In more recent years evidence has come from several directions that the cholesterol content of the bile is not dependent on that of the blood or on the composition of the diet. Dostal and Andrews have satisfied themselves of this by experiments in dogs with two-way fistulas (which are not open to the objection already mentioned), and by a study of the bile in a patient with a biliary fistula who received sufficient bile salt by the mouth to permit bile and cholesterol itself to be absorbed. If this proposition be accepted it can no longer be argued that there is any relation between gall-stones and conditions, such as pregnancy, in which there is hypercholesterolæmia; and Gross's observation, referred to by Mr. Patey, that gall-stones are no more frequent in married than in single women is only what would be expected.

Nevertheless the problem of gall-stone formation in man is the problem of cholesterol precipitation, and if the absolute quantity present in the bile is not a controlling factor another explanation may be found in the conditions governing its solution. Cholesterol is totally insoluble in water, in bile it is held in solution by the bile salts, and a diminution in the latter beyond an ascertained point must be followed by its precipitation. C. L. Newman,[2] working in Aschoff's laboratory, has made the important observation that the bile-salt cholesterol ratio is profoundly disturbed in cholelithiasis. In the bile obtained post mortem from gall-bladders containing stones the bile-salt content was markedly reduced, and a similar reduction was observed in a variety of diseases of the liver. Andrews,[3] who has also studied more intimately the mechanism by which the bile cholesterol is held in solution, confirms Newman's observations: in the pooled bile from thirty gall-bladders containing stones, obtained post mortem, the bile-salt content was 247 mg. per cent., and the cholesterol content 400 mg. per cent., this gives a ratio of 0·6 in contrast to the normal figures of from 20 to 30; a rather less strikingly reduced average ratio (3·7) was obtained in twelve specimens of bile from stone-containing gall-bladders removed at operation. A diminution of the bile salts to a point at which all the cholesterol cannot be held in solution is clearly a factor in gall-stone formation; the next question is whether this abnormal bile is secreted as such by the liver, or whether the bile-salt content is reduced by absorption in the gall-bladder. Newman's observations suggest that the liver may be at fault, and Andrews[3] furnishes other examples of damaged livers which secreted a bile with a low bile-salt content, including a case in which the liver bile itself contained cholesterol crystals. It has been shown repeatedly by other workers that degrees of liver damage insufficient to produce symptoms will bring about a marked lowering of the biliary excretion of bile salts. Andrews and his co-workers, however, claim to have proved that the fault may also lie in the gall-bladder: its normal mucosa absorbs only water and salts, but if it is experimentally infected (a result invariably secured by puncture after tying the cystic duct) bile salts are absorbed by the "inflamed and denuded wall," while the cholesterol remains. This crucial experiment clearly needs careful repetition, if it can be verified the exact relation between infection and gall-stone formation may well have been made clear. The capacity of the gall-bladder mucosa for excretion and absorption is still exceedingly obscure, as is the source of the cholesterol deposits in "strawberry" gall-bladder. Wilkie and Doubilet[4] maintain that cholesterol may be either excreted or absorbed by the mucosa according as the blood-cholesterol bile cholesterol ratio varies, a conclusion very difficult to accept. Andrews and his co-workers[5] deny that a normal gall-bladder can excrete cholesterol, an inflamed mucosa, however, furnishes an exudate with a high cholesterol content in both serum and cells, a factor which may easily vitiate results, even leakage of serum or blood after puncture may affect the results of bile cholesterol estimations.

Although it is from this series of mainly biochemical studies in America that new light on the problem has chiefly been obtained, the infective aspect has not been altogether neglected. Interest centres chiefly on the source of infection and the route by which it reaches

[1] *Arch. of Surg.* 1933, xxvi, 258.
Beitr. z. Path. Anat. 1931, lxxxvi, 187.

[3] *Arch. of Surg.* 1932, xxv, 796.
[4] Ibid., 1933, xxvi, 110.
[5] Ibid., 1933, xxvi, 382.

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FOR THE UPPER AND MIDDLE CLASSES ONLY

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Two miles from the Main Hospital there are several Branch establishments and villas situated in a park and farm of 650 acres. Milk, meat, fruit and vegetables are supplied to the Hospital from the farm, gardens and orchards of Moulton Park. Occupation therapy is a feature of this branch and patients are given every facility for occupying themselves in farming, gardening and fruit growing.

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The seaside house of St. Andrew's Hospital is beautifully situated in a Park of 330 acres, Llanfairfechan, amidst the finest scenery in North Wales. On the North-West side of the Estate a mile of sea coast forms the boundary. Patients may visit this Branch for a short seaside change or for longer periods. The Hospital has its own private bathing hous on the sea shore. There is trout fishing in the park.

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Telephone: Teignmouth 209

the gall bladder the main alternative hypotheses are those of Rosenow and A L Wilkie who postulate a distant focus and haematogenous infection and the more natural assumption that the source is the bowel and the route lymphatic or direct via the ducts An unprejudiced study of this question *de novo* conducted on an adequate scale and by methods above all criticism appears to be necessary even to determine the nature and frequency of demonstrable infection in cholelith asis On the experimental side a recent contribution is that of Patey and Whitby [1] who determined the distribution of *Cl welchii* at varying intervals after injection into the systemic and portal circulation of the rabbit Their chief conclusion is that bacteria may reach the gall-bladder from the portal vein having presumably traversed the liver and eventually returned via the cystic artery the liver is therefore not an efficient bacterial filter and the bowel may hence be the ultimate source even of a haematogenous infection Although it is difficult to understand why this organism should be recoverable from the liver and from the blood five minutes after introducing a calculated inoculum of only twenty-five individual bacteria into the circulation these results may be accepted as indicating the freedom with which bacteria may circulate and therefore perhaps the ultimate certainty that an organ predisposed to infection will somehow be attacked That predisposition by stasis or otherwise is a predominating factor the results of other experimenters leave no doubt

THIRD-GENERATION SYPHILIS

Authorities in this country have for the most part ignored the likelihood of the transmission of syphilis to the third generation or some (like Sir Jonathan Hutchinson) have emphatically *denied the possibility* modifying their opinion but slightly when the discoveries of the treponema and the Wassermann reaction made the matter no longer one of theoretical speculation The French syphilologists on the other hand have always been enthusiastic to explain a hare-lip for example or even a hernia in an infant by postulating a syphilitic grandparent This has no doubt antagonized many British workers but a recent careful marshalling of the evidence by Dr David Nabarro [2] with personal observations of sixteen families with undoubted syphilis in three generations of six more in which syphilis was probably present and a further seven in which it was possibly present should serve to settle the matter for those who are prepared to be swayed by scientific evidence The French authority Fournier has laid down certain rigid conditions for determining the possibility of the transmission of syphilis to the third generation including *proof of syphilis in the grandparent* evidence of early inherited syphilis in the parent and child and also evidence that syphilis had not been acquired by either of the parents This was however written in 1891 and as Dr Nabarro points out detection of undoubted stigmata of congenital syphilis in a parent (usually the mother) of a syphilitic child makes the investigation of the grandparents not always essential although in the course of his investigations Dr Nabarro has not infrequently discovered that a grandfather had died of general paralysis of the insane—a point now more acceptable as confirmatory than it would have been in Fournier's time The probability of a woman with congenital syphilis transmitting the infection to her offspring depends almost entirely upon the possible duration of the disease in such a woman It is known that a woman with acquired syphilis can give birth to syphilitic children for twenty or more years and there seems to be no reason why the treponema should not remain transmissible for at least an equal period in the infected offspring Dr Nabarro has used strict rules to guide his investigations For undoubted third-generation cases he includes those in which a positive Wassermann reaction was found in grandparent parent and child and also cases in which the mother has definite stigmata of congenital syphilis such as typical Hutchinsonian teeth rhagades and signs or a history of interstitial keratitis In his group of probables he includes those in which there is obviously a congenitally syphilitic mother and a child with an early suggestive history but a negative Wassermann reaction If this history is too vague for certainty the case is classed as 'possible' In a very valuable addendum full clinical details of all Dr Nabarro's cases are included so that the validity of his classification and conclusions can be easily tested In view of the number of instances presented he justifiably poses the question why other observers have not come across similar cases He attributes this first to the lack of experience necessary to detect finer points in making the diagnosis of congenital syphilis in the mother of an infected child secondly to the failure to obtain a detailed enough history of the parents of the mother thirdly to the lack of appreciation which unfortunately is all too common among clinicians that one negative blood test on mother or child does not necessarily preclude syphilis and fourthly to the fact that his experience has been gained almost entirely among the hospital class where inadequate treatment of acquired syphilis leads to the possibility of remote transmission The importance of the subject is out of proportion to the comparative infrequency of such cases as Dr Nabarro has described for one of the unsolved problems of syphilis is the incidence of congenital infection and the best means of dealing with a type of malady which is eminently preventable A careful search for third-generation cases would be a step towards detecting more untreated cases in the community

[1] *Brit Journ Surg* 1933 xx 580
[2] *Brit Journ Venereal Dis* 1933 ix 1

INTERNATIONAL PAEDIATRIC CONFERENCE

The third International Paediatric Congress will be held this year in London at the British Medical Association's House Tavistock Square on July 20th 21st and 22nd under the presidency of Professor G F Still H R H the Duke of York accompanied by the Duchess will open the congress and welcome the members on Thursday July 20th at 10 a m in the Great Hall of University College Gower Street The subjects for general discussion at two of the morning sessions are (1) the nature of allergy and its role in diseases of children and (2) the prophylaxis of milk-borne diseases

Nominations are invited from secretaries of the various national committees for delegates to take part in these discussions and to contribute independent papers Membership of the congress is open to all members of a recognized medical society, but they must be nominated by their own national committee The subscription for medical men and women (active members) is £2, and for non-medical persons accompanying active members £1, payable in advance to the treasurer, Dr Hugh Thursfield, 84, Wimpole Street, W 1 A demonstration of patients from all children's clinics in London will be given at the Hospital for Sick Children, Great Ormond Street, on the afternoon of Saturday, July 22nd Among the social functions already arranged are an afternoon reception by the President and Fellows of the Royal College of Physicians, an evening reception by the President of the Congress, a dinner at the May Fair Hotel, and excursions for ladies accompanying members The secretary is Dr Leonard Findlay, 61, Harley Street, W 1

HOSPITAL LIGHTING

At the Illuminating Engineering Society's meeting recently Mr Charles Raphael, the consulting engineer to St Bartholomew s Hospital, read an interesting paper on hospital lighting One of the points he made was that in shop-front and workshop lighting cost is negligible as compared with the value of brilliancy, but in the hospital it is otherwise thus at St Bartholomew's, with strictest economy, the cost last year was £1,500 Ward lighting must be restful, therefore of low standard yet cheerful and without flatness An average illumination of 1 8 foot-candles is ample This, in Mr Raphael s experience is best obtained by the "old-fashioned arrangement of hanging pendants suitably spaced along the centre of the ward These must hang low enough for easy cleaning, which means that no powerful lamps can be employed, otherwise there would be glare in the eyes of the patients in bed A maximum height of 8 feet with 100-watt opal lamps and suitable satin flint shades, secures this Also there is a separate light for the nurses table and the poison cupboard Such a low standard of lighting is unsuitable for reading To meet this need there is a bracket light for each bed with a 25 watt pearly lamp and shade, giving 3 7 foot-candles at the head of the bed and 2 at the foot—a sufficient light for reading and general examinations A table standard is provided for each ward, mounted on a large tray with big rubber-tyred wheels on ball bearings this lamp gives a light of 47 foot-candles For the examination of cavities there is a hand lamp with a local illumination of 200 foot-candles There are arrangements for dimming the lights at night In this hospital there are two sources of current, so that such an arrangement is easily provided by means of a step down transformer on one circuit When this is not possible Mr Raphael recommends the use of double-filament lamps controlled by a two-way-and-off switch Operation theatre lighting has been transformed by the invention of the shadowless lamp Formerly the surgeon was content with a number of lights above his head This method is still used in small hospitals it does away with the need for separate general lighting of the theatre The originator of the present-day shadowless operating theatre lantern was Professor Verain, and the French lamp known as the "scialytic" was made on the principle introduced by him, and is still probably the most popular By an arrangement of lenses and mirrors within a big shield a 100-watt lamp is made to give a cool hollow cone of brilliant light Tests with a good lantern showed that focused for ordinary working conditions it gave 450 foot-candles, and with the head of the observer interposed the illumination was never less than 300 It is of the utmost importance that the lantern should be of large size , 36 inches diameter is satisfactory, and there is now a well made English lantern of this size The shadowless lantern requires separate general lighting, and Mr Raphael showed how this may be obtained In daylight the white walled theatre has often a better general lighting than table lighting, so that the lantern may need to be used in daylight Glare from towels and sheets is noticeable with these high-power lights, so that at St Bartholomew's green towels are in use For medical schools a most ingenious adaptation of the shadowless lantern had been devised This is 10 feet in diameter and has a 5,000-watt lamp Within the hollow cone of light there is an optical attachment, and through this and by an arrangement of mirrors and prisms the image of what is being done at the operating table is displayed to the students in the next room, three times its natural size and in its actual colours, on a screen one metre in diameter

PROPHYLAXIS OF MALARIA BY DRUGS

Professor C Strickland and Dr D N Roy have carried out a series of experiments to determine the prophylactic action of drugs in the prevention of malarial infections in man [1] Their purpose was to determine, if possible, the amount of protection afforded by plasmoquine and quinine against the entry of sporozoites injected by the bites of mosquitos They refer to the reports by James, Nicol, and Shute (1931) and Swellengrebel and de Buck (1931) The former authors apparently obtained complete success against infection by the administration of 0 06 gram of plasmoquine before, and daily for six days after, the bites of mosquitos infected with *Plasmodium vivax* Twelve out of thirteen of Swellengrebel and de Buck's cases that were given 0 03 gram of plasmoquine twenty-four hours before the infecting bites developed malaria Strickland and Roy tested quinoplasmine, quinine bisulphate, and quinine bihydrochloride on volunteers by administering to them a "prophylactic" course before feeding on them *Anopheles stephensi* infected with *Plasmodium falciparum* or *P vivax* After the prophylactic course no other medicine was given unless fever developed and parasites were found Quinoplasmine, given in various ways before infecting mosquito bites, did not prevent the development of malarial fever, and, further, quinine sulphate and quinine bihydrochloride administered before the bites of infected mosquitos failed to protect individuals from fever The authors conclude that these observations and the massive amounts of the drugs used by them indicate that for all practical purposes neither plasmoquine nor quinine sulphate nor quinine bihydrochloride has any effect on sporozoites It is considered that so far no prophylactic drug action against sporozoites has been demonstrated, and that

[1] *Parasitology* March 4th, 1933 [illegible] No 1

BETHLEM ROYAL HOSPITAL, for Nervous and Mental Disorders,

Monks Orchard, Monks Orchard Road, Eden Park, Beckenham, Kent.

Reg Tel Address Bethlem, Beckenham *Telephone* Springpark 1180 1181
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Every facility for specialized investigation and treatment is provided in the Lord Wakefield Science and Treatment Unit In this unit is found the X Ray and Dental Departments and the Bio-Chemical Pathological and Psychological Laboratories

Furthermore provision is made for Electro-Therapy and Hydro Therapy to be carried out in all their forms and Occupational Therapy under competent instruction is encouraged

In addition to the Resident Medical Staff Consultants in special branches of Medicine and Surgery are available whenever required

The comfort of sensitive patients is greatly enhanced by the fact that the majority are given single bedrooms

For forms and further particulars apply to the Physician Superintendent at the Hospital

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A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS

Extensive grounds Detached Villas Chapel Garden and dairy produce from own farm Terms very moderate

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Detached Villas standing in 12 acres of ornamental grounds with tennis courts etc., which Voluntary Temporary or Certified Patients may visit by arrangement for long or short periods.

Illustrated Brochure on application to the Medical Superintendent, The Old Manor, Salisbury Telephone 51

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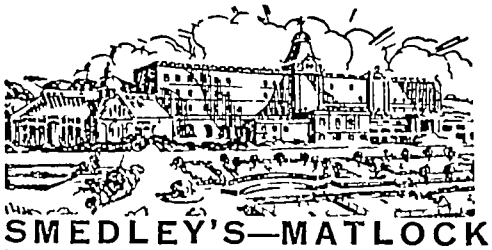

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Ladies and gentlemen admitted for treatment

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effects hitherto observed must be considered to be a therapeutic action of the drugs on the asexual development of the parasites

ANAEMIAS OF EARLY CHILDHOOD

The *Archives of Disease in Childhood* is publishing a series of ten papers by Professor Leonard Parsons and his colleagues in the department of diseases of children at Birmingham University entitled Studies in the Anaemias of Infancy and Early Childhood The subjects dealt with are as follows (1) introduction by Professor Parsons (2) effect of yeast on nutritional anaemia in the rat (3) anhaematopoietic anaemias (deficiency diseases of the erythron) nutritional anaemia and the anaemias of prematurity scurvy and coeliac disease (4) haemolytic (erythronoclastic) anaemia of the neo-natal period (5) haemolytic (erythronoclastic) anaemia of later infancy and childhood (6) anaemia in mother and child (7) monocytosis in myelosis (8) leukaemia (9) reticulo endotheliosis in severe anaemia and (10) the haematocrit in clinical medicine The series provides an authoritative restatement of the subject in the light of the results of modern research on blood diseases The first three papers appear in the current (April) issue Nos 4 and 5 will be published in June and the rest in subsequent numbers In addition Dr Helen M M Mackay is contributing three articles dealing with nutritional anaemia in infancy The second of these to appear in June contains a revision of her previously published standard haemoglobin curve for the first year of life

VENTILATION IN FACTORIES

A second edition[1] of the Welfare Pamphlet on the ventilation of factories and workshops has been issued by the Home Office It marks a considerable advance on the first edition published in 1920 and is illustrated with a large number of useful diagrams and reproduced photographs The introduction lays stress on the importance to physical health of air movement and discusses standards of ventilation and cooling power The section on natural ventilation which is much too brief is misleading however in that it figures and describes—apparently with approval—a building with a double-sided ridge louvre extending the whole length of the roof The larger portion of the pamphlet is devoted to mechanical ventilation It describes various types of fan in detail but shows a curious lack of balance by referring on several occasions to the extraction of air from factories by means of fans at or near the floor level Such a form of extraction is very seldom used and should be avoided if possible as it inevitably causes a considerable draught at foot level In its opening section however the pamphlet rightly deprecates the discomfort induced by hot head and cold feet The subject of heating systems is barely mentioned and we are told that the Home Office has in preparation a further pamphlet on industrial heating It seems a pity that it was not issued in conjunction with the present publication as it is impossible to discuss ventilation adequately without reference to heating As an example of this lack of co-ordination we are told that the ducts of a plenum ventilation system should terminate just overhead , yet any reference to the fact that in winter the temperature of this plenum air is about 100° F could not fail to suggest that the position indicated for the air discharge is incorrect

[1] Welfare Pamphlet No 5 Second edition Ventilation of Factories and Workshops London H M Stationery Office 1933 (1s net.)

W E. DIXON MEMORIAL

The executive committee of the Dixon Memorial Fund decided that the fund should be closed on May 1st, and has called a meeting of the subscribers to be held at the rooms of the Royal Society of Medicine 1 Wimpole Street on Thursday June 1st at 5 p m The total sum subscribed is £718 13s and after deducting expenses the amount available is nearly £695 The committee will recommend to this meeting that the fund be devoted to the establishment of a Dixon Memorial Lecture which should be delivered biennially or triennially on some subject of therapeutic interest It will further propose that the trusteeship of the fund be vested in the Royal Society of Medicine and that the council of the Section of Pharmacology and Therapeutics be requested to undertake the selection of the lecturer on each occasion

HOSPITAL ALMONERS

The annual report for 1932 of the Institute of Hospital Almoners shows that the number of hospitals instituting an almoner's department has increased despite the financial stringency indicating the economic value of this work For the first time in the history of the Institute the supply of trained almoners has temporarily outrun the demand This is thought to be largely due to the fact that hospital social service as a profession for women has received much publicity of late To the five local committees in university centres existing at the end of 1931 a new one came into being (in Glasgow) last year Affiliation has been established with the Victorian Institute of Almoners in Australia six trained almoners are now working in Victoria and there is one in Tasmania Women trained by the British Institute are also at work in Cyprus, Stockholm and Paris Five certificated almoners who have taken special training in mental health are engaged in psychiatric social service in London hospitals It may be recalled that an account of the progress of the Institute appeared in our issue of November 19th 1932 (p 933) in connexion with the publication by the Hospital Almoners Association of a volume describing this line of work in preparation for the International Conference of Social Workers at Frankfort A grant from the Institute rendered possible the publication of a report of an investigation by trained almoners into the predisposing social factors in chronic rheumatism among women

The Croonian Lectures before the Royal College of Physicians of London will be given by Professor Edward Mellanby F R S on June 8th 13th and 15th at 5 p m His subject is 'Nutrition and Disease the Interaction of Clinical and Experimental Investigations'

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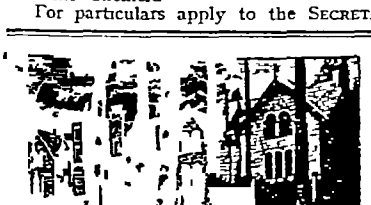

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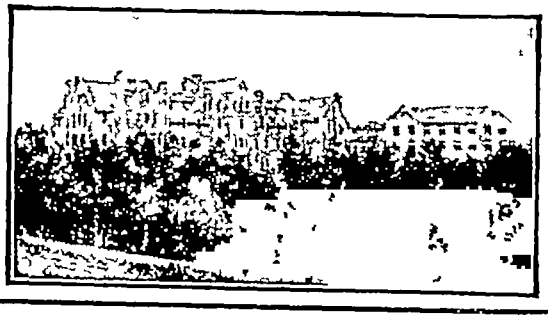

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April 27th, 1933.

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S. FORREST COWELL,
May 6th, 1933. Secretary.

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insured patients in the clinic the entire ante natal care of insured persons will fall into the lap of local authorities and their medical officers I do not for a moment suggest that this would be a disaster it is possible that it may be the ultimate development On the other hand I wish general practitioners to be given every chance to co-operate Should they do so completely and efficiently this would be a better arrangement

Exception must be taken to the manner in which certain local authorities are developing their maternity services

The following advertisement appeared in the *Glasgow Herald* in February of this year

BURGH OF AND (SCOTLAND)

Applications are invited by the Town Council of the Burgh of and from duly qualified Medical Practitioners (Male or Female) for the position of Resident Medical Officer Maternity and Child Welfare Department Candidates must have at least three years' post graduate experience of medical practice and possess the D P H or similar qualification Special experience in Obstetrics or Gynaecology and of Diseases of Children and of Maternity and Child Welfare Work is essential

Duties include obstetrical work in a maternity hospital the conducting of ante-natal clinics and child welfare consultation

Salary £350 per annum rising by £25 annually to £450 with board and residence in the maternity hospital

It will be observed according to the advertisement that obstetrical training is not essential but that a D P H is essential Surely for appointments of this nature it is of *primary* importance that the medical officer appointed should have a wide training in obstetrics and of comparatively little consequence that he should have a D P H Young graduates well trained in obstetrics who ultimately intend to take up obstetrics and gynaecology as a specialty are anxious to secure such appointments but they cannot possibly give up the time necessary to take a D P H The salary offered is quite substantial and would be willingly accepted as adequate remuneration by young graduates well qualified in obstetrics No progress in improving the maternity service of the country can result if local authorities pursue the policy here indicated

The Departmental Committee and all other *ad hoc* committees who have reported on maternal mortality have definitely expressed the opinion that the person responsible for ante natal supervision should be responsible for attendance during labour Many medical officers of ante natal clinics under local authorities never take part in intra natal supervision It is the general practitioner who is called out to assist the midwife should a difficulty arise *It is obvious that either medical practitioners should be associated with the clinics or the officers of local authorities should go to the assistance of midwives* A most unsatisfactory position is being created in many localities which cannot possibly be to the advantage of pregnant and parturient women The country will not wake up one morning and find itself— in possession of a national maternity service without knowing quite how we got it as Watts Eden[1] suggested in a recent lecture delivered to the Cardiff Division of the British Medical Association The country will only secure a satisfactory midwifery service when all the agents concerned have their individual duties defined and their activities centred in maternity hospitals and ante natal clinics

Various attempts have been made in recent years to persuade general practitioners to co-operate with local authorities and carry out ante natal care in and from the clinic In Hampshire Dr H Leslie Cronk county M O H has introduced a service very closely resembling the one here suggested The scheme as outlined provides that practitioners duly qualified for the post (qualifications are defined) will serve as medical officer in rotation normally for twelve months at a time The period of duty will terminate on December 31st Unless otherwise decided by the practitioners of the area the order in which the service will be given will be determined alphabetically Any general practitioner appointed will be expected to attend punctually at the time and place appointed and to make such arrangements that his private work will not interfere with his obligation to the county council The fee payable to a general practitioner for each session of not more than two hours will be one and a half guineas

The service established in Cumberland by Dr F H Monson[2] M O H for the county is radically different in this respect that the ante natal care is not necessarily carried out in the clinic The arrangements for provision of additional midwives early examination of patients by doctors routine supervision by midwives accouchement outfit are all in accordance with modern ideas It would appear that this arrangement is probably more suitable for certain rural areas In Burnley a scheme has been initiated where the practitioners who wish to do ante natal work do it in and from the clinics of the local authorities This I maintain is the best arrangement in urban areas more especially in densely populated industrial centres

W H F Oxley[3] refers to the matter and regrets that the scheme in Hampshire provides for attendance at the clinic and that no provision is made for attendance at the doctor's surgery Later in his paper he states in referring to the clinics that they are to be staffed by midwives and general practitioners Now *How does the East London Hospital secure such wonderful results?* The excellent results are obtained because patients attend the clinic of the hospital and are carefully supervised there by midwives If they do not or cannot attend they are visited in their homes and if any abnormality arises Dr Oxley and his staff are consulted if the complication of pregnancy or labour is deemed serious the patient is transferred to the hospital *This is precisely the service I am advocating for the country*

Dr Oxley[3] returns to this subject in a later communication Many local authorities and medical officers of health however appear to take an exaggerated view of the usefulness of publicly provided clinics and are blind to their limitations and disadvantages' Of course there are disadvantages but the advantages of the clinic in respect to insured persons far outweigh the disadvantages in large centres of population

MIDWIVES AND ANTE NATAL CLINICS

The remarks made here deal only with the relation of midwives to ante natal clinics

The most authoritative pronouncement regarding the place of the midwife in a maternity service of this country is contained in the Report of the Departmental Committee on the Training and Employment of Midwives (1929) In the service outlined the midwife is to undertake the routine ante natal intra natal and post natal supervision of patients entrusted to her care or as the committee stated (para 9)

> The midwife as the person responsible in the majority of cases for the care of the mother throughout pregnancy confinement and the puerperal period is the one upon whom the main burden would rest In all such cases there should be available the services of a doctor with certain well-defined duties towards the mother to whom the midwife should be able at all times to look for assistance when she is faced with difficulties beyond her ordinary competence and skill and an obstetric specialist who would be called in by the doctor to deal with exceptional emergencies

This policy has the support of the British Medical Association and the imprimatur of the Departmental Committee on Maternal Mortality and Morbidity (Final Report p 34)

Prima facie this arrangement is simple and rational because the essence of ante natal care is keeping a constant look out for the slightest disorder This meticulous attention to and supervision of pregnant women is a type of work peculiarly suited to intelligent and highly trained midwives As much of it is of a non medical character midwives under supervision are better qualified than doctors for routine ante natal care To put it very simply the principle should be that midwives mother their patients during pregnancy

It must be clearly understood however that this is throwing an enormous responsibility upon midwives That the policy is safe if conditions are satisfactory is proved by the results secured by the Netherlands and by certain services in this country—for example the General Lying-in Hospital York Road and the East End Maternity

Hospital London, in both of which institutions the routine work (domiciliary and institutional) is conducted by midwives in training under supervision What is necessary for the country generally is to organize the midwives' service on a similar basis, with possibly not quite so much elaboration as pertains in Holland

If midwives are to be made responsible for routine ante natal and intra natal care they must be (1) more adequately trained, (2) under the jurisdiction of some authority, and the natural authority is the local authority Special conditions should be laid down for midwives desiring to practise on their own account

The reason for attaching so much importance to associating the midwife's work with the ante-natal clinic is that all her work would be under supervision She would see her patients there when they can visit the clinic, her obstetric outfit would be kept in the clinic, and the case sheets or records of the patient's health would be preserved in the clinic She would be the patient's health visitor throughout pregnancy Should it be necessary for the patient's doctor to see the patient she would arrange accordingly In the event of a patient having to go to a hospital she would accompany her there By this arrangement the standard of her work would be kept at such a high level that it would be hardly necessary for her to take revision courses

I was particularly pleased to notice a statement recently made by Dame Janet Campbell[6] to the following effect

But there is a growing opinion that she would do her work better and under more comfortable conditions if brought definitely within a municipal or nursing scheme, as indeed is already the case in county districts" This is a considerable step forward The next and final step is to associate the midwives with the ante-natal clinic

Organization and Staffing of Ante-natal Clinics

The organization and staffing of welfare centres is fully outlined in "A National Maternity Service"[7] (paras 44 to 51 and 64 to 76) which the writer proposed

It is there suggested

1 They are to be the centres for routine ante natal care

2 Each is to be in liaison with a particular maternity institution

3 The routine ante natal care by midwives is to be carried on in and from these clinics

4 The ante natal care with which the medical practitioner is more specially concerned is to be undertaken in and from the clinic The final examination of the patient (month after delivery) is also to be carried out in the clinic and the final note on her condition inserted in her case sheet which should be kept in the ante natal clinic

5 The domiciliary service for women in labour is to be directed from the clinic where the midwives who will be doing the bulk of this particular work will keep their obstetric outfit and have it duly kept in order as is done in the domiciliary services of all maternity institutions

6 Accouchement outfits for patients may, if this is the most suitable arrangement for the locality be stored and distributed from the clinic

7 [illegible] records of all patients are to be preserved [illegible] in the clinic

8 [illegible] health visitors home helps and other [illegible] to be directed from the clinic

With this arrangement the whole maternity service is brought into alignment—the institutions for patients requiring labour treatment ante-natal clinics of these institutions for ordinary work and in large cities and towns [illegible] *purposes* the welfare clinics for the supervision of expectant mothers, the domiciliary [illegible] associated with these clinics for the supervision of women in labour The economic advantages of this [illegible] are obvious

References

1 [illegible] *Medical Journal* March 11th 1933 p 400
2 *Medical Officer* November 1st 1930 p 195
3 [illegible] *Medical Journal* October 18th 1930 p 649
4 [illegible] January 3rd 1931 p 6
5 [illegible] January 14th 1933 p 77
6 [illegible] November 26th 1932 p 962
7 [illegible] *San Inst* 1931 In No 4 *Lancet* August 15th, 1931 p 367

Ireland

Regius Chair of Surgery

Sir Arthur Ball, Bt, has been appointed to the regius professorship in surgery at Trinity College, Dublin in succession to the late Sir William Taylor The new professor is senior surgeon to Sir Patrick Dun's Hospital and examiner in surgery at the Royal College of Surgeons in Ireland He is a grandson of Robert Ball, LL D (1897–91) the Dublin naturalist, a nephew of Sir Robert Ball F R S (1840–1913), the astronomer, and the eldest son of Sir Charles Bent Ball (1851–1916), honorary surgeon to the King in Ireland, who for many years occupied the chair of surgery to which Sir Arthur now succeeds

Medical Registration Council

At the May session of the Medical Registration Council held in the office of the Council, 35, Upper Fitzwilliam Street, Dublin, there were present the president Dr Denis J Coffey, Dr James N Meenan, Dr Henry F Moore, Dr Stephen Shea, Dr A Francis Dixon Dr Edward Magennis, Mr R Atkinson Stoney, Dr T Gillman Moorhead, Dr Robert J Rowlette, and Mr William Doolin The registrar, Miss Hayes, was in attendance Among the business dealt with was the appointment of Dr Henry F Moore to be a member of the Therapeutic Substances Advisory Committee representing the Medical Registration Council, and the adoption of new penal regulations under Sections 28 29 and 30 of the Medical Practitioners Act, 1927 The registrar stated that the reports on the recent visitations to the final medical examinations had been sent to the various qualifying bodies

Federation of Hospitals

At the Charter Day dinner of the Royal College of Surgeons in Ireland the president, Mr Frank Crawley, expressed his firm belief that the days of the voluntary hospitals were over, and referred to a statement made recently by Sir Henry Brackenbury, Chairman of Council of the British Medical Association, to the effect that hospitals were becoming less and less a provision by charitable people for the care of those who could not pay anything, and more and more a general provision by the public on a self-supporting basis for members of that public who required treatment Mr Crawley recalled that he had already drawn attention to "those prophetic words", he was sure there would be, as there was then, the criticism "And the greatest of these is charity" To that criticism he would like to point out that charity did not merely mean sending a subscription to the hospitals another meaning of the word charity was love, and in that was included the idea of personal service If the charitably inclined felt that they could not give their own service, perhaps they could pay those less endowed with the world's goods to do the service for them The contributions of the charitable in the country would not be sufficient to keep the hospitals properly equipped and with a sufficient number of beds for the very poor, who formed a large proportion of the patients in all hospitals Notwithstanding all that had been heard and read of patients being refused admission to hospitals, he ventured to say that in no single instance was the refusal for the reason that the patient could not pay Referring to the recent Charitable Hospitals Bill Mr Crawley said that this was a most important Bill, the main idea of which was correct He believed that it was wrong to allow in Ireland a number of small hospitals, each trying to be in miniature a complete hospital, having every possible modern specialty provided for in its building, and having on its

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THE UNIVERSITY OF SHEFFIELD

FACULTY OF MEDICINE

The Council of the University and the Board of Management of the Royal Infirmary Sheffield acting conjointly are about to make an appointment to the post of ASSISTANT PATHOLOGIST to the Infirmary and DEMONSTRATOR OF PATHOLOGY in the University The salary offered is £500 per annum Applications accompanied by the names of three referees should be sent on or before May 17th to the undersigned from whom further details may be obtained

W M GIBBONS Registrar

THE UNIVERSITY OF SHEFFIELD

DEPARTMENT OF BACTERIOLOGY

The Council are about to appoint a JUNIOR ASSISTANT BACTERIOLOGIST and DEMONSTRATOR Salary £300 during the first year and £350 for the second year

Applications must be received by the undersigned from whom further particulars may be obtained not later than May 20th

W M GIBBONS Registrar

UNIVERSITY OF LONDON, UNIVERSITY COLLEGE

SHARPEY PHYSIOLOGICAL SCHOLARSHIP

The College Committee will shortly proceed to elect a Sharpey Physiological Scholar

The Sharpey Scholar will be a member of the Academic Staff of the College and will work in the Department of Physiology and Biochemistry under the direction of Professor C A LOVATT EVANS

The Sharpey Scholar will be expected to carry out original investigations

The emoluments of the Sharpey Scholarship will be £200 a year

The appointment is tenable for one year, but is renewable

Candidates should send in their applications together with a full statement of their academic training and list of publications if any so as to reach the undersigned not later than May 27th

C O G DOUIE
University College Secretary
London (Gower Street, W C 1)

UNIVERSITY OF BIRMINGHAM

FACULTY OF MEDICINE.

LECTURER IN PATHOLOGY

Applications are invited for the post of Lecturer in Pathology to Dental Students and Pathologist to the Queen's Hospital Birmingham at a stipend of £400 per annum

Applications with three testimonials should be sent on or before May 15th to the undersigned from whom further particulars may be obtained

The University, C G BURTON,
Birmingham Secretary
April 1933

GOVERNMENT OF SOUTHERN RHODESIA

APPOINTMENT OF MEDICAL SUPERINTENDENT MENTAL HOSPITAL, BULAWAYO

Applications are invited from male Medical Practitioners, for the post of Medical Superintendent of the Mental Hospital, Bulawayo Southern Rhodesia Applicants must have had suitable experience in mental disease and will be expected to commence duty in October, 1933 or shortly after Candidates should be in possession of the Diploma in Psychological Medicine

The successful candidate will also be required to undertake certain routine medical duties in Bulawayo in connection with the Government Medical Service

Salary £600 per annum rising by £40 per annum to £1 000 per annum (subject to temporary deductions in terms of the Public Services Economy Act 1931") plus a pensionable allowance of £200 per annum for unfurnished quarters light and water, for which purpose a house is provided in the vicinity of the hospital Consultant practice but not private practice will be allowed The post is pensionable in terms of the Public Services Act 1931

Application forms and further information regarding the terms of appointment and conditions of service can be obtained from the Official Secretary, Office of the High Commissioner for Southern Rhodesia, Crown House, Aldwych London W C 2 to whom applications should be sent not later than May 31st

COUNTY BOROUGH OF DEWSBURY

ASSISTANT SCHOOL MEDICAL OFFICER AND ASSISTANT MEDICAL OFFICER OF HEALTH

Applications are invited from duly qualified and registered Medical Practitioners (men or women) for the post of Assistant School Medical Officer and Assistant Medical Officer of Health

Applicants should have had at least three years experience since qualification Experience in eye work and refractions is essential The possession of the D P H, and previous experience in School Medical Inspection and the work of a School Clinic, and in Tuberculosis and Child Welfare will be considered important additional qualifications

The salary scale will be £500 per annum rising by annual increments of £25 to £750 per annum subject to a temporary percentage reduction Particulars of the duties and terms and conditions of appointment together with application forms may be obtained from Dr J GREENWOOD WILSON Medical Officer of Health Municipal Buildings Halifax Road Dewsbury to whom all applications accompanied by copies of not more than three recent testimonials should be delivered not later than Saturday May 13th

Canvassing in any form will be a disqualification

Town Hall HOLLAND BOOTH
Dewsbury Town Clerk
April, 1933

THE NATIONAL BIRTH CONTROL ASSOCIATION.

(Incorporating the Birth Control Investigation Committee)

A MEDICAL CONFERENCE ON CONTRACEPTIVES

WILL BE HELD IN LONDON

on July 8th, 1933

Further particulars will appear in due course.

FELLOWSHIPS IN PSYCHIATRY

THE CHILD GUIDANCE COUNCIL offers two Fellowships in Psychiatry tenable at the London Child Guidance Clinic, 1 Canonbury Place N.1 on the basis of six months full time or twelve months half time training Candidates should be registered Medical Practitioners of either sex and should possess the Diploma in Psychological Medicine or be able to produce evidence of psychiatric experience The financial value of the Fellowships will not be less than £150 the actual financial value depending upon the qualifications and experience of the applicant. Further particulars and forms of application may be obtained from the Acting Secretary Child Guidance Council 7 Buckingham Palace Gardens, S W 1 Applications must reach the Secretary not later than May 20th

ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION

REMINDER

Examination for GASKELL GOLD MEDAL AND PRIZE FICATE IN be held at till London on Friday and Saturday, MAY 26th and 27th, 1933 Latest date for entry Saturday May 20th

Application for entry to be made to the Registrar R M P A, St Andrews Hospital Northampton

INDIAN RESEARCH FUND ASSOCIATION

Wanted for service with the Malaria Survey of India a competent RESEARCH WORKER medical qualifications preferred capable of undertaking independent inquiries on Malaria in the field and in the laboratory Special consideration will be given to candidates with previous experience of research work more especially in relation to Malaria. Appointment will be made on the basis of three-years contract subject to one year's probation Salary Rs 1 500 per mensem rising by Rs 100 annual increments to Rs 1 700 in last year of contract (equivalent at present rate of exchange to about £1 340 to £1 520 per annum but is subject to the 5 per cent emergency cut so long as it lasts) with usual departmental travelling allowance and halting allowance salary to start from date of landing in India Free passage out and home first-class B P S O or equivalent at termination of contract or period of employment return passage also paid if first years probation not satisfactory Usual service conditions regarding leave To one months leave with full pay after eleven months service or equivalent proportion cumulative with usual casual leave not exceeding 15 days in the year Suitable man would have every prospect of renewing agreement or obtaining suitable equivalent employment Applying stating qualifications and experience with copies of relevant testimonials to the Secretary Indian Research Fund Association Simla India, from whom any further information as to qualifications most desired or on other points can be obtained The applications should reach the Secretary Indian Research Fund Association by July 31st at the latest

BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN

HOUSE SURGEON (man or woman) wanted for six months from July 1st Salary to be at the rate of £75 per annum Applications with full particulars and copies of testimonials to be sent not later than May 20th to HUGH C. ASTON, 45, Newhall Street, Birmingham

CHARTERED SOCIETY of MASSAGE & MEDICAL GYMNASTICS

President LORD MOYNIHAN OF LEEDS K.C.M.G., C.B., M.S., F.R.C.S

Those requiring the services of

CHARTERED MASSEUSES & CHARTERED MASSEURS

can obtain full information from the Society's Bureau

Hours 10 6

Or from the—

Secretary (Dept. B) C.S.M.M.G., Tavistock House (North), Tavistock Square, London, W.C.1 Phone Museum 9223-4-5

COUNTY BOROUGH OF DERBY

RESIDENT ASSISTANT MEDICAL OFFICER. (Female)

Applications are invited from qualified women (age not to exceed 40 years) for the post of Resident Assistant Medical Officer. Salary £350 per annum rising by annual increments of £25 to £450 per annum (subject to temporary economy deduction as follows: up to £100 per annum—nil; on next £200—1½ per cent.; on next £200—2½ per cent., etc.) plus emoluments valued at £150 per annum.

The successful candidate will be required to reside at the Borough Isolation Hospital and Sanatorium.

Forms of application can be obtained from the undersigned and applications together with three copies of recent testimonials should be forwarded to the undersigned not later than Tuesday, May 9th.

Public Health Dept., 1 Derwent Street, Derby. CORDON LITTLE, Medical Officer of Health.

WARWICKSHIRE AND COVENTRY JOINT COMMITTEE FOR TUBERCULOSIS

KING EDWARD VII MEMORIAL SANATORIUM, HERTFORD HILL, near WARWICK

Applications are invited for the post of JUNIOR ASSISTANT MEDICAL OFFICER (male) at the Memorial Sanatorium near Warwick of 195 beds. The successful candidate will be appointed for six months and will have special opportunity of gaining experience in treatment by Artificial Pneumothorax by ultra violet Light and in X ray work.

The salary will be at the rate of £200 per annum with board lodging and laundry and promotion is probable at the end of six months.

Applications with recent testimonials should be forwarded direct to the Medical Superintendent at the Sanatorium by not later than Monday, May 15th.

Shire Hall, Warwick. L. EDGAR STEPHENS, Clerk of the Joint Committee. April 1933.

EARSDON URBAN DISTRICT COUNCIL.

APPOINTMENT OF A TEMORARY PART TIME MEDICAL OFFICER OF HEALTH

The above Council invite applications from duly qualified persons for the temporary appointment of Medical Officer of Health of their district at a salary of £100 per annum.

The appointment which is part time is subject to the provisions of the Sanitary Officers Order 1926 and to the approval of the Minister of Health.

Applications stating age, experience, qualifications, together with copies of recent testimonials should be addressed so as to reach me not later than first post on Tuesday, May 16th.

Dated this 28th day of April 1933.

J. W. CUTHBERTSON, Clerk to the Council. 40 Bridge Street, Blyth, Northumberland.

THE STAFFORDSHIRE GENERAL INFIRMARY, STAFFORD

HOUSE SURGEON required. Salary £200 per annum with board residence. The appointment must be held for at least six months. The selected candidate will be required to take up duties as early as possible. The Hospital has 100 beds and there are two Residents.

Applications stating age, accompanied by copies of three recent testimonials as to qualifications and experience should be sent at once to the undersigned.

Stafford, April 24th, 1933. A. E. COLLINS, Secretary.

HULL ROYAL INFIRMARY

The Appointing Committee invite applications for the office of HONORARY PHYSICIAN to the Institution.

Applicants must have obtained a degree in Medicine at one of the Universities of the United Kingdom be a Fellow or Member of the Royal College of Physicians of London, Edinburgh or Ireland and be duly registered under the Medical Acts.

Honorary Physicians are appointed for a period not exceeding twenty years or until attaining 60 years of age (whichever event occurs first) and in accordance with the terms of the Royal Charter.

Applicants are prohibited from personally canvassing but may send copies of their applications and testimonials to the members of the Appointing Committee.

Applications should be addressed to the Chairman of the Managing Committee and should reach him by May 19th.

May 1st 1933. R. J. CARLESS, House Governor.

MILLER GENERAL HOSPITAL, Greenwich Road, S.E.10

Applications are invited for the following posts:

HOUSE SURGEON. Salary £100 per annum.

HOUSE PHYSICIAN. Salary £100 per annum.

CASUALTY OFFICER. Salary £150 per annum.

Board residence and laundry are provided.

OUT PATIENT OFFICER who is required to see Medical and Surgical cases. Attendance daily (except Sunday) from 9 to 1. Tuesdays 9 to 5. Salary £150 per annum and lunch.

Candidates (male) must be unmarried. The appointments are for six months from July 1st next. There are six Resident Officers.

Applications stating age, nationality, qualifications and experience accompanied by copies of not more than three recent testimonials, to be sent to the Acting Secretary not later than May 24th.

May 2nd 1933.

NEW SUSSEX HOSPITAL FOR WOMEN AND CHILDREN, Windlesham Rd., BRIGHTON

Applications are invited from qualified Medical Women for the post of HOUSE PHYSICIAN (duties to commence June 14th) and HOUSE SURGEON (duties to commence June 14th). Salary at the rate of £100 per annum.

Applications in writing accompanied by recent testimonials should be sent on or before Friday, May 19th, to—

Board Room, April 27th 1933. PERCY F. SPOONER, Secretary.

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN, St. Quintin Avenue, North Kensington, W.10. (58 Beds.)

The Board of Management invite applications for the post of HONORARY DERMATOLOGIST. Candidates must hold the M.R.C.P. Application accompanied by copies of three testimonials should be addressed to the undersigned at the Hospital and should reach him not later than Monday, May 22nd.

H. J. ELEY, Secretary.

NEWCASTLE-UPON-TYNE EYE HOSPITAL.

Wanted for July 1st a RESIDENT HOUSE SURGEON (female). Salary £75 per annum together with board, lodgings and laundry. Applications stating experience if any and age with copies of recent testimonials to be sent to CHARLES E. V. UPTON, Secretary.

WEST NORFOLK AND KING'S LYNN GENERAL HOSPITAL.

HOUSE PHYSICIAN

Applications (male or female) are invited for the above post which will become vacant May 19th. Salary £125 per annum. To have charge of Medical and Ophthalmic beds also to act as Casualty Officer and Resident Anaesthetist. This post which is for six months in the first instance offers valuable experience in both In patient and Out patient work.

Applications, stating age, experience, etc., should be sent to the undermentioned as early as possible.

JOSEPH E. SEARJEANT, F.C.C.S., House Governor & Secretary.

PRESTON AND COUNTY OF LANCASTER QUEEN VICTORIA ROYAL INFIRMARY

The Board of Management invite applications from unmarried gentlemen, double qualified and registered for the post of HOUSE PHYSICIAN. Salary at the rate of £150 per annum with board, residence and laundering.

The Hospital is recognised for the Post-Graduate Examinations of the Royal College of Physicians and Surgeons (England).

Applications stating age, qualification and experience together with copies of recent testimonials should be addressed to the undersigned on or before May 11th.

JOHN GIBSON, Supt. and Secretary.

LIVERPOOL HAHNEMANN HOSPITAL, HOPE STREET (52 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER to the above Institution which falls vacant on May 16th. Appointment is for six months renewable. Salary at the rate of £100 per annum. Duties include casualties, occasional anaesthetics and assisting at operations general gynaecological aural and ophthalmic.

Apply stating age, sex, nationality and previous experience, and enclosing copies of recent testimonials to the Registrar before May 16th.

LIVERPOOL MATERNITY HOSPITAL, OXFORD STREET

HOUSE SURGEON required for the six months commencing July 1st next. Salary at the rate of £90 per annum with board residence and laundry. Previous experience as House Surgeon essential. Membership of a Medical Defence Society is a condition of appointment.

Applications stating age, qualifications and experience together with copies of testimonials to be sent to the Hon. Secretary of the Medical Board on or before May 26th.

ROYAL WEST SUSSEX HOSPITAL, CHICHESTER

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON vacant May 1st. Salary £125 per annum with board residence and laundry.

Applications stating age, with three recent testimonials should be sent to the undersigned as soon as possible.

HERBERT S. WILMORE, Secretary.

MANCHESTER ROYAL EYE HOSPITAL.

Vacancy occurs at once for JUNIOR HOUSE SURGEON. Salary £120 per annum with residence, board, etc. Applications (with copies of testimonial) endorsed "House Surgeon" to be addressed to the Chairman of the Board of Management.

H. R. NORTH, Secretary.

staff all the specialists necessary to carry out the extremely varying treatments He could not see how such a staff could be collected in a small country town and in these days of rapid transport he did not see the necessity for it In the larger towns—Dublin Cork and Galway in particular—there should be amalgamation of the hospitals or as his friend and colleague the president of the College of Physicians had suggested to him a federation of hospitals Explaining this proposal he took Sir Patrick Dun's and Baggot Street Hospital as examples and said that both would have their number of beds but each would develop to the utmost one or two or more specialties There would of course always be special hospitals taking care of such diseases as fever etc He was glad to see that medical research was to be looked after in the new Bill the subject had been largely neglected and this for want of facilities in Dublin Referring to the enormous amount of work involved in formulating any scheme for the federation of hospitals Mr Crawley said that there should be a board or commission on which the medical profession would be represented by some member or members whose views were broad far reaching and thoroughly up to date He could not agree with the circular sent out by the Associated Hospitals Sweepstakes Committee which stated that in the interest of the hospitals it would be much wiser if the terms of the Bill were not publicly discussed and that no opinions were given to the Press He was against hush hush and he welcomed all opinions right or wrong

Temporary Economies Bill

A meeting of the Society of Whole time Medical Officers of Health of the Free State with Dr Saunders presiding was held in Dublin recently for the purpose of discussing the position in relation to the proposed salary cuts in the public services The following statement was authorized to be issued on behalf of the society

In stating their case against the proposed cuts embodied in the Bill the members desire to emphasize the following points (1) In order to qualify to hold the position of county medical officer of health or assistant county medical officer of health candidates must hold higher qualifications than the ordinary medical degrees and licentiateships These extra qualifications involve at least one year's whole-time study (in most cases two to three years) with the consequential expenditure on fees living expenses etc and the loss of revenue which would have accrued if the candidates had embarked at once in practice (2) In addition to obtaining these higher qualifications (the diploma in public health) officers now holding these positions have had to undertake special courses of administrative training in England and elsewhere which again has involved a heavy expenditure with no compensation income from private or other practice (3) It may be said therefore that the whole course of training for the posts has involved from seven to eight years of preparation and a very heavy outlay in actual cash (4) In addition the great majority of medical officers of health (county and county borough) in Saorstát Eireann before taking up their present posts resigned similar posts in England Scotland and elsewhere and in doing so surrendered chances of promotion pension etc in services which offered opportunities much greater than those in Ireland (5) The conditions of service in the majority of these posts are considerably below those holding for similar posts in England and elsewhere In practically all cases the salaries paid are only half of what are paid in the places stated In no instance is the salary even 75 per cent of that paid in England (6) The county medical officer of health in Ireland has to perform a three fold function (*a*) as county medical officer of health he is responsible for the general health and sanitation of his area (*b*) as school medical officer he is responsible for the health of the school children and the prevention of defects (*c*) as tuberculosis officer he is responsible for the administration of the tuberculosis services in his area In addition he has to exercise the function of supervisor of midwives (a most necessary office) and in many are so he acts as maternity and child welfare medical officer (7) Public health work in Saorstát Eireann is in its infancy and in consequence the burden of work falling upon the newly appointed county medical officer of health is enormously increased In addition to organizing services *ab initio* he has to work against a great amount of misunderstanding The future welfare of the public health services in this country is of immense importance to the State and consequently the society feels justified in asserting that the officers appointed to carry out the work should not be subjected to conditions which were never contemplated when they undertook it

The Irish Medical Secretary has dealt in the lay press with the cases of medical officials serving under local authorities and their claims to be excluded from the operations of the Public Services (Temporary Economies) Bill 1933

Scotland

Medical Reform in Scottish Universities

In an article under the heading Away with Lumber in the Medical Curriculum in *The Student*—the Edinburgh University magazine—Dr Chalmers Watson deals with the need for change in the instruction given to medical students in Scottish universities The article has called forth a considerable amount of comment in the Press and many persons interested in medical teaching are in general agreement with its conclusions Dr Chalmers Watson points out the necessity for a proper perspective between the scientific aspect of various subjects and the application of those subjects to the future work of general practitioners For real improvement in the nation's health there must be regard to a higher state of efficiency on the part of the general practitioner rather than to the work of the specialist While there is a great degree of unanimity in regard to the general need for reform definite divergence of opinion arises in regard to details because each individual teacher is of opinion that the need for reform is less urgent in his own subject than in that of others Dr Chalmers Watson makes certain general proposals concerning the lines on which reform might profitably take place He suggests that no course of systematic lectures need exceed fifty in number provided that textbooks primarily adapted for the student's needs are available and that tutorial work and demonstrations designed to cultivate the student's individual thinking powers are added The number of systematic lectures in different subjects should vary to suit the scope of the subject The amount of time available for practical medicine should be greatly increased—in Dr Watson's opinion it should be trebled—and concurrently the time devoted to operative surgery and similar departments of a specialist nature might be materially decreased Out patient work in dispensaries and under similar supervision should be re-established as part of the course With regard to Edinburgh especially a combined class of medicine surgery and pathology which was established some years ago and which many people regard as having been a failure should be relinquished and individual classes dealing with the principles and practice of these subjects should be re-established It is suggested that the time of senior medical students is at present unduly occupied by special classes and that time saved by the sacrifice of unnecessary detail should be devoted to subjects which at present receive too little attention such as diet and feeding ante natal hygiene physico-therapeutics etc Attention is specially directed to the need for reorganization in the teaching of basal scientific subjects and to the defects inherent in the present curriculum of cramming excessive teaching of

WORCESTERSHIRE MENTAL HOSPITAL
BARNSLEY HALL BROMSGROVE.

DEPUTY MEDICAL SUPERINTENDENT

Applications for this post are invited from duly qualified registered Medical Practitioners who have had previous Mental Hospital experience

Commencing salary £450 rising by annual increments of £25 to £550 with furnished quarters board laundry, and attendance If the successful candidate is unmarried these emoluments are valued at £90 if married partly furnished quarters are available and the emoluments are valued at £187 of which £62 is paid in cash in lieu of board and attendance

An additional £50 per annum will be paid to the holder of the D P M qualification

The usual deduction will be made in accordance with the Superannuation Act, 1909 and a temporary deduction under the National Economy Scheme at present amounting to £16 5s on the initial salary Forms of application may be obtained from the Medical Superintendent and they should be returned to him accompanied by copies of three recent testimonials before Monday May 15th

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ROYAL GWENT HOSPITAL, NEWPORT, MON
(NEWPORT AND MONMOUTHSHIRE HOSPITAL)

HONORARY EAR NOSE AND THROAT SURGEON

The Directors require an Honorary Ear, Nose, and Throat Surgeon and applications are invited for the position

Applicants must be Graduates of a University or Fellows of a Royal College of Surgeons and should have had some special experience in *Ear Nose and Throat work*

The successful candidate will be required to hold the office subject to the Rules and Regulations of the Hospital

Further particulars may be obtained from the undersigned to whom applications, with copies of testimonials should be sent before May 13th

J K MILLWARD
May 1st 1933 Secretary Supt

THE ROYAL GWENT HOSPITAL, NEWPORT MON (160 Beds)

Wanted a Junior Resident Medical Officer to *act as* HOUSE SURGEON to Out patients and as House Physician

Salary £135 with board lodgings and laundry Resident Medical Staff 5 Eligible for promotion

Large Out patient Department

Applications stating age and qualifications with copies of three recent testimonials, to be sent to the undersigned

Applications from ladies not entertained

J K MILLWARD,
May 1st 1933 Secretary Supt

ROCHDALE INFIRMARY AND DISPENSARY
(110 Beds)

The Board of Management invite applications for the appointment of JUNIOR HOUSE SURGEON The salary attached to the appointment is £200 per annum including board residence and laundry

Applications stating age nationality etc together with copies of three recent testimonials to be sent to the Secretary endorsed House Surgeon Particulars of duties, and conditions of appointment may be had on application to the Secretary

Infirmary Office W WYNNE
Rochdale Lancs Secretary

BOLINGBROKE HOSPITAL
Wandsworth Common S W 11
(121 Beds)

HOUSE SURGEON (male) required The appointment is for six months commencing on June 1 t Salary £120 per annum with board, residence and laundry

Candidates must be fully qualified and registered

Applications stating age qualifications and experience with copies of not more than three testimonials should be sent to the undersigned for May 11th

W S RANDOLPH BISS
Secretary Superintendent

ANCOATS HOSPITAL MANCHESTER

RESIDENT MEDICAL OFFICER required to commence duties on June 1st One having held a House appointment essential Appointment for six months Salary at the rate £150 per annum with board residence Applications stating age qualifications experience together with copies of three recent testimonials to be forwarded to the undersigned on or before May 17th

By Order of the Board
HERBERT J DAFFORNE
Gen Supt & Secretary

THE HOSPITAL FOR SICK CHILDREN,
Great Ormond Street London W C 1

A RESIDENT MEDICAL SUPERINTENDENT is required on July 1st

Gentlemen are invited to send in their applications to the Secretary, before 12 o clock on Monday, May 15th accompanied by copies of not more than three testimonials given specially for the purpose

The appointment is made for one year, but may be held, subject to re-election, for a period of three years

Salary £300 per annum with board, residence in the Hospital £10 allowance for laundry, and £18 18s for the purpose of providing a substitute during annual leave

Candidates must be unmarried and possess a legal qualification to practice, and must have held a responsible Hospital appointment at a General Hospital

All candidates must be in attendance on Wednesday, May 17th, at 4 45 p m precisely to appear before the Joint Committee, if required

Forms of application and copies of the Rules may be obtained from the Secretary, at the Hospital

By Order of the Board of Management,
H F RUTHERFORD
April 1933 Secretary

ROYAL SALOP INFIRMARY, SHREWSBURY
(156 Beds)

APPOINTMENT OF CASUALTY OFFICER AND RESIDENT ANAESTHETIST

Applications are invited from fully qualified men for the appointment of Casualty Officer and Resident Anaesthetist now vacant

The appointment is for a period of six months, subject to re appointment for a further period of six months at a salary of £160 per annum with board residence etc Resident Staff comprises Resident Surgical Officer, House Physician, and Casualty Officer

Applications stating age qualifications experience, nationality, and accompanied by copies of three recent testimonials, to be sent to the undersigned forthwith

Board Room J W NORIE
Secretary Superintendent

WARRINGTON INFIRMARY AND DISPENSARY

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON (male) unmarried

Applicants who must be of British nationality must be duly qualified medical practitioners. Salary £175 per annum, with board, apartments and laundry

Applications stating age, with copies of three recent testimonials, should be sent in at once to the undersigned The appointment to date from June 1st

By Order
HENRY L BOOT
April 29th 1933 Supt & Secretary

ROYAL NATIONAL ORTHOPAEDIC HOSPITAL
(Country Branch Brockley Hill, Stanmore, Middlesex)
(280 Beds—75 per cent for the treatment of Surgical Tuberculosis)

Applications are invited for the post of HOUSE SURGEON (TWO) Salary £150 per annum with board quarters and laundry The appointment is for six months from June 1st renewable for a further period of six months on the recommendation of the Medical Board Applications with copies of testimonials should reach the Secretary 234 Gt Portland Street London, W 1 not later than May 15th

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ROYAL FREE HOSPITAL,
Gray s Inn Road, W C 1

Applications are invited from medical women who have had previous V D experience for the post of ASSISTANT MEDICAL OFFICER in the V D Department Salary at the rate of £350 per annum part time appointment is for twelve months from July 1st next Intending candidates should submit applications stating age and experience with copies of three recent testimonials to the undersigned on or before May 10th

REGINALD R GARRATT Secretary

ROYAL FREE HOSPITAL,
Gray s Inn Road W C 1

Applications are invited from duly qualified male medical candidates for the post of SENIOR RESIDENT MEDICAL OFFICER, vacant June 1st and tenable for one year Salary £150 per annum and emoluments of about £90 per annum with board and residence Intending candidates should submit applications stating age and experience accompanied by copies of three recent testimonials to the undersigned on or before May 8th

REGINALD R GARRATT Secretary

MONTAGU HOSPITAL, MEXBOROUGH YORKS

Applications are invited for the position of SENIOR HOUSE SURGEON and JUNIOR HOUSE SURGEON, at the above Hospital The commencing salary attached to each post is £120 and £100 respectively, with board, residence, laundry, etc One months holiday is allowed annually

The bed accommodation is as follows Surgical 64 Maternity 20 A further 20 beds for medical cases will shortly be brought into commission The appointments become vacant *beginning of June*

Applications giving full particulars including experience in the administering of anaesthetics, together with recent testimonial should be forwarded without delay to the undersigned

DONALD WILSON Secretary

THE HOSTEL OF ST LUKE (CLERGY Nursing Home) 14, Fitzroy Square, London, W 1

The Committee of Management invite applications for the post of RESIDENT MEDICAL OFFICER (male) to the above Hostel

Candidates must have had previous experience as House Surgeon at a general hospital The appointment is for six months and may be renewable for a further period of six months Salary at the rate of £200 per annum with board, residence and laundry A fortnights holiday will be allowed every six months and the locum will be paid by the Committee of the Hostel

Applications and enquiries should be addressed to the Secretary of the Hostel at 14 Fitzroy Square London W 1 and reach him before May 20th The successful applicant will be required to take up his duties on June 1st

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STOCKTON AND THORNABY HOSPITAL,
STOCKTON ON TEES
(140 Beds—Three Residents.)

Applications are invited for the posts of SENIOR and JUNIOR RESIDENT MEDICAL OFFICERS (male) for a period of at least six months commencing May 19th Salary £200 and £175 p a respectively, with board residence, and laundry

Candidates must be duly qualified and unmarried Applications stating age nationality qualifications and experience, together with copies of three recent testimonials to be sent to the undersigned

J WILKINSON Secretary

RADCLIFFE INFIRMARY AND COUNTY HOSPITAL, OXFORD

Applications are invited for the post of RESIDENT MEDICAL OFFICER (Female) at the TUBERCULOSIS BRANCH of the RADCLIFFE INFIRMARY The Osler Pavilion, Headington, Oxford, as from July 1st

The appointment will be for six months in the first instance Salary at the rate of £170 per annum

Applications, with copies of testimonials, should be forwarded to the undersigned at the Radcliffe Infirmary not later than Monday May 29th

A C E SANCTUARY
Administrator

ROYAL NORTHERN HOSPITAL,
Holloway, N 7

Applications are invited for the post of *HOUSE SURGEON (male)* The appointment is for nine months (six months as House Surgeon and three months as *Casualty Officer) from* June 15th Salary at the rate of £70 p r annum with board residence *and laundry*

Applications with copies of testimonials should be sent by *May 13th to* the undersigned, from whom forms of application and rules can be obtained

GILBERT G PAINTER Secretary

COSSHAM MEMORIAL HOSPITAL,
KINGSWOOD BRISTOL.

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) Salary £150 p a with board residence, and laundry To remain for six months in the first in turn Applicants should be British nationality, thoroughly qualified and registered

Applications not later than May 22nd to—

F J HAWKINS Secretary

EAST SUFFOLK AND IPSWICH HOSPITAL
(282 Beds—7 Residents)

Wanted June 1st HOUSE PHYSICIAN (British male) Salary at the rate of £120 per annum

Applications stating age qualifications and experience to be sent to the undersigned together with copies of three recent testimonials

The Hospital, ARTHUR GRIFFITHS
Ipswich Secretary

specialized detail and inadequate instruction in the principles and practice of preventive medicine For the purpose of the revision of the curriculum Dr Chalmers Watson suggests that it would be unsatisfactory to entrust this to any existing body of medical teachers, and that the revision should be carried out by men who have had a complete medical training, and who have come to occupy a recognized position as men of affairs

Glasgow Royal Maternity and Women's Hospital

The recently issued sixth annual medical report of the Glasgow Royal Maternity and Women s Hospital follows the general lines of its predecessors It has been prepared by the registrar, Dr D M Hart As far as possible the data are set out in the form recommended by the committee appointed by the Royal Society of Medicine for the unification of the clinical reports of maternity hospitals and the immense amount of material to be dealt with is thus recorded in convenient form for study The institution has 175 beds, of which 78 are reserved for ante-natal cases 78 for lying-in cases and 19 for 'suspect' cases, these last being situated in a separate block, under a special administrative arrangement which precludes any carrying of infection by the staff into the remainder of the hospital During 1931 the number of patients admitted was 4,442 , the average daily number in the hospital was 165 and the average period of residence was 13 5 days Co-operation with the Corporation of Glasgow has enabled the hospital to continue its policy of not refusing treatment to any woman in labour, without further overcrowding of the wards Thus, in the year under review, the municipal hospitals accepted 938 patients as overflow cases The work of the ante-natal department grows steadily From the ante-natal dispensary which is situated on the hospital premises, many patients are admitted to the obstetrical department and the ante natal wards In the twelve months 1 570 patients were treated in these wards, representing 35 3 per cent of all admissions In the previous year it had been found necessary to open the dispensary on Saturdays to cope with the rising numbers of patients , with it is combined a post natal dispensary and an infant consultation (child welfare) centre at all of which jointly the attendances during 1931 totalled 23 024 Much obstetrical work is being conducted by the hospital in the homes of the patients During 1931 the staff attended thus 4 274 women in childbirth and 46 399 visits were paid The proportion of abnormal cases was 62 per cent of all admissions, many being emergency cases This fact, together with many others such as the high incidence of rickets in the population served by the hospital indicates that the type of case dealt with is often very grave Of the total of 4,442 patients treated in the wards of the hospital 2 346 had been under ante natal supervision 1,794 were sent in as emergency cases and 302 were without recommendation of any kind Full advantage is being taken of this clinical material and a considerable amount of research work is in progress by members of the medical staff into infections of the urinary tract, puerperal fever, and the toxaemias of pregnancy

Edinburgh Hospital for Crippled Children

A memorandum has been prepared by the Committee of Management of the Edinburgh Hospital for Crippled Children in connexion with a visit paid to the hospital by members of the Public Health Committee of Edinburgh Town Council with a view to co-operation in the provision of increased facilities for the care of crippled children The memorandum proposes that there should be a series of units the Edinburgh hospital being the central orthopaedic hospital with associated clinics in the town and in surrounding country districts of South-Eastern Scotland These clinics will act as out patient departments near the patients homes, thus providing facilities for early diagnosis, minor treatment and after care The memorandum points out that the prevention of crippling is at present largely overlooked because accommodation for treatment on efficient lines is inadequate the general hospitals, with their own peculiar difficulties, being unable to cope with this special problem After-care also is disregarded, and organized after care clinics are recommended It has been estimated that for every one orthopaedic case needing immediate admission to hospital there are twenty which could be successfully treated as out-patient cases The clinics would form the essential link between the orthopaedic hospital, the doctor, and the patient Suitable sites for five centres for such clinics in the Edinburgh area are indicated in the memorandum

Central Midwives Board

The examinations of the Central Midwives Board for Scotland, held simultaneously in Edinburgh, Glasgow Dundee, and Aberdeen, have just concluded with the following results Out of 176 candidates who appeared for the examination 165 passed Of the successful candidates twenty-eight were trained at the Royal Maternity Hospital and fourteen at the Elsie Inglis Memorial Hospital Edinburgh , seventy at the Royal Maternity Hospital, six at Stobhill Hospital, and two at the Western District Hospital, Glasgow , seven at Govan Maternity Hospital , nine at Bellshill Maternity Hospital , two at Barshaw Maternity Hospital , one at Motherwell Maternity Hospital , six at the Maternity Hospital Aberdeen, thirteen at the Maternity Department, Royal Infirmary Dundee , four at the Royal Infirmary, Perth , one at the Royal Infirmary Stirling , and the remainder at various recognized institutions

England and Wales

Conference on Maternity and Child Welfare

Six special sessions have been arranged for the Conference on Maternity and Child Welfare, which is to be held in the Friends House, Euston Road London, on July 5th to 7th inclusive The first session on the opening day is being organized by the National Association for the Prevention of Infant Mortality and the subject for debate will be the scope and advancement of ante-natal care Sir Arthur Stanley, chairman of the National Council for Maternity and Child Welfare, will preside over this session, in the course of which Sir George Newman will deliver his address as president of the conference The second session will be held in the afternoon of the first day, and will deal with the care and protection of illegitimate children in relation to their future citizenship The organizing body for this is the National Council for the Unmarried Mother and her Child It will be followed by a garden party at St James s Palace in aid of the special appeal of the National Council for Maternity and Child Welfare when parties will be received by the Duchess of York The conference dinner will be held in the evening The morning of July 6th will be devoted to consideration of team work in the discovery of the cripple , this session is being arranged by the Central Council for the Care of Cripples At the afternoon session, organized by the Invalid Children s Aid Association the subject for discussion is announced as 'Forty-five Years Work and Future Developments," with Mr H S Souttar in the chair and a meeting of the Association of Maternity and Child Welfare Centres is arranging a debate on the health of

the child in relation to its environment with special reference to tuberculosis and overcrowding with Dr Eric Pritchard in the chair The National Baby Week Council is responsible for the morning session on the last day of the conference when the topic to be discussed will be Ways and Means of Propaganda In the afternoon a debate on Those Early Years will take place under the auspices of the National Society of Day Nurseries The conference is open to all interested in maternity and child welfare It will be preceded by a short post graduate clinical course on July 3rd and 4th arranged by the maternity and child welfare group of the Society of Medical Officers of Health One of the travelling exhibitions of the National Council for Maternity and Child Welfare will be on view at Carnegie House Piccadilly and a display of films will be organized by the National Baby Week Council Special railway facilities are available in connexion with the conference For further particulars and tickets application should be made to Miss J Halford 117 Piccadilly W 1

The Manchester Northern Hospital

In aid of the new building fund of the Manchester Northern Hospital for Women and Children a booklet containing the history of this institution since its earliest days has been prepared by Mr E Wheatley Jones and is obtainable from the secretary of the hospital (38 Barton Arcade Manchester price 1s postage 2½d) Early in 1856 Dr A S Merei a refugee from Hungary and Dr J Whitehead then lecturer on obstetric medicine at the Manchester College of Medicine rented at their own expense premises at 5 Stevenson Square setting up the sign The Clinical Hospital for the Diseases of Children In addition to treatment the institution set itself openly to carry on scientific investigations into the causes nature and treatment of diseases of children to inquire into the causes and character of the principal infantile diseases prevalent in Manchester to impart instruction to mothers and nurses and to spread sound principles on the subject of nursing and managing children among the lower ranks and to afford to students and young practitioners opportunities of acquiring practical knowledge in this branch of medicine and to deliver periodically for this purpose clinical lectures illustrated with appropriate cases It is mentioned in this statement which was issued in the first year that the first children's hospital in this country had been founded three years previously in London under the special patronage of Queen Victoria A special feature of the work was study of the laws governing the healthy development of children and important findings by Dr Merei are set out in the present booklet The percentage of infantile ill health in various streets and districts of Manchester is specified in the second annual report and doubtless played its part in calling into being in about 1860 the joint committee of clergy and medical practitioners which founded the Manchester and Salford Sanitary Association Year by year the work increased but no appeal for public support was made until 1859 the founders having previously paid the costs out of their own pockets In 1864 steps were taken to raise funds for the erection of a new building in Park Place and this was opened in May 1867 A house surgeon was obtained for the first time and a committee was brought into being to visit the homes of the children and to improve the conditions there A grass playground was also provided for convalescent children Towards the end of 1869 a circular letter was sent to the minister of every church and chapel in Manchester (foreshadowing the Hospital Sunday Fund) asking for the allocation to the institution of some part of the collection on one Sunday only one church responded Still the struggle continued and funds were obtained for extensions In 1892 a new department was opened in Cheetham Hill Road In 1923 it was recognized that the old buildings in Park Place were out of date and quite inadequate so a new building fund was inaugurated Two years later a site on Alms Hill was acquired In January 1933 the work of building began and the foundation stone was laid last month There is now arising a modern hospital designed in several sections and fully up to date

Annual Meeting of the British Association

The annual meeting of the British Association for the Advancement of Science will be held this year at Leicester under the presidency of Sir F Gowland Hopkins from September 6th to 13th Discussions will be held in thirteen Sections—namely mathematical and physical sciences chemistry geology zoology geography economic science and statistics engineering anthropology physiology psychology botany educational science and agriculture A preliminary programme has been issued containing some of the topics which will be dealt with in these Sections Those of medical interest include the determination of the chemical constitution of hormones from *x ray measurements of crystal structure and from* band spectra vertigo and disorientation ossification chemical control of the circulation genetics aspects of *social psychology and personality* the inheritance of acquired characteristics mental work vocational tests stuttering land drainage problems and the handling and food value of milk In the Section of Physiology the presidential address will be delivered by Professor E D Adrian who will take as his subject The Activity of Nerve Cells The corresponding address in the Psychology Section will be delivered by Professor F Aveling on The Status of Psychology as an Empirical Science With a view to the wider distribution of the annual report of the British Association which contains the various presidential addresses in full as well as summaries of the transactions of the Sections it has been reduced in price this year on certain conditions Applications for further information and for membership tickets should be sent to the general secretaries of the Association Burlington House W 1

CORRESPONDENCE

Australasian Medical Congress

SIR —At a representative meeting of members of the British Medical Association held at Oatlands Tasmania it was resolved that a session of congress of members of the British Medical Association from Australia and New Zealand be held at Hobart from January 15th to 20th 1934 Dr D H E Lines of Hobart was nominated for the position of president The subscription for membership has been fixed at two guineas It is confidently expected that as many members of the profession in Australasia as may be possible will be present Any member of the British Medical Association who is visiting Australia at the time is cordially invited to enrol as a member of congress Besides the professional and scientific aspect Tasmania is an ideal spot at this time of the year for a holiday Splendid lake and river fishing yachting golf and all forms of outdoor sports are available within easy reach of Hobart —We are etc

H N BUTLER
WILLIAM L CROWTHER

Macquarie Street Hobart, Tasmania April 10th.

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B.M.A. House Tavistock Square, W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary 7 Drumsheugh Gardens Edinburgh)

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH** *(contd.)*
EBBW VALE, MON. *(Workmen's Medical Society)*	NEATH AND DISTRICT *(Medical Aid Association.)*	WORCESTER COUNTY AND CITY MENTAL HOSPITAL. *(Junior Assistant Medical Officer)*
GILFACH GOCH GLAMORGAN *(Workmen's Medical Scheme)*	OAKDALE MON. *(Medical Officer for Medical Aid Association)*	
LLWYNPIA CLYDACH VALE PENYGRAIG GLAMORGAN *(Workmen's Medical Scheme)*	OGMORE VALLEY GLAMORGAN *(Wyndham Colliery Medical Aid Society)* *(Workmen's Medical Scheme)*	COUNTY BOROUGH OF SOUTH SHIELDS HARTON INSTITUTION AND CLEADON COTTAGE HOMES *(Medical Officer)*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer)*	**PUBLIC HEALTH**	
MARDY GLAMORGAN *(Workmen's Medical Scheme)*	KENT COUNTY COUNCIL. LENHAM SANATORIUM *(Male Assistant Medical Officer)* FARNBOROUGH INSTITUTION HOSPITAL. *(Resident Assistant Medical Officer)*	CITY OF STOKE-ON-TRENT *(Venereal Diseases Officer)*

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B.M.A. House, Tavistock Square W.C.1

Town or District	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District	Hon. Sec. of Division or Branch.
NEW SOUTH WALES *(All Friendly Society Appointments)*	Dr. J. G. HUNTER (Medical Secretary New South Wales Branch) 133, Macquarie St., Sydney N.S.W.	QUEENSLAND *(Brisbane Associated Friendly Societies Institute)* *(Toowoomba Associated Friendly Societies Medical Institute Toowoomba.)*	The Hon. Sec. Queensland Branch British Medical Association B.M.A. Building Adelaide St. Brisbane.	WELLINGTON NEW ZEALAND *(Contract Practice Appointments)*	Dr. G. F. V. ANSON (Hon. Sec. New Zealand Branch) British Medical Association P.O. Box 156 Wellington New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch British Medical Association, Medical Society Hall East Melbourne, Victoria.			WESTERN AUSTRALIA. *(Contract and Lodge Practices)*	Hon. Sec., Western Australian Branch British Medical Association No. 6 Bank of N.S.W. Chambers St. George's Terr., Perth, Western Australia.

May 3rd 1933 By Order of the Council. G. C. ANDERSON Medical Secretary

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WORCESTER ROYAL INFIRMARY (142 Beds.)

Applications are invited for the post of THIRD HOUSE SURGEON.

The Hospital is equipped with new Operating Theatres Pathological Laboratories Orthopaedic Department E.N.T. Department up-to-date X-ray Department etc.

Salary at the rate of £120 per annum together with board residence.

The post offers exceptional scope for medical and surgical experience.

The successful candidate will be eligible for the posts of Second and First House Surgeons which will later become vacant (salaries £150 and £180 per annum respectively).

Applications should state full particulars as to age, whether married or single qualifications etc. and should be accompanied by copies of three testimonials.

Applications to be received by the undersigned not later than first post on Thursday May 10th.

PERCY N. CLASS
Superintendent Secretary

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH. (240 Beds.)

RESIDENT SURGICAL OFFICER (Male). Salary £150 per annum with board residence and laundry. Appointment tenable for six months and subject to renewal. Duties to commence June 1st. Candidates must be registered under the Medical Acts.

Applications stating age and qualifications together with copies of recent testimonial to reach the undersigned by May 10th.

ARTHUR J. CASH
April 25th 1933. Gen. Supt. & Sec.

ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST VENTNOR, ISLE OF WIGHT

JUNIOR ASSISTANT RESIDENT MEDICAL OFFICER (male) unmarried required for six months commencing June 1st.

Salary at the rate of £300 per annum with board residence and laundry allowance.

Candidates must be duly registered Medical Practitioners. Previous experience in Tuberculosis also Bacteriological work desirable.

[illegible] own handwriting [illegible] ins (with one copy of [illegible] to be sent to the Medical Superintendent Royal National Hospital for Consumption Ventnor I.O.W. not later than May 12th.

THE MARIE CURIE HOSPITAL, 2, Fitzjohn's Avenue N.W.3

Applications are invited from fully qualified Medical Women for the post of RADIOLOGIST in charge of the Deep X-Ray Therapy Dept.

Applicants must hold a Diploma in Radiology.

The appointment will be for one year eligible for re-election salary £500 per annum non-resident. Application with copies of testimonials should be sent to the Secretary at the Hospital on or before Saturday May 20th.

ROYAL SURREY COUNTY HOSPITAL, GUILDFORD (182 Beds.)

Wanted June 1st HOUSE SURGEON. Salary £150 per annum with board residence and laundry. Applications stating essential particulars with copies of not more than three testimonials to be sent to the Secretary Superintendent on or before May 9th.

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN
St. Quintin Avenue W.10 (58 Beds)

HOUSE SURGEON (male or female) required from May 18th to June 30th. Salary at the rate of £75 p.a. with board, residence and laundry. It is desirable that applicants should have held a responsible Hospital post. Application with copies of two testimonial should be submitted on a form to be obtained from the Secretary at the Hospital, and must reach him not later than Wednesday May 10th.

ST. JOHN'S HOSPITAL, LEWISHAM S.E.13.

There is a vacancy for an HONORARY GYNAECOLOGICAL SURGEON to take charge of bed and to see Out-patient.

Candidates who must be Fellows of the Royal College of Surgeons (England) should send applications with copies of not more than three recent testimonial to reach the undersigned on or before Wednesday May 10th. A Selection Committee will sit on Tuesday May 16th.

J. C. GILBERT
Secretary Superintendent

ROYAL BERKSHIRE HOSPITAL.

HOUSE SURGEON (male) required from June 1st for six months. The candidates must be fully qualified and registered. Remuneration at the rate of £150 per annum with board residence and laundry. Applications with copies of testimonial to be sent to the undersigned on or before May 19th.

F. A. LYON
Reading Secretary.

(Appointments continued on p. 54.)

British Medical Journal
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WANTED A YOUNG UNMARRIED MALE British outdoor ASSISTANT for Branch Colliery Practice near Newcastle on Tyne Salary £400 p a with furnished house coals light and attendance — Address No 2725 B M A House Tavistock Square W C 1

WANTED BY EXPERIENCED WOMAN Doctor ASSISTANTSHIP preferably with view Keen midwifery References Own car London preferred but not essential Interview —Address No 2719 B M A House Tavistock Square W C 1

WANTED —INDOOR ASSISTANT IN JUNE in an industrial and appointments Practice Some experience energetic T T car provided Work light Salary according to experience — Address No 2612 B M A House, Tavistock Square W C 1

WANTED IMMEDIATELY — INDOOR AND Outdoor ASSISTANTS for Town and Country Practices with and without View Good salaries State full particulars —BRITISH MEDICAL BUREAU 33 Cross St Manchester 2

PART TIME ASSISTANT WANTED WEEK ends and two evenings — Address No 2014 B M A House Tavistock Square W C 1

WANTED, INDOOR ASSISTANT, MALE IN mixed country town Practice Salary £300 p a Car provided for work Usual bond State age and experience —Address No 2717, B M A House Tavistock Square W C 1

WANTED — MALE INDOOR ASSISTANT, single for East London, near City, work light no midwifery Salary £250 to £300 all found, according to experience Usual bond — Address, No 2724, B M A. House, Tavistock Square W C 1

WANTED —ASSISTANT (INDOOR) (EITHER sex), preferably one just qualified State essential particulars — Address No 2708, B M A House Tavistock Square W C 1

WANTED — JUNIOR ASSISTANT SINGLE, British nationality Salary £300 per annum, with rooms coal gas and attendance —Address No 2721, B M A House, Tavistock Square W C 1

WANTED —OUTDOOR ASSISTANT SINGLE, British County Town, 20 miles from Liverpool Use of saloon car for work Usual bond Dispenser kept — Address, No 2838 B M A House, Tavistock Square W C 1

WANTED — OUTDOOR ASSISTANT, British, for Colliery Practice S Wales Salary £400 p a —Address No 2839 B M A House Tavistock Square W C 1

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LOCUM TENENS WANTED BY DOCTOR (St Bart's) Experienced in general practice Own car available —Address No 2733, B M A House Tavistock Square W C 1

M B, 37, SINGLE CONTINENTAL AND English qualifications seeks LOCUM, ASSISTANTSHIP or PARTNERSHIP Wide continental and English exp Speaking perfect 4 European languages Naturalised British subject Willing go anywhere Highest references —No 2842 B M A House Tavistock Sq W C 1

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A YOUNG LADY DESIRES SITUATION well experienced dispensing (Hall), book keeping Able to drive car if necessary— Address No 2707 B M A House Tavistock Square W C 1

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DOCTORS REQUIRING QUALIFIED Dispensers Nurse Dispensers Secretary Dispensers or Chauffeuse-Dispensers are invited to write wire, or phone Temple Bar 5858 THE DISPENSERS BUREAU, 3 Lindsay House 171 Shaftesbury Avenue London W C 2

LADY DISPENSER BOOK KEEPER (HALL certificate) SEEKS POST with Hospital or Doctor Experienced N H I etc aged 39 years now disengaged — Address, No 2830 B M A House Tavistock Square, W C 1

MEDICAL WOMAN, EXPERIENCED HOSpital and general practice, studying higher degree, wants PART TIME (preferably evening) or LOCUM WORK in London— Address, No 2702 B M A House, Tavistock Square W C 1

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to this view and which I hope to publish in full at an early date This was the case of a boy of 8 years, who was first seen by me some five months ago on account of a persistent dry cough of three years duration Shortly after coming under observation he developed slight impairment of the percussion note with tubular breathing at the right base, and a radiogram revealed the appearance of partial atelectasis in this region A lipiodol injection demonstrated a slight but definite degree of tubular bronchiectasis in the right lower lobe By means of inhalations of CO_2 in O_2 the collapsed portion of the lung was caused to re expand Thereafter the cough, although ameliorated, continued, but when the patient was seen again some seven days ago a second lipiodol injection showed the bronchi to have regained their normal calibre —I am etc

London W 1 May 8th LEONARD FINDLAY

B M A Committee on Nutrition

SIR —I have noted with great interest the fact that a committee is being set up by the Association to investigate the question of nutrition and have also read Dr Nash's letter (*Journal* April 1st, p 580) which is of much interest as it gives the recent history of the movement so far as action taken by him is concerned I should like however to point out that it is now practically nine years since an attempt was made to focus the attention of the Association on this very important subject

At the Annual Meeting in Bradford in 1924 the late Colonel Herbert Jones was president of the Section of Public Medicine and I, as secretary that year organized a discussion on 'Diet and the Public Health' A full account of the proceedings is given in the *Journal* of September 20th 1924 The discussion was opened by Dr John Boyd Orr, director of the Rowett Research Institute Dr J S Manson, and Dr Savage, medical officer of health Somerset County Council while among others participating was Dr Robert Hutchison The following resolution which was framed in consultation with the late Dr James Wheatley (who, it will be remembered was always a great advocate of the importance of this subject) was unanimously carried

That it be a recommendation to the Council to appoint a Committee on which there should be representatives of the Society of Medical Officers of Health for the purpose of

1 Conducting an investigation into the adequacy and suitability of the dietary of the people of this country,

2 As the result of the investigation making such recommendations and drawing up such directions as may appear desirable

3 Conferring with the Ministry of Health the Medical Research Council and other bodies and

4 Dealing with food problems as they arise

When however the resolutions were eventually submitted to the Council of the British Medical Association we were disappointed to find that no further action was taken at that time This is still more to be regretted in view of the fact that since then so many varying diets have been issued on the subject by the Press and by other bodies —I am etc,

G W N JOSEPH
Medical Officer of Health and School Medical Officer

Warrington May 15th

Excessive Carbohydrate

SIR —I am in hearty agreement with Dr G C M M Gongle (May 6th p 803) as to the production of deficiency by our large intake of white flour and sugar and as to the resultant lowering of resistance to infection I was careful to state that the effect of excessive absorption of carbohydrate *per se* is an effect not upon the incidence, but upon the duration of catarrhal illness In the school to which I refer the incidence of catarrhal attacks was not reduced during the period of rationing although the number of cases in which the illness persisted for seven days or more was diminished

My assumption that mere excess of carbohydrate absorption is responsible for this aggravation of catarrhal illness is based upon the fact that the withdrawal of sugar and restriction of carbohydrates alone is sufficient to benefit not only phlyctenular conjunctivitis, but also the catarrhal states constantly associated with it Further justification of this view is supplied by the experimental production of water retention and by Cameron's description of the swollen, almost oedematous mucous membranes in which catarrhal processes luxuriate The 'deficiencies' of white flour and sugar are sufficient to determine the consumption of quantities of these foodstuffs larger than are required for the supply of energy alone Excessive absorption of glucose is thus favoured —I am, etc,

St Andrews May 8th J HUNTER P PATON

A Special Use for an Electrical Aid to Hearing

SIR —The secretary of the National Institute for the Deaf has drawn my attention to the fact that my name has been figuring in a list of doctors and other more or less illustrious persons as using a certain electrical aid for hearing, suggesting that I am using it as such on account of deafness of a degree to require such an appliance I may say that this is not the case, and that the use to which I have put it has been to take the place of the auscultation tube with an ivory tip which I have used very assiduously when inflating ears with the Eustachian catheter or Politzer bag This occasioned some irritation in the meatus, approximating to eczema and I was advised to give up its use, under the threat that if I did not do so the eczema would persist I found that by applying the receiver of the electrical aid over my ear (kept in place by a spring over the top of the head), while the patient held the transmitter closely applied to his ear, I was able to appreciate the sounds produced by the air passing through the Eustachian tube and into the tympanic cavity I would recommend this form of apparatus to any of my otological confreres who have experienced the same discomfort After using it for about a year the meatus improved greatly, and I have since been able to use the auscultation tube with a metal tip without experiencing any significant degree of discomfort I have to admit however, that within the last week or two I have had a slight return of the irritation of the meatus, and have been glad to avail myself again of the electrical aid —I am, etc

London W 1 May 12th JAMES DUNDAS GRANT

Turpentine Idiosyncrasy

SIR,—Most dermatologists would agree with Dr R L Sutton (May 6th, p 805) that dermatitis resulting from turpentine idiosyncrasy is "decidedly common A great number of cases of industrial dermatitis are dependent upon this idiosyncrasy in painters, polishers, printers, and engineers as are often cases of household dermatitis and eczematous eruptions following the use of turpentine liniments in the treatment of joint and muscle pain While I would agree with Dr Sutton that this happening is sufficiently common to merit general recognition I would stress that it is idiosyncratic, and would not agree that it is dependent—except to a very limited extent upon concentration, or that it would arise upon any skin —I am, etc,

JOHN T I GRAY

Leeds May 8th

Convalescent Homes and Vaccination

SIR,—Dr R W Jameson's plea in the *Journal* of May 13th (p 845) for the reconsideration of our convalescent home policy in regard to vaccination will meet with sympathetic approval from many who whilst fully convinced of the efficacy of vaccination to protect the community against small pox consider that there are circumstances in which it is preferable to take a slight risk rather than subject a large number of children to the ordeal of vaccination at a time when they are not in good health

The immediate advantage to be gained is as Dr Jameson points out to reduce the probability that a child will either (*a*) develop small pox after admission as a result of infection acquired during a stay of a month or so at the home or (*b*) develop and convey to others in the home small pox acquired before admission With regard to (*a*) during the first quarter of this year notified small pox cases in England and Wales averaged eighteen a week of which about six a week would be in children between the ages of 5 and 15 giving a weekly incidence rate of about 1 per million or a monthly rate of about 4 per million among school children The chance that small pox will develop during a month amongst a hundred school children chosen at random is therefore at present about 1 in 2 500 or only about three times the ordinary risk that a school child will die within a month Seeing that the child would be exposed to as great a risk of coming into contact with small pox if not sent to the convalescent home this supplies no valid reason for not relaxing the vaccination rule

With regard to (*b*) some recent statistics of the variola minor epidemic in Stepney during 1929–30 may throw some light on the problem (*Annals of Eugenics* 1933 v pp 192–233) In that epidemic the mean annual rate of primary incidence among children aged 5 to 15 was about 4 per 1 000 as shown in Table XII Taking the usual incubation period to be about fifteen days or one twenty fourth of a year the chance that a given child drawn at random from Stepney during the epidemic would be unprotected and incubating small pox at the moment of admission to a convalescent home would be $1/24 \times 4/1\,000$ or 1 in 6 000 Vaccination of such children before admission would be equally likely to be performed 0 1 2 3 15 days after exposure to infection if the exposure was not suspected It is shown in Table XX of the paper based on a study of the behaviour of 1 004 contacts vaccinated after exposure that the effect of vaccination of previously unvaccinated contacts *t* days after the appearance of the rash in the infecting case was to reduce the risk of developing small pox to the following fractions of the original risk had the contacts been left alone

Interval *t* days	0	1	2	3	4	5	6	7	8–12
Ratio of actual to expected attacks	0·143			0·243		0·69			1·027

Counting the effect as *nil* from the eighth to the fifteenth day after exposure the weighted mean effect for random vaccination on any day up to fifteen days after exposure would be only to reduce the risk of small pox immediately developing to about two-thirds of its value had the children been left alone If then among 18 000 children drawn at random from an area where a large epidemic is in progress only three children would be incubating small pox the effect of vaccinating the whole of the 18 000 would apparently be to reduce the number who would develop it to two If there were no epidemic in the place from which the children came these chances would both be reduced about one hundredfold

If this were the whole story such reductions of risk would be plainly out of proportion to the disadvantages of vaccinating large numbers of children at an unsuitable time but it must be remembered that if the vaccination rule were relaxed the occurrence of one case in a convalescent home would be followed by a batch of secondary cases the number of these depending upon the rapidity with which the diagnosis was made and the vaccination of all unprotected children in the home carried out If this was done within two days of the appearance of the rash about one seventh of the children who had not been previously vaccinated and who had come in contact with the infective child might be expected to develop small pox Such an event would inevitably occur sooner or later and if sooner then those who had advocated relaxation of the vaccination rule would be blamed It would certainly mean trouble for the home concerned but so long as the imported infection was variola minor and not major no serious harm would result

The question is therefore whether the obvious disadvantages of the present procedure taking into account also the warning implied in the paragraph of the 1929 Vaccination Order quoted by Dr Jameson do not outweigh the addition of the small risks which would be added by relaxation of the rule If such relaxation were applied only to children coming from places where no epidemic was in progress it seems to a statistician with some past experience in selecting children for convalescent homes that there is good reason to support Dr Jameson's plea—I am etc

PERCY STOCKS

Department of Applied Statistics University College W C May 14th

SIR,—I entirely support Dr R W Jameson's contention that to make antecedent vaccination a condition of admission is to-day quite unreasonable It is undoubtedly a survival of an old custom which ought now to be repealed rather than a precaution which can be justified by any risk entailed by admitting unvaccinated patients I would urge upon medical officers of institutions where this custom still persists to use their influence with the authorities to get it abolished—I am etc

C KILLICK MILLARD
Medical Officer of Health

Leicester May 15th

Treatment of Arthritis

SIR,—In your issue of May 6th (p 774) there appears a full report of an interesting lecture by Dr C W Buckley on the treatment of arthritis In enumerating the physical methods which he intends to discuss he says

They comprise the various forms of hydrotherapy massage electricity light heat etc I have searched carefully through the report and so far as I can discover the etc remains the one and only reference to the form of physical treatment which I venture to submit is worth of a rather more detailed notice I refer to *x* ray therapy

Lest I should be charged with riding to death a personal hobby horse I should like to point out that within the past months the Section of Physical Medicine and the Section of Radiology of the Royal Society of Medicine each thought it worth while to devote the greater part of an evening to a discussion of *x* ray therapy in arthritis Dr Gunnar Kahlmeter the well known Stockholm physician (himself not a radiologist) addressed the Section of Physical Medicine on modern physiotherapeutic methods His lecture is reported in full (*Proc Roy Soc Med* May 1932 xxv 25) Of the thirteen pages which are occupied by the lecture eight are taken up by *x* ray treatment—a proportion somewhat different from that of the etc in Dr Buckley's paper Dr Kahlmeter quotes statistics of 562 cases treated for him between the year 1924 and 1931 Taking all sorts of cases with the exception of senile hips he finds that only 10 to 15 per cent fail to show any improvement under *x* ray treatment and that in over 50 per cent the patient can be made free or

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almost free from symptoms Also in a discussion on the x-ray diagnosis and treatment of osteo arthritis held at the Royal Society of Medicine on December 7th, 1932, which I had the honour to open in conjunction with Dr Langmuir Watt there was ample testimony to the value of x-ray therapy Dr Watt himself, in a series of 194 cases quoted 40 per cent free or nearly free from symptoms and 23 per cent improved as regards pain and disability He pointed out that these cases were all treated before 1928, and that he was getting better results to day Drs Mucklow, Batten, Hernaman-Johnson, Connell Courtney Gage, Barclay, Hardman and Webster confirmed the views of the openers as a result of their own experiences

I will resist the temptation to assert that the physiotherapeutic treatment of osteo arthritis should consist of x rays, etc ; but I hope I have said enough to prove that any discussion of the subject which fails to take note of the work which has been done on these lines falls somewhat short of completeness —I am, etc ,

London W 1 May 10th S GILBERT SCOTT

Toxins and Mental Depression

SIR —The recent sad cases reported in the daily press—two of them medical men—of suicide, have prompted me to ask you to be good enough to print the following remarks I think it possible I may be able to make a few brief observations which might be of value to medical men in practice in preventing some, at least, of these painful cases The degree of mental depression so severe as to result in the act of suicide might be prevented in a large number of cases by the promulgation of the knowledge of the following simple facts I shall not attempt to give here references necessary fully to support this thesis

1 The major degree of mental depression is dependent on sudden or recurrent toxaemia

2 This toxaemia is commonly caused by protein derivative poisons such as histamine

3 These are absorbed in excess and in dangerous concentration in various degrees of intestinal stagnation

4 Where mental depression is chronic or recurrent or is likely to occur as for example after attacks of influenza the rate and degree of absorption of dangerous toxins from the intestinal tube may be diminished by the adoption temporarily or in chronic cases permanently of a low protein diet—namely a lacto vegetarian diet

It is unfortunately still true that there is some professional resistance to this simple explanation of disease giving rise to suicide but chemical analyses of the blood in states of mental depression reveal a degree of toxaemia not elsewhere found That is to say, there is scientific proof of what was until quite recently the subject of controversy

I would recommend therefore, during acute depression following acute disease or in depression accompanying many forms of chronic disease, the adoption of a strictly lacto vegetarian diet both as a measure of prevention and as a cure of the present disease, and consequently as a measure of prevention of such dire effects as suicide —I am etc

Holbrook Suffolk May 13th J C WATT M B Ch B

Aetiology of Acute Rheumatism

SIR —Dr Tertius Clarke's criticism (*Journal* May 13th, p 849) of a recent article of mine on this subject demands a reply

I agree with him that climatic influences play a great part in the causation of rheumatism but how exactly is not clearly understood Dr Clarke's interesting rat theory cannot be the entire explanation Why, for instance, should rheumatic heart disease in children be relatively uncommon in Scandinavia where the *R norvegicus*, the animal particularly incriminated apparently has its origin? Because of the close association of climate and acute rheumatism Dr Clarke takes me to task for doubting whether the disease is really the result of one specific infection To my mind it is this very difference in geographical distribution which directs attention away from the germ and on to the patient In the bacteriological study of rheumatism we are apt to be led astray amidst a mass of culture tubes and sugars and to forget the reaction of the patient's tissues to the organism One of these reactions comes under the heading of allergy, and Dr Clarke is wrong in supposing that this cannot be affected by climate The experience of asthmatics is sufficient to prove this

There is a great deal of evidence pointing to familial and racial influences The higher incidence of rheumatism in near relatives of rheumatic children than among those of non-rheumatic children is well known Many years ago the effect of race was well demonstrated by the average number of attacks of rheumatism per 1 000 among Scotch troops in India being much larger than when the same troops were quartered at home whilst the ratio given by the native Indian Army was the lowest of all Finally the geographical incidence of acute rheumatism and rheumatoid arthritis is not always identical Holland is a striking example Here chronic infective arthritis abounds and juvenile rheumatism is relatively uncommon Thus there appears to be more in the aetiology of acute rheumatism than a rat, a flea, and a haemolytic streptococcus —I am, etc ,

London W 1 May 15th BERNARD SCHLESINGER

Libel and Slander in Medical Practice

SIR —I find the medico-legal articles which you are publishing most interesting and instructive But in the second article, printed in the *Journal* of April 22nd (p 723), the author makes a statement about which I am in doubt In the paragraph headed "When slander is not slander" he says "The principle is that the words spoken must be capable of producing a bad impression on the minds of average reasonable men, and not merely on the minds of medical men' In support he quotes two cases

In the thirteenth edition of Kenny's *Outline of Criminal Law* on page 312, it is stated "Anyone who publishes a defamatory document concerning another person, so as to tend to bring him into hatred, contempt, or ridicule is guilty of publishing a defamatory libel" In a foot note to the word "hatred" there is this statement "Even merely amongst a narrow circle of associates *e g* a little coterie of anarchists, Rex *v* Malatesta 7 Cr App R 273" Although what I have quoted from Kenny is about libel should it not also apply to slander? I would be very glad of the author's observations on this point —I am, etc ,

Maidstone May 4th J C M MATHESON

*** Our correspondent writes The principle that the words spoken must be capable of producing a bad impression on the minds of average reasonable men and not merely on the minds of medical men, represents the bulk of opinion, at any rate as far as civil actions for libel are concerned In Rex *v* Malatesta the accused had suggested that his enemy was an Italian spy, and the Common Sergeant directed the jury that the words complained of were capable of exposing the man libelled—another Italian anarchist—to the hatred of the society in which he lived an Italian colony in London many members of which held pronounced anarchist views

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EAST HAM CORPORATION — FURNITURE etc —for supply of furniture including tables chairs other wooden furniture, beds and bedding and ward surgical and laundry etc equipment for new Pavilion Harts Sanatorium Woodford Green Essex Forms of tender obtainable upon application accompanied by stamped addressed foolscap envelope from Town Clerk Town Hall East Ham E 6 to whom tenders must be returned by noon on Thursday May 11th

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APPOINTMENTS—Contd

THE SALVATION ARMY, THE MOTHERS HOSPITAL Lower Clapton Road, Clapton E 5

Applications are invited from Medical Women for the post of SENIOR RESIDENT MEDICAL OFFICER vacant July 1st Salary £150 per annum with board residence and laundry The appointment is for twelve months Applications with testimonials must be sent to the Secretary on or before May 17th
EDGAR DIBDEN Secretary

THE SALVATION ARMY, THE MOTHERS HOSPITAL Lower Clapton Road Clapton E 5

Applications are invited from Medical Women for the post of JUNIOR RESIDENT MEDICAL OFFICER vacant August 1st Salary £60 per annum with board residence and laundry The appointment is for six months Applications with testimonials must be sent to the Secretary on or before July 17th
EDGAR DIBDEN Secretary

THE LIVERPOOL EYE EAR & THROAT INFIRMARY MYRTLE STREET

Applications are invited for the post of OPHTHALMIC HOUSE SURGEON (male) to the above Institution to take up duty immediately Salary £120 per annum Applications with copies of not more than three recent testimonials should be made before May 12th to the Chairman CHARLES W WRIGHT, ESQ, 9, Harrington Street Liverpool

ROYAL CHEST HOSPITAL, City Road E C 1
(Royal Northern Group of Hospitals)

A vacancy occurs for a PHYSICIAN Candidates must possess the degree of M D or M B obtained by examination at a British University, and be Fellows or Members of the Royal College of Physicians of London

Full particulars of the appointment, and details with regard to the submission of testimonials etc may be obtained from the undersigned to whom applications should be sent not later than May 31st
GILBERT G PAINTER Secretary

KING GEORGE HOSPITAL, ILFORD
(8 miles from London)

Wanted a HOUSE SURGEON to commence duty at once for a period of ten months two months as Casualty Officer six months as House Surgeon and two months as Deputy Resident Medical Officer in charge of the Casualty Department Salary £100 per annum £10 bonus on completion of appointment and two weeks holiday Candidates should send their applications with three recent testimonials and call on the members of the Honorary Medical Staff indicated by the Secretary as soon as possible
C AUSTIN HEPWORTH Secretary

STAMEN'S HOSPITAL SOCIETY, Greenwich

HOUSE PHYSICIAN and HOUSE SURGEON required at DREADNOUGHT HOSPITAL Greenwich for six months from July 1st Salary £110 per annum and a proportion of fees with board residence and laundry Candidates must be male Applications with copies of three testimonials to be sent in by May 30th to the undersigned
Greenwich R E V BAX
April 27th 1933 Secretary

LONDON HOSPITAL, E 1

There is a vacancy for the post of ASSISTANT DIRECTOR of the Medical Unit he shall also be an Assistant Physician to the Hospital

Applications should be sent to the House Governor from whom further information as to salary and other particulars may be obtained and should reach him on or before Wednesday, June 14th
A G ELLIOTT
May 2nd 1933 House Governor

SOUTHEND ON SEA GENERAL HOSPITAL
(221 Beds—6 Residents.)

Wanted a HOUSE SURGEON and CASUALTY OFFICER to commence immediately Salaries £100 per annum with board residence and laundry Applications invited at once from British (male single) candidates stating age qualifications and experience accompanied or followed by three recent testimonials, to be sent to the Joint Secretaries

JEWISH MATERNITY HOSPITAL, Underwood Street, E.1

Applications are invited for the post of RESIDENT MEDICAL OFFICER Duties commence June 1st for a period of six months Salary at the rate of £50 per annum

Applications together with copies of three recent testimonials to be sent to the undersigned not later than May 16th
ALICE MODEL Secretary

THE GENERAL HOSPITAL, BIRMINGHAM

Applications are invited for the following Resident appointments vacant immediately
RESIDENT ANAESTHETIST Salary £120 per annum (£70 per annum if a first Resident appointment)
HOUSE SURGEON Salary £70 per annum
Applications giving full details of qualifications should be sent to the undersigned as soon as possible
A H LEANEY,
May 1st 1933 House Governor

SOUTHEND ON SEA GENERAL HOSPITAL
(221 Beds—Six Residents)

RESIDENT MEDICAL OFFICER required August 1st next or earlier for one year Eligible for re-appointment Salary £300 p a rising £50 yearly to £400 p a F R C S (Eng) preferred Previous surgical and administrative experience essential Applications as early as possible not later than May 31st to the Joint Secretaries

COUNTY COUNCIL OF ORKNEY

Wanted a MEDICAL OFFICER for the Islands of South Ronaldsay and Burray, to take up duty on August 1st

For particulars apply with testimonials and references to the County Clerk, Commercial Bank Buildings Kirkwall

Kirkwall April 25th, 1933.

LONDON COUNTY COUNCIL

Applications invited for appointment of MEDICAL OFFICERS at [illegible] by DIRECTOR OF PUBLIC HEALTH Duties a special and necessary assistance at other establishments under control of the Council Valuation of emoluments is subject to temporary reduction Candidates must be registered Medical Practitioners of at least one year's standing and have held a resident appointment in a general hospital for at least six months

Remuneration and conditions subject to review

1 ST MARY ABBOTS HOSPITAL, Marloes Road Kensington W 8 —Senior Assistant Medical Officer (Grade II) Salary £500 a year rising annually by £25 to £600 a year with board lodging and washing Preference will be given to candidates who have special experience in obstetrics and general surgery

2 HACKNEY HOSPITAL High Street, Homerton E.9 — Assistant Medical Officer (Grade I). Candidates must have had experience in midwifery and gynaecology and be competent to undertake operative work in these departments Marriage will terminate contract of service if a woman is appointed There is no accommodation for a married man

3 NEW END HOSPITAL New End Hampstead N W 3 — †*Assistant Medical Officer (Grade I) Candidates must have had experience in midwifery and in anaesthetics.

*Salary £350 rising annually by £25 to £425 a year with board lodging and washing

†There is no accommodation for a married man or for a woman at the hospitals

Forms of application obtainable (stamped, addressed foolscap envelope necessary) from Medical Officer of Health. Last day for receipt of application May 19th

Candidates should specify position or positions for which they desire to apply Canvassing disqualifies Further enquiries should be addressed to the Medical Superintendent at the respective hospitals

THE CHILDREN'S HOSPITAL, BIRMINGHAM

RESIDENT SURGICAL OFFICER.

Applications are invited for the above post Candidates must be qualified and registered

The salary attaching to the post is at the rate of £175 per annum with board residence and laundry The appointment is tenable for one year as from July 16th

Candidates must forward their applications with certificate of registration and any credentials which they may desire to offer to the undersigned on or before May 27th and from whom further particulars may be obtained.
HAROLD F SHRIMPTON
May 2nd 1933 House Governor

THE CHILDREN'S HOSPITAL, BIRMINGHAM

HOUSE SURGEON

Applications are invited for the above post. The appointment is tenable for six months as from June 1st

The salary attaching to the post is at the rate of £75 per annum, with board residence and laundry

Candidates must forward their applications with certificate of registration and any credentials which they may desire to offer to the undersigned and from whom further particulars may be obtained
HAROLD F SHRIMPTON
May 2nd 1933 House Governor

THE GUEST HOSPITAL DUDLEY
(General Hospital—107 Beds)

Applications are invited for the post of ASSISTANT HOUSE SURGEON Salary £140 per annum with furnished apartments board and laundry

Applications, stating age qualifications and experience and accompanied by copies of testimonials, to be sent to the undersigned
H RAYMOND HURST
The Guest Hospital, House Governor & Secretary
Dudley
April 28th 1933

ACTON HOSPITAL, W 3.

JUNIOR RESIDENT MEDICAL OFFICER required to commence duties June 12th Salary £150 per annum with board residence and laundry

Candidates must be fully qualified and registered

Applications stating age nationality and qualifications together with a copy of three recent testimonials should reach the Secretary Acton Hospital Cunnersbury Lane W 3 by Wednesday, May 17th
DONALD C. D SWORD
Secretary

May 3rd 1933.

Halsbury the great compendium of English law does not reconcile the apparent conflict between this decision and the principle quoted above and Dr Clement Gatley does not mention the case doubtless because his book is devoted to civil actions I suggest that although it does not appear in the report the difference is explained by the fact that Rex v Malatesta was a prosecution for criminal libel the essence of which is not the damage to a man's reputation but the probability that the defamatory statement will lead to a breach of the peace If Malatesta had induced several members of the colony to believe that the libelled man was an Italian spy the chances are that murder would have been done The quotation from Kenny does not apply to slander because slander is a criminal offence only when it is seditious or blasphemous or uttered to a magistrate in the execution of his duty or when it tends to provoke a breach of the peace The words published by Malatesta which suggested that his opponent was an Italian spy could not have led to a civil action for slander if they had only been spoken because they did not tend to injure him in the particular ways I mentioned in my article The defamatory document referred to in the sentence from Kenny which tends to bring a man into hatred contempt or ridicule is not actionable as a spoken statement for the same reason unless it also fulfils one of those conditions Finally may I point out that I went on to quote Dr Gatley's opinion that the accusation of being an advertising doctor would nowadays bring a medical man into contempt with average reasonable men as well as with his professional fellows?

Obituary

J T J MORRISON M.A. M.B. F.R.C.S.

Emeritus Professor of Forensic Medicine in the University of Birmingham

The death occurred on May 10th at his residence in Edgbaston of Professor James Thomas Jackman Morrison at the age of 76 He had practised in Birmingham as a surgeon throughout his professional career

After a distinguished record at Christ's College Cambridge and Guy's Hospital Mr Morrison settled in Birmingham and was appointed a casualty surgeon to the Queen's Hospital in 1887 He was elected assistant to the chair of surgery in Mason University College in 1895 and held this appointment until 1899 when he was appointed professor of forensic medicine in succession to Dr R M Simon (later Sir Robert Simon) This chair he held for thirty two years He became honorary surgeon to the Queen's Hospital in 1902 and remained on the active staff until after the termination of the war He was appointed consulting surgeon to the hospital in 1919 and remained a member of the Committee of Management until the time of his death In 1913 he delivered the Ingleby Lectures on Spinal Anaesthesia by Tropacocaine with a Review of 1 000 Cases He was a member of the University Council for many years He was an external examiner in forensic medicine at the University of Glasgow and had held similar appointments in other universities On his retirement from the chair of forensic medicine in the University he presented the prizes and medals at the opening ceremony of the Faculty of Medicine in October 1932 and gave an address on the history of the Birmingham Medical School About that time the title of emeritus professor was conferred upon him by the University

For thirty five years he was police surgeon in Birmingham and acquired in this way very wide knowledge of medico-legal work giving evidence as an expert witness in a number of important cases The clear and forceful nature of his evidence caused it to carry great weight in courts of law He acted as a medical referee under the Workmen's Compensation Act for a number of years and was a past president of the United Kingdom Police Surgeons' Association

In the early stages of the war he organized a British hospital unit in Serbia and rendered conspicuous service by adapting dilapidated premises to form a hospital of nearly 300 beds Professor Morrison was surgeon in-chief of the hospital for about two years and in recognition of his services received the Serbian Order of the White Eagle and the Order of St Sava The work of the St John Ambulance Association always attracted him and he devoted much time to this aspect of medical work being an honorary associate of the Order He was made a magistrate for the City of Birmingham in 1914 His literary attainments were of a high order and he made numerous contributions to medical knowledge Besides numerous articles on surgical subjects he wrote an excellent little book on poisons His *History of the Birmingham Medical School* is a precise and inspiring record of this provincial centre in its medical life He devoted much time and energy to the activities of the British Medical Association and had held the office of president of the Birmingham Branch He was a member of the Representative Body in 1903 and a member of the Central Council in 1904–5 and again in 1908–9 he was also vice-president of the Section of Medical Sociology in 1910 and vice-president of the Section of Surgery at the Birmingham Meeting in 1911 and served on the special committee on tests for drunkenness six years ago

Professor Morrison was a man of outstanding ability with a wide range of interests He was an eloquent speaker his command of English being such that it was a real pleasure to hear him address an audience His precise legal mind made him a valuable member on committees In private life he was a kind friend to many who needed his help and guidance This was shown by the large number of men and women of the working class and of the very poor who received help and encouragement from him The funeral service was conducted by Professor Rendle Short of the University of Bristol in accordance with the rites of the Plymouth Brethren and was attended by a large and representative gathering Professor Morrison leaves a widow but no children

THE LATE SIR ARTHUR WHITELEGGE

For the following appreciation of Sir Arthur Whitelegge we are indebted to a former colleague

I first became acquainted with Dr Whitelegge (as he then was) when he was medical officer of health in Nottingham and where he was held in high esteem There was general regret when Dr Whitelegge left Nottingham to become medical officer of health for the West Riding of Yorkshire I never thought in those days that in later years it would be my lot and privilege to serve under Dr Whitelegge and often to meet in his room at the Home Office his old friend Dr Gow head master of my old school Nottingham High School and afterwards head master of Westminster

After Dr Whitelegge's appointment as Chief Inspector of Factories in 1896 I had little opportunity of meeting him until 1900 By that time Whitelegge had set himself to reorganize the Factory Department so as to secure uniformity of administration When he became Chief Inspector the area for each inspector was not defined Derbyshire for example being administered by five inspectors Under his administration definite districts were assigned to inspectors following as far as possible the geographical county boundaries Similarly the districts were grouped into clearly defined divisions each under the charge of a superintending inspector to whom the district inspectors and their junior staffs were directly responsible In 1900 I had to make special inquiries for Whitelegge and before these were undertaken a

DERBYSHIRE HOSPITAL FOR WOMEN FRIAR GATE, DERBY (54 Beds.)

Applications are invited for the post of HOUSE SURGEON (a medical woman with Obstetrical experience preferred). Salary £150 per annum with apartments board etc The appointment is tenable for six months with a possibility of extension for a further period of six months.

Application, with copies of not more than three testimonials to be sent to the undersigned not later than May 15th. Duties to commence May 25th.

W T COCKER Secretary

QUEEN MARY'S HOSPITAL FOR THE EAST END E.15

Applications are invited for the post of DENTAL ANAESTHETIST to the above Hospital.

Applications accompanied by copies of testimonials from male candidates only should be forwarded to the undersigned on or before Wednesday May 10th.

The Anaesthetist will be required to attend on Tuesday morning at 9 a.m. and the appointment carries with it an honorarium of £25 per annum.

RAPHAEL JACKSON (Major) Secretary

BRADFORD ROYAL INFIRMARY

HOUSE SURGEON (male) wanted from June 1st to November 30th. Candidates must be single and legally qualified. Salary £135 per annum with board residence and washing. There are 215 beds and six Resident Officers.

Applications stating age qualification and previous experience (if any) with copies of recent testimonials to be received by the undersigned not later than May 9th.

J J BARRON
May 2nd 1933 Secretary Supt

BRADFORD ROYAL INFIRMARY

HOUSE PHYSICIAN (male) wanted from June 1st to November 30th. Candidates must be single and legally qualified. Salary £135 per annum with board, residence and washing. There are 215 beds and six Resident Officers.

Applications stating age qualifications and previous experience (if any) with copies of recent testimonials, to be received by the undersigned not later than May 9th.

J J BARRON
May 2nd 1933 Secretary Supt

RADCLIFFE INFIRMARY AND COUNTY HOSPITAL, OXFORD

Applications are invited for the following post which will become vacant on July 1st

HOUSE PHYSICIAN

The appointment is for six months with salary at the rate of £120 per annum with board lodgings etc. Candidates must be male and qualified.

Applications, with four copies of three testimonials, should be sent to the undersigned on or before Monday May 29th.

A G E SANCTUARY Administrator

BURTON-ON-TRENT GENERAL INFIRMARY (142 Beds.)

Applications are invited for the post of SENIOR HOUSE SURGEON (male). Salary at the rate of £200 per annum with board residence and laundry.

Also for the post of Casualty Officer and House Physician (male) Salary at the rate of £150 per annum, with board residence and laundry.

Applications, stating age and qualifications, together with copies of testimonials to be sent to—

E. W THORNLEY Secretary

THE HOSPITAL FOR SICK CHILDREN Great Ormond Street W.C.1.

There are several vacancies for HONORARY MEDICAL and SURGICAL CLINICAL ASSISTANTS in the Out patients Department of this Hospital.

Applications are invited from gentlemen legally qualified to practise who will be willing to offer their services on two mornings a week from 9 a.m. until about 12.30 p.m.

Candidates should apply personally to the Medical Registrar to Out patients

H F RUTHERFORD
May 2nd 1933 Secretary

THE KIDDERMINSTER AND DISTRICT GENERAL HOSPITAL (120 Beds.)

HOUSE SURGEON (male) required. Salary £150 per annum with residence board and laundry. Applications with not more than three testimonials to be sent to the Secretary, Miss SUSAN SMITH, South Cliff, Kidderminster

UNIVERSITY COLLEGE HOSPITAL, Gower Street, W.C.1

Applications are invited for the Honorary post of ASSISTANT SURGEON to University College Hospital in the Ear Nose and Throat Department (Royal Ear Hospital)

Applications accompanied by evidence of fitness for the post must reach the Secretary by noon on Friday May 26th

UNIVERSITY COLLEGE HOSPITAL, Gower Street W.C.1

Applications are invited for the Honorary post of ASSISTANT OPHTHALMIC SURGEON to University College Hospital

Applications accompanied by evidence of fitness for the post must reach the Secretary by noon on Friday May 26th

THE MOUNT VERNON HOSPITAL

Vacancy for ASSISTANT RADIOLOGIST which is for therapy but also some diagnostic work three half days per week also holiday duty in the absence of Senior Radiologist

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NORTHANTS—DEATH VACANCY IN MIXED industrial and agricultural district. Well-established. Receipts £500—£600 p.a. and ample scope. Vendor suffered serious disability. Panel and contract worth £300. Detached house, 3 bed. 2 recep., Surgery etc., on lease at £60.—No. 9156

LONDON N.W. SUBURB — INCREASING NUCLEUS. Receipts last year £400. Panel 230. This year showing increase. Premium £600. Six roomed corner house with small garden. Room to enlarge. Generous mortgage £150 down secures house.—No. 9154

KENT—ABOUT 30 MILES FROM TOWN—Residential country. Half share of £2,300 after preliminary Assistance. Good fees. Not much midwifery. New house specially built to rent or buy. Further share later. Partner to be Lond or Camb Graduate. Age 30 to 35.—No. 9152.

WEST END—URGENT—HIGH-CLASS SURGICAL PRACTICE in excellent position. Over £1,000 p.a. Cons. fees from £2 2. Ops. 10 to 100 guineas. Good flat with 3 beds at moderate rental. Equipment at valuation if desired. Premium £2,000 or less for quick sale.—No. 9150

LONDON N.W. — VERY FINE OUTLYING district. About £1,000 p.a. No panel taken but ample scope. Some dispensing. Expenses low. Corner house in excellent position on main road. 4 bedrooms etc. Long leasehold for sale at £3,220. Vendor giving up general practice. Premium for goodwill 14 years purchase.—No. 9149

MANCHESTER. — ABOUT £650 P.A., INcreasing old-established PRACTICE. Panel 790. Opposition less than usual. Visiting fees 4/6 and 5/. Lowest surgery fee 2/6. House off main road. 4/5 beds. 2 recep. and sp. surgery. Rent £60 on lease.—No. 9144

YORKSHIRE. — OUTSKIRTS OF LARGE town. Old-established middle and better class PRACTICE, averaging £930 p.a. Panel 400. Visits 3/6 to 21/. Very little midwifery. Specially built house 2 recep., 6 bed. Surgery with separate entrance etc. On lease at £100. Premium only £1,200.—No. 9141

LADY PARTNER WANTED IN PRACTICE of about £1,000 p.a. in country district in Kent. Steadily increasing and ample scope for further extension. Panel worth £130 and appts. about £120. Premium for half share £1,000.—No. 9140

CHANNEL ISLANDS — URGENT SALE through ill health of Vendor. Private PRACTICE in best part of Island, overlooking sea, averaging £357 p.a. No midwifery taken. Fees 3/6 to 7/6 med. extra. Choice of houses and others building. Good schools. Sea and trout fishing. Prem. 14 years purch.—No. 9107

NORTHERN UNIVERSITY CITY — £1,700 a year. Old-established PRACTICE in best position in residential district. Opposition not strong. Appt. worth £130. Panel of 700. Fees 5/ up. Ex. house with 5 beds. 3 recep. well designed professional offices etc. To rent on lease. Would suit gentleman of some experience.—No. 9134

ITALIAN COAST — DELIGHTFUL SPOT — About £500 p.a. Scope to increase. Good opening in neighbouring town. No English opposition. Fees 12/6 to 35/. Flat to rent at under £100. 2 recep. 3 bed. cons. room and usual offices. Furniture etc. can be bought if desired. Goodwill £750 cash.—No. 9129

RESIDENTIAL SEASIDE RESORT—WITHIN easy reach of London. £700—£800 p.a., suffered through Vendor's ill health. Ample scope. New estate building. Small panel. No dispensing. Milk not sought. Attractive freehold house built by Vendor 5 bed., etc. garden and garage.—No. 9127

BERKS — OLD ESTABLISHED — COUNTRY PRACTICE, about £700 p.a. has been £1,100. Panel about 500. Visiting fees 2/6 to 7/6. Very little midwifery. Splendid house, specially built for Vendor with two acres of grounds 2 reception rooms 6 bedroom surgery and waiting rooms etc. Consider £4,000 offer for Practice & house freehold.—No. 9100.

WANTED

WANTED—MIDDLE AND WORKING-CLASS PRACTICE, with good panel preferably London Birmingham or Cardiff or out skirt of large town not North of Manchester. £1,200—£1,500. House with garden to rent with option to purchase.—No. 991

WANTED BY M.B.ED., AGED 35 — PRACTICE, with scope for Surgery small panel. £1,500 p.a. in London or South of England. House with 5 bed. and garden on lease with option.—No. 993

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NORTHANTS —DEATH VACANCY —Well-established middle and working class G P situate in Country Town Suitable detached house available garden garage Receipts £500 p a Panel 510 Fees 2/6 upwards Premium for Practice £750 House £800

LIVERPOOL —PARTNERSHIP in good middle class G P in Suburban district Excellent detached house for sale or rent (furnished or unfurnished) garden garage Receipts approx £2 000 Panel 700 —800 Fees 3/6 up Hospital appointment Excellent scope Premium for one half share £2,100

LONDON E C —Mixed Cash and Panel Lock up PRACTICE with living accommodation if desired facing main thoroughfare held on lease at £95 p a Receipts nearly £700 Panel 450 (scope) Fees 1/6 to 10/6 Midwifery not undertaken Premium £1 000

LONDON, N W —Lock up NUCLEUS situate in residential locality Suitable accommodation if desired Receipts £230 Panel 180 Fees 2 6 up Premium 1½ years purchase or near offer

MIDDLESEX, W — Well-established G P situated in semi rural locality Choice of two houses to be rented Receipts approximately £2 300 Panel about 1 500 Fees 2/6 up Suit two friends in Partnership or a Principal and Assistant Premium we are instructed to ask £5 000 for goodwill and certain furniture carpets etc

WEST END — ELECTRO THERAPEUTIC PRACTICE complete with very full equipment Rooms rented on agreement Fees 10/6 upwards Trained staff Receipts average £800 p a Suitable to either sex Premium £1 000 or near offer

WEST COUNTRY —Very old established G P in charming agricultural district Picturesque freehold house available Tennis court well planted fruit garden, etc Garage. Receipts approx £775 p a Panel 300 at £1 per patient Fees 3/6 up Three appointments. Premium 1½ years purchase

MANCHESTER — Old established industrial PRACTICE. Medium sized house to be rented on lease Receipts approx £650, increasing Panel nearly 800 Fees 2/6 up Premium £950 to include furniture

We have numerous applications for Practices and Partnerships, both Town and Country, with incomes from £400 to £6,000

Prospective vendors are invited to send particulars

DURHAM —Middle-class and industrial PRACTICE. Average receipts £550 Panel 380 Medium sized house to rent on lease at £52 p a Branch Surgery Fees 2/6 up Premium £450

CHESHIRE —Well established mixed middle and working-class PRACTICE Semi detached house (6 bedrooms) with garden to rent at £70 p a Receipts approx £556 Panel 527 Fees 2/6 up. Premium £700, or near offer

LONDON N —Well established mixed middle and working-class LOCK up PRACTICE situated on main thoroughfare in thickly populated locality Professional accommodation may be rented on lease Receipts average £750 p a Panel 550 Fees 2/ to 10/6 One appointment Premium 1½ years purchase

BEDFORDSHIRE.—NUCLEUS middle-class Country Practice Conveniently situated house available to be rented on lease at £56 p a or purchased for £900 Receipts over £500 Panel 100 (increasing) Scope for increase Premium £500 for quick sale

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LONDON E —Suburban middle-class G P Medium-sized house to rent on lease at the low rental of £30 p a Fees 2/ up Average receipts £516 Panel 350 Excellent scope for young man. Premium for Practice and lease £1,050 cash or near offer

NEWCASTLE (near) —Well-established middle-class and club PRACTICE Medium sized house to rent. Receipts over £450 Panel 500 Fees 2/6 up Prem £775 to incl drugs, instruments, surg fittings etc

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6 Near CRICKLEWOOD N W — Well-established PRACTICE Receipts £200 panel 140 Nice house on lease Premium £300 Not been actively worked

7 LONDON, N W (near Highgate) — Well established PRACTICE, capable of good increase Receipts £250 per annum Surgery rent £1 weekly inclusive Premium £150

8 BEDS —Old established Country PRACTICE Receipts about £300 p a panel 100 Nice house rent £56 p a Excellent scope for increase Premium £500

9 ESSEX TOWN — Well-established mixed class PRACTICE. Receipts nearly £6 0 p a panel 250 Very nice house rent £ 0 p a Good scope for increase Prem £1 0

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conference with the Chief Inspector was generally the rule I was thus enabled to see the wonderful grasp Whitelegge had on every new subject selected for investigation the detailed line of inquiry, methods of attack, the side issues to be followed when necessary, were quickly reeled off like a carefully compiled genealogical tree although I am sure this was often the spontaneous conception of a scientifically trained and wonderfully ordered mind It was my privilege later to see my chief almost daily in his office and discuss with him the many points of detail which arose in connexion with my special work and duties in reference to public inquiries and new codes of regulations I shall always recall the almost uncanny knowledge he had of each subject

Whitelegge was a prodigious worker, and he expected the same from others under him I remember on one occasion, before the opening of a public inquiry in a provincial city he travelled from London after a long day's work to meet me at midnight on my arrival from Glasgow We sat up till 4 a.m. discussing the pros and cons of the next day, and we had a further conference together after breakfast at 8 a.m., which continued until 10 a.m., when the public inquiry was opened Almost the same procedure followed during the next four days, until the inquiry concluded On one of my Continental journeys with him he kept me busy taking copious notes for inquiries he wanted me to undertake and I was kept fully occupied for seven or eight hours, we only stopped for meals Whitelegge expected the best from members of his staff and generally secured it He had no use for a man who turned out careless or inaccurate work, himself he was meticulously exact, and did his best to secure this in all the work of the department I remember well on one occasion sending him a report, which I received back with the following note 'I have read this report with the greatest interest, but note on the first page two split infinitives and the omission of six commas Please edit the report carefully and return to me as soon as possible The Factory Department owes to Whitelegge the introduction of the technical inspectors—medical, electrical and engineering—in addition to the reorganization of the inspectorate into a compact body from the isolated units which formerly existed

Though during and since the war it has been my lot to work under a number of chiefs in other departments, I have never worked with a more charming colleague than Whitelegge, one who was ever ready to help, to get the best out of everybody, and the merry twinkle in his eye at the end of one's labour conveyed the sign of approbation which meant more from him than words of praise from many another

THE LATE PROFESSOR PRIESTLEY SMITH

Dr. A. L. REMNETT WEAVER, M.O.H. for Weston-super-Mare writes: By the death of Professor Priestley Smith the Birmingham Medical School has lost one of its most distinguished alumni and moreover, one of international reputation. As I was his secretary from 1890 to 1899, during the height of his professional activity, I would like to make a few observations as to his work and character which may prove of interest.

Priestley Smith came of Unitarian stock and was named after Joseph Priestley the Birmingham Unitarian Divine and the discoverer of oxygen a singularly apt naming considering the scientific discoveries and researches made by Priestley Smith. He was proud of his connexion through his mother with the Kenricks and Chamberlains Joseph Chamberlain was his patient, and caused him amusement at each consultation by producing a huge bunch of monocles with tangled cords from his pocket It was Priestley Smith who induced Mr. Chamberlain, on account of some astigmatism to adopt spectacles for private use about the time he became Colonial Secretary, and a good deal of popular surprise was occasioned when a photograph of Mr. Chamberlain sitting at his desk at the Colonial Office and wearing spectacles, appeared in the illustrated papers. Priestley Smith said that Mr. Chamberlain was his best patient as he was the one who could most quickly and definitely make up his mind whether a trial lens was 'better or worse"

Physically Priestley Smith was of delicate mould. He often told how, during his apprenticeship in the engineering workshops he became so exhausted that he slept the whole week-end. He eased the ardours of his professional work by horse exercise and long holidays with his children sketching in quiet rural or seaside retreats varied by visits to his ophthalmic confreres abroad. Mentally he was a giant with exceptional powers of scientific analysis and invention. To those who knew him intimately his most outstanding characteristics were simplicity of mind and method and fearless honesty. He simplified everything he touched. His writings were models of clarity and precision, and he spared no pains by condensation and revision to attain this ideal. To the despair of his printer nearly all his book *Glaucoma* had to be reset owing to repeated author's corrections. His simplicity of style was carried into his public speaking, making him a charming and lucid lecturer and powerful debater. His research apparatus, his perimeter, tonometer, and the numerous other instruments he invented were patterns of mechanical simplicity and efficiency, their final forms being determined only after he had made numerous models. When experiments brought him up against problems in mathematics, physics, or chemistry, concerning which he candidly admitted his superficial knowledge, he freely sought aid from those more expert. Here he displayed his uncanny flair for scientific truth by unerringly picking out the essentials from the information given to him however complicated or technical it might be. While batting a ball for exercise against a metal disk held by a slipping clip, he noticed that in one position of the clip the plate gave out a pure musical note. Investigation led to his discovery of the nodal circle of a vibrating disk, and he utilized this in suspending his "campanels" or musical gongs, which he patented in England and also in America where he had to prove the originality of his discovery.

Priestley Smith was a skilful operator, being possessed of much manual dexterity and a fine touch, and, further he was actively ambidextrous an invaluable asset to an ophthalmic surgeon. As a consultant he adopted the German method, which fitted him admirably. He preferred to examine his patient first and to take the history afterwards, he then delivered his opinion definitely and finally. His commercial instincts were poorly developed and he consistently failed to ask more than his usual moderate fees for special consultations and operations (even from patients coming to him from other countries) or from wealthy patients, some of whom failed to realize the unique value of his help as they paid so little for it. On the other hand, he was generous to those whom he thought were trying to help themselves but he had no patience with slackers or sycophants. As a clinical teacher Professor Priestley Smith, justly, was highly esteemed. His demonstrations and lectures were systematic, and (being illustrated and illuminated by his artistic diagrams and ingenious models) clear and attractive. He was much sought after as a member of committees and governing bodies on account of his disinterestedness and the soundness of his views and advice. Birmingham University owes more than is generally known to his influence with Mr. Joseph Chamberlain who was his warm admirer. He prided himself upon his fairness and to be his associate or friend was tantamount to knowing that he would not use his influence in any way on one's behalf for fear of prejudicing others. Thus he was often unconsciously actually unfair, and sorely tried the loyalty of many disappointed friends. Priestley Smith also possessed much ability in music and painting. The atmosphere and brilliance of his water colour sketches were achieved by simple washes of pure colour without stippling or opaques. He was a great and cultured gentleman, a fond father, and a genius who never despised labour.

Dr. J. S. GRIFFITHS, who died last month, had practised in Bristol for forty years. He received his medical education at Bristol and at King's College, obtaining the diploma M.R.C.S., L.R.C.P. in 1891. In this same year he was largely responsible for starting the work of the St. John Ambulance in Bristol, and was commissioner for the West of England District for many years, being made Knight

of Grace of the Order of St John of Jerusalem During the war Dr Griffiths was county director of the British Red Cross Society and among his manifold duties as such organized the whole of the transport of wounded soldiers from Bristol and Avonmouth He held several public appointments in Bristol and was for twenty years medical officer to Queen Victoria Convalescent Home Apart from his medical career Dr Griffiths was a man of wide interests and in addition to being a member of the Arts Committee of Bristol University was one of the founders of the Clifton Arts Club subsequently becoming its chairman He was appointed Deputy Lieutenant for the County of Gloucestershire from which he resigned this year owing to ill health A well known figure in Bristol Dr Griffiths will be greatly missed by all with whom he came in contact and the memory of his kindliness and care will be cherished in many homes

With the death of Dr I W JOHNSON of Bury Lancs on May 5th there has passed away a greatly respected member of our profession who was for many years a staunch supporter of the British Medical Association Isaac Wellwood Johnson was born in 1865 and received his medical education in the University of Dalhousie and at Surgeons Hall Edinburgh He graduated M D C M Dalhousie in 1891 and in the following year obtained the diplomas of L R C P L R C S Ed and the L R F P S Glas In 1910 he was admitted a Fellow of the Royal College of Surgeons of Edinburgh At Bury his interest in the social and medical spheres of the community was extensive He was for many years surgeon to Bury Infirmary and later was appointed honorary consulting surgeon He was chairman of the Health Committee and a member of the Education Committee of the local council and was created J P Until his retirement from medical practice last year Dr Johnson was an active worker in the British Medical Association He served as a Representative from 1912 to 1930 and was on the Council during most of the years between 1916 and 1929 He was a member of the Hospitals Committee from 1919 to 1922 of the Dominions Committee in 1920 1921 and 1929 and of the Central Ethical Committee in 1926 1927 and 1929 He also served on the Ministry of Health Joint Advisory Committee with reference to discipline procedure from 1929 to 1932 After his retirement he went to live at Southport

The death took place on May 11th at Penmaenmawr North Wales of Dr HUGH MORETON ROBERTS after a prolonged illness borne with fortitude at the age of 54 Graduating M B Ch B at Edinburgh University in 1901 he proceeded to M D which he obtained with distinction in 1905 After serving as house surgeon at the Carnarvonshire and Anglesey Infirmary he settled at Penmaenmawr joining Dr Williams in partnership and after the latter's retirement he was joined by Dr R Salter Ellis His death has left a gap in the medical profession of the Principality where he was held in high esteem by his colleagues He had the reputation of being an able physician kind and considerate with his patients and endeared himself to all classes He was a member of the British Medical Association and kept himself up to date with recent medical literature In public matters he took much interest and had been a member of the urban district council for many years having also occupied the chair He was founder and trustee of the Young Men's Memorial Institute Mutual Society and was interested in other beneficent organizations Of a literary turn of mind being a voluminous reader and an able speaker he was much in request at social gatherings and public functions He took a keen interest in Masonry and had attained high honours in the Provincial Grand Lodge of North Wales The funeral was one of the largest ever seen in the district over a thousand people being present showing the universal respect in which he was held After an impressive service in the chapel the large company of mourners and general public proceeded to the cemetery where the last rites were performed by the vicar followed by the Masonic ritual each member from various lodges in the province passing in procession round the grave and dropping a sprig of acacia on the coffin

Dr LEONARD STOKES the famous international Rugby footballer died at Hurstbourne Tarrant near Andover on May 3rd after many months of indifferent health He was born at Blackheath in February 1856 and after school days at Bath studied medicine at Guy's Hospital becoming M.R.C.S. in 1881 and L.R.C.P. in 1882 He began to play for Blackheath Football Club when he was 17 and under his captaincy the club steadily grew in reputation it was he who was responsible for its acquiring the Rectory Field on which many international matches were played in those days Between 1875 and 1881 Stokes played regularly for England against Scotland and Ireland and for England in the first match against Wales in 1881 After qualification he served as house-surgeon and resident obstetrical officer at Guy's and then began general practice at Blackheath He was for many years honorary surgeon to St John's Hospital Lewisham In 1921 he went to practise in Hampshire

We regret to announce the death of Dr DAVID C DOUGLAS of Hamilton at the age of 57 After graduating M B Ch B at Glasgow University in 1900 he spent a short period as an assistant in Manchester prior to settling in Hamilton An able clinician he had an extensive practice and enjoyed in a high degree the confidence of his patients and the esteem of his fellow practitioners He was a member of the Hamilton Panel Committee and acted for a period as its chairman Dr Douglas took a great interest in sport and in his earlier days was a keen tennis player His garden however was his particular pride and joy and in its cultivation he found pleasure and relaxation from his arduous professional duties He contracted a severe attack of influenza at the beginning of the year from which he never fully recovered and his death was the result of an acute development of a dormant heart affection He is succeeded in the practice by his eldest son

Dr ARTHUR SPENCER EDWARDS who recently died at the age of 68 had been in general practice in Halling near Rochester Kent for the previous thirty-four years He received his medical education in Edinburgh where he graduated M B C M in 1889 He was medical officer and public vaccinator for the Halling and Cuxton District and honorary surgeon to the local fire brigade A man of very wide interests Dr Edwards took an active part in the general life of the local community He was a member of the Halling Parish Church Council the Maidstone Numismatic Society the Geographical Society and the Rochester Naturalists Society In Freemasonry he was a Past Master of the Solway Lodge Aspatria Cumberland and a member of the Gundulph Lodge Rochester He had been a member of the British Medical Association for twenty-two years He is succeeded by his son Dr J C Spencer Edwards

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

It is proposed to confer the degree of Doctor of Science *honoris causa* on Sir Frederick Gowland Hopkins D Sc F R C P Dunn Professor of Biochemistry and President of the Royal Society

The Raymond Horton Smith Prize for 1931-2 has been awarded to J E Semple M D Corpus Christi for his thesis on Chronic Otitis Media Suppurativa with a Comparison between several Methods of Treatment *Proxime accessit*—H L Wilson M D Emmanuel for his thesis on The Treatment of the Voluntary Boarder

The General Board has recommended to the Senate that a readership in physiology be established from October 1 1933 and that the first holder of the post be F R Winton M D of Clare College at present university lecturer in physiology

In March 1932 the General Board as the result of representations made to it by the Syndicate on Medical Courses and Examinations appointed a committee to inquire into the establishment of the department of anatomy The committee came to the conclusion that there was a convincing case for an immediate addition of at least one university lecturer and one university demonstrator to the permanent staff of the

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MANCHESTER.—Sound Industrial PRACTICE. Cash receipts last year £1,317. Panel over 1,300. Small house on main road containing consulting and waiting rooms, 2 bedrooms, kitchen, dining room and scullery. Rent £45 p.a. on lease.—No. 456.

LANCS COUNTRY TOWN near Coast.—Sound old-established mixed PRACTICE. Average cash receipts over £2,000 p.a. Appointment (transferable) £100 p.a. Panel 1,375. Excellent house, 2 reception, 4 bedrooms, professional rooms, garage and large garden to rent on long lease or would sell for £400. Premium 1½ years purchase. If desired, 12 months introduction as Partner on half-share basis. Vendor retiring.—No. 455.

MANCHESTER.—Very old-established good-class PRACTICE in residential suburb. Average cash receipts £1,912 p.a. Select panel of 464. Excellent freehold corner house, 2 reception, 6 bedroom, garage and garden. Price £1,600. Premium 1½ years purchase.—No. 458.

DEATH VACANCY.—LEEDS.—Old established PRACTICE. Average cash receipts last 3 years £1,264. Panel 840. Good house to rent at £40 p.a. Prem. best offer.—No. 454.

NORTH WEST COAST.—Large residential and seaside town.—Old-established PRACTICE. Cash receipts about £1,200 p.a. Panel 1,500. Excellent detached corner house (freehold), 3 professional rooms, 5 beds. and 2 recep. rooms, garage, and good garden for sale. Premium.—Practice—1½ yrs. purch.—No. 417.

MANCHESTER.—Established panel and private PRACTICE averaging about £1,300 p.a. Panel 1,800. Good scope. Excellent house in main road, 3/4 bedrooms, reception room and professional rooms. Price for freehold £1,150. Premium 1½ years purchase.—No. 451.

LAKE DISTRICT.—Small Seaside Town.—Beautiful district.—Middle-class PRACTICE. Cash receipts over £800 p.a. Panel 250. Excellent freehold house (on sea front), 3 reception, 7 bed. rooms, garage and nice garden. For sale or may be rented on lease. Premium 1½ years purchase.—No. 388.

LANCS TOWN, near Liverpool.—Mixed General PRACTICE. Average cash receipts £1,458 p.a. Panel 1,672. Excellent freehold corner house (facing Park), 2 reception, 4 bedrooms, 4 professional rooms, garage and garden. Premium—Practice—1½ years purchase.—No. 427.

MANCHESTER.—Old-established panel and private PRACTICE. Cash receipts last year £642. Panel 788. Scope. Good corner house, 2 reception, 4 bedrooms, garage. Rent £60 p.a. Premium 1½ years purchase or near offer.—No. 437.

NORTH WALES.—Old-established mixed PRACTICE in Country Town near Coast. Cash receipts last year £700. Panel 538. Scope for increase as the Practice has been neglected. Excellent house, 3 reception, 6 bedrooms, garage and large garden. Net rent £50 p.a. Good sport and educational facilities. Welsh not essential. Cottage Hospital. Premium £800.—No. 412.

EAR, NOSE, & THROAT PRACTICE in Northern City.—PARTNER wanted urgently. Must be good operator. Receipts £4,000—£5,000 p.a. Please give full particulars as to qualifications and experience.—No. 453.

N. STAFFS.—Old-established Country PRACTICE in charming district, averaging £900 p.a. Panel 632. Appointments (transferable) £100 p.a. Practically unopposed. Scope for increase. Excellent house with ample accommodation, garage and garden, rent £84 p.a. Premium 1½ years purchase.—No. 426.

DEATH VACANCY.—Cheshire Coast Town, near Liverpool.—Cash receipts £500/£550 p.a. Panel 100. Good house, 3 reception, 5 beds, garage & gard. Rent £80 p.a. Prem. best offer.—No. 429.

MEDICAL WOMAN'S PRACTICE.—MANCHESTER.—Cash receipts last year £645. Panel 450. Good scope. Excellent house, 3 reception, 6 bedrooms, garage. Rent £80 p.a. on lease. Premium best offer.—No. 330.

CO. DURHAM.—Small PRACTICE offering great scope in beautiful country district. Cash receipts £650 p.a. Panel 380. Good semi-detached house (3 bedrooms) to rent at £55 p.a. Garden. Prem. £350.—No. 446.

NEAR NEWCASTLE-ON-TYNE.—Mixed General PRACTICE, averaging £800—£850 p.a. Panel 600. Scope for increase. Good house, 3 reception, 5 beds, garage and garden. Premium £950.—No. 422.

NEWCASTLE-ON-TYNE.—PARTNERSHIP in sound industrial Practice. Average cash receipts £4,865 p.a. Panel 4,500. Suitable house available at low rental. Premium—one-quarter or one-third share—2 years' purchase. Further share in 2—3 years.—No. 357.

EAST YORKS.—Country Town near Coast.—Unopposed mixed PRACTICE. Cash receipts last year £960. Panel 630. Excellent detached house, 3 reception, 4 bedroom, garage and large garden. Premium 1½ years purchase.—No. 346.

MANCHESTER.—Middle-class PRACTICE in pleasant suburb. Cash receipts last year £1,327. Panel 528. Charming house to rent, 3 reception, 6 bedrooms, billiard room. Large garden and garage. Premium—Practice—1½ years purchase.—No. 322.

NORTH WEST COAST.—Large Seaside Town.—Middle-class (non-dispensing) PRACTICE. Cash receipts £874 p.a. Select panel of 250. Excellent house (freehold), 2 reception, 5 bedrooms, garage and garden.—No. 266.

NR. MANCHESTER.—Old-established mixed PRACTICE, offering great scope. Average cash receipts over £500 p.a. Panel 625. Good house in main road, 2 reception, 4 bedrooms. Rent £49 p.a. Premium best offer. Vendor retiring.—No. 450.

DEATH VACANCY.—NORTHAMPTONSHIRE.—Country PRACTICE of £500 p.a. Panel 510. Scope for increase. Good house, 2 reception, 3 bedrooms, garage and large garden. Rent £60 p.a. Premium best offer.—No. 459.

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department The cost of establishing the additional posts is estimated at about £880 a year The General Board makes a recommendation in accordance with the committee s findings that the additional posts be established as from October 1st 1933 and the Financial Board offers no objection

At a congregation held on May 12th the following medical degrees were conferred

M B B Chir—A M Cunningham A W Franklin, J H Hall
M B—G G Mowat W W Sargant

UNIVERSITY OF MANCHESTER

Dr W R Addis and Dr C P Brentnall have been appointed clinical lecturers in the Department of Obstetrics and Gynaecology

UNIVERSITY OF SHEFFIELD

Dr George Albert Clark has been appointed to the chair of physiology in succession to Professor J B Leathes, F R S

QUEEN S UNIVERSITY OF BELFAST

Musgrave Research Studentships of £200 one studentship being primarily allotted to each of the subjects pathology biology chemistry physics and physiology may be awarded to British subjects graduates of at least one year s standing in a university of the British Empire Each studentship is held for one year and may be continued for a second Applications must be made by June 15th

The Senate of the University has resolved to confer the degree of D Sc *honoris causa* on Sir Walter Morley Fletcher K B E M D F R S, secretary of the Medical Research Council

ROYAL COLLEGE OF SURGEONS OF ENGLAND

A meeting of the Council of the Royal College of Surgeons of England was held on May 11th when the President Sir Holburt Waring was in the chair

Diplomas in Gynaecology and Obstetrics were granted jointly with the Royal College of Physicians to H Sobhi and N J Pharavala

Diplomas of Membership were granted to 167 candidates who had passed the Final Examination in Medicine Surgery and Midwifery of the Examining Board in England (The lists of the successful candidates were printed in the report of the meeting of the Royal College of Physicians of London in our issues of May 6th p 808 and May 13th p 852)

The Services

DEATHS IN THE SERVICES

Lieut Colonel Malachi O Dwyer Bengal Medical Service (ret) died in London on April 21st aged 76 He was born in Tipperary on July 15th 1856 the son of the late John O Dwyer of Barronstown Tipperary and was educated at Trinity College Dublin where he was a medical exhibitioner and graduated B A M B and B Ch in 1877 and at the Meath and St Mark s Hospitals Dublin Entering the I M S as surgeon on September 30th 1878 he became lieutenant colonel after twenty years service and retired on November 30th 1898 he served in the Afghan war of 1878 9 and received the medal He was a brother of Sir Michael O Dwyer K C S I late Governor of the Punjab During the war he was engaged on telegraphic and intelligence work under the War Office He leaves a son who is serving in the Royal Engineers at Aldershot and an unmarried daughter

Major John Henderson Brannigan R A M C (ret) died at Englefield Green on April 21st aged 74 He was born on December 28th 1857 was educated at Queen s College Belfast and at Edinburgh and Glasgow Universities and took the L R C P and S Ed in 1879 Entering the R A M C as surgeon on August 1st 1885 he became surgeon major on August 1st 1897 and retired on August 1st 1905 He served on the North West Frontier of India in the Zhob campaign of 1890 and in the campaign of 1897–8 in the Mohmand Field Force (medal with clasp), and in the South African war of 1899–1902 including the battle of Colenso (wounded) and relief of Ladysmith operations in the Transvaal including the actions at Belfast and Lydenberg (Queen s medal with four clasps and King s medal with two clasps) After retirement he rejoined for duty in the war of 1914–18 from February 6th 1915 when he was in charge of the military hospital at Lichfield He leaves a widow and two married daughters

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons has this week considered the Finance Bill and has passed the Rent Restriction Bill through report stage and third reading The Exchange Equalization Bill was read a third time and certain import duties confirmed

The Private Legislation Procedure (Scotland) Bill was read a second time by the House of Commons on May 11th Sir GODFREY COLLINS explained that its purpose was to widen the scope of the system of inquiry in Scotland on draft Provisional Orders, followed by a Confirming Bill in Parliament

A scheme for regulating the marketing of milk in Scotland was approved by the House of Commons on May 11th

The House of Commons read the Solicitors Bill a third time on May 11th This Bill proposes that all solicitors should keep separate accounts for their clients' money

The Parliamentary Medical Committee met on May 11th and received a deputation, consisting of Dr David Lees, Dr E T Burke, Dr D Nabarro and Dr Drummond Shiels, from the British Social Hygiene Council The deputation adduced statistics and experience at clinics bearing on the problem of congenitally diseased children who are withdrawn from treatment while still uncured A discussion followed

In the House of Lords on May 16th the Protection of Animals Bill was read a third time and passed

The text has been issued of the Local Government B ll, which consolidates, with amendments, the enactments relating to authorities for local government in England and Wales, which was introduced in the House of Lords by the Lord Chancellor on May 2nd

Pharmacy and Poisons Bill

Examination of the Pharmacy and Poisons Bill a Government measure which has already passed the House of Lords was begun by a select committee of the House of Commons on May 9th Mr HACKING was in charge of the Bill for the Government Clauses 1 to 16 were passed with a few drafting amendments Amendments proposed by Dr CLAYTON to secure the use of the term 'chemist' by analytical chemists and by Mr STEVENSON regarding the representation of Scottish pharmacists on the new Statutory Committee were resisted by Mr Hacking as needless, and were negatived On Clause 17 several amendments were moved to relax the provisions concerning Part II (poisons which may be sold by authorized shopkeepers not being pharmaceutical chemists) Mr Hacking pointed out that this provision was intended to facilitate the sale of horticultural and agricultural products Several members pressed for amendments which would authorize the free sale of substances such as ammonia which are usually sold in the original containers or labelled in accordance with regulations and are in common use Mr GLOSSOP exhibited fireworks "wireless batteries refills for electric torches and for fire extinguishers and other goods now sold without restriction as evidence that there was free sale of poisonous articles Mr HACKING said he did not conceive that the Poisons Board would schedule hair cream merely because it contained a poisonous ingredient If the Board did so the Home Secretary or Parliament would reverse the decision

An amendment moved by Mr GLOSSOP was defeated and the committee adjourned till May 11th

On May 11th consideration of the Pharmacy and Poisons Bill in Standing Committee was completed and the Bill was reported to the House with a few small amendments During the discussion Mr HACKING for the Home Office said it would be possible under the Bill to label substances 'poisonous' instead of poison Dr CLAYTON moved to add words to make sure that a university school, or other

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Practices and Partnerships for Disposal. **Full particulars sent free.**

1 SUSSEX—PRACTICE ABOUT £700 P A IN FIRST RATE Country Town Panel over 200 increasing rapidly Very little midwifery Well-equipped maisonette containing 6 rooms and bathroom rent £100 p a, inclusive Premium £1 000

2 LONDON N—OLD ESTABLISHED PRACTICE ABOUT £1 000 p a in pleasant residential district Panel 900 Excellent corner house (6 bedrooms) fair sized garden and garage th lease of which is for sale Scope for increase Premium £1 500

3 S WALES—GROWING SEAPORT TOWN—OLD ESTABLISHED and rapidly increasing PRACTICE about £1 770 p a including £500 from the panel Large semi-detached house (5 bedrooms) in main thoroughfare Large garden and garage Lease for sale Hospital and good scope for Surgery Premium £3 000

41 LONDON E—CASH AND PANEL PRACTICE OF £860 P A in populous district Panel 570 Small house to rent on lease Premium 1½ years purchase

5 EASTERN COUNTIES — OLD ESTABLISHED COUNTRY PRACTICE Cash receipts about £720 p a including appointments over £150 and a panel of about 590 Detached house (5 bedrooms) in grounds of 1 acre for sale Prem for Practice £650

6 CO DURHAM—PRACTICE OF £540 P A IN RESIDENTIAL Colliery District near two large Towns Panel 580 Well situated house (7 rooms) with good Surgery and Dispensary, for sale or rent Scope for substantial increase Premium only £500

7 S MIDLANDS—PARTNERSHIP IN COUNTRY PRACTICE OF £2 576 p a Good residential district Panel and appointments £1 186 Detached house with garden to rent Premium for three eighths share £1 400

8 WEST OF ENGLAND—OLD ESTABLISHED PRACTICE OF £750 p a in beautiful district Panel 300 Excellent house (5 bedrooms) for sale Premium 1½ years purchase

9 HOME COUNTIES—PARTNERSHIP IN STEADILY INCREASING Practice about £1 700 p a in growing residential district, within 15 miles of London Panel 500—600 Suitable accommodation could be had Great scope as district is rapidly developing Premium two fifths share 2 years purchase

10 S OF ENGLAND—OLD ESTABLISHED PRACTICE AVERAGING nearly £1 430 p a in small town close to coast and favourite Health Resort Panel 775 Large charming modernised house in grounds about two acres including paddock for sale or rent Premium 1½ years purchase

11 S E COAST — PARTNERSHIP IN STEADILY INCREASING non dispensing Practice averaging nearly £1 700 p a in popular Seaside Resort Panel 725 Partner should be English or Scottish. Premium one half share 2 years purchase

12 S WALES — PRACTICE BETWEEN £250—£300 P A IN beautifully situated village about 4 miles from important town Small panel Nice house (6 bedrooms) electric light gas and company's water Premium house and Practice drug etc, £1 950

13 N OF ENGLAND—OLD ESTABLISHED GOOD CLASS PRACTICE of about £2 000 in favourite Seaside Resort. Small Panel. Large modern residence for sale Scope for increase Prem £2 700

14 KENT—PARTNERSHIP IN MIDDLE AND WORKING CLASS Practice averaging nearly £4 450 p a in an industrial Town under 25 miles of London Panel about 2 600 Detached house (4 bedrooms) with garden to rent. Plenty of scope for increase Premium one fifth share 2 years purchase

15 S OF ENGLAND — PARTNERSHIP IN OLD ESTABLISHED Practice of nearly £1,950 p a. in important town within 80 miles of London No panel Attractive corner residence (7 bed and dressing rooms) in half acre of walled in garden with garage etc for sale Ample scope for increase. Premium one half share 2 years purchase.

16 ESSEX OLD ESTABLISHED PRACTICE OF ABOUT £600 P A in Suburban District Panel 500 Well situated detached house (6 bedrooms) standing in own grounds with nice garden garage and stabling for sale Scope for increase Premium £650

educational authority particularly one conducting examinations should receive exemption with respect to purchases of poisons Mr HACKING said there was no doubt of this right and the amendment was withdrawn Dr CLAYTON also raised the question of inspectors under the Bill Mr HACKING said local authorities should be allowed to use their inspectors under the Food and Drugs Acts and Shops Acts if efficient He resisted proposals that the Poisons Board should be enlarged to include a representative of the Royal College of Veterinary Surgeons but gave an assurance that that College would be consulted on the rules under the Bill

During the discussion Mr HACKING stated that the Home Office was looking into the use of poisonous sprays in the disinfection of ships in order to safeguard men employed in that work

Rural Sanitation and Health in Distressed Areas

On May 8th during a discussion on the motion that the House of Commons should go into committee on the Civil Estimates Viscount ELIBANK moved a resolution urging the Government to keep closely under review the difficulties experienced by local authorities particularly in rural areas in dealing with problems arising from unemployment and the provision of adequate systems of water supply and drainage Mr LEVY seconded the motion and urged that there should be a comprehensive survey with a view to providing a regional water supply or an area basis Drainage ought also to be dealt with

Sir F FREMANTLE said that having been for fourteen years a county medical officer he saw the growing necessity for these schemes and he felt strongly on the subject Mr LEVY had exaggerated when he suggested that the wretched condition with regard to certain water supplies were representative of the whole countryside For the greater part and especially in the areas of the Home Counties which he knew the position was quite the opposite In general the villages had a fair standard of sanitation and health arrangements There was certainly room for improvement and medical officers of health did not wish to belittle the desire for improvement But rural conditions must not be judged by an urban standard It was not necessary in the country to have the ordinary fixed public water supply for the purposes of health as long as the more primitive arrangements which existed were sanitary and in proper order If it was possible to find some method for providing the necessary finance to be used under proper supervision for improving rural water supplies it would be greatly to the advantage of the countryside and would advance the general policy of improving agriculture in this country But above all things they must avoid waste and there was great danger of being parsimonious in one respect and wasteful in another The county councils could do a great deal more than they had done in helping local authorities If the county council had done its duty with regard to Malton and had kept under supervision the conditions reported on by Dr Bruce Low in 1892 the matter would not have been allowed to rest as it was The county councils were given the power to report where public health administration was not being carried out and that was the opportunity for them to act not as a duty not by sending in a report but by giving advice of a helpful nature to the local authority The county councils could do a great deal in that way and he wished they would do more but for that purpose there must be officials He had always advocated the appointment of county sanitary inspector Such an official was just as necessary as a county medical officer of health—a sanitary inspector of high quality Further education was needed in these matters especially among the rising generation to fit them to take their part in the work of local authorities

Sir HILTON YOUNG said that all the time the qualified officers of the Ministry of Health were inquiring into the quality and quantity of rural water supplies and the possibility of improving them

A close watch had been and would be kept by the Medical Department of the Ministry of Health and the Medical Department of the Board of Education for any sign of malnutrition especially in those areas where unemployment was most prevalent A careful scrutiny of the reports of school medical officers of England and Wales for 1931 established the fact that the condition of the children had not really been affected by unemployment That had been confirmed by his further inquiries in many areas in 1933 The physical condition of the adult varied no doubt in different parts of the country Generally speaking it was good and contrary to what might reasonably have been expected did not appear so far to be affected by unemployment This could be tested by basic facts of statistics In 1932 they had one of the lowest death rates recorded in England and Wales—12 per 1 000 They had an exceedingly low infant mortality rate—about 65 per 1 000 They had fewer epidemics and less mortality and they had on the whole a favourable report of the health of insured persons The medical officers of health were fully alive to the situation and were vigilant at all times to observe any departure from the normal in their districts It was their duty to send him a statement of any noteworthy conditions prejudicial to the health of their areas The question had occupied and would continue to occupy his daily attention and he had taken special steps to secure that any facts which emerged were immediately known

The motion was withdrawn

Public Health Services Inquiry in Scotland

On May 16th Mr SKELTON informed Mr GUY that the Secretary of State for Scotland proposed to adopt the recommendation of the Committee on Local Expenditure that he should institute an inquiry into the public health services in Scotland He hoped to announce the personnel and the terms of reference of the proposed committee shortly

Tuberculosis in Glasgow's Milch Cattle

On May 9th Mr KIRKWOOD asked the Minister of Agriculture if he was aware that the veterinary inspector of Glasgow in a report to the Markets Committee stated that 14·5 per cent of milk samples tested by him contained virulent tubercle bacilli that many infected cows were sent to the city market for sale and that nearly 9 000 bovine consumptives remained undetected in Scotland Dr ELLIOT replied that he had seen the report He understood that the Department of Health for Scotland hoped to publish shortly the results of a recent investigation on this subject carried out in the four large cities of Scotland A committee of the Economic Advisory Council was now considering what practical measures could be taken to reduce the incidence of tuberculosis (as well as of other diseases) among milch cattle in this country including any changes desirable in existing administrative practice Mr KIRKWOOD might rest assured that the recommendations of that committee on this difficult question would receive most careful consideration

Survey of National Development

Dr W McLEAN urged the necessity for a national development plan or survey to obtain some idea of the nature and extent of the development in regard to housing and planning for which the country had to provide Sir E FREMANTLE said that there was need of a wider basis for our planning The House and the country had not taken enough advantage of the very practical example which they had had of thoroughgoing planning in the garden cities of Letchworth and Welwyn They differed from the ordinary town and country planning because they had been founded on a wider sphere of knowledge The essential thing was the immense value of incorporating the idea put forward in Dr McLEAN'S proposal—that they should consider for what life they were planning to have regard to all the interests concerned such as locomotion communication of every kind industry shipping commerce and the whole needs of the people They were all put together in those diagrammatic experiments which had been a conspicuous success up to a certain point There was a great danger in planning too rigidly for conditions which they could not foresee They wanted a practical scheme for avoiding waste of money and energy for preventing mistakes and for helping on sound development.

Dr BURTON said that while large areas of the country had not changed in industrial development sufficiently to warrant a detailed survey of the whole country national development and planning were in the air and were engaging attention

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Practices and Partnerships for Disposal (continued)

1. S.W. OF ENGLAND — WELL ESTABLISHED MIDDLE AND better-class PRACTICE of between £1,200 and £1,300 p.a. in Seaside Resort. Panel 500. Excellent and well-situated large detached corner house with every modern convenience, to rent on lease. Very good Educational facilities. Sport of all kinds including golf, yachting, etc. Premium £2,000.

18. LONDON, S.W.—OLD ESTABLISHED PRACTICE ABOUT £650 p.a. in well populated area. Panel 850. Separate Surgery and private residence to be purchased. Scope for increase. Premium £1,100.

19. SURREY—PARTNERSHIP IN SOUND OLD ESTABLISHED good mixed-class Practice about £3,000 p.a. in the Croydon area. Small panel. Very little midwifery. Suitable house could be obtained. Scope for increase. One-fourth share at first at 2 years purchase with option to increase.

20. ESSEX COAST—PARTNERSHIP IN PRACTICE OF £2,500 p.a. in small Seaside Town. Panel 2,300. Modern house in good position facing Sea with 4 bedrooms for sale. Scope for increase. Premium one-fourth share £1,250 and further share later.

21. ESSEX.—PRACTICE ABOUT £1,150 P.A. IN DEVELOPING district in the Thames Estuary. Panel 350. House with ample accommodation. Electric light, main drainage, garage, and very nice garden to rent. Yachting. Plenty of scope for increase. Premium £1,600.

23. LONDON, W.—STEADILY INCREASING NUCLEUS OF PRACtice in the Maida Vale district. Bookings for 11 months £249, of which about £100 has been received. Rent of consulting and waiting rooms 30/- weekly. Good scope. Premium £300.

23. WEST OF ENGLAND—PARTNERSHIP IN OLD-ESTABLISHED PRACTICE over £2,200 p.a. in County Town. Panel about 1,000. Premium one half share 2 years purchase. Good prospects for well-qualified physician (preferably M.R.C.P.) who should be an R.C. and who would have opportunity of getting on Staff of Hospital in near future.

24. LONDON, E.C.—PARTNERSHIP IN OLD-ESTABLISHED PRACtice in the City. Receipts average about £1,650 p.a., including appointment and panel worth over £500 p.a. Premium one half share £1,000.

25. NORTH OF ENGLAND — INLAND HEALTH RESORT — NON-dispensing PRACTICE of about £1,000 p.a. Small select panel. House (7 bedrooms) with large garden for sale. Premium—Practice—£750.

26. LONDON, E.C. — NUCLEUS OF PRACTICE (ABOUT FOUR fifths Ophthalmic) in the City. Cash receipts average £268 p.a. Fees for Consultations £1 1s. to £2 2s. Consulting and waiting room to rent. Premium £100.

27. HOME COUNTIES—WELL-ESTABLISHED PRACTICE OF £700 p.a. in first rate Country Town under 40 miles from London. Panel about 250. Fees 5/- to £1 1s. Large well-built residence (about 6 bedrooms) with modern conveniences. Beautiful garden, meadow orchard, etc. in all about 24 acres. Excellent hunting. Premium. Practice and house £4,500 (or near offer) which is less than the value of the house alone.

28. S. AFRICA—RADIOLOGICAL PRACTICE IN A MOST DElightful town with excellent climate. Cash receipts last year £1,450. Scope. Premium to include furniture, carpets, accessories, etc. £2,200.

29. PRIVATE MENTAL HOME (FOR LADIES ONLY).—EXCEPtionally nice house and grounds. A considerable sum required for the purchase. Further particulars on application.

30. EAST COAST—PRACTICE OF BETWEEN £750 AND £800 p.a. in a purely Residential Seaside District within 40 miles from London. Small Panel. Detached house (5 bedrooms) for sale. Scope for increase as district is growing.

31. SURREY—PRACTICE OF £1,000 P.A. IN RAPIDLY GROWing Residential District within 15 miles of London. Panel 400. Suitable house with separate professional accommodation for sale. Scope for considerable increase. Premium £1,600.

32. LONDON, W.—GOOD MIDDLE-CLASS PRACTICE £400 P.A. in suburb within easy access of the West End. Panel over 100. Attractive double-fronted house with nice garden for sale. Scope for increase. Premium 1½ years purchase.

33. CORNWALL.—VERY OLD-ESTABLISHED PRACTICE OF OVER £1,100 p.a. in delightfully situated seaside village on West Coast. Panel about 550. Well-built house (7 bed and dressing rooms) standing in half acre of ground for sale. Scope as building is going on. Premium 1½ years purchase.

34. LONDON, N.—PARTNERSHIP IN PRACTICE ABOUT £5,250 p.a. in thickly populated Suburban District. Panel about 800. One fourth or one-third share at 2 years purchase.

35. HOME COUNTIES — OPHTHALMIC PRACTICE BETWEEN £300 and £400 p.a. in desirable Residential Town under 15 miles from London. Good detached house (4 bedrooms) with large garden for sale. Good reasons for plenty of scope for increase. Premium £300.

36. LONDON, E.C.—OLD-ESTABLISHED LOCUM PRACTICE of £646 p.a. Panel 459. Living accommodation to rent if desired. Premium £1,000.

37. S. AFRICA — OPHTHALMIC AND GENERAL PRACTICE about £1,400 p.a. (about 60 per cent. Ophthalmic) including appointments £400. No Ophthalmic opposition. Premium £400.

38. N. OF ENGLAND — OPHTHALMIC PRACTICE OF OVER £1,600 p.a. in an important town. Excellent scope for one keen on clinical and operative Ophthalmology. Large house in first-class condition for sale. Purchaser should be well qualified. Premium £2,500.

39. S. AFRICA — PRACTICE OF ABOUT £2,000 P.A. IN A famous town. Pleasantly situated detached bungalow (5 bedrooms) garage and small garden for sale. Good hospital (with private wards). Premium £1,100.

40. LONDON, WEST END — X-RAY AND ELECTRO-THERAPEUTIC Practice. Receipts 1931 nearly £620. Suitable and convenient flat at moderate rent, on lease. Premium £925.

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Accountancy and legal services furnished by the Agency, where desired, at moderate inclusive charges. No charge is made to Principals for the introduction of Locum Tenens or Assistants

1 DEATH VACANCY —OXON —PARTNERSHIP —A three eighths share is for disposal (owing to the death of the senior of two partners) with increase up to one half in two years in a very old-established good mixed-class Practice situated in delightful country district near two good towns Average gross cash receipts over £2 500 including panel producing about £900 p a and appts worth £270 Fees 3/6 to 21/ medicine extra Large house with good garden containing 2 reception, 7 bedrooms etc and professional rooms Net rent £55 p a Premium for share £1 400 Ingoing Partner should be experienced, and preferably not under 35 years of age

2 DEATH VACANCY —NORTHANTS —Middle and working class PRACTICE in pleasant country town producing approx £500 p a including panel of 510 and appts worth nearly £100 p a Fees from 2/6 Very low expenses House contains 2 reception, 3 bedrooms etc surgery and waiting room Large garden Can be rented at £60 p a Sport of all kinds and schools within reach Prem £750

3 EASTERN SUBURB —Very old established middle and working class PRACTICE worth about £1 100 p a including panel of 1 350 Very little midwifery House contains 2 reception 4 bedrooms etc, separate entrance to professional rooms Small garden Garage Price for freehold £1 350 Premium 2 years purchase

4 EASTERN COUNTIES — FAVOURITE SEASIDE AND HOLIDAY RESORT —Good mixed-class PRACTICE established many years and producing for the last twelve months £1 600 Panel brings in £300 p a and an appt worth £100 p a Fees 3/6 to 7/6 with medicine extra Nice house with 2 reception 5 bedrooms, etc Garage Garden Price for freehold £2,250 Golf, shooting, and other sport Premium 1½ years purchase

5 SOUTH WEST OF ENGLAND —PARTNERSHIP —A share producing about £850 p a is offered in a very well-established Practice, owing to the retirement of the senior of two partners Good prospects of increase Suitable house available on rental Ingoing Partner should be experienced, a keen worker and preferably not over 30 years of age

6 MANCHESTER SUBURB — (Partly Residential) — Old established upper and middle-class PRACTICE averaging about £1,700 p a, including appts worth £130 and selected panel of 700 About ten cases of midwifery yearly at 5 to 10 guineas Expenses low Excellent house well situated and specially built for medical man with ample accommodation garden and garage Rent on lease £120 p a Premium £2 500 Good educational facilities

7 SOUTH WALES —Pleasant Coast Town and Pleasure Resort (pop 40 000) —Very old established and increasing PRACTICE amidst beautiful surrounding country, averaging £1 644 p a including appt worth £70 and panel of 1 200 Visits 5/ to 21/ medicine extra Good house (5 bedrooms etc with garden and garage) Price leasehold (about 60 years to run at a ground rent of £3 p a) £1,800 £1 200 on mortgage Educational facilities and sport A knowledge of surgery is essential

8 PARTNERSHIP —LINCS —A one third share is offered in an old established mixed-class Practice situated in pleasant agricultural district, near good town Average gross cash receipts approximately £3 200 Panel of 2,500 Fees 3/6 to 21/ Large twelve-roomed house with electric light Good garden Garage In good repair Can be rented at £60 p a Sport of all kinds and schools within reach Premium £2 000

9 PARTNERSHIP —Residential Town within easy reach of London — A one third share is for disposal owing to the retirement of the senior of three Partners in a well-established mixed class Practice Gross cash receipts for the last 12 months £4 400 Panel of 2 500 Fees 3/6 to 21/ Midwifery from £5 5s Very nice house available Ingoing Partner should be experienced, accustomed to better class work and able to undertake major surgery Preference will be given to one holding the F R C S Premium £3 000

10 PARTNERSHIP —WITHIN TEN MILES OF LONDON —In a pleasant and rapidly growing residential suburb the half share is offered owing to the retirement of the Junior Partner in a well established and increasing Practice having good future prospects Gross cash receipts for last 12 months about £1 600 Panel of 1 600 Appt worth £140 not included in receipts Very nice house with 2 reception 5 bedrooms and dressing room 2 maids rooms and usual offices Large garden with tennis lawn Price for freehold £1,700 Premium 2 years purchase

11 PARTNERSHIP —In a well populated pleasant South Eastern suburb within ten miles of London the half share of an old established mixed class Practice is for disposal owing to the retirement of the junior partner Held by the remaining partner 30 years Cash receipts average £2 765 p a including panel of 1 800 and appts worth £150 Very little midwifery Pleasant semi-detached corner house with ample accommodation garden Price leasehold (over 900 years at ground rent of £7 p a) £1 050 Premium 2 years purchase Scottish graduate preferred

12 MANCHESTER —Old-established middle and working class PRACTICE averaging about £1 300 p a including panel of nearly 1 800 Visits from 3 6 Moderate expenses Suitable house with 3 bed rooms and 3 good sized attics etc Price for freehold £1 150 Premium 1½ years purchase

13 NORTH EAST COAST —FAVOURITE TOWN —Old-established good mixed general Practice offering considerable scope for increase Gross cash receipts for the past twelve months approximately £1 800 Selected panel of 100 Fees 5/ to 7/6 Very little midwifery Well situated house with 3 reception 5 to 6 bedrooms, etc, and separate professional rooms Electric light Garage Price £2 500 large part on mortgage Good opportunity for Eye work and Ear Nose and Throat work if desired Sport of all kinds and excellent schools Premium £2,800

14 MANCHESTER —Old-established middle and working-class PRACTICE producing for the last twelve months about £650, including panel of 790 Fees from 3/6 Convenient house with 2 reception 4 to 5 bedrooms bathroom, etc Rent on lease £60 Premium £950 to include furniture

15 LONDON, NORTH WEST — Middle class PRACTICE in new and developing district producing last year £400 and this year at the rate of about £600 Panel of 230 Fees 2/6 and 3/6 visits from 5/ Six roomed house with bathroom electric light Car Garden Price for freehold £1 000 £850 on mortgage Prem £650

16 CENTRAL LONDON —Middle and better class PRACTICE, average for the last two years about £500 p a including small panel of 180 Fees 3/6 to 21/ Professional accommodation can be rented at £200 p a Premium £300 to include furniture drugs instruments etc

17 CO DURHAM —PARTNERSHIP —7/12 share is offered in a well established very sound mixed class Practice the gross cash receipts of which average approximately £2 400 p a Panel produces £850 p a and Public Medical Service £750 p a Appointments worth £120 Succession to the whole Practice within 4 years or sooner as agreed Very good house, specially built with ample accommodation for sale Practice is situated in a growing area and offers excellent scope f Premium for share 2 years purchase

18 PARTNERSHIP —A one half share is offered i tter and middle-class Practice situated in suburb of favourite residential town Practice is steadily increasing with good scope for further development Gross cash receipts for last 12 months £1 700 Panel of 700 Fees from 3/6 Very nice house with 2 reception 4 bedrooms etc One acre of garden Garage for 2 cars Rent on lease £80 p a Sport of all kinds and good schools Premium for share 2 years purchase

19 SOUTH EAST LONDON —Good middle and working-class PRACTICE producing last twelve months nearly £950 Panel of 986 Suitable house with 2 reception 4 to 5 bedrooms etc Rent on lease £70 p a Prem to include drugs etc and surgery fittings and furn £1 450

20 HOME COUNTIES —ASSISTANTSHIP with view to Partnership offered in a better class Practice in residential town Ingoing partner must have experience of general Practice and be able to undertake major surgery and preferably hold a Fellowship

21 NORTH WALES —Old established middle and working-class PRACTICE averaging for the last three years over £1 700 including panel of about 1 300 Fees from 2/6 Visits from 3/6 with medicine extra Suitable house with good professional accommodation Electric light Garage for two cars Small garden Rent on lease £100 p a Premium £2 500, £1,700 down balance by instalments Good sport etc A knowledge of Welsh is not necessary

22 RIVIERA —Old established PRACTICE the receipts from which have averaged over £1 600 p a but have decreased recently owing to Vendor's ill health Very good prospects of extension Fees from £1 1s Very easy work Suitable flat can be rented at £160 p a Premium £4 000

23 MIDLANDS —Old-established middle and better-class PRACTICE in clean and attractive manufacturing city Cash receipts average over £1 600 p a including appt worth £165 (transferable) and panel of 1 220 Visits 5/ to 2 gns Midwifery discouraged Fees 5 to 15 gns Exceptionally good house in its own grounds with ample accommodation fitted with every labour saving device and economically run Situated in the best residential part A cottage in the grounds is let at £37 a year Price freehold £5 000 (£3 500 on mortgage) Premium £3 500 Scope for active man

24 EGYPT —Well-established PRACTICE producing about £960 p a and offering good scope for increase Fees 10/6 to 2 guineas Excellent accommodation can be rented at £16 10s monthly Premium to include all furn drugs drug bottles instruments etc, £2 000

FOREIGN APPOINTMENT —SOUTH AMERICA —MEDICAL OFFICER required for Company Must be well up in Surgery and have some knowledge of Tropical Diseases and if possible Sanitary matters Three years agreement Salary £750 rising annually to £1 000 First-class passage out and home Aged 30 to 35 Married or single

ASSISTANTS REQUIRED —(1) STAFFS Outdoor £300 p a all found (2) LEICESTER Outdoor £350 p a with rooms and attendance View to Partnership in 12 months Single preferred (3) LONDON Indoor £300 p a (4) LINCS Outdoor Assistantship Married or single General country Practice Salary £400 p a (5) YORKS Outdoor English or Scottish, single and not over 30 Salary £200 p a all found (6) WALES Outdoor £400 p a (7) LONDON E £300 p a

WANTED TO PURCHASE.

1 LONDON or MANCHESTER — Well-established private and panel PRACTICE producing £1 200 upwards with nice hou

2 BUCKS BERKS or near localities —Better class PRACTICE averaging about £1 500 p a with good scope Panel not necessary Amount capital for purchase of house and Practice

The Agency has made arrangements for special facilities, on very favourable terms, to be afforded to approved purchasers for the advance of part of the premium for any suitable practice or partnership Full details on application.

Printed and published by the British Medical Association at their Office Tavistock Square in the Parish of St Pancras in the County of London.

The idea of planning was entirely congenial to the Government and every possible advantage would be taken of the information available to the Department

The motion to go into committee was agreed to

Insanity and Divorce

The motion for the third reading of the Matrimonial Causes Bill again came before the House of Commons on May 12th Dr O DONOVAN moved the rejection of the Bill and presented further arguments against making incurable insanity for five years a ground of divorce He said he saw no provision in the Bill whereby a judge would be assisted by any qualified assessor in dealing with the difficulties of medical certification Medical certificates could mean much or little He pointed out that a large part of the asylum population was made up of people in a condition of senile decay The Bill would result in increased pressure on the public authorities to put away senile cases

A count was called and there not being forty members in the House the debate stood adjourned

Panel Patients Record Cards —Sir HILTON YOUNG replying to Mr Gledhill on May 8th said that the cost of printing record cards for use by insurance practitioners during the latest year for which information was available was £1 426 The cost of distribution was negligible, as the cards were usually enclosed with other communications sent out regularly by Insurance Committees to practitioners

Insurance Benefit in 1932 —On May 8th Sir HILTON YOUNG told Mr Mabane that the total benefits paid in Great Britain under the National Health Insurance Acts during the calendar year 1932 amounted approximately to £31 850 000

Increase of Child Marriage in India —On May 8th Miss RATHBONE asked the Secretary of State for India if he was aware that the census returns already published for three provinces of India, showed an enormous increase in child marriage since the previous census especially in Bihar and Orissa Sir SAMUEL HOARE said the marriage age and the age of consent were constantly under the consideration of the Government of India and he did not consider it necessary to give any directions on the subject

Deaths during Anaesthesia in Glasgow —Sir G COLLINS replying on May 9th to Mr Neil Maclean said that, according to the Registrar's returns the number of deaths registered in 1932 as having occurred at the Royal, the Western and the Victoria Infirmaries Glasgow during or following upon the administration of anaesthetics were, respectively 29, 26, and 6

High Death Rate in Stockton on Tees —Sir HILTON YOUNG told Mr Lawson on May 11th that the report of the medical officer of health for Stockton on Tees on the death rate for the Mount Pleasant area which had averaged 33 55 per 1,000 of the population for the last five years as compared with the death rate for the same period of 10 5 for England and Wales was still under consideration

Water Supply —Replying on May 11th to Mr Levy, Sir HILTON YOUNG said experience indicated that there was not a sufficient case for further legislative powers to enable him to compel an authority which had an excess in its water supply to make that excess available for or put it at the service of other districts where a scarcity existed Where an authority had a real surplus of water it was usually glad to find customers Where difficulties occurred he was ready to use his good offices He was aware of the scarcity of water in the Denby Dale district and was in communication with the local council That body was negotiating for a supply of water from the aqueduct of a neighbouring authority He realized the gravity of epidemics arising out of water which was of doubtful purity

Foot and Mouth Disease —Dr ELLIOT stated on May 11th that an inquiry had been held into an outbreak of foot and mouth disease on a sewage farm at Kinver Staffordshire Circumstances suggested that virus might have been introduced on the farm through the sewage effluent No definite proof was obtainable He was conferring with the Minister of Health on whether any action was possible to eliminate the risk of infection from this source

Notes in Brief

On May 8th Sir HILTON YOUNG told Mr Mabane that the census material required for the construction of life tables for 1931 was not yet available Provisional figures showed that the general death rate was 12 per 1 000 of the population of England and Wales in 1932, the infantile mortality rate was 65

Late applications for pensions which have at any time in past years been recognized by the Ministry of Pensions numbered up to the end of last March 2 745 and a further 721 cases were found to require medical or surgical treatment

The Home Secretary proposes to bring into force on November 1st the Children and Young Persons Act 1933

Medical News

The dinner and annual meeting of the University of London Medical Graduates Society was held at the Langham Hotel on May 9th, with the president Lady Barrett, in the chair A large number of graduates attended, and the guests of the evening were the Dean of the Faculty of Medicine of the University of London (Dr A M H Gray) and the Master of the Society of Apothecaries (Dr Cecil Wall) The president, in outlining the successful social programme which had been carried out in the past year, expressed the hope that many of those London medical graduates who had not yet joined the society would do so in the near future and urged them to apply for particulars to the honorary secretaries at 11, Chandos Street, W 1

The Buckston Browne annual banquet of the Harveian Society of London will be held at the Star and Garter Home, Richmond, on Thursday, June 8th, at 7 30 for 8 p m

At the Princess Elizabeth of York Hospital for Children Shadwell, E, on Friday, May 26th, at 8 45 p m Sir Henry Gauvain will give a talk (illustrated by lantern slides) on the nature of the work carried on at the Lord Mayor Treloar Cripples' Hospital and College at Alton and Hayling Island Dr William Stobie will preside Visitors are welcomed

A paper will be read on Tuesday, May 30th at the British Red Cross Society's Rheumatism Clinic Peto Place, by Dr Gilbert Scott, on "Sacro-iliitis its Relation to Spondylitis and Other Rheumatic Conditions" based on the work done by himself and Dr Golding Clinic open for inspection at 7 15 p m, paper at 8 15

The thirty-fourth annual meeting of the Lebanon Hospital for Mental Diseases, near Beirut, Syria will take place at Friends House, Euston Road, N W, on Monday May 22nd, at 3 15 p m, under the chairmanship of Mr E W G Masterman, F R C S The report of the director, Dr H Watson Smith, on the work of the hospital during 1932–3 will be presented The speakers will include Dr Henry Yellowlees, M Jean Massip, Mr Oscar Darton, Mr D E Lowrie, and Miss Florence Barrow Visitors are specially invited Tea, 4 30 p m

The annual general meeting of the members of the Society for Relief of Widows and Orphans of Medical Men 11, Chandos Street, W, will be held on Wednesday May 24th, at 5 p m

In addition to the lectures already announced in this column, the Fellowship of Medicine and Post Graduate Medical Association has arranged a week-end course at the Hospital for Consumption, Brompton on May 27th and 28th, when all day instruction in chest diseases will be given Forthcoming courses include medicine surgery and the specialties, June 12th to 24th, at the Prince of Wales's Hospital, week-end courses in clinical surgery at the Royal Albert Dock Hospital, June 10th and 11th diseases of the chest, at the Victoria Park Hospital June 12th to 24th, ante-natal treatment at the Royal Free Hospital, June 16th to July 7th (Fridays at 5 p m) The arrangements for each week are notified in our *Supplement*

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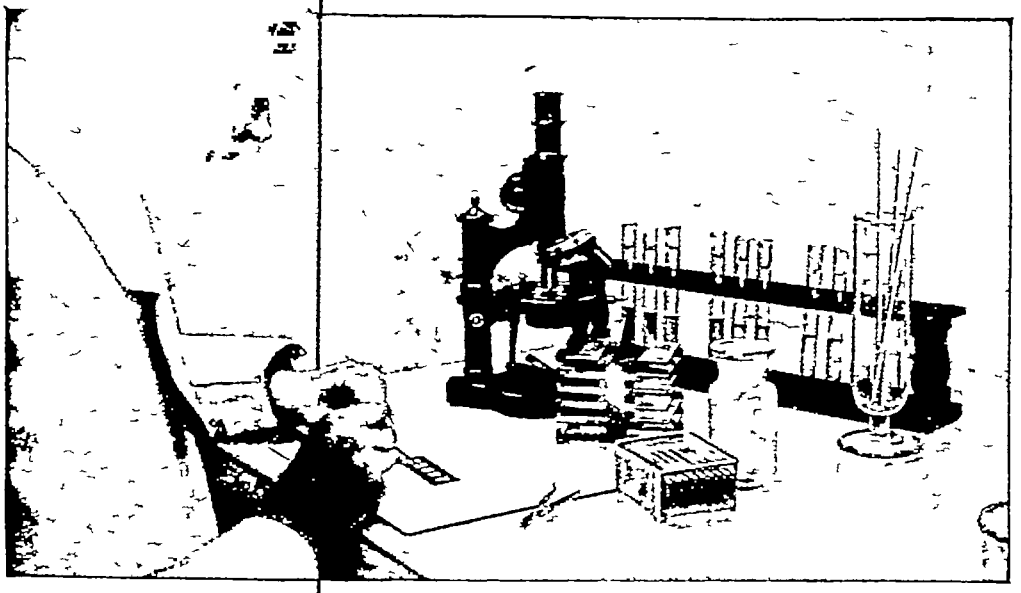

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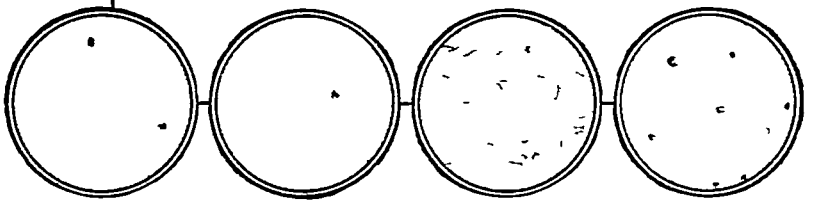

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A meeting of the Medico-Legal Society will be held at 8.30 p.m. on May 25th at 11 Chandos Street, W., when Mr. W. G. Earengey, K.C., will open a discussion on The Legal Consequences of Shock.

A post-graduate course to be held in Strasbourg from June 21st to July 1st inclusive will deal mainly with modern diagnostic methods and treatment in connexion with medical and surgical tuberculosis and certain affections of the respiratory tract. Lectures will be followed by discussions, clinical examinations, cinematograph demonstrations, and illustrations of the various procedures described. In addition to the special consideration of pulmonary radiography, bronchoscopy, thoracoplasty, and pneumothorax, the lecturers will devote sessions to tuberculous osteitis, arthritis, and laryngitis, mediastinal new growths and adenopathies, and asthma from the oto-laryngological standpoint. The fee for the course is 300 francs. Further information can be obtained from Dr. Vaucher, Quai Finkwiller, 8, Strasbourg.

Professor Emile Sergent will hold a post-graduate course on tuberculosis at the Hôpital de la Charité, Paris, from *June 12th to July 8th*.

The medical profession was well represented at the Rotary Conference held at Scarborough from May 4th to 9th. About twenty medical Rotarians attended the vocational group meeting on the Saturday, when Dr. Jonas presided, and at which many interesting topics were discussed.

The Committee of Award of the Commonwealth Fund Fellowships has issued a list of appointments to fellowships tenable by British graduates in American universities for the two years beginning September 1933. These fellowships are offered by the Commonwealth Fund of New York, of which Mr. Edward S. Harkness is president. H. W. Mulligan, M.B., Ch.B., M.D., University of Aberdeen, of the Indian Medical Service, is appointed to a fellowship in medicine at the University of Chicago.

British doctors are being invited to join a party of medical men who will leave this country in September next for a tour of about a fortnight to spas and other resorts in the Dolomite region on the Lake of Garda in the Apennines, etc.; the cost of the tour, which will start at Venice and finish at Rome, is about £23. The group will be in charge of an English-speaking Italian doctor, and receptions and entertainments will be arranged by the local authorities at the various resorts. There will be no night travel in Italy, and a special train composed of first-class coaches will be used throughout. Each doctor will have the option of taking his wife, son or daughter, and special railway tickets will be provided so that at the conclusion of the tour members will at liberty to visit other parts of Italy at half fare. Details of the arrangements may be had from the manager of the Italian State Tourist Department (E.N.I.T.), 16, Waterloo Place, Regent Street, S.W.1.

The Cambridge University Press announces for early publication a book entitled *The Digestive Tract: A Radiological Study of its Anatomy, Physiology, and Pathology*, by Dr. A. E. Barclay.

The Trade Marks Committee, set up in January last under the chairmanship of Viscount Goschen to consider and report whether any, and if so what, changes in the existing law and practice relating to trade marks are desirable, is continuing its meetings for the purpose of hearing evidence from interested persons and associations. Any who desire to submit further suggestions or to give evidence should notify the secretary to the committee, Mr. R. W. Luce, Industrial Property Department, Board of Trade, 25, Southampton Buildings, W.C.2, not later than June 3rd.

The twenty-fifth anniversary of the death of Vittorio Marchi, the neurologist and histologist, was celebrated at the University of Modena—his Alma Mater—on May 13th.

A severe outbreak of small-pox has recently occurred at Alexandria, where 2,149 cases and 443 deaths—a mortality of 26.7 per cent.—have been notified between January 1st and March 4th.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, B.M.A. House, Tavistock Square, W.C.1.**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish for notice to be taken of their communications should authenticate them with their name, not necessarily for publication.

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of proofs.

All communications with reference to ADVERTISEMENTS as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager.

The **TELEPHONE NUMBER** of the British Medical Association and the *British Medical Journal* is EUSTON 2111 (internal exchange, four lines).

The **TELEGRAPHIC ADDRESSES** are:
EDITOR OF THE *BRITISH MEDICAL JOURNAL*, *Aitiology, Westcent, London*.
FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westcent, London*.
MEDICAL SECRETARY, *Medicera, Westcent, London*.

The address of the Irish Office of the British Medical Association is 15 Kildare Street, Dublin (telegrams *Bacillus, Dublin*; telephone 6250 Dublin) and of the Scottish Office, 7 Drumsheugh Gardens, Edinburgh (telegrams *Associate, Edinburgh*; telephone 24361 Edinburgh).

QUERIES AND ANSWERS

Nirvanol in Chorea

S.O.S. asks: What is the present position of the nirvanol treatment of chorea?

*** A correspondent who has used nirvanol since it was introduced into this country writes: In many cases of chorea the drug is strikingly successful but not in all. It is not possible to foresee the failures. The drug does not show its effect until about the twelfth day. A definite reaction with enlarged glands (post-cervical), a rash very like German measles, and other phenomena described in the literature usually appear about the tenth day. The dose is carefully restricted to 0.3 gram for a child of 9 years and half that dose for a child of 5 years—in each case divided into two doses (halves) given in tablet form by the mouth. The writer does not use it for a mild chorea, believing its use then not called for but for severe and stubborn cases. Some authorities condemn it believing it to be dangerous, the chief danger being temporary mental derangement. For this reason it is not advisable to give it to a mentally deficient child with chorea. The drug is stopped when the rash and large glands appear or if there is no reaction on the twelfth day. It is a drug that needs discretion but the writer has found it very serviceable.

Perpetual Snoring

Dr. M. G. FITZGERALD (Teddington) writes: Would anyone be good enough to suggest a remedy for loud snoring which takes place every night as soon as the patient a healthy married woman of 30 goes to sleep. It persists all night and she is quite unconscious of it. There is no apparent lesion of the mouth, tongue, pharynx, larynx, lung, nose or ear. Changes of posture, strapping the lips, dentures, alteration of meals, etc., have all failed. The snoring began two years ago when her child was 14 days old. I have had to give the husband a sedative and he can hear the noise all over the house.

Pruritus in Tabes

BORDERER asking for information on the following case writes: A woman aged 60 with tabes has shown definite improvement following several courses of treatment. Wassermann reaction of both blood and cerebro-spinal fluid is now negative. Life is miserable from generalized pruritus; the patient cannot bear clothing on the skin. Baths, diets, drugs, sedatives, hormones, etc., are all of no help.

Income Tax

Repayment of Loan by Instalments

M. B. borrows capital to the extent of £3,000 to buy a practice or share yielding about £2,000 per annum. The security includes an insurance policy and M. B. pays back on a seven-year capital basis at the rate of about £700

per annum of which about £200 is insurance The surgery is at the house where M B lives How will these facts affect the liability?

*** Amounts repaid on account of money borrowed are of a capital nature only The income so used is "M B's" income and he is entitled to 'earned' relief on it and must pay tax thereon accordingly So far as the annual payments represent interest on the loan he is entitled to deduct tax therefrom at the time of payment To the extent to which they are for premiums on an assurance effected by him on his own life he is entitled to the usual insurance relief No definite rule can be laid down as to the proportion of the general 'house' expenses attributable to professional work, but a basis of half and half is not uncommon

Depreciation Allowance

'P Q R" explains that he has been allowed depreciation yearly—less one seventh attributed to private use of the car In July 1932 the old car, which was written down by depreciation to £37 was lost in an accident and £35 was received from the insurance company A new car was bought for £160

*** As presumably the insurance premiums have been allowed for income tax purposes the £35 received cannot be ignored and the obsolescence allowance—to be treated as a professional expense of 1932—is therefore £37 − £35 = £2 Depreciation for 1933-4 will be 15 per cent (or 20 per cent if allowed) of £160 = £24, less one seventh for private use—that is, £21

Obsolescence of Car Temporary Cessation of Professional Work

D T' used a car from 1928 to July 1932 when the practice was sold Depreciation was allowed at 20 per cent, and by April 5th 1932 the value of the car had been thereby written down to £70 8s The amount then offered in part exchange for a new one was £25 Can any further allowance be obtained (*a*) if professional work be resumed and (*b*) if it is not resumed?

*** In our opinion no further allowance in respect of the car is legally due The "obsolescence allowance" requires as a condition the purchase of another car in replacement so that if professional work be not resumed no allowance can be claimed The matter is not so clear if another practice is taken and a car purchased in replacement of the old one but the only subject of the deduction would be the profits of the new practice and the obsolescence and replacement are irrelevant to those earnings because necessitated by the work done in the previous practice

Purchase of Lease Deduction for Rent

A H S purchased in April 1927 for £2 400 a twenty nine year lease commencing Lady Day 1942 Prior to that date the rent was £240 subsequently it is £100 He asks what is the equivalent rent and to what extent the tax paid under Schedule A has to be borne by him The net Schedule A assessment on the premises is £240

*** The calculation of the equivalent rent (that is £100 plus an annual payment equivalent to twenty nine sinking fund payments starting back in 1927) is a somewhat complicated matter and for the reason given below its ascertainment would not assist A H S" materially—assuming that the premises have not fallen in annual value since the £240 rent was fixed Suppose the true rent to be £60 + £*x* In that case there are grounds for saying that the net assessment under Schedule A should be £100 + £*x* Assuming that 'A H S" deducts two thirds of that amount as applicable for professional purposes then to that extent the more he pays under Schedule A the less he pays under Schedule D, but as regards the one third applicable to his private use of the premises any increase in the assessment affects him adversely Consequently his best course appears to be to continue to accept the net Schedule A assessment of £240 and to deduct £160 (that is two thirds of the £240) as the 'professional' rent and not two thirds of the £100 rent He will pay tax under Schedule A on £240, and recover on £100 only from the ground landlord the tax on the difference of £140 is tax on his own intangible rent—that is on the income represented by his lump sum payment of £2 400 in April 1927

LETTERS, NOTES, ETC

"Memorial to Malton Doctor"

Mr ERIC I LLOYD F R C S (London W) writes The above appeal which was announced in a letter to the *British Medical Journal* on December 17th, 1932 as well as in the *Lancet* and the *Times* has brought in £955 7s 5d Small insurance policies are being bought and the Royal Medical Benevolent Fund has agreed to administer the moneys for the benefit of Dr Parkin's boy and girl The Medical Relief Committee wish to thank the *British Medical Journal* for publishing the appeal and the public for their generous response The fund is now closed

Maternity Work in Central Africa

Dr C A MARSH (Bath) writes from Central Africa As a visitor to the American Mission at Kumosi near the northern shore of the Victoria Nyanza I had the opportunity of seeing something of native methods of midwifery in addition to well conducted labour in the Mission Hospital Labour is not so easy in this district as in ours and I am told this is because the pelvis approximates to the male type owing to women beginning to carry loads too young The elderly women who preside do not believe in any rest between the pains and the patient is urged to make effort the whole time uterine inertia being the common result When labour is properly begun the patient is taken from the hut by an exit other than the normal door sometimes through some quite small opening I could not discover the objection to using the ordinary doorway She is placed on the ground in the banana grove which adjoins every hut in this part and the population of the neighbourhood attends to watch the proceedings The patient is quite devoid of clothing If after several days the baby is *not* born, assistance is sought from a doctor attached to the Mission Hospital I went with the doctor to such a case and on arrival found the woman had been in labour four days She was lying naked among the banana trees and about a hundred natives—at least half of them men—were in the immediate neighbourhood A native stretcher was produced and the patient was carried to the nearest point to which a car could be driven She was placed with one woman and several men in a box body car and driven fourteen miles over rough country to the hospital which is situated on the edge of the new Kakamega goldfield On examination I found a stinking faecal odour which made me suspect ulceration through the intestine but this proved not to be the case There was complete uterine inertia, but no haemorrhage A large caput was presenting and all liquor amnii had drained away The position was left occipito anterior but the only difficulty appeared to be a large baby unfavourable methods, and lack of strength in a woman with her eighth child I was invited to finish the job, which was fairly easily accomplished with forceps in the hospital with a native attendant as a skilful anaesthetist When last seen she was doing well Another case I went to see proved a B B A and the patient was back in her hut The baby was a few hours old and was being nursed by another woman The cord had been successfully tied and divided Many people of both sexes were squatting round in the hut and I had to inquire which was the patient A smoky fire was burning beside her in spite of a tropical temperature There is a teeming population in the neighbourhood notwithstanding high maternal and infantile mortality The tribe is Bantu Kavirondo

Torsion of the Omentum

Mr E M COWELL (London W) writes In your issue of May 6th (p 784) Mr L Brill of Leeds describes a case of complete torsion of the omentum He has apparently not consulted one authority on the subject, an American text book May I refer him to my paper published in the *British Journal of Surgery* (1925, xii 738) in which a complete bibliography was given Several reports of such cases published in the *British Medical Journal* have referred to this article

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 41 42 43 44 45 48 and 49 of the advertisement columns and advertisements as to partnerships assistantships, and locumtencies at pages 46 and 47

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 22

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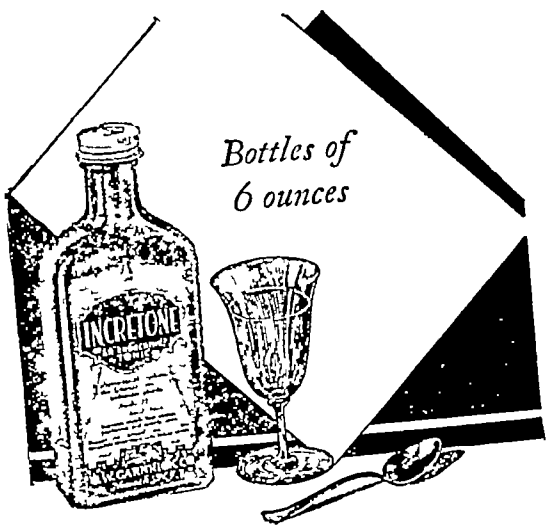

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EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

357 Atophan (Cinchophen) Jaundice

K Larsen (*Ugeskrift for Laeger* February 16th 1933 p 189) recording a case of atophan jaundice has found in the literature records of ninety six cases forty-two of which proved fatal In the thirty five fatal cases in which a post mortem examination was made acute yellow atrophy of the liver was diagnosed The sex was not stated in twenty two cases Among the remainder including the author's own case were thirty males to forty five females There were only two cases under the age of 19 Between the ages of 20 and 40 there were twenty three cases between 40 and 60 there were thirty-eight cases and over 60 there were ten cases There were twenty four cases in which the age was not recorded The dosage and the period during which the drug was given fluctuated between such wide limits that it was impossible to establish any definite toxic dose The smallest dose was 4 5 grams given over a period of five days The largest dose was about 460 grams given over a period of about three years It is probable that the patient's general health the pre-existing condition of the parenchyma of his liver and idiosyncrasy played an important part Since atophan was introduced in 1908 by Weintraud it has been extensively used in uric acid rheumatic and gonorrhoeal arthritis neuralgia myalgia and certain diseases of the skin and eyes The ninety six recorded cases of atophan jaundice are few in comparison with the total number of patients taking atophan but it is probable that several other cases of atophan jaundice have escaped recognition or at any rate record As an anti rheumatic remedy atophan should therefore be given alternately with other anti rheumatic remedies and at as short intervals and in as small daily doses as possible The patient must also be closely supervised as long as he is taking atophan so that it can be discontinued on the first sign of poisoning A history of idiosyncrasy to atophan on a previous occasion should be taken as a warning against prescribing it again

358 Pathogenesis of Diabetes

In the last five years several German writers have described numerous cases of diabetes associated with cholecystitis cholangitis and hepatic cirrhosis E Becker (*Med Klinik* January 27th 1933 p 154) has collated these reports which show that in 38 per cent of recorded cases diabetes was a definite sequel of cholecystitis Some writers found in a large proportion (24 to 36 per cent) of all diabetics definite evidence of old or of concurrent cholecystitis or of other diseases of the bile ducts or of the liver parenchyma Necropsies revealed only slight changes in the pancreas and the islands of Langerhans but on the other hand the hepatic parenchyma exhibited definite lesions According to Becker the latter condition must lead to a derangement of carbohydrate metabolism thus giving support to the old theory of hepatic diabetes For this hypothesis a connecting link with pancreatic disease is not essential There is some evidence that hereditary disposition is the decisive factor The majority of patients are women In Becker's own series of 265 cases seventy-one patients (26 8 per cent) exhibited symptoms of definite gall bladder disease Freund however does not admit the frequency of antecedent cholecystitis in diabetes It has been shown that the occurrence of familial diabetes and of diseases of the bile ducts and gall bladder is not uncommon the last named may be the starting point of a secondary pancreatic lesion leading ultimately to damage to the islands of Langerhans In another series of 265 patients hepatic lesions were found in 129 cases (49 68 per cent) Of these forty-one were cases of cirrhosis (of which thirty five occurred in males) Becker believes that the presence of hepatic hyperaemia fatty infiltration or commencing hepatic cirrhosis is frequently unrecognized during life and therefore the question whether the primary lesion is cirrhosis or diabetes cannot be decided at the present time

359 Concurrent Typhoid Fever and Diphtheria

L P Gorrichon (*Thèse de Paris* 1933 No 6) states that the association of typhoid fever and diphtheria was first described in 1859 by Oulmont, who reported a mild epidemic of diphtheria among the typhoid patients in the Hôpital Saint-Antoine Paris A small epidemic of diphtheria among the typhoid cases in the same hospital was recorded by Gallard in 1880 In 1907 Rathery observed a few cases of typho-diphtheria in Chantemesse's typhoid wards Subsequently no further mention was made of the association until the beginning of the war when important communications were made to the Société Médicale des Hôpitaux de Paris by Joltrain Rathery and Labbé who reported 120 109 and fourteen cases respectively Since the war the subject has been forgotten apart from the Paris theses of Pigeon in 1922 and Haye in 1927 Typho-diphtheria is a very severe affection which is chiefly found in hospitals either because the contagion is due to carriers or because the virulence of the bacilli in the typhoid patients who had hitherto been merely carriers suddenly becomes exalted as the result of typhoid fever The disease usually runs a very severe course owing to the complications due to diphtheria and typhoid fever or from acute typho-diphtheritic cachexia In addition to the ordinary treatment for typhoid fever diphtheria antitoxin should be given early and in large and repeated doses It is hoped that typho-diphtheria can be stamped out by the generalization of combined inoculation against diphtheria and typhoid fever Gorrichon records a sporadic fatal case in a woman aged 44 in whom diphtheria occurred in the second week of typhoid fever Death was due to broncho-pneumonia There was no necropsy

Surgery

360 Parathyroid Operations in Various Affections

R Leriche and A Jung (*Rev de Chir* January 1933 p 5) record details of twenty-one cases of various diseases in which operations on the parathyroid glands were performed In all the cases (except one in which hyperparathyroidism was present) they excised one or both parathyroid glands In their absence resection of the terminal segment or of two thyroid arteries was performed Two cases of Recklinghausen's disease showed that parathyroid adenomata usually considered as characteristic of this condition are not always present The authors suggest that this tumour is only a secondary formation and not causal and that possibly at the onset of the disease it does not exist or is only slightly visible The good results obtained in seven cases of scleroderma show that parathyroid surgery is certainly indicated in this affection In two personal cases of ankylosing polyarthritis this operation was unavailing but excellent results were obtained in a third and have persisted for twenty-three months Resection of the thyroid artery in two cases of spontaneous keloids caused a certain amelioration but this was not very marked or permanent Clinical improvement with a return of the calcaemia to the normal followed a similar operation in a case of painful spinal callus with hypercalcaemia but it was too early to estimate the probable ultimate benefit One parathyroid gland was excised in a case of Paget's disease and in another case sympathectomy of the thyroid arteries with the application of carbolic acid to the arterial pedicles

was performed Although both patients experienced relief the authors doubt if this disease is really benefited by parathyroid surgery

361 Hydatid Cysts of the Pelvis

J Okinczyc and P Moulonguet (*Bull et Mém Soc Nat de Chir* February 25th 1933, p 301) report two cases of hydatid cyst of the pelvis which were treated surgically and made good recoveries In both cases recurrence took place and confirmed the grave prognosis in cases of this type of hydatid cyst Diagnosis is very difficult and is seldom made prior to operation pain is very slight and the evolution of the disease slow the patient showing no symptoms of disorder in general health The prognosis is more hopeful in cases where the disease is confined to the pelvic girdle than when it extends to the joints particularly the hip joint In the latter case there are signs of pseudo coxalgia with pain, loss of function and secondary infection When the osteitis is complicated by arthritis, and when operation on the joint is necessary in addition to bone resection the outlook is comparatively hopeless, as death occurs more or less quickly from septicaemia On the other hand when the parasitic infection is limited to the pelvic bones the evolution of the disease is so slow and obscure that the bone may be nearly destroyed before some slight injury causes a spontaneous fracture and reveals the extent of the disease It is only in early diagnosis, whenever possible that surgical intervention can offer any hope of removing the parasitic infection *en bloc* Otherwise the extension of the disease is so insidious and erratic that it is almost impossible to remove every trace of infection, and tissue may be left which will be the seat of possibly fatal recurrence The iliac bone is the most common site of infection and in these cases a considerable resection is possible and has given good results When the parasitic infection extends towards the sacrum and the coxo femoral joint a secondary infection is usually present and drainage alone is possible to retard the issue, which can only be fatal In the cases reported, diagnosis of a cold abscess was made in one instance and of a lipoma in the other Recurrence occurred in both cases, necessitating further surgical intervention, but at the present time both patients are alive and well

362 Treatment of Empyema Thoracis

John F Connors (*New York State Journ Med* February 1st, 1933 p 149) records further experiences in the treatment of empyema thoracis by packing The author emphasizes that unless there are signs of rapid downward progression operation should be postponed until the time when the patient's condition is improved This is accomplished by not only waiting until the pus is thick, but by strengthening the patient's resistance by daily pleural taps by allowing time for subsidence of any possible underlying pulmonary infection, by forcing nourishment and fluids and if necessary, by blood transfusion The operation consists of the removal, through an incision made according to the position and extent of the empyema, of two and a half inches of two adjacent ribs These are removed subperiosteally, and the intervening muscles and vessels are clamped at each end and removed *en masse* Pus is then located with an aspirating syringe, and the opening made by the needle slowly made larger, in order to admit the nozzle of an aspirating apparatus, which as far as possible removes the pus The orifice in the chest wall is then slowly opened widely, until it is approximately two inches in diameter Through it, with the aid of the Cameron light, the greater part of the pleural cavity may be investigated, adhesions broken down and fibrin and pus removed The cavity is now packed firmly with plain gauze as much as thirty yards having been used in some cases The skin edges are protected by vaselinized gauze and a dry dressing applied Oxygen is a valuable aid in the post operative treatment, and forced fluids and nourishment and transfusion of blood are continued as before The patient is got up early—frequently as soon as the second day—and respiratory movements are encouraged by the use of Would bottles, balloons, etc The packing is removed in two days, and not replaced, except in a few special cases In almost all cases the pleural cavity is found to be perfectly clean after the removal of the packing and the lung expands freely Thereafter rapid improvement takes place and most patients are ready for discharge from hospital two weeks after operation, although of course further dressings are required The advantages of the method are claimed to be (1) the pleural cavity is cleaned within twenty-four hours and remains grossly clean until the cure is effected, (2) the ease of management post-operatively by the surgeon (3) the introduction of tubes is unnecessary, and therefore a source of pleural irritation is avoided (4) it prevents discomfort which may be due to a mobile mediastinum, by fixing it and (5) the large thoracotomy wound permits a perfect inspection of the cavity by the operator with the aid of the Cameron light

Therapeutics

363 Lactose in Constipation

According to E Boros (*Med Journ and Record* February 15th 1933, p 140) the harm resulting from constipation depends on the presence and degree of toxaemia When a patient is not toxic constipation may be regarded as of slight importance, but if he is, frequent bowel evacuations are necessary Irregularity of bowel evacuations is caused by specific factors, the most important of which are granular degenerations in the plexus of Auerbach and Meissner and in the fibres and ganglia of the sympathetic plexuses, these are caused by resorption of toxic products from the colon This interference with its normal innervation disturbs the normal functioning of the bowel The resulting constipation is due to degeneration and necrosis in the intestinal mucosa, especially in the lymphoid tissues and small glands, and in the secreting cells of the tubular glands and the epithelium These conditions also are due to toxic products formed in the intestine The putrefactive process, which is both a cause and an effect of intestinal stasis (constipation), should be relieved as quickly as possible Boros has found bacterial methods with both *B bulgaricus* and *B acidophilus* and the use of cathartics, etc, to be valueless, and he cites the opinions of various authorities as to the marked benefits obtained by lactose in this condition Fitch has stated that thoroughly efficient protection is afforded for the infant in the acidophil or fermentative bacteria imbibed in the mother's milk Lactose is a prime constituent of milk and an excellent source of energy for these microbes In cases of constipation Boros administers 2 tablespoonfuls of lactose (preferably β lactose) in half a glass of cold water half an hour before breakfast and again before retiring Cold water is given as it tends to stimulate the gastro colic reflex Results are not noticeable for a few days In the interim magnesium oxide powder is prescribed as follows one tablespoonful three daily on the first day, a half on the second, and a quarter on the third, it should then be discontinued In obstinate cases having no bowel movement during this period a bland oil should be injected rectally on retiring followed next morning if necessary by an enema containing a little water Boros has found this method to be successful in the vast majority of his patients Short notes are given of four typical cases

364 Immuno transfusion in Scarlet Fever

J E Gordon (*Journ Amer Med Assoc* January 14th, 1932 p 102) who records six illustrative cases in children aged from 23 months to 15 years, states that of 1360 scarlet fever patients admitted to the Hermann Infirmary Hospital at Detroit in the last ten years, 240 have been treated by immuno-transfusion, the two principal indications for which were early septic scarlet fever and septicaemia with late complication such as acute mastoiditis

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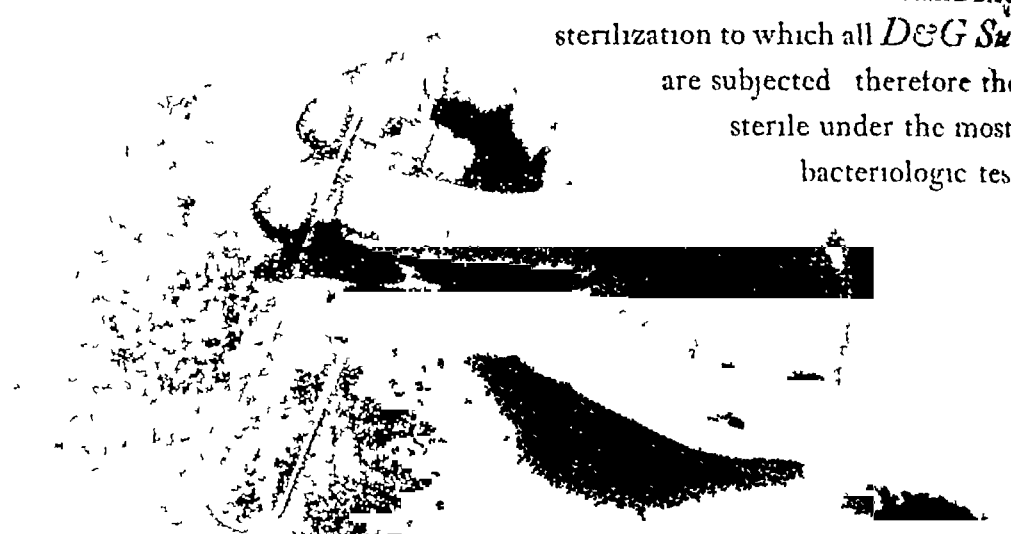

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or sinus infection. The donors were persons whose attack of scarlet fever was not more recent than thirteen days previously or later than three or four months. One transfusion was usually sufficient but sometimes from two to six were necessary. The doses were usually from 100 to 150 c.cm. for infants and young children, 300 c.cm. for older children, and 500 c.cm. for adults.

365 Splenic Extract in Delayed Dentition

P. BAIZE (*Bull. Soc. de Thér.* February 8th, 1933, p. 48) treated seventeen children presenting disorders of dentition in the form of delay in the appearance of the teeth and general symptoms such as restlessness, insomnia, and diarrhoea, by administration of splenic extract. Ten drops of a lipoid extract of the spleen were given by mouth three times a day for a period ranging from twenty days to two and a half months. With three exceptions the results were good. Baize attributes the success of the treatment of the splenic extract to its beneficial action on systematic mineralization and growth.

Neurology and Psychology

366 Treatment of Tabes by Intraspinal Arsenobenzol

J. GADRAT (*Ann. de Derm. et de Syph.* January, 1933, p. 28) reviews the treatment of syphilis of the nervous system by means of intraspinal injections of the arsenobenzol group. Since the tolerance of the subarachnoid space to foreign substances has long been established it appeared reasonable to suppose that direct injections of arsenobenzol would have a beneficial effect upon late syphilitic manifestations. Also since only a very minute quantity of drugs injected intravenously appears to reach the cerebro-spinal fluid, direct injections would seem *a priori* to have special therapeutic value. Nevertheless Gadrat brings evidence to show that this method has been almost abandoned everywhere. The reason advanced for its failure is that arsenical solutions even very dilute exert too violent an action on nervous tissue. Meningeal shock may be exhibited and even haemorrhagic reaction of the subjacent parenchyma. The dose which may provoke these conditions varies with different individuals and cannot be defined beforehand. The treatment of tabes by specific intraspinal medicaments cannot be compared with that of cerebro-spinal meningitis by anti-meningococcic serum. Also it is not proved that arsenic compounds exert a beneficial effect by direct action since the treponema can live in arsenic. It is suggested that the arsenic injected into the venous system has to undergo some profound modification before it can exercise its curative properties. Certain benefits have however resulted from intraspinal treatment, particularly in cases with very severe gastric pain. Optic atrophy is considered by Kafka as a definite indication for this method of treatment.

367 Distortion of the Visual Fields in Occipital Tumours

Differentiation of tumours of the temporal and occipital lobes especially when the lesion is on the right side of the brain may be difficult or impossible from neurological examination even when dependable perimetric fields can be plotted for hemianopsia of one form or another is very common with lesions in either situation. G. HORRAX and T. J. PUTNAM (*Brain*, December, 1932, p. 499) have therefore set out to enumerate and discuss the diagnostic importance of the field defects and hallucinations produced by tumours of the occipital lobe as a sequel to the comparable study of Cushing in 1921 in respect of the temporal lobe. Localization of a growth by ventriculography, though valuable, has certain drawbacks, especially in the case of a patient whose general condition is already precarious. In many cases clinical observations will therefore afford the only criterion available, and the present authors record a series of clinical cases with a view to showing how valuable these visual determinations can be. They state that intracranial tumours confined to the occipital lobes are relatively rare, occurring in only forty instances in a series of 1,881 cases of verified intracranial growths. In 73·6 per cent. of patients with tumours confined to or chiefly compressing the occipital lobe the fields of vision show a contralateral homonymous hemianopsia in which the central fibres remain unaffected. This is said to be particularly true of meningiomas situated at the posterior end of the occipital lobe. An upper quadrant homonymous defect of the visual fields was not found in any case of the series, and the authors regard its occurrence therefore as rare in strictly occipital tumours. Visual hallucinations were present in six out of the forty patients (15 per cent.) before the operation for removing the tumour. Careful investigation of these supported the idea that complex formed images are not provoked by occipital growths. The authors agree that a differential diagnosis of these tumours may be impossible without ventriculography. The high incidence of spared central fibres together with the rarity of upper quandrant defects in occipital growths is helpful since bisection of the macula and an upper quadrantopsia are frequent in temporal lesions. Other differential points cited are the relatively greater tendency to the true quadrantic form (bounded by the horizontal meridian) in defects due to temporal lobe growths and their greater incongruity as compared with those due to tumours of the temporal lobe.

368 Familial Disseminated Sclerosis

W. G. S. SMITT (*Nederl. Tijdschr. v. Geneesk.* February 25th, 1933, p. 882) describes a familial nervous disease developing in both sexes at puberty or in adult life and characterized by the following clinical features: an onset with psychical symptoms in the form of dementia simplex, neurological changes in the form of disseminated sclerosis, and rapid progress and absence of epileptic attacks. Nosologically the disease may be regarded as belonging to the group of familial forms of disseminated sclerosis and allied to encephalitis periaxialis diffusa and Pelizäus-Merzbacher disease.

Obstetrics and Gynaecology

369 Dangers and Contraindications of Hystero-salpingography

Although it is affirmed frequently that diagnostic methods should be absolutely safe it is inevitable that some valuable diagnostic procedures such as *x* ray examination of the pregnant uterus and exploratory laparotomy should entail some risks. The dangers of hystero-salpingography must be weighed against the value of the information that it may furnish. P. E. MORHARDT (*Gynecol. et Obstet.* January, 1933, p. 47) has collated the results obtained by various authorities. He classifies the dangers of hystero-salpingography as (1) chemio-toxic, (2) mechanical, and (3) infections or reinfections. In some cases toxic symptoms have followed the injection of collargol, sodium bromide, iodipin, and lipiodol. The last appears to be less toxic than the others if some lipiodol escapes into the pelvis it is apparently absorbed slowly but without producing serious symptoms. It is suggested that the stimulating action of the iodine is sometimes beneficial. Mechanical accidents result usually from excessive pressure. This should never exceed 200 to 250 mm. Hg. In all doubtful cases a manometer should be employed. Tubal pregnancy, carcinoma of the corpus uteri, fibroma, and uterine atrophy may induce rupture. Laceration may lead to injection of fluid into the veins and consequent oil-embolism. One writer records a death following injection of 5 c.mm. iodipin (40 per cent.) under a pressure of 80 mm. A number of cases of infection or

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reinfection of the uterus or tubes after hystero salpingography have been reported One patient who had had a streptococcal infection died shortly after injection from streptococcal peritonitis Other cases of pelvic abscess and of tuberculous peritonitis following hystero salpingography have been recorded Morhardt recommends strict attention to asepsis a long interval before or after menstruation and waiting until all inflammatory symptoms such as pain and exudation have disappeared Any intrauterine treatment may be followed by restoration of tubal permeability but it is difficult to attribute special efficacy to the employment of iodine compounds

370 Cotte's Operation

G Cotti (*Zentralbl f Gynak* January 14th, 1933 p 72) reviews the results of over 200 cases of removal of the presacral nerve—an operation practised by him since 1924 He finds its chief use in functional alterations of the genital tract especially dysmenorrhoea In ninety-one patients in whom the latter was the chief complaint, and in whom organic lesions of the genitalia were absent, as well as thirty four who had, besides dysmenorrhoea, other pelvic pains and demonstrable disease of the adnexa, resection of the presacral nerve was followed by disappearance of the pain In the first group the operation was combined with ligament-fixation and appendicectomy, in some of the second group with surgical treatment of the tubes and/or ovaries Sixteen of these patients had dyspareunia, and this also became cured Thirty pregnancies followed and proved normal Cotte states that the success of his operation is dependent on correct choice of cases the character of the menstrual pain must be carefully studied Prognosis is best when the hypogastric plexus alone shows irritation if in addition the utero ovarian plexus is affected and there is sacral backache with pain in the course of the obturator nerve, or if there is intermenstrual pain the operation is less likely to be fully successful Division of the presacral nerve cured six out of seven cases of vaginismus and was successful in sixteen cases of pelvic neuralgia and some of nymphomania and pruritus Trying his operation in five cases of neuralgia pains in inoperable or recurrent cancer of the cervix Cotte found it successful in four including one case in which the pain remained absent even after subsequent development of vesico and recto vaginal fistulae

371 Accidental Injection of Blood Vessels during Salpingography

C Becclere (*Bull Soc d Obstet et de Gynécol de Paris* January 1933 p 31) alludes to experimental injections of the uterus and tubes in operation or post-mortem specimens which proved that lipiodol might enter the blood vessels in and without the uterus if the pressure exceeded 30 cm of mercury In conjunction with Portes (p 36) he obtained radiographic evidence that a similar vascular injection had occurred in a sterile woman whose adnexa had been the subject of surgical intervention some time previously The pressure used had not been greater than 30 cm He reproduces radiograms of similar cases described by Pujol y Brull Vanrell and C Riera, and states also that a study of his radiograms after salpingography done in early cases without the use of a manometer has shown evidence of injection of the uterine blood vessels unsuspected at the time The accident in cases so far known has been well supported but pain pyrexia and haemoptysis (all transitory) have been noted In prevention the following measures are important The pressure should be measured beginning with 10 to 15 cm of mercury slowly rising to 20 cm (the usual limit) and never exceeding 30 cm Special care should be taken when the uterus is infantile and where there has previously been salpingectomy The injection must be stopped if pain is reported and signs of vascular injection should be watched for on the screen A syringe should be used of which the piston only is controlled manually

Pathology

372 The Blood Volume in Chronic Arthritis

Various explanations have been suggested for the diminished vascularity of the joints in chronic arthritis and M I Sparks and R L Haden (*Amer Journ Med Sci* December, 1932 p 753) have examined forty-one unselected cases, with either hypertrophic or atrophic forms of this disease, in order to determine whether an actual variation in the total volume of the blood in the body may account, in part at any rate, for the reduced supply to the joints. The colorimetric method of Rowntree, Brown, and Roth (using Congo red) was employed In sixteen normal persons, taken as controls the average whole blood volume was found to be 67 c cm per kilo of body weight This is a lower figure than that obtained by other workers, and Sparks and Haden attribute this discrepancy to the fact that they allowed a four minute interval instead of the more customary two-minute interval The same technique was used throughout so that the comparative value of the estimations in their series of cases is unaffected In twenty six patients suffering from atrophic arthritis the average blood volume proved to be 75 9 c cm per kilo , the highest figure was 112 c cm , and the lowest 57 c cm This is a wide variation, but in twenty cases the range was between 65 and 85 c cm This finding would seem to exclude the possibility of any decrease in blood volume being a factor in atrophic arthritis In the group of fifteen patients with hypertrophic arthritis the average blood volume was found to be slightly less than in the group of normal persons—namely 62 5 c cm per kilo, with a range of 49 8 to 76 3 c cm Overweight is usually associated with a smaller blood volume per kilo, and this fact is held by the authors to have some significance in the present connexion since the subjects of chronic hypertrophic arthritis tend to be above the average weight Only a relatively small percentage of their group of patients with atrophic arthritis were underweight, and it is held consequently that a variation in weight cannot be the explanation of the increased blood volume observed in the atrophic cases This increase is shown to be due entirely to an increase in the plasma, the volume of which was 47 7 c cm per kilo, as contrasted with 39 c cm in normal individuals In atrophic arthritis an oligocythaemic hypervolaemia is present, and in hypertrophic arthritis there is an oligocythaemic hypovolaemia Since the total blood volume in atrophic arthritis is greater than that in normal persons, with a decrease in blood in the peripheral vessels it is argued by the authors that the excess blood must be retained in the large splanchnic vessels This fact might account for the beneficial effects of breathing and postural exercises which aid in the mobilization of these large and relatively stagnant visceral pools

373 Indoxylaemia in the Aged

G Laroche, E Schulman, and Deseordes (*C R Soc de Biol* January 27th, 1933, p 290) have investigated the occurrence of indoxylaemia in thirty one patients whose ages ranged from 60 to over 80 years The indoxylaemia was determined by Grigaut's method the blood urea and phenolsulphonephthalein elimination after intravenous injection were also estimated A slight or moderate azotaemia was frequently found No parallelism was found to exist between slight azotaemia (below 1 gram) and the indoxylaemia, but three cases of marked azotaemia showed a very high indoxylaemia A clear relation was found between the indoxylaemia and the phenolsulphonephthalein elimination , the former was much more frequent when the latter was most lowered Four out of six cases with very low phenolsulphonephthalein elimination and a very positive indoxylaemia died within three months The authors believe that indoxylaemia in the aged is frequently associated with azotaemia and a diminished phenolsulphonephthalein elimination that its presence indicates an accentuated renal insufficiency and that it is a valuable aid in prognosis

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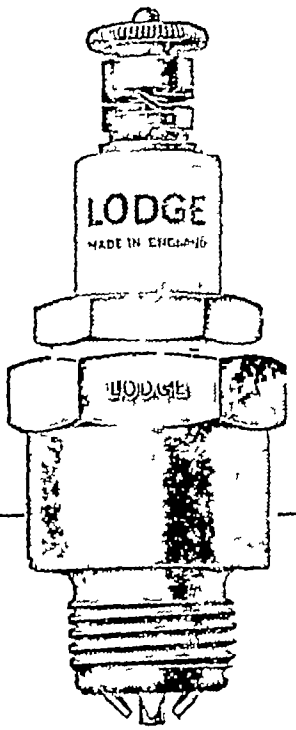

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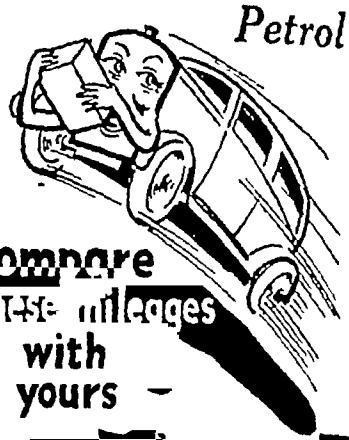

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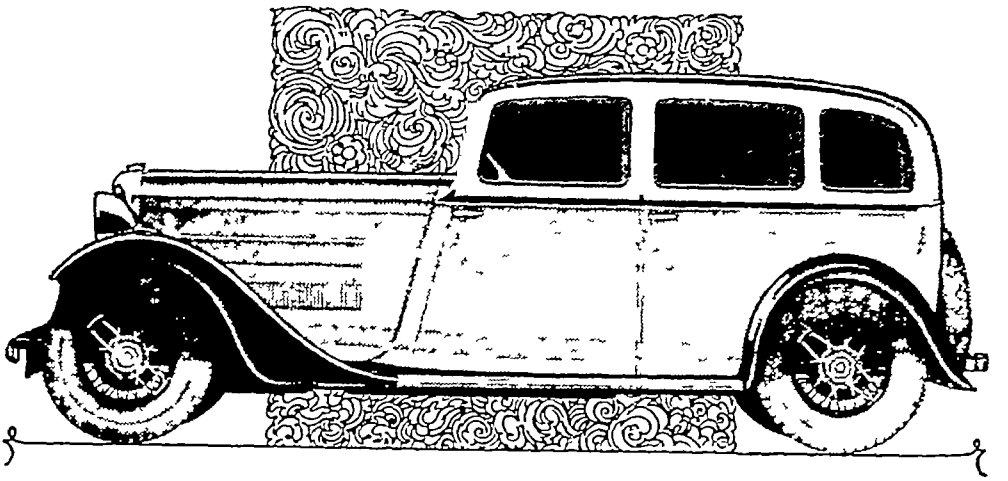

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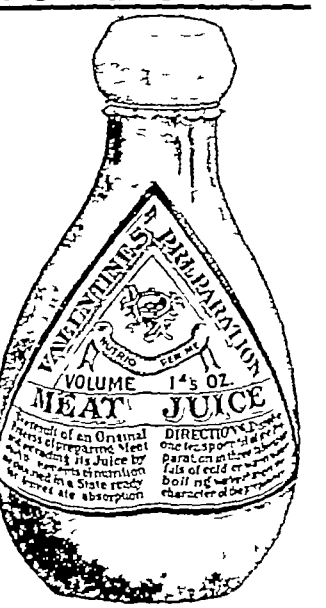

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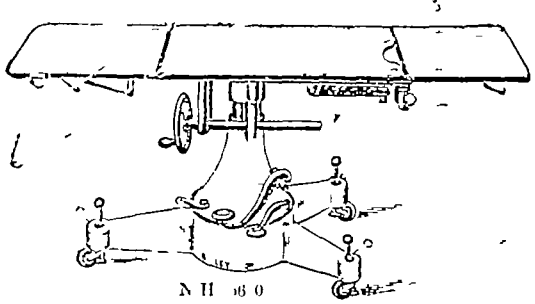

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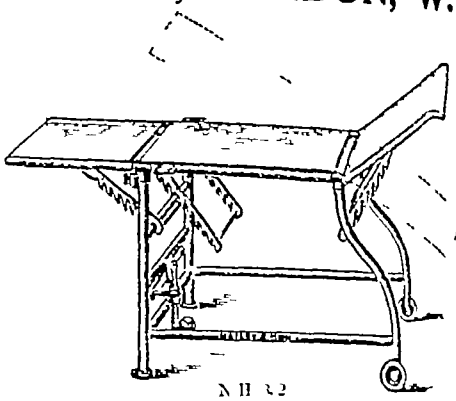

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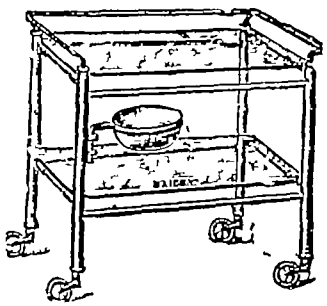

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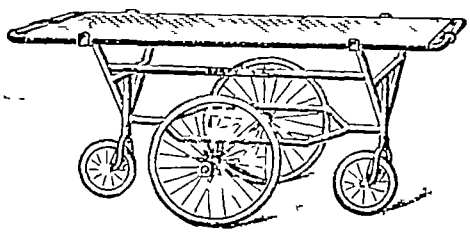

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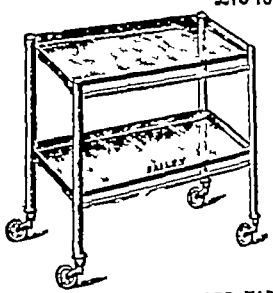

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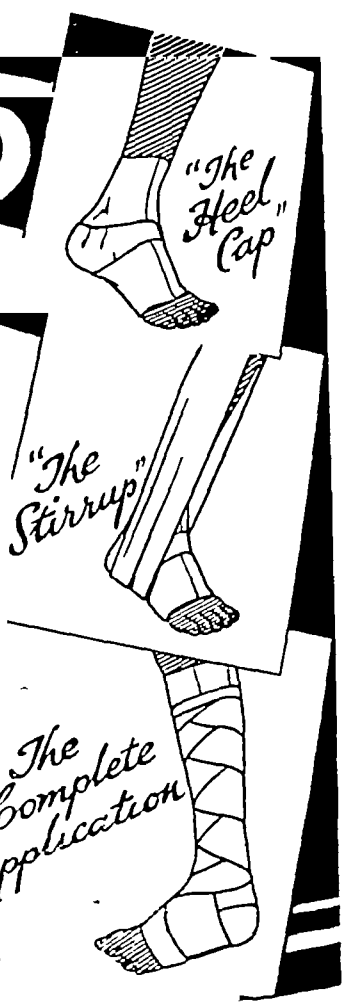

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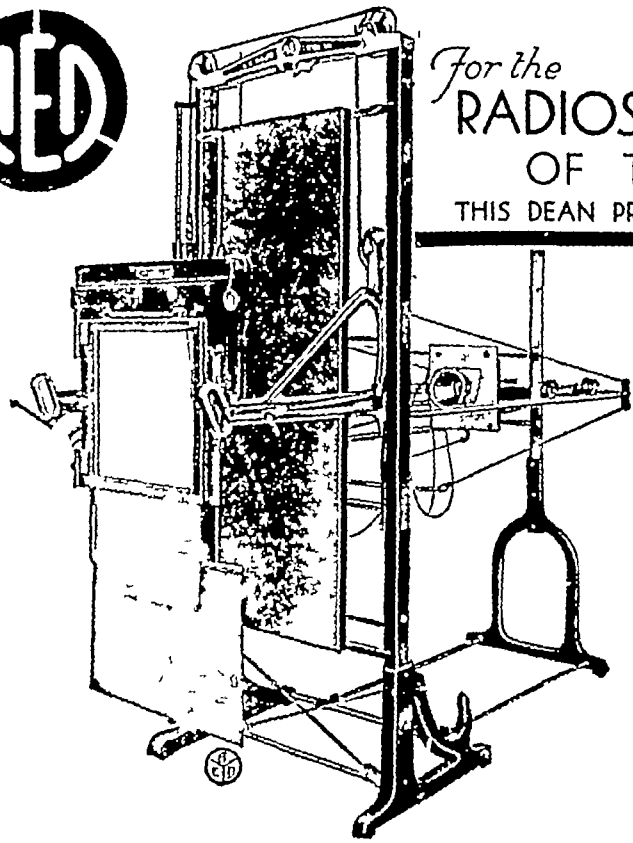

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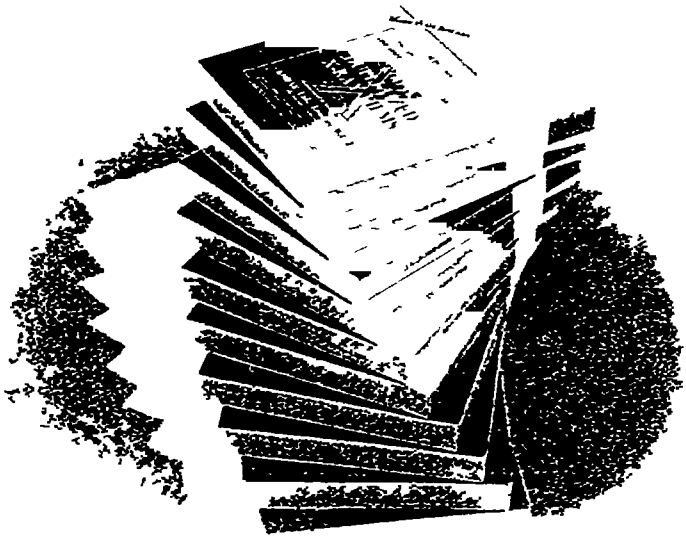

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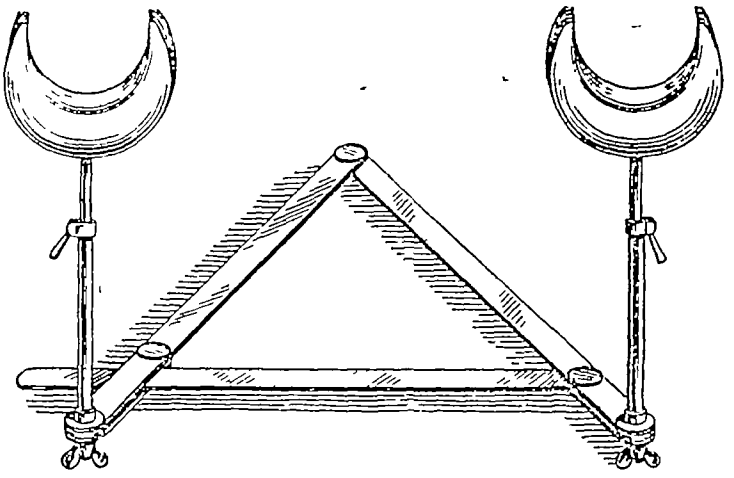

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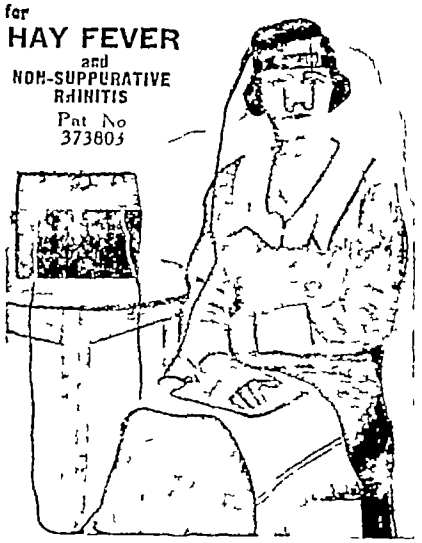

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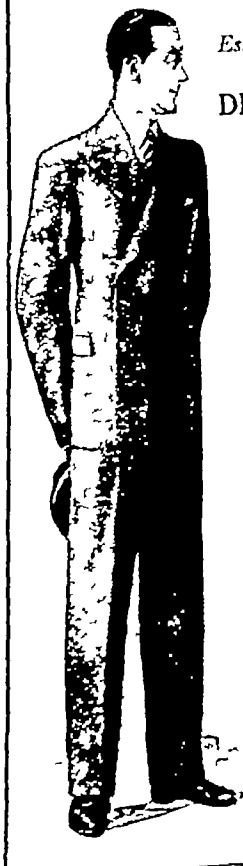

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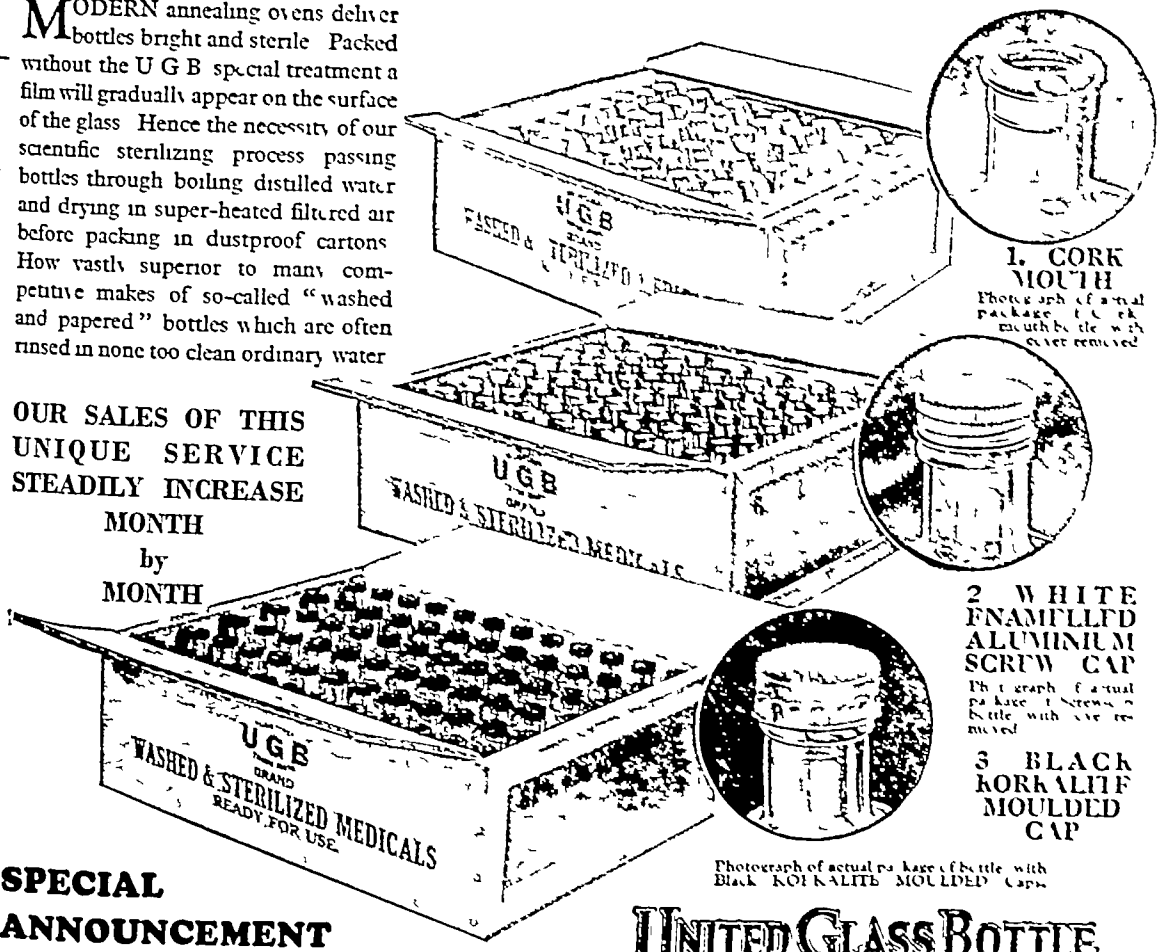

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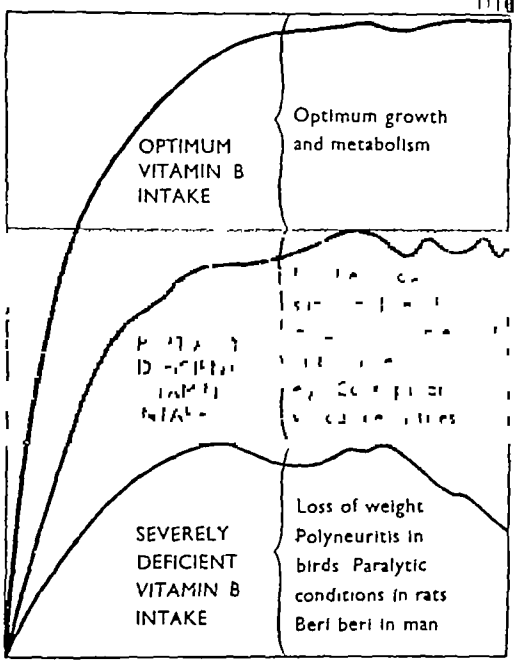

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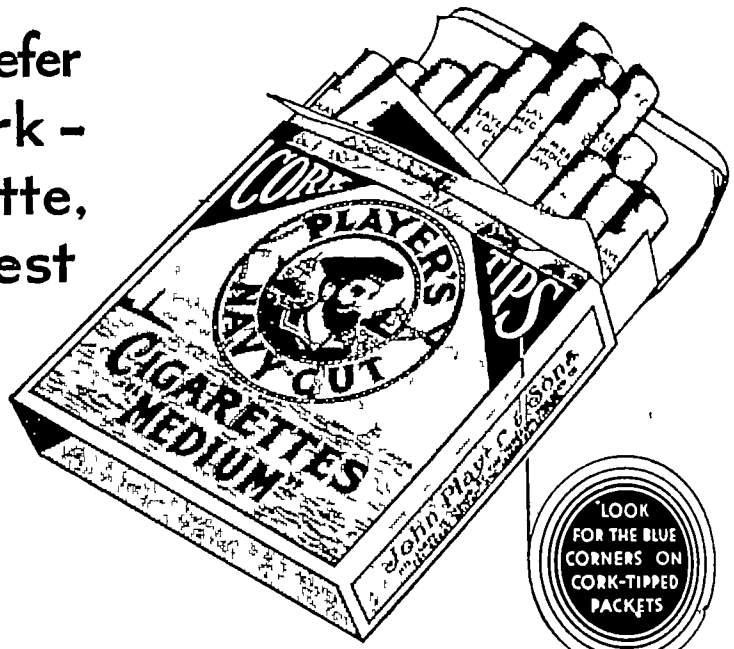

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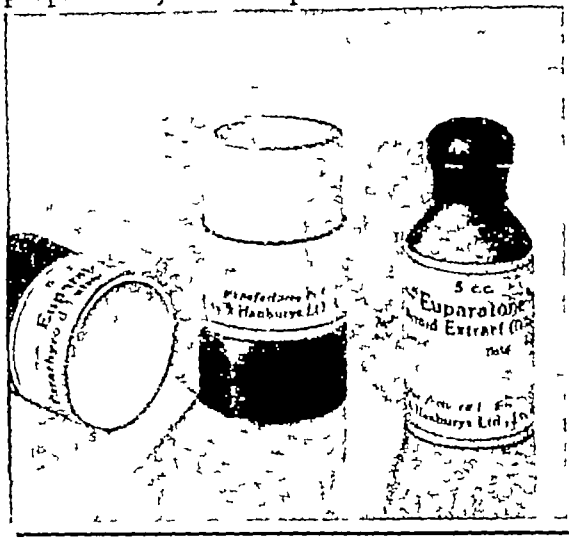

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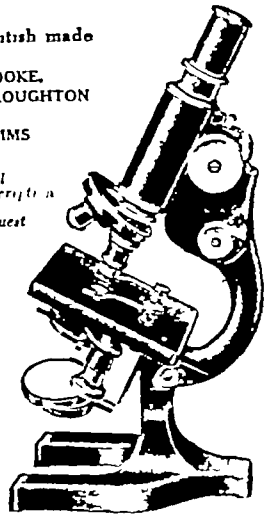

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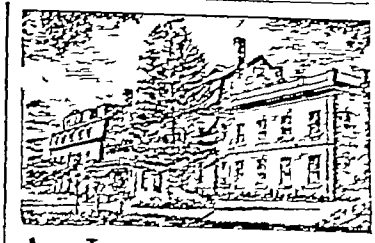

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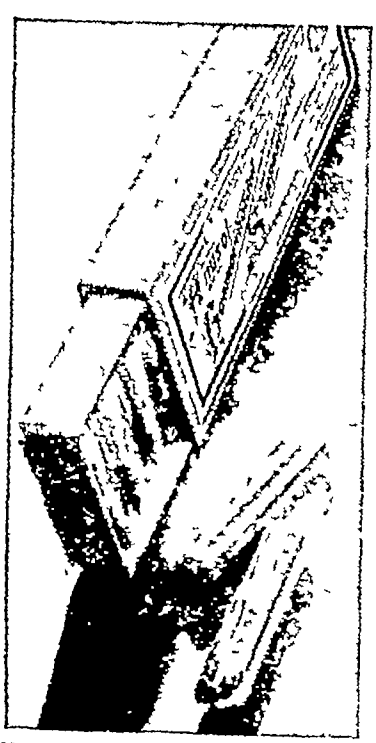

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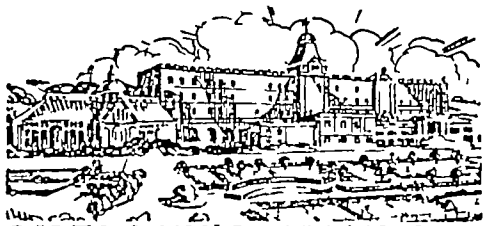

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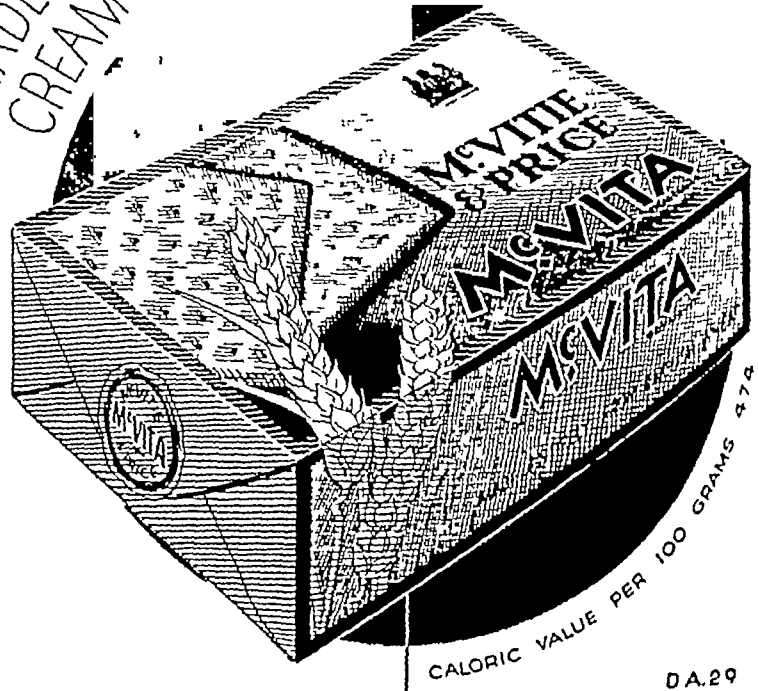

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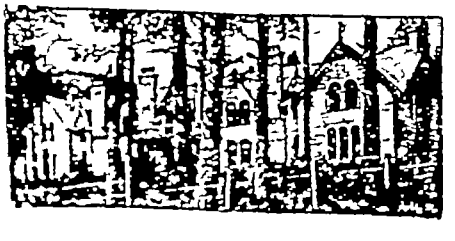

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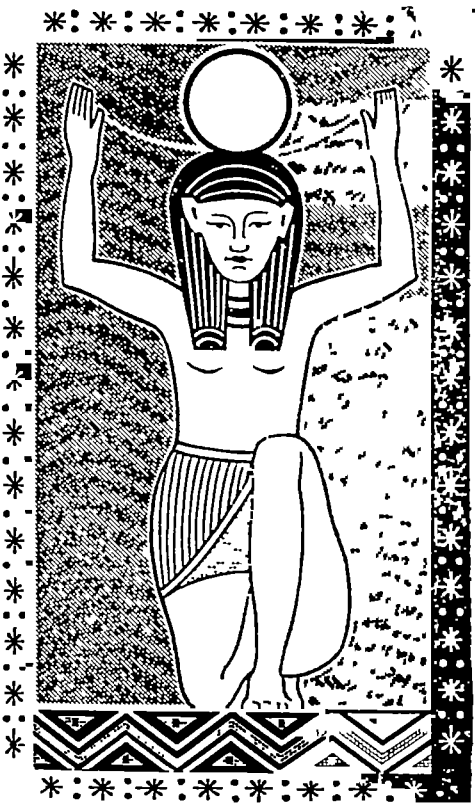

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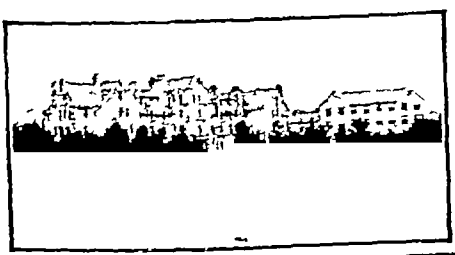

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UNIVERSITY OF BIRMINGHAM

FACULTY OF MEDICINE

PROFESSORSHIP OF PHYSIOLOGY

The Council of the University invites applications for the CHAIR OF PHYSIOLOGY, vacant by the resignation of Professor J de Burgh Daly

The stipend offered is £1,000 a year

Applications (thirty copies) may be accompanied by testimonials references or other credentials and should be received by the undersigned on or before June 12th (first post)

(A new building for the Medical School including accommodation for the Department of Physiology is about to be commenced The plans are almost complete and the newly appointed Professor of Physiology will be expected to join the Committee which is responsible for their final details It is hoped that the buildings will be ready for occupation in about four years)

Further particulars may be obtained from—

The University, C C BURTON
Birmingham Secretary
May 1933

UNIVERSITY OF LONDON

Applications are invited from Graduates of the University of London in Medicine and Surgery for the GEOFFREY DUVEEN TRAVELLING STUDENTSHIP FOR RESEARCH IN OTO-RHINO-LARYNGOLOGY The *Studentship* is of the value of £450 a year and is tenable in the first instance for one year

Applications should reach the University on or before June 12th, 1933 and must be made on the prescribed form which may be obtained together with further particulars from the Academic Registrar University of London South Kensington S W 7

UNIVERSITY OF LONDON

The Senate invite applications for the UNIVERSITY READERSHIP in CONSERVATIVE DENTAL SURGERY tenable at Guy's Hospital Medical School Salary £750 a year Candidates should have both medical and dental qualifications. Applications (12 copies) must be received not later than first post on May 30th by the Academic Registrar University of London S W 7 from whom further particulars may be obtained

ROYAL COLLEGE OF PHYSICIANS OF LONDON

The next ordinary PROFESSIONAL EXAMINATION for the MEMBERSHIP will commence on Friday July 7th 1933

Candidates are required to give twenty one days notice in writing to the Registrar of the College to whom all certificates and testimonials required by the By laws must be sent at the same time.

Candidates who propose to submit published work under the regulations now in force should apply in writing to the Registrar, *without delay* for detailed instructions as to the procedure they should follow

RAYMOND CRAWFURD M D
Pall Mall East S W 1 Registrar

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Remedial Instruction on approved lines for Stammer, Aphonia, Cleft Palate Tracheotomy and disturbed or retarded Co ordination

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LIVERPOOL SCHOOL OF TROPICAL MEDICINE

(UNIVERSITY OF LIVERPOOL)

COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on October 2nd 1933 and January 3rd 1934 and for the Diploma in Tropical Hygiene on January 11th and April 26th 1934 (Candidates for the D T H must possess the D T M of this University)

For particulars apply to the Hon Dean Liverpool School of Tropical Medicine Pembroke Place Liverpool

POST GRADUATE STUDY

The Medical Correspondence College provides ample facilities under highly qualified tutors for oral, practical and clinical instruction in preparation for the various higher qualifications and for Post Graduate Study irrespective of any examination

Diploma in Psychological Medicine
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Diploma in Radiology
Diploma in Laryngology, Otology, and Rhinology
Diploma in Public Health
Diploma in Tropical Medicine
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SKILLED COACHING GUIDANCE, and ADVICE from Special Tutors in conformity with the Regulations of the various Universities Apply for particulars and free booklet "Hints on Writing a Thesis for the M D Degree" to the SECRETARY, Medical Correspondence College, 19, Welbeck Street London, W 1

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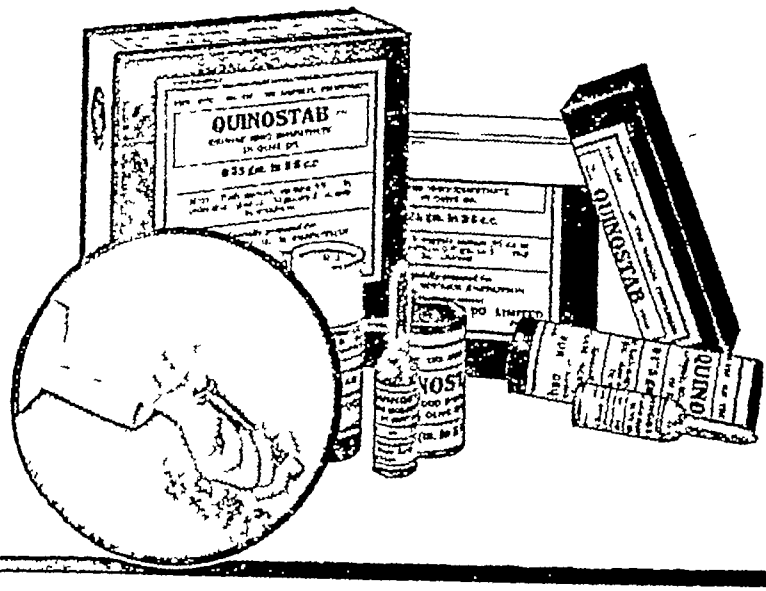

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Literature sent on request

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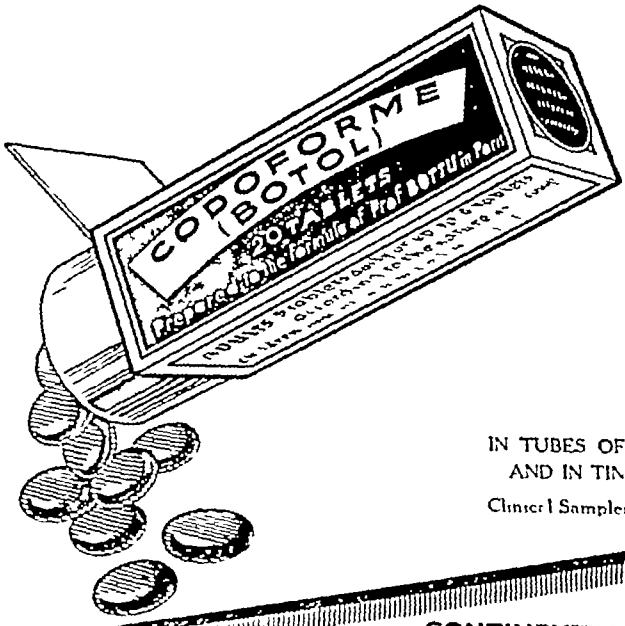

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At GREAT QUEEN'S HALL, Lanyham Place London Thursday May 25th at 8 p m, MARIE STOPES D Sc., will speak on BIRTH CONTROL." The Chair will be taken by The Rt. Hon Lord Marley, supported by Lt.-Col Sir Wm Wayland J.P M.P., Dr Henry Neilson Aylmer Maude, Esq and others.

Admission Free Reserved seats 2/6 and 1/ from Great Queen's Hall, or C.B.C. Society 108 Whitfield Street, W C.1

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN

The ANNUAL GENERAL MEETING of the Members of this Society will be held a 11 Chandos Street Cavendish Square W on WEDNESDAY MAY 24th at 5 p m precisely to transact the usual business of such meeting to elect officers for 1933—1934 and to confirm the By laws as passed at the Special General Meeting that was held on May 12th

11 Chandos St. E J BLACKETT
Cavendish Square W 1 Secretary
May 15th 1933

BRITISH COLLEGE OF OBSTETRICIANS AND GYNAECOLOGISTS

The next Examination for the Membership will be held in July 1933

Particulars may be obtained from the under signed.

W FLETCHER SHAW
58 Queen Anne St., Hon Secretary
London W 1

BOARD OF EDUCATION

APPOINTMENT OF MEDICAL OFFICER

The Board of Education invite applications from registered Medical Practitioners for appointment a Medical Officer on the staff of the Board

Applicants must be Medical Practitioners preferably between 30 and 40 years of age with a University Medical Degree a Diploma in Public Health and experience of the School Medical Service

The officer will be required to reside in London or such other area as may be determined by the Board The appointment will carry the normal Civil Service conditions as to pension holidays etc

The scale of salary will be £726 per annum rising by twelve annual increments to a maximum of £1 043. In special circumstances the minimum salary may be advanced where a candidate has special knowledge and experience.

Further particulars together with application forms which must be returned completed not later than Saturday June 3rd may be obtained on application in writing to the Director of Establishments Board of Education Whitehall, London S W.1

ERITH URBAN DISTRICT COUNCIL

ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER.

The Council of the Urban District of Erith invite applications from Medical Practitioners under the age of 40 years and of not less than three years standing in their profession for the above appointment

The commencing salary will be determined by previous Municipal service, but in no case will it be less than £500 per annum. Annual increments of £25 will be given to a maximum salary of £700 per annum

The appointment is subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and the person appointed will be required to pass a medical examination

It is terminable by three months written notice on either side and is also subject to the Council's Standing Orders Regulations and Resolutions governing staff.

The appointment is a whole-time one The duties will consist mainly of work in the School Medical Department but will include also duty in any section of the Health Services of the Council

Experience in the certification of mental defectives in ante-natal care and the possession of a registrable qualification in Public Health will be considered additional recommendation

Applications accompanied by copies of not more than three recent testimonials must be made on forms obtainable from the Medical Officer of Health Council Offices Erith to whom they should be returned to reach him not later than June 7th endorsed Assistant M O H

Council Offices DOUGLAS S TWIGG
Erith Clerk to the Council.
May 13th 1933.

CITY OF MANCHESTER

PUBLIC HEALTH DEPARTMENT

BOOTH HALL HOSPITAL

APPOINTMENT OF AN ASSISTANT MEDICAL OFFICER

The Public Health Committee invites applications from qualified Medical Men for the position of Assistant Medical Officer at the Booth Hall Hospital for Children (750 beds) Charlestown Road Blackley Manchester

Every applicant must be a registered Medical Practitioner and unmarried.

Preference will be given to applicants with previous hospital experience and good surgical experience

The hospital is a recognised training school for nurses and is equipped with all modern hospital requirements

Salary £250 per annum subject to a temporary deduction of £6 10 per annum The amount payable is therefore £243 10s with board residence and laundry in addition subject to the terms and conditions of the Manchester Corporation Grading Scheme. No bonus

The appointment will be made in the first instance for a period of six months The successful candidate however will be eligible for re-appointment for a further period of six months at the end of that period

Application stating full the age training qualifications and experience of the candidate with copies of three recent testimonials and endorsed on the envelope Assistant Medical Officer Booth Hall Hospital must be addressed to the Medical Officer of Health Civic Buildings 1 Mount Street Manchester 2 and not to members of the Committee or Council and must be received by him not later than Saturday May 27th

The candidate appointed will be required to commence duty as soon as possible after appointment to devote the whole of his time to the duties of the position to pass a medical examination to contribute to the Corporation Superannuation Fund and to execute the Deed of Service

Canvassing in any form oral or written direct or indirect is prohibited

Town Hall F E WARBRECK HOWELL
Manchester 2. Town Clerk.
May 11th 1933.

CITY OF MANCHESTER.

APPOINTMENT OF ASSISTANT TUBERCULOSIS OFFICER.

The Public Health Committee invites applications for the position of Assistant Tuberculosis Officer at a commencing basic salary of £650 per annum rising by annual increments of £25 to £750 per annum. The salary is subject to a temporary deduction (£26 5 on £650)

Candidates must be fully qualified Medical Practitioners having special knowledge of Medical and Surgical Tuberculosis and should state whether they possess the Diploma of Public Health.

Applications stating age qualifications, and experience with copies of not more than three recent testimonials, and endorsed on the envelope Assistant Tuberculosis Officer must be addressed to the Town Clerk only and not to members of the Committee or Council and must be received by him not later than June 3rd

The gentleman appointed will be under the administrative control of the Medical Officer of Health and the immediate control of the Senior Tuberculosis Officer He will be required to devote the whole of his time to the duties of his position to execute the Deed of Service, and to contribute to the Corporation Superannuation Fund

Canvassing in any form direct or indirect oral or written, is prohibited

By Order
Town Hall F E WARBRECK HOWELL
Manchester Town Clerk
May 15th 1933.

LONDON CLINIC AND INSTITUTE OF PHYSICAL MEDICINE.

The Committee of Management are about to appoint a fully qualified RADIOLOGIST at the above Clinic

Applications with not more than three recent testimonials should be addressed to the Secretary London Clinic and Institute of Physical Medicine 42, Ranelagh Road S W 1 not later than June 1st

THE UNIVERSITY OF MANCHESTER.

Applications are invited for the post of PROFESSOR OF DENTAL SURGERY AND DIRECTOR of the DENTAL HOSPITAL. Duties to commence September 29th All applications should be sent not later than June 12th to the Registrar from whom further particulars may be obtained

MUNICIPAL BOARD OF MOMBASA.

Applications are invited from British subjects for the post of MEDICAL OFFICER OF HEALTH under the Municipal Board of Mombasa, Kenya The consolidated salary of the post is £950—£40—£1,150 There is at present a 6 per cent. levy on salaries as a measure of economy No house is provided nor house allowance paid. The post is non pensionable there is no Provident Fund which the latter is instituted all Municipal Officials will be required to participate

The person appointed must be a legally qualified Medical Practitioner registered under the Medical Acts of the United Kingdom and must be registered in the Medical Register of the United Kingdom as the holder of a diploma or certificate in sanitary science, public health or state medicine Previous experience of public health work is essential The possession of a diploma in tropical medicine or tropical medicine and hygiene or previous tropical experience is desirable

The Medical Officer of Health on appointment will be granted a first-class passage to Mombasa and half salary while on the voyage He will be required to serve 3 years (and will be subject to retention for a further year if the exigencies of the service so demand) Thereafter he will be granted 3 months leave on full pay and, if returning to his appointment will have three further months on full pay a first class return passage will be provided up to £150 During 3 years service he will be entitled to three periods of local leave of 14 days each

He will be required to provide himself with motor transport the present motor-car allowance being £4 a month.

Application with copies of any testimonials and with a recent photograph should be sent by candidates in the British Isles to Dr GILES Coolgardie" Aldwick Road Bognor Regis Sussex by July 15th.

Applications from other countries should reach the undersigned by August 15th Copies of the terms of service may be obtained from Dr GILES or the undersigned

(Sgd) DONALD S. FRASER
Mombasa. Town Clerk.
May 5th 1933

HAMPSHIRE COUNTY COUNCIL.

ASSISTANT COUNTY MEDICAL OFFICER.

Applications are invited for the post of Assistant County Medical Officer Preference will be given to a woman with experience in maternity and child welfare work, including maternity centres and ante natal clinics Possession of a Diploma or Degree in public health work is essential and previous experience in tuberculosis venereal disease and medical inspection of school children will be considered an advantage

Salary £600 a year rising on approved service by increments of £50 (subject to deductions under the Local Government Officers Superannuation Act and to temporary abatement) in addition to travelling expenses

Application with copies of not more than three testimonials upon a form which, with the condition of appointment may be obtained from the County Medical Officer The Castle Winchester should be sent to him not later than June 3rd. Canvassing is prohibited.

THE INSTITUTE OF RAY THERAPY AND ELECTROTHERAPY Camden Rd N W 1

A Part time MEDICAL OFFICER is required on July 3rd The duties include assisting in the treatment and collecting clinical data

The appointment is for not less than six months and is eminently suitable for a man doing Post graduate study Full board residence and laundry is provided in addition to an honorarium at the rate of £100 per annum

THE BOLTON ROYAL INFIRMARY (301 Beds including Two Auxiliary Hospitals)

Applications are invite from Ladies having a registered Medical and Surgical qualification for the post of HOUSE SURGEON Salary £125 per annum with board residence and attendance

Application stating age nationality and previous experience together with copies of two testimonials should be forwarded to the undersigned not later than Monday May 22nd.

ALBERT E. BRISCOE, Secretary

THE WOMEN'S HOSPITAL, Catharine Street LIVERPOOL.

There is a vacancy for a HOUSE SURGEON at the above Hospital for a period of six months commencing July 1st

Salary at the rate of £100 per annum.

Application to the Hon Secretary of the Medical Board by June 10th.

"I have used Sodium Morrhuate B D H. with splendid results"

— — — L.R.C.S

The treatment of varicose veins by the injection of Sodium Morrhuate is now a standard procedure in general practice hence it is important to the physician that there is available a product of the nature of Sodium Morrhuate B D H—chemically pure and absolutely non-toxic.

Sodium Morrhuate B D H is issued for immediate injection in sterile solutions of two strengths—5 per cent. and 10 per cent.

Being thoroughly sterilised solutions of Sodium Morrhuate B.D.H produce no untoward effects on injection into the vein indeed they are used as a regular routine in general practice with the utmost possible sense of security and, as quoted above, *with splendid results.*

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For an adult the usual portion should be a dessertspoonful to a tablespoonful several times a day and at bedtime

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NORTH WALES COUNTIES MENTAL HOSPITAL DENBIGH

ASSISTANT MEDICAL OFFICER

The Committee of Visitors of the above Institution invite applications from duly qualified male candidates married or single for the post of Resident Assistant Medical Officer Salary which will be subject to the Statutory deductions under the provisions of the Asylum Officers Superannuation Act 1909 will be £500 per annum together with emoluments valued at £125 per annum for superannuation purposes If single full board, residence laundry, and attendance provided If married an unfurnished house with light water rent and rates provided free valued at £75 for purposes of Superannuation The appointment to be terminable upon one month's written notice on either side Practical experience of the modern treatment of mental conditions will be expected and a knowledge of the Welsh language will be deemed most desirable

Applications stating age qualifications and accompanied by three recent testimonials are to be sent to the Chairman of the Visiting Committee endorsed Assistant Medical Officer not later than Tuesday the 30th instant

Dated this 12th day of May 1933

WM BARKER
Clerk to the Visiting Committee

HEREFORDSHIRE GENERAL HOSPITAL (140 Beds)

Applications are invited for the post of HOUSE SURGEON and CASUALTY OFFICER (male)

Salary at the rate of £100 per annum, with board residence and laundry

The appointment will be for a period of six months The successful candidate will, subject to satisfactory service be eligible to succeed to the Resident Surgical Officer's post with a salary at the rate of £150 per annum

Applications stating age qualifications and experience together with copies of three recent testimonials should reach the undersigned on or before May 31st

T W UPTON Secretary

BRIGHTON SANATORIUM AND INFECTIOUS DISEASE HOSPITAL

Applications are invited for the post of MALE JUNIOR RESIDENT MEDICAL OFFICER Salary £150 per annum with board and lodging

The appointment is for a period of six months

Particulars and form of application can be had from the undersigned

Latest date for application for appointment June 6th

Town Hall JAS H ROTHWELL
Brighton Town Clerk
May 15th 1933

LIVERPOOL HAHNEMANN HOSPITAL HOPE STREET (52 Beds)

Applications are invited for the post of RESIDENT MEDICAL OFFICER to the above Institution Appointment is for six months renewable Salary at the rate of £100 per annum Duties include casualties occasional anæsthetics and assisting at operations mental gynæcological aural and ophthalmic Apply stating age sex nationality and previous experience and enclosing copies of recent testimonials to the Registrar before May 30th

NATIONAL HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM Queen Square W C 1

HOUSE PHYSICIAN

Applications are invited for the post of House Physician and should be sent to the undersigned accompanied by three recent testimonials not later than Wednesday May 31st The salary is £150 per annum with board and lodging

CODRFY H HAMILTON Secretary

CROSSHAM MEMORIAL HOSPITAL KINGSWOOD BRISTOL

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) Salary £150 p a with board residence and laundry for a term for six months in the first instance Applicants should be British nationality thoroughly qualified and registered

Applications not later than May 22nd to—

E J HAWKINS Secretary

MERTHYR GENERAL HOSPITAL

Applications are invited for the post of RESIDENT SURGEON for the coming six months Salary £150 per annum plus board lodging and laundry

Applications with three recent testimonials must be in the hands of the Secretary on or before May 27th

WORCESTER ROYAL INFIRMARY (142 Beds.)

Applications are invited for the post of THIRD HOUSE SURGEON (male)

The Hospital is equipped with new Operating Theatres Pathological Laboratories Orthopædic Department E N T Department up-to-date X-ray Department etc

Salary at the rate of £120 per annum together with board residence

The post offers exceptional scope for medical and surgical experience

The successful candidate will be eligible for the posts of Second and First House Surgeons which will later become vacant (salaries £150 and £180 per annum respectively)

Applications should state full particulars as to age whether married or single qualifications etc and should be accompanied by copies of three testimonials

Applications to be received by the undersigned not later than Friday, May 26th

PERCY N GLASS
Superintendent Secretary

FREEMASONS HOSPITAL AND NURSING HOME 257 Fulham Rd Chelsea, S W 3

The post of RESIDENT MEDICAL OFFICER (male) will be vacant on July 1st Salary at the rate of £250 per annum with board residence and laundry The appointment is for six months Candidates must be registered and must have held resident appointments at a General Hospital The officer appointed will be asked to proceed to the new Hospital in October

The Institution (48 beds) is for paying patients of both sexes of moderate means unable to afford ordinary nursing home treatment, etc

Applications stating full particulars to be sent on or before June 6th next to the Honorary Secretaries from whom further information may be obtained The Medical Advisory Committee will meet on June 13th next

CITY OF LONDON HOSPITAL FOR DISEASES OF THE HEART AND LUNGS, Victoria Park E 2
(Bus, Tram, and Rail, Cambridge Heath, L & N E Railway)

A vacancy for a HOUSE PHYSICIAN (male) will occur on July 1st Six months appointment Salary at the rate of £100 per annum Board residence and laundry provided

Applications with copies of three testimonials should be sent to the undersigned on or before Friday, June 16th

GEORGE WATTS Secretary

CLAYTON HOSPITAL, WAKEFIELD

There are vacancies for TWO HOUSE SURGEONS (male British) for which posts applications are invited The appointments are for six months in the first instance and the salary for each is at the rate of £200 per annum together with board residence and laundry

Applications stating age, qualifications and experience together with copies of three recent testimonials should be sent to the undersigned as early as possible

H J LANCASTER
Gen Supt & Secretary

MANCHESTER BABIES' HOSPITAL Burnage Lane LEVENSHULME. (80 Beds)

Applications are invited for the post of SENIOR RESIDENT MEDICAL OFFICER Appointment is for six months from July 1st Salary at the rate of £125 per annum with laundry Only candidates with previous Hospital experience need apply

Applications, together with copies of testimonials to be sent to the Secretary at the above address marked R M O by June 9th

ANCELA LOPEZ Secretary

CITY OF LONDON MATERNITY HOSPITAL City Road E.C 1

Applications invited from fully qualified male candidates for the post of ASSISTANT RESIDENT MEDICAL OFFICER vacant July 1st Three months appointment at £80 p a, plus board residence and laundry

If satisfactory appointee becomes Senior for three months at £100 p a

Twenty five copies of application and testimonial should reach the undersigned by June 10th

RALPH B CANNINGS Secretary

CENTRAL HOSPITAL PLYMOUTH

Wanted a fully qualified RESIDENT HOUSE SURGEON to commence duty June 1st Salary £150 per annum with board residence and laundry Appointment for six months or twelve if mutually desired Applications, stating age together with not more than three recent testimonials (which will not be returned) to be sent to the undersigned not later than May 22nd

WM W URELL F C C S
Secretary

HULL ROYAL INFIRMARY (370 Beds.)

Applications are invited from registered Medical Practitioners for the following posts (male)

CASUALTY OFFICER Vacant June 14th Salary at the rate of £150 per annum, plus residence board and laundry The officer appointed will work mainly under the direction of the Resident Surgical Officer

HOUSE PHYSICIAN at the SUTTON BRANCH Vacant June 9th Salary at the rate of £160 per annum plus board residence and laundry The Branch Hospital contains 100 beds, 45 of which are for medical cases

Candidates are expected to stay for not less than six months, but the appointments are at any time determinable by one month's notice on either side

Applications giving particulars of age experience and nationality together with copies of testimonials should be addressed to the undersigned

R J CARTER
May 15th 1933 House Governor

COUNTY MENTAL HOSPITAL LANCASTER

Applications are invited for the post of ASSISTANT MEDICAL OFFICER Candidates must be single and under 35 years of age Commencing salary £500, rising by annual increments of £25 to £600, with further increment on promotion subject to a deduction of 3 per cent under the Asylum Officers Superannuation Act There are no emoluments The successful candidate will be required to live in the Hospital and will be provided with board light etc for which a charge of £150 a year is made A temporary abatement from the gross salary will be made, the amount of the abatement on £500 being £18 15s The possession of a Diploma in Psychological Medicine will entitle the officer to an additional £50 per annum Applications giving full particulars with testimonials (copies only) should be forwarded to the Medical Superintendent not later June 5th

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN St Quintin Avenue North Kensington W 10 (58 Beds)

HOUSE PHYSICIAN (male) required for six months from July 1st Salary for first three months at the rate of £75 per annum and for second three months at the rate of £100 per with board residence and laundry in each case. Candidates should have held a recognised Hospital appointment Applications with copies of three recent testimonials must be submitted on a form to be obtained from the undersigned and should reach him not later than first post on Thursday June 8th

H J FIFY Secretary

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN St Quintin Avenue North Kensington W 10 (58 Beds)

HOUSE SURGEON (male) required for six months from July 1st Salary for first three months at the rate of £75 per annum and for three months at the rate of £100 per annum with board residence and laundry in each case Candidates should have held a recognised Hospital appointment Applications with copies of three recent testimonials must be submitted on a form to be obtained from the undersigned and should reach him not later than first post on Thursday June 8th

H J FIFY Secretary

WEST NORFOLK AND KING'S LYNN GENERAL HOSPITAL

HOUSE PHYSICIAN

Applications (male or female) are invited for the above post which will become vacant on July 19th Salary £125 per annum To have charge of Medical and Ophthalmic beds also to act as Casualty Officer and Resident Anæsthetist The post which is for six months in the first instance offers valuable experience in both In and Out patient work

Applications stating age experience etc should be sent to the undersigned as soon as possible

JOSEPH E SEARJEANT F C C S
House Governor & Secretary

SOUTH EASTERN HOSPITAL FOR CHILDREN, Sydenham S E 26

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER for six months The appointment will be from June 19th Honorarium £120 per annum with board residence and laundry Applications by letter only stating age qualifications with copies of three testimonials must be sent to the Hon Secretary Mr F F J 182 Turney Road Dulwich Village S E 21 be received not later than Saturday

MILLER GENERAL HOSPITAL, Greenwich Road S.E.10

Applications are invited for the following posts:
HOUSE SURGEON. Salary £100 per annum.
HOUSE PHYSICIAN. Salary £100 per annum.
CASUALTY OFFICER. Salary £150 per annum.
Board, residence and laundry are provided.
OUT-PATIENT OFFICER who is required to see Medical and Surgical cases. Attendance daily (except Sundays) from 9 to 1. Tuesdays 9 to 5. Salary £150 per annum and lunch.
Candidates (male) must be unmarried. The appointment are for six months from July 1st next. There are six Resident Officers.
Applications stating age, nationality, qualifications and experience, accompanied by copies of not more than three recent testimonials to be sent to the Acting Secretary not later than May 24th.
May 2nd 1933

MONTAGU HOSPITAL, MEXBOROUGH, YORKS.

Applications are invited for the positions of SENIOR HOUSE SURGEON and JUNIOR HOUSE SURGEON (ladies) at the above Hospital. The commencing salary attached to each post is £120 and £100 respectively with board, residence, laundry, etc. One month's holiday is allowed annually.
The bed accommodation is as follows: Surgical 64, Maternity 20. A further 20 beds for medical cases will shortly be brought into commission. The appointments become vacant beginning of June.
Application, giving full particulars including experience in the administering of anæsthetics, together with recent testimonials, should be forwarded without delay to the undersigned.
DONALD WILSON, Secretary.

NORTH RIDING MENTAL HOSPITAL, YORK.

RESIDENT ASSISTANT MEDICAL OFFICER.

Applications are invited from duly qualified Medical Practitioners.
Candidates should be under 35 years of age; preference will be given to one who has held a resident appointment.
Salary £350 per annum, increasing by annual increments of £25 to £450, with board and apartments. An additional £50 per annum will be paid to an officer holding a recognised Diploma in Psychological Medicine.
Salary subject to 3 per cent. deduction in accordance with the Superannuation Act 1909 and to a temporary deduction, the latter amounting to approximately £11 on the initial salary.
Applications, with full particulars of age, qualifications and experience, and with copies of recent testimonials, to be sent to the Medical Superintendent.

ALL SAI[illegible] [illegible]NITO
Austral Stre[illegible] [illegible]s Rd
S.E.11

RESIDENT HOUSE SURGEON (male) required on July 1st for six months, being three months as Junior House Surgeon with salary at £100 per annum, followed by three months as Senior House Surgeon with salary at £150 per annum.
Applications, giving particulars of age, experience, qualification, and enclosing copies of three recent testimonials, should reach me not later than May 25th.
D. H. EADE, Secretary.

BIRMINGHAM & MIDLAND SKIN HOSPITAL, John Bright Street, BIRMINGHAM.

Applications are invited from registered Medical Practitioners for the post of CLINICAL ASSISTANT in the Out-patient Consulting Room on Thursday afternoons for the four months ending September 30th. Honorarium at the rate of half a guinea per attendance.
Applications (one copy) stating age, qualification and experience should be addressed to the Secretary not later than May 27th.
The work of the hospital can be seen each afternoon except Saturdays by doctors and bona fide students.
HUBERT SUMNER, General Secretary.

YORK COUNTY HOSPITAL (200 Beds.)

The post of HOUSE PHYSICIAN (male) will become vacant on July 1st. Salary £150 per annum with board, residence and laundry.
Application, stating age and previous experience, together with copies of not more than three recent testimonials to be sent to the undersigned not later than 9 a.m. on Wednesday, May 31st.
H. E. RYAN, Gen. Supt.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL (Incorporated by Royal Charter), Bread Street, W.C.2.

A BACTERIOLOGIST is required by June 1st. The appointment is a part-time one for attendance on three days per week. Salary £75 per annum and fees from the Private Patients which approximately double the remuneration.
Candidate for the appointment must be fully qualified and registered Medical Practitioner and must have made a special study of the subject of Bacteriology.
Applications to be sent with copies of testimonials to the Secretary from whom further particulars may be obtained, not later than June 30th.
Intending candidates are requested to call upon the Staff of the Hospital, a list of whom can be obtained from the General Office.

ST BARTHOLOMEW'S HOSPITAL, ROCHESTER (126 Beds), Rochester, Chatham, Gillingham and District.

The House and Finance Committee invite application for the post of RESIDENT SURGICAL OFFICER which will become vacant on July 1st next.
Candidates must be unmarried, qualified and registered Medical Practitioners, and it is desirable that they shall have previously held a House Surgeon's appointment. The appointment is partly administrative. The appointment is for six months, renewable for a further six months at the discretion of the Committee. Salary fixed at the rate of £225 per annum, with board, residence and laundry.
Applications, stating age, qualifications, experience, to be accompanied by copies of three recent testimonials, to reach the Secretary not later than June 1st.
Canvassing the Honorary Staff will disqualify.

TYNEMOUTH VICTORIA JUBILEE INFIRMARY.

HOUSE SURGEON (male) required. Applicant must be lawfully qualified and registered. Salary £150 per annum with board, residence and laundry.
Applications, stating age, and other essential particulars, and accompanied by copies of recent testimonials, to be addressed to the undersigned from whom all particulars may be obtained.
The Hospital has two Resident House Surgeons and contains 80 beds and out-patient department, and an Out-patient department where accidents are treated.
CHARLES ROWELL, Assistant Secretary.
1 Northumberland Place, North Shields.

ELSIE INGLIS MEMORIAL MATERNITY HOSPITAL, Spring Gardens, EDINBURGH (60 Beds.)

Applications are invited from fully qualified Medical Women for the post of DISTRICT MEDICAL OFFICER rising to Senior House Surgeon after three months.
Appointment is for six months from July 1st; honorarium at the rate of £50 per annum with board, residence and laundry.
Application, with copies of testimonials, to be sent to the Secretary, 1 Brunstfield Crescent, Edinburgh, on or before June 3rd.

ELIZABETH GARRETT ANDERSON HOSPITAL, Euston Road, N.W.1.

Wanted fully qualified Medical Women for the following posts:
HOUSE PHYSICIAN, OBSTETRIC ASSISTANT, THREE HOUSE SURGEONS. Appointments for six months from July 1st next. Salary at the rate of £50 per annum with board, residence and laundry. Applications, with copies of three testimonials, to be sent to the undersigned by Friday, May 26th.
JEAN R. MURRAY, Secretary.

ELIZABETH GARRETT ANDERSON HOSPITAL, Euston Road, N.W.1.

Applications are invited from qualified Medical Women for the post of JUNIOR ASSISTANT PATHOLOGIST. Appointment one year, eligible for re-election. Salary £250 rising by £50 if appointed for second year. Duties to commence June 6th. Applications, stating age, qualifications and experience, with copies of three testimonials, to be sent to the undersigned by May 26th.
JEAN R. MURRAY, Secretary.

ELIZABETH GARRETT ANDERSON HOSPITAL, Euston Road, N.W.1.

Wanted, Two fully qualified Medical Women as MEDICAL AND SURGICAL REGISTRARS, Non-resident. Honorarium £100 per annum. Particulars can be obtained from the Secretary, to whom application, with testimonials, should be sent before the 25th instant.
JEAN R. MURRAY, Secretary.

QUEEN MARY'S HOSPITAL FOR THE EAST END, E.15. Telephone: Maryland 2566.

Applications are invited from fully qualified and registered Medical Men for the following posts:
TWO HOUSE SURGEONS. Salary £120 p.a.
ONE HOUSE PHYSICIAN. Salary £120 p.a.
ONE OBSTETRIC HOUSE SURGEON. Salary £120 p.a.
ONE HOUSE PHYSICIAN AND RESIDENT ANÆSTHETIST. Salary £120 p.a.
ONE CASUALTY OFFICER. Salary £150 p.a.
The Hospital contains 250 beds and 50 for Maternity and Children. Special Department.
Candidates who should have had Hospital appointments must be accompanied by testimonials of the same and not later than Friday, June 2nd.
The appointment will date from July 1st and will be for six months.
RAPHAEL JACKSON, M.D., Secretary.

ROYAL VICTORIA INFIRMARY, Newcastle upon Tyne (650 Beds.)

MEDICAL REGISTRAR (Open Appointment).

Applications are invited for the post of Medical Registrar to take up duties on June 5th.
Candidates must be registered in Medicine and in Surgery.
The salary is at the rate of £2-2-15s. per annum (non-resident).
Further particulars regarding duties, time of attendance, etc., may be obtained from the Honorary Secretary and Secretaries, to whom applications, with copies of three testimonials, should be sent not later than Saturday, May 27th.
S. DUNSTAN, Hon. Governors' Secretary.
May 11th, 1933.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH. (240 Beds.)

Applications are invited for TWO HOUSE SURGEONS.
Salary £100 per annum with board, residence and laundry.
Appointments are tenable for six months and are subject to renewal. Duties to commence on June 8th and 15th respectively.
Applicants must be registered under the Medical Acts.
Application, stating age and qualifications, with copies of three recent testimonials, should reach the undersigned not later than May 25th.
ARTHUR L. CASH, Gen. Superintendent and Secretary.
May 9th, 1933.

ST MARY'S HOSPITAL, W.2.

MEDICAL REGISTRAR.

The Board of Management invite applications for the above post.
Candidates for the appointment must be registered Medical Practitioners and Fellows, Members or Licentiates of the Royal College of Physicians or Graduates in Medicine of a University in the British Empire.
The salary is £200 per annum with luncheon and tea provided.
Copies of the regulations for the Medical Registrar may be obtained on application to the Secretary at the Office.
Application, with copies of three testimonials, should reach the undersigned not later than Saturday, June 3rd.
W. PARKES, Secretary.

WALLINGTON INFIRMARY AND DISPENSARY.

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON (male), unmarried.
Applicant must be a British subject, must be duly qualified Medical Practitioner.
Salary £150 per annum with board, apartments and laundry.
Application, stating age, with copies of three recent testimonials, should be sent to the undersigned. The appointment is to date from June 1.
By Order,
HENRY L. BENT, Solicitor and Secretary.
May 15th, 1933.

THE ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Road, S.E.1.

There will be a vacancy on July 1st for a HOUSE SURGEON (male) at the above Hospital. The appointment is for the first year for a period of six months. Salary at the rate of £100 per annum with board and lodging.
Application, with copies of testimonials, to be forwarded not later than Tuesday, May 23rd, to the Secretary at the above address, from whom further particulars can be obtained.

Announcing the Introduction of

ENTEROFAGOS

POLYVALENT INTESTINAL BACTERIOPHAGES

Continental Laboratories Ltd present a preparation of Laboratoire de Biologie Médicale (Nice—France) based on an entirely new conception, and used in France for several years with great success

It is made by a mixture of bacteriophages active against microbes which are usually found in intestinal infections

The bacteriophage **has no action on the human organism and is absolutely innocuous**, but in the presence of any micro-organism against which it is specially adapted, it lyses and destroys this microbe, without causing the slightest general reaction in the patient

Contrary to that which often happens with vaccines, the bacteriophage causes **neither temperature reaction nor shock**

Treatment with bacteriophage constitutes a **natural treatment**, because it has been noticed that the bacteriophage appears naturally in the organism at the moment when the invalid becomes convalescent, and when the infecting microbe disappears The bacteriophage may be considered therefore as an essential for the disappearance of the micro-organism and the onset of convalescence in the patient. **In other words the presence of the bacteriophage may be considered as the initial cause of the cure**

Per Box of 10 Ampoules
5/-
Per Box of 5 Ampoules
3/-
Less professional discount.

Enterofagos is presented in 2 c.c. ampoules to be taken orally only—Enterofagos cannot be injected

Treatment with bacteriophage is characterised by its innocuousness and rapidity of action.

IT IS THE THERAPY OF THE FUTURE

INDICATIONS

Enteritis, Acute or Chronic, Colitis Entero-Colitis.

Diarrhoea, Infantile and Senile Epidemic Diarrhoea Alimentary Intoxications

Typhoid and Paratyphoid Conditions.

Bacillary Dysentery

Various Bacillus Coli Infections.

Chronic Appendicitis.

Constipation Intestinal Fermentation, Secondary Results of Intestinal Affections, Associated conditions such as Urticaria, Eczema Herpes, and Furunculosis.

CONTRA-INDICATIONS

There are no contra indications. Bacteriophage being absolutely innocuous of itself, never gives rise to difficulties unavoidable with vaccines

Samples and literature can be obtained from

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DISTRIBUTORS OF DETENSYL, TAXOL, BOTOL, etc., e c., etc.

ROYAL SOUTHERN HOSPITAL LIVERPOOL.

Applications are invited for the post of HONORARY ASSISTANT ORTHOPAEDIC SURGEON.

Applicants must be Fellows of the Royal College of Surgeons of Edinburgh or England and must also possess special experience in orthopaedic work to which their duties will be entirely confined.

Applications and testimonials addressed to the Chairman of the Election Committee to be made not later than June 9th.

The canvassing of any member of the Election Committee will disqualify the applicant.

C. H. SPENCE
Assistant Secretary.

ROYAL UNITED HOSPITAL BATH.

HOUSE SURGEON required for June 1st. Duties include general Surgical and Ear Nose and Throat work.

Salary £150 per annum board residence and laundry.

The appointment is for six months and candidates must be male unmarried and of British nationality.

Applications with copies of three testimonials to be addressed to the undersigned by May 24th.

J. LAWRENCE MEARS
Secretary Superintendent.

ROYAL UNITED HOSPITAL, BATH.

OUT PATIENT AND CASUALTY OFFICER required.

The appointment offers opportunity of experience in medicine and surgery.

Salary £150 per annum with board residence and laundry.

Appointment for six months and candidates must be male unmarried and of British nationality.

Applications with copies of three testimonials to be addressed to the undersigned by May 24th.

J. LAWRENCE MEARS
Secretary Superintendent.

PLYMOUTH PUBLIC DISPENSARY.

The Committee of the Plymouth Public Dispensary invite applications for the post of an HONORARY MEDICAL OFFICER to start a Child Guidance Clinic.

Such Medical Officer must have experience in Psychological Medicine. Preference will be given to one holding the D.P.M. or its equivalent or with special Child Guidance knowledge.

Applications with testimonials to be sent to the undersigned by June 1st.

BASIL H. PRANCE
Hon. Secretary.

Plymouth Public Dispensary,
St. Catherine Street, Plymouth.
Dated May 10th, 1933.

EDINBURGH HOSPITAL FOR WOMEN AND CHILDREN, Whitehouse Loan, EDINBURGH. (56 Beds.)

Applications are invited from fully qualified Medical Women for the post of JUNIOR HOUSE SURGEON, rising to Senior House Surgeon after three months.

Appointment is for six months from July 1st, honorarium at the rate of £25 per annum for first three months, £50 per annum for second three months, with board residence and laundry.

Applications with copies of testimonials to be sent to the Secretary, 1 Bruntsfield Crescent, Edinburgh, on or before June 3rd.

DONCASTER ROYAL INFIRMARY. (185 Beds.)

CASUALTY HOUSE SURGEON (male) required immediately. Five House Surgeons are resident. Salary at the rate of £175 per annum with residence board and laundry. On successful applicant will be promoted to post of House Surgeon as a vacancy occurs.

This large industrial area offers excellent opportunities for gaining experience.

Application accompanied by not more than three testimonials to be sent to the undersigned.

WALTER R. SMITH
Secretary Supt.

DONCASTER ROYAL INFIRMARY. (185 Beds.)

HOUSE SURGEON (male) required immediately. Five House Surgeons are resident. Salary at the rate of £175 per annum, with residence board and laundry.

This large industrial area offers excellent opportunity for gaining experience.

Application accompanied by not more than three testimonials to be sent to the undersigned.

WALTER R. SMITH
Secretary Supt.

THE CHILDREN'S HOSPITAL HAMPSTEAD, 30 College Crescent, Swiss Cottage, N.W.3. (63 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER vacant July 1st next.

Appointment is for a period of six months with option of extending. Salary £100 per annum with board, residence and laundry.

Candidates must be duly registered Medical Practitioners.

Applications stating age, qualifications and previous experience together with copies of not more than three recent testimonials must reach the Secretary of the Hospital not later *than Thursday, June 1st.*

THE CHILDREN'S HOSPITAL, SHEFFIELD. (110 Beds.)

Applications are invited for the following post, vacant June 1st.

RESIDENT MEDICAL OFFICER (male and unmarried) who will have charge of all the Medical and Surgical beds in the Hospital. Salary commencing £175 per annum, with board, residence and laundry. Previous resident experience essential.

Applications stating age, nationality, qualifications and experience with copies of three recent testimonials, to be forwarded immediately to the undersigned.

F. H. G. GARTLAND, Secretary.

WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.1.

Applications are invited for the office of ASSISTANT PHYSICIAN FOR DISEASES OF CHILDREN to this Hospital.

Candidates must be Fellows or Members of the Royal College of Physicians. Each candi*date is required to transmit a certificate of his* age and 30 copies of his application with 30 copies of each of three testimonials to the undersigned not later than Friday, May 26th, *and to attend before the House Committee on* Tuesday, May 30th, at 4 p.m.

A copy of the Laws relating to the office may be obtained on application to the Secretary.

By Order of the House Committee,
CHARLES M. POWER, Secretary.

NUNEATON GENERAL HOSPITAL. (80 Beds.)

Applications are invited for the post of HOUSE SURGEON vacant July 1st next. Salary £150 per annum, plus board and lodging and certain other emoluments. Applicants must be fully qualified and may be of either sex but the post is one specially suitable to a medical woman.

The appointment will be made in the first place for a period of six months and applications should be addressed to the Secretary of the Medical Board at the Hospital and should be received by the morning of May 26th.

NORFOLK AND NORWICH HOSPITAL, NORWICH. (392 Beds.)

Applications are invited for the post of HOUSE SURGEON. Salary £120 per annum with board residence, and laundry. Preference will be given to a candidate who has held a previous Hospital appointment. Candidates (male) who must possess registered qualifications should forward applications stating age nationality etc. together with copies of testimonials to the undersigned not later than first post on Tuesday, May 30th.

FRANK INCH,
May 20th, 1933. House Gov. & Sec.

LEICESTER ROYAL INFIRMARY. (472 Beds.)

RESIDENT ASSISTANT ANAESTHETIST.

Applications are invited. Appointment for six months, with possibility of renewal. Salary £250 per annum with board and residence. As two of the Resident Anaesthetists are women applications from qualified and experienced women will be preferred. Particulars of special experien[illegible] of anaesthetics supporte particular refer ence to House Governor and Secretary forthwith.

May 4th, 1933.

THE LADY CHICHESTER HOSPITAL HOME (BRIGHTON) FOR FUNCTIONAL NERVOUS DISEASES. (60 Beds.)

Medical Woman required as HOUSE PHYSICIAN for six months on July 1st. Salary at the rate of £100 per annum all found.

Also JUNIOR at the rate of £50 per annum all found.

Valuable experience for Diploma in Psychological Medicine.

Applications with testimonials to the Secretary, 117 North Street, Brighton.

May 10th, 1933.

ROYAL CHEST HOSPITAL, City Road, E.C.1. (Royal Northern Group of Hospitals.)

A vacancy occurs for a PHYSICIAN. Candidates must possess the degree of M.D. or M.R.C.P. obtained by examination at a British University and be Fellows or Members of the Royal College of Physicians of London.

Full particulars of the appointment and details with regard to the submission of testimonials etc. may be obtained from the undersigned to whom applications should be sent not later than May 31st.

GILBERT G. PAINTER, Secretary.

THE QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, London, E.2.

HOUSE PHYSICIAN required July 1st.

CASUALTY OFFICER required July 6th. Some Dermatological work additional.

Six months appointments. Salary at the rate of £100 per year, with board lodging and laundry.

Applications must be made on forms to be obtained from the undersigned and must be sent in with copies of not more than four testimonials on or before June 9th.

CHARLES H. BESSELL,
May 12th, 1933. Secretary.

DISTRICT INFIRMARY, ASHTON UNDER LYNE. (General Hospital—200 Beds mainly Surgical.)

Wanted a HOUSE SURGEON. Six months appointment.

Salary at the rate of £150 per annum with board residence and laundry.

The Resident Staff comprises a Resident Surgical Officer and three House Surgeons.

Applications with testimonials to be sent at once to the undersigned.

FRANK OLIVER,
May 4th, 1933. Gen. Supt. & Secretary.

THE DEWSBURY AND DISTRICT GENERAL INFIRMARY. (100 Beds.)

Applications are invited for the post of SECOND HOUSE SURGEON. Salary £150 with board, residence and laundry.

The duties mainly comprise work in the Casualty Department and *the duties of the* Physician.

Applications stating age and experience together with copies of recent testimonials to be sent to the undersigned *before May 24th.*

The appointment commences July 1st.

H. G. IRRGE,
Secretary Supt. and [illegible]

THE HOSPITAL FOR EPILEPSY AND PARALYSIS, Maida Vale, W.9.

MEDICAL REGISTRAR REQUIRED.

Applications are invited for the post of Medical Registrar falling vacant on July 1st. The appointment is for one year, renewable for a further year. Honorarium £100.

Applications which should be accompanied by copies of not more than three recent testimonials should reach me by June 4th.

H. W. BUTTERFIELD,
Secretary & General Supt.

CHELSEA HOSPITAL FOR WOMEN, Arthur Street, S.W.3.

There will be a vacancy for a JUNIOR HOUSE SURGEON (male) on July 1st. The appointment for six months. Salary £100 p.a. He will be expected to proceed to the [illegible] post (*six months*, salary £120 p.a.) at the end of his term of office.

Candidates must be duly registered and preferably unmarried. Applications, accompanied by copies of three testimonials should reach me not later than Friday, June 9th, to Secretary, HERBERT H. JENNINGS.

CHARING CROSS HOSPITAL.

Applications are invited for the post of HONORARY CLINICAL ASSISTANT to the Radiological Department. Preference to one holding D.M.R.E. (Cantab.).

Applications together with copies of three recent testimonials should be sent to the undersigned not later than May 27th.

PHILIP INMAN,
Hon. Gen. Sec.

Charing Cross Hospital,
London, W.C.2.

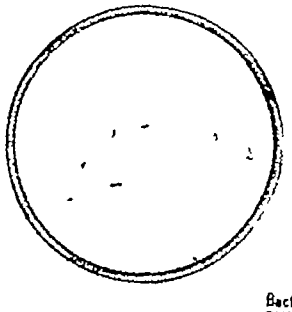
CHARING CROSS HOSPITAL.

Applications are invited for the post of HONORARY CLINICAL ASSISTANT to the Dermatological Department. Applicants with copies of three recent testimonials to be sent to the undersigned not later than May 27th.

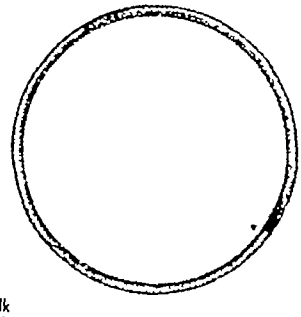
PHILIP INMAN,
Hon. Gen. Sec.

Charing Cross Hospital,
London, W.C.2.

CERTIFIED AND GRADED MILKS IN INFANT FEEDING



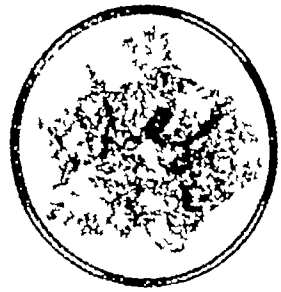
CERTIFIED MILK
Legal Limits
30 000 colonies per ml



Bacteria in Milk

COW & GATE MILK FOOD
Always below 150
colonies per ml

These are actual microphotographs



Slime in Milk.

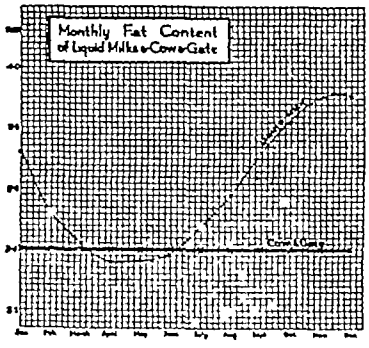
This is an actual photograph of the natural slime (cells pus blood etc.) present in all milk. Certified Grade A and ordinary but it is removed by the Cow & Gate Process

THESE are a few of the authoritative statements of the bacteriological inadequacies of Certified and Grade A Milks for Infant Feeding. (The legal limit for Grade A milk is 200,000 colonies per ml.) Cow & Gate Milk Food is cheaper than certified milk and is at once bacteriologically reliable, and biologically suitable for the critical periods of infancy. Even more important, it does not vary in composition from day to day, as is shown in the graph below.

Clinical samples and literature will gladly be sent on request.

"On two or three occasions in the summer months the supply of Grade A T T Milk has been sour before the bottles were opened It would seem therefore that unless a constant analysis is made there is no evidence that Grade A Milk is always as pure as the label on the bottle would lead one to believe The same case can be made against tuberculin tested samples, for who is to say that a cow may not become tuberculous in the intervals between the tuberculin test" *Lancet* July 18th 1931

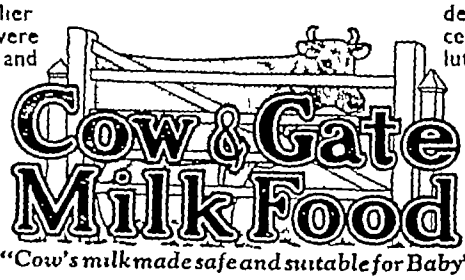
'Two licences were granted to local retailers to sell milk designated as Grade A' in bottles only as received from the supplier Seven samples of this milk were examined for bacteria, coli and dirt and three came below the standard prescribed and in one instance appeared to indicate evidence of disease in one or more of the cows supplying the milk" *M O H Report* 1930



The above graph shows the large fluctuations in the fat content of liquid milks throughout the year as compared with the unvarying fat content of Cow & Gate which is based on the fat content of average healthy Breast Milk

"Among our certified producers in July of last year 17 8% of the samples taken failed to come within the limit laid down, and with regard to Grade A T T, 48 5 of the samples were in excess of the limit In addition to failing on the bacterial count we had several samples that showed traces of blood and indications of hæmolytic streptococci" *Speech of Chairman of Leading Dairy Company* 1931

In the present state of milk supply the feeding of infants on raw cow's milk must be condemned Even the highest grade certificated milk cannot be absolutely guaranteed tubercle free, although everything possible is done to make it so" *D. R. J., Annual Tuberculosis Conference* 1931



"Cow's milk made safe and suitable for Baby"

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For the efficient treatment of

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ECZEMATOUS CONDITIONS
ULCERS AND BOILS
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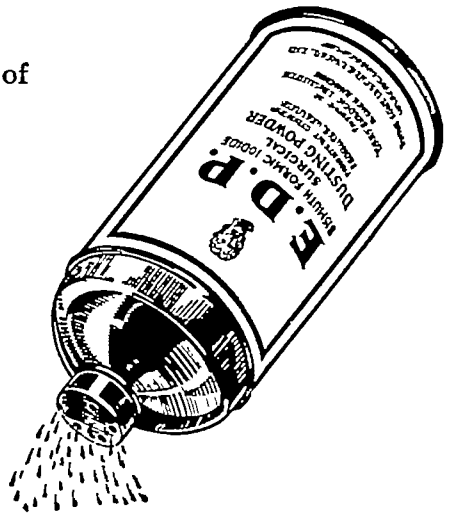
SEVERE SUNBURN



E. D. P. SURGICAL DUSTING POWDER

Contains BISMUTH FORMIC-IODIDE

Possesses disinfectant, deodorant, sedative and styptic properties By its drying action it renders conditions less favourable to bacterial growth and removes the irritating secretions which delay healing

Issued in convenient Sprinkler tins

SMALL SIZE **1/6** each

HOSPITAL SIZE **4/6** each

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APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B.M.A. House Tavistock Square W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary 7, Drumsheugh Gardens Edinburgh)

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	**CONTRACT PRACTICE** (contd.)	**PUBLIC HEALTH** (contd.)
EBBW VALE MON. (*Workmen's Medical Society*)	NEATH AND DISTRICT (*Medical Aid Association*)	WORCESTER COUNTY AND CITY MENTAL HOSPITAL. (*Junior Assistant Medical Officer*)
GILFACH GOCH GLAMORGAN (*Workmen's Medical Scheme*)	OAKDALE MON. (*Medical Officer for Medical Aid Association*)	COUNTY BOROUGH OF SOUTH SHIELDS HALTON INSTITUTION AND CLEADON COTTAGE HOMES (*Medical Officer*)
LLWYNPIA CYNHEIDRE VALE, PENYGRAIG GLAMORGAN (*Workmen's Medical Scheme*)	OGMORE VALLEY GLAMORGAN (*Ogmoredam Colliery Medical Aid Society*) (*Workmen's Medical Scheme*)	CITY OF STOKE-ON-TRENT (*Venereal Diseases Officer*)
LOWESTOFT MEDICAL INSTITUTE. (*Medical Officer*)	**PUBLIC HEALTH**	HERTFORDSHIRE COUNTY COUNCIL. WARE SANATORIUM (*Assistant Medical Officer*)
MARDY GLAMORGAN (*Workmen's Medical Scheme*)	KENT COUNTY COUNCIL. TENHAM SANATORIUM (*Male Assistant Medical Officer*) FARNBOROUGH INSTITUTION HOSPITAL. (*Resident Assistant Medical Officer*)	

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B.M.A. House Tavistock Square W.C.1

Town or District.	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch
NEW SOUTH WALES (*All Friendly Society Appointments*)	Dr. J. C. HUNTER (Medical Secretary N.S.W. South Wales Branch) 135 Macquarie St. Sydney N.S.W.	**QUEENSLAND** (*Brisbane Associated Friendly Societies Institute*) (*Toowoomba Associated Friendly Societies Medical Institute Toowoomba*)	The Hon. Sec. Queensland Branch British Medical Association B.M.A. Building Adelaide St. Brisbane	**WELLINGTON NEW ZEALAND** (*Contract Practice Appointments*)	Dr. C. F. WANSON (Hon. Sec. New Zealand Branch British Medical Association) P.O. Box 1643 Wellington New Zealand
VICTORIA. (*All Institute or Medical Dispensaries*)	Dr. J. P. MAJOR (Hon. Sec. Victorian Branch British Medical Association Medical Society Hall East Melbourne Victoria			**WESTERN AUSTRALIA.** (*Contract and Lodge Practice*)	Hon. Sec. Western Australian Branch British Medical Association No. 6 Bank of NSW Chambers St. George's Tce. Perth Western Australia

May 17th, 1933 By Order of the Council. G. C. ANDERSON Medical Secretary

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BEDFORD COUNTY HOSPITAL.
(124 Beds)

Wanted both a FIRST and SECOND HOUSE SURGEON to take over their duties May 29th for a term of not less than six months.
Salary First House Surgeon £165 Second House Surgeon £140.
They must be fully qualified male unmarried. Board Lodging and laundry.
Applications stating age nationality qualifications together with three recent testimonials to be sent to the Hon. Secretary Hon. Medical Staff Committee as soon as possible.

KING EDWARD VII HOSPITAL WINDSOR.
(181 Beds)

TWO HOUSE SURGEONS required (One for Casualty Department) for six months from July 1st. Applicants must be fully qualified men or women registered and preferably have held a resident appointment.
Salary at the rate of £100 per annum together with board residence and laundry.
Applications stating age qualification and experience accompanied by testimonial should be sent to the undersigned not later than May 27th.
ARTHUR E. CHURCHER Secretary.

ST. THOMAS'S HOSPITAL.

VACANCY

The appointment of a SURGICAL REGISTRAR AND TUTOR. Candidates must be Fellows of the Royal College of Surgeons.
Applications with full details of academic career to be forwarded with copies of testimonial to the Clerk to the Governors not later than May 24th.

ROYAL FREE HOSPITAL,
Gray's Inn Road W.C.1

for the following

with care of

SURGEON
ON

posts tenable for six months to commence July 1st.
DISTRICT OBSTETRIC ASSISTANT (salary £100 per annum) tenable for six months.
Duties to commence August 1st.
Preference is given to applications from former students of the London (Royal Free Hospital) School of Medicine for Women.
Candidates who must be fully qualified registered Medical Women should submit applications stating age and accompanied by copies of three recent testimonials to the undersigned on or before May 27th.
REGINALD R. GARRATT Secretary.

SOUTHEND-ON-SEA GENERAL HOSPITAL.
(221 Beds—Six Residents)

SENIOR RESIDENT MEDICAL OFFICER required August 1st next or earlier for one year eligible for re-appointment. Salary £300 per annum rising £50 yearly to £400 per annum. F.R.C.S. (Eng.) essential. Previous surgical and administrative experience necessary. Facilities for emergency surgery.
Applications as early as possible not later than May 31st to the Joint Secretaries.

ROYAL FREE HOSPITAL,
Gray's Inn Road W.C.1

Applications are invited from duly qualified and registered Medical Men for the following posts.
CASUALTY OFFICER.
Duties to commence August 1st for six months. Salary £150 per annum. Candidates who must have had previous hospital appointment shall submit applications and accompanied by copies of three recent testimonials to the undersigned not later than 27th.
REGINALD R. GARRATT Secretary.

ROYAL FREE HOSPITAL,
Gray's Inn Road W.C.1

Applications are invited from duly qualified and registered Medical Men for the following post.
FIRST HOUSE SURGEON.
Duties to commence July 1st for six months. Candidates should submit applications stating age and accompanied by copies of three recent testimonials to the undersigned not later than May 27th.
REGINALD R. GARRATT Secretary.

THE ST. HELENS HOSPITAL.

Applications are invited for a JUNIOR HOUSE SURGEON (male) to the Hospital at a salary of £150 per annum plus board residence and laundry. Applications accompanied by three recent testimonials to be sent to the Secretary St. Helens Hospital Lancs. not later than May 23rd.

(*Appointments continued on p. 48*)

British Medical Journal

BRITISH MEDICAL ASSOCIATION HOUSE, TAVISTOCK SQ LONDON W C 1

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WANTED BY M R C S L R C P (DURHAM Rotunda London Hosp) ASSISTANTSHIP with or without view male act 33 married experienced GP and panel abstainer drive car own furniture available — Address No 3438 B M A House Tavistock Sq W C 1

WANTED—MALE ASSISTANT UNDER 35 British with view to Partnership for industrial district in Midlands Must be keen and full and have strong personality Salary £450 and hou —Apply with refs and photo No 3333 B M A House Tavistock Sq W C 1

WANTED UNMARRIED MALE ASSISTANT English or Scotch outdoor for Practice in Midland City Salary £360 with furnished rooms and attendance 25 per cent commission on midwifery Petrol allowance if own car —No 2954 B M A House Tavistock Sq W C 1

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WANTED AT ONCE, AN INDOOR ASSISTANT male or female for an industrial town near Nottingham Must be able to drive car — Address No 3324 B M A House Tavistock Square W C 1

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DOCTORS REQUIRING QUALIFIED Dispensers Nurse-Dispensers Secretary Dispensers or Chauffeur-Dispensers are invited to write wire or phone Temple Bar 5858 The DISPENSERS BUREAU 3 Lindsay House 11 Shaftesbury Avenue London W C 2

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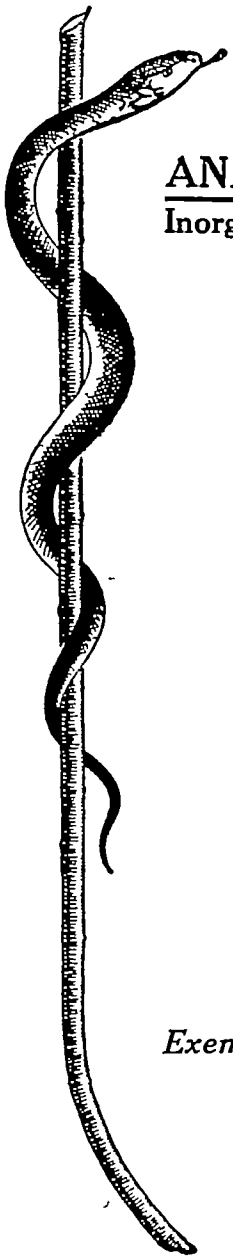

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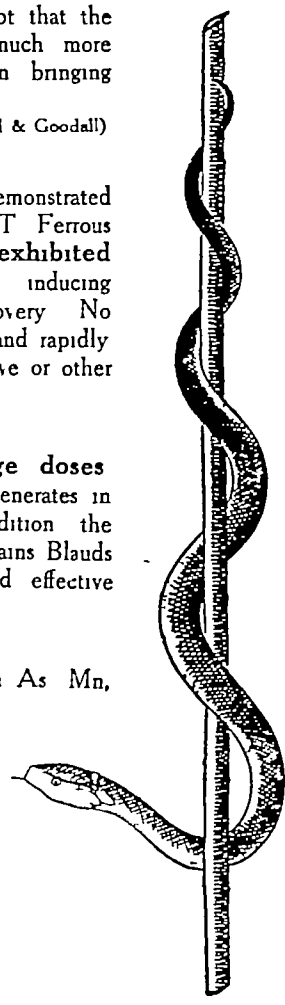

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WANTED IMMEDIATELY BY M B (GLAS) aet 33 7 years experience PRACTICE PARTNERSHIP or ASSISTANTSHIP with early view Scotland or England Pleasant house Free now Capital available — Address No 3328 B M A House Tavistock Square W C 1

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APPOINTMENTS—Contd

LONDON COUNTY COUNCIL

Applications invited for appointment to the undermentioned resident positions

Duties assigned by Medical Superintendent and include if necessary, assistance at other establishments under the control of the Council

1 ST MARY ABBOTS HOSPITAL Marloes Road Kensington W 8—*ASSISTANT MEDICAL OFFICER (Grade I) Salary £350 a year rising annually by £25 to £425 with board, lodging and washing Candidates must be Medical Practitioners of at least one year's standing and have held a resident appointment in a general hospital for at least six months Candidates should have had experience in medicine and the possession of a higher qualification in medicine is desirable There is no accommodation for a married man or for a woman

2 ST LEONARD'S HOSPITAL Hoxton Rd Shoreditch, N 1—*HOUSE PHYSICIAN Salary £80 a year with board lodging, and washing Appointment for six months in first instance but may be extended for a further period of six months. Candidates must be registered Medical Practitioners There is no accommodation for a married man In the case of a woman being appointed, marriage will terminate contract of service

*The remuneration and conditions are subject to review

Forms of application obtainable (stamped addressed *foolscap envelope necessary*) from Medical Officer of Health (Staff Division 3a) County Hall Westminster Bridge S E 1 returnable June 2nd Canvassing disqualifies Further enquiries should be addressed to the Medical Superintendent at the respective hospitals.

LONDON COUNTY COUNCIL

Applications invited for appointment of RESIDENT ASSISTANT MEDICAL OFFICER, Grade I at PARK (FEVER) HOSPITAL Hither Green Lewisham S E 13

Duties assigned by Medical Superintendent and include if necessary assistance at other establishments under the control of the Council

*Remuneration is £350 a year rising annually by £25 to £425, with board lodging and washing and is subject to the temporary reduction made by the Council from the value of the emoluments Candidates must be registered Medical Practitioners of at least one year's standing Experience in a resident appointment in a general hospital and the possession of D P H desirable. There is no accommodation for a married man or for a woman The remuneration and conditions are subject to review

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a) County Hall Westminster Bridge S E 1 returnable May 26th Canvassing disqualifies *Further inquiries should be addressed to Medical Superintendent at the Hospital*

THE JESSOP HOSPITAL FOR WOMEN SHEFFIELD (146 Beds.)

The Board of Management invite applications for the post of HOUSE SURGEON (male) to the Maternity Department (30 beds).

The appointment is for *six months from* July 1st Salary £120 per annum, plus board, residence and laundry

Previous resident experience essential

Applications stating age and experience with copies of recent testimonials should be forwarded to the undersigned not later than Monday June 5th

DAVID OSWALD Secretary

THE JESSOP HOSPITAL FOR WOMEN SHEFFIELD (146 Beds)

GYNAECOLOGICAL AND MATERNITY DEPTS

The Board of Management invite applications for the post of HOUSE SURGEON (male) for a *period of six months* commencing July 1st

Salary £100 per annum together with board residence and laundry

Applications *stating* age together with copies of testimonials should be addressed to the undersigned not later than Monday June 5th.

DAVID OSWALD Secretary

CITY OF SHEFFIELD

KING EDWARD VII HOSPITAL, RIVELIN VALLEY

RESIDENT HOUSE SURGEON required on July 1st for the above Hospital which is for the treatment of Surgical Tuberculosis and other Orthopaedic conditions (140 beds)

The officer appointed will be required to attend the Out patient Department for Surgical Tuberculosis *cases* and the Orthopaedic Clinic of the Maternity and Child Welfare Centre

Salary at the rate of £150 per annum with board and laundry Appointment for six months, with possible extension for further six months

Applications with testimonials should be sent to the Medical Superintendent

CITY OF SHEFFIELD

ASSISTANT TUBERCULOSIS OFFICER

Wanted a Male (unmarried) Assistant Tuberculosis Officer to reside at WINTER STREET HOSPITAL and to devote his whole time to the Municipal Tuberculosis Scheme

Salary £350 per annum, rising to £400 per annum by annual increments of £25 with board, residence and laundry

The office has been designated as an established post under the Local Government and Other Officers Superannuation Act 1922.

Applications stating age qualifications and experience with copies of three testimonials to be *sent on or before* May 29th to the Medical Officer of Health, Town Hall Sheffield.

THE GENERAL HOSPITAL BIRMINGHAM

Applications are invited for the following resident posts

1 SURGICAL REGISTRAR

2 GYNAECOLOGICAL AND EAR NOSE AND THROAT REGISTRAR

salary £100—£20—£140 per annum

3 TWO HOUSE SURGEONS HOUSE SURGEON to the Gynaecological Department HOUSE SURGEON to the Throat Nose and Ear Department

4 HOUSE PHYSICIAN

salary £70 per annum in each case

Applications must reach the undersigned not later than June 1st

A H LEANEY

May 16th, 1933 House Governor

ST MARYLEBONE GENERAL DISPENSARY (Incorporated) 30 Marylebone Lane W 1

The Council invite applications for the post of HONORARY SURGEON to the Ear Nose and Throat Department Every candidate for the post must be a Fellow of the Royal College of Surgeons England or of Edinburgh and practising as an Ear Nose *and Throat* Surgeon Applications with copies of testimonials should be forwarded to the Secretary not later than Saturday June 3rd Candidates will be asked to attend a meeting of the Medical Committee

M A DONALDSON Secretary

NATIONAL TEMPERANCE HOSPITAL Hampstead Road N W 1

Applications are invited for the post of HOUSE PHYSICIAN (male) The appointment will be for a period of six months at a salary of £100 per annum, and will date from June 21st Preference will be given to those who have held a resident post

Candidates must submit applications with qualifications age etc with copies of not more than three testimonials by Friday June 2 addressed to the Secretary

NATIONAL TEMPERANCE HOSPITAL Hampstead Road N W 1

Applications are invited for the post of CASUALTY OFFICER (Male) The appointment will be for a period of six months at a salary of £120 per annum and will date from June 21st

Candidates must submit applications with qualifications age etc with copies of not more than three testimonials by Friday June 2 addressed to the Secretary

NATIONAL TEMPERANCE HOSPITAL Hampstead Road N W 1

Applications are invited for the post of HOUSE SURGEON (male) The appointment will be for a period of six months at a salary of £100 per annum and will date from June 21st Preference will be given to those who have held a resident post

Candidates must submit applications with qualifications age etc with copies of not more than three testimonials by Friday June 2 addressed to the Secretary

LANCASHIRE COUNTY COUNCIL.

PARK HOSPITAL, DAVYHULME, Near MANCHESTER.

APPOINTMENT OF JUNIOR RESIDENT MEDICAL OFFICER.

Applications are invited from registered Medical Practitioners for the appointment of Junior Resident Medical Officer at the above Hospital. Candidates must be unmarried.

Preference will be given to applicants having experience in Midwifery, Gynæcology and Diseases of Children.

The appointment will in the first instance be for a period of six months, the successful applicant being eligible for reappointment for a further period of six months at the end of that period.

The salary is at the rate of £200 per annum, subject to an emergency abatement, together with the usual residential allowances.

The Hospital comprises 500 beds.

Application, accompanied by copies of not more than two recent testimonials, should be addressed to the County Medical Officer, Public Assistance (Hospital and Medical) Department, County Offices, Preston, not later than June 12th. Envelopes should be endorsed "Junior Resident Medical Officer."

County Offices, Preston. GEORGE ETHERTON, Clerk of the County Council.

May 13th, 1933.

LANCASHIRE COUNTY COUNCIL.

PUBLIC ASSISTANCE COMMITTEE.

LAKE HOSPITAL AND DARWEN HOUSE, ASHTON-UNDER-LYNE, near MANCHESTER.

APPOINTMENT OF JUNIOR RESIDENT MEDICAL OFFICER.

Application are invited from registered Medical Practitioners for the appointment of Junior Resident Medical Officer at the above Hospital and Institution, comprising 300 and 600 beds respectively.

Candidates must be unmarried.

Salary, subject at the present time to an emergency abatement at the rate of £175 per annum, together with the usual residential emolument.

The appointment will, in the first instance, be for a period of six months, the successful applicant being eligible for reappointment for a further period of six months at the end of that period.

Applications, accompanied by copies of not more than two recent testimonials, should be addressed to County Medical Officer, Public Assistance (Hospital and Medical) Department, County Offices, Preston, not later than June 12th. Envelopes should be endorsed "Junior Resident Medical Officer."

County Offices, Preston. GEORGE ETHERTON, Clerk of the County Council.

May 15th, 1933.

CITY AND COUNTY OF KINGSTON UPON HULL.

HULL MUNICIPAL MATERNITY HOME AND INFANTS HOSPITAL. (104 Beds.)

JUNIOR RESIDENT MEDICAL OFFICER (*Woman*).

Applications are invited from unmarried or widowed Women Medical Practitioners for the appointment of Junior Resident Medical Officer at the above Institution.

Salary £100 per annum, together with board, washing and residence at the Maternity Home. Salary at present subject to a temporary deduction of 2½ per cent. under the City Council's economy measures.

The appointment will be for six months with a possible extension for a further period of six months.

Forms of application and conditions of appointment may be obtained from the undersigned.

Completed applications (in an envelope endorsed "Junior Resident Medical Officer, Maternity Home"), together with copies of three recent testimonials, must be received by me not later than mid-day on Saturday, June 3rd.

Health Department, 2 CEBBIE,
Guildhall, Medical Officer of Health.
Hull, May 1933.

CHILDREN'S HOSPITAL, LUTON.

Applications are invited for the posts of CONSULTING SURGEON and CONSULTING PHYSICIAN.

Apply to the Hon. Secretary, P. F. JEFFS, Esq., 11 George Street West, Luton, not later than June 15th.

WANTED — RESIDENT ASSISTANT MEDICAL OFFICER for a period of twelve months. Salary £350 p.a. Apply for form of application to the Medical Superintendent, CHESHIRE JOINT SANATORIUM, MALBANK, BRAYTON, which should be returned not later than May 31st.

LANCASHIRE COUNTY COUNCIL.

BIDDULPH GRANGE ORTHOPÆDIC HOSPITAL.

Applications are invited from duly qualified and registered Medical Practitioners for the following posts at the above Hospital which contains 83 beds:

SENIOR HOUSE SURGEON. Salary £250 per annum (during temporary emergency duties only) together with board, residence and laundry. Candidates must have had experience in a General Hospital. Preference will be given to candidates who have had orthopædic experience.

JUNIOR HOUSE SURGEON. Salary £150 per annum (during temporary emergency duties only) together with board, residence and laundry. Preference will be given to candidates who have had experience in a General Hospital.

Both appointments will be for a period of six months in the first instance, and for a further appointment at the option of the Council but will not be terminable within that time.

Applications, with the names of two recent testimonials, should be sent not later than June 2nd to Dr. J. J. BUTTERWORTH, School Medical and Child Welfare Department, County Offices, Preston.

Duties commence 1st July.

County Offices, Preston. GEORGE ETHERTON, Clerk of the County Council.

May 11th, 1933.

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KENT — ABOUT 30 MILES FROM TOWN — Residential country. Half mare £2,300 after preliminary valuation. Only fees. No much midwifery. New house. Small rent or by. Further particulars, interview Londⁿ. Camb. Graduate.—No. 9152.

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YORKSHIRE. — OUTSKIRTS OF LARGE town. Old-established middle and better class PRACTICE averaging £980 p.a. Panel 400. Visits 3/6 to 21/-. Very little night work. Specially built house, 2 rec., 6 bed. Surgery with separate entrance. Rent £[illegible] at £100. Premium £1,250.—No. 9141.

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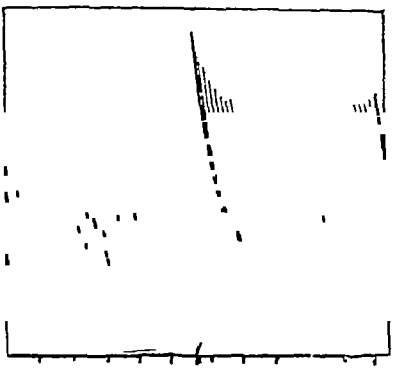

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Date Present day

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Observations
ON
ENCEPHALITIS, POLIOENCEPHALITIS, AND VACCINIAL ENCEPHALITIS IN CHILDREN*

BY
C PAGET LAPAGE M D F R C P
SENIOR PHYSICIAN ROYAL MANCHESTER CHILDREN'S HOSPITAL PENDLEBURY PHYSICIAN TO CHILDREN ST MARY'S HOSPITAL MANCHESTER LECTURER ON DISEASES OF CHILDREN MANCHESTER UNIVERSITY

Acute diseases of the brain are not rare in children Apart from epidemics meningitis is more frequently seen than encephalitis and tuberculous meningitis remains much the most common—occurring in my experience in a ratio of 6 to 1 to other acute cerebral lesions With greater attention and better methods of diagnosis much is being brought to light about encephalitis and undoubtedly many cases which were formerly called meningitis were really encephalitis It had been recognized for a long time that encephalitis may occur in infants from the virus of poliomyelitis and the recognition of epidemic encephalitis (lethargica) greatly helped to focus attention on the occurrence of encephalitis as distinct from meningitis Encephalitic diseases show a distinct epidemic tendency even vaccinial encephalitis being seemingly more prevalent at one time than another Encephalitis may follow vaccinia variola varicella[2] zoster encephalitis lethargica and poliomyelitis all of which are virus diseases It may in addition follow pertussis mumps rubella and influenza—all diseases likely to be of virus origin

The pathology of encephalitis is that of widespread and marked degeneration of ganglion cells with vacuolation neurophagy areas of hyperaemia and small haemorrhages The virus reaches the nerve cells via the blood or the perineural lymph vessels and the fluids which surround and protect the nerve tissues[1] Inflammation and hyperaemia occur with exudate so that some nerve cells are put out of action temporarily by pressure These have the power of recovery if pressure is removed but those directly destroyed by the virus are irreplaceable Virus diseases can cause encephalitis either by direct action or by activating a neurotropic virus Most probably they act directly because taking vaccinia as an example the virus of this disease has been demonstrated in the blood of a vaccinated person from the third to the tenth day after vaccination and the onset of vaccinial encephalitis falls usually about the tenth to the thirteenth day The more severe the general disease the greater is the likelihood of encephalitis The virus diseases therefore in all probability cause a direct encephalitis One could better understand a virus disease operating by activation of a neurotropic virus in the case of delayed primary vaccination or of revaccination because the older the child the greater the likelihood of an unsuspected and dormant lesion in the brain Revaccination does cause encephalitis[3] but probably not so often as does primary vaccination All virus diseases show a distinct tendency to a selective action on certain areas of the brain but it is unlikely that each virus infection causing encephalitis is selective of area and further experience is needed before we can decide the question

VACCINIAL ENCEPHALITIS

The occurrence of encephalitis in relation to vaccination was described a long time ago but its recent more frequent—and even epidemic—occurrence is of great interest and importance Quite a number of cases have been reported especially in Holland England and Germany Rolleston[4] shows that out of 5½ million people vaccinated there were roughly 175 cases and 91 died This is one case in 33 000 vaccinations and one death in 60 000 In Holland there were 146 cases and the deaths were 1 in 5 000 It is curious how groups of cases are reported from some countries and not others The lymph is not at fault because in Holland the vaccine was brought in from several different countries Nor is it due to the use of rabbits in the preparation of the lymph because rabbit lymph has been used with no untoward results in Spain The pathological changes are those of a severe disseminated encephalomyelitis evidently caused by a neurotropic virus This has been found in the blood and in the tissues in vaccinated persons but not in the cerebro-spinal fluid unless nervous symptoms have supervened A serum from immune persons has an effect on the virus The inflammation is therefore probably due to the specific virus of vaccinia Thirty to forty per cent of cases die three to ten days after onset with necropsy findings of a severe generalized encephalitis Convulsions are not infrequently seen and local palsies like hemiplegia may result but the tendency is to a general cerebral distribution of the lesion

In one case now under my care for eclampsia vaccination was performed at 23 days old On the second day after vaccination a pustule developed followed by a very severe vaccinia The symptoms of encephalitis began three weeks after vaccination and were those of many slight generalized convulsions a curious semi suppressed hiccup stupor and other brain symptoms Eclamptic attacks and some degree of mental disability have persisted

The symptoms which usually begin some ten to thirteen days after vaccination are those of severe encephalitis of acute onset with headache fever vomiting drowsiness retention of urine constipation and signs varying from convulsive irritation to flaccid paralysis Spinal puncture shows fluid under pressure with usually moderate cell increase of lymphocytes The age of onset is interesting as it is usually from 3 to 13 years This indicates that vaccination should take place in infancy and at as early an age as possible Revaccination is not so likely to cause encephalitis though cases have been reported[3] Immunity from previous vaccination may have disappeared or a neurotropic virus may be activated

Treatment.—If a case occurs every effort should be made to inject serum from an immune person intrathecally if possible Horder[3] gave 5 c cm in his case intrathecally with very good results Hekman[6] records nine cases treated by intravenous injections of serum of the parents vaccinated at the same time with good results Encephalitis occurred in the proportion of 1 to 25 000 in 199 000 cases vaccinated under the age of 2 years and in 1 to 3 570 of 660 000 vaccinated between 2 and 11 years old[7] It is therefore obvious that vaccination is advisable at the earliest age possible when the infant may have some advantage from maternal immunity If vaccination has to be undertaken at a late age the risk of encephalitis (which is really very small) can be still further limited by using a dilute lymph say 1 in 5 by giving a dose of convalescent serum at the same time as the vaccination and by vaccinating in only one place so that the patient can have the disease as mildly as possible The inner side of the upper arm has been recommended as the most protected place and a certain amount of rest when the disease is at its height is advantageous as in other illnesses

POLIOENCEPHALITIS

This is an inflammation of the grey matter due usually to a specific virus which reaches the brain via the perineural lymphatics from the nose and throat or possibly

*Part of a post-graduate lecture St Mary's Hospital Manchester

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MANCHESTER.—Middle-class PRACTICE, [illegible] Cash receipts last year £1,327. Panel 528. Charming [illegible] reception 3 reception 6 bedrooms billiard room. Large [illegible] garage. Premium—Practice—1½ years purchase.—No. 322.

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from the gastro intestinal tract The trachea and bronchi are possible areas also but polioencephalitis tends to occur in the dry, dusty autumn, and not as much in the winter and spring, when chest diseases are common In a typical attack the child may have prodromal pharyngeal catarrh and fever and vomiting Then follow symptoms of an acute brain lesion, with a moderately raised temperature headache, retraction, and perhaps coma, or at least stupor There is, however, much less tendency to stupor in encephalitis than in meningitis In addition there may be neuritic pains the pain making the child apprehensive of movement There is cerebral irritation in both diseases but the irritative apprehensive state of encephalitis is to be distinguished from the irritative stuporose state of meningitis Lumbar puncture shows increased pressure, with, as a rule, a clear cerebrospinal fluid negative for micro-organisms and showing only moderate cell increase , albumin may be increased, but sugar and chlorides remain normal Sometimes the cell increase is very great, and is highly suggestive of tuberculous meningitis The virus is present in dust of rooms inhabited by infected persons and resists drying and sunlight, so that even the dust of the roads may be infective—in fact, epidemics seem to spread along the high roads and occur in the early autumn Carriers are probably numerous during epidemics in the form of those who are in the catarrhal stage of an abortive attack with no paralysis Such an attack is mistaken for a " cold " The incubation period is most commonly five to eight days, but may vary on either side of these figures Children who are having an attack are infectious but not strongly so The disease does not often spread in a ward, and attendants rarely catch it A carrier—that is, a child or person who has the virus present (perhaps intermittently) in his nose and throat—may start an epidemic It is my opinion that some of the children who have had infantile paralysis may become periodically infective This would explain the steady stream of sporadic cases A case with two recurrent attacks of poliomyelitis is reported by Peremans [8] Instances of infection of several members of a family are not very rare, but much rarer than one would anticipate except perhaps in epidemics The following case is of interest in this connexion

H W aged 3 years and 8 months was attended as a case of acute infantile paralysis recovering He was seen in September 1913 and had begun to be ill on July 16th His twin brother was affected on July 17th and died on July 20th after a feverish illness with mucus in the bronchi and furred tongue Death was sudden and due to collapse An elder brother aged 7 began on July 15th with headache and a feverish cold followed by paralysis with sudden collapse and death on July 17th

Food does not appear to be so infective as does dust Poliomyelitis occurs in hot dry (fly) weather, and once the stable fly (*Stomoxys calcitrans*) was under suspicion It is a fly quite unlike the horse fly and like the housefly in shape and size but with black-and-white body stripes Its mode of attack is by puncture and drawing blood It may do so through a thick sock It is not likely to be a carrier because the virus is not transmitted by the blood stream Domestic animals might be carriers Bruno[9] and Lovett and Sheppard[10] reported on epidemics affecting human beings and animals Cleland[11] reported the conveyance of the virus of human acute infective polio encephalitis myelitis occurring in Australia to monkeys sheep a calf and a foal

Treatment —General preventive measures are suggested by the study of epidemics and have been already indicated in the discussion on causation They include prompt isolation of actual cases and of possible carriers, the avoidance of dust from infected rooms or neighbourhoods care with domestic animals and other precautions Local preventive measures, such as douching of mucous membranes unless they have an astringent action, are to my mind ineffective, and may lead to a chronic inflammatory state A healthy undouched nose is possibly more antagonistic to infective agents than is a healthy douched one

We can attack the virus and prevent the spread of destruction of the nerve cells by injection intrathecally and intravenously of 20 to 50 c cm of convalescent serum from a person who has had the disease Convalescent serum has been used extensively in Australia [1] It is not very easy to obtain The need for the Wassermann test is one difficulty, the keeping of the serum another Again, it is usually wanted urgently and in large quantities, but only at infrequent intervals and seasons It is of course, best kept in the veins of the convalescent but as such is not so readily available One plan is to keep at a children s hospital a regular supply obtained from cases which have recovered from infantile paralysis and have been Wassermann tested Other active measures may include the use of 10 to 15 grains of hexamine four hourly and symptomatic treatment It is extremely important to protect neurones and to prevent undue spread by promoting rest A glance at the pathology of the disease shows this Nerve cells surrounding those destroyed or about to be destroyed, are temporarily put out of action by pressure of exudates Rest will perhaps save them, and haemorrhages may be prevented I have been struck by the fact that a long journey by train or motor has preceded some of my severe cases of infantile paralysis One a girl who died of an acute ascending type, had made a long train journey just before Another, a boy with severe symptoms had ridden a long way with his father in a motor car In both cases the infection had probably taken place some days before the ride, but the shaking of the long journey may have transformed what might have been a mild case into a severe one Rest immediate and prolonged, is therefore of first importance in the early stages Medical examinations should be as few as possible, the room should be quietened and darkened sedatives should be given as soon as the diagnosis is established, and journeys undertaken only when absolutely necessary Nature may aid us in the worst cases by plunging the child into unconsciousness which, though often a precursor of death, may be salutary I have known patients remain unconscious for many weeks and yet recover In such cases the disturbance of lumbar puncture must be avoided whenever possible Cooling applications to the head may soothe Irritative symptoms must be controlled by bromides or luminal Some cases need nasal feeding Orthopaedic rest appliances, like plaster beds or splints, are to be used if necessary

Epidemic Encephalitis (Lethargica)

There may be coma in the severe cases, but most show the peculiar sleepy lethargy which has given the name to the disease Headache is as a rule very persistent, and another characteristic sign, diplopia, is often not mentioned by the child unless special inquiry is made as to its presence Persistent hiccup may be an early sign Myoclonic and paretic cases occur, while on the other hand some cases may be so slight that they are ambulatory, with only lassitude and drowsiness Sequelae of the disease are common, and take the form of irritability, debility, and sleeplessness at night, when the child may whistle, or sing, or be up and doing until the early hours Some have asthmatic attacks, some become mentally unbalanced as regards morals, and some may develop Parkinsonism These peculiarities seem to indicate that the disease is a special form of encephalitis The disease was becoming common, but has been less frequent lately When epidemics occur it is very infectious, and cases may arise at any age, even in early

infancy. Not many cases make a complete recovery from a severe attack. Robb[13] gives the proportion as 6·8 per cent., but a certain percentage more had only a slight change mentally and nervously. However a large proportion of cases which have encephalitis lethargica are permanently and severely damaged.

Pathologically there may be no naked eye lesions. In the acute stage microscopical lesions are diffuse and tend to be in the basal nuclei, the cerebrum and mid brain especially the latter. Occasionally they are in the cortex cerebri, pons, medulla and posterior cornua of the cord. They are not in the anterior cornua. Later the typical cuffing appearance is seen round the perivascular lymphatic spaces. There is a similarity between the distemper and epidemic encephalitis. This is discussed by Pugh[14] and in articles in the *Lancet*.[15] In the distemper cases there was sleepiness, hiccup and ocular palsies, and there were similar cuff lesions in the brain. This is an argument in favour of the encephalitis syndrome being caused by more than one virus and might even support the idea that encephalitis lethargica is really a variety of influenza.

Treatment consists in alleviating distress, providing rest to the nervous tissues and aiding the elimination of toxins. Lumbar puncture may relieve pressure and various chemical drugs can be given intravenously. Belladonna and hyoscine may be useful in the later stages and for sequelae, but they are not so important for the acute stages. For sequelae trypan blue is the latest drug recommended.[16] Vaccines have been tried[17] and the serum of convalescents is as with other virus diseases perhaps the most likely method of affording some immediate action on the disease and its acute stages. Up to the present however this does not appear to have been tried to any extent.

EXANTHEMATIC ENCEPHALITIS

This may follow an acute infectious disease, especially measles. Encephalitis of measles is often severe in effect at first, but tends to clear up and leave no bad effects.

One patient of mine, a child of 8 years, developed encephalitis after measles. She became unconscious, had a high temperature and a cerebro-spinal fluid under pressure but with only a very moderate cell increase. The optic disks were normal and there were no signs of other disease. She remained blind and semiconscious for some seven or eight days and then slowly improved and made a complete recovery.

Pathologically there are perivascular zones of demyelination in the brain and cord in fatal cases, and the lesion is very like that of vaccinial encephalitis.[18] Measles does not seem to produce such severe after effects as do the neurotropic virus diseases. It may not be a true inflammatory process but rather a toxic condition. Acute toxic encephalitis may occur in diphtheria.[19]

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TREATMENT OF CARCINOMA OF THE BREAST BY RADIUM EMANATION

BY

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SURGEON TO THE LONDON HOSPITAL

In writing on any form of radium treatment at the present time one is faced by the dilemma that either one's conclusions are premature or one's methods are out of date. It is however only by the accurate record of new technical methods and of their results that progress can be made and even a small group of cases of the same class treated by the same methods and carefully watched is of definite value. From this point of view the small group of fifty-two cases of carcinoma of the breast here recorded is of interest since all the cases were treated with very nearly the same technique, radon seeds and over a period of three years up to one year ago, more recent cases having been excluded.

The technical advantages of seeds over needles are very obvious to those who have used the former. Yet in this country they have scarcely received the recognition which they deserve, while on the Continent they are almost ignored. It is asserted by those who have not used them that they cannot be introduced with accuracy, and that they act for too short a time to be effective. With proper apparatus however almost mathematical accuracy can be obtained, and the results here recorded are at least evidence of their effectiveness. It will of course be many years before sufficient evidence is accumulated to show whether irradiation or amputation gives the best results, and it is possible that both may be replaced by beam radiation with large quantities of radium or by some other form of treatment. At present however it would seem to be useful to place on record the results which have been obtained by a uniform and systematic technique.

The technique which I now adopt has been slightly modified from that which I described three years ago in an article on the use of radon seeds (*British Medical Journal* August 23rd 1930). Radon seeds are implanted into the tissues beneath the breast in such a manner that the whole of the breast and its lymphatic drainage is exposed to a uniform radiation sufficient to destroy any carcinoma cells whether in the tumour in the breast or in the lymphatics. The seeds are introduced by means of a special introducer described in the article mentioned and consisting essentially of a long hollow needle and a rotating barrel which holds the seeds. The seeds can be introduced to any depth and planted in long columns. Both the columns and the seeds in each column can be accurately spaced from one another; this is of vital importance as otherwise some portion of the suspected tissues may escape irradiation. About 100 seeds may be introduced, each containing 0·5 to 1 millicurie; the precise amount varying with the dimensions of the breast and the bulk of the seeds will lie in the fascia covering the pectoralis major. Through a single puncture it is quite possible by displacing the skin to insert four parallel rows of seeds in the fascia beneath the tumour. Through a second puncture another group can be inserted in the same situation but in lines at right angles to the first

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thus forming a kind of grid of seeds beneath the tumour, and actually in the primary area of its lymphatic drainage Where the tumour is very large a layer of seeds may be inserted into its substance but no seeds should be inserted in the more superficial portions of the tumour, as these will only destroy the skin Through a puncture in the axilla two rows of seeds are deposited beneath the pectoralis major about 1 to 2 cm below the line of the axillary vessels, and through the same puncture two parallel rows are introduced along the axillary border of the pectoralis major The whole arrangement aims at a uniform irradiation of the breast itself and of the lymphatic drainage in fact, one should endeavour to perform a complete Halstead by means of radiation The natural tendency to concentrate on the tumour should be avoided, and its disappearance should be used as an index of the adequacy of the radiation as a whole rather than as the immediate object

A few days after the introduction of the seeds it will be noticed that the tumour has become softer, and at the end of a week the tumour will have lost the induration which is so characteristic of carcinoma Small tumours may disappear completely in six weeks and even large fungating masses may have disappeared and the surface have healed in three months Secondary glands and recurrences disappear with greater ease than the original tumour and in the majority of cases all traces of active carcinoma will have disappeared in three months It must not be imagined that this indicates the cure of the patient but it certainly represents a very substantial step in that direction It is an open question whether the patient is any more secure after a complete amputation of the breast

In advanced cases and in elderly patients there can be no possible question but that irradiation by means of seeds presents immense advantages Although a general anæsthetic is required, the whole procedure takes less than fifteen minutes and as it is carried out through a few small punctures the patient may go home the next day In a younger patient with an early carcinoma the problem is more difficult and I am fully aware of the grave responsibility involved in suggesting that under these conditions the breast should not be amputated On the other hand it is a very grave responsibility to advise amputation of the breast if an equally satisfactory result can be obtained by such a simple means as the introduction of radon seeds and with no disfigurement It has been my custom in such cases to advise a trial of radium, with the express condition that if, in three months the result is not completely satisfactory, the breast must be removed

One small point in technique should be remembered Immediately after the insertion of radium the whole of the breast and the surrounding region should be covered with an ointment consisting of equal parts of castor oil and zinc ointment and this should be removed and replaced daily If this is done from the outset there will be little or no skin reaction and the patient will be saved from the discomfort of the ulceration which would otherwise occur

Cases Treated

The cases were divided into three groups—early advanced and inoperable In the early cases a small local tumour was present not adherent to either the skin or the fascia and with no discoverable enlargement of the glands In the advanced group the tumour was attached either to the skin or the fascia and in most instances there were secondary deposits in the glands The inoperable cases showed for the most part large ulcerating masses of carcinoma fixed to the chest wall with secondary deposits in the glands

In the early group there were twelve cases of these four died from generalization over an average period of three and a half years and eight remained alive and well after an average period of two and a half years Of the four who died one failed to respond at all and an amputation was performed four months later In another a local excision followed by radium was satisfactory until the full term of a pregnancy eighteen months later when a local recurrence appeared which was treated satisfactorily for the time being two years later however the patient died of generalization Of the successful cases three had small recurrences which were again treated by radium but they all remain well and free from any further recurrence after more than three years

Of the twenty nine advanced but operable cases seven died from generalization after an average of eighteen months two died from other causes at fifteen months with no recurrence and twenty are alive and well at periods up to four years Of the cases which remain well an amputation was performed in three one for a local recurrence after eighteen months one for a suspected recurrence which however was not present on pathological examination and one because after four months there was no reaction whatever In three other cases small recurrences were again treated with radium with success after periods of twelve, eighteen and twenty months respectively

Of the eleven inoperable cases only one remains alive and well after three years This however, is scarcely surprising considering that the average age of the remaining ten was 70 and that four died of old age and six of generalization (one at 86) In every case the tumour was enormously reduced in size and in most cases complete healing was secured The patient who remains alive and well was a woman of 50 who had a recurrence after a complete Halstead performed twelve years before The recurrence formed a large mass fixed to the costal cartilages and to the skin, but it disappeared entirely with radium and has not recurred Some of these cases were very advanced, one having a huge fungating tumour of four years standing with a large mass of secondary glands in the axilla and a few above the clavicle Complete healing with disappearance of all the glands was obtained in four months, but the patient died of dissemination nineteen months after treatment five and a half years after the onset of the disease

Fifty two Cases of Carcinoma of the Breast treated with Radon Seeds

	Well	Average Period	Died of Generalization	Average Period	Died of Other Cause	Total
Early	8	2½ years	4	3½ years	—	12
Advanced	20	2½	7	1½	2	29
Inoperable	1	3	6	1 year	4	11

In recording these cases my object is to present the facts as they have emerged, and not to make any claim either for or against radium as contrasted with operation Of the three groups the early cases are definitely disappointing, because although 66 per cent remained free after an average of two and a half years, this is far too short a period on which to base any opinion This short period is due to the fact that it was only after a considerable experience of advanced cases that I ventured to treat those in which the disease was still early My feeling at the moment is that such treatment is justifiable provided the patients are kept under close observation In almost every instance all trace of carcinoma will disappear, but any recurrence would, I feel, be better treated by complete amputation than by a repetition of the radium It is not, however, always possible to obtain consent

The advanced cases show a much more satisfactory result, 70 per cent remaining alive and well after an average of two and a quarter years Moreover, among these only six have required any further treatment In some of these cases very large tumours were present in one the breast was distended by a tumour which had been growing steadily for over a year, but even in this

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3 LONDON SUBURB, NORTH WEST —Very old-established panel PRACTICE with better class connection attached and situated in a pleasant residential suburb Cash receipts over £2 800 including panel of 3,150 and transferable appt worth £70 Very good house, with ample accommodation (7 bedrooms etc) Price leasehold (with 11 years to run at a ground rent of £15 p a) £1 500 Rent of separate Surgery on 21 years lease £52 inclusive Premium £7 000

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5 LONDON, NORTH —Old-established middle and working class PRACTICE, held by Vendor 11 years Average gross cash receipts £975 Panel of over 900 Fees from 2/6 Semi detached corner house in good condition with ten rooms and usual offices Separate entrance to professional rooms Price for leasehold £600 Premium £1,500

6 LONDON, EAST —Middle and working class PRACTICE producing £1 000 p a including panel of about 1 100 Suitable small house with sitting room, 2 bedrooms, and attic, waiting room, surgery and dispensary Rent £52 p a Premium 2 years purchase

7 HOME COUNTIES —PARTNERSHIP —Residential Town, within easy reach of London A one third share is offered in a very sound old established Practice producing for the last 12 months nearly £4 500 Panel of 2 500 Fees from 3/6 to 21/ Very nice house, with ample accommodation, or smaller one if desired Ingoing Partner should be experienced accustomed to better class work able to undertake major surgery, and pref hold a Fellowship Premium £3,000

8 DORSET —Well established PRACTICE, in very pleasant town within easy reach of the coast Gross cash receipts over £1 000 of which about £400 is from panel Fees 3/6 to 21/ Opposition not strong Good house with 2 reception 5 bedrooms etc garden of nearly 3 acres Rent on lease £62 p a Premium £1,750

9 LONDON SOUTH EAST —Old-established better working class PRACTICE increasing and situated in well populated district Gross cash receipts for last 12 months £1 263 including panel of over 1 300 Suitable house, with 2 reception and 3 bedrooms Garden Price for freehold £1 100 Premium £2 400

10 EASTERN SUBURB —Very old established middle and working class PRACTICE worth about £1 100 p a including panel of 1 350 Very little midwifery House contains 2 reception 4 bedrooms, etc, separate entrance to professional rooms Small garden Garage Price for freehold £1 350 Premium 2 years purchase

11 EASTERN COUNTIES — FAVOURITE SEASIDE AND HOLIDAY RESORT —Good mixed-class PRACTICE established many years and producing, for the last twelve months £1 600 Panel brings in £300 p a and an appt worth £100 p a Fees 3/6 to 7/6 with medicine extra Nice house, with 2 reception 5 bedrooms etc Garage Garden Price for freehold £2,250 Golf, shooting, and other sport Premium 1½ years purchase

12 PARTNERSHIP —In a well populated pleasant South Eastern suburb within ten miles of London the half share of an old established mixed class Practice is for disposal owing to the retirement of the junior partner Held by the remaining partner 30 years Cash receipts average £2 765 p a including panel of 1 800 and appts worth £150 Very little midwifery Pleasant semi detached corner house with ample accommodation garden Price, leasehold (over 900 years at ground rent of £7 p a), £1 050 Premium 2 years purchase - Scottish graduate preferred

13 CO DURHAM —PARTNERSHIP —A five-twelfths or seven-twelfths share is offered in a well-established sound mixed-class Practice t gross cash receipts of which average approximately £2 400 p a Panel produces £850 and P M S £720 p a Appointments worth £120 Succession to the whole in four years, or sooner a Good house, specially built with ample accommodation for sur Practice is situated in a growing area and offers excellent scop for further development Premium for share 2 years purchas

14 NORTH EAST COAST —PARTNERSHIP —A one-half share is offered in an old-established better middle-class Practice in suburb of favourite residential town Steadily increasing and excellent fu prospects Gross cash receipts £1 700 Panel of 700 Fees from 3 6 Very nice house, with 2 reception 4 bedrooms etc One a garden Garage for 2 cars Rent on lease £80 p a Sport of all kinds and good schools Premium for share 2 years purchase

15 MANCHESTER —Old-established middle and working-class PRACTICE, producing for the last twelve months about £650 including pan of 790 Fees from 3/6 Convenient house with 3 reception 4 to bedrooms bathroom etc Rent on lease £60 Premium £9 to include furniture

16 SOUTH country district within 4 miles of lar town ducing between £300 and £350 p a offering fees from 5/ Very little midwif or night work Well situated house with well kept garden contain 2 reception 3 good sized bedrooms, and servants rooms El tri light and gas throughout Garage Rent on lease £70 p a

17 CENTRAL LONDON —Middle and better-class PRACTICE, avera for the last two years about £500 p a including small panel 180 Fees 3/6 to 21/ Professional accommodation can be r at £200 p a Premium £300, to include furniture drugs, i ments, etc

18 SOUTH EAST LONDON —Good middle and working-class PRACTICE producing last twelve months nearly £950 Panel of 986 Suitable house with 2 reception 4 to 5 bedrooms etc Rent on lease £ Premi , to include drugs, etc., and surgery fittings and furn £1

19 HOME COUNTIES —ASSISTANTSHIP with view to Partn offered in a better class Practice in residential town Ingoing partn must have experience of general Practice and be able to undertak major surgery, and preferably hold a Fellowship

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case the tumour disappeared completely leaving an almost normal breast These results compare very favourably with those obtained by amputation

In the inoperable cases where no alternative method of treatment was possible the results quite exceeded expectation large fungating masses disappeared and ulcerating surfaces healed over As most of the patients were 70 years of age or more this was really all that one could ask and in the majority of cases the patient was saved from a distressing condition It is remarkable however that even at the age of 86 extensive generalization can occur It would of course have been impossible if the ulcer had not been treated since the patient would have died of exhaustion

It will be seen then that in inoperable cases radium can give a relief which cannot be otherwise obtained In advanced cases the evidence seems to show that radium can give results at least as good as those obtained by amputation at the cost of far less inconvenience and with no disfigurement In early cases it may certainly be used with a considerable prospect of success on condition that the case is most closely watched and with the stipulation that in the event of a recurrence a complete amputation shall immediately be performed Most surgeons will agree that the wider their experience of carcinoma the less inclined they feel to dogmatize either as to the treatment to adopt or the result which may be expected Sometimes they are surprised by a brilliant result in an apparently hopeless case and have some compensation for the many disappointments they are bound to meet The use of radon seeds in the treatment of carcinoma of the breast furnishes them with a method which is applicable to almost every case There is no case so advanced that local relief is impossible while in the earliest cases I am convinced from my own experience that the surgeon is fully justified in offering this alternative to amputation and that he need have no fears of prejudicing the interests of his patients We are all only too familiar with patients who refuse to ask for help until the condition is so far advanced that it can no longer be concealed and I feel that if the possibilities of radium were more widely known patients would be inclined to seek advice at a much earlier date to their own inestimable advantage

THE INTRADERMAL TUBERCULIN TEST IN NON-TUBERCULOUS ADULTS

BY

S LYLE CUMMINS C B C M G M D

AND

A CEINWEN EVANS M B B CH

The investigation here described had for its object the study of the variations in tuberculin sensitivity manifested by adults free from clinically recognizable tuberculosis and the comparison of the findings in non tuberculous with those in clinically tuberculous groups

One of us (S L C) had already published with his colleague Dr S B H Walker the results of preliminary studies on this subject and he makes some further use of the material then collected for the purpose of the present inquiry The other (A C E) as pathologist to the Denbighshire Mental Hospital was in a position to carry out tuberculin tests on a considerable number of patients suffering from mental symptoms only but otherwise in average bodily health

The tests were arranged so as to correspond as closely as possible with those previously carried out in Cardiff One of us (S L C) prepared the dilutions of tuberculin on standard lines and supplied them as required so that they should be used fresh The other (A C E) having worked for some time in the tuberculosis laboratory at Cardiff was in a position to carry out the tests and read the results on lines similar to those applied in the previous series

The tuberculin used was selected for us as of standard strength by Dr R A O Brien director of the Wellcome Physiological Research Laboratories Its description is as follows P T No B 1648 B W and Co Dilutions in tenths were prepared with 0 5 per cent carbolic in normal saline solution ranging from 1 in 10 to 1 in 100 000

Previous observations having satisfied us that all persons giving a definite positive reaction to any given dilution tend to react still more markedly to the next in order of strength we decided to start the tests on each individual with the highest dilution and to excuse all positive reactors from further tests applying successively stronger dilutions to the negatives only In this way we gradually narrowed down the negatives to those failing to react to a dilution of 1 in 10

Control tests with glycerin broth were omitted previous observations having satisfied us that these are always negative until strong concentrations are reached The non specific reactions which tend to occur with very strong concentrations of glycerin broth have been shown by D Arcy Hart to be confined to those persons who also react to tuberculin so the possibility of non specific reactions need not be taken into account

Intradermal tuberculin tests on these lines were applied to three successive series of persons under treatment in the mental hospital a first male group of 304 a second male group of 141 and a female group of 150 persons In the tables which follow the two male series have been combined into one group of 445 persons for comparison with the female group

The following table shows by sexes the percentages of persons reacting to the various dilutions of tuberculin used

TABLE I.—*Tuberculin sensitivity Variations in Terms of End point of Reactivity in Healthy Persons*

	Dilutions					
	1 in 100,000	1 in 10 000	1 in 1 000	1 in 100	1 in 10	Negative to 1 in 10
Males (445) Positive per cent	14.1	45.8	83.3	9-6	99 1	0 9
Females 150) Positive per cent	21.3	58.0	88 0	93 3	97.3	2.7

The female group while including a larger number of negatives than the male showed a decidedly higher percentage of positive reactors with the higher dilutions It will be noted too that while 85 9 per cent of the males and 78 7 per cent of the females were negative to a dilution of 1 in 100 000 only 11 7 per cent of males and 12 per cent of females were negative to 1 in 1 000 This point is stressed as a reminder of the fact that while positive is an absolute term the expression tuberculin negative is relative only and depends on the technique employed and the dilution of tuberculin used The von Pirquet scarification method for instance when carried out with undiluted old tuberculin has been shown to be not quite so stringent a test as the intradermal inoculation of a 1 in 1 000 dilution of the same tuberculin Negatives to the von Pirquet test therefore may be taken to include at least 10 per cent of persons who would prove to be positive if tested intradermally with 1 in 100 and 1 in 10

For comparison with the above the results of intradermal tuberculin tests in 100 persons forty five males and fifty five females suffering from active pulmonary tuberculosis are set forth in Table Ia

It was not thought safe to give intradermals of 1 in 100 and 1 in 10 to actively tuberculous persons so a final concentration of 1 in 500 was used instead Here again the females included a larger percentage of negatives than the males but in the higher dilutions the findings

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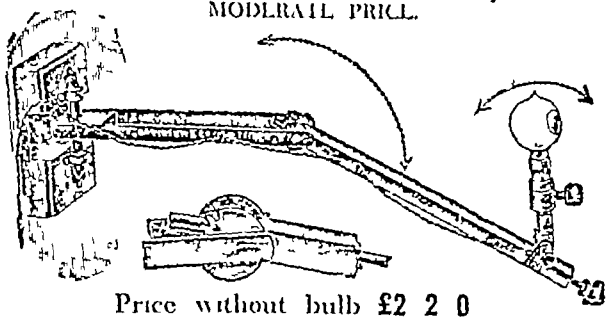

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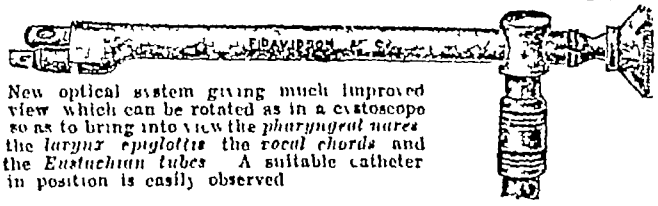

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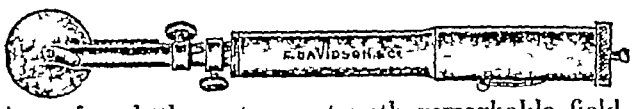

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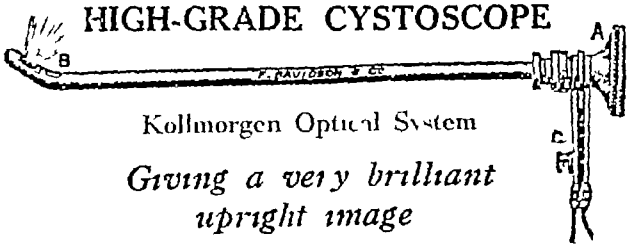

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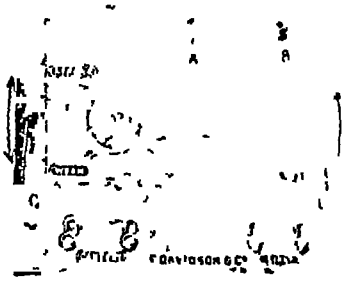

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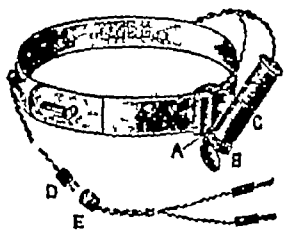

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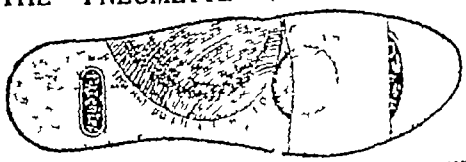

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were reversed, and the males showed greater reactivity than the females

It is clear that, in the groups tested the tuberculous patients showed a much higher percentage of "reactors"

TABLE I.—*Tuberculin sensitivity Variations in 100 Persons with Active Pulmonary Tuberculosis*

		Dilutions				
		1 in 100 000	1 in 10 000	1 in 1 000	1 in 500	Negative to 1 in 500
Males (45) per cent	Positive	46 6	73 3	93.3	97 8	2 2
Females (55) per cent	Positive	30 9	63 6	87 2	92 7	7 2
Both sexes per cent	Positive	38 0	68 0	90 0	95 0	5 0

to the higher dilutions of tuberculin than did the healthy persons referred to in Table I over three times as many in the case of males to a dilution of 1 in 100 000

The percentages of "negatives" are not comparable, as in the healthy group the non-reactors were negative to 1 in 10 while in the tuberculous group the non-reactors were negative to 1 in 500 only It is probable that *all* the tuberculous group would have been found positive if tested with 1 in 10 tuberculin

The recording of the "end point" reactivity is not, however the only method of evaluating tuberculin sensitivity There is also the size of reaction area, the measurement of which affords a rough index of intensity

In Table II are set forth for the healthy persons of Table I the average sizes of the reaction areas noted in each dilution Only those who had failed to

TABLE II.—*Tuberculin sensitivity Variations in Terms of Average Size of Reaction (Healthy Persons)*

	Dilutions				
	1 in 100 000	1 in 10 000	1 in 1 000	1 in 100	1 in 10
Males (average size in millimetres)	7 7	10 5	14 15	18 5	13 7
Females (average size in millimetres)	12 8	12 8	20 0	16 1	11 7

react to the next highest dilution are included in each average Had the sizes of the reactions in those who had also been positive to a higher end point been included the averages would, of course, have been greater Only the "raised" area, not the red flush, was included in the measurement

Here again it is to be noted that with the three higher dilutions the reactivity of the females was greater than that of the males although with the stronger concentrations it was rather less It looks as if in these Welsh females at least the threshold of reactivity were higher, both in end point and in reaction size than in the corresponding male groups—a circumstance which may perhaps be connected in some way with the fact that they are liable to show a particularly severe type of the disease The reaction size in the actively tuberculous groups corresponded to the above though there was a tendency to rather smaller reaction zones

This problem is approached from a different angle in Table III where the numbers and percentages of different sizes of reaction for each dilution are given under four headings These figures are based on the male groups only and concern the measurements of the reactions in 145 persons

Here the tendency to a weaker and less extensive type of reaction with the higher dilutions is well seen

It is to be noted however that of those found positive even with such a high dilution as 1 in 100 000 of tuberculin two-thirds showed a well marked reactivity and only one third gave weak reactions of a diameter of 5 mm or under

We decided, therefore, to carry our dilutions further and to test the first male group, of 304 patients with dilutions of 1 in 1 million and 1 in 10 million These

TABLE III.—*Tuberculin Reaction Size according to Dilution (Males)*

Dilution	Reaction Size			
	3-5 mm	6-10 mm	11-20 mm	Over 20 mm
1 in 100 000 (63 persons)	Per cent 33	Per cent 44	Per cent 21	Per cent 1
1 in 10 000 (141 persons)	14	40	45	1
1 in 1 000 (189 persons)	6	21	50	23
1 in 100 (34 persons)	6	12	32	50
1 in 10 (12 persons)	8	25	59	8

tests, carried out some two months later, showed seventeen reactors to 1 in 1 million, and seven reactors to 1 in 10 million dilution

The combined results for the whole of this group of 304 males are given in Table IV below

TABLE IV.—*Results of Serial Intradermal Tuberculin Tests in 304 Male Adults*

	Dilutions							
	1 in 10 000 000	1 in 1 000 000	1 in 100 000	1 in 10 000	1 in 1 000	1 in 100	1 in 10	Neg
Positives (per cent)	2 3	5 5	12 4	43 9	85 5	95 4	99 6	0 4
Reaction size (mm)	4 9	5 9	7 7	10 0	14 3	20 7	11 0	–

It is of interest to note, in passing, that the tuberculin reactivity of this group of male adults is far less marked especially in the higher dilutions, that that of South African native mine recruits, as set forth in the recently published Report No XXX (vol v, 1932) of the Publications of the South African Institute for Medical Research in which the percentages giving a positive reaction to varying dilutions are as follows

TABLE V.—*Results of Serial Intradermal Tuberculin Tests in South African Native Mine Recruits (for Comparison with Table II)*

	Dilutions			
	1 in 10 000 000	1 in 1,000 000	1 in 100 000	1 in 10 000
Positives (per cent)	48 6	51 5	55 0	72 5

This marked excess of "end point" reactivity shown by these highly susceptible South African natives over that of European males, as represented by the population of a mental hospital in Wales, is a most interesting phenomenon, more especially in view of the fact that those natives showing marked tuberculin reactions proved, on further observation during their 'contract' periods in the gold mines, to be more likely to develop tuberculosis than those reacting weakly or failing to react to the dilutions used

It will require some years of "follow up" to ascertain whether there is any similar tendency to an association of marked "reactivity" with liability to develop disease in the Welsh group under observation

In this connexion a close scrutiny of the "previous histories" and present condition of the 304 mental cases of the first male series was now undertaken and it was discovered that a history pointing to the occurrence, or possible occurrence, of previous tuberculous disease was present in eighteen of the total In only two of these was there evidence of present activity Both these men had reacted to 1 in 1,000 tuberculin, but not to higher

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dilutions It may be added that the distribution of these eighteen cases throughout the group in terms of end-point and reaction size was not of a nature appreciably to alter the findings already tabulated The group as a whole though made up of mentally defective persons consisted of individuals in good average health nor did those persons manifesting high reactivity to tuberculin differ appreciably in health from those giving slight or negative reactions This latter point is established by a comparison of the average rate of blood sedimentation in fifty of these mental patients reacting to 1 in 100 000 and fifty selected as negative or giving a weak reaction only when tested with the strongest concentrations of tuberculin

TABLE VI—*Blood Sedimentation Rate in Strong and Weak Reactors to the Intradermal Tuberculin Test (Healthy Persons)*

Time	"Strong" Reactors. Average "Clear Per Cent"	"Weak" Reactors Average "Clear Per Cent"
After 1 hour	15 0	11.3
After 5 hours	39 7	35.6
After 24 hours	52.0	53.3

N B—"Clear per cent" refers to the height of the clear space of fluid remaining above the sedimented red blood corpuscles in a column of fluid 100 mm high

It will be seen that there is no appreciable difference in the sedimentation rate in the two groups In both the average rate of sedimentation though perhaps rather rapid is within normal limits

In order to emphasize the value of the sedimentation test as an index of normal bodily health the average sedimentation rates of 100 persons with active pulmonary tuberculosis are tabulated for comparison with the above findings

TABLE VII—*Blood Sedimentation Rate in Strong and Weak Reactors to the Intradermal Tuberculin Test (Persons with Active Tuberculosis)*

Time	"Strong" Reactors Average "Clear Per Cent"	"Weak" Reactors Average Clear Per Cent"
After 1 hour	43 0	6.5
After 5 hours	55 6	65 6
After 24 hours	60 6	68 7

Here it is seen that especially in the first hour the rate of sedimentation is much more rapid in the tuberculous than in the normal groups shown in Table VI It will be noticed too that the weak reactors show a much more rapid sedimentation than the strong reactors indicating that in this tuberculous group the weak and negative results of tuberculin tests are the expression of the anergic state characteristic of the terminal phases of the disease

DISCUSSION

It is easy to suggest an explanation of the individual differences in tuberculin sensitivity manifested by persons suffering from active tuberculosis since we know that the progress of the disease first stimulates and finally damps down the allergic function—a fact which implies marked variation of reactivity in the individuals of a clinically active group When however we attempt to explain the equally marked variation in reactivity shown by individuals free from active disease the problem becomes more complicated as anergy or at least negative anergy cannot be cited as a factor

All the reactions whether manifest to high-dilution end points or to the stronger concentrations of tuberculin must be taken to prove antecedent infection with the tubercle bacillus Animal experiments show that the tuberculo-allergy evoked by infection with strains of low virulence gradually dies out as the lesions undergo spontaneous healing From this it might seem reasonable to conclude that the variations in tuberculin sensitivity in healthy persons depend on individual differences in the degree of spontaneous healing of minute lesions due to early or recent subinfections

It is probable that we all encounter minute doses of tubercle bacillary infection in our daily life and thanks to our resistance to reinfection partly natural and partly acquired through previous contact with Koch's bacillus we kill off these minor invasions at or near the threshold and remain in health

The community under discussion consisting of the inmates of a mental hospital is clearly one in which the handing round of respiratory infections is liable to occur and the well known fact that tuberculosis mortality tends to be high in mental hospitals supports the suggestion that reinfections are common in such institutions and often eventuate in disease

Such reinfection must vary greatly in frequency and extent according to the number of unrecognized open cases in the community and according to accidental factors depending on contact with infected room mates table companions and work associates and accentuated by the prevalence of the spitting habit the breathing in of contaminated dust and so forth

It is probable that these variations in intensity of subinfection suffice to explain the differences in reactivity noted if taken in conjunction with the differences in resistance efficiency possessed by the individuals concerned In this latter connexion the differences observed between males and females are of interest and deserve further investigation

CONCLUSIONS

1 In the groups investigated marked individual variations in cutaneous tuberculin sensitivity were noted

2 These variations were apparent both in regard to end point reactivity with serial dilutions and to the intensity of reaction as evaluated through measurement of the size of the reaction area

3 In the non tuberculous groups—that is to say the groups of persons free from clinically apparent tuberculosis—the variations were not associated with differences in general health as tested by the rate of blood sedimentation in contrasted groups In these healthy groups the females showed a more marked reactivity than the males but both the males and the females of European race showed less reactivity than that recorded for South African native mine recruits in the report of the South African Tuberculosis Research Committee (1932) It is to be noted in this connexion that young adult females in Wales are liable to a more acute and severe type of tuberculosis than corresponding male groups and that South African mine natives exhibit a still more marked liability to fatal acute tuberculosis In other words pronounced cutaneous tuberculin sensitivity in a group appears to be associated with liability to severe tuberculosis

4 In actively tuberculous groups the reactivity of florid cases of the disease is greater than the reactivity of non-tuberculous persons and the reactivity of tuberculous males appears to be greater than that of tuberculous females in the small groups tested Here however the findings are complicated by the gradual onset of anergy as the cases progress in severity and as the systemic disturbance increases—a progression which in Wales tends to be more rapid in young females This perhaps explains their lower sensitivity in the tuberculous group

5 The anergic state in tuberculous persons is associated not only with loss of tuberculin reactivity but with marked increase in the rate of sedimentation of the red blood corpuscles

Our thanks are due to the medical superintendent of the Denbighshire Mental Hospital through whose kind co-operation the observations here recorded were rendered possible

A REINVESTIGATION OF CHILDREN PREVIOUSLY EXAMINED BY TUBERCULIN TESTS*

BY

W ERNEST LLOYD, M D , M R C P

AND

A MARGARET C MACPHERSON, M D , M R C P

In 1931 a report was published by this department on the incidence of tuberculous infection in children (Brompton Hospital Research Department, Report II) in which there were given the results of a series of von Pirquet and Mantoux tests on 1,220 children up to the age of 15 years As many as possible of these have been retested and examined after an interval of one and a half to two years, with a view to finding whether there was any change in reaction to the tuberculin tests, and whether any of them had developed clinical signs and symptoms of tuberculosis Of those previously tested 700 returned for re examination

In the previous report the children were separated into three groups (1) those who had been in contact with a person known to have had tubercle bacilli in the sputum —that is contacts , (2) those in contact with a person suffering from tuberculosis but without tubercle bacilli in the sputum and (3) those without any known contact It was found that the incidence of tuberculosis as shown by the Mantoux test was practically the same in groups (2) and (3) , therefore in this investigation the children have been divided into two groups—namely, (1) contact, and (2) non contact

Of the 1 220 children tested in 1930–1 200 were tested by the von Pirquet method and the remainder by that of Mantoux with 0 1 c cm of these dilutions of old tuberculin 1 in 10 000 1 in 1 000 and 1 in 100 In the present investigation all the retests were done by the Mantoux method the same brew of old tuberculin used in 1930–1 being employed and in similar dilutions The readings were taken after an interval of forty-eight hours to prevent confusion with non specific reactions these were most frequent after injections with 1 in 100 old tuberculin and usually occurred within twelve to twenty-four hours after injection but in most cases they had disappeared within forty eight hours or only showed very faintly

CHANGES IN REACTION TO TUBERCULIN

A comparison was made between the results of the tests after an interval of one and a half to two years to determine whether sensitivity to tuberculin was retained or lost The results are shown in Table I

Thirty three of these cases which gave a positive von Pirquet in 1930 gave positive Mantoux reactions (1 in 10 000 or 1 in 1 000) in 1932 eighty two were negative to von Pirquet's test and of these sixteen became positive (in varying dilutions) and sixty-six negative (1 in 100) to the Mantoux test In the previous report it was shown that the Mantoux test is more sensitive than the von Pirquet, the latter being equivalent to 0 1 c cm of 1 in 10 000 old tuberculin (O T) given intracutaneously Therefore the number of changes from negative to positive is higher than it would have been if the comparison had been made with the more sensitive Mantoux method in all cases Out of 303 children there were twelve (4 per cent) whose reaction changed from positive to negative An analysis of these cases was made with the following results three of the children tested in 1932 were not seen for the reading but the result was reported by the parent , two were positive to 1 in 1,000 O T in 1930, but the reaction was slight , one was positive to 1 in 10 000 in 1930 and

TABLE I

	Cases Retested					
	No of Cases	Per centage	Contact		Non-contact	
			No of Cases	Per centage	No of Cases	Per centage
Positive 1930–1						
Remaining positive	291	96 0	112	96 6	179	95 6
Becoming negative	12	4 0	4	3 4	8	4 3
Total	303	—	116	—	187	—
Negative 1930–1						
Remaining negative	343	86 4	38	79 2	305	87 4
Becoming positive	54	13 6	10	20 8	44	12 6
Total	397	—	48	—	349	—

negative to 1 in 1,000 in 1932, but it was not possible to test with 1 in 100 , six were positive to 1 in 100 in 1930 and became negative to 1 in 100 in 1932 Therefore there are less than 4 per cent who, without doubt changed from positive to negative and it is questionable if so low a figure as this is of any special significance

In 1930–1 397 children were negative to the tuberculin test, and of these fifty-four (13 6 per cent) became positive in 1932 These fifty-four, of whom ten were contacts were further investigated by inquiry into their clinical history during the interval between the two tests The past occurrence of any acute or definite illness would be ascertained in this way, although, admittedly, minor illnesses and indispositions might be overlooked Six children had a definite history of illness, two having had pneumonia, one acute bronchitis, one tuberculous abscess of the neck, and two measles Two children, both 4 years old were debilitated and much below normal weight and development In eleven cases the symptoms of asthma and chronic pulmonary catarrh, which were present at the first test, persisted The other thirty one children were reported to have been free from symptoms and in these the primary infection by the tubercle bacillus was not accompanied by any disturbance worthy of note by the parents

That thirty-eight of the contact children remained negative is explained by the fact that their exposure to tuberculous infection during the one and a half to two years was slight and in fact, differed little from that of the non contact children Details of the degree of exposure to infection are as follows in twenty-three cases the parent had at one time had tubercle bacilli in the sputum but there had been no known positive sputum test since the birth of the child , therefore it may be argued that these were not strictly contact cases In two instances the parent had died before the first test was done, so that there had been no known contact since that time In no case in which the child remained negative was the parent or other relation known to have had a positive sputum test since 1930–1

CHANGES IN DEGREE OF ALLERGY

Changes in the sensitivity to tuberculin were studied by comparing the lowest concentrations to which the children reacted on the two occasions Each child who had reacted to 0 1 c cm of the 1 in 10 000 O T was retested with this strength, and if negative, was tested

* This investigation was carried out under the direction of the medical staff of the Brompton Hospital and the expenses were defrayed by a grant from the Halley Stewart Trustees to the Research Department of the hospital

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with 1 in 1 000 and if negative to this with 1 in 100 Those who had been previously positive to 1 in 1 000 or to 1 in 100 were tested with each strength in turn beginning with the 1 in 10 000 dilution and if necessary increasing to 1 in 1 000 or to 1 in 100 until a positive reaction occurred

TABLE II

—	Positive 1 in 10 000 in 1930–1			Positive 1 in 1 000 in 1930–1			Positive 1 in 100 in 1930–1		
	No of Cases	Contact	Non-contact	No of Cases	Contact	Non-contact	No of Cases	Contact	Non-contact
Positive 1932									
1 in 10 000 ..	140	59	81	39	14	25	3	1	2
1 in 1,000 ..	5	2	3	33	12	21	13	1	12
1 in 100 ...	0	0	0	5	0	5	7	0	7
Negative 1932									
1 in 100 ..	1	1	0	2	0	2	5	1	4
1 in 1 000 ..	3	2	1	1	0	1	0	0	0
Total	149	64	85	80	26	54	28	3	25

Eighty children were positive to 1 in 1 000 and negative to 1 in 10 000 in 1930–1 and of these thirty nine (nearly 50 per cent) now react to 1 in 10 000 dilution in twenty eight children a positive reaction was obtained with dilution 1 in 100 only in 1930–1 but in 1932 three react to 1 in 10 000 and thirteen to 1 in 1 000 therefore sixteen (more than 50 per cent) respond to a weaker concentration Out of all those who reacted positively in 1930–1 there are very few who have decreased their degree of allergy as shown by the above figures and in about 50 per cent there is an increase in sensitivity

A comparison of the sensitivity of different age groups was made and for this the result of the first test done on each child was used The figures below are based chiefly on those given in Report II of the Brompton Hospital Research Department Each child reported as positive to 1 in 1 000 or positive to 1 in 100 was negative to 1 in 10 000 or 1 in 1 000 respectively The contact and non contact children were considered separately and were divided into four age groups

TABLE III

Dilutions	Positive Reactors							
	0 to 5 years		5 to 10 years		10 to 15 years		15 yrs & over	
	No of Cases	Per cent	No of Cases	Per cent	No of Cases	Per cent	No of Cases	Per cent
Contact								
1 in 10 000 ..	27	71.1	72	74 2	70	68.5	12	60 0
1 in 1,000 ..	10	26.3	20	20 6	30	27 0	8	40.0
1 in 100	1	2 6	5	5 2	5	4 5	0	—
Non-contact								
1 in 10 000	13	52 0	97	62 8	81	52 6	15	60 0
1 in 1 000	10	40 0	39	25 0	50	32 5	9	36 0
1 in 100 ...	2	8 0	20	12.2	23	14 9	1	4 0

A large percentage of the contact children are positive to 1 in 10 000 at an early age and this percentage varies very little over the period 0–15 years In the non-contact children the percentage positive to 1 in 10 000 in all age groups is comparatively low and never reaches as high as that of the youngest group of the contacts In the contact children there is apparently a quick process of reaching a high degree of allergy while in the non-contact ones there is a smaller percentage which reaches the same high degree of sensitivity It has not been possible for us to test the majority of the contact children at a sufficiently early age to observe the change from negative to positive and to note with which dilution the first reaction after infection is obtained

CLINICAL STUDIES

The second part of the investigation was concerned with the incidence of clinical tuberculosis in the 700 children retested Of these seven were suffering from pulmonary tuberculosis when first tested but when seen at the time of the second test they had all improved and the disease was quiescent Their ages were 8 10 11 (two) 13 (two) and 14 years and four of them had a history of contact with open tuberculosis Besides these seven there were five children with pulmonary tuberculosis who were tested in 1930 only of whom four—13 14 15 and 16 years old respectively in 1930—have died of the disease and one aged 14 years is in a sanatorium at present Of the other 693 none has developed clinical tuberculosis during the interval between the two tests This number includes 303 who were originally positive reactors to von Pirquet or Mantoux tests Their ages are given below and it will be seen that twenty four of these were under the age of 5 years when first tested

TABLE IV

Age	Contact	Non-contact	Total
0 to 5 years	14	10	24
5 to 10 years	62	93	155
10 to 15 years	38	76	114
15 years and over ..	5	5	10

A more detailed investigation of these twenty four children is given below

POSITIVE REACTORS UNDER 5 YEARS OF AGE

The group of positive reactors under 5 years of age consists of twenty four children fourteen of whom were contacts Their ages at the time of the first test are given in the following table

TABLE V

Age	Contact	Non-contact	Total
0 to 1 year	0	0	0
1 to 2 years ...	2	0	2
2 to 3 years	2	3	5
3 to 4 years	2	4	6
4 to 5 years	6	5	11

The history of each child during the interval between the tests the general and pulmonary condition in 1932 and the degree of exposure to tuberculous infection in the case of the contact children were noted In five of the contact cases the infected parent had died before the first test and there had been no known contact since in four the tuberculous relative had apparently been well and had not been known to have had a positive sputum during the past two years in five the parent had had tubercle bacilli in the sputum since 1930–1 and the child had been in close contact Therefore in five cases out of the twenty four there was a history of continuous exposure to tuberculous infection

The history and clinical condition of the twenty-four children was as follows eighteen had had no symptoms or signs during the one and a half or two years and their

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general and pulmonary condition in 1932 was normal, one child had had no symptoms, but there were signs of fibrosis at the base of one lung following collapse of the lower lobe, which was recognized in 1930 but for which no definite cause was ascertained on investigation, one had had no symptoms, but his general condition was poor, although there were no definite abnormal physical signs, one had bronchitis when the second test was done, one had rheumatic myocarditis at the time of the second test, but had had no pulmonary symptoms during the two years, and there were no abnormal signs in the lungs in 1932, one had enlarged and unhealthy tonsils in 1932, but was otherwise healthy, and one had slightly enlarged discrete cervical glands which had remained unaltered since 1930. Three children under 5 years of age, who were positive in 1930, cannot be traced.

None of the children examined was ill and with one exception their general condition was good. Although the numbers are small it is interesting to note that of these twenty-four children under 5 years (two of whom were under 2) who had been infected with the tubercle bacillus none had had an acute dissemination of the disease, and none, except perhaps the child with cervical adenitis, had clinical tuberculosis.

Conclusions

The results of the repetition of the tuberculin test on 700 children whose ages varied from 1 to 15 years at the time of the first test show that allergy, once it is produced persists in over 96 per cent. of cases throughout childhood.

A comparison of the different dilutions of old tuberculin which will produce a positive tuberculin reaction demonstrates the fact that there is a tendency for the degree of sensitivity to increase after an interval of one and a half to two years. Further on separating the children into contact and non-contact groups, it is evident that a high degree of sensitivity in contact children is reached at an early age whereas in a large percentage of non-contact children this degree of allergy is not reached at any age.

The absence of any development of clinical tuberculosis in 700 children during the period of one and a half to two years is interesting, more especially as this number includes two children of 1 to 2 years of age and seven under 3 years. That these children have remained apparently healthy throws doubt on the view which is held by some authors that a positive tuberculin reaction in a child under 2 years of age is evidence of active tuberculous disease.

Summary

1. After an interval of one and a half to two years 700 children, 164 of whom were contact cases, were retested with tuberculin with the Mantoux method, and were examined for signs of tuberculosis.

2. Investigation has shown that in over 96 per cent. of cases positive reactors have remained positive after an interval of one and a half to two years. The change from negative to positive reaction, in at least thirty-one out of fifty-four cases, took place without any notable disturbance to the health of the child.

3. By using dilutions of 1 in 10,000, 1 in 1,000, and 1 in 100 O.T. it was shown that there is a tendency for the reactions to occur with higher dilutions of O.T. after one and a half to two years' interval.

4. Seven of the 700 children had pulmonary tuberculosis when first examined, but had improved in 1932. Of the remainder none has developed clinical tuberculosis. This number includes twenty-four who were under 5 years when first positive to the tuberculin test, and of these two were under 2 years of age.

We wish to express our thanks to the honorary medical staff of the hospital for permission to make use of their cases, and to the Lady Almoner, Miss Marx, for valuable help in tracing the children.

SEVERE ANAEMIA WITH ACHLORHYDRIA*

BY

CHARLES H. MELLAND, M.D., F.R.C.P.

HONORARY CONSULTING PHYSICIAN, MANCHESTER ROYAL INFIRMARY

We come across three different clinical forms of severe anaemia associated with the absence of free hydrochloric acid from the gastric juice: (1) pernicious anaemia, (2) anaemia associated with carcinoma of the stomach, and (3) a form of anaemia of secondary type associated with neither of the above conditions.

I

Pernicious anaemia shows all the characteristic signs and symptoms met with in severe anaemia due to any cause. But it may or may not show, in addition, certain other features affecting the alimentary tract as sore tongue, nausea, vomiting, and diarrhoea, or the nervous system as postero-lateral sclerosis. But the final decision must rest on the blood examination, and this is characteristic and absolutely diagnostic. There is great diminution both of the red corpuscles and of the haemoglobin, but the special feature is that the red corpuscles are proportionately more reduced than the haemoglobin, so that each corpuscle on the average contains *more* haemoglobin than does a normal red corpuscle. This is expressed in the statement that the colour index is above 1. Accordingly on examining a film it is recognized that on the average the corpuscles are larger than normal. This may be confirmed by an elaborate process of measurement, though this is rarely necessary. The presence of these large corpuscles, macrocytes, is a characteristic feature of the anaemia, and is found in no other condition, except certain unusual and rarely met with conditions. There is also marked variation in size. In addition to the macrocytes, microcytes—corpuscles smaller than normal—are encountered and their presence makes the macrocytic condition more strikingly evident than even the raised colour index would indicate. In addition to this macrocytosis and anisocytosis there is marked departure from the normal shape—poikilocytosis—and the corpuscles may be oval or pear-shaped or depart still more from the normal rounded form. It is not that an occasional corpuscle here or there departs from its natural form (that may happen in any kind of severe anaemia), but that the great majority do so, and one may have to look carefully for any of the normal round shape. This tendency for the corpuscles to be oval† instead of round is one that I have emphasized for a long time back, and is sometimes even more striking than the large average size. There are other departures from the normal—the presence of nucleated and abnormally staining red corpuscles, departures from the normal proportions of the various forms of leucocytes, and diminution of the blood platelets—but the features of the red corpuscles that I have already described are the most important, and are in themselves diagnostic.

A good many patients with pernicious anaemia appear to digest their food well and maintain their body weight. But on looking through my record of cases over the last twenty or thirty years I come across a fair number of patients with pernicious anaemia in whom anorexia or complete loss of any inclination for food was present. This is a symptom that one had commonly come to associate with absence of free hydrochloric acid from the gastric juice, and accordingly in these patients I was accustomed to use medicinal doses of hydrochloric or

* Post-graduate lecture, Manchester Royal Infirmary, November 29th, 1932.

† On showing a film of his patient's blood to one practitioner who had a clear recollection of his biological days he exclaimed, "Why! it's just like frog's blood."

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nitro-hydrochloric acid in the treatment But it was only a comparatively small proportion of the cases that showed these symptoms and it was only in these occasional cases that one judged on clinical grounds achlorhydria to be present Of recent years however since direct chemical investigation by fractional test meals has become more common it has been demonstrated that *all* cases of pernicious anaemia practically without exception have complete achlorhydria although only a minority of them show that anorexia which one commonly associated with achlorhydria It proves in point of fact to be complete achylia gastrica—that is there is absence of pepsin as well—and it seems remarkable that so many of these patients are able to digest and assimilate their food as well as they do

II

The anaemia associated with carcinoma of the stomach closely resembles that of pernicious anaemia and on ordinary clinical grounds there is great difficulty in discriminating between the two They both commonly show symptoms of severe anaemia associated with gastric symptoms pain after food nausea vomiting and anorexia of varying severity If there is a history of sore tongue or of nervous symptoms the diagnosis of pernicious anaemia is indicated but these symptoms are by no means always present

It is becoming more and more fully recognized how frequently these two conditions have in past years been confused I can recall most vividly a patient being picked out in the wards of a Poor Law hospital as a typical case of pernicious anaemia by one of our leading physicians to be utilized in an examination in clinical medicine It was only when the blood was examined actually in the examination room that the true nature of the condition was demonstrated and this was confirmed by necropsy a few months later And the confusion in either direction may lead to most serious and regrettable results I can recall not a few cases of carcinoma of the stomach that have been treated for long periods as being cases of pernicious anaemia naturally without avail In some of these I have seen the patient with the diagnosis already made for me (maybe on the word of a clinical research laboratory) in the hopeful expectation that I should be able to advise a line of treatment that would lead to amelioration and cure and when I came to investigate it the case proved to be rather one of carcinoma of the stomach and I was obliged to give the expectant friends an absolutely hopeless instead of a hopeful prognosis And moreover valuable time had been lost during which perhaps surgical treatment might have been of some avail On the other hand cases that have really been pernicious anaemia have been regarded as carcinoma of the stomach and in the feeling that nothing could be done for them in consequence they have steadily got worse without the effective and successful treatment that was available having received a trial

And yet a suitable blood examination will conclusively discriminate between the two conditions and remove any possibility of confusion The two are from the point of view of the type of anaemia diametrically opposed In carcinoma the haemoglobin is reduced to a greater degree than the number of red corpuscles The colour index therefore is below unity often only 0·5 or 0·6 The red corpuscles accordingly are on the average smaller than normal they appear thin and washed out The majority of the corpuscles are of even size and of the normal round shape there may be *some* variation in size and shape but it is insignificant compared with the degree of variation met with in pernicious anaemia The leucocytes are commonly somewhat increased (as compared with a leucopenia) and there is often a high percentage—12 to 15 per cent—of large mononuclears and the blood platelets are increased instead of being greatly diminished or absent as in pernicious anaemia

The characters of the red corpuscles stamp the condition as typically a microcytic anaemia as also is the anaemia of chlorosis and of all forms of secondary anaemia and indeed of all forms of anaemia with insignificant exceptions other than pernicious anaemia The slides that I show you now of the blood in pernicious anaemia in the anaemia of carcinoma of the stomach and in other forms of secondary anaemia will clearly demonstrate this *

It appears to be cases of carcinoma at the *cardiac end* of the stomach that produce the most profound degrees of anaemia and further as the pylorus is not obstructed the gastric symptoms pain and vomiting are often comparatively inconspicuous and any tumour is concealed under the edge of the ribs and may not be palpable until the very late stages

As the result of accumulated experience of these two types of anaemia one came to assume with considerable confidence that cases of severe anaemia with gastric symptoms in which the blood examination did not reveal the features of pernicious anaemia especially in elderly persons were to be regarded as carcinoma of the stomach And in the main the further course of the illness the resistance to treatment and the steady progress to a fatal termination with or without necropsy confirmed the correctness of the diagnosis With the advance of *x* ray examination of the stomach the detection clinically of early carcinoma was rendered easier and occasionally (unfortunately only too seldom) surgical intervention was possible with greater or less success

III

But as time went on and numbers of cases accumulated occasional exceptions to this generalization began to be noticeable Patients with severe anaemia were seen with the blood showing the features of a secondary type and not of pernicious anaemia who had gastric symptoms and complete achlorhydria but who showed no evidence of carcinoma of the stomach on *x* ray examination and who instead of getting steadily worse and dying made a more or less complete recovery under medicinal treatment And it is especially of recent years when a routine investigation of the gastric activity in all cases of severe anaemia has become more common that the frequency of the condition has become to be generally recognized But the recognition is in point of fact by no means of recent date As far back as 1909 and 1913 a number of cases were very completely described by Knud Faber and since then many writers particularly in Scandinavian literature have described cases and these have been well summarized in a recent paper by E Meulengrath The condition has attracted less attention in this country and in spite of its long recognition has hardly obtained entry to our text books The name which has been most commonly applied to the disease has been simple achylic anaemia but the term simple achlorhydric anaemia has been suggested as more accurate since though the absence of hydrochloric acid is well established it is not quite so definitely proved that pepsin is always absent from the gastric juice † Witts in a recent paper has described cases that have come under his care under the heading of chronic microcytic anaemia The term is an

* The lecture was illustrated by a series of lant m slides of the blood in various forms of anaemia

† The meaning of the word achylia present some uncertaint relation to any proces of gastric digestion it can have no true If it is translated as absence of chyle since the chyle is the product of digestion in the mall intestine If it is translated more literally as absence of juice then achylia gastrica would signify absence of the gastric juice Einhorn appears to have used it as connoting absence of the ferments of the gastric juice which is certainly not what it means literally If we use it to denote absence of the specific digestive power of the gastric juice it would cover an absence of ferments or acid or both

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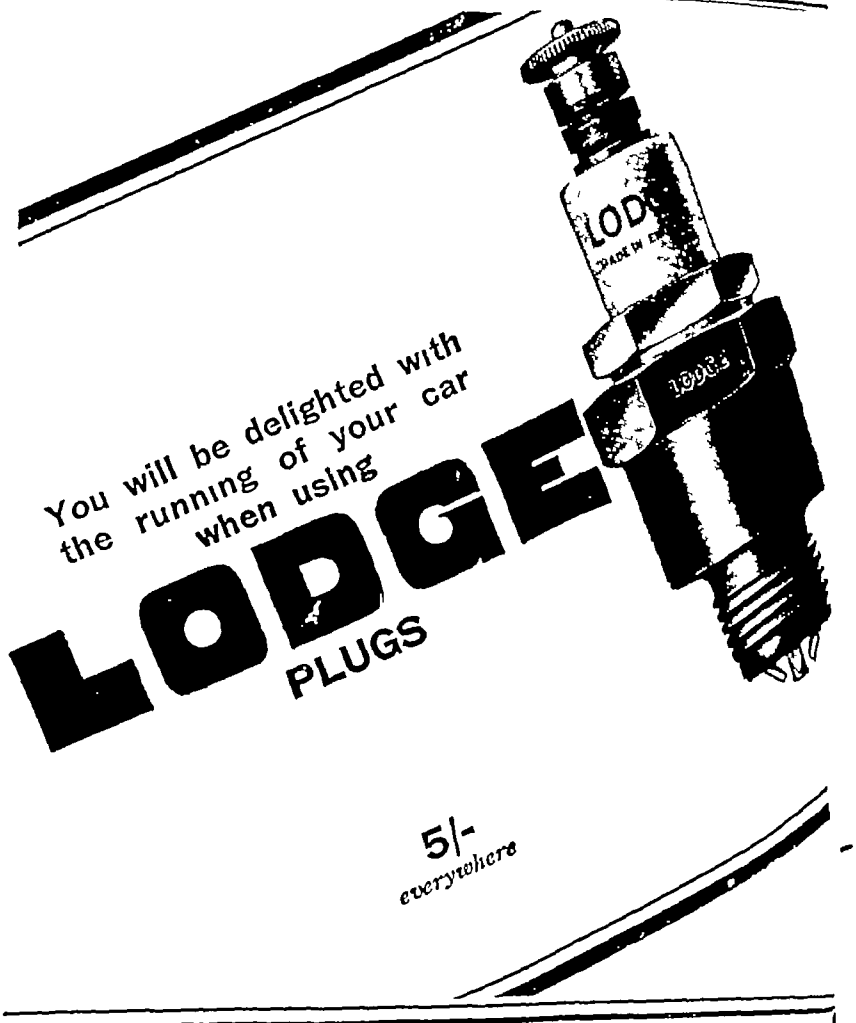

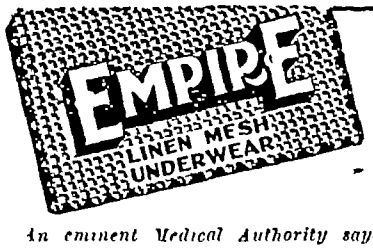

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unfortunate one, since, as I have said, with rare exceptions all cases of anaemia, other than pernicious anaemia, are microcytic, and to appear to limit the term to one specific form seems to me inaccurate and unscientific I see no adequate reason to depart from the established and sufficiently accurate name "simple achylic anaemia"

The condition is met with much more commonly in women than in men, usually between the ages of 30 and 50, and in some it is associated with varying degrees of menorrhagia So far no features of the blood have been described which would distinguish it from any variety of severe secondary anaemia The treatment is generally straightforward and satisfactory Full doses of iron, with or without hydrochloric acid and pepsin, usually produce rapid amelioration Ferri et ammon cit in doses of 20 to 30 grains three times a day has been the form I have employed This is in my experience the blandest and most easily taken form of iron, but it has long been recognized that it must be given in full doses, and that doses of less than 20 grains are much less effective in bringing about an improvement I have tried the addition of small doses of copper and manganese without any apparent benefit, but small doses of arsenic and of digitalis do appear to increase the effectiveness of the iron

I should like to add that preparations of liver and of stomach have no special effect in these cases In pernicious anaemia there is a definite and rapid response on the part of the bone marrow to treatment with these preparations as shown by the appearance of a high proportion of reticulocytes in the blood, but these cases of simple achylic anaemia show no such reticulocyte response to treatment with liver or stomach I resent the action of some of our manufacturing chemists in pushing on the market special and expensive combinations of liver and stomach with iron for the treatment of such cases which are no more effective than the simple and inexpensive pharmacopoeial preparations

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CONGENITAL ABSENCE OF THE VAGINA

BY

NORMAN HODGSON, M.S., F.R.C.S.Ed.,

NEWCASTLE-UPON-TYNE

Operative measures for the formation of an artificial vagina are undertaken either to rectify a congenital abnormality or to reconstruct a vagina in cases where the natural canal has been destroyed as a result of parturition or consequent upon inflammation

The purpose of this paper is to record a case of congenital absence of the vagina which I have had the opportunity of treating These cases are so few in number that the recording of every example is important as an aid to surgeons confronted with a similar problem

The patient was a woman 32 years of age, of normal appearance Until her marriage four years previously she was unaware of any abnormality beyond the fact that she had never menstruated She had regular monthly molimena but no menstrual flow After marriage the impossibility of coitus became apparent and resulted in domestic unhappiness This finally caused her to consult her family practitioner, who discovered the abnormality He invited me to see the patient with a view to rectifying the condition if possible

On examination one found that the secondary sexual characteristics were normal as were also the external genitals When the labia were separated a small depression, suggesting in appearance and position an imperforate hymen was seen There was no evidence of haematocolpos On rectal examination no cervix uteri could be felt and no further information regarding the uterine adnexa was obtained The probability of the absence of the vaginal canal, and the proposed method of forming a vagina, with the operative risks and ultimate possibilities, were explained to the patient, who readily gave consent to the suggested procedure

Three methods of forming an artificial vagina have been described and performed with varying degrees of success (1) Turning in pedicled flaps of skin This method carries the minimum risk, but the subsequent contraction of the new canal makes it the least satisfactory (2) The method described by Schubert of adapting a portion of the rectum (3) The method described by Baldwin in 1904, and successfully performed by him in 1907 of utilizing a loop of small intestine From a survey of the literature this appeared to me to give the most satisfactory permanent results and was therefore employed in this case

FIG 1—Shows the method of drawing down the isolated loop of ileum The end of this loop is shown open and the other closed by suture In the actual operation both ends were closed before the loop was drawn down, the continuity of the bowel had also been restored before this stage was reached
FIG 2—Shows the operation completed

The operation was carried out as follows The patient was first placed in the lithotomy position and a transverse incision made between the labia minora The cellular tissue between the rectum and bladder opened up easily, but there was no trace of a vaginal canal This separation was carried out to the highest possible point A pair of long artery forceps was then introduced into this space, and fixed securely in position by packing gauze round it The position of the patient was then changed to the Trendelenburg, and the abdomen was opened by a median subumbilical incision

The first striking feature found intraperitoneally was that the left kidney was lying on the brim of the true pelvis This abnormality is mentioned by Pemberton as being present in several of the cases recorded, he suggests, therefore, a preliminary cystoscopy with ureter catheterization and a ray examination to ascertain the location of the ureters On examining the pelvic viscera the ovaries were

found lying one in either iliac fossa near the pelvic brim they were normal in appearance and showed evidence of the formation of Graafian follicles There was no trace of a uterus or of any tissue representing it

The technique of the Baldwin operation was followed A loop of small intestine about 7 inches long and about 12 inches from the ileo-caecal valve was selected It was isolated together with its mesentery and the cut ends of the bowel in the loop were permanently closed by purse string sutures of catgut The continuity of the intestinal canal was restored by an end to-end anastomosis The apex of the U shaped isolated loop was easily pressed to the bottom of the pelvis where it was grasped by the forceps previously introduced from the vulva and drawn to the surface The isolated loop of bowel was now sutured to the pelvic peritoneum but this did not exclude it entirely from the peritoneal cavity as the mesentery passed through the pelvic floor This concluded the intra abdominal part of the operation and the abdomen was closed without drainage

The patient was again placed in the lithotomy position The loop of bowel was of normal colour and there appeared to be no undue tension on its mesentery The convexity of the loop was incised and the cut edges sutured to the skin edges within the labia minora This concluded the operation The patient made a straight forward recovery

It was thought advisable to wait a few months before proceeding with the division of the septum between the tubes of the transplanted bowel At the end of three months the septum had retracted to such an extent that this procedure was unnecessary At first there was a constant discharge of mucus from the vagina but this rapidly diminished in amount

Two years after the operation the patient was examined Her general condition mentally and physically had improved She expressed herself as well satisfied with the result of the operation and there is every reason to believe that coitus can be carried out satisfactorily There is no contraction of the orifice of the vagina which admits two fingers with ease

A collective review of the literature on the formation of an artificial vagina by Frank A Pemberton is to be found in the *American Journal of Obstetrics and Gynecology* for August 1925

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A NOTE ON TREATMENT OF IMPETIGO

BY

J L NEWMAN M B B CH

ASSISTANT M O H COUNTY BOROUGH AND PORT OF SOUTHAMPTON

Of all the skin diseases that fall within the province of the school medical service impetigo must be given pride of place alike for its commonness and for its effects It is the cause of an enormous amount of loss of education its treatment involves considerable expense and it produces immeasurable results in the way of impairment of health For these reasons any improvement in existing methods is to be welcomed The following notes describe what I believe to be an improvement by means of the already well recognized principle of the occlusive dressing

The subjects of the treatments recorded below were elementary school children treated at the Southampton municipal clinics Three different lines of treatment were adopted

Group I Treatment by the Occlusive Dressing

This consisted simply in the application of a piece of elastoplast bandage to the lesion—whatever its stage of development The lesion was not touched in any other way Crusts if present were left *in situ* superficial pustules were not pricked and the adjacent skin was not cleaned Some selection of patients had to be employed There are situations such as the lip edge on which a dressing cannot conveniently be stuck and there were children who by reason of their irresponsible nature could not be trusted to leave their dressings alone No other method of selection was invoked On the first visit the dressing was applied and the patient was told not to pull it off or to wash it Unfortunately—and even surprisingly in respect of the second injunction—these instructions were often ignored and the result has been a considerable diminution of the material available for statistical purposes These failures were sometimes due to the misguided efforts of the parents who would much rather use sulphur ointment than be parties to a revolution More frequently they were due to the natural restlessness of childhood for in point of fact the elastoplast if not interfered with will stand a good deal of immersion in hot water Fifty children have been treated from first to last with elastoplast They were excluded from school at their first visit and not allowed to go back till healing was complete I believe there is very little risk of the infection spreading to others through the dressing but the children were kept from school partly owing to the possibility of fresh lesions developing and partly in order to make sure that they did not vanish from observation The total time lost from school by these fifty children was 486 days giving an average of 9 7 days per child The longest period of exclusion was nineteen days the shortest five days

Group II Treatment by Ung Hyd Ammon Dil

This comprised children who by reason of the situation of the lesion or by their probable or proved irresponsibility were unsuitable for treatment in Group I It also included those treated in the first part of 1932 before the elastoplast treatment had been started The patient was given a box of dilute ammoniated mercury ointment and was told to keep the lesions well covered with it Nothing was said about removal of crusts or any supplementary form of treatment This group included sixty five children and they lost in all 1 208 school days giving an average loss of 18 6 days per child The longest period of exclusion from school was eighty-two days the shortest five days

Group III Intensive Treatment

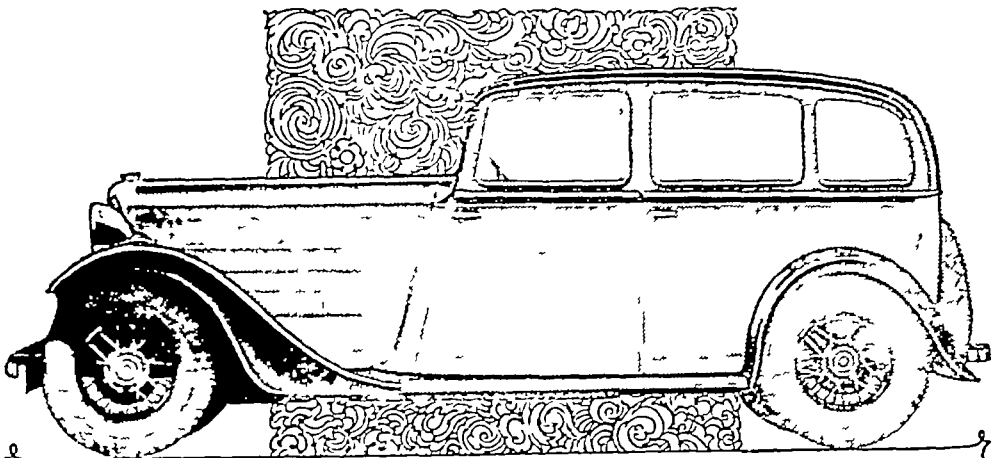
The fifty children in this group were treated on similar lines to Group II but on a more intensive scale No attempt was made at any sort of selection Crusts if a prominent feature were removed by means of a starch poultice applied either at the school clinic or at home the materials in the latter case being provided and the method of use explained The child then attended the clinic for daily dressings and the parent was given a box of ointment as in the previous group and told to apply it six times a day These fifty children lost 1 127 school days giving an average loss of 22 5 days per child On an average they were dressed at the clinic six times each The longest period of exclusion from school was eighty one days the shortest three days The largest number of dressings in any individual was thirty three the smallest one

Complications

One patient treated with elastoplast for three lesions on the left knee developed an abscess in the subcutaneous tissues of the middle of the left thigh This was opened and recovery was uneventful One patient in Group III—also with the primary focus on the knee—developed an abscess in one of the inguinal lymph glands In this case too recovery was rapid after the abscess had been opened

DISCUSSION

A comparison of these three groups relatively small though they are shows quite clearly the advantages of a policy of non interference in the treatment of simple impetigo Indeed a study of the patients themselves brings home even more forcibly its benefits for a comparison of the lesion which has been kept occluded with another on the same patient from which the dressing has been removed is most striking Another feature but one which it is difficult to express in statistical form is the limitation of spread from one site to another in the individual patient Nor does the occurrence of a subcutaneous abscess in the elastoplast ' group invalidate the claims



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of the latter, for such a complication may arise in impetigo however treated An increased incidence of such complications would have to be demonstrated in a very much longer series of cases before the very obvious advantages of the method could be seriously decried But there is no need to stress the benefits of the occlusive dressing in superficial infections they are already well enough known to all who have used them An important aspect of impetigo is the administrative one If the disease can be cured so readily with so little treatment the work of the school clinic can be enormously reduced The amount of supervision needed from the medical officer will be lessened, and the school nurse, absolved from the necessity of doing daily dressings, can apply her energies in more useful spheres Adhesive dressings no doubt cost more than ointment, but in the long run their use might well prove to be an economy At any rate the cost is scarcely likely to outweigh their great advantages Finally, the occlusion of the individual lesions is likely to have the effect of limiting the spread of the disease from one member of a household to another

SUMMARY AND CONCLUSIONS

1 Three methods of treating simple impetigo are described—by means of the occlusive dressing, by means of ointment applied intensively, and by means of the same ointment applied in a more desultory way

2 The evidence indicates that the advantage is strongly with the first method of treatment the period of invalidism being almost halved The worst results come from intensive methods

3 This advantage to the patients may also be felt by the school medical service in the form of increased simplification of work The occlusive treatment is likely to diminish the infectivity of the disease

I should like to express my thanks to my colleague Mr J D Dear for permission to use the records of his patients

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

FATAL CEREBRAL HAEMORRHAGE IN A YOUNG ADULT

There are several points of interest in the unusual case described below—the extreme difficulty of diagnosis in the first emergency the occurrence of fatal cerebral haemorrhage in one so young and the presence of glycosuria and albuminuria

I was recently called to attend a young lady of 25 who while dancing had suddenly sunk to the ground On examination she was quite unconscious all reflexes were absent the pulse was very bad but colour was good and there were no obvious signs of injury to the head A stomach wash was done nothing abnormal being found and with oxygen the pulse revived a little Soon after it was noticed that the pupils were becoming unequal and there was some divergence of the left eye The history was entirely negative She had been at her work as a secretary during the day and had been quite herself all the evening For two days during the previous week she had been at home with a slight cold She had had some septic infection of the face some three years before but had never had a serious illness After about two hours it was decided to remove her to a nursing home where a catheter specimen showed a considerable quantity of sugar and some albumin Blood pressure was 190 A few minutes later the left pupil which had been smaller than the right was seen to be dilating The divergence increased and the patient died four hours after being first taken ill Post mortem the only abnormalities found prior to an examination of the skull contents were a few calcareous glands in the abdomen and a slight thickening of the mitral valve suggestive of old vegetations On opening the head the dura mater was found to be rather adherent There was a marked effusion of blood in the subarachnoid space all over both sides of the brain This was slightly more marked in the left fissure of Rolando and left Sylvian fissure than in the right The pons medulla and the lower surface of the brain were all covered with effused blood No ruptured aneurysm could be found but there was so much disorganization that it was difficult to identify the vessels which incidentally did not appear to be unduly thickened

Cerebral haemorrhage in young persons is not so rare as might be expected Allbutt[1] quotes the St Bartholomew's figures of 3,790 necropsies with 134 cases of intracranial haemorrhage, of which 7, or 5·6 per cent, occurred between 21 and 30 In Dr Cookson's interesting series of eight cases of subarachnoid haemorrhage recently published in the *Journal*,[2] only one—a boy of 17—was under 30 In the historic work of Charcot and Buchard in 1868 it was considered that haemorrhage came from miliary aneurysms, but according to Osler and Price this view was negatived by Ellis and Pick,[3] and it is now held that the cause is a rupture of a definite aneurysm or of a weak arterial wall, following an infective embolus[4] In this case the history of a septic infection of the face and the suspicious mitral valve are suggestive but there is no explanation of why the rupture took place when it did

The occurrence of the glycosuria and albuminuria is of practical importance as bearing on the diagnosis of cases of sudden unconsciousness My colleague Dr Beare had removed the appendix some two years previously, when the urine was free from sugar and albumin No history of polyuria or diabetic symptoms since then could be obtained, nor were there any naked eye changes in the kidneys post mortem Though the literature on this matter seems scanty, it is generally taught, and held by Munch-Peterson,[6] that such an occurrence is due to interference with some special centre in the brain, probably in the medulla oblongata or corpus striatum None of Dr Cookson's eight cases showed any glycosuria, and in five out of six there was only slight albuminuria It would appear that this centre must be very active, as in the present case urine in the bladder contained a large amount of sugar and albumin within three hours of the onset of the haemorrhage The high blood pressure may have had some similar cause, but it may have been terminal, as it was not taken until just before death

I am indebted to my partner, Dr Max Davison and to my colleague Dr C E Beare for their assistance and to the latter for permission to publish the case

S MORTON MACKENZIE M A
M B, B Ch Cantab

Dorking

REFERENCES

1 Allbutt *System of Medicine* 1910, p 309
2 Cookson Spontaneous Subarachnoid Haemorrhage *British Medical Journal* April 1st 1933
3 Price *Textbook of Practical Medicine* 1929
4 Learnsides *Brain* 1916 xxxix, 224
5 Glaser *Ibid* 1929 lii 226
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DRUG ERUPTIONS

The extended use of gold and bismuth salts has been followed in some instances by a rash I propose to record here an example of an eruption due to solganol which, so far as I know, has not been recorded in English literature as producing a characteristic rash

Mrs M, aged 46 was admitted under my care at St Mary's Hospital on February 20th, 1933 when she gave the following history She had suffered for some years, probably since early 1929 from an eruption diagnosed as erythema perstans by a dermatologist in charge of a department at a teaching hospital This is described as a gyrate purple eruption on the backs of both legs with a history of having had it at some time upon the face The

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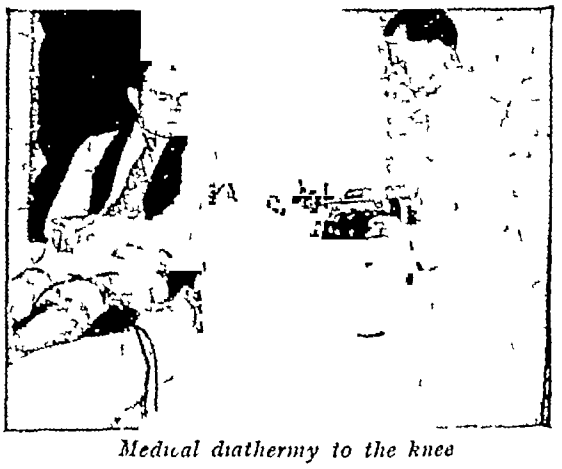

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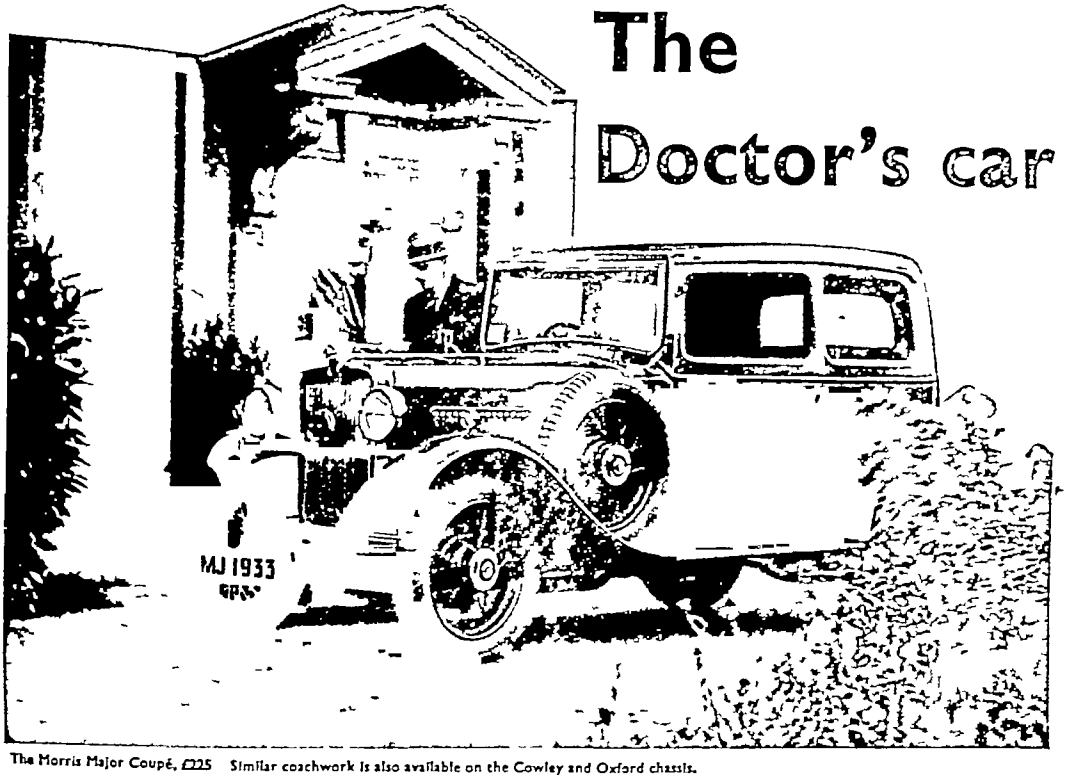

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eruption disappeared in the summer to recur in the winter She suffers intensely from cold In January 1931 the same dermatologist regarded the eruption which was then upon the face as lupus erythematosus She received four doses of solganol (di sodium salt of sulpho-methyl-amino-auro-mercaptan benzol sulphuric acid) by intramuscular injection at intervals of a week between each The first injection—0 01 gram—was followed almost immediately by a very extensive eruption closely simulating erythema multiforme With each successive injection—and four in all were given—the rash became more extensive

When seen by me in February the patient was obviously extremely ill She then had a very congestive erythematous eruption like erythema multiforme of the whole face neck upper arms and forearms chest and back Both legs were entirely covered with a thickly set purpuric eruption which persisted long after the erythematous rash had died away Treatment in the hospital was confined to soothing lotions retention in bed and administration of bromide as the patient was sleepless and suffered extreme discomfort from the widespread congestion of the skin

This patient was shown by me at the meeting of the Dermatological Section of the Royal Society of Medicine on March 16th 1933 when the diagnosis of solganol eruption was generally confirmed She has now made a complete recovery the only traces of the eruption left being some stains upon the legs from the purpura

At the same meeting of the Dermatological Section three cases were exhibited of widespread eruption closely simulating lichen planus and clinically indeed indistinguishable from that disease but with a history of having come on during the administration of bismuth injections I had seen a few weeks previously an eruption in a young man undergoing treatment for syphilis and showing patches upon the face indistinguishable clinically from hypertrophic lichen planus In this case the history was that for the twelve months previous to his coming to me he had been having bismuth injections following upon a course of N A B injections in the previous twelve months during which however he had shown no rash Eruptions simulating lichen planus and following upon bismuth injections are not as far as I can find mentioned in any textbooks and are probably a new observation Our knowledge of the causation of lichen planus is so limited that it may be regarded as a tenable hypothesis that actual lichen planus can itself be produced by drugs just as herpes zoster usually an idiopathic phenomenon can be produced by arsenic

The object of this note is to suggest to practitioners an inquiry into drug antecedents in cases resembling lichen planus erythema multiforme and other skin eruptions the aetiology of which is obscure

St. Mary's Hospital Skin Department. E GRAHAM LITTLE

TWO CASES OF SPONTANEOUS CURE OF CONGENITAL NYSTAGMUS

In view of the poor prognosis associated with congenital nystagmus the following cases may be of interest

A girl aged 5 was brought to me in 1925 suffering from a typical congenital nystagmus The condition had been noticed for some time but the parent hoped the child would grow out of it There was no history of head nodding I could do no more than refract the child under atropine and order glasses but acting on the theory of congenital albinism I had the lenses tinted (Crookes A2) No type vision could be recorded The following year conditions were very similar except that the vision could now be recorded as R E with + 3 D cyl ax 105°—6/24 L E with + 0 50 D sph + 2 5 D cyl ax 90°—6/18 In 1927 there was no change in the nystagmus and the vision remained the same In 1930 the child was brought to me again when to my astonishment no nystagmus could be seen The parent stated that the condition began to improve in 1928 and about a year later the nystagmic movements had disappeared The refraction was then R E + 2 5 D cyl ax 100° which gave a vision of 6/9 partly and L E + 2 D cyl ax 90° which gave a vision of 6/9 New glasses were ordered without any tint and the condition of affairs is still good

A boy aged 6 was suffering from congenital nystagmus when seen by me in 1927 The mother gave a history of eye movements for as long as she could remember no head nodding however had been seen Both fundi were apparently normal and the vision in both eyes was 6/24 with a small hypermetropic astigmatism corrected Glasses were ordered tinted as in the case recorded above and I saw him eighteen months later when no change could be noticed In July 1932 I saw him again but no nystagmus was apparent The mother gave a similar history—namely that about eighteen months previously the condition had begun to improve and six months before I saw the boy the nystagmus had ceased completely The vision was then R E with — 0 5 D cyl ax 90°—6/9 L E with + 0 5 D cyl ax 90°—6 12 Untinted lenses were ordered I saw the boy again in January 1933 and the vision with glasses had improved to 6 6 and 6 9

I can trace no similar cases in the literature

Swansea ROY THOMAS M B F R C S Ed D O M S

Reports of Societies

TREATMENT OF CHRONIC SUPPURATIVE OTITIS

A meeting of the Section of Otology of the Royal Society of Medicine was held on May 5th with Mr J F O MALLEY in the chair when a discussion took place on the treatment of chronic suppurative otitis

Dr T RITCHIE RODGER in opening said that the problem which was social as well as surgical was a reproach to the medical profession in general and to the otologist in particular Although in no other open sinus was there such an element of danger to life yet no other chronic suppurating sinus in any part of the body was treated with the same levity and inaction There were now some hundreds of men engaged in the practice of otology as compared with a mere handful a generation ago but the question might well be asked whether they were making an impression on this unfortunate condition such as their numbers and endeavours might be expected to make The average length of treatment was some criterion of progress and this provided distinct encouragement At school clinics before the appointment of aural surgeons the same patients treated on the old lines used to attend month after month without improvement Now with attention to adenoids improved local treatment and recourse to mastoid operation where necessary the average length of treatment was very much reduced The increased number of mastoid operations performed might perhaps be claimed as an index of progress although critics would say that it was only an evidence of enthusiasm for surgery The most searching test of all was to ask whether the number of intracranial complications had been reduced but this was difficult to answer The otologist had so recently gained his proper position in most cities and towns that a decade or two ago a large proportion of such complications passed into the hands of the general surgeon Therefore statistics by otologists might well show an increase in such complications although the absolute number might be much smaller Dr Rodger said that in the first fifty mastoid operations of all kinds that he performed in his city of Hull he had seventeen intracranial complications The chief explanation of this high ratio was that no special department had previously been in existence in the city and the general surgeons who did the mastoid work received for the most part only those cases in which immediate operation was required His figures for 1932 at the Hull Royal Infirmary where there was now a department similar to the one in Edinburgh showed taking all mastoid operations together a percentage of complications of 10 5 and this was almost identical with the figure in Edinburgh for 1932 At the Children's Hospital in Hull the proportion of complications was smaller—4 2 per cent—and in private cases of all ages it was 7 1 per cent The investigation had brought to light one very weak link in the arrangements for at the two municipal hospitals

otherwise quite well equipped, there had been no ear department, the surgeon being called in as required Here the percentage of complications in 1932 was 45 4 He went on to point out that every chronic ear discharge had had an acute stage, and the chronicity was mainly due to mismanagement of that early stage Paracentesis should be performed if opportunity was given Nature s method of relieving the intratympanic pressure of pus in the middle-ear was by a sloughing of part of the membrane, and no control was possible over the size, shape, or site of the perforation This might be too large for restoration or badly situated for drainage The linear incision of a well-performed paracentesis could be relied upon to heal when its purpose had been served The otologist should take pains to explain to the practitioner and the patient that if the paracentesis or spontaneous rupture was not followed by a fairly early cessation of the discharge, even if all other symptoms besides the discharge had subsided, operation must be considered The otologist should make a time limit—four weeks or six or or perhaps longer—and adhere to it, presuming, of course, that the most careful local treatment would be carried out, and that he had an opportunity of seeing that this was efficient before operation was finally advised The end in view was that no acute otitis media should be allowed to pass into the chronic stage In the case in which chronicity was established, the patient should be told that a determined effort was going to be made to get the ear dry by conservative measures but that if within a reasonable time limit these did not succeed, it must be assumed that there was some deeper mischief and that operation would be necessary Here more particularly than in the acute case, it was a duty to advise the patient of the element of danger attaching to every chronic ear suppuration The patient had probably been impressed only by the annoying discharge and the defect in hearing , he must be told of the danger to his life In this matter the otologist must not hesitate to assume the role of guide to the medical attendant, for the otologist was likely to have had personal experience of the tragedies of neglected cases while the average practitioner probably did not see more than once in eight or ten years in his own practice the intracranial complications which made the otologist so much alive to their importance Anything inimical to efficient ventilation of the Eustachian tube must, of course, be corrected whether in nasopharynx or nose For local treatment Dr Rodger used the dry method which he proceeded to describe in detail In résumé his contentions were that chronic otitis media should seldom be seen if the acute stage was efficiently managed , that the otologist should impress on the practitioner and the patient the importance of a time limit, after the expiry of which operation must be considered , that in such chronic cases as did fall to be treated the same principle should be adopted , and, finally that it was the duty of the otologist to explain his point of view for the education of the public and the practitioner

Dr A R FRIEL said that twenty years ago Professor Leduc had taught him the principles and methods of ionization and he had been endeavouring to apply them in otology There was a factor in chronic otorrhoea which was common to all cases—namely, sepsis The sepsis was external in the necrosed area, and did not extend far into the living tissues If a hundred cases of chronic otorrhoea were taken and classified it would be found that in by far the largest class there was sepsis in the tympanum without any other factor being present The sepsis in most cases was accessible , and surely, this being so the treatment for tympanic sepsis should be an antiseptic directly applied to the surface For zinc ionization it could be claimed that it was a remedy for sepsis in the inaccessible area The current made the positive ion travel towards the negative pole so that the positive ions would be driven through the microscopic film of discharge which was adhering to the tympanum The current acted selectively, taking only the positive ions the negative having no action on the tissues The zinc was the antiseptic and when it combined with the albumin it formed a firm precipitate which was a protection between the subjacent tissues and the exterior The ionization treatment was rapid enough to be carried out within a moderate time After the treatment had been completed the solution was allowed to run out of the ear and then he thought it was good practice, if the tissues had been previously congested, to blow some boric powder into the meatus

Mr T B LAYTON agreed with Dr Rodger that this was a social problem, but he thought that he was unduly unkind in saying that the present position was a reproach to the medical profession in general and to the otologist in particular So long as it remained a social problem the hygiene of school and home must be one of the most important factors, and if it was a reproach at all it was a reproach to the whole nation, and not to the medical profession He disagreed with Dr Rodger s remark that ' Nature's method of relieving the intratympanic pressure of pus in the middle ear is by sloughing of part of the membrane " While he did not doubt that this occurred occasionally, usually the perforation caused by Nature was a very small one and there was no sloughing He believed that the change from that condition to the large perforation of the chronic suppurating ear was a slow ulceration around the edge of the perforation, and if that was so it became a race against time The treatment of acute otitis media was far and away the most important part of the treatment of chronic suppuration, and in all this procedure the manner in which the meatus was cleansed was probably the most critical point He also disagreed with Dr Rodger in saying that it did not matter very much what time limit was imposed so long as some time limit was laid down If he was right in suspecting that secondary infection was likely to have occurred by the end of two months, it was desirable to place the time limit at the end of one month in order to have a fortnight for discussion of it with the parents or the patient and for getting the operation done The ordinary simple mastoid operation showed very good results but it was disappointing if it was done after the secondary organisms had got into the mastoid region Dr Rodger had put very ably the disadvantages of the radical mastoid operation but there were one or two points he had left out He had mentioned the risk to life of the chronic ear, and had said that this was a handicap to labour, but had suggested that the person who had had a radical mastoid operation no longer suffered from that handicap Personally the speaker found that in many parts of the labour market, to have had a radical mastoid operation done, even though the result was perfect, was a handicap, and once a radical mastoid operation had been done some people could never be got back into the heavy and dangerous trades

Dr DOUGLAS GUTHRIE referred to the problem in the Army, where chronic suppurative otitis media had been and remained, one of the commonest causes of invalidity and rejection of recruits He himself saw all doubtful ear cases in the troops in Scotland, and he had no hesitation in rejecting any recruit suffering from suppurative otitis even though the ear had become dry It was of no use performing radical mastoid operations in the Army, as one did not get the men fit He also referred to the problem in a children's hospital mentioning that previously in 1926, he had brought forward at the Royal Society of Medicine particulars of 500 cases An endeavour had been made to trace those cases, and, after very considerable trouble, 345 had been followed up Among all the chronic cases only one intracranial complication had been found —a cerebral abscess in a boy aged 9—while among the acute cases 3 or 4 per cent showed intracranial complications Since that time he had seen only one other intracranial complication in a child following the chronic type of case If the tuberculous ears were excluded, 60 per cent of the chronic suppurative otitis media cases were cured, the ear being dried and deafness very slight The results of radical mastoid operation were unfortunate and since that time he had performed very few such operations in children He insisted upon thorough conservative treatment, which one carried out oneself or by means of a skilled assistant, the ear being most carefully inspected at regular and frequent intervals He had found the results of ionization distinctly encouraging, but it required meticulous attention to detail

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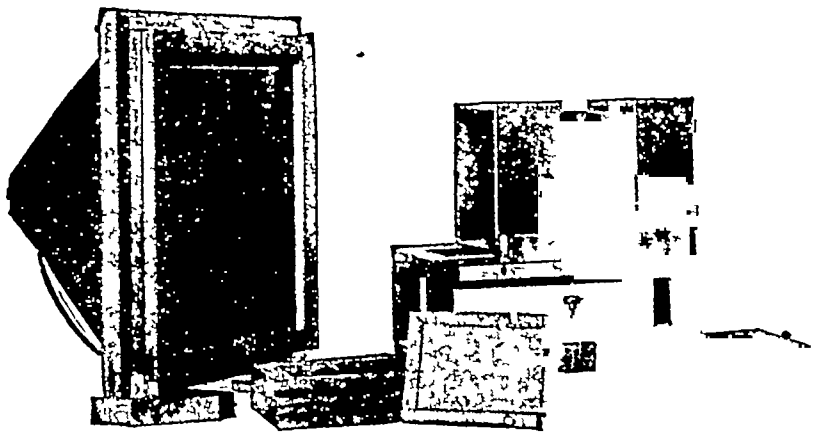

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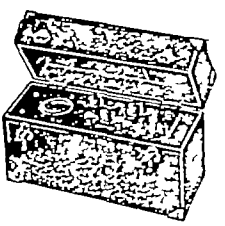

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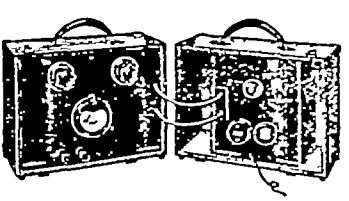

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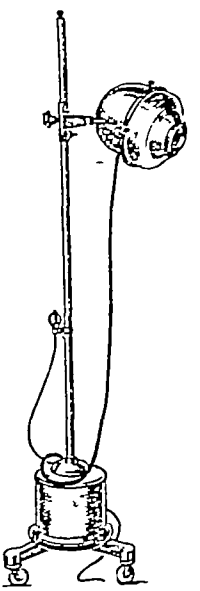

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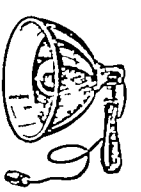

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Electrical Aids to Diagnosis and Treatment

Dr Sophia Jevons said that this was a social problem and that she felt strongly that propaganda by otologists was what was wanted She had a great deal to do with the medically minded lay public but it was almost impossible to make even these people understand the importance of this subject If it was desired to make progress the dangers and the possibilities of cure must be carefully and thoroughly explained Dr Thacker Neville also referred to the necessity of educating the family practitioner He considered that there were far too few articles on this subject in the *British Medical Journal* and the *Lancet* He also mentioned that in Denmark the ear nose and throat specialists constituted panels and saw patients at their own consulting rooms and he thought far better treatment was obtained in this way than at the crowded clinics in this country Dr James Adam said that for many years he had used the cautery for closing the Eustachian tube in the radical operation Mr Graham Brown raised the question of the form of operation and showed a case of chronic suppurative otitis media in which transmastoid attico-tympanotomy had been performed and there had been cure with hearing conserved The patient was a female aged 29 with chronic suppuration of the right ear following measles at the age of 12 Attic perforation with granulations was present After operation healing was complete in three weeks and the patient could hear a watch held close to the ear

Sir James Dundas Grant said that he did not think Dr Rodger had dwelt sufficiently on the difference between the postero superior marginal perforation and the antero-inferior one the difference in regard to risk and to curability was very well marked Dr Rodger had referred to antero-inferior perforation as being exceptional This perforation was very important in the respect that it was so benign it indicated a slight trouble in which generally the discharge was coming from the upper part of the Eustachian tube and in such cases a special treatment for the Eustachian tube would sometimes bring about recovery in a very obstinate class of case He had previously shown to the Section a girl with a very large perforation for which she was going to have a radical mastoid operation There was a discharge in this case which he managed to bring to an end by the use of chloride of zinc solution up the Eustachian tube using for the purpose a long silver Eustachian catheter He had had at least one very marked case in which the mucus in the tympanum was so inspissated that it amounted almost to a foreign body and when removed by syringing and suction it accumulated again and again until he employed irrigation through the Eustachian tube That could only be safely carried out when there was a large perforation With regard to polypi which sometimes grew from the edges of the perforation and might remain inside and be larger than the perforation itself he had in one particular case been able to force out a polypus and snare it away without its recurrence and with complete cessation of the discharge afterwards Another treatment which was of value was the use of the fine point of the galvano-cautery but this must be used in careful hands and with a good instrument By this means he had been able on certain occasions to put an end to small polypi that were keeping up a discharge

Dr Rodger in replying said that he had tried ionization but he feared there must be some defect in his technique for he could not get the same results as Dr Friel He got really good results with the old fashioned treatment described in the paper He thought the secret of success with local treatment by the dry method was in the detail The ear must be absolutely clean and dry before the wall of protective antiseptic powder was inserted He had always had the impression that Dr Friel's cases were of exactly the same type as his own—that is to say suppuration was confined to the middle ear If the suppuration went into the antrum and the adjacent cells he did not think any conservative treatment was going to be successful He could not agree with Mr Layton's point about the secondary organisms being a criterion for chronicity He thought chronicity depended upon the point to which the infection had reached no matter whether there was one organism or many

SPEECH AND HEARIN

At a meeting of the Manchester Medical Soc 5th with the president Professor E D Telfo chair Mr and Mrs A W G Ewing made a con tion on recent researches in speech and hearing

The present research in the Department of Educatic the Deaf at Manchester University began in 1924 Pra tical experience in the education of partially and function ally deaf children led to a realization of the need for methods of measuring hearing capacity in relation to the physical nature of speech sounds During the post war period there has been what amounted to a revolution in the physics of sound The absolute control and measurement of intensity or loudness had been brought within the scope of all workers A standard unit of intensity had come into common use in all countries Quantitative measurements had been made of the intensity of the sounds of speech and the noises of daily life Human hearing had been explored in terms of intensity By the use of properly calibrated oscillators the average auditory acuity of a number of normal ears could be established and used for comparison with the auditory acuity of individual partially deaf patients Three or four hundred tests of this nature had been made in the Department of Education of the Deaf at Manchester University (The significance of two audiograms was then discussed and illustrated by the use of apparatus) Wegel had discovered that when the intensity or loudness of a tone was progressively increased a level was eventually reached at which its affective quality changed It might produce discomfort and even pain This was obviously a matter of practical importance in investigating the potential value of hearing aids

The authors explained that research on this problem in the Department of Education of the Deaf had been enlarged to its present scope with the help of the Medical Research Council and the Royal Society Aids to hearing had been designed and constructed with a view to efficiency regardless of size and weight Aetiological factors and the phenomena of auditory fatigue and adaptation were being studied The frequency or pitch characteristics of speech sounds could now be demonstrated with suitable apparatus The advantages of vacuum tube oscillators in testing auditory acuity consisted in the possibility of exact quantitative measurements made in a straightforward way the use of the same apparatus for testing almost all audible frequencies and the ability to maintain the intensity of a tone at a constant strength The standard blow problem was eliminated The apparently greater relative sensitivity of some paracusic patients to sounds heard in a telephone receiver than to sounds in free air was probably not mainly due to bone and cartilage conduction The use of amplifiers in the education of congenitally deaf children with some hearing capacity afforded a field for the most drastic test of the potential value of hearing aids especially when the children had no other auditory experience to compensate for any defects in the apparatus

A demonstration with clinical cases followed the reading of Mr and Mrs Ewing's paper

COELIAC DISEASE

At a meeting of the Section of Medicine of the Royal Academy of Medicine in Ireland on April 21st with the president Dr W G Harvey in the chair Dr R E Steen read a paper on coeliac disease and showed two patients who were being treated by him

The cases were typical in respect of clinical and biochemical findings and their weight charts showed the typical rises and falls though in both real improvement had already been obtained one patient at the age of 3 years was walking well and was thirty three inches in height In discussing treatment he emphasized the revolution which had been brought about by the introduction of the vitamin concentrates Formerly the physician always found himself between the Scylla of giving too much fat and the Charybdis of producing rickets by starving the child of fat soluble vitamins Now it was

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not without interest We notice, for example, that the petrosal nerves are one and all regarded as entirely derived from the facial glosso pharyngeal complex, their connexions with the sympathetic system being noted but receiving no distinctive names The arrangement, again, of the upper intercostal veins admittedly subject to considerable variation is of a type which we in this country would regard as abnormal Among minor differences we observe that the agger nasi is applied to part of the ethmoid and not as with us to part of the superior maxilla and that the thickened part of the shaft of the second rib is attributed to the insertion of the scalenus posticus muscle

The illustrations are almost entirely original and of the highest excellence Nothing could, for instance be better than the drawings of the tendons and their sheaths in the neighbourhood of the wrist or than certain schematic figures showing the arrangement of the peritoneum In Fig 204 vol i however, both the infra-trochlear and frontal nerves appear to us to be inaccurately related to the superior oblique and levator palpebrae superioris muscles respectively while in Fig 136, vol i the recurrent laryngeal branch of the right vagus—unnamed, by the way—is shown arising from the lateral instead of the medial side of the nerve Finally the work of the publisher should not pass unnoticed, worthily supporting that of the author and artist, with the result that we are presented with a book which reflects the *greatest* credit on all concerned—a book in many ways standing in a class by itself and one which from the attractiveness of its appearance, may be justly regarded as an *edition de luxe*

ADULTERATION OF FOODS AND DRUGS

In *Adulteration and Analysis of Foods and Drugs*, by J I LIVERSEEGE repetitions from existing literature are notably absent The lively interest for the reader which springs from personal experience of the writer runs through almost every page Mr Liverseege's long experience as public analyst for the city of Birmingham has enabled him to draw an interesting survey of the practical administration of the Food and Drugs Act The subject is here considered systematically on a plan calculated to furnish advice to all who are occupied in an executive capacity including analysts sampling officials and solicitors In treating of procedure with regard to offences the author indicates the methods that tend to avoid a waste of public money He describes the pitfalls which beset the work of a sampling official and suggests means by which his services may become more efficient He describes in detail the formalities which are essential to reports by public analysts the length to which his evidence may extend and the limits to which it should be restricted He also shows the difficulties that may arise from the failure of a witness to appreciate the niceties of a legal distinction Analytical methods are not usually given in extended detail, but numerous instances are provided of improvements and modifications of known methods which have been found in practice to give satisfaction References to original papers describing special analytical methods are plentiful

Many accounts of prosecutions and of the results are quoted in connexion with foods and drugs A considerable number of these are not of recent occurrence but they are not less useful for they afford a means of studying the development and trend of food control Among the various subjects discussed are found colouring matters, preservatives the dispensing of medicines and the microscopy of starches Suggestions are also offered on methods of calculating analytical results There is an appendix supplying descriptions of apparatus, reagents, and tables of factors used in calculations The book is one of a novel kind in its sphere and will be found exceptionally useful to those concerned in the administration of the Food and Drugs Act

A SURVEY OF UROLOGICAL LITERATURE

The output of medical literature in all countries has become so voluminous that there is an ever increasing need for summarizing the most important contributions in medical annuals This has been done in America by the Year Book Publishing Company in their Practical Medicine Series In 1932, for the first time a separate volume has been dedicated to the subject of *Urology*.[6] In it a great deal of space has been allowed for foreign material and British contributions to urology have received generous recognition So many subjects are dealt with within the 464 pages of this book that it is difficult to refer in detail to any one of them In general it may be said that urology, unlike some specialties appears to be progressing along broader lines, and to be concerning itself not only with the effect of lesions of the genito urinary tract on the body as a whole but with the urinary manifestations of disorders arising outside the organs with which urology is more particularly concerned Many of the articles summarized in this volume show that urologists are gaining a better understanding of certain aspects of biophysics and biochemistry, and are utilizing this knowledge for the better control of urinary infections A good instance of this is the use of the ketogenic diet in the treatment of chronic infections of the urinary tract

The editor, Dr CUNNINGHAM is to be congratulated on the extensiveness of his review of the urologic literature of the world and on the skill with which he has accomplished his difficult task

Notes on Books

Mrs LILIAN LINDSAY'S *Short History of Dentistry*[7] maintains the high standard of the previous volumes in this useful little series A history of dentistry has long been wanted, and Mrs Lindsay is well qualified to write it, as she has been interested in the subject for some years and has the practical knowledge necessary to estimate the advances which have been made in recent times She has covered a great deal of ground in eighty eight small pages, but the reader is left with a clear impression of the progress of dentistry from primitive times when the teeth were intimately connected with magic to its present position as a well organized profession She shows evidence of wide reading and has made her story interesting by numerous side-lights Her facts for the most part are correct, and there are only a few inaccuracies, which can easily be corrected in the second edition, which will surely be asked for Foremost among them is the statement on page 27 that 'the first diploma was granted by Henry VII, Robert Anson being the recipient" The sentence should read " the earliest existing diploma was granted to Robert Anson in 1497 during the reign of King Henry VII " This series of short histories is intended for those who are just becoming interested in the history of medicine It might be well therefore, to add to each volume a short list of books dealing at greater length than is possible in a primer with the subject of which it treats Mrs Lindsay mentions some previous histories of dentistry, but only incidentally

[5] *Adulteration and Analysis of Foods and Drugs* By J I Liverseege Birmingham methods and analyses of samples With a foreword by the Right Hon Neville Chamberlain M P formerly Minister of Health London J and A Churchill 1932 (Pp xv + 599 36s)

[6] *Urology* By J H Cunningham M D The Practical Medicine Series of Year Books Series 1932 Chicago The Year Book Publishers Inc 1933 (Pp 464 70 figures)

[7] *A Short History of Dentistry* By Lilian Lindsay L D S Short History Series London J Bale Sons and Danielsson Ltd 1933 (Pp 88 3s 6d net)

When a medical handbook can boast six editions four reprintings and a Spanish translation it has little either to hope or to fear from the reviewer This is the position of Dr LEONARD WILLIAMS s *Minor Maladies*[8] and there is every reason to believe that the book will continue its triumphal career Possibly the senior reader may feel unable to allow that practice is quite so simple or cures quite so inevitable or propositions quite so absolute as Dr Williams writes them and at some of the doctrines he presents as authoritative and beyond question the chastened practitioner may well be disposed to hesitate To all such criticisms of manner or degree the book offers an answer that cannot be gainsaid in the shape of a record of practical service and juniors will doubtless continue to find help in its bright and cheerful pages The section dealing with lunacy certification might well have recognized the new position created by the Mental Treatment Act

The twelfth issue of the French Practical Medical Annual[9] (dated 1933 but referring presumably to 1932) is like its predecessors a curious mixture of useful and useless material Dr CAMILLE LIAN the editor continues to allow the vast bulk of the references to be French and the result is a curiously insular outlook on medicine One section deals with congenital syphilis as a cause of nocturnal enuresis two enthusiasts having found evidence of syphilis in the parents or grandparents of 75 per cent of children with this complaint The article in question it is true sums up the evidence on the other side but the inclusion of such a discussion seems worthless and a waste of space On the other hand a most informative article on the various fruits and vegetables valuable as therapeutic agents (for example apple diet for diarrhoea) includes information not collected into such a short space in any other publication

Although the tenth edition of *Black s Medical Dictionary*[10] was only published eighteen months ago it has already been sold out and the eleventh has now appeared completing 87 000 copies Opportunity has been taken by the editor Dr J D COMRIE to introduce a large number of minor changes in order to bring the book thoroughly up to date The new *British Pharmacopoeia* has provided material for four more pages in the article on dosage and there are several other additions in respect of subjects which have lately attracted public attention The increasing interest taken by the general public in measures for the prevention of disease has led to a demand for compilations of this kind The new edition of Black should serve a useful purpose in correcting false ideas which are still far too prevalent and in emphasizing the importance of early medical attention in many cases of illness or accident The text is remarkably free from undefined abstruse technical expressions and the illustrations are useful

[8] *Minor Maladies* By Leonard Williams M D Sixth edition London Baillière Tindall and Cox 1933 (Pp xiii + 420 10s 6d)

[9] *L Année Médicale Pratique* Publiée sous la direction du Dr Camille Lian Douzième année Paris R. Lépine 1933 (Pp 684 illustrated 26 francs)

[10] *Black s Medical Dictionary* Edited by J D Comrie M A B Sc. M D F R C P Eleventh edition London A. and C Black Ltd 1933 (Pp viii + 1 002 over 500 illustrations 18s net.)

New Preparations

CRYSTALLINE OVARIAN FOLLICULAR HORMONE

British Drug Houses Ltd are putting on the market under the name oestroform a chemically pure preparation of the ovarian follicular hormone It has the formula $C_{18}H_2O_3$ (keto-hydroxy oestrin) This hormone is already known in scientific literature by the names of oestrin folliculin theelin and female sex hormone in addition to a large number of proprietary names

The activity of the hormone is usually measured in rat units but unfortunately small variations in technique can produce very wide variations in values obtained British Drug Houses have standardized oestroform in terms of a sample of pure keto-hydroxy oestrin One ten thousandth of a milligram of this substance which produces oestrus in 50 per cent of spayed mice is taken as the unit of activity The makers are to be congratulated on having obtained a preparation of sufficient purity to permit the biological test with a definite quantity of the hormone Oestroform is put up in ampoules containing 1 000 units per c cm It is also supplied in tablets of 100 units strength for oral administration There is a good deal of evidence that oestrin is more effective when injected intramuscularly than when given by mouth

The possible therapeutic applications of oestrin in gynaecology are very wide but investigations have been hindered by the difficulty of obtaining preparations of adequate activity The appearance of one that contains the hormone in a state of chemical purity is therefore a welcome advance

LIVER WITH YEAST AND IRON

Livron (Boots Pure Drug Co Ltd) is a preparation of fluid liver yeast and malt extracts combined with iron salts Each ounce contains the equivalent of 2 oz of fresh liver and 1/2 oz fresh yeast together with 90 grains of iron and ammonium citrate The mixture thus provides an adequate dosage of iron together with liver extract and the two vitamins B, and B_2 It is intended for the intensive treatment of dietary or secondary anaemias or indeed for all cases where rapid haemoglobin regeneration is desired It is not intended for treatment of pernicious anaemia

The special advantages claimed for the preparation are as follows Iron given in livron is well tolerated although the dose is large This large dose of iron salt (90 grains) is the quantity recommended by various authorities who have recently studied the treatment of simple anaemias The combination of iron with liver also has been recommended by various authorities Clinical tests have shown that livron has a powerful action in stimulating haemoglobin formation in anaemias of the secondary and nutritional types

The makers have issued a booklet describing livron and giving a short summary of recent work on anaemia The dramatic advance made in the treatment of pernicious anaemia stimulated interest in the treatment of simple anaemia and knowledge regarding the latter although still imperfect is advancing rapidly The combination of factors prepared by Messrs Boots is well worthy of trial

A GLUCOSE PRODUCT FOR INFANT FEEDING

Karo Syrup (Corn Products Co Ltd Bush House W C 2) is prepared by the hydrolysis of corn starch with the addition of a small amount of invert sugar The percentage composition of its solid content is dextrine and malto-dextrine 46 maltose 13 and dextrose 30 The preparation is specially recommended for addition to diluted cow s milk in infant feeding The high casein content of cow s milk makes dilution desirable and this calls for the addition of carbohydrate to maintain the proportions found in human milk The disadvantage of adding milk sugar is that this is liable to ferment in the lower intestine whilst cane sugar is somewhat irritating to the stomach The advantages claimed for karo syrup are that it provides a mixture of lower carbohydrates with a large proportion of the non irritating but easily digestible dextrin The makers claim that infants fed on milk mixtures to which karo syrup has been added are less likely to suffer from diarrhoea than those fed on other types of carbohydrate Directions for the use of karo syrup are given in an interesting pamphlet on infant feeding The preparation has been in use in the United States for a number of years and favourable references are quoted from journals and textbooks of repute

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Ephedrol (Clay and Abraham Ltd Bold Street Liverpool) is an oily solution containing 1 per cent ephedrine and 2 per cent menthol It is recommended for use in nasal catarrh hay fever etc The solution is packed in a bottle with a narrow orifice which fits the nostril and hence can be sniffed direct from the bottle This simple method of nasal medication seems well adapted for household use The rationale of the mixture is that ephedrine contracts the vessels of the nasal mucosa and thus relieves congestion while menthol is antiseptic and analgesic.

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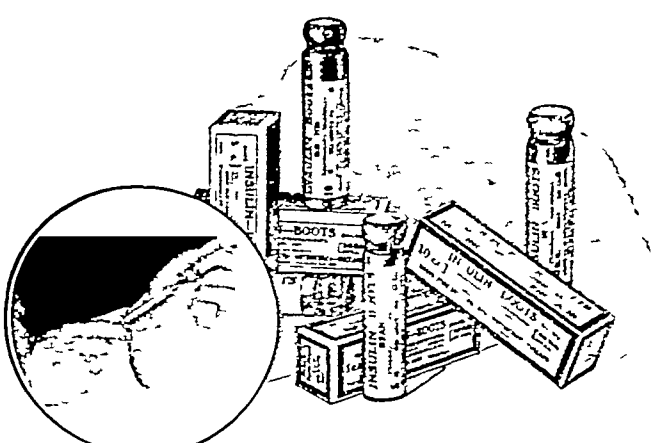

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British Medical Journal

SATURDAY, MAY 13th, 1933

MATERNAL MORTALITY AND THE GENERAL PRACTITIONER

In 1928, when the Minister of Health appointed a Departmental Committee on Maternal Mortality and Morbidity, certain statements were publicly made which appeared to reflect upon the practice of midwifery in this country The Annual Representative Meeting of the British Medical Association in that year gave the matter serious consideration, and, realizing that uninformed allegations as to the general practitioners' responsibility in relation to the practice of midwifery could only be countered by collecting reliable data, decided " that members of the medical profession should be encouraged to keep regular and careful records of their midwifery cases " The Head Office acting through the Divisions, invited members to take part in a midwifery and maternity inquiry by supplying confidential records of a series of cases in a form drawn up and supplied by the Association The Council, having now decided that sufficient information is available to form the basis of a report, has terminated the inquiry, and has received from Dr A P Luff (director of the Association's scientific researches) a collation and analysis of the returns made by those practitioners who volunteered to supply them

Dr Luff's report was considered by the Council on April 12th, and copies will be sent to all those whose records have made its compilation possible The Council considers that the interim and final reports of the Departmental Committee on Maternal Mortality furnish a sufficient rejoinder to the earlier criticisms of medical practice to which we have already referred, and, as the Association's own inquiry leads to conclusions similar to those of the Departmental Committee, it is not proposed to print the report as a separate document In some respects however, the results of the inquiry are of special interest The number of practitioners who took part in it was 439, and detailed histories of 15 677 midwifery cases were received Among these sixty-six maternal deaths occurred Of the deaths, forty-two were attributed to puerperal causes—that is " classed to pregnancy and childbearing," or "directly due to child-bearing," the official phraseology of death registration adopted in the Departmental Committee's reports Non-puerperal causes (deaths not primarily due to pregnancy, etc ") gave rise to twenty-four deaths The total maternal mortality was 4 22 per 1,000 live births, as compared with the Registrar-General's rates for England and Wales of 5 59 in 1930 and 5 55 in 1931 If attention is confined to puerperal causes alone, the rates were 2 69 in this inquiry as against 4 40 and 4 11 for the country generally On the other hand, the non-puerperal causes figured rather more prominently in the practitioners' cases, the rate per 1,000 live births being 1 53, while those for England and Wales in 1930 and 1931 were 1 19 and 1 44 respectively When the puerperal causes are separated into septic and non-septic groups, the results of the practitioners taking part in this inquiry are found to be better than those for England and Wales in both classes, sepsis accounting for 0 9 deaths per 1,000 (compared with 1 92 in 1930 and 1 66 in 1931), and other causes accounting for 1 79 deaths per 1,000 (the national figures being 2 48 in 1930 and 2 45 in 1931)

In judging the significance of these figures it is, of course, necessary to bear in mind fallacies inherent in statistics gathered from different sources For one thing, the British Medical Association's inquiry deals, unfortunately, with a very much smaller group of cases and deaths than those which form the basis of the Registrar-General's rates Some allowance must be made, too, for the inevitable variation of classification in the hands of different statisticians , but the high proportion of deaths due to non puerperal causes in the Association's inquiry does not appear to be explained in this way, since such a clearly defined disease as tuberculosis accounts for exactly a third of the non-puerperal deaths, whereas it figured in only 7 2 per cent of the co-responding group analysed by the Departmental Committee Again, the incidence of abortion, which the Departmental Committee showed to exercise a serious influence upon the puerperal mortality, was remarkably low in this series, only twenty four cases occurring and all without fatality On the other hand, primiparae, among whom the risks are known to be greater, constituted as high a proportion as 45 5 per cent of all the practitioners' cases and accounted for 57 1 per cent of the deaths

Perhaps the most unexpected finding of this inquiry is the small proportion of patients who could be said to have received sufficient ante-natal supervision Dr Luff does not accept as readily practicable the Departmental Committee's " minimum scope of ante-natal examinations"—namely, eleven examinations beginning in the sixteenth week of pregnancy On the advice of a consulting obstetrician, he would regard a first examination before the twenty-eighth week and four subsequent examinations as adequate to diminish the risks of childbirth, but for the purpose of this analysis he accepts four examinations at least, after the thirtieth week as sufficient Taking this as his standard he finds that these careful practitioners were able to exercise this degree of supervision in only 8 3 per cent of the 14,614 cases regarding whom information on this point was furnished Some ante-natal care was afforded in 70 3 per cent of these cases, including the 8 3 above mentioned The Association has repeatedly expressed the opinion that ante-natal care properly falls within the province of the practitioner who will be in attendance at confinement rather than of ante-natal clinics staffed by whole-time officers, and the Minister of Health has partially endorsed this policy It is

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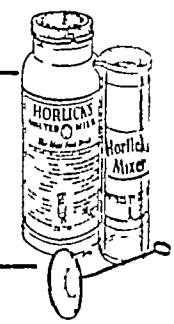

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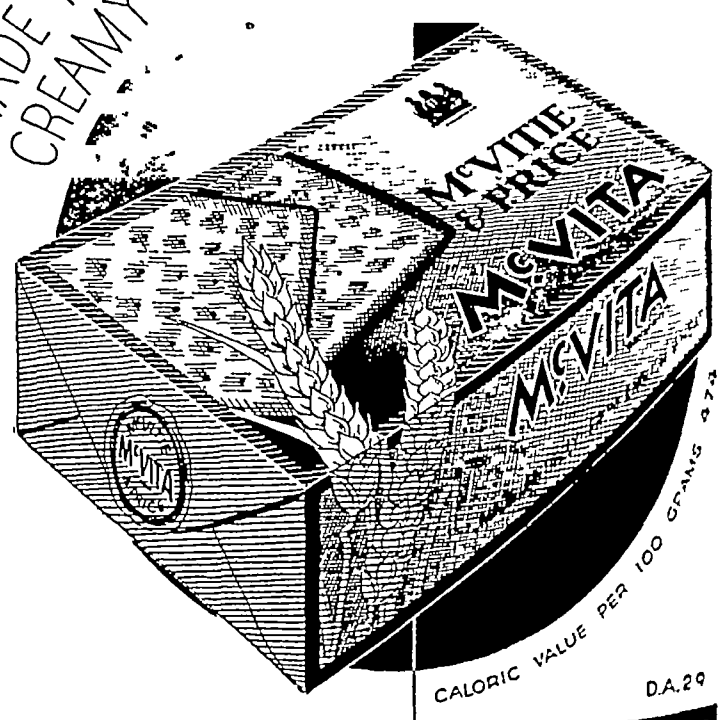

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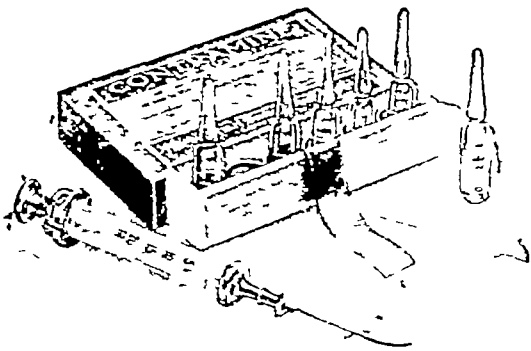

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puzzling therefore, and rather disappointing to find that the keenest practitioners have difficulty in persuading their patients to submit themselves to a reasonable measure of ante-natal supervision The reason may be financial It is possible too that women especially primiparae are still reluctant to undergo examinations of this character when they themselves are unconscious of any disease or abnormality

THE CLASSIFICATION OF BRIGHT'S DISEASE

This is a subject of perennial interest and because of its difficulties, it excites endless discussion among physicians physiologists and pathologists So far most of the attempts at classification have been made by clinicians and morbid anatomists and it is well known that the two cannot possibly be made to agree Teachers of clinical medicine have at present to content themselves with giving a double classification and to admit that the cold logic of the post-mortem room often exhibits all too clearly the defects of this double method The question may be asked if it is not now possible for the physiologists to step in and offer us a suitable classification based on the various aspects of renal function and its defects It is certain as the pages of medical and scientific journals show that the study of renal physiology is being intensively investigated in many lands but up to the present it appears to have gone scarcely far enough to offer us a comprehensive classification of nephritis or Bright s disease It is time however that some attempt was made in this direction even if only a tentative one based partly on known facts and partly on deductions or hypotheses The only attempt at classification based on disordered renal function that has so far been of any practical value is the French conception of hydraemic and azotaemic nephritis the former characterized by great oedema and the latter by retention of urea and other nitrogenous substances normally excreted by the kidneys This classification so imperfect and incomplete as scarcely to merit the name actually proved of great value in clinical medicine since it broadly separated two groups of nephritis in which whatever the nature of the morbid anatomy the clinical features were in important ways different and required different lines of treatment But even this simple division based on disordered function valuable as it is only serves to emphasize our lack of knowledge of the basal facts of the metabolic disturbances in Bright s disease

The problems of renal oedema remain in many respects unsolved although progress has been encouraging The question of salt retention which held prominence as an explanation is receding into the background for the time at least and that of the diminished protein content of the plasma is now in the ascendant Obviously however we are not yet approaching the whole truth and no explanation has yet been offered to account for the manifest difference between the oedema of acute nephritis and that of the subacute and chronic varieties Moreover the mechanism of the manifestations of renal failure which we term uraemia still eludes us completely in spite of all the work already done on the chemistry of the blood and tissues in Bright s disease It seems evident that in Bright s disease we must not make the mistake of confining our attention to what the kidney can or cannot excrete but must consider the disturbances of other organs of the body whose failure may impose work on the renal tissues of a quite abnormal kind and so injure them It is a fact that on the whole the types of renal damage with a known aetiology—such as for example those following acute tonsillitis or those following corrosive sublimate poisoning—are just the varieties in which complete recovery is most commonly and hopefully expected On the contrary it is in those examples of Bright s disease in which there is no known aetiology that recovery to normal is rare and these may for all we know be primary affections of some other part of the body producing general metabolic disturbances and incidentally injuring the kidneys In this connexion the problems of eclampsia and of the toxaemias of pregnancy come to mind Here is a generalized metabolic disturbance occurring under very specialized circumstances and involving the liver and central nervous system as well as the kidneys Recovery from one or several attacks in repeated pregnancies may be complete but as is well known chronic and incurable renal disease may ultimately supervene Whoever solves the metabolic problems of eclampsia or of uraemia will set us well on the road to the discovery of the mechanism of the chronic forms of Bright s disease whose aetiology is entirely unknown to us

These remarks on the classification of Bright s disease are suggested by the appearance of the second monograph on this subject published in recent years under the auspices of the Medical Research Council The latest of these is by Dr John Gray of the pathology department Aberdeen University [1] His monograph as Dr Gray himself indicates inevitably invites comparison with the previous report of Dr Dorothy S Russell (M R C Special Report Series No 142) published four years ago Dr Gray is essentially a morbid anatomist and histologist and his work deals chiefly with the pathological histology of the kidneys which he correlates with the clinical reports provided by the hospitals His aim is like that of Dr Russell, to provide a classification suitable for clinicians and pathologists alike as has been indicated earlier this is an impossibility Between Dr Gray and Dr Russell there is little difference in essentials but the former uses on the whole terms familiar to us by long usage and does not employ the descriptions mitis repens and acris repens proposed by his predecessor An individual hymn of praise or hatred could be sung about the terms employed in describing nephritis

[1] Medical Research Council Special Report Series No 178 A Study of Nephritis and Allied Lesions By John Gray London H.M. Stationery Office 1933 (2s. 6d net.)

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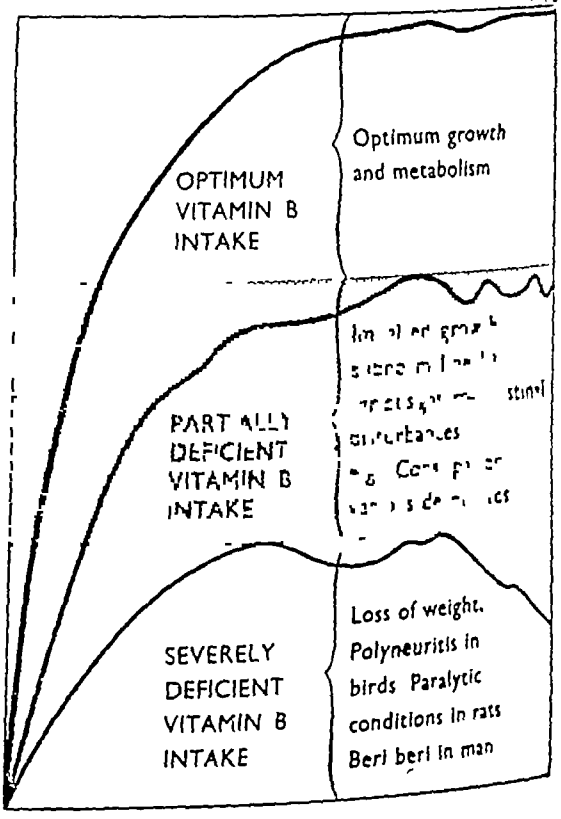

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Some love "nephrosis" and all it is supposed to imply, others detest it Some will enjoy the retention by Dr Gray of the term "subacute nephritis", and all will, we hope, rejoice to see in these monographs the disappearance of "parenchymatous" as a descriptive term Dr Gray, however, produces a monster in "nephrotic nephritis," which, it is hoped, may not long survive birth The monograph by Dr Gray represents, as did the previous one by Dr Russell, a sound piece of work for which every praise is due, but unfortunately its ability to advance our knowledge of Bright's disease and even to classify the cases reasonably is limited This Dr Gray admits fully at the commencement of his summary

HARVEY MEMORIAL AT HEMPSTEAD

HEMPSTEAD CHURCH BEFORE 1882

THREE years have gone by since we last mentioned the project to restore the fallen church tower at Hempstead, in Essex, as a memorial to William Harvey, whose remains are deposited there This parish church, seven miles from Saffron Walden and some fifty miles from London, is a fourteenth century building of much interest, it was closely linked with the Harveys, and contains memorials to other members of the family who achieved distinction On January 28th, 1882, two hundred and twenty-five years after William Harvey's death, the massive tower fell towards the south-west, and the stones have been lying in heaps in the churchyard ever since The village of Hempstead must always make a strong appeal to everyone connected with the medical profession, since it is the place of burial of the great exponent of the experimental method in biology and the founder of scientific medicine Now, in 1933, fifty-one years after the tower collapsed, its restoration is being taken in hand All preliminaries have been duly performed, the faculty to proceed has been received, and the architect, Sir Charles Nicholson, holds the contract with the builders The full sum required to complete the work is £5,000 In cash and promises the committee has £3,000 in view, it appeals with every confidence for the remaining £2,000 during the building of the first section Donations should be made payable to the Harvey Memorial Fund, and may be sent to the joint honorary secretary, Dr Arnold Stott, 58, Harley Street, W 1, who will gladly supply printed copies of the appeal to any reader who is willing to circulate them among possible subscribers The chairman of the committee Sir John Rose Bradford, has written eloquently on behalf of the fund in these columns and elsewhere The rebuilding of the fallen church tower was a matter near to the heart of Sir Dawson Williams, late Editor of this *Journal*, and a detailed account of the Harvey Chapel, on the north side of the chancel, written shortly before his death, appeared in our issue of May 12th 1928 when the tercentenary of the publication of *De Motu Cordis* was being celebrated It is hoped that Lord Dawson will lay the foundation stone

L.C.C. CONSULTANTS AND SPECIALISTS

The Central Public Health Committee reported to the London County Council on May 9th that under its scheme for the engagement of consultants and specialists at grouped general hospitals and affiliated special hospitals applications, invited by public advertisement, had been received to the number approximately of 620, of which six had been subsequently withdrawn The applications had been examined by the medical officer of health, who, in selecting candidates, had had the assistance of certain eminent members of the medical profession (twenty of whom are named in the L.C.C. agenda) Approved lists had been prepared, containing in all 188 names, of candidates suitable for engagement as consultants and specialists These lists, not yet completed, would form the basis on which final selections and engagements would be made for the number of sessions a week approved by the L.C.C. on March 7th (*Journal*, March 18th, p. 466) The committee had been advised that from the approved panels of selected candidates it would be possible to arrange for engagements and sessions adequate to the needs of the hospital and affiliated services In framing the panels special consideration had been given to the consultant staff at present engaged by the Council The date at which the new scheme was to be brought into operation was originally fixed for July 1st, 1933, but it is now stated that owing to the work entailed, and to the fact that the summer arrangements of many consultants and specialists had already been made, it would probably not be possible for the scheme to be brought fully into working order until some little time after that date It is therefore proposed to retain, in cases in which such a course is necessary, beyond June 30th, but in any event not beyond September 30th, the services of consultants and specialists at present engaged It had been arranged, in order to permit of the bringing of the new scheme into operation, that the engagements of these consultants and specialists should be terminated at the end of June

It will be remembered that in the Memorandum presented to the London County Council in February of this year[1] the part-time consultants and specialists to the Council's hospitals stated "It is hoped that the Council will adapt its machinery of selection and appointment so as to secure that the merits of applicants for consultant posts are judged by men whose professional standing and contact with clinical medicine enable them fairly to estimate their professional worth" It is therefore gratifying to note that the L.C.C. in seeking the assistance of eminent consultants in the selection of candidates has conceded this principle After the consultants and specialists had decided to entrust the Council of the British Medical Association with further negotiations on their behalf a letter was sent on April 13th to the chairman of the Central Public Health Committee of the L.C.C. offering a "friendly conference through suitably appointed representatives" on matters concerning the L.C.C.'s specialist service On April 19th a reply was received from the L.C.C. in which details of the proposed points of discussion were asked for These were outlined in a letter sent to the L.C.C. on May 2nd, in which was reiterated the request

[1] See *Supplement* March 25th 1933, p. 105

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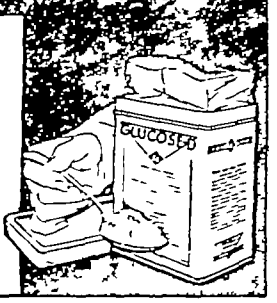

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of the Council of the B M A that the Central Public Health Committee of the L C C should authorize discussion upon any relevant points between representatives appointed by itself and the four members appointed for this purpose by the Council of the Association In a letter from the L C C on May 5th this request was not acceded to but an intimation was given to the effect that the Central Public Health Committee would be pleased to receive a deputation of representatives of the Council of the B M A at County Hall on May 18th It has been decided that the Association's representatives shall attend there on the date mentioned

HUXLEY AND MEDICAL EDUCATION

The memorial lecture to Thomas Huxley was delivered at the Imperial College of Science and Technology on May 4th (the day, by a sad coincidence on which the death of Huxley s eldest son Leonard was announced) The lecturer Professor H E Armstrong under the title of Our Need to honour Huxley s Will allowed himself many characteristic digressions and incorporated some interesting autobiography Over sixty five years ago he himself sat before Huxley s blackboard and watched the great man embroider it most exquisitely with chalks of varied hue Huxley was a marvellous exponent and therefore a bad teacher as are all who are eloquent Under Huxley he was only entertained and soon ceased to attend his courses this failure to attract him was the more noteworthy because at that time young Armstrong was going week after week to St Bartholomew s to witness surgical operations But he says that he made abject apology to Huxley later in life by sending two of his sons on their leaving school not as was usual to first years chemistry and physics courses but directly to the lectures on biology Professor Armstrong believes that there is great need of an open course on physiology for those who have just left school No school could teach more than the beginnings of real biology and the need of such teaching was most felt and most necessary at the age when school should be left for some place of higher instruction In the course of his lecture he had a tilt at medical education where he said the instructions of Huxley had been most disregarded Huxley gave a considered address on the subject of medical education in 1870 to the medical faculty of University College At that time the conditions under which the preliminary scientific subjects were taught were pitiable but Professor Armstrong is of the opinion that things are not much better to-day because of the far greater burden laid upon the student which makes rational study impossible Most unfortunately to make their own task easier the authorities have allowed schools to teach nominally for the first M B I say nominally because the proper atmosphere cannot possibly be provided in the school nor are the teachers competent He quoted Huxley as complaining of the unsatisfactory character of the teaching in physiology even in medical schools and said that to-day although here and there an attempt is made to teach real physiology it is to unprepared minds the foundation of chemistry being insufficient Chemistry he declared already plays a dominant part in physiology and medicine and in future will be of supreme importance Apart from surgery medicine would be simply chemistry as applied to the living being He was satisfied that it would be necessary to teach it apart in a form suitable for medical students and that the preliminary foundations to be laid in school would need very special consideration

THE CONCENTRATION OF VITAMIN A

The fat-soluble growth promoting factor was one of the first vitamins to be recognized but until a few years ago relatively little advance had been made regarding its nature or its action Since then progress has been very rapid for its chemical nature was established by the discovery that the body formed it from the plant pigment carotene and it attained therapeutic importance from the discovery that lack of this vitamin predisposed to bacterial infection The international unit adopted is 0 001 mg of standard carotene and about four units daily are needed to restore growth in a young rat fed on vitamin A free diet Vitamin A differs in certain obvious respects from carotene—for instance the former is colourless and the latter orange-red moreover the two substances give a different tint of blue with antimony trichloride reaction The biological activity of the purest specimens of vitamin A hitherto isolated has been similar to that of carotene and in view of the extraordinarily small amounts required it seemed likely that these products were chemically pure Carr and Jewell[1] have however succeeded in preparing a more highly active preparation of vitamin A These workers used a very delicate method of fractional distillation under a high vacuum (pressure 10^{-5} mm) and obtained a product of considerably higher activity than the best previous results The preparations had about twice the biological activity of international standard carotene Analysis gave figures in agreement with the formula suggested by Karrer—namely $C_{20}H_{30}O$—and the alcoholic solution showed no optical rotation The mother substance carotene has the formula $C_{40}H_{56}$ and is optically active The outstanding fact regarding the fat soluble vitamins is the amazing potency of pure preparations The international unit of vitamin D is one ten thousandth of a milligram of irradiated ergosterol and the purest specimens of calciferol have four times this activity Vitamin A in its purest form is only about one tenth as active as vitamin D but even so there are few other substances the minimum effective daily dose of which can compare with these figures

ANOTHER CENTENARY

The vast majority of entomologists are still and will long continue to be collectors and systematists The true naturalist collector has an almost inborn faculty for elucidating the habits of insects and no one but an experienced and often highly specialized systematist is able nowadays to determine accurately the names of the insects brought before him It is on these two bases that applied entomology is founded and no one appreciates the need for good systematics and good ecology—the scientific offspring of the old natural history—better than the agricultural or the medical entomologist It is therefore most proper that the centenary of the Entomological Society of London

[1] *Nature* January 21st 1933 p 92

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henceforward to be known as the Royal Entomological Society of London, which was celebrated last week under the presidency of Professor E B Poulton, F R S , should have been attended by representatives of agriculture and of medicine Although this great society is primarily one of "pure" entomologists it numbers among its fellows many "applied" entomologists from medical, agricultural, and other spheres At the conversazione which formed part of the centenary celebrations, medical entomology was represented directly by an exhibit from the London School of Hygiene and Tropical Medicine, which consisted of insects that are carriers of human diseases They made a formidable array All were shown in the living state, and included, among others, the tsetse fly (*Glossina tachinoides*) which carries sleeping sickness in Northern Nigeria , the yellow fever mosquito *Aedes aegypti* , *Anopheles maculipennis* the chief malaria carrier of Europe , the tropical plague flea *Xenopsylla cheopis* , and the body louse *Pediculus corporis*, the carrier of typhus and relapsing fever Less directly connected with public health was an exhibit from the Imperial College of Science, showing some of the insects which attack and consume the stored foodstuffs of man, and some of the methods which are used for their control There is a natural tendency among those who wish to bring home the importance of a given science to the lay mind to emphasize its practical achievements But it is not to be forgotten that further advances in applied entomology are, to a great extent, waiting upon new knowledge of the ecology and the physiology of insects It is in the fostering of this side of entomology that the Royal Entomological Society of London has done so much during the past century and has still so much to do

SCHOOL OPHTHALMIC WORK IN SCOTLAND

Something of the enthusiasm of the pioneer is shown in a paper by Dr Ernest Thomson on the organization and the administration of school ophthalmic clinics in the county of Lanark, which is printed in the last volume of *Transactions of the Ophthalmological Society* The field of the work provided ample scope for ingenuity of method, for while less than one-half the hundred thousand children in the area attended small town schools, the rest belonged to truly rural schools The work began in 1914 in a more or less permissive fashion, for there was not then unification of authority Now every district is under the Education Committee of the county council The author discloses to his readers the stages of growth of the organization, showing how school medical inspection is conducted and how the treatment in the clinics is provided, and in particular what steps are taken to follow up the treatment ordered so as to ensure that the directions given are carried out In discussing how defective-sighted children may be discovered Dr Thomson claims that there is only one satisfactory way—that is, by expert ophthalmic examination of all the entrants , the other way perforce adopted, by testing visual acuity and noting reports of difficulty made by the teachers, is less efficient Most of the children treated are refraction cases "Obvious cases of eye disease usually find their way straight to the family doctor, and through him to the specialist either in hospital or in private Nevertheless, the school oculist has a good many opportunities that may be denied to others in that he is privileged to see cases of congenital anomalies, the early effects of birth injury, and of early and probable unsuspected fundus disease" Operations and extended treatment are not provided for under the scheme, but most of the ophthalmic staff are also on the staff of the Glasgow Eye Infirmary and make arrangements accordingly "The arrangements, like the British Constitution, are unwritten , there is no definite arrangement between the authority and the committee of the Glasgow Eye Infirmary, but there is a kind of liaison due to the fact that some of the staff of each are common to both" Note is made of the changed attitude of teachers and parents towards school medical work Medical inspection at first was by many held to be "an interference with the liberty of the subject," and the medical staff were obliged to walk warily Now there is as a rule cordial appreciation on the part of all concerned

ROLL OF BIO PHYSICAL ASSISTANTS

We publish this week as a Special Supplement the complete list of names on the *Register of Bio-Physical Assistants*, revised to March 31st It is now nearly five years since the Representative Body of the British Medical Association first drew attention to the need for registration of lay persons to whom medical practitioners could with confidence send their patients for electrical treatment and actinotherapy A small committee of experts was formed to prepare a scheme, which received approval by the Council of the Association Early in 1929 the Court of the Society of Apothecaries of London decided to adopt and to further this scheme for granting diplomas, after examination, to bio-physical assistants, and for the establishment of a roll Regulations were drawn up, and the first *Register of Bio-Physical Assistants* appeared in book form under the Society's direction Our purpose in publishing the revised edition of this register is to make it widely known to members of the medical profession in a form convenient for ready reference The entries in Part I are arranged in alphabetical order, with postal addresses, in Part II the names are regrouped geographically Since the British Medical Association was primarily responsible for the setting up of the roll, we hope that members will preserve this Supplement and send their patients who require treatment by light and electricity to technicians holding the Society's diploma

Sir Almroth Wright will deliver the John Mallet Purser Lecture on "Immunization—the Old Doctrine and the New" in the Department of Physiology, Trinity College, Dublin, on Wednesday, May 17th, at 5 p m

The next session of the General Medical Council will commence on Tuesday, May 23rd, at 2 p m, when the President, Sir Norman Walker, M D , will take the chair and give an address The Council will continue to sit from day to day until the termination of its business

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ONE HUNDRED AND FIRST ANNUAL MEETING
of the
British Medical Association
DUBLIN, 1933

THE one hundred and first Annual Meeting of the British Medical Association will be held in Dublin this summer under the presidency of Dr T Gillman Moorhead Regius Professor of Physic Trinity College who will deliver his address to the Association on the afternoon of Tuesday July 25th The sectional meetings for scientific and clinical work will be held as usual on the three following days the morning sessions being given up to discussions and the reading of papers and the afternoon to demonstrations The Annual Representative Meeting for the transaction of medico political business will begin on the previous Friday July 21st The list of officers of the sixteen Scientific Sections and the subjects for discussion was published in the SUPPLEMENT *of April 15th Other details of the arrangements for the Annual Meeting will be given in later issues We publish below the fourth of a series of descriptive articles on Dublin and its medical institutions The first a preliminary note appeared in our issue of December 3rd 1932 (p 1026) the second on the History of Dublin on March 18th 1933 (p 476) and the third on the Dublin of To day on April 22nd (p 710)*

THE UNIVERSITY OF DUBLIN TRINITY COLLEGE *

BY GILBERT WATERHOUSE Litt D

At least three ineffective attempts were made in the fourteenth and fifteenth centuries to establish a university in Dublin Then in 1585 an old project of associating a university with St Patrick's Cathedral was revived but had to be abandoned owing to the opposition of Archbishop Loftus No further definite step was taken until 1590 when a group of influential citizens headed by Henry Ussher Archdeacon of Dublin Luke Challoner and two Scots James Fullerton and James Hamilton masters at the Grammar School addressed a petition to the City Council which had long been well disposed to the establishment of a university The council undertook to make representations to the Lord Deputy Fitzwilliam and more particularly to facilitate the scheme by providing a suitable site The Archbishop and the Lord Chief Justice added their recommendations to those of the Lord Deputy the royal sanction was immediately accorded and by letters patent of March 3rd 1591 (commonly called The Foundation Charter) Queen Elizabeth founded the Collegium sanctae et individuae Trinitatis juxta Dublin to be the mother of a university

Early Developments

William Cecil Lord Burghley was appointed chancellor and Archbishop Loftus provost A small endowment was granted but the funds for the erection and equipment of the necessary buildings were raised mainly by public subscription in Ireland The foundation stone was laid by the Mayor of Dublin Thomas Smyth on March 13th 1592 and the college was opened to students in 1593 The original number of students is unfortunately unknown but it rose from sixty five in 1613 to 472 in 1704 933 in 1792 and to 1 300 in 1886 In 1913 the number was 1 285 of whom 211 were women During the war the response to the call to arms—a response which was entirely voluntary—caused the number of men students to drop to 535 There was a temporary return to the pre war total in 1919 and 1920 when several hundred ex service students resumed their studies but the revolutionary period and the progressive impoverishment of the country caused a further decline to 936 in 1924 With the return to more settled conditions numbers have steadily risen to 1 455 in 1931–2 The midsummer entrance for 1930 (162) was higher than in any year with one exception since the famine

The original endowment of Elizabeth was generously supplemented by James I and in 1637 Charles I granted a new charter which forms the basis of the present Consolidated Statutes of Trinity College and the University of Dublin The Foundation Charter of Queen Elizabeth appears to have contemplated a possible multiplication of colleges on the lines of Oxford and Cambridge However that may be all attempts to develop in that way have failed and for practical purposes Dublin University and Trinity College are synonymous terms The framework of a university was undoubtedly created in 1591 by the appointment of a chancellor by provision for the appointment of a vice-chancellor and proctors and by the regulations for the conferring of degrees but the primary executive authority was vested in the provost as head of the college The power of appointment to the provostship originally rested with the Fellows but passed to the Crown under the Charter of 1637 The chancellor is appointed for life by the senate The vice-chancellor is appointed by the chancellor and presides in the absence of the chancellor at commencements or other meetings of the senate This body consists of all doctors and masters who keep their names on the books of Trinity College It is a body corporate distinct from the college and is the final authority in all matters relating to the institution and conferring of degrees The caput of the senate consists of the chancellor (vice-chancellor or pro-vice-chancellor) the provost and the senior master non regent who is elected annually by the senate Any member of the caput may veto any proposed grace for a degree

The regulation of courses and examinations precedent to degrees (except in divinity) and the nomination of the university professors for appointment (with certain exceptions created by Act of Parliament or by the directions of private founders) are the concern of the University Council a small body composed mainly of members of the teaching staff together with representatives of the senate and of the Board of Trinity College All matters relating to the Divinity School are dealt with by the Divinity School Council on which the bishops of the Church of Ireland are represented The provost presides over both the University Council and the Divinity School Council All the acts of these bodies require the sanction of the Board of Trinity College which is the supreme authority in matters of administration discipline and finance It consists of the provost the seven senior fellows two representatives of the junior fellows and two representatives of the university professors

The domestic cares of a residential university are innumerable Rooms in college are naturally in great demand but only about 300 undergraduates can be accommodated The remainder live in registered lodgings or with their parents if their homes are in Dublin or its neighbourhood A hostel for women Trinity Hall was opened in 1908 and now after extension accommoda es

* Reprinted from the series British Universities To-day Nature 15 October 1930

about sixty students. About 300 undergraduates dine in hall daily, luncheon is served at a special buffet during term, and the Dublin University Co-operative Society caters for all ordinary requirements. Indeed, life in Trinity offers many attractions not easily found elsewhere. The spacious grounds form an oasis of some 30 acres in the heart of the city, provide the college clubs with ample facilities for cricket, football, hockey, and tennis and still leave room for quiet walks for flowers, shrubs and stately trees.

TRINITY COLLEGE LIBRARY

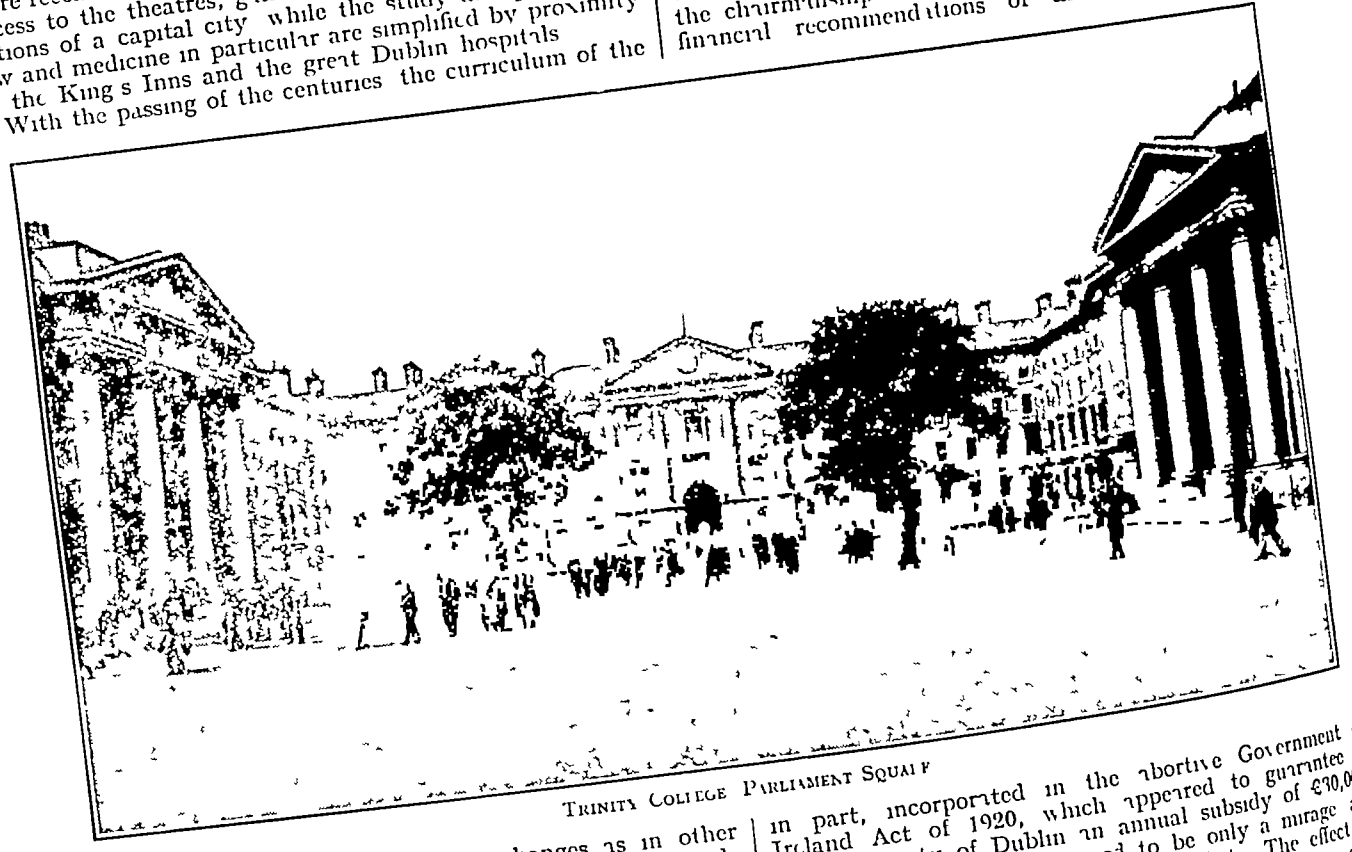
A Varied Curriculum

In Trinity Week, about the middle of June, the college races provide one of the principal athletic and social functions in Ireland. Similarly, there is ample scope for intellectual and oratorical activity in the College Historical Society, founded in 1770, the University Philosophical Society (1853), the Theological Society (1830), the Choral Society (1837), the Classical Society and others of more recent foundation. There are advantages also in easy access to the theatres, galleries, libraries, and other institutions of a capital city, while the study and practice of law and medicine in particular are simplified by proximity to the King's Inns and the great Dublin hospitals.

With the passing of the centuries the curriculum of the university has undergone the same changes as in other ancient seats of learning. Sweeping reforms were made during the provostship of Bartholomew Lloyd (1831–7), who opened a new and progressive stage in the history of the college. The school of engineering, the first in any university in the United Kingdom, was opened in 1842, and degrees in engineering were created in 1872. In 18[illegible], when open competition for the Indian Civil Service was introduced, prompt steps were taken to provide the necessary instruction in Oriental languages with the result that hundreds of Dublin graduates have found, and continue to find, their careers in the Imperial services. This widening of academic studies has proceeded so far that students can now obtain degrees not merely in divinity, law, medicine, philosophy, classics and mathematics, but also in modern literature (professorships French and German Italian and Spanish were founded in 177[illegible]), Oriental languages, Celtic languages, music, history and political science, engineering, natural science, experimental science, and commerce.

Financial Needs

Like other academic bodies throughout the world the Board of Trinity College is constantly engaged on the task of apportioning its limited resources to ever increasing demands for staff, buildings and equipment. The needs of the university, like those of Oxford and Cambridge, were the subject of an inquiry by Royal Commission in 1920 under the chairmanship of the late Sir Archibald Geikie. The financial recommendations of that Commission were, in part, incorporated in the abortive Government of Ireland Act of 1920, which appeared to guarantee to the University of Dublin an annual subsidy of £30,000. This cheering prospect proved to be only a mirage and the guarantee disappeared with the Act. The effect of this disappointment were acutely felt for some years



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but there are now signs that relief may come from another source In 1927 an influential committee of graduates reverting to the old maxim that self help is the best help established the Trinity College (Dublin) Educational Endowment Fund as a thank offering to the college for the education received within its walls It is hoped that this fund which takes the form of a perpetual trust will in the course of time assist the university to maintain that academic independence which is the first condition of a healthy existence The University of Dublin subsisting entirely on its endowments and on its fees thus remains one of the few free universities of Europe acknowledging no obligation save to the cause of learning and offering equal liberty to all who seek its instruction with good will

Trinity College owes much nevertheless to the generosity of Governments in the past The library (Fig 1) the oldest and largest of the existing buildings was erected in the years 1712 to 1724 at a total cost of £17 000 of which £15 000 was provided by Parliament The collection of books had its origin in a subscription of £1 800 from Her Majesty s Army in commemoration of the victory over the Spanish troops at Kinsale in 1601 The private collection of Archbishop Ussher consisting of 10 000 volumes with many valuable manuscripts including the priceless Book of Kells was also a gift from the officers and men of the English Army in Ireland Among the more important additions to the library since 1660 are the collections of Archbishop Palliser Bishop Stearne Dr Claudius Gilbert and Baron Hendrik Fagel In common with the British Museum the university libraries of Oxford Cambridge and Wales (Aberystwyth) and the Advocates Library of Edinburgh Trinity College enjoys the privilege of receiving a free copy of every book published in the United Kingdom

The cost of the magnificent west front of the College (1759) and the adjacent Parliament Square (Fig 2) was largely defrayed by a grant of £40 000 from the Irish Parliament The two wings of the square are terminated with symmetry and dignity by the Public Theatre or Examination Hall (1787) and the Chapel (1798) Indeed few universities can offer such variety of architectural interest as Trinity College but space permits only a brief reference to the unique Museum Building (1857) the Graduates Memorial Building erected by subscription to commemorate the tercentenary (1893) and the physical and botanical laboratories erected and equipped by the munificence of the late chancellor the first Earl of Iveagh

Famous Men

At some time in the beginning of the nineteenth century Trinity appears to have been reproached as the silent sister as one that contributed nothing to the intellectual life of the country a charge which drew from Dr Mahaffy the witty comment Among all Irish institutions probably the only one ever accused of silence is the University of Dublin It is at least open to doubt whether Oxford and Cambridge were in much better case during that period of war rebellion reaction and unrest which was not unlike the times through which Europe has recently passed At any rate the record of Trinity College as shown by the catalogue of its great men will bear comparison with that of any other university British or foreign Among poets and men of letters it claims Swift Congreve Farquhar Goldsmith and Moore among scholars Ussher Ware Dodwell Malone Hincks Whitley Stokes Lecky Mahaffy Tyrrell Dowden and Bury among philosophers Berkeley among mathematicians Hamilton and McCullagh among scientists Molyneux Lloyd and Fitzgerald among theologians Magee and Salmon among physicians Stokes and Graves among statesmen and orators Burke Grattan Flood Plunket Curran and a host of others The past is full of splendour only its troubles and dangers are forgotten And what of the future? How will Trinity College face the changing times? The answer must be exactly as it faced the changes of the past that is by the steadfast discharge of a university s supreme function—by single minded devotion to the advancement of knowledge

ARRANGEMENTS FOR LADY VISITORS

Many of those members of the Association who attend the Annual Meetings regularly are almost invariably accompanied by their wives and daughters and it is hoped that those attending the Dublin Meeting will follow this example Ample provision is being made for the comfort and entertainment of lady visitors Their headquarters will be in Lord Iveagh s house in St Stephen s Green where all ladies will register and procure tickets for the entertainments and excursions arranged for them Here they will find a comfortable place to rest read or write and here they will be supplied (without charge) with morning coffee and with afternoon tea to which they may invite their menfolk when the latter s morning labours are over Lunches are not being supplied at the Ladies Club as it is within a few minutes walk of the sectional meetings reception room and many hotels and restaurants

A number of entertainments have been arranged for the ladies to take place during the meetings of the Representative Body On Friday July 21st there will be a short excursion to the beautiful Walpole s Gardens where visitors will be surprised at the number of subtropical plants which flourish in the mild climate of County Wicklow Tea will be provided at Newcastle Sanatorium which is in the vicinity and which is itself well worth inspection On the following afternoon a similar short excursion will show the beauties of the Phoenix Park the River Liffey and Carton—the demesne of the Duke of Leinster tea will be provided at Carton by the kindness of local ladies These excursions are provided gratis and ladies accompanying representatives are invited to join in On the Friday evening Mrs Barniville chairman of the Ladies Committee will be At Home to all ladies and on the Saturday evening the President and Local Executive invite representatives and their ladies to an At Home to be followed by a dance

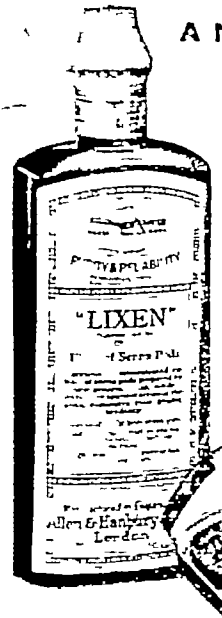
On Sunday July 23rd a modest 15s will give representatives and their wives a good view of some of the beautiful scenery of County Wicklow Lunch will be provided (without extra payment) at Glendalough where time will be allowed for visitors to explore the lakes and ruins in the Valley of the Seven Churches Tea will be taken at Greystones and the organizers of the trip promise to arrange their time table so that it terminates in Dublin not later than 6 30 p m

Each morning from Monday to Friday ladies can amuse themselves with visits to the Club or Dublin s shops with short excursions by bus or private car and with golf or tennis On the Wednesday morning the competition for the Notts Ladies Challenge Cup will be played on the celebrated Portmarnock Links On Monday afternoon July 24th Mrs Moorhead wife of the President Elect will be At Home to all ladies and in the evening the ladies as well as representatives will be entertained at the Abbey Theatre to a comedy of Irish life played by the celebrated Abbey Theatre Company called Professor Tim

The President s reception which will be followed by a dance will be held on the evening of Tuesday July 25th Wednesday afternoon will offer a choice of an At Home at Dr Steevens Hospital the oldest of the Dublin hospitals and a garden party at the Zoological Gardens In the evening all visitors will be entertained by the Free State Government at a reception in Dublin Castle

St Ultan s Babies Hospital is inviting lady doctors to lunch on Thursday and some of the ladies will lunch with their husbands at Guinness s brewery at the same time Dublin University will confer honorary degrees on this day the ceremony being followed by a garden party in the attractive grounds of Trinity College in the centre of the city The evening will be occupied by the annual dinner

Friday afternoon presents the difficulty of deciding which of the three garden parties—at Blackrock College the Rotunda Hospital and the Sunshine Home—should be patronized whichever is chosen the visitors may be assured of pleasant entertainment In the evening many



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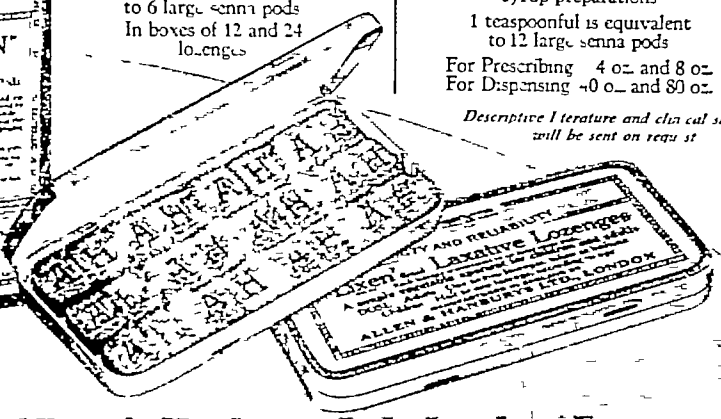

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ladies will probably wish to hear Professor Macalister's lecture on "Footprints of History in Ireland" and, if they do, they will be convinced that archaeology is not, as they may previously have thought, a dull subject. Later in the evening honorary degrees will be conferred by the National University and this will be followed by a reception and dance at University College.

The last day, Saturday, July 29th, will be devoted entirely to excursions. It will be difficult to decide on the relative merits of a visit to the "Meeting of the Waters" at Avoca immortalized by Moore, followed by a visit to a hospital and to Shelton Abbey, where the Earl of Wicklow has invited visitors to tea and to see the gardens, and a northern trip, which covers many of Ireland's most celebrated historical and prehistorical remains at Slane, Tara, and on the banks of the Boyne. Either trip may be enjoyed for about 15s., and this price includes lunch and tea.

So conclude the nine days, but it is hoped that they may be for many visitors, but a prelude to a more extended visit to other of Ireland's beauty spots, which may be reached by rail or road. Visitors who bring their cars may be assured that the roads are good, and that comfortable hotels are ready to entertain them at quite reasonable prices. The committees responsible for making arrangements for the Dublin Meeting are not unmindful of the fact that the present financial stringency affects the medical profession as well as other sections of the community, and that travelling expenses will be, for most doctors, heavier than in connexion with many other meetings. They have endeavoured, therefore, to keep the incidental expenses of visitors as low as possible, apart from hotel bills which will be lower than in most cities, visitors will have few expenses. The only entertainments for which payment must be made are the dinners (Annual, Representatives', and Secretaries'), and the excursions on the Sunday and final Saturday; all other entertainments and excursions will be free.

This outline of the programme for ladies will, it is hoped, persuade many to come, as the local ladies are keenly looking forward to their visit, and will do all in their power to make their stay in Dublin both comfortable and pleasant.

THE FREEMASONS' HOSPITAL AND NURSING HOME

NEW BUILDING AT RAVENSCOURT PARK

The New Freemasons' Hospital and Nursing Home at Ravenscourt Park, near Hammersmith, is rapidly approaching completion, and is to be opened on July 17th by the King, who will be accompanied by the Queen. The building is a noteworthy addition to the modern architecture of London, and, as one would expect, an outstanding example of the mason's craft. The trowel, the emblem of freemasonry, has been employed to much advantage, and the result is a building of pleasing red brick. Another feature is the large amount of window space; this is the result of an insistence by the building committee upon the fullest possible provision of light, even to the overriding of aesthetic considerations.

Hitherto the Freemasons' Hospital has been housed in an inadequate building in the Fulham Road, where there are only fifty-nine beds, and where a waiting list of between fifty and sixty patients has been usual. The movement to a site further west and to a building worthy of the benevolence of the society took final shape two years ago under the energetic stimulus of the chairman of the hospital, Lord Wakefield, and the honorary treasurer, Lord Marshall of Chipstead. The new hospital will contain 180 beds; at a superficial glance it might be supposed to contain a much larger number, but the plan has been followed of having many small wards, which necessarily occupy much greater total space. There are no more than eight beds in any ward, and most of the wards are for two or four beds, while a number are single bedrooms. This arrangement will, of course, add to the burden of nursing, and it is expected that the nursing staff will eventually number about 100. It is hoped to use the old hospital as a nurses' home until such time as a home can be built, on ground already acquired in close proximity to the new building.

SPECIAL FEATURES OF THE HOSPITAL

The façade of the hospital is extremely pleasing. The wide frontage to the south, capped by a square clock tower, is extended on either side by projecting wings ending on each floor in large semicircular sun balconies, on which beds can be wheeled out, and from which on the upper floors a view of an immense area of West London is obtainable. In the forecourt and approach to the main entrance are garden strips and a lily pond with fountain. On one side of the hospital, above the patients' entrance, there is some further decorative work, and at roof level there are two large busts representing Aesculapius and Hygeia.

Opening immediately from the principal entrance is a large central hall, with inlaid pavement and galleries above extending almost to the full height of the building. Near by is the administrative block and the council room with its walls panelled in French walnut. The hospital consists of four principal floors, three devoted to the wards, and the uppermost to the kitchens; it is intended to have a different colour scheme for each floor. There are numerous devices for the comfort of the patients. Not only will each patient have a locker by his bedside, but also an ample private cupboard. The windows have been so glazed that while the patients can see out it is not possible to anyone outside to see in. The children's department is distinguished by its zoological frieze and other decorations to delight the child heart; it is overlooked by an observation room for the nurse and leads out on to a large roof playground. The sisters' rooms are doorless—they are entered through curtains—the idea being that sometimes a closed door may act as a psychological barrier to a nervous patient. There are no bells in the building to jar patients' nerves; a system of buzzers and lights having been installed. Abundant bathroom and lavatory accommodation has been provided, incorporating the latest ideas in sanitary equipment. On each floor there is an excellent well-lighted laboratory.

In the planning and construction of the kitchen care has been taken to ensure that no fumes penetrate to the hospital below, and the lifts communicate only with the service quarters so that there will be a minimum of noise in the corridors adjacent to the wards. Some 25 per cent. of the patients customarily received are of the Jewish faith, special kitchens have therefore been set apart for the preparation of their food, and it is intended to install a Jewish cook. The theatre block, which at the moment is the least finished part of the building, is on a level with the uppermost wards, with easy access from all parts of the hospital by lift and corridor. There are four operating theatres, two to each suite, so that each pair can be in charge of one theatre sister. The x-ray department is also to be well equipped. All the operating theatres, ward service rooms, and the central sterilizing station have been supplied with a special "recessed" type of sterilizing apparatus.

The hospital is, of course, only for the use of Freemasons and their families. Each patient will pay what he can afford. The cases admitted will be mostly surgical ones, the average stay in hospital being about three weeks, but there will be some medical beds, though not specifically allotted. It is not intended to have an out-patient department. The enlargement of the hospital will mean an increase of the resident medical staff to the number of five or six. In addition to the visiting staff, we understand that it will be open to surgeons on the staffs of other London hospitals to come in to perform operations as required.

For the financing of the hospital Freemasons from all parts of the country have contributed in the aggregate very large sums. There have been few exceptionally large donations, most of the contributions being sums of the order of two guineas. In some instances the masonic provinces have made themselves responsible for a stipulated amount, and wards are to be named after these provinces—for example, Kent in the same way certain beds have been endowed.

The architects are Sir John Burnet, Tait, and Lorne, and the consulting engineer Mr. Stinton Jones. The sterilizing

apparatus already mentioned has been supplied by Manlove Alliott and Co Ltd of Nottingham

The writer of this note desires to express his great appreciation of the kindness of Sir D Arcy Power chairman of the Medical Advisory Committee who accompanied him round the entire building and explained the many original or adapted ideas which have been incorporated in the structure and equipment of the hospital

England and Wales

Medical Women's Federation London Association's Dinner

The annual dinner of the London Association of the Medical Women's Federation was held at Claridge's on May 5th with Professor Mary Lucas Keene in the chair In proposing the toast of The Guests Dr Jane Walker C H mentioned first of all the visiting members of the council of the parent body and coupled with the toast the name of the president of the Federation Dr Mabel Ramsay She also expressed pleasure at the presence of representatives of the British Medical Association—Sir Henry Brackenbury the Chairman of Council and the Editor of the *Journal*—saying that the Association had been a faithful friend of the Federation for many years and had given it much assistance She hoped that this state of affairs would continue for h considered it not improbable that before long women would be called upon to oppose some reactionary propositions and would need to look for support to all who would stand by them Replies on behalf of the guests were made by Mrs Sylvia Lynd and Dr Mabel Ramsay Mrs Lynd made some amusing comparisons between the medical and the literary calling (her own) She also as a reviewer discussed the difficulties of the modern novelist pointing out that in a former period of literature it was very easy for the author to make his characters go into a decline but now such was the inquiring spirit of the age readers would want to know from what it was they had died Another marked change that had taken place in novels related to the position of the mother Formerly the mother was a very popular figure in fiction but in the modern book the greater number of mothers who appeared did so only to die Finally Mrs Lynd told a story which must not be considered to apply to reviewers for medical journals A well known reviewer took some books to a second hand bookshop in order to get rid of them finding it impossible to give house room to all the volumes that came his way The young woman in the shop looked at him coldly and said These are not review books These books have been cut ! Dr Mabel Ramsay in her response said that women doctors had now been accepted by the world at large and on the present occasion she recalled their great pioneer Mrs Garrett Anderson who was a woman of vision She knew that registration was but a step in the right direction and that women would never be content until they were able to do things for themselves so that she soon established the Elizabeth Garrett Anderson Hospital with that purpose in view But was it not time the speaker asked for medical women to have their chance in all the hospitals of the country? They had been told first to found a medical school for themselves and they had done that and had staffed their own hospitals but the furthermost development of medical women was being prevented It was the policy of the Medical Women's Federation to secure equal opportunities for women in all the hospitals and all the public services of the country Mr Ralph Straus proposed the toast of The London Association mentioning that he had begun his career as a medical student but had been turned into other paths on discovering that he would be unable to advertise himself until he had received a baronetcy Professor Lucas Keene in a happy response announced with what enjoyment she had recently discovered the new unit the decibel the term being a measure of sound She proceeded to assess on this basis the value of the various speeches delivered that evening and contrived in a whimsical way to pay a compliment to all who had spoken

A Port Health Officer's Day

The various duties of a port health officer in the Thames were picturesquely described by Dr Hugh Willoughby in a paper read before the Royal Society of Medicine (Section of Tropical Diseases) on May 4th The fact that immediately after his paper was read he had to return to the boarding launch somewhere off Gravesend with the prospect of inspecting a vessel arriving from a foreign port at 2 a m and another at 3 a m during his twenty four hour spell of duty added to the interest of his narrative Some 15 000 vessels enter the Port of London every year from across the sea together with 12 000 others engaged on coastwise traffic The jurisdiction of the authority extends from Teddington Lock to a point just beyond the Nore Lightship—a distance of seventy miles—and includes the mouth of the Medway The duties of those concerned with the sanitation of the port include the detection of any cases of infectious disease on arriving vessels the inspection of crew accommodation to ensure that certain hygienic standards are observed and the sampling and examination of food cargoes In 1931—the latest year for which statistics are complete—the number of passengers inspected on arrival was 65 079 and of crew 59 601 and the cases of infectious disease occurring on the vessel during the voyage or detected on arrival numbered 620 Those engaged on the work of inspection have at least six hours notice by flying signal or Morse of the approach of a vessel and are already aware of the epidemiological condition of the port from which she comes When a ship which has or has had infectious disease on board arrives in the Thames the passengers are no longer placed in quarantine but they are carefully examined—if it is small pox their condition as to vaccination is noted and vaccination is offered—and telegraphic notification is sent to the medical officer of health of the district to which they are going the onus of their further surveillance resting upon him If as in many cases they can give only a vague address of a bank or tourist agency they are handed printed cards to be returned under penalty every fourteen days When a surgeon is carried on board his certificate is accepted to cover all Europeans but not Asiatics who are always inspected on arrival whether a surgeon is carried or not when a surgeon is not carried everybody is examined Fortunately with the most serious cases like small pox the spots show on the wrists hands and forehead and are readily detected and it is generally possible to detect a man with bubo in the groin by watching him clamber over some obstacle Cases of infectious disease are landed at a hospital just beyond Gravesend which has a landing stage on the river Some difficulty arises with passengers who land at Marseilles and complete the journey by railway and Channel boat but this is met by requiring not a list of passengers disembarking but a list of those who have embarked To deal with a case of infectious disease on board ship Dr Willoughby said was less difficult than might be supposed owing to the way in which a ship is compartmented If the case was that of a fireman for example only the other firemen might be regarded as contacts and the firemen's quarters fumigated if a deck hand the deck hands quarters and if a passenger the cabin and the ship's hospital were really the only concern A card index is kept of every vessel showing

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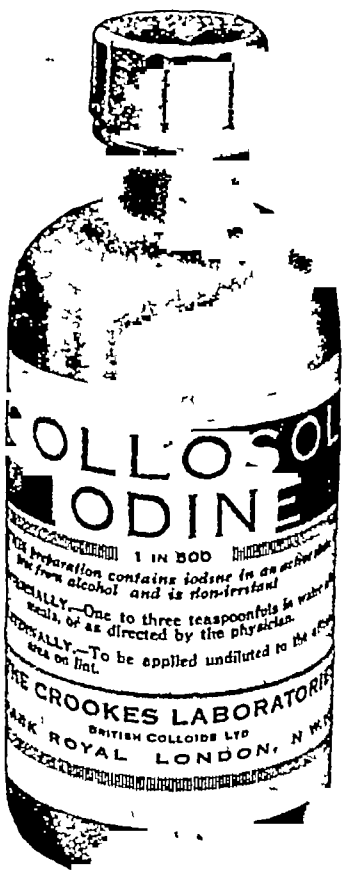

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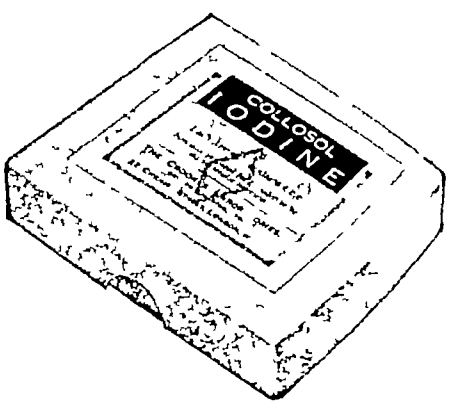

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school hours sitting Perchance there are factors other than simply being kept off his legs which improve a child's health when he goes to school There is the irritable child to whom his parents pay too much attention, there is the child who feeds at all hours or the child who for some reason or other is not quite tranquil in his home surroundings The school child has his pleasant routine of breakfast school, dinner school tea

Feeding.—Advice given to a mother in respect of feeding is based in the first instance on the weight chart Unreliable weighing is misleading At each weighing it must be the same machine the same weigher, the same time of day If the weighing this week is just after a feed and next week just before a feed a fallacy occurs By the weight chart one can say if a healthy baby is underfed or overfed If a baby is on the breast the mother is advised as to her diet If the baby is bottle fed advice in respect of iron and vitamins is given The most reputable of the dried milks have now iron as an added constituent Fortunately for the unemployed fruit juice to supply the infant's needs need cost nothing either A mother need only run a teaspoon over the cut surface of a raw turnip carrot or apple when she is preparing the family dinner Fortunately also for the toddlers vegetables are cheap and can be given in soups and stews It may be that babies are kept on milk and milk only for too long At the twenty eighth week a baby can have two or three teaspoonfuls of a vegetable soup especially if cabbage and carrot are used At most baby clinics extra vitamin D can be had as ostelin at a penny a week Artificial sunlight is even more important here in the North than it is in the South as the real sunshine is less A puny or ailing bottle fed baby quickly responds to light treatment even though it is only a ten minutes exposure twice a week from a carbon arc lamp Some results are spectacular In the case of a breast fed baby a mother feeds it during the exposure The children over 7 months are given a piece of apple to suck at or to eat according to their age during the exposure

Fevers Tuberculosis and other Diseases.—Most of us will have experienced the satisfaction of finding Koplik's spots two days before a measles rash appears and giving advice accordingly That and an early diagnosis of diphtheria from a positive throat swab are the chances a medical officer gets in baby clinics The incidence of infantile diarrhoea is infinitely less here since the dried milks have taken the place of dairy milk Cases of paralysis are quite often seen in baby clinics due to poliomyelitis missed in the acute stage or to a missed slight diphtheria As to tuberculosis prevention by the C G serum our hopes were raised some years ago only to be dashed again Frequently all we can do when there is a case of pulmonary tuberculosis in a household where there are small children is to reiterate each time the mother is seen the methods she can use to help the patient to keep his infection from spreading to the other members of the family particularly to children

Co ordination.—In the case of a baby with a temperature or of a baby who looks too sick to be brought to a clinic the mother is advised to call in her own doctor When a child reaches the age of 5 the baby card is sent to the school medical officer when there is any abnormality When hospital treatment is required arrangements are made for a child to be admitted Use is also made of the tuberculosis and venereal diseases dispensaries and of the bacteriologist

It is evident then that the uses of child welfare centres are the preservation of health the prevention of disease, the treatment of such deficiency diseases as rickets, and the sending for treatment of other diseases either to the patient's own doctor or to hospital Many general medical practitioners make use of the centres for their poorer patients knowing often that a pound packet of a dried milk or of cocoa is more indicated than is a bottle of medicine Since the passing of the Local Government Act the onus of giving "extra nourishment" for children under 5 formerly borne by the Poor Law Department, is now borne by the Maternity and Child Welfare Department.—I am, etc.,

GRACE H GIFFEN DUNDAS,
I R C S I D P H

Middlesbrough May 3rd

Nomenclature of the Involuntary Nervous System

SIR,—The article by Professors E D Telford and J B Stopford on lumbar sympathectomy, in the *Journal* of February 4th (p 173), brings into prominence the nomenclature of the abdominal and pelvic portions of the involuntary nervous system Such terms as "inter mesenteric plexus" and the so called "middle root of the pre-sacral nerves" for what Langley and Gaskell in animals have called respectively the "inferior mesenteric ganglion" and the "hypogastric nerve," are only confusing and not even widely recognized

Hugh Trumble, in the *Medical Journal of Australia* October 3rd, 1931, writes

> Turning now to consider the arrangement in human beings it is at once apparent that there is a close agreement with that in animals It would seem to be eminently desirable that someone with authority in the realms of anatomy should undertake a review of the nomenclature and he could scarcely do better than to adopt that used by those very devoted and painstaking physiological workers Langley and Gaskell"

Telford and Stopford surmise that because there is no deleterious effect of their operation a sympathetic supply remains to the pelvic organs Trumble has shown that total destruction of the sympathetic supply to the bladder prostate, etc "has apparently no very ill effects either in animals or in man Incontinence of urine does not follow nor is bladder or rectal sensation abolished.—I am, etc,

A S FURNESS M B

Toowoomba Queensland
March 16th

First Operations

SIR,—To claim priority or novelty in these days of a superabundant medical literature is admittedly difficult, and requires, if one is not prepared to undertake a very considerable and oft-times tedious search, a redoubtable audacity For this reason we should extend our sympathy to those who, in the best of faith, advance a claim for originality which further acquaintance with the subject proves to have been anticipated, perhaps on several occasions

The *Journal* of May 6th provides two instances where such anticipation has occurred Mr Alex Wells, in his article (p 778) on high gastric ulcer proposes partial gastrectomy below the level of the ulcer as "a new operation for this type of ulcer", but I would refer him to an article of my own on the later results of partial gastrectomy (*Lancet*, August, 1928), in which, after a discussion of the *modus operandi* of the operation in the treatment of ulceration, the following appears

> Ulcers of the cardiac end of the stomach are not so uncommon as is sometimes thought Where the ulcer is capable of local excision without danger this should be done combined immediately or subsequently with partial gastrectomy Where the ulcer cannot be excised removal of the pyloric end is nevertheless indicated This method of treatment has been adopted in several cases with complete relief of symptoms and definite radiographic evidence of cure of the ulcer

I make, of course no claim to originality in this statement, since the publication of this letter will doubtless bring forth others from surgeons with still earlier experience of the method

The second and perhaps more marked instance is Mr Watson Jones's description of "a new operation for the repair of defects in the vault of the skull by a pedicle bone graft" The description is that of the classical Müller König operation, of which a complete account will be found in Binnie's *Operative Surgery* (1916, p 12),

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R. THOMSON, Chemist, Abbey Street, ELGIN, SCOTLAND

together with a diagram which agrees very closely with that given in the present article This operation was extensively used by surgeons for the closure of skull defects during the war and while I am obviously completely unable to subscribe to Mr Jones s claim to novelty or priority I can as a result of my experience heartily endorse his statement that the method is a useful one although in many instances equally good results are obtained if the pedicle is abandoned and the graft of the outer table is inserted free —I am etc

London W 1 May 6th NORMAN C LAKE

Convalescent Homes and Vaccination

SIR —In the springtime it is natural for a doctor s thoughts to turn to the amelioration of the lot of ailing children Convalescent homes customarily make antecedent vaccination a condition of admission this I consider is not now necessary

All reasonable people know that vaccination protects from small pox but the great majority do not by repeated vaccination keep themselves protected against small pox Why? Because they realize that vaccination is an insurance proposition and that the individual risk of being exposed to serious small pox infection is infinitesimal and so they trust our excellent health service both to detect any small pox which may occur and to protect them from infection should occasion arise by vaccination etc The authorities of convalescent homes have not this trusting spirit despite the fact that the hospitals have it for hospitals do not make antecedent vaccination a condition of admission although those on waiting lists would have plenty of time in which to so occupy themselves

What does this antecedent vaccination condition entail on the children? As only about half the babies born are vaccinated in infancy about half the children for whom convalescent treatment is recommended are either vaccinated immediately prior to admission to the home or are refused admission The reason for insisting on the vaccination of the child must be either in the interest of the child population of the home or in the interest of the unvaccinated child If the first it is largely illusory The unvaccinated child cannot start small pox in the home unless he was already incubating the disease before arrival if he is incubating small pox vaccination will not stop the development of that disease unless performed within the first three days of the incubation period while the small pox will not prevent the vaccination from taking unless the child at the time of vaccination was already suffering from the prodromal symptoms of small-pox

A table from my 1923 Gloucester Small pox Hospital Report illustrates this

Small pox Cases Vaccinated after Catching the Disease

	No of Days between Vaccination and Appearance of Small pox Rash														Total
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Cases where vaccination took						2	1	2		3		2	1			11 } 16
Cases where it did not take ...	1	2	1	1												5 }

Thus as a preventive of the introduction of small pox into a home successful vaccination cannot be relied on unless it is done a fortnight before admission but this time-condition is not enforced It appears then that the second reason accounts for the rule—that is that the homes require all their children to be vaccinated to guard them from the small pox to which they may be exposed during their stay of a month or less in the home Is this reasonable? What is the risk? We know that for a generation the risk of variola major has been negligible not primarily because of its infrequent introduction into this country but because of the adequate treatment of the introduced cases and their contacts made possible by the Infectious Diseases Notification Act of 1889 We know that variola minor prevalent in certain areas since 1923 now seems to be disappearing that it is a trivial disease for which vaccination has been refused by very large numbers of contacts and that the disease is of low infectivity—for example it must have been introduced year after year into our seaside resorts and yet it has never spread in them It seems erroneous to suppose that during a month s stay at a convalescent home the risk of contracting small pox of either form is a sufficient one to justify making the vaccination of all entrants obligatory When one realizes that these children are ailing and are admitted for the restoration of their health to subject them to another disease even though a mild one —vaccination—seems in the circumstances to be reprehensible

A paragraph of the 1929 Vaccination Order merits the attention of convalescent home authorities After stating that post vaccinal nervous disease occurs mainly among children of school age and adolescents who had never previously been vaccinated it concludes as follows

> The Minister is of opinion that in the present state of knowledge and so long as the small pox prevalent in this country retains its present mild character it is not generally expedient to press for the vaccination of persons of these ages who have not previousl been vaccinated unless they have been in personal contact with a case of small pox or directly exposed to small pox infection

At the present time variola minor the mild small pox referred to is no longer prevalent the last variola major cases were the *Tuscania* ones of some years ago The chances of exposure to small pox infection in this country are indeed very remote Surely the time is opportune for the reconsideration of convalescent home policy in regard to vaccination I hope they will disregard the vaccinal condition of their little patients save in the presence of small pox —I am etc

R W JAMESON M R C S D P H
West Wickham April 29th Barrister-at Law

Aspiration of Empyema in Children

SIR —In the *Journal* of December 10th 1932 (p 1067) is written These two points—the question of air in the pleural cavity and the large masses of fibrin—are the main criticisms of the aspiration method I would add to these a major objection that has not been overlooked by the authors of the paper under review—prolonged delay in recovery from an advantageous localization of a general infection I can confidently relegate the two points mentioned to their proper place as difficulties associated with a method that is tedious because wanting in radical features

The alarming mortality revealed by the American Empyema Commission impelled surgeons to resort to closed or intermittent drainage by aspiration Immediately the mortality fell and the low figure of 4 per c nt was obtained early but not sustained It cannot be claimed that a mortality now reported as running into double figures is satisfying The deaths are due to the risks attached to the slow design of the technique chosen Its temporizing feature involves the patient in a struggle against a condition demanding salutary relief The long stay in hospital invites cross and intercurrent infections which are so often fatal

45

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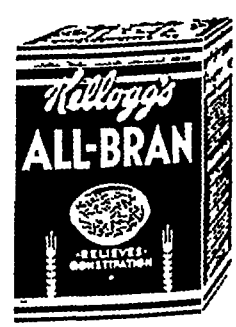

I take it that the work of Drs E T McEnery and Joseph Brennemann was designed to show by comparison the superiority of aspiration over all other methods, including variations of that technique According to these authors aspiration has been on trial " for the last ten or fifteen years ' and seems to have done its best It is a poor best The immediate effect of aspiration is relief and fall of temperature, but with re accumulation there is relapse The conditions alternate for weeks The little patient is exhausted by an acute illness prolonged by a complication which we should welcome as an indication that the infection has been overcome and blockaded, yet we treat the situation with vacillation

At this point to justify my statement, I will describe the pathological processes involved as I understand them In the main, all forms of abscess, including empyema, conform to this description After aspiration the relief of tension within the cavity is brief and incomplete, and, the tension still being positive, pus formation does not cease but is actually excited by the tension, variable though it be This statement may not conform to modern views but I will supply ample evidence to support it I fear that it is taught that re-accumulation is the result of bacterial activity and all our efforts at cure are based on that supposition It is not true Admittedly, pus formation is originally excited by continued stimulation provided by the virus, but a point is reached at which this influence wanes and the abscess is said to be ripe Definite localization has been established It is impossible to imagine how cure could result otherwise Beyond this stage increase of size is due to the attempt on the part of the host to throw off the residue of a successful conflict An attempt at physiological repair is made by adding polymorphs and lymph to the mass These outpourings cease when the tension so caused is relieved by an exit being found or by the pus finding its way into yielding tissues In the former case no more pus is formed a serous discharge small and lessening in quantity taking its place In the latter pus production is merely suspended These things could not happen if prevailing beliefs were true In this description it is understood that secondary infection has been rigidly excluded from the draining abscess Unless the discharge remains serous reinfection has occurred which is usual but reprehensible *Hinc illae lachrimae !*

To prove the complete misconceptions held to day in the pathology of abscess I will refer to the textbooks thereon They say that when an abscess ceases to spread a dense wall of cellular infiltration forms around it— the so called pyogenic membrane ' Why ' pyogenic ' if it forms after the pus has arrived? This loose and utterly misleading description focuses the attention on the passive pus as the active influence to the exclusion of the potent energies of the granulation tissue which has been struggling all along to clean up a messy conflict Of course what happens is that granulation tissue forms first and pus exudes from its surface This infiltration tissue is then rightly called " pyogenic " It is not a membrane I think we can now agree on clinical and pathological grounds that the formation of granulation tissue is the first step towards cure This conception must give us as surgeons great heart When granulation tissue is found it is the time to strike and cut to the core, but not to puncture except to find the way

My ground is now clear for a complaint that thoracotomy has not had a fair go In defending it, I do not forget that a proof puncture is the first essential, and in very young infants one aspiration has been known to be followed by cure The conclusion to day is that thoracotomy with or without rib resection should only be resorted to when there is no other way out In these circumstances the open operation must have a place in the treatment of empyema It is therefore our bounden duty to perform it under proper safeguards Our great and only concern is secondary infection It is an axiom wider than affairs surgical that evacuation must be attended by adequate protection to be safe It is evident that the methods in use to-day are not safe, and in that case no surgeon has a right to perform the operation

It is recorded by Drs McEnery and Brennemann, and it is common knowledge, that pus evacuated through rupture into a bronchus results in rapid cure Can we learn nothing from this?

The explanation is simple The empyema is drained through a tube (the bronchus) that is bactericidal—in other words, protective against secondary infection Surely we can provide an exit for the pus through a wound on the same principle—that it shall be received by a medium that is also bactericidal and therefore protective But we must be watchful as to its efficacy from hour to hour If that is too much for the busy practitioner, he must train someone to do it for him By adopting the open method of drainage we respond axiomatically to a surgical emergency The effect on the patient is dramatic All constitutional symptoms rapidly abate, and if our precautions have been adequate there will be no relapses, but increase in appetite and well being

I could write a lot on the prevailing fear of collapse of the lung on opening the chest wall As a matter of fact it expands and empties the pleural cavity of pus Adhesions, which only form after secondary infection or prolonged and repeated aspirations bind the lung down and in turn contract the chest wall, but these adhesions take weeks to form By the open method the wound would have closed and the abscess healed long before this Treatment by irrigation is the commonest cause of this disability —I am, etc ,

A C F HALFORD, M D Melb, F R A C S

Brisbane Australia

Hernia and Appendicectomy

SIR —It was with great pleasure that I read in your issue of April 29th (p 763) the protest of Mr F A R Stammers at the repetition of what I too believe to be the unfounded idea that the muscle splitting incision for the operation of appendicectomy has any causal connexion with any subsequent appearance of an inguinal hernia It is my practice to use this incision for appendicectomy in any case in which the diagnosis seems to be reasonably certain, and in which no special difficulties are looked for from adhesions or other cause I have carefully looked for an undue proportion of inguinal hernias after many hundreds of these operations, but without result It is, in my view, unfortunate that an attempt should be made to discredit what I believe to be the best incision for straightforward cases, and on grounds which are purely theoretical —I am, etc ,

C A MOORE

Clifton May 1st

Persistent Occipito-Posterior Cases

SIR —Professor Bjornson's article in the *Journal* of February 25th raises once more the question of the treatment of persistent occipito-posterior positions of the vertex in labour I should like to question the wisdom and the advisability of his treatment of these cases, and at the same time put forward a method which I have found uniformly simple and successful Professor Bjornson's paper is illustrated by a figure which (Fig 1) is gravely misleading It shows the foetal head in the pelvic cavity together with the whole thickness of the operator's wrist and forearm This is impossible I am stressing this inaccuracy because to do as Professor Bjornson writes means that the foetal head has to be pushed up out of

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the pelvis till it is free above the brim We should then get a figure as shown (Fig 2) and this makes it obvious that the whole hand and wrist is inside the uterus and the operator s arm up to mid forearm is inside the vagina In

Fig 1

Fig 2.

my opinion this is a most undesirable procedure owing to the great risk of infecting the uterus Inserting the whole hand and part of the forearm into the interior of the uterus is one of the last things one ever wishes to do and the method I am about to describe renders it wholly unnecessary

The foetal head can only be turned when it is either above the brim or else completely in the pelvic cavity it cannot be turned whilst still midway through the brim There are those cases where the liquor has drained away and the uterus has retracted down on the foetus where it is impossible to push the foetal head above the brim Professor Bjornson mentions this class of case and advises turning the head only with the hand in the vagina An assistant then fixes the head in the new position by supra pubic pressure until forceps can be applied He states that this procedure is not over difficult and can be carried out by anyone possessed of even ordinary manual dexterity It would seem natural to ask why he does not adopt this simple method in preference to passing the whole hand and wrist into the uterus as he describes Even his alternative method is only applicable where the head is in the pelvic cavity and would be impossible where the head is fixed in the brim and the uterus has firmly retracted down on the foetus

The method I have invariably and successfully adopted for the past five years is the same whether the head has entered the pelvic cavity or is still half way through the brim when progress has been arrested and it is applicable whether the uterus is firmly retracted on the foetus or whether it allows the head to be pushed up out of the brim before turning It is rotation by means of Kielland s forceps Professor Bjornson summarily dismisses rotation by the forceps and I agree that the pelvic curve of the ordinary forceps makes them unsuitable for the purpose I we apply the ordinary forceps to the posterior occiput with the pelvic curve looking anteriorly after rotation the pelvic curve looks posteriorly and the handles are pressed strongly into the perineum and the forceps have to be removed and reapplied before extraction can be carried out With Kielland s forceps this is not necessary as o begin with the forceps can be applied to the posterior occiput *with the pelvic curve looking posteriorly* In this position they are in their correct anatomical relation to the foetal head and after rotation extraction can be carried out without more ado Only the one application is therefore necessary and only the fingers in the vagina are required exactly as for the application of the ordinary forceps to the head in the simple anterior position

Kielland s forceps are just as easy to apply with the pelvic curve looking posteriorly as they are to apply with the pelvic curve looking anteriorly No hand is ever required to be inserted into the uterus and all manipulations are reduced to the minimum and the risk of sepsis thereby brought to the same level as for a simple forceps operation In Kielland s forceps the fenestrated portion of the blade lies below the level of the handles and the pelvic curve is slight In the ordinary forceps the pelvic curve is pronounced and carries the tip of the blade three inches above the horizontal The cephalic curve is similar in both instruments The accompanying sketch shows the essential difference (Fig 3) There is no risk to the

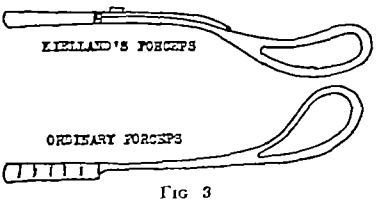

Fig 3

foetus in rotating the head by means of the forceps as the head will easily turn more than 180 degrees neither is there risk to the mother if one thing is borne in mind—never rotate whilst making traction

When traction is applied the pelvic structures are fixed to the foetal head and if rotation is forcibly performed the bladder or vagina may be torn from its attachments These were the injuries formerly reported after rotation by the forceps and which brought discredit on the method They were due to an insufficient appreciation of the mechanics involved and not to any fault of the principle I personally always slightly push up the foetal head to loosen its grip on the pelvic walls and have never experienced difficulty nor seen untoward results If the head be eased in this way then rotation requires no force whatever In my opinion it is infinitely easier to rotate the foetal head with forceps than to do so with the hand Indeed every authority acknowledges there are times when the latter fails completely I have discarded Professor Kielland s original method of applying the anterior blade by passing it up behind the symphysis pubis with its cephalic curve looking anteriorly and then obtaining the cephalic apposition by turning the blade on its long axis It is easier to slip the blades round the head until they come to lie against its sides

In conclusion I suggest that the solution of the bogy of the persistent occipito posterior is the application of Kielland s forceps in the reverse position —I am etc

C L SOMERVILLE M D
Surgeon Leicester and Leicestershire Maternity Hospital
Leicester

Treatment of Tuberculosis

SIR —In your issue of April 29th (p 731) you published an article by Dr L S T Burrell on Principles of Treatment in Tuberculosis As this was presumably meant to be a guide to the family doctor in his attitude towards tuberculosis in private patients I feel that I cannot allow some of the statements made and the advice given to go unchallenged

Under the heading Pretuberculous Stage the impression is given that actual treatment for tuberculosis is rarely necessary in children even if they have been house contacts to a sputum positive case of tuberculosis I am prepared to show that in an unduly high proportion of cases of sputum positive tuberculosis in young adults there has been exposure to tuberculous infection in the home during the first fifteen years of life No further justification is necessary for the policy of endeavouring to prevent this excessive morbidity in young adult life by active treatment during childhood when the disease is localized in the lymphatic system—superficial thoracic or mesenteric With reference to non-clinical pulmonary tuberculosis what use does this term serve? Tuberculosis

(Aesculapius)

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is either active or quiescent, in the former case treatment is required. As pleurisy with effusion is included under this heading it would seem that non-clinical tuberculosis must mean non-sputum-positive pulmonary tuberculosis. If this is so then Dr. Burrell is teaching that clinical tuberculosis commences when tubercle bacilli appear in the sputum—a sorry postulate for any clinician to adopt, and definitely a retrograde teaching.

The final point to which I must allude is the prominence given to Swiss treatment in the advice. Dr. Burrell admits that in Swiss sanatoriums the patient is apt to live carelessly, that sanatorium discipline on the whole is bad, that post-tuberculous neurasthenia is more common in Swiss treated than in English-treated cases, and, finally, that recovery is no quicker in Switzerland, and costs more. After these admissions he still advises Swiss treatment, particularly in early and hopeful cases. There are many excellently managed private sanatoriums in Britain in charge of capable tuberculosis physicians, and I wish to make it quite clear that no patient has anything to gain by leaving Britain in order to have tuberculosis effectively treated. In fairness to our British sanatoriums, however, practitioners should not take Dr. Burrell's advice and send their early and hopeful cases to Switzerland and the other cases plus the Swiss-treated failures, to British sanatoriums. It is the duty of the family doctor to advise the best treatment for his patient, and not to pander to any popular ideas his patient may have on Swiss treatment. Such popular ideas are, after all, purely the result of intensive advertising to which Dr. Burrell is now adding his quota. Any psychological reactions caused by advocating what is best for the patient rather than what he wants may safely be left to a capable English sanatorium physician to deal with.—I am, etc.,

H. MIDGELEY TURNER,
Clinical Tuberculosis Officer to the City of Sheffield.

May 2nd.

Raw and Pasteurized Milk

SIR,—I have read with interest the leading article in your issue of May 6th (p. 792), 'Milk and Pasteurization,' giving a review of Bulletin 5 of the Hannah Dairy Research Institute, especially as I find comments in Bulletin 5 on a paper of my own (*Proc. Roy. Soc. Med.* March 1932). It is on these comments that I, in turn, would also comment.

The authors of Bulletin 5 state:

1. That the children I wrote about were on high grade raw milk: this is imagination on their part, as though some were on Grade A (T.T.) the great majority were on ungraded milk which was produced from a farm medically inspected from time to time, and from which samples were tested in laboratories at frequent intervals for tubercle bacilli, etc. The 750 boys I refer to in that paper were on this milk continuously for six and a half years, and incidentally no case of tuberculosis occurred in any boy after admission during that time. It was observation of the amazing change in the teeth of these children which prompted my investigation which in itself is a comparison.

2. They also state that no comparable data were given of the effects of raw and pasteurized milk respectively on teeth. This also is incorrect for the following reasons: (*a*) In my Tables I and VI which show the incidence of caries in second permanent molars (the specific tooth developing and erupting in those age groups) is found an exact comparison of the incidence of caries in those teeth with raw and pasteurized milk respectively when commenced at such late ages as from 8½ to 10 years. It shows a ratio of eleven carious teeth with raw milk to fifty-nine with pasteurized milk in spite of an average age difference of 1½ years in favour of pasteurized milk. (*b*) My Tables II and VI give the ratio of caries in these same teeth as eleven carious teeth with raw milk to seventy-seven with pasteurized milk plus cod-liver oil, though as I state the seventy-seven is not meticulously accurate on account of a slight age difference of 1½ years in favour of raw milk. (*c*) There is the strongest of inferential evidence in the comparison of my children brought up (from their earliest years) on raw milk and having no caries (Tables III and in effect Table IV) with those of the rest of the United Kingdom most of whom are presumably brought up on pasteurized or sterilized milk and of whom 90 to 95 per cent. show caries with an average of 6·8 carious teeth per head at age 5 as Dr. Wheatley showed.

I can only conclude that the commentators, since they were not dental surgeons, for whom my paper was primarily written and so contains technical dental terms, have misunderstood or missed the comparisons which are clear enough to dental surgeons, as they have often commented on them. Indeed, a partial reproduction of two of my tables in Bulletin 5 omits the essential point on which comparison rests. The above no doubt explains the rather scathing remarks made by the Hannah Dairy Research Institute on Middleburgh's work, which they also refer to, he, being a dental surgeon, appreciated the comparisons at once, and was perfectly correct in drawing such inferences and making such statements as he did. I may add that a considerable amount of evidence confirmatory of my thesis has come to hand since my original paper was written, and some has been published also by dental research workers in the United States of America. No one, so far as I know, has ever suggested that one should rely solely on raw milk after weaning for the proper development of the bones and teeth of the growing child, but only that it should form *part of the diet*, the remainder, of course, should be of an adequate and suitable nature, and notably so from the time when the deciduous cheek teeth erupt. I notice that Bulletin 5 rather decries the value of the work of McCandlish and Black on calves, without taking into account the possibility that those calves fed on pasteurized milk may thereby have had their resistance so lowered as to render them more subject to infection, and died on that account. As far as teeth are concerned, the alteration in the equilibrium between the calcium and phosphate ions on pasteurization may be an important factor in the chemical composition and physical properties of enamel.

As I have at no time advocated the use of raw milk other than Certified or Grade A (T.T.) and (in later papers) from double intradermally tested animals, I should be grateful for information concerning any overwhelming evidence in favour of pasteurization in the case of cleanly produced milks from healthy animals and milkers—such, for instance, as in the case of certified milk—as this too, of course, is part of the "liquid milk supply."—I am, etc.,

EVELYN SPRAWSON.

The London Hospital Dental School, E.1. May 6th.

Surgery in the Treatment of Haematemesis

SIR,—I have read with interest and profit Professor D. P. D. Wilkie's article in your current issue upon the indications for surgery in peptic ulcer. In it he quotes certain of my figures on the mortality from haematemesis (*Lancet*, July 23rd, 1927, and October 1st, 1932).

The analysis of 578 cases admitted to the medical wards of the General Hospital, Birmingham, because of haematemesis during the period 1902–31 showed a total mortality of 10·7 per cent. The males had a death rate of 16·2 per cent. and the females 6·8 per cent., there were negligible differences between acute and chronic cases. In six cases operation was performed for the treatment of active haemorrhage after medical treatment had failed. In the earlier series (1902–25) four patients had a gastro-enterostomy performed—2 died, in the later series (1926–31) two cases were operated upon after a blood transfusion. In the first a small gastric ulcer was found and invaginated,

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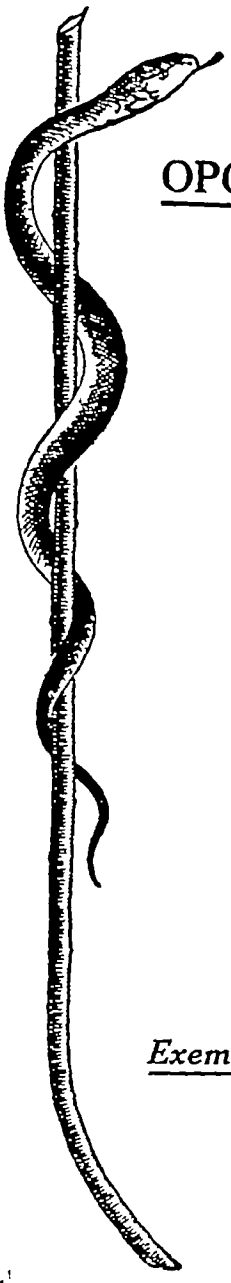

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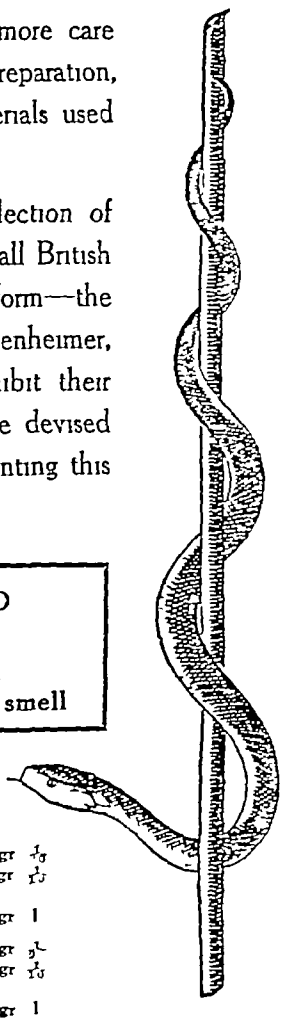

Exempla:

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		Cerebrin	
		Orchitin	āā gr 1
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bleeding was not controlled and the patient died at the necropsy although there was not any external thickening of the stomach a small ulcer was with difficulty found and the bleeding vessel seen this was not the ulcer with which the surgeon had dealt In the second case a small thickened duodenal ulcer was invaginated the bleeding continued and the patient died At the necropsy a second ulcer was found it was a small acute superficial duodenal ulcer with a branch of the gastro-duodenal ulcer exposed in its base

These instances are few to the surgeon they must be discouraging more especially as he no longer regards a simple gastro enterostomy as useful The bleeding point may be elusive and the patient's state too precarious to allow of a minute search even in the post mortem room the finding of the bleeding ulcer may be most difficult As a physician my own practice is not to be tardy in seeking surgical co-operation—a co operation which has so far led to a continuance of conservative treatment often against my own wishes I am of opinion that the only invariable indication for surgical intervention is in the rare case in which haematemesis is followed by the presence of occult blood in the stools for more than a few weeks apart from the radical treatment of the bleeding point the question of malignancy must be decided —I am etc

Birmingham May 6th ERNEST BULMER

Actiology of Acute Rheumatism

SIR —It is rather disappointing to note that Dr Bernard Schlesinger in his article on acute rheumatism in the *Journal* of April 22nd (p 697) makes no reference to the great difference in the geographical distribution of the disease Generally speaking neither the disease nor its various manifestations occur in the Tropics at or about sea level I think it is quite certain that some years ago rheumatic fever was absent in the Tropics though now it seems possible that a few real cases may be found here and there which is a change of some import but the difference between the distribution of the disease in the temperate climates and the Tropics is so great that it is quite clear that there is some factor common in the one area which is absent or very rare in the other and that the discovery of this factor should mean the discovery of the cause of rheumatic fever

There are certain statements in Dr Schlesinger's article which I hope I may be allowed to criticize from the point of view of geographical distribution He suggests that the old idea of a specific infection may have to be modified but what does the word 'specific' mean? Is specificity in one climate different from what it is in another and does not a difference in geographical distribution suggest specificity? It has not yet been proved that living organisms do not breed true Haemolytic streptococci are not absent from the Tropics though they seem to clear up from the throat of rheumatic cases that are sent from New York to Porto Rico Nor is there reason to think that allergy is different in the Tropics from what it is in temperate climates Dr Schlesinger says that the nervous strain of city life must have some effect but why should it not affect the children of any class in the large cities of the Tropics? And again he says that race and heredity also play a considerable part but on what evidence? The late Dr Carey Coombs (*Rheumatic Heart Disease* 1924 p 17) wrote that there is need for statistical inquiry into the relative liability of the various races of mankind I do not think that any statistical inquiry has been made since that book was written It is place not race that makes the difference

I quite agree that improper sanitation is at fault In fact this is my point and is I believe the clue to the cause of the disease to be obtained from tropical experience Finding that the temperate climate rat flea *Ceratophyllus fasciatus* was absent from the Tropics I was led to its host—the common sewer or brown rat *R norvegicus* which is not a natural denizen of the Tropics—and from this to the sewer—its common habitation—and to the broken drain There are very few places in the Tropics which have sewers and those places which have them are among those in which can be found a few cases of rheumatic fever I suggest that the broken drain is possibly the commonest environment of rheumatic fever and that it provides the cause of the first throat from which may be spread droplet infection The change of opinion from a non haemolytic to a haemolytic streptococcus does not shake one's opinion in an organism but only as to whether a streptococcus in the throat can account for the whole story Something more seems to be wanted

As regards rheumatoid arthritis I think that the geographical incidence is similar to that of rheumatic fever and that just as transfer of the patient to a tropical climate has been shown to have a remarkably beneficial result in rheumatic fever so I am confident would it be found that a visit to the Tropics would be the best treatment for a patient suffering from rheumatoid arthritis —I am etc

J TERTIUS CLARKE
Late Health Officer and Medical Officer Perak F M S

Harrow May 1st

Typhoid Fever in 1931 2

SIR —The annotation under the above heading in your last issue prompts me to beg a little more of your space particularly as the contents support the views expressed in the letter you were good enough to publish for me last January The general consensus of opinion is that the recent outbreak in Malton was due to a contaminated water supply whereas I hold it occurred as a natural sequence of events Typhoid broke out in Denby Dale before the epidemic appeared in Malton and later it occurred in other districts in Yorkshire

The annotation states that in 1932 a remarkable increase of typhoid occurred in many countries and that a sort of typhoid pandemic affected the Balkan States and Eastern Europe at the end of the year Particular note should be taken of the fact that the pandemic occurred at the same time as the districts in Yorkshire were attacked therefore would it not be more logical to infer that the increase in 1932 was due to a common factor rather than to contaminated water supplies in the various places affected?

The increase was predicted several months ago and in my opinion typhoid appears to be no more than a form of so-called influenza It is difficult to account for water being free in 1931 contaminated in 1932 and still contaminated despite the fact that the first epidemic of the new series has vanished and the second has not yet begun —I am etc

London W 1 May 5th J E R MCDONAGH

The Prince of Wales went to the City on Tuesday May 9th to visit the new offices of King Edward's Hospital Fund for London at 10 Old Jewry As President of the Fund His Royal Highness first took the chair at a meeting of the Management Committee and conducted the business through a long agenda which included the preparation for the annual meeting to be held at St James's Palace on May 26th He afterwards went round the new offices inspected the different departments and talked with various members of the staff The whole visit lasted about an hour and a half

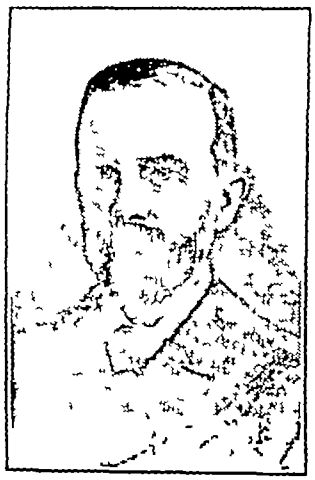
Obituary

PRIESTLEY SMITH, LL D, F R C S

Emeritus Professor of Ophthalmology in the University of Birmingham

Professor Priestley Smith the eminent ophthalmologist, died on April 30th, in his eighty-eighth year, at Edgbaston, where he had been living in retirement The last of many honours came to him only a few weeks ago—the Gullstrand gold medal of the Swedish Medical Society, for his pioneer contributions to our knowledge of glaucoma Apart from that disease the name of Priestley Smith will long be remembered for his researches on the growth of the crystalline lens, for his studies of visual function by means of perimetry, and for his advocacy of the educative treatment of squint

Joseph Priestley Smith was born at Edgbaston on October 29th, 1845, his father, Brooke Smith, had been an active member of the old Birmingham Town Council He left school with the intention of becoming an engineer, but after three or four years medicine claimed him The apprenticeship to mechanical engineering stood him in good stead, for he entered upon medical study with a working knowledge of mechanics and a familiarity with the properties of materials Towards the end of his course at Queen's Hospital, Birmingham, the Franco German war began, and he went out as a dresser under the Red Cross, serving with a field hospital near Cologne In 1871 he obtained the M R C S diploma, and was for two years house-surgeon at the Birmingham and Midland Eye Hospital Then after a period as clinical assistant at Moorfields he went back to Birmingham in 1874 as ophthalmic surgeon to the Queen's Hospital, this appointment he held for thirty years during which time his reputation steadily grew and the name of Priestley Smith became known far beyond the British Isles In 1878 he won the Jacksonian prize of the Royal College of Surgeons of England for his dissertation on glaucoma, its causes, symptoms pathology and treatment ten years later the council of the College appointed him Erasmus Wilson lecturer and in 1890 he was awarded jointly with W A Bruley the Middlemore prize in ophthalmology of the British Medical Association At the Annual Meeting of the Association in 1887 he was vice president of the Section of Ophthalmology and in 1892 president In 1895 he was appointed lecturer in diseases of the eye at the Queen's Faculty of Medicine in Mason College, and in 1900 on the incorporation of the University of Birmingham by Royal Charter he became professor of ophthalmology In the following year the university conferred on him the degrees of M Sc M B, and B Ch, and he was elected a Fellow of the Royal College of Surgeons of England



In 1898 Priestley Smith delivered the Bowman Lecture before the Ophthalmological Society of the United Kingdom on the aetiology and educative treatment of convergent strabismus In 1904 he received the first Nettleship gold medal and a few months later he was elected president of the Ophthalmological Society The Royal College of Surgeons in Ireland made him an honorary Fellow and the Royal Medical Society of Vienna an honorary member On his retirement from active practice in 1916 the University of Birmingham conferred on him the honorary degree of LL D, and he was entertained to dinner by a large number of his former house-surgeons at the Queen's Hospital In 1927 the American Ophthalmological Society at its congress in Quebec unanimously awarded him the Lucian Howe medal and commissioned Dr W H Wilder of Chicago to present it personally This medal (conferred only thrice before—on Kohler, Fuchs, and Edward Jackson) is the highest honour the society can bestow Dr Wilder visited Birmingham on August 18th of that year and spent some time with Priestley Smith, examining his wonderful injections of the eye of the ox, and studying his apparatus for investigating the circulation of the eye At the close of 1928 Priestley Smith was presented with his portrait in oils as a memento of his long association with Queen's Hospital, Birmingham This portrait, an excellent likeness by Harold Speed, now hangs in the board room of the hospital

Priestley Smith was at one time editor of the old *Ophthalmic Review* and many of his important researches are recorded in the volumes of the *British Journal of Ophthalmology* His Jacksonian essay of 1878, on glaucoma was published, soon after delivery, in book form, with illustrations reproduced from the author's original drawings Some twenty years later he contributed the section on the pathogenesis, symptoms, cause, and treatment of glaucoma to Norris and Oliver's *System of Diseases of the Eye*

[The photograph reproduced is by H J Whitlock and Sons Ltd Birmingham]

ALEXANDER DON, M A, M B, C M F R C S Ed

Consulting Surgeon, Ashford Hospital late Surgeon Dundee Royal Infirmary

Mr Alexander Don, who died at Ashford, Kent, on April 16th, was born at Strathdon in 1863, and received his early education at the Old Grammar School, Aberdeen He graduated M A at Aberdeen University (King's College) in 1884, and M B, C M with honours in 1894, having won the Fife Jamieson gold medal in anatomy and the Shepherd gold medal in surgery He was elected a Fellow of the Royal College of Surgeons of Edinburgh after examination in 1900 He held for some years the posts of assistant professor of anatomy and assistant professor of surgery at Aberdeen University, and was also private assistant to the late Sir Alexander Ogston From 1905 to the outbreak of the war he was lecturer on clinical surgery at St Andrews University and honorary surgeon to the Dundee Royal Infirmary Soon after mobilization in 1914 he proceeded to France with the Highland Division as surgeon to the casualty clearing station, which he commanded during 1915 and 1916 He served as officer in charge of various general hospitals in France and Macedonia till 1918, when he was demobilized with the rank of major In 1924 he went to Ashford, Kent where his son was already in practice, and was appointed senior surgeon on the Ashford Hospital staff, and consultant to the hospital in 1928

Mr A B Beresford Jones, surgeon to the Kent and Canterbury Hospital, writes Though he had only been in Kent for nine years, Alexander Don brought a reputation with him, from the war area and from his native shire of Aberdeen which led us to expect an interesting and progressive surgeon and colleague—a reputation in which we were in no way disappointed His skill and charm of manner and kindness will be greatly missed by all in the neighbourhood of Ashford, where he soon built up and carried on an extensive surgical practice As a member of the Kent Association of Surgeons he was much appreciated by his colleagues, by whom he was elected presi

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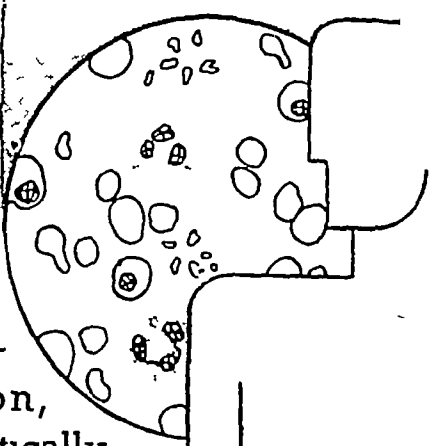

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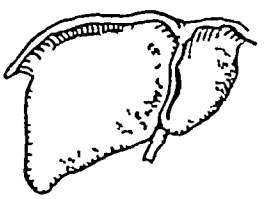

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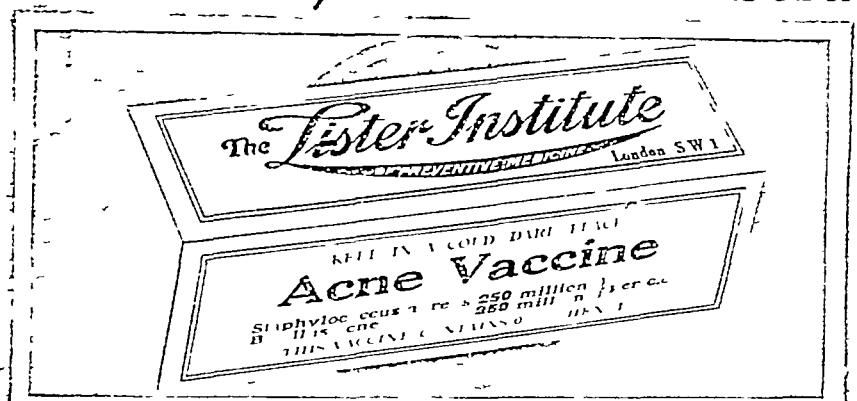

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dent in 1929–31 He was known to them all as a skilful operator with many new ideas based on sound knowledge and experience and one who always had a convincing reason for departures from standard practice His recent enthusiasm for percaine as a spinal anaesthetic led him to depart from usual methods with most encouraging results He was much interested in the use of cinematography for demonstrating surgical operative technique Alexander Don stimulated the energies of the Ashford Division of the British Medical Association shortly after he came to the town and it was entirely his efforts that reorganized its activities—evidenced by many well attended and appreciated meetings He loved country life was a keen golfer and many days during his holidays were spent trout fishing on the rivers of the Scottish Highlands

Dr JOHN CRAIG a well known and much respected practitioner in Edinburgh died on April 23rd after a very short illness the result of a septic wound of the hand The son of Dr William Craig for long a lecturer in materia medica in the school of medicine John Craig graduated M B Ch B Ed in 1900 and after gaining additional clinical experience as R M O in Dumfries Infirmary took up general practice in his native city His industry and conscientiousness soon brought him a busy practice and he became the trusted friend as well as medical adviser of his patients He had a great love of Scottish literature and a special interest in medical jurisprudence in which subject he took the class medal as a student He leaves a wife two sons and a daughter his elder son is almost ready to follow his father's and grandfather's profession To all his relatives his many friends extend their sympathy in their sudden and unlooked for bereavement J O

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons has this week discussed the Trade Agreements recently negotiated with certain foreign countries the increase in the Exchange Equalization Account and the subjects to be considered during the World Economic Conference Scottish business was also taken In the House of Lords the Local Government Bill and the Protection of Animals Bill were down for second reading

The University Spurious Degrees (Prohibition of Use and Issue) Bill to make provision with respect to the unauthorized use and issue of university degrees and with respect to the penalties to be imposed with respect to such unauthorized use and issue was presented in the House of Lords by Lord Jessel on May 3rd and read a first time The second reading was set down for May 10th

The Protection of Animals Bill was read a third time by the House of Commons on May 3rd and sent to the House of Lords The Bill proposes to authorize magistrates to prohibit the holding of dog licences by persons convicted of cruelty to dogs

Water Supply

Sir HILTON YOUNG told Mr Chorlton on May 4th that regional water committees had already been formed for South West Lancashire the West Riding of Yorkshire the Sherwood area of Nottinghamshire the Isle of Wight Holland (Lincolnshire) and South Buckinghamshire and the Central Advisory Water Committee was now considering where others should be formed With the supplies of water already available for populated areas it was not likely that many large new schemes would be required in the immediate future Rural supplies presented the greatest difficulty and he was issuing a circular on them in the course of the next few days He was aware of the present scarcity in the water supply of the district of Denby Dale and also of the proposal since rejected for Bradford to supply Kingston upon Hull he was in touch with both these cases but would be glad to consider any special representations concerning them He was of the opinion that existing powers were adequate if properly used

Public Health in Distressed Areas

In reply to Miss Ward on May 4th Sir HILTON YOUNG stated that it was the practice of the Ministry of Health to require medical officers of health in their annual reports to draw attention to any noteworthy conditions prejudicial to the health of their districts and it was customary for school medical officers in their reports to deal with the physical condition of the child population He did not think it necessary therefore to make any further special recommendation on this subject to the local authorities in distressed areas Dr FREEMANTLE asked whether the Minister would make a definite statement with regard to this matter on the discussion of the Ministry of Health Estimates Sir HILTON YOUNG said he would be glad to give information on the subject while it was being debated

Cost of Medical Services of Metropolitan Police

The accounts of the Metropolitan Police Fund from April 1st 1932 to March 31st 1933 were issued as a White Paper on May 5th They show that the salaries of the chief medical officer the consulting surgeon the deputy physician the divisional surgeons the consulting dental surgeon and the dental surgeons amounted to £13 844 The cost of hospital and convalescent home treatment first-aid instruction of police and medical provision for prisoners and for persons injured in street accidents was £15 469 The expenses of the police nursing home were £3 807

Control of Massage Establishments

The Essex County Council Bill which among other purposes seeks powers for the protection of streams the prohibition of pollution and the control and licensing of massage establishments came before a select committee of the House of Lords on May 4th The Bill contains provisions to exempt establishments carried on by medical practitioners Lord REDESDALE presided Dealing with the proposals for the control of establishments for massage and special treatment Mr CRAIG HENDERSON who appeared for the County Council said that in certain cases the special electrical treatment might be a grave danger to health In 1920 the London County Council obtained powers to bring these establishments under control by a system of licensing and registration Other counties had obtained similar powers Counsel for the corporations of Ilford Walthamstow Barking and Leyton while agreeing that there ought to be control of these establishments contended that that control could be better exercised by the local authorities themselves than by the Essex County Council

Mr ALFRED G CHAMINGS said that until 1931 he was chief officer of the Public Control Department of the London County Council and was responsible for carrying out the law relating to establishments for massage and special treatment Persons engaged in this treatment against whom there had been complaints had migrated from London to the neighbouring counties and had carried on their treatment which in some instances was very dangerous It would be unwise to devolve the powers of control upon local authorities in the county His experience in London was that the worst cases would move from district to district often changing their names or getting a fresh man into the firm It was only through the knowledge of officers who covered the whole of London that the London County Council was able to cope with these cases The committee adjourned

Road Accidents and the Driving Test

In reply to Mr Lovat Fraser on May 3rd Mr STANLEY said that the question of subjecting applicants for motor driving licences to a driving test was discussed at length when the Road Traffic Act 1930 was before Parliament he did not at present see sufficient justification for introducing amending

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legislation on that point He hoped the inquiry now proceeding into the causes and circumstances of fatal accidents would throw light on the extent to which they were due to any want of capacity such as would be disclosed by a driving test The provisions of the Road and Rail Bill would add to the safety and convenience of users of the highway and the investigation which his department with the help of the police was now carrying out into the causes and circumstances of all fatal road accidents would he hoped provide information on which further remedial action could be based

Sir JOHN GILMOUR told Mr Lunn on May 3rd that 416 persons riding pedal cycles were killed and 17 167 injured, during 1932 in Great Britain in road accidents attributed to motor vehicles other than tramcars and trolley vehicles The corresponding figures for 1931 were 428 and 15 293

Road Accidents in Metropolitan Area —In reply to Mr McEntee on April 27th Mr DOUGLAS HACKING stated that 625 persons were killed and 18 977 injured by motor vehicles in the Metropolitan Police district in the six months ended March 31st last Of the persons killed 115 were under 15 years of age The number of children under 15 injured by all classes of vehicles in the same period was 4,668 Mr Hacking told Mr Parkinson on April 27th that the number of motor accidents known to have occurred in the Metropolitan Police district in the twelve months ended March 31st, 1933 was 99 540 The number attributable to careless or dangerous driving and the number of convictions arising therefrom were not available

Food Impurity —On May 2nd Mr RANKIN asserted that the work of public analysts in detecting food impurities was hindered because in many commodities there was no official definition to work on Sir HILTON YOUNG replied that this matter was within the terms of reference of a committee on the law relating to the composition and description of food The suspension of the work of this committee had been necessary in September 1931 as a measure of economy He did not propose to introduce legislation on the subject at present

Grading of Milk —In reply to General Clifton Brown on April 27th Sir HILTON YOUNG stated that the recommendations of the Milk Reorganization Commission for the grading and designations of milk would involve fresh legislation, which he could not undertake to introduce during the present session Under the existing law a conviction could be obtained for the misuse of a prescribed designation

Sickness and Disablement Benefit Reduction —On May 1st Mr RHYS DAVIES asked the reason for reducing the expected sickness experience of spinsters and widows in the Valuation Regulations of April 14th 1933 under the National Health Insurance Act Sir HILTON YOUNG explained that in this new table an overall improvement of 10 per cent from the level of 1928-30 had been assumed taking sickness and disablement benefits together and the anticipated total saving had been apportioned between the two benefits While in the case of sickness benefit the new rates showed small reductions substantial increases had been made in the number of weeks provided for in disablement benefit

Inoculation in the Malton Outbreak —Replying on May 4th to Mr Groves Sir HILTON YOUNG stated he had no complete information as to how many of the persons who developed typhoid fever in the recent Malton outbreak had been inoculated but at the time of the outbreak he obtained particulars covering approximately 200 patients from eight of the nine isolation hospitals in which patients from Malton were treated Twenty seven of these patients had been inoculated before admission but not before contracting the disease Although the dates of notification and admission to hospital could be ascertained it was impossible to discover the date of appearance of the first symptoms of the disease in each case

Operations under Anaesthesia in Glasgow Hospitals —Mr SKELTON told Mr Neil Maclean on May 4th that the number of operations at which anaesthetics were used in Glasgow during 1932 if completely available could be obtained only by a detailed examination of the records at the individual hospitals In view of the labour involved he would not be justified in asking the hospital authorities to undertake the task He promised to see what could be done to get some form of statistics regarding these operations Mr MACLEAN asserted that there had been certain statements in the Glasgow press concerning operations under anaesthetics

Insanity and Divorce —In the House of Commons on May 5th Mr HOLFORD KNIGHT moved the second reading of the Matrimonial Causes Bill He said it sought to give effect to a recommendation made twenty years ago by a Royal Commission to permit divorce from a person who had been incurably and continuously insane for a period of five years Mr DENMAN seconded the motion Dr O DONOVAN moved the rejection of the Bill Many persons properly certified as unfit for release, he said were conscious of all that was going on in the world around them, and their sufferings would be increased if husband or wife took another partner The practice of the Bill would depend on medical certification Practice in the Divorce Court was not above suspicion He looked with distress on the possibility that some weaker members of the medical profession might be tempted to give certificates, as those who kept hotels and boarding houses were asked to furnish evidence for a divorce One beneficent advance in the treatment of lunatics had been the ease with which in remission of their illness they were allowed to return to their own homes That provision would come to a dead end if this Bill passed Attention was drawn to the absence of a quorum and the House was counted out. Mr Knight put the Bill down again for May 12th

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Universities and Colleges

UNIVERSITY OF CAMBRIDGE

The Vice Chancellor has published in the *University Reporter* for May 2nd a letter from the Public Trustee relating to a bequest by Mr Frank Edward Elmore of Boxmoor Herts for scholarships for medical research The testator in his will dated January 24th 1929 bequeathed the income of a trust fund for or towards the provision of scholarships for medical research to male post graduates of British or Colonial birth other than Scottish birth at Cambridge University I exclude graduates of Scottish birth as ample provision is made for them under the Carnegie Trust and in other ways" The trustee has discretion to accumulate the income and if in his opinion the income cannot at any time be advantageously applied in the way proposed he may use it to promote or assist generally the provision of medical education at Cambridge University The estate was sworn for probate at about £76 000 but provision has to be made *inter alia* for two annuities of £600 each and the Public Trustee cannot at the present stage say how much the available income is likely to amount to

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UNIVERSITY OF LONDON

The Court at its meeting on May 3rd learnt with gratification of the following grants made to the University payment being spread over a period of years Haberdashers Company £500 Saddlers' Company 500 guineas and Apothecaries Society £500 It also welcomed a small donation from the Class Sellers Company who expressed its desire to be associated with the Bloomsbury scheme These benefactions will be applied towards meeting the cost of the new Ceremonial Hall to be erected on the University's site in Bloomsbury

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ROYAL COLLEGE OF PHYSICIANS OF LONDON

Licences Supplementary List

Licences to practise have been conferred upon the following candidates who have passed the Final Examinations in Pathology Medicine Surgery, and Midwifery of the Conjoint Board and have complied with the regulations of the Board

G G Airey D A Andersen W T Andrews K S Ayyar W O Baird G F Barrin W T C Berry N B Bett F J Brice G O A Briggs R H Carpenter A H Charle A G Cross H T Croudace E M Dimmick W Dean P E Dipple, R J Drummond G C Exner, W L George E M Griffin F F R Griffin T T Hardy H C H Higginson H M Hodgkin E K Hole J M Holford M I V Hunter M J Ingram C W John A E Jones R L Kennedy E S Lee H B Lee C A Lewis R G Maclarlane Rosamund M I Mackay R F Matthews A Miller P J W Milligan M P Morel H Mower J B C Murdoch A G Palin J P S Peck G Phipps B V S Rao R D Rowlands G E Scott F P Sharpey Schafer J V Shemilt D Stephens R H Swinglehurst T P Thamotheram H B Tipler G F H Tisdall G I Watson A R Woodforde C W B Woodham

A Clinical Lecture
ON
CANCER OF THE STOMACH*
BY
R P ROWLANDS OBE MS FRCS
SENIOR SURGEON TO GUY'S HOSPITAL

Cancer of the stomach is admitted to be a very depressing disease It kills about 10 000[1] a year in England and Wales and is said to account for one third of all cancers in men and one fifth in women[2] It is so insidious in onset and so painless in progression that it often passes unnoticed until it is too late for successful operation But in spite of these facts there is too much pessimism about it in the minds of both the medical profession and the public who often think and say that it is incurable and therefore patients are not encouraged to come for operation which is the only treatment that can cure the disease If a radical operation is done early there is a hope of cure in a fair proportion of cases and from palliative operation of much relief and prolongation of life As it is only a small proportion ever come to the surgeon less than 50 per cent of these come in time for any operation to be justifiable and less than 30 per cent in time for radical resection The mortality from this operation when performed by experts used to be about 10 per cent but D C Balfour[3] reduced this to 5 per cent in his last 200 resections Finsterer[4] had a mortality of 6 per cent in 211 simple resections and 41 per cent in 129 complicated resections—that is when the growth had invaded surrounding organs such as the colon or pancreas Gatewood[5] analysing all the cases of cancer of the stomach admitted to the Presbyterian Hospital Chicago during the ten years 1920–30 states that 209 were operated upon including fifty eight resections with a mortality of 18 per cent Balfour has reviewed 128 patients at the Mayo Clinic who had survived resection for over ten years this number formed 20 per cent of those who had survived this operation performed at the Clinic between 1910 and 1920 Finsterer found that 17·4 per cent of those discharged healed were well after ten years Gatewood reports 39·5 per cent of those who survived resection well after five years and without any sign of recurrence These results of late operations are stimulating and should encourage doctors to persuade patients to come for operation much earlier than they do at present in the sure hope of much better results in the future

Although I have not had time to trace all my patients I want to bring to your notice the following encouraging cases of my own

CASE I.—*Cancer of the Stomach Partial Gastrectomy Well Seventeen and a Half Years Later*

Mrs E aged 41 a patient of Dr Brackenbury She had suffered increasingly from indigestion for three years She had had haematemesis and had wasted rapidly Radiography revealed pyloric obstruction I had felt a tumour of moderate size in the epigastrium a little to the right of the middle line The patient looked ill and anaemic was vomiting large quantities about once a day and was unable to take solids I therefore advised operation

Operation on August 21st 1915 in the private ward at Guy's Hospital (Dr Brackenbury present) A long incision was made in the epigastrium to the right of the middle line A dilated stomach hypertrophied and oedematous was found and a pyloric ulcer of large size extending half way along the lesser curvature from the pylorus around which it formed a wide ring which was hard and felt like a carcinoma As the stomach was particularly movable and there were no growths in the liver pelvic peritoneum or glands I decided to resect the diseased part and this was done without delay The gastric artery was doubly ligatured and divided the left gastro-epiploic also then the great omentum close to the transverse colon and the right gastro-epiploic and pyloric arteries The duodenum was crushed one inch beyond the pylorus and closed with a running suture of linen thread and then invaginated by two purse-strings of the same material A loop of jejunum was brought up through the transverse mesocolon and sewn to the back wall of the stomach along a selected line a little on the cardiac side of the middle of the stomach The stomach was divided near the line already mentioned between two clamps so that no leakage occurred An opening the same size as the one in the stomach was made in the jejunum and an anastomosis made after the Polya method Sewing the jejunum to the stomach before the growth was removed greatly facilitated the operation for the tubular pyloric segment was useful as a tractor the attachment to the jejunum prevented retraction of the stomach during the insertion of the deep suture The opening in the jejunum began four inches from the end of the duodenum and by starting it here there was no tension upon the first part of the jejunum and duodenum for the proximal part of the jejunum was joined not to the lesser but to the greater curvature of the stomach The great omentum was not removed but drawn up over the anastomosis and the stump of the duodenum The opening in the transverse mesocolon was closed by four interrupted sutures The operation lasted forty five minutes and the patient was not shocked after it She was infused during the operation two pints being run into the armpits

She was very well the next day but vomited once or twice On August 23rd she frequently vomited small quantities of green offensive material and as half a pint of sodium bicarbonate solution was given without according any great relief the stomach was washed out at 9 P.M A very large quantity of bilious liquid was withdrawn and the patient felt much better She was up on the tenth day and was walking about on the thirteenth and eating almost full diet She rapidly regained weight and strength Microscopically the ulcer proved to be a typical carcinoma

In December 1928 Mr Bellingham Smith performed hysterectomy for a rapidly growing soft fibroid

In February 1933 seventeen and a half years after the operation she was still alive with no sign of recurrence of the carcinoma

CASE II.—*Cancer of the Stomach 1 Primary Gastro-jejunostomy 2 Secondary Resection Well Eleven Years Later*

A man aged 64 referred by Dr Aston Key The patient had had indigestion for several years but he had been much worse for the last six months with anorexia vomiting and melaena When admitted to Guy's Hospital he was thin and very anaemic the haemoglobin being only 40 per cent He was sent up with the diagnosis of duodenal ulcer but the diagnosis in hospital was carcinoma of the pylorus with obstruction

Operation on May 25th 1922 Dr E A Scott who gave the anaesthetic considered that the patient would not stand a long anaesthetic and operation owing to his anaemic and bad condition I therefore performed posterior gastro-jejunostomy well away from a definite pyloric carcinoma the size of a tangerine orange completely encircling the pylorus ulcerated hard and at one side piercing the muscle wall of the stomach and showing peritoneal nodules No secondary growths anywhere Therefore partial gastrectomy (possible after blood transfusion) was thought advisable three or four weeks later

The patient improved so much that blood transfusion was not necessary before the second operation which was performed on July 10th 1922 when about half the stomach was removed The growth was a columnar-celled carcinoma Good recovery followed and in January 1929 the patient was in excellent health less anaemic and better nourished and in regular work at his old job of cleaning cars In February 1933 aged 75 he was well and acting as a family retainer and doing odd jobs at Hayling Island

[3777]

* Delivered at Guy's Hospital

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH

At a quarterly meeting of the College on May 2nd with the President Dr Robert Thin in the chair Dr Robert Lees (Edinburgh) took his seat as a Fellow and Dr Mohamed Abd El Hamid Gohar (Cairo) Dr Douglas Begbie McCrie Lothian (Larbert) Dr Alfred David Corman (Blackburn) and Dr William Ritchie Russell (Edinburgh) were elected Fellows

The Freeland Barbour Fellowship was awarded to William Muir B Sc Ph D

Dr John Orr was elected a representative of the College on the Committee of Management of the Triple Qualification

Dr Edwin Matthew was elected the representative of the College on the General Medical Council for a period of five years

ROYAL COLLEGE OF PHYSICIANS OF IRELAND

At the invitation of the Department of Local Government and Public Health the College has appointed Professor Joseph W Bigger to be a member of the Therapeutic Substances Advisory Committee

At the monthly meeting held on May 5th Mahmond El Hennawi L R C P and S Ed was admitted to the Licence in Midwifery

Medico-Legal

INQUEST ON CHRISTIAN SCIENCE HOME PATIENT

An inquest was held at Harrow last month by the deputy coroner (Dr J V Gorsky) into the circumstances of the death of an elderly woman Emily Hedges at the Christian Science Nursing Home Sunny Lodge Harrow The husband stated that his wife who was a Christian Scientist had had two strokes within twelve months a doctor attending her on each occasion for about three weeks After the second stroke her mental condition became somewhat difficult and as he could not give her the attention she required at home she was sent to the Christian Science home on March 27th and died there three weeks later Dr B H Barton said that on post mortem examination he found cancer of the liver which was the cause of death but even had this been diagnosed he did not think it would have been possible to do anything to prolong life

Miss Winifred Moir in charge of the home said that she was not a State registered nurse but had such nurses in the home She had conducted the home for three years and previously one at Hampstead for seven years She had an exemption certificate under the Nursing Homes Registration Act whereby the home was inspected not by the county council but by a committee of the Church of Christ Scientist She took in all sorts of cases except mental and maternity Patients were treated by Christian Science practitioners no drugs of any kind were used and great care was taken to give the right food She denied that the deceased was a mental case the patient was only a little confused and had to be humoured Asked how she knew what was wrong with patients Miss Moir replied that experience had taught her In reply to Dr Goddard medical officer of health for Harrow who asked what would happen in a case of appendicitis she said that she would detect the symptoms and keep the patient in bed and warm and give a light diet she would not countenance operation An officer of the Church explained that the treatment received by those who went into the homes was the application of prayer as understood in Christian Science Even appendicitis with abscess would be treated in that way and he had seen relief afforded by such treatment Miss Moir further stated that following on some public protest when she first came to Harrow the members of the local council were invited to inspect the home and came to the conclusion that it was a thoroughly well-organized private nursing home

The deputy coroner commented on the strange procedure whereby Christian Science homes were exempted from inspection and the still more strange fact that people with no medical qualifications should profess to say what was wrong with cases

The jury returned a verdict of Death from natural causes

Medical News

The next quarterly meeting of the Royal Medico-Psychological Association will be held at 11 Chandos Street W on Wednesday May 17th at 2 p m At 3 p m in the Barnes Hall of the Royal Society of Medicine 1 Wimpole Street W Dr Adolf Meyer (psychiatrist-in-chief, Phipps Psychiatric Clinic the Johns Hopkins Hospital Baltimore) will deliver the fourteenth Maudsley Lecture on Psychiatry and Mental Hygiene

The next meeting of the Royal Microscopical Society will be held at B M A House Tavistock Square on Wednesday May 17th at 5 30 p m Papers will be read by Mr J E Barnard F R S and Mr F V Welch (Some Further Examples of Dark ground Ultra-violet Microscopy) and by Mr G Dallas Hanna (An Alcohol soluble Resin of High Refractive Index)

The Faculty of Medicine of the University of Birmingham has arranged for two lectures dealing with the regulations appertaining to national health insurance practice to be given by Dr H Guy Dain chairman of the Birmingham Panel Committee on Thursdays May 18th and 25th at 4 p m in the Medical Theatre the University Edmund Street While these lectures are primarily intended for senior medical students medical practitioners are also invited to attend

The next meeting of the Physiological Society will be held in the Physiological Laboratory Cambridge to-day (Saturday May 13th) at 3 30 p m Dinner in Trinity College at 7 15 p m On June 10th the society will meet at Leeds in the Department of Physiology of the School of Medicine

A provincial meeting of the Fever Hospital Medical Services Group of the Society of Medical Officers of Health will be held at the Municipal Buildings Par Gates Poole on Friday May 19th at 4 p m A discussion on the position of the smaller provincial fever hospitals in relation to Section 63 of the Local Government Act 1929 will be introduced by Dr Maule Horne

The annual general meeting of the British Institute of Radiology (incorporated with the Röntgen Society) will be held at 32 Welbeck Street W on May 18th at 8 p m After the business part of the meeting is completed the following papers will be read The Variation in the Response of Animal Tumours after Lethal Doses of X Rays by Professor Sidney Russ and The Biological Response to Gamma Rays of Radium as a Function of the Intensity of Radiation by Dr F G Spear and Mr L G Grimmett On May 19th members are invited to visit the National Hospital for Diseases of the Heart where they will be received by Dr Campbell Golding (in the absence of Dr Gilbert Scott) between 11 a m and 1 p m

In view of the fact that a large number of radium officers from the provinces will be visiting London for a conference on Friday May 19th arrangements have been made to devote the monthly meeting of the medical members of the British Institute of Radiology to a subject of interest to them This meeting will be held at 32 Welbeck Street W 1 on that day at 5 p m when a paper will be read on the treatment of rodent ulcers by radium by Dr N S Finzi and a discussion will follow All radium officers whether members of the Institute or not are invited to attend

The French *Journal Officiel* has just published a decree affecting foreign doctors wishing to practise in France Henceforth no one will be allowed to practise medicine in France who does not hold a French medical degree or who is not a French citizen or subject or a person belonging to a country under the protection of France Citizens of countries in which French doctors are allowed to practise can apply for the benefit of diplomatic conventions which in certain cases enable French nationality to be dispensed with There must however be no disparity in the number of doctors from any foreign country and the number of French doctors practising in that country This decree applies also to dentists

The first of a series of lectures, instituted by the British Science Guild for the purpose of directing attention to the importance of research—both purely scientific and technical—and the utilization of its results in the service of mankind, will be given by Sir Harold Carpenter, D Sc , F R S , in the Carpenters' Hall, Throgmorton Avenue E C , on Tuesday, May 16th, at 4 30 p m The subject of the lecture is metals in the service of human life and industry Tickets are obtainable free of charge from the secretary of the Guild, 6, John Street, Adelphi, W C 2

A post graduate course on diseases of children will be held at the Hospital for Sick Children, Great Ormond Street W C , from May 15th to 27th—mornings 10 a m to 1 p m afternoons (except Saturdays) 2 p m to 4 p m It will consist of fifty clinical lectures and demonstrations and six laboratory demonstrations The fee is £6 6s , and applications to take the course should be addressed to the secretary

At the invitation of the Joint Tuberculosis Council Dr Peter W Edwards medical superintendent, Cheshire Joint Sanatorium, near Market Drayton, Salop, is prepared to give a series of short intensive post-graduate courses on modern methods of therapy in tuberculosis of the respiratory system, with special reference to collapse therapy Methods of sanatorium administration will also be demonstrated and no class will exceed four members in number Suitable arrangements for board and residence can be made within a convenient distance of the sanatorium Details of dates, expenses, etc , will be sent on application being made to Dr William Brand, honorary secretary for post graduate courses, 8, Highway Court, Beaconsfield, Bucks

The Fellowship of Medicine and Post Graduate Medical Association announces that two lectures on cataract extraction from the point of view of the general practitioner will be given by Lieut -Colonel R H Elliot, on May 24th and 31st, at 5 p m at 11, Chandos Street, W A course of four lectures will be given at 11, Chandos Street on Wednesdays, at 5 p m , as follows June 7th, Dr Leonard Findlay ' Chronic Pulmonary Disease in Childhood June 14th, Dr C P Symonds " The Disturbance of Cerebral Function in Head Injury " June 21st Mr F J McCann " The Repair of Injuries to the Perineum and Vaginal Walls ' (illustrated by epidiascope) June 28th Mr Andrew McAllister " Some Features of Eclampsia Dr G F Stebbings will give a demonstration of selected cases at the Lambeth Hospital, Brook Street on Friday May 26th, at 2 p m Forthcoming courses include venereal disease at the London Lock Hospital May 22nd to June 3rd gynaecology at the Chelsea Hospital for Women, May 22nd to June 3rd , and diseases of the chest (week end) at the Hospital for Consumption Brompton May 27th and 28th

The Friends Provident and Century Life Office held its centenary dinner at the Park Lane Hotel on May 3rd, when the directorate both general and local, and the senior members of the staff were entertained, together with certain selected guests Speeches were made by Mr H J Morland Lord Brocket Mr Arthur Rowntree, Mr H J Tapscott (general manager of the Friends Provident) and Mr J R Little (general manager of the Century) The Friends Provident is one of the principal offices issuing life and permanent sickness policies to doctors and this company issued the first policies under the scheme for the provision of additional capital required for the purchase of a medical partnership or practice A short history of the first hundred years, by Mr Arthur Rowntree appears in *The Friend* of May 5th It is interesting to note that of the first fifty six whole-life policies which were issued one insured declared he had had cow pox or small pox eighteen declared they had had cow pox while the remaining thirty-seven persons had had small pox

According to the *Times* correspondent in Cairo the Egyptian Government has decided to authorize 200 Jewish doctors and lawyers who have been compelled to leave Germany as the result of recent events to take up residence and exercise their professions in Egypt

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, B M.A House Tavistock Square, W C.1**

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The address of the Irish Office of the British Medical Association is 18 Kildare Street Dublin (telegrams *Bacillus Dublin* telephone 62550 Dublin) and of the Scottish Office 7 Drumsheugh Gardens Edinburgh (telegrams *Associate Edinburgh*, telephone 24361 Edinburgh)

QUERIES AND ANSWERS

Pain in Chronic Gout

Dr C JOYNER (Farnham) writes I would be grateful if any reader could suggest treatment for the alleviation of pains due to chronic gout Atequinol and novalgin have been tried and dieting but the pains in the ankles and the feet prohibit the patient from walking although the joints have good movements

Oedema of Toes

Dr WALTER GRIPPER (Willingdon Eastbourne) writes In reply to Dr H Wilson Miller s query regarding oedema of the toes (May 6th p 810) I would suggest examining for the *Epidermophyton interdigitale*, especially if there is slight vesication

Income Tax

Proportion of Expenses Chargeable to Practice

" G G " asks what proportion of house rent may be deducted for income tax purposes In his case ' there are only two rooms (excluding the kitchen) on the ground floor one of which is used as a consulting room and the other as a waiting room for patients, though ostensibly a dining room '

*** It is impossible to lay down any general rule with regard to the appropriate proportion One half is usually reasonable, and a larger ratio is not often allowed One useful test is to consider it from the opposite aspect—that is is one half the rent rates etc reasonable for the private use derived from the premises? If similar accommodation could be obtained for less than the one half then there may be some claim to charge a larger ratio against the practice With regard to the more specifically professional expenses mentioned—for example use of car drugs medical subscriptions etc —prima facie these are allowable the only modification being some deduction from the total which fairly represents the value of the private benefit derived from them

Obsolescence Allowance Hire Purchase

" W H K " bought a car in 1926 for £275 In 1932 he sold it for £15 and bought another car for £325 The aggregate amount of wear and tear allowances in respect of the old car is £173 What is the appropriate obsolescence allowance? Can ' hire purchase ' payments be deducted for tax purposes?

*** £275—(£15+£173=) £188—that is, £87 Where a car is bought on the hire purchase system the monthly instalments represent capital payments even though made out of income and are not allowable for income tax purposes

CASE III —*Cancer of the Colon Intestinal Obstruction Short-circuit Resection in 1919 Cancer of the Stomach Partial Gastrectomy in 1927 Well in 1933*

A lady aged 56 an artist patient of Dr Grace Griffith, seen in October 1919 had been suffering from complete intestinal obstruction for ten days the vomit was brown and offensive, and the abdomen distended Upon exploration a carcinoma was found at the splenic flexure of the colon A short circuit was made between the middle of the transverse and pelvic colons Two months later the growth was removed through an oblique incision in the left flank parallel to the intercostal nerves The swelling had shrivelled considerably and was easily removed the ends of the colon near the anastomosis being closed without disturbing the stoma All the colon between the middle of the transverse and pelvic loops was removed together with the mesocolon and draining lymphatic glands The patient made a good recovery and remained well until March 1927, when indigestion with attacks of vomiting developed There was tenderness in the right hypochondrium and therefore cholecystitis was suspected, but she did not improve under treatment for this and the vomiting increased in frequency Anaemia and wasting and a vague swelling in the right epigastric region were noticed in August and carcinoma of the stomach was suspected On September 19th 1927 the abdomen was explored The diagnosis was confirmed a large carcinoma involving the pylorus and the greater part of the pyloric segment was found There were enlarged hard glands in the omenta above and below the growth About two thirds of the stomach together with the draining lymphatic glands and omenta were removed The anastomosis made was after the Polya retrocolic method In spite of attacks of vomiting for a fortnight good recovery followed and the patient returned home a month after the operation She has remained well ever since It is now five and a half years since the partial gastrectomy, and sixteen years after the colectomy and although the patient is 69 years old she is still very active in her garden travels abroad and paints and exhibits charming water colour pictures Microscopical examinations proved the carcinomatous nature of both growths which were quite distinct and dissimilar primary cancers

Dr Hurst[6] mentions another patient operated upon by me for a carcinoma of the stomach which had developed four years after a gastro jejunostomy which had been performed for a simple ulcer no relief had followed and hyperchlorhydria was still present The patient was alive and well seven years after the partial gastrectomy Recurrence with jaundice took place in another patient eight years after partial gastrectomy

SYMPTOMS AND SIGNS

Cancer of the stomach in its earlier and hopeful stages does not give rise to symptoms which are characteristic of the disease Anorexia, indigestion, pain, nausea, and vomiting, haematemesis, progressive wasting, and anaemia are suggestive Hypochlorhydria is too often thought to be a necessary sign of cancer of the stomach this is only true of the late stages of the disease In the early and operable stages the free HCl is either at or above the normal in over half the cases Occult blood in the stools is almost a constant sign [7] Radiographic examinations are often negative in the early stages but if they are repeated —as they should be—at frequent intervals they will ultimately show defective filling and delay which are very suggestive signs, or they may show an ulcer with a large crater increasing instead of diminishing under treatment A tumour may be felt in the epigastrium, but in the majority of cases exploration should be undertaken long before a tumour can be felt

DIAGNOSIS

1 *From Chronic Gastritis* —The presence of occult blood and of radiographic deformity point strongly to the presence of cancer

2 *From Simple Ulcer* —It is often difficult or impossible to make sure that a supposed simple ulcer of the stomach is not malignant Hurst and Stewart[8] believe that over 6 per cent of gastric ulcers become malignant, and that over 15 per cent of gastric cancers start in simple ulcers McCarty used to teach that a large crater—say over 2 5 cm —indicated malignancy, but this, although very suspicious, is not quite reliable, but if the crater does not diminish rapidly under good medical treatment the suspicion of cancer is great

3 *From Syphilis of the Stomach* —Although rare this has been mistaken for carcinoma of the stomach especially as hypochlorhydria is marked, but occult blood is usually absent and the stomach is contracted and shows *multiple defects* on the *x* ray screen A Wassermann test should always be made

4 *From Carcinoma of the Pancreas and Chronic Pancreatitis* —The wasting and anaemia associated with chronic disease of the pancreas have often led to suspicion of cancer of the stomach but repeated radiographic examinations of the stomach and chemical examinations of the stools should prevent this mistake

5 *From Empyema of the Gall bladder* —Chronic empyema of the gall-bladder has been mistaken for cancer of the stomach because of the dyspeptic symptoms associated with a tumour in the epigastrium, but radiographic and cholecystographic examinations, and the absence of occult blood in the stools, should lead us to a correct diagnosis

In conclusion, it cannot be too strongly urged that the diagnosis of cancer of the stomach, if it is to be early enough for hopeful resection, must often be made by exploration Too much time is often wasted on laborious laboratory tests and futile medical treatment and this "scientific and deadly delay" too often throws away the hope of successful operation The diagnosis ought to be made in all cases with or without exploration well within two months of the onset of symptoms Then resection would be possible in about 70 per cent of the patients presenting themselves

INDICATIONS FOR OPERATION

A suspicion of the presence of cancer of the stomach especially if supported by radiographic evidence and the presence of occult blood, makes early exploration desirable This is the best way to discover cancer of the stomach in its early and curable stages In the later cases when the diagnosis is obvious, operation is indicated (1) *when there is evidence of existing or threatening pyloric obstruction*, for, at the least, relief can be given by short circuit or palliative resection (2) *When there is reasonable hope of resection* Here it is most important to remember that cancer of the stomach starts at the pylorus in nearly two-thirds of the cases, and long remains localized and resectable [9] Even at death there are no secondary growths in over a third of pyloric cancers Therefore one must not lightly conclude that a growth of the stomach is inoperable On the other hand, it is important not to submit patients to unnecessary explorations when the growth is irremovable, as is indicated by the discovery of (1) hard nodules of secondary growth in the peritoneum, by rectal or vaginal examination (2) enlarged, hard glands at the root of the neck especially under the lower end of the left sterno-mastoid, (3) nodules of growth at the umbilicus or under the skin of the abdomen, (4) ascites indicating peritoneal growth or obstruction of the portal vein, (5) nodular enlargement of the liver, (6) the large size, fixation and awkward position of the growth as felt clinically and estimated by repeated radiographic examinations The growth may be so fixed, or so high, involving the cardia that resection is impossible, but in doubtful cases it is wise to explore, for occasionally the clinical signs and the *x* ray ex-

Income from Abroad Exchange Premium

P W receives dividends from South Africa They are paid into his banking account there and from time to time remittances are made from that account to this country Owing to South Africa remaining on the gold standard these transfers in 1932 were made at a considerable profit The inspector of taxes claims to bring into assessment here not only the profit on remittances but the profit which could have been made by remitting the whole of the income Is this legal?

*** Income from stocks and shares abroad is assessable whether it has been or will be received in the United Kingdom or not on the full amount of the income arising The assessments here must of course be made in sterling and some rate of exchange must necessarily be applied to the unremitted income The use of the word arising in the section suggests that the appropriate rate is the one which was in operation when the income arose —that is became available for remittance We understand that that is the basis adopted by the assessing authorities and we are not aware that it has been successfully disputed and P W will apparently have to pay British tax accordingly But he should claim the rate of exchange when the income arose even in the case of remitted income if the rate was less favourable then than when the remittances were actually made

Cash Receipts Change of Proprietorship

A W M has hitherto been assessed on the cash basis As from July 1st 1932 he took his son into partnership and it has been arranged that the new practice shall be treated as set up as from that date During the period July 6th 1932 to April 5th 1933 A W M received £600 in respect of outstanding accounts from the original practice Has he got to pay on those receipts?

*** Presumably after July 1st the new practice will be assessed on the basis of bookings and receipts from former accounts will not come into the computation of any liability (either of the new firm or of A W M) for a subsequent period They represent capital receipts from accumulated accounts of the former practice and are not assessable It is just possible that the authorities may ask for the assessments on the old practice to be revised for the fifteen months from April 5th 1931 to July 1st 1932 to the bookings basis but this should be resisted unless there is some reason to think that the gross earnings of the practice had been increasing as compared with earlier years

Car Expenses Replacement

H K S professional income is derived in part from a hospital appointment including car allowance The car was purchased in August 1932 for £73 and sold in March 1933 for £50 when another car was bought for £123 10s What can he claim?

*** In the first place he should request that the hospital emoluments should be included with his general professional earnings in one assessment He may find it convenient to make up his accounts for the year ending March 31st 1933 The amount allowable in respect of the replacement of the car is £73–£50=£23 any expenditure over that amount is prima facie to improve and not merely to maintain his car equipment The expense allowance received from the hospital should of course be included in the receipts and the whole of the running costs (less any appropriate deduction for private use) deducted as expenses

LETTERS, NOTES ETC

Report of Council Corrigendum

We are asked to correct a misprint in the Honours List published with the Annual Report of Council in the *Supplement* of April 29th (p 154) The name of Sir Frederic Jeune Willans K C V O was misspelt

Catheterization in Mid air

Mr CLIFFORD MORSON writes A letter with the title of the Flying Doctor which has appeared recently in the *Times* prompts me to record another advance in aviation An elderly man living in Kenya was advised by his local medical attendant to return to London to seek expert advice on account of attacks of retention and inflammation of the testicles He decided to fly home by Imperial Airways The journey by this method of transport takes exactly seven days Previous to embarkation he took the precaution of including in his baggage a number of catheters in a metal formalin container Though this man has travelled all over the world and never been seasick during the hop from Nairobi to Khartum he was terribly airsick While so suffering to add to his misery he was seized with retention of urine Nothing daunted he made his way while in mid air to the tiny lavatory in the aeroplane's cabin and proceeded to pass a catheter on himself with complete success In a few weeks this courageous fellow will be returning to Kenya by the leisurely sea route unencumbered by catheter and a peccant prostate

Toxaemia in Acute Obstruction

Dr F A HOPE (Nice) writes In an article on acute obstruction of the colon in your issue of March 11th it is categorically stated that the chief danger and the most frequent cause of death is the toxaemia which results from the obstruction which can best be dealt with by the free administration of fluids May one inquire if there is any surgical reason why detoxication should not be carried out by small rectal enemata—say 100 c cm of a solution of 1 grain of pure potassium permanganate to a pint of warm water freshly prepared two- or three- or four-hourly either with or without the administration of ext thyroid sicc It is a formula that one feels many physicians would employ unhesitatingly but of course as soon as it appears that surgical intervention is called for such cases pass over to the theatre where angels fear to tread However anyone familiar with the amazingly rapid effects of the thyroid and manganese treatment as the most powerful detoxicating agent known would surely agree that in such an emergency the method could be given a trial even in the most desperate cases without any appreciable risk of death from shock if there is no surgical reason against it and thus perhaps the chief danger averted

Beds for Tonsil Cases

Mr THOMAS CLAPHAM secretary to the Belgrave Hospital for Children S W 9 writes In his article on maternity and child welfare services in their relation to public health (April 29th p 742) Dr Donald Paterson emphasizes the importance of children being kept in hospital for two or three days when undergoing an operation for the removal of tonsils and adenoids and urges that they should not be kept waiting The Committee of Management of the Belgrave Hospital heartily agrees with Dr Paterson An aural clinic has been conducted here for the treatment of children from the L C C schools since 1912 and thousands of children have been treated When the clinic was first opened the children were sent home a few hours after operation but it was quickly realized that an improvement in this method was desirable The war intervened and nothing was done until national affairs were on a peace footing again The main difficulty was to set aside a ward for these cases in view of the limited bed accommodation but as a first step the children were sent home in an ambulance accompanied by a nurse instead of being allowed to get home as best they could in public conveyances Eventually in 1921 it was found possible to rearrange the administrative block a room was set apart and adapted as a ward with ten beds The children were admitted the day prior to operation and detained for at least two days

Request for Synovial Fluid

Dr E SHIRLEY JONES (Bentley Hants) writes I shall be grateful for specimens of human synovial fluid They should be taken with absolute asepsis and a note giving condition of joint and total quantity of fluid contained in it will be of added assistance

A new booklet has been published by Cadbury Brothers Ltd describing the organization and work of the laboratories at Bournville Copies may be had from the publication department Bournville Works Birmingham

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 43 44 45 48 49 and 50 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 46 and 47

A short summary of vacant posts notified in the advertisement columns appears at page 857

and resection proves possible The mere size of a palpable but mobile tumour does not make resection impossible Sometimes the disease proves to be either an innocent growth or simple but extensive ulceration curable by operation

CHOICE OF ANAESTHETIC AND OPERATION

Finsterer has shown us that local is here much safer than general anaesthesia Although the method is tedious it certainly lessens shock and diminishes the danger of thoracic complications After morphine 1/3 grain and hyoscine 1/100 grain have been injected about half an hour before the operation to make the patient comfortably sleepy novocain 0 75 per cent is used to produce local and block anaesthesia of the upper part of the abdominal wall Directly the abdomen is opened splanchnic anaesthesia is carefully induced with the aid of a long needle passed deeply between the upper parts of the aorta and inferior vena cava Sometimes a little gas and oxygen or oxygen and ether is necessary to complete the anaesthesia

In most cases of cancer of the stomach it is necessary to remove an inch or more of the duodenum and from one third to three quarters of the stomach depending on the site and extent of the growth After such extensive resections direct union of the cardiac remainder to the duodenum after Billroth's first method is impracticable without undue tension even when the duodenum has been freely mobilized Therefore it is better to close the duodenum and to join the gastric remainder to the jejunum after the Polya method When the cardiac remainder is small after high division of the stomach it is easier to close the upper part of the gastric wound and to use Billroth's second method of anastomosis—of the jejunum to the lower part only of the cardiac remainder It is also better to bring the loop of jejunum up in front of the transverse colon after Balfour's and Moynihan's methods for if recurrence takes place as it often does about the pancreas and transverse mesocolon obstruction of the anastomosis is not so likely as when a retrocolic anastomosis is made

When the abdomen has been opened the first step is to explore thoroughly to make sure if resection is practicable Secondary growths in the liver parietal or pelvic peritoneum pancreas mesentery or transverse mesocolon make a radical cure impossible and so do invasion of the cardiac orifice and fixation of the growth to the large blood vessels such as the coeliac axis

Sometimes the general condition of the patient and the way he behaves upon the table make primary resection too hazardous Then pyloric obstruction may be relieved by gastro-jejunostomy with entero-anastomosis After this the patient may become so much better that a secondary resection can be safely carried out Frequently although a radical cure appears to be beyond hope palliative partial gastrectomy is better than gastro-jejunostomy for the mortality is not much greater and the patient gets far more relief as well as greater prolongation of life

Sometimes when resection is impracticable exclusion of the cancerous part of the stomach is better than gastro-jejunostomy The stomach is divided above the growth the distal opening is closed and the proximal or cardiac opening is joined to the jejunum

CONCLUSION

1 We are far too pessimistic about cancer of the stomach and ought to know that a fair proportion of cases can be cured by early operation

2 Comparatively few cases are ever sent to the surgeon and less than a third of these come in time for a radical operation to be possible

3 The diagnosis can and should be made much earlier than it is even if exploration is necessary to decide this in doubtful cases

4 In spite of deplorable procrastination in the past nearly 20 per cent of the patients who survived resection (at a risk of about 10 to 15 per cent) were well over ten years later Much better results will surely follow earlier resections

REFERENCES

1 Registrar-General's Report, 1921 (Over 8,000 died from cancer of the stomach in England and Wales in 1921 1,000 more than in 1919 The records no longer give separate figures for cancer of the stomach)
2 Turner Grey *Glas Med Journ* 1931 cxvi 137
3 Balfour D C *Collected Papers Mayo Clinic* 1931 p 0
4 Finsterer *Wien Klin Woch* August, 1929 p 1125 ib 1 September 1929 p 1157
5 Gatewood *Surg Gyn col and Obstet* 1933 lvi 2142
6 Hurst and Stewart *Gastric and Duodenal Ulcer* 1929 p 429
7 *Wien Klin Woch* 1931 (Professor Berger of Vienna says it is found in over 90 per cent. of cancers of the stomach)
8 Loc cit p 381
Billroth *Clin Surg* (New Sydenham Society 1881)

TREATMENT OF MENSTRUAL IRREGULARITIES*

BY

WILFRED SHAW M D F R C S

F C O G

ASSISTANT PHYSICIAN ACCOUCHEUR ST BARTHOLOMEW'S HOSPITAL GYNAECOLOGIST ST ANDREW'S HOSPITAL DOLLIS HILL

Disorders of menstruation are among the commonest gynaecological ailments with which the general practitioner has to deal Excessive menstruation is very frequently seen and irregular uterine haemorrhage in which the rhythm of the menstrual cycle is lost is common at the menopause It is the experience of all practitioners that such irregularities of the menstrual functions may be encountered without gross lesions being present either in the uterus or in the ovaries It is quite true that irregular haemorrhage is seen in such conditions as carcinoma of the cervix and in polypi but in these cases menstruation itself occurs rhythmically and the abnormal haemorrhage is superimposed upon the cyclical bleeding The type of patient now under consideration is the woman who has some form of menstrual irregularity independent of the presence of either tumour or inflammation of the pelvic organs Such cases are extremely common It is impossible to appreciate the significance of these ailments without some idea of the modern work on the physiology of menstruation and it will perhaps be more logical if a short review of this work is first given

PHYSIOLOGY OF MENSTRUATION

The process of ovulation whereby an ovum is discharged from a ripe Graafian follicle is limited to the child bearing period of life Ovulation never occurs before puberty nor after the menopause It has been shown that it is restricted to about half way between two periods It is customary to consider the normal menstrual cycle as being one of twenty-eight days the first day of the bleeding being taken as the first day of the cycle and with this standard ovulation is restricted to about the fourteenth day—that is to say fourteen days after the first day of the previous menstrual period After ovulation a corpus luteum is formed from the follicle which has discharged its ovum and within a few days it attains full development producing the characteristic grey or yellow convoluted body in the ovary When menstruation begins or perhaps shortly before retrogression arises in the corpus luteum which gradually becomes converted into a structureless hyaline body known as the corpus albicans

* A paper read to the Guildford Division of the British Medical Association

Simultaneously with the production of a corpus luteum in the ovary the endometrium hypertrophies and, during the presence of a mature corpus luteum in the ovary, shows a peculiar histological structure in that its glands have a characteristic corkscrew like appearance During menstruation the superficial layers of the endometrium degenerate, and as a result of disintegration most of its hypertrophied superficial portion is shed into the cavity of the uterus, this, together with the blood which is simultaneously effused, constitutes the menstrual discharge After menstruation a process of repair ensues, during which the epithelium grows over and covers the denuded areas These are the main histological features of the menstrual cycle, with the exception that immediately prior to ovulation a peculiar oedematous appearance develops in the endometrium, together with some degree of hypertrophy, which, there is good reason to believe, is controlled by the ripening follicles in the ovaries

It is well known that two ovarian hormones have now been identified—namely, oestrin and progestin The oestrin hormone is produced by the ripening Graafian follicles, although it can also be demonstrated in the corpus luteum, in the placenta and in the urine of pregnant women There are good grounds for assuming that the mild degree of hypertrophy which occurs in the endometrium immediately before ovulation is controlled by the oestrin hormone and is comparable to the proliferous hypertrophy of the endometrium of lower animals The hormone progestin is the corpus luteum hormone It was first identified by Corner and amongst other properties it possesses the power of inducing a premenstrual hypertrophy in the endometrium of primates, which is certainly comparable to that observed in human beings This effect of progestin is only seen if the endometrium is first sensitized by the previous administration of oestrin The physiology of menstruation is not quite so simple as was originally believed, for it has been shown in the last few years that ovarian activity is dominated by the activity of the anterior lobe of the pituitary, fresh extracts of which, when injected into mice, stimulate the ovaries so that Graafian follicles hypertrophy, ovulate, and become converted into corpora lutea Similarly, the urine of pregnant women contains substances allied to, or perhaps identical with the anterior pituitary hormone It is important to remember that the anterior lobe of the pituitary hypertrophies during pregnancy and leads to the secretion of large amounts of its hormone It is well known that very commonly women menstruate at reduced intervals after parturition, the condition being referred to as post partum epimenorrhoea Such cases may perhaps be explained by assuming the persistence of the activity of the anterior lobe with the result that follicles ripen and ovulate more frequently

This represents a brief summary of the physiological principles upon which the interpretation of menstrual irregularities must rest There are several points which must be borne in mind In the first place, it is conceivable that a woman for some reason or other may produce large corpora lutea The result would be an excessive premenstrual hypertrophy, so that during menstruation a large amount of tissue would be shed and menorrhagia or excessive menstrual bleeding result The second point is that the causation of the twenty eight-day rhythm does not necessarily lie in the ovaries No explanation has been offered as to why this rhythm is the rule but it is clear that as the pituitary dominates ovarian activity it is quite possible that factors disturbing the menstrual rhythm are just as likely to lie in the pituitary as in the ovaries The third point is the causation of menstrual bleeding itself I have always maintained that menstrual degeneration of the endometrium is an active process, and is not induced passively by the simple withdrawal of the hormone progestin I have gone so far as to postulate the existence of a third ovarian hormone, one which induces degeneration in the endometrium If this view is accepted it is clear that in exceptional circumstances this hypothetical hormone if produced in excess, may lead to a continuous degeneration of the endometrium, so that prolonged uterine haemorrhage is the result

EPIMENORRHOEA

In this form of menstrual irregularity the patients menstruate with a cycle less than the normal twenty eight days—usually with one of twenty one days or with one of fourteen Typically the menstrual cycle is constant, and is not irregular In some cases, in addition to a reduction in the menstrual cycle, the duration of the haemorrhage is prolonged and the amount lost on each day is increased This clinical form of menstrual irregularity is very common but it must be emphasized that epimenorrhoea in itself is not a disease but merely a symptom Cases of epimenorrhoea can be classified into fairly well defined groups The post partum type is seen very often indeed, and when such patients start menstruating after parturition the cycle is reduced from one of twenty eight days to one of twenty one or fourteen Post partum epimenorrhoea may, of course, complicate inflammation of the Fallopian tubes and ovaries but such cases are relatively few, and in the common form no lesion can be detected in the pelvis As I have already stated, these cases are probably related to a disturbance of the endocrine balance, and are perhaps due to over activity of the anterior lobe of the pituitary

Epimenorrhoea occurs most frequently however, in patients about the age of 45 when they are approaching the menopause It is almost invariable that the amount of blood lost at each period is excessive, and quite often leads to a severe degree of anaemia Not seldom the uterus is found to be enlarged, and is harder than normal Until recently such cases were grouped under the term 'chronic metritis" but since the advance in our knowledge in the physiology of menstruation it has become generally recognized that both the epimenorrhoea and the uterine hypertrophy are due to over activity of the ovaries Epimenorrhoea is also common in cases of fibroids, particularly in patients over the age of 40 In another group it develops in patients about the age of 35 most of whom are single Sometimes it is associated with salpingo oöphoritis, and sometimes with chocolate cysts of the ovary The aetiology of these cases of epimenorrhoea is not known with certainty At the present day it is generally accepted that it is not related either to an inflammation of the appendages or to any local lesion in the uterus itself Almost certainly the condition is due to an abnormality of ovarian function, although there is no proof that the primary fault lies in the ovary, it may very well be that the pituitary is primarily responsible

[illegible] treatment

The treatment of epimenorrhoea is one of the most difficult problems in gynaecology One has to deal, not with a diminution of activity for which an appropriate hormone might readily be administered, but with over-activity, and the question is essentially one of inhibition of ovarian activity Now, it is quite clear that whatever pharmacological properties may be claimed for the various ovarian and pituitary hormones, no one has at any time suggested that any one of these has an inhibitory effect on the ovary For these reasons one is very sceptical as to whether the administration of any

ductless gland preparation is likely to be of benefit in a case of epimenorrhoea. These theoretical considerations are borne out by my own experience and I have personally given both oestrin and the anterior pituitary hormones to cases of this kind without result. When we turn to the prescription of drugs in the treatment of epimenorrhoea it is clear at the outset that there can be small hope of success. The only way in which such drugs could act is by inhibiting ovarian activity. It is true that the amount of blood lost during each period can be controlled by drugs such as ergot and by proprietary preparations such as femergin but it is difficult to conceive that there is any drug on the market which possesses the remarkable property of inducing a specific inhibitory effect on the ovary. Again these theoretical considerations are borne out by clinical experience. The question now arises as to what can be done for these cases. In patients of 45 or over treatment as a general rule resolves itself into the creation of an artificial menopause. The patient is anaesthetized, the uterus is curetted and then a tube containing 50 mg. of radium is inserted into the uterus and kept there for forty-eight hours. This is an excellent remedy so far as the uterine bleeding is concerned. It is true that the results are often not immediate and patients occasionally have one or two periods after the application of radium but it is very exceptional for further bleeding to take place. Sometimes the first haemorrhage after radium is copious because the radium itself produces a local inflammation in the endometrium and this hyperaemic area bleeds excessively during the menstrual period. There are two other objections to radium treatment: one is that almost invariably there is a persistent vaginal discharge due to the local inflammation of the endometrium and the second is the onset of menopausal symptoms. After the age of 45 severe menopausal symptoms as the result of the creation of an artificial menopause by radiological means are not usual although they are extremely common under the age of 40 and fairly common between the ages of 40 and 45. It is difficult to give an opinion as to whether the patient is likely to develop these menopausal symptoms if an artificial menopause is brought about and if the patient is a good subject for an operation with a thin abdominal wall I often prefer hysterectomy with conservation of the ovaries to radiological treatment. It should be emphasized that with modern technique hysterectomy has a very low mortality and if a patient survives the operation and has her ovaries retained she is much more likely to be free of symptoms than if an artificial menopause is induced radiologically. So far as *x* ray treatment is concerned the end results are similar to those obtained after the application of radium. The great drawback to *x* rays however is that for sound therapy the uterus should be curetted prior to treatment so that carcinoma of the body of the uterus or of the isthmus can be excluded.

Whereas the treatment of epimenorrhoea in patients approximating to menopausal age is fairly successful that in younger patients is extremely difficult. Both *x* rays and radium are in my view contraindicated as a means of producing a permanent artificial menopause which in patients younger than 40 almost invariably leads to appallingly severe menopausal symptoms and one of the worst sequels is the development of kraurosis vulvae with its attendant symptoms of pain and dyspareunia. Cases of this sort are sometimes encountered and it is not an exaggeration to say that the resultant symptoms often produce more distress than the original epimenorrhoea. Theoretically the induction of a temporary artificial menopause with either *x* rays or radium would seem a satisfactory procedure but in practice this is not so. The essential difficulty is to obtain the correct dosage for if a small dose is given no effect is obtained while if it is too large the result is a permanent artificial menopause. The margin is small and experience at St. Bartholomew's Hospital has shown that it is extremely difficult to gauge with any accuracy the correct dosage for a temporary artificial menopause. My own view is that with *x* rays so many factors—such as the location of the ovaries and the thickness of the abdominal wall—have to be considered that this form of treatment is unlikely ever to be used extensively similarly with radium. I believe that the effect of radium is upon the ovary and not upon the uterus and again it is difficult to gauge the exact distance of the ovaries from the radium placed within the cavity of the uterus.

The treatment of epimenorrhoea in patients prior to the age of 40 resolves itself into either expectant treatment or operation. In cases of post partum epimenorrhoea experience shows that almost invariably the menstrual functions right themselves spontaneously in due course. Indeed it is very rare to see patients who give a history of epimenorrhoea which has persisted for more than three years following childbirth. In these cases provided the patient does not acquire a severe degree of anaemia the administration of such drugs as ergot during the menstrual period combined with rest is the wisest course to follow and the return of the normal menstrual cycle should be awaited. In the other cases of epimenorrhoea the position is difficult. In those in which it arises without obvious cause in single women of the age of 35 clinical experience shows that it is exceptional for them to return to the old cycle of twenty-eight days. Whether operation is performed depends solely on the degree of anaemia. If operation is decided upon the correct procedure is to perform subtotal hysterectomy and to leave the ovaries behind. It is quite clear that this method is drastic and it is warranted only if the patients suffer from a high degree of anaemia. The results of hysterectomy are extremely good the primary mortality is low and the end results are eminently satisfactory.

METROPATHIA HAEMORRHAGICA

The recognition of this disease is the outcome of researches on the menstrual cycle. The full description of the pathological conditions is due to Schroeder as a result of his investigations carried out at Rostock during the war. The disease is characterized by a complete upset of the menstrual functions so that ovulation is inhibited and corpora lutea are not produced in the ovaries. Always a cyst is found in the ovaries and has the structure of a cystic ripening follicle. The condition of the endometrium is that of a diffuse polypoidal hypertrophy and large plum-coloured polypi project from the endometrium downwards towards the cervical canal. The endometrium shows the changes of a true hyperplasia combined with cystic dilatation of the glands and in the superficial layer large areas of necrosis can be observed. Premenstrual hypertrophy never develops in the endometrium because a corpus luteum is not found in the ovaries. Metropathia haemorrhagica is not uncommon and can be diagnosed with a fair degree of precision if due care is taken. It occurs most frequently about the age of the menopause but it is also seen in young girls before the age of 20 and it is not unusual before the age of 30. The symptoms are fairly characteristic. Usually the patients give a history of a short period of amenorrhoea this lasts for about six to ten weeks and is followed by continuous bleeding which may persist for many months (I have seen cases in young girls in which it has gone on for years). The amount of blood lost on each day is not excessive and it is rare for large clots or severe bleeding to be seen at any

SURREY BRANCH REIGATE DIVISION.—At White Hart Hotel Reigate Wednesday May 17th 7.30 p.m. Annual dinner. Followed by annual meeting election of officers etc.

SUSSEX BRANCH BRIGHTON DIVISION.—At Royal Sussex County Hospital Thursday May 18th 3.45 p.m. Clinical meeting.

Naval and Military Appointments

ROYAL NAVAL MEDICAL SERVICE

Surgeon Lieutenant Commander T. Madill and J. J. Major to the *Penelope* for Royal Naval Barracks Chatham. J. P. Patrick to the *Victory* for Royal Naval Barracks Portsmouth. A. I. Walsh to the *President* for Medical Department Admiralty. R. W. Muston to the *Shropshire*. R. A. Craig to the *Malaya*. C. R. Boland to the *Cumberland*.

Surgeon Lieutenants C. Ommaney Davis and J. I. S. Coulter are transferred to permanent list, seniority May 19th 1930 and February 7th 1931 respectively. W. R. S. Lanchester to the *Victory* for Royal Naval Infirmary Portsmouth. A. D. Sinclair to the *Hood*. A. J. A. Cruse to the *Douglas*. H. D. Hamlett to the *Dundalk*. W. J. F. Guild to the *Penelope* for Royal Naval Barracks Chatham.

ROYAL NAVAL VOLUNTEER RESERVE

Surgeon Lieutenant H. M. Willoughby to be Surgeon Lieutenant Commander.

Surgeon Sub-lieutenant J. M. Jarvis to be Surgeon Lieutenant.

Probationary Surgeon Sub-lieutenant A. I. Williams to be Surgeon Sub-lieutenant, seniority December 15th 1931.

ROYAL ARMY MEDICAL CORPS

Lieut.-Col. F. T. Potts, C.M.G., D.S.O., retires on retired pay.

Major A. H. T. Davy to be Lieutenant-Colonel.

Major G. H. Stacke is placed on half-pay list on account of ill health.

Lieutenant A. N. T. Menezes to be Captain.

J. P. Douglas to be Lieutenant (on probation).

ROYAL AIR FORCE MEDICAL SERVICE

Flight Lieutenant J. B. Gregg to be Squadron Leader.

Flight Lieutenants A. R. French is transferred to the Reserve Class D (ii). G. Kinnear relinquishes his temporary commission on completion of service. C. W. Coffey to Station Headquarters Hendon. C. W. Paton to R.A.F. Hospital Cranwell.

Flying Officers A. M. Weston and A. H. Tomkins to be Flight Lieutenants.

ROYAL AIR FORCE RESERVE MEDICAL BRANCH

J. L. H. Easton is granted a commission as Flying Officer.

TERRITORIAL ARMY

ROYAL ARMY MEDICAL CORPS

Lieut.-Col. H. F. Wilkin, M.C., T.D., retires and retains his rank with permission to wear the prescribed uniform.

Captain J. C. C. Howe to be Major.

Captains J. L. Turpie resigns his commission. J. M. Wyatt, having attained the age limit relinquishes his commission and retains his rank.

Lieutenant R. H. Tootill to be Captain.

To be Lieutenant: D. A. Lanchorne (late Lieutenant R.A.M.C.) seniority August 12th 1932. J. W. Lobban.

Supernumerary for Service with the O.T.C.—Lieutenant J. P. Raban to be Captain, supernumerary for service with Medical Unit University of London Contingent Senior Division O.T.C.

TERRITORIAL ARMY RESERVE OF OFFICERS. ROYAL ARMY MEDICAL CORPS

Lieut.-Col. J. E. A. Ryan, T.D., from active list to be Lieutenant-Colonel.

Captain A. Capstaff from active list to be Captain.

INDIAN MEDICAL SERVICE

Lieut.-Col. W. T. McCowen to be Colonel, seniority July 30th 1927.

The services of Lieut.-Col. G. M. Millar are replaced at the disposal of His Excellency the Commander-in-Chief in India from February 23rd.

Lieut.-Col. F. Stevenson is posted as Residency Surgeon and Chief Medical Officer in Baluchistan from February 21st.

Lieut.-Col. J. Morison, Director Pasteur Institute and Medical Research Institute Shillong, to be Inspector-General of Civil Hospitals and Inspector-General of Prisons Assam vice Colonel J. P. Cameron who has been granted leave.

Major W. J. Webster (Medical Research Department) to be a Supernumerary Officer at the King Institute Guindy Madras from March 4th.

The services of Captain B. S. Nat are placed permanently at the disposal of the Punjab Government from November 10th 1932.

To be Captains: Captain (local Major) F. M. Collins from R.A.M.C., seniority September 1st 1929 and to retain local rank of Major while employed as Surgeon to H.F. the Viceroy. Captain C. A. D. Rose from R.A.M.C., seniority October 25th 1932.

To be Captains (on probation): P. A. Karamchandani, seniority February 26th 1926. R. K. Misra, seniority April 2nd 1926. K. R. Saghal, seniority September 26th 1926.

Lieutenant L. F. Burns to be Captain, seniority March 7th 1929.

Lieutenant (on probation) D. Death to be Captain (provisional on probation).

To be Lieutenants: B. A. Porritt, seniority July 26th 1930. M. S. Purvis, seniority February 20th 1932. F. W. Whiteman (remains unseconded). M. F. Kirwan.

To be Lieutenant (on probation): A. S. Morgan.

COLONIAL MEDICAL SERVICES

M. Ellis, M.R.C.S., L.R.C.P., Medical Officer, Nigeria. F. E. R. Bartholomeusz, L.R.C.P. and S., L.F.P. and S., Medical Superintendent, Leper Asylum, Hendala, Ceylon. H. E. Elanayake, L.R.C.P., M.R.C.S., Provincial Surgeon, Ceylon. W. H. Kauntze, M.B.E., M.D., B.Ch., D.P.H., Director of Medical and Sanitary Services, Uganda. A. M. W. Rae, M.D., Ch.B., Senior Medical Officer, Gold Coast. C. Sivasthamparam, L.R.C.P. and S., L.F.P. and S., Provincial Surgeon, Ceylon. L. G. W. Lynch, M.R.C.S., L.R.C.P., D.T.M. and H., Superintendent, Chacachacare Leper Settlement, Trinidad.

APPOINTMENTS

MILLIGAN, C. Guy, M.R.C.S., M.R.C.P., Deputy Medical Superintendent Cell Barnes Colony, St. Albans.

MORRISON, John, M.B., Ch.B., Ophthalmic Specialist, Medical Referee under the Workmen's Compensation Act, 1925, for the Bolton, Bury, Rochdale, Oldham, Salford (Circuit No. 6) and Wigan (Circuit No. 6) County Court Districts.

O'SHAUGHNESSY, Laurence, M.D., F.R.C.S., Surgeon to British Legion Sanatorium, Preston Hall.

WALKER, A. R., M.B., Ch.B., D.P.H., Assistant Medical Officer of Health, County Borough of Walsall.

BENHILL HOSPITAL (to be opened on May 19th).—*Honorary Consulting Surgeon*, David Ligat, F.R.C.S. *Honorary Consulting Ophthalmologist*, C. B. Lowe, M.R.C.S., L.R.C.P., D.O. *Honorary Pathologist*, P. Lazarus-Barlow, M.D. *Honorary Radiologists*, A. Grellier, M.R.C.S., L.R.C.P., T. D. Overend, M.R.C.S., L.R.C.P. *Honorary Oto-rhino-laryngologists*, D. E. O. C. Cuffley, F.R.C.S.Ed.

KING'S COLLEGE HOSPITAL.—*Senior Casualty Officer*, M. L. Brance, M.R.C.S., L.R.C.P. *Second Casualty Officer*, J. D. H. Bird, M.B., B.S. *House Anaesthetist*, A. H. Calley, M.R.C.S., L.R.C.P. *Junior House Anæsthetist*, W. H. Whiles, M.R.C.S., L.R.C.P. *Clinical Pathologist and House Physician to Dermatological Department*, H. E. Donnell, M.R.C.S., L.R.C.P. *Radiologist*, T. A. Crichlow, M.R.C.S., L.R.C.P., D.M.R.E. *House Physicians*, H. T. S. Wise, M.R.C.S., L.R.C.P., R. H. Bailey, M.R.C.S., L.R.C.P., D. H. Fulton, M.B., B.S. *House Surgeons*, R. H. Rushton, M.R.C.S., L.R.C.P., A. H. W. Roffe, M.R.C.S., L.R.C.P., S. O. Jones, M.R.C.S., L.R.C.P. (Urological Department), J. J. Somerset, M.R.C.S., L.R.C.P. (Orthopædic Department and Third Casualty Officer), H. W. Burge, M.R.C.S., L.R.C.P. (Obstetrics and Gynæcology, Senior), A. B. Simmons, M.R.C.S., L.R.C.P. (Junior), Miss J. M. Egerton, M.R.C.S., L.R.C.P. (Aural and Throat Department.) Miss A. E. M. Herbert, M.R.C.S., L.R.C.P. Non-resident appointment. *Junior House Surgeon, Aural and Throat Department*, A. Rothwell, M.R.C.S., L.R.C.P. *Junior House Pathologist*, B. H. Kirman, M.R.C.S., L.R.C.P.

LEICESTER CITY GENERAL HOSPITAL.—*Consulting Physicians*, J. V. C. Braithwaite, M.D., M.R.C.P., R. McD. Cairns, M.D. *Consulting Radiologist*, D. Forbes Lawson, B.Ch., D.M.R.E. *Visiting Anæsthetists*, D. Justin Davies, M.P., Olive M. C. Jones, M.R.C.S. *Senior R.M.O. and Deputy Medical Superintendent*, A. M. Macqueen, M.D.

CERTIFYING FACTORY SURGEONS.—H. Brookes, M.B., Ch.B., Sheffield for Tideswell District (Derby). A. S. M. Douglas, M.R.C.S., L.R.C.P. for Brixworth District (Northampton). W. C. Latham, M.R.C.S., L.R.C.P. for Newton-le-Willows No. 2 District (Lancaster). J. S. Rowlands, M.D., F.R.C.S. for Rhyl District (Flint). A. Stevens, M.R.C.S., L.R.C.P. for Woolpit District (Suffolk).

VACANCIES

ALL SAINTS HOSPITAL (FOR GENITO-URINARY DISEASES), Aperfield Street, S.E.—R.H.S. (male).

ASHTON-UNDER-LYNE DISTRICT INFIRMARY.—H.S.

BEDFORD COUNTY HOSPITAL.—(1) First H.S. (2) Second H.S. Males unmarried.

BIRMINGHAM GENERAL HOSPITAL.—(1) Surgical Registrar to Gynæcological and Eye Departments. (2) H.S. to Throat and Ear Department. (3) Anæsthetist.

BLACKBURN AND EAST LANCASHIRE ROYAL INFIRMARY.—P.S.O. (male).

BOLTON ROYAL INFIRMARY.—H.S. (female).

BRISTOL COSSHAM MEMORIAL HOSPITAL.—R.M.O. (male).

BURTON-ON-TRENT GENERAL INFIRMARY.—(1) Senior H.S. (2) C.O. and H.P. Males.

COBHAM SCHIFF HOME OF RECOVERY.—R.S.O. (male).

DUDLEY GUEST HOSPITAL.—Assistant H.S.

EAST LANCASHIRE TUBERCULOSIS COLONY, Great Barrow.—H.P. (male).

ELIZABETH GARRETT ANDERSON HOSPITAL, Euston Road, N.W.—(1) H.P. (2) Obstetric Assistant. (3) Three H.S. (4) Junior Assistant Pathologist. (5) Medical Registrar. (6) Surgical Registrar. Female.

GENERAL LYING-IN HOSPITAL, York Road, S.E.—Jun. M.O. and Anæsthetist.

HOSTEL OF ST LUKE, 14 Fitzroy Square, W.—M.O. (male).

INDIAN RESEARCH FUND ASSOCIATION, Simla.—Chemist to Worker for Malaria Survey of India.

IPSWICH EAST SUFFOLK AND IPSWICH HOSPITAL.—H.P. (male).

JEWISH MATERNITY HOSPITAL, Underwood Street, E.—H.S.

LEICESTER ROYAL INFIRMARY.—Pathologist Assistant Anæsthetist.

LIVERPOOL HAHNEMANN HOSPITAL.—H.S.

stage of the disease The characteristic symptom is continuous bleeding similar to the haemorrhage of a normal menstrual period

The treatment of metropathia haemorrhagica corresponds almost exactly with that of cases of epimenorrhoea with the exception that in the former we have to deal sometimes with young patients—patients below the age of 25 In these cases the first procedure to be employed is curetting The whole of the endometrium should be carefully scraped away and the material removed examined microscopically so that the diagnosis can be confirmed The results of curetting are not very satisfactory and in most cases the continuous bleeding recurs within a few months nevertheless, it is sometimes stopped and the normal menstrual cycle returns There is however, a tendency, even in these cases for the disease to recur and it is very interesting to notice that a cyst may form in the opposite ovary In young patients with metropathia haemorrhagica, if curetting fails the next line of treatment is to give anterior pituitary hormone either in the form of the prolan preparations or of Parke Davis's 'antuitrin S This method has been employed extensively in America and in Canada, and encouraging results have been reported, in my hands however, they have not been good Theoretically, this therapy follows the correct line, for the object of the administration of the anterior pituitary hormone is to stimulate the ovaries to produce corpora lutea It may be that when more potent preparations are available this form of treatment will be generally adopted In a few cases I have tried the application of small doses of radium of the order of 40 or 50 mg for periods varying from twelve to twenty-four hours, but again I have not had any satisfactory results This again, is theoretically sound, for it aims at creating a temporary artificial menopause but as in all such cases the essential difficulty is to give the correct dosage

It might be thought that removal of the ovary which contains the cyst would lead to cessation of the symptoms A fair amount of evidence has accumulated to show that the opposite ovary invariably becomes cystic within a short space of time and the continuous bleeding recurs Unfortunately, in young patients, if there is no response to the various treatments I have indicated, one is sometimes forced to perform hysterectomy and to leave the ovaries behind It is obvious that such a procedure is very drastic and not to be lightly undertaken In my experience the patient and her relations eventually insist upon the removal of the uterus, for it is not uncommon for a severe degree of anaemia to be produced by the continuous bleeding the patient and her friends become tired of the unsatisfactory results of the methods employed, and she becomes insistent upon having the uterus removed

HYPOMENORRHOEA

In this type of menstrual irregularity the menstrual cycle is prolonged The usual history given is that the patient menstruates every six weeks and then perhaps every three months, she may then have a period of amenorrhoea lasting for six months or even longer Irregularity of the cycle in which there is a wide interval between the menstrual periods, is a characteristic of hypomenorrhoea It is seen most commonly in patients about the age of 30 So far as the menstrual functions are concerned, the cause of hypomenorrhoea is an irregularity of ovarian function, and histological investigations prove that ovulation and corpus luteum formation occur spasmodically Two types can be distinguished one in which the fault is primarily ovarian, and the other in which the fault lies in one of the other ductless glands usually the pituitary the ovaries are deficient secondarily Patients with primary ovarian deficiency give a history of a late onset of puberty and irregular menstruation from the beginning, such patients frequently have spasmodic dysmenorrhoea, and not seldom are sterile In addition, there are certain physical signs of primary ovarian deficiency, such as an ill-developed uterus small vagina, and scaphoid perineum On the other hand, cases of secondary involvement of the ovaries usually give a history of normal onset of puberty without severe spasmodic dysmenorrhoea, and quite commonly the patients have borne children prior to the onset of the menstrual irregularity There are all varieties of endocrine disturbances leading to hypomenorrhoea and I do not propose to go into them in any great detail A common type is that in which the patient about the age of 30 develops adiposity headaches and irregular and scanty menstruation

In all cases of primary ovarian deficiency, treatment should be directed along the lines of organotherapy The results obtained are far from being satisfactory, but occasionally dramatic improvement has been reported Of the ovarian hormones, oestrin is marketed in the forms of theelin progynon, menformon, and sistomensin and recently the British Drug Houses has put a more potent preparation on the market, 'oestroform Oestrin should always be given subcutaneously, for it has been calculated that subcutaneous injections are eight times more powerful than the same dose given orally This leads to the inconvenience of a hypodermic injection Another disadvantage is that only small doses are put up by the manufacturing chemists, and it is difficult to believe that any dose of the order of a hundred rat units is likely to have any lasting effect on an adult woman If such doses are given they must be administered frequently probably at least three times every week The corpus luteum hormone, progestin, is not marketed at present so that so far as ovarian therapy is concerned only oestrin is available On theoretical grounds the anterior pituitary hormone by stimulating the ovaries to produce ripening follicles and corpora lutea, is to be preferred to the ovarian hormones themselves The pituitary preparations that are available are the prolan preparations and antuitrin S It should be remembered that here again the hormone must be given by injection, and it is essential that the substances should be freshly prepared With the anterior pituitary hormone there is the same difficulty about dosage Probably the ampoules that are put up by the manufacturing firms do not contain sufficient of the active principle to have any lasting therapeutic effect In any case, if the injections are to be given they must be given frequently—at least three times every week I carried out some clinical trials with oestrin some years ago and found that in cases of primary ovarian deficiency a good effect was obtained only in those of mild degree There was little evidence that it had any good effect in severe cases and I believe that this view is generally held at the present time With the anterior pituitary hormone the results are not perfectly satisfactory, and it is wrong to suppose that the hormone has a specific effect in reducing the irregular cycle of cases of hypomenorrhoea to the normal cycle of twenty-eight days In some instances of hypomenorrhoea, in which the patients also complain of sterility, dilatation of the cervix may be beneficial For some reason or other dilatation of the cervix stimulates the generative organs and, as is well known, conception frequently follows this procedure Similarly, in cases of hypomenorrhoea the menstrual cycle may revert back to its regular rhythm This treatment is frankly empirical, and is based on clinical experience Nevertheless it is a valuable therapeutic measure in these cases of hypomenorrhoea, particularly if sterility is an attendant symptom

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

340 Diagnosis of Acute Pericarditis

HAROLD N SEGALL (*Arch Int Med* January 1933 p 62) describes a new clinical procedure for the detection of the murmur of acute pericarditis The author points out that the discovery of the typical *cri de coeur* murmur is as a rule accidental and it is usual to fail to detect a pericardial friction murmur in suspected acute pericarditis Segall's interest in the problem of eliciting the pericardial friction murmur when not heard during an ordinary careful examination of the heart and of differentiating it from other cardiac murmurs was aroused by a case of rheumatic heart disease occurring in a boy aged 15 The case is described and discussed in full On several occasions the pericardial friction murmur was heard but at other times it was absent It was discovered that the murmur could be elicited by shaking the body of the patient from side to side about half a dozen times in quick succession with the patient in the dorsal recumbent posture The reason for this is thought to be that the shaking causes the heart to swing somewhat in pendulum fashion and thus the two layers of the pericardium are brought into contact for a sufficiently long time to cause a friction murmur A more gentle and equally effective method is to place the patient in the right lateral recumbent position and instruct him to move towards the dorsal and prone postures back and forwards several times A simpler although not so effective method is to try the effect of deep breathing coughing sighing yawning and sneezing Such respiratory efforts by virtue of the movements of the diaphragm cause changes in the lie of the heart which may elicit the presence or absence of pericardial friction It is concluded therefore that these procedures constitute methods of detecting a friction murmur and of differentiating it from other murmurs which it may resemble

341 Milkers Nodules

V J ASMUS (*These de Paris* 1932 No 624) who records an illustrative case in a woman states that the condition of milkers nodules is a rare form of skin disease of which only three cases have hitherto been published in France by Audry (1898) Hudelo and Rabut (1931) and Maire Woringer and Houot (1932) respectively The condition is found in persons who have been engaged in milking cows suffering from cow pox and is manifested in the form of hard circumscribed nodules situated on the hands The aetiology is obscure As the tubercles do not protect against vaccinia or vice versa the hypothesis of a vaccinial origin for the lesions can be excluded On the other hand the presence of numerous features common to the tubercles and para vaccinia suggests the hypothesis of an identical virus for the two affections which is confirmed by the presence of *Strongyloplasma paravaccinae* in the nodules The tubercles show a tendency to spontaneous recovery and bland topical applications are sufficient treatment

342 B coli Infection and Endocrine Disturbance

P DESGEORGES (*Rev de Méd* January 1933 p 28) believes that many endocrine disturbances are traceable to an enterogenous source—that is to the passage of *B coli* (and less frequently of enterococcus *B paratyphosus B proteus* and of Friedländer's pneumobacillus) into the blood stream Cultures from eighty five cases of bacilluria yielded *B coli* in 82 per cent Desgeorges dissents from the general opinion that bacteria having traversed the damaged caecal and colonic mucosa reach the portal circulation The frequent occurrence of urinary infection has convinced him that the bacilli pass into the lymphatics and thoracic duct thus reaching the general circulation The effects of this bacillaemia are very serious and widespread The writer believes that the suprarenals and thyroid are first attacked Bacterial toxins produce hypotension and other symptoms of suprarenal and thyroid damage Signs of this damage are seen in the characteristic pigmentation of the eyelids and bronzing of the skin of the trunk and limbs Lassitude mental depression and other emotional states tremors tachycardia sweating or sensations of cold are common symptoms frequently associated with exophthalmos and all indicative of lesions of the suprarenals and of the thyroid This endocrine derangement is essentially polyglandular for after the initial invasion of the suprarenals and thyroid other organs—the pituitary ovary and possibly the parathyroid—may be attacked The autonomic nervous system is affected in its turn because it is largely under the control of the internal secretions Finally the autonomic nervous system itself may be infected directly Vagotonia and sympathicotonia may occur alternately although the former appears to predominate The author has found that the majority of these coli bacillaemic patients are of the asthenic type He adds that the elongated form of the thorax induces visceroptosis this ptosis tends to produce intestinal stasis with venous congestion and consequent interference with the nutrition of the mucosa The resultant lesions of the muco-a permit the passage of bacteria this leads to chronic bacillaemia thus a vicious circle is established

343 Immunization in Whooping-cough

L SAUER (*Journ Amer Med Assoc* January 28th 1933 p 239) states that during the last four years he has injected about 300 susceptible children aged from 9 months to 3 years with 7 to 8 c cm of a pertussis vaccine (1 c cm containing ten billion organisms) The vaccine was made from five to seven recently isolated haemolytic strains and was given hypodermically in divided weekly doses The local reaction was transient In 60 per cent of the cases the leucocyte count on the day of the last injection ranged from 12 000 to 15 000 per c mm There were eight certain and 127 probable exposures without any child contracting whooping-cough

Surgery

344 Chronic Parotitis

L N PYRAH (*Brit Journ Surg* January 1933 p 505) reports four cases of chronic infection of the parotid gland which were investigated by sialography In one case a chronic stomatitis had preceded the parotitis in another there was an infection of the tonsils whilst an infective focus in the mouth was present in the remainder In some instances of chronic swelling of the parotid gland the infective lesion lies in the ducts All four of the cases reported had an acute or subacute onset and during this stage the gland became hot tender and painful During the chronic phase of the disease there was little discomfort in the gland but varying amounts of pus were discharged from Stenson's duct Remedies consist in the treatment or removal of foci of infection in the mouth in the promotion of secretion from the gland to ensure evacuation of the purulent debris which collects in the ducts and in irrigation of the ducts with some mild antiseptic Drainage of infective material from the ducts may be obtained by massage of the gland which can be carried out by the patient Saliva should be increased by acid drinks and chewing gum Calculi in the gland

Summary

I have attempted to indicate the theoretical basis upon which the treatment of irregular uterine haemorrhage rests. The evidence is very strong that a large proportion of cases are determined by a disturbance of ovarian function although it is impossible to say whether the majority are primarily ovarian in origin. No claim is made that modern treatment is all that can be desired indeed the methods available are generally speaking very primitive. One is conscious of two main deficiencies the first is a lack of a biochemical method to determine with precision the amount by which the circulating hormones depart from the normal; the second is the absence of standardized hormones of high concentration. At the present day we are as yet only hovering at the fringe of a complete understanding of these ovarian abnormalities. In the future it is more than probable that organotherapy will be the method of choice in the treatment of all cases of this kind.

PRIMARY INTRATHORACIC NEW GROWTH

OBSERVATIONS ON FIFTY CASES EXAMINED BRONCHOSCOPICALLY

BY

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AND

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All writers are agreed that there is a real increase in the incidence of thoracic neoplasms and in this connexion the following figures published by Dr. Glovne from the records of necropsies at Victoria Park Hospital are of interest. He makes a comparison of lung new growths in two ten year periods, omitting the war years:

	1904–13	1921–30
Mediastinal (oat-celled)	16	38
Lungs and pleura	4	43

It is apparent from these figures that not only have the growths increased from twenty in the first period to eighty-one in the second, but whereas in the first period the oat-celled type had a frequency four times greater than growths in lung and pleura, in the second period the latter exceeds the former. At the same hospital for the years 1931 and 1932 there have been thirty-five necropsies on intrathoracic growth. If we compare the yearly average for these separate periods the picture is even more striking:

	Mediastinal (oat-celled)	Lungs and Pleura	Proportion
1904–13	1·6 per year	0·4 per year	4 to 1
1921–30	3·8 "	4·3 "	1 to 1 (approx.)
1931–32	6·5 "	11·0 "	1 to 2 (approx.)

Thus the oat-celled type of growth in twenty-five years has increased about four times, the growths of lung and pleura over twenty-seven times.

Classification of Tumours

In the bronchoscope we have an instrument for the visual examination of the bronchi and its value in the diagnosis of pulmonary neoplasm will be dependent on the frequency with which this disease gives rise to changes in the bronchial tree and also in what stage of the disease these bronchial changes are produced. It is generally accepted that malignant intrathoracic growths fall into four groups:

1. Growths of the mediastinal glands (in the older text-books known as lymphosarcoma, now generally referred to as *oat-celled carcinoma*)
2. Pleural growths
3. Bronchial carcinoma (large and single or small and multiple)
4. Pulmonary carcinoma

Group 1 would appear to be composed of two types, true lymphosarcoma (rare) and the oat-celled growth which is usually regarded as of primary bronchial origin with early (?) and extreme glandular involvement—in this case the oat-celled growth should be included in the bronchogenetic group. There is no real dividing line between Groups 3 and 4. Some pathologists surmise a different site of origin—for example, mucous gland, alveolar wall, bronchial wall; others are inclined to class all cases of these groups as bronchial in origin and they explain the difference in the histological picture by assuming that the growth begins in different cases at different levels of the bronchial mucosa and that a pulmonary carcinoma is merely one in which extension has taken place from a bronchus. From the clinical and broncho-scopic point of view these distinctions are of little importance as in the two common types—that is, the oat-celled and large bronchus type (the others being of great rarity)—the ulceration commences or appears to commence in the large bronchi fairly close to the carina. It is therefore in these two types that the bronchoscope will give valuable diagnostic information. In cases of carcinoma arising in the secondary bronchi in the parenchyma of the lung or in the pleura no broncho-scopic evidence is found until the glands become involved at the root or secondary extension takes place.

The cytological problem as mentioned above is a difficult one and if this is true of the post-mortem specimen it is easy to understand the difficult position in which the histologist is placed when asked to report on the small portions of tissue often crushed by the forceps which one is able to obtain for section during life. It is probably on this account that one has experienced occasional shocks in the endeavour made to differentiate the type of growth by the bronchoscopic appearances and the clinical findings. Nevertheless, the findings generally admit of the following data:

Oat celled Type.—This appears to arise in the deep layers of the mucosa; the spread is rapid to the lymphatics and enormous enlargement of the mediastinal glands takes place. Bronchoscopically in the oat-celled type the mucosa is infiltrated and ulcerated; little raised nodules are seen which in colour as compared with the normal mucous membranes but polypoid formation is rare, though occasionally deeper in the bronchial tree there may be some tendency to occlusion. In association with this type of ulceration evidence of glandular enlargement is seen. There may be some bulging into the trachea, widening and deformation of the carina and scabbard shaped bronchi. Section can usually only be obtained with a punch forceps.

Bronchial Type.—These tumours appear to arise in the superficial layers of the bronchus. There is a tendency to spread into the lumen rather than to the lymphatics; glandular enlargement is rare and the clinical signs are, as we have stated elsewhere, somewhat pleomorphic but dependent usually on the bronchial obstruction. Broncho-scopically there is usually no evidence of glandular enlargement; the carina is not widened but may be dragged over if there is collapse of lung; the bronchus is seen to be partially or completely blocked by a polypoid

mass, which can be removed easily with forceps In both types the position is usually in main stem bronchus, a short distance below the bifurcation Clinically the type is usually fairly clear cut rarely one may see cases of the bronchial type in which masses of gland in the mediastinum are found or the oat-celled type in which glands are not found, but we suspect that some of these aberrant cases have been due to difficulties in the histology For convenience of description one might possibly divide these types into

Centrifugal (the oat celled type with the greater tendency to glandular involvement), and

Centripetal (the type marked by spread into lumen rather than at an early stage to glands)

The importance of differentiation in these two types lies in the fact that in the centrifugal type the early involvement of glands renders treatment of little value In the centripetal type the result of treatment should be more valuable if the case is obtained in time Of the *thirty-five cases coming to necropsy* in 1931 and 1932 the average age in both groups is 52 the lowest age 34, the highest 63 The dangerous age appears to be 45 to 55 The bronchoscopic examination is the safest and surest method of examination and proof We have recently seen a man whose bronchial tree was lipiodolled and declared normal, and who was dead of a bronchial carcinoma in two months

RESULTS OF BRONCHOSCOPY

Of the fifty cases we have analysed many were sent with an incorrect diagnosis , others had very few symptoms at all and yet only one was a case in which much hope could be held out from treatment Whether or no it may be possible to improve our ideas of the symptomatology these cases, especially the bronchial type, must be seen at an earlier stage for success in treatment It is possible that, if the practitioner reviewed the past history of cases found to have this disease, he might be able to remember some points which would be an aid in the earlier diagnosis of this condition, and in getting the patient for bronchoscopy at a period when it is possible to do something effective in the way of treatment Our submission of the value of the bronchoscope is borne out by the examination we have made by this method on fifty cases of pulmonary growth which have been under our care or referred to us for examination during the last two years In all of them we have been able to make or confirm a diagnosis In 62 per cent this was done by removing a piece for section , in the remaining 38 per cent direct evidence of growth was found as indicated by ulceration in 30 per cent and observation of the effects produced on the bronchial tree by pressure from without in 8 per cent As a rule the protrusion into the wall of bronchus or trachea in these cases was covered by a normal mucous membrane, and was not sufficient to cause a complete block of the main bronchus but usually to give some obstruction to the passage of the bronchoscope

In two other cases (apart from the fifty) in which we presumed that the findings were diagnostic of new growths we were wrong the patients being alive and well and *in statu quo* two years later It is interesting to note that both these cases were examined with the Haslinger bronchoscope before we had perfected our telescopic instrument In the one case no ulceration was seen but owing to the distortion of the left upper lobe bronchus it was considered suspicious This it would appear was caused by fibrosis

From these figures it will be seen that in the first fifty-two cases which we examined bronchoscopically for the disease positive proof by section was obtained in 62 per cent and in the rest bronchoscopic indications which have proved erroneous in only two cases

COURSE OF THE DISEASE

To appreciate fully the value of the bronchoscope in the diagnosis of new growth of the lung we should follow as accurately as we can the course of the disease

Early Signs

It is probable that the centripetal type appears first as a small growth, warty or polypoid, in the bronchial mucous membrane It would appear that an occasional fortunate individual has been caught at this stage with cure as a result Usually, if it gives any symptom at all it will only be an irritating cough when slightly larger possibly a localized wheeze Otherwise physical and radiological examination is negative Only the bronchoscope can reveal the condition As growth continues it may give rise comparatively early to slight haemoptyses Again physical and radiological examination is negative We have examined forty two cases of haemoptysis with no radiological or pathological evidence available, and in five cases have found neoplasm

In the case of a male aged 50 who had had repeated haemoptyses over twenty years physical and radiological examinations were negative Bronchoscopy showed a polyp between the upper and middle lobe bronchi A section was reported as bronchial carcinoma In view of the long history this diagnosis is questionable although cases are reported of benign growth being present for years before becoming malignant

In this early stage the glands around the bifurcation from the main bronchi may become involved, though, as stated above, this is more common in the centrifugal type, in which this kind of history is not usually obtained although at this stage the involvement will give no radiological evidence a bulge in the main stem bronchus may often be seen

In a male aged 60 with a six months history of cough dyspnoea and loss of weight the physical signs were increase in substernal dullness to the left and weak air entry into the left lower lobe Skiagram showed a dense shadow in the left hilar region On bronchoscopic examination no growth was seen but the left main stem bronchus was distorted by a bulging in of the external wall just below the opening of the upper lobe bronchus

Bronchial Occlusion

The next stage is occlusion of a bronchus by a growth, which causes collapse of the lobe supplied by the bronchus, and also gives rise to clinical signs and symptoms frequently mistaken for pneumonia At this stage a definite radiological picture of a collapsed lobe is produced, and the differential diagnosis of bronchiectasis and mediastinal effusion ruled out A lipiodol injection and skiagram will often show a blocked bronchus, but it must be remembered that the demonstration of a blocked bronchus by means of lipiodol does not necessarily mean that the block is caused by new growth We have seen such a picture produced by fibrosis, tuberculosis or broncholiths

In a male, aged 45 years, with repeated haemoptysis physical signs and radiological reports were negative A skiagram after lipiodol injection revealed a partial hold up of the lipiodol in the right lower lobe Bronchoscopic examination showed the cause of the lipiodol hold up" to be a broncholith At necropsy following a fatal haemorrhage some time later the presence of the broncholith was confirmed On reconsideration of the original skiagram the shadow cast by the broncholith could be distinguished from the shadow of the fibrosis around it

The following are examples of collapse of a lobe or lung due to a blocked bronchus by a neoplasm

A male aged 40 Three months previous to admission he developed pneumonia from which he made a protracted recovery On examination there were signs of collapse of the

or duct should be removed and cicatricial narrowings in the duct should be dilated or divided The instillation of 1/2 to 1 c cm of lipiodol into Stenson s duct proved successful in two of the cases reported The injections should be made weekly, and for short periods may be given on alternate days In three of the cases described marked improvement followed treatment, and the patients appear to be making good recovery In the fourth case there were no foci of infection in the teeth or mouth, but a sialogram showed incomplete filling of the smaller ducts of the parotid due to advanced fibrosis Massage of the glands has been carried out and a prolonged course of lipiodol injections given, but so far no improvement has taken place

345 Inguinal Lymphogranulomatosis

F G CAILOL and M P FLÓ (*Rev Med de Barcelona*, December 1932, p 515), who record ten illustrative cases in men aged from 19 to 40, state that the inguinal lymphogranulomatosis of Nicolas and Favre is not a rare disease in Spain and that the diagnosis is generally easy if one thinks of the condition in the presence of any inguinal adenitis of subacute course Suppuration does not occur *en masse* but in small disseminated foci, and the process is only slightly if at all painful The condition is at first unilateral but subsequently the other groin and iliac chain become affected the constitutional disturbance is slight The differential diagnosis from syphilis, chancroid, tuberculosis plague, and simple adenitis is made by Frei's intradermo reaction the moderate hyperleucocytosis, inoculation of the guinea pig absence of micro-organisms on direct examination or cultivation on the ordinary media the typical histological appearances, the constancy of formogelification of the serum, and fixation of complement The most rapid and successful treatment is surgical operation

346 Arterial Pressure in Shock

Though accidental traumatic shock usually is encountered in healthy persons and operative shock in subjects weakened by disease DESMARREST (*Presse Méd*, January 28th 1933 p 155) remarks that in both cases the phenomena of shock are intimately connected with a fall in arterial pressure and that any occurrence which predisposes to arterial hypotension predisposes to shock Such aetiological factors are organic weakness, nervousness hypotensive anaesthetics and rough surgical manipulations the last named act either by freeing harmful albumins from the lacerated tissues or by *injuring* the nerves, particularly in the splanchic area Local conditions, including haemorrhage and osseous or muscular damage resulting from extensive injuries cause a fall in blood pressure which is aggravated by the *nervous* shock Desmarest considers however that these occurrences only act by lowering the blood pressure, which is itself the essential cause of shock and that the lowered blood pressure produces all the physiological phenomena characterizing this condition These phenomena, including insufficient oxygenation of the blood and tissues, abnormal metabolism of the albuminoid substances, and the formation of toxic products by cellular disintegration are briefly discussed and a detailed report of a typical case of shock is given The author recommends the following measures in all cases with lowered blood pressure which are awaiting operation Before surgical intervention the pressure should be brought as nearly to the normal as possible by suitable medication At the operation a hypertensive anaesthetic should be employed, nitrous oxide being the best During the operation the blood pressure should be continuously controlled If the hypotension becomes accentuated an intravenous injection of adrenaline (1 mg) followed by a similar injection of adrenalinized serum should be given Camphorated oil, ouabaine and digibaine are useful adjuvants The blood pressure should be watched for some days after the operation since it is the best indication of the patient s condition If it rises the prognosis is favourable, if it progressively falls the prognosis is grave

Therapeutics

347 Treatment of Purpura Haemorrhagica

H W JONES and L TOCANTINS (*Journ Amer Med Assoc* January 14th, 1933, p 83) call attention to the large number of spontaneous recoveries which occur in purpura haemorrhagica, and also to the marked seasonal tendency—namely, the high incidence of cases in the spring Many therapeutic procedures have been commended, of which blood transfusion seems to be the most generally effective The authors conclude from this that the disease is of the deficiency type It occurs in a person with a "haemorrhagic constitution," the acute phase of which is precipitated by toxins originating from an acute or chronic infectious process which is active, or by substances which affect the capillary permeability Surgical treatment, therefore, should be deferred to allow spontaneous recovery to ensue, or a good response to follow the conduct of the case on medical lines The diet should be investigated, because in many instances a history is elicited of too little meat or a too low protein content There is often a distaste for fresh vegetables and fruit the supply of which induces clinical improvement Vitamin C is beneficial in certain cases and viosterol or halibut-liver oil is commended Liver extract and iron should be administered Search should be made for local infectious processes in order that they may be eliminated The acute progressive case should be treated by small intravenous blood transfusions, repeated frequently In watching a case more attention should be paid to the bleeding time than to the blood platelet count It is imperative that the bleeding time should be kept under control in order that the haemorrhagic phenomena shall not recur and intracranial haemorrhage be prevented In some cases ultra-violet ray therapy and attention to a more outdoor life are useful accessories Indications for splenectomy are (1) the acute progressive case which does not respond to dietetic and medicinal treatment (2) the chronic case with a normal or nearly normal blood count but a long bleeding time and a low platelet count, and (3) the chronic case with anaemia or other manifestations which is not improved by transfusions, the removal of infection, and other forms of treatment As an alternative, ligature of the splenic artery may be preferable, in view of its lower mortality rate, less difficult technique, and the celerity with which it can be performed The authors add that failure to respond to transfusion treatment may be due to too large quantities of blood being used to faulty performance of transfusion, to too long an interval between the transfusions or to the number of these being insufficient to control the bleeding time and relieve the symptoms

348 Insulin Therapy in Heart Disease

J WIENER (*Bruxelles-Médical* December 18th, 1932, p 188) holds that cardiovascular disease finds a place among the maladies which, although unrelated to diabetes respond to insulin treatment Ill-judged use of insulin in heart disease has in the past led to untoward and even fatal results, which have hindered the development of this therapeutic measure But Bickal has pointed out that hypoglycaemia is at the root of these troubles, and that provided this is avoided insulin can exert no harmful effects The author recommends the following technique 5 to 10 units of insulin followed in fifteen minutes by 100 grams of glucose It is held that certain cardiac conditions are remarkably benefited by such treatment, notably congestive failure unrelieved by the usual remedies and insufficiency of the left or of the right ventricle Other maladies are but little influenced by insulin therapy, to this category belong the cardiopathy of Graves's disease, the arrhythmias, and high blood pressure The treatment is contraindicated in acute infective heart disease The results that may be obtained by these methods include the disappearance of failure due to valvular disease or coronary sclerosis, the restoration to normal T-waves previously inverted the cessation of bundle-branch and arborization blocks, and the

abatement of dyspnoea and arrhythmia The author cites a patient suffering from emphysema myocarditis and chronic nephritis who received no benefit from the usual measures after a pulmonary infarction Administration of insulin and glucose produced diuresis progressive diminution of dyspnoea and ultimate restoration of a fair degree of effort tolerance

Laryngology

349 Treatment of Chronic Nasal Sinusitis

J G HUNT (*Canadian Med Assoc Journ* January 1933 p 54) attacks the still too frequent empiric treatment of nasal sinusitis without first determining the degree and type of the pathological changes in the sinus mucosa by the use of iodized oil and *x* rays Repeated drainage operations and excisions of polypi have often proved disappointing owing to the neglect to obtain an accurate diagnosis in the beginning He classifies the present therapeutic procedures as (1) the nasal including irrigations astringent applications and cauterization and extensive submucous resection (2) the constitutional consisting of vaccinotherapy light therapy and the prescribing of vitamin containing foods and (3) direct surgical interventions the approach being intranasal for drainage or extranasal for the complete removal of the diseased tissues Hunt insists that there must be a more general recognition by rhinologists that the real cause of both the local catarrhal and the remote organic and constitutional symptoms is the presence within certain of the paranasal cells of an infected fibrosed or polypoid mucosa He argues therefore that constitutional remedies such as vaccines and light therapy cannot possibly be expected to restore to normal or sterilize the thickened mucosa of a paranasal cell while irrigations are obviously futile when a chronic pyogenic infection has given rise to polypoid or fibrotic degeneration More over nasal operations for the relief of the obstructed breathing caused by chronic sinusitis are irrational they may even be dangerous when associated with post-operative packing causing sequelæ ranging from haemorrhages and discharges to middle ear disease The indiscriminating attempt to cure all types of chronic antrum disease by nasal puncture and lavage is even more illogical than the attempt to flush polypi from the nasal cavity or tonsils from their beds The author adds that success in radical sinus surgery will vary in direct proportion with the ability of the surgeon to locate the diseased cells He does not imply that every person with a chronically diseased sinus requires a radical operation for in some cases the disease is quiescent and is only accidentally disclosed by an *x* ray examination of the head for other purposes Such cases should be left alone Other patients of this kind who are in good general health and have only mild catarrhal symptoms are best treated by medical measures directed to the relief of the symptoms When however the symptoms are so severe as to indicate the necessity of surgical intervention the radical extranasal removal of all the thick polypoid mucosa is in the author's experience the only permanently effective therapeutic measure for this otherwise intractable disease

350 The Complications of Acute Tonsillitis

L HAYMANN (*München med Woch* January 1933 p 107) in an examination of the conditions which have been stated to follow a primary infection of the tonsils defines the following as being without doubt causally related to such a focus renal disease endo- peri and myocarditis pleuritis acute rheumatism appendicitis purpura erythema nodosum iritis and neuritis In a typical case of erythema nodosum the author was able to cure the condition completely by removal of the tonsils He strongly advocates the complete enucleation of the tonsils as the only certain method of removing the primary focus methods such as Röder's aspiration technique being specially condemned In certain cases however where surgical removal is not immediately practicable the aspiration of infected plugs from the tonsillar crypts may ameliorate the condition somewhat Contrary to the view of Schottmüller Haymann considers the tonsils as the site of origin of what he calls tonsillogenic general infection which arises most often from an infection of the tonsils with streptococci staphylococci diplococci and sometimes pathogenic anaerobes In contrast with the severe clinical picture presented by tonsillar sepsis or quinsy the signs and symptoms of the tonsillogenic infection may only become manifest after the acute tonsillitis has subsided The temperature suddenly rises and may be accompanied by rigors There is more or less general discomfort The temperature may be of the high maintained type or take on a pyaemic character in the latter case rigors are frequent Occasionally there may be glandular enlargement in the neck hard in filtration and a painful swelling at the anterior border of the sterno-cleido-mastoid The spleen and the liver are frequently enlarged while haemorrhagic nephritis is common The blood culture is positive in some cases There is marked leucocytosis with a predominance of young cells This general infection may take a slow course and produce occasional bouts of fever Although the condition may disappear more or less spontaneously it usually ends in death if no proper treatment is instituted The differential diagnosis is not always easy A careful study of the history with examination of the whole pharyngeal area and a search for signs of thrombophlebitis as well as a thorough examination of the blood are outstanding factors in the diagnosis The condition is particularly to be distinguished from agranulocytic and monocytic angina in the former there is an almost complete absence of glanular leucocytes and in the latter there may be a monocyte count up to 78 per cent Out of 10 000 post mortem examinations the author states that there were 100 cases of death from tonsillar sepsis The only useful treatment is surgical the aim being a complete removal of any pharyngeal focus of infection Venous thrombosis must be sought for and radical removal practised after appropriate ligature of the vessels

351 Post Diphtheritic Laryngeal Stenosis

C H KRIEGER (*Arch of Otolaryngol* January 1933 p 49) reviews the literature and reports six cases of laryngeal stenosis following diphtheria In this series cases of both supraglottic and subglottic lesions are included The aetiology was varied and both conservative and radical methods were necessary to re establish the airway Krieger is satisfied that post-diphtheritic laryngeal stenosis cannot be attributed to any one cause although errors in intubation or tracheotomy too prolonged retention of tubes and diphtheritic infection are held to be the chief activating agencies in the order named He commends intubation by direct laryngoscopy because it can be readily learned the risk of trauma to the larynx is lessened and the larynx can be studied at the time of intubation In his opinion tubes should not be retained more than two weeks a shorter period than this he thinks is probably preferable Dilatation should be instituted early if decannulation is impossible since the cicatrix is still soft and responds to dilatation more readily Krieger considers Jackson's method of dilatation and occlusion the procedure of choice wherever practicable when continuous dilatation is necessary or desirable the method of Iglauer seems to him to be the most reliable Before treatment is instituted the nature and extent of the stenosed area must be determined by direct and retrograde laryngoscopy and by radioscopy The prognosis as regards ultimate functional recovery is good if the cartilaginous framework is not entirely destroyed if it has collapsed transplantation of bone and cartilage may be effective but the difficulties are great and Nassau's method of plastic closure following laryngostomy seems to be the best procedure The treatment should be conducted in hospital with the patient under the close supervision of specially trained nurses Since most of these cases of laryngeal stenosis occur in children of pre-school age Krieger urges the adoption of early immunization against diphtheria of the very young

right lower lobe confirmed by a skiagram After lipiodol skiagram showed a hold up of lipiod l at the lower lobe B nchoscopic exam nation showed a new growth A section removed proved to be an oat-c lled carcinoma

A male aged 34 had for some indefinite period complained of cough Three weeks before admi sion he complain d of pain in the left chest and dyspnoea Physical s gns were those of collapse of the whole of the left lung Bronchoscopic examination revealed a mass blocking both upper and lower left bronchi Section showed an oat-celled carcinoma Radium inserted by the broncho-scope has caused the intrabronchial growth to diminish so much in size that both upper and lower lobes are now re-expanded

In some cases of collapsed lobe due to a neoplasm the skiagram after a lipiodol injection may fail to show the lipiodol hold up because the lipiodol has entered the bronchi anteriorly and posteriorly to the bronchus which is blocked and has thus reached the distal bronchi and obscured on the skiagram the lipiodol which is held up

A male aged 52 years gave a twelve months history of pain and cough with slight haemoptysis Physical s gns included partial collapse at the right lower lobe confirm d by skiagram After lipiodol the skiagram showed th lipiod l to have entered the distal bronchi and no hold up was visible Bronchoscopic examination showed a new growth obstructing the internal division of the lower l b bronchus while the anterior and post rior division were patent Section showed a bronchial carcinoma

Pleural Effusion

An effusion may appear coincident with the collapse or even before The physical and radiological s gns are those of an effusion and nothing in either exam nation may suggest a new growth Some help may be obtained by pathological examination of the fluid or by radiological examination after air replacement Neither method is certain but bronchoscopic examination may give a proven diagnosis

A male aged 34 had physical signs and radiological evidence of effusion at the left base The patient's general appearance did not suggest tuberculosis Bronchoscopic examination was thought worth while and revealed a new growth blocking the lower lobe Section showed an oat-celled carcinoma

In another case the pathological examination of pleural exudate withdrawn from a young man was reported as diagnostically suggestive of neoplasm Nothing else suggested new growth Bronchoscopic examination was negative (Here it must be remembered that a negative finding has not the value of a positive one the growth might be in a second division bronchus or might even be an alveolar growth) The patient has made a perfect recovery from the simple effusion

Suppuration

The next pathological stage in the development of the new growth is suppuration in the lung and bronchi behind the obstructed or partially obstructed bronchus At this stage the physical signs and symptoms are those of pulmonary suppuration There are certain points of difference in the *x* ray which may point to new growth as the cause but occasionally lipiodol examination will show up a bronchiectatic condition or abscess without giving a hint that the causative factor is new growth All cases of pulmonary suppuration must be bronchoscoped to a certain the cause we have found various causes at different times from half a coat button to daughter hydatid cysts

A male aged 55 complained of coughing up blood and foul sputum for eighteen months Physical signs and the *x* ray suggested an abscess in the left middle zone A skiagram after lipiodol gave no further help Bronchoscopic examination revealed a polypoid growth partially obstructing the upper lobe bronchus

A female aged 23 years gave a history of eighteen months coughing up blood and foul sputum The physical signs and skiagram suggested bronchiectasis at the right base Skiagram after lipiodol confirmed this Bronchoscopic examination showed a polypoid growth partially obstructing one of the lower lobe bronchi

THE VALUE OF BRONCHOSCOPY

From the above description of the mode of development and symptomatology of the bronchial carcinoma it will be seen that the broncho-scope must play the paramount part in diagnosis and though in the advanced cases an old pattern instrument is sufficient in the earliest type of case—which one hopes to get in the future with a greater knowledge of the diagnostic feature of the earlier stages of the disease—aids to vision in the way of better illumination and telescopic attachment such as we have described will have to be used The destructive argument might be raised that *early* diagnosis of the disease being at present impossible—and at the stage when it does become possible treatment has ceased to be of value—confirmation of diagnosis at this stage is of little use Though this may in part be true the fact remains that if ever a successful treatment is to be evolved the experimental treatment must be done on those cases which though not early in the pathological sense are yet earlier than those cases diagnosed in the past It is only since the bronchoscope has been used in this diagnostic work that the condition has been diagnosed with absolute certainty (by macroscopic section) whereas previously certainty had to wait on the appearance of secondary glands or deposits elsewhere With regard to the other varieties of intrathoracic new growth (excluding pleural growth)—sarcoma and alveolar carcinoma—the bronchoscope can only give information if the growth has reached the bronchial walls either deforming their contour or ulcerating or infiltrating them At this stage the disease has advanced beyond hope from treatment though confirmation of the diagnosis is obtained

TREATMENT

As regards treatment deep therapy has been disappointing A patient with alveolar carcinoma after deep therapy spat up most of his growth leaving a cavity the size of an orange but he shortly developed secondaries The glandular type whether oat-celled carcinoma or lymphosarcoma seems to have a similar tendency to dissemination after treatment One case developed a secondary in the eye (a very rare condition) while in others we have seen the most extensive dissemination in this disease where the metastases are not usually wide if untreated The bronchial type seems little influenced The radium bomb we understand has also not proved its value Pituitary and theelin has proved on several patients quite useless The best hope seems to lie in radium or radon applied locally We have had a number of patients whom we have treated in this way but the method is still too much in the experimental stage for there to be reports in any sense on its efficacy It appears however that there is some hope in this direction If the cases can be obtained earlier probably much could be done In the centripetal type of case somewhat more advanced lobectomy is hopeful if the growth is low enough in the bronchial tree as is commonly *not* the case Nevertheless it is difficult to advise a patient who at this stage usually appears to be in perfect health to submit to an operation of high mortality risk though the surgical figures for lobectomy are rapidly improving to a stage when one would feel justified in advising it

SOME CONCLUSIONS

Of the fifty cases on which these observations have been made from the broncho-scopic findings the following aetiological points are of interest

the optimum dose must be minute I originally used a 1 in 1,000 solution for testing purposes, but I now use a 1 in 100,000 or even 1 in 1,000,000, for the preliminary test Cases treated recently have given better results than the earlier ones, and I attribute this to the reduction of the therapeutic dose The results of skin tests in normal persons and patients suffering from the skin diseases under discussion show very striking differences, for while only 16 per cent of normal persons gave positive reactions to their own proteoses, 67 per cent of the skin cases responded in this way

With regard to the statements of Barber and Oriel, my results tend to show that the amount of proteose excreted is not of very great significance, for the difference between that excreted in health and in various skin diseases was not great More, however, was excreted from patients suffering from skin diseases, and in one case of angio neurotic oedema more was excreted during an attack than in a quiescent interval I have also confirmed the statement that exacerbations of the skin condition may follow *relatively* large doses of proteose My clinical findings agree very closely with those of Eichenlaub, and I agree with his conclusion that the method should be more widely used in order that its full value may be determined

SUMMARY

1 Treatment with proteose prepared from the patient's urine has given satisfactory results in cases of chronic eczema and urticaria Less striking results were obtained in cases of psoriasis and Besnier's prurigo, but benefit seemed to be derived from the treatment in some cases

2 Sixteen per cent of normal persons and 67 per cent of patients suffering from various skin diseases gave positive reactions to their own proteoses Slightly more proteose was excreted by the latter than by the former

3 All the cases relieved by this treatment gave positive skin reactions to their own proteoses before treatment while after treatment and cure, all those tested gave negative skin reactions

REFERENCES

1 Barber and Oriel *Lancet* 1928 ii 1064
2 Idem *Ibid* 1930 ii 231
3 Oriel *Proc Roy Soc Med* 1931 xxiv 55
4 Barber *British Medical Journal* 1931 ii 1060
5 Freeman *Ibid* 1931 ii 1011
6 Burgess *Ibid* 1932 i 37
7 Lyon Percival and Stewart *Ibid* 1932 i 136
8 Eichenlaub *Arch Dermat and Syph* 1933 xxvii 316

CALCIUM THIOSULPHATE IN THE TREATMENT OF THE COMPLICATIONS OF "914" AND BISMUTH ADMINISTRATION IN SYPHILIS

PRELIMINARY COMMUNICATION

BY

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Schamberg and Brown (1930) introduced calcium thiosulphate into the therapy of the post-arsenobenzol complications, and in 1932 Schamberg and Wright quote Cannon as having employed the preparation in a series of cases of arsphenamine dermatitis with excellent results It was particularly effective in drying up surface exudation The dose recommended was 5 c cm of a 10 per cent solution daily for three days and subsequently two or three times a week Schoch (1931) commented 'A new drug brought out for the treatment of arsphenamine dermatitis is calcium thiosulphate The highly rational combination of calcium with the detoxifying action of the thiosulphate radical may prove to be an excellent prophylaxis for treatment reactions from arsphenamines other than arsphenamine dermatitis The value of the sodium salt of thiosulphate, introduced by Ravaut (1920) for the treatment of arsenical dermatitis, has been shown by McBride and Dennie (1923, 1924) and by many subsequent observers, while the value of calcium chloride in the prevention of certain cutaneous inflammations has been shown by Wright (1896), Chiari and Januschke (1911), and Blum (1921) On theoretical grounds, therefore, the combination of calcium and thiosulphate should be advantageous, especially in that group of cases which fails to react to sodium thiosulphate or which fails to clear up completely under its administration

CASE RECORDS

Recently the following series of cases of intolerance to "914" or bismuth has been treated with calcium thiosulphate

1 *Early Arsenical Dermatitis*—Male aged 31 Sero-negative primary syphilis Developed arsenical erythematous dermatitis three weeks after completion of first course of 914 and bismuth Calcium thiosulphate, 0 6 gram intravenously, daily for three days then at three day intervals Skin lesions completely clear on the thirteenth day

2 *Post arsenical Dermatitis*—Male, aged 50 Persistent sero positive syphilis Developed exfoliative dermatitis, which was treated over a period of several months with sodium thiosulphate Condition became stationary with scattered areas of scaly fissured infiltrated skin over flexures of arms legs and trunk After twenty two injections of calcium thiosulphate at three-day intervals the skin was completely clear

3 *Jaundice*—Male aged 49 Persistent sero-positive syphilis Had post arsenical jaundice in April 1932 which yielded after one month's treatment with sodium thiosulphate Four months later administration of 914 was recommenced Developed jaundice December 1932 while under dual therapy Calcium thiosulphate, 0 6 gram intravenously the first two doses on successive days then at two-day intervals Icterus completely clear after the fifth dose

4 *Immediate Reaction (Vomiting) after 914*'—Male aged 40 Persistent sero positive syphilis Vomited after each injection of '914' No other signs of intolerance over a long period of treatment Vomiting controlled by admixture of sodium thiosulphate equally well controlled by calcium thiosulphate Other factors—bulk of injection, rate of administration etc—were kept as far as possible unchanged

5 *Bismuth Dermatitis*—Male, aged 49 Persistent sero positive syphilis Developed arsenical erythema while under dual therapy This yielded rapidly to sodium thiosulphate Bismuth administration recommenced two months later After a course of 3 grams metallic bismuth in ten weeks he reported with a scattered papulo-squamous erythematous rash on the trunk with moist fissured eczematous lesions of scrotum The skin lesions partly cleared under the administration of sodium thiosulphate but those of the scrotum remained unaltered after bi weekly treatment for one month Calcium thiosulphate was then commenced 0 6 gram bi weekly, the scrotal lesions and the residua on the skin cleared up completely after five injections That bismuth was an aetiological factor in the production of this dermatitis in a skin previously damaged by an arsenical erythema, was proved by the recurrence of a similar rash on the re exhibition of bismuth

6 *Dermatitis probably due to Bismuth*—Male aged 27 Sero negative syphilis Treated originally with '914' and mercury then with '914' and bismuth No 914 for three and a half months, during the last ten weeks of which he received 3 grams metallic bismuth In the eighth week of the bismuth therapy he reported a papulo squamous erythematous dermatitis which was aggravated by the subsequent injections There had been no intolerance while under dual therapy a total of 13 35 grams 914 and 8 7 grams bismuth having been administered The dermatitis was considered to be due to bismuth and treatment with calcium thiosulphate was instituted After the seventh injection (0 6 gram bi weekly) the skin had completely cleared

In one case of bismuth stomatitis the pain and discomfort were relieved by the administration of calcium thiosulphate although clinically there was no improvement in the condition of the mouth One case of seborrhoeic dermatitis which showed a tendency to flare up during the administration of bismuth was markedly improved

Obstetrics and Gynaecology

352 Induction of Labour

M Berger (*Zentralbl f Gynäk* January 21st, 1933, p 178) states that at the Magdeburg Stadtischen-Frauerklinik the method used for inducing labour until recently was rupture of the membranes followed by the insertion of an india-rubber bag of 400 to 700 c cm capacity In a series of thirty five cases there was no maternal mortality, but two foetal deaths occurred from prolapse of the cord There were in all four cases of this complication and in two others the presentation ceased to be a vertex Since the occurrence of a maternal death the method has been replaced by simple rupture of the membranes The vagina having been disinfected, the anterior lip of the cervix is instrumentally steadied whilst a clip is introduced which, having encountered the presenting part grasps and tears the membranes Berger believes that introduction of the finger adds to the danger of infection and that to push up the head with the object of increasing the drainage of liquor amnii is to risk prolapse of the cord The use of this method in twenty-six cases of post mature pregnancy and eighteen others led in primiparae to onset of pains an average of three hours later to an average duration of labour of eleven hours and to no (corrected) foetal mortality and no maternal mortality or morbidity In two cases labour failed to ensue The induction of labour by administration of drugs is not recommended—except aperients, which are given trial, associated with enemata, before it is decided to rupture the membranes

353 X Ray Sterilization

Dr Sv Stiftanik (*Bratis avské Lekárske Listy* February, 1933 p 53) describes the application of *x* rays to the ovaries in order to produce temporary sterilization in 103 cases and permanent sterilization in 154 cases Theoretically one or the other may be achieved according to the dose of x rays supplied But the treatment was unsuccessful in 12 1 per cent of the cases treated with the view of producing temporary amenorrhoea, and in 6 8 per cent of these cases permanent, instead of temporary, sterilization resulted The method of temporary *x*-ray sterilization has therefore proved unsafe Furthermore, there is always the possibility of permanent injury to the ovary and to the future progeny The author therefore recommends the method of temporary *x* ray sterilization in exceptional cases only Permanent *x*-ray sterilization in women approaching the menopause can be carried out very successfully without any ill consequences to the patient

Pathology

354 Vaccination against Yellow Fever

A W Sellards and J Laigret (*Arch de l Inst Pasteur de Tunis* December 1932 p 229) report on the successful vaccination of human beings against yellow fever by the use of a virus that had been adapted by numerous passages to existence in the brain of the mouse Intracerebral inoculation of mice with the particular strain used—a virus recovered originally from a mild case of yellow fever—led after an incubation period of six days, to rapid paralysis and death the majority of the animals dying on the seventh or eighth day The authors were able to confirm the truth of Theiler's statement that the mouse passage virus was incapable of causing fatal disease in the monkey Experiments showed that after subcutaneous or intraperitoneal inoculation, even with large doses monkeys either presented no reaction or developed a mild illness in either event they were found to be subsequently immune to inoculation with a virulent monkey virus The conclusion was drawn that as the result of mouse passage the virulence of the virus had been lowered for monkeys Since vaccination of human beings with killed virus of monkey origin has been found incapable of producing immunity to yellow fever, the authors determined to try the effect of inoculations of living mouse-passage virus Infected mice were killed between the sixth and ninth days after intracerebral inoculation, the brain being removed and ground up in 4 5 c cm of saline containing 10 per cent rabbit serum This 1 in 10 suspension was centrifuged for two minutes to throw down gross particles, and the supernatant fluid was then diluted to the required degree Five persons whose serum was free from protective bodies were inoculated on one or more occasions with varying quantities of the living vaccine None of them became ill, and all of them developed antibodies to the yellow fever virus as tested by the intracerebral mouse inoculation method In a second series of vaccinations on seven subjects, three of the inoculated persons developed an atypical febrile reaction, indicating that the mouse virus is not completely devoid of activity for human beings

355 Temporary Sterilization by Injection of Human Spermatozoa

In a preliminary report M J Baskin (*Amer Journ Obstet and Gynecol*, December, 1932, p 892) claims to have induced temporary sterilization, lasting about one year, in twenty patients injected with human spermatozoa The spermatic fluid, obtained by condom coitus, was injected into the buttock on three occasions at weekly intervals in amounts of 2 to 5 c cm General reactions were absent The spermatocidal properties of the patients serum were tested at three monthly intervals beginning one week after the first injection and, initially well marked, were found to diminish as time went on, in about twelve months the serum had ceased to kill spermatozoa The cervical secretion was invariably non spermatocidal None of the patients became pregnant within twelve months, and revaccination at the end of the year appeared to prolong the immunity for at least twelve months

356 B C G. Vaccine in the Guinea pig

K E Birkhaug (*Nord Med Tidskrift* January 28th 1933, p 99) gives an account of B C G investigations started three years ago The first question to which he sought an answer was whether B C G was capable of producing tuberculin as effective as that produced by virulent tubercle bacilli Intracutaneous injections of tuberculins made from various strains belonging to one or other of these two main groups were given to tuberculous guinea-pigs There was little difference in the reactions Hence the conclusion that B C G is capable of producing as effective a tuberculin as that derived from virulent human or bovine tubercle bacilli In another series of investigations newborn tuberculin negative guinea-pigs were given B C G by mouth and, six months later, virulent tubercle bacilli by subcutaneous injection The course of the tuberculosis which developed in these guinea-pigs and in controls receiving no B C G by the mouth previous to the injection of virulent tubercle bacilli was approximately the same Hence the conclusion that B C G given by the mouth to the newborn guinea-pig confers no reliable immunity on it Parenteral injections of B C G into guinea-pigs provoked only local lesions without any progressive tuberculosis The degree of immunity to virulent tubercle bacilli thus achieved was greatest when the intracutaneous and subcutaneous routes were followed Other investigations showed that the immunity conferred by B C G lasts longer than the cutaneous allergic properties acquired for even after B C G-inoculated guinea-pigs had again become tuberculin-negative their ability to survive a superinfection with virulent tubercle bacilli was considerably greater than that of the controls It was found that B C G can live for 577 days in the guinea pig's body without developing any tendency to provoke progressive tuberculosis The investigation also suggested that B C G is harmless even in the case of "smooth" strains and when it is grown under partially anaerobic conditions

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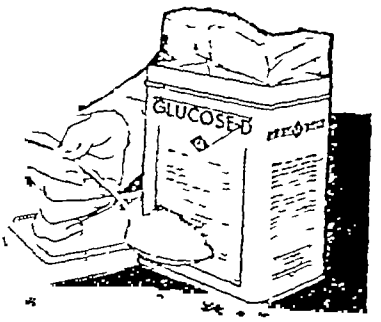

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Conclusions

The results of the calcium thiosulphate treatment of six cases of intolerance to 914 or bismuth are reported in these cases calcium thiosulphate appeared to exert a definite curative influence The total number of cases treated is however small and more widely extended observations are necessary before any final conclusions can be reached as to the place of this drug in the control of the sequelae of arsenicals and bismuth

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A NOTE ON MONILIA INFECTION OF THE RESPIRATORY TRACT

BY

P JANVRIN MARETT

MEDICAL OFFICER OF HEALTH AND BACTERIOLOGIST STATES OF JERSEY

In Jersey during 1932 568 patients had their sputa examined both by direct and by cultural methods As a result they can be classified as follows T B + = 103 monilia + = 294 negative to T B and monilia = 171

When the sputa from a patient are repeatedly examined over a long period direct and cultural examination shows varying flora the only organism which on culture is persistently present is monilia Apart from the fact that monilia is frequently associated with pyogenic organisms its action in the respiratory tract will here be discussed from two points of view—the mechanical and the allergic When incubated at blood heat and in suitable fluid media monilias can be divided into three groups according to their method of growth

1 Those which grow round the glass of the test tube in what is known as collar formation

2. Those which grow over the surface of a medium in a continuous sheet

3 Those which starting as islets on the surface grow into a sheet as under 2

Monilias stain with all ordinary stains and are practically all Gram positive When stained by the Ziehl Nielsen method they are found to contain acid fast granules In the human being the ordinary condition of thrush (monilia) is to be seen on the mucous membrane of the mouth and consists of the well known whitish patches which on removal frequently show ulceration of the underlying mucous membrane

Mechanical and Allergic Manifestations

It should not be difficult to appreciate what is likely to occur when monilias infect the air passages If we compare the bronchi and the bronchioles to test tubes we can visualize monilia growing in the air passages either in collar or in surface growth formation Monilia growing on the mucous membrane of a bronchus would give rise to a patch and would tend to spread round the bronchus in collar formation Ulceration is likely to occur and haemorrhage will result giving rise to blood stained or pinkish sputum the irritation of the condition sets up a cough and results in a weakening of the bronchial wall and consequent dilatation Where the condition has existed for a considerable time irregular thickening and dilatation of the bronchial tree occurs This bronchiectatic condition is well seen on *x* ray examination and is referred mostly to the bases In these cases the brunt of the infection falls on the bronchial tree A second type of case can be referred to Groups 2 and 3 above where in the smaller bronchioles the growth produces occlusion and collapse of the alveoli at the distal end with consequent cavitation Such cases show fluffing of lung tissue on *x* ray examination The above conditions are frequently found in combination

The allergic manifestations connected with moniliasis are similar to those connected with other diseases of the lungs and of the respiratory tract where allergy is found to be present—hay fever asthma and bronchiectasis and tuberculosis Allergy is due to the sensitization of the body to a foreign protein and for the purposes of this paper it is not necessary to discuss whether the foreign protein concerned is of vegetable or of animal origin Is it possible that there may be a common factor a foreign protein which gives rise to allergic manifestations? To attempt to prove this one must take each disease separately In hay fever the chief pollen held responsible for the condition is that of Timothy grass This grass has a well known acid fast bacillus associated with its name Turning to asthma Storm van Leeuwen has shown that many asthmatics give a positive von Pirquet—that is they are allergic to tuberculin True spasmodic bronchial asthma is recognized as not due to tubercle infection yet these cases are sensitive to tuberculin which contains acid fast substance As regards tuberculosis the von Pirquet and the Mantoux reactions are recognized as pathognomonic of tubercle infection Now both in asthma and in bronchiectasis monilias are present and as recorded above monilias on staining by the Ziehl Neilsen method are found to contain acid fast granules The amount varies according to the strain of monilia and according to the medium on which it is grown Cultures on agar give a far greater acid fast granule content than do cultures grown on Sabouraud's medium Cases of these monilia infections give rise to cutis reactions when tested with monilia vaccine

One common factor in these diseases then is that the organisms connected with them are recognizable by the presence of acid fast substance and it is suggested that the foreign protein which is common to all is the acid fast protein and that allergic manifestations are due to it

Conclusions

The presence of monilia in chronic lung infections gives rise to pus formation Apart from this monilias have a mechanical action This mechanical action is due to the local growth of monilia on the mucous membrane similar to the growth of monilia (thrush) in the mouth Two types may be recognized one affecting the bronchial tree and resulting in a bronchiectatic condition of the air passages the other occurring as the result of occlusion of the bronchioles and collapse of the lung alveoli the brunt of the infection falling on the lungs Monilia infection gives rise to allergic cutis reactions Such reactions are known to occur also in hay fever asthma non tuberculous broncho-pulmonary lesions and in tuberculosis A common factor in all these diseases is the presence of acid fast substance in their respective causal organisms It is suggested that the foreign protein which is responsible for allergy is this acid fast substance

A NOTE ON CONTRACEPTION

SOME PRACTICAL CONSIDERATIONS

BY

CECIL I B VOGE, B Sc , Ph D , F R S E

(From the London School of Hygiene and Tropical Medicine)

A research into medical writings has shown that women from the earliest times have attempted to control their reproductive power On the one hand we find directions for assuring fertility, and, on the other complete instructions for the prevention of pregnancy In the former case free and frank discussion has always been possible, but in the latter an enormous mass of nebulous probably harmful, information has existed almost to the present time There are many reasons why this problem, generally known as contraception, has been neglected, but the time would now appear to be ripe for impartial examination and assessment Towards that end the following brief summary may be of service

In 1923 the National Committee on Maternal Health New York, was formed to consider problems related to fertility and sterility, and it has published many contributions dealing with the many aspects of this subject [1 2] Several other groups have also been most active in their investigations in this country, notably the Birth Control Investigation Committee, the Society for the Provision of Birth Control Clinics, the Birth Control Information Centre, and the National Birth Control Association The information which I collected during my preliminary research appeared to indicate that (*a*) a problem really did exist , (*b*) no accurate knowledge was forthcoming of the theory upon which the various methods acted, or failed to act (*c*) contraceptives both mechanical and chemical were being manufactured and sold in ever-increasing quantities regardless of whether they were harmless to the user or not or were successful in the prevention of pregnancy or not (*d*) unless an impartial scientific research was carried out many methods which were possibly harmful from one or another point of view would be employed , (*e*) the results of such a research would then enable the medical practitioner to assess the value of the different methods in terms of the cases under consideration

Contraception is not a new problem having been practised for some 4 000 years The methods employed were magical abortifacient, operative and chemical, and those dependent upon will power, such as coitus interruptus, the safe period etc One might in fact suggest that all the above mentioned methods would fail to prevent pregnancy when both partners are fertile The failure is, however not such a cogent medical problem as the fact that injury to the users might possibly result

A study of the anatomy and secretions of the male and female reproductive organs has been carried out in order to survey the problem This is of especial importance when chemical methods are considered for a product may be efficacious in the test tube, using normal saline, but be wholly ineffective in the presence of large amounts of protein owing to the buffering effect of the latter A complete review has been made of the effect of pure chemicals upon the life and vitality of spermatozoa About 150 pure compounds have been reported on [2 3 4] The compounding of pure chemicals in such a manner that the spermicides can be readily inserted into the vagina, and once there will spread and penetrate into the sulci and fornices presents the next problem Here it is necessary to realize that certain measures are dependent upon such factors as time, temperature, moisture, etc , and hence one method may well be successful with one individual and fail with another Again, a somewhat similar method with adulterated material may be unsuccessful owing to the change in melting points, etc It was next necessary to ascertain in what manner existing chemical preparations agreed with, or departed from, the theoretical standards based upon *in vitro* or animal experiments More than 100 chemical preparations have been collected and classified into chemical constituents etc most of the better known have been examined as to their spermicidal effect, foaming capacity melting points, etc according to the system employed , and an expectation of success has been estimated It should however, be noted that scarcely any authoritative clinical evidence is obtainable as to the practical value of these preparations when used by themselves Steps are being taken to obtain this information, but in the series so far available it would appear that the clinical results are similar to those foreshadowed by theoretical knowledge One aspect that has been carefully looked into is the chemistry of rubber, in order to ascertain the conditions under which rubber ages and perishes Its stresses and strains have likewise been examined, this whole problem being of the greatest importance when the condom is considered The effect on occlusive pessaries of cocoa butter and jellies has also been studied There is more certainty about the clinical success of both the condom and the occlusive pessary, and some interesting figures are to be found [5 6]

In conclusion, I would submit that it is useless merely to disapprove of contraception for it will be practised in some form or another Dissuasion can be employed , it can be suggested that the unbridled use of contraceptives is harmful in one way or another , but if it is to be practised then the method to be used must primarily be harmless This I consider to be the essential medical problem, although naturally the success of any method from the point of view of pregnancy prevention, is most important My work suggests that the universally applicable contraceptive will not readily be found but four or five types do exist which will in all probability be successful in a similar number of population groups It is for the specialist to decide what is appropriate for each individual case and the excellent results reported on by clinics such as the Walworth Women's Welfare Centre would appear to bear out this contention It should, however, be noted that mechanical methods are almost alone adopted at clinics, and hence we can obtain no information as to the success, or otherwise, of chemical contraceptives when used by themselves It is a fact that these are being sold in great number, often to members of the medical profession, and authoritative information as to the success or failure of these methods would greatly help the progress of research

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Memoranda

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SPONTANEOUS RUPTURE OF THE NORMAL SPLEEN

Spontaneous rupture of the normal spleen is a rare abdominal catastrophe which so far has not been satisfactorily explained In 1919 Shorten described a case in the *British Medical Journal*[1] and in 1930 Hamilton Bailey collected eleven cases from the literature and added one of his own Since then single cases have been described by Dardinski[2] and by Black[3] In view of the rarity of this occurrence the following case is worth recording

A married woman aged 56 was admitted to the Jersey General Hospital on September 25th 1932 with a history that immediately after she had eaten her supper which consisted of bread and cheese she felt a sudden pain in the back This became very severe and worked round to the abdomen No pain was felt in the left shoulder She did not vomit but there was some nausea She had always been quite healthy and had never had any serious illness There was no history of trauma after the operation when this question of trauma was gone into more fully she still believed she was quite certain that at no time during the few weeks previous to the onset of pain had she received any blow or been involved in any accident

On admission ten hours after onset of the pain she was very collapsed The pulse was 150 and barely perceptible and the temperature was subnormal There was tenderness and rigidity in the epigastrium but there did not appear to be any general abdominal tenderness A diagnosis of perforated gastric ulcer probably into the lesser sac was made but the patient was so collapsed that it appeared unlikely she would survive operation She was treated with continuous subcutaneous saline and coramine 1 c.cm four hourly in the hope that she might improve sufficiently to undergo the operation Her condition improved very markedly and twelve hours later operation was performed

Under open ether anaesthesia an upper right paramedian incision into the abdomen was made and it was at once obvious that the peritoneal cavity was full of blood A rapid examination was made of the liver and as this revealed no abnormality the spleen was palpated A rupture was felt in the lower pole so the left rectus was divided transversely and the spleen removed The division of the rectus was probably unnecessary since the splenic pedicle was unusually long and the spleen could have been removed quite easily through the right paramedian incision Clots were removed from the upper abdomen which was then closed in layers

The patient left the table in good condition Subcutaneous saline was continued for six hours and she made an uneventful recovery Examination of the spleen showed it to be normal in size and consistence There was a large subcapsular haematoma on the convex surface and a deep transverse rupture of the lower pole It was submitted to the Bland Sutton Institute of Pathology for examination but no pathological cause for the rupture could be discovered

This case does not appear to differ in any essential details from the others recorded In the case described by Dardinski the patient was suffering from primary carcinoma of the liver and the spleen was probably in a condition of chronic venous congestion Susman[5] reviewed the seven cases reported up to 1927 and suggested that they were really cases of traumatic rupture in which the injury had been very slight and had been forgotten by the patient or a temporary clot had formed and given way later by which time the association with the injury had been forgotten He gave examples of cases of apparent spontaneous rupture in which the patients remembered later that they had received a blow It is inconceivable that an injury sufficiently severe to rupture a normal spleen could be forgotten The spleen has better protection than the kidney or intestinal tract yet it is the only viscus which behaves in this way Rupture of the diseased spleen either spontaneously or with slight trauma is not rare and occurs most commonly in malaria and typhoid it is probably due to softening and congestion Torsion of the pedicle of a normal spleen may produce the congestion necessary for rupture particularly since the spleen degenerates early In this case the pedicle was unusually long and may possibly have undergone slight torsion This was suggested in Black's case and is the most reasonable explanation of this remarkable occurrence

Although this condition appears to be rare the spleen should always be remembered as a possible source of haemorrhage even in the absence of a history of injury

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AN UNUSUALLY PREMATURE INFANT

A male foetus said to be of six months gestation in view of the menstrual history was brought to me for examination It had lived for eighteen hours As the post mortem examination revealed certain points of interest in the medico-legal question of viability a short account of these has been thought worthy of report

The foetus weighed 512 grams and measured 30 cm in its total length and 18 cm in its C.R. length a weight and measurement consistent with a five months gestation rather than one of six months There was too no trace of an ossific centre in either os calcis a centre which normally appears at the sixth month of foetal life As the ordinary menstrual method of calculation is known to have a possible error of roughly three weeks (T. W. Eden *Lancet* 1921 ii 127) these facts suggest that the foetus cannot have been one of more than five months gestation Viability of a foetus of such an early age is unusual and a separate existence is generally believed to be possible only at the twenty-eighth week when the elastic fibres of the lung alveolar walls have differentiated (E. E. Hewer *Quart Journ Exper Physiol* 1924 xv 115) Microscopical sections of the lung tissue of this foetus were therefore prepared and stained for elastic fibres by Weigert's resorcin fuchsin method but no trace of these fibres could be found in the alveolar intercellular tissue As the elastic tissue of the pulmonary arteries in the same sections was stained a deep purple black colour it may reasonably be concluded that the absence of the elastic fibres was due to the fact that they had not yet differentiated rather than to a faulty technique Vital respiration is thus found to be independent of elastic tissue The alveoli near the bronchi were expanded normally by air but the expansion became less well marked further away from the bronchi and at the more distal portions the lung presented the characters of an unexpanded atelectactic foetal state Life under these conditions of lung expansion is possible for a period Indeed a child may live after birth for a very short time without expanding its lungs at all and may live for many hours with only a small proportion of its lung tissue expanded (Sydney Smith *Forensic Medicine* 1931 p 341) The microscopical sections also showed that the foetus had suffered from congenital pneumonia to which its death was attributed This disease as a cause of death in the newborn is generally overlooked because nothing is seen on naked-eye examination It is stated by those who have studied the subject that aspiration *in utero* is responsible for the condition and that it is found on microscopical examination in 50 per cent of deaths occurring in newborn infants J. Haller (*Journ Obstet and Gynecol* 1933 xxv 120) studied thirty-nine consecutive cases of stillborn infants and found it present in 75 per cent of them

RICHARD H. HUNTER M.D. M.Ch. Ph.D.
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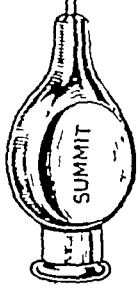

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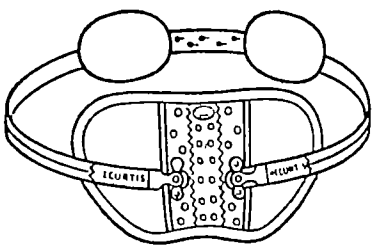

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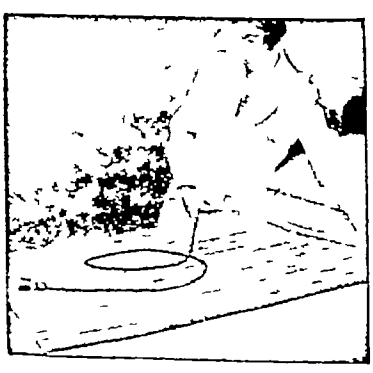

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Reviews

EARLY OPHTHALMOLOGY IN ENGLAND

Mr R R JAMES has done a service to the history of ophthalmology in England by the publication of this volume of studies dealing with the subject from the earliest times to the year 1800 [1] It is to be hoped that he will continue the essays, and show how the art freed itself from its undesirable association with quackery, became for a time a part of general surgery, then a coherent specialty, and finally has been subdivided into well-defined branches George Coats (1876-1915), who excelled in all that he did in his short life, may be said to have founded the historical tradition which has been continued by Treacher Collins, by R R James, and by Arnold Sorsby with such conspicuous success The last two chapters of these studies are reprints of Coats's account of the Taylor family, dealing with the Chevalier, his son, and his grandson They show the great care Coats took to be accurate, and prove that he was as good a bibliographer as he was an oculist Mr James follows closely on his footsteps He has gone to original sources for his information, and is remarkable in the fact that he has given details of the wills of several of the surgeons mentioned, and has thus obtained much new information Beginning with ophthalmology in Roman Britain Mr James describes and figures some of the numerous examples of oculists' stamps which have been unearthed during the last two centuries, including one which was found in Ireland and is now in the British Museum The stamps were usually quadrilateral or oblong, and were intended to impress the directions for use on the semi-solid ointment much as a maker's name is stamped nowadays on a cake of soap The lettering generally consisted of the name of the practitioner to whom the stamp belonged, the name of the remedy, and the disease for which it was employed

From Roman times Mr James passes to the Anglo Saxon period, where most of our knowledge is to be found in the Leechdoms, the treatment being confined practically to decoctions made from various herbs The wonderful twelfth century saw little improvement in practice but a marvellous development in theory Robert Grossteste and still more Roger Bacon and John de Peckham were the founders of British optical science A hundred years later John Arderne wrote a treatise on the cure of the eyes Mr James gives the Latin text of parts of it in an appendix and a translation in the body of the work A fifteenth century translation of the treatise is preserved in the library of Emmanuel College, Cambridge (Leaf lxv-lxxii), and would be well worth printing During the Wars of the Roses diseases of the eye, like all other branches of surgery, received but little attention Books on the subject were produced when printing became common, and from 1600 onwards the history of ophthalmology is continuous and easily traced The eighteenth century was the golden age for all sorts of quacks, and Mr James gives a full and entertaining account of them, from Sir William Read, who could neither read nor write and yet received the accolade from Queen Anne, to Chevalier Taylor, who made triumphal progresses through Europe, and afterwards described them in his own words, often enclosing a minute grain of truth in a vast mass of supposititious embroidery He was, in fact as George Coats says, "an unparalleled liar, pre-eminent among charlatans in the art of advertisement"

[1] *Studies in the History of Ophthalmology in England* By R R James F R C S Prior to the year 1800 Published for the *British Journal of Ophthalmology* London Cambridge University Press 1933 (Pp x + 255, 9 plates 15s net)

The studies are produced in the excellent style we always expect of the Cambridge University Press, and the nine plates with which they are illustrated have been carefully selected and well reproduced

SPECIAL PHARMACOLOGY

In 1930 Professor E ZUNZ of Brussels published a volume on the elements of general pharmacodynamy and he has now completed a general survey of the subject with two volumes entitled Elements of Special Pharmacodynamy" [2] In a review of the earlier volume we pointed out that it was a pioneer work in that the author dealt with the general principles of the mode of action of drugs and had collected a large mass of material that had not previously been treated in a systematic manner The volumes under review follow more ordinary lines, since they give a detailed account of the pharmacology of the important drugs in a manner similar to that adopted by various textbooks in English and German It is, however, noteworthy that a work of this scope and excellence should appear in French, because the teaching of pharmacology has been somewhat neglected in France Most of the French textbooks on drugs deal chiefly with materia medica and it is not unusual to find the drugs arranged according to the natural orders of the plants from which they are obtained This lag amongst the textbooks has been the more remarkable in view of the outstanding contributions that French research workers have made to pharmacology, and there has appeared to be a curious divorce between the research workers and the compilers of textbooks Professor Zunz has however, broken away completely from this unfortunate tradition and his book gives a comprehensive account of modern knowledge of pharmacology

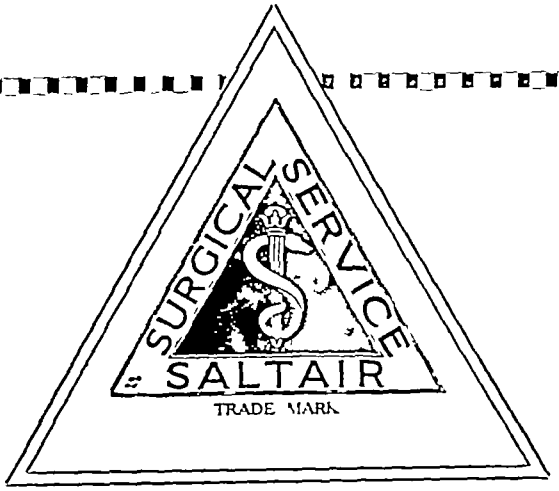
The author has presented his material according to the actions produced by various drugs, chapter headings having such forms as "Drugs Acting on the Respiratory System" "Drugs Acting Principally on the Heart" etc This arrangement greatly facilitates the description of drug action and also the discussion of the relative merits of different members of groups of drugs The work is well illustrated with reproductions of tracings and with diagrams Tables are freely employed to show the relative actions of series of related drugs The size of the work is indicated by the fact that it contains 1,272 pages with 167 illustrations and 181 tables This clear and very readable account of the subject will rank as one of the best and most complete textbooks of pharmacology The Brussels school of medical sciences is well known to be very active and progressive, and deserves congratulations on its latest product

TUBERCULOSIS CONTROL IN CHICAGO

Procedures in Tuberculosis Control for the Dispensary Home and Sanatorium [3] by BENJAMIN GOLDBERG is a complete account of the municipal organization for handling the tuberculosis problem in Chicago The author is one of the three directors entrusted with this problem, and he is therefore well qualified to describe the methods used, and the ideals aimed at, by the city of Chicago in this department of municipal activities The descriptions of home, dispensary, and sanatorium treatment are

[2] *Éléments de Pharmacodynamie spéciale* Par Professeur Edgar Zunz Deux volumes—ne pouvant etre vendus separement Paris Masson et Cie 1932 (190 fr)

[3] *Procedures in Tuberculosis Control* By B Goldberg M D F A C P For the dispensary home and sanatorium Chapter on sanatorium planning by T B Kohler and an introduction by D J Davis M D Ph D Philadelphia F A Davis Company 1933 (Pp 373 44 figures 4 dollars net)



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very full and it would seem that while the organization has been worked out to the smallest detail to ensure efficiency yet the authorities expect a considerable amount of personal initiative from their officers both medical and lay. With their methods and routine duties mapped out to meet any emergency and with apparently no fewer than thirty separate forms or cards to be filled in for each individual patient (in a few instances some of these have to be written up daily for long periods) to say nothing of a most complicated system of indexing and cross indexing one wonders how much personality the doctors and nurses employed have the time or facilities for putting into their work. That this centralized control does not always function satisfactorily is suggested by a sentence such as this from the section on sanatorium management. These measures should not be applied haphazardly by the resident physician but should be done conscientiously under the supervision of the attending specialist.

The author's description of what he calls coercive legislation is remarkably interesting. The attack is centred on the open case—that is the case with a positive sputum. If any individual has a positive sputum he is considered to be an open case for three months or until he can provide three negative sputum tests. Such a case may be subjected to a great deal of legal coercion. No child under the age of 16 may live in the same house as an open case. If this law is infringed either the patient may be forcibly hospitalized by the police or the children forcibly removed; and even if there are no children in the house but the case is considered by the tuberculosis authorities to be non co-operative he can be effectively isolated by the police and his isolation quarters placarded with a red card ten inches by twelve carrying the legend in two-inch letters TUBERCULOSIS KEEP OUT. These are stern methods to employ for the diagnosed case when so many undiagnosed and therefore more dangerous carriers go scot free. And the fact that it depends on such slender evidence as three sputum examinations and entirely ignores other paths of infection seems to open such legislation to criticism. Nor is the practitioner exempt: if the tuberculosis authorities consider his conduct in any way lax he can be called before a disciplinary body named the Hearing Board. The author does not tell us what action this board can take against the offender. Judged by the author's description this legislation may be subject to widespread evasion and might lend itself to corrupt practice; nor would one think that it encouraged either the patient or the practitioner to make full use of the facilities provided by the municipal tuberculosis scheme. Thus we see that Chicago is determined to get right down to its tuberculosis problem and we must sympathize for it is believed that Chicago has many serious municipal problems.

PALATABLE DIETETICS

It is not very often that even a popular book which deals with a technical subject can afford really light and enjoyable reading. No matter how he may try it is difficult for the author to stand back sufficiently from his work and so to display it in such a way that the layman can grasp its essentials without effort and can savour its triumphs with enjoyment. To a man who is absorbed in the routine of research one of the hardest of tasks is to write a readable popular account of his subject. It is difficult to decide how much knowledge the intelligent layman really possesses or how far it is necessary to labour a point that he may perceive it and the continual effort of striving with what is often to the worker the duller aspect of his subject breeds in the end a kind of nausea. It is therefore often with dread tempered by sympathy that the reviewer opens a popular book on diet. In the case however of Dr. AYKROYD'S *Vitamins and other Dietary Essentials*[1] the former emotion is clearly unwarranted and the latter wasted. If Dr. Aykroyd did not enjoy writing this book he has concealed the fact very cleverly indeed; and if he fails to convey some of his enjoyment to his readers they must indeed be dull and unresponsive creatures. To begin with he has the knack of writing—not merely the power of concise and accurate description but of employing happy phrases and of drawing vivid pictures. He has dealt with the human aspect of his subject and has shown how mankind with many setbacks and reverses has on his stumbling way moved towards a more adequate and a healthier diet. He has shown how now that the goal is becoming clearly defined progress is accelerated as never before; and he has sketched in all its beauty some of the recent experimental work that has brought the goal within sight.

The book deals in the main with broad issues and often shows in a most interesting way how diet has promoted or baffled human progress and human happiness. That the course of history is often governed by biological considerations is a commonplace; foremost among these stand the facilities which communities possess for obtaining a suitable diet. It is not unthinkable but that an ideal diet might produce an organism altogether different from man as he exists now; and it is certain that before long questions of food supply will influence national policies in a far more direct way than they do at present.

MEDICAL ENTOMOLOGY

One of the chief difficulties in preparing a textbook of medical entomology is the just allocation of space to the three components of the subject: the structure and natural history of the insects concerned, the epidemiology of the diseases they carry, and the practical measures for their limitation or control. In his new work[2] Dr. ROBERT MATHESON displays an admirable sense of proportion in setting down lucidly and concisely the established facts under these several heads. The anatomical sections are well illustrated by figures most of which are original; throughout the sections dealing with the incidence of diseases carried by insects the reader is given accurate information and is constantly referred to the original sources; and the sections on control are thoroughly practical. Perhaps the greatest shortcoming of the book as a general textbook of medical entomology is the undue stress that is laid upon American insects. Dichotomous keys are given to the anopheles of America but those from other continents are merely listed and no account is given of the habits of even the most important species; so that the mosquito malaria problem appears far simpler than it really is. The same criticism might be made of the chapters on plague and sleeping sickness.

The book is well arranged and easy to use for reference since it has an index to authors and an excellent subject index. An original feature is an *synonam* list of medical entomologists who have contracted fatal infections in the laboratory; a very valuable feature is an introductory chapter setting out briefly the crowded history of medical entomology during the last fifty years.

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[1] *Vitamins and other Dietary Essentials*. By W. R. Aykroyd, M.D. London: W. Heinemann (Medical Books), Ltd. 1933. (Pp. 218; 7s. 6d. net.)

[2] *Medical Entomology*. By R. Matheson, Ph.D. London: Baillière, Tindall and Cox. 1933. (Pp. xiv + 429; 211 figures. 28s.)

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Notes on Books

The Little Doctor,[6] by Dr FRANK G LAYTON is a refreshing and amusing account of a real "character" drawn from the life—a doctor by vocation, and a born individualist who "likes working-class people and likes doctoring them" He has a caustic tongue, a somewhat lurid vocabulary, and a very soft heart The book re creates for those who know it the very atmosphere of a thoroughly industrial poor practice, with all its crudities yet with a shrewd eye for the sturdy independence and courage of the people who form the bulk of such communities It will open the eyes of anybody suffering from sentimental illusions as to the 'short and *simple annals of the poor*" The dialogue, which forms the main part of the book, is vivid, and fits the character of the "little doctor" like a glove Many panel doctors, especially those who have no 'vocation,' will resent the exceedingly direct criticisms made about them and their work Many will think the "little doctor's" sardonic descriptions of the system under which they work overdrawn, but there isn't one who will fail to benefit by the reading of the book if he has any sense of humour The 'little doctor" is not fettered by any undue regard for consistency—such a virtue would be inconsistent with the character of the man who lives for us in this book He is a *real* person, and the reviewer is grateful for the opportunity of saying so and recommending it to every panel doctor and everyone who likes to read about real persons There is no sex interest in the book, which accentuates its originality The review copy of *The Little Doctor* was tried out on a nurse, who chuckled her way right through the book and declared that its hero was a 'dear' but that she was glad she hadn't to nurse him in the illness so graphically described —obviously from the personal experience of a close and humorous observer This is certainly Dr Layton's best book

In a recently published booklet[7] Dr RENÉ CHARRY has provided a useful reminder of the methods of diagnosis and treatment of some of the conditions most often met with in an orthopaedic clinic His method is first of all to present the reader with the results of clinical examination, supplemented by the history, then to consider the disorders 'which it is not" ('ce que ça n'est pas"), and finally to give a brief description of principles of treatment On this plan the following conditions are briefly handled club foot, congenital dislocation of the hip, brachial birth-palsy, Pott's disease, Little's disease, rachitic bow legs, morbus coxae poliomyelitis affecting a lower limb, torticollis, and scoliosis Diagrams are used in illustration Necessarily it is not possible in eighty pages to go into many details and discussions of various opinions or methods of treatment The author has had perforce to confine himself to the most obvious and important details, and to the methods which he has found most commonly useful The booklet will be of value to students and practitioners We do not, however go all the way with Dr Charry when he suggests that these notes should be carried in the pocket in order that they may initiate their bearer into the case which he has before his eyes Diagnosis and treatment are not to be so summarily acquired and carried out as all that!

The sixth issue of the *International Health Year Book*,[8] of which the previous volume was published nearly two years ago, contains information concerning the following countries Australia, Belgium, Bulgaria China, Czechoslovakia, Denmark, Egypt, Esthonia Finland, France, French colonies, Germany, Greece, Hungary, Irish Free State, Italian colonies, Japan, Latvia, Lithuania, Netherlands New Zealand, Norway, Poland Spain, Sweden, Switzerland, Turkey, the United Kingdom (England and Wales, Scotland and Northern Ireland), Union of Soviet Socialist Republics, and Yugoslavia The health conditions in each country are illustrated by twenty seven standard tables, which are classified in the following seven groups general demography birth rate, general death rates, cause of death, infantile mortality, public health statistics, and data on curative medicine The work also contains a review of industrial hygiene in Great Britain, Germany Belgium, Italy, Holland and Soviet Russia, the report of the Health Organization of the League of Nations for the period January, 1931, to September, 1932 and a list of the public health administrations in sixty one countries

In the third edition of Ernest Benn's List of *Nursing Homes*,[9] the number of institutions of which particulars are given has been considerably increased The publishers are to be congratulated on this improvement in what they claim is now by far the most complete list in existence of registered nursing establishments in this country

[6] *The Little Doctor* By F G Layton Edinburgh and London W Blackwood and Sons Ltd 1933 (Pp 309 7s 6d net)

[7] *Dix Consultations d'Orthopédie* Par René Charry Préface du M le Dr Charles Flessinger Paris N Maloine 1932 (Pp 80)

[8] *International Health Year Book 1930* (vol vi) Reports (with Vital and Public Health Statistics) on the Public Health Progress of Thirty four Countries and Colonies in 1929 • League of Nations Health Organization London G Allen and Unwin Ltd 1932 (Pp 1 100 24s)

[9] *Nursing Homes* 1933 Edited by J Laton Hosking (Third year of publication) A directory of nursing and convalescent homes mental homes etc in England Wales and Scotland London Ernest Benn Ltd (Pp 2s7 4s)

Preparations and Appliances

RADIUM APPLICATOR FOR VAGINAL USE

Dr R E TOTTENHAM, F R C P I, F C O G (professor of obstetrics and gynaecology, University of Hong Kong) writes

In the treatment of carcinoma of the cervix uteri it is usual to make an intrauterine and a vaginal application of radium, the instrument I am about to describe is used only for the latter part of the treatment the intrauterine application being made in the usual manner There are many applicators in use but those which ensure that the radium is maintained high up in the lateral vaults of the vagina and that all needles are lying antero posteriorly appear to be the most satisfactory

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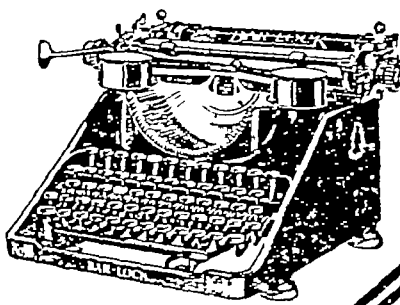

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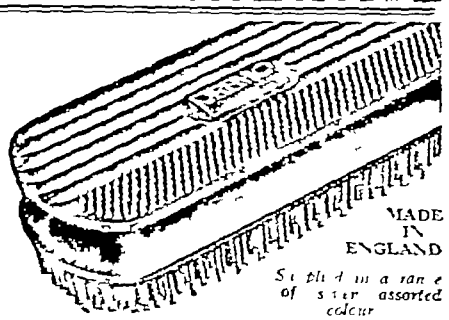

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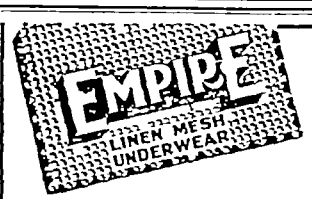

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British Medical Journal

SATURDAY, MAY 27th 1933

THE QUININE PROBLEM

The Health Organization of the League of Nations has published the results of an inquiry into the quinine requirements of malarial countries[1] The figures are fairly complete for the total population of the countries providing statistics amounts to 1 590 millions The annual number of cases of malaria treated is 17 7 millions the disease accounting in some countries for from 10 to 56 9 per cent of the total cases of infectious disease admitted to hospital These figures do not however indicate the real extent of the ravages of malaria Treated cases reported from India and Ceylon amount to 10 millions—more than half the world total of such cases—but the actual number of cases of malaria in these two countries is estimated at at least 100 millions which is ten times the number treated Furthermore no figures are reported from China In that country malaria is known to be endemic—and at times epidemic—in areas containing 350 million persons which is one sixth of the world's population

The approximate needs of quinine per annum in a malarial country are estimated as being 20 grams per case To allow for the necessary prophylactic use however this estimate must be at least doubled for a dose of 5 grains a day amounts to 110 grams a year The annual quinine output of the world is said to be about 600 tons an amount that suffices for the needs of the malarial cases under treatment and for prophylaxis among Europeans but it is only a tithe of what is really required An estimate of the quantities of quinine needed can be made from the experience of Italy About half that country is exposed to malaria and 500 000 cases are treated every year The Italian Government distributes annually about 20 tons of quinine free and about 7 tons more at a reduced price This amounts to about 140 grams per case treated or 0 7 gram per head of the total population Greece uses quinine on an even more lavish scale These figures provide a striking contrast to those for British India where the cases of malaria treated amount to 10 millions a year and the total cases are estimated at 100 millions But the total quinine consumption of India is only about 96 tons a year and the total amount of quinine and cinchona febrifuge distributed free of charge or at reduced prices is only 16 tons The amount of quinine needed annually in India is estimated at 680 tons

The problem of the quinine supply of India has been discussed recently by Lieut.-Colonel R N Chopra He points out that the problem is even more serious than the general figures indicate Quinine usage is not uniform and the areas most heavily infected with malaria show the lowest quinine consumption The reason for this somewhat paradoxical state of affairs is that the consumption of quinine is limited by its price and the populations most crippled by malaria are the least able to afford the drug The most obvious remedy for the scantiness of the present supply is either to reduce the cost of quinine or to find a cheaper substitute Java produces nine-tenths of the world supply of quinine and the Kina Bureau has kept the price stationary at 27s per lb Chopra considers that this is a fair price if allowance be made for the cost of replacement of cinchona plantations The Indian Government tried to introduce cinchona febrifuge[2] as a cheap substitute for quinine but it has never attained any great popularity and its consumption is on the decline The introduction of totaquine by the Hygiene Commission of the League of Nations and its inclusion in the *British Pharmacopoeia* represent an attempt to establish a preparation of the mixed alkaloids with a recognized and stable composition There are important economic possibilities in this direction because cinchona trees that would give a good yield of totaquine can be grown easily in India whereas India cannot compete with Java in the production of pure quinine The introduction of the new synthetic remedies plasmoquine and atebrin provides another complication because some authorities are doubtful whether synthetic compounds may not in the future replace quinine as the most effective anti-malarial remedies If this were to happen any money that had been spent on extending cinchona plantations would be lost

The contrast between Italy and India is striking and unflattering to the latter country The Italian Government provides its population with an adequate supply of quinine either free or at a reduced price It has established cinchona plantations which yielded 14 tons of bark in 1927 but which will yield 860 tons by 1936 a quantity more than sufficient for the national quinine requirements India on the other hand produces enough quinine to supply only one third of its needs and the production is decreasing rather than increasing The current number of *Chinrui* the publication of the Kina Bureau comments on the inadequate treatment of malaria in India and remarks It is particularly tragic because it is quite possible to cultivate cinchona trees in the country Certain plantations exist but yet the quinine factors in Mungpoo and Madras based on the indigenous cultivation can only provide about one-third of the existing quinine demands which are still relatively low Chopra suggests that the annual direct loss in India due to malaria is about £25 000 000 The Hygiene Commission of the League of Nations concludes Perusal of our report confirms the fact already demonstrated on a large scale in Italy that in a malarial country an increase in the quantity of quinine used produces a decrease in the malarial death rate The present situation cannot be regarded as satisfactory and the opinions of the diverse authorities

[1] League of Nations Health Organization Inquiry into the Quinine Requirements of Malarial Countries and the World Prevalence of Malaria

[2] Chopra R N *Indigenous Drugs of India* 1933. The Art Press. Calcutta.

[3] Johannessohn, F *Chinarum* 1932. Amsterdam.

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quoted all point to the same conclusion—namely, that there is an urgent need for Government action in organizing on a large scale the production and distribution of the cheapest effective anti-malarial remedy that can be obtained

A PSYCHIATRIST'S RETROSPECT

Psychiatry is a specialty in its own right but to map out its confines is by no means an easy matter Its province extends even beyond medical territory In so far as it is a department of medicine, psychiatry stands in the closest relation with neurology and with psychopathology In these two disciplines are to be found its main sources, which as yet, however, have not become merged into a common stream They are complementary, two aspects of a common science, each speaking its own language , and as yet they do not occupy the same universe of discourse The brain is not synonymous with the mind There are other territories outside the realm of medicine altogether with which psychiatry has the closest association , and a host of administrative, legal, psychological, and sociological implications are inevitably bound up in its constitution It is this fact that makes psychiatry a specialty of a unique sort Treatment of mental disorder frequently necessitates legal formulae and legal safeguards for the protection of the patient and of society Moreover, diagnostic criteria are coloured by such formulae, and cases of mental disease and mental deficiency may not be ascertained merely clinically, but require to be brought into alignment with the provisions of the various enactments of civil and perhaps criminal jurisprudence It may be pertinent to note that insanity is by no means coterminous with the province of the psychoses There may exist a psychotic state which, by reason of its mildness or of the fact that its manifestations are not antisocial, could not possibly be classed as an insanity It is equally evident that a psychoneurosis or a state of mental defectiveness may, by the very reason of its severity or its extreme antisocial manifestations, fully deserve that appellation

From the clinical standpoint psychiatry may be said to have two aspects, descriptive and explanatory the latter may be neurological or psychological With the advent of the Kraepelinian hypotheses psychiatry was in its heyday as a descriptive science Kraepelin clarified the obscurity of the clinical syndromes by his formulation of the manic-depressive psychosis and of dementia praecox, but he still left a picture hard to decipher , and it was not until the coming into being of psychological analysis, in the widest sense of that term, that the key to this cryptogram was discovered Psychiatry has since become an explanatory science It was an explanatory science, of course, before Freud, but only in so far as a somatic causation was accepted as the whole explanation of its phenomena Professor Woodworth has remarked somewhere that, just when psychology was becoming more somatic, psychiatry started in earnest to be psychic His reference was, of course, to "behaviorism" and to psycho-analysis Certainly one would not doubt, after reading Dr W A White's *Forty Years of Psychiatry*,[1] or any of his other numerous publications, that psychiatry had become "psychic" Some of our readers may remember the shock felt when first viewing in White and Jelliffe's well-known textbook a photograph of a duodenal ulcer produced by unconscious hate Such a causation may indeed be far removed from fantasy, and is at any rate in accordance with much that has been psycho analytically determined

Those who are already acquainted with Dr White's writings will not be disappointed in this psychiatrical retrospect He is an enthusiast who has never ceased to testify to the fascination which his specialty has exercised on him There is much in these pages that is autobiography—and highly interesting biography it is , but of the chiefest interest is perhaps his account of the gradual emancipation of the mentally afflicted from the prejudices and ignorance of the past Dr White speaks of his own country, America We in this country have a parallel story to tell, and one which his closely approximates The inspiration of the humanitarian movement with regard to the mentally afflicted in America was derived largely from England , and Dr White pays tribute to the Quaker influence which came from England by way of the York Retreat One of the outstanding features of the early years of Saint Elizabeth's Hospital, Washington, was this influence, which the author says left so distinct an impression upon its traditions Trenchant observations abound in these pages on matters clinical, legal, historical, and administrative All of these would merit discussion, but one of the many administrative problems may be chosen for special notice Dr White discusses the question of the advisability of segregating in special hospitals those who are suffering from chronic mental derangement He is opposed to any such scheme Nevertheless, it would seem that the main reason against its adoption lies in the pessimistic connotation of the title of such a hospital Names certainly exercise a tyranny over our thought and behaviour, and a name such as "The Willard State Hospital for the Chronic Insane" (a title happily no longer in use) is deserving of the censure Dr White gives it but that is no good reason for condemning the segregation of chronic cases The misnomer could be as easily corrected as was the appellation "asylum" changed in England by legal sanction to that of "mental hospital," and with similar benefit If it were true, as is often alleged, that the very knowledge of the fact that the inmates of a mental hospital were all deemed to be irrecoverable is in itself sufficient to stifle all interest and initiative, the arguments against segregation would be overwhelming We may feel sure that with Dr White as the medical director of such an institution the supposed irrecoverability of the inmates would be a spur to, rather than a drag upon, initiative, and that it would not be long before rich fruits were forthcoming from so seemingly barren a soil

[1] *Forty Years of Psychiatry* By W A White A M M D Sc D New York and Washington Nervous and Mental Disease Publishing Company 1933 (3 dollars)

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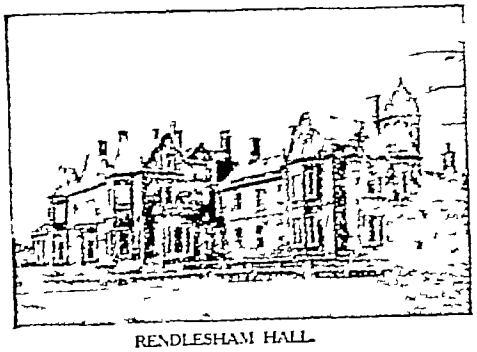

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VERTIGO

Vertigo is a difficult subject whether it be regarded from the point of view of aetiology of diagnosis or of treatment or even from that of those who try to write intelligently about it A recent monograph by Hautant and his colleagues[1] will be of great assistance to those who are confronted by these cases The first four chapters are by Hautant himself and the subject is set forth with that clarity of thought and expression characteristic of his countrymen After pointing out that the severity of the sensation in cases of vertigo bears little relation to the extent of the pathological changes Hautant goes on to classify the different types of the disease He very rightly emphasizes the importance of dissociating the sensation of vertigo which is a cerebral manifestation from disequilibration which is a reflex manifestation independent of consciousness And the latter is not necessarily in proportion to the former indeed vertigo may be present without disequilibration and may be accompanied by sickness The types of vertigo described by Hautant are the neuritic the neuralgic the cerebral the endocranial (produced by disturbance in the medulla) and the commotional (caused by concussions of the skull) This classification is admittedly in large part arbitrary but for the purposes of instruction it is very helpful In the neuralgic type of vertigo the vestibular tests show a normal reaction and those of hearing are approximately normal It is frequently the result of poisoning by tobacco or carbon monoxide or of absorption of endogenous toxins from the gastro-intestinal tract In all cases the effect is produced either directly by the action of the poison on the nerve termination in the labyrinth or indirectly by its effect on the blood vessels supplying this organ The latter type of case Hautant describes as angiospastic Another class of case which is also described as neuralgic vertigo includes those which result from chronic vasomotor troubles such as may occur at the menopause or in the course of arteriosclerosis In the neuritic type there is a definite lesion in the labyrinth or in its nerve supply as for example in syphilis or in suppurative labyrinthitis In this connexion Hautant refers to the fact that vertigo may often be absent when the labyrinth is completely destroyed When speaking of the apoplectiform type he points out that in many cases the attack occurs once and is never repeated though the hearing is permanently lost such cases are very commonly syphilitic in origin An interesting chapter is that on the mental condition of vertiginous individuals Vertigo always produces a central reaction of anguish and fear, and is often of this type and of long duration when resulting from a mastoid operation The objective manifestations resulting from the labyrinthine tests are usually absent and psychotherapy should form the basis of treatment M Aubry is the author of the chapter on vertigos of central origin The vertigo in these cases is unaccompanied by deafness or tinnitus and is not systematized—that is to say the patient does not feel as though surrounding objects were moving in a given direction but suffers rather from a vague sensation of uncertainty of balance A case of insular sclerosis is described illustrating this condition The treatment of vertigo is described by Ramadier it may be sedative or symptomatic aetiological or treatment by removal of the cause and surgical by destruction of vestibular sensibility Full details are given of the different operations employed such as decompression of the cerebellar fossa lumbar puncture decompression of the internal ear and destruction of the internal ear

[1] Les Vertiges. *Les Annales d'Otolaryngologie* January 1933

ELEMENTARY BODIES AND CUTANEOUS ALLERGY TO VACCINIA

It has been known for some time past that the early or immediate reaction that occurs in the skin of human subjects on revaccination is specific to vaccinia virus and that it can be provoked by this virus even when killed by heat Last year it was shown by Wilson Smith that the reaction can be elicited by a boiled extract prepared from tissues containing vaccinia virus (*Brit Journ Exper Path* xiii 434) In a recent communication[1] James Craigie and F O Wishart of the Connaught Laboratories Toronto have demonstrated that this specific allergic reaction is provoked by the washed killed elementary bodies of vaccinia virus These Paschen bodies were obtained from the skin lesions of rabbits vaccinated three days previously with a rabbit strain of vaccinia virus They were purified by repeated washings and concentrated by means of an angle centrifuge Microscopical examination at this stage revealed that the Paschen bodies were present in a very high degree of purity and their abundance was such that the suspension when diluted one-hundredfold still showed a trace of opalescence and also gave specific agglutination The bodies were next killed by the addition of formalin the suspension being injected into the rabbit's testis in order to prove that no living virus was present Suspensions of killed elementary bodies prepared in this way were tested on the skin of over 200 normal individuals Intradermal injection was tried at first but owing to some severe reactions was abandoned in favour of needle puncture through a drop of the suspension placed on the skin The reaction thus evoked consisted of a papule 1 to 3 mm in diameter distinctly red in colour and reaching its maximum in twenty four to forty-eight hours Frequently but not invariably the papule was surrounded by a pink areola In most of the groups of individuals tested in this way control observations by puncture in the same way were made of rabbit-skin extract and calf skin extract with negative results and the observations were also controlled with calf virus living and killed One group tested consisted of 130 girls whose ages ranged from 10 to 16 years and here vaccine virus of calf origin was used for vaccination by the short scratch method at the same time In seventy-five of these girls who had been previously vaccinated during the first three days the size of the papule evoked by the calf virus and the elementary bodies respectively was similar Later the lesion in the case of the latter regressed while in the case of the former it increased in some instances to a vaccinial lesion In fifty-two of the girls who had not previously been vaccinated no reactions occurred with the killed elementary bodies on the third day there was less reaction to the calf lymph than in the case of the former group but by the seventh day all were proceeding to

[1] *Canadian Public Health Journal* February 1933.

a primary take The conclusion arrived at was that the washed elementary bodies of vaccinia virus of rabbit origin elicit an early reaction in previously vaccinated human individuals, but produce no reaction in the absence of previous vaccination These observations would seem to provide a further and important link in the chain of evidence establishing the identity of vaccine virus with the elementary bodies

THE ROYAL SOCIETY CONVERSAZIONE

The isolation of the man of science from the man in the street has often been deplored, and attempts have been made to bring the two together by the publication of popular books on science A visit to a conversazione of the Royal Society reminds us that a barrier to a complete understanding between the two must always exist—the barrier of language For instance, even a dictionary would not help the uninitiated to grasp the meaning of 'A cathode-ray oscillograph is used stroboscopically, by allowing the focused electron-jet to appear only for periods of a fraction of a millisecond at any selected point in the cycle of recurrence, in certain measurements on the ionosphere" The medical man always finds exhibits of professional interest at the Royal Society's conversaziones and among others the artificial larynx shown on May 17th by the Western Electric Company appeals on account of its practical nature This instrument consists of a sound-box holding a delicate metal reed A rubber tube connects one end to an opening in the trachea and from the other end another piece of tubing projects into the mouth At the side of the sound-box is a breathing hole, which enables the patient to inhale and exhale freely When he wants to speak the patient closes this hole with a finger, the exhaled air thus being forced against the reed in the sound-box, the sound thus generated enters the mouth through the rubber tube and is "modulated into articulate speech by the action of the mouth, throat, and nasal cavities, as in ordinary speaking' The instrument is intended for those who have had the larynx removed surgically or who suffer from vocal paralysis Interest in virus diseases shows no sign of flagging Mr J E Barnard and Dr F M Burnett investigating the virus of canary-pox, suggest that it is closely related to that of fowl-pox, and that the bodies seen in infected tissues or body fluids are the virus In studies on varicella, Dr C Russell Amies working at the Lister Institute, has succeeded in demonstrating the presence of elementary bodies in this disease and their agglutination in pure suspension by the serum of chicken-pox patients He has also shown that these bodies are present in the expired air of a patient in the early stages of varicella At the Research Institute of the Cancer Hospital it has been found that a certain fluorescence spectrum is common to cancer-producing tars and oils and to another carcinogenic material of quite different origin This suggested that the substance responsible for the fluorescence spectrum might be responsible also for the cancer-producing action, and the spectrum was used as a guide for isolating carcinogenic material from two tons of pitch Infra-red photography of a section through the heart and of varicose veins show that results obtained by this method are much superior to those obtained by orthochromatic and panchromatic plates An interesting historical exhibit—the earliest standard thermometer in England—was staged by Mr G H Gabb This, known as "the Royal Society Thermometer," was recorded in the minutes of the Society in 1663 The only fixed point, taken as zero, was apparently based on the temperature of the human body, and the instrument was graduated downwards to 90°, "hard frost" being indicated at about 85° This scale remained the standard until about 1730, when Fahrenheit's suggested fixed points of the freezing and boiling points of water were generally employed Dr L S B Leaky has, with his recent discoveries of prehistoric man in East Africa, given a strong fillip to a subject of perennial interest The Kanam mandible, found in Lower Pleistocene deposits is as old as the Piltdown and Peking skulls but the orientation of the cheek teeth and the suggestion of a chin in the Kanam mandible place its possessor nearer to the main human stem The Kanjera skulls were found in association with tools of the Chellean culture These discoveries, and the finding of fragments of fossil anthropoids from the Miocene deposits of the Victoria Nyanza Basin lend support to Darwin's theory that Africa was the birthplace of man Along with exhibits on the production and detection of neutrons, and of a model to illustrate the classical motion of a diatomic rotator with two degrees of freedom," was Ben Jonson's copy of *De Magnete*, by William Gilbert, physician to Queen Elizabeth and to James I Two very interesting lantern-slide lectures were given respectively by Mr Olaf Bloch on recent developments in infra red photography and by Lieut.-Colonel L V S Blacker on the Houston Mount Everest Expedition

INCIDENCE OF MENTAL DISORDER IN LONDON

While the census returns show that the population of the county of London is decreasing, the population of the mental hospitals tends to increase Volume VI of the annual report of the London County Council for 1931,[1] which is devoted to the mental hospitals and the provision for mental deficiency, gives the number of persons of unsound mind for whose accommodation the Council was responsible on January 1st, 1932, as 21,675 —an increase of 253 on the year Save during the war years there has been an annual increase in the mental hospital population over a long period During the decennium 1891–1900 the average yearly increase was 508, during the next decennium it was 473 It fell to 162 during the next quinquennium, and during the quinquennium following (1916–20) it was replaced by an average yearly decrease of 848 But during the decennium 1921–30 there was again a yearly increase of 373 The reason for this rather paradoxical situation, however, is soon discovered It can be presumed that the population of the county is decreasing as the result of migration to the outer ring of Greater London, particularly of younger persons on marriage The result is a gradual increase in the average age of the population remaining in the administrative county, and this, coupled with the increasing longevity of the population generally, makes it likely that there will be a larger number of persons who will have to remain under

[1] Annual Report of London County Council 1931 Vol VI P S King and Son Westminster (1s)

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This REGISTERED HOSPITAL with a SEASIDE BRANCH at Colwyn Bay N Wales is for the treatment and care of those of the Upper and Middle Classes suffering from MENTAL and NERVOUS DISEASES
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In addition to the Main Building there are separate villas Extensive grounds Hard and grass tennis courts cricket and croquet grounds, and a court for badminton There are also wireless installations Golf may be had within easy distance. Occupational Therapy
VOLUNTARY TEMPORARY AND CERTIFIED PATIENTS received
The Hospital is nine miles from Manchester 50 minutes by rail from Liverpool and 3½ hours from London
For terms and further particulars apply to the Medical Superintent, J A C ROY, M B who may be seen in Manchester by APPOINTMENT
Telephone GATLEY 2231 (3 lines)

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Telegrams "Alleviated, London" Telephone Rodney 4741-4742

The above House, which was established in 1826, is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders Certified voluntary and temporary patients are received Separate houses for treatment and accommodation of special cases adjoin the Institution There is a seaside branch Kearsney Court near Dover to which patients may be sent for treatment or on holiday Motor and carriage exercise is provided as required Patients can avail themselves of a course of physical drill Tennis Courts Entertainments dances, and indoor amusements held throughout the year Terms from £3 3s per week
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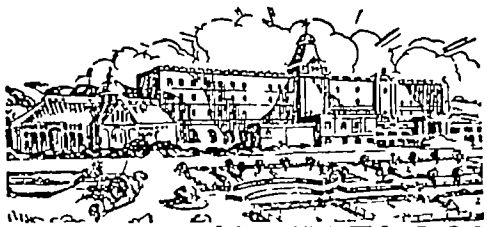

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Telephone No Bathe aston 8189

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Tel and Telegrams Haynes Brentwood 45

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permanent care because of decay of mental health The regular excess of admissions over exits therefore must not be taken to imply an increase in the incidence of mental disorder in the general population of London it represents largely an accumulation of chronic patients The bed accommodation at the ten county mental hospitals on the basis of the requirements of the Board of Control as to bed space was 21 068 but the number of patients resident on January 1st 1932 was 21 419 At every hospital except Horton the number for which measured accommodation is provided was exceeded It is hoped that by some time in the present year the accommodation for patients will have been increased by 669 beds and extension schemes providing for a further 830 are projected but are held up by the economic situation The recoveries in mental hospitals during 1931 were 31 41 per cent of the admissions and the percentage of deaths on the average number on the register was 5 83 The number readmitted after having been discharged recovered was 352 and 115 of these were readmitted within twelve months of the discharge Of the 173 voluntary and temporary patients received under the Mental Treatment Act 69 were discharged (33 as recovered 20 as relieved and 16 as not improved) 3 were transferred to the certified class and 5 died leaving 96 remaining on the registers

BLINDNESS IN PALESTINE

The prevalence of blindness in Palestine was revealed by a Government census in 1931 which showed that 843 of every 100 000 inhabitants were totally blind The nearest figure to this total elsewhere in the world is that of Egypt (776) in Cyprus it is 420 and in England by way of contrast the figure is 73 References have been made in these columns to the steadily growing work of the Ophthalmic Hospital Jerusalem an institution under the control of the Grand Priory of the Order of St John of Jerusalem In his report for 1932 the warden Lieut.-Colonel J C Strathearn honorary consulting ophthalmic surgeon to the Government of Palestine records briefly an ophthalmic survey he undertook last summer of the state of vision among the inhabitants in the villages of the Plains It was found that the previous census returns had underestimated the amount of blindness in the eleven villages examined and probably also in the general population elsewhere Of the 1 118 blind eyes in these villages acute conjunctivitis a preventable disease was shown to be the primary cause in 78 per cent The High Commissioner for Palestine ordered a memorandum on the whole subject to be prepared and after this had been studied it was decided that the Government and the Ophthalmic Hospital staff should jointly attack this problem on comprehensive lines It is proposed to open additional clinics and equip a travelling motor unit under a specialist medical officer Furthermore a village school is to be established in which voluntary teachers under the direction of an English lady also acting in a voluntary capacity should train Palestinian girls to travel in this part of the country and teach the fellahin the elementary rules of first aid hygiene, home nursing and sanitation so as to stamp out preventable blindness During 1932 the hospital dealt with 1 399 in patients and 21 350 out-patients , the total attendances reached the record figure of 97 063 and there were 3 716 operations Of the new patients 15 754 were Moslems 3 617 Christians and 1 979 Jews Once again the warden has to record grave anxiety about the water supply of this institution Last year the scarcity was greater than ever and in the city disaster was only averted by bringing in an emergency supply from the adjacent foothills Even so from July to September water was only available at the hospital for a short period every sixth day and the year finished with the cisterns empty The December rains which usually arrive in sufficient quantity to relieve all anxiety entirely failed and the prospect for the coming months is very gloomy The warden regards such continued water deficiency as the main reason for the increasing incidence of blindness during the past five years in sharp contrast with the preceding seven years with better rainfall in which there was a steady decline

FEE-SPLITTING

An article on this disagreeable subject in our issue of March 11th (p 422) gave the following definition of the practice known in America as dichotomy By fee-splitting is meant an arrangement between general medical practitioner and consultant or specialist by which the former retains or receives back part of the fee paid to the latter for special services The essence of the transaction is that part of the consultant's fee unknown to the patient is deflected to the practitioner who advised the consultation or operation The receipt of secret commissions in this country is recognized as being against the public interest and also forbidden by law But unfortunately it is one thing to make a law and quite another to enforce it This matter we are glad to note has now been raised in the General Medical Council Sir Norman Walker the President at the close of his address from the chair on Tuesday made a significant reference to it I have been informed he said that the practice of dichotomy or fee-splitting which we have heard is regrettably prevalent in some countries is raising its head in this I wish I could think that my information is incorrect A conviction under the Act for Punishment of Corrupt Transactions with Agents would inevitably bring he offender under the jurisdiction of this Council So far so good Fee-splitting is a noxious growth which can only flourish in the dark and the President's warning has received wide publicity in the Press It is to be hoped however that if instances of the practice are brought to light disciplinary action will not have to wait upon proceedings in a criminal court.

The George Alexander Gibson Memorial Lecture will be delivered before the Royal College of Physicians of Edinburgh on Thursday and Friday June 1st and 2nd at 5 o'clock by Professor K F Wenckebach of Vienna Subject The Beri-beri Heart and its Significance for Cardiology '

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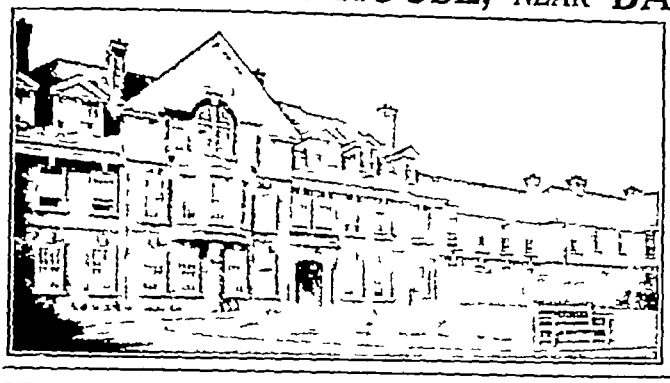

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BRITISH INFLUENCES IN PSYCHIATRY AND MENTAL HYGIENE

DR ADOLF MEYER'S MAUDSLEY LECTURE

The fourteenth Maudsley Lecture, under the auspices of the Royal Medico Psychological Association, was delivered on May 17th by Dr Adolf Meyer psychiatrist in chief of the Phipps Psychiatric Clinic, Johns Hopkins Hospital, Baltimore U S A The lecture was delivered within ten minutes of Dr Meyer's arrival at Waterloo from the United States, and an audience of about 400 people cheerfully waited for one hour before he arrived The chair was taken by Dr R B CAMPBELL of Stirling

Dr MEYER began by acknowledging his personal indebtedness to British science and medicine, and especially British psychiatry, largely because of what he had received in, and since his early post-graduate work in this country forty-three years ago He mentioned especially in this connexion Francis Caird James Taylor, Hughlings Jackson Victor Horsley, Gowers and Ferrier Clouston's lectures on The Neuroses of Development were a great inspiration to him as also was the Second International Psychological Congress in London in 1892 He set out to discuss four aspects of his subject—namely (1) the genesis, meaning, and importance of a psycho biological rather than a psycho-physical conception of man and what this conception owed to British thought especially to Hughlings Jackson and Thomas Huxley, (2) the meaning of the resulting truly functional formulation of pathology, (3) the resulting interest in the individual and the development of mental hygiene, and (4) some essential perspectives of present day psychiatry Lange's and Wundt's essays failed him in his quest for a satisfactory understanding of life and psyche, and he received much more enlightenment from reading Huxley's essays and Hughlings Jackson's writings on neurology In British thought he found, as a rule, a very definite biological comprehensiveness in contrast to the narrow interest in the cell and the isolated organ which was typical of Continental thinking In Sir Charles Sherrington's concept of the integrative function of the nervous system one felt that he was doing justice to human nature and to the demands of the sciences available for its study During the last forty years a really vital sense of the human individual had made its appearance, especially through the British emphasis on biology in a scientific naturalism and on the living unit Psychologists no longer felt that they were working with a body which happened to be complicated by a mind, or a mind that happened also to be hampered by a body, there was a growing sense of an intrinsic unity, notwithstanding the traditional contrasts By pondering on the various systems the student arrived at a general habit and principle of all science dealing with function, he wanted to know when and where the event, experience, or function occurred, under what conditions, with what factors, with what working effect, and within what range of regularity and plasticity and capacity for modification What was needed was a concept of man which included what, in everyday practical life, one recognized and felt man to be—namely an organism with a personality function He touched briefly on the work of Sir Frederick Mott, whose first study turned on the invasion of the brain by syphilis, and later on the endocrines, but Mott's clinical interests, he said, were at Charing Cross Hospital and not in asylums Kraepelin—more interested in his basic laboratory studies on the work-curve the effects of fatigue, and the influence of alcohol and other drugs than in the history and personality of his patients—had practically ignored in his conceptions of dementia praecox a constitutional and individual experience factor, which seemed to the lecturer to be paramount

MENTAL HYGIENE

These considerations brought Dr Meyer to the question of the interest of the individual and mental hygiene He said that for his own part he had always felt an urge to understand and guide, not merely to describe and dissect the patient He proceeded to describe certain American work which had a social as well as a psychiatric character A proposal of Miss Louise Schuyler in 1905 to introduce the European after care principles into New York State made it possible to utilize this experience together with something forming part of the real pathology and therapy of psychiatry, and it paved the way to a new venture—the appointment of the first official psychiatric social worker in 1906 When in 1908 Mr Beers turned his attention to reform of mental hospitals, the lecturer urged him to do it on the basis of mental hygiene, and this received support from Mrs Ethel Dummer, who was strongly influenced by the writings of Booth and Maudsley By the term "mental hygiene" was meant something more than mere child psychiatry and a diluted kind of general psychiatry it implied an intimate study and public education in favour of those factors which made for mental health in a positive and creative, and not merely in a passive or remedial way It was the ambition of the hygienist to think and speak in terms of natural opportunities and resources, with a balance in favour of the hale and whole conception of life There were two methods of procedure which might readily be used side by side On the one hand, there should be a systematic and well-balanced attention to the human—the psycho biological—health tissues, depending on a sound evaluation and testing out of intuitions and emotions and of individual and social contributing factors On the other hand, there should be a most thorough and critically constructive control of the strictly professional work, pushing, wherever feasible, the possibilities of intensive investigation, not merely as child study but as part of the adult problem He protested against mere leaflets of instruction and thought that while it might be well not to cultivate high pressure production, it was urgent to insist on substantial work within the range of controllable data The most difficult task in psychiatry Dr Meyer described as that of balancing the concreteness and profusion of its data and what was needed to keep order among the mass of such data Unless our sciences could concentrate and focus, as well as differentiate their data, their general average effect would be chaos or sham He thought that at the present time it was well to concentrate after a period of great expansion What had been gained during the last generation was encouraging, but it needed to be straightened and sorted out He hoped that the study of the pathology of the living and the dead would become more contributive to human welfare, and that without turning the world into a pathological laboratory The question was now being asked of psychiatry and mental hygiene what it was doing to fill in the gaps of knowledge, and to assemble the experiments of nature and of man in a way that allowed the placing of samples before those competent to create public opinion

Finally, Professor Meyer said that all interested in this subject would always want to come and learn in the country which produced the Magna Charta, Bacon's experimental philosophy, Shakespeare's drama and generations of scientists who were always thoughtful of the man in the street Those workers in the United States who had been favoured with visitors and co-workers from Britain valued very highly what these people had taken to the States in training and outlook The United

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(3) A COURSE IN OBSTETRICS AND GYNAECOLOGY AND CHILD LIFE AND HEALTH from July 17th to Aug 12th Fee £10 10s (Minimum number 12)

In addition to the above the following *Special Courses* have been arranged SUMMER TERM

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VENEREAL DISEASES—Royal Infirmary Minimum number 5 Fee £10 10s
DISEASES OF EAR NOSE AND THROAT—Ear and Throat Dispensary Cambridge Street Fee £4 4s
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UROLOGICAL SURGERY AND TREATMENT OF FRACTURES (Spring Term)—Fee £3 3s
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DURING THE PERIOD OF THE GENERAL COURSES (AUGUST SEPTEMBER)

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Further particulars may be had on application to the Hon Secretary Post Graduate Courses in Medicine University New Buildings Edinburgh.

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Attention is called to this CASH PRIZE of £100 to be offered on January 1st 1934 to the author of the best Essay upon the treatment, according to the principles of Homœopathy, of INSANITY in all its forms For full particulars apply to the Secretary British Homœopathic Association (Inc) 45 Russell Square, London W C 1

States was sometimes looked upon as an experimental ground which was still a land of great possibilities although its limitations were beginning to be appreciated But his own countrymen looked to Britain as a country with fascinating economic and cultural and social problems and with a people having a blend of present-day practical sense respect for the past and mindfulness of the immediate future Those who knew how to come and learn would always have cause to cherish Anglo American contacts and co-operation

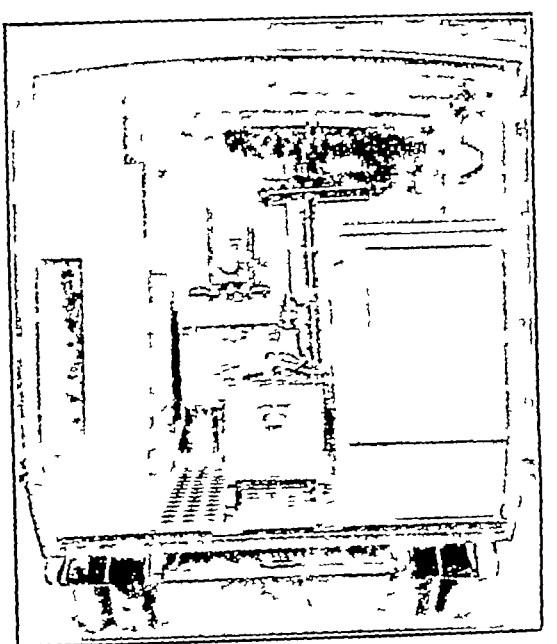
On the motion of Sir Hubert Bond seconded by Professor D K Henderson a resolution of thanks to Dr Meyer was carried by acclamation

MOBILE X-RAY APPARATUS

THE HOME AMBULANCE UNIT

The general practitioner would undoubtedly welcome more help from radiology if he could get it His difficulty until recently was that unless he could send his patient to a department or consulting room equipped with permanent apparatus he had to dispense with x ray help altogether During the last few years the portable diagnostic outfit has partly filled the breach The manufacturers who first designed this set deserve the highest credit for it really represents a marvellous achievement to pack into containers not larger than a pair of suitcases a tube and transformer which are not only ray proof and shock proof but will also take very good radiographs Nevertheless *pace* its makers the portable set has definite limitations It will take a great many of the usual radiograms with reasonably short exposures and is perfectly effective when the exposure is no object but in work that requires very short exposures and high power the radiologist feels the need of a set with considerably more reserve It is unreasonable to expect even the best of portable sets to take a chest at 2 metres in a fraction of a second Moreover the portable set has to be worked off the house current and the ordinary main supply has several grave defects chief among which are its lamentable fluctuations An x ray transformer makes a heavy demand on the supply and when it is put on the main in a country district the voltage is apt to waver considerably Moreover in urban practice changes occur through the varying demands of other users When a set is working on the same substation as an electric lift or *a fortiori* as a factory or workshop employing electric power intermittently the radiologist is never certain what his voltage is going to be and only the best of stabilizers can make him moderately secure This objection applies not only to a portable set but also to the permanent installation unless this is very carefully protected The ward set mounted on a trolley has more power but not all that is desired and is also at the mercy of a fluctuating supply

Enterprising commercial concerns have provided travelling x ray facilities since the comparatively early days of the science when the power was supplied from a battery of accumulators working through a coil This system has been progressively developed but is not used nearly as much as it ought to be Its latest development demonstrated on May 10th at Grosvenor Crescent by the Joint Council of the Order of St John of Jerusalem and the British Red Cross Society suggests a much wider scope of utility The Home Service Ambulance Committee has added to its equipment a mobile x ray unit which appears not only to be the last word in travelling x ray apparatus but also to possess considerable advantages even over the permanent installation It is housed in a neat van mounted on a 27 h p Bedford chassis made by Vauxhall Motors The front of the van contains the generator switch board and electric controls the rear part is fitted out as a dark room and when the unit is on the move accommodates the whole of the apparatus The long and the short tube stands fold up and stand upright in a corner and the substantial wooden couch is pushed into a slot on the left hand side of the vehicle The tubes are housed in wooden drawers and the Potter Bucky diaphragm in its own holder and the transformer and control trolley fit into rails in the middle of the floor The unit can be assembled and ready for work within seven or eight minutes of arriving at the patient's home The most remarkable feature is the amplitude and steadiness of the supply The generator is driven by the engine of the van which develops 44 brake h p at 2 400 revolutions The output is controlled by a voltage regulator which automatically interposes and withdraws resistances in the field circuit This device cuts down fluctuation to within 1 per cent and the remaining error is smoothed out by a milliampere second relay on the control trolley Steadiness is helped by the use of an unusually high frequency—90 cycles as against the ordinary 50 of the National Grid—and as the iron and copper losses of the transformer are so low it can be made comparatively small The tube a metalix which is self rectified normally works at 90 kV and can if required pass a radiographic current of 100 mA—a genuine 100 mA as Mr H T Ferrier the council's radiographer demonstrated The result is that for ordinary pictures it will work comfortably on exposures of one thirtieth to one



Interior of mobile unit showing tube-stands transformer and control trolley washing tank chair and swinging screen for housing [illegible] when in use

fortieth of a second and even for 2 metre work will keep within the shortest exposures known to the equipment of a chest hospital Potter Bucky work can be done with exposures of under a second The tube stand can be adjusted for work over or under the couch or upright Screening can be carried out comfortably on the couch with the screen on the patient's abdomen but in the upright position the patient must hold the screen in front of his body and it is obvious that delicate palpation work is impracticable especially as there is no provision for stopping secondary radiation except the screen itself The use of the apparatus therefore is primarily radiographic When an exposure is to be made the supply required is adjusted to an artificial load and the change over to the tube and back throws only a slight stress on the generator The temperature of the developer and hypo is maintained by electrical resistances and it is found that if the current is turned on about ten minutes before leaving the carriage the fluid is heated to 65° in good time for use this temperature is maintained for an appreciable time after the current is turned off Thermostatic control was

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THE UNIVERSITY OF SHEFFIELD

DEPARTMENT OF BACTERIOLOGY

The Council are about to appoint a JUNIOR ASSISTANT BACTERIOLOGIST and DEMONSTRATOR Salary £300 during the first year and £350 for the second year

Application must be received by the undersigned (from whom further particulars may be obtained) not later than May 20th

W M CIBBINS Registrar

THE GOVERNMENT OF INDIA INVITES APPLICATIONS FOR THREE GAZETTED APPOINTMENTS IN THE MEDICAL RESEARCH DEPARTMENT

Applications will be received from Europeans and Indian candidates who must be natural-born British subjects and the children of British subjects or statutory natives of India

Note (a) and (b)—Applicants who must be qualified doctors and must not be members of the Indian Medical Service should have had considerable practical experience in Bacteriology and preferably have undertaken original research. For post (1) at the Haffkine Institute, Bombay a thorough knowledge of animal technique of preparation of Plague vaccine is also required

Terms—Commencing pay will be fixed at a point in the incremental scale of Rs 625—Rs 1 350 a calendar month commensurate with age and qualifications etc and the pay will be subject to such temporary reduction (at present 5 per cent) as may be imposed by Government Sterling equivalent of Rs 625 and Rs 1 350 respectively at present rate of exchange (less 5 per cent.) £534 and £1 154 per annum

Tenure—Permanent subject to satisfactory completion of a probationary period of three years Posts are non pensionable but on confirmation appointees are eligible for the benefits of a special provident fund

Passage—Free first-class passage to India also for candidates of non Asiatic domicile only similar return passage subject to usual conditions

Strict medical examination

Post (c)—Applications are invited from and restricted to officers of the Indian Medical Service The selected officer, who will also be required to serve a probationary period of three years will be eligible for the pay of his rank plus a Bacteriological allowance of Rs 250 a calendar month.

Forms of application may be obtained upon request by post card from the High Commissioner for India General Department India House Aldwych London W C 2 where applications will be received up to July 1st 1933, for transmission eventually to the Recruitment and Appointments Board for the Medical Research Department in India.

Candidates are liable to be required to attend for interview in England

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Applications marked House Physician with copies of three recent testimonials should be sent to the Medical Superintendent at the above address

COUNTY COUNCIL OF ORKNEY

Wanted a MEDICAL OFFICER for the Islands of South Ronaldsay and Burray to take up duty on August 1st

For particulars apply with testimonials and references to the County Clerk Commercial Bank Buildings, Kirkwall

Kirkwall. April 25th 1933.

THE ALL INDIA INSTITUTE OF HYGIENE AND PUBLIC HEALTH CALCUTTA INVITES APPLICATIONS FOR THE FOLLOWING GAZETTED POSTS Viz.

(1) ASSISTANT PROFESSOR OF PUBLIC HEALTH ADMINISTRATION with additional experience in publicity and propaganda work.

(2) ASSISTANT PROFESSOR OF BIO-CHEMISTRY AND NUTRITION

(3) ASSISTANT PROFESSOR OF MALARIOLOGY AND RURAL HYGIENE (including Venereology and Tuberculosis)

(4) ASSISTANT PROFESSOR OF VITAL STATISTICS AND EPIDEMIOLOGY

Terms—Pay Rs 375—35—1 075 a calendar month Pay higher than initial rate might be given having regard to age and qualifications. Emoluments liable to revision if necessary in Services in India or of a decision by Bengal Government to revise rates of pay of similar staff of School of Tropical Medicine Calcutta (Rupee 1 6d approximately) The appointments are non pensionable but appointees will be eligible for the benefits of the Contributory Provident Fund (India)

Tenure—Five years in the first instance subject to six months notice on either side and extensible thereafter at the discretion of Government for such periods at a time as may be agreed upon A formal agreement will be entered into with appointees provided they are not already in Government service in India

Leave—Appointees of non Asiatic domicile will be eligible for leave during agreement in accordance with Model Leave terms those already in Government service in India will be eligible for leave in accordance with Fundamental Rules or such other leave rules applicable to their service to those of Asiatic domicile special leave rules will apply Officers will be bound by the leave rules applicable to them and such revisions thereto as may be made from time to time

Passage—Free first-class passage to India also for candidates of non Asiatic domicile only similar return passage subject to usual condition

All candidates will on appointment be regarded as serving in a vacation department on distinct understanding that withdrawal of this concession if and when found necessary will not entitle them to compensation No private practice including laboratory and consultant practice will be allowed

Forms of application may be obtained upon request by post card from the High Commissioner for India General Department India House Aldwych London W C 2 where applications will be received up to July 1st 1933 for transmission eventually to the Recruitment Board for the All India Institute of Hygiene and Public Health Calcutta.

Candidates are liable to be required to attend for interview in England.

GOVERNMENT OF SOUTHERN RHODESIA.

APPOINTMENT OF MEDICAL SUPERINTENDENT MENTAL HOSPITAL, BULAWAYO

Applications are invited from male Medical Practitioners for the post of Medical Superintendent of the Mental Hospital Bulawayo Southern Rhodesia. Applicants must have had suitable experience in mental disease and will be expected to commence duty in October 1933 or shortly after Candidates should be in possession of the Diploma in Psychological Medicine The successful candidate will also be required to undertake certain routine medical duties in Bulawayo in connection with the Government Medical Service

Salary £600 per annum rising by £40 per annum to £1 000 per annum (subject to temporary deductions in terms of the Public Services Economy Act 1931) plus a pensionable allowance of £200 per annum for unfurnished quarters light and water for which purpose a house is provided in the vicinity of the hospital Consultant practice but not private practice will be allowed The post is pensionable in terms of the Public Services Act 1931

Application forms and further information regarding the terms of appointment and conditions of service can be obtained from the Official Secretary Office of the High Commissioner for Southern Rhodesia, Crown House Aldwych London W C 2 to whom applications should be sent not later than May 31st

CARDIFF ROYAL INFIRMARY (Associated with Welsh National School of Medicine)

(Number of available Beds—490)

Applications are invited for the post of HOUSE SURGEON—Surgical Unit

Salary is at the rate of £50 per annum with board and lodging The appointment is for six months commencing June 3rd

Application with copies of three recent testimonials should be submitted not later than May 22nd next.

R. ARMSTRONG Medical Superintendent.

May 9th 1933

THE ALL INDIA INSTITUTE OF HYGIENE AND PUBLIC HEALTH CALCUTTA INVITES APPLICATIONS FOR THE FOLLOWING GAZETTED POSTS Viz.

(1) PROFESSOR OF BIOCHEMISTRY AND NUTRITION

(2) PROFESSOR OF MALARIOLOGY AND RURAL HYGIENE (including Venereology and Tuberculosis)

(3) PROFESSOR OF VITAL STATISTICS AND EPIDEMIOLOGY

Terms—Pay Rs 375—125 3—1 565—125 3—1 750 a calendar month plus a compensatory allowance of Rs 500 a calendar month in lieu of private practice. Pay higher than initial rate might be given having regard to age and qualification Emoluments liable to revision if necessary in event of any grading down of pay of Public Services in India or of a decision by Bengal Government to revise rates of pay of similar staff of School of Tropical Medicine Calcutta. (Rupee 1s 6d approximately) The appointments are non pensionable but appointees will be eligible for the benefits of the Contributory Provident Fund (India)

Tenure—Five years in the first instance subject to six month notice on either side and extensible thereafter at the discretion of Government for such periods at a time as may be agreed upon A formal agreement will be entered into with appointees provided they are not already in Government service in India

Leave—Appointees of non Asiatic domicile will be eligible for Leave during agreement in accordance with Model Leave terms those already in Government service in India will be eligible for leave in accordance with Fundamental Rules or such other leave rules applicable to their service to those of Asiatic domicile special leave rules will apply Officers will be bound by the leave rules applicable to them and such revisions thereto as may be made from time to time

Passage—Free first-class passage to India also for candidates of non Asiatic domicile only similar return passage subject to usual conditions

Applications for all three posts will be accepted from Officers of the Indian Medical Service to whom the following terms will apply Emoluments—basic pay of rank (time scale IMS Civil) Overseas pay if admissible at the prescribed rate special pay Rs 250 per mensem compensatory allowance in lieu of private practice Rs 500 per mensem Pay subject to emergency cut so long as it is at Tenure same as for non recruited Leave under Fundamental Rules as applicable to IMS Officers on appointment to be recalled to IMS Officers

All candidates will on appointment be regarded as serving in a vacation department on distinct understanding that withdrawal of this concession if and when found necessary will not entitle them to compensation No private practice including laboratory and consultant practice will be allowed

Form of application may be obtained upon request by post card from the High Commissioner for India General Department India House Aldwych London W C 2 where applications will be received up to July 1st 1933 for transmission eventually to the Recruitment Board for the All India Institute of Hygiene and Public Health Calcutta

Candidates are liable to be required to attend for interview in England.

INDIAN RESEARCH FUND ASSOCIATION

Wanted for service with the Malaria Survey of India a competent RESEARCH WORKER medical qualification preferred capable of undertaking and conducting inquiries in Malaria in the field and in the laboratory Special consideration will be given to candidates with previous experience of research work especially in relation to Malaria. Appointment will be made on the basis of three-yearly contract subject to one year's probation Salary Rs 1 500 per mensem rising by Rs 100 annual increments to Rs 1 700 in the 1st year (equivalent at present rate of exchange to £1 340 to £1 520 per annum but is subject to the 5 per cent emergency cut so long as it lasts) with usual departmental cut so long as it from date of landing in India. Free passage out and home first-class by P & O or equivalent at termination of contract or period of leave on full pay after 10 years service Passage on termination of contract or on retirement after 15 years service conditions regarding leave after 5 years probation not satisfactory Usual service conditions regarding leave after 5 years with full pay after 15 months service or equivalent proportion cumulative with usual casual leave not exceeding 15 days in the year Suitable man would have every prospect of renewable agreement or of obtaining suitable appointment on termination of present appointment Applicants should state qualifications and experience with full particulars of appointments held and should forward copies of relevant testimonials to the Secretary Indian Research Fund Association Simla from whom any further information as to qualifications may be desired or on which reports can be obtained The application should reach the Secretary Indian Research Fund Association by July

rejected as unnecessarily expensive Mr Ferrier showed that a radiograph could be developed and exhibited in three minutes by the clock, normally he would prefer to take five minutes and use slightly cooler developer, but he demonstrated the extraordinary dispatch with which results could be obtained In addition to ordinary dark-room lamps the dark room is fitted with an illuminated viewing box over the washing tank, and others are carried for the purpose of exhibiting the finished films at the bedside

The value of this service is obvious and cannot be too widely realized The unit is at the disposal of the medical profession for reasonable charges,* and should meet an increasing demand Moreover, hospital x ray departments and consulting radiologists might profitably investigate this very efficient method of stabilizing their current It might pay, instead of using the public supply with a stabilizer to install one of these self-regulating generators coupled to a motor The cost ought not to be much more than that of a stabilizer It is a pity that the committee had to go to Italy for the generator, apparently no British firm was in a position to supply one within a reasonable time or at a reasonable price Considering the resources of our electrical trade, this seems an anomaly capable of cure

SPREAD OF SMALL-POX IN PARTLY VACCINATED COMMUNITIES

The replacement in Great Britain of the severe form of small-pox which is still endemic in India and the East, by the milder and almost non-lethal alastrim or variola minor, has brought up the questions whether any change in the present practice as regards small-pox control is desirable, and whether any alteration of the vaccination laws should be contemplated With a view to adding to the sum of available data on which sound conclusions may be based, Dr Percy Stocks, reader in medical statistics in the University of London, has addressed himself to the following problems the degree of protective efficacy on the individual of vaccination practised at different intervals of time before and after exposure to infection with variola minor the liability to attack in unprotected persons of different ages, the effects of dilution of the susceptible fraction of the population by protection of different proportions of the people, the manner in which an epidemic when out of effective control spreads in an urban and a country district and the reasons why it eventually comes to an end He has studied a series of 1 433 cases of variola minor occurring in the metropolitan borough of Stepney during 1929–30 together with records of infant vaccination before 1930, and another series of 17 708 cases occurring in the county of Durham A report of the conclusions reached with regard to the first series has now been completed, and was published in the *Annals of Eugenics* (vol v, Parts I and II, January, 1933) Towards the expenses of this research a grant was made by the British Medical Association The following is a summary of the conclusions reached

In the three years preceding the Stepney epidemic one-third of all infants surviving the first year in Stepney had been vaccinated, the rate being 70 per cent of that in the country as a whole It was estimated that, in the general population of that borough at the beginning of the epidemic the proportions who had been vaccinated in infancy were about 35, 40, and 60 per cent respectively in the first three decades of age, or, adding the proportions estimated to have been primarily vaccinated after infancy about 45 65, and 80 per cent respectively This did not suffice to protect the community from an epidemic In the 643 households attacked by small-pox, however, the corresponding proportions who had ever been vaccinated were only 12 29 and 43 per cent

The liability of home contacts unprotected by vaccination to be attacked reached a maximal value in August and September, 1929, by which time most of the borough was involved From that date onwards the liability steadily declined and a straight line fitted to either the declining apparent infectiousness or to the declining attack rate in unprotected contacts up to the end of 1930 reached the zero point in July, 1932 Since the epidemic actually died out at the end of the second quarter in 1932 Dr Stocks suggests that this statistical procedure may provide a means of predicting the duration of an epidemic The steady decline in the attack rate among unprotected home contacts after the epidemic had become diffused indicates either that the virus became progressively less infective or that latent immunity was being acquired by the population Although no evidence in favour of the latter explanation was found from the study of the subsequent attack rates of contacts who escaped immediate infection, Dr Stocks calls attention to the curious fact that the immediate attack rate in unvaccinated children under 10 years old who were exposed to infection was no lower in 1930 than in 1929, whereas in adults it was much lower He considers that it would be difficult to account for this on the first hypothesis whereas it might be explained if the bulk of the propagation of small pox and latent immunization associated with it took place in work places, factories, and wherever else adults were crowded together

In the first year of the epidemic the mean number of persons in each house affected by small pox was 9 of whom 5 6 were unprotected by vaccination, in the second year the corresponding figures were 8 2 and 5 In the first three months of the epidemic two thirds of the previously unvaccinated home contacts accepted vaccination, but after six months this proportion fell to 30 per cent, and with recrudescence of the epidemic gradually rose again to 45 per cent At the start of the epidemic 55 per cent of previously vaccinated home contacts accepted revaccination, but this proportion rapidly fell to about 17 per cent, and did not rise again

INCUBATION PERIOD AND SOURCES OF INFECTION

The incubation period of variola minor, it is concluded, seems to lie outside the limits of twelve to sixteen days in at least one eighth of all cases but it can very rarely be less than ten or more than eighteen days The mean interval from the onset of the symptoms to the appearance of the rash was 2 7 days When a small pox case developed the rash eleven to twenty-four days after a previous case in the same house, it was regarded as being secondary to that is to say infected by the latter When the interval was less than eleven or more than twenty four days, some other source of infection was postulated The reasons for this deduction are indicated graphically in the report and also argued on statistical considerations When a small-pox case was removed to hospital on the day of the appearance of the rash the subsequent attack rate among unprotected home contacts was significantly less than in cases where such removal was delayed The attack rate also increased from 8 per cent (when four days elapsed from the onset of the symptoms to removal) to 25 per cent when eight, nine ten, or eleven days had elapsed

PROTECTION AFFORDED TO THE INDIVIDUAL BY VACCINATION

The cases of small pox included 157 persons who had been vaccinated less than twenty four days before attack but in only five of these did the interval from vaccination to onset exceed twelve days and in only one case was it greater than sixteen days Owing to the time required for complete protection to develop, which is presumably variable, like the incubation period of small pox itself it is evident that immunity from attack cannot be guaranteed, even if vaccination is performed immediately after exposure to infection Of 145 previously unvaccinated home contacts who were vaccinated on the day of, or the day following the appearance of the rash in the first case in the house, six were attacked which indicates, according to Dr Stocks, that vaccination after exposure cannot reduce the risk to the previously unvaccinated below about 4 per cent Comparing the actual

* Information may be obtained from the secretary Mobile X Ray Department 12 Grosvenor Crescent S W 1 (Sloane 7136)

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attacks with those expected in the same age distribution of unvaccinated persons the vaccination of unprotected contacts within two days of the appearance of the rash in the first case reduced the risk of immediate attack to one seventh vaccination three or four days afterwards reduced the risk to one quarter vaccination five six or seven days subsequently reduced it to two thirds but with longer intervals there was no evidence that it was effectual For statistical purposes protection has been regarded as adequate if vaccination was performed within four days it appears however that definite advantage is gained by no postponing the vaccination of contacts beyond the second day after appearance of the rash

The primary cases of small pox showed a relative excess of young adults in comparison with the secondary cases this suggests that small pox is spread in workplaces more than in schools The proportion of young adults in affected houses who had been previously vaccinated increased during the epidemic owing no doubt to vaccination in factories but this was not the case in children The ages of maximal attack rate in the whole population were 5 to 10 both for primary and for secondary cases but the change of attack rate with age was greatly influenced by the differing proportions protected by vaccination at different ages this proportion being highest at 20 to 25 The total effect of vaccination before and after exposure was to protect adequately about 30 per cent of home contacts at the ages 0 to 5 40 per cent at 5 to 10 50 per cent at 10 to 15 60 per cent at 15 to 30 70 per cent at 30 to 45 40 per cent at 45 to 50 30 per cent at 50 to 60 and 8 per cent after 60

The susceptibility to attack in unprotected home contacts was highest at the ages 15 to 20 and 0 to 50 it was significantly lower at 20 to 30 and rapidly declined after 50 The aggregate risk of immediate attack to the unprotected contacts of all ages was 1 in 4 At ages under 20 the risk to those vaccinated in infancy only was one twentieth of that in the unvaccinated at ages 20 and 40 it was about one tenth and at ages over 40 about one half This was also found to be true when the vaccinated and unvaccinated living in the same houses were compared Relating the actual attacks to those expected in the same age distributions of unvaccinated contacts vaccination less than twenty years before reduced the risk of immediate attack below one twentieth vaccination twenty to thirty years before reduced it below one twelfth vaccination thirty to forty years before reduced it to one ninth and if more than forty years before to less than one half For statistical purposes Dr Stocks reasons protection after vaccination may be regarded as adequate for thirty years although it is no longer at its maximal potency after twenty years Among persons vaccinated within five years about 1 in 150 may be expected to contract variola minor when exposed to infection in the house He estimates that in the Stepney epidemic prior vaccination saved 392 and subsequent vaccination saved 135 home contacts from attack leaving out of account the persons infected by these cases

PROTECTION AFFORDED TO THE COMMUNITY BY VACCINATION

The mean number of persons per dwelling was higher in houses invaded by small pox than for the borough as a whole The proportion of contacts unprotected did not show any relation to the number of persons in the house The attack rate among the unprotected contacts increased in general with the number of persons living in the house but was definitely lower in households of ten to twelve persons than in households of four to 6 this being no doubt due to separation into two or more families occupying different rooms Although no evidence was found that a protection rate as high as 60 per cent suffices to protect a community from the spread of an epidemic as distinct from protecting the vaccinated persons in it the risk to unvaccinated persons in an infected house appeared to have been considerably reduced when more than half the persons living in the house were protected by vaccination the important factor being the ratio of protected to unprotected persons rather than the actual numbers of each

South Africa

[FROM OUR CORRESPONDENT : PRETORIA]

Ministry of Public Health

As the result of coalition between the two large political groups—the Nationalist Party and the South African Party—certain Ministerial changes have taken place important among which is the change in the Public Health portfolio In 1924 Dr D F Malan was appointed Minister of Public Health Education and the Interior in the Hertzog Government a post which he occupied for nine years until owing to his opposition to the principle of coalition he was unable to continue in the Cabinet The medical profession in South Africa owes much to Dr Malan It was he who finally succeeded in getting the Medical Dental and Pharmacy Bill put on the Statute Book For a dozen years this Bill had been brought up regularly only to be talked out of the House by the protagonists of unqualified practice The Bill as finally passed gives entire protection to qualified practitioners it provides that only those who hold a recognized degree or diploma shall be admitted to the *Register* Dr Malan was also responsible for guiding through the House the Foods Drugs and Disinfectants Bill and important amendments to the Public Health Act Although a layman he had an excellent grasp of medical matters and always showed much sympathy for professional ideals He is succeeded in office by a comparatively young man Mr Jan Hendrik Hofmeyr nephew of the former Cape Prime Minister of that name Mr Hofmeyr had a particularly brilliant career at the South African College now the University of Capetown From there he proceeded to Balliol College Oxford as a Rhodes Scholar taking a first in Greats in 1916 He was appointed successively lecturer in classics at Capetown University professor of classics at Johannesburg principal of the Johannesburg University College (which under him became the University of the Witwatersrand) and Administrator of the Transvaal His accession has given much satisfaction in educational and in medical circles since his long experience of university matters will make him a capable and sympathetic Minister

Dr Robert Broom, F.R.S.

The notable contributions to science of the medical practitioner Dr Robert Broom have been recognized by the University of Witwatersrand which at its recent graduation ceremony conferred on him the degree of Doctor of Science *honoris causa* Dr Broom was born at Paisley Scotland in 1866 During his boyhood he became keenly interested in botany and natural history and in 1886 he was appointed secretary to the Natural History Society Glasgow In 1887 he obtained his B Sc in geology at Glasgow University and in 1889 his M B C M In 1892 he migrated to Australia partly for reasons of health but chiefly to study the marsupials and monotremes During his four years there he practised in country towns but devoted much of his time to stratigraphical research He came to South Africa early in 1897 mainly to work on the fossil reptiles of the Karroo and this work has absorbed most of his energies during the last thirty years In 1903 he was appointed professor of zoology and geology at the Victoria College—now the University of Stellenbosch—and honorary curator of fossil vertebrates in the South African Museum Capetown and in 1911 the honorary degree of D Sc was conferred on him by the University of the Cape of Good Hope He was elected a Fellow of the Royal Society of London in 1920 and in 1928 was awarded the Society's

royal medal Except for a period when he occupied the chair of zoology, Dr Broom has always had to earn his livelihood as a general medical practitioner, and although his practice naturally took much of his time, he never lost sight of his scientific ideals, and continued to do first class work in his own chosen field of research Indeed, Dr Broom is generally looked upon as the leading palaeontologist in his particular department of study When he commenced his researches on the Karroo reptiles only about seventy species were known, and even this knowledge was scanty and unclassified Now, owing to his work, over three hundred species are known fully, and his classification has been accepted by the whole scientific world This study has practically solved the problem of the origin of mammals, and at the same time has thrown light on many other subjects His research on the organ of Jacobson has resulted in a reclassification of the insectivora Besides two important books on the evolution of man and other mammals, Dr Broom has published about three hundred original papers—an amazing output when it is considered that all this is the work of a man whose professional duties naturally had first claim on his time

Miners' Phthisis Appeal Board

The first chairman of the Miners' Phthisis Medical Board of Appeal was the late Dr A M Moll, a Johannesburg psychiatrist The board was brought into being some years ago to examine the claims of beneficiaries under the Miners' Phthisis Act who were dissatisfied with the finding of the Phthisis Bureau in Johannesburg For the proper functioning of this body it was essential that gold miners should have confidence in it, and for this reason a chairman was chosen who was in close touch with the mining community The members of the board, Drs Smith and Truter, had previously served for many years on the Miners' Phthisis Bureau an institution which has received world wide recognition in industrial medicine for its high technical efficiency Dr Moll is to be succeeded by Dr Carl Th Moller a general practitioner of Germiston He, too, has been chosen as likely to inspire confidence in miners As district surgeon and private practitioner he has always been in close touch with them, and, since coming to the Witwatersrand twenty-five years ago, has made a study of their special ailments

Scotland

Alexander Black Memorial Lecture

The Alexander Black Memorial Lecture was delivered to the Royal College of Physicians of Edinburgh on May 12th by Dr John D Comrie, with the president Dr Robert Thin, in the chair Taking as his subject 'The Evolution of Ideas regarding Disease,' Dr Comrie said that the causes producing premature inefficiency and death had been much the same throughout the history of mankind although different diseases had come and gone in frequency according to man's conditions of life, food supply places of residence, and other changes of environment Primitive man was an animist, seeing in all the forces of nature around him spirits which were often malevolent, and therefore attributing sickness and even accidents to hostile magic Ideas as to the essential cause of disease could be divided into four groups, each of which had recurred in cycles as man progressed in knowledge two or more having often been combined at one epoch or having engaged rival schools of thought in dispute In the first, disease was attributed to supernatural, religious, or psychic causes this was the earliest group and was constantly recurring In the second, the fluids of the body were at fault—the theory of the humours, in the third, the solid material of the body was defective, and in the fourth, the body was perfect but external agencies caused disease Complete rationalism had been the characteristic of Greek medicine in 400 B C, when Hippocrates insisted that all diseases must be regarded as due to material causes The Greek philosophers explained diseases as being want of balance between the humours or four fluids of the body Among the Roman poets of the Augustan age there was a belief that infection and fevers were due to minute living things, an idea which was revived by Jerome Fracastor and others at the time of the Renaissance, while Sydenham suggested in the seventeenth century that fevers were caused by minute particles in the air which insinuated themselves into the body and tainted the whole frame Although bacteria had been seen and figured by Leeuwenhoek in 1683, their connexion with disease was not generally admitted until the work of Semmelweis, Pasteur, Koch, and Lister after the middle of the nineteenth century The effect of psychic influences in treatment had been recognized by the ancient Greeks in their health temples, and in the Dark Ages, when physical means of healing were at a discount, faith healing had been practised with success by the Church Suggestion and faith were the basis of a great deal of the successful treatment by modern practitioners, and an exaggerated development of this principle had been the foundation of Christian Science about 1860 by Phineas Quimby and Mrs Eddy Recent phrases, such as hypnotism, Coueism, and psycho analysis had been merely excrescences upon this great general principle The interest in physical and biological science that followed the Renaissance, of which Harvey's work had been the most outstanding example, formed the basis of the iatro mechanical school of medical thought to which the iatro chemical school under Sylvius, de Graaf, Spallanzani and others had been a kind of reaction From the iatro mechanical school had developed the anatomical conception of disease, largely founded by Morgagni, and expanded by the work on physical signs of Laennec and his successors A further development of the solidistic theory, following upon the improvement of the microscope early in the nineteenth century, had been the cell theory of Virchow, and all its implications In the twentieth century, serology and endocrinology had been, in a sense, a return to the theory of the ancient Greeks regarding the body fluids The outstanding aspect of twentieth century medicine was the view of disease not so much in relation to the individual as in regard to the whole community measures to provide wholesome food, to improve dwellings, to secure favourable conditions of work, to remove material that bred disease, to separate the sick from the healthy, and to adapt members of society to the positions they could best occupy had already brought about a greater general stamina and led to the diminution of many diseases and to the production of a greatly increased measure of efficiency among the general population

Conference of Health Visitors

The fourteenth annual conference of the Scottish National Health Visitors' Association was held on May 14th at Dunfermline, Lady Leslie Mackenzie presiding, Provost Gorrie extended an official welcome to the meeting Dr John Currie, professor of public health in the University of Glasgow, said that the ruling idea in the work of health visiting was to prevent disease The Notification of Births Act (1919) had organized maternity and child welfare work, and had set health visiting on its feet Referring to the question of diet, he said that a working

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Remittances must accompany all orders Apply at the office, B M A

APPOINTMENTS —Contd

GROSVENOR SANATORIUM ASHFORD KENT

SECOND ASSISTANT MEDICAL OFFICER (male single under 40 years of age) required for above Institution Salary £250 with board lodging and laundry Applications together with copies of recent testimonials, to Dr J ABERDEIN MILNE Medical Supt

CITY OF LEICESTER.
RESIDENT MEDICAL OFFICER.

Junior Assistant Medical Officer (male) required at the City General Hospital for a period of twelve months

The Hospital is a modern building with 530 beds and three Resident Medical Officers

Salary £300 per annum together with full residential emoluments The gentleman appointed to the post will be required when requested, to assist at the Institutions of the Public Assistance Committee

Further particulars of the appointment may be obtained from the Medical Superintendent E C HADLEY M D B S Lond F R C S P to the General Hospital Gwendolen Road Leicester

Applications stating age experience and qualifications, accompanied by copies of three recent testimonials must be received by first post on the 23rd instant addressed to—

C KILLICK MILLARD
Health Offices, Medical Officer of Health.
Grey Friars Leicester
May 12th, 1933

SOUTH DEVON AND EAST CORNWALL HOSPITAL PLYMOUTH (240 Beds)

Applications are invited for the TWO vacant POSTS of HOUSE SURGEON

Salary £100 per annum, with board residence and laundry

Appointments are tenable for six months and are subject to renewal Duties to commence on June 8th and 19th respectively

Applicants must be registered under the Medical Acts.

Applications, stating age and qualifications with copies of three recent testimonials, to reach the undersigned by May 25th

ARTHUR R CASH
May 9th, 1933 Gen Supt & Secretary

BOARD OF EDUCATION
APPOINTMENT OF MEDICAL OFFICER.

The Board of Education invite applications from registered Medical Practitioners for appointment as Medical Officer on the staff of the Board

Applicants must be Medical Practitioners preferably between 30 and 40 years of age with a University Medical Degree a Diploma in Public Health, and experience of the School Medical Service

The officer will be required to reside in London or such other area as may be determined by the Board The appointment will carry the normal Civil Service conditions as to pension holidays, etc

The scale of salary will be £726 per annum rising by twelve annual increments to a maximum of £1 043 In special circumstances the minimum salary may be advanced where a candidate has special knowledge and experience

Further particulars together with application forms which must be returned completed not later than Saturday, June 3rd may be obtained on application in writing to the Director of Establishments, Board of Education Whitehall, London S W 1

KELLING SANATORIUM HOLT NORFOLK

JUNIOR ASSISTANT RESIDENT MEDICAL OFFICER (male) unmarried, required at the above Sanatorium First appointment 12 months with 3 months notice on either side

Salary £350, with apartments board and laundry

Candidates must be duly registered Medical Practitioners and have held both surgical and medical House appointments and preferably possess some Bacteriological knowledge

There will be every facility for becoming conversant with the treatment of Pulmonary Tuberculosis in its various forms

Applications in candidate's own handwriting stating age and qualifications (with one copy of three recent testimonials) to be sent to the Medical Superintendent Kelling Sanatorium, Holt Norfolk not later than May 20th

NATIONAL HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM
Queen Square W C 1

HOUSE PHYSICIAN

Applications are invited for the post of House Physician and should be sent to the undersigned accompanied by three recent testimonials not later than Wednesday May 31st The salary is £150 per annum, with board and lodging

GODFREY H HAMILTON Secretary

class family had to be very careful because by economy in the bill of fare articles of food which contained the essentials of child nutrition might easily be omitted Professor Currie stressed particularly the value of skimmed milk and tomatoes Infantile mortality was continuing to fall due especially to the decrease in digestive types of disease but the mortality rate in maternity presented a darker picture and the position was more complex than many critics supposed The expectant mother was much less willing to come to clinics for advice than the nursing mother and health visitors might do much to create favourable opinion in this matter Miss Helen Drummond principal of Dunfermline College of Hygiene urged the importance of physical exercise as a necessary part of good physical and mental development for children The exercises in schools were a substitute for ordinary play but the latter was preferable if children had sufficient freedom The National Playing Fields Association was doing a great work in securing playing fields in and about large towns but this provided little scope for the smaller boys or for the girls She therefore advocated the training of voluntary play leaders for children of 5 to 14 and the opening of school playgrounds after school hours for this purpose Dr C Barclay Reekie M O H for Dunfermline said that the most valuable preventive work of the health visitor concerned nutrition He believed that there had been too much attention focused on housing in relation to health with a tendency to overlook the importance of nutrition In Dunfermline the infant mortality twenty five years ago was 120 per 1 000 and now it had been reduced to 49

Home Relief of Incurables

Professor D P D Wilkie of Edinburgh speaking at the annual meeting of the Royal Society for Home Relief of Incurables on May 6th said that in spite of advances in medicine and surgery there were still diseases which baffled all efforts at cure in some of which however much could be done to prolong life and to make it more enjoyable The society in his experience had been of inestimable help towards this end There was a tendency at the present time to provide institutional treatment for all sickness and disability but the gain from such a process might be lost in the subtler and finer plane of morals and sentiment The society made possible the perpetuation of the homely art of medicine and he strongly urged its claims for support Although he was an enlightened admirer of the skilled nursing in great institutions he admired still more the nursing which was characterized by understanding sympathy devoted care and filial affection and he considered that this society was a great national asset The report showed that the society had distributed £5 322 among 478 beneficiaries during the past year The total revenue had been £6 900 and the expenditure £6 178 In connexion with the Dunlop Cancer Fund which is administered by the society a sum of £1 868 was distributed

Royal Northern Infirmary

The report presented to the annual meeting of the Royal Northern Infirmary at Inverness on May 17th when Sir Alexander MacEwen presided showed that 2 323 patients had been admitted to the infirmary during the past year and there had been 2 198 out patients and 1 813 operations The ordinary income for the year had been £13 857 an increase of £2 290 on that of the previous year while ordinary expenditure had amounted to £18 351 It was mentioned as a satisfactory feature that the excess of expenditure over income had been £1 100 less than in 1931

Ireland

Ulster Hospital for Children and Women

At a recent meeting of the Ulster Hospital for Children and Women the honorary treasurer announced that two friends of the hospital had offered to contribute the last £100 of each £1 000 collected up to a total of £5 000 Mr R A Mitchell who presided at the meeting said the present building was twenty-one years old having been completed in May 1912 In 1914 in patients numbered 478 visits by or to patients 14 430 and operations 433 In 1922 intern admissions numbered 705 visits by or to patients 17 554 and operations 1 011 while in 1931 the figures were 1 226 32 144 and 1 906 respectively This showed the great need for an extension of the premises In response to an appeal in 1929 the hospital received about £13 000 On investigating the cost of an extension it was found that £25 000 or more would be required Even with the aid of a Government grant it was not considered advisable to spend so much because of the large annual expense that would be entailed by the women's ward As a minimum it was decided to add a new wing to include a women's extern department a laundry more accommodation for nurses and new x ray apparatus and accommodation to make various improvements such as the introduction of oil fuel for the heating apparatus and steam for sterilization and laundry plant and to make new arrangements in the kitchens and in the administrative portion of the original building to permit better accommodation for the house surgeons and office work The instalment of the laundry and the giving up of the nurses house in Templemore Avenue would mean a great saving of money Arrangements were also being made whereby the women's ward could be extended without difficulty and at little expense when required In 1932 the money on hand (about £13 000)) and the expected grant from the Government were just sufficient to pay for the building and alterations to the main hospital at present proceeding The hospital owed for the oil fuel firing for the sterilization laundry and new cooking plants for electric light fittings and for painting etc In all probability this would require about £5 000 The meeting appointed a committee to raise this amount

School Medical Services in County Cork

Dr R Condy Cork County medical officer of health in his annual report on the school medical services of the county states that the work of school medical inspection during the year 1932 was handicapped by reason of a deficiency in the usual complement of staff One of the posts of assistant medical officer had been vacant since February 1932 and for the greater part of this year the staff of health visitors had been deficient to the extent of two nurses This had necessarily diminished the number of inspections and the general amount of work accomplished since the full complement of staff was in itself barely sufficient satisfactorily to provide for school medical inspection throughout the county The records for 1932 although showing a reduction as far as numbers were concerned were yet indicative of the activity shown by all members of the staff Dealing with the co-operation of parents Dr Condy states that in some districts nearly 100 per cent. of the parents showed sufficient interest to be present during the examination It was regretted however that in certain areas the inspections aroused little or no interest in the parents even in districts where attendance could have been undertaken conveniently Some parents held the opinion that there was no need for their children to be examined unless illness or ill health

MILLER GENERAL HOSPITAL
Greenwich Road S.E.10

Applications are invited for the following posts:
HOUSE SURGEON. Salary £100 per annum.
HOUSE PHYSICIAN. Salary £100 per annum.
CASUALTY OFFICER. Salary £150 per annum.
Board, residence and laundry are provided.
OUT-PATIENT OFFICER who is required to see Medical and Surgical cases. Attendance daily (except Sundays) from 9 to 1. Tuesdays 9 to 5. Salary £150 per annum and lunch.

Candidates (male) must be unmarried. The appointments are for six months from July 1st next. There are six Resident Officers.

Applications stating age, nationality, qualifications and experience, accompanied by copies of not more than three recent testimonials, to be sent to the Acting Secretary not later than May 24th.

May 2nd, 1933.

WESTMINSTER HOSPITAL,
Broad Sanctuary, S.W.1.

Applications are invited for the office of ASSISTANT PHYSICIAN FOR DISEASES OF CHILDREN to this Hospital.

Candidates must be Fellows or Members of the Royal College of Physicians. Each candidate is required to transmit a certificate of his age and 30 copies of his application with 30 copies of each of three testimonials to the undersigned not later than Friday, May 26th, and to attend before the House Committee on Tuesday, May 30th, at 4 p.m.

A copy of the Laws relating to the office may be obtained on application to the Secretary.

By Order of the House Committee,
CHARLES M. POWER, Secretary.

ALL SAINTS HOSPITAL (FOR GENITO-URINARY DISEASES),
Central Street, West Square, St. George's Rd., S.E.11.

RESIDENT HOUSE SURGEON (male) required on July 1st for six months, being three months as Junior House Surgeon with salary at £100 per annum, followed by three months as Senior House Surgeon with salary at £150 per annum.

Applications giving particulars of age, experience, qualification and enclosing copies of three recent testimonials, should reach me not later than May 25th.

D. H. EADE, Secretary.

DISTRICT INFIRMARY,
ASHTON-UNDER-LYNE.
(General Hospital—200 Beds; mainly Surgical.)

Wanted, a HOUSE SURGEON. Six months appointment.

Salary at the rate of £160 per annum with board, residence and laundry.

The Resident Staff comprises a Resident Surgical Officer and three House Surgeons.

Applications with testimonials to be sent at once to the undersigned.

FRANK OLIVER,
May 4th, 1933. Gen. Supt. & Secretary.

THE BOLTON ROYAL INFIRMARY
(301 Beds including Two Auxiliary Hospitals.)

Applications are invited from Ladies having a registered Medical and Surgical qualification for the post of HOUSE SURGEON. Salary £125 per annum with board, residence and attendance.

Applications stating age, nationality and previous experience, together with copies of two testimonials, should be forwarded to the undersigned not later than Monday, May 22nd.

ALBERT E. BRISCOE, Secretary.

THE ROYAL GWENT HOSPITAL, NEWPORT, MON. (160 Beds.)

Wanted a Junior Resident Medical Officer to act as HOUSE SURGEON to Out-patients and as House Physician.

Salary £135 with board, lodgings and laundry. Resident Medical Staff 5. Eligible for promotion.

Large Out-patient Department.

Applications stating age and qualifications with copies of three recent testimonials to be sent to the undersigned.

Applications from ladies not entertained.

J. K. MILLWARD,
May 1st, 1933. Secretary-Supt.

THE ST. HELENS HOSPITAL.

Applications are invited for a JUNIOR HOUSE SURGEON (male) to this Hospital at a salary of £150 per annum plus board, residence and laundry. Application accompanied by three recent testimonials to be sent to the Secretary, St. Helens Hospital, Lancs., not later than May 23rd.

THE HOSTEL OF ST. LUKE (CLERGY Nursing Home), 14 Fitzroy Square, London, W.1.

The Committee of Management invite application for the post of RESIDENT MEDICAL OFFICER (male) to the above Hostel.

Candidates must have had previous experience as House Surgeon at a general hospital. The appointment is for six months and may be renewable for a further period of six months. Salary at the rate of £200 per annum with board, residence and laundry. A fortnight's holiday will be allowed every six months and the locum will be paid by the Committee of the Hostel.

Applications and enquiries should be addressed to the Secretary of the Hostel at 14 Fitzroy Square, London, W.1, and reach him before May 20th. The successful applicant will be required to take up his duties on June 1st.

ST. MARY'S HOSPITAL, W.2.

CASUALTY HOUSE SURGEON.

Applications are invited from duly qualified candidates for the post of Casualty House Surgeon. Candidates must have been House Surgeon for a full period of office to this Hospital or to some other general Hospital approved by the Board.

The salary is £100 per annum with board and residence and the appointment is for six months.

Applications with copies of testimonials not exceeding three in number should reach the undersigned (from whom particulars of the office may be obtained) on or before Saturday, May 20th, 1933.

The successful candidate will be expected to take up the duties on June 1st.

W. PARKES, Sec.

LEICESTER ROYAL INFIRMARY
(402 Beds.)

RESIDENT ASSISTANT ANÆSTHETIST.

Applications are invited. Appointment for six months with possibility of renewal. Salary £250 per annum with board and residence. As two of the Resident Anæsthetists are women applications from qualified and experienced women will be preferred. Particulars of special experience in the administration of anæsthetics supported by testimonials with particular reference to anæsthetic work to the House Governor and Secretary forthwith.

May 4th, 1933.

BEDFORD COUNTY HOSPITAL.
(124 Beds.)

Wanted both a FIRST and SECOND HOUSE SURGEON to take over their duties May 29th for a term of not less than six months.

Salary, First House Surgeon £165, Second House Surgeon £140.

They must be fully qualified male unmarried. Board, lodging and laundry.

Applications stating age, nationality, qualification, together with three recent testimonials to be sent to the Hon. Secretary, Hon. Medical Staff Committee, as soon as possible.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, BRIGHTON. (100 Beds.)

HOUSE SURGEON (male) required. Salary at the rate of £100 per annum with board, lodging and laundry. No canvassing allowed. Selected candidates will be asked to attend at the Hospital for interview on June 2nd, the successful applicant taking up the appointment immediately.

Application in writing accompanied by testimonials should be sent to PERCY F. SPOONER, Secretary.

May 6th, 1933.

(AMENDED NOTICE.)

THE SALVATION ARMY
THE MOTHERS' HOSPITAL,
Lower Clapton Road, Clapton, E.5.

Applications are invited from Medical Women for the post of SENIOR RESIDENT MEDICAL OFFICER vacant July 1st. Salary £150 per annum with board, residence and laundry. The appointment is for twelve months. (In special circumstances a six months' appointment would be considered.) Applications with testimonials must be sent to the Secretary on or before May 17th.

EDGAR DIBDEN, Secretary.

THE SALVATION ARMY
THE MOTHERS' HOSPITAL,
Lower Clapton Road, Clapton, E.5.

Applications are invited from Medical Women for the post of JUNIOR RESIDENT MEDICAL OFFICER vacant August 1st. Salary £60 per annum with board, residence and laundry. The appointment is for six months. Applications with testimonials must be sent to the Secretary on or before July 17th.

EDGAR DIBDEN, Secretary.

THE GENERAL HOSPITAL, BIRMINGHAM.

Applications are invited for the following Resident posts:

1. SURGICAL REGISTRAR to the Gynæcological and Eye Departments for twelve months in the first instance from June 10th, at a salary at the rate of £100—£20—£140 per annum.
2. HOUSE SURGEON to the Throat and Ear Department for three months in the first instance at a salary at the rate of £70 per annum (vacant immediately).
3. ANÆSTHETIST for three months at a salary at the rate of £120 per annum (£70 per annum if a first Resident appointment). Vacant immediately.

Applications must reach the undersigned not later than May 22nd.

A. H. LEANEY,
May 5th, 1933. House Governor.

ROYAL NATIONAL ORTHOPÆDIC HOSPITAL.
(Country Branch: Brockley Hill, Stanmore, Middlesex.)
(280 Beds—£3 per cent. for the treatment of Surgical Tuberculosis.)

Applications are invited for the post of HOUSE SURGEON (TWO). Salary £150 per annum with board, quarters and laundry. The appointment is for six months from June 1st, renewable for a further period of six months on the recommendation of the Medical Board. Applications with copies of testimonials should reach the Secretary, 234 Gt. Portland Street, London, W.1, not later than May 15th.

THE SCHIFF HOME OF RECOVERY,
COBHAM, SURREY.
(64 Surgical Beds.)

Required from July 7th RESIDENT SURGICAL OFFICER (male). Three months' appointment. Salary rate £200 per year all found. Must have held position of Resident Surgical Officer or House Surgeon in General Hospital. Particularly suitable for reader. Preference Constituent Hospitals, Guy's, St. Thomas', King's College, Middlesex, University College, Charing Cross, West, London. Full particulars with testimonials should be received by the Secretary Supt. not later than June 7th.

RADCLIFFE INFIRMARY AND COUNTY HOSPITAL, OXFORD.

Application are invited for the following post which will become vacant on July 1st:

HOUSE PHYSICIAN.

The appointment is for six months with salary at the rate of £120 per annum with board, lodgings etc. Candidates must be male and qualified.

Applications with four copies of three testimonial should be sent to the undersigned on or before Monday, May 29th.

A. C. E. SANCTUARY, Administrator.

GENERAL LYING-IN HOSPITAL,
York Road, Lambeth, S.E.

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER AND ANÆSTHETIST. Salary at the rate of £100 per annum, with board, residence and laundry. Appointment for three months commencing July 1st. The successful candidate will be subject to satisfactory service be required to act as the Senior Medical Officer's assistant for a further three months.

Application stating age and qualifications with copies of three recent testimonials to be sent to the undersigned not later than May 26th.

LILY HEATH, Secretary.

LIVERPOOL HAHNEMANN HOSPITAL,
HOPE STREET. (52 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER to the above Institution which will fall vacant on May 16th. Appointment is for six months, renewable. Salary at the rate of £100 per annum. Duties include casualties, occasional anæsthetics and assisting at operations, general, gynæcological, aural and ophthalmic.

Apply stating age, sex, nationality and previous experience and enclosing copies of recent testimonial to the Registrar before May 6th.

BURTON-ON-TRENT GENERAL INFIRMARY.
(142 Beds.)

Applications are invited for the post of SENIOR HOUSE SURGEON (male). Salary at the rate of £200 per annum, with board, residence and laundry.

Also for the post of Casualty Officer and House Physician (male). Salary at the rate of £150 per annum with board, residence and laundry.

Applications stating age and qualifications, together with copies of testimonial to be sent to—

E. W. THORNLEY, Secretary.

LONDON COUNTY COUNCIL

Applications invited for appointment of RESIDENT ASSISTANT MEDICAL OFFICERS at undermentioned hospitals Duties assigned by Medical Superintendents and include if necessary assistance at other establishments under control of the Council Valuation of emoluments is subject to temporary reduction Candidates must be registered Medical Practitioners of at least one year's standing and have held a resident appointment in a general hospital for at least six months

Remuneration and conditions subject to review

1 ST MARY ABBOTS HOSPITAL Marloes Road Kensington W 8 —Senior Assistant Medical Officer (Grade II) Salary £500 a year rising annually by £25 to £600 a year with board lodging and washing Preference will be given to candidates who have special experience in obstetrics and general surgery

2 HACKNEY HOSPITAL High Street Homerton, E 9 — *Assistant Medical Officer (Grade I) Candidates must have had experience in midwifery and gynæcology and be competent to undertake operative work in these departments Marriage will terminate contract of service if a woman is appointed There is no accommodation for a married man

3 NEW END HOSPITAL New End Hampstead N W 3 — †Assistant Medical Officer (Grade I) Candidates must have had experience in midwifery and in anæsthetics

*Salary £350 rising annually by £25 to £425 a year with board lodging and washing

†There is no accommodation for a married man or for a woman at these hospitals

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health Last day for receipt of application May 19th

Candidates should specify position or positions for which they desire to apply Canvassing disqualifies Further enquiries should be addressed to the Medical Superintendent at the respective hospitals

LONDON COUNTY COUNCIL

Applications invited for appointment of RESIDENT ASSISTANT MEDICAL OFFICER Grade I at PARK (FEVER) HOSPITAL Hither Green Lewisham S E 13

Duties assigned by Medical Superintendent and include if necessary assistance at other establishments under the control of the Council

Remuneration is £350 a year rising annually by £25 to £425 with board lodging and washing and is subject to the temporary reduction made by the Council from the value of the emoluments Candidates must be registered Medical Practitioners of at least one year's standing Experience in a resident appointment in a general hospital and the possession of D P H desirable There is no accommodation for a married man or for a woman The remuneration and conditions are subject to review

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a) County Hall Westminster Bridge S E 1 returnable May 26th Canvassing disqualifies Further inquiries should be addressed to Medical Superintendent at the Hospital

KING EDWARD VII HOSPITAL, WINDSOR
(181 Beds)

TWO HOUSE SURGEONS required (One for Casualty Department) for six months from July 1st Applicants must be fully qualified men or women registered and preferably have held a resident appointment

Salary at the rate of £100 per annum together with board residence and laundry

Applications stating age qualifications and experience accompanied by testimonials should be sent to the undersigned not later than May 27th

ARTHUR E. CHURCHER Secretary

KING EDWARD VII HOSPITAL WINDSOR

A vacancy exists on the Medical Staff of the above Hospital for an HONORARY ANÆSTHETIST to administer anæsthetics one day each week Applications stating qualifications and experience accompanied by testimonials, to be sent to the undersigned not later than May 27th

ARTHUR E. CHURCHER Secretary

KENT AND CANTERBURY HOSPITAL CANTERBURY
(Recognised by the University of London for the purpose of the M S Examination)

HOUSE SURGEON (male) required, to commence duties as soon as possible Six months appointment Salary payable at the rate of £125 per annum plus board residence and laundry Applications stating age and particulars of qualifications and enclosing copies of testimonials should be forwarded to the undersigned immediately

W T SOUTHWOOD,
Superintendent & Secretary

ST THOMAS'S HOSPITAL

VACANCY

The appointment of a SURGICAL REGISTRAR AND TUTOR Candidates must be Fellows of the Royal College of Surgeons

Applications with full details of academic career to be forwarded with copies of testimonials to the Clerk to the Governors not later than May 24th

Telephone WELBECK 2728
Telegrams "ASSISTAMO LONDON"

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(In conjunction with the MALE NURSES ASSOCIATION)
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Mrs MILLICENT HICKS *Supt.*
W J HICKS *Secretary*

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33, Cross Street, Manchester,

or its Newcastle Branch at
7, Windsor Place, Newcastle-on-Tyne

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NORTHANTS —DEATH VACANCY IN MIXED industrial and agricultural district. Well established Receipts £500—£600 p.a. and ample scope. Vendor suffered serious disability Panel and contract worth £300 Detached house 3 bed 2 recep Surgery, etc., on lease at £60 —No 9156

CHESHIRE-TOWN PRACTICE WORTH £550 p.a., including panel of 530. Scope for increase midwifery refused Visits 3/6 up Convenient 3 bed 3 attics recep., and professional room Rent £70 Premium £ 00 or near offer —No. 9155

LONDON, N W SUBURB — INCREASING NUCLEUS Receipts last year £400 Panel 230 This year showing increase. Premium £600 Six roomed corner house with small garden Room to enlarge Terms mortgage £150 down secures house —No. 9154

KENT —ABOUT 30 MILES FROM TOWN— Residential country Half share of £2,300 after preliminary Assistance Good fees. Very much midwifery New house specially built, to rent or buy Further share later Partner to be Lond or Camb Graduate, age 30 to 35 —No 9152

SURGICAL.—EXCELLENT OPPORTUNITY TO acquire goodwill of connection established by Vendor over 10 years and returning £1 000 p.a. Income has been more Desirable modern flat in select West End area. Premium £600 down and £700 spread over 3 years.—No. 9150

LONDON, N W — VERY FINE OUTLYING district About £1 000 p.a. No panel taken but ample scope Some dispensing Expenses low Corner house in excellent position on main road 4 bedrooms etc. Long leasehold for sale at £2 220 Vendor giving up general practice Premium for goodwill 1½ years purchase —No 9149

MANCHESTER — ABOUT £650 P.A., INcreasing old established PRACTICE. Panel 790 Opposition less than usual. Visiting fees 4/5 and 5/ Lowest surgery fee 2/6. House off main road, 4/5 beds 2 recep., and spacious surgery Rent £60 on lease —No 9144

YORKSHIRE — OUTSKIRTS OF LARGE town Old-established middle and better class PRACTICE averaging £980 p.a. Panel 400 Visits 3/6 to £1/ Very little midwifery Specially built house 2 recep 6 bed Surgery with separate entrance etc On lease at £100 Premium only £1 200 —No 9141

LADY PARTNER WANTED IN PRACTICE of about £1 000 p.a. in country district in Kent Steadily increasing and ample scope for further extension Panel worth £130 and appts about £120 Premium for half share £1 000 —No 9140

CHANNEL ISLANDS — URGENT SALE through ill health of Vendor Private PRACTICE in best part of Island overlooking sea averaging £3o7 p.a. No midwifery taken. Fees 3/6 to 7/6 med extra Choice of houses, and others building Good schools. Sea and trout fishing From 1½ years purch —No 9107

ITALIAN COAST — DELIGHTFUL SPOT — About £500 p.a. Scope to increase Good opening in neighbouring town No English opposition Fees 12/6 to 35/ Flat to rent at under £100 2 recep 3 bed. cons. room and usual offices Furniture, etc., can be bought if desired Goodwill £750 cash.—No. 9129

RESIDENTIAL SEASIDE RESORT—WITHIN easy reach of London £700—£800 p.a. suffered through Vendor's ill health Ample scope. New estate building Small panel No dispensing Mids not sought Attractive freehold house built by Vendor, 5 bed. etc., garden and garage —No 9127

BERKS — OLD ESTABLISHED — COUNTRY PRACTICE about £700 p.a. has been £1 100 Panel about 500. Visiting fees 2/6 to 7/6 Very little midwifery Splendid house, specially built for Vendor with two acres of grounds 2 reception rooms 6 bedrooms surgery and waiting rooms etc. Consider £4 000 offer for Practice & house freehold.—No. 9103.

WANTED

WANTED —MIDDLE AND WORKING-CLASS PRACTICE with good panel preferable London Birmingham or Cardiff or outskirts of large town, not North of Manchester £1 200—£1 500 House, with garden to rent with option to purchase —No. 991

WANTED BY M B ED., AGED 35 — PRACTICE with scope for Surgery small panel £1 500 p.a. in London or South of England House with 5 bed and garden on lease with option —No. 995.

Both the above have ample capital Details in confidence to PERCIVAL TURNER LTD as above

NO CHARGE TO PURCHASERS.

manifested itself, when they would take the child to their private doctor Such views were entirely opposed to the principles on which the scheme of school medical inspection was instituted The percentage number of parents who attended at the examinations during 1932 was 34 2, as against 30 2 in 1931 The parents of 113 children—namely, 1 3 per cent , as compared with 1 2 per cent in 1931—objected to the examination

England and Wales

Work of Queen's Nurses

At the annual meeting of the Queen s Institute of District Nursing, to be held on June 1st, a report will be submitted showing the work that has been done by Queen s nurses in England and Wales on behalf of public health authorities It used to be thought that acute illness could not be successfully nursed at home, and that without the facilities provided in hospitals for the use of the nursing staff the patients must necessarily suffer The statistics compiled by the Queen s Institute of the home nursing of various notifiable diseases prove this to be incorrect The work undertaken by Queen s nurses is very varied, and the scope is an ever-enlarging one as the value of home nursing among the poor and middle classes is more and more realized In 1932, 13,470 cases of pneumonia were nursed of these, 1,229 were living in London 7,475 were in other cities and urban districts, while the remaining 4 272 were in rural and scattered areas In London 66 4 per cent of these patients became convalescent, 16 1 per cent were sent to hospital, and 11 6 per cent died , in the urban areas 65 5 per cent became convalescent, 11 per cent were sent to hospital, and 16 9 per cent died In the rural areas 69 3 per cent became convalescent, 7 1 per cent were sent to hospital, and 17 6 per cent died In some cases the patient was provided for in some other way after a few visits had been paid, but before convalescence—such as by a resident private nurse or by the care of friends Queen s nurses attended 3,307 cases of measles, 639 of which were complicated by pneumonia The death rate for this disease was 8 3 per cent in London, 10 8 per cent in urban areas, and 7 9 per cent in rural areas, while the proportion of convalescents at home was 79 6 per cent Cases of puerperal fever and puerperal pyrexia numbered 465, resulting in convalescence at home of 74 3 per cent , while 23 6 per cent were sent to hospital and 1 5 per cent died The nurses have attended also 776 cases of ophthalmia neonatorum, 349 of chicken pox, 695 of whooping-cough, 446 of infantile diarrhoea, and 145 of pemphigus neonatorum The number of visits paid to all these patients was 43 014 This work is in addition to the midwifery undertaken by 949 Queen's nurses and 2,814 village nurses working in connexion with the Institute, who attended 67,496 cases, with a maternal mortality of 2 1 per 1,000

"Canti's Film"

At an evening reception held in the house of the Royal Society of Medicine on May 17th, Dr R G Canti gave a cinematograph demonstration of the cultivation of living tissue cells A short description of this may be of interest to those who have not yet had an opportunity of seeing what is popularly known as " Canti's film " In his introductory remarks Dr Canti said that the idea of cinema photography of living cells had been suggested by the late Dr Strangeways, when he was investigating the effects of radium on the isolated normal and cancer cells The present film had been made possible by facilities afforded by workers at the Strangeways Laboratory under the directorship of Dr Honor Fell Ordinary cinematograph pictures, continued the speaker, were taken at the rate of sixteen pictures a second, and projected on the screen at the same speed, the temporal relation of events shown on the film being the same as the actual events themselves The photographs of living tissue cells were taken at less frequent intervals—every 3, 10, 30, and 60 seconds —and were projected on the screen at the standard rate of sixteen pictures a second Thus a speeding up of 50, 160, 480, and 960 times respectively was obtained and three weeks actual photography was represented by half an hour on the screen This makes it easy to follow changes in the cell which take a long time to occur The first film was of a fragment of chick periosteum in tissue culture, the radial spread of the fibroblasts and the excursions of the wandering cells being seen Higher magnification revealed the details of cell structure, with nucleus, nucleolus, and fat globules, and the appearance of the chromosomes in the various stages of mitosis The ' bubbling " activities of the daughter cells at the moment of separation were most dramatic to watch A photograph of cell structure under dark ground illumination showed vividly the appearance and the movement of the mitochondria some of which were observed to divide The avidity with which the phagocytes attacked the mesenchyme cells made the onlooker feel they were satisfying a private need rather than performing a physiological process Another reel demonstrated the division of a fertilized rabbit ovum from a single cell up to the morula stage, and the growth of the young chick embryo In the latter the development of the primitive streak the formation of the head fold and of the neural folds the mesodermal segments, and the pulsation of the embryonic tubular heart were all clearly depicted The growth of a whole organ in tissue culture was illustrated by the development of a femur from its rudimentary elements in a five and a half-day chick embryo The last picture was of the cells of Jensen s rat sarcoma, which could be seen multiplying, becoming degenerate, and then being attacked by phagocytes The action of radium was then shown by the abrupt cessation of all cell movement After Dr Canti s demonstration the guests returned to the library for a buffet supper and music

CORRESPONDENCE

Genesis of Gall-stones

SIR —Mr Patey's review of recent literature on " the mechanism of gall-stone formation " in your issue of May 20th is of course, too brief to be complete May I call attention to certain omissions which are, in my view, of great importance?

In dealing with the relevance of infections of the gall bladder to the genesis of gall-stones it is essential to bear in mind that an examination of the gall bladder after removal shows that microbic attacks generally reach the gall-bladder from without and not from within In a series of cases published by me (*British Medical Journal*, 1928, 1, 1) I pointed out that of eighty one consecutive cases it was clearly demonstrable that infection began in the outer coats in sixty-three In the remaining eighteen it was possible that infection had occasionally begun in the outer coats, though at a later stage it had fallen most severely upon the mucosa

Mr Patey quotes Gardner and Gainsborough as showing that hypercholesterolaemia is " not a constant occurrence in pregnancy ' No reference is made to the work of Dr Cecilia Shiskin, conducted at my request, and published in the paper to which I have referred In that paper I showed charts indicating the rise in cholesterol content of the blood during menstruation and during pregnancy I hope Dr Shiskin will give further details of her work,

conducted at the Maternity Hospital which shows that if not constant hypercholesterolaemia is at least very frequent in pregnancy and that excess of cholesterol mounts steadily as pregnancy advances

Mr Patey says attempts to correlate the amount of cholesterol in the blood with gall stones have failed Investigation conducted upon my cases by Dr Fowweather and Dr Shiskin show that this statement is not strictly accurate In the same article I have shown that about 60 per cent of my cases of cholelithiasis showed a cholesterol value of over 0 192 per cent May I quote a paragraph

The question of the cholesterol content of the blood is one for close examination in all suspected cases of cholelithiasis With the skilful help of Dr Cecilia Shiskin 280 patients suffering from various abdominal diseases requiring operation have been examined Of these 101 were cases of cholelithiasis Cholesterol is a member of the important group of substances known as lipoids It is an invariable constituent of all active cells of the body both in its free form and in combination as ester In disease it may occur in abnormal amounts in various organs tissue fluids and calculi It is present in the blood in very variable quantities The normal amount may be stated as 0 160 per cent and in older people as rather more than this For purposes of classification we regard—

Less than 0 133 per cent as indicating hypocholesterolaemia

Between 0 133 and 0 160 per cent as being normal

Between 0 160 and 0 192 per cent as being high normal

Above 0 192 per cent as indicating hypercholesterolaemia

Hypercholesterolaemia is found in cases of arteriosclerosis chronic nephritis diabetes the later months of pregnancy and in cholelithiasis

Of 101 cases of cholelithiasis (proved by operation) 66 4 per cent were females The average cholesterol value was 0 217 per cent 65 per cent of cases showed hypercholesterolaemia 23 per cent had high normal values 11 5 per cent had normal values and two cases only showed hypocholesterolaemia—one patient was a man aged 76 the other suffered from an acute empyema of the gall bladder In both a low value was therefore to be expected

It is interesting to compare these figures with those obtained in cases of gastric and duodenal ulcer Twenty six cases of gastric ulcer were examined the average cholesterol value was 0 167 per cent 27 per cent of the cases showed hypocholesterolaemia 50 per cent gave normal values and 23 per cent showed hypercholesterolaemia Forty-one cases of duodenal ulcer were examined the average value was 0 149 per cent 36 6 per cent of the cases showed hypocholesterolaemia 51 2 per cent gave normal values and 12.2 per cent showed hypercholesterolaemia and in some of these arteriosclerosis was noted

The diagnostic significance of an increased cholesterol content of the blood is therefore important Over 75 per cent of patients in whom hypercholesterolaemia was found were suffering from cholelithiasis

It is true that I was the first to call attention to the condition to which the appropriate name of strawberry gall bladder has been attached But my paper was not a contribution to the pathology of gall stone formation for even twenty four years ago I was beginning to feel that we should concern ourselves with the diagnosis of diseases of the gall bladder apart from or earlier than cholelithiasis And in this connexion I would venture a criticism of the statement Mr Patey makes that there is no doubt that the modern *x* ray test of cholecystography (Graham) has within the last decade revolutionized the clinical recognition of gall stones Revolutionized perhaps in *method* of diagnosis but with little effect upon *accuracy* of diagnosis for it was and is a rare event for cholelithiasis to hide itself from the expert clinician In relation to the diagnosis of diseases of the gall bladder requiring cholecystectomy Graham's method is far less accurate than clinical examination I would roughly estimate that the accuracy of diagnosis in cases of gall-bladder disease is about 25 per cent inferior when Graham's method is contrasted with clinical methods In consequence many gall bladders which are asserted after radiological examination to be healthy or nearly so when examined after removal are proved to be so diseased as to have required extirpation I was recently confirmed in the justice of this opinion by finding that it conforms to that of the Mayo Clinic though there a still higher degree of untrustworthiness in this matter is attributed to radiology

An argument in favour of recurrent events in connexion with changes in the gall bladder or its functions leading to the deposit of stones is supported by their collective examination If say one hundred stones from one gall-bladder are placed on the table it will not be difficult to recognize that there are generations of them A certain number will all be of nearly the same size another generation all of the same size will be smaller than the first a third and perhaps a fourth generation still smaller The conviction is clear that the stones of each generation have been formed at the same time and at a time separated by longer or shorter intervals from that of other generations

Mr Patey makes no reference to the radiological examination of stone-containing gall bladders after their removal as throwing light upon the method of formation of calculi Dr Rowden has done much work for me in this matter A brief reference with illustrations may be found in an article of mine in the *British Medical Journal* (1928 1)

As I offer these remarks in order to complete the story Mr Patey tells I desire to say that I greatly appreciate the interest of his paper—I am etc

London W May 22nd MOYNIHAN

Treatment of Tuberculosis

SIR—A child living in a tuberculous household is in danger—grave danger—and as I asserted in my paper (*Journal* April 29th) should be removed from the source of infection I stated however that the athlete is just as likely as the bookworm to contract the disease and I protest against a system of examining such contact children sending away for a few months the delicate or suspicious ones and allowing the robust children to return to the infected household Apart from contact certain delicate children need special food schooling and attention but in my opinion the expense of this should not come from funds allocated for the prevention and treatment of tuberculosis If the child has tuberculosis of course it requires treatment but if it is only pre-tuberculous in the sense that it is exposed to infection the proper remedy is to remove the source of infection whether or not the child appears to be healthy

If one reads Dr Midgeley Turner's letter (*Journal* May 20th) carefully it does not appear that he differs fundamentally from these views—indeed he admits that exposure to infection often leads to active disease After all what does one mean by contact? Most of us are or have been contact cases and the danger seems to me to be either massive or continued infection One school of thought holds that once infection has taken place reinfection is impossible from which it follows that when once the contact has become infected no harm is done by allowing him to live in an infected household I differ completely from this view Dr Midgeley Turner objects to the term non-clinical tuberculosis but he does not suggest an alternative term The example I gave was the patient who has just recovered from tuberculous pleural effusion and has no signs or symptoms of disease

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but who, experience teaches, is likely to develop active tuberculosis within a year or so Whatever theories one may have, it is a fact that such a patient is in infinitely more danger of becoming a consumptive even than the child with some definite tuberculous lesion such as cervical glands What term can one use for this phase of the disease? In what category should one place many a patient returned from a sanatorium as cured? He feels quite fit and has no signs or symptoms, but a relapse is so possible that no life insurance company will consider *him on any terms* for a few years

With regard to treatment in Switzerland we seem to be in agreement, except that Dr Midgeley Turner rules out every Swiss sanatorium, whilst I, having stated that it is usually best to start treatment at home, and having mentioned some strong objections to treatment in Switzerland, say that the essential factor in a sanatorium is the way it is run, and not its locality Given a first-class superintendent it does not matter much where the institution is situated There are excellent sanatoriums in England and Switzerland and in every country and I should not insist on a patient remaining in this country if he had a definite preference for going abroad and I saw no contraindication in his particular case This brings me to my only real difference of opinion with Dr Midgeley Turner—namely, the matter of temperament Full credit cannot be given to the physician if his patient becomes a confirmed neurasthenic, however firmly the tuberculous lesion may be healed Many of these cases are the result of faulty management in the early stages of treatment, and as far as is consistent with thorough treatment I believe it right to pander to the wishes of the patient and to consider each one individually —I am etc ,

London W May 22nd L S T BURRELL

Treatment of Breast Cancer with Radon

SIR,—On reading the article by Mr Souttar in the *Journal* of May 13th (p 813) I was struck by several points which to me require some explanation

(1) What is the screening of the seeds used? (2) What is the effect of leaving seeds *in situ* when at a later date further irradiation either surface or interstitial, is used? Such a procedure in my experience is likely, if extensive irradiation is given to cause a radium burn In the inoperable, hopeless cases, however, I agree that the implantation of seeds ' as described is the method of choice as it is unusual to give more than one treatment (3) Were the growths in this series both scirrhous and encephaloid in type? In my experience generalization is more likely to occur in the encephaloid type following radium implants and although this may happen in the scirrhous type it is not so common

The only comments I can make are unfortunately not backed up by any statistical data In early carcinomata of the breast as described by Mr Souttar, amputation is the method *par excellence*, followed by radiation in the form of radium or deep x rays In the advanced type (Mr Souttar s second group) some form of combined irradiation as used at the Radium Institute seems to me to be satisfactory Needles of low linear intensity are used with a screenage of at least 0 6 mm platinum The breast and axilla are irradiated as homogeneously as possible by inserting the needles 1 5 cm apart and they are allowed to remain in position for from 7 to 10 days This is followed in three months time by the application of a surface plaque moulded to the breast and the associated lymphatic areas at a skin distance of 2 cm using 1 5 to 2 mg per square centimetre for a period of 120 to 160 hours Results following this treatment are fairly satisfactory In the hopelessly inoperable cases I agree with Mr Souttar that radon seeds are preferable to any other form of treatment The results are most gratifying in so far as huge fungating areas clear up and heal The patient is made much more comfortable, but it is doubtful whether life is prolonged —I am etc

Hampstead N W 6 May 14th J K HARPER

"Nerve Energy"

SIR,—The correspondence in the *Journal* on this subject, up to the date of April 8th draws attention to the essentially differing ideas concerning "nerve energy" which clinicians and physiologists, respectively, have developed I should like to point out that, according to my own observations, the physiologists are here at fault, and that the source of their fault has been a too great reliance on the *muscle nerve preparation*

To obtain and work with that preparation we do the equivalent of first destroying post offices, and then examining transmission along telegraph wires The result has been a vast accumulation of knowledge concerning this transmission, combined with a relative ignorance concerning post offices We have, of course, with the microscope observed the bodies of the post office staff as well as, possibly, the remains of their batteries , but when it came to speculating about those clerks and their batteries the speculations have been biased by the experiments with the wires As a result physiologists have done the equivalent of imagining that every clerk in the post office is normally in a state of sound slumber until he is awakened by a customer desirous of sending a telegram Such is in effect, the picture which physiology has so far drawn of our post offices In contrast with this my own observations reveal post offices with wide-awake clerks in the shape of rhythmically active central neurones—obviously sources of nervous energy The properties of retinal end organs and the properties of reflex arcs are, in fact the properties of rhythmical structures

Physiologists are however, as human as theologians, and so as equally capable of framing hypotheses which bring new facts into line with accepted doctrine The accepted doctrines of physiologists have been that retinal end organs and central neurones are structures which remain inactive until roused to activity by an external agent—the stimulus None of these structures however was found on examination to behave like the members of the quiescent muscle nerve preparation , their behaviour was instead that of a structure ever in rhythmical activity But if anyone starts out firm in the faith that the structure on which he experiments is quiescent until roused to activity by his stimulus, and then finds behaviour which does not accord with this faith, it is well known to psychologists that the firmness of the faith will tend to prevent it from being discarded The more likely course to be followed would be that of framing an adjustive theory

Physiologists in general have pursued the more likely course The physiology of *retinal stimulation*, for example, is a mass of hypotheses which adjust the observed facts to the original presupposition that retinal end organs are in the same state as the nerve of the excised muscle nerve preparation The observed facts actually show that these end-organs have rhythm a possibility that remains undreamt of so long as it is firmly presupposed that they *must* be quiescent Similarly, the synapse theory adjusts the facts to a firm presupposing that central neurones *must* be quiescent until excited I have therefore to re-suggest that the time is ripe for physiologists to re-examine critically the fundamentals of their faith in the muscle-nerve preparation When that is done I have no doubt that there will be due appreciation of the point that the physiology of the nervous system has been floundering for several generations in a sort of morass,

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and that the clinicians have forged ahead Nerve energy may well be a conception that cannot be reached from experiments on isolated nerve But instead of deducing from such experiments that there is no such entity as nervous energy it could well be more profitable to consider the probability perhaps rather the certainty that central neurones are not in the same state as excised nerve —I am etc

W BURRIDGE
Professor of Physiology Lucknow

May 6th

Raw and Pasteurized Milk

SIR —Mr Evelyn Sprawson in a letter in your issue of May 13th states that the authors of Bulletin No 5 issued by this institute (which deals with the nutritive properties of milk in relation to pasteurization) have given an inaccurate summary of the results recorded in his paper on the influence of raw milk on dental caries Mr Sprawson cites two instances (1) that the authors refer to the use of high grade raw milk whereas the majority of the children under his charge were fed on ungraded milk and (2) that the authors state that no comparable data were given of the effects of raw and pasteurized milk on teeth whereas in Mr Sprawson's opinion such data are available in his tables

The first objection is in fact of no significance in the interpretation of Mr Sprawson's results There is no difference in the legal standards governing the composition and therefore the nutritive value of graded and non graded milks in England Both are subject to the presumptive standard of 3 per cent butter fat and 8 5 per cent solids not fat The only difference is in the higher bacterial purity of the former type of milk as shown by freedom from tuberculous infection and a low bacterial count However since Mr Sprawson stated that the raw milk used in his investigation was frequently tested for the presence of tubercle bacilli and since he not only recorded that milk from tuberculin tested cows was used in at least one group (Group III) but recommended in his conclusions that only such milk as Certified or Grade A (T T) should be used the term high grade used by the authors of the Bulletin appears justifiable

The second objection is however of considerable importance since it is possible that Mr Sprawson's claim (that is that pasteurized milk is ineffective in preventing dental caries while raw milk confers immunity) might be urged as evidence of the lowered nutritive value of the treated milk It is therefore desirable to state clearly the facts which justify the authors of the Bulletin in affirming that the question must at present be regarded as open

1 Mr Sprawson compares the teeth of children in Tables I and II who receive *12 oz* of pasteurized milk (with or without cod liver oil) with those of children in Table VI who according to his statement on page 1 receive *20 oz* of raw milk—that is children in his raw milk group are receiving practically twice as much milk as those in his pasteurized milk groups This entirely invalidates the experiment as a comparison of the two types of milk

2 The numbers of children in his pasteurized milk groups (Tables I and II) are 15 and 8 respectively while the number in the raw milk group (Table VI) is 44 Even if both sets of children had received equal quantities of milk the numbers in the former groups would be entirely inadequate for comparison with the latter The authors of the Bulletin showed in fact that the omission of only *one* child from Table II reversed the conclusions which might be drawn from a comparison of Tables I and II thereby demonstrating the inconclusiveness of results based on inadequate numbers of children

3 Mr Sprawson compares the teeth of 40 children (Table III) known to have *commenced* raw milk feeding before 12 months old and of 33 children (Table IV) who commenced raw milk feeding between 1 and 2½ years of age with those of the rest of the United Kingdom most of whom he states are *presumably brought up on pasteurized or sterilized milk* Such a general comparison is invalid Mr Sprawson has no knowledge of the numbers of children in the United Kingdom who receive pasteurized or sterilized milk It is in fact quite certain that a very large number—particularly in country districts and in small towns—receive raw milk and that in many instances the milk is not boiled in the home before use Incidentally in support of his generalization he quotes figures given by the School Medical Officer for Salop County Council in a report dated 1914 when pasteurization was neither so efficiently conducted nor so widely adopted as at present Moreover while Mr Sprawson refers (p 8) to the influence of refined carbohydrate intake on dental caries he fails to mention other factors such as the care and cleanliness of the teeth and irregularity in the spacing of the teeth which may also affect the incidence of caries As a matter of fact in only three cases does Mr Sprawson record the original incidence of caries so that there is *no indication in his paper that the groups are similar* with regard to such factors The possible existence of such predisposing factors illustrates the need for the most careful selection of control groups on which comparisons may be based—a precaution which does not seem to have been taken by Mr Sprawson

4 It appears therefore that Mr Sprawson is quite unjustified in regarding his data as evidence that raw milk will confer immunity to dental caries while pasteurized milk will not No comparison of the two types of milk is in fact possible from an examination of his tables since there is not only no evidence that the nature of the milk supply was the only variable between the groups but there is evidence that even the quantity of milk fed (and from a sentence on page 2 apparently the regularity of milk feeding of children in Tables I II and VI) varied in the different groups Mr Sprawson himself writes The facts recorded concern the effects of raw milk *I am not aware of any comparable body of children who have been similarly brought up or sterilized or pasteurized milk* and so have no *exact knowledge* whether effects comparable with those recorded might be brought about by such means but such evidence as is available and inference indicate rather that they would not be Since as stated in the preface the authors of the Bulletin limited themselves strictly to reviewing *evidence*—rather than summarizing *opinions*—and since it is apparent from the above facts that the available evidence does not satisfy the requirements of a scientific comparison the position taken up by the authors is entirely justifiable

Mr Sprawson suggests in his letter that the authors of Bulletin No 5 were not by training competent to appreciate the significance of his findings Yet in his own publications he preserves a far more cautious attitude with regard to his own tentative hypothesis The observations herein recorded he writes (p 1) *seem to show that* raw milk *confers some immunity* to dental caries Or again in a later publication[1] *if* this raw milk hypothesis is a true one Moreover Mr Sprawson quotes Middleburgh as *giving a correct interpretation* of the results of the investigation Yet if reference is made to the last page of Middleburgh's paper the following statement will be found even should Sprawson's conclusions *ultimately prove incorrect or inaccurate* we have done an immense amount of good in recommending [the daily consumption of one pint of Certified or Grade A (T T) milk] These statements are far more guarded than those of the authors of the Bulletin who state definitely that the merit of including raw milk in the diet of young children for the prevention or arrest of dental caries *has been demonstrated* but the contention that pasteurized milk is not an efficient agent has been shown to be *unproven*

It is most unfortunate that in attempting to apply his results to the controversy over raw and pasteurized milk Mr Sprawson should have relegated to the background the real significance of his work Thus in comparing the

[1] *Scottish Journal of Agriculture* 1933 xvi 27

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EAST YORKS.—Country Town, near Coast.—Unopposed mixed PRACTICE. Cash receipts last year £960. Panel 630. Excellent detached house 3 reception, 4 bedrooms garage and large garden. Premium 1½ years purchase.—No. 346.

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incidence of dental caries in his selected groups of children with the general incidence of this condition among children in Great Britain, he appears to have neglected the one outstanding feature—namely, that whereas the average child in Great Britain receives an entirely inadequate supply of milk children in his selected groups received comparatively large quantities of milk. He states (p. 5) for instance that many of his children not only received liberal quantities of liquid milk but were given milk puddings (presumably heat-treated) on five or more days of the week.

If his results are interpreted with these facts in mind it is fair to say that Mr. Sprawson has rendered a signal service not only to the population at large, but also to the dairy industry by demonstrating the urgent need for increasing the *per capita* consumption of milk. In this conclusion he would find himself at one with the authors of the Bulletin who maintain (p. 68) that "it can confidently be stated that the value and convenience of milk as a food are powerful arguments for a very great extension of its consumption by children varying from 2 to 10 years."—We are, etc.,

JANET H. BLACKWOOD
NORMAN C. WRIGHT

Hannah Dairy Research Institute, Kirkhill, Ayr, May 19th.

Persistent Occipito-posterior Cases

SIR,—Dr. Somerville's letter (*Journal*, May 13th, p. 846) is of special interest to general practitioners if only to show how fashions change. Berkeley and Bonney (*Difficulties and Emergencies of Obstetric Practice*, second edition) state: "There are four methods of dealing with this complication: to flex the head, to rotate the head, to pull on the head, to perforate the head." With reference to rotating the head they state: "We prefer to use the hands. Forceps even if they were as efficient, have many disadvantages. Further, unless straight forceps are used—that is to say, a pattern which is *almost obsolete* [the italics are mine] and not likely to be found in any practitioner's bag—they would have to be taken off and reapplied." This book has been my vade mecum since 1920. It appears to me, however, that, as in any other difficulty, the personal factor is important: a man with a pugilist's fist would find it easier to use Kielland's forceps in making the necessary rotation. Others with strong, flexible, and thin fingers are probably more manually dextrous in this branch of work.

A final important point: if Dr. Somerville's practice is correct, why have two kinds of forceps? Why has the obstetrical specialist (the G.P.'s critic) been teaching the ordinary forceps for delivery when, apparently, the modern ones are obviously the "obsolete" ones?—I am, etc.,

Swansea, May 22nd. L. W. HEFFERMAN, M.R.C.S.

Rupture of Lung without External Signs of Trauma

SIR,—The following case may be of interest to police surgeons and others who may be called upon to certify the cause of sudden death.

A motor lorry reversing in a narrow street went too far backwards and inadvertently jammed a boy 13 years of age against the wall. The boy collapsed and died immediately. No marks of violence were to be seen externally.

On post mortem examination when the chest cavity was opened the right lung was found completely collapsed and the left lung partially so. Further examination showed three tears in the right lung: (1) a tear at the root of the lung measuring 5 in. by 3/4 in. deep; (2) a tear 3 in. long on the anterior surface of the lung; (3) a tear 2 in. long at the base of the lung. The right side of the chest cavity contained 12 oz. of blood. No fracture was found in any of the ribs. The sternum was intact.

The case illustrates the great elasticity of the chest wall. In this case the anterior and posterior surfaces must have been approximated with sufficient force to nip the lung, yet fracture of the ribs did not take place.—I am, etc.,

Forensic Medicine Department, University of Glasgow, May 12th. F. W. MARTIN.

First Operations

SIR,—I cannot but agree with Mr. Norman C. Lake that the phrase "a new operation" which appears in the summary at the end of my article in the *Journal* of May 6th (p. 778) is an unhappy choice of words, and certainly an irresistible target to be shot at. But I do not regret the expression, for it has brought from Mr. Lake himself speedy evidence in support of the operation I was advocating and, despite the article to which I am referred, I am convinced that the notion is new in the sense that it is novel to the majority of surgeons whilst the question of originality scarcely arises since the procedure is so simple and so obvious that it must have occurred to others, frequently. In this connexion may I say that I should welcome the publication of further cases. If consistently good results can be obtained by so easy a means in a condition so difficult and dangerous to deal with in any other way—and on this point Mr. Lake and I are in entire agreement—it should surely become established as a standard therapeutic measure.

In apologizing as I do to Mr. Lake (and the authors of any other pertinent work) for omitting any allusion to his paper, I would say that his reference to the matter in question occupies but one short paragraph in an exceptionally long article, and is couched in the most general terms.—I am, etc.

Liverpool, May 15th. C. ALEX. WELLS, F.R.C.S.

Libel and Slander in Medical Practice

SIR,—Your learned correspondent, in his article dealing with libel, quotes the decision in Dockrell *v.* Dougal. I humbly beg to point out that the author is not quite accurate. The jury found it was not libel in this case and the court agreed with the finding. The author would be correct in saying that the unauthorized employment of a medical practitioner's name in connexion with a quack medicine may constitute a libel.—I am, etc.

London, W.1, May 11th. M. W. BROWDY.

*** Our correspondent writes: I am much indebted to Dr. Browdy for pointing out my error concerning Dockrell *v.* Dougal. The advertisement contained the words "Dr. Morgan Dockrell, physician to St. John's Hospital, London, and many of the leading physicians are prescribing Sallyco as an habitual drink. Dr. Dockrell says: Nothing has done his gout so much good." The jury found that these words did not constitute a libel, but Dr. Dockrell appealed, asking for an injunction to restrain the repetition of the advertisement on the ground that, as the Lords of Appeal put it, they infringed his right to preserve his name from unauthorized use. The court unanimously agreed that no man has any property in his own name and that no man can prevent its unauthorized use, provided that the use does not constitute an actionable libel. Lord Justice Romer said that if the advertisement had been so phrased as to induce the public to believe that Dr. Dockrell had assented to the use of his name and damage had thereby been caused to him in his profession his action might have succeeded. Lord Justice Williams, while he

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2. DORSET.—Well-established PRACTICE, in very pleasant town within easy reach of the coast. Gross takings over £1,000 of which about £400 is from panel. Fees 3/6 to 21/-. Opportunity not to be missed. Consulting house with 2 reception, 5 bedrooms, etc., and garden of nearly 3 acres. Part only let at £62 p.a. Premium £1,750.

3. EASTERN COUNTIES.—Very sound established PRACTICE, unopposed and situated in pleasant agricultural district within reach of two good towns. Average gross cash receipts for last three years £1,849 (last year £2,237). Panel with mileage produces over £900 p.a. and appt. worth about £130. Fees from 3/6. Comfortable house with 2 reception, 6 bedrooms, etc. Garden. Garage. Price for freehold £1,500. Premium £3,200.

4. LONDON SOUTH EAST.—Old-established Better working-class PRACTICE in pleasant and situated in well populated district. Gross cash receipts for last 12 months £1,263 including panel of over 1,300. Suitable house with 2 reception and 3 bedrooms. Garden. Price for freehold £1,100. Premium £2,400.

5. DEATH VACANCY.—OXON.—PARTNERSHIP.—A three-eighth share is for disposal (owing to the death of the senior partner) with increase up to one-half on 1st October in a very old-established good mixed-class Practice situated in delightful country district near two good towns. Average gross cash receipts over £2,500 including panel producing about £900 p.a. and appt. worth £270. Fees 3/6 to 21/-, medicine extra. Large house with good garden containing 2 reception, 7 bedrooms, etc., and professional room. Net rent £55 p.a. Premium for share £1,400. Ingoing Partner should be experienced and preferably not under 35 years of age.

6. DEATH VACANCY.—NORTHANTS.—Middle and working-class PRACTICE, in pleasant country town producing approx. £500 p.a. including panel of 510 and appt. worth nearly £100 p.a. Fees from 2/6. Very low expenses. House contains 2 reception, 3 bedrooms, etc. surgery and waiting room. Large garden. Can be rented at £60 p.a. Sport of all kinds and schools within reach. Prem. £750.

7. EASTERN SUBURB.—Very old-established middle and working-class PRACTICE, worth about £1,100 p.a. including panel of 1,350. Very little midwifery. House contains 2 reception, 4 bedrooms, etc. Separate entrance to professional room. Small garden. Garage. Price for freehold £1,350. Premium 2 years' purchase.

8. EASTERN COUNTIES — FAVOURITE SEASIDE AND HOLIDAY RESORT.—Good mixed-class PRACTICE, established many years and producing for the last twelve months £1,600. Panel brings in £300 p.a. and an appt. worth £100 p.a. Fees 3/6 to 7/6 with medicine extra. Nice house with 2 reception, 5 bedrooms, etc. Garage. Garden. Price for freehold £2,250. Golf, shooting and other sports. Premium 1½ years' purchase.

9. SOUTH WEST OF ENGLAND.—PARTNERSHIP.—A share producing about £850 p.a. is offered on account of the retirement of the senior of two partners. Good prospect of increase. Suitable house available on rental. Ingoing Partner should be experienced and a keen worker and preferably not over 30 years of age.

10. SOUTH WALES.—Pleasant Coast Town and Pleasure Resort (pop. 40,000).—Very old-established and increasing PRACTICE amidst beautiful surrounding country averaging £1,644 p.a. including appt. worth £70 and panel of 1,200. Visits 5/- to 21/-, medicine extra. Good house (5 bedrooms, etc.) with garden and garage). Price leasehold (about 60 years to run) at a ground rent of £3 p.a.) £1,800 £1,200 on mortgage. Educational facilities and sport. A knowledge of surgery is essential.

11. PARTNERSHIP.—Residential Town within easy reach of London.—A one-third share is for disposal owing to the retirement of the senior of three Partners in a well-established mixed-class Practice. Gross cash receipts for the last 12 months £4,400. Panel of 2,500. Fees 3/6 to 21/-. Midwifery from £5/5. Very nice house available. Ingoing Partner should be experienced accustomed to best class work and able to undertake major surgery. Preference will be given to one holding the F.R.C.S. Premium £3,000.

12. PARTNERSHIP.—In a well populated pleasant South Eastern suburb within ten miles of London the half share of an old-established middle class Practice is for disposal owing to the retirement of the junior partner. He [illegible] senior 50 years. Cash receipts average £2 [illegible] of 1,800 and appts. worth £150. Very [illegible] semi-detached corner house with ample [illegible] ice leasehold (over 900 years at ground rent of £7 p.a.) £1,050. Premium 2 years' purchase. Scottish graduate preferred.

13. CO. DURHAM.—PARTNERSHIP.—A five-twelfths or seventy-fifths share is offered in a well-established sound mixed-class Practice the gross cash receipts of which average approximately £2,500 p.a. Panel produces £850 and P.M.S. £720 p.a. Appointments worth £120. Succession to the whole in four years or sooner if desired. Good house specially built with ample accommodation for the Practice situated in a growing area and offers excellent scope for further development. Premium for share 2 years' purchase.

14. NORTH EAST COAST.—PARTNERSHIP.—A one-half share is offered in an old-established better middle-class Practice in one of the favourite residential towns. Steadily increasing and excellent future prospects. Gross cash receipts £1,700. Panel of 700. Fees from 3/6. Very nice house with 2 reception, 4 bedrooms, etc. Garden. Garage for 2 cars. Rent on lease £80 p.a. Sport of all kinds and good schools. Premium for share 2 years' purchase.

15. MANCHESTER.—Old-established middle and working-class PRACTICE producing for the last twelve months about £650 including panel of 790. Fees from 3/6. Convenient house with 2 reception, 4 to 5 bedrooms, bathroom, etc. Rent on lease £50. Premium £950 to include furniture.

16. LONDON NORTH WEST.—Middle-class PRACTICE, in new and developing district, producing last year £400 and this year at the rate of about £600. Panel of 250. Fees 2/6 and 3/6 visit, from 5 to 7 gns. Six-roomed house with bathroom, electric light. Garage. Garden. Price for freehold £1,000. £850 on mortgage. Rent £650.

17. CENTRAL LONDON.—Middle and better-class PRACTICE, averaging for the last two years about £500 p.a. including small panel of 180. Fees 3/6 to 21/-. Professional accommodation can be rented at £200 p.a. Premium £300 to include furniture, drugs, instruments, etc.

18. SOUTH EAST LONDON.—Good middle and working-class PRACTICE, producing last twelve months nearly £950. Suitable house with 2 reception rooms and 5 bedrooms, etc. Rent on lease £70 p.a. Premium to include drugs, etc., and surgery fittings and furniture £1,450.

19. HOME COUNTIES.—ASSISTANTSHIP with view to Partnership offered in a better-class Practice in residential town. Ingoing partner must have experience of general Practice and be able to undertake major surgery and preferable hold a Fellowship.

20. NORTH WALES.—Old-established middle and working-class PRACTICE, averaging for the last three years over £1,700 including panel of about 1,300. Fees from 2/6. Visits from 3/6 with medicine extra. Suitable house with good professional accommodation. Electric light. Garage for two cars. Small garden. Rent on lease £100 p.a. Premium £2,500, £1,700 down balance by instalments. Good sport, etc. A knowledge of Welsh is not necessary.

21. RIVIERA.—Old-established PRACTICE the receipts from which have averaged over £1,600 p.a. but have decreased recently owing to Vendor's ill health. Very good prospects of extension. Fees from £1 1s. Very easy work. Suitable flat can be rented at £160 p.a. Premium £4,000.

22. MIDLANDS.—Old-established middle and better-class PRACTICE in clean and attractive manufacturing city. Cash receipts average over £1,600 p.a. including appt. worth £165 (transferable) and panel of 1,220. Visits 5/- to 2 gns. Midwifery discouraged. Fees 5 to 15 gns. Exceptionally good house in its own ground with ample accommodation fitted with every labour-saving device and economically run. Situated in the best residential part. A cottage in the grounds is let at £37 a year. Price freehold £5,000 (£3,000 on mortgage). Premium £3,500. Scope for active man.

23. EGYPT.—Well-established PRACTICE, producing about £1,650 p.a. and offering good scope for increase. Fees 10/6 to 2 gns. Excellent accommodation can be rented at £16 10s. monthly. Premium to include all furniture, drugs, bottles, instruments, etc. £2,000.

24. LONDON SOUTH WEST.—Old-established middle and working-class PRACTICE producing about £1,100 p.a. including panel of about 1,150. Visits 5/6 to 5 gns. Suitable corner house with 2 reception, 4 bedrooms, bathroom and separate professional accommodation. Can be rented on lease. Premium £1,750. Easily worked and offering very good scope for increase.

FOREIGN APPOINTMENT.—SOUTH AMERICA.—MEDICAL OFFICER required for Company. Must be well up in Surgery and have some knowledge of Tropical Diseases and if possible Sanitary matters. First-class passage out and home. Aged 30 to 35. Married or single. Three years' agreement. Salary £750 rising annually to £1,000.

ASSISTANTS REQUIRED.—(1) STAFFS. Outdoor £300 p.a. all found. (2) LEICESTER. Outdoor £330 p.a. with prospects and attractive view to Partnership in 12 months. Single preferred. (3) LONDON. Indoor £500 p.a. (4) LINCS. Outdoor Assistantship. Married or single. General country Practice. Salary £400 p.a. (5) YORKS. Outdoor. English or Scottish single and not over 30. Salary £300 p.a. all found. (6) WALES. Outdoor £400 p.a. (7) LONDON. £300 p.a.

WANTED TO PURCHASE.

1. LONDON or MANCHESTER.—Well-established price and panel PRACTICE, producing £1,200 upwards with nice house.
2. BUCKS, BERKS or near locality.—Best class PRACTICE averaging about £1,500 p.a. with good scope. Partnership not necessary. Ample capital for purchase of house and Practice.

The Agency has made arrangements for special facilities, on very favourable terms to be afforded to approved purchasers for the advance of part of the premium for any suitable practice or partnership Full details on application

agreed added the caution that he did not mean to say that a man might safely advertise his quack medicine as being certified to be efficacious by a professional man without his authority Dr Gatley (2nd edition 1929 p 36) says It is libellous to use the name of a medical man without his consent in the advertisement of a quack medicine in such a way as to induce the public to believe that it is prescribed or certified by him as efficacious This statement however seems in the light of this case to need qualifying by the condition that the advertisement must cause the doctor damage

Camp Communities

SIR—The organization known as Crith Ford Camps (Crith peace and Ford militia) has come into existence in response to the present situation A chain of permanent camp communities is being formed in which young men of all classes can live a worthwhile life even though precluded from earning a living It is more than an unemployment scheme for it aims at filling needs—which would be urgent even if there were no unemployment—(1) for the regaining by our young men of that personal experience of primitive adventure which was lost in the migration from country to town (2) for the constructive use of readiness to face danger and difficulty in the service of their country and (3) for education in the purposeful use of the leisure which humanity has secured by the elaboration of machines As Sir Alfred Ewing said in his presidential address to the British Association The command of Nature has been put into man's hands before he knows how to command himself

The first camp is at Godshill near Fordingbridge on the north western edge of the New Forest When equipped and fully established the camps will approximately maintain themselves The money paid by those who participate—£1 weekly by non insured persons and the State unemployment or other benefit by the men entitled to them—will supply the greater part of their needs the work of the men themselves will provide the balance Those working within the scheme while living a full and healthy life will find time to provide an increasing proportion of each other's needs They will avoid competition by sale of goods or services with the industrial community the contributions required from it for their upkeep will diminish as their powers of self help increase Their life whilst unemployed though not rich in comfort will be full of interest affording an honourable and adventurous alternative to industrial life The men who come to the camps are drawn by the prospect of adventure and of national service they form a community closely resembling that of a university where young men of varied experience and outlook compare views and work together Those who come from public schools and universities will be able to contribute the full cost of their maintenance On each of the others there is a weekly deficit and help is required to meet this as well as for the equipment of new camps and for the expenses of management The address for contributions or inquiries is Crith Ford Camps Toynbee Hall London E 1

The camps offer to a man a real opportunity to work out his own salvation We appeal to all who feel the gravity of the present situation to see to it that the wherewithal to equip these camps is not lacking Their assistance will enable the threat of disaster to become the means of a great renaissance—We are etc

LASCELLES ABERCROMBIE
J R BELLERBY
MARGARET C BONDFIELD
RONALD C DAVISON
LAURENCE HOUSMAN
EDITH M HULSE
J SCOTT LIDGETT
JOHN MACMURRAY
ARNOLD S ROWNTREE
MICHAEL E SADLER
MARY TREVELYAN
AUBREY T WESTLAKE
Chairman
J NORMAN GLAISTER
Honorary Secretary

May 13th

Obituary

R W INNES SMITH M D

Sheffield

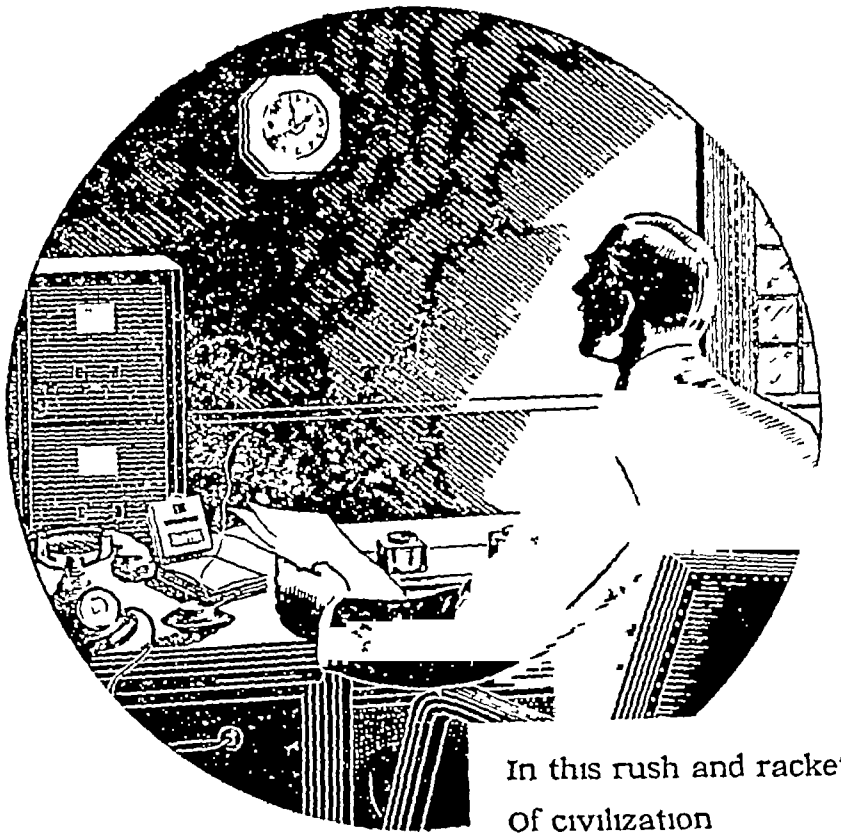
We regret to announce the death at his home in Sheffield of Dr R W Innes Smith Born in 1872 in Edinburgh he was educated at Daniel Stewart's College and the university graduating M B C M in 1894 and proceeding M D in 1902 In 1897 he was for a short time a student at King's College London and afterwards became house surgeon at Ancoats Hospital Manchester He settled in Sheffield in 1900 and retired only recently from practice A keen antiquarian and traveller he published in 1932 a record of the English speaking students who had studied at Leyden University He was also the author of several medical memoirs including that of Dr James Mounsey and in 1927 acted as vice president of the History of Medicine Section of the British Medical Association

Professor ARTHUR HALL writes

Innes Smith was in many ways a very exceptional man His interests were wide his enthusiasm was intense and his energy was boundless Whatever he set about to do was done thoroughly and with success Soon after settling in Sheffield thirty three years ago his influence for good began to be felt in many ways Amidst the heavy duties of a very large practice in the industrial quarter of the city he found time to devote to his pioneer organization of local public ambulance work It was indeed at his suggestion that one of the larger steel works was eventually persuaded to set up its own ambulance station and first aid surgery to deal with accidents among its workmen His ripe experience and judgement in everything connected with ambulance work led to his being appointed medical referee for all compensation cases by one of the large firms of the district He was a true and loyal son of Edinburgh Alma Mater for him had always a deep and lively meaning and to this he gave practical expression twenty seven years ago by bringing together his fellow graduates practising in this district to found the Sheffield Edinburgh University Graduates Club an organization which still flourishes and has done much not only for its members but also in promoting closer relations between the staffs of Edinburgh and Sheffield Universities

Perhaps the most surprising side of Innes Smith's personality was his interest in the history of medicine This was his lifelong hobby and to it he devoted all his spare hours In the course of time he had gradually amassed a large number of engravings of medical portraits which made a unique collection About the life history of each subject he knew every available detail and his knowledge of the physiognomy of most of the medical leaders whose portraits have come down to us was quite exceptional This was once tested when he was shown round the portraits in the Royal College of Physicians of London He recognized each at once At another time at the Wellcome Museum he found that they had a portrait erroneously labelled as Dr Mead which he said was really that of John Belchier—as it proved to be An engraving of Sir Charles Scarburgh which he presented to the Royal College of Physicians of London a few years ago was identified by him at a second hand dealer's on one of his holiday trips It had been labelled Charles Searburgh Navigator Most of his holidays for many years were spent in visits to the various European centres which are or have been the seats of famous schools of medicine From time to time he published various articles relating to medical worthies of the past

He also did valuable work to help his less successful brethren As a life governor of Epsom College he acted for many years as the local secretary for Sheffield



In this rush and racket
Of civilization
When everything
Must go
By the clock
Of efficiency,
AGAROL keeps step
With the march
Of therapeutic
Advance
In the treatment
Of *constipation.*
Agarol puts moisture
Into the intestinal tract
And keeps
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Soft and pliable
That makes evacuation
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But Agarol also
Gently stimulates
Peristalsis,
And propels
The contents
Of the intestines
Outward
Ofttimes, in less
Than a week
The dose
Of one tablespoonful
Or less,
Can be reduced
To even less
So prompt and sure
Is the improvement
Evident

Agarol Brand Compound is the original mineral oil and agar-agar emulsion with phenolphthalein Palatable, easily mixed with other liquids, Agarol is suitable for every age period.

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Printed and published by the British Medical Association at their Office Tavistock Square in the Parish of St Pancras in the County of London.

and district, and during his tenure he had collected over £1,200 for the charity, a larger amount than has been collected by any other secretary in the provinces Nor must it be forgotten that this money was collected in spite of the fact that the greater part of his area is in the West Riding, which has its own medical charitable society, of which Innes Smith was the president only a year ago Indeed, this was one of the last occasions on which he appeared in public before the onset of his long and painful illness Kind-hearted, generous and sympathetic, his loss will be felt by a wide circle of patients and friends

WILSON TYSON, M A , M D CANTAB , I R C S LD

We regret to announce the death, on May 9th, of Dr Wilson Tyson, after an illness lasting some months From Newcastle Grammar School he went to Caius College, Cambridge, and thence to Guy's Hospital, where he qualified in 1895, and thereafter held the posts of house-physician and resident medical officer to the private wards He took a prominent part in the athletic life of the hospital and captained the Guy's Hospital Rugby team In 1898 he began general practice in Lowestoft, where for many years he carried on a successful and responsible practice His interests, however, were in surgery, and for more than twenty five years he was surgeon to the Lowestoft and North Suffolk Hospital He was a very good all round doctor, and became known throughout the district as a sound diagnostician During the war he served in the R A M C (T), at the 1st Eastern General Hospital, Cambridge, and subsequently in France , he was demobilized with the rank of major in 1919 For twenty-five years he was honorary secretary to the North Suffolk Division of the British Medical Association, and in 1922 was president of the Suffolk Branch In 1928 he retired from Lowestoft, and later took a country practice in Newport, Shropshire, where he was becoming well known at the time of his death

A colleague (H M E) writes

Dr Wilson Tyson s death will be regretted by many grateful patients and by a large circle of professional friends He was still in possession of boundless energy an of enthusiasm for surgery, which was to him not only a profession but a hobby If one dropped in on Tyson in the evening he was always found reading the latest book or journal on surgery in fact, although a general practitioner with a surgical bent his knowledge and practice of surgery was that of a highly skilled specialist A powerfully built man he excelled at games in his younger days He always retained his interest in Rugby football he was also a keen tennis player On leaving Guy's he came to Lowestoft, and succeeded Dr Roberts in practice After a few years he was appointed assistant surgeon to the Lowestoft Hospital, and in due course became full surgeon He soon established a reputation as a sound surgeon with fine manipulative skill When the war came it found him ready to take a responsible post, and he was appointed surgeon to the Eastern General Hospital at Cambridge He served with this unit both at home and in France, and was held in high esteem by his colleagues On returning from active service he became a Fellow of the Royal College of Surgeons of Edinburgh while still carrying on his practice at Lowestoft He soon began to obtain a consulting practice in surgery and was in great request among his colleagues for advice and operations Tyson was an enthusiastic supporter of the Association , he was local secretary for many years, and held office in the Division and Branch In fact in East Anglia for a considerable time the B M A was Tyson He enlisted new members, smoothed over difficulties arranged meetings and dinners, and carried on a large correspondence in a quiet unassuming way that was perhaps not duly recognized by those who benefited by the results His work and influence were a great factor in the professional life of East Anglia, and his death has come as a great blow

THE LATE PROFESSOR J T J MORRISON

A former colleague writes From 1899 to 1932 J T J Morrison was professor of forensic medicine and toxicology in the Birmingham Medical School Many of his later colleagues in the faculty had been his pupils formerly He lectured with a dignified bearing, a good voice and distinct speech From the beginning he applied care and skill and learning to the use of words, so that they might convey the intended meaning unmistakably, impressively and in shapely form His measured clarity of statement made him a valuable expert witness Even more important to students than his instruction was his implied attitude towards medical practice It was as though he felt that all medical work was a special service to humanity none but the practitioners themselves could know how valuable or how well done No enactments nor rewards could call forth good medical work , that could only come from the strict principles, vision, devotion, and high ideals of the doctors themselves They were to be a kind of voluntary nobility, self-dedicated to a worthy purpose, incapable of inferior conduct To no one—students practitioners or laymen—would he allow a lower view of the doctor's vocation Morrison's conduct was parallel with his teaching He was an upright man, of high aim and undeviating rectitude He would speak fearlessly and emphatically for what he considered right His own interests might invite no compromise, nor could the interests of his friends His inflexibility occasionally brought him unpopularity, but even those who thought him most mistaken soon came to respect and to admire his principles, and to recognize no ordinary motive of opposition Morrison set a standard which, long associated with his personality, will long survive his bodily presence —C W

We regret to record the death, on April 24th, at the age of 74, of Dr RICHARD WILLIAM LLOYD of Kensington Born at Gibraltar in 1859 Dr Lloyd received his preliminary education at Bedford Modern School Entering St Bartholomew's he obtained the M R C S Eng in 1880, and the L R C P Ed and L M in 1883 In 1881 he served as house surgeon at the West London Hospital and was subsequently honorary anaesthetist at the hospital for thirty years, and on retiring in 1914 was appointed honorary consulting anaesthetist Among his earlier appointments were a house surgeoncy at St Peter s Hospital for Stone, dental anaesthetist at Guy's Hospital, and anaesthetist at St Mark s Hospital for over thirty eight years He commenced private practice in Kensington in 1883 During the war Dr Lloyd was anaesthetist at the King George and Swedish War Hospitals He was one of the original members of the West London Medico-Chirurgical Society, whose meetings he attended regularly, and was successively president, vice president and member of the council Initiated in Freemasonry in the Cavendish Lodge, he was always an enthusiast in the craft A hobby he developed in later years was the study and acquisition of old pictures, and he was the author of *The Cult of Old Paintings and the Romney Case*, with a foreword by Sir Edward Poynter, P R A Although his health began to fail during the last three years he carried on practice up to within two weeks of entering hospital for an operation on April 18th

The following well-known foreign medical men have recently died Dr ALBERT LEMAIRE professor of internal medicine at Louvain aged 57 , Baron ALBERT DE LA CHAPELLE, an eminent surgeon of Helsingfors, aged 62 , Professor GIOVANNI D'AIUTOLO a prominent oto rhino-laryngologist and pathologist of Bologna, aged 71 , Dr PAOLO ENRIQUES, professor of anatomy at the Faculty of Medicine of Padua , and Dr DESOIL, professor of medical zoology at Lille

Medico-Legal

NEGLIGENCE OF A SUBORDINATE NURSING HOMES AND CO OPERATIONS THE PAYING PATIENT*

The legal liability of a hospital for injury due to the negligence of its medical and nursing staff has been laid down within broad limits by a succession of judgements of the High Court though as the first part of this article showed there is still room for doubt on the precise limits of the hospital's liability for negligent acts by nurses The leading cases especially Hillyer's case suggest that it is not as a rule liable for negligent acts by its qualified medical staff all that its governors must do is to exercise reasonable care in the selection of competent medical officers It is not liable for negligent acts by nurses at operations nor at electrical treatments nor presumably in the course of any treatment under the direction and control of a medical officer In the performance of purely ministerial or administrative duties whatever that phrase may include the nurse is the agent or servant of the hospital and the management may have to pay damages for her negligence In matters of professional skill although the nurse may perhaps at times be the agent of the medical man directing the treatment it seems that she is not the agent of the hospital Provided that the hospital has taken reasonable care at the beginning to ensure that she is competent to do the duties with which she is charged it is not liable for her negligence in those duties in so far as they are matters of professional skill Where this begins and ends is not defined and would probably be regarded as a question of fact in each individual case to be left for the jury to decide Broadly speaking it seems that a hospital's liability is limited to providing the patient with reasonably adequate food shelter bedding and the other basic necessities of a sick person and to ensuring that he shall have the attention of competent doctors and nurses A hospital is responsible for the summoning of medical aid to a patient in an emergency but when the management through its servants has discharged its purely ministerial and administrative duties it apparently has no further responsibility Lord Dunedin went so far as to say that the managers of a hospital do not go to the public professing themselves to operate on or nurse or treat patients they only profess to provide an institution where patients will meet with skilled persons who will do these things

That is certainly the position of the hospital in regard to non paying patients Nowadays however most patients pay something to the funds of the hospital where they are treated even if the fee is only a few shillings a week and patients who can afford to enter a nursing home pay much larger sums The liability of the hospital as defined by the judgements that have been quoted is its liability for the results of wrongful behaviour not for breach of contract A hospital has no contract with a non paying patient it merely owes him the duty to take a certain degree of care When a patient pays to enter a hospital or home he enters into a contract with the management and this contract may involve the managers in fresh liability apart from the ordinary duties which they owe him to take care Now that municipalities all over the country are assuming the management of hospitals and are admitting paying patients this liability is not one which they can afford to neglect The question of what this contract involves must be answered by the facts of each case but it is fair to assume that the more a hospital receives the more it undertakes to do When a patient in a public hospital pays a small sum only and is not otherwise differentiated from a non paying patient the inference may be that he agrees to contribute to the hospital's fund according to his means and that he does not expect to get more than the destitute patient gets for nothing If then the contract on the part of the hospital is to supply in consideration of the fee paid its ordinary accommodation and facilities for nursing and treatment its liability to the patient for the negligence of its nurses will not be different from its liability to a patient with whom it has made no contract If the fee is to include the privilege of occupying a special ward or a private room or the supply of more desirable food or personal service and the like these benefits are clearly all within the class of purely ministerial or administrative duties for the purpose of providing them the nurses are the servants of the hospital and the hospital is responsible if the nurses neglect to perform them It is doubtful if the hospital in return for the patient's fee ever under takes to do more from the medical point of view than provide skilled doctors and nurses

The legal position of a nursing home must surely be very different There seem to be no judicial decisions or even pronouncements on it but certain inferences can be drawn from the ordinary principles of contract law The hospital managers to use Lord Dunedin's expression do not profess to treat or nurse the patient themselves A brief study of a number of advertisements of nursing homes will show that the proprietors of these institutions obviously go to the public with the profession that they themselves nurse the patient and in many respects with the profession that they themselves treat him The advertisements seek to attract patients by describing not only the comfort and amenities of the home but the especial skill of the nursing staff and the long professional experience of the matron—who is often also a proprietor Many of them advertise the skill and experience of members of their staff who are employed for the special purpose of giving massage baths or electrical treatment Not a few homes especially those which cater for mental patients advertise the skill and experience of the medical staff On their advertisements alone it seems clear—speaking generally—that the managers of nursing homes agree with the patients to nurse them if not to treat them If a home sanatorium or other similar institution undertakes to nurse or treat patients then the nurse or doctor who carries out nursing or treatment is the home's agent and it is responsible for every act of negligence which that nurse or doctor may commit (See the case of Hall *v* Lees below) It is doing more than provide a place where the patient may meet the skilled doctor and the skilled nurse It is selling him nursing and treatment When a patient is being visited by his own doctor the home is naturally not responsible for the actions of that doctor and if one of its nursing staff while assisting the patient's own doctor during an operation and while under his direct control committed an act of negligence the home would perhaps not be responsible because it would for that purpose have parted with the control of the nurse But whereas in a hospital a nurse may while performing a skilled service be nobody's agent in a nursing home she must it is submitted always be the agent of the home except in the rare event of her being under the direct control of a medical man

In addition to nursing homes and sometimes in connexion with them there exist many organizations which perform the service of supplying on demand nurses to doctors and homes to patients It is possible through these co-operations to engage a nurse at any time for any purpose and for any desired period Some are charitable some exist for profit If a patient engages a nurse from a co-operation and she burns him with a hot water bottle can he get damages from the co-operation The test question here is Did the organization undertake to nurse him or only to supply a nurse If it undertook to nurse him it must pay damages but if it only undertook to supply a nurse its sole duty was to use reasonable care to supply one competent for the purpose and it is not responsible for any negligence she may commit afterwards The usual undertaking is merely to supply a nurse

In Hall *v* Lees (1904) a philanthropic association supplied nurses both to non paying and to paying patients it used great care in the selection of competent nurses and paid them salaries A patient who underwent an operation in her own home engaged a nurse from this association to take care of

* The first part of this article on Negligence of a Subordinate by a legal correspondent appeared in the *Journal* of April 29th (p 766)

'NEOSALVARSAN' TRADE MARK BRAND
NEOARSPHENAMINE
EHRLICH'S ORIGINAL
'1914'

Approved for use under the V.D Regulations 1916 and tested in accordance with the Therapeutic Substances Act, 1925

ISO DOUBLE AMPOULE

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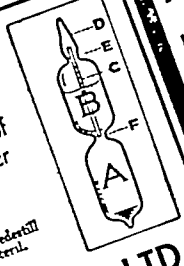
The ampoule body A contains the Neosalvarsan, and the fluid container B the necessary quantity of sterile redistilled water



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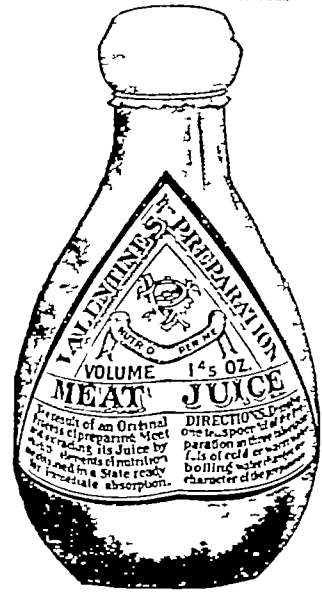

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her afterwards and while she was still under the effects of the anaesthetic she was burnt by a hot water bottle Collins, Master of the Rolls explained that the association s liability depended upon what contract the patient had in fact made with the association If the association undertook to nurse the patient it was responsible for the negligence of the nurse by whom it nursed her If however it only undertook to supply a competent nurse then its only duty to the patient was to use ordinary care and skill in selecting that nurse After a careful study of the regulations of the association the Master of the Rolls said that it had only contracted to supply a competent nurse, and therefore was not liable for her negligence in a particular case

The further question sometimes arises of who is liable if a nursing home engages a special temporary nurse for a particular patient In a recent case a medical man entered a nursing home as a patient , he instructed the matron of the nursing home to engage a special nurse for him from a co operation The doctor in charge of the patient was also part proprietor of the nursing home He ordered this temporary nurse to give the patient 1 drachm of paraldehyde , this was a right and proper dose and the giving of medicine is one of the duties which a doctor may properly delegate to a nurse As a result of the dose given by the nurse the patient died, and it was alleged that the nurse negligently gave an overdose In this case (which did not come into court) the doctor in charge had two separate liabilities for he was not only the doctor but also the part-owner of the nursing home As doctor he was not responsible for the negligent performance by the nurse, in his absence of a duty which it was proper for him to delegate to her (see the case of Perionowski *v* Freeman below) His responsibility as part-owner of the nursing home was another matter, for in this capacity he had undertaken to nurse the patient and was therefore liable for any negligence committed by one of the nurses through whom he nursed the patient They would in this case remain his servants or agents because of his undertaking to nurse the patient The question is then Was this special nurse his servant or agent at the time? As the case never came into court the correct answer will never be known It is, however possible to argue that the nurse was never the servant of the nursing home or under its control, but was the servant of the deceased and acting under the instructions of the doctor in charge of the case who of course, would not as such be responsible for anything she did in his absence The nursing home agrees to nurse the patient but if the patient asks to engage a special nurse the home can say with reason that, so far as the duties of that nurse are concerned he has released it from its agreement to nurse him and has himself undertaken that responsibility, its only duty being to satisfy itself that the nurse it engages at his request is competent

THE HOSPITAL PHYSICIAN

Can a physican or surgeon on the consulting staff of a hospital, or a house-physician or surgeon, ever be held liable for the negligence of a nurse? The courts have given very little indication of the right answer to this delicate question It is fairly clear, subject to certain reservations, that when a nurse is under the direct control of a surgeon or physician she is his servant for the time being and he is responsible for the consequences of her negligence The test question for deciding who is responsible for a subordinate is, " Who had control of him at the material time ? " In Donovan *v* Laing etc , Syndicate (1893), the court held that a crane driver, borrowed with his crane from another company by a firm of wharfingers, was the servant of the wharfingers while he was working for them Whether the surgeon or physician actually has control is a question of fact in each particular case Sometimes a nurse engaged on a highly skilled task may be a free agent and under no one s control When a nurse is carrying out on the order of a medical man and in his absence some duty which it is the reasonable custom of the hospital that he should delegate to her, he cannot be held responsible for her negligence or other wrongdoing

In the case of Perionowsky *v* Freeman (1886) a patient in St George s Hospital brought an action against two of its visiting surgeons He said that they had ordered him a hot hip bath which was given by nurses and that the nurses made the water much too hot and held him in it in spite of his screams and struggles, so that he was severely scalded Chief Justice Cockburn observed that, as it was proved to be the ordinary hospital practice to leave the administration of the bath to nurses the patient could not get damages from the surgeons even if the nurses had been negligent If the surgeons had been personally present they might have had to answer an allegation of ill usage but as they had not been present they could not be held liable He said in summing up that our great hospitals supported as they were only by voluntary subscriptions (this was seventy years ago) could not be supported if they had to engage a staff of medical men sufficient to attend to all the minor incidents or details of medical or surgical operations which might be ordered such as baths It was he said indispensable that such matters should be left to nurses who were necessarily familiar with them Medical men were always anxious that no unnecessary pain should be inflicted on their patients, and it was incredible that they should have allowed the man to be treated in their presence in the way which he had described

To sum up, therefore medical men cannot be held liable for the negligent acts of nurses whom they have every reason to believe to be competent, in the performance of ordinary nursing duties, unless they are present at the performance of the act and can exercise control Whether a particular duty properly comes within the scope of a nurse is a matter of the practice in the hospital and in the profession generally and of whether the jury consider that practice reasonable, having regard to all the circumstances

(To be continued)

JUDGEMENT AGAINST SURGEONS FOR ALLEGED NEGLIGENCE £1,000 DAMAGES

An action, the hearing of which occupied eight days, was commenced before Mr Justice Horridge and a special jury in the King s Bench Division on May 9th, in which Neville Hartley, a minor, and John Hartley, his father, of Upwell, Norfolk, sued Charles Eric Sweeting Jackson, F R C S , and John Lewin, F R C S , of King's Lynn for damages for alleged negligence in the performance of an operation on Neville Hartley and in subsequent orthopaedic treatment Mr Lewin was sued only as Mr Jackson's partner

On July 30th 1931 Neville Hartley was injured in a motor car accident when his right leg was fractured in three places On August 3rd he was removed to the nursing home of Mr Jackson and Mr Lewin, and on the following day Mr Jackson performed an operation The plaintiffs alleged that the injuries were negligently unskilfully, and improperly treated the compound fracture of the femur not being properly set, and that owing to non fixation the leg slipped and became twisted The boy left the nursing home on August 20th and later at Westminster Hospital in November two operations were performed to remedy the defects but the leg was permanently shortened The defendants denied the allegations against them and stated that if the patient suffered unduly it was because of the refusal of his parents to comply with Mr Jackson's advice that he should not be removed from the home

Case for Plaintiffs

Mr Neville Hartley aged 17 stated that after his admission to the defendants' nursing home *x* ray photographs were taken, and his broken leg was afterwards placed in a Thomas splint On the night of August 7th four days after his admission he was awakened by Mr Jackson who told him that his leg which had been resting on the foot rail of the bed had slipped down It was replaced, and afterwards he suffered great agony In cross examination by Mr Roland Oliver K C for the defence the witness said that he thought he was neglected in the home and that the staff did not think he was half as ill as he was Nurse Topps who went with the patient to look after him in the nursing home said that she went in to see him several times during the night of August 7th as he was in such pain, and he told her that Mr Jackson had awakened him and said that his leg had slipped The mother of the boy also stated that her son informed her next morning of this occurrence Evidence on behalf of the plaintiffs was also given by Dr William Reynolds

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of Upwell who had rendered first aid soon after the motor accident and subsequently had called Mr Jackson into consultation The fractures he said were reduced on the bed in the boy's room at the nursing home he would have preferred the operating theatre He saw no traction applied to the limb which was not even fixed to the end of the splint so as to hold it firmly On the boy's return from the nursing home on August 20th he found the limb very swollen over the whole length and it was quite obvious that the fracture had become unreduced and displaced to an extreme degree The thigh was twisted and the upper part of the femur was lying on the outer side of the knee-cap producing an appearance of two knees Fixation in the displaced position must have taken place some days previously In cross-examination Dr Reynolds said that he considered that some form of traction should have been applied and he himself would have risked putting a pin through the top of the tibia which was some distance from the wound He agreed that for a good many days after the accident there was septic infection and he did not suggest that the sepsis was the fault of the nursing home He denied that the trouble arose when the splint was taken off the limb at the patient's home at the end of September or that there were any signs of ill effect upon the limb owing to the journey home in the ambulance

Mr E P Brockman who operated on the limb in the following November expressed the view from an x-ray photograph taken at the nursing home on the day of admission that the proper treatment would have been to excise the wound and remove any soft tissues which appeared to be damaged or dirty afterwards replacing the fractured bone in the normal position and providing some fixation to maintain the reduction and to secure adequate drainage It was put to the witness in cross-examination that Choyce's *Surgery* and Mitchiner's *Science and Practice of Surgery* and both stated that excision should be done soon after the injury and that one of these authorities said that this was seldom possible after a few hours without risk of septic infection so that when this case came into Mr Jackson's hands five days after the injury it would have been useless and wrong to have excised The witness did not agree he considered it negligent not to excise in such an injury even as long as four or five days after it had been sustained With the fracture reduced and extension employed the risk of spreading sepsis was small He operated on the boy twice in November the reason for the second operation being that the lower fragment of bone had slipped back The patient was discharged in March 1932 and there were still signs of infection in the following May Mr W McAdam Eccles said that if he had a case of the kind early enough and before any marked sepsis was present he would excise the wound It was of no use to manipulate a fracture unless something was done to retain the fragments in apposition With regard to the condition four or five days after the accident when it was seen by Mr Jackson Mr Eccles said that if there were no signs of sepsis or only mild sepsis he would excise but if the wounds were really septic and discharged offensive pus he would open them up widely for drainage otherwise the patient's life was in danger The charts indicated that the plaintiff's wounds were mildly septic from the first and that the sepsis became pronounced on the evening of August 7th

Case for Defendants

Mr Roland Oliver in defence said that one of the main questions to be decided was what happened in the nursing home on the night of August 7th If what the boy said was true and the patient was left in bed in such a way that the fracture might become displaced that obviously was negligence But in fact at the time of night referred to in the boy's story Mr Jackson was never in the home except for an operation and the only night during the boy's stay in the home when Mr Jackson was there was August 4th the date of the operation Neither the boy's mother nor Nurse Topps who were there daily complained to Mr Jackson about this occurrence nor was anything said to Dr Reynolds when he visited the boy a week later The defendants case was that the boy's leg was set as well as it could be and remained straight all the time he was in the nursing home and that it was after his removal and the taking away of the splint that it assumed its frightful position A fractured leg would gradually give way and become bowed if it were taken out of the splint too soon It was not until Mr Jackson sent his account to the father towards the end of September that any complaint of negligence was made and even then the father in refusing to pay the account made no reference to the incident of August 7th

Mr Jackson who said that he was senior surgeon to the West Norfolk Hospital and during the war a surgical specialist in France stated that on being called to the case by Dr Reynolds he went to the boy's home and found him lying on a bed with a soft mattress and wearing underclothes saturated with blood and sweat The wounds were very dirty and there was considerable sero-purulent discharge over the fractured tibia and two separate discharges from the wound in the thigh He took a grave view of the case The boy was brought to the nursing home and next day he set the fractured femur by manipulating it He got a correct result and is certain that the bones were in line As the leg was septic to have cut down as suggested by Mr Brockman would have been fatal The sepsis became more acute as time went on but he did not agree that there was no sepsis at the beginning of the treatment It would have been unsafe to take the boy down to the x-ray room which was down two flights of stairs and the costly hiring of a portable x-ray outfit did not seem justified in view of the fact that no further operation is possible During the seventeen days that the boy was in the nursing home he visited him on forty-eight occasions and personally attended to his dressings every day except two He had no knowledge whatever of the alleged slipping incident of August 7th the first he heard of it was in court The splint enclosing the leg was supported on two wooden blocks

Mr John Lewin Mr Jackson's partner said that there was nothing improper or unusual in doing the manipulation on the bed instead of in the operating theatre He himself took no part in the manipulation but he had a perfect view of what was done The leg was made straight and when he saw it a week later there was no distortion or difference in position and the same was true when he examined it shortly before the boy left the home No form of extension of which he was aware could have been applied The matron Miss Thorpe spoke to seeing the limb exposed two days before the patient left when it looked the same as it did after the reduction of the fracture and showed no sign of distortion She had never heard of the incident of the night of August 7th until that hearing A sister at the home stated that she saw present when Mr Jackson reduced the fracture and she saw the leg every day until the boy left On the day of his leaving Mr Jackson himself dressed the leg and padded it evenly all the way down the splint She had never heard of the August 7th incident and the lady who had been night nurse on the occasion was also called and denied that Mr Jackson was in the boy's room that night Nurse Pepper of Wisbech who took charge of the boy after his arrival home and remained for five weeks said that when she first saw the naked limb three days after the boy had left the nursing home there was no obvious deformity at the knee or anywhere else the leg appeared in good alignment There was gross deformity at the site of the fracture when the plint was finally removed at the end of September Owing to the position of the fracture boards on a non-rigid mattress at the boy's home there was sagging wherever there was pressure she thought she mentioned this to Dr Reynolds

Mr Robert Milne considered that it would have been wrong treatment to excise such a wound four or five days after the accident Nor would he have cut down to get at the fragment because by so doing there would be risk of scattering the sepsis further Extension or traction was desirable if it could be accomplished but it did not follow that the fracture must have traction to keep it fixed Mr Hamilton Bailey declared the plaintiff's injuries to have been very exceptional and extremely serious with danger to life from shock and later from infection The inevitable presence of infection must colour treatment He believed the course which Mr Jackson had adopted to have been compatible with the best interests of the patient and consistent with good practice The witness resented certain questions in cross-examination arising out of his book *A Practice of Emergency Surgery* which had no application he said to a case like this which stood by itself

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Books Added to the Library

Association Notices, Correspondence, Vacancies and Appointments, Diary

AN EPITOME OF CURRENT MEDICAL LITERATURE will be found at the end of the JOURNAL

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Judgement

Mr Justice Horridge, in summing up said that the law in the case was simple A surgeon must use all due care and skill in treating his patient It did not follow that he did not use due care and skill because some other surgeons would have done differently, also there was no guarantee that he would be successful—he had only to use due care and skill

The jury answered the questions put to them as follows

(1) Did the incident spoken of as having happened on the night of August 7th take place?—Yes

(2) Was the defendant guilty of any negligence other than the accident of August 7th?—Yes

(3) If the answer to (1) and (2) is in the affirmative, what damages?—£1 000

Judgement was entered for the sum awarded with costs and as Neville Hartley is under age an order was made for the payment of £1,000 into court to be dealt with by the Master

The Services

HONORARY PHYSICIAN TO THE KING

The King has approved the appointment of Major General C A Sprawson C I E, M D F R C P Indian Medical Service honorary surgeon to the Viceroy of India as honorary physician to the King in succession to Colonel W H Leonard, F R C S, Indian Medical Service who has retired

DEATHS IN THE SERVICES

Colonel John Charles Barron Statham C M G, C B E R A M C (ret) died on April 29th aged 60 at Raigarh Central Provinces India of injuries inflicted by wild bees while making an archaeological investigation in the Cave of Sighanpur in Raigarh State earlier the same day In India wild bees are well known to be the most dangerous wild animals to sportsmen and others whose duties or pleasures take them into the jungle and all such accordingly give them a very wide berth Probably the presence of wild bees in the cave was not known to Colonel Statham He was born on November 7th 1872 was educated at Guy's and took the M R C S and L R C P Lond in 1895 and subsequently the D P H of the London Colleges and the D T M at Cambridge in 1904 Entering the R A M C as surgeon lieutenant on January 29th 1896 he was promoted to lieutenant colonel in the long war promotion list of March 1st 1915 to colonel in 1917 and retired on December 26th 1921 He served in the campaign on the North West Frontier of India in 1897-8 receiving the Frontier medal with a clasp and in the war of 1914-18 when he was mentioned in dispatches in the *London Gazette* of May 31st 1916 and received the C M G in 1917 for bravery in succouring wounded under heavy fire and also recovering an abandoned gun, in the campaign in the Cameroons West Africa where he was principal medical officer Subsequently he served as administrative medical officer with the Serbian Army as D D M S of lines of communication in the Mediterranean area and as D D M S at Naples and Boulogne He received the C B E on June 3rd 1919 and also the Legion of Honour the Croix de Guerre with palm the Order of St Saba of Serbia and the Italian silver medal for public health He was elected to the Athenaeum Club in 1924 on the occasion of the centenary of the club in that year From his boyhood he had been a great sportsman and hunter, and after his retirement he devoted himself to travel and sport making more use of the camera than of the gun chiefly in Africa which he had crossed more than once He was the author of *Through Angola* 1922 *With My Wife Across Africa by Canoe and Caravan* 1924 and *The Romance of a Tudor House* 1929 In 1922 he married Jessie Throsk daughter of F A Macquisten, K C M P their honeymoon consisting in the journey across Africa described in his second book

Lieut Colonel James Davidson, D S O Bengal Medical Service (retired) died at Lasswade Midlothian on May 1st aged 67 He was born on November 27th, 1865 the son of the late Rev Adam Davidson minister of Yetholm and was educated at Edinburgh University where he graduated M B and C M in 1891 Entering the Indian Medical Service as surgeon lieutenant on July 29th 1893 he became lieutenant colonel on January 29th 1913 and retired on November 27th 1920 He served on the North West Frontier of India in the Waziristan campaign of 1894-5 (medal with clasp) and in the Chitral campaign of 1895 (medal with clasp), in the Sudan in 1896 in the Dongola campaign (medal and Khedive's medal), on the North West Frontier in the Tirah campaign of 1897-8 (two clasps) in the Tibet expedition of 1904 in the action at Niani operations at and around Gyantse and the march to Lhasa (medal with clasp) and on the North East Frontier of India, in the Abor campaign of 1911-12 (mentioned in dispatches in G G O No 480 of May 25th 1912 medal with clasp and D S O)

Lieut Colonel Stephen Little Bengal Medical Service (ret) died at Monte Carlo on May 14th, aged 76 He was born on January 8th 1857, the son of Edward Little Inland Revenue officer Glasgow, and was educated at Queen's College Belfast where he graduated M D and M Ch with honours of the Queen's University, Ireland, and at Bart's Entering the I M S as surgeon on March 31st 1879, he became lieutenant colonel after twenty years service and retired with an extra compensation pension on June 22nd 1909 He served in the Afghan war of 1879-80 when he took part in the Hissarik expedition, and received the medal and in the Mahsud Waziri campaign of 1881 on the North West Frontier Most of his service in India was in civil employment in the Punjab

Lieut Colonel Alexander Vass Anderson Bombay Medical Service (ret), died at Stonehaven on May 9th aged 76 He was born on November 24th, 1856, the son of James Anderson of Aberdeen and was educated in the university in that city where he graduated M B and C M in 1880 subsequently taking the D P H in 1900 Entering the I M S as surgeon on April 1st 1882 he became lieutenant colonel after twenty years' service and retired on July 19th 1907 During the great war he rejoined for service in India and served from January 20th 1915 to June 5th 1920 He had also served on the North West Frontier of India in the second Miranzai campaign of 1891, receiving the Frontier medal with a clasp

Universities and Colleges

UNIVERSITY OF OXFORD

Convocation on May 16th accepted gratefully the legacy of the late Dr E R Fraser of New South Wales amounting to £417, for the Anatomical Department of the Medical School

UNIVERSITY OF CAMBRIDGE

The Rede Lecture by Sir Charles Sherrington has been postponed until the autumn

UNIVERSITY OF LONDON

LONDON HOSPITAL MEDICAL COLLEGE AND DENTAL SCHOOL

The prizes and certificates awarded during the current academic year will be presented by the Very Rev W R Inge D D Dean of St Paul's on Tuesday June 27th, in the College Library

UNIVERSITY OF LEEDS

The Council of the University announces the election to the chair of clinical medicine of Dr William Macadam F R C P Mr John Foster, F R C S has been appointed clinical lecturer and Mr Norman Wood part time demonstrator in pathology and bacteriology and research assistant in experimental pathology

UNIVERSITY OF DUBLIN

The Senate of the University has decided to confer the following degrees *honoris causa* at the Commencements which will be held on Thursday, July 27th, at 3 30 p m, during the Annual Meeting in Dublin of the British Medical Association

D Sc—Emil Novak, M D, Associate in Gynaecology Johns Hopkins Medical School and former vice president of the American Gynaecological Society, Gordon M Holmes M D F R C P President of the Section of Neurology and Psychological Medicine of the British Medical Association, 1933

M D—E Kaye Le Fleming M A M B Chairman of the Representative Body of the British Medical Association H S Souttar M Ch F R C S, Deputy Chairman of the Representative Body

ROYAL COLLEGE OF SURGEONS OF EDINBURGH

A meeting of the Royal College of Surgeons of Edinburgh was held on May 17th when Mr John Wheeler Dowden President was in the chair The following candidates having passed the requisite examinations were admitted Fellows R W Agnew E Ll Godfrey C S Gross K K Ghosh, R Harvey, D MacLennan E K McLean, D E Orchard, P I Pelly B A Porritt J M Sanson J P Semple S J Scott G H Solomon F D J Viljoen H Wilson

The Henry Arthur Dalziel Ferns Bursary was awarded after a competitive examination in organic chemistry in its application to medicine to I Greenberger

The Bathgate Memorial Prize was awarded after a competitive examination in materia medica and therapeutics to S J Lederman

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons went into Committee this week on the Finance Bill and also carried a resolution authorising taxation of reserves of co-operative and certain other mutual societies Foreign affairs were also down for discussion

The Metropolitan Police Bill was read a second time This Bill among other objects deals with the age of compulsory retirement and membership of the Police Federation Constables may be appointed for a fixed period of service and will be insured under the national health insurance scheme and under the Widows Orphans and Old Age Contributory Pensions Act

In the House of Lords on May 18th the Cancer Hospital (Free) Bill was on the motion of the Earl of Onslow Chairman of Committees read a second time There was no discussion on the Bill

The Royal Assent was given to the Protection of Animals Bill on May 18th This Act authorizes magistrates to forbid the holding of dog licences by persons convicted of cruelty to dogs

The Gas Light and Coke Company Bill was read a third time by the House of Commons on May 18th After a debate to which Dr O DONOVAN contributed Dr BURGIN on behalf of the Board of Trade said it was time the House said clearly that local authorities should not be allowed powers arbitrarily to cut off pipes and prevent their tenants having the alternative use of gas

The Road Accidents Parliamentary Group met on May 23rd to consider the Road and Rail Bill Sir E GRAHAM LITTLE presided The meeting welcomed the proposals for the maintenance of vehicles in a serviceable condition and for the *stricter supervision of hours of* labour of drivers and the loading of vehicles It was agreed that amendments and conditions should be moved in committee to strengthen the public safety provisions of the Bill

Industrial Pulmonary Disease

On May 16th Mr E BROWN replying to Sir W Jenkins said that research into industrial pulmonary diseases was directed by a Committee under the Medical Research Council and an account of the work was included in the annual reports of the Council No fresh findings or mining diseases had as yet been reported by the Committee but in the meantime increased attention was given by *inspectors of mines* to secure the effective use of dust preventive measures Practical work for the improvement of such methods was the constant duty of a special inspector attached to the Mines Department Mr D GRENFELL asked whether the Committee had *recommended* the use of appliances to prevent the inhalation of stone dust Mr BROWN said that the latest report (Command Paper 4248) showed that there were difficulties

On May 16th Sir J GILMOUR also informed Sir W Jenkins that he could not state the number of persons in South Wales mines suffering from silicosis and anthracosis who had made claims for compensation nor how many had succeeded Anthracosis was not a disease for which compensation was provided under the Workmen's Compensation Act He was advised that it had not yet been established that the condition of the lungs described as anthracosis gave rise to any disabling condition The Miners Federation had made representations to him regarding certain cases in which miners suffering from silicosis had not obtained compensation Mr GRENFELL asked whether the Home Secretary had a record of anthracosis cases as well as silicosis cases Sir JOHN GILMOUR said he was advised that anthracosis did not come under the terms that they were discussing Mr GRENFELL asked if applicants or the dependants of persons who had died or had been disabled were handicapped because of the failure of the medical profession and the medical officers of the Home Office to make a correct diagnosis between those two kinds of cases Sir J GILMOUR said that all those matters were being taken into consideration

Superannuation of Medical Officers of Health —The Parliamentary Medical Committee met on May 18th Sir Francis Fremantle presiding The committee received a deputation representing the National Association of Local Government Officers the Mental Hospitals Association the British Medical Association and the Society of Medical Officers of Health concerning the *effect on superannuation of the temporary* abatements of salaries It was agreed that the constituent bodies represented on the deputation should approach the association of local government bodies to discuss possible agreement and joint action with a view to approaching the Government to secure consideration of present anomalies A further object would be to suggest amendments in the Local Government Officers and Others Superannuation Bill which the Ministry of Health has under consideration

Unemployment Benefit following Sickness —Sir HILTON YOUNG told Mr Buchanan on May 18th that he had now made arrangements whereby an unemployed insured person who was summoned for examination by a regional medical officer would be advised to see his own doctor on the morning following his examination The doctor would then have received the report of the regional medical officer If that officer was of opinion that the insured person was fit for work and the doctor agreed he would so inform the insured person with the result that he would be able to attend at the Employment Exchange the same morning and claim unemployment benefit As sickness benefit would be payable up to and including the date of examination by the regional medical officer there need no longer be any gap during which no benefit was payable provided that the claimant satisfied the usual conditions

Physical Fitness for Driving Licence —In reply to Sir A Conan Doyle on May 17th Mr STANLEY said he did not think it was necessary to amend the Road Traffic Act 1930 that when a person charged with driving a vehicle while under the influence of drink was found not guilty of this offence on grounds of suffering from a physical defect—which might make him incapable of having proper control of a motor vehicle and a danger to other users of the highway—the court could order such person to be disqualified from holding or obtaining a licence for a suitable period Subsection (4) of Section 5 empowered the licensing authority to revoke the licence in such a case if its attention was drawn to it either by the magistrates the police or anyone else Answering Mr Lovat Fraser on May 17th Mr Stanley referred to an estimate that 250 000 drivers of motor vehicles in England and Wales were incapable of knowing green lights from red He said this was very exaggerated The Departmental Committee on Traffic Signs heard evidence on this subject and he would consider the matter in the light of a report which he hoped to receive shortly

Inquests in Camera —Replying to Mr Cocks on May 18th Sir HILTON YOUNG stated that he was unaware of any tendency among coroners especially in cases of suicide to hold inquests *in camera* He had no authority to offer coroners advice on this matter which was one for their own discretion having regard to the circumstances of the particular case He thought it undesirable that suicides should be announced in the Press in the sensational manner in which they were sometimes reported

Deaths from Small pox and Vaccinia —Sir G COLLINS told Mr Groves on May 17th that the number of deaths from small pox registered in Scotland during the period 1922 to 1932 inclusive was two and from vaccinia and cow pox during the same period thirteen

Alleged Deaths from Inoculation in Italy —On May 16th Mr GROVES asked the Minister of Health if he had received information regarding the deaths of ten children and the serious injury to a number of others from inoculation against diphtheria in the provinces of Venezia and Rovigo in Italy Sir HILTON YOUNG replied that so far he had no information beyond what had appeared in the public press but steps were being taken to obtain an official report He would consider publication when the information was available

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Medical News

The annual general meeting of the London and Counties Medical Protection Society, Limited will be held at Victory House, Leicester Square, W C 2, on Wednesday, May 31st at 4 p m

A 'sun walk' at Harrogate, in the form of a covered corridor built of glass which admits ultra violet rays, will be opened by Lord Horder on Saturday, June 17th

A short course of lectures on the approach to the psychoneuroses, for practitioners and medical students, will be given at the Institute of Medical Psychology, 6 Torrington Place W C , beginning June 12th The fee for the course is £2 2s for medical graduates and 10s 6d for medical students

A post graduate course on diseases of the kidneys will be held at the Hôpital de la Pitie Paris, from June 6th to 17th, under the direction of Professor Rathery and Dr Chevassu

The second lecture on cataract extraction, arranged by the Fellowship of Medicine will be given by Lieut Colonel R H Elliot at the Medical Society of London, 11, Chandos Street, W on May 31st, at 5 p m Four advanced lectures will be given on Wednesdays at 5 p m , at 11 Chandos Street, as follows June 7th, Dr Leonard Findlay chronic pulmonary disease in childhood , June 14th, Dr C P Symonds, disturbance of cerebral function in head injury , June 21st, Mr F J McCann, repair of injuries to the perineum and vaginal walls , June 28th, Mr Andrew McAllister, some features of eclampsia Forthcoming courses include medicine, surgery, and the specialties at the Prince of Wales s Hospital, June 12th to 24th week end course in clinical surgery at the Royal Albert Dock Hospital, June 10th and 11th , ante natal treatment at the Royal Free Hospital, Fridays, June 16th to July 7th , diseases of the chest at the City of London Hospital, Victoria Park June 12th to 24th , and cardiology at the National Heart Hospital, June 26th to July 8th

The thanksgiving service in connexion with St George's Hospital bicentenary will be held at St Paul's Church, Knightsbridge on Tuesday, June 27th, at 3 p m Invitations for a conversazione at the hospital on the evening of that day have been issued by the treasurers of the hospital and the dean of the medical school

The German Dermatological Congress which was to have been held in Vienna from June 6th to 8th has been postponed indefinitely for political reasons

The second French Congress of Gynaecology will be held at Luxeuil les Bains, with Professor Keiffer of Brussels, member of the Royal Academy of Medicine of Belgium, as president of honour, and Dr L M Pierra of Luxeuil, vice president of the French Society of Gynaecology, as president Further information can be obtained from the general secretary, Dr Maurice Fabre, 6, Rue du Conservatoire, Paris, 9e

The third International Hospital Congress will be held in Belgium at Knocke sur-Mer from June 28th to July 3rd, and will be open to all persons and societies interested in the construction administration, and development of hospitals The reports of ten international study committees will be read, the subjects concerned being construction, equipment and technique, administration and housekeeping finance and book-keeping legislation, care of the patient in the hospital, patients' food, personnel, statistics and outside connexions with the hospital The congress will be followed by a five day tour through Holland to visit new hospitals, industrial centres, and historic sites Detailed programmes can be obtained free from Messrs W Kohlhammer, Urbanstrasse 12/16, Stuttgart, and inquiries should be addressed to Dr W Alter, Ernst Ludwig Allee 2 Buchschlag, Hessen, Germany

At a general meeting of the Society of Medical Officers of Health held on May 19th, Dr Charles Porter, medical officer of health of the metropolitan borough of St Marylebone, was elected president for the session 1933–4 Dr Porter will take office on October 1st next

At its meeting on May 4th of the Central Midwives Board for England and Wales an application was received from the Lady Forester Trust, Shropshire for approval of the training of its midwives in the same manner as is followed at Queen Charlotte s, where midwives administer chloroform capsules to produce analgesia in labour It was stated at the same time that each hospital has a qualified medical officer in charge The Board replied that, as the rules stand at present the Board regards the medical officer as responsible in all cases in which chloroform is administered Approval as lecturer was granted to the following medical practitioners Dr J N Morris Devonport (pro tem) and Drs Edward Lethem and Charles Penny, Royal Derbyshire Nursing Association The appointment as examiner to the Board of Dr John Eric Stacey was approved

In view of the response to the circular letter and advertisements that have been issued regarding the tentative proposals that the Imperial Bureau of Animal Health should publish an *Index Veterinarius*, its preparation has now been taken in hand The first number, covering the indexing done at the Bureau in the first quarter of 1933, will be issued during the summer *Index Veterinarius* will be a complete index to publications relating to veterinary research, public health administration, and education The price is £4 a volume (four quarterly issues), including packing and postage Orders should be sent to the Imperial Bureau of Animal Health Veterinary Laboratory, Ministry of Agriculture and Fisheries, Weybridge Surrey

Dr Harvey Cushing of Boston has been elected a doctor, *honoris causa*, of the University of Paris

Professors Aschoff the Freiburg pathologist, and Sauerbruch the Berlin surgeon, have been elected doctors, *honoris causa* of Upsala University

Dr Paul Uhlenhuth professor of hygiene and bacteriology at Freiburg in Baden, has been awarded the Paul Ehrlich gold medal

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QUERIES AND ANSWERS

Hypertrichosis

E H B writes I would be grateful if anyone could suggest treatment for a condition of hypertrichosis affecting the arms and shoulders of a young girl aged 12 years It is a most unsightly condition and particularly trying to a young and sensitive girl otherwise healthy Electrolysis is unsuitable owing to the extensive nature of the condition

*** An article dealing generally with the treatment of hypertrichosis appeared in our issue of April 9th, 1932 (p 667)

Ulcers of Mouth

H B P (Manchester) would be glad of information regarding treatment likely to avail in a case of obstinate recurring ulceration (peptic ulcers) of the mouth and tongue He writes the patient is a lady about 47 years of age in very good general health The ulcers are typical quite white about the size of a pin's head surrounded by a small angry zone are multiple—from two or three to twelve or so—and situated between the gum and lip or cheek and sometimes on the tip of the tongue They are very tender have lasted with very little intermission for four months and cause almost constant pain No general cause seems ascertainable Myrrh has given very temporary relief apart from which nothing has been of real use

Tapeworm Infection

Dr S DEIVASIKAMONI (Madras) in replying to Dr J C Bennett's query (*Journal* February 4th p 211) recommends the use of melon pumpkin seeds for the treatment of his case He writes I have found this very effective and absolutely reliable Two to three ounces of the pulp of the seeds (fresh melon pumpkin) is macerated with sugar and milk and given on an empty stomach in the morning at 6 a m At 8 a m three ounces of mist alba is given The worm is usually brought out complete with head The dosage given above is for an average adult weighing 120 lb

* Melon pumpkin seeds (*Cucurbitae semina praeparata B P 1914*) are obtained from the *Cucurbita maxima* Duchesne a native of the Levant For medicinal use they should not be more than a month old and should be deprived of their seed coats The Curator Royal Botanic Gardens Kew kindly informs us that the fruit which is also known as the calabash gourd squash gourd and red gourd is cultivated in most warm countries particularly in India He adds The plant produces the largest known cucurbitaceous fruit in some cases measuring nearly 8 feet in diameter and weighing as much as 240 lb

Income Tax

Public Appointment Basis of Calculation

M B obtained a definite public appointment on February 2nd 1931 During the previous nine months he had earned £231 in respect of broken employment partly as locum tenent at two hospitals and one county council which employment commenced April 1st 1930 On what basis should he be assessed for 1931-2?

** The Finance Act 1927 Section 45 (4) provides that where the person first held the office or employment on some day in the year preceding income tax shall be computed on the amount of the emoluments for the year of assessment M B holds an office and he first held that office in 1930-1 consequently he is assessable for 1931-2 on the amount of the emoluments of that year The previous broken employment is not the same (or even a precisely similar) office and does not affect his 1931-2 liability

British Income While Resident Abroad

J T has been resident in Africa for four years and returned to the United Kingdom on April 6th 1932 On May 3rd 1932 he withdrew from a British bank money which had been on deposit during his absence abroad together with the accumulated interest Is he liable on the whole amount of the interest or on only the portion that accrued while he was abroad?

**On the whole amount residence abroad does not carry exemption from income tax on income arising in the United Kingdom

Sale of Practice on Leaving England

W B P sold his practice as from June 30th 1932 and after remaining in the United Kingdom for some months went abroad where he has since remained He states that he has received a demand note for the income tax he would normally have paid if he had remained in England He paid income tax in January and June 1932

The tax referred to above would be for the financial year ending April 1932 There might be some liability in respect of the professional earnings for the three months to June 30th but as the year's personal allowances would be set against that quarter's income any such liability would presumably be comparatively small certainly not anything like a normal year's tax

Cash Basis—Partnership Division

RODWAY —A and B were partners on a half share basis until March 31st 1932 as from which date B purchased an additional one eighth share making the ratio of division three eighths and five eighths Cash received after March 31st for work done before that date has been divided half and half On what share should B's own liability be computed for 1932-3?

B's share of the assessment will be five-eighths of the gross amount less of course his personal allowances The cash basis is merely a measure of the earnings of the practice and the assessment for 1932-3 is in respect of those earnings whether received in cash or not

Departmental Appointment Official Quarters

M H was until March last a whole time medical officer in the Ministry of Pensions He has just received a demand for income tax for 1930-1 and 1931-2 on the annual value of the quarters he occupied as an unmarried medical officer No other unmarried medical officer has been asked to pay tax on the quarters and M H has now left. Is he liable?

** Yes The Income Tax Act of 1918 provides that a house tenement or apartment belonging to the Crown in the occupation of any officer of the Crown by reason of his office or otherwise is assessable on the occupier according to the amount of the annual value The point as to whether the occupier is married or not does not seem to affect the question which has to be decided according to the status of the individual and the use to which the premises are put by him

Professional Use of Residence

M B CH B is shortly to be married and will then put her plate up in a new estate The husband will be in business some distance from the house What proportion of the rent maid's wages and telephone will she be able to charge for income tax purposes?

* In such circumstances it is almost impossible to suggest a definite proportion It depends on what would be reasonable and the primary factor is what proportion of the total accommodation is set apart and used for professional purposes? Unless our correspondent attracts work very quickly she will not be likely to be allowed more than one-quarter to one third of the total expenses as incurred for professional purposes

Assistant's Board and Lodging—Assessability

J L acted as assistant to his present partner on terms that he received a monthly salary in cash and had bed and breakfast in a nearby house for which the employer paid £1 1s a week and other meals with the employer The employer has been allowed to deduct £2 2s a week as the cost of J L's board and lodging and the income tax authorities regard that amount as assessable on him

**In our opinion the £1 1s per week which is paid on J L's account for his board and lodging is probably rightly regarded as assessable on him inasmuch as it relieves him of the necessity of making that precise payment himself On the other hand the benefit of free meals at his employer's house appears to be directly covered by the rule in the old case of Tennant v Smith and we do not consider that any later case has brought that benefit within the scope of taxation

LETTERS NOTES ETC

Left handedness and Mirror writing

Dr RICHARD BELL (Haydon Bridge) writes A letter in your issue of April 1st states that left handedness and mirror writing as a combination is extremely rare If by mirror writing one means writing which viewed in a mirror appears ordinary writing I cannot see how this is rare especially from left handed people I should like to be assured on this point as up till now I thought my own capabilities of writing with my left hand starting at the right side of the page quite ordinary and not worth investigating more thoroughly Right handed people seldom realize the irritating difficulties that beset the path of the left handed Society demands that a man must be right handed that his writing may be read that he may not be a nuisance with a cricket bat or a hockey stick or a rifle or a bomb that he may not appear ungainly at dinner

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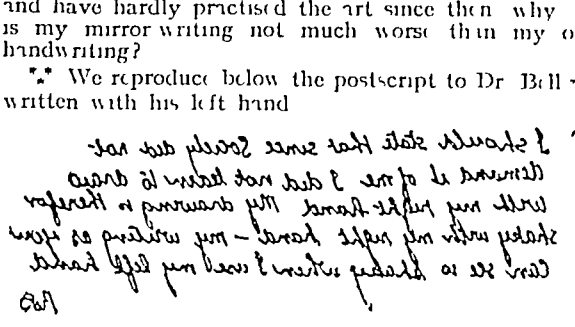
that he may easily follow instructions in books for manipulations or movements that he may learn almost anything from any teacher—music handicraft etc—without that teacher at some time losing his patience A problem which someone no doubt can elucidate but which has for years puzzled me is this If I ceased to learn to write back side foremost with my left hand when I was about 7 and have hardly practised the art since then why to-day is my mirror writing not much worse than my ordinary handwriting?

*** We reproduce below the postscript to Dr Bell's letter written with his left hand



New Treatments for Old

DR A CLARK (Kenton Harrow) writes May I as an ordinary general practitioner venture to protest against some of the remarks of Lord Horder in his article "New Treatments for Old" appearing in the *British Medical Journal* of May 20th? While agreeing with many of his points I take exception to his attack on many of the smaller firms of manufacturing chemists I am particularly offended by his denouncement of arthrytin and antibacsyn both of which products are well known to me and in my experience have given excellent results Concerning antibacsyn particularly I can say from personal experience that it is one of the most remarkable therapeutic agents it has been my good fortune to discover The makers explanation of its action does not concern me What does interest me are the results I have obtained which leave no doubt in my mind as to its great efficacy in all types of bacterial infections In these circumstances I think it rather unfair that a man of such great standing in the medical world should so completely condemn it Surely an open mind and a lively curiosity are the guiding qualities in all experimental endeavour

ANTIBODY PRODUCTS LIMITED (Watford) write In your issue of last week Lord Horder mentions our products antibacsyn and antimalignyn by name in such slighting terms that we feel you will allow us the courtesy of your columns to rebut some of the harsh statements he makes about these preparations These names offend Why? The name antibacsyn was dictated by the main action of this substance—namely its polyvalent antibacterial action He is distressed because they suggest that a number of disease processes which are widely different are all of them amenable to the same chemical substance We have clinical reports indicating that many medical practitioners are satisfied that antibacsyn is effective in a wide range of diseases caused by bacteria of an endotoxic nature He seems to grieve that the older specific therapy should have to give way to the newer non-specific methods but just as protein shock methods may prove beneficial in very diverse complaints though we may not in the least know how so it is not impossible to imagine a chemical serum derivative that may have the same effect without the discomforts attendant on protein shock therapy

'One of the Best for Cancer'

A correspondent giving an address in Liverpool sends the following ingenious communication I discovered the treatment for internal cancer My firm belief is that all external cancer comes from internal cancer My discovery is not my own only through long study from Professor Judah Levitt which I claim he was the biggest medical man in his time because he says in his diary how to diagnose cancer without any x-ray or blood test and he gives you the nature from which it could develop, and he gives you the cure for it which I have tried several cases and in every case showed my great success, killed the pain and prolonged life I cannot see the reason why medical men should not try this treatment to relieve the whole world from this dreadful disease I am almost certain that the doctors are using medicines out of old Egyptian books also from a book the name of which is 'Rambon' that is translated into various languages I would like to have a debate with all medical men from all England to convince them that the treatment from Prof J Levitt is *one of the best for cancer* I could assure you that if Prof J Levitt was alive still he would be the greatest man in the world with his remedies You may alter this story to your own liking also there are a few testimonials if required

Mobile Sanitation

The Elsan system of chemical sanitation has for years proved valuable wherever it is impracticable to install a drainage system especially during late years in passenger aircraft and motor coaches Its most recent application suggests a wide field of usefulness The organizers of the British Hospitals Air Pageant, which has just commenced a six months tour of the country including about two hundred towns were faced with the difficult problem of providing suitable lavatory accommodation for the spectators of their display The firm of Duple Bodies and Motors in response to their appeal constructed in seven days two bodies of an entirely novel design and fitted them on one of the new three ton Morris commercial chassis and a Harrow trailer These vehicles consist of mobile sanitary conveniences fitted with the Elsan equipment for men and women respectively The motor vehicle contained five closets and the trailer three and a urinal together with wash basins The vehicles are enamelled white inside and finished outside in bright red The entrances and exits are very wide and fitted with folding steps and handrails These outfits should prove of great value to municipalities and undertakings who have to improvise conveniences for large crowds in the open air They would for instance add greatly to the amenities of Derby Day and Bank Holidays

Visit to Soviet Russia

PROFESSOR JULIAN HUXLEY Mr C MANSELL MOULLIN FRCS and Dr JOHN MARRACK write It is proposed to organize a tour of doctors and scientists to the USSR and the first party will leave London Bridge by Soviet ship for Leningrad on July 1st The return journey will cost £22 to £36 inclusive, according to the type of accommodation selected The party will spend a total of sixteen days in Russia—three days in Leningrad five days in Moscow then there are three alternatives (*a*) Corky down the Volga to Stalingrad-Leningrad (*b*) Rostov/Don Kharkov-Leningrad, (*c*) Kharkov Kiev-Leningrad Meetings will be arranged which members of the party will be invited to address and there will be excursions with guides to scientific institutions of interest to members It is suggested that parties shall consist of about ten in number to facilitate arrangements Parties may be arranged to leave London at a later date if there is a demand for such parties The latest date for receiving applications for the party leaving London on July 1st is June 15th All inquiries should be addressed to the secretary of the S C R 1 Montague Street W C 1

Victory 4 per cent Bonds

A CORRESPONDENT writes There must be many members of the British Medical Association who are holders of Victory 4 per cent Bonds the present value of which is £109 These bonds are redeemable next month at par But for the fact of the drawing these bonds are an excellent investment It may not be generally known to the profession that for the sum of 3s to 4s per £100 bond insurance can be effected against the risk of drawing and by so insuring the holder avoids loss of capital if drawn Information on this subject may be obtained by members from their bank managers or brokers

Corrigendum

In a report of Dr A R Friel's remarks on zinc ionization at the discussion on chronic suppurative otitis media in the *Journal* of May 13th (p 826 column 1) the words 'in the necrosed area' (line 6) should be deleted and "sepsis in the inaccessible area" (line 15) should read sepsis in the accessible area

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The summer number of *Punch* devotes much attention to the problems and predicaments of the holiday maker and picnickers especially will sympathize with Bertram Prance's patient who tells his elderly medical adviser that they are mostly insect bites but some of them were made by bullstones

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Messrs Maggs Bros have recently published a catalogue (No 582) of their manuscripts and books on medicine magic astrology and natural science arranged in chronological order as well as their portraits and autographs of physicians and scientists

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Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 46 47 48, 49 50 51 and 54 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 52 and 53

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 235

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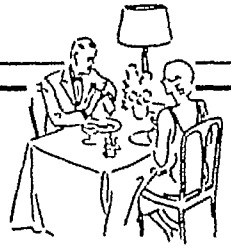

Your wife, more than most married women, has a difficult time Of course she knew, before you were married, that the average doctor's existence was one long hurry and scurry of consultations and visits, and when his time should be his own more than likely he would be called out to some urgent case

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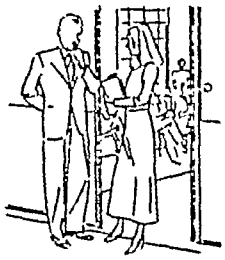

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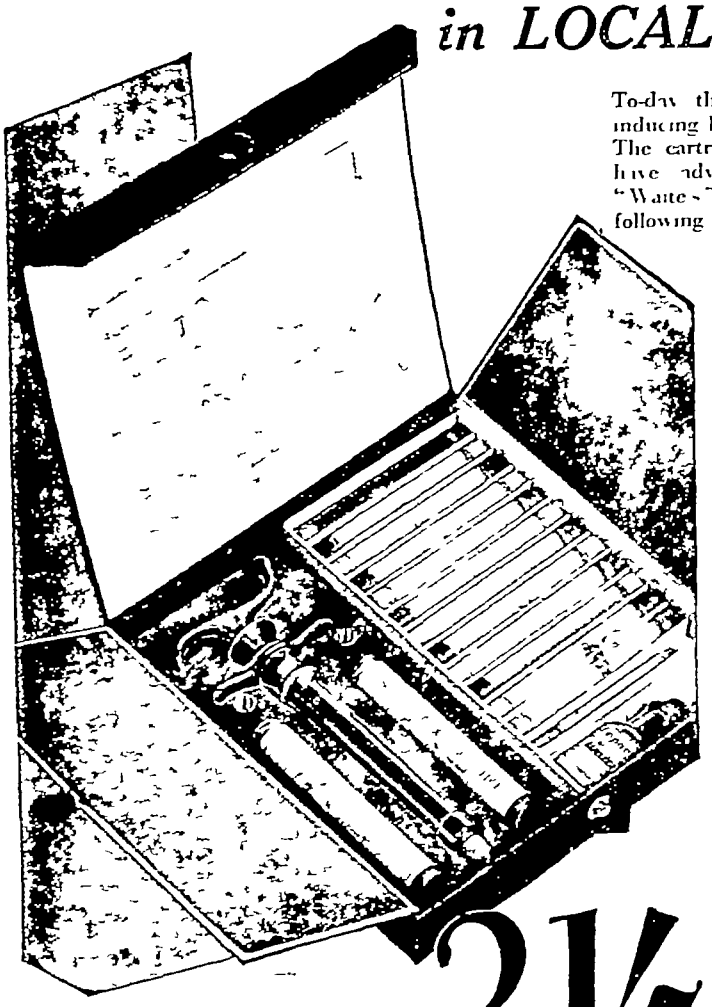

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EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

374 Scarlet Fever and Valvular Disease

W J MOLTSCHANOW (*Jahrb f Kinderheilk* February 1933 p 129) in the period 1929–31 saw seventeen cases of valvular disease which occurred during or immediately after scarlet fever at the Children's Clinic of the First Medical Institute of Moscow The children were aged from 4 to 12 years The attack of scarlet fever was subtoxic in two cases which were treated with serum but in all the others was moderate or mild The endocarditis appeared in one case in the second week in fifteen between the third and eighth weeks and in one the date of onset was not determined Two patients died with symptoms of cardiac failure one six months and the other eleven months after the onset of the endocarditis In fourteen cases the endocarditis was preceded or accompanied by arthritis In addition to the two well known forms of joint affection in scarlet fever—namely scarlatinal synovitis and purulent arthritis there is a later form of polyarthritis which occurs between the third and the seventh week of scarlet fever in association with cervical adenitis nephritis or tonsillitis This late polyarthritis presents the clinical features of a rheumatic joint affection especially as it is followed by endocarditis In one of Moltschanow's fatal cases the necropsy revealed the rheumatic character of the valvular disease The occurrence of the rheumatic syndrome during or immediately after scarlet fever should not be regarded as a mere coincidence nor as the exacerbation of a pre-existing acute rheumatism since in most of the patients the rheumatic syndrome had *not appeared before the attack* of scarlet fever According to Moltschanow the allergic theory offers the best explanation of the connexion between scarlet fever and the development of the rheumatic syndrome Scarlet fever therefore should not be removed from the list of diseases which give rise to valvular disease which probably complicates more frequently than is supposed as the rheumatic syndrome occasionally does not develop until after the patient has left the hospital

375 Sulphaemoglobinaemia

This condition in which haemoglobin is replaced partially by sulphaemoglobin is discussed by J C HEALY (*Journ Lab and Clin Med* January 1933 p 348) who believes that it is overlooked frequently especially when the symptoms are mild Patients complain of constant dull oppressive headache and chronic constipation Mauve-lavender cyanosis of mucous membranes and of the nail beds (in the absence of cardiac or pulmonary disease) is symptomatic while spectroscopic blood examination shows an absorption band in the red portion of the spectrum in addition to the normal absorption bands of oxyhaemoglobin Administration of large quantities of sulphur or of H_2S produces sulphaemoglobinaemia it occurs also in the presence of powerful reducing agents such as nitrites A nitrite producing bacillus has been found in the alimentary tract of affected persons An aniline derivative—acetphenetidin—in large doses will produce sulphaemoglobinaemia Apparently aniline sensitizes haemoglobin which then unites with sulphides absorbed from the intestine That excessive intestinal absorption of H_2S is a necessary factor is proved clinically by the occurrence of severe and persistent constipation in the majority of patients In addition to acetphenetidin acetanilide and exposure to aniline will cause sulphaemoglobinaemia Healy's two patients took habitual and excessive doses of bromoseltzer The first a man aged 50 years suffered from severe constipation and frequent headaches for which he took increasing doses of acetanilide until he needed a full dose every hour He carried bromoseltzer for use when soda water was unobtainable The cyanosis and spectroscopic tests were typical Eggs were restricted and large quantities of fat prescribed Oxygen and CO were administered three or four times daily until the respiration rate rose to 36 per minute Ammonium chloride 15 grains was given four times daily as a substitute for bromoseltzer All symptoms disappeared in five days The second patient a man aged 40 complained of glycosuria constipation and headaches for which he took bromoseltzer Symptoms and treatment were precisely the same as in the other case Glycosuria disappeared in two days headache and sulphaemoglobinaemia in a week

376 Encephalitis following Rubella

MOTZFELDT (*Norsk Mag f Laegevid* February 1933 p 153) records this case which is of special interest not only on account of the rarity of the condition—of which only three previous examples have been recorded by Labougle in 1910 Debre Turquety and Broca in 1930 and Siegl in 1932—but also because this is the first fatal case on record The patient was a girl aged 14 who suddenly developed coma hyperpyrexia and athetotic movements of the four limbs four days after the appearance of the eruption Death ensued in twenty four hours The necropsy showed a generalized inflammation of the brain and on histological examination the appearances were similar to those of a case of encephalitis following measles

Surgery

377 Elephantiasis Nostras

G P MULLER and C G JORDAN (*Ann of Surg* February 1933 p 226) describe elephantiasis as a chronic inflammatory fibromatosis of the dermal and hypodermal tissues either preceded or accompanied by venous and lymphatic stasis In true filarial elephantiasis the lymph channels are obstructed by the parasites and invasion by the streptococcus follows Tropical elephantiasis is not caused by filaria but the reason for its frequency in the Tropics is the greater exposure of the skin to infection In northern latitudes the disease is called elephantiasis nostras The causative factor may be trauma or a tumour which presses on the lymph channels and causes lymphatic stasis Phlebitis or an inguinal bubo or scarring after operation for hernia will with a superadded streptococcal infection produce the disease Heredity is also an important aetiological factor Elephantiasis nostra is usually found in the leg scrotum or penis The typical symptoms of the disease are recurrent attacks of elephantoid fever with chills an elevated temperature and painful swollen limb with enlarged regional lymph nodes Symptoms greatly resemble those of erysipelas and generally subside after a few days but recur about once a month and each time the swelling subsides less than the time before The dermal and hypodermal tissues hypertrophy and the underlying soft tissues unite with the skin to form one brawny hard induration The process of development extends over a period of years and is not arrested until the elephantiasis is fully developed The skin is hard does not fold or pit and shows trophic disturbances with ulcerations in many cases The tissues hypertrophy and sclerosis stops with the deep fascia and the disease involves only the structures of the superficial venous and lymphatic system Treatment should be medical and surgical and should consist of baking and massage elevation of the limb compression by elastic bandages injection of streptococcus polyvalent serum vaccine therapy fibrolysin and foreign protein therapy Operative treatment consists of an elliptical incision of the skin removal of excess skin reflection of skin flap 6 cm laterally the removal of

a large section of subcutaneous tissue and deep fascia, and the exposure of the muscle which is brought into direct contact with the skin The greatest success was noted in cases of the scrotum and penis and in cases of secondary elephantiasis of long standing Five cases are fully reported

378 Distinction between Luxation and Tearing of Joint Capsule

F O MAYER (*Zentralbl f Chir* February 4th, 1933, p 249) stresses the importance of careful distinction between luxations, according as they involve tears in the joint capsule to a greater or lesser extent He thinks that the term "luxation" should be reserved for dislocations which involve the capsule to only an inconsiderable degree and in which reduction may be expected to lead to a good functional result Subcoracoid luxation of the humerus and posterior antibrachial luxation are usually of this type, and the prognosis is usually good But in the case of the knee dislocations are accompanied by such considerable injury to the joint capsules that both the treatment and prognosis are different, to such conditions the author prefers to apply the term 'joint-tear' *X*-ray examination affords little indication in such cases, since the part of the injury which will give trouble later is not apparent To ignore such a distinction is to court the possibility of later complications arthritic changes, and sometimes permanently stiff joints These cases require longer immobilization and very great care in the re establishment of function The danger of regarding such cases as simple luxations and giving a favourable prognosis apart from that indicated, lies in the probability of considerable difficulty with panel authorities or trade societies who may be involved in the cost of treatment

379 A Case of Strangulated Epigastric Hernia

E DELANNOY (*Bull et Mém Soc Nat de Chir* March 4th 1933 p 319) reports a case of strangulated epigastric hernia which occurred in a man of 54 years The patient was vomiting and had a hard irreducible hernia The abdomen was distended with a painful swelling in the epigastrium and resonance in the umbilical region Dullness in the flanks was noted and a thrill which gave the impression of a considerable quantity of free fluid A diagnosis of strangulated epigastric hernia was made, and operation under local anaesthesia was carried out An elliptical incision was made round the hernia, which was easily freed After the sac was opened a quantity of blood-stained fluid escaped, followed by about 15 cm of small intestine which was purplish in colour but otherwise in good condition This was returned to the abdomen, the hernial sac was quickly cut off, and the opening closed with catgut sutures The patient made an excellent recovery following the operation The case was of interest on account of the comparative rarity of the condition Epigastric herniae consist in most cases of an extraperitoneal lipoma or a peritoneal diverticulum without contents

380 Rupture of the Tendo Achillis

P COGNIAUX and L WYBAUW (*Journ de Chir et Ann Soc Belge de Chir* February, 1933 p 46) report five cases of subcutaneous rupture of the tendo Achillis and state that treatment should be surgical and should be carried out as early as possible The rupture is most frequently caused by a sudden overstretching of the tendon between the contracted fleshy belly of the muscle above and its insertion into the os calcis below This overstretching may be produced by the violent contraction of the muscle during a fall on the ball of the foot, and three of the cases reported were caused in this way In two cases the rupture was caused by a slip on the stairs and in another on a slippery road In each case the patient was very stout The symptoms in all but one case were similar—namely, instantaneous localized pain in the heal which was increased by palpation or by active movement The amount of extension possible in the ankle was reduced in varying degree, whilst its power was practically nil On palpation it was possible to feel the gap at the site of the rupture Walking was only undertaken with great pain and difficulty In the remaining case, which was complicated by a sprain the rupture was only discovered after the sprain had been treated The aim of treatment in these cases is to bring about union between the two ends of the tendon by a short and firm scar Non-operative treatment endeavours to bring this about by external manipulation—immobilization in hyperextension with continued compression of the calf muscles to bring the ruptured tendon towards its attachment Massage and regular mobilization are also necessary, and the results are not good Surgical treatment consists in the careful suture under local anaesthetic of the two ends of the tendon, and this is easy to carry out After immobilization in moderate extension for ten days massage and mobilization are started and the patient is allowed to walk after three weeks This treatment produces excellent results In rare cases a secondary suture may be necessary, whilst in others where the separation between the muscle and tendon is considerable a fascial graft may be required and usually gives a satisfactory result

Therapeutics

381 Liver Therapy in Sprue

Referring to a case of sprue with a neuro anaemic syndrome (reported by Picard) which benefited from the administration of liver, COSTEDOAT (*Bull et Mém Soc Méd des Hôp de Paris* February 13th, 1933 p 171) records a similar case in which recovery resulted from a like treatment The patient, a resident for some time in Indo-China, where the disease was evidently contracted, presented the following symptoms chronic diarrhoea with very abundant, malodorous fatty, clear stools containing neither blood, mucus, nor any known pathogenic organism, good appetite, with some degree of thirst abdominal meteorism, stomatitis, grave anaemia, painless oedema of the lower limbs slight ascites, and cachexia No enlargement of the liver or spleen was noted, and sugar, albumin, and pus were absent from the urine The lungs were normal, but the heart was very rapid The disease was marked by remissions often over long periods No response followed the administration of specific drugs (emetine yatren etc) associated with the usual symptomatic remedies Finally, to combat the anaemia calves liver (200 grams of the raw g and daily) was given Brilliant results immediately followed the blood counts became normal diarrhoea ceased, the oedema, ascites and stomatitis disappeared the weight increased and the general condition improved, cure has persisted to the time of writing An interesting fact is that previous injections of liver extract had proved inefficacious Costedoat suggests that this may have been due to insufficient dosage

382 Intramuscular Administration of Liver Extract

E W MCHENRY E S MILLS and R F FARQUHARSON (*Canadian Med Assoc Journ* February, 1933, p 123) describe a process of preparing liver extract for intramuscular injection, the product has a depressor content, and is not suitable therefore for administration intravenously or subcutaneously They have found this preparation safe, dependable and effective when the adequate dosage is ensured Administered intramuscularly a given amount of extract is at least thirty times more potent than when given by mouth The authors found that the extract from 10 to 20 grams of liver injected thus each day was fully as effective as the ingestion of the extract from 250 to 850 grams A good reticulocyte response has been obtained from a single injection of the extract from 50 grams of liver They point out that, nevertheless, the results of intramuscular therapy are not better than those obtained by the ingestion of an adequate amount of liver or liver preparations This therapy is, however, of great value in the treatment of patients in

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★ *'Brighton Herald," April 1st*

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★ *"Daily Mirror" April 12th*

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New apparatus for administering carbon dioxide with which the Thames police were recently equipped was successfully used by them to save the life of a woman who fell into the river from Tower Bridge She was rescued unconscious by a waterman Lifted into a police patrol motor boat she was taken to Wapping Station On arrival at the station the gas was administered and after a short time breathing was restored

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RESCUED UNCONSCIOUS

★ *'Sunday Dispatch April 23rd*

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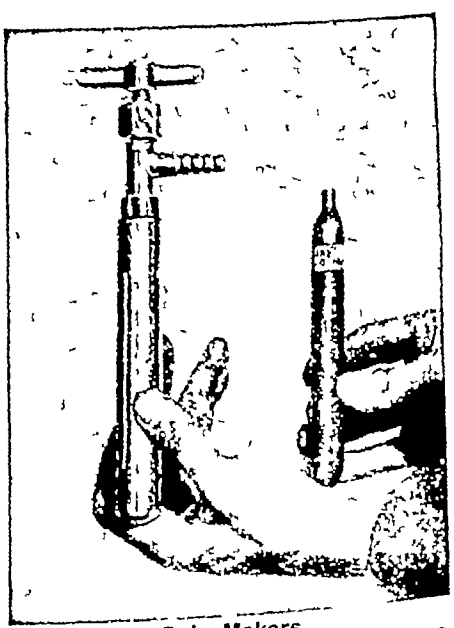

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severe relapse to whom large doses can be given readily by this method with assurance of an early response The remission begins about a week sooner than when the extract is administered by the mouth It is also very useful in treating patients who refuse to continue to take sufficient amounts of liver or its preparations by the mouth The intramuscular injection of the extract of from 100 grams of liver each week is probably sufficient to maintain most patients with pernicious anaemia in a good state of health The authors add that it is always very important (as has been amply demonstrated by the oral method of giving liver treatment) to ensure the taking of a sufficient amount no matter how much may be required to maintain the patient in good health with no anaemia and to prevent the appearance or progressive advance of lesions of the nervous system Liver extract administered intramuscularly was also used with excellent results in a case of sprue with the blood picture of pernicious anaemia In support of these views the authors record clinical results obtained in hospitals in two cases there was definite improvement in neurological manifestations but it is as yet too soon to suggest that in intramuscular liver therapy a way has been found to deal with these very grave sequelæ of pernicious anaemia

383 Haematoporphyrin in Melancholia

J VINCHON and P BOURGEOIS (*Bull Soc de Thér* February 8th 1933 p 41) allude to the success obtained within the last three years by German observers in the treatment of melancholia by administration of haematoporphyrin and record four cases which came under their own observation Their conclusions are as follows Haematoporphyrin appears to have a specific action in cases of true melancholia but is inactive in states of psychasthenic depression It seems to have a remarkable effect on the inertia and motor and psychical inhibition characteristic of the melancholic syndrome Its use enables other drugs to be reduced or given up altogether The dosage differs according as the attack is mild or severe In mild cases 30 to 50 drops a day of stabilized 0.5 per cent solution of haematoporphyrin is given by mouth a quarter of an hour before each meal for two or three weeks If necessary the treatment may be resumed after a fortnight's interval In severe forms the intramuscular route is employed 1/2 c.cm of a 0.2 per cent. solution being given the first day followed by a series of ten injections of 1 c.cm After an interval of eight days another series of injections is given the first dose being 1 c.cm and the rest 2 or 3 c.cm every other day No bad effects were observed The mode of action of the drug is obscure According to the German observers Huhnerfeld in particular haematoporphyrin being a photodynamic substance acts on the vegetative centres by sensitization of the skin

Ophthalmology

384 Changing Causes of Blindness

G NORRIE (*Hospitalstidende* February 9th 1933 p 141) shows how during the thirty years he has been a medical officer to an institution for the blind in Denmark the relative proportions of the causes of blindness among children have changed His material consists of about 800 children 684 of whom he has taken charge of personally In his opinion at the present time xerophthalmia is the most important cause of blindness early in life In the past it was commonly taken for gonorrhoeal ophthalmia and it is probable that about 150 of the author's cases were due to the former disease There were as many as twenty nine cases of xerophthalmia in the three-year period 1913–15 During the next three-year period the numbers were down to eighteen and they were further reduced to twelve in the three year period 1919–21 Since then there have been only one or two cases every year There were only fifty-one cases of blindness from gonorrhoeal infection at birth and while there were as many as forty two cases in the fifteen year period 1892–1906 there were only six in the fifteen year period 1907–31 Since then the author has seen only three cases and he attributes this practical disappearance of gonorrhoeal infection of the newborn to the routine employment of Credé's prophylactic treatment The author's predecessor at the same institute for the blind considered scrofula the most common cause of blindness But the author himself has seen only thirteen cases the last being a child born in 1912 Tuberculosis would now seem to attack other parts of the eye and give rise to iridocyclitis With regard to the thirty-one cases of blindness due to trauma the author urges his colleagues to send their patients to hospital whenever one eye is seriously injured There were fifty-one children suffering from congenital cataract the incidence of which is declining A little over a third of all the cases of blindness were due to congenital factors In the future optic atrophy will probably be the most common cause of blindness In the present material it was responsible for a little over a quarter of all the cases

385 A New Local Anaesthetic

N SHIMKIN (*Folia Ophthalmologica Orientalia* February 1933 p 192) states that cocaine has certain bad effects Its vaso-constriction is inimical to the healing of corneal ulcers it is toxic and since blinking is hampered allows drying of the epithelium with consequent cloudiness and exfoliation Mydriasis harmful in certain cases also results The use of 1·2 per cent pantocain a new preparation first used in eye practice by Reible gives anaesthesia in five to forty seconds lasting fifteen to twenty minutes Pantocain can be mixed with solutions of zinc sulphate resorcin copper sulphate eserine sulphate pilocarpine scopolamine atropine and suprarenin It can be used for months continuously without evil results is easily soluble in water and can be boiled frequently without deterioration It causes a slight hyperaemia and has no effect on the orbicularis or pupil Because of the hyperaemia epithelial regeneration proceeds at a greater rate than with cocaine A strength of 1 per cent should be used for operations but 1/2 per cent is sufficient for infiltration of the lids Pantocain is cheaper than cocaine and does not come within the Dangerous Drugs Act The drawback in operating is that there is rather more bleeding than with cocaine or novocain even though adrenaline is added

Obstetrics and Gynaecology

386 Ureteral Injuries during Pelvic Operations

From the large number of cases reported Q U NEWELL (*Amer Journ Obstet and Gynecol* February 1933 p 220) believes that ureteral injury is a far more common surgical complication than would be suspected it is responsible for a certain number of deaths The accident due to ligation or crushing with clamps is possible in any pelvic operation but usually occurs during radical abdominal and vaginal hysterectomies Doubtless some unrecognized unilateral ligations with ultimate death of the corresponding kidney occur Though in most cases the injury is unilateral in a certain number both ureters are involved In discussing treatment Newell emphasizes the importance of prophylaxis In the operations cited the ureters should be isolated according to the familiar technique and as a further safeguard ureteral catheters may be inserted before operation If the accident is due to ligation and is discovered at the time of operation deligation should immediately be done if one or both ureters have been severed a uretero-ureteral anastomosis is indicated If the ureter has been severely crushed by a clamp end-to-end anastomosis should be done if the injury is slight circulation may be restored and healing take place without fistula formation Should the accident not be discovered for some days deligation is indicated if the patient's

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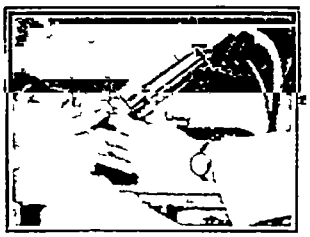

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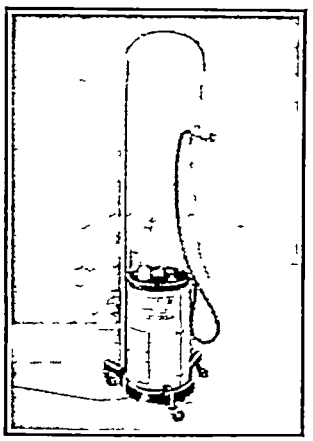

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condition permits, if her condition is grave, nephrostomy with drainage should be performed The most common sequels of ureteral injury are vaginal and abdominal fistulæ The former are the more frequent, vaginal correction of these is unsatisfactory and abdominal operation (either ureteral anastomosis or nephrectomy) is the choice The operation, which should aim at preserving normal ureteral and renal function, should be delayed for one to six months after the primary operation, as the fistula is occasionally cured spontaneously by scar tissue contraction Reports of eight illustrative cases are given

387 Ketone Bodies in the Blood in Pregnancy

According to A GAROFALO (*Ann di Ostet e Ginecol* January 31st, 1933, p 3) a moderate degree of hyperketosis is to be noted during the last three months of pregnancy and during labour During gestation β oxybutyric acid in the blood is augmented, but acetone and diacetic acid are maintained at a low level the latter increase during labour In cases of pregnancy albuminuria and eclampsia the increase of β oxybutyric acid is especially well marked, although it is not possible to trace a parallelism between the amount present in the blood and the clinical severity of the disease In cardiopathies complicating pregnancy ketonic retention is of acetone and diacetic acid rather than of β oxybutyric acid

Pathology

388 Bacteriology of Influenzal Meningitis

P VON GARA (*Deut med Woch* February 17th, 1933, p 252) describes two cases of influenzal meningitis in children, both of which proved fatal The first occurred in a boy 3½ years old Lumbar puncture revealed a markedly purulent cerebro spinal fluid, containing 6,800 cells per c cm and short Gram negative rods In culture these organisms grew in broth, on blood agar, chocolate agar and on plain nutrient agar, forming a number of long filaments After a few subcultures the growth became gradually poorer, and ultimately the organisms died out Pathogenicity tests made by inoculating guinea-pigs and mice intraperitoneally and rabbits intravenously proved negative The patient's serum agglutinated the strain recovered from the spinal fluid to a titre of 1 in 50 The second patient was a girl 6 months old There was a large amount of pus in the cerebro spinal fluid and fine Gram-negative rods were visible microscopically Direct culture on blood agar chocolate agar, and ascitic agar was successful, but no growth occurred on subculture Mice inoculated intraperitoneally apparently with the original cultures, remained well Bacteriologically the points of interest about these cases are the growth of both organisms on media free from hæmogobin, their rapid dying out in subculture and their absence of pathogenicity for laboratory animals

389 The Production of Lymphocytes

Continuing lines of investigation into the problem of lymphoid tissue, details of which were published in the *British Medical Journal* of December 10th, 1932, J M YOFFEY (*Journ of Anat*, January, 1933 p 250) records a study of lymphocyte production from the quantitative standpoint Using dogs, he estimated the numbers of newly formed lymphocytes passing through the thoracic duct into the blood stream, and also of those present in the blood stream The duration of the experimental period was nine hours at a time during seven of which lymph was collected The average total daily output for a dog weighing 10 kilos was found to be 576 c cm lymph and 5 207 000 000 lymphocytes 95 per cent of these being small young forms with only a margin of cytoplasm This percentage and the difference between the relative distributions of small and large lymphocytes in the blood as compared with the lymph led the author to oppose the hypothesis that there is a continuous circulation of lymphocytes from blood to lymph and from lymph to blood Moreover large numbers of lymphocytes may enter the blood stream directly through the blood vessels of lymphatic tissue without entering the lymph and so passing through the thoracic duct He cites reasons for believing that the lymphocytes of the blood are replaced on an average two and a half times daily Since the blood lymphocyte content remains constant the same numbers of lymphocytes must leave the blood each day as enter it The ultimate destination of these lymphocytes constitutes the fundamental problem of normal lymphoid tissue Considerations are put forward which point very strongly to the view that they leave the blood mainly in the bone marrow, where they develop into erythrocytes and granulocytes Yoffey admits, however, that the histological interpretation of cell changes in the marrow is so difficult that it cannot by itself yield an absolutely decisive answer Such a further development was, however, suggested by Jordan, and almost implied by the work of Maximow and Latta The cells of the lymph contrary to previous views, do not seem to be concerned with the transportation of fat, which is carried in the fluid portion Yoffey also disputes the conception that lymphoid tissue has as one of its main functions the arrest of injurious matter The gain resulting from any barrier action of this nature is more than offset by the dangerously easy dissemination made possible by the lymphatic vessels In the normal body, he adds the one function which can be definitely assigned to lymphoid tissue is the formation of lymphocytes The life history of this cell must therefore form the starting point of any investigation into healthy lymphoid tissue, and the author is at present conducting experiments with a view to throwing more light on the factors controlling lymphocyte production

390 The Virus of Chicken pox

T TANIGUCHI *et al* (*Japan Journ Exper Med* December 20th 1932, p 599) have demonstrated by suitable staining methods the presence of elementary bodies in the vesicular fluid withdrawn from patients in the stage of eruption These bodies which they consider to be the actual virus of chicken pox, are of coccoid form and are arranged singly, in pairs and in short chains, in smear preparations they are situated mostly outside the cells Inoculation of vesicular fluid into the testicle of the rabbit succeeded apparently after a number of passages, in giving rise to an inflammatory reaction accompanied by œdema of the scrotum, thus confirming the work of Rivers and Tillett By this means three strains of virus were established A marked reaction, similar to that with vaccinia virus, was obtained by the inoculation of testicular suspension into the anterior chamber of rabbits After forty-eight to seventy two hours, when the non specific inflammatory reaction had died down, a specific reaction occurred, characterized by turbidity of the aqueous humour, swelling and turbidity of the cornea, dilatation of the blood vessels of the iris, and in extreme cases by exudation on the periphery of the pupil Conjunctivitis was as a rule less evident than after inoculation with vaccinia virus Smear preparations showed the presence of elementary bodies in the endothelial cells of the cornea Inoculation of the aqueous humour together with the cells of Descemet's membrane into the rabbit's testicle gave rise to a typical reaction An intradermal reaction was produced by the inoculation of testicular suspension into the skin of normal rabbits and elementary bodies were demonstrated in the vesicular fluid Tissue cultures were obtained from the testicular suspension by growth in the presence of rabbit lung and testicle, and elementary bodies were demonstrated in large numbers in the cultures Cross examination experiments showed that the skin of rabbits which had been inoculated a week previously with varicella virus by the testicular route no longer reacted to varicella virus, though it did to vaccinia virus, on the other hand, the skin of rabbits that had been immunized to vaccinia virus reacted to varicella virus but not to vaccinia virus

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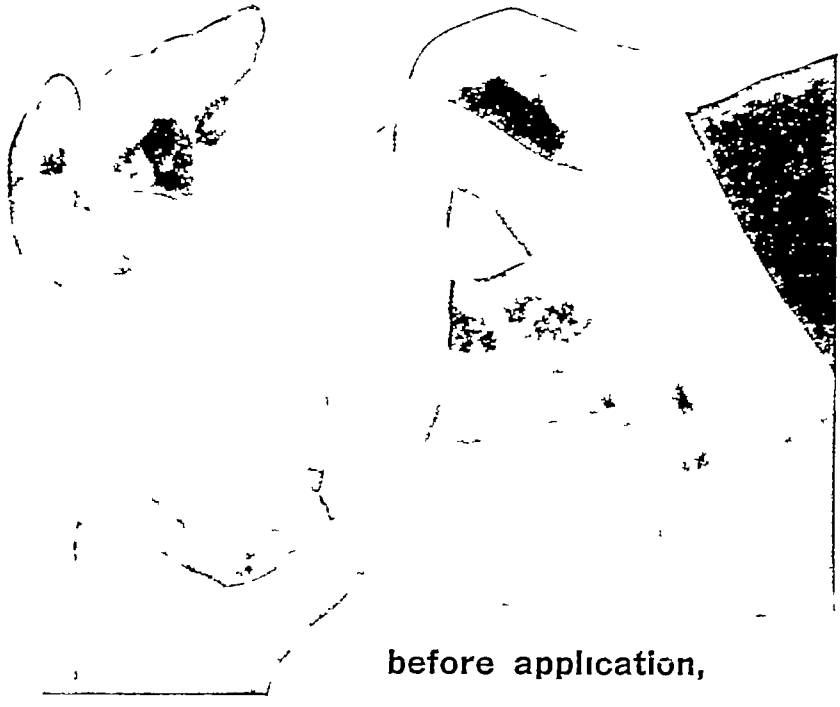

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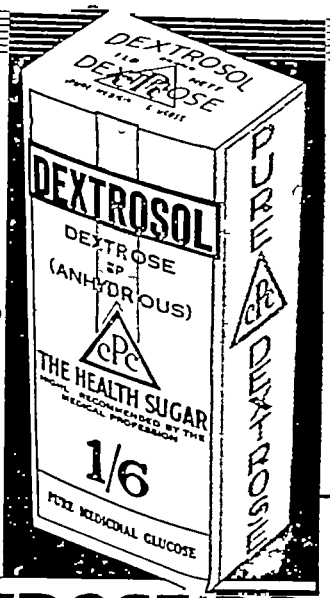

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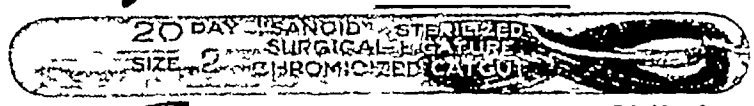

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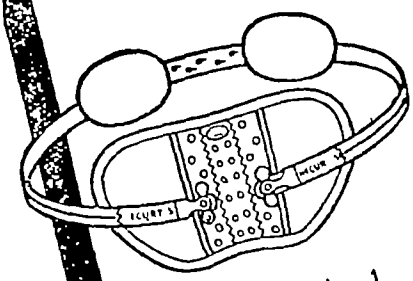

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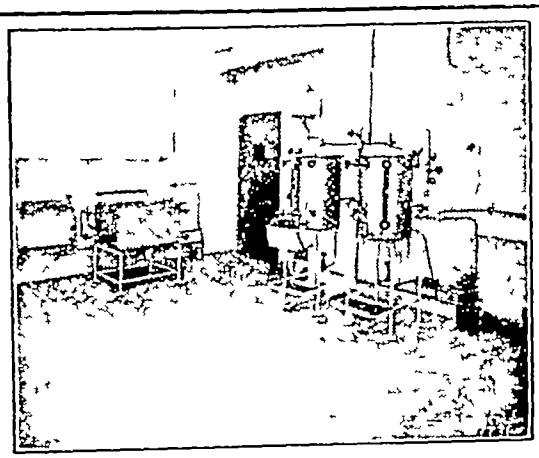

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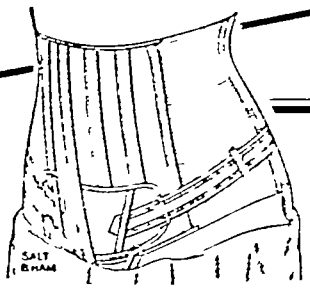

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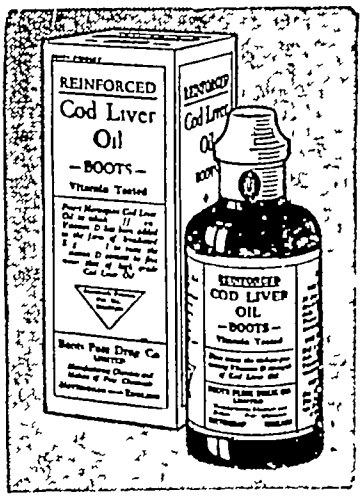

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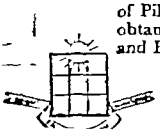

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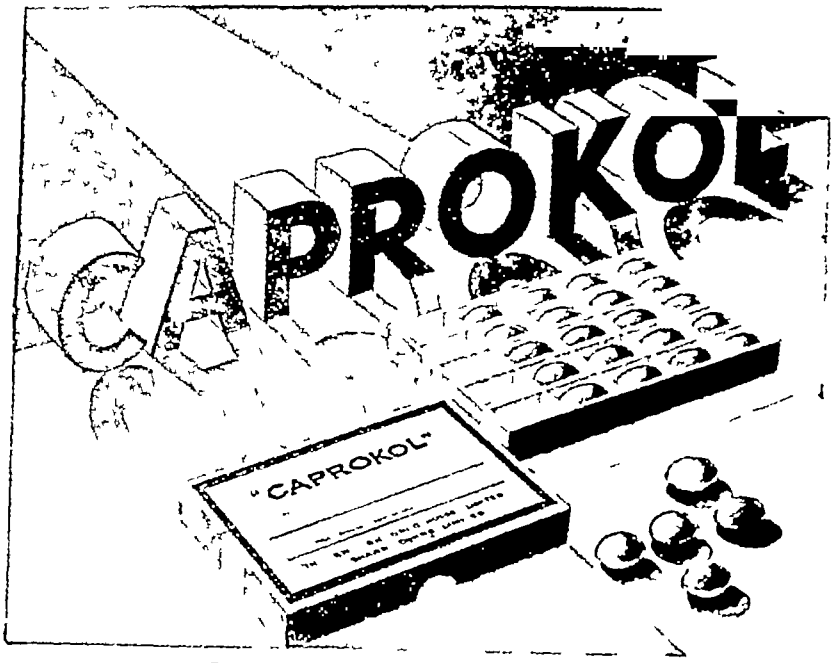

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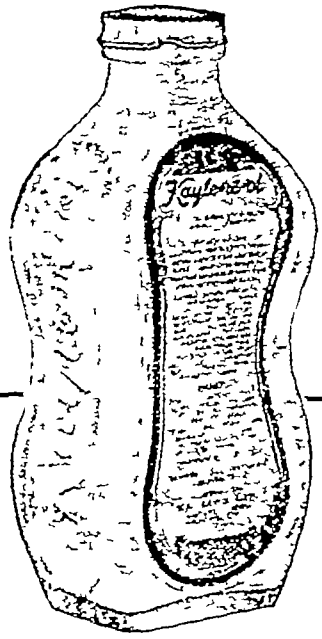

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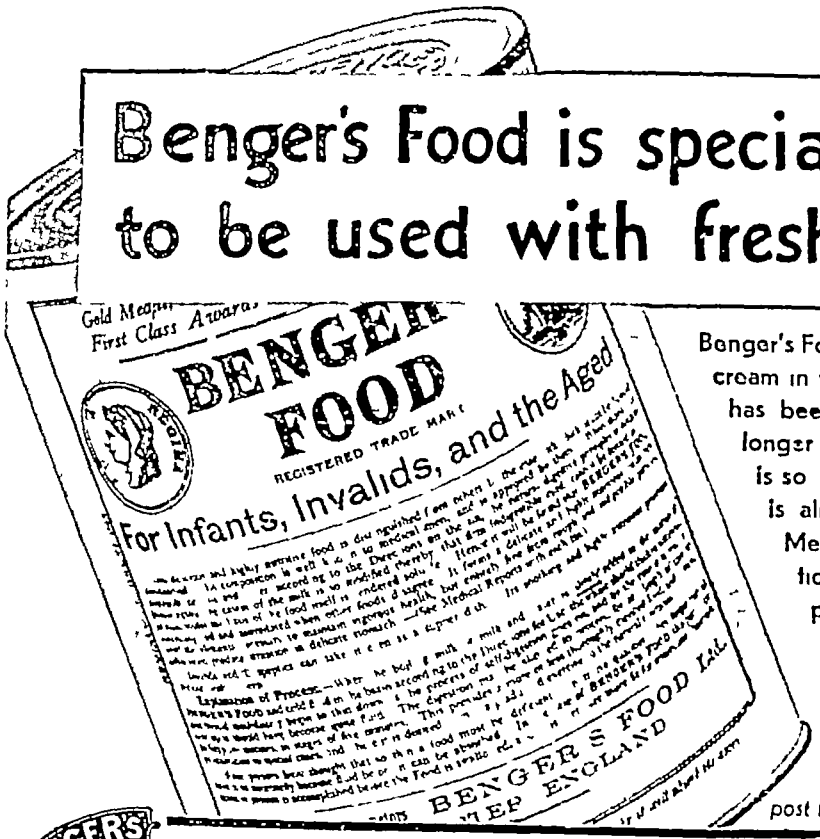

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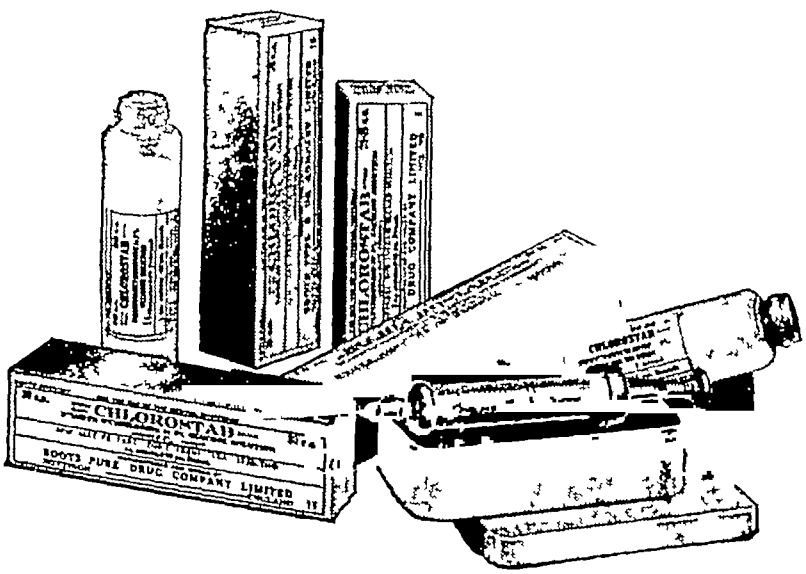

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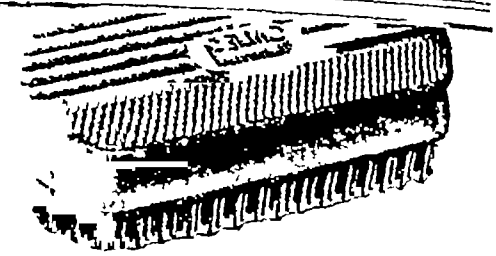

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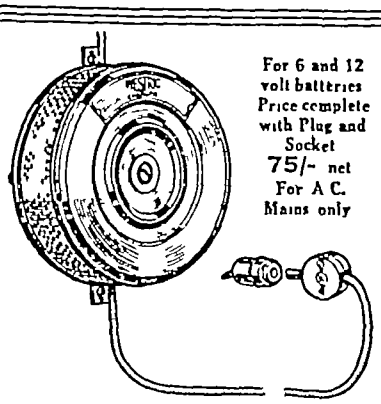

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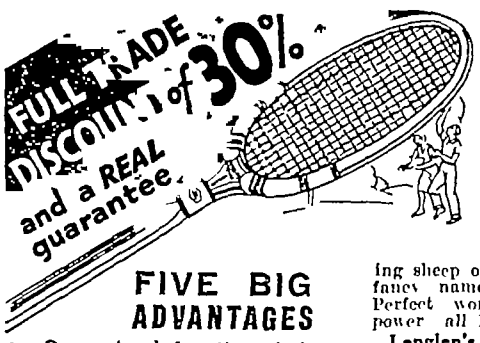

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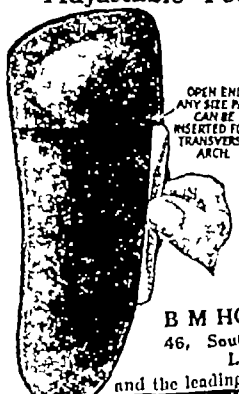

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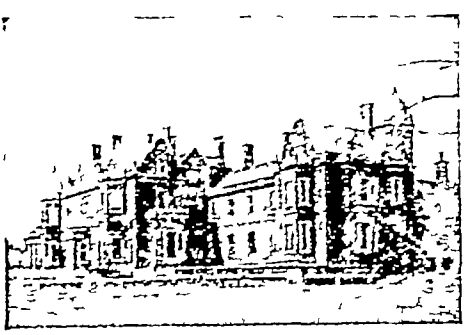

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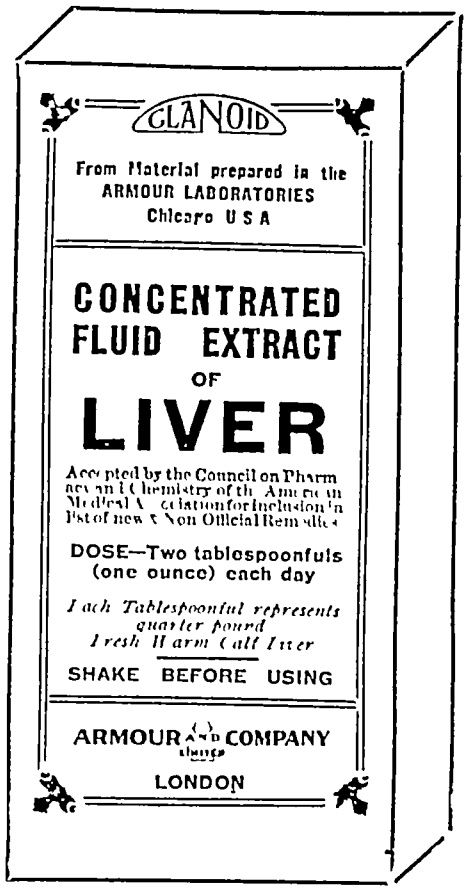

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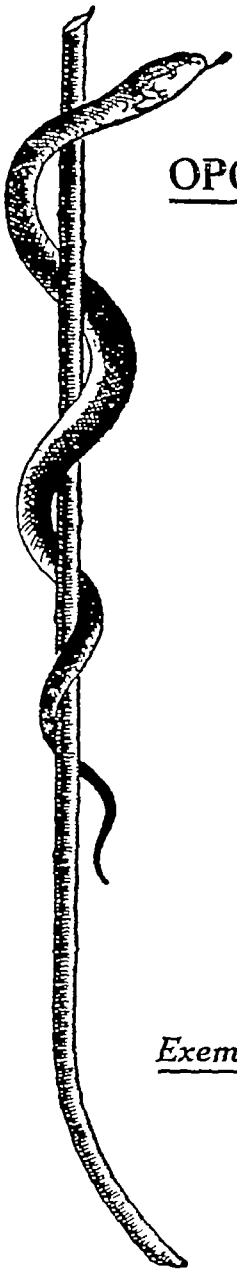

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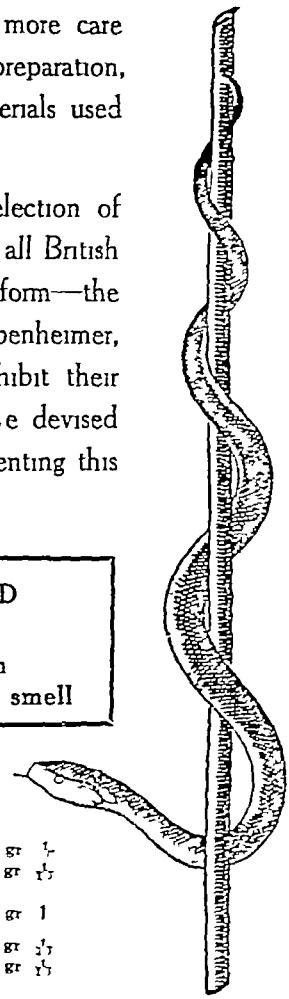

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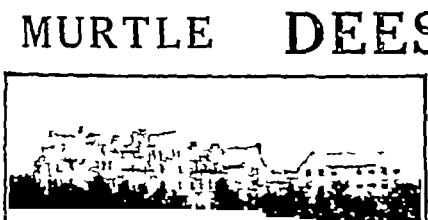

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FOR THE TREATMENT OF TUBERCULOSIS, was opened in January 1899 by ROWLAND THURNAM, M.D.

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For full particulars apply to *The Secretary*, Nordrach-upon-Mendip, Blagdon, Bristol. *Telegrams*, Nordrach, Blagdon. *Telephone*, Blagdon 23.

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First opened in 1893 and rebuilt in 1925. On the Cotswold Hills, seven miles from Cheltenham, for the treatment of Pulmonary and all other forms of Tuberculosis. Aspect S.S.W., sheltered from North and East, elevation 500 feet. Pure bracing air. Special Treatment by artificial Pneumothorax (X ray controlled). Tuberculins Medicated Inhalations by means of the Apneu Inhalation Installation, and Ultra Violet Rays is available when necessary without extra charge. X ray plant. Electric light. Radiators, hot and cold basins and Wireless in all rooms.

Full day and night Nursing Staff.

Medical Superintendent, GEOFFREY A. HOFFMAN, B.A., M.B., T.C.Dub. *Assistant Physician*, MARGARET A. HARRISON, M.B., B.S. Lond. *Consulting Laryngologist*, SIDNEY BERNSTEIN, M.R.C.S. Eng., L.R.C.P. Lond. (Attended Regularly).

Apply The Secretary, The Cotswold Sanatorium, Cranham, Gloucester. *Telephone*, 41 WITCOMBE. *Telegrams*, HOFFMAN, BIRDLIP.

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Candidates must be males of pure British descent and citizens of Great Britain or Northern Ireland and must hold a registrable qualification The selected candidate will be expected to devote his whole time to research in connection with Anatomy Physiology or Pathology of the Nose Throat or Ear under the general direction of the two Senior Surgeons to the Department Full opportunities are offered for Clinical and Operative work No strict limits are placed upon the nature of the research undertaken and in it the selected candidate may expect to avail himself to the full of the resources of the Department Thus include a clinical and pathological laboratory providing large and fully equipped laboratory provision special facilities for and with a staff familiar with the technique of temporal bone preparation

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IN CONNECTION WITH THE UNIVERSITY AND ROYAL COLLEGES 1933

The POST GRADUATE COURSES to be held this year comprise

(1) A GENERAL PRACTITIONERS COURSE from August 14th to September 9th

(2) A GENERAL SURGICAL COURSE from August 14th to September 9th

The composite fee for each Course will be £10 10s. for the four weeks or £6 6s for either the first or second fortnight.

(3) A COURSE IN OBSTETRICS AND GYNAECOLOGY AND CHILD LIFE AND HEALTH from July 17th to Aug 12th Fee £10 10s. (Minimum number 12)

In addition to the above the following Special Courses have been arranged SUMMER TERM

SURGICAL PATHOLOGY—May 9th. Fee £4 4s OPHTHALMOSCOPY—May 1st Fee £5 5s. Minimum number 5.

SUMMER AUTUMN AND SPRING TERMS.

CLINICAL SURGERY (including Radiology)—Royal Infirmary Fee £4 4s

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DISEASES OF EAR NOSE, AND THROAT—Eye and Throat Dispensary Cambridge Street Fee £4 4s

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UROLOGICAL SURGERY AND TREATMENT OF FRACTURES (Spring Term)—Fee £3 3s.

NEUROLOGICAL SURGERY (March). Fee £2 2

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DURING THE PERIOD OF THE GENERAL COURSES. (AUGUST SEPTEMBER).

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Further particulars may be had on application to the Hon Secretary Post Graduate Courses in Medicine University New Buildings Edinburgh.

THE INSTITUTE OF MEDICAL PSYCHOLOGY (the Tavistock Clinic), 6, Torrington Place, London, W C 1

A SHORT COURSE OF LECTURES ON

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FOR PRACTITIONERS AND MEDICAL STUDENTS

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For particulars of the Course apply to the Hon Lecture Secretary 6 Torrington Place W C 1

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A A General Medical and Surgical Course from August 21st to September 15th.

Fee £10 10s or £6 6s for first or second fortnight.

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Syllabuses and any other information may be had or application to the Secretary Post Graduate Medical Association The University Glasgow

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POST-GRADUATE COURSES:

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MEDICINE & SURGERY (Prince of Wales's Hospital two courses, June 12th 24th and June 26th July 8th all day) CLINICAL SURGERY (Royal Albert Dock Hospital week end Saturday and Sunday June 10th and 11th all day) ANTE NATAL (Royal Free Hospital Fridays at 5 p.m., June 16th July 7th) CHEST DISEASES (Victoria Park Hospital June 12th 24th, all day) MEDICINE & SURGERY (Southern General Hospital week end July 8th and 9th) ADVANCED LECTURES (Medical Society Wednesdays at 5 p.m., June 7th, 14th 21st, and 28th) on Children Nerves Gynaecology and Obstetrics *Panel of Teachers available daily*

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For rules fees etc., apply H R STOKES Secretary-Superintendent.

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The COLLEGE OF PRECEPTORS holds Preliminary Examinations for Medical and Dental Students in London and at Provincial Centres in March, June September and December For Regulations apply to the Secretary College of Preceptors, Bloomsbury Square London W C 1

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Examination for the Diploma of the Master of Midwifery of the Society of Apothecaries of London will be held beginning Monday 4th September 20th 1933 and Monday May 21st 1934

For regulation apply to the Registrar of the Society Water Lane E C 4

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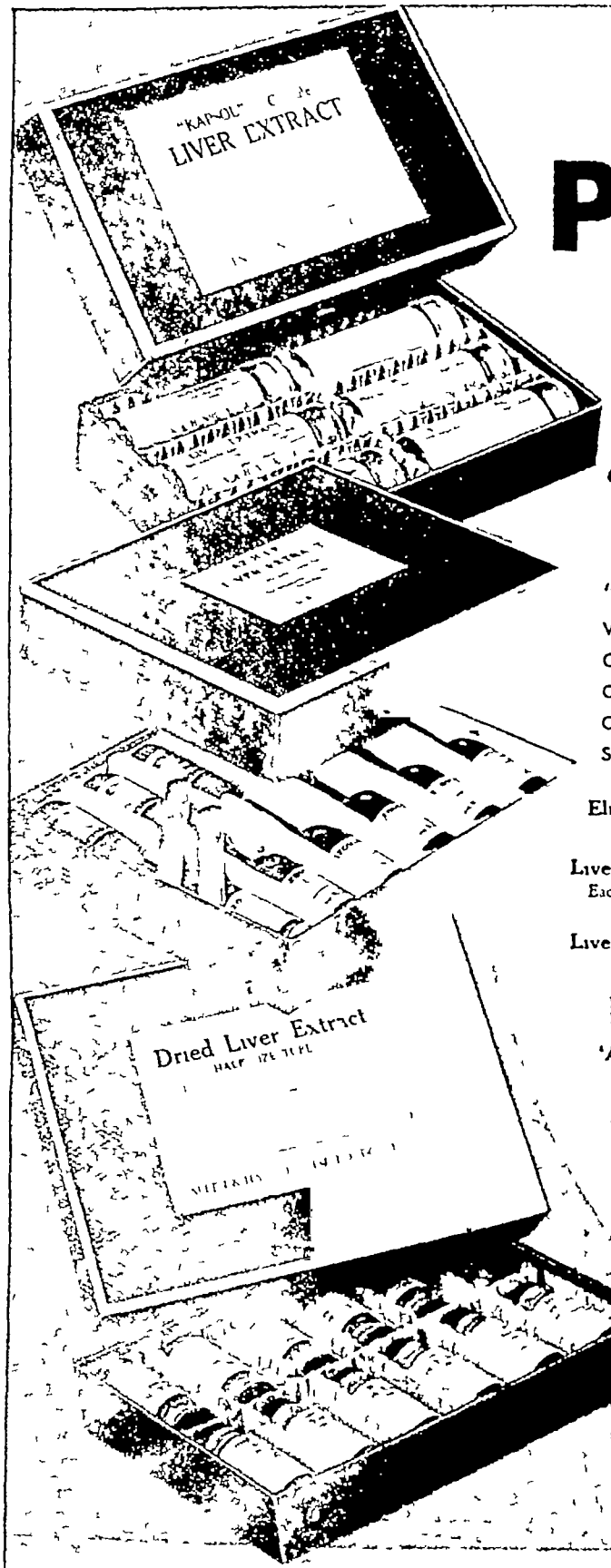

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In boxes of 12 ampoules

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ST MARY'S HOSPITAL

INSTITUTE OF PATHOLOGY AND RESEARCH
Principal SIR ALMROTH E WRIGHT

Applications are invited from qualified Medical Practitioners for a RESEARCH STUDENTSHIP This will be tenable for six months and may be renewed for a second period of six months

The Institute comprises the following departments Anatomy and Embryology Physiology Pathology Chemical Pathology Clinical Bacteriology Systematic Bacteriology, and Immunology

The Student who will receive an honorarium at the rate of £200 per annum may elect to carry out his researches in any one of these departments and would be required to work under the direction of the Head of the department concerned

Preference will be given to old St Mary's Students

For further particulars apply to the Secretary Institute of Pathology and Research St Mary's Hospital Paddington W 2 to whom applications must be sent not later than June 6th

UNIVERSITY OF BIRMINGHAM

FACULTY OF MEDICINE

APPOINTMENT OF LECTURER IN MENTAL DISEASES

The Council invites applications for this appointment vacant on the death of Dr PERCY F HUGHES

Applications (thirty copies) accompanied by testimonials or such other credentials as the candidates desire to offer should be sent to the undersigned on or before June 3rd

Further particulars may be obtained from—
Edmund Street C G BURTON
Birmingham Secretary
May 1933

THE UNIVERSITY OF LIVERPOOL

The Council invites applications for the post of LECTURER (ungraded) in the department of Pathology Salary £600 per annum

The Lecturer will commence duty as soon as possible after the date of appointment

The appointment is a whole time one and the Lecturer will be required to comply with the conditions of the Federated Superannuation System for Universities

Four typewritten applications together with three references and (if the candidate so desires) copies of testimonials to be forwarded not later than Saturday, June 24th to the Registrar

Further enquiries should be addressed to the George Holt Professor of Pathology

EDWARD CAREY Registrar

EDINBURGH DENTAL HOSPITAL AND SCHOOL.

Applications are invited from registered Dental Surgeons for the combined post of DEAN of the SCHOOL and TEACHER of CLINICAL DENTAL SURGERY

Minimum salary £1 000 per annum For other conditions of appointment apply to—

C M STUART W S
20 York Place Edinburgh

THE UNIVERSITY OF MANCHESTER

Applications are invited for the post of PROFESSOR OF DENTAL SURGERY AND DIRECTOR of the DENTAL HOSPITAL. Duties to commence September 29th All applications should be sent not later than June 12th to the Registrar from whom further particulars may be obtained

OXFORD UNIVERSITY

The Electors to the MAY FELLOWSHIP AND READERSHIP IN MEDICINE invite applications for the POST before June 17th Stipend £400 Further particulars may be obtained from the Registrar University Registry Oxford

CITY OF SHEFFIELD

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RESIDENT HOUSE SURGEON required on July 1st for the above Hospital which is for the treatment of Surgical Tuberculosis and other Orthopaedic conditions (140 beds)

The officer appointed will be required to attend the Out patient [illegible] Surgical Tuberculosis cases and [illegible] ic of the Maternity and

Salary at the rate of £150 per annum with board and laundry Appointment for six months with possible extension for further six months.

Applications with testimonials should be sent to the Medical Superintendent

MUNICIPAL BOARD OF MOMBASA

Applications are invited from British subjects for the post of MEDICAL OFFICER OF HEALTH under the Municipal Board of Mombasa Kenya The consolidated salary of the post is £950—£40—£1 150 There is at present a 6 per cent levy on salaries as a measure of economy No house is provided nor is house allowance paid The post is non pensionable there is no Provident Fund when the latter is instituted all Municipal Officials will be required to participate

The person appointed must be a legally qualified Medical Practitioner registered under the Medical Acts of the United Kingdom and must be registered in the Medical Register of the United Kingdom as the holder of a diploma or certificate in sanitary science public health or state medicine Previous experience of public health work is essential The possession of a diploma in tropical medicine or tropical medicine and hygiene or previous tropical experience is desirable

The Medical Officer of Health on appointment will be granted a first class passage to Mombasa and half salary while on the voyage He will be required to serve 3 years (and will be subject to retention for a further year if the exigencies of the service so demand) Thereafter he will be granted 3 months leave on full pay and if returning to his appointment will have three further months on full pay a first class return passage will be provided up to £150 During 3 years service he will be entitled to three periods of local leave of 14 days each

He will be required to provide himself with motor transport the present motor-car allowance being £4 a month

Applications with copies of any testimonials and with a recent photograph should be sent by candidates in the British Isles to Dr GILKS Coolgardie Aldwick Road, Bognor Regis Sussex by July 15th

Applications from other countries should reach the undersigned by August 15th Copies of the terms of service may be obtained from Dr GILKS or the undersigned

(Sgd) DONALD S FRASER,
Mombasa Town Clerk
May 5th 1933

CITY OF MANCHESTER

APPOINTMENT OF ASSISTANT TUBERCULOSIS OFFICER

The Public Health Committee invites applications for the position of Assistant Tuberculosis Officer at a commencing basic salary of £650 per annum rising by annual increments of £25 to £750 per annum The salary is subject to a temporary deduction (£26 5s. on £650)

Candidates must be fully qualified Medical Practitioners having special knowledge of Medical and Surgical Tuberculosis and should state whether they possess the Diploma of Public Health

Applications stating age qualifications and experience with copies of not more than three recent testimonials and endorsed on the envelope Assistant Tuberculosis Officer must be addressed to the Town Clerk only and not to members of the Committee or Council and must be received by him not later than June 3rd

The gentleman appointed will be under the administrative control of the Medical Officer of Health and the immediate control of the Senior Tuberculosis Officer He will be required to devote the whole of his time to the duties of his position to execute the Deed of Service and to contribute to the Corporation Superannuation Fund

Canvassing in any form direct or indirect, oral or written, is prohibited

By Order
Town Hall F F WARBRECK HOWELL
Manchester Town Clerk
May 15th 1933

HAMPSHIRE COUNTY COUNCIL

ASSISTANT COUNTY MEDICAL OFFICER

Applications are invited for the post of Assistant County Medical Officer Preference will be given to a woman with experience in maternity and child welfare work including maternity centres and ante natal clinics Possession of a Diploma or Degree in public health work is essential and previous experience in tuberculosis venereal disease and medical inspection of school children will be considered an advantage

Salary £600 a year rising on approved service by increments to £750 (subject to deductions under the Local Government Officers Superannuation Act and to temporary abatement), in addition to travelling expenses

Applications with copies of not more than three testimonials upon a form which with the conditions of appointment may be obtained from the County Medical Officer The Castle, Winchester should be sent to him not later than June 3rd Canvassing is prohibited

METROPOLITAN BOROUGH OF GREENWICH

APPOINTMENT OF A JUNIOR ASSISTANT MATERNITY AND CHILD WELFARE MEDICAL OFFICER.

The Council of the Metropolitan Borough of Greenwich is prepared to receive applications from registered Medical Practitioners for the appointment of Junior Assistant Maternity and Child Welfare Medical Officer in the Borough of Greenwich

Applicants must have had experience in connection with Maternity and Child Welfare work generally and shall be registered Medical Practitioners who prior to April 1st 1930 had held the appointment of Medical Officer of an Ante Natal Clinic with the approval of the Minister of Health or who subsequent to qualification have had at least 3 years experience in the practice of his or her profession and special experience of practical midwifery and ante natal work resident Obstetric experience will be considered an additional qualification The person to be appointed will act generally under the direction and supervision of the Medical Officer of Health who is the Administrative Medical Officer of the Maternity and Child Welfare Services

The salary will be at the rate of £500 per annum rising by annual increments of £25 to a maximum of £700 per annum

The successful candidate will be required to reside in the neighbourhood of the Borough Council's Maternity Home to devote the whole or his or her time to the service of the Council, and not to engage in private practice except when called in by Medical Men in the district

The appointment will be subject to the provisions of the Council's Superannuation Act as amended and to the approval of the Minister of Health and will be terminable by three months notice in writing on either side

Applications must be made on forms to be obtained from the undersigned stating age qualifications and experience and accompanied by copies of not more than three recent testimonials and must be sealed up and endorsed "Junior Assistant Maternity Medical Officer" and reach me not later than 12 o'clock noon on Monday, June 19th

Canvassing Members of the Council either directly or indirectly will be a disqualification

Stamped addressed foolscap envelope must accompany application for form

Town Hall FREDERICK J SIMPSON
Greenwich S E.10 Town Clerk
May 18th 1933

COUNTY COUNCIL OF MIDDLESEX

WEST MIDDLESEX COUNTY HOSPITAL, ISLEWORTH

RESIDENT ASSISTANT MEDICAL OFFICER (Woman)

The County Council invites applications for the above appointment Candidates must be registered Medical Practitioners, unmarried must have held resident appointments in a General Hospital and have special experience in obstetrics and gynaecology The officer appointed will work under the control of the Medical Superintendent and will devote her whole time to her official duties.

Salary is at the rate of £400 per annum rising by annual increments of £50 to £600 per annum together with board lodging and laundry valued for superannuation purposes at £100 per annum In view of the national situation a temporary abatement calculated on the following scale is applied to the salary and value of the emoluments for the first £150 per annum no abatement, for the next £100 per annum 2½ per cent abatement for the next £600 per annum 5 per cent abatement

The successful candidate will be required to pass such medical examination as the County Council may direct and unless subject to the Poor Law Officers Superannuation Act 1896 to contribute to the County Councils Superannuation Fund The appointment will be held during the pleasure of the Council and subject to three months notice on either side

Applications stating (1) age, (2) qualifications and (3) experience together with copies of not more than three recent testimonials must be received by the undersigned not later than Thursday June 8th

No special application forms are provided Envelopes must be endorsed Resident Assistant Medical Officer

Canvassing directly or indirectly, will be a disqualification

N B—West Middlesex County Hospital is a modern general hospital with over 500 beds for medical surgical and maternity cases Some 650 beds for chronic cases in Warkworth House an adjoining institution also under the care of the medical staff of the Hospital

(C D/14) ERNEST S W HART
Middlesex Guildhall Clerk of the
Westminster S W 1 County Council
May 19th 1933

ROYAL SUSSEX COUNTY HOSPITAL, BRIGHTON

Notice is hereby given that a Meeting of the Elective Committee will be held in the Board Room at the Hospital on Wednesday, July 26th, at 12.15 p.m. for the purpose of electing

1. An HONORARY ASSISTANT OTO-RHINO LARYNGOLOGIST
2. An HONORARY CLINICAL ASSISTANT to the Dental Department

and such Elective Committee is hereby convened accordingly.

Applications are invited from the first named, (a) from gentlemen who hold the usual Medical or Surgical qualifications required by the Statutes of the Hospital and who are duly registered under the Medical Act;

Application are invited from the last named (a) from gentlemen who possess a Diploma in Dentistry and are duly registered under the Medical or Dentists Act.

Application must reach the Secretary, Sydney Lloyd, at the Hospital before 12 noon on June 24th.

By Order of the Board of Management
L. L. W. LANCASTER CAVE,
Secretary Superintendent.

MANCHESTER ROYAL INFIRMARY CENTRAL BRANCH ROBY STREET MANCHESTER

HOUSE SURGEON (LADY)

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment. Applicants must be registered and hold a Medical and Surgical qualification.

The appointment is available from the commencement July 1st three months as Junior at £100 per annum, three months as Assistant at £100 per annum, and three months as Senior at £200 per annum, together with board and allowance for laundry.

Applicants must state age and qualifications, and send twelve copies of their applications and testimonials to the undersigned, not later than Tuesday, June 15th.

By Order,
FRANK C. HAZELL,
General Superintendent & Secretary.

(AMENDED ADVERTISEMENT.)

WESTERN OPHTHALMIC HOSPITAL, Marylebone Road, N.W.1.

The Committee have now decided to arrange for the JUNIOR HOUSE SURGEON to be resident and have charge of a certain number of beds, and applications are invited for this post.

The salary is at the rate of £100 per annum and the appointment for six months.

Some practical Ophthalmic experience is required.

The successful candidate will be required to take up duties at an early date.

Applications accompanied by three copies of three testimonials, should be sent in at once and not later than June 7th.

H. W. BURFITT,
Honorary Secretary.

SELFOLD ROYAL HOSPITAL, (263 Beds.)

Applications are invited from duly registered candidates (male) for

HOUSE SURGEON (General and Urinary Duties).
HOUSE SURGEON (Neurological Duties).

For six months from July 1st. Salary £125 per annum.

Forms of application obtainable from the undersigned, must be delivered on or before June 6th.

By Order of the Board,
H. B. SHELSWELL,
Hon. Sec. Supt. & Secy.

May 22nd, 1933.

THE ROYAL PORTSMOUTH HOSPITAL, PORTSMOUTH.

(Five Resident Medical Officers.)

CASUALTY OFFICER, male (qualified), required to commence on June 24th. Salary at the rate of £130 per annum with board, etc. Six months' appointment. Eligible on completion of term for appointment to other resident posts.

Applications, stating age, nationality, etc., and copies of three recent testimonials, to be sent to the undersigned not later than June 8th, from whom all particulars can be obtained.

B. WACSTAFF, Secretary.

WINFORD ORTHOPAEDIC HOSPITAL, near BRISTOL.

There are vacancies for (a) HONORARY ASSISTANT SURGEON and (b) HONORARY DENTAL SURGEON.

Applications should be received by the undersigned not later than June 17th.

46, Park Street, Bristol.

G. M. ROWE,
Secretary.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond Street, London, W.C.1.

A HOUSE PHYSICIAN and a HOUSE SURGEON are required on July 1st.

Gentlemen are invited to send in their applications, addressed to the Secretary, before 12 o'clock on Monday, June 5th, with copies, not more than three testimonials given specially for the purpose and also an account of their hospital appointments.

The appointments are made for six months. Salary at the rate of £100 per annum. Duties all whole-time and resident in the Hospital.

Candidates must be unmarried and possess a final qualification.

All candidates must be in attendance to appear before the Joint Committee if required at their Meeting on Wednesday, June 7th, at 4 p.m. precisely.

Forms of application and rules of the Hospital can be obtained from the Secretary.

By Order of the Board of Management,
HERBERT E. RUTHERFORD,
May, 1933. Secretary.

THE CANCER HOSPITAL (FREE), (Incorporated under Royal Charter), Fulham Road, London, S.W.3.

The Committee are prepared to receive applications for the post of HOUSE SURGEON to commence duties July 1st. Salary at the rate of £100 per annum.

The appointment is for six months and subject to renewal.

Candidates must attend each Meeting of the Medical Committee not later than Tuesday, June 27th.

Copies of the Rules and the names and addresses of the Medical Committee may be obtained from the Secretary.

Previous Medical and House Surgeons are ineligible.

Applications, with three (3) copies only testimonials, to be sent to the undersigned not later than the first post, Saturday, June 10th.

CLEMENT COBBOLD, Secretary.

LONDON HOMOEOPATHIC HOSPITAL, Great Ormond Street, W.C.1.
(Voluntary Hospital—200 Beds.)

POST OF RESIDENT MEDICAL OFFICER.

The post of Junior Assistant Medical Officer in Private Wards becoming vacant, an appointment is being made for six months. Four months as House Surgeon (Urinary, Venereal and Casualty Officer) and four months as Medical Officer in charge at the rate of £100 per annum and board apartments and laundry.

Candidates must be legally qualified and registered.

Application for JUNE APPOINTMENT stating age, with copies of testimonials, to the Secretary.

EDWARD A. ATTWOOD, Secretary.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Road, S.E.1.

There is a vacancy for an HONORARY CLINICAL ASSISTANT (male or female) at a Rheumatism Supervisory Centre for Children suffering from rheumatic fever and chorea. Candidates should be interested in children's illnesses and cardiac problems. Previous children experience desirable. The appointment is for six months in the first instance. Applicants should send testimonials, which will be returned, from whom further particulars can be obtained not later than June 3rd.

J. H. TEASDALE, Secretary.

ROYAL ALBERT HOSPITAL AND EYE INFIRMARY, DEVONPORT.

A vacancy for an ASSISTANT HOUSE SURGEON exists. Applicants must be fully registered and unmarried, and the appointment will be for six months. Salary £100 per annum with board, apartments and laundry free.

Applications, stating age, accompanied by copies of not more than three testimonials, should be forwarded to the undersigned not later than June 3rd.

By Order of the Committee,
FRANK POWE,
May 22nd, 1933. Secretary.

ROYAL WEST SUSSEX HOSPITAL, CHICHESTER.

Applications are invited for the post of GYNAECOLOGIST AND OBSTETRICIAN to the Royal West Sussex Hospital, Chichester.

Candidates must have had special experience in this work and should forward three testimonials to the Secretary, the Royal West Sussex Hospital, Chichester, before June 16th.

WEST LONDON HOSPITAL, Hammersmith Road, W.6. (234 Beds.)

Required ONE HOUSE PHYSICIAN, TWO HOUSE SURGEONS and ONE RESIDENT ANAESTHETIST (Males). The duties of the House Physician include some work in the Neurological and Dermatological Department. The duties of one House Surgeon include some work in the Genito-Urinary Department and of the other some work in the Gynaecological Department. These four appointments are tenable for six months from July 1st next, subject to one month's notice on either side. Salary at the rate of £100 per annum with board, lodging and laundry allowance.

Candidates must be registered under the Medical Act. Applications (which must be on printed forms obtained from me) must reach me not later than first post on Friday, June 16th. Selected candidates will be required to call upon such members of the Medical Staff as directed to be in attendance at the Medical Committee Meeting on Friday, June 23rd, at 4.30 p.m. and the House Committee Meeting at 5 p.m. the same day when the appointments will be made.

H. A. MADGE, Secretary.

ARCOATS HOSPITAL, MANCHESTER.

HONORARY RADIOLOGIST

Applications are invited for the post of Honorary Radiologist. The successful applicant will be required to take an active part in the work of the Department with attendance on three mornings per week.

Application, stating age, qualifications, experience and appointments held (if any), to be forwarded to the undersigned on or before June 7th, together with copies of three recent testimonials.

By Order of the Board,
HERBERT J. DAFFORNE,
Gen. Supt. & Secretary.

ARCOATS HOSPITAL, MANCHESTER.

EAR, NOSE AND THROAT DEPT. OUT PATIENT CLINIC.

CLINICAL ASSISTANT required for the above on Thursday afternoon from 2 p.m. to 4 p.m. Fee 10/6d. per clinic will be paid.

Applications, stating age, qualifications, experience and appointments held (if any), to be forwarded to the undersigned on or before June 7th next, together with copies of three recent testimonials.

By Order of the Board,
HERBERT J. DAFFORNE,
Gen. Supt. & Secretary.

ARCOATS HOSPITAL, MANCHESTER.

HOUSE PHYSICIAN

House Physician required for a period of six months, commencing July 1st next. Salary £100 per annum with board, residence and laundry.

Applications, stating age, qualifications and experience, to be forwarded to the undersigned on or before June 7th next, together with copies of three recent testimonials.

By Order of the Board,
HERBERT J. DAFFORNE,
Gen. Supt. & Secretary.

THE HOSPITAL FOR WOMEN, Soho Square, W.1.

Applications from fully qualified women are invited for the post of RESIDENT MEDICAL OFFICER for a period of six months, commencing July 1st next. The salary is at the rate of £100 per annum with board, residence and laundry. Applications and testimonials must reach the undersigned by Monday, June 19th.

J. P. HEMING, Secretary.

ST. MARK'S HOSPITAL FOR CANCER, FISTULA AND OTHER DISEASES OF THE RECTUM, City Road, E.C.1.

Applications are invited for the position of CLINICAL ASSISTANTS in the Out-patient Department for the sessions on Monday at 2 p.m. and Tuesday at 4.30 p.m. The appointment is for six months from the first week in June in the first instance. Fee of three guineas is payable on appointment. Application to be addressed to the Secretary of the Hospital.

MERTHYR GENERAL HOSPITAL.

Applications are invited for the post of RESIDENT SURGEON for the coming six months. Salary £150 per annum plus board, lodging and laundry.

Applications with three recent testimonials must be in the hands of the Secretary on or before May 27th.

Annual Oration

ON

NEW TREATMENTS FOR OLD

DELIVERED BEFORE THE MEDICAL SOCIETY OF LONDON MAY 8TH 1933

BY

LORD HORDER K.C.V.O. M.D. F.R.C.P.

PHYSICIAN IN ORDINARY TO H.R.H. THE PRINCE OF WALES; SENIOR PHYSICIAN TO ST. BARTHOLOMEW'S HOSPITAL

I should like to begin with the customary word of appreciation of the honour you pay me in asking me to deliver this Annual Oration—customary and yet by no means perfunctory because I am very sensible of the note of distinction which your choice carries with it. The Medical Society of London provides a unique *milieu* for observations which range rather widely over the field of medicine using this word in its fullest and best sense. And that these observations are being made this evening by one whose sphere of thought and work is also wide—some may say much too wide to be useful—is perhaps not inappropriate having regard to the fact that this society is not sectional but universal in its ambit. I am content with the reflection that our society in its aims and your present Orator in his outlook upon medicine either fall together or together stand justified. The word pathology has been wrested from its original and true meaning has become stunted in its connotation otherwise I would remind you that there is a unity in it which is worth preserving and that though much may be gained by way of progress if we view it compartmentally there is something lost if we do not now and again make the effort to see it steadily and see it whole. And this is what the Medical Society stands for or so I understand its purpose.

Especially do I think this observation true of therapeutics. To get a proper conception of pathology we must not separate off one organ from the rest. To be good therapeutists we must remember the harmony that exists and must be preserved between the various organs and tissues when we seek to restore a state of equilibrium which has been temporarily upset. A good doctor though he may call himself physician surgeon psychologist or immunologist must in spirit be all of these. He must think physiologically and he must think pathologically. Having worked out carefully in his mind the indications for treatment he must meet these indications in the best informed and most skilful manner that he himself together with his colleagues can achieve. It is this thought that induces me to believe that a society like ours which is quite unspecialized is the right place to discuss some changed aspects in therapeutics and to consider their bearings upon the present position of medicine.

THERAPEUTICS AND TECHNIQUE

Our friend the public has no doubt about the progress made by medicine during the last few decades. Nor with all our chafing when faced with incurable disease have we ourselves on serious consideration any doubt. There are certain advances to which we can point and they not only give us hopes for the future but they show the way by which fresh successes may be gained. (I am not to-day including preventive medicine in my purview.) In the realm of therapeutic research the stories of insulin and of liver therapy stand out prominently as having provided us with novel methods of treatment. The dreary lives and outlook of thousands of diabetics and sufferers from pernicious anaemia have been completely changed by these two advances. In both cases the results have been achieved by long and patient research and strict adherence to the principles of physiology and the established facts of histology and chemistry.

The application of technique to therapeutics has led to equally sound new methods. The surgeon has fused his efforts with those of the physician in more than one field; that of pulmonary tuberculosis affords a striking example; artificial pneumothorax phrenic avulsion and thoracoplasty have assisted greatly in securing physiological rest and healing of the diseased lung. Blood transfusion has saved many lives and has assisted greatly in enabling us to exploit methods of treatment which would otherwise fail of their purpose. The technique of the radiotherapist has become highly efficient both in *x* rays and in radium and the overlap of his work with general medicine grows steadily. The physiotherapist too has brought many forms of technical help to a high pitch of usefulness. Indeed he offers us almost an embarrassment of riches and we are perhaps a little in danger of being cluttered up by pieces of machinery which we are tempted to use a little indiscriminately rather as an inexperienced fireman might play with his hose and wield his axe first here then there without much definite purpose and perhaps doing harm as well as good. Only for a hose and an axe we must substitute numerous kinds of implements ionization diathermy ultra violet rays high frequency the sinusoidal current Finsen light—a whole series of physical methods. The fashionable quack tries all in turn on the same patient hoping by trial and error to get a result before the client gets tired. In ide the profession there is more and more evidence that the man controls the method rather than the method the man. And this is what matters in all such things. So that physiotherapy may be counted upon to go much further and is bound to exercise great influence in modern therapeutics so long as it is guided by physiological principles. It has already changed the aspect of the treatment of many diseases not a little.

We have no difficulty in appreciating that if technique be added to therapeutics in the ways just mentioned and in other ways success to be real and lasting depends upon the subservience of the method to physical principles on the one hand and to physiological principles on the other. Abrams's box is an example of a piece of machinery (save the mark!) which offends against both of these principles the wires do not join up and nothing demonstrable happens to the patient. But the credulous public so loves a piece of apparatus which it believes capable of eliminating the fallible human element whether in diagnosis or in treatment that the business still goes on and seems likely so to do. We see clearly I say that the skilled physicist to be a therapeutist must wed his physics to the patient's physiology.

WORDS AND PRINCIPLES

I want to touch on some of those more complex fields of therapeutics in which the necessity for this same alliance between the method and the principles though it is equally essential that it be observed is broken and where it may not be very easy to see exactly where the divorce has taken place.

In passing I should like to say that if we get slovenly on the point of terms and definitions it follows that only by a happy accident can we achieve anything. The curse of Babel is not more calculated to prevent concerted action among laymen than is indifference in the use of terms calculated to hold up progress in any branch of science. Take the word specific for example. Until quite recently the meaning of the word was precise and entirely free from ambiguity when used in immunology. But we

have arrived at a state of confusion as regards its connotation in therapeutics—or some people have. If the result of the use of an antigen, or even a drug in the treatment of an acute infection is sufficiently dramatic, whether the result be good or bad, the substance used is called specific," quite regardless of its mode of action. Certain preparations put on the market for use in acute infections of quite different nature, differing as much as influenza differs from furunculosis, are credited with containing 'the specific antibody,' whatever that may mean. But this is merely a protest in passing.

When we think carefully on the question, most of our treatments, and some that are quite successful, are matters of expediency; they are not matters of right or wrong. This arises from the fact that it is always Nature that cures and not we. The disharmony we call disease can only be adjusted by the operation of processes which are already inherent in the body; we cannot substitute new processes, we can only help and control those by which life and health are being already maintained. This basic fact is, I take it, the *raison d'être* of the preliminary studies in the medical student's curriculum. To tamper unduly with these fundamentals would inevitably lead to an extension of what is already—or so I believe—a disastrous tendency in modern therapeutics, the tendency to think that what I may call "direct action" is the best way of getting an ill person restored to health. I am not a believer in the efficacy of direct action in the political sphere, but, however this may be, I am convinced that it is doomed to ultimate failure in the sphere of therapeutics. Moreover, it is becoming more and more popular, and I think it needs to be watched and to be resisted.

Limitations of Direct Action

There are, it is true, some diseases which call for treatment by direct action—action which is urgent, perhaps life saving in its insistency, but for the most part these are accidents rather than disease processes. Acute poisoning calls for prompt elimination and appropriate antidotes. Cessation of breathing demands artificial respiration. A foreign body in the larynx must be extracted as soon as may be. In the "acute abdomen," if the diagnosis favours the rupture of a hollow viscus, the peritoneal cavity must be opened forthwith. But even in the acute abdomen, if the diagnosis is clearly that of an inflammation, direct action is not necessarily indicated. Judging by the closeness of the voting at a recent discussion it would appear that after nearly forty years of familiarity with so common a disease as acute appendicitis no rule of practice carries conviction; two authorities of equal experience and equal technical ability, and both of them surgeons, may decide upon quite different lines of treatment. And it is fairly certain that the mortality incidence in the practice of both men is much the same.

What's in a Name?

Direct action is of course the main appeal of the quack medicine to the credulous public. The reader of the advertisement cannot withhold his confidence in a remedy whose very name suggests that his dominant symptom is its sole and its immediate objective. "Jones's backache pills." "Smith's blood mixture," 'Robinson's asthma cure," and so on. "Purple pellets for pallid persons," in addition to the attraction of alliteration, stresses the appositeness of the remedy for the particular purpose. These things lie outside medicine. The empirics, however, do not monopolize this form of appeal, and though such names as 'spasmalgin" and 'phenodorm" are perhaps admissible, seeing that the main actions of these drugs may be allowed to dictate their names ('morphine" might be advanced as a precedent) and even "regulin" may be forgiven for somewhat similar reasons, what shall we say of 'arthrytin" and 'antibacsyn" and 'antimalignyn"? These names offend not only because they put the doctor's mentality on a level with that of the ignorant layman, but because they suggest that a number of disease processes which are widely different are all of them amenable to the same chemical substance. I do not think that the doctor turned-chemist is of help to us in these matters. I think we have trouble enough as it is to resist the blandishments of the chemist proper. Formerly the chemist was the servant of the doctor, to-day he tends to become the doctor's master. His preparations are so elegant, the troubles for which he offers them are so obviously just those for which we have long been awaiting an efficient remedy, and the presentation of his thesis is so attractive, that we succumb very easily to his dictation.

I recently asked a friend of mine engaged in a busy practice what determined his decision to try any of these new remedies with advertisements of which we are all of us daily bombarded. He said he was governed by two criteria. The first was the reputation of the firm which put the preparation on the market, and the second was the quality of the literature which introduced it, by which he meant the degree to which he was convinced by this literature. Now I believe his first criterion to be a sound one. There are at least a couple of old-established firms trading in this country whose products can not only be counted upon to be pure and accurately assayed, but who spend a large sum of money annually in useful experimental work, and maintain efficient laboratories with a distinguished personnel designed to place their newer preparations upon a sound scientific footing before they recommend them. Of a number of other firms, and some private individuals, the same cannot be said. The tendency to rush a remedy on to the market before it has been brought under scientific control is increasing and should be severely discouraged. The second of my friend's criteria is more difficult to assess, and it is no reflection upon a busy practitioner to suggest that he may not be familiar with the fallacies involved in a specious pamphlet. The alleged actions of a drug which call forth the eloquence of the traveller, untrained as he is in the principles of our work, do not necessarily always appeal to us. The other day I was solicited to give a trial to a new and perfect intestinal disinfectant, that consummation so devoutly to be wished by many. I was told that it rendered the faeces quite sterile. My imagination toyed with the thought of what might happen to a patient with sterile faeces, and my interviewer seemed surprised that I did not share his enthusiasm even if I could not deny his fact.

Doses Large and Small

In the matter of dosage of drugs we have in recent years tended in the direction of the mass attack. In some cases this has proved useful but not, I think, in all. We have seen a revival in popularity of a number of old remedies, some of which though they have never entirely dropped out of use, have come to be employed less frequently and with less confidence in their efficacy. The revival has, in some cases, been accompanied by an effort at greater systematization, and this has undoubtedly been to the good. We cannot accuse all the physicians of the last century of engaging in dilute therapeutics (*pace* our homoeopathic friends), but we have, in some well known instances, gone far beyond them. Even in the use of salicylates in rheumatic fever our doses exceed theirs, and this though we see much less than they did of the severe forms of the disease. The prevalent use of quinine in malaria is another instance of the same tendency. Alkalis were given in peptic ulcer, but the effort now

NORTH WALES COUNTIES MENTAL HOSPITAL DENBIGH

ASSISTANT MEDICAL OFFICER

The Committee of Visitors of the above Institution invite applications from duly qualified male candidates married or single for the post of Resident Assistant Medical Officer Salary which will be subject to the Statutory deductions under the provisions of the Asylum Officers Superannuation Act 1909 will be £500 per annum together with emoluments valued at £125 per annum for superannuation purposes If single full board residence laundry, and attendance provided If married an unfurnished house with light water rent, and rates provided free valued at £75 for purposes of Superannuation The appointment to be terminable upon one month's written notice on either side Practical experience of the modern treatment of mental conditions will be expected and a knowledge of the Welsh language will be deemed most desirable

Applications stating age qualifications and accompanied by three recent testimonials are to be sent to the Chairman of the Visiting Committee endorsed Assistant Medical Officer not later than Tuesday the 30th instant

Dated this 12th day of May 1933

WM BARKER,
Clerk to the Visiting Committee

TYNEMOUTH VICTORIA JUBILEE INFIRMARY

HOUSE SURGEON (male) required Applicants must be doubly qualified and registered Salary £150 per annum, with board, residence and laundry

Applications stating age and other essential particulars and accompanied by copies of recent testimonials to be addressed to the undersigned, from whom all particulars may be obtained

The Hospital has two Resident House Surgeons and contains 80 beds and cots an X ray department and an Out patient department where accident cases are received

CHARLES ROWELL
1 Northumberland Place, Assistant
North Shields Secretary

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN
St Quintin Avenue North Kensington W 10
(68 Beds)

HOUSE SURGEON (male) required for six months from July 1st Salary for first three months at the rate of £75 p a and for second three months at the rate of £100 p a with board residence and laundry in each case Candidates should have held a responsible Hospital appointment Applications with copies of three recent testimonials must be submitted on a form to be obtained from the undersigned and should reach him not later than first post on Thursday June 8th

H T ELEY Secretary

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN
St Quintin Avenue North Kensington, W 10
(68 Beds)

HOUSE PHYSICIAN (male) required for six months from July 1st Salary for first three months at the rate of £75 per annum and for second three months at the rate of £100 p a with board residence and laundry in each case Candidates should have held a responsible Hospital appointment Applications with copies of three recent testimonials must be submitted on a form to be obtained from the undersigned and should reach him not later than first post on Thursday June 8th

H T ELEY Secretary

ELSIE INGLIS MEMORIAL MATERNITY HOSPITAL Spring Gardens
EDINBURGH (60 Beds)

Applications are invited from fully qualified Medical Women for the post of DISTRICT MEDICAL OFFICER rising to Senior House Surgeon after three months

Appointment is for six months from July 1st honorarium at the rate of £50 per annum, with board residence and laundry

Applications with copies of testimonials to be sent to the Secretary 1 Bruntsfield Crescent Edinburgh on or before June 3rd

THE LADY CHICHESTER HOSPITAL, HOVE (BRIGHTON)
FOR FUNCTIONAL NERVOUS DISEASES
(60 Beds)

Medical Woman required as HOUSE PHYSICIAN for six months on July 1st Salary at the rate of £100 per annum all found

Also JUNIOR at the rate of £50 per annum all found

Valuable experience for Diploma in Psychological Medicine

Applications with testimonials to the Secretary 117 North Street Brighton

May 10th 1933

QUEEN MARY'S HOSPITAL FOR THE EAST END E 15
Telephone Maryland 2616

Applications are invited from fully qualified and registered Medical Men for the following posts

TWO HOUSE SURGEONS Salary £120 p a
ONE HOUSE PHYSICIAN Salary £120 p a
ONE OBSTETRIC HOUSE SURGEON Salary £120 p a.
ONE HOUSE PHYSICIAN AND RESIDENT ANAESTHETIST Salary £120 p a
ONE CASUALTY OFFICER Salary £150 p a

The Hospital contains 217 beds including 50 for Maternity, and other Special Departments.

Candidates who should have held previous Hospital appointments, must send applications accompanied by testimonials to the undersigned not later than Friday June 2nd

The appointments will date from July 1st and will be for six months

RAPHAEL JACKSON (Major)
Secretary

ST MARY'S HOSPITAL W 2

MEDICAL REGISTRAR

The Board of Management invite applications for the above post

Candidates for the appointment must be registered Medical Practitioners and Fellows Members or Licentiates of the Royal College of Physicians or Graduates in Medicine of a University in the British Empire

The salary is £200 per annum, with luncheon and tea provided

Copies of the regulations for the Medical Registrar may be obtained on application at the Secretary's Office

Applications with copies of testimonials should reach the undersigned on or before Saturday June 3rd

W PARKES Secretary

EDINBURGH HOSPITAL FOR WOMEN AND CHILDREN Whitehouse Loan
EDINBURGH (56 Beds)

Applications are invited from fully qualified Medical Women for the post of JUNIOR HOUSE SURGEON rising to Senior House Surgeon after three months

Appointment is for six months from July 1st honorarium at the rate of £25 per annum for first three months £50 per annum for second three months with board, residence and laundry

Applications with copies of testimonials to be sent to the Secretary 1 Bruntsfield Crescent Edinburgh on or before June 3rd

NATIONAL TEMPERANCE HOSPITAL, Hampstead Road N W 1

Applications are invited for the post of HOUSE SURGEON (male) The appointment will be for a period of six months at a salary of £100 per annum and will date as from June 21st Preference will be given to those who have held a resident post

Candidates must submit applications stating qualifications age etc with copies of not more than three testimonials by Friday, June 9th addressed to the Secretary

NATIONAL TEMPERANCE HOSPITAL, Hampstead Road N W 1

Applications are invited for the post of HOUSE PHYSICIAN (male) The appointment will be for a period of six months at a salary of £100 per annum and will date as from June 21st Preference will be given to those who have held a resident post

Candidates must submit applications stating qualifications age etc with copies of not more than three testimonials by Friday June 9th addressed to the Secretary

NATIONAL TEMPERANCE HOSPITAL Hampstead Road N W 1

Applications are invited for the post of CASUALTY OFFICER (Male) The appointment will be for a period of six months at a salary of £120 per annum and will date as from June 21st

Candidates must submit applications stating qualifications age etc with copies of not more than three testimonials by Friday, June 9th addressed to the Secretary

THE HOSPITAL FOR EPILEPSY AND PARALYSIS Maida Vale, W 9

MEDICAL REGISTRAR REQUIRED

Applications are invited for the post of Medical Registrar falling vacant on July 1st

The appointment is for one year renewable for a further year Honorarium £100

Applications which should be accompanied by copies of not more than three recent testimonials should reach me by June 7th

H W BURLEIGH
Secretary & General Supt.

BRIGHTON SANATORIUM AND INFECTIOUS DISEASE HOSPITAL

Applications are invited for the post of MALE JUNIOR RESIDENT MEDICAL OFFICER. Salary £150 per annum with board and lodging

The appointment is for a period of six months

Particulars and form of application can be had from the undersigned

Latest date for application for appointment June 6th

Town Hall, JAS H ROTHWELL,
Brighton Town Clerk
May 15th 1933

THE CHILDREN'S HOSPITAL, SHEFFIELD
(110 Beds)

Applications are invited for the following post vacant June 1st

RESIDENT MEDICAL OFFICER (male and unmarried) who will have charge of all the Medical and Surgical beds in the Hospital Salary commencing £175 per annum with board residence and laundry Previous resident experience essential

Applications stating age nationality qualifications and experience with copies of three recent testimonials to be forwarded immediately to the undersigned

T H C CARTLAND Secretary

THE JESSOP HOSPITAL FOR WOMEN SHEFFIELD (146 Beds)

The Board of Management invite applications for the post of HOUSE SURGEON (male) to the Maternity Department (50 beds).

The appointment is for six months from July 1st Salary £120 per annum plus board, residence and laundry

Previous resident experience essential

Applications stating age and experience with copies of recent testimonial should be forwarded to the undersigned not later than Monday June 5th

DAVID OSWALD Secretary

THE JESSOP HOSPITAL FOR WOMEN SHEFFIELD (146 Beds.)

GYNAECOLOGICAL AND MATERNITY DEPTS.

The Board of Management invite applications for the post of HOUSE SURGEON (male) for a period of six months commencing July 1st

Salary £100 per annum together with board residence and laundry

Applications, stating age together with copies of testimonials should be addressed to the undersigned not later than Monday June 5th.

DAVID OSWALD Secretary

MANCHESTER BABIES HOSPITAL, Burnage Lane LEVENSHULME.
(80 Beds)

Applications are invited for the post of SENIOR RESIDENT MEDICAL OFFICER Appointment is for six months from July 1st Salary at the rate of £125 per annum with laundry Only candidates with previous Hospital experience need apply

Applications together with copies of testimonials to be sent to the Secretary at the above address marked R M O by Jun 9th

ANGELA LOPEZ Secretary

LIVERPOOL HAHNEMANN HOSPITAL, HOPE STREET (52 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER to the above Institution Appointment is for six months renewable Salary at the rate of £100 per annum Duties include casualties occasional anaesthetics and assisting at operations general gynaecological aural and ophthalmic

Apply stating age sex nationality and previous experience and enclosing copies of recent testimonials to the Registrar before May 30th

SOUTH EASTERN HOSPITAL FOR CHILDREN, Sydenham S E.26

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER (lady). The appointment will be for six months from June 19th Honorarium £120 per annum with board residence and laundry Applications by letter only stating age and qualifications with copies of three testimonials should be sent to the Hon Secretary Mr L. E. DENT 182 Turney Road Dulwich Village S E.21 to be received not later than Saturday June 3rd

SOUTHEND ON SEA GENERAL HOSPITAL
(221 Beds—Six Residents)

SENIOR RESIDENT MEDICAL OFFICER required August 1st next or earlier for one year eligible for re appointment Salary £300 per annum rising £50 yearly to £400 per annum F R C S (Eng) essential Previous surgical and administrative experience necessary Facilities for emergency surgery

Applications as early as possible not later than May 31st to the Joint Secretaries

made at alkalinization is relatively new and the picture of alkalosis occasionally seen was probably unknown to our teachers Iron again was given in chlorosis and freely but with the disappearance of that disease and the experience that the metal was of little service in Addisonian anaemia iron dropped very largely out of practice or was only employed as a tonic and chiefly in the form of the scaly preparations We now give iron more frequently and in a variety of anaemias prescribing massive doses The metal has so low a degree of toxicity that even when these large doses are not helpful they do not seem to harm the patient In streptothrix infections we use the iodides or some other form of iodine in much larger doses than did our predecessors and with good results True there was always a school of therapeutists that gave iodides very freely in syphilis though another school took the view that the same good results might be achieved by smaller doses

Of special interest in this connexion is the use of digitalis in cardiac diseases *Digitalization* achieved by giving large doses at frequent intervals until physiological effects are observed has become a familiar method It is interesting to note that this was suggested by Balfour One result of the popularization of this intensive method seems to be that digitalis has fallen into disuse to a large extent in a number of the less dramatic forms of circulatory trouble in which it was formerly employed with benefit The extreme position in this matter is taken up by those who teach that the only indication for digitalis is auricular fibrillation Such a severe limitation to the use of the drug denies to many patients its helpfulness in a number of other conditions—for example in the milder cases of the senile heart and in the circulatory disturbances associated with renal disease No doubt the great relative infrequency of primary mitral incompetence in these days *pari passu* with the infrequency of rheumatic valvulitis of the more acute type denies the younger practitioner the ocular demonstration of the dramatic effect of digitalis with relapse after relapse in such cases (showing no arrhythmia) which was formerly such a common experience In short the apotheosis of mitral stenosis has aroused so much interest in this form of cardiac disease that some of the other forms especially as seen in private practice have been as it were blacked out of the doctor's mind And it is in these forms that smaller doses of the drug are still so effective

The Pendulum of Practice

Thoroughness in treatment always makes a great appeal to me Sceptical by nature my first reflection when I am told that a patient is cured is that he probably is not The dogged persistence of a disease process once started and whether the original irritant be microbe or not—but especially if it be microbic—is a lesson that experience alone teaches us In particular we see this with such infecting agents as those of syphilis tubercle and the less virulent types of the streptococcus and coliform bacillus groups Remissions yes quiescence yes but arrest possibly yes but probably no Anyway better to assume no in the patient's interest and persevere with whatever appropriate remedies we have long after the signs and symptoms have gone and even after specific reactions have disappeared Our fathers knew this and acted accordingly But should it be by intensive methods from time to time or by steady slow persistence with small doses or by intensive methods first and by slow persistence with small doses afterwards? Even to-day this question has not been finally answered The pendulum of practice still swings Syphilis is as we know a pertinent example The arrival of 606 was heralded by the hope of a *sterilisatio magna* But with the reluctant relinquishing of this ideal and the resentment shown in many patients by certain organs and especially the liver to a mass attack a less vigorous onslaught has been made and this even though the modern equivalents of the drug and supplemental or substitutional drugs are much less toxic than was the original The problem indeed is not the simple one that some of us still seem to think it—of a foreign foe invading the home country wandering about the surface of the land and capable either of being rounded up and chased back across the frontier or killed in the open by shrapnel and machine guns The very first symptoms of the disease indicate that the enemy is already dug in more than that he has fraternized with the home troops and with the civilian populace and even with the governing elements themselves

In syphilis which certainly does give us a model for therapeutic exploitation—even though we may not subscribe to that quaint doctrine which holds that there is one disease and syphilis is its name—it is interesting to note a recent tendency to return to the older method of Hutchinson and to treat the patient by small doses of mercury over a period of two years at least This method of using drugs known as alteratives of which mercury was one of the most important was in vogue long before Hutchinson's day The poet Crabbe has a couplet of lines that clearly refer to this custom

> Here alteratives by slow degrees controul
> The chronic habits of the sickly soul

But the method of the storm troops is still the favourite with many—to make a sudden and overwhelming attack Exactly what the human body will stand in this way with damage it is true though with damage which may not be lethal is well illustrated by a patient recently under my care in St Bartholomew's

A healthy young Jew of 22 was admitted on April 4th His history was that he had developed a primary sore and also showed some symptoms of a general infection three years before He went to the venereal department of a London hospital was found to have a positive Wassermann reaction and was treated by arsenic and bismuth He received in the course of three months 4·95 grams of N A B and 8 c.cm of a 20 per cent glucose solution of bismuth His Wassermann reaction was negative at the end of this treatment Five months ago he presented himself again at the same hospital His Wassermann reaction was still negative He was given two injections of neoarsphenamin and as he felt ill this was changed to acetylarsan of which he received 2 c.cm on two occasions He was then given four injections of 0·6 gram each of sulphostab and also four injections of 2 c.cm each of bismuth oxychloride He then complained of irritation and redness of the skin of his lower limbs Two months ago between February 10th and February 24th he received three injections of 0·6 gram each of the same sulphur preparation and three injections of 2 c.cm each of bismuth oxychloride Eight days before admission the patient complained of colicky pains which doubled him up and of constipation and cramps in the legs On admission there was an intense black line on the gums a good deal of gingivitis and all the front teeth were loose Four days after admission deep jaundice appeared My colleague Dr Harrison demonstrated bismuth in as little as 150 c.cm of urine and Dr Archer detected arsenic in 0·25 gram of hair But the patient left hospital on April 28th apparently well

Such thoroughness such an implacable determination to purge the patient of his peccant humour at all costs is reminiscent of the old story of the French dermatologist who accepted the challenge to cure the intractable skin disease—another arsenic story It also reminds me of a candidate whose examination paper I once corrected The question was about anthrax (wool sorters disease) with special reference to its preventive treatment This he said is very important (He might count on full marks thus far at all events) All

LONDON COUNTY COUNCIL.

Application invited for appointment to undermentioned resident positions. The remuneration and condition in each case are subject to review. Duties assigned by Medical Superintendent and include if necessary duties at other establishments under control of the Council.

Candidates for the position of Assistant Medical Officer Grade I must be Medical Practitioners of at least one year's standing and have held a resident appointment in a general hospital for at least six months.

1. HACKNEY HOSPITAL, Hight Street, Homerton, E.9 — ASSISTANT MEDICAL OFFICER (Grade I). Duties mainly medical.

2. PADDINGTON HOSPITAL, Harrow Rd., W.9 — ASSISTANT MEDICAL OFFICER (Grade I). Salary £350 rising by annual increment of £30 to £425 a year with board, lodging and washing. No accommodation for a married man or for a woman.

3. ST. LEONARD'S HOSPITAL, Hoxton, N.1 — Shoreditch, N.1 — HOUSE PHYSICIAN. Salary £80 a year with board, lodging and washing. Appointment for six months in first instance but may be extended for a further period of six months. Candidates must be registered Medical Practitioners. No accommodation for a married man. In the case of a woman marriage terminates contract.

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), County Hall, Westminster Bridge, S.E.1, returnable by June 2nd, or June 9th in the case of Paddington Hospital. Canvassing disqualifies. Further enquiries should be addressed to Medical Superintendent of the respective hospitals.

LONDON COUNTY COUNCIL.

Applications invited from registered Medical Practitioners of at least one year's standing for appointment as TEMPORARY DISTRICT MEDICAL OFFICER in undermentioned medical districts:

Area III—District I (Islington) £200 p.a.
Area VII—District D (Battersea) £275 p.a.
Area VII—District E (Battersea) £150 p.a.
Area VII—District O (Battersea) £300 p.a.

Candidate appointed will be required in each case to reside in or near the district. Salary in each case is provisional and the remuneration and conditions subject to review.

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), County Hall, Westminster Bridge, S.E.1, returnable by June 9th. Canvassing disqualifies.

COUNTY BOROUGH OF HUDDERSFIELD

PUBLIC HEALTH DEPARTMENT

APPOINTMENT OF ASSISTANT MEDICAL OFFICER OF HEALTH

Applications are invited from registered Medical Practitioners for the above appointment.

Candidates should be ladies who have had special experience in ante-natal work and in the care of infants.

The salary offered is according to scale £500 increasing by £25 per annum to £700. It will be subject to the temporary cut in operation at present on the salaries of all Corporation officials. On £500 the reduction amount to £17 10s.

Application stating age and giving full particulars regarding training, qualifications and appointments held since qualification should be forwarded to JOHN M. GIBSON, Esq., B.A., M.D., D.P.H., Medical Officer of Health, Public Health Department, Huddersfield, along with copies of two recent testimonials so as to reach him not later than Thursday, June 8th.

Town Hall, SAMUEL PROCTER,
Huddersfield. Town Clerk.
May 17th, 1933.

CONNAUGHT HOSPITAL,
Waltham Cross, E.17.
(100 Beds with Three Resident Medical Officers.)

RESIDENT HOUSE PHYSICIAN (male) required. Salary £100 per annum. Appointment for six months from July 1st, with board, residence and laundry. Applications stating age, nationality, qualifications and experience accompanied by copies of not more than three recent testimonials should be received by us on or before Monday, June 5th.

KENELM S. ELLISON, Secretary.

LANCASHIRE COUNTY COUNCIL.

BIDDULPH GRANGE ORTHOPAEDIC HOSPITAL.

Applications are invited from duly qualified and registered Medical Practitioners for the following posts at the above Hospital which contains 88 beds:

SENIOR HOUSE SURGEON. Salary £250 per annum (less temporary emergency deduction) together with board, residence and laundry. Candidates must have had experience in a General Hospital. Preference will be given to candidates who have had orthopaedic experience.

JUNIOR HOUSE SURGEON. Salary £150 per annum (less temporary emergency deduction) together with board, residence and laundry. Preference will be given to candidates who have held a resident hospital appointment and who are competent anaesthetists.

Both appointments will be for a period of six months in the first instance and for a further six months at the option of the Council but will not be renewable after that time.

Applications, with copies of two recent testimonials should be sent not later than June 2nd to Dr. J. J. BUTTERWORTH, School Medical and Child Welfare Department, County Offices, Preston.

Duties to commence August 1st.

County Offices, Preston. GEORGE STIPPTON,
Clerk of the County Council.
May 11th, 1933.

CITY OF LIVERPOOL.

THIRD SENIOR ASSISTANT RESIDENT MEDICAL OFFICER.

Applications are invited for the above appointment at the WALTON HOSPITAL, Rice Lane, Liverpool (1,650 beds) for a period of twelve months. Candidates must be single, fully qualified and registered, have had at least 2 years' continuous hospital experience since qualification and possess special experience in surgery.

Salary at the rate of £350 per annum (subject to temporary reduction as authorised by the Council) together with the usual residential allowances. All fees received in connection with the appointment to be handed over to the City Council.

The appointment will be made in accordance with the Standing Orders of the City Council and will be determinable by one calendar month's notice on either side.

Canvassing either directly or indirectly will be deemed a disqualification.

Applications upon forms to be obtained from the Medical Officer of Health, Municipal Annexe, Liverpool, to be endorsed "Third Senior Assistant Medical Officer," and returned to the undersigned so as to be received not later than Tuesday, June 13th.

Municipal Buildings, WALTER MOON,
Liverpool. Town Clerk.
May 22nd, 1933.

BEDFORD COUNTY HOSPITAL.
(124 Beds.)

Wanted, both a FIRST and SECOND HOUSE SURGEON, to take over their duties May 29th for a term of not less than six months.

Salary, First House Surgeon £165, Second House Surgeon £140.

They must be fully qualified male unmarried. Board, lodging and laundry.

Application stating age, nationality, qualifications, together with three recent testimonials to be sent to the Hon. Secretary, Hon. Medical Staff Committee, as soon as possible.

CONNAUGHT HOSPITAL,
Waltham Cross, E.17.
(100 Beds with Three Resident Medical Officers.)

RESIDENT CASUALTY OFFICER (male) required. Salary £100 per annum. Appointment for six months from July 1st, with board, residence and laundry. Applications stating age, nationality, qualifications and experience accompanied by copies of not more than three recent testimonials should be received not later than Monday, June 5th.

KENELM S. ELLISON, Secretary.

THE ST. HELENS HOSPITAL.

Applications are invited for a JUNIOR HOUSE SURGEON (male) to this Hospital at a salary of £150 per annum plus board, residence and laundry. Applications accompanied by three recent testimonials to be sent to the Secretary, St. Helens Hospital, Lancs., not later than June 6th.

CITY AND COUNTY OF KINGSTON UPON HULL.

HULL MUNICIPAL MATERNITY HOME AND INFANTS HOSPITAL. (104 Beds.)

JUNIOR RESIDENT MEDICAL OFFICER.
(Woman.)

Applications are invited from unmarried or widowed Women Medical Practitioners for the appointment of Junior Resident Medical Officer at the above Institution.

Salary £100 per annum, together with board, washing and residence at the Maternity Home. Salary at present subject to a temporary deduction of 2½ per cent. under the City Council's economy measures.

The appointment will be for six months with a possible extension for a further period of six months.

Forms of application and conditions of appointment may be obtained from the undersigned.

Completed applications (in an envelope endorsed "Junior Resident Medical Officer, Maternity Home") together with copies of three recent testimonials must be received by me not later than mid-day on Saturday, June 3rd.

Health Department, N. GEBBIE,
Guildhall. Medical Officer of Health.
Hull, May 1933.

COUNTY BOROUGH OF OLDHAM.

BOUNDARY PARK MUNICIPAL HOSPITAL.

RESIDENT ASSISTANT MEDICAL OFFICER.

Applications are invited from registered Medical Practitioners for the post of Assistant Resident Medical Officer.

Salary £200 per annum, with board, residence and laundry.

Candidates should be unmarried.

The appointment will, in the first instance, be for a period of six months. The successful applicant however will be eligible for re-appointment for a further period of six months.

The Hospital comprises 375 beds with facilities for gaining experience in medicine, surgery, midwifery and diseases of children.

Applications on forms to be obtained from the undersigned, endorsed "Resident Assistant Medical Officer," should be sent to the Medical Officer of Health, Town Hall, Oldham, and should be received not later than Tuesday, June 6th.

JAMES B. WILKINSON, M.D., Ch.M., D.P.H.,
Town Hall, Oldham. Medical Officer of Health.

ROYAL EYE HOSPITAL,
St. George's Circus, Southwark, S.E.1.

The Council invite application for the appointment of HONORARY PHYSICIAN to the above Hospital. Candidates must be a Graduate of Medicine of a British University and a Fellow or Member of the Royal College of Physicians of London.

Application, with copies of testimonials, to be sent to the Secretary on or before June 30th.

F. E. DALTON, Secretary.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.13.

Applications are invited for an HONORARY ASSISTANT PHYSICIAN (Out-patients) attendance Friday afternoons. Candidates must be graduates of a British University and Members of the Royal College of Physicians, London.

The Hospital is close to Plaistow Station, thirty minutes from Charing Cross (Underground).

Applications with copies of three recent testimonials to be sent on or before June 17th to the undersigned.

C. ERNEST WILKES, Secretary.

PRESTON HALL SANATORIUM, AYLESFORD, KENT.

JUNIOR ASSISTANT MEDICAL OFFICER required at once, live in. Salary £200 per annum. Applications with copies of three recent testimonials to the Medical Director.

CHESHIRE JOINT SANATORIUM, MARKET DRAYTON.

Wanted, Male RESIDENT ASSISTANT MEDICAL OFFICER for a period of twelve months. Salary £350 per annum. Applications for forms of application to the Medical Superintendent which should be returned not later than May 31st.

ROYAL LONDON OPHTHALMIC HOSPITAL
(Moorfields Eye Hospital)
City Road E.C 1

Applications are invited for the office of ASSISTANT SURGEON to the above Hospital
Candidates must be Fellows of the Royal College of Surgeons of England
Canvassing is not permitted Candidates are however requested to send copies of their application and testimonials to the members of the Committee of Management and the acting Medical and Surgical staff whose names and addresses can be obtained on application to the Secretary
Applications stating age, with copies of testimonials, must be received not later than June 17th

ARTHUR J M TARRANT
Secretary

ROYAL GWENT HOSPITAL, NEWPORT MON
(Newport and Monmouthshire Hospital)

HONORARY ASSISTANT OPHTHALMIC SURGEON

The Directors require an Honorary Assistant Ophthalmic Surgeon and applications are invited for the position
Applicants must be Graduates of a University or Fellows of a Royal College of Surgeons and should have had some special experience in Ophthalmic work
The successful candidate will be required to hold the office subject to the Rules and Regulations of the Hospital
Further particulars may be obtained from the undersigned, to whom applications with copies of testimonials should be sent before June 12th

J K MILLWARD
May 23rd 1933 Secretary Supt

THE ROYAL GWENT HOSPITAL NEWPORT, MON (160 Beds)

Wanted, a JUNIOR RESIDENT MEDICAL OFFICER to act as House Surgeon to Out patients and as House Physician
Salary £135 with board, lodgings and laundry Resident Medical Staff 5 Eligible for promotion
Large Out patient Department
Applications stating age and qualifications with copies of three recent testimonials to be sent to the undersigned
Applications from ladies not entertained

J K MILLWARD
May 23rd 1933 Secretary Superintendent

BIRMINGHAM AND MIDLAND EYE HOSPITAL

Applications are invited from duly qualified Medical Practitioners for the post of RESIDENT SURGICAL OFFICER, which will become vacant on or about July 1st
The Resident Staff also consists of Two House Surgeons and in the event of one of these being promoted applicants should state whether they will be willing to accept the appointment of House Surgeon
Applications, with testimonials and evidence of registration must be received not later than Tuesday June 6th

Church St J W PEARCE
Birmingham Gen Supt

LONDON HOSPITAL, E 1

Applications are invited for the post of *FIRST ASSISTANT AND REGISTRAR* to the Children's Department The appointment is for one year but is renewable annually on application for two further periods of one year
Salary £300 per annum payable by the Hospital and Medical College jointly
Candidates must be fully qualified medically
Applications should arrive at the Hospital not later than by the first post on July 15th
Further particulars may be obtained from the House Governor

ARTHUR G ELLIOTT,
House Governor

ALTRINCHAM GENERAL HOSPITAL
(100 Beds.)

Applications are invited for the post of JUNIOR HOUSE SURGEON Salary £120 per annum with board residence and laundry
The appointment is for six months in the first instance duties to commence July 1st
Applications stating age and experience together with copies of recent testimonials to be sent to the Secretary, General Hospital Altrincham, not later than June 8th

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STREATHAM SCHOOL TREATMENT CENTRE, 55, Lewin Road Streatham, S W 16

Applications are invited for the following *appointments for the period ending March* 31st 1934
OPHTHALMIC SURGEON One session a week (2½ hours) £80 per annum
MINOR AILMENTS DOCTOR One session a week (2 hours) £65 per annum
DENTAL ANÆSTHETIST One session a fortnight (2½ hours) £37 10s per annum
Applications giving qualifications and experience together with copies of two recent testimonials should be sent not later than June 7th to Hon Secretary 17 Woodman sterne Crescent Streatham S W 16

DONCASTER ROYAL INFIRMARY
(185 Beds)

CASUALTY HOUSE SURGEON (male) required immediately Five House Surgeons are *resident* Salary *at the rate of £175 per* annum with residence board and laundry Successful applicant will be promoted to post of House Surgeon as a vacancy occurs
This large industrial area offers excellent *opportunities for gaining experience*
Applications accompanied by not more than three testimonials to be sent to the undersigned

WALTER R SMITH
Secretary Supt

WARRINGTON INFIRMARY AND DISPENSARY

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON (male) unmarried
Applicants who must be of British nationality, must be duly qualified Medical Practitioners Salary £175 per annum with board apartments and laundry
Applications stating age with copies of three recent testimonials should be sent in at once to the undersigned The appointment is to date from June 1st

By Order
HENRY L BOOT
May 15th 1933 Supt & Secretary

DONCASTER ROYAL INFIRMARY
(185 Beds)

HOUSE SURGEON (male) required immediately Five House Surgeons are resident Salary at the rate of £175 per annum with residence board and laundry
This large industrial area offers excellent opportunities for gaining experience
Applications accompanied by not more than three testimonials to be sent to the undersigned

WALTER R SMITH
Secretary Supt

HUDDERSFIELD ROYAL INFIRMARY

Wanted LADY HOUSE SURGEON to commence duty July 1st Duties mainly Eye, Ear Nose Throat and Obstetrical Departments Salary £150 per annum, with board residence, and laundry
Appointment for six months subject to renewal for a similar period
Applications, with copies of three recent testimonials, to be addressed to the undersigned not later than June 12th

H E G HALL
Gen Supt & Secretary

NELSON HOSPITAL MERTON S W 20
(84 Beds 63 General, 21 Maternity)

Vacancies for TWO RESIDENT HOUSE SURGEONS (male) will occur on July 1st and August 1st, respectively Applicants for one of the appointments should have a good knowledge of obstetrics and gynæcology
Majority of work surgical
Appointments for six months in first instance Salary at the rate of £100 per annum Applications, with copies of two testimonials should be sent to the Secretary not later than June 7th

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WEMBLEY HOSPITAL

Applications are invited for the appointment of an HON PHYSICIAN 43 beds (8 private wards and no Out patient Department Candidates must be Fellows or Members of the Royal College of Physicians with charge of an Out patient Department of a recognised London Hospital Applications with not more than three testimonials to be sent not later than Tuesday, June 6th to GEORGE A PAINES, F I S A, Secretary Wembley Hospital

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NEWCASTLE THROAT NOSE AND EAR HOSPITAL

HOUSE SURGEON required for *period of six* months. Applicants must be fully qualified and preferably have held Resident appointment.
Salary £100 per annum with board residence and laundry Applications stating age qualifications and experience and three recent testimonials, should be forwarded to the undermentioned by June 3rd

CHAS W LISLE,
Newcastle Throat Nose, and Ear Hospital Secretary
96/98, Rye Hill Newcastle-on Tyne 4

NORFOLK AND NORWICH HOSPITAL, NORWICH (392 Beds)

Applications are invited for three vacancies in post of HOUSE SURGEON Salary £120 per annum with board residence and laundry Preference will be given to candidates who have held previous Hospital appointments Candidates (male) who must possess registered qualifications should forward applications, stating age nationality etc together with copies of testimonials to the undersigned not later than first post on Tuesday May 30th

FRANK INCH,
May 20th 1933. House Gov & Sec.

SANATORIUM BRIDGE OF WEIR.

COLONY FOR EPILEPTICS, BRIDGE OF WEIR

ASSISTANT MALE RESIDENT MEDICAL OFFICER wanted to commence duties in August Keen evangelical and keen research worker preferred Appointment for six months in first instance at rate of £200 p.a. (renewable by mutual agreement) with board and laundry Applications to Medical Superintendent stating age experience and qualifications, and enclosing references

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PROVIDENCE FREE HOSPITAL, ST HELENS (135 Beds)

HOUSE SURGEON (male) required experience in Anæsthetics essential Appointment offers opportunity to gain good surgical experience Suit newly qualified man Appointment is for six months and successful candidate is eligible for re appointment Vacancy in July Salary £230 with board residence and laundry
Applications stating age experience and full particulars together with copies of three testimonials, to be in by June 6th
Reply Secretary, M O

THE CORBETT HOSPITAL, STOURBRIDGE.

HON OPHTHALMIC SURGEON

The Board of Management give notice that there is a vacancy in the Medical Staff of the Hospital for an Ophthalmic Surgeon and invite applications to fill the post
Applicants duly qualified are requested to send in their applications, with testimonials, and sufficient evidence of their Degrees and Diplomas to the undersigned immediately
The Corbett Hospital, W G H WESTON
Stourbridge Secretary

CHELSEA HOSPITAL FOR WOMEN, Arthur Street S W 3.

There will be a vacancy for a JUNIOR HOUSE SURGEON (male) on July 1st Appointment for six months. Salary £100 p.a. He will be expected to proceed to the Senior post (six months, salary £120 p.a.) at the end of his term of office
Candidates must be duly registered and preferably unmarried Applications accompanied by copies of three testimonials should be sent not later than Friday June 9th to the Secretary HERBERT H JENNINGS.

SEAMEN'S HOSPITAL SOCIETY
Greenwich

HOUSE PHYSICIAN and HOUSE SURGEON required at DREADNOUGHT HOSPITAL, Greenwich for six months from July 1st Salary £110 per annum and a proportion of fees with board, residence and laundry Candidates must be male Applications with copies of three testimonials to be sent in by May 30th to the undersigned

R E V RAY
Greenwich Secretary
April 27th 1933.

view these children form a great test of a school's efficiency for if school is a success the child will make good, if a failure the child will be harmed and further handicapped There is nothing that can replace in its life the benefit of a satisfactory school career

It is about the school life of these children that doctors are so often consulted, and I think that there are many matters causing uneasiness to the minds of parents, of which more is heard by doctors than by the school authorities I propose, therefore, to discuss some of the factors which seem to me to lead to lack of the fullest benefit from school life or even to actual ill success I shall deal with them under the headings of school, home, and health

SCHOOL FACTOR

Choice of School.—Failure to fit in successfully at school is not necessarily the fault of the school or of the child often the wrong type of school has been chosen Generally speaking, boarding school is less of a strain than day school, with its dual interests for the child I am often amazed at the length of day to which parents will submit day-school children After the child returns in the evening there is homework, more hated and harmful than any other part of the day's work and much more strain than 'prep' in class Boarding school is essential for solitary children, children of widows and delicate town children It is impossible to exaggerate the benefit that may accrue to the latter from years spent in the wonderful air of our health resorts The plan of a weekly boarder is unsatisfactory to the school and difficult for the child although some happy children from sensible homes manage it quite well Mixed day and boarding schools are apt to be hard on the boarders whose hours have to suit the day pupils Co-education schools have not, as yet had the advantage of being patronized by ordinary children of ordinary parents The youngest children may go to kindergartens or pre preparatory schools, but as a rule they go into the bottom classes of ordinary boarding schools where they settle down with a pleasure begotten of pride It is not unimportant where these little folk go for the worst bullying especially at girls schools is apt to occur in the lowest forms A dominating little girl will lead all the others against some harmless child for no reason save that she wishes to show off her power It is not necessarily wise to send a child to a particular school merely because its brothers or sisters have been there before There is more in the selection of a school for an individual child than this plan allows Boarding school offers a fuller life with less strain and greater opportunity for development of character and improvement in health than any other type of school In many instances it is a necessity to the child no alternative is half so good

Climate.—As many children are sent to boarding school primarily for their health it is only common sense to choose the best climate Speaking as I am in Thanet, I need hardly emphasize this point

Extra Care for Delicate Children

A school is not a convalescent home, still less is it a nursing home nevertheless there are many children, needing boarding-school life supremely, who will require extra attention if they are to be made successes In most instances of physical delicacy this is only required for the first term or so for the rest of its school life the child is well and strong Additional rest is one of the needs of most delicate and nervous children as I shall mention later Particular attention should be paid to weight It ought not to be difficult to have a list of children who should be weighed every fortnight or month In any case, to have children weighed only at the beginning and e of term is not enough It is not fair to send a child ho having lost 4 lb and no one to have noticed the chan until the end of term Unless there is some spec reason to the contrary, a child should not be told weight, and should be weighed with its back to the scal

Nervous children who are notoriously bad mixers mu be protected from incidental 'ragging' and bullyin What may be harmless or even good for the ordinary chi may mean disaster for them The same holds good class, the teacher must distinguish the lazy careless chi from the nervous, scatter-brained, and perhaps half scare child, and must know which child will improve wi correction and which will just wilt under it Generall speaking, the nervous child will react only to encourag ment Some have a special horror of certain lessons pa ticularly of mathematics This subject should be taug by a highly paid professional dunce no mathematica has any idea of the difficulties which children have ove the elements of the subject

Considerable experience is necessary in handling som of these difficult children How often a trifling inciden will put a child at loggerheads with its teacher! Member of the teaching staffs of schools should not be abov taking advice from the head of the school I have many times known the head to be the only person who could understand and get round a child To do this to put a nervous little girl on her feet and to get her to take her proper place in the school and to do it without allowing the child to develop a devastating passion for herself is a very clever thing for any mistress to accom plish These pashes play havoc with the nerves of children, and must be prevented at all costs

Feeding.—Delicate children may need extra feeding or some modification of the school diet What is more commonly required, however, is that the school should provide a liberal ordinary diet and should see that the child eats it In this matter the school has a great advantage over the home Often indeed the mother of an inveterate non eater has given up the struggle, and has deliberately left it to the school to get the child into better habits There are many interesting medical problems in connexion with such cases but there is no doubt that in many of them habit plays a large part These children, therefore sitting scattered among the others must be carefully watched at meals, in most cases the child forgets its difficulties and goes ahead well And this leads me to speak of the importance of the fourth or evening meal In my opinion, there has been of late years a great improvement in this matter Older children are getting proper meat suppers, and the tea meal has been reduced Something more strengthening and less fattening is required than a surfeit of bread, butter, and jam Even in preparatory schools there will probably be a certain number of older and also delicate children who will do better with a proper fourth meal in the day There is no truth in the idea that children cannot sleep well after a good plain meal at night On the contrary, they sleep quite well, just as they can play games directly after a middle-day meal large enough to immobilize an adult for the afternoon It is to be hoped that these times of financial stringency will not cause any falling away from the high standard of school dietaries

Modern Psychotherapy

It is impossible to speak about difficult or nervous children without making some mention of modern psychology and the methods of treatment based upon it This matter is increasingly exercising the minds of parents Already it is claimed that all peculiarities of school children, whether in temperament or deportment, should

be referred to the doctor for psychological investigation and treatment The child guidance movement shows us this doctrine at work among the children and in the homes of the poor It is clear that we are in for a phase of it in which extravagances will not be lacking and it will be interesting to see what the scholastic profession will make of it in practice The children of the poor are accustomed to all manner of outside interference in their education from the time they matriculate as it were at the ante natal clinic Children in high class schools are in a different position and these schools should I think oppose the substitution of the doctor for the teacher in minor matters psychological I say this because the teacher's contact with the child is such that the responsibility of understanding its mind cannot be transferred to the doctor and because there is a danger that with a doctor's investigation into its behaviour the child will develop a morbid interest in itself

Sometimes I think schools make the same error as the modern psychologist of treating what is essentially trivial as of great importance All children for instance go through phases of lying and stealing Even in the case of the grossest faults it is seldom wise to ostracize a child or to expose it to the tender mercies of school mates Surely a head should stretch many points to be loyal to a child even in grave misdemeanours The controlling idea should not necessarily be that the child has let the school down may it not be that the school has let the child down? Whatever then may be the value of modern psychological methods in really abnormal children there is possible danger from their use in ordinary children holding their own with more or less success in high-class schools

Home Factor

In order to get the best from school life particularly in the case of delicate or difficult children co-operation between the school and the parents is desirable The difficulties in the attainment of this ideal though not strictly of a medical nature are often made obvious to the doctor and I propose to discuss some of them candidly

The viewpoints of parents and of the head of a school or school house are not quite the same In sending a child to school especially to boarding school parents are doing what is to them a very big thing—namely handing over their child to someone else who will have great influence over it To the parents the child is not only theirs but also distinctly an individual child and they wish it to have individual attention The head of a school however although wishing to give individual attention to each child knows that there is another side to the question—namely that the school as a whole must run satisfactorily He is as it were painting a picture and if the design is a success the children—and for that matter the teaching staff—cannot do better than fit into it It is surely in influencing a child for good by creating the right atmosphere that the art and genius of keeping school lies Parents are disposed to be impatient or jealous of this side of a schoolmaster's work they are all for individual attention and in this they are apt to be unreasonable If parents thought the matter out they would realize that it is the tone of the school which is so important for the child In the right atmosphere the child comes under a discipline which works silently and automatically with the result that it falls into line with a minimum of dragooning and pressure Such an atmosphere spells freedom for the child and at the same time helps it to *choose* to behave reasonably and unselfishly

To turn to quite a different matter could not co-operation between the parents and the school be promoted by the issue of school reports in a form which has something more than hoary antiquity to commend it? Only too often reports seem to be written on the principle of the least said the soonest mended I would urge that the head's report which is the important one especially in preparatory boarding schools should be something fuller than a line at the bottom of a sheet of paper and more illuminating than the usual non-committal Has done well but could do better I suggest that this report should be written separately from the rest so that the child does not necessarily see it It should be full enough to mention the child's successes as well as its difficulties and failures and though not couched in terms of advice should perhaps be some guidance to parents Again might not more use be made of half-term reports? Lastly might it not sometimes be advantageous if parents were expected to report to the school concerning the holidays and for the child to be aware that such a report would be sent? This plan is often of help in dealing with children who behave well at school and outrageously at home and tends towards co-operation between the school and the parents

Should the parents seriously distrust the school the child is better moved elsewhere but how many problems might be solved if parents could or would tell their difficulties to the school! In their relation to parents the schoolmaster and the children's physician have much in common They may merely tolerate the parents or may make an effort to influence them and win them to their views The heads of schools have a reputation for being somewhat intolerant towards parents How far this is so I should not like to say but I think it is certainly true that parents are much more shy of head masters and mistresses than they are of their children's physicians

Health Factor Fatigue

The relation of the physical health of children to their mental reactions to education and school life is a subject of great importance I can however only deal with one aspect of it here—namely fatigue in children I have chosen this because I think it is the commonest and perhaps the least appreciated of the causes of transient or even permanent ill success at school The really psychopathic child is outside my scope for I want to discuss briefly the causes and effects of fatigue in the more or less ordinary children who are adapting themselves to the life of private and public schools with varying degrees of strain and success Generally speaking physical fatigue although obvious to the trained eye in the child's face and carriage shows itself chiefly in nervous and mental symptoms The type of symptom depends upon the type of child The question may be asked if it is possible to over fatigue a normal well balanced child I should be inclined to say that if the child is left to itself this is not possible it would automatically sleep off its physical fatigue and by changing its occupation relieve its mental fatigue Unfortunately as so often happens the child is not left to itself Its lack of attention inaccuracy and stupidity are carefully noted and it is spurred to greater efforts which can only be made at the risk of added fatigue The highly strung nervous child has less reserve and so fatigues more easily than the more normal child and its symptoms are different Instead of becoming dull and apparently lazy it becomes restless emotional irritable scatter brained wildly disobedient and negative Such a child with its bullying selfish ways may be the cause of an extraordinary amount of unhappiness in others When to such symptoms as these are added refusal of food and

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary, 7 Drumsheugh Gardens, Edinburgh).

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH** *(contd.)*
EBBW VALE, MON. *(Workmen's Medical Society.)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association.)*	COUNTY BOROUGH OF SOUTH SHIELDS. HARTON INSTITUTION AND CLEADON COTTAGE HOMES *(Medical Officer.)*
GILFACH GOCH, GLAMORGAN *(Workmen's Medical Scheme.)*	OGMORE VALLEY, GLAMORGAN *(Wyndham Colliery Medical Aid Society.)* *(Workmen's Medical Scheme.)*	CITY OF STOKE-ON-TRENT *(Venereal Diseases Officer.)*
LLWYNPIA, CLYDACH VALE, PENYGRAIG, GLAMORGAN *(Workmen's Medical Scheme.)*	**PUBLIC HEALTH**	HERTFORDSHIRE COUNTY COUNCIL. WARE SANATORIUM. *(Assistant Medical Officer.)*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer.)*	KENT COUNTY COUNCIL. LENHAM SANATORIUM. *(Male Assistant Medical Officer.)*	FULHAM BOROUGH COUNCIL. Maternity and Child Welfare Department. *(Assistant Medical Officer—Women.)*
MARDY, GLAMORGAN *(Workmen's Medical Scheme.)*	FAR BOROUGH INSTITUTION HOSPITAL. *(Resident Assistant Medical Officer.)*	
NEATH AND DISTRICT *(Medical Aid Association.)*	WORCESTER COUNTY AND CITY MENTAL HOSPITAL. *(Junior Assistant Medical Officer.)*	

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District.	Hon. Sec. of Division or Branch	Town or District.	Hon. Sec. of Division or Branch	Town or District.	Hon. Sec. of Division or Branch
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. C. HUNTER (Medical Secretary, New South Wales Branch), 135, Macquarie St., Sydney, N.S.W.	**QUEENSLAND** *(Brisbane Federated Friendly Societies Institute.)*	The Hon. Sec. Queensland Branch, British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	**WELLINGTON, NEW ZEALAND** *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec. New Zealand Branch), British Medical Association, P.O. Box 1156, Wellington, New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec. Victorian Branch, British Medical Association), Medical Society Hall, East Melbourne, Victoria.	*(Toowoomba Associated Friendly Societies Medical Institute, Toowoomba.)*		**WESTERN AUSTRALIA.** *(Contract and Lodge Practices.)*	Hon. Sec. Western Australian Branch, British Medical Association, No. 6 Bank of N.S.W. Chambers, St. Georges Terr., Perth, Western Australia.

May 24th, 1933 — By Order of the Council. G. C. ANDERSON, Medical Secretary.

HULL ROYAL INFIRMARY
(370 Beds.)

Applications are invited from registered Medical Practitioners for the following posts (male):

CASUALTY OFFICER. Vacant June 14th. Salary at the rate of £150 per annum, plus residence, board, and laundry. The officer appointed will work mainly under the direction of the Resident Surgical Officer.

HOUSE PHYSICIAN at the SUTTON BRANCH. Vacant June 9th. Salary at the rate of £160 per annum, plus board, residence, and laundry. The Branch Hospital contains 100 beds, 45 of which are for medical cases.

Candidates are expected to stay for not less than six months, but the appointments are at any time determinable by one month's notice on either side.

Applications, giving particulars of age, experience, and nationality, together with copies of testimonials, should be addressed to the undersigned.

May 15th, 1933 — R. J. CARLESS, House Governor.

THE QUEEN'S HOSPITAL FOR CHILDREN
Hackney Road, London, E.2.

HOUSE PHYSICIAN required July 1st.

CASUALTY OFFICER required July 6th for some Dermatological work additional.

Six months' appointments. Salary at the rate of £100 per year, with board, lodging, and laundry.

Applications must be made on forms to be obtained from the undersigned, and must be sent in with copies of not more than four testimonials on or before June 9th.

May 12th, 1933 — CHARLES H. BESSELL, Secretary.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL
(Incorporated by Royal Charter)
Broad Street, W.C.2.

A BACTERIOLOGIST is required by Aug. 1st. The appointment is a part-time one for attendance on three days per week. Salary £[illegible] per annum and fees from the Private Patients which approximately double the remuneration.

Candidates for the appointment must be duly qualified and registered Medical Practitioners and must have made a special study of the subject of Bacteriology.

Application to be sent with copies of testimonials to the Secretary, from whom further particulars can be obtained not later than June 30th.

Intending candidates are requested to call upon the Staff of the Hospital a list of whom can be obtained from the General Office.

FREEMASONS HOSPITAL AND NURSING HOME, 237, Fulham Rd., Chelsea, S.W.3.

The post of RESIDENT MEDICAL OFFICER (male) will be vacant on July 1st. Salary at the rate of £250 per annum with board, residence, and laundry. The appointment is for six months. Candidates must be registered and must have held resident appointments at a General Hospital. The officer appointed will be asked to proceed to the new Hospital in October.

The Institution (48 beds) is for paying patients of both sexes of moderate means unable to afford ordinary nursing home treatment, etc.

Applications, stating full particulars, to be sent on or before June 6th next to the Honorary Secretaries, from whom further information may be obtained. The Medical Advisory Committee will meet on June 13th next.

COUNTY MENTAL HOSPITAL, LANCASTER.

Applications are invited for the post of ASSISTANT MEDICAL OFFICER. Candidates must be single and under 35 years of age. Commencing salary £500 rising by annual increments of £25 to £600, with further increases on promotion, subject to a deduction of 3 per cent. under the Asylum Officers Superannuation Act. There are no emoluments. The selected candidate will be required to live in the Hospital and will be provided with board, lodging, etc., for which a charge of £150 a year is made. A temporary abatement from the gross salary will be made, the amount of the abatement on £500 being £18 15s. The possession of a Diploma in Psychological Medicine will entitle the officer to an additional £50 per annum. Applications, giving full particulars, with testimonials (copies only), should be forwarded to the Medical Superintendent before June 5th.

THE CHILDREN'S HOSPITAL, HAMPSTEAD
30, College Crescent, Swiss Cottage, N.W.3.
(65 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER, vacant July 1st next.

Appointment is for a period of six months, with option of extending. Salary £100 per annum, with board, residence, and laundry.

Candidates must be duly registered Medical Practitioners.

Applications, stating age, qualifications, and previous experience, together with copies of not more than three recent testimonials, must reach the Secretary of the Hospital not later than Thursday, June 1st.

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loss of sleep a picture of severe fatigue is presented The point that I want to make here is that the child will hardly ever complain of fatigue, this will be apparent in alterations in application and in behaviour In other words the first to have the opportunity of recognizing the onset of fatigue in a child will be the school teacher, and from this responsibility there is no escape

The causes of fatigue may be in the child or in the school regime Age is significant I should say that children in pre preparatory and preparatory schools are most prone to show fatigue by unsatisfactory behaviour and progress, although in girls fatigue may mar educational effort throughout school life In boys, after a year or two at a public school, fatigue seems to lead more to illness than to nervous symptoms, by this time the boy has learnt to fend for himself and, be they masters or school-fellows, to persecute those who persecute him Rapid growth in height is another strain on the child, and gives rise, also, I think, to diminished resistance to infections

The liability to serious fatigue is greatly increased by any sort of subnormal physical health Although it is not true to say that a child who is kept in good physical health will be free of physical and mental fatigue, yet there is an element of truth in the statement Certainly the physical health of any child showing persistent symptoms of fatigue needs careful investigation Some form of chronic toxaemia—often of obscure origin—may be at work, as for example disease of the tonsils or antra, disease of the bronchial glands, or, what is perhaps still more frequently found, toxaemia arising from the intestine the condition which in my view, is often falsely called "acidosis" Activity of the endocrine glands may also cause fatigue Severe cases of fatigue are seen in adolescent girls, particularly just now in connexion with the prevailing habit of slimming Many apparently alarming disorders of behaviour and thought at this age may mean nothing unduly serious

The causes of fatigue attributable to school regime are numerous I have already mentioned the choice of school and climate, and have discussed the question of diet and the great importance of ensuring that the child takes a proper quantity of food The amount of rest provided is of the utmost importance The hours devoted to sleep are mainly adequate, except, perhaps, in the upper forms at public schools Rest, however is not merely a matter of sleep Nothing tries the nerves of some children more than the perpetual noise and rowing that may go on Some period of silent rest such as lying down with a book, should be ordered daily, and is often popular Meals, too, should be taken in comparative quiet It must be mentioned that summer time means curtailed sleep for many children

In my opinion the hours of work are far too long, and the harm that these long hours might do is only avoided by the slow pace which is set The clever child learns to work slowly, and so spares itself, but the nervous child must work at high pressure, and thus may come badly to grief Praiseworthy efforts are made in some schools to separate the quicker workers from the slower ones From what I have heard, the Dalton system seems to make an effort to teach a child how to tackle its work and to take its own time over it Some of our public schools for boys still lay themselves open to criticism concerning the activity they exact from the boys before breakfast

Lastly, there is the difficult question of fatigue from examinations When examinations are taken by children in their stride as it were, they are harmless and useful, but public examinations, which have become competitive, are apt to be tests of a good memory and a smart coach Such examinations certainly put an immense strain on some children

As regards the treatment of these tired children the first essential is that the tired ones should be recognized and I have already emphasized upon whom the responsibility for this must necessarily fall The teacher must be able to distinguish between the actual fatigue and natural laziness, wilfulness, incompetence, or the results of fear If in doubt the effect of a day or two in bed should be tried Fatigue should be the first thing to occur to the mind to account for deterioration in work or character and the doctor should be consulted on the possibility of a physical cause For the rest it should be possible especially in preparatory schools, to give the child an occasional day in bed to provide extra rests and perhaps extra food, and to allow breakfast in bed, the latter does not seriously interfere with education, and it materially diminishes fatigue It must always be remembered that a child has a natural tendency to right itself I am sure that drastic alterations in its life, and evidence of concern in its psychology, should be avoided, and that the happiest results will be obtained by minor modifications of the school regime, friendly explanations and sympathetic encouragement, all carried out quietly and with the lightest of touches

MODERN VIEWS ON THE MECHANISM OF GALL-STONE FORMATION

BY

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Gall stones are a common cause of pain and disability and therefore a considerable amount of work has been done to determine the causes of their formation and the best methods of treatment The subject has been investigated from various angles—clinical, morbid anatomical bacteriological biochemical, and experimental—and much of the work is scattered about in various types of journal and not readily available to the general reader A brief review of modern views on gall stone formation may therefore be of interest

THE FACTOR OF INFECTION

The first difficulty that arises is the definition of "modern," and how new a view has to be for inclusion in that term In this article an attempt will be made to get over that difficulty by first of all giving Naunyn's classical theory of gall-stone formation, and then discussing in what ways our views have had to be modified as a result of increasing knowledge Although this theory dates from the last century, it was widely accepted in its entirety as the best explanation of the formation of gall stones until a comparatively few years ago According to Naunyn, the essential factor in the formation of all gall stones was infection, the usual infecting organisms being of intestinal origin These organisms acted on the wall of the gall bladder and gave rise to a "lithogenous catarrh" as a result of which cholesterol was formed by the gall bladder wall and shed into the lumen of the gall bladder, together with small quantities of calcium and organic matter If in sufficient concentration these substances in the presence of stasis combined with the pigments of the bile to form a calculus As a result of secondary cholesterolization of a primary mixed calculus, it was postulated that eventually a pure cholesterol calculus might be produced Naunyn appreciated that gall stones were commoner in

women than in men and attributed this to the greater tendency to biliary stasis in women from the less strenuous character of their occupation the wearing of tight fitting corsets and the bearing of children

Thus the corner stone of Naunyn's theory was infection but opinions on the aetiological importance of this factor have varied widely since Naunyn's day One of the earliest and most persistent opponents of the Naunyn theory was Rovsing a Scandinavian surgeon who based his opinion on the frequency with which in a large personal series of gall stones removed at operation no organisms could be found He held the view that when organisms were to be found in gall stones they were to be regarded as secondary invaders Unfortunately Rovsing had no bacteriological investigations made of the gall bladder wall which we now know is frequently infected when the contained stones are sterile Meanwhile the possible importance of metabolic factors in the formation of gall stones began to be realized particularly by Chauffard and his pupils in France Aschoff approaching the subject particularly from the morbid anatomical standpoint attempted to reconcile conflicting views by describing two types of gall stones one formed as the result of pure metabolic factors the other as the result of infection The trend of opinion was away from the simple direct infection gall stone relation as postulated by Naunyn when in 1916 Rosenow of the Mayo Clinic swung right back again and claimed to find in human gall stones certain specific streptococci which on injection into animals tended to localize electively in the gall bladder and produce gall stones Rosenow's work has been widely quoted but by other workers his findings were not confirmed and his views had not won general acceptance when in 1927 A L Wilkie working in the School of Experimental Surgery at Edinburgh claimed to have produced similar results By both Wilkie and Rosenow the important organisms in gall bladder disease were thought to be not intestinal organisms as had always previously been held but organisms from peripherally situated foci such as the teeth or tonsils Wilkie's work has been strongly criticized however (Williams and McLachlan) and has not been confirmed

It is thus impossible at present to give any dogmatic or final conclusions on the relation between infection and gall stones The general opinion is however that there is some relation between infection and gall stones since the gall-bladder wall is infected in approximately 70 per cent of cases of gall stones the fluid contents in 40 per cent and the gall stones themselves in 30 per cent. (Gordon Taylor and Whitby—collected statistics) Moreover it is widely accepted in opposition to A L Wilkie and Rosenow that the common infecting organisms are intestinal—*B coli B welchii Streptococcus faecalis* and *B typhosus* But there is very little substantial evidence on which it can be determined whether the infection is primary or secondary or the way in which it normally reaches the gall bladder And although it is generally believed that infection is an important aetiological factor in at any rate some types of gall stones the modern view is that it is probably not the simple direct relation that Naunyn postulated but a more complex combination of factors involving alterations in the normal physiological absorptive powers of the gall bladder mucosa and the chemistry of the bile One recent article may be quoted to illustrate this point Andrews and his collaborators state that if the gall bladder is inflamed it not only absorbs water as Rous and McMaster had previously shown but also bile acids It is the bile acids that are chiefly responsible for keeping cholesterol in solution in the bile so that their diminution would predispose to the precipitation of cholesterol If this finding of Andrews is confirmed a very important way in which infection may predispose to gall stones will have been demonstrated

METABOLIC FACTORS

The possible importance of metabolic factors in gall-stone formation has been extensively investigated by modern workers In Naunyn's day the chemical tests for cholesterol and other constituents of gall stones were so crude that practically nothing was known of their metabolism To-day though there are still large gaps our knowledge has been considerably extended It is known for example that even the common mixed gall stones are composed predominantly of cholesterol which constitutes anything from 80 to 98 per cent of the calculus (Peel) that cholesterol may be present in the gall bladder bile in concentrations of anything from 100 to between 800 and 900 mg per 100 c cm (Peel) that it is present in the blood plasma of normal individuals in anything from 80 to 220 mg per 100 c cm with an average of 153 mg per 100 c cm for females and 170 for males (Gardner) that in certain conditions (for example parenchymatous nephritis jaundice pregnancy diabetes) the amount of cholesterol in the plasma may be increased and that this increase may be associated with an increase of cholesterol in the bile excreted by the liver though the last statement is still disputed Chauffard has attempted to relate hypercholesterolaemia directly with gall stones Thus he states that there is a hypercholesterolaemia of pregnancy which is probably related to the relative frequency of gall stones in women and also in the convalescence from typhoid fever which he thinks may be a factor in the occasional development of gall stones after this disease Gardner and Gainsborough however have shown that hypercholesterolaemia is not a constant occurrence in pregnancy though the relation between the amounts of free cholesterol and cholesterol esters in the blood is usually altered Chauffard also stated that gall stones are usually associated with hypercholesterolaemia but it has been shown that this only occurs when the stones are causing obstructive jaundice (Gardner) Gardner has also shown that a condition such as subacute parenchymatous nephritis which is associated with a marked degree of hypercholesterolaemia shows no special tendency to be associated with gall stones Attempts to correlate directly the amount of cholesterol in the blood with gall stones have thus failed and it is probable that before further advance can be made on these lines more will have to be known of the precise place of cholesterol in the metabolism of the body But that the amount of cholesterol in the bile is of fundamental importance in the formation of gall stones is strongly suggested by the fact that gall stones formed predominantly of cholesterol are confined to man and that in animals which have a much lower cholesterol content of the bile cholesterol gall-stones of the type found in man have never been found naturally nor with rare exceptions which will not bear critical analysis have they been produced experimentally In fact Naunyn was one of the first to point out that human gall-stones may become dissolved if placed in the gall bladders of animals

As regards other metabolic factors much attention has been directed to the bile acids and their salts which are responsible for the keeping of cholesterol in solution in the bile Chemically the bile acids appear to be closely related to cholesterol (Gardner) Smyth and Whipple found that the amount of bile acids excreted in the bile of dogs was markedly diminished as the result of quite small doses of chloroform and increased after meat feeds The drugs tested (atropine pilocarpine quinine calomel sodium salicylate and alcohol) had no marked effect either way Andrews and his collaborators

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found that if the ratio of bile acids to cholesterol falls below 13 precipitation of cholesterol begins In human bile the bile acid-cholesterol ratio is normally in the neighbourhood of 20 or 30, which is dangerously near the critical point In animals, on the other hand, owing to the lower cholesterol content of the bile the ratio is nearer 100, so that the failure of cholesterol stones to be formed in animals is not surprising This difference between the constitution of human and animal bile is one of the greatest difficulties in the way of experimental investigation of the subject and in the interpretation of experimental results

In addition, the factors responsible for variations in the pigment of the bile have been studied Bile pigment is chemically closely related to the blood pigments, and it is well recognized that in acholuric jaundice in which there is excessive haemolysis there is a special liability to pigment calculi Rovsing following Boysen, went so far as to regard all gall stones as primarily due to a breakdown in pigment metabolism with the production of pigment nuclei on which cholesterol became deposited, but this is not generally accepted

It would therefore seem that at present a study of the metabolic factors in gall-stone formation and the possible influence of local infective conditions of the biliary tract on these factors offers a hopeful line of approach to the gall stone problem

The chief surgical contribution to the pathology of gall-stone formation in the last twenty years or so has been the discovery of the "strawberry gall-bladder or cholesterolosis gall-bladder" This is the condition in which deposits of cholesterol are found in the mucosa either as whitish streaks or polypoid masses The history of strawberry gall bladder has recently been reviewed by Elman and Graham and by Illingworth They state that the condition was first described by Moynihan in 1909 the term strawberry being coined by MacCarty a year later Illingworth found that out of a large number of gall bladders removed surgically at the Edinburgh Royal Infirmary one fifth showed these deposits in the mucosa in greater or lesser degree Sometimes they occur in otherwise normal gall bladders sometimes in inflamed gall-bladders and sometimes in association with gall-stones Precisely how the cholesterol gets into the mucosa of the gall bladder is not decided By some it is believed to be absorbed from the bile (Boyd Illingworth) by others to be in process of excretion into the gall-bladder (Elman and Graham) At present strawberry gall bladder affords an important field of study for the aetiology of gall stones

Other Factors Considered

Stasis of bile was thought by Naunyn to play an important part in the formation of gall-stones and he considered in detail the various factors, such as lack of exercise and tight lacing which were believed to predispose to stasis But the increased knowledge gained from the modern x ray test of cholecystography has led to considerable alterations in old ideas of how the gall-bladder emptied Whitaker showed that the cause of emptying was a contraction of the musculature of the gall-bladder, and that extrinsic factors such as respiration played little or no part It is now known that the ingestion of different kinds of foodstuffs affects the emptying of the gall bladder in different ways, most potent in causing the gall bladder to contract being fatty foods And the giving of a fatty meal is to day a routine part of the test of cholecystography Westphal and his co workers lay considerable stress on the importance of functional disorders of motility of the gall bladder and biliary passages According to them, stasis in the gall-bladder may result either from hypotonicity of the gall-bladder itself or from hypertonicity of the sphincteric mechanisms They believe that stasis thus produced plays an important part in the production of gall stones As regards pregnancy, since Naunyn's day this has commonly been believed to be the important factor accounting for the well recognized greater frequency of gall stones in women, one of the ways in which it was presumed to act being by the production of biliary stasis But Gross in 1931 published an analysis of a large number of cases of gall stones from the post mortem records of the Leeds General Infirmary, and though she found in accordance with general experience that the condition was twice as frequent in women as in men when the proportion of married to single women admitted to the hospital was taken into account the married women were no more liable than the single If Gross's figures are confirmed then some factor other than pregnancy will have to be discovered to explain the greater liability of women to gall stones It is thus interesting that the three chief factors postulated by Naunyn as predisposing to stasis of bile—namely, lack of exercise tight lacing and pregnancy—are all open to serious criticism in the light of modern knowledge

That vitamin deficiency might be a factor in the formation of gall stones was almost bound to be suggested in view of the rapidly growing importance of these accessory food factors but the evidence is very slender It is based on some experimental work by Fujimaki who found that rats fed for prolonged periods on diets deficient in vitamin A developed among other things small concretions in the biliary tract There is no detailed analysis of these concretions and they do not seem to correspond to human gall stones Clinical evidence, too, is against gall-stones being a deficiency disease, as also is the fact that cholesterol gall stones appear to be more common in the more variedly and richly fed peoples of Western civilization than in the East (Miyake, Digby)

Finally, mention must be made of the work of Lichtwitz Schade, and others on the physico chemical aspects of gall stone formation Schade states that all attempts to explain biliary and urinary calculi on simple laws of solution have failed, one important reason being the presence of colloids in body fluids which increase the stability of the solution He also points out that the structure of the various concretions formed in the body does not correspond with that of crystals of the same substances formed in a test tube The pure cholesterol calculus, he states is due to the precipitation of cholesterol from a hypersaturated solution, but it is a special type of precipitation resulting from the presence of small amounts of fatty substances in the bile The common cholesterol pigment gall stone on the other hand, he believes is inflammatory in origin, the inflammation resulting in the presence of an appreciable amount of irreversible colloid in the gall-bladder which acts as a binding material for the crystalloid elements The fact that these inflammatory gall stones are usually multiple he attributes to the formation of numerous calcium-albumin adsorption points as the result of the inflammation Schade's conclusions from his chemical studies thus resemble those of Aschoff who from morbid anatomical considerations, believed in a different causation for the crystalline cholesterol gall stone and the common mixed stone We have little knowledge of the time period required for the formation of the usual human gall-stone, although the structural similarity of different gall stones from the same case makes it almost certain that they are as a rule formed at the same time If any surgeons therefore, have had the experience of finding gall stones in a gall bladder which has been noted at a previous operation to be devoid of stones, their observations would be of value on this point

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GENERAL SUMMARY

To summarize therefore increasing knowledge has made it obvious that the comparatively simple explanations of gall stone formation of some years back no longer hold but as yet no completely satisfactory alternative explanation has been brought forward Many factors appear to be involved in gall stone formation and it is not yet possible to evaluate their precise position in causation But in spite of this it is true to say that a real increase of knowledge and a clarification of ideas has taken place On the statistical side the most striking contribution is that of Gross especially her conclusion that married women are no more liable than single to gall stones The bacteriology of gall stones has been carefully worked out and the frequency with which the gall bladder wall is infected as compared with the gall stones themselves is generally noted The view that there are certain types of streptococci with an elective affinity for the gall bladder has not won general acceptance but anaerobic organisms have been shown to be not infrequent invaders (Gordon Taylor and Whitby) It is on the biochemical aspect that the biggest advances have been made and this possibly affords the most promising line of investigation at the moment the metabolism of cholesterol the question whether the gall bladder absorbs or secretes cholesterol the factors responsible for the varying amounts of bile acids and cholesterol secreted in the bile by the liver and the effect of inflammatory and other lesions of the liver and biliary passages on these substances all being of great importance in this connexion Schade's work on concretions as a problem in physical chemistry is interesting and although his conclusions are disputed it is a line of work that merits further exploration

Finally the question of course arises whether the increase of knowledge that has taken place has any practical application From the point of view of diagnosis there is no doubt that the modern *x* ray test of cholecystography (Graham) has within the last decade revolutionized the clinical recognition of gall stones But from the point of view of treatment the patient with gall stones has still only two alternatives—to keep them with any trouble they may be causing or to have them removed by a surgical operation Because therefore of the predominant position that surgery occupies to-day in the treatment of gall stones the surgeon's position is a particularly responsible one and although many of the problems may lie outside his immediate interests he may yet do much to initiate work which will lead to an increased knowledge of gall stone formation and advances in treatment along all lines

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THE AETIOLOGY AND TREATMENT OF PERNICIOUS ANAEMIA

BY

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PROFESSOR OF PHARMACOLOGY IN THE UNIVERSITY OF OXFORD

Just a quarter of a century ago I put forward in this *Journal*[1] a theory which was at that time new and heterodox of the aetiology of pernicious anaemia Various and discordant views were then held as to the causation of this disease—that it was due to a toxic haemolysis to repeated small capillary haemorrhages to a specific infection of the alimentary tract to a protozoal infection I suggested that it might be a deficiency disease due to a deficient available quantity of those materials which go to form the stroma of the red blood corpuscles This hypothesis was ignored or scouted at the time but it seems that opinion has in recent years veered round to it As my original argument was relatively concise it may be worth restatement exactly as it was given

A THEORY OF THE BLOOD DEFECT IN PERNICIOUS ANAEMIA

The aetiology of idiopathic or pernicious anaemia is still obscure and therapeutic measures are correspondingly inadequate to combat the disease In these circumstances any reasonable suggestion bearing on its pathology or treatment may have some value Pernicious anaemia in regard to blood abnormality is characterized especially by a great diminution in the number with generally a high individual haemoglobin value of the red blood corpuscles It presents in this respect a striking contrast to simple anaemia in which disease while the number of the red blood corpuscles is not conspicuously lessened each individual erythrocyte is markedly poorer in haemoglobin than are the red cells of healthy blood In the case of simple anaemia though the ultimate aetiology of it may be debated this at least is generally accepted that there is for some reason a deficient supply to the blood forming organs of material available for making haemoglobin and that this defect of material can be made good by the therapeutic administration of iron The facts that in pernicious anaemia there is found abundance of iron in the liver and in other organs and that iron is useless as a remedy would seem to show that in this disease the defect does not lie in the haemoglobin factor of the corpuscles Moreover each erythrocyte contains in many cases a quantity of haemoglobin in excess of that which is found in the erythrocytes of healthy blood May the defect not lie in the other constituent of the red cell—the stroma? There may be supplied to the blood forming organs in a patient suffering from pernicious anaemia a deficient available quantity of those materials which go to form the stroma of the red blood corpuscles There is present as it were in the body haemoglobin enough but not enough material for stroma in which the haemoglobin may find place The stroma of the red blood corpuscles consists largely of lecithin and cholesterin The condition known as pernicious anaemia may be due to a deficiency in the body of lecithin or cholesterin and the administration of these substances may be of some use as a remedy Certain facts go to show that there may be some defect in the stroma of the red cells in this disease For example they do not run into rouleaux in normal fashion It has

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15 LONDON N — OLD ESTABLISHED PRACTICE OF £930 p a in pleasant residential district Panel 910 Excellent corner house (6 bedrooms), fair sized garden and garage the lease of which is for sale Scope for increase Premium £1,500

16 LONDON E—CASH AND PANEL PRACTICE OF £860 P A in populous district Panel 570 Small house to rent on lease Premium 1½ years purchase

17 EASTERN COUNTIES — OLD ESTABLISHED COUNTRY PRACTICE Cash receipts about £720 p a including appointments over £150 and a panel of about 590 Detached house (6 bedrooms) in grounds of 1 acre for sale Premium for Practice £650

been shown that bodies suspended in a watery solution run into rouleaux only when possessed of a fatty covering The absence of this phenomenon in pernicious anaemia may be due to a defect in the stroma of the red blood corpuscles, in the lecithin and cholesterin elements, which though not true fats are yet of a fatty nature The condition of poikilocytosis and abnormal staining of the red cells, sometimes present in pernicious anaemia, may be due partly to the same defect On such a hypothesis of the blood defect in pernicious anaemia, the results of its somewhat empirical treatment may possibly be explained The giving of bone marrow recommended by Fraser may be merely a method of supplying to the blood-forming organs those constituents of stromae which they lack Lecithin is certainly known to exist naturally in the bone marrow Arsenic, which, since its introduction by Byrom Bramwell in this disease, has been found to benefit a certain number of cases, may act on the stroma of the red blood corpuscles in such a way as to remedy this defect and increase their resistance Indeed, lecithin has been found to increase the number of the red cells and some experiments which I have made with regard to the action of arsenic on these cells have gone to show that it increases their resisting power Nor is there any inherent reason, if a deficiency of iron, for example, or of calcium can cause morbid conditions, why disease may not also be set up by a lack of such necessary constituents as lecithin or cholesterin '

The main contention was that pernicious anaemia is due to a lack of 'those materials which go to form the stroma of the red blood corpuscles" Not only this conclusion, but the premisses upon which it was based, seem to resemble very closely those which have later been admitted For example, Whipple[2] wrote in 1922

Our conception of pernicious anaemia is that there is a scarcity of stroma building material or a disease of the stroma forming cells of the marrow which limits the output of red cell framework There is plenty of pigment material (an excess in fact) is evidenced by the high colour index or the saturation of the red cells with haemoglobin"

It is unnecessary here to attempt to recapitulate the recent advances in knowledge of pernicious anaemia, which furnish one of the most brilliant successes of therapeutics The value of liver diet and of liver extracts has been firmly established As to what the substance is which occurring in various organs seems to supply the material lacking for stroma formation, there is still doubt —a doubt which may soon be dispelled There is a good deal of evidence to show that more than one substance, and possibly not always the same substance, may be lacking My original conjecture that the failure to produce red cells in pernicious anaemia might be due specifically to lack of lipoid material seems to have been disproved At any rate this cannot be the sole factor, so far as one can judge from the evidence of liver extracts

A SUGGESTION PUT FORWARD

My object in publishing this note is, however, not to derive a melancholy satisfaction from the fact that I was nearer the mark than the authorities of my early days were willing to allow, but to make a further suggestion As Whipple says in the paper already quoted "hypotheses are of some value for further work, even if there be little or no truth in them" Having formulated this hypothesis of the causative factor in pernicious anaemia, I attempted in 1908 to proceed to the next obvious step, which was to administer the separated stroma material in pernicious anaemia I tried to obtain this by haemolysing defibrinated ox blood and separating the stroma by centrifuging Having at my disposal only a very small centrifuge, I obtained only an insignificant amount of stroma material Having also no facilities for testing this material clinically, even if I could obtain a sufficient quantity of it, and having little hope of persuading anyone to test the fruits of a discredited hypothesis, I gave up the work, discouraged During recent years, when opinion has come round in the direction of believing that pernicious anaemia is due to some lack of stroma forming substance, I have wondered that no one has done the experiment I originally contemplated, and which still seems to me a crucial experiment It may have been done and escaped my notice In the belief that it has not been tried, I venture to put forward the following considerations in the hope that someone who has the requisite plant and facilities will hazard the gamble

If pernicious anaemia is due, partly or wholly, to a lack of the materials (in the widest sense) necessary for stroma formation, it would seem that the most direct and complete method of supplying this deficiency would be to administer the actual stroma material as a whole and unchanged Presumably all the materials necessary for the ultimate stages of stroma formation are there present As it is impossible to foretell to what extent, if any, the stroma constituents may be destroyed by digestion, a saline suspension of stroma might first be tried intramuscularly It is more than probable that, if this were to be effective at all, it would act quickly in pernicious anaemia

If it did act, it might be easier to obtain the active principle from stroma material than from liver or other organs, because the chemical structure of the stroma must almost certainly be less complicated than that of liver The stroma is only a box, while the liver has many functions to perform other than those concerned with blood metabolism It is possible, however, that, even if the supposition be correct (that pernicious anaemia is due to lack of stroma building material), the administration of completed stroma material will not supply the deficiency because the blood forming organs may deal with the precursors of that material and may not be able to avail themselves of the material in the full and final stage of its synthesis This possibility is, however, not sufficiently deterrent to oust the propriety of trying the administration of stroma material in pernicious anaemia If this proved successful it might provide a therapeutic agent cheaper and more concentrated than liver extract, it might furnish a simpler matrix for extracting the active principle and it would certainly provide further direct evidence as to the aetiology of pernicious anaemia

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CRYPTO-EMPYEMA

BY

A RENDLE SHORT, M D , B S , B Sc , F R C S

PROFESSOR OF SURGERY IN THE UNIVERSITY OF BRISTOL

By crypto empyema is meant an empyema that cannot be diagnosed by repeated needling, even under an anaesthetic The term is useful, if for no other reason than that it reminds the practitioner that empyema ought to be diagnosed and treated, on occasion, when pus cannot be found by the exploring needle

Three cases of this condition that have come under my care may be briefly related

CASE I

A public school boy developed a left empyema nine days after the onset of pneumonia Temperature was 103° pulse 100 respirations 30 A large empyema was evacuated by rib resection after locating the pus with a needle It contained streptococci and saprophytes For a few days he did well, then the temperature rose again, and the boy looked

very ill Twelve days after the first operation an anaesthetic was given and the residual empyema searched for by needle but it could not be found Four inches of the posterior part of the fifth rib and two inches of the fourth were resected and the whole hand was put in to explore On breaking down a long stretch of adhesions posteriorly a cavity containing one ounce of foul pus was opened at the back of the root of the lung The original empyema cavity was quite clean A tube was inserted After a long illness the boy made a perfect recovery

CASE II

A gentleman aged 45 was referred to me by Dr J A Nixon and Dr Dyer He had been ill five weeks with influenzal pneumonia the temperature was still 99° to 100° every night there was dullness at the right base and the patient looked ill A skiagram showed opacity of the right base A needle had been put in three weeks before but found no pus Under ether I needled in five places but found no pus A piece of the ninth rib was resected in the posterior axillary line and the pleura opened it was clean and non adherent The lung was adherent further back and felt firm The clean pleura was closed more rib removed posteriorly and adhesions separated by the finger Two small loculi of pus were found one alongside the vertebral column and another between the lobes of the lung A bifurcated tube was put into these the chest wall sewn tightly around it and the projecting end clamped Twice a day the discharge was drained off under the surface of carbolic lotion In ten days the empyema had healed

CASE III

I was called by Dr C Bernard to see a man aged 60 who had appeared to recover from influenza in the epidemic of January 1933 but after being up a week had to go back to bed with fever shortness of breath and dullness of the base of the right lung with absent breath sounds and diminished vocal fremitus The heart was not displaced A needle was inserted in two places but no pus was found He was removed to the Bristol Royal Infirmary a very sick man Under an anaesthetic the chest was repeatedly needled but no pus was found A piece of rib was resected posteriorly and clean non adherent pleura opened This was closed again and adherent pleura separated back until an abscess containing several ounces of foul pus was opened between the base of the lung and the dome of the diaphragm far in It was treated as in Case II and an excellent recovery followed

The main lesson to be learned from these cases is that one must not be dissuaded from diagnosing empyema because repeated needling fails to strike pus In a patient who has suffered from pneumonia and especially influenzal pneumonia if the temperature keeps up for more than three weeks if dyspnoea and sweating are present and dullness is found at the base of the lung with diminished breath sounds and vocal fremitus that is enough to warrant an exploratory operation and a determined effort to find pus with the finger or if necessary the whole hand inside the chest even if the heart is not displaced A skiagram is useful it will show some opacity but it cannot be relied on to tell us exactly where the abscess is The loculi of pus may be small but they are likely to lead to a long and serious illness if not evacuated

There are two exceptions to the rule just laid down If tubercle bacilli have been demonstrated in the sputum a diagnosis of crypto-empyema would be precarious If the patient is very toxic, bringing up quantities of putrid expectoration and especially if it contains elastic fibres there is probably an open abscess or gangrene of the lung and operation would be too dangerous A closed abscess of the lung might well be confused with crypto-empyema and if the pleura was found non adherent it would be safest to make a two-stage operation of it packing off with gauze at the first intervention so as to promote adhesion of the lung to the chest wall Probably some cases of abscess of the lung are better left alone

It may be objected that the surgeon following this principle will often find himself meddling with an unresolved pneumonia We do not agree When from the so-called unresolved pneumonias with fever and physical signs persisting for three weeks there have been deducted the tubercles the pleuritic effusions the empyemas and the abscesses there is little if anything left

SODIUM SONERYL AS A BASAL HYPNOTIC

A REPORT OF 150 CASES

BY

S E BIRDSALL M A B CH CANTAB
M R C S L R C P

Sodium sonervl is the sodium salt of butyl ethyl barbituric acid and has been used as a basal hypnotic before general anaesthesia in 150 cases at St Bartholomew's Hospital between January 30th and April 14th 1933 Chemically sodium sonervl resembles nembutal which is sodium ethyl (1 methyl butyl) barbiturate clinically it is of lower toxicity and is administered in larger doses The presence of a methyl group may be the cause of the greater toxicity of nembutal The series of cases includes patients whose ages varied from 6 to 70 years and operations were performed for diseases of the ear nose and throat (45) the abdomen (39) the uro-genital tract (36) bone (11) the breast and neck (10) and for hernia (9) In every case the anaesthetic was administered by means of Boyle's nitrous-oxide oxygen-ether apparatus In the ear nose and throat cases and in nearly all the abdominal ones the anaesthetic was given by the endotracheal route comprising in all eighty five cases

Sodium sonervl was taken by the oral route in capsules containing 0 15 gram each In the first eleven cases the dosage was as follows Two capsules (0 3 gram) were given at 8 p m the day before operation this ensured a good night's sleep though in four instances the patients were found to be sweating the next morning On the day of operation sodium sonervl was given one hour before the induction of anaesthesia this dose being regulated according to the weight of the patient Thus from 6 to 8½ stone 0 45 gram (three capsules) from 8½ to 10½ stone 0 6 gram (four capsules) from 10½ to 12½ stone 0 75 gram (five capsules) and above 12½ stone 0 9 gram (six capsules) were administered Gynaecological operations were performed on six of these patients and it was found that they were still drowsy on the morning of the operation so that enemas were imperfectly returned on this account the evening dose was discontinued Doses of 0 45 gram were generally found not to produce sleep in adults and the dosage was therefore again simplified the following scale being adopted for the majority of the cases in the series below 10 stone 0 6 gram between 10 and 12 stone 0 75 gram and above 12 stone 0 9 gram In children (below 12 years) 0 3 gram was given followed by a further dose of 0 15 gram if the child was not asleep or drowsy after half an hour The capsules were given one hour and atropine (grain 1 75) fifteen to thirty minutes before operation No morphine was given except in three cases

EFFECTS OF SODIUM SONERYL

The following effects were noted in ninety seven cases the patient was asleep on reaching the operating theatre in forty six the patient was very sleepy in five no definite effect was noted and in two the patient was excited All arrived in the theatre breathing naturally with no trace of cyanosis and no stertor Sleep was commonly produced in thirty to forty five minutes The induction of anaesthesia was very smooth the length of time taken being the same as in non premedicated patients averaging about six minutes for moderately deep anaesthesia by nitrous oxide oxygen and ether In the majority of

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instances the amount of ether used was considerably less than would otherwise have been necessary In vaginal and urethral operations, and in bone operations, which included two amputations through the thigh, no ether was required In most of the hernia cases gas and oxygen alone was employed In seven cases the breathing was shallow including three in which morphine (grain 1/6) was given, the usual dose of soneryl being diminished by 0 15 gram In the remaining 143 patients there was no obvious depression of respiration, such as usually occurs after nembutal (3 grains) and morphine (1/6 grain) Consequently the induction of anæsthesia following the administration of soneryl was more rapid than after nembutal and morphine , the signs of anæsthesia were not affected

Recovery from the anæsthetic occurred in most cases after two or three hours After being awake for an hour or two the patient usually slept for the next six to twelve hours, and on waking up had no recollection of having been awake previously In eighty cases the average time that elapsed before recovery was two and a half hours the longest recovery period was twelve hours, following a long abdominal operation With nitrous oxide oxygen anæsthesia recovery was particularly rapid Restlessness during recovery was noticed in some patients In fifty consecutive cases the recovery was observed carefully, and in five of these the patients were noisy or excited In all these instances the operation had been over one hour in length and the restlessness was controlled by morphine or omnopon Injection of morphine or omnopon is effective, and is indicated after long anæsthesia with nitrous oxide, oxygen and ether In 130 cases there was no vomiting after the anæsthetic , it occurred in twenty cases, but was not excessive Memory was abolished except for outstanding events With those patients who were asleep on arrival at the theatre nothing was remembered subsequent to the swallowing of the capsules Those who were drowsy but not actually sleeping at the time anæsthesia was induced remembered being lifted out of bed and also remembered the mask being applied to the face, but their condition was one of calm rather than of apprehension at the time of induction

The urine was examined on the day following the administration of soneryl in most of the cases in order to determine the presence or absence of bile pigments or albumin, as these abnormal constituents are said to appear occasionally after the administration of barbiturates In no case was either detected

COMPLICATIONS

Complications and sequelæ were considered in the same order as in Boyd's investigation of nembutal (*St Bartholomew's Hospital Reports*, lxv) (1) Restlessness supervened in about 10 per cent of cases It occurred after prolonged anæsthesia in which ether was used In such cases morphine (grain 1/6) should be given if the patient is at all noisy or restless on recovery , otherwise morphine is unnecessary Restlessness was the most common complication observed (2) There were no cases of post operative pulmonary disease in this series During February and March, 1933, fifty cases in which soneryl was given were compared with fifty cases in which only atropine was given, the types of operation being similar in both series In the latter group there were five cases of bronchitis, in each instance following an abdominal operation It is likely that the smaller amount of ether required in the soneryl group was responsible for the absence of post operative bronchitis, as many patients, including those in whom bronchitis occurred in the control series, had suffered from influenza in the recent epidemic (3) There were no instances of excessive vomiting (4) Cutaneous eruptions were not observed (5) Headache was complained of in two cases but it was not severe (6) Amnesia has never been prolonged, and is not so marked as after nembutal (7) Definite giddiness occurred in four cases In most of the cases drowsiness persisted during the next day

CONCLUSIONS

1 Sodium soneryl is a reliable basal narcotic producing sleep or drowsiness in 95 per cent of cases when administered by mouth one hour before the induction of general anæsthesia

2 The optimum dose varies from 0 6 to 0 9 gram according to the patient's weight

3 Depression of respiration is produced in a few instances, and restlessness occurs in 10 per cent of cases Respiration is depressed far less than by a combination of nembutal (grains 3) with morphine (grain 1/6) and the therapeutic effect desired can be obtained with a much less toxic dosage No other toxic effects have been observed

4 Sodium soneryl has not been administered in cases of (*a*) senility, (*b*) pulmonary disease, (*c*) renal impairment or (*d*) arteriosclerosis

The author wishes to express his indebtedness to Mr A M Boyd at whose suggestion this investigation was undertaken and to Mr H L G Boyd whose advice and guidance made the investigation possible

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

NOTE ON AN OUTBREAK OF PUERPERAL SEPSIS IN A MATERNITY HOSPITAL

The last serious outbreak of puerperal sepsis in the Glasgow Royal Maternity and Women's Hospital occurred between January and March a few years ago The findings of an investigation into the cause are thought to be of general interest and to be suitable for publication The outbreak would appear to be attributable to tonsillitis in one of the house surgeons

The hospital was divided into two units each of which had two house surgeons The outbreak was confined to one unit whose house surgeons we will call A and B , B was the affected one The first three months October to December of B's residence were compared with the second three months January to March The cases were also divided according to whether they were handled by A or B

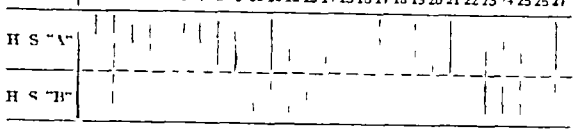
Table I shows that in the first three months the notifiable pyrexia rates and death rates for the cases of both A and B were approximately the same, but that in the second three months B had a much higher notifiable pyrexia rate and a very much higher death rate The death rate on the total cases for the second three months was approximately three times the death rate for the first three months

TABLE I

	October-December			January-March		
	Total Cases	Notifiable Pyrexia	Deaths	Total Cases	Notifiable Pyrexia	Deaths
H S A	204	21 or 10 3 %	2 or 0 98 %	179	18 or 10 0 %	2 or 1 12 %
H S B	207	20 or 9 7 %	2 or 0 97 %	238	39 or 16 4 %	10 or 4 2 %
Total deaths	4 or 0 97 %			12 or 2 9 %		

In Table II the deaths are shown according to the date of delivery They were all clinically septicaemias and it is interesting to note that five of the deaths in B's cases in the second three months occurred within three weeks

TABLE II



As the great proportion of fatal puerperal septicaemias is due to the *Streptococcus haemolyticus* from the throats of the attendants and as a recent investigation (Baird and Hart unpublished) into all cases of puerperal sepsis occurring in the Glasgow Royal Maternity and Women's Hospital showed that the unit where masking was most rigorously insisted upon had the least number of cases of streptococcal septicaemia it may be suggested that this type of outbreak of sepsis can largely be avoided by thorough masking

In addition to the assistance offered by Professor Munro Kerr my thanks are particularly due to Dr Dugald Baird and Dr D M Hart for the help they have given me in this investigation

MALCOLM D BLACK M B Ch B
House-Surgeon Glasgow Royal Maternity and Women's Hospital

PLEURAL SHOCK DURING ROUTINE ARTIFICIAL PNEUMOTHORAX REFILL

One of us has during his six years here done about 3 500 refills including inductions and has experienced four definite frights The first was on the occasion of his first induction when the girl patient became very pale and then cyanosed Although the pneumothorax needle was withdrawn on reintroducing it a satisfactory pneumothorax was induced and no further trouble was ever experienced The second case was published in the *British Medical Journal* of April 28th 1928 under the heading Diagnosis of Pleural Shock from Cocaine Poisoning (The article was sent to Sir William Willcox who definitely said it was a case of cocaine poisoning and kindly said he might be quoted as saying so) The third was in a well-established case Here the woman complained of a bitter taste in the mouth became cyanosed and then could not speak she recovered very quickly The needle was of course withdrawn at once and the refills were continued a few days after A brief account of the fourth case may be of interest

A pharmaceutical chemist's assistant aged 28 was admitted to the Winsley Sanatorium on November 18th 1932 He had never been strong and the term marasmic describes his history extremely well His private doctor Dr Bourke Cuppage of Bath tells me that to his knowledge the patient had never had any fits of any sort On August 18th he had gone to the Bath Tuberculosis Dispensary to see Dr Heslop on account of a dry cough Pneumonia developed fourteen days later on the left side and then a month afterwards a right sided pleurisy On admission we found right sided disease and some on the left confirmed by the *x* ray screen The temperature fluctuated between 97 6° and 99° F pulse was 96 to 100 there was very little sputum but tubercle bacilli were found in it On January 16th 1933 the temperature shot up to 103° and on the 23rd we induced a right sided artificial pneumothorax and obtained a reasonable collapse On March 13th he was having a routine refill after being screened After the usual 2½ per cent novocain injection had been given and after we had waited about three minutes the artificial pneumothorax needle was inserted A reading was not obtained at once and the operator pierced the lung—as shown by the appearance of some blood stained sputum after the fit—before getting a −6 −3 reading We then proceeded to put some air in Suddenly the patient said I am going and became very ill with livid face profuse perspiration staring eyes and loss of consciousness The pulse was full and rapid the breathing short and jerky and the face very flushed on the right side This lasted for about fifteen minutes when he regained consciousness The patient stated that before going off he felt pins and needles on the right side of his face He has made a complete recovery and is bitterly disappointed that we are not going on with the artificial pneumothorax treatment

The differential diagnosis would appear to be pleural shock or gas embolus as we are informed that novocain is not likely to produce poisoning The condition seemed unlikely to be a hysterical fit but we should appreciate help in the diagnosis from neurologists and from tuberculosis specialists with much more experience than we have

JAMES D MACFIE M D Ch B
Senior Resident M O
WILLIAM FITZGERALD LYLE M D
Winsley Sanatorium Bath Assistant Resident M O

British Medical Association

CLINICAL AND SCIENTIFIC PROCEEDINGS

PUNJAB BRANCH

Evolution of Public Health in the Punjab

At the annual meeting of the Punjab Branch of the British Medical Association on March 5th the newly elected president Dr K A RAHMAN assistant director of public health in that province delivered an address on the way in which the public health services in the Punjab had developed from the earliest days until the present.

Dr Rahman said that the Punjab comprised an area of 97 280 square miles its population at the last census in 1931 was estimated at a little over 23 millions of which 13 millions were male The first appearance of preventive medicine in it was traceable to the appointment of a superintendent general of vaccination shortly after the annexation of the province This was followed by the appointment of a sanitary commissioner in 1868 Twelve years later the two departments were amalgamated area deputy sanitary commissioners being appointed who were also concerned with vaccination In 1890 a Sanitary Board was created to advise the Government with regard to the execution of sanitary works for local bodies In 1897–8 bubonic plague first occurred in the province and the deputy sanitary commissioner was detailed to act as plague medical officer in addition to his original duties but subsequently a separate department was created and placed under the Inspector General of Civil Hospitals Twelve years later the province was visited by an epidemic of malaria of extreme severity this led to the appointment under the Inspector General of a chief malaria medical officer in charge of the Punjab Malaria Depot Thus up to that time the conduct of public health services was almost entirely concentrated at the headquarters of the Government apart from the vaccination staff and the temporary staff engaged in combating plague Medical officers of health were however functioning at Lahore and Amritsar and in 1905 the Government of India appointed one for Simla but it was not until 1915 that the municipal committees of Lahore Amritsar Multan Rawalpindi Sialkot Ludhiana and Jullundur were required to employ medical officers of health and at least two qualified sanitary inspectors each while twenty nine other such committees were required to employ at least one qualified sanitary inspector Courses for the training of these inspectors were inaugurated and a system of compulsory certification was established

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11. LONDON SOUTH EAST—Old-established better working-class PRACTICE increasing and situated in well populated district Gross cash receipts for last 12 months £1 263 including panel of over 1 300 Suitable house with 2 reception and 3 bedrooms. Garden. Price for freehold £1 100 Premium £2.400
12. EASTERN SUBURB—Very old-established middle and working-class PRACTICE, worth about £1 100 p.a. including panel of 1,350 Very little midwifery House contains 2 reception 4 bedrooms etc. Separate entrance to professional rooms Small garden Garage Price for freehold £1 350 Premium 2 years purchase
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In 1920 the first step was taken towards the provision of a permanent public health establishment in rural areas, and three districts were provided with district medical officers of health at the expense of the Government Propaganda work now began, and an education bureau was brought into being for the preparation of lantern slides to illustrate lectures In the same year the chief plague and malaria medical officers were transferred from the control of the Inspector General of Civil Hospitals to that of the Sanitary Commissioner In 1922 the Public Health Department came into being, incorporating the sanitary department, in the following year further reorganization followed, the Punjab Malaria Bureau becoming the Epidemiological Bureau, with an increased qualified staff In 1926 it was ordered that every district should have its own medical officer of health who should be a Government servant, control being thus centralized Until 1926 it had been the practice to engage large temporary staffs to combat epidemics of plague, cholera, and malaria, but after that year, which was marked by a very severe epidemic of plague, the staff was retained, and had been subsequently engaged in preventive work Its value proved to be so great that its numbers were increased and differentiation of its duties was evolved

Dr Rahman sketched briefly the development of the Punjab Vaccine Institute, with its permanent buildings at Lahore and Murree, the Epidemiological Bureau the Education Bureau, and the Sanitary Board, which now directed the whole general technical public health policy of the province The greater part of its work had been done since the war In 1900 there were only about twelve towns in the Punjab with properly protected water supplies In 1920 the number had increased to eighteen, and the present total was thirty six Special attention had also been paid to water supply schemes for rural areas and fair centres, and drainage works had been installed on a wide scale So far it had not been possible to do very much as regards housing conditions in towns or the amelioration of public health conditions in rural areas One necessity in the latter was the provision of large engineering works in various places to drain swampy tracts of land, to prevent inundations by river floods, to remedy the waterlogging due to excessive irrigation, and to counteract the blocking of natural drainage resulting from the development of canals and railways A Drainage Board had been brought into being in 1918 but little work could be done until 1923, owing to financial stringency Increased activity followed and by 1927 large operations were in progress in eleven out of the twenty-nine districts of the province Reduction in the work was subsequently brought about through scarcity of funds

In 1922 the Punjab Provincial Branch of the Lady Chelmsford Maternity and Child Welfare League opened a training school for women health visitors who could be placed in charge of centres throughout the province Forty two such centres were now in existence, and the demand for more was keen Seventeen of these were situated in rural areas From the beginning of the 1927 financial year the Punjab Health School had been taken over by the Government, but the work of choosing these health visitors and supervising their work at the centres was left to local authorities, the Government making an annual grant in aid A chemical laboratory had been instituted in 1921 by the Punjab Sanitary Board for the systematic examination of rural water supplies and this had extended its activities to include the examination of foods and certain other public health investigations Additional laboratories were required by the larger municipalities which were at present partly assisted by the central laboratory

The president concluded by emphasizing the additional scope for work rendered necessary by the increasing urbanization of the population generally Transport improvements were intensifying the danger of the spread of epidemics and the travels of pilgrims were now an even greater possible source of the dissemination of infection than hitherto Preventive medicine was becoming more and more important and in this connexion the part to be played by the general practitioner was very great

Reports of Societies

BRONCHOSCOPY IN POST OPERATIVE LUNG COMPLICATIONS

At a meeting of the Section of Anaesthetics of the Royal Society of Medicine on May 5th, with Dr C F HADFIELD in the chair, Mr V E NEGUS read a paper on bronchoscopy in the diagnosis and treatment of post operative lung complications

Mr Negus said that all surgeons and anaesthetists were interested in post operative lung complications and were deeply concerned with their avoidance, and this was particularly the case in operations on the upper air passages The nose and throat surgeon had a further field of activity in endoscopy, and, called upon to treat cases of lung suppuration by means of the bronchoscope he could study the normal mechanism of the tracheo-bronchial tree by direct observation Chevalier Jackson in America, had shed light on the causation of suppurative diseases of bronchi and lungs, and had drawn most valuable conclusions as to their prevention and treatment The conditions to be dealt with could be classified in the following way (1) inspiration of a foreign body, (2) diffuse suppurative bronchitis, (3) lung abscess and bronchiectatic abscess, (4) acute massive collapse or atelectasis and (5) multiple bronchiectasis He then discussed the natural defences against infection in the case of the lungs The first of these was protective closure of the larynx which had to be considered in both the conscious and unconscious subject Bronchoscopic observations had been made after tonsillectomy to see whether blood entered the lung, and conclusions had also been drawn by the application of lipiodol to the tonsils before operation Cough, again had to be considered both from the point of view of the duration of the reflex and in relation to the normal respiratory movements of the bronchi Protective closure of the larynx did not offer any real safeguard against bacterial infection, its useful function was concerned with the exclusion of foreign bodies Voluntary closure of the larynx could not be long maintained because the rising amount of carbon dioxide concentration stimulated the respiratory centre and caused the larynx to open During dental extraction the patient might be forced to take an inspiration at the precise moment that a tooth dropped down, and the foreign body be carried by inspired air into the lungs During the induction of anaesthesia voluntary control was obliterated, and a deep inspiratory effect might suck in packing which had not been securely fastened The secretion of mucus was another defensive mechanism, and was of great importance in inhibiting the growth of bacteria It was therefore most desirable that applications such as excessive doses of atropine which dried up the mucus, should be avoided The action of the cilia must also be considered in the mechanism of lung protection Ciliary action was most valuable in removing bacteria before they got a foothold The waving of these cilia took place in one direction, and their action was efficient when a blanket of mucus covered the ciliated surface This action proved especially valuable in emptying the periphery of the lungs

Inspiration of a foreign body might occur during either general or local anaesthesia With the former, the danger of the entrance of a foreign body was greater if operation was carried out with the patient in the sitting position this was especially so in dental extractions and tonsillectomy During tonsillectomy the greatest danger of the inspiration of a foreign body occurred in this posture, for a dislodged tooth or a piece of sponge easily followed the air stream down the trachea Bronchoscopy was the only method of removing foreign bodies Diffuse suppurative bronchitis might arise after general anaesthesia and there occurred expectoration of purulent sputum to a considerable amount The accidental entrance of liquid ether also would cause it Bronchoscopy was of the greatest value in cases of severe post operative suppuration, removal of the pus by aspiration might prevent the patient from drowning in his own secretions The

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most frequent cause of lung abscess and bronchiectatic abscess was the inspiration of infected blood clot or of an infected foreign body such as a tooth or swab The fact of a patient's coughing up a large quantity of pus in a short time was evidence that he had a large reservoir of infected secretion The most important process of draining was carried out by bronchoscopy under local anaesthesia Acute massive collapse of a lung lobe sometimes called for bronchoscopic diagnosis and treatment In many cases the condition was caused by plugging of a bronchus with viscid mucus Massive collapse of lung might occur after any operation particularly after those on the upper abdomen and in this deficient movement of the diaphragm was a powerful factor Multiple bronchiectasis sometimes dated from the time of an operation but often the history was so long that it was difficult to say whether the cause lay in the operation itself or in the disease it was intended the operation should relieve Cocainizing the larynx was a dangerous procedure even when general anaesthesia was employed Packing inside the nose should always be securely anchored because of the danger of its being inspired

Dr I W MAGILL said all anaesthetists experienced difficulty in securing such a condition of affairs in the pharynx as to enable a surgeon to carry out tonsillectomy with ease One way was to induce deep anaesthesia another was to cocainize the larynx in the first instance and then to use a light anaesthetic instead of saturation In his practice he had found the latter free from complication In his view the less ether or chloroform a patient had the better Mr CECIL HUGHES strongly favoured the induction of the minimum amount of anaesthesia for all kinds of cases as it was advantageous not to have to get rid of a lot of ether or chloroform after the operation was concluded and recovery was thereby hastened He favoured the use of rectal oil ether it constituted a valuable basal anaesthetic Dr HAROLD SINGTON said the paper demonstrated the importance of the depth of anaesthesia in each particular case It was most essential to make sure that no bleeding was taking place at the end of the operation In tonsil and adenoid operations unless anaesthesia was complete one could not completely dry the pharynx and especially in the case of children it was very important that the posterior nasopharynx should be dry before the return to bed Light anaesthesia did not secure this so well as deep

Dr T B JOBSON said he had had only two cases of lung abscess and in both the operation was done under general anaesthesia with ether He had performed a large number of tonsil operations under local anaesthesia but in none of those had he experienced any lung complication He wondered whether premedication with such drugs as nembutal and avertin had any influence on the occurrence of operative complications Mr CYRIL HORSFORD was sure every anaesthetist would appreciate Mr Negus's remarks on the prevention and cure of lung complications One of the greatest dangers of nasal and throat surgery was the anaesthetic difficulty not only because the anaesthetist had to carry out his work in the same region as the surgeon but also because of the irritative effects of the various anaesthetics He had recently been pleased with the method of intratracheal gas and-oxygen anaesthesia but if a sedative was given causing the patient to sleep many hours afterwards a rapid cessation of the anaesthesia could not be obtained He had done many tonsillar operations under local anaesthesia the advantage of which was that with sufficient adrenaline the operation could be rendered practically bloodless and if one abstained from using much cocaine there was no need for abolition of the laryngeal reflex He preferred gas and-oxygen to ether chloroform he did not favour nor deep anaesthesia Mr M L FORMBY asked whether there was more danger in operating on a dirty antrum with an intratracheal tube than with an ordinary air way instrument in the mouth Dr R J MINNITT said he worked with a surgeon who wished children to be sat up immediately after guillotine removal of the tonsils as it was thought to stop the bleeding but the speaker considered there was a danger of blood being aspirated He had experimented with the heating of ether in tubes of various lengths and found that when the temperature was 112° at the heated point it was only 80° at a distance of two feet

Mr H E G BOYLE agreed that in throat cases a great deal depended for the success of the operation on the posture of the patient on the table He still thought that the position insisted on long ago by Sir Henry Butlin—with the patient on his side and with the left shoulder raised—was much safer than the extended position for then blood collected in the post nasal space from which it should always be removed His impression was that a number of patients who had blood in that space subsequently developed mastoid disease By giving patients nembutal beforehand all operations could be done under gas and-oxygen using very little ether Mr HOWARD JONES said that the mere passage of a tube into the trachea was no protection against the inhalation of blood by the patient unless it completely filled the trachea

TUMOUR OF LUNG

At a meeting of the Aberdeen Medico-Chirurgical Society on May 4th with the president Dr W CLARK SOUTER in the chair Dr R J DUTHIE read a paper on an unusual case of tumour of the lung illustrated by radiograms taken at different stages

The patient a male shopkeeper aged 58 years had been admitted to hospital with an eight weeks history of shortness of breath and pain in the left side of the chest No relevant family history was obtained and no history in the patient's case of previous pulmonary complaint or of any immoderation in habits The Wassermann reaction of the blood was negative The illness had commenced a few days after catching a chill with breathlessness on exertion and a dull aching pain near the left shoulder blade these symptoms had increased gradually and a week before admission to hospital his doctor had removed 70 ounces of blood stained fluid from the left side of the chest He had never had much cough and had very little sputum and this never blood stained Night sweats were absent and general tiredness was the only other symptom present

On admission the patient's nutrition was moderately good weight 9 st 3 lb and no pallor cyanosis jaundice clubbing of the fingers or enlarged glands were present Nothing abnormal was found in the cardio vascular alimentary renal or nervous systems no anaemia was present and the blood pressure was 122 77 The left side of the chest was practically immobile on respiration and there were all the classical signs of an extensive pleural effusion in the left pleural sac displacing the heart to the right this was confirmed by radiogram An exploratory puncture was made 2 ounces of dark red fluid being withdrawn from the chest the fluid was found to be sterile and a section of the deposit showed lymphocytes and endothelial cell but no evidence of tumour No enlarged glands were found anywhere and after three weeks rest in bed the patient appeared to improve a little the temperature remaining normal and no loss of weight taking place Blood stained fluid to the amount of 1 500 c cm was removed and replaced by 900 c cm of air and radiographic examination showed the upper left lobe partially collapsed and above the level of the fluid two shadows—one like the left border of the heart the other like the upper part of the collapsed lower lobe in this latter however no striae could be seen Two days later further 1 500 c cm of fluid were withdrawn and replaced by 1 100 c cm of air Radiographic examination showed the upper lobe partially collapsed as before and the lower lobe completely collapsed Bulging into the lower part of the pleural cavity was a large cystic looking tumour Lipiodol examination showed the upper lobe filling easily but complete blockage of the bronchus leading to the lower lobe At this period the patient's condition showed no signs of retrogression and his symptoms had disappeared A few days later however a small very hard nodule—about the size of a split pea—was discovered in the left axilla and a similar nodule above the left clavicle The former was removed and the pathological report was adenocarcinoma similar in type to many carcinomata of the bronchi There was subsequently a rapid increase in the pleural effusion

Dr JOHN CRAIG described a case of basophil adenoma of the pituitary in which one feature had been a generalized decalcification and softening of bone illustrating the case by photographs and photomicrographs

A keen discussion followed the papers taken part in by the president Dr W F Croll Professor L S P Davidson Professor Campbell Dr J M Johnston Mr Alexander Mitchell and Dr H Ross Souper

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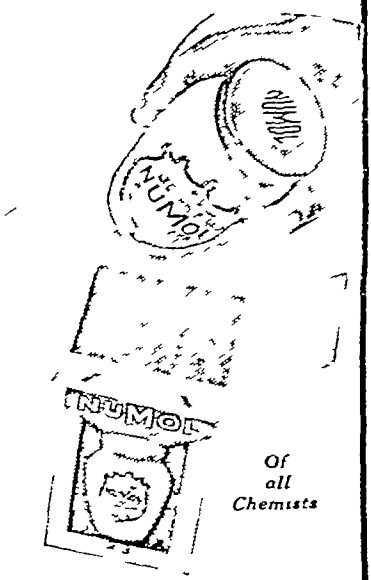

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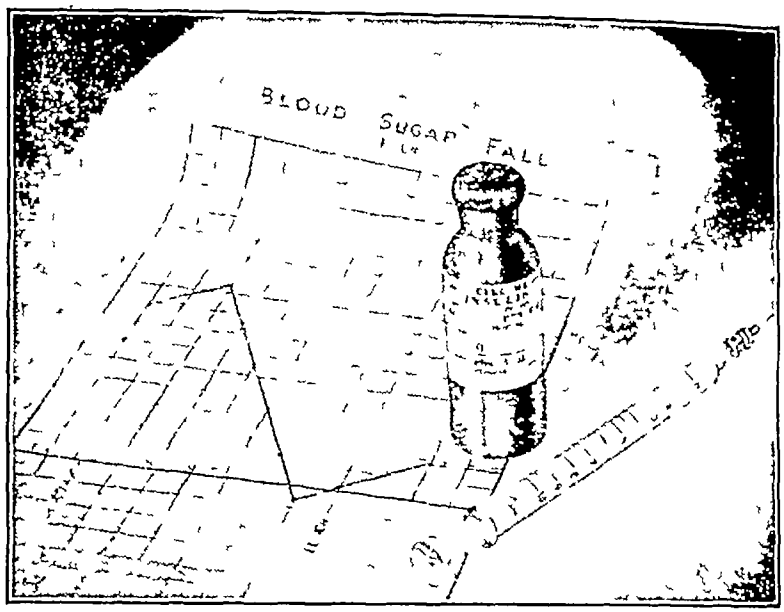

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Reviews

THE MEDICAL ANNUAL, 1933

It has been stated that there are approximately 1,800 medical periodicals in existence and their number tends to increase rather than to diminish The busy general practitioner may find time to read one, or perhaps two The specialist is tempted to confine his reading to technical journals dealing with his own specialty, and so comes to lose touch with what is outside it The student working for a higher medical examination reads either too much or too little and must waste a lot of time in sifting the chaff from the wheat The *Medical Annual*[1] is remarkable in that it has something to offer to all three As a Year Book of Treatment" it should be invaluable to the practitioner who wants to keep abreast of modern developments, as a well documented critical commentary on medicine and surgery it cannot fail to be of interest to the advanced student and the specialist

Medicine is the most catholic of the sciences, receiving whatever may further its progress from chemistry, physics, biology, physiology, etc Chemistry, and particularly biochemistry continues to yield information of value in the diagnosis and treatment of the anaemias, a comprehensive review of which is given by Professor Stanley Davidson and Dr Reginald Miller A potent extract for the treatment of pernicious anaemia has now been obtained from fish liver, and vitamin B has gained a niche in the therapeutics of this disease Large doses of iron are recommended in the treatment of subacute combined degeneration of the cord, while iron deficiency is thought to be responsible for the spoon-shaped nails present in simple achlorhydric anaemia 'In the past twelve months writes Dr J H Anderson in his article on diabetes the swing towards the higher-carbohydrate lower fat diet has continued" This may eventually be reflected in a diminution of the deaths from the cardiovascular complications of arteriosclerosis which "has unexpectedly developed into a problem of major importance in diabetes' (L W Dunlop) In his review of the ductless glands Professor Langdon Brown includes some interesting plates of adrenal virilism and an account of the virilism associated with basophil adenoma of the pituitary Pneumonia has always taxed the ingenuity of therapeutists and Professor W H Wynn's review contains some interesting suggestions from the various workers in this field Artificial pneumothorax has been recommended on the grounds that it rests the inflamed lung lessens pain by separating the pleural surfaces and interferes with the passage of toxins into the blood stream Yandell Henderson's carbon dioxide and oxygen treatment and the use of antisera are fully dealt with Carbon dioxide and oxygen is also recommended in the treatment of drowning gas poisoning pulmonary collapse, asphyxia of the newborn and other conditions The value of routine purgation in the treatment of pneumonia has been questioned and a more conservative management of the bowels is advocated Professor Wynn and Mr Tudor Edwards contribute a valuable article on lung abscess, which is best treated by medical measures in the acute stage In his article on heart failure Dr A G Gibson concludes that digitalis is of definite value in cardiac failure with regular rhythm and often gives complete relief in cases of cardiac asthma In his review of the new *British Pharmacopoeia* Dr Ivor Davies includes a complete posological table of the official drugs Nephritis is a perennial problem for both clinician and pathologist and Dr S W Patterson's account of modern ideas on the subject will help the practitioner to a clear understanding of them Geoffrey Evans's classification of albuminuria (reproduced on page 391) is a good practical guide to the diagnosis of the conditions which give rise to this sign

The general practitioner can directly apply most of the advances in medicine, but at the same time he wants to be kept informed of those advances in surgery which may be useful to his patients, although he may not have the special skill necessary to carry them out It is evident that parathyroidectomy and the surgery of the sympathetic nervous system are highly specialized procedures The former has proved of value in generalized osteitis fibrosa, and Sir William Wheeler who reviews the subject, states 'Tumours of the parathyroid body have been regarded as very rare, but they will probably prove to be much more common than was at one time thought" Mr Geoffrey Jefferson says that the number of operations on the sympathetic nervous system is increasing yearly, ganglion chain resections are nowadays preferred to periarterial sympathectomy and are of benefit in Raynaud's disease, thrombo angiitis obliterans, and megacolon Sir William Wheeler, in his article on surgical technique, draws attention to a new styptic called stryphnon, which has received very favourable reports It is also pointed out that tourniquet paralysis can be avoided by the use of a pneumatic tourniquet In his review of the surgery of gastric and duodenal ulcers Professor Rendle Short reproduces the dietetic instructions which Lord Moynihan gave in his article in the *British Medical Journal* of January 1st, 1932 Professor Beckwith Whitehouse gives an interesting account of labour and its complications, and Dr Blomfield of anaesthesia

It has been possible in this review to refer only to a few of the many excellent articles which one expects to find in the *Medical Annual*, the high standard of which is in no small measure due to the enterprise of the publishers and the sound judgement of the editors The *Annual* suffered last year a great loss in the death of one of its editors, Dr Carey Coombs, who "for fourteen years has been largely responsible for the choice of reviewers on medical subjects and for the general direction of the lines to be followed For ten years he himself contributed, very ably, the articles on diseases of the heart"

[1] *The Medical Annual A Year Book of Treatment and Practitioner's Index* Fifty first year Edited by the late Carey F Coombs MD LRCP and A Rendle Short MD BS BSc FRCS Bristol John Wright and Sons Ltd London Simkin Marshall Ltd 1933 (Pp cv + 628 20s net)

INHERITED SKIN DEFECTS

In his book on *Inherited Abnormalities of the Skin and its Appendages*[2] Dr E A COCKAYNE has presented us with a mine of information It is the first attempt that has been made to collect in one book the information available on the genetics of all the defects of a single organ The skin is obviously the most suitable part of the body for such a purpose, as the necessary observation of its defects is relatively easy to make It has long been known that certain dermatoses as well as congenital abnormalities of the skin tend to run in families—alopecia areata and psoriasis are good examples of the former while the various types of ichthyosis are familial in character Dr Cockayne is, however, the first investigator who has attempted to explain the mechanism of cutaneous inheritance in general, to discover whether the various inherited peculiarities of the skin are recessive or dominants, and to obtain information which may one day make it possible to advise the individual on the degree of probability that certain conditions may be transmitted to his or her offspring Certainly that day is as yet very far distant

[2] *Inherited Abnormalities of the Skin and its Appendages* By E A Cockayne MD FRCP London H Milford Oxford University Press 1933 (Pp viii + 394 32s net)

The

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The immediate object of the author has been to provide a book of reference for dermatologists and to encourage them to record with greater care than they have previously exercised pedigrees and histories of families with inherited defects and secondly to enable geneticists to learn from the data given what defects are suitable for further study Thus armed they will be in a position to elucidate special problems in heredity—for example to determine whether a defect is due to the action of two dominant genes whether in addition an environmental factor is concerned or why some particular defect is sex limited Perhaps the familial disease in which most clinical dermatologists will be particularly interested is psoriasis It appears that though there is strong evidence for the disease being inherited not many pedigrees have actually been published Dr Cockayne has come to the provisional conclusion that the appearance of psoriasis is not dependent solely on some inherited abnormality but needs an external cause as well The inherited factor may however well be a genuine dominant The same appears to be true of alopecia areata

The whole subject is extremely interesting and very difficult Dr Cockayne has done his best for the vast majority of medical men who have never been taught to think in Mendelian terms by providing a very useful introductory chapter on the general mechanism of inheritance This makes by no means easy reading but it must be studied carefully by anyone who desires to make good use of the vast amount of information that has been collected by the author We have no idea how long he has occupied himself with the subject but some measure of the labour expended can be guessed from the many thousands of references which are given The complexity of the whole subject of inheritance is forbidding Even in forms of life where the numbers of chromosomes are very small—for example certain insects—the mechanism of inheritance is difficult enough and the complications are sufficiently puzzling but in man the problems involved are far more terrific We must congratulate the author on being one of the first to venture into this unbedden field and we must thank him for providing so vast a quantity of carefully gathered information for those who undeterred by the intricacies of the subject are enterprising enough to follow him

AMERICAN PUBLIC HEALTH

Reflecting as it does American views and practice in public health the fourth edition of Dr MARK F BOYD'S *Preventive Medicine*[1] is both interesting and informative to the English reader The control of leprosy which is endemic in portions of the United States is well summarized the degree of isolation required being aptly described as of a nominal character approaching that suitable to tuberculosis In connexion with hookworm disease reference is made to the mass treatment of the whole population of heavily infested areas without preliminary examination of the stools for the presence of ova in order to lighten the general infestation and so economize time and money in proceeding towards final cure Under tuberculosis the infection of milk is ascribed more to contamination from the faeces of the cow than to tuberculosis of the udder Maternal mortality from all causes according to figures quoted appears recently to have shown a slight downward tendency in the States Puerperal sepsis however keeps high and is said to occasion from 50 to 75 per cent of all maternal deaths The remark that a formidable proportion of confinements in some localities are not attended by physicians but by midwives throws into relief the divergency of status between midwives in America and here The author finds it necessary to recommend that some provision should be made for the formal instruction of midwives in obstetrics and that none should be permitted to practise without a State licence His claim that the sterilization of all feeble minded epileptic insane or criminal persons would produce an enormous reduction in the institutional population in the course of a generation would be questioned by many in this country These comments on apparent differences between American ways and ours are not made in any sense as criticisms of the author whose fourth edition fully maintains the high quality of his previous work

[1] *Preventive Medicine* By M F Boyd M D M S Fourth edition revised Philadelphia and London W B Saunders Company 1932 (Pp 532 149 figures 22s 6d net.)

THE HOSPITALS OF AMSTERDAM

In the year 1913 the mayor and aldermen of Amsterdam determined that the hospitals of their city should be unified and brought up to date and they charged Dr WORTMAN of the municipal hospital service to prepare a report on the conditions of the existing hospitals The war stopped the intended development and only piecemeal changes have been possible Dr Wortman has now published an account of the city's hospital institutions and services[1] both in English and in Dutch the two versions being set in parallel columns and the numerous illustrations having descriptions in both languages

Dr Wortman deplores the fatal influence which the war exerted on the development of the Amsterdam hospitals At one time there was every reason for expecting that a new university hospital would be erected the site having already been chosen and Amsterdam would have maintained a prominent place in regard to social service for the sick Existing and out-of-date hospital buildings could have been diverted to other purposes But as the author points out Amsterdam is not the only city to have suffered in this way He says

> While the world war has delayed the development of hospitals in the pauperized countries of Europe America goes undisturbedly on her way building new ones so that nearly 100 million dollars a year is spent on the purpose

Dr Wortman shows that private and voluntary enterprise has made up for the deficiencies of the municipal service to a considerable extent but he points out that the necessity for better educational institutions and the demand for increased accommodation in the municipal hospitals is a direct consequence of improvements in medical science The hospitals are becoming more and more technical and are losing the character of charitable institutions Improvements in research and in the treatment given by hospitals have resulted in an ever-increasing number of patients

> While in former times only the poorest the homeless vagabonds and foreigners had been admitted the changed circumstances of the times brought ever more and more pressure to bear upon the sick who were finally driven to the hospitals from all strata of society

This book will doubtless interest British readers especially those connected with hospitals To the author it has been a labour of love and he has conveyed his enthusiasm to his readers The volume is finely produced both type and illustrations being excellent One could have wished however that instead of such an imposing folio volume it had been smaller and more convenient both for reading and for storage

[1] *De Amsterdamsche Ziekenhuizen* B J L C Wortman M D Lochem Holland N V Algemeene Periodieken Maatschappij 1932. (Pp 169 16s)

INTERPRETATION OF ANIMAL BEHAVIOUR

Maternal Behaviour in the Rat,[5] by BERTOLD P WIESNER and NORAH M SHEARD is a monograph belonging to a series which is under the general editorship of Professor F A E Crew and Mr D Ward Cutler It is a record of a large series of observations, chiefly experimental, into maternal behaviour and its relation to physiological factors The authors have employed certain elements of behaviour—nest-building, retrieving of young, suckling—as indicators, and have studied the conditions which appear to influence and modify them They avoid any dogmatic interpretation of their results, but report several that are important and illuminating—such, for example, as that maternal behaviour can be aroused in virgin oöphorectomized rats by injections of anterior lobe pituitary extracts The retrieving response is chiefly relied upon as an indicator in this series They do not attempt to unravel the problem as to how internal "drive" is related to external stimulus, and, without forcing the evidence of experiments into some preconceived hypothesis, this problem is hardly ready for discussion, they do, however, conclude that normal cessation of maternal behaviour is due to the disappearance of the young stimulus as the litter grows

The type of inquiry which this monograph illustrates is transforming much that was guesswork in the interpretation of animal behaviour into a demonstrated sequence, and in this respect it is complementary to the work of Pavlov and his school Although it leaves untouched many fundamental biological problems, it is achieving success in showing the mediate influences under which the organism acts It brings into prominence the fact that the behaviour of the organism is compounded of ability which is characteristic to itself and of the influence of external events This book is a record of laborious work, carried out with meticulous attention to accuracy and to control the authors are to be complimented both upon this and upon the restraint which they show in drawing conclusions from their results

Notes on Books

In *The Psychological Effects of Menstruation*[6] Miss MARY CHADWICK has collected much of the available information on the effects of the menstrual cycle in women and young girls and has added still more from her own experience, gained during the psycho-analytical treatment of children and adults The monograph is short and, in spite of being closely packed with facts, easy to read The first section has an especial interest from the historical point of view In it Miss Chadwick traces the relation between disturbances of menstruation and the accusation of witchcraft made against women in the past and is able to show how the resentment of the disturbed woman against society found its expression in fancied power to do her neighbour injury The enmity which she awakened led to rumours that she practised the Black Art which gave the public "an excellent opportunity to release sadistic impulses of their own Accusations were doubtless usually based on some physical or mental peculiarity of the suspected witch and her behaviour might do little to mitigate suspicion In the section on the menstrual cycle in childhood Miss Chadwick indicates how the changes in the mother's personality at the time of the periods may influence the life of the child She includes in an appendix two case histories which illustrate some of the points mentioned in the monograph The last section deals with psychological disturbances during the adult menstrual period

Irradiated Sterols in Therapeutics,[7] by Dr GERMAINE DREYFUS SEE, is a brochure prepared for the purpose of explaining to the physician the general nature of the innumerable preparations of these substances that are now on the market The author points out that the sudden popularity of irradiated sterols has resulted in their being acclaimed as panaceas, and that it is difficult for the practising physician to estimate their proper place in therapeutics and their value relative to old established remedies such as cod-liver oil The book contains a short account of the chemistry and therapeutic action of irradiated ergosterol and a discussion of its therapeutic uses

The January number of the *Annals of Medical History*[8] contains seven articles of rather exceptional interest It opens with the first of the promised six parts of Dr Kate Campbell Hurd-Mead's introduction to the history of women in medicine Dr H S Denninger of Chicago sets out the palaeopathological evidence of osteitis deformans, based on examination of five skeletons of prehistoric American Indians As confusion with syphilitic bone disease is not unknown, reference may here be made to the list, compiled by Drs E B Krumbhaar and V C Garner, of rare books, portraits, and other articles of interest ("luesiana") exhibited at a special meeting of the College of Physicians of Philadelphia in November 1931 to celebrate the discovery of the *Treponema pallidum* in 1906 by Schaudinn and Hoffmann Dr F M Harrison concludes his essay on psychiatry in historical retrospect by carrying on the survey from the age of feudalism (1000–1300) to the present time As William Beaumont published his *Experiments and Observations on the Gastric Juice and the Physiology of Digestion* in 1833, it is appropriate that his life's activities should be commemorated so thoroughly as Dr W S Miller now does Dr Blanton gives an account of the versatile George Washington's interests in medical matters, his illnesses his medical friends, his care in looking after the health of his slaves, and his advocacy of inoculation for the prevention of small-pox A short sketch of J F Lobstein who was the first professor of pathology ever appointed in a faculty of medicine—that of Strasbourg in 1819—and who coined the words "arteriosclerosis" and "arterectasia," is contributed by Dr A Brunschwig With much charm and many quotations Dr J B Herrick explains that he reads Chaucer at 70 because of his kindly philosophy, optimism, ever-present humour, and ability to make music of the early English language Among the reviews is one of Professor John Fulton's fine bibliography of Robert Boyle

The seventh edition of *A Compendium of the Pharmacopoeias and Formularies*[9] brings up to date the synopses from British and foreign pharmacopoeias which have rendered previous editions of this useful volume so popular The compiler, Mr J C J S THOMPSON, has revised carefully the whole text, and has found room for the introduction of a considerable amount of new information by shortening some sections and eliminating others of relatively less importance The result is a clearly printed and well-arranged tabulation of therapeutical formulae, with notes on such allied subjects as are likely to be of practical value to general practitioners, pharmacists, and students A summary of the legal regulations concerned is a useful feature The compendium will be found to be a really practical aid to prescribing and dispensing, though it is curious that no reference should be made to tannic acid in the treatment of burns, and there are some other omissions of a like nature

[5] *Maternal Behaviour in the Rat* By B P Wiesner and N M Sheard Biological Monographs and Manuals No XI Editors F A E Crew and D Ward Cutler Edinburgh and London Oliver and Boyd 1933 (Pp ix + 260 3 plates numerous figures 12s 6d net)

[6] *The Psychological Effects of Menstruation* By Mary Chadwick Nervous and Mental Disease Monograph Series No 56 New York and Washington Nervous and Mental Disease Publishing Company 1932 (Pp 70 2 dollars)

[7] *Les Stérols irradiés en Thérapeutique* Par Dr Germaine Dreyfus See Les Thérapeutiques nouvelles Paris J B Baillière et Fils 1933 (Pp 68 6 fr)

[8] *Annals of Medical History* New series vol v No 1 January 1933 Edited by Francis R Packard M D New York Paul B Hoeber Inc London Baillière Tindall and Cox (Pp 1-102 illustrated Subscription for volume of six numbers £1 8s 6d)

[9] *A Compendium of the Pharmacopoeias and Formularies* (Official and Unofficial) By C J S Thompson M B I Seventh edition London J Bale Sons and Danielsson Ltd 1933 (Pp 881 10s 6d net)

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THE OPHTHALMOLOGICAL SOCIETY

ANNUAL CONGRESS

The annual congress of the Ophthalmological Society of the United Kingdom was held in London on May 11th 12th and 13th under the presidency of Dr A H H SINCLAIR of Edinburgh Some twenty five papers were read and a discussion took place on heredity and eye disease A few of the papers are abstracted below

RADON FOR INTRAOCULAR DISEASE

Mr R FOSTER MOORE's paper on radon in certain intra ocular conditions dealt only with such diseases of the eye as appeared to be amenable to radium emanations in the form of seeds The kinds of disease considered were sarcoma glioma angioma A man aged 65 presented himself with a choroidal sarcoma the fellow eye having been blind since childhood from leukoma adherens Refusal to have his only eye removed led to radium being applied At the end of three and a half years what remained of the growth was less than before treatment there was no extraocular extension and no evidence of dissemination When such growths were accessible sloughing of the sclerotic or other tissues need not be feared and the sarcoma would shrink and remain shrunken under treatment for a long time He had treated five cases of retinal glioma some by interstitial insertion some by scleral application some by a com bination of both methods One patient a boy whom Mr Foster Moore had shown at the Royal Society of Medicine had lost a brother from double retinal glioma and the mother not unnaturally declined to allow both eyes to be removed Mr Rupert Scott to whom the case was brought confirmed the diagnosis removed one eye and transferred the boy to Mr Foster Moore's care Now three and a half years later after the insertion of a seed the boy's health was good and he was attending an ordinary school Mr Foster Moore had treated two cases of retinal angioma both by scleral applications and there was a slow subsidence of the condition Central vision was maintained at 6/6 but the scarred area contracted the field He did not recommend the treatment in melanotic sarcoma when the other eye was sound but if a sarcoma could be effectively irradiated the danger of dissemination ceased from that time so that if useful sight could be saved by interstitial irradiation there was probably no greater risk to life than if the eye were removed In a case of unilocular glioma he did not recommend radon seeds as a substitute for enucleation but he insisted on a very thorough examination of the second eye under general anaesthesia lest a small growth be overlooked Binocular glioma was a different matter For retinal angiomata radon was most successful and indeed was the only effective treatment He knew nothing which had any influence on the course of Eales's disease The weakest strength he had used was 1 millicurie the strongest single seed 5 3 millicuries in every case filtration was through 0 5 mm of platinum Mr H B STALLARD read a paper in which he discussed the effects of applying radium emanations in certain selected diseases of the eye

AETIOLOGY OF PRIMARY GLAUCOMA

Mr W S DUKE ELDER who at this meeting was awarded the Nettleship prize for his researches on the physiology of the eye read a paper liberally supported by slides and tracings on the aetiology of primary glaucoma He said that primary glaucoma was probably a heterogeneous clinical group and he set out to discuss chiefly the possible mechanism of a vascular crisis in the eye such as might result in the clinical picture of acute glaucoma The most dramatic crisis which occurred to him was to cause a total cessation of the circulation then to allow it to resume under close observation The first was produced by raising the intraocular pressure to a height above that in the ophthalmic artery by means of the apparatus he showed Within thirty seconds of the resumption of the circulation the vessels in the iris were seen to be maximally dilated the amplitude of the pulse recorded in the tracings became greater and after it had been injected intravenously the appearance of trypan-blue over the surface of the iris and in the anterior chamber evidenced a marked increase in the capillary permeability An increased blood flow was indicated by a rise of temperature in the anterior chamber of from 1° to 2° C the pupil contracted maximally and in one to three minutes the intraocular pressure rose sharply but at a later stage though the increased pressure was maintained the amplitude of the pulse declined These events especially the continued maximal dilatation of the small vessels and the constriction of the pupil seemed to indicate he thought that the cause of the disturbance was the liberation of a histamine like substance in the eye indeed the injection of aqueous humour drawn from such an eye into cats showed that such a vaso-dilator substance was present There seemed to be a close association with the histamine like substance which Sir Thomas Lewis and his colleagues had demonstrated to have potent effects on the skin Mr Duke Elder had therefore conducted experiments the essential feature of which was a stroking of a segment of the iris with the cannula of the manometer as it lay in the anterior chamber The following results were noted a dilatation of the small vessels after a thirty second latent period extending markedly over the area of iris stroked an increased permeability of the minute vessels on the surface of the iris a rise of temperature after a latent period of sixty seconds of from 0 5° to 1 5° C a maximal and constant constriction of the pupil evident thirty seconds after stroking this effect persisting indefinitely a rise in the intraocular pressure Similar research but with 2 per cent cocaine instilled into the conjunctival sac showed that there were two types of response one of local distribution and not dependent on nervous activity the other general in distribution and taking place only when the sensory nerves were allowed to function Hence the suggestion was that in this condi tion one was dealing with an axon reflex mediated by the trigeminal nerve similar to those described by Bruce in 1910 as occurring in the conjunctiva and the possibility of this was shown by the effects of sensory stimulation of the cornea

DIATHERMY FOR DETACHED RETINA

Mr C DEE SHAPLAND in a paper on diathermy in the treatment of detachment of retina gave the results of treating 131 cases of retinal detachment by this means at the Royal London Ophthalmic Hospital most of them males He divided the cases into five groups emme-tropes low myopes intermediate myopes high myopes and aphakics In twenty six of the cases there was a detach ment in both eyes nineteen being myopias with an ante cedent detachment in the other eye A history of injury direct and indirect was obtained in 33 3 per cent of the emmetropes in 19 8 per cent of the myopes In this series a retinal hole or holes were found in 80 7 per cent 91 2 per cent being in front of the equator of the globe while in 34 5 per cent the rents were multiple The present method used at the hospital was a modification of the Larsson technique by Weiss to the design of Fran Flynn by which the surface of the sclera was kept moist with distilled water during the actual cauterization so avoiding charring of the scleral surface The distribution of the cauterization depended on the size and shape of the retinal defect and must properly cover the estimated margins of the hole and any thin areas of retina in relation with it Of all the cases operated upon by endo thermic cauterization 43 5 per cent were cured 13 per cent improved There had been notably few complica tions following the procedure For cases of re inal dialysis the objective with each type of opera ive pro cedure was to produce a barrage of scar tissue imme diately behind the rent Mr Shapland considered it had been amply proved that endo herm c caut rization was the most satisfactory method yet devised for the treatment of simple detachment of the retina

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Mr L H SAVIN read a paper showing a relation between cases of herpes ophthalmicus and varicella A series of eighteen cases were dealt with, in three, zoster preceded varicella in contacts in two varicella preceded zoster in contacts, in one varicella and herpes appeared almost simultaneously in contacts Six of the eighteen cases of zoster had previously had chicken-pox Complement fixation and inoculation tests suggested a relation between zoster and varicella Mr Savin thought that here there were operative modified strains of the same parent virus, much like vaccinia and variola, but not identical diseases

BARBERS' COMPANY OF LONDON

A REUNION DINNER

For the first time since the Surgeons separated from the Barbers' Company in 1745 a company of distinguished London physicians and surgeons to the number of nearly fifty dined at Barbers' Hall, on May 11th, as guests of the Master, Mr H O SERPELL On the walls of the council room in which the guests were received hung the various Charters received by the Company, the earliest having been granted by Edward IV in 1461, while in the main hall, above the diners, was the famous painting by Holbein, which depicts Henry VIII bestowing on the then Master and Wardens, in 1540 the Charter given when the Company was reincorporated as the Company of Barber-Surgeons The hall which is in Monkwell Street, Cripplegate was one of the few to escape the Great Fire

In proposing the toast of "The Guests," the Master said that about a year ago the idea came to him that it would be pleasant to give a dinner to some of the medical men of London, in view of the fact that the surgeons had once been members of the Company, and therefore, with the help of his friend Dr Graham Hodgson, the present gathering was arranged He offered all the guests the heartiest possible welcome

Lord MOYNIHAN who responded, said that as a Fellow of the Royal College of Surgeons he was delighted to revisit his ancestral home The barbers and the surgeons first came into contact as the result of a quarrel, the barbers in those far off days finding reason to complain of the incompetence of the surgeons The quarrel so started eventually brought them together, and for more than two centuries they remained the warmest friends When eventually the separation came, it was entirely to the advantage of the barbers for they were left in possession of the property while the surgeons "went out naked into the world with no possessions but the intellectual glory inherited from their ancestors and the Arris and Gale bequests Any feeling of animosity, however, had long since passed away, and the surgeons of to-day were no longer tempted, as they might have been two hundred years ago to "bury the hatchet" in the cranium of the Master

Lord HORDER then proposed the toast of "The Worshipful Company of Barbers of London," and in the course of an amusing speech expressed regret that he had not had the opportunity, which appeared to have been Lord Moynihan's, of preparing a memorable discourse He congratulated the Master and the Company, and expressed the pleasure of all present at meeting in their interesting home in the heart of the City of London Mr FRANCIS WESTON Past Master who responded, gave an outline of the history of the Company From the earliest times he said its members were attached to the Court, and under Henry VIII following the dissolution of the monasteries were made responsible for the health of the City of London which, once the monks had gone, possessed no hospitals and no arrangements for the care of the sick and poor The Company still possessed a book, dating from the time of Henry VII, which must be one of the oldest codes of medical etiquette in the world and which provided that none should "supplant another's cure" or take his patients away from him, or allow a patient to die without calling in another member to see and advise on the case For an infraction of the latter rule the great Harvey was brought before the Master and Wardens and publicly reprimanded When the separation came in 1745, and a Worshipful Company of Surgeons was formed with a Master and Wardens, the Barbers offered to sell them all the surgical books they had left behind for £15, but they refused to have them if they could not get them for nothing In the end their Company dwindled to a Master and a Clerk, the Master was bed ridden and the Clerk ought to have been in gaol In the year 1800 however, the Act was passed which gave the glorious Royal College of Surgeons the opportunity to break away from the old traditions

During the course of the dinner the massive silver loving-cups were passed round, and the surgeons present had many opportunities of admiring the artistic and other treasures they had lost by their separation from the Company nearly two hundred years ago

Among others present were Dr Brunton Blaikie Mr W R Bristow, Sir John Broadbent, Mr L Bromley, Dr Maxwell Chance, Dr A Landale Clark, Dr H Devine, Dr H Devitt, Dr J A Drake, Mr T P Dunhill, Mr A Tudor Edwards, Mr Arthur Evans Mr H A T Fairbank, Professor G E Gask, Mr W Gilliatt, Sir Harold Gillies, Dr H Graham Hodgson, Dr N G Horner, Dr F D Howitt, Dr J F Jennings, Mr J P Lockhart-Mummery, Professor J Woodburn Morison, Dr N J McCaskie, Dr G G Macdonald, Dr W J McKeand, Dr Desmond MacManus, Dr Nathan Raw Mr C Lane Roberts, Mr H G Bedford Russell Dr J A Ryle, Dr G B Scott, Dr B Shires Mr E G Slesinger, Dr Theodore Thompson, Mr Wilfred Trotter Professor G Grey Turner, Mr C P G Wakely Dr R H Wagner Dr Cecil Wall (Master of the Apothecaries Society) Sir John Weir, Sir William Willcox, and Sir Russell Wilkinson

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British Medical Journal

SATURDAY, MAY 20th, 1933

A RETURN TO PRINCIPLES

Many doctors appear to be convinced of the truth of the children's rhyme For every evil under the sun there is a remedy or there is none and in the attempt to find the remedy zeal not seldom outruns discretion The whole hearted enthusiast is not content with finding one remedy for each evil With the maximum of hope and the minimum of caution he puts all his therapeutic eggs into one basket one cure for all ills But as Montaigne said 'Our Physitians never remember that *he who will provide for all provideth for nothing* The belief in a panacea dies hard Indeed at the present time if we are to judge by the activities of various purveyors of healing agents to the public either directly or through the medical profession this belief shows no sign of dying At the other end of the scale we find not one but many remedies advocated for the same disease And a plurality of treatments is especially to be found in those diseases which are incurable or which respond only to the effects of time It is worthy of note that the present multiplicity of drugs and new forms of treatment for disease coincides with a growing concern on the part of the profession with health This concern is manifested not only in sanitary science but in the problems of proper diet of correct posture and of mental hygiene More attention is being paid to the question of healthy living

The physician although conscious of his duty to promote the cause of good health is by necessity much preoccupied with what Lord Horder describes in his annual oration to the Medical Society of London (published in our opening pages this week) as the disharmony we call disease and later the deviations from the physiological that constitute disease When it is a question of identifying a physiological disharmony the medical man has at his disposal a well-tried method upon which he can rely The first thing in medicine he has been taught is diagnosis But in the treatment of disease method is still sadly lacking Therapeutics is still largely empirical and therefore on an insecure scientific foundation If it were not so the quack healers would not flourish as they do nor would there exist so much divergency of opinion on treatment among medical practitioners themselves There is be it noted, little dispute as to the correct methods of diagnosis For those—and they must be many—who feel the sands of therapy shifting under their feet Lord Horder's oration will come as a welcome stabilizing influence His scepticism is not a barren scepticism

When we think carefully on the question he says "most of our treatment and some that are quite successful are matters of expediency they are not matters of right or wrong This arises from the fact that it is always Nature that cures and not we Later on he remarks I am sceptical of tendencies that dissociate themselves from known physiological principles Throughout the oration will be found this insistence on physiology and on the need for a return to principles There is no doubt that in the not very remote past the physician was so to speak educated too exclusively in the post-mortem room There is also no doubt that the post-mortem room has a salutary educative influence but a preoccupation with the gross end products of a disease process must tend to obscure the real nature of disease—namely a deviation from physiological harmony It may be that the cumulative force of the morbid anatomy approach to medicine has been responsible for that incursion of the mass-man' and that lust for direct action which Lord Horder deplores A conception of disease in terms of macroscopic pathology is apt to lead to large scale therapeutics

The physician faced with a patient who is importunate that something should be done is often in a dilemma He may know that in order to retain his patient's confidence he must prescribe drugs fully aware of the truth of Lord Horder's saying The trouble is no doubt that we know so little about the way in which drugs act He may then continue to employ one after another all the various therapies that are at his disposal There are nowadays so many things that can be done—and the layman is well aware of them—that in the absence of some guiding principle the practitioner must often feel therapeutically embarrassed And if we read Lord Horder aright this guiding principle should be physiology The questions to be asked are

To what extent will the remedies advocated in such and such a disease help to restore physiological equilibrium? and Are the claims made for this drug based on sound scientific evidence It is however not questioned that there are many excellent remedial measures whose usage is sanctioned not by science but by experience But the medical man should be on his guard against the blandishments of the chemist and against the specific anti-product which is held out as such an effective cure for so many ills A firmer and more critical attitude is needed

Science has thrown so many things into the melting-pot of practical medicine that it is becoming more and more difficult for the working doctor to distinguish good metal from bad Lord Horder towards the end of his oration makes a suggestion rather like one that was put forward a short time ago at a meeting of the British Association I sometimes wonder he says if it would help us to close down our laboratories for a while to hand over the wards to our juniors and to get together and try to see where we are

MECHANISM OF GALL-STONE FORMATION

On its technical side the science of surgery may seem almost to have reached finality, but inasmuch as it concerns itself with the origins of disease requiring surgical intervention it has far to go. A consideration of Mr. D. H. Patey's account (printed at page 866) of past and current beliefs about the mode of formation of gall-stones prompts the reflection that most conditions for which the abdomen is opened are fundamentally unexplained. A similar necessarily inconclusive review might be written on peptic ulceration, and a more slender one—since this subject excites strangely little curiosity—on appendicitis. The problem of cholelithiasis has been by no means neglected, but it has been seriously confused by unwarranted deductions from clinical or experimental data. One aspect of it in which the truth appears to have been obscured in this way is the relation of cholesterol metabolism generally to the cholesterol content of the bile, a subject recently reviewed by Dostal and Andrews.[1] A method of experimentation which has been believed to furnish evidence on this point is the estimation of cholesterol in bile drained from a fistula while the fat content of the diet is varied; this method disregards the fact that in the absence of bile from the intestine fat cannot be absorbed. Conclusions have been based on estimations of cholesterol in bile obtained by duodenal intubation, regardless of the fact that the intestine itself secretes sterols which will vitiate such results, and other observers have ignored the possible effect of starvation, which was shown by Rothschild to increase the cholesterol content of the bile threefold. In more recent years evidence has come from several directions that the cholesterol content of the bile is not dependent on that of the blood or on the composition of the diet. Dostal and Andrews have satisfied themselves of this by experiments in dogs with two-way fistulas (which are not open to the objection already mentioned), and by a study of the bile in a patient with a biliary fistula who received sufficient bile salt by the mouth to permit fats and cholesterol itself to be absorbed. If this proposition be accepted it can no longer be argued that there is any relation between gall-stones and conditions, such as pregnancy, in which there is hypercholesterolæmia; and Gross's observation, referred to by Mr. Patey, that gall-stones are no more frequent in married than in single women is only what would be expected.

Nevertheless the problem of gall-stone formation in man is the problem of cholesterol precipitation, and if the absolute quantity present in the bile is not a controlling factor another explanation may be found in the conditions governing its solution. Cholesterol is totally insoluble in water, in bile it is held in solution by the bile salts, and a diminution in the latter beyond an ascertained point must be followed by its precipitation. C. L. Newman,[2] working in Aschoff's laboratory, has made the important observation that the bile salt/cholesterol ratio is profoundly disturbed in cholelithiasis. In the bile obtained post mortem from gall bladders containing stones the bile-salt content was markedly reduced, and a similar reduction was observed in a variety of diseases of the liver. Andrews,[3] who has also studied more intimately the mechanism by which the bile cholesterol is held in solution, confirms Newman's observations. In the pooled bile from thirty gall bladders containing stones, obtained post mortem, the bile salt content was 247 mg. per cent., and the cholesterol content 400 mg. per cent., this gives a ratio of 0·6 in contrast to the normal figures of from 20 to 30; a rather less strikingly reduced average ratio (3·7) was obtained in twelve specimens of bile from stone-containing gall-bladders removed at operation. A diminution of the bile salts to a point at which all the cholesterol cannot be held in solution is clearly a factor in gall-stone formation; the next question is whether this abnormal bile is secreted as such by the liver, or whether the bile-salt content is reduced by absorption in the gall-bladder. Newman's observations suggest that the liver may be at fault, and Andrews[3] furnishes other examples of damaged livers which secreted a bile with a low bile-salt content, including a case in which the liver bile itself contained cholesterol crystals. It has been shown repeatedly by other workers that degrees of liver damage insufficient to produce symptoms will bring about a marked lowering of the biliary excretion of bile salts. Andrews and his co-workers, however, claim to have proved that the fault may also lie in the gall-bladder. Its normal mucosa absorbs only water and salts, but if it is experimentally infected (a result invariably secured by puncture after tying the cystic duct) bile salts are absorbed by the "inflamed and denuded wall," while the cholesterol remains. This crucial experiment clearly needs careful repetition, if it can be verified the exact relation between infection and gall-stone formation may well have been made clear. The capacity of the gall-bladder mucosa for excretion and absorption is still exceedingly obscure, as is the source of the cholesterol deposits in "strawberry" gall-bladder. Wilkie and Doubilet[4] maintain that cholesterol may be either excreted or absorbed by the mucosa according as the blood-cholesterol bile cholesterol ratio varies, a conclusion very difficult to accept. Andrews and his co-workers[5] deny that a normal gall bladder can excrete cholesterol, an inflamed mucosa, however, furnishes an exudate with a high cholesterol content in both serum and cells, a factor which may easily vitiate results, even leakage of serum or blood after puncture may affect the results of bile cholesterol estimations.

Although it is from this series of mainly biochemical studies in America that new light on the problem has chiefly been obtained, the infective aspect has not been altogether neglected. Interest centres chiefly on the source of infection and the route by which it reaches

[1] *Arch. of Surg.* 1933, xxvi, 258.
Beitr. z. Path. Anat. 1931, lxxxvi, 187.

[3] *Arch. of Surg.* 1932, xxv, 796.
[4] Ibid. 1933, xxvi, 110.
[5] Ibid. 1933, xxvi, 382.

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the gall bladder the main alternative hypotheses are those of Rosenow and A L Wilkie who postulate a distant focus and haematogenous infection and the more natural assumption that the source is the bowel and the route lymphatic or direct via the ducts An unprejudiced study of this question *de novo* conducted on an adequate scale and by methods above all criticism appears to be necessary even to determine the nature and frequency of demonstrable infection in cholelith asis On the experimental side a recent contribution is that of Patey and Whitby [1] who determined the distribution of *Cl welchii* at varying intervals after injection into the systemic and portal circulation of the rabbit Their chief conclusion is that bacteria may reach the gall-bladder from the portal vein having presumably traversed the liver and eventually returned via the cystic artery the liver is therefore not an efficient bacterial filter and the bowel may hence be the ultimate source even of a haematogenous infection Although it is difficult to understand why this organism should be recoverable from the liver and from the blood five minutes after introducing a calculated inoculum of only twenty-five individual bacteria into the circulation these results may be accepted as indicating the freedom with which bacteria may circulate and therefore perhaps the ultimate certainty that an organ predisposed to infection will somehow be attacked That predisposition by stasis or otherwise is a predominating factor the results of other experimenters leave no doubt

THIRD-GENERATION SYPHILIS

Authorities in this country have for the most part ignored the likelihood of the transmission of syphilis to the third generation or some (like Sir Jonathan Hutchinson) have emphatically denied the possibility modifying their opinion but slightly when the discoveries of the treponema and the Wassermann reaction made the matter no longer one of theoretical speculation The French syphilologists on the other hand have always been enthusiastic to explain a hare-lip for example or even a hernia in an infant by postulating a syphilitic grandparent This has no doubt antagonized many British workers but a recent careful marshalling of the evidence by Dr David Nabarro [2] with personal observations of sixteen families with undoubted syphilis in three generations of six more in which syphilis was probably present and a further seven in which it was possibly present should serve to settle the matter for those who are prepared to be swayed by scientific evidence The French authority Fournier has laid down certain rigid conditions for determining the possibility of the transmission of syphilis to the third generation including *proof of syphilis in the grandparent* evidence of early inherited syphilis in the parent and child and also evidence that syphilis had not been acquired by either of the parents This was however written in 1891 and as Dr Nabarro points out detection of undoubted stigmata of congenital syphilis in a parent (usually the mother) of a syphilitic child makes the investigation of the grandparents not always essential although in the course of his investigations Dr Nabarro has not infrequently discovered that a grandfather had died of general paralysis of the insane—a point now more acceptable as confirmatory than it would have been in Fournier's time The probability of a woman with congenital syphilis transmitting the infection to her offspring depends almost entirely upon the possible duration of the disease in such a woman It is known that a woman with acquired syphilis can give birth to syphilitic children for twenty or more years and there seems to be no reason why the treponema should not remain transmissible for at least an equal period in the infected offspring Dr Nabarro has used strict rules to guide his investigations For undoubted third-generation cases he includes those in which a positive Wassermann reaction was found in grandparent parent and child and also cases in which the mother has definite stigmata of congenital syphilis such as typical Hutchinsonian teeth rhagades and signs or a history of interstitial keratitis In his group of probables he includes those in which there is obviously a congenitally syphilitic mother and a child with an early suggestive history but a negative Wassermann reaction If this history is too vague for certainty the case is classed as 'possible' In a very valuable addendum full clinical details of all Dr Nabarro's cases are included so that the validity of his classification and conclusions can be easily tested In view of the number of instances presented he justifiably poses the question why other observers have not come across similar cases He attributes this first to the lack of experience necessary to detect finer points in making the diagnosis of congenital syphilis in the mother of an infected child secondly to the failure to obtain a detailed enough history of the parents of the mother thirdly to the lack of appreciation which unfortunately is all too common among clinicians that one negative blood test on mother or child does not necessarily preclude syphilis and fourthly to the fact that his experience has been gained almost entirely among the hospital class where inadequate treatment of acquired syphilis leads to the possibility of remote transmission The importance of the subject is out of proportion to the comparative infrequency of such cases as Dr Nabarro has described for one of the unsolved problems of syphilis is the incidence of congenital infection and the best means of dealing with a type of malady which is eminently preventable A careful search for third-generation cases would be a step towards detecting more untreated cases in the community

[1] *Brit Journ Surg* 1933 xx 589
[2] *Brit Journ Venereal Dis* 1933 ix 1

INTERNATIONAL PAEDIATRIC CONFERENCE

The third International Paediatric Congress will be held this year in London at the British Medical Association's House Tavistock Square on July 20th 21st and 22nd under the presidency of Professor G F Still H R H the Duke of York accompanied by the Duchess will open the congress and welcome the members on Thursday July 20th at 10 a.m. in the Great Hall of University College Gower Street The subjects for general discussion at two of the morning sessions are (1) the nature of allergy and its role in diseases of children and (2) the prophylaxis of milk-borne diseases

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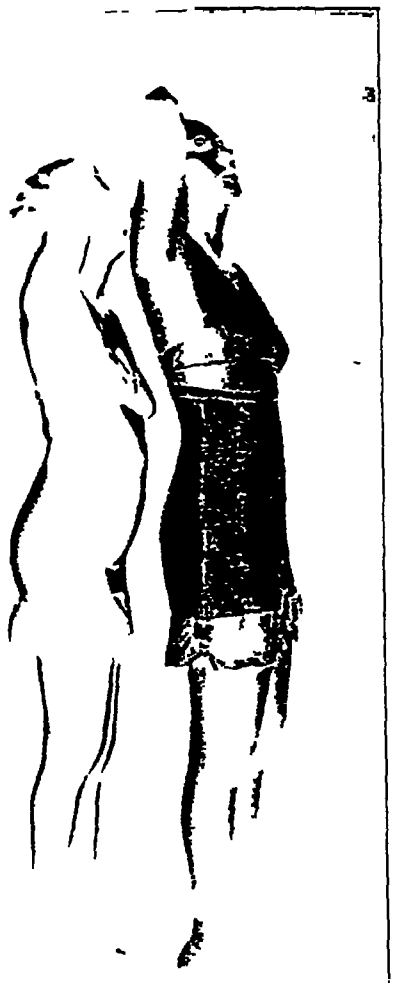
HOSPITAL LIGHTING

At the Illuminating Engineering Society's meeting recently Mr Charles Raphael, the consulting engineer to St Bartholomew s Hospital, read an interesting paper on hospital lighting One of the points he made was that in shop-front and workshop lighting cost is negligible as compared with the value of brilliancy, but in the hospital it is otherwise thus at St Bartholomew's, with strictest economy, the cost last year was £1,500 Ward lighting must be restful, therefore of low standard yet cheerful and without flatness An average illumination of 1 8 foot-candles is ample This, in Mr Raphael's experience is best obtained by the "old-fashioned" arrangement of hanging pendants suitably spaced along the centre of the ward These must hang low enough for easy cleaning, which means that no powerful lamps can be employed, otherwise there would be glare in the eyes of the patients in bed A maximum height of 8 feet with 100-watt opal lamps and suitable satin flint shades, secures this Also there is a separate light for the nurses table and the poison cupboard Such a low standard of lighting is unsuitable for reading To meet this need there is a bracket light for each bed with a 25 watt pearly lamp and shade, giving 3 7 foot-candles at the head of the bed and 2 at the foot—a sufficient light for reading and general examinations A standard is provided for each ward, mounted on a large bar with big rubber-tyred wheels on ball bearings this lamp gives a light of 47 foot-candles For an examination of cavities there is a hand lamp with a local illumination of 200 foot-candles There are arrangements for dimming the lights at night In this hospital there are two sources of current, so that such an arrangement is easily provided by means of a step down transformer on one circuit When this is not possible Mr Raphael recommends the use of double-filament lamps controlled by a two-way-and-off switch Operation theatre lighting has been transformed by the invention of the shadowless lamp Formerly the surgeon was content with a number of lights above his head This method is still used in small hospitals it does away with the need for separate general lighting of the theatre The originator of the present-day shadowless operating theatre lantern was Professor Verain, and the French lamp known as the "scialytic" was made on the principle introduced by him, and is still probably the most popular By an arrangement of lenses and mirrors within a big shield a 100-watt lamp is made to give a cool hollow cone of brilliant light Tests with a good lantern showed that focused for ordinary working conditions it gave 450 foot-candles, and with the head of the observer interposed the illumination was never less than 300 It is of the utmost importance that the lantern should be of large size , 36 inches diameter is satisfactory, and there is now a well made English lantern of this size The shadowless lantern requires separate general lighting, and Mr Raphael showed how this may be obtained In daylight the white-walled theatre has often a better general lighting than table lighting, so that the lantern may need to be used in daylight Glare from towels and sheets is noticeable with these high-power lights, so that at St Bartholomew's green towels are in use For medical schools a most ingenious adaptation of the shadowless lantern had been devised This is 10 feet in diameter and has a 5,000-watt lamp Within the hollow cone of light there is an optical attachment, and through this and by an arrangement of mirrors and prisms the image of what is being done at the operating table is displayed to the students in the next room, three times its natural size and in its actual colours, on a screen one metre in diameter

PROPHYLAXIS OF MALARIA BY DRUGS

Professor C Strickland and Dr D N Roy have carried out a series of experiments to determine the prophylactic action of drugs in the prevention of malarial infections in man [1] Their purpose was to determine, if possible, the amount of protection afforded by plasmoquine and quinine against the entry of sporozoites injected by the bites of mosquitos They refer to the reports by James, Nicol, and Shute (1931) and Swellengrebel and de Buck (1931) The former authors apparently obtained complete success against infection by the administration of 0 06 gram of plasmoquine before, and daily for six days after, the bites of mosquitos infected with *Plasmodium vivax* Twelve out of thirteen of Swellengrebel and de Buck's cases that were given 0 03 gram of plasmoquine twenty-four hours before the infecting bites developed malaria Strickland and Roy tested quinoplasmine, quinine bisulphate, and quinine bihydrochloride on volunteers by administering to them a "prophylactic" course before feeding on them *Anopheles stephensi* infected with *Plasmodium falciparum* or *P vivax* After the prophylactic course no other medicine was given unless fever developed and parasites were found Quinoplasmine, given in various ways before infecting mosquito bites, did not prevent the development of malarial fever, and, further, quinine sulphate and quinine bihydrochloride administered before the bites of infected mosquitos failed to protect individuals from fever The authors conclude that these observations and the massive amounts of the drugs used by them indicate that for all practical purposes neither plasmoquine nor quinine sulphate nor quinine bihydrochloride has any effect on sporozoites It is considered that so far no prophylactic drug action against sporozoites has been demonstrated, and that

[1] *Parasitology* March 4th, 1933 [illegible] No 1



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effects hitherto observed must be considered to be a therapeutic action of the drugs on the asexual development of the parasites

ANAEMIAS OF EARLY CHILDHOOD

The *Archives of Disease in Childhood* is publishing a series of ten papers by Professor Leonard Parsons and his colleagues in the department of diseases of children at Birmingham University entitled Studies in the Anaemias of Infancy and Early Childhood The subjects dealt with are as follows (1) introduction by Professor Parsons (2) effect of yeast on nutritional anaemia in the rat (3) anhaematopoietic anaemias (deficiency diseases of the erythron) nutritional anaemia and the anaemias of prematurity scurvy and coeliac disease (4) haemolytic (erythronoclastic) anaemia of the neo-natal period (5) haemolytic (erythronoclastic) anaemia of later infancy and childhood (6) anaemia in mother and child (7) monocytosis in myelosis (8) leukaemia (9) reticulo endotheliosis in severe anaemia and (10) the haematocrit in clinical medicine The series provides an authoritative restatement of the subject in the light of the results of modern research on blood diseases The first three papers appear in the current (April) issue Nos 4 and 5 will be published in June and the rest in subsequent numbers In addition Dr Helen M M Mackay is contributing three articles dealing with nutritional anaemia in infancy The second of these to appear in June contains a revision of her previously published standard haemoglobin curve for the first year of life

VENTILATION IN FACTORIES

A second edition[1] of the Welfare Pamphlet on the ventilation of factories and workshops has been issued by the Home Office It marks a considerable advance on the first edition published in 1920 and is illustrated with a large number of useful diagrams and reproduced photographs The introduction lays stress on the importance to physical health of air movement and discusses standards of ventilation and cooling power The section on natural ventilation which is much too brief is misleading however in that it figures and describes—apparently with approval—a building with a double-sided ridge louvre extending the whole length of the roof The larger portion of the pamphlet is devoted to mechanical ventilation It describes various types of fan in detail but shows a curious lack of balance by referring on several occasions to the extraction of air from factories by means of fans at or near the floor level Such a form of extraction is very seldom used and should be avoided if possible as it inevitably causes a considerable draught at foot level In its opening section however the pamphlet rightly deprecates the discomfort induced by hot head and cold feet The subject of heating systems is barely mentioned and we are told that the Home Office has in preparation a further pamphlet on industrial heating It seems a pity that it was not issued in conjunction with the present publication as it is impossible to discuss ventilation adequately without reference to heating As an example of this lack of co-ordination we are told that the ducts of a plenum ventilation system should terminate just overhead , yet any reference to the fact that in winter the temperature of this plenum air is about 100° F could not fail to suggest that the position indicated for the air discharge is incorrect

[1] Welfare Pamphlet No 5 Second edition Ventilation of Factories and Workshops London H M Stationery Office 1933 (1s net.)

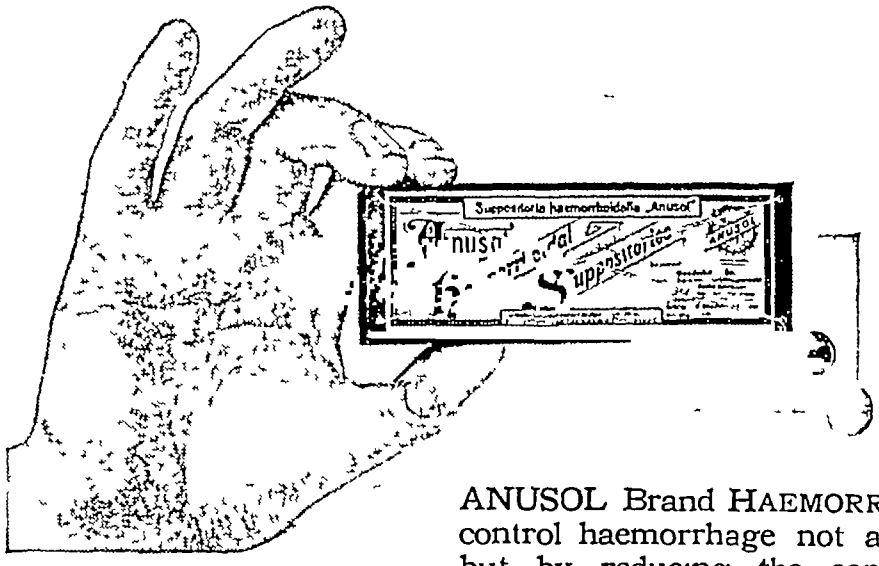
W E. DIXON MEMORIAL

The executive committee of the Dixon Memorial Fund decided that the fund should be closed on May 1st, and has called a meeting of the subscribers to be held at the rooms of the Royal Society of Medicine 1 Wimpole Street on Thursday June 1st at 5 p m The total sum subscribed is £718 13s and after deducting expenses the amount available is nearly £695 The committee will recommend to this meeting that the fund be devoted to the establishment of a Dixon Memorial Lecture which should be delivered biennially or triennially on some subject of therapeutic interest It will further propose that the trusteeship of the fund be vested in the Royal Society of Medicine and that the council of the Section of Pharmacology and Therapeutics be requested to undertake the selection of the lecturer on each occasion

HOSPITAL ALMONERS

The annual report for 1932 of the Institute of Hospital Almoners shows that the number of hospitals instituting an almoner's department has increased despite the financial stringency indicating the economic value of this work For the first time in the history of the Institute the supply of trained almoners has temporarily outrun the demand This is thought to be largely due to the fact that hospital social service as a profession for women has received much publicity of late To the five local committees in university centres existing at the end of 1931 a new one came into being (in Glasgow) last year Affiliation has been established with the Victorian Institute of Almoners in Australia six trained almoners are now working in Victoria and there is one in Tasmania Women trained by the British Institute are also at work in Cyprus, Stockholm and Paris Five certificated almoners who have taken special training in mental health are engaged in psychiatric social service in London hospitals It may be recalled that an account of the progress of the Institute appeared in our issue of November 19th 1932 (p 933) in connexion with the publication by the Hospital Almoners Association of a volume describing this line of work in preparation for the International Conference of Social Workers at Frankfort A grant from the Institute rendered possible the publication of a report of an investigation by trained almoners into the predisposing social factors in chronic rheumatism among women

The Croonian Lectures before the Royal College of Physicians of London will be given by Professor Edward Mellanby F R S on June 8th 13th and 15th at 5 p m His subject is 'Nutrition and Disease the Interaction of Clinical and Experimental Investigations'



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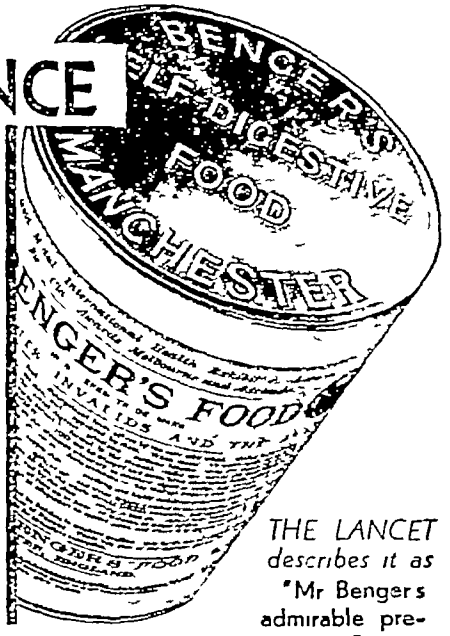

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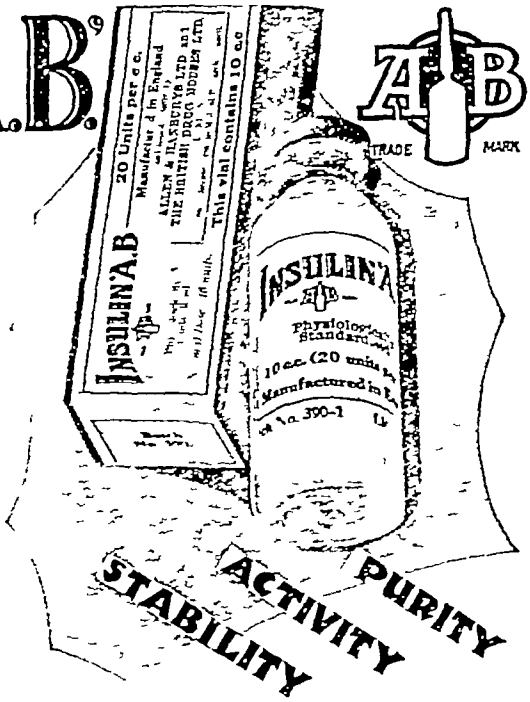

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insured patients in the clinic the entire ante natal care of insured persons will fall into the lap of local authorities and their medical officers I do not for a moment suggest that this would be a disaster it is possible that it may be the ultimate development On the other hand I wish general practitioners to be given every chance to co-operate Should they do so completely and efficiently this would be a better arrangement

Exception must be taken to the manner in which certain local authorities are developing their maternity services

The following advertisement appeared in the *Glasgow Herald* in February of this year

BURGH OF AND (SCOTLAND)

Applications are invited by the Town Council of the Burgh of and from duly qualified Medical Practitioners (Male or Female) for the position of Resident Medical Officer Maternity and Child Welfare Department Candidates must have at least three years post-graduate experience of medical practice and possess the D P H or similar qualification Special experience in Obstetrics or Gynaecology and of Diseases of Children and of Maternity and Child Welfare Work is essential

Duties include obstetrical work in a maternity hospital the conducting of ante-natal clinics and child welfare consultation

Salary £350 per annum rising by £25 annually to £450 with board and residence in the maternity hospital

It will be observed according to the advertisement that obstetrical training is not essential but that a D P H is essential Surely for appointments of this nature it is of *primary* importance that the medical officer appointed should have a wide training in obstetrics and of comparatively little consequence that he should have a D P H Young graduates well trained in obstetrics who ultimately intend to take up obstetrics and gynaecology as a specialty are anxious to secure such appointments but they cannot possibly give up the time necessary to take a D P H The salary offered is quite substantial and would be willingly accepted as adequate remuneration by young graduates well qualified in obstetrics No progress in improving the maternity service of the country can result if local authorities pursue the policy here indicated

The Departmental Committee and all other *ad hoc* committees who have reported on maternal mortality have definitely expressed the opinion that the person responsible for ante natal supervision should be responsible for attendance during labour Many medical officers of ante natal clinics under local authorities never take part in intra natal supervision It is the general practitioner who is called out to assist the midwife should a difficulty arise *It is obvious that either medical practitioners should be associated with the clinics or the officers of local authorities should go to the assistance of midwives* A most unsatisfactory position is being created in many localities which cannot possibly be to the advantage of pregnant and parturient women The country will not wake up one morning and find itself— in possession of a national maternity service without knowing quite how we got it as Watts Eden[1] suggested in a recent lecture delivered to the Cardiff Division of the British Medical Association The country will only secure a satisfactory midwifery service when all the agents concerned have their individual duties defined and their activities centred in maternity hospitals and ante natal clinics

Various attempts have been made in recent years to persuade general practitioners to co-operate with local authorities and carry out ante natal care in and from the clinic In Hampshire Dr H Leslie Cronk county M O H has introduced a service very closely resembling the one here suggested The scheme as outlined provides that practitioners duly qualified for the post (qualifications are defined) will serve as medical officer in rotation normally for twelve months at a time The period of duty will terminate on December 31st Unless otherwise decided by the practitioners of the area the order in which the service will be given will be determined alphabetically Any general practitioner appointed will be expected to attend punctually at the time and place appointed and to make such arrangements that his private work will not interfere with his obligation to the county council The fee payable to a general practitioner for each session of not more than two hours will be one and a half guineas

The service established in Cumberland by Dr F H Monson[2] M O H for the county is radically different in this respect that the ante natal care is not necessarily carried out in the clinic The arrangements for provision of additional midwives early examination of patients by doctors routine supervision by midwives accouchement outfit are all in accordance with modern ideas It would appear that this arrangement is probably more suitable for certain rural areas In Burnley a scheme has been initiated where the practitioners who wish to do ante natal work do it in and from the clinics of the local authorities This I maintain is the best arrangement in urban areas more especially in densely populated industrial centres

W H F Oxley[3] refers to the matter and regrets that the scheme in Hampshire provides for attendance at the clinic and that no provision is made for attendance at the doctor's surgery Later in his paper he states in referring to the clinics that they are to be staffed by midwives and general practitioners Now *How does the East London Hospital secure such wonderful results?* The excellent results are obtained because patients attend the clinic of the hospital and are carefully supervised there by midwives If they do not or cannot attend they are visited in their homes and if any abnormality arises Dr Oxley and his staff are consulted if the complication of pregnancy or labour is deemed serious the patient is transferred to the hospital *This is precisely the service I am advocating for the country*

Dr Oxley[3] returns to this subject in a later communication Many local authorities and medical officers of health however appear to take an exaggerated view of the usefulness of publicly provided clinics and are blind to their limitations and disadvantages' Of course there are disadvantages but the advantages of the clinic in respect to insured persons far outweigh the disadvantages in large centres of population

MIDWIVES AND ANTE NATAL CLINICS

The remarks made here deal only with the relation of midwives to ante natal clinics

The most authoritative pronouncement regarding the place of the midwife in a maternity service of this country is contained in the Report of the Departmental Committee on the Training and Employment of Midwives (1929) In the service outlined the midwife is to undertake the routine ante natal intra natal and post natal supervision of patients entrusted to her care or as the committee stated (para 9)

> The midwife as the person responsible in the majority of cases for the care of the mother throughout pregnancy confinement and the puerperal period is the one upon whom the main burden would rest In all such cases there should be available the services of a doctor with certain well-defined duties towards the mother to whom the midwife should be able at all times to look for assistance when she is faced with difficulties beyond her ordinary competence and skill and an obstetric specialist who would be called in by the doctor to deal with exceptional emergencies

This policy has the support of the British Medical Association and the imprimatur of the Departmental Committee on Maternal Mortality and Morbidity (Final Report p 34)

Prima facie this arrangement is simple and rational because the essence of ante natal care is keeping a constant look out for the slightest disorder This meticulous attention to and supervision of pregnant women is a type of work peculiarly suited to intelligent and highly trained midwives As much of it is of a non medical character midwives under supervision are better qualified than doctors for routine ante natal care To put it very simply the principle should be that midwives mother their patients during pregnancy

It must be clearly understood however that this is throwing an enormous responsibility upon midwives That the policy is safe if conditions are satisfactory is proved by the results secured by the Netherlands and by certain services in this country—for example the General Lying-in Hospital York Road and the East End Maternity

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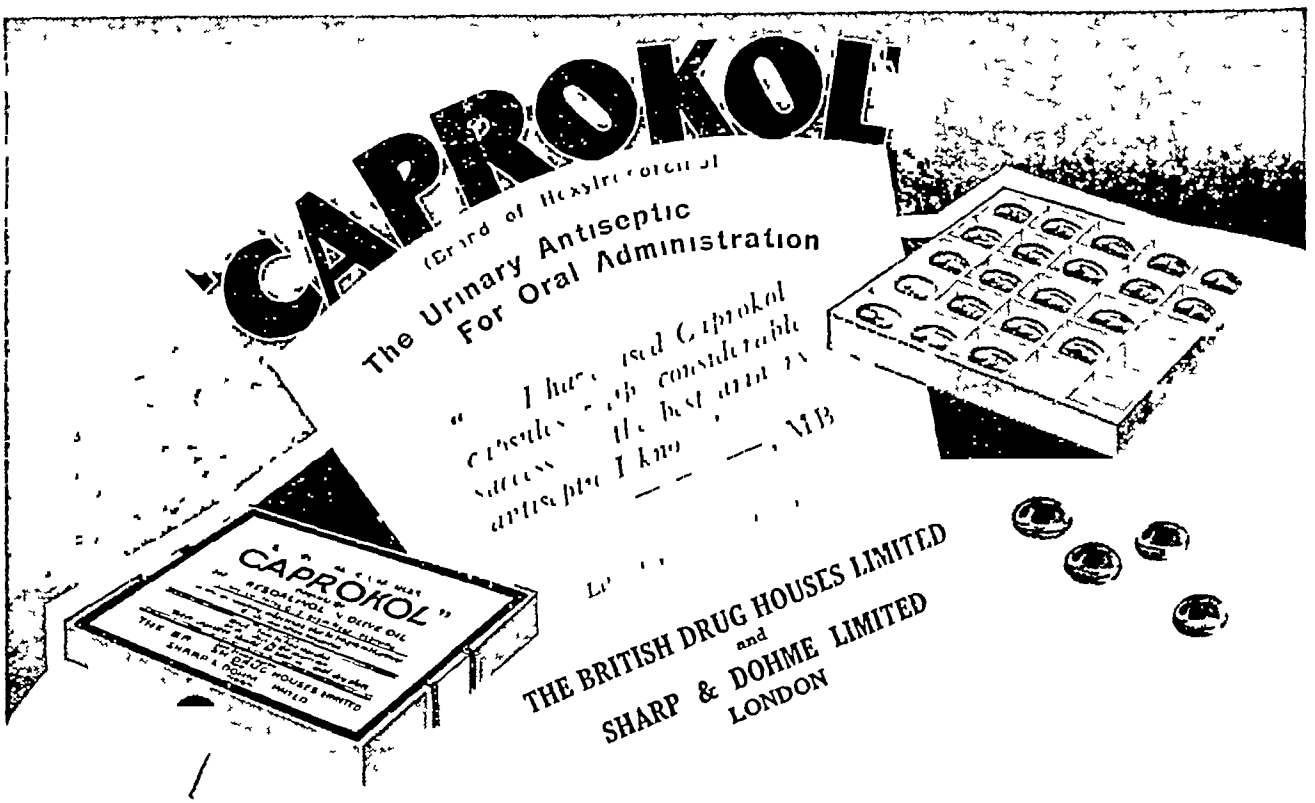

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Hospital London, in both of which institutions the routine work (domiciliary and institutional) is conducted by midwives in training under supervision What is necessary for the country generally is to organize the midwives' service on a similar basis, with possibly not quite so much elaboration as pertains in Holland

If midwives are to be made responsible for routine ante natal and intra natal care they must be (1) more adequately trained, (2) under the jurisdiction of some authority, and the natural authority is the local authority Special conditions should be laid down for midwives desiring to practise on their own account

The reason for attaching so much importance to associating the midwife's work with the ante-natal clinic is that all her work would be under supervision She would see her patients there when they can visit the clinic, her obstetric outfit would be kept in the clinic, and the case sheets or records of the patient's health would be preserved in the clinic She would be the patient's health visitor throughout pregnancy Should it be necessary for the patient's doctor to see the patient she would arrange accordingly In the event of a patient having to go to a hospital she would accompany her there By this arrangement the standard of her work would be kept at such a high level that it would be hardly necessary for her to take revision courses

I was particularly pleased to notice a statement recently made by Dame Janet Campbell[6] to the following effect But there is a growing opinion that she would do her work better and under more comfortable conditions if brought definitely within a municipal or nursing scheme, as indeed is already the case in county districts" This is a considerable step forward The next and final step is to associate the midwives with the ante-natal clinic

Organization and Staffing of Ante-natal Clinics

The organization and staffing of welfare centres is fully outlined in "A National Maternity Service"[7] (paras 44 to 51 and 64 to 76) which the writer proposed It is there suggested

1 They are to be the centres for routine ante natal care
2 Each is to be in liaison with a particular maternity institution
3 The routine ante natal care by midwives is to be carried on in and from these clinics
4 The ante natal care with which the medical practitioner is more specially concerned is to be undertaken in and from the clinic The final examination of the patient (month after delivery) is to be carried out in the clinic and the final note on her condition inserted in her case sheet which should be kept in the ante natal clinic
5 The domiciliary service for women in labour is to be directed from the clinic where the midwives who will be doing the bulk of this particular work will keep their obstetric outfit and have it duly kept in order as is done in the domiciliary services of all maternity institutions
6 Accouchement outfits for patients may, if this is the most suitable arrangement for the locality be stored and distributed from the clinic
7 [illegible] record of all patients are to be preserved [illegible] in the clinic
8 [illegible] visits of health visitors home helps and other [illegible] to be directed from the clinic

With this arrangement the whole maternity service is [illegible] into alignment—the institutions for patients requiring [illegible] treatment ante-natal clinics of these institutions for ordinary work and in large cities and towns [illegible] *consultative purposes* the welfare clinics for the [illegible] supervision of expectant mothers, the domiciliary [illegible] associated with these clinics for the supervision [illegible] women in labour The economic advantages of this [illegible] are obvious

References

[illegible] *Medical Journal* March 11th 1933 p 400
[illegible] November 1st 1930 p 795
[illegible] *Medical Journal* October 18th 1930 p 649
[illegible] January 3rd 1931 p 6
[illegible] January 14th 1933 p 77
[illegible] November 26th 1932 p 962
[illegible] *Soc Inst* 1931 In No 4 *Lancet* August 15th, 1931 p 367

Ireland

Regius Chair of Surgery

Sir Arthur Ball, Bt, has been appointed to the regius professorship in surgery at Trinity College, Dublin in succession to the late Sir William Taylor The new professor is senior surgeon to Sir Patrick Dun's Hospital and examiner in surgery at the Royal College of Surgeons in Ireland He is a grandson of Robert Ball, LL D (1808–91) the Dublin naturalist, a nephew of Sir Robert Ball F R S (1840–1913), the astronomer, and the eldest son of Sir Charles Bent Ball (1851–1916), honorary surgeon to the King in Ireland, who for many years occupied the chair of surgery to which Sir Arthur now succeeds

Medical Registration Council

At the May session of the Medical Registration Council held in the office of the Council, 35, Upper Fitzwilliam Street, Dublin, there were present the president Dr Denis J Coffey, Dr James N Meenan, Dr Henry F Moore, Dr Stephen Shea, Dr A Francis Dixon Dr Edward Magennis, Mr R Atkinson Stoney, Dr T Gillman Moorhead, Dr Robert J Rowlette, and Mr William Doolin The registrar, Miss Hayes, was in attendance Among the business dealt with was the appointment of Dr Henry F Moore to be a member of the Therapeutic Substances Advisory Committee representing the Medical Registration Council, and the adoption of new penal regulations under Sections 28 29 and 30 of the Medical Practitioners Act, 1927 The registrar stated that the reports on the recent visitations to the final medical examinations had been sent to the various qualifying bodies

Federation of Hospitals

At the Charter Day dinner of the Royal College of Surgeons in Ireland the president, Mr Frank Crawley, expressed his firm belief that the days of the voluntary hospitals were over, and referred to a statement made recently by Sir Henry Brackenbury, Chairman of Council of the British Medical Association, to the effect that hospitals were becoming less and less a provision by charitable people for the care of those who could not pay anything, and more and more a general provision by the public on a self-supporting basis for members of that public who required treatment Mr Crawley recalled that he had already drawn attention to "those prophetic words", he was sure there would be, as there was then, the criticism "And the greatest of these is charity" To that criticism he would like to point out that charity did not merely mean sending a subscription to the hospitals another meaning of the word charity was love, and in that was included the idea of personal service If the charitably inclined felt that they could not give their own service, perhaps they could pay those less endowed with the world's goods to do the service for them The contributions of the charitable in the country would not be sufficient to keep the hospitals properly equipped and with a sufficient number of beds for the very poor, who formed a large proportion of the patients in all hospitals Notwithstanding all that had been heard and read of patients being refused admission to hospitals, he ventured to say that in no single instance was the refusal for the reason that the patient could not pay Referring to the new Charitable Hospitals Bill Mr Crawley said that this was a most important Bill, the main idea of which was correct He believed that it was wrong to allow in Ireland a number of small hospitals, each trying to be in miniature a complete hospital, having every possible medical specialty provided for in its building, and having on its

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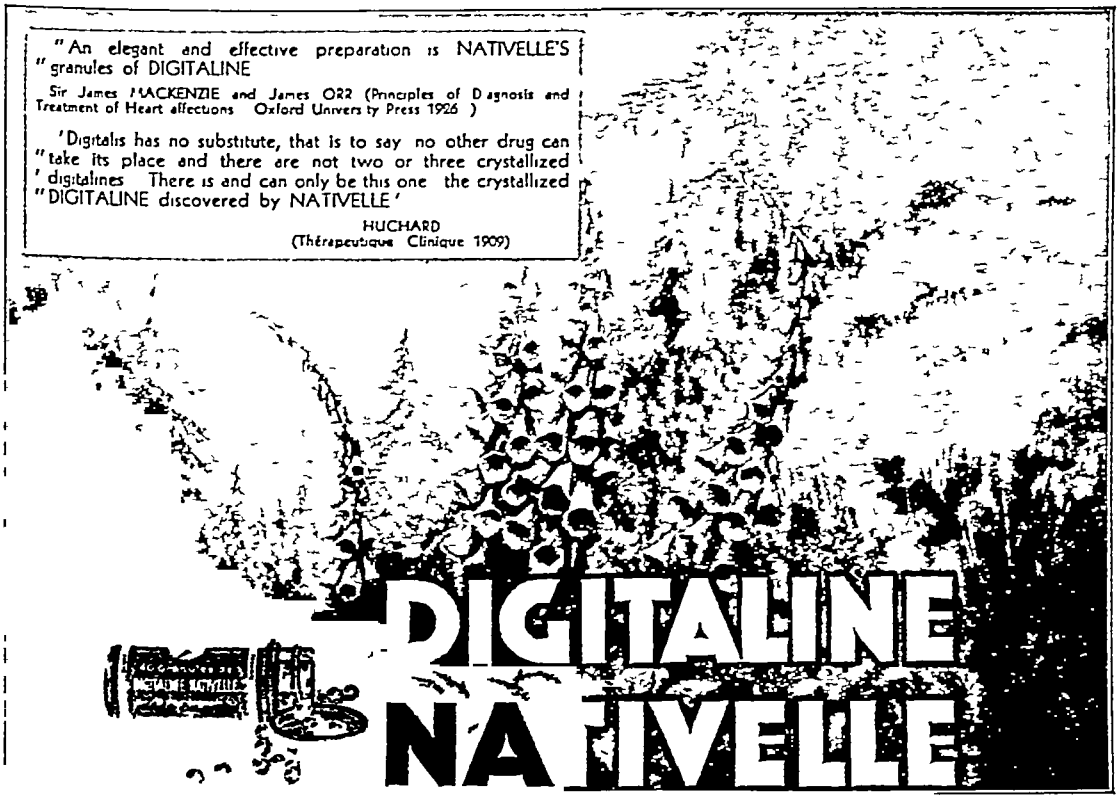

staff all the specialists necessary to carry out the extremely varying treatments He could not see how such a staff could be collected in a small country town and in these days of rapid transport he did not see the necessity for it In the larger towns—Dublin Cork and Galway in particular—there should be amalgamation of the hospitals or as his friend and colleague the president of the College of Physicians had suggested to him a federation of hospitals Explaining this proposal he took Sir Patrick Dun's and Baggot Street Hospital as examples and said that both would have their number of beds but each would develop to the utmost one or two or more specialties There would of course always be special hospitals taking care of such diseases as fever etc He was glad to see that medical research was to be looked after in the new Bill the subject had been largely neglected and this for want of facilities in Dublin Referring to the enormous amount of work involved in formulating any scheme for the federation of hospitals Mr Crawley said that there should be a board or commission on which the medical profession would be represented by some member or members whose views were broad far reaching and thoroughly up to date He could not agree with the circular sent out by the Associated Hospitals Sweepstakes Committee which stated that in the interest of the hospitals it would be much wiser if the terms of the Bill were not publicly discussed and that no opinions were given to the Press He was against hush hush and he welcomed all opinions right or wrong

Temporary Economies Bill

A meeting of the Society of Whole time Medical Officers of Health of the Free State with Dr Saunders presiding was held in Dublin recently for the purpose of discussing the position in relation to the proposed salary cuts in the public services The following statement was authorized to be issued on behalf of the society

In stating their case against the proposed cuts embodied in the Bill the members desire to emphasize the following points (1) In order to qualify to hold the position of county medical officer of health or assistant county medical officer of health candidates must hold higher qualifications than the ordinary medical degrees and licentiateships These extra qualifications involve at least one year's whole-time study (in most cases two to three years) with the consequential expenditure on fees living expenses etc and the loss of revenue which would have accrued if the candidates had embarked at once in practice (2) In addition to obtaining these higher qualifications (the diploma in public health) officers now holding these positions have had to undertake special courses of administrative training in England and elsewhere which again has involved a heavy expenditure with no compensation income from private or other practice (3) It may be said therefore that the whole course of training for the posts has involved from seven to eight years of preparation and a very heavy outlay in actual cash (4) In addition the great majority of medical officers of health (county and county borough) in Saorstát Eireann before taking up their present posts resigned similar posts in England Scotland and elsewhere and in doing so surrendered chances of promotion pension etc in services which offered opportunities much greater than those in Ireland (5) The conditions of service in the majority of these posts are considerably below those holding for similar posts in England and elsewhere In practically all cases the salaries paid are only half of what are paid in the places stated In no instance is the salary even 75 per cent of that paid in England (6) The county medical officer of health in Ireland has to perform a threefold function (*a*) as county medical officer of health he is responsible for the general health and sanitation of his area (*b*) as school medical officer he is responsible for the health of the school children and the prevention of defects (*c*) as tuberculosis officer he is responsible for the administration of the tuberculosis services in his area In addition he has to exercise the function of supervisor of midwives (a most necessary office) and in many areas he acts as maternity and child welfare medical officer (7) Public health work in Saorstát Eireann is in its infancy and in consequence the burden of work falling upon the newly appointed county medical officer of health is enormously increased In addition to organizing services *ab initio* he has to work against a great amount of misunderstanding The future welfare of the public health services in this country is of immense importance to the State and consequently the society feels justified in asserting that the office is appointed to carry out the work should not be subjected to conditions which were never contemplated when they undertook it

The Irish Medical Secretary has dealt in the lay press with the cases of medical officials serving under local authorities and their claims to be excluded from the operations of the Public Services (Temporary Economies) Bill 1933

Scotland

Medical Reform in Scottish Universities

In an article under the heading Away with Lumber in the Medical Curriculum in *The Student*—the Edinburgh University magazine—Dr Chalmers Watson deals with the need for change in the instruction given to medical students in Scottish universities The article has called forth a considerable amount of comment in the Press and many persons interested in medical teaching are in general agreement with its conclusions Dr Chalmers Watson points out the necessity for a proper perspective between the scientific aspect of various subjects and the application of those subjects to the future work of general practitioners For real improvement in the nation's health there must be regard to a higher state of efficiency on the part of the general practitioner rather than to the work of the specialist While there is a great degree of unanimity in regard to the general need for reform definite divergence of opinion arises in regard to details because each individual teacher is of opinion that the need for reform is less urgent in his own subject than in that of others Dr Chalmers Watson makes certain general proposals concerning the lines on which reform might profitably take place He suggests that no course of systematic lectures need exceed fifty in number provided that textbooks primarily adapted for the student's needs are available and that tutorial work and demonstrations designed to cultivate the student's individual thinking powers are added The number of systematic lectures in different subjects should vary to suit the scope of the subject The amount of time available for practical medicine should be greatly increased—in Dr Watson's opinion it should be trebled—and concurrently the time devoted to operative surgery and similar departments of a specialist nature might be materially decreased Out patient work in dispensaries and under similar supervision should be re-established as part of the course With regard to Edinburgh especially a combined class of medicine surgery and pathology which was established some years ago and which many people regard as having been a failure should be relinquished and individual classes dealing with the principles and practice of these subjects should be re-established It is suggested that the time of senior medical students is at present unduly occupied by special classes and that time saved by the sacrifice of unnecessary detail should be devoted to subjects which at present receive too little attention such as diet and feeding ante natal hygiene physico-therapeutics etc Attention is specially directed to the need for reorganization in the teaching of basal scientific subjects and to the defects inherent in the present curriculum of cramming excessive teaching of

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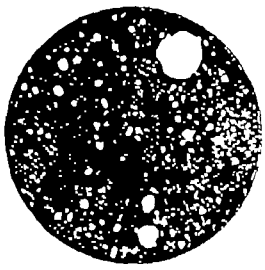
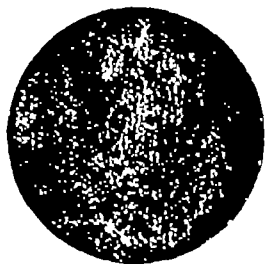


Fig 1 (th untreated control) shows that the washing from the normal mouth examined contained at least *four million* micro organisms.



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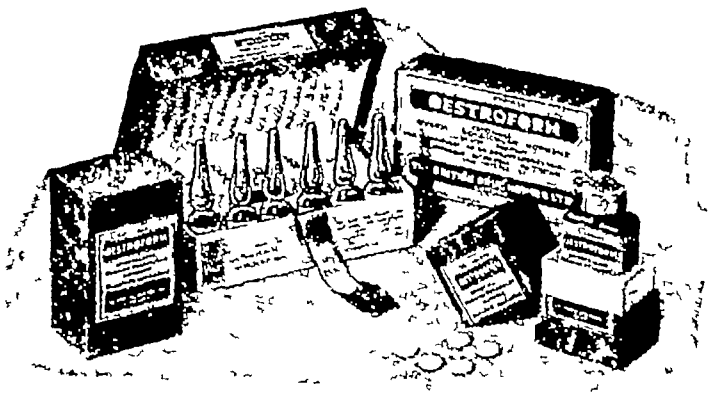

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specialized detail and inadequate instruction in the principles and practice of preventive medicine For the purpose of the revision of the curriculum Dr Chalmers Watson suggests that it would be unsatisfactory to entrust this to any existing body of medical teachers, and that the revision should be carried out by men who have had a complete medical training, and who have come to occupy a recognized position as men of affairs

Glasgow Royal Maternity and Women's Hospital

The recently issued sixth annual medical report of the Glasgow Royal Maternity and Women s Hospital follows the general lines of its predecessors It has been prepared by the registrar, Dr D M Hart As far as possible the data are set out in the form recommended by the committee appointed by the Royal Society of Medicine for the unification of the clinical reports of maternity hospitals and the immense amount of material to be dealt with is thus recorded in convenient form for study The institution has 175 beds, of which 78 are reserved for ante-natal cases 78 for lying-in cases and 19 for ' suspect ' cases, these last being situated in a separate block, under a special administrative arrangement which precludes any carrying of infection by the staff into the remainder of the hospital During 1931 the number of patients admitted was 4,442 , the average daily number in the hospital was 165 and the average period of residence was 13 5 days Co-operation with the Corporation of Glasgow has enabled the hospital to continue its policy of not refusing treatment to any woman in labour, without further overcrowding of the wards Thus, in the year under review, the municipal hospitals accepted 938 patients as overflow cases The work of the ante-natal department grows steadily From the ante-natal dispensary which is situated on the hospital premises, many patients are admitted to the obstetrical department and the ante natal wards In the twelve months 1 570 patients were treated in these wards, representing 35 3 per cent of all admissions In the previous year it had been found necessary to open the dispensary on Saturdays to cope with the rising numbers of patients , with it is combined a post natal dispensary and an infant consultation (child welfare) centre at all of which jointly the attendances during 1931 totalled 23 024 Much obstetrical work is being conducted by the hospital in the homes of the patients During 1931 the staff attended thus 4 274 women in childbirth and 46 399 visits were paid The proportion of abnormal cases was 62 per cent of all admissions, many being emergency cases This fact, together with many others such as the high incidence of rickets in the population served by the hospital indicates that the type of case dealt with is often very grave Of the total of 4,442 patients treated in the wards of the hospital 2 346 had been under ante natal supervision 1,794 were sent in as emergency cases and 302 were without recommendation of any kind Full advantage is being taken of this clinical material and a considerable amount of research work is in progress by members of the medical staff into infections of the urinary tract, puerperal fever, and the toxaemias of pregnancy

Edinburgh Hospital for Crippled Children

A memorandum has been prepared by the Committee of Management of the Edinburgh Hospital for Crippled Children in connexion with a visit paid to the hospital by members of the Public Health Committee of Edinburgh Town Council with a view to co-operation in the provision of increased facilities for the care of crippled children The memorandum proposes that there should be a series of units the Edinburgh hospital being the central orthopaedic hospital with associated clinics in the town and in surrounding country districts of South-Eastern Scotland These clinics will act as out patient departments near the patients homes, thus providing facilities for early diagnosis, minor treatment and after care The memorandum points out that the prevention of crippling is at present largely overlooked because accommodation for treatment on efficient lines is inadequate the general hospitals, with their own peculiar difficulties, being unable to cope with this special problem After-care also is disregarded, and organized after care clinics are recommended It has been estimated that for every one orthopaedic case needing immediate admission to hospital there are twenty which could be successfully treated as out-patient cases The clinics would form the essential link between the orthopaedic hospital, the doctor, and the patient Suitable sites for five centres for such clinics in the Edinburgh area are indicated in the memorandum

Central Midwives Board

The examinations of the Central Midwives Board for Scotland, held simultaneously in Edinburgh, Glasgow Dundee, and Aberdeen, have just concluded with the following results Out of 176 candidates who appeared for the examination 165 passed Of the successful candidates twenty-eight were trained at the Royal Maternity Hospital and fourteen at the Elsie Inglis Memorial Hospital Edinburgh , seventy at the Royal Maternity Hospital, six at Stobhill Hospital, and two at the Western District Hospital, Glasgow , seven at Govan Maternity Hospital , nine at Bellshill Maternity Hospital , two at Barshaw Maternity Hospital , one at Motherwell Maternity Hospital , six at the Maternity Hospital Aberdeen , thirteen at the Maternity Department, Royal Infirmary Dundee , four at the Royal Infirmary, Perth , one at the Royal Infirmary Stirling , and the remainder at various recognized institutions

England and Wales

Conference on Maternity and Child Welfare

Six special sessions have been arranged for the Conference on Maternity and Child Welfare, which is to be held in the Friends House, Euston Road London, on July 5th to 7th inclusive The first session on the opening day is being organized by the National Association for the Prevention of Infant Mortality and the subject for debate will be the scope and advancement of ante-natal care Sir Arthur Stanley, chairman of the National Council for Maternity and Child Welfare, will preside over this session, in the course of which Sir George Newman will deliver his address as president of the conference The second session will be held in the afternoon of the first day, and will deal with the care and protection of illegitimate children in relation to their future citizenship The organizing body for this is the National Council for the Unmarried Mother and her Child It will be followed by a garden party at St James s Palace in aid of the special appeal of the National Council for Maternity and Child Welfare when purses will be received by the Duchess of York The conference dinner will be held in the evening The morning of July 6th will be devoted to consideration of team work in the discovery of the cripple , this session is being arranged by the Central Council for the Care of Cripples At the afternoon session, organized by the Invalid Children s Aid Association the subject for discussion is announced as ' Forty-five Years Work and Future Developments," with Mr H S Souttar in the chair and a meeting of the Association of Maternity and Child Welfare Centres is arranging a debate on the health of

the child in relation to its environment with special reference to tuberculosis and overcrowding with Dr Eric Pritchard in the chair The National Baby Week Council is responsible for the morning session on the last day of the conference when the topic to be discussed will be Ways and Means of Propaganda In the afternoon a debate on Those Early Years will take place under the auspices of the National Society of Day Nurseries The conference is open to all interested in maternity and child welfare It will be preceded by a short post graduate clinical course on July 3rd and 4th arranged by the maternity and child welfare group of the Society of Medical Officers of Health One of the travelling exhibitions of the National Council for Maternity and Child Welfare will be on view at Carnegie House Piccadilly and a display of films will be organized by the National Baby Week Council Special railway facilities are available in connexion with the conference For further particulars and tickets application should be made to Miss J Halford 117 Piccadilly W 1

The Manchester Northern Hospital

In aid of the new building fund of the Manchester Northern Hospital for Women and Children a booklet containing the history of this institution since its earliest days has been prepared by Mr E Wheatley Jones and is obtainable from the secretary of the hospital (38 Barton Arcade Manchester price 1s postage 2½d) Early in 1856 Dr A S Merei a refugee from Hungary and Dr J Whitehead then lecturer on obstetric medicine at the Manchester College of Medicine rented at their own expense premises at 5 Stevenson Square setting up the sign The Clinical Hospital for the Diseases of Children In addition to treatment the institution set itself openly to carry on scientific investigations into the causes nature and treatment of diseases of children to inquire into the causes and character of the principal infantile diseases prevalent in Manchester to impart instruction to mothers and nurses and to spread sound principles on the subject of nursing and managing children among the lower ranks and to afford to students and young practitioners opportunities of acquiring practical knowledge in this branch of medicine and to deliver periodically for this purpose clinical lectures illustrated with appropriate cases It is mentioned in this statement which was issued in the first year that the first children's hospital in this country had been founded three years previously in London under the special patronage of Queen Victoria A special feature of the work was study of the laws governing the healthy development of children and important findings by Dr Merei are set out in the present booklet The percentage of infantile ill health in various streets and districts of Manchester is specified in the second annual report and doubtless played its part in calling into being in about 1860 the joint committee of clergy and medical practitioners which founded the Manchester and Salford Sanitary Association Year by year the work increased but no appeal for public support was made until 1859 the founders having previously paid the costs out of their own pockets In 1864 steps were taken to raise funds for the erection of a new building in Park Place and this was opened in May 1867 A house surgeon was obtained for the first time and a committee was brought into being to visit the homes of the children and to improve the conditions there A grass playground was also provided for convalescent children Towards the end of 1869 a circular letter was sent to the minister of every church and chapel in Manchester (foreshadowing the Hospital Sunday Fund) asking for the allocation to the institution of some part of the collection on one Sunday only one church responded Still the struggle continued and funds were obtained for extensions In 1892 a new department was opened in Cheetham Hill Road In 1923 it was recognized that the old buildings in Park Place were out of date and quite inadequate so a new building fund was inaugurated Two years later a site on Alms Hill was acquired In January 1933 the work of building began and the foundation stone was laid last month There is now arising a modern hospital designed in several sections and fully up to date

Annual Meeting of the British Association

The annual meeting of the British Association for the Advancement of Science will be held this year at Leicester under the presidency of Sir F Gowland Hopkins from September 6th to 13th Discussions will be held in thirteen Sections—namely mathematical and physical sciences chemistry geology zoology geography economic science and statistics engineering anthropology physiology psychology botany educational science and agriculture A preliminary programme has been issued containing some of the topics which will be dealt with in these Sections Those of medical interest include the determination of the chemical constitution of hormones from x ray measurements of crystal structure and from band spectra vertigo and disorientation ossification chemical control of the circulation genetics aspects of social psychology and personality the inheritance of acquired characteristics mental work vocational tests stuttering land drainage problems and the handling and food value of milk In the Section of Physiology the presidential address will be delivered by Professor E D Adrian who will take as his subject The Activity of Nerve Cells The corresponding address in the Psychology Section will be delivered by Professor F Aveling on The Status of Psychology as an Empirical Science With a view to the wider distribution of the annual report of the British Association which contains the various presidential addresses in full as well as summaries of the transactions of the Sections it has been reduced in price this year on certain conditions Applications for further information and for membership tickets should be sent to the general secretaries of the Association Burlington House W 1

CORRESPONDENCE

Australasian Medical Congress

SIR —At a representative meeting of members of the British Medical Association held at Oatlands Tasmania it was resolved that a session of congress of members of the British Medical Association from Australia and New Zealand be held at Hobart from January 15th to 20th 1934 Dr D H E Lines of Hobart was nominated for the position of president The subscription for membership has been fixed at two guineas It is confidently expected that as many members of the profession in Australasia as may be possible will be present Any member of the British Medical Association who is visiting Australia at the time is cordially invited to enrol as a member of congress Besides the professional and scientific aspect Tasmania is an ideal spot at this time of the year for a holiday Splendid lake and river fishing yachting golf and all forms of outdoor sports are available within easy reach of Hobart —We are etc

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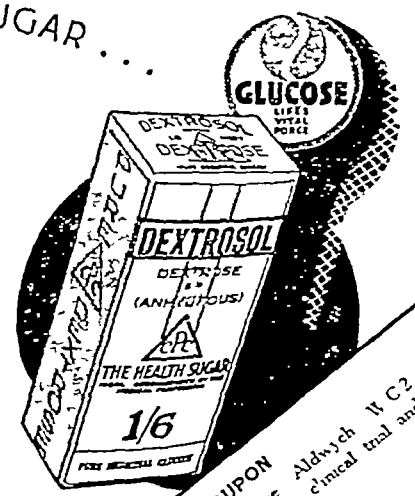

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to this view and which I hope to publish in full at an early date This was the case of a boy of 8 years, who was first seen by me some five months ago on account of a persistent dry cough of three years duration Shortly after coming under observation he developed signs of impairment of the percussion note with tubular breathing at the right base, and a radiogram revealed the appearance of partial atelectasis in this region A lipiodol injection demonstrated a slight but definite degree of tubular bronchiectasis in the right lower lobe By means of inhalations of CO_2 in O_2 the collapsed portion of the lung was caused to re expand Thereafter the cough, although ameliorated, continued, but when the patient was seen again some seven days ago a second lipiodol injection showed the bronchi to have regained their normal calibre —I am etc

London W 1 May 8th LEONARD FINDLAY

B M A Committee on Nutrition

SIR —I have noted with great interest the fact that a committee is being set up by the Association to investigate the question of nutrition and have also read Dr Nash's letter (*Journal* April 1st, p 580) which is of much interest as it gives the recent history of the movement so far as action taken by him is concerned I should like however to point out that it is now practically nine years since an attempt was made to focus the attention of the Association on this very important subject

At the Annual Meeting in Bradford in 1924 the late Colonel Herbert Jones was president of the Section of Public Medicine and I, as secretary that year organized a discussion on 'Diet and the Public Health' A full account of the proceedings is given in the *Journal* of September 20th 1924 The discussion was opened by Dr John Boyd Orr, director of the Rowett Research Institute Dr J S Manson, and Dr Savage, medical officer of health Somerset County Council while among others participating was Dr Robert Hutchison The following resolution which was framed in consultation with the late Dr James Wheatley (who, it will be remembered was always a great advocate of the importance of this subject) was unanimously carried

That it be a recommendation to the Council to appoint a Committee on which there should be representatives of the Society of Medical Officers of Health for the purpose of

1 Conducting an investigation into the adequacy and suitability of the dietary of the people of this country,

2 As the result of the investigation making such recommendations and drawing up such directions as may appear desirable

3 Conferring with the Ministry of Health the Medical Research Council and other bodies and

4 Dealing with food problems as they arise

When however the resolutions were eventually submitted to the Council of the British Medical Association we were disappointed to find that no further action was taken at that time This is still more to be regretted in view of the fact that since then so many varying diets have been issued on the subject by the Press and by other bodies —I am etc,

G W N JOSEPH
Medical Officer of Health and School Medical Officer

Warrington May 15th

Excessive Carbohydrate

SIR —I am in hearty agreement with Dr G C M M Gongle (May 6th p 803) as to the production of deficiency by our large intake of white flour and sugar and as to the resultant lowering of resistance to infection I was careful to state that the effect of excessive absorption of carbohydrate *per se* is an effect not upon the incidence, but upon the duration of catarrhal illness In the school to which I refer the incidence of catarrhal attacks was not reduced during the period of rationing although the number of cases in which the illness persisted for seven days or more was diminished

My assumption that mere excess of carbohydrate absorption is responsible for this aggravation of catarrhal illness is based upon the fact that the withdrawal of sugar and restriction of carbohydrates alone is sufficient to benefit not only phlyctenular conjunctivitis, but also the catarrhal states constantly associated with it Further justification of this view is supplied by the experimental production of water retention and by Cameron's description of the swollen, almost oedematous mucous membranes in which catarrhal processes luxuriate The 'deficiencies' of white flour and sugar are sufficient to determine the consumption of quantities of these foodstuffs larger than are required for the supply of energy alone Excessive absorption of glucose is thus favoured —I am, etc,

St Andrews May 8th J HUNTER P PITON

A Special Use for an Electrical Aid to Hearing

SIR —The secretary of the National Institute for the Deaf has drawn my attention to the fact that my name has been figuring in a list of doctors and other more or less illustrious persons as using a certain electrical aid for hearing, suggesting that I am using it as such on account of deafness of a degree to require such an appliance I may say that this is not the case, and that the use to which I have put it has been to take the place of the auscultation tube with an ivory tip which I have used very assiduously when inflating ears with the Eustachian catheter or Politzer bag This occasioned some irritation in the meatus, approximating to eczema and I was advised to give up its use, under the threat that if I did not do so the eczema would persist I found that by applying the receiver of the electrical aid over my ear (kept in place by a spring over the top of the head), while the patient held the transmitter closely applied to his ear, I was able to appreciate the sounds produced by the air passing through the Eustachian tube and into the tympanic cavity I would recommend this form of apparatus to any of my otological confreres who have experienced the same discomfort After using it for about a year the meatus improved greatly, and I have since been able to use the auscultation tube with a metal tip without experiencing any significant degree of discomfort I have to admit however, that within the last week or two I have had a slight return of the irritation of the meatus, and have been glad to avail myself again of the electrical aid —I am, etc

London W 1 May 12th JAMES DUNDAS GRANT

Turpentine Idiosyncrasy

SIR,—Most dermatologists would agree with Dr R L Sutton (May 6th, p 805) that dermatitis resulting from turpentine idiosyncrasy is "decidedly common A great number of cases of industrial dermatitis are dependent upon this idiosyncrasy in painters, polishers, printers, and engineers as are often cases of household dermatitis and eczematous eruptions following the use of turpentine liniments in the treatment of joint and muscle pain While I would agree with Dr Sutton that this happening is sufficiently common to merit general recognition I would stress that it is idiosyncratic, and would not agree that it is dependent—except to a very limited extent—upon concentration, or that it would arise upon any skin —I am, etc,

Leeds May 8th JOHN T I GRAY

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> (*Ind Med Gaz, March*, 1933, *p* 133)

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> (*Proc Roy Soc. Med., March*, 1933, *p* 607)

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JB 98

Convalescent Homes and Vaccination

SIR,—Dr R W Jameson's plea in the *Journal* of May 13th (p 845) for the reconsideration of our convalescent home policy in regard to vaccination will meet with sympathetic approval from many who whilst fully convinced of the efficacy of vaccination to protect the community against small pox consider that there are circumstances in which it is preferable to take a slight risk rather than subject a large number of children to the ordeal of vaccination at a time when they are not in good health

The immediate advantage to be gained is as Dr Jameson points out to reduce the probability that a child will either (*a*) develop small pox after admission as a result of infection acquired during a stay of a month or so at the home or (*b*) develop and convey to others in the home small pox acquired before admission With regard to (*a*) during the first quarter of this year notified small pox cases in England and Wales averaged eighteen a week of which about six a week would be in children between the ages of 5 and 15 giving a weekly incidence rate of about 1 per million or a monthly rate of about 4 per million among school children The chance that small pox will develop during a month amongst a hundred school children chosen at random is therefore at present about 1 in 2 500 or only about three times the ordinary risk that a school child will die within a month Seeing that the child would be exposed to as great a risk of coming into contact with small pox if not sent to the convalescent home this supplies no valid reason for not relaxing the vaccination rule

With regard to (*b*) some recent statistics of the variola minor epidemic in Stepney during 1929–30 may throw some light on the problem (*Annals of Eugenics* 1933 v pp 192–233) In that epidemic the mean annual rate of primary incidence among children aged 5 to 15 was about 4 per 1 000 as shown in Table XII Taking the usual incubation period to be about fifteen days or one twenty fourth of a year the chance that a given child drawn at random from Stepney during the epidemic would be unprotected and incubating small pox at the moment of admission to a convalescent home would be $1/24 \times 4/1\,000$ or 1 in 6 000 Vaccination of such children before admission would be equally likely to be performed 0 1 2 3 15 days after exposure to infection if the exposure was not suspected It is shown in Table XX of the paper based on a study of the behaviour of 1 004 contacts vaccinated after exposure that the effect of vaccination of previously unvaccinated contacts *t* days after the appearance of the rash in the infecting case was to reduce the risk of developing small pox to the following fractions of the original risk had the contacts been left alone

Interval *t* days	0	1	2	3	4	5	6	7	8–12
Ratio of actual to expected attacks	0·143			0·243		0·69			1·027

Counting the effect as *nil* from the eighth to the fifteenth day after exposure the weighted mean effect for random vaccination on any day up to fifteen days after exposure would be only to reduce the risk of small pox immediately developing to about two-thirds of its value had the children been left alone If then among 18 000 children drawn at random from an area where a large epidemic is in progress only three children would be incubating small pox the effect of vaccinating the whole of the 18 000 would apparently be to reduce the number who would develop it to two If there were no epidemic in the place from which the children came these chances would both be reduced about one hundredfold

If this were the whole story such reductions of risk would be plainly out of proportion to the disadvantages of vaccinating large numbers of children at an unsuitable time but it must be remembered that if the vaccination rule were relaxed the occurrence of one case in a convalescent home would be followed by a batch of secondary cases the number of these depending upon the rapidity with which the diagnosis was made and the vaccination of all unprotected children in the home carried out If this was done within two days of the appearance of the rash about one seventh of the children who had not been previously vaccinated and who had come in contact with the infective child might be expected to develop small pox Such an event would inevitably occur sooner or later and if sooner then those who had advocated relaxation of the vaccination rule would be blamed It would certainly mean trouble for the home concerned but so long as the imported infection was variola minor and not major no serious harm would result

The question is therefore whether the obvious disadvantages of the present procedure taking into account also the warning implied in the paragraph of the 1929 Vaccination Order quoted by Dr Jameson do not outweigh the addition of the small risks which would be added by relaxation of the rule If such relaxation were applied only to children coming from places where no epidemic was in progress it seems to a statistician with some past experience in selecting children for convalescent homes that there is good reason to support Dr Jameson's plea—I am etc

PERCY STOCKS

Department of Applied Statistics University College W C May 14th

SIR,—I entirely support Dr R W Jameson's contention that to make antecedent vaccination a condition of admission is to-day quite unreasonable It is undoubtedly a survival of an old custom which ought now to be repealed rather than a precaution which can be justified by any risk entailed by admitting unvaccinated patients I would urge upon medical officers of institutions where this custom still persists to use their influence with the authorities to get it abolished—I am etc

C KILLICK MILLARD
Medical Officer of Health

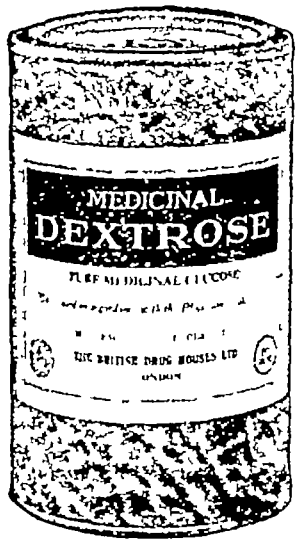
Leicester May 15th

Treatment of Arthritis

SIR,—In your issue of May 6th (p 774) there appears a full report of an interesting lecture by Dr C W Buckley on the treatment of arthritis In enumerating the physical methods which he intends to discuss he says

They comprise the various forms of hydrotherapy massage electricity light heat etc I have searched carefully through the report and so far as I can discover the etc remains the one and only reference to the form of physical treatment which I venture to submit is worth of a rather more detailed notice I refer to *x* ray therapy

Lest I should be charged with riding to death a personal hobby horse I should like to point out that within the past months the Section of Physical Medicine and the Section of Radiology of the Royal Society of Medicine each thought it worth while to devote the greater part of an evening to a discussion of *x* ray therapy in arthritis Dr Gunnar Kahlmeter the well known Stockholm physician (himself not a radiologist) addressed the Section of Physical Medicine on modern physiotherapeutic methods His lecture is reported in full (*Proc Roy Soc Med* May 1932 xxv 25) Of the thirteen pages which are occupied by the lecture eight are taken up by *x* ray treatment—a proportion somewhat different from that of the etc in Dr Buckley's paper Dr Kahlmeter quotes statistics of 562 cases treated for him between the year 1924 and 1931 Taking all sorts of cases with the exception of senile hips he finds that only 10 to 15 per cent fail to show any improvement under *x* ray treatment and that in over 50 per cent the patient can be made free or



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almost free from symptoms Also in a discussion on the x-ray diagnosis and treatment of osteo arthritis held at the Royal Society of Medicine on December 7th, 1932, which I had the honour to open in conjunction with Dr Langmuir Watt there was ample testimony to the value of x-ray therapy Dr Watt himself, in a series of 194 cases quoted 40 per cent free or nearly free from symptoms and 23 per cent improved as regards pain and disability He pointed out that these cases were all treated before 1928, and that he was getting better results to-day Drs Mucklow, Batten, Hernaman-Johnson, Connell Courtney Gage, Barclay, Hardman and Webster confirmed the views of the openers as a result of their own experiences

I will resist the temptation to assert that the physiotherapeutic treatment of osteo arthritis should consist of x rays, etc ; but I hope I have said enough to prove that any discussion of the subject which fails to take note of the work which has been done on these lines falls somewhat short of completeness —I am, etc ,

London W 1 May 10th S GILBERT SCOTT

Toxins and Mental Depression

SIR —The recent sad cases reported in the daily press—two of them medical men—of suicide, have prompted me to ask you to be good enough to print the following remarks I think it possible I may be able to make a few brief observations which might be of value to medical men in practice in preventing some, at least, of these painful cases The degree of mental depression so severe as to result in the act of suicide might be prevented in a large number of cases by the promulgation of the knowledge of the following simple facts I shall not attempt to give here references necessary fully to support this thesis

1 The major degree of mental depression is dependent on sudden or recurrent toxaemia

2 This toxaemia is commonly caused by protein derivative poisons such as histamine

3 These are absorbed in excess and in dangerous concentration in various degrees of intestinal stagnation

4 Where mental depression is chronic or recurrent or is likely to occur as for example after attacks of influenza the rate and degree of absorption of dangerous toxins from the intestinal tube may be diminished by the adoption temporarily or in chronic cases permanently of a low protein diet—namely a lacto vegetarian diet

It is unfortunately still true that there is some professional resistance to this simple explanation of disease giving rise to suicide but chemical analyses of the blood in states of mental depression reveal a degree of toxaemia not elsewhere found That is to say, there is scientific proof of what was until quite recently the subject of controversy

I would recommend therefore, during acute depression following acute disease or in depression accompanying many forms of chronic disease, the adoption of a strictly lacto vegetarian diet both as a measure of prevention and as a cure of the present disease, and consequently as a measure of prevention of such dire effects as suicide —I am etc

Hollesley Suffolk May 18th J C WATT M B Ch B

Aetiology of Acute Rheumatism

SIR —Dr Tertius Clarke's criticism (*Journal* May 13th, p 849) of a recent article of mine on this subject demands a reply

I agree with him that climatic influences play a great part in the causation of rheumatism but how exactly is not clearly understood Dr Clarke's interesting rat theory cannot be the entire explanation Why, for instance, should rheumatic heart disease in children be relatively uncommon in Scandinavia where the *R norvegicus*, the animal particularly incriminated apparently has its origin? Because of the close association of climate and acute rheumatism Dr Clarke takes me to task for doubting whether the disease is really the result of one specific infection To my mind it is this very difference in geographical distribution which directs attention away from the germ and on to the patient In the bacteriological study of rheumatism we are apt to be led astray amidst a mass of culture tubes and sugars and to forget the reaction of the patient's tissues to the organism One of these reactions comes under the heading of allergy, and Dr Clarke is wrong in supposing that this cannot be affected by climate The experience of asthmatics is sufficient to prove this

There is a great deal of evidence pointing to familial and racial influences The higher incidence of rheumatism in near relatives of rheumatic children than among those of non-rheumatic children is well known Many years ago the effect of race was well demonstrated by the average number of attacks of rheumatism per 1 000 among Scotch troops in India being much larger than when the same troops were quartered at home whilst the ratio given by the native Indian Army was the lowest of all Finally the geographical incidence of acute rheumatism and rheumatoid arthritis is not always identical Holland is a striking example Here chronic infective arthritis abounds and juvenile rheumatism is relatively uncommon Thus there appears to be more in the aetiology of acute rheumatism than a rat, a flea, and a haemolytic streptococcus —I am, etc ,

London W 1 May 15th BERNARD SCHLESINGER

Libel and Slander in Medical Practice

SIR —I find the medico-legal articles which you are publishing most interesting and instructive But in the second article, printed in the *Journal* of April 22nd (p 723), the author makes a statement about which I am in doubt In the paragraph headed "When slander is not slander" he says "The principle is that the words spoken must be capable of producing a bad impression on the minds of average reasonable men, and not merely on the minds of medical men' In support he quotes two cases

In the thirteenth edition of Kenny's *Outline of Criminal Law* on page 312, it is stated "Anyone who publishes a defamatory document concerning another person, so as to tend to bring him into hatred, contempt, or ridicule is guilty of publishing a defamatory libel" In a foot note to the word "hatred" there is this statement "Even merely amongst a narrow circle of associates *e g* a little coterie of anarchists, Rex *v* Malatesta 7 Cr App R 273" Although what I have quoted from Kenny is about libel should it not also apply to slander? I would be very glad of the author's observations on this point —I am, etc ,

Maidstone May 4th J C M MATHESON

*** Our correspondent writes The principle that the words spoken must be capable of producing a bad impression on the minds of average reasonable men and not merely on the minds of medical men, represents the bulk of opinion, at any rate as far as civil actions for libel are concerned In Rex *v* Malatesta the accused had suggested that his enemy was an Italian spy, and the Common Sergeant directed the jury that the words complained of were capable of exposing the man libelled—another Italian anarchist—to the hatred of the society in which he lived an Italian colony in London many members of which held pronounced anarchist views

Halsbury the great compendium of English law does not reconcile the apparent conflict between this decision and the principle quoted above and Dr Clement Gatley does not mention the case doubtless because his book is devoted to civil actions I suggest that although it does not appear in the report the difference is explained by the fact that Rex v Malatesta was a prosecution for criminal libel the essence of which is not the damage to a man's reputation but the probability that the defamatory statement will lead to a breach of the peace If Malatesta had induced several members of the colony to believe that the libelled man was an Italian spy the chances are that murder would have been done The quotation from Kenny does not apply to slander because slander is a criminal offence only when it is seditious or blasphemous or uttered to a magistrate in the execution of his duty or when it tends to provoke a breach of the peace The words published by Malatesta which suggested that his opponent was an Italian spy could not have led to a civil action for slander if they had only been spoken because they did not tend to injure him in the particular ways I mentioned in my article The defamatory document referred to in the sentence from Kenny which tends to bring a man into hatred contempt or ridicule is not actionable as a spoken statement for the same reason unless it also fulfils one of those conditions Finally may I point out that I went on to quote Dr Gatley's opinion that the accusation of being an advertising doctor would nowadays bring a medical man into contempt with average reasonable men as well as with his professional fellows?

Obituary

J T J MORRISON MA MB FRCS

Emeritus Professor of Forensic Medicine in the University of Birmingham

The death occurred on May 10th at his residence in Edgbaston of Professor James Thomas Jackman Morrison at the age of 76 He had practised in Birmingham as a surgeon throughout his professional career

After a distinguished record at Christ's College Cambridge and Guy's Hospital Mr Morrison settled in Birmingham and was appointed a casualty surgeon to the Queen's Hospital in 1887 He was elected assistant to the chair of surgery in Mason University College in 1895 and held this appointment until 1899 when he was appointed professor of forensic medicine in succession to Dr R M Simon (later Sir Robert Simon) This chair he held for thirty two years He became honorary surgeon to the Queen's Hospital in 1902 and remained on the active staff until after the termination of the war He was appointed consulting surgeon to the hospital in 1919 and remained a member of the Committee of Management until the time of his death In 1913 he delivered the Ingleby Lectures on Spinal Anaesthesia by Tropacocaine with a Review of 1 000 Cases He was a member of the University Council for many years He was an external examiner in forensic medicine at the University of Glasgow and had held similar appointments in other universities On his retirement from the chair of forensic medicine in the University he presented the prizes and medals at the opening ceremony of the Faculty of Medicine in October 1932 and gave an address on the history of the Birmingham Medical School About that time the title of emeritus professor was conferred upon him by the University

For thirty five years he was police surgeon in Birmingham and acquired in this way very wide knowledge of medico-legal work giving evidence as an expert witness in a number of important cases The clear and forceful nature of his evidence caused it to carry great weight in courts of law He acted as a medical referee under the Workmen's Compensation Act for a number of years and was a past president of the United Kingdom Police Surgeons Association

In the early stages of the war he organized a British hospital unit in Serbia and rendered conspicuous service by adapting dilapidated premises to form a hospital of nearly 300 beds Professor Morrison was surgeon-in-chief of the hospital for about two years and in recognition of his services received the Serbian Order of the White Eagle and the Order of St Sava The work of the St John Ambulance Association always attracted him and he devoted much time to this aspect of medical work being an honorary associate of the Order He was made a magistrate for the City of Birmingham in 1914 His literary attainments were of a high order and he made numerous contributions to medical knowledge Besides numerous articles on surgical subjects he wrote an excellent little book on poisons His *History of the Birmingham Medical School* is a precise and inspiring record of this provincial centre in its medical life He devoted much time and energy to the activities of the British Medical Association and had held the office of president of the Birmingham Branch He was a member of the Representative Body in 1903 and a member of the Central Council in 1904–5 and again in 1908–9 he was also vice-president of the Section of Medical Sociology in 1910 and vice-president of the Section of Surgery at the Birmingham Meeting in 1911 and served on the special committee on tests for drunkenness six years ago

Professor Morrison was a man of outstanding ability with a wide range of interests He was an eloquent speaker his command of English being such that it was a real pleasure to hear him address an audience His precise legal mind made him a valuable member on committees In private life he was a kind friend to many who needed his help and guidance This was shown by the large number of men and women of the working class and of the very poor who received help and encouragement from him The funeral service was conducted by Professor Rendle Short of the University of Bristol in accordance with the rites of the Plymouth Brethren and was attended by a large and representative gathering Professor Morrison leaves a widow but no children

THE LATE SIR ARTHUR WHITELEGGE

For the following appreciation of Sir Arthur Whitelegge we are indebted to a former colleague

I first became acquainted with Dr Whitelegge (as he then was) when he was medical officer of health in Nottingham and where he was held in high esteem There was general regret when Dr Whitelegge left Nottingham to become medical officer of health for the West Riding of Yorkshire I never thought in those days that in later years it would be my lot and privilege to serve under Dr Whitelegge and often to meet in his room at the Home Office his old friend Dr Gow head master of my old school Nottingham High School and afterwards head master of Westminster

After Dr Whitelegge's appointment as Chief Inspector of Factories in 1896 I had little opportunity of meeting him until 1900 By that time Whitelegge had set himself to reorganize the Factory Department so as to secure uniformity of administration When he became Chief Inspector the area for each inspector was not defined Derbyshire for example being administered by five inspectors Under his administration definite districts were assigned to inspectors following as far as possible the geographical county boundaries Similarly the districts were grouped into clearly defined divisions each under the charge of a superintending inspector to whom the district inspectors and their junior staffs were directly responsible In 1900 I had to make special inquiries for Whitelegge and before these were undertaken a

(Aesculapius)

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conference with the Chief Inspector was generally the rule I was thus enabled to see the wonderful grasp Whitelegge had on every new subject selected for investigation the detailed line of inquiry, methods of attack, the side issues to be followed when necessary, were quickly reeled off like a carefully compiled genealogical tree although I am sure this was often the spontaneous conception of a scientifically trained and wonderfully ordered mind It was my privilege later to see my chief almost daily in his office and discuss with him the many points of detail which arose in connexion with my special work and duties in reference to public inquiries and new codes of regulations I shall always recall the almost uncanny knowledge he had of each subject

Whitelegge was a prodigious worker, and he expected the same from others under him I remember on one occasion, before the opening of a public inquiry in a provincial city he travelled from London after a long day's work to meet me at midnight on my arrival from Glasgow We sat up till 4 a.m. discussing the pros and cons of the next day, and we had a further conference together after breakfast at 8 a.m., which continued until 10 a.m., when the public inquiry was opened Almost the same procedure followed during the next four days, until the inquiry concluded On one of my Continental journeys with him he kept me busy taking copious notes for inquiries he wanted me to undertake and I was kept fully occupied for seven or eight hours, we only stopped for meals Whitelegge expected the best from members of his staff and generally secured it He had no use for a man who turned out careless or inaccurate work, himself he was meticulously exact, and did his best to secure this in all the work of the department I remember well on one occasion sending him a report, which I received back with the following note 'I have read this report with the greatest interest, but note on the first page two split infinitives and the omission of six commas Please edit the report carefully and return to me as soon as possible The Factory Department owes to Whitelegge the introduction of the technical inspectors—medical, electrical and engineering—in addition to the reorganization of the inspectorate into a compact body from the isolated units which formerly existed

Though during and since the war it has been my lot to work under a number of chiefs in other departments, I have never worked with a more charming colleague than Whitelegge, one who was ever ready to help, to get the best out of everybody, and the merry twinkle in his eye at the end of one's labour conveyed the sign of approbation which meant more from him than words of praise from many another

THE LATE PROFESSOR PRIESTLEY SMITH

DR. A. L. REMNETT WEAVER, M.O.H. for Weston-super-Mare writes By the death of Professor Priestley Smith the Birmingham Medical School has lost one of its most distinguished alumni and moreover, one of international reputation As I was his secretary from 1890 to 1899, during the height of his professional activity, I would like to make a few observations as to his work and character which may prove of interest

Priestley Smith came of Unitarian stock and was named after Joseph Priestley the Birmingham Unitarian Divine and the discoverer of oxygen a singularly apt naming considering the scientific discoveries and researches made by Priestley Smith He was proud of his connexion through his mother with the Kenricks and Chamberlains Joseph Chamberlain was his patient, and caused him amusement at each consultation by producing a huge bunch of monocles with tangled cords from his pocket It was Priestley Smith who induced Mr Chamberlain, on account of some astigmatism to adopt spectacles for private use about the time he became Colonial Secretary, and a good deal of popular surprise was occasioned when a photograph of Mr Chamberlain sitting at his desk at the Colonial Office and wearing spectacles, appeared in the illustrated papers Priestley Smith said that Mr Chamberlain was his best patient as he was the one who could most quickly and definitely make up his mind whether a trial lens was 'better or worse"

Physically Priestley Smith was of delicate mould He often told how, during his apprenticeship in the engineering workshops he became so exhausted that he slept the whole week-end He eased the ardours of his professional work by horse exercise and long holidays with his children sketching in quiet rural or seaside retreats varied by visits to his ophthalmic confreres abroad Mentally he was a giant with exceptional powers of scientific analysis and invention To those who knew him intimately his most outstanding characteristics were simplicity of mind and method and fearless honesty He simplified everything he touched His writings were models of clarity and precision, and he spared no pains by condensation and revision to attain this ideal To the despair of his printer nearly all his book *Glaucoma* had to be reset owing to repeated author's corrections His simplicity of style was carried into his public speaking, making him a charming and lucid lecturer and powerful debater His research apparatus, his perimeter, tonometer, and the numerous other instruments he invented were patterns of mechanical simplicity and efficiency, their final forms being determined only after he had made numerous models When experiments brought him up against problems in mathematics, physics, or chemistry, concerning which he candidly admitted his superficial knowledge, he freely sought aid from those more expert Here he displayed his uncanny flair for scientific truth by unerringly picking out the essentials from the information given to him however complicated or technical it might be While batting a ball for exercise against a metal disk held by a slipping clip, he noticed that in one position of the clip the plate gave out a pure musical note Investigation led to his discovery of the nodal circle of a vibrating disk, and he utilized this in suspending his "campanels" or musical gongs, which he patented in England and also in America where he had to prove the originality of his discovery

Priestley Smith was a skilful operator, being possessed of much manual dexterity and a fine touch, and, further he was actively ambidextrous an invaluable asset to an ophthalmic surgeon As a consultant he adopted the German method, which fitted him admirably He preferred to examine his patient first and to take the history afterwards, he then delivered his opinion definitely and finally His commercial instincts were poorly developed and he consistently failed to ask more than his usual moderate fees for special consultations and operation (even from patients coming to him from other countries) or from wealthy patients, some of whom failed to realize the unique value of his help as they paid so little for it On the other hand, he was generous to those whom he thought were trying to help themselves but he had no patience with slackers or sycophants As a clinical teacher Professor Priestley Smith, justly, was highly esteemed His demonstrations and lectures were systematic, and (being illustrated and illuminated by his artistic diagrams and ingenious models) clear and attractive He was much sought after as a member of committees and governing bodies on account of his disinterestedness and the soundness of his views and advice Birmingham University owes more than is generally known to his influence with Mr Joseph Chamberlain who was his warm admirer He prided himself upon his fairness and to be his associate or friend was tantamount to knowing that he would not use his influence in any way on one's behalf for fear of prejudicing others Thus he was often unconsciously actually unfair, and sorely tried the loyalty of many disappointed friends Priestley Smith also possessed much ability in music and painting The atmosphere and brilliance of his water colour sketches were achieved by simple washes of pure colour without stippling or opaques He was a great and cultured gentleman, a fond father, and a genius who never despised labour

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DR. J. S. GRIFFITHS, who died last month, had practised in Bristol for forty years He received his medical education at Bristol and at King's College, obtaining the diploma M.R.C.S., L.R.C.P. in 1891 In this same year he was largely responsible for starting the work of the St. John Ambulance in Bristol, and was commissioner for the West of England District for many years, being made Knight

of Grace of the Order of St John of Jerusalem During the war Dr Griffiths was county director of the British Red Cross Society and among his manifold duties as such organized the whole of the transport of wounded soldiers from Bristol and Avonmouth He held several public appointments in Bristol and was for twenty years medical officer to Queen Victoria Convalescent Home Apart from his medical career Dr Griffiths was a man of wide interests and in addition to being a member of the Arts Committee of Bristol University was one of the founders of the Clifton Arts Club subsequently becoming its chairman He was appointed Deputy Lieutenant for the County of Gloucestershire from which he resigned this year owing to ill health A well known figure in Bristol Dr Griffiths will be greatly missed by all with whom he came in contact and the memory of his kindliness and care will be cherished in many homes

With the death of Dr I W JOHNSON of Bury Lancs on May 5th there has passed away a greatly respected member of our profession who was for many years a staunch supporter of the British Medical Association Isaac Wellwood Johnson was born in 1865 and received his medical education in the University of Dalhousie and at Surgeons Hall Edinburgh He graduated M D C M Dalhousie in 1891 and in the following year obtained the diplomas of L R C P L R C S Ed and the L R F P S Glas In 1910 he was admitted a Fellow of the Royal College of Surgeons of Edinburgh At Bury his interest in the social and medical spheres of the community was extensive He was for many years surgeon to Bury Infirmary and later was appointed honorary consulting surgeon He was chairman of the Health Committee and a member of the Education Committee of the local council and was created J P Until his retirement from medical practice last year Dr Johnson was an active worker in the British Medical Association He served as a Representative from 1912 to 1930 and was on the Council during most of the years between 1916 and 1929 He was a member of the Hospitals Committee from 1919 to 1922 of the Dominions Committee in 1920 1921 and 1929 and of the Central Ethical Committee in 1926 1927 and 1929 He also served on the Ministry of Health Joint Advisory Committee with reference to discipline procedure from 1929 to 1932 After his retirement he went to live at Southport

The death took place on May 11th at Penmaenmawr North Wales of Dr HUGH MORETON ROBERTS after a prolonged illness borne with fortitude at the age of 54 Graduating M B Ch B at Edinburgh University in 1901 he proceeded to M D which he obtained with distinction in 1905 After serving as house surgeon at the Carnarvonshire and Anglesey Infirmary he settled at Penmaenmawr joining Dr Williams in partnership and after the latter's retirement he was joined by Dr R Salter Ellis His death has left a gap in the medical profession of the Principality where he was held in high esteem by his colleagues He had the reputation of being an able physician kind and considerate with his patients and endeared himself to all classes He was a member of the British Medical Association and kept himself up to date with recent medical literature In public matters he took much interest and had been a member of the urban district council for many years having also occupied the chair He was founder and trustee of the Young Men's Memorial Institute Mutual Society and was interested in other beneficent organizations Of a literary turn of mind being a voluminous reader and an able speaker he was much in request at social gatherings and public functions He took a keen interest in Masonry and had attained high honours in the Provincial Grand Lodge of North Wales The funeral was one of the largest ever seen in the district over a thousand people being present showing the universal respect in which he was held After an impressive service in the chapel the large company of mourners and general public proceeded to the cemetery where the last rites were performed by the vicar followed by the Masonic ritual each member from various lodges in the province passing in procession round the grave and dropping a sprig of acacia on the coffin

Dr LEONARD STOKES the famous international Rugby footballer died at Hurstbourne Tarrant near Andover on May 3rd after many months of indifferent health He was born at Blackheath in February 1856 and after school days at Bath studied medicine at Guy's Hospital becoming M.R.C.S. in 1881 and L.R.C.P. in 1882 He began to play for Blackheath Football Club when he was 17 and under his captaincy the club steadily grew in reputation it was he who was responsible for its acquiring the Rectory Field on which many international matches were played in those days Between 1875 and 1881 Stokes played regularly for England against Scotland and Ireland and for England in the first match against Wales in 1881 After qualification he served as house surgeon and resident obstetrical officer at Guy's and then began general practice at Blackheath He was for many years honorary surgeon to St John's Hospital Lewisham In 1921 he went to practise in Hampshire

We regret to announce the death of Dr DAVID C DOUGLAS of Hamilton at the age of 57 After graduating M B Ch B at Glasgow University in 1900 he spent a short period as an assistant in Manchester prior to settling in Hamilton An able clinician he had an extensive practice and enjoyed in a high degree the confidence of his patients and the esteem of his fellow practitioners He was a member of the Hamilton Panel Committee and acted for a period as its chairman Dr Douglas took a great interest in sport and in his earlier days was a keen tennis player His garden however was his particular pride and joy and in its cultivation he found pleasure and relaxation from his arduous professional duties He contracted a severe attack of influenza at the beginning of the year from which he never fully recovered and his death was the result of an acute development of a dormant heart affection He is succeeded in the practice by his eldest son

Dr ARTHUR SPENCER EDWARDS who recently died at the age of 68 had been in general practice in Halling near Rochester Kent for the previous thirty-four years He received his medical education in Edinburgh where he graduated M B C M in 1889 He was medical officer and public vaccinator for the Halling and Cuxton District and honorary surgeon to the local fire brigade A man of very wide interests Dr Edwards took an active part in the general life of the local community He was a member of the Halling Parish Church Council the Maidstone Numismatic Society the Geographical Society and the Rochester Naturalists Society In Freemasonry he was a Past Master of the Solway Lodge Aspatria Cumberland and a member of the Gundulph Lodge Rochester He had been a member of the British Medical Association for twenty two years He is succeeded by his son Dr J C Spencer Edwards

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

It is proposed to confer the degree of Doctor of Science *honoris causa* on Sir Frederick Gowland Hopkins D Sc F R C P Dunn Professor of Biochemistry and President of the Royal Society

The Raymond Horton Smith Prize for 1931–2 has been awarded to J E Semple M D Corpus Christi for his thesis on Chronic Otitis Media Suppurativa with a Comparison between several Methods of Treatment *Proximè accessit* — H L Wilson M D Emmanuel for his thesis on The Treatment of the Voluntary Boarder

The General Board has recommended to the Senate that a readership in physiology be established from October 1 1933 and that the first holder of the post be F R Winton M D of Clare College at present university lecturer in physiology

In March 1932 the General Board as the result of representations made to it by the Syndicate on Medical Courses and Examinations appointed a committee to inquire into the establishment of the department of anatomy The committee came to the conclusion that there was a convincing case for an immediate addition of at least one university lecturer and one university demonstrator to the permanent staff of the

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VACCINE THERAPY

Like most comparatively new methods of treatment, Vaccine Therapy has passed through many stages during recent years At the present time, however, it is generally admitted that Vaccines provide a valuable means of combating microbic infections, as there are no drugs which are effective against the majority of pathogenic organisms An excellent survey of this subject appeared in the issue of the *British Medical Journal* for June 25th, 1932 from which we give the following extracts.—

> "*Preventive treatment by Vaccine against the risk of infection from catarrhal, intestinal, or septic infections in persons of normal health is usually successful and uneventful Failure, however, occasionally occurs and the presence of an unsuspected focus of infection is usually the reason*"
>
> "*Vaccine treatment is an invaluable therapeutic measure and all too frequently advantage is not taken of its help in the scope of clinical practice It is either not employed early enough to be of real service, or too much is expected of its exhibition under conditions which preclude its success*"

The 15th Annual issue of the Genatosan Vaccine Bulletin has recently been posted to all medical men whose names appear on the Medical Register This brochure contains information of recent researches on Influenza and "Colds," together with details of a wide range of Vaccine products Any practitioner who has not received a copy of this booklet may obtain one by sending a post-card to

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department The cost of establishing the additional posts is estimated at about £880 a year The General Board makes a recommendation in accordance with the committee s findings that the additional posts be established as from October 1st 1933 and the Financial Board offers no objection

At a congregation held on May 12th the following medical degrees were conferred

M B B Chir—A M Cunningham A W Franklin, J H Hall
M B—G G Mowat W W Sargant

UNIVERSITY OF MANCHESTER

Dr W R Addis and Dr C P Brentnall have been appointed clinical lecturers in the Department of Obstetrics and Gynaecology

UNIVERSITY OF SHEFFIELD

Dr George Albert Clark has been appointed to the chair of physiology in succession to Professor J B Leathes, F R S

QUEEN S UNIVERSITY OF BELFAST

Musgrave Research Studentships of £200 one studentship being primarily allotted to each of the subjects pathology biology chemistry physics and physiology may be awarded to British subjects graduates of at least one year s standing in a university of the British Empire Each studentship is held for one year and may be continued for a second Applications must be made by June 15th

The Senate of the University has resolved to confer the degree of D Sc *honoris causa* on Sir Walter Morley Fletcher K B E M D F R S, secretary of the Medical Research Council

ROYAL COLLEGE OF SURGEONS OF ENGLAND

A meeting of the Council of the Royal College of Surgeons of England was held on May 11th when the President Sir Holburt Waring was in the chair

Diplomas in Gynaecology and Obstetrics were granted jointly with the Royal College of Physicians to H Sobhi and N J Pharavala

Diplomas of Membership were granted to 167 candidates who had passed the Final Examination in Medicine Surgery and Midwifery of the Examining Board in England (The lists of the successful candidates were printed in the report of the meeting of the Royal College of Physicians of London in our issues of May 6th p 808 and May 13th p 852)

The Services

DEATHS IN THE SERVICES

Lieut Colonel Malachi O Dwyer Bengal Medical Service (ret) died in London on April 21st aged 76 He was born in Tipperary on July 15th 1856 the son of the late John O Dwyer of Barronstown Tipperary and was educated at Trinity College Dublin where he was a medical exhibitioner and graduated B A M B and B Ch in 1877 and at the Meath and St Mark s Hospitals Dublin Entering the I M S as surgeon on September 30th 1878 he became lieutenant colonel after twenty years service and retired on November 30th 1898 he served in the Afghan war of 1878 9 and received the medal He was a brother of Sir Michael O Dwyer K C S I late Governor of the Punjab During the war he was engaged on telegraphic and intelligence work under the War Office He leaves a son who is serving in the Royal Engineers at Aldershot and an unmarried daughter

Major John Henderson Brannigan R A M C (ret) died at Englefield Green on April 21st aged 74 He was born on December 28th 1857 was educated at Queen s College Belfast and at Edinburgh and Glasgow Universities and took the L R C P and S Ed in 1879 Entering the R A M C as surgeon on August 1st 1885 he became surgeon major on August 1st 1897 and retired on August 1st 1905 He served on the North West Frontier of India in the Zhob campaign of 1890 and in the campaign of 1897–8 in the Mohmand Field Force (medal with clasp), and in the South African war of 1899–1902 including the battle of Colenso (wounded) and relief of Ladysmith operations in the Transvaal including the actions at Belfast and Lydenberg (Queen s medal with four clasps and King s medal with two clasps) After retirement he rejoined for duty in the war of 1914–18 from February 6th 1915 when he was in charge of the military hospital at Lichfield He leaves a widow and two married daughters

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons has this week considered the Finance Bill and has passed the Rent Restriction Bill through report stage and third reading The Exchange Equalization Bill was read a third time and certain import duties confirmed

The Private Legislation Procedure (Scotland) Bill was read a second time by the House of Commons on May 11th Sir GODFREY COLLINS explained that its purpose was to widen the scope of the system of inquiry in Scotland on draft Provisional Orders, followed by a Confirming Bill in Parliament

A scheme for regulating the marketing of milk in Scotland was approved by the House of Commons on May 11th

The House of Commons read the Solicitors Bill a third time on May 11th This Bill proposes that all solicitors should keep separate accounts for their clients' money

The Parliamentary Medical Committee met on May 11th and received a deputation, consisting of Dr David Lees, Dr E T Burke, Dr D Nabarro and Dr Drummond Shiels, from the British Social Hygiene Council The deputation adduced statistics and experience at clinics bearing on the problem of congenitally diseased children who are withdrawn from treatment while still uncured A discussion followed

In the House of Lords on May 16th the Protection of Animals Bill was read a third time and passed

The text has been issued of the Local Government B ll, which consolidates, with amendments, the enactments relating to authorities for local government in England and Wales, which was introduced in the House of Lords by the Lord Chancellor on May 2nd

Pharmacy and Poisons Bill

Examination of the Pharmacy and Poisons Bill a Government measure which has already passed the House of Lords was begun by a select committee of the House of Commons on May 9th Mr HACKING was in charge of the Bill for the Government Clauses 1 to 16 were passed with a few drafting amendments Amendments proposed by Dr CLAYTON to secure the use of the term 'chemist' by analytical chemists and by Mr STEVENSON regarding the representation of Scottish pharmacists on the new Statutory Committee were resisted by Mr Hacking as needless, and were negatived On Clause 17 several amendments were moved to relax the provisions concerning Part II (poisons which may be sold by authorized shopkeepers not being pharmaceutical chemists) Mr Hacking pointed out that this provision was intended to facilitate the sale of horticultural and agricultural products Several members pressed for amendments which would authorize the free sale of substances such as ammonia which are usually sold in the original containers or labelled in accordance with regulations and are in common use Mr GLOSSOP exhibited fireworks "wireless batteries refills for electric torches and for fire extinguishers and other goods now sold without restriction as evidence that there was free sale of poisonous articles Mr HACKING said he did not conceive that the Poisons Board would schedule hair cream merely because it contained a poisonous ingredient If the Board did so the Home Secretary or Parliament would reverse the decision

An amendment moved by Mr GLOSSOP was defeated and the committee adjourned till May 11th

On May 11th consideration of the Pharmacy and Poisons Bill in Standing Committee was completed and the Bill was reported to the House with a few small amendments During the discussion Mr HACKING for the Home Office said it would be possible under the Bill to label substances 'poisonous' instead of poison Dr CLAYTON moved to add words to make sure that a university school, or other

educational authority particularly one conducting examinations should receive exemption with respect to purchases of poisons Mr HACKING said there was no doubt of this right and the amendment was withdrawn Dr CLAYTON also raised the question of inspectors under the Bill Mr HACKING said local authorities should be allowed to use the inspectors under the Food and Drugs Acts and Shops Acts if efficient He resisted proposals that the Poisons Board should be enlarged to include a representative of the Royal College of Veterinary Surgeons but gave an assurance that that College would be consulted on the rules under the Bill

During the discussion Mr HACKING stated that the Home Office was looking into the use of poisonous sprays in the disinfection of ships in order to safeguard men employed in that work

Rural Sanitation and Health in Distressed Areas

On May 8th during a discussion on the motion that the House of Commons should go into committee on the Civil Estimates Viscount ELIBANK moved a resolution urging the Government to keep closely under review the difficulties experienced by local authorities particularly in rural areas in dealing with problems arising from unemployment and the provision of adequate systems of water supply and drainage Mr LEES seconded the motion and urged that there should be a comprehensive survey with a view to providing a regional water supply or an area basis Drainage ought also to be dealt with

Sir F FREMANTLE said that having been for fourteen years a county medical officer he saw the growing necessity for these schemes and he felt strongly on the subject Mr LEES had exaggerated when he suggested that the wretched condition with regard to certain water supplies were representative of the whole countryside For the greater part and especially in the areas of the Home Counties which he knew the position was quite the opposite In general the villages had a fair standard of sanitation and health arrangements There was certainly room for improvement and medical officers of health did not wish to belittle the desire for improvement But rural conditions must not be judged by an urban standard It was not necessary in the country to have the ordinary fixed public water supply for the purposes of health as long as the more primitive arrangements which existed were sanitary and in proper order If it was possible to find some method for providing the necessary finance to be used under proper supervision for improving rural water supplies it would be greatly to the advantage of the countryside and would advance the general policy of improving agriculture in this country But above all things they must avoid waste and there was great danger of being parsimonious in one respect and wasteful in another The county councils could do a great deal more than they had done in helping local authorities If the county council had done its duty with regard to Malton and had kept under supervision the conditions reported on by Dr Bruce Low in 1892 the matter would not have been allowed to rest as it was The county councils were given the power to report where public health administration was not being carried out and that was the opportunity for them to act not as a duty not by sending in a report but by giving advice of a helpful nature to the local authority The county councils could do a great deal in that way and he wished they would do more but for that purpose there must be officials He had always advocated the appointment of county sanitary inspector Such an official was just as necessary as a county medical officer of health—a sanitary inspector of high quality Further education was needed in these matters especially among the rising generation to fit them to take their part in the work of local authorities

Sir HILTON YOUNG said that all the time the qualified officers of the Ministry of Health were inquiring into the quality and quantity of rural water supplies and the possibility of improving them

A close watch had been and would be kept by the Medical Department of the Ministry of Health and the Medical Department of the Board of Education for any sign of malnutrition especially in those areas where unemployment was most prevalent A careful scrutiny of the reports of school medical officers of England and Wales for 1931 established the fact that the condition of the children had not really been affected by unemployment That had been confirmed by his further inquiries in many areas in 1933 The physical condition of the adult varied no doubt in different parts of the country Generally speaking it was good and contrary to what might reasonably have been expected did not appear so far to be affected by unemployment This could be tested by basic facts of statistics In 1932 they had one of the lowest death rates recorded in England and Wales—12 per 1 000 They had an exceedingly low infant mortality rate—about 65 per 1 000 They had fewer epidemics and less mortality and they had on the whole a favourable report of the health of insured persons The medical officers of health were fully alive to the situation and were vigilant at all times to observe any departure from the normal in their districts It was their duty to send him a statement of any noteworthy conditions prejudicial to the health of their areas The question had occupied and would continue to occupy his daily attention and he had taken special steps to secure that any facts which emerged were immediately known

The motion was withdrawn

Public Health Services Inquiry in Scotland

On May 16th Mr SKELTON informed Mr GUY that the Secretary of State for Scotland proposed to adopt the recommendation of the Committee on Local Expenditure that he should institute an inquiry into the public health services in Scotland He hoped to announce the personnel and the terms of reference of the proposed committee shortly

Tuberculosis in Glasgow's Milch Cattle

On May 9th Mr KIRKWOOD asked the Minister of Agriculture if he was aware that the veterinary inspector of Glasgow in a report to the Markets Committee stated that 14·5 per cent of milk samples tested by him contained virulent tubercle bacilli that many infected cows were sent to the city market for sale and that nearly 9 000 bovine consumptives remained undetected in Scotland Dr ELLIOT replied that he had seen the report He understood that the Department of Health for Scotland hoped to publish shortly the results of a recent investigation on this subject carried out in the four large cities of Scotland A committee of the Economic Advisory Council was now considering what practical measures could be taken to reduce the incidence of tuberculosis (as well as of other diseases) among milch cattle in this country including any changes desirable in existing administrative practice Mr Kirkwood might rest assured that the recommendations of that committee on this difficult question would receive most careful consideration

Survey of National Development

Dr W McLEAN urged the necessity for a national development plan or survey to obtain some idea of the nature and extent of the development in regard to housing and planning for which the country had to provide Sir E FREMANTLE said that there was need of a wider basis for our planning The House and the country had not been enough advantage of the very practical example which they had had of thoroughgoing planning in the garden cities of Letchworth and Welwyn They differed from the ordinary town and country planning because they had been founded on a wider sphere of knowledge The essential thing was the immense value of Dr McLean's proposal incorporating the idea put forward in Dr McLean's proposal —that they should consider for what life they were planning —to have regard to all the interests concerned such as locomotion communication of every kind industry shipping commerce and the whole needs of the people They were all put together in those diagrammatic experiments which had been a conspicuous success up to a certain point There was a great danger in planning too rigidly for conditions which they could not foresee They wanted a practical scheme for avoiding waste of money and energy for preventing mistakes and for helping on sound development.

Dr BURGIN said that while large areas of the country had not changed in industrial development sufficiently to warrant a detailed survey of the whole country national development and planning were in the air and were engaging attention

12 POINTS

of interest to the MEDICAL PROFESSION

No 1

FOUR YEARS OF INTENSIVE RESEARCH

preceded the introduction of

BOURN-VITA

CADBURYS, the inventors of Bourn vita are famous throughout the world as the makers of fine chocolates Their factory at Bournville is one of the largest of its kind in the world They have their own buyers in the cocoa-growing districts in the British Empire they use only fresh full-cream milk and new laid eggs, and they have a large scientific staff in their own research laboratories In a word, their organisation is unique

Before Bourn vita was put on the market four years of intensive research were found necessary to ensure its introduction as the perfect food-drink.

The quality and quantity of each of its constituents is correct. Care in selecting and treating each constituent has resulted in a product of exceptional merit. Bourn-vita contains over 95 per cent of bone-forming and energy-producing constituents Ninety per cent of Bourn-vita is digestible in a few hours Its energy value is 1,930 calories per lb

Further information in this series will deal with the merits of individual constituents

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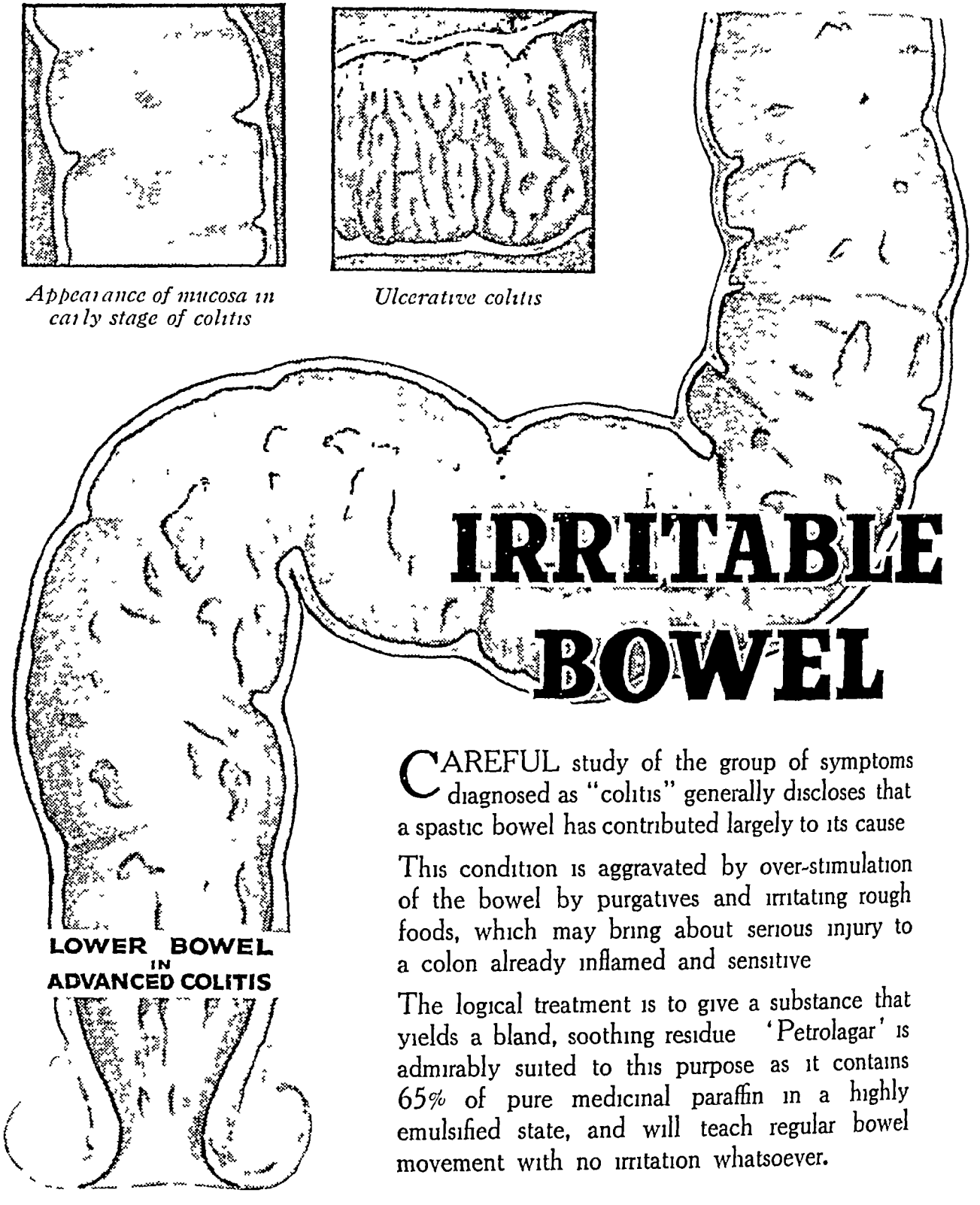
BOURN-VITA

(A SCIENTIFIC COMBINATION OF MILK, MALT, NEW LAID EGGS AND CHOCOLATE)

for sleep and energy

Appearance of mucosa in early stage of colitis

Ulcerative colitis



IRRITABLE BOWEL

CAREFUL study of the group of symptoms diagnosed as "colitis" generally discloses that a spastic bowel has contributed largely to its cause

This condition is aggravated by over-stimulation of the bowel by purgatives and irritating rough foods, which may bring about serious injury to a colon already inflamed and sensitive

The logical treatment is to give a substance that yields a bland, soothing residue 'Petrolagar' is admirably suited to this purpose as it contains 65% of pure medicinal paraffin in a highly emulsified state, and will teach regular bowel movement with no irritation whatsoever.

'Petrolagar'
(Regd Trade Mark)
BRAND PARAFFIN EMULSION

Petrolagar Laboratories, Limited, Braydon Road, London, N 16

The idea of planning was entirely congenial to the Government and every possible advantage would be taken of the information available to the Department

The motion to go into committee was agreed to

Insanity and Divorce

The motion for the third reading of the Matrimonial Causes Bill again came before the House of Commons on May 12th Dr O Donovan moved the rejection of the Bill and presented further arguments against making incurable insanity for five years a ground of divorce He said he saw no provision in the Bill whereby a judge would be assisted by any qualified assessor in dealing with the difficulties of medical certification Medical certificates could mean much or little He pointed out that a large part of the asylum population was made up of people in a condition of senile decay The Bill would result in increased pressure on the public authorities to put away senile cases

A count was called and there not being forty members in the House the debate stood adjourned

Panel Patients Record Cards —Sir Hilton Young replying to Mr Gledhill on May 8th said that the cost of printing record cards for use by insurance practitioners during the latest year for which information was available was £1 426 The cost of distribution was negligible, as the cards were usually enclosed with other communications sent out regularly by Insurance Committees to practitioners

Insurance Benefit in 1932 —On May 8th Sir Hilton Young told Mr Mabane that the total benefits paid in Great Britain under the National Health Insurance Acts during the calendar year 1932 amounted approximately to £31 850 000

Increase of Child Marriage in India —On May 8th Miss Rathbone asked the Secretary of State for India if he was aware that the census returns already published for three provinces of India, showed an enormous increase in child marriage since the previous census especially in Bihar and Orissa Sir Samuel Hoare said the marriage age and the age of consent were constantly under the consideration of the Government of India and he did not consider it necessary to give any directions on the subject

Deaths during Anaesthesia in Glasgow —Sir G Collins replying on May 9th to Mr Neil Maclean said that, according to the Registrar's returns the number of deaths registered in 1932 as having occurred at the Royal, the Western and the Victoria Infirmaries Glasgow during or following upon the administration of anaesthetics were, respectively 29, 26, and 6

High Death Rate in Stockton on Tees —Sir Hilton Young told Mr Lawson on May 11th that the report of the medical officer of health for Stockton on Tees on the death rate for the Mount Pleasant area which had averaged 33 55 per 1,000 of the population for the last five years as compared with the death rate for the same period of 10 5 for England and Wales was still under consideration

Water Supply —Replying on May 11th to Mr Levy, Sir Hilton Young said experience indicated that there was not a sufficient case for further legislative powers to enable him to compel an authority which had an excess in its water supply to make that excess available for or put it at the service of other districts where a scarcity existed Where an authority had a real surplus of water it was usually glad to find customers Where difficulties occurred he was ready to use his good offices He was aware of the scarcity of water in the Denby Dale district and was in communication with the local council That body was negotiating for a supply of water from the aqueduct of a neighbouring authority He realized the gravity of epidemics arising out of water which was of doubtful purity

Foot and Mouth Disease —Dr Elliot stated on May 11th that an inquiry had been held into an outbreak of foot and mouth disease on a sewage farm at Kinver Staffordshire Circumstances suggested that virus might have been introduced on the farm through the sewage effluent No definite proof was obtainable He was conferring with the Minister of Health on whether any action was possible to eliminate the risk of infection from this source

Notes in Brief

On May 8th Sir Hilton Young told Mr Mabane that the census material required for the construction of life tables for 1931 was not yet available Provisional figures showed that the general death rate was 12 per 1 000 of the population of England and Wales in 1932, the infantile mortality rate was 65

Late applications for pensions which have at any time in past years been recognized by the Ministry of Pensions numbered up to the end of last March 2 745 and a further 721 cases were found to require medical or surgical treatment

The Home Secretary proposes to bring into force on November 1st the Children and Young Persons Act 1933

Medical News

The dinner and annual meeting of the University of London Medical Graduates Society was held at the Langham Hotel on May 9th, with the president Lady Barrett, in the chair A large number of graduates attended, and the guests of the evening were the Dean of the Faculty of Medicine of the University of London (Dr A M H Gray) and the Master of the Society of Apothecaries (Dr Cecil Wall) The president, in outlining the successful social programme which had been carried out in the past year, expressed the hope that many of those London medical graduates who had not yet joined the society would do so in the near future and urged them to apply for particulars to the honorary secretaries at 11, Chandos Street, W 1

The Buckston Browne annual banquet of the Harveian Society of London will be held at the Star and Garter Home, Richmond, on Thursday, June 8th, at 7 30 for 8 p m

At the Princess Elizabeth of York Hospital for Children Shadwell, E, on Friday, May 26th, at 8 45 p m Sir Henry Gauvain will give a talk (illustrated by lantern slides) on the nature of the work carried on at the Lord Mayor Treloar Cripples' Hospital and College at Alton and Hayling Island Dr William Stobie will preside Visitors are welcomed

A paper will be read on Tuesday, May 30th at the British Red Cross Society's Rheumatism Clinic Peto Place, by Dr Gilbert Scott, on "Sacro-iliitis its Relation to Spondylitis and Other Rheumatic Conditions" based on the work done by himself and Dr Golding Clinic open for inspection at 7 15 p m , paper at 8 15

The thirty-fourth annual meeting of the Lebanon Hospital for Mental Diseases, near Beirut, Syria will take place at Friends House, Euston Road, N W , on Monday May 22nd, at 3 15 p m , under the chairmanship of Mr E W G Masterman, F R C S The report of the director, Dr H Watson Smith, on the work of the hospital during 1932–3 will be presented The speakers will include Dr Henry Yellowlees, M Jean Massip, Mr Oscar Darton, Mr D E Lowrie, and Miss Florence Barrow Visitors are specially invited Tea, 4 30 p m

The annual general meeting of the members of the Society for Relief of Widows and Orphans of Medical Men 11, Chandos Street, W , will be held on Wednesday May 24th, at 5 p m

In addition to the lectures already announced in this column, the Fellowship of Medicine and Post Graduate Medical Association has arranged a week end course at the Hospital for Consumption, Brompton on May 27th and 28th, when all day instruction in chest diseases will be given Forthcoming courses include medicine surgery and the specialties, June 12th to 24th, at the Prince of Wales's Hospital , week-end courses in clinical surgery at the Royal Albert Dock Hospital, June 10th and 11th diseases of the chest, at the Victoria Park Hospital June 12th to 24th , ante-natal treatment at the Royal Free Hospital, June 16th to July 7th (Fridays at 5 p m) The arrangements for each week are notified in our *Supplement*

CARBON DIOXIDE

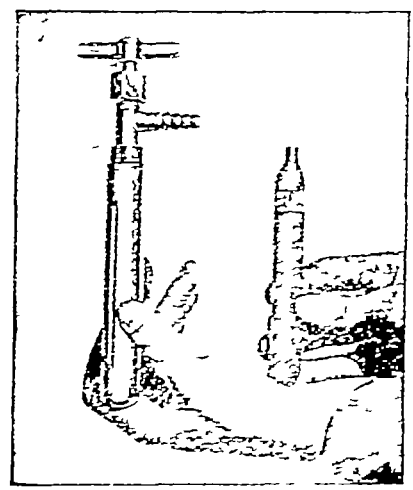
one of the latest advances in the treatment of HAY FEVER AND ASTHMA

For the treatment of hay fever and asthma, carbon dioxide may very conveniently be administered by the "Sparklet" Pocket Resuscitator, "J" size, for which a special attachment consisting of a rubber bag, tubing and nose-piece is issued The method of administering the gas has been described by an authority as follows —

In cases of ASTHMA the nose piece should be inserted in a glass of water and Valve Key should then be very slowly turned in an anti clockwise direction until a moderately rapid stream of small bubbles is seen to issue from the tube The nose piece is then dried and inserted into one nostril The patient should breathe through the mouth and the gas should be allowed to flow into the nose without being actually inhaled

In HAY FEVER the treatment prescribed should be followed for five minutes up each nostril every morning throughout the hay fever season and in addition the gas should be used as often as necessary during the day if an attack seems imminent and its use continued until the symptoms cease For paroxysmal sneezing and nose running the treatment should also be followed immediately an attack begins In cases of asthma which begin with an attack of this nature the gas may prevent the attack from developing

Proc Roy Soc Med Section of Laryng Dec 1930 p 441



"SPARKLET" POCKET RESUSCITATOR

PRICES (British Isles)

RESUSCITATOR, "J" Size, 32/6

Rubber Bag with Tubing and Nasal Tip **12/6**

BULBS "J" Size, for use with above, containing CARBON DIOXIDE, Box of 6 **10/6**

Refilling **4/6**

Other uses of the 'Sparklet' Pocket Resuscitator in general medical practice are the treatment of whooping-cough asphyxia through drowning or poisoning and to facilitate inhalation anaesthesia Write for Booklets 'The Use of Carbon Dioxide in General Practice and The Uses of Carbon Dioxide Snow in the Treatment of Skin Blemishes to

Sole Makers SPARKLETS LIMITED, LONDON, N 18

A meeting of the Medico-Legal Society will be held at 8.30 p.m. on May 25th at 11 Chandos Street, W., when Mr. W. G. Earengey, K.C., will open a discussion on The Legal Consequences of Shock.

A post-graduate course to be held in Strasbourg from June 21st to July 1st inclusive will deal mainly with modern diagnostic methods and treatment in connexion with medical and surgical tuberculosis and certain affections of the respiratory tract. Lectures will be followed by discussions, clinical examinations, cinematograph demonstrations, and illustrations of the various procedures described. In addition to the special consideration of pulmonary radiography, bronchoscopy, thoracoplasty, and pneumothorax, the lecturers will devote sessions to tuberculous osteitis, arthritis, and laryngitis, mediastinal new growths and adenopathies, and asthma from the oto-laryngological standpoint. The fee for the course is 300 francs. Further information can be obtained from Dr. Vaucher, Quai Finkwiller 8, Strasbourg.

Professor Emile Sergent will hold a post-graduate course on tuberculosis at the Hôpital de la Charité, Paris, from June 12th to July 8th.

The medical profession was well represented at the Rotary Conference held at Scarborough from May 4th to 9th. About twenty medical Rotarians attended the vocational group meeting on the Saturday, when Dr. Jonas presided, and at which many interesting topics were discussed.

The Committee of Award of the Commonwealth Fund Fellowships has issued a list of appointments to fellowships tenable by British graduates in American universities for the two years beginning September 1933. These fellowships are offered by the Commonwealth Fund of New York, of which Mr. Edward S. Harkness is president. H. W. Mulligan, M.B., Ch.B., M.D., University of Aberdeen, of the Indian Medical Service, is appointed to a fellowship in medicine at the University of Chicago.

British doctors are being invited to join a party of medical men who will leave this country in September next for a tour of about a fortnight to spas and other resorts in the Dolomite region on the Lake of Garda in the Apennines, etc.; the cost of the tour, which will start at Venice and finish at Rome, is about £23. The group will be in charge of an English-speaking Italian doctor, and receptions and entertainments will be arranged by the local authorities at the various resorts. There will be no night travel in Italy, and a special train composed of first-class coaches will be used throughout. Each doctor will have the option of taking his wife, son or daughter, and special railway tickets will be provided, so that at the conclusion of the tour members will at liberty to visit other parts of Italy at half-fare. Details of the arrangements may be had from the manager of the Italian State Tourist Department (E.N.I.T.), 16 Waterloo Place, Regent Street, S.W.1.

The Cambridge University Press announces for early publication a book entitled *The Digestive Tract: A Radiological Study of its Anatomy, Physiology, and Pathology*, by Dr. A. E. Barclay.

The Trade Marks Committee, set up in January last under the chairmanship of Viscount Goschen to consider and report whether any, and if so what, changes in the existing law and practice relating to trade marks are desirable, is continuing its meetings for the purpose of hearing evidence from interested persons and associations. Any who desire to submit further suggestions or to give evidence should notify the secretary to the committee, Mr. R. W. Luce, Industrial Property Department, Board of Trade, 25 Southampton Buildings, W.C.2, not later than June 3rd.

The twenty-fifth anniversary of the death of Vittorio Marchi, the neurologist and histologist, was celebrated at the University of Modena—his Alma Mater—on May 13th.

A severe outbreak of small-pox has recently occurred at Alexandria, where 2,149 cases and 443 deaths—a mortality of 26.7 per cent.—have been notified between January 1st and March 4th.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, B.M.A. House, Tavistock Square, W.C.1.**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their name, not necessarily for publication.

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of proofs.

All communications with reference to ADVERTISEMENTS as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager.

The **TELEPHONE NUMBER** of the British Medical Association and the *British Medical Journal* is EUSTON 2111 (internal exchange four lines).

The **TELEGRAPHIC ADDRESSES** are:
EDITOR OF THE *BRITISH MEDICAL JOURNAL*, *Aitiology, Westcent, London*.
FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements, etc.), *Articulate, Westcent, London*.
MEDICAL SECRETARY, *Medsecra, Westcent, London*.

The address of the Irish Office of the British Medical Association is 18 Kildare Street, Dublin (telegrams *Bacillus, Dublin*; telephone 62580 Dublin); and of the Scottish Office, 7 Drumsheugh Gardens, Edinburgh (telegrams *Associate, Edinburgh*; telephone 24361 Edinburgh).

QUERIES AND ANSWERS

Nirvanol in Chorea

S.O.S. asks: What is the present position of the nirvanol treatment of chorea?

*** A correspondent who has used nirvanol since it was introduced into this country writes: In many cases of chorea the drug is strikingly successful, but not in all. It is not possible to foresee the failures. The drug does not show its effect until about the twelfth day. A definite reaction with enlarged glands (post-cervical), a rash very like German measles, and other phenomena described in the literature usually appear about the tenth day. The dose is carefully restricted to 0.3 gram for a child of 9 years and half that dose for a child of 5 years—in each case divided into two doses (halves) given in tablet form by the mouth. The writer does not use it for a mild chorea, believing its use then not called for, but for severe and stubborn cases. Some authorities condemn it, believing it to be dangerous, the chief danger being temporary mental derangement. For this reason it is not advisable to give it to a mentally deficient child with chorea. The drug is stopped when the rash and large glands appear, or if there is no reaction on the twelfth day. It is a drug that needs discretion, but the writer has found it very serviceable.

Perpetual Snoring

Dr. M. G. FITZGERALD (Teddington) writes: Would it be good enough to suggest a remedy for loud snoring which takes place every night as soon as the patient, a healthy married woman of 30, goes to sleep. It persists all night, and she is quite unconscious of it. There is no apparent lesion of the mouth, tongue, pharynx, larynx, lung, nose, or ear. Changes of posture, strapping the lips, sedatives, alteration of meals, etc., have all failed. The snoring began two years ago when her child was 14 days old. I have had to give the husband a sedative, and he can hear the noise all over the house.

Pruritus in Tabes

BORDERER asking for information on the following case writes: A woman aged 60, with tabes, has shown definite improvement following several courses of treatment. Wassermann reaction of both blood and cerebro-spinal fluid is now negative. Life is miserable from generalized pruritus; the patient cannot bear clothing on the skin. Baths, diets, drugs, sedatives, hormones, etc., are all of no help.

Income Tax

Repayment of Loan by Instalments

M.B. borrows capital to the extent of £3,000 to buy a practice or share yielding about £2,000 per annum. The security includes an insurance policy and M.B. pays back on a seven-year capital basis at the rate of about £700

per annum of which about £200 is insurance The surgery is at the house where M B lives How will these facts affect the liability?

*** Amounts repaid on account of money borrowed are of a capital nature only The income so used is "M B's" income and he is entitled to 'earned' relief on it and must pay tax thereon accordingly So far as the annual payments represent interest on the loan he is entitled to deduct tax therefrom at the time of payment To the extent to which they are for premiums on an assurance effected by him on his own life he is entitled to the usual insurance relief No definite rule can be laid down as to the proportion of the general 'house' expenses attributable to professional work, but a basis of half and half is not uncommon

Depreciation Allowance

'P Q R" explains that he has been allowed depreciation yearly—less one seventh attributed to private use of the car In July 1932 the old car, which was written down by depreciation to £37 was lost in an accident and £35 was received from the insurance company A new car was bought for £160

*** As presumably the insurance premiums have been allowed for income tax purposes the £35 received cannot be ignored and the obsolescence allowance—to be treated as a professional expense of 1932—is therefore £37 − £35 = £2 Depreciation for 1933-4 will be 15 per cent (or 20 per cent if allowed) of £160 = £24, less one seventh for private use—that is, £21

Obsolescence of Car Temporary Cessation of Professional Work

D T' used a car from 1928 to July 1932 when the practice was sold Depreciation was allowed at 20 per cent, and by April 5th 1932 the value of the car had been thereby written down to £70 8s The amount then offered in part exchange for a new one was £25 Can any further allowance be obtained (*a*) if professional work be resumed and (*b*) if it is not resumed?

*** In our opinion no further allowance in respect of the car is legally due The "obsolescence allowance" requires as a condition the purchase of another car in replacement so that if professional work be not resumed no allowance can be claimed The matter is not so clear if another practice is taken and a car purchased in replacement of the old one but the only subject of the deduction would be the profits of the new practice and the obsolescence and replacement are irrelevant to those earnings because necessitated by the work done in the previous practice

Purchase of Lease Deduction for Rent

A H S purchased in April 1927 for £2 400 a twenty nine year lease commencing Lady Day 1942 Prior to that date the rent was £240 subsequently it is £100 He asks what is the equivalent rent and to what extent the tax paid under Schedule A has to be borne by him The net Schedule A assessment on the premises is £240

*** The calculation of the equivalent rent (that is £100 plus an annual payment equivalent to twenty nine sinking fund payments starting back in 1927) is a somewhat complicated matter and for the reason given below its ascertainment would not assist A H S" materially—assuming that the premises have not fallen in annual value since the £240 rent was fixed Suppose the true rent to be £60 + £*x* In that case there are grounds for saying that the net assessment under Schedule A should be £100 + £*x* Assuming that 'A H S" deducts two thirds of that amount as applicable for professional purposes then to that extent the more he pays under Schedule A the less he pays under Schedule D, but as regards the one third applicable to his private use of the premises any increase in the assessment affects him adversely Consequently his best course appears to be to continue to accept the net Schedule A assessment of £240 and to deduct £160 (that is two thirds of the £240) as the 'professional' rent and not two thirds of the £100 rent He will pay tax under Schedule A on £240, and recover on £100 only from the ground landlord the tax on the difference of £140 is tax on his own intangible rent—that is on the income represented by his lump sum payment of £2 400 in April 1927

LETTERS, NOTES, ETC

"Memorial to Malton Doctor"

Mr ERIC I LLOYD F R C S (London W) writes The above appeal which was announced in a letter to the *British Medical Journal* on December 17th, 1932 as well as in the *Lancet* and the *Times* has brought in £955 7s 5d Small insurance policies are being bought and the Royal Medical Benevolent Fund has agreed to administer the moneys for the benefit of Dr Parkin's boy and girl The Medical Relief Committee wish to thank the *British Medical Journal* for publishing the appeal and the public for their generous response The fund is now closed

Maternity Work in Central Africa

Dr C A MARSH (Bath) writes from Central Africa As a visitor to the American Mission at Kumosi near the northern shore of the Victoria Nyanza I had the opportunity of seeing something of native methods of midwifery in addition to well conducted labour in the Mission Hospital Labour is not so easy in this district as in ours and I am told this is because the pelvis approximates to the male type owing to women beginning to carry loads too young The elderly women who preside do not believe in any rest between the pains and the patient is urged to make effort the whole time uterine inertia being the common result When labour is properly begun the patient is taken from the hut by an exit other than the normal door sometimes through some quite small opening I could not discover the objection to using the ordinary doorway She is placed on the ground in the banana grove which adjoins every hut in this part and the population of the neighbourhood attends to watch the proceedings The patient is quite devoid of clothing If after several days the baby is *not* born, assistance is sought from a doctor attached to the Mission Hospital I went with the doctor to such a case and on arrival found the woman had been in labour four days She was lying naked among the banana trees and about a hundred natives—at least half of them men—were in the immediate neighbourhood A native stretcher was produced and the patient was carried to the nearest point to which a car could be driven She was placed with one woman and several men in a box body car and driven fourteen miles over rough country to the hospital which is situated on the edge of the new Kakamega goldfield On examination I found a stinking faecal odour which made me suspect ulceration through the intestine but this proved not to be the case There was complete uterine inertia, but no haemorrhage A large caput was presenting and all liquor amnii had drained away The position was left occipito anterior but the only difficulty appeared to be a large baby unfavourable methods, and lack of strength in a woman with her eighth child I was invited to finish the job, which was fairly easily accomplished with forceps in the hospital with a native attendant as a skilful anaesthetist When last seen she was doing well Another case I went to see proved a B B A and the patient was back in her hut The baby was a few hours old and was being nursed by another woman The cord had been successfully tied and divided Many people of both sexes were squatting round in the hut and I had to inquire which was the patient A smoky fire was burning beside her in spite of a tropical temperature There is a teeming population in the neighbourhood notwithstanding high maternal and infantile mortality The tribe is Bantu Kavirondo

Torsion of the Omentum

Mr E M COWELL (London W) writes In your issue of May 6th (p 784) Mr L Brill of Leeds describes a case of complete torsion of the omentum He has apparently not consulted one authority on the subject, an American text book May I refer him to my paper published in the *British Journal of Surgery* (1925, xii 738) in which a complete bibliography was given Several reports of such cases published in the *British Medical Journal* have referred to this article

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 41 42 43 44 45 48 and 49 of the advertisement columns and advertisements as to partnerships assistantships, and locumtencies at pages 46 and 47

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 22

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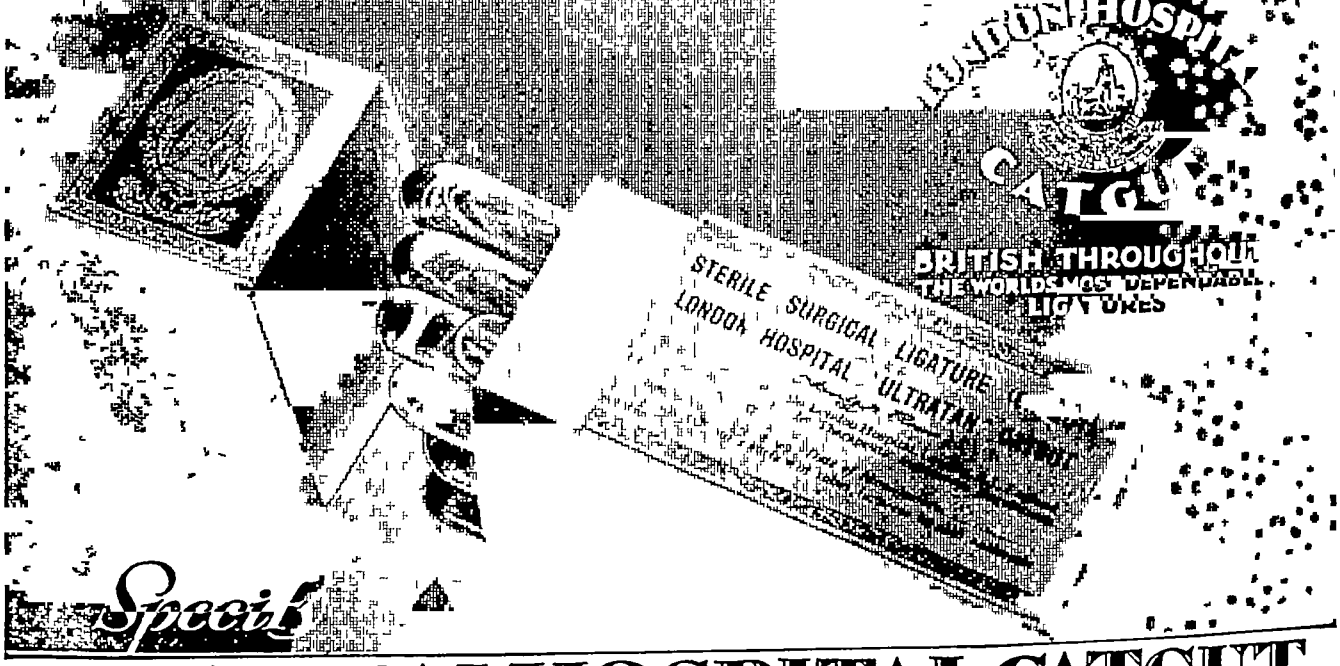

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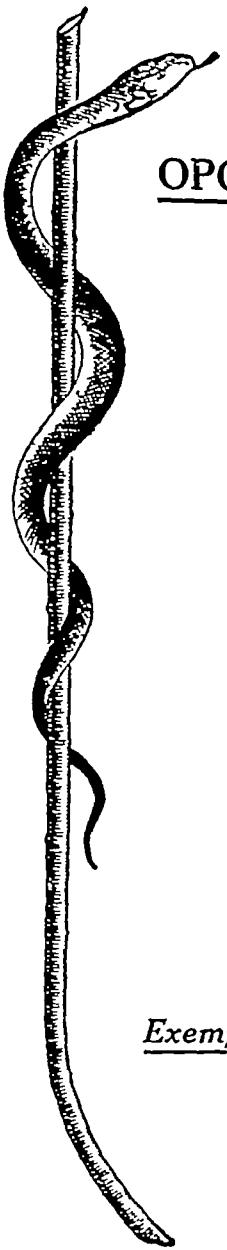

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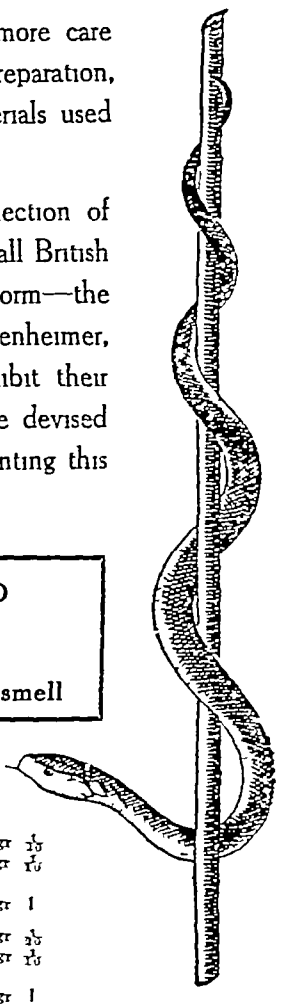

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EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

357 Atophan (Cinchophen) Jaundice

K Larsen (*Ugeskrift for Laeger* February 16th 1933 p 189) recording a case of atophan jaundice has found in the literature records of ninety six cases forty-two of which proved fatal In the thirty five fatal cases in which a post mortem examination was made acute yellow atrophy of the liver was diagnosed The sex was not stated in twenty two cases Among the remainder including the author's own case were thirty males to forty five females There were only two cases under the age of 19 Between the ages of 20 and 40 there were twenty three cases between 40 and 60 there were thirty-eight cases and over 60 there were ten cases There were twenty four cases in which the age was not recorded The dosage and the period during which the drug was given fluctuated between such wide limits that it was impossible to establish any definite toxic dose The smallest dose was 4 5 grams given over a period of five days The largest dose was about 460 grams given over a period of about three years It is probable that the patient's general health the pre-existing condition of the parenchyma of his liver and idiosyncrasy played an important part Since atophan was introduced in 1908 by Weintraud it has been extensively used in uric acid rheumatic and gonorrhoeal arthritis neuralgia myalgia and certain diseases of the skin and eyes The ninety six recorded cases of atophan jaundice are few in comparison with the total number of patients taking atophan but it is probable that several other cases of atophan jaundice have escaped recognition or at any rate record As an anti rheumatic remedy atophan should therefore be given alternately with other anti rheumatic remedies and at as short intervals and in as small daily doses as possible The patient must also be closely supervised as long as he is taking atophan so that it can be discontinued on the first sign of poisoning A history of idiosyncrasy to atophan on a previous occasion should be taken as a warning against prescribing it again

358 Pathogenesis of Diabetes

In the last five years several German writers have described numerous cases of diabetes associated with cholecystitis cholangitis and hepatic cirrhosis E Becker (*Med Klinik* January 27th 1933 p 154) has collated these reports which show that in 38 per cent of recorded cases diabetes was a definite sequel of cholecystitis Some writers found in a large proportion (24 to 36 per cent) of all diabetics definite evidence of old or of concurrent cholecystitis or of other diseases of the bile ducts or of the liver parenchyma Necropsies revealed only slight changes in the pancreas and the islands of Langerhans but on the other hand the hepatic parenchyma exhibited definite lesions According to Becker the latter condition must lead to a derangement of carbohydrate metabolism thus giving support to the old theory of hepatic diabetes For this hypothesis a connecting link with pancreatic disease is not essential There is some evidence that hereditary disposition is the decisive factor The majority of patients are women In Becker's own series of 265 cases seventy-one patients (26 8 per cent) exhibited symptoms of definite gall bladder disease Freund however does not admit the frequency of antecedent cholecystitis in diabetes It has been shown that the occurrence of familial diabetes and of diseases of the bile ducts and gall bladder is not uncommon the last named may be the starting point of a secondary pancreatic lesion leading ultimately to damage to the islands of Langerhans In another series of 265 patients hepatic lesions were found in 129 cases (49 68 per cent) Of these forty-one were cases of cirrhosis (of which thirty five occurred in males) Becker believes that the presence of hepatic hyperaemia fatty infiltration or commencing hepatic cirrhosis is frequently unrecognized during life and therefore the question whether the primary lesion is cirrhosis or diabetes cannot be decided at the present time

359 Concurrent Typhoid Fever and Diphtheria

L P Gorrichon (*Thèse de Paris* 1933 No 6) states that the association of typhoid fever and diphtheria was first described in 1859 by Oulmont, who reported a mild epidemic of diphtheria among the typhoid patients in the Hôpital Saint-Antoine Paris A small epidemic of diphtheria among the typhoid cases in the same hospital was recorded by Gallard in 1880 In 1907 Rathery observed a few cases of typho-diphtheria in Chantemesse's typhoid wards Subsequently no further mention was made of the association until the beginning of the war when important communications were made to the Société Médicale des Hôpitaux de Paris by Joltrain Rathery and Labbé who reported 120 109 and fourteen cases respectively Since the war the subject has been forgotten apart from the Paris theses of Pigeon in 1922 and Haye in 1927 Typho-diphtheria is a very severe affection which is chiefly found in hospitals either because the contagion is due to carriers or because the virulence of the bacilli in the typhoid patients who had hitherto been merely carriers suddenly becomes exalted as the result of typhoid fever The disease usually runs a very severe course owing to the complications due to diphtheria and typhoid fever or from acute typho-diphtheritic cachexia In addition to the ordinary treatment for typhoid fever diphtheria antitoxin should be given early and in large and repeated doses It is hoped that typho-diphtheria can be stamped out by the generalization of combined inoculation against diphtheria and typhoid fever Gorrichon records a sporadic fatal case in a woman aged 44 in whom diphtheria occurred in the second week of typhoid fever Death was due to broncho-pneumonia There was no necropsy

Surgery

360 Parathyroid Operations in Various Affections

R Leriche and A Jung (*Rev de Chir* January 1933 p 5) record details of twenty-one cases of various diseases in which operations on the parathyroid glands were performed In all the cases (except one in which hyperparathyroidism was present) they excised one or both parathyroid glands In their absence resection of the terminal segment or of two thyroid arteries was performed Two cases of Recklinghausen's disease showed that parathyroid adenomata usually considered as characteristic of this condition are not always present The authors suggest that this tumour is only a secondary formation and not causal and that possibly at the onset of the disease it does not exist or is only slightly visible The good results obtained in seven cases of scleroderma show that parathyroid surgery is certainly indicated in this affection In two personal cases of ankylosing polyarthritis this operation was unavailing but excellent results were obtained in a third and have persisted for twenty-three months Resection of the thyroid artery in two cases of spontaneous keloids caused a certain amelioration but this was not very marked or permanent Clinical improvement with a return of the calcaemia to the normal followed a similar operation in a case of painful spinal callus with hypercalcaemia but it was too early to estimate the probable ultimate benefit One parathyroid gland was excised in a case of Paget's disease and in another case sympathectomy of the thyroid arteries with the application of carbolic acid to the arterial pedicles

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was performed Although both patients experienced relief the authors doubt if this disease is really benefited by parathyroid surgery

361 Hydatid Cysts of the Pelvis

J Okinczyc and P Moulonguet (*Bull et Mém Soc Nat de Chir* February 25th 1933, p 301) report two cases of hydatid cyst of the pelvis which were treated surgically and made good recoveries In both cases recurrence took place and confirmed the grave prognosis in cases of this type of hydatid cyst Diagnosis is very difficult and is seldom made prior to operation pain is very slight and the evolution of the disease slow the patient showing no symptoms of disorder in general health The prognosis is more hopeful in cases where the disease is confined to the pelvic girdle than when it extends to the joints particularly the hip joint In the latter case there are signs of pseudo coxalgia with pain, loss of function and secondary infection When the osteitis is complicated by arthritis, and when operation on the joint is necessary in addition to bone resection the outlook is comparatively hopeless, as death occurs more or less quickly from septicaemia On the other hand when the parasitic infection is limited to the pelvic bones the evolution of the disease is so slow and obscure that the bone may be nearly destroyed before some slight injury causes a spontaneous fracture and reveals the extent of the disease It is only in early diagnosis, whenever possible that surgical intervention can offer any hope of removing the parasitic infection *en bloc* Otherwise the extension of the disease is so insidious and erratic that it is almost impossible to remove every trace of infection, and tissue may be left which will be the seat of possibly fatal recurrence The iliac bone is the most common site of infection and in these cases a considerable resection is possible and has given good results When the parasitic infection extends towards the sacrum and the coxo femoral joint a secondary infection is usually present and drainage alone is possible to retard the issue, which can only be fatal In the cases reported, diagnosis of a cold abscess was made in one instance and of a lipoma in the other Recurrence occurred in both cases, necessitating further surgical intervention, but at the present time both patients are alive and well

362 Treatment of Empyema Thoracis

John F Connors (*New York State Journ Med* February 1st, 1933 p 149) records further experiences in the treatment of empyema thoracis by packing The author emphasizes that unless there are signs of rapid downward progression operation should be postponed until the time when the patient's condition is improved This is accomplished by not only waiting until the pus is thick, but by strengthening the patient's resistance by daily pleural taps by allowing time for subsidence of any possible underlying pulmonary infection, by forcing nourishment and fluids and if necessary, by blood transfusion The operation consists of the removal, through an incision made according to the position and extent of the empyema, of two and a half inches of two adjacent ribs These are removed subperiosteally, and the intervening muscles and vessels are clamped at each end and removed *en masse* Pus is then located with an aspirating syringe, and the opening made by the needle slowly made larger, in order to admit the nozzle of an aspirating apparatus, which as far as possible removes the pus The orifice in the chest wall is then slowly opened widely, until it is approximately two inches in diameter Through it, with the aid of the Cameron light, the greater part of the pleural cavity may be investigated, adhesions broken down and fibrin and pus removed The cavity is now packed firmly with plain gauze as much as thirty yards having been used in some cases The skin edges are protected by vaselinized gauze and a dry dressing applied Oxygen is a valuable aid in the post operative treatment, and forced fluids and nourishment and transfusion of blood are continued as before The patient is got up early—frequently as soon as the second day—and respiratory movements are encouraged by the use of Woulf bottles, balloons, etc The packing is removed in two days, and not replaced, except in a few special cases In almost all cases the pleural cavity is found to be perfectly clean after the removal of the packing and the lung expands freely Thereafter rapid improvement takes place and most patients are ready for discharge from hospital two weeks after operation, although of course further dressings are required The advantages of the method are claimed to be (1) the pleural cavity is cleaned within twenty-four hours and remains grossly clean until the cure is effected, (2) the ease of management post-operatively by the surgeon (3) the introduction of tubes is unnecessary, and therefore a source of pleural irritation is avoided (4) it prevents discomfort which may be due to a mobile mediastinum, by fixing it and (5) the large thoracotomy wound permits a perfect inspection of the cavity by the operator with the aid of the Cameron light

Therapeutics

363 Lactose in Constipation

According to E Boros (*Med Journ and Record* February 15th 1933, p 140) the harm resulting from constipation depends on the presence and degree of toxaemia When a patient is not toxic constipation may be regarded as of slight importance, but if he is, frequent bowel evacuations are necessary Irregularity of bowel evacuations is caused by specific factors, the most important of which are granular degenerations in the plexus of Auerbach and Meissner and in the fibres and ganglia of the sympathetic plexuses, these are caused by resorption of toxic products from the colon This interference with its normal innervation disturbs the normal functioning of the bowel The resulting constipation is due to degeneration and necrosis in the intestinal mucosa, especially in the lymphoid tissues and small glands, and in the secreting cells of the tubular glands and the epithelium These conditions also are due to toxic products formed in the intestine The putrefactive process, which is both a cause and an effect of intestinal stasis (constipation), should be relieved as quickly as possible Boros has found bacterial methods with both *B bulgaricus* and *B acidophilus* and the use of cathartics, etc, to be valueless, and he cites the opinions of various authorities as to the marked benefits obtained by lactose in this condition Fitch has stated that thoroughly efficient protection is afforded for the infant in the acidophil or fermentative bacteria imbibed in the mother's milk Lactose is a prime constituent of milk and an excellent source of energy for these microbes In cases of constipation Boros administers 2 tablespoonfuls of lactose (preferably β lactose) in half a glass of cold water half an hour before breakfast and again before retiring Cold water is given as it tends to stimulate the gastro colic reflex Results are not noticeable for a few days In the interim magnesium oxide powder is prescribed as follows one tablespoonful three daily on the first day, a half on the second, and a quarter on the third, it should then be discontinued In obstinate cases having no bowel movement during this period a bland oil should be injected rectally on retiring followed next morning if necessary by an enema containing a little water Boros has found this method to be successful in the vast majority of his patients Short notes are given of four typical cases

364 Immuno transfusion in Scarlet Fever

J E Gordon (*Journ Amer Med Assoc* January 14th, 1932 p 102) who records six illustrative cases in children aged from 23 months to 15 years, states that of 1,003 scarlet fever patients admitted to the Hermann Infant Hospital at Detroit in the last ten years, 240 have been treated by immuno-transfusion, the two principal indications for which were early septic scarlet fever and septicaemia with late complication such as acute mastoiditis

or sinus infection. The donors were persons whose attack of scarlet fever was not more recent than thirteen days previously or later than three or four months. One transfusion was usually sufficient but sometimes from two to six were necessary. The doses were usually from 100 to 150 c.cm. for infants and young children 300 c.cm. for older children and 500 c.cm. for adults.

365 Splenic Extract in Delayed Dentition

P. BAIZE (*Bull. Soc. de Thér.* February 8th 1933 p. 48) treated seventeen children presenting disorders of dentition in the form of delay in the appearance of the teeth and general symptoms such as restlessness insomnia and diarrhoea by administration of splenic extract. Ten drops of a lipoid extract of the spleen were given by mouth three times a day for a period ranging from twenty days to two and a half months. With three exceptions the results were good. Baize attributes the success of the treatment of the splenic extract to its beneficial action on systematic mineralization and growth.

Neurology and Psychology

366 Treatment of Tabes by Intraspinal Arsenobenzol

J. GADRAT (*Ann. de Derm. et de Syph.* January 1933 p. 28) reviews the treatment of syphilis of the nervous system by means of intraspinal injections of the arsenobenzol group. Since the tolerance of the subarachnoid space to foreign substances has long been established it appeared reasonable to suppose that direct injections of arsenobenzol would have a beneficial effect upon late syphilitic manifestations. Also since only a very minute quantity of drugs injected intravenously appears to reach the cerebro-spinal fluid direct injections would seem *a priori* to have special therapeutic value. Nevertheless Gadrat brings evidence to show that this method has been almost abandoned everywhere. The reason advanced for its failure is that arsenical solutions even very dilute exert too violent an action on nervous tissue. Meningeal shock may be exhibited and even haemorrhagic reaction of the subjacent parenchyma. The dose which may provoke these conditions varies with different individuals and cannot be defined beforehand. The treatment of tabes by specific intraspinal medicaments cannot be compared with that of cerebro-spinal meningitis by anti-meningococcic serum. Also it is not proved that arsenic compounds exert a beneficial effect by direct action since the treponema can live in arsenic. It is suggested that the arsenic injected into the venous system has to undergo some profound modification before it can exercise its curative properties. Certain benefits have however resulted from intraspinal treatment particularly in cases with very severe gastric pain. Optic atrophy is considered by Kafka as a definite indication for this method of treatment.

367 Distortion of the Visual Fields in Occipital Tumours

Differentiation of tumours of the temporal and occipital lobes especially when the lesion is on the right side of the brain may be difficult or impossible from neurological examination even when dependable perimetric fields can be plotted for hemianopsia of one form or another is very common with lesions in either situation. G. HORRAX and T. J. PUTNAM (*Brain* December 1932 p. 499) have therefore set out to enumerate and discuss the diagnostic importance of the field defects and hallucinations produced by tumours of the occipital lobe as a sequel to the comparable study of Cushing in 1921 in respect of the temporal lobe. Localization of a growth by ventriculography though valuable has certain drawbacks especially in the case of a patient whose general condition is already precarious. In many cases clinical observations will therefore afford the only criterion available and the present authors record a series of clinical cases with a view to showing how valuable these visual determinations can be. They state that intracranial tumours confined to the occipital lobes are relatively rare occurring in only forty instances in a series of 1,881 cases of verified intracranial growths. In 73·6 per cent. of patients with tumours confined to or chiefly compressing the occipital lobe the fields of vision show a contralateral homonymous hemianopsia in which the central fibres remain unaffected. This is said to be particularly true of meningiomas situated at the posterior end of the occipital lobe. An upper quadrant homonymous defect of the visual fields was not found in any case of the series and the authors regard its occurrence therefore as rare in strictly occipital tumours. Visual hallucinations were present in six out of the forty patients (15 per cent.) before the operation for removing the tumour. Careful investigation of these supported the idea that complex formed images are not provoked by occipital growths. The authors agree that a differential diagnosis of these tumours may be impossible without ventriculography. The high incidence of spared central fibres together with the rarity of upper quandrant defects in occipital growths is helpful since bisection of the macula and an upper quadrantopsia are frequent in temporal lesions. Other differential points cited are the relatively greater tendency to the true quadrantic form (bounded by the horizontal meridian) in defects due to temporal lobe growths and their greater incongruity as compared with those due to tumours of the temporal lobe.

368 Familial Disseminated Sclerosis

W. G. S. SMITT (*Nederl. Tijdschr. v. Geneesk.* February 25th 1933 p. 882) describes a familial nervous disease developing in both sexes at puberty or in adult life and characterized by the following clinical features: an onset with psychical symptoms in the form of dementia simplex neurological changes in the form of disseminated sclerosis and rapid progress and absence of epileptic attacks. Nosologically the disease may be regarded as belonging to the group of familial forms of disseminated sclerosis and allied to encephalitis periaxialis diffusa and Pelizäus-Merzbacher disease.

Obstetrics and Gynaecology

369 Dangers and Contraindications of Hystero-salpingography

Although it is affirmed frequently that diagnostic methods should be absolutely safe it is inevitable that some valuable diagnostic procedures such as *x* ray examination of the pregnant uterus and exploratory laparotomy should entail some risks. The dangers of hystero-salpingography must be weighed against the value of the information that it may furnish. P. E. MORHARDT (*Gynecol. et Obstet.* January 1933 p. 47) has collated the results obtained by various authorities. He classifies the dangers of hystero-salpingography as (1) chemio-toxic (2) mechanical and (3) infections or reinfections. In some cases toxic symptoms have followed the injection of collargol sodium bromide iodipin and lipiodol. The last appears to be less toxic than the others if some lipiodol escapes into the pelvis it is apparently absorbed slowly but without producing serious symptoms. It is suggested that the stimulating action of the iodine is sometimes beneficial. Mechanical accidents result usually from excessive pressure. This should never exceed 200 to 250 mm. Hg. In all doubtful cases a manometer should be employed. Tubal pregnancy carcinoma of the corpus uteri fibroma and uterine atrophy may induce rupture. Laceration may lead to injection of fluid into the veins and consequent oil-embolism. One writer records a death following injection of 5 c.mm. iodipin (40 per cent.) under a pressure of 80 mm. A number of cases of infection or

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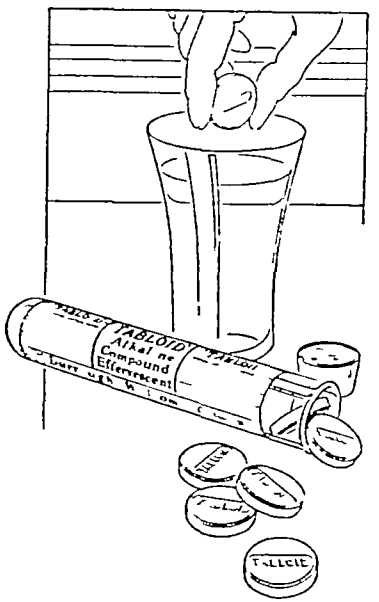

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reinfection of the uterus or tubes after hystero salpingography have been reported One patient who had had a streptococcal infection died shortly after injection from streptococcal peritonitis Other cases of pelvic abscess and of tuberculous peritonitis following hystero salpingography have been recorded Morhardt recommends strict attention to asepsis a long interval before or after menstruation and waiting until all inflammatory symptoms such as pain and exudation have disappeared Any intrauterine treatment may be followed by restoration of tubal permeability but it is difficult to attribute special efficacy to the employment of iodine compounds

370 Cotte's Operation

G Cotti (*Zentralbl f Gynak* January 14th, 1933 p 72) reviews the results of over 200 cases of removal of the presacral nerve—an operation practised by him since 1924 He finds its chief use in functional alterations of the genital tract especially dysmenorrhoea In ninety-one patients in whom the latter was the chief complaint, and in whom organic lesions of the genitalia were absent, as well as thirty four who had, besides dysmenorrhoea, other pelvic pains and demonstrable disease of the adnexa, resection of the presacral nerve was followed by disappearance of the pain In the first group the operation was combined with ligament-fixation and appendicectomy, in some of the second group with surgical treatment of the tubes and/or ovaries Sixteen of these patients had dyspareunia, and this also became cured Thirty pregnancies followed and proved normal Cotte states that the success of his operation is dependent on correct choice of cases the character of the menstrual pain must be carefully studied Prognosis is best when the hypogastric plexus alone shows irritation if in addition the utero ovarian plexus is affected and there is sacral backache with pain in the course of the obturator nerve, or if there is intermenstrual pain the operation is less likely to be fully successful Division of the presacral nerve cured six out of seven cases of vaginismus and was successful in sixteen cases of pelvic neuralgia and some of nymphomania and pruritus Trying his operation in five cases of neuralgia pains in inoperable or recurrent cancer of the cervix Cotte found it successful in four including one case in which the pain remained absent even after subsequent development of vesico and recto vaginal fistulae

371 Accidental Injection of Blood Vessels during Salpingography

C Becclere (*Bull Soc d Obstet et de Gynécol de Paris* January 1933 p 31) alludes to experimental injections of the uterus and tubes in operation or post-mortem specimens which proved that lipiodol might enter the blood vessels in and without the uterus if the pressure exceeded 30 cm of mercury In conjunction with Portes (p 36) he obtained radiographic evidence that a similar vascular injection had occurred in a sterile woman whose adnexa had been the subject of surgical intervention some time previously The pressure used had not been greater than 30 cm He reproduces radiograms of similar cases described by Pujol y Brull Vanrell and C Riera, and states also that a study of his radiograms after salpingography done in early cases without the use of a manometer has shown evidence of injection of the uterine blood vessels unsuspected at the time The accident in cases so far known has been well supported but pain pyrexia and haemoptysis (all transitory) have been noted In prevention the following measures are important The pressure should be measured beginning with 10 to 15 cm of mercury slowly rising to 20 cm (the usual limit) and never exceeding 30 cm Special care should be taken when the uterus is infantile and where there has previously been salpingectomy The injection must be stopped if pain is reported and signs of vascular injection should be watched for on the screen A syringe should be used of which the piston only is controlled manually

Pathology

372 The Blood Volume in Chronic Arthritis

Various explanations have been suggested for the diminished vascularity of the joints in chronic arthritis and M I Sparks and R L Haden (*Amer Journ Med Sci* December, 1932 p 753) have examined forty-one unselected cases, with either hypertrophic or atrophic forms of this disease, in order to determine whether an actual variation in the total volume of the blood in the body may account, in part at any rate, for the reduced supply to the joints. The colorimetric method of Rowntree, Brown, and Roth (using Congo red) was employed In sixteen normal persons, taken as controls the average whole blood volume was found to be 67 c cm per kilo of body weight This is a lower figure than that obtained by other workers, and Sparks and Haden attribute this discrepancy to the fact that they allowed a four minute interval instead of the more customary two-minute interval The same technique was used throughout so that the comparative value of the estimations in their series of cases is unaffected In twenty six patients suffering from atrophic arthritis the average blood volume proved to be 75 9 c cm per kilo , the highest figure was 112 c cm , and the lowest 57 c cm This is a wide variation, but in twenty cases the range was between 65 and 85 c cm This finding would seem to exclude the possibility of any decrease in blood volume being a factor in atrophic arthritis In the group of fifteen patients with hypertrophic arthritis the average blood volume was found to be slightly less than in the group of normal persons—namely 62 5 c cm per kilo, with a range of 49 8 to 76 3 c cm Overweight is usually associated with a smaller blood volume per kilo, and this fact is held by the authors to have some significance in the present connexion since the subjects of chronic hypertrophic arthritis tend to be above the average weight Only a relatively small percentage of their group of patients with atrophic arthritis were underweight, and it is held consequently that a variation in weight cannot be the explanation of the increased blood volume observed in the atrophic cases This increase is shown to be due entirely to an increase in the plasma, the volume of which was 47 7 c cm per kilo, as contrasted with 39 c cm in normal individuals In atrophic arthritis an oligocythaemic hypervolaemia is present, and in hypertrophic arthritis there is an oligocythaemic hypovolaemia Since the total blood volume in atrophic arthritis is greater than that in normal persons, with a decrease in blood in the peripheral vessels it is argued by the authors that the excess blood must be retained in the large splanchnic vessels This fact might account for the beneficial effects of breathing and postural exercises which aid in the mobilization of these large and relatively stagnant visceral pools

373 Indoxylaemia in the Aged

G Laroche, E Schulman, and Deseordes (*C R Soc de Biol* January 27th, 1933, p 290) have investigated the occurrence of indoxylaemia in thirty one patients whose ages ranged from 60 to over 80 years The indoxylaemia was determined by Grigaut's method the blood urea and phenolsulphonephthalein elimination after intravenous injection were also estimated A slight or moderate azotaemia was frequently found No parallelism was found to exist between slight azotaemia (below 1 gram) and the indoxylaemia, but three cases of marked azotaemia showed a very high indoxylaemia A clear relation was found between the indoxylaemia and the phenolsulphonephthalein elimination , the former was much more frequent when the latter was most lowered Four out of six cases with very low phenolsulphonephthalein elimination and a very positive indoxylaemia died within three months The authors believe that indoxylaemia in the aged is frequently associated with azotaemia and a diminished phenolsulphonephthalein elimination that its presence indicates an accentuated renal insufficiency and that it is a valuable aid in prognosis

A Paper
ON
PRACTICAL PROBLEMS IN PAEDIATRICS*

BY

A DINGWALL FORDYCE M.D. F.R.C.P.ED.
HONORARY PHYSICIAN ROYAL LIVERPOOL CHILDREN'S HOSPITAL

In medical practice every age has had its own peculiar difficulties and its particular problems to be solved in the advancement of science and the furtherance of the well-being of society. In no department of medicine are the problems of to-day more conspicuous than in paediatrics.

Consequent upon the founding of special hospitals for children about seventy years ago a vast amount of new knowledge has been gained concerning the diseases peculiar to children their prevention and their treatment. Many recent discoveries of prophylactic promise in general medicine have their greatest value in practice when utilized in infancy and in childhood. The dictum that prevention is better than cure is being forced on the nation as a practical proposition largely by the authority of members of our profession in official positions.

The evolution of democracy in our country has been powerfully influenced of late by financial and economic conditions. This evolution has on the one hand altered and to some degree levelled social status while greatly limiting financial resource and on the other has been associated with important fundamental changes in our hospital systems both voluntary and controlled. Both types of hospital are at the opening of a new page in their history and by combined work will have opportunities of benefiting children such as never before existed.

Finally with such development of conditions and of opportunities evidence has accumulated pointing to the need for alterations in the training of medical students so as adequately to fit practitioners to carry out paediatric and more particularly prophylactic paediatric work. These are important considerations for our attention.

DIETETIC PROBLEMS

The work of the Mellanbys Helen Mackay and others in this country and of workers elsewhere has opened a new chapter in paediatrics. We have attained a higher level of knowledge regarding phases of malnutrition in infants and in young children and for the time much of our attention has been attracted to vitamins and to mineral salts. We know much of the importance of vitamins and of iron for young children and we know that without them growth and nutrition suffer and infection readily occurs. Following these discoveries there has been put ready to our hand a very large number of agents by which these substances can readily be administered. From New Zealand to Toronto a wide selection of diets is offered us to choose from. We live in the vitamin era. But particularly necessary when dealing with infants and young children is it for us to remember that the discovery of vitamins does not vitiate previously ascertained scientific facts. No antipodean cream or other mixture can compensate for impaired digestion. The great majority of our babies are born healthy and will grow up strong if fed on simple food with such additions as will not interfere with digestion but may be necessary because of maternal or environmental conditions. Thus in the case of infants under our supervision we do not fear scurvy or rickets unless in markedly exceptional cases—for example coeliac disease. When we are faced with an early case of rickets the primary desideratum remains restoration of normal digestive power. Then we have to seek for our vitamin D—our proper salts percentage in the blood—our adequate supply of body calcium. To this end we employ irradiated ergosterol haliverol artificial sunlight—one or more or all—but we do not risk disturbed digestion by popular remedies or masses of fats or use parathyroid. Endocrine secretions are widely in use but it is however almost always wise to avoid such use if satisfactory results can be obtained by dietetic means. The administration of iron we know often has marvellous results in the cases of little children who are weakly but the advance in knowledge regarding the relation of copper and iron and the marketing of such combinations has greatly furthered our power of benefiting anaemic children.

It is impossible to avoid feeling that in some cases valour outruns discretion in the prescription of glucose. In our young days we heard much of carbohydrate indigestion later we faced acidosis as the popular complaint and it almost looks as if another swing of the pendulum were due before long. Diet and habit change with passing years reaction follows action and reaction often tends to be excessive. The discovery of the vitamin content of foods while clarifying our vision of health and disease sometimes induced dietetic indiscretion particularly in connexion with fatty foods and to-day in attempting to avoid the Scylla of excessive fat it sometimes looks as if there were danger of sailing near the Charybdis of excessive sugar. It is even possible to have too much of such a good thing as sunlight!

INFECTIONS AND IMMUNITY

As regards acute infections great advance has been made in recent years in the discovery of specific tests for susceptibility and in the production of immunizing agents.

In speaking of immunity we talk of a still largely unknown quantity and a specific test postulates knowledge of a specific infecting agent. Even in the case of diphtheria where the infecting agent is definitely known and both specific testing and immunization are proved in the mass to be of great value it cannot yet be claimed that the subject of individual reaction to test or immunization is fully understood. Still more doubtful is the position as regards scarlet fever and other acute infective fevers but progress along such lines has been very considerable and great hope for the future lies in its development. There are difficulties peculiar to each particular infection.

Of two outstanding conditions in one acute anterior poliomyelitis we know the virus but have extreme difficulty in getting sufficiently early clinical diagnosis as to render specific injection of great practical therapeutic utility while in the other rheumatic infection we have not yet an accurately determined specific virus nor despite many contentions an accurately defined clinical condition.

Flexner has recently written of the American investigations in which parental blood is injected intramuscularly with a view to prevent acute anterior poliomyelitis infection and has discussed the underlying theoretical basis for such action—namely that a widespread subclinical immunization of the adult population is constantly proceeding. The position is extraordinarily interesting and important and may prove to be a most valuable advance in prophylactic medicine.

PREVENTIVE TREATMENT

In all directions we can note the trend towards preventive treatment in medicine and with increasing clarity are the results of preventive activity and propaganda to be observed. The work of the paediatric physician is

* Read before the Hyde Division of the British Medical Association March 15th 1933.

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to-day to a considerable degree very different from that of twenty years ago Much of it still is, and obviously always must be, purely therapeutic in nature, but on the other hand the numbers are greatly increased of those coming both in hospital and in private practice, mainly for the purpose of prevention Diffusion of knowledge among the laity concerning the principles and practices of prophylactic medicine has been carried out persistently and with ever-increasing vigour The means employed, the methods adopted, and the nature of information given in the course of such lay instruction have often been open to very severe criticism, but the result to-day is the existence among the general public of a considerable superficial knowledge of medical terms, of symptom-complexes of the dangers of disease in childhood, and of theoretical methods of prevention and treatment In the mass the idea of prevention has come to hold a much larger place in the mind of the nation than heretofore, and, so far the diffusion of medical information among the public has been justified Buttressing such information are the obvious good results of preventive medicine —intensified since the war, but insistently pursued since the opening of the century In addition, enormous stimulus to prevention has developed through the provision of extended facilities for obtaining it—for example cheap or free milk provision, rest homes, convalescent homes free immunization, etc

Two intensive campaigns—anti-tuberculosis and orthopaedic—have been conducted during this century each having a fundamental object of wide sociologic import—namely, such development of therapeusis as to lead up to prophylaxis

In both instances important consequences have been the enfolding within "medicine" of many, if not all, of the mental and physical activities of the child for a prolonged period—possibly years Both the tuberculosis specialist and the orthopaedic specialist require complete control of the patient and with such environmental dictates scholastic education must necessarily be given an appropriate and special place Thus have been developed special residential schools for physically defective children and country hospitals with special schools By these means large numbers of children now have opportunities not only of regaining health and strength but at the same time of becoming both educationally and physically better fitted to face life

Of types of children most needing prolonged medical institutional care with schooling none is so outstanding as the rheumatic Forming this class are usually mentally alert children in whose cases early and prolonged care will commonly prevent the development of heart disease But treatment and special schooling, to be efficacious must be prolonged for years, and lacking such full care the chances of permanent improvement are greatly diminished Special care and medical supervision of rheumatic children in their homes can, however, certainly be associated with very satisfactory progress and the prevention of serious cardiac effects The most important factor in obtaining such satisfactory results is the presence of a good mother and by good mothering in this connexion one means such control and guidance of everyday affairs of life as will keep the child at the highest possible standard of health and immediately combat the commencement of illness

The subject of mothering leads to consideration of another aspect of paediatric work very intimately connected with family relationships and maternal care Originated in America there have of late years been developed in this country special clinics for "difficult children—child guidance clinics Here temperamental, mental and even moral peculiarities and difficulties are the outstanding features presented in the history, and the forms of "guidance" necessary may be very variable and referable to almost any factor in environment, but should always be prefaced by complete physical examination and the establishment of sound health Child guidance clinics are doing valuable work—work which often cannot otherwise be carried out—but detailed investigation at them should always be preceded or commenced by thorough examination by a paediatric physician as this may render further investigation unnecessary

Prior to the development of the school medical and infant welfare services in the early years of this century most of the environmental work immediately connected with medicine when carried out at all, was done by voluntary agencies, but of late years official prophylactic medical work under the guidance of the Ministry of Health and the Board of Education has increased enormously In connexion with both these services prophylactic work under the medical officers has steadily become wider in range and more intense in character Children to-day are cleaner, better clothed, and better fed than ever before Ante-natal clinics are now provided, not only for the purpose of safeguarding the mothers with regard to their forthcoming confinements, but also to secure that their dietaries shall be regulated so as to supply any deficiencies which might adversely affect the newborn baby

With the existence of ante-natal and child welfare clinics and their accessory activities a very extensive preventive system is in being Not only has the infantile mortality rate sunk greatly since the beginning of the century, but we see much less frequently the gross forms of various diseases Ordinary minor complaints are dealt with earlier, severe scurvy and rickets are becoming uncommon, florid congenital syphilis is almost rare

Disease is being dealt with at a much earlier stage, so that after-effects do not occur, or are minimized, and, consequently, there is an average higher standard of health for the bulk of the children and a greater likelihood of health in adult life than heretofore Undoubtedly some weakly lives are saved which previously would have been lost and whose preservation lowers the general standard But, while this is so, it is quite wrong to argue that too much to day is done for the poor child and that as a result the weakest stamina and poorest blood is being preserved For the acutely sick child it is impossible for too much to be done The prolonged care of subnormal children and the prophylactic care of those in average good health has resulted in advance in physique and a higher general standard of scholastic attainment than previously in spite of the saving of lives in earlier years The standard of physical health of young children has risen and is rising, and preventive medicine is showing definite results of national value As the child grows older medical, scholastic, and social attention continues to be focused upon him He is helped to avoid a great many of the serious medical and surgical dangers of childhood, special classes and special schools nurture him scholastically, child guidance councils and mental welfare associations are at hand to help him, and if he be certifiable as feeble-minded, particularly careful supervision is provided for him

A MULTIPLICITY OF INSTITUTIONS

It has been said by at least one eminent judge and the head master of a renowned public school that the physique of the nation is declining and is practically in desperate straits It is not possible to accept such views, and lengthy medical experience shows the contrary to be the case Such erroneous opinions are partly due to incorrect appreciation of medical terms and consequently of changing medical standards and the meaning of statistics

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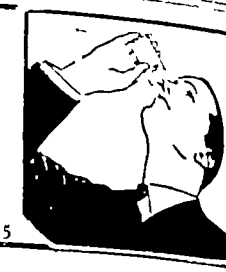

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Undoubtedly however there is just now an unprecedented multiplicity of institutions and agencies dealing with children and we all know that too many cooks spoil the broth

An attitude of observant neglect towards a child is most certainly an important and necessary feature in healthy development when coupled with what our far seeing American ambassador in London told us the other day was the strongest Anglo American bond of union—namely a rich supply of common sense

The existence of facilities for assistance through manifold agencies encourages a tendency not only to lack of discrimination and a loss of focused view on the part of parents but also not infrequently acts as direct incitement to wander from one possible source of aid to others Departmental medical work has extended from routine advisory examination to the treatment of disease and there has been great development in the notification segregation and care of large groups of cases in connexion with controlled institutions Thus has arisen in some respects overlapping and even competition in supervision and so far as medical instruction is concerned some degree of difficulty The present time is of course a period of transition and it is essential that in future the voluntary and the controlled hospitals should mutually co-operate and ultimately form a complementary whole subserving the interests and needs of all classes of society

Such would form a co-ordination within what may be termed pure medicine but beyond this is growing the recognition of need for a wider co-ordination in the completion of medical work There is fortunately an ever increasing spirit and practice of harmonious co-operation between medicine and education—the two are becoming closer and closer linked

THE WHOLE CHILD

Modern medicine teaches that health and disease in childhood cannot be considered apart from a purview of all the activities going to form the life of the child and that scholastic education and life at school have very important bearings on general well being The doctor recognizes the claims of education not only in providing nurture and a means of development of intrinsic value but he has also come to recognize that education when suitably modified and arranged is frequently of very great assistance in furthering the purely medical welfare of the child With knowledge of the various forms and types of education now offered must come active search for the best in any individual case and not only close collaboration with the educational authority but the proffering of expert advice The calls on medical knowledge regarding many environmental factors in the life of the child are increasing in latitude and in importance particularly with respect to psychological relations and reactions and in order to give authoritative advice and assume just responsibility the doctor requires expert knowledge and special training

It is being appreciated that prophylactic paediatrics is the basis of sound health and vitality in the nation and that each individual child requires special individual attention Useful advice from a medical practitioner can only be obtained when he or she has received a full course of training in what is really a very large and distinct subject Thus he must learn not only something of the special characteristics of children in health and disease and of the special applications of modern medicine to them but also something of the scholastic mental and general environmental factors which powerfully influence their development and health At present the bulk of medical graduates receive no such comprehensive training and there are still various internal medical influences which militate against putting this into practice But such development surely will come and the path to it is already blazed

Along with proper instruction will come a readjustment of avenues of approach to the subject of child care and a more intimate collaboration of all agencies for the welfare of children The need for this is great—the opportunity seems at hand With lack of recognition that the medical care of children in health and disease is a great complete subject there has resulted in the past much difficulty in control and confusion in the practice of child care in the mass Even through such times of difficulty the beneficial results of the enormous amount of attention devoted to the welfare of children by the State corporations associations hospitals etc and by private individuals and parents has been marked But it has been incomplete through divided responsibility and it has often been so incoordinated as to involve unnecessary energy thought worry activity and expense

Surely now we can look forward to the dawning of a morrow when paediatrics will be recognized as a unit of the first importance in medicine and when pessimistic wailings with regard to the future ability and stamina of the nation will be conclusively refuted

TRANSITORY ARTHRITIS OF THE HIP-JOINT IN CHILDHOOD

AN INVESTIGATION OF ARTHRITIS OF THE HIP IN NINETY SEVEN CHILDREN

BY

RICHARD W BUTLER M CHIR F R C S

CHIEF ASSISTANT TO THE ORTHOPAEDIC DEPARTMENT ST THOMAS'S HOSPITAL

(From the Orthopaedic Department St Thomas's Hospital)

The desirability of an early and exact diagnosis of arthritis of the hip in childhood is beyond dispute From time to time we see children with the clinical signs of arthritis of the hip—a limp limitation of movement by spasm and perhaps pain but with only a few days history of trouble no signs of general illness and a normal x ray appearance of the joint We probably see such children earlier than we did in the past as a result of better education of the public as to the serious possibilities of joint pains and limping in children and an increased watchfulness of school and public authorities These children must be watched and investigated carefully for the possibility of an early tuberculous infection must always be borne in mind

If seen among the out patients in the orthopaedic department at St Thomas's Hospital the practice in recent years has been for such children to be admitted to the ward for observation Some of them become normal within a few days are discharged and remain normal On the other hand if the signs persist the child is transferred to the country hospital at Pyrford At Pyrford the child is treated under open air hospital conditions with such local treatment to the hip as seems indicated for each individual simple rest in bed in most cases and traction on the joint or fixation with abduction and traction on a hip frame when the symptoms are markedly persistent All such children are regarded as being possibly tuberculous until proof of some other condition becomes manifest or until they settle down completely The period for which they are so observed varies from a few weeks to several months according to individual progress They are regarded as observation hip Certain others sent to Pyrford under like conditions by

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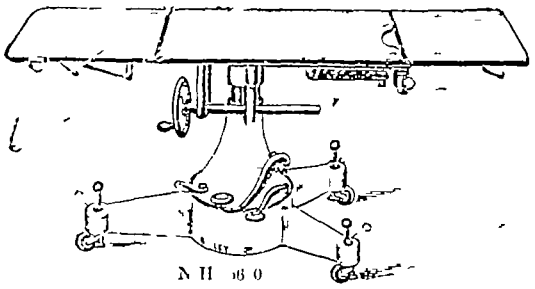

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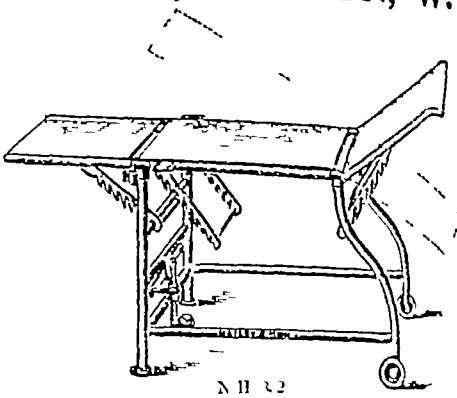

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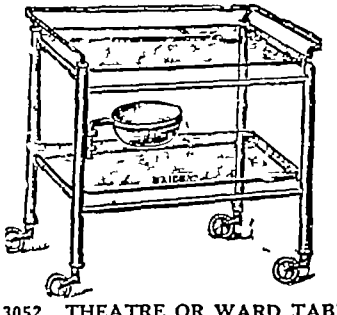

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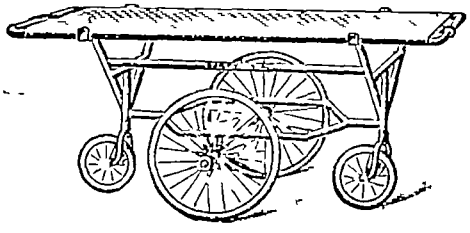

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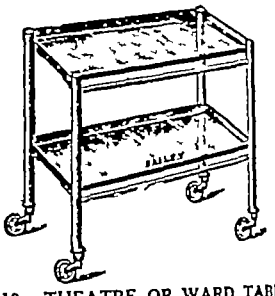

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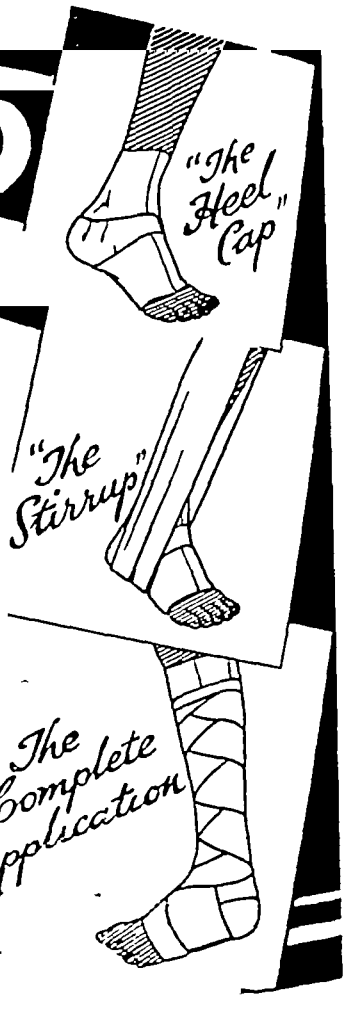

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other hospitals and by county authorities, are also placed in this class, though most of these will have been sent with a definite diagnosis of tuberculosis, and presumably certified as such

Previous to 1922 most of the cases thus sent from St Thomas's to Pyrford would have been accepted as definitely tuberculous, but in the last ten years the number of "observation hips" has increased yearly Some of them do turn out to be tuberculous The percentage cannot, unfortunately, be ascertained from past records, since, when the diagnosis has finally been made, they have passed into the records as "tuberculous arthritis of the hip," and in some cases no record has been kept of the fact that there was at one time any real doubt as to the diagnosis

The figures for the years 1929, 1930, and 1931 for those in which the signs were sufficiently persistent for them to be sent for observation at Pyrford are as follows

Total number admitted as "observation hips"		25
Number finally proving to be tuberculous		3
During the same three years the number admitted as tuberculous in which the diagnosis has remained acceptable has been		21
The outcome and final diagnosis of the above twenty-five 'observation hips' was as follows		
Finally proving tuberculous	3	
Subacute pyogenic arthritis	1	
Pseudocoxalgia	1	
Chondroma of acetabular roof	1	
Finally settling completely with a return of normal function—that is some form of transitory arthritis	19	
Total	25	

It is clear, therefore, that in a large proportion of these "observation hips"—actually rather over 75 per cent—the condition is transitory In the last ten years there have been at Pyrford altogether thirty-four such observation hips" that have settled down completely During the same period there have been admitted to Pyrford fifty-six children with early tuberculous arthritis of the hip In other words, besides these fifty-six, there have been thirty-four which might at one time have been regarded as splendid "cures" of tuberculous disease and it is probable that it is the inclusion of cases of this type with those of true tuberculous arthritis that makes the statistics of the end-results in tuberculosis claimed even to day by some authorities so favourable, and so much at variance with the results obtained by others [1 2]

REVIEW OF CASES

An attempt has been made to follow up these thirty-four children A complete "follow up" with clinical and *x*-ray findings to the end of 1932 has been possible in twenty-two instances, the average time since discharge from Pyrford being three and a half years The twenty-two children are made up of seventeen boys and five girls the average age at the time they first came under observation being 8½ years Two of these children, a boy aged 13 and a girl aged 14, had hysterical contractures of the hip Both had been sent to hospital by county authorities as tuberculous Under appropriate treatment both recovered completely One girl, aged 8, proved to be a congenital syphilitic, and later, when the hip had cleared up developed a transitory arthritis of the knee associated with periostitis about the lower end of the femur and ulceration of the palate Recovery on appropriate treatment was complete This child illustrates well the necessity for a routine Wassermann test whenever the diagnosis is uncertain The inclusion of children with hysteria and congenital syphilis in this series exemplifies a failure of diagnosis but serves to show the type of mistake that may arise if we accept too lightly a diagnosis of tuberculosis

All the remaining nineteen children, when first seen at an average age of 7½ years had limitation of movement at the hip joint by spasm, and a limp The average period of persistence of symptoms before admission to hospital was five weeks In only seven had pain in the hip been a cause of complaint In only six was pyrexia present when they were admitted to hospital, and in only one did this persist for more than four weeks The average time during which muscular spasm persisted after admission was six weeks, the longest being eleven months, but the majority showed some slight limitation of full range for a further period varying between one and three months Thereafter there has been no return of symptoms in any of the nineteen, nor is there any resulting *x* ray abnormality These children have all been on full school and games since leaving hospital, and those that have left school are now at work when they can obtain it The average period since discharge has been three years In the examination of several of these children years after the cessation of all signs of the arthritis the thigh on the side once affected was found to be half to three quarters of an inch less in diameter than the thigh on the other side Presumably this frequently occurs when wasting has been present for a time during a period of active growth

AETIOLOGY OF TRANSIENT ARTHRITIS

In these nineteen cases it seems we are dealing with a true transitory arthritis of uncertain origin It is interesting to speculate upon the underlying causative factors The possibilities are as follows

A *Trauma*.—In no instance was there a history of definite and closely related trauma, but in four cases there was a vague story of a fall weeks or months before No *x* ray evidence of bone injury was present in any Trauma might play a part without bone injury visible by *x* rays in three ways (1) traumatic synovitis—the result of contusion or strain, (2) traumatic osteochondritis—from injury to articular surfaces, and (3) juxta epiphyseal strain—a term used fairly frequently by some writers, but not easy to define unless it is taken to imply the incipient stage of a slipping of the epiphysis as in adolescent coxa vara The age of these children—the average was 7½—was not one at which adolescent coxa vara was likely to occur, and there was no *x*-ray evidence of this condition Trauma, therefore, may have played a part, but in the absence of a history is unlikely as a predisposing factor in the greater number

B *Infection*.—This might be either (i) a low grade infection entering the blood stream and localizing primarily in some part of the joint, presumably most often an epiphysitis, or (ii) a metastatic infection from some other focus Slight pyrexia occurred over a few weeks in six cases, but in the majority the temperatures were normal Blood examinations were not carried out Any primary infection of the joint must have been of very low grade, as no destruction took place and recovery was complete With regard to a metastatic infection we have more suggestive evidence One boy, aged 11, had septic tonsils, and had had a sharp attack of tonsillitis shortly before the onset of symptoms in the hip Probably this was a metastatic infection from the throat Another child a girl aged 7 had had both measles and scarlet fever immediately before the hip became troublesome and a boy aged 9 had just recovered from measles

Arthritis of the hip is recorded after measles, influenza pneumonia and typhoid, and, according to the Metropolitan Asylums Board Reports from 1901 to 1909 some transitory joint symptoms occur in 3·5 per cent of all cases of scarlet fever [3] It is probable that the catarrhal condition of the nose and throat commonly associated with the acute fevers of childhood may have been the

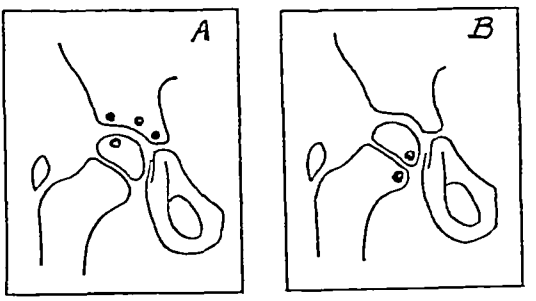
site of an infection of low virulence and that metastatic spread from this caused a transitory infection of the hip-joint in these two children. One boy aged 6 with fixation of the right hip-joint by spasm of all the muscles about the joint developed an acute appendicitis in a retrocaecal appendix two weeks after coming under treatment. It is possible that this was a misdiagnosis—spasm—in part voluntary—of other muscles being added to spasm of the psoas due to irritation from a grumbling retrocaecal appendicitis. Fixation of the hip-joint by psoas spasm is however generally easy to differentiate from the fixation by spasm in an arthritis and it is possible that this was rather a low grade metastatic infection of the joint from the infected appendix especially as the joint symptoms were already improving before the onset of the acute appendicitis and did not again increase with the attack. Following appendicectomy recovery from the appendicitis was uninterrupted but slight limitation of movement at the hip with a limp took two months to disappear. One other boy aged 6 had had some illness lasting only a few days called at the time rheumatic fever a month before the onset of pain in the hip. None of these children showed anything to suggest that they had ordinary rheumatic fever. No other joints were affected and there was no evidence of cardiac lesions. To exclude possible omissions of observation a search was made of the *x* rays of all these cases for an osteochondritis of the ischiopubic junction or an osteochondritis dessicans of the femoral head. No evidence of either condition was found.

Excluding therefore the four children with some history of trauma and the five with a possible distant infective focus we are left with thirteen in which we have no hint of the origin of the lesion. On the whole an infective process is the most likely and the most probable form of this would seem to be a transient epiphysitis never sufficiently localized and well defined to show changes in the bone in an *x* ray film.

Arthritis From Adjacent Infection

In a general consideration of transitory arthritis of the hip there is one other type which must be mentioned. This is the arthritis associated with a well-developed and localized infective cavity in one or other bone close to the joint without a true spread of infection to the joint itself. Reactionary joint symptoms are present probably the result of synovial effusion and before the cavity is well defined by *x* ray the clinical picture is that of an observation arthritis but if the course of the infection is favourable the cavity will become well defined and will later heal soundly and the joint will again become completely normal. Probably many of these infective bone cavities in children are tuberculous and are potential centres for the spread of infection to the joint itself. The likelihood of such a spread early in the disease depends largely upon the situation of the focus. Should it lie in the acetabular roof or the upper part of the femoral head (see A in Fig.) the trauma of weight bearing will lead to an early spread to the joint and it is probable that many cases of tuberculous arthritis in childhood originate in this way. Thus we frequently see in cases of tuberculous arthritis which are becoming quiescent localized foci in the acetabular roof becoming outlined by the deposition of calcium though in the early stages their outlines were lost in the intense calcium absorption and their presence perhaps not appreciated. When the focus lies on the under surface of the femoral head and neck (see B in Fig.) the outlook for the joint itself is comparatively good. Under treatment the cavity may heal soundly and the joint become once more normal though subsequently a coxa vara deformity is very likely to develop. In one of our cases there was no sign of this deformity until after sound healing weight bearing had taken place for over eighteen months.

In the ten year period under consideration there have been seven such children under treatment at Pyrford with such localized bone infection probably tuberculosis at the under side of the head and neck of the femur. Two of these were watched as observation hips before the cavities could be defined by *x* rays but have not been included among the thirty four already mentioned. Treated as tuberculous arthritis of the hip on conservative lines six of these escaped without joint infection. The seventh escaped joint infection for the time being but a year after discharge developed an



area of destruction in the acetabular roof with subsequent spread to the joint. It would be desirable to eradicate this area of infected bone to prevent a possible spread to the joint. Whether this can be done surgically without encroaching on the joint depends upon the exact limits of the bone abscess but drainage via the trochanter and neck of the femur should be possible and may restrict spread of infection to the joint itself.

It seems therefore that a transitory arthritis of the hip-joint in childhood is common. There must be many that are never brought for examination whereas all children with tuberculous arthritis come sooner or later so that we cannot truly gauge the comparative frequency of the two conditions by comparing the numbers treated in hospital.

Diagnosis

A transitory arthritis is the most difficult differential diagnosis from a commencing tuberculous infection of the joint. Clinically the two may be identical and remain so for days or even weeks. The *x* ray is negative in a transitory arthritis—except in the type due to a well defined neighbouring bone focus—but a negative *x* ray does not absolutely exclude tuberculosis. As a matter of fact the *x* ray is seldom absolutely negative in tuberculous arthritis when first brought for examination. Of the fifty-six children coming under treatment for early tuberculous arthritis of the hip at Pyrford in the last ten years there was only one whose *x* ray at that time was absolutely negative. All the others showed bone atrophy about the affected joint most of them with loss of the joint space as well and many with bone destruction already progressing.

It is perhaps needless to point out that in an early arthritis with only slight bone atrophy a really good *x* ray showing both hip-joints for comparison is essential and interpretation of the plate is useless unless made by one accustomed to the appearances in early tuberculosis. With a completely normal *x* ray however the odds are heavily in favour of an observation hip being a transitory arthritis rather than tuberculous. The earliest stages of a virulent pyogenic epiphysitis or pyaemic joint may show a negative *x* ray but the differentiation of these from a transitory arthritis of the type we have been considering cannot be long delayed on both clinical and *x* ray grounds. It is unnecessary here to discuss in detail the differential diagnosis between a transitory arthritis and pseudocoxalgia. The clinical examination combined with the *x* ray picture is usually conclusive. Very seldom will the *x* ray in pseudocoxalgia be so near to the normal that differentiation from a transitory arthritis will give rise to difficulty. All doubtful cases of arthritis in childhood must be watched very carefully and treated with the

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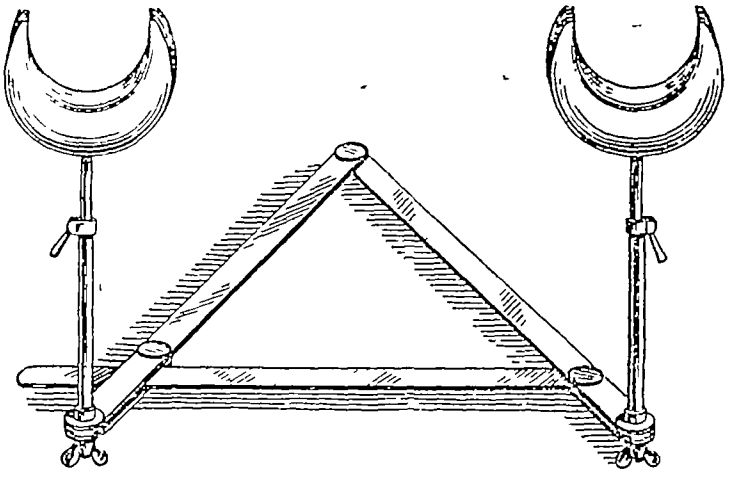

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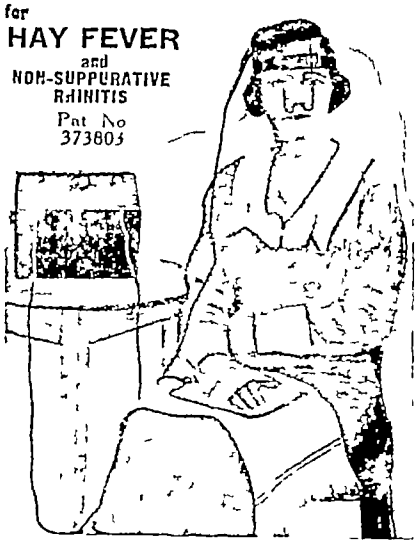

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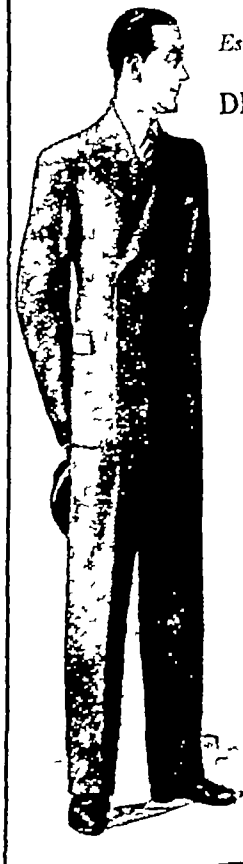

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respect due to an arthritis that is likely to be progressive Time alone will then solve all doubts of the diagnosis In the meantime, they must be considered in a class by themselves " for observation "

SUMMARY

Fifty-six of the ninety-seven cases proved to be tuberculous

Thirty-four were suffering from a transitory arthritis only without any abnormality being shown by x rays at any time

Seven had a transitory arthritis as a reaction to a localized bone infection near the joint, without true joint infection

A transitory arthritis without x-ray changes is common in childhood, and is frequently diagnosed wrongly as tuberculous

Sometimes it may be traumatic in origin but more often it is infective, the infection being often secondary to a focus elsewhere in the body

The prognosis of this transitory arthritis is excellent A follow-up of twenty-two cases for an average period of three years has been given

A transitory arthritis is the most difficult differential diagnosis of tuberculous arthritis of the hip in childhood Its differentiation from tuberculous and other types of arthritis is discussed

I am indebted to Mr W Rowley Bristow for permission to describe these cases all of which have been under the care of the orthopaedic department of St Thomas s Hospital

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DYSPEPSIA AND ITS SURGICAL SIGNIFICANCE

BY

JOHN J ROBB, *M C*, M B, F R C S Ed
CONSULTING SURGEON COUNTY OF ZETLAND

It can scarcely be said that the present position of surgery in relation to the dyspepsias is either defined or satisfactory, nor is it likely to improve until the surgeon is given a clearer interpretation of the physiological eventualities which culminate in distortions of the metabolic processes Symptomatic classifications, together with chemico-physiological abnormalities, provide the therapeutist with material to work on, but the surgical craftsman requires further information if he is to restore function to normal He must know the changes that result in symptoms, and why these changes take place When he has determined why, he is in a position to decide whether or not surgical intervention is of avail It is not enough to correct the changes and trust that the reason for their being may disappear

In this article I purpose to set out, shortly, my findings when I endeavoured to discover why changes in the mechanical metabolic processes take place, and where surgery may be applied as a corrective

INVESTIGATION

To study the behaviour of the intestinal tract in chronic dyspeptics I adopted the simple method of *x* rays and opaque meals In old-standing cases the changes seen proved very constant In cases of short duration the changes were less marked, or only intermittently present As I became familiar with these changes they were to be seen not only in simple dyspepsias, but also in cases complicated by peptic ulceration

The stomach varies from the hypersthenic type to the completely asthenic Its rhythmic propulsive action remains constant, but changes from forceful in the former to tired and sluggish in the latter The ultimate purpose of the stomach, that of evacuating its contents towards the duodenum, is to a varying extent thwarted by disturbed pyloric function This difficulty is at first overcome by increased tonus in the stomach, but frequently this tonus later fails and evacuation is rendered slow The chemical balance on either side of the pyloric sphincter clearly ceases to be its controlling factor The duodenum may appear normal or become distended There is delay in the passage of contents along the small intestine, and barium is held up in the lower ileum Dilatation and often prolapse of the caecum is present, most marked in cases of long standing

EXPLANATION OF FINDINGS

From evidence collected and given in the *British Journal of Surgery* (1932, p 634), I think it is clear that these stomach and bowel changes seen in the chronic dyspeptic are due to abdominal sympathetic activation Such activation results in junctional sphincteric spasm or hypertonus, with relaxation and delay in the remainder of the bowel These changes reduce bowel activity, and thereby protect any lesion within the peritoneal cavity

If one realizes that in the majority of dyspeptics the departure from normal in bowel function is due to sympathetic excitation it then becomes imperative to elucidate the various causes of this excitation In the aforementioned article I have shown that inflammatory lesions in relation to the abdominal peritoneum are causal agents, and experimentally it has been demonstrated by Alvarez, Mahoney, and others that chemical irritants to the peritoneum produce similar results Further, I have noted that mechanical irritants such as intraperitoneal bands may result in a like syndrome Lastly, it would appear true that chemical changes in the blood composition septicaemias, and toxaemias may produce abdominal sympathetic excitation, not by any direct action on the nerve centres or trunks, but reflexly by their irritant and congestive effects on the abdominal peritoneum

In investigating cases I have found the primary causes of sympathetic excitation in dyspepsia, in order of frequency, to be (1) appendix disease, (2) disease of the uterus and appendages, (3) dental disease (4) intra-abdominal bands and adhesions, (5) abdominal adenitis with and without mesenteric contractions, (6) renal insufficiency, (7) nasopharyngeal sepsis, or other source of chronic sepsis Finally, there is a small group of cases where I have failed to demonstrate any lesion and I class these as being due to primary sympathetic instability or to some endocrine abnormality

CLASSIFICATION OF DYSPEPSIAS

With this interpretation it now becomes possible to separate dyspepsias into two main groups—primary and secondary The primary dyspepsias are medical the secondary are entirely reflex, and, apart from certain ones that are renal in origin, are therefore surgical The secondary dyspepsias, for diagnostic purposes I subdivide into (1) reflex septicaemic dyspepsia, and (2) reflex abdominal dyspepsia

Reflex Septicaemic Dyspepsia—I use this term merely because it suggests that the reflex sympathetic upset has resulted from a general condition The principal reasons for the presence of this general toxaemia or septicaemia appear most often to be dental and nasopharyngeal sepsis renal inefficiency or insufficiency, and any other source of chronic sepsis The method by which the abdominal

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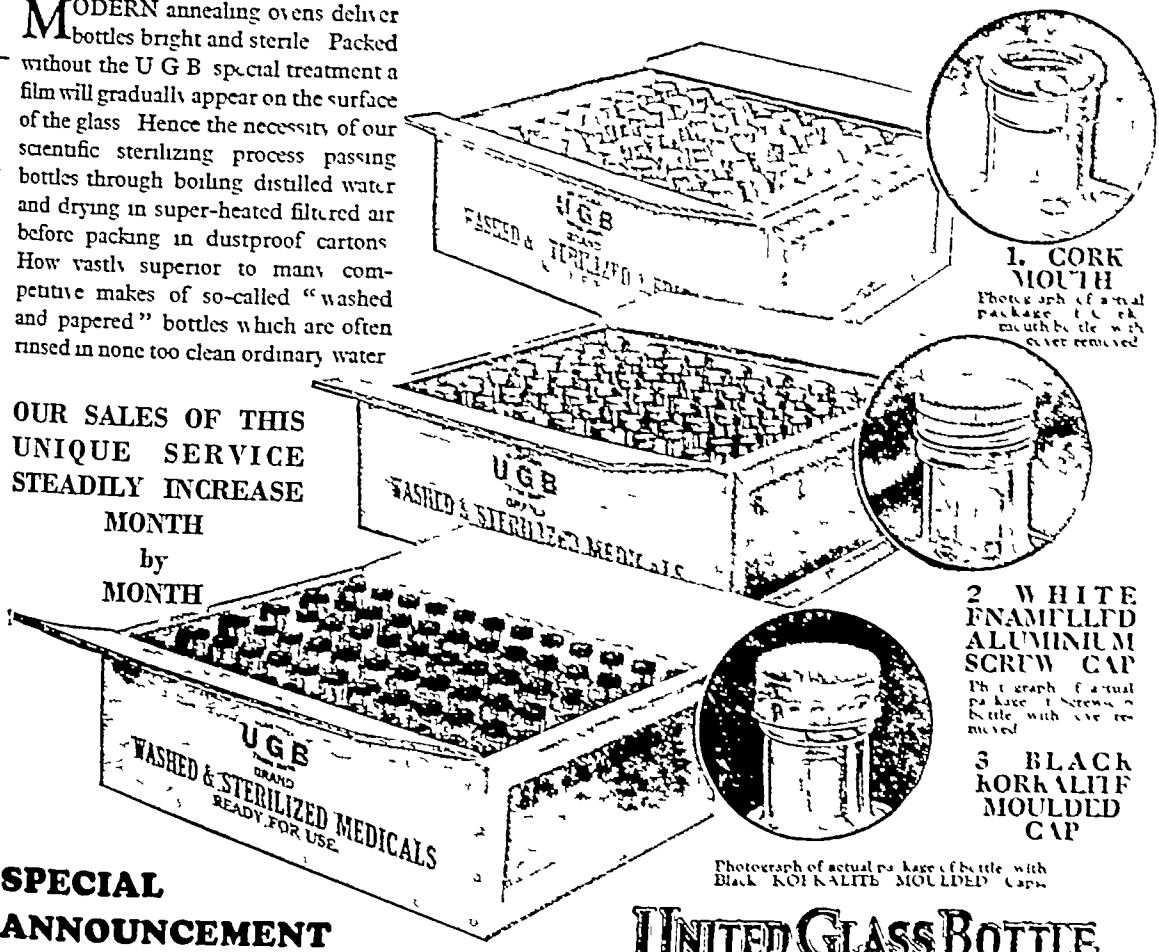

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sympathetics are disturbed by such lesions is somewhat obscure A recent case of profound haemolytic streptococcal septicaemia from a finger wound which came under my care demonstrated the violence with which the abdominal sympathetics may be disturbed Extreme gastric discomfort with vomiting was present marked duodenal soreness was followed by the real pain of ulceration then haematemesis and melaena The abdomen became still and almost rigid It is significant that a general peritoneal congestion with effusion is present in such a case It may be therefore that a congestive irritability of the peritoneum is readily induced by milder degrees of septicaemia and toxaemia and reflexly a sympathetic excitation is induced My attention has been drawn to an article by Beattie in the *Journal of the Canadian Medical Association* (March 1932) in which he traces an afferent connexion between the olfactory tract and the supra optic nucleus of the diencephalon Certain cells in the latter when stimulated produce hyperaemic areas at the pyloric end of the stomach It may be that nasal lesions produce dyspepsia in this reflex way Again it appears to be the effect on the peritoneum of changes in the blood chemistry which result from insufficiency in urinary excretion that produces sympathetic excitation in such cases When renal insufficiency is present it is well to remember that varying degrees of this condition may be produced by as well as produce a sympathetic activation Though the exact method by which toxic and chemical blood changes result in dyspepsia may yet be uncertain the recognition of the fact that they do so greatly assists in the investigation and relief of such a case

Reflex Abdominal Dyspepsia.—Under this heading I include all dyspepsias secondary to an abdominal lesion The absence from my list of lesions of the gall bladder may appear somewhat conspicuous I omit this group because the present study has led me to the belief that this organ becomes affected secondarily to sympathetic disturbances Its innervation tends to confirm this belief It remains apparent however that when gall bladder disease has extended so as to involve its peritoneal covering the organ requires to be dealt with

THE APPLICATION OF SURGERY

This suggested classification simplifies the sorting of dyspepsias for treatment Those amenable to surgery should first be eliminated If the case is of the reflex septicaemic type I have seen no harm in dealing immediately with the source of trouble whether it be a tooth or a prostate In dealing with the reflex abdominal type where the cause of reflex excitation is symptomatically clear there seems no reason why it should not be immediately eradicated Where no reflex exciting agent is discoverable it is neither justifiable to classify the case as a primary one nor is it good surgery to perform immediate laparotomy in the hope of finding a possible cause Dealing with such cases has brought me to this latter belief

I have found that just as peptone or other shock may nullify sympathetic activity for a period of two weeks to two years so also will a surgical operation If however the operation has failed to eliminate the exciting cause or if the case proves to be other than reflex abdominal symptoms more distressing than ever previously will sooner or later return It is evident also that the most constant dyspepsias are those where sympathetic excitation is always present and its cause in consequence most perfectly protected and free from localizing symptoms In such a case where the condition is long standing one is driven to the belief that a state of sympathetic activity has become the normal and no surgical intervention can be of avail until a reversion to the original state of quiescence has been secured In every case of dyspepsia with no clear reflex exciting cause I approach treatment by as far as possible restoring bowel function to normal This means undoing the protective sympathetic reflex exposing the exciting cause and rendering it the chief source of symptoms

Those who have essayed the reversion of sympathetic excitement to quiescence by therapeutic measures know how extremely difficult and delicate the task may be I have confined my own attempts to the use of atropine MacLean's alkaline method and finally to the bromides Atropine I abandoned because the dosage required to obtain results always produced the disturbing general symptoms of that drug and could not be continued MacLean's alkaline treatment is often unsatisfactory in that it will only produce results so long as the reflex exciting cause of the dyspepsia remains quiescent It acts by falsifying the normal physiological state of the stomach contents so that stomach function is quietened and the acid alkaline balance reflex being destroyed the physiological necessity for the protective reflex to the pyloric sphincter is hidden With no direct action on the sympathetic reflex arcs very careful dosage diet and rest are usually all required over a prolonged period I sought a simpler and more efficacious method through the medium of the bromides Massive doses over short periods as suggested by some workers did not fulfil the purpose I wanted as time was obviously necessary to bring up the offending lesion and to stabilize the abdominal sympathetics in a state of quiescence I found however that small doses given with an almost chloride-free diet acted and could be given over prolonged periods with no general symptoms To the bromide I added the heavy carbonate of magnesium mildly to re-establish the normal intrinsic forward peristaltic action of the bowel and later to ensure calcium to reduce the irritability of the autonomic system and to act also as an alkali in the stomach I introduced calcium carbonate Much more uniform results were then obtained and finally a tablet was produced which rendered treatment simple and satisfactory The tablet contains 3 grains of sodium bromide 7 grains of mag carb pond and 5 grains of calc carb

This is given with or without diet depending upon the ease or difficulty that is experienced in restoring function to normal I have frequently found it wise to eliminate from the diet strong forward peristaltics such as red meat Function is restored to normal when the patient is clinically free from symptoms and the bowel is acting at least once a day The tablet is so arranged that this result is obtained by giving two of them three times daily I have not had to exceed three By this method the reflex exciting cause of the dyspepsia may become apparent without a renewal of dyspeptic symptoms

SURGICAL INTERVENTION

When localizing abdominal symptoms make it reasonably apparent why a dyspepsia had been present I do not deem it wise immediately to operate The more obstinate and long standing the dyspepsia has been the longer I prefer to delay operation and in consequence the better the final result seems to be It has not been my experience that even where the appendix is the offending lesion it is in immediate danger of an acute flare up I have however removed a *gangrenous* appendix as early as four weeks from the institution of treatment and as late as fourteen months in old standing dyspeptics where prior to treatment there had been no sign of appendix trouble

To clear up old-standing cases entirely not only must the exciting cause of the sympathetic activity be removed but the remote effects may also require attention Organic pyloric stenosis demands a gastro-enterostomy stomach

contractions from healed ulcers may require remedial operative measures, and duodenal dilatation may require improved drainage Evacuation of the advanced asthenic stomach in the erect position is greatly facilitated by the application of a suitable abdominal support and pad

CONCLUSION

I have attempted in this investigation to obtain a better understanding of dyspepsia, and from my findings to evolve for the surgeon a useful classification I have then tried to indicate how and when surgery is best applicable as a means of remedy

I am greatly indebted to all those who have assisted me in this work and in particular to Dr G D Roche of Scalloway whose careful treatment and observation of cases was of great help I am also grateful to Parke, Davis and Co who undertook the tedious work of repeatedly producing the tablet till a satisfactory one was obtained

VASO-DILATOR EFFECTS OF THE PNEUMOGASTRIC NERVE

BY

D T BARRY, D Sc, M D F R C S

PROFESSOR OF PHYSIOLOGY UNIVERSITY COLLEGE CORK

The subject of the nervous control of the abdominal and pelvic viscera is one upon which many different opinions prevail Of the various problems connected with the question that concerning the vascular changes determined by the vagus nerves is one which, at first sight, may seem to be mainly of physiological interest In reality it is of much importance from a clinical standpoint, and for this reason a clinical journal is now chosen for a brief discussion of the subject with a view to developing the theme further in a subsequent paper The direct method of approach to a solution of the question of vagal function—that is by stimulation of the trunk—has been freely employed in determining vagal influence on the digestive mechanisms, its effect on blood vessels being for many investigators a more or less secondary consideration Hallion and François-Franck Bunch, Masuda, and a few others have observed the changes in blood vessels due to direct vagal stimulation, but very little definite information about them is to hand Kiss, McSwiney, and other workers have been concerned with the question of vagal influence on gastric and intestinal muscle, while Gayet and Guillaumie, and Tournade with his co workers, are recent investigators of the pancreatic and renal functions of the nerves

An important feature of the problem is the extent to which sympathetic and parasympathetic systems communicate with each other Simple dissection is not adequate for the purpose of disclosing fine and intricate connexions, evidence of these is often best revealed by physiological and pharmacological tests I have made a study of the vascular reactions and incidentally of the intestinal and gastric effects resulting from electrical excitation of the subcardiac vagus The blood pressure was recorded from the carotid artery and the gastric and intestinal contractions by a balloon-tambour system The vagi were reached in chloralosed dogs through the diaphragm from below, with the use of artificial respiration in a few instances the chest was opened through the sternum The nerves were severed on the lower end of the oesophagus each peripheral part being placed on shielded electrodes and excited by galvanic and faradic currents of different strengths Some of the salient features of the results obtained are given below but the records to illustrate them are being kept, owing to restriction of space for a later publication

The effects of stimulation with a fairly strong current were in about two thirds of the experiments (thirty in all) an initial phase of hypertension lasting ten to fifteen seconds and a subsequent phase of hypotension lasting twice as long and measuring 20 to 40 mm Hg in some cases the reaction was purely hypotensive Generally speaking this response was much the same for both nerves Some care was necessary to avoid stimulation of cardio inhibitor fibres which seem to leave the main trunk sometimes at a very low level a strong stimulus applied to these fibres may cause fibrillation of the ventricles The vascular reaction was not annulled by atropine in doses which completely abolished the response of the cardio inhibitor vagus in the neck Atropine is the classical paralysant of parasympathetic elements and its failure to modify hypotensive elements in the vagus trunk suggests that these are not of parasympathetic nature an inference which is further supported by the failure of parasympathetic stimulants such as acetyl choline and pilocarpine to intensify the reaction The intestinal and gastric contractions on the other hand—that is increased contractions on stimulating the vagi—were abolished by atropine thus showing the true parasympathetic nature of the fibres concerned this finds support in the augmentor effect on them of acetyl choline and pilocarpine The dose of atropine employed was 0 7 mg per kilo which gave a positive result in several experiments Bayliss and Starling seemed to think that atropine did not paralyse the motor intestinal fibres of the vagus but the observations made in the present experiments indicate abolition of the effect with strong doses

What is the type of fibre in the vagus trunk subserving the vascular function referred to? The answer suggested is that it belongs to the sympathetic system To test this I have used sympathetic paralysants—namely ergotinine citrate, ergotoxine, and yohimbine Each of these injected intravenously had the effect of abolishing the hypotensive reaction Large doses were necessary—for example several centigrams of ergotinine citrate which is active because of the ergotoxine it contains pure ergotinine is said to be inert Ergotinine citrate in doses of 1 cg or more causes a rise of blood pressure in large doses it causes a fall, and this must be produced to ensure abolition of the vagal response The dose of yohimbine which definitely annulled the reaction amounted to more than 1 mg per kilo It is therefore justifiable to conclude that fibres of sympathetic nature whatever be their anatomical connexion, exist in the vagus trunk for the control of the calibre of certain blood vessels Non medullated fibres of sympathetic type have been described in the vagus by various observers who have ascribed different functions to them Kiss and his co workers attribute gastric motor functions to them, but the result obtained by administration of atropine, which annuls this influence, is opposed to that view

An important feature of the pneumogastric reaction of hypotension is the modification produced in it by section of the splanchnic nerves These nerves were cleaned and stout threads placed under them so that by tugging on the threads they were instantly ruptured The depressor phase of the vagal reaction was in several experiments suppressed or greatly diminished when this was done suggesting that the depressor fibres passed from vagus to splanchnics somewhere about the diaphragmatic level But there are other possibilities which must be considered The vagus is easily fatigued, and a stimulus tends to lose its effect by repetition In a given case it might be said that the splanchnic section was a mere coincidence the true cause of failure to react being fatigue Due precautions were taken to eliminate this source of fallacy and there is no doubt that fatigue must fail as an explanation in certain tests Further the mechanism of vagal hypotensive influence may be the neutralization of splanchnic tone The effect of central vaso constrictor tone is of course, cut out with section of the nerves and vagal impulses should, if this mechanism be the one played on

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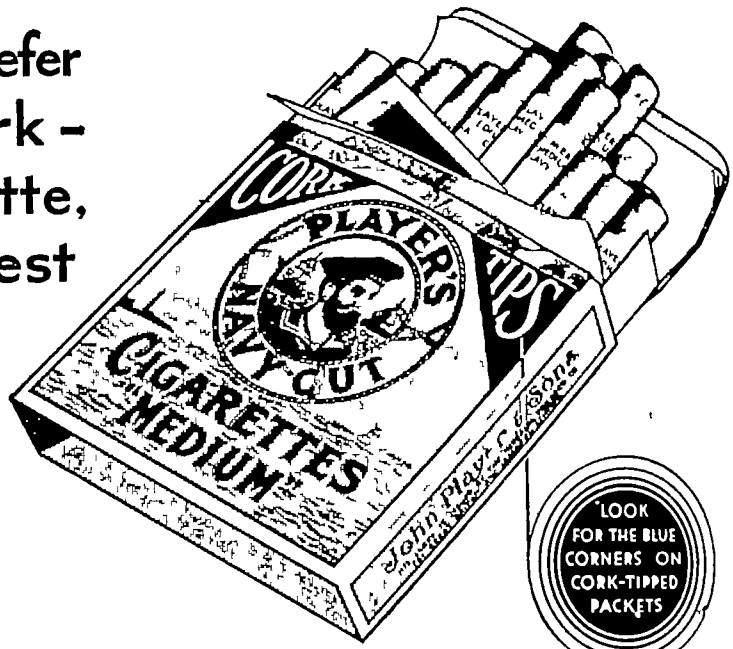

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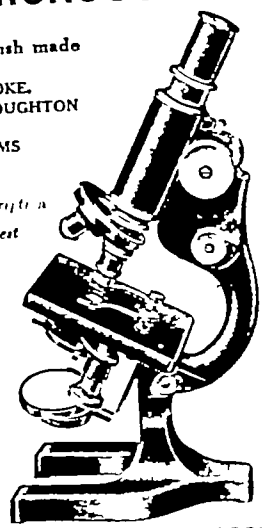

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lose their seat of action However it is a common observation that arterial pressure which drops by 25 or 30 mm Hg at the moment of section soon regains its former level and vagal excitation is ineffective to lower it Nevertheless it may be that splanchnic tone is the point of vagal purchase the secondary or subsidiary tone which replaces it being immune to vagal influence

A more serious objection to accepting the view of transference of elements to the splanchnic trunk is that the vagal hypotensive reaction abolished by splanchnic section occasionally shows a tendency to restoration after a time a fact which suggests fatigue as the cause of the phenomenon But fatigue was almost certainly excluded in some cases where the phenomenon occurred Another consideration is that trauma must be great when the splanchnics are cut Slight traction or pressure on the intact nerves produces convulsive twitches which indicate a very sensitive structure and the shock of rupture may cause a depression of peripheral as well as central excitability Whatever the explanation splanchnic section which gives rise to increase of the intestinal and gastric muscle contraction following pneumogastric excitation causes in a large proportion of experiments a depression or even abolition of the vascular hypotensive reaction to this excitation There are good reasons for the view that the pneumogastric nerve contains sympathetic fibres and it must seem strange that it should receive these only to restore them to the sympathetic system for final distribution While we cannot affirm that this is the case we cannot assert that it is not so further work is necessary to determine the point The splanchnics were divided in the first instance with a view to demonstrating the possible transference to them of intestinal motor fibres from the vagus since it had been found in previous work that excitation of certain bundles from the splanchnics caused increased intestinal activity Splanchnic section however far from diminishing this activity has an augmentor influence on it eliciting spontaneous movements and increasing the effect of vagal stimulation This observation points to the absence of motor communication

It is important to ascertain the seat of the vaso-dilatation resulting from pneumogastric excitation and efforts have been made in this direction by taking plethysmographic records of the kidney intestine spleen and the limbs Since the demonstration by Kuré Hasama and others of vaso-dilator nerves coming from different spinal segments it was thought well to test the limbs for enlargement although it was unlikely that a vagal supply to them existed The splenic and intestinal volume did not show any significant alterations the variations in these parts were mostly passive in relation to blood pressure changes The small portion of gut however which is introduced into the oncometer does not necessarily reveal what may be occurring in other parts It is quite possible that a vagal control of mesenteric vessels may exist without a uniform distribution of vascular elements The renal reaction showed some differences in individual animals A marked vaso-constriction was observed after the vagal stimulation in two experiments This was soon followed by enlargement of the viscus but the renal spasm was synchronous with the fall in blood pressure and still occurred when this was compensated In two other experiments some degree of expansion of the kidney coincided with the depressor phase of tension but a general feature of the renal change was alternation of expansion and contraction for some time after stimulation more or less independently of the blood pressure Tournade described a renal shrinkage as a result of pneumogastric excitation which he ascribed to increased production of adrenaline In the present experiments the latent period of the early constrictor effect was too rapid to be accounted for in this way The liver and stomach of which the changes of volume were not recorded remain as possible regions where the vascular change could occur

It will suffice to state that the records obtained in the work and held over for publication provide clear evidence of the chief point in the contribution—namely that there exist hypertensive and hypotensive fibres in the vagus trunk the latter particularly being paralysed by ergo and yohimbine and unaffected by atropine They are consequently to be considered of sympathetic type

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THE SPHYGMOMANOMETER IN THE DIAGNOSIS OF CARDIAC IRREGULARITIES

BY

MAURICE E SHAW M D M R C P

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The clinical differentiation of cardiac arrhythmias has been much simplified as the result of electrocardiographic studies of the mechanisms involved but there are always certain cases in which a definite diagnosis is impossible without the aid of some means of graphic registration It is probable that no method except the graphic will ever be devised which will serve to distinguish with certainty between auricular fibrillation and those cases of frequent extrasystoles (more particularly those in which premature beats of both auricular and ventricular origin are present) which give rise to a complete disorganization of ventricular rhythm

The fact that pulsus alternans may often be recognized during the routine taking of the blood pressure is fairly well known It deserves however to be far more widely appreciated The sphygmomanometer is an instrument which is now as much part of the everyday equipment of the medical man as the stethoscope and pulsus alternans is a portent of such gravity that no method by which it can easily be recognized should be overlooked It is not common for the alternating beats to be so marked that they can be distinguished by even the most sensitive finger The sense of hearing is far more delicate than the sense of touch and the auscultatory method of estimating blood pressure provides a means of detecting quite small differences in the strength of the ventricular contractions

It is common knowledge that the systolic pressure is remarkably inconstant even in the same individual Not only does it vary from day to day but from minute to minute and even from beat to beat Other factors remaining constant the maximum arterial pressure achieved by any beat will depend upon the strength of the ventricular contraction Where such contractions alternate in strength there will be alternation of maximum (systolic) pressure This is as a rule quite easily recognized with the manometer A variation of 5 mm of mercury

between the beats can certainly be recognized with ease and smaller variations might be distinguished if the possibility of alternation were borne in mind when the blood pressure was being taken If alternate beats reach a different systolic pressure the audible number of beats will be halved as soon as the pressure in the cuff exceeds the lower of the two maximum pressures When all the beats have been obliterated by inflating the cuff to a pressure higher than the higher of the two systolic readings the halved rate will again be heard on deflation until the pressure in the cuff falls below the lower of the two systolic readings

The pulse tracing is the only other method which can be relied upon to detect alternation of the pulse, and this is not likely to be used unless the condition is suspected Small differences in systolic pressure cannot be recognized by palpation, and the electrocardiogram may be normal in spite of alternation Every cardiac case is (or should be) investigated with the sphygmomanometer, and if the possibility of alternation is not forgotten few cases, where this type of arrhythmia is persistent, should be missed It must be remembered that alternate strong and weak beats may be due to extrasystoles alternating with normal beats In such cases there will be a disturbance of rhythm which will not, as a rule, be difficult to recognize, although the halving of the pulse rate will be observed as soon as the pressure in the cuff of the sphygmomanometer is sufficient to obliterate the beats due to the extrasystoles

A study of the pressure relations of individual pulse beats is sometimes helpful in determining the cause of other forms of arrhythmia Auricular fibrillation can often be diagnosed with confidence by palpation of the pulse and apex beat If the blood pressure is taken in such cases it is found that the systolic pressure is impossible to estimate in the ordinary way, the first beat that is heard on deflating the cuff is usually an isolated one, and it may be necessary to reduce the pressure in the cuff by 20 or 30 mm before the number of beats heard bears any relation to the charted pulse rate If the cuff is held inflated at the pressure at which the first beat is heard only two or three beats a minute may be heard As the cuff is *slowly* deflated the number gradually increases, and it is possible to get some idea of the variations in systolic pressure between the biggest and smallest beats The complete disorganization of ventricular rhythm is suggested by the fact that the *sound* of each beat varies, even though the pressure in the cuff is kept constant And the number of beats which get through at a given pressure of the cuff bears no sort of relation to normal cardiac rhythm

In some cases where frequent extrasystoles closely simulate the arrhythmia of fibrillation careful attention to the rhythm heard with the cuff of the manometer partially inflated may give a clue to the true source of the ventricular irregularity Ectopic beats of ventricular origin do not as a rule disturb the dominant rhythm of the heart These beats can be excluded by raising the pressure in the cuff to a point just below the pressure generated by the normal beats The equal spacing of the remaining (normal) beats can then be recognized with a fair degree of certainty The method cannot be as accurate as measurement on a pulse tracing, but I have been able on several occasions to diagnose correctly the presence of extrasystoles in patients who have previously been thought to be suffering from fibrillation, and in whom palpation of the pulse and apex beat had certainly suggested the latter condition Where the ectopic beats are of auricular origin there is usually interference with the dominant rhythm, and the distinction is less easy if the abnormal beats are very frequent But in many cases the extrasystoles seem to generate a fairly constant pressure For example, a patient may have a systolic pressure of 160 mm, but the abnormal beats may sometimes be shown to appear in the brachial artery only when the pressure in the cuff is between 120 and 130 If one series of beats remains fairly constantly at one pressure and another series appears to lie between pressures not more than 15 mm apart the second series are likely to be extrasystoles rather than irregular responses to a fibrillating auricle In the latter condition the systolic pressures resulting from individual ventricular contractions are much more variable, and in this way the two conditions may sometimes be distinguished It must not be expected that all cases can be distinguished by the method described Ectopic beats are sometimes very variable in the pressures which they generate in the course of half a minute there may be ventricular contractions which fail to exceed the aortic diastolic pressure and so fail to give rise to a pulse beat at all, while others may exceed the diastolic pressure sufficiently to give rise to a pulse beat whose pressure is not very far short of the maximum pressure of the normal beats But if careful attention is paid both to the rhythm and to the actual pressures of abnormal beats I believe that valuable information may be obtained

This method of studying the pulse is possibly well known to cardiologists, but it does not seem to be mentioned in their works, except in so far as it applies to the detection of pulsus alternans Anything which simplifies clinical investigation and eliminates the necessity for employing elaborate apparatus is clearly useful and I have therefore ventured to draw attention to a method which has proved of value to me in the routine investigation of blood pressure in patients suffering from cardiac irregularities

CHOICE OF OPERATION FOR CATARACT ON A PREVIOUSLY TREPHINED EYE

BY

R H ELLIOT M D, F R C S

LIEUT.-COLONEL, LATE INDIAN MEDICAL SERVICE

It is well known that cataract is frequently met with in association with glaucoma Sometimes the patient shows evidence of the former condition when he first presents himself to the surgeon At others, the opacification of the lens follows an operation for the relief of tension In certain cases it is obvious that the glaucoma operation has been, to some extent at least, responsible for the occurrence of the cataract, for the opacification may spread from the points where the iris has adhered to the lens capsule, thus suggesting that these synechiae are in some way responsible for the commencement of the trouble In others the first signs of opacity are seen in the depth of the lens and are obviously independent of any interference with the capsule, though the suggestion that the lenticular nutrition has been affected cannot unhesitatingly be set aside Whatever may be the cause of the cataract, and whether it is primary or secondary, the consequent failure of vision may often demand the removal of the lens

Such an operation is bound to be fraught with anxiety for added to the many risks that are always associated with cataract extraction, the surgeon is confronted with others peculiar to the condition under discussion The cataract is rarely fully mature, the optic nerve has probably been damaged to some extent, and the interference with the circulation which was associated with the glaucomatous attack has left the eye in a condition less able to stand the strain to which a cataract operation necessarily subjects it

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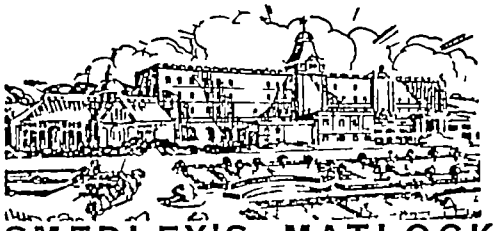

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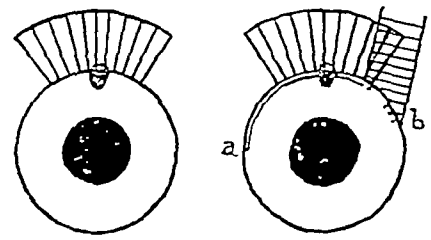
In addition to all the above considerations there is added one of special importance—namely the necessity of avoiding interference with the filtering scar It is true that in some cases where the original filtration has been on too generous a scale it may be a positive advantage to diminish it by cutting through the filtration area and thus establishing some amount of cicatrization Much more commonly however the converse holds and the surgeon's principal anxiety is to avoid doing anything which can diminish filtration For a long time past I have therefore focused my attention in all such cases on *a technique which will avoid any interference with the filtering scar* My task has been made more difficult by the fact that I have since 1920 made the inclusion of a conjunctival bridge a routine step in all my extractions

For a very long time past surgeons have recognized that a large conjunctival flap promotes the early healing of a cataract incision Well over thirty years ago Maynard of Calcutta was advocating the stitching of the conjunctival flap to add to the safety of the operation and I opposed him then on the ground that to introduce stitches into the near neighbourhood of a cataract wound was asking for trouble from sepsis There was and is another objection to the ordinary conjunctival flap—namely that it is liable to lead to the presence of a filtering scar after an extraction and also to increase the amount of astigmatism present by permitting a general healing of the wound whilst leaving the corneo-scleral edge partly ununited It might be argued that this would be a point in favour of adopting a wide conjunctival flap in cases where a filtering scar is already in existence I have tried this and given it up for I found that any interference with the tissue over the trephine hole is apt to lead not to the increase but to the cessation of filtration It is very difficult to limit the amount of cicatrization produced when a fresh cut is made through the filtering tissue and one may easily cause the trephine hole to close with the recurrence of glaucoma

I was therefore led to seek an alternative procedure A wholly corneal incision is unsatisfactory because it is attended with a risk of delay in the healing of the section a complication which is even more undesirable in these cases than in ordinary straightforward cataracts The method which I have adopted with success and which appears to me to be rational is to transfix the cornea in the usual way with a cataract knife and then to cut out along the sclero-corneal margin until nearly clear of the filtering pad and finally to make a broad bridge either upward and outward or upward and inward to the outer or inner side of the filtering scar (see diagram) This is admittedly a much more difficult thing to do than the fashioning of an ordinary bridge which usually lies in the vertical meridian but which may be a little to the outer or inner side without being any the worse for it Anyone with experience in fashioning a conjunctival bridge knows that while it is comparatively easy for an expert to make one under ordinary circumstances it is by no means so easy to get it *exactly* where one wants it In these eyes which present a filtration scar the corneal part of the incision must be made first the scleral part with its attached bridge being left till the end The difficulty in this class of case lies in the fact that the exact site of the bridge is dictated to us in advance A greater degree of operative skill is obviously called for under such conditions

If the procedure I have just outlined is successfully carried out one obtains all the advantages of a bridge—namely (1) the protection from vitreous escape (2) the immediate closure of the wound by the straplike action of the conjunctival bridge as soon as the incision is finished and the lens removed and (3) the early strong and complete healing of the whole incision Thus we can combine the safety of primary union of our wound lips with the protection conferred on the deeper structures by the conjunctival bridge and with the avoidance of all interference with the essential spongy character of the filtering scar I have adopted this technique on a number of occasions and have satisfied myself that it is a practical working proposition



A.—Showing the filtering scar the trephine hole and the peripheral coloboma of the original operation in a right eye
B.—The same with the line of the new incision added

The continuous line in B concentric with the corneal margin should lie on that margin but is carried inside it so as to make the diagram clearer It is a right eye and so the bridge is on the left (nasal) side where the incision finishes If it had been a left eye the bridge would have been on the right side on the presumption that the surgeon is ambidextrous The sclero-corneal margin has been cut along the solid line The dotted portion shows where the incision has passed under the bridge The knife-point entered at *a* and emerged at *b* The filtration scar is shown by roughly radiating lines The bridge is shown by lines at right angles to its length

The determination of the right period for intervention in a cataract following glaucoma must be decided on ordinary principles the guiding rule being to operate when the vision is no longer useful If the state of the opposite eye still permits of serviceable vision it may be advisable to postpone extraction until some measure of maturity is reached One must never lose sight of the balance between what the patient has to gain and what he may possibly lose by operation Nor must it for a moment be forgotten that the prognosis in these cases must necessarily be less favourable than in ordinary healthy eyes

A FATAL CASE OF UNDULANT FEVER IN THE NORTH OF SCOTLAND

BY

D M MARR M.D M.R.C.P.Ed

GRANTOWN-ON-SPEY MORAYSHIRE

Contagious abortion amongst the herds of Aberdeen-Angus cattle in this pastoral area of Scotland has been a very common condition for many years Undulant fever is however comparatively rare but not unknown Smith[1] described ten cases which occurred in the north east of Scotland between July 1929 and October 1931 These were of a mild type and none were fatal

Death from undulant fever contracted in Britain is extremely rare if not unknown Maclean[2] records one fatal case in thirty six recognized in New Zealand during the last three years Fatal termination is not so rare on the Mediterranean littoral In the case recorded below infection was contracted locally and it terminated in death

CASE RECORD

A railway porter aged 29 was first seen on July 27th 1932 He gave a history of influenza ten years previously Four years ago he had his right eye removed This was rendered necessary owing to severe infection following the entry of a piece of steel by an accident whilst on duty He complained of having felt seedy for five days before

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NORTHAMPTON.

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Medical Superintendent DANIEL F. RAMBAUT M.A. M.D.

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the date of his first visit Three days before this visit he had got drenched with rain at his work and had continued on duty with an overcoat above his wet clothing The main complaint was of pain in the right shoulder joint and thoracic spine Temperature 101° F pulse 76 respirations 26 Physical examination revealed some tenderness on passive movement of the right shoulder but none on pressure over the vertebral spines while all other joints appeared normal The tongue was clean and moist He was put on a mixture containing sodii salicyl 10 grains t i d Seen four days later, the fever and pain had gone and he was apparently well He was advised to rest for a week before resuming duty

On August 11th I was again called to see him He was found complaining of anorexia intense headache backache and cough Sweating was profuse Temperature 101 6° pulse 80 respirations 26 There were generalized rhonchi back and front of the chest and crepitations at both pulmonary bases The tongue was again clean and moist He was seen daily at this stage Heavy sweats were a marked feature at this period These occurred at night or in the early morning The temperature varied from 104 5° to 99 5° The pulse rate was not above 90 Respiration rate varied from 24 to 32

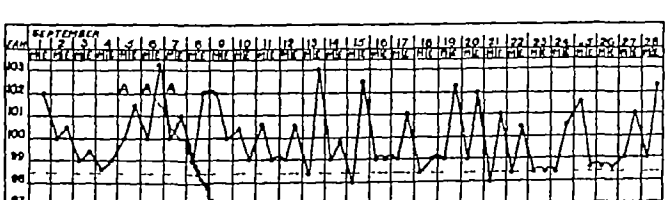
Headache was severe continuous and lasted altogether for eighteen days The chest signs cleared up in a few days Thirst was constant The tongue remained clean and moist There was no albuminuria or glycosuria and no significant casts in the urine The stools were unaltered macroscopically

On August 15th the patient complained of severe pain in the right hypochondriac region No evidence of pleurisy or enlargement of the liver was found Next day it was just possible to palpate the spleen and a specimen of blood was sent to Aberdeen City Hospital Dr John Smith reported 'The blood serum failed to agglutinate *B typhosus B para typhosus* A B and C, but agglutinates *Br abortus* in a dilution of 1 in 1 600 On receipt of this report blood faeces and urine were sent for culture but *Br abortus* was not isolated A specimen of the patient's milk supply was also examined and it was found that the whey agglutinated *Br abortus* to a dilution of 1 in 200 This indicated infection of some of the cows in the dairy herd

From August 16th the spleen enlarged rapidly and on August 20th the liver was found to have increased in size Both liver and spleen attained their maximum size about August 30th At this date the liver was 4 inches below the costal margin and filled the epigastrium The surface was smooth, consistency firm and the anterior edge hard and sharp The spleen reached to the umbilicus in the middle line and filled the left abdomen Its consistence was hard and firm Both organs were tender on pressure There was no jaundice or ascites and no other glandular enlargement

Towards the end of August pallor of the facies and skin were noted and the whole body became of a dull dead white, like the pallor of death This was a striking feature of the case and persisted until death The blood showed 2 840 000 red cells haemoglobin 40 per cent, colour index 0 7 white cells 7 200

On September 1st the patient was persuaded to enter the Ian Charles Cottage Hospital at Grantown on Spey A complete record of his temperature was now obtained (see Chart)



An agglutination test at this time showed that the titre had risen to 1 in 12 800 It will be noted, as pointed out by Forbes[3] the fever is not of the typical undulant variety attributed to cases of Mediterranean origin but has some resemblance The pulse ranged mostly between 70 and 86

On September 11th an intradermal injection of 0 2 c cm of 1 in 1 000 suspension of dead *Br abortus* was made in order to elicit if possible a positive Burnet[4] reaction There was no reaction of any kind Towards the end of September there was some improvement in his general condition The liver and spleen became less in size but the fever and pallor remained

At the beginning of October he began to worry over non payment of sickness benefit (This is not payable to patients whilst in hospital) He insisted on going home and it was arranged that he should be discharged on October 6th On October 3rd he became delirious and semi conscious A specimen of cerebro spinal fluid was taken, which was unfortunately mixed with blood Culture failed to show *Br abortus* The blood in the specimen obviated chemical and cytological examination The ocular fundi were normal Next day he was 'himself' again, and insisted on adhering to the arrangement made for his home going He therefore went home on October 6th

On October 9th I was hurriedly sent for and found that he had had a serious gastric haemorrhage He had lost over a pint of blood He was exhausted and weak and the pulse rate had risen to 120 By the same evening he had rallied and the pulse rate was back to 90 Although passing tarry stools he continued to improve until the night of October 22nd-23rd when he had a second haemorrhage from the stomach By this time he was extremely weak and on October 24th there was slight oedema of the ankles and feet The oedema increased until there was ascites The spleen and liver were still large and easily palpable The pulse rate was from 80 to 85 He became comatose on October 31st and without regaining consciousness died on November 11th

Two days before death a sample of blood was taken from a collapsed vein, and the serum agglutinated both *Br abortus* and *B melitensis* to a dilution of 1 in 51 600 At no stage was there any apparent wasting or emaciation

COMMENTARY

With infectious abortion known to be rampant in this district for years it is surprising how few recognized cases of undulant fever occur Mild cases may certainly be overlooked, but in thirteen years practice here I have never come across a case which resembled the one just described The difficulty of isolating *Br abortus* from blood, urine, and stool is worthy of comment In such a marked case serologically, one would have expected this to be possible Blood received directly from a vein into suitable media was sent at different stages of the disease for culture, but on each occasion proved sterile The tardiness of diagnosis and the time lost in transit from bedside to laboratory may both, or separately, account for failure The progressive rise in the agglutination titre of the serum is interesting, as is the high agglutinating power just prior to death On a single case it is highly dangerous to form an opinion, but the failure of the Burnet test as an aid to diagnosis was disappointing

Clinically the main features of the case were *the in*sidious onset, the slow pulse, the clean, moist tongue, the sweats, the intense headache, the pallor, the irregular temperature, the enlarged and firmly consistent liver and spleen, and finally, the gastric haemorrhages and death The difficulty of early diagnosis, in the absence of serological examination, will be apparent, as will the similarity to the typhoid group of fevers

Treatment was almost entirely symptomatic Salicylates were pushed at the outset, later quinine bihydrochloride, 10 grains t i d, and still later S U P 36 All were equally ineffective Short of opium it was not possible to allay the headache

I have pleasure in acknowledging my indebtedness to Dr John Smith bacteriologist City Hospital Aberdeen and to the matron and sisters of the Ian Charles Hospital Grantown on Spey

REFERENCES

[1] Smith J *Quart Journ Med* 1932 1 No 2 103
[2] Maclean F S *New Zealand Med Journ* August 1932
[3] Forbes Alexander *British Medical Journal* 1932 1 1028
[4] Burnet Et *Arch Inst Past Afr Nord* 1922 t 2, 165

BETHLEM ROYAL HOSPITAL, for Nervous and Mental Disorders,

Monks Orchard, Monks Orchard Road, Eden Park, Beckenham, Kent

Reg Tel Address Bethlem Beckenham *Telephone* Springpark 1180-1181
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Patients who can contribute 5 guineas weekly towards the cost of treatment and maintenance may be received as vacancies arise The Committee will also consider applications for admission at lower rates, and in certain cases will be prepared to admit patients free of charge

Every facility for specialized investigation and treatment is provided in the Lord Wakefield Science and Treatment Unit In this unit is found the X Ray and Dental Departments and the Bio Chemical, Pathological and Psychological Laboratories

Furthermore provision is made for Electro-Therapy and Hydro-Therapy to be carried out in all their forms and Occupational Therapy under competent instruction is encouraged

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For forms and further particulars apply to the Physician Superintendent at the Hospital

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Extensive grounds Detached Villas Chapel Garden and dairy produce from own farm Terms very moderate

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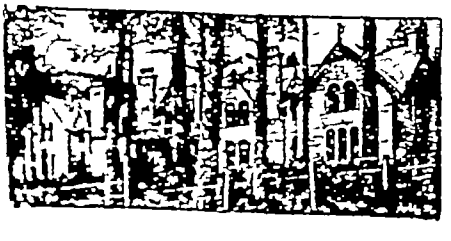

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MEDICAL, SURGICAL, OBSTETRICAL

APPENDICITIS AND MECKEL'S DIVERTICULUM

The following are notes of a case of acute appendicitis with an unusual post operative sequel due to the presence of a Meckel's diverticulum

L E aged 32 first seen on June 4th 1932 with a history of forty-eight hours abdominal pain A diagnosis of pelvic appendicitis was made and he was removed to hospital and operated upon the same day On opening the abdomen by the right paramedian subumbilical route a Meckel's diverticulum of the ileum presented itself at the upper end of the wound It was two inches long lying quite free and not inflamed The inflammation was confined to the right side of the pelvis from which a gangrenous pelvic appendix was removed The stump was buried and a drain of dental rubber inserted through the lower end of the wound down to the pelvis This was removed in forty eight hours and convalescence proceeded in normal fashion until the seventh day Early in the morning of that day the patient was seized with acute pain of a colicky nature in the region of the umbilicus This was accompanied by vomiting Despite good results both of flatus and faeces with enemas his general condition rapidly deteriorated It was surprising how quickly grave toxaemia ensued

On June 12th his wound was reopened and Meckel's diverticulum was discovered to be passing across and obstructing a coil of the ileum adhering by its tip only to a portion of the mesentery A few recent adhesions between the intestines the result of a localized plastic peritoneal inflammatory reaction were present. The diverticulum was excised and the wound closed For forty eight hours the patient was gravely ill but with the relief of the obstruction he speedily improved and was discharged from hospital a fortnight later He has remained in good health ever since

On account of the severe symptoms caused by the obstruction and the necessity for a second operation under adverse circumstances I am convinced that the diverticulum should never have been left alone at the first operation when its removal could have been undertaken without risk

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F R C S Ed
Assistant Honorary Surgeon Blackburn Royal Infirmary

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The patient a male aged 38 keeps a dairy farm though he has not anything to do with the herd as the milking is done by a milkman The past year was a very trying one for him and he confesses to being very worried and over worked

The illness dates from August 1932 when he began to feel indefinitely ill tired and depressed This decided him to go away for a fortnight's holiday and he came back feeling better In September he noticed when he went to bed that no matter what the temperature was he felt chilly and actually shivered in much the same way as he did subsequently with his rigors In November he began morning headaches which usually left him during the day and sometimes returned at night At this time when he woke he felt so tired that he could not get up to do his duties about the farm a most unusual feeling for him

On December 6th he came to see me complaining chiefly of headaches and feeling tired His temperature at this visit was 99 6° He said that this headache and tired feeling had been on for about three weeks A tentative diagnosis of influenza with subsequent headaches and general lassitude was made and medicine to relieve his head and to clean his tongue which was furred was prescribed The week following the temperature was taken regularly while he was at home and began to register 102°–103° at night and about 100° in the morning These high temperatures at night were accompanied by rigors and sweating

On December 14th he was admitted to a nursing home During the day he appeared well and his appetite was not seriously affected his pulse rate was low but his temperature continued high especially at night when he continued to have rigors His lungs were clear heart sounds were poor the spleen was not palpable and not enlarged to percussion His liver was not palpable and the abdomen not distended His bowels acted with the help of mist alb and the stools were normal in appearance Urine was normal On the night after his admission to the home he had severe abdominal pain and during the rigors he always had painful cramps in his thigh muscles and in his back On December 15th a specimen of blood was sent to a laboratory for a report on the erum reactions with the typhoid group and *Br abortus* They were all returned as negative

On December 19th as no improvement was taking place he was seen in consultation by Dr Arthur Davies of London and I have asked him to append his pathological report with notes By December 26th the patient's temperature came down to normal and he left the home on January 2nd He now feels easily tired and a reading of his blood pressure has recorded the extraordinarily low figures of 98 88

Laboratory Findings.—The patient's blood serum agglutinated the following strains of the Brucella group *Br abortus* (Bang and hog R V C) *B melitensis*—Groups 1 2 and 3 and Zammit The serum did not agglutinate *B melitensis* (Arkwright strain) The agglutination titre in all cases was 1 in 640 except *B melitensis* Zammit which was agglutinated to 1 in 320 dilution only Blood culture and urine yielded no growth of Brucella group organisms The blood picture was that of a secondary anaemia red blood cells 4 370 000 per c mm haemoglobin 80 per cent white blood cells 5 925 per c mm —polymorphs 63 per cent lymphocytes 31 per cent large mononuclears 5 per cent eosinophils 1 per cent

Yeovil H R LEWIN M B F R C S

Reports of Societies

ANAEMIA IN INFANCY

A meeting of the Section for the Study of Disease in Children (Royal Society of Medicine) was held on May 26th in conjunction with the Maternity and Child Welfare Group of the Society of Medical Officers of Health for the discussion of cases of anaemia in infants Dr LEONARD G PARSONS was in the chair

Dr ALAN MONCRIEFF showed a case of anaemia of von Jaksch in a child of 8 months the only child of healthy parents admitted to hospital under his care two months ago He indicated the dietetic and other treatment followed The spleen remained much enlarged and firm Dr PARKES WEBER pointed out that von Jaksch's anaemia comprised a number of different conditions including some with syphilis which was ruled out in Dr Moncrieff's case He had lately had the opportunity of observing a particular kind of anaemia which was sometimes familial with a large spleen and of which it would be said at first glance that it was either von Jaksch's anaemia or congenital haemolytic familial anaemia It seemed to be now settled that it always appeared in Southern European families One of the characteristics was absence of nucleated red cells another being the large spleen There was also a peculiarity in the shape of the head

Dr HELEN MACKAY and Dr E O FLYNN showed two cases of pure haemolytic anaemia in the newborn another case of haemolytic anaemia with icterus gravis neonatorum of familial type and a further case of haemolytic anaemia in the newborn presumably due to an intestinal infection

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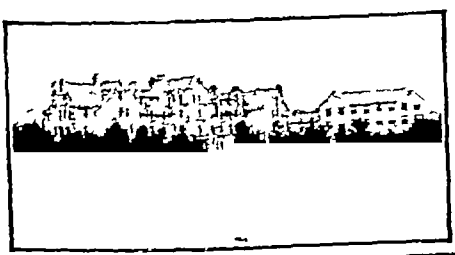

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and hepatitis In the first three cases Dr Mackay suggested that there was a temporary absence or deficiency of some product needed to prevent haemolysis Dr JEAN SMITH also showed a case of severe anaemia in a newborn child, in which a distinct improvement had been brought about by blood transfusion and intramuscular injections of collosol iron Dr J C HAWKSLEY and Dr R LIGHTWOOD showed a case of icterus gravis neonatorum, a condition which had been much improved under whole-blood transfusion Dr Lightwood pointed out that these cases were not always familial, though the familial seemed to have attained more prominence in literature than the non-familial Dr PARKES WEBER asked who was the first to introduce the treatment of these cases by blood transfusion , he believed it was a London physician, and certainly it was a very successful treatment, and at the time a wonderful discovery Dr MONCRIEFF raised the question of blood grouping in these cases, recalling the suggestion that where the blood groups of mother and child were different there were more cases of jaundice than when the blood groups were the same Dr MACKAY said that in bringing her own cases forward she had hoped to learn whether the excessive destruction occurred because there was an excessive number of young cells present, or whether the number of young cells present was an attempt at regeneration , she was inclined to think the latter was the case

Dr LEONARD FINDLAY brought forward an example of the chlorotic type of anaemia in a girl aged 11 years, also an example, in a girl of 9, of chlorotic anaemia and rickets He said that it was most unusual to find such a degree of anaemia and rickets associated, because rickets *per se* was really not associated with anaemia at all There had been a long history of illness in this case, necessitating several years' residence in hospital There was absolutely no evidence of any defect in absorption over the gut, nor of renal mischief Dr E C WARNER showed a case of anaemia, with probably acholuric jaundice, in a girl aged 5, with no family history of either condition, and another case of acquired acholuric jaundice, with acquired fragility of red cells, in a girl aged 11 He said that such cases were not very rare , he had had three during the last two years The second case also had no family history of splenic enlargement, jaundice, or increased red cell fragility

Cases were also shown by Dr EDMUND CAUTLEY, Dr T STANLEY RODGERS, and Dr T PEARSE WILLIAMS the last named showing a " pernicious " blood picture in an infant, with recovery

VENTILATION AND HEATING OF HOSPITAL WARDS

In a paper read before the Section of Epidemiology and State Medicine of the Royal Society of Medicine on May 26th, Dr JAMES WATT complained that in the ventilation of hospital wards ordinary domestic standards were usually followed and it was not appreciated that good ventilation was a form of physical medicine and an adjuvant in the treatment of the sick It was true, he said that in fever hospitals the question of cross-infection had compelled greater attention to the ventilation of the wards but only in the sanatorium treatment of tuberculosis had the subject received the care that it deserved It was now well established that the various forms of tuberculosis were best treated under open-air conditions and if the results were so favourable in one multiform disease why not in others? He had not found pleurisy occur in exceptional frequency among sanatorium populations lobar pneumonia was practically unknown in his own sanatorium experience bronchitis was occasionally aggravated by open air conditions in winter, but the cases generally improved steadily with the improvement in tuberculous disease and colds in the head were at least no more frequent and lasted no longer among persons nursed in open air wards than among persons nursed in their own homes where much higher temperatures and much less exposure to moving air were the rule The coolness and movement of the air were far more important than its chemical purity Dr Watt went on to claim that the most comfortable and probably the most efficient ventilation was secured in a shed or room one side of which was completely open, while the other three sides, though provided with fanlights, could be completely closed In this country it was usually held that the ward temperature should be between 60° and 65°F —in America a higher level, up to 75°, was demanded—but these figures were partly dependent on habit, and ward temperatures could be reduced below such standards with benefit to the health of the patient and acceleration of his recovery Certain adjustments might be made, such as extra provision of blankets, bed jackets, and socks, perhaps also woollen helmets, and patients extremely susceptible to cold might be segregated in a small ward Dr Watt thought that mechanical systems of ventilation by propulsion and extraction of air, though they had many attractive features, were not well suited to hospital wards, where, indeed, they had gone out of fashion Most hospitals depended on cross ventilation of wards by windows, sometimes supplemented by wall ventilators and fireplaces The practice of heating the in-coming air, unless it was limited to taking the chill off very cold air, seemed wrong in principle Sash windows were usual and convenient, but casements allowed the whole window to be opened, and particularly to be welcomed was a form of casement vertically pivoted about one third of its distance from the upright frame The ward window was best completed above by a hopper A window favoured by the Scottish Board of Health was the Austral window, the two sashes of which were horizontally pivoted so as to direct the entering air upward and keep out rain On the subject of heating the wards Dr Watt pointed out that it had to be borne in mind that the hospital patient unlike the ordinary healthy person, or even the child attending an open air school, could not usually maintain a balance by exercises, so that some supplementary heating was necessary in winter The maintenance of warmth for the body and lower extremities was a question of bedclothes, and if a mild beam of radiant heat could be focused on the patient's head and upper extremities the problem would be solved In ordinary circumstances an open fire in the ward was something of a luxury, and, with cross window ventilation, its ventilating action should be unnecessary There were objections to the steam heating of wards, owing to moisture, stale smell, and complication of guards to prevent burns The method he preferred was pipe heating, which ensured an even distribution Finally, he touched on the question of lighting, urging that the supply of artificial light should not be niggardly, but if there was an individual light over each bed, controlled by the patient, a few other central lights, one over the sterilizer and another over the fireplace, and a reading light for the nurse's table, should furnish all that was necessary

Two architects joined in the discussion on Dr Watt's paper One of them Mr H W BINNS, showed photographs of two hospitals he had designed—St David's, Ealing, for men suffering from permanent war injuries and St Vincent's Orthopaedic Hospital, Eastcote Both were built on the cloister principle, the idea being taken from hospital architecture in Spain Mr L G PEARSON, as an architect, favoured the small ward preferably of four beds, and said that in Germany and other countries the four-bed ward, with the beds parallel, and a large window on one side and fanlights into a ventilated corridor on the other was very largely used In this country, however, the nurses appeared to object to such an arrangement, a sister not uncommonly saying that she could look after thirty patients in an open ward, but not with the same number of patients distributed in small wards Mr T B LAYTON remarked that in his experience these matters were left too much to the nursing staff who tended rather to extremes in ward ventilation, resulting on the one hand in stuffiness and on the other in exposure which reached the point of discomfort The nursing profession, he added, was extremely conservative, only equalled in this respect by newly qualified members of the medical profession who served as hospital residents

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The University, Birmingham. C. C. BURTON, Secretary.

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Admission Free Reserved seats 2/6 and 1/ from Great Queen's Hall, or C.B.C. Society 108 Whitfield Street, W C.1

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN

The ANNUAL GENERAL MEETING of the Members of this Society will be held a 11 Chandos Street Cavendish Square W on WEDNESDAY MAY 24th at 5 p m precisely to transact the usual business of such meeting to elect officers for 1933—1934 and to confirm the By laws as passed at the Special General Meeting that was held on May 12th

11 Chandos St. E J BLACKETT
Cavendish Square W 1 Secretary
May 15th 1933

BRITISH COLLEGE OF OBSTETRICIANS AND GYNAECOLOGISTS

The next Examination for the Membership will be held in July 1933

Particulars may be obtained from the under signed.

W FLETCHER SHAW
58 Queen Anne St., Hon Secretary
London W 1

BOARD OF EDUCATION

APPOINTMENT OF MEDICAL OFFICER

The Board of Education invite applications from registered Medical Practitioners for appointment a Medical Officer on the staff of the Board

Applicants must be Medical Practitioners preferably between 30 and 40 years of age with a University Medical Degree a Diploma in Public Health and experience of the School Medical Service

The officer will be required to reside in London or such other area as may be determined by the Board The appointment will carry the normal Civil Service conditions as to pension holidays etc

The scale of salary will be £726 per annum rising by twelve annual increments to a maximum of £1 043. In special circumstances the minimum salary may be advanced where a candidate has special knowledge and experience.

Further particulars together with application forms which must be returned completed not later than Saturday June 3rd may be obtained on application in writing to the Director of Establishments Board of Education Whitehall, London S W.1

ERITH URBAN DISTRICT COUNCIL

ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER.

The Council of the Urban District of Erith invite applications from Medical Practitioners under the age of 40 years and of not less than three years standing in their profession for the above appointment

The commencing salary will be determined by previous Municipal service, but in no case will it be less than £500 per annum. Annual increments of £25 will be given to a maximum salary of £700 per annum

The appointment is subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and the person appointed will be required to pass a medical examination

It is terminable by three months written notice on either side and is also subject to the Council's Standing Orders Regulations and Resolutions governing staff.

The appointment is a whole-time one The duties will consist mainly of work in the School Medical Department but will include also duty in any section of the Health Services of the Council

Experience in the certification of mental defectives in ante-natal care and the possession of a registrable qualification in Public Health will be considered additional recommendation

Applications accompanied by copies of not more than three recent testimonials must be made on forms obtainable from the Medical Officer of Health Council Offices Erith to whom they should be returned to reach him not later than June 7th endorsed Assistant M O H

Council Offices DOUGLAS S TWIGG
Erith Clerk to the Council.
May 13th 1933.

CITY OF MANCHESTER

PUBLIC HEALTH DEPARTMENT

BOOTH HALL HOSPITAL

APPOINTMENT OF AN ASSISTANT MEDICAL OFFICER

The Public Health Committee invites applications from qualified Medical Men for the position of Assistant Medical Officer at the Booth Hall Hospital for Children (750 beds) Charlestown Road Blackley Manchester

Every applicant must be a registered Medical Practitioner and unmarried.

Preference will be given to applicants with previous hospital experience and good surgical experience

The hospital is a recognised training school for nurses and is equipped with all modern hospital requirements

Salary £250 per annum subject to a temporary deduction of £6 10 per annum The amount payable is therefore £243 10s with board residence and laundry in addition subject to the terms and conditions of the Manchester Corporation Grading Scheme. No bonus

The appointment will be made in the first instance for a period of six months The successful candidate however will be eligible for re-appointment for a further period of six months at the end of that period

Application stating full the age training qualifications and experience of the candidate with copies of three recent testimonials and endorsed on the envelope Assistant Medical Officer Booth Hall Hospital must be addressed to the Medical Officer of Health Civic Buildings 1 Mount Street Manchester 2 and not to members of the Committee or Council and must be received by him not later than Saturday May 27th

The candidate appointed will be required to commence duty as soon as possible after appointment to devote the whole of his time to the duties of the position to pass a medical examination to contribute to the Corporation Superannuation Fund and to execute the Deed of Service

Canvassing in any form oral or written direct or indirect is prohibited

Town Hall F E WARBRECK HOWELL
Manchester 2. Town Clerk.
May 11th 1933.

CITY OF MANCHESTER.

APPOINTMENT OF ASSISTANT TUBERCULOSIS OFFICER.

The Public Health Committee invites applications for the position of Assistant Tuberculosis Officer at a commencing basic salary of £650 per annum rising by annual increments of £25 to £750 per annum. The salary is subject to a temporary deduction (£26 5 on £650)

Candidates must be fully qualified Medical Practitioners having special knowledge of Medical and Surgical Tuberculosis and should state whether they possess the Diploma of Public Health.

Applications stating age qualifications, and experience with copies of not more than three recent testimonials, and endorsed on the envelope Assistant Tuberculosis Officer must be addressed to the Town Clerk only and not to members of the Committee or Council and must be received by him not later than June 3rd

The gentleman appointed will be under the administrative control of the Medical Officer of Health and the immediate control of the Senior Tuberculosis Officer He will be required to devote the whole of his time to the duties of his position to execute the Deed of Service, and to contribute to the Corporation Superannuation Fund

Canvassing in any form direct or indirect oral or written, is prohibited

By Order
Town Hall F E WARBRECK HOWELL
Manchester Town Clerk
May 15th 1933.

LONDON CLINIC AND INSTITUTE OF PHYSICAL MEDICINE.

The Committee of Management are about to appoint a fully qualified RADIOLOGIST at the above Clinic

Applications with not more than three recent testimonials should be addressed to the Secretary London Clinic and Institute of Physical Medicine 42, Ranelagh Road S W 1 not later than June 1st

THE UNIVERSITY OF MANCHESTER.

Applications are invited for the post of PROFESSOR OF DENTAL SURGERY AND DIRECTOR of the DENTAL HOSPITAL. Duties to commence September 29th All applications should be sent not later than June 12th to the Registrar from whom further particulars may be obtained

MUNICIPAL BOARD OF MOMBASA.

Applications are invited from British subjects for the post of MEDICAL OFFICER OF HEALTH under the Municipal Board of Mombasa, Kenya The consolidated salary of the post is £950—£40—£1,150 There is at present a 6 per cent. levy on salaries as a measure of economy No house is provided nor house allowance paid. The post is non pensionable there is no Provident Fund which the latter is instituted all Municipal Officials will be required to participate

The person appointed must be a legally qualified Medical Practitioner registered under the Medical Acts of the United Kingdom and must be registered in the Medical Register of the United Kingdom as the holder of a diploma or certificate in sanitary science, public health or state medicine Previous experience of public health work is essential The possession of a diploma in tropical medicine or tropical medicine and hygiene or previous tropical experience is desirable

The Medical Officer of Health on appointment will be granted a first-class passage to Mombasa and half salary while on the voyage He will be required to serve 3 years (and will be subject to retention for a further year if the exigencies of the service so demand) Thereafter he will be granted 3 months leave on full pay and, if returning to his appointment will have three further months on full pay a first class return passage will be provided up to £150 During 3 years service he will be entitled to three periods of local leave of 14 days each

He will be required to provide himself with motor transport the present motor-car allowance being £4 a month.

Application with copies of any testimonials and with a recent photograph should be sent by candidates in the British Isles to Dr GILES Coolgardie" Aldwick Road Bognor Regis Sussex by July 15th.

Applications from other countries should reach the undersigned by August 15th Copies of the terms of service may be obtained from Dr GILES or the undersigned

(Sgd) DONALD S. FRASER
Mombasa. Town Clerk.
May 5th 1933

HAMPSHIRE COUNTY COUNCIL.

ASSISTANT COUNTY MEDICAL OFFICER.

Applications are invited for the post of Assistant County Medical Officer Preference will be given to a woman with experience in maternity and child welfare work, including maternity centres and ante natal clinics Possession of a Diploma or Degree in public health work is essential and previous experience in tuberculosis venereal disease and medical inspection of school children will be considered an advantage

Salary £600 a year rising on approved service by increments of £50 (subject to deductions under the Local Government Officers Superannuation Act and to temporary abatement) in addition to travelling expenses

Application with copies of not more than three testimonials upon a form which, with the condition of appointment may be obtained from the County Medical Officer The Castle Winchester should be sent to him not later than June 3rd. Canvassing is prohibited.

THE INSTITUTE OF RAY THERAPY AND ELECTROTHERAPY Camden Rd N W 1

A Part time MEDICAL OFFICER is required on July 3rd The duties include assisting in the treatment and collecting clinical data

The appointment is for not less than six months and is eminently suitable for a man doing Post graduate study Full board residence and laundry is provided in addition to an honorarium at the rate of £100 per annum

THE BOLTON ROYAL INFIRMARY (301 Beds including Two Auxiliary Hospitals)

Applications are invite from Ladies having a registered Medical and Surgical qualification for the post of HOUSE SURGEON Salary £125 per annum with board residence and attendance

Application stating age nationality and previous experience together with copies of two testimonials should be forwarded to the undersigned not later than Monday May 22nd.

ALBERT E. BRISCOE, Secretary

THE WOMEN'S HOSPITAL, Catharine Street LIVERPOOL.

There is a vacancy for a HOUSE SURGEON at the above Hospital for a period of six months commencing July 1st

Salary at the rate of £100 per annum.

Application to the Hon Secretary of the Medical Board by June 10th.

Reviews

THE DUODENUM

DR EDWARD L KELLOGG'S volume *The Duodenum* [1] is a comprehensive work based upon twenty years of study and practice in the course of which the author has contributed many articles to medical literature dealing with the medical and surgical treatment of gastro-intestinal disorders To present as this volume does an account of the diseases of one small segment of the body is not an easy task and it is doubtful whether so specialized a view of disease—in particular a view anatomically specialized—can ever be wholly satisfactory The author can however maintain that he is one of a numerous company of writers who have treated of circumscribed parts of the alimentary and other systems in the same way as he here deals with the first segment of the small intestine Among earlier studies to which he acknowledges his indebtedness he mentions particularly the notable review of the pathology of duodenal disease which was contributed by Perry and Shaw to the *Guy's Hospital Reports* of 1893 Studies of the literature have led the author far afield and his review of it is comprehensive for he has co-ordinated with marked success the important work of the past and the present methods of investigation and treatment On several important questions he expresses with commendable restraint no definite views he is dogmatic when the evidence justifies it and cautious when he does not find himself entitled to preach

The chapters on the anatomy and physiology of the duodenum show that there is still much work to be done before the physiology of this part of the alimentary canal can be completely described A full review is given of the many measures that have been devised for the direct examination and treatment of ulcer and other lesions by intubation and the Levin tube is specially recommended The section on examination includes an admirable chapter on radiology by Dr A Judson Quimby in which he describes the special technique needed for the difficult work of obtaining satisfactory duodenal pictures and interpreting fluoroscopic appearances The first morbid condition to be described is duodenitis now recognized as a pathogenic entity of importance and of frequent occurrence apart from ulceration Short reference is made to the possible connexion between this lesion and glycosuria A chapter on parasites by Dr Bailey K Ashford is chiefly occupied by a study of ankylostomiasis or uncinariasis as the writer prefers to name it a term under which he includes infection with *Necator americanus* In a chapter on diverticulosis it is well said that the clinical importance of this condition should now be acknowledged Surgeons who have met with cases in which this condition has been responsible for symptoms are alive to the possibility of its being the basis of some of the perforations abscesses and fistulae of obscure origin which are met with on the right side of the abdomen and in the right flank Another subject which is admirably dealt with is that of duodenal ileus acute and chronic it is only within the last fifteen years or so that the causes of either the acute and often fatal type or the chronic type have been clearly shown Dr Kellogg describes these conditions as acute and chronic duodenal obstruction giving as synonyms the old terms acute dilatation of the stomach and 'chronic duodenal ileus' respectively In the chapter on chronic obstruction are included clinical reports on 118 cases which have come under the author's personal care most of them the sequel of bands and adhesions a minority due to mesenteric compression The subject 'ulcer' naturally receives lengthy consideration and the author holds that infection is frequently a direct exciting cause and that the gastric secretion is a supplementary agent only in aetiology In regard to treatment the comparative advantages of medical and surgical procedures are not definitely discussed The various surgical measures which are suitable for varying states of ulceration are however admirably debated The last chapter of the book forms an illustrated atlas of the surgical procedures which concern the duodenum There are some forty pictures and these and the other illustrations throughout the book are of first rate quality A hundred and thirty two pages are devoted to literary references and there are complete indexes of subjects and authors

[1] *The Duodenum* By E L Kellogg M D F A C S Foreword by G D Stewart, M D F A C S Chapter on duodenal parasites by B K Ashford M D Sc D Section on x-ray diagnosis by A Judson Quimby M D New York Paul B Hoeber Inc. 1933 (Pp xxvii + 859 287 figures (3 in colour) 10 dollars.)

ARTIFICIAL PNEUMOTHORAX

We have received from the Paris publishers Masson et Cie three small books dealing with artificial pneumothorax treatment Two of them are new additions to that firm's well known series Médecine et Chirurgie Pratiques and are entitled The After-effects of Pneumothorax Treatment [2] by L DE WECK and Simultaneous Bilateral Pneumothorax [3] by M ASCOLI and M LUCIGER The third is an M D thesis Pneumothorax versus Phrenic Evulsion [4] by J MORIN These three books all dealing with special aspects of a specialized form of treatment and appealing only to those who are devoting themselves to the treatment of pulmonary tuberculosis and not to the general medical reader may with advantage be reviewed together

By far the most arresting of the three is Morin's thesis In it he definitely champions phrenic evulsion as a method of treatment superior to artificial pneumothorax His introduction to his subject is a very concise piece of writing and would be read with advantage by anyone who is practising collapse therapy to any extent Some of its suggestions will certainly tend to check over confidence in a treatment whose introduction is still so recent that few of us have any real experience of its after-results The thesis is beautifully illustrated and finishes with a most spirited argument in which the author fearlessly tilts at conventional opinion even when expressed by men of world wide reputation The two hours that would be spent reading this work would not be wasted One rather hoped that de Weck's After effects of Pneumothorax Treatment might illuminate or elaborate some of Morin's arguments for the more we can learn of this treatment the surer will be our use of it but in this one is disappointed The book is really an anatomical and pathological description of the after-effects of collapse on the lung and on the thorax and its other contents and has little to say of how these changes affect the clinical condition or general welfare of the patient There is in it too much theoretical disquisition and too little practical guidance The same criticism applies with even greater force to Simultaneous Bilateral Pneumothorax One of the authors Dr Ascoli has been studying and using this method of treatment since 1912 and the reader would therefore be very ready to sit at his feet for instruction Instead one finds a most painstaking analysis of other people's opinions on bilateral collapse and very little of

[2] *Effets Eloignés du Pneumothorax Thérapeutique* Par L de Weck Médecine et Chirurgie Pratiques Préface du Dr Bernard Paris Masson et Cie 1932. (Pp viii + 129 16 figures 16 fr.)

[3] *Le Pneumothorax Bilatéral Simultané* Par M Ascoli et M Luciger Préface de F Dumarest. Médecine et Chirurgie Pratiques 54 Paris Masson et Cie 1933 (Pp 104 11 figures 22 fr.)

Du Pneumothorax à la Phrenicectomie Par J Morin Thèse d'habilitation présentée à la Faculté de Médecine de l'Université de Lausanne pour l'obtention du titre de privat docent de médecine interne Paris Masson et Cie (Pp 35 30 figures 20 fr.)

NORTH WALES COUNTIES MENTAL HOSPITAL DENBIGH

ASSISTANT MEDICAL OFFICER

The Committee of Visitors of the above Institution invite applications from duly qualified male candidates married or single for the post of Resident Assistant Medical Officer Salary which will be subject to the Statutory deductions under the provisions of the Asylum Officers Superannuation Act 1909 will be £500 per annum together with emoluments valued at £125 per annum for superannuation purposes If single full board, residence laundry, and attendance provided If married an unfurnished house with light water rent and rates provided free valued at £75 for purposes of Superannuation The appointment to be terminable upon one month's written notice on either side Practical experience of the modern treatment of mental conditions will be expected and a knowledge of the Welsh language will be deemed most desirable

Applications stating age qualifications and accompanied by three recent testimonials are to be sent to the Chairman of the Visiting Committee endorsed Assistant Medical Officer not later than Tuesday the 30th instant

Dated this 12th day of May 1933

WM BARKER
Clerk to the Visiting Committee

HEREFORDSHIRE GENERAL HOSPITAL (140 Beds)

Applications are invited for the post of HOUSE SURGEON and CASUALTY OFFICER (male)

Salary at the rate of £100 per annum, with board residence and laundry

The appointment will be for a period of six months The successful candidate will, subject to satisfactory service be eligible to succeed to the Resident Surgical Officership with a salary at the rate of £150 per annum

Applications stating age qualifications and experience together with copies of three recent testimonials should reach the undersigned on or before May 31st

T W UPTON Secretary

BRIGHTON SANATORIUM AND INFECTIOUS DISEASE HOSPITAL

Applications are invited for the post of MALE JUNIOR RESIDENT MEDICAL OFFICER Salary £150 per annum with board and lodging

The appointment is for a period of six months

Particulars and form of application can be had from the undersigned

Latest date for application for appointment June 6th

Town Hall JAS H ROTHWELL
Brighton Town Clerk
May 15th 1933

LIVERPOOL HAHNEMANN HOSPITAL HOPE STREET (52 Beds)

Applications are invited for the post of RESIDENT MEDICAL OFFICER to the above Institution Appointment is for six months renewable Salary at the rate of £100 per annum Duties include casualties occasional anæsthetics and assisting at operations general gynæcological aural and ophthalmic Apply stating age sex nationality and previous experience and enclosing copies of recent testimonials to the Registrar before May 30th

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NATIONAL HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM Queen Square W C 1

HOUSE PHYSICIAN

Applications are invited for the post of House Physician and should be sent to the undersigned accompanied by three recent testimonials not later than Wednesday May 31st The salary is £150 per annum with board and lodging

CODRFY H HAMILTON Secretary

COSSHAM MEMORIAL HOSPITAL KINGSWOOD BRISTOL

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) Salary £150 p a with board residence and laundry for a minimum of six months in the first instance Applicants should be British nationality thoroughly qualified and registered

Applications not later than May 22nd to—

E J HAWKINS Secretary

MERTHYR GENERAL HOSPITAL

Applications are invited for the post of RESIDENT SURGEON for the coming six months Salary £150 per annum plus board lodging and laundry

Applications with three recent testimonials must be in the hands of the Secretary on or before May 27th

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WORCESTER ROYAL INFIRMARY (142 Beds.)

Applications are invited for the post of THIRD HOUSE SURGEON (male)

The Hospital is equipped with new Operating Theatres Pathological Laboratories Orthopædic Department E N T Department up-to-date X-ray Department etc

Salary at the rate of £120 per annum together with board residence

The post offers exceptional scope for medical and surgical experience

The successful candidate will be eligible for the posts of Second and First House Surgeons which will later become vacant (salaries £150 and £180 per annum respectively)

Applications should state full particulars as to age whether married or single qualifications etc and should be accompanied by copies of three testimonials

Applications to be received by the undersigned not later than Friday, May 26th

PERCY N GLASS
Superintendent Secretary

FREEMASONS HOSPITAL AND NURSING HOME 257 Fulham Rd Chelsea, S W 3

The post of RESIDENT MEDICAL OFFICER (male) will be vacant on July 1st Salary at the rate of £250 per annum with board residence and laundry The appointment is for six months Candidates must be registered and must have held resident appointments at a General Hospital The officer appointed will be asked to proceed to the new Hospital in October

The Institution (48 beds) is for paying patients of both sexes of moderate means unable to afford ordinary nursing home treatment, etc

Applications stating full particulars to be sent on or before June 6th next to the Honorary Secretaries from whom further information may be obtained The Medical Advisory Committee will meet on June 13th next

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CITY OF LONDON HOSPITAL FOR DISEASES OF THE HEART AND LUNGS, Victoria Park E 2
(Bus, Tram, and Rail, Cambridge Heath, L & N E Railway)

A vacancy for a HOUSE PHYSICIAN (male) will occur on July 1st Six months appointment Salary at the rate of £100 per annum Board residence and laundry provided

Applications with copies of three testimonials should be sent to the undersigned on or before Friday, June 16th

GEORGE WATTS Secretary

CLAYTON HOSPITAL, WAKEFIELD

There are vacancies for TWO HOUSE SURGEONS (male British) for which posts applications are invited The appointments are for six months in the first instance and the salary for each is at the rate of £200 per annum together with board residence and laundry

Applications stating age, qualifications and experience together with copies of three recent testimonials should be sent to the undersigned as early as possible

H J LANCASTER
Gen Supt & Secretary

MANCHESTER BABIES' HOSPITAL Burnage Lane LEVENSHULME. (80 Beds)

Applications are invited for the post of SENIOR RESIDENT MEDICAL OFFICER Appointment is for six months from July 1st Salary at the rate of £125 per annum with laundry Only candidates with previous Hospital experience need apply

Applications, together with copies of testimonials to be sent to the Secretary at the above address marked R M O by June 9th

ANCELA LOPEZ Secretary

CITY OF LONDON MATERNITY HOSPITAL City Road E.C 1

Applications invited from fully qualified male candidates for the post of ASSISTANT RESIDENT MEDICAL OFFICER vacant July 1st Three months appointment at £80 p a, plus board residence and laundry

If satisfactory appointee becomes Senior for three months at £100 p a

Twenty five copies of application and testimonial should reach the undersigned by June 10th

RALPH B CANNINGS Secretary

CENTRAL HOSPITAL PLYMOUTH

Wanted a fully qualified RESIDENT HOUSE SURGEON to commence duty June 1st Salary £150 per annum with board residence and laundry Appointment for six months or twelve if mutually desired Applications, stating age together with not more than three recent testimonials (which will not be returned) to be sent to the undersigned not later than May 22nd

WM W URELL F C C S
Secretary

HULL ROYAL INFIRMARY (370 Beds.)

Applications are invited from registered Medical Practitioners for the following posts (male)

CASUALTY OFFICER Vacant June 14th Salary at the rate of £150 per annum, plus residence board and laundry The officer appointed will work mainly under the direction of the Resident Surgical Officer

HOUSE PHYSICIAN at the SUTTON BRANCH Vacant June 9th Salary at the rate of £160 per annum plus board residence and laundry The Branch Hospital contains 100 beds, 45 of which are for medical cases

Candidates are expected to stay for not less than six months, but the appointments are at any time determinable by one month's notice on either side

Applications giving particulars of age experience and nationality together with copies of testimonials should be addressed to the undersigned

R J CARTESS
May 15th 1933 House Governor

COUNTY MENTAL HOSPITAL LANCASTER

Applications are invited for the post of ASSISTANT MEDICAL OFFICER Candidates must be single and under 35 years of age Commencing salary £500, rising by annual increments of £25 to £600, with further increment on promotion subject to a deduction of 3 per cent under the Asylum Officers Superannuation Act There are no emoluments The successful candidate will be required to live in the Hospital and will be provided with board light etc for which a charge of £150 a year is made A temporary abatement from the gross salary will be made, the amount of the abatement on £500 being £18 15s The possession of a Diploma in Psychological Medicine will entitle the officer to an additional £50 per annum Applications giving full particulars with testimonials (copies only) should be forwarded to the Medical Superintendent not later June 5th

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PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN St Quintin Avenue North Kensington W 10 (58 Beds)

HOUSE PHYSICIAN (male) required for six months from July 1st Salary for first three months at the rate of £75 per annum and for second three months at the rate of £100 p a with board residence and laundry in each case. Candidates should have held a recognised Hospital appointment Applications with copies of three recent testimonials must be submitted on a form to be obtained from the undersigned and should reach him not later than first post on Thursday June 8th

H J FIFY Secretary

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN St Quintin Avenue North Kensington W 10 (58 Beds)

HOUSE SURGEON (male) required for six months from July 1st Salary for first three months at the rate of £75 p a and for second three months at the rate of £100 p a with board residence and laundry in each case Candidates should have held a recognised Hospital appointment Applications with copies of three recent testimonials must be submitted on a form to be obtained from the undersigned and should reach him not later than first post on Thursday June 8th

H J FIFY Secretary

WEST NORFOLK AND KING'S LYNN GENERAL HOSPITAL

HOUSE PHYSICIAN

Applications (male or female) are invited for the above post which will become vacant on July 19th Salary £125 per annum To have charge of Medical and Ophthalmic beds also to act as Casualty Officer and Resident Anæsthetist The post which is for six months in the first instance offers valuable experience in both In and Out patient work

Applications stating age experience etc should be sent to the undersigned as early as possible

JOSEPH E SEARJEANT F C S
House Governor & Secretary

SOUTH EASTERN HOSPITAL FOR CHILDREN, Sydenham S E 26

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER The appointment will be for six months from June 19th Honorarium £120 per annum with board residence and laundry Applications by letter only stating age qualifications with copies of three testimonials to be sent to the Hon Secretary Mr F F J 182 Turney Road Dulwich Village S E 21 not later than Saturday June

Dr Ascoli's One is also struck by the extraordinarily close physiological study that is made of, and used for the control of, bilateral pneumothorax, and by the complete absence of any mention of guidance to be derived from the clinical changes experienced by the patient The book finishes with an interesting account of contralateral pneumothorax treatment—that is, the collapse of a sound lung as a method of treating active disease in its fellow It is well to study all methods of treatment, even if only to learn which to avoid

THE NERVOUS CHILD

Schoolmasters, parents, and doctors of the present day should be in no danger of neglecting, or of failing to realize the importance of emotional disturbances and disorders of conduct in children, for the literature concerned with what is called the "problem child" at home and at school grows apace Some years ago Dr H C CAMERON wrote a little book dealing with the nervous child in the nursery, and he has now published another entitled *The Nervous Child at School*[1] This is intended apparently to help each of the three classes of person mentioned in our first sentence, and it is well calculated to achieve this purpose It deals mainly with the causes and the effects of fatigue and of unhappiness in school life, and of the disorders of health and of conduct directly arising from such fatigue and unhappiness In pursuance of this theme the consideration of such subjects as masturbation, bed-wetting, and stammering naturally arises, and these sections are characterized by clearness, common sense and due proportion Indeed, one may say that these are characteristics of the whole book, which, on the subjects mentioned and on others cognate to them, can be consulted with the certainty of finding useful information and wise advice The chapters on 'special abilities and disabilities and on 'schools for girls and schools for boys' will be found by doctors and teachers to be somewhat perfunctory but they will probably awaken understanding in some parents Dr Cameron makes some important general observations, as, for example, when he says "A great many infant welfare centres are not free from blame, because they encourage a feeling of too great dependence in their clients Sometimes the doctor seems to be apt to create the impression that the safety of the infant depends upon his weekly or fortnightly examination, and is to be obtained only by the most meticulous observation of the very general rules which he lays down and the measures of food which he prescribes If an infant centre is doing good work it knows that it can only achieve its purpose through and by means of the mothers, and that its main object is to fortify and not to weaken the mother's confidence in herself Or, again "The family doctor, while he utilizes to the full special knowledge and experience and means of treatment must keep a grasp upon the whole situation The nervous child cannot be profitably divided into two halves, one of which is dispatched to the orthopaedic surgeon and the other to the psychiatrist'

It is, of course, possible to differ from some of Dr Cameron's expressed opinions, but such differences will be found to be differences of emphasis rather than of fundamental view For example, it is probable that most experienced medical practitioners would, in a large number of cases such as those which the author cites, rely in a much less accentuated degree on treatment by sensible psychotherapy and in their own hands on the administration of glucose and of alkalis Again, while no doubt be doubted whether a school for stammerers, as such, is no more than a special class for stammerers would have all the advantages which the author looks for, unless it continued to retain till the full school age all those who had been cured of their defect, and in that case it would really cease to be a school for stammerers Lastly, it is surprising that in a book of this kind and with a chapter on schools, there should be no mention at all of mixed schools or of co-education of the sexes which may clearly offer advantages in some cases

[1] *The Nervous Child at School* By Hector Charles Cameron MRCP London H Milford Oxford University Press pp xi + 160 6s net.)

BIOLOGY FOR MEDICAL STUDENTS

The textbook entitled *Biology for Medical Students*[1] by C C HENTSCHEL and W R IVIMEY COOK is prefaced by a foreword from Professor Gask, in which he says "Some knowledge of the processes of life as exemplified by the various types of plants and animals is essential for one who aspires to become the best sort of doctor' Out of the controversy on this matter during the last twenty years this is undoubtedly the view that has survived, and, as in the case of many another settled controversy, it is now difficult to imagine how any other view could have been sustained While the opinion of the authors that instruction in zoology and botany for the medical student in separate departments is necessarily unsatisfactory is one with which all readers will not agree, the book itself makes out a strong case for associating instruction in the two branches of biology in the closest possible manner

It is so arranged that chapters introductory to the animal kingdom and to its main branches, and to the plant kingdom, are each followed by others in which types are described in detail Certain of the types chosen have special reference to medicine—the malaria parasite, the tapeworm, and others—and there is a special chapter on the bacteria Interspersed among these sections are chapters on general subjects, on the cell and reproduction, on histology, embryology, plant physiology, evolution, and heredity It is noteworthy that seven pages only are devoted to consideration of the natural orders of plants and this is typical of the change that has taken place in the teaching of most, but not all, of the subjects of the curriculum from the days when the memorizing of names was the student's main task The general plan of the book is excellent The student is shown living organism in its simplest forms, and thereafter an increasing complexity of function and structure In the general chapters the unity of living organism is taught, then follows what is known of the process of its evolution Such a background is what the medical student needs for his further studies if he is to conceive of his patient as an individual intimately related to an environment past and present Without such a conception he cannot be what Professor Gask describes as "the best sort of doctor," or, indeed, any sort of real doctor at all!

[1] *Biology for Medical Students* By C C Hentschel M Sc and W R Ivimey Cook B Sc, Ph D London and New York Longmans, Green and Co 1932 (Pp xi + 618 413 figures 18s net)

DIAGNOSTIC TABLES

Dr CEMACH'S book on the Diagnosis of Medical Diseases[1] is an attempt to compress into the form of tables the essential facts The diseases of each part of the body are designated in a separate table, and opposite the disease are given the important features of the subjective symptoms of the patient and the objective findings on clinical and laboratory examination In a final column the differential diagnosis is summarized That the book appeals to some members of the profession is shown by

[1] *Diagnostik innerer Krankheiten in Tabellenform* Von Dr med A J Cemach München J F Lehmanns Verlag 1932 (64 tables Geb M 6 30 Lwd M 7 20)

MILLER GENERAL HOSPITAL, Greenwich Road S.E.10

Applications are invited for the following posts:
HOUSE SURGEON. Salary £100 per annum.
HOUSE PHYSICIAN. Salary £100 per annum.
CASUALTY OFFICER. Salary £150 per annum.
Board, residence and laundry are provided.
OUT-PATIENT OFFICER who is required to see Medical and Surgical cases. Attendance daily (except Sundays) from 9 to 1. Tuesdays 9 to 5. Salary £150 per annum and lunch.
Candidates (male) must be unmarried. The appointment are for six months from July 1st next. There are six Resident Officers.
Applications stating age, nationality, qualifications and experience, accompanied by copies of not more than three recent testimonials to be sent to the Acting Secretary not later than May 24th.
May 2nd 1933

MONTAGU HOSPITAL, MEXBOROUGH, YORKS.

Applications are invited for the positions of SENIOR HOUSE SURGEON and JUNIOR HOUSE SURGEON (ladies) at the above Hospital. The commencing salary attached to each post is £120 and £100 respectively with board, residence, laundry, etc. One month's holiday is allowed annually.
The bed accommodation is as follows: Surgical 64, Maternity 20. A further 20 beds for medical cases will shortly be brought into commission. The appointments become vacant beginning of June.
Application, giving full particulars including experience in the administering of anæsthetics, together with recent testimonials, should be forwarded without delay to the undersigned.
DONALD WILSON, Secretary.

NORTH RIDING MENTAL HOSPITAL, YORK.

RESIDENT ASSISTANT MEDICAL OFFICER.

Applications are invited from duly qualified Medical Practitioners.
Candidates should be under 35 years of age; preference will be given to one who has held a resident appointment.
Salary £350 per annum, increasing by annual increments of £25 to £450, with board and apartments. An additional £50 per annum will be paid to an officer holding a recognised Diploma in Psychological Medicine.
Salary subject to 3 per cent. deduction in accordance with the Superannuation Act 1909 and to a temporary deduction, the latter amounting to approximately £11 on the initial salary.
Applications, with full particulars of age, qualifications and experience, and with copies of recent testimonials, to be sent to the Medical Superintendent.

ALL SAI[illegible] [illegible]NITO
Austral Stre[illegible] [illegible]s Rd
S.E.11

RESIDENT HOUSE SURGEON (male) required on July 1st for six months, being three months as Junior House Surgeon with salary at £100 per annum, followed by three months as Senior House Surgeon with salary at £150 per annum.
Applications, giving particulars of age, experience, qualification, and enclosing copies of three recent testimonials, should reach me not later than May 25th.
D. H. EADE, Secretary.

BIRMINGHAM & MIDLAND SKIN HOSPITAL, John Bright Street, BIRMINGHAM.

Applications are invited from registered Medical Practitioners for the post of CLINICAL ASSISTANT in the Out-patient Consulting Room on Thursday afternoons for the four months ending September 30th. Honorarium at the rate of half a guinea per attendance.
Applications (one copy) stating age, qualification and experience should be addressed to the Secretary not later than May 27th.
The work of the hospital can be seen each afternoon except Saturdays by doctors and bona fide students.
HUBERT SUMNER, General Secretary.

YORK COUNTY HOSPITAL (200 Beds.)

The post of HOUSE PHYSICIAN (male) will become vacant on July 1st. Salary £150 per annum with board, residence and laundry.
Application, stating age and previous experience, together with copies of not more than three recent testimonials to be sent to the undersigned not later than 9 a.m. on Wednesday, May 31st.
H. E. RYAN, Gen. Supt.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL (Incorporated by Royal Charter), Bread Street, W.C.2.

A BACTERIOLOGIST is required by June 1st. The appointment is a part-time one for attendance on three days per week. Salary £75 per annum and fees from the Private Patients which approximately double the remuneration.
Candidate for the appointment must be fully qualified and registered Medical Practitioner and must have made a special study of the subject of Bacteriology.
Applications to be sent with copies of testimonials to the Secretary from whom further particulars may be obtained, not later than June 30th.
Intending candidates are requested to call upon the Staff of the Hospital, a list of whom can be obtained from the General Office.

ST BARTHOLOMEW'S HOSPITAL, ROCHESTER (126 Beds), Rochester, Chatham, Gillingham and District.

The House and Finance Committee invite application for the post of RESIDENT SURGICAL OFFICER which will become vacant on July 1st next.
Candidates must be unmarried, qualified and registered Medical Practitioners, and it is desirable that they shall have previously held a House Surgeon's appointment. The appointment is partly administrative. The appointment is for six months, renewable for a further six months at the discretion of the Committee. Salary fixed at the rate of £225 per annum, with board, residence and laundry.
Applications, stating age, qualifications, experience, to be accompanied by copies of three recent testimonials, to reach the Secretary not later than June 1st.
Canvassing the Honorary Staff will disqualify.

TYNEMOUTH VICTORIA JUBILEE INFIRMARY.

HOUSE SURGEON (male) required. Applicant must be lawfully qualified and registered. Salary £150 per annum with board, residence and laundry.
Applications, stating age, and other essential particulars, and accompanied by copies of recent testimonials, to be addressed to the undersigned from whom all particulars may be obtained.
The Hospital has two Resident House Surgeons and contains 80 beds and out-patient department, and an Out-patient department where accidents are treated.
CHARLES ROWELL, Assistant Secretary.
1 Northumberland Place, North Shields.

ELSIE INGLIS MEMORIAL MATERNITY HOSPITAL, Spring Gardens, EDINBURGH (60 Beds.)

Applications are invited from fully qualified Medical Women for the post of DISTRICT MEDICAL OFFICER rising to Senior House Surgeon after three months.
Appointment is for six months from July 1st; honorarium at the rate of £50 per annum with board, residence and laundry.
Application, with copies of testimonials, to be sent to the Secretary, 1 Brunstfield Crescent, Edinburgh, on or before June 3rd.

ELIZABETH GARRETT ANDERSON HOSPITAL, Euston Road, N.W.1.

Wanted fully qualified Medical Women for the following posts:
HOUSE PHYSICIAN, OBSTETRIC ASSISTANT, THREE HOUSE SURGEONS. Appointments for six months from July 1st next. Salary at the rate of £50 per annum with board, residence and laundry. Applications, with copies of three testimonials, to be sent to the undersigned by Friday, May 26th.
JEAN R. MURRAY, Secretary.

ELIZABETH GARRETT ANDERSON HOSPITAL, Euston Road, N.W.1.

Applications are invited from qualified Medical Women for the post of JUNIOR ASSISTANT PATHOLOGIST. Appointment one year, eligible for re-election. Salary £250 rising by £50 if appointed for second year. Duties to commence June 6th. Applications, stating age, qualifications and experience, with copies of three testimonials, to be sent to the undersigned by May 26th.
JEAN R. MURRAY, Secretary.

ELIZABETH GARRETT ANDERSON HOSPITAL, Euston Road, N.W.1.

Wanted, Two fully qualified Medical Women as MEDICAL AND SURGICAL REGISTRARS, Non-resident. Honorarium £100 per annum. Particulars can be obtained from the Secretary, to whom application, with testimonials, should be sent before the 25th instant.
JEAN R. MURRAY, Secretary.

QUEEN MARY'S HOSPITAL FOR THE EAST END, E.15. Telephone: Maryland 2566.

Applications are invited from fully qualified and registered Medical Men for the following posts:
TWO HOUSE SURGEONS. Salary £120 p.a.
ONE HOUSE PHYSICIAN. Salary £120 p.a.
ONE OBSTETRIC HOUSE SURGEON. Salary £120 p.a.
ONE HOUSE PHYSICIAN AND RESIDENT ANÆSTHETIST. Salary £120 p.a.
ONE CASUALTY OFFICER. Salary £150 p.a.
The Hospital contains 250 beds and 50 for Maternity and Children. Special Department.
Candidates who should have had Hospital appointments must be accompanied by testimonials of the same and not later than Friday, June 2nd.
The appointment will date from July 1st and will be for six months.
RAPHAEL JACKSON, M.D., Secretary.

ROYAL VICTORIA INFIRMARY, Newcastle upon Tyne (650 Beds.)

MEDICAL REGISTRAR (Open Appointment).

Applications are invited for the post of Medical Registrar to take up duties on June 5th.
Candidates must be registered in Medicine and in Surgery.
The salary is at the rate of £2-2-15s. per annum (non-resident).
Further particulars regarding duties, time of attendance, etc., may be obtained from the Honorary Secretary and Secretaries, to whom applications, with copies of three testimonials, should be sent not later than Saturday, May 27th.
S. DUNSTAN, Hon. Governors' Secretary.
May 11th, 1933.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH. (240 Beds.)

Applications are invited for TWO HOUSE SURGEONS.
Salary £100 per annum with board, residence and laundry.
Appointments are tenable for six months and are subject to renewal. Duties to commence on June 8th and 15th respectively.
Applicants must be registered under the Medical Acts.
Application, stating age and qualifications, with copies of three recent testimonials, should reach the undersigned not later than May 25th.
ARTHUR L. CASH, Gen. Superintendent and Secretary.
May 9th, 1933.

ST MARY'S HOSPITAL, W.2.

MEDICAL REGISTRAR.

The Board of Management invite applications for the above post.
Candidates for the appointment must be registered Medical Practitioners and Fellows, Members or Licentiates of the Royal College of Physicians or Graduates in Medicine of a University in the British Empire.
The salary is £200 per annum with luncheon and tea provided.
Copies of the regulations for the Medical Registrar may be obtained on application to the Secretary at the Office.
Application, with copies of three testimonials, should reach the undersigned not later than Saturday, June 3rd.
W. PARKES, Secretary.

WALLINGTON INFIRMARY AND DISPENSARY.

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON (male), unmarried.
Applicant must be a British subject, must be duly qualified Medical Practitioner.
Salary £150 per annum with board, apartments and laundry.
Application, stating age, with copies of three recent testimonials, should be sent to the undersigned. The appointment is to date from June 1.
By Order,
HENRY L. BENT, Solicitor and Secretary.
May 15th, 1933.

THE ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Road, S.E.1.

There will be a vacancy on July 1st for a HOUSE SURGEON (male) at the above Hospital. The appointment is for the first year for a period of six months. Salary at the rate of £100 per annum with board and lodging.
Application, with copies of testimonials, to be forwarded not later than Tuesday, May 23rd, to the Secretary at the above address, from whom further particulars can be obtained.

the present being the seventh edition and by the additional fact that the author has produced a similar tabular diagnosis of surgical diseases which has run through five editions It might be useful as a vade mecum for students or others preparing for an examination but it cannot replace a textbook as no treatment is mentioned It thus compares unfavourably with such series as the 'Essentials' published in English or the synopses of medicine and surgery Nor does it lend itself to diagnosis by working back from the patient's leading symptom A condensed form is difficult to read and when presented as tables it becomes more difficult The book has a good index so that a subject may easily be found and the illustrations from the publishers well known hand atlases are instructive

Notes on Books

Drs W J PEARSON and A G WATKINS have collected into a very small book a large number of useful facts entitled *The Infant—a Handbook of Management* The elementary principles of infant feeding could scarcely have been put more briefly and accuracy has not been sacrificed to brevity Tables of food values various prescriptions (for which no definite dose for age is given) recipes tables of growth and development etc are all included and serve to make a valuable booklet The retail prices of cow's milk and dried milks are given from which it would appear that on an average the latter costs (on a basis of reconstruction by a 1 in 8 dilution) about double the price of ordinary pasteurized varieties of the former

The March number of the *Annals of Medical History*[1] bears on its cover the pleasant smiling face of Dr Joseph Ignatius Guillotin whose invention of the guillotine spelt as if it were his daughter was intended to reduce capital punishment to one common level and to do away with the invidious distinction of beheading for the nobility while the common herd were hanged He was a philanthropist intent on taking his part in a movement for the benefit of mankind and did not realize the ghastly development of his dream Dr J H Lloyd points out that no member of the medical profession except possibly Dr Gatling has obtained such perpetual recollection in this manner In his interesting William Potter Memorial Lecture at the Jefferson Medical College on medical Philadelphia in the eighteenth century Dr F R PACKARD practises editorial modesty and consideration in delaying publication of his own article for more than a year In his history of laryngology and rhinology Dr J H Bryan shows the influence of America on the development of this branch of medicine and mentions that in the pre laryngoscopic period there were attempts in this direction by Levret in 1743 and Bozzini in 1804 The story of the fatal illness of Frederick the Crown Prince of Germany is retold and Morell Mackenzie is acquitted of all blame in the tragedy Dr Bryan adds that he does not know of any medical man responsible for the life of a public character who has escaped unjust criticism Dr Kate Campbell Hurd Mead continues her Introduction to the History of Women in Medicine by an account of their position and activities before the Christian Era There is a contribution by a descendant of Dr Hall Jackson who in 1760 introduced into America the seeds of foxglove which he had received from Withering In an editorial Dr David Riesman tells the tale of what historians still call the most interesting newspaper in the United States —namely the *Ulster County Gazette* of January 4th 1800 which within heavy black lines and borders described the death and funeral of George Washington There is only one authentic copy of this paper in existence but there are many reprints which the owners are always convinced are original

Radiologic Maxims[14] by HAROLD SWANBERG is a small book of extracts from the writings of many authors on radiological subjects and in addition contains a large number of aphorisms which the author thinks will prove instructive to those practising radiology Most of the maxims have been gathered from a monthly journal the *Radiological Review* which is edited by Dr Swanberg and short statements from current literature on radiological subjects are included The author having come to the conclusion that there is a woeful lack of knowledge of what the radiologist can accomplish hopes that this little book will bring the subject in an acceptable form before those who otherwise would not be interested

The work on São Paulo typhus[15] by Drs JOSÉ DE TOLEDO PIZA J R MEYER and LUIS SALLES GOMES deals with an interesting outbreak which occurred in the outskirts of São Paulo Brazil from October 1929 to November 1931 during which period sixty-one cases whose histories are related were under treatment with a mortality of 72 13 per cent The disease was at first supposed to be ordinary typhus fever due to the immigration of a large number of Russians and Slovaks but the predominance of cases in a rural zone where the houses were separated from one another the low incidence in the same family the exceptional presence of lice among the patients and the appearance of unusual symptoms and of atypical microscopical features justified the disease being classified as a distinct entity The bulk of the volume is the work of Dr Piza who gives a general description of the disease and a detailed account of the sixty-one cases Dr Meyer deals with the morbid anatomy and Dr Gomes records his experimental researches An abstract in English is appended to each part of the work which is freely illustrated with temperature charts photographs of the patients and microphotographs of the lesions

The Arches of the Years[12] is Dr HALLIDAY SUTHERLAND'S mystical name for a most unmystical and adventurous collection of his life's impressions He tells his story well He has the epic gift of blundering into extraordinary situations in ordinary places Even in his childhood days he watched his father a well known commissioner in lunacy deal with a homicidal maniac who besieged the whole family in the dining room of a farmhouse in the Highlands He has hunted whales half way to Iceland Sent to assist an uncle with a surgical practice in Spain he practised the technique of bull fighting and achieved a local legend of such celebrity that innkeepers entertained him with honour and without pay He turns a naïve and sardonic eye upon his own speculative adventures in American Rails In 1914 he became a naval surgeon sailed round the Tropics tested the psychology of the wardroom wine experts and wrote his handbook on pulmonary tuberculosis in general practice He has intended to produce an objective book and no references to his leadership in a well known controversy appear This volume has the poetry of a life without the polemics of which the author is capable Cocksureness is a quality which produces adventurers If Dr Sutherland were more meditative he might never have met with these stirring events which he describes and we should be reading perhaps a greater but certainly not a more interesting book The earlier part dealing with university days Spain and Medicine are the best they have the quality of old ballads The account of the war experiences is journalistic Doctors witness more of human drama than others but they lack too often the gift of expression Dr Sutherland is an impetuous Quixote but there is in his composition a shrewd Boswell too He can write fine prose and his humour never fails to be effective To say that he has committed no exaggerations would be to declare that he was incompetent to write a book of this kind at all

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[1] *The Infant—a Handbook of Management* By W J Pearson M D F R C P and A G Watkins M D M R C P London H K Lewis and Co Ltd 1932 (Pp 47 2s 6d net)

[2] *Annals of Medical History* New Series Vol v No 2 March 1933 Edited by Francis R Packard M D New York Paul B Hoeber Inc London Baillière Tindall and Cox (Pp 103–204 illustrated Subscription for volume of six numbers £3 8s 6d)

[14] *Radiologic Maxims* By H Swanberg B Sc M D F A C P Foreword by Henry Schmitz A M M D Quincy Illinois Radiological Review Publishing Company 1932 (Pp 126 1 50 dollars)

[15] *Typho exanthematico de São Paulo* By J de Toledo Piza J R Meyer and Luiz Salles Gomes São Paulo Sociedade impressora Paulista 1932 (Pp 184 82 figures)

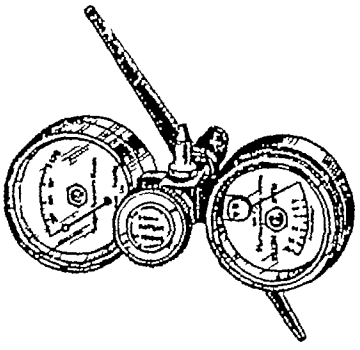
[12] *The Arches of the Years* By Halliday Sutherland London Geoffrey Bles 1933 (Pp 293 10s 6d net)

Preparations and Appliances

VALVE FOR OXYGEN CYLINDERS

Dr K B PINSON (Manchester) writes The new fine adjustment valve (illustrated herewith), which I have designed for the control of oxygen from cylinders is similar to my other valves, but has also a flowmeter built integral with the valve

The flow is indicated on a dial 2½ inches in diameter in litres per minute, and the movement is such that it can be depended upon, and is not subject to variation due to wear or other cause Being in one piece with the valve body, there are no sources of leaks or unions likely to get loose



I have tested one for ten months at the Manchester Royal Infirmary and have found it useful in administering nitrous oxide and oxygen, for instance when one can be sure that the patient is having enough oxygen and in the routine administration of small amounts of oxygen with ether

The valve is made by the Manchester Machine and Instrument Manufacturing Company, Ltd , of 2, Booth Street Manchester

AN AUSTRALIAN ANTISEPTIC OIL

Tea tree oil is a volatile oil which was isolated in 1925 from *Melaleuca alternifolia* an Australian "tea" or tea tree by Mr A R Penfold The oil has been used as an antiseptic in the form of an emulsion (melasol), which has been found to be a valuable agent in the treatment of septic wounds The Rideal-Walker coefficient of the oil is 11, it has good solvent and penetrating powers, is not irritating, and has a pleasant smell The pure oil can be employed as an inhalant, and it is also used to medicate a germicidal soap named "tea tree toilet soap" Favourable reports regarding tea tree have appeared in the *Medical Journal of Australia* in recent years

AN IMMUNIZING DENTIFRICE

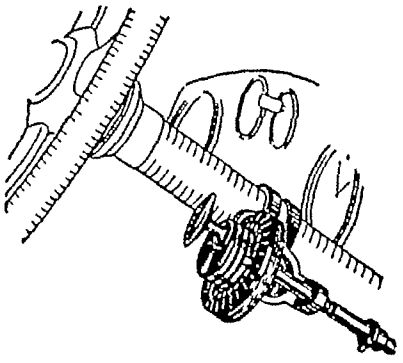
Ivago dental cream contains a vaccine discovered by Dr Goldenberg of Paris which he has used in the treatment of pyorrhoea alveolaris The purpose of the preparation is to produce a local immunizing effect in the oral cavity It is sold in this country by Coates and Cooper Ltd (94 Clerkenwell Road, E C 1)

LAXATIVE SEEDS

The preparation herbaras (John W Longman, 489A, Oxford Street W) consists of the seeds of a plant of this name The vendors state that they have been in popular use as a laxative in the Near East since the dawn of history The seeds when moistened, swell up and form a mucilaginous mass which acts as an evacuant in a manner somewhat similar to agar agar The mode of administration is to put two teaspoonfuls of seeds into a tumbler of hot water, and to take them after about half an hour, by which time they have formed a jelly

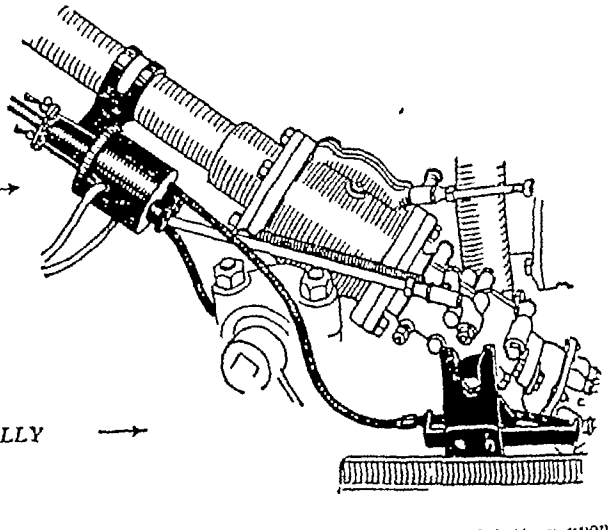
A CAR LOCKING DEVICE

Six thousand cars were stolen in the metropolitan police area last year It is not, therefore improbable that medical men who often have to leave their cars unattended outside the



houses of their patients will welcome the advent of a reliable and easily operated locking device It is said that the car thief is an impatient fellow that if the slightest mechanical difficulty is put in his way he will sooner than risk being caught tampering with an ignition switch a gear lock or a steering clamp leave the prize and turn his attention to easier spoil Whether this is true we are unable to say—*Punch's* picture of a rear wheel firmly chained to a lamp post the absent car having been driven away on the spare wheel might suggest otherwise In any case a mechanism which locks both ignition and the car's bonnet should prove a troublesome proposition to the most determined of thieves

A demonstration of what is known as the Donford car lock was given before an interested company of motorists in London last week and this fitting appeared to be a thoroughly effective means of combating theft The lock which is made of rustless solid steel is fitted by a clamp to the steering column of the car, and is governed by a combination, like the lock of a combination safe offering several thousand three letter codes The action of the lock is twofold it controls the ignition switch which is fitted inside the bonnet, and, by means of a cam lever it locks the bonnet internally on both sides, the bonnet lock being only released again when the correct switch combination is operated No key is used but a button, when pushed home switches off the ignition and simultaneously locks the car It is impossible for a thief to tamper with wires because none are connected to the combination lock or to any exposed part of the system The control from the lock on to the steering wheel is a stout steel rod, and the locked bonnet prevents any attempt to short circuit wires or interfere with the engine The ignition switch is mounted *inside* the bonnet and the contact bush on the switch rod is made reversible for either coil or magneto ignition The arrangement is such that the owner cannot switch off his engine without instantaneously putting the whole locking system



into operation and the chance of a thief hitting upon the unlocking combination is one in some 17 000 The Donford car lock is produced by Car Lock Limited, at Cranham, Essex and costs a couple of guineas

ROYAL SOUTHERN HOSPITAL LIVERPOOL.

Applications are invited for the post of HONORARY ASSISTANT ORTHOPAEDIC SURGEON

Applicants must be Fellows of the Royal College of Surgeons of Edinburgh or England and must also possess special experience in orthopaedic work to which their duties will be entirely confined

Applications and testimonials addressed to the Chairman of the Election Committee to be made not later than June 9th

The canvassing of any member of the Election Committee will disqualify the applicant

C H SPENCE
Assistant Secretary

ROYAL UNITED HOSPITAL BATH

HOUSE SURGEON required for June 1st Duties include general Surgical and Ear Nose and Throat work

Salary £150 per annum board residence and laundry

The appointment is for six months and candidates must be male unmarried and of British nationality

Applications with copies of three testimonials to be addressed to the undersigned by May 24th

J LAWRENCE MEARS
Secretary Superintendent

ROYAL UNITED HOSPITAL, BATH

OUT PATIENT AND CASUALTY OFFICER required

The appointment offers opportunity of experience in medicine and surgery

Salary £150 per annum with board residence and laundry

Appointment for six months and candidates must be male unmarried and of British nationality

Applications with copies of three testimonials to be addressed to the undersigned by May 24th

J LAWRENCE MEARS
Secretary Superintendent

PLYMOUTH PUBLIC DISPENSARY

The Committee of the Plymouth Public Dispensary invite applications for the post of an HONORARY MEDICAL OFFICER to start a Child Guidance Clinic

Such Medical Officer must have experience in Psychological Medicine Preference will be given to one holding the D P M or its equivalent or with special Child Guidance knowledge

Applications with testimonials to be sent to the undersigned by June 1st

BASIL H PRANCE
Hon Secretary

Plymouth Public Dispensary
St Catherine Street Plymouth
Dated May 10th 1933

EDINBURGH HOSPITAL FOR WOMEN AND CHILDREN Whitehouse Loan EDINBURGH (56 Beds)

Applications are invited from fully qualified Medical Women for the post of JUNIOR HOUSE SURGEON rising to Senior House Surgeon after three months

Appointment is for six months from July 1st honorarium at the rate of £25 per annum for first three months £50 per annum for second three months with board residence and laundry

Applications with copies of testimonials to be sent to the Secretary 1 Bruntsfield Crescent Edinburgh on or before June 3rd

DONCASTER ROYAL INFIRMARY (185 Beds)

CASUALTY HOUSE SURGEON (male) required immediately Five House Surgeons are resident Salary at the rate of £175 per annum with residence board and laundry Successful applicant will be promoted to post of House Surgeon as a vacancy occurs

This large industrial area offers excellent opportunities for gaining experience

Application accompanied by not more than three testimonials to be sent to the undersigned

WALTER R SMITH
Secretary Supt

DONCASTER ROYAL INFIRMARY (185 Beds)

HOUSE SURGEON (male) required immediately Five House Surgeons are resident Salary at the rate of £175 per annum, with residence board and laundry

This large industrial area offers excellent opportunity for gaining experience

Application accompanied by not more than three testimonials to be sent to the undersigned

WALTER R SMITH
Secretary Supt

THE CHILDREN'S HOSPITAL HAMPSTEAD 30 College Crescent Swiss Cottage N W 3 (63 Beds)

Applications are invited for the post of RESIDENT MEDICAL OFFICER vacant July 1st next

Appointment is for a period of six months with option of extending Salary £100 per annum with board, residence and laundry

Candidates must be duly registered Medical Practitioners

Applications stating age, qualifications and previous experience together with copies of not more than three recent testimonials must reach the Secretary of the Hospital not later than Thursday, June 1st

THE CHILDREN'S HOSPITAL, SHEFFIELD (110 Beds)

Applications are invited for the following post, vacant June 1st

RESIDENT MEDICAL OFFICER (male and unmarried) who will have charge of all the Medical and Surgical beds in the Hospital Salary commencing £175 per annum, with board, residence and laundry Previous resident experience essential

Applications stating age nationality, qualifications and experience with copies of three recent testimonials, to be forwarded immediately to the undersigned

F H G GARTLAND Secretary

WESTMINSTER HOSPITAL, Broad Sanctuary S W 1

Applications are invited for the office of ASSISTANT PHYSICIAN FOR DISEASES OF CHILDREN to this Hospital

Candidates must be Fellows or Members of the Royal College of Physicians. Each candidate is required to transmit a certificate of his age and 30 copies of his application with 30 copies of each of three testimonials to the undersigned not later than Friday May 26th and to attend before the House Committee on Tuesday May 30th at 4 p m

A copy of the Laws relating to the office may be obtained on application to the Secretary

By Order of the House Committee
CHARLES M POWER Secretary

NUNEATON GENERAL HOSPITAL. (80 Beds)

Applications are invited for the post of HOUSE SURGEON vacant July 1st next Salary £150 per annum, plus board and lodging and certain other emoluments Applicants must be fully qualified and may be of either sex but the post is one specially suitable to a medical woman

The appointment will be made in the first place for a period of six months and applications should be addressed to the Secretary of the Medical Board at the Hospital and should be received by the morning of May 26th

NORFOLK AND NORWICH HOSPITAL, NORWICH (392 Beds)

Applications are invited for the post of HOUSE SURGEON Salary £120 per annum with board residence, and laundry Preference will be given to a candidate who has held a previous Hospital appointment Candidates (male) who must possess registered qualifications should forward applications stating age nationality etc together with copies of testimonials to the undersigned not later than first post on Tuesday May 30th

FRANK INCH
May 20th, 1933 House Gov & Sec

LEICESTER ROYAL INFIRMARY (472 Beds)

RESIDENT ASSISTANT ANAESTHETIST

Applications are invited Appointment for six months, with possibility of renewal Salary £250 per annum with board and residence As two of the Resident Anaesthetists are women applications from qualified and experienced women will be preferred Particulars of special experien[illegible] of anaesthetics supporte[illegible] particular reference to House Governor and Secretary forthwith

May 4th 1933

THE LADY CHICHESTER HOSPITAL HOVE (BRIGHTON) FOR FUNCTIONAL NERVOUS DISEASES (60 Beds)

Medical Woman required as HOUSE PHYSICIAN for six months on July 1st Salary at the rate of £100 per annum all found

Also JUNIOR at the rate of £50 per annum all found

Valuable experience for Diploma in Psychological Medicine

Applications with testimonials to the Secretary 117 North Street, Brighton

May 10th 1933

ROYAL CHEST HOSPITAL City Road E C 1 (Royal Northern Group of Hospitals)

A vacancy occurs for a PHYSICIAN Candidates must possess the degree of M D or M P obtained by examination at a British University and be Fellows or Members of the Royal College of Physicians of London

Full particulars of the appointment and details with regard to the submission of testimonials etc may be obtained from the undersigned to whom applications should be sent not later than May 31st

GILBERT G PANTER Secretary

THE QUEEN'S HOSPITAL FOR CHILDREN Hackney Road London E 2.

HOUSE PHYSICIAN required July 1st

CASUALTY OFFICER required July 6th Some Dermatological work additional

Six months appointments. Salary at the rate of £100 per year, with board lodging and laundry

Applications must be made on forms to be obtained from the undersigned and must be sent in with copies of not more than four testimonials on or before June 9th

CHARLES H BESSELL
May 12th 1933 Secretary

DISTRICT INFIRMARY ASHTON UNDER LYNE (General Hospital—200 Beds mainly Surgical)

Wanted a HOUSE SURGEON Six months appointment

Salary at the rate of £150 per annum with board residence and laundry

The Resident Staff comprises a Resident Surgical Officer and three House Surgeons

Applications with testimonials to be sent at once to the undersigned

FRANK OLIVER
May 4th 1933 Gen Supt & Secretary

THE DEWSBURY AND DISTRICT GENERAL INFIRMARY (100 Beds)

Applications are invited for the post of SECOND HOUSE SURGEON Salary £150 with board, residence and laundry

The duties mainly comprise work in the Casualty Department and the duties of the Physician

Applications stating age and experience together with copies of recent testimonials to be sent to the undersigned before May 24th

The appointment commences July 1st

H G IRIF
Secretary Supt

THE HOSPITAL FOR EPILEPSY AND PARALYSIS Maida Vale W 9

MEDICAL REGISTRAR REQUIRED

Applications are invited for the Medical Registrar falling vacant on July 1

The appointment is for one year renewable for a further year Honorarium £100

Applications which should be accompanied by copies of not more than three testimonials should reach me by June 5th

H W BULLOCH
Secretary & General Supt

CHELSEA HOSPITAL FOR WOMEN Arthur Street S W 3

There will be a vacancy for a JUNIOR HOUSE SURGEON (male) on July 1st for appointment for six months Salary £100 per annum He will be expected to proceed to the [illegible] post (six months, salary £120 per annum) at the end of his term of office

Candidates must be duly registered and preferably unmarried Applications, accompanied by copies of three testimonials should be sent not later than Friday June 9th to the Secretary, HERBERT H JENNINGS

CHARING CROSS HOSPITAL

Applications are invited for the [illegible] HONORARY CLINICAL ASSISTANT to the Radiological Department Preference to one holding D M R E (Cantab)

Applications together with copies of three recent testimonials should be sent to the undersigned not later than May 27th

PHILIP INMAN
Charing Cross Hospital Hon Gen Sec
London W C 2

CHARING CROSS HOSPITAL

Applications are invited for the [illegible] HONORARY CLINICAL ASSISTANT to the Dermatological Department Applications with copies of three recent testimonials to be sent to the undersigned not later than May 27th

PHILIP INMAN
Charing Cross Hospital Hon Gen Sec
London W C 2.

British Medical Journal

SATURDAY, JUNE 3rd 1933

SPECIFIC TREATMENT OF PNEUMONIA

Although several years have passed since potent serum first became available for the treatment of pneumonia there are still comparatively few clinicians who have had experience of its use and it may be of interest to consider at this stage what is likely to be the future of this form of treatment It will be recalled that this phase in the history of pneumonia dates from Lloyd Felton's discovery of methods by which the antibody fraction of the serum of immunized horses can be concentrated and separated from the other proteins that the three types of pneumococci which produce the majority of pneumonias are antigenically distinct and that therefore the infecting type must be known in order that serum containing the antibody for that type may be given and further that only in Type I pneumonia has any convincing therapeutic effect been obtained The position therefore is that only about one third (the usual incidence of Type I) of all cases of lobar pneumonia can be effectively treated and the treatment demands identification of the type of pneumococcus in the sputum at the earliest possible moment followed by frequently repeated intravenous injections of a very expensive serum

The results reviewed by R L Cecil[1] at the Centenary Meeting of the Association last year are the most extensive available and were obtained under the only conditions which can be said strictly to test the treatment—namely by giving serum to alternate cases alone Any other system of choosing control cases and particularly that of treating only those cases admitted at a time of day when typing can conveniently be carried out is clearly exposed to fallacies while dispensing with control cases the mortality of the treated being compared with that during some other period or in other institutions is still further from furnishing real evidence The essential feature of Cecil's results is that in a series of 473 cases of Type I pneumonia the mortality with serum treatment was 20 1 per cent without it 31 2 per cent Such a reduction in mortality in a series of this magnitude must be significant and experi other institutions is still further from furnishing real to the same conclusion Any doubt whether the effect is specific if not dispelled by comparison with results in other types is discounted by an important experiment though on a limited scale recently reported by Sutliff and others[2] Of twenty-nine Type I pneumonias sixteen were treated with Type I serum and thirteen with serum concentrated by the same method but containing no antibody The effect of the latter was often a fall in temperature and pulse rate and a sensation of well-being which may therefore be a non-specific effect when obtained with potent serum but the course of the disease was not shortened bacteriaemia persisted in five cases and the extent of consolidation increased in another five whereas in all the cases treated with serum containing antibody these manifestations were prevented For Type II serum in Cecil's results no more can be said than that in a series of 505 cases it reduced the mortality from 45 8 per cent to 40 5 per cent Type III pneumonia is generally acknowledged to be totally uninfluenced by serum and in the heterogeneous Group IV now subdivided by American workers into twenty-nine types it is almost hopeless to expect that serum treatment will ever be really practicable although there are reports of success with one of the more prevalent of these (Type VII) The present issue really centres on Type I Is the evidence for the utility of Type I serum such that facilities for its use now confined to only a few of the largest hospitals should be extended to all hospitals and as far as possible to private practice?

The rapid determination of pneumococcus type requires the services of an expert bacteriologist and in some circumstances may be provided for only with great difficulty If this obstacle can be overcome and the appropriate serum obtained its repeated administration intravenously preceded by tests for sensitiveness to serum may be a formidable task for the average general practitioner It has been stated over and over again that only intravenous injection will serve but according to Curphey and Baruch[3] intramuscular injection yields as good results as intravenous in treating the type of infection produced in rabbits by the intradermal injection of pneumococci a proceeding devised by Goodner for testing curative as opposed to protective action The only qualification to this statement is that intravenous injection is required to combat a marked degree of blood stream invasion If these results are applicable to the human disease and intramuscular injection will serve for the average case intravenous being reserved for exceptionally severe infections the treatment will at all events be simpler to carry out and is likely to be entertained by a larger number of practitioners Another new observation is that of Francis[4] who finds that the intradermal injection of type specific capsular polysaccharide is an accurate guide to prognosis A positive reaction is almost always followed by a recovery and indicates that further serum treatment is unnecessary such a reaction may be obtained before there are clinical signs of improvement and Francis attributes it to the general re awakening of cellular activity which is necessary—in addition to the presence of antibodies—for recovery to take place

Hitherto the results of giving serum have only been compared with those in cases in which no special form of treatment has been attempted It should not be thought that there is no other supposedly specific treatment for pneumonia the enthusiasm displayed in America for serum has its equivalent in Germany for

[1] *British Medical Journal* 1932, ii 657
[2] *Arch Intern Med* 1933 li 435

[3] *Journ Exper Med* 1932, lv 925
Ibid 1933 lvii 617

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B.M.A. House Tavistock Square W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary 7, Drumsheugh Gardens Edinburgh)

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	**CONTRACT PRACTICE** (contd.)	**PUBLIC HEALTH** (contd.)
EBBW VALE MON. (*Workmen's Medical Society*)	NEATH AND DISTRICT (*Medical Aid Association*)	WORCESTER COUNTY AND CITY MENTAL HOSPITAL. (*Junior Assistant Medical Officer*)
GILFACH GOCH GLAMORGAN (*Workmen's Medical Scheme*)	OAKDALE MON. (*Medical Officer for Medical Aid Association*)	COUNTY BOROUGH OF SOUTH SHIELDS HALTON INSTITUTION AND CLEADON COTTAGE HOMES (*Medical Officer*)
LLWYNPIA CYNHEIDRE VALE, PENYGRAIG GLAMORGAN (*Workmen's Medical Scheme*)	OGMORE VALLEY GLAMORGAN (*Ogmoredam Colliery Medical Aid Society*) (*Workmen's Medical Scheme*)	CITY OF STOKE-ON-TRENT (*Venereal Diseases Officer*)
LOWESTOFT MEDICAL INSTITUTE. (*Medical Officer*)	**PUBLIC HEALTH**	HERTFORDSHIRE COUNTY COUNCIL. WARE SANATORIUM (*Assistant Medical Officer*)
MARDY GLAMORGAN (*Workmen's Medical Scheme*)	KENT COUNTY COUNCIL. TENHAM SANATORIUM (*Male Assistant Medical Officer*) FARNBOROUGH INSTITUTION HOSPITAL. (*Resident Assistant Medical Officer*)	

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B.M.A. House Tavistock Square W.C.1

Town or District.	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch
NEW SOUTH WALES (*All Friendly Society Appointments*)	Dr. J. C. HUNTER (Medical Secretary N.S.W. South Wales Branch) 135 Macquarie St. Sydney N.S.W.	**QUEENSLAND** (*Brisbane Associated Friendly Societies Institute*) (*Toowoomba Associated Friendly Societies Medical Institute Toowoomba*)	The Hon. Sec. Queensland Branch British Medical Association B.M.A. Building Adelaide St. Brisbane	**WELLINGTON NEW ZEALAND** (*Contract Practice Appointments*)	Dr. C. F. WANSON (Hon. Sec. New Zealand Branch British Medical Association) P.O. Box 1643 Wellington New Zealand
VICTORIA. (*All Institute or Medical Dispensaries*)	Dr. J. P. MAJOR (Hon. Sec. Victorian Branch British Medical Association Medical Society Hall East Melbourne Victoria			**WESTERN AUSTRALIA.** (*Contract and Lodge Practice*)	Hon. Sec. Western Australian Branch British Medical Association No. 6 Bank of NSW Chambers St. George's Tce. Perth Western Australia

May 17th, 1933 By Order of the Council. G. C. ANDERSON Medical Secretary

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BEDFORD COUNTY HOSPITAL.
(124 Beds)

Wanted both a FIRST and SECOND HOUSE SURGEON to take over their duties May 29th for a term of not less than six months.
Salary First House Surgeon £165 Second House Surgeon £140.
They must be fully qualified male unmarried. Board Lodging and laundry.
Applications stating age nationality qualifications together with three recent testimonials to be sent to the Hon. Secretary Hon. Medical Staff Committee as soon as possible.

KING EDWARD VII HOSPITAL WINDSOR.
(181 Beds)

TWO HOUSE SURGEONS required (One for Casualty Department) for six months from July 1st. Applicants must be fully qualified men or women registered and preferably have held a resident appointment.
Salary at the rate of £100 per annum together with board residence and laundry.
Applications stating age qualification and experience accompanied by testimonial should be sent to the undersigned not later than May 27th.
ARTHUR E. CHURCHER Secretary.

ST. THOMAS'S HOSPITAL.

VACANCY

The appointment of a SURGICAL REGISTRAR AND TUTOR. Candidates must be Fellows of the Royal College of Surgeons.
Applications with full details of academic career to be forwarded with copies of testimonial to the Clerk to the Governors not later than May 24th.

ROYAL FREE HOSPITAL,
Gray's Inn Road W.C.1

for the following

with care of

SURGEON
ON

posts tenable for six months to commence July 1st.
DISTRICT OBSTETRIC ASSISTANT (salary £100 per annum) tenable for six months.
Duties to commence August 1st.
Preference is given to applications from former students of the London (Royal Free Hospital) School of Medicine for Women.
Candidates who must be fully qualified registered Medical Women should submit applications stating age and accompanied by copies of three recent testimonials to the undersigned on or before May 27th.
REGINALD R. GARRATT Secretary.

SOUTHEND-ON-SEA GENERAL HOSPITAL.
(221 Beds—Six Residents)

SENIOR RESIDENT MEDICAL OFFICER required August 1st next or earlier for one year eligible for re-appointment. Salary £300 per annum rising £50 yearly to £400 per annum. F.R.C.S. (Eng.) essential. Previous surgical and administrative experience necessary. Facilities for emergency surgery.
Applications as early as possible not later than May 31st to the Joint Secretaries.

ROYAL FREE HOSPITAL,
Gray's Inn Road W.C.1

Applications are invited from duly qualified and registered Medical Men for the following posts.
CASUALTY OFFICER.
Duties to commence August 1st for six months. Salary £150 per annum. Candidates who must have had previous hospital appointment shall submit applications and accompanied by copies of three recent testimonials to the undersigned not later than 27th.
REGINALD R. GARRATT Secretary.

ROYAL FREE HOSPITAL,
Gray's Inn Road W.C.1

Applications are invited from duly qualified and registered Medical Men for the following post.
FIRST HOUSE SURGEON.
Duties to commence July 1st for six months. Candidates should submit applications stating age and accompanied by copies of three recent testimonials to the undersigned not later than May 27th.
REGINALD R. GARRATT Secretary.

THE ST. HELENS HOSPITAL.

Applications are invited for a JUNIOR HOUSE SURGEON (male) to the Hospital at a salary of £150 per annum plus board residence and laundry. Applications accompanied by three recent testimonials to be sent to the Secretary St. Helens Hospital Lancs. not later than May 23rd.

(*Appointments continued on p. 48*)

the use of optochin (ethyl-hydrocuprein), a synthetic compound so highly bactericidal to pneumococci that it is believed to exert a direct bactericidal effect after absorption from the bowel Some of the results obtained with this compound and with solvochin (quinine-urethane) are reviewed by Martini[1] the success of the treatment appears to be conditioned, as in the use of serum, by the stage of the disease at which it is begun, and even by the type of the infection, Type I being again the most amenable Even so, marked reductions in mortality are claimed, and Leitner[2] contrasts an average mortality of 25 per cent for bronchopneumonia in children with a consecutive series of forty-four cases treated with optochin without a single death Such claims as these for a comparatively simple treatment, applicable to forms of pneumonia outside the scope of serum therapy, should surely not be ignored , and it may well be asked whether an extended trial of these remedies could not be undertaken with advantage, at least in those cases for which serum treatment is either inapplicable or unobtainable

CUBIC SPACE IN THE HOSPITAL WARD

A letter from an architect was recently sent to this *Journal* asking for the latest views on the amount of cubic space required per bed in the wards of children's hospitals as compared with hospitals for adults This may be taken as another symptom of the growing interest which is centring round the whole subject of hospital construction It will be recalled that in 1932 the Royal Institute of British Architects appointed a committee to consider the problem of the orientation of buildings, and in the report published in the *Journal of the R I B A* there was a section dealing with hospitals It was suggested that hospital planning had become standardized, or even fossilized, and that the medical profession had failed to bring sufficient pressure to bear upon hospital architects to provide adequate entrance of sunshine Later in the year the *Architects' Journal* devoted a whole issue to hospital design, and it was apparent from the contributions that modern materials in the shape of steel framework and reinforced concrete should revolutionize the whole style of hospitals, since adequate entrance of sunlight and air was now consistent with a minimum of solid wall space Viewed from this aspect the question of cubic space per bed appears to be much less important than the provision of adequate sunlight and fresh air

Sir Henry Gauvain put the matter very succinctly at the discussion on " Infection in the Dormitory " at the Royal Society of Medicine last year, when he said that in the construction of Alton he was more concerned to secure the air of Hampshire than to have any definite minimum space between the beds Public health authorities regard 1,000 cubic feet air space and 100 square feet floor space as the minimum for adult hospitals, while the Board of Education's pamphlet on suggestions for the planning of new buildings for secondary schools suggests that in the dormitories the cubic space shall be as a minimum 700 cubic feet with 65 square feet of floor space and 3 feet between the beds It is probable that more importance lies in the last of these requirements than in any of the others, for the actual cubic space is, after all, a valueless figure, unless the ventilation efficiency is known and the basic amount of fresh air per patient per hour secured As far as this is concerned the standard 3,000 cubic feet per hour for adults can theoretically be reduced for children, who have a smaller output of carbon dioxide, but other considerations—especially that of droplet infection—suggest that the space between the beds must be regarded as of fundamental importance This was the view expressed by various speakers at the discussion referred to above Dr J A Glover showed that in one large dormitory where infection occurred there was only 1 foot 8 inches between the beds instead of the minimum of 3 feet Surgeon Captain Dudley made the suggestion that placing beds alternately head and foot to the wall was one way in which to increase the distance between the source and entry point of infectious materials, but it is noticeable that throughout the discussion the traditional position of beds at right angles to the wall was accepted as the only possibility In the plans for the new buildings at the Hospital for Sick Children Great Ormond Street, details of which have been kindly supplied by the architect, Mr Stanley Hall, the beds are to be arranged parallel to the wall Each cot is to have a floor space of 70 square feet and an air space of 700 cubic feet, while with this arrangement of beds the minimum space between any two " heads " will be about 10 feet Many of the new hospitals on the Continent are being constructed on this " beds parallel to the wall " system, which is held to have many advantages, including psychological advantages, and one physician in this country has roundly stigmatized the use of the old position in new hospitals as a retrogressive step

It will be seen from what has been said above that the advantages, including psychological advantages, and one Broadly speaking, the space between beds is the important problem rather than the cubic space, provided that the entrance of air is so free that ventilation is effective in dealing with the products of respiration With the more serious danger of infection in children's wards there is little reason to hold that a smaller cubic space can be safely employed Some other aspects of the problem were brought out in a discussion on ventilation and heating of hospital wards which we report at p 962

VISION IN INDUSTRY

The National Ophthalmic Treatment Board (1, High Street, Marylebone, W 1) has done good service by its issue of a leaflet (No 37) dealing with the conditions of vision in industry It is pointed out that efficient sight in many industries is probably the most important single factor contributing to high output, good work, diminishing casualties, and the well-being and contentment of workers In certain forms of manufacture, in which the detail is so fine that a short working distance

[1] *Münch med Woch* 1933 lxxx (i) 100
[2] *Jahrb f Kinderheilk* 1932 cxxxv 257

British Medical Journal

BRITISH MEDICAL ASSOCIATION HOUSE, TAVISTOCK SQ LONDON W C 1

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WANTED—MALE ASSISTANT UNDER 35 British with view to Partnership for industrial district in Midlands Must be keen and full and have strong personality Salary £450 and hou —Apply with refs and photo No 3333 B M A House Tavistock Sq W C 1

WANTED UNMARRIED MALE ASSISTANT English or Scotch outdoor for Practice in Midland City Salary £360 with furnished rooms and attendance 25 per cent commission on midwifery Petrol allowance if own car —No 2954 B M A House Tavistock Sq W C 1

OPHTHALMIC ASSISTANTSHIP WANTED by M B B S D O, D O M S act 28 in South preferably near London To commence in the Autumn—Address No 3302 B M A House, Tavistock Square W C 1

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WANTED AT ONCE, AN INDOOR ASSISTANT male or female for an industrial town near Nottingham Must be able to drive car — Address No 3324 B M A House Tavistock Square W C 1

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POST WANTED HOME OR ABROAD BY L R C P I R C S, aged 31 4 years experience obstetric and general practice Accustomed sole charge Own car Free now Salary under £450 p a not entertained —Address No 3440 B M A House Tavistock Square W C 1

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is necessary—for example linking in the hosiery trade filament sorting and mounting in the electrical industry and a weaving operation known as drawing in—it has been proved conclusively that glasses both to correct any error of refraction in the eyes of the worker and to give the special assistance the short focus indicates have been of the greatest advantage Again apart from the provision of glasses the examination of the eyes of workers is needed in fabric and printing work in which accurate colour vision is wanted also for transport drivers who need both good colour vision and full fields of vision Preliminary examination would often save much time and money expended in training unsuitable candidates Defective vision is responsible for many more accidents in industry than is generally recognized Timely attention to the eyes will reduce the risks and also the regular examination of the sight of workers and the records of the findings are of high value in dealing with claims for injuries To meet the requirements of industry the National Ophthalmic Treatment Board with the approval and support of the British Medical Association has prepared a scheme for expert examination of the eyes of workers There are centres throughout the country with approved medical personnel and also approved opticians Employers of labour may desire to test for themselves the effect of this service upon their output and work before adopting it generally and the Board will gladly provide facilities and technical advice Medical practitioners will be interested in this pamphlet and might well bring it to the notice of employers of labour with whom they have relations

THE REGISTRAR OF THE G.M.C.

Although it is three-quarters of a century since the General Medical Council was constituted and its registrar comes up annually for election there have been only four holders of that office The first of the four Dr Francis Hawkins was a medical man the others have been laymen Dr Hawkins was registrar from 1858 until 1876 when he was succeeded by Mr W J C Milner who served the Council until 1897 when Mr H E Allen was appointed and remained in office until his death in 1911 In that year Mr Norman C King was appointed registrar and in 1921 he combined with it the office of registrar to the Dental Board Mr King entered the service of the Council in 1897 and became assistant secretary ten years later At the end of the recent May session of the Council Mr King retired and his successor in both offices is Mr Michael Heseltine lately assistant secretary at the Ministry of Health Mr King's retirement was the subject of many kindly references on official and unofficial occasions during the sessions of the Council and of the Dental Board The President of the Council Sir Norman Walker in bidding him farewell remarked that there were very few members now in the Council who could remember its sittings without seeing him on the left hand of the President The *Medical Register* he said was an example of what such an important document should be and its accuracy was a testimony to the vigilant supervision Mr King had exercised over its compilation He has set a high standard of work he hands over to his successor a smooth running machine and he carries with him into his retirement the gratitude of the Council Sir Francis Dyke Acland from the chair of the Dental Board bore similar testimony Mr King's retirement he said would be a break with the past which they all would regret He called to mind Mr King's assistance in two matters which were of outstanding importance during the earlier years of the Board—namely the framing of the regulations and the formulation of the *Dentists Register* It was a great tribute to his care that the regulations had so well stood the test of time and the *Register* that of the High Court His organizing ability was shown in the fact Sir Francis Acland continued that every department of the Board's work had been carried out not only efficiently but with devotion and enthusiasm Mr King has certainly been an ideal registrar of both bodies ever zealous to uphold their prestige and yet at the same time able to interpret their procedure and functions in human terms Many a case has been prevented from becoming the subject of disciplinary proceedings and many a doubtful situation has been cleared up to the benefit of an individual practitioner thanks to his wise and kindly advice Those who have had occasion as have members of the staff of this *Journal* to call on him for information have always found him most courteous and willing to give up any amount of time to help them in their task A few years ago when the Council was being subjected to more than the usual amount of public misrepresentation and misjudgement he wrote an admirable memorandum on its constitution and powers He has endeared himself particularly to his own staff as was very evident at a little presentation which took place last week when he confessed that one of his ambitions had been to cultivate a family feeling amongst all those working at Hallam Street Mr King was absent from his duties at the Council during the period of the war when he rendered distinguished military service He commanded the 3rd London Rifle Brigade from June 1915 until demobilization The new registrar Mr Michael Heseltine a man still well short of 50 enters upon his office with a valuable experience gained at the Ministry of Health and in the service of various official bodies In his post at the Ministry he has had many opportunities of coming into touch with representatives of the medical profession and has earned their good opinion

ANAESTHETIC EXPLOSIONS

Ignition of anaesthetic vapour in the operating theatre is generally held to be of rare occurrence in this country though Pinson[1] has estimated that at least a hundred cases of burns of the eyebrows lips and pharynx occur here each year due to ether explosions (A fatal case with rupture of the bronchi from an ether and oxygen mixture was described in the *Journal* of October 17th 1925 p 712) Pure chloroform on the other hand appears to be a safe anaesthetic if unadulterated and the same observer found experimentally that though its vapour could be decomposed by the heat of an oxy-acetylene blowpipe no ignition occurred even when a stream of oxygen was passed through it Alleged chloroform explosions are he believes due to unsuspected admixture of ether or to the burning of combustible gases arising from charred or hot tissues In drier and hotter climates than our own the explosion danger is a constant source of anxiety to surgeons and

[1] *British Medical Journal* 1920 ii 312

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to MEMBERS of the MEDICAL PROFESSION

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APPOINTMENTS—Contd

LONDON COUNTY COUNCIL

Applications invited for appointment to the undermentioned resident positions

Duties assigned by Medical Superintendent and include if necessary, assistance at other establishments under the control of the Council

1 ST MARY ABBOTS HOSPITAL Marloes Road Kensington W 8—*ASSISTANT MEDICAL OFFICER (Grade I) Salary £350 a year rising annually by £25 to £425 with board, lodging and washing Candidates must be Medical Practitioners of at least one years standing and have held a resident appointment in a general hospital for at least six months Candidates should have had experience in medicine and the possession of a higher qualification in medicine is desirable There is no accommodation for a married man or for a woman

2 ST LEONARDS HOSPITAL Hoxton Rd Shoreditch, N 1—*HOUSE PHYSICIAN Salary £80 a year with board lodging, and washing Appointment for six months in first instance but may be extended for a further period of six months. Candidates must be registered Medical Practitioners There is no accommodation for a married man In the case of a woman being appointed, marriage will terminate contract of service

*The remuneration and conditions are subject to review

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a) County Hall Westminster Bridge S E 1 returnable June 2nd Canvassing disqualifies Further enquiries should be addressed to the Medical Superintendent at the respective hospitals.

LONDON COUNTY COUNCIL

Applications invited for appointment of RESIDENT ASSISTANT MEDICAL OFFICER, Grade I at PARK (FEVER) HOSPITAL Hither Green Lewisham S E 13

Duties assigned by Medical Superintendent and include if necessary assistance at other establishments under the control of the Council

Remuneration is £350 a year rising annually by £25 to £425, with board lodging and washing and is subject to the temporary reduction made by the Council from the value of the emoluments Candidates must be registered Medical Practitioners of at least one years standing Experience in a resident appointment in a general hospital and the possession of D P H desirable. There is no accommodation for a married man or for a woman The remuneration and conditions are subject to review

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a) County Hall Westminster Bridge S E 1 returnable May 26th Canvassing disqualifies Further inquiries should be addressed to Medical Superintendent at the Hospital

THE JESSOP HOSPITAL FOR WOMEN SHEFFIELD (146 Beds.)

The Board of Management invite applications for the post of HOUSE SURGEON (male) to the Maternity Department (30 beds).

The appointment is for six months from July 1st Salary £120 per annum, plus board, residence and laundry

Previous resident experience essential

Applications stating age and experience with copies of recent testimonials should be forwarded to the undersigned not later than Monday June 5th

DAVID OSWALD Secretary

THE JESSOP HOSPITAL FOR WOMEN SHEFFIELD (146 Beds)

GYNAECOLOGICAL AND MATERNITY DEPTS

The Board of Management invite applications for the post of HOUSE SURGEON (male) for a period of six months commencing July 1st

Salary £100 per annum together with board residence and laundry

Applications stating age together with copies of testimonials should be addressed to the undersigned not later than Monday June 5th.

DAVID OSWALD Secretary

CITY OF SHEFFIELD

KING EDWARD VII HOSPITAL, RIVELIN VALLEY

RESIDENT HOUSE SURGEON required on July 1st for the above Hospital which is for the treatment of Surgical Tuberculosis and other Orthopaedic conditions (140 beds).

The officer appointed will be required to attend the Out patient Department for Surgical Tuberculosis cases and the Orthopaedic Clinic of the Maternity and Child Welfare Centre

Salary at the rate of £150 per annum with board and laundry Appointment for six months, with possible extension for further six months

Applications with testimonials should be sent to the Medical Superintendent

CITY OF SHEFFIELD

ASSISTANT TUBERCULOSIS OFFICER

Wanted a Male (unmarried) Assistant Tuberculosis Officer to reside at WINTER STREET HOSPITAL and to devote his whole time to the Municipal Tuberculosis Scheme

Salary £350 per annum, rising to £400 per annum by annual increments of £25 with board, residence and laundry

The office has been designated as an established post under the Local Government and Other Officers Superannuation Act 1922.

Applications stating age qualifications and experience with copies of three testimonials to be sent on or before May 29th to the Medical Officer of Health, Town Hall Sheffield.

THE GENERAL HOSPITAL BIRMINGHAM

Applications are invited for the following resident posts

1 SURGICAL REGISTRAR

2 GYNAECOLOGICAL AND EAR NOSE & THROAT REGISTRAR

salary £100—£20—£140 per annum

3 TWO HOUSE SURGEONS HOUSE SURGEON to the Gynaecological Department HOUSE SURGEON to the Throat & Ear Department

4 HOUSE PHYSICIAN

salary £70 per annum in each case

Applications must reach the undersigned not later than June 1st

A H LEANEY
May 16th, 1933 House Governor

ST MARYLEBONE GENERAL DISPENSARY (Incorporated) 30 Marylebone Lane W 1

The Council invite applications for the office of HONORARY SURGEON to the Ear Nose & Throat Department Every candidate for the post must be a Fellow of the Royal College of Surgeons England or of Edinburgh and practising as an Ear Nose and Throat Surgeon Applications with copies of testimonials should be forwarded to the Secretary no later than Saturday June 3rd Candidates will be asked to attend a meeting of the Medical Committee

M A DONALDSON Secretary

NATIONAL TEMPERANCE HOSPITAL Hampstead Road N W 1

Applications are invited for the post of HOUSE PHYSICIAN (male) The appointment will be for a period of six months at a salary of £100 per annum, and will date from June 21st Preference will be given to those who have held a resident post

Candidates must submit applications with qualifications age etc with copies of not more than three testimonials by Friday June 2nd addressed to the Secretary

NATIONAL TEMPERANCE HOSPITAL Hampstead Road N W 1

Applications are invited for the post of CASUALTY OFFICER (Male) The appointment will be for a period of six months at a salary of £120 per annum and will date from June 21st

Candidates must submit applications with qualifications age etc with copies of not more than three testimonials by Friday June 2nd addressed to the Secretary

NATIONAL TEMPERANCE HOSPITAL Hampstead Road W 1

Applications are invited for the post of HOUSE SURGEON (male) The appointment will be for a period of six months at a salary of £100 per annum and will date from June 21st Preference will be given to those who have held a resident post

Candidates must submit applications with qualifications age etc with copies of not more than three testimonials by Friday June 2nd addressed to the Secretary

ANTERIOR LOBE OF THE PITUITARY

PROFESSOR COLLIP'S LECTURE

At a special meeting of the Section of Therapeutics and Pharmacology of the Royal Society of Medicine on May 30th, with Dr E P POULTON in the chair, Professor J B COLLIP of McGill University, Montreal, lectured on the separation of substances from the anterior lobe of the pituitary gland having different properties (growth-producing and thyroid stimulating)

Professor Collip said that he proposed to discuss the results of experimental work relating to pituitary gland physiology and chemistry which had been carried out during the past few months in the biochemistry department at McGill He had had as collaborators Dr Hans Selye, Dr D T Thomson, and Dr Evelyn Anderson Intensive work had proceeded during the past three years on the general problem of placental hormones One of these—the prolan of Zondek—they had never been able definitely to recognize as a pituitary hormone, nor could they find substantial evidence for the existence of two prolans in the placenta, in the pregnancy blood or in the urine They chose to call this ovary-stimulating factor the anterior pituitary-like substance, recognizing in this manner that they were in all probability dealing with a single hormone factor having physiological properties only partially like the true anterior lobe substance It had been felt for a long time that the question as to the identity or non-identity of the gonad-stimulating substance derived from the human placenta with that occurring in the pituitary gland of animals could be definitely answered providing the tests of replacement therapy were carried out on hypophysectomized animals Experiments of this nature that had been previously reported had yielded somewhat contradictory results Last September, therefore he invited Dr Selye, who was then research fellow in his laboratory, to undertake the preparation of a large number of hypophysectomized white rats Using a slight modification of the Smith technique for hypophysectomy, he soon became highly proficient in the art as applied to the rat, and made available for experimental use a large number of animals of various ages Dr Selye had had no difficulty in carrying out the complete operation in five minutes

With the aid of a large number of microscopical sections Professor Collip then gave a brief but masterly summary of the work which had been proceeding He illustrated the effect of the injection of prolan on the testes and ovaries of the immature and mature animals The character of the result depended on the age of the animal at operation With immature animals the injection of massive doses of prolan did not produce any noticeable effect, though when the animals were killed and the ovaries examined certain changes were observed (the appearance of pseudo corpora lutea) If the animal had passed puberty at the time of operation the injected prolan resulted in continuing oestrus—the observation of this had been continued on the same animal for as long as six weeks The placental hormones had no effect on the growth of the body as a whole , the animals after hypophysectomy did not grow at all, but on prolan being given there occurred a growth process so far as the interstitial tissue was concerned, side by side with a degenerative process in the germinal epithelium In the same way practically a normal testis could be produced in the male animal If the prolan were given for weeks on end, the effect observed on the interstitial tissue passed away, and there appeared a complete necrosis of the gland with large giant cells coming in and cleaning up the debris

The lecturer next showed how, by the use of pituitary implants, practically complete replacement of the ovary in the hypophysectomized rat was produced In the male the implant also prevented the atrophy of the testis He then went on to describe how almost by accident, a growth-producing substance was separated from anterior lobe extract This was found to carry great potency in the production of growth in the completely hypophysectomized rat He showed curves illustrating the metabolism of the animals treated with this 'Q' extract in respect of nitrogen balance and excretion of nitrogen in the urine When the growth extract was given to an animal the excretion of nitrogen within forty eight hours dropped considerably, and remained down for as long as the extract was continued The growth hormone probably affected protein metabolism as much as it affected calcium metabolism There was a tendency for the calcium balance to become negative after hypophysectomy, and with the injection of the substance it tended to swerve from negative to positive At present however, the data were not sufficient to permit of much to be said about that range of results

Passing on to the thyroid stimulating substance, the thyrotropic fraction, Professor Collip said that when the growth hormone was removed from the extract it was a simple matter to obtain a protein like fraction from the purified residues He showed the results obtained with hypophysectomized rats treated with the thyrotropic fraction for a period—nine days was mentioned A fair amount of work had been carried out in Germany and elsewhere following up the thyrotropic effects of pituitary extract After the maximum effect of the thyrotropic hormone had been reached, as shown by the rise in basal metabolism to a large degree and by the maximum amount of hyperplasia, as shown by the histological condition of the gland, the basal metabolism tended to return to normal and the gland to revert to a less active state To what extent this might be altered by giving minute doses of iodine with the thyrotropic hormone was not yet quite clear, but some work had been started in that direction, and suggestive results had been already forthcoming By giving the right dosage to the hypophysectomized animal it should be possible to keep the thyroid normal

He also touched, finally, upon the adrenotropic substance It was not known whether the substance in the pituitary which regulated the suprarenal cortex was identical with the substance which regulated the thyroid, but he felt that there were two factors at work, one on the thyroid and one on the suprarenal In the case of the hypophysectomized animals the thyroid had been found restored to normal without the suprarenal being restored at all, and the suprarenal had been restored, though always in connexion with the thyroid There was suggestive evidence that the thyrotropic and adrenotropic substances were not necessary identical

DISCUSSION

Dr A S PARKES said that he was inclined to raise his hat to anyone who could get anywhere near the pituitary of a rat in five minutes But the ultimate test was the examination of serial sections of the base of the skull, and in the absence of that proof that the pituitary body had been completely removed he did not think positive conclusions could be drawn The physiological evidence of removal—namely, the retrogressive changes in the reproductive gland and the endocrine glands—was not in itself adequate proof that the whole of the pituitary body had been removed It was well known that two-thirds or three fourths removal was quite inadequate to cause complete atrophy of the ovaries or testes, and as far as that went, an adequate amount of pituitary body had been removed , on the other hand, any remaining fragment might be quite sufficient to upset the experiment when the animal was used as a test animal As regards the macroscopic evidence from an examination of the base of the brain, there were many cases where an appreciable fragment of anterior lobe had been found on sectioning the skull, such as could not possibly have been seen at necropsy by macroscopic examination Another point he emphasized was that where the whole of the tubular tissue of the testes had undergone regression, the apparent amount of interstitial tissue was, of course, enormously increased Precisely the same effect was obtained in the case of *x* rays which destroyed the tubular tissue and thus increased apparently the amount of interstitial material Finally, he suggested that the enormous amount of experimental work now being carried out was likely to bring about forgetfulness of the fact that there was such a thing as a normal animal One of the most interesting uses that could be made of hypophysectomized animals

LANCASHIRE COUNTY COUNCIL.

PARK HOSPITAL, DAVYHULME, Near MANCHESTER.

APPOINTMENT OF JUNIOR RESIDENT MEDICAL OFFICER.

Applications are invited from registered Medical Practitioners for the appointment of Junior Resident Medical Officer at the above Hospital. Candidates must be unmarried.

Preference will be given to applicants having experience in Midwifery, Gynæcology and Diseases of Children.

The appointment will in the first instance be for a period of six months, the successful applicant being eligible for reappointment for a further period of six months at the end of that period.

The salary is at the rate of £200 per annum, subject to an emergency abatement, together with the usual residential allowances.

The Hospital comprises 500 beds.

Application, accompanied by copies of not more than two recent testimonials, should be addressed to the County Medical Officer, Public Assistance (Hospital and Medical) Department, County Offices, Preston, not later than June 12th. Envelopes should be endorsed "Junior Resident Medical Officer."

County Offices, Preston. GEORGE ETHERTON, Clerk of the County Council.

May 13th, 1933.

LANCASHIRE COUNTY COUNCIL.

PUBLIC ASSISTANCE COMMITTEE.

LAKE HOSPITAL AND DARWEN HOUSE, ASHTON-UNDER-LYNE, near MANCHESTER.

APPOINTMENT OF JUNIOR RESIDENT MEDICAL OFFICER.

Application are invited from registered Medical Practitioners for the appointment of Junior Resident Medical Officer at the above Hospital and Institution, comprising 300 and 600 beds respectively.

Candidates must be unmarried.

Salary, subject at the present time to an emergency abatement at the rate of £175 per annum, together with the usual residential emolument.

The appointment will, in the first instance, be for a period of six months, the successful applicant being eligible for reappointment for a further period of six months at the end of that period.

Applications, accompanied by copies of not more than two recent testimonials, should be addressed to County Medical Officer, Public Assistance (Hospital and Medical) Department, County Offices, Preston, not later than June 12th. Envelopes should be endorsed "Junior Resident Medical Officer."

County Offices, Preston. GEORGE ETHERTON, Clerk of the County Council.

May 15th, 1933.

CITY AND COUNTY OF KINGSTON UPON HULL.

HULL MUNICIPAL MATERNITY HOME AND INFANTS HOSPITAL. (104 Beds.)

JUNIOR RESIDENT MEDICAL OFFICER (*Woman*).

Applications are invited from unmarried or widowed Women Medical Practitioners for the appointment of Junior Resident Medical Officer at the above Institution.

Salary £100 per annum, together with board, washing and residence at the Maternity Home. Salary at present subject to a temporary deduction of 2½ per cent. under the City Council's economy measures.

The appointment will be for six months with a possible extension for a further period of six months.

Forms of application and conditions of appointment may be obtained from the undersigned.

Completed applications (in an envelope endorsed "Junior Resident Medical Officer, Maternity Home"), together with copies of three recent testimonials, must be received by me not later than mid-day on Saturday, June 3rd.

Health Department, 2 CEBBIE,
Guildhall, Medical Officer of Health.
Hull, May 1933.

CHILDREN'S HOSPITAL, LUTON.

Applications are invited for the posts of CONSULTING SURGEON and CONSULTING PHYSICIAN.

Apply to the Hon. Secretary, P. F. JEFFS, Esq., 11 George Street West, Luton, not later than June 15th.

WANTED — RESIDENT ASSISTANT MEDICAL OFFICER for a period of twelve months. Salary £350 p.a. Apply for form of application to the Medical Superintendent, CHESHIRE JOINT SANATORIUM, MALBANK, BRAYTON, which should be returned not later than May 31st.

LANCASHIRE COUNTY COUNCIL.

BIDDULPH GRANGE ORTHOPÆDIC HOSPITAL.

Applications are invited from duly qualified and registered Medical Practitioners for the following posts at the above Hospital which contains 83 beds:

SENIOR HOUSE SURGEON. Salary £250 per annum (during temporary emergency duties only) together with board, residence and laundry. Candidates must have had experience in a General Hospital. Preference will be given to candidates who have had orthopædic experience.

JUNIOR HOUSE SURGEON. Salary £150 per annum (during temporary emergency duties only) together with board, residence and laundry. Preference will be given to candidates who have had experience in a General Hospital.

Both appointments will be for a period of six months in the first instance, and for a further appointment at the option of the Council but will not be terminable within that time.

Applications, with the names of two recent testimonials, should be sent not later than June 2nd to Dr. J. J. BUTTERWORTH, School Medical and Child Welfare Department, County Offices, Preston.

Duties commence 1st July.

County Offices, Preston. GEORGE ETHERTON, Clerk of the County Council.

May 11th, 1933.

Telephone: WELBECK 2728
Telegrams: ASSISTANTS, LONDON

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Manchester 3152 Ardwick
Dub. 531 Ballsbridge Glasgow 4[illegible] Douglas
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LONDON E. — PARTNER WANTED in well-established Practice of about £2,700. Large list of 4,800. Visiting fees 2/6 to 3/6. Life for 15 to 20 p.a. fees 2½ to 3 gns. Prefer third share. 2-year purchase. House 4 rooms, surgery, kitchen-room and other fittings. Rent £80 p.a. No. 9157.

NORTHANTS — DEATH VACANCY. MIXED industrial and agricultural district. Well established. Receipts £500—£600 p.a. and ample. Vendor suffered from disability. Land and contract worth £3-0. Detached house, 3 bed, 2 recep., Surgery etc. Rent at £60—No. 9156.

CHESHIRE-TOWN PRACTICE WORTH £550 p.a. including panel c. 530. Slight increase. midwifery reserved. Visit 3/6 up. Consulting house, 3 bed, 3 attics, rental. Professional room. Rent £70. Premises £1,000 or near offer.—No. 9155.

KENT — ABOUT 30 MILES FROM TOWN — Residential country. Half mare £2,300 after preliminary valuation. Only fees. No much midwifery. New house. Small rent or by. Further particulars, interview Londⁿ. Camb. Graduate.—No. 9152.

SURGICAL — EXCELLENT OPPORTUNITY. Superior established connection. Vendor retiring. Car and returns £1,000 p.a. Income has been more. Delightful West End house and £700. Trade £3[illegible].—No. 9153.

LONDON N.W. — VERY FINE CLIENTÈLE. Average about £1,000 p.a. Net [illegible] taken. Ample scope. Small premium. Practice. Central. [illegible] Established 14 years. Owner retiring at £[illegible]. Vendor will introduce to Londⁿ. Camb. Graduate.—No. 9149.

MANCHESTER — ABOUT £6,000 P.A. IN Established PRACTICE. Large [illegible] £700. Opposite new [illegible] Visiting fees 2/6 and 5/-. Long list. Fees 2/6. House if main required. 5 beds. 2 receptions. Surgery. Rent £60 on lease.—No. 9154.

YORKSHIRE. — OUTSKIRTS OF LARGE town. Old-established middle and better class PRACTICE averaging £980 p.a. Panel 400. Visits 3/6 to 21/-. Very little night work. Specially built house, 2 rec., 6 bed. Surgery with separate entrance. Rent £[illegible] at £100. Premium £1,250.—No. 9141.

LADY PARTNER WANTED IN PRACTICE of about £1,000 p.a. [illegible] Rent steadily increasing and [illegible] further extension. [illegible] £[illegible] appts. about £120. Premium for half £1,000.—No. 9140.

CHANNEL ISLANDS — URGENT SALE through ill-health of Vendor. Private PRACTICE in best part of Island overlooking sea averaging £350 p.a. No midwifery taken. Fees 3/6 to 7/6 med. extra. Choice of house and others building. Good harbour. Sea and front fishing. Term 1½ years. Price—No. 9160.

ITALIAN COAST — DELIGHTFUL SPOT — About £500 p.a. Scope. Practice. Opening in neighbouring town. Engaging in neighbouring town. Rent. Steadily increasing and [illegible] further extension. [illegible] £[illegible] appts. about £120. Premium for half £1,000.—No. 9140.

CHANNEL ISLANDS — URGENT SALE through ill-health of Vendor. Private PRACTICE in best part of Island overlooking sea averaging £350 p.a. No midwifery taken. Fees 3/6 to 7/6 med. extra. Choice of house and others building. Good harbour. Sea and front fishing. Term 1½ years. Price—No. 9160.

ITALIAN COAST — DELIGHTFUL SPOT — About £500 p.a. Scope. Practice. Opening in neighbouring town. Engaging in neighbouring town. Rent. Steadily increasing and [illegible] further extension. [illegible] £[illegible] appts. about £120. Premium for half £1,000.—No. 9140.

RESIDENTIAL SEASIDE RESORT — WITHIN easy reach of London. £700—£800 p.a. suffered through Vendor's ill-health. Ample scope. New estate building. Small panel. No dispensing. Midwifery not sought. Attractive freehold house built by Vendor, 5 bed, etc. garden and garage.—No. 9102.

WANTED

WANTED BY HIGHLY QUALIFIED married English Graduate, [illegible] PARTNERSHIP in a Provincial Practice with a view to ultimate [illegible] Ample capital. Details in confidence.—No. 9[illegible].

WANTED BY SCOTCH GRADUATE, married, a PRACTICE, small or [illegible] in a residential or [illegible] £1,500 or more. Capital £3,000 or more. Details in confidence.—No. 932.

NO CHARGE TO PURCHASERS.

was to substitute by various means the action of the anterior lobe itself and to produce finally an animal which would perform all the normal functions of reproduction in the absence of the anterior lobe He thought he was right in saying that the remarkable process whereby at each period of oestrus a fairly definite number of follicles were brought to maturity and ovulated had never been actually carried out on the hypophysectomized animal Ovulation had been caused in the hypophysectomized animal but not those completely abnormal changes in the ovary such as destruction of the smaller follicles and partial maturation and partial regression of the whole mass of follicles which was the kind of thing rarely if ever found in the complete normal animal

Dr W CRAMER asked whether there was any difference so far as obesity was concerned in these experimental animals Some years ago curious differences were obtained in that respect in rats which had been irradiated on the testes as compared with castrated rats The latter remained in the normal condition but in the irradiated rats the interstitial tissues showed hypertrophy and the animals became very obese Dr WHITE expressed the view that it was dangerous to postulate new hormones He believed that this was the seventeenth postulated from the pituitary It was incredible that it could secrete seventeen different principles Dr W M FELDMAN asked what was the relation between the pituitary and the parathyroid

Sir HENRY DALE took up the remark about the number of hormones which were supposed to originate from the anterior pituitary lobe Did he understand Professor Collip to suggest that the gonad stimulating function of the anterior pituitary lobe which used to be ascribed to at least one and possibly two different hormones was not in itself a hormone function at all?

Professor COLLIP in reply said that whether in these experiments they had missed a possible fragment of the tissue because they had followed the behaviour of the animal only he could not decide but the completely hypophysectomized animal did not grow at all That is to say if a month after operation it was 100 grams in weight it would be 100 grams or less a month later If there was a slight growth the animal was killed and invariably a trace of pituitary was found also with such growth the extreme retrograde changes in gonad thyroid and suprarenal glands were not observed The animals had not been submitted to a breeding test but the histological features and the growth curves had been studied and the fact that so very many animals had been used seemed to give a certain statistical assurance to the results Dr Cramer's question about obesity was most interesting because in the experiments at McGill no effect at all on fat metabolism had been observed but the experimenters were quite convinced that the pituitary did come into the problem of fat metabolism With regard to the number of pituitary hormones he did not believe for a moment that there were as many as might be suggested by the physiologically active principles obtained but it was quite possible that the substance in the gland was so altered in the process of extraction that there were side chains so that it was not pure hormone fractions which were being isolated but fractions which had definite physiological activity Probably the word hormone applied to any of the fractions mentioned was a misnomer With regard to the parathyroid gland there was no evidence at all of any change taking place after hypophysectomy As opposed to the thyroid and the suprarenal the parathyroid stood out as being unaffected by the operation In reply to Sir Henry Dale there was satisfactory evidence of the existence of a principle or substance in very simple anterior lobe extracts which completely modified the effect of prolan in the hypophysectomized animal One immediately attempted to link that up with the work of Evans who showed that the summation effect—prolan plus anterior lobe—was really something of the nature of catalytic effect The effect of prolan alone in a certain dose plus the effect of anterior lobe alone as measured by the weight of ovary was only a fraction of the effect when the two things were given to the same animal He was of the opinion that the placental hormone was physiologically identical with an anterior lobe fraction which like the former required the presence of a complementary substance of true pituitary origin in order to produce a full maturity effect

THE SCOTTISH SPAS

A MEDICAL VISIT

On Friday May 19th a party of well known physicians left London for a visit to Scotland at the invitation of Sir Henry Lunn and Sir Josiah Stamp They arrived back in London on the morning of the following Wednesday having spent a most enjoyable four days under conditions which were equalled only by the generosity of their hosts On Saturday morning after the spa at Bridge of Allan had been inspected a visit was paid to Stirling Castle where by the kindness of Lord Mar and Kellie they were able to inspect parts of the castle not usually thrown open to the public

DIETETIC TREATMENT AT SPAS

At the luncheon held at Bridge of Allan Spa Sir William Willcox in introducing a discussion on dietetic treatment reminded his audience that the reconstructed spa had been opened in 1930 by Sir Humphry Rolleston and Dr Fortescue Fox The water at Bridge of Allan he continued was unique it contained more calcium chloride than any other water in the world and should prove very useful to patients in need of calcium therapy The spa itself was mild in winter and not too hot in summer One of the shortcomings of British spas had been the insufficient attention given to dietetics At spas abroad the hotels were in close association with the physicians who prescribed food as well as waters and medicines Sir Henry Lunn was a disciple of the fasting method of dietetic treatment Sir William said and he agreed that restriction of diet was advisable in some cases What was wanted in the spas of this country was not any stunt form of diet but a system of rational dietetics each individual being treated according to his needs At Bridge of Allan it was proposed that rational dietetics should be employed as well as climatic and hydrotherapeutic methods Lord Horder said that he was impressed by what he had seen of this spa It was a going concern Why British spas did not go ahead more rapidly was a question that was concerning many of them just now Was it lack of British business aptitude? Were we a little ashamed of pushing our own wares? Members of the medical profession were trained to believe they should avoid anything like publicity still more anything like advertisement But they should not be loath to give advice when asked to The British Health Resorts Association had been formed partly with the object of aiding the development of individual health resorts and under the able guidance of its secretary Dr Alfred Cox great results were to be expected Lord Horder said that the popular idea on the questions of diet was always in the direction of fasting rather than of adapting the diet to the individual There was certainly something dramatic about fasting—sometimes referred to as alimentary rest He had always lamented that dietetics had been left too much in the hands of eminent surgeons and distinguished lady publicists If expert guidance ample local facilities and the amenities were provided there was no reason why Bridge of Allan should not have the great success they all wished it In congratulating Sir Henry Lunn on the part he had played in bringing the profession and the public to Bridge of Allan Dr Chalmers Watson remarked that the profession had perhaps been rather remiss in this matter of dietetics There was no question that defects in diet were an important factor in the causation of disease He thought that if the profession and the public would pay attention to fresh foods then they need not worry about vitamins as such

Professor S J Cowell said that increased interest was being shown in nutrition and in diet as a form of treat-

ment The Scots were pioneers in the subject of dietetics In the past few years enormous advances in the diagnosis and treatment of deficiency diseases had been made Apart from these there were a number of conditions (for example, hypertension, chronic arthritis) in which there might be a general metabolic disturbance susceptible to treatment by readjustment of the diet To-day few physicians would agree as to what was the rational treatment of these disorders Elimination was all right up to a point There must be something to eliminate, but no one knew what There was, he felt, a great need for much more observation and accurate recording in these metabolic disorders Sir Ashley Mackintosh, speaking as a patient, said he could not sufficiently express his appreciation of everything at the Bridge of Allan After short speeches by Dr W H Welsh, one of the physicians on the staff and Mr Alexander Morrison the town clerk Sir Henry Lunn said that in Great Britain there were many establishments which carried out starvation treatment without any scientific background There was therefore a need for proper dietetic centres

Although it cannot be said that the members of the party were, during the rest of the tour, given any opportunity of testing the therapeutic value of "alimentary rest" they were pleasantly subjected to that most benign form of all treatments—climatic From the Bridge of Allan they went by car on Saturday afternoon to Pitlochry, passing through the most beautiful country by way of Crieff Sma'Glen and Aberfeldy At Pitlochry they were handsomely entertained at the Atholl Palace Hotel by Mr Holdsworth Lunn Dr Fortescue Fox, speaking in the evening said that the aim of the British Health Resorts Association was to develop the health resorts of this country in accordance with the demands of modern medicine In the modern spa expert medical advice must come first, the other things would then follow On Sunday morning the party left by special train for Gleneagles, where they were the guests of Sir Josiah Stamp as chairman of the London Midland and Scottish Railway Everything at Gleneagles including a cloudless-sky, conspired to make the visit there one of the most pleasant episodes in the whole tour On Monday the company moved north to Strathpeffer, where they stayed at the Highland Hotel In the evening the idea that the Scots have no humour was successfully dispelled by Mr MacIver, who, with a number of others, provided the guests with an excellent concert On the last morning Dr F A Bearn took the party round the spa, which is famed for its sulphur springs and peat baths

ACADEMIC ASSISTANCE COUNCIL

AID FOR DISPLACED GERMAN PROFESSORS

A group of forty-one men and women holding high positions in the intellectual life of Great Britain have formed themselves into an Academic Assistance Council, and have issued a public appeal for funds to assist university teachers on the Continent who, "on grounds of religion, political opinion, or race, are unable to carry on their work in their own country" Seven of the signatories are members of the medical profession or intimately connected with it Professors Winifred Cullis G Elliot Smith, M Greenwood, J S Haldane, A V Hill, Sir F Gowland Hopkins and Sir Charles Sherrington Others are distinguished exponents of pure science such as Lord Rutherford Sir Joseph J Thomson, Sir William Pope, Lord Rayleigh and Sir William Bragg The immediate concern of the council is to assist teachers and investigators who have been displaced under the present regime in Germany The appeal states

'If the information before us is correct effective help from outside for more than a small fraction of the teachers now likely to be condemned to want and idleness will depend on the existence of large funds specifically devoted to this purpose It seems clear also that some organization will be needed to act as a centre of information and put the teachers concerned into touch with the institutions that can best help them We have formed ourselves accordingly into a provisional council for these two purposes We shall seek to raise a fund to be used primarily though not exclusively, in providing maintenance for displaced teachers and investigators and finding them the chance of work in universities and scientific institutions

We shall place ourselves in communication both with universities in this country and with organizations which are being formed for similar purposes in other countries and we shall seek to provide a clearing house and centre of information for those who can take any kind of action directed to the same end We welcome offers of co-operation from all quarters We appeal for generous help from all who are concerned for academic freedom and the security of learning We ask for means to prevent the waste of exceptional abilities exceptionally trained The issue raised at the moment is not a Jewish one alone many who have suffered or are threatened have no Jewish connexion

'The issue though raised acutely at the moment in Germany is not confined to that country We should like to regard any funds entrusted to us as available for university teachers and investigators of whatever country who on grounds of religion political opinion or race are unable to carry on their work in their own country The Royal Society has placed office accommodation at the disposal of the council Sir William Beveridge and Professor C S Gibson are acting as honorary secretaries of the council and communications should be sent to them at the Royal Society Burlington House W

"Our action implies no unfriendly feelings to the people of any country it implies no judgement on forms of government or on any political issue between countries Our only aims are the relief of suffering and the defence of learning and science'

LEVERHULME RESEARCH FELLOWSHIPS

The will of the late Lord Leverhulme directed that the income arising from a part of his estate should be devoted to the granting of scholarships for "research and education" and the trustees have recently made grants for this purpose to several institutions They have now resolved to devote from income of the fund a sum of £12 000 a year to the establishment of a scheme of research fellowships These are intended in the first instance for the assistance of experienced workers rather than to add to the provision already existing for workers in the early stages of their careers The trustees have in mind particularly men and women who are prevented either by pressure of routine duties or by any other cause from undertaking or completing an investigation of value They have decided therefore, to place no definite limit to the amount of individual grants which will be adjusted according to the circumstances of each case The duration of grants will normally not exceed two years Fellows will usually be required to work at or in connexion with a recognized centre of research, either at home or abroad No subject of inquiry is excluded from the scope of the scheme but under present conditions the trustees intend that preferential consideration should be given to subjects in which the existing provision is inadequate

The following have accepted their invitation to serve on an advisory committee for the selection of Fellows and for the general supervision of the scheme Dr H J W Hetherington (chairman), Professor A M Carr Saunders Sir William Hardy F R S Dr N V Sidgwick F R S and Mr H T Tizard F R S Dr L Haden Guest has been appointed secretary

Applications (from British born candidates normally resident in the United Kingdom) and all communications in connexion with the scheme should be addressed to the Secretary Leverhulme Fellowship Scheme Union House St Martins le Grand E C 1 who will furnish further information and a schedule of the particulars required

The advisory committee will meet early in July to consider recommendations for the first awards under this scheme They will then be able to deal with applications received up to June 19th Later applications will be considered afterwards But it will be a convenience to the committee if as many applications as possible are in the hands of the secretary by June 19th

THE MEDICAL AGENCY

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Telegrams REAGRANT RAND LONDON

LONDON S E —Middle and working-class G P situate in pleasant locality *Medium sized* house available to rent Receipts approx £1 000 p a Panel nearly 1 000 Fees 2/6 up Premium 2 years purchase or near offer

LONDON E —PARTNERSHIP in old established G P situate in thickly populated working-class locality House to rent at £80 p a Receipts approximately £2 690 Panel 4 780 Fees 1/6 up Premium for one third share 2 years purchase

LONDON W —Old-established middle class G P situate in well populated locality within 15 minutes of West End Suitable house to rent on lease at £150 p a Receipts £1 600 Panel approx 950 Fees 3/6 up Premium 2 years purchase or near offer

MIDDLESEX —Middle class Country Practice Conveniently situated house available to be rented on lease at £56 p a or purchased for £900 Receipts over £500 Panel 100 (increasing) Scope for increase Premium £500 for quick sale

LONDON W —Middle class G P situate in the heart of West End Three first floor rooms to be rented on lease May be used as Lock up if desired Receipts average £460 p a (cash) Panel 184 2 appointments Scope for Surgery Premium £300 (cash)

ESSEX —NUCLEUS Country G P held by Lady Doctor Medium sized house with large garden to rent or purchase Receipts approx £360 p a Small panel Visits 3/6 up Good scope for man or woman doctor Premium to be mutually arranged

LONDON W —Mixed residential working class PRACTICE Corner house to rent part sub let net rental £17 p a Receipts approx £300 Panel 200 Fees 2/6 up No night work Premium for Practice and lease £500 or near offer

WEST END (adjacent) — Well established middle class C P Excellent scope Medium sized house to rent on lease Suitable for experienced man aged about 35 Receipts average £900 Panel nearly 700 Premium 2 years purchase

CUMBERLAND —PARTNERSHIP (after short Preliminary Assistant hip) in very old-established industrial Club and Panel C P Good house available to rent (garden, garage) Receipts average £5,263 p a Panel 2 488 Fees 3/6 up Scope for surgery Two appointments Premium for one fourth share 1½ years purchase with option of increase within 6/12 months

LONDON E.C —Mixed cash and Panel Lock up PRACTICE, with house accommodation if desired facing main thoroughfare held on lease at £95 p a Receipts approx £700 Panel 500 (growing steadily) Fees 1/6 to 10/6 (almost entirely cash down) Midwifery not undertaken Premium £1,000 or near offer

MANCHESTER — Old-established Industrial PRACTICE Medium sized house to be rented on lease Receipts approx £650 increasing Panel nearly 800 Fees 2/6 up Premium £950 or near offer (to include furniture)

NORTHANTS —DEATH VACANCY —Well-established middle and working class G P situate in Country Town Suitable detached house available garden, garage Receipts £500 p a Panel 510 Fees 2/6 upwards Premium for Practice £750 House £800

LIVERPOOL —PARTNERSHIP in good middle-class C P in Suburban district. Excellent detached house for sale or rent (furnished or unfurnished) garden, garage Receipts approx. £2 000 Panel 600—800 Fees 3/6 up Hospital appointment Excellent scope Premium for one half share £2 100

LONDON N W —Lock up NUCLEUS situate in residential locality Suitable accommodation if desired Receipts £230 Panel 180 Fees 2/6 up Premium 1½ years purchase or near offer

MIDDLESEX, W —Well-established C P situated in semi rural locality Choice of two houses to be rented Receipts approximately £2,300 Panel about 1 500 Fees 2/6 up. Suit two friends in Partnership or a Principal and Assistant Premium we are instructed to ask £5,000 for goodwill and certain furniture, carpets etc

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DURHAM —Middle-class and industrial PRACTICE Average receipts £550 Panel 380 Medium sized house to rent on lease at £52 p a Branch Surgery Fees 2/6 up Premium £450

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2 DORSET —Well established Country Town PRACTICE Receipts about £1 000 p a Panel 492 Both increasing and good fees and midwifery Nice house to rent 5 beds etc

3 WORCESTERSHIRE (Border) — Unopposed Country PRACTICE Receipts over £794 p a Panel 920 both increasing Good fees Nice house to rent 4 beds etc

4 LANCS —Well established mixed panel and private PRACTICE Receipts last year £725 Panel 1 050 Good house to rent 5 beds etc

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4 ESSEX TOWN — Well established middle class PRACTICE. Receipts nearly £500 p a panel 250 Very nice house rent £ p a Good scope for increase Premium £

5 WALES Large Town —DEATH VACANCY — Well established PRACTICE Receipts £900 including panel about 1 Reasonable offers considered

6 SOUTH WALES — Well established PRACTICE Vendor retiring Income £300 panel small Nice house rent £ Vendor's own property Premium £

7 HAMPSTEAD N W —Well-established PRACTICE capable of good extension Receipts about £200 p a panel 200 Surgery Premium quick sale £150 and furniture included

8 NORTHANTS — DEATH VACANCY — Well established mixed-class PRACTICE Income receipts average £500 p a Panel over Nice house could be rented Premium £750 Sole charge

9 YORKS — Large Town —Old-established first class PRACTICE Average panel 400 Nice house on rental Premium £1 200 Vendor moving to London

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NORTH EAST COAST.—PARTNERSHIP with view to early succession in sound mixed-class Practice. Cash receipts last year £2,354. Panel 2,070. Appointment £120 p.a. Scope for increase. District growing and practically no unemployment. Excellent house specially built for Practice. Premium—7/12 share—2 years purchase.—No. 461.

LANCS LANCS TOWN near Manchester.—Old-established mixed PRACTICE. Average cash receipts £1,080 p.a. Panel 1,060. Scope. Good house 2 reception 4 bedrooms garage and garden. Rent £85 p.a. Premium 1½ years purchase.—No. 457.

NEAR HULL.—Mixed General PRACTICE in pleasant district near Housing Estate. Cash receipts last year £953. Appointment £82 p.a. Panel over 500. Scope for increase. Vendor retiring. Premium 1½ years purchase.—No. 463.

LARGE LANCS TOWN near MANCHESTER.—Old-established mixed PRACTICE. Cash receipts last year £1,200. Panel 950. Some surgery if desired. Good house in main road 2 reception 3 bedroom 3 professional rooms and garage. Rent £80 p.a. Premium 1½ years purchase.—No. 462.

NORTH WALES.—Old-established mixed PRACTICE in Country Town near Coast. Cash receipts last year £700. Panel 538. Scope for increase as the Practice has been neglected. Excellent house 3 reception 5 bedrooms garage and large garden. Net rent £50 p.a. Good sport and educational facilities. Welsh not essential. Cottage Hospital. Premium £800.—No. 412.

LARGE LANCS TOWN.—Very old-established middle-class PRACTICE averaging £3,267 p.a. Panel 500. Appointment £300 p.a. Partnership with succession in 12-18 months' time. Good semi-detached house 3 reception 6 bedroom garage and garden. For sale or would rent on Lease. Vendor retiring. Premium 1½ years purchase.—No. 464.

NORTH WEST COAST.—Large residential and seaside town.—Old-established PRACTICE. Cash receipts about £1,200 p.a. Panel 1,500. Excellent detached corner house (freehold) 3 professional rooms 5 bedrooms and 2 reception rooms garage and good garden for sale. Premium—Practice—1½ years purchase.—No. 417.

LANCS TOWN.—Mixed general PRACTICE. Cash receipts last year approx. £1,500. Panel 829. Scope for surgery if desired. Good house containing Operating Theatre 3 professional rooms 2 small ward and living accommodation. Rent £60 p.a. on lease. Premium 1½ years purchase.—No. 460.

LAKE DISTRICT.—Small Seaside Town.—Beautiful district.—Mid-Health PRACTICE. Cash receipts over £800 p.a. Panel 250. Excellent freehold house (on sea front) 3 reception 7 bedrooms garage and nice garden. For sale or may be rented on Lease. Premium 1½ years purchase.—No. 388.

MANCHESTER.—Very old-established good class PRACTICE. Residential suburb. Average cash receipts £1,[illegible]. Panel of 464. Excellent freehold corner house 3 reception 4 bedrooms 4 professional rooms, garage and garden. Price £1,500. Premium for purchase.—No. 458.

EAST YORKS.—County Town near Coast.—Long-established PRACTICE. Cash receipts last year £960. Panel 630. Excellent detached house 3 reception 4 bedrooms garage and garden. Premium 1½ years purchase.—No. 346.

NR. MANCHESTER.—Old-established mixed PRACTICE. Average cash receipts over £600 p.a. Panel 632. Good house in main road 2 reception 4 bedrooms. Rent £45 p.a. Premium on retirement.—No. 450.

N. STAFFS.—Old-established Country PRACTICE in charming district average £600 p.a. Panel 1,632. Appointment (transferable) £100 p.a. Practically unopposed. Scope for increase. Excellent house with ample accommodation garage and garden. Rent £84 p.a. Premium 1½ years purchase.—No. 426.

MEDICAL WOMAN'S PRACTICE.—MANCHESTER.—Cash receipts last year £645. Panel 450. Good scope. Excellent house 3 reception 6 bedroom garage. Rent £80 p.a. on lease. Premium best offer.—No. 330.

NEAR NEWCASTLE-ON-TYNE.—Mixed General PRACTICE, averaging £800—£850 p.a. Panel 600. Scope for increase. Good house 3 reception 5 bedrooms garage and garden. Premium £950.—No. 422.

CO. DURHAM.—Small PRACTICE offering great scope in busy country district. Cash receipts £ p.a. Panel 1,500. Good semi-detached house (3 bed.) to rent at £55 p.a. Garden. Premium £350.—No. 265.

DEATH VACANCY.—Cheshire Coast Town near Liverpool.—Cash receipts £500-£550 p.a. Panel 1,100. Good house 3 reception 5 bedrooms garage & yard. Rent £80 p.a. Premium best offer.—No. [illegible].

MANCHESTER.—Middle-class PRACTICE, [illegible] Cash receipts last year £1,327. Panel 528. Charming [illegible] reception 3 reception 6 bedrooms billiard room. Large [illegible] garage. Premium—Practice—1½ years purchase.—No. 322.

NORTH WEST COAST.—Large Seaside Town.—Mixed (dispensing) PRACTICE. Cash receipts £874 p.a. Selected [illegible] 250. Excellent house (freehold) 2 reception 5 bedrooms and garden.—No. 266.

MANCHESTER.—Old-established Panel and Private PRACTICE. Cash receipts last year £642. Panel 788. Good house 2 reception 4 bedrooms garage. Rent £40 p.a. Premium 1½ years. Purchase or near offer.—No. 453.

DEATH VACANCY.—NORTHAMPTONSHIRE.—Country PRACTICE of £500 p.a. Panel 510. Scope for increase. [illegible] reception 3 bedroom garage and large garden. Rent £40 p.a. Premium best offer.—No. 409.

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Scotland

Scottish Hospital Services

A report on the hospital services of Scotland has been issued to the Department of Health by the Consultative Council on Medical and Allied Services Briefly its recommendations are that all the hospital services in a given area whether voluntary or statutory should be co-ordinated that they should all be equipped for dealing with the same types of illness that the question whether a patient is to receive treatment should be decided purely on medical grounds that the same power of charging should apply in voluntary as in statutory hospitals that the staffs should be of equal professional standing and that there should be a common practice in the matter of payment of the medical staff The report gives a résumé of the changes which have been effected by the Local Government (Scotland) Act of 1929 It points out that the voluntary hospitals differ from the statutory hospitals in that they are maintained wholely or mainly by voluntary contributions and the managers are under no legal obligations to the public The statutory or municipal hospitals however are maintained out of rates levied by the local authorities who have defined obligations for the treatment of the necessitous sick of mothers and children and of patients suffering from infectious diseases under the new powers they may also provide for the same classes of patients and the same types of illness as the voluntary hospitals The report affirms that there should be close co-operation between the voluntary hospital and the statutory hospitals in any given area so that the patient who cannot be provided for in one hospital may be admitted to another It suggests that it may be found desirable in large centres to provide a clearing house where patients may be allocated among the hospitals in the area Such a clearing house would economize accommodation and would be in a position to secure the most effective use of ambulance services The question of payment by patients is regarded as not only of first-class importance but also of great urgency Scottish local authorities have no statutory power to impose charges on patients treated in hospitals for infectious diseases including tuberculosis but they have powers to make charges for other kinds of illness treated in statutory hospitals In general the voluntary hospitals have no power to recover costs of maintenance and treatment being often debarred by their charters from claiming any payment from patients A workman who has been contributing to some organized scheme of subscription to a voluntary hospital may if he falls ill not be able to secure immediate admission to such a hospital and that if he has to be admitted to a statutory hospital and is charged according to his means he may not continue willingly to subscribe to the voluntary hospital It is regarded as essential therefore that the voluntary hospitals and the statutory authorities in each area should work out a common policy and that the same power of charging should apply in voluntary as in statutory hospitals The obstacle to charging patients which might arise under certain charters of incorporation might be met by application to Parliament or the Privy Council or the Court of Session As a corollary to co-ordination of hospital services the staffs of both must be of equal professional standing and members of the staffs of the voluntary hospitals should be eligible to serve at the statutory hospital where local conditions make this practicable It is suggested that opportunity might be taken to increase the number of family doctors brought into active association with the hospitals It is also suggested that for the teaching of medical students and the training of nurses the statutory and the voluntary hospitals should be equally available within their respective limits and that further teaching might be made available at certain hospitals outside the principal centres with arrangements for medical students The situation of the large hospitals in university centres has enabled them to supply specialized services of a kind unobtainable in outlying areas but it is considered that the larger hospitals outside the principal centres—which might be called district hospitals—should be definitely linked up with the central hospitals for transfer of patients provision of consultant and specialist services clinical teaching and the training of nurses It is proposed that there should be some administrative mechanism to secure continuous consultation and co-ordination between the various organizations involved and it is suggested that in each region of Scotland there should be a committee representative of the statutory authorities the voluntary hospitals the medical schools and the medical profession to advise on matters concerned with the co-ordination of hospital services A copy of the report can be obtained from H M Stationery Office 120 George Street Edinburgh price 2d

Medical Education in Scotland

The students of Edinburgh University organized a meeting on May 26th in the University Union to discuss the question of reforming the medical curriculum Mr G N Masheder president of the union was in the chair and said that for some years past the Scottish students at their annual conference had been making demands for improvement of the medical curriculum but so far these demands had not borne fruit *Dr Chalmers Watson* said that a profound change in the system of medical education in this country was overdue Recent reports of meetings of teachers and students in the hospitals of London showed that the same matter was exciting attention in England and the British Medical Association had appointed a committee to draw up recommendations on this subject The opinions expressed appeared to be practically unanimous that the defects of the present curriculum were primarily due to (1) the excessive time and attention devoted to unnecessary detail in the preliminary scientific subjects such as anatomy physiology and pathology and the failure to correlate these subjects with the later clinical work of the students (2) defective appreciation by specialists of the limitations to the value of teaching in its relation to the daily work of the practitioner and (3) lack of adequate attention to many subjects of great practical importance in preventive medicine Taking anatomy as an example of the scientific subjects Dr Chalmers Watson pointed out that in Edinburgh the time allocated to this subject was 900 hours as against 450 hours devoted to medicine and practical medicine In the leading American universities on the other hand the corresponding figures were 260 and 1 160 hours There was very little doubt that by teaching the anatomy of the living as opposed to over minute anatomy of the dead at least 500 hours could be saved to the advantage of the student A different outlook on these matters would necessitate the following changes The student would begin his clinical studies in his first instead of his third year more time would be given to physiology more attention would be paid to practical surgery in the out patient department at the expense of time wasted in the operating theatre special subjects would be taught from the standpoint of the general practitioner at the end of the curriculum the student would be engaged for three terms in clinical work with no further theoretical examination in front of him The time saved by more effective co-ordination of subjects and teachers would allow more attention to be given to subjects of great importance in preventive and curative medicine at present largely neglected in the curriculum and to the physical well-being of the student If this scheme was adopted the subjects of the present first professional examination—

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NORTHERN BRANCH

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1 N E OF ENGLAND—PARTNERSHIP IN VERY OLD ESTABlished General Practice in an important City Cash receipts average £4 743 p a including appointment worth about £360 p a and a panel of 4 300 Semi-detached t n roomed house with garage and garden for sale Scope for increase Premium two fifths share 1½ years purchase

2 BORDERS OF SHROPSHIRE AND CHESHIRE—OLD ESTABlished PRACTICE averaging £1 055 p a in Market Town Panel 850 Nice detached house (5 bedrooms attics, etc) with garage and old world garden etc for sale Educational facilities Well equipped Cottage Hospital offering scope for one keen on Surgery Premium £1 580

3 LONDON S E—WELL ESTABLISHED PRACTICE AVERAGING £1 715 p a in populous Suburban District Panel about 1 650 Lents of scope for midwifery House (4 bedrooms garage etc) is held on long lease at nominal rent Prem 2 years purchase

4 W OF ENGLAND — PARTNERSHIP (WITH SUCCESSION within two years) in very old-established Country Practice of £1 900—£2 000 p a in very compact Village close to large City Panel about 1 300 Share up to one half would be sold at once at 2 year purchase

5 LONDON E—PARTNERSHIP IN WELL ESTABLISHED CASH and Panel Practice averaging about £2 700 p a in populous area close to the City Panel nearly 4 800 Living accommodation over Surgery Premium one third share 2 years purchase

6 PARTNERSHIP (WITH VIEW TO SUCCESSION) IN OPHTHALmic Practice in delightful Southern Seaside Resort Income £1 400—£1 500 Must be specially qualified and have sound practical experience in Ophthalmic work Half share at 1½ years purchase

7 LONDON S E WELL-ESTABLISHED PRACTICE IN OUTLYING Suburban District Cash receipts 1932 £1 008 including appointment worth £23 p a and Panel 993 Well situated corner house on main road 5 bed and dressing rooms) with garage and large garden to rent also separate Surgery to rent Scope for increase Premium £1 800

8 S W OF ENGLAND—PARTNERSHIP IN WELL-ESTABISHED Practice averaging £7 350 p a in important town Panel about 1 000 Working expenses light Double fronted house (6 bed and dr ing room) garden back and front for sale Some General Surgery Premium one fourth share £3 225

9 PRIVATE MENTAL HOME (FOR LADIES ONLY)—EXCEPtionally nice house and grounds A considerable sum required for the purchase Further particulars on application.

10 W MIDLANDS — A WELL-ESTABLISHED AND EASILY worked Country PRACTICE Receipts average over £790 p a including appointments worth £120 and a panel of 920 House (4 bedrooms, etc. electric light) Large garden, garage etc, to rent Premium £1,200

11 YORKSHIRE (W R)—PARTNERSHIP IN OLD ESTABLISHED Practice about £3 700 p a in one of the smaller and pleasanter Manufacturing Towns Panel 3 366 Suitable house available Hospital Premium one third share 2 years purchase

12 ITALIAN RIVIERA—SEASON PRACTICE IN SMALL SEASIDE Town Earnings past 5 months just over £500 Furnished flat for sale Scope Premium £750

13 SUSSEX—PRACTICE ABOUT £700 P A IN FIRST RATE Country Town Panel over 200, increasing rapidly Very little midwifery Well equipped maisonette containing 6 rooms and bathroom, rent £100 p a inclusive Premium £1 000

14 LONDON N — OLD ESTABLISHED PRACTICE OF £950 p a in pleasant residential district Panel 910 Excellent commodious house (6 bedrooms) fair sized garden and garage the latter of which is for sale Scope for increase Premium £1 500

15 LONDON E—CASH AND PANEL PRACTICE OF £860 P A in populous district Panel 570 Small house to rent on lease Premium 1½ years purchase

16 EASTERN COUNTIES — OLD ESTABLISHED COUNTRY PRACTICE Cash receipts about £720 p a including appointments over £150 and a panel of about 590 Detached house (6 bedrooms) in grounds of 1 acre for sale Premium for Practice £650

17 CO DURHAM—PRACTICE OF £540 P A IN RESIDENTIAL Colliery District near two large Towns Panel 380 Well-situated house (7 rooms) with good Surgery and Dispensary for sale or rent Scope for substantial increase Premium only £500

18 S W OF ENGLAND—OLD ESTABLISHED PRACTICE OF £750 p a in beautiful district Panel 300 Excellent house (6 bedrooms) for sale Premium 1½ years purchase

chemistry, physics and biology—would be taken in the pre-registration period of study In the new curriculum it would be possible and advantageous to arrange for further study of these elementary sciences in their application to the work of the practitioner The medical course proper should begin with anatomy and physiology, and this would still allow for its completion in five years Mr G H Colt of the University of Aberdeen suggested that at the end of five years study the student might become a qualified doctor with a certificate allowing him to practise but without a degree, and further attendance at hospitals and similar institutions might be insisted upon Mr Godfrey, of the department of anatomy in Edinburgh, suggested that the entire course might be increased by a year or eighteen months After a large number of students and others had made various suggestions, the following resolution was passed by an overwhelming majority ' That this House places on record its opinion that the present system of medical education in this country is unsatisfactory In its opinion important changes in the curriculum are essential, whereby more facilities for instruction in practical medicine are available and more assistance given in the principles and practice of preventive medicine The time required for this additional teaching can in its opinion, be obtained by a judicious modification of the teaching in the earlier scientific subjects, with some revision of the time and attention devoted to the teaching in the ' special ' departments of medicine and surgery "

Glasgow Post Graduate Courses

A summer session for post-graduate teaching in Glasgow has again been arranged under the auspices of the Glasgow Post-Graduate Medical Association The teaching facilities will fall chiefly into two divisions (*a*) general medical and surgical course and (*b*) clinical assistantships During the last two weeks of August and the first two weeks of September a whole-time course, for which an inclusive fee is charged, will be conducted in some of the general and special hospitals The course will include most of the subjects of interest to the practitioner—the mornings being occupied with general medicine and surgical diagnosis, and minor surgery in the Western Infirmary and the Royal Infirmary and the afternoons with special subjects in the special hospitals or special departments of the general hospitals, two subjects being dealt with each afternoon Clinical assistantships, which are limited in number are available in the summer months as well as at other times during the year They are designed to make provision for graduates who desire opportunity for detailed study of one or other of the specialties Full particulars may be obtained from the secretary Glasgow Post Graduate Medical Association, The University, Glasgow

Lord High Commissioner and Hospitals

This year the Lord High Commissioner, who represents the King at the General Assembly of the Church of Scotland is Mr John Buchan and, as usual, his duties have included visits to the principal hospitals in Edinburgh On May 24th the Commissioner and Mrs Buchan visited the Royal Infirmary and, after inspecting the surgical wards under the charge of Mr Struthers, presented the prizes gained by nurses Mrs Buchan paid a visit to the Royal Maternity and Simpson Memorial Hospital where special attention was paid to the ante-natal department, and with her husband visited the Scottish National Institution for Blinded Sailors and Soldiers at Newington House, where forty-nine blinded ex-service men are now employed in various processes of mat making, basketry and boot repairing On May 25th a visit was paid to the Deaconess Hospital, where Lord Sands, the chairman of the board, referred to the proposed extension of the hospital for out-patients and for the accommodation during illness of workers in connexion with the Church of Scotland The Deaconess Hospital was he said unique in that it was entirely managed and supported by the Church The institution had managed to balance its budget year by year and had never been in debt—a position due entirely to support from the Church particularly from the Women s Guild A visit was also paid to the Scottish Branch of the Queen's Institute of District Nursing where Lady Finlay joint honorary treasurer of the Scottish Council, explained that the object of the institute was to bring the benefit of skilled nursing into the homes of the people all over the country The district nurse might be described as the most finished product of the nursing profession a hospital training was followed by a complicated post graduate course including the C M B certificate, so that she was competent to meet any emergency that might arise

Slum Clearance in Edinburgh

In an address, on May 18th, on slum clearance in Edinburgh, Mr Allan W Ritchie, chief sanitary inspector of the city said that the Prince of Wales s appeal on behalf of slum clearance and rehousing would stimulate the desire to deal with this urgent problem Edinburgh Corporation he maintained had done more in this direction since the Royal Commission on Housing in Scotland reported in 1917, than other authorities Five improvement schemes had so far been promoted The first was the Cowgate Grassmarket scheme in 1923, which was followed by one for Leith in 1924 , the occupiers in both these areas were transferred to a large district of new houses at Lochend The Cowgate scheme had dealt with properties dating back 200 and 300 years The next scheme, in 1927, had covered many derelict properties, dating as far back as 1737, 1633 and even 1570, in the Canongate and other parts of Edinburgh Schemes for St Leonard s district in 1927 and 1929 provided for the clearance of some 1,544 houses and the people from these areas were in process of transference to Prestonfield and Niddrie Altogether the corporation had dealt with about 4 000 houses having a population of 12 000 people The general experience had been that the occupiers of the new houses appreciated the benefits of better environment and had responded to the fresh claims upon them by keeping their houses and gardens in order

England and Wales

London Voluntary Hospitals Committee

We print below the result of the election of members to the London Voluntary Hospitals Committee for 1933-6 At its first meeting, held on May 24th the committee elected the following officers chairman, Lord Riddell vice chairman Mr O N Chadwyck Healey , honorary treasurer, Mr E Vernor Miles , honorary secretary, Professor L S Dudgeon

Hospitals with Undergraduate Schools Mr C E A Bedwell Mr R Davies Colley F R C S , Professor L S Dudgeon, Mr A G Elliott Dr Geoffrey Evans Dr Anthony Feiling Dr A M H Gray Dr J M H MacLeod, Mr Robert Milne F R C S Sir Edward Penton Lord Riddell Sir Herbert Samuelson Mr Austin Taylor, Mr F P Whitbread Dr C M Wilson

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Welsh Tributes to Sir Robert Jones

The February number of *The Welsh Outlook* contains an editorial tribute to Sir Robert Jones—one of Wales's greatest sons—with a portrait supplement and signed appreciations by Sir John Lynn Thomas and Dr W Thomas of Prestatyn Sir John writes from thirty two years intimate friendship and from first hand knowledge in peace and in war of the great apostle of the Thomas splint There cannot be another Robert Jones He lived through two revolutionary epochs in the medical profession The first was the introduction of antiseptics by Lord Lister for general use in surgery The other was the creation by Hugh Owen Thomas of a special scientific branch in bone setting known as orthopaedic surgery in the very house where Robert Jones and I first met in 1900 Sir Robert Jones Sir John Lynn Thomas and Sir Dawson Williams late Editor of this *Journal* were a trio of intimate friends and here we have a glimpse of them in holiday mood They went together to a boxing match one night and when they returned to the club Williams and I had a revelation into our host's extraordinary character by a scientific racy discourse on the art of boxing with illustrative quick movements

When he sat down and explained how easy it was to control each or every movement by suitable splinting we then realized that Robert Jones's great interest in boxing formed one of the facets of his wide outlook on orthopaedics generally

Royal Sanitary Institute Congress

The programme of the forty fourth Congress of the Royal Sanitary Institute which is to be held at Blackpool from June 17th to 24th has now been issued Lord Cozens-Hardy will deliver his inaugural address as president on the afternoon of June 19th In the Section of Preventive Medicine presided over by Sir Henry Bracken bury the first day (June 20th) will be devoted to a discussion on A General Medical Service for the Nation The speakers will be Dr Alfred Cox Sir William E Hart Dr R M F Picken and Dr R G McGowan On June 21st a discussion on some psychological problems in industry will be opened by Dr Leonard P Lockhart Professor T H Pear of Manchester University and Mr F J Marquis In the Section of Architecture Town Planning and Engineering the subjects include slum clearance and rehousing and the Town and Country Planning Act 1932 Viscountess Erleigh will preside over the Section of Maternity Child Welfare and School Hygiene and papers will be read on the place of the maternity hospital or home in the maternity and child welfare scheme juvenile rheumatism social care work in the organization of a rheumatism supervisory centre the control of rheumatic infection in childhood and the working of the first orthodontic clinic in this country In the Section of Veterinary Hygiene the subjects to be dealt with include developments in the slaughter and inspection of animals for food food adulteration and the diseases of poultry rabbits and game Mr Walter Davies chairman of the Manchester Insurance Committee will preside over the Section on National Health Insurance and papers will be read on insurance of women and on sickness in the insured population of Scotland The Section on the Hygiene of Food is being arranged this year in conjunction with the Food Group of the Society of Chemical Industry During the congress there will also be conferences of representatives of sanitary authorities of medical officers of health of engineers and surveyors of sanitary inspectors and of health visitors

"The Difficult Child"

Guy's Hospital has been working on this problem for three years through its child guidance clinic—a section of the department of psychological medicine The staff of the clinic consists of ten medical and lay workers Problem children attend for a number of causes among which are disorders of behaviour and sleep personality deviations scholastic backwardness speech defects and suspected mental deficiency They are referred by other departments of the hospital or by other hospitals clinics for children's diseases private doctors school care committees and by a number of other organizations including the children's courts Children from 2 to 16 years of age are received the majority being between the ages of 9 and 14 A hospital playroom is provided where the patient spends the afternoon with other children under the watchful eye of a trained observer who makes notes on the child's behaviour towards his companions his preference for certain games or occupations and his general demeanour Finally the psychiatrist assesses the case making use of the reports submitted by the other members of his team Treatment usually consists of very simple common sense measures directed at the correction of the child's particular difficulties—often it is merely a question of his being given more adequate outlets for his energies such as being moved into a higher class at school joining a cub or scout organization etc —while steps are taken by the social worker to alter the home conditions which have led to unusual behaviour The problems met with seem to arise far more often from emotional maladjustments between the child and its parents or between one child and another than from conditions of poverty overcrowding or other bad circumstances in the home The results of three years working and observation at the Guy's Clinic suggest that many children have already been saved from becoming a burden upon their parents while the latest figures show that at least 60 per cent of the patients have well repaid the attention which has been given them

Liverpool Psychiatric Clinic

Since the opening of this clinic in May 1924 1 117 cases have been investigated comprising 12 530 attendances The need for an institution in Liverpool is shown by the fact that the demand for its services not only persists but continues to increase During the year ended March 31st 198 new patients were referred to the clinic —that is thirty-one more than during the previous twelve months Of these sixty two were men seventy one women forty four adolescents under 19 years of age and twenty-one children under 14 From its foundation the clinic has been very largely utilized by the general practitioner and 66 per cent of the new patients have been derived from this source There has also been a steady increase in support from the social organizations of Liverpool and district During recent years there has become apparent the need for linking medical and sociological activities if the best results in both preventive and remedial work are to be achieved and in no branch of medicine has this alliance proved of more value than in the practice of psychiatry Psychological medicine no longer restricts its attention to a study of the individual's ability to cope with the affairs of life but must include

British Medical Bureau

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Practices and Partnerships for Disposal (continued)

19 S. WALES — PRACTICE BETWEEN £250—£300 P.A. IN beautifully situated village about 4 miles from important town. Small panel. Nice house (6 bedrooms) electric light gas and company's water for sale or rent. Premium £280.

20 S. OF ENGLAND — PARTNERSHIP IN OLD ESTABLISHED Practice of nearly £1,950 p.a. in important town within 80 miles of London. No panel. Attractive corner residence (7 bed and dressing rooms) in half acre of walled in garden with garage, etc., for sale. Ample scope for increase. Premium on half share 2 years purchase.

21 ESSEX.—OLD ESTABLISHED PRACTICE OF ABOUT £600 P.A. in Suburban District. Panel 500. Well situated detached house (6 bedrooms) standing in own grounds with nice garden garage and stabling for sale. Scope for increase. Premium £650.

22 S.W. OF ENGLAND — WELL-ESTABLISHED MIDDLE AND better-class PRACTICE of between £1,200 and £1,300 p.a. in Seaside Resort. Panel 500. Excellent and well-situated large detached corner house with every modern convenience to rent on lease. Very good Educational facilities. Sport of all kinds including golf yachting etc. Premium £2,000.

23 LONDON S.W.—OLD-ESTABLISHED PRACTICE ABOUT £650 p.a. in well populated area. Panel 850. Separate surgery and private residence to be purchased. Scope for increase. Premium £1,100.

24 SURREY.—PARTNERSHIP IN SOUND OLD ESTABLISHED good mixed-class Practice about £3,000 p.a. in the Croydon area. Small panel. Very little midwifery. Excellent modern detached house for sale. Scope for increase. Premium on half share 2 years purchase.

25 ESSEX COAST.—MEDICAL WOMAN REQUIRED AS PARTNER in Practice of £2,500 p.a. in small Seaside Town. Panel 2,300. Modern house in good position facing Sea with 4 bedroom for sale. Scope for increase. Premium one fourth share £1,250 and further share later.

26 LONDON W.—STEADILY INCREASING NUCLEUS OF PRACtice in the Maida Vale district. Bookings for 11 months £249, of which about £100 has been received. Rent of consulting and waiting rooms 30/- weekly. Good scope. Premium £300.

27 WEST OF ENGLAND.—PARTNERSHIP IN OLD ESTABLISHED PRACTICE over £2,200 p.a. in County Town. Panel about 1,000. Premium one half share 2 years purchase. Good prospects for well-qualified physician (preferably M.R.C.P.) who should be an R.C. and who would have opportunity of getting on Staff of Hospital in near future.

28 LONDON E.C.—PARTNERSHIP IN OLD ESTABLISHED PRACtice in the City. Receipts average about £1,650 p.a., including appointments and panel worth over £500 p.a. Premium one half share £1,000.

29 NORTH OF ENGLAND — INLAND HEALTH RESORT — NON-dispensing PRACTICE of about £1,000 p.a. Small select panel. House (7 bedrooms) with large garden for sale. Premium—Practice—£750.

30 LONDON E.C. — NUCLEUS OF PRACTICE (ABOUT FOUR fifths Ophthalmic) in the City. Cash receipts average £268 p.a. Fees for Consultations £1 1s. to £2 2s. Consulting and waiting room to rent. Premium £100.

31 HOME COUNTY.—WELL-ESTABLISHED PRACTICE OF £700 p.a. in first rate Country Town and over 40 miles from London. Panel about 250. Fees 5/- to £1 1s. Large well-built residence (about 6 bedrooms) with modern conveniences. Beautiful garden, grass lot orchard etc. In all about 2½ acres. Excellent hunting. Premium Practice and house £4,500 (or near offer) which is less than the value of the house alone.

32 S. AFRICA.—RADIOLOGICAL PRACTICE IN A MOST DEsirable town with excellent climate. Cash receipts last year £1,450. Scope. Premium to include furniture carpets accessories etc. £2,200.

33 EAST COAST.—PRACTICE OF BETWEEN £750 AND £800 p.a. in a purely Residential Seaside District within 40 miles from London. Small Panel. Detached house (5 bedrooms) for sale. Scope for increase as district is growing.

34 SURREY.—PRACTICE OF £1,000 P.A. IN RAPIDLY GROWing Residential District within 15 miles of London. Panel 400. Suitable house with separate professional accommodation for sale. Scope for considerable increase. Premium £1,600.

35 LONDON W.—GOOD MIDDLE-CLASS PRACTICE £400 P.A. in suburb within easy access of the West End. Panel over 100. Attractive double fronted house with nice garden for sale. Scope for increase. Premium 1½ years purchase.

36 CORNWALL.—VERY OLD ESTABLISHED PRACTICE OF OVER £1,100 p.a. in delightfully situated seaside village on West Coast. Panel about 550. Well built house (7 bed and dressing) standing in half acre of ground for sale. Scope as building is going on. Premium 1½ years purchase.

37 LONDON N.—PARTNERSHIP IN PRACTICE ABOUT £3,250 p.a. in thickly populated Suburban District. Panel about 800. One fourth or one third share at 2 years purchase.

38 HOME COUNTIES — OPHTHALMIC PRACTICE BETWEEN £500 and £600 p.a. in desirable Residential Town, under 15 miles from London. Good detached house (4 bedrooms) with large garden for sale. Good reasons for plenty of scope for increase. Premium £300.

39 LONDON E.C.—OLD ESTABLISHED LOCK-UP PRACTICE of £646 p.a. Panel 459. Living accommodation to rent if desired. Premium £1,000.

40 S. AFRICA — OPHTHALMIC AND GENERAL PRACTICE about £1,400 p.a. (about 60 per cent. Ophthalmic) including appointments £400. No Ophthalmic opposition. Premium £600.

41 N. OF ENGLAND — OPHTHALMIC PRACTICE OF OVER £1,600 p.a. in an important town. Excellent scope for one keen on clinical and operative Ophthalmology. Large house in first-class condition for sale. Purchaser should be well qualified. Premium £2,500.

42 S. AFRICA — PRACTICE OF ABOUT £2,000 P.A. IN A famous town. Pleasantly situated detached bungalow (5 bed rooms) garage and small garden for sale. Good hospital (with private wards). Premium £1,100.

43 LONDON WEST END — X-RAY AND ELECTRO-THERAPeutic Practice. Receipts 1931 nearly £620. Suitable and convenient flat at moderate rent on lease. Premium £925.

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Accountancy and legal services furnished by the Agency, where desired, at moderate inclusive charges. No charge is made to Principals for the introduction of Locum Tenens or Assistants

1 DEATH VACANCY —WEST MIDLANDS —Well established PRACTICE situated in very attractive market town, amidst beautiful surrounding country rapidly increasing and offering good scope for further development Gross cash receipts for last twelve months £1,814 Panel with mileage, brings in about £480 and appts worth £65 Fees 3/6 to 21/ Very good well equipped Cottage Hospital and there is excellent scope for major surgery Nice corner house with good accommodation and pleasant garden Can be purchased or rented Very efficient Locum in charge

2 LONDON, WEST END —Very old-established good class non dispensing and non panel PRACTICE held many years by Vendor who is selling owing to failing health Cash receipts for past three years average £3 123 p a Average visiting fee 10/6 up to 21/ No midwifery or night work Good family residence with ample accommodation, for sale Vendor s leasehold property Six months introduction given

3 LONDON SUBURB, NORTH WEST —Very old-established panel PRACTICE with better class connection attached and situated in a pleasant residential suburb Cash receipts over £2 800 including panel of 3,150 and transferable appt worth £70 Very good house, with ample accommodation (7 bedrooms etc) Price leasehold (with 11 years to run at a ground rent of £15 p a) £1 500 Rent of separate Surgery on 21 years lease £52 inclusive Premium £7 000

4 LANCASHIRE — LARGE TOWN —Old established good mixed-class PRACTICE held by Vendor for the past ten years Average gross cash receipts £1 458 Panel of 1 674, and several Insurance appts Corner house, in very pleasant residential locality containing consultation room 2 waiting rooms dispensary, 2 reception rooms 4 bedrooms, bathroom kitchen, etc Garden Garage Price for free hold £1,400, £1,000 on mortgage Good scope for increase

5 LONDON, NORTH —Old-established middle and working class PRACTICE, held by Vendor 11 years Average gross cash receipts £975 Panel of over 900 Fees from 2/6 Semi detached corner house in good condition with ten rooms and usual offices Separate entrance to professional rooms Price for leasehold £600 Premium £1,500

6 LONDON, EAST —Middle and working class PRACTICE producing £1 000 p a including panel of about 1 100 Suitable small house with sitting room, 2 bedrooms, and attic, waiting room, surgery and dispensary Rent £52 p a Premium 2 years purchase

7 HOME COUNTIES —PARTNERSHIP —Residential Town, within easy reach of London A one third share is offered in a very sound old established Practice producing for the last 12 months nearly £4 500 Panel of 2 500 Fees from 3/6 to 21/ Very nice house, with ample accommodation, or smaller one if desired Ingoing Partner should be experienced accustomed to better class work able to undertake major surgery, and pref hold a Fellowship Premium £3,000

8 DORSET —Well established PRACTICE, in very pleasant town within easy reach of the coast Gross cash receipts over £1 000 of which about £400 is from panel Fees 3/6 to 21/ Opposition not strong Good house with 2 reception 5 bedrooms etc garden of nearly 3 acres Rent on lease £62 p a Premium £1,750

9 LONDON SOUTH EAST —Old-established better working class PRACTICE increasing and situated in well populated district Gross cash receipts for last 12 months £1 263 including panel of over 1 300 Suitable house, with 2 reception and 3 bedrooms Garden Price for freehold £1 100 Premium £2 400

10 EASTERN SUBURB —Very old established middle and working class PRACTICE worth about £1 100 p a including panel of 1 350 Very little midwifery House contains 2 reception 4 bedrooms, etc, separate entrance to professional rooms Small garden Garage Price for freehold £1 350 Premium 2 years purchase

11 EASTERN COUNTIES — FAVOURITE SEASIDE AND HOLIDAY RESORT —Good mixed-class PRACTICE established many years and producing for the last twelve months £1 600 Panel brings in £300 p a and an appt worth £100 p a Fees 3/6 to 7/6 with medicine extra Nice house, with 2 reception 5 bedrooms etc Garage Garden Price for freehold £2,250 Golf, shooting, and other sport Premium 1½ years purchase

12 PARTNERSHIP —In a well populated pleasant South Eastern suburb within ten miles of London the half share of an old established mixed class Practice is for disposal owing to the retirement of the junior partner Held by the remaining partner 30 years Cash receipts average £2 765 p a including panel of 1 800 and appts worth £150 Very little midwifery Pleasant semi detached corner house with ample accommodation garden Price, leasehold (over 900 years at ground rent of £7 p a), £1 050 Premium 2 years purchase Scottish graduate preferred

13 CO DURHAM —PARTNERSHIP —A five-twelfths or seven twelfths share is offered in a well-established sound mixed-class Practice Gross cash receipts of which average approximately £2 400 p a Panel produces £850 and P M S £720 p a Appointments worth £120 Succession to the whole in four years, or sooner Good house, specially built with ample accommodation for sub Practice is situated in a growing area and offers excellent scope for further development Premium for share 2 years purchase

14 NORTH EAST COAST —PARTNERSHIP —A one-half share is offered in an old-established better middle-class Practice in suburb of favourite residential town Steadily increasing and excellent in the prospects Gross cash receipts £1 700 Panel of 700 Fees from 3 6 Very nice house, with 2 reception 4 bedrooms etc One acre of garden Garage for 2 cars Rent on lease £80 p a Sport of all kinds and good schools Premium for share 2 years purchase

15 MANCHESTER —Old-established middle and working-class PRACTICE, producing for the last twelve months about £650 including panel of 790 Fees from 3/6 Convenient house with 2 reception 4 to 5 bedrooms bathroom etc Rent on lease £60 Premium £[illegible] to include furniture

16 SOUTH [illegible] country district within 4 miles of large town producing between £300 and £350 p a offering fees from 5/ Very little midwifery or night work Well situated house with well kept garden containing 2 reception 3 good sized bedrooms, and servants room Electric light and gas throughout Garage Rent on lease £70 p a

17 CENTRAL LONDON —Middle and better-class PRACTICE, averaging for the last two years about £500 p a including small panel of 180 Fees 3/6 to 21/ Professional accommodation can be rented at £200 p a Premium £300, to include furniture drugs, instruments, etc

18 SOUTH EAST LONDON —Good middle and working-class PRACTICE producing last twelve months nearly £950 Panel of 986 Suitable house with 2 reception 4 to 5 bedrooms etc Rent on lease £[illegible] p a Premium, to include drugs, etc., and surgery fittings and furniture £[illegible]

19 HOME COUNTIES —ASSISTANTSHIP with view to Partnership is offered in a better class Practice in residential town Ingoing partner must have experience of general Practice and be able to undertake major surgery, and preferably hold a Fellowship

20 NORTH WALES —Old established middle and working-class PRACTICE averaging for the last three years over £1 700 including panel of about 1 300 Fees from 2/6 Visits from 3/6 with medicine extra Suitable house with good professional accommodation Electric light Garage for two cars Small garden Rent on lease £100 p a Premium £2 500, £1 700 down balance by instalments Good sport, etc. A knowledge of Welsh is not necessary

21 RIVIERA —Old established PRACTICE the receipts from which have averaged over £1 600 p a but have decreased recently owing to Vendor s ill health Very good prospects of extension Fees low £1 1s Very easy work Suitable flat can be rented at £160 p a Premium £4 000

22 MIDLANDS —Old established middle and better class PRACTICE clean and attractive manufacturing city Cash receipts over £1 600 p a including appt worth £165 (transferable) panel of 1 220 Visits 5/ to 2 gns Midwifery discouraged from 5 to 15 gns Exceptionally good house in its own grounds with ample accommodation fitted with every labour saving device economically run Situated in the best residential part Tennis in the grounds is let at £37 a year Price freehold £5 000 (£[illegible] on mortgage) Premium £3 500 Scope for active man

23 EGYPT —Well established PRACTICE producing about £[illegible] and offering good scope for increase Fees 10/6 to 2 guineas Excellent accommodation can be rented at £16 10s monthly Premium to include all furn, drugs, drug bottles instruments etc £2[illegible]

FOREIGN APPOINTMENT —SOUTH AMERICA —MEDICAL OFFICER required for Company Must be well up in Surgery and have a knowledge of Tropical Diseases and if possible Sanitary [illegible] Three years agreement. Salary £750 rising annually to £[illegible] First-class passage out and home Aged 30 to 35 Married or [illegible]

ASSISTANTS REQUIRED —(1) STAFFS Outdoor £300 p a [illegible] (2) LEICESTER Outdoor, £350 p a with rooms and [illegible] View to Partnership in 12 months Single preferred (3) LONDON Indoor, £300 p a (4) BRISTOL Outdoor £300 p a [illegible] Scottish Graduate preferred and must be single (5) LONDON Indoor £300 p a

The Agency has made arrangements for special facilities, on very favourable terms, to be afforded to approved purchasers for the advance of part of the premium for any suitable practice or partnership Full details on application

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the study of the environment to which that individual is attempting to adapt himself The general practitioner, who has been closely associated with a family group over a number of years, is able to supply the psychiatrist, to whom he refers the case, with relevant environmental details So, too, agencies dealing with the moral, social, and economic welfare of the populace have much information in their case files of the greatest assistance to those who are studying and attempting to remedy states of nervous, mental, and behaviour disorder A clinic at which so wide a variety of nervous and mental disorders is investigated and treated loses its full value unless it also answers the purpose of a teaching centre During the past year this subsidiary function has been brought into action Having at its disposal the part-time services of an experienced psychiatric social worker, the clinic has been able to undertake the training and teaching of moral welfare students from the Josephine Butler Memorial House Opportunity has also arisen for the demonstration of psychological testing and psychiatric methods of approach to graduates and undergraduates in the teaching, medical, and other professions

Deafness

We have received from the Ministry of Health two circulars on this subject, both of which draw attention to a report by the late Dr Eichholz, *A Study of the Deaf* recently published by H M Stationery Office The first,[1] entitled *Prevention of Deafness* is addressed to maternity and child welfare authorities in England, and endorses the suggestion that closer attention be paid to the early and continuous treatment of infants suffering from ear defects particularly in respect of the sequelae of measles, scarlatina, diphtheria and meningitis, and of nose and throat defects It is suggested that wherever practicable, treatment of ear diseases should be entrusted to a medical practitioner who has special experience of this work The second circular,[2] entitled *The Deaf and Dumb*, is addressed to county and county borough councils in England and Wales and deals with questions relating to the social welfare and employment of deaf mutes It is suggested that public assistance authorities should use to a limited extent only the powers entitling them to make, with the consent of the Minister of Health contributions towards the support and maintenance of associations for aiding deaf-and dumb persons

Ireland

The Medical Profession and the Temporary Economies Bill

A meeting of delegates from the medical profession in the several counties in the Irish Free State was held in Dublin on May 9th to consider the Public Services (Temporary Economies) Bill The draft memorandum which had been prepared by the executive committee for submission to the Minister for Local Government and Public Health was adopted after amendment This memorandum has since been presented to the Minister and to representatives of the several parties in the Dail The position of medical officers in the public service, in this matter of proposed reduction in salaries, differs from that of other groups of public officers, and requires special consideration Medical officers are members of a learned profession, whose study for that profession has occupied several years of their lives The emoluments of this section of the Civil Service which includes such officers as the medical inspectors of the Department of Local Government and Public Health and the medical referees of the national health insurance system, are not large, and are certainly less than the emoluments the officers might reasonably have expected to receive if they had devoted themselves to some other line of professional work The attraction in these public health appointments lies in the confidence in their security, and anything which tends to diminish that confidence is likely to deter the most suitable candidates from seeking these appointments in future The conditions of service in the mental hospitals are already unsatisfactory The initial salary of assistant medical officers is £300 a year with unfurnished apartments—tradesmen in mental hospitals are paid as much, in some cases a little more—while the corresponding salary in the English, Scottish, and Welsh services is never lower than £350 per annum, with emoluments (board, fire, light, etc), valued for pensionable purposes at £100 per annum There are very limited prospects of promotion, and the outlook to an assistant medical officer of some seniority is discouraging as his prospect of promotion becomes less and his salary remains stationary The position of the resident medical superintendents is little better, and that of the county hospital surgeons, who are in most cases virtually whole time officers, is very similar to that of the county medical officers of health These medical men in the public health service must not only have a wide knowledge of general medicine, but they must be general surgeons to an extent unknown in any other line of medical professional work They must be, in fact, all-round specialists, for they must have such knowledge of the surgery of the eye, the ear, the nose and throat and of the abdominal organs as will make them prepared to operate in emergency They must also be expert in x-ray work and in pathology Most of the men holding these offices have been appointed in recent years, and have had reasonable hope of gradually increasing, not gradually diminishing, remuneration The position of the Poor Law medical officers, particularly those in dispensary work, deserves special consideration The salary varies between £175 and £350 a year It is not a salary in the ordinary sense of the term in that it is not devoted entirely to remuneration for work done , it is devoted in part to remuneration for work done and in part to payment of out of-pocket expenses It is impossible to allocate the proper proportion under these two heads In most country districts and the great majority of the Poor Law medical officers work in country districts, the annual cost of keeping and running a motor car—with the hire of a man—properly attributable to Poor Law work must be more than 50 per cent of the maximal salary , that is to say, 50 per cent or more of the so called salary is, in fact, out of pocket expenses This must be borne in mind should deductions be forced on dispensary medical officers A "cut" would also press more hardly on a dispensary doctor than on almost any other member of the community because he has been more severely hit than anyone by the financial depression It is the universal experience of country doctors that their income from private practice has almost vanished, and their dispensary work has increased beyond measure Some of those patients who formerly were treated by the dispensary doctor as private patients now attempt to claim his services as dispensary patients Thus his income from private practice has dwindled, while his dispensary work and the expenses incidental thereto have increased At one time the dispensary doctor was allowed a rebate of 50 per cent on his motor tax in view of his public service, but this concession has long since disappeared

[1] Circular 1337A 1933 H M Stationery Office (1d)
[2] Circular 1337 1933 H M Stationery Office (1d)

NATURALLY RICH IN VITAMIN "D"

NUTRITIONAL ANÆMIA IN INFANCY

The Minister of Health draws attention in Circular No 1290 (27th Oct , 1932) to the importance of the results of the investigations carried out under the auspices of the Medical Research Council on Nutritional Anæmia in Infancy (Medical Research Report No 157 Mackay) In this Circular the Minister recommends all authorities responsible for the care of infants to give practical effect to the recommendations made as the result of these researches for the prevention and cure of Nutritional Anæmia.

★ **The Milk Food which was used exclusively in this extensive work, and which is still being recommended for this purpose is** ★

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(Full Cream Milk Powder with Iron Ammonium Citrate)

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Coroner for the City of Dublin

Dr D A McErlean who has been appointed coroner for the city of Dublin assumed office on June 1st Dr McErlean was born in Belfast where his father was a well known solicitor He received his early education in Clongowes Wood and subsequently at University College Dublin He commenced law courses in 1900 and having obtained his B L practised as a junior barrister for five years in Dublin and in the North Eastern Circuit until 1908 At this time he started to study medicine graduating M B in 1913 and proceeding M D in 1926 He is visiting physician to the Mater Misericordiae Hospital Dublin and president of the Leinster Branch of the British Medical Association

The Rotunda Hospital

The annual report of the Rotunda Hospital Dublin covers the twelve months ending October 31st 1932 It has been compiled by the Master Dr Bethel Solomons and the two assistant masters in association with the pathologist and radiologist During the year the number of maternity admissions was the highest on record (2 690) of these patients 2 289 were delivered The intern and extern pre-natal departments were also exceptionally active and there is great need of a few out patient departments Including patients treated in their homes the Rotunda was responsible for 4 469 maternity cases during the year of which 3 842 were delivered In the extern department there was no death in the first ten months in the last two months two deaths occurred but in each case the aid of the hospital was only sought after birth in one instance and after abortion in the other The Master comments on the question of the most suitable form of anaesthesia in labour and refers to the correspondence in the *British Medical Journal* He insists that chloroform is dangerous in the hands of junior assistants that in a large maternity hospital some anaesthetics must be given by these that deaths attributable to chloroform have occurred at the Rotunda as well as at other maternity hospitals and that ether is well nigh foolproof The administration of nembutal by the mouth was tried in a number of cases it succeeded in some but the excitement accompanying the use of this drug was so pronounced that it has been discontinued An investigation is being conducted into the possibilities of sodium amytal Forceps were applied 119 times—a percentage rate of 5 19 In nearly all cases the low forceps procedure was used Dr Solomons states that midstrait forceps operations are only undertaken when very definite indications are present It is recognized that they add considerably to the gravity of the labour and this fact is impressed on all students Delivery is slow and anti streptococcal serum is given in each case as a prophylactic this the Master adds may seem extravagant but it is life saving and also economical for patients leave the hospital earlier Attempts were made to induce labour 169 times puncture of the membranes is still considered the best available method Only two cases were unsuccessful but many gave rise to anxiety owing to the slowness of incidence of labour There were 727 admissions to the gynaecology wing of the hospital and 577 of these patients required operations With regard to non-operative measures it is mentioned that diathermy is used for parametritis and sometimes for chronic salpingitis In surgical procedures the diathermy knife was employed for carcinoma of the vulva and urethral caruncle Radium therapy was conducted in the few cases of carcinoma of the cervix which were encountered Dr Solomons believes that in Ireland the incidence of this condition is relatively low Hysterectomy was performed 52 times in 1930–1 without mortality and on 62 occasions in the year under review with two deaths The varieties were total (28) subtotal (18) vaginal (14) Wertheim (1) and Caesarean hysterectomy (1) The subtotal operation is performed when there is no cervical erosion or ectropion and when leucorrhoea is absent Total hysterectomy is preferred in all other cases unless the patient is very stout or requires much vaginal repair when the vaginal route is chosen Clinical details are given of the more interesting cases The bulk of the report consists of the usual statistical tables

India

Prophylactic Treatment of Rabies

Continuing their investigation into the value of an etherized vaccine in the prophylactic treatment of rabies Lieut -Colonel J Cunningham I M S (ret) Major R H Malone I M S officiating director of the Pasteur Institute Burma and Major A C Craighead I M S assistant director of the Kasauli Pasteur Institute now record a study[1] of the comparative immunizing value of carbolized etherized-carbolized and etherized vaccines tested under identical conditions of dosage and administration In their previous memoir (1930) a complete summary was given of the history of antirabic treatment in India from 1900 until the start of their investigation when they concluded that the administration of etherized vaccine according to the Alivisatos method produced a statistically significant reduction in the mortality rate in the severe type of case as compared with Semple's carbolized vaccine It was noted however that the improvement coincided with the amount of brain substance used and the factors concerned were obscure An attempt was made therefore to elucidate the precise factor and to accumulate further evidence regarding the value of a shorter and more concentrated type of treatment for the less severe type of case The investigators bore in mind the hypotheses that rapid immunization was essential for successful prophylaxis in severely bitten patients with a presumably short incubation period and that larger doses given in as short a time as possible were more likely to produce rapid immunization than smaller doses injected over a longer period It was considered reasonable also to test the further hypothesis that equally good results might be obtained with dead vaccines provided that these essentials for rapid immunization were retained Living virus was eliminated therefore from the tests for the most part and the Alivisatos method of dosage was employed as the one which had proved most successful previously The results are recorded and discussed in the present memoir the most salient being a recommendation that a 5 per cent carbolized dead vaccine should now be substituted for the Alivisatos etherized vaccine previously employed Animal experiments left little doubt that the *virus fixé* from the Pasteur Institute in Paris had better antigenic properties than the Kasauli fixed virus which is commonly employed in India The mortality from the most serious bites—for example multiple ones of the face—was but little influenced by any of the methods of treatment tried and it is thought possible now that better results might be obtained by vaccines containing living virus The experiments brought out little evidence pointing to the value of early treatment this is attributed to the severity of the infection and the susceptibility of the experimental animals but there was a possible suggestion of grading in efficiency of vaccines according to the amount of living virus contained It was noted that treatment had

[1] *Indian Medical Research Memoirs* No 26 January 1933

no effect in prolonging the incubation period in monkeys In an appendix to the memoir Major Malone gives reasons for believing that in the period 1925–30 any significant differences in the death rates of the various populations studied were due to one exceptional condition—namely the method of treatment employed If no significance can be attached to these differences, it is deducible that no one treatment employed anywhere could be considered better than another

Hospital Services in the Punjab

The triennial report on the Working of Hospitals and Dispensaries in the Punjab for the years 1929 to 1931, inclusive, reveals that considerable progress has been made towards the ideal of providing one dispensary for every area of 100 square miles and one for each 30,000 of population The triennium opened with 964 dispensaries and closed with 1 024 ninety-five of the new ones being situated in rural areas Colonel D P Goil, I M S Inspector-General of Civil Hospitals Punjab, announces that the scheme of medical relief inaugurated in 1925 is almost complete only thirteen dispensaries still being required At the beginning of the triennium there were thirty-two itinerating dispensaries, all have now ceased to function owing to financial difficulties but the need for them has been much reduced by the steady multiplication of these stationary ones The taking over by the Province of district and tansil headquarters hospitals has also been arrested by pecuniary considerations, and sixty seven still await this step in the provincialization of medical treatment Except in Lahore hospitals so taken over are supervised by visiting committees There were large increases in the numbers of patients during the three-year period, and it was estimated that in 1931 more than half the population of the Punjab received medical treatment in the State-public, local fund, and private aided institutions There is considerable overcrowding in all hospitals which are surgical centres of repute throughout the cataract season each year, and extra accommodation has to be improvised to meet the rush of patients who come for operative treatment The figures for the Mayo Hospital at Lahore were the highest since its inauguration Progress in the development of the Government Hospital for Women and Children in the same city was exceptionally rapid, and the new accommodation provided enabled the admission of a larger number of new cases than had been anticipated It is no longer necessary, therefore for Lahore medical students to go to Madras for their obstetrical and gynaecological training The total number of new cases treated in all hospitals and dispensaries during the triennium was 39 363 000 as compared with 27 868,000 in the previous one and 20,750,000 in 1923 to 1925 The inauguration of the scheme of rural dispensaries increased the attendance of out-patients very considerably, many purdah women making use of them Diseases of the eye and malaria were the two outstanding reasons for attendance, there having been no grave epidemic of infectious disease in the three years A new dental hospital was opened at Lahore by the Government and proved very popular, nearly 18 000 patients having been treated there in 1931

Egmore Hospital for Women and Children

The Government Hospital for Women and Children at Egmore in Madras was founded in 1844, in the next year the first complete one of its existence, the number of confinements was 62 Confidence in it slowly grew and in 1861 the figure reached 1 000 to be doubled thirty years later Maternity cases alone numbered 3,311 in 1910 and 3 389 in 1931 There is now a large ante natal department and a children s section Just before the war a separate block was erected for teaching purposes solely This comprised a modern lecture amphitheatre, museum rooms clinical and research laboratories a photographic department, and residential accommodation for men and women students At that time, also additional wards, an out-patient block, an operation theatre and spacious quarters for nurses were provided Although this institution now ranks as one of the largest educational centres in obstetrics and gynaecology for medical students and wives, and specialists, the retiring superintendent, Lieut Colonel C A F Hingston, I M S, enumerates in his last report further steps which should be taken as soon as possible to remove certain inconveniences and to increas the efficiency of the hospital Of these the chief are the establishment of an obstetrical operating theatre re arrangement of the septic delivery ward so as to obviate any possibilities of cross infection, the construction of an ante natal ward and a more suitable ante natal clinic and a separate children's department, so that in the present infant welfare section, which includes this department, there may be more room for greater concentration on the physiological requirements of infants suffering from various diseases or needing safeguarding Colonel Hingston points out that the Egmore Hospital is a provincial institution rather than a Madras city building The majority of the more serious cases are drawn from almost every district in the Presidency and from the neighbouring Indian States Within the last few years a successful mothercraft department has been opened, with which is associated a training centre for midwives, who will thus be enabled to disseminate widely the modern ideals of infant feeding and infant care generally Post-graduate courses for general practitioners have also been a feature of recent years at the Egmore Hospital, they have attended from all parts of India, Burma, the Straits Settlements, Sumatra, Java, and many other parts of the Far East

CORRESPONDENCE

Substitutes for Morphine and Heroin

SIR,—During the past few years three new synthetic drugs have been manufactured and extensively used on the Continent as substitutes for morphine and heroin These drugs are being manufactured in Germany and are marketed under the trade names of dilaudid, dicodid, and eukodol respectively The clinical literature on these drugs is fairly extensive but little has been published with regard to their pharmacological actions A complete survey of the clinical and experimental work on dilaudid is given by Eddy[1] Articles in the medical press in this country and the United States of America show that considerable interest is felt in this drug I therefore venture to put forward briefly some evidence which I have myself obtained during the past eighteen months on the pharmacological actions of the drugs dilaudid dicodid and eukodol

Dilaudid is the hydrochloride of dihydromorphine It is a derivative of morphine and is manufactured from that substance Dilaudid is a white amorphous substance which is freely soluble in water and alcohol but is insoluble in ether The aqueous solution has a neutral reaction The name dilaudid is a registered trade name patented by Knoll A G of Ludwigshafen on the Rhine The drug is marketed as a substitute for morphine and the makers put forward claims for it as an analgesic and as a respiratory sedative

Dicodid is manufactured by Knoll A G and is the bitartrate of dihydrocodeinone Its chemical structure shows it to be a derivative of thebaine Since however it can be obtained from codeine it must be regarded from the stand

[1] *Journ Amer Med Assoc* 1933 c 10.62

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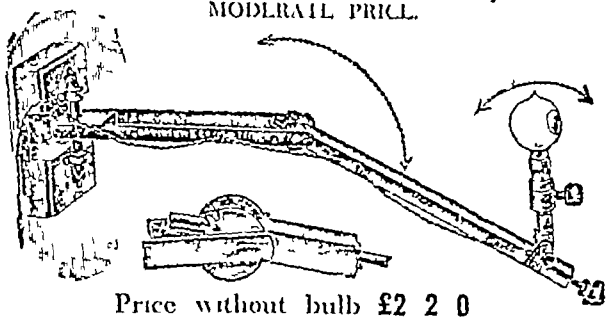

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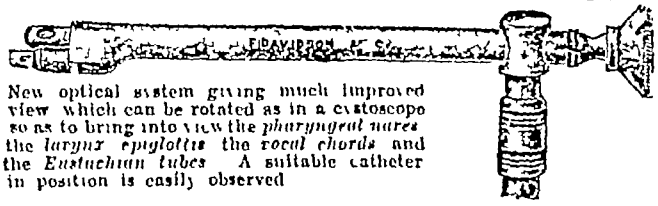

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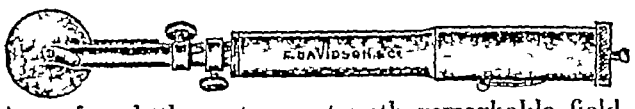

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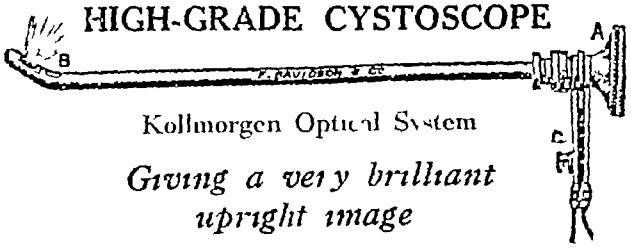

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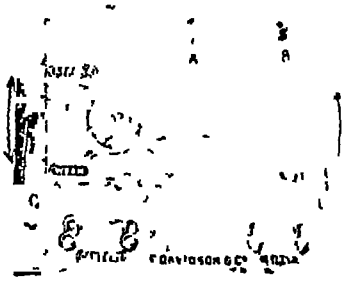

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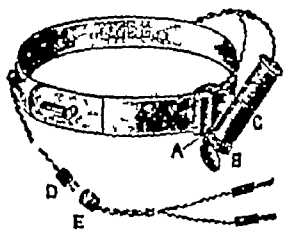

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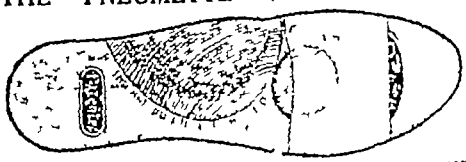

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point of production as a derivative of codeine and so of morphine It also is advocated as an analgesic and as a sedative of the respiratory tract

Eukodol is the hydrochloride of dihydroxycodeinone and is manufactured by a patent process by E Merck of Darmstadt It is not a derivative of morphine It is manufactured from thebaine and as opium contains but a small quantity of thebaine the amount of eukodol manufactured must be very limited No process is known for the manufacture of thebaine from morphine or codeine Eukodol is used for the same purposes as dilaudid and dicodid

The results of my experiments carried out on laboratory animals show that

1 The action of dilaudid or dicodid (0 5 mg per kg) on the intestine whether the organ be in situ or isolated (1/100 000 concentration) is the same and consists of stimulation of tone and movements (small doses) followed by depression (with large doses—that is 10 mg per kg and 1/20 000) These effects are quite similar to those produced by morphine and heroin except that heroin has a greater effect on intestinal tonus The action of eukodol differs from this since it produces little effect in small doses while large doses produce an increase in tone and movements

2 Dilaudid is the only one of these three drugs which has a marked effect on the pyloric sphincter and the stomach and in this respect it resembles morphine Dilaudid (0 5 mg per kg) produces a well marked increase in the sphincter movements which reach a maximum effect after about thirty minutes These increased movements may continue for a period of two or three hours At the same time the stomach movements are increased but the general muscular tone is not altered The action on the stomach is slow and gradual and reaches a maximum effect after about forty minutes These effects are very similar to those of morphine on the same structures The effects produced by dicodid or eukodol (1 mg per kg) on the movements of the pyloric sphincter and the stomach are so slight as to be negligible In doses of 5 or 10 mg per kg they do however slightly increase tone and movements and in this respect resemble codeine

3 Dilaudid (0 5 mg per kg) dicodid (0 5 mg per kg) and eukodol (5 mg per kg) markedly increase the tone of ileo-colic sphincter In this they resemble morphine and in Larger doses of eukodol than of either dilaudid or dicodid are however required to produce these effects dicodid which has a weak action on the pyloric sphincter has however a well marked action on the ileo-colic sphincter This contraction of the ileo-colic sphincter is very similar to that produced by adrenaline or by stimulation of the sympathetic nerves in the lumbar roots of the spinal column

4 These three drugs in doses as small as 0 1 mg per kg all produce a most profound effect on the respiration which becomes slower and deeper and the general effects resemble those produced by morphine A toxic dose of any one of these drugs produces a serious progressive depression of the respiratory centre as shown by a marked decrease in rate depth and efficiency of respiration The respiration is finally arrested before the heart is seriously injured

An interesting observation with regard to the toxicity of dilaudid and dicodid was made during these experiments It was found that if a small initial dose such as 0.25 mg per kg of one of these drugs was given to an anaesthetized cat the respiration became slower and deeper Enormous doses of the drug such as 20 or 30 mg per kg could then be given without causing death or even indeed producing much further effect on the respiration On the other hand if an initial dose in excess of the therapeutic dose (that is 3 mg per kg) was given then the respiration ceased and the animal died The explanation of this increased tolerance to dilaudid or dicodid after therapeutic doses is not apparent but further experiments are now in progress with a view to elucidating this

An attempt to analyse further the effect on respiration showed that (1) Dilaudid dicodid and eukodol have little or no action on the bronchioles (2) The sensitivity of the vagus centre is much increased after the administration of small doses of dilaudid (0 25 mg per kg) Larger doses (1 mg per kg) quickly depress it after a short initial period of increased sensitivity Similar effects were observed with dicodid Eukodol however appears to depress the vagus centre even in small doses (0 1 mg per kg) It is well known that morphine increases the reflex excitability of the vagus centre dilaudid and dicodid therefore resemble morphine in this respect.

Large doses of dilaudid and dicodid have a well marked action on the spinal reflexes One large dose (20 mg per kg) or several smaller doses given within a short space of time will produce twitching of the limbs or the whole body These twitchings when severe are of a convulsive nature and always can be produced in the conscious in the pithed or in the anaesthetized animal The period during which the reflexes are increased may vary from a few minutes to almost an hour according to the amount of the drug injected The twitchings can be abolished immediately by injecting curare or destroying the cord Dilaudid produces these twitchings much more easily than dicodid They are not produced by therapeutic doses but only when these amounts are grossly exceeded These effects are similar to those produced by heroin or morphine hydrochloride which are much more active in this respect Eukodol even in large doses (30 to 50 mg per kg) does not affect the spinal reflexes This is not what one would expect in view of the fact that eukodol is manufactured from thebaine which is a convulsant

The effects of therapeutic doses of dilaudid dicodid or eukodol on the blood pressure are so slight as to be almost negligible Dilaudid (0 25 to 2 5 mg per kg) however causes a slight slowing of the heart rate which has little effect upon the blood pressure The effects produced in mice (0 25 mg per 20 gram mouse) and rabbits (2 5 mg per kilo) after the injection of small doses of dilaudid and dicodid closely resemble those of morphine Respiration is markedly slower and deeper and signs of restlessness become manifest There is paresis of the hind limbs The gait resembles the hyenoid walk seen in the dog under the influence of morphine Marked analgesia is present Recovery takes place in a few hours Larger doses give rise to the symptoms just described Later there is an increase in reflexes which give place to convulsions and death follows (dilaudid 1 mg dicodid 10 mg per 20 gram mouse)

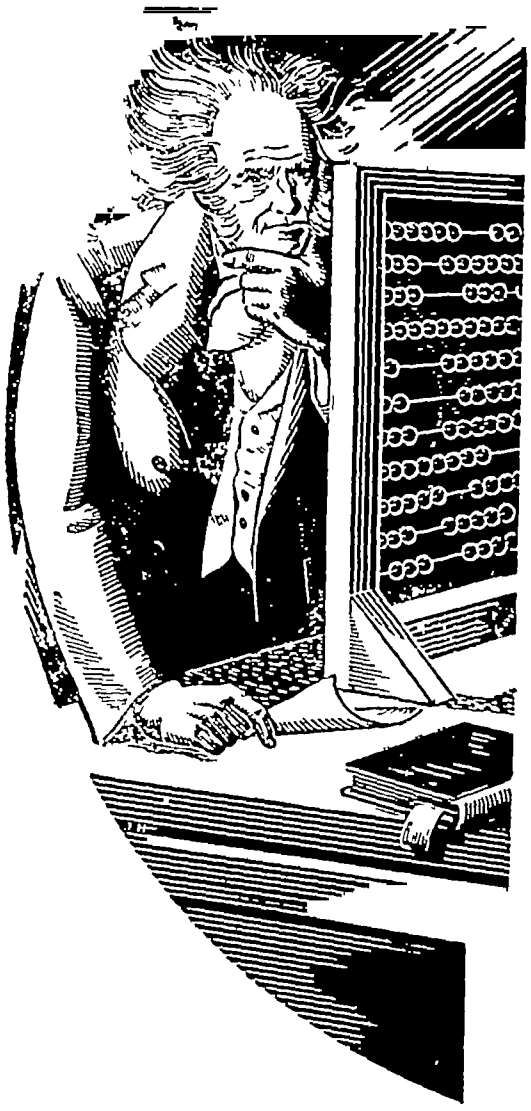
Eukodol differs from dilaudid and dicodid in two respects it does not cause convulsions and very large doses are needed to cause death The toxicity of dilaudid is much greater than dicodid which is in turn greater than that of eukodol The injection of any of these three drugs into mice causes a stiff erection of the tail which is very similar to that described by Straub for morphine or its esters Van Leersum[1] believes this to be due to intense tenesmus of the anal and bladder sphincters originating in the medulla and transmitted through the pelvic nerves while Heinekamp[2] refers it to stimulation of the spinal cord

The results of the investigation have shown that the pharmacological actions of dilaudid dicodid and eukodol are very similar to morphine but appear to be much more toxic smaller amounts of dilaudid than of morphine are needed to depress the respiratory centre Dicodid on the other hand seems to lie midway between morphine and codeine Eukodol differs from the others in many ways It has a much weaker action on the movements of the alimentary tract and does not increase spinal reflexes It has however a profound effect upon respiration which is as marked as that produced by either dilaudid or morphine So far as these investigations go there is no reason to think that any of these drugs are superior from a therapeutic point of view to morphine Experiments of this type of course throw no light on the question of addiction —I am etc

G NOPLAN MYERS

Pharmacological Laboratory
Cambridge May 28th

[1] *Journ Amer Med Assoc* 1918 lxxi 783.
[2] *Journ Pharm Exp Therap* 1922 x 107



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Genesis of Gall-stones

SIR,—Lord Moynihan, in a letter in your issue of May 27th, has taken Mr Patey to task for failing to mention, in his admirable article on "The Mechanism of Gall-stone Formation," the work of Dr Shiskin, and also for his statement "that attempts to correlate the amount of cholesterol in the blood with gall-stones have failed" Lord Moynihan restates his own views on cholesterol metabolism in this connexion, but we scarcely think that these are in accord with present-day views of workers in this field

Hypercholesterolaemia is not easily defined without a knowledge of normal limits Lord Moynihan quotes MacAdam and Shiskin's work, in which twelve normal cases were examined, the detailed figures not being presented in their original paper They found upper and lower limits of plasma cholesterol of 0 191 per cent and 0 133 per cent, with an average of 0 161 per cent He has quite unjustifiably divided the lower half of this region as normal and the upper half as high normal He then quotes figures of analyses made in abdominal conditions such as gastric ulcer, in which hypercholesterolaemia is not known to occur, and finds 23 per cent of the cases show hypercholesterolaemia, 50 per cent as normal, and 27 per cent show hypocholesterolaemia Surely, then, it is obvious that he has started with inadequately defined normal limits, as is indeed the case, since the data derived from perfectly normal people by many workers show far wider variations than his arbitrarily chosen limits It is, in fact, practically impossible to state that a moderate degree of hypercholesterolaemia is present in an individual case from single observations unless the individual's normal plasma cholesterol content has been previously well studied That he finds somewhat high figures for the plasma cholesterol content in cholelithiasis is not surprising, since both Campbell and ourselves have shown that such hypercholesterolaemia occurs whenever biliary obstruction is present but *not* in uncomplicated cholelithiasis But why does Lord Moynihan ignore the more complicated changes which occur in the blood in these cases of biliary stasis, such as have been demonstrated not only by ourselves but also by Adler and Lemmel, Thannhauser and Schaber, Stern and Suchantke, and Burger and Habs? In biliary obstruction we have shown that two types of change occur the first, a reversal of the free to ester ratio, is caused apparently by the effect of the absence of bile from the intestine (however deviated therefrom) on fat and sterol absorption the second, a hypercholesterolaemia with a reversal of the usual proportion of free and ester forms, is produced when biliary obstruction and retention persist for some time The further study of these phenomena is complicated by the capacity of the intestine of excreting dihydrocholesterol

In Lord Moynihan's paper (*Journal*, 1925, 1, 393, and not as quoted) Dr Shiskin's results are presented only as one graph of changes in pregnancy and one during menstruation, drawn with exaggerated ordinates, but which can hardly be compared with serious studies in which all details are published and available for examination Surely Mr Patey can hardly be blamed for not quoting results which admittedly had never been published That some degree of hypercholesterolaemia sometimes occurs in pregnancy we have shown, but the real point of interest again is the remarkable and constant cyclical change that occurs in the free to ester ratio

Mr Patey's statement as to the correlation between gall-stones and cholesterolaemia is quite correct if we exclude the effect of biliary obstruction There is no unequivocal evidence that either high fat feeding, or hypercholesterolaemia, or pregnancy with its inconstant hypercholesterolaemia, can cause any increase in the cholesterol content of the bile Further gross hypercholesterolaemia such as occurs for long periods in subacute forms of nephritis leads to no increase in the incidence of gall-stones On the other hand the evidence in Fowweather and Collinson's paper that hypercholesterolaemia is produced in gall-bladder disease by a "flood of cholesterol" (quoting Lord Moynihan's words) reabsorbed by the gall-bladder from the bile, is unconvincing

Lastly, we would suggest that no comprehensive theory of gall stone formation can be adequate if it ignores the close chemical relation between cholesterol and the bile acids, and more particularly the properties and distribution of the various bile acids which are so important in maintaining the different sterols of bile in solution At present we have no satisfactory method of estimating even the total quantity of bile acids present in bile, much less of determining their relative proportions—We are, etc,

J A GARDNER
H GAINSBOROUGH

London W, May 29th

Return to Principles

SIR,—When I read in the *Journal* of May 20th, in Lord Horder's address (p 859) on "New Treatments for Old" and in your leading article (p 881), of "deviations from the physiological that constitute disease," and of 'the disharmony we call disease," I was reminded of one of my medical teachers of more than forty years ago, who introduced each description of all the "labels" he had selected for his course of lectures by the words "a morbid process", and I feel now, as I felt long ago, that knowledge is not advanced much, if at all, by such phrases and that we are no further on Indeed, is a "morbid process" not the better term, since it connotes the something further which causes the "deviation from the physiological,' an invasion of something new which somehow determines "physiological disharmony"?

To identify a disharmony of physiology (disease) you say 'the medical man has at his disposal a well tried method upon which he can rely diagnosis" This stops far short of what is required We can all diagnose pneumonia, influenza, erysipelas, osteoarthritis, and the rest, but these are not the disharmonies, they are the full blown effects of an antecedent disharmony What is the nature of that disharmony, that departure from physiology, which produces what we diagnose and call disease? Would anyone say, in a case of pneumonia, that the real disharmony is the consolidation? Yet some knowledge of the underlying processes has been stated, is gaining ground, and may yet answer the questions as to the real principles which govern health and disease

But, leaving this out and departing at once from Harvey's exordium, which he quotes, Lord Horder suggests an interregnum—the cessation of laboratory work and of the seniors' activities in the hospitals—and a conference "to try to see where we are" Well, to me the answer, on the old lines is "Nowhere," and will, on these lines, for long be the answer, despite the enormous masses of accumulated useful knowledge Nor are we better off in therapeutics, unless light is also dawning slowly We assuredly do produce the results we want, and help to cure, or alleviate our patients, but as Lord Horder says, "we know so little about the way in which drugs act' We know the effects many drugs can be trusted to produce, but how they do it and what happens in the process that leads to the result we wish we seldom know "It is always Nature that cures not we', and we can only help But by what process does Nature cure? Not yet can that be answered with full and complete knowledge

Thus we have reached a stage where we call disease a physiological disharmony the primary nature of which we do not know where we say Nature cures not we but how she does it we do not know (we only know some of the steps she takes) where we know little or nothing of just how our drugs produce their action though fortunately we can so often predict and depend on it We are told to use remedies which will help to restore physiological equilibrium though we do not know the primary essential of that equilibrium nor what has caused and constitutes the primary upset of it The position is not too satisfactory

Yet there are movements in a better direction but I fear some of these come under Lord Horder's ban I do not for a moment advocate the indiscriminate trial of all the nostrums we are bombarded with nor the foolish administration and advocacy of any of them—especially the best and good ones (and these are *not* nostrums)—as recounted by Lord Horder in his Good Samaritan story But I do say the general practitioner is the man to try them out with all the care and discrimination he can bring to bear Many practitioners must see thousands of cases—simple early uncomplicated—which consultants never see in which the best of the newer remedies are useful And in cautiously accepting the stated method of action and using these remedies under whatever class of therapeutic activity they fall we do no more and no worse and may do much better than those who decry them and decline to use them preferring the older remedies though avowedly with little or no knowledge of how the older remedies act in producing the results expected

None but the most foolish would expect of any drug an action so miraculous as to do away with all necessary care (for example the three-day cure of influenza) or fail to employ concurrently every adjunct to the whole welfare of the patient—I am etc

Glasgow May 23rd R O ADAMSON

Meningitis from Bowel Toxaemia

SIR—In the *Journal* of April 8th there is a report of two cases of tuberculous meningitis resembling cerebro-spinal fever in which the main points were (*a*) brothers aged 6 and 3 years (*b*) duration five and three days respectively (*c*) both died within twelve hours of admission (*d*) cerebro-spinal fluid showed trace of albumin and numerous small lymphocytes

I venture to suggest for consideration a diagnosis of meningitis due to bowel toxaemia probably of Flexner group origin It is a not uncommon condition in South India and Flexner group infections are not unknown in Britain There may or not be a previous bowel history there is usually constipation but when the stool is obtained it is loose often contains mucus and cellular exudate is strongly acid and Flexner group organisms are cultivated The cerebro-spinal fluid is under pressure clear globulin is increased and lymphocytes are numerous there is no sugar

The meningitis is either fulminating and fatal or acute with good prognosis under intensive treatment with subcutaneous salines (for an adult 8 pints in twenty four hours) liquid protein diet (swallowing power quickly returns after the salines) and alkalis A curious feature is that except in to-be fatal cases the coma is only apparent the patient looks comatose but there is an awareness and alertness of mind without the power of expression I have known a patient signify disapproval of a relative's inaccuracy of statement by moving one finger and during the early stages of recovery the clear mindedness is very marked A further point is that Flexner group infections cause attacks of influenza like fever Was the mother's attack a week before the source of infection for the two boys?—I am etc

Medical School Vellore South India April 28th FLORA R INNES

Rupture of Lung without External Signs of Trauma

SIR—The remarkable case recorded in your issue of May 27th (p 938) by Dr F W Martin recalls to my memory a case which I reported in the year 1882 of a young man who had been knocked down by a cart and pushed along under its wheel without being actually run over Admitted to the Great Northern Hospital (then in the Caledonian Road) he lay for more than two months with puzzling symptoms indicating severe damage to thoracic and abdominal organs without any external signs of injury Post mortem examination showed that the right lung had been torn and that a portion of it had passed through the diaphragm—presumably ruptured at the same time—and a large piece of collapsed lung was found in the pelvis Hernia of lung into the abdomen is an almost unknown occurrence and the case is therefore doubly interesting The whole case with comments will be found in the *Lancet* 1882 i 139—I am etc

London S W 3, May 27th E CLIFFORD BEALE

Crypto empyema

SIR—I was interested in the article by Professor A Rendle Short in the *Journal* of May 20th (p 870) in which he refers to three cases of empyema where the diagnosis was difficult where repeated needling failed to reveal the presence of pus but where pus was found at operation Professor Rendle Short states A skiagram is useful it will show some opacity but it cannot be relied on to tell us exactly where the abscess is I cannot entirely agree with this statement Radiology is extremely useful in a large number of cases in determining where the pus is and particularly in those cases of encysted empyemas to which Professor Rendle Short refers Radiograms taken in the direct lateral position are extremely useful in the localization for example of (*a*) an interlobar empyema and (*b*) an empyema encysted between the base of the lung and the diaphragm These illustrate two types of cases to which Professor Rendle Short refers In cases of difficulty of this sort routine postero-anterior and direct lateral radiograms should be taken where possible The latter will often show the exact localization of the pus

I think that needling should not be used too freely as there is a considerable element of danger of infecting the general pleural cavity when one may be dealing with encysted effusions—I am etc

W PATON PHILIP M B D M R E D P H
Consulting Physician Papworth Village Settlement
May 24th Tuberculosis Officer Cambridge Coun

The G P and Midwifery

SIR—I may be wrong in my conclusion but I feel that Professor J M Munro Kerr in all that he writes does so with a bias against the capacity of the general practitioner of medicine to carry out his duties in reference to midwifery in accordance with the highest standards of modern practice In my I suppose bucolic outlook and insight he writes with his head in the clouds full of expert knowledge full of the wise saws of official reports and the brotherhood of the F C O G full of all the conveniences and in his becoated bemashed and waited upon existence the advantages of the clinic and the

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hospital, but with no practical knowledge of the capacity of the average general practitioner

I believe that if the work of all the general practitioners in the country were classified according to results, and compared with the results of the maternity hospitals, the results of the general practitioners would easily win We do not shout our gifts and capacities from the housetops and we deal with our difficulties in accordance with Nature, but it is right that we should occasionally raise our voices against a tendency to depreciate our work and belittle our results One cannot but resent the superior air, the almost sneering air, that runs through most of Professor Munro Kerr s writings that it has been my privilege to read He knows nothing of our work In my opinion the greatest work of the general practitioner is that in maternity He realizes that the whole happiness, not only of the mother and her child, but of the involved household, depends upon his work He knows that the mortality is not the chief point for his judgement and anxiety , many mothers would be better dead than face the years of invalidism that is before them The outstanding reward of our work is a healthy mother to rejoice in the birth of a healthy child

If the clinic is the correct place to watch over and guide the "insured person, ' then surely the clinic is the right place to supervise all potential mothers The law should forbid the general practitioner to deal with, in her own home, any child-bearing woman Surely those poor souls ' the non-insured " persons, deserve as much consideration from the powers that be as their more fortunate sisters—those who would come under the schemes adumbrated by Professor Munro Kerr? I do not, however for one moment accept his insinuations and contentions The right place for the mother to have her baby in is her own home and it would be well for modern legislation, as advocated by the Prince of Wales, to see to it that every potential mother has a decent home Were more money spent upon providing decent homes for the people, and less upon pandering to the idiosyncrasies of the so-called health reformer there would be less maternal mortality and morbidity to-day The right person to look after the prospective mother is her private doctor, who knows her, her history, her family, her home, and everything about her, and he should look after her in her own home If the general practitioner is conscientious, has common sense and knows his job, his results from what I have seen of both will easily beat the clinic and the hospital, in spite of the facilities provided for the so-called specialist in the latter There is a kindliness in the home which means far more in the actual results than it gets credit for

What nonsense to write that " only " in the clinic can the bulk of patients be thoroughly examined , there only can health sheets be satisfactorily preserved " Since 1915, although only a rural physician in the Highlands of Scotland, forty-five miles from the nearest hospital, doing some 15,000 miles a year, I have to April 30th, 1932, done 1,032 confinements I have accurate details, antenatal and otherwise, of every case I give every case ante natal guidance I had one maternal death of doubtful classification I have not seen puerperal fever No mother has yet complained that I have done her harm I must have thousands of colleagues who can beat my results The bulk of my patients live in cottages with no sanitary conveniences within their dwelling, and only outside well-water supplies We are a happy and contented family many miles from clinics and officials

Clinics and maternity hospitals are no doubt useful, but go through them and look at them , see the mothers in their beds or on the couch , see the labelled babies in their rows see routine and officialdom in their masks and coats Would anyone compare them with home , would any of us like those near and dear to us to go there? It is perhaps true, as Professor Munro Kerr writes, that the world will move on, and I suppose such things will come but the world or the mothers will be no better Thank God I shall be dead before that day comes at least to the Highlands Again I would pray that the money being spent upon clinics hospitals and the schemes of politicians, and of faddists cranks and specialists who know nothing of what the real life of the people is, should be spent upon improving the lot of the people and their homes This done, you will have to look far to find the superior of the general practitioner in maternity or any other sphere of medical work As one of them I do not blush —I am, etc ,

Tain Ross-shire May 22nd E K MACKENZIE

Treatment of Menstrual Irregularities

SIR —Dr Wilfred Shaw's admission, at the end of a most interesting paper in your issue of May 27th (p 907) that modern methods of treatment of menstrual irregularities leave much to be desired justifies my bringing forward the following therapeutic note

I believe it is agreed that a certain balance of function exists between the various endocrine glands and that a diminution in the function of one may show itself by exaggerated action of another Thus a lessened activity of the thyroid gland, such as often takes place at or about the menopause, may cause increased activity of the pituitary This state of affairs, it seems to me may well bring about the condition of epimenorrhoea in patients over 40, such as Dr Shaw describes At any rate, in cases of excessive menstrual discharge at or about the menopause I have found the administration of thyroid extract always worth a trial —I am, etc ,

Tamworth May 28th P W PARKES

Treatment of Tuberculosis

SIR —I was glad to read in the *Journal* of May 27th (p 935) Dr L S T Burrell's timely protest against funds " allocated for the prevention and treatment of tuberculosis " being diverted to certain delicate children needing " special food schooling and attention ' These children are called by some ' pretuberculous " The word should be discarded as a cloak for ignorance All it means is " before becoming tuberculous "

I have no wish to score a dialectic point against Dr Burrell by observing that in the first sentence of his letter he asserts that the child should be removed from the source of infection, whereas in the last sentence of the same paragraph he says ' the proper remedy is to remove the source of infection ' In point of fact both pleas should have a place in our scheme for treatment The child born of an infectious, tuberculous mother should be removed at birth from its mother and reared artificially, or by a healthy wet-nurse That is the Grancher system, which has given excellent results in Paris The infectious adult who, by reason either of bad housing conditions or of a low mentality, cannot carry out at home the precautions necessary to protect those living in intimate association with him (the contacts) should go to a sanatorium if curable or to a hospital for advanced cases if incurable It is at this point where our much-vaunted system of dealing with tuberculosis breaks down Our sanatorium beds should be reserved for the infectious febrile and debilitated patient who need the optimum of fresh air and fresh food and graduated rest and exercise Most of the other cases could be equally well treated at home by tuberculin and at a fraction of the cost of sanatorium treatment The truth is that some medical superintendents of sanatoriums

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want early and hopeful cases to improve their statistics In one well known sanatorium an investigation showed that 14 per cent of the patients were not suffering from tuberculosis On the other hand very few practitioners have been trained to use tuberculin and at very few tuberculosis dispensaries is tuberculin employed In my view all children exposed to infection at home and reacting to tuberculin should be immunized by a course of tuberculin

I agree with Dr Midgley Turner in deploring the term non-clinical tuberculosis All this means is tuberculosis without symptoms and it covers two distinct groups of people (*a*) those who have been infected by the tubercle bacillus but in whom the disease has not yet developed and (*b*) cases such as the patient who has just recovered from tuberculous pleural effusion and has no signs or symptoms of disease Surely the only accurate term for this case is arrested pleural tuberculosis Such a patient is certainly in danger of becoming later on a consumptive—unless immunized by tuberculin To be accurate we should never speak of a cured case of tuberculosis but of arrested disease and if the disease remains arrested for a lifetime the patient will say that this is as good as a cure

As regards Switzerland if a patient wants to go there let him go but also let him know the facts In the treatment of pulmonary tuberculosis dryness calmness and changes of temperature are minor considerations I wrote that in 1916 in my book *Pulmonary Tuberculosis* and am still of this opinion As good results have been achieved in patients homes and in sanatoriums in England Scotland and Wales as in Switzerland Moreover it is better that if possible the disease should be arrested in the climate where the patient is to spend the rest of his working life —I am etc

London W.8 May 27th HALLIDAY SUTHERLAND

SIR —I fear that Dr L S T Burrell and I in our studies of tuberculosis travel by such diverging tracks that we must one or other be travelling further and further from the truth Would that we could have a heart to heart discussion in all friendliness so that we might use our knowledge and experience for the benefit not of individuals but of mankind My experiences are largely among the industrial classes while Dr Burrell must be thinking of the well-to-do and accordingly we can never agree upon the best methods of dealing with the problem of tuberculosis in the aggregate How is it possible to deal with the problem of tuberculosis by means of sanatoriums when the cost is so great and the benefit so small? Even with artificial pneumothorax neither hospitals nor sanatoriums stretched to their uttermost can ever seriously help the poor enmeshed in the coils of this disease Their one hope of salvation lies in scientific methods Surely the disease should be attacked long before conditions arise that need surgical methods

I regret that Dr Burrell uses that misleading term pretuberculous This is merely casting dust into our eyes We must not give countenance to a term that should be condemned at first sight because it means nothing if it does not mean non tuberculous No one who uses tuberculin systematically when there is open phthisis in the family will ever make the mistake of calling healthy persons tuberculous or tuberculous persons healthy I can understand the meaning of pre phthisical We should call a spade a spade

For the last five years I have had too much evidence of haphazard diagnoses in tuberculous diseases of the eye and *mutatis mutandis* these unscientific diagnoses are just as common in tuberculous disease of other organs especially in phthisis I use this term advisedly because it connotes the truth—namely that there is no such thing as chronic pulmonary tuberculosis as an entity If there is chronic tuberculous disease of the lungs there is plenty of evidence that tuberculosis may have also attacked many other organs Moreover—and this point urges me to dissent from Dr Burrell's ideas upon pleural effusion —who has ever seen a sufferer from pleural effusion without signs or symptoms of disease ? Tuberculin which Dr Burrell eschews in diagnosis and treatment would prove that in every case of pleural effusion even after quiescence of the local trouble the tubercle bacilli still live in the tissues awaiting an opportunity for further invasion of the body I would ask Dr Burrell to study the meticulous labours of Anders and Schmoe in 1 500 post mortem examinations in the pathological laboratories of the Freiburg University which demonstrate the fact that in adult life 35 per cent of human beings living in towns are the hosts of living tubercle bacilli causing active lesions in the hitherto ignored subpleural lymphatic glands Strange too we know that our own statistics tell us that 35 per cent of adult women who die between the ages of 15 and 35 die of tuberculosis These lesions are overlooked because tuberculin is not used for diagnosis and these lesions can be brought to a standstill by means of tuberculin used in treatment.

In his recent book Dr Burrell has written these words

Apart from shock or reaction I have failed to find a single case in which tuberculin could be clearly shown to have been of therapeutic value I venture to predict that within the next ten years Dr Burrell will set his compass in a different direction and will become a dutiful disciple in the school of scientific method inaugurated by the master of the method Robert Koch —I am etc

W CAMAC WILKINSON M.D F.R.C.P

London W May 28th

Aetiology of Acute Rheumatism

SIR —The correspondence between Drs Schlesinger and Tertius Clarke would appear to emphasize four points in relation to the aetiology of acute rheumatism

1 Climatic influences together with differences in geographical distribution play an important part

2. There is considerable evidence pointing to familial and racial influences

3 Scottish troops suffered far more from rheumatism in India than did native Indian troops

4 In Holland the ratio of juvenile rheumatism to the adult form differs from that in England

May not a common factor linking together these superficially unconnected data be found in *diet* The food of every nation varies and the further apart two countries are the more do their dietaries differ There is nothing perhaps so essentially national as food and the more a nation departs from its national dietary the more it lays itself open to diseases of constitutional nature *In Great Britain* the milk supply per head is unsatisfactorily poor in quantity and at times also in quality acute rheumatism and chorea being rife among those children whose intake of lime-containing foods is small In other European countries the milk supplies either from cows or goats are much greater than in Great Britain

Familial influences are closely connected with the family dietaries Mothers who dislike milk are inclined to provide for their families only nominal quantities of that important food and wherever there is a familial tendency to acute rheumatism it will be found that the milk supply of that family is insufficient

The native troops in India obtain less meat and more lime-containing foods than do the Scottish troops and consume little or no alcohol which lessens the calcium content of the body Dutch children are relatively better fed than adults since they are given more lime-containing foods In a large number of children investigated during

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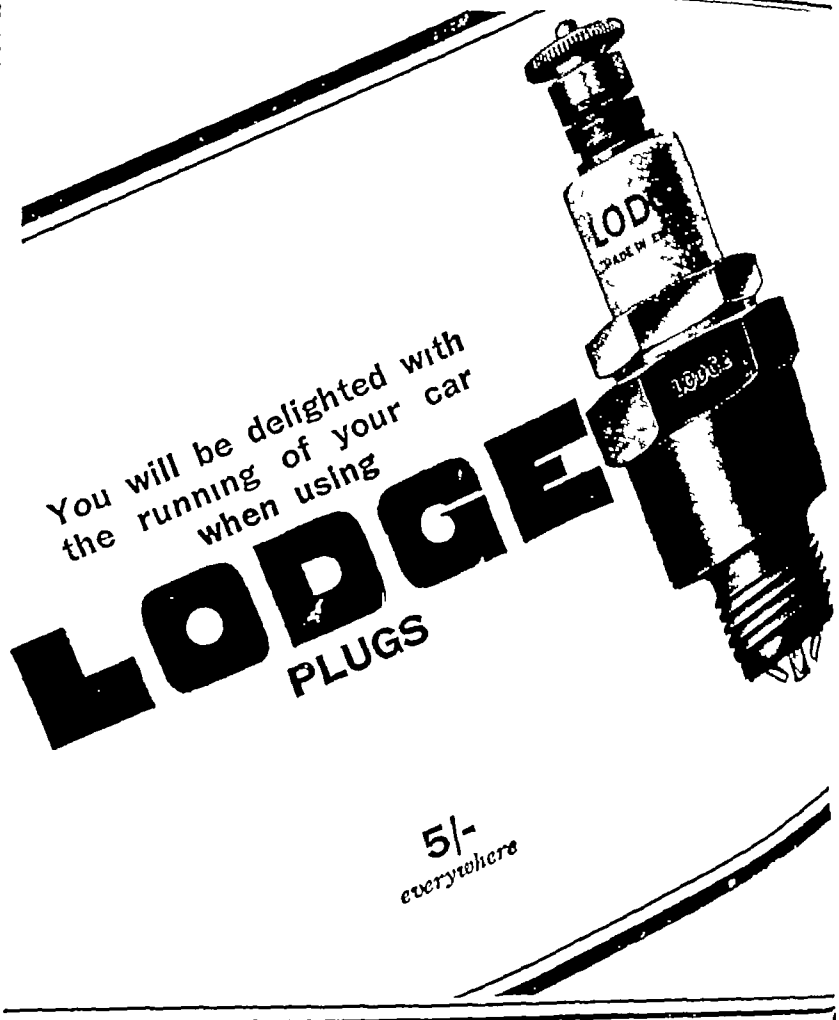

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the past six years at the Marylebone Rheumatism Supervisory Centre (J F H D) insufficient calcium intake appears of significance an adequate supply of milk being found to decrease susceptibility to muscular pains and nervous hypersensitiveness With reference to flea bites it is known that children with too little lime in their systems, and therefore with urticarial tendencies, are the ones upon whom fleas delight to batten

Expressed more technically in terms of disease resistance, one may say that the more stable the tissue colloids the less the liability to disease, and that this stability depends upon a condition of acid-base equilibrium The *p*H of the tissues and tissue-fluids can be varied by adjustment of diet, a large protein dietary deviating the acid-base equilibrium in the direction of increased acidity, whilst a lacto-vegetarian diet will cause deviation to the alkaline side At the Marylebone Rheumatic Centre all the children manifesting cardiac involvement—that is, enlargement of heart or murmurs—had in the blood a lowered alkaline reserve and in the urine a deviation of the acid-base balance in the direction of increased acidity — We are, etc ,

J F HALLS DALLY,
London

G ARBOUR STEPHENS,
Swansea

May 24th

SIR —I fear that Dr Bernard Schlesinger has not grasped my idea of the cause of rheumatic fever , I must point out that Norway is not the country of origin of *Rattus norvegicus* It undoubtedly comes from temperate Asia and was introduced into Western Europe by the Russian fleet which visited Copenhagen in 1716 The history and habits of this animal are described by Mr M A C Hinton in a pamphlet on " Rats and Mice as Enemies of Mankind "

Dr Schlesinger states (*Journal* May 20th, 1933) that rheumatic heart disease is relatively uncommon in Scandinavia But according to the late Dr Carey Coombs most of our knowledge of rheumatic heart disease comes from Great Britain, Scandinavia, France, Germany, North America and Australia This statement, as was another by the same author, of the uncertainty of the race incidence, was written in 1924 In spite of this, Dr Schlesinger quotes from (apparently) Sir William Church of 1896 I have pointed out in an article on the geographical distribution of rheumatic fever that Sir William Church himself wrote that the returns were very unsatisfactory The late Dr Carey Coombs obviously did not accept them My opinion still is that it is place, not race, that matters

I do not know whether allergy is affected by climate, but asthma is not uncommon in the Tropics, and when a case of asthma is benefited by transfer from one country to another it is probable that the result is due to removal from a particular protein rather than to a change of climate As regards Holland, I am afraid that I cannot look on differences in that country as other than local, just as there are differences between agricultural and industrial town areas My whole argument has arisen from the immense geographical difference between the Tropics and temperate climates I agree that there is something more in the aetiology of rheumatic fever than " a rat a flea and a haemolytic streptococcus " The whole cause of a disease is not disclosed by the discovery of a bacillus though it may be by finding some defect of sanitation Dr Schlesinger agrees that ' improper sanitation is at fault " Analysis of the significant environmental conditions of rheumatic fever given in Report No 114 of the Medical Research Council shows that they all lead to the environment of the rat The most important environment of the rat is water Rats in a house almost certainly indicate the presence of a broken drain It is therefore not easy to understand why it has become necessary to direct attention from the germ on to the patient or why the relation to rheumatic fever of this one particular item of defective sanitation should not be considered worthy of investigation —I am, etc

J TERTIUS CLARKE
Late Health Officer and Medical Officer Perak

Harrow May 28th

Treatment of Impetigo

SIR —I should like to endorse completely the claims put forward by Dr Newman (*Journal* May 13th p 823) for the use of elastoplast in impetigo having employed it both in school and in child welfare clinics for the past three years in some hundreds of cases with great satisfaction to patients and resultant gratitude of my nursing staff—a matter to which I have drawn attention in my annual reports for 1931 and 1932

At the outset I used an initial soak of peroxide of hydrogen but soon found this quite unnecessary in facial cases Having regard, however, to liability to extra infection, etc in the knee region, I retain the peroxide, my routine in cases which are not definitely inflamed—these are always first subdued—being to clean surroundings with petrol soak in peroxide, then apply elastoplast This treatment is carried out also with abrasions Since the beginning of this year I have had four inguinal abscesses to open, following impetigo of knees, but in none had elastoplast been available, all having arrived too late I have never seen a case where this could in any way be connected with the use of elastoplast The same trouble, noted by Dr Newman, with a few parents of pulling off the elastoplast and applying sulphur ointment, has been my experience With regard to his suggestion of the possibility of non-infection with this treatment I can assure him that he need have no fear whatever I never now exclude from school for impetigo except where parents decline treatment by elastoplast The disease is disappearing from my schools, and would be very seldom seen were it not for infection from children under school age, who are being attacked with coupon captivating soaps and sulphur in their homes

The great drawback to general acceptance of Dr Newman's treatment will be found, I fear to lie in its simplicity Without a more or less elaborate ritual it seems difficult, in my experience extending over thirty years in the clinical field, to persuade professional brethren to give a trial even to a well tested method of treatment —I am, etc ,

J M MORRIS M O H

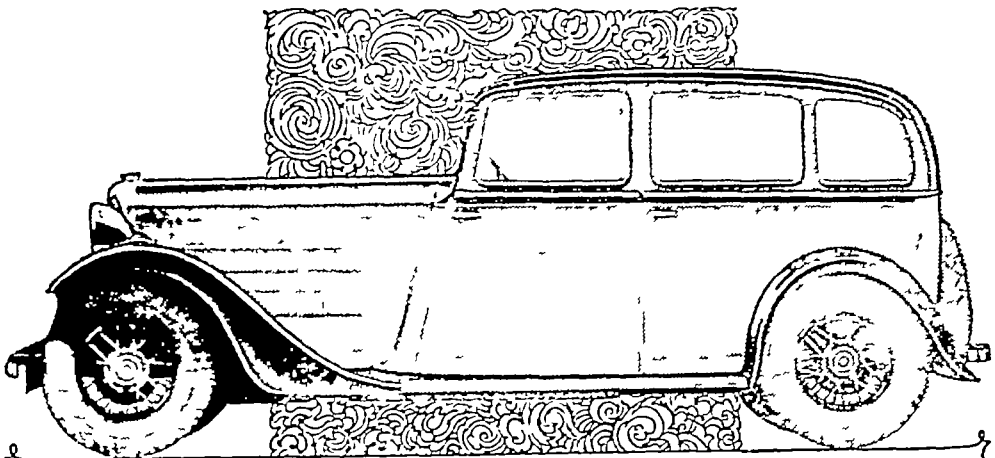
Neath May 22nd

Motor Function of Ilio-inguinal Nerve

SIR —My recent article (*Journal*, April 1st, p 761) on the efferent fibres in the ilio inguinal nerve and their relation to the incision for appendicectomy was written on purely anatomical grounds, owing to the brief descriptions of that nerve given in anatomical textbooks

The relation of the ilio inguinal nerve to the McBurney incision was referred to, and it was suggested that, should the nerve be damaged whether by scar tissue (where drainage is employed) involvement in sutures or by surgery (namely section), then muscular weakness in the transversalis abdominis and internal oblique muscles will be produced This weakness will predispose to the occurrence of an inguinal hernia

I regret I am not in a position to discuss the aetiology of inguinal herniae, but I suggest on purely anatomical grounds, that muscular weakness will predispose to their occurrence (particularly the direct type), but that the



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indirect type is not out of the question since congenital preformed sacs have been observed in dissections where no actual hernia existed admitting that probably this latter theory is the main factor in the majority of the indirect type A combination of both factors would entirely produce such a sequel and the muscular weakness would be caused by damaging the ilio inguinal nerve — I am etc

Blackburn May 28th HENRY J WADE

Bismuth and Peptone in Asthma

SIR —The tests for anaphylaxis show small relation to those of allergy Under the supervision of Professor McIntosh eleven sensitized guinea pigs were carefully tested with bismuth and peptone and with peptone alone They weighed about 400 grams each Those receiving 0 25 c cm of horse serum in racardially were dead in forty minutes though the controls lived for three minutes only It would appear that the recent statement of Dr Gerald Slot that he had found it extraordinarily difficult to find out after making eight post mortems of those who had died of allergy why they had died at all is true [1] I have always used Witte's special peptone 30 intramuscularly (gluteus) and also the bismuth metal *B.P* 1 c cm Those whose skin is little attacked by peptone can receive 0 3 c cm 0 5 c cm and 1 c cm to begin with Those whose skin is tender receive less There is no doubt that the bismuth greatly increases the efficacy of peptone

The lady whose case I mentioned in the *British Medical Journal* (1932 ii 731) remains quite well and I have had numerous other cases equally severe who have succeeded perfectly Some have had to take morphine regularly to relieve their attacks but now all remains right with them The bismuth is given with the fourth dose of peptone The injections are continued weekly for some time afterwards then fortnightly Treatment by bismuth seems to cause catalysis of the peptone in the reticulo-endothelial system into which they both enter — I am etc

London W May 23rd A G ALLD

Mirror-Writing

SIR —With reference to Dr Geoffrey Morey's letter on the above subject (*Journal* April 1st p 588) such cases as he describes are hardly of extreme rarity It is relatively common to find some degree of facility both for mirror writing and for mirror reading in the left handed and many children who are otherwise intelligent but have a specific difficulty in learning to read will also tend to reverse the order of letters the confusion of was and saw dog and god being common errors The tendency to reversals may be in the realm of visual imagery rather than in the order of the letters and commonly b and d p and q are confused Dr S T Orton has suggested an interesting theory which relates the whole problem to that of cerebral dominance and a survey of his work is given in an article by him entitled Word blindness in School Children published in the *Archives of Neurology and Psychiatry* (1925 xiv 581)

The child who is so completely left handed that no attempt is made by him to use the other hand suffers less than does the so-called intergrade —that is to say a child who has difficulty in establishing a definite left or right handedness and who goes through a period of non-dexterous ambidexterity or in whom the handedness and eyedness fail to establish in the same side There seems no doubt that there is a leading eye in every way comparable to the leading hand and that the majority of individuals develop into being right handed and right eyed Many of the intergrades succeed after some difficulty with reading or penmanship during school years in becoming acceptably right handed but they are often found to have a facility in mirror reading and writing which greatly exceeds that of the naturally right sided individual

The case described by Dr Morey is a well marked one of special reading disability for which Orton has suggested the term strephosymbolia It is interesting in that it illustrates very prettily the ease with which the hardly established speech mechanism is upset by a shift from left to right handed training But it is less extreme than that in one case seen recently by the writer of an intelligent girl of 9 years also left handed who wrote mirror writing which was also reversed upside down and which she began by choice at the bottom right hand corner of the page of her exercise book — I am etc

MILDRED CREAK
A M O in charge of Children's Department
Maudsley Hospital L C C

Philadelphia U S A April 27th

[1] *Lancet* 1933 i 1084

A Medical History of Liverpool

SIR —A medical history of Liverpool based upon material collected by Mr Thomas H Bickerton is being compiled at the request of the family by Miss M McKisack lecturer in history in the University of Liverpool If any of your readers have letters papers pictures or personal recollections which they would care to submit for the purpose of this history will they kindly *send them to me*? All communications will be immediately acknowledged and manuscripts will be returned with the least possible delay —I am etc

H RICHARD BICKERTON

88 Rodney Street Liverpool May 25th

Obituary

J HARLEY GOUGH M D F R C S Ed

Consulting Physician Torbay Hospital

Dr John Harley Gough died on May 20th at Torquay at the age of 71 He studied medicine in various schools in the North of England and became M R C S in 1884 and L R C P in 1885 At the same time he qualified for the associateship of Owens College Manchester and then graduated B Sc of Victoria University In 1899 he became a Fellow of the Royal College of Surgeons of Edinburgh and seven years later graduated M D of the University of Durham Before going to Torquay Dr Gough was resident medical officer at the Royal Albert Hospital Devonport senior resident medical officer at St Mary's Hospital for Diseases of Women and Children Manchester and senior house surgeon at Wolverhampton General Hospital It was in Torquay that Dr Gough performed the most fruitful of his medical work There he had been honorary physician senior physician and consulting physician to the Torbay Hospital for thirty years For about twenty years he was also honorary physician to the Western Hospital for Consumption Among his many other medical activities may be mentioned his work as physician to Erith House Institute for Invalid Ladies and to Rosehill Hospital for Children

Towards the end of last century Dr Gough published several papers in the *British Medical Journal* and the *Lancet* but his greatest efforts were always in connexion with the advancement of the practice of medicine

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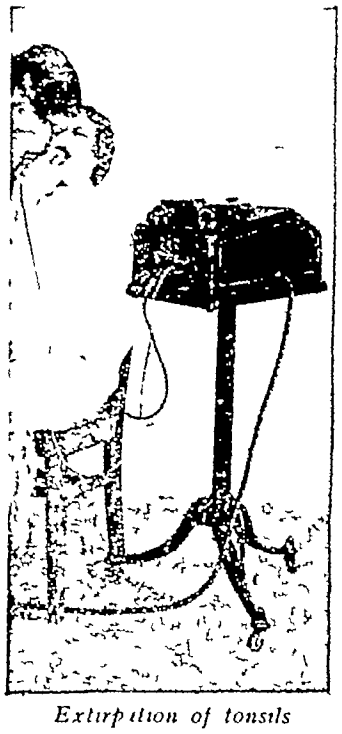

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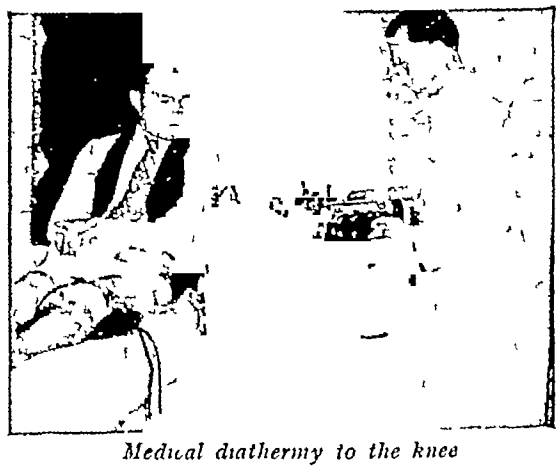

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in Devon Torquay now possesses a beautiful, well-equipped, and well-organized hospital, and this achievement is due in no small part to the indefatigable efforts of Dr Gough through many years Among his medical colleagues he was held in the highest esteem, and his opinion on medical problems was much sought after and valued He was for many years a member of the Torquay Medical Society, of which he had held the presidency At the Annual Meeting of the British Medical Association in 1907 he was Secretary of the Section of Diseases of Children

Dr Gough was a very active worker for the social welfare of Torquay He was a keen lover of music, and was a member of the Torquay branch of the British Musical Society and the Torquay and District Organists' Association He was also a zealous student of natural history and archaeology (especially of Devon), and was a member of the Torquay Natural History Society He was one of the first people in the West of England to possess a motor car Although he had been ill since January the end was sudden, and the manner in which Torquay and Paignton reacted to the shock of his death was convincing evidence of the love and admiration held for him, not only by his colleagues and patients, but also by a much wider circle of friends He leaves a widow and five sons, the eldest of whom Dr J H H Gough is practising at Chichester and the youngest is studying medicine in the University of Cambridge

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The recent death of Dr RICHARD MCCULLOCH has been deeply felt by his professional brethren in Northern Ireland Richard McCulloch had an unusually wide circle of friends, and was held in the highest esteem by all who knew him His cheery good humour was a strong and unfailing characteristic, and the kindness and generosity of his nature knew no bounds Few men have been better loved by their fellows or deserved the affection more His memory will long be held dear by his colleagues in Ulster He graduated M B , B Ch , and B A O at the Queen s University of Belfast in 1912, obtaining the D P H in 1916, and after a preliminary resident post in the Belfast Infirmary was appointed assistant tuberculosis officer to the city of Belfast, which office he held until 1928 This experience no doubt prompted him to undertake private consulting practice in clinical and radiological chest work He was appointed honorary radiologist to the Belfast Hospital for Sick Children, and after only five years had succeeded in attaining a sound reputation as an authority on the radiography of the chest This was well deserved, as his radiographs of this region were perfect examples of their kind A man of wide interests, he was a Fellow of the Ulster Medical Society, and a regular attender and contributor to its work At the time of his death he was also honorary treasurer of the Belfast Division of the British Medical Association He was an ardent Freemason and was as well known in Masonic circles as in his own profession

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We regret to record the death of Dr THOMAS CUMING ASKIN M B E , who was at one time a familiar figure at Panel Conferences and before the war at Representative Meetings of the British Medical Association Born in March, 1864, he studied medicine at Trinity College, Dublin, graduating B A , M B , B Ch and B A O in 1899, and proceeding soon after to the M D degree After holding house appointments at the Huntingdon County Hospital and the Liverpool Northern Hospital he practised for many years at Alderton in Suffolk He was a member of the Representative Body in 1912–14, and when he retired to live in London the Suffolk Branch, of which he was a past-president, made him an associate member He was chairman of the Local Medical and Panel Committee from 1915 to 1926 a member of the Insurance Acts Committee 1920–2, and of the Rural Practitioners Subcommittee 1919–25 Dr J R Whitwell sends the following appreciation Dr Cuming Askin a friend of nearly forty years' standing, was a most conscientious and sincere man, always his own hardest taskmaster and judge and a staunch friend In his practice he never spared himself , every minute of his time was devoted either directly to his patients or indirectly to the furthering of some scheme which he believed to be for their ultimate benefit—in fact, he became not only the doctor but also " the father of his people,' and they loved him, for they knew from the squire to the panel patient in his semi-peninsular practice, that in their doctor they had an honest man whose sole aim as a medical man was their welfare In official life he had the reputation of being a ' fighter," but everyone who really knew him realized that this " pugnacity " was the expression of a deep, intense, and dominating principle, based on the highest ideals, and for these he was prepared to sacrifice everything of self Although not attached to any of the organized religions, he was of a deeply religious nature (using that word in the Max Müllerian sense) and this undefinable idealistic relationship to the Infinite governed all his actions, was the keynote of his life He was truly an example of the Ciceronian ideal " Omnia profecto, cum se a caelestibus rebus referet ad humanas excelsius magnificentiusque et dicet et sentiet " (*Orator*)

Dr CORDLEY BRADFORD died on May 17th at his residence in Acocks Green, Birmingham, after a short illness , he had been carrying on his professional duties on the previous Friday Dr Bradford was born at Weston Hills, Lincolnshire, in 1851, and went to Birmingham in the early 'seventies His medical education was carried out at Mason s College and the Queen's Hospital, Birmingham, where, after qualifying he filled the posts of house surgeon and house physician He then took up the post of medical officer to Messrs Tangye's works, Smethwick In 1880 he bought Dr Woodifield's practice in Acocks Green where he remained ever since In 1903 he took the degree of M B , B Ch of Birmingham University He occupied a leading place in the medical life of the Birmingham district, having been president of the Birmingham Branch of the British Medical Association, and of the Birmingham Medical Benevolent Society He was elected a magistrate for the county of Worcester in 1909, and in latter years was chairman of the Wythall Bench In 1878 Dr Bradford married Alice, daughter of George Lunn of Fladbury, and they celebrated their golden wedding five years ago , Mrs Bradford died in 1930 Their son, Dr Ernest Cordley Bradford, is in practice in Sussex Dr Bradford's infinite capacity for work foresight, and love of his fellow men endeared him to all the people of Acocks Green For more than half a century his influence extended over a wide area He was vicar's warden of St Mary's Church for twenty six years His passing will leave a great gap in this district, both on account of his professional services and of his social services As one of his brethren in the profession said 'He was a grand old man, and for the end to come at his age actually in harness was wonderful, and I feel that his type will not be seen again He belonged to a generation that produced some wonderful people, whose enjoyment of work the new generation simply cannot understand ' When in the prime of his life he worked for eight years without a break of as much as a week He often said that work was never a trouble to him and when it was he would give it up

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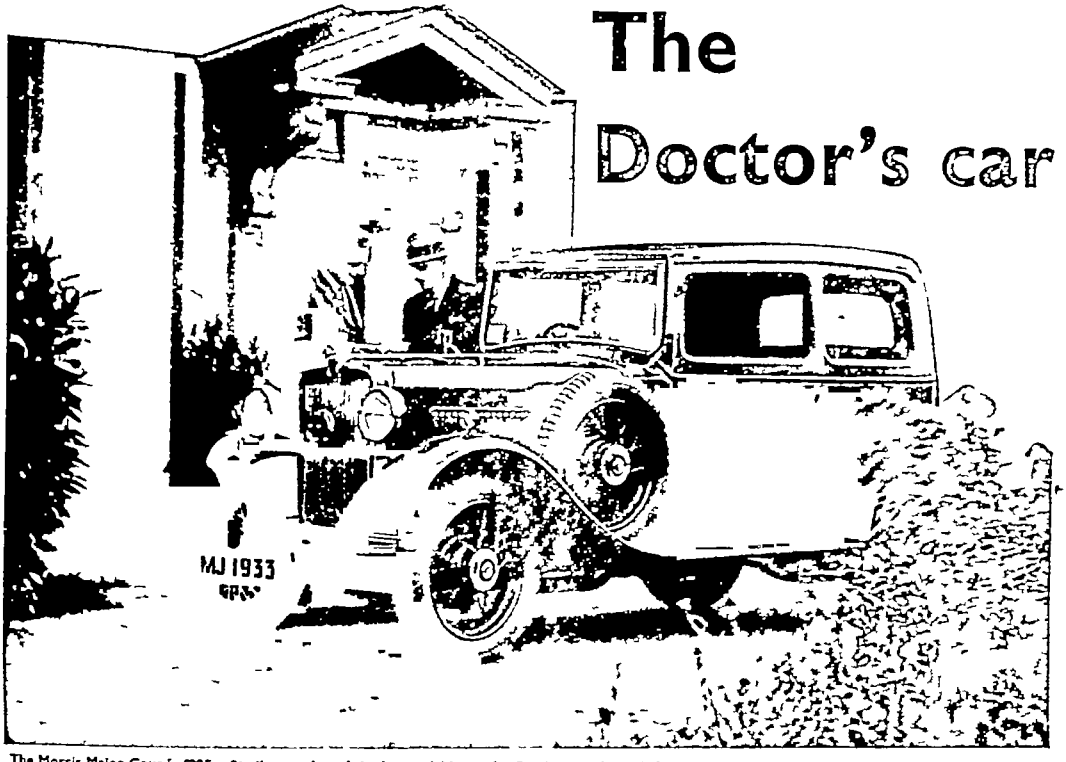
We regret to announce the death of Dr NORMAN COOK at the Church Missionary Society Hospital, Zaria, Nigeria on May 11th from general septicaemia Norman Ethelbert Cook was born at Kampala Uganda Province on February 21st, 1903, the son of Dr J H Cook medical secretary of the Church Missionary Society and nephew of Sir Albert Cook of Uganda He was educated at Highgate School and St Bartholomew s Hospital, graduating M B , B S Lond in 1928 At school he gained the Lyons Prize for the best all-round athlete and he was captain of cricket at Highgate School St Bartholomew s Hospital, and London University He occupied the post of house-surgeon for a year at the Mildmay Mission Hospital,

The Doctor's car



The Morris Major Coupé, £225 Similar coachwork is also available on the Cowley and Oxford chassis.

Both from professional and personal points of view, how pleasant it is to have a very simple and straightforward car With a Morris there is all the speed that you want, but more important, there is a day-to-day reliability and certainty of easy starting that is constantly saving minutes of your time Then there is the low price It is a sensible economy to buy and to run a Morris car To pay more is to disburse an unnecessary outlay, to pay less is seldom satisfactory

All Morris cars have 4-speed twin-top gearbox Eddyfree front, flashing Direction Indicators (except Minor) Triplex glass throughout, Dunlop tyres chromium-finished radiator Lockheed hydraulic brakes are fitted on all models from the 'Ten upwards

The Morris 1933 Range includes 8 Models and 31 Body Styles.

THE MORRIS 25 -	from £385 0	THE COWLEY - -	from £165 0
THE ISIS 6 - -	from £340 0	THE TEN -	from £165 0
THE OXFORD 6 -	from £265 0	FAMILY MINOR	from £145 0
THE MAJOR 6 - -	from £199 10	THE MINOR (4-Speed)	from £105 0

(The famous £100 car with 3 speed gearbox is continued unchanged)

All prices ex Works

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where by his courtesy and never failing sympathy as well as by his professional skill he won the hearts of all He sailed for the Zaria Medical Mission in Northern Nigeria in February 1930 and built there several blocks of the Hampstead Centenary Hospital including a small branch hospital at Maska Katsina The medical work has made tremendous progress in Zaria the number of patients having quadrupled during the last three years so that in 1932 there were 441 in patients and 40 000 visits of out patients Dr Cook married only last year

The following well known foreign medical men have recently died Geh Med Rat Professor Dr OTTO LUBARSCH for many years professor of morbid anatomy in Berlin aged 73 Professor V ALGESZKY a Budapest bacteriologist aged 64 Dr GEORGE DAVID STEWART past president of the American College of Surgeons and professor of surgery University and Bellevue Hospital Medical College New York aged 73 Dr GIUSEPPE PIANESE professor of anatomy and pathological history at the University of Naples Professor PETER FOKITSCH BOROWSKY director of the second surgical clinic at Tashkent aged 69 Sanitatsrat Dr EDMUND DIPPEY director of the German Hospital at Pekin and Dr ANDRE BUECKEL lecturer in urology in the Strasbourg Faculty of Medicine

Universities and Colleges

UNIVERSITY OF OXFORD

At the encaenia on June 21st the honorary degree of D Sc will be conferred on Professor J S Haldane M D F R S

UNIVERSITY OF CAMBRIDGE

At a congregation held on May 27th the following medical degrees were conferred

M B B CHIR.—G T Partridge F K Boston J H Fisher
M B.—J W P Thompson R Watson

SOCIETY OF APOTHECARIES OF LONDON

The following candidates have been approved at the examination indicated

MISTER OF MIDWIFERY.—Helen M Jardine Elizabeth M Moore Dorothy M Satur V J Thanavala

The following candidates have passed in the subjects indicated

SURGERY.—J B Frumin S Gurevich R Hill R W J Scheel H B Thornton J A van Rooyen
MEDICINE.—E V Bevan R Hill L R Jain E O C Parsons E Pugh-Jones R W J Scheel F H Williams I M William
FORENSIC MEDICINE.—A H L Baker E V Bevan E H F Cross W H Ekin J P Fitzgerald M S Hendriks R Hill W E Merrick H J Ripka R W J Scheel R Sugarman
MIDWIFERY.—C A Bell F V Bevan W E P Corbett J P Fitzgerald R Hill R W J Scheel D V Smith G Wilson

The diploma of the Society has been granted to Messrs W E P Corbett R Hill E O C Parsons R W J Scheel J A van Rooyen and I M Williams

The Services

INDIAN MEDICAL SERVICE DINNER

The annual dinner of the Indian Medical Service will be held at the Trocadero Restaurant London on Wednesday June 14th at 7.15 p.m. Air Vice-Marshal Sir David Munro K.C.B. C.I.E. (I.M.S. ret.) has been invited to take the chair. Tickets and all particulars may be had from the joint honorary secretary Major Sir Thomas Carey Evans Hammersmith Hospital Ducane Road W 12

DEATHS IN THE SERVICES

Colonel Harold Hugh Norman C.B.E. R.A.M.C. (ret.) was killed along with his wife in a railway accident between Wimbledon and Raynes Park on May 25th aged 57. He was born on August 8th 1875 and was educated at Trinity College Dublin where he graduated M.B. B.Ch. and B.A.O. in 1898. Entering the R.A.M.C. as lieutenant on July 27th 1899 he became lieutenant-colonel in the long war promotion list of March 1st 1915 got a brevet colonelcy on January 1st 1917 and became substantive colonel on March 2nd 1919 retiring in September 1930. He served in the South African war in 1902 taking part in operations in Natal the Orange Free State and the Transvaal was slightly wounded and received the Queen's medal with three clasps and the King's medal with two clasps and in the war of 1914–18 when he was mentioned in dispatches in the *London Gazette* of January 1st 1916 and January 4th 1917 and received a brevet as colonel and the C.B.E. His wife was killed with him in the accident. He leaves three children a boy of 12 and two girls of 9 and 7 years old.

Lieut.-Colonel John William McCoy O.B.E. Indian Medical Service (ret.) died on March 21st aged 57. He was born on April 6th 1875 was educated at the Madras Medical College and at Bart's and took the M.R.C.S. and L.R.C.P. Lond. in 1899. After filling the posts of resident medical officer of the Bethnal Green Infirmary and of the Poplar and Stepney Sick Asylum he entered the I.M.S. as lieutenant on January 29th 1902 attained the rank of lieutenant-colonel on July 29th 1921 and retired on April 6th 1930. He received the O.B.E. on December 15th 1930.

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

Before rising for Whitsuntide the House of Commons completed its consideration of the Agricultural Marketing Bill and also the committee stage of the Finance Bill. A Standing Committee made progress with the Metropolitan Police Bill. In the House of Lords the Rent Restriction Bill was read a second time.

In the House of Lords on May 30th Lord MOYNIHAN presented a Bill to make provision for the payment of remuneration to registered medical practitioners and hospitals for treatment rendered to persons injured in the use of motor vehicles on roads. The Bill was read the first time.

In the House of Lords on May 30th the Cancer Hospital (Free) Bill which has passed through a select committee was read the third time and passed.

The Essex County Council Bill was read the third time and passed in the House of Lords on May 30th.

In the House of Lords on May 24th the Samaritan Free Hospital for Women Bill was read the second time.

The Trout (Scotland) Bill was read a third time in the House of Commons on May 24th.

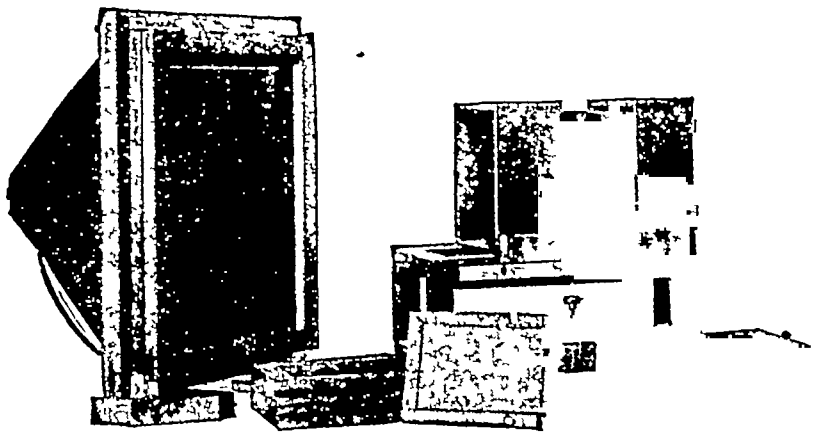
Medical Benefit Expenditure since 1911

On May 29th Sir E HILTON YOUNG informed Mr Rhys Davies that from the inception of the national health insurance scheme up to December 31st 1932 in England and Wales approximately £146 529 000 had been spent on medical benefit. During the same period on sickness benefit £154 101 000 had been expended on disablement benefit £65 568 000 on maternity benefit £27 615 000 on dental benefit £14 850 000 and on ophthalmic benefit £2 320 000. On other additional benefits given by way of increases in sickness disablement and maternity benefits £4 726 000 had been expended.

Denby Dale Water Supply Proposal.—Sir HILTON YOUNG told Mr Glossop on May 25th that he had received a protest from the ratepayers of the village of Denby Dale concerning the proposal of the Denby and Cumberworth Urban District Council to revert to the use of the Square Wood water reservoir which was the source of the infection of the recent epidemic of typhoid. He would consider this protest with the report of his inspector who had visited the locality.

Slum Replacement in Aberdeen.—Mr SHELTON told Dr Maclean on May 25th that his attention had been drawn to the fact that although the corporation of Aberdeen had completed over 3 000 houses with State assistance since 1919 none of these had been provided under the Act of 1930

Kodak X-Ray Reduction Camera Outfit



A simple and solidly built camera. Reduces negatives of any size.

Suitable for making bromide prints or transparencies of $6\frac{1}{2}$ x $4\frac{3}{4}$ size or smaller, and lantern slides.

An automatic focussing scale makes the Kodak Reduction Camera exceedingly simple to operate.

Full particulars on application:
Kodak Limited, (Medical Department), Kodak House, Kingsway, London, W C 2

The corporation had however erected 280 houses for slum replacement with the assistance of the grant available under the Act of 1923 The corporation was preparing a scheme for the erection of some 500 houses for slum replacement on land already in their possession

Noise of Aircraft Engines—Replying to Mr Lovat-Fraser on May 25th Sir PHILIP SASSOON said he could not adopt the suggestion that in view of the annoyance caused by the noise of aeroplanes he should restrict commercial flying to definite lines of traffic and pleasure flying to thinly populated districts This would unduly restrict the reasonable development of commercial flying and to a large extent, deprive the public of opportunities for pleasure flying As people usually went to thinly populated areas to be quiet the inhabitants would be the first to complain if the suggestion were carried out Asked by Lord Apsley whether any steps were being taken to prohibit the use of open exhausts on aircraft engines Sir Philip assured him that they would do whatever they possibly could to restrict noise

Stamp Book Advertisements—Mr SUTCLIFFE gave notice that on June 2nd he would ask the Postmaster-General what has been the revenue of the Post Office from the advertisements of patent medicines in books of stamps issued by the Post Office during each of the past three years, whether it is proposed to continue such advertisements and if not on what grounds

Medical News

The annual luncheon of the Irish Medical Schools' and Graduates' Association will be held at the Hibernian Hotel Dublin on Wednesday July 26th, at 1 p m The chair will be taken by the president, Dr T Gillman Moorhead Tickets (6s) may be obtained by members of the association resident in England from the provincial honorary secretary, Dr Falkland L Cary, 67, King's Road, Harrogate and members of the association resident in Ireland may obtain tickets on application to Mr R F J Henry F R C S I 24 Upper Fitzwilliam Street, Dublin The luncheon is open to non members and lady guests are welcome

The eighth annual Macalister Lecture will be delivered at the National Temperance Hospital on Thursday, June 22nd at 9 p m, by Sir Frederick Hobday, on 'Our Animal Friends as Patients,' illustrated by lantern slides and cinematograph pictures All medical practitioners are invited to be present and may bring friends (ladies or gentlemen)

The new building for the department of zoology and comparative anatomy at University College, London, will be opened on Monday, June 12th, at 3 p m, by the Earl of Athlone Chancellor of the University The chair will be taken by Sir John Rose Bradford, Bt chairman of the college committee

The Wrightington Hospital, near Wigan, will be formally opened on the afternoon of Friday, June 16th, by Sir George Newman, Chief Medical Officer of the Ministry of Health The ceremony will be presided over by Alderman J T Travis Clegg chairman of the Lancashire County Council

A lecture on the theory and practice of contraception will be given to medical students by Dr G M Cox on Monday June 12th at 6 p m at the Walworth Women's Welfare Centre 153A, East Street, S E 17

The first of four advanced lectures arranged by the Fellowship of Medicine will be given at 5 p m on June 7th at 11, Chandos Street, by Dr Leonard Findlay There will be a week-end course in clinical surgery at the Royal Albert Dock Hospital on June 10th and 11th, a course in diseases of the chest at the City of London Hospital, Victoria Park from June 12th to 24th, and a course in medicine, surgery, and the specialties at the Prince of Wales's Hospital from June 12th to 24th Other forthcoming courses include ante-natal treatment, at the Royal Free Hospital, June 16th to July 7th, cardiology at the National Hospital for Diseases of the Heart June 26th to July 8th, diseases of children, at the Children's Clinic, June 26th to July 8th

A post-graduate course under the direction of Professor Gustave Roussy will be held at the Paris Cancer Institute from June 16th to July 13th inclusive It is intended for French and foreign doctors and final year students The fee is 350 francs and the course is limited to forty persons a certificate will be given to those who complete it Applications should be addressed to the Bureau de l'A D R M salle Béclard, a la Faculté de Medecine

During Toronto Tuberculosis Week, which opens on June 26th the annual meetings will be held of the National Tuberculosis Association, the Canadian Tuberculosis Association and the American Sanatorium Association, and also the Tuberculosis Secretaries Conference It is described as the most important conference of tuberculosis workers ever held in Canada The British guests of the Ontario Department of Health will be Sir Humphry Rolleston and Professor Lyle Cummins of Cardiff

The East London Child Guidance Clinic announces a course of twelve lectures on the applied psychology of childhood at Toynbee Hall, Commercial Street E, on June 8th, 9th 12th, 13th 14th, and 15th at 3 30 p m and 5 p m each day The fee for the course is £1 1s (students 10s 6d), day tickets 5s single lecture 2s 6d Applications for tickets to the Lecture Secretary, East London Child Guidance Clinic Bell Lane, E 1

An Ulster comedy, entitled 'The Ballad Singer by Dr Ernest H M Milligan, will be broadcast from the Belfast wireless station to-day Saturday, June 3rd, at 9 45 p m The author is M O H for the borough of Glossop and honorary secretary of the Glossop Division of the British Medical Association

The general programme of the conference on renal insufficiency which is to be held at Evian on September 18th to 20th, has now been issued Papers to be read by British and French physicians will deal with such topics as alteration in the blood calcium in renal insufficiency (Dr Izod Bennett), the effect of the composition of the blood plasma on the production of the oedemas of Bright's disease high nitrogen content of extrarenal origin, the treatment of infections and toxic anuria the state of elimination of water in renal insufficiency, the mechanical function of the liver in the passage of water nephritic cases with nitrogenous derangement only the relation between arterial hyperpiesis and renal insufficiency, physio chemical aspects of the blood in cardio-renal conditions, chlorine in nephritis, acidosis and renal insufficiency and the surgical aspect of the question Communications and inquiries should be addressed to the Secretariat du Congrès de l'Insuffisance Rénale, 21 Rue de Londres, Paris

At the second annual dinner of the Radiological Section of the Royal Society of Medicine, held at the Dorchester Hotel on May 19th the president, Dr Russell Reynolds, took the chair, and proposed the health of the guests Lord Dawson, the guest of honour, replied, outlining the remarkable progress of radiology and looking forward to its association with cinematography He suggested that the cost of the service might be reduced by mass production and the use of non professional technicians "The Health of the Section of Radiology" was proposed by Mr Warren Low, and Dr R S Paterson president-elect, replied Mr Low said he believed some radiologists thought that of the five years at present allotted to the medical curriculum at least ten should be spent in the study of radiology! That spirit would take the Section far Dr Paterson appealed to London radiologists to attend the meetings of the Section so that provincial workers might have an opportunity of meeting the leaders of radiological thought

Dr William H Park, director of laboratories for the New York City Department of Health, has been appointed to the Hermann M Biggs professorship of preventive medicine at New York University and Bellevue Hospital Medical College

The fourth International Congress of Radiology will be held in Zürich under the presidency of Professor H R Schinz from July 24th to 31st 1934 According to the rules the congress may be attended by (1) members of radiological societies in all countries (2) persons introduced by such societies The thirty two countries which were represented at the third international Congress of Radiology in Paris have been invited by the organizing committee to appoint delegates to the international committee and to nominate a speaker to report on the organization of the cancer campaign in his country at the opening session At the general meetings the following subjects will be discussed *x* ray diagnosis of bone tumours vasography the development of pulmonary tuberculosis as seen radiologically radiation treatment of carcinoma of the uterus radiation treatment of malignant tumours of the mouth and pharynx radiation genetics mitogenetic radiation structure analysis identical physical measurement of the dose in *x* ray and radium treatment hard gamma rays cosmic radiation earth radiation short wave therapy In addition the sections for *x* ray diagnosis radiotherapy radiobiology radiophysics and technic electrology and heliotherapy will hold discussions During the congress an exhibition of apparatus photographical accessories chemical products and scientific books will be on view (for details apply to A Strehn Kilchberg/Zürich) All radiological societies are requested to send as soon as possible a list of their members to the general secretary (Dr H E Walther Glonastrasse 14 Zürich)

The issue of *La Medicina Ibera* for April 29th is devoted to the proceedings of the fourteenth International Congress of Ophthalmology recently held at Madrid with portraits of the principal members

Dr Bela Schick of New York has been given the annual gold medal awarded by the Phi Lambda Kappa Society in recognition of his work on diphtheria

In 1932 the numbers of births in Spain exceeded the deaths by 281 630

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal B.M.A. House Tavistock Square W C.1**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication

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All communications with reference to ADVERTISEMENTS as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager

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The address of the Irish Office of the British Medical Association is 18 Kildare Street Dublin (telegrams *Bacillus Dublin* telephone 62580 Dublin) and of the Scottish Office 7 Drumsheugh Gardens Edinburgh (telegrams *Associate Edinburgh* telephone 24301 Edinburgh)

QUERIES AND ANSWERS

Pruritus in Pregnancy

DR F W LAWSON (Cheltenham) writes I should be grateful for suggestions for the relief of itching in a woman seven months pregnant She had the same trouble in a previous pregnancy and while almost any cold application will bring temporary relief it is not enough to allow her proper rest There is no rash on the skin but plenty of evidence of the activity of her fingers

Wanted A Drum Defender

T S writes Can any reader tell me of a simple method of blocking the ears of a chronic invalid driven to distraction by motor horns? Cotton wool seems to be of little use

** We are informed that simple devices such as aurapax and quies can be obtained from most pharmacists

Ulcers of the Mouth

M W B writes in reply to H B P (May 27th p 947) I suggest this is probably a case of herpes and recommend painting the ulcers with 2 per cent resorcin in spirit Shock therapy is often successful

DR ALFRED P AMBROSE (Wembley) writes I recommend H B P to try 10 per cent chromic acid—carefully applied to the ulcers

DR V G REID (Upton Manor Essex) writes Recurring ulcers of mouth and tongue are very difficult The pathology is unknown I believe I suggest however a certain empirical treatment which appears to have put an end to the condition in a young woman of 23 (1) Give iron in abundance even if there is no anaemia (in the case of the patient mentioned I gave Blaud's pills) (2) Administer once a week intramuscularly an ampoule of 1 c cm manganese butyrate (British Drug Houses) (3) Make sure that meals are regular liberal and that the vitamin content is satisfactory Although the above treatment appeared to cure her I must say that there was just the possibility of another causal factor during the course of the treatment the patient took to herself a husband pregnancy might profoundly alter what is doubtless a blood perversion

DR A V RUSSELL (Wolverhampton) writes I presume that H B P has given an alkaline mixture or powder but if not the following may be administered with benefit sodii bicarb grains x calcii carb grains v pot chloratis mist tr bellad mv aq menth pip ad ʒss Sig ʒss ex aquae t d s As regards local treatment the application of 1 per cent gentian violet solution as a paint to the ulcers is often successful while the use of milk of magnesia with an equal quantity of tepid water as a mouthwash frequently is soothing The teeth should be carefully examined and any signs of caries or pyorrhoea dealt with

Income Tax

Whole time Appointment—Use of Car

ALEMB has a whole time appointment under a municipal corporation and is allowed £26 a year for the use of his own car on corporation work He estimates the ratio of private to corporation work at half and half and his running expenses at £57 per annum He has recently replaced his car at a net cost of £139 10s What can he claim?

* On the figures given it would be reasonable to deduct one half of the £139 10s as a special expense but there is the difficulty that where an allowance is received from an employer in respect of an expense there is usually an assumption that it is adequate over a period of years Consequently the revenue authorities will probably set up the contention that the £26 per annum paid by the corporation should be assumed to be all that is necessary to cover the costs of going about on corporation work and that no more than is necessary can be allowed under the statute In our experience such arguments are usually accepted by a tribunal hearing appeals unless the facts are exceptional and the allowance can be shown clearly to be inadequate over a series of years

House Belonging to Employer

D P H has hitherto been living in a house which he has rented from the company to whose institution he is appointed It is proposed to allow him to reside rent free and to reduce his salary by the amount of the former rent What will then be the position as regards income tax on the house?

** If the position reached is that D P H has to reside in the house because the company requires him to do so in order to perform his duties then the case falls under old Tennant v South rule the company is the occupier and D P H is liable on his actual salary only In such circumstances he will pay less than at present and the company the same If the intention is to give him full occupiers rights over the property then he will pay the same (or slightly more) because he will be liable to pay the income tax assessed on the premises under Schedule A as well as tax on the cash salary

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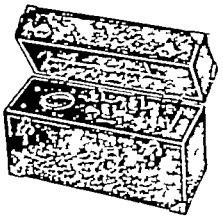
ELECTRICAL treatment in one of its several forms, often yields gratifying results in conjunction with other methods. The use of up-to-date equipment involves no risk to patient or operator neither is any special electrical knowledge needed on the part of the medical man.

Below is a selection from the wide range of electro medical equipment manufactured by Watsons. Every instrument embodies the results of wide experience, and can be implicitly relied upon to render long and trouble-free service

We invite you to write for catalogues or to call at our extensive showrooms for practical demonstrations.

THE "SUNIC" METAL RECTIFIED GALVANIC AND SINUSOIDAL APPARATUS



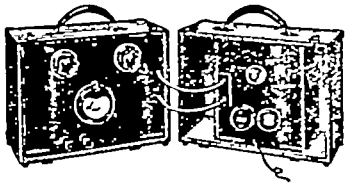
This apparatus has no moving parts is silent in operation earth free, perfectly safe and very compact It will deliver 80 m.A at 80 volts and up to 70 volts sinusoidal current The galvanic circuit is specially smoothed resulting in constant and unvarying current.

Price (A.C. only) - £13 13 0

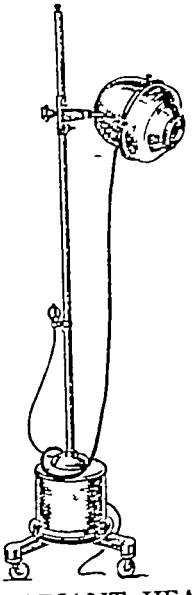
THE "SUNIC" PORTABLE DIATHERMY APPARATUS

Made in two models (a) For medical work (b) For surgical work. Both types pack in two convenient sections for easy carrying. They incorporate the most up-to-date and improved features including a special vacuum impregnated mica condenser in porcelain case potentiometer control thermo-couple ammeter and spark gap with 9/16 inch diameter contacts (2 contacts 4 points)

Price (For medical work A.C. only) - £45 0 0
(For surgical work A.C. only) - £55 0 0



THE "SUPER SUNICA" MERCURY VAPOUR LAMP



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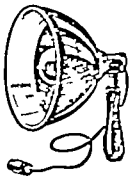

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Cash Basis—New Practice

DUBIOUS " was in partnership up to May, 1932 from which date he and his former partner have practised separately His accountant informed him about the time of the dissolution that the inspector had agreed to the cash basis being applied to the separate practices but apparently he is now insisting on the bookings basis being applied

*** It has to be admitted that the bookings basis is correct and the cash basis supported by convenience and practice only At the same time this certainly seems to be a case where the Revenue would lose nothing by adhering to the cash basis, seeing that cash received for past work is being brought in and it is obviously convenient to all concerned We suggest that " Dubious might reasonably point out that having been given to understand that the old basis could be continued his receipts from the former practice have been mixed in with the later fees, and cannot now be separated without great trouble and that as *all* receipts are being brought in his cash accounts will show his proper liability

LETTERS, NOTES, ETC

Abdomino-perineal Operation

In the course of a letter in which he refers to a paper on the treatment of carcinoma of the rectum and recto sigmoid function by a two stage abdomino perineal operation read by Dr R C Coffey of Portland Oregon at a meeting of the Royal Society of Medicine (Section of Surgery) on October 17th 1932 Mr EDWARD T THRING F R C S (New South Wales) states that the result of the subsequent discussion reported in the *Proceedings* of the Society (February 1933) did not appear to clarify the situation but rather to leave things *in statu quo* so far as the surgical treatment is concerned Mr Thring would draw attention to a paper of his own, printed in the *Medical Journal of Australia* on February 28th 1925 entitled " The Surgical Treatment of Cancer of the Rectum

Scarlet Fever in Yugoslavia

According to N D CERNOZUBOV (*Bull Off Internat d Hyg Publique* November 1932) the severe epidemic of scarlet fever in Yugoslavia from 1928 to 1930 was preceded by a mild attack without fatalities and with a large number of abortive and atypical cases In April and May 1928, a similar outbreak occurred among the recruits in the Novi Bazar garrison In the autumn of 1928 a sudden and violent epidemic broke out affecting the whole valley of the Ibar from Kus Metrowitza to Raschka and BaGiewatz The disease reached its highest incidence and fatality in December 1928 The fatality which was always very high fell from 34 7 per cent in 1928-9 to 26 3 per cent in 1929-30 The proportion of non eruptive cases was 64 per cent in the first year of the epidemic and 36 per cent in the second year 7 8 per cent of the patients had hypertoxic or fulminant attacks The high fatality was only partly due to lack of proper nursing, and was mainly caused by the epidemic attacking virgin soil The results obtained from active immunization were unsatisfactory as the disease severely attacked the schools in which the children had been given preventive injections or Dick toxin associated with anatoxin

A Stage Doctor

A London correspondent writes The grave frock coated Harley Street specialist has long been a familiar figure on the stage The play *The Late Christopher Bean* which has started on apparently a very successful run at the St James s Theatre gives us for a change a representation of the practitioner in a Midland village Dr Haggett admirably played by Mr Cedric Hardwicke also wears a frock coat but a very frowsy one and although spats give him a touch of smartness, the effect is somewhat spoiled by the bicycle clips which he forgets to remove from his trousers His professional desk swivel chair and medicine cabinet are in the same room as that in which he and his family have all their meals but as the painters are on the premises this may perhaps be excused The one thing in his practice which he seems to do with cheerful thoroughness is to make entries in his day book, but a realistic touch is given when he laments the fact that the patients do not pay their bills There is little reference to professional questions in the play, the theme of which is his and his family s reaction to the possibility of impending fortune Although the time is the present and the practice extensive, including—unless the remark was misheard—a ' panel he does not rise to a car He is a prey to greed although he fulminates against it in others but he shines *in moral splendour at the end* when he makes reparation to his servant upon whom he has been trying to play a sorry trick I have never met Dr Haggett or anyone resembling him, in town or country practice Is it possible that he may have existed in a previous generation?

A Syringe Case

Dr H L BASU F R F P S G writes from Calcutta Regarding the syringe case mentioned in the *British Medical Journal* of January 21st (p 104) made by Messrs Maw and Sons at the direction of Dr W R Thrower of Weymouth I would like to point out that this particular apparatus is not an original one as I have had in use a number of such for seven years They were obtained through a firm in Bombay and bear marks of being made in Germany In fact they are superior in design and make There are two portions in the cylindrical case—an outer one of metal and an inner one of closely fitting glass The glass cylinder is filled with alcohol and in it is immersed the carrier holding the barrel piston and two sizes of needles vertically The lid being made flat, bearing two knobs for gripping is screwed on to the top of the cylinder and takes up less space The various units can be taken to pieces when necessary

Medical Golf

The annual summer meeting of the Medical Golfing Society was held on May 25th at Walton Heath The competitors were the guests of Lord Riddell Results were as follows Henry Morris Cup (handicap), H L Glyn Hughes (handicap 11) 4 up G D McGrath (5) T H P Kolesar (scratch) A C Palmer (9), and H C Apperly (7) 1 up *Lancet* Cup (scratch) T H P Kolesar 1 up T A Torrance and H L Glyn Hughes, all square Veterans Cup (handicap) J Wallace* (9) Sir Milsom Rees (8) 1 down Class I (handicap 9 and under) G D McGrath* (5) T H P Kolesar (scratch), A C Palmer (9), and H C Apperly (7) 1 up * First prize after ties result is reckoned on last nine holes Class I (last nine holes) M F McDonnell (5), 1 up Class II (handicap 10 and over) H L Glyn Hughes (11) 4 up Stanley Wyard (11) all square Class II (last nine holes) H L Glyn Hughes (11) 1 up Foursomes (handicap) T H P Kolesar and D Wheeler 2 up , Leslie Williams and H L Glyn Hughes 1 up

Disclaimer

Dr C B HOGG (Kettering) writes As a sequel to faulty reporting of the proceedings of a local education committee meeting certain investigations concerning left handed children have in the lay press been incorrectly attributed to me My letter to the education committee regarding left-handed children which was read at the meeting gave the names of the investigators, in conjunction with the research work to which reference was made

Endomotriomata

Correction

By an error for which we were not responsible the name of Dr H K DUTTA pathologist to the Eden Hospital, Calcutta, was misspelt in the heading of the article by Colonel Green Armytage and himself in the *Journal* of April 8th

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospital will be found at pages 43 44 45 46 47 50 and 51 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 48 and 49

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 247

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Read this extract from the 'British Medical Journal' 30/7/32—

Dr — (London W) writes in reply to W A M's inquiry (July 23rd, 1932 p 180) I can confidently recommend Zonol Ltd 59 & 60 Old Bailey E.C 4 who cleared my garage of cockroaches after one treatment. We had swarms of them and had tried several treatments before theirs without success. It is now nine months and they have not returned

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EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

391 Prevention and Treatment of Diabetic Coma

O STUB (*Tidsskr f d Norske Laegefor* February 1st 1933 p 113) compares the fate of the diabetic patient before and after the insulin era with the help of statistics provided by the Rikshospital in Oslo Between July 1889 and July 1899 fifty seven diabetics were treated at this hospital six of them suffering from diabetic coma on admission There were altogether fourteen deaths in hospital from diabetic coma among these fifty seven cases Between April 1st 1924 and June 1st 1932 the same hospital admitted 302 men and 287 women suffering from diabetes As many as fifty five of these patients were comatose or precomatose (thirty five women twenty men) As many as thirty-eight of these fifty five patients were under the age of 30 and as many as twenty three had suffered from diabetes for less than six months A classification of the causes responsible for the development of coma or its precursors showed that intercurrent infectious diseases were the most important numerically being responsible for as many as nineteen cases Dietetic errors came next with seventeen cases and lack of the diagnosis of diabetes came third with seven cases Fourth in this list was the discontinuation of insulin in six cases There were five cases in which the cause was unknown and one in which it was abuse of alcohol This analysis suggests that such a high coma incidence on admission to hospital as fifty five out of 589 patients (9 4 per cent) is largely preventable The author recommends the supervision of diabetics under a card index system and education of the patient by means of printed instructions The mortality from diabetic coma could also assuredly be reduced by shortening the interval between the first warnings and admission to hospital This point is emphasized by the fact that of the thirteen patients admitted to hospital in full coma as many as eleven died whereas there were only six deaths among the forty two patients admitted in the precomatose stage of stupor or drowsiness Nine patients had been completely comatose from six to twenty four hours before treatment was instituted and fifteen of the seventeen patients who died of coma were women

392 Infectious Mononucleosis Simulating Diphtheria

F WULFF (*Ugeskrift for Laeger* February 2nd 1933 p 131) has made a systematic examination of the blood of all the 238 patients admitted between August 1st 1931 and August 1st 1932 to a hospital in Denmark for observation as diphtheria suspects A blood smear was made on the patient's admission but the staining and counting were usually deferred to the following day The May-Grünwald method of staining was employed and 300 or more leucocytes were counted In no fewer than twenty cases was mononucleosis infectiosa diagnosed by this procedure numerous atypical lymphocytes being found in every case As all the twenty recovered there was no likelihood of these being cases of acute lymphatic leukaemia Among the twenty cases were seven in which the local throat condition as well as the general condition was not only suggestive of diphtheria but also so serious as to indicate antitoxin treatment In some cases the false membrane not only covered the tonsils but also extended to the pillars of the fauces posterior wall of the pharynx uvula and soft palate There was a blood stained serous or purulent discharge from the nose enlargement of the lymphatic glands and a diphtheria like fetor Five of the seven worst cases were at once given antitoxin on admission as the diagnosis of diphtheria seemed so obvious The blood examination did however save these patients from the inconveniences of subsequent injections It has been decided that in the future the blood of diphtheria suspects shall be examined at this hospital before antitoxin is given Cultures were repeatedly made for diphtheria bacilli in all these twenty cases but the results were invariably negative The course of these cases was often protracted With regard to the differential diagnosis it can be made with certainty only by means of the blood count but a demonstrable enlargement of the spleen and of the lymphatic glands in parts of the body other than the neck is suggestive of mononucleosis infectiosa

393 Measles and Tuberculosis

H KOCH (*Arch f Kinderheilk* January 24th 1933 p 129) as the result of his observations at the G V Prever Children's Hospital Vienna comes to the following conclusions In a considerable number of cases measles leads to activation of tuberculosis although this cannot be regarded as a general rule The explanation of this activation is to be found first in the fact that in the prodromal stage measles exerts a powerful action on the cellular infiltration which forms a protective wall round the tuberculous foci—the more severe the attack of measles the more dangerous are its effects In the second place the activation is due to the tuberculous focus itself The more pronounced the exudative character of the tuberculous process the more likely is there to be an activation of the disease whereas tuberculous foci in the proliferative stage are not affected Young children and those whose tuberculous infection is of recent date are liable to most risk from measles In such cases inoculation with convalescent serum should be performed as the danger of activation of tuberculosis is small when the attack of measles is attenuated

Surgery

394 Malignant Prostate

J F MCCARTHY and S E KRAMER (*Amer Journ Surg* February 1933 p 209) point out that whereas carcinoma of the prostate was considered to be a rare disease in the past more accurate diagnosis has now shown it to be comparatively common Out of a total number of 689 prostatic tumours 123 (or 18 per cent) were found to be malignant It is suggested that the epithelial hyperplasia seen in prostatitis and hypertrophy may lead to early cancer but the aetiology is doubtful Diagnosis of malignancy is easy the classical signs being nodulation induration and fixation There is usually a loss of normal elasticity during the introduction of the endoscope Induration is abnormal and there are atypical visual changes near the vesical neck As 25 per cent of all men experience prostatism in greater or less degree it is of the utmost importance that early diagnosis should be made by means of routine palpation of the prostate microscopical and cultural study of the expressed secretion and the treatment of any infections found When malignancy of the prostate has been confirmed the outlook is grave and the chance of a permanent cure is very slight If a localized nodule is discovered a radical perineal prostatectomy may give a fair measure of success In the majority of cases of prostatic cancer either bone metastasis or involvement of the ileo-pelvic or abdominal glands is present therefore the complete surgical removal of such prostates is of little use Radium according to present methods cannot be used effectively in cases of malignant prostate and x rays though they may retard the growth of the cancer have no curative power and may precipitate metastases Endoscopic revision supplemented with x ray therapy offers the patient the greatest degree of comfort and economic usefulness as it restores his bladder function and to a certain extent controls the inevitable pain up to the terminal stage of the disease

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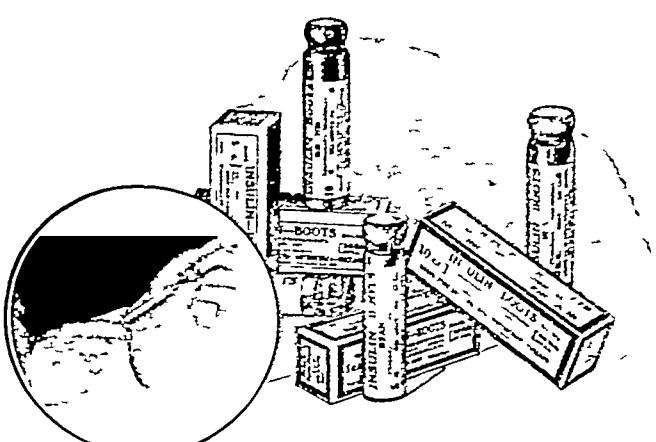

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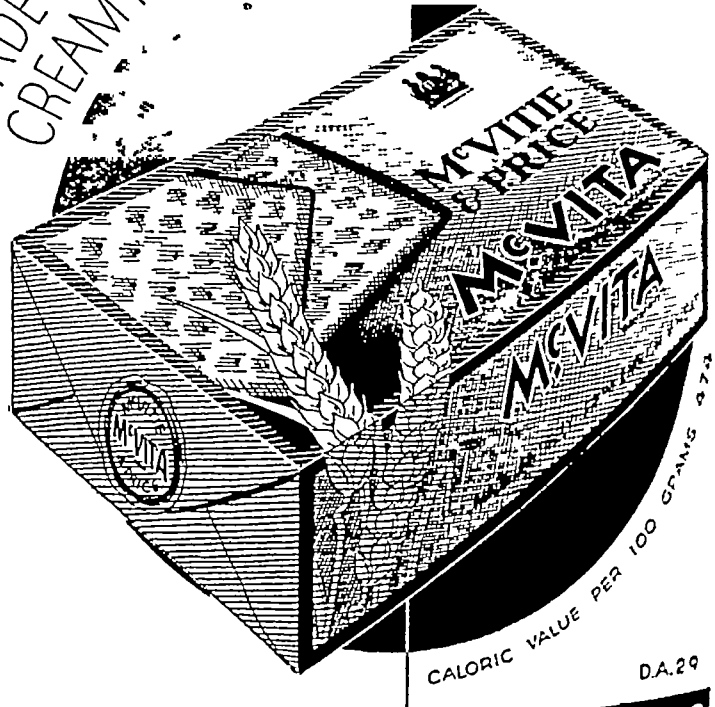

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395 Tumours of the Gasserian Ganglion

M J COOPER (*Amer Journ Med Sci*, March, 1933, p 315) records three cases of primary tumour in the region of the Gasserian ganglion, and reviews nineteen additional cases in the literature to illustrate the frequency of occurrence of the various initial symptoms and objective manifestations, and to assess the value of operative intervention Gratifying results were obtained in a few cases where such operation was undertaken early There was a relatively low operative mortality in excision of early lesions and in the less hazardous procedure of section of the sensory root Attention is drawn to the possibility of relieving the symptoms in cases of inoperable tumour by division of this root Cooper points out that the clinical diagnosis of tumour of the Gasserian ganglion is not always possible, even when definite neoplastic involvement of the ganglion has occurred Occasionally such conditions as tic douloureux, atypical neuralgia, post-zoster neuralgia, syphilis, and rarely tuberculosis or angle tumour, may produce a clinical picture which cannot be distinguished from early tumour of the ganglion He considers that an exploratory operation in its region by competent surgeons is justified for patients who are suffering from suspicious constant trigeminal pain of uncertain causation It is also commended for those who show objective indications of interruption of the trigeminal motor or sensory pathways, without evidence of an aetiology other than ganglion tumour In a series of twenty-two cases analysed by the author pain in the ipsolateral trigeminal distribution occurred seventeen times, impairment or loss of touch, pain, heat or cold sensations in the same distribution sixteen times, in fifteen there was ipsolateral involvement of the third, fourth, or sixth nerve in thirteen there was ipsolateral trigeminal motor weakness, and in ten diminution or loss of the ipsolateral conjunctival reflex was demonstrable The clinical picture of tumour of the ganglion appeared, therefore, to be that of some impairment of the sensory or motor functions or of the reflex arcs dependent upon the integrity of the trigeminal pathways, although no single sign or symptom was invariably found In some instances there were no signs or symptoms pointing to any involvement of the ganglion Radiographical examination gave no help In the twenty-two cases the pathological conditions were endothelioma (10) neuroma, sheath neuroma and undetermined (2 each), while there were single examples of neurocytoma neurofibrosarcoma, sarcoma, fibroblastoma, chondroma, and neurofibroma Reviewing the results of operation in these cases Cooper remarks that a definite conclusion cannot be reached until larger figures are available for assessment In his collected series twenty patients were so treated Of these, death attributable to the operation occurred only twice, the operation having been undertaken for decompression in one instance and for exploration in the other Frazier reported the low percentage operative mortality of 0 26 as regards the middle fossa procedure for trigeminal neuralgia and this is held to encourage exploratory investigation in doubtful cases as well as the section of the sensory root in otherwise inoperable cases

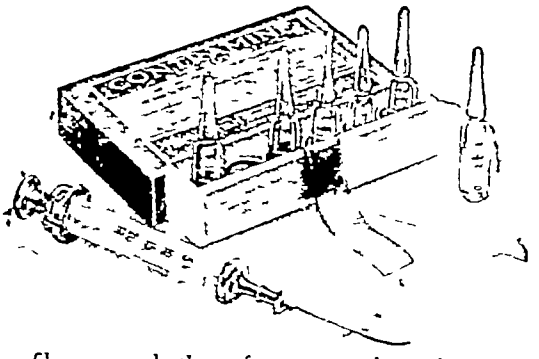
Therapeutics

396 Treatment of Strychnine Poisoning

G F KEMPE J T C MCCALLUM and L G ZERFAS (*Journ Amer Med Assoc* February 25th, 1933, p 548) discuss the various lines of treating strychnine poisoning, and record eleven cases successfully dealt with by intravenous injections of sodium amytal or sodium pentobarbital They point out that by the time when the symptoms are first noted much of the poison has already been absorbed, and that therefore the use of the stomach pump and such antidotes as tannic acid, iodine, and potassium permanganate are of little value Although ether chloroform, and chloral hydrate are sometimes effective in controlling the convulsions the doses necessary are often so large as to depress or stop the respiration Similarly morphine may be of no avail owing to the large quantity required Smaller doses of the barbiturates are, however, strikingly effective The authors recommend the following line of treatment When sodium amytal or pentobarbital is used, just enough of the intravenous preparation is given to induce sleep or to stop the convulsions In patients aged about 20 the dose of amytal was about 8 to 12 grains, in one patient, aged 4, who had been accidentally poisoned by an unknown quantity of strychnine, 15 grains were necessary When the phenobarbital salt is employed the dose should be that which is just sufficient to stop the convulsions and not necessarily to cause sleep Should the patient subsequently show any signs of continued strychnine poisoning such as heightened reflexes complaints about noises marked response to slight stimuli, or convulsions, the treatment should be renewed Gastric lavage is held to be neither advisable nor necessary, but it may be undertaken after the patient has fallen asleep if adequate assistance is available to prevent injury or the aspiration of material from the stomach Intravenous injections of sodium chloride solution may be given, but are not deemed necessary Quiet dark surroundings are advisable There is sometimes difficulty in determining after the administration of the antidote whether symptoms are due to it or to continued strychnine action, in such cases it is advisable to await a mild convulsion before increasing the dose of amytal The authors admit that it is not possible to calculate exactly the requisite dose of the remedy unless the amount of strychnine absorbed is known and the presence of idiosyncrasy to it or amytal can be estimated An experimental dosage is usually necessary, therefore, at first Neither morphine nor apomorphine should be given, but ether can be used to control the convulsions until the antidote is available In the absence of the intravenous preparation of amytal oral doses up to the equivalent of 15 grains may be given by the mouth as a preliminary, intravenous injection being subsequently employed

397 Thyroid Medication in Chronic Arthritis

F C HALL and R T MONROE (*Journ Lab and Clin Med* February, 1933, p 439) have studied 300 patients with chronic non tuberculous arthritis for the signs and symptoms of thyroid deficiency the basal metabolic rates and the action of thyroid gland therapy, of these 150 were of the hypertrophic and 150 of the atrophic type In the former group the symptoms and signs of hypothyroidism frequently occurred with no other explanation for them The basal metabolic rates were below minus 10 in 50 per cent and below minus 15 in 34 2 per cent of 108 patients in whom these determinations were made The patients were mostly well nourished and the gland deficiency was apparently the only cause for the hypometabolism Thyroid therapy permanently benefited 49 1 per cent of 116 patients in whom its use seemed wise In the atrophic group the symptoms and signs of hypothyroidism were less frequent and could generally be explained by depletion and under nutrition The basal metabolic rates were below minus 10 in 35 6 per cent and below minus 15 in 17 7 per cent of 106 patients in whom these were determined definite gland deficiency was present in only a few, and usually another explanation existed for the hypometabolism Thyroid therapy was permanently beneficial in 16 5 per cent of 103 suitable cases The authors add Care must be taken in the selection of patients for thyroid medication, its routine use may be harmful, especially if an element of cardiopathy be present it is rarely indicated in active cases of the atrophic type of short duration Its greatest use is in those cases showing hypothyroidism, these include the majority of the hypertrophic and a few of atrophic type of long duration and mixed or hypertrophic elements The action of the extract may be both specific and non specific, it aids in reducing weight increasing the circulation, and regulating calcium and phosphorus metabolism



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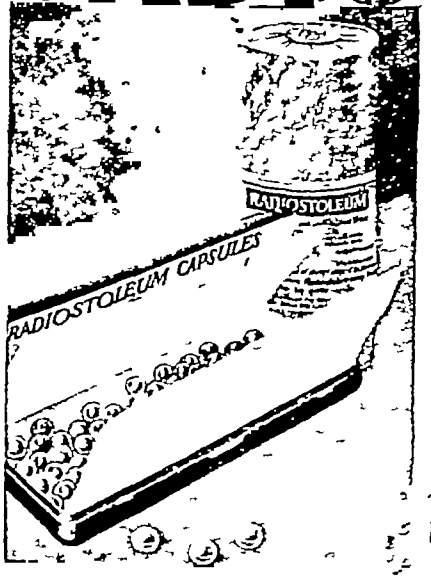

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The authors conclude that thyroid deficiency is a contributory factor in certain cases of chronic arthritis its correction when present improves the general well being and aids in relieving joint pain and disability and in permanently controlling the arthritis probably through better joint nutrition

398 High Carbohydrate Diets in the Treatment of Diabetes

M ROSENBERG (*Deut med Woch* March 3rd 1933 p 320) points out that the dietetic treatment of diabetes even since the introduction of insulin has undergone almost every modification possible for each of which special virtues were and are claimed From low carbohydrate diets in the early days to very high fat diets relatively recently the pendulum has swung to very high carbohydrate diets These latter are by no means advocated by the author who working in Umber's clinic has had consistent success for years with diets containing just enough carbohydrate for the patient's well being and ability to carry on his work the remaining calorie requirements being made up with the protein and fat for the maintenance of nitrogen equilibrium The claims of Adlersberg and Porges that the high carbohydrate treatment of diabetes has a curative effect are regarded with doubt by the author and the phenomena are explained by him as due to the spontaneous improvement in tolerance to sugar which frequently occurs in diabetics kept on a controlled regimen Two cases are however described which in spite of treatment on the ordinary lines frequently developed hypoglycaemic symptoms even though they constantly exhibited glycosuria On changing the diet of these patients to one containing an excess of carbohydrate (200 grams) and very little fat it was found that the glucose equivalent of the insulin now required rose and complete control now became possible gain in weight occurred and the patients were discharged from the clinic with almost normal blood sugars As a result of study of these and similar cases Rosenberg considers that the type which improves on a high carbohydrate diet is that in which there is overactivity of the glands antagonizing the action of insulin so that the insulin administered on ordinary diets is unable to exert its full glucose equivalence When in such cases excessive carbohydrate is administered the insulin can in some as yet unexplained way more readily act upon it so that a higher glucose equivalence is attained Whilst recognizing the purely hypothetical nature of this view the author considers it as more nearly in accordance with the facts than any other

Dermatology

399 Chloasma Faciei

Professor A. JORDAN (*Derm Woch* March 11th 1933 p 336) finds that of a series of fifty cases of chloasma faciei seen privately twenty were unmarried and girls twenty six were pregnant, and four were men Of 461 non pregnant cases taken at random in the dermatological and venereal clinic 129 complained of this condition of these thirty five were unmarried girls seventy six were non pregnant women and eighteen were men An analysis of the age incidence in this series of 129 showed that the disease is one associated with the sexually mature years Its occurrence in men although relatively rare rules out the specific attribution to anomalous conditions of the uterus and appendages The contention of other authors that the aetiology of the disease is associated with trophic changes in the sympathetic fibres running in the trigeminal nerve is not supported by the author who did not find distributions of the pigmentation corresponding to this nerve But in the matter of endocrine disequilibrium definite evidence was almost always obtainable particularly in the young female patients Such evidence included menstrual disturbances diseases of the genital tract and Graves's disease In non gravid cases chloasma faciei seemed to be related to previous pregnancies or to the climacteric The development of the condition during pregnancy is not necessarily followed by its regression after delivery it may remain permanently or for many years In men the disease according to Jordan is associated with sexual weakness thus again supporting the endocrine view Therapy is directed therefore to the endocrine system preparations of ovary thyroid etc being used Prophylactically exposure to the sun should be avoided

400 Favus in Mice and Men

J I CONNOR (*Med Journ of Australia* December 24th 1932 p 765) reports an investigation into the prevalence of favus among the workers in wheat in Australia to whose susceptibility to the disease a recent mouse plague in the wheat growing areas has drawn attention The parasite *Achorion quinckeanum* has been known to be present among wild mice since 1917 An affected mouse has yellow crusts about the nose eyes and ears and also on the legs Some of the men at work rebagging the wheat had circinate ringworm-like lesions on the neck and forearms Two different fungi were grown from these on Sabouraud's maltose agar medium (1) a woolly rapidly growing fungus which later produced black terminal ascospores and (2) a slow growing snow white fungus The second when inoculated into mice produced lesions similar to those found in the wild mice Death of the mice occurred three weeks after infection Cultures from the scutula of these mice on Sabouraud's media produced the same snow white fungus Lesions in man consist of circinate erythematous scaly lesions on the glabrous skin and kerion like lesions on the hairy parts Yellow scutula are seen in a small proportion of cases Only a small percentage of the men exposed to infection contract the disease Treatment consists in applying an ointment composed of benzoic acid 15 grains and salicylic acid 15 grains in 1 ounce of vaseline Kerion of hairy parts is better treated with weak perchloride of mercury or mild antiseptic dressings of eusol

Obstetrics and Gynaecology

401 Subfascial Fixation of the Prolapsed Uterus

C IUBAS (*Zentralbl f Gynäk* January 28th 1933 p 227) reports twenty four successful operations for prolapse performed by the method of Grigoriu In lumbar anaesthesia the abdomen is opened mesially and the uterus together with the adnexa is pulled upwards and forwards The lower end of the uterus is fixed by anterior and posterior sutures to the posterior sheath of the rectus abdominis and the uterus and appendages are then sutured in a bed bounded behind by the rectus muscle and in front by its sheath A plastic vaginal operation now follows but anterior colporrhaphy is unnecessary since the fascial suspension remedies a cystocele The operation can only be undertaken when the uterus and adnexa are healthy or have been made so surgically It must be accompanied in preclimacteric subjects by double resection of the Fallopian tube Popovici has recorded twenty two successful operations of this kind performed by Grigoriu and his pupils According to Iubas who warmly commends the operation it is short and easy recurrence of the prolapse is impossible and menstruation and coitus are not affected

402 Various Treatments of Cervical Carcinoma

Before contrasting the results of radium surgery with those obtained by other methods in the treatment of cervical cancer P PETIT DUTAILLIS (*La Gynécol* January 1933 p 5) describes his three methods in the former procedure He agrees with other authorities that the failures in and accidents following radium therapy are due to faulty technique and not to the radium itself

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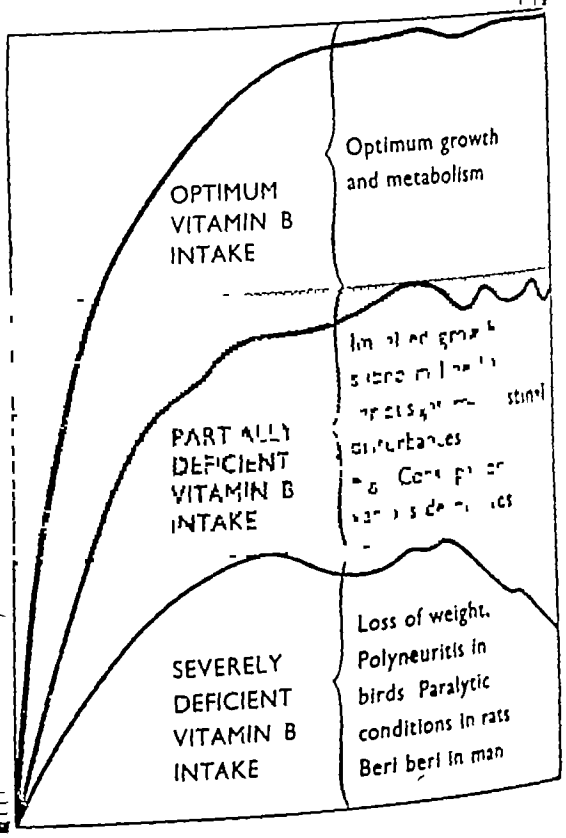

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Pathology

403 Infection in Burns

R H ALDRICH (*New England Journ Med* , February 9th, 1933 p 299) discusses and rejects the three theories—destruction of the functions of the skin, absorption, and blood concentration—that have been put forward to account for the various phenomena encountered in a burned patient Bacteriological studies were done by Eiror on a series of these cases, and the beta haemolytic or gamma streptococcus was found to be the invading organism in all extensive burns Further, there are no marked constitutional changes if burns are kept free of infection The author advocates the use of the aniline dye gentian violet in treatment Its advantages are (1) it is a specific antiseptic for the invading organism (2) it forms a thin light eschar tough but flexible (3) it produces practically instantaneous analgesia , (4) minute islands of unburned epithelium, found in practically all third degree burns are conserved under the eschar and the necessity for subsequent skin grafting diminished A 1 per cent aqueous solution of the crystalline form of the dye is sprayed on to the burned area every two hours until the burn is sealed No dressing is applied The usual treatment for shock is carried out After the eschar has formed the patient is sprayed every four to six hours during the day Any blebs or softening of tissues are opened or removed and the underlying portions sprayed The importance of this is stressed The general care of the patient includes forcing of fluids and a high vitamin and high calorie diet A few typical cases are reported

404 Infectious Polypoid Colitis

R M LARSEN (*Arch Int Med* February 1933, p 236), who records an illustrative case states that the colon is a relatively frequent site for multiple polyps of the mucous membrane with and without chronic ulceration The true polyp is composed of hyperplastic glandular mucous membrane projecting into the lumen of the gut Larsen's patient was a man, aged 49, in whom the clinical symptoms simulated those of ordinary polyposis with ulceration, and associated with structures which bore a close gross relation to ordinary polyps of colon The polyps were composed primarily of granulations and massive clusters of large mononuclear inflammatory cells containing numerous Gram negative apparently unencapsulated bacilli which were probably the cause of the condition No previous example of this kind has been recorded

405 Post operative Blood Changes

Referring to recent work of numerous authors regarding the variations in the chloride content of the blood following operations, especially abdominal ones, J DRIESSENS and R DEVERIX (*C R Soc de Biol*, February 4th, 1933, p 389) record a study of the plasma and corpuscular chloride contents in thirty three cases subsequent to surgical intervention , the findings in three of these are tabulated It was found that an operation, with or without general anaesthesia, brings about a disturbed equilibrium of the blood chlorides , a very marked plasma hypochloraemia was found in 81 per cent of the cases and a corpuscular deficiency in 84 per cent , a combined hypochloraemia of both plasma and corpuscles was found in 73 per cent Cases of increased chloraemia could be explained by changes in the blood before the operation Variations in the plasma corpuscle coefficient characterise this disturbed balance of the blood chlorides being raised in 70 per cent and lowered in 30 per cent of the cases In a further reference to this subject P BOULANGER and J DRIESSENS (ibid p 391) cite recent experiments which indicate that all increases of this coefficient are due to increased acidity of the albumins, the converse being also true In the first case acid stimulation of the respiratory centre occurs, with resulting acidosis , in the second the alkaline reserve is low, a non acid stimulation of the centre takes place, which tends to create an alkalosis These workers found in thirty-three cases after operation the coefficient was lowered in 72 per cent and raised in 28 per cent In the latter cases the fall in the alkaline reserve indicated a true acidosis , in the former an increased alkaline reserve was noted only in one-third of the cases, it being lowered in the remainder

406 Repair of Bony Fractures

D MUCCI (*Chir d Org di Movimento* December, 1932, p 498), by a series of experimental fractures of the radius in rabbits in which, after exposure of the shaft (1) the stumps were completely separated from the soft parts (2) the periosteum was also thoroughly removed (3) attached to the muscles, and (3) the site of fracture remained with periosteum and soft parts intact, was enabled on killing the animals at intervals of six to sixty days to observe the rate and nature of repair After the operation the animals received daily subcutaneous injections of 1 per cent aqueous solution of trypan blue After death the bone was decalcified and sections were prepared In all cases the wound was healed by first intention Mucci found in group (1) that healing of the fracture occurred later that in the renewal of continuity the periosteum did not share, the histiocytic elements being provided exclusively by the medulla and open Haversian canals at the site of the fracture In group (2), where the separated periosteum remained attached to the muscles, there was even at the sixth day an active production of chondroblastic and osteoid tissue which tended to envelop the site of fracture being collected in dense layers which caused an early thickening of the periosteal lamina and was associated with an outflow of great numbers of histiocytes from the intermuscular tissue Even after two months there was no formation of true callus between the stumps or consolidation of the fracture In group (3) proliferative processes occurred from the beginning accumulation in the periosteum of great quantities of histiocytes (trypanophilic cells) derived from the intermuscular and subcutaneous tissues appeared at the site of fracture with formation of chondroblastic and osteoid tissue so that at the second week the consolidation was well advanced

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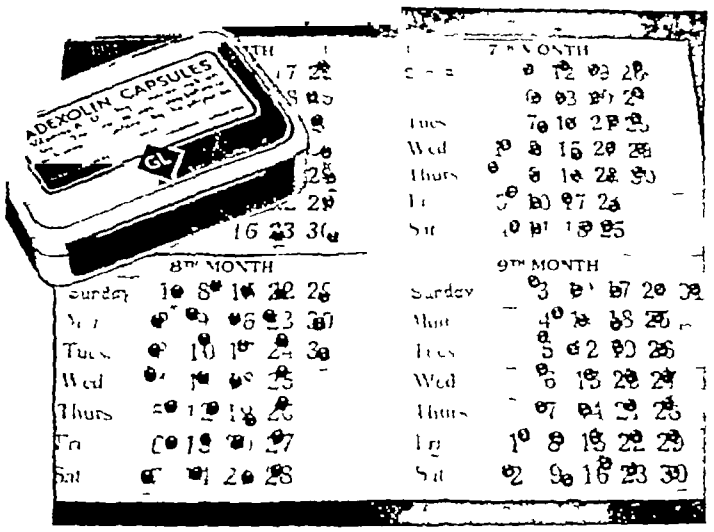

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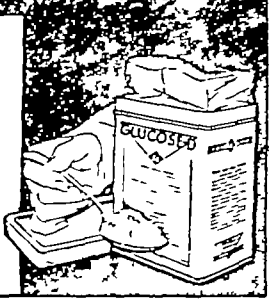

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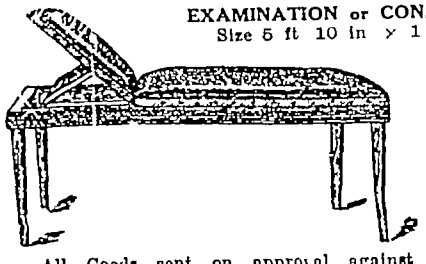

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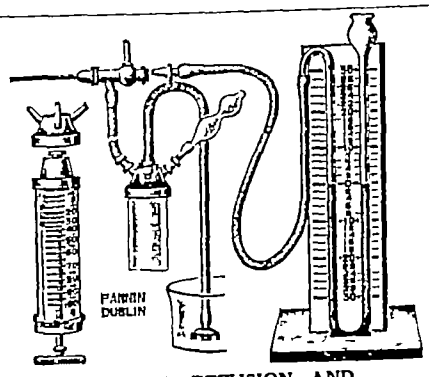

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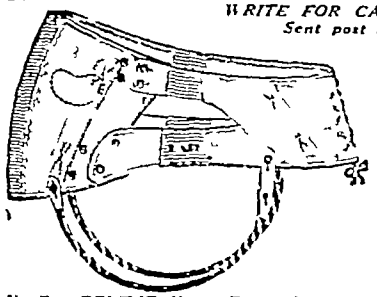

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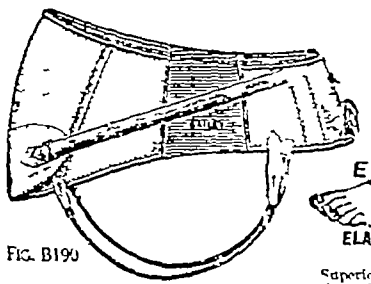
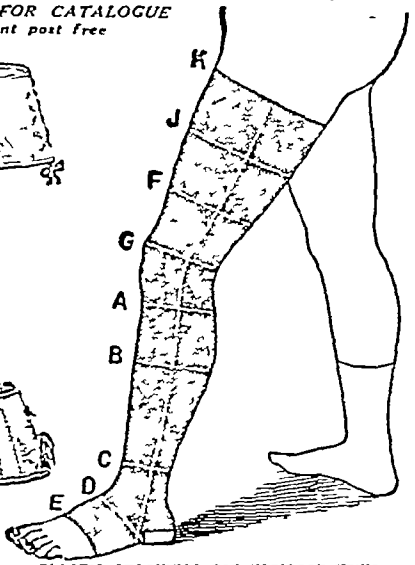


FIG. B190

BELT FOR ENTEROPTOSIS



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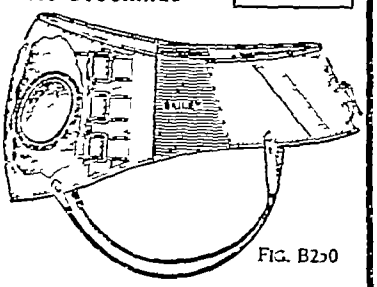
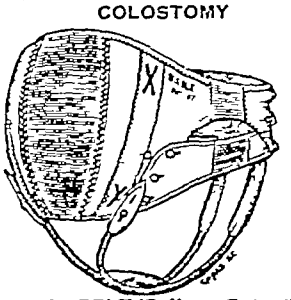


FIG. B250
(Showing Interior of Cup)
SPECIAL BELT FOR AFTER COLOSTOMY



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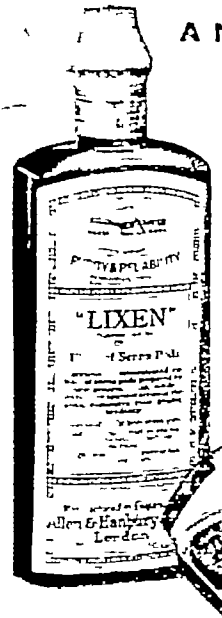

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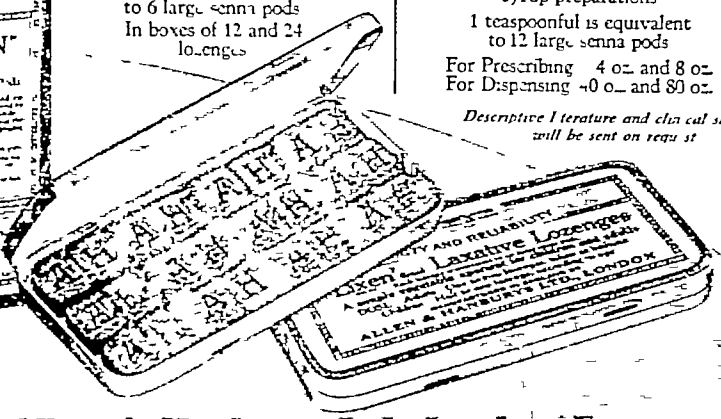

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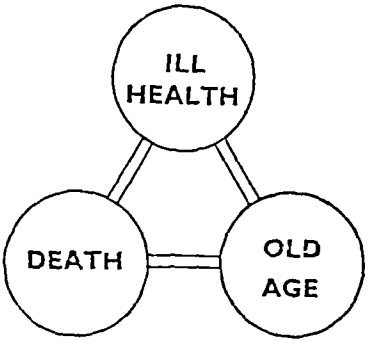

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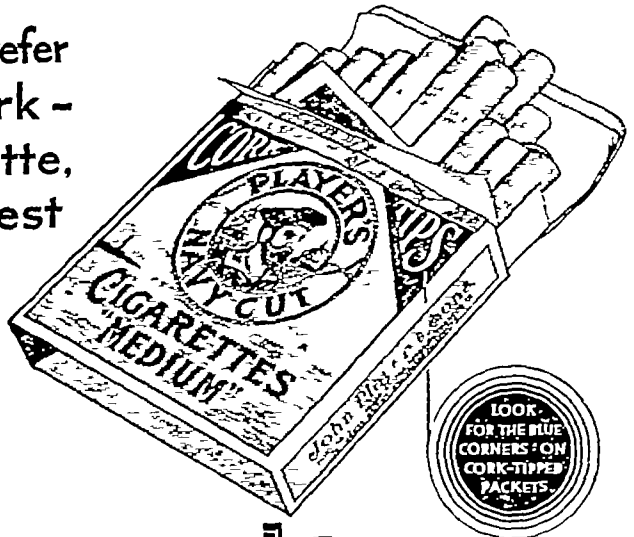

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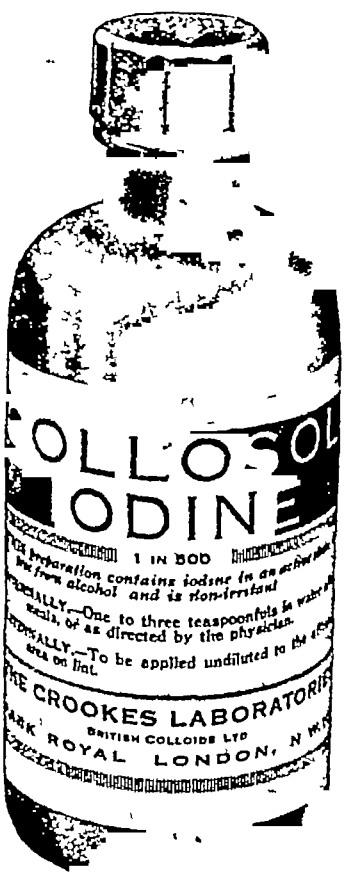

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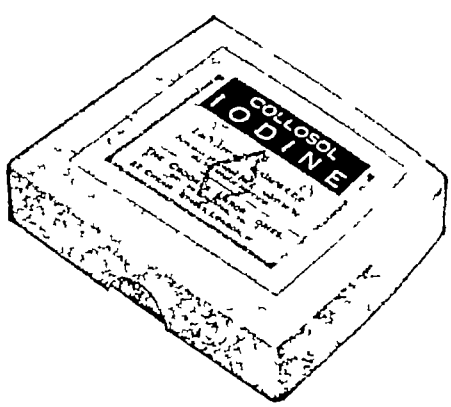

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The seaside house of St. Andrew's Hospital is beautifully situated in a Park of 330 acres, Llanfairfechan, amidst the finest scenery in North Wales. On the North-West side of the Estate a mile of sea coast forms the boundary. Patients may visit this branch for a short seaside change or for long period. The Hospital has its own private bathing house on the seashore. There is trout fishing in the park.

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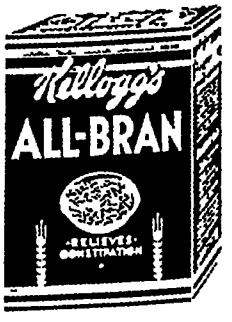

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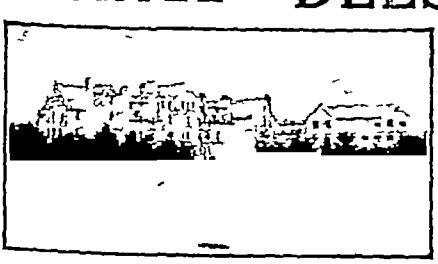

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THE UNIVERSITY OF LIVERPOOL

The Council invites applications for the post of LECTURER (ungraded) in the department of Pathology Salary £600 per annum

The Lecturer will commence duty as soon as possible after the date of appointment

The appointment is a whole-time one and the Lecturer will be required to comply with the conditions of the Federated Superannuation System for Universities.

Four typewritten applications together with three references and (if the candidate so desires) copies of testimonials to be forwarded not later than Saturday June 24th to the Registrar

Further enquiries should be addressed to the George Holt Professor of Pathology

EDWARD CAREY Registrar

VACANCY FOR RESEARCH FELLOW (MALE or female) at a Liverpool Hospital The appointment is for one year in the first instance Work may be used for M D thesis—For particulars write Box 4 484 Lee and Nightingale Liverpool 2.

UNIVERSITY OF LONDON

EXTERNAL EXAMINERSHIPS 1934

The Senate announce the following vacant Examinerships for the year 1934

For Final and Higher Examinations for Medical Degrees

MEDICINE SURGERY M D HYGIENE.

For First Examinations for Medical Degrees

CHEMISTRY (TWO). GENERAL BIOLOGY PHYSICS

For Second Examinations for Medical Degrees

ANATOMY CHEMISTRY PHARMACOLOGY

Associate Examinerships

Applications will also be invited for Associate Examinerships in Medicine Obstetric Medicine Pathology and Surgery A separate application form must be used for Associate Examinerships and the word "Associate" must be written on it.

Application forms (or forms if more than one Examinership is applied for) and particulars of the remuneration and duties can be obtained from the External Registrar

Candidates must send in their names to the External Registrar GEO F GOODCHILD M A B Sc with any attestation of their qualifications they may think desirable on or before Monday July 3rd 1933 (Envelopes should be marked Examinership")

The Senate desire that no application of any kind be made to individual members.

If testimonials are submitted one copy only of each is required. In no case should original testimonials be submitted. If more than one Examinership is applied for a separate and complete application must be forwarded in respect of each Examinership The appointments will be made by the Senate in November Applicants who desire that the result should be communicated to them are requested to enclose a stamped and addressed envelope with their application

EDWIN DELLER, Principal.

University of London
South Kensington S W 7
June 1933

UNIVERSITY of CAMBRIDGE

DIPLOMA IN MEDICAL RADIOLOGY AND ELECTROLOGY

New Regulations for the Diploma come into force on October 1st 1933 and apply to all candidates who have not been admitted to any examination for the Diploma before that date The course which occupies nine months in all begins on October 4th 1933 and comprises

(a) Four months instruction in Physics Radiology Electrology and Pathology

(b) Three months further instruction in Radiology and Electrology together with three months clinical work in the Radiological Department of a hospital approved by the Managing Committee for the Diploma

(b) Three months further instruction in ant in the Radiological Department of a hospital approved by the Committee Hospitals in London in the Provinces and Overseas have been approved for this part of the course

Examinations for Part I (Physics) will be held in February and July 1934 and for Part II (Radiology Electrology and Pathology) in July and October 1934

The courses are open to men and women whose medical qualifications are approved by the General Medical Council for purposes of registration and who satisfy the Committee that they have had sufficient post-graduate clinical experience.

Further information as to the courses may be obtained from G STEAD M.A., Secretary for the Diploma Cavendish Laboratory Cambridge or the General Secretary British Institute of Radiology 32, Welbeck Street, London W 1

EDINBURGH DENTAL HOSPITAL AND SCHOOL.

Applications are invited from registered Dental Surgeons for the post of TEACHER of CLINICAL DENTAL SURGERY who would also require to act as Dean

Minimum salary £1 000 per annum For other conditions of appointment apply to—

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EPSOM COLLEGE

Established in 1855 as a Public School with a Royal Medical Foundation.

Notice is hereby given that the ANNUAL GENERAL MEETING of the Governors will be held at the office 49 Bedford Square W C.1 on Friday June 23rd, 1933 at 4 p.m. when the names of the Pensioners and Foundation Scholars appointed by the new Competent Committee will be announced.

In accordance with the provisions of the Acts of Parliament, ten members of the Council will retire at this meeting It will be proposed that the following be re-elected for a further period of three years Dr C Luther Batteson Mr J S Cotman F C A., Dr Raymond Crawford M D., F R C P Sir Henry Dixon Kimber Bart. Dr S Morton Mackenzie M.A. M B., B Ch., Brigadier-General G T Mair C.M G D.S.O Dr Henry Robinson M.D, J P., D L. Sir Squire Sprigge M.D F R C S Dr. Septimus Sunderland M.D Mr George E. Waugh F R C.S

The Council will propose (a) that Colonel Norman C King Mr Horace H. Rew and Mr P D Leake F.C.A be reappointed Auditors for the ensuing year and (b) that Dr L. Prosser White be elected a Vice-President of the College

By Order of the Council,
W L GIFFARD (Major)
Secretary

49 Bedford Sq., W.C.1.
May 15th 1933.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

Prof EDWARD MELLANBY F R S will deliver the CROONIAN LECTURES on June 8th, 13th, and 15th at 5 o'clock, at the College, Pall Mall East S W.1

Subject *Nutrition and Disease—the Interaction of Clinical and Experimental Investigations"*

Any Member of the Medical Profession admitted on presentation of card.

By Order of the President
H. M. BARLOW Secretary

SURGEONS HALL, EDINBURGH

ANATOMY

The Vacation Classes commence on Aug 3rd and terminate on Sept 27th. Lectures and Demonstrations covering the entire subject and including Embryology are given thrice daily

Apply to CHAS R. WHITTAKER F R C.S F R S E. Lecturer

GUY'S HOSPITAL MEDICAL SCHOOL.

Applications are invited for the post of LECTURER on Physiological Chemistry The appointment will be for two years in the first instance with eligibility for reappointment Initial salary £450 per annum The Lecturer will be a member of the Staff of the Department of Physiology and will carry out his duties under the direction of the Head of the Department He may also be required to assist either in the Department of Pharmacology or in the Department of Pathological Chemistry

Candidates who must hold a registrable medical qualification should submit a statement covering education teaching experience and research together with the names of not more than two referees

Application should be sent to the Dean Guy's Hospital Medical School, London Bridge S E.1 not later than the first post on Monday June 19th.

THE SEXOLOGY GROUP OF THE PHYSIOMETHEAN SOCIETY has arranged for a series of TEN LECTURES to be given by Dr NORMAN HAIRE, Ch.M., M.B. on *The Evolution of Sexology* at the London School of Hygiene and Tropical Medicine Keppel Street (Gower Street W.C.1 at 8 p.m. on Thursday October 12th to December 14th inclusive Fee for the course 10s

Application for enrolment should be made on early date on forms to be obtained from Kathleen Styles Federation of Progressive Societies and Individuals, 21 St. Stephen's House, Westminster S.W.1.

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		Cerebrin	
		Orchitin	āā gr 1
FOR WOMEN	NEURASTHENIA AMENORRHOEA, etc. Palatinoid No 5743	Pituitary (ant.)	gr $\frac{1}{10}$
		Thyroid Gland	gr $\frac{1}{10}$
		Ovarian Substance	
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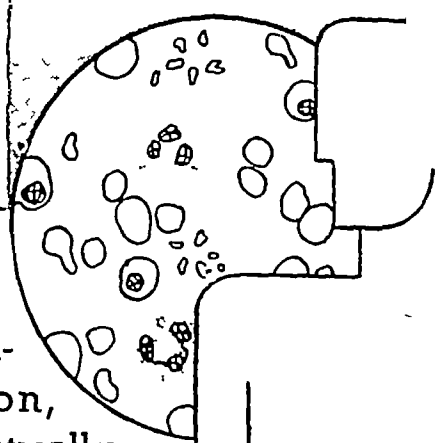

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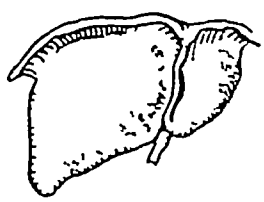

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METROPOLITAN BOROUGH OF GREENWICH

APPOINTMENT OF A JUNIOR ASSISTANT MATERNITY AND CHILD WELFARE MEDICAL OFFICER

The Council of the Metropolitan Borough of Greenwich is prepared to receive applications from registered Medical Practitioners for the appointment of Junior Assistant Maternity and Child Welfare Medical Officer in the Borough of Greenwich

Applicants must have had experience in connection with Maternity and Child Welfare work generally and shall be registered Medical Practitioners who, prior to April 1st 1930, had held the appointment of Medical Officer of an Ante Natal Clinic with the approval of the Minister of Health or who subsequent to qualification, have had at least 3 years' experience in the practice of his or her profession and special experience of practical midwifery and ante natal work resident Obstetric experience will be considered an additional qualification The person to be appointed will act generally under the direction and supervision of the Medical Officer of Health who is the Administrative Medical Officer of the Maternity and Child Welfare Services

The salary will be at the rate of £500 per annum rising by annual increments of £25 to a maximum of £700 per annum

The successful candidate will be required to reside in the neighbourhood of the Borough Council's Maternity Home, to devote the whole or his or her time to the service of the Council and not to engage in private practice except when called in by Medical Men in the district

The appointment will be subject to the provisions of the Council's Superannuation Act as amended, and to the approval of the Minister of Health and will be terminable by three months notice in writing on either side

Applications must be made on forms to be obtained from the undersigned stating age qualifications and experience, and accompanied by copies of not more than three recent testimonials and must be sealed up and endorsed Junior Assistant Maternity Medical Officer and reach me not later than 12 o clock noon on Monday June 19th

Canvassing Members of the Council either directly or indirectly will be a disqualification

Stamped addressed foolscap envelope must accompany application for form

Town Hall FREDERICK J SIMPSON
Greenwich S E 10 Town Clerk
May 18th 1933

COUNTY BOROUGH OF OLDHAM

BOUNDARY PARK MUNICIPAL HOSPITAL.

RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from registered Medical Practitioners for the post of Assistant Resident Medical Officer

Salary £200 per annum, with board residence and laundry

Candidates should be unmarried

The appointment will in the first instance, be for a period of six months The successful applicant however will be eligible for re appointment for a further period of six months

The Hospital comprises 375 beds with facilities for gaining experience in medicine, surgery midwifery and diseases of children

Applications on forms to be obtained from the undersigned endorsed Resident Assistant Medical Officer should be sent to the Medical Officer of Health Town Hall Oldham and should be received not later than Tuesday June 13th

JAMES B WILKINSON M D C M
Town Hall D P H
Oldham Medical Officer of Health

LONDON COUNTY COUNCIL

Applications invited from registered Medical Practitioners of at least one year's standing for appointment as TEMPORARY DISTRICT MEDICAL OFFICER in undermentioned medical districts

Area III—District I (Islington) £200 p a
Area VII—District D (Battersea) £275 p a
Area VII—District E (Battersea) £150 p a
Area VII—District O (Battersea) £300 p a

Candidate appointed will be required in each case to reside in or near the district Salary in each case is provisional and the remuneration and conditions subject to review

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a) County Hall Westminster Bridge S E 1 returnable by June 9th Canvassing disqualifies

THE INFANTS HOSPITAL, Vincent Square Westminster

Applications are invited for the post of HOUSE PHYSICIAN for three months from July 1st Salary at the rate of £75 per annum, with board residence and laundry

Applications with copies of testimonials to be forwarded to the undersigned

ALFRED J SMALL Secretary

COUNTY COUNCIL OF MIDDLESEX

WEST MIDDLESEX COUNTY HOSPITAL, ISLEWORTH

RESIDENT ASSISTANT MEDICAL OFFICER (Woman)

The County Council invites applications for the above appointment Candidates must be registered Medical Practitioners, unmarried must have held resident appointments in a General Hospital, and have special experience in obstetrics and gynaecology The officer appointed will work under the control of the Medical Superintendent, and will devote her whole time to her official duties

Salary is at the rate of £400 per annum, rising by annual increments of £50 to £600 per annum, together with board, lodging and laundry, valued for superannuation purposes at £100 per annum In view of the national situation a temporary abatement calculated on the following scale is applied to the salary and value of the emoluments for the first £150 per annum, no abatement, for the next £100 per annum, 2½ per cent abatement, for the next £500 per annum, 5 per cent. abatement

The successful candidate will be required to pass such medical examination as the County Council may direct, and, unless subject to the Poor Law Officers Superannuation Act 1896, to contribute to the County Council's Superannuation Fund The appointment will be held during the pleasure of the Council and subject to three months notice on either side

Applications, stating (1) age, (2) qualifications and (3) experience, together with copies of not more than three recent testimonials, must be received by the undersigned not later than Thursday, June 8th

No special application forms are provided Envelopes must be endorsed Resident Assistant Medical Officer'

Canvassing, directly or indirectly, will be a disqualification

N B—West Middlesex County Hospital is a modern general hospital, with over 500 beds for medical surgical and maternity cases Some 650 beds for chronic cases in Warkworth House, an adjoining institution also are under the care of the medical staff of the Hospital (C D/14)

ERNEST S W HART
Middlesex Guildhall, Westminster, S W 1 Clerk of the County Council
May 19th 1933

COUNTY BOROUGH OF BIRKENHEAD

DEPARTMENT OF THE MEDICAL OFFICER OF HEALTH

BIRKENHEAD MUNICIPAL HOSPITAL DEPUTY MEDICAL SUPERINTENDENT

Applications are invited for the appointment of Deputy Medical Superintendent (Resident) at the Birkenhead Municipal Hospital (547 beds) This Hospital has been appropriated under the Public Health Acts.

The remuneration attached to the appointment will be £450 per annum, rising by increments of £25 to a maximum of £550 per annum together with residence board etc

Applicants must be single, fully qualified, and registered

The candidate appointed will be required to perform any operative work allotted to him by the Medical Superintendent

He will act as an Assistant Medical Officer on the staff of the Medical Officer of Health and be required to undertake such other duties of a medical or surgical nature in the Public Health Services of the Borough as may be assigned to him

The appointment will be made subject to the Local Government and Other Officers Superannuation Act, 1922 and is determinable by three months calendar notice on either side

Candidates who possess

(a) a special qualification in surgery,
(b) the Diploma in Public Health

will be specially considered

Forms of application and further particulars relating to this appointment can be obtained from D MORLEY MATHIESON Esq M D Medical Officer of Health, 9, Hamilton Square Birkenhead

Canvassing directly or indirectly, will disqualify the applicant

Applications, endorsed 'Deputy Medical Superintendent' should reach the undersigned not later than Friday, June 16th

Town Hall E W TAME
Birkenhead Town Clerk
May 29th 1933

STOCKWELL COLLEGE, London S W 9

Applications are invited from WOMEN DOCTORS for appointment as MEDICAL OFFICER at the above Training College The duties will involve a daily visit to the College during term time Salary £100 per annum

For particulars apply to the Secretary British and Foreign School Society, 114, Temple Chambers Temple Avenue E C 4

COUNTY BOROUGH OF HUDDERSFIELD

PUBLIC HEALTH DEPARTMENT

APPOINTMENT OF ASSISTANT MEDICAL OFFICER OF HEALTH

Applications are invited from registered Medical Practitioners for the above appointment

Candidates should be ladies who have had special experience in ante natal work and in the care of infants

The salary offered is according to scale, £500 increasing by £25 per annum to £700 It will be subject to the temporary cut in operation at present on the salaries of all Corporation officials On £500 the reduction amounts to £17 10s

Applications stating age and giving full particulars regarding training qualifications and appointments held since qualification should be forwarded to JOHN M GIBSON Esq B A M D D P H Medical Officer of Health Public Health Department Huddersfield along with copies of two recent testimonials so as to reach him not later than Thursday June 8th

Town Hall SAMUEL PROCTER
Huddersfield Town Clerk.
May 17th, 1933

COUNTY BOROUGH OF HUDDERSFIELD

PUBLIC HEALTH DEPARTMENT

APPOINTMENT OF RESIDENT MEDICAL OFFICER, MILL HILL ISOLATION HOSPITAL.

Resident Medical Officer required for clinical duties at Mill Hill Isolation Hospital and at St Luke's General Hospital Appointment for one year

Previous experience in Fever work is essential

Salary £350 per annum, with board residence, and travelling expenses

Applications stating age and giving full particulars regarding training, qualifications and appointments held since qualification, should be forwarded to JOHN M GIBSON Esq B A M D D P H Medical Officer of Health Public Health Department Huddersfield along with copies of two recent testimonials so as to reach him not later than Thursday, June 15th

Town Hall SAMUEL PROCTER
Huddersfield Town Clerk
May 27th, 1933

COUNTY BOROUGH OF WEST HAM

EDUCATION COMMITTEE.

APPOINTMENT OF ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited from fully qualified and registered Medical Practitioners for appointment as an Assistant School Medical Officer under the direction of the School Medical Officer The person appointed will be required to devote his or her whole time to the service of the Authority

Salary £500 per annum, rising by annual increments of £25 to a maximum of £700 per annum, allowance being made in respect of similar service under other Local Authorities in fixing the commencing salary in accordance with the scale agreed between the British Medical Association and the Local Education Authorities The salary will be subject to an abatement in accordance with the resolution of the Council for the time being in force at present

From the first £200—2½ per cent
From the next £100—3½ per cent
From the next £250—5 per cent
From the next £250—7½ per cent

Applicants must have had not less than three years experience since qualification, and should have had previous experience in medical inspection and treatment of school children A diploma in Public Health will be an advantage

The appointment will be a designated post under the Local Government and Other Officers Superannuation Act 1922 and the successful applicant will be required to pass a medical examination as required by the Council for the purposes of that Act and the statutory contribution of five per cent to the Superannuation Fund will be deducted from his or her salary In the event of the appointment of a woman such appointment will be automatically terminated on marriage

Canvassing members of the Education Committee or the Council either directly or indirectly will be considered a disqualification

Forms of application, together with particulars and conditions of duties may be obtained from the School Medical Officer Municipal Health Offices 88 Romford Road Stratford E 15 upon receipt of a stamped addressed envelope and should be returned to the undersigned not later than Saturday June 17th

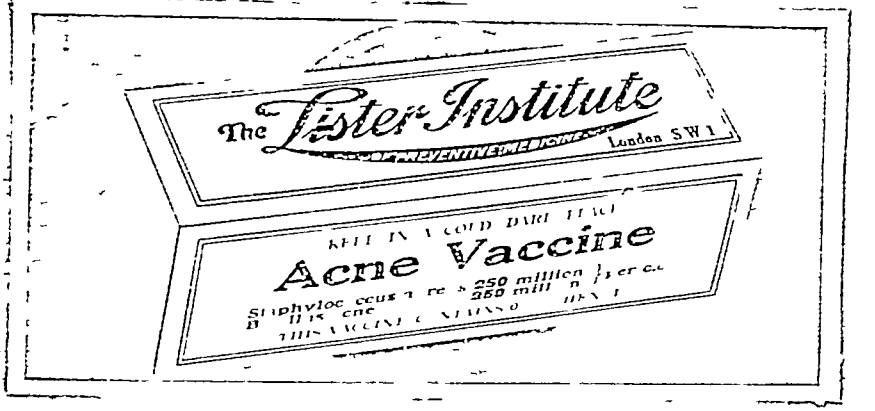
CHARLES E. CRANFIELD
Town Clerk and Education Officer
Education Office, 95 The Grove Stratford E 15
May 29th 1933

The Lister Institute

FOR PREVENTIVE MEDICINE

Therapeutic Substances Act, 1925 Manufacturing Licence No 9

Antitoxins, Vaccines and Sera



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Shiga (5,000 units) Flexner Y Sonne)
(Globulin Solution)

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In phials of 3 c.c. equivalent to 10 c.c. natural serum
5 c.c. " " 15 c.c. " "
10 c.c. " " 30 c.c. " "

Anti-Pneumococcus Serum
In phials containing 10 and 25 c.c.

Anti-Streptococcus Serum (Multivalent)
(Puerperal)
(Erysipelas)
In phials of 3 c.c. equivalent to 10 c.c. natural serum
8 c.c. " " 25 c.c. " "
10 c.c. " " 30 c.c. " "

Anti-typhoid paratyphoid Vaccine (T A B)

Compound Catarrhal Vaccine
In phials containing 234, 470 940 and 1,850 million organisms per c.c.

Compound Influenza Vaccine
In phials containing 30 and 660 million organisms per c.c.

Concentrated Diphtheria Antitoxin
In phials of 500 1 000, 2,000 4,000 6,000 8,000 and 10 000 units

Concentrated Tetanus Antitoxin
In phials of 1 000 3 000 10 000, 16,000 and 20,000 units (1,000=500 U.S.A. units)

Staphylococcus Vaccine (Mixed)
(Aureus, Citreus, and Albus)
In phials containing 500 1 000 and 2 000 million organisms.

Staphylococcus Vaccine (Aureus)
In phials containing 500 1,000 and 2,000 million organisms.

Vaccine Lymph

A descriptive pamphlet issued under the Authority of the Governing Body of the Lister Institute will be sent on request

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INDIAN MEDICAL SERVICE

Recruitment of European Officers.

Applications are invited from medical men for permanent commissions in H.M.'s Indian Medical Service. The terms offered include a gratuity of £1,000 on retirement after six years' service, or £2,500 after 12 years' service, together with free return passages for those who no longer desire to remain in the Service. In other respects the terms will be as detailed below

Candidates must be European British subjects under 32 years of age at the time of application and must be registered under the Medical Acts in force in Great Britain and Northern Ireland

CAREERS.

The Indian Medical Service offers wide opportunities of medical experience including clinical preventive specialist and research work At the beginning of his career an officer is employed on the military side which has medical charge of the Indian Army Promotion is on a time scale up to the rank of Lieutenant-Colonel and by selection to the ranks of Colonel and Major General An officer may apply after one year's Indian Service to have his name registered for transfer to the civil side from which appointments are made to Civil Surgeoncies which are established at the principal civil centres to provide for the medical needs of civil officials and for general medical administrative purposes to specialist (for example public health and bacteriological) services to research posts and to professorships at the Medical Schools

NOTE.—It is not possible to state at present what, if any prospects of employment on the civil side will be open to Indian Medical Service Officers under the proposed new constitution for India.

PAY

Owing to the state of the financial emergency at present prevailing in India the existing monthly rates of pay which are as follows are subject to a temporary reduction of 5 per cent

Rank.	Service in Rank.	Basic Pay	Overseas Pay	Year of Total Service
		Rs	R	
			150	1st
Lieut.	—	500	150	2nd
			150	3rd
			150	4th
Capt.	(I) During first 3 years service as Captain	600	£15	5th
			£15	6th
	(II) With more than 3 and less than 6 yrs. service as Captain	800	£25	th
			£25	8th
			£25	9th
	(III) With more than 6 years service as Captain	900	£25	10th
			£25	11th
			£30	12th
Major	(I) During first 3 years service as Major	950		
	(II) With more than 3 and less than 6 years service as Major	1100		
	(III) With more than 6 years service as Major ...	1250		
Lieut.-Col.	(I) Until completion of 23 years total service	1,000	£30	13th and over
	(II) During 24th and 25th years service	1600		
	(III) After completion of 25 years total service	1 00		
	(iv) When selected for increased pay	16.0		

EXTRAS.—In addition to the above rates various allowances are admissible for a large number of special appointments on both the military and the civil side which may be held by members of the Indian Medical Service Special high rates of pay are also attached to the numerous administrative appointments open to officers in both branches of the Service.

ANTEDATES IN COMMISSION

Any service rendered by an officer during the war as a medical or combatant officer or in a position usually filled by an officer may be counted as service for increments of pay promotion retirement and retired pay but not for gratuity

One half of any service in the ranks during the war may be counted as service for retirement and retired pay only

Candidates possessing certain higher medical qualifications may be granted an antedate of one year in their commissions Past service in certain hospital appointments may also render candidates eligible for an antedate of one year Persons holding or about to hold resident posts at recognized hospitals may be seconded in those posts for a period not exceeding one year The maximum period of antedate secondment or antedate and secondment combined admissible under this paragraph is limited to one year

OUTFIT ALLOWANCE.

Officers on appointment will receive an allowance of £50 towards the cost of outfit.

PRIVATE PRACTICE.

With the exception of Administrative Officers military or civil and officers holding certain special appointments officers are not debarred from taking private practice so long as it does not interfere with their proper duties

LEAVE

Leave can be taken at reasonable intervals and adequate rates of leave pay are provided Extra leave (known as study leave) which may not exceed 12 months in all during an officer's service may be granted to officers desirous of pursuing special courses of study of a post graduate nature During such leave study allowance at present fixed at the rate of 12s a day in the United Kingdom £1 a day on the Continent of Europe and £1 10s a day in the United States of America is granted to an officer in addition to ordinary rates of leave pay

PENSIONS.

The rates of pension are as follows	Per annum £
After 17 years service for pension	400
18	430
19	460
20	500
21	540
22	580
23	620
24	660
25	700
26	750
27	800

These rates are subject to alteration on account of a rise or fall in the cost of living as compared with the year 1919 to an extent not exceeding 20 per cent. in all At present a reduction of 8½ per cent is being made on this account.

There are additional pensions ranging from £65 to £350 per annum for officers who have held administrative appointments

PASSAGES

An officer on appointment is provided with free passage to India The families of officers who are married prior to the date of the officers embarkation on first appointment will also be provided with free passage to India subject to the payment of messing charges

Officers and their families are also eligible for passage concessions under which they are granted a certain number of return passages home at Government expense during their service

INSTRUCTION PRIOR TO EMBARKATION

Officers are required to undergo courses of instruction at the Royal Army Medical College and at Aldershot lasting approximately six months prior to their embarkation for India on first appointment Information as to the rates of pay admissible during this period and subsequently up to arrival in India is contained in the memorandum referred to below

A memorandum giving full details regarding these appointments and forms of application may be obtained from the Under-Secretary of State for India Military Department, India Office, London, S W 1 The Selection Committee will meet at the India Office early in July next and the selected candidates will be required to join a course of instruction commencing early in August prior to sailing for India early in 1934 Applications should be submitted as soon as possible

You may think we are always emphasising the word *English* ....we are!

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A Clinical Lecture

ON

CANCER OF THE STOMACH*

BY

R P ROWLANDS OBE MS FRCS

SENIOR SURGEON TO GUY'S HOSPITAL

Cancer of the stomach is admitted to be a very depressing disease It kills about 10 000[1] a year in England and Wales and is said to account for one third of all cancers in men and one fifth in women[2] It is so insidious in onset and so painless in progression that it often passes unnoticed until it is too late for successful operation But in spite of these facts there is too much pessimism about it in the minds of both the medical profession and the public who often think and say that it is incurable and therefore patients are not encouraged to come for operation which is the only treatment that can cure the disease If a radical operation is done early there is a hope of cure in a fair proportion of cases and from palliative operation of much relief and prolongation of life As it is only a small proportion ever come to the surgeon less than 50 per cent of these come in time for any operation to be justifiable and less than 30 per cent in time for radical resection The mortality from this operation when performed by experts used to be about 10 per cent but D C Balfour[3] reduced this to 5 per cent in his last 200 resections Finsterer[4] had a mortality of 6 per cent in 211 simple resections and 41 per cent in 129 complicated resections—that is when the growth had invaded surrounding organs such as the colon or pancreas Gatewood[5] analysing all the cases of cancer of the stomach admitted to the Presbyterian Hospital Chicago during the ten years 1920–30 states that 209 were operated upon including fifty eight resections with a mortality of 18 per cent Balfour has reviewed 128 patients at the Mayo Clinic who had survived resection for over ten years this number formed 20 per cent of those who had survived this operation performed at the Clinic between 1910 and 1920 Finsterer found that 17·4 per cent of those discharged healed were well after ten years Gatewood reports 39·5 per cent of those who survived resection well after five years and without any sign of recurrence These results of late operations are stimulating and should encourage doctors to persuade patients to come for operation much earlier than they do at present in the sure hope of much better results in the future

Although I have not had time to trace all my patients I want to bring to your notice the following encouraging cases of my own

CASE I.—*Cancer of the Stomach Partial Gastrectomy Well Seventeen and a Half Years Later*

Mrs E aged 41 a patient of Dr Brackenbury She had suffered increasingly from indigestion for three years She had had haematemesis and had wasted rapidly Radiography revealed pyloric obstruction I had felt a tumour of moderate size in the epigastrium a little to the right of the middle line The patient looked ill and anaemic was vomiting large quantities about once a day and was unable to take solids I therefore advised operation

Operation on August 21st 1915 in the private ward at Guy's Hospital (Dr Brackenbury present) A long incision was made in the epigastrium to the right of the middle line A dilated stomach hypertrophied and oedematous was found and a pyloric ulcer of large size extending half way along the lesser curvature from the pylorus around which it formed a wide ring which was hard and felt like a carcinoma As the stomach was particularly movable and there were no growths in the liver pelvic peritoneum or glands I decided to resect the diseased part and this was done without delay The gastric artery was doubly ligatured and divided the left gastro-epiploic also then the great omentum close to the transverse colon and the right gastro-epiploic and pyloric arteries The duodenum was crushed one inch beyond the pylorus and closed with a running suture of linen thread and then invaginated by two purse-strings of the same material A loop of jejunum was brought up through the transverse mesocolon and sewn to the back wall of the stomach along a selected line a little on the cardiac side of the middle of the stomach The stomach was divided near the line already mentioned between two clamps so that no leakage occurred An opening the same size as the one in the stomach was made in the jejunum and an anastomosis made after the Polya method Sewing the jejunum to the stomach before the growth was removed greatly facilitated the operation for the tubular pyloric segment was useful as a tractor the attachment to the jejunum prevented retraction of the stomach during the insertion of the deep suture The opening in the jejunum began four inches from the end of the duodenum and by starting it here there was no tension upon the first part of the jejunum and duodenum for the proximal part of the jejunum was joined not to the lesser but to the greater curvature of the stomach The great omentum was not removed but drawn up over the anastomosis and the stump of the duodenum The opening in the transverse mesocolon was closed by four interrupted sutures The operation lasted forty five minutes and the patient was not shocked after it She was infused during the operation two pints being run into the armpits

She was very well the next day but vomited once or twice On August 23rd she frequently vomited small quantities of green offensive material and as half a pint of sodium bicarbonate solution was given without according any great relief the stomach was washed out at 9 p.m A very large quantity of bilious liquid was withdrawn and the patient felt much better She was up on the tenth day and was walking about on the thirteenth and eating almost full diet She rapidly regained weight and strength Microscopically the ulcer proved to be a typical carcinoma

In December 1928 Mr Bellingham Smith performed hysterectomy for a rapidly growing soft fibroid

In February 1933 seventeen and a half years after the operation she was still alive with no sign of recurrence of the carcinoma

CASE II.—*Cancer of the Stomach 1 Primary Gastrojejunostomy 2 Secondary Resection Well Eleven Years Later*

A man aged 64 referred by Dr Aston Key The patient had had indigestion for several years but he had been much worse for the last six months with anorexia vomiting and melaena When admitted to Guy's Hospital he was thin and very anaemic the haemoglobin being only 40 per cent He was sent up with the diagnosis of duodenal ulcer but the diagnosis in hospital was carcinoma of the pylorus with obstruction

Operation on May 25th 1922 Dr E A Scott who gave the anaesthetic considered that the patient could stand a long anaesthetic and operation owing to his anaemic and bad condition I therefore performed posterior gastro-jejunostomy well away from a definite pyloric carcinoma the size of a tangerine orange completely encircling the pylorus ulcerated hard and at one side piercing the muscle wall of the stomach and showing peritoneal nodules No secondary growths anywhere Therefore partial gastrectomy (possible after blood transfusion) was thought advisable three or four weeks later

The patient improved so much that blood transfusion was not necessary before the second operation which was performed on July 10th 1922 when about half the stomach was removed The growth was a columnar-celled carcinoma Good recovery followed and in January 1923 the patient was in excellent health less anaemic and better nourished and in regular work at his old job of cleaning cars In February 1933 aged 75 he was well and acting as a family retainer and doing odd jobs at Hayling Island

[3777]

* Delivered at Guy's Hospital

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B.M.A. House Tavistock Square W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary 7 Drumsheugh Gardens Edinburgh)

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Town or District	Town or District	Town or District
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EBBW VALE, MON *(Workmen's Medical Society)*	OAKDALE, MON *(Medical Officer for Medical Aid Association)*	COUNTY BOROUGH OF SOUTH SHIELDS. HARTON INSTITUTION AND CLEADON COTTAGE HOMES *(Medical Officer)*
GILFACH GOCH GLAMORGAN *(Workmen's Medical Scheme)*	OGMORE VALLEY GLAMORGAN *(Wyndham Colliery Medical Aid Society)* *(Workmen's Medical Scheme)*	CITY OF STOKE-ON-TRENT. *(Venereal Diseases Officer)*
LLWYNPIA CLYDACH VALE TENYGRAIG GLAMORGAN *(Workmen's Medical Scheme)*	**PUBLIC HEALTH**	HERTFORDSHIRE COUNTY COUNCIL. WARE SANATORIUM. *(Assistant Medical Officer)*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer)*	KENT COUNTY COUNCIL. LENHAM SANATORIUM *(Male Assistant Medical Officer)* FARNBOROUGH INSTITUTION HOSPITAL. *(Resident Assistant Medical Officer)*	FULHAM BOROUGH COUNCIL. *Maternity and Child Welfare Department.* *(Assistant Medical Officer—Women)*
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(b) Overseas

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Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments)*	Dr. J. G. HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St. Sydney N.S.W.	**QUEENSLAND** *(Brisbane Associated Friendly Societies Institute)* *(Toowoomba Associated Friendly Societies Medical Institute Toowoomba)*	The Hon. Sec. Queensland Branch, British Medical Association B.M.A. Building Adelaide St. Brisbane.	**WELLINGTON NEW ZEALAND** *(Contract Practice Appointments)*	Dr. G. F. WILSON (Hon. Sec. New Zealand Branch) British Medical Association P.O. Box 156 Wellington New Zealand.
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May 31st, 1933 By Order of the Council G. C. ANDERSON Medical Secretary

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HUDDERSFIELD ROYAL INFIRMARY

Wanted, LADY HOUSE SURGEON to commence duty July 1st. Duties mainly Eye Ear Nose, Throat and Obstetrical Departments Salary £150 per annum with board residence and laundry

Appointment for six months subject to renewal for a similar period

Applications with copies of three recent testimonials to be addressed to the undersigned not later than June 12th

H. E. G. HALL,
Gen. Supt. & Secretary

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ASSISTANT MALE RESIDENT MEDICAL OFFICER wanted, to commence duties in August. Keen evangelical, and keen research worker preferred Appointment for six months in first instance at rate of £200 p.a. (renewable by mutual agreement) with board and laundry Applications to Medical Superintendent stating age experience and qualifications, and enclosing references

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Applications stating age qualification and experience to be sent to the undersigned together with copies of three recent testimonials

The Hospital, Ipswich. ARTHUR GRIFFITHS Secretary

LONDON HOSPITAL, E.1.

Applications are invited for the post of FIRST ASSISTANT AND REGISTRAR to the Children's Department The appointment is for one year but is renewable annually on application for two further periods of one year

Salary £300 per annum payable by the Hospital and Medical College jointly

Candidates must be fully qualified medically

Applications should arrive at the Hospital not later than by the first post on July 15th.

Further particulars may be obtained from the House Governor

ARTHUR G. ELLIOTT
House Governor

THE HOSPITAL FOR WOMEN
Soho Square W.1

Applications from fully qualified men and women are invited for the post of RESIDENT MEDICAL OFFICER for a period of six months commencing July 1st next The salary is at the rate of £100 per annum, with board residence and laundry Applications and testimonials must reach the undersigned by Monday June 19th

J. P. HEMING Secretary

ALTRINCHAM GENERAL HOSPITAL.
(100 Beds.)

Applications are invited for the post of JUNIOR HOUSE SURGEON Salary £120 per annum, with board residence and laundry

The appointment is for six months, in the first instance duties to commence July 1st

Applications stating age and experience together with copies of recent testimonials to be sent to the Secretary General Hospital, Altrincham not later than June 8th.

THE CANCER HOSPITAL (FREE)
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Fulham Road, London S.W.3.

The Committee are prepared to receive applications for the post of HOUSE SURGEON to commence duties on July 1st. Salary at the rate of £100 per annum.

The appointment is for six months and subject to rules

Candidates must call upon each Member of the Medical Committee not later than Tuesday June 20th

A copy of the Rules and the names and addresses of the Medical Committee may be obtained from the Secretary

Previous experience as a House Surgeon is indispensable.

Application with three (copies only) testimonials to be sent to the undersigned not later than the first post on Saturday June 10th.

CLEMENT COBBOLD Secretary

BIRMINGHAM AND MIDLAND EYE HOSPITAL.

Applications are invited from duly qualified Medical Practitioners for the post of RESIDENT SURGICAL OFFICER, which will become vacant on or about July 1st.

The Resident Staff also consists of Two House Surgeons and in the event of one of these being promoted, applicants should state whether they will be willing to accept the appointment of House Surgeon.

Applications with testimonials and evidence of registration must be received not later than Tuesday June 6th.

Church St., Birmingham. J. W. PEARCE Gen. Sup.

(Appointments continued on p 49.)

CASE III —*Cancer of the Colon Intestinal Obstruction Short-circuit Resection in 1919 Cancer of the Stomach Partial Gastrectomy in 1927 Well in 1933*

A lady aged 56 an artist patient of Dr Grace Griffith, seen in October 1919 had been suffering from complete intestinal obstruction for ten days the vomit was brown and offensive, and the abdomen distended Upon exploration a carcinoma was found at the splenic flexure of the colon A short circuit was made between the middle of the transverse and pelvic colons Two months later the growth was removed through an oblique incision in the left flank parallel to the intercostal nerves The swelling had shrivelled considerably and was easily removed the ends of the colon near the anastomosis being closed without disturbing the stoma All the colon between the middle of the transverse and pelvic loops was removed together with the mesocolon and draining lymphatic glands The patient made a good recovery and remained well until March 1927, when indigestion with attacks of vomiting developed There was tenderness in the right hypochondrium and therefore cholecystitis was suspected, but she did not improve under treatment for this and the vomiting increased in frequency Anaemia and wasting and a vague swelling in the right epigastric region were noticed in August and carcinoma of the stomach was suspected On September 19th 1927 the abdomen was explored The diagnosis was confirmed a large carcinoma involving the pylorus and the greater part of the pyloric segment was found There were enlarged hard glands in the omenta above and below the growth About two thirds of the stomach together with the draining lymphatic glands and omenta were removed The anastomosis made was after the Polya retrocolic method In spite of attacks of vomiting for a fortnight good recovery followed and the patient returned home a month after the operation She has remained well ever since It is now five and a half years since the partial gastrectomy, and sixteen years after the colectomy and although the patient is 69 years old she is still very active in her garden travels abroad and paints and exhibits charming water colour pictures Microscopical examinations proved the carcinomatous nature of both growths which were quite distinct and dissimilar primary cancers

Dr Hurst[6] mentions another patient operated upon by me for a carcinoma of the stomach which had developed four years after a gastro jejunostomy which had been performed for a simple ulcer no relief had followed and hyperchlorhydria was still present The patient was alive and well seven years after the partial gastrectomy Recurrence with jaundice took place in another patient eight years after partial gastrectomy

SYMPTOMS AND SIGNS

Cancer of the stomach in its earlier and hopeful stages does not give rise to symptoms which are characteristic of the disease Anorexia, indigestion, pain, nausea, and vomiting, haematemesis, progressive wasting, and anaemia are suggestive Hypochlorhydria is too often thought to be a necessary sign of cancer of the stomach this is only true of the late stages of the disease In the early and operable stages the free HCl is either at or above the normal in over half the cases Occult blood in the stools is almost a constant sign [7] Radiographic examinations are often negative in the early stages but if they are repeated —as they should be—at frequent intervals they will ultimately show defective filling and delay which are very suggestive signs, or they may show an ulcer with a large crater increasing instead of diminishing under treatment A tumour may be felt in the epigastrium, but in the majority of cases exploration should be undertaken long before a tumour can be felt

DIAGNOSIS

1 *From Chronic Gastritis* —The presence of occult blood and of radiographic deformity point strongly to the presence of cancer

2 *From Simple Ulcer* —It is often difficult or impossible to make sure that a supposed simple ulcer of the stomach is not malignant Hurst and Stewart[8] believe that over 6 per cent of gastric ulcers become malignant, and that over 15 per cent of gastric cancers start in simple ulcers McCarty used to teach that a large crater—say over 2 5 cm —indicated malignancy, but this, although very suspicious, is not quite reliable, but if the crater does not diminish rapidly under good medical treatment the suspicion of cancer is great

3 *From Syphilis of the Stomach* —Although rare this has been mistaken for carcinoma of the stomach especially as hypochlorhydria is marked, but occult blood is usually absent and the stomach is contracted and shows *multiple defects* on the *x* ray screen A Wassermann test should always be made

4 *From Carcinoma of the Pancreas and Chronic Pancreatitis* —The wasting and anaemia associated with chronic disease of the pancreas have often led to suspicion of cancer of the stomach but repeated radiographic examinations of the stomach and chemical examinations of the stools should prevent this mistake

5 *From Empyema of the Gall bladder* —Chronic empyema of the gall-bladder has been mistaken for cancer of the stomach because of the dyspeptic symptoms associated with a tumour in the epigastrium, but radiographic and cholecystographic examinations, and the absence of occult blood in the stools, should lead us to a correct diagnosis

In conclusion, it cannot be too strongly urged that the diagnosis of cancer of the stomach, if it is to be early enough for hopeful resection, must often be made by exploration Too much time is often wasted on laborious laboratory tests and futile medical treatment and this "scientific and deadly delay" too often throws away the hope of successful operation The diagnosis ought to be made in all cases with or without exploration well within two months of the onset of symptoms Then resection would be possible in about 70 per cent of the patients presenting themselves

INDICATIONS FOR OPERATION

A suspicion of the presence of cancer of the stomach especially if supported by radiographic evidence and the presence of occult blood, makes early exploration desirable This is the best way to discover cancer of the stomach in its early and curable stages In the later cases when the diagnosis is obvious, operation is indicated (1) *when there is evidence of existing or threatening pyloric obstruction*, for, at the least, relief can be given by short circuit or palliative resection (2) *When there is reasonable hope of resection* Here it is most important to remember that cancer of the stomach starts at the pylorus in nearly two-thirds of the cases, and long remains localized and resectable [9] Even at death there are no secondary growths in over a third of pyloric cancers Therefore we must not lightly conclude that a growth of the stomach is inoperable On the other hand, it is important not to submit patients to unnecessary explorations when the growth is irremovable, as is indicated by the discovery of (1) hard nodules of secondary growth in the peritoneum, by rectal or vaginal examination (2) enlarged, hard glands at the root of the neck especially under the lower end of the left sterno-mastoid, (3) nodules of growth at the umbilicus or under the edge of the abdomen, (4) ascites indicating peritoneal growth or obstruction of the portal vein, (5) nodular enlargement of the liver, (6) the large size, fixation and awkward position of the growth as felt clinically and estimated by repeated radiographic examinations The growth may be so fixed, or so high, involving the cardia that resection is impossible, but in doubtful cases it is wise to explore, for occasionally the clinical signs and the *x* ray ex-

and resection proves possible The mere size of a palpable but mobile tumour does not make resection impossible Sometimes the disease proves to be either an innocent growth or simple but extensive ulceration curable by operation

Choice of Anaesthetic and Operation

Finsterer has shown us that local is here much safer than general anaesthesia Although the method is tedious it certainly lessens shock and diminishes the danger of thoracic complications After morphine 1/3 grain and hyoscine 1/100 grain have been injected about half an hour before the operation to make the patient comfortably sleepy novocain 0 75 per cent is used to produce local and block anaesthesia of the upper part of the abdominal wall Directly the abdomen is opened splanchnic anaesthesia is carefully induced with the aid of a long needle passed deeply between the upper parts of the aorta and inferior vena cava Sometimes a little gas and oxygen or oxygen and ether is necessary to complete the anaesthesia

In most cases of cancer of the stomach it is necessary to remove an inch or more of the duodenum and from one third to three quarters of the stomach depending on the site and extent of the growth After such extensive resections direct union of the cardiac remainder to the duodenum after Billroth s first method is impracticable without undue tension even when the duodenum has been freely mobilized Therefore it is better to close the duodenum and to join the gastric remainder to the jejunum after the Polya method When the cardiac remainder is small after high division of the stomach it is easier to close the upper part of the gastric wound and to use Billroth s second method of anastomosis—of the jejunum to the lower part only of the cardiac remainder It is also better to bring the loop of jejunum up in front of the transverse colon after Balfour s and Moynihan s methods for if recurrence takes place as it often does about the pancreas and transverse mesocolon obstruction of the anastomosis is not so likely as when a retrocolic anastomosis is made

When the abdomen has been opened the first step is to explore thoroughly to make sure if resection is practicable Secondary growths in the liver parietal or pelvic peritoneum pancreas mesentery or transverse mesocolon make a radical cure impossible and so do invasion of the cardiac orifice and fixation of the growth to the large blood vessels such as the coeliac axis

Sometimes the general condition of the patient and the way he behaves upon the table make primary resection too hazardous Then pyloric obstruction may be relieved by gastro-jejunostomy with entero-anastomosis After this the patient may become so much better that a secondary resection can be safely carried out Frequently although a radical cure appears to be beyond hope palliative partial gastrectomy is better than gastro-jejunostomy for the mortality is not much greater and the patient gets far more relief as well as greater prolongation of life

Sometimes when resection is impracticable exclusion of the cancerous part of the stomach is better than gastro-jejunostomy The stomach is divided above the growth the distal opening is closed and the proximal or cardiac opening is joined to the jejunum

Conclusion

1 We are far too pessimistic about cancer of the stomach and ought to know that a fair proportion of cases can be cured by early operation

2 Comparatively few cases are ever sent to the surgeon and less than a third of these come in time for a radical operation to be possible

3 The diagnosis can and should be made much earlier than it is even if exploration is necessary to decide this in doubtful cases

4 In spite of deplorable procrastination in the past nearly 20 per cent of the patients who survived resection (at a risk of about 10 to 15 per cent) were well over ten years later Much better results will surely follow earlier resections

References

1 Registrar-General's Report, 1921 (Over 8,000 died from cancer of the stomach in England and Wales in 1921 1,000 more than in 1919 The records no longer give separate figures for cancer of the stomach)
2 Turner Grey *Glas Med Journ* 1931 cxvi 137
3 Balfour D C *Collected Papers Mayo Clinic* 1931 p 0
4 Finsterer *Wien Klin Woch* August, 1929 p 1125 ib 1 September 1929 p 1157
5 Gatewood *Surg Gynecol and Obstet* 1933 lvi 2142
6 Hurst and Stewart *Gastric and Duodenal Ulcer* 1929 p 439
7 *Wien Klin Woch* 1931 (Professor Berger of Vienna says it is found in over 90 per cent. of cancers of the stomach)
8 Loc cit p 581
Billroth *Clin Surg* (New Sydenham Society 1881)

TREATMENT OF MENSTRUAL IRREGULARITIES*

BY

WILFRED SHAW M D F R C S

F C O G

ASSISTANT PHYSICIAN ACCOUCHEUR ST BARTHOLOMEW'S HOSPITAL GYNAECOLOGIST ST ANDREW'S HOSPITAL DOLLIS HILL

Disorders of menstruation are among the commonest gynaecological ailments with which the general practitioner has to deal Excessive menstruation is very frequently seen and irregular uterine haemorrhage in which the rhythm of the menstrual cycle is lost is common at the menopause It is the experience of all practitioners that such irregularities of the menstrual functions may be encountered without gross lesions being present either in the uterus or in the ovaries It is quite true that irregular haemorrhage is seen in such conditions as carcinoma of the cervix and in polypi but in these cases menstruation itself occurs rhythmically and the abnormal haemorrhage is superimposed upon the cyclical bleeding The type of patient now under consideration is the woman who has some form of menstrual irregularity independent of the presence of either tumour or inflammation of the pelvic organs Such cases are extremely common It is impossible to appreciate the significance of these ailments without some idea of the modern work on the physiology of menstruation and it will perhaps be more logical if a short review of this work is first given

Physiology of Menstruation

The process of ovulation whereby an ovum is discharged from a ripe Graafian follicle is limited to the child bearing period of life Ovulation never occurs before puberty nor after the menopause It has been shown that it is restricted to about half way between two periods It is customary to consider the normal menstrual cycle as being one of twenty-eight days the first day of the bleeding being taken as the first day of the cycle and with this standard ovulation is restricted to about the fourteenth day—that is to say fourteen days after the first day of the previous menstrual period After ovulation a corpus luteum is formed from the follicle which has discharged its ovum and within a few days it attains full development producing the characteristic grey or yellow convoluted body in the ovary When menstruation begins or perhaps shortly before retrogression arises in the corpus luteum which gradually becomes converted into a structureless hyaline body known as the corpus albicans

* A paper read to the Guildford Division of the British Medical Association

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APPOINTMENTS—Contd

COUNTY BOROUGH OF WEST BROMWICH

HALLAM HOSPITAL

SENIOR RESIDENT MEDICAL OFFICER

Applications are invited from fully qualified male registered practitioners for the above appointment.

The appointment may be terminated by either party giving two months' notice.

The Hospital has 474 beds and is equipped with up-to-date special departments. There is a visiting staff of eight consultant Physicians and Surgeons.

Preference will be given to applicant with previous experience of Surgery and Hospital administration.

Salary £350 per annum rising by annual increments of £25. The appointment is limited to 3 years.

Canvassing either directly or indirectly is strictly prohibited and will be deemed a disqualification.

Applications stating age, experience and qualification, together with copies of three recent testimonials must be forwarded to the Medical Officer of Health, 2 Lodge Road, West Bromwich, so as to arrive not later than the first post on Tuesday, June 13th.

Town Hall, *ALFRED WICKHAM*,
West Bromwich. Town Clerk.
May 29th, 1933.

NOTTINGHAM GENERAL DISPENSARY GREGORY POULEYARDE BRANCH NOTTINGHAM.

Wanted RESIDENT SURGEON (male) unmarried. Must have Medical and Surgical qualifications. Salary £450 with £25 increase per year up to £500. House with attendance lights and full (not board). This Institution is a non-provident one. No Midwifery. Applications stating age and accompanied by copies of recent testimonials, to be sent by June 13th, to—

5 Thurland St., R. J. WILLATT,
Nottingham. Secretary.

COUNTY COUNCIL OF DURHAM

ASSISTANT WELFARE MEDICAL OFFICER.

The County Health Committee invite applications for the appointment of an ASSISTANT WELFARE MEDICAL OFFICER (Woman) at a commencing salary of £500 per annum (subject to such temporary reduction as the County Council may order) rising by annual increments of £25 to £600 per annum. Travelling expenses will be paid by the County Council according to scale.

The appointment will be held subject to three months' notice on either side and to the following conditions:

(1) The Officer appointed must be a registered Medical Practitioner between the ages of 25 and 45 years must devote the whole of her time to the duties of the office and must not engage in private practice.
(2) She should either have held a previous appointment as Medical Officer of an ante-natal clinic with the approval of the Minister of Health or have had at least three years' experience in the practice of her profession and special experience of practical midwifery and ante-natal work. The holding of a Diploma in Public Health and practical experience in bacteriological laboratory work will be deemed additional qualifications for the post.
(3) She will be subject to the direction of the County Medical Officer.
(4) She will be required to reside in Durham City or such other place as required by the Council.
(5) She must be prepared if called upon to act as Locum Tenens to other members of the Medical Staff of the County Medical Officer.
(6) The appointment will terminate on marriage.
(7) The candidate appointed will be required to pass the County Council's medical examination and will be subject to the provisions of the Local Government and Other Officers' Superannuation Act, 1922.

Application endorsed Assistant Welfare Medical Officer with copies of not more than three recent testimonials must be received by the undersigned not later than June 17th.

Shire Hall, C. EVANS,
Durham. County Medical Officer.
May 30th, 1933.

WARRINGTON INFIRMARY AND DISPENSARY

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON (male) unmarried.

Applicants, who must be of British nationality must be duly qualified Medical Practitioners.

Salary £175 per annum with board apartments and laundry.

Application stating age with copies of three recent testimonials, should be sent in at once to the undersigned.

By Order,
HENRY L. FOOT,
May 30th, 1933. Superintendent & Secretary.

CONNAUGHT HOSPITAL,
Walthamstow, E.17.
(100 Beds with Three Resident Medical Officers.)

RESIDENT CASUALTY OFFICER (male) required. Salary £100 per annum. Appointment for six months from July 1st with board residence and laundry. Application stating age, nationality, qualifications and experience accompanied by copies of not more than three recent testimonials, should be received not later than Monday, June 5th.

KENELM S. ELLISON,
Secretary.

CONNAUGHT HOSPITAL,
Walthamstow, E.17.
(100 Beds with Three Resident Medical Officers.)

RESIDENT HOUSE PHYSICIAN (male) required. Salary £100 per annum. Appointment for six months from July 1st, with board, residence and laundry. Application stating age, nationality, qualifications, and experience accompanied by copies of not more than three recent testimonials, should be received on or before Monday, June 5th.

KENELM S. ELLISON, Secretary.

THE WILLESDEN GENERAL HOSPITAL, N.W.10.

Applications are invited from fully qualified and registered candidates (unmarried) for the appointment of a Resident Officer to hold the appointment of CASUALTY OFFICER for three months from July 1st, followed by a six months' appointment as HOUSE SURGEON (male).

Salary at the rate of £100 per annum.

Applications to be received by the Secretary not later than first post Saturday, June 17th.

THE HOSPITAL FOR SICK CHILDREN
Great Ormond St London, W C 1

Applications are invited from registered Medical Practitioners for the following non resident appointments which become vacant on July 1st

A CASUALTY MEDICAL OFFICER (male) Salary £250 p a (half time)
TWO OUT PATIENT MEDICAL REGISTRARS (male) Salary £250 p a (half time)
THREE OUT PATIENT ANAESTHETISTS Honorarium £50 p a (part time)
Also for an IN PATIENT MEDICAL REGISTRAR (male) Salary £300 p a (whole time)

Duties to commence on October 1st

All the above appointments are tenable for twelve months but are renewable

Candidates must be prepared to attend for interview at the Hospital on Wednesday, June 21st at 4 45 p m

Applications supported by not more than three testimonials given specially for the purpose must be submitted to the undersigned not later than Saturday June 17th from whom further particulars and forms of application may be obtained

H F RUTHERFORD Secretary

THE HOSPITAL FOR SICK CHILDREN
Great Ormond Street London, W C 1

A HOUSE PHYSICIAN and a HOUSE SURGEON are required on July 1st

Gentlemen are invited to send in their applications addressed to the Secretary before 12 o clock, on Monday June 5th with copies of not more than three testimonials given specially for the purpose and also evidence of their having held a responsible Hospital appointment

The appointments are made for six months Salaries at the rate of £100 per annum, laundry allowance £5, board and residence in the Hospital

Candidates must be unmarried and possess a legal qualification to practise

All candidates must be in attendance to appear before the Joint Committee, if required at their Meeting on Wednesday June 7th at 5 p m precisely

Forms of application and copies of the Rules may be obtained from the Secretary

By Order of the Board of Management
HERBERT F RUTHERFORD
May 1933 Secretary

HULL ROYAL INFIRMARY
(370 Beds)

Applications are invited from registered Medical Practitioners for the post of THIRD HOUSE SURGEON (male) vacant June 25th

Salary at the rate of £150 per annum plus residence, board and laundry

The candidate appointed will be expected to stay for not less than six months but the appointment is at any time determinable by one month s notice on either side

The Hospital is recognised by the Royal Colleges for the F R C S examinations

Applications giving particulars of age experience, and nationality together with copies of testimonials should be addressed to the undersigned

R J CARLESS
May 29th 1933 House Governor

NATIONAL TEMPERANCE HOSPITAL
Hampstead Road N W 1

Applications are invited for the post of HOUSE SURGEON (male) The appointment will be for a period of six months at a salary of £100 per annum and will date as from June 21st Preference will be given to those who have held a resident post

Candidates must submit applications stating qualifications age etc with copies of not more than three testimonials by Friday June 9th addressed to the Secretary

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NATIONAL TEMPERANCE HOSPITAL
Hampstead Road N W 1

Applications are invited for the post of HOUSE PHYSICIAN (male) The appointment will be for a period of six months at a salary of £100 per annum, and will date as from June 21st Preference will be given to those who have held a resident post

Candidates must submit applications stating qualifications age etc with copies of not more than three testimonials by Friday June 9th, addressed to the Secretary

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NATIONAL TEMPERANCE HOSPITAL
Hampstead Road N W 1

Applications are invited for the post of CASUALTY OFFICER (Male). The appointment will be for a period of six months at a salary of £120 per annum and will date as from June 21st

Candidates must submit applications stating qualifications age etc with copies of not more than three testimonials by Friday June 9th, addressed to the Secretary

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WEST LONDON HOSPITAL
Hammersmith Road W 6 (234 Beds)

Required ONE HOUSE PHYSICIAN, TWO HOUSE SURGEONS and ONE RESIDENT ANAESTHETIST (Males) The duties of the House Physician include some work in the Neurological [illegible] ments The duties of [illegible] some work in the [illegible] and of the other some work in the Gynaecological Department These four appointments are tenable for six months from July 1st next subject to one month s notice on either side Salary at the rate of £100 per annum, with board lodgings, and laundry allowance

Candidates must be registered under the Medical Act Applications (which must be on printed forms obtained from me) must reach me not later than first post on Friday, June 16th Selected candidates will be required to call upon such members of the Medical Staff as directed to be in attendance at the Medical Council Meeting on Friday June 23rd at 4 30 p m and the House Committee Meeting at 5 p m the same day when the appointments will be made

H A MADGE Secretary

MONTAGU HOSPITAL, MEXBOROUGH, YORKS

Applications are invited for the positions of SENIOR HOUSE SURGEON and JUNIOR HOUSE SURGEON (ladies) at the above Hospital The commencing salary attached to each post is £120 and £100 respectively, with board residence laundry etc One month s holiday is allowed annually

The bed accommodation is as follows Surgical 64 Maternity 20 A further 20 beds for medical cases will shortly be brought into commission The appointments become vacant beginning of June

Applications giving full particulars including experience in the administering of anaesthetics together with recent testimonials, should be forwarded without delay to the undersigned

DONALD WILSON Secretary

FREEMASONS HOSPITAL AND NURSING HOME, 237, Fulham Rd Chelsea, S W 3

The post of RESIDENT MEDICAL OFFICER (male) will be vacant on July 1st Salary at the rate of £250 per annum with board residence and laundry The appointment is for six months Candidates must be registered and must have held resident appointments at a General Hospital. The officer appointed will be asked to proceed to the new Hospital in October

The Institution (48 beds) is for paying patients of both sexes of moderate means unable to afford ordinary nursing home treatment etc

Applications stating full particulars to be sent on or before June 6th next to the Honorary Secretaries from whom further information may be obtained The Medical Advisory Committee will meet on June 13th next

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SEAMEN S HOSPITAL SOCIETY

KING GEORGE S SANATORIUM FOR SAILORS LIPHOOK HANTS
(For the Treatment of Pulmonary and Non Pulmonary Tuberculosis)

ASSISTANT MEDICAL OFFICER required as from July 1st Salary at the rate of £200 per annum with quarters and board The appointment is for six months in the first instance There is no accommodation for a married man Applications, with copies of three recent testimonials to be sent in by Tuesday June 13th to the undersigned

Seamen s Hospital R E V BAX
Greenwich S E 10 Secretary
May 25th 1933

SALFORD ROYAL HOSPITAL
(263 Beds)

Applications are invited from duly registered candidates (male) for

HOUSE SURGEON (Genito Urinary Dept)
HOUSE SURGEON (Neurological Dept)

For six months from July 1st Salary £125 per annum

Forms of application obtainable from the undersigned, must be delivered on or before June 6th

By Order of the Board
H B SHELSWELL
May 22nd 1933 Gen Supt & Sec

ABERDEEN CITY DISTRICT ASYLUM

Applications invited for the post of SENIOR ASSISTANT MEDICAL OFFICER Preference will be given to one who has held a resident appointment in a General Hospital Previous mental hospital experience is essential

Salary £450 per annum, increasing after one year s approved service by annual increments of £25 to £550 with board and apartments. Applications with particulars of age qualifications experience and copies of recent testimonials to be sent to Medical Superintendent

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CITY OF BIRMINGHAM MENTAL HOSPITAL

JUNIOR LADY ASSISTANT MEDICAL OFFICER

The Committee of Visitors invite applications for the above whole time appointment from ladies under 35 years of age who are duly qualified and registered Medical Practitioners A person who has held for at least six months a medical or surgical residential post in a general hospital will be regarded as having an additional qualification

The successful candidate should be a good anaesthetist

She will be required to reside in the hospital

The commencing salary will be £350 per annum plus the usual residential emoluments of board lodging laundry and attendance Subject to 12 months service satisfactory to the Committee an increase of £50 will be granted and thereafter increases of £25 per annum up to a maximum salary of £450 per annum An additional £50 per annum will be paid to the holder of the D P M qualification or to a person obtaining the D P M after appointment The salary and emoluments will be subject to a temporary deduction amounting to £6 12s. per annum in accordance with the Scale of Temporary Abatements from Salaries approved by the City Council The salary is inclusive of all fees received and any such fees must be accounted for and paid into the hospital account.

The successful candidate will be required to pass satisfactorily a medical examination and to join the scheme under the Asylums Officers Superannuation Act 1909 She will be required to serve in such institution belonging to the Mental Hospitals Committee as they may from time to time direct The appointment is subject to one month s notice on either side

Applications stating full particulars of qualifications experience and appointments held accompanied by copies of three recent testimonials, must be addressed to the undersigned so as to be received not later than June 24th

F H C WHITSHIRE,
Town Clerk s Office, Clerk to the
Council House Committee of Visitors.
Birmingham May 25th 1933

ANCOATS HOSPITAL, MANCHESTER

HONORARY RADIOLOGIST

Applications are invited for the post of Honorary Radiologist The successful applicant will be required to take an active part in the work of the Department with attendance on three mornings per week

Applications, stating age qualifications, experience and appointments held (if any) to be forwarded to the undersigned on or before June 7th together with copies of three recent testimonials

By Order of the Board
HERBERT J DAFFORNE
Gen Supt & Secretary

ANCOATS HOSPITAL MANCHESTER.

EAR, NOSE AND THROAT DEPT
OUT PATIENT CLINIC

CLINICAL ASSISTANT required for the above on Thursday afternoons from 2 p m A fee of 10s 6d per clinic will be paid

Applications stating age qualifications experience and appointments held (if any) to be forwarded to the undersigned on or before June 7th next together with copies of three recent testimonials

By Order of the Board
HERBERT J DAFFORNE,
Gen Supt & Secretary

ANCOATS HOSPITAL MANCHESTER.

HOUSE PHYSICIAN

House Physician required for a period of six months to commence duty July 1st next Salary £100 per annum, with board, residence laundry etc.

Applications stating age qualifications and experience to be forwarded to the undersigned together with copies of three recent testimonials on or before June 7th next

By Order of the Board
HERBERT J DAFFORNE.
Gen Supt & Secretary

CITY OF LONDON HOSPITAL FOR DISEASES OF THE HEART AND LUNGS
Victoria Park E 2
(Bus, Tram and Rail Cambridge Heath L & N E Railway)

A vacancy for a HOUSE PHYSICIAN (male) will occur on July 1st Six months appointment Salary at the rate of £100 per annum Board residence and laundry provided

Applications with copies of three testimonials should be sent to the undersigned on or before Friday, June 16th

GEORGE WATTS, Secretary

Simultaneously with the production of a corpus luteum in the ovary the endometrium hypertrophies and, during the presence of a mature corpus luteum in the ovary, shows a peculiar histological structure in that its glands have a characteristic corkscrew like appearance During menstruation the superficial layers of the endometrium degenerate, and as a result of disintegration most of its hypertrophied superficial portion is shed into the cavity of the uterus, this, together with the blood which is simultaneously effused, constitutes the menstrual discharge After menstruation a process of repair ensues, during which the epithelium grows over and covers the denuded areas These are the main histological features of the menstrual cycle, with the exception that immediately prior to ovulation a peculiar oedematous appearance develops in the endometrium, together with some degree of hypertrophy, which, there is good reason to believe, is controlled by the ripening follicles in the ovaries

It is well known that two ovarian hormones have now been identified—namely, oestrin and progestin The oestrin hormone is produced by the ripening Graafian follicles, although it can also be demonstrated in the corpus luteum, in the placenta and in the urine of pregnant women There are good grounds for assuming that the mild degree of hypertrophy which occurs in the endometrium immediately before ovulation is controlled by the oestrin hormone and is comparable to the proliferous hypertrophy of the endometrium of lower animals The hormone progestin is the corpus luteum hormone It was first identified by Corner and amongst other properties it possesses the power of inducing a premenstrual hypertrophy in the endometrium of primates, which is certainly comparable to that observed in human beings This effect of progestin is only seen if the endometrium is first sensitized by the previous administration of oestrin The physiology of menstruation is not quite so simple as was originally believed, for it has been shown in the last few years that ovarian activity is dominated by the activity of the anterior lobe of the pituitary, fresh extracts of which, when injected into mice, stimulate the ovaries so that Graafian follicles hypertrophy, ovulate, and become converted into corpora lutea Similarly, the urine of pregnant women contains substances allied to, or perhaps identical with the anterior pituitary hormone It is important to remember that the anterior lobe of the pituitary hypertrophies during pregnancy and leads to the secretion of large amounts of its hormone It is well known that very commonly women menstruate at reduced intervals after parturition, the condition being referred to as post partum epimenorrhoea Such cases may perhaps be explained by assuming the persistence of the activity of the anterior lobe with the result that follicles ripen and ovulate more frequently

This represents a brief summary of the physiological principles upon which the interpretation of menstrual irregularities must rest There are several points which must be borne in mind In the first place, it is conceivable that a woman for some reason or other may produce large corpora lutea The result would be an excessive premenstrual hypertrophy, so that during menstruation a large amount of tissue would be shed and menorrhagia or excessive menstrual bleeding result The second point is that the causation of the twenty eight-day rhythm does not necessarily lie in the ovaries No explanation has been offered as to why this rhythm is the rule but it is clear that as the pituitary dominates ovarian activity it is quite possible that factors disturbing the menstrual rhythm are just as likely to lie in the pituitary as in the ovaries The third point is the causation of menstrual bleeding itself I have always maintained that menstrual degeneration of the endometrium is an active process, and is not induced passively by the simple withdrawal of the hormone progestin I have gone so far as to postulate the existence of a third ovarian hormone, one which induces degeneration in the endometrium If this view is accepted it is clear that in exceptional circumstances this hypothetical hormone if produced in excess, may lead to a continuous degeneration of the endometrium, so that prolonged uterine haemorrhage is the result

EPIMENORRHOEA

In this form of menstrual irregularity the patients menstruate with a cycle less than the normal twenty eight days—usually with one of twenty one days or with one of fourteen Typically the menstrual cycle is constant, and is not irregular In some cases, in addition to a reduction in the menstrual cycle, the duration of the haemorrhage is prolonged and the amount lost on each day is increased This clinical form of menstrual irregularity is very common but it must be emphasized that epimenorrhoea in itself is not a disease but merely a symptom Cases of epimenorrhoea can be classified into fairly well defined groups The post partum type is seen very often indeed, and when such patients start menstruating after parturition the cycle is reduced from one of twenty eight days to one of twenty one or fourteen Post partum epimenorrhoea may, of course, complicate inflammation of the Fallopian tubes and ovaries but such cases are relatively few, and in the common form no lesion can be detected in the pelvis As I have already stated, these cases are probably related to a disturbance of the endocrine balance, and are perhaps due to over activity of the anterior lobe of the pituitary

Epimenorrhoea occurs most frequently however, in patients about the age of 45 when they are approaching the menopause It is almost invariable that the amount of blood lost at each period is excessive, and quite often leads to a severe degree of anaemia Not seldom the uterus is found to be enlarged, and is harder than normal Until recently such cases were grouped under the term 'chronic metritis" but since the advance in our knowledge in the physiology of menstruation it has become generally recognized that both the epimenorrhoea and the uterine hypertrophy are due to over activity of the ovaries Epimenorrhoea is also common in cases of fibroids, particularly in patients over the age of 40 In another group it develops in patients about the age of 35 most of whom are single Sometimes it is associated with salpingo oöphoritis, and sometimes with chocolate cysts of the ovary The aetiology of these cases of epimenorrhoea is not known with certainty At the present day it is generally accepted that it is not related either to an inflammation of the appendages or to any local lesion in the uterus itself Almost certainly the condition is due to an abnormality of ovarian function, although there is no proof that the primary fault lies in the ovary, it may very well be that the pituitary is primarily responsible

[illegible] treatment

The treatment of epimenorrhoea is one of the most difficult problems in gynaecology One has to deal, not with a diminution of ovarian activity for which an appropriate hormone might readily be administered, but with over-activity, and the question is essentially one of inhibition of ovarian activity Now, it is quite clear that whatever pharmacological properties may be claimed for the various ovarian and pituitary hormones, no one has at any time suggested that any one of these has an inhibitory effect on the ovary For these reasons one is very sceptical as to whether the administration of any

ductless gland preparation is likely to be of benefit in a case of epimenorrhoea These theoretical considerations are borne out by my own experience and I have personally given both oestrin and the anterior pituitary hormones to cases of this kind without result When we turn to the prescription of drugs in the treatment of epimenorrhoea it is clear at the outset that there can be small hope of success The only way in which such drugs could act is by inhibiting ovarian activity It is true that the amount of blood lost during each period can be controlled by drugs such as ergot and by proprietary preparations such as femergin but it is difficult to conceive that there is any drug on the market which possesses the remarkable property of inducing a specific inhibitory effect on the ovary Again these theoretical considerations are borne out by clinical experience The question now arises as to what can be done for these cases In patients of 45 or over treatment as a general rule resolves itself into the creation of an artificial menopause The patient is anaesthetized the uterus is curetted and then a tube containing 50 mg of radium is inserted into the uterus and kept there for forty eight hours This is an excellent remedy so far as the uterine bleeding is concerned It is true that the results are often not immediate and patients occasionally have one or two periods after the application of radium but it is very exceptional for further bleeding to take place Sometimes the first haemorrhage after radium is copious because the radium itself produces a local inflammation in the endometrium and this hyperaemic area bleeds excessively during the menstrual period There are two other objections to radium treatment one is that almost invariably there is a persistent vaginal discharge due to the local inflammation of the endometrium and the second is the onset of menopausal symptoms After the age of 45 severe menopausal symptoms as the result of the creation of an artificial menopause by radiological means are not usual although they are extremely common under the age of 40 and fairly common between the ages of 40 and 45 It is difficult to give an opinion as to whether the patient is likely to develop these menopausal symptoms if an artificial menopause is brought about and if the patient is a good subject for an operation with a thin abdominal wall I often prefer hysterectomy with conservation of the ovaries to radiological treatment It should be emphasized that with modern technique hysterectomy has a very low mortality and if a patient survives the operation and has her ovaries retained she is much more likely to be free of symptoms than if an artificial menopause is induced radiologically So far as *x* ray treatment is concerned the end results are similar to those obtained after the application of radium The great drawback to *x* rays however is that for sound therapy the uterus should be curetted prior to treatment so that carcinoma of the body of the uterus or of the isthmus can be excluded

Whereas the treatment of epimenorrhoea in patients approximating to menopausal age is fairly successful that in younger patients is extremely difficult Both *x* rays and radium are in my view contraindicated as a means of producing a permanent artificial menopause which in patients younger than 40 almost invariably leads to appallingly severe menopausal symptoms and one of the worst sequels is the development of kraurosis vulvae with its attendant symptoms of pain and dyspareunia Cases of this sort are sometimes encountered and it is not an exaggeration to say that the resultant symptoms often produce more distress than the original epimenorrhoea Theoretically the induction of a temporary artificial menopause with either *x* rays or radium would seem a satisfactory procedure but in practice this is not so The essential difficulty is to obtain the correct dosage for if a small dose is given no effect is obtained while if it is too large the result is a permanent artificial menopause The margin is small and experience at St Bartholomew's Hospital has shown that it is extremely difficult to gauge with any accuracy the correct dosage for a temporary artificial menopause My own view is that with *x* rays so many factors—such as the location of the ovaries and the thickness of the abdominal wall—have to be considered that this form of treatment is unlikely ever to be used extensively similarly with radium I believe that the effect of radium is upon the ovary and not upon the uterus and again it is difficult to gauge the exact distance of the ovaries from the radium placed within the cavity of the uterus

The treatment of epimenorrhoea in patients prior to the age of 40 resolves itself into either expectant treatment or operation In cases of post partum epimenorrhoea experience shows that almost invariably the menstrual functions right themselves spontaneously in due course Indeed it is very rare to see patients who give a history of epimenorrhoea which has persisted for more than three years following childbirth In these cases provided the patient does not acquire a severe degree of anaemia the administration of such drugs as ergot during the menstrual period combined with rest is the wisest course to follow and the return of the normal menstrual cycle should be awaited In the other cases of epimenorrhoea the position is difficult In those in which it arises without obvious cause in single women of the age of 35 clinical experience shows that it is exceptional for them to return to the old cycle of twenty eight days Whether operation is performed depends solely on the degree of anaemia If operation is decided upon the correct procedure is to perform subtotal hysterectomy and to leave the ovaries behind It is quite clear that this method is drastic and it is warranted only if the patients suffer from a high degree of anaemia The results of hysterectomy are extremely good the primary mortality is low and the end results are eminently satisfactory

Metropathia Haemorrhagica

The recognition of this disease is the outcome of researches on the menstrual cycle The full description of the pathological conditions is due to Schroeder to a result of his investigations carried out at Rostock during the war The disease is characterized by a complete upset of the menstrual functions so that ovulation is inhibited and corpora lutea are not produced in the ovaries Always a cyst is found in the ovaries and has the structure of a cystic ripening follicle The condition of the endometrium is that of a diffuse polypoidal hyperplasia and large plum-coloured polypi project from the endometrium downwards towards the cervical canal The endometrium shows the changes of a true hyperplasia combined with cystic dilatation of the glands and in the superficial layer large areas of necrosis can be observed Premenstrual hypertrophy never develops in the endometrium because a corpus luteum is not found in the ovaries Metropathia haemorrhagica is not uncommon and can be diagnosed with a fair degree of precision if due care is taken It occurs most frequently about the age of the menopause but it is also seen in young girls before the age of 20 and it is not unusual before the age of 30 The symptoms are fairly characteristic Usually the patients give a history of a short period of amenorrhoea this lasts for about six to ten weeks and is followed by continuous bleeding which may persist for many months (I have seen cases in young girls in which it has gone on for years) The amount of blood lost on each day is not excessive and it is rare for large clots or severe bleeding to be seen at any

LONDON COUNTY COUNCIL

Application invited for appointment to undermentioned resident positions. Remuneration and conditions subject to review. Duties assigned by Medical Superintendent and include, if necessary assistance at other establishments under Council's control.

Candidates for the position of Assistant Medical Officer Grades I and II must be Medical Practitioners of at least one year standing and have held a resident appointm nt in a general hospital for at least six months.

1 PADDINGTON HOSPITAL, Harrow Road W.9 — ASSISTANT MEDICAL OFFICER (Grade I).

2. BETHNAL GREEN HOSPITAL, Cambridge Road E.2.— ASSISTANT MEDICAL OFFICER (Grade I). Surgical experience desirable.

Salary £350 rising by annual increments of £.5 to £425 a year with board lodging and washing. No accommodation for married man or for woman.

3 CONSTANCE RD INSTITUTION Dulwich S.E.22. — ASSISTANT MEDICAL OFFICER (Grade II). Salary £250 a year with board lodging and washing. Appointment for one year only and not renewable. No accommodation for married man or for woman.

4 FULHAM HOSPITAL, St Dunstan's Road Hammersmith W 6 — CLINICAL ASSISTANT Salary £100 a year with meals on duty. Appointment for six months in first instance but may be extended for a further six months. Candidates must be registered medical practitioners. In the case of a woman marriage terminates contract.

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a) County Hall Westminster Bridge S.E.1 returnable by June 16th (in the case of Paddington Hospital by June 9th). Canvassing disqualifies. Further enquiries should be addressed to the respective Medical Supts.

NOTTINGHAMSHIRE COUNTY COUNCIL.

EDUCATION COMMITTEE.

ASSISTANT SCHOOL MEDICAL OFFICER (Male)

Applications are invited from duly qualified and registered Medical Practitioners for the post of Assistant School Medical Officer.

Candidates must possess a Diploma in Public Health and have had at least three years experience since qualification.

The officer appointed will be required to devote his whole-time to the duties of the office. He will be a member of the staff of the County Medical Officer will work under his control and direction and will be required to reside in a part of the County to be approved by him and to carry out such duties as may be prescribed.

The salary will be at the rate of £500 per annum rising by annual increments of £25 to £700 with travelling allowances in accordance with the County Council's Scale.

The engagement will be terminable by three months notice on either side.

The appointment is an established post under the Local Government and Other Officers Superannuation Act, 1922 and the successful candidate will be required to pass a medical examination.

Applications on the prescribed form (which may be obtained upon request at my office) accompanied by copies of not more than three recent testimonials should be forwarded to the County Medical Officer Shire Hall Nottingham not later than June 17th.

Shire Hall, Nottingham. May 29th 1933. K. TWEEDALE MEABY, Clerk of the County Council.

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stage of the disease The characteristic symptom is continuous bleeding similar to the haemorrhage of a normal menstrual period

The treatment of metropathia haemorrhagica corresponds almost exactly with that of cases of epimenorrhoea with the exception that in the former we have to deal sometimes with young patients—patients below the age of 25 In these cases the first procedure to be employed is curetting The whole of the endometrium should be carefully scraped away and the material removed examined microscopically so that the diagnosis can be confirmed The results of curetting are not very satisfactory and in most cases the continuous bleeding recurs within a few months nevertheless, it is sometimes stopped and the normal menstrual cycle returns There is however, a tendency, even in these cases for the disease to recur and it is very interesting to notice that a cyst may form in the opposite ovary In young patients with metropathia haemorrhagica, if curetting fails the next line of treatment is to give anterior pituitary hormone either in the form of the prolan preparations or of Parke Davis's 'antuitrin S This method has been employed extensively in America and in Canada, and encouraging results have been reported, in my hands however, they have not been good Theoretically, this therapy follows the correct line, for the object of the administration of the anterior pituitary hormone is to stimulate the ovaries to produce corpora lutea It may be that when more potent preparations are available this form of treatment will be generally adopted In a few cases I have tried the application of small doses of radium of the order of 40 or 50 mg for periods varying from twelve to twenty-four hours, but again I have not had any satisfactory results This again, is theoretically sound, for it aims at creating a temporary artificial menopause but as in all such cases the essential difficulty is to give the correct dosage

It might be thought that removal of the ovary which contains the cyst would lead to cessation of the symptoms A fair amount of evidence has accumulated to show that the opposite ovary invariably becomes cystic within a short space of time and the continuous bleeding recurs Unfortunately, in young patients, if there is no response to the various treatments I have indicated, one is sometimes forced to perform hysterectomy and to leave the ovaries behind It is obvious that such a procedure is very drastic and not to be lightly undertaken In my experience the patient and her relations eventually insist upon the removal of the uterus, for it is not uncommon for a severe degree of anaemia to be produced by the continuous bleeding the patient and her friends become tired of the unsatisfactory results of the methods employed, and she becomes insistent upon having the uterus removed

HYPOMENORRHOEA

In this type of menstrual irregularity the menstrual cycle is prolonged The usual history given is that the patient menstruates every six weeks and then perhaps every three months, she may then have a period of amenorrhoea lasting for six months or even longer Irregularity of the cycle in which there is a wide interval between the menstrual periods, is a characteristic of hypomenorrhoea It is seen most commonly in patients about the age of 30 So far as the menstrual functions are concerned, the cause of hypomenorrhoea is an irregularity of ovarian function, and histological investigations prove that ovulation and corpus luteum formation occur spasmodically Two types can be distinguished one in which the fault is primarily ovarian, and the other in which the fault lies in one of the other ductless glands usually the pituitary the ovaries are deficient secondarily Patients with primary ovarian deficiency give a history of a late onset of puberty and irregular menstruation from the beginning, such patients frequently have spasmodic dysmenorrhoea, and not seldom are sterile In addition, there are certain physical signs of primary ovarian deficiency, such as an ill-developed uterus small vagina, and scaphoid perineum On the other hand, cases of secondary involvement of the ovaries usually give a history of normal onset of puberty without severe spasmodic dysmenorrhoea, and quite commonly the patients have borne children prior to the onset of the menstrual irregularity There are all varieties of endocrine disturbances leading to hypomenorrhoea and I do not propose to go into them in any great detail A common type is that in which the patient about the age of 30 develops adiposity headaches and irregular and scanty menstruation

In all cases of primary ovarian deficiency, treatment should be directed along the lines of organotherapy The results obtained are far from being satisfactory, but occasionally dramatic improvement has been reported Of the ovarian hormones, oestrin is marketed in the forms of theelin progynon, menformon, and sistomensin and recently the British Drug Houses has put a more potent preparation on the market, 'oestroform Oestrin should always be given subcutaneously, for it has been calculated that subcutaneous injections are eight times more powerful than the same dose given orally This leads to the inconvenience of a hypodermic injection Another disadvantage is that only small doses are put up by the manufacturing chemists, and it is difficult to believe that any dose of the order of a hundred rat units is likely to have any lasting effect on an adult woman If such doses are given they must be administered frequently probably at least three times every week The corpus luteum hormone, progestin, is not marketed at present so that so far as ovarian therapy is concerned only oestrin is available On theoretical grounds the anterior pituitary hormone by stimulating the ovaries to produce ripening follicles and corpora lutea, is to be preferred to the ovarian hormones themselves The pituitary preparations that are available are the prolan preparations and antuitrin S It should be remembered that here again the hormone must be given by injection, and it is essential that the substances should be freshly prepared With the anterior pituitary hormone there is the same difficulty about dosage Probably the ampoules that are put up by the manufacturing firms do not contain sufficient of the active principle to have any lasting therapeutic effect In any case, if the injections are to be given they must be given frequently—at least three times every week I carried out some clinical trials with oestrin some years ago and found that in cases of primary ovarian deficiency a good effect was obtained only in those of mild degree There was little evidence that it had any good effect in severe cases and I believe that this view is generally held at the present time With the anterior pituitary hormone the results are not perfectly satisfactory, and it is wrong to suppose that the hormone has a specific effect in reducing the irregular cycle of cases of hypomenorrhoea to the normal cycle of twenty-eight days In some instances of hypomenorrhoea, in which the patients also complain of sterility, dilatation of the cervix may be beneficial For some reason or other dilatation of the cervix stimulates the generative organs and, as is well known, conception frequently follows this procedure Similarly, in cases of hypomenorrhoea the menstrual cycle may revert back to its regular rhythm This treatment is frankly empirical, and is based on clinical experience Nevertheless it is a valuable therapeutic measure in these cases of hypomenorrhoea, particularly if sterility is an attendant symptom

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SUMMARY

I have attempted to indicate the theoretical basis upon which the treatment of irregular uterine haemorrhage rests The evidence is very strong that a large proportion of cases are determined by a disturbance of ovarian function although it is impossible to say whether the majority are primarily ovarian in origin No claim is made that modern treatment is all that can be desired indeed the methods available are generally speaking very primitive One is conscious of two main deficiencies the first is a lack of a biochemical method to determine with precision the amount by which the circulating hormones depart from the normal the second is the absence of standardized hormones of high concentration At the present day we are as yet only hovering at the fringe of a complete understanding of these ovarian abnormalities In the future it is more than probable that organotherapy will be the method of choice in the treatment of all cases of this kind

PRIMARY INTRATHORACIC NEW GROWTH

OBSERVATIONS ON FIFTY CASES EXAMINED BRONCHOSCOPICALLY

BY

H V MORLOCK *M C* M D M R C P

ASSISTANT PHYSICIAN MILLER GENERAL AND HAVERSTEAD EMERGENCY HOSPITALS PHYSICIAN TO OUT PATIENTS CITY OF LONDON HOSPITAL VICTORIA PARK

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All writers are agreed that there is a real increase in the incidence of thoracic neoplasms and in this connexion the following figures published by Dr Glovne from the records of necropsies at Victoria Park Hospital are of interest He makes a comparison of lung new growths in two ten year periods omitting the war years

	1904-13	1921-30
Mediastinal (oat-celled)	16	38
Lungs and pleura	4	43

It is apparent from these figures that not only have the growths increased from twenty in the first period to eighty-one in the second but whereas in the first period the oat-celled type had a frequency four times greater than growths in lung and pleura in the second period the latter exceeds the former At the same hospital for the years 1931 and 1932 there have been thirty five necropsies on intrathoracic growth If we compare the yearly average for these separate periods the picture is even more striking

	Mediastinal (oat-celled)	Lungs and Pleura	Proportion
1904-13	1.6 per year	0.4 per year	4 to 1
1921-30	3.8 "	4.3 "	1 to 1 (approx.)
1931-32	6.5 "	11.0 "	1 to 2 (approx.)

Thus the oat-celled type of growth in twenty five years has increased about four times the growths of lung and pleura over twenty seven times

CLASSIFICATION OF TUMOURS

In the bronchoscope we have an instrument for the visual examination of the bronchi and its value in the diagnosis of pulmonary neoplasm will be dependent on the frequency with which this disease gives rise to changes in the bronchial tree and also in what stage of the disease these bronchial changes are produced It is generally accepted that malignant intrathoracic growths fall into four groups

1 Growths of the mediastinal glands (in the older text-books known as lymphosarcoma now generally referred to as oat-celled carcinoma)
2 Pleural growths
3 Bronchial carcinoma (large and single or small and multiple)
4 Pulmonary carcinoma

Group 1 would appear to be composed of two types true lymphosarcoma (rare) and the oat-celled growth which is usually regarded as of primary bronchial origin with early (?) and extreme glandular involvement—in this case the oat celled growth should be included in the bronchogenetic group There is no real dividing line between Groups 3 and 4 Some pathologists surmise a different site of origin—for example mucous gland alveolar wall bronchial wall others are inclined to class all cases of these groups as bronchial in origin and they explain the difference in the histological picture by assuming that the growth begins in different cases at different levels of the bronchial mucosa and that a pulmonary carcinoma is merely one in which extension has taken place from a bronchus From the clinical and broncho copic point of view these distinctions are of little importance as in the two common types—that is the oat celled and large bronchus type (the others being of great rarity)—the ulceration commences or appears to commence in the large bronchi fairly close to the carina It is therefore in these two types that the bronchoscope will give valuable diagnostic information In cases of carcinoma arising in the secondary bronchi in the parenchyma of the lung or in the pleura no broncho-scopic evidence is found until the glands become involved at the root or secondary extension takes place

The cytological problem as mentioned above is a difficult one and if this is true of the post mortem specimen it is easy to understand the difficult position in which the histologist is placed when asked to report on the small portions of tissue often crushed by the forceps which one is able to obtain for section during life It is probably on this account that one has experienced occasional shocks in the endeavour made to differentiate the type of growth by the bronchoscopic appearances and the clinical findings Nevertheless the findings generally admit of the following data

Oat celled Type —This appears to arise in the deep layers of the mucosa the spread is rapid to the lymphatics and enormous enlargement of the mediastinal glands takes place Bronchoscopically in the oat-celled type the mucosa is infiltrated and ulcerated little raised nodules are seen whitish in colour as compared with the normal mucous membranes but polypoid formation is rare though occasionally deeper in the bronchial tree there may be some tendency to occlusion In association with this type of ulceration evidence of glandular enlargement is seen There may be some bulging into the trachea widening and deformation of the carina and scabbard shaped bronchi Section can usually only be obtained with a punch forceps

Bronchial Type —These tumours appear to arise in the superficial layers of the bronchus There is a tendency to spread into the lumen rather than to the lymphatics glandular enlargement is rare and the clinical signs are as we have stated elsewhere somewhat pleomorphic but dependent usually on the bronchial obstruction Broncho-scopically there is usually no evidence of glandular enlargement the carina is not widened but may be dragged over if there is collapse of lung the bronchus is seen to be partially or completely blocked by a polypoid

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mass, which can be removed easily with forceps In both types the position is usually in main stem bronchus, a short distance below the bifurcation Clinically the type is usually fairly clear cut rarely one may see cases of the bronchial type in which masses of gland in the mediastinum are found or the oat-celled type in which glands are not found, but we suspect that some of these aberrant cases have been due to difficulties in the histology For convenience of description one might possibly divide these types into

Centrifugal (the oat celled type with the greater tendency to glandular involvement), and

Centripetal (the type marked by spread into lumen rather than at an early stage to glands)

The importance of differentiation in these two types lies in the fact that in the centrifugal type the early involvement of glands renders treatment of little value In the centripetal type the result of treatment should be more valuable if the case is obtained in time Of the thirty-five cases coming to necropsy in 1931 and 1932 the average age in both groups is 52 the lowest age 34, the highest 63 The dangerous age appears to be 45 to 55 The bronchoscopic examination is the safest and surest method of examination and proof We have recently seen a man whose bronchial tree was lipiodolled and declared normal, and who was dead of a bronchial carcinoma in two months

RESULTS OF BRONCHOSCOPY

Of the fifty cases we have analysed many were sent with an incorrect diagnosis , others had very few symptoms at all and yet only one was a case in which much hope could be held out from treatment Whether or no it may be possible to improve our ideas of the symptomatology these cases, especially the bronchial type, must be seen at an earlier stage for success in treatment It is possible that, if the practitioner reviewed the past history of cases found to have this disease, he might be able to remember some points which would be an aid in the earlier diagnosis of this condition, and in getting the patient for bronchoscopy at a period when it is possible to do something effective in the way of treatment Our submission of the value of the bronchoscope is borne out by the examination we have made by this method on fifty cases of pulmonary growth which have been under our care or referred to us for examination during the last two years In all of them we have been able to make or confirm a diagnosis In 62 per cent this was done by removing a piece for section , in the remaining 38 per cent direct evidence of growth was found as indicated by ulceration in 30 per cent and observation of the effects produced on the bronchial tree by pressure from without in 8 per cent As a rule the protrusion into the wall of bronchus or trachea in these cases was covered by a normal mucous membrane, and was not sufficient to cause a complete block of the main bronchus but usually to give some obstruction to the passage of the bronchoscope

In two other cases (apart from the fifty) in which we presumed that the findings were diagnostic of new growths we were wrong the patients being alive and well and *in statu quo* two years later It is interesting to note that both these cases were examined with the Haslinger bronchoscope before we had perfected our telescopic instrument In the one case no ulceration was seen but owing to the distortion of the left upper lobe bronchus it was considered suspicious This it would appear was caused by fibrosis

From these figures it will be seen that in the first fifty-two cases which we examined bronchoscopically for the disease positive proof by section was obtained in 62 per cent and in the rest bronchoscopic indications which have proved erroneous in only two cases

COURSE OF THE DISEASE

To appreciate fully the value of the bronchoscope in the diagnosis of new growth of the lung we should follow as accurately as we can the course of the disease

Early Signs

It is probable that the centripetal type appears first as a small growth, warty or polypoid, in the bronchial mucous membrane It would appear that an occasional fortunate individual has been caught at this stage with cure as a result Usually, if it gives any symptom at all it will only be an irritating cough when slightly larger possibly a localized wheeze Otherwise physical and radiological examination is negative Only the bronchoscope can reveal the condition As growth continues it may give rise comparatively early to slight haemoptyses Again physical and radiological examination is negative We have examined forty two cases of haemoptysis with no radiological or pathological evidence available, and in five cases have found neoplasm

In the case of a male aged 50 who had had repeated haemoptyses over twenty years physical and radiological examinations were negative Bronchoscopy showed a polyp between the upper and middle lobe bronchi A section was reported as bronchial carcinoma In view of the long history this diagnosis is questionable although cases are reported of benign growth being present for years before becoming malignant

In this early stage the glands around the bifurcation from the main bronchi may become involved, though, as stated above, this is more common in the centrifugal type, in which this kind of history is not usually obtained although at this stage the involvement will give no radiological evidence a bulge in the main stem bronchus may often be seen

In a male aged 60 with a six months history of cough dyspnoea and loss of weight the physical signs were increase in substernal dullness to the left and weak air entry into the left lower lobe Skiagram showed a dense shadow in the left hilar region On bronchoscopic examination no growth was seen but the left main stem bronchus was distorted by a bulging in of the external wall just below the opening of the upper lobe bronchus

Bronchial Occlusion

The next stage is occlusion of a bronchus by a growth, which causes collapse of the lobe supplied by the bronchus, and also gives rise to clinical signs and symptoms frequently mistaken for pneumonia At this stage a definite radiological picture of a collapsed lobe is produced, and the differential diagnosis of bronchiectasis and mediastinal effusion ruled out A lipiodol injection and skiagram will often show a blocked bronchus, but it must be remembered that the demonstration of a blocked bronchus by means of lipiodol does not necessarily mean that the block is caused by new growth We have seen such a picture produced by fibrosis, tuberculosis or broncholiths

In a male, aged 45 years, with repeated haemoptysis physical signs and radiological reports were negative A skiagram after lipiodol injection revealed a partial hold up of the lipiodol in the right lower lobe Bronchoscopic examination showed the cause of the lipiodol hold up " to be a broncholith At necropsy following a fatal haemorrhage some time later the presence of the broncholith was confirmed On reconsideration of the original skiagram the shadow cast by the broncholith could be distinguished from the shadow of the fibrosis around it

The following are examples of collapse of a lobe or lung due to a blocked bronchus by a neoplasm

A male aged 40 Three months previous to admission he developed pneumonia from which he made a protracted recovery On examination there were signs of collapse of the

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25 ESSEX.—OLD-ESTABLISHED PRACTICE OF ABOUT £600 P.A. in Suburban District. Panel 500. Well-situated detached house (6 bedrooms) standing in own grounds with nice garden garage and stabling for sale. Scope for increase. Premium £650.

26 LONDON S.W.—OLD ESTABLISHED PRACTICE ABOUT £650 p.a. in well populated area. Panel 850. Separate surgery and private residence to be purchased. Scope for increase. Premium £1,100.

27 SURREY.—PARTNERSHIP IN SOUND OLD ESTABLISHED good mixed-class Practice about £3,000 p.a. in the Croydon area. Small panel. Very little midwifery. Excellent modern detached house for sale. Scope for increase. Premium one half share 2 year purchase.

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right lower lobe confirmed by a skiagram After lipiodol skiagram showed a hold up of lipiod l at the lower lobe B nchoscopic exam nation showed a new growth A section removed proved to be an oat-c lled carcinoma

A male aged 34 had for some indefinite period complained of cough Three weeks before admi sion he complain d of pain in the left chest and dyspnoea Physical s gns were those of collapse of the whole of the left lung Bronchoscopic examination revealed a mass blocking both upper and lower left bronchi Section showed an oat-celled carcinoma Radium inserted by the broncho-scope has caused the intrabronchial growth to diminish so much in size that both upper and lower lobes are now re-expanded

In some cases of collapsed lobe due to a neoplasm the skiagram after a lipiodol injection may fail to show the lipiodol hold up because the lipiodol has entered the bronchi anteriorly and posteriorly to the bronchus which is blocked and has thus reached the distal bronchi and obscured on the skiagram the lipiodol which is held up

A male aged 52 years gave a twelve months history of pain and cough with slight haemoptysis Physical s gns included partial collapse at the right lower lobe confirm d by skiagram After lipiodol the skiagram showed th lipiod l to have entered the distal bronchi and no hold up was visible Bronchoscopic examination showed a new growth obstructing the internal division of the lower l b bronchus while the anterior and post rior division were patent Section showed a bronchial carcinoma

Pleural Effusion

An effusion may appear coincident with the collapse or even before The physical and radiological s gns are those of an effusion and nothing in either exam nation may suggest a new growth Some help may be obtained by pathological examination of the fluid or by radiological examination after air replacement Neither method is certain but bronchoscopic examination may give a proven diagnosis

A male aged 34 had physical signs and radiological evidence of effusion at the left base The patient's general appearance did not suggest tuberculosis Bronchoscopic examination was thought worth while and revealed a new growth blocking the lower lobe Section showed an oat-celled carcinoma

In another case the pathological examination of pleural exudate withdrawn from a young man was reported as diagnostically suggestive of neoplasm Nothing else suggested new growth Bronchoscopic examination was negative (Here it must be remembered that a negative finding has not the value of a positive one the growth might be in a second division bronchus or might even be an alveolar growth) The patient has made a perfect recovery from the simple effusion

Suppuration

The next pathological stage in the development of the new growth is suppuration in the lung and bronchi behind the obstructed or partially obstructed bronchus At this stage the physical signs and symptoms are those of pulmonary suppuration There are certain points of difference in the *x* ray which may point to new growth as the cause but occasionally lipiodol examination will show up a bronchiectatic condition or abscess without giving a hint that the causative factor is new growth All cases of pulmonary suppuration must be bronchoscoped to a certain the cause we have found various causes at different times from half a coat button to daughter hydatid cysts

A male aged 55 complained of coughing up blood and foul sputum for eighteen months Physical signs and the *x* ray suggested an abscess in the left middle zone A skiagram after lipiodol gave no further help Bronchoscopic examination revealed a polypoid growth partially obstructing the upper lobe bronchus

A female aged 23 years gave a history of eighteen months coughing up blood and foul sputum The physical signs and skiagram suggested bronchiectasis at the right base Skiagram after lipiodol confirmed this Bronchoscopic examination showed a polypoid growth partially obstructing one of the lower lobe bronchi

THE VALUE OF BRONCHOSCOPY

From the above description of the mode of development and symptomatology of the bronchial carcinoma it will be seen that the broncho-scope must play the paramount part in diagnosis and though in the advanced cases an old pattern instrument is sufficient in the earliest type of case—which one hopes to get in the future with a greater knowledge of the diagnostic feature of the earlier stages of the disease—aids to vision in the way of better illumination and telescopic attachment such as we have described will have to be used The destructive argument might be raised that *early* diagnosis of the disease being at present impossible—and at the stage when it does become possible treatment has ceased to be of value—confirmation of diagnosis at this stage is of little use Though this may in part be true the fact remains that if ever a successful treatment is to be evolved the experimental treatment must be done on those cases which though not early in the pathological sense are yet earlier than those cases diagnosed in the past It is only since the bronchoscope has been used in this diagnostic work that the condition has been diagnosed with absolute certainty (by macroscopic section) whereas previously certainty had to wait on the appearance of secondary glands or deposits elsewhere With regard to the other varieties of intrathoracic new growth (excluding pleural growth)—sarcoma and alveolar carcinoma—the bronchoscope can only give information if the growth has reached the bronchial walls either deforming their contour or ulcerating or infiltrating them At this stage the disease has advanced beyond hope from treatment though confirmation of the diagnosis is obtained

TREATMENT

As regards treatment deep therapy has been disappointing A patient with alveolar carcinoma after deep therapy spat up most of his growth leaving a cavity the size of an orange but he shortly developed secondaries The glandular type whether oat-celled carcinoma or lymphosarcoma seems to have a similar tendency to dissemination after treatment One case developed a secondary in the eye (a very rare condition) while in others we have seen the most extensive dissemination in this disease where the metastases are not usually wide if untreated The bronchial type seems little influenced The radium bomb we understand has also not proved its value Pituitary and theelin has proved on several patients quite useless The best hope seems to lie in radium or radon applied locally We have had a number of patients whom we have treated in this way but the method is still too much in the experimental stage for there to be reports in any sense on its efficacy It appears however that there is some hope in this direction If the cases can be obtained earlier probably much could be done In the centripetal type of case somewhat more advanced lobectomy is hopeful if the growth is low enough in the bronchial tree as is commonly *not* the case Nevertheless it is difficult to advise a patient who at this stage usually appears to be in perfect health to submit to an operation of high mortality risk though the surgical figures for lobectomy are rapidly improving to a stage when one would feel justified in advising it

SOME CONCLUSIONS

Of the fifty cases on which these observations have been made from the broncho-scopic findings the following aetiological points are of interest

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2 MIDLANDS—PARTNERSHIP—A one-half share is offered in a very old established good mixed class Practice situated in country town in attractive hunting district Gross cash receipts about £6 200, including panel of 3 500 and appts about £600 p a Fees from 3/6 Suitable house available to purchase Cottage Hospital Ingoing partner should be experienced about 40 years of age and able to undertake major surgery Premium for share 2 years purchase

3 RIVERSIDE SUBURB—Middle and working-class PRACTICE averaging £1 125 p a including panel producing about £340 and appts nearly £100 p a Fees from 3/6 Detached house, with nice garden and containing 4 reception 6 bedrooms, etc, for sale Premium £2 225

4 HOME COUNTIES—PARTNERSHIP—Residential Town within easy reach of London A share producing about £1 300 p a is offered in a very sound old established Practice producing for the last 12 months approximately £5 200 Panel of 2 500 Fees from 3/6 to 21/ Very nice house with ample accommodation or smaller one if desired Ingoing Partner should be experienced accustomed to better-class work able to undertake major surgery, and preferably a Fellowship Premium 2 years purchase

5 OPHTHALMIC PRACTICE—Within eighty miles of London—Practice is increasing and offers good scope for further development Average gross cash receipts for the past three years £554 Last year over £700 Fees 1 to 2 guineas Opposition slight Choice of houses Premium £700

6 DEATH VACANCY—WEST MIDLANDS—Well established PRACTICE situated in very attractive market town, amidst beautiful surrounding country rapidly increasing, and offering good scope for further development Gross cash receipts for last twelve months £1,814 Panel with mileage brings in about £480, and appts worth £65 Fees 3/6 to 21/ Very good well equipped Cottage Hospital and there is excellent scope for major surgery Nice corner house with good accommodation and pleasant garden Can be purchased or rented Very efficient Locum in charge

7 LONDON WEST END—Very old-established good class non dispensing and non panel PRACTICE held many years by Vendor who is selling owing to failing health Cash receipts for past three years average £3 123 p a Average visiting fee 10/6 up to 21/ No midwifery or night work Good family residence with ample accommodation, for sale Vendor's leasehold property Six months introduction given Premium 1½ years purchase

8 LONDON SUBURB NORTH WEST—Very old established panel PRACTICE with better class connection attached and situated in a pleasant residential suburb Cash receipts over £2 800 including panel of 3 150 and transferable appt worth £70 Very good house with ample accommodation (7 bedrooms etc) Price leasehold (with 11 years to run at a ground rent of £15 p a) £1 500 Rent of separate Surgery on 21 years lease £52 inclusive Premium £7,000

9 LANCASHIRE — LARGE TOWN—Old established good mixed class PRACTICE held by Vendor for the past ten years Average gross cash receipts £1 458 Panel of 1 674, and several Insurance appts Corner house in very pleasant residential locality containing consultation room 2 waiting rooms dispensary 2 reception rooms 4 bedrooms bathroom kitchen etc Garden Garage Price for freehold £1 400 £1 000 on mortgage Good scope for increase

10 LONDON, NORTH—Old-established middle and working class PRACTICE held by Vendor 11 years Average gross cash receipts £975 Panel of over 900 Fees from 2/6 Semi-detached corner house in good condition with ten rooms and usual offices Separate entrance to professional rooms Price for leasehold £600 Premium £1 500

11 LONDON EAST—Middle and working class PRACTICE producing £1 000 p a including panel of about 1 100 Suitable small house with sitting room 2 bedrooms, and attic waiting room surgery and dispensary Rent £52 p a Premium 2 years purchase

12 DORSET—Well established PRACTICE in very pleasant town within easy reach of the coast Gross cash receipts over £1 000 of which about £400 is from panel Fees 3/6 to 21/ Opposition not strong Good house with 2 reception 5 bedrooms etc garden of nearly 3 acres Rent on lease £62 p a Premium £1 750

13 LONDON SOUTH EAST—Old established better working class PRACTICE increasing and situated in well populated district Gross cash receipts for last 12 months £1 263 including panel of over 1 300 Suitable house with 2 reception and 3 bedrooms Garden Price for freehold £1 100 Premium £2 400

14 EASTERN SUBURB—Very old established middle and working-class PRACTICE worth about £1,100 p a, including panel of 1 350 Very little midwifery House contains 2 reception 4 bedrooms etc separate entrance to professional rooms Small garden Garage Price for freehold £1 350 Premium 2 years purchase

15 EASTERN COUNTIES — FAVOURITE SEASIDE AND HOLIDAY RESORT—Good mixed-class PRACTICE established many years and producing for the last twelve months £1 600 Panel brings in £300 p a and an appt worth £100 p a Fees 3/6 to 7/6 with medicine extra Nice house, with 2 reception 5 bedrooms et Garage Garden Price for freehold £2,250 Golf, shooting and other sport Premium 1½ years purchase

16 PARTNERSHIP—In a well populated pleasant South Eastern suburb within ten miles of London the half share of an old-established mixed class Practice is for disposal owing to the retirement of the junior partner Held by the remaining partner 30 years Cash receipts average £2 765 p a including panel of 1 800 and appts worth £150 Very little midwifery Pleasant semi detached corner house with ample accommodation garden Price leasehold (over 900 years, at ground rent of £7 p a) £1,050 Premium 2 years purchase Scottish graduate preferred

17 NORTH EAST COAST—PARTNERSHIP—A one half share is offered in an old established better middle-class Practice in suburb of favourite residential town Steadily increasing and excellent future prospects Gross cash receipts £1 700 Panel of 700 Fees from 3/6 Very nice house with 2 reception 4 bedrooms etc One acre of garden Garage for 2 cars Rent on lease £80 p a Sport of all kinds and good schools Premium for share 2 years purchase

18 MANCHESTER—Old-established middle and working class PRACTICE producing for the last twelve months about £650, including panel of 790 Fees from 3/6 Convenient house, with 2 reception 1 to 5 bedrooms bathroom etc Rent on lease £60 Premium £900 to include furniture

19 SOUTH WALES—Beautiful country district within 4 miles of large town Small PRACTICE producing between £300 and £350 p a offering good scope Visiting fees from 5/ Very little midwifery or night work Well situated house with well kept garden containing 2 reception 3 good sized bedrooms and servants room Electric light and gas throughout Garage Rent on lease £70 p a

20 CENTRAL LONDON—Middle and better class PRACTICE averaging for the last two years about £500 p a including small panel of 180 Fees 3/6 to 21/ Professional accommodation can be rented at £200 p a Premium £300, to include furniture drugs instruments etc

21 SOUTH EAST LONDON—Good middle and working-class PRACTICE, producing last twelve months nearly £950 Panel of 986 Suitable house with 2 reception 4 to 5 bedrooms etc Rent on lease £70 p a Premium to include drugs, etc and surgery fittings and furniture £1 450

22 NORTH WALES—Old-established middle and working-class PRACTICE averaging for the last three years over £1 700 including panel of about 1 300 Fees from 2/6 Visits from 3/6 with medicine extra Suitable house with good professional accommodation Electric light Garage for two cars Small garden Rent on lease £100 p a Premium £2 500 £1 700 down balance by instalments Good sport, etc A knowledge of Welsh is not necessary

23 RIVIERA—Old-established PRACTICE the receipts from which have averaged over £1 600 p a but have decreased recently owing to Vendor's ill health Very good prospects of extension Fees from £1 1s Very easy work Suitable flat can be rented at £160 p a. Premium £4 000

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3 SOUTH OF ENGLAND—Good town with educational facilities Income £1 200 to £1 800 with substantial panel Furnished house with garden

4 SOUTH COAST TOWN or near locality—PRACTICE averaging at least £1 500 p a with panel of 1 000 or thereabouts Small house preferably on rental Capital available

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the optimum dose must be minute I originally used a 1 in 1,000 solution for testing purposes, but I now use a 1 in 100,000 or even 1 in 1,000,000, for the preliminary test Cases treated recently have given better results than the earlier ones, and I attribute this to the reduction of the therapeutic dose The results of skin tests in normal persons and patients suffering from the skin diseases under discussion show very striking differences, for while only 16 per cent of normal persons gave positive reactions to their own proteoses, 67 per cent of the skin cases responded in this way

With regard to the statements of Barber and Oriel, my results tend to show that the amount of proteose excreted is not of very great significance, for the difference between that excreted in health and in various skin diseases was not great More, however, was excreted from patients suffering from skin diseases, and in one case of angio neurotic oedema more was excreted during an attack than in a quiescent interval I have also confirmed the statement that exacerbations of the skin condition may follow *relatively* large doses of proteose My clinical findings agree very closely with those of Eichenlaub, and I agree with his conclusion that the method should be more widely used in order that its full value may be determined

SUMMARY

1 Treatment with proteose prepared from the patient's urine has given satisfactory results in cases of chronic eczema and urticaria Less striking results were obtained in cases of psoriasis and Besnier's prurigo, but benefit seemed to be derived from the treatment in some cases

2 Sixteen per cent of normal persons and 67 per cent of patients suffering from various skin diseases gave positive reactions to their own proteoses Slightly more proteose was excreted by the latter than by the former

3 All the cases relieved by this treatment gave positive skin reactions to their own proteoses before treatment while after treatment and cure, all those tested gave negative skin reactions

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CALCIUM THIOSULPHATE IN THE TREATMENT OF THE COMPLICATIONS OF "914" AND BISMUTH ADMINISTRATION IN SYPHILIS

PRELIMINARY COMMUNICATION

BY

A E W McLACHLAN M B

SURGEON TO OUT PATIENTS ST PAUL'S HOSPITAL

Schamberg and Brown (1930) introduced calcium thiosulphate into the therapy of the post-arsenobenzol complications, and in 1932 Schamberg and Wright quote Cannon as having employed the preparation in a series of cases of arsphenamine dermatitis with excellent results It was particularly effective in drying up surface exudation The dose recommended was 5 c cm of a 10 per cent solution daily for three days and subsequently two or three times a week Schoch (1931) commented 'A new drug brought out for the treatment of arsphenamine dermatitis is calcium thiosulphate The highly rational combination of calcium with the detoxifying action of the thiosulphate radical may prove to be an excellent prophylaxis for treatment reactions from arsphenamines other than arsphenamine dermatitis The value of the sodium salt of thiosulphate, introduced by Ravaut (1920) for the treatment of arsenical dermatitis, has been shown by McBride and Dennie (1923, 1924) and by many subsequent observers, while the value of calcium chloride in the prevention of certain cutaneous inflammations has been shown by Wright (1896), Chiari and Januschke (1911), and Blum (1921) On theoretical grounds, therefore, the combination of calcium and thiosulphate should be advantageous, especially in that group of cases which fails to react to sodium thiosulphate or which fails to clear up completely under its administration

CASE RECORDS

Recently the following series of cases of intolerance to "914" or bismuth has been treated with calcium thiosulphate

1 *Early Arsenical Dermatitis*—Male aged 31 Sero-negative primary syphilis Developed arsenical erythematous dermatitis three weeks after completion of first course of 914 and bismuth Calcium thiosulphate, 0 6 gram intravenously, daily for three days then at three day intervals Skin lesions completely clear on the thirteenth day

2 *Post arsenical Dermatitis*—Male, aged 50 Persistent sero positive syphilis Developed exfoliative dermatitis, which was treated over a period of several months with sodium thiosulphate Condition became stationary with scattered areas of scaly fissured infiltrated skin over flexures of arms legs and trunk After twenty two injections of calcium thiosulphate at three-day intervals the skin was completely clear

3 *Jaundice*—Male aged 49 Persistent sero-positive syphilis Had post arsenical jaundice in April 1932 which yielded after one month's treatment with sodium thiosulphate Four months later administration of 914 was recommenced Developed jaundice December 1932 while under dual therapy Calcium thiosulphate, 0 6 gram intravenously the first two doses on successive days then at two-day intervals Icterus completely clear after the fifth dose

4 *Immediate Reaction (Vomiting) after '914'*—Male aged 40 Persistent sero positive syphilis Vomited after each injection of '914' No other signs of intolerance over a long period of treatment Vomiting controlled by admixture of sodium thiosulphate equally well controlled by calcium thiosulphate Other factors—bulk of injection, rate of administration etc—were kept as far as possible unchanged

5 *Bismuth Dermatitis*—Male, aged 49 Persistent sero positive syphilis Developed arsenical erythema while under dual therapy This yielded rapidly to sodium thiosulphate Bismuth administration recommenced two months later After a course of 3 grams metallic bismuth in ten weeks he reported with a scattered papulo-squamous erythematous rash on the trunk with moist fissured eczematous lesions of scrotum The skin lesions partly cleared under the administration of sodium thiosulphate but those of the scrotum remained unaltered after bi weekly treatment for one month Calcium thiosulphate was then commenced 0 6 gram bi weekly, the scrotal lesions and the residua on the skin cleared up completely after five injections That bismuth was an aetiological factor in the production of this dermatitis in a skin previously damaged by an arsenical erythema, was proved by the recurrence of a similar rash on the re exhibition of bismuth

6 *Dermatitis probably due to Bismuth*—Male aged 27 Sero negative syphilis Treated originally with '914' and mercury then with '914' and bismuth No 914 for three and a half months, during the last ten weeks of which he received 3 grams metallic bismuth In the eighth week of the bismuth therapy he reported a papulo squamous erythematous dermatitis which was aggravated by the subsequent injections There had been no intolerance while under dual therapy a total of 13 35 grams 914 and 8 7 grams bismuth having been administered The dermatitis was considered to be due to bismuth and treatment with calcium thiosulphate was instituted After the seventh injection (0 6 gram bi weekly) the skin had completely cleared

In one case of bismuth stomatitis the pain and discomfort were relieved by the administration of calcium thiosulphate although clinically there was no improvement in the condition of the mouth One case of seborrhoeic dermatitis which showed a tendency to flare up during the administration of bismuth was markedly improved

Apart from the feeling of intense heat in the skin which comes on during or immediately after the injection and persists only a few moments the intravenous injection of calcium thiosulphate has been uneventful Where it was possible 0 6 gram was administered daily for three days then bi weekly injections were given Where sodium thiosulphate was given the first injection was 0 6 gram and subsequent injections 1 gram

Conclusions

The results of the calcium thiosulphate treatment of six cases of intolerance to 914 or bismuth are reported in these cases calcium thiosulphate appeared to exert a definite curative influence The total number of cases treated is however small and more widely extended observations are necessary before any final conclusions can be reached as to the place of this drug in the control of the sequelae of arsenicals and bismuth

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A NOTE ON MONILIA INFECTION OF THE RESPIRATORY TRACT

BY

P JANVRIN MARETT

MEDICAL OFFICER OF HEALTH AND BACTERIOLOGIST STATES OF JERSEY

In Jersey during 1932 568 patients had their sputa examined both by direct and by cultural methods As a result they can be classified as follows T B + = 103 monilia + = 294 negative to T B and monilia = 171

When the sputa from a patient are repeatedly examined over a long period direct and cultural examination shows varying flora the only organism which on culture is persistently present is monilia Apart from the fact that monilia is frequently associated with pyogenic organisms its action in the respiratory tract will here be discussed from two points of view—the mechanical and the allergic When incubated at blood heat and in suitable fluid media monilias can be divided into three groups according to their method of growth

1 Those which grow round the glass of the test tube in what is known as collar formation

2. Those which grow over the surface of a medium in a continuous sheet

3 Those which starting as islets on the surface grow into a sheet as under 2

Monilias stain with all ordinary stains and are practically all Gram positive When stained by the Ziehl Nielsen method they are found to contain acid fast granules In the human being the ordinary condition of thrush (monilia) is to be seen on the mucous membrane of the mouth and consists of the well known whitish patches which on removal frequently show ulceration of the underlying mucous membrane

Mechanical and Allergic Manifestations

It should not be difficult to appreciate what is likely to occur when monilias infect the air passages If we compare the bronchi and the bronchioles to test tubes we can visualize monilia growing in the air passages either in collar or in surface growth formation Monilia growing on the mucous membrane of a bronchus would give rise to a patch and would tend to spread round the bronchus in collar formation Ulceration is likely to occur and haemorrhage will result giving rise to blood stained or pinkish sputum the irritation of the condition sets up a cough and results in a weakening of the bronchial wall and consequent dilatation Where the condition has existed for a considerable time irregular thickening and dilatation of the bronchial tree occurs This bronchiectatic condition is well seen on *x* ray examination and is referred mostly to the bases In these cases the brunt of the infection falls on the bronchial tree A second type of case can be referred to Groups 2 and 3 above where in the smaller bronchioles the growth produces occlusion and collapse of the alveoli at the distal end with consequent cavitation Such cases show fluffing of lung tissue on *x* ray examination The above conditions are frequently found in combination

The allergic manifestations connected with moniliasis are similar to those connected with other diseases of the lungs and of the respiratory tract where allergy is found to be present—hay fever asthma and bronchiectasis and tuberculosis Allergy is due to the sensitization of the body to a foreign protein and for the purposes of this paper it is not necessary to discuss whether the foreign protein concerned is of vegetable or of animal origin Is it possible that there may be a common factor a foreign protein which gives rise to allergic manifestations? To attempt to prove this one must take each disease separately In hay fever the chief pollen held responsible for the condition is that of Timothy grass This grass has a well known acid fast bacillus associated with its name Turning to asthma Storm van Leeuwen has shown that many asthmatics give a positive von Pirquet—that is they are allergic to tuberculin True spasmodic bronchial asthma is recognized as not due to tubercle infection yet these cases are sensitive to tuberculin which contains acid fast substance As regards tuberculosis the von Pirquet and the Mantoux reactions are recognized as pathognomonic of tubercle infection Now both in asthma and in bronchiectasis monilias are present and as recorded above monilias on staining by the Ziehl Neilsen method are found to contain acid fast granules The amount varies according to the strain of monilia and according to the medium on which it is grown Cultures on agar give a far greater acid fast granule content than do cultures grown on Sabouraud's medium Cases of these monilia infections give rise to cutis reactions when tested with monilia vaccine

One common factor in these diseases then is that the organisms connected with them are recognizable by the presence of acid fast substance and it is suggested that the foreign protein which is common to all is the acid fast protein and that allergic manifestations are due to it

Conclusions

The presence of monilia in chronic lung infections gives rise to pus formation Apart from this monilias have a mechanical action This mechanical action is due to the local growth of monilia on the mucous membrane similar to the growth of monilia (thrush) in the mouth Two types may be recognized one affecting the bronchial tree and resulting in a bronchiectatic condition of the air passages the other occurring as the result of occlusion of the bronchioles and collapse of the lung alveoli the brunt of the infection falling on the lungs Monilia infection gives rise to allergic cutis reactions Such reactions are known to occur also in hay fever asthma non tuberculous broncho-pulmonary lesions and in tuberculosis A common factor in all these diseases is the presence of acid fast substance in their respective causal organisms It is suggested that the foreign protein which is responsible for allergy is this acid fast substance

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A NOTE ON CONTRACEPTION

SOME PRACTICAL CONSIDERATIONS

BY

CECIL I B VOGE, B Sc , Ph D , F R S E

(From the London School of Hygiene and Tropical Medicine)

A research into medical writings has shown that women from the earliest times have attempted to control their reproductive power On the one hand we find directions for assuring fertility, and, on the other complete instructions for the prevention of pregnancy In the former case free and frank discussion has always been possible, but in the latter an enormous mass of nebulous probably harmful, information has existed almost to the present time There are many reasons why this problem, generally known as contraception, has been neglected, but the time would now appear to be ripe for impartial examination and assessment Towards that end the following brief summary may be of service

In 1923 the National Committee on Maternal Health New York, was formed to consider problems related to fertility and sterility, and it has published many contributions dealing with the many aspects of this subject [1 2] Several other groups have also been most active in their investigations in this country, notably the Birth Control Investigation Committee, the Society for the Provision of Birth Control Clinics, the Birth Control Information Centre, and the National Birth Control Association The information which I collected during my preliminary research appeared to indicate that (*a*) a problem really did exist , (*b*) no accurate knowledge was forthcoming of the theory upon which the various methods acted, or failed to act (*c*) contraceptives both mechanical and chemical were being manufactured and sold in ever-increasing quantities regardless of whether they were harmless to the user or not or were successful in the prevention of pregnancy or not (*d*) unless an impartial scientific research was carried out many methods which were possibly harmful from one or another point of view would be employed , (*e*) the results of such a research would then enable the medical practitioner to assess the value of the different methods in terms of the cases under consideration

Contraception is not a new problem having been practised for some 4 000 years The methods employed were magical abortifacient, operative and chemical, and those dependent upon will power, such as coitus interruptus, the safe period etc One might in fact suggest that all the above mentioned methods would fail to prevent pregnancy when both partners are fertile The failure is, however not such a cogent medical problem as the fact that injury to the users might possibly result

A study of the anatomy and secretions of the male and female reproductive organs has been carried out in order to survey the problem This is of especial importance when chemical methods are considered for a product may be efficacious in the test tube, using normal saline, but be wholly ineffective in the presence of large amounts of protein owing to the buffering effect of the latter A complete review has been made of the effect of pure chemicals upon the life and vitality of spermatozoa About 150 pure compounds have been reported on [2 3 4] The compounding of pure chemicals in such a manner that the spermicides can be readily inserted into the vagina, and once there will spread and penetrate into the sulci and fornices presents the next problem Here it is necessary to realize that certain measures are dependent upon such factors as time, temperature, moisture, etc , and hence one method may well be successful with one individual and fail with another Again, a somewhat similar method with adulterated material may be unsuccessful owing to the change in melting points, etc It was next necessary to ascertain in what manner existing chemical preparations agreed with, or departed from, the theoretical standards based upon *in vitro* or animal experiments More than 100 chemical preparations have been collected and classified into chemical constituents etc most of the better known have been examined as to their spermicidal effect, foaming capacity melting points, etc according to the system employed , and an expectation of success has been estimated It should however, be noted that scarcely any authoritative clinical evidence is obtainable as to the practical value of these preparations when used by themselves Steps are being taken to obtain this information, but in the series so far available it would appear that the clinical results are similar to those foreshadowed by theoretical knowledge One aspect that has been carefully looked into is the chemistry of rubber, in order to ascertain the conditions under which rubber ages and perishes Its stresses and strains have likewise been examined, this whole problem being of the greatest importance when the condom is considered The effect on occlusive pessaries of cocoa butter and jellies has also been studied There is more certainty about the clinical success of both the condom and the occlusive pessary, and some interesting figures are to be found [5 6]

In conclusion, I would submit that it is useless merely to disapprove of contraception for it will be practised in some form or another Dissuasion can be employed , it can be suggested that the unbridled use of contraceptives is harmful in one way or another , but if it is to be practised then the method to be used must primarily be harmless This I consider to be the essential medical problem, although naturally the success of any method from the point of view of pregnancy prevention, is most important My work suggests that the universally applicable contraceptive will not readily be found but four or five types do exist which will in all probability be successful in a similar number of population groups It is for the specialist to decide what is appropriate for each individual case and the excellent results reported on by clinics such as the Walworth Women's Welfare Centre would appear to bear out this contention It should, however, be noted that mechanical methods are almost alone adopted at clinics, and hence we can obtain no information as to the success, or otherwise, of chemical contraceptives when used by themselves It is a fact that these are being sold in great number, often to members of the medical profession, and authoritative information as to the success or failure of these methods would greatly help the progress of research

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The Board of Education has published in pamphlet form a revised list (No 42) of certified special schools for blind deaf, defective, and epileptic children in England and Wales, and also institutions recognized by the Board as providing higher education for such children, together with a list of nursery schools The institutions are grouped according to type and arranged in counties details being given of the available accommodation in each Copies of the list may be obtained from H M Stationery Office (price 9d)

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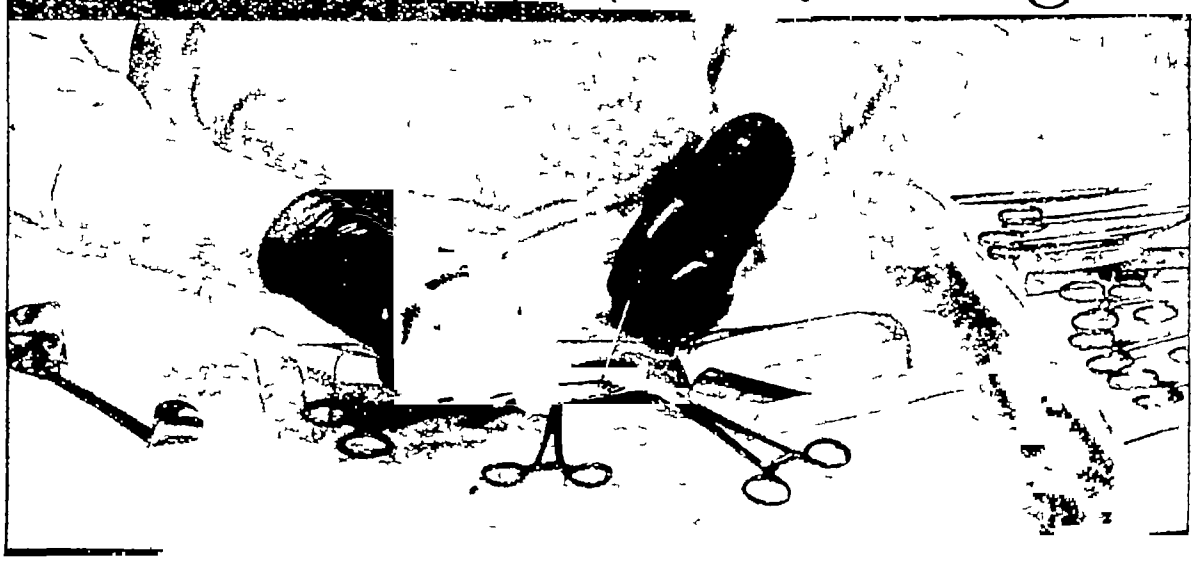

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SPONTANEOUS RUPTURE OF THE NORMAL SPLEEN

Spontaneous rupture of the normal spleen is a rare abdominal catastrophe which so far has not been satisfactorily explained In 1919 Shorten described a case in the *British Medical Journal*[1] and in 1930 Hamilton Bailey collected eleven cases from the literature and added one of his own Since then single cases have been described by Dardinski[2] and by Black[3] In view of the rarity of this occurrence the following case is worth recording

A married woman aged 56 was admitted to the Jersey General Hospital on September 25th 1932 with a history that immediately after she had eaten her supper which consisted of bread and cheese she felt a sudden pain in the back This became very severe and worked round to the abdomen No pain was felt in the left shoulder She did not vomit but there was some nausea She had always been quite healthy and had never had any serious illness There was no history of trauma after the operation when this question of trauma was gone into more fully she still believed she was quite certain that at no time during the few weeks previous to the onset of pain had she received any blow or been involved in any accident

On admission ten hours after onset of the pain she was very collapsed The pulse was 150 and barely perceptible and the temperature was subnormal There was tenderness and rigidity in the epigastrium but there did not appear to be any general abdominal tenderness A diagnosis of perforated gastric ulcer probably into the lesser sac was made but the patient was so collapsed that it appeared unlikely she would survive operation She was treated with continuous subcutaneous saline and coramine 1 c.cm four hourly in the hope that she might improve sufficiently to undergo the operation Her condition improved very markedly and twelve hours later operation was performed

Under open ether anaesthesia an upper right paramedian incision into the abdomen was made and it was at once obvious that the peritoneal cavity was full of blood A rapid examination was made of the liver and as this revealed no abnormality the spleen was palpated A rupture was felt in the lower pole so the left rectus was divided transversely and the spleen removed The division of the rectus was probably unnecessary since the splenic pedicle was unusually long and the spleen could have been removed quite easily through the right paramedian incision Clots were removed from the upper abdomen which was then closed in layers

The patient left the table in good condition Subcutaneous saline was continued for six hours and she made an uneventful recovery Examination of the spleen showed it to be normal in size and consistence There was a large subcapsular haematoma on the convex surface and a deep transverse rupture of the lower pole It was submitted to the Bland Sutton Institute of Pathology for examination but no pathological cause for the rupture could be discovered

This case does not appear to differ in any essential details from the others recorded In the case described by Dardinski the patient was suffering from primary carcinoma of the liver and the spleen was probably in a condition of chronic venous congestion Susman[5] reviewed the seven cases reported up to 1927 and suggested that they were really cases of traumatic rupture in which the injury had been very slight and had been forgotten by the patient or a temporary clot had formed and given way later by which time the association with the injury had been forgotten He gave examples of cases of apparent spontaneous rupture in which the patients remembered later that they had received a blow It is inconceivable that an injury sufficiently severe to rupture a normal spleen could be forgotten The spleen has better protection than the kidney or intestinal tract yet it is the only viscus which behaves in this way Rupture of the diseased spleen either spontaneously or with slight trauma is not rare and occurs most commonly in malaria and typhoid it is probably due to softening and congestion Torsion of the pedicle of a normal spleen may produce the congestion necessary for rupture particularly since the spleen degenerates early In this case the pedicle was unusually long and may possibly have undergone slight torsion This was suggested in Black's case and is the most reasonable explanation of this remarkable occurrence

Although this condition appears to be rare the spleen should always be remembered as a possible source of haemorrhage even in the absence of a history of injury

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1 Shorten *British Medical Journal* 1919 ii 844
2 Bailey *Brit Journ Surg* 1929–30 xvii 417
3 Dardinski *Journ Amer Med Asso* September 3rd 1932
4 Black *Brit Journ Surg* 1933 xx 526
5 Susman Ibid 1927–8 xv 47

A. C. HALLIWELL F.R.C.S.
General Hospital, Jersey

AN UNUSUALLY PREMATURE INFANT

A male foetus said to be of six months gestation in view of the menstrual history was brought to me for examination It had lived for eighteen hours As the post mortem examination revealed certain points of interest in the medico-legal question of viability a short account of these has been thought worthy of report

The foetus weighed 512 grams and measured 30 cm in its total length and 18 cm in its C.R. length a weight and measurement consistent with a five months gestation rather than one of six months There was too no trace of an ossific centre in either os calcis a centre which normally appears at the sixth month of foetal life As the ordinary menstrual method of calculation is known to have a possible error of roughly three weeks (T. W. Eden *Lancet* 1921 ii 127) these facts suggest that the foetus cannot have been one of more than five months gestation Viability of a foetus of such an early age is unusual and a separate existence is generally believed to be possible only at the twenty-eighth week when the elastic fibres of the lung alveolar walls have differentiated (E. E. Hewer *Quart Journ Exper Physiol* 1924 xv 115) Microscopical sections of the lung tissue of this foetus were therefore prepared and stained for elastic fibres by Weigert's resorcin fuchsin method but no trace of these fibres could be found in the alveolar intercellular tissue As the elastic tissue of the pulmonary arteries in the same sections was stained a deep purple black colour it may reasonably be concluded that the absence of the elastic fibres was due to the fact that they had not yet differentiated rather than to a faulty technique Vital respiration is thus found to be independent of elastic tissue The alveoli near the bronchi were expanded normally by air but the expansion became less well marked further away from the bronchi and at the more distal portions the lung presented the characters of an unexpanded atelectactic foetal state Life under these conditions of lung expansion is possible for a period Indeed a child may live after birth for a very short time without expanding its lungs at all and may live for many hours with only a small proportion of its lung tissue expanded (Sydney Smith *Forensic Medicine* 1931 p 341) The microscopical sections also showed that the foetus had suffered from congenital pneumonia to which its death was attributed This disease as a cause of death in the newborn is generally overlooked because nothing is seen on naked-eye examination It is stated by those who have studied the subject that aspiration *in utero* is responsible for the condition and that it is found on microscopical examination in 50 per cent of deaths occurring in newborn infants J. Haller (*Journ Obstet and Gynecol* 1933 xxv 120) studied thirty-nine consecutive cases of stillborn infants and found it present in 75 per cent of them

RICHARD H. HUNTER M.D. M.Ch. Ph.D.
Department of Anatomy, Queen's University, Belfast

British Medical Journal

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Reviews

EARLY OPHTHALMOLOGY IN ENGLAND

Mr R R JAMES has done a service to the history of ophthalmology in England by the publication of this volume of studies dealing with the subject from the earliest times to the year 1800 [1] It is to be hoped that he will continue the essays, and show how the art freed itself from its undesirable association with quackery, became for a time a part of general surgery, then a coherent specialty, and finally has been subdivided into well-defined branches George Coats (1876–1915), who excelled in all that he did in his short life, may be said to have founded the historical tradition which has been continued by Treacher Collins, by R R James, and by Arnold Sorsby with such conspicuous success The last two chapters of these studies are reprints of Coats's account of the Taylor family, dealing with the Chevalier, his son, and his grandson They show the great care Coats took to be accurate, and prove that he was as good a bibliographer as he was an oculist Mr James follows closely on his footsteps He has gone to original sources for his information, and is remarkable in the fact that he has given details of the wills of several of the surgeons mentioned, and has thus obtained much new information Beginning with ophthalmology in Roman Britain Mr James describes and figures some of the numerous examples of oculists' stamps which have been unearthed during the last two centuries, including one which was found in Ireland and is now in the British Museum The stamps were usually quadrilateral or oblong, and were intended to impress the directions for use on the semi-solid ointment much as a maker's name is stamped nowadays on a cake of soap The lettering generally consisted of the name of the practitioner to whom the stamp belonged, the name of the remedy, and the disease for which it was employed

From Roman times Mr James passes to the Anglo Saxon period, where most of our knowledge is to be found in the Leechdoms, the treatment being confined practically to decoctions made from various herbs The wonderful twelfth century saw little improvement in practice but a marvellous development in theory Robert Grossteste and still more Roger Bacon and John de Peckham were the founders of British optical science A hundred years later John Arderne wrote a treatise on the cure of the eyes Mr James gives the Latin text of parts of it in an appendix and a translation in the body of the work A fifteenth century translation of the treatise is preserved in the library of Emmanuel College, Cambridge (Leaf lxv-lxvii), and would be well worth printing During the Wars of the Roses diseases of the eye, like all other branches of surgery, received but little attention Books on the subject were produced when printing became common, and from 1600 onwards the history of ophthalmology is continuous and easily traced The eighteenth century was the golden age for all sorts of quacks, and Mr James gives a full and entertaining account of them, from Sir William Read, who could neither read nor write and yet received the accolade from Queen Anne, to Chevalier Taylor, who made triumphal progresses through Europe, and afterwards described them in his own words, often enclosing a minute grain of truth in a vast mass of supposititious embroidery He was, in fact as George Coats says, "an unparalleled liar, pre-eminent among charlatans in the art of advertisement"

[1] *Studies in the History of Ophthalmology in England* By R R James F R C S Prior to the year 1800 Published for the *British Journal of Ophthalmology* London Cambridge University Press 1933 (Pp x + 255, 9 plates 15s net)

The studies are produced in the excellent style we always expect of the Cambridge University Press, and the nine plates with which they are illustrated have been carefully selected and well reproduced

SPECIAL PHARMACOLOGY

In 1930 Professor E ZUNZ of Brussels published a volume on the elements of general pharmacodynamy and he has now completed a general survey of the subject with two volumes entitled Elements of Special Pharmacodynamy '[2] In a review of the earlier volume we pointed out that it was a pioneer work in that the author dealt with the general principles of the mode of action of drugs and had collected a large mass of material that had not previously been treated in a systematic manner The volumes under review follow more ordinary lines, since they give a detailed account of the pharmacology of the important drugs in a manner similar to that adopted by various textbooks in English and German It is, however, noteworthy that a work of this scope and excellence should appear in French, because the teaching of pharmacology has been somewhat neglected in France Most of the French textbooks on drugs deal chiefly with materia medica and it is not unusual to find the drugs arranged according to the natural orders of the plants from which they are obtained This lag amongst the textbooks has been the more remarkable in view of the outstanding contributions that French research workers have made to pharmacology, and there has appeared to be a curious divorce between the research workers and the compilers of textbooks Professor Zunz has however, broken away completely from this unfortunate tradition and his book gives a comprehensive account of modern knowledge of pharmacology

The author has presented his material according to the actions produced by various drugs, chapter headings having such forms as "Drugs Acting on the Respiratory System" "Drugs Acting Principally on the Heart etc This arrangement greatly facilitates the description of drug action and also the discussion of the relative merits of different members of groups of drugs The work is well illustrated with reproductions of tracings and with diagrams Tables are freely employed to show the relative actions of series of related drugs The size of the work is indicated by the fact that it contains 1,272 pages with 167 illustrations and 181 tables This clear and very readable account of the subject will rank as one of the best and most complete textbooks of pharmacology The Brussels school of medical sciences is well known to be very active and progressive, and deserves congratulations on its latest product

TUBERCULOSIS CONTROL IN CHICAGO

Procedures in Tuberculosis Control for the Dispensary Home and Sanatorium [3] by BENJAMIN GOLDBERG is a complete account of the municipal organization for handling the tuberculosis problem in Chicago The author is one of the three directors entrusted with this problem, and he is therefore well qualified to describe the methods used, and the ideals aimed at, by the city of Chicago in this department of municipal activities The descriptions of home, dispensary, and sanatorium treatment are

[2] *Éléments de Pharmacodynamie spéciale* Par Professeur Edgar Zunz Deux volumes—ne pouvant etre vendus separement Paris Masson et Cie 1932 (190 fr)

[3] *Procedures in Tuberculosis Control* By B Goldberg M D F A C P For the dispensary home and sanatorium Chapter on sanatorium planning by T B Kohler and an introduction by D J Davis M D Ph D Philadelphia F A Davis Company 1933 (Pp 373 44 figures 4 dollars net)

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By LEONARD G PARSONS, M.D., F.R.C.P.,
Professor of Diseases of Children in the University of Birmingham; Physician to the Children's Hospital, Birmingham; Physician to the General Hospital, Birmingham

and SEYMOUR BARLING C.M.G., F.R.C.S.,
Professor of Surgery in the University of Birmingham; Honorary Surgeon to the Children's Hospital, Birmingham; Honorary Surgeon to the General Hospital, Birmingham

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During recent years the call of the child has become insistent, and consequently additions to our knowledge of the subject of paediatrics have been so great that we offer no apologies for presenting to the medical profession another text-book. Paediatrics is not a speciality in the sense in which that much abused word is ordinarily used; on the contrary it is an application of the principles of general preventive and curative medicine and surgery to children who represent a large part, if not the majority, of the patients seen in general practice. Until recently instruction in this branch of medicine was greatly neglected in British schools, but there are not wanting signs that this reproach may within a few years be removed, and if this text-book contributes in any degree to this end both publishers and editors will feel amply repaid. The subject of paediatrics includes the study both of the healthy and of the sick child, not only of curative but also of preventive medicine, and special consideration has been given to both these aspects. Again, the treatment of the sick child by surgical means is so essentially a paediatric as well as a surgical problem that it is only fitting that in a book which seeks to give a full account of paediatrics due prominence should be given to the surgery of disease in childhood. All the contributors have considered their allotted subjects from the clinical standpoint, and have paid special attention to diagnosis and treatment; only such pathology and details of technique have been given as are sufficient to elucidate the subject under consideration.

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very full and it would seem that while the organization has been worked out to the smallest detail to ensure efficiency yet the authorities expect a considerable amount of personal initiative from their officers both medical and lay. With their methods and routine duties mapped out to meet any emergency and with apparently no fewer than thirty separate forms or cards to be filled in for each individual patient (in a few instances some of these have to be written up daily for long periods) to say nothing of a most complicated system of indexing and cross indexing one wonders how much personality the doctors and nurses employed have the time or facilities for putting into their work. That this centralized control does not always function satisfactorily is suggested by a sentence such as this from the section on sanatorium management. These measures should not be applied haphazardly by the resident physician but should be done conscientiously under the supervision of the attending specialist.

The author's description of what he calls coercive legislation is remarkably interesting. The attack is centred on the open case—that is the case with a positive sputum. If any individual has a positive sputum he is considered to be an open case for three months or until he can provide three negative sputum tests. Such a case may be subjected to a great deal of legal coercion. No child under the age of 16 may live in the same house as an open case. If this law is infringed either the patient may be forcibly hospitalized by the police or the children forcibly removed; and even if there are no children in the house but the case is considered by the tuberculosis authorities to be non co-operative he can be effectively isolated by the police and his isolation quarters placarded with a red card ten inches by twelve carrying the legend in two-inch letters TUBERCULOSIS KEEP OUT. These are stern methods to employ for the diagnosed case when so many undiagnosed and therefore more dangerous carriers go scot free. And the fact that it depends on such slender evidence as three sputum examinations and entirely ignores other paths of infection seems to open such legislation to criticism. Nor is the practitioner exempt: if the tuberculosis authorities consider his conduct in any way lax he can be called before a disciplinary body named the Hearing Board. The author does not tell us what action this board can take against the offender. Judged by the author's description this legislation may be subject to widespread evasion and might lend itself to corrupt practice; nor would one think that it encouraged either the patient or the practitioner to make full use of the facilities provided by the municipal tuberculosis scheme. Thus we see that Chicago is determined to get right down to its tuberculosis problem and we must sympathize for it is believed that Chicago has many serious municipal problems.

PALATABLE DIETETICS

It is not very often that even a popular book which deals with a technical subject can afford really light and enjoyable reading. No matter how he may try it is difficult for the author to stand back sufficiently from his work and so to display it in such a way that the layman can grasp its essentials without effort and can savour its triumphs with enjoyment. To a man who is absorbed in the routine of research one of the hardest of tasks is to write a readable popular account of his subject. It is difficult to decide how much knowledge the intelligent layman really possesses or how far it is necessary to labour a point that he may perceive it and the continual effort of striving with what is often to the worker the duller aspect of his subject breeds in the end a kind of nausea. It is therefore often with dread tempered by sympathy that the reviewer opens a popular book on diet. In the case however of Dr. AYKROYD'S *Vitamins and other Dietary Essentials*[1] the former emotion is clearly unwarranted and the latter wasted. If Dr. Aykroyd did not enjoy writing this book he has concealed the fact very cleverly indeed; and if he fails to convey some of his enjoyment to his readers they must indeed be dull and unresponsive creatures. To begin with he has the knack of writing—not merely the power of concise and accurate description but of employing happy phrases and of drawing vivid pictures. He has dealt with the human aspect of his subject and has shown how mankind with many setbacks and reverses has on his stumbling way moved towards a more adequate and a healthier diet. He has shown how now that the goal is becoming clearly defined progress is accelerated as never before; and he has sketched in all its beauty some of the recent experimental work that has brought the goal within sight.

The book deals in the main with broad issues and often shows in a most interesting way how diet has promoted or baffled human progress and human happiness. That the course of history is often governed by biological considerations is a commonplace; foremost among these stand the facilities which communities possess for obtaining a suitable diet. It is not unthinkable but that an ideal diet might produce an organism altogether different from man as he exists now; and it is certain that before long questions of food supply will influence national policies in a far more direct way than they do at present.

MEDICAL ENTOMOLOGY

One of the chief difficulties in preparing a textbook of medical entomology is the just allocation of space to the three components of the subject: the structure and natural history of the insects concerned, the epidemiology of the diseases they carry, and the practical measures for their limitation or control. In his new work[2] Dr. ROBERT MATHESON displays an admirable sense of proportion in setting down lucidly and concisely the established facts under these several heads. The anatomical sections are well illustrated by figures most of which are original; throughout the sections dealing with the incidence of diseases carried by insects the reader is given accurate information and is constantly referred to the original sources; and the sections on control are thoroughly practical. Perhaps the greatest shortcoming of the book as a general textbook of medical entomology is the undue stress that is laid upon American insects. Dichotomous keys are given to the anopheles of America but those from other continents are merely listed and no account is given of the habits of even the most important species; so that the mosquito malaria problem appears far simpler than it really is. The same criticism might be made of the chapters on plague and sleeping sickness.

The book is well arranged and easy to use for reference since it has an index to authors and an excellent subject index. An original feature is an *synonam* list of medical entomologists who have contracted fatal infections in the laboratory; a very valuable feature is an introductory chapter setting out briefly the crowded history of medical entomology during the last fifty years.

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[1] *Vitamins and other Dietary Essentials*. By W. R. Aykroyd, M.D. London: W. Heinemann (Medical Books), Ltd. 1933. (Pp. 218; 7s. 6d. net.)

[2] *Medical Entomology*. By R. Matheson, Ph.D. London: Baillière, Tindall and Cox. 1933. (Pp. xiv + 429; 211 figures. 28s.)

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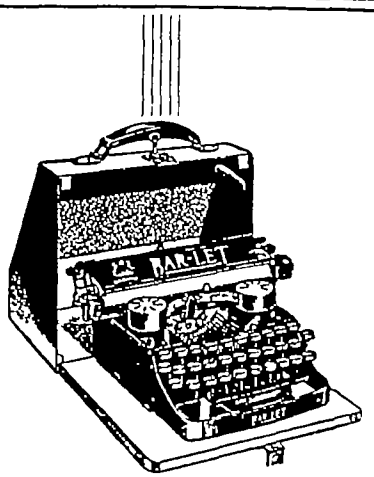

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Notes on Books

The Little Doctor,[6] by Dr FRANK G LAYTON is a refreshing and amusing account of a real "character" drawn from the life—a doctor by vocation, and a born individualist who "likes working-class people and likes doctoring them" He has a caustic tongue, a somewhat lurid vocabulary, and a very soft heart The book re creates for those who know it the very atmosphere of a thoroughly industrial poor practice, with all its crudities yet with a shrewd eye for the sturdy inde pendence and courage of the people who form the bulk of such communities It will open the eyes of anybody suffering from sentimental illusions as to the 'short and simple annals of the poor" The dialogue, which forms the main part of the book, is vivid, and fits the character of the "little doctor" like a glove Many panel doctors, especially those who have no 'vocation,' will resent the exceedingly direct criticisms made about them and their work Many will think the "little doctor s" sardonic descriptions of the system under which they work over-drawn, but there isn't one who will fail to benefit by the reading of the book if he has any sense of humour The 'little doctor" is not fettered by any undue regard for consistency—such a virtue would be incon-sistent with the character of the man who lives for us in this book He is a *real* person, and the reviewer is grateful for the opportunity of saying so and recom mending it to every panel doctor and everyone who likes to read about real persons There is no sex interest in the book, which accentuates its originality The review copy of *The Little Doctor* was tried out on a nurse, who chuckled her way right through the book and declared that its hero was a 'dear' but that she was glad she hadn't to nurse him in the illness so graphically described —obviously from the personal experience of a close and humorous observer This is certainly Dr Layton's best book

In a recently published booklet[7] Dr RENÉ CHARRY has provided a useful reminder of the methods of diagnosis and treatment of some of the conditions most often met with in an orthopaedic clinic His method is first of all to present the reader with the results of clinical examina-tion, supplemented by the history, then to consider the disorders 'which it is not" ('ce que ça n'est pas"), and finally to give a brief description of principles of treatment On this plan the following conditions are briefly handled club foot, congenital dislocation of the hip, brachial birth-palsy, Pott s disease, Little's disease, rachitic bow legs, morbus coxae poliomyelitis affecting a lower limb, torticollis, and scoliosis Diagrams are used in illustration Necessarily it is not possible in eighty pages to go into many details and discussions of various opinions or methods of treatment The author has had perforce to confine himself to the most obvious and impor-tant details, and to the methods which he has found most commonly useful The booklet will be of value to students and practitioners We do not, however go all the way with Dr Charry when he suggests that these notes should be carried in the pocket in order that they may initiate their bearer into the case which he has before his eyes Diagnosis and treatment are not to be so summarily acquired and carried out as all that!

The sixth issue of the *International Health Year Book*,[8] of which the previous volume was published nearly two years ago, contains information concerning the following countries Australia, Belgium, Bulgaria China, Czecho slovakia, Denmark, Egypt, Esthonia Finland, France, French colonies, Germany, Greece, Hungary, Irish Free State, Italian colonies, Japan, Latvia, Lithuania, Nether-lands New Zealand, Norway, Poland Spain, Sweden, Switzerland, Turkey, the United Kingdom (England and Wales, Scotland and Northern Ireland), Union of Soviet Socialist Republics, and Yugoslavia The health con ditions in each country are illustrated by twenty seven standard tables, which are classified in the following seven groups general demography birth rate, general death rates, cause of death, infantile mortality, public health statistics, and data on curative medicine The work also contains a review of industrial hygiene in Great Britain, Germany Belgium, Italy, Holland and Soviet Russia, the report of the Health Organization of the League of Nations for the period January, 1931, to September, 1932 and a list of the public health administrations in sixty one countries

In the third edition of Ernest Benn's List of *Nursing Homes*,[9] the number of institutions of which particulars are given has been considerably increased The publishers are to be congratulated on this improvement in what they claim is now by far the most complete list in existence of registered nursing establishments in this country

[9] *Nursing Homes* 1933 Edited by J Laton Hosking (Third year of publication) A directory of nursing and convalescent homes mental homes etc in England Wales and Scotland London Ernest Benn Ltd (Pp 257 4s)

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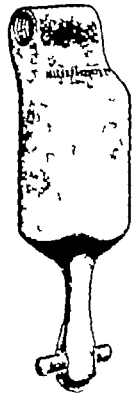
RADIUM APPLICATOR FOR VAGINAL USE

Dr R E TOTTENHAM, F R C P I, F C O G (professor of obstetrics and gynaecology, University of Hong Kong) writes

In the treatment of carcinoma of the cervix uteri it is usual to make an intrauterine and a vaginal application of radium, the instrument I am about to describe is used only for the latter part of the treatment the intrauterine applica tion being made in the usual manner There are many applicators in use but those which ensure that the radium is maintained high up in the lateral vaults of the vagina and that all needles are lying antero posteriorly appear to be the most satisfactory

We have devised an instrument which although it does not distend the vaginal vault as much as some applicators, yet has the merit of extreme simplicity no handling of the needles is required, and further the needles can be placed so as to lie antero posteriorly The instrument consists of a block of aluminium somewhat wedge shaped at one end while at the other there is a little T shaped handle The body of the instru ment is square on cross section, the corners being slightly rounded and its total length is about 4 inches At the wedge shaped extremity a hole has been drilled to the following dimensions 28 mm deep 10 mm in diameter and the outer (or distal) portion of the wall is 1/2 mm thick The hole is threaded in its upper quarter of an inch As many radium needles as required are dropped into the hole and fixed there by pouring in some molten Columbia paste ' or paraffin wax the threaded por tion of the hole ensures that the wax obtains a good grip



As soon as the intrauterine application of radium has been made this instrument (for the vaginal application) is passed so that the wedge shaped extremity lies firmly pressed up into the vaginal fornix of one side, a little iodoform gauze is tucked around the T shaped handle in order to prevent the instrument from rotating At the end of twelve hours the iodoform gauze is removed and the instrument rotated so that the radium comes to lie in the lateral fornix of the opposite side the radium thus being changed from side to side every twelve hours until the total dose is given

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[6] *The Little Doctor* By F G Layton Edinburgh and London W Blackwood and Sons Ltd 1933 (Pp 309 7s 6d net)

[7] *Dix Consultations d'Orthopédie* Par René Charry Préface du M le Dr Charles Flessinger Paris N Maloine 1932 (Pp 80)

[8] *International Health Year Book 1930* (vol vi) Reports (with Vital and Public Health Statistics) on the Public Health Progress of Thirty four Countries and Colonies in 1929 • League of Nations Health Organization London G Allen and Unwin Ltd 1932 (Pp 1 100 24s)

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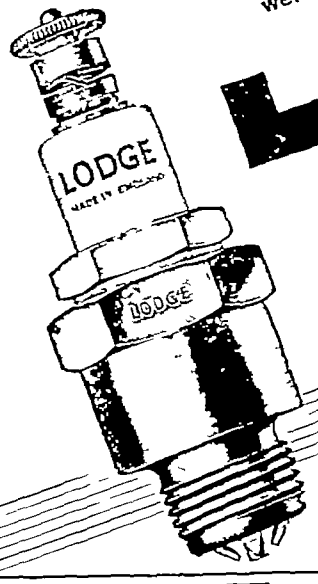

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British Medical Journal

SATURDAY, MAY 27th 1933

THE QUININE PROBLEM

The Health Organization of the League of Nations has published the results of an inquiry into the quinine requirements of malarial countries[1] The figures are fairly complete for the total population of the countries providing statistics amounts to 1 590 millions The annual number of cases of malaria treated is 17 7 millions the disease accounting in some countries for from 10 to 56 9 per cent of the total cases of infectious disease admitted to hospital These figures do not however indicate the real extent of the ravages of malaria Treated cases reported from India and Ceylon amount to 10 millions—more than half the world total of such cases—but the actual number of cases of malaria in these two countries is estimated at at least 100 millions which is ten times the number treated Furthermore no figures are reported from China In that country malaria is known to be endemic—and at times epidemic—in areas containing 350 million persons which is one sixth of the world's population

The approximate needs of quinine per annum in a malarial country are estimated as being 20 grams per case To allow for the necessary prophylactic use however this estimate must be at least doubled for a dose of 5 grains a day amounts to 110 grams a year The annual quinine output of the world is said to be about 600 tons an amount that suffices for the needs of the malarial cases under treatment and for prophylaxis among Europeans but it is only a tithe of what is really required An estimate of the quantities of quinine needed can be made from the experience of Italy About half that country is exposed to malaria and 500 000 cases are treated every year The Italian Government distributes annually about 20 tons of quinine free and about 7 tons more at a reduced price This amounts to about 140 grams per case treated or 0 7 gram per head of the total population Greece uses quinine on an even more lavish scale These figures provide a striking contrast to those for British India where the cases of malaria treated amount to 10 millions a year and the total cases are estimated at 100 millions But the total quinine consumption of India is only about 96 tons a year and the total amount of quinine and cinchona febrifuge distributed free of charge or at reduced prices is only 16 tons The amount of quinine needed annually in India is estimated at 680 tons

The problem of the quinine supply of India has been discussed recently by Lieut.-Colonel R N Chopra He points out that the problem is even more serious than the general figures indicate Quinine usage is not uniform and the areas most heavily infected with malaria show the lowest quinine consumption The reason for this somewhat paradoxical state of affairs is that the consumption of quinine is limited by its price and the populations most crippled by malaria are the least able to afford the drug The most obvious remedy for the scantiness of the present supply is either to reduce the cost of quinine or to find a cheaper substitute Java produces nine-tenths of the world supply of quinine and the Kina Bureau has kept the price stationary at 27s per lb Chopra considers that this is a fair price if allowance be made for the cost of replacement of cinchona plantations The Indian Government tried to introduce cinchona febrifuge[2] as a cheap substitute for quinine but it has never attained any great popularity and its consumption is on the decline The introduction of totaquine by the Hygiene Commission of the League of Nations and its inclusion in the *British Pharmacopoeia* represent an attempt to establish a preparation of the mixed alkaloids with a recognized and stable composition There are important economic possibilities in this direction because cinchona trees that would give a good yield of totaquine can be grown easily in India whereas India cannot compete with Java in the production of pure quinine The introduction of the new synthetic remedies plasmoquine and atebrin provides another complication because some authorities are doubtful whether synthetic compounds may not in the future replace quinine as the most effective anti-malarial remedies If this were to happen any money that had been spent on extending cinchona plantations would be lost

The contrast between Italy and India is striking and unflattering to the latter country The Italian Government provides its population with an adequate supply of quinine either free or at a reduced price It has established cinchona plantations which yielded 14 tons of bark in 1927 but which will yield 860 tons by 1936 a quantity more than sufficient for the national quinine requirements India on the other hand produces enough quinine to supply only one third of its needs and the production is decreasing rather than increasing The current number of *Chinrui* the publication of the Kina Bureau comments on the inadequate treatment of malaria in India and remarks It is particularly tragic because it is quite possible to cultivate cinchona trees in the country Certain plantations exist but yet the quinine factors in Mungpoo and Madras based on the indigenous cultivation can only provide about one-third of the existing quinine demands which are still relatively low Chopra suggests that the annual direct loss in India due to malaria is about £25 000 000 The Hygiene Commission of the League of Nations concludes Perusal of our report confirms the fact already demonstrated on a large scale in Italy that in a malarial country an increase in the quantity of quinine used produces a decrease in the malarial death rate The present situation cannot be regarded as satisfactory and the opinions of the diverse authorities

[1] League of Nations Health Organization Inquiry into the Quinine Requirements of Malarial Countries and the World Prevalence of Malaria

[2] Chopra R N *Indigenous Drugs of India* 1933. The Art Press. Calcutta.

[3] Johannessohn, F *Chinarum* 1932. Amsterdam.

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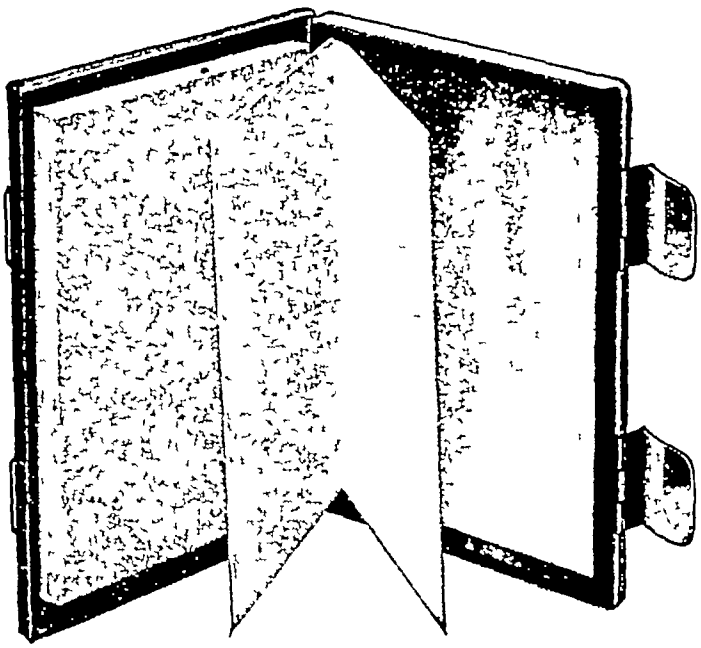

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quoted all point to the same conclusion—namely, that there is an urgent need for Government action in organizing on a large scale the production and distribution of the cheapest effective anti-malarial remedy that can be obtained

A PSYCHIATRIST'S RETROSPECT

Psychiatry is a specialty in its own right but to map out its confines is by no means an easy matter Its province extends even beyond medical territory In so far as it is a department of medicine, psychiatry stands in the closest relation with neurology and with psychopathology In these two disciplines are to be found its main sources, which as yet, however, have not become merged into a common stream They are complementary, two aspects of a common science, each speaking its own language , and as yet they do not occupy the same universe of discourse The brain is not synonymous with the mind There are other territories outside the realm of medicine altogether with which psychiatry has the closest association , and a host of administrative, legal, psychological, and sociological implications are inevitably bound up in its constitution It is this fact that makes psychiatry a specialty of a unique sort Treatment of mental disorder frequently necessitates legal formulae and legal safeguards for the protection of the patient and of society Moreover, diagnostic criteria are coloured by such formulae, and cases of mental disease and mental deficiency may not be ascertained merely clinically, but require to be brought into alignment with the provisions of the various enactments of civil and perhaps criminal jurisprudence It may be pertinent to note that insanity is by no means coterminous with the province of the psychoses There may exist a psychotic state which, by reason of its mildness or of the fact that its manifestations are not antisocial, could not possibly be classed as an insanity It is equally evident that a psychoneurosis or a state of mental defectiveness may, by the very reason of its severity or its extreme antisocial manifestations, fully deserve that appellation

From the clinical standpoint psychiatry may be said to have two aspects, descriptive and explanatory the latter may be neurological or psychological With the advent of the Kraepelinian hypotheses psychiatry was in its heyday as a descriptive science Kraepelin clarified the obscurity of the clinical syndromes by his formulation of the manic-depressive psychosis and of dementia praecox, but he still left a picture hard to decipher , and it was not until the coming into being of psychological analysis, in the widest sense of that term, that the key to this cryptogram was discovered Psychiatry has since become an explanatory science It was an explanatory science, of course, before Freud, but only in so far as a somatic causation was accepted as the whole explanation of its phenomena Professor Woodworth has remarked somewhere that, just when psychology was becoming more somatic, psychiatry started in earnest to be psychic His reference was, of course, to "behaviorism" and to psycho-analysis Certainly one would not doubt, after reading Dr W A White's *Forty Years of Psychiatry*,[1] or any of his other numerous publications, that psychiatry had become "psychic" Some of our readers may remember the shock felt when first viewing in White and Jelliffe's well-known textbook a photograph of a duodenal ulcer produced by unconscious hate Such a causation may indeed be far removed from fantasy, and is at any rate in accordance with much that has been psycho analytically determined

Those who are already acquainted with Dr White's writings will not be disappointed in this psychiatrical retrospect He is an enthusiast who has never ceased to testify to the fascination which his specialty has exercised on him There is much in these pages that is autobiography—and highly interesting biography it is , but of the chiefest interest is perhaps his account of the gradual emancipation of the mentally afflicted from the prejudices and ignorance of the past Dr White speaks of his own country, America We in this country have a parallel story to tell, and one which his closely approximates The inspiration of the humanitarian movement with regard to the mentally afflicted in America was derived largely from England , and Dr White pays tribute to the Quaker influence which came from England by way of the York Retreat One of the outstanding features of the early years of Saint Elizabeth's Hospital, Washington, was this influence, which the author says left so distinct an impression upon its traditions Trenchant observations abound in these pages on matters clinical, legal, historical, and administrative All of these would merit discussion, but one of the many administrative problems may be chosen for special notice Dr White discusses the question of the advisability of segregating in special hospitals those who are suffering from chronic mental derangement He is opposed to any such scheme Nevertheless, it would seem that the main reason against its adoption lies in the pessimistic connotation of the title of such a hospital Names certainly exercise a tyranny over our thought and behaviour, and a name such as "The Willard State Hospital for the Chronic Insane" (a title happily no longer in use) is deserving of the censure Dr White gives it but that is no good reason for condemning the segregation of chronic cases The misnomer could be as easily corrected as was the appellation "asylum" changed in England by legal sanction to that of "mental hospital," and with similar benefit If it were true, as is often alleged, that the very knowledge of the fact that the inmates of a mental hospital were all deemed to be irrecoverable is in itself sufficient to stifle all interest and initiative, the arguments against segregation would be overwhelming We may feel sure that with Dr White as the medical director of such an institution the supposed irrecoverability of the inmates would be a spur to, rather than a drag upon, initiative, and that it would not be long before rich fruits were forthcoming from so seemingly barren a soil

[1] *Forty Years of Psychiatry* By W A White A M M D Sc D New York and Washington Nervous and Mental Disease Publishing Company 1933 (3 dollars)

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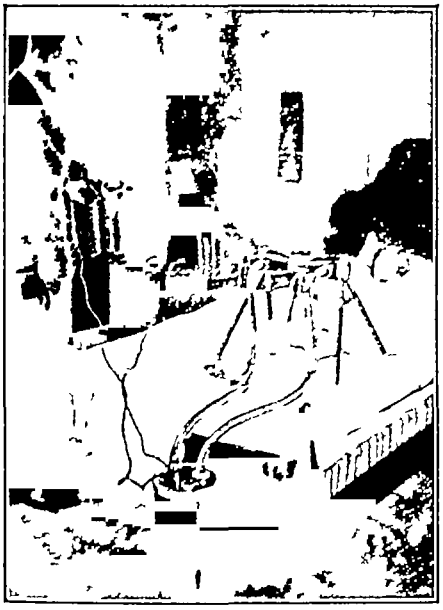

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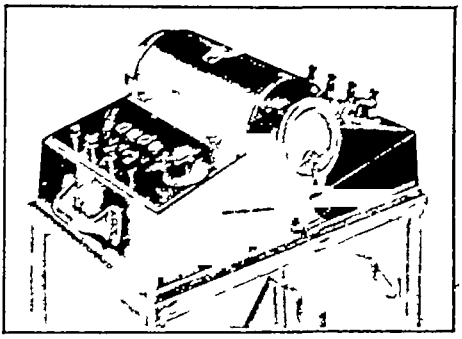

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VERTIGO

Vertigo is a difficult subject whether it be regarded from the point of view of aetiology of diagnosis or of treatment or even from that of those who try to write intelligently about it A recent monograph by Hautant and his colleagues[1] will be of great assistance to those who are confronted by these cases The first four chapters are by Hautant himself and the subject is set forth with that clarity of thought and expression characteristic of his countrymen After pointing out that the severity of the sensation in cases of vertigo bears little relation to the extent of the pathological changes Hautant goes on to classify the different types of the disease He very rightly emphasizes the importance of dissociating the sensation of vertigo which is a cerebral manifestation from disequilibration which is a reflex manifestation independent of consciousness And the latter is not necessarily in proportion to the former indeed vertigo may be present without disequilibration and may be accompanied by sickness The types of vertigo described by Hautant are the neuritic the neuralgic the cerebral the endocranial (produced by disturbance in the medulla) and the commotional (caused by concussions of the skull) This classification is admittedly in large part arbitrary but for the purposes of instruction it is very helpful In the neuralgic type of vertigo the vestibular tests show a normal reaction and those of hearing are approximately normal It is frequently the result of poisoning by tobacco or carbon monoxide or of absorption of endogenous toxins from the gastro-intestinal tract In all cases the effect is produced either directly by the action of the poison on the nerve termination in the labyrinth or indirectly by its effect on the blood vessels supplying this organ The latter type of case Hautant describes as angiospastic Another class of case which is also described as neuralgic vertigo includes those which result from chronic vasomotor troubles such as may occur at the menopause or in the course of arteriosclerosis In the neuritic type there is a definite lesion in the labyrinth or in its nerve supply as for example in syphilis or in suppurative labyrinthitis In this connexion Hautant refers to the fact that vertigo may often be absent when the labyrinth is completely destroyed When speaking of the apoplectiform type he points out that in many cases the attack occurs once and is never repeated though the hearing is permanently lost such cases are very commonly syphilitic in origin An interesting chapter is that on the mental condition of vertiginous individuals Vertigo always produces a central reaction of anguish and fear, and is often of this type and of long duration when resulting from a mastoid operation The objective manifestations resulting from the labyrinthine tests are usually absent and psychotherapy should form the basis of treatment M Aubry is the author of the chapter on vertigos of central origin The vertigo in these cases is unaccompanied by deafness or tinnitus and is not systematized—that is to say the patient does not feel as though surrounding objects were moving in a given direction but suffers rather from a vague sensation of uncertainty of balance A case of insular sclerosis is described illustrating this condition The treatment of vertigo is described by Ramadier it may be sedative or symptomatic aetiological or treatment by removal of the cause and surgical by destruction of vestibular sensibility Full details are given of the different operations employed such as decompression of the cerebellar fossa lumbar puncture decompression of the internal ear and destruction of the internal ear

[1] Les Vertiges. *Les Annales d'Otolaryngologie* January 1933

ELEMENTARY BODIES AND CUTANEOUS ALLERGY TO VACCINIA

It has been known for some time past that the early or immediate reaction that occurs in the skin of human subjects on revaccination is specific to vaccinia virus and that it can be provoked by this virus even when killed by heat Last year it was shown by Wilson Smith that the reaction can be elicited by a boiled extract prepared from tissues containing vaccinia virus (*Brit Journ Exper Path* xiii 434) In a recent communication[1] James Craigie and F O Wishart of the Connaught Laboratories Toronto have demonstrated that this specific allergic reaction is provoked by the washed killed elementary bodies of vaccinia virus These Paschen bodies were obtained from the skin lesions of rabbits vaccinated three days previously with a rabbit strain of vaccinia virus They were purified by repeated washings and concentrated by means of an angle centrifuge Microscopical examination at this stage revealed that the Paschen bodies were present in a very high degree of purity and their abundance was such that the suspension when diluted one-hundredfold still showed a trace of opalescence and also gave specific agglutination The bodies were next killed by the addition of formalin the suspension being injected into the rabbit's testis in order to prove that no living virus was present Suspensions of killed elementary bodies prepared in this way were tested on the skin of over 200 normal individuals Intradermal injection was tried at first but owing to some severe reactions was abandoned in favour of needle puncture through a drop of the suspension placed on the skin The reaction thus evoked consisted of a papule 1 to 3 mm in diameter distinctly red in colour and reaching its maximum in twenty four to forty-eight hours Frequently but not invariably the papule was surrounded by a pink areola In most of the groups of individuals tested in this way control observations by puncture in the same way were made of rabbit-skin extract and calf skin extract with negative results and the observations were also controlled with calf virus living and killed One group tested consisted of 130 girls whose ages ranged from 10 to 16 years and here vaccine virus of calf origin was used for vaccination by the short scratch method at the same time In seventy-five of these girls who had been previously vaccinated during the first three days the size of the papule evoked by the calf virus and the elementary bodies respectively was similar Later the lesion in the case of the latter regressed while in the case of the former it increased in some instances to a vaccinial lesion In fifty-two of the girls who had not previously been vaccinated no reactions occurred with the killed elementary bodies on the third day there was less reaction to the calf lymph than in the case of the former group but by the seventh day all were proceeding to

[1] *Canadian Public Health Journal* February 1933.

a primary take The conclusion arrived at was that the washed elementary bodies of vaccinia virus of rabbit origin elicit an early reaction in previously vaccinated human individuals, but produce no reaction in the absence of previous vaccination These observations would seem to provide a further and important link in the chain of evidence establishing the identity of vaccine virus with the elementary bodies

THE ROYAL SOCIETY CONVERSAZIONE

The isolation of the man of science from the man in the street has often been deplored, and attempts have been made to bring the two together by the publication of popular books on science A visit to a conversazione of the Royal Society reminds us that a barrier to a complete understanding between the two must always exist—the barrier of language For instance, even a dictionary would not help the uninitiated to grasp the meaning of 'A cathode-ray oscillograph is used stroboscopically, by allowing the focused electron-jet to appear only for periods of a fraction of a millisecond at any selected point in the cycle of recurrence, in certain measurements on the ionosphere" The medical man always finds exhibits of professional interest at the Royal Society's conversaziones and among others the artificial larynx shown on May 17th by the Western Electric Company appeals on account of its practical nature This instrument consists of a sound-box holding a delicate metal reed A rubber tube connects one end to an opening in the trachea and from the other end another piece of tubing projects into the mouth At the side of the sound-box is a breathing hole, which enables the patient to inhale and exhale freely When he wants to speak the patient closes this hole with a finger, the exhaled air thus being forced against the reed in the sound-box, the sound thus generated enters the mouth through the rubber tube and is "modulated into articulate speech by the action of the mouth, throat, and nasal cavities, as in ordinary speaking' The instrument is intended for those who have had the larynx removed surgically or who suffer from vocal paralysis Interest in virus diseases shows no sign of flagging Mr J E Barnard and Dr F M Burnett investigating the virus of canary-pox, suggest that it is closely related to that of fowl-pox, and that the bodies seen in infected tissues or body fluids are the virus In studies on varicella, Dr C Russell Amies working at the Lister Institute, has succeeded in demonstrating the presence of elementary bodies in this disease and their agglutination in pure suspension by the serum of chicken-pox patients He has also shown that these bodies are present in the expired air of a patient in the early stages of varicella At the Research Institute of the Cancer Hospital it has been found that a certain fluorescence spectrum is common to cancer-producing tars and oils and to another carcinogenic material of quite different origin This suggested that the substance responsible for the fluorescence spectrum might be responsible also for the cancer-producing action, and the spectrum was used as a guide for isolating carcinogenic material from two tons of pitch Infra-red photography of a section through the heart and of varicose veins show that results obtained by this method are much superior to those obtained by orthochromatic and panchromatic plates An interesting historical exhibit—the earliest standard thermometer in England—was staged by Mr G H Gabb This, known as "the Royal Society Thermometer," was recorded in the minutes of the Society in 1663 The only fixed point, taken as zero, was apparently based on the temperature of the human body, and the instrument was graduated downwards to 90°, "hard frost" being indicated at about 85° This scale remained the standard until about 1730, when Fahrenheit's suggested fixed points of the freezing and boiling points of water were generally employed Dr L S B Leaky has, with his recent discoveries of prehistoric man in East Africa, given a strong fillip to a subject of perennial interest The Kanam mandible, found in Lower Pleistocene deposits is as old as the Piltdown and Peking skulls but the orientation of the cheek teeth and the suggestion of a chin in the Kanam mandible place its possessor nearer to the main human stem The Kanjera skulls were found in association with tools of the Chellean culture These discoveries, and the finding of fragments of fossil anthropoids from the Miocene deposits of the Victoria Nyanza Basin lend support to Darwin's theory that Africa was the birthplace of man Along with exhibits on the production and detection of neutrons, and of a model to illustrate the classical motion of a diatomic rotator with two degrees of freedom," was Ben Jonson's copy of *De Magnete*, by William Gilbert, physician to Queen Elizabeth and to James I Two very interesting lantern-slide lectures were given respectively by Mr Olaf Bloch on recent developments in infra red photography and by Lieut.-Colonel L V S Blacker on the Houston Mount Everest Expedition

INCIDENCE OF MENTAL DISORDER IN LONDON

While the census returns show that the population of the county of London is decreasing, the population of the mental hospitals tends to increase Volume VI of the annual report of the London County Council for 1931,[1] which is devoted to the mental hospitals and the provision for mental deficiency, gives the number of persons of unsound mind for whose accommodation the Council was responsible on January 1st, 1932, as 21,675 —an increase of 253 on the year Save during the war years there has been an annual increase in the mental hospital population over a long period During the decennium 1891–1900 the average yearly increase was 508, during the next decennium it was 473 It fell to 162 during the next quinquennium, and during the quinquennium following (1916–20) it was replaced by an average yearly decrease of 848 But during the decennium 1921–30 there was again a yearly increase of 373 The reason for this rather paradoxical situation, however, is soon discovered It can be presumed that the population of the county is decreasing as the result of migration to the outer ring of Greater London, particularly of younger persons on marriage The result is a gradual increase in the average age of the population remaining in the administrative county, and this, coupled with the increasing longevity of the population generally, makes it likely that there will be a larger number of persons who will have to remain under

[1] Annual Report of London County Council 1931 Vol VI P S King and Son Westminster (1s)

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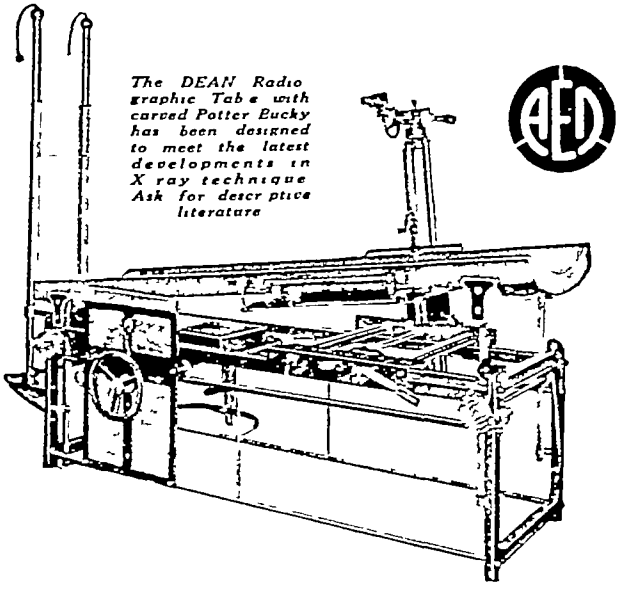

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permanent care because of decay of mental health The regular excess of admissions over exits therefore must not be taken to imply an increase in the incidence of mental disorder in the general population of London it represents largely an accumulation of chronic patients The bed accommodation at the ten county mental hospitals on the basis of the requirements of the Board of Control as to bed space was 21 068 but the number of patients resident on January 1st 1932 was 21 419 At every hospital except Horton the number for which measured accommodation is provided was exceeded It is hoped that by some time in the present year the accommodation for patients will have been increased by 669 beds and extension schemes providing for a further 830 are projected but are held up by the economic situation The recoveries in mental hospitals during 1931 were 31 41 per cent of the admissions and the percentage of deaths on the average number on the register was 5 83 The number readmitted after having been discharged recovered was 352 and 115 of these were readmitted within twelve months of the discharge Of the 173 voluntary and temporary patients received under the Mental Treatment Act 69 were discharged (33 as recovered 20 as relieved and 16 as not improved) 3 were transferred to the certified class and 5 died leaving 86 remaining on the registers

BLINDNESS IN PALESTINE

The prevalence of blindness in Palestine was revealed by a Government census in 1931 which showed that 843 of every 100 000 inhabitants were totally blind The nearest figure to this total elsewhere in the world is that of Egypt (776) in Cyprus it is 420 and in England by way of contrast the figure is 73 References have been made in these columns to the steadily growing work of the Ophthalmic Hospital Jerusalem an institution under the control of the Grand Priory of the Order of St John of Jerusalem In his report for 1932 the warden Lieut.-Colonel J C Strathearn honorary consulting ophthalmic surgeon to the Government of Palestine records briefly an ophthalmic survey he undertook last summer of the state of vision among the inhabitants in the villages of the Plains It was found that the previous census returns had underestimated the amount of blindness in the eleven villages examined and probably also in the general population elsewhere Of the 1 118 blind eyes in these villages acute conjunctivitis a preventable disease was shown to be the primary cause in 78 per cent The High Commissioner for Palestine ordered a memorandum on the whole subject to be prepared and after this had been studied it was decided that the Government and the Ophthalmic Hospital staff should jointly attack this problem on comprehensive lines It is proposed to open additional clinics and equip a travelling motor unit under a specialist medical officer Furthermore a village school is to be established in which voluntary teachers under the direction of an English lady also acting in a voluntary capacity should train Palestinian girls to travel in this part of the country and teach the fellahin the elementary rules of first aid hygiene, home nursing and sanitation so as to stamp out preventable blindness During 1932 the hospital dealt with 1 399 in patients and 21 350 out-patients , the total attendances reached the record figure of 97 063 and there were 3 716 operations Of the new patients 15 754 were Moslems 3 617 Christians and 1 979 Jews Once again the warden has to record grave anxiety about the water supply of this institution Last year the scarcity was greater than ever and in the city disaster was only averted by bringing in an emergency supply from the adjacent foothills Even so from July to September water was only available at the hospital for a short period every sixth day and the year finished with the cisterns empty The December rains which usually arrive in sufficient quantity to relieve all anxiety entirely failed and the prospect for the coming months is very gloomy The warden regards such continued water deficiency as the main reason for the increasing incidence of blindness during the past five years in sharp contrast with the preceding seven years with better rainfall in which there was a steady decline

FEE-SPLITTING

An article on this disagreeable subject in our issue of March 11th (p 422) gave the following definition of the practice known in America as dichotomy By fee-splitting is meant an arrangement between general medical practitioner and consultant or specialist by which the former retains or receives back part of the fee paid to the latter for special services The essence of the transaction is that part of the consultant's fee unknown to the patient is deflected to the practitioner who advised the consultation or operation The receipt of secret commissions in this country is recognized as being against the public interest and also forbidden by law But unfortunately it is one thing to make a law and quite another to enforce it This matter we are glad to note has now been raised in the General Medical Council Sir Norman Walker the President at the close of his address from the chair on Tuesday made a significant reference to it I have been informed he said that the practice of dichotomy or fee-splitting which we have heard is regrettably prevalent in some countries is raising its head in this I wish I could think that my information is incorrect A conviction under the Act for Punishment of Corrupt Transactions with Agents would inevitably bring he offender under the jurisdiction of this Council So far so good Fee-splitting is a noxious growth which can only flourish in the dark and the President's warning has received wide publicity in the Press It is to be hoped however that if instances of the practice are brought to light disciplinary action will not have to wait upon proceedings in a criminal court.

The George Alexander Gibson Memorial Lecture will be delivered before the Royal College of Physicians of Edinburgh on Thursday and Friday June 1st and 2nd at 5 o'clock by Professor K F Wenckebach of Vienna Subject The Beri-beri Heart and its Significance for Cardiology '

BRITISH INFLUENCES IN PSYCHIATRY AND MENTAL HYGIENE

DR ADOLF MEYER'S MAUDSLEY LECTURE

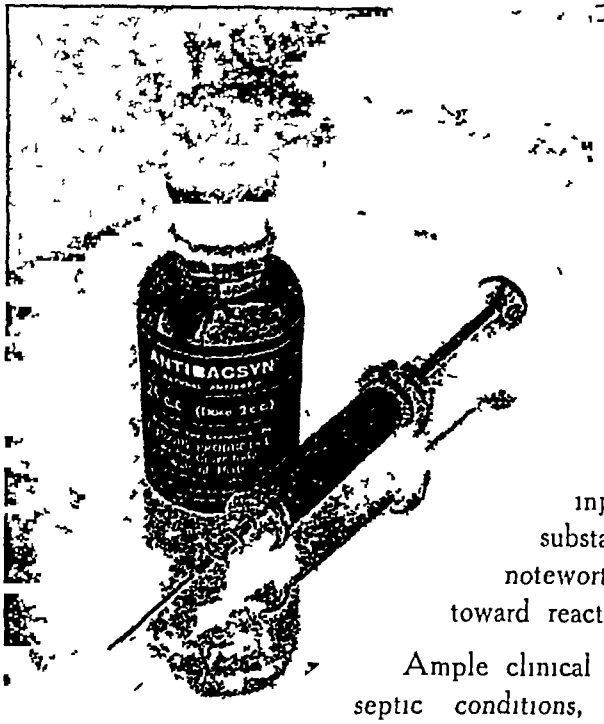
The fourteenth Maudsley Lecture, under the auspices of the Royal Medico Psychological Association, was delivered on May 17th by Dr Adolf Meyer psychiatrist in chief of the Phipps Psychiatric Clinic, Johns Hopkins Hospital, Baltimore U S A The lecture was delivered within ten minutes of Dr Meyer's arrival at Waterloo from the United States, and an audience of about 400 people cheerfully waited for one hour before he arrived The chair was taken by Dr R B CAMPBELL of Stirling

Dr MEYER began by acknowledging his personal indebtedness to British science and medicine, and especially British psychiatry, largely because of what he had received in, and since his early post-graduate work in this country forty-three years ago He mentioned especially in this connexion Francis Caird James Taylor, Hughlings Jackson Victor Horsley, Gowers and Ferrier Clouston's lectures on The Neuroses of Development were a great inspiration to him as also was the Second International Psychological Congress in London in 1892 He set out to discuss four aspects of his subject—namely (1) the genesis, meaning, and importance of a psycho biological rather than a psycho-physical conception of man and what this conception owed to British thought especially to Hughlings Jackson and Thomas Huxley, (2) the meaning of the resulting truly functional formulation of pathology, (3) the resulting interest in the individual and the development of mental hygiene, and (4) some essential perspectives of present day psychiatry Lange's and Wundt's essays failed him in his quest for a satisfactory understanding of life and psyche, and he received much more enlightenment from reading Huxley's essays and Hughlings Jackson's writings on neurology In British thought he found, as a rule, a very definite biological comprehensiveness in contrast to the narrow interest in the cell and the isolated organ which was typical of Continental thinking In Sir Charles Sherrington's concept of the integrative function of the nervous system one felt that he was doing justice to human nature and to the demands of the sciences available for its study During the last forty years a really vital sense of the human individual had made its appearance, especially through the British emphasis on biology in a scientific naturalism and on the living unit Psychologists no longer felt that they were working with a body which happened to be complicated by a mind, or a mind that happened also to be hampered by a body, there was a growing sense of an intrinsic unity, notwithstanding the traditional contrasts By pondering on the various systems the student arrived at a general habit and principle of all science dealing with function, he wanted to know when and where the event, experience, or function occurred, under what conditions, with what factors, with what working effect, and within what range of regularity and plasticity and capacity for modification What was needed was a concept of man which included what, in everyday practical life, one recognized and felt man to be—namely an organism with a personality function He touched briefly on the work of Sir Frederick Mott, whose first study turned on the invasion of the brain by syphilis, and later on the endocrines, but Mott's clinical interests, he said, were at Charing Cross Hospital and not in asylums Kraepelin—more interested in his basic laboratory studies on the work-curve the effects of fatigue, and the influence of alcohol and other drugs than in the history and personality of his patients—had practically ignored in his conceptions of dementia praecox a constitutional and individual experience factor, which seemed to the lecturer to be paramount

MENTAL HYGIENE

These considerations brought Dr Meyer to the question of the interest of the individual and mental hygiene He said that for his own part he had always felt an urge to understand and guide, not merely to describe and dissect the patient He proceeded to describe certain American work which had a social as well as a psychiatric character A proposal of Miss Louise Schuyler in 1905 to introduce the European after care principles into New York State made it possible to utilize this experience together with something forming part of the real pathology and therapy of psychiatry, and it paved the way to a new venture—the appointment of the first official psychiatric social worker in 1906 When in 1908 Mr Beers turned his attention to reform of mental hospitals, the lecturer urged him to do it on the basis of mental hygiene, and this received support from Mrs Ethel Dummer, who was strongly influenced by the writings of Boole and Maudsley By the term "mental hygiene" was meant something more than mere child psychiatry and a diluted kind of general psychiatry it implied an intimate study and public education in favour of those factors which made for mental health in a positive and creative, and not merely in a passive or remedial way It was the ambition of the hygienist to think and speak in terms of natural opportunities and resources, with a balance in favour of the hale and whole conception of life There were two methods of procedure which might readily be used side by side On the one hand, there should be a systematic and well-balanced attention to the human—the psycho biological—health tissues, depending on a sound evaluation and testing out of intuitions and emotions and of individual and social contributing factors On the other hand, there should be a most thorough and critically constructive control of the strictly professional work, pushing, wherever feasible, the possibilities of intensive investigation, not merely as child study but as part of the adult problem He protested against mere leaflets of instruction and thought that while it might be well not to cultivate high pressure production, it was urgent to insist on substantial work within the range of controllable data The most difficult task in psychiatry Dr Meyer described as that of balancing the concreteness and profusion of its data and what was needed to keep order among the mass of such data Unless our sciences could concentrate and focus, as well as differentiate their data, their general average effect would be chaos or sham He thought that at the present time it was well to concentrate after a period of great expansion What had been gained during the last generation was encouraging, but it needed to be straightened and sorted out He hoped that the study of the pathology of the living and the dead would become more contributive to human welfare, and that without turning the world into a pathological laboratory The question was now being asked of psychiatry and mental hygiene what it was doing to fill in the gaps of knowledge, and to assemble the experiments of nature and of man in a way that allowed the placing of samples before those competent to create public opinion

Finally, Professor Meyer said that all interested in this subject would always want to come and learn in the country which produced the Magna Charta, Bacon's experimental philosophy, Shakespeare's drama and generations of scientists who were always thoughtful of the man in the street Those workers in the United States who had been favoured with visitors and co-workers from Britain valued very highly what these people had taken to the States in training and outlook The United



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States was sometimes looked upon as an experimental ground which was still a land of great possibilities although its limitations were beginning to be appreciated But his own countrymen looked to Britain as a country with fascinating economic and cultural and social problems and with a people having a blend of present-day practical sense respect for the past and mindfulness of the immediate future Those who knew how to come and learn would always have cause to cherish Anglo American contacts and co-operation

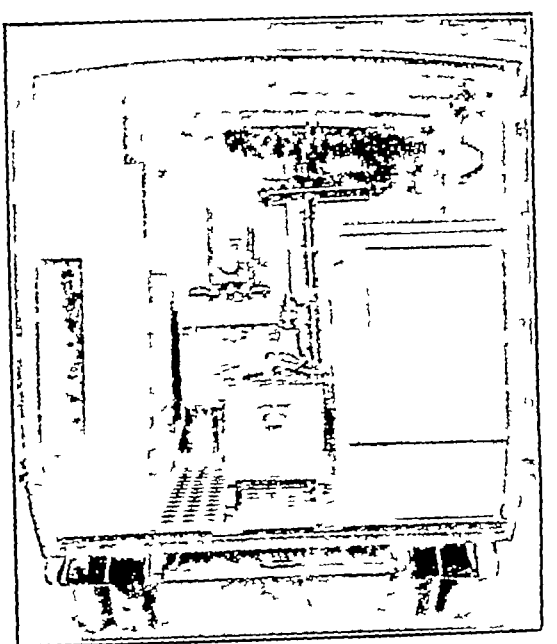
On the motion of Sir Hubert Bond seconded by Professor D K Henderson a resolution of thanks to Dr Meyer was carried by acclamation

MOBILE X-RAY APPARATUS

THE HOME AMBULANCE UNIT

The general practitioner would undoubtedly welcome more help from radiology if he could get it His difficulty until recently was that unless he could send his patient to a department or consulting room equipped with permanent apparatus he had to dispense with x ray help altogether During the last few years the portable diagnostic outfit has partly filled the breach The manufacturers who first designed this set deserve the highest credit for it really represents a marvellous achievement to pack into containers not larger than a pair of suitcases a tube and transformer which are not only ray proof and shock proof but will also take very good radiographs Nevertheless *pace* its makers the portable set has definite limitations It will take a great many of the usual radiograms with reasonably short exposures and is perfectly effective when the exposure is no object but in work that requires very short exposures and high power the radiologist feels the need of a set with considerably more reserve It is unreasonable to expect even the best of portable sets to take a chest at 2 metres in a fraction of a second Moreover the portable set has to be worked off the house current and the ordinary main supply has several grave defects chief among which are its lamentable fluctuations An x ray transformer makes a heavy demand on the supply and when it is put on the main in a country district the voltage is apt to waver considerably Moreover in urban practice changes occur through the varying demands of other users When a set is working on the same substation as an electric lift or *a fortiori* as a factory or workshop employing electric power intermittently the radiologist is never certain what his voltage is going to be and only the best of stabilizers can make him moderately secure This objection applies not only to a portable set but also to the permanent installation unless this is very carefully protected The ward set mounted on a trolley has more power but not all that is desired and is also at the mercy of a fluctuating supply

Enterprising commercial concerns have provided travelling x ray facilities since the comparatively early days of the science when the power was supplied from a battery of accumulators working through a coil This system has been progressively developed but is not used nearly as much as it ought to be Its latest development demonstrated on May 10th at Grosvenor Crescent by the Joint Council of the Order of St John of Jerusalem and the British Red Cross Society suggests a much wider scope of utility The Home Service Ambulance Committee has added to its equipment a mobile x ray unit which appears not only to be the last word in travelling x ray apparatus but also to possess considerable advantages even over the permanent installation It is housed in a neat van mounted on a 27 h p Bedford chassis made by Vauxhall Motors The front of the van contains the generator switch board and electric controls the rear part is fitted out as a dark room and when the unit is on the move accommodates the whole of the apparatus The long and the short tube stands fold up and stand upright in a corner and the substantial wooden couch is pushed into a slot on the left hand side of the vehicle The tubes are housed in wooden drawers and the Potter Bucky diaphragm in its own holder and the transformer and control trolley fit into rails in the middle of the floor The unit can be assembled and ready for work within seven or eight minutes of arriving at the patient's home The most remarkable feature is the amplitude and steadiness of the supply The generator is driven by the engine of the van which develops 44 brake h p at 2 400 revolutions The output is controlled by a voltage regulator which automatically interposes and withdraws resistances in the field circuit This device cuts down fluctuation to within 1 per cent and the remaining error is smoothed out by a milliampere second relay on the control trolley Steadiness is helped by the use of an unusually high frequency—90 cycles as against the ordinary 50 of the National Grid—and as the iron and copper losses of the transformer are so low it can be made comparatively small The tube a metalix which is self rectified normally works at 90 kV and can if required pass a radiographic current of 100 mA—a genuine 100 mA as Mr H T Ferrier the council's radiographer demonstrated The result is that for ordinary pictures it will work comfortably on exposures of one thirtieth to one



Interior of mobile unit showing tube-stands transformer and control trolley washing tank chair and swinging screen for housing [illegible] when in use

fortieth of a second and even for 2 metre work will keep within the shortest exposures known to the equipment of a chest hospital Potter Bucky work can be done with exposures of under a second The tube stand can be adjusted for work over or under the couch or upright Screening can be carried out comfortably on the couch with the screen on the patient's abdomen but in the upright position the patient must hold the screen in front of his body and it is obvious that delicate palpation work is impracticable especially as there is no provision for stopping secondary radiation except the screen itself The use of the apparatus therefore is primarily radiographic When an exposure is to be made the supply required is adjusted to an artificial load and the change over to the tube and back throws only a slight stress on the generator The temperature of the developer and hypo is maintained by electrical resistances and it is found that if the current is turned on about ten minutes before leaving the carriage the fluid is heated to 65° in good time for use this temperature is maintained for an appreciable time after the current is turned off Thermostatic control was

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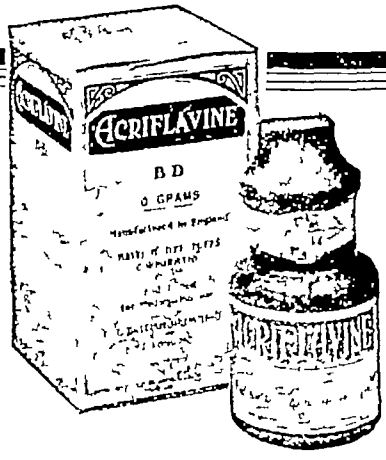

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rejected as unnecessarily expensive Mr Ferrier showed that a radiograph could be developed and exhibited in three minutes by the clock, normally he would prefer to take five minutes and use slightly cooler developer, but he demonstrated the extraordinary dispatch with which results could be obtained In addition to ordinary dark-room lamps the dark room is fitted with an illuminated viewing box over the washing tank, and others are carried for the purpose of exhibiting the finished films at the bedside

The value of this service is obvious and cannot be too widely realized The unit is at the disposal of the medical profession for reasonable charges,* and should meet an increasing demand Moreover, hospital x ray departments and consulting radiologists might profitably investigate this very efficient method of stabilizing their current It might pay, instead of using the public supply with a stabilizer to install one of these self-regulating generators coupled to a motor The cost ought not to be much more than that of a stabilizer It is a pity that the committee had to go to Italy for the generator, apparently no British firm was in a position to supply one within a reasonable time or at a reasonable price Considering the resources of our electrical trade, this seems an anomaly capable of cure

SPREAD OF SMALL-POX IN PARTLY VACCINATED COMMUNITIES

The replacement in Great Britain of the severe form of small-pox which is still endemic in India and the East, by the milder and almost non-lethal alastrim or variola minor, has brought up the questions whether any change in the present practice as regards small-pox control is desirable, and whether any alteration of the vaccination laws should be contemplated With a view to adding to the sum of available data on which sound conclusions may be based, Dr Percy Stocks, reader in medical statistics in the University of London, has addressed himself to the following problems the degree of protective efficacy on the individual of vaccination practised at different intervals of time before and after exposure to infection with variola minor the liability to attack in unprotected persons of different ages, the effects of dilution of the susceptible fraction of the population by protection of different proportions of the people, the manner in which an epidemic when out of effective control spreads in an urban and a country district and the reasons why it eventually comes to an end He has studied a series of 1 433 cases of variola minor occurring in the metropolitan borough of Stepney during 1929–30 together with records of infant vaccination before 1930, and another series of 17 708 cases occurring in the county of Durham A report of the conclusions reached with regard to the first series has now been completed, and was published in the *Annals of Eugenics* (vol v, Parts I and II, January, 1933) Towards the expenses of this research a grant was made by the British Medical Association The following is a summary of the conclusions reached

In the three years preceding the Stepney epidemic one-third of all infants surviving the first year in Stepney had been vaccinated, the rate being 70 per cent of that in the country as a whole It was estimated that, in the general population of that borough at the beginning of the epidemic the proportions who had been vaccinated in infancy were about 35, 40, and 60 per cent respectively in the first three decades of age, or, adding the proportions estimated to have been primarily vaccinated after infancy about 45 65, and 80 per cent respectively This did not suffice to protect the community from an epidemic In the 643 households attacked by small-pox, however, the corresponding proportions who had ever been vaccinated were only 12 29 and 43 per cent

The liability of home contacts unprotected by vaccination to be attacked reached a maximal value in August and September, 1929, by which time most of the borough was involved From that date onwards the liability steadily declined and a straight line fitted to either the declining apparent infectiousness or to the declining attack rate in unprotected contacts up to the end of 1930 reached the zero point in July, 1932 Since the epidemic actually died out at the end of the second quarter in 1932 Dr Stocks suggests that this statistical procedure may provide a means of predicting the duration of an epidemic The steady decline in the attack rate among unprotected home contacts after the epidemic had become diffused indicates either that the virus became progressively less infective or that latent immunity was being acquired by the population Although no evidence in favour of the latter explanation was found from the study of the subsequent attack rates of contacts who escaped immediate infection, Dr Stocks calls attention to the curious fact that the immediate attack rate in unvaccinated children under 10 years old who were exposed to infection was no lower in 1930 than in 1929, whereas in adults it was much lower He considers that it would be difficult to account for this on the first hypothesis whereas it might be explained if the bulk of the propagation of small pox and latent immunization associated with it took place in work places, factories, and wherever else adults were crowded together

In the first year of the epidemic the mean number of persons in each house affected by small pox was 9 of whom 5 6 were unprotected by vaccination, in the second year the corresponding figures were 8 2 and 5 In the first three months of the epidemic two thirds of the previously unvaccinated home contacts accepted vaccination, but after six months this proportion fell to 30 per cent, and with recrudescence of the epidemic gradually rose again to 45 per cent At the start of the epidemic 55 per cent of previously vaccinated home contacts accepted revaccination, but this proportion rapidly fell to about 17 per cent, and did not rise again

INCUBATION PERIOD AND SOURCES OF INFECTION

The incubation period of variola minor, it is concluded, seems to lie outside the limits of twelve to sixteen days in at least one eighth of all cases but it can very rarely be less than ten or more than eighteen days The mean interval from the onset of the symptoms to the appearance of the rash was 2 7 days When a small pox case developed the rash eleven to twenty-four days after a previous case in the same house, it was regarded as being secondary to that is to say infected by the latter When the interval was less than eleven or more than twenty four days, some other source of infection was postulated The reasons for this deduction are indicated graphically in the report and also argued on statistical considerations When a small-pox case was removed to hospital on the day of the appearance of the rash the subsequent attack rate among unprotected home contacts was significantly less than in cases where such removal was delayed The attack rate also increased from 8 per cent (when four days elapsed from the onset of the symptoms to removal) to 25 per cent when eight, nine ten, or eleven days had elapsed

PROTECTION AFFORDED TO THE INDIVIDUAL BY VACCINATION

The cases of small pox included 157 persons who had been vaccinated less than twenty four days before attack but in only five of these did the interval from vaccination to onset exceed twelve days and in only one case was it greater than sixteen days Owing to the time required for complete protection to develop, which is presumably variable, like the incubation period of small pox itself it is evident that immunity from attack cannot be guaranteed, even if vaccination is performed immediately after exposure to infection Of 145 previously unvaccinated home contacts who were vaccinated on the day of, or the day following the appearance of the rash in the first case in the house, six were attacked which indicates, according to Dr Stocks, that vaccination after exposure cannot reduce the risk to the previously unvaccinated below about 4 per cent Comparing the actual

* Information may be obtained from the secretary Mobile X Ray Department 12 Grosvenor Crescent S W 1 (Sloane 7136)

attacks with those expected in the same age distribution of unvaccinated persons the vaccination of unprotected contacts within two days of the appearance of the rash in the first case reduced the risk of immediate attack to one seventh vaccination three or four days afterwards reduced the risk to one quarter vaccination five six or seven days subsequently reduced it to two thirds but with longer intervals there was no evidence that it was effectual For statistical purposes protection has been regarded as adequate if vaccination was performed within four days it appears however that definite advantage is gained by no postponing the vaccination of contacts beyond the second day after appearance of the rash

The primary cases of small pox showed a relative excess of young adults in comparison with the secondary cases this suggests that small pox is spread in workplaces more than in schools The proportion of young adults in affected houses who had been previously vaccinated increased during the epidemic owing no doubt to vaccination in factories but this was not the case in children The ages of maximal attack rate in the whole population were 5 to 10 both for primary and for secondary cases but the change of attack rate with age was greatly influenced by the differing proportions protected by vaccination at different ages this proportion being highest at 20 to 25 The total effect of vaccination before and after exposure was to protect adequately about 30 per cent of home contacts at the ages 0 to 5 40 per cent at 5 to 10 50 per cent at 10 to 15 60 per cent at 15 to 30 50 per cent at 30 to 45 40 per cent at 45 to 50 30 per cent at 50 to 60 and 8 per cent after 60

The susceptibility to attack in unprotected home contacts was highest at the ages 15 to 20 and 0 to 50 it was significantly lower at 20 to 30 and rapidly declined after 50 The aggregate risk of immediate attack to the unprotected contacts of all ages was 1 in 4 At ages under 20 the risk to those vaccinated in infancy only was one twentieth of that in the unvaccinated at ages 20 and 40 it was about one tenth and at ages over 40 about one half This was also found to be true when the vaccinated and unvaccinated living in the same houses were compared Relating the actual attacks to those expected in the same age distributions of unvaccinated contacts vaccination less than twenty years before reduced the risk of immediate attack below one twentieth vaccination twenty to thirty years before reduced it below one twelfth vaccination thirty to forty years before reduced it to one ninth and if more than forty years before to less than one half For statistical purposes Dr Stocks reasons protection after vaccination may be regarded as adequate for thirty years although it is no longer at its maximal potency after twenty years Among persons vaccinated within five years about 1 in 150 may be expected to contract variola minor when exposed to infection in the house He estimates that in the Stepney epidemic prior vaccination saved 332 and subsequent vaccination saved 135 home contacts from attack leaving out of account the persons infected by these cases

PROTECTION AFFORDED TO THE COMMUNITY BY VACCINATION

The mean number of persons per dwelling was higher in houses invaded by small pox than for the borough as a whole The proportion of contacts unprotected did not show any relation to the number of persons in the house The attack rate among the unprotected contacts increased in general with the number of persons living in the house but was definitely lower in households of ten to twelve persons than in households of four to 6 this being no doubt due to separation into two or more families occupying different rooms Although no evidence was found that a protection rate as high as 60 per cent suffices to protect a community from the spread of an epidemic as distinct from protecting the vaccinated persons in it the risk to unvaccinated persons in an infected house appeared to have been considerably reduced when more than half the persons living in the house were protected by vaccination the important factor being the ratio of protected to unprotected persons rather than the actual numbers of each

South Africa

[FROM OUR CORRESPONDENT I PRETORIA]

Ministry of Public Health

As the result of coalition between the two large political groups—the Nationalist Party and the South African Party—certain Ministerial changes have taken place important among which is the change in the Public Health portfolio In 1924 Dr D F Malan was appointed Minister of Public Health Education and the Interior in the Hertzog Government a post which he occupied for nine years until owing to his opposition to the principle of coalition he was unable to continue in the Cabinet The medical profession in South Africa owes much to Dr Malan It was he who finally succeeded in getting the Medical Dental and Pharmacy Bill put on the Statute Book For a dozen years this Bill had been brought up regularly only to be talked out of the House by the protagonists of unqualified practice The Bill as finally passed gives entire protection to qualified practitioners it provides that only those who hold a recognized degree or diploma shall be admitted to the *Register* Dr Malan was also responsible for guiding through the House the Foods Drugs and Disinfectants Bill and important amendments to the Public Health Act Although a layman he had an excellent grasp of medical matters and always showed much sympathy for professional ideals He is succeeded in office by a comparatively young man Mr Jan Hendrik Hofmeyr nephew of the former Cape Prime Minister of that name Mr Hofmeyr had a particularly brilliant career at the South African College now the University of Capetown From there he proceeded to Balliol College Oxford as a Rhodes Scholar taking a first in Greats in 1916 He was appointed successively lecturer in classics at Capetown University professor of classics at Johannesburg principal of the Johannesburg University College (which under him became the University of the Witwatersrand) and Administrator of the Transvaal His accession has given much satisfaction in educational and in medical circles since his long experience of university matters will make him a capable and sympathetic Minister

Dr Robert Broom, F.R.S.

The notable contributions to science of the medical practitioner Dr Robert Broom have been recognized by the University of Witwatersrand which at its recent graduation ceremony conferred on him the degree of Doctor of Science *honoris causa* Dr Broom was born at Paisley Scotland in 1866 During his boyhood he became keenly interested in botany and natural history and in 1886 he was appointed secretary to the Natural History Society Glasgow In 1887 he obtained his B Sc in geology at Glasgow University and in 1889 his M B C M In 1892 he migrated to Australia partly for reasons of health but chiefly to study the marsupials and monotremes During his four years there he practised in country towns but devoted much of his time to stratigraphical research He came to South Africa early in 1897 mainly to work on the fossil reptiles of the Karroo and this work has absorbed most of his energies during the last thirty years In 1903 he was appointed professor of zoology and geology at the Victoria College—now the University of Stellenbosch—and honorary curator of fossil vertebrates in the South African Museum Capetown and in 1911 the honorary degree of D Sc was conferred on him by the University of the Cape of Good Hope He was elected a Fellow of the Royal Society of London in 1920 and in 1928 was awarded the Society's

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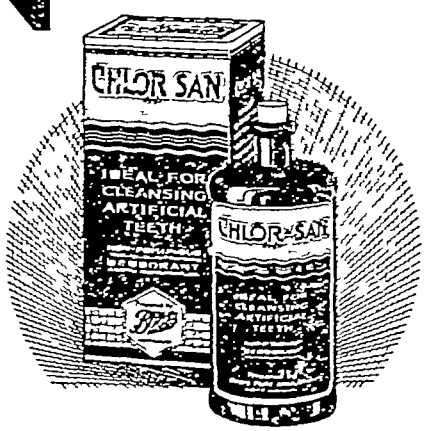

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royal medal Except for a period when he occupied the chair of zoology, Dr Broom has always had to earn his livelihood as a general medical practitioner, and although his practice naturally took much of his time, he never lost sight of his scientific ideals, and continued to do first class work in his own chosen field of research Indeed, Dr Broom is generally looked upon as the leading palaeontologist in his particular department of study When he commenced his researches on the Karroo reptiles only about seventy species were known, and even this knowledge was scanty and unclassified Now, owing to his work, over three hundred species are known fully, and his classification has been accepted by the whole scientific world This study has practically solved the problem of the origin of mammals, and at the same time has thrown light on many other subjects His research on the organ of Jacobson has resulted in a reclassification of the insectivora Besides two important books on the evolution of man and other mammals, Dr Broom has published about three hundred original papers—an amazing output when it is considered that all this is the work of a man whose professional duties naturally had first claim on his time

Miners' Phthisis Appeal Board

The first chairman of the Miners' Phthisis Medical Board of Appeal was the late Dr A M Moll, a Johannesburg psychiatrist The board was brought into being some years ago to examine the claims of beneficiaries under the Miners' Phthisis Act who were dissatisfied with the finding of the Phthisis Bureau in Johannesburg For the proper functioning of this body it was essential that gold miners should have confidence in it, and for this reason a chairman was chosen who was in close touch with the mining community The members of the board, Drs Smith and Truter, had previously served for many years on the Miners' Phthisis Bureau an institution which has received world wide recognition in industrial medicine for its high technical efficiency Dr Moll is to be succeeded by Dr Carl Th Moller a general practitioner of Germiston He, too, has been chosen as likely to inspire confidence in miners As district surgeon and private practitioner he has always been in close touch with them, and, since coming to the Witwatersrand twenty-five years ago, has made a study of their special ailments

Scotland

Alexander Black Memorial Lecture

The Alexander Black Memorial Lecture was delivered to the Royal College of Physicians of Edinburgh on May 12th by Dr John D Comrie, with the president Dr Robert Thin, in the chair Taking as his subject 'The Evolution of Ideas regarding Disease,' Dr Comrie said that the causes producing premature inefficiency and death had been much the same throughout the history of mankind although different diseases had come and gone in frequency according to man's conditions of life, food supply places of residence, and other changes of environment Primitive man was an animist, seeing in all the forces of nature around him spirits which were often malevolent, and therefore attributing sickness and even accidents to hostile magic Ideas as to the essential cause of disease could be divided into four groups, each of which had recurred in cycles as man progressed in knowledge two or more having often been combined at one epoch or having engaged rival schools of thought in dispute In the first, disease was attributed to supernatural, religious, or psychic causes this was the earliest group and was constantly recurring In the second, the fluids of the body were at fault—the theory of the humours, in the third, the solid material of the body was defective, and in the fourth, the body was perfect but external agencies caused disease Complete rationalism had been the characteristic of Greek medicine in 400 B C, when Hippocrates insisted that all diseases must be regarded as due to material causes The Greek philosophers explained diseases as being want of balance between the humours or four fluids of the body Among the Roman poets of the Augustan age there was a belief that infection and fevers were due to minute living things, an idea which was revived by Jerome Fracastor and others at the time of the Renaissance, while Sydenham suggested in the seventeenth century that fevers were caused by minute particles in the air which insinuated themselves into the body and tainted the whole frame Although bacteria had been seen and figured by Leeuwenhoek in 1683, their connexion with disease was not generally admitted until the work of Semmelweis, Pasteur, Koch, and Lister after the middle of the nineteenth century The effect of psychic influences in treatment had been recognized by the ancient Greeks in their health temples, and in the Dark Ages, when physical means of healing were at a discount, faith healing had been practised with success by the Church Suggestion and faith were the basis of a great deal of the successful treatment by modern practitioners, and an exaggerated development of this principle had been the foundation of Christian Science about 1860 by Phineas Quimby and Mrs Eddy Recent phases, such as hypnotism, Coueism, and psycho analysis had been merely excrescences upon this great general principle The interest in physical and biological science that followed the Renaissance, of which Harvey's work had been the most outstanding example, formed the basis of the iatro mechanical school of medical thought to which the iatro chemical school under Sylvius, de Graaf, Spallanzani and others had been a kind of reaction From the iatro mechanical school had developed the anatomical conception of disease, largely founded by Morgagni, and expanded by the work on physical signs of Laennec and his successors A further development of the solidistic theory, following upon the improvement of the microscope early in the nineteenth century, had been the cell theory of Virchow, and all its implications In the twentieth century, serology and endocrinology had been, in a sense, a return to the theory of the ancient Greeks regarding the body fluids The outstanding aspect of twentieth century medicine was the view of disease not so much in relation to the individual as in regard to the whole community measures to provide wholesome food, to improve dwellings, to secure favourable conditions of work, to remove material that bred disease, to separate the sick from the healthy, and to adapt members of society to the positions they could best occupy had already brought about a greater general stamina and led to the diminution of many diseases and to the production of a greatly increased measure of efficiency among the general population

Conference of Health Visitors

The fourteenth annual conference of the Scottish National Health Visitors' Association was held on May 14th at Dunfermline, Lady Leslie Mackenzie presiding, Provost Gorrie extended an official welcome to the meeting Dr John Currie, professor of public health in the University of Glasgow, said that the ruling idea in the work of health visiting was to prevent disease The Notification of Births Act (1919) had organized maternity and child welfare work, and had set health visiting on its feet Referring to the question of diet, he said that a working

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class family had to be very careful because by economy in the bill of fare articles of food which contained the essentials of child nutrition might easily be omitted Professor Currie stressed particularly the value of skimmed milk and tomatoes Infantile mortality was continuing to fall due especially to the decrease in digestive types of disease but the mortality rate in maternity presented a darker picture and the position was more complex than many critics supposed The expectant mother was much less willing to come to clinics for advice than the nursing mother and health visitors might do much to create favourable opinion in this matter Miss Helen Drummond principal of Dunfermline College of Hygiene urged the importance of physical exercise as a necessary part of good physical and mental development for children The exercises in schools were a substitute for ordinary play but the latter was preferable if children had sufficient freedom The National Playing Fields Association was doing a great work in securing playing fields in and about large towns but this provided little scope for the smaller boys or for the girls She therefore advocated the training of voluntary play leaders for children of 5 to 14 and the opening of school playgrounds after school hours for this purpose Dr C Barclay Reekie M O H for Dunfermline said that the most valuable preventive work of the health visitor concerned nutrition He believed that there had been too much attention focused on housing in relation to health with a tendency to overlook the importance of nutrition In Dunfermline the infant mortality twenty five years ago was 120 per 1 000 and now it had been reduced to 49

Home Relief of Incurables

Professor D P D Wilkie of Edinburgh speaking at the annual meeting of the Royal Society for Home Relief of Incurables on May 6th said that in spite of advances in medicine and surgery there were still diseases which baffled all efforts at cure in some of which however much could be done to prolong life and to make it more enjoyable The society in his experience had been of inestimable help towards this end There was a tendency at the present time to provide institutional treatment for all sickness and disability but the gain from such a process might be lost in the subtler and finer plane of morals and sentiment The society made possible the perpetuation of the homely art of medicine and he strongly urged its claims for support Although he was an enlightened admirer of the skilled nursing in great institutions he admired still more the nursing which was characterized by understanding sympathy devoted care and filial affection and he considered that this society was a great national asset The report showed that the society had distributed £5 322 among 478 beneficiaries during the past year The total revenue had been £6 900 and the expenditure £6 178 In connexion with the Dunlop Cancer Fund which is administered by the society a sum of £1 868 was distributed

Royal Northern Infirmary

The report presented to the annual meeting of the Royal Northern Infirmary at Inverness on May 17th when Sir Alexander MacEwen presided showed that 2 323 patients had been admitted to the infirmary during the past year and there had been 2 198 out patients and 1 813 operations The ordinary income for the year had been £13 857 an increase of £2 290 on that of the previous year while ordinary expenditure had amounted to £18 351 It was mentioned as a satisfactory feature that the excess of expenditure over income had been £1 100 less than in 1931

Ireland

Ulster Hospital for Children and Women

At a recent meeting of the Ulster Hospital for Children and Women the honorary treasurer announced that two friends of the hospital had offered to contribute the last £100 of each £1 000 collected up to a total of £5 000 Mr R A Mitchell who presided at the meeting said the present building was twenty-one years old having been completed in May 1912 In 1914 in patients numbered 478 visits by or to patients 14 430 and operations 433 In 1922 intern admissions numbered 705 visits by or to patients 17 554 and operations 1 011 while in 1931 the figures were 1 226 32 144 and 1 906 respectively This showed the great need for an extension of the premises In response to an appeal in 1929 the hospital received about £13 000 On investigating the cost of an extension it was found that £25 000 or more would be required Even with the aid of a Government grant it was not considered advisable to spend so much because of the large annual expense that would be entailed by the women's ward As a minimum it was decided to add a new wing to include a women's extern department a laundry more accommodation for nurses and new x ray apparatus and accommodation to make various improvements such as the introduction of oil fuel for the heating apparatus and steam for sterilization and laundry plant and to make new arrangements in the kitchens and in the administrative portion of the original building to permit better accommodation for the house surgeons and office work The instalment of the laundry and the giving up of the nurses house in Templemore Avenue would mean a great saving of money Arrangements were also being made whereby the women's ward could be extended without difficulty and at little expense when required In 1932 the money on hand (about £13 000)) and the expected grant from the Government were just sufficient to pay for the building and alterations to the main hospital at present proceeding The hospital owed for the oil fuel firing for the sterilization laundry and new cooking plants for electric light fittings and for painting etc In all probability this would require about £5 000 The meeting appointed a committee to raise this amount

School Medical Services in County Cork

Dr R Condy Cork County medical officer of health in his annual report on the school medical services of the county states that the work of school medical inspection during the year 1932 was handicapped by reason of a deficiency in the usual complement of staff One of the posts of assistant medical officer had been vacant since February 1932 and for the greater part of this year the staff of health visitors had been deficient to the extent of two nurses This had necessarily diminished the number of inspections and the general amount of work accomplished since the full complement of staff was in itself barely sufficient satisfactorily to provide for school medical inspection throughout the county The records for 1932 although showing a reduction as far as numbers were concerned were yet indicative of the activity shown by all members of the staff Dealing with the co-operation of parents Dr Condy states that in some districts nearly 100 per cent. of the parents showed sufficient interest to be present during the examination It was regretted however that in certain areas the inspections aroused little or no interest in the parents even in districts where attendance could have been undertaken conveniently Some parents held the opinion that there was no need for their children to be examined unless illness or ill health

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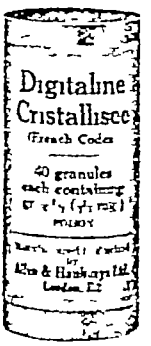

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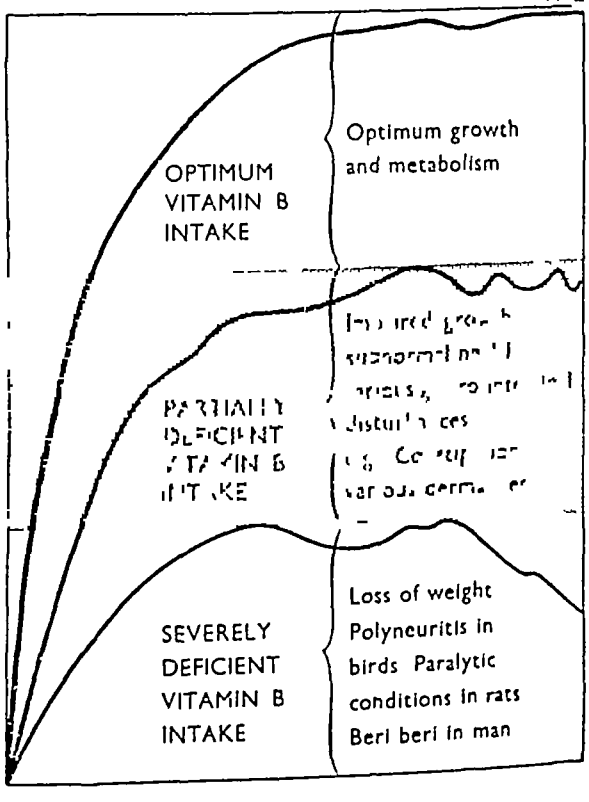

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manifested itself, when they would take the child to their private doctor Such views were entirely opposed to the principles on which the scheme of school medical inspection was instituted The percentage number of parents who attended at the examinations during 1932 was 34 2, as against 30 2 in 1931 The parents of 113 children—namely, 1 3 per cent , as compared with 1 2 per cent in 1931—objected to the examination

England and Wales

Work of Queen's Nurses

At the annual meeting of the Queen s Institute of District Nursing, to be held on June 1st, a report will be submitted showing the work that has been done by Queen s nurses in England and Wales on behalf of public health authorities It used to be thought that acute illness could not be successfully nursed at home, and that without the facilities provided in hospitals for the use of the nursing staff the patients must necessarily suffer The statistics compiled by the Queen s Institute of the home nursing of various notifiable diseases prove this to be incorrect The work undertaken by Queen s nurses is very varied, and the scope is an ever-enlarging one as the value of home nursing among the poor and middle classes is more and more realized In 1932, 13,470 cases of pneumonia were nursed of these, 1,229 were living in London 7,475 were in other cities and urban districts, while the remaining 4 272 were in rural and scattered areas In London 66 4 per cent of these patients became convalescent, 16 1 per cent were sent to hospital, and 11 6 per cent died , in the urban areas 65 5 per cent became convalescent, 11 per cent were sent to hospital, and 16 9 per cent died In the rural areas 69 3 per cent became convalescent, 7 1 per cent were sent to hospital, and 17 6 per cent died In some cases the patient was provided for in some other way after a few visits had been paid, but before convalescence—such as by a resident private nurse or by the care of friends Queen s nurses attended 3,307 cases of measles, 639 of which were complicated by pneumonia The death rate for this disease was 8 3 per cent in London, 10 8 per cent in urban areas, and 7 9 per cent in rural areas, while the proportion of convalescents at home was 79 6 per cent Cases of puerperal fever and puerperal pyrexia numbered 465, resulting in convalescence at home of 74 3 per cent , while 23 6 per cent were sent to hospital and 1 5 per cent died The nurses have attended also 776 cases of ophthalmia neonatorum, 349 of chicken pox, 695 of whooping-cough, 446 of infantile diarrhoea, and 145 of pemphigus neonatorum The number of visits paid to all these patients was 43 014 This work is in addition to the midwifery undertaken by 949 Queen's nurses and 2,814 village nurses working in connexion with the Institute, who attended 67,496 cases, with a maternal mortality of 2 1 per 1,000

"Canti's Film"

At an evening reception held in the house of the Royal Society of Medicine on May 17th, Dr R G Canti gave a cinematograph demonstration of the cultivation of living tissue cells A short description of this may be of interest to those who have not yet had an opportunity of seeing what is popularly known as " Canti's film " In his introductory remarks Dr Canti said that the idea of cinema photography of living cells had been suggested by the late Dr Strangeways, when he was investigating the effects of radium on the isolated normal and cancer cells The present film had been made possible by facilities afforded by workers at the Strangeways Laboratory under the directorship of Dr Honor Fell Ordinary cinematograph pictures, continued the speaker, were taken at the rate of sixteen pictures a second, and projected on the screen at the same speed, the temporal relation of events shown on the film being the same as the actual events themselves The photographs of living tissue cells were taken at less frequent intervals—every 3, 10, 30, and 60 seconds —and were projected on the screen at the standard rate of sixteen pictures a second Thus a speeding up of 50, 160, 480, and 960 times respectively was obtained and three weeks actual photography was represented by half an hour on the screen This makes it easy to follow changes in the cell which take a long time to occur The first film was of a fragment of chick periosteum in tissue culture, the radial spread of the fibroblasts and the excursions of the wandering cells being seen Higher magnification revealed the details of cell structure, with nucleus, nucleolus, and fat globules, and the appearance of the chromosomes in the various stages of mitosis The ' bubbling " activities of the daughter cells at the moment of separation were most dramatic to watch A photograph of cell structure under dark ground illumination showed vividly the appearance and the movement of the mitochondria some of which were observed to divide The avidity with which the phagocytes attacked the mesenchyme cells made the onlooker feel they were satisfying a private need rather than performing a physiological process Another reel demonstrated the division of a fertilized rabbit ovum from a single cell up to the morula stage, and the growth of the young chick embryo In the latter the development of the primitive streak the formation of the head fold and of the neural folds the mesodermal segments, and the pulsation of the embryonic tubular heart were all clearly depicted The growth of a whole organ in tissue culture was illustrated by the development of a femur from its rudimentary elements in a five and a half-day chick embryo The last picture was of the cells of Jensen s rat sarcoma, which could be seen multiplying, becoming degenerate, and then being attacked by phagocytes The action of all cell movement After Dr Canti s demonstration the guests returned to the library for a buffet supper and music

CORRESPONDENCE

Genesis of Gall-stones

SIR —Mr Patey's review of recent literature on " the mechanism of gall-stone formation " in your issue of May 20th is of course, too brief to be complete May I call attention to certain omissions which are, in my view, of great importance?

In dealing with the relevance of infections of the gall bladder to the genesis of gall-stones it is essential to bear in mind that an examination of the gall bladder after removal shows that microbic attacks generally reach the gall-bladder from without and not from within In a series of cases published by me (*British Medical Journal*, 1928, 1, 1) I pointed out that of eighty one consecutive cases it was clearly demonstrable that infection began in the outer coats in sixty-three In the remaining eighteen it was possible that infection had occasionally begun in the outer coats, though at a later stage it had fallen most severely upon the mucosa

Mr Patey quotes Gardner and Gainsborough as showing that hypercholesterolaemia is " not a constant occurrence in pregnancy ' No reference is made to the work of Dr Cecilia Shiskin, conducted at my request, and published in the paper to which I have referred In that paper I showed charts indicating the rise in cholesterol content of the blood during menstruation and during pregnancy I hope Dr Shiskin will give further details of her work,

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(Lancet 1931 2, 141)

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conducted at the Maternity Hospital which shows that if not constant hypercholesterolaemia is at least very frequent in pregnancy and that excess of cholesterol mounts steadily as pregnancy advances

Mr Patey says attempts to correlate the amount of cholesterol in the blood with gall stones have failed Investigation conducted upon my cases by Dr Fowweather and Dr Shiskin show that this statement is not strictly accurate In the same article I have shown that about 60 per cent of my cases of cholelithiasis showed a cholesterol value of over 0 192 per cent May I quote a paragraph

The question of the cholesterol content of the blood is one for close examination in all suspected cases of cholelithiasis With the skilful help of Dr Cecilia Shiskin 280 patients suffering from various abdominal diseases requiring operation have been examined Of these 101 were cases of cholelithiasis Cholesterol is a member of the important group of substances known as lipoids It is an invariable constituent of all active cells of the body both in its free form and in combination as ester In disease it may occur in abnormal amounts in various organs tissue fluids and calculi It is present in the blood in very variable quantities The normal amount may be stated as 0 160 per cent and in older people as rather more than this For purposes of classification we regard—

Less than 0 133 per cent as indicating hypocholesterolaemia

Between 0 133 and 0 160 per cent as being normal

Between 0 160 and 0 192 per cent as being high normal

Above 0 192 per cent as indicating hypercholesterolaemia

Hypercholesterolaemia is found in cases of arteriosclerosis chronic nephritis diabetes the later months of pregnancy and in cholelithiasis

Of 101 cases of cholelithiasis (proved by operation) 66 4 per cent were females The average cholesterol value was 0 217 per cent 65 per cent of cases showed hypercholesterolaemia 23 per cent had high normal values 11 5 per cent had normal values and two cases only showed hypocholesterolaemia—one patient was a man aged 76 the other suffered from an acute empyema of the gall bladder In both a low value was therefore to be expected

It is interesting to compare these figures with those obtained in cases of gastric and duodenal ulcer Twenty six cases of gastric ulcer were examined the average cholesterol value was 0 167 per cent 27 per cent of the cases showed hypocholesterolaemia 50 per cent gave normal values and 23 per cent showed hypercholesterolaemia Forty-one cases of duodenal ulcer were examined the average value was 0 149 per cent 36 6 per cent of the cases showed hypocholesterolaemia 51 2 per cent gave normal values and 12.2 per cent showed hypercholesterolaemia and in some of these arteriosclerosis was noted

The diagnostic significance of an increased cholesterol content of the blood is therefore important Over 75 per cent of patients in whom hypercholesterolaemia was found were suffering from cholelithiasis

It is true that I was the first to call attention to the condition to which the appropriate name of strawberry gall bladder has been attached But my paper was not a contribution to the pathology of gall stone formation for even twenty four years ago I was beginning to feel that we should concern ourselves with the diagnosis of diseases of the gall bladder apart from or earlier than cholelithiasis And in this connexion I would venture a criticism of the statement Mr Patey makes that there is no doubt that the modern *x* ray test of cholecystography (Graham) has within the last decade revolutionized the clinical recognition of gall stones Revolutionized perhaps in *method* of diagnosis but with little effect upon *accuracy* of diagnosis for it was and is a rare event for cholelithiasis to hide itself from the expert clinician In relation to the diagnosis of diseases of the gall bladder requiring cholecystectomy Graham's method is far less accurate than clinical examination I would roughly estimate that the accuracy of diagnosis in cases of gall-bladder disease is about 25 per cent inferior when Graham's method is contrasted with clinical methods In consequence many gall bladders which are asserted after radiological examination to be healthy or nearly so when examined after removal are proved to be so diseased as to have required extirpation I was recently confirmed in the justice of this opinion by finding that it conforms to that of the Mayo Clinic though there a still higher degree of untrustworthiness in this matter is attributed to radiology

An argument in favour of recurrent events in connexion with changes in the gall bladder or its functions leading to the deposit of stones is supported by their collective examination If say one hundred stones from one gall-bladder are placed on the table it will not be difficult to recognize that there are generations of them A certain number will all be of nearly the same size another generation all of the same size will be smaller than the first a third and perhaps a fourth generation still smaller The conviction is clear that the stones of each generation have been formed at the same time and at a time separated by longer or shorter intervals from that of other generations

Mr Patey makes no reference to the radiological examination of stone-containing gall bladders after their removal as throwing light upon the method of formation of calculi Dr Rowden has done much work for me in this matter A brief reference with illustrations may be found in an article of mine in the *British Medical Journal* (1928 1)

As I offer these remarks in order to complete the story Mr Patey tells I desire to say that I greatly appreciate the interest of his paper—I am etc

London W May 22nd MOYNIHAN

Treatment of Tuberculosis

SIR—A child living in a tuberculous household is in danger—grave danger—and as I asserted in my paper (*Journal* April 29th) should be removed from the source of infection I stated however that the athlete is just as likely as the bookworm to contract the disease and I protest against a system of examining such contact children sending away for a few months the delicate or suspicious ones and allowing the robust children to return to the infected household Apart from contact certain delicate children need special food schooling and attention but in my opinion the expense of this should not come from funds allocated for the prevention and treatment of tuberculosis If the child has tuberculosis of course it requires treatment but if it is only pre-tuberculous in the sense that it is exposed to infection the proper remedy is to remove the source of infection whether or not the child appears to be healthy

If one reads Dr Midgeley Turner's letter (*Journal* May 20th) carefully it does not appear that he differs fundamentally from these views—indeed he admits that exposure to infection often leads to active disease After all what does one mean by contact? Most of us are or have been contact cases and the danger seems to me to be either massive or continued infection One school of thought holds that once infection has taken place reinfection is impossible from which it follows that when once the contact has become infected no harm is done by allowing him to live in an infected household I differ completely from this view Dr Midgeley Turner objects to the term non-clinical tuberculosis but he does not suggest an alternative term The example I gave was the patient who has just recovered from tuberculous pleural effusion and has no signs or symptoms of disease

but who, experience teaches, is likely to develop active tuberculosis within a year or so Whatever theories one may have, it is a fact that such a patient is in infinitely more danger of becoming a consumptive even than the child with some definite tuberculous lesion such as cervical glands What term can one use for this phase of the disease? In what category should one place many a patient returned from a sanatorium as cured? He feels quite fit and has no signs or symptoms, but a relapse is so possible that no life insurance company will consider him on any terms for a few years

With regard to treatment in Switzerland we seem to be in agreement, except that Dr Midgeley Turner rules out every Swiss sanatorium, whilst I, having stated that it is usually best to start treatment at home, and having mentioned some strong objections to treatment in Switzerland, say that the essential factor in a sanatorium is the way it is run, and not its locality Given a first-class superintendent it does not matter much where the institution is situated There are excellent sanatoriums in England and Switzerland and in every country and I should not insist on a patient remaining in this country if he had a definite preference for going abroad and I saw no contraindication in his particular case This brings me to my only real difference of opinion with Dr Midgeley Turner—namely, the matter of temperament Full credit cannot be given to the physician if his patient becomes a confirmed neurasthenic, however firmly the tuberculous lesion may be healed Many of these cases are the result of faulty management in the early stages of treatment, and as far as is consistent with thorough treatment I believe it right to pander to the wishes of the patient and to consider each one individually —I am etc ,

London W May 22nd L S T BURRELL

Treatment of Breast Cancer with Radon

SIR,—On reading the article by Mr Souttar in the *Journal* of May 13th (p 813) I was struck by several points which to me require some explanation

(1) What is the screening of the seeds used? (2) What is the effect of leaving seeds *in situ* when at a later date further irradiation either surface or interstitial, is used? Such a procedure in my experience is likely, if extensive irradiation is given to cause a radium burn In the inoperable, hopeless cases, however, I agree that the implantation of seeds ' as described is the method of choice as it is unusual to give more than one treatment (3) Were the growths in this series both scirrhous and encephaloid in type? In my experience generalization is more likely to occur in the encephaloid type following radium implants and although this may happen in the scirrhous type it is not so common

The only comments I can make are unfortunately not backed up by any statistical data In early carcinomata of the breast as described by Mr Souttar, amputation is the method *par excellence*, followed by radiation in the form of radium or deep x rays In the advanced type (Mr Souttar s second group) some form of combined irradiation as used at the Radium Institute seems to me to be satisfactory Needles of low linear intensity are used with a screenage of at least 0 6 mm platinum The breast and axilla are irradiated as homogeneously as possible by inserting the needles 1 5 cm apart and they are allowed to remain in position for from 7 to 10 days This is followed in three months time by the application of a surface plaque moulded to the breast and the associated lymphatic areas at a skin distance of 2 cm using 1 5 to 2 mg per square centimetre for a period of 120 to 160 hours Results following this treatment are fairly satisfactory In the hopelessly inoperable cases I agree with Mr Souttar that radon seeds are preferable to any other form of treatment The results are most gratifying in so far as huge fungating areas clear up and heal The patient is made much more comfortable, but it is doubtful whether life is prolonged —I am etc

Hampstead N W 6 May 14th J K HARPER

"Nerve Energy"

SIR,—The correspondence in the *Journal* on this subject, up to the date of April 8th draws attention to the essentially differing ideas concerning "nerve energy which clinicians and physiologists, respectively, have developed I should like to point out that, according to my own observations, the physiologists are here at fault, and that the source of their fault has been a too great reliance on the muscle nerve preparation

To obtain and work with that preparation we do the equivalent of first destroying post offices, and then examining transmission along telegraph wires The result has been a vast accumulation of knowledge concerning this transmission, combined with a relative ignorance concerning post offices We have, of course, with the microscope observed the bodies of the post office staff as well as, possibly, the remains of their batteries, but when it came to speculating about those clerks and their batteries the speculations have been biased by the experiments with the wires As a result physiologists have done the equivalent of imagining that every clerk in the post office is normally in a state of sound slumber until he is awakened by a customer desirous of sending a telegram Such is in effect, the picture which physiology has so far drawn of our post offices In contrast with this my own observations reveal post offices with wide-awake clerks in the shape of rhythmically active central neurones—obviously sources of nervous energy The properties of retinal end organs and the properties of reflex arcs are, in fact the properties of rhythmical structures

Physiologists are however, as human as theologians, and so as equally capable of framing hypotheses which bring new facts into line with accepted doctrine The accepted doctrines of physiologists have been that retinal end organs and central neurones are structures which remain inactive until roused to activity by an external agent—the stimulus None of these structures however was found on examination to behave like the members of the quiescent muscle nerve preparation, their behaviour was instead that of a structure ever in rhythmical activity But if anyone starts out firm in the faith that the structure on which he experiments is quiescent until roused to activity by his stimulus, and then finds behaviour which does not accord with this faith, it is well known to psychologists that the firmness of the faith will tend to prevent it from being discarded The more likely course to be followed would be that of framing an adjustive theory

Physiologists in general have pursued the more likely course The physiology of retinal stimulation, for example, is a mass of hypotheses which adjust the observed facts to the original presupposition that retinal end organs are in the same state as the nerve of the excised muscle nerve preparation The observed facts actually show that these end-organs have rhythm a possibility that remains undreamt of so long as it is firmly presupposed that they *must* be quiescent Similarly, the synapse theory adjusts the facts to a firm presupposing that central neurones *must* be quiescent until excited I have therefore to suggest that the time is ripe for physiologists to re-examine critically the fundamentals of their faith in the muscle-nerve preparation When that is done I have no doubt that there will be due appreciation of the point that the physiology of the nervous system has been floundering for several generations in a sort of morass,

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and that the clinicians have forged ahead Nerve energy may well be a conception that cannot be reached from experiments on isolated nerve But instead of deducing from such experiments that there is no such entity as nervous energy it could well be more profitable to consider the probability perhaps rather the certainty that central neurones are not in the same state as excised nerve—I am etc

W BURRIDGE

May 6th Professor of Physiology Lucknow

Raw and Pasteurized Milk

SIR—Mr Evelyn Sprawson in a letter in your issue of May 13th states that the authors of Bulletin No 5 issued by this institute (which deals with the nutritive properties of milk in relation to pasteurization) have given an inaccurate summary of the results recorded in his paper on the influence of raw milk on dental caries Mr Sprawson cites two instances (1) that the authors refer to the use of high grade raw milk whereas the majority of the children under his charge were fed on ungraded milk and (2) that the authors state that no comparable data were given of the effects of raw and pasteurized milk on teeth whereas in Mr Sprawson's opinion such data are available in his tables

The first objection is in fact of no significance in the interpretation of Mr Sprawson's results There is no difference in the legal standards governing the composition and therefore the nutritive value of graded and non graded milks in England Both are subject to the presumptive standard of 3 per cent butter fat and 8·5 per cent solids not fat The only difference is in the higher bacterial purity of the former type of milk as shown by freedom from tuberculous infection and a low bacterial count However since Mr Sprawson stated that the raw milk used in his investigation was frequently tested for the presence of tubercle bacilli and since he not only recorded that milk from tuberculin tested cows was used in at least one group (Group III) but recommended in his conclusions that only such milk as Certified or Grade A (T T) should be used the term high grade used by the authors of the Bulletin appears justifiable

The second objection is however of considerable importance since it is possible that Mr Sprawson's claim (that is that pasteurized milk is ineffective in preventing dental caries while raw milk confers immunity) might be urged as evidence of the lowered nutritive value of the treated milk It is therefore desirable to state clearly the facts which justify the authors of the Bulletin in affirming that the question must at present be regarded as open

1 Mr Sprawson compares the teeth of children in Tables I and II who receive *12 oz* of pasteurized milk (with or without cod liver oil) with those of children in Table VI who according to his statement on page 1 receive *20 oz* of raw milk—that is children in his raw milk group are receiving practically twice as much milk as those in his pasteurized milk groups This entirely invalidates the experiment as a comparison of the two types of milk

2 The numbers of children in his pasteurized milk groups (Tables I and II) are 15 and 8 respectively while the number in the raw milk group (Table VI) is 44 Even if both sets of children had received equal quantities of milk the numbers in the former groups would be entirely inadequate for comparison with the latter The authors of the Bulletin showed in fact that the omission of only *one* child from Table II reversed the conclusions which might be drawn from a comparison of Tables I and II thereby demonstrating the inconclusiveness of results based on inadequate numbers of children

3 Mr Sprawson compares the teeth of 40 children (Table III) known to have commenced raw milk feeding before 12 months old and of 33 children (Table IV) who commenced raw milk feeding between 1 and 2½ years of age with those of the rest of the United Kingdom most of whom he states are presumably brought up on pasteurized or sterilized milk Such a general comparison is invalid Mr Sprawson has no knowledge of the numbers of children in the United Kingdom who receive pasteurized or sterilized milk It is in fact quite certain that a very large number—particularly in country districts and in small towns—receive raw milk and that in many instances the milk is not boiled in the home before use Incidentally in support of his generalization he quotes figures given by the School Medical Officer for Salop County Council in a report dated 1914 when pasteurization was neither so efficiently conducted nor so widely adopted as at present Moreover while Mr Sprawson refers (p 5) to the influence of refined carbohydrate intake on dental caries he fails to mention other factors such as the care and cleanliness of the teeth and irregularity in the spacing of the teeth which may also affect the incidence of caries As a matter of fact in only three cases does Mr Sprawson record the original incidence of caries so that there is no indication in his paper that the groups are similar with regard to such factors The possible existence of such predisposing factors illustrates the need for the most careful selection of control groups on which comparisons may be based—a precaution which does not seem to have been taken by Mr Sprawson

4 It appears therefore that Mr Sprawson is quite unjustified in regarding his data as evidence that raw milk will confer immunity to dental caries while pasteurized milk will not No comparison of the two types of milk is in fact possible from an examination of his tables since there is not only no evidence that the nature of the milk supply was the only variable between the groups but there is evidence that even the quantity of milk fed (and from a sentence on page 2 apparently the regularity of milk feeding of children in Tables I II and VI) varied in the different groups Mr Sprawson himself writes The facts recorded concern the effects of raw milk *I am not aware of any comparable body of children who have been similarly brought up or sterilized or pasteurized milk* and so have no *exact knowledge* whether effects comparable with those recorded might be brought about by such means but such evidence as is available and inference indicate rather that they would not be Since as stated in the preface the authors of the Bulletin limited themselves strictly to reviewing *evidence*—rather than summarizing *opinions*—and since it is apparent from the above facts that the available evidence does not satisfy the requirements of a scientific comparison the position taken up by the authors is entirely justifiable

Mr Sprawson suggests in his letter that the authors of Bulletin No 5 were not by training competent to appreciate the significance of his findings Yet in his own publications he preserves a far more cautious attitude with regard to his own tentative hypothesis The observations herein recorded he writes (p 1) *seem to show that* raw milk confers some immunity to dental caries Or again in a later publication[1] *if* this raw milk hypothesis is a true one Moreover Mr Sprawson quotes Middleburgh as giving a correct interpretation of the results of the investigation Yet if reference is made to the last page of Middleburgh's paper the following statement will be found even should Sprawson's conclusions *ultimately prove incorrect or inaccurate* we have done an immense amount of good in recommending [the daily consumption of one pint of Certified or Grade A (T T) milk] These statements are far more guarded than those of the authors of the Bulletin who state definitely that the merit of including raw milk in the diet of young children for the prevention or arrest of dental caries *has been demonstrated* but the contention that pasteurized milk is not an efficient agent has been shown to be *unproven*

It is most unfortunate that in attempting to apply his results to the controversy over raw and pasteurized milk Mr Sprawson should have relegated to the background the real significance of his work Thus in comparing the

[1] *Scottish Journal of Agriculture* 1933 xvi 27

incidence of dental caries in his selected groups of children with the general incidence of this condition among children in Great Britain, he appears to have neglected the one outstanding feature—namely, that whereas the average child in Great Britain receives an entirely inadequate supply of milk children in his selected groups received comparatively large quantities of milk He states (p 5) for instance that many of his children not only received liberal quantities of liquid milk but were given milk puddings (presumably heat-treated) on five or more days of the week

If his results are interpreted with these facts in mind it is fair to say that Mr Sprawson has rendered a signal service not only to the population at large, but also to the dairy industry by demonstrating the urgent need for increasing the *per capita* consumption of milk In this conclusion he would find himself at one with the authors of the Bulletin who maintain (p 68) that "it can confidently be stated that the value and convenience of milk as a food are powerful arguments for a very great extension of its consumption by children varying from 2 to 10 years —We are, etc ,

JANET H BLACKWOOD
NORMAN C WRIGHT

Hannah Dairy Research Institute
Kirkhill Ayr May 19th

Persistent Occipito-posterior Cases

SIR —Dr Somerville s letter (*Journal* May 13th p 846) is of special interest to general practitioners if only to show how fashions change Berkeley and Bonney (*Difficulties and Emergencies of Obstetric Practice* second edition) state 'There are four methods of dealing with this complication to flex the head to rotate the head , to pull on the head , to perforate the head With reference to rotating the head they state We prefer to use the hands forceps even if they were as efficient, have many disadvantages Further, unless straight forceps are used—that is to say a pattern which is *almost obsolete* [the italics are mine] and not likely to be found in any practitioner s bag—they would have to be taken off and reapplied This book has been my vade mecum since 1920 It appears to me, however, that, as in any other difficulty the personal factor is important a man with a pugilist s fist would find it easier to use Kielland s forceps in making the necessary rotation Others with strong, flexible, and thin fingers are probably more manually dextrous in this branch of work

A final important point if Dr Somerville s practice is correct why have two kinds of forceps? Why has the obstetrical specialist (the G P s critic) been teaching the ordinary forceps for delivery when, apparently the modern ones are obviously the 'obsolete" ones?—I am etc ,

Swansea May 22nd L W HEFFERMAN, M R C S

Rupture of Lung without External Signs of Trauma

SIR —The following case may be of interest to police surgeons and others who may be called upon to certify the cause of sudden death

A motor lorry reversing in a narrow street went too far backwards and inadvertently jammed a boy 13 years of age against the wall The boy collapsed and died immediately No marks of violence were to be seen externally

On post mortem examination when the chest cavity was opened the right lung was found completely collapsed and the left lung partially so Further examination showed three tears in the right lung (1) a tear at the root of the lung measuring 5 in by 3/4 in deep (2) a tear 3 in long on the anterior surface of the lung (3) a tear 2 in long at the base of the lung The right side of the chest cavity contained 12 oz of blood No fracture was found in any of the ribs The sternum was intact

The case illustrates the great elasticity of the chest wall In this case the anterior and posterior surfaces must have been approximated with sufficient force to nip the lung, yet fracture of the ribs did not take place —I am, etc ,

Forensic Medicine Department University of Glasgow May 12th F W MARTIN

First Operations

SIR —I cannot but agree with Mr Norman C Lake that the phrase "a new operation" which appears in the summary at the end of my article in the *Journal* of May 6th (p 778) is an unhappy choice of words, and certainly an irresistible target to be shot at But I do not regret the expression, for it has brought from Mr Lake himself speedy evidence in support of the operation I was advocating and, despite the article to which I am referred, I am convinced that the notion is new in the sense that it is novel to the majority of surgeons whilst the question of originality scarcely arises since the procedure is so simple and so obvious that it must have occurred to others, frequently In this connexion may I say that I should welcome the publication of further cases If consistently good results can be obtained by so easy a means in a condition so difficult and dangerous to deal with in any other way—and on this point Mr Lake and I are in entire agreement—it should surely become established as a standard therapeutic measure

In apologizing as I do to Mr Lake (and the authors of any other pertinent work) for omitting any allusion to his paper, I would say that his reference to the matter in question occupies but one short paragraph in an exceptionally long article, and is couched in the most general terms —I am etc

Liverpool May 15th C ALEX WELLS, F R C S

Libel and Slander in Medical Practice

SIR —Your learned correspondent, in his article dealing with libel, quotes the decision in Dockrell *v* Dougal I humbly beg to point out that the author is not quite accurate The jury found it was not libel in this case and the court agreed with the finding The author would be correct in saying that the unauthorized employment of a medical practitioner s name in connexion with a quack medicine may constitute a libel —I am, etc

London W 1 May 11th M W BROWDY

*** Our correspondent writes I am much indebted to Dr Browdy for pointing out my error concerning Dockrell *v* Dougal The advertisement contained the words "Dr Morgan Dockrell physician to St John s Hospital, London, and many of the leading physicians are prescribing Sallyco as an habitual drink Dr Dockrell says Nothing has done his gout so much good" The jury found that these words did not constitute a libel, but Dr Dockrell appealed, asking for an injunction to restrain the repetition of the advertisement on the ground that, as the Lords of Appeal put it they infringed his right to preserve his name from unauthorized use The court unanimously agreed that no man has any property in his own name and that no man can prevent its unauthorized use, provided that the use does not constitute an actionable libel Lord Justice Romer said that if the advertisement had been so phrased as to induce the public to believe that Dr Dockrell had assented to the use of his name and damage had thereby been caused to him in his profession his action might have succeeded Lord Justice Williams, while he

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agreed added the caution that he did not mean to say that a man might safely advertise his quack medicine as being certified to be efficacious by a professional man without his authority Dr Gatley (2nd edition 1929 p 36) says It is libellous to use the name of a medical man without his consent in the advertisement of a quack medicine in such a way as to induce the public to believe that it is prescribed or certified by him as efficacious This statement however seems in the light of this case to need qualifying by the condition that the advertisement must cause the doctor damage

Camp Communities

SIR —The organization known as Crith Gyrd Camps (Crith peace and Gyrd militia) has come into existence in response to the present situation A chain of permanent camp communities is being formed in which young men of all classes can live a worthwhile life even though precluded from earning a living It is more than an unemployment scheme for it aims at filling needs —which would be urgent even if there were no unemployment—(1) for the regaining by our young men of that personal experience of primitive adventure which was lost in the migration from country to town (2) for the constructive use of readiness to face danger and difficulty in the service of their country and (3) for education in the purposeful use of the leisure which humanity has secured by the elaboration of machines As Sir Alfred Ewing said in his presidential address to the British Association The command of Nature has been put into man's hands before he knows how to command himself

The first camp is at Godshill near Fordingbridge on the north western edge of the New Forest When equipped and fully established the camps will approximately maintain themselves The money paid by those who participate—£1 weekly by non insured persons and the State unemployment or other benefit by the men entitled to them —will supply the greater part of their needs the work of the men themselves will provide the balance Those working within the scheme while living a full and healthy life will find time to provide an increasing proportion of each other's needs They will avoid competition by sale of goods or services with the industrial community the contributions required from it for their upkeep will diminish as their powers of self help increase Their life whilst unemployed though not rich in comfort will be full of interest affording an honourable and adventurous alternative to industrial life The men who come to the camps are drawn by the prospect of adventure and of national service they form a community closely resembling that of a university where young men of varied experience and outlook compare views and work together Those who come from public schools and universities will be able to contribute the full cost of their maintenance On each of the others there is a weekly deficit and help is required to meet this as well as for the equipment of new camps and for the expenses of management The address for contributions or inquiries is Crith Gyrd Camps Toynbee Hall London E 1

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May 13th

Obituary

R W INNES SMITH M D

Sheffield

We regret to announce the death at his home in Sheffield of Dr R W Innes Smith Born in 1872 in Edinburgh he was educated at Daniel Stewart's College and the university graduating M B C M in 1894 and proceeding M D in 1902 In 1897 he was for a short time a student at King's College London and afterwards became house surgeon at Ancoats Hospital Manchester He settled in Sheffield in 1900 and retired only recently from practice A keen antiquarian and traveller he published in 1932 a record of the English speaking students who had studied at Leyden University He was also the author of several medical memoirs including that of Dr James Mounsey and in 1927 acted as vice president of the History of Medicine Section of the British Medical Association

Professor ARTHUR HALL writes

Innes Smith was in many ways a very exceptional man His interests were wide his enthusiasm was intense and his energy was boundless Whatever he set about to do was done thoroughly and with success Soon after settling in Sheffield thirty three years ago his influence for good began to be felt in many ways Amidst the heavy duties of a very large practice in the industrial quarter of the city he found time to devote to his pioneer organization of local public ambulance work It was indeed at his suggestion that one of the larger steel works was eventually persuaded to set up its own ambulance station and first aid surgery to deal with accidents among its workmen His ripe experience and judgement in everything connected with ambulance work led to his being appointed medical referee for all compensation cases by one of the large firms of the district He was a true and loyal son of Edinburgh Alma Mater for him had always a deep and lively meaning and to this he gave practical expression twenty seven years ago by bringing together his fellow graduates practising in this district to found the Sheffield Edinburgh University Graduates Club an organization which still flourishes and has done much not only for its members but also in promoting closer relations between the staffs of Edinburgh and Sheffield Universities

Perhaps the most surprising side of Innes Smith's personality was his interest in the history of medicine This was his lifelong hobby and to it he devoted all his spare hours In the course of time he had gradually amassed a large number of engravings of medical portraits which made a unique collection About the life history of each subject he knew every available detail and his knowledge of the physiognomy of most of the medical leaders whose portraits have come down to us was quite exceptional This was once tested when he was shown round the portraits in the Royal College of Physicians of London He recognized each at once At another time at the Wellcome Museum he found that they had a portrait erroneously labelled as Dr Mead which he said was really that of John Belchier—as it proved to be An engraving of Sir Charles Scarburgh which he presented to the Royal College of Physicians of London a few years ago was identified by him at a second hand dealer's on one of his holiday trips It had been labelled Charles Scarburgh Navigator Most of his holidays for many years were spent in visits to the various European centres which are or have been the seats of famous schools of medicine From time to time he published various articles relating to medical worthies of the past

He also did valuable work to help his less successful brethren As a life governor of Epsom College he acted for many years as the local secretary for Sheffield

and district, and during his tenure he had collected over £1,200 for the charity, a larger amount than has been collected by any other secretary in the provinces Nor must it be forgotten that this money was collected in spite of the fact that the greater part of his area is in the West Riding, which has its own medical charitable society, of which Innes Smith was the president only a year ago Indeed, this was one of the last occasions on which he appeared in public before the onset of his long and painful illness Kind-hearted, generous and sympathetic, his loss will be felt by a wide circle of patients and friends

WILSON TYSON, M A , M D CANTAB , I R C S LD

We regret to announce the death, on May 9th, of Dr Wilson Tyson, after an illness lasting some months From Newcastle Grammar School he went to Caius College, Cambridge, and thence to Guy's Hospital, where he qualified in 1895, and thereafter held the posts of house-physician and resident medical officer to the private wards He took a prominent part in the athletic life of the hospital and captained the Guy's Hospital Rugby team In 1898 he began general practice in Lowestoft, where for many years he carried on a successful and responsible practice His interests, however, were in surgery, and for more than twenty-five years he was surgeon to the Lowestoft and North Suffolk Hospital He was a very good all round doctor, and became known throughout the district as a sound diagnostician During the war he served in the R A M C (T), at the 1st Eastern General Hospital, Cambridge, and subsequently in France , he was demobilized with the rank of major in 1919 For twenty-five years he was honorary secretary to the North Suffolk Division of the British Medical Association, and in 1922 was president of the Suffolk Branch In 1928 he retired from Lowestoft, and later took a country practice in Newport, Shropshire, where he was becoming well known at the time of his death

A colleague (H M E) writes

Dr Wilson Tyson s death will be regretted by many grateful patients and by a large circle of professional friends He was still in possession of boundless energy an of enthusiasm for surgery, which was to him not only a profession but a hobby If one dropped in on Tyson in the evening he was always found reading the latest book or journal on surgery in fact, although a general practitioner with a surgical bent his knowledge and practice of surgery was that of a highly skilled specialist A powerfully built man he excelled at games in his younger days He always retained his interest in Rugby football he was also a keen tennis player On leaving Guy's he came to Lowestoft, and succeeded Dr Roberts in practice After a few years he was appointed assistant surgeon to the Lowestoft Hospital, and in due course became full surgeon He soon established a reputation as a sound surgeon with fine manipulative skill When the war came it found him ready to take a responsible post, and he was appointed surgeon to the Eastern General Hospital at Cambridge He served with this unit both at home and in France, and was held in high esteem by his colleagues On returning from active service he became a Fellow of the Royal College of Surgeons of Edinburgh while still carrying on his practice at Lowestoft He soon began to obtain a consulting practice in surgery and was in great request among his colleagues for advice and operations Tyson was an enthusiastic supporter of the Association , he was local secretary for many years, and held office in the Division and Branch In fact in East Anglia for a considerable time the B M A was Tyson He enlisted new members, smoothed over difficulties arranged meetings and dinners, and carried on a large correspondence in a quiet unassuming way that was perhaps not duly recognized by those who benefited by the results His work and influence were a great factor in the professional life of East Anglia, and his death has come as a great blow

THE LATE PROFESSOR J T J MORRISON

A former colleague writes From 1899 to 1932 J T J Morrison was professor of forensic medicine and toxicology in the Birmingham Medical School Many of his later colleagues in the faculty had been his pupils formerly He lectured with a dignified bearing, a good voice and distinct speech From the beginning he applied care and skill and learning to the use of words, so that they might convey the intended meaning unmistakably, impressively and in shapely form His measured clarity of statement made him a valuable expert witness Even more important to students than his instruction was his implied attitude towards medical practice It was as though he felt that all medical work was a special service to humanity none but the practitioners themselves could know how valuable or how well done No enactments nor rewards could call forth good medical work , that could only come from the strict principles, vision, devotion, and high ideals of the doctors themselves They were to be a kind of voluntary nobility, self-dedicated to a worthy purpose, incapable of inferior conduct To no one—students practitioners or laymen—would he allow a lower view of the doctor's vocation Morrison's conduct was parallel with his teaching He was an upright man, of high aim and undeviating rectitude He would speak fearlessly and emphatically for what he considered right His own interests might invite no compromise, nor could the interests of his friends His inflexibility occasionally brought him unpopularity, but even those who thought him most mistaken soon came to respect and to admire his principles, and to recognize no ordinary motive of opposition Morrison set a standard which, long associated with his personality, will long survive his bodily presence —C W

We regret to record the death, on April 24th, at the age of 74, of Dr RICHARD WILLIAM LLOYD of Kensington Born at Gibraltar in 1859 Dr Lloyd received his preliminary education at Bedford Modern School Entering St Bartholomew's he obtained the M R C S Eng in 1880, and the L R C P Ed and L M in 1883 In 1881 he served as house surgeon at the West London Hospital and was subsequently honorary anaesthetist at the hospital for thirty years, and on retiring in 1914 was appointed honorary consulting anaesthetist Among his earlier appointments were a house surgeoncy at St Peter s Hospital for Stone, dental anaesthetist at Guy's Hospital, and anaesthetist at St Mark s Hospital for over thirty eight years He commenced private practice in Kensington in 1883 During the war Dr Lloyd was anaesthetist at the King George and Swedish War Hospitals He was one of the original members of the West London Medico-Chirurgical Society, whose meetings he attended regularly, and was successively president, vice president and member of the council Initiated in Freemasonry in the Cavendish Lodge, he was always an enthusiast in the craft A hobby he developed in later years was the study and acquisition of old pictures, and he was the author of *The Cult of Old Paintings and the Romney Case*, with a foreword by Sir Edward Poynter, P R A Although his health began to fail during the last three years he carried on practice up to within two weeks of entering hospital for an operation on April 18th

The following well-known foreign medical men have recently died Dr ALBERT LEMAIRE professor of internal medicine at Louvain aged 57 , Baron ALBERT DE LA CHAPELLE, an eminent surgeon of Helsingfors, aged 62 , Professor GIOVANNI D'AIUTOLO a prominent oto rhino-laryngologist and pathologist of Bologna, aged 71 , Dr PAOLO ENRIQUES, professor of anatomy at the Faculty of Medicine of Padua , and Dr DESOIL, professor of medical zoology at Lille

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Medico-Legal

NEGLIGENCE OF A SUBORDINATE NURSING HOMES AND CO OPERATIONS THE PAYING PATIENT*

The legal liability of a hospital for injury due to the negligence of its medical and nursing staff has been laid down within broad limits by a succession of judgements of the High Court though as the first part of this article showed there is still room for doubt on the precise limits of the hospital's liability for negligent acts by nurses The leading cases especially Hillyer's case suggest that it is not as a rule liable for negligent acts by its qualified medical staff all that its governors must do is to exercise reasonable care in the selection of competent medical officers It is not liable for negligent acts by nurses at operations nor at electrical treatments nor presumably in the course of any treatment under the direction and control of a medical officer In the performance of purely ministerial or administrative duties whatever that phrase may include the nurse is the agent or servant of the hospital and the management may have to pay damages for her negligence In matters of professional skill although the nurse may perhaps at times be the agent of the medical man directing the treatment it seems that she is not the agent of the hospital Provided that the hospital has taken reasonable care at the beginning to ensure that she is competent to do the duties with which she is charged it is not liable for her negligence in those duties in so far as they are matters of professional skill Where this begins and ends is not defined and would probably be regarded as a question of fact in each individual case to be left for the jury to decide Broadly speaking it seems that a hospital's liability is limited to providing the patient with reasonably adequate food shelter bedding and the other basic necessities of a sick person and to ensuring that he shall have the attention of competent doctors and nurses A hospital is responsible for the summoning of medical aid to a patient in an emergency but when the management through its servants has discharged its purely ministerial and administrative duties it apparently has no further responsibility Lord Dunedin went so far as to say that the managers of a hospital do not go to the public professing themselves to operate on or nurse or treat patients they only profess to provide an institution where patients will meet with skilled persons who will do these things

That is certainly the position of the hospital in regard to non paying patients Nowadays however most patients pay something to the funds of the hospital where they are treated even if the fee is only a few shillings a week and patients who can afford to enter a nursing home pay much larger sums The liability of the hospital as defined by the judgements that have been quoted is its liability for the results of wrongful behaviour not for breach of contract A hospital has no contract with a non paying patient it merely owes him the duty to take a certain degree of care When a patient pays to enter a hospital or home he enters into a contract with the management and this contract may involve the managers in fresh liability apart from the ordinary duties which they owe him to take care Now that municipalities all over the country are assuming the management of hospitals and are admitting paying patients this liability is not one which they can afford to neglect The question of what this contract involves must be answered by the facts of each case but it is fair to assume that the more a hospital receives the more it undertakes to do When a patient in a public hospital pays a small sum only and is not otherwise differentiated from a non paying patient the inference may be that he agrees to contribute to the hospital's fund according to his means and that he does not expect to get more than the destitute patient gets for nothing If then the contract on the part of the hospital is to supply in consideration of the fee paid its ordinary accommodation and facilities for nursing and treatment its liability to the patient for the negligence of its nurses will not be different from its liability to a patient with whom it has made no contract If the fee is to include the privilege of occupying a special ward or a private room or the supply of more desirable food or personal service and the like these benefits are clearly all within the class of purely ministerial or administrative duties for the purpose of providing them the nurses are the servants of the hospital and the hospital is responsible if the nurses neglect to perform them It is doubtful if the hospital in return for the patient's fee ever under takes to do more from the medical point of view than provide skilled doctors and nurses

The legal position of a nursing home must surely be very different There seem to be no judicial decisions or even pronouncements on it but certain inferences can be drawn from the ordinary principles of contract law The hospital managers to use Lord Dunedin's expression do not profess to treat or nurse the patient themselves A brief study of a number of advertisements of nursing homes will show that the proprietors of these institutions obviously go to the public with the profession that they themselves nurse the patient and in many respects with the profession that they themselves treat him The advertisements seek to attract patients by describing not only the comfort and amenities of the home but the especial skill of the nursing staff and the long professional experience of the matron—who is often also a proprietor Many of them advertise the skill and experience of members of their staff who are employed for the special purpose of giving massage baths or electrical treatment Not a few homes especially those which cater for mental patients advertise the skill and experience of the medical staff On their advertisements alone it seems clear—speaking generally—that the managers of nursing homes agree with the patients to nurse them if not to treat them If a home sanatorium or other similar institution undertakes to nurse or treat patients then the nurse or doctor who carries out nursing or treatment is the home's agent and it is responsible for every act of negligence which that nurse or doctor may commit (See the case of Hall *v* Lees below) It is doing more than provide a place where the patient may meet the skilled doctor and the skilled nurse It is selling him nursing and treatment When a patient is being visited by his own doctor the home is naturally not responsible for the actions of that doctor and if one of its nursing staff while assisting the patient's own doctor during an operation and while under his direct control committed an act of negligence the home would perhaps not be responsible because it would for that purpose have parted with the control of the nurse But whereas in a hospital a nurse may while performing a skilled service be nobody's agent in a nursing home she must it is submitted always be the agent of the home except in the rare event of her being under the direct control of a medical man

In addition to nursing homes and sometimes in connexion with them there exist many organizations which perform the service of supplying on demand nurses to doctors and homes to patients It is possible through these co-operations to engage a nurse at any time for any purpose and for any desired period Some are charitable some exist for profit If a patient engages a nurse from a co-operation and she burns him with a hot water bottle can he get damages from the co-operation The test question here is Did the organization undertake to nurse him or only to supply a nurse If it undertook to nurse him it must pay damages but if it only undertook to supply a nurse its sole duty was to use reasonable care to supply one competent for the purpose and it is not responsible for any negligence she may commit afterwards The usual undertaking is merely to supply a nurse

In Hall *v* Lees (1904) a philanthropic association supplied nurses both to non paying and to paying patients it used great care in the selection of competent nurses and paid them salaries A patient who underwent an operation in her own home engaged a nurse from this association to take care of

* The first part of this article on Negligence of a Subordinate by a legal correspondent appeared in the *Journal* of April 29th (p 766)

Fat Intolerance

THE proportion of fat in breast milk is very variable and may range from 2·6 to 6·0 per cent

Many infants cannot assimilate food rich in fat, which gives rise to vomiting, constipation, relaxed green stools and other symptoms associated with "acidosis."

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This announcement regarding the "Allenburys" Foods is No 7 of a series which will be continued

her afterwards and while she was still under the effects of the anaesthetic she was burnt by a hot water bottle Collins, Master of the Rolls explained that the association s liability depended upon what contract the patient had in fact made with the association If the association undertook to nurse the patient it was responsible for the negligence of the nurse by whom it nursed her If however it only undertook to supply a competent nurse then its only duty to the patient was to use ordinary care and skill in selecting that nurse After a careful study of the regulations of the association the Master of the Rolls said that it had only contracted to supply a competent nurse, and therefore was not liable for her negligence in a particular case

The further question sometimes arises of who is liable if a nursing home engages a special temporary nurse for a particular patient In a recent case a medical man entered a nursing home as a patient , he instructed the matron of the nursing home to engage a special nurse for him from a co operation The doctor in charge of the patient was also part proprietor of the nursing home He ordered this temporary nurse to give the patient 1 drachm of paraldehyde , this was a right and proper dose and the giving of medicine is one of the duties which a doctor may properly delegate to a nurse As a result of the dose given by the nurse the patient died, and it was alleged that the nurse negligently gave an overdose In this case (which did not come into court) the doctor in charge had two separate liabilities for he was not only the doctor but also the part-owner of the nursing home As doctor he was not responsible for the negligent performance by the nurse, in his absence of a duty which it was proper for him to delegate to her (see the case of Perionowski *v* Freeman below) His responsibility as part-owner of the nursing home was another matter, for in this capacity he had undertaken to nurse the patient and was therefore liable for any negligence committed by one of the nurses through whom he nursed the patient They would in this case remain his servants or agents because of his undertaking to nurse the patient The question is then Was this special nurse his servant or agent at the time? As the case never came into court the correct answer will never be known It is, however possible to argue that the nurse was never the servant of the nursing home or under its control, but was the servant of the deceased and acting under the instructions of the doctor in charge of the case who of course, would not as such be responsible for anything she did in his absence The nursing home agrees to nurse the patient but if the patient asks to engage a special nurse the home can say with reason that, so far as the duties of that nurse are concerned he has released it from its agreement to nurse him and has himself undertaken that responsibility, its only duty being to satisfy itself that the nurse it engages at his request is competent

THE HOSPITAL PHYSICIAN

Can a physican or surgeon on the consulting staff of a hospital, or a house-physician or surgeon, ever be held liable for the negligence of a nurse? The courts have given very little indication of the right answer to this delicate question It is fairly clear, subject to certain reservations, that when a nurse is under the direct control of a surgeon or physician she is his servant for the time being and he is responsible for the consequences of her negligence The test question for deciding who is responsible for a subordinate is, " Who had control of him at the material time ? " In Donovan *v* Laing etc , Syndicate (1893), the court held that a crane driver, borrowed with his crane from another company by a firm of wharfingers, was the servant of the wharfingers while he was working for them Whether the surgeon or physician actually has control is a question of fact in each particular case Sometimes a nurse engaged on a highly skilled task may be a free agent and under no one s control When a nurse is carrying out on the order of a medical man and in his absence some duty which it is the reasonable custom of the hospital that he should delegate to her, he cannot be held responsible for her negligence or other wrongdoing

In the case of Perionowsky *v* Freeman (1886) a patient in St George s Hospital brought an action against two of its visiting surgeons He said that they had ordered him a hot hip bath which was given by nurses and that the nurses made the water much too hot and held him in it in spite of his screams and struggles, so that he was severely scalded Chief Justice Cockburn observed that, as it was proved to be the ordinary hospital practice to leave the administration of the bath to nurses the patient could not get damages from the surgeons even if the nurses had been negligent If the surgeons had been personally present they might have had to answer an allegation of ill usage but as they had not been present they could not be held liable He said in summing up that our great hospitals supported as they were only by voluntary subscriptions (this was seventy years ago) could not be supported if they had to engage a staff of medical men sufficient to attend to all the minor incidents or details of medical or surgical operations which might be ordered such as baths It was he said indispensable that such matters should be left to nurses who were necessarily familiar with them Medical men were always anxious that no unnecessary pain should be inflicted on their patients, and it was incredible that they should have allowed the man to be treated in their presence in the way which he had described

To sum up, therefore medical men cannot be held liable for the negligent acts of nurses whom they have every reason to believe to be competent, in the performance of ordinary nursing duties, unless they are present at the performance of the act and can exercise control Whether a particular duty properly comes within the scope of a nurse is a matter of the practice in the hospital and in the profession generally and of whether the jury consider that practice reasonable, having regard to all the circumstances

(To be continued)

JUDGEMENT AGAINST SURGEONS FOR ALLEGED NEGLIGENCE £1,000 DAMAGES

An action, the hearing of which occupied eight days, was commenced before Mr Justice Horridge and a special jury in the King s Bench Division on May 9th, in which Neville Hartley, a minor, and John Hartley, his father, of Upwell, Norfolk, sued Charles Eric Sweeting Jackson, F R C S , and John Lewin, F R C S , of King's Lynn for damages for alleged negligence in the performance of an operation on Neville Hartley and in subsequent orthopaedic treatment Mr Lewin was sued only as Mr Jackson's partner

On July 30th 1931 Neville Hartley was injured in a motor car accident when his right leg was fractured in three places On August 3rd he was removed to the nursing home of Mr Jackson and Mr Lewin, and on the following day Mr Jackson performed an operation The plaintiffs alleged that the injuries were negligently unskilfully, and improperly treated the compound fracture of the femur not being properly set, and that owing to non fixation the leg slipped and became twisted The boy left the nursing home on August 20th and later at Westminster Hospital in November two operations were performed to remedy the defects but the leg was permanently shortened The defendants denied the allegations against them and stated that if the patient suffered unduly it was because of the refusal of his parents to comply with Mr Jackson's advice that he should not be removed from the home

Case for Plaintiffs

Mr Neville Hartley aged 17 stated that after his admission to the defendants' nursing home *x* ray photographs were taken, and his broken leg was afterwards placed in a Thomas splint On the night of August 7th four days after his admission he was awakened by Mr Jackson who told him that his leg which had been resting on the foot rail of the bed had slipped down It was replaced, and afterwards he suffered great agony In cross examination by Mr Roland Oliver K C for the defence the witness said that he thought he was neglected in the home and that the staff did not think he was half as ill as he was Nurse Topps who went with the patient to look after him in the nursing home said that she went in to see him several times during the night of August 7th as he was in such pain, and he told her that Mr Jackson had awakened him and said that his leg had slipped The mother of the boy also stated that her son informed her next morning of this occurrence Evidence on behalf of the plaintiffs was also given by Dr William Reynolds

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of Upwell who had rendered first aid soon after the motor accident and subsequently had called Mr Jackson into consultation The fractures he said were reduced on the bed in the boy's room at the nursing home he would have preferred the operating theatre He saw no traction applied to the limb which was not even fixed to the end of the splint so as to hold it firmly On the boy's return from the nursing home on August 20th he found the limb very swollen over the whole length and it was quite obvious that the fracture had become unreduced and displaced to an extreme degree The thigh was twisted and the upper part of the femur was lying on the outer side of the knee-cap producing an appearance of two knees Fixation in the displaced position must have taken place some days previously In cross-examination Dr Reynolds said that he considered that some form of traction should have been applied and he himself would have risked putting a pin through the top of the tibia which was some distance from the wound He agreed that for a good many days after the accident there was septic infection and he did not suggest that the sepsis was the fault of the nursing home He denied that the trouble arose when the splint was taken off the limb at the patient's home at the end of September or that there were any signs of ill effect upon the limb owing to the journey home in the ambulance

Mr E P Brockman who operated on the limb in the following November expressed the view from an x-ray photograph taken at the nursing home on the day of admission that the proper treatment would have been to excise the wound and remove any soft tissues which appeared to be damaged or dirty afterwards replacing the fractured bone in the normal position and providing some fixation to maintain the reduction and to secure adequate drainage It was put to the witness in cross-examination that Choyce's *Surgery* and Mitchiner's *Science and Practice of Surgery* and both stated that excision should be done soon after the injury and that one of these authorities said that this was seldom possible after a few hours without risk of septic infection so that when this case came into Mr Jackson's hands five days after the injury it would have been useless and wrong to have excised The witness did not agree he considered it negligent not to excise in such an injury even as long as four or five days after it had been sustained With the fracture reduced and extension employed the risk of spreading sepsis was small He operated on the boy twice in November the reason for the second operation being that the lower fragment of bone had slipped back The patient was discharged in March 1932 and there were still signs of infection in the following May Mr W McAdam Eccles said that if he had a case of the kind early enough and before any marked sepsis was present he would excise the wound It was of no use to manipulate a fracture unless something was done to retain the fragments in apposition With regard to the condition four or five days after the accident when it was seen by Mr Jackson Mr Eccles said that if there were no signs of sepsis or only mild sepsis he would excise but if the wounds were really septic and discharged offensive pus he would open them up widely for drainage otherwise the patient's life was in danger The charts indicated that the plaintiff's wounds were mildly septic from the first and that the sepsis became pronounced on the evening of August 7th

Case for Defendants

Mr Roland Oliver in defence said that one of the main questions to be decided was what happened in the nursing home on the night of August 7th If what the boy said was true and the patient was left in bed in such a way that the fracture might become displaced that obviously was negligence But in fact at the time of night referred to in the boy's story Mr Jackson was never in the home except for an operation and the only night during the boy's stay in the home when Mr Jackson was there was August 4th the date of the operation Neither the boy's mother nor Nurse Topps who were there daily complained to Mr Jackson about this occurrence nor was anything said to Dr Reynolds when he visited the boy a week later The defendants case was that the boy's leg was set as well as it could be and remained straight all the time he was in the nursing home and that it was after his removal and the taking away of the splint that it assumed its frightful position A fractured leg would gradually give way and become bowed if it were taken out of the splint too soon It was not until Mr Jackson sent his account to the father towards the end of September that any complaint of negligence was made and even then the father in refusing to pay the account made no reference to the incident of August 7th

Mr Jackson who said that he was senior surgeon to the West Norfolk Hospital and during the war a surgical specialist in France stated that on being called to the case by Dr Reynolds he went to the boy's home and found him lying on a bed with a soft mattress and wearing underclothes saturated with blood and sweat The wounds were very dirty and there was considerable sero-purulent discharge over the fractured tibia and two separate discharges from the wound in the thigh He took a grave view of the case The boy was brought to the nursing home and next day he set the fractured femur by manipulating it He got a correct result and is certain that the bones were in line As the leg was septic to have cut down as suggested by Mr Brockman would have been fatal The sepsis became more acute as time went on but he did not agree that there was no sepsis at the beginning of the treatment It would have been unsafe to take the boy down to the x-ray room which was down two flights of stairs and the costly hiring of a portable x-ray outfit did not seem justified in view of the fact that no further operation is possible During the seventeen days that the boy was in the nursing home he visited him on forty-eight occasions and personally attended to his dressings every day except two He had no knowledge whatever of the alleged slipping incident of August 7th the first he heard of it was in court The splint enclosing the leg was supported on two wooden blocks

Mr John Lewin Mr Jackson's partner said that there was nothing improper or unusual in doing the manipulation on the bed instead of in the operating theatre He himself took no part in the manipulation but he had a perfect view of what was done The leg was made straight and when he saw it a week later there was no distortion or difference in position and the same was true when he examined it shortly before the boy left the home No form of extension of which he was aware could have been applied The matron Miss Thorpe spoke to seeing the limb exposed two days before the patient left when it looked the same as it did after the reduction of the fracture and showed no sign of distortion She had never heard of the incident of the night of August 7th until that hearing A sister at the home stated that she saw present when Mr Jackson reduced the fracture and she saw the leg every day until the boy left On the day of his leaving Mr Jackson himself dressed the leg and padded it evenly all the way down the splint She had never heard of the August 7th incident and the lady who had been night nurse on the occasion was also called and denied that Mr Jackson was in the boy's room that night Nurse Pepper of Wisbech who took charge of the boy after his arrival home and remained for five weeks said that when she first saw the naked limb three days after the boy had left the nursing home there was no obvious deformity at the knee or anywhere else the leg appeared in good alignment There was gross deformity at the site of the fracture when the plint was finally removed at the end of September Owing to the position of the fracture boards on a non-rigid mattress at the boy's home there was sagging wherever there was pressure she thought she mentioned this to Dr Reynolds

Mr Robert Milne considered that it would have been wrong treatment to excise such a wound four or five days after the accident Nor would he have cut down to get at the fragment because by so doing there would be risk of scattering the sepsis further Extension or traction was desirable if it could be accomplished but it did not follow that the fracture must have traction to keep it fixed Mr Hamilton Bailey declared the plaintiff's injuries to have been very exceptional and extremely serious with danger to life from shock and later from infection The inevitable presence of infection must colour treatment He believed the course which Mr Jackson had adopted to have been compatible with the best interests of the patient and consistent with good practice The witness resented certain questions in cross-examination arising out of his book *A Practice of Emergency Surgery* which had no application he said to a case like this which stood by itself

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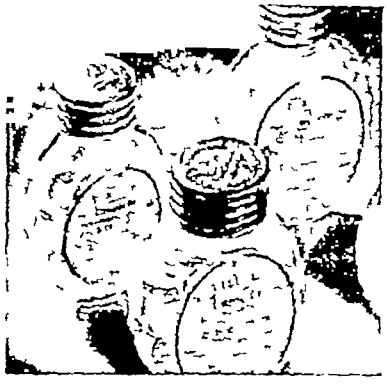

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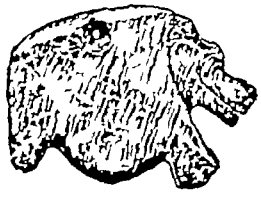

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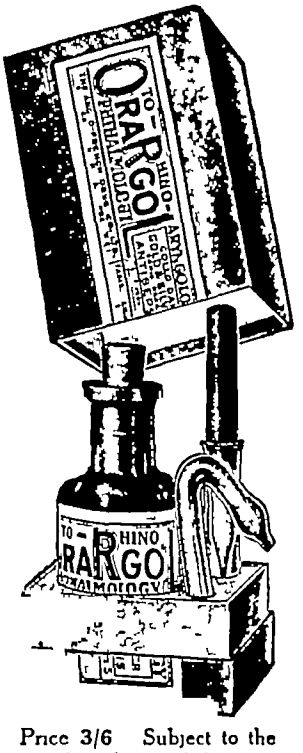

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Judgement

Mr Justice Horridge, in summing up said that the law in the case was simple A surgeon must use all due care and skill in treating his patient It did not follow that he did not use due care and skill because some other surgeons would have done differently, also there was no guarantee that he would be successful—he had only to use due care and skill

The jury answered the questions put to them as follows

(1) Did the incident spoken of as having happened on the night of August 7th take place?—Yes

(2) Was the defendant guilty of any negligence other than the accident of August 7th?—Yes

(3) If the answer to (1) and (2) is in the affirmative, what damages?—£1 000

Judgement was entered for the sum awarded with costs and as Neville Hartley is under age an order was made for the payment of £1,000 into court to be dealt with by the Master

The Services

HONORARY PHYSICIAN TO THE KING

The King has approved the appointment of Major General C A Sprawson CIE, MD FRCP Indian Medical Service honorary surgeon to the Viceroy of India as honorary physician to the King in succession to Colonel W H Leonard, FRCS, Indian Medical Service who has retired

DEATHS IN THE SERVICES

Colonel John Charles Barron Statham CMG, CBE RAMC (ret) died on April 29th aged 60 at Rajgarh Central Provinces India of injuries inflicted by wild bees while making an archaeological investigation in the Cave of Sighanpur in Rajgarh State earlier the same day In India wild bees are well known to be the most dangerous wild animals to sportsmen and others whose duties or pleasures take them into the jungle and all such accordingly give them a very wide berth Probably the presence of wild bees in the cave was not known to Colonel Statham He was born on November 7th 1872 was educated at Guy's and took the MRCS and LRCP Lond in 1895 and subsequently the DPH of the London Colleges and the DTM at Cambridge in 1904 Entering the RAMC as surgeon lieutenant on January 29th 1896 he was promoted to lieutenant colonel in the long war promotion list of March 1st 1915 to colonel in 1917 and retired on December 26th 1921 He served in the campaign on the North West Frontier of India in 1897–8 receiving the Frontier medal with a clasp and in the war of 1914–18 when he was mentioned in dispatches in the *London Gazette* of May 31st 1916 and received the CMG in 1917 for bravery in succouring wounded under heavy fire and also recovering an abandoned gun, in the campaign in the Cameroons West Africa where he was principal medical officer Subsequently he served as administrative medical officer with the Serbian Army as DDMS of lines of communication in the Mediterranean area and as DDMS at Naples and Boulogne He received the CBE on June 3rd 1919 and also the Legion of Honour the Croix de Guerre with palm the Order of St Saba of Serbia and the Italian silver medal for public health He was elected to the Athenaeum Club in 1924 on the occasion of the centenary of the club in that year From his boyhood he had been a great sportsman and hunter, and after his retirement he devoted himself to travel and sport making more use of the camera than of the gun chiefly in Africa which he had crossed more than once He was the author of *Through Angola* 1922 *With My Wife Across Africa by Canoe and Caravan* 1924 and *The Romance of a Tudor House* 1929 In 1922 he married Jessie Throsk daughter of F A Macquisten, KC MP their honeymoon consisting in the journey across Africa described in his second book

Lieut Colonel James Davidson, DSO Bengal Medical Service (retired) died at Lasswade Midlothian on May 1st aged 67 He was born on November 27th, 1865 the son of the late Rev Adam Davidson minister of Yetholm and was educated at Edinburgh University where he graduated MB and CM in 1891 Entering the Indian Medical Service as surgeon lieutenant on July 29th 1893 he became lieutenant colonel on January 29th 1913 and retired on November 27th 1920 He served on the North West Frontier of India in the Waziristan campaign of 1894–5 (medal with clasp) and in the Chitral campaign of 1895 (medal with clasp), in the Sudan in 1896 in the Dongola campaign (medal and Khedive's medal), on the North West Frontier in the Tirah campaign of 1897–8 (two clasps) in the Tibet expedition of 1904 in the action at Niani operations at and around Gyantse and the march to Lhasa (medal with clasp) and on the North East Frontier of India, in the Abor campaign of 1911–12 (mentioned in dispatches in GGO No 480 of May 25th 1912 medal with clasp and DSO)

Lieut Colonel Stephen Little Bengal Medical Service (ret) died at Monte Carlo on May 14th, aged 76 He was born on January 8th 1857, the son of Edward Little Inland Revenue officer Glasgow, and was educated at Queen's College Belfast where he graduated MD and MCh with honours of the Queen's University, Ireland, and at Bart's Entering the IMS as surgeon on March 31st 1879, he became lieutenant colonel after twenty years service and retired with an extra compensation pension on June 22nd 1909 He served in the Afghan war of 1879–80 when he took part in the Hissarik expedition, and received the medal and in the Mahsud Waziri campaign of 1881 on the North West Frontier Most of his service in India was in civil employment in the Punjab

Lieut Colonel Alexander Vass Anderson Bombay Medical Service (ret), died at Stonehaven on May 9th aged 76 He was born on November 24th, 1856, the son of James Anderson of Aberdeen and was educated in the university in that city where he graduated MB and CM in 1880 subsequently taking the DPH in 1900 Entering the IMS as surgeon on April 1st 1882 he became lieutenant colonel after twenty years' service and retired on July 19th 1907 During the great war he rejoined for service in India and served from January 20th 1915 to June 5th 1920 He had also served on the North West Frontier of India in the second Miranzai campaign of 1891, receiving the Frontier medal with a clasp

Universities and Colleges

UNIVERSITY OF OXFORD

Convocation on May 16th accepted gratefully the legacy of the late Dr E R Frazer of New South Wales amounting to £417, for the Anatomical Department of the Medical School

UNIVERSITY OF CAMBRIDGE

The Rede Lecture by Sir Charles Sherrington has been postponed until the autumn

UNIVERSITY OF LONDON

LONDON HOSPITAL MEDICAL COLLEGE AND DENTAL SCHOOL

The prizes and certificates awarded during the current academic year will be presented by the Very Rev W R Inge DD Dean of St Paul's on Tuesday June 27th, in the College Library

UNIVERSITY OF LEEDS

The Council of the University announces the election to the chair of clinical medicine of Dr William Macadam FRCP Mr John Foster, FRCS has been appointed clinical lecturer and Mr Norman Wood part time demonstrator in pathology and bacteriology and research assistant in experimental pathology

UNIVERSITY OF DUBLIN

The Senate of the University has decided to confer the following degrees *honoris causa* at the Commencements which will be held on Thursday, July 27th, at 3 30 p m, during the Annual Meeting in Dublin of the British Medical Association

D Sc —Emil Novak, M D, Associate in Gynaecology Johns Hopkins Medical School and former vice president of the American Gynaecological Society, Gordon M Holmes M D FRCP President of the Section of Neurology and Psychological Medicine of the British Medical Association, 1933

M D —E Kaye Le Fleming M A M B Chairman of the Representative Body of the British Medical Association H S Souttar M Ch FRCS, Deputy Chairman of the Representative Body

ROYAL COLLEGE OF SURGEONS OF EDINBURGH

A meeting of the Royal College of Surgeons of Edinburgh was held on May 17th when Mr John Wheeler Dowden President was in the chair The following candidates having passed the requisite examinations were admitted Fellows R W Agnew E Ll Godfrey C S Gross K K Ghosh, R Harvey, D MacLennan E K McLean, D E Orchard, P I Peltz B A Porritt J M Sanson J P Semple S J Scott G H Solomon F D J Viljoen H Wilson

The Henry Arthur Dalziel Ferns Bursary was awarded after a competitive examination in organic chemistry in its application to medicine to I Greenberger

The Bathgate Memorial Prize was awarded after a competitive examination in materia medica and therapeutics to S J Lederman

Observations
ON
THE CURE OF MALARIA WITH ATEBRIN
BY
A L HOOPS C B E M D D P H
SENIOR MEDICAL OFFICER MALACCA AGRICULTURAL MEDICAL BOARD
MALACCA STRAITS SETTLEMENTS

The production of atebrin a drug far more effective than quinine in that it apparently eradicates the malaria parasite in man as a rule after only five days treatment is an event in the history of tropical medicine According to R Green malaria research officer of the Institute of Medical Research Kuala Lumpur it is not unlikely that in the molecular synthesis of atebrin the quinoline nucleus (common to both quinine and plasmoquine) has been retained and that one of the acridine compounds allied to acriflavine has been incorporated A paper published by Green [1] together with a synopsis of the German literature on atebrin and a supply of the drug received from Dr K Koenig of Singapore led me to give this drug a trial on some of the estates under my charge between June and August 1932 My results were so favourable that atebrin and not quinine is now the drug in ordinary use for the treatment of malaria on estates served by the Malacca Agricultural Medical Board comprising an area of nearly 150 000 acres

PREVENTION OF MALARIA

The primary aim of both the estate medical officer and the planter in Malaya is to prevent malaria by antimalarial drainage by oiling of the breeding places of malaria-carrying anophelines and in some places by the use of mosquito curtains or screening Though these antimosquito measures have proved so valuable that they are being retained even in these days of extreme compulsory economy a more effective drug than quinine for the radical cure of malaria is indispensable for fuller success

It has been clearly proved that prophylactic quinine whether administered daily or at intervals is a delusion and a snare no amount of quinine will prevent the development of malaria in a person who has been newly infected This practice has been entirely abandoned on Malacca estates Quinine owes its past reputation as a prophylactic to the fact that many of those dosed with it were in fact actually infected with undiagnosed malaria in such cases it was very useful For the cure of malaria quinine though for centuries the best drug available involves a lengthy and debilitating course of treatment followed by a high relapse rate Atebrin combined with plasmoquine if the malaria is subtertian in type and reinforced in certain grave cases with quinine administered by injection appears to effect a complete cure within less than one week in 95 per cent of cases treated

THE PROBLEM IN MALACCA

The population with which my colleagues and I deal consists of over 19 000 rubber estate labourers and dependants and of the staff—European and Asiatic—with their households numbering over 800 who control the estates The following figures show the recent incidence of malaria among labourers and dependants who are known as the labour population

Most of those appearing under the heading Out patients are relapse patients who after a chill have one or two days fever in this category are also included a number of the primary cases occurring on Asiatic estates where there are no hospitals Grave cases on these estates are generally sent into Government hospitals as evidenced by the few deaths among malaria cases treated as out patients—four in 1931 and three in 1932 The majority of European estates on which over two-thirds of the labour population including the great majority of Southern Indians work have their own hospitals The weekly use of antimalarial oil to spray anopheline breeding grounds within the danger zone of

Year	Average Labour Population	Cases of Malaria		Deaths from Malaria
		Out patients	In patients	
1931	21 553	1,877	934	35 (4 in lines)
1932	17,511	1,334	565	21 (3 in lines)

the coolie lines is almost universal on such estates where a good deal of antimalarial drainage has also been done in the past (Antimalarial oiling is the exception rather than the rule on Asiatic-owned estates) Owing to the widespread reduction in labour forces many sickly coolies have also been repatriated

The result of these two factors combined with early and effective treatment of the sick is shown by a spleen rate of only 4 2 per cent among 9 722 Southern Indians examined at the last half yearly musters on European estates The spleen rate among a thousand-odd Southern Indians employed on Asiatic estates was however over 20 per cent About 1 400 Chinese work on European owned estates and the spleen rate among those examined was 4 27 per cent while on Asiatic estates where some 4 300 Chinese are employed it was 8 34 per cent About 1 200 Malays work as estate labourers nearly all these live in their own kampongs to which they return daily As is natural the spleen rates for these workers were almost identical on European and Asiatic estates being 12 8 per cent on the former and 11 64 per cent. on the latter Many Malays have acquired a partial immunity due to repeated attacks of malaria in childhood this is probably the reason why their spleen rates are so much less than those of Tamils working on Asiatic-owned estates The high spleen rate among the Southern Indians on Asiatic estates reveals the lot of the careless labourer who unprotected by oiling does not avail himself of a mosquito curtain The Chinese coolie on the other hand uses a mosquito curtain has more stamina feeds better and knows how to look after himself The result is that placed in the same position as the Tamil he shows less than half the spleen rate

TREATMENT OF MALARIA WITH ATEBRIN

For the actual treatment of malaria reliance has hitherto been placed on that old and tried remedy quinine On European estates the sufferer from primary malaria has received full doses in hospital for perhaps ten days followed by smaller doses for perhaps three weeks in the lines He has been given more quinine when at labour inspections he has been found to possess an enlarged spleen And yet with all this dosing it is well known that over 50 per cent of sufferers so treated relapse and have further attacks of malaria in some cases repeatedly and for years after the original infection There are several notable disadvantages attending the use of quinine —such as the long continuance of the treatment the difficulty of carrying this out the lowering effect on the vitality of its continued administration the great liability to relapse and finally the expense

Beginning the trial of atebrin in June 1932 I have found that it has apparently brought about a permanent cure in the great majority of 153 malaria cases treated between that month and the end of the year Two of my colleagues Dr I D Stubbs and Dr Foo Hee Seng who started to use the drug in August 1932 have had

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons went into Committee this week on the Finance Bill and also carried a resolution authorising taxation of reserves of co-operative and certain other mutual societies. Foreign affairs were also down for discussion.

The Metropolitan Police Bill was read a second time. This Bill among other objects deals with the age of compulsory retirement and membership of the Police Federation. Constables may be appointed for a fixed period of service and will be insured under the national health insurance scheme and under the Widows, Orphans and Old Age Contributory Pensions Act.

In the House of Lords on May 18th the Cancer Hospital (Free) Bill was on the motion of the Earl of Onslow, Chairman of Committees, read a second time. There was no discussion on the Bill.

The Royal Assent was given to the Protection of Animals Bill on May 18th. This Act authorizes magistrates to forbid the holding of dog licences by persons convicted of cruelty to dogs.

The Gas Light and Coke Company Bill was read a third time by the House of Commons on May 18th. After a debate to which Dr. O'DONOVAN contributed, Dr. BURGIN on behalf of the Board of Trade said it was time the House said clearly that local authorities should not be allowed powers arbitrarily to cut off pipes and prevent their tenants having the alternative use of gas.

The Road Accidents Parliamentary Group met on May 23rd to consider the Road and Rail Bill. Sir E. GRAHAM LITTLE presided. The meeting welcomed the proposals for the maintenance of vehicles in a serviceable condition and for the stricter supervision of hours of labour of drivers and the loading of vehicles. It was agreed that amendments and conditions should be moved in committee to strengthen the public safety provisions of the Bill.

Industrial Pulmonary Disease

On May 16th Mr. E. BROWN replying to Sir W. Jenkins said that research into industrial pulmonary diseases was directed by a Committee under the Medical Research Council and an account of the work was included in the annual reports of the Council. No fresh findings or mining diseases had as yet been reported by the Committee but in the meantime increased attention was given by inspectors of mines to secure the effective use of dust preventive measures. Practical work for the improvement of such methods was the constant duty of a special inspector attached to the Mines Department. Mr. D. GRENFELL asked whether the Committee had recommended the use of appliances to prevent the inhalation of stone dust. Mr. BROWN said that the latest report (Command Paper 4248) showed that there were difficulties.

On May 16th Sir J. GILMOUR also informed Sir W. Jenkins that he could not state the number of persons in South Wales mines suffering from silicosis and anthracosis who had made claims for compensation, nor how many had succeeded. Anthracosis was not a disease for which compensation was provided under the Workmen's Compensation Act. He was advised that it had not yet been established that the condition of the lungs described as anthracosis gave rise to any disabling condition. The Miners' Federation had made representations to him regarding certain cases in which miners suffering from silicosis had not obtained compensation. Mr. GRENFELL asked whether the Home Secretary had a record of anthracosis cases as well as silicosis cases. Sir JOHN GILMOUR said he was advised that anthracosis did not come under the terms that they were discussing. Mr. GRENFELL asked if applicants or the dependants of persons who had died or had been disabled were handicapped because of the failure of the medical profession and the medical officers of the Home Office to make a correct diagnosis between those two kinds of cases. Sir J. GILMOUR said that all those matters were being taken into consideration.

Superannuation of Medical Officers of Health.—The Parliamentary Medical Committee met on May 18th, Sir Francis Fremantle presiding. The committee received a deputation representing the National Association of Local Government Officers, the Mental Hospitals Association, the British Medical Association, and the Society of Medical Officers of Health concerning the effect on superannuation of the temporary abatements of salaries. It was agreed that the constituent bodies represented on the deputation should approach the Association of local government bodies to discuss possible agreement and joint action with a view to approaching the Government to secure reconsideration of present anomalies. A further object would be to suggest amendments in the Local Government Officers and Others' Superannuation Bill which the Ministry of Health has under consideration.

Unemployment Benefit following Sickness.—Sir HILTON YOUNG told Mr. Buchanan on May 18th that he had now made arrangements whereby an unemployed insured person who was summoned for examination by a regional medical officer would be advised to see his own doctor on the morning following his examination. The doctor would then have received the report of the regional medical officer. If that officer was of opinion that the insured person was fit for work and the doctor agreed he would so inform the insured person with the result that he would be able to attend at the Employment Exchange the same morning and claim unemployment benefit. As sickness benefit would be payable up to and including the date of examination by the regional medical officer there need no longer be any gap during which no benefit was payable provided that the claimant satisfied the usual conditions.

Physical Fitness for Driving Licence.—In reply to Sir W. Bratton Doyle on May 17th Mr. STANLEY said he did not think it was necessary to amend the Road Traffic Act 1930 that when a person charged with driving a vehicle while under the influence of drink was found not guilty of this offence on grounds of suffering from a physical defect—which might make him incapable of having proper control of a motor vehicle and a danger to other users of the highway—the court could order such person to be disqualified from holding or obtaining a licence for a suitable period. Subsection (4) of Section 5 empowered the licensing authority to revoke the licence in such a case if its attention was drawn to it either by the magistrates, the police or anyone else. Answering Mr. Lovat Fraser on May 17th Mr. Stanley referred to an estimate that 250 000 drivers of motor vehicles in England and Wales were incapable of knowing green lights from red. He said this was very exaggerated. The Departmental Committee on Traffic Signs heard evidence on this subject and he would consider the matter in the light of a report which he hoped to receive shortly.

Inquests in Camera.—Replying to Mr. Cocks on May 18th Sir HILTON YOUNG stated that he was unaware of any tendency among coroners especially in cases of suicide to hold inquests *in camera*. He had no authority to offer coroners advice on this matter which was one for their own discretion having regard to the circumstances of the particular case. He thought it undesirable that suicides should be announced in the Press in the sensational manner in which they were sometimes reported.

Deaths from Small pox and Vaccinia.—Sir G. COLLINS told Mr. Groves on May 17th that the number of deaths from small pox registered in Scotland during the period 1922 to 1932 inclusive was two and from vaccinia and cow pox during the same period thirteen.

Alleged Deaths from Inoculation in Italy.—On May 16th Mr. GROVES asked the Minister of Health if he had received information regarding the deaths of ten children and the serious injury to a number of others from inoculation against diphtheria in the provinces of Venezia and Rovigo in Italy. Sir HILTON YOUNG replied that so far he had no information beyond what had appeared in the public press but steps were being taken to obtain an official report. He would consider publication when the information was available.

Medical News

The annual general meeting of the London and Counties Medical Protection Society, Limited will be held at Victory House, Leicester Square, W C 2, on Wednesday, May 31st at 4 p m

A 'sun walk' at Harrogate, in the form of a covered corridor built of glass which admits ultra violet rays, will be opened by Lord Horder on Saturday, June 17th

A short course of lectures on the approach to the psychoneuroses, for practitioners and medical students, will be given at the Institute of Medical Psychology, 6 Torrington Place W C, beginning June 12th The fee for the course is £2 2s for medical graduates and 10s 6d for medical students

A post graduate course on diseases of the kidneys will be held at the Hôpital de la Pitie Paris, from June 6th to 17th, under the direction of Professor Rathery and Dr Chevassu

The second lecture on cataract extraction, arranged by the Fellowship of Medicine will be given by Lieut Colonel R H Elliot at the Medical Society of London, 11, Chandos Street, W on May 31st, at 5 p m Four advanced lectures will be given on Wednesdays at 5 p m, at 11 Chandos Street, as follows June 7th, Dr Leonard Findlay chronic pulmonary disease in childhood, June 14th, Dr C P Symonds, disturbance of cerebral function in head injury, June 21st, Mr F J McCann, repair of injuries to the perineum and vaginal walls, June 28th, Mr Andrew McAllister, some features of eclampsia Forthcoming courses include medicine, surgery, and the specialties at the Prince of Wales's Hospital, June 12th to 24th week end course in clinical surgery at the Royal Albert Dock Hospital, June 10th and 11th, ante natal treatment at the Royal Free Hospital, Fridays, June 16th to July 7th, diseases of the chest at the City of London Hospital, Victoria Park June 12th to 24th, and cardiology at the National Heart Hospital, June 26th to July 8th

The thanksgiving service in connexion with St George's Hospital bicentenary will be held at St Paul's Church, Knightsbridge on Tuesday, June 27th, at 3 p m Invitations for a conversazione at the hospital on the evening of that day have been issued by the treasurers of the hospital and the dean of the medical school

The German Dermatological Congress which was to have been held in Vienna from June 6th to 8th has been postponed indefinitely for political reasons

The second French Congress of Gynaecology will be held at Luxeuil les Bains, with Professor Keiffer of Brussels, member of the Royal Academy of Medicine of Belgium, as president of honour, and Dr L M Pierra of Luxeuil, vice president of the French Society of Gynaecology, as president Further information can be obtained from the general secretary, Dr Maurice Fabre, 6, Rue du Conservatoire, Paris, 9e

The third International Hospital Congress will be held in Belgium at Knocke sur-Mer from June 28th to July 3rd, and will be open to all persons and societies interested in the construction administration, and development of hospitals The reports of ten international study committees will be read, the subjects concerned being construction, equipment and technique, administration and housekeeping finance and book-keeping legislation, care of the patient in the hospital, patients' food, personnel, statistics and outside connexions with the hospital The congress will be followed by a five day tour through Holland to visit new hospitals, industrial centres, and historic sites Detailed programmes can be obtained free from Messrs W Kohlhammer, Urbanstrasse 12/16, Stuttgart, and inquiries should be addressed to Dr W Alter, Ernst Ludwig Allee 2 Buchschlag, Hessen, Germany

At a general meeting of the Society of Medical Officers of Health held on May 19th, Dr Charles Porter, medical officer of health of the metropolitan borough of St Marylebone, was elected president for the session 1933–4 Dr Porter will take office on October 1st next

At its meeting on May 4th of the Central Midwives Board for England and Wales an application was received from the Lady Forester Trust, Shropshire for approval of the training of its midwives in the same manner as is followed at Queen Charlotte's, where midwives administer chloroform capsules to produce analgesia in labour It was stated at the same time that each hospital has a qualified medical officer in charge The Board replied that, as the rules stand at present the Board regards the medical officer as responsible in all cases in which chloroform is administered Approval as lecturer was granted to the following medical practitioners Dr J N Morris Devonport (pro tem) and Drs Edward Lethem and Charles Penny, Royal Derbyshire Nursing Association The appointment as examiner to the Board of Dr John Eric Stacey was approved

In view of the response to the circular letter and advertisements that have been issued regarding the tentative proposals that the Imperial Bureau of Animal Health should publish an *Index Veterinarius*, its preparation has now been taken in hand The first number, covering the indexing done at the Bureau in the first quarter of 1933, will be issued during the summer *Index Veterinarius* will be a complete index to publications relating to veterinary research, public health administration, and education The price is £4 a volume (four quarterly issues), including packing and postage Orders should be sent to the Imperial Bureau of Animal Health Veterinary Laboratory, Ministry of Agriculture and Fisheries, Weybridge Surrey

Dr Harvey Cushing of Boston has been elected a doctor, *honoris causa*, of the University of Paris

Professors Aschoff the Freiberg pathologist, and Sauerbruch the Berlin surgeon, have been elected doctors, *honoris causa* of Upsala University

Dr Paul Uhlenhuth professor of hygiene and bacteriology at Freiburg in Baden, has been awarded the Paul Ehrlich gold medal

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR British Medical Journal, B M A House, Tavistock Square, W C 1**

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QUERIES AND ANSWERS

Hypertrichosis

E H B writes I would be grateful if anyone could suggest treatment for a condition of hypertrichosis affecting the arms and shoulders of a young girl aged 12 years It is a most unsightly condition and particularly trying to a young and sensitive girl otherwise healthy Electrolysis is unsuitable owing to the extensive nature of the condition

*** An article dealing generally with the treatment of hypertrichosis appeared in our issue of April 9th, 1932 (p 667)

similar results among 163 cases treated by them Our combined figures are

Total Cases Treated	Type of Malaria				Relapses
	Subtertian	Benign Tertian	Quartan	Unclassified	
317	98	114	5	100	11

Eighteen of the ninety-eight patients under the heading "Subtertian" were cases of mixed infection, showing benign tertian parasites as well In four subtertian cases, in which cerebral symptoms appeared, I administered from two to six doses of quinine bihydrochloride intramuscularly, with one death The "unclassified" patients were mainly on estates where no microscope was available, but were clinically cases of malaria The figures for relapse up to the end of March, 1933—that is over nine months after the first case and three months after the last case was treated—are eleven The relapses usually occurred within two months of the first treatment, the types of malaria in which these were noted being subtertian (three), benign tertian (two), unclassified (six)

Relapse Rate

There is little movement among labour forces at present, and it has therefore been possible to keep in touch with the great majority of those treated Deducting, however, the liberal allowance of 20 per cent from the total 317 patients treated, on account of persons since lost sight of, there remain 253 treated and still under observation, with eleven relapses—a relapse rate of 4 34 per cent All persons once treated with atebrin and having further malarial attacks have been counted as relapses, though some may have been fresh infections Of the eighteen cases of mixed infection, eleven occurred on one division, where there was a violent outbreak of malaria due to a temporary failure in oiling—thirty eight out of a population of sixty-seven being affected within one month Microscopical findings were fourteen subtertian (of whom eleven showed benign tertian parasites also) and twenty-four benign tertian In spite of so many double infections, there has not been a single relapse on this division, though seven months have passed since treatment was given

Death Rates

A comparison of the labour death rates among those treated in hospital with quinine and with atebrin respectively is of interest In 1931, 934 cases of malaria were treated in hospital, all with quinine 10 grains of the sulphate or bihydrochloride were given in solution three times daily for nine or ten days, followed usually by small doses of quinine in the lines for three weeks Deaths numbered thirty one, death rate, 3 31 per cent In 1932, 288 patients were treated in hospital with quinine, of whom fourteen died death rate, 4 85 per cent Of the 317 patients who received atebrin, 257 were treated in hospital, with four deaths—a death rate of 1 55 per cent Both the relapse rate and the mortality rate therefore, favour atebrin treatment Of the labour population averaging 19 511 last year two-thirds were Southern Indians—mostly Tamils—less than one third were Chinese and about 1 200 were Malays 85 per cent of those treated with atebrin were Tamils

Staff Treated

In addition to labour eight Europeans, including two ladies and ten members of the Asiatic staff were treated for malaria with atebrin in the last half of the year 1932 All found it easy to take, and experienced a sense of well-being after it None has so far relapsed

Particulars of Treatment

A course of atebrin lasts as a rule for five days only The daily amount administered is 0 3 gram (4½ grains) for adults and for children over 11, 0 1 to 0 2 gram (1½ to 3 grains) for children of 5 to 10 years, and 0 035 to 0 1 gram (1/2 to 1½ grains) for children of 1 to 4 years and is given in three divided doses In addition, plasmoquine is prescribed in subtertian cases only, also for five days—0 03 gram (1/2 grain) daily for adults in three divided doses, children of 11 receive only half this dose of plasmoquine, and younger children proportionately less The bowels are kept freely open throughout The tablets of atebrin and plasmoquine are crushed and taken with a drink of water half an hour before meals Most patients are also dosed with oil of chenopodium to remove their ankylostomes, and those who need it have santonin to relieve them of round-worms At the conclusion of the treatment patients are placed on an iron and arsenic tonic No quinine has been given with atebrin by me, except by injection in a few severe cases

ADVANTAGES OF ATEBRIN

The points in favour of the use of atebrin in place of quinine are

1 The fever is usually reduced as quickly as with quinine it is uncommon to find a temperature above 99° F after forty eight hours' treatment In two cases only did fever persist as long as the fifth day, for these atebrin was continued for eight days

2 With the exception of subtertian gametocytes it is rare to find malarial parasites in the blood after the second day of treatment *No parasites of any description* were found in the blood of any hospital case on the conclusion of treatment

3 The treatment is short simple, and effective—one 1½ grain tablet three times a day for five days only, as against a prolonged course of quinine

4 The drug is not unpleasant to take and is not depressing It is well tolerated even by pregnant women and young children and in blackwater fever and also by persons suffering as well from other diseases such as pneumonia and influenza

5 Relapses are rare after atebrin while with quinine the relapse rate is high

6 The cost of a course of atebrin (fifteen tablets) is about 75 cents (1s 9d) that is, less than the cost of a course of quinine—one ounce about $1 (2s 4d)—not to speak of the cost of treating the frequent relapses when quinine is used

7 In malaria of the benign tertian and quartan types atebrin only is necessary

8 When malaria is subtertian in type it is necessary to give a five days' course of plasmoquine in addition to atebrin (cost about 43 cents 1s) but this is also needed when quinine is employed as subtertian gametocytes are unaffected by either quinine or atebrin

9 Last but not least atebrin is a powerful preventive of malaria in the sense that most of those treated with it being cured are rid of the infection and completely non infective to their fellows It may well prove that the regular use of atebrin—plus plasmoquine in subtertian cases—for the cure of malaria will lessen the amount spent on antimalarial drainage and oiling

LIMITATIONS OF ATEBRIN

Are there any serious disadvantages in the use of atebrin? So far as my experience goes, "No" A few patients have colicky pains about the last day of treatment, and a few show a temporary yellow discoloration of the skin and conjunctiva, due not to jaundice but to the fact that atebrin contains a yellow dye No form of the drug suitable for injection is yet available consequently in very severe cases of malaria, it is advisable to administer one or several doses of quinine, generally by intramuscular injection Some medical men, though now using atebrin for malaria, are prescribing quinine during the first two days of treatment This may be quite sound but personally I have as far as possible employed

atebrin alone in order to test fully the value of that drug without quinine

In a progress report issued locally in November 1932 R Green[3] states that both benign tertian and quartan parasites including gametocytes disappear from the blood more quickly with atebrin than with quinine In subtertian malaria the rings disappear either with quinine or with atebrin in about three days The febrile period in all types is slightly shorter with atebrin than with quinine but pending the cessation of febrile symptoms the temperature among some of the subtertian cases seems to remain on the whole somewhat higher and the patient to be more prostrate than with quinine The subtertian infection varies from the very mild case to the fulminating case attended with fatal results whatever the form of therapy In the small but certain proportion of subtertian cases which show alarming symptoms Green regards it as at present advisable to administer quinine for two or three days as a preliminary to atebrin

Green's Relapse Rates

Among forty three patients who had 30 grains of quinine bihydrochloride a day for seven days and were under observation for a maximum of forty six days Green's record is

	Total cases	Relapses
Benign tertian	12	6
Subtertian	13	9
Quartan	18	9

Among forty-eight cases receiving a six-days course of atebrin and kept under observation for a maximum of eighty days (seventeen being benign tertian twenty three subtertian and eight quartan) Green observed one relapse —a benign tertian case on the thirty second day after treatment

ATEBRIN IN SPLENOMEGALY WITHOUT MALARIA SYMPTOMS

On the presumption that an enlarged spleen indicates a latent malaria infection it has been usual to give a course of quinine to all newly engaged local coolies with enlarged spleens and to all coolies and dependants found in a similar state at periodic examinations of labour forces Towards the end of 1932 I gave instead a five days course of atebrin to forty nine such cases the first twenty five were admitted to hospital the other twenty four were treated in the field None of these has since developed malaria

During the present year I am prescribing for the majority of patients with enlarged spleens a course of atebrin in the lines without taking them off work one tablet is administered in the morning and two in the afternoon A careful record is being kept no further atebrin and no quinine will be administered to these cases —even if the spleen continues enlarged—unless an attack of malaria occurs

CONCLUSION

The treatment of malaria with atebrin is short simple and economical Most sufferers appear to be cured within a week The consistent use of this drug should effect a great and permanent diminution of malaria among labour forces by sterilizing most of the reservoirs of infection

I am grateful to Dr Green for valuable information and to my colleagues for their records

REFERENCES

[1] Green R A Report on Fifty Cases of Malaria Treated with Atebrin *Lancet* 1932 i 826
[2] Hoops A L The Treatment of Malaria with Atebrin in Estate Practice *Trans Roy Soc Trop Med and Hyg* November 1932 xxvi No 3 289
[3] Green R A Comparison between Atebrin and Quinine in the Treatment of Malaria a progress report issued locally in November 1932 from the Institute for Medical Research F M S

TREATMENT OF MALARIA BY PLASMOQUINE AND QUININE

BY

M SCHWARTZ M B B S LOND

TRINIDAD

A remedy that will invariably cure malaria after a single course of treatment has yet to be found unless the new preparation atebrin which is still on its trial proves superior in this respect to the drugs at present in use In the Tropics the assessment of the value of anti malarial treatment is generally rendered difficult owing to the frequent presence of other diseases the often poor living conditions of the patient the difficulty of giving a prolonged course of treatment and the liability to re infection In temperate climates patients are often lost sight of after treatment owing to their return to the Tropics and in the event of a relapse they may fail to return to the prescriber of the original course of treat ment Control over any lengthy period is therefore the exception while most of the cases treated must inevitably be cases of relapse It therefore appeared to me that a high percentage of cures obtained with a standardized course of treatment under unusually well-controlled con ditions might be of some general interest

Malaria in Trinidad is the largest single cause of death In 1931 this disease was responsible for 734 deaths out of a total of 5 374 (Registrar-General's Report for Trinidad and Tobago 1931) and it must accordingly be assumed that the disease here is of a moderately severe type All the cases in the accompanying table are those of members of the staff (including dependants) of an oil company operating in Trinidad These form only a small per centage of the total cases of malaria treated the disease being far more common among the labourers but for reasons stated above the latter are unsuitable for the purpose of this paper The total number of staff and dependants in this company is approximately 200 living in several widely scattered fields in the south of the island All cases of illness occurring on these fields are bound to be reported to me and thus no case of relapse could fail to come to my notice The living conditions of these people are good Comfortable mosquito-proof bungalows are provided none of which is situated in a malarial area and infection with this disease is therefore only accidental Other tropical conditions are rarely found among them and the general health is excellent While all three varieties of malaria parasite are found in Trinidad quartan infection is in my experi ence unusual while benign and subtertian are almost equally common though each predominates in its respective areas

In the cases shown in Table I the attacks have generally been severe with maximum temperatures of 103° to 105° F the fever lasting three to four days In no case has the fever persisted longer than the fifth day of treat ment or risen again subsequently I have for long been of the opinion that fever which did not respond to suitable treatment within five days was due to some cause other than malaria providing the drugs administered were being absorbed In nearly all cases the fever was of a remittent type the regular intermittent fever frequently associated with relapses being notably absent This was to be expected in a series where most of the cases were primary In no case was an injection of quinine found necessary I limit such injections entirely to cases in which adminis tration of drugs by mouth is impossible owing to intract able vomiting delirium or coma The treatment prescribed has been in use for over three years and is the outcome of a trial of a number of different combina tions of quinine plasmoquine and arsenic No case of

Ulcers of Mouth

H B P (Manchester) would be glad of information regarding treatment likely to avail in a case of obstinate recurring ulceration (peptic ulcers) of the mouth and tongue He writes the patient is a lady about 47 years of age in very good general health The ulcers are typical quite white about the size of a pin's head surrounded by a small area zone are multiple—from two or three to twelve or so—and situated between the gum and lip or cheek and sometimes on the tip of the tongue They are very tender have lasted with very little intermission for four months and cause almost constant pain No general cause seems ascertainable Myrrh has given very temporary relief apart from which nothing has been of real use

Tapeworm Infection

Dr S DEIVASIKAMONI (Madras) in replying to Dr J C Bennett's query (*Journal* February 4th p 211) recommends the use of melon pumpkin seeds for the treatment of his case He writes I have found this very effective and absolutely reliable Two to three ounces of the pulp of the seeds (fresh melon pumpkin) is macerated with sugar and milk and given on an empty stomach in the morning at 6 a m At 8 a m three ounces of mist alba is given The worm is usually brought out complete with head The dosage given above is for an average adult weighing 120 lb

* Melon pumpkin seeds (*Cucurbitae semina praeparata B P 1914*) are obtained from the *Cucurbita maxima* Duchesne a native of the Levant For medicinal use they should not be more than a month old and should be deprived of their seed coats The Curator Royal Botanic Gardens Kew kindly informs us that the fruit which is also known as the calabash gourd squash gourd and red gourd is cultivated in most warm countries particularly in India He adds The plant produces the largest known cucurbitaceous fruit in some cases measuring nearly 8 feet in diameter and weighing as much as 240 lb

Income Tax

Public Appointment Basis of Calculation

M B obtained a definite public appointment on February 2nd 1931 During the previous nine months he had earned £231 in respect of broken employment partly as locum tenent at two hospitals and one county council which employment commenced April 1st 1930 On what basis should he be assessed for 1931-2?

** The Finance Act 1927 Section 45 (4) provides that where the person first held the office or employment on some day in the year preceding income tax shall be computed on the amount of the emoluments for the year of assessment M B holds an office and he first held that office in 1930-1 consequently he is assessable for 1931-2 on the amount of the emoluments of that year The previous broken employment is not the same (or even a precisely similar) office and does not affect his 1931-2 liability

British Income While Resident Abroad

J T has been resident in Africa for four years and returned to the United Kingdom on April 6th 1932 On May 3rd 1932 he withdrew from a British bank money which had been on deposit during his absence abroad together with the accumulated interest Is he liable on the whole amount of the interest or on only the portion that accrued while he was abroad?

**On the whole amount residence abroad does not carry exemption from income tax on income arising in the United Kingdom

Sale of Practice on Leaving England

W B P sold his practice in June 30th 1932 and after remaining in the United Kingdom for some months went abroad where he has since remained He states that he has received a demand note for the income tax he would normally have paid if he had remained in England He paid income tax in January and June 1932

The tax referred to above would be for the financial year ending April 1932 There might be some liability in respect of the professional earnings for the three months to June 30th but as the year's personal allowances would be set against that quarter's income any such liability would presumably be comparatively small certainly not anything like a normal year's tax

Cash Basis—Partnership Division

RODWAY —A and B were partners on a half share basis until March 31st 1932 as from which date B purchased an additional one eighth share making the ratio of division three eighths and five eighths Cash received after March 31st for work done before that date has been divided half and half On what share should B's own liability be computed for 1932-3?

B's share of the assessment will be five-eighths of the gross amount less of course his personal allowances The cash basis is merely a measure of the earnings of the practice and the assessment for 1932-3 is in respect of those earnings whether received in cash or not

Departmental Appointment Official Quarters

M H was until March last a whole time medical officer in the Ministry of Pensions He has just received a demand for income tax for 1930-1 and 1931-2 on the annual value of the quarters he occupied as an unmarried medical officer No other unmarried medical officer has been asked to pay tax on the quarters and M H has now left. Is he liable?

** Yes The Income Tax Act of 1918 provides that a house tenement or apartment belonging to the Crown in the occupation of any officer of the Crown by reason of his office or otherwise is assessable on the occupier according to the amount of the annual value The point as to whether the occupier is married or not does not seem to affect the question which has to be decided according to the status of the individual and the use to which the premises are put by him

Professional Use of Residence

M B Ch B is shortly to be married and will then put her plate up in a new estate The husband will be in business some distance from the house What proportion of the rent maid's wages and telephone will she be able to charge for income tax purposes?

* In such circumstances it is almost impossible to suggest a definite proportion It depends on what would be reasonable and the primary factor is what proportion of the total accommodation is set apart and used for professional purposes? Unless our correspondent attracts work very quickly she will not be likely to be allowed more than one-quarter to one third of the total expenses as incurred for professional purposes

Assistant's Board and Lodging—Assessability

J L acted as assistant to his present partner on terms that he received a monthly salary in cash and had bed and breakfast in a nearby house for which the employer paid £1 1s a week and other meals with the employer The employer has been allowed to deduct £2 2s a week as the cost of J L's board and lodging and the income tax authorities regard that amount as assessable on him

**In our opinion the £1 1s per week which is paid on J L's account for his board and lodging is probably rightly regarded as assessable on him inasmuch as it relieves him of the necessity of making that precise payment himself On the other hand the benefit of free meals at his employer's house appears to be directly covered by the rule in the old case of Tennant v Smith and we do not consider that any later case has brought that benefit within the scope of taxation

LETTERS NOTES ETC

Left handedness and Mirror writing

Dr RICHARD BELL (Haydon Bridge) writes A letter in your issue of April 1st states that left handedness and mirror writing as a combination is extremely rare If by mirror writing one means writing which viewed in a mirror appears ordinary writing I cannot see how this is rare especially from left handed people I should like to be assured on this point as up till now I thought my own capabilities of writing with my left hand starting at the right side of the page quite ordinary and not worth investigating more thoroughly Right handed people seldom realize the irritating difficulties that beset the path of the left handed Society demands that a man must be right handed that his writing may be read that he may not be a nuisance with a cricket bat or a hockey stick or a rifle or a bomb that he may not appear ungainly at dinner

intolerance to plasmoquine has occurred, nor is it expected to occur with the dosage prescribed, and none of the toxic symptoms occasionally seen with that drug (for example, cyanosis, abdominal pains) has been noted. The treatment pamphlet, together with the requisite drugs, is supplied to the patient as soon as convalescence sets in, and he is instructed to report any symptoms of ill health which may arise.

TABLE I.—*Cases Shown in Tabular Form*

Case	Date First Seen	Previous Malarial History	Type of Infection	Relapse	Under Observation to—	Remarks
F C	12/29	Two previous attacks	Benign and subtertian	None	4/33	Mixed infection contracted in Venezuela five months previously
H P	1/30	Many attacks	Benign	12/30	7/31	Contracted in Ceylon eighteen months previously. Had a cure in European tropical hospital in July 1929. No further attack
C M	3/30	None	Benign	None	4/33	
Mrs F	6/30	None		None	4/33	
L S	7/30	None	Subtertian	None	4/33	
H S	7/30	None		None	4/33	
Mrs T	8/30	None		None	4/33	
G C	9/30	None	Benign	None	12/31	
Miss W	5/31	None	Subtertian	None	10/32	
S L	7/31	None		None	4/33	
Miss L	10/31	None	Benign	None	4/33	
Miss U	11/31	None		3/32	4/33	Child aged 10. Treatment of first attack delayed ten days owing to absence from home
Miss B	12/31	Many attacks		None	4/33	
Mrs F	12/31	None		6/32	4/33	No further attack after relapse
R G	12/31	Two attacks	"	None	4/33	Contracted in Venezuela fifteen months previously. Invalided for malaria
Mrs W	1/32	None	"	None	4/33	
G H	2/32	Many attacks		None	4/33	
Mrs E	2/32	None		None	4/33	
Mrs N	3/32	None		None	4/33	
Mrs B	5/32	None		None	4/33	

TABLE II.—*Standard Five Weeks Antimalaria Course*

Preliminary calomel and Epsom salts. Constipation must be avoided while this course is being taken.

1st week *1st to 3rd day* (inclusive).—Quinine grains x + one plasmoquine tablet morning and night. Quinine grains x midday.
4th to 7th day (inclusive).—Quinine grains x + two tonic pills morning and night. Quinine grains x midday.

2nd week *1st to 3rd day*.—Quinine grains x + one plasmoquine tablet morning and night. Quinine grains x midday.
4th to 7th day.—Quinine grains x + two tonic pills morning and night. Quinine grains x midday.

3rd week *1st to 3rd day*.—Quinine grains x + one plasmoquine tablet morning and night.
4th to 7th day.—Quinine grains x + two tonic pills morning and night. Quinine grains x midday.

4th week.—As for third.

5th week *1st to 3rd day*.—Quinine grains x + one plasmoquine tablet morning and night. Quinine grains x midday.
4th to 7th day.—Quinine grains x + two tonic pills morning and night.

The quinine used is generally quinine hydrochloride in capsule. Occasionally quinine is used in solution (where there is difficulty in swallowing capsule). The plasmoquine referred to is plasmoquine simplex. The tonic pills are the standard pills of B. W. and Co. containing quinine grain 1, iron, arsenic, and strychnine.

In view of recent statements suggesting that delay in commencing treatment in malaria might be of benefit in permitting the acquisition of some natural immunity and thus facilitate subsequent cure, I may state that all these cases commenced treatment as soon as the diagnosis was made, and my own experience indicates that where delay has occurred, owing to incorrect diagnosis or some other cause, the severity of the attack in primary cases has been very much aggravated without any diminished liability to relapse. For the purpose of this paper I am assuming that all patients carried out their treatment according to instructions, and that any subsequent attack of malaria was in the nature of a relapse and not a new infection.

TREATMENT OF ACUTE CORYZA BY AUTOGENOUS VACCINES

BY

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Anti-catarrhal vaccines of various types are widely used by clinicians, and stock vaccines are marketed by a large number of commercial houses. There is, however, very little evidence that such vaccines have any beneficial effects, and extensive investigations by von Sholly and Park (1921), Jordan and Sharp (1921), and Ferguson, Davey, and Topley (1927), showed that stock vaccines exerted no influence on the incidence of acute coryza. The object of this investigation has been to determine whether autogenous vaccines were of any greater value than stock vaccines.

In previous studies of the bacteriology of acute coryza (Hoyle, 1932) it had been found that individuals who suffered from unusually frequent and severe attacks of coryza harboured pneumococci, influenza bacilli, and "mouse pathogenic green streptococci" in large numbers in the upper respiratory tract, these organisms showing an increased incidence during infections. Similar observations have been recorded by Webster and Clow (1932). Haemolytic streptococci, while absent from the upper respiratory flora of the majority of normal individuals, were present in a small number of cases and showed an increased incidence during infections. Friedländer's bacillus was observed in some cases of chronic catarrh. No other organism which could be cultivated on the media employed appeared to play any part in upper respiratory infection.

TYPE OF VACCINE USED

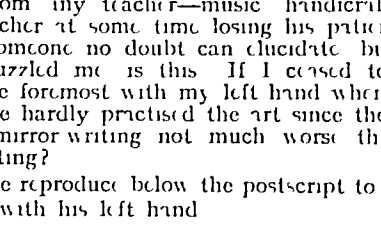
In view of the above findings it was considered essential that all vaccines employed should contain pneumococci, *B. influenzae*, and "mouse pathogenic green streptococci", and if an autogenous strain was not available a stock strain was included. Haemolytic streptococci and Friedländer's bacillus were only included in the vaccine when autogenous strains were available. The composition of the vaccine was as follows:

1 c.cm. of an eighteen hour culture of pneumococci in 5 per cent. rabbit's serum broth.
1 c.cm. of an eighteen hour culture of "mouse pathogenic green streptococci" in 5 per cent. rabbit's serum broth.
8 c.cm. of saline.

B. influenzae from a chocolate agar slope was suspended in the above to a concentration of 1,000 millions per c.cm., and if autogenous strains of haemolytic streptococci and Friedländer's bacillus were available they were added in concentration of 500 millions per c.cm. and 1,000 millions per c.cm. respectively. To 1,000 formaldehyde was used as antiseptic. Serum

that he may easily follow instructions in books for manipulations or movements that he may learn almost anything from any teacher—music handicraft etc—without that teacher at some time losing his patience A problem which someone no doubt can elucidate but which has for years puzzled me is this If I ceased to learn to write back side foremost with my left hand when I was about 7 and have hardly practised the art since then why to-day is my mirror writing not much worse than my ordinary handwriting?

*** We reproduce below the postscript to Dr Bell's letter written with his left hand



New Treatments for Old

DR A CLARK (Kenton Harrow) writes May I as an ordinary general practitioner venture to protest against some of the remarks of Lord Horder in his article "New Treatments for Old" appearing in the *British Medical Journal* of May 20th? While agreeing with many of his points I take exception to his attack on many of the smaller firms of manufacturing chemists I am particularly offended by his denouncement of arthrytin and antibiosyn both of which products are well known to me and in my experience have given excellent results Concerning antibiosyn particularly I can say from personal experience that it is one of the most remarkable therapeutic agents it has been my good fortune to discover The makers' explanation of its action does not concern me What does interest me are the results I have obtained which leave no doubt in my mind as to its great efficiency in all types of bacterial infections In these circumstances I think it rather unfair that a man of such great standing in the medical world should so completely condemn it Surely an open mind and a lively curiosity are the guiding qualities in all experimental endeavour

Antibody Products Limited (Watford) write In your issue of last week Lord Horder mentions our products antibiosyn and antimalignyn by name in such slighting terms that we feel you will allow us the courtesy of your columns to rebut some of the harsh statements he makes about these preparations These names offend Why? The name antibiosyn was dictated by the main action of this substance—namely its polyvalent antibacterial action He is distressed because they suggest that a number of disease processes which are widely different are all of them amenable to the same chemical substance We have clinical reports indicating that many medical practitioners are satisfied that antibiosyn is effective in a wide range of diseases caused by bacteria of an endotoxic nature He seems to grieve that the older specific therapy should have to give way to the newer non specific methods but just as protein shock methods may prove beneficial in very diverse complaints though we may not in the least know how so it is not impossible to imagine a chemical serum derivative that may have the same effect without the discomforts attendant on protein shock therapy

'One of the Best for Cancer'

A correspondent giving an address in Liverpool sends the following ingenuous communication I discovered the treatment for internal cancer My firm belief is that all external cancer comes from internal cancer My discovery is not my own only through long study from Professor Judah Levitt which I claim he was the biggest medical man in his time because he says in his diary how to diagnose cancer without any x-ray or blood test and he gives you the nature from which it could develop, and he gives you the cure for it which I have tried several cases and in every case showed my great success, killed the pain and prolonged life I cannot see the reason why medical men should not try this treatment to relieve the whole world from this dreadful disease I am almost certain that the doctors are using medicines out of old Egyptian books also from a book the name of which is 'Rambon' that is translated into various languages I would like to have a debate with all medical men from all England to convince them that the treatment from Prof J Levitt is *one of the best for cancer* I could assure you that if Prof J Levitt was alive still he would be the greatest man in the world with his remedies You may alter this story to your own liking also there are a few testimonials if required

Mobile Sanitation

The Elsan system of chemical sanitation has for years proved valuable wherever it is impracticable to install a drainage system especially during late years in passenger aircraft and motor coaches Its most recent application suggests a wide field of usefulness The organizers of the British Hospitals Air Pageant, which has just commenced a six months tour of the country including about two hundred towns were faced with the difficult problem of providing suitable lavatory accommodation for the spectators of their display The firm of Duple Bodies and Motors in response to their appeal constructed in seven days two bodies of an entirely novel design and fitted them on one of the new three ton Morris commercial chassis and a Harrow trailer These vehicles consist of mobile sanitary conveniences fitted with the Elsan equipment for men and women respectively The motor vehicle contained five closets and the trailer three and a urinal together with wash basins The vehicles are enamelled white inside and finished outside in bright red The entrances and exits are very wide and fitted with folding steps and handrails These outfits should prove of great value to municipalities and undertakings who have to improvise conveniences for large crowds in the open air They would for instance add greatly to the amenities of Derby Day and Bank Holidays

Visit to Soviet Russia

Professor JULIAN HUXLEY Mr C MANSELL MOULTIN F R C S and Dr JOHN MARRACK write It is proposed to organize a tour of doctors and scientists to the U S S R and the first party will leave London Bridge by Soviet ship for Leningrad on July 1st The return journey will cost £22 to £36 inclusive, according to the type of accommodation selected The party will spend a total of sixteen days in Russia—three days in Leningrad five days in Moscow then there are three alternatives (*a*) Gorky down the Volga to Stalingrad–Leningrad (*b*) Rostov/Don Kharkov–Leningrad, (*c*) Kharkov Kiev–Leningrad Meetings will be arranged which members of the party will be invited to address and there will be excursions with guides to scientific institutions of interest to members It is suggested that parties shall consist of about ten in number to facilitate arrangements Parties may be arranged to leave London at a later date if there is a demand for such parties The latest date for receiving applications for the party leaving London on July 1st is June 15th All inquiries should be addressed to the secretary of the S C R 1 Montague Street W C 1

Victory 4 per cent Bonds

A CORRESPONDENT writes There must be many members of the British Medical Association who are holders of Victory 4 per cent Bonds the present value of which is £109 These bonds are redeemable next month at par But for the fact of the drawing these bonds are an excellent investment It may not be generally known to the profession that for the sum of 3s to 4s per £100 bond insurance can be effected against the risk of drawing and by so insuring the holder avoids loss of capital if drawn Information on this subject may be obtained by members from their bank managers or brokers

Corrigendum

In a report of Dr A R Friel's remarks on zinc ionization at the discussion on chronic suppurative otitis media in the *Journal* of May 13th (p 826 column 1) the words 'in the necrosed area' (line 6) should be deleted and "sepsis in the inaccessible area' (line 15) should read "sepsis in the accessible area

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The summer number of *Punch* devotes much attention to the problems and predicaments of the holiday maker and picnickers especially will sympathize with Bertram Prince's patient who tells his elderly medical adviser that they are mostly insect bites but some of them were made by bullstones

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Messrs Maggs Bros have recently published a catalogue (No 582) of their manuscripts and books on medicine magic astrology and natural science arranged in chronological order as well as their portraits and autographs of physicians and scientists

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Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 46 47 48, 49 50 51 and 54 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 52 and 53

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 235

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

374 Scarlet Fever and Valvular Disease

W J MOLTSCHANOW (*Jahrb f Kinderheilk* February 1933 p 129) in the period 1929–31 saw seventeen cases of valvular disease which occurred during or immediately after scarlet fever at the Children's Clinic of the First Medical Institute of Moscow The children were aged from 4 to 12 years The attack of scarlet fever was subtoxic in two cases which were treated with serum but in all the others was moderate or mild The endocarditis appeared in one case in the second week in fifteen between the third and eighth weeks and in one the date of onset was not determined Two patients died with symptoms of cardiac failure one six months and the other eleven months after the onset of the endocarditis In fourteen cases the endocarditis was preceded or accompanied by arthritis In addition to the two well known forms of joint affection in scarlet fever—namely scarlatinal synovitis and purulent arthritis there is a later form of polyarthritis which occurs between the third and the seventh week of scarlet fever in association with cervical adenitis nephritis or tonsillitis This late polyarthritis presents the clinical features of a rheumatic joint affection especially as it is followed by endocarditis In one of Moltschanow's fatal cases the necropsy revealed the rheumatic character of the valvular disease The occurrence of the rheumatic syndrome during or immediately after scarlet fever should not be regarded as a mere coincidence nor as the exacerbation of a pre existing acute rheumatism since in most of the patients the rheumatic syndrome had not appeared before the attack of scarlet fever According to Moltschanow the allergic theory offers the best explanation of the connexion between scarlet fever and the development of the rheumatic syndrome Scarlet fever therefore should not be removed from the list of diseases which give rise to valvular disease which probably complicates more frequently than is supposed as the rheumatic syndrome occasionally does not develop until after the patient has left the hospital

375 Sulphaemoglobinaemia

This condition in which haemoglobin is replaced partially by sulphaemoglobin is discussed by J C HEALY (*Journ Lab and Clin Med* January 1933 p 348) who believes that it is overlooked frequently especially when the symptoms are mild Patients complain of constant dull oppressive headache and chronic constipation Mauve-lavender cyanosis of mucous membranes and of the nail beds (in the absence of cardiac or pulmonary disease) is symptomatic while spectroscopic blood examination shows an absorption band in the red portion of the spectrum in addition to the normal absorption bands of oxyhaemoglobin Administration of large quantities of sulphur or of H_2S produces sulphaemoglobinaemia it occurs also in the presence of powerful reducing agents such as nitrites A nitrite producing bacillus has been found in the alimentary tract of affected persons An aniline derivative—acetphenetidin—in large doses will produce sulphaemoglobinaemia Apparently aniline sensitizes haemoglobin which then unites with sulphides absorbed from the intestine That excessive intestinal absorption of H_2S is a necessary factor is proved clinically by the occurrence of severe and persistent constipation in the majority of patients In addition to acetphenetidin acetanilide and exposure to aniline will cause sulphaemoglobinaemia Healy's two patients took habitual and excessive doses of bromoseltzer The first a man aged 50 years suffered from severe constipation and frequent headaches for which he took increasing doses of acetanilide until he needed a full dose every hour He carried bromoseltzer for use when soda water was unobtainable The cyanosis and spectroscopic tests were typical Eggs were restricted and large quantities of fat prescribed Oxygen and CO were administered three or four times daily until the respiration rate rose to 36 per minute Ammonium chloride 15 grains was given four times daily as a substitute for bromoseltzer All symptoms disappeared in five days The second patient a man aged 40 complained of glycosuria constipation and headaches for which he took bromoseltzer Symptoms and treatment were precisely the same as in the other case Glycosuria disappeared in two days headache and sulphaemoglobinaemia in a week

376 Encephalitis following Rubella

MOTZFELDT (*Norsk Mag f Laegevid* February 1933 p 153) records this case which is of special interest not only on account of the rarity of the condition—of which only three previous examples have been recorded by Labougle in 1910 Debre Turquety and Broca in 1930 and Siegl in 1932—but also because this is the first fatal case on record The patient was a girl aged 14 who suddenly developed coma hyperpyrexia and athetotic movements of the four limbs four days after the appearance of the eruption Death ensued in twenty four hours The necropsy showed a generalized inflammation of the brain and on histological examination the appearances were similar to those of a case of encephalitis following measles

Surgery

377 Elephantiasis Nostras

G P MULLER and C G JORDAN (*Ann of Surg* February 1933 p 226) describe elephantiasis as a chronic inflammatory fibromatosis of the dermal and hypodermal tissues either preceded or accompanied by venous and lymphatic stasis In true filarial elephantiasis the lymph channels are obstructed by the parasites and invasion by the streptococcus follows Tropical elephantiasis is not caused by filaria but the reason for its frequency in the Tropics is the greater exposure of the skin to infection In northern latitudes the disease is called elephantiasis nostras The causative factor may be trauma or a tumour which presses on the lymph channels and causes lymphatic stasis Phlebitis or an inguinal bubo or scarring after operation for hernia will with a superadded streptococcal infection produce the disease Heredity is also an important aetiological factor Elephantiasis nostra is usually found in the leg scrotum or penis The typical symptoms of the disease are recurrent attacks of elephantoid fever with chills an elevated temperature and painful swollen limb with enlarged regional lymph nodes Symptoms greatly resemble those of erysipelas and generally subside after a few days but recur about once a month and each time the swelling subsides less than the time before The dermal and hypodermal tissues hypertrophy and the underlying soft tissues unite with the skin to form one brawny hard induration The process of development extends over a period of years and is not arrested until the elephantiasis is fully developed The skin is hard does not fold or pit and shows trophic disturbances with ulcerations in many cases The tissues hypertrophy and sclerosis stops with the deep fascia and the disease involves only the structures of the superficial venous and lymphatic system Treatment should be medical and surgical and should consist of baking and massage elevation of the limb compression by elastic bandages injection of streptococcus polyvalent serum vaccine therapy fibrolysin and foreign protein therapy Operative treatment consists of an elliptical incision of the skin removal of excess skin reflection of skin flap 6 cm laterally the removal of

broth cultures of pneumococci and mouse pathogenic green streptococci were used because in animal experiments it had been found that they were more effective in producing immunity than saline suspensions and experiments with human volunteers showed that the use of serum broth did not result in unduly severe reactions

SOURCE OF CASES

I obtained the co-operation of a number of Leeds general practitioners who sent cases suffering from unusually frequent and severe attacks of coryza A clinical history was obtained from each patient and an examination of his upper respiratory flora was made by the methods described previously (Hoyle 1932) An autogenous vaccine was prepared as set out above and a course of three injections given at weekly intervals—0 25 c cm for the first and second doses and a third and final dose of 1 c cm Six months later a record of progress was obtained and any patient desiring a further course of vaccine was examined again and a fresh vaccine prepared and administered

BACTERIOLOGY AND RESULTS

As was expected these individuals showed unusually large numbers of pathogenic bacteria in the upper respiratory tract Out of ninety four cases examined in only one case were no pathogenic bacteria detected Pneumococci were isolated in 59 per cent of the cases *B influenzae* in 52 per cent mouse pathogenic green streptococci in 72 per cent haemolytic streptococci in 32 per cent and Friedländer's bacillus in 11 per cent

It was only possible to obtain satisfactory records in sixty-seven cases and the results in these cases were as follows twenty eight cases derived no benefit whatever in twenty three cases the incidence of acute coryza was not affected but the severity of the attacks was reduced sixteen cases showed a definite reduction in both the frequency and the severity of the attacks These results indicate that autogenous anti-catarrhal vaccines like stock vaccines do not appreciably affect the incidence of attacks of acute coryza and although some cases showed a reduction in the severity of attacks this was not in my opinion sufficient to justify any very extensive use of such vaccines It has been suggested that the failure of anti-catarrhal vaccines is due to the causal agent of coryza being absent from the vaccine but as the immunity conferred by an attack of coryza is negligible there appears to be no reason for supposing that any greater degree of immunity is to be expected from vaccine therapy and it is probable that a reduction in seventy of the attacks is the most that can be expected

SUMMARY

Sixty seven individuals suffering from very frequent and severe attacks of coryza have been treated by autogenous vaccine therapy The results show that the vaccine exerts no influence on the incidence of attacks The suggestion has been made by previous workers that *while stock anti-catarrhal vaccines have no effect on the* incidence of acute coryza they tend to diminish the frequency of severe complications such as pneumonia and this suggestion has been supported by a small number of cases treated by autogenous vaccines

I should like to express my indebtedness to a number of Leeds general practitioners who have assisted me in this investigation to the Medical Research Council from whom I am in receipt of grants and to Professor J W McLeod for some helpful criticism

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ACETYLCHOLINE IN THE TREATMENT OF EPILEPSY

BY

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Since Hughlings Jackson [1] in 1870 pointed out the possibility of the epileptic seizure being determined by contraction of the cerebral arteries the role of vascular spasm in this disorder has been a subject of clinical and experimental interest Vascular spasm is a mechanism now accepted by many clinicians as explaining a number of cases of transitory aphasias hemianopias and migraine The sudden blanching of the extremities as a result of vaso-constriction is well illustrated in Raynaud's disease The association of Raynaud's disease with cerebral vascular disturbances has been recorded by Norman [2] and by Carp [3] Russell [4] has noted the similarity between the stages of the epileptic convulsion and the symptoms accompanying heart block in Stokes Adams's disease Many observations of the exposed cortex during epileptic attacks have been made Foerster [5] describes the sequence of events repeatedly seen by him on the operating table Sudden pallor of the cortex and arrest of cerebral pulsation is immediately followed by extreme hyperaemia venous engorgement and bulging of the brain Horsley [6] Leriche [7] and Kennedy and Hartwell [8] have observed practically similar changes Corroborative evidence is to be found in the observations of the fundus oculi during an attack Jackson [9] long ago noticed that the fundus was pale before a seizure during the convulsion the veins became large and dark Experimental evidence has recently been brought forward to show that the cerebral vessels contract after stimulation of the cervical sympathetic and dilate in response to vagus stimulation (Schilf [10] Forbes and Wolff [11]) The effect of these observations has been to bring again to the foreground the hypothesis that fits are precipitated by cerebral vaso-constriction But although it is now generally acknowledged that the cerebral arteries are under vasomotor control a causal relationship between cerebral vaso-constriction and the epileptic attack is by no means accepted (Notkin *et al* [1] Wilson [12]) On the assumption that seizures are due to vaso-constriction of the cerebral arteries various operations on the cervical sympathetic chain have been performed in epileptic patients (Alexander [13] Bojovitch [15] Tinel [16] Zavialoff [17] Lauwers [18]) The results of cervical sympathectomy have on the whole been disappointing Favourable results in certain subjects are reported recently by Lauwers [18] following the removal of the carotid body

Attempts to influence epileptic attacks by the administration of vaso-dilator substances have been made Popea and Eustatziou [9] in 1927 recorded beneficial results following the inhalation of amyl nitrite at the onset of attacks In 1929 Villaret and Justin Besançon [1] demonstrated the therapeutic value of injections of acetylcholine in Raynaud's disease arteritis and similar complaints The beneficial effects of acetylcholine in Raynaud's disease appeared to lend support to the vaso-constriction theory of epilepsy In 1931 Étienne [22] and his co-workers at Nancy investigated the action of this substance in a group of seven epileptics In two cases a notable reduction in the fit incidence was recorded Later de Gennes [3] reported that injections of acetylcholine arrested the seizures in two cases of status epilepticus Similar results were described by Pagniez Plichet and Decourt [4] Dino Bolsi [5] in 1932 reported a dramatic reduction in the number of seizures in five of his eight cases In some of the group investigated the beneficial effect persisted for several days after the injections of acetylcholine

a large section of subcutaneous tissue and deep fascia, and the exposure of the muscle which is brought into direct contact with the skin The greatest success was noted in cases of the scrotum and penis and in cases of secondary elephantiasis of long standing Five cases are fully reported

378 Distinction between Luxation and Tearing of Joint Capsule

F O MAYER (*Zentralbl f Chir* February 4th, 1933, p 249) stresses the importance of careful distinction between luxations, according as they involve tears in the joint capsule to a greater or lesser extent He thinks that the term "luxation" should be reserved for dislocations which involve the capsule to only an inconsiderable degree and in which reduction may be expected to lead to a good functional result Subcoracoid luxation of the humerus and posterior anti brachial luxation are usually of this type, and the prognosis is usually good But in the case of the knee dislocations are accompanied by such considerable injury to the joint capsules that both the treatment and prognosis are different, to such conditions the author prefers to apply the term 'joint-tear' *X*-ray examination affords little indication in such cases, since the part of the injury which will give trouble later is not apparent To ignore such a distinction is to court the possibility of later complications arthritic changes, and sometimes permanently stiff joints These cases require longer immobilization and very great care in the re establishment of function The danger of regarding such cases as simple luxations and giving a favourable prognosis apart from that indicated, lies in the probability of considerable difficulty with panel authorities or trade societies who may be involved in the cost of treatment

379 A Case of Strangulated Epigastric Hernia

E DELANNOY (*Bull et Mém Soc Nat de Chir* March 4th 1933 p 319) reports a case of strangulated epigastric hernia which occurred in a man of 54 years The patient was vomiting and had a hard irreducible hernia The abdomen was distended with a painful swelling in the epigastrium and resonance in the umbilical region Dullness in the flanks was noted and a thrill which gave the impression of a considerable quantity of free fluid A diagnosis of strangulated epigastric hernia was made, and operation under local anaesthesia was carried out An elliptical incision was made round the hernia, which was easily freed After the sac was opened a quantity of blood-stained fluid escaped, followed by about 15 cm of small intestine which was purplish in colour but otherwise in good condition This was returned to the abdomen, the hernial sac was quickly cut off, and the opening closed with catgut sutures The patient made an excellent recovery following the operation The case was of interest on account of the comparative rarity of the condition Epigastric herniae consist in most cases of an extraperitoneal lipoma or a peritoneal diverticulum without contents

380 Rupture of the Tendo Achillis

P COGNIAUX and L WYBAUW (*Journ de Chir et Ann Soc Belge de Chir* February, 1933 p 46) report five cases of subcutaneous rupture of the tendo Achillis and state that treatment should be surgical and should be carried out as early as possible The rupture is most frequently caused by a sudden overstretching of the tendon between the contracted fleshy belly of the muscle above and its insertion into the os calcis below This overstretching may be produced by the violent contraction of the muscle during a fall on the ball of the foot, and three of the cases reported were caused in this way In two cases the rupture was caused by a slip on the stairs and in another on a slippery road In each case the patient was very stout The symptoms in all but one case were similar—namely, instantaneous localized pain in the heal which was increased by palpation or by active movement The amount of extension possible in the ankle was reduced in varying degree, whilst its power was practically nil On palpation it was possible to feel the gap at the site of the rupture Walking was only undertaken with great pain and difficulty In the remaining case, which was complicated by a sprain the rupture was only discovered after the sprain had been treated The aim of treatment in these cases is to bring about union between the two ends of the tendon by a short and firm scar Non-operative treatment endeavours to bring this about by external manipulation—immobilization in hyperextension with continued compression of the calf muscles to bring the ruptured tendon towards its attachment Massage and regular mobilization are also necessary, and the results are not good Surgical treatment consists in the careful suture under local anaesthetic of the two ends of the tendon, and this is easy to carry out After immobilization in moderate extension for ten days massage and mobilization are started and the patient is allowed to walk after three weeks This treatment produces excellent results In rare cases a secondary suture may be necessary, whilst in others where the separation between the muscle and tendon is considerable a fascial graft may be required and usually gives a satisfactory result

Therapeutics

381 Liver Therapy in Sprue

Referring to a case of sprue with a neuro anaemic syndrome (reported by Picard) which benefited from the administration of liver, COSTEDOAT (*Bull et Mém Soc Méd des Hôp de Paris* February 13th, 1933 p 171) records a similar case in which recovery resulted from a like treatment The patient, a resident for some time in Indo-China, where the disease was evidently contracted, presented the following symptoms chronic diarrhoea with very abundant, malodorous fatty, clear stools containing neither blood, mucus, nor any known pathogenic organism, good appetite, with some degree of thirst abdominal meteorism, stomatitis, grave anaemia, painless oedema of the lower limbs slight ascites, and cachexia No enlargement of the liver or spleen was noted, and sugar, albumin, and pus were absent from the urine The lungs were normal, but the heart was very rapid The disease was marked by remissions often over long periods No response followed the administration of specific drugs (emetine yatren etc) associated with the usual symptomatic remedies Finally, to combat the anaemia calves liver (200 grams of the raw g and daily) was given Brilliant results immediately followed the blood counts became normal diarrhoea ceased, the oedema, ascites and stomatitis disappeared the weight increased and the general condition improved, cure has persisted to the time of writing An interesting fact is that previous injections of liver extract had proved inefficacious Costedoat suggests that this may have been due to insufficient dosage

382 Intramuscular Administration of Liver Extract

E W MCHENRY E S MILLS and R F FARQUHARSON (*Canadian Med Assoc Journ* February, 1933, p 123) describe a process of preparing liver extract for intramuscular injection, the product has a depressor content, and is not suitable therefore for administration intravenously or subcutaneously They have found this preparation safe, dependable and effective when the adequate dosage is ensured Administered intramuscularly a given amount of extract is at least thirty times more potent than when given by mouth The authors found that the extract from 10 to 20 grams of liver injected thus each day was fully as effective as the ingestion of the extract from 250 to 850 grams A good reticulocyte response has been obtained from a single injection of the extract from 50 grams of liver They point out that, nevertheless, the results of intramuscular therapy are not better than those obtained by the ingestion of an adequate amount of liver or liver preparations This therapy is, however, of great value in the treatment of patients in

On the other hand Dejean and Hughes[26] in four cases treated over a fourteen-day period did not obtain any favourable results

EXPERIMENTAL

The therapeutic effect of acetylcholine and pacyl was investigated in fourteen epileptics at Colney Hatch Mental Hospital The cases selected were subject to frequent major convulsive attacks, which were unassociated with ascertainable organic disorder in the nervous system or elsewhere The age of onset of the disorder and the age at the time of the investigation are shown in the table Either some degree of congenital mental defect or progressive mental deterioration was present in all members of the group During the experiment no change was made in the diet, usual medication or regimen of the subjects The type and frequency of all convulsions aurae, and equivalents were recorded for stated periods before, during, and after treatment

Table showing age of onset of the disorder present age and the number of seizures occurring during the fourteen day periods before during and after treatment with acetylcholine bromide injections (0 1 to 0.3 gram) and pacyl (two tablets three times daily)

Case No	Age of Onset	Present Age	No of Seizures during Previous 14 Days	No of Seizures during Treatment (14 days) by Pacyl	No of Seizures during Treatment (14 days) by Acetylcholine	No of Seizures during Succeeding 14 Days	Results
1	14	22	23	32	20	19	Unchanged
2	7	31	34	29	30	41	Unchanged
3	16	26	5	4	1	6	Improved
4	7	23	5	4	3	4	Unchanged
5	Infant	30	7	8	3	1	Improved
6	Infant	39	4	4	4	3	Unchanged
7	11	23	37	66	* —	—	Unimproved
				Acetyl choline	Pacyl		
8	3	24	5	1	5	5	Improved
9	3	29	3	1	2	4	Improved
10	Infant	33	2	0	2	1	Improved
11	Infant	21	5	4	5	5	Unchanged
12	Infant	18	2	12	12	4	Unimproved
13	Infant	14	19	18	18	12	Unchanged
14	12	20	9	7	9	8	Unchanged

* Treatment stopped on account of increase in number and severity of seizures

Acetylcholine bromide (B D H) was administered by subcutaneous injection each morning for fourteen days The initial dose given was 0 1 gram, followed by a daily dose of 0 15 gram After seven days the dose was increased to 0 3 gram Pacyl is a derivative of choline and has the advantage of oral administration Its action as a parasympathetic stimulant is said to be more constant than that of acetylcholine Two pacyl tablets were given three times daily for fourteen days Half the cases were first given a course of pacyl tablets followed by a course of acetylcholine injections In the other seven subjects this procedure was reversed

DISCUSSION

The influence of pacyl tablets and acetylcholine injections is shown in the table No beneficial effect was observed during pacyl administration During acetylcholine treatment it will be noted that in five cases a reduction of the number of seizures occurred There was no association between the decrease in the number of convulsions and the increased dosage (0 3 gram) given during the second week In two cases diminution in the number of seizures was accompanied by an increase in psychic equivalents No change in the type or severity of the seizures was observed in the other three cases, classified as improved One of these (No 8) became brighter and more energetic and this mental improvement was maintained for some weeks, although the number of fits again increased after treatment There was no mental change noted in the other two patients, who showed decrease of fits during the injections Case No 5, where a decrease in the number of seizures occurred during the fourteen-day period succeeding acetylcholine administration, was confined to bed at this time With regard to Case No 7, a great increase in the number and severity of attacks coincided with the end of the pacyl treatment An attempt to arrest the rapidly repeated seizures by two 0 4 gram doses of acetylcholine failed, and this form of treatment was in consequence stopped The results obtained in the seven cases classified as unchanged do not call for individual discussion

COMMENT

The question arises whether the beneficial effect occurring in a few cases of the group during acetylcholine therapy may not be dependent on some factor other than the action of this substance It is well known that periodic fluctuations in the incidence of seizures occur in many epileptics An investigation of the incidence of fits occurring in these cases during the previous three months, when the subjects were under the same conditions in all respects except for acetylcholine treatment, did not disclose any fourteen-day periods comparible with those which have been held to justify the use of the word "improved" in the table While, therefore, there was no dramatic reduction in the incidence of seizures, it would seem that a small proportion of the group are less susceptible to attacks when under the influence of acetylcholine

The results obtained from the administration of the choline derivative, pacyl, were discouraging On the whole, it may be said that the results which followed the use of these arterial antispasmodic substances do not lend definite support to the hypothesis that cerebral vasoconstriction is by itself the precipitating factor of the epileptic attack It must, however, be admitted that the action of the drugs may not be the same in the case of the cerebral circulation as in the peripheral vessels of the body

The writer is indebted to Dr F Golla who suggested this investigation and to Dr J Brander, for his help and criticism

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severe relapse to whom large doses can be given readily by this method with assurance of an early response. The remission begins about a week sooner than when the extract is administered by the mouth. It is also very useful in treating patients who refuse to continue to take sufficient amounts of liver or its preparations by the mouth. The intramuscular injection of the extract of from 100 grams of liver each week is probably sufficient to maintain most patients with pernicious anaemia in a good state of health. The authors add that it is always very important (as has been amply demonstrated by the oral method of giving liver treatment) to ensure the taking of a sufficient amount no matter how much may be required to maintain the patient in good health with no anaemia and to prevent the appearance or progressive advance of lesions of the nervous system. Liver extract administered intramuscularly was also used with excellent results in a case of sprue with the blood picture of pernicious anaemia. In support of these views the authors record clinical results obtained in hospitals in two cases there was definite improvement in neurological manifestations but it is as yet too soon to suggest that in intramuscular liver therapy a way has been found to deal with these very grave sequelæ of pernicious anaemia.

383 Haematoporphyrin in Melancholia

J. VINCHON and P. BOURGEOIS (*Bull. Soc. de Thér.* February 8th 1933 p. 41) allude to the success obtained within the last three years by German observers in the treatment of melancholia by administration of haematoporphyrin and record four cases which came under their own observation. Their conclusions are as follows: Haematoporphyrin appears to have a specific action in cases of true melancholia but is inactive in states of psychasthenic depression. It seems to have a remarkable effect on the inertia and motor and psychical inhibition characteristic of the melancholic syndrome. Its use enables other drugs to be reduced or given up altogether. The dosage differs according as the attack is mild or severe. In mild cases 30 to 50 drops a day of stabilized 0.5 per cent. solution of haematoporphyrin is given by mouth a quarter of an hour before each meal for two or three weeks. If necessary the treatment may be resumed after a fortnight's interval. In severe forms the intramuscular route is employed. 1/2 c.cm. of a 0.2 per cent. solution being given the first day followed by a series of ten injections of 1 c.cm. After an interval of eight days another series of injections is given the first dose being 1 c.cm. and the rest 2 or 3 c.cm. every other day. No bad effects were observed. The mode of action of the drug is obscure. According to the German observers Huhnerfeld in particular haematoporphyrin being a photodynamic substance acts on the vegetative centres by sensitization of the skin.

Ophthalmology

384 Changing Causes of Blindness

G. NORRIE (*Hospitalstidende* February 9th 1933 p. 141) shows how during the thirty years he has been a medical officer to an institution for the blind in Denmark the relative proportions of the causes of blindness among children have changed. His material consists of about 800 children 684 of whom he has taken charge of personally. In his opinion at the present time xerophthalmia is the most important cause of blindness early in life. In the past it was commonly taken for gonorrhoeal ophthalmia and it is probable that about 150 of the author's cases were due to the former disease. There were as many as twenty-nine cases of xerophthalmia in the three-year period 1913–15. During the next three-year period the numbers were down to eighteen and they were further reduced to twelve in the three year period 1919–21. Since then there have been only one or two cases every year. There were only fifty-one cases of blindness from gonorrhoeal infection at birth and while there were as many as forty-two cases in the fifteen year period 1892–1906 there were only six in the fifteen year period 1907–31. Since then the author has seen only three cases and he attributes this practical disappearance of gonorrhoeal infection of the newborn to the routine employment of Credé's prophylactic treatment. The author's predecessor at the same institute for the blind considered scrofula the most common cause of blindness. But the author himself has seen only thirteen cases the last being a child born in 1912. Tuberculosis would now seem to attack other parts of the eye and give rise to iridocyclitis. With regard to the thirty-one cases of blindness due to trauma the author urges his colleagues to send their patients to hospital whenever one eye is seriously injured. There were fifty-one children suffering from congenital cataract the incidence of which is declining. A little over a third of all the cases of blindness were due to congenital factors. In the future optic atrophy will probably be the most common cause of blindness. In the present material it was responsible for a little over a quarter of all the cases.

385 A New Local Anaesthetic

N. SHIMKIN (*Folia Ophthalmologica Orientalia* February 1933 p. 192) states that cocaine has certain bad effects. Its vaso-constriction is inimical to the healing of corneal ulcers; it is toxic and since blinking is hampered allows drying of the epithelium with consequent cloudiness and exfoliation. Mydriasis harmful in certain cases also results. The use of 1·2 per cent. pantocain a new preparation first used in eye practice by Reible gives anaesthesia in five to forty seconds lasting fifteen to twenty minutes. Pantocain can be mixed with solutions of zinc sulphate resorcin copper sulphate eserine sulphate pilocarpine scopolamine atropine and suprarenin. It can be used for months continuously without evil results is easily soluble in water and can be boiled frequently without deterioration. It causes a slight hyperaemia and has no effect on the orbicularis or pupil. Because of the hyperaemia epithelial regeneration proceeds at a greater rate than with cocaine. A strength of 1 per cent. should be used for operations but 1/2 per cent. is sufficient for infiltration of the lids. Pantocain is cheaper than cocaine and does not come within the Dangerous Drugs Act. The drawback in operating is that there is rather more bleeding than with cocaine or novocain even though adrenaline is added.

Obstetrics and Gynaecology

386 Ureteral Injuries during Pelvic Operations

From the large number of cases reported Q. U. NEWELL (*Amer. Journ. Obstet. and Gynecol.* February 1933 p. 220) believes that ureteral injury is a far more common surgical complication than would be suspected. It is responsible for a certain number of deaths. The accident due to ligation or crushing with clamps is possible in any pelvic operation but usually occurs during radical abdominal and vaginal hysterectomies. Doubtless some unrecognized unilateral ligations with ultimate death of the corresponding kidney occur. Though in most cases the injury is unilateral in a certain number both ureters are involved. In discussing treatment Newell emphasizes the importance of prophylaxis. In the operations cited the ureters should be isolated according to the familiar technique and as a further safeguard ureteral catheters may be inserted before operation. If the accident is due to ligation and is discovered at the time of operation deligation should immediately be done. If one or both ureters have been severed a uretero-ureteral anastomosis is indicated. If the ureter has been severely crushed by a clamp end to-end anastomosis should be done. If the injury is slight circulation may be restored and healing take place without fistula formation. Should the accident not be discovered for some days deligation is indicated if the patient's

ACETYLCHOLINE THERAPY IN EPILEPSY

BY

J E S LLOYD M B

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A diminution in the number of fits of epileptics following administration of choline derivatives has been recorded in French journals The following investigation of the subject was carried out at Cane Hill Mental Hospital with the permission and help of Dr Lilly the medical superintendent

METHOD

In order to avoid any risk of decomposition the acetylcholine bromide solution was prepared immediately before injection The volume of the injection was maintained at 1 c cm and sterile distilled water was used as the solvent Twenty-one epileptic patients were treated by acetylcholine injections and a similar number of control epileptic patients were given an equal volume of saline hypodermically The dose of acetylcholine was during February 1933 0 12 gram once daily During March the dose was 0 12 gram twice daily All medicines that the patients had been receiving before the course were continued unchanged In April 1933 seven patients were given increasing doses of acetylcholine bromide until they were receiving 0 5 gram hypodermically twice daily The tables show the numbers of fits per month compared with the average numbers per month of 1932

Choline Treatment						Saline Controls					
Case No	Age at onset of fits	Age in 1933	Average fits per 28 days 1932	February 1 to 28 1933	March 1 to 28 1933	Case No	Age at onset of fits	Age in 1933	Average fits per 28 days 1932	February 1 to 28 1933	March 1 to 28 1933
1	7	50	6	5	8	22	—	40	5	4	9
2	12	41	16	19	21	23	21	43	15	14	21
3	14	43	9	10	19	24	—	49	9	9	13
4	—	—	1	1	2	25	—	65	1	0	1
5	18	43	1	0	0	26	10	54	1	1	0
6	—	48	1	0	0	27	11	43	4	5	9
7	12	32	2	2	3	28	—	37	15	12	20
8	13	32	18	24	24	29	13	29	11	22	9
9	7	64	9	4	5	30	—	62	7	5	6
10	15	44	9	1	2	31	19	37	8	9	4
11	35	60	2	0	4	32	—	60	3	2	3
12	2	33	6	5	5	33	12	33	7	4	8
13	19	28	5	0	0	34	23	33	5	7	5
14	1	37	0	0	0	35	—	58	0	0	0
15	—	56	7	9	7	36	18	57	5	6	8
16	13	40	10	10	7	37	21	48	8	9	10
17	12	44	6	10	9	38	—	44	4	8	5
18	—	62	4	4	4	39	—	60	4	5	11
19	5	54	10	8	9	40	—	44	12	14	9
20	—	62	3	5	1	41	—	55	2	3	1
21	26	53	3	1	4	42	—	48	4	7	6
Total			128	118	132	Total — —			133	146	158

Case No	Average per 28 days 1932	April 1 to 28 1933	Case No	Average per 28 days 1932	April 1 to 28 1933
3	9	14	23	15	14
16	10	12	24	9	8
17	6	9	33	7	12
19	10	7	Total —	60	75

An attempt was made to ascertain whether the intracranial pressure was affected by the hypodermic injection of 0 5 gram acetylcholine bromide In the case of six patients and six controls the cerebro-spinal fluid pressure was measured immediately before and at one minute intervals following the injection The observations were continued for ninety minutes after the injection No significant alteration of the cerebro-spinal pressure was noted No subjective or objective symptoms following the injections were noted in any case

The conclusion arrived at is that acetylcholine bromide does not diminish the number of epileptic fits No change in the character of the fits or of the mental condition of the patients was observed during the course

THE USES AND DANGERS OF COSMETICS

BY

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It has been estimated that the fourth largest industry in the United States of America is concerned with the manufacture of cosmetic preparations If they are as is said less commonly used in this country they enter none the less into the daily life of an immense number of women And it is therefore a matter of interest not only to the dermatologist but also to the practitioner to consider their potentialities for good or ill

A formidable list can be made out of cosmetic constituents which have produced harmful results I think the length of the list has sometimes influenced the views of writers on the subject and obscured the fact that many of these substances have caused injurious effects only in rare cases and have otherwise been found harmless or even beneficial I do not propose to make an exhaustive list of substances which have proved irritating or toxic in one or two recorded instances but only to consider a few common preparations and their potentially harmful ingredients

SOME COMMON PREPARATIONS

Powders —Toilet powders consist of a mixture of animal or vegetable powders colouring matter and perfume The vegetable powders include rice wheat corn flour starch acacia and tragacanth The mineral powders in use are chalk talc kaolin magnesium carbonate bismuth nitrate or carbonate and zinc oxide The dyes may be of vegetable origin or may be aniline derivatives Various ethereal oils are used as perfumes and orris root is frequently employed as a fixative The majority of these substances are entirely harmless and unperfumed untinted powders are used in dermatological practice The most dangerous powder ingredient to which most of the recorded instances of poisoning from this source are due is lead Either in the form of lead acetate or lead carbonate this seems to have been a very common powder ingredient in the past though the use of lead acetate is surprising since it is so easily soluble that a shower of rain would dissolve it away But its danger has

condition permits, if her condition is grave, nephrostomy with drainage should be performed The most common sequels of ureteral injury are vaginal and abdominal fistulæ The former are the more frequent, vaginal correction of these is unsatisfactory and abdominal operation (either ureteral anastomosis or nephrectomy) is the choice The operation, which should aim at preserving normal ureteral and renal function, should be delayed for one to six months after the primary operation, as the fistula is occasionally cured spontaneously by scar tissue contraction Reports of eight illustrative cases are given

387 Ketone Bodies in the Blood in Pregnancy

According to A GAROFALO (*Ann di Ostet e Ginecol* January 31st, 1933, p 3) a moderate degree of hyperketosis is to be noted during the last three months of pregnancy and during labour During gestation β oxybutyric acid in the blood is augmented, but acetone and diacetic acid are maintained at a low level the latter increase during labour In cases of pregnancy albuminuria and eclampsia the increase of β oxybutyric acid is especially well marked, although it is not possible to trace a parallelism between the amount present in the blood and the clinical severity of the disease In cardiopathies complicating pregnancy ketonic retention is of acetone and diacetic acid rather than of β oxybutyric acid

Pathology

388 Bacteriology of Influenzal Meningitis

P VON GARA (*Deut med Woch* February 17th, 1933, p 252) describes two cases of influenzal meningitis in children, both of which proved fatal The first occurred in a boy 3½ years old Lumbar puncture revealed a markedly purulent cerebro spinal fluid, containing 6,800 cells per c cm and short Gram negative rods In culture these organisms grew in broth, on blood agar, chocolate agar and on plain nutrient agar, forming a number of long filaments After a few subcultures the growth became gradually poorer, and ultimately the organisms died out Pathogenicity tests made by inoculating guinea-pigs and mice intraperitoneally and rabbits intravenously proved negative The patient's serum agglutinated the strain recovered from the spinal fluid to a titre of 1 in 50 The second patient was a girl 6 months old There was a large amount of pus in the cerebro spinal fluid and fine Gram-negative rods were visible microscopically Direct culture on blood agar chocolate agar, and ascitic agar was successful, but no growth occurred on subculture Mice inoculated intraperitoneally apparently with the original cultures, remained well Bacteriologically the points of interest about these cases are the growth of both organisms on media free from haemoglobin, their rapid dying out in subculture and their absence of pathogenicity for laboratory animals

389 The Production of Lymphocytes

Continuing lines of investigation into the problem of lymphoid tissue, details of which were published in the *British Medical Journal* of December 10th, 1932, J M YOFFEY (*Journ of Anat*, January, 1933 p 250) records a study of lymphocyte production from the quantitative standpoint Using dogs, he estimated the numbers of newly formed lymphocytes passing through the thoracic duct into the blood stream, and also of those present in the blood stream The duration of the experimental period was nine hours at a time during seven of which lymph was collected The average total daily output for a dog weighing 10 kilos was found to be 576 c cm lymph and 5 207 000 000 lymphocytes 95 per cent of these being small young forms with only a margin of cytoplasm This percentage and the difference between the relative distributions of small and large lymphocytes in the blood as compared with the lymph led the author to oppose the hypothesis that there is a continuous circulation of lymphocytes from blood to lymph and from lymph to blood Moreover large numbers of lymphocytes may enter the blood stream directly through the blood vessels of lymphatic tissue without entering the lymph and so passing through the thoracic duct He cites reasons for believing that the lymphocytes of the blood are replaced on an average two and a half times daily Since the blood lymphocyte content remains constant the same numbers of lymphocytes must leave the blood each day as enter it The ultimate destination of these lymphocytes constitutes the fundamental problem of normal lymphoid tissue Considerations are put forward which point very strongly to the view that they leave the blood mainly in the bone marrow, where they develop into erythrocytes and granulocytes Yoffey admits, however, that the histological interpretation of cell changes in the marrow is so difficult that it cannot by itself yield an absolutely decisive answer Such a further development was, however, suggested by Jordan, and almost implied by the work of Maximow and Latta The cells of the lymph contrary to previous views, do not seem to be concerned with the transportation of fat, which is carried in the fluid portion Yoffey also disputes the conception that lymphoid tissue has as one of its main functions the arrest of injurious matter The gain resulting from any barrier action of this nature is more than offset by the dangerously easy dissemination made possible by the lymphatic vessels In the normal body, he adds the one function which can be definitely assigned to lymphoid tissue is the formation of lymphocytes The life history of this cell must therefore form the starting point of any investigation into healthy lymphoid tissue, and the author is at present conducting experiments with a view to throwing more light on the factors controlling lymphocyte production

390 The Virus of Chicken pox

T TANIGUCHI *et al* (*Japan Journ Exper Med* December 20th 1932, p 599) have demonstrated by suitable staining methods the presence of elementary bodies in the vesicular fluid withdrawn from patients in the stage of eruption These bodies which they consider to be the actual virus of chicken pox, are of coccoid form and are arranged singly, in pairs and in short chains, in smear preparations they are situated mostly outside the cells Inoculation of vesicular fluid into the testicle of the rabbit succeeded apparently after a number of passages, in giving rise to an inflammatory reaction accompanied by oedema of the scrotum, thus confirming the work of Rivers and Tillett By this means three strains of virus were established A marked reaction, similar to that with vaccinia virus, was obtained by the inoculation of testicular suspension into the anterior chamber of rabbits After forty-eight to seventy two hours, when the non specific inflammatory reaction had died down, a specific reaction occurred, characterized by turbidity of the aqueous humour, swelling and turbidity of the cornea, dilatation of the blood vessels of the iris, and in extreme cases by exudation on the periphery of the pupil Conjunctivitis was as a rule less evident than after inoculation with vaccinia virus Smear preparations showed the presence of elementary bodies in the endothelial cells of the cornea Inoculation of the aqueous humour together with the cells of Descemet's membrane into the rabbit's testicle gave rise to a typical reaction An intradermal reaction was produced by the inoculation of testicular suspension into the skin of normal rabbits and elementary bodies were demonstrated in the vesicular fluid Tissue cultures were obtained from the testicular suspension by growth in the presence of rabbit lung and testicle, and elementary bodies were demonstrated in large numbers in the cultures Cross examination experiments showed that the skin of rabbits which had been inoculated a week previously with varicella virus by the testicular route no longer reacted to varicella virus, though it did to vaccinia virus, on the other hand, the skin of rabbits that had been immunized to vaccinia virus reacted to varicella virus but not to vaccinia virus

long been recognized, and its use by reputable firms is now abandoned In Germany it has been prohibited for the last forty years Mayer reports that in Japan the poorer women still use pure lead acetate as a powder and breast fed children have acquired chronic lead poisoning by inhaling it from their mother's skin Barron and Habein give a startling account of five cases of lead poisoning in one family including three deaths two of which were due to lead encephalopathy Only the women of the family were affected, and though the source was not absolutely certain, there was strong presumptive evidence for the prolonged use of a face powder containing lead acetate Bismuth is another metallic powder ingredient which may be harmful if absorbed in sufficient quantities Cole quotes Tuttle as reporting five cases of chronic poisoning due to an insoluble preparation of bismuth in a toilet powder Apart from lead and bismuth toilet powders appear to cause no harm except to individuals who are allergic or hypersensitive Eosin for instance which is used to colour powders causes dermatitis in some few people and orris root is a not uncommon allergen which may give rise to asthma or hay fever as well as dermatitis Rice, wheat and corn flour have also been incriminated as allergens

Lipsticks —These consist of a varying mixture of paraffin lanolin and spermaceti with a dyestuff They scarcely ever cause irritation The rare case of cheilitis from this source is generally due to the dye, and disappears as a rule with a change of lipstick

Cold Creams —These are mixtures of fats and water, with or without the addition of other ingredients The quality depends on the fineness of division of the fats—hence the superiority of proprietary mixtures Some face creams, however contain in addition lead or mercury in the form of white precipitate or calomel Woltman describes a case of chronic lead poisoning due to the use for twelve years of 'owl enamel cream' Creams and lotions containing perchloride of mercury in strengths up to 1 in 200 and white precipitate as strong as 50 per cent are recommended by so called beauty experts' as skin bleaches, the strength of the official white precipitate ointment is 5 per cent Their persistent use has been known to cause a facial pigmentation very difficult to remove Goeckermann mentions two such cases which he believes to have been associated with alkaline sweat He suggests that the normal acidity of the sweat might account for the rarity of this result

Many cosmetic advertisements to day lay stress on the "radio active" properties of the wares extolled In the vast majority of cases this is fortunately a fraudulent statement for as Lord Lee of Fareham pointed out recently, in the Silvanus Thompson Lecture such substances, 'to such extent if any as they contain radium must be harmful and potentially dangerous He adds that in his view 'the sale of radio active preparations designed for either internal or external use should be absolutely prohibited"

Vanishing creams are relatively fatless creams and are composed of potassium or sodium stearate and glycerin together with a little fat and rose water or perfume Semi fatless creams may contain almond oil wax or gelatin Casein an occasional constituent of vanishing creams, may produce allergic reactions

Depilatories —Barium sulphide is the commonest constituent but sulphides of calcium, sodium, strontium or magnesium are also used These appear to be generally harmless but in sensitive skins they may give rise to a localized dermatitis

Wrinkle Removers —Astringent lotions are sold for this purpose They are as harmless as they are ineffective Some years ago there was a vogue for the local injection of paraffin Such injections are liable to cause fibrosis with lymphatic blockage and local oedema and in any case the aesthetic effects are most uncertain The method has been abandoned Miller and Taussig describe the appalling results of a third method of removing wrinkles This consists in painting the face with a 65 per cent solution of phenol Strips of adhesive tape are applied next day and removed forty eight hours later together with the adherent epidermis The crust separates in two to three weeks In the resulting scar wrinkles are not apparent Unfortunately it is impossible in some cases to close the lips or approximate the eyelids!

Hair Dyes —These have been grouped as (1) Vegetable dyes such as henna Henna does not irritate but its frequent use makes the hair brittle (2) Metallic dyes Silver copper mercury lead nickel, cobalt and bismuth are used in dilute solutions The metal combines with the sulphur in the hair to form a deposit of metallic sulphide If the metallic dyes are used frequently the metal will be to some extent absorbed and will give rise in time to symptoms of chronic poisoning, a much more serious sequel than the dermatitis of the scalp which may appear at the time of application (3) Compounds of metallic salts and vegetable products such as pyrogallic acid In these not only the metallic salts but also the pyrogallol are potentially toxic and irritant (4) Aniline derivatives of which the best known is paraphenylendiamine The aesthetic advantage of this dye is that it does not merely coat but penetrates the hair It is easy to apply gives a fast colour, and can produce a very varied range of shades For these reasons it became rapidly popular As its popularity spread its danger soon became manifest Its unrestricted sale is now prohibited in Germany Austria and France This dye causes a very severe and persistent dermatitis probably the most persistent of the dermatites due to external applications Miller and Taussig report a case where the eczematous lesions lasted for six months Not only is 'para' an irritant of the skin but it may also produce gastro intestinal and nervous symptoms including retrobulbar neuritis Several fatal cases have been recorded The client's sensitivity to the dye can be estimated beforehand by the Sabouraud Rousseau test But some hairdressers presumably owing to carelessness in application or observation, have failed to detect sensitivity, with disastrous results Several cases have recently been reported of poisoning from 'meeto" a popular preparation containing paraphenylendiamine Unfortunately this does not complete the list of irritants in the process of hair dyeing The first step in the process consists in the removal of the sebum This is usually done by applying an alkaline wash, such as caustic soda or ammonia after the shampoo If the alkaline wash is too strong it may produce a dermatitis of the scalp When the hair has already been dyed or has been unsatisfactorily dyed it may be necessary to remove the dyestuff by bleaching This may be done with hydrogen peroxide which does not irritate, but its excessive use may injure the hair shaft and cause the hairs to break off short Other substances used for hair bleaching are oxalic acid and hydrochloric acid the danger of which need hardly be stressed More disturbing still is the employment for this purpose of potassium cyanide

Hair Lotions —Cases of dermatitis or chronic intoxication have from time to time been traced to the use of hair lotion The incriminated substances have been quinine salicylic acid and resorcin These while beneficial in suitable strengths may cause dermatitis if given in too great strengths or to sensitive individuals Resorcin has the added drawback of causing a dirty discoloration of white or blonde hair Cole describes a case of dermatitis due to arsenious oxide given in a hair tonic Sir Thomas Oliver records a case of asthma which came and went with the use or abandonment of a hair wash containing lead

DISCUSSION

Such a formidable record of injurious effects might well lead one to condemn cosmetics outright This is often and unfortunately done I say "unfortunately" because the result is rarely to deter people from their use but rather to drive them into the hands of unqualified and ignorant or even of definitely fraudulent, persons It seems a pity, therefore, that cosmetics should sometimes be condemned by the medical profession as wholly injurious, not only for their chemical constituents but also for their physical properties, on what appear to be very insufficient grounds

McKenna, in an article in the *British Medical Journal* states that cold creams and vanishing creams "block the sebaceous and sweat glands," and that their use lead eventually to acne rosacea and acne vulgaris This is a common indictment But is there any proof of its validity? McCafferty and Genovese experimented on twenty five cases, and were unable to detect clogging of

the pores in any one McKenna ridicules the cleansing properties of cold cream which are so often advertised But if any observer will apply cold cream to the face and then rub it off with cotton wool he will find that the cream has removed a considerable layer of dirt and dust—more in fact than can be removed with a damp sponge or towel McKenna further dismisses the use of creams and skin foods on the ground that with the exception of glycerin none of the usual constituents are absorbed But Sutton's experiments have shown that fats *are* absorbed though in very varying degrees McKenna would apparently confine the toilet of the face to the use of soap-and water He says that it is only in exceptional cases that the skin of the face is irritated by toilet soaps if we exclude the cheaper soaps containing coco-nut oil and an excess of free alkali This is by no means a universal experience McCafferty and Genovese in addition to their tests with cold cream made further tests with soap They chose patients with moderately dry skins and observed the effect of a few weeks use of soap-and water on the face They found that mild desquamation appeared with a feeling of tautness This disappeared with the application of cold cream They conclude very reasonably that soap-and water are suitable for oily skins and cold cream for dry skins Vanishing creams they condemned as of no value on the ground that these creams were only used as a basis for powder and the same purpose could be served equally well by cold cream From an aesthetic point of view this is not quite true The fatty nature of cold creams makes them too shiny for use by day and it is for this reason that women dislike them

An Experiment with Vanishing Cream

There is however a popular feeling that vanishing creams are drying On theoretical grounds it would seem possible that their high glycerin content might prove irritating As I could find no statements on the subject I tested them myself Trials were made with forty individuals mostly girl undergraduates and a few older women Pond's vanishing cream was rubbed into the right side of the face at night and rubbed off in the morning The other side of the face was *left untreated and used as a control* The duration of the tests was from four to six weeks in April and early May a period in which many women notice a temporary roughness of the face generally attributed to spring winds The results were as follows

In twelve cases the untreated side of the face became rough while the treated side remained smooth
In one case both sides desquamated but the untreated side was the rougher
In one case both sides desquamated equally which was rapidly cured by cold cream
In one case only the treated side desquamated
In one case small pustules appeared on the treated side
In twenty four cases there was no change

In fact in twenty four cases vanishing cream proved harmless though three of these cases had naturally dry skins In thirteen cases the cream was beneficial In only one out of forty cases did the cream cause dryness

The use of cosmetics is looked upon more kindly on the Continent than in Great Britain In contradistinction to such criticisms as those of McKenna we have the opinion of Kromayer that salves and pastes and the like cause no change in the skin that can produce a bad cosmetic effect Sabouraud goes further and says that he would almost prefer bad creams and bad cosmetics to none at all He has noted as have many others that actresses as a class look younger than their contemporary sisters One sometimes hears the complaint that it is unnatural to put creams and lotions on the skin but it is equally unnatural to wash off the natural oils with soap-and water We live in dry warmed houses and expose the skin to sharp alternations of heat and cold Is it not to be expected that it should need protection and re-oiling?

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THE TREATMENT OF ABSCESS OF THE BREAST*

BY

HAMILTON BAILEY F R C S

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Although great strides have been made in preventing infection of the lactating breast mammary abscess is still an everyday occurrence For many years teaching concerning the treatment of these abscesses has remained stereotyped Under the well known principle of awaiting for fluctuation or at any rate until localization has occurred and then obtaining free drainage by incisions radiating from the nipple results in the majority of cases are good The objections which can be raised to this well tried method are mainly these (1) the resulting scars are too often unsightly (2) a proportion of cases continue to discharge for weeks or months (3) the dressings if secondary infection is to be minimized require the frequent attention of a skilled nurse About two decades ago an innovation was introduced Briefly it consisted of an early but small incision followed by suction with a Bier's hyperaemic bell I saw something of this method and the pain which it caused and the results which ensued were such that I gladly returned to the methods of our forefathers The method of treatment which presently will be described is free from all the objections of its forerunners

Most abscesses of the breast are of the intramammary variety (as opposed to subcutaneous or retromammary) and it is lactating women who are usually sufferers Infection occurs in one of two ways (1) Staphylococci enter the lactiferous ducts and cause clotting of the milk Within the clot these organisms multiply and the acini severed by the obstructed duct become the seat of a lively inflammation (2) Streptococci enter through a crack or abrasion of the nipple and inflammation proceeds apace in the interglandular tissues Unless it is arrested the infection spreads to the glandular mechanism Even

* Being part of an address to the Swindon Division of the British Medical Association February 22nd 1933

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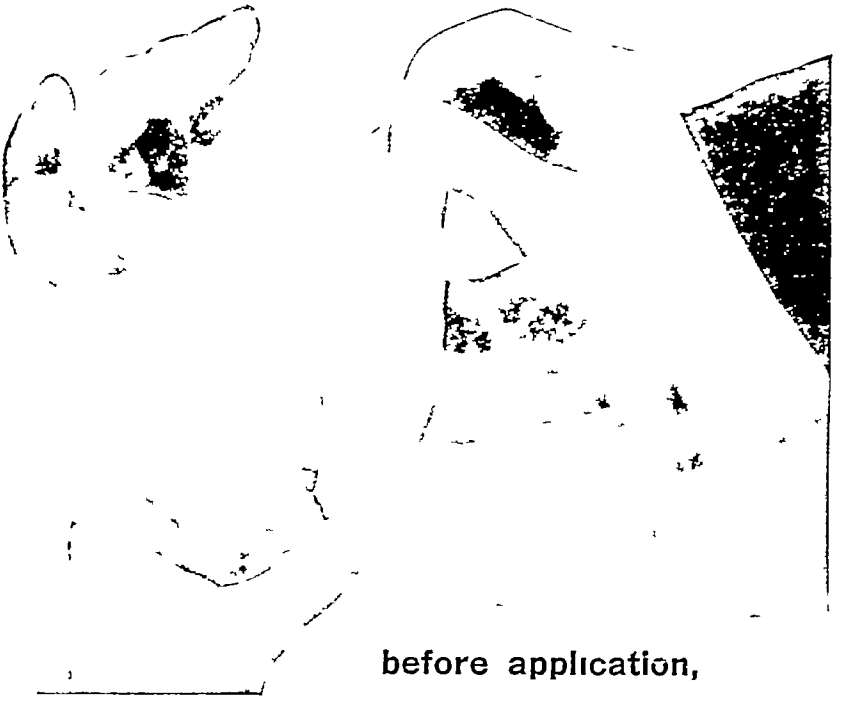

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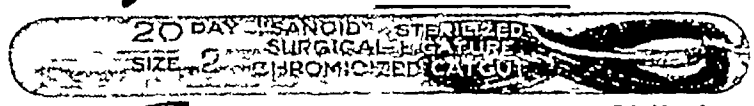

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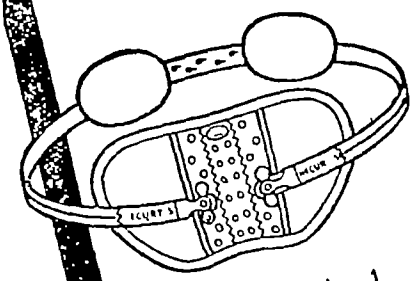

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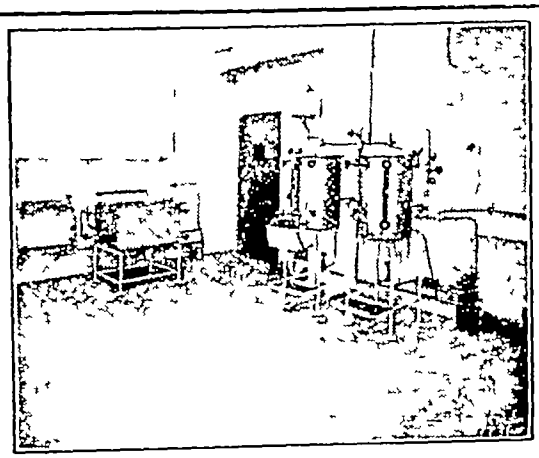

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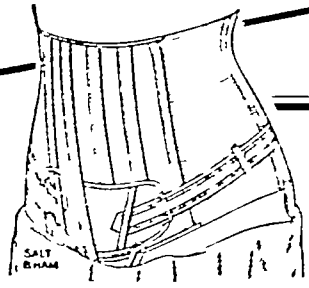

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Convalescence—The only dressing now required is a piece of dry folded gauze over the wound kept in place by adhesive plaster The patient can get up wearing an ordinary brassiere for support There is always a considerable indurated area in the breast at this period and it persists for some time Latterly I have placed the patient during convalescence upon iodine in milk therapy similar to that described by Mr H Chitty for the treatment of actinomycosis This has been followed by a more rapid absorption of the massive induration and an obvious improvement in the patient's general condition

CONCLUSION

I submit that this technique which largely follows that of Dr J E Hobbs of St. Louis is an advance on older methods After a considerable experience of it I am confident that those who adopt the method will find that the patient is delighted with the painlessness of the post operative period Scarring of the breast is reduced to a minimum—obviously an important consideration Convalescence is short—much shorter than when the classical treatment is employed I have found that the after treatment has received the unqualified approval of the attending nursing staff and it seems probable that the method will appeal particularly to the more isolated practitioner who of necessity must leave the after treatment largely in the hands of a district nurse

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A TREATMENT OF SYDENHAM'S CHOREA

BY

DONALD BATEMAN M R C S L R C P

HOUSE PHYSICIAN HOSPITAL FOR SICK CHILDREN GREAT ORMOND STREET

The treatment of Sydenham's chorea as conducted at present may be said to resolve itself into enforced rest and the use of drugs The most popular drugs for this purpose are probably salicylates aspirin chloretone arsenic and nirvanol Although much can be said in favour of the use of nirvanol there are those who raise objection to it and who state that harmful effects may arise from its administration even when the greatest care is taken Of the others none is of proven and specific value in the treatment of this disease Rest is the fundamental and most important mode of treatment the drugs play a secondary part It is almost impossible to secure complete rest in the patient's own home especially is this so when dealing with the hospital class of patient and it is among this class that the disease is most prevalent Moreover rest to be effective must be prolonged The result is that we have throughout the country large numbers of cases of chorea occupying beds for extensive periods in the hospitals supported by voluntary contributions If there could be discovered a satisfactory method of treatment that would bring about a quicker cure it would be a source of great economy and convenience as well as of satisfaction to the patients parents The possibility that there is such a method has now been demonstrated with success by Dr Lucy Porter Sutton of Bellevue Hospital New York City It was observed by her that an intoxication with fever resulting from phenobarbital therapy when occurring in a case of chorea caused a reduction in the choreic manifestations The conclusion was drawn that the fever itself was responsible for the effect On this basis it appeared that the deliberate provocation of fever during the course of an attack of chorea would be a beneficial therapeutic measure This proved to be so The induction of fever is now used as a routine procedure in the treatment of chorea in the Children's Medical Service of the Bellevue Hospital It is upon the observation of Dr Sutton's methods and the experience derived from a number of patients with chorea whom it was my privilege to treat under her direction that this report is made

TREATMENT BY INDUCED PYREXIA

Fever is induced by a triple typhoid vaccine containing 1 000 million typhoid and 750 million each of paratyphoid A and B bacilli per cubic centimetre Other methods of causing artificial fever have been used and are at present being investigated but the typhoid treatment is at present most commonly employed The routine is as follows

On the day following admission to hospital the patient is submitted to a thorough physical examination to make sure that there are no contraindications to treatment The degree of chorea exhibited in the various limbs at rest and upon the performance of combined movements (talking dressing mastication) is estimated and classified as severe moderate or mild this is done so that the daily progress may be roughly noted It should be carried out each day before treatment On the day treatment is commenced the patient receives a light breakfast (that is no food within a short time of the induction of fever) The pulse and temperature are taken immediately before the typhoid vaccine injection It is advisable to take the temperature rectally as it is hard to estimate it accurately elsewhere once the fever is in progress The vaccine is administered intravenously It is customary to begin with 0 05 or 0 1 c.cm as a reasonably high temperature is usually obtained with fairly small doses following the initial injections The patient is then placed in a blanket bed and is supplied with several hot water bottles It must be emphasized that the patient requires the most careful observation and attention from the nursing and medical staffs during the course of the fever The desired object is the attainment of a temperature between 104° F and 105·5° F and its maintenance for four hours At first it should be taken hourly but once it is above 103° it is as well to take it every thirty minutes The only objection to the temperature being taken frequently throughout the treatment is that each disturbance of the bed tends to lower the patient's temperature Once the temperature is rising well it is advisable to remove the hot water bottles

During the course of the treatment the patient's thirst may be relieved by sips of water copious draughts should not be allowed as they may be harmful and also have an antipyretic effect. No food should be given even without it vomiting may occur in a few cases The earlier after injection the required degree of fever is reached the more likely is the temperature to go on rising In these cases it is necessary to remove some of the bedclothes until the next temperature is read The patient should be carefully watched At the end of the period of desired hyperpyrexia the patient is placed between sheets and the temperature allowed to fall But this is not an occasion for the relaxation of nursing attention The temperature should be taken regularly until it is normal again If it rises above 106° efforts should at once be made to bring it down The bedclothes should be removed and the patient covered only with a sheet A tepid sponging should be given and aspirin (5 grains) administered In addition an ice bag may be applied to the head The tepid sponging should be continued at intervals of a few minutes until the temperature is below 106° It is not usual for it to reach this height but if it does harmful effects do not ensue 106° is used as an indication for active measures as it is well inside the limits of safety If the patient has been carefully watched this degree of pyrexia should not be reached at all as it should have been possible to regulate the temperature by adjustments of the bedclothes based on previous observations In this connexion it is important to note whether the patient is of a type that sweats easily or not In those who do not sweat much the temperature is apt to rise fairly rapidly to a considerable height and close attention is therefore indicated With patients who sweat easily there may be difficulty in getting the required temperature and they should be wrapped closely in their blankets when it is seen that the temperature

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is not rising This measure may send the temperature up quickly, and the patient should be watched for this eventuality

The treatment should be continued each day until the choreic movements have disappeared It is usually found that the dose of typhoid vaccine must be doubled each day in order that it may be effective but no general rule can be made as patients react differently It is a good plan in starting to increase the dose by half that of the day before A rough guide is that it should be increased freely when the previous day's dose gave a poor result and only slightly when the former one was attended with a very high fever But even after a high fever a larger dose is usually necessary if an adequate fever is to be maintained If it is found that a dose of vaccine has not been sufficient, it may be supplemented two to four hours later by another and smaller one

Most patients show a marked improvement after two or three treatments and are usually free from choreic movements in a week As would be expected the milder cases improve more quickly than the severe ones Patients with a long history of chorea before admission to hospital may be slow in their response to treatment and it should be remembered that in these patients habit movements may be superimposed upon those that are essentially of choreic origin At the end of the fever treatment the patients are kept in bed for a few days and are then allowed up for a week before discharge from hospital The usual length of stay in hospital is three weeks This compares very favourably with the seven weeks which most other modes of treatment require Mention may be made of those cases of chorea which on admission to hospital show a cardiac murmur of rheumatic origin This need not be regarded as a contraindication to treatment unless it is thought that the circulatory system cannot support the effects of a high fever The treatment so far has proved satisfactory It has considerably shortened the duration of the stay in hospital and is not accompanied so far as is at present known, by complications The patient's discomfort attendant upon the treatment is much less than might be expected and is probably preferable to the weeks in bed and long continuance of the choreiform movements associated with other methods

I have to thank Dr Charles Hendee Smith and Dr Lucy Porter Sutton of the Children's Medical Division Bellevue Hospital New York City and the Department of Paediatrics New York University for allowing me to treat cases under their direction for teaching me their methods and for permitting me to write this note

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

POST OPERATIVE INTESTINAL OBSTRUCTION

A case reported by Mr A Davies under this heading in the *Journal* of January 7th was interesting and helpful The following case which came under my care involved a similar sequence of problems, but with variations

The patient aged 10 was admitted to the St Albans and Mid Herts Hospital on November 6th 1930, with the history that for three days she had had abdominal pain with vomiting

On November 7th an appendicectomy was performed The appendix was found to be ulcerated but not perforated and the abdomen was closed without drainage Subsequent progress was uneventful and the patient was discharged as fit fourteen days later

On February 28th 1932 the patient was re-admitted with a history of sudden onset of abdominal pain on the previous day frequent vomiting and pain on micturition temperature was 101° and pulse 146 On examination there was no abdominal distension but rigidity and tenderness especially in the right lumbar and right iliac regions A laparotomy was performed that evening and a nine inch loop of small intestine was found constricted by an adhesion The constricting band was incised and the gut which was dark purple in colour on being treated with warm saline so improved in appearance as to be considered viable The abdomen was closed without drainage During the following three days the patient's condition was satisfactory the temperature fell gradually to normal on the third day and the pulse rate decreased Much abdominal pain with occasional vomiting, was not considered abnormal Anti gas gangrene serum was given with morphine and hyoscine and on the third day an enema was administered with good result and passage of flatus On the fourth day blood and mucus was passed per rectum vomiting increased in frequency and became faeculent and the abdomen became more distended An exploration was undertaken and the affected loop of bowel was found to be gangrenous and perforated The pelvis was full of foul intestinal contents which welled out of the abdominal wound A Paul's tube was inserted into the healthy gut proximal to the gangrenous portion the latter being brought into the lower margin of the wound and left *in situ* the pelvis was drained Resection was considered inexpedient in view of the condition of the patient but especially in view of her age Subsequently the ileum drained freely through the enterostomy, the wound gaped widely and ten days later the segment of bowel together with its mesentery separated through the lower extremity of the wound

On April 19th a further operation was undertaken the skin of the abdominal wall having become severely excoriated by the digestive action of the fluid contents There was an extensive 'matting' between coils of gut The ileum above and proximal to the enterostomy was clamped and divided the distal end invaginated, while a lateral anastomosis was performed between the proximal portion of ileum and the transverse colon On April 22nd the bowels opened naturally The patient was again discharged on June 4th both the local and the general condition being very favourable

After re-admission three months later the functionless enterostomy was closed by dissection and invaginated extraperitoneally and the patient finally discharged on October 29th

This case demonstrates, as did the one previously recorded, the difficulties of diagnosis in surgical conditions of the abdomen In the interim between the initial operation for intestinal obstruction and the following exploration, the patient's general condition was no criterion of the pathological state The case also illustrates the inherent faculty of the peritoneum to procure the restoration of vital functions This has been the only case in my experience of the separation of a segment of gut together with its mesentery by natural means and its extrusion through the abdominal wound

D S MORGAN JONES F R C S Ed
Honorary Surgeon St Albans and Mid Herts Hospital

P S —Since the above was written the recurrent formation of a mucocele necessitated a complete resection of the blind gut, which was undertaken on March 7th with an entirely successful issue

A CASE OF GENERALIZED VACCINIA

Although, after vaccination, secondary pustules are sometimes seen round the primary mark a case of generalized vaccinia is comparatively rare

On December 1st 1932 I vaccinated D H a well nourished healthy baby weighing 15 lb and aged 3 months using Government establishment lymph and making one scar on the left arm At the same time I vaccinated an elder child H H, aged 10 years in the same house using the same lymph On December 7th I inspected both arms and found them clean and healthy presenting the features of a normal six day vaccination On December 20th the medical officer of health asked if I would call and see the younger child as some spots had broken out over the body

When I saw it I learned that the spots had begun to appear about three days previously The outer surface of the left arm was bright red the colour extending from 1 inch below the shoulder to about 1½ inches above the elbow The area was covered by necrosed skin and presented the appearance

of a large blister out of which the fluid had been withdrawn There was a very slight temperature (99° F) The child was restless fretful and irritable and refused its food On the wrists thighs legs and head there were raised pearly spots in varying stages of development and of various sizes Some were umbilicated and some appeared more like the spots of alastrim than those of small pox On December 21st the child was admitted to Fazackerly Hospital under the care of Dr C Rundle the medical superintendent On admission there were numerous small vesicles around the original larger one on the left arm and the spots on the body had developed into typical vaccination pustules The distribution was then face back of scalp both wrists left thumb right buttock and several on the right leg and thigh and soles of both feet The temperature was still 99° pulse 132 respiration 34 On December 23rd the temperature went up to 100 4° The pulse was 144 and the lesions were spreading with copious eruption on both legs and buttocks and on the face some of these were the size of a shilling The temperature then fell to normal and remained so until December 26th On December 25th fresh pustules developed on the back and front of both thighs but with no accompanying rise of temperature On December 26th the temperature again rose to 99 6° and the arm became very baggy and was inclined to slough There were numerous water vesicles at the outer edge The child was taking food well On December 27th the temperature rose still further to 100 4° pulse 178 and the child *developed convulsions and died*

The post mortem findings were as follows The body was that of a well nourished child Over the outer surface of the left upper arm was a bare bright red inflamed area 4 inches long by 3½ inches in diameter and extending approximately from the shoulder to the elbow There was some deeper coloration of the central portion suggesting that this was the oldest part of the lesion and that it had commenced there The body was covered with raised pearly spots varying from about 1 8 inch up to 1 2 inch in diameter The larger of these were depressed in the centre and had thickened edges resembling blebs and giving the appearance of developing vaccination pocks The largest and oldest lesions showed necrosis in the centres and the formation of crusts There was little or no pustulation The distribution of the lesions was general but they were more numerous on the lower limbs than on the trunk and upper part of the body The thoracic organs were healthy except for some terminal congestion and oedema of the lung bases The liver and spleen both showed areas of necrosis having the characters of vaccinia lesions The other abdominal organs showed no abnormality Microscopical examination of the skin lesions showed these to have the character of vaccinia papules The same characters were found in the focal lesions of the spleen and liver No changes of importance were found by microscopical examination in the brain and spinal cord or in the other organs (suprarenals heart kidneys pancreas) which were examined in this way

It is obvious from the pathological report that this was a blood borne infection Professor Dible pathologist of Liverpool University has never seen a case of this kind in his experience It could hardly have arisen from any septic infection as both parents and home were extremely clean and there was no evidence of such infection being present While I was in Persia several thousand vaccinations were done either by me or under my supervision The scar was made and the lymph was allowed to dry on It was impossible to keep either pads or bandages on the natives arms so after drying they were left uncovered No untoward result had ever been seen I have had several letters on the subject and in one the writer has reported to me a case of general vaccinia which occurred in a baby that had been washed with water in which an elder child who had been vaccinated was bathed

I am deeply indebted to Professor Dible for a report on his post mortem and bacteriological findings and to Dr C Rundle medical superintendent Fazackerly Fever Hospital for his notes on the case whilst it was under his care

C J DE VERE SHORTT M B D P H
Late M O H and Port Health Officer
Abadan S Persia

Reports of Societies

OVARIOTOMY

At the annual general meeting of the Section of Obstetrics and Gynaecology of the Royal Society of Medicine with the president Mr J P HEDLEY in the chair Dr HERBERT SPENCER in a review of six hundred and fifty eight ovariotomies remarked on the paucity of *personal* records of complete series since Spencer Wells published in 1882 his *One Thousand Ovariotomies* with a mortality rate of 23 2 per cent Dr Spencer had published his first fifty cases (in 1893) with one death but in his complete series there were thirty five deaths (5 3 per cent) of which twelve occurred after the removal of *malignant or suppurating tumours*

Dr Spencer emphasized the importance of the entering of particulars in an analysis book by the operator immediately after the operation and recovery or death of the patient No patient was discharged from hospital or home before the twenty fourth day after operation As an illustration of the influence on statistics of early discharge from hospital or home he stated that of the thirty five deaths one occurred (from syncope) on the twenty second day two (from embolism) on the twenty fourth day one (malignant) on the thirty fourth day and one (from cachexia) five months after operation The youngest patient was aged 14 the oldest 82 eleven patients being over 70 years of age Sixty three cases associated with pregnancy had been already published in detail Adhesions were present in 448 cases torsions of the pedicle in eighty-five twelve tumours had been tapped before operation There were thirty three benign ovarian tumours (in addition to seventeen malignant cysts) which were papillomatous sixty six were dermoids twenty ovarian fibroids (eighteen fibromata two adenofibromata) forty five were parovarian tumours (eight complicating pregnancy) sixty three tumours were suppurating sixty seven malignant (of which six were sarcomata and two endotheliomata) The proportion of malignant tumours was just over 10 per cent Dr Spencer thought that the proportion (20 to 25 per cent) often stated in textbooks was *exaggerated and that the* error was due to mistaking benign for malignant papilloma and fibroma for sarcoma He had personally removed eleven papillomatous benign ovarian tumours which after coeliotomy had been declared by experienced gynaecologists to be inoperable and mostly *malignant* and as a result of a personal experience of this kind if a patient with a tumour supposed to be malignant was found to be in fair condition two years later he advised the operator to believe with him that a mistake had been made and remove the tumour In Dr Spencer's opinion all benign tumours could and should be removed With regard to malignant tumours he was of the opinion that many of these could be removed with advantage even in presence of secondary growths Cases in support of this opinion were mentioned such as cancerous tumours remaining well six and seven years after unilateral removal a patient well four years after removal of cancer of the ovary and breast and a patient with pseudomyxoma ovarii et peritonei who survived four operations and died of heart disease seventeen years after the first operation A notebook with details of the cases was *exhibited*

Lieut-Colonel GREEN ARMYTAGE reminded the Section that he had published in 1930 the findings and results of 547 consecutive operations for ovarian neoplasms He was of opinion that the incidence of malignancy was greater than Dr Spencer had indicated (10 per cent) for in his series microscopically malignant tumours amounted to 21 4 per cent *a figure which approximated* more nearly to the statistics of Döderlein and Lippert He considered also that the chances of recurrence in the opposite ovary in cases of papilliferous tumours was greater than Dr Spencer had suggested In recent years when there was ascites and an extrinsic type of papillary tumour in one ovary he had preferred to remove the uterus and both ovaries With regard to pulmonary embolism he had found this accident a very rare com

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plication in clean cases since he had insisted on breathing exercises and active limb and chest movements

Mrs IVENS-KNOWLES said that in a case of bilateral dermoids associated with a five months pregnancy, she had adopted the enucleation as recommended by Dr Spencer The pregnancy continued and menstruation returned normally Twenty years later however, carcinoma of the right ovary had developed This unfortunate sequel to a successful case had made her doubt the safety of the procedure Mr C D LOCHRANE stated that he had experienced the grave complication of pulmonary embolism in his cases in spite of deep breathing exercises and early active movements Dame LOUISE MCILROY and Mr CLIFFORD WHITE also took part in the discussion

Dr HERBERT SPENCER, in reply, referring to Colonel Green-Armytage's practice of removing both ovaries in cases of papilloma of the ovary said that the advantages of leaving one ovary, or even part of the organ, were so great that he preferred to take the risk of development of papillomata on the other side Dr Ivens-Knowles's experience would not affect his belief in the soundness of the practice of enucleating dermoids He did not agree with Colonel Green-Armytage that suppuration never occurred in dermoids he had met with it four times in sixty-six cases He would with Mr Lochrane, express his mistrust of facile statements about methods to avoid pulmonary embolism

SNAKE VENOMS

At a meeting of the Royal Society of Tropical Medicine and Hygiene on May 11th with the president Dr CARMICHAEL LOW in the chair, Dr C H KELLAWAY read a paper entitled "Some Peculiarities of Australian Snake Venom"

In his introductory remarks Dr Kellaway pointed out that, though Fairley (1929) had shown in the common poisonous Australian snakes a gradual transition in morphological characters from the non-poisonous colubrines towards the vipers, no such regular transition was demonstrable in their venom constituents, the death-adder for example, presenting a pure colubrine type of venom Viperine venoms were not so toxic as those of the Colubridae they, however, possessed powerful thrombins and usually killed by causing peripheral circulatory failure which was contributed to by cytolysis of vascular endothelium (haemorrhagin) Viperine venoms were weak in haemolytic and curare-like action The venom of the Colubridae, on the other hand generally possessed no thrombins, but contained powerful haemolysins and were predominantly curare-like poisons some had an additional direct action on muscle These venoms caused death by paralysis of respiration but the action was peripheral, and not central This he had demonstrated experimentally in inoculated animals by placing the phrenic nerve in contact with non-polarizable electrodes the upper of which was earthed and the lower connected to the grid of the first valve of an amplifier whose output passed to a loud speaker Rhythmic rustling sounds due to nervous impulses down the phrenic nerve were heard similar to those studied by Gasser and Newcomer (1921) and Adrian and his colleagues (1928) Certain of the Australian colubrine venoms were powerfully coagulent but haemorrhagins were not strongly represented Their haemolysins though generally similar in action to those of other colubrine venoms, exhibited certain points of difference They were not influenced by the presence of complement indeed, serum frequently inhibited instead of activating haemolysis The haemolysins though they caused inhibition of haemolysis when present in excess did not render the cells less susceptible to other lytic agents The Australian venoms were peculiarly toxic when administered subcutaneously, and though this was in part due to their curare like action it could not be wholly accounted for There was no convincing evidence of direct action on the central nervous system and their extreme toxicity might be due in part to action on the peripheral circulation On smooth muscle the Australian venoms exhibited a wholly peculiar action, which resembled the anaphylactic response of sensitive plain muscle Similar effects could be demonstrated upon the isolated uterine muscle and upon the intact vascular system The potency of this action on smooth muscle was closely paralleled by the lethal action of the venoms when injected subcutaneously in laboratory animals

Dr HAMILTON FAIRLEY referred to the pioneer work on snake venom done by Martin in Australia at the close of the last century and pointed out that until Dr Kellaway and his colleagues had commenced their investigations at the Hall Institute of Research Melbourne little new work had been done Apart from field work and investigations on ophidian immunity, Dr Kellaway had studied a number of entirely new Australian venoms, and re-investigated the commoner colubrine venoms, using modern pharmacological methods the end result had been to establish a very strong case for their peripheral action Essex and Markowitch had done this conclusively for the crotaline viper venoms and since the lesion described in the nervous system by Kilvington Lamb and others could now be explained in terms of asphyxia it looked as if the whole theory of the central action of venom would have to be discarded The killing capacity of the venom yield of certain Australian snakes was amazing and in Australia at one "milking" he had obtained sufficient venom from a tiger snake to kill a flock of 387 sheep, and from the death adder sufficient to kill 235, the average venom yield had been 118 and 84·7 lethal sheep doses for these two species respectively In studying snake venoms the zoological approach remained an important and an inadequately explored one After all, snake venom was fundamentally a digestive salivary juice, and the fact that it contained haemorrhagin, haemolysin, and other cytolysins and even thrombin, was not so surprising, but the capacity of the venom gland to manufacture a neuro muscular poison having the effect of rapidly immobilizing the prey was difficult to comprehend except in terms of a spontaneous variation which had become permanently established by natural selection More information was required about the physiology of ophidian digestion and the interrelationship of the digestive juices, and when this was forthcoming the significance of certain venom constituents might become more apparent

Dr MORGAN said that as director of the Commonwealth Serum Institute, he had been asked to produce antivenenes, and had succeeded in the case of the tiger snake and copperhead but not in the death adder Some 2 or 3 mg of the latter venom was the approximate lethal dose for horses, yet after immunizing them to stand as much as 8 grams of venom—that is, 2,700 lethal doses—the serum showed no obvious protective action Dr Kellaway had already referred to this finding in one of his papers So far no polyvalent serum was available throughout Australia, but in tiger-snake bites so treated fourteen out of fourteen cases had recovered Regarding specificity tiger-snake antivenene was only 10 per cent protective for the copperhead, and showed no protection at all for death-adder venom The action of antivenene was specific

Colonel R H ELLIOT stated that some thirty years ago he had started work assuming that all colubrine snakes killed alike but he had soon found that the action of the sea-snake was different from that of the cobra and its venom ten times more lethal In his experience *Pel s carinata* was not a deadly snake He asked whether in inoculated monkeys Dr Kellaway had observed paralysis of the levator palpebrae superioris, and in frogs paralysis of the muscles lifting the lower lids Sir LEONARD ROGERS said that he was not altogether convinced as to the peripheral action of the cobra venom which killed an animal in two to three minutes at a time when there was no paralysis of the phrenic nerve he did not think haemolysin had anything to do with mortality Professor BOYCOTT asked whether venoms were adapted to the animals they were required to kill and whether they were always compound in their constitution Was any venom known which contained a single constituent, such as thrombin or haemolysin?

Sir HENRY DALE commented on the interesting nature of the diffusible thrombin of brown snake venom and

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also asked if there was any evidence that a mush of plain muscle would absorb the venom constituent responsible for the anaphylactic like response of isolated plain muscle Sir RICKARD CHRISTOPHERS said that he would have expected snake-venom haemolysis to resemble saponin haemolysis and so be unassociated with prehaemolytic swelling of the corpuscle He asked what was the degree of dilution in which prehaemolytic swelling was seen Dr MALCOLM SMITH pointed out that the Ophidia were classified into three groups non poisonous snakes with non grooved teeth back fang snakes which possessed grooves on their back teeth and a mildly poisonous venom and the truly poisonous snakes with grooved or canalized front teeth and potent venoms From the evolutionary viewpoint the back fanged snakes with grooved teeth had gradually shortened their maxillary bone until the back has become the first fang

In replying Dr KELLAWAY dealt with the various questions raised With regard to Sir Leonard Rogers's criticism concerning the peripheral action of venom he pointed out that cobra venom was a cardiac poison and where many lethal doses were given the animal died of heart failure before curarization had time to develop He had noted with Australian venoms paralysis of the eyelids of monkeys and frogs similar to those described by Colonel Elliot for Indian venoms In regard to Sir Henry Dale's query he had not determined whether muscle could absorb the constituent of venom concerned in its anaphylactic like response but would do so In haemolytic experiments the order of dose producing strong prehaemolytic swelling varied from 1 to 3 mg for 0·34 c.cm of a 50 per cent suspension of corpuscles

TOXAEMIAS OF PREGNANCY

At a meeting of the London Association of the Medical Women's Federation held on May 23rd Professor M LUCAS KEENE presiding a paper on toxaemias of pregnancy was read by Miss MARGARET BASDEN She said that she proposed to discuss only late toxaemias—namely toxic albuminuria and eclampsia Following Dr James Young's classification she included all cases of albuminuria occurring in late pregnancy and drew attention to Dr Young's view that nearly every case of chronic nephritis met with in pregnancy owed its origin to toxaemia originating in a previous pregnancy The cause of toxaemia of pregnancy was still unknown but certain facts were established that the cause of toxaemia of pregnancy was pregnancy (G F Gibberd) that the organs chiefly involved were the liver and kidneys and that the latter might be permanently affected Miss Basden then gave some statistics for the years 1931 and 1932 from the Mothers' Hospital Clapton

Out of a total of 3,008 deliveries during this period there were 239 cases of albuminuria excluding eclampsia (7·9 per cent.) Fifteen per cent of the patients gave a previous history of scarlet fever or diphtheria but since many case sheets had no reference to past history the proportion of previous infective disease was probably higher The foetal mortality rate in the group was only 3 per cent and 73 per cent of the cases did not show symptoms till the thirty fourth week or later but it was possible that the infective disease had caused an occult nephritis The combined foetal and neo-natal mortality in all cases was 4·5 per cent and in the albuminuria cases 10 per cent High blood pressure in the mother appeared to play the most important part in causing foetal deaths—a blood pressure of 150 or over was present in 64 per cent of the cases and of 170 or over in 44 per cent Prolonged toxaemia was less important as a cause of foetal death and was present in less than 25 per cent

The supervention of eclampsia was no longer looked upon as the only real danger to the mother connected with toxic albuminurias for the work of Gibberd and others had shown that the albuminuria recurred as such in subsequent pregnancies in 50 per cent of cases while in 10 per cent of cases it recurred as chronic nephritis The risks both of recurrent albuminuria and of chronic nephritis were greatly increased when the toxaemia was allowed to continue for more than three weeks The diagnosis of toxic albuminuria was simple and the obstetrician should be prepared to make and act upon it without risking dangerous delay by depending on extraneous aids The two cardinal symptoms were albuminuria and high blood pressure of which the latter was the more important De Lee stated that a blood pressure of 130 should be looked on as a warning to greater vigilance while the limit of safety might be put at 140 This might seem unduly cautious but the blood pressure of a healthy pregnant woman tended to be low and 105/110 was not an uncommon reading

Discussing treatment Miss Basden said that there were two main objects (1) to prevent the patient from getting worse (for the hope of curing her before delivery was but slight) and (2) to do what was possible to prevent permanent damage to the kidneys The urine and blood pressure should if possible be examined daily but in hospital practice twice weekly sufficed for mild cases the more serious ones should be admitted The medical treatment was practically that of nephritis except that milk was restricted or withheld It varied in strictness according to the severity of the case the worst cases being kept in bed on water or water and glucose only The best means at present known of preventing permanent renal damage was the timely termination of a toxic pregnancy It was hardly ever justifiable to allow the toxaemia to continue for more than three weeks and toxaemia appearing at or continuing till full term should be looked upon as an indication for inducing labour at once Fortunately this seldom meant sacrificing the child The Mothers' Hospital statistics for 1931 and 1932 showed that more than 75 per cent of all cases of albuminuria did not show symptoms till the thirty fourth week or later It was therefore seldom necessary to induce labour before the thirty sixth week and a child born at thirty-six weeks had almost as good a chance of survival as one at full term and a much better one than if it had to exist for weeks in the uterus of a toxaemic mother The best and quickest method of induction was by rupture of the membranes as described by Dr Gibbon FitzGibbon and in practice its numerous theoretical disadvantages were found to be non-existent The treatment of severe recurrent toxaemia and of chronic nephritis from which it might not be distinguishable should be by Caesarean section and sterilization

Miss Basden showed a chart giving details of the seven eclampsia cases occurring in the years under review constituting 1 in 427 of all deliveries and about 3 per cent of the albuminuria cases There was one maternal death among them None of the patients had symptoms suggesting the onset of eclampsia until the day on which the fits occurred and even then subjective symptoms were only present in three cases—namely headache and loss of vision in one case and headache alone and vomiting alone in the two others In three cases the blood pressure remained below 140 and the highest blood pressure noted was 190 The prophylactic treatment of eclampsia was far more important than that of the developed condition which was medical not surgical The transition between a severe case of pre-eclamptic toxaemia and eclampsia was often so insidious that prompt Caesarean section was indicated as soon as this stage was reached Recognition of this very severe type of toxaemia depended on its response to medical treatment No single sign or symptom-complex could be relied on as a guide Most patients showed a distinct improvement after treatment in bed for twenty four hours on glucose and water only Should this improvement not occur labour should be induced at once but if the condition worsened Caesarean section should be performed Occasionally even this twenty four-hour delay proved dangerous The symptoms indicating immediate operation would be such a combination as severe headache high blood pressure much albuminuria and dimness of vision a less obvious indication would be recurrence of severe symptoms after temporary improvement Miss Basden referred to her recent report of thirty cases of pre-eclamptic toxaemia treated by Caesarean section with no maternal mortality and no subsequent development of eclampsia She had since added three cases to the series which included three cases of sterilization for severe recurrent toxaemia She would not

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suggest that without operation all these cases would have developed eclampsia but she was convinced that some would have done Patients with profound toxaemia did not stand the operation badly, and they were not therefore being asked to undergo an undue risk

SURGERY OF FACIAL PARALYSIS

At the May meeting of the Section of Surgery of the Royal Academy of Medicine in Ireland, with the president, Mr H STOKES in the chair, Mr F J MORRIN read a paper on the surgery of facial paralysis

Having reviewed the anatomy of the nerve, Mr Morrin discussed the various conditions producing interruption of its conductivity from the cortex to its distribution Paralysis appearing immediately after a mastoidectomy was probably due to section of the nerve , in such cases faradic response was lost in approximately three weeks The presence of faradism in the muscles was an indication for deferring operative treatment The methods of surgical treatment—plastic operations sympathectomy nerve suture, and nerve anastomosis—were discussed End-to-end suture he described as technically difficult, and if the nerve ends were much damaged or frayed it was impossible as tension could not be avoided He reported two cases in which facio-hypoglossal anastomosis was performed with return of voluntary movement, muscular co ordination and absence of associated movements, but without return of emotional movement Movements occurred in the first case fourteen weeks, and in the second case eighteen weeks following operation The operative procedure was described Mr Morrin considered the hypoglossal nerve more suitable than the spinal accessory as providing better co ordination, while anastomosis of the descendens noni to the cut distal fibres of the twelfth nerve prevented hemiatrophy of the tongue to a very great extent The three desiderata in the surgical treatment of facial paralysis were (1) restoration of normal facial contour and muscular tone during repose , (2) restoration of voluntary muscular control , (3) restoration of emotional expression These three functions would recover if satisfactory end-to end anastomosis could be accomplished , they might recover with a nerve graft The first two functions would recover with facio-hypoglossal anastomosis, and some emotional expression might be acquired Restoration of contour and muscular tone might be improved by sympathectomy, while some restoration of contour might be regained by plastic operations To ensure success, operation must be undertaken without undue delay

The PRESIDENT congratulated Mr Morrin on his successful operations, and on the lucid explanation of his operative technique He referred to a recent paper by Dickson Wright who stated that he did not believe in transverse anastomosis Mr W PEARSON said that the cases described by Dickson Wright were not all cases of facial paralysis , some of the operations had been done for severe facial tic, and in these the operation was much easier to perform Where a nerve graft was necessary, he thought it better not to put in a section of freshly cut nerve It was better to isolate the segment of nerve and then wait for about four weeks before putting it in When a two-stage operation was done a very good result would ensue

Mr C J MACAULEY said that anyone who had seen cases of facial paralysis and realized their distress would appreciate what a tremendous boon operation was In one case in which the facial nerve had been damaged many years previously it was impossible to find the nerve and he concluded that it had atrophied completely He performed a plastic operation which apparently was very successful but about a year later the muscle had completely disappeared This, he thought was the usual result in cases in which muscle grafts were used Dr ALAN THOMPSON referred to a case of facio-hypoglossal anastomosis, performed by Dickson Wright in which return of voluntary power was practically *nil* but emotional return was good In cases of facial spasm there was very ugly grimacing and sometimes complete loss of vision for a short time, so that the operation was very beneficial It had been suggested that facial paralysis was sometimes caused by herpes zoster of the geniculate ganglion

Reviews

A SURGEON S POCKET BOOK

Mr H S SOUTTAR has written a handbook for the use of students under the title of *A Surgeon s Pocket Book* [1] with the idea of providing them with a volume for reference ' at odd moments ' It epitomizes points of first importance in regard to the injuries and diseases with which surgical practice is concerned As in the case of the usual System, ' the book deals first with general and, later, with regional surgery As a companion in ward work and out-patient work such a summary of facts as it provides has definite uses , and it is for reference in association with clinical work we imagine that the author has designed it A few points seem to call for remark Is it correct to describe the fatty protrusions of the mid abdominal line as lipomata and are they the " starting-points " of hernia? The myeloma, or osteoclastoma, should find a place among the catalogued tumours of bone it is described elsewhere but not in this category (p 81) To place chronic mastitis typically in the fourth decade of life is to place it, surely somewhat early , in the distinction from carcinoma the bilaterality of the condition is worth emphasis The occurrence of abscess formation in connexion with diverticulitis needs mention In giving the treatment of enlarged prostate (p 267) the words " suprapubic cystotomy " are used where what seems to be intended is " suprapubic prostatectomy "

A very useful inclusion in the regional chapters is a description of the surgical anatomy relative to each region or viscus A dresser with this book in his hand will certainly find his way made easier amid the multifarious conditions with which he has to become acquainted it will adequately fulfil for him the purpose of ready and serviceable reference

MODERN ASPECTS OF GASTRO ENTEROLOGY

The special subject of diseases of the digestive organs has made great advances in the last half century Not only have the methods of investigation been enlarged by new discoveries and the application of *x*-ray technique and chemical tests, but the underlying conception of the phenomena of disease of these organs has undergone a complete change The textbooks of thirty or forty years ago dealt with the diseases according to the symptoms of the patients, as explicable by the pathology of that day Pathologists were aware of gross changes due to new growth or chronic ulceration, and of anatomical abnormalities of position causing obstruction but post mortem changes obscured the fine details of alterations in the mucous membrane lining the digestive tract Clinicians therefore, in the absence of other data, were led to regard many of the complaints of their patients as due to nervous dyspepsia and gastric or intestinal neuroses The early work with test meals, which differentiated an acid from an atonic or subacid dyspepsia only confirmed the functional aspect of the disorder Though the direct observations of surgeons at operation with their investigation of the pathology of the living took note, for example, of ulcers of the duodenum, they drew a hard-and-fast line between those patients with demonstrable duodenal ulcer and those who only suffered from hyperchlorhydria Failing however to ensure the recovery of the patient by simple short circuiting methods they practised the removal of parts of the badly functioning organ itself These parts when submitted to careful

[1] *A Surgeon s Pocket Book* By H S Souttar D M M.Ch F R C S London W Heinemann (Medical Books) Ltd 1933 (Pp 285 7s 6d net)

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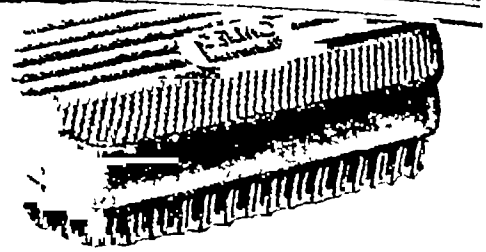

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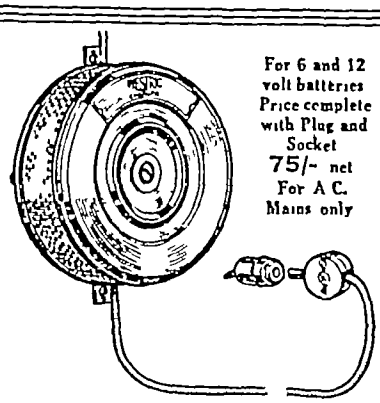

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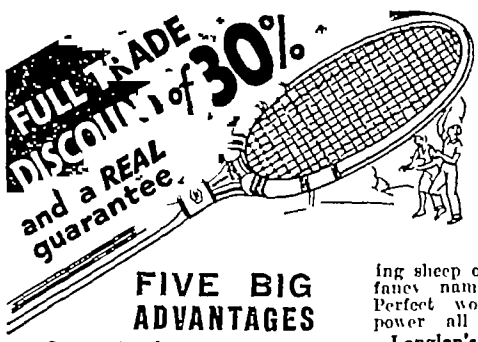

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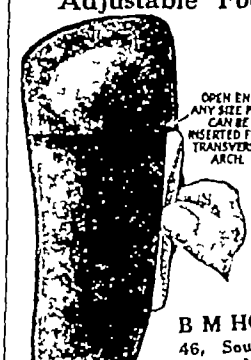

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histological examination have revealed changes of an organic nature in the portions of viscus far removed from the ulcer itself Now the pendulum has swung across to the other side Gastro-duodenitis is the essential and underlying condition in diseases of the upper digestive tract according to the teaching of Faber and Hurst just as colitis is to be regarded as an organic complaint if we follow von Bergmann and others

A recently published book on the *Modern Aspects of Gastro enterology* emphasizes the changed point of view Dr M A ARAFA the author after serving as medical registrar to Kasr-el Aini Hospital Cairo and medical tutor at the Egyptian University was given three years leave of absence for study abroad He has divided his time between London Berlin and Vienna and has had as Dr Hurst says in a foreword an almost unique opportunity of studying modern medicine under clinicians approaching the subject by very different methods and from very different points of view Dr Arafa has set down the views of his teachers and notes of his reading in the subject of diseases of the digestive system and has combined them in a book that will be read with interest and instruction by all who work on the subject In the investigation of the stomach he declares a good history of the case proper abdominal palpation modern radiology and gastric analysis are the reliable factors for diagnosis Each of these should be given due weight and we must never depend upon the radiological report alone to give a definite diagnosis X rays can only support a provisional diagnosis based on a careful clinical examination as well as on other evidence Modern radiological technique and the chemical examination of gastric contents are described in detail Emphasis is laid on the display by special methods of the condition of the folds of mucous membrane lining the stomach thickening or irregularity of the folds may serve to draw attention to lesions which would otherwise be overlooked In this way the modern conception of the frequency of gastritis has been confirmed there may be two varieties at least—a hypertrophic gastritis where the rugae or folds of mucous membrane are abnormally thickened and tortuous or chronic atrophic gastritis where the rugae are thin and atrophic It is easy to understand that an atrophic gastritis will produce a subacidity or achlorhydria and even achylia or complete absence of gastric secretion if the atrophy has proceeded far enough Hyperchlorhydria on the other hand is not so readily explained as a sequel of gastritis except on the hypothesis that it follows when gastritis occurs in those who have constitutional hyperchlorhydria and the gastritis is thus superadded to a functional hypersecretion Setting aside these considerations however Dr Arafa finds that he can convey the modern conception of gastro-duodenal diseases under two headings—peptic ulcer and gastritis with its sequelae of which the most important is cancer of the stomach

In the investigation of intestinal diseases too radiology plays an important part when the results obtained by it are placed in proper relation to a careful history and physical examination including proctosigmoidoscopy and analysis of the faeces The colon can be demonstrated and information obtained not only about its movements but about the state of the lining membrane as well In this way the portion of the colon involved can be localized when ulceration is shown by the presence of pus and mucus in the faeces Dr Arafa deals only with ulcerations of the colon due to various causes—dysentery tuberculosis and what is called primary ulcerative colitis He omits the simple and catarrhal forms of colitis from his discussion because they clear up rapidly with complete rest and careful dieting But it is these simple and often relapsing forms which many modern authors regard as precursors of the more severe and ulcerative forms In dealing with tests of liver function the author finds none of much value except those which define the gall bladder on the *x* ray screen after the ingestion of opaque dyes containing iodine A short chapter on the diagnosis of pancreatic disease follows and then one on the dietetic treatment of the diseases of the digestive organs Excellent *x* ray photographs illustrate the various lesions described

And yet the practitioner who takes up this book will find that he may be much interested but not so much helped by these modern aspects of gastro-enterology It is right that the pathology of these diseases should be clearly defined for it is only from a basis of sound pathology that any steps towards an adequate therapy can be taken But an over simplification may lead to difficulties When gastritis is so prevalent and so protean in its manifestations the practitioner may well demand some classification with greater clinical application which will display the broad features of the complaints of his patients enabling him thus to make a good attempt to meet and treat them, and only secondarily requiring the aid of elaborate methods with *x* ray and test meals This is perhaps not possible at present but we hope it may be envisaged in more modern aspects of gastro-enterology

[1] *Modern Aspects of Gastro-enterology* By M A Arafa M R C P With foreword by A F Hurst, M D F R C P London Baillière Tindall and Cox 1933 (Pp xviii + 374 56 plates 23 figures 27s 6d)

FUCHS S OPHTHALMOLOGY

It is interesting to recall the aim that ERNST FUCHS had in 1889 when he penned the first edition of his well-known textbook of ophthalmology He abhorred note taking by his students during his professorial lectures at Vienna For these reasons he wrote I am very happy to go to the trouble of writing out the essentials of my lectures for my auditors He planned a small work but it grew under his hand for he remarked that the book the student learned to know became the familiar friend of the practising physician His work[2] has now reached the fifteenth German and the tenth English edition All the German editions except this last were the product of Fuchs s own hand and bore the sole impress of his observant and thoughtful mind In somewhat of the spirit of filial duty Dr Maximilian Salzmann professor of ophthalmology in the University of Graz Austria has now taken over the task of continuing the labours of his revered teacher The English translation has also changed hands the late Dr Alexander Duane having been succeeded by Dr E V L Brown professor of ophthalmology in the University of Chicago

The new edition has the old familiar form but there are changes of moment in its make-up The increase in size of the later editions tended to make the work too costly for undergraduate students—just those for whom it was primarily intended The present authors have taken a bold decision for the chapters on methods of examination refraction and operation have been omitted The omission leaves the book practically a treatise on eye diseases alone—the field in which Fuchs was without a peer—so that it is now called Fuchs s *Diseases of the Eye* A second and lesser change is a reversion to the custom followed by authors of many other textbooks in the inclusion of an atlas of fundus drawings There are forty-one coloured illustrations drawn by Professor Salzmann himself The choice is good and the technique of both artist and printer excellent The new revision will ensure the maintenance of this work in the premier position it

[2] *Diseases of the Eye* By H E Fuch Authorized translation by Professor E V L. Brown M D Tenth English edition. Philadelphia Montreal and London J B Lippincott Company 1933 (Pp xviii + 641 250 illustrations 41 coloured figures. 42s net.)

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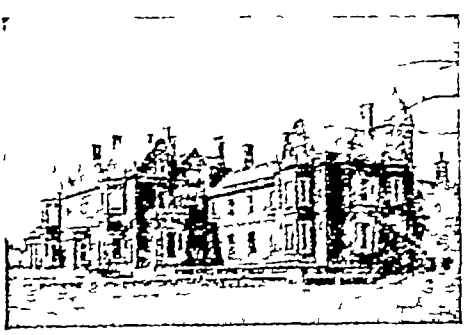

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A comfortable private HOME charmingly situated overlooking Torbay near Torquay Main line 3½ hours from Paddington Both Ladies and Gentlemen admitted as voluntary patients. The treatment is the outcome of many years experience and besides removing all craving for drink and drugs it has a tonic action on the system and the general health is improved. Alcohol and drugs reduced gradually without suffering

FUNCTIONAL NERVOUS DISEASES AND NEURASTHENIA are also treated with excellent results. Cases with insomnia depression etc do especially well

Exceptionally good climate and ample and varied amusement Moderate inclusive terms. Prospectus etc from STANFORD PARK M B Ch B Res Med Supt. Bay Mount Paignton

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For the treatment of GENTLEMEN Estab 1883 by an Association of prominent medical men and others for the study and treatment of alcohol and drug abuse. Large secluded grounds on the bank of the River Colne Voluntary Patients can be received under the Inebriates Act. Full sized billiards tennis croquet bowls Golf (Moor Park Sandy Lodge) close by For particulars apply to—F S D HOGG M R C S &c Resident Med Supt. Tel phone 16 RICKMANSWORTH.

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PRIVATE HOSPITAL for Ladies and Gentlemen suffering from Mental and Nervous Disorders. The hospital is situated in nine acres of pleasure grounds. Both voluntary and patients under certificates received. For further particulars apply Dr GERALD JOHNSTON or Dr FREDERT ROLLINS Resident Physicians

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Littleton Hall, Brentwood, Essex.

Large grounds 400 ft. above sea. HOME for ladies Mentally afflicted Voluntary Boarders received. Station Brentwood and Shenfield 1 mile Liverpool St. 26 min Apply Dr HAYNES

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Situated in 3½ acres of secluded gardens

HOME FOR TWELVE MENTAL PATIENTS (LADIES)

Well appointed private house. Home comforts and Trained Nursing Staff Eminent Mental Specialist Visiting Physician

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Patients of both sexes with any disorder to which PSYCHOTHERAPY is applicable are received for treatment at ELMSLEIGH BASSETT SOUTHAMPTON Domestic arrangements well ordered and surroundings pleasant Terms and particulars from T A. HAWKESWORTH, M.B.

The MAUDSLEY HOSPITAL

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A CLINIC instituted by the London County Council for Treatment of NERVOUS and CURABLE MENTAL DISORDER. Voluntary patients ONLY received.

NEW OUT PATIENTS MEN — Mondays and Thursdays, 2 p.m. WOMEN—Tuesdays and Fridays, 2 p.m CHILDREN—Mondays and Fridays 10 a.m

IN PATIENTS (a) 229 beds (both sexes) in wards or separate rooms including 35 beds in a ward of King's College Hospital which is in use as a temporary annex to the Maudsley Hospital. (b) 13 private rooms (for ladies) with special sitting rooms, garden and dietary

TERMS

(a) £5 a week, but in case of patients with a legal settlement in the County of London a less sum may be charged according to means.

(b) £6 6s a week.

Terms include (with rare exceptions) all forms of treatment, for which unusual facilities exist—there being a staff of consultant specialists and the central laboratory of London County Mental Hospital being attached to the Hospital.

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As founded and established by the late Dr FRANCIS HARE, for 20 years Med. Supt. of the Norwood Sanatorium and author of "Alcoholism" etc for the treatment of ALCOHOLISM other Drug Habits Insomnia, Neurasthenia, Functional Nervous Disorders

"THE OLD HILL HOUSE," CHISLEHURST KENT

Fees 5–10 guineas. Ample amusements. 25 bedrooms Annexe for mild cases. Quiet and pleasant situation

Ladies and gentlemen admitted for treatment. For prospectus etc. write or phone WALTER E. MASTERS M.D. M.R.C.S., D.P.H., Barrister at Law (Pres. Med. Supt.) Author of The Alcohol Habit

Phone *Telegrams*

Chislehurst 451. "Masters" Chislehurst.

has held for so long as the most widely read of all the one-volumed textbooks of ophthalmology It is both the guide to the senior student and the reliable mentor of the practitioner, whether ophthalmic specialist or engaged in a wider and more general field of practice

IMMUNITY IN TUBERCULOSIS

Dr JEAN VAN BENEDEN has attacked one of the most complex problems of bacteriology—the nature of immunity in tuberculosis During the past few years his work has brought him into contact with many aspects of this subject and he has now embodied his results in a book with the comprehensive title of "Investigations into Infection, Hypersensitivity, and Immunity towards Virulent or Attenuated Forms of the Tuberculous Virus" [4] His observations, though rambling, are of considerable interest, and his experiments have clearly been made with an attention to detail and a regard to possible errors that are often missing from the work of others in this field One of his main contributions is towards the existence of a filterable form of the tubercle bacillus That the pathological changes occurring in guinea-pigs after inoculation with filtrates of tuberculous material are not the result of the passage of very small numbers of bacilli through the filter he has endeavoured to show by injecting normal guinea-pigs with minute doses of virulent tubercle bacilli These animals, he has found, develop the same type of lesions as do those receiving larger doses, and react quite differently from guinea-pigs inoculated with the so-called filterable form Experiments with B C G have indicated that a considerable degree of allergy develops after subcutaneous inoculation of this organism into guinea-pigs but that the resistance of the animals to subsequent inoculation with virulent bacilli is not increased On the other hand, intracardiac inoculation with B C G , though giving rise to a less durable allergic condition, appears to lead to a significant increase in resistance From this result the author draws the conclusion not only that the route of vaccination may be of much importance but that allergy and immunity are distinct phenomena The final conception that is built up of the nature of immunity in tuberculosis is vague and unsatisfying, but even this is preferable to rationalization and dogmatism

CHEMISTRY

Every new volume of MELLOR'S *Chemistry*[3] is a fresh cause of delight The book is called a comprehensive treatise but while the word comprehensive is most often used in a figurative sense only, it is quite properly applied to Dr Mellor's work and has a literal significance It appears hardly possible that any fact of chemistry can have been overlooked in its preparation and every statement is rendered easily traceable to the authority by whom it was enunciated But if the work is of compendious bulk the arrangement is no less admirable The whole of it forms a context in which nothing appears out of its proper place The copious index need but rarely be consulted to find what is wanted Even ornamentation is not lacking for in regard to existing anomalies in the nomenclature of iron and steel the quotation is introduced

Socrates Why should we dispute about names when we have realities of such importance to consider?

Glaucon Why indeed when any name will do which expresses the thought of the mind with clearness?

Volume XII has now been issued It contains the chemistry of uranium, manganese masurium rhenium and iron There is a complete and interesting account of the physiological effects and the biological functions of manganese, which begins with observations made by Gmelin and extends to matters affecting many varieties of plant and animal life Every forethought has been taken to anticipate the desire of those who may use the book It even includes a map of the geographical distribution of uranium and a summary of the iron ore reserves of Europe

BARGER'S *Organic Chemistry*[6] is written expressly for medical students, and is designed to impart the requisite teaching without penetrating the more technical branches of chemistry as avenues to medical knowledge Such a need has long been recognized, but hitherto attempts to provide it have not all been fully successful They have not escaped the fault of presuming too much on the student's previous learning Professor Barger, however, with a broad appreciation of the student's needs, has produced a constructive scheme of teaching directly connected with the elementary principles as a basis and has made his treatise easily readable, as well as complete in essential matters A pleasing feature of the book is the association of medical knowledge with chemical teaching in a way that provides the student with a connected scheme of study, recalling the manner in which chemistry was taught to medical students sixty or eighty years ago, when the chemistry, such as it was, fitted its place exactly in medical science Thus the chemistry of therapeutic substances and of the materials of metabolism and nutrition is studied in relation to their uses and functions This is a book well suited to the purpose for which it is intended, and one that may confidently be expected to engage the interest of a wider circle of readers than those for whom it was especially written

Notes on Books

The Significance of Phosphoric Esters in Metabolism by Professor R Robison, is based on a course of Herter Lectures delivered by the author in New York in 1931 It forms an authoritative monograph on an important subject in which knowledge is advancing rapidly Books of this type are invaluable, and the appearance of the work will be welcomed by biochemists throughout the world, for the phosphoric esters appear to be of fundamental importance for a considerable proportion of the activities of living cells In the first lecture the author deals with the function of these esters in yeast fermentation and in muscular contraction Harden showed that the formation of hexose phosphate was an intermediate stage in the conversion of sugar to alcohol by yeast The author of this monograph was chiefly responsible for advancing our knowledge of these changes to its present stage In recent years it has been shown that another phosphate ester—namely, phosphagen—is the substance whose breakdown is the immediate source of the energy which produces muscular contraction In the second and third lectures Professor Robison deals with the calcification of bone and cartilage *in vivo* and *in vitro* This subject is extremely important in connexion with bone repair and also in defective bone formation such as occurs in rickets A particularly interesting feature of the book is the portion dealing with the author's experiments on bone formation *in vitro* This is fully illustrated with plates and gives a clear account of the present state of knowledge regarding the factors that influence the deposition of calcium salts in cartilage

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[4] *Recherches sur l'Infection, l'Hypersensibilité et l'Immunité vis-à-vis des formes virulentes ou atténuées du Virus Tuberculeux* Par Dr Jean van Beneden Paris Masson et Cie 1932 (Pp 136 14 figures 25 fr)

[3] *A Comprehensive Treatise on Inorganic and Theoretical Chemistry* Vol XII By J W Mellor D Sc F R S London Longmans Green and Co Ltd 1932 (Pp 956 320 figures 63s net)

[6] *Organic Chemistry for Medical Students* By G Barger M A D Sc F R S Hon D Sc Liverpool Hon M D Heidelberg Hon Sc and Edinburgh Gurney and Jackson 1932 (Pp 249 [illegible] 6d net)

[7] *The Significance of Phosphoric Esters in Metabolism* [illegible] R Robison Ph D D Sc F R S Herter Lectureship on Biological Chemistry New York The New York University Press London H Milford Oxford University Press 1932. (Pp 164 39 figures 7 tables)

ST. ANDREW'S HOSPITAL

FOR MENTAL DISORDERS,

NORTHAMPTON.

FOR THE UPPER AND MIDDLE CLASSES ONLY

President THE MOST HON THE MARQUESS OF EXETER C M G A D C

Medical Superintendent DANIEL I RAMBAUT M A M D

This registered Hospital is situated in 120 acres of park and pleasure grounds. Voluntary patients who are suffering from incipient mental disorders or who wish to prevent recurrent attacks of mental trouble temporary patients and certified patients of both sexes, are received for treatment Careful clinical biochemical bacteriological and pathological examinations Private rooms with special nurses male or female in the Hospital or in one of the numerous villas in the grounds or the various branches can be provided

WANTAGE HOUSE.

This is a Reception Hospital in detached grounds with a separate entrance to which patients can be admitted It is equipped with all the apparatus for the most modern treatment of Mental and Nervous Disorders It contains special departments for hydrotherapy by various methods including Turkish and Russian baths the prolonged immersion bath Vichy Douche Scotch Douche Electrical bath Plombieres treatment etc There is an Operating Theatre a Dental Surgery an X ray room an Ultra violet Apparatus and a Department for Diathermy and High Frequency treatment It also contains Laboratories for biochemical, bacteriological and pathological research

MOULTON PARK.

Two miles from the Main Hospital there are several branch establishments and villas situated in a park and farm of 650 acres Milk meat fruit and vegetables are supplied to the Hospital from the farm gardens and orchards of Moulton Park Occupation therapy is a feature of this branch and patients are given every facility for occupying themselves in farming gardening and fruit growing

BRYN-Y-NEUADD HALL

The seaside house of St Andrew's Hospital is beautifully situated in a Park of 330 acres Llanfairfechan amidst the finest scenery in North Wales On the North West side of the Estate a mile of sea coast forms the boundary Patients may visit this branch for a short seaside change or for longer periods The Hospital has its own private bathing house on the seashore There is trout fishing in the park

At all the branches of the Hospital there are cricket grounds football and hockey grounds, lawn tennis courts (grass and hard courts) croquet grounds golf courses and bowling greens Ladies and gentlemen have their own gardens and facilities are provided for handicrafts such as carpentry etc

For terms and further particulars apply to the Medical Superintendent (Telephone No 2356 and 2357 Northampton) who can be seen in London by appointment

HAYDOCK LODGE,

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Phone 11 Ashton in Makerfield

For the reception and treatment of PRIVATE PATIENTS of both sexes of the UPPER AND MIDDLE CLASSES suffering from mental and nervous diseases, either voluntarily or under Certificate. Patients are classified in separate buildings according to their mental condition

Situated in park and grounds of 400 acres Self supported by its own farm and gardens in which patients are encouraged to occupy themselves Every facility for indoor and outdoor recreation For terms prospectus etc apply MEDICAL SUPERINTENDENT

THE COPPICE, NOTTINGHAM.

HOSPITAL FOR MENTAL DISEASES

This Institution is exclusively for the reception of a limited number of Private Patients of both sexes of the Upper and Middle Classes at moderate rates of payment It is beautifully situated in its own grounds on an eminence a short distance from Nottingham, and from its singularly healthy position and comfortable arrangements affords every facility for the relief and cure of those mentally afflicted Voluntary and Temporary Patients received

Tel 64117 *For terms etc, apply to the Medical Superintendent*

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SOUTH DEVON

For the care and treatment of Ladies suffering from Mental Diseases Limited to eight patients Telephone Starcross 59

CLIFFDEN TEIGNMOUTH, in connection with Court Hall for early and convalescent cases Cliffden is a large well appointed house with lovely views of the South Devon Coast It is beautifully situated in grounds of 24 acres The gardens are very attractive, and there is a private road to the beach

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BUCKS

FUNCTIONAL NERVOUS DISORDERS, MEDICAL & CONVALESCENT CASES

An Approved Nursing Home for reception of Female Cases under the Mental Treatment Act

The Home is a Mansion of Historical Interest standing in 9 acres of garden and grounds and is situated 14 miles from Northampton and 12 miles from Bedford on the main London to Northampton Road fifty miles from London Both sexes are accommodated Psycho-therapeutic Treatment is used extensively in suitable cases Radiant Heat X Ray and Ultra violet Light Diathermy and Foam Baths Billiards tennis, etc Fees from five gns per week

Apply Dr D E M DOUGLAS MORRIS Telephone Newport Pagnell 121

CHISWICK HOUSE

A Private Mental Hospital for the Treatment and Care of Mental and Nervous Disorders in both Sexes

Now removed to

CHISWICK HOUSE, PINNER, MIDDLESEX

Telephone PINNER 234

A modern country house, 12 miles from Marble Arch, in beautiful secluded grounds Fees from 10 guineas per week, inclusive Cases under certificate and Voluntary Patients received for treatment Special provision for "Temporary" patients under the new Mental Treatment Act

Douglas Macaulay M D D P M

BARNWOOD HOUSE,

GLOUCESTER

A REGISTERED HOSPITAL for the CARE and TREATMENT of LADIES and GENTLEMEN suffering from NERVOUS and MENTAL DISORDERS Within two miles of the G W Railway and L M & S Railway Stations at Gloucester, the Hospital is easily accessible by rail from London and all parts of the United Kingdom It is beautifully situated at the foot of the Cotswold Hills and stands in its own grounds of over 280 acres. Voluntary Boarders of both sexes are also received for treatment

Special accommodation for Lady Voluntary Boarders is also provided at the MANOR HOUSE, which has its own private grounds and is entirely separate from the main Hospital.

For particulars as to terms etc., apply to—
ARTHUR TOWNSEND M D Medical Supt.
Telephone No 6207 Barnwood

HILL END AND HIGHFIELD HALL,

ST ALBANS

(20 miles from London)

Ladies suffering from all forms of Mental Illness are received for treatment on modern lines as Voluntary, Temporary or Certified Private Patients at the Hill End Mental Hospital Convalescent and mild cases can be treated in a delightful country mansion with extensive grounds known as Highfield Hall, situate about a mile away from the Hospital. FEES TWO TO THREE GUINEAS PER WEEK.

For further particulars apply to the Medical Supt W J T KIMBER L R C P D P M., Hill End Mental Hospital St Albans Herts.

HOME FOR EPILEPTICS,

MAGHULL (near LIVERPOOL)

Chairman Brig Gen C Griffin Taylor C B E. V D D L

FARMING and OPEN AIR OCCUPATION for PATIENTS.

A few vacancies in 1st and 2nd Class Homes.

FEES 1st Class (men only) from £3 p.w upwards 2nd Class (men and women) 32/ p w

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CHRISTCHURCH ROAD,

STREATHAM HILL, S W 2.

A Private Home for the Care and Treatment of a limited number of Ladies with Mental and Nervous Disorders Separate accommodation for Voluntary Patients. Large Mansion with 12 acres of ground (See *Medical Directory* p 2294) Apply J H FARIS M D Resident Physician Telephone Tulse Hill 7181

SPRINGFIELD HOUSE,

Near BEDFORD (Phone 3417)

For Mental Disorders with or without Certificates.

Resident Physician CEDRIC W FOWLE.

Ordinary Terms Five Guineas per week.

(Including Separate Bedrooms where suitable)

Interviews in London by appointment.

WYE HOUSE, BUXTON

For the treatment of Ladies and Gentlemen mentally afflicted Voluntary Boarders received Situated 1,200 ft above sea level facing S 14 acres of grounds — For terms apply to the Resident Medical Superintendent Nat Tel 170

W W HORTON M D

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REDUCTION OF FEES

In view of the present economic position the inclusive fees at Ruthin Castle formerly from 17 guineas a week have been reduced to from 15 guineas a week

The fees include medical attendance all scientific investigations that may be needed such as analyses bacteriological cultures the ordinary x ray examinations and electrocardiograph readings all treatment that may be prescribed such as special diets insulin artificial sunlight electrical treatment baths massage nursing medicines or vaccines board and lodging

The only extra charge is that for a complete alimentary x ray examination or for x ray therapy

All the usual forms of treatment are given at Ruthin Castle The climate is mild The annual rainfall is 30 5 inches that is less than the average for England There is central heating throughout Should the accommodation in the Castle not prove sufficient comfortable rooms can be obtained near by for those undergoing treatment

Address—THE SECRETARY Ruthin Castle North Wales Telegram CASTLE, RUTHIN Telephone RUTHIN 66

WOODSIDE HOSPITAL

WOODSIDE AVENUE MUSWELL HILL, LONDON N 10

President THE RT HON THE EARL OF ATHLONE, K.G., P.C.

Fully equipped with every modern appliance for the diagnosis and treatment of

FUNCTIONAL NERVOUS DISORDERS

Private Rooms Broad Verandahs Physiotherapy and Psychotherapy X ray and Dental departments Laboratories for investigation and research For terms and particulars apply to the Physician in charge at the Hospital Telephone Tudor 4211

THE OLD MANOR SALISBURY

A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS

Extensive grounds Detached Villas Chapel Garden and dairy produce from own farm Terms very moderate.

CONVALESCENT HOME at BOURNEMOUTH

Detached Villas standing in 12 acres of ornamental grounds with tennis courts etc., which Voluntary Temporary or Certified Patients may visit, by arrangement, for long or short periods

Illustrated Brochure on application to the Medical Superintendent The Old Manor Salisbury Telephone 51

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Telegrams "PSYCHOLIA LONDON" *Telephone* RODNEY 4731—4732

FOR THE TREATMENT OF MENTAL DISORDERS

Also completely detached Villas for mild cases with private suites if desired Voluntary Patients received Twenty acres of grounds Hard and Grass Tennis Courts Putting Greens Bowls Croquet Squash Rackets and all indoor amusements including Wireless and other Concerts Occupational Therapy Callisthenics and Dancing Classes X ray and Actino therapy Prolonged Immersion Baths Operating Theatre Pathological Laboratory Dental Surgery and Ophthalmic Dept Chapel and a court for badminton There are also war less installations Golf may be had within easy distance. Occupational Therapy Senior Physician Dr HUBERT JAMES NORMAN assisted by three Medical Officers also resident and visiting Consultants An illustrated Prospectus giving fees which are strictly moderate may be obtained upon application to the Secretary

The Convalescent Branch is HOVE VILLA BRIGHTON and is 200 feet above sea-level

CHEADLE ROYAL MENTAL HOSPITAL,

CHEADLE, CHESHIRE.

This REGISTERED HOSPITAL, with a SEASIDE BRANCH at Colwyn Bay N Wales is for the treatment and care of those of the Upper and Middle Classes suffering from MENTAL and NERVOUS DISEASES

The Hospital is governed by a COMMITTEE appointed by the TRUSTEES of the Manchester Royal Infirmary

In addition to the Main Building there are separate villas Extensive grounds Hard and grass tennis courts, cricket and croquet grounds, Occupational Therapy

VOLUNTARY TEMPORARY AND CERTIFIED PATIENTS received.

The Hospital is nine miles from Manchester 50 minutes by rail from Liverpool and 3½ hours from London.

For terms and further particulars apply to the Medical Superintendent J A C. ROY M.B who may be seen in Manchester by APPOINTMENT

Telephone GATLEY 2231 (3 lines)

NORTHUMBERLAND HOUSE,

GREEN LANES, FINSBURY PARK, N 4

Telegrams SUBSIDIARY LONDON *Telephone* NORTH 0833

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses

Conveniently situated four miles from Charing Cross Easy access from all parts Six acres of ground highly situated facing Finsbury Park. Private Suites. Voluntary Patients and Temporary Patients received without certification.

Convalescent Home **Kearsney Court Dover** For further particulars, apply to the **Medical Superintendent.**

PECKHAM HOUSE, 112, Peckham Road, London, S E 15

Telegrams 'Alleviated London **Telephone Rodney 4741-4742**

The above House which was established in 1826 is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders Certified voluntary and temporary patients are received Separate houses for treatment and accommodation of special cases adjoin the Institution There is a seaside branch Hearsney Court near Dover to which patients may be sent for treatment or on holida Motor and carriage exercise is provided as required Patients can avail themselves of a course of physical drill Tennis Courts Entertainments dances and indoor amusements held throughout the year Terms from £3 3s per week.

Illustrated prospectus and further particulars can be obtained from the **Medical Superintendent.**

The little work on *Heart Burial*[1] by Mr C A BRADFORD deals as he points out in a prefatory note with the ancient custom of division of the human body at death and the separate disposal of its parts as illustrated by cases associated with the London postal area In addition to much curious information which will interest the historian and antiquary the book contains chronological notes on 108 cases ranging from Henry II in the twelfth century to Thomas Hardy in the twentieth About fifty five of these are examples of heart burial and the rest either cases where there was doubt as to whether the heart or other viscera were interred or instances of undoubted visceral interment selected for their historical interest Mr Bradford remarks that though John Hunter expressed a desire that his heart should be preserved in his museum his wish was disregarded On the other hand the heart and other viscera of Livingstone the only other medical man who figures in this list were buried at Ilala in Central Africa while his body was embalmed and buried in the nave of Westminster Abbey We learn from a footnote that among French surgeons whose hearts were buried in Paris separately were Fromentin (1677) De la Peyronie (1747) and Larrey (1842)

An enlarged edition of Dr BUCKSTEIN'S book on the radiology of peptic ulcer[2] has now appeared The first edition was published in December 1929 and reviewed in this *Journal* in July 1930 In the present edition many new illustrations have been added and the literature has been brought up to date The new sections on the differential diagnosis of benign and malignant ulcer and on jejunal ulcer as well as the illustrations of the effect of treatment in the healing of peptic ulcer of stomach and duodenum are interesting and instructive In the three years that have elapsed since the first edition was published radiological technique has improved a great deal and many of the old illustrations should have been replaced by radiograms obtained with modern apparatus and films Although relief pictures are given of the folds of mucous membrane these are not shown in the same cases as the ulcer and much of the teaching value is lost It is doubtful therefore if the book will be of great use to a radiologist as it contains so much that has already appeared in textbooks and journals It may be useful to the practitioner as a summary of the radiological findings in peptic ulcer and its complications and as a reference book in the medical library

Commander W S BAINBRIDGE of the United States Navy Reserve has compiled a report of the Sixth International Congress of Military Medicine and Pharmacy and of the meetings of the Permanent Committee which were held at The Hague in June 1931[3] It is issued by the Department of State of the United States as No 12 of its Conference Series The main topics reported are those relating to the recruiting training and advanced training of military medical officers and pharmacists the psychoneuroses of war including the immediate and remote effects of war on the nervous system of combatants and non-combatants the preparation and storage of medicinal ampoules in use in the medical services and methods of haemostasis on the battlefield with special reference to the standardization of first aid material and the mode of application The contributions made by the delegates of the various countries represented at the congress are clearly set out and the unanimous conclusions reached are detailed The author points out in his introduction that much of the knowledge gained in the war can be utilized in times of peace if rendered available in permanent form The present volume is an effective illustration of this assertion

Chininum[4] the annual publication of the Kina Bureau has been written this year by Dr F JOHANNESSOHN This author in the 1930 number gave a summary of the literature on the therapeutic action of quinine during the previous fifteen years and now he summarizes the therapeutic and pharmacological works that have appeared since 1930 The importance of quinine as a drug is evidenced by the fact that he gives 465 references Malaria is dealt with in fifteen pages and references are given to recent work on plasmoquine and atebrin The quinine treatment of pneumonia is dealt with particularly fully and it is interesting to note that about ten German writers have found that quinine injections reduce the mortality of pneumonia by 50 per cent The claims regarding the results of quinine appear to be very similar to those made for the antipneumococcal serum A short account is also given of recent pharmacological work on quinine and its application for various therapeutic purposes in medicine surgery and obstetrics

[1] *Heart Burial* By Charles Angell Bradford F S A London George Allen and Unwin Ltd 1933 (Pp 256 8s 6d net.)

[2] *Peptic Ulcer* Vol X *Annals of Roentgenology* By J Buckstein M D Edited by J T Case M D Second edition revised New York Paul B Hoeber Inc 1933 (Pp xxvii + 417 405 figures 12 dollars)

[3] *Sixth International Congress of Military Medicine and Pharmacy* Report of Commander William Seaman Bainbridge M C F U S N R for the delegation from the United States of America Conference Series No 12. Washington United States Government Printing Office. 1933 (Pp xii + 166 1 dollar)

[4] *Chininum in der Allgemeinpraxis* Von Dr med Fritz Johannessohn Unter berücksichtigung pharmakologischer befunde Amsterdam Bureau tot Bevordering van het Kinine-Gebruik. (Pp 176)

Preparations and Appliances

TANNIC ACID OUTFIT FOR BURNS

Messrs C J Hewlett and Son Ltd (35 42 Charlotte Street E C 2) have sent us a small outfit for the treatment of burns by tannic acid which is both convenient and easy to use The apparatus consists of a 2-ounce bottle with spray attachment in which a tablet of tannic acid compound giving the required strength of solution can be dissolved The composition follows that suggested by Mr Mitchiner in his lecture in the *British Medical Journal* of March 18th 1933 Two different kinds of tablets are supplied ordinary and effervescent With the first a solution is attained in two ounces of warm water in a few minutes the effervescent tablets on the other hand take considerably less time to dissolve and the amount of gas given off by them is not inconvenient The whole apparatus comprising bottle vulcanite spray and rubber bellows together with a supply of tablets complete in cardboard box costs 4s 6d Extra tablets can be obtained at 3s per 100

OIL SOLUBLE BISMUTH

Stabismol is a solution of a new oil soluble bismuth compound which has been discovered and manufactured by Boots Pure Drug Co Ltd The formula of the compound is bismuth α-carboxy-cyclo-hexanyl acetate The drug is supplied in solution in olive oil and 1 c cm of the solution contains 0 1 gram of bismuth metal The advantages claimed for this preparation are that it is less painful on injection and more rapidly absorbed than are aqueous suspensions of bismuth salts or of bismuth metal The superior rate of absorption has been demonstrated by x ray photographs Pharmacological experiments have proved the non toxicity of the compound and the purity and sterility of the preparation is controlled by analytical and bacteriological tests The dosage recommended is 2 c cm solution (0 2 gram bismuth metal) weekly

Messrs Boots have prepared an interesting brochure which gives full details of the properties of the drug and its mode of administration and also gives an outline of suitable courses of combined arsenical and bismuth therapy for various types of syphilitic infection The introduction of bismuth by Sazeras and Levaditi has proved a valuable advance in the therapy of syphilis but there has been considerable difficulty in finding a satisfactory preparation of this metal Preparations which form aqueous suspensions are very slowly absorbed whilst those given in aqueous solution are painful and have often proved to be unduly toxic This new oil-soluble preparation ought therefore to prove a valuable advance in bismuth therapy

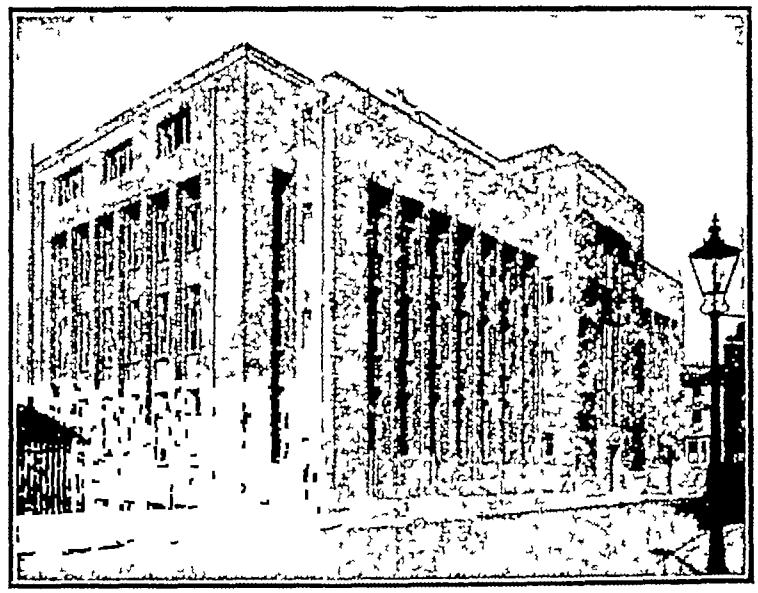
POLYVALENT INTESTINAL BACTERIOPHAGES

Enterofagos is a broth filtrate of polyvalent intestinal bacteriophages which has been prepared by the Laboratoire de Biologie Médicale of Nice and is marketed in this country by Continental Laboratories Ltd (30 Farnham Street S W 1) The mixture is recommended for oral administration in the treatment of intestinal infections of a wide variety The venders claim that since bacteriophage by virtue of its ultramicroscopic dimensions can pass through the intestinal mucosa therefore their preparation should be effective not only against gastro-intestinal infections but also against infections of the bladder and kidney

FIRTH INSTITUTE OF PATHOLOGY, UNIVERSITY OF LEEDS

It is now some seven or eight years since the University of Leeds launched its great rebuilding fund appeal, as a result of which nearly half a million of money has been collected to date The rebuilding scheme itself has made considerable progress during this time In connexion with the main university centre in Woodhouse Lane and University Road, new buildings have been erected for the departments of physics, chemistry, and mining, and the building of the Brotherton Library, for which a special donation of £100,000 was made by the late Lord Brotherton, is about to be commenced All these various sectional activities are component parts of one big architectural scheme of expansion, the architects of which are Messrs Lanchester and Lodge of London

At the Medical School also much additional accommodation has been provided A new School of Dentistry and Dental Hospital was opened some four years ago, and in 1930 a new wing was added to the existing Medical School buildings to provide additional accommodation for physiology and biochemistry Lately we have had to record the opening of the Algernon Firth Institute of Pathology[1] on a site immediately adjacent to the School of Medicine and General Infirmary For some years the department of pathology and bacteriology has been very inadequately housed, much of its accommodation being of a temporary and makeshift character The department of experimental pathology and cancer research also since its inception in 1926, has occupied temporary quarters in Great George Street In future the work of these departments will be centralized in the new institute to the great advantage of all concerned



ALGERNON FIRTH INSTITUTE OF PATHOLOGY
St George's Road Frontage

The new building has cost approximately £50 000 and is the work of Mr J C Procter and Mr F L Charlton associated architects It has been named after Sir Algernon Firth Bt whose gift of £25,000 'towards the building of an institute in which accommodation should be provided for cancer research alone rendered its erection possible The opening ceremony, on April 25th last, was presided over by the Pro Chancellor Colonel C H Tetley and was attended by a large and representative body of Leeds citizens visitors from sister universities, and others The building was declared open by Sir Algernon Firth and an address On the Value of an Institute of Pathology to the Community was delivered by Professor Robert Muir F R S

DESCRIPTION OF THE BUILDING

The new institute is a dignified austerely beautiful brick building of four stories and basement The ground floor and part of the basement provide accommodation for the bacteriological section of the department of pathology and bacteriology (Professor J W McLeod, F R S) while the first floor is occupied by the department of experimental pathology and cancer research (Professor R D Passey), and the second by the pathological section of the department of pathology and bacteriology (Professor M J Stewart) There are two practical classrooms on the ground floor with places for seventy and twenty students respectively The lecture theatre, seated for eighty four, is on the first floor The animal quarters, on the second floor, are arranged so that all the rooms open on to an outside balcony, thus preventing any odour from reaching the interior of the building The third floor is occupied by the Charles Brotherton Museum, with its various annexes The museum a magnificent room with over 4,000 square feet of floor space, is brilliantly lighted by clerestory windows, leaving practically the whole of the walls available for museum purposes

The structure except for a small amount of Portland stone in the plinth and main entrance is entirely of brick Steel stanchions are used on either side of the main central corridors to break the span, but there are no stanchions in the outer walls and the floor girders are supported on the brick walls and central stanchions In other words, it is not a steel framed building Internal partition walls are in patent light brick and are not structural in order that room sizes may be altered in the future if required, with a minimum of disturbance The suspended floors throughout are of expanded metal and concrete the floor coverings to corridors and lavatories being terrazzo, to museum and lecture room oak and in the remaining rooms and laboratories 'battleship" linoleum cemented direct to the concrete The windows are steel framed, and the fenestration is for the most part in regular bays with windows 9 feet 8 inches and piers 3 feet The museum is lighted by three tiers of clerestory windows glazed with special diffusing glass The upper tier is top hung to open out the whole range being electrically operated Stained Columbian pine flush doors are used throughout internally

All the services are exposed, the main runs being carried in ducts over the corridor ceilings on each floor These ducts are served from two vertical ducts one on each side of the staircase well—one carrying all the electrical work and the cold water supply the other hot water heating mains gas etc Each service and run is ringed with a key colour at intervals for identification All internal drainage is exposed that for the laboratories on one floor being carried in glass lined cast iron pipes on the ceiling of the floor below Heating is by low pressure hot water pump circulated from duplicate coke fired boilers in the basement The hot water supply is by gravity from duplicate coke fired boilers in the basement

The general ventilation is natural but exhaust fans have been fitted to the combustion room and fume chambers An incubator room and refrigerator room have been installed in the basement Cleaners' closets with sinks and hot and cold water are provided on each floor There is an automatic electrically operated lift

The building as a whole is spacious and well lighted, and gives the impression of eminent suitability for its purpose It is a great acquisition to the armamentarium of the Leeds School of Medicine

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The current issue of *Archivio di Scienze Biologiche* contains the proceedings of the Fourteenth International Congress of Physiology held at Rome from August 29th to September 3rd, including the inaugural address delivered by Professor A V Hill on energy exchanges in nerve and muscle

[1] *British Medical Journal* May 6th 1933, p 801

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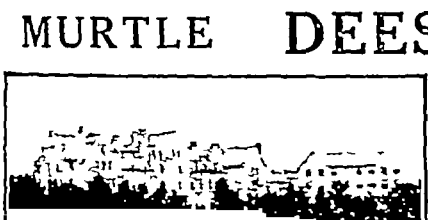

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British Medical Journal

SATURDAY, JUNE 10th 1933

THE SUPRARENAL CORTEX

The problem of the function of the suprarenal cortex is occupying the attention of the clinical endocrinologist the pathologist and the physiologist to so great an extent that it seems certain that discoveries of the first importance may be expected in the near future As in all investigations of endocrine function the essential action of any given gland is hidden in the complex of interactions with other glands Indeed it is not easy to define exactly what is meant by the action of a hormone If we take as an analogy the action of an enzyme the substrate upon which the hormone exerts its action is the entire organism and the final effect to be assessed is the resultant of all the responses of which the various components of the endocrine system are capable When so clear a statement as that insulin lowers blood sugar is made no simple picture of the processes leading to this end effect can readily be formed liver muscles suprarenal thyroid pituitary and centres in the pontine region of the brain all being undoubtedly concerned Bearing in mind the reservations which must attach to the term action in reference to hormones we are for most purposes content to express it in terms of the end-effects which dominate the picture Thus for the hormone of the parathyroid we have the changes in the serum calcium for the sex hormone the changes in the genital tract for insulin the blood sugar for the thyroid the metabolic rate for the pituitary the pressor oxytocic and growth effects and so on But in the case of the recently demonstrated hormone of the suprarenal cortex no clearly defined end-effect has been found Estimation of the potency of cortical extracts by the prolongation of the lives of suprarenalectomized animals with the maintenance of their weight and blood urea at normal levels is clearly very indirect and merely indicates that the tissue is essential to life The rise of blood urea after extirpation of the glands is evidence of a certain degree of renal failure and the symptomatology after the operation in animals can be correlated with the progress of this rise Thus Harrop and Weinstein [1] having shown that the normal non protein nitrogen of the blood of dogs is about 40 mg per cent found that after adrenalectomy anorexia and loss in weight begin when this value rises to 64 changes in gait occur when it is at 86 vomiting at 116 and diarrhoea at 123 That the cortical hormone is in some way closely connected with the efficiency of the muscular system is obvious from the well known clinical picture of Addison's disease whether this be due to a tuberculous process or to primary atrophy of the glands and the characteristic muscular asthenia so marked in the adrenalectomized animal Hence we are not altogether surprised that an outstanding feature of the injection of the cortical hormone into normal subjects (human and animal) should be a striking increase in the power of doing work Thus Britton and Silvette [2] have recently shown that injections of potent extracts doubled the running capacity of a normal dog and the effect was still noticeable after fifteen days Further Hartman and his co-workers [3] have found that in asthenia from other causes than Addison's disease cortical extract produced improvement with a capability of increased effort In myasthenia gravis muscular atrophy and dystrophy no benefit was obtained from the cortical extract a result which was perhaps to be expected In an interesting case described by J H Robbins [4] an acute streptococcal sore throat was followed by a complicating series of symptoms which were referred to an acute hyposuprarenalism and obvious benefit followed the administration of Hartman's cortin The evidence for hypofunction of the cortex was low blood pressure anorexia nausea vomiting loss in weight lumbar pains mental depression definite temporary mental changes and extreme weakness This author persuasively argues that if in streptococcal infections renal damage may follow the dissemination of toxic agents there is every reason to believe that suprarenal damage is also probable particularly in view of the very rich blood supply of this gland and that in post-infective asthenias the use of cortical extracts may find an extended field of application

Although we must consider that it is the deficiency of cortical hormone which is the prime cause of the syndrome of Addison's disease there are certain facts which complicate the problem Thus the treatment of such cases with cortical extracts while in most instances it prolongs life and relieves the most urgent symptoms when the process is not too far advanced fails to remove three cardinal features of the disease—namely hypotension pigmentation and hypoglycaemia Strangely enough these three characters are absent from the symptomatology of suprarenal deficiency in the dog a fact recently demonstrated by Harrop and Weinstein [1] From the point of view of the endocrinologist there is little doubt that the suprarenal cortex is intimately connected with the maintenance of what may be called sex balance and in this connexion this tissue must be considered as having some relation to the pituitary gland Neoplasms of the suprarenal cortex cause changes in metabolism changes in the distribution of the hair hypertension and marked abnormality in the secondary sex characters phenomena which are also associated with the basophil tumour of the pituitary described by Cushing In the male before puberty cortical tumours produce great growth of the body and increased development of the muscles and the external genitalia the general features of the subject tend to

[1] Harrop and Weinstein *Journ Exp Med* 1923 lvii 305

[2] Britton et al *Amer Journ Physiol* 1932 cii 70

[3] Hartman et al. *Journ Amer Med Asso* 1932 xcix 1478 and *Journ Nerv and Mental Disease* 1933 lxxvii 1

[4] Robbins J H. *Journ Amer Med Assoc* 1933 c 657

the adult type, and if the process is slow it leads to premature senility and death After puberty, however, when the virility of the subject is established, no further change in this direction is possible These facts are well known, and led to the view that overactivity of the suprarenal cortex stimulates all the mechanisms associated with virilism Two cases have, however, recently been described by H L Cecil in which the patients, young men of 26 and 27 years, showed pronounced changes in the direction of femininity as a result of hypernephromata , the matter is thus no longer so clear It is in the female subject that cortical tumours or hyperplasia lead to most striking changes in sex characters If the process begins before puberty the child tends to become obese, and develops hair on the face and pubic region , the voice coarsens and the skin becomes coarse and dry , the clitoris enlarges, the internal genitalia diminish in size, and frequently menstruation fails to start at puberty If the onset is after puberty there appears the tragic syndrome of amenorrhoea, loss of sexual interest, hirsutism, and the usual signs of virilism, with marked enlargement of the clitoris and labia and great diminution in the size of the breasts and internal genitalia In addition a sustained hypertension becomes established Heterosexuality gradually disappears In spite of this strong evidence that the suprarenal cortex exerts a stimulus to the male characters Cleghorn[6] was unable to obtain any effect on the growth and maturation of male mice by the injection of potent extracts of the cortex prepared by the method of Swingle and Pfiffner

As if still further to complicate the problem, recent work has shown that the suprarenal cortex is intimately connected with vitamin C The work of Szent-Gyorgyi has shown that the suprarenal cortex is relatively rich in hexuronic acid (ascorbic acid) and that the reducing power of vitamin C concentrates is due to, or associated with, hexuronic acid From beef suprarenal cortex he isolated 300 mg hexuronic acid per kilo and from orange juice only 100 mg , and, although these yields may be rather low, they give a good index of the relative amounts of this substance in the two sources Szent-Gyorgyi concluded that hexuronic acid is identical with vitamin C More recent work by Harris and Ray,[7] who used the ninety-day guinea-pig growth test and the tooth structure method for estimating antiscorbutic activity, strongly confirms the view of Szent-Györgyi Harris and Ray showed that the antiscorbutic power of fresh suprarenal cortex is three times that of fresh orange juice a result which is explicable on the hexuronic acid theory The antiscorbutic properties of suprarenal cortex are higher per unit weight than any other tissue hitherto investigated but the absolute amount in the liver is greater by virtue of its greater weight The peculiar fact observed by Harris that the dog and the rat are able to synthesize vitamin C when this is absent from the diet, whereas guinea-pigs, monkeys, and men are unable to do so, may lead to further knowledge of the role of the suprarenals in this connexion The present position, then, as to the function of the suprarenal cortex is one of considerable confusion, and we must await a greater array of facts before any coherent view can be developed

[6] Cecil H L *Amer Journ Physiol* 1933 c 463
[6] Cleghorn *Journ Physiol* 1932 lxx 413
[7] Harris and Ray *Biochem Journ* 1932 xxvi 2067

PLANNING BY THE PARKWAY

Those who invented the garden suburb a generation or two ago did not realize that it implied the decentralization of the city of industrialism It was one of England's brilliant improvisations, and, as so often happens, the English people who conceived the idea never thought it out fully, but left the elaboration to other countries Hence, as Mr C R Ashbee explained recently to the Town Planning Institute, we must now look for its logical development to Germany and America The Germans have reasoned the whole thing out , they have developed the law, linked the movement up with education, tackled the problems of transport and hygiene on rational lines, combined the park system with housing, the preservation of monuments, country schools, and museums, and made of the whole a logical cultural movement The Americans have specialized in the park system and the parkway, and it was with the lessons which America has to teach this country that Mr Ashbee mostly concerned himself The chief of these lessons is that the isolated suburb or garden city is no longer practicable The expansion and rebuilding of the city have to be considered in relation to its outlying suburbs and landscape areas The State park systems represent a magnificent piece of work in process of achievement by some four or five inter-State commissions, and America also has some fifty national parks and national monuments surrounded by park areas, together with many great city parks that are being incorporated into town-planning schemes The State park systems cover about ten thousand miles of parkway, which is multiplied many times by the frontage Building is permitted, subject to control, around or within the parkway, but not as a rule on the roadway We in England, in our perverse and short-sighted fashion, try to make the immediate road frontage pay the cost of the road, and so stimulate ribbon development The Americans, by keeping the buildings off the road, also keep off the local car traffic Moreover, American industrialists believe that the future of heavy industry is not in the town but in the country They believe that this development is inevitable, because they will shortly be taxed out of the towns The housing of workpeople will no longer be the affair of the master of industry, because every workman now has his own car The effect of this revolution upon great American cities in process of decentralization has been profound It narrows and simplifies town planning down to definitely reserved areas, or to centres in which all who stand for the finer cultural life may say to the industrialist "Thus far but no farther" The bearing of all this upon health can be perceived without any undue exercise of imagination

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LIVERPOOL SCHOOL OF TROPICAL MEDICINE

(UNIVERSITY OF LIVERPOOL)

COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on October 2nd, 1933 and January 3rd, 1934 and for the Diploma in Tropical Hygiene on January 11th and April 26th, 1934 (Candidates for the D T H must possess the D T M of this University)

For particulars apply to the Hon Dean Liverpool School of Tropical Medicine, Pembroke Place Liverpool

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Are you desirous of obtaining one of the special higher qualifications?

Diploma in Psychological Medicine
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MIDDLESEX HOSPITAL,

LONDON, W 1

FERENS INSTITUTE OF OTO LARYNGOLOGY

Applications are invited for the BENHARD BARON RESEARCH STUDENTSHIP, vacant on July 1st 1933, and tenable at the Ferens Institute

The appointment is for one year in the first instance but a suitable candidate will be eligible for reelection for at least a year beginning on July 1st 1934

The honorarium is at the rate of £300 per annum with holiday leave amounting to one month in each twelve

Candidates must be males of pure British descent and citizens of Great Britain or Northern Ireland and must hold a registrable qualification The selected candidate will be expected to devote his whole time to research in connection with Anatomy Physiology or Pathology of the Nose Throat or Ear under the general direction of the two Senior Surgeons to the Department Full opportunities are offered for Clinical and Operative work No strict limits are placed upon the nature of the research undertaken and in it the selected candidate may expect to avail himself to the full of the resources of the Department both clinical and pathological This includes a large and fully equipped laboratory providing special facilities for and with a staff familiar with the technique of temporal bone preparation

Applications should reach the School Secretary Middlesex Hospital W 1, not later than June 15th next.

EDINBURGH POST-GRADUATE COURSES IN MEDICINE

IN CONNECTION WITH THE UNIVERSITY AND ROYAL COLLEGES 1933

The POST GRADUATE COURSES to be held this year comprise

(1) A GENERAL PRACTITIONERS COURSE from August 14th to September 9th

(2) A GENERAL SURGICAL COURSE from August 14th to September 9th

The composite fee for each Course will be £10 10s. for the four weeks or £6 6s. for either the first or second fortnight.

(3) A COURSE IN OBSTETRICS AND GYNAECOLOGY AND CHILD LIFE AND HEALTH from July 17th to Aug 12th Fee £10 10s. (Minimum number 12)

In addition to the above the following *Special Courses* have been arranged SUMMER TERM

SURGICAL PATHOLOGY.—May 9th. Fee £4 4s. | OPHTHALMOSCOPY.—May 1st Fee £5 5s. Minimum number 5.

SUMMER AUTUMN AND SPRING TERMS.

CLINICAL SURGERY (including Radiology).—Royal Infirmary Fee £4 4s.
CLINICAL MEDICINE.—Royal Infirmary (May and October) Fee £3 3s.
CHILD LIFE AND HEALTH (May and October).—Clinical Demonstrations Fee £1 1s.
DISEASES OF EAR NOSE, AND THROAT.—Royal Infirmary Minimum number 5 Fee £10 10s.
VENEREAL DISEASES.—Royal Infirmary Minimum number 5 Fee £10 10
DISEASES OF EAR NOSE, AND THROAT.—Eye and Throat Dispensary Cambridge Street Fee £4 4s.
DISORDERS OF SPEECH AND VOICE (Summer and Autumn only).—Minimum number 8 Fee £3 3s.
UROLOGICAL SURGERY AND TREATMENT OF FRACTURES (Spring Term).—Fee £3 3s.
NEUROLOGICAL SURGERY (March). Fee £2 2
ORTHOPAEDIC SURGERY (Summer and Autumn) Fee £4 4

DURING THE PERIOD OF THE GENERAL COURSES. (AUGUST SEPTEMBER).

UROLOGICAL SURGERY AND TREATMENT OF FRACTURES.—Fee £3 3s.
DISEASES OF THE BLOOD.—Fee £3 3
X-RAY PHYSICS AND ELECTRO TECHNICS.—Fee £3 3
ULTRA VIOLET RADIATIONS AND THEIR USES.—Fee £3 3s.
NEUROLOGICAL SURGERY (September) Fee £2 2
MODERN DIAGNOSTIC METHODS.—Minimum number 6 Fee £4 4s.
OPHTHALMOSCOPY.—Minimum number 5 Fee £5 5s.
GENETICS IN RELATION TO MEDICINE.—Fee £3 3s

Further particulars may be had on application to the Hon. Secretary Post Graduate Courses in Medicine University New Buildings Edinburgh.

THE INSTITUTE OF MEDICAL PSYCHOLOGY (the Tavistock Clinic), 6, Torrington Place, London, W.C.1

A SHORT COURSE OF LECTURES ON

THE APPROACH TO THE PSYCHONEUROSES

FOR PRACTITIONERS AND MEDICAL STUDENTS

will be given at the Institute's new premises Torrington Place, beginning June 12th, 1933.

For particulars of the Course apply to the Hon. Lecture Secretary 6 Torrington Place W.C.1

GLASGOW POST-GRADUATE MEDICAL ASSOCIATION

The following arrangements have been made for POST GRADUATE TEACHING in Glasgow during the Summer of 1933

A A General Medical and Surgical Course from August 21st to September 15th.

Fee £10 10s or £6 6s for first or second fortnight.

B Clinical Assistantships in General and Special Hospitals

Syllabuses and any other information may be had or application to the Secretary Post Graduate Medical Association The University Glasgow

Post-Graduate Teaching, West London Hospital.

Continuous Clinical Instruction daily from 10 a.m. to 4 p.m.—Post-Graduates may enrol at any time for any period from 1 week to 3 months—Special facilities for "Study Leave" and for those wishing to take a course under the "Grant-aided Scheme for Post-Graduate Study by Insurance Practitioners."—Anaesthetic Courses—Clinical Assistantships—Annual Membership Tickets at Special Terms available for General Practitioners who wish to attend the Hospital Practice at irregular intervals

Prospectus from the DEAN, West London Hospital, Hammersmith, W.6

POST-GRADUATE COURSES:

Open only to Members of the Fellowship of Medicine. Annual Subscription £1 1s.

MEDICINE & SURGERY (Prince of Wales's Hospital two courses, June 12th 24th and June 26th July 8th all day) CLINICAL SURGERY (Royal Albert Dock Hospital week end Saturday and Sunday June 10th and 11th all day) ANTE NATAL (Royal Free Hospital Fridays at 5 p.m., June 16th July 7th) CHEST DISEASES (Victoria Park Hospital June 12th 24th, all day) MEDICINE & SURGERY (Southern General Hospital week end July 8th and 9th) ADVANCED LECTURES (Medical Society Wednesdays at 5 p.m., June 7th, 14th 21st, and 28th) on Children Nerves Gynaecology and Obstetrics *Panel of Teachers available daily*

Apply—

FELLOWSHIP OF MEDICINE, 1, Wimpole Street, London, W.1 (Langham 4266)

QUEEN CHARLOTTE'S MATERNITY HOSPITAL

MARYLEBONE ROAD, N.W.1

Medical Students and Qualified Practitioners admitted to the Practice of this Hospital. Unusual opportunities are afforded of seeing Obstetrical Complications and Operative Midwifery (about one half of the total admission being primiparous cases). Over 2,700 patients are admitted to the Wards annually and in the Ante-natal Department there are over 20 000 attendances per annum

Certificates awarded as required by the various Examining Bodies.

For rules fees etc., apply H. B. STOKES Secretary-Superintendent.

Preliminary Examinations

The COLLEGE OF PRECEPTORS holds Preliminary Examinations for Medical and Dental Students in London and at Provincial Centres in March, June September and December For Regulations apply to the Secretary College of Preceptors, Bloomsbury Square London W.C.1

MASTERY OF MIDWIFERY

Examination for the Diploma of the Master of Midwifery of the Society of Apothecaries of London will be held beginning Monday November 20th 1933 and Monday May 21st 1934

For regulation apply to the Registrar of the Society Water Lane E.C.4

STAMMERING SPEECH DEFECTS

BEHNKE METHOD Estab. 1882. Cases non-resident, treated at 39 Earl's Court Square S.W.5 and in residence in the Summer holidays at Miss BEHNKE'S House on the Chiltern

"Pre-eminent success in the prevention and treatment of stammering and other speech defects."—Times

"Thoroughly physiological principles."—Lancet.

"The method is applied by correct and perfectly effective."—Guy's Hospital Gazette.

STAMMERING CLEFT PALATE SPEECH LISPING 3/9 of Miss BEHNKE, 39 Earl's Court Sq., S.W.5

FRCS (Edin)

PREP COURSE with daily Lecture-Demonstrations of Museum Specimens of Surg., Path., for next Exam. will commence shortly Personal TUITION at any time.—Further particulars H. C. ORRIN F.R.C.S. Surgeons Hall, Edinburgh.

The scenery of Massachusetts was a source of wonder to the English colonists of the seventeenth century it was spoilt by industrialism and has been reclaimed by intelligent and logical planning That system is typical of the new philosophic conception which underlies planning in America to day Mr Ashbee thinks that if London had had a survey like that shown in the regional plan of New York it might have solved the problem of its bridges and avoided such blunders as the destruction of the scale of the Mall in its centre and of the many noble parks at its periphery What England has to do as the next step in the process of industrial development is he says to link up its 200 decentralizing towns somewhat on the lines of the American parkway but to a unified system with the farther sighted protective legislation indicated in the Government Parks Report of 1928 Let us never forget that care for the amenities forms part of hygiene A park system for England is necessary to protect our landscape beauty and historical associations It must provide both for national parks and for reserved or controlled private park areas within the danger orbits of the rapidly decentralizing towns Though this project can be aided by the new Town and Country Planning Act it cannot be carried out for the administration of any park system has first to be disentangled from the ordinary democratic machinery of the ballot-box and popular election More authority should be given to unbiased advisory bodies equipped with local knowledge The aim must be to consider every detail of landscape beauty and every English park as a unit for possible incorporation in a plan To produce results effective administration will be necessary Local government is still in terrible confusion and where good planning work has been done it has says Mr Ashbee been done because those engaged upon it were able to establish confidence and handle skilfully the varying and difficult elements of which statutory bodies are composed

THE BIRTHDAY HONOURS

The list of medical honours announced on the occasion of His Majesty's sixty eighth birthday will be found at page 1020 Surgeon Vice Admiral Reginald Bond who is created K C B entered the Royal Naval Medical Service thirty-five years ago and has been Medical Director-General of the Navy since 1931 Mr Thomas P Dunhill honorary surgeon to the King is associate surgeon to the professorial unit at St Bartholomew's and before the war was surgeon to St Vincent's Hospital Melbourne, the honour of K C V O which he receives will be especially welcomed by his fellow members of the Council of the British Medical Association Dr Morton Smart who is also created K C V O had a distinguished record in the R N V R during the war The honour of knighthood is to be conferred on six members of our profession Dr Raymond Crawfurd consulting physician to King's College Hospital and registrar of the Royal College of Physicians of London has long identified himself with the work of Epsom College of which he is now chairman of council Mr William Duke Elder ophthalmic surgeon to St George's Hospital was recently awarded the Nettleship gold medal and prize for the most valuable contribution to ophthalmology during the past three years by the Ophthalmological Society of the United Kingdom Dr Arthur Bagshawe has been for many years Director of the Bureau of Hygiene and Tropical Diseases Mr Hugh Dyke Acland vice-president of the Royal Australasian College of Surgeons has been honorary surgeon to the Governor-General of New Zealand since 1930 and during the war served as a consultant to the New Zealand Expeditionary Force Dr Kedar Nath Das is well known to the profession in India as principal of the Carmichael Medical College Calcutta Lastly we mention with particular pleasure the knighthood for Colonel Robert McCarrison I M S director of Nutritional Research Indian Research Fund Association whose original and most valuable investigations on goitre and cretinism and on deficiency diseases have won him world-wide recognition

A SPECIAL ARTHRITIS NUMBER

The opening pages of our forthcoming number dated June 17th will contain the full text of the report of a committee appointed by the Council of the British Medical Association in November 1931 to inquire into the causes and treatment of arthritis and allied conditions This expert committee with Sir Humphry *Rolleston as chairman and Dr R G Gordon as* honorary secretary and vice-chairman surveyed the whole field that came within its terms of reference The Council felt and every reader will probably agree that the outcome of these deliberations ought to have the widest publicity among practising members of our profession The crippling di cases lumped together in the past almost anyhow as chronic rheumatism rheumatic gout rheumatoid arthritis etc and spoken of as this or that even to-day form a diverse group that cried aloud for critical analysis in the light of advancing knowledge The B M A Committee is modest tentative and cautious It makes no claim to have solved one of the major problems of civilized life Clarification was the aim and this we believe has been achieved In presenting the Arthritis Committee's round unvarnished tale next week as the feature of a special issue of the *British Medical Journal* instead of as a formal appendix to the Annual Report of Council in the *Supplement* we shall take the occasion to point one or two morals and to compare some of the committee's findings with parallel work in America We shall include also an account of the discussion on climatology in relation to rheumatic diseases which took place during the Whitsuntide Public Health Congress at Eastbourne and a note on the spa hospitals of this country

A SYMPOSIUM ON THE MIDWIFE

At the Maternity and Child Welfare Section of the Annual Conference of the Royal Institute of Public Health held at Eastbourne from May 30th to June 4th a discussion took place on The Role of the Midwife in a National Medical Service The uneconomic division of midwives between urban and rural areas the scanty pecuniary rewards and the absence of a pension make the lot of midwives at present an

unhappy one The rural midwife is the test of the efficiency of the national standard of midwifery Miss E M Wyatt, inspector of midwives of the East Sussex County Council, described the arrangements made between the Council and the County Nursing Federation, whereby district nurses, who were all qualified midwives, were assigned a district for which they did not only the general nursing, but also fourteen to twenty cases of midwifery yearly This had proved quite safe, in 1,333 cases only two maternal deaths had occurred The small cars provided for the district nurses had proved an inestimable boon Refresher courses of a month every five years were necessary, in a little village anyone is liable to become moss-grown There was general agreement among those present that the length of the period of training should be increased Dr Bethel Solomons suggested eighteen months as desirable, the period of instruction in midwifery of the general-trained nurse might remain as it is—six months Opinion differed as to the value of general training to the midwife Some thought the longer obstetrical atmosphere produced a more practical midwife, an inspector of midwives considered that nurses nurse the patients, and midwives were not taught to nurse patients, on the other hand, a midwife was taught to accept responsibility, while the whole tendency of a nurse's training is to refer everything to the doctor Slight modifications of the C M B rules were suggested Dr Solomons considered that midwives should be required to send for medical aid for breech presentations in multigravidae as well as in primigravidae, until the very end of such labours no one could say that difficulty would not arise Again, it is easy for a midwife to mistake a hand for a foot, the change proposed would prevent an unfortunate situation if such a mistake were made Any vaginal examinations made should be limited to the first stage of labour Midwives should be trained and permitted to give intramuscular injections of brandy and ether and hypodermic injections of ergot and, after the third stage but not before, of pituitary extract He thought it disastrous to allow midwives to give chloroform, even in capsules, deaths occurred after the inhalation of even a few breaths of vapour Mr L C Rivett said that these capsules had been used at Queen Charlotte's Hospital in thousands of cases without harm, patients had by their means been maintained in a state of analgesia for ten to fourteen hours Although agreeing that a timely dose of morphine might prevent a labour becoming difficult, Sir Ewen Maclean was very averse to allowing midwives to administer sedatives even doctors were very carefully restricted in the use of these dangerous drugs by the law There might be less objection to the use of anaesthetics and anodynes in midwifery if only midwives who were also registered nurses were allowed to use them but this would have the unfortunate effect of splitting midwives into two distinct classes Much efficient ante-natal work, he held, was being done by general practitioners apart from ante-natal clinics It was suggested that women who book with a midwife for their confinement should be examined ante-natally by the doctor whom the midwife would call in if there were need for medical aid The only objection to experienced general practitioners staffing municipal ante-natal clinics would be the doubt as to their being able to attend regularly Dr A H Crook considered that the proper person to undertake the management of a normal case was a well-trained midwife In Eastbourne there is year by year an increase in the percentage of cases attended by midwives alone in 1928 the figure was 66 per cent, this increased in 1932 to 78 per cent The infantile mortality rate of Eastbourne babies born in institutions was 14 as opposed to 43 among those born at home The point was raised as to whether busy general practitioners with a working class and panel practice wished to do midwifery Sir Ewen Maclean thought there would be little demur to the establishment of a panel of practitioners who were especially interested in midwifery and would be prepared to give up the time necessary for the work Although the custom of women going into institutions to have their babies was increasing, at present of 600,000 births in England and Wales every year only some 50,000 took place in institutions, and it was evident that for many years to come attention would have to be concentrated on the provision of an efficient domiciliary service Dame Louise McIlroy urged the need for providing maternity hospital accommodation for women of moderate means Sending round a questionary had brought out the astonishing lack of hospital beds for women just above the hospital class who urgently required treatment in the ante-natal stage and for abnormal labour

CHINESE QUARANTINE SERVICE

In spite of the Sino-Japanese hostilities at Shanghai the National Quarantine Service of China[1] has managed to carry out its programme with a fair measure of success The doctors at Woosung (the entrance to Shanghai) remained at their post till shot out of it by the intense bombardment They then evacuated to Shanghai During the year under review a total of 2,205 vessels were examined, and of these 733 were fumigated All the recognized fumigants were employed, the most favoured being a convenient form of hydrocyanic gas under the trade name of "zyklon B" A rat-flea survey of the port was undertaken 691 rats were trapped alive and 34,555 fleas recovered from these No plague was discovered either among live rats or those killed by fumigation Warehouses on both sides of the river were treated, by permission of their owners New stations have been taken over and all the port health services in the country have been co-ordinated every effort is being made to bring quarantine practice into line with the established procedure of foreign countries A cholera outbreak, one of the severest and most widespread in the history of China, swept over the country and visited Shanghai with full force last summer By working well together the various health bodies managed to wipe the epidemic out with a comparatively low mortality among the sick The National Quarantine Service controlled the spread of the disease among shipping arrivals and performed several thousand inoculations in the harbour of Shanghai The 1932 epidemic invaded twenty-three provinces and 312 large cities, claiming over 100,000 sick and nearly 34,000 deaths Of the big cities involved Shanghai had the largest number of sick but the smallest mortality rate—7·4 per cent Over one million, or a

[1] Reports National Quarantine Service Series III 1932 Edited by Wu Lien Teh and Wu Chang Yi for National Quarantine Service Headquarters 2 Peking Road Shanghai

ST MARY'S HOSPITAL

INSTITUTE OF PATHOLOGY AND RESEARCH
Principal Sir ALMROTH E WRIGHT

Applications are invited from qualified Medical Practitioners for a RESEARCH STUDENTSHIP This will be tenable for six months and may be renewed for a second period of six months

The Institute comprises the following departments Anatomy and Embryology Physiology Pathology Chemical Pathology Clinical Bacteriology Systematic Bacteriology and Immunology

The Student who will receive an honorarium at the rate of £200 per annum may elect to carry out his researches in any one of these departments and would be required to work under the direction of the Head of the department concerned

Preference will be given to old St Mary's Students

For further particulars apply to the Secretary Institute of Pathology and Research St Mary's Hospital Paddington W 2 to whom applications must be sent not later than June 6th

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UNIVERSITY OF BIRMINGHAM

FACULTY OF MEDICINE.

APPOINTMENT OF LECTURER IN MENTAL DISEASES

The Council invites applications for this appointment vacant on the death of Dr PERCY F HUGHES

Applications (thirty copies) accompanied by testimonials or such other credentials as the candidates desire to offer should be sent to the undersigned on or before June 3rd

Further particulars may be obtained from—
Edmund Street C G BURTON
Birmingham Secretary
May 1933

THE UNIVERSITY OF LIVERPOOL

The Council invites applications for the post of LECTURER (ungraded) in the department of Pathology Salary £600 per annum

The Lecturer will commence duty as soon as possible after the date of appointment

The appointment is a whole time one and the Lecturer will be required to comply with the conditions of the Federated Superannuation System for Universities

Four typewritten applications together with three references and (if the candidate so desires) copies of testimonials to be forwarded not later than Saturday, June 24th to the Registrar

Further enquiries should be addressed to the George Holt Professor of Pathology

EDWARD CAREY Registrar

EDINBURGH DENTAL HOSPITAL AND SCHOOL.

Applications are invited from registered Dental Surgeons for the combined post of DEAN of the SCHOOL and TEACHER of CLINICAL DENTAL SURGERY

Minimum salary £1 000 per annum For other conditions of appointment apply to—

C M STUART W S
20 York Place Edinburgh

THE UNIVERSITY OF MANCHESTER

Applications are invited for the post of PROFESSOR OF DENTAL SURGERY AND DIRECTOR of the DENTAL HOSPITAL. Duties to commence September 29th All applications should be sent not later than June 12th to the Registrar from whom further particulars may be obtained

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OXFORD UNIVERSITY

The Electors to the MAY FELLOWSHIP AND READERSHIP IN MEDICINE invite applications for the POST before June 17th Stipend £400 Further particulars may be obtained from the Registrar University Registry Oxford

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CITY OF SHEFFIELD

KING EDWARD VII HOSPITAL
RIVELIN VALLEY

RESIDENT HOUSE SURGEON required on July 1st for the above Hospital which is for the treatment of Surgical Tuberculosis and other Orthopaedic conditions (140 beds)

The officer appointed will be required to attend the Out patient [illegible] ic Tuberculosis cases an [illegible] ic of the Maternity and

Salary at the rate of £150 per annum with board and laundry Appointment for six months with possible extension for further six months.

Applications with testimonials should be sent to the Medical Superintendent

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MUNICIPAL BOARD OF MOMBASA

Applications are invited from British subjects for the post of MEDICAL OFFICER OF HEALTH under the Municipal Board of Mombasa Kenya The consolidated salary of the post is £950—£40—£1 150 There is at present a 6 per cent levy on salaries as a measure of economy No house is provided nor is house allowance paid The post is non pensionable there is no Provident Fund when the latter is instituted all Municipal Officials will be required to participate

The person appointed must be a legally qualified Medical Practitioner registered under the Medical Acts of the United Kingdom and must be registered in the *Medical Register* of the United Kingdom as the holder of a diploma or certificate in sanitary science public health or state medicine Previous experience of public health work is essential The possession of a diploma in tropical medicine or tropical medicine and hygiene or previous tropical experience is desirable

The Medical Officer of Health on appointment will be granted a first class passage to Mombasa and half salary while on the voyage He will be required to serve 3 years (and will be subject to retention for a further year if the exigencies of the service so demand) Thereafter he will be granted 3 months leave on full pay and if returning to his appointment will have three further months on full pay a first class return passage will be provided up to £150 During 3 years service he will be entitled to three periods of local leave of 14 days each

He will be required to provide himself with motor transport the present motor-car allowance being £4 a month

Applications with copies of any testimonials and with a recent photograph should be sent by candidates in the British Isles to Dr GILKS Coolgardie Aldwick Road, Bognor Regis Sussex by July 15th

Applications from other countries should reach the undersigned by August 15th Copies of the terms of service may be obtained from Dr GILKS or the undersigned

(Sgd) DONALD S FRASER,
Mombasa Town Clerk
May 5th 1933

CITY OF MANCHESTER

APPOINTMENT OF ASSISTANT TUBERCULOSIS OFFICER

The Public Health Committee invites applications for the position of Assistant Tuberculosis Officer at a commencing basic salary of £650 per annum rising by annual increments of £25 to £750 per annum The salary is subject to a temporary deduction (£26 5s. on £650)

Candidates must be fully qualified Medical Practitioners having special knowledge of Medical and Surgical Tuberculosis and should state whether they possess the Diploma of Public Health

Applications stating age qualifications and experience with copies of not more than three recent testimonials and endorsed on the envelope Assistant Tuberculosis Officer must be addressed to the Town Clerk only and not to members of the Committee or Council and must be received by him not later than June 3rd

The gentleman appointed will be under the administrative control of the Medical Officer of Health and the immediate control of the Senior Tuberculosis Officer He will be required to devote the whole of his time to the duties of his position to execute the Deed of Service and to contribute to the Corporation Superannuation Fund

Canvassing in any form direct or indirect, oral or written, is prohibited

By Order
Town Hall F F WARBRECK HOWELL
Manchester Town Clerk
May 15th 1933

HAMPSHIRE COUNTY COUNCIL

ASSISTANT COUNTY MEDICAL OFFICER

Applications are invited for the post of Assistant County Medical Officer Preference will be given to a woman with experience in maternity and child welfare work including maternity centres and ante-natal clinics Possession of a Diploma or Degree in public health work is essential and previous experience in tuberculosis venereal disease and medical inspection of school children will be considered an advantage

Salary £600 a year rising on approved service by increments to £750 (subject to deductions under the Local Government Officers Superannuation Act and to temporary abatement), in addition to travelling expenses

Applications with copies of not more than three testimonials upon a form which with the conditions of appointment may be obtained from the County Medical Officer The Castle, Winchester should be sent to him not later than June 3rd Canvassing is prohibited

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METROPOLITAN BOROUGH OF GREENWICH

APPOINTMENT OF A JUNIOR ASSISTANT MATERNITY AND CHILD WELFARE MEDICAL OFFICER.

The Council of the Metropolitan Borough of Greenwich is prepared to receive applications from registered Medical Practitioners for the appointment of Junior Assistant Maternity and Child Welfare Medical Officer in the Borough of Greenwich

Applicants must have had experience in connection with Maternity and Child Welfare work generally and shall be registered Medical Practitioners who prior to April 1st 1930 had held the appointment of Medical Officer of an Ante Natal Clinic with the approval of the Minister of Health or who subsequent to qualification have had at least 3 years' experience in the practice of his or her profession and special experience of practical midwifery and ante natal work resident Obstetric experience will be considered an additional qualification The person to be appointed will act generally under the direction and supervision of the Medical Officer of Health who is the Administrative Medical Officer of the Maternity and Child Welfare Services

The salary will be at the rate of £500 per annum rising by annual increments of £25 to a maximum of £600 per annum

The successful candidate will be required to reside in the neighbourhood of the Borough Council's Maternity Home to devote the whole or his or her time to the service of the Council, and not to engage in private practice except when called in by Medical Men in the district

The appointment will be subject to the provisions of the Council's Superannuation Act as amended and to the approval of the Minister of Health and will be terminable by three months notice in writing on either side

Applications must be made on forms to be obtained from the undersigned stating age qualifications and experience and accompanied by copies of not more than three recent testimonials and must be sealed up and endorsed "Junior Assistant Maternity Medical Officer" and reach me not later than 12 o'clock noon on Monday, June 19th

Canvassing Members of the Council either directly or indirectly will be a disqualification

Stamped addressed foolscap envelope must accompany application for form

Town Hall FREDERICK J SIMPSON
Greenwich S E 10 Town Clerk
May 18th 1933

COUNTY COUNCIL OF MIDDLESEX

WEST MIDDLESEX COUNTY HOSPITAL, ISLEWORTH

RESIDENT ASSISTANT MEDICAL OFFICER
(Woman)

The County Council invites applications for the above appointment Candidates must be registered Medical Practitioners, unmarried must have held resident appointments in a General Hospital and have special experience in obstetrics and gynaecology The officer appointed will work under the control of the Medical Superintendent and will devote her whole time to her official duties.

Salary is at the rate of £400 per annum rising by annual increments of £50 to £600 per annum together with board lodging and laundry valued for superannuation purposes at £100 per annum In view of the national situation a temporary abatement calculated on the following scale is applied to the salary and value of the emoluments for the first £150 per annum no abatement, for the next £100 per annum 2½ per cent abatement for the next £600 per annum 5 per cent abatement

The successful candidate will be required to pass such medical examination as the County Council may direct and unless subject to the Poor Law Officers Superannuation Act 1896 to contribute to the County Council's Superannuation Fund The appointment will be held during the pleasure of the Council and subject to three months notice on either side

Applications stating (1) age, (2) qualifications and (3) experience together with copies of not more than three recent testimonials must be received by the undersigned not later than Thursday June 8th

No special application forms are provided Envelopes must be endorsed Resident Assistant Medical Officer

Canvassing directly or indirectly, will be a disqualification

N B—West Middlesex County Hospital is a modern general hospital with over 500 beds for medical surgical and maternity cases Some 650 beds for chronic cases in Warkworth House an adjoining institution also are under the care of the medical staff of the Hospital

(C D/14) ERNEST S W HART
Middlesex Guildhall Clerk of the
Westminster S W 1 County Council
May 19th 1933

third of the population of Shanghai received anti-cholera inoculation This together with a clean water supply and efficient hospitalization no doubt accounted for the low death rate which could very well lay claim to be a record one Those attacked were mostly in the prime of life The outstanding feature of this epidemic is that the efficacy of anti-cholera inoculation has been amply proved A central cholera bureau has now been established and arrangements have been made to telegraph a weekly summary to Geneva Owing to military troubles the North Manchurian Plague Prevention Service with headquarters at Harbin has virtually ceased to exist but it is promised that the work which has been carried on with such marked success for twenty years will be continued with undiminished vigour inside the Great Wall The plague papers which should have been published in the Manchurian Service reports are incorporated in the volume under review There is a good rat-flea survey of Shanghai and a survey of plague in wild rodents throughout the world is embodied in the report.

A CO OPERATIVE HEALTH CENTRE

In a report on ten years work [1] published by the East Harlem Health Center and the New York Chapter of the American Red Cross a stimulating account is given of the results achieved by the Department of Health of the City of New York and twenty-one co-operating voluntary agencies working together in a defined city area to promote the health and welfare of the residents The work was undertaken in the first place as a temporary demonstration the East Harlem district being chosen for the purpose two-thirds of the residents in this area are Italians and the remaining third consists of Jews Irish and negroes with a sprinkling of other nationalities Many of the voluntary agencies co-operating in the demonstration were already doing a certain amount of work in the district but when they had all been grouped in a single building the Health Center they were able to avoid overlapping and to see where the service as a whole was inadequate it speaks highly for the enthusiasm of the workers that these voluntary organizations which came together for a three-year trial period have worked together for ten years with a growing sympathy The executive organization adopted is set out in the report and it is noteworthy that one of the most valuable committees the House Council was developed from the informal meetings held by the various co-operating agencies in their attempts to get to know each other better The aim was not only to extend and improve existing health services but to fill in gaps two of the most noticeable of these were the lack of services for the pre-school child and the absence of dental clinics moreover the nursing service to the district was derived from several different sources and consequently incoordinate The story of the gradual conquest of difficulties and the establishment of a more general service makes encouraging reading at a moment when our own health services are driven to marking time the work of the East Harlem Center is fully justified by the results summarized at the end of the report The death rate between 1916 and 1920 the five year period before the opening of the centre was 15 34 per 1 000 at the end of 1931 it was 10 46 per 1 000 or nearly 32 per cent lower Infant mortality has also shown a marked decrease dropping from 101 per 1 000 during the period 1916–20 to 72 per 1 000 in 1926–30 Infant deaths from diarrhoea and enteritis have fallen in the same period from 22 to 5 per 1 000 On the other hand maternal mortality has not responded to improved public health measures in the same way the death rate due to childbirth instead of falling during the ten-year period under review has risen from 3 2 per 1 000 in the five years before 1920 to 5 3 per 1 000 in the five-year period 1926–30 This finding is in keeping with experience in this country and suggests that the problem of maternal mortality cannot be approached along the ordinary public health lines Effects of the economic depression on residents in the East Harlem district have been observed since 1929 when loss of employment among heads of families began to be noticeable by December 1931 the breadwinner was out of work in 45 per cent of families As a result more people have been seeking the help of the centre So far there has been no increase of mortality among infants and young children but the death rate from tuberculosis and the numbers of cases reported which had been falling have tended to become static or to increase The amount of material help given by family welfare agencies has had to be extended

[1] *A Decade of District Health Center Pioneering* Ten year report of the East Harlem Health Center Prepared under the direction of A D Widdemer Executive Officer New York City Department of Health (1 dollar)

PRIZE FOR MALARIA INVESTIGATION

A foundation was created by the Health Organization of the League of Nations in honour of the late Dr Samuel T Darling who met his death in 1925 by an accident while conducting a mission on behalf of the League The purpose of this foundation is the periodical award of a prize known as The Darling Foundation Prize to the author of an original work on the pathology aetiology and prophylaxis of malaria It is now announced from Geneva that the first award will take place on January 1st 1934 and that the Foundation Committee on the recommendation of the Malaria Commission of the Health Organization of the League has decided at its meeting in Paris on April 29th to award the prize to Lieut-Colonel S P James M D F R S of the Ministry of Health London

Sir Colin MacKenzie M D F R C S Director of the Australian Institute of Anatomy has been elected President of the Royal Society of Australia This is the youngest of the Royal Societies and has been founded with its headquarters in the national capital and branches in the various States for the purpose of advancing the interests of science in general within the Commonwealth of Australia

Cubic Space in the Hospital Ward Corrigendum —In the first sentence of the last paragraph of our leading article *on this subject* in last week's *Journal* (p 968) the insertion of a wrong line through a printer's error made nonsense of the meaning The sentence should read

It will be seen from what has been said above that the answer to the architect's question is not a simple one Broadly speaking etc

ROYAL SUSSEX COUNTY HOSPITAL, BRIGHTON

Notice is hereby given that a Meeting of the Elective Committee will be held in the Board Room at the Hospital on Wednesday, July 26th, at 12.15 p.m. for the purpose of electing

1. An HONORARY ASSISTANT OTO-RHINO-LARYNGOLOGIST
2. An HONORARY CLINICAL ASSISTANT to the Dental Department

and such Elective Committee is hereby convened accordingly.

Applications are invited from the first-named of these from gentlemen who hold the usual Medical or Surgical qualifications required by the Statutes of the Hospital and who are duly registered under the Medical Act.

Applications are invited from the last-named of these from gentlemen who possess a Doctor's Diploma in Dentistry and are duly registered under the Medical or Dentists Act.

Application must reach the Secretary, Sussex Hundred at the Hospital not later than 12 noon on June 24th.

By Order of the Board of Management
L. L. W. LANCASTER CAVE,
Secretary Superintendent.

MANCHESTER ROYAL INFIRMARY AND CENTRAL BRANCH ROBY STREET, MANCHESTER

HOUSE SURGEON (LADY)

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment. Applicants must be registered and hold a Medical and Surgical qualification.

The appointment is available from one month commencing July 1st, three months as Junior at £100 per annum, three months as Assistant at £100 per annum, and three months as Senior at £200 per annum, together with board and allowance for laundry.

Applicants must state age and qualifications and send twelve copies of their application and testimonials to the undersigned by 10 a.m. on Tuesday, June 15th.

By Order,
FRANK C. HAZELL,
General Superintendent & Secretary.

(AMENDED ADVERTISEMENT)

WESTERN OPHTHALMIC HOSPITAL, Marylebone Road, N.W.1

The Committee have now received notification of arrangements for the JUNIOR HOUSE SURGEON's appointment and have the privilege of announcing a certain number of the applicants are invited for the post.

The salary is at the rate of £100 per annum and the appointment is for six months.

Some qualification in ophthalmic experience is required.

The successful candidate will be required to take up duties at an early date.

Applicants accompanied by three copies of three testimonials should be sent in at once and not later than June 7th.

H. W. BURDETT,
Honorary Secretary.

SALFORD ROYAL HOSPITAL, (263 Beds.)

Applications are invited from duly registered candidates (male) for

HOUSE SURGEON (Genito-Urinary Dept.)
HOUSE SURGEON (Neurological Dept.).

For six months from July 1st. Salary £125 per annum.

Forms of application obtainable from the undersigned, must be delivered on or before June 6th.

By Order of the Board,
H. B. SHELSWELL,
May 22nd, 1933. Group Supt. & Sec.

THE ROYAL PORTSMOUTH HOSPITAL, PORTSMOUTH

(Five Resident Medical Officers.)

CASUALTY OFFICER, male (qualified), required to commence on June 24th. Salary at the rate of £130 per annum with board, etc. Six months' appointment. Eligible on completion of term for appointment to other resident posts.

Applications stating age, nationality, etc., and copies of three recent testimonials to be sent to the undersigned not later than June 8th, from whom all particulars can be obtained.

B. WACSTAFF, Secretary.

WINFORD ORTHOPAEDIC HOSPITAL, near BRISTOL.

There are vacancies for (a) HONORARY ASSISTANT SURGEON and (b) HONORARY DENTAL SURGEON.

Applications should be received by the undersigned not later than June 17th.

46, Park Street, Bristol.
G. M. ROWE,
Secretary.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond Street, London, W.C.1

A HOUSE PHYSICIAN and a HOUSE SURGEON are required on July 1st.

Gentlemen are invited to send in their applications, addressed to the Secretary, before 12 o'clock on Monday, June 5th, with applications other than those testimonials given specially for the purpose and also evidence of their having held a resident Hospital appointment.

The appointments are made for six months. Salary at the rate of £100 per annum, laundry allowance, board and residence in the Hospital.

Candidates must be unmarried and possess a final qualification in Medicine.

All candidates must be in attendance to appear before the Joint Committee if required at their Meeting on Wednesday, June 7th, at 4.30 p.m. [illegible].

Forms of application and rules of the Public may be obtained from the Secretary.

By Order of the Board of Management,
HERBERT E. RUTHERFORD,
May [illegible], 1933. Secretary.

THE CANCER HOSPITAL (FREE), (Incorporated under Royal Charter), Fulham Road, London, S.W.3.

The Committee are prepared to receive applications for the post of HOUSE SURGEON to commence duties July 1st. Salary at the rate of £100 per annum.

The appointment is for six months, and subject to renewal.

Candidates must apply on each Monday of the Medical Committee not later than Tuesday, June 27th.

Copies of the Rules and the names and addresses of the Medical Committee may be obtained from the Secretary.

Previous experience as House Surgeon is indispensable.

Applicants with three (copies only) testimonials to send to the undersigned not later than the first post Saturday, June 10th.

CLEMENT COBBOLD, Secretary.

LONDON HOMOEOPATHIC HOSPITAL, Great Ormond Street, W.C.1. (A General Hospital—200 Beds.)

POST OF RESIDENT MEDICAL OFFICER.

The permanent appointment of the Third Resident Medical Officer, who is required to act as Dispenser, is vacant on July 1st.

Applications are invited for the appointment, lasting for six months, of a House Surgeon for six months, a General and Casualty Officer and for a Medical Officer to the Out-Patient Department at the rate of £100 per annum and board, apartments and laundry.

Candidates must be legally qualified and registered.

Application for JUNE APPOINTMENT should reach the undersigned not later than June 1st, accompanied by three testimonials, which will be returned to the Secretary.

EDWARD A. ATTWOOD, Secretary.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Road, S.E.1.

There is a vacancy for an *HONORARY* CLINICAL ASSISTANT (male or female) at the Rheumatism Supervisory Centre for Children, suffering from rheumatic fever and chorea. Candidates should be interested in children's diseases and cardiac [illegible] previous children experience desirable. The appointment is for six months in the first instance. Application, accompanied by testimonials, should be sent to the undersigned from whom further particulars can be obtained not later than June 3rd.

J. H. TEASDALE, Secretary.

ROYAL ALBERT HOSPITAL AND EYE INFIRMARY, DEVONPORT

A vacancy for an ASSISTANT HOUSE SURGEON exists. Applicant must be fully registered and unmarried, and the appointment will be for six months. Salary £100 p.a. with board, apartments and laundry free.

Applications stating age, accompanied by copies of not more than three testimonials, should be forwarded to the undersigned without delay.

By Order of the Committee,
FRANK POWE,
May 22nd, 1933. Secretary.

ROYAL WEST SUSSEX HOSPITAL, CHICHESTER.

Applications are invited for the post of ANAESTHETIST AND OBSTETRICIAN to the Royal West Sussex Hospital, Chichester.

Candidates must have had special experience in this work and should forward three testimonials to the Secretary, the Royal West Sussex Hospital, Chichester, before June 16th.

WEST LONDON HOSPITAL, Hammersmith Road, W.6. (234 Beds.)

Required ONE HOUSE PHYSICIAN, TWO HOUSE SURGEONS and ONE RESIDENT ANAESTHETIST (Males). The duties of the House Physician include some work in the Neurological and Dermatological Departments. The duties of one House Surgeon include some work in the Genito-Urinary Department and of the other some work in the Gynaecological Department. These four appointments are tenable for six months from July 1st next, subject to one month's notice on either side. Salary at the rate of £100 per annum with board, residence and laundry allowance.

Candidates must be registered under the Medical Act. Applications (which must be on printed forms obtained from me) must reach me not later than first post on Friday, June 16th. Selected candidates will be required to call upon members of the Medical Staff as directed to be in attendance at the Medical Committee Meeting on Friday, June 23rd, at 4.30 p.m. and the House Committee Meeting at 5 p.m. when the appointments will be made.

H. A. MADGE, Secretary.

ACCOUCHEMENTS HOSPITAL, MANCHESTER.

HONORARY RADIOLOGIST

Applications are invited for the post of Honorary Radiologist. The successful applicant will be required to take an active part in the work of the Department with attendance on three mornings per week.

Application, stating age, qualifications, experience and appointments held (if any), to be forwarded to the undersigned on or before June 7th, together with copies of three recent testimonials.

By Order of the Board,
HERBERT J. DAFFORNE,
Gen. Supt. & Secretary.

ACCOUCHEMENTS HOSPITAL, MANCHESTER.

EAR, NOSE AND THROAT DEPT. OUT-PATIENT CLINIC.

CLINICAL ASSISTANT required for the above on Thursday afternoon from 2 p.m. to 10 p.m. but clinic will be split.

Applications stating age, qualifications, experience and appointments held (if any) to be forwarded to the undersigned on or before June 7th next, together with copies of three recent testimonials.

By Order of the Board,
HERBERT J. DAFFORNE,
Gen. Supt. & Secretary.

ACCOUCHEMENTS HOSPITAL, MANCHESTER.

HOUSE PHYSICIAN

House Physician required for a period of six months, commencing July 1st next. Salary £100 per annum with board, residence and laundry.

Applications stating age, qualifications and experience to be forwarded to the undersigned on or before June 7th next, together with copies of three recent testimonials.

By Order of the Board,
HERBERT J. DAFFORNE,
Gen. Supt. & Secretary.

THE HOSPITAL FOR WOMEN, Soho Square, W.1.

Applications from fully qualified men and women are invited for the post of RESIDENT MEDICAL OFFICER for a period of six months, commencing July 1st next. The salary is at the rate of £100 per annum, with board, residence and laundry. Applications and testimonials must reach the undersigned by Monday, June 19th.

J. P. HEMING, Secretary.

ST. MARK'S HOSPITAL FOR CANCER, FISTULA AND OTHER DISEASES OF THE RECTUM, City Road, E.C.1.

Applications are invited for the position of CLINICAL ASSISTANTS in the Out-patient Department for the years 1933-34, on Monday at 2 p.m. and Tuesday at 5.30 p.m. The appointment is for six months from the first week in July, in the first instance. A fee of three guineas is payable on appointment. Applications to be addressed to the Secretary of the Hospital.

MERTHYR GENERAL HOSPITAL.

Applications are invited for the post of RESIDENT SURGEON for the coming six months. Salary £150 per annum, plus board, residence and laundry.

Applications with three recent testimonials must be in the hands of the Secretary on or before May 27th.

have made special arrangements for their admission This is well illustrated by noticing that there are forty two cases of cancer of the tongue that have been treated at the radiotherapeutic clinic during 1930 and 1931 thirty of which were growths that had started in the posterior half of the tongue, and only twelve in the anterior half It is well known that cancer of the tongue is more hopeful if it starts in the anterior half and such cases have obtained admission elsewhere in larger numbers than those in which growth had started in the posterior half "

These matters are of vast importance as enabling some conclusions to be reached upon large numbers of patients who are prevented from being received into the large voluntary hospitals, where until recently most of the available statistical material has been prepared Moreover, in many cases the disease was found to be so advanced that little or nothing could be expected from the curative point of view , nevertheless, radiotherapy has been employed in all cases when there was possibility of rendering the patient's remaining span of life as comfortable as possible under the circumstances Since the last report the equipment of the department has been augmented by the installation of one of the most recent and efficient types of high-tension generator, together with an equally modern deep therapy tube enclosed in the latest Holfelder " cannon " The new apparatus can be used for from eight to twelve hours each day It is interesting and good news to hear that expert physical advice has been requisitioned in connexion with the department This is specially mentioned in connexion with the radium work, and Mr W V Mayneord of the Cancer Hospital has been engaged in research work bearing upon the question of the amount and distribution of the radium dosage It is essential for the development of radiation therapy in this country that there should be the fullest and most complete co-operation between physician, surgeon, pathologist, physicist, and instrument maker The last of these is a highly trained electrical engineer whose specialty it is to advise upon the lay-out of installations, and who by his experience is specially qualified to give technical advice upon many practical points which might escape attention in the first instance, but which later on give unmistakable evidence of the fact that they have been overlooked We think the London County Council is to be warmly congratulated on this aspect of its hospital work

THE BIRTHDAY HONOURS

The Honours List issued on June 3rd, on the occasion of His Majesty's birthday, includes the names of the following members of the medical profession

K C B (Military Division)

REGINALD ST GEORGE SMALLRIDGE BOND, C B M B, I R C P F R C S K H P, Surgeon Vice Admiral R N

K C V O

THOMAS PEEL DUNHILL C M G M D

MORTON SMART C V O D S O M D, Commander, late R N V R

Knights Bachelor

ARTHUR WILLIAM GARRARD BAGSHAWE C M G M B, Director Bureau of Hygiene and Tropical Diseases

RAYMOND HENRY PAYNE CRAWFURD M D F R C P consulting physician King's College Hospital, Registrar of the Royal College of Physicians of London

WILLIAM STEWART DUKE ELDER M D D Sc, F R C S Ophthalmic Surgeon St George's Hospital

ROBERT MCCARRISON C I E, Colonel I M S K H P M D F R C P, Director, Nutritional Research Indian Research Fund Association

KEDAR NATH DAS C I E, M D Principal, Carmichael Medical College Calcutta

HUGH THOMAS DYKE ACLAND C M G C B L I R C S Christchurch New Zealand Vice President of the Royal Australasian College of Surgeons

C B (Military Division)

JAMES ANDREW HARTIGAN C M G D S O, K H P Major General, late Royal Army Medical Corps Deputy Director of Medical Services, Aldershot Command

WILLIAM HUGH LEONARD, F R C S, Colonel late I M S

C M G

JOHN LANGTON GIBBS, F R C S, East African Medical Service Director of Medical and Sanitary Services

FREDERICK ARTHUR MAGUIRE, D S O M D, F R C S F C O G, Gynaecologist St Vincent's Hospital Sydney Colonel A A M S

C I E

JAMES MCPHERSON, K H S, Brevet Colonel I M S, Residency Surgeon in Mysore, Bangalore

WALTER LIDWELL HARNETT, Lieut Colonel I M S Professor of Surgery Medical College, Calcutta and Surgeon to the College Hospital Bengal

JAMSHEDJI NASARVANJI DUGGAN O B L L M and S F C P S, D O Oxon Professor of Ophthalmic Medicine and Surgery, Grant Medical College, and Superintendent, Sir C J Ophthalmic Hospital, Bombay

O B E (Military)

BIJITENDRA BASU, L M S Calcutta F R C S Ed, Major I M S Specialist in Ophthalmology, Rawalpindi District India

ALEXANDER DAWSON M B, Lieut Colonel R A M C Assistant Director of Pathology Eastern Command

ST GEORGE LYRE HARRIS, M D temporary Major R A M C, Cambridge Hospital, Aldershot

O B E (Civil)

EVAN EDWARD OWENS *M C* L R C P and S Ed, L R F P S For political and public services in Glamorgan

CLERMONT GRANTHAM HILL, Senior Surgeon Khartum Hospital

FREDERIC GARDINER ROSE, M D, Medical Superintendent Leper Asylum British Guiana

ERACHSHAW DINSHAW SHROFF L R C P and S Ed L R F P S, Health Officer of the Karachi Municipality Bombay

MAURICE REVELL SINCLAIR Captain I M S, Officer on special duty with the Political Officer in Sikkim

MISS PATRICIA RUTH ELLIOTT M B For services as a missionary doctor in the Straits Settlements

I S O

Companion

CHARLES FRANCIS LASSALLE M D, Deputy Surgeon General and Medical Inspector of Health Colony of Trinidad and Tobago

Kaisar i Hind Medal (First Class)

Mrs LAURA MARGARET HOPE M B, B S medical practitioner Bengal

SAMUEL GEORGE STEELE HAUGHTON O B E Lieut Colonel I M S, Officer Commanding Indian Military Hospital Quetta

The 182nd annual report of the City of London Maternity Hospital covers the year 1932, and shows that there has been a reduction in the number of admissions and deliveries, associated with a longer average stay in hospital and an increase in the average total cost for mothers and children There was a considerable fall in income during the year, mainly owing to a decrease in legacies and donations A successful week end course was organized for medical practitioners, and a residential post graduate course for practising midwives proved popular and helpful In the medical portion of the report it is stated that the mortality rate was 5 91 per 1,000 for delivered cases

NORTH WALES COUNTIES MENTAL HOSPITAL DENBIGH

ASSISTANT MEDICAL OFFICER

The Committee of Visitors of the above Institution invite applications from duly qualified male candidates married or single for the post of Resident Assistant Medical Officer Salary which will be subject to the Statutory deductions under the provisions of the Asylum Officers Superannuation Act 1909 will be £500 per annum together with emoluments valued at £125 per annum for superannuation purposes If single full board residence laundry and attendance provided If married an unfurnished house with light water rent and rates provided free valued at £75 for purposes of Superannuation The appointment to be terminable upon one month's written notice on either side Practical experience of the modern treatment of mental conditions will be expected and a knowledge of the Welsh language will be deemed most desirable

Applications stating age qualifications and accompanied by three recent testimonials are to be sent to the Chairman of the Visiting Committee endorsed Assistant Medical Officer not later than Tuesday the 30th instant

Dated this 12th day of May 1933

WM BARKER,
Clerk to the Visiting Committee

TYNEMOUTH VICTORIA JUBILEE INFIRMARY

HOUSE SURGEON (male) required Applicants must be doubly qualified and registered Salary £150 per annum with board residence and laundry

Applications stating age and other essential particulars and accompanied by copies of recent testimonials to be addressed to the undersigned from whom all particulars may be obtained

The Hospital has two Resident House Surgeons and contains 80 beds and cots an X-ray department and an Out patient department where accident cases are received

CHARLES ROWELL
1 Northumberland Place, North Shields — Assistant Secretary

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN
St Quintin Avenue North Kensington W 10
(58 Beds)

HOUSE SURGEON (male) required for six months from July 1st Salary for first three months at the rate of £75 p a and for second three months at the rate of £100 p a with board residence and laundry in each case Candidates should have held a responsible Hospital appointment Applications with copies of three recent testimonials must be submitted on a form to be obtained from the undersigned and should reach him not later than first post on Thursday June 8th

H J ELEY Secretary

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN
St Quintin Avenue North Kensington, W 10
(58 Beds)

HOUSE PHYSICIAN (male) required for six months from July 1st Salary for first three months at the rate of £75 per annum and for second three months at the rate of £100 p a with board residence and laundry in each case Candidates should have held a responsible Hospital appointment Applications with copies of three recent testimonials must be submitted on a form to be obtained from the undersigned and should reach him not later than first post on Thursday June 8th

H J ELEY Secretary

ELSIE INGLIS MEMORIAL MATERNITY HOSPITAL Spring Gardens EDINBURGH (60 Beds)

Applications are invited from fully qualified Medical Women for the post of DISTRICT MEDICAL OFFICER rising to Senior House Surgeon after three months

Appointment is for six months from July 1st honorarium at the rate of £50 per annum, with board residence and laundry

Applications with copies of testimonials to be sent to the Secretary 1 Bruntsfield Crescent Edinburgh on or before June 3rd

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THE LADY CHICHESTER HOSPITAL, HOVE (BRIGHTON)
FOR FUNCTIONAL NERVOUS DISEASES
(60 Beds)

Medical Woman required as HOUSE PHYSICIAN for six months on July 1st Salary at the rate of £100 per annum all found

Also JUNIOR at the rate of £50 per annum all found

Valuable experience for Diploma in Psychological Medicine

Applications with testimonials to the Secretary 117 North Street Brighton

May 10th 1933

QUEEN MARY'S HOSPITAL FOR THE EAST END E 15
Telephone Maryland 2616

Applications are invited from fully qualified and registered Medical Men for the following posts

TWO HOUSE SURGEONS Salary £120 p a
ONE HOUSE PHYSICIAN Salary £120 p a
ONE OBSTETRIC HOUSE SURGEON Salary £120 p a
ONE HOUSE PHYSICIAN AND RESIDENT ANAESTHETIST Salary £120 p a
ONE CASUALTY OFFICER Salary £150 p a

The Hospital contains 217 beds including 50 for Maternity, and other Special Departments.

Candidates who should have held previous Hospital appointments, must send applications accompanied by testimonials to the undersigned not later than Friday June 2nd

The appointments will date from July 1st and will be for six months

RAPHAEL JACKSON (Major)
Secretary

ST MARY'S HOSPITAL W 2

MEDICAL REGISTRAR

The Board of Management invite applications for the above post

Candidates for the appointment must be registered Medical Practitioners and Fellows Members or Licentiates of the Royal College of Physicians or Graduates in Medicine of a University in the British Empire

The salary is £200 per annum, with luncheon and tea provided

Copies of the regulations for the Medical Registrar may be obtained on application at the Secretary's Office

Applications with copies of testimonials should reach the undersigned on or before Saturday June 3rd

W PARKES Secretary

EDINBURGH HOSPITAL FOR WOMEN AND CHILDREN Whitehouse Loan EDINBURGH (56 Beds)

Applications are invited from fully qualified Medical Women for the post of JUNIOR HOUSE SURGEON rising to Senior House Surgeon after three months

Appointment is for six months from July 1st honorarium at the rate of £25 per annum for first three months £50 per annum for second three months with board, residence and laundry

Applications with copies of testimonials to be sent to the Secretary 1 Bruntsfield Crescent Edinburgh on or before June 3rd

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NATIONAL TEMPERANCE HOSPITAL, Hampstead Road N W 1

Applications are invited for the post of HOUSE SURGEON (male) The appointment will be for a period of six months at a salary of £100 per annum and will date as from June 21st Preference will be given to those who have held a resident post

Candidates must submit applications stating qualifications age etc with copies of not more than three testimonials by Friday, June 9th addressed to the Secretary

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NATIONAL TEMPERANCE HOSPITAL, Hampstead Road N W 1

Applications are invited for the post of HOUSE PHYSICIAN (male) The appointment will be for a period of six months at a salary of £100 per annum and will date as from June 21st Preference will be given to those who have held a resident post

Candidates must submit applications stating qualifications age etc with copies of not more than three testimonials by Friday June 9th addressed to the Secretary

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NATIONAL TEMPERANCE HOSPITAL Hampstead Road N W 1

Applications are invited for the post of CASUALTY OFFICER (Male) The appointment will be for a period of six months at a salary of £120 per annum and will date as from June 21st

Candidates must submit applications stating qualifications age etc with copies of not more than three testimonials by Friday, June 9th addressed to the Secretary

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THE HOSPITAL FOR EPILEPSY AND PARALYSIS Maida Vale, W 9

MEDICAL REGISTRAR REQUIRED

Applications are invited for the post of Medical Registrar falling vacant on July 1st

The appointment is for one year renewable for a further year Honorarium £100

Applications which should be accompanied by copies of not more than three recent testimonials should reach me by June 7th

H W BURLEIGH
Secretary & General Supt.

BRIGHTON SANATORIUM AND INFECTIOUS DISEASE HOSPITAL

Applications are invited for the post of MALE JUNIOR RESIDENT MEDICAL OFFICER.

Salary £150 per annum with board and lodging

The appointment is for a period of six months

Particulars and form of application can be had from the undersigned

Latest date for application for appointment June 6th

JAS H ROTHWELL,
Town Clerk

Town Hall, Brighton
May 15th 1933

THE CHILDREN'S HOSPITAL, SHEFFIELD (110 Beds)

Applications are invited for the following post vacant June 1st

RESIDENT MEDICAL OFFICER (male and unmarried) who will have charge of all the Medical and Surgical beds in the Hospital Salary commencing £175 per annum with board residence and laundry Previous resident experience essential

Applications stating age nationality qualifications and experience with copies of three recent testimonials to be forwarded immediately to the undersigned

T H C CARTLAND Secretary

THE JESSOP HOSPITAL FOR WOMEN SHEFFIELD (146 Bed)

The Board of Management invite applications for the post of HOUSE SURGEON (mal) to the Maternity Department (50 beds).

The appointment is for six months from July 1st Salary £120 per annum plus board, residence and laundry

Previous resident experience essential

Applications stating age and experience with copies of recent testimonial should be forwarded to the undersigned not later than Monday June 5th

DAVID OSWALD Secretary

THE JESSOP HOSPITAL FOR WOMEN SHEFFIELD (146 Beds.)

GYNAECOLOGICAL AND MATERNITY DEPTS.

The Board of Management invite applications for the post of HOUSE SURGEON (male) for a period of six months commencing July 1st

Salary £100 per annum together with board residence and laundry

Applications, stating age together with copies of testimonials should be addressed to the undersigned not later than Monday June 5th.

DAVID OSWALD Secretary

MANCHESTER BABIES HOSPITAL, Burnage Lane LEVENSHULME. (80 Beds)

Applications are invited for the post of SENIOR RESIDENT MEDICAL OFFICER Appointment is for six months from July 1st Salary at the rate of £125 per annum with laundry Only candidates with previous Hospital experience need apply

Applications together with copies of testimonials to be sent to the Secretary at the above address marked RMO by Jun 9th

ANGELA LOPEZ Secretary

LIVERPOOL HAHNEMANN HOSPITAL, HOPE STREET (52 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER to the above Institution Appointment is for six months renewable Salary at the rate of £100 per annum Duties include casualties occasional anaesthetics and assisting at operations general gynaecological aural and ophthalmic

Apply stating age sex nationality and previous experience and enclosing copies of recent testimonials to the Registrar before May 30th

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SOUTH EASTERN HOSPITAL FOR CHILDREN, Sydenham S E.26

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER (lady). The appointment will be for six months from June 19th Honorarium £120 per annum with board residence and laundry Applications by letter only stating age and qualifications with copies of three testimonials should be sent to the Hon Secretary Mr L E DENT 182 Turney Road Dulwich Village S E.21 to be received not later than Saturday June 3rd

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SOUTHEND ON SEA GENERAL HOSPITAL (221 Beds—Six Residents)

SENIOR RESIDENT MEDICAL OFFICER required August 1st next or earlier for one year eligible for reappointment Salary £300 per annum rising £50 yearly to £400 per annum F R C S (Eng) essential Previous surgical and administrative experience necessary Facilities for emergency surgery

Applications as early as possible not later than May 31st to the Joint Secretaries

England and Wales

Leicester Royal Infirmary

At the 160th anniversary meeting of the Leicester Royal Infirmary tribute was paid to the immense service rendered by the Hospital Saturday Society in stabilizing to some extent the income of this institution in exceptionally difficult circumstances It was announced that the returns from this fund were higher than at any period in its history and that new homes for convalescent cases would soon be erected at Overstrand near Cromer At the Swithland Home of the Hospital Saturday Society more than half the accommodation was at present reserved for cases from the Leicester Royal Infirmary and when the society's main work was removed to Overstrand the Infirmary hoped to take over the whole of the Swithland Home This would entail an expenditure of about £4 000 a year but since the Infirmary Board was already paying a considerable sum for the reservation of beds it was estimated that the additional cost of maintaining the whole of the beds could be undertaken without imprudence Close co-operation had been effected by the appointment of four members of the Infirmary Board to serve on the committee of the society The annual report of the Infirmary states that there was a slight fall in the number of in patients and a rise in the number of out patient attendances It is mentioned that the administration of the Road Traffic Act has disclosed many loopholes and the financial result of the Infirmary's claims has proved disappointing It is suggested that a small addition to the cost of insurance premiums would give to policy holders the certainty that hospitals would be reimbursed their commitments and would relieve the hospitals of a responsibility which policy holders often give intimation of their desire to accept. The income of the Infirmary for the year fell short of the expenditure by just over £1 000 which is regarded as gratifying in view of the serious financial condition in the country generally Annual subscriptions however are decreasing and the Board appeals urgently for improvement in this respect The amounts received from church collections also continue to fall The number of endowed beds and also of cots in the children's hospital is growing year by year The first stage of the enlargement of the Sir Edward Wood Nurses Home has been completed and work is proceeding on the remainder Money for this has been coming in fairly well and the Board hopes to raise the outstanding sum by June 1934 so that the enlarged home may be opened free from debt. It is felt that there is room for better co-ordination with auxiliary hospitals in the area The long waiting list has however been substantially reduced by administrative changes

Society for Relief of Widows and Orphans of Medical Men

The annual general meeting of the members of this society was held on May 24th with Mr V Warren Low in the chair The report for 1932 was presented and approved and £4 954 was distributed among the fifty two widows and eight orphans in receipt of relief Included in this was a sum of £451 which had been allotted to orphans to enable them to continue their education or to train for a professional or commercial career Three widows had died during the year one had received in grants £3 100 another £2 120 and the third £1 100 five widows and two orphans came on the funds The total membership at the end of the year was 286 which is but a very small proportion of the medical men who are eligible for membership Any medical practitioner who at the time of his election is resident within a twenty mile radius of Charing Cross can apply to become a member of the society The subscription is £2 2s per annum if under 35 years of age at the time of election £3 3s if under 45 and £4 4s if over 45 there are special terms for life membership Relief is only granted to the widows and orphans of deceased members The present scale of grants to widows left with an income of £125 per annum or less is should she be over 65 years of age £75 per annum if under 65 £60 per annum the grant to orphans is £50 per annum In addition a Christmas present of £10 is usually made to each widow and orphan The revised and redrafted by laws passed at a special general meeting on May 12th were confirmed at this meeting A subcommittee had been holding meetings during the year for the purpose of advertising the society and obtaining new members with the latter object in view it has been decided to approach each of the London teaching hospitals in turn Although the society was founded in 1788 and incorporated by Royal Charter in 1864 many medical men still seem to be unaware of its existence The invested funds amount to £140 700 and only the income of this may be applied for the purpose of making grants The capital can never be used as income Particulars and application forms for membership may be obtained from the secretary at the office of the society 11 Chandos Street Cavendish Square W 1

Graded Milk

The Minister of Health received a deputation on May 24th from the Certified and Grade A (T T) Milk Producers Association who desired to bring to his notice their objections to the scheme for the regulation of the marketing of milk submitted to the Ministry of Agriculture by the National Farmers Union The deputation expressed the fear that the proposed marketing scheme apart from its merits for the regulation of the marketing of ordinary milk would be detrimental to the production of graded milks in view of the very special circumstances which apply to this section of the milk industry The Minister of Health said that from the point of view of public health he attached great importance to the graded milk movement He understood that the Minister of Agriculture would shortly hold an inquiry into the proposed marketing scheme and he had no doubt that the association would be given a full opportunity to state at the inquiry the difficulties which they felt in the application of the scheme to graded milks and that their views would be fully considered

Prevention of Cruelty to Children in Liverpool

The Liverpool Society for the Prevention of Cruelty to Children was founded on April 19th 1883 and the fiftieth annual report contains a survey of the work achieved during the last half-century At the inaugural meeting it was pointed out that the value of the efforts made by the Society for the Prevention of Cruelty to Animals had been so noteworthy that a campaign on similar lines on behalf of children might well produce at least as good results Following the issue of the society's first annual report kindred societies were formed in 1884 in London Manchester Edinburgh and Glasgow the Liverpool rules and objectives being adopted by each in turn In 1889 the Act for the prevention of cruelty to and better protection of children placed on a firm basis the ideals which the various societies had promulgated and gave power to punish offenders Some later overlapping with the work of the National Society was removed by an agreement reached in 1897 under which the city of Liverpool and the borough of Bootle remained entirely under the Liverpool Society outlying parts being served by the National Society which had evolved from

LONDON COUNTY COUNCIL.

Application invited for appointment to undermentioned resident positions. The remuneration and condition in each case are subject to review. Duties assigned by Medical Superintendent and include if necessary duties at other establishments under control of the Council.

Candidates for the position of Assistant Medical Officer Grade I must be Medical Practitioners of at least one year's standing and have held a resident appointment in a general hospital for at least six months.

1. HACKNEY HOSPITAL, Hight Street, Homerton, E.9 — ASSISTANT MEDICAL OFFICER (Grade I). Duties mainly medical.

2. PADDINGTON HOSPITAL, Harrow Rd., W.9 — ASSISTANT MEDICAL OFFICER (Grade I). Salary £350 rising by annual increment of £30 to £425 a year with board, lodging and washing. No accommodation for a married man or for a woman.

3. ST. LEONARD'S HOSPITAL, Hoxton, N.1 — Shoreditch, N.1 — HOUSE PHYSICIAN. Salary £80 a year with board, lodging and washing. Appointment for six months in first instance but may be extended for a further period of six months. Candidates must be registered Medical Practitioners. No accommodation for a married man. In the case of a woman marriage terminates contract.

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), County Hall, Westminster Bridge, S.E.1, returnable by June 2nd, or June 9th in the case of Paddington Hospital. Canvassing disqualifies. Further enquiries should be addressed to Medical Superintendent of the respective hospitals.

LONDON COUNTY COUNCIL.

Applications invited from registered Medical Practitioners of at least one year's standing for appointment as TEMPORARY DISTRICT MEDICAL OFFICER in undermentioned medical districts:

Area III—District I (Islington) £200 p.a.
Area VII—District D (Battersea) £275 p.a.
Area VII—District E (Battersea) £150 p.a.
Area VII—District O (Battersea) £300 p.a.

Candidate appointed will be required in each case to reside in or near the district. Salary in each case is provisional and the remuneration and conditions subject to review.

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), County Hall, Westminster Bridge, S.E.1, returnable by June 9th. Canvassing disqualifies.

COUNTY BOROUGH OF HUDDERSFIELD

PUBLIC HEALTH DEPARTMENT

APPOINTMENT OF ASSISTANT MEDICAL OFFICER OF HEALTH

Applications are invited from registered Medical Practitioners for the above appointment.

Candidates should be ladies who have had special experience in ante-natal work and in the care of infants.

The salary offered is according to scale £500 increasing by £25 per annum to £700. It will be subject to the temporary cut in operation at present on the salaries of all Corporation officials. On £500 the reduction amount to £17 10s.

Application stating age and giving full particulars regarding training, qualifications and appointments held since qualification should be forwarded to JOHN M. GIBSON, Esq., B.A., M.D., D.P.H., Medical Officer of Health, Public Health Department, Huddersfield, along with copies of two recent testimonials so as to reach him not later than Thursday, June 8th.

Town Hall, SAMUEL PROCTER,
Huddersfield. Town Clerk.
May 17th, 1933.

CONNAUGHT HOSPITAL,
Waltham Cross, E.17.
(100 Beds with Three Resident Medical Officers.)

RESIDENT HOUSE PHYSICIAN (male) required. Salary £100 per annum. Appointment for six months from July 1st, with board, residence and laundry. Applications stating age, nationality, qualifications and experience accompanied by copies of not more than three recent testimonials should be received by us on or before Monday, June 5th.

KENELM S. ELLISON, Secretary.

LANCASHIRE COUNTY COUNCIL.

BIDDULPH GRANGE ORTHOPAEDIC HOSPITAL.

Applications are invited from duly qualified and registered Medical Practitioners for the following posts at the above Hospital which contains 88 beds:

SENIOR HOUSE SURGEON. Salary £250 per annum (less temporary emergency deduction) together with board, residence and laundry. Candidates must have had experience in a General Hospital. Preference will be given to candidates who have had orthopaedic experience.

JUNIOR HOUSE SURGEON. Salary £150 per annum (less temporary emergency deduction) together with board, residence and laundry. Preference will be given to candidates who have held a resident hospital appointment and who are competent anaesthetists.

Both appointments will be for a period of six months in the first instance and for a further six months at the option of the Council but will not be renewable after that time.

Applications, with copies of two recent testimonials should be sent not later than June 2nd to Dr. J. J. BUTTERWORTH, School Medical and Child Welfare Department, County Offices, Preston.

Duties to commence August 1st.

County Offices, Preston. GEORGE STIPPTON,
Clerk of the County Council.
May 11th, 1933.

CITY OF LIVERPOOL.

THIRD SENIOR ASSISTANT RESIDENT MEDICAL OFFICER.

Applications are invited for the above appointment at the WALTON HOSPITAL, Rice Lane, Liverpool (1,650 beds) for a period of twelve months. Candidates must be single, fully qualified and registered, have had at least 2 years' continuous hospital experience since qualification and possess special experience in surgery.

Salary at the rate of £350 per annum (subject to temporary reduction as authorised by the Council) together with the usual residential allowances. All fees received in connection with the appointment to be handed over to the City Council.

The appointment will be made in accordance with the Standing Orders of the City Council and will be determinable by one calendar month's notice on either side.

Canvassing either directly or indirectly will be deemed a disqualification.

Applications upon forms to be obtained from the Medical Officer of Health, Municipal Annexe, Liverpool, to be endorsed "Third Senior Assistant Medical Officer," and returned to the undersigned so as to be received not later than Tuesday, June 13th.

Municipal Buildings, WALTER MOON,
Liverpool. Town Clerk.
May 22nd, 1933.

BEDFORD COUNTY HOSPITAL.
(124 Beds.)

Wanted, both a FIRST and SECOND HOUSE SURGEON, to take over their duties May 29th for a term of not less than six months.

Salary, First House Surgeon £165, Second House Surgeon £140.

They must be fully qualified male unmarried. Board, lodging and laundry.

Application stating age, nationality, qualifications, together with three recent testimonials to be sent to the Hon. Secretary, Hon. Medical Staff Committee, as soon as possible.

CONNAUGHT HOSPITAL,
Waltham Cross, E.17.
(100 Beds with Three Resident Medical Officers.)

RESIDENT CASUALTY OFFICER (male) required. Salary £100 per annum. Appointment for six months from July 1st, with board, residence and laundry. Applications stating age, nationality, qualifications and experience accompanied by copies of not more than three recent testimonials should be received not later than Monday, June 5th.

KENELM S. ELLISON, Secretary.

THE ST. HELENS HOSPITAL.

Applications are invited for a JUNIOR HOUSE SURGEON (male) to this Hospital at a salary of £150 per annum plus board, residence and laundry. Applications accompanied by three recent testimonials to be sent to the Secretary, St. Helens Hospital, Lancs., not later than June 6th.

CITY AND COUNTY OF KINGSTON UPON HULL.

HULL MUNICIPAL MATERNITY HOME AND INFANTS HOSPITAL. (104 Beds.)

JUNIOR RESIDENT MEDICAL OFFICER.
(Woman.)

Applications are invited from unmarried or widowed Women Medical Practitioners for the appointment of Junior Resident Medical Officer at the above Institution.

Salary £100 per annum, together with board, washing and residence at the Maternity Home. Salary at present subject to a temporary deduction of 2½ per cent. under the City Council's economy measures.

The appointment will be for six months with a possible extension for a further period of six months.

Forms of application and conditions of appointment may be obtained from the undersigned.

Completed applications (in an envelope endorsed "Junior Resident Medical Officer, Maternity Home") together with copies of three recent testimonials must be received by me not later than mid-day on Saturday, June 3rd.

Health Department, N. GEBBIE,
Guildhall. Medical Officer of Health.
Hull, May 1933.

COUNTY BOROUGH OF OLDHAM.

BOUNDARY PARK MUNICIPAL HOSPITAL.

RESIDENT ASSISTANT MEDICAL OFFICER.

Applications are invited from registered Medical Practitioners for the post of Assistant Resident Medical Officer.

Salary £200 per annum, with board, residence and laundry.

Candidates should be unmarried.

The appointment will, in the first instance, be for a period of six months. The successful applicant however will be eligible for re-appointment for a further period of six months.

The Hospital comprises 375 beds with facilities for gaining experience in medicine, surgery, midwifery and diseases of children.

Applications on forms to be obtained from the undersigned, endorsed "Resident Assistant Medical Officer," should be sent to the Medical Officer of Health, Town Hall, Oldham, and should be received not later than Tuesday, June 6th.

JAMES B. WILKINSON, M.D., Ch.M., D.P.H.,
Town Hall, Oldham. Medical Officer of Health.

ROYAL EYE HOSPITAL,
St. George's Circus, Southwark, S.E.1.

The Council invite application for the appointment of HONORARY PHYSICIAN to the above Hospital. Candidates must be a Graduate of Medicine of a British University and a Fellow or Member of the Royal College of Physicians of London.

Application, with copies of testimonials, to be sent to the Secretary on or before June 30th.

F. E. DALTON, Secretary.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.13.

Applications are invited for an HONORARY ASSISTANT PHYSICIAN (Out-patients) attendance Friday afternoons. Candidates must be graduates of a British University and Members of the Royal College of Physicians, London.

The Hospital is close to Plaistow Station, thirty minutes from Charing Cross (Underground).

Applications with copies of three recent testimonials to be sent on or before June 17th to the undersigned.

C. ERNEST WILKES, Secretary.

PRESTON HALL SANATORIUM, AYLESFORD, KENT.

JUNIOR ASSISTANT MEDICAL OFFICER required at once, live in. Salary £200 per annum. Applications with copies of three recent testimonials to the Medical Director.

CHESHIRE JOINT SANATORIUM, MARKET DRAYTON.

Wanted, Male RESIDENT ASSISTANT MEDICAL OFFICER for a period of twelve months. Salary £350 per annum. Applications for forms of application to the Medical Superintendent which should be returned not later than May 31st.

the London Society Successive Acts of Parliament enabled the work to be extended and intensified, and the advances made are recorded by means of abstracts from the various annual reports up to the present During 1932 the number of children under observation was 3,444, in addition to 3,127 under supervision on January 1st of that year It is stated that most of these were cases of minor neglect The total number of children helped and protected during the half century was 297,857 A statistical table for the fifty years shows that the number of children requiring help was at its maximum during 1904 to 1914 Prosecutions of parents and guardians were highest between 1892 and 1903 when the figures ran to three or four hundred each year This contrasts sharply with four such prosecutions in 1932, one in 1931, and five in 1930

Scotland

Chair of Surgery at St. Andrews

At a meeting of the Court of the University of St Andrews on June 2nd Mr John Anderson was appointed professor of surgery in succession to the late Professor L Turton Price Professor Anderson was born in Banffshire in 1886, and after studying medicine at Aberdeen University, graduated M B , Ch B there in 1908 He then acted as house surgeon at the Royal Infirmary of Dundee, and for two years thereafter studied in Tübingen and Berlin Returning to Dundee, he was appointed a member of the surgical staff of the Royal Infirmary, and during the war became surgical specialist to the 20th Casualty Clearing Station in France with the rank of major R A M C Later he acted as a consulting surgeon in the Third Army, and for his military services was awarded the D S O On his return to Dundee he became surgeon to the Royal Infirmary and was consulting surgeon for orthopaedic cases to the Ministry of Pensions in the Dundee area He has devoted special attention to the use of high-frequency electricity in general surgery, and his numerous contributions to current surgical literature include the following

Surgical Treatment of Severe Penetrating Wounds of the Chest in a Casualty Clearing Station," *British Medical Journal* 1917 , ' Surgical Diathermy in Breast Cancer, ' *British Journal of Surgery*, 1928 , and ' Tuberculous Hyperplasia of the Large Intestine," *Edinburgh Medical Journal* 1931

Health Services Inquiry in Scotland

Sir Godfrey Collins, Secretary of State for Scotland, in addressing a recent meeting at Greenock, announced that a review of the health services in Scotland would be undertaken shortly by a special committee After referring to the Housing Acts of 1926 and 1930, under which nearly 21 600 houses had been completed and over 8,000 were under construction he said that the time had come when it was necessary to take stock of the other health services in Scotland with a view to ascertaining whether expenditure on them was being applied in the wisest and most effective manner He proposed therefore, to appoint a committee to review the existing health services of Scotland in the light of modern conditions and knowledge, and to make recommendations on any changes in policy and organization that might be considered necessary for the promotion of efficiency and economy What was contemplated was a comprehensive inquiry which would survey the whole health organization including sanitation, maternity and child welfare school health services, tuberculosis service the insurance medical service hospitals, and all other agencies concerned with the health of the community These services had grown up in a haphazard way for the past fifty years, and to day they represented a varied series of activities which required pulling together Much had been achieved in reducing death rates, but the results were less than might be expected from so much effort and expenditure

Close of an Old Edinburgh Charity

With the death of Dr Charles H Thatcher the Edinburgh Lying in Institution, in which his family has taken a close interest for 117 years, comes to an end In 1816 a dispensary, which afforded gratuitous advice and medicine in the diseases of women, infants, and children and also attendance during confinement, was established by Dr John Thatcher From 1816 to 1824, 12,000 patients received medical relief at this dispensary from Dr Thatcher and his apprentices, while over 1,000 were attended during confinement The dispensary was then situated at 13, High School Yards, and in 1824 a public appeal was issued and the dispensary came under the management of a committee After the death of Dr John Thatcher in 1853 the work was carried on by his son Dr Lewis Thatcher, who died in 1876 Dr Charles H Thatcher, grandson of the founder, then took over the work, and continued the institution for the training of midwives and nurses, who attended the patients under his supervision He took an active interest in the institution until the time of his death

Ireland

State Control in Public Health

At a recent meeting of the Northern Ireland Branch of the British Medical Association, Dr C S Thomson medical superintendent officer of health, Belfast delivered an address on " The Outlook in Public Health " Dealing with modern State services, Dr Thomson pointed out that between 1874 and 1930 Parliament imposed duties of a preventive kind upon every registered medical practitioner With the appointment of so many medical men to State services, such as the school medical and maternity and child welfare services, the general practitioner began to wonder whether this was for him the end of all things The passing of the National Insurance Act had brought in 15,000 doctors as the medical advisers of 15,000,000 people, and it had brought prosperity to the medical profession Would the State system of medical practice engulf the general practitioner? It could never come without his own consent Something might have to be done if the volume of taxation led people to forget their duty to their noble voluntary hospitals Again pensions would have to be found for the older medical practitioners who had faithfully served their fellow men, but the expenditure of public money on pensions involved public control

Co-ordinated Medical Services in the Dublin Hospitals

At the conclusion of the draw for the sweepstakes in Dublin Dr R J Rowlette, vice chairman of the Hospitals Committee, in thanking subscribers for their generous support of the Irish hospitals, said he was particularly grateful for the world wide confidence in the integrity and efficiency of the sweepstakes He also thanked the Hospitals Trust and their staff for the extraordinary efficiency with which they had carried out the sweepstakes, and those others who had contributed to its success, including the nurses and the Commissioner of the Garda Siochana As a result of these sweepstakes it was hoped, within the next few years, to have an efficient hospital system under which there would be a co-ordinated service, and not as in the past, a number of hospitals each trying to cover the whole ground of medical

ROYAL LONDON OPHTHALMIC HOSPITAL
(Moorfields Eye Hospital)
City Road E.C.1

Applications are invited for the office of ASSISTANT SURGEON to the above Hospital
Candidates must be Fellows of the Royal College of Surgeons of England
Canvassing is not permitted Candidates are however requested to send copies of their application and testimonials to the members of the Committee of Management and the acting Medical and Surgical staff whose names and addresses can be obtained on application to the Secretary
Applications stating age, with copies of testimonials, must be received not later than June 17th
ARTHUR J M TARRANT
Secretary

ROYAL GWENT HOSPITAL, NEWPORT MON
(Newport and Monmouthshire Hospital)

HONORARY ASSISTANT OPHTHALMIC SURGEON

The Directors require an Honorary Assistant Ophthalmic Surgeon and applications are invited for the position
Applicants must be Graduates of a University or Fellows of a Royal College of Surgeons and should have had some special experience in Ophthalmic work
The successful candidate will be required to hold the office subject to the Rules and Regulations of the Hospital
Further particulars may be obtained from the undersigned, to whom applications with copies of testimonials should be sent before June 12th
J K MILLWARD
May 23rd 1933 Secretary Supt

THE ROYAL GWENT HOSPITAL NEWPORT, MON (160 Beds)

Wanted, a JUNIOR RESIDENT MEDICAL OFFICER to act as House Surgeon to Out patients and as House Physician
Salary £135 with board, lodgings and laundry Resident Medical Staff 5 Eligible for promotion
Large Out patient Department
Applications stating age and qualifications with copies of three recent testimonials to be sent to the undersigned
Applications from ladies not entertained
J K MILLWARD
May 23rd 1933 Secretary Superintendent

BIRMINGHAM AND MIDLAND EYE HOSPITAL

Applications are invited from duly qualified Medical Practitioners for the post of RESIDENT SURGICAL OFFICER, which will become vacant on or about July 1st
The Resident Staff also consists of Two House Surgeons and in the event of one of these being promoted applicants should state whether they will be willing to accept the appointment of House Surgeon
Applications, with testimonials and evidence of registration must be received not later than Tuesday June 6th
Church St J W PEARCE
Birmingham Gen Supt

LONDON HOSPITAL, E.1

Applications are invited for the post of FIRST ASSISTANT AND REGISTRAR to the Children's Department The appointment is for one year but is renewable annually on application for two further periods of one year
Salary £300 per annum payable by the Hospital and Medical College jointly
Candidates must be fully qualified medically
Applications should arrive at the Hospital not later than by the first post on July 15th
Further particulars may be obtained from the House Governor
ARTHUR G ELLIOTT,
House Governor

ALTRINCHAM GENERAL HOSPITAL
(100 Beds.)

Applications are invited for the post of JUNIOR HOUSE SURGEON Salary £120 per annum with board residence and laundry
The appointment is for six months in the first instance duties to commence July 1st
Applications stating age and experience together with copies of recent testimonials to be sent to the Secretary, General Hospital Altrincham, not later than June 8th

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STREATHAM SCHOOL TREATMENT CENTRE, 56, Lewin Road Streatham, S.W.16

Applications are invited for the following appointments for the period ending March 31st 1934
OPHTHALMIC SURGEON One session a week (2½ hours) £80 per annum
MINOR AILMENTS DOCTOR One session a week (2 hours) £66 per annum
DENTAL ANAESTHETIST One session a fortnight (2½ hours) £37 10s per annum
Applications giving qualifications and experience together with copies of two recent testimonials should be sent not later than June 7th to Hon Secretary 17 Woodman sterne Crescent Streatham S.W.16

DONCASTER ROYAL INFIRMARY
(185 Beds)

CASUALTY HOUSE SURGEON (male) required immediately Five House Surgeons are resident Salary at the rate of £175 per annum with residence board and laundry Successful applicant will be promoted to post of House Surgeon as a vacancy occurs
This large industrial area offers excellent opportunities for gaining experience
Applications accompanied by not more than three testimonials to be sent to the undersigned
WALTER R SMITH
Secretary Supt

WARRINGTON INFIRMARY AND DISPENSARY

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON (male) unmarried
Applicants who must be of British nationality, must be duly qualified Medical Practitioners Salary £175 per annum with board apartments and laundry
Applications stating age with copies of three recent testimonials should be sent in at once to the undersigned The appointment is to date from June 1st
By Order
HENRY L. BOOT
May 15th 1933 Supt & Secretary

DONCASTER ROYAL INFIRMARY
(185 Beds)

HOUSE SURGEON (male) required immediately Five House Surgeons are resident Salary at the rate of £175 per annum with residence board and laundry
This large industrial area offers excellent opportunities for gaining experience
Applications accompanied by not more than three testimonials to be sent to the undersigned
WALTER R SMITH
Secretary Supt

HUDDERSFIELD ROYAL INFIRMARY

Wanted LADY HOUSE SURGEON to commence duty July 1st Duties mainly Eye, Ear Nose Throat and Obstetrical Departments Salary £150 per annum, with board residence, and laundry
Appointment for six months subject to renewal for a similar period
Applications, with copies of three recent testimonials, to be addressed to the undersigned not later than June 12th
H E G HALL
Gen Supt & Secretary

NELSON HOSPITAL MERTON S.W.20
(84 Beds 63 General, 21 Maternity)

Vacancies for TWO RESIDENT HOUSE SURGEONS (male) will occur on July 1st and August 1st, respectively Applicants for one of the appointments should have a good knowledge of obstetrics and gynaecology
Majority of work surgical
Appointments for six months in first instance Salary at the rate of £100 per annum Applications, with copies of two testimonials should be sent to the Secretary not later than June 7th

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WEMBLEY HOSPITAL

Applications are invited for the appointment of an HON PHYSICIAN 43 beds (8 private wards and no Out patient Department Candidates must be Fellows or Members of the Royal College of Physicians with charge of an Out patient Department of a recognised London Hospital Applications with not more than three testimonials to be sent not later than Tuesday, June 6th to GEORGE A PAINES, F.I.S.A., Secretary Wembley Hospital

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NEWCASTLE THROAT NOSE AND EAR HOSPITAL

HOUSE SURGEON required for period of six months. Applicants must be fully qualified and preferably have held Resident appointment.
Salary £100 per annum with board residence and laundry Applications stating age qualifications and experience and three recent testimonials, should be forwarded to the undermentioned by June 3rd
CHAS W LISLE,
Newcastle Throat Nose, and Ear Hospital Secretary
96/98, Rye Hill Newcastle-on-Tyne 4

NORFOLK AND NORWICH HOSPITAL, NORWICH (392 Beds)

Applications are invited for three vacancies in post of HOUSE SURGEON Salary £120 per annum with board residence and laundry Preference will be given to candidates who have held previous Hospital appointments Candidates (male) who must possess registered qualifications should forward applications, stating age nationality etc together with copies of testimonials to the undersigned not later than first post on Tuesday May 30th
FRANK INCH,
May 20th 1933. House Gov & Sec.

SANATORIUM BRIDGE OF WEIR.

COLONY FOR EPILEPTICS, BRIDGE OF WEIR

ASSISTANT MALE RESIDENT MEDICAL OFFICER wanted to commence duties in August keen evangelical and keen research worker preferred Appointment for six months in first instance at rate of £200 p.a. (renewable by mutual agreement) with board and laundry Applications to Medical Superintendent stating age experience and qualifications, and enclosing references

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PROVIDENCE FREE HOSPITAL, ST HELENS (135 Beds)

HOUSE SURGEON (male) required experience in Anaesthetics essential Appointment offers opportunity to gain good surgical experience Suit newly qualified man Appointment is for six months and successful candidate is eligible for reappointment Vacancy in July Salary £230 with board residence and laundry
Applications stating age experience and full particulars together with copies of three testimonials, to be in by June 6th
Reply Secretary, M.O

THE CORBETT HOSPITAL, STOURBRIDGE.

HON OPHTHALMIC SURGEON

The Board of Management give notice that there is a vacancy in the Medical Staff of the Hospital for an Ophthalmic Surgeon and invite applications to fill the post
Applicants duly qualified are requested to send in their applications, with testimonials, and sufficient evidence of their Degrees and Diplomas to the undersigned immediately
The Corbett Hospital, W G H WESTON
Stourbridge Secretary

CHELSEA HOSPITAL FOR WOMEN, Arthur Street S.W.3.

There will be a vacancy for a JUNIOR HOUSE SURGEON (male) on July 1st Appointment for six months. Salary £100 p.a. He will be expected to proceed to the Senior post (six months, salary £120 p.a.) at the end of his term of office
Candidates must be duly registered and preferably unmarried Applications accompanied by copies of three testimonials should be sent not later than Friday June 9th to the Secretary HERBERT H JENNINGS.

SEAMEN'S HOSPITAL SOCIETY
Greenwich

HOUSE PHYSICIAN and HOUSE SURGEON required at DREADNOUGHT HOSPITAL, Greenwich for six months from July 1st Salary £110 per annum and a proportion of fees with board, residence and laundry Candidates must be male Applications with copies of three testimonials to be sent in by May 30th to the undersigned
R E V RAY
Greenwich Secretary
April 27th 1933.

service That did not give the best results no matter how efficient each individual hospital might be The sweepstakes would also benefit another important aspect of hospital work—namely medical research If they had funds to spare for this worthy object much progress might be made in the alleviation of human suffering

Stamp Duty on Hospital Sweepstakes

Sir James Craig (Dublin University) in the course of the debates in the Dail on the committee stage of the Public Hospitals Bill protested against the stamp duty in its application to the moneys derived from the sweepstakes A year ago when the tax was first introduced and the sweepstakes on the Derby was at the peak he warned the Minister of Finance They saw what had happened the sweepstakes on the Derby had fallen by one million pounds and not only was the total sum received less by over £900 000 but the amount going to the hospitals was down by £221 000 He wondered if the Minister even at this late date would not reconsider the matter During the last twelve months the Exchequer had received no less a sum than £1 011 393 from the hospital fund in view of that he supposed he could not expect the Minister to change his mind but he did ask him to consider whether his action would not in the end wreck the whole scheme He had received letters from a great many people who had refused to have anything more to do with the sweepstakes because the Government was collecting as revenue money which was subscribed for the deserving hospitals Sir James subsequently moved two amendments to the Bill The first aimed at deleting the section which provided for the setting up of a single fund and the second at securing that the National Hospitals Trustees should divide the moneys received in respect of a particular sweepstakes into two funds in the proportion of two-thirds and one third the first fund to be known as the Promoting Hospitals Fund and the second as the General Fund In the Bill the Government had gone back on the provision of the original Act and proposed to form the surplus into a single fund This was viewed with suspicion The Minister could do what he liked with the fund and not a single penny unless he chose would go to the voluntary hospitals In reply the Parliamentary Secretary Dr Ward said that the one intention in the minds of the promoters of the Bill was to secure that the best results in the matter of hospital accommodation and equipment should be made available for the poor as the result of the financial opportunity that the sweepstakes offered

CORRESPONDENCE

"New Treatments for Old"

SIR —Having read and reread with interest and profit Lord Horder's oration I still feel like one of your correspondents last week that it needs some reply or at least some amendment of emphasis It would I think be disastrous for our profession were it allowed to stand as the final word on our attitude to those outside the two old-established firms who are adding to our stock of therapeutic agents if not of knowledge While holding no brief for any of these firms I can only say that on the various occasions I have written to them I have always received the utmost courtesy and consideration they have given the information I asked supplied references to literature or translations from foreign literature and at times they have carried out special clinical investigations on behalf of my patients which neither they nor I could pay for entirely without charge or even any acknowledgement from me until now To throw scorn on such services seems neither helpful nor generous

I think that what is actually happening is that a slow and hitherto silent revolution is taking place in our work Many of the products put on the market are admittedly somewhat experimental For all that the manufacturer—as I have met him—is not merely out to sell his *new* drugs He is even more concerned at first to find out about their clinical action Lord Horder has made it clear that he will not help in this quest and many eminent physicians take the same attitude As a result the maker turns to the general practitioner and gives him the opportunity of doing so instead If he communicates his results direct to the maker the latter is usually most grateful More commonly he does not and the manufacturer then has to form his own opinion by whether the demand for the product increases or not The system is admittedly imperfect or even wasteful but it has one crowning virtue for the profession in that it gives every G P the opportunity—should he wish it—of doing some original clinical investigation If done carefully and critically it sharpens his wits increases his knowledge may add some treatment of value to therapeutics and not infrequently enables him to cure a patient pronounced incurable by a consultant relying on the older methods to which Lord Horder would have us revert

By this I do not mean to imply that every patient should have some new treatment Far from it I still use treatments handed down from my father grandfather and great grandfather among which the use of small doses of digitalis to which Lord Horder refers holds an important place But where patients do not improve as fast as we or they should like it behoves us to see if we cannot do something better A return to principles surely does not mean a return to the primitive meaning of clinical and therapeutics Clinical medicine in this twentieth century surely means more than merely putting a patient to bed and therapeutics more than merely tending him there While granting that the first thing in medicine is diagnosis we must never forget that patients come to us not to be labelled but to be cured In this connexion may I commend to Lord Horder a companion to his Good Samaritan story and one I think much more typical of general practice?

A few weeks ago neither I nor my partner was satisfied with the progress of a lady patient and a consultant (for whom I and the whole profession have the highest regard) kindly came to see her She had been having some of the massive doses to which such exception is taken and as a result the clinical picture was obscured I thought it was probably a case of septicaemia in spite of the mild fever present The advice given was to withhold the obscuring treatment let the temperature soar if it would and then take a blood culture and so the diagnosis would be clenched! Being only a general practitioner I preferred to carry on as I was for I feared that if the weakened patient had been allowed to develop frank signs of septicaemia I might never get it under control again I am glad to say the patient is doing well Unfortunately in general practice we sometimes have to choose between getting a patient well and making a diagnosis This may be rank heresy but it is none the less true

Lord Horder is particularly horrified that a drug should be considered a specific for ailments with so different a pathology as influenza and furunculosis That however does not prevent practitioners from securing striking results in these conditions from such to all appearances different agents as S U P 36 antibacsyn edwenil or omnadin to mention a few of which I have slight experience and to which some of his remarks seem particularly directed. They do not always work the oracle but they sometimes do and some I think more often than others Our practice is founded above all on observation and surely instead of bewailing these results we should greet them with the hope that even in such varied conditions there

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House Tavistock Square W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary 7 Drumsheugh Gardens Edinburgh)

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH** *(contd.)*
EBBW VALE, MON. *(Workmen's Medical Society.)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association.)*	COUNTY BOROUGH OF SOUTH SHIELDS. HARTON INSTITUTION AND CLEADON COTTAGE HOMES *(Medical Officer.)*
GILFACH GOCH, GLAMORGAN. *(Workmen's Medical Scheme.)*	OGMORE VALLEY, GLAMORGAN. *(Wyndham's Colliery Medical Aid Society.)* *(Workmen's Medical Scheme.)*	CITY OF STOKE-ON-TRENT. *(Venereal Diseases Officer.)*
LLWYNPIA, CLYDACH VALE, PENYGRAIG, GLAMORGAN. *(Workmen's Medical Scheme.)*	**PUBLIC HEALTH**	HERTFORDSHIRE COUNTY COUNCIL. WARE SANATORIUM. *(Assistant Medical Officer.)*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer.)*	KENT COUNTY COUNCIL. LENHAM SANATORIUM. *(Male Assistant Medical Officer.)* FAR BOROUGH INSTITUTIO HOSPITAL. *(Resident Assistant Medical Officer.)*	FULHAM BOROUGH COUNCIL. Maternity and Child Welfare Department. *(Assistant Medical Officer—Women.)*
MARDY, GLAMORGAN. *(Workmen's Medical Scheme.)*	WORCESTER COUNTY AND CITY MENTAL HOSPITAL. *(Junior Assistant Medical Officer.)*	
NEATH AND DISTRICT. *(Medical Aid Association.)*		

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. C. HUNTER (Medical Secretary New South Wales Branch), 135, Macquari St., Sydney, N.S.W.	**QUEENSLAND** *(Brisbane Federated Friendly Societies Medical Institute.)* *(Toowoomba Associated Friendly Societies Medical Institute, Toowoomba.)*	The Hon. Sec. Queensland Branch, British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	**WELLINGTON, NEW ZEALAND** *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec. New Zealand Branch) British Medical Association, P.O. Box 156, Wellington, New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec. Victorian Branch British Medical Association), Medical Society Hall, East Melbourne, Victoria.			**WESTERN AUSTRALIA.** *(Contract and Lodge Practices.)*	Hon. Sec. Western Australian Branch, British Medical Association, No. 6 Bank of N.S.W. Chambers, St. Georges Terr., Perth, Western Australia.

May 24th, 1933 — By Order of the Council. G. C. ANDERSON, Medical Secretary.

HULL ROYAL INFIRMARY
(370 Beds.)

Applications are invited from registered Medical Practitioners for the following posts (male):

CASUALTY OFFICER. Vacant June 14th. Salary at the rate of £150 per annum, plus residence, board, and laundry. The officer appointed will work mainly under the direction of the Resident Surgical Officer.

HOUSE PHYSICIAN at the SUTTON BRANCH. Vacant June 9th. Salary at the rate of £160 per annum, plus board, residence, and laundry. The Branch Hospital contains 100 beds, 45 of which are for medical cases.

Candidates are expected to stay for not less than six months, but the appointments are at any time determinable by one month's notice on either side.

Applications, giving particulars of age, experience, and nationality, together with copies of testimonials, should be addressed to the undersigned.

R. J. CARLESS,
House Governor.

May 15th, 1933

THE QUEEN'S HOSPITAL FOR CHILDREN,
Hackney Road, London, E.2.

HOUSE PHYSICIAN required July 1st.

CASUALTY OFFICER required July 6th. Some Dermatological work additional.

Six months' appointments. Salary at the rate of £100 per year, with board, lodging, and laundry.

Applications must be made on forms to be obtained from the undersigned, and must be sent in with copies of not more than four testimonials on or before June 9th.

CHARLES H. BESSELL,
Secretary.

May 12th, 1933

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL
(Incorporated by Royal Charter)
Broad Street, W.C.2.

A BACTERIOLOGIST is required by Aug. 1st. The appointment is a part-time one for attendance on three days per week. Salary £[illegible] per annum and fees from the Private Patients which approximately double the remuneration.

Candidates for the appointment must be duly qualified and registered Medical Practitioners and must have made a special study of the subject of Bacteriology.

Application to be sent with copies of testimonials to the Secretary, from whom further particulars can be obtained not later than June 30th.

Intending candidates are requested to call upon the Staff of the Hospital, a list of whom can be obtained from the General Office.

FREEMASONS' HOSPITAL AND NURSING HOME, 237, Fulham Rd., Chelsea, S.W.3.

The post of RESIDENT MEDICAL OFFICER (male) will be vacant on July 1st. Salary at the rate of £250 per annum with board, residence, and laundry. The appointment is for six months. Candidates must be registered and must have held resident appointments at a General Hospital. The officer appointed will be asked to proceed to the new Hospital in October.

The Institution (48 beds) is for paying patients of both sexes of moderate means unable to afford ordinary nursing home treatment, etc.

Applications, stating full particulars to be sent on or before June 6th next to the Honorary Secretaries from whom further information may be obtained. The Medical Advisory Committee will meet on June 13th next.

COUNTY MENTAL HOSPITAL, LANCASTER.

Applications are invited for the post of ASSISTANT MEDICAL OFFICER. Candidates must be single and under 35 years of age. Commencing salary £500, rising by annual increments of £25 to £600, with further increases on promotion, subject to a deduction of 3 per cent. under the Asylum Officers' Superannuation Act. There are no emoluments. The selected candidate will be required to live in the Hospital, and will be provided with board, lodging, etc., for which a charge of £150 a year is made. A temporary abatement from the gross salary will be made, the amount of the abatement on £500 being £18 15s. The possession of a Diploma in Psychological Medicine will entail the officer to an additional £50 per annum. Applications, giving full particulars with testimonials (copies only), should be forwarded to the Medical Superintendent before June 30th.

THE CHILDREN'S HOSPITAL, HAMPSTEAD,
30, College Crescent, Swiss Cottage,
N.W.3.
(63 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER, vacant July 1st next.

Appointment is for a period of six months, with option of extending. Salary £100 per annum with board, residence, and laundry.

Candidates must be duly registered Medical Practitioners.

Application, stating age, qualifications, and previous experience, together with copies of not more than three recent testimonials, must reach the Secretary of the Hospital not later than Thursday, June 1st.

may be a treatment suitable for all It is really no safer to argue that because the disease processes, as known so far, are different, therefore no one drug can benefit them all than to argue that because all the locks in a house seem different there cannot be a master key

The fact is that modern medicine has passed through many stages First of all, diseases were described and classified, then came the search for causes, lately we have had a wonderful time while biochemistry, etc, has shown how these causes work Preventive medicine has thereby gained a good start, but many of us hope that we may even now be entering on the time for which all this labour is but a preparation—the time, that is, when we may reverse these workings of disease and actively aid, expedite, or imitate the workings of nature, and so really 'cure' disease as well as treat it To this end clinical experiment is actually more important than laboratory tests (immensely valuable though these are), and under present circumstances a vast amount of clinical work is being done The trouble is that the practitioners who are doing it have little time or energy left to classify and communicate their results, otherwise progress would be much faster (Incidentally this letter would never have been written had I not been laid up with influenza)

Let not Lord Horder throw cold water on what we general practitioners are trying to do in our humble way and impeded circumstances Can he not use his great powers and influence to help us to get the best out of the new circumstances and give us an oration to cheer us up in the fight instead of sounding the retreat to the old positions? I am sure that none could do it better, unless it be Sir Humphry Rolleston, the memory of whose profound appreciation of the old with his no less profound appreciation of the new has been for nearly twenty years alike the despair and the inspiration of his clinical clerk,

Your obedient servant,

Winsford Cheshire, May 31st W N LEAK

P S —Lest any should read into parts of this letter anything so stupid as an attack on consultants I would like to say categorically that no such is intended Most of us would be in a poor way without them, and I am especially grateful for the pains taken over my poorer patients when they attend the Manchester Royal Infirmary and for the full reports I often receive about their condition W N L

SIR —With the exception of a few diseases due to gross parasites there is no cure for any disease by medical means No one can say 'This is a case of *mumps* or *meningitis* and I can cure it" Physiology and biochemistry are in their infancy, and very little is known of the complicated chemical changes which take place in the tissues in health and disease The constitution of the molecules of proteins, hormones, vitamins, etc is still obscure and without this knowledge there is little hope of a cure for disease or 'morbid process" Palliative treatment is plentiful, dangers can sometimes be avoided and there are some slight indications of the direction in which curative agents are to be sought and possibly found —I am etc

Windsor May 4th W T LLOYD

"Nerve Energy"

SIR —I must see that Professor W Burridge has thrown much if any light on the problem of the reality of nerve energy (*Journal* May 27th, p 936) One physiologist at least does not base his views regarding nerve energy upon the nerve muscle preparation, for quite one of the best accounts of nerve energy is by Professor Howell of Baltimore, in his *Textbook of Physiology* from which I quote (ninth edition, Saunders, 1924 p 134)

"Modern physiologists have considered the cell body of the neuron, including the dendrites as the source of the energy displayed by the nervous system and it has been assumed that this energy arises from chemical changes in the nerve cell as the energy liberated by the muscle arises from or is dependent upon, the chemical changes in its substance It would follow from this standpoint that evidences of chemical activity should be obtained from the cells and that these elements should exhibit the phenomenon of fatigue'

Professor Howell goes on to speak of fatigue of nerve centres (chromatolysis), and correlates this with the familiar sensations of tiredness Here, therefore, we have a physiologist discussing the doctrine, if we may so call it, of nerve energy upon general physiological lines My complaint in the past has been that hardly any other physiologist has seriously dealt with the concept of nerve energy and, consequently not indexed the words whereas, as I have repeatedly pointed out, the clinicians and psychiatrists use the concept freely, and as though it had never been looked at askance

It is, to say the least, very unsatisfactory from the student's point of view, to find his clinical teachers employing as valid a concept which his teachers in physiology either ridicule or ignore One set of writers seem persuaded of the existence of something which the others will not even discuss Ought we not to try to put an end to this state of intellectual indecency, and come to some sort of understanding with the clinicians regarding a concept which some of us believe to be a fundamental one among those which relate to the functions of the central nervous system?—I am, etc

London W 4 May 31st D FRASER HARRIS

Genesis of Gall-stones

SIR —A not unimportant amendment might be made to the statement in Mr D H Patey's review on the mechanism of gall-stone formation in the *Journal* of May 20th (p 866), that "cholesterol gall stones of the type found in man have never been found naturally' in animals Edington (*Veterinary Record* 1927, vii, 353) found two gall stones, one in the gall bladder and the other in the left bile duct, of a three and a half year old cock canary which was suffering from biliary cirrhosis, the stones gave positive Salkowski and Liebermann reactions for cholesterol In the distended but otherwise normal gall bladder of a two-year old cock canary which died of acute pasteurellosis I found two greyish coloured, semi-translucent, oval-shaped gall stones (each about 0 2 cm long), which readily disintegrated on pressure in a cover-slip preparation into what appeared microscopically to be pure cholesterol crystals Burgom (*Journ de méd vét et de zootech de Lyon* 1882, xxxii 343) described a 320 gram stone which he found in the bile duct of a seven-year old horse as composed almost entirely of cholesterol However, Burgom's statement which was unsupported by competent testimony, is not confirmed by the records in veterinary literature of gall stones in mammals

Stones have been found in the gall bladder or bile ducts of cattle, horse (which does not possess a gall bladder) dog, swine, and rarely of cat and sheep I have found two hard stones (not analysed) in the distended and chronic inflamed gall-bladder of a drake, and Fox (*Diseases in Captive Wild Animals and Birds* 1923) reported six cases of 'gall stones'—in the beaver (2) brant goose, pig-tailed macaque, polar bear, and mongoose lemur The incidence of gall stones is highest in cattle—for example in approximately 0 5 to 1 per cent of cattle slaughtered in the United States of America (vide Feldman *Journ*

British Medical Journal
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RETIRED MEDICAL PRACTITIONER UNDER takes LOCUM TENENS work. Large experience in London and Provinces (Life abstainer) Now booking engagements.—Address No 3513 B.M.A. House Tavistock Sq., W.C.1

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UNIVERSITY GRADUATE, WITH LARGE City Practice would do LOCUM quiet seaside Practice 3 weeks August using own car, return for hospitality wife and 2 children Convenient Yorkshire pref. but not essential.— No 3504 B.M.A. House Tavistock Sq. W.C.1

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A LADY DISPENSER BOOKKEEPER supplied immediately on request qualified and with practical experience in private practice and dispensary work also trained in Bacteriological Laboratories of the LONDON COLLEGE OF PHARMACY FOR WOMEN Preparation for Examinations — Write wire or 'phone (Bayswater 0969) Secretary 7, West bourne Park Road W.2

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GENTLEWOMAN WISHES POSITION WITH Doctor Dispensing qualification (Hall) nursing and secretarial experience Also other qualifications Can drive car Would do Locum. Moderate salary — Address No. 3534 B.M.A. House Tavistock Square, W.C.1

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Cancer Research 1928 xii 188 Gauss and Davis *Journ Amer Vet Med Assoc* 1932 lxxxi 71) On analysing all the reports in the available veterinary literature of the past fifty years I find there is no significant difference in sex incidence and no constant pathological change associated with the stones No macroscopic abnormality of the biliary system or liver is found in the majority of bovine cases whereas biliary cirrhosis is reported in the majority of equine cases The stones usually found in mammals consist principally of bile pigment and bile salts traces of cholesterol may also be found Concretions composed principally of the carbonate and phosphate of calcium and magnesium mixed with bile and formed around a foreign body—for example a crystal of quartz a grain of corn or a dead parasite—are not uncommon in the horse

I suggest that progress in experiments on the genesis of cholesterol gall stones might result from the investigation of canaries —I am etc

Department of Pathology Royal Veterinary College N W 1 May 31st TOM HARE

Hernia and Appendicectomy

SIR —The correspondence on this subject in your columns has perhaps necessarily brought about a comparison between two incisions—the muscle splitting and the muscle retracting

I have certainly never connected the possibility of the grid iron incision which I practically never use now for appendicectomy with the production later of an inguinal hernia It seems to me very probable however that this may happen even if only on theoretical grounds It is not difficult to imagine where the muscle supports of the inguinal canal are weakened or paralysed and there is loss of shutter action that it might be easier for abdominal contents to slip into a lurking indirect hernial sac I saw recently an appalling ventral hernia occasioned by the use of a muscle splitting incision plus sepsis The last dorsal nerve at least had also been involved and the whole of the right lower abdominal quadrant bulged hideously being surmounted by the actual thinned-out scar and hernial sac During the last year I have seen two other ventral hernias from this incision Furthermore repair of a muscle splitting incisional hernia is surely attended with less chance of cure than a hernia following rectus sheath incisions Why split muscles when there are means of causing less injury by retraction as in Battle's incision? All I think will admit that exposure is not so good with a McBurney incision—surely an important point in almost all appendix cases since we never know beforehand how difficult an appendicectomy may be We may also want to hunt for a concretion I believe that abscesses are better opened by sight so that every drop of escaping pus can be mopped up

Mr Geary Grant's letter (May 20th p 892) gives cause for comment He favours the muscle splitting incision and states I believe it is a better situation for drainage the ilio-inguinal and ilio-hypogastric nerves are unlikely to be injured except from sepsis What of the last dorsal nerve too? He also says I am ready to admit that where drainage has been carried out through this incision it may be a cause of post operative pain And how painful these lateral abdominal incisions can be! Why then employ an incision which may meddle with nerve tracts? In his last paragraph he mentions reasons for giving up Battle's incision which are not easy to agree with It is surely not difficult to avoid dividing one or more of the nerves to the rectus The nerves pierce the posterior sheath of the rectus so that mobilization of the outer edge of muscle is free from danger The nerves now lie in some transparent membranous tissue behind If a bold transverse gap is made through this soft yielding membrane and areolar tissue and the edges are retracted up and down with the finger all nerves and vessels are carried out of harm's way at once It remains to incise the absolutely bare posterior sheath If local difficulties above or in the pelvis demand a little more exposure it is still a simple matter to enlarge the opening in the posterior sheath up or down behind the nerve bearing retracted tissue If the upper abdomen has to be approached I sometimes convert Battle's incision into a right paramesial with retraction of the rectus outwards Adequate drainage of the rectus sheath and a tube (if drainage be employed through the original incision) left in for the shortest possible time and not the longest ensures against ventral hernia The outer edge of the thick muscle is a very adequate barrier for any tendency to hernia under these conditions —I am etc

Torquay May 29th W ETHERINGTON WILSON F R C S

So called Pancreatitis in Mumps

SIR —In case the symptoms of the complication of pancreatitis in mumps are not generally known I am sending you notes of a case I have recently seen as there is a definite danger of unnecessary operative intervention

The patient was a youth aged 20 who developed right sided parotitis The symptoms were very mild and at the end of the fourth day had practically disappeared On the seventh day his temperature ran up to 104° F He was acutely ill His abdomen was much distended with general pain and tenderness all over it but there was no localized pain or rigidity He had nausea but was not sick Restlessness headache and photophobia were prominent symptoms The patient's relatives were apprehensive of appendicitis and both a surgeon and a physician were called in the former taking a serious view of the case and ascribing the symptoms to a partial intestinal obstruction The latter was more cheery about it but both were of the opinion that the case was not mumps and that the parotitis had its origin in some abdominal disease With the exception of a slight leucopenia the blood picture was normal The reactions to the enteric group were negative and the blood was sterile In forty-eight hours the boy was well

In discussing the case with a colleague he informed me that a similar train of symptoms occurred to him in America His condition was so alarming that it was decided to do a laparotomy This fortunately was averted on the advice of a man who recognized the symptoms In his case too the pancreatitis was well in a couple of days but on the fourteenth day of the disease he developed orchitis

The medical officer of a large public school tells me that this complication is not uncommon and he knows of a similar case which was operated on for appendicitis and a normal appendix removed

It would be interesting to know on what grounds the pancreas is considered to be involved In this case there was no tenderness in the epigastrium no sickness no characteristic stools The urinary diastase was unfortunately not estimated till rather late but was then normal —I am etc

London W 1 May 27th A H SPICER

Infra red Rays in Criminal Investigation

SIR —In the investigation of crime it is of the highest importance that the medico-legalist should know what possible assistance he may obtain from science to aid his investigation of crimes and it is equally essential that he should make use of the latest developments of science

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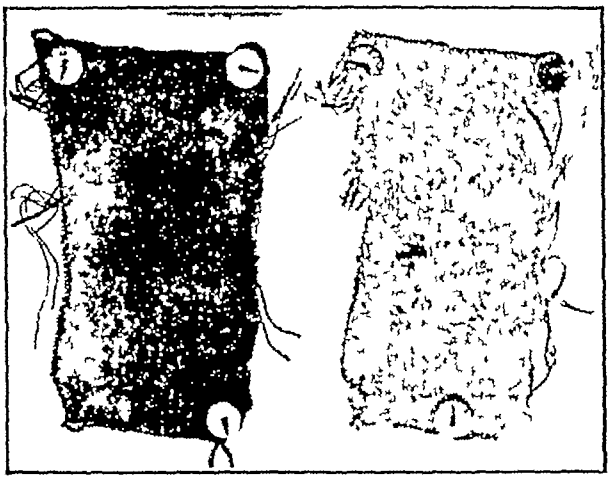
literature provides ample evidence of the many possible applications of the filtered ultra-violet rays in criminal investigation But invisible rays from the other end of the spectrum, infra-red rays or heat rays, may be of considerable value to the criminologist The photographs reproduced herewith are, I think, of interest in this respect

On the left is a photograph taken in ordinary light of a piece of blue serge cloth which was being examined for the presence of blood No stain is visible either to the



naked eye or by ordinary photography On the right is the cloth as it appeared when photographed with an infra-red plate Now a stain is evident, and this stain, by the usual microscopical, chemical, and spectroscopic tests was proved to be one of blood

I have to thank Professor Glaister of this university for permission to use the photographs —I am, etc ,

Forensic Medicine Department University of Glasgow May 16th F W MARTIN

Mind and Body

SIR —There has been a tendency for many years past to regard the human organism as a rat or a guinea pig is regarded in the laboratory Surely it is time that we all recognized in our work and our hypotheses of disease that our patients have minds, and that this highly civilized part of them has a very strong influence indeed over their bodies

In the *Journal* of May 27th there are two extremely able articles which make very interesting reading , but I feel quite certain that both these articles would be still more interesting and much more valuable if only they were to contain a slight acknowledgement that the mind also comes into the picture I refer to Dr Wilfred Shaw's Treatment of Menstrual Irregularities' (p 907), and to Dr Norman Burgess s Experiences with Proteose in the Treatment of Diseases of the Skin " (p 914) In the former article there is a paragraph headed " Metropathia haemorrhagica The results of treatment are given as not satisfactory ' though theoretically correct " May I suggest that the reason is that treatment of this sort does not remove the fear of pregnancy which is the real cause of the condition Dr Wilfred Shaw with his wide experience of suffering women must have had to recognize this frequently All general practitioners meet it continually Why do they not admit this state of affairs at least to their own reasoning? Unless we all begin to think fairly we shall never get further than ' hover at the fringe of a complete understanding of these ovarian abnormalities To my mind the last sentence of Dr Shaw s article should read In future it is more than probable that psychotherapy will be the method of choice in the treatment of many cases of this kind "

Is it not time that we as a profession preaching prevention rather than cure, began to teach our patients how best to control their bodies by true harmony of mind rather than how we, by surgical amputations, can try to free them from the anxieties and fears that so often cause their symptoms? Asthma is surely an instance of an anxiety disease Let us admit it and research in that direction, rather than experiment by rejecting the abnormal excretions that the body is trying so hard to get rid of We all rejoice with Dr Burgess that he is getting good results, but is he not beginning at the wrong end?

All through the medical, and even surgical, literature of the day one can see our great profession blinding itself at the outset by thinking in terms of the physiologist or pharmacologist, or bacteriologist, doing experiments on animals, instead of starting as a humanist and admitting the very powerful influence of an anxious mind over the body in which it works Many instances occur to one and, indeed, to all of us, but it is not part of the scope of this letter to recount cases of my own experience but rather to express a hope that the profession generally may be stimulated to reorientate its views on disease in the light of recent psychological work —I am, etc ,

Cambridge May 29th C M BILLINGTON, M D

Treatment of Compound Fracture of Femur

SIR,—In your issue of May 27th (p 942) is an account of an action against a surgeon for negligence in the treatment of a compound fracture of a femur In the course of his evidence for the plaintiff, Mr Brockman is stated to have given his opinion that the correct treatment of a compound fracture of four days' duration is excision of the wound I have no more right than he—is neither of us saw the case at the time when the proper treatment was in question—to offer an opinion as to the treatment best for this individual case, but I venture to think such a view ought not to be spread about by the medical press

It is, fortunately, not a common experience to have to undertake the treatment on the fifth day of a compound fracture of a long bone in civil practice All cases in my practice seen within twenty four hours of the accident are cleaned and excised If Mr Brockman had any experience of casualty clearing station surgery in the war I feel sure he would agree with me that late excisions which were at times attempted, were a failure In advocating such a procedure Mr Brockman loses sight of the aim of excision, which is to obtain primary union and to convert an open fracture into a closed one

It was stated by the defendants and by witnesses for the defence that when the patient was admitted to the home his wounds were " very dirty " Does Mr Brockman advocate closure of such wounds? If not excision would be merely meddlesome I am sorry to have to disagree with what is reported as Mr Eccles's evidence for similar reasons When he states that he would excise in the presence of mild sepsis four or five days after an accident he is at variance with me on a question of surgical principle which cannot be a matter for discussion

Of course, one cannot take in the whole of a case by merely reading a newspaper report there were several points in the case which to me were not clear—the chief being why the admittance of the patient to the nursing home was delayed till the fifth day, and what treatment in the way of reduction and immobilization had previously been carried out or attempted Counsel for the defence seems to have ignored these points

The larger question as to the calling of expert evidence by both sides in such a case seems to me to be again brought into prominence by this verdict I submit that the present method is against the public interest and derogatory to the reputation of the medical profession

Much more reliable medical evidence would be available for the guidance of judge and jury if experts selected from a panel of medical men experienced in that particular type of case were summoned by the court But this is too big a question to discuss fully in your correspondence columns—I am etc

London W June 5th C H FAGGE

"Sunshine Roof" Rheumatism

SIR—With the advent of warmer weather and spells of sunshine the motorist is making full use of his sunshine roof which is now becoming a standard fitting on all saloon cars large and small If the weather is really warm he will also discard his headgear and enjoy to the full the fresh air and sunshine In common with all new ideas which are on the whole in advance and largely beneficial the sunshine roof brings its little drawback which in my small experience is becoming fairly common—namely a subacute rheumatism affecting *the musculature of the back between the scapulae*

The victim who is usually quite unaware of the cause of his trouble complains of a mild but annoying muscular ache between the shoulder blades which is more marked during rest when the head is rested on a pillow in the lateral recumbent position It is usually the healthy young owner-driver who suffers—the man (or woman) who is keen on motoring and who sits up to the wheel when driving The passenger who sits back against the cushions rarely complains and often the small protection offered by the brim of a hat is enough to ward off the unnoticed but causative back draught

The cause of the rheumatism once discovered the cure soon follows and the sunshine roof motorist either wears a hat or pulls the sliding roof forward an extra foot and sits back in his driving seat Iodex radiant heat and massage soon settle the condition if further treatment is required

In spite of these observations I am an enthusiastic user of a sunshine roof and believe that it is a most necessary fitting to the modern saloon car which has so completely ousted the old fashioned open tourer—I am etc

Colwyn Bay June 1st. DONALD I CURRIE

South African Medical Congress

SIR—In the *British Medical Journal* of March 11th this year you were good enough to publish a letter of mine expressing the hope that some members of the British Medical Association in England and elsewhere might be tempted to attend the twenty seventh Annual Medical Congress to be held in Capetown September 25th to 30th and assuring them of a warm welcome should they do so In response to that letter I have had several inquiries as to the possibility of obtaining some reduction of shipping fares and special terms for those attending the congress at certain hotels in Capetown I have been able to do both these things

Visitors to the congress can leave England and return as follows *Armadale Castle* leaving Southampton August 4th or by the *Windsor Castle* leaving Southampton August 25th and return by the *Windsor Castle* leaving Capetown October 6th The first-class return fare will be £90 and the second-class return fare £60 The second class accommodation on these ships is extremely comfortable and no one need hesitate to travel by it These ships belong to the Union Castle Company of 3 Fenchurch Street London The Ellerman Bucknall Company of Leadenhall Street have monthly sailings of very comfortable one-class ships and the return fare is £72—I am etc

E BARNARD FULLER
President Elect.

85 St. George's Street, Capetown
May 11th

Medico-Legal

NEGLIGENCE OF A SUBORDINATE
THE SURGEON AND THE THEATRE TEAM*

The surgeon performing an operation relies on his highly trained team to fulfil many vitally important duties The question of the extent to which he is responsible for a negligent act by his anaesthetist assistant or nurse may therefore at any moment call for an answer Considering the thousands of operations performed in this country every week it is astounding that the hundreds of volumes in which English cases are reported contain no judgement by which this responsibility is measured and hardly even a dictum from which it can be inferred Judges seem to have been rather careful to avoid expressing a definite opinion on this important and difficult matter There is on record however a case which originated in a South African hospital and was heard by the Appellate Division of the Supreme Court of South Africa The judgements given in this case are not of course binding on an English court but they represent the opinions of three lawyers of great learning and experience This was the case of Van Wyk *v* Lewis (1924)

A girl was taken suddenly ill and her general practitioner found her to be suffering from acute cholecystitis He advised an immediate operation and called in an eminent consulting surgeon who performed the operation in the nearest hospital at midnight He was assisted by an anaesthetist and by a qualified nurse on the hospital staff who acted as theatre sister The operation was a most difficult and anxious one the gall bladder was in a very bad state and its substance was so friable that it would not hold the sutures The condition of the patient was critical and the anaesthetist warned the surgeon to get her off the table as soon as possible At the end of the operation the surgeon searched for swabs as carefully as he could but was chiefly concerned with closing the abdomen and getting the patient off the table The patient made a quick recovery and the wound healed over Some months afterwards it broke again and discharged some gall stones and about a year after the operation she passed by the bowels an object which was undoubtedly a small swab with tape attachment She sued the surgeon for negligence and claimed £2 000 damages The judge of the inferior court found against her and she appealed

The court first disposed of the contention of the patient's advisers that to leave a swab in the abdomen was itself proof of negligence and that the surgeon must pay damages unless he could prove that he had not been negligent Chief Justice Innes held that on the contrary all the facts must be considered and that the patient must prove the negligence The court quoted the words of Beven on Negligence

Prima facie to sew up a sponge or an instrument in a patient after an operation is negligence Very great care and method is to be observed in accounting for all appliances used and this in proportion to the easiness with which they may escape observation but even here the fact that some needle or portion of an instrument has been left in a wound is not conclusive but the conclusion from the fact must be determined by a jury on a view of the whole circumstances

Wessels Judge of Appeal said Since all the surrounding circumstances are to be taken into consideration there is no room for the maxim (namely *res ipsa loquitur* which means that the fact is itself adequate evidence of negligence) The case hinged on whether the surgeon was entitled to depute to an assistant the task of counting and checking the swabs or whether he did so at his own risk and if she (the assistant) made a mistake was responsible for her negligence Judge Kotzé said The operating surgeon *no doubt* has control of the operating room or theatre and circumstances may arise where he *may* become liable for the acts of the nurse or sister in attendance

The evidence had established that by the procedure of the hospital the duty of counting all the swabs and particularly of keeping a tally of those used inside the body and checking them as they came out was entrusted to the

* The first part of this article on Negligence of a Subordinate by a legal correspondent appeared in the *Journal* of April 29th (p 766) and the second part, dealing particularly with nursing homes and co-operations and the paying patient, on May 27th (p 941)

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sister The court held that this practice was reasonable—the sole test of whether the surgeon had used due care On the question of whether the theatre sister was the servant of the surgeon in the sense that he was responsible for her negligence the court expressed a most important opinion Wessels, J A , said

' The relation of a hospital sister or nurse in a public hospital to a surgeon operating in that hospital is not that of *master and servant* nor is it analogous to such a relationship The sister or nurse is an independent assistant of the surgeon though under his control in respect of the operation The truth is that hospital sisters and nurses form a distinct branch of the hospital They are members of an allied profession and have duties of their own to perform They are subordinate to the surgeons, but they are in no way their servants *The surgeon does not insure* that he will be responsible for every misfeasance of the nurse To make him so would make his position intolerable "

Speaking of the practice of the profession, he said

' In determining whether a surgeon conducting an abdominal operation in a hospital is entitled to place reliance on the counting of the swabs by a qualified and competent hospital sister we must consider the prevailing practice of the profession and all the circumstances surrounding the operation In operations some team work is essential to what *extent the doctor should or should not rely* upon the team work of the hospital assistants depends entirely on the nature of the particular case '

He quoted the words of an American annotator " If the surroundings are those of a modern hospital with experienced nurses and attendants, the doctor ought to be entitled to take for granted that they will attend to their ordinary duties without instruction " He said

This appears to me both common sense and sound law in this country [South Africa], taking into consideration modern conditions and modern methods of operating in hospitals The Court of Appeal affirmed the judgement of the court below Here are three learned Dominion judges expressing the emphatic opinion that a surgeon is entitled to rely on expert assistants in an operation and is not to be held personally responsible for every act of those assistants The extent of his responsibility, they suggest will vary in each particular case, but he is not unconditionally responsible, and the fact that a *mistake* has been made and an appliance has been left in the patient s body will not in itself prove that either he or a subordinate has been guilty of negligence Whether in the circumstances negligence has been committed is a matter for the jury to decide

In March 1930, the Lord Chief Justice, sitting with a special jury heard the case of Crotch *v* Miles, in which a woman claimed damages against Mr Ernest Miles on the ground that he had left a pair of forceps in her abdomen at an operation he had performed ten years before This case was not reported in any of the series of legal reports but a full account appeared in the weekly medical journals [1] The evidence established that, since the operation by Mr Miles the patient had undergone another operation in France Mr Miles gave evidence that he invariably exercised scrupulous personal care in counting all instruments and appliances after an operation and had devised a system by which both he and his theatre sister counted the instruments in multiples of three It appeared that at operations in France no count is made either by the surgeon or by the assistant The jury came to the conclusion that the forceps had not been left in the patient s body at the operation performed by Mr Miles and so the question of the surgeon s responsibility for his assistants at an operation was not a main issue Nevertheless in the course of this case Lord Hewart made several interesting observations which may fairly be taken to represent the attitude of the common law towards a surgeon who accidentally allows an appliance to remain in the body of a patient They show moreover the essential contrast between his attitude and that of the African judges Whereas these judges were concerned with whether a surgeon, legally speaking, should be responsible *in law* for a mistake by his assistant, Lord Hewart was concerned in all he said with asking the jury whether it thought *on the facts* of this particular case that the surgeon had been negligent

Referring to the judgement in Hillyer s case, Lord Hewart said that the operation staff had been held not to be the servants of the governors but, he said it did not follow the other way round that the nurses assisting at the operation were the servants of the surgeon In his summing-up, he said that nobody denied that if a surgical forceps was left in the body of a patient in the course of a surgical operation, that patient ought to have a remedy in damages against somebody—in other words, the case is one where *res ipsa loquitur* He quoted the evidence of Sir Hugh Rigby a surgeon, that in England the theatre sister was exceptionally responsible and highly trained, and that according to the usual practice she was charged with the duty of counting instruments and swabs He very properly left the decision to the jury whether on the evidence in the particular case assuming that the forceps had been left in the body at Mr Miles s operation, it considered that the surgeon was ultimately responsible He recalled that Sir Hugh Rigby had said it was in the interests of the patient that the duty of counting should be left to the sister Sir Thomas Horder (as he then was) had said that he regarded the surgeon as ultimately responsible, and that the surgeon should check the count at the close of the operation Lord Hewart s words to the jury were

" You may think it is right to draw a distinction between what is done in the course of the operation and what is done immediately at its close It may well be that in the actual course of the operation while the surgeon is cutting and opening and attending to his surgical task it is not to be expected nor desired that he should be busying his mind with the counting of instruments and swabs or with the question of whether a swab or instrument is missing But you may think that other considerations apply at the close of the surgery itself It may well be that any delay might be highly prejudicial if it occurred before the body of the patient was stitched up but after that you may think that before the surgeon departs it is reasonable that he should personally satisfy himself that the number is correct and that there is nothing missing

" Was it in November 1920 part of the duty of the surgeon personally to count the instruments and satisfy himself that the number was correct or was he entitled to say that there was present a skilled theatre sister that this was her job, and that he was entitled to act upon her report? She is not his servant she is one of the team We can all make mistakes I suppose it is quite conceivable that somebody in an individual case might miscount a certain instrument You have to address your minds to this question suppose the theatre sister did miscount and thought there were six of these instruments when there were *only five* is the defendant responsible for that happening? Is it a breach of duty on his part that the theatre sister made that mistake? You may think it is linked up with the question as to what he did afterwards

It was in some ways a pity that the question was not a main issue of the action From the words of the Lord Chief Justice it seems doubtful whether an English court will ever commit itself to an unconditional ruling that the surgeon at an operation can leave the counting of instruments and swabs entirely to the theatre sister and be relieved of all responsibility Lord Hewart hinted strongly that however urgent it may be to get a patient sewn up and off the table the surgeon can reasonably be expected to count his instruments and appliances afterwards In any event the matter rests with the jury to decide on the evidence in the particular case

Attempts have sometimes been made to hold the surgeon responsible together with the anæsthetist if mishap resulted from the administration of the anæsthetic but there appears to be no record of any case in which their respective liabilities have been defined In Hillyer s case Lord Justice Farwell made some remarks about the surgeon being in supreme command at an operation, but these remarks were not directed towards the point at issue—which was the liability of the hospital for injury to a patient at an operation—and were, therefore in the nature of *obiter dicta* and not binding on other judges It is difficult to see how a surgeon can possibly be held responsible for the proper administration of the anæsthetic As a rule the anæsthetist is neither his nor at

[1] *British Medical Journal*, 1930, i, 620 *Lancet* 1930, i, 643, 706

nor his servant but an independent contractor upon whose skilled collaboration and assistance he depends If however the selection of the anaesthetist has been left to the surgeon he would probably be held to owe the patient a duty to exercise reasonable care in selecting a competent anaesthetist A surgeon who consents to operate with an anaesthetist whose competence he has reason to doubt probably does so at his own risk

STUDENTS IN A TEACHING HOSPITAL

In a teaching hospital it is part of the training of students to perform subordinate duties such as dressings passing catheters taking specimens of blood and treating minor ailments and injuries in the casualty department The question may at any time arise Who is responsible for injury resulting from lack of reasonable skill or care in a student? The question is not an easy one The governors of the hospital contract with the medical school to give facilities to students to learn their craft within the hospital under the direction of the visiting and resident physicians and surgeons The hospital governors do not exercise any control over the students who learn within the walls of the hospital Nevertheless one of the duties of the hospital to its patients is to protect them or warn them against any dangers they may encounter in the hospital In certain circumstances the ministrations of the student may conceivably be quite dangerous and the question arises whether a patient who enters a teaching hospital of his own will knowingly and willingly takes the risk of being attended in some circumstances by a student There is no explicit guidance in either the law reports or the textbooks and the legal liability would probably vary according to the particular case It seems reasonable that the hospital or the teachers should be liable for any injury caused by the delegation to a student of a duty which he could not reasonably be considered competent to perform On the other hand the governors are never in a position either to control the student or to decide what duties may be properly delegated to a student in any particular case This seems to be peculiarly a matter of professional skill within the compass of the medical staff alone and outside the interference of the governors altogether The inference is therefore that if harm happens through a student being given a task that is in the view of a reasonable man beyond his capacity the liability should rest on the person who appointed him to that task If however a student who was considered on reasonable grounds fit to perform a certain task caused injury by performing it negligently it does not seem good law that the teacher who ordered him to perform it should be held responsible unless he was present and in a position to control the student If the qualified medical staff were liable for isolated acts of negligence by students in their absence clinical teaching would be very seriously hampered if not brought to a standstill altogether When a member of the staff is present and in a position to exercise control the position is different he would then it is submitted have to answer for any injury due to the student's lack of due skill and care

THE QUALIFIED ASSISTANT THE LOCUMTENENT AND THE TECHNICAL EXPERT

Applying the principles laid down in the textbooks and in the cases that have been cited it appears that a medical man in private practice contracts to treat his patient with reasonable skill and care and can only delegate these duties with the consent of the patient If however the patient consents to be treated by a qualified assistant or locumtenent the doctor's duty ceases when he has exercised reasonable skill and care in selecting a competent qualified assistant or locumtenent and he will not be responsible for any isolated act of negligence by such a person Whether the patient has consented must be a matter of fact a patient's consent need not be given in so many words but may sometimes be implied from the fact that he has allowed the substitute to treat him When however a busy medical man finds he cannot pay a certain visit and sends his assistant or locumtenent instead he may put the patient into a position in which he has to choose between putting up with the substitute and going without treatment altogether In such a case the jury is not likely to regard the patient's acquiescence as consent and the substitute will be in the position of the doctor's agent for whose negligence he (the doctor) is responsible If a medical man benefits financially by the work of another there is at any rate a presumption that the other is his agent. It is worth noting that a panel doctor by the form of his contract with the Insurance Committee undertakes liability for his assistant's failure to give a patient proper care and attention

On the other hand when a doctor prescribes expert treatment to be carried out with the consent of the patient by a medically unqualified person skilled in that treatment such as a registered biophysical assistant—a qualification which implies competence in many kinds of treatment such as massage electrotherapy and hydrotherapy—he is not responsible for specific acts of negligence by such persons if he has good reason to believe that they are competent to carry out the treatment which he has prescribed and if it is the custom of the profession to delegate such treatment to such persons He has discharged his duty when he has exercised due care in the selection of an assistant or independent expert competent to perform the task in question If however a subordinate is performing a duty in his presence and he is able to exercise control he may be liable for that subordinate's negligence Whether a given person was in fact a subordinate and whether the doctor could properly have exercised control is a question for the jury in the particular case

Under the Partnership Act 1890 (Sections 10 and 12) each partner in a firm is liable for the misdoings of the others in the firm's ordinary business If therefore one of the partners in a medical firm is so unfortunate as to have damages given against him for negligence any of the others may be made to pay the whole of the amount If the injury was caused by fraud or culpable negligence the offending partner may in some cases be ordered by the Court to indemnify the others but he may not have the means to do so Every member of a partnership would therefore be well advised to insure himself against the risk of being held liable in damages for the act of another practitioner over which he cannot exercise the slightest degree of control Even if his partners are absolutely competent and trustworthy juries are not

* Since the three parts of this article on Negligence of a Subordinate were written Mr H C Dickens barrister at law has delivered a valuable lecture to the Medico-Legal Society entitled Negligence in Hospital and its Legal Consequences in which he dealt with some of the same points and with certain others This paper will in due course appear in the *Medico Legal and Criminological Review*

Universities and Colleges

UNIVERSITY OF OXFORD

At a congregation held on June 3rd the degree of Doctor of Medicine (D M) was conferred on F Hawking

UNIVERSITY OF BRISTOL

Dr Geoffrey Hadfield F R C P Professor of Pathology in the University of London (Royal Free Hospital London School of Medicine for Women) has accepted an invitation to fill the Chair of Pathology shortly to be vacated by Professor Walker Hall

Dr J W de W G Thornton has been appointed Lecturer in Pharmacology and Mr J D A Gray senior Pathological Officer in the Department of Preventive Medicine

UNIVERSITY OF SHEFFIELD

At a congregation on July 1st the honorary degree of Doctor of Science will be conferred upon Professor J B Leathes F R S Dean of the Faculty of Medicine and upon Mrs May Mellanby

UNIVERSITY OF ST ANDREWS

Mr Francis Robert Brown M B Ch B F P C S Ed has been appointed a lecturer in clinical surgery in the University

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Practices and Partnerships for Disposal (continued)

18 CO DURHAM.—PRACTICE OF £540 P A IN RESIDENTIAL Colliery District near two large Towns Pan 1 380 Well fitted house (7 room) with good Surgery and Dispensary for sale or rent. Scope for substantial increase Premium only £500

19 S W OF ENGLAND.—OLD ESTABLISHED PRACTICE OF £750 p.a. in beautiful district Pan 1 300 Excellent house (5 bedrooms) for sale Premium 1½ years purchase

20 S WALES — PRACTICE BETWEEN £250—£300 P A IN beautifully situated village about 4 miles from important town Small panel. Nice house (6 bedrooms) electric light gas and company's water for sale or rent. Premium £280

21 S OF ENGLAND — PARTNERSHIP IN OLD ESTABLISHED Practice of nearly £1,950 p.a. in important town within 80 miles of London No panel. Attractive corner residence (7 bed and dressing rooms) in half acre of walled in garden with garage, etc. for sale. Ample scope for increase. Premium one-half share 2 years purchase.

22 ESSEX.—OLD ESTABLISHED PRACTICE OF ABOUT £600 P A in Suburban District. Pan 1 500 Well-situated detached house (6 bedrooms) standing in own grounds with nice garden garage and stabling for sale Scope for increase. Premium £650

23 LONDON, S W.—OLD-ESTABLISHED PRACTICE ABOUT £650 p.a. in well populated area Panel 850 Separate surgery and private residence to be purchased Scope for increase Premium £1 100

24 SURREY.—PARTNERSHIP IN SOUND OLD ESTABLISHED good mixed-class Practice about £3 000 p.a. in the Croydon area Small panel. Very little midwifery Excellent modern detached house for sale Scope for increase Premium one half share 2 years purchase.

25 ESSEX COAST.—MEDICAL WOMAN REQUIRED AS PARTNER in Practice of £2,500 p.a. in small Seaside Town Panel 2,300 Modern house in good position facing Sea with 4 bedroom for sale. Scope for increase. Premium one fourth share £1 250 and further share later

26 LONDON W.—STEADILY INCREASING NUCLEUS OF PRACtice in the Maida Vale district. Bookings for 11 months £249, of which about £100 has been received. Rent of consulting and waiting rooms 30/ weekly Good scope Premium £300

27 WEST OF ENGLAND.—PARTNERSHIP IN OLD ESTABLISHED PRACTICE over £2 200 p.a. in County Town Panel about 1 000 Premium one half share 2 years purchase. Good prospects for well-qualified physician (preferably M R C P) who should be an R.C and who would have opportunity of getting on Staff of Hospital in near future.

28 LONDON E.C.—PARTNERSHIP IN OLD ESTABLISHED PRACtice in the City Receipts average about £1 650 p.a. including appointments and panel worth over £500 p.a. Premium one half share £1 000

29 NORTH OF ENGLAND — INLAND HEALTH RESORT — NON dispensing PRACTICE of about £1,000 p.a. Small select panel. House (7 bedrooms) with large garden for sale. Premium—Practice—£750

30 HOME COUNTY.—WELL ESTABLISHED PRACTICE OF £700 p.a. in first rate Country Town under 40 miles from London Pan 1 about 2,0 Fees 5/ to £1 1s. Large well-built residence (about 6 bedrooms) with modern conveniences. Beautiful garden meadow orchard etc. in all about 24 acres Excellent hunting Premium Practice and house £4,500 (or near offer) which is less than the value of the house alone.

31 S AFRICA.—RADIOLOGICAL PRACTICE IN A MOST DElightful town with excellent climate Cash receipts last year £1 450 Scope. Premium to include furniture carpets accessories etc £2,200

32 EAST COAST.—PRACTICE OF BETWEEN £750 A D £800 p.a. in a purely Residential Seaside District within 40 miles from London Small Panel. Detached house (5 bedrooms) for sale. Scope for increase as district is growing

33 SURREY.—PRACTICE OF £1 000 P A IN RAPIDLY GROWing Residential District within 15 miles of London Panel 400 Suitable house with separate professional accommodation for sale. Scope for considerable increase. Premium £1 600

34 LONDON W.—GOOD MIDDLE CLASS PRACTICE £400 P A in district within easy access of the West End. Pan 1 over 100 Attractive double fronted house with nice garden for sale. Scope for increase Premium 1½ years purchase

35 CORNWALL.—VERY OLD ESTABLISHED PRACTICE OF OVER £1 100 p.a. in delightfully situated seaside village on West Coast. Pan 1 about 550 Well built house (7 bed and dressing rooms) standing in half acre of ground for sale. Scope as building is going on Premium 1½ years purchase.

36 LONDON N.—PARTNERSHIP IN PRACTICE ABOUT £5 250 p.a. in thickly populated Suburban District. Panel about 800 One fourth or one third share at 2 year purchase.

37 HOME COUNTIES — OPHTHALMIC PRACTICE BETWEEN £300 and £400 p.a. in desirable Residential Town under 15 miles from London. Good detached house (4 bedrooms) with large garden for sale. Good reasons for plenty of scope for increase. Premium £300.

38 LONDON E.C.—OLD ESTABLISHED LOCK UP PRACTICE of £646 p.a. Panel 459 Living accommodation to rent if desired Premium £1 000

39 S AFRICA. — OPHTHALMIC AND GENERAL PRACTICE about £1 400 p.a. (about 60 per cent. Ophthalmic) including appointments £400 No Ophthalmic opposition Premium £400

40 N OF ENGLAND — OPHTHALMIC PRACTICE OF OVER £1 600 p.a. in an important town Excellent scope for one keen on clinical and operative Ophthalmology Large house in first-class condition for sale. Purchaser should be well qualified Premium £2,500

41 S AFRICA. — PRACTICE OF ABOUT £2,000 P A IN A famous town Pleasantly situated detached bungalow (5 bed rooms) garage and small garden for sale. Good hospital (with private wards). Premium £1 100

42 LONDON WEST END — X RAY AND ELECTRO-THERApeutic Practice Receipts 1931 nearly £620 Suitable and convenient flat at moderate rent, on lease. Premium £925

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LANCS TOWN near Liverpool —Mixed General PRACTICE Aver ag cash receipts £1 458 p a Panel 1 672 Excellent freehold corner house (facing Park) 2 reception 4 bedrooms 4 professional rooms garage and garden Premium—Practice—1½ years pur chase —No 427

NORTH WEST COAST —PARTNERSHIP (after six months assist antship) in mixed panel and private Practice averaging £5 263 p a Panel 2 500 and appointments Good house available to rent with garden and garage Salary £500 p a Premium—¼ share—1½ years pur Further share later —No A 15

LARGE LANCS TOWN near Man chester — Old established mixed PRACTICE Average cash receipts £1 080 p a Panel 1 060 Scope Good house 2 reception 4 bedrooms garage and garden to rent Pre mium 1½ years purchase —No 457

MANCHESTER —PARTNERSHIP in excellent mixed Practice Cash re ceipts last year £2,414 Panel 2 670 Suit Irish Graduate Scope for increase Good accommodation can be secured Premium—one third share—2 years purcha e (to include book debts) —No 448

LARGE LANCASHIRE TOWN nr MANCHESTER — Sound mixed class PRACTICE Average cash receipts £1,481 Panel 1 466 Good de tached corner house 2 reception 4 bedrooms garage and garden Prem 1½ years purch —No 466

BLACKPOOL —NUCLEUS with great scope in developing district Cash receipts last three months £134 Panel about 70 Excellent corner house for sale or could be rented on lease Premium, best offer —No 444

LAKE DISTRICT —Small Seaside Town —Beautiful district — Middle class PRACTICE Cash receipts over £800 p a Panel 250 Excellent freehold hou e (on sea front) 3 rec ption, 7 bed rooms garage and nice garden For sale or may be rented on lease Premium 1½ years purchase —No 388

NEAR HULL —Mixed General PRACTICE in pleasant district near Housing Estate Cash receipts last year £953 Appointments £82 p a Panel over 500 Scope for increase Vendor retiring Premium 1½ years purchase —No 463

NORTH WALES —Old established mixed PRACTICE in Country Town near Coast Cash receipts last year £700 Panel 538 Scope for increase as the Practice has been neglected Excellent house 3 reception 5 bedrooms garage and large garden Net rent £50 p a Good sport and educational facilities Welsh not essential Cottage Hospital Premium £800 —No 412

LARGE LANCS TOWN —Very old established middle class PRAC TICE averaging £3 267 p a Panel 500 Appointments £300 p a Partnership with succession in 12/18 months suggested Good semi detached house 3 reception 6 bedrooms garage and garden For sale or would rent on lease Vendor retiring Pre mium 1½ years purchase —No 464

MANCHESTER —Middle-class PRACTICE in pleasant suburb. Cash receipts last year £1 327 Panel 528 Charming house to rent 3 reception 6 bedrooms billiard room Large garden and garag Premium—Practice—1½ years purchase —No 322

LANCS TOWN —Mixed general PRACTICE. Cash receipts last year approx £1 500 Panel 829 Scope for surgery if desired Good house containing Operating Theatre 3 professional rooms 2 small wards, and living accommodation Rent £60 p a on lease Pr mium 1½ years purchase —No 460

MANCHESTER —Very old-established good class PRACTICE in residential suburb Average cash receipts £1 912 p a Select panel of 464 Excellent freehold corner house, 2 reception 6 bed rooms garage and garden Price £1 600 Premium 1½ years purchase —No 458

STAFFS —Old established Country PRACTICE in charming district averaging £900 p a Panel 632 Ap pointments (transferable) £100 p a Practically unopposed Scope for in crease Excellent house with ample accommodation garage and garden rent £84 p a Premium 1½ years purchase —No 426

MANCHESTER — Old-establi hed panel and private PRACTICE. Ca h receipts last year £642 Panel 788 Scope Good corner house 2 recep tion 4 bedrooms garage Rent £60 p a Premium 1½ years purchase or near offer —No 437

EAST YORKS —Country Town near Coast —Unopposed mixed PRACTICE. Cash receipts last year £960 Panel 630 Excellent detached house 3 reception 4 bedrooms garage and large garden Premium 1½ years purchase —No 346

DEATH VACANCY —Cheshire Coast Town near Liverpool —Cash receipts £500/£550 p a Panel 100 Good house 3 reception, 5 beds garage & gard Rent £80 p a Prem best offer —No 429

NR MANCHESTER —Old established mixed PRACTICE offering great scope Average cash receipts over £500 p a Panel 625 Good house in main road, 2 reception 4 bedrooms. Rent £49 p a Premium best offer Vendor retiring —No 450

CO DURHAM —Small PRACTICE offering great scope in beautiful country district Cash receipts £550 p a Panel 380 Good semi detached house (3 beds) to rent at £55 p a Garden Premium £350 —No 446

MEDICAL WOMAN S P —Cash receipts last year £645 Panel nt hou 3 re ception 6 bedrooms garag Rent £80 p ase Premium best offer —No 330

NEAR NEWCASTLE ON TYNE —Mixed General PRACTICE aver aging £800—£850 p a Panel 600 Scope for increa Cost house, 3 reception, 5 bedrooms garage, and garden Premium £950 —No 422

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Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The Unemployment Insurance (Expiring Enactments) Bill was introduced in the House of Commons on May 31st It is a Government measure which proposes to continue for twelve months the Unemployment Insurance Act, 1930, and Sections 1 and 2 of the Unemployment Insurance (No 3) Act, 1931 The second reading is put down for June 14th

The House of Commons will reassemble on June 13th The report and third reading of the Pharmacy and Poisons Bill is set down for June 15th The Bill has already passed the House of Lords

Hospitals and the Tax on Co operative Societies

On May 30th, in the House of Commons the Finance Bill was further considered in committee A new clause moved by Mr HORE BELISHA imposing a charge of income tax on mutual profits of any company or society was read a second time by 253 votes to 77

Mr CAPE moved an amendment to exempt from income tax any profit or surplus allocated by a society to hospitals, convalescent homes or welfare centres He understood from the Chancellor of the Exchequer that donations by societies to such institutions would be on a similar basis to donations given by individuals or companies But he understood that an individual or a company had to give a seven years guarantee that the donation would be paid to these institutions before being able to claim exemption If that was so the case of these societies would not be met because it was very difficult for a mutual trading society to give a guarantee for that length of time most of these societies were run on democratic lines and every half year the meeting of members decided what donations of this kind should be made Having been a general secretary of one of these societies himself he could say that they generally paid something to the hospitals and convalescent homes in the locality every year for the benefit of their people For three or four years they gave a substantial grant to one or two hospitals not only in their own area but outside as well because of the specialist treatment given to their people This year, however owing to so many men being unemployed and their revenue having much decreased they had to reduce their donations to the hospitals The same thing applied to other co operative societies

Mr LOGAN said that it was important in hospital and convalescent treatment for a patient to be able to get out of his own neighbourhood and a wonderful opportunity would be afforded if a big society with 6 500 000 members was in a position to provide additional benefits out of its surplus funds Owing to the great amount of poverty many thousands of people would be turned off health insurance this year Here was an opportunity for the co ordination of the health services of the nation with the work that the co operative society was able to do The expenditure on Poor Law would be relieved by the grants that could be given not only for the relief of distress but for convalescent treatment and after care Mr PRICE appealed to the Chancellor of the Exchequer to give consideration to the matter because it was bound to affect the finance of hospitals all over the country

Government Reply

Mr CHAMBERLAIN Chancellor of the Exchequer said he could not accept the amendment He hoped that the answer he would give to the points raised would satisfy hon members and reassure them as to the fears which had been expressed There had been some misunderstanding on two points He had not said that co operative societies in this respect would be in the same position as private individuals he had said that they would be in the same position as trading companies—quite a different thing The seven year guarantee was something which applied only to subscriptions by private individuals there was no question of the seven year guarantee in considering what had to be allowed as a trading expense or in computing the profits or gains of a trading company To put the matter quite broadly and generally if donations or subscriptions to hospitals and other institutions referred to in the amendment were made for the welfare of the employees of the co-operative society or company they would be admissible as a trade expense In the case of hospitals the question would be whether those hospitals were available for the welfare of the employees If that was the case subscriptions or donations would not be subject to taxation, although they might be taken out of the surplus of the society But with regard to donations or subscriptions—for example by a Yorkshire co operative society to a hospital in London—one could hardly say that that was in connexion with employees of the society and he did not think that they should be permitted as a trade expense

Mr LOGAN asked if the Chancellor would agree that in the case of a company or society in say, Yorkshire or Lancashire, subscribing to a specialist hospital to which they could send a patient even though it might be in the South of England that would be within his description Mr CHAMBERLAIN answered Certainly It is not necessarily a question of the locality The test is whether it is for the welfare of the employees It would of course in the ordinary case be a local hospital, but a subscription to a specialist hospital which was not necessarily in the locality would come within the exemption

Sir S CRIPPS said he was afraid that what Mr Chamberlain had said would not in the least meet the point which the Opposition desired to put forward The right hon gentleman had stressed quite rightly and accurately that all these various payments must be made on behalf of employees and that of course was the existing law as regarded other companies But co operative societies were concerned with payments made on behalf of members and not of employees and the position as he saw it was this a co operative society had a surplus available and in order to provide hospital accommodation for its members made a large donation to a local hospital The members had the alternative of taking the money in dividend or of benefiting the hospital Surely it was a proper and right use of the money on exactly the same basis as the use of the money for dividend

The amendment was rejected by 231 votes to 66

Stamp Book Advertisements—Answering Mr Sutcliffe on June 2nd, Sir KINGSLEY WOOD said that revenue from advertisements of patent medicines in the stamp books was about £530 per annum of which about £30 per annum was from advertisements of medicines for certain diseases referred to in paragraph 58 (2) of the Report of the Select Committee on Patent Medicines In view of the committee's recommendations he had decided that any future contract for the exploitation of advertisement space in the stamp books should prohibit acceptance by the contractor of any advertisement for a patent medicine the terms of which suggest that the medicine had a beneficial effect in respect of the diseases listed

Obituary

Dr T BURNS MOYES, who died at the early age of 40 was well known as a general practitioner in Hull where he had many friends especially among the poorer classes He was born in Calcutta and studied medicine at the University of Edinburgh, graduating M B B Ch in 1918 During his undergraduate days he was president of the Royal Medical Society of Edinburgh and after qualifying held a number of resident posts at the Edinburgh Royal Infirmary In the early part of the war he served with the 28th Brigade R F A, and afterwards as a temporary captain R A M C At Hull he was medical officer to one of the River Boards, and medical referee for the central district in connexion with the examination of superannuated employees of the corporation

Medical News

The summer dinner of the Australian and New Zealand Medical Association in England will be held at the Trocadero Restaurant Piccadilly on Friday June 16 h at 7 45 for 8 p m with Mr L Graham Brown F R C S in the chair Sir Thomas Wilford High Commissioner for New Zealand will be the official guest All medical visitors from Australia and New Zealand whether members of the association or not are cordially invited to be present The honorary secretaries are Mr E T C Milligan and Mr Philip Jory (26 Queen Anne Street W 1)

The annual general meeting of the Paddington Medical Society will be held on Tuesday June 13th in the Great Western Royal Hotel Paddington at 9 p m when the presidential valedictory will be delivered by Dr G de Swietochowski and officers for the coming year appointed

The British Institute of Philosophy announces that an address will be given by Sir Herbert Samuel entitled The Tree of Good and Evil at University College Gower Street on Wednesday June 14th at 5 15 p m A limited number of seats are available for the public and applications for tickets should be made to the director of studies University Hall 14 Gordon Square W C 1

The St Cyres Lecture for 1933 on Some Observations on Coronary Thrombosis will be delivered by Professor John Hay at the National Hospital for Diseases of the Heart Westmoreland Street W 1 on Tuesday June 13th at 5 p m All members of the medical profession are invited to attend

At the Princess Elizabeth of York Hospital for Children Shadwell E to-day (Friday June 9th) at 8 45 p m Dr A. P Cawadias will give an address on Hippocrates and Hippocratic Principles of Practice in Contemporary Medicine Dr A M Gossage will preside Visitors are welcomed

The second of four advanced lectures for post graduates arranged by the Fellowship of Medicine and Post Graduate Medical Association will be given on June 14th at 5 p m at the Medical Society of London 11 Chandos Street W by Dr C P Symonds on The Disturbance of Cerebral Function in Head Injury A course in diseases of the chest will take place at the City of London Hospital Victoria Park from June 12th to 24th On June 26th at 8 30 p m at 11 Chandos Street Dr Roland de Hellebranth of New Jersey U S A will deliver a lecture on Modern Methods of Local and Spinal Anaesthesia illustrated by lantern and cinema There will be a practical week end course in general medicine and surgery at the General Hospital Southend on-Sea on July 8th and 9th On June 16th at 5 p m there will be an ante natal demonstration at the Royal Free Hospital Forthcoming courses include cardiology at the National Hospital for Diseases of the Heart June 26th to July 8th diseases of children at the Children s Clinic June 26th to July 8th

A joint conference of the British Hospital Association and the Incorporated Association of Hospital Officers is being held at Bath during the last three days of this week An opportunity will be afforded for viewing officially and in detail the new Bath Royal United Hospital which has lately been completed at a cost of £150 000

The annual congress known as the Journées médicales de Bruxelles will be held at Brussels under the presidency of Professor Valère Cocq from June 24th to 28th when syphilis will be the principal subject for discussion The subscription is 100 francs which should be sent to the general secretary Dr Beckers Rue Belliard 141 Brussels The inaugural address will be given by Professor Charles Saroléa on The Doctor and Medicine in European Literature Excursions and amusements have been arranged for visitors and on June 28th members are invited to the official inauguration of the Palais des Thermes at Ostend

The fifth congress of the International Society of Urology will be held at the Royal Society of Medicine 1 Wimpole Street W from July 10th to 15th under the presidency of Sir John Thomson-Walker

Lord Melchett has accepted the presidency of the British Science Guild in succession to Sir Samuel Hoare whose three year term of office ends in June 1933 Lord Melchett will be formally elected at the annual general meeting to be held in the Mansion House on June 19th at 4 30 p m with the Lord Mayor of London (Sir Percy W Greenaway) in the chair

Dr B Holroyd J P of Pannal near Harrogate has been elected chairman of the Claro Guardians Committee of the West Riding County Council for the fourth year in succession

We have received the first issue published in March of a new monthly Spanish journal entitled *Revista Medica de Toledo* edited by Dr J Ruiz de Guardia It contains original articles on nervous syndromes and hepatic opotherapy by Professor G Marañon treatment of infantile paralysis by irradiation of the spinal and peripheral sympathetic system by Dr A Piga and the causes of error in the determination of age by the measurement of the Haversian canals by Dr Daniel Ortega

A meeting of the Physiological Society will be held in the Physiological Laboratory of the School of Medicine Leeds to-day (Saturday June 10th) at 3 p m On July 1st the society will meet in the University Laboratory of Physiology Oxford

We have to announce with great regret that Sir Walter Fletcher died on June 7th after an operation

Letters. Notes. and Answers

All communications in regard to editorial business should be addressed to **The EDITOR. British Medical Journal B.M.A. House Tavistock Square W C.1**

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QUERIES AND ANSWERS

Sequels of War Gassing

YOUNG G P asks where he can find some authoritative information as to the sequelae of being gassed in the war At least 30 per cent of my male patients (he writes) who were combatants in the war and who are now in an industrial practice blame the effect of poison gas on the lungs for their bronchitis thoracic aches and pains asthma tuberculosis etc All the patients are emphatic in saying they were in perfect health before the war and have never been thoroughly fit since their poison gas experience What and where are the facts?

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3. HOME COUNTIES—PARTNERSHIP—Residential Town within easy reach of London A one-third share is offered in a very sound old established Practice producing for the last 12 months nearly £4 500 Panel of 2,500 Fees from 3 6 to 21 Very nice house with ample accommodation or small practice if desired Incoming Partner should be experienced accustomed to better-class work all to undertake major surgery and preferably hold a Bell whip Premium £3 000
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5. LONDON WEST END—Very old-established good-class non-dispensing and non-panel PRACTICE held many years by Vendor who is selling owing to failing health. Cash receipts for past three years average £3 123 p.a. Average visiting fee 10 6 up to 21 No midwifery or night work. Good family residence with ample accommodation for sale Vendor's leasehold property Six months introduction given
6. LONDON SUBURB NORTH WEST—Very old-established panel PRACTICE, with better-class connection attached and situated in a pleasant residential suburb Cash receipts over £2 800 including panel of 3 150 and transferable appt worth £70 Very good house with ample accommodation (7 bedrooms etc) Price leasehold (with 11 years to run at a ground rent of £15 p.a.) £1,500 Rent of separate Surgery on 21 years lease £52 inclusive Premium £7 000
7. LANCASHIRE. — LARGE TOWN—Old-established good mixed-class PRACTICE held by Vendor for the past ten years Average gross cash receipt £1 458 Panel of 1 674 and several Insurance appts Corner house in very pleasant residential locality containing consultation room 2 waiting rooms dispensary 2 reception rooms 4 bedrooms bathroom kitchen etc Card on Garage Price for freehold £1 400 £1 000 on mortgage Good scope for increase
8. LONDON NORTH—Old-established middle and working-class PRACTICE, held by Vendor 11 years. Average gross cash receipts £975 Panel of over 900 Fees from 2 6 Semi-detached corner house in good condition with ten rooms and usual offices Separate entrance to professional rooms Price for leasehold £600 Premium £1,500
9. LONDON, EAST—Middle and working-class PRACTICE, producing £1 000 p.a. including panel of about 1 100 Suitable small house with sitting room 2 bedroom and attic waiting room surgery and dispensary Rent £52 p.a. Premium 2 years purchase
10. DORSET—Well-established PRACTICE, in very pleasant town within easy reach of the coast Gross cash receipts over £1 000 of which about £400 is from panel Fees 3 6 to 21 Opposition not strong Good house, with 2 reception 5 bedrooms etc garden of nearly 3 acres. Rent on lease £62 p.a. Premium £1 750
11. LONDON SOUTH EAST—Old-established better working-class PRACTICE increasing and situated in well populated district Gross cash receipts for last 12 months £1 263 including panel of over 1 300 Suitable house with 2 reception and 3 bedrooms. Garden. Price for freehold £1 100 Premium £2.400
12. EASTERN SUBURB—Very old-established middle and working-class PRACTICE, worth about £1 100 p.a. including panel of 1,350 Very little midwifery House contains 2 reception 4 bedrooms etc. Separate entrance to professional rooms Small garden Garage Price for freehold £1 350 Premium 2 years purchase
13. EASTERN COUNTIES — FAVOURITE SEASIDE AND HOLIDAY RESORT—Good mixed-class PRACTICE, established many years and producing for the last twelve months £1 600 Panel brings in £300 p.a. and an appt. worth £100 p.a. Fees 3 6 to 7/6 with medicine extra. Nice house with 2 reception 5 bedrooms etc Garage Garden Price for freehold £2 250 Golf shooting and other sport. Premium 1½ years purchase
14. PARTNERSHIP—In a well populated pleasant South Eastern suburb within ten miles of London the half share of an old-established mixed class Practice is for disposal owing to the retirement of the junior partner Held by the remaining partner 30 years Cash receipts average £2 765 p.a. including panel of 1 800 and appts worth £150 Very little midwifery Pleasant semi-detached corner house with ample accommodation garden Price leasehold (over 900 years at ground rent of £7 p.a.) £1 050 Premium 2 years purchase. Scottish graduate preferred.
15. NORTH EAST COAST—PARTNERSHIP—A one-half share is offered in an old-established better middle-class Practice in suburb of favourite residential town Steadily increasing and excellent future prospects Gross cash receipts £1 700 Panel of 700 Fees from 3 6 Very nice house with 2 reception 4 bedrooms etc One acre of garden Garage for 2 cars Rent on lease £80 p.a. Sport of all kinds and good school Premium for share 2 years purchase
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17. SOUTH WALES—Beautiful country district within 4 miles of large town Small PRACTICE producing between £300 and £350 p.a. off ring good scope Visiting fees from 5 Very little midwifery or night work Well-situated house with well kept garden containing 2 reception 3 good-sized bedroom and servants room Electric light and gas throughout Garage Rent on lease £70 p.a.
18. CENTRAL LONDON—Middle and better-class PRACTICE, averaging for the last two years about £500 p.a. including small panel of 180 Fees 3 6 to £1 Professional accommodation can be rented at £200 p.a. Premium £300 to include furniture drugs instruments etc
19. SOUTH EAST LONDON—Good middle and working-class PRACTICE producing last twelve months nearly £950 Panel of 986 Suitable house with 2 reception 4 to 5 bedrooms etc Rent on lease £70 p.a. Premium to include drugs etc. and surgery fittings and furniture £1 450
20. NORTH WALES—Old-established middle and working-class PRACTICE, averaging for the last three years over £1 700 including panel of about 1 300 Fees from 2 6 Visits from 3 6 with medicine extra. Suitable house with good professional accommodation Electric light. Garage for two cars Small garden. Rent on lease £100 p.a. Premium £2,500 £1 700 down balance by instalments. Good sport, etc. A knowledge of Welsh is not necessary
21. RIVIERA—Old-established PRACTICE the receipts from which have averaged over £1 600 p.a. but have decreased recently owing to Vendor's ill health Very good prospects of extension Fees from £1 1s. Very easy work. Suitable flat can be rented at £160 p.a. Premium £4 000
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4. SOUTH COAST TOWN or near locality—PRACTICE £1 500 p.a. with panel of 1 000 or thereabout preferably on rental Capital available [earning about house pre-
5. LONDON OR SUBURBS—PRACTICE, producing p.a. with panel of 1,500 Good house with [0 to £1 600

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Myositis Ossificans Progressiva

'HELP' writes A sturdy child of 7 years has developed myositis ossificans progressiva involving chiefly the flat muscles of the back, which are all becoming masses of bone The axillary and neck muscles are also becoming affected so that movements of the head are impossible, and feeding can be achieved only with great difficulty The disease is usually considered hopeless and the sufferer is allowed slowly to become a solid mass of bone Has anyone ever had any success with this disease? Or can anyone make any suggestions? Anything would be tried in a case which, untreated, holds such a hopeless prognosis

Pruritus in Pregnancy

Mr DONALD I CURRIE F R C S (Colwyn Bay) writes in reply to Dr F W Lawson's query under this heading June 3rd p 991) I suggest that he should treat the affected parts by exposure to ultra violet light Two or three exposures at three- or four day intervals are usually all that is required, the patient being placed in the lithotomy position and the parts being well retracted Cold bathing and an antiseptic dusting powder should be used between applications

Income Tax

Board and Lodging of Son Acting as Assistant

"R S" has a son who acts as his locumtenent and assistant, and he claims to deduct as professional expenses "the fees of £7 7s per week as locum and £2 2s as assistant" also £2 2s and £1 1s per week as 'maintenance" expenses The assessor objects to the deduction of £1 1s per week for maintenance as assistant, on the ground that he would have been staying at home in any case

*** The objection does not seem to be well founded If the son does assist in the practice and does in fact receive £2 2s per week in cash and maintenance to the value of £1 1s per week in respect of his services, it seems irrelevant to consider what would have been the position if he were not rendering those services The relationship is also irrelevant unless the value of the emoluments claimed is clearly excessive on a *quantum meruit* basis The amount of the allowances claimed seems reasonable but of course, a lot depends on the facts—that is, on the value and cost of the board and lodging provided

Car Transactions

"MAGNETO'S" car transactions have been as follows

October 1921	Bought car A for £467
December 1926	Bought car B for £130
February 1930	Sold car B for £15 and Bought car C for £165
April 1933	Sold car A for £10 and Bought car D for £180

*** It would have paid "Magneto" better to have claimed the wear and tear allowance throughout, but as it is we advise him to claim the renewal allowance for 1931-2 on car B—that is £130-£15=£115 invoking Section 24 of the Act of 1923 to justify the reopening of the assessment and the repayment of the appropriate amount to him The renewal allowance for car A—that is £180-£10=£170—will affect the profit for the year 1933 and therefore the income tax assessment for 1934-5 The wear and tear allowance should be claimed for 1935-6 and onwards

Allowance for Use of Residence

"M R C S has not practised in recent years She and her husband have now decided to take a house in a suburb M R C S will put up her plate and see whether she can acquire a practice The whole venture is rather in the nature of a speculation' and they are taking a larger house than they would otherwise require so as to be equipped with consulting room etc What expenses can be deducted?

*** The expense of fitting up the consulting room is capital outlay and cannot be deducted but a proportion of the general expenses can be treated as professional It will be a little difficult to fix that proportion because presumably comparatively little use is likely to be made of the consulting room to begin with—we would suggest that one quarter might be claimed

LETTERS, NOTES, ETC

Non differentiation of Abdominal Musculature

Dr NORMAN LOWER (surgeon to the Yeovil Hospital) writes In view of the rare occurrence of this condition it has been suggested to me that some record should be made The patient a commercial traveller aged 68 was admitted to the Yeovil Hospital with acute appendicitis on January 2nd At the operation a modification of Battle's incision was used, and the following abnormalities of the abdominal wall were revealed There was no linea semilunaris The rectus possessed no separate sheath The rectus and internal oblique did not exist as separate entities The lower quadrant of the abdominal wall was composed of a thick plaque" of muscle, uniform in structure and extending from the middle line to the anterior superior spine and Poupart's ligament, the direction of the fibres being vertical in the mid line and gradually diverging towards the outer side to make their attachment to Poupart's ligament For the purpose of investigation the common aponeurosis was rapidly lifted in both directions to these limits The patient made an uneventful recovery so that no opportunity has been afforded for a more extensive and detailed examination

Simultaneous Herpes Zoster and Varicella in the Same Individual

Dr E B HOLLWAY (Bettiah, Bihar India) writes A lady aged 67 developed a severe attack of herpes zoster of the superior ophthalmic division of the fifth nerve on March 11 1933 Seven days later she had a slight rise of temperature, followed twenty four hours later by a typical varicella rash over trunk and limbs She had never had chicken pox A garden coolie had had chicken pox fourteen days before her attack of herpes zoster, and her own sister, aged 70, developed the disease ten days later

Artificial Male Urethra

Mr ALEX E ROCHE (London W 1) writes Last December at the West London Hospital, I amputated a penis for urethral carcinoma extending from the external meatus to the scrotum and implanted the urethral stump into the perineum just behind the scrotum Subsequently the patient inquired if he could be fitted with an apparatus to enable him to pass water while standing instead of squatting At my suggestion and request the Genito Urinary Company made a tapering rubber cup about 2 inches deep whose lumen is continued into a rubber tube the length and width of the latter being about 6 inches and ¼ inch respectively The oval mouth of the cup measures about 2½ by 2 inches and has rounded lips for application to the perineum This apparatus (price 10s 6d) enabled the patient at his first attempt on May 11th 1933 to micturate accurately and cleanly while standing into a conical specimen glass without spilling a drop Thus by means of a simple rubber cup and tube this patient is now able to avail himself of the social advantages gratuitously provided by the community, free from the expenses entailed by the squatting position

Mirror Writing

"SINISTRAL" writes Like Dr Richard Bell in his letter on page 947 of your issue of May 27th I was surprised to learn it was not common knowledge that almost anyone with a few minutes' practice can produce mirror writing with his left hand The knowledge is useful for it was a common "tip" in the last war to give to patients with a wound which prevented the use of the right hand And it was uncommon to find one who could not after a little practice write to his friends merely getting someone to add a note to hold the letter before the mirror

Disclaimer

Dr A C MAGIAN writes With regard to the publication in the lay press of certain items highly eulogistic of the work of myself and a colleague in the matter of cancer research and a new line of treatment I desire to state that these have appeared without my consent or approval also that they contain many inaccuracies and are completely misleading as far as my own portion of the work is concerned

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 40 41 42 43 44 45 and 47 of the advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 46 and 47

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 259

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

407 Vocal Symptoms in Addison's and Graves's Disease

R SEGRÉ (*Rev Franç de Phoniatrie* January 1933 p 39) claims that certain vocal troubles observed in connexion with the diseases of Addison and Basedow though not exclusive to these maladies or absolutely characteristic are sufficiently frequent to be recognized as a symptom of endocrine derangement The dysphonia of Addison's disease appears in the period of advanced asthenia and pigmentation and becomes progressively accentuated as the malady advances A subjective sensation of fatigue precedes the vocal trouble There is a difficulty in shouting or emitting sharp sounds At this stage the timbre of voice is not altered in quality or strength and laryngoscopic examination is normal Later a diminution of tone occurs which is quite characteristic This is unaccompanied by hoarseness or uncertainty or tremulousness Occasionally the voice is normal in the dorsal decubitus and becomes feeble several minutes after assuming the upright position Suprarenal extract has benefited some cases the cortical hormone having a more durable action than insulin Alteration of the voice may lead to a diagnosis of exophthalmic goitre The case is quoted of a woman of 36 who complained of stammering for about eight years Her voice had become harsh and sometimes raucous her parents had noted that the timbre was more infantile and singing fatigued her She experienced an occasional difficulty in speech—a sensation of being unable to emit the sound There were no associated movements as in stammering and the difficulty was not accentuated before intimidating persons On examination this patient's eyes were found to be slightly prominent Stellwag's sign was present and though the thyroid was not palpable the pulse was 120 and there was slight trembling of the hands Basal metabolism was found to be much above normal

408 Pneumococcal Bronchial Obstruction

As the result of the experimental production in dogs of atelectasis and lobar pneumonia by the injection into the bronchi of human pneumococcal sputum P N CORYLLOS and G L BIRNBAUM (*Arch Int Med* February 1933 p 290) conclude that bronchial obstruction plays an important part in the pathogenesis of neonatal or postnatal atelectasis and pneumonia post operative atelectasis and pneumonia and lobar pneumonia They consider that the deleterious qualities of the pneumonic exudate are not due solely to its viscosity but also to its content of virulent pneumococci and fibrin the coagulability of which endangers the drainage of the finer bronchioles and pulmonary parenchyma The expectorated sputum should not be taken as indicating the type of bronchial mucus occluding a lobe of the lung for it may be merely an overflow from the bronchus For example the lung parenchyma in lobar pneumonia is filled with coagulated fibrinous exudate while the expectoration is rusty and mucoid and mucous glands are not found in bronchi smaller than 1 mm in diameter Pneumococci produce an exudate which is sufficiently viscid to occlude a lobar bronchus and cause air absorption and atelectasis Lobular involvements on the contrary are usually associated with other organisms such as staphylococci streptococci and *B influenzae* In the recorded experiments it was found that the ease with which atelectasis was produced depended on the virulence as well as on the viscosity of the injected pneumococcal sputum It was shown that 1 c cm of a concentrated broth culture of a virulent strain of pneumococci was sufficient to cause pneumococcal atelectasis when sprayed into the bronchus of a dog The only distinction if any that can be made clinically between post-operative atelectasis and post-operative pneumonia is the greater toxicity of the patient for the physical and radiographical signs are similar The crisis of pneumonia may indicate that there is now a sufficient enzyme liquefaction of the intrapulmonary exudate to allow the beginning of the ingress of air into the finer bronchi and alveoli and the consequent starting of the lung to eject its liquefied matter This is advanced by the authors as a counter theory to the other explanation of some special antibody formation to which they cite such objections as the increased susceptibility sometimes conferred by one attack of pneumonia They deduce the following therapeutic recommendations In pneumococcal bronchitis the repeated inhalation of mixtures of carbon dioxide and oxygen certainly constitutes an excellent preventive and often curative treatment When chill elevation of temperature toxic general symptoms and increased dyspnoea and cyanosis which indicate bronchial obstruction are present nothing is more efficient than bronchoscopic re establishment of the patency of the bronchi a measure which gives gratifying results when instituted early Although the symptom-complex of pneumococcal bronchial obstruction is variable the authors define a syndrome of different phases The underlying or basic condition is held to be atelectasis but the clinical phenomena will depend on the size of the occluded part of the lung the duration of the bronchial occlusion the type and virulence of the infecting micro-organism the character and amount of the alveolar exudate and the complications which may arise The amount of the alveolar exudate it is added determines such diagnostic signs as the degree of shift of the heart and mediastinum and of the elevation of the mediastinum hence the less marked radiographical signs of atelectasis in lobar pneumonia although there are cases in which the radiographical signs in pneumonia are the classic signs of atelectasis especially in children

Surgery

409 Traumatic Rupture of the Liver

Many cases of traumatic splenic rupture have been reported evolving in two stages with an interval of several hours or even days between the accident and the appearance of signs of intraperitoneal haemorrhage F BERTRAND (*Bull et Mém Soc Nat de Chir* March 11th 1933 p 366) believes that this may occur in rupture of any abdominal viscus and records such a sequence in a case of hepatic rupture The patient a young male after a fall on the right hypochondrium was apparently in good health and able to resume his ordinary occupations Eight days later symptoms of intraperitoneal haemorrhage supervened At operation a rupture of the antero-superior surface of the right hepatic lobe was discovered tamponing was the sole treatment performed The patient made an uneventful recovery Two theories are advanced as to the cause of the delayed haemorrhage One suggests that favoured by the syncopal state following the injury a thick clot of blood closed the fissures and prevented immediate bleeding this gradually became detached thus permitting of the secondary haemorrhage The other theory is that a subcapsular haematoma was formed rupture of the capsule subsequently occurring with free haemorrhage into the peritoneum Bertrand advises that strict supervision for at least eight to ten days be made over all cases of abdominal contusions Three interesting points were noted in the present case absence of bradycardia presence of subicterus and slight haematemesis The latter is explained as follows slight traces of blood can through the biliary canaliculi reach the liver bile duct and duodenum causing symptoms

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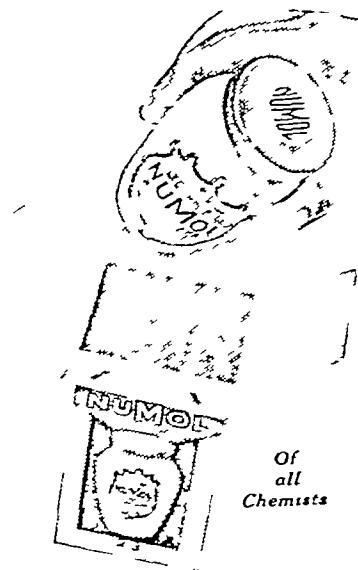

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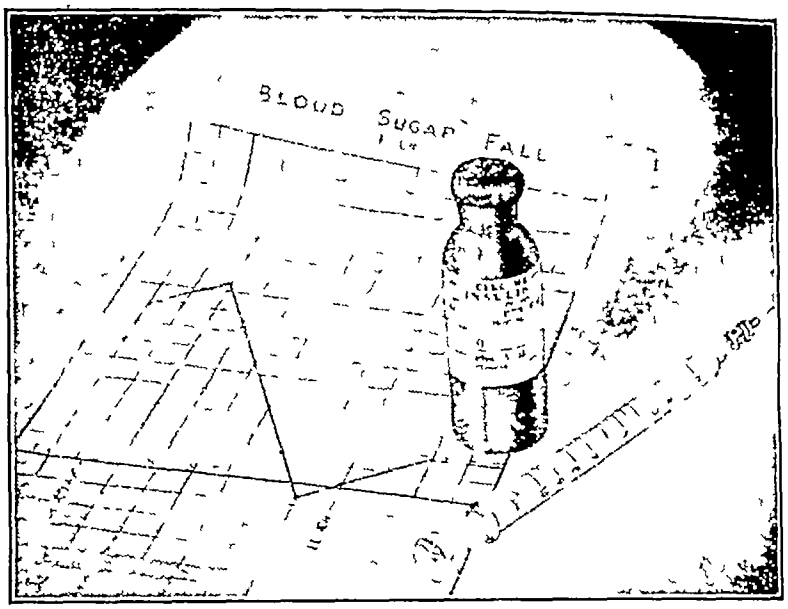

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of hepatic colic, it can then flow backwards into the stomach with ensuing haematemesis The prognosis of hepatic rupture is always grave statistics show a mortality of 56 to 62 5 per cent According to all authorities suturing is the treatment of choice Observations, however, show that tamponing is as effective as simple sutures with closure of the wall

410 Recovery from Mesenteric Embolism

J SMITH, jun (*Aust and New Zeal Journ Surg*, January, 1933, p 309), records in detail three cases of mesenteric embolism in which surgical intervention was followed by recovery A striking feature in each was the abrupt demarcation of the affected from the non-affected portions of the bowel and the mesentery The embolus, which consists of detached vegetations from the mitral or aortic valves or atheromatous aortic patches, usually lodges in the superior mesenteric system The result is generally an infarction of the intestine of the haemorrhagic type Sudden anaemia produced by the blockage of a branch of the artery sets up a violent spasmodic contraction of the bowel, and establishment of the collateral flow is thus often rendered impossible The salient symptoms and signs are intense colicky pain vomiting, abdominal distension, and tenderness, and, in a majority of cases, blood in the stools—almost a pathognomonic sign when present Treatment involves resection of the affected portion of the gut, but it is difficult to indicate the length which may be removed safely, since individual factors are concerned Permanent recovery has followed the excision of as much as fifteen feet of small intestine, but death from inanition has been reported in a case in which only eight feet were removed The author recalls the fact that spontaneous recovery has ensued, even though no resection was attempted This is due to the re establishment of the collateral circulation He thinks, therefore, that surgeons should not be too pessimistic, even though there is a relatively high mortality in cases of mesenteric embolism

Therapeutics

411 Treatment of Gastric Ulcer by Diathermy of the Sympathetic and Parasympathetic

Strikingly successful results are reported in a preliminary communication by R GROTH and P JEGOROW (*Münch med Woch* March 3rd, 1933, p 343) in the treatment of a variety of cases by diathermy applied in the cervical region Two electrodes, 5 by 10 cm, are placed on either side of the neck along the sterno mastoids and current strengths of about 0 5 to 1 ampere are employed The effect of these currents is in part upon the vago-sympathetic, and the improvement in the cases so treated is referred to influences exerted upon the effector organs associated with these nerves In fifty cases of gastric hyperacidity (twenty with haematemesis and blood in the stools, associated with gastric or duodenal ulcers diagnosed by x rays or operation, thirty cases with spastic pains, pylorospasm, etc) the application of the treatment for twenty to thirty sittings of about thirty minutes each was followed by remarkable improvement The gastric pain disappeared, and in most of the cases the pyrosis and regurgitations ceased, and the free acidity of the gastric contents diminished, frequently to normal Gastric syndromes with lessened acidity were unaffected by this procedure Especially noteworthy were the effects produced in cases of epilepsy, the attacks in most instances disappeared completely after a few applications of the current Diathermy of the lumbo sacral vegetative centres also led to very good results in affections of the pelvic organs the lower limbs and even in cases of myelitis In such cases the electrodes are placed one over the affected area in the lumbo-sacral region and one in the rectum Indications are further discussed by the authors for a more extended use of this method particularly in the thoracic, abdominal, and cranial regions

412 Treatment of Mumps by Lead

MARTINY (*Bull Soc de Thér* March 8th 1933 p 72) remarks that though mumps is usually a mild affection and the effects of treatment are difficult to appreciate the swelling and pain in the parotid region last on the average four or five days He had found, however, that the oral administration of minute quantities of metallic lead, triturated in lactose, and placed on the tongue every hour—except during meals and at night—aborts the disease in twenty-four hours and causes rapid disappearance of the pain and swelling The treatment has no effect on mumps orchitis, but none of the patients who had been treated by lead subsequently developed this complication The treatment is described as quite harmless

Disease in Childhood

413 Prognosis in Children with Open Pulmonary Tuberculosis

S HASLE (*Ugeskrift for Laeger* December 22nd 1932 p 1231) has investigated the fate of children suffering from open pulmonary tuberculosis and treated in a Danish sanatorium between 1911 and 1926 Of the 496 sputum positive children fifty-six could not be traced About two-thirds of all the children were girls It was found that five years after discharge 282 (64 per cent) had died Of the survivors, 121 (28 per cent) were well and thirty seven (8 per cent) were still ill About a third of all the children had died within a year of the first discovery of tubercle bacilli, their average length of life after this discovery being only seven months Five years after discharge the average duration of life of the 282 children who died was 20 2 months, as reckoned from the date of the first discovery of tubercle bacilli This average was only 18 2 months for the girls, whereas it was 27 7 for the boys Hasle points out that not only were the girl patients twice as numerous as the boys, but they also succumbed to the disease more quickly A classification of the children in three age groups (1 to 7, 7 to 12, and 12 to 16 years) showed that in the oldest group there were as many as 102 girls and thirty boys The average duration of life of the girls in this group was remarkably short—a finding which tallies with the common clinical observation that at puberty the resistance of girls to tuberculosis is very feeble The practical lesson the author draws from his statistical analysis is that, in view of the bad prognosis for children with open pulmonary tuberculosis, skilled treatment should be provided as early as possible

414 V POULSEN and A O ANDERSEN (ibid, February 9th, 1933, p 169) have investigated the life histories of 622 Pirquet-positive children suffering from pulmonary tuberculosis As many as 199 of them were sputum positive Of these 199 children under the age of 10 years seven could not be traced, forty four were found to have died, and 148 were still alive In the first year of life there were fifty-four infants in whom tubercle bacilli were found, only twenty-three of them had died In the older age groups the proportion of deaths was still lower The authors ask why their findings are so much better than those of other observers such as Hasle Their answer is that by demonstrating tubercle bacilli by such delicate tests as gastric lavage followed by culture and animal inoculations, they have included in their material a number of cases which by other methods of diagnosis would have been classed as sputum negative In about half of these 199 children there were no stethoscopic changes in the lungs, and in thirty one cases even the x ray examination of the lungs was negative In a table dealing with 148 sputum-positive children under the age of 10 and kept under observation for an average period of two years, the authors show that as many as 127, or 85 8 per cent, were apparently well Most of the deaths in the

material occurred during the first two years of life It would therefore seem that after the age of 2 years the demonstration of tubercle bacilli in the sputum of a child is far from being so fatal a sign as was formerly supposed to be the case

415 Progressive Ossifying Myositis

Progressive ossifying myositis is characterized by multiple osseous formations in the intra and peri muscular connective tissue tendons and aponeuroses and ends in impotence of the affected regions subsequent to successive attacks E APERT and P GARNIER (*Paris Méd* January 28th 1933 p 76) describe this condition after briefly reviewing the literature The Anglo Saxon is more often affected than members of the Latin races and boys than girls (in the ratio of four to one) The affection occurs in infants usually about the fifth year Older children are rarely attacked and in these the onset can generally be traced to infancy In most cases the onset is insidious the general health is not affected local signs are slight pain is absent and the tumour is only accidentally discovered usually on the back or neck In some cases there is more or less general reaction with tenderness heat and oedema of the swollen area and glandular inflammation The initial symptoms subside quickly in about ten days and occasionally the tumour completely disappears When once established the first tumour is rapidly followed at varying intervals by others in different regions after acute attacks intercurrent maladies seasonal changes and traumatism favour the appearance of these sequels The tumour forms an irregular mass with osseous prolongations The skin except in purely superficial growths is non adherent The muscles chiefly affected are those of the back neck trunk upper limbs and the masticators Those of the face eye diaphragm heart sphincters and other non striated ones are never involved The lower extremities are less often attacked and when involved the flexors are predominantly affected The tumours are asymmetrical thus causing abnormal attitudes and deformities The intelligence is unimpaired and the organs function normally for a long period Congenital malformations chiefly microdactylia other exostoses and disorders of development may also coexist The lesions primarily affect the interstitial connective tissue the muscles being secondarily involved The pathology and the still obscure pathogenesis are briefly discussed Certain modern authors consider that the condition is merely an ossification of haematomas due to haemorrhages from congenitally malformed capillaries and vessels The prognosis is always grave and the disease usually slowly progresses to a fatal termination intercurrent maladies chiefly pulmonary tuberculosis may supervene Treatment is usually of no avail though radiotherapy has given some encouraging results Surgery is indicated only in very rare cases to ameliorate or correct embarrassing attitudes or ankyloses

416 Madelung's Disease

E KUN (*Thèse de Paris* 1933 No 23) who records three illustrative cases one of which was in a boy aged 5 and two in girls aged 11 and 14 states that Madelung's disease is not a subluxation but an incurvation of the radius which gives rise to the other deformities simulating subluxation although the bones of the carpus still remain attached to the radius There is however always a dislocation or subluxation of the ulna Madelung's disease is rare and the aetiology is uncertain but the part played by late rickets appears to be of considerable importance The radiological picture is characteristic and always enables the diagnosis to be made The treatment is surgical but an operation should only be performed when the deformity is well marked otherwise there will be recurrence The most logical operation is cuneiform osteotomy of the radius sometimes associated with resection of the lower end of the ulna so as to bring it to the same level as the lower end of the radius Opotherapy should be tried when disturbance of the endocrine glands is suspected

Obstetrics and Gynaecology

417 Cervical Obliteration during Pregnancy

J KREIS (*Gynecol et Obstet* February 1933 p 97) considers and demonstrates by means of diagrams and tables the physiology and pathology of the obliteration of the cervix during pregnancy The period at which the head engages and the times and causation of the rupture of the membranes are also considered Spontaneous delivery is not necessarily a normal one in the physiological sense since there may be defective mechanism even in such cases The mechanism of the preparatory stages which occur during pregnancy (taking up of the cervix and formation of the inferior segment) are not distinguishable in principle from those of labour —dilatation of the os and further formation of the segment Anomalies of the mechanism may be found in both cases The condition of the cervix its length its partial or total permeability present sufficient varieties in primiparae and multiparae as to abolish any rigorous clinical rule Physiologically the multipara should conform to the same postulates as the primipara Any differences should be attributed to a diminution in functional and tissue qualities The same faults may be met with in primiparae although the multipara is more frequently the subject of pathological conditions The fact that the head engages in a primipara relatively early in pregnancy presupposes the early effacement of the cervix If the head remains mobile after the taking up of the cervix there must be special inhibitive forces at work Multiparae examined at the tenth month show a larger number with the head engaged than with it mobile The moment of the rupture of the membranes spontaneous premature or at complete dilatation is decided by the extent of the fixation of the inferior membranous pole to the lower uterine segment By reason of the frequent irregularity of the physiological obliteration of the cervix rupture of the membranes before complete dilatation occurs in at least half the cases Kreis considers that artificial rupture is indicated in cases showing a retardation in the taking up of the cervix That a multipara generally has an easier confinement is considered to be more the result of a pathological disorganization than a favour physiologically acquired

418 Positive Aschheim Zondek Reaction in Spurious Pregnancy

It is recognized generally that a negative Aschheim Zondek reaction is not absolute proof of the non-existence of pregnancy On the other hand a positive reaction may occur in cases of hydatid mole chorion-epithelioma or granuloma—that is in any condition causing hyperhormonic amenorrhoea with excess of lutein production K KAISER (*Zentralbl f Gynäk* February 4th 1933 p 266) reports an illustrative case A married woman aged 33 had had a normal confinement three years previously and no subsequent miscarriage Amenorrhoea and increasing obesity continued for seven months No foetal movements were felt but colostrum was present The vaginal walls were relaxed and livid and there was a slight sanguineous discharge from the closed os A tumour extended to within three inches of the umbilicus No foetal heart sounds were heard. The Aschheim Zondek reaction was strongly positive The diagnosis was that of pregnancy of six to seven months with the probability of a dead foetus although the form of the tumour suggested an extrauterine pregnancy A skiagram showed curved streaky nodular shadows suggestive of a foetal vertebral column The haemorrhage ceased after rest and the general health was good In the eighth month labour appeared imminent but the foetal heart sounds were absent The cervix was dilated with laminaria tents Since there was no pain nor haemorrhage a sound was passed into an empty uterine cavity measuring 4½ inches The tumour lay behind and to the left of the uterus Median laparotomy was performed and a very large left parovarian cyst closely adherent to the uterus was removed with difficulty The right ovary was cystic

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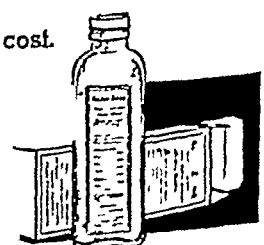

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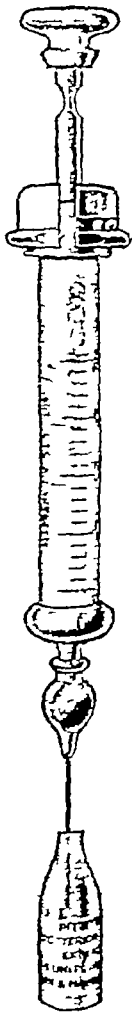

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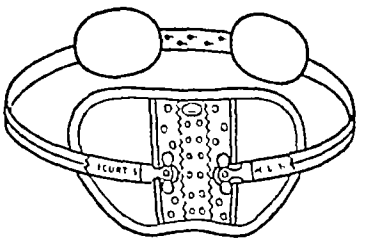

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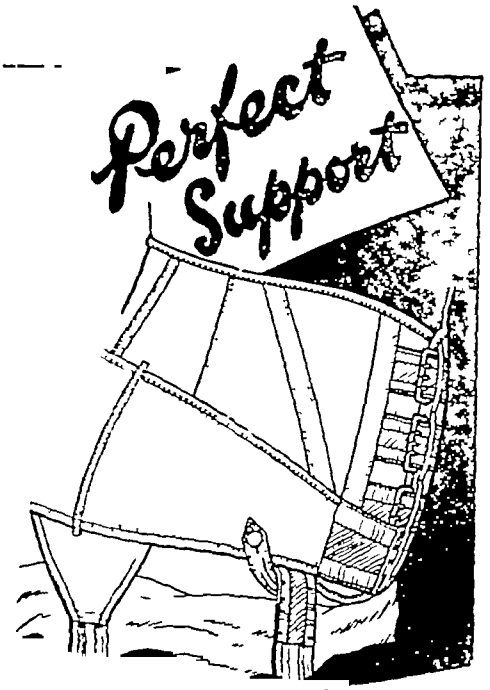

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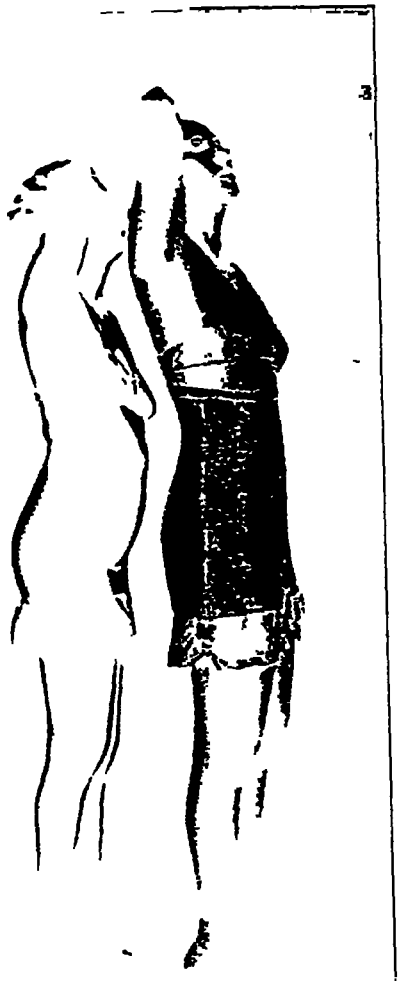

Note the sagging of bust and abdomen and the I rdous tendency in the incorrectly corsetted figure at left At right the same figure uplifted and supported by a Spencer individually designed for her

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Under private management

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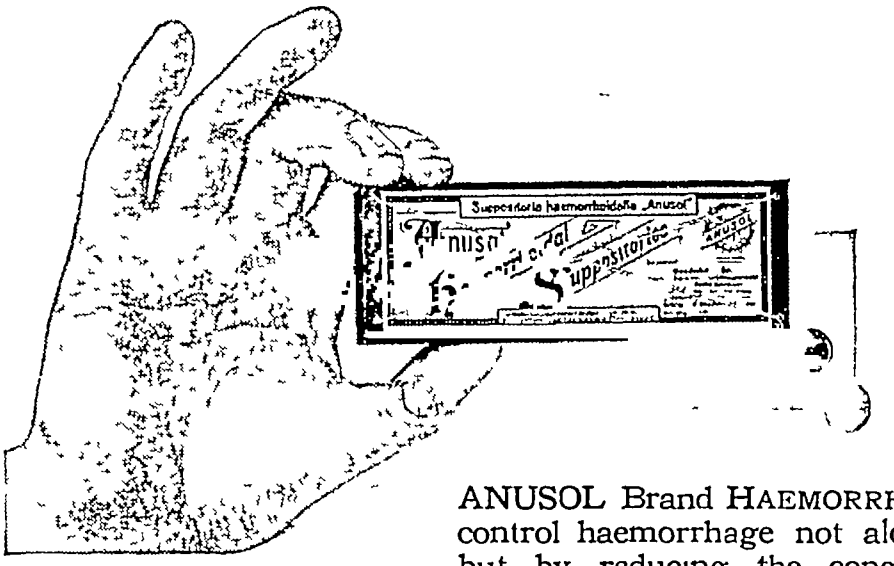

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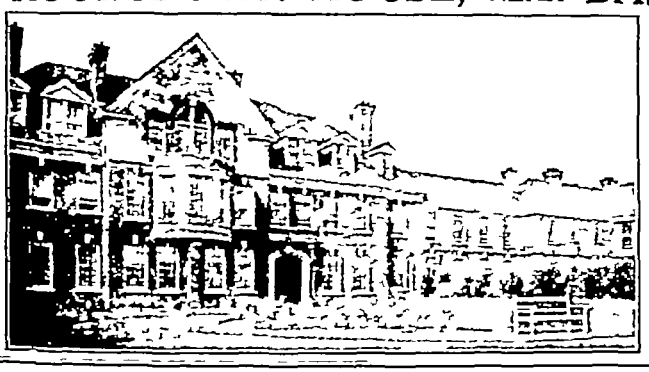

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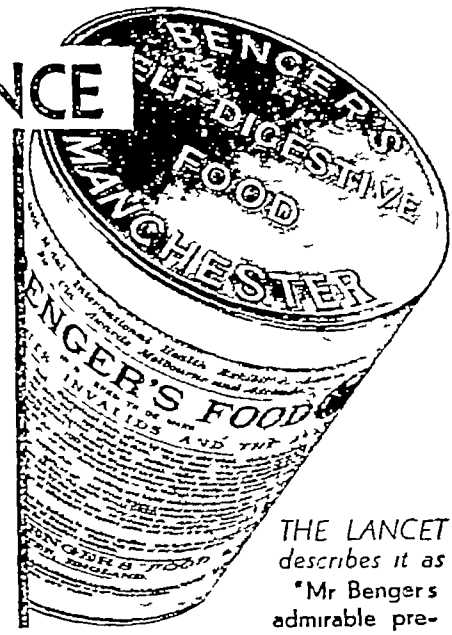

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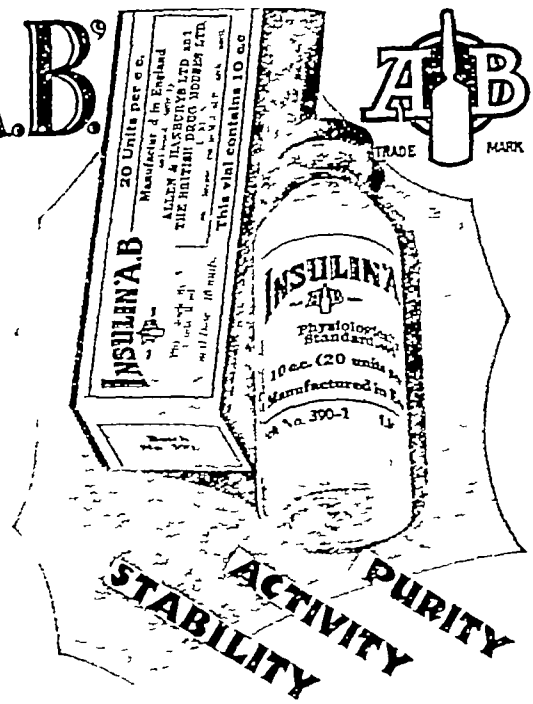

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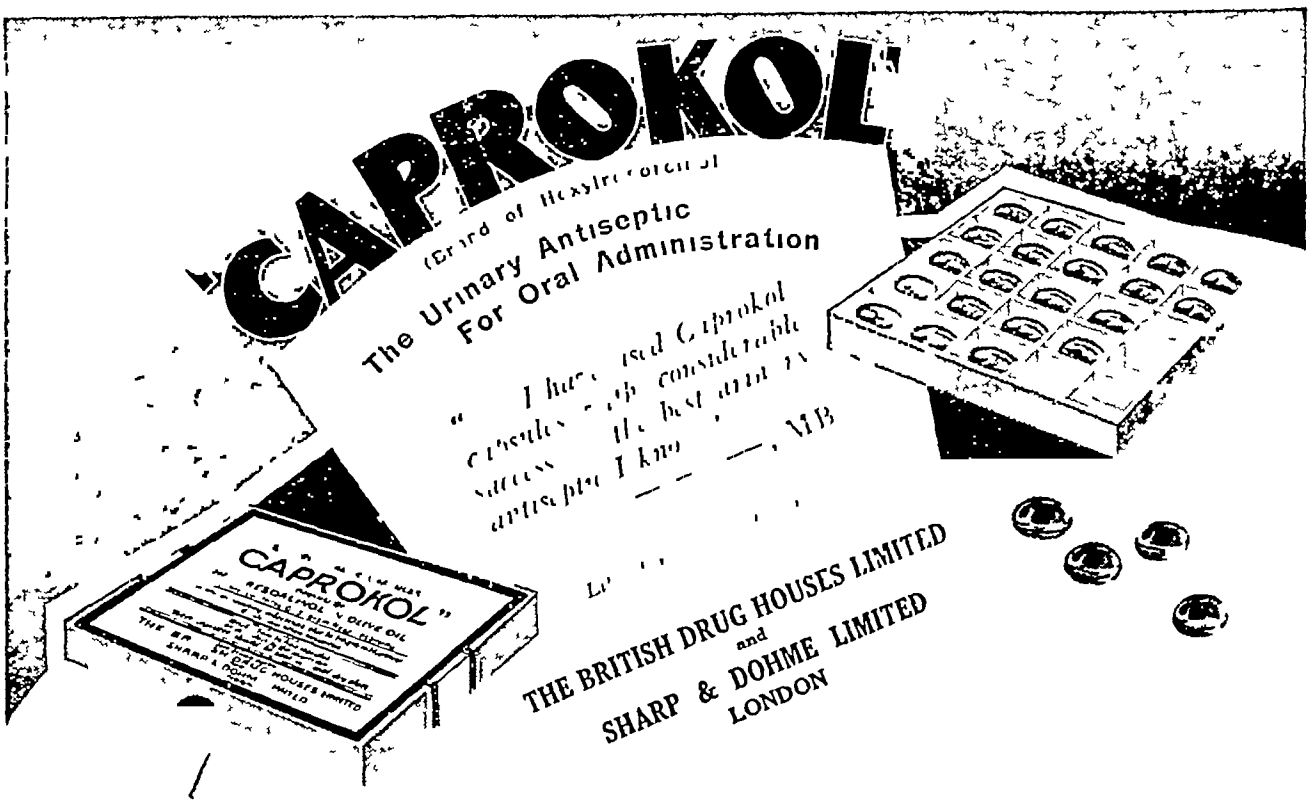

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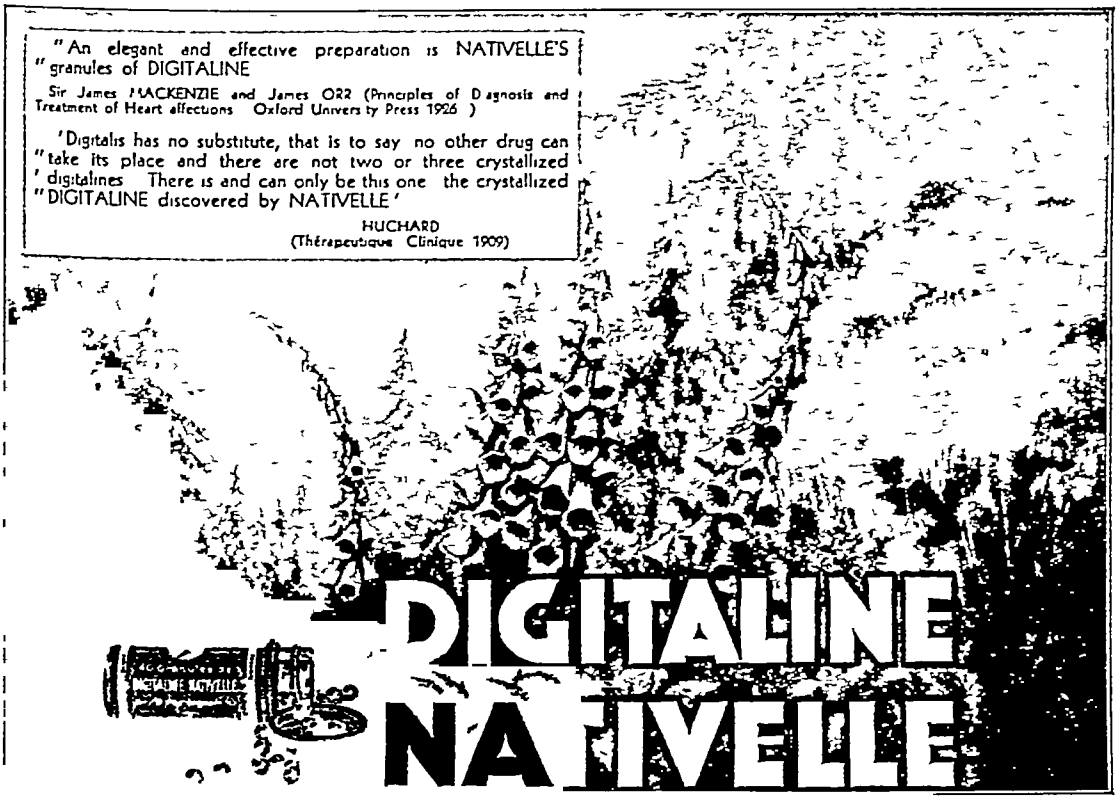

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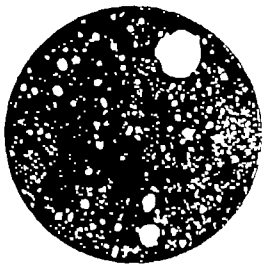

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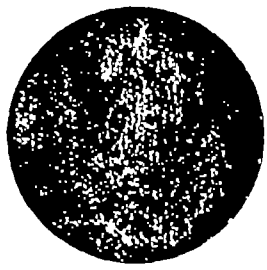

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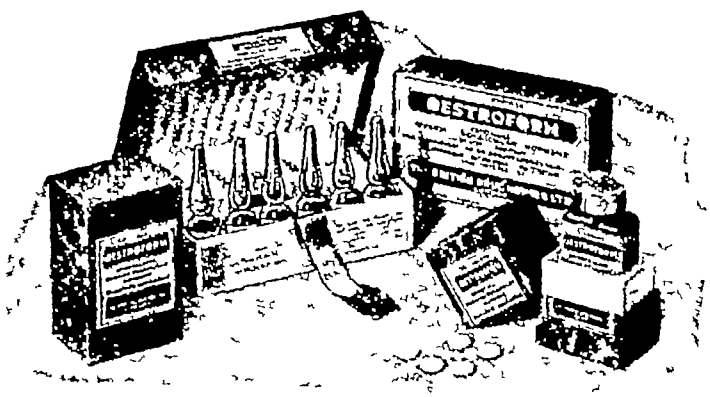

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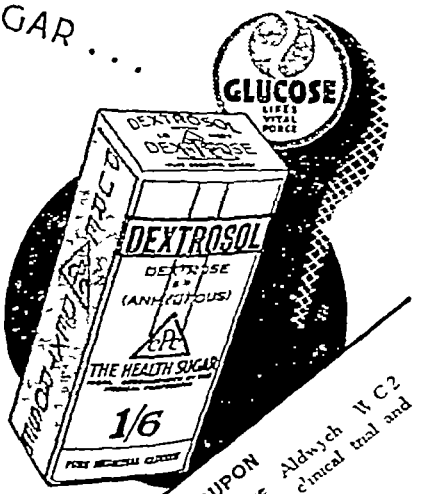

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(4) ASSISTANT PROFESSOR OF VITAL STATISTICS AND EPIDEMIOLOGY

Terms—Pay Rs 375—35—1 075 a calendar month Pay higher than initial rate might be given having regard to age and qualifications. Emoluments liable to revision if necessary in event of any grading down of pay of Public Services in India or of a decision by Bengal Government to revise rates of pay of similar staff of School of Tropical Medicine, Calcutta (Rupee 1s 6d approximately) The appointments are non pensionable but appointees will be eligible for the benefits of the Contributory Provident Fund (India)

Tenure—Five years in the first instance subject to six months notice on either side and extensible thereafter at the discretion of Government for such periods at a time as may be agreed upon A formal agreement will be executed with appointees provided they are not already in Government service in India

Leave—Appointees of non Asiatic domicile will be eligible for leave during agreement in accordance with Model Leave terms those already in Government service in India will be eligible for leave in accordance with Fundamental Rules or such other leave rules applicable to their service to those of Asiatic domicile special leave rules will apply Officers will be bound by the leave rules applicable to them and such revisions thereto as may be made from time to time

Passage—Free first-class passage to India also for candidates of non Asiatic domicile only similar return passage subject to usual conditions

All candidates will on appointment be regarded as serving in a vacation department on distinct understanding that withdrawal of this concession if and when found necessary will not entitle them to compensation No private practice including laboratory and consultant practice will be allowed

Forms of application may be obtained upon request by post card from the High Commissioner for India General Department India House, Aldwych London W C 2 where applications will be received up to July 1st 1933 for transmission eventually to the Recruitment Board for the All India Institute of Hygiene and Public Health Calcutta

Candidates are liable to be required to attend for interview in England

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THE GOVERNMENT OF INDIA INVITES APPLICATIONS FOR THREE GAZETTED APPOINTMENTS IN THE MEDICAL RESEARCH DEPARTMENT

Applications will be received only from European and Indian candidates who must be natural born British subjects and the children of British subjects, or statutory natives of India

Posts (a) and (b)—Applicants who must be qualified doctors and must not be members of the Indian Medical Service should have had considerable practical experience in Bacteriology and preferably have undertaken some research For post (b) at the Haffkine Institute, Bombay a thorough knowledge of modern technique of preparation of Plague vaccine is also required

Terms—Commencing pay will be fixed at a point in the incremental scale of Rs 625 – Rs 1 350 a calendar month commensurate with age and qualifications etc, and the pay will be subject to such temporary reductions (at present 5 per cent) as may be imposed by Government Sterling equivalents of Rs 625 and Rs 1 350 respectively at present rate of exchange (less 5 per cent) £534 and £1 154 per annum

Tenure—Permanent subject to satisfactory completion of a probationary period of three years Posts are non pensionable but on confirmation appointees are eligible for the benefits of a special provident fund

Passage—Free first class passage to India also for candidates of non Asiatic domicile only similar return passage, subject to usual conditions.

Strict medical examination

Post (c)—Applications are invited from and restricted to officers of the Indian Medical Service The selected officer who will also be required to serve a probationary period of three years, will be eligible for the pay of his rank plus a Bacteriological allowance of Rs 250 a calendar month

Forms of application may be obtained upon request by post card from the High Commissioner for India General Department India House, Aldwych London W C 2 where applications will be received up to July 1st, 1933 for transmission eventually to the Recruitment and Appointments Board for the Medical Research Department in India

Candidates are liable to be required to attend for interview in England

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COUNTY COUNCIL OF MIDDLESEX

NORTH MIDDLESEX COUNTY HOSPITAL EDMONTON

RESIDENT PHYSICIAN

The County Council invites applications for the above appointment Candidates must be registered Medical Practitioners, Graduates in Medicine of a British University, and Fellows or Members of the Royal College of Physicians The successful candidate will work under the direction of the Medical Superintendent, will reside at the hospital, and will devote the whole of his time to his official duties.

Salary £600 per annum, rising by annual increments of £50 to £800 per annum together with residential emoluments valued for superannuation purposes at £150 per annum

In view of the national situation a temporary abatement calculated on the following scale is applied to the salary and value of the emoluments for the first £150 per annum, no abatement for the next £100 per annum 2½ per cent abatement for the next £500 per annum, 5 per cent abatement for the next £750 per annum 7½ per cent abatement

The successful candidate will be required to pass such medical examination as the Council may direct, and unless subject to the Poor Law Officers Superannuation Act 1896 to contribute to the County Councils Superannuation Fund The appointment will be held during the pleasure of the Council and subject to three months notice on either side

Applications stating (1) name (2) age (3) qualifications and (4) experience, together with copies of not more than three recent testimonials must be received by the undersigned not later than June 24th

No special application forms are provided Envelopes must be endorsed Resident Physician"

Canvassing directly or indirectly will be a disqualification

N B—North Middlesex County Hospital is a modern General Hospital with accommodation for 900 cases chiefly acute 215 beds in the adjoining Edmonton House also are under the care of the Medical Staff of the Hospital The Hospital possesses a Pathological Laboratory, and Radiological Radium Electrotherapeutic, Actino-therapeutic Maternity Massage Ear Nose and Throat Ophthalmic Dental, and Out patient Departments

ERNEST S W HART, Clerk of the County Council.
Middlesex Guildhall, Westminster S W 1
May 31 t 1933

THE ALL-INDIA INSTITUTE OF HYGIENE AND PUBLIC HEALTH CALCUTTA INVITES APPLICATIONS FOR THE FOLLOWING GAZETTED POSTS Viz

(1) [illegible] MISTRY AND
(2) [illegible] BIOLOGY AND [illegible]dia Veter[illegible]
(3) [illegible] AND EPIDEMIOLOGY STATISTICS

Terms—Pay Rs 725—120/3—1 065—125/3—1 700 a calendar month Plus a compensatory allowance of Rs 500 a calendar month in lieu of private practice Pay higher than initial rate might be given having regard to age and qualifications Emoluments liable to revision if necessary in event of any grading down of pay of Public Services in India or of a decision by Bengal Government to revise rates of pay of similar staff of School of Tropical Medicine Calcutta (Rupee 1s 6d approximately) The appointments are non pensionable but appointees will be eligible for the benefits of the Contributory Provident Fund (India)

Tenure—Five years in the first instance subject to six months notice on either side and extensible thereafter at the discretion of Government for such periods at a time as may be agreed upon A formal agreement will be executed with appointees provided they are not already in Government service in India

Leave—Appointees of non Asiatic domicile will be eligible for leave during agreement in accordance with Model Leave terms those already in Government service in India will be eligible for leave in accordance with Fundamental Rules or such other leave rules applicable to their service to those of Asiatic domicile special leave rules will apply Officers will be bound by the leave rules applicable to them and such revisions thereto as may be made from time to time

Passage—Free first-class passage to India also, for candidates of non Asiatic domicile only similar return passage, subject to usual conditions

Applications for all three posts will be accepted from Officers of the Indian Medical Service to whom the following terms will apply Emoluments—basic pay of rank (time scale of I M S Civil) Overseas pay if admissible at the prescribed rate, special pay as Professor Rs 250 per mensem compensatory allowance in lieu of private practice Rs 500 per mensem Pay subject to emergency cut so long as it lasts Tenure same as for non service men Leave under Fundamental Leave rules as applicable to I M S Officers in Civil employment

All candidates will, on appointment be regarded as serving in a vacation department on distinct understanding that withdrawal of this concession if and when found necessary will not entitle them to compensation No private practice including laboratory and consultant practice will be allowed

Forms of application may be obtained upon request by post card from the High Commissioner for India General Department India House, Aldwych, London W C 2 where applications will be received up to July 1st 1933 for transmission eventually to the Recruitment Board for the All India Institute of Hygiene and Public Health Calcutta

Candidates are liable to be required to attend for interview in England

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FRCS (Edin)

PREP COURSE with daily Lecture-Demonstrations of Museum Specimens of Surg, Path for next Exam will commence shortly Postal TUITION at any time—Further particulars from ORBIN FRCS Surgeons Hall Edinburgh.

WARRINGTON INFIRMARY AND DISPENSARY

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON (male) unmarried

Applicants who must be of British nationality must be duly qualified Medical Practitioners.

Salary £175 per annum with board apartments and laundry

Applications stating age with copies of three recent testimonials should be sent in once to the undersigned

By Order
HENRY J POOT, Supt & Secretary
May 30th 1933

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY

Applications are invited from [illegible] gentlemen, properly qualified [illegible] for the post of HOUSE SURGEON [illegible] Departments with resident care of the [illegible] Department (16 beds) and Eye [illegible] Throat (27 beds)

Salary at the rate of £150 per [illegible] board residence and laundry

Applications stating age qualifications previous experience to be sent with [illegible] testimonials to be forwarded to the [illegible] on or before June 16th

JOHN GIBSON, Supt [illegible]

SUMMER TIME

Stomachic and Bowel Derangements of

INFANTS AND CHILDREN

are well met in every case by treatment with

DIMOL syrup

½ drachm to 2 drachms after food

For particulars and prices write to —

Dimol Laboratories, Ltd, 40, Ludgate Hill, London, E.C.4

MARMITE

(Registered Trade Mark)

In the Treatment of the Anæmias

Corroborative evidence of the medicinal value of Marmite is accumulating with rapidity In a paper, published recently, describing the use of Marmite in certain types of anæmia, the author states —

> **" further trials have confirmed my previous findings as to the curative action of this preparation "**
>
> (*Ind Med Gaz, March*, 1933, *p* 133)

Further, at a meeting of the Royal Society of Medicine, held in January, 1933, at which the treatment of the anæmias was discussed, the opinion was expressed that in cases of

Pernicious Anæmia

> **" Marmite promises to be another inexpensive remedy for the disease."**
>
> (*Proc Roy Soc. Med., March*, 1933, *p* 607)

The medicinal use of Marmite is not limited to its administration in certain cases of anæmia As a potent source of the essential B Vitamins, Marmite is prescribed extensively in the many conditions associated with Vitamin B deficiency

Sample and literature on application to—

THE MARMITE FOOD EXTRACT CO, LTD
Walsingham House, Seething Lane, London, E.C.3

In Jars 1 *oz* 6*d*, 2 *oz* 10*d*, 4 *oz* 1/6, 8 *oz* 2/6, 16 *oz* 4/6

Special quotations for supplies in bulk to hospitals and institutions

INDIAN MEDICAL SERVICE

Recruitment of European Officers.

Applications are invited from medical men for permanent commissions in H.M.'s Indian Medical Service. The terms offered include a gratuity of £1,000 on retirement after six years' service, or £2,500 after 12 years' service, together with free return passages for those who no longer desire to remain in the Service. In other respects the terms will be as detailed below.

Candidates must be European British subjects under 32 years of age at the time of application and must be registered under the Medical Acts in force in Great Britain and Northern Ireland.

CAREERS

The Indian Medical Service offers wide opportunities of medical experience including clinical preventive specialist and research work. At the beginning of his career an officer is employed on the military side which has medical charge of the Indian Army. Promotion is on a time scale up to the rank of Lieutenant-Colonel and by selection to the ranks of Colonel and Major-General. An officer may apply after one year's Indian Service to have his name registered for transfer to the civil side from which appointments are made to Civil Surgeoncies which are established at the principal civil centres to provide for the medical needs of civil officials and for general medical administrative purposes to specialist (for example public health and bacteriological) services to research posts and to professorships at the Medical Schools.

NOTE.—It is not possible to state at present what if any prospects of employment on the civil side will be open to Indian Medical Service Officers under the proposed new constitution for India.

PAY

Owing to the state of the financial emergency at present prevailing in India the existing monthly rates of pay which are as follows are subject to a temporary reduction of 5 per cent.

Rank.	Service in Rank.	Basic Pay	Overseas Pay	Year of Total Service
		Rs.	Rs.	
Lieut.	—	400	100	1st
			100	2nd
			100	3rd
Capt.	(i) During first 3 years service as Captain	600	100	4th
			£15	5th
			£15	6th
	(ii) With more than 3 and less than 6 yrs. service as Captain	700	£25	7th
			£25	8th
			£25	9th
	(iii) With more than 6 years service as Captain	800	£25	10th
			£25	11th
			£50	12th
Major	(i) During first 3 years service as Major	900		
	(ii) With more than 3 and less than 6 years service as Major	1100		
	(iii) With more than 6 years service as Major	1200		
Lieut.-Col.	(i) Until completion of 23 years total service	1 000	£50	13th and over
	(ii) During 24th and 25th years service	1600		
	(iii) After completion of 25 years total service	1 000		
	(iv) When selected for increased pay	1800		

EXTRAS.—In addition to the above rates various allowances are admissible for a large number of special appointments on both the military and the civil side which may be held by members of the Indian Medical Service. Special high rates of pay are also attached to the numerous administrative appointments open to officers in both branches of the Service.

ANTEDATES IN COMMISSION

Any service rendered by an officer during the war as a medical or combatant officer or in a position usually filled by an officer may be counted as service for increments of pay promotion retirement and retired pay but not for gratuity.

One half of any service in the ranks during the war may be counted as service for retirement and retired pay only.

Candidates possessing certain higher medical qualifications may be granted an antedate of one year in their commissions. Past service in certain hospital appointments may also render candidates eligible for an antedate of one year. Persons holding or about to hold resident posts at recognized hospitals may be seconded in those posts for a period not exceeding one year. The maximum period of an edate secondment or antedate and secondment combined admissible under this paragraph is limited to one year.

OUTFIT ALLOWANCE

Officers on appointment will receive an allowance of £50 towards the cost of outfit.

PRIVATE PRACTICE

With the exception of Administrative Officers military or civil and officers holding certain special appointments officers are not debarred from taking private practice so long as it does not interfere with their proper duties.

LEAVE

Leave can be taken at reasonable intervals and adequate rates of leave pay are provided. Extra leave (known as study leave) which may not exceed 12 months in all during an officer's service may be granted to officers desirous of pursuing special courses of study of a post graduate nature. During such leave study allowance at present fixed at the rate of 12s. a day in the United Kingdom £1 a day on the Continent of Europe and £1 10s. a day in the United States of America is granted to an officer in addition to ordinary rates of leave pay.

PENSIONS

The rates of pension are as follows	Per annum £
After 17 years service for pension	400
18	430
19	460
20	500
21	540
22	580
23	620
24	660
25	700
26	750
27	800

These rates are subject to alteration on account of a rise or fall in the cost of living as compared with the year 1919 to an extent not exceeding 20 per cent. in all. At present a reduction of 8½ per cent. is being made on this account.

There are additional pensions ranging from £65 to £350 per annum for officers who have held administrative appointments.

PASSAGES

An officer on appointment is provided with free passage to India. The families of officers who are married prior to the date of the officers embarkation on first appointment will also be provided with free passage to India subject to the payment of messing charges.

Officers and their families are also eligible for passage concessions under which they are granted a certain number of return passages home at Government expense during their service.

INSTRUCTION PRIOR TO EMBARKATION

Officers are required to undergo courses of instruction at the Royal Army Medical College and at Aldershot lasting approximately six months prior to their embarkation for India on first appointment. Information as to the rates of pay admissible during this period and subsequently up to arrival in India is contained in the memorandum referred to below.

A memorandum giving full details regarding these appointments and forms of application may be obtained from the Under-Secretary of State for India, Military Department, India Office, London, S.W.1. The Selection Committee will meet at the India Office early in July next and the selected candidates will be required to join a course of instruction commencing early in August prior to sailing for India early in 1934. Applications should be submitted as soon as possible.

ANAESTHETICS

ANAESTHETIC ETHER

(DUNCAN)

S G 720

Duncan

Duncan's Anaesthetic Ether is absolutely pure and contains no aldehydes or other oxidation products. It is the result of many years experience in the manufacture of anaesthetics and can be used with confidence by the Anaesthetist.

Prices on Application

DUNCAN, FLOCKHART & CO.

EDINBURGH and LONDON

104, Holyrood Road 155, Farringdon Road, E.C.1

Valentine's Meat-Juice

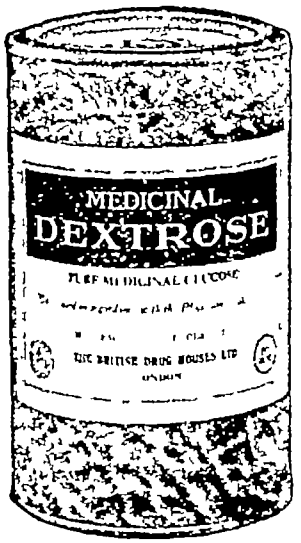
IN Typhoid and other Fevers, Extreme Exhaustion, Critical Conditions, Before and After Surgical Operations, when Other Food Fails to be Retained, Valentine's Meat-Juice demonstrates its Ease of Assimilation and Power to Restore and Strengthen

Clinical Reports from Hospitals and General Practitioners of Europe and America posted on application.

For sale by European and American Chemists and Druggists.

Valentine's Meat-Juice Co., Richmond, Vir., U.S.A.

JB 98



For the Emotional Child

The remarkable value of glucose for correcting such conditions as *"cyclical vomiting night terrors, certain headaches often of migrainous type, some crises of collapse, some insomnias, certain cases of enuresis, and many cases of fatigue"* is traceable to its action in building up the glycogen reserve of the liver, on which reserve in a child that is emotionally unstable there is presumably an abnormal demand.

Medicinal Dextrose B D H is the purest form of glucose obtainable It is prepared specially for administration orally, rectally or intravenously in all conditions resulting from carbohydrate deficiency

MEDICINAL DEXTROSE B.D.H.

Sample on request

THE BRITISH DRUG HOUSES LTD. **LONDON N-1**

MD/12

A Distinct Advance Over Preparations of Acetyl-Salicylic Acid

Acetyl-salicylic acid possesses a notable disadvantage Physicians have proved that it cannot be tolerated by patients suffering with a delicate stomach Consequently, the value of this medicament in the wide field in which it is indicated is very seriously reduced

Alasil completely overcomes this objection By combining calcium acetyl salicylate with Alocol unfavourable secondary action upon the stomach is prevented This beneficial influence is undoubtedly due to the presence of Alocol (Colloidol Hydroxide of Aluminium) which preparation has brilliantly stood the test of practice in the treatment of hyperacidity and other ill conditions of the gastric tract. Alasil is therefore a triumph over acetyl salicylic acid It enables higher doses to be administered and maintains the patient's system under its influence for a greater length of time Analgesic Antipyretic and Sedative Alasil is indicated in all cases where acetyl salicylic acid has been used heretofore

A supply for clinical trial with full descriptive literature sent free on request

A WANDER, Ltd, Manufacturing Chemists,
184, Queen's Gate, London, SW 7

Alasil

M 235

(Aesculapius)

MASSIVE IRON THERAPY

It has been established that certain types of anaemia respond to iron, when administered in very large doses only

COLLIRON

This is a most satisfactory form of iron for oral administration, especially where large doses are required It is a colloidal iron preparation in palatable form, containing 10 per cent. metallic iron.

Issued in—

8-oz. bottles	16-oz. bottles	80-oz. bottles
5/-	9/6	40/-

Literature on application

Evans Sons Lescher & Webb Ltd.

Manufacturers of Fine Chemicals, Pharmaceutical & Biological Products

LIVERPOOL, LONDON AND DUBLIN

CITY OF BIRMINGHAM MENTAL HOSPITAL.

JUNIOR LADY ASSISTANT MEDICAL OFFICER

The Committee of Visitors invite applications for the above wholetime appointment from ladies under 35 years of age who are duly qualified and registered Medical Practitioners. A person who has held for at least six months a medical or surgical residential post in a general hospital will be regarded as having an additional qualification.

The successful candidate should be a good anaesthetist.

She will be required to reside in the hospital.

The commencing salary will be £300 per annum plus the usual residential emoluments of board, lodging, laundry and attendance. Subject to 12 months' service satisfactory to the Committee an increase of £50 will be granted and thereafter increases of £25 per annum up to a maximum salary of £450 per annum. An additional £50 per annum will be paid to the holder of the D.P.M. qualification or to a person obtaining the D.P.M. after appointment. The salaries and emoluments will be subject to a temporary deduction in accordance with the Scale of Temporary Abatements from Salaries approved by the City Council. The salaries are inclusive of all fees received and no such fees must be accounted for and paid into the hospital account.

The successful candidate will be required to pass satisfactorily a medical examination and to join the scheme under the Asylums Officers Superannuation Act, 1909. She will be required to serve in such institution belonging to the Mental Hospital Committee as they may from time to time direct. The appointment is subject to one month's notice on either side.

Applications stating full particulars of qualification, experience and appointments held, accompanied by copies of three recent testimonials must be addressed to the undersigned so as to be received not later than June 24th.

F. H. C. WILTSHIRE,
Town Clerk. Office Clerk to the Council House Committee of Visitors
Birmingham. May 25th, 1933.

HAMPSTEAD GENERAL AND NORTH WEST LONDON HOSPITAL, Haverstock Hill, N.W.3.

APPOINTMENT OF A HOUSE SURGEON

Applications are invited from unmarried Medical Men for an appointment of House Surgeon vacant on July 1st next. The salary will be at the rate of £100 per annum together with board, residence etc. and the term will be for six months.

Application to be made on a form which will be supplied by the Secretary, together with copies of not more than three testimonials, should reach the Secretary not later than noon on Jan. 17th next.

ELLINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.1.

Applications are invited for the post of HOUSE PHYSICIAN (male) for six months from July 1st (first two months in Casualty and Out-patient Department). Salary at the rate of £120 per annum with board and residence.

Applications stating age, experience and qualifications, accompanied by copies of four testimonials, to be sent to the undersigned not later than June 20th, from whom rules and other particulars can be obtained.

By Order of the Committee of Management.

W. H. SIDWELL,
May 24th, 1933. Secretary Supt.

COVENTRY & WARWICKSHIRE HOSPITAL.
307 Bed Main Hospital.
40 Beds Convalescent Hospital.
(Seven Resident Medical Officers.)

Applications are invited for the posts of RESIDENT HOUSE SURGEON and CASUALTY OFFICER (male). Duties to commence on July 1st. Salaries at the rate of £125 per annum with board, lodging and attendance. Candidates must be duly qualified and registered.

Applications stating age and enclosing copies of recent testimonials, to be sent to the undersigned on or before June 14th.

(MISS) R. HOOPER,
May 27th, 1933. Secretary.

CLAYTON HOSPITAL, WAKEFIELD.
(General Hospital—166 Beds.)

Applications are invited for the post of HOUSE SURGEON (male British). The appointment is for six months in the first instance and the salary is at the rate of £200 per annum together with board, residence and laundry.

Application, stating age, qualifications and experience, together with copies of three recent testimonials, should be sent to the undersigned as early as possible.

H. J. LANCASTER, Gen. Supt. & Sec.

WOOLWICH AND DISTRICT WAR MEMORIAL HOSPITAL,
Shooters Hill, London, S.E.18.
GENERAL HOSPITAL—112 Beds.

HOUSE PHYSICIAN also HOUSE SURGEON

The Board of Management invites applications from suitably qualified male candidates for appointment as (a) House Physician and (b) House Surgeon for a period of six months from July 1st next. In addition to his surgical duties the House Surgeon will have the care of a Maternity Unit of 8 beds.

An honorarium of £100 per annum will be paid in respect of each appointment, plus board, residence and laundry.

Applications, accompanied by copies of not more than three recent testimonials, should be addressed to the Secretary (at the Hospital) to reach him not later than Monday, June 19th. The Appointments Committee will meet on June 23rd to interview such of the candidates who will be duly advised when and where to attend.

NORFOLK AND NORWICH HOSPITAL,
NORWICH. (392 Beds.)

Applications are invited for the following posts:—

(a) HOUSE SURGEON.
(b) HOUSE PHYSICIAN.

Preference will be given to candidates who have held previous appointments. Salary for both posts £120 per annum with board, residence and laundry.

Candidates (male) who must possess registered qualifications, should forward applications, stating age, nationality, etc., together with copies of testimonials, to the undersigned not later than the first post in Tuesday, June 20th.

FRANK INCH,
June 7th, 1933. House Governor & Secretary.

ELSIE INGLIS MEMORIAL MATERNITY HOSPITAL,
Spittal Street, EDINBURGH. (60 Beds.)

Applications are invited from fully qualified Medical Women for the following posts:—

1. DISTRICT MEDICAL OFFICER, rising to Senior House Surgeon after three months, honorarium at the rate of £50 per annum with board, residence and laundry.
2. JUNIOR HOUSE SURGEON, honorarium at the rate of £25 per annum with board, residence and laundry.

The appointments are for six months from July 1st. Applications, with copies of testimonials to be sent to the Secretary, 1 Brunstane Road, Craigmillar, Edinburgh, immediately.

EDINBURGH HOSPITAL FOR WOMEN AND CHILDREN,
Whitehouse Loan, EDINBURGH. (56 Beds.)

Applications are invited from fully qualified Medical Women for the post of JUNIOR HOUSE SURGEON, rising to Senior House Surgeon after three months.

Appointment for six months from July 1st, honorarium at the rate of £25 per annum for first three months, £50 per annum for second three months, with board, residence and laundry.

Applications, with copies of testimonials to be sent immediately to the Secretary, 1 Brunstane Road, Craigmillar, Edinburgh.

THE PRINCESS BEATRICE HOSPITAL,
Richmond Road, Earl's Court, S.W.5.
(General Hospital—80 Beds.)

RESIDENT MEDICAL OFFICER (male) required to act as House Surgeon and Casualty Officer for six months from July 1st. Salary at the rate of £110 per annum with board, residence and laundry. Previous resident experience essential.

Applications to be sent to the House Governor not later than June 20th, accompanied by copies of three recent testimonials.

WATERLOO AND DISTRICT GENERAL HOSPITAL, WATERLOO,
Near LIVERPOOL.

HOUSE SURGEON required as from July 1st. The candidate must be fully qualified and registered. Remuneration at the rate of £100 per annum with board, residence and laundry.

Applications with copies of testimonials to be sent to the undersigned on or before June 15th.

W. T. EMERY,
Hon. Secretary & Supt.

YORK COUNTY HOSPITAL.
(200 Beds.)

The post of HOUSE PHYSICIAN will become vacant on July 1st. Salary £150 per annum with board, residence and laundry.

Applications, stating age and previous experience, together with copies of not more than three recent testimonials to be sent to the undersigned not later than 9 a.m. on Tuesday, June 20th.

H. E. RYAN, Gen. Sup.

THE GENERAL INFIRMARY AT LEEDS.

HONORARY ASSISTANT SURGEON.

Notice is hereby given that a Meeting of the Special Election Committee will be held in the Board Room on July 7th to elect an Honorary Assistant Surgeon.

Information as to the duties and necessary qualifications for the office will be supplied on request to the House Governor.

Thirty two copies of application, each accompanied by not less than three recent testimonials, to be addressed to the Chairman of the Infirmary, should be sent in on or before June 23rd.

By Order of the Board of Management,
S. CLAYTON FEYELS,
House Governor & Secretary.

THE GENERAL INFIRMARY AT LEEDS.
(627 Beds.)

(1) TWO JUNIOR RECEIVING ROOM OFFICERS (Candidates must have held a previous resident House appointment).

(2) RESIDENT MEDICAL OFFICER, Ida Robert Arthington Hospital.

Applications are invited for the above posts. Salaries (1) £100 per annum and (2) £60 per annum with board, residence and laundry.

The appointments are for six months, subject to renewal. Candidates must be legally qualified and registered.

Application with copies of testimonials to be sent in at once to the House Governor and Secretary.

June 2nd, 1933.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.
(240 Beds.)

Applications are invited for the post of HOUSE PHYSICIAN.

Salary £120 with board, residence and laundry.

Appointment tenable for six months, and subject to renewal.

Duties to commence July 1st.

Applicants must be registered under the Medical Acts.

Applications, stating age, and qualifications with copies of three recent testimonials, to reach the undersigned by June 21st.

ARTHUR R. CASH,
General Superintendent & Secretary.

WEST END HOSPITAL FOR NERVOUS DISEASES.
In-Patient Department, Gloucester Gate, Regent's Park.
Out-Patient Department, 73 Welbeck St., W.1.

The Committee of Management invite applications for the post of HON. ASSISTANT OPHTHALMIC SURGEON. Candidates who must be Fellows of the Royal College of Surgeons, England, are required to send twenty copies of their application with recent testimonials not later than Monday, June 19th to the undersigned from whom further particulars should be obtained.

J. P. WETENHALL,
Wellbeck Street, W.1. Secretary.

MANSFIELD AND DISTRICT HOSPITAL.

The Board of Management of the above Hospital (135 beds) invite applications for the post of HOUSE SURGEON (male). Duties to commence July 1st next.

Salary at the rate of £150 per annum, with residence, board and laundry.

The appointment is for six months, renewable.

The Resident Staff consists of a Resident Surgical Officer and two House Surgeons.

Applications accompanied by not more than three recent testimonials to be sent to the undersigned.

Dated this 31st day of May, 1933.

C. J. ADAMS, Secretary.

DISTRICT INFIRMARY,
ASHTON-UNDER-LYNE.
(General Hospital—200 Beds. Mainly Surgical.)

Wanted a HOUSE SURGEON for six months' appointment.

Salary at the rate of £150 per annum, with board, residence and laundry.

The Resident Staff comprises a Resident Surgical Officer and three House Surgeons.

Applications with testimonials to be sent at once to the undersigned.

FRANK OLIVER,
June 5th, 1933. Gen. Supt. & Secretary.

CHESTER ROYAL INFIRMARY.
(211 Beds.)

HOUSE PHYSICIAN (male) required as from July 15th. Salary £150 per annum, with board, lodging and washing. Applications close June 22nd. Application forms may be obtained from W. H. GRACE, M.D., M.R.C.P., Hon. Superintendent of the Resident Medical Staff.

ST PETER'S HOSPITAL FOR STONE ETC., Henrietta Street Covent Garden, W.C.2

The attendance of CLINICAL ASSISTANTS to the undermentioned members of the Honorary Staff who attend the Out-patients Department at the times indicated, is now being considered A fee of Five Guineas becomes payable to the funds of this Hospital on appointment and applications should be forwarded to the undersigned as early as possible

Mr John Sandrey	Mondays 3 to 6 p.m.
Mr Alban Andrews	Tuesdays 2 to 5 p.m.
Mr Ogier Ward	Wednesdays 3 to 6 p.m.
Mr F. J. F. Barrington	Thursdays 3 to 7 p.m.
Mr Ogier Ward	Fridays 9.30 to 11.30 a.m. (*Women & Children*)
Mr Alban Andrews	Fridays 3 to 6 p.m. (male out-patients)
Mr John Sandrey	Saturdays 2 to 6 p.m.

BEECHEY ROGERS, Secretary

NOTTINGHAM CHILDREN'S HOSPITAL

Applications are invited for the post of RESIDENT HOUSE SURGEON (Woman) The salary will be at the rate of £150 per annum, with apartments board and laundry The appointment will be for six months, duties to commence on August 1st

Applications, together with testimonials and stating age qualifications, and experience to be sent to F. PRAGNELL the Honorary Secretary, 1 King John's Chambers Bridlesmith Gate Nottingham by June 19th Selected candidates will be required to attend at the Hospital for a personal interview on June 27th, when the appointment will be made

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ROYAL INFIRMARY, BLACKBURN
(240 Beds—Five Residents)

FOURTH HOUSE SURGEON (*male*) required at a salary of £150 per annum rising to £250, with board residence, laundry, etc. To commence duties at end of June

Applications with copies of testimonials, stating age, nationality experience, etc., to be sent at once to the undersigned

Royal Infirmary, NATHAN A. SMITH
Blackburn Gen. Supt. & Secretary

This Institution is recognised for the Surgical Practice required for the F.R.C.S. final examination

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ADDENBROOKE'S HOSPITAL CAMBRIDGE

Applications are invited for the post of RESIDENT ANAESTHETIST AND EMERGENCY OFFICER (male) The appointment will be for three months from July 1st Salary at the rate of £130 per annum with board residence and laundry Candidates who must be unmarried and duly registered are requested to forward their applications, stating age qualifications etc together with copies of not more than four recent testimonials to the undersigned on or before Wednesday, June 14th

W. H. HEAD
Secretary Superintendent

LINCOLN COUNTY HOSPITAL

Wanted HOUSE SURGEON male, unmarried Salary at the rate of £150 per annum rising to £200 per annum at the conclusion of six months approved service Board residence and washing will also be provided

Every candidate for the appointment must be registered under the Medical Acts

Applications stating age and other particulars with copies of not more than three testimonials are to be sent to the undersigned from whom further particulars may be obtained.

ARTHUR MOORE
Lincoln Secretary Supt.

ROYAL ALBERT HOSPITAL AND EYE INFIRMARY DEVONPORT

A vacancy for an ASSISTANT HOUSE SURGEON exists Applicants must be duly registered and unmarried and the appointment will be *for six months* Salary £100 p.a. *with* board apartments and laundry free

Application stating age accompanied by copies of not more than three testimonials should be forwarded to the undersigned without delay

By Order of the Committee
FRANK ROWE
May 22nd 1933 Secretary

ALTRINCHAM GENERAL HOSPITAL.
(100 Beds)

Applications are invited for the post of JUNIOR HOUSE SURGEON Salary £120 per annum with board residence and laundry

The appointment is for six months in the first instance duties to commence July 1st

Applications stating age and experience together with copies of recent testimonials to be sent to the Secretary General Hospital Altrincham not later than June 15th

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GYNAECOLOGIST WANTED FOR POST OF HON. ASSISTANT AT THE HENRY KING EDWARD MEMORIAL HOSPITAL N.W.4 Particulars on request to the Secretary of Hospital Applications for post must be in before June 19th

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NORTHAMPTON GENERAL HOSPITAL.
(253 Beds)

There are vacancies immediately for a HOUSE SURGEON for one of the General Honorary Surgeons and a HOUSE SURGEON for the Ear Nose, and Throat Department British nationality Salary £150 per annum, with board, residence and laundry

The successful candidates will be appointed for the period ending on September 30th and will be eligible for re-election for a further period of six months.

Candidates must be duly qualified and registered

Applications stating age sex qualifications etc *with copies of testimonials to reach the* undersigned not later than first post on Wednesday June 21st

H. ST JOHN WOOD
June 9th 1933 Secretary Supt.

NOTTINGHAM GENERAL DISPENSARY GREGORY BOULEVARDE BRANCH NOTTINGHAM

Wanted RESIDENT SURGEON (female) unmarried Must have Medical and Surgical qualifications Salary £250 with £25 increase per year up to £300 House with attendance, lights and fuel (not board) This institution is a non-provident one No beds No midwifery Applications stating age and *accompanied by copies of recent testimonials* to be sent by June 13th to—

5 Thurland St R. J. WILLATT
Nottingham Secretary

THE CHILDREN'S HOSPITAL SHEFFIELD
(110 Beds—Three Residents)

Applications are invited for the following posts vacant August 1st

HOUSE PHYSICIAN HOUSE SURGEON

The appointments are for six months with salary in each case at the rate of £100 per annum with board residence and laundry

Candidates (male and unmarried) who must possess registered qualifications, should forward applications stating age nationality, etc., *together with copies of three recent testimonials* to the undersigned

T. H. G. CARTLAND, Secretary

JENNY LIND HOSPITAL FOR CHILDREN, NORWICH

Applications are invited for the post of RESIDENT MEDICAL OFFICER Salary £120 per annum, with board, residence and laundry Candidates (male or female) who must possess registered qualifications should forward applications stating age nationality etc., together with copies of testimonials to the undersigned not later than first post on Tuesday, June 20th

FRANK INCH
June 9th 1933 Secretary

SANATORIUM, BRIDGE OF WEIR.

COLONY FOR EPILEPTICS, BRIDGE OF WEIR

ASSISTANT MALE RESIDENT MEDICAL OFFICER wanted to commence duties in August Keen evangelical and keen research worker preferred Appointment for six months in first instance, at rate of £200 p.a. (renewable by mutual agreement) with board and laundry Applications to Medical Superintendent stating age experience and qualifications and enclosing references

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ROYAL ISLE OF WIGHT COUNTY HOSPITAL, RYDE I.W.

RESIDENT HOUSE SURGEON wanted for [illegible] married single-handed [illegible] fied and registered Salary at the rate of £160 yearly with board residence, and laundry Apply enclosing copies of testimonials, to Secretary before Tuesday June 20th Third-class return railway fare for selected candidates.

A. S. GORDON Secretary

ROYAL INFIRMARY, WIGAN
(180 Beds)

HOUSE SURGEON (male) required July 1st for a period of six months Salary £150 per annum with board apartments and washing Staff consists of R.S.O. and three House Surgeons Applications stating age and qualifications with copies of three recent testimonials should be addressed to the undersigned as soon as possible

A. STANLEY BRUNT
June 6th 1933 Gen. Supt. & Sec.

MANCHESTER ROYAL EYE HOSPITAL

Vacancy occurs at once for JUNIOR HOUSE SURGEON Salary £120 per annum with board residence etc Applications (with copies of testimonials) endorsed House Surgeon to be forwarded to the Chairman of the Board of Management by June 17th

H. R. NORTH
General Superintendent & Secretary

VICTORIA HOSPITAL BLACKPOOL

HOUSE SURGEON OR PHYSICIAN (Male).

Applications are invited for the above post from duly qualified and registered Medical Practitioners

The appointment is for six months from July 1st with salary at the rate of £200 per annum including board lodging and laundry The duties will include the giving of a certain number of anaesthetics The person appointed if satisfactory, will be eligible for the post of House Surgeon for a further period of six months Salary at the rate of £250 per annum

Applications stating age nationality qualifications and experience together with not more than three recent testimonials should be sent to the Hon. Secretary endorsed House Surgeon or Physician on or before June 19th.

Victoria Hospital JOHN HACKING
Blackpool Hon. Secretary
June 6th 1933

DURHAM COUNTY MENTAL HOSPITAL

ASSISTANT MEDICAL OFFICER

The Visiting Committee invite applications from duly registered Medical Practitioners for the appointment of Assistant Medical Officer at the *Mental Hospital* Salary £350 per annum rising by annual increments of £25 to £450 per annum, together with board lodging, laundry, and attendance valued at £135 per annum plus £50 per annum for the Diploma in Psychological Medicine The appointment will be subject to the conditions of the Asylums Officers Superannuation Act 1909 and the successful candidate will be required to pass a medical examination Preference given to applicants with knowledge of Laboratory routine Applications with copies of three recent testimonials to be forwarded to the Medical Superintendent Winterton Stockton-on-Tees by June 21st

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NATIONAL HOSPITAL FOR DISEASES OF THE HEART, Westmoreland St., W.1

PHYSICIAN TO OUT-PATIENTS

The Committee of Management invites applications for the post of Physician to Out-patients

Candidates must be Graduates in Medicine of a University of the British Empire recognised by the Royal College of Physicians of London and Fellows or Members of that College

Applications with ten copies of not more than three recent testimonials should be sent to me not later than Friday June 16th

ROBERT G. E. WHITLEY
Secretary

NORTH ORMESBY HOSPITAL, MIDDLESBROUGH

HOUSE PHYSICIAN required male and unmarried Salary £120 per annum with board residence, and laundry There are three Consultants and the successful candidate will be eligible for the post of House Surgeon in due course

Applications stating age qualifications previous experience (if any) with copies of three recent testimonials, should be sent to the undersigned at once

GEORGE WATTS
June 6th 1933 Secretary Supt.

PRINCESS ELIZABETH OF YORK HOSPITAL *FOR CHILDREN* Shadwell London E.1

HOUSE SURGEON required Salary at the rate of £125 per annum with board residence and laundry The appointment is for six months from July 1st Application stating age nationality, qualifications and experience accompanied by copies of not more than three recent testimonials should reach the undersigned not later than June 19th

T. F. RUSSELL Secretary

EDINBURGH MUNICIPAL HOSPITALS

There will be a vacancy for a RESIDENT HOUSE PHYSICIAN (male) at the Royal General Hospital Seafield Street Leith from July 1st period of three *months from* July 1 (possibility of extension) Salary at rate of £100 per annum (subject to temporary cut of 4½ per cent) plus board etc

Applications and testimonials to be sent as soon as possible to the Medical Officer of Health Johnston Terrace Edinburgh

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SOUTHEND-ON-SEA GENERAL HOSPITAL
(228 Beds—Six Residents)

Wanted CASUALTY OFFICER [illegible] England essential to commence July 1st period ending Nov. 1st 1933 [illegible] 1934 Salary £150 per annum [illegible] dence laundry Application [illegible] British male candidates stating age [illegible] tions and experience with three recent testimonials, to the Joint Secretaries by June 14th

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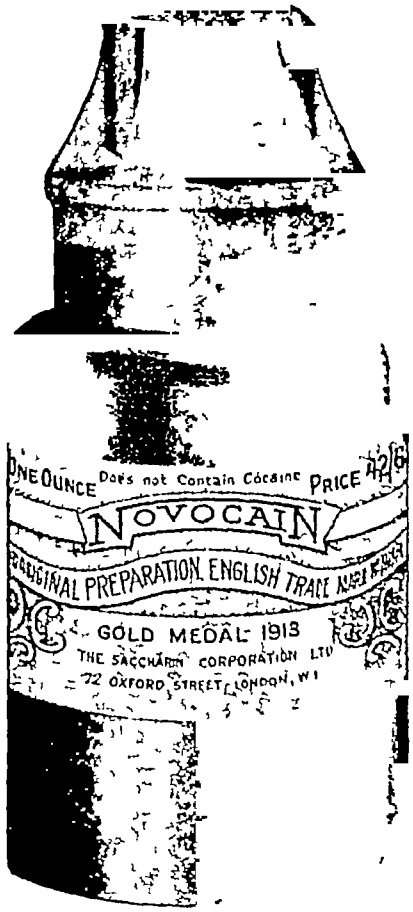

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APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary, 7 Drumsheugh Gardens, Edinburgh).

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(cont'd)*	**PUBLIC HEALTH** *(cont'd)*
EBBW VALE, MON. *(Workmen's Medical Society)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association)*	WORCESTER COUNTY AND CITY MENTAL HOSPITAL. *(Junior Assistant Medical Officer)*
GILFACH GOCH, GLAMORGAN. *(Workmen's Medical Scheme)*	OGMORE VALLEY, GLAMORGAN. *(Wyndham Colliery Medical Aid Society)* *(Panel Medical Scheme)*	COUNTY BOROUGH OF SOUTH SHIELDS. HARTON INSTITUTION AND CLEADON COTTAGE HOMES. *(Medical Officer)*
LLWYNPIA, CLYDACH VALE, TENYGRAIG, GLAMORGAN. *(Workmen's Medical Service)*	**PUBLIC HEALTH**	HERTFORDSHIRE COUNTY COUNCIL. WARE SANATORIUM. *(Assistant Medical Officer)*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer)*	KENT COUNTY COUNCIL. LENHAM SANATORIUM. *(Male Assistant Medical Officer)*	FULHAM BOROUGH COUNCIL. Maternity and Child Welfare Department. *(Assistant Medical Officer—Women)*
MARDY, GLAMORGAN. *(Workmen's Medical Service)*	FAR BOROUGH INSTITUTION HOSPITAL. *(Resident Assistant Medical Officer)*	
NEATH AND DISTRICT. *(Medical Aid Association)*		

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments)*	Dr. J. G. HUNTER (Medical Secretary, New South Wales Branch), 135, Macquarie St., Sydney, N.S.W.	**QUEENSLAND** *(Juniors are assistants of Friendly Societies Institute)*	The Hon. Sec., Queensland Branch, British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	**WELLINGTON, NEW ZEALAND** *(Contract Practice Appointments)*	Dr. G. F. WILSON (Hon. Sec., New Zealand Branch), British Medical Association, P.O. Box 155, Wellington, New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch, British Medical Association), Medical Society Hall, East Melbourne, Victoria.	*(To all subscribing Associated Friendly Societies' Medical Institute, Toowoomba.)*		**WESTERN AUSTRALIA.** *(Contract and Lodge Practices)*	Hon. Sec., Western Australian Branch, British Medical Association, No. 6 Bank, N.S.W. Chambers, St. George's Terr., Perth, Western Australia.

June 7th, 1933 By Order of the Council G. C. ANDERSON, Medical Secretary.

WEST LONDON HOSPITAL, Hammersmith Road, W.6. (234 Beds.)

Required ONE HOUSE PHYSICIAN, TWO HOUSE SURGEONS and ONE RESIDENT ANÆSTHETIST (Males). The duties of the House Physician include some work in the Neurological and Dermatological Departments. The duties of one House Surgeon include some work in the Genito-Urinary Department and of the other some work in the Gynæcological Department. These four appointments are tenable for six months from July 1st next, subject to one month's notice on either side. Salary at the rate of £100 per annum with board, lodgings and laundry allowance.

Candidates must be registered under the Medical Act. Applications (which must be on printed forms obtained from me) must reach me not later than first post on Friday, June 16th. Selected candidates will be required to call upon such members of the Medical Staff as directed, to be in attendance at the Medical Council Meeting on Friday, June 23rd, at 4.30 p.m., and the House Committee Meeting at 5 p.m. the same day when the appointment will be made.

H. A. MADGE, Secretary.

THE WILLESDEN GENERAL HOSPITAL, N.W.10.

Applications are invited from fully qualified and registered candidates (unmarried) for the appointment of a Resident Officer to hold the appointment of CASUALTY OFFICER for three months from July 1st, followed by a six months' appointment as HOUSE SURGEON (total nine months).

Salary at the rate of £100 per annum.

Applications to be received by the Secretary not later than first post Saturday, June 17th.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond St., London, W.C.1.

Applications are invited from registered Medical Practitioners for the following non-resident appointments which become vacant on July 1st:

A CASUALTY MEDICAL OFFICER (male). Salary £250 p.a. (half-time).

TWO OUT-PATIENT MEDICAL REGISTRARS (male). Salary £250 p.a. (half-time).

THREE OUT-PATIENT ANÆSTHETISTS. Honorarium £50 p.a. (part-time).

Also for an IN-PATIENT MEDICAL REGISTRAR (male). Salary £300 p.a. (whole-time).

Duties to commence on October 1st.

All the above appointments are tenable for twelve months but are renewable.

Candidates must be prepared to attend for interview at the Hospital on Wednesday, June 21st, at 4.45 p.m.

Applications, supported by not more than three testimonials given specially for this purpose, must be submitted to the undersigned not later than Saturday, June 17th, from whom further particulars and forms of application may be obtained.

H. F. RUTHERFORD, Secretary.

THE ROYAL EYE AND EAR HOSPITAL, BRADFORD.

Wanted JUNIOR HOUSE SURGEON (male). Salary £150 with board, residence and laundry.

Application, stating qualifications and etc., with copies of recent testimonials to be forwarded to the undersigned on or before June 14th.

F. BRIGGS, Secretary, Sup.

HULL ROYAL INFIRMARY. (350 Beds.)

Applications are invited from registered Medical Practitioners for the post of THIRD HOUSE SURGEON (male), vacant June 25th.

Salary at the rate of £150 per annum, plus resident board and laundry.

The candidate appointed will be expected to stay for not less than six months, but the appointment is at any time determinable by one month's notice on either side.

The Hospital is recognised by the Royal Colleges for the F.R.C.S. examinations.

Applications giving particulars of age, experience and nationality, together with copies of testimonials, should be addressed to the undersigned.

P. J. CAPLESS, House Governor.

May 29th, 1933.

SEAMEN'S HOSPITAL SOCIETY.

KING GEORGE'S SANATORIUM FOR SAILORS, LIPHOOK, HANTS.

(For the Treatment of Pulmonary and Non-Pulmonary Tuberculosis.)

ASSISTANT MEDICAL OFFICER required from July 1st. Salary at the rate of £200 per annum, with quarters and board. The appointment is for six months in the first instance. There is no accommodation for a married man. Application, with names of three recent testimonials, to be sent in by Tuesday, June 13th, to the undersigned.

Seamen's Hospital, Greenwich, S.E.10. R. E. V. BAX, Secretary.

May 25th, 1933.

(Appointments continued on p. 47)

VACCINE THERAPY

Like most comparatively new methods of treatment, Vaccine Therapy has passed through many stages during recent years At the present time, however, it is generally admitted that Vaccines provide a valuable means of combating microbic infections, as there are no drugs which are effective against the majority of pathogenic organisms An excellent survey of this subject appeared in the issue of the *British Medical Journal* for June 25th, 1932 from which we give the following extracts.—

> "*Preventive treatment by Vaccine against the risk of infection from catarrhal, intestinal, or septic infections in persons of normal health is usually successful and uneventful Failure, however, occasionally occurs and the presence of an unsuspected focus of infection is usually the reason*"
>
> "*Vaccine treatment is an invaluable therapeutic measure and all too frequently advantage is not taken of its help in the scope of clinical practice It is either not employed early enough to be of real service, or too much is expected of its exhibition under conditions which preclude its success*"

The 15th Annual issue of the Genatosan Vaccine Bulletin has recently been posted to all medical men whose names appear on the Medical Register This brochure contains information of recent researches on Influenza and "Colds," together with details of a wide range of Vaccine products Any practitioner who has not received a copy of this booklet may obtain one by sending a post-card to

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APPOINTMENTS—Contd

THE ROYAL HOSPITAL, WOLVERHAMPTON (Incorporated under Charter)

HOUSE SURGEON required duties to commence July 6th. The Hospital contains 300 beds, includes the usual special departments and is recognised by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice.

Candidates must be registered under the Medical Acts and unmarried.

The appointment is for six months. Salary at the rate of £100 per annum, board, furnished rooms and laundry provided.

Applications with copies of testimonials to be forwarded to the undersigned.

Wolverhampton W. H. HARPER
June 6th 1933 House Governor

COUNTY MENTAL HOSPITAL PRESTWICH MANCHESTER.

LOCUM TENENS required for about three months. Salary £[illegible] per week with board furnished apartments attendance and laundry. Apply stating full particulars to Medical Superintendent.

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LONDON W.C. — CENTRALLY SITUATED £600 p.a., increasing. Estab. only 2½ years. Vendor accepting appt. abroad. Panel 180. Visits 5/-. Cons. 2/6 up. Children 2/6. House on list at £160 part sublet at £1 per week. Premium only £500.—No. 9161

RESIDENTIAL SEASIDE RESORT—WITHIN easy reach of London. £700—£800 p.a. offered through Vendor's illness. Ample scope. New estate building. Small panel. No dispensing. Midwifery not a feature. Attractive freehold house built by Vendor 5 beds., etc. garden and garage.—No. 9108

CHESHIRE—TOWN PRACTICE WORTH £550 p.a. including panel of 830. Scope for increase; midwifery refused. Visits 3/6 to Consulting house 3 bed 3 attics, recep. and professional room. Rent £70. Premium £700 or nearer offer.—No. 9155

KENT—ABOUT 30 MILES FROM TOWN.—Residential country. Half share of £2,500 after preliminary Assistancy. Good fees. Not much midwifery. New house, specially built to rent or buy. Further share later. Partner to be Lond. or Camb. Graduate age 30 to 33.—No. 9152.

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LONDON N.W. — VERY FINE OUTLYING district. About £1,000 p.a. No panel taken but ample scope. Some dispensing. Expenses low. Corner house in excellent position on main road, 4 bedrooms etc. Long leasehold for sale at £2,220. Vendor giving up general practice. Premium for goodwill 11 years' purchase.—No. 9149

MANCHESTER. — ABOUT £650 P.A., INcreasing old-established PRACTICE. Panel 790. Opposition less than usual. Visiting fees 4/- and 5/-. Lower surgery fee 2/6. House off main road 4/5 beds. 2 recep., and sep. surgery. Rent £60 on lease.—No. 9144

MANCHESTER.—£1,300 P.A. PAYABLE 1ST-6TH Well-established working and middle-class Practice. Very few midwifery at 2 and 3 gns. Visits 3/6 to 5/-. Premium 1½ years' purchase. Double-fronted main road house with 6 beds. etc. for sale at £1,150 good mortgage.—No. 9143.

LONDON N.W. — SUBURB. — RECEIPTS average last three years £540. Panel 150. Visits 5/- up. Surg. 3/6 to 5/-. Midw. 8 to 10 p.a. fees 3 to 6 gns. Premium £900 or offer. Good house with garden. Five bed. 2 recep. sep. surg., and garage. Price £1,600 of which £1,000 could remain on mortgage.—No. 9142.

YORKSHIRE — OUTSKIRTS OF LARGE town. Old-established middle and better class PRACTICE averaging £980 p.a. Panel 400. Visits 3/6 to 21/-. Very little midwifery. Specially built house, 2 recep. 6 bed. Surgery with separate entrance etc. On lease at £100. Premium only £1,200.—No. 9141

LADY PARTNER WANTED IN PRACTICE of about £1,000 p.a. in country district in Kent. Steadily increasing and ample scope for further extension. Panel worth £130 and appts. about £120. Premium for half share £1,000.—No. 9140

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BERKS — OLD ESTABLISHED — COUNTRY PRACTICE, about £700 p.a. has been £1,100. Panel about 500. Visiting fees 2/6 to 7/6. Very little midwifery. Splendid house specially built for Vendor with two acres grounds 2 reception rooms, 6 bedrooms, surgery and waiting rooms etc. Considered £4,000 offer for Practice & house first declined.—No. 9100

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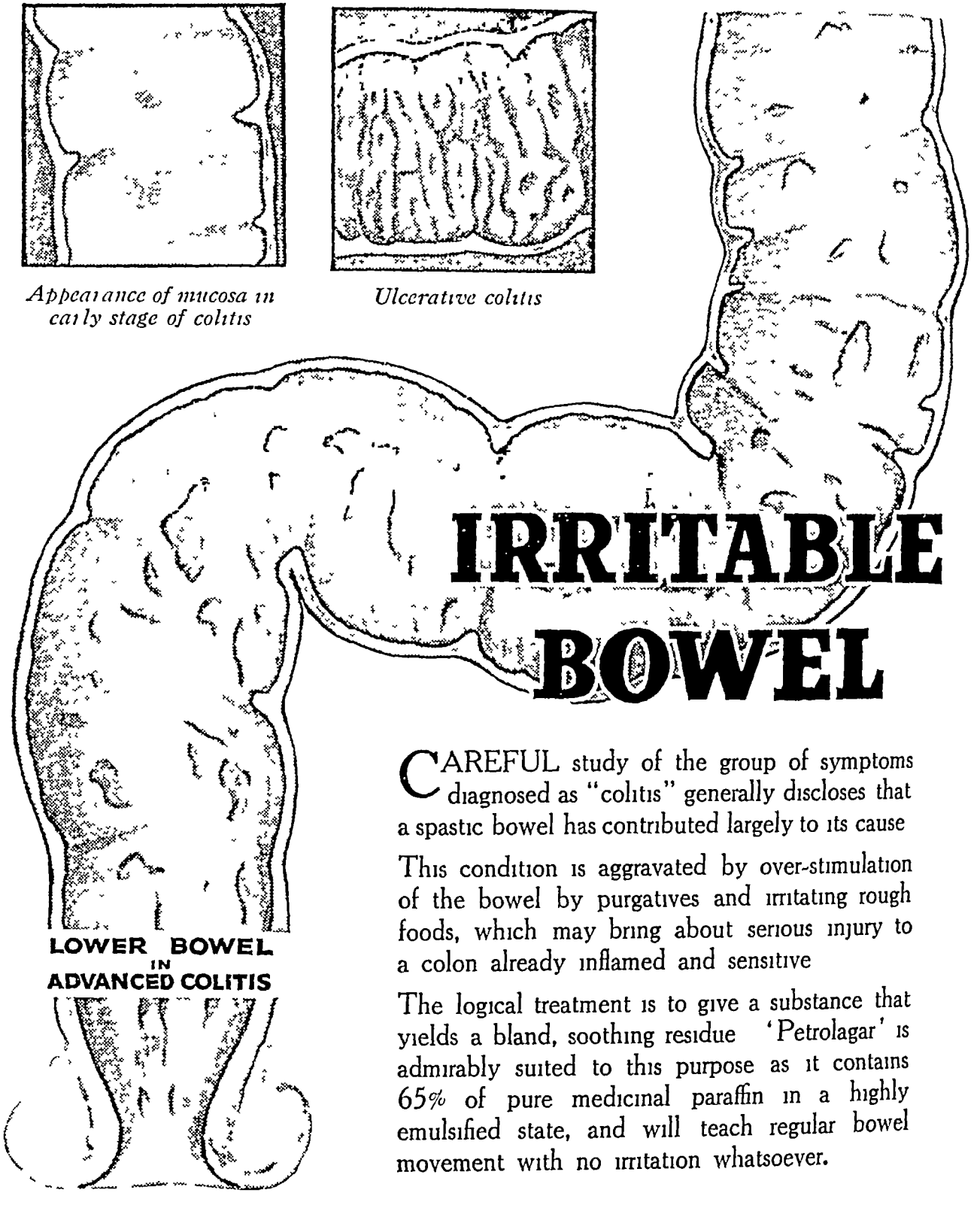
Appearance of mucosa in early stage of colitis

Ulcerative colitis



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(FOUNDED 1880)

12, Stratford Place,

Oxford Street, W 1.

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Telephone Mayfair {1782 1783

The Association has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful Agency for the transaction of every description of Medical Scholastic and Accountancy business and the BRITISH MEDICAL ASSOCIATION has every confidence in recommending its members to consult Mr A V STOREY, the General Manager, in all transactions requiring the services of a Medical Agent

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Medical Practitioners wishing to dispose of Practices, or desiring to take Partners, are advised to negotiate the business through the British Medical Bureau Vendors may depend upon receiving introductions only to eligible and bona-fide purchasers All information is treated in strictest confidence Full and trustworthy information regarding Practices, Partnerships, etc , for disposal, supplied gratis to Purchasers

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Practices and Partnerships for Disposal. **Full particulars sent free.**

1 N W OF ENGLAND—SEAPORT TOWN —PARTNERSHIP IN well established Practice of about £1 500 p a Panel 1,660 Great scope for increase Premium two fifths share £1,000

2 PARTNERSHIP IN VERY OLD ESTABLISHED MIDDLE-CLASS Practice in County Town within 40 miles of London Cash receipts average £3,300 p a Panel 3 000 Good house with ample accommodation garden and garage to rent Applicant must be experienced and aged 30—35 Premium one third share 2 years purchase Preliminary Assistantship

3 KENT — FOURTH PARTNER REQUIRED IN OLD ESTABlished Country Practice within easy reach of London Freehold house standing in three and a half acres of garden to be purchased Price £2 000 Incoming Partner should be keen on country life and have held H P and H S appointments Share worth £800 p a guaranteed Premium £1,600

4 W OF ENGLAND — PARTNERSHIP IN OLD ESTABLISHED Practice of about £1 200 p a in picturesque Seaside Place Panel 690 Unique house (6 bed and dressing rooms etc) in excellent state of repair with every modern convenience Beautiful garden and garage to rent on lease Hunting yachting, fishing etc Premium one half share 2 years purchase

5 WEST OF ENGLAND—PARTNERSHIP IN OLD ESTABLISHED PRACTICE over £2 200 p a in County Town Panel about 1 000 Premium one half share 2 years purchase Good prospects for well-qualified physician (preferably M R C P) who should be an R C and who would have opportunity of getting on Staff of Hospital in near future

6 MIDLANDS — PARTNERSHIP IN GOOD MIXED CLASS Practice in Country Town in first rate Hunting Centre Cash receipts about £6 200 p a including panel 3 700 Suitable house to purchase Excellent opening for capable and energetic man aged about 40 who should be able to do Surgery Cottage Hospital Premium one half share 2 years purchase

7 N E OF ENGLAND—PARTNERSHIP IN VERY OLD ESTABlished general Practice in an important City Cash receipts over £4 743 p a including appointment worth about £300 p a and a panel of 4 300 Semi detached ten roomed house with garage and garden for sale Scope for increase Premium two fifths share 12 years' purchase

8 LONDON N —PRACTICE CARRIED ON BY MEDICAL WOMAN in populous area Cash receipts average £480 p a including panel 527 Visits 2/6 to 3/6 Small house (6 rooms) to rent at £50 p a on lease Practice capable of increase Premium 1½ years purchase

9 E ANGLIA —OLD ESTABLISHED COUNTRY PRACTICE OF about £2 700 p a in most beautiful part easy distance of Coast Panel 1 150 Visits 3/6 to £1 1s , medicine extra Lovely modernised house (6 bedrooms etc and central heating) with garden and two acres land for sale Cottage Hospital Scope for increase

10 LONDON, N —PRACTICE CARRIED ON BY MEDICAL WOMAN in populous district Cash receipts average £270 p a including panel 360 Scope for midwifery Six roomed house to rent at £70 p a on lease Premium 1½ years purchase

11 BORDERS OF SHROPSHIRE AND CHESHIRE—OLD ESTABlished PRACTICE averaging £1 055 p a in Market Town Panel 850 Nice detached house (5 bedrooms attics etc) with pretty old world garden etc , for sale Educational facilities Well equipped Cottage Hospital offering scope for one keen on Surgery Premium £1,580

12 LONDON E —PARTNERSHIP IN WELL ESTABLISHED CASH and Panel Practice averaging about £2 700 p a in popular suburb close to the City Panel nearly 4 800 Living accommodation over Surgery Premium one third share 2 years purchase

13 PARTNERSHIP (WITH VIEW TO SUCCESSION) IN OPHTHALmic Practice in delightful Southern Seaside Resort In 1st £1 400—£1 500 Must be specially qualified and have had practical experience in Ophthalmic work Half share at 1½ years purchase

14 LONDON S E WELL ESTABLISHED PRACTICE IN OUTER Suburban District Cash receipts 1932 £1 008 including appointments worth £23 p a and Panel 993 Well situated corner house on main road (5 bed and dressing rooms) with garage and large garden to rent also separate Surgery to rent Scope for increase Premium £1,800

15 PRIVATE MENTAL HOME (FOR LADIES ONLY)—EXCEPtionally nice house and grounds A considerable sum required for the purchase Further particulars on application

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Practices and Partnerships for Disposal (continued)

16 YORKSHIRE (W.R.)—PARTNERSHIP IN OLD-ESTABLISHED Practice about £3,700 p.a. in one of the smaller and pleasanter Manufacturing Towns. Panel 3,366. Suitable house available Hospital. Premium one third share 2 years purchase.

17 SUSSEX—PRACTICE ABOUT £700 P.A. IN FIRST RATE Country Town. Panel over 200 increasing rapidly. Very little midwifery. Well-equipped maisonette containing 6 rooms and bathroom, rent £100 p.a. inclusive. Premium £1,000.

18 LONDON E.—CASH AND PANEL PRACTICE OF £860 P.A. in populous district. Panel 570. Small house to rent on lease. Premium 1½ years' purchase.

19 EASTERN COUNTIES — OLD ESTABLISHED COUNTRY PRACTICE. Cash receipts about £720 p.a. including appointments over £150 and a panel of about 590. Detached house (6 bedrooms) in grounds of 1 acre for sale. Premium for Practice £650.

20 CO. DURHAM—PRACTICE OF £540 P.A. IN RESIDENTIAL Colliery District near two large Towns. Panel 380. Well situated house (7 rooms) with good Surgery and Dispensary for sale or rent. Scope for substantial increase. Premium only £500.

21 S.W. OF ENGLAND — OLD-ESTABLISHED PRACTICE OF £750 p.a. in beautiful district. Panel 300. Excellent house (5 bedrooms) for sale. Premium 1½ years' purchase.

22 S. WALES — PRACTICE BETWEEN £250—£300 P.A. IN beautifully situated village about 4 miles from important town. Small panel. Nice house (6 bedrooms) electric light, gas and company's water for sale or rent. Premium £280.

23 S. OF ENGLAND — PARTNERSHIP IN OLD ESTABLISHED Practice of nearly £1,950 p.a. in important town within 80 miles of London. No panel. Attractive corner residence (7 bed and dressing rooms) in half acre of walled in garden with garage etc., for sale. Ample scope for increase. Premium one-half share 2 years purchase.

24 ESSEX—OLD-ESTABLISHED PRACTICE OF ABOUT £600 P.A. in Suburban District. Panel 500. Well-situated detached house (6 bedrooms) standing in own grounds with nice garden, garage and stabling for sale. Scope for increase. Premium £650.

25 LONDON S.W.—OLD ESTABLISHED PRACTICE ABOUT £650 p.a. in well populated area. Panel 850. Separate surgery and private residence to be purchased. Scope for increase. Premium £1,100.

26 SURREY—PARTNERSHIP IN SOUND OLD ESTABLISHED good mixed-class Practice about £3,000 p.a. in the Croydon area. Small panel. Very little midwifery. Excellent modern detached house for sale. Scope for increase. Premium one half share 2 years purchase.

27 ESSEX COAST—MEDICAL WOMAN REQUIRED AS PARTNER in Practice of £2,500 p.a. in small Seaside Town. Panel 2,500. Modern house in good position facing Sea with 4 bedrooms for sale. Scope for increase. Premium one fourth share £1,250 and further share later.

28 LONDON E.C.—PARTNERSHIP IN OLD ESTABLISHED PRACtice in the City. Receipts average about £1,650 p.a., including appointments and panel worth over £500 p.a. Premium one half share £1,000.

29 NORTH OF ENGLAND — INLAND HEALTH RESORT—NO dispensing PRACTICE of about £1,000 p.a. Small select panel. House (7 bedrooms) with large garden for sale. Premium—Practice—£750.

30 HOME COUNTY—WELL ESTABLISHED PRACTICE OF £700 p.a. in first rate Country Town under 40 miles from London. Panel about 250. Fees 5/- to £1 1s. Large well built residence (about 6 bedrooms) with modern conveniences. Beautiful garden, meadow, orchard etc. In all about 24 acres. Excellent hunting. Premium. Practice and house £4,500 (or near offer) which is less than the value of the house alone.

31 S. AFRICA—RADIOLOGICAL PRACTICE IN A MOST DElightful town with excellent climate. Cash receipts last year £1,450. Scope. Premium to include furniture, carpets, accessories etc. £2,200.

32 EAST COAST—PRACTICE OF BETWEEN £750 AND £800 p.a. in a purely Residential Seaside District within 40 miles from London. Small Panel. Detached house (5 bedrooms) for sale. Scope for increase as district is growing.

33 SURREY—PRACTICE OF £1,000 P.A. IN RAPIDLY GROWing Residential District within 15 miles of London. Panel 400. Suitable house with separate professional accommodation for sale. Scope for considerable increase. Premium £1,600.

34 LONDON W.—GOOD MIDDLE-CLASS PRACTICE £400 P.A. in suburb within easy access of the West End. Panel over 100. Attractive double fronted house with nice garden for sale. Scope for increase. Premium 1 years' purchase.

35 LONDON N.—PARTNERSHIP IN PRACTICE ABOUT £5,250 p.a. in thickly populated Suburban District. Panel about 800. One fourth or one third share at 2 years' purchase.

36 HOME COUNTIES — OPHTHALMIC PRACTICE BETWEEN £300 and £400 p.a. in desirable Residential Town under 15 miles from London. Good detached house (4 bedrooms) with large garden for sale. Good reason for client's of scope for increase. Premium £300.

37 LONDON E.C.—OLD ESTABLISHED LOCK UP PRACTICE of £646 p.a. Panel 459. Living accommodation to rent if desired. Premium £1,000.

38 S. AFRICA. — OPHTHALMIC AND GENERAL PRACTICE about £1,400 p.a. (about 60 per cent. Ophthalmic) including appointments £400. No Ophthalmic opposition. Premium £400.

39 S. OF ENGLAND — OPHTHALMIC PRACTICE OF OVER £1,600 p.a. in an important town. Excellent scope for one keen on clinical and operative Ophthalmology. Large house in first-class condition for sale. Purchaser should be well qualified. Premium £2,500.

40 S. AFRICA — PRACTICE OF ABOUT £2,000 P.A. IN A famous town. Pleasantly situated detached bungalow (5 bedrooms) garage and small garden for sale. Good hospital (with private wards). Premium £1,100.

41 LONDON WEST END — X-RAY AND ELECTRO-THERAPEUtic Practice. Receipts 1931 nearly £520. Suitable and convenient flat at moderate rent, on lease. Premium £925.

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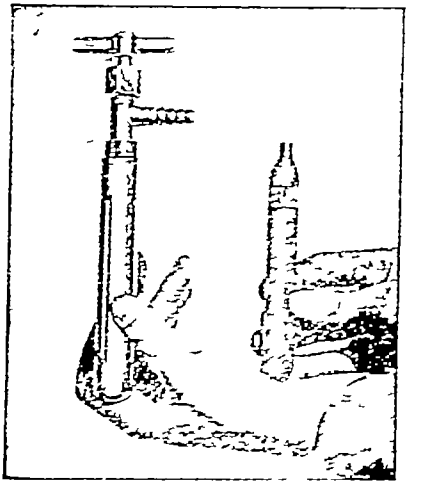
one of the latest advances in the treatment of HAY FEVER AND ASTHMA

For the treatment of hay fever and asthma, carbon dioxide may very conveniently be administered by the "Sparklet" Pocket Resuscitator, "J" size, for which a special attachment consisting of a rubber bag, tubing and nose-piece is issued The method of administering the gas has been described by an authority as follows —

In cases of ASTHMA the nose piece should be inserted in a glass of water and Valve Key should then be very slowly turned in an anti clockwise direction until a moderately rapid stream of small bubbles is seen to issue from the tube The nose piece is then dried and inserted into one nostril The patient should breathe through the mouth and the gas should be allowed to flow into the nose without being actually inhaled

In HAY FEVER the treatment prescribed should be followed for five minutes up each nostril every morning throughout the hay fever season and in addition the gas should be used as often as necessary during the day if an attack seems imminent and its use continued until the symptoms cease For paroxysmal sneezing and nose running the treatment should also be followed immediately an attack begins In cases of asthma which begin with an attack of this nature the gas may prevent the attack from developing

Proc Roy Soc Med Section of Laryng, Dec 1930 p 441.



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RESUSCITATOR, "J" Size, 32/6

Rubber Bag with Tubing and Nasal Tip **12/6**

BULBS "J" Size, for use with above, containing CARBON DIOXIDE, Box of 6 **10/6**

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Other uses of the 'Sparklet' Pocket Resuscitator in general medical practice are the treatment of whooping-cough asphyxia through drowning or poisoning and to facilitate inhalation anaesthesia Write for Booklets 'The Use of Carbon Dioxide in General Practice and The Uses of Carbon Dioxide Snow in the Treatment of Skin Blemishes to

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Accountancy and legal services furnished by the Agency, where desired, at moderate inclusive charges. No charge is made to Principals for the introduction of Locum Tenens or Assistants

1 PARTNERSHIP—SOUTH WEST OF ENGLAND, SEASIDE RESORT—A share worth about £600 p a (with succession to the whole Practice eventually) is offered in a very old established mixed class Practice situated in very attractive small coast town, with beautiful surrounding country Gross cash receipts approximately £1 200 p a including panel worth about £420 Visits 5/ to 30/ Midwifery from 3 gns Exceptionally nice house, with 2 reception 5 bedrooms etc, and usual offices Half an acre of garden Can be rented on lease Premium 2 years purchase

2 MIDLANDS—PARTNERSHIP—A one half share is offered in a very old-established good mixed-class Practice situated in country town, in attractive hunting district Gross cash receipts about £6 200, including panel of 3 500 and appts about £600 p a Fees from 3/6 Suitable house available to purchase Cottage Hospital Ingoing partner should be experienced about 40 years of age and able to undertake major surgery Premium for share 2 years purchase

3 RIVERSIDE SUBURB—Middle and working class PRACTICE averaging £1 125 p a, including panel producing about £340 and appts nearly £100 p a Fees from 3/6 Detached house, with nice garden and containing 4 reception, 6 bedrooms, etc for sale Premium £2 225

4 HOME COUNTIES—PARTNERSHIP—Residential Town within easy reach of London A share producing about £1 300 p a is offered in a very sound old established Practice producing for the last 12 months approximately £5 200 Panel of 2 500 Fees from 3/6 to 21/ Very nice house, with ample accommodation or smaller one if desired Ingoing Partner should be experienced accustomed to better-class work able to undertake major surgery, and preferably a Fellowship Premium 2 years purchase

5 OPHTHALMIC PRACTICE—Within eighty miles of London—Practice is increasing and offers good scope for further development Average gross cash receipts for the past three years £554 Last year over £700 Fees 1 to 2 guineas Opposition slight Choice of houses Premium £700

6 DEATH VACANCY—WEST MIDLANDS—Well established PRACTICE situated in very attractive market town, amidst beautiful surrounding country rapidly increasing, and offering good scope for further development Gross cash receipts for last twelve months £1,814 Panel with mileage brings in about £480, and appts worth £65 Fees 3/6 to 21/ Very good well equipped Cottage Hospital and there is excellent scope for major surgery Nice corner house with good accommodation and pleasant garden Can be purchased or rented Very efficient Locum in charge

7 LONDON, WEST END—Very old-established good-class non dispensing and non panel PRACTICE held many years by Vendor who is selling owing to failing health Cash receipts for past three years average £3 123 p a Average visiting fee 10/6 up to 21/ No midwifery or night work Good family residence with ample accommodation, for sale Vendor's leasehold property Six months' introduction given Premium 1½ years purchase

8 LONDON SUBURB NORTH WEST—Very old established panel PRACTICE with better class connection attached and situated in a pleasant residential suburb Cash receipts over £2 800 including panel of 3 150 and transferable appt worth £70 Very good house with ample accommodation (7 bedrooms etc) Price leasehold (with 11 years to run at a ground rent of £15 p a) £1 500 Rent of separate Surgery on 21 years lease £52 inclusive Premium £7 000

9 LANCASHIRE — LARGE TOWN—Old established good mixed class PRACTICE held by Vendor for the past ten years Average gross cash receipts £1 458 Panel of 1 674 and several Insurance appts Corner house in very pleasant residential locality containing consultation room 2 waiting rooms dispensary 2 reception rooms 4 bedrooms bathroom kitchen etc Garden Garage Price for freehold £1 400 £1 000 on mortgage Good scope for increase

10 LONDON, NORTH—Old-established middle and working-class PRACTICE held by Vendor 11 years Average gross cash receipts £975 Panel of over 900 Fees from 2/6 Semi-detached corner house, in good condition with ten rooms and usual offices Separate entrance to professional rooms Price for leasehold £600 Premium £1 500

11 LONDON EAST—Middle and working class PRACTICE producing £1 000 p a including panel of about 1 100 Suitable small house with sitting room 2 bedrooms and attic waiting room surgery and dispensary Rent £52 p a Premium 2 years purchase

12. DORSET—Well-established PRACTICE in very pleasant town within easy reach of the coast Cross cash receipts over £1 000 of which about £400 is from panel Fees 3/6 to 21/ Opposition not strong Good house with 2 reception 5 bedrooms etc garden of nearly 3 acres Rent on lease £62 p a Premium £1 750

13 LONDON SOUTH EAST—Old-established better working-class PRACTICE in roaring and situated in well populated district Gross cash receipts for last 12 months £1 263 including panel of over 1 300 Suitable house with 2 reception and 3 bedrooms Garden Price for freehold £1 100 Premium £2 400

14 EASTERN SUBURB—Very old-established middle and working class PRACTICE worth about £1 100 p a including panel of 1 300 Very little midwifery House contains 2 reception 4 bedrooms etc separate entrance to professional rooms Small garden Garage Price for freehold £1 350 Premium 2 years purchase

15 EASTERN COUNTIES — FAVOURITE SEASIDE AND HOLIDAY RESORT—Good mixed-class PRACTICE established many years and producing for the last twelve months £1 600 Panel brings in £300 p a and an appt worth £100 p a Fees 3/6 to 7/6 with medicine extra Nice house, with 2 reception 5 bedrooms etc Garage Garden Price for freehold £2,250 Golf shooting and other sport Premium 1½ years purchase

16 PARTNERSHIP—In a well populated pleasant South Eastern suburb within ten miles of London the half share of an old-established mixed class Practice is for disposal owing to the retirement of the junior partner Held by the remaining partner 30 years Cash receipts average £2 765 p a. including panel of 1 800 and appts worth £150 Very little midwifery Pleasant semi detached corner house with ample accommodation garden Price leasehold (over 900 years at ground rent of £7 p a) £1,050 Premium 2 years purchase Scottish graduate preferred

17 NORTH EAST COAST—PARTNERSHIP—A one-half share is offered in an old established better middle class Practice, in suburb of favourite residential town Steadily increasing and excellent future prospects Cross cash receipts £1 700 Panel of 700 Fees from 3/6 Very nice house with 2 reception 4 bedrooms etc One acre of garden Garage for 2 cars Rent on lease £80 p a Sport of all kinds and good schools Premium for share 2 years purchase

18 MANCHESTER—Old established middle and working-class PRACTICE producing for the last twelve months about £650 including panel of 790 Fees from 3/6 Convenient house with 2 reception 4 to 5 bedrooms bathroom etc Rent on lease £60 Premium £950 to include furniture

19 SOUTH WALES—Beautiful country district within 4 miles of live town Small PRACTICE producing between £300 and £350 p a offering good scope Visiting fees from 5/ Very little midwifery or night work Well situated house with well kept garden containing 2 reception 3 good sized bedrooms and servants' rooms Electric light and gas throughout Garage Rent on lease £70 p a

20 CENTRAL LONDON—Middle and better-class PRACTICE, averaging for the last two years about £500 p a including small panel of 180 Fees 3/6 to 21/ Professional accommodation can be rented at £200 p a. Premium £300, to include furniture drugs instruments etc

21 SOUTH EAST LONDON—Good middle and working-class PRACTICE producing last twelve months nearly £950 Panel of 986 Suitable house, with 2 reception 4 to 6 bedrooms etc Rent on lease £70 p a Prem, to include drugs etc. and surgery fittings and furn £1 400

22 NORTH WALES—Old-established middle and working class PRACTICE, averaging for the last three years over £1 700 including panel of about 1,300 Fees from 2/6 Visits from 3/6 with medicine extra Suitable house with good professional accommodation. Electric light. Garage for two cars Small garden Rent on lease £100 p a Premium £2 500 £1 700 down balance by instalments Good sport etc. A knowledge of Welsh is not necessary

23 RIVIERA—Old-established PRACTICE the receipts from which have averaged over £1 600 p a but have decreased recently owing to Vendor's ill health Very good prospects of extension Fees from £1 1s Very easy work Suitable flat can be rented at £160 p a. Premium £4 000

ASSISTANTS REQUIRED—(1) BUCKS Better class Practice Indoor £300 p a or outdoor by arrangement (2) BRISTOL Outdoor £250 p a all found Scottish Graduate preferred and must be single (3) NORTHAMPTON Lady required Preferably Irish Graduate experienced in Midwifery (4) SOUTH WALES Indoor £300 p a Must be young Pref RC and able to drive car (5) NOTTS Indoor £250 to £300 Newly qualified (6) LFICS Outdoor £—) p a with rooms and attendance Must be single View to Partnership later (7) LONDON, EAST Indoor £300 p a

WANTED TO PURCHASE.

1 LONDON or MANCHESTER — Well established private and panel PRACTICE producing £1 200 upwards with nice house

2. BUCKS BERKS or near locality—Better class PRACTICE averaging about £1 500 p a, with good scope Panel not necessary Small capital for purchase of house and Practice

3 SOUTH OF ENGLAND—Good town with educational facilities Income £1 200 to £1,800 with substantial panel Fair size house with garden

4 SOUTH COAST TOWN or near locality—PRACTICE averaging about £1 500 p a with panel of 1 000 or thereabouts Small premium preferably on rental Capital available

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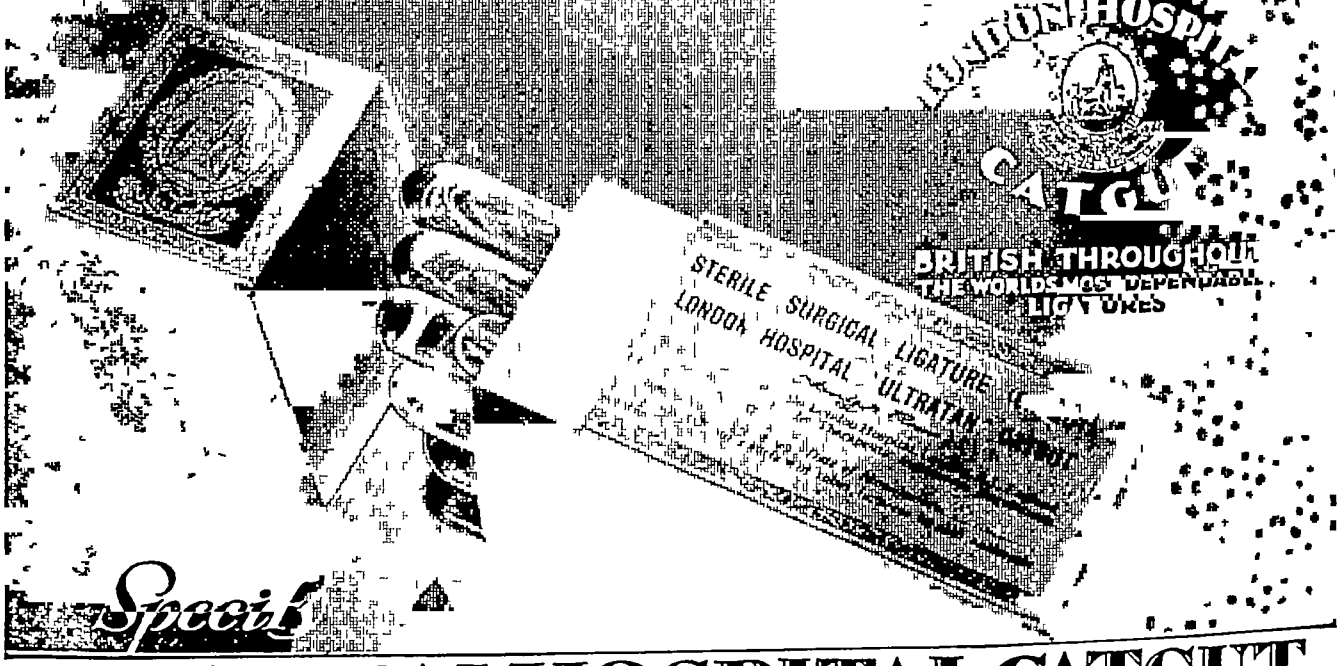

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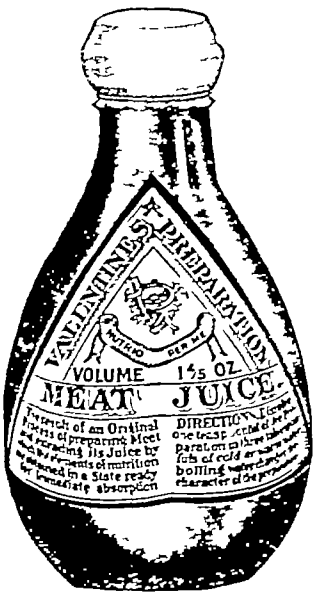

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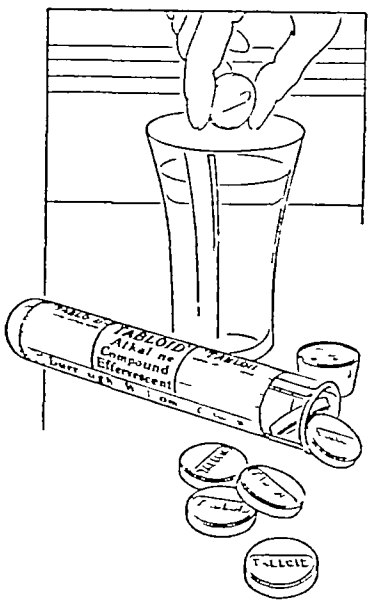

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A Paper
ON
PRACTICAL PROBLEMS IN PAEDIATRICS*

BY

A DINGWALL FORDYCE M.D. F.R.C.P.ED.
HONORARY PHYSICIAN ROYAL LIVERPOOL CHILDREN'S HOSPITAL

In medical practice every age has had its own peculiar difficulties and its particular problems to be solved in the advancement of science and the furtherance of the well-being of society. In no department of medicine are the problems of to-day more conspicuous than in paediatrics.

Consequent upon the founding of special hospitals for children about seventy years ago a vast amount of new knowledge has been gained concerning the diseases peculiar to children their prevention and their treatment. Many recent discoveries of prophylactic promise in general medicine have their greatest value in practice when utilized in infancy and in childhood. The dictum that prevention is better than cure is being forced on the nation as a practical proposition largely by the authority of members of our profession in official positions.

The evolution of democracy in our country has been powerfully influenced of late by financial and economic conditions. This evolution has on the one hand altered and to some degree levelled social status while greatly limiting financial resource and on the other has been associated with important fundamental changes in our hospital systems both voluntary and controlled. Both types of hospital are at the opening of a new page in their history and by combined work will have opportunities of benefiting children such as never before existed.

Finally with such development of conditions and of opportunities evidence has accumulated pointing to the need for alterations in the training of medical students so as adequately to fit practitioners to carry out paediatric and more particularly prophylactic paediatric work. These are important considerations for our attention.

DIETETIC PROBLEMS

The work of the Mellanbys Helen Mackay and others in this country and of workers elsewhere has opened a new chapter in paediatrics. We have attained a higher level of knowledge regarding phases of malnutrition in infants and in young children and for the time much of our attention has been attracted to vitamins and to mineral salts. We know much of the importance of vitamins and of iron for young children and we know that without them growth and nutrition suffer and infection readily occurs. Following these discoveries there has been put ready to our hand a very large number of agents by which these substances can readily be administered. From New Zealand to Toronto a wide selection of diets is offered us to choose from. We live in the vitamin era. But particularly necessary when dealing with infants and young children is it for us to remember that the discovery of vitamins does not vitiate previously ascertained scientific facts. No antipodean cream or other mixture can compensate for impaired digestion. The great majority of our babies are born healthy and will grow up strong if fed on simple food with such additions as will not interfere with digestion but may be necessary because of maternal or environmental conditions. Thus in the case of infants under our supervision we do not fear scurvy or rickets unless in markedly exceptional cases—for example coeliac disease. When we are faced with an early case of rickets the primary desideratum remains restoration of normal digestive power. Then we have to seek for our vitamin D—our proper salts percentage in the blood—our adequate supply of body calcium. To this end we employ irradiated ergosterol haliverol artificial sunlight—one or more or all—but we do not risk disturbed digestion by popular remedies or masses of fats or use parathyroid. Endocrine secretions are widely in use but it is however almost always wise to avoid such use if satisfactory results can be obtained by dietetic means. The administration of iron we know often has marvellous results in the cases of little children who are weakly but the advance in knowledge regarding the relation of copper and iron and the marketing of such combinations has greatly furthered our power of benefiting anaemic children.

It is impossible to avoid feeling that in some cases valour outruns discretion in the prescription of glucose. In our young days we heard much of carbohydrate indigestion later we faced acidosis as the popular complaint and it almost looks as if another swing of the pendulum were due before long. Diet and habit change with passing years reaction follows action and reaction often tends to be excessive. The discovery of the vitamin content of foods while clarifying our vision of health and disease sometimes induced dietetic indiscretion particularly in connexion with fatty foods and to-day in attempting to avoid the Scylla of excessive fat it sometimes looks as if there were danger of sailing near the Charybdis of excessive sugar. It is even possible to have too much of such a good thing as sunlight!

INFECTIONS AND IMMUNITY

As regards acute infections great advance has been made in recent years in the discovery of specific tests for susceptibility and in the production of immunizing agents.

In speaking of immunity we talk of a still largely unknown quantity and a specific test postulates knowledge of a specific infecting agent. Even in the case of diphtheria where the infecting agent is definitely known and both specific testing and immunization are proved in the mass to be of great value it cannot yet be claimed that the subject of individual reaction to test or immunization is fully understood. Still more doubtful is the position as regards scarlet fever and other acute infective fevers but progress along such lines has been very considerable and great hope for the future lies in its development. There are difficulties peculiar to each particular infection.

Of two outstanding conditions in one acute anterior poliomyelitis we know the virus but have extreme difficulty in getting sufficiently early clinical diagnosis as to render specific injection of great practical therapeutic utility while in the other rheumatic infection we have not yet an accurately determined specific virus nor despite many contentions an accurately defined clinical condition.

Flexner has recently written of the American investigations in which parental blood is injected intramuscularly with a view to prevent acute anterior poliomyelitis infection and has discussed the underlying theoretical basis for such action—namely that a widespread subclinical immunization of the adult population is constantly proceeding. The position is extraordinarily interesting and important and may prove to be a most valuable advance in prophylactic medicine.

PREVENTIVE TREATMENT

In all directions we can note the trend towards preventive treatment in medicine and with increasing clarity are the results of preventive activity and propaganda to be observed. The work of the paediatric physician is

* Read before the Hyde Division of the British Medical Association March 15th 1933.

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to-day to a considerable degree very different from that of twenty years ago Much of it still is, and obviously always must be, purely therapeutic in nature, but on the other hand the numbers are greatly increased of those coming both in hospital and in private practice, mainly for the purpose of prevention Diffusion of knowledge among the laity concerning the principles and practices of prophylactic medicine has been carried out persistently and with ever-increasing vigour The means employed, the methods adopted, and the nature of information given in the course of such lay instruction have often been open to very severe criticism, but the result to-day is the existence among the general public of a considerable superficial knowledge of medical terms, of symptom-complexes of the dangers of disease in childhood, and of theoretical methods of prevention and treatment In the mass the idea of prevention has come to hold a much larger place in the mind of the nation than heretofore, and, so far the diffusion of medical information among the public has been justified Buttressing such information are the obvious good results of preventive medicine —intensified since the war, but insistently pursued since the opening of the century In addition, enormous stimulus to prevention has developed through the provision of extended facilities for obtaining it—for example cheap or free milk provision, rest homes, convalescent homes free immunization, etc

Two intensive campaigns—anti-tuberculosis and orthopaedic—have been conducted during this century each having a fundamental object of wide sociologic import—namely, such development of therapeusis as to lead up to prophylaxis

In both instances important consequences have been the enfolding within "medicine" of many, if not all, of the mental and physical activities of the child for a prolonged period—possibly years Both the tuberculosis specialist and the orthopaedic specialist require complete control of the patient and with such environmental dictates scholastic education must necessarily be given an appropriate and special place Thus have been developed special residential schools for physically defective children and country hospitals with special schools By these means large numbers of children now have opportunities not only of regaining health and strength but at the same time of becoming both educationally and physically better fitted to face life

Of types of children most needing prolonged medical institutional care with schooling none is so outstanding as the rheumatic Forming this class are usually mentally alert children in whose cases early and prolonged care will commonly prevent the development of heart disease But treatment and special schooling, to be efficacious must be prolonged for years, and lacking such full care the chances of permanent improvement are greatly diminished Special care and medical supervision of rheumatic children in their homes can, however, certainly be associated with very satisfactory progress and the prevention of serious cardiac effects The most important factor in obtaining such satisfactory results is the presence of a good mother and by good mothering in this connexion one means such control and guidance of everyday affairs of life as will keep the child at the highest possible standard of health and immediately combat the commencement of illness

The subject of mothering leads to consideration of another aspect of paediatric work very intimately connected with family relationships and maternal care Originated in America there have of late years been developed in this country special clinics for "difficult children—child guidance clinics Here temperamental, mental and even moral peculiarities and difficulties are the outstanding features presented in the history, and the forms of "guidance" necessary may be very variable and referable to almost any factor in environment, but should always be prefaced by complete physical examination and the establishment of sound health Child guidance clinics are doing valuable work—work which often cannot otherwise be carried out—but detailed investigation at them should always be preceded or commenced by thorough examination by a paediatric physician as this may render further investigation unnecessary

Prior to the development of the school medical and infant welfare services in the early years of this century most of the environmental work immediately connected with medicine when carried out at all, was done by voluntary agencies, but of late years official prophylactic medical work under the guidance of the Ministry of Health and the Board of Education has increased enormously In connexion with both these services prophylactic work under the medical officers has steadily become wider in range and more intense in character Children to-day are cleaner, better clothed, and better fed than ever before Ante-natal clinics are now provided, not only for the purpose of safeguarding the mothers with regard to their forthcoming confinements, but also to secure that their dietaries shall be regulated so as to supply any deficiencies which might adversely affect the newborn baby

With the existence of ante-natal and child welfare clinics and their accessory activities a very extensive preventive system is in being Not only has the infantile mortality rate sunk greatly since the beginning of the century, but we see much less frequently the gross forms of various diseases Ordinary minor complaints are dealt with earlier, severe scurvy and rickets are becoming uncommon, florid congenital syphilis is almost rare

Disease is being dealt with at a much earlier stage, so that after-effects do not occur, or are minimized, and, consequently, there is an average higher standard of health for the bulk of the children and a greater likelihood of health in adult life than heretofore Undoubtedly some weakly lives are saved which previously would have been lost and whose preservation lowers the general standard But, while this is so, it is quite wrong to argue that too much to day is done for the poor child and that as a result the weakest stamina and poorest blood is being preserved For the acutely sick child it is impossible for too much to be done The prolonged care of subnormal children and the prophylactic care of those in average good health has resulted in advance in physique and a higher general standard of scholastic attainment than previously in spite of the saving of lives in earlier years The standard of physical health of young children has risen and is rising, and preventive medicine is showing definite results of national value As the child grows older medical, scholastic, and social attention continues to be focused upon him He is helped to avoid a great many of the serious medical and surgical dangers of childhood, special classes and special schools nurture him scholastically, child guidance councils and mental welfare associations are at hand to help him, and if he be certifiable as feeble-minded, particularly careful supervision is provided for him

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The existence of facilities for assistance through manifold agencies encourages a tendency not only to lack of discrimination and a loss of focused view on the part of parents but also not infrequently acts as direct incitement to wander from one possible source of aid to others Departmental medical work has extended from routine advisory examination to the treatment of disease and there has been great development in the notification segregation and care of large groups of cases in connexion with controlled institutions This has arisen in some respects overlapping and even competition in supervision and so far as medical instruction is concerned some degree of difficulty The present time is of course a period of transition and it is essential that in future the voluntary and the controlled hospitals should mutually co-operate and ultimately form a complementary whole subserving the interests and needs of all classes of society

Such would form a co-ordination within what may be termed pure medicine but beyond this is growing the recognition of need for a wider co-ordination in the completion of medical work There is fortunately an ever increasing spirit and practice of harmonious co-operation between medicine and education—the two are becoming closer and closer linked

THE WHOLE CHILD

Modern medicine teaches that health and disease in childhood cannot be considered apart from a purview of all the activities going to form the life of the child and that scholastic education and life at school have very important bearings on general well being The doctor recognizes the claims of education not only in providing nurture and a means of development of intrinsic value but he has also come to recognize that education when suitably modified and arranged is frequently of very great assistance in furthering the purely medical welfare of the child With knowledge of the various forms and types of education now offered must come active search for the best in any individual case and not only close collaboration with the educational authority but the proffering of expert advice The calls on medical knowledge regarding many environmental factors in the life of the child are increasing in latitude and in importance particularly with respect to psychological relations and reactions and in order to give authoritative advice and assume just responsibility the doctor requires expert knowledge and special training

It is being appreciated that prophylactic paediatrics is the basis of sound health and virility in the nation and that each individual child requires special individual attention Useful advice from a medical practitioner can only be obtained when he or she has received a full course of training in what is really a very large and distinct subject Thus he must learn not only something of the special characteristics of children in health and disease and of the special applications of modern medicine to them but also something of the scholastic mental and general environmental factors which powerfully influence their development and health At present the bulk of medical graduates receive no such comprehensive training and there are still various internal medical influences which militate against putting this into practice But such development surely will come and the path to it is already blazed

Along with proper instruction will come a readjustment of avenues of approach to the subject of child care and a more intimate collaboration of all agencies for the welfare of children The need for this is great—the opportunity seems at hand With lack of recognition that the medical care of children in health and disease is a great complete subject there has resulted in the past much difficulty in control and confusion in the practice of child care in the mass Even through such times of difficulty the beneficial results of the enormous amount of attention devoted to the welfare of children by the State corporations associations hospitals etc and by private individuals and parents has been marked But it has been incomplete through divided responsibility and it has often been so incoordinated as to involve unnecessary energy thought worry activity and expense

Surely now we can look forward to the dawning of a morrow when paediatrics will be recognized as a unit of the first importance in medicine and when pessimistic wailings with regard to the future ability and stamina of the nation will be conclusively refuted

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other hospitals and by county authorities, are also placed in this class, though most of these will have been sent with a definite diagnosis of tuberculosis, and presumably certified as such

Previous to 1922 most of the cases thus sent from St Thomas's to Pyrford would have been accepted as definitely tuberculous, but in the last ten years the number of "observation hips" has increased yearly Some of them do turn out to be tuberculous The percentage cannot, unfortunately, be ascertained from past records, since, when the diagnosis has finally been made, they have passed into the records as "tuberculous arthritis of the hip," and in some cases no record has been kept of the fact that there was at one time any real doubt as to the diagnosis

The figures for the years 1929, 1930, and 1931 for those in which the signs were sufficiently persistent for them to be sent for observation at Pyrford are as follows

Total number admitted as "observation hips"		25
Number finally proving to be tuberculous		3
During the same three years the number admitted as tuberculous in which the diagnosis has remained acceptable has been		21
The outcome and final diagnosis of the above twenty-five "observation hips" was as follows		
Finally proving tuberculous	3	
Subacute pyogenic arthritis	1	
Pseudocoxalgia	1	
Chondroma of acetabular roof	1	
Finally settling completely with a return of normal function—that is some form of transitory arthritis	19	
Total	25	

It is clear, therefore, that in a large proportion of these "observation hips"—actually rather over 75 per cent—the condition is transitory In the last ten years there have been at Pyrford altogether thirty-four such observation hips" that have settled down completely During the same period there have been admitted to Pyrford fifty-six children with early tuberculous arthritis of the hip In other words, besides these fifty-six, there have been thirty-four which might at one time have been regarded as splendid "cures" of tuberculous disease and it is probable that it is the inclusion of cases of this type with those of true tuberculous arthritis that makes the statistics of the end-results in tuberculosis claimed even to day by some authorities so favourable, and so much at variance with the results obtained by others [1 2]

REVIEW OF CASES

An attempt has been made to follow up these thirty-four children A complete "follow up" with clinical and *x*-ray findings to the end of 1932 has been possible in twenty-two instances, the average time since discharge from Pyrford being three and a half years The twenty-two children are made up of seventeen boys and five girls the average age at the time they first came under observation being 8½ years Two of these children, a boy aged 13 and a girl aged 14, had hysterical contractures of the hip Both had been sent to hospital by county authorities as tuberculous Under appropriate treatment both recovered completely One girl, aged 8, proved to be a congenital syphilitic, and later, when the hip had cleared up developed a transitory arthritis of the knee associated with periostitis about the lower end of the femur and ulceration of the palate Recovery on appropriate treatment was complete This child illustrates well the necessity for a routine Wassermann test whenever the diagnosis is uncertain The inclusion of children with hysteria and congenital syphilis in this series exemplifies a failure of diagnosis but serves to show the type of mistake that may arise if we accept too lightly a diagnosis of tuberculosis

All the remaining nineteen children, when first seen at an average age of 7½ years had limitation of movement at the hip joint by spasm, and a limp The average period of persistence of symptoms before admission to hospital was five weeks In only seven had pain in the hip been a cause of complaint In only six was pyrexia present when they were admitted to hospital, and in only one did this persist for more than four weeks The average time during which muscular spasm persisted after admission was six weeks, the longest being eleven months, but the majority showed some slight limitation of full range for a further period varying between one and three months Thereafter there has been no return of symptoms in any of the nineteen, nor is there any resulting *x* ray abnormality These children have all been on full school and games since leaving hospital, and those that have left school are now at work when they can obtain it The average period since discharge has been three years In the examination of several of these children years after the cessation of all signs of the arthritis the thigh on the side once affected was found to be half to three quarters of an inch less in diameter than the thigh on the other side Presumably this frequently occurs when wasting has been present for a time during a period of active growth

AETIOLOGY OF TRANSIENT ARTHRITIS

In these nineteen cases it seems we are dealing with a true transitory arthritis of uncertain origin It is interesting to speculate upon the underlying causative factors The possibilities are as follows

A *Trauma*.—In no instance was there a history of definite and closely related trauma, but in four cases there was a vague story of a fall weeks or months before No *x* ray evidence of bone injury was present in any Trauma might play a part without bone injury visible by *x* rays in three ways (1) traumatic synovitis—the result of contusion or strain, (2) traumatic osteochondritis—from injury to articular surfaces, and (3) juxta epiphyseal strain—a term used fairly frequently by some writers, but not easy to define unless it is taken to imply the incipient stage of a slipping of the epiphysis as in adolescent coxa vara The age of these children—the average was 7½—was not one at which adolescent coxa vara was likely to occur, and there was no *x*-ray evidence of this condition Trauma, therefore, may have played a part, but in the absence of a history is unlikely as a predisposing factor in the greater number

B *Infection*.—This might be either (i) a low grade infection entering the blood stream and localizing primarily in some part of the joint, presumably most often an epiphysitis, or (ii) a metastatic infection from some other focus Slight pyrexia occurred over a few weeks in six cases, but in the majority the temperatures were normal Blood examinations were not carried out Any primary infection of the joint must have been of very low grade, as no destruction took place and recovery was complete With regard to a metastatic infection we have more suggestive evidence One boy, aged 11, had septic tonsils, and had had a sharp attack of tonsillitis shortly before the onset of symptoms in the hip Probably this was a metastatic infection from the throat Another child a girl aged 7 had had both measles and scarlet fever immediately before the hip became troublesome and a boy aged 9 had just recovered from measles

Arthritis of the hip is recorded after measles, influenza pneumonia and typhoid, and, according to the Metropolitan Asylums Board Reports from 1901 to 1909 some transitory joint symptoms occur in 3·5 per cent of all cases of scarlet fever [3] It is probable that the catarrhal condition of the nose and throat commonly associated with the acute fevers of childhood may have been the

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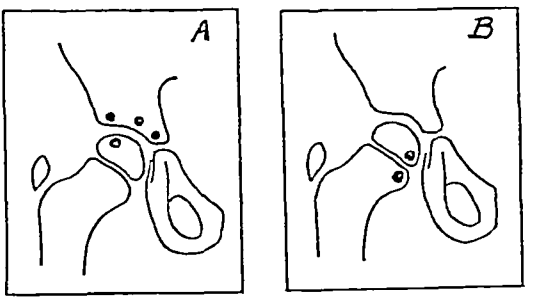
site of an infection of low virulence and that metastatic spread from this caused a transitory infection of the hip-joint in these two children. One boy aged 6 with fixation of the right hip-joint by spasm of all the muscles about the joint developed an acute appendicitis in a retrocaecal appendix two weeks after coming under treatment. It is possible that this was a misdiagnosis—spasm—in part voluntary—of other muscles being added to spasm of the psoas due to irritation from a grumbling retrocaecal appendicitis. Fixation of the hip-joint by psoas spasm is however generally easy to differentiate from the fixation by spasm in an arthritis and it is possible that this was rather a low grade metastatic infection of the joint from the infected appendix especially as the joint symptoms were already improving before the onset of the acute appendicitis and did not again increase with the attack. Following appendicectomy recovery from the appendicitis was uninterrupted but slight limitation of movement at the hip with a limp took two months to disappear. One other boy aged 6 had had some illness lasting only a few days called at the time rheumatic fever a month before the onset of pain in the hip. None of these children showed anything to suggest that they had ordinary rheumatic fever. No other joints were affected and there was no evidence of cardiac lesions. To exclude possible omissions of observation a search was made of the *x* rays of all these cases for an osteochondritis of the ischiopubic junction or an osteochondritis dessicans of the femoral head. No evidence of either condition was found.

Excluding therefore the four children with some history of trauma and the five with a possible distant infective focus we are left with thirteen in which we have no hint of the origin of the lesion. On the whole an infective process is the most likely and the most probable form of this would seem to be a transient epiphysitis never sufficiently localized and well defined to show changes in the bone in an *x* ray film.

Arthritis From Adjacent Infection

In a general consideration of transitory arthritis of the hip there is one other type which must be mentioned. This is the arthritis associated with a well-developed and localized infective cavity in one or other bone close to the joint without a true spread of infection to the joint itself. Reactionary joint symptoms are present probably the result of synovial effusion and before the cavity is well defined by *x* ray the clinical picture is that of an observation arthritis but if the course of the infection is favourable the cavity will become well defined and will later heal soundly and the joint will again become completely normal. Probably many of these infective bone cavities in children are tuberculous and are potential centres for the spread of infection to the joint itself. The likelihood of such a spread early in the disease depends largely upon the situation of the focus. Should it lie in the acetabular roof or the upper part of the femoral head (see A in Fig.) the trauma of weight bearing will lead to an early spread to the joint and it is probable that many cases of tuberculous arthritis in childhood originate in this way. Thus we frequently see in cases of tuberculous arthritis which are becoming quiescent localized foci in the acetabular roof becoming outlined by the deposition of calcium though in the early stages their outlines were lost in the intense calcium absorption and their presence perhaps not appreciated. When the focus lies on the under surface of the femoral head and neck (see B in Fig.) the outlook for the joint itself is comparatively good. Under treatment the cavity may heal soundly and the joint become once more normal though subsequently a coxa vara deformity is very likely to develop. In one of our cases there was no sign of this deformity until after sound healing weight bearing had taken place for over eighteen months.

In the ten year period under consideration there have been seven such children under treatment at Pyrford with such localized bone infection probably tuberculosis at the under side of the head and neck of the femur. Two of these were watched as observation hips before the cavities could be defined by *x* rays but have not been included among the thirty four already mentioned. Treated as tuberculous arthritis of the hip on conservative lines six of these escaped without joint infection. The seventh escaped joint infection for the time being but a year after discharge developed an



area of destruction in the acetabular roof with subsequent spread to the joint. It would be desirable to eradicate this area of infected bone to prevent a possible spread to the joint. Whether this can be done surgically without encroaching on the joint depends upon the exact limits of the bone abscess but drainage via the trochanter and neck of the femur should be possible and may restrict spread of infection to the joint itself.

It seems therefore that a transitory arthritis of the hip-joint in childhood is common. There must be many that are never brought for examination whereas all children with tuberculous arthritis come sooner or later so that we cannot truly gauge the comparative frequency of the two conditions by comparing the numbers treated in hospital.

Diagnosis

A transitory arthritis is the most difficult differential diagnosis from a commencing tuberculous infection of the joint. Clinically the two may be identical and remain so for days or even weeks. The *x* ray is negative in a transitory arthritis—except in the type due to a well defined neighbouring bone focus—but a negative *x* ray does not absolutely exclude tuberculosis. As a matter of fact the *x* ray is seldom absolutely negative in tuberculous arthritis when first brought for examination. Of the fifty-six children coming under treatment for early tuberculous arthritis of the hip at Pyrford in the last ten years there was only one whose *x* ray at that time was absolutely negative. All the others showed bone atrophy about the affected joint most of them with loss of the joint space as well and many with bone destruction already progressing.

It is perhaps needless to point out that in an early arthritis with only slight bone atrophy a really good *x* ray showing both hip-joints for comparison is essential and interpretation of the plate is useless unless made by one accustomed to the appearances in early tuberculosis. With a completely normal *x* ray however the odds are heavily in favour of an observation hip being a transitory arthritis rather than tuberculous. The earliest stages of a virulent pyogenic epiphysitis or pyaemic joint may show a negative *x* ray but the differentiation of these from a transitory arthritis of the type we have been considering cannot be long delayed on both clinical and *x* ray grounds. It is unnecessary here to discuss in detail the differential diagnosis between a transitory arthritis and pseudocoxalgia. The clinical examination combined with the *x* ray picture is usually conclusive. Very seldom will the *x* ray in pseudocoxalgia be so near to the normal that differentiation from a transitory arthritis will give rise to difficulty. All doubtful cases of arthritis in childhood must be watched very carefully and treated with the

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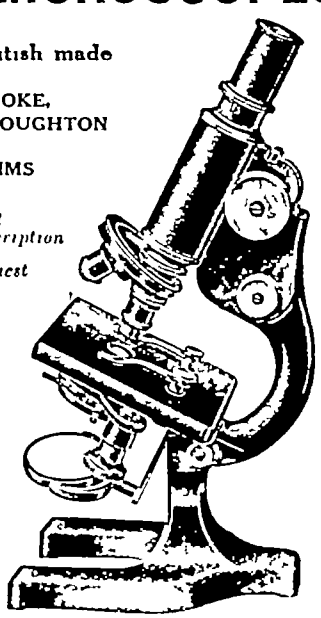

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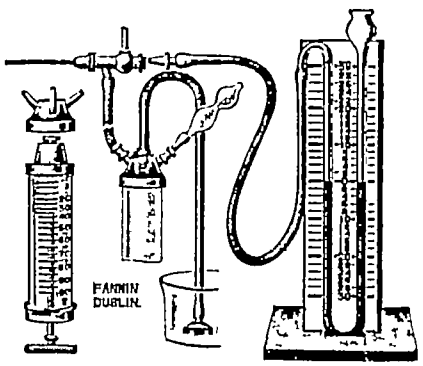

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respect due to an arthritis that is likely to be progressive Time alone will then solve all doubts of the diagnosis In the meantime, they must be considered in a class by themselves " for observation "

SUMMARY

Fifty-six of the ninety-seven cases proved to be tuberculous

Thirty-four were suffering from a transitory arthritis only without any abnormality being shown by x rays at any time

Seven had a transitory arthritis as a reaction to a localized bone infection near the joint, without true joint infection

A transitory arthritis without x-ray changes is common in childhood, and is frequently diagnosed wrongly as tuberculous

Sometimes it may be traumatic in origin but more often it is infective, the infection being often secondary to a focus elsewhere in the body

The prognosis of this transitory arthritis is excellent A follow-up of twenty-two cases for an average period of three years has been given

A transitory arthritis is the most difficult differential diagnosis of tuberculous arthritis of the hip in childhood Its differentiation from tuberculous and other types of arthritis is discussed

I am indebted to Mr W Rowley Bristow for permission to describe these cases all of which have been under the care of the orthopaedic department of St Thomas s Hospital

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DYSPEPSIA AND ITS SURGICAL SIGNIFICANCE

BY

JOHN J ROBB, *M C*, M B, F R C S Ed
CONSULTING SURGEON COUNTY OF ZETLAND

It can scarcely be said that the present position of surgery in relation to the dyspepsias is either defined or satisfactory, nor is it likely to improve until the surgeon is given a clearer interpretation of the physiological eventualities which culminate in distortions of the metabolic processes Symptomatic classifications, together with chemico-physiological abnormalities, provide the therapeutist with material to work on, but the surgical craftsman requires further information if he is to restore function to normal He must know the changes that result in symptoms, and why these changes take place When he has determined why, he is in a position to decide whether or not surgical intervention is of avail It is not enough to correct the changes and trust that the reason for their being may disappear

In this article I purpose to set out, shortly, my findings when I endeavoured to discover why changes in the mechanical metabolic processes take place, and where surgery may be applied as a corrective

INVESTIGATION

To study the behaviour of the intestinal tract in chronic dyspeptics I adopted the simple method of *x* rays and opaque meals In old-standing cases the changes seen proved very constant In cases of short duration the changes were less marked, or only intermittently present As I became familiar with these changes they were to be seen not only in simple dyspepsias, but also in cases complicated by peptic ulceration

The stomach varies from the hypersthenic type to the completely asthenic Its rhythmic propulsive action remains constant, but changes from forceful in the former to tired and sluggish in the latter The ultimate purpose of the stomach, that of evacuating its contents towards the duodenum, is to a varying extent thwarted by disturbed pyloric function This difficulty is at first overcome by increased tonus in the stomach, but frequently this tonus later fails and evacuation is rendered slow The chemical balance on either side of the pyloric sphincter clearly ceases to be its controlling factor The duodenum may appear normal or become distended There is delay in the passage of contents along the small intestine, and barium is held up in the lower ileum Dilatation and often prolapse of the caecum is present, most marked in cases of long standing

EXPLANATION OF FINDINGS

From evidence collected and given in the *British Journal of Surgery* (1932, p 634), I think it is clear that these stomach and bowel changes seen in the chronic dyspeptic are due to abdominal sympathetic activation Such activation results in junctional sphincteric spasm or hypertonus, with relaxation and delay in the remainder of the bowel These changes reduce bowel activity, and thereby protect any lesion within the peritoneal cavity

If one realizes that in the majority of dyspeptics the departure from normal in bowel function is due to sympathetic excitation it then becomes imperative to elucidate the various causes of this excitation In the aforementioned article I have shown that inflammatory lesions in relation to the abdominal peritoneum are causal agents, and experimentally it has been demonstrated by Alvarez, Mahoney, and others that chemical irritants to the peritoneum produce similar results Further, I have noted that mechanical irritants such as intraperitoneal bands may result in a like syndrome Lastly, it would appear true that chemical changes in the blood composition septicaemias, and toxaemias may produce abdominal sympathetic excitation, not by any direct action on the nerve centres or trunks, but reflexly by their irritant and congestive effects on the abdominal peritoneum

In investigating cases I have found the primary causes of sympathetic excitation in dyspepsia, in order of frequency, to be (1) appendix disease, (2) disease of the uterus and appendages, (3) dental disease (4) intra-abdominal bands and adhesions, (5) abdominal adenitis with and without mesenteric contractions, (6) renal insufficiency, (7) nasopharyngeal sepsis, or other source of chronic sepsis Finally, there is a small group of cases where I have failed to demonstrate any lesion and I class these as being due to primary sympathetic instability or to some endocrine abnormality

CLASSIFICATION OF DYSPEPSIAS

With this interpretation it now becomes possible to separate dyspepsias into two main groups—primary and secondary The primary dyspepsias are medical the secondary are entirely reflex, and, apart from certain ones that are renal in origin, are therefore surgical The secondary dyspepsias, for diagnostic purposes I subdivide into (1) reflex septicaemic dyspepsia, and (2) reflex abdominal dyspepsia

Reflex Septicaemic Dyspepsia.—I use this term merely because it suggests that the reflex sympathetic upset has resulted from a general condition The principal reasons for the presence of this general toxaemia or septicaemia appear most often to be dental and nasopharyngeal sepsis renal inefficiency or insufficiency, and any other source of chronic sepsis The method by which the abdominal

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sympathetics are disturbed by such lesions is somewhat obscure A recent case of profound haemolytic streptococcal septicaemia from a finger wound which came under my care demonstrated the violence with which the abdominal sympathetics may be disturbed Extreme gastric discomfort with vomiting was present marked duodenal soreness was followed by the real pain of ulceration then haematemesis and melaena The abdomen became still and almost rigid It is significant that a general peritoneal congestion with effusion is present in such a case It may be therefore that a congestive irritability of the peritoneum is readily induced by milder degrees of septicaemia and toxaemia and reflexly a sympathetic excitation is induced My attention has been drawn to an article by Beattie in the *Journal of the Canadian Medical Association* (March 1932) in which he traces an afferent connexion between the olfactory tract and the supra optic nucleus of the diencephalon Certain cells in the latter when stimulated produce hyperaemic areas at the pyloric end of the stomach It may be that nasal lesions produce dyspepsia in this reflex way Again it appears to be the effect on the peritoneum of changes in the blood chemistry which result from insufficiency in urinary excretion that produces sympathetic excitation in such cases When renal insufficiency is present it is well to remember that varying degrees of this condition may be produced by as well as produce a sympathetic activation Though the exact method by which toxic and chemical blood changes result in dyspepsia may yet be uncertain the recognition of the fact that they do so greatly assists in the investigation and relief of such a case

Reflex Abdominal Dyspepsia.—Under this heading I include all dyspepsias secondary to an abdominal lesion The absence from my list of lesions of the gall bladder may appear somewhat conspicuous I omit this group because the present study has led me to the belief that this organ becomes affected secondarily to sympathetic disturbances Its innervation tends to confirm this belief It remains apparent however that when gall bladder disease has extended so as to involve its peritoneal covering the organ requires to be dealt with

THE APPLICATION OF SURGERY

This suggested classification simplifies the sorting of dyspepsias for treatment Those amenable to surgery should first be eliminated If the case is of the reflex septicaemic type I have seen no harm in dealing immediately with the source of trouble whether it be a tooth or a prostate In dealing with the reflex abdominal type where the cause of reflex excitation is symptomatically clear there seems no reason why it should not be immediately eradicated Where no reflex exciting agent is discoverable it is neither justifiable to classify the case as a primary one nor is it good surgery to perform immediate laparotomy in the hope of finding a possible cause Dealing with such cases has brought me to this latter belief

I have found that just as peptone or other shock may nullify sympathetic activity for a period of two weeks to two years so also will a surgical operation If however the operation has failed to eliminate the exciting cause or if the case proves to be other than reflex abdominal symptoms more distressing than ever previously will sooner or later return It is evident also that the most constant dyspepsias are those where sympathetic excitation is always present and its cause in consequence most perfectly protected and free from localizing symptoms In such a case where the condition is long standing one is driven to the belief that a state of sympathetic activity has become the normal and no surgical intervention can be of avail until a reversion to the original state of quiescence has been secured In every case of dyspepsia with no clear reflex exciting cause I approach treatment by as far as possible restoring bowel function to normal This means undoing the protective sympathetic reflex exposing the exciting cause and rendering it the chief source of symptoms

Those who have essayed the reversion of sympathetic excitement to quiescence by therapeutic measures know how extremely difficult and delicate the task may be I have confined my own attempts to the use of atropine MacLean's alkaline method and finally to the bromides Atropine I abandoned because the dosage required to obtain results always produced the disturbing general symptoms of that drug and could not be continued MacLean's alkaline treatment is often unsatisfactory in that it will only produce results so long as the reflex exciting cause of the dyspepsia remains quiescent It acts by falsifying the normal physiological state of the stomach contents so that stomach function is quietened and the acid alkaline balance reflex being destroyed the physiological necessity for the protective reflex to the pyloric sphincter is hidden With no direct action on the sympathetic reflex arcs very careful dosage diet and rest are usually all required over a prolonged period I sought a simpler and more efficacious method through the medium of the bromides Massive doses over short periods as suggested by some workers did not fulfil the purpose I wanted as time was obviously necessary to bring up the offending lesion and to stabilize the abdominal sympathetics in a state of quiescence I found however that small doses given with an almost chloride-free diet acted and could be given over prolonged periods with no general symptoms To the bromide I added the heavy carbonate of magnesium mildly to re-establish the normal intrinsic forward peristaltic action of the bowel and later to ensure calcium to reduce the irritability of the autonomic system and to act also as an alkali in the stomach I introduced calcium carbonate Much more uniform results were then obtained and finally a tablet was produced which rendered treatment simple and satisfactory The tablet contains 3 grains of sodium bromide 7 grains of mag carb pond and 5 grains of calc carb

This is given with or without diet depending upon the ease or difficulty that is experienced in restoring function to normal I have frequently found it wise to eliminate from the diet strong forward peristaltics such as red meat Function is restored to normal when the patient is clinically free from symptoms and the bowel is acting at least once a day The tablet is so arranged that this result is obtained by giving two of them three times daily I have not had to exceed three By this method the reflex exciting cause of the dyspepsia may become apparent without a renewal of dyspeptic symptoms

SURGICAL INTERVENTION

When localizing abdominal symptoms make it reasonably apparent why a dyspepsia had been present I do not deem it wise immediately to operate The more obstinate and long standing the dyspepsia has been the longer I prefer to delay operation and in consequence the better the final result seems to be It has not been my experience that even where the appendix is the offending lesion it is in immediate danger of an acute flare up I have however removed a gangrenous appendix as early as four weeks from the institution of treatment and as late as fourteen months in old standing dyspeptics where prior to treatment there had been no sign of appendix trouble

To clear up old-standing cases entirely not only must the exciting cause of the sympathetic activity be removed but the remote effects may also require attention Organic pyloric stenosis demands a gastro-enterostomy stomach

contractions from healed ulcers may require remedial operative measures, and duodenal dilatation may require improved drainage Evacuation of the advanced asthenic stomach in the erect position is greatly facilitated by the application of a suitable abdominal support and pad

CONCLUSION

I have attempted in this investigation to obtain a better understanding of dyspepsia, and from my findings to evolve for the surgeon a useful classification I have then tried to indicate how and when surgery is best applicable as a means of remedy

I am greatly indebted to all those who have assisted me in this work and in particular to Dr G D Roche of Scalloway whose careful treatment and observation of cases was of great help I am also grateful to Parke, Davis and Co who undertook the tedious work of repeatedly producing the tablet till a satisfactory one was obtained

VASO-DILATOR EFFECTS OF THE PNEUMOGASTRIC NERVE

BY

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The subject of the nervous control of the abdominal and pelvic viscera is one upon which many different opinions prevail Of the various problems connected with the question that concerning the vascular changes determined by the vagus nerves is one which, at first sight, may seem to be mainly of physiological interest In reality it is of much importance from a clinical standpoint, and for this reason a clinical journal is now chosen for a brief discussion of the subject with a view to developing the theme further in a subsequent paper The direct method of approach to a solution of the question of vagal function—that is by stimulation of the trunk—has been freely employed in determining vagal influence on the digestive mechanisms, its effect on blood vessels being for many investigators a more or less secondary consideration Hallion and François-Franck Bunch, Masuda, and a few others have observed the changes in blood vessels due to direct vagal stimulation, but very little definite information about them is to hand Kiss, McSwiney, and other workers have been concerned with the question of vagal influence on gastric and intestinal muscle, while Gayet and Guillaumie, and Tournade with his co workers, are recent investigators of the pancreatic and renal functions of the nerves

An important feature of the problem is the extent to which sympathetic and parasympathetic systems communicate with each other Simple dissection is not adequate for the purpose of disclosing fine and intricate connexions , evidence of these is often best revealed by physiological and pharmacological tests I have made a study of the vascular reactions and incidentally of the intestinal and gastric effects resulting from electrical excitation of the subcardiac vagus The blood pressure was recorded from the carotid artery and the gastric and intestinal contractions by a balloon-tambour system The vagi were reached in chloralosed dogs through the diaphragm from below, with the use of artificial respiration in a few instances the chest was opened through the sternum The nerves were severed on the lower end of the oesophagus each peripheral part being placed on shielded electrodes and excited by galvanic and faradic currents of different strengths Some of the salient features of the results obtained are given below but the records to illustrate them are being kept, owing to restriction of space for a later publication

The effects of stimulation with a fairly strong current were in about two thirds of the experiments (thirty in all) an initial phase of hypertension lasting ten to fifteen seconds and a subsequent phase of hypotension lasting twice as long and measuring 20 to 40 mm Hg in some cases the reaction was purely hypotensive Generally speaking this response was much the same for both nerves Some care was necessary to avoid stimulation of cardio inhibitor fibres which seem to leave the main trunk sometimes at a very low level a strong stimulus applied to these fibres may cause fibrillation of the ventricles The vascular reaction was not annulled by atropine in doses which completely abolished the response of the cardio inhibitor vagus in the neck Atropine is the classical paralysant of parasympathetic elements and its failure to modify hypotensive elements in the vagus trunk suggests that these are not of parasympathetic nature an inference which is further supported by the failure of parasympathetic stimulants such as acetyl choline and pilocarpine to intensify the reaction The intestinal and gastric contractions on the other hand—that is increased contractions on stimulating the vagi—were abolished by atropine thus showing the true parasympathetic nature of the fibres concerned this finds support in the augmentor effect on them of acetyl choline and pilocarpine The dose of atropine employed was 0 7 mg per kilo which gave a positive result in several experiments Bayliss and Starling seemed to think that atropine did not paralyse the motor intestinal fibres of the vagus but the observations made in the present experiments indicate abolition of the effect with strong doses

What is the type of fibre in the vagus trunk subserving the vascular function referred to? The answer suggested is that it belongs to the sympathetic system To test this I have used sympathetic paralysants—namely ergotinine citrate, ergotoxine, and yohimbine Each of these injected intravenously had the effect of abolishing the hypotensive reaction Large doses were necessary—for example several centigrams of ergotinine citrate which is active because of the ergotoxine it contains pure ergotinine is said to be inert Ergotinine citrate in doses of 1 cg or more causes a rise of blood pressure in large doses it causes a fall, and this must be produced to ensure abolition of the vagal response The dose of yohimbine which definitely annulled the reaction amounted to more than 1 mg per kilo It is therefore justifiable to conclude that fibres of sympathetic nature whatever be their anatomical connexion, exist in the vagus trunk for the control of the calibre of certain blood vessels Non medullated fibres of sympathetic type have been described in the vagus by various observers who have ascribed different functions to them Kiss and his co workers attribute gastric motor functions to them, but the result obtained by administration of atropine, which annuls this influence, is opposed to that view

An important feature of the pneumogastric reaction of hypotension is the modification produced in it by section of the splanchnic nerves These nerves were cleaned and stout threads placed under them so that by tugging on the threads they were instantly ruptured The depressor phase of the vagal reaction was in several experiments suppressed or greatly diminished when this was done suggesting that the depressor fibres passed from vagus to splanchnics somewhere about the diaphragmatic level But there are other possibilities which must be considered The vagus is easily fatigued, and a stimulus tends to lose its effect by repetition In a given case it might be said that the splanchnic section was a mere coincidence the true cause of failure to react being fatigue Due precautions were taken to eliminate this source of fallacy and there is no doubt that fatigue must fail as an explanation in certain tests Further the mechanism of vagal hypotensive influence may be the neutralization of splanchnic tone The effect of central vaso constrictor tone is of course, cut out with section of the nerves and vagal impulses should, if this mechanism be the one played on

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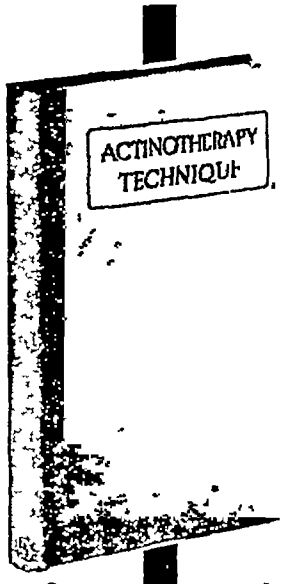

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lose their seat of action However it is a common obser vation that arterial pressure which drops by 25 or 30 mm Hg at the moment of section soon regains its former level and vagal excitation is ineffective to lower it Nevertheless it may be that splanchnic tone is the point of vagal purchase the secondary or subsidiary tone which replaces it being immune to vagal influence

A more serious objection to accepting the view of trans ference of elements to the splanchnic trunk is that the vagal hypotensive reaction abolished by splanchnic sec tion occasionally shows a tendency to restoration after a time a fact which suggests fatigue as the cause of the phenomenon But fatigue was almost certainly excluded in some cases where the phenomenon occurred Another consideration is that trauma must be great when the splanchnics are cut Slight traction or pressure on the intact nerves produces convulsive twitches which indicate a very sensitive structure and the shock of rupture may cause a depression of peripheral as well as central excit ability Whatever the explanation splanchnic section which gives rise to increase of the intestinal and gastric muscle contraction following pneumogastric excitation causes in a large proportion of experiments a depression or even abolition of the vascular hypotensive reaction to this excitation There are good reasons for the view that the pneumogastric nerve contains sympathetic fibres and it must seem strange that it should receive these only to restore them to the sympathetic system for final dis tribution While we cannot affirm that this is the case we cannot assert that it is not so further work is necessary to determine the point The splanchnics were divided in the first instance with a view to demonstrating the possible transference to them of intestinal motor fibres from the vagus since it had been found in previous work that excitation of certain bundles from the splanch nics caused increased intestinal activity Splanchnic section however far from diminishing this activity has an augmentor influence on it eliciting spontaneous movements and increasing the effect of vagal stimulation This observation points to the absence of motor communi cation

It is important to ascertain the seat of the vaso-dilatation resulting from pneumogastric excitation and efforts have been made in this direction by taking plethysmographic records of the kidney intestine spleen and the limbs Since the demonstration by Kuré Hasama and others of vaso-dilator nerves coming from different spinal segments it was thought well to test the limbs for enlargement although it was unlikely that a vagal supply to them existed The splenic and intestinal volume did not show any significant alterations the variations in these parts were mostly passive in relation to blood pressure changes The small portion of gut however which is introduced into the oncometer does not necessarily reveal what may be occurring in other parts It is quite possible that a vagal control of mesenteric vessels may exist without a uniform distribution of vascular elements The renal reaction showed some differences in individual animals A marked vaso-constriction was observed after the vagal stimulation in two experiments This was soon followed by enlargement of the viscus but the renal spasm was synchronous with the fall in blood pressure and still occurred when this was compensated In two other experiments some degree of expansion of the kidney co-incided with the depressor phase of tension but a general feature of the renal change was alternation of expansion and contraction for some time after stimulation more or less independently of the blood pressure Tournade described a renal shrinkage as a result of pneumogastric excitation which he ascribed to increased production of adrenaline In the present experiments the latent period of the early constrictor effect was too rapid to be accounted for in this way The liver and stomach of which the changes of volume were not recorded remain as possible regions where the vascular change could occur

It will suffice to state that the records obtained in the work and held over for publication provide clear evidence of the chief point in the contribution—namely that there exist hypertensive and hypotensive fibres in the vagus trunk the latter particularly being paralysed by ergo and yohimbine and unaffected by atropine They are conse quently to be considered of sympathetic type

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THE SPHYGMOMANOMETER IN THE DIAGNOSIS OF CARDIAC IRREGULARITIES

BY

MAURICE E SHAW M D M R C P

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The clinical differentiation of cardiac arrhythmias has been much simplified as the result of electrocardiographic studies of the mechanisms involved but there are always certain cases in which a definite diagnosis is impossible without the aid of some means of graphic registration It is probable that no method except the graphic will ever be devised which will serve to distinguish with certainty between auricular fibrillation and those cases of frequent extrasystoles (more particularly those in which premature beats of both auricular and ventricular origin are present) which give rise to a complete dis-organization of ventricular rhythm

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It is common knowledge that the systolic pressure is remarkably inconstant even in the same individual Not only does it vary from day to day but from minute to minute and even from beat to beat Other factors remain ing constant the maximum arterial pressure achieved by any beat will depend upon the strength of the ventricular contraction Where such contractions alternate in strength there will be alternation of maximum (systolic) pressure This is as a rule quite easily recognized with the manometer A variation of 5 mm of mercury

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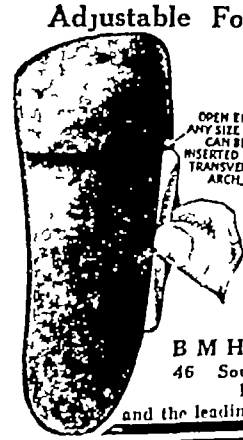

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between the beats can certainly be recognized with ease and smaller variations might be distinguished if the possibility of alternation were borne in mind when the blood pressure was being taken If alternate beats reach a different systolic pressure the audible number of beats will be halved as soon as the pressure in the cuff exceeds the lower of the two maximum pressures When all the beats have been obliterated by inflating the cuff to a pressure higher than the higher of the two systolic readings the halved rate will again be heard on deflation until the pressure in the cuff falls below the lower of the two systolic readings

The pulse tracing is the only other method which can be relied upon to detect alternation of the pulse, and this is not likely to be used unless the condition is suspected Small differences in systolic pressure cannot be recognized by palpation, and the electrocardiogram may be normal in spite of alternation Every cardiac case is (or should be) investigated with the sphygmomanometer, and if the possibility of alternation is not forgotten few cases, where this type of arrhythmia is persistent, should be missed It must be remembered that alternate strong and weak beats may be due to extrasystoles alternating with normal beats In such cases there will be a disturbance of rhythm which will not, as a rule, be difficult to recognize, although the halving of the pulse rate will be observed as soon as the pressure in the cuff of the sphygmomanometer is sufficient to obliterate the beats due to the extrasystoles

A study of the pressure relations of individual pulse beats is sometimes helpful in determining the cause of other forms of arrhythmia Auricular fibrillation can often be diagnosed with confidence by palpation of the pulse and apex beat If the blood pressure is taken in such cases it is found that the systolic pressure is impossible to estimate in the ordinary way, the first beat that is heard on deflating the cuff is usually an isolated one, and it may be necessary to reduce the pressure in the cuff by 20 or 30 mm before the number of beats heard bears any relation to the charted pulse rate If the cuff is held inflated at the pressure at which the first beat is heard only two or three beats a minute may be heard As the cuff is *slowly* deflated the number gradually increases, and it is possible to get some idea of the variations in systolic pressure between the biggest and smallest beats The complete disorganization of ventricular rhythm is suggested by the fact that the *sound* of each beat varies, even though the pressure in the cuff is kept constant And the number of beats which get through at a given pressure of the cuff bears no sort of relation to normal cardiac rhythm

In some cases where frequent extrasystoles closely simulate the arrhythmia of fibrillation careful attention to the rhythm heard with the cuff of the manometer partially inflated may give a clue to the true source of the ventricular irregularity Ectopic beats of ventricular origin do not as a rule disturb the dominant rhythm of the heart These beats can be excluded by raising the pressure in the cuff to a point just below the pressure generated by the normal beats The equal spacing of the remaining (normal) beats can then be recognized with a fair degree of certainty The method cannot be as accurate as measurement on a pulse tracing, but I have been able on several occasions to diagnose correctly the presence of extrasystoles in patients who have previously been thought to be suffering from fibrillation, and in whom palpation of the pulse and apex beat had certainly suggested the latter condition Where the ectopic beats are of auricular origin there is usually interference with the dominant rhythm, and the distinction is less easy if the abnormal beats are very frequent But in many cases the extrasystoles seem to generate a fairly constant pressure For example, a patient may have a systolic pressure of 160 mm, but the abnormal beats may sometimes be shown to appear in the brachial artery only when the pressure in the cuff is between 120 and 130 If one series of beats remains fairly constantly at one pressure and another series appears to be between pressures not more than 15 mm apart the second series are likely to be extrasystoles rather than irregular responses to a fibrillating auricle In the latter condition the systolic pressures resulting from individual ventricular contractions are much more variable, and in this way the two conditions may sometimes be distinguished It must not be expected that all cases can be distinguished by the method described Ectopic beats are sometimes very variable in the pressures which they generate in the course of half a minute there may be ventricular contractions which fail to exceed the aortic diastolic pressure and so fail to give rise to a pulse beat at all, while others may exceed the diastolic pressure sufficiently to give rise to a pulse beat whose pressure is not very far short of the maximum pressure of the normal beats But if careful attention is paid both to the rhythm and to the actual pressures of abnormal beats I believe that valuable information may be obtained

This method of studying the pulse is possibly well known to cardiologists, but it does not seem to be mentioned in their works, except in so far as it applies to the detection of pulsus alternans Anything which simplifies clinical investigation and eliminates the necessity for employing elaborate apparatus is clearly useful and I have therefore ventured to draw attention to a method which has proved of value to me in the routine investigation of blood pressure in patients suffering from cardiac irregularities

CHOICE OF OPERATION FOR CATARACT ON A PREVIOUSLY TREPHINED EYE

BY

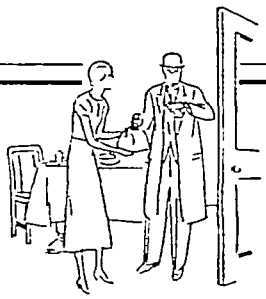
R H ELLIOT M D, F R C S

LIEUT.-COLONEL, LATE INDIAN MEDICAL SERVICE

It is well known that cataract is frequently met with in association with glaucoma Sometimes the patient shows evidence of the former condition when he first presents himself to the surgeon At others, the opacification of the lens follows an operation for the relief of tension In certain cases it is obvious that the glaucoma operation has been, to some extent at least, responsible for the occurrence of the cataract, for the opacification may spread from the points where the iris has adhered to the lens capsule, thus suggesting that these synechiae are in some way responsible for the commencement of the trouble In others the first signs of opacity are seen in the depth of the lens and are obviously independent of any interference with the capsule, though the suggestion that the lenticular nutrition has been affected cannot unhesitatingly be set aside Whatever may be the cause of the cataract, and whether it is primary or secondary, the consequent failure of vision may often demand the removal of the lens

Such an operation is bound to be fraught with anxiety for added to the many risks that are always associated with cataract extraction, the surgeon is confronted with others peculiar to the condition under discussion The cataract is rarely fully mature, the optic nerve has probably been damaged to some extent, and the interference with the circulation which was associated with the glaucomatous attack has left the eye in a condition less able to stand the strain to which a cataract operation necessarily subjects it

To a doctor's wife



OF all married women, yours is perhaps the most difficult task Your husband may be the soul of consideration, but his patients certainly are not Any hour of the day or night he is at their beck and call—consultations here, visits there Likely as not, when he seems to have a quiet hour or two for dinner, the 'phone rings and in ten minutes' time the car is at the door and he's away again

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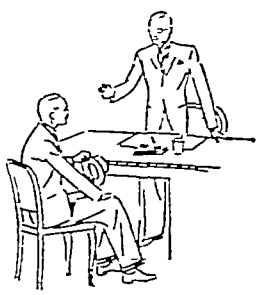

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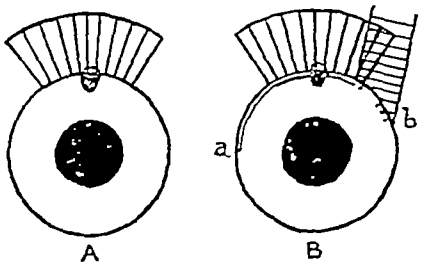
In addition to all the above considerations there is added one of special importance—namely the necessity of avoiding interference with the filtering scar It is true that in some cases where the original filtration has been on too generous a scale it may be a positive advantage to diminish it by cutting through the filtration area and thus establishing some amount of cicatrization Much more commonly however the converse holds and the surgeon's principal anxiety is to avoid doing anything which can diminish filtration For a long time past I have therefore focused my attention in all such cases on *a technique which will avoid any interference with the filtering scar* My task has been made more difficult by the fact that I have since 1920 made the inclusion of a conjunctival bridge a routine step in all my extractions

For a very long time past surgeons have recognized that a large conjunctival flap promotes the early healing of a cataract incision Well over thirty years ago Maynard of Calcutta was advocating the stitching of the conjunctival flap to add to the safety of the operation and I opposed him then on the ground that to introduce stitches into the near neighbourhood of a cataract wound was asking for trouble from sepsis There was and is another objection to the ordinary conjunctival flap—namely that it is liable to lead to the presence of a filtering scar after an extraction and also to increase the amount of astigmatism present by permitting a general healing of the wound whilst leaving the corneo-scleral edge partly ununited It might be argued that this would be a point in favour of adopting a wide conjunctival flap in cases where a filtering scar is already in existence I have tried this and given it up for I found that any interference with the tissue over the trephine hole is apt to lead not to the increase but to the cessation of filtration It is very difficult to limit the amount of cicatrization produced when a fresh cut is made through the filtering tissue and one may easily cause the trephine hole to close with the recurrence of glaucoma

I was therefore led to seek an alternative procedure A wholly corneal incision is unsatisfactory because it is attended with a risk of delay in the healing of the section a complication which is even more undesirable in these cases than in ordinary straightforward cataracts The method which I have adopted with success and which appears to me to be rational is to transfix the cornea in the usual way with a cataract knife and then to cut out along the sclero-corneal margin until nearly clear of the filtering pad and finally to make a broad bridge either upward and outward or upward and inward to the outer or inner side of the filtering scar (see diagram) This is admittedly a much more difficult thing to do than the fashioning of an ordinary bridge which usually lies in the vertical meridian but which may be a little to the outer or inner side without being any the worse for it Anyone with experience in fashioning a conjunctival bridge knows that while it is comparatively easy for an expert to make one under ordinary circumstances it is by no means so easy to get it *exactly* where one wants it In these eyes which present a filtration scar the corneal part of the incision must be made first the scleral part with its attached bridge being left till the end The difficulty in this class of case lies in the fact that the exact site of the bridge is dictated to us in advance A greater degree of operative skill is obviously called for under such conditions

If the procedure I have just outlined is successfully carried out one obtains all the advantages of a bridge—namely (1) the protection from vitreous escape (2) the immediate closure of the wound by the strap-like action of the conjunctival bridge as soon as the incision is finished and the lens removed and (3) the early strong and complete healing of the whole incision Thus we can combine the safety of primary union of our wound lips with the protection conferred on the deeper structures by the conjunctival bridge and with the avoidance of all interference with the essential spongy character of the filtering scar I have adopted this technique on a number of occasions and have satisfied myself that it is a practical working proposition



A—Showing the filtering scar the trephine hole and the peripheral coloboma of the original operation in a right eye
B—The same with the line of the new incision added

The continuous line in B concentric with the corneal margin should lie on that margin but is carried inside it so as to make the diagram clearer It is a right eye and so the bridge is on the left (nasal) side where the incision finishes If it had been a left eye the bridge would have been on the right side on the presumption that the surgeon is ambidextrous The sclero-corneal margin has been cut along the solid line The dotted portion shows where the incision has passed under the bridge The knife-point entered at *a* and emerged at *b* The filtration scar is shown by roughly radiating lines The bridge is shown by lines at right angles to its length

The determination of the right period for intervention in a cataract following glaucoma must be decided on ordinary principles the guiding rule being to operate when the vision is no longer useful If the state of the opposite eye still permits of serviceable vision it may be advisable to postpone extraction until some measure of maturity is reached One must never lose sight of the balance between what the patient has to gain and what he may possibly lose by operation Nor must it for a moment be forgotten that the prognosis in these cases must necessarily be less favourable than in ordinary healthy eyes

A FATAL CASE OF UNDULANT FEVER IN THE NORTH OF SCOTLAND

BY

D M MARR M D M R C P Ed

GRANTOWN-ON-SPEY MORAYSHIRE

Contagious abortion amongst the herds of Aberdeen-Angus cattle in this pastoral area of Scotland has been a very common condition for many years Undulant fever is however comparatively rare but not unknown Smith[1] described ten cases which occurred in the north east of Scotland between July 1929 and October 1931 These were of a mild type and none were fatal

Death from undulant fever contracted in Britain is extremely rare if not unknown Maclean[2] records one fatal case in thirty six recognized in New Zealand during the last three years Fatal termination is not so rare on the Mediterranean littoral In the case recorded below infection was contracted locally and it terminated in death

CASE RECORD

A railway porter aged 29 was first seen on July 27th 1932 He gave a history of influenza ten years previously Four years ago he had his right eye removed This was rendered necessary owing to severe infection following the entry of a piece of steel by an accident whilst on duty He complained of having felt seedy for five days before

the date of his first visit Three days before this visit he had got drenched with rain at his work and had continued on duty with an overcoat above his wet clothing The main complaint was of pain in the right shoulder joint and thoracic spine Temperature 101° F pulse 76 respirations 26 Physical examination revealed some tenderness on passive movement of the right shoulder but none on pressure over the vertebral spines while all other joints appeared normal The tongue was clean and moist He was put on a mixture containing sodii salicyl 10 grains t i d Seen four days later, the fever and pain had gone and he was apparently well He was advised to rest for a week before resuming duty

On August 11th I was again called to see him He was found complaining of anorexia intense headache backache and cough Sweating was profuse Temperature 101 6° pulse 80 respirations 26 There were generalized rhonchi back and front of the chest and crepitations at both pulmonary bases The tongue was again clean and moist He was seen daily at this stage Heavy sweats were a marked feature at this period These occurred at night or in the early morning The temperature varied from 104 5° to 99 5° The pulse rate was not above 90 Respiration rate varied from 24 to 32

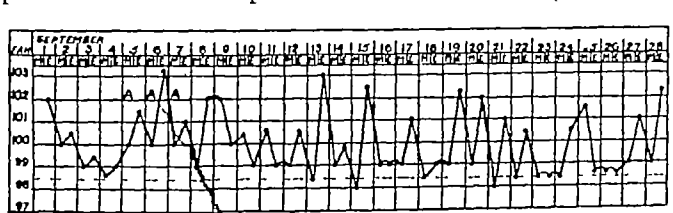
Headache was severe continuous and lasted altogether for eighteen days The chest signs cleared up in a few days Thirst was constant The tongue remained clean and moist There was no albuminuria or glycosuria and no significant casts in the urine The stools were unaltered macroscopically

On August 15th the patient complained of severe pain in the right hypochondriac region No evidence of pleurisy or enlargement of the liver was found Next day it was just possible to palpate the spleen and a specimen of blood was sent to Aberdeen City Hospital Dr John Smith reported 'The blood serum failed to agglutinate *B typhosus B para typhosus* A B and C, but agglutinates *Br abortus* in a dilution of 1 in 1 600 On receipt of this report blood faeces and urine were sent for culture but *Br abortus* was not isolated A specimen of the patient's milk supply was also examined and it was found that the whey agglutinated *Br abortus* to a dilution of 1 in 200 This indicated infection of some of the cows in the dairy herd

From August 16th the spleen enlarged rapidly and on August 20th the liver was found to have increased in size Both liver and spleen attained their maximum size about August 30th At this date the liver was 4 inches below the costal margin and filled the epigastrium The surface was smooth, consistency firm and the anterior edge hard and sharp The spleen reached to the umbilicus in the middle line and filled the left abdomen Its consistence was hard and firm Both organs were tender on pressure There was no jaundice or ascites and no other glandular enlargement

Towards the end of August pallor of the facies and skin were noted and the whole body became of a dull dead white, like the pallor of death This was a striking feature of the case and persisted until death The blood showed 2 840 000 red cells haemoglobin 40 per cent, colour index 0 7 white cells 7 200

On September 1st the patient was persuaded to enter the Ian Charles Cottage Hospital at Grantown on Spey A complete record of his temperature was now obtained (see Chart)



An agglutination test at this time showed that the titre had risen to 1 in 12 800 It will be noted, as pointed out by Forbes[3] the fever is not of the typical undulant variety attributed to cases of Mediterranean origin but has some resemblance The pulse ranged mostly between 70 and 86

On September 11th an intradermal injection of 0 2 c cm of 1 in 1 000 suspension of dead *Br abortus* was made in order to elicit if possible a positive Burnet[4] reaction There was no reaction of any kind Towards the end of September there was some improvement in his general condition The liver and spleen became less in size but the fever and pallor remained

At the beginning of October he began to worry over non payment of sickness benefit (This is not payable to patients whilst in hospital) He insisted on going home and it was arranged that he should be discharged on October 6th On October 3rd he became delirious and semi conscious A specimen of cerebro spinal fluid was taken, which was unfortunately mixed with blood Culture failed to show *Br abortus* The blood in the specimen obviated chemical and cytological examination The ocular fundi were normal Next day he was 'himself' again, and insisted on adhering to the arrangement made for his home going He therefore went home on October 6th

On October 9th I was hurriedly sent for and found that he had had a serious gastric haemorrhage He had lost over a pint of blood He was exhausted and weak and the pulse rate had risen to 120 By the same evening he had rallied and the pulse rate was back to 90 Although passing tarry stools he continued to improve until the night of October 22nd-23rd when he had a second haemorrhage from the stomach By this time he was extremely weak and on October 24th there was slight oedema of the ankles and feet The oedema increased until there was ascites The spleen and liver were still large and easily palpable The pulse rate was from 80 to 85 He became comatose on October 31st and without regaining consciousness died on November 11th

Two days before death a sample of blood was taken from a collapsed vein, and the serum agglutinated both *Br abortus* and *B melitensis* to a dilution of 1 in 51 600 At no stage was there any apparent wasting or emaciation

COMMENTARY

With infectious abortion known to be rampant in this district for years it is surprising how few recognized cases of undulant fever occur Mild cases may certainly be overlooked, but in thirteen years practice here I have never come across a case which resembled the one just described The difficulty of isolating *Br abortus* from blood, urine, and stool is worthy of comment In such a marked case serologically, one would have expected this to be possible Blood received directly from a vein into suitable media was sent at different stages of the disease for culture, but on each occasion proved sterile The tardiness of diagnosis and the time lost in transit from bedside to laboratory may both, or separately, account for failure The progressive rise in the agglutination titre of the serum is interesting, as is the high agglutinating power just prior to death On a single case it is highly dangerous to form an opinion, but the failure of the Burnet test as an aid to diagnosis was disappointing

Clinically the main features of the case were the insidious onset, the slow pulse, the clean, moist tongue, the sweats, the intense headache, the pallor, the irregular temperature, the enlarged and firmly consistent liver and spleen, and finally, the gastric haemorrhages and death The difficulty of early diagnosis, in the absence of serological examination, will be apparent, as will the similarity to the typhoid group of fevers

Treatment was almost entirely symptomatic Salicylates were pushed at the outset, later quinine bihydrochloride, 10 grains t i d, and still later S U P 36 All were equally ineffective Short of opium it was not possible to allay the headache

I have pleasure in acknowledging my indebtedness to Dr John Smith bacteriologist City Hospital Aberdeen and to the matron and sisters of the Ian Charles Hospital Grantown on Spey

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[2] Maclean F S *New Zealand Med Journ* August 1932
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Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

APPENDICITIS AND MECKEL'S DIVERTICULUM

The following are notes of a case of acute appendicitis with an unusual post operative sequel due to the presence of a Meckel's diverticulum

L E aged 32 first seen on June 4th 1932 with a history of forty-eight hours abdominal pain A diagnosis of pelvic appendicitis was made and he was removed to hospital and operated upon the same day On opening the abdomen by the right paramedian subumbilical route a Meckel's diverticulum of the ileum presented itself at the upper end of the wound It was two inches long lying quite free and not inflamed The inflammation was confined to the right side of the pelvis from which a gangrenous pelvic appendix was removed The stump was buried and a drain of dental rubber inserted through the lower end of the wound down to the pelvis This was removed in forty eight hours and convalescence proceeded in normal fashion until the seventh day Early in the morning of that day the patient was seized with acute pain of a colicky nature in the region of the umbilicus This was accompanied by vomiting Despite good results both of flatus and faeces with enemas his general condition rapidly deteriorated It was surprising how quickly grave toxaemia ensued

On June 12th his wound was reopened and Meckel's diverticulum was discovered to be passing across and obstructing a coil of the ileum adhering by its tip only to a portion of the mesentery A few recent adhesions between the intestines the result of a localized plastic peritoneal inflammatory reaction were present. The diverticulum was excised and the wound closed For forty eight hours the patient was gravely ill but with the relief of the obstruction he speedily improved and was discharged from hospital a fortnight later He has remained in good health ever since

On account of the severe symptoms caused by the obstruction and the necessity for a second operation under adverse circumstances I am convinced that the diverticulum should never have been left alone at the first operation when its removal could have been undertaken without risk

A H HOLLIES M D B S Dunelm F R C S Ed
Assistant Honorary Surgeon Blackburn Royal Infirmary

ABORTUS FEVER IN DORSET

Abortus fever is a sufficiently rare and unrecognized disease to warrant recording the notes of the following case

The patient a male aged 38 keeps a dairy farm though he has not anything to do with the herd as the milking is done by a milkman The past year was a very trying one for him and he confesses to being very worried and over worked

The illness dates from August 1932 when he began to feel indefinitely ill tired and depressed This decided him to go away for a fortnight's holiday and he came back feeling better In September he noticed when he went to bed that no matter what the temperature was he felt chilly and actually shivered in much the same way as he did subsequently with his rigors In November he began morning headaches which usually left him during the day and sometimes returned at night At this time when he woke he felt so tired that he could not get up to do his duties about the farm a most unusual feeling for him

On December 6th he came to see me complaining chiefly of headaches and feeling tired His temperature at this visit was 99 6° He said that this headache and tired feeling had been on for about three weeks A tentative diagnosis of influenza with subsequent headaches and general lassitude was made and medicine to relieve his head and to clean his tongue which was furred was prescribed The week following the temperature was taken regularly while he was at home and began to register 102°–103° at night and about 100° in the morning These high temperatures at night were accompanied by rigors and sweating

On December 14th he was admitted to a nursing home During the day he appeared well and his appetite was not seriously affected his pulse rate was low but his temperature continued high especially at night when he continued to have rigors His lungs were clear heart sounds were poor the spleen was not palpable and not enlarged to percussion His liver was not palpable and the abdomen not distended His bowels acted with the help of mist alb and the stools were normal in appearance Urine was normal On the night after his admission to the home he had severe abdominal pain and during the rigors he always had painful cramps in his thigh muscles and in his back On December 15th a specimen of blood was sent to a laboratory for a report on the erum reactions with the typhoid group and *Br abortus* They were all returned as negative

On December 19th as no improvement was taking place he was seen in consultation by Dr Arthur Davies of London and I have asked him to append his pathological report with notes By December 26th the patient's temperature came down to normal and he left the home on January 2nd He now feels easily tired and a reading of his blood pressure has recorded the extraordinarily low figures of 98 88

Laboratory Findings.—The patient's blood serum agglutinated the following strains of the Brucella group *Br abortus* (Bang and hog R V C) *B melitensis*—Groups 1 2 and 3 and Zammit The serum did not agglutinate *B melitensis* (Arkwright strain) The agglutination titre in all cases was 1 in 640 except *B melitensis* Zammit which was agglutinated to 1 in 320 dilution only Blood culture and urine yielded no growth of Brucella group organisms The blood picture was that of a secondary anaemia red blood cells 4 370 000 per c mm haemoglobin 80 per cent white blood cells 5 925 per c mm —polymorphs 63 per cent lymphocytes 31 per cent large mononuclears 5 per cent eosinophils 1 per cent

Yeovil H R UNWIN M B F R C S

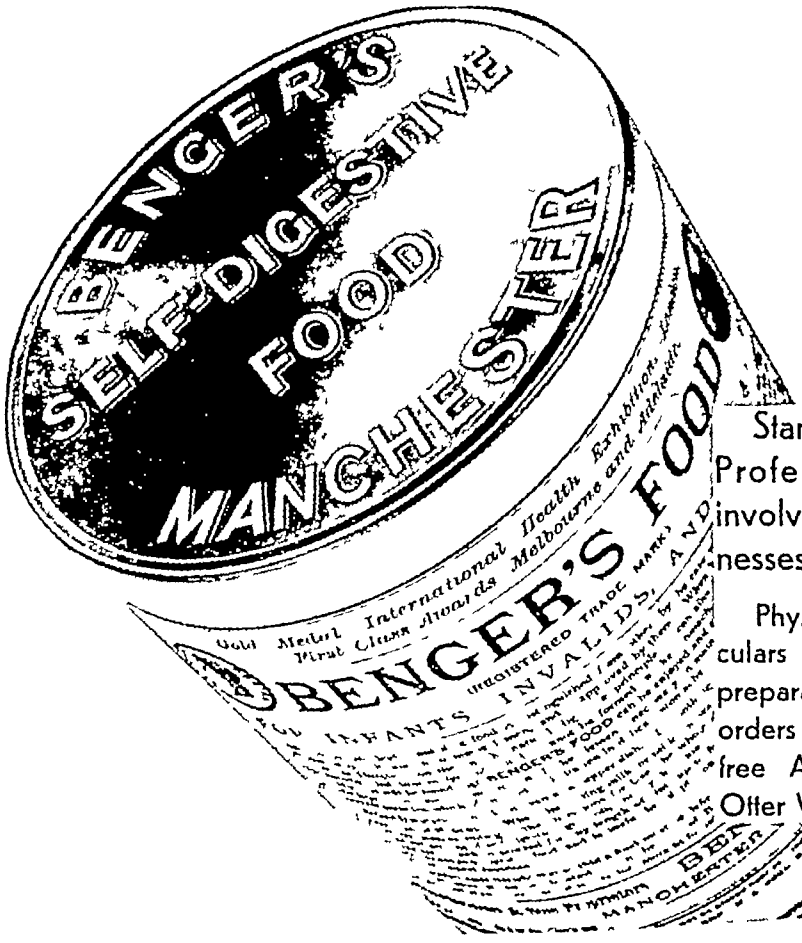
Reports of Societies

ANAEMIA IN INFANCY

A meeting of the Section for the Study of Disease in Children (Royal Society of Medicine) was held on May 26th in conjunction with the Maternity and Child Welfare Group of the Society of Medical Officers of Health for the discussion of cases of anaemia in infants Dr LEONARD G PARSONS was in the chair

Dr ALAN MONCRIEFF showed a case of anaemia of von Jaksch in a child of 8 months the only child of healthy parents admitted to hospital under his care two months ago He indicated the dietetic and other treatment followed The spleen remained much enlarged and firm Dr PARKES WEBER pointed out that von Jaksch's anaemia comprised a number of different conditions including some with syphilis which was ruled out in Dr Moncrieff's case He had lately had the opportunity of observing a particular kind of anaemia which was sometimes familial with a large spleen and of which it would be said at first glance that it was either von Jaksch's anaemia or congenital haemolytic familial anaemia It seemed to be now settled that it always appeared in Southern European families One of the characteristics was absence of nucleated red cells another being the large spleen There was also a peculiarity in the shape of the head

Dr HELEN MACKAY and Dr E O FLYNN showed two cases of pure haemolytic anaemia in the newborn another case of haemolytic anaemia with icterus gravis neonatorum of familial type and a further case of haemolytic anaemia in the newborn presumably due to an intestinal infection



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and hepatitis In the first three cases Dr Mackay suggested that there was a temporary absence or deficiency of some product needed to prevent haemolysis Dr JEAN SMITH also showed a case of severe anaemia in a newborn child, in which a distinct improvement had been brought about by blood transfusion and intramuscular injections of collosol iron Dr J C HAWKSLEY and Dr R LIGHTWOOD showed a case of icterus gravis neonatorum, a condition which had been much improved under whole-blood transfusion Dr Lightwood pointed out that these cases were not always familial, though the familial seemed to have attained more prominence in literature than the non-familial Dr PARKES WEBER asked who was the first to introduce the treatment of these cases by blood transfusion , he believed it was a London physician, and certainly it was a very successful treatment, and at the time a wonderful discovery Dr MONCRIEFF raised the question of blood grouping in these cases, recalling the suggestion that where the blood groups of mother and child were different there were more cases of jaundice than when the blood groups were the same Dr MACKAY said that in bringing her own cases forward she had hoped to learn whether the excessive destruction occurred because there was an excessive number of young cells present, or whether the number of young cells present was an attempt at regeneration , she was inclined to think the latter was the case

Dr LEONARD FINDLAY brought forward an example of the chlorotic type of anaemia in a girl aged 11 years, also an example, in a girl of 9, of chlorotic anaemia and rickets He said that it was most unusual to find such a degree of anaemia and rickets associated, because rickets *per se* was really not associated with anaemia at all There had been a long history of illness in this case, necessitating several years' residence in hospital There was absolutely no evidence of any defect in absorption over the gut, nor of renal mischief Dr E C WARNER showed a case of anaemia, with probably acholuric jaundice, in a girl aged 5, with no family history of either condition, and another case of acquired acholuric jaundice, with acquired fragility of red cells, in a girl aged 11 He said that such cases were not very rare , he had had three during the last two years The second case also had no family history of splenic enlargement, jaundice, or increased red cell fragility

Cases were also shown by Dr EDMUND CAUTLEY, Dr T STANLEY RODGERS, and Dr T PEARSE WILLIAMS the last named showing a " pernicious " blood picture in an infant, with recovery

VENTILATION AND HEATING OF HOSPITAL WARDS

In a paper read before the Section of Epidemiology and State Medicine of the Royal Society of Medicine on May 26th, Dr JAMES WATT complained that in the ventilation of hospital wards ordinary domestic standards were usually followed and it was not appreciated that good ventilation was a form of physical medicine and an adjuvant in the treatment of the sick It was true, he said that in fever hospitals the question of cross-infection had compelled greater attention to the ventilation of the wards but only in the sanatorium treatment of tuberculosis had the subject received the care that it deserved It was now well established that the various forms of tuberculosis were best treated under open-air conditions and if the results were so favourable in one multiform disease why not in others? He had not found pleurisy occur in exceptional frequency among sanatorium populations lobar pneumonia was practically unknown in his own sanatorium experience bronchitis was occasionally aggravated by open air conditions in winter, but the cases generally improved steadily with the improvement in tuberculous disease and colds in the head were at least no more frequent and lasted no longer among persons nursed in open air wards than among persons nursed in their own homes where much higher temperatures and much less exposure to moving air were the rule The coolness and movement of the air were far more important than its chemical purity Dr Watt went on to claim that the most comfortable and probably the most efficient ventilation was secured in a shed or room one side of which was completely open, while the other three sides, though provided with fanlights, could be completely closed In this country it was usually held that the ward temperature should be between 60° and 65°F —in America a higher level, up to 75°, was demanded—but these figures were partly dependent on habit, and ward temperatures could be reduced below such standards with benefit to the health of the patient and acceleration of his recovery Certain adjustments might be made, such as extra provision of blankets, bed jackets, and socks, perhaps also woollen helmets, and patients extremely susceptible to cold might be segregated in a small ward Dr Watt thought that mechanical systems of ventilation by propulsion and extraction of air, though they had many attractive features, were not well suited to hospital wards, where, indeed, they had gone out of fashion Most hospitals depended on cross ventilation of wards by windows, sometimes supplemented by wall ventilators and fireplaces The practice of heating the in-coming air, unless it was limited to taking the chill off very cold air, seemed wrong in principle Sash windows were usual and convenient, but casements allowed the whole window to be opened, and particularly to be welcomed was a form of casement vertically pivoted about one third of its distance from the upright frame The ward window was best completed above by a hopper A window favoured by the Scottish Board of Health was the Austral window, the two sashes of which were horizontally pivoted so as to direct the entering air upward and keep out rain On the subject of heating the wards Dr Watt pointed out that it had to be borne in mind that the hospital patient unlike the ordinary healthy person, or even the child attending an open air school, could not usually maintain a balance by exercises, so that some supplementary heating was necessary in winter The maintenance of warmth for the body and lower extremities was a question of bedclothes, and if a mild beam of radiant heat could be focused on the patient's head and upper extremities the problem would be solved In ordinary circumstances an open fire in the ward was something of a luxury, and, with cross window ventilation, its ventilating action should be unnecessary There were objections to the steam heating of wards, owing to moisture, stale smell, and complication of guards to prevent burns The method he preferred was pipe heating, which ensured an even distribution Finally, he touched on the question of lighting, urging that the supply of artificial light should not be niggardly, but if there was an individual light over each bed, controlled by the patient, a few other central lights, one over the sterilizer and another over the fireplace, and a reading light for the nurse's table, should furnish all that was necessary

Two architects joined in the discussion on Dr Watt's paper One of them Mr H W BINNS, showed photographs of two hospitals he had designed—St David's, Ealing, for men suffering from permanent war injuries and St Vincent's Orthopaedic Hospital, Eastcote Both were built on the cloister principle, the idea being taken from hospital architecture in Spain Mr L G PEARSON as an architect, favoured the small ward preferably of four beds, and said that in Germany and other countries the four-bed ward, with the beds parallel, and a large window on one side and fanlights into a ventilated corridor on the other was very largely used In this country, however, the nurses appeared to object to such an arrangement, a sister not uncommonly saying that she could look after thirty patients in an open ward, but not with the same number of patients distributed in small wards Mr T B LAYTON remarked that in his experience these matters were left too much to the nursing staff who tended rather to extremes in ward ventilation, resulting on the one hand in stuffiness and on the other in exposure which reached the point of discomfort The nursing profession, he added, was extremely conservative, only equalled in this respect by newly qualified members of the medical profession who served as hospital residents

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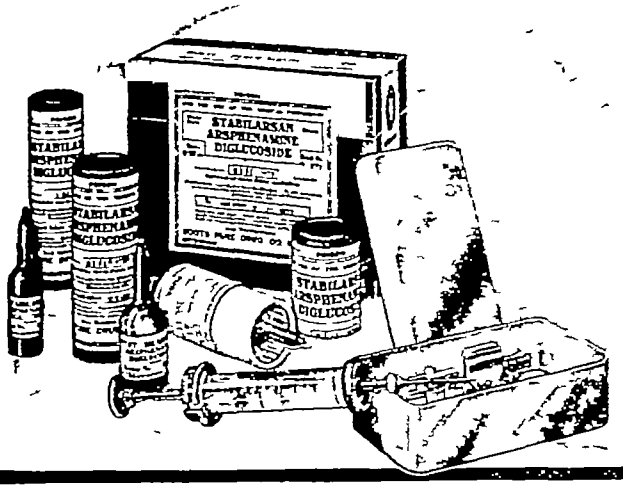

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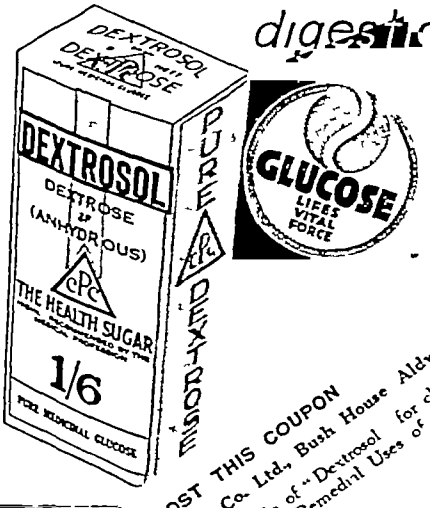

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Reviews

THE DUODENUM

Dr EDWARD L KELLOGG S volume *The Duodenum* [1] is a comprehensive work based upon twenty years of study and practice in the course of which the author has contributed many articles to medical literature dealing with the medical and surgical treatment of gastro-intestinal disorders To present as this volume does an account of the diseases of one small segment of the body is not an easy task and it is doubtful whether so specialized a view of disease—in particular a view anatomically specialized—can ever be wholly satisfactory The author can however maintain that he is one of a numerous company of writers who have treated of circumscribed parts of the alimentary and other systems in the same way as he here deals with the first segment of the small intestine Among earlier studies to which he acknowledges his indebtedness he mentions particularly the notable review of the pathology of duodenal disease which was contributed by Perry and Shaw to the *Guy s Hospital Reports* of 1893 Studies of the literature have led the author far afield and his review of it is comprehensive for he has co-ordinated with marked success the important work of the past and the present methods of investigation and treatment On several important questions he expresses with commendable restraint no definite views he is dogmatic when the evidence justifies it and cautious when he does not find himself entitled to preach

The chapters on the anatomy and physiology of the duodenum show that there is still much work to be done before the physiology of this part of the alimentary canal can be completely described A full review is given of the many measures that have been devised for the direct examination and treatment of ulcer and other lesions by intubation and the Levin tube is specially recommended The section on examination includes an admirable chapter on radiology by Dr A Judson Quimby in which he describes the special technique needed for the difficult work of obtaining satisfactory duodenal pictures and interpreting fluoroscopic appearances The first morbid condition to be described is duodenitis now recognized as a pathogenic entity of importance and of frequent occurrence apart from ulceration Short reference is made to the possible connexion between this lesion and glycosuria A chapter on parasites by Dr Bailey K Ashford is chiefly occupied by a study of ankylostomiasis or uncinariasis as the writer prefers to name it a term under which he includes infection with *Necator americanus* In a chapter on diverticulosis it is well said that the clinical importance of this condition should now be acknowledged Surgeons who have met with cases in which this condition has been responsible for symptoms are alive to the possibility of its being the basis of some of the perforations abscesses and fistulae of obscure origin which are met with on the right side of the abdomen and in the right flank Another subject which is admirably dealt with is that of duodenal ileus acute and chronic it is only within the last fifteen years or so that the causes of either the acute and often fatal type or the chronic type have been clearly shown Dr Kellogg describes these conditions as acute and chronic duodenal obstruction giving as synonyms the old terms acute dilatation of the stomach and chronic duodenal ileus respectively In the chapter on chronic obstruction are included clinical reports on 118 cases which have come under the author s personal care most of them the sequel of bands and adhesions a minority due to mesenteric compression The subject of ulcer naturally receives lengthy consideration and the author holds that infection is frequently a direct exciting cause and that the gastric secretion is a supplementary agent only in aetiology In regard to treatment the comparative advantages of medical and surgical procedures are not definitely discussed The various surgical measures which are suitable for varying states of ulceration are however admirably debated The last chapter of the book forms an illustrated atlas of the surgical procedures which concern the duodenum There are some forty pictures and these and the other illustrations throughout the book are of first rate quality A hundred and thirty two pages are devoted to literary references and there are complete indexes of subjects and authors

[1] *The Duodenum* By E L Kellogg M D F A C S Foreword by G D Stewart, M D F A C S Chapter on duodenal parasites by B H Ashford M D Sc D Section on x ray diagnosis by A Judson Quimby M D New York Paul B Hoeber Inc. 1933 (Pp xxvii + 859 287 figures (3 in colour) 10 dollars.)

ARTIFICIAL PNEUMOTHORAX

We have received from the Paris publishers Masson et Cie three small books dealing with artificial pneumothorax treatment Two of them are new additions to that firm s well known series Médecine et Chirurgie Pratiques and are entitled The After-effects of Pneumothorax Treatment [2] by L DE WECK and Simultaneous Bilateral Pneumothorax [3] by M ASCOLI and M LUCIGER The third is an M D thesis Pneumothorax versus Phrenic Evulsion [4] by J MORIN These three books all dealing with special aspects of a specialized form of treatment and appealing only to those who are devoting themselves to the treatment of pulmonary tuberculosis and not to the general medical reader may with advantage be reviewed together

By far the most arresting of the three is Morin s thesis In it he definitely champions phrenic evulsion as a method of treatment superior to artificial pneumothorax His introduction to his subject is a very concise piece of writing and would be read with advantage by anyone who is practising collapse therapy to any extent Some of its suggestions will certainly tend to check over confidence in a treatment whose introduction is still so recent that few of us have any real experience of its after-results The thesis is beautifully illustrated and finishes with a most spirited argument in which the author fearlessly tilts at conventional opinion even when expressed by men of world wide reputation The two hours that would be spent reading this work would not be wasted One rather hoped that de Weck s After effects of Pneumothorax Treatment might illuminate or elaborate some of Morin s arguments for the more we can learn of this treatment the surer will be our use of it but in this one is disappointed The book is really an anatomical and pathological description of the after-effects of collapse on the lung and on the thorax and its other contents and has little to say of how these changes affect the clinical condition or general welfare of the patient There is in it too much theoretical disquisition and too little practical guidance The same criticism applies with even greater force to Simultaneous Bilateral Pneumothorax One of the authors Dr Ascoli has been studying and using this method of treatment since 1912 and the reader would therefore be very ready to sit at his feet for instruction Instead one finds a most painstaking analysis of other people s opinions on bilateral collapse and very little of

[2] *Effets Eloignés du Pneumothorax Thérapeutique* Par L de Weck Médecine et Chirurgie Pratiques Préface du Dr Bernard Paris Masson et Cie 1932. (Pp viii + 129 16 figures 16 fr.)

[3] *Le Pneumothorax Bilatéral Simultané* Par M Ascoli e M Luciger Préface de F Dumarest. Médecine et Chirurgie Pratiques 54 Paris Masson et Cie 1933 (Pp 104 11 figures 22 fr.)

Du Pneumothorax à la Phrenicectomie Par J Morin Thèse d habilitation présentée à la Faculté de Médecine de l Université de Lausanne pour l obtention du titre de privat docent de médecine interne Paris Masson et Cie (Pp 35 30 figures 20 fr.)

Dr Ascoli's One is also struck by the extraordinarily close physiological study that is made of, and used for the control of, bilateral pneumothorax, and by the complete absence of any mention of guidance to be derived from the clinical changes experienced by the patient The book finishes with an interesting account of contralateral pneumothorax treatment—that is, the collapse of a sound lung as a method of treating active disease in its fellow It is well to study all methods of treatment, even if only to learn which to avoid

THE NERVOUS CHILD

Schoolmasters, parents, and doctors of the present day should be in no danger of neglecting, or of failing to realize the importance of emotional disturbances and disorders of conduct in children, for the literature concerned with what is called the "problem child" at home and at school grows apace Some years ago Dr H C CAMERON wrote a little book dealing with the nervous child in the nursery, and he has now published another entitled *The Nervous Child at School*[1] This is intended apparently to help each of the three classes of person mentioned in our first sentence, and it is well calculated to achieve this purpose It deals mainly with the causes and the effects of fatigue and of unhappiness in school life, and of the disorders of health and of conduct directly arising from such fatigue and unhappiness In pursuance of this theme the consideration of such subjects as masturbation, bed-wetting, and stammering naturally arises, and these sections are characterized by clearness, common sense and due proportion Indeed, one may say that these are characteristics of the whole book, which, on the subjects mentioned and on others cognate to them, can be consulted with the certainty of finding useful information and wise advice The chapters on 'special abilities and disabilities and on 'schools for girls and schools for boys' will be found by doctors and teachers to be somewhat perfunctory but they will probably awaken understanding in some parents Dr Cameron makes some important general observations, as, for example, when he says "A great many infant welfare centres are not free from blame, because they encourage a feeling of too great dependence in their clients Sometimes the doctor seems to be apt to create the impression that the safety of the infant depends upon his weekly or fortnightly examination, and is to be obtained only by the most meticulous observation of the very general rules which he lays down and the measures of food which he prescribes If an infant centre is doing good work it knows that it can only achieve its purpose through and by means of the mothers, and that its main object is to fortify and not to weaken the mother's confidence in herself Or, again "The family doctor, while he utilizes to the full special knowledge and experience and means of treatment must keep a grasp upon the whole situation The nervous child cannot be profitably divided into two halves, one of which is dispatched to the orthopaedic surgeon and the other to the psychiatrist'

It is, of course, possible to differ from some of Dr Cameron's expressed opinions, but such differences will be found to be differences of emphasis rather than of fundamental view For example, it is probable that most experienced medical practitioners would, in a large number of cases such as those which the author cites, rely in a much less accentuated degree on treatment by sensible psychotherapy and generally the administration of glucose and of alkalis Again, no one will be doubted whether a school for stammerers, as in their own right, is more helpful than special classes for stammerers would have the advantages which the author looks for, unless it continued to retain till the full school age all those who had been cured of their defect, and in that case it would really cease to be a school for stammerers Lastly, it is surprising that in a book of this kind and with a chapter on schools, there should be no mention at all of mixed schools or of co-education of the sexes which may clearly offer advantages in some cases

[1] *The Nervous Child at School* By Hector Charles Cameron M R C P London H Milford Oxford University Press 1932 (Pp xi + 160 6s net.)

BIOLOGY FOR MEDICAL STUDENTS

The textbook entitled *Biology for Medical Students*[1] by C C HENTSCHEL and W R IVIMEY COOK is prefaced by a foreword from Professor Gask, in which he says "Some knowledge of the processes of life as exemplified by the various types of plants and animals is essential for one who aspires to become the best sort of doctor' Out of the controversy on this matter during the last twenty years this is undoubtedly the view that has survived, and, as in the case of many another settled controversy, it is now difficult to imagine how any other view could have been sustained While the opinion of the authors that instruction in zoology and botany for the medical student in separate departments is necessarily unsatisfactory is one with which all readers will not agree, the book itself makes out a strong case for associating instruction in the two branches of biology in the closest possible manner

It is so arranged that chapters introductory to the animal kingdom and to its main branches, and to the plant kingdom, are each followed by others in which types are described in detail Certain of the types chosen have special reference to medicine—the malaria parasite, the tapeworm, and others—and there is a special chapter on the bacteria Interspersed among these sections are chapters on general subjects, on the cell and reproduction, on histology, embryology, plant physiology, evolution, and heredity It is noteworthy that seven pages only are devoted to consideration of the natural orders of plants and this is typical of the change that has taken place in the teaching of most, but not all, of the subjects of the curriculum from the days when the memorizing of names was the student's main task The general plan of the book is excellent The student is shown living organism in its simplest forms, and thereafter an increasing complexity of function and structure In the general chapters the unity of living organism is taught, then follows what is known of the process of its evolution Such a background is what the medical student needs for his further studies if he is to conceive of his patient as an individual intimately related to an environment past and present Without such a conception he cannot be what Professor Gask describes as "the best sort of doctor," or, indeed, any sort of real doctor at all!

DIAGNOSTIC TABLES

Dr CEMACH'S book on the Diagnosis of Medical Diseases[2] is an attempt to compress into the form of tables the essential facts The diseases of each part of the body are designated in a separate table, and opposite the disease are given the important features of the subjective symptoms of the patient and the objective findings on clinical and laboratory examination In a final column the differential diagnosis is summarized That the book appeals to some members of the profession is shown by

[1] *Biology for Medical Students* By C C Hentschel M Sc and W R Ivimey Cook B Sc, Ph D London and New York Longmans, Green and Co 1932 (Pp xi + 618 413 figures 18s net)

[2] *Diagnostik innerer Krankheiten in Tabellenform* Von Dr med A J Cemach München J F Lehmanns Verlag 1932 (64 tables Geb M 6 30 Lwd M 7 20)

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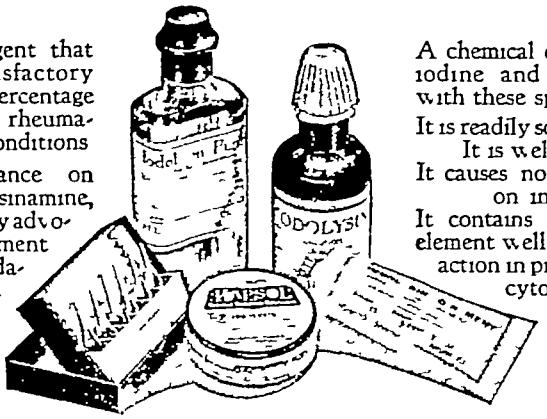

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the present being the seventh edition and by the additional fact that the author has produced a similar tabular diagnosis of surgical diseases which has run through five editions It might be useful as a vade mecum for students or others preparing for an examination but it cannot replace a textbook as no treatment is mentioned It thus compares unfavourably with such series as the 'Essentials' published in English or the synopses of medicine and surgery Nor does it lend itself to diagnosis by working back from the patient's leading symptom A condensed form is difficult to read and when presented as tables it becomes more difficult The book has a good index so that a subject may easily be found and the illustrations from the publishers well known hand atlases are instructive

Notes on Books

Drs W J PEARSON and A G WATKINS have collected into a very small book a large number of useful facts entitled *The Infant—a Handbook of Management* The elementary principles of infant feeding could scarcely have been put more briefly and accuracy has not been sacrificed to brevity Tables of food values various prescriptions (for which no definite dose for age is given) recipes tables of growth and development etc are all included and serve to make a valuable booklet The retail prices of cow's milk and dried milks are given from which it would appear that on an average the latter costs (on a basis of reconstruction by 1 in 8 dilution) about double the price of ordinary pasteurized varieties of the former

The March number of the *Annals of Medical History*[9] bears on its cover the pleasant smiling face of Dr Joseph Ignatius Guillotin whose invention of the guillotine spelt as if it were his daughter was intended to reduce capital punishment to one common level and to do away with the invidious distinction of beheading for the nobility while the common herd were hanged He was a philanthropist intent on taking his part in a movement for the benefit of mankind and did not realize the ghastly development of his dream Dr J H Lloyd points out that no member of the medical profession except possibly Dr Gatling has obtained such perpetual recollection in this manner In his interesting William Potter Memorial Lecture at the Jefferson Medical College on medical Philadelphia in the eighteenth century Dr F R PACKARD practises editorial modesty and consideration in delaying publication of his own article for more than a year In his history of laryngology and rhinology Dr J H Bryan shows the influence of America on the development of this branch of medicine and mentions that in the pre laryngoscopic period there were attempts in this direction by Levret in 1743 and Bozzini in 1804 The story of the fatal illness of Frederick the Crown Prince of Germany is retold and Morell Mackenzie is acquitted of all blame in the tragedy Dr Bryan adds that he does not know of any medical man responsible for the life of a public character who has escaped unjust criticism Dr Kate Campbell Hurd Mead continues her Introduction to the History of Women in Medicine by an account of their position and activities before the Christian Era There is a contribution by a descendant of Dr Hall Jackson who in 1760 introduced into America the seeds of foxglove which he had received from Withering In an editorial Dr David Riesman tells the tale of what historians still call the most interesting newspaper in the United States —namely the *Ulster County Gazette* of January 4th 1800 which within heavy black lines and borders described the death and funeral of George Washington There is only one authentic copy of this paper in existence but there are many reprints which the owners are always convinced are original

Radiologic Maxims[10] by HAROLD SWANBERG is a small book of extracts from the writings of many authors on radiological subjects and in addition contains a large number of aphorisms which the author thinks will prove instructive to those practising radiology Most of the maxims have been gathered from a monthly journal the *Radiological Review* which is edited by Dr Swanberg and short statements from current literature on radiological subjects are included The author having come to the conclusion that there is a woeful lack of knowledge of what the radiologist can accomplish hopes that this little book will bring the subject in an acceptable form before those who otherwise would not be interested

The work on São Paulo typhus[11] by Drs JOSÉ DE TOLEDO PIZA J R MEYER and LUIS SALLES GOMES deals with an interesting outbreak which occurred in the outskirts of São Paulo Brazil from October 1929 to November 1931 during which period sixty-one cases whose histories are related were under treatment with a mortality of 72 13 per cent The disease was at first supposed to be ordinary typhus fever due to the immigration of a large number of Russians and Slovaks but the predominance of cases in a rural zone where the houses were separated from one another the low incidence in the same family the exceptional presence of lice among the patients and the appearance of unusual symptoms and of atypical microscopical features justified the disease being classified as a distinct entity The bulk of the volume is the work of Dr Piza who gives a general description of the disease and a detailed account of the sixty-one cases Dr Meyer deals with the morbid anatomy and Dr Gomes records his experimental researches An abstract in English is appended to each part of the work which is freely illustrated with temperature charts photographs of the patients and microphotographs of the lesions

The Arches of the Years[12] is Dr HALLIDAY SUTHERLAND'S mystical name for a most unmystical and adventurous collection of his life's impressions He tells his story well He has the epic gift of blundering into extraordinary situations in ordinary places Even in his childhood days he watched his father a well known commissioner in lunacy deal with a homicidal maniac who besieged the whole family in the dining room of a farmhouse in the Highlands He has hunted whales half way to Iceland Sent to assist an uncle with a surgical practice in Spain he practised the technique of bull fighting and achieved a local legend of such celebrity that innkeepers entertained him with honour and without pay He turns a naïve and sardonic eye upon his own speculative adventures in American Rails In 1914 he became a naval surgeon sailed round the Tropics tested the psychology of the wardroom wine experts and wrote his handbook on pulmonary tuberculosis in general practice He has intended to produce an objective book and no references to his leadership in a well known controversy appear This volume has the poetry of a life without the polemics of which the author is capable Cocksureness is a quality which produces adventurers If Dr Sutherland were more meditative he might never have met with these stirring events which he describes and we should be reading perhaps a greater but certainly not a more interesting book The earlier part dealing with university days Spain and Medicine are the best they have the quality of old ballads The account of the war experiences is journalistic Doctors witness more of human drama than others but they lack too often the gift of expression Dr Sutherland is an impetuous Quixote but there is in his composition a shrewd Boswell too He can write fine prose and his humour never fails to be effective To say that he has committed no exaggerations would be to declare that he was incompetent to write a book of this kind at all

[9] *The Infant—a Handbook of Management* By W J Pearson M D F R C I and A G Watkins M D M R C P London H K Lewis and Co Ltd 1932 (Pp 47 2s 6d net)

[9] *Annals of Medical History* New Series Vol v No 2 March 1933 Edited by Francis R Packard M D New York Paul B Hoeber Inc London Baillière Tindall and Cox (Pp 103–204 illustrated Subscription for volume of six numbers £3 6s 6d)

[10] *Radiologic Maxims* By H Swanberg B Sc M D F A C P Foreword by Henry Schmitz A M M D Quincy Illinois Radiological Review Publishing Company 1932 (Pp 126 1 50 dollars)

[11] *Typho exanthematic of São Paulo* By J de Toledo Piza J R Meyer and Luiz Salles Gomes São Paulo Sociedade impressora Paulista 1932 (Pp 186 82 figures)

[12] *The Arches of the Years* By Halliday Sutherland London Geoffrey Bles 1933 (Pp 293 10s 6d net)

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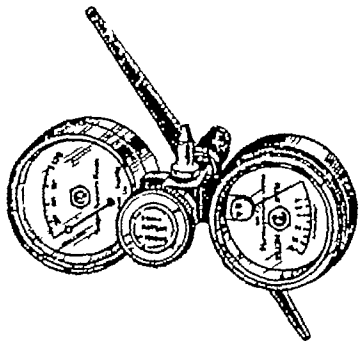

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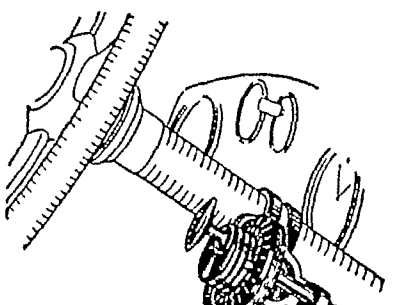
A CAR LOCKING DEVICE

Six thousand cars were stolen in the metropolitan police area last year It is not, therefore improbable that medical men who often have to leave their cars unattended outside the houses of their patients will welcome the advent of a reliable and easily operated locking device It is said that the car thief is an impatient fellow that if the slightest mechanical difficulty is put in his way he will sooner than risk being caught tampering with an ignition switch a gear lock or a steering clamp leave the prize and turn his attention to easier spoil Whether this is true we are unable to say—*Punch's* picture of a rear wheel firmly chained to a lamp post the absent car having been driven away on the spare wheel might suggest otherwise In any case a mechanism which locks both ignition and the car's bonnet should prove a troublesome proposition to the most determined of thieves



A demonstration of what is known as the Donford car lock was given before an interested company of motorists in London last week and this fitting appeared to be a thoroughly effective means of combating theft The lock which is made of rustless solid steel is fitted by a clamp to the steering column of the car, and is governed by a combination, like the lock of a combination safe offering several thousand three letter codes The action of the lock is twofold it controls the ignition switch which is fitted inside the bonnet, and, by means of a cam lever it locks the bonnet internally on both sides, the bonnet lock being only released again when the correct switch combination is operated No key is used but a button, when pushed home switches off the ignition and simultaneously locks the car It is impossible for a thief to tamper with wires because none are connected to the combination lock or to any exposed part of the system The control from the lock on to the steering wheel is a stout steel rod, and the locked bonnet prevents any attempt to short circuit wires or interfere with the engine The ignition switch is mounted inside the bonnet and the contact bush on the switch rod is made reversible for either coil or magneto ignition The arrangement is such that the owner cannot switch off his engine without instantaneously putting the whole locking system into operation and the chance of a thief hitting upon the unlocking combination is one in some 17 000 The Donford car lock is produced by Car Lock Limited, at Cranham, Essex and costs a couple of guineas

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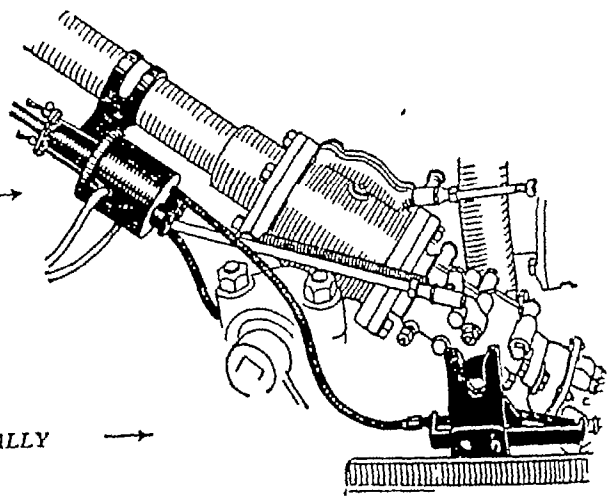
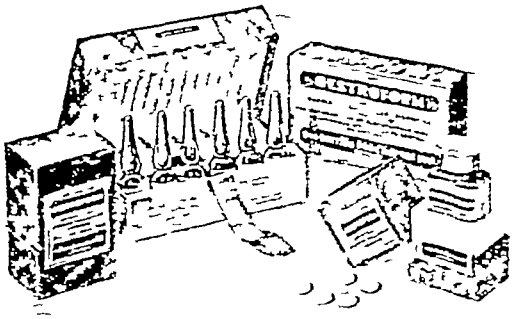


OESTROFORM



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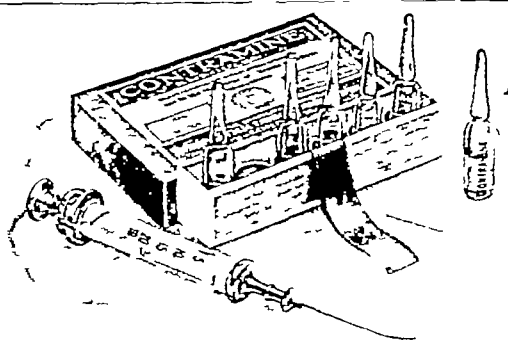

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British Medical Journal

SATURDAY, JUNE 3rd 1933

SPECIFIC TREATMENT OF PNEUMONIA

Although several years have passed since potent serum first became available for the treatment of pneumonia there are still comparatively few clinicians who have had experience of its use and it may be of interest to consider at this stage what is likely to be the future of this form of treatment It will be recalled that this phase in the history of pneumonia dates from Lloyd Felton's discovery of methods by which the antibody fraction of the serum of immunized horses can be concentrated and separated from the other proteins that the three types of pneumococci which produce the majority of pneumonias are antigenically distinct and that therefore the infecting type must be known in order that serum containing the antibody for that type may be given and further that only in Type I pneumonia has any convincing therapeutic effect been obtained The position therefore is that only about one third (the usual incidence of Type I) of all cases of lobar pneumonia can be effectively treated and the treatment demands identification of the type of pneumococcus in the sputum at the earliest possible moment followed by frequently repeated intravenous injections of a very expensive serum

The results reviewed by R L Cecil[1] at the Centenary Meeting of the Association last year are the most extensive available and were obtained under the only conditions which can be said strictly to test the treatment—namely by giving serum to alternate cases alone Any other system of choosing control cases and particularly that of treating only those cases admitted at a time of day when typing can conveniently be carried out is clearly exposed to fallacies while dispensing with control cases the mortality of the treated being compared with that during some other period or in other institutions is still further from furnishing real evidence The essential feature of Cecil's results is that in a series of 473 cases of Type I pneumonia the mortality with serum treatment was 20 1 per cent without it 31 2 per cent Such a reduction in mortality in a series of this magnitude must be significant and experi other institutions is still further from furnishing real to the same conclusion Any doubt whether the effect is specific if not dispelled by comparison with results in other types is discounted by an important experiment though on a limited scale recently reported by Sutliff and others[2] Of twenty-nine Type I pneumonias sixteen were treated with Type I serum and thirteen with serum concentrated by the same method but containing no antibody The effect of the latter was often a fall in temperature and pulse rate and a sensation of well-being which may therefore be a non-specific effect when obtained with potent serum but the course of the disease was not shortened bacteriaemia persisted in five cases and the extent of consolidation increased in another five whereas in all the cases treated with serum containing antibody these manifestations were prevented For Type II serum in Cecil's results no more can be said than that in a series of 505 cases it reduced the mortality from 45 8 per cent to 40 5 per cent Type III pneumonia is generally acknowledged to be totally uninfluenced by serum and in the heterogeneous Group IV now subdivided by American workers into twenty-nine types it is almost hopeless to expect that serum treatment will ever be really practicable although there are reports of success with one of the more prevalent of these (Type VII) The present issue really centres on Type I Is the evidence for the utility of Type I serum such that facilities for its use now confined to only a few of the largest hospitals should be extended to all hospitals and as far as possible to private practice?

The rapid determination of pneumococcus type requires the services of an expert bacteriologist and in some circumstances may be provided for only with great difficulty If this obstacle can be overcome and the appropriate serum obtained its repeated administration intravenously preceded by tests for sensitiveness to serum may be a formidable task for the average general practitioner It has been stated over and over again that only intravenous injection will serve but according to Curphey and Baruch[3] intramuscular injection yields as good results as intravenous in treating the type of infection produced in rabbits by the intradermal injection of pneumococci a proceeding devised by Goodner for testing curative as opposed to protective action The only qualification to this statement is that intravenous injection is required to combat a marked degree of blood stream invasion If these results are applicable to the human disease and intramuscular injection will serve for the average case intravenous being reserved for exceptionally severe infections the treatment will at all events be simpler to carry out and is likely to be entertained by a larger number of practitioners Another new observation is that of Francis[4] who finds that the intradermal injection of type specific capsular polysaccharide is an accurate guide to prognosis A positive reaction is almost always followed by a recovery and indicates that further serum treatment is unnecessary such a reaction may be obtained before there are clinical signs of improvement and Francis attributes it to the general re awakening of cellular activity which is necessary—in addition to the presence of antibodies—for recovery to take place

Hitherto the results of giving serum have only been compared with those in cases in which no special form of treatment has been attempted It should not be thought that there is no other supposedly specific treatment for pneumonia the enthusiasm displayed in America for serum has its equivalent in Germany for

[1] *British Medical Journal* 1932, ii 657
[2] *Arch Intern Med* 1933 li 435
[3] *Journ Exper Med* 1932, lv 925
[4] Ibid 1933 lvii 617

the use of optochin (ethyl-hydrocuprein), a synthetic compound so highly bactericidal to pneumococci that it is believed to exert a direct bactericidal effect after absorption from the bowel Some of the results obtained with this compound and with solvochin (quinine-urethane) are reviewed by Martini[1] the success of the treatment appears to be conditioned, as in the use of serum, by the stage of the disease at which it is begun, and even by the type of the infection, Type I being again the most amenable Even so, marked reductions in mortality are claimed, and Leitner[2] contrasts an average mortality of 25 per cent for bronchopneumonia in children with a consecutive series of forty-four cases treated with optochin without a single death Such claims as these for a comparatively simple treatment, applicable to forms of pneumonia outside the scope of serum therapy, should surely not be ignored , and it may well be asked whether an extended trial of these remedies could not be undertaken with advantage, at least in those cases for which serum treatment is either inapplicable or unobtainable

CUBIC SPACE IN THE HOSPITAL WARD

A letter from an architect was recently sent to this *Journal* asking for the latest views on the amount of cubic space required per bed in the wards of children's hospitals as compared with hospitals for adults This may be taken as another symptom of the growing interest which is centring round the whole subject of hospital construction It will be recalled that in 1932 the Royal Institute of British Architects appointed a committee to consider the problem of the orientation of buildings, and in the report published in the *Journal of the R I B A* there was a section dealing with hospitals It was suggested that hospital planning had become standardized, or even fossilized, and that the medical profession had failed to bring sufficient pressure to bear upon hospital architects to provide adequate entrance of sunshine Later in the year the *Architects' Journal* devoted a whole issue to hospital design, and it was apparent from the contributions that modern materials in the shape of steel framework and reinforced concrete should revolutionize the whole style of hospitals, since adequate entrance of sunlight and air was now consistent with a minimum of solid wall space Viewed from this aspect the question of cubic space per bed appears to be much less important than the provision of adequate sunlight and fresh air

Sir Henry Gauvain put the matter very succinctly at the discussion on " Infection in the Dormitory " at the Royal Society of Medicine last year, when he said that in the construction of Alton he was more concerned to secure the air of Hampshire than to have any definite minimum space between the beds Public health authorities regard 1,000 cubic feet air space and 100 square feet floor space as the minimum for adult hospitals, while the Board of Education's pamphlet on suggestions for the planning of new buildings for secondary schools suggests that in the dormitories the cubic space shall be as a minimum 700 cubic feet with 65 square feet of floor space and 3 feet between the beds It is probable that more importance lies in the last of these requirements than in any of the others, for the actual cubic space is, after all, a valueless figure, unless the ventilation efficiency is known and the basic amount of fresh air per patient per hour secured As far as this is concerned the standard 3,000 cubic feet per hour for adults can theoretically be reduced for children, who have a smaller output of carbon dioxide, but other considerations—especially that of droplet infection—suggest that the space between the beds must be regarded as of fundamental importance This was the view expressed by various speakers at the discussion referred to above Dr J A Glover showed that in one large dormitory where infection occurred there was only 1 foot 8 inches between the beds instead of the minimum of 3 feet Surgeon Captain Dudley made the suggestion that placing beds alternately head and foot to the wall was one way in which to increase the distance between the source and entry point of infectious materials, but it is noticeable that throughout the discussion the traditional position of beds at right angles to the wall was accepted as the only possibility In the plans for the new buildings at the Hospital for Sick Children Great Ormond Street, details of which have been kindly supplied by the architect, Mr Stanley Hall, the beds are to be arranged parallel to the wall Each cot is to have a floor space of 70 square feet and an air space of 700 cubic feet, while with this arrangement of beds the minimum space between any two " heads " will be about 10 feet Many of the new hospitals on the Continent are being constructed on this " beds parallel to the wall " system, which is held to have many advantages, including psychological advantages, and one physician in this country has roundly stigmatized the use of the old position in new hospitals as a retrogressive step

It will be seen from what has been said above that the advantages, including psychological advantages, and one Broadly speaking, the space between beds is the important problem rather than the cubic space, provided that the entrance of air is so free that ventilation is effective in dealing with the products of respiration With the more serious danger of infection in children's wards there is little reason to hold that a smaller cubic space can be safely employed Some other aspects of the problem were brought out in a discussion on ventilation and heating of hospital wards which we report at p 962

VISION IN INDUSTRY

The National Ophthalmic Treatment Board (1, High Street, Marylebone, W 1) has done good service by its issue of a leaflet (No 37) dealing with the conditions of vision in industry It is pointed out that efficient sight in many industries is probably the most important single factor contributing to high output, good work, diminishing casualties, and the well-being and contentment of workers In certain forms of manufacture, in which the detail is so fine that a short working distance

[1] *Münch med Woch* 1933 lxxx (i) 100
[2] *Jahrb f Kinderheilk* 1932 cxxxv 257

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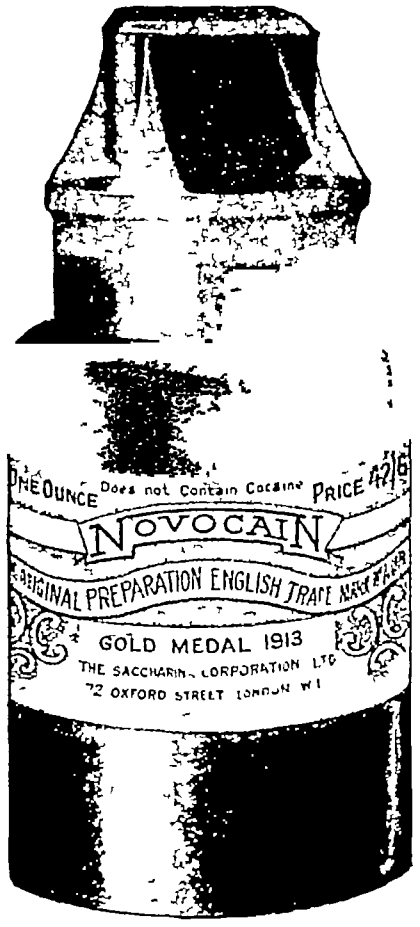

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is necessary—for example linking in the hosiery trade filament sorting and mounting in the electrical industry and a weaving operation known as drawing in—it has been proved conclusively that glasses both to correct any error of refraction in the eyes of the worker and to give the special assistance the short focus indicates have been of the greatest advantage Again apart from the provision of glasses the examination of the eyes of workers is needed in fabric and printing work in which accurate colour vision is wanted also for transport drivers who need both good colour vision and full fields of vision Preliminary examination would often save much time and money expended in training unsuitable candidates Defective vision is responsible for many more accidents in industry than is generally recognized Timely attention to the eyes will reduce the risks and also the regular examination of the sight of workers and the records of the findings are of high value in dealing with claims for injuries To meet the requirements of industry the National Ophthalmic Treatment Board with the approval and support of the British Medical Association has prepared a scheme for expert examination of the eyes of workers There are centres throughout the country with approved medical personnel and also approved opticians Employers of labour may desire to test for themselves the effect of this service upon their output and work before adopting it generally and the Board will gladly provide facilities and technical advice Medical practitioners will be interested in this pamphlet and might well bring it to the notice of employers of labour with whom they have relations

THE REGISTRAR OF THE G.M.C.

Although it is three-quarters of a century since the General Medical Council was constituted and its registrar comes up annually for election there have been only four holders of that office The first of the four Dr Francis Hawkins was a medical man the others have been laymen Dr Hawkins was registrar from 1858 until 1876 when he was succeeded by Mr W J C Milner who served the Council until 1897 when Mr H E Allen was appointed and remained in office until his death in 1911 In that year Mr Norman C King was appointed registrar and in 1921 he combined with it the office of registrar to the Dental Board Mr King entered the service of the Council in 1897 and became assistant secretary ten years later At the end of the recent May session of the Council Mr King retired and his successor in both offices is Mr Michael Heseltine lately assistant secretary at the Ministry of Health Mr King's retirement was the subject of many kindly references on official and unofficial occasions during the sessions of the Council and of the Dental Board The President of the Council Sir Norman Walker in bidding him farewell remarked that there were very few members now in the Council who could remember its sittings without seeing him on the left hand of the President The *Medical Register* he said was an example of what such an important document should be and its accuracy was a testimony to the vigilant supervision Mr King had exercised over its compilation He has set a high standard of work he hands over to his successor a smooth running machine and he carries with him into his retirement the gratitude of the Council Sir Francis Dyke Acland from the chair of the Dental Board bore similar testimony Mr King's retirement he said would be a break with the past which they all would regret He called to mind Mr King's assistance in two matters which were of outstanding importance during the earlier years of the Board—namely the framing of the regulations and the formulation of the *Dentists Register* It was a great tribute to his care that the regulations had so well stood the test of time and the *Register* that of the High Court His organizing ability was shown in the fact Sir Francis Acland continued that every department of the Board's work had been carried out not only efficiently but with devotion and enthusiasm Mr King has certainly been an ideal registrar of both bodies ever zealous to uphold their prestige and yet at the same time able to interpret their procedure and functions in human terms Many a case has been prevented from becoming the subject of disciplinary proceedings and many a doubtful situation has been cleared up to the benefit of an individual practitioner thanks to his wise and kindly advice Those who have had occasion as have members of the staff of this *Journal* to call on him for information have always found him most courteous and willing to give up any amount of time to help them in their task A few years ago when the Council was being subjected to more than the usual amount of public misrepresentation and misjudgement he wrote an admirable memorandum on its constitution and powers He has endeared himself particularly to his own staff as was very evident at a little presentation which took place last week when he confessed that one of his ambitions had been to cultivate a family feeling amongst all those working at Hallam Street Mr King was absent from his duties at the Council during the period of the war when he rendered distinguished military service He commanded the 3rd London Rifle Brigade from June 1915 until demobilization The new registrar Mr Michael Heseltine a man still well short of 50 enters upon his office with a valuable experience gained at the Ministry of Health and in the service of various official bodies In his post at the Ministry he has had many opportunities of coming into touch with representatives of the medical profession and has earned their good opinion

ANAESTHETIC EXPLOSIONS

Ignition of anaesthetic vapour in the operating theatre is generally held to be of rare occurrence in this country though Pinson[1] has estimated that at least a hundred cases of burns of the eyebrows lips and pharynx occur here each year due to ether explosions (A fatal case with rupture of the bronchi from an ether and oxygen mixture was described in the *Journal* of October 17th 1925 p 712) Pure chloroform on the other hand appears to be a safe anaesthetic if unadulterated and the same observer found experimentally that though its vapour could be decomposed by the heat of an oxy-acetylene blowpipe no ignition occurred even when a stream of oxygen was passed through it Alleged chloroform explosions are he believes due to unsuspected admixture of ether or to the burning of combustible gases arising from charred or hot tissues In drier and hotter climates than our own the explosion danger is a constant source of anxiety to surgeons and

[1] *British Medical Journal* 1930 ii 312

ANTERIOR LOBE OF THE PITUITARY

PROFESSOR COLLIP'S LECTURE

At a special meeting of the Section of Therapeutics and Pharmacology of the Royal Society of Medicine on May 30th, with Dr E P POULTON in the chair, Professor J B COLLIP of McGill University, Montreal, lectured on the separation of substances from the anterior lobe of the pituitary gland having different properties (growth-producing and thyroid stimulating)

Professor Collip said that he proposed to discuss the results of experimental work relating to pituitary gland physiology and chemistry which had been carried out during the past few months in the biochemistry department at McGill He had had as collaborators Dr Hans Selye, Dr D T Thomson, and Dr Evelyn Anderson Intensive work had proceeded during the past three years on the general problem of placental hormones One of these—the prolan of Zondek—they had never been able definitely to recognize as a pituitary hormone, nor could they find substantial evidence for the existence of two prolans in the placenta, in the pregnancy blood or in the urine They chose to call this ovary-stimulating factor the anterior pituitary-like substance, recognizing in this manner that they were in all probability dealing with a single hormone factor having physiological properties only partially like the true anterior lobe substance It had been felt for a long time that the question as to the identity or non-identity of the gonad-stimulating substance derived from the human placenta with that occurring in the pituitary gland of animals could be definitely answered providing the tests of replacement therapy were carried out on hypophysectomized animals Experiments of this nature that had been previously reported had yielded somewhat contradictory results Last September, therefore he invited Dr Selye, who was then research fellow in his laboratory, to undertake the preparation of a large number of hypophysectomized white rats Using a slight modification of the Smith technique for hypophysectomy, he soon became highly proficient in the art as applied to the rat, and made available for experimental use a large number of animals of various ages Dr Selye had had no difficulty in carrying out the complete operation in five minutes

With the aid of a large number of microscopical sections Professor Collip then gave a brief but masterly summary of the work which had been proceeding He illustrated the effect of the injection of prolan on the testes and ovaries of the immature and mature animals The character of the result depended on the age of the animal at operation With immature animals the injection of massive doses of prolan did not produce any noticeable effect, though when the animals were killed and the ovaries examined certain changes were observed (the appearance of pseudo corpora lutea) If the animal had passed puberty at the time of operation the injected prolan resulted in continuing oestrus—the observation of this had been continued on the same animal for as long as six weeks The placental hormones had no effect on the growth of the body as a whole , the animals after hypophysectomy did not grow at all, but on prolan being given there occurred a growth process so far as the interstitial tissue was concerned, side by side with a degenerative process in the germinal epithelium In the same way practically a normal testis could be produced in the male animal If the prolan were given for weeks on end, the effect observed on the interstitial tissue passed away, and there appeared a complete necrosis of the gland with large giant cells coming in and cleaning up the debris

The lecturer next showed how, by the use of pituitary implants, practically complete replacement of the ovary in the hypophysectomized rat was produced In the male the implant also prevented the atrophy of the testis He then went on to describe how almost by accident, a growth-producing substance was separated from anterior lobe extract This was found to carry great potency in the production of growth in the completely hypophysectomized rat He showed curves illustrating the metabolism of the animals treated with this ' Q " extract in respect of nitrogen balance and excretion of nitrogen in the urine When the growth extract was given to an animal the excretion of nitrogen within forty eight hours dropped considerably, and remained down for as long as the extract was continued The growth hormone probably affected protein metabolism as much as it affected calcium metabolism There was a tendency for the calcium balance to become negative after hypophysectomy, and with the injection of the substance it tended to swerve from negative to positive At present however, the data were not sufficient to permit of much to be said about that range of results

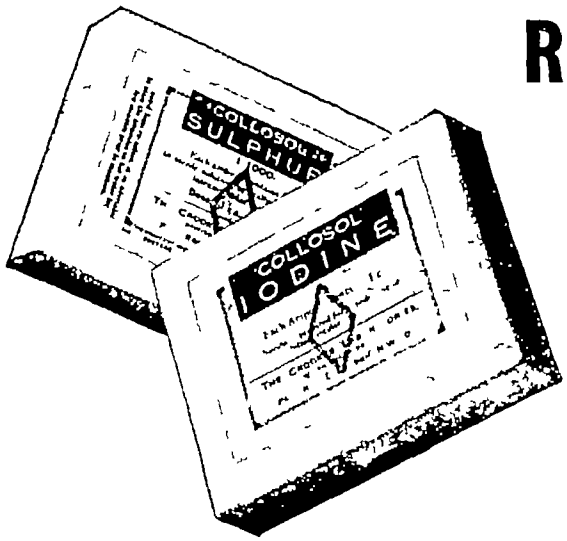
Passing on to the thyroid stimulating substance, the thyrotropic fraction, Professor Collip said that when the growth hormone was removed from the extract it was a simple matter to obtain a protein like fraction from the purified residues He showed the results obtained with hypophysectomized rats treated with the thyrotropic fraction for a period—nine days was mentioned A fair amount of work had been carried out in Germany and elsewhere following up the thyrotropic effects of pituitary extract After the maximum effect of the thyrotropic hormone had been reached, as shown by the rise in basal metabolism to a large degree and by the maximum amount of hyperplasia, as shown by the histological condition of the gland, the basal metabolism tended to return to normal and the gland to revert to a less active state To what extent this might be altered by giving minute doses of iodine with the thyrotropic hormone was not yet quite clear, but some work had been started in that direction, and suggestive results had been already forthcoming By giving the right dosage to the hypophysectomized animal it should be possible to keep the thyroid normal

He also touched, finally, upon the adrenotropic substance It was not known whether the substance in the pituitary which regulated the suprarenal cortex was identical with the substance which regulated the thyroid, but he felt that there were two factors at work, one on the thyroid and one on the suprarenal In the case of the hypophysectomized animals the thyroid had been found restored to normal without the suprarenal being restored at all, and the suprarenal had been restored, though always in connexion with the thyroid There was suggestive evidence that the thyrotropic and adrenotropic substances were not necessary identical

DISCUSSION

Dr A S PARKES said that he was inclined to raise his hat to anyone who could get anywhere near the pituitary of a rat in five minutes But the ultimate test was the examination of serial sections of the base of the skull, and in the absence of that proof that the pituitary body had been completely removed he did not think positive conclusions could be drawn The physiological evidence of removal—namely, the retrogressive changes in the reproductive gland and the endocrine glands—was not in itself adequate proof that the whole of the pituitary body had been removed It was well known that two-thirds or three fourths removal was quite inadequate to cause complete atrophy of the ovaries or testes, and as far as that went, an adequate amount of pituitary body had been removed , on the other hand, any remaining fragment might be quite sufficient to upset the experiment when the animal was used as a test animal As regards the macroscopic evidence from an examination of the base of the brain, there were many cases where an appreciable fragment of anterior lobe had been found on sectioning the skull, such as could not possibly have been seen at necropsy by macroscopic examination Another point he emphasized was that where the whole of the tubular tissue of the testes had undergone regression, the apparent amount of interstitial tissue was, of course, enormously increased Precisely the same effect was obtained in the case of x rays which destroyed the tubular tissue and thus increased apparently the amount of interstitial material Finally, he suggested that the enormous amount of experimental work now being carried out was likely to bring about forgetfulness of the fact that there was such a thing as a normal animal One of the most interesting uses that could be made of hypophysectomized animals

IN RHEUMATIC CONDITIONS



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was to substitute by various means the action of the anterior lobe itself and to produce finally an animal which would perform all the normal functions of reproduction in the absence of the anterior lobe He thought he was right in saying that the remarkable process whereby at each period of oestrus a fairly definite number of follicles were brought to maturity and ovulated had never been actually carried out on the hypophysectomized animal Ovulation had been caused in the hypophysectomized animal but not those completely abnormal changes in the ovary such as destruction of the smaller follicles and partial maturation and partial regression of the whole mass of follicles which was the kind of thing rarely if ever found in the complete normal animal

Dr W CRAMER asked whether there was any difference so far as obesity was concerned in these experimental animals Some years ago curious differences were obtained in that respect in rats which had been irradiated on the testes as compared with castrated rats The latter remained in the normal condition but in the irradiated rats the interstitial tissues showed hypertrophy and the animals became very obese Dr WHITE expressed the view that it was dangerous to postulate new hormones He believed that this was the seventeenth postulated from the pituitary It was incredible that it could secrete seventeen different principles Dr W M FELDMAN asked what was the relation between the pituitary and the parathyroid

Sir HENRY DALE took up the remark about the number of hormones which were supposed to originate from the anterior pituitary lobe Did he understand Professor Collip to suggest that the gonad stimulating function of the anterior pituitary lobe which used to be ascribed to at least one and possibly two different hormones was not in itself a hormone function at all?

Professor COLLIP in reply said that whether in these experiments they had missed a possible fragment of the tissue because they had followed the behaviour of the animal only he could not decide but the completely hypophysectomized animal did not grow at all That is to say if a month after operation it was 100 grams in weight it would be 100 grams or less a month later If there was a slight growth the animal was killed and invariably a trace of pituitary was found also with such growth the extreme retrograde changes in gonad thyroid and suprarenal glands were not observed The animals had not been submitted to a breeding test but the histological features and the growth curves had been studied and the fact that so very many animals had been used seemed to give a certain statistical assurance to the results Dr Cramer's question about obesity was most interesting because in the experiments at McGill no effect at all on fat metabolism had been observed but the experimenters were quite convinced that the pituitary did come into the problem of fat metabolism With regard to the number of pituitary hormones he did not believe for a moment that there were as many as might be suggested by the physiologically active principles obtained but it was quite possible that the substance in the gland was so altered in the process of extraction that there were side chains so that it was not pure hormone fractions which were being isolated but fractions which had definite physiological activity Probably the word hormone applied to any of the fractions mentioned was a misnomer With regard to the parathyroid gland there was no evidence at all of any change taking place after hypophysectomy As opposed to the thyroid and the suprarenal the parathyroid stood out as being unaffected by the operation In reply to Sir Henry Dale there was satisfactory evidence of the existence of a principle or substance in very simple anterior lobe extracts which completely modified the effect of prolan in the hypophysectomized animal One immediately attempted to link that up with the work of Evans who showed that the summation effect—prolan plus anterior lobe—was really something of the nature of catalytic effect The effect of prolan alone in a certain dose plus the effect of anterior lobe alone as measured by the weight of ovary was only a fraction of the effect when the two things were given to the same animal He was of the opinion that the placental hormone was physiologically identical with an anterior lobe fraction which like the former required the presence of a complementary substance of true pituitary origin in order to produce a full maturity effect

THE SCOTTISH SPAS

A MEDICAL VISIT

On Friday May 19th a party of well known physicians left London for a visit to Scotland at the invitation of Sir Henry Lunn and Sir Josiah Stamp They arrived back in London on the morning of the following Wednesday having spent a most enjoyable four days under conditions which were equalled only by the generosity of their hosts On Saturday morning after the spa at Bridge of Allan had been inspected a visit was paid to Stirling Castle where by the kindness of Lord Mar and Kellie they were able to inspect parts of the castle not usually thrown open to the public

DIETETIC TREATMENT AT SPAS

At the luncheon held at Bridge of Allan Spa Sir William Willcox in introducing a discussion on dietetic treatment reminded his audience that the reconstructed spa had been opened in 1930 by Sir Humphry Rolleston and Dr Fortescue Fox The water at Bridge of Allan he continued was unique it contained more calcium chloride than any other water in the world and should prove very useful to patients in need of calcium therapy The spa itself was mild in winter and not too hot in summer One of the shortcomings of British spas had been the insufficient attention given to dietetics At spas abroad the hotels were in close association with the physicians who prescribed food as well as waters and medicines Sir Henry Lunn was a disciple of the fasting method of dietetic treatment Sir William said and he agreed that restriction of diet was advisable in some cases What was wanted in the spas of this country was not any stunt form of diet but a system of rational dietetics each individual being treated according to his needs At Bridge of Allan it was proposed that rational dietetics should be employed as well as climatic and hydrotherapeutic methods Lord Horder said that he was impressed by what he had seen of this spa It was a going concern Why British spas did not go ahead more rapidly was a question that was concerning many of them just now Was it lack of British business aptitude? Were we a little ashamed of pushing our own wares? Members of the medical profession were trained to believe they should avoid anything like publicity still more anything like advertisement But they should not be loath to give advice when asked to The British Health Resorts Association had been formed partly with the object of aiding the development of individual health resorts and under the able guidance of its secretary Dr Alfred Cox great results were to be expected Lord Horder said that the popular idea on the questions of diet was always in the direction of fasting rather than of adapting the diet to the individual There was certainly something dramatic about fasting—sometimes referred to as alimentary rest He had always lamented that dietetics had been left too much in the hands of eminent surgeons and distinguished lady publicists If expert guidance ample local facilities and the amenities were provided there was no reason why Bridge of Allan should not have the great success they all wished it In congratulating Sir Henry Lunn on the part he had played in bringing the profession and the public to Bridge of Allan Dr Chalmers Watson remarked that the profession had perhaps been rather remiss in this matter of dietetics There was no question that defects in diet were an important factor in the causation of disease He thought that if the profession and the public would pay attention to fresh foods then they need not worry about vitamins as such

Professor S J Cowell said that increased interest was being shown in nutrition and in diet as a form of treat-

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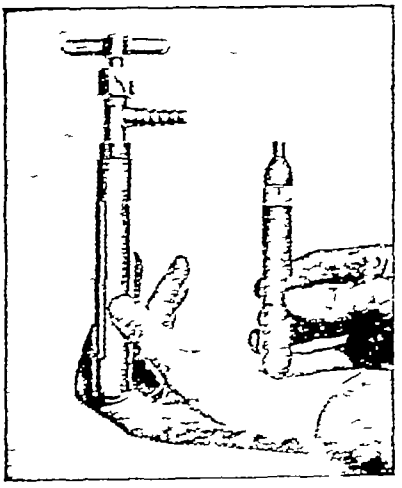
* *Proc Roy Soc Med Section of Laryng., Dec* 1930 *p* 441.



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ment The Scots were pioneers in the subject of dietetics In the past few years enormous advances in the diagnosis and treatment of deficiency diseases had been made Apart from these there were a number of conditions (for example, hypertension, chronic arthritis) in which there might be a general metabolic disturbance susceptible to treatment by readjustment of the diet To-day few physicians would agree as to what was the rational treatment of these disorders Elimination was all right up to a point There must be something to eliminate, but no one knew what There was, he felt, a great need for much more observation and accurate recording in these metabolic disorders Sir Ashley Mackintosh, speaking as a patient, said he could not sufficiently express his appreciation of everything at the Bridge of Allan After short speeches by Dr W H Welsh, one of the physicians on the staff and Mr Alexander Morrison the town clerk Sir Henry Lunn said that in Great Britain there were many establishments which carried out starvation treatment without any scientific background There was therefore a need for proper dietetic centres

Although it cannot be said that the members of the party were, during the rest of the tour, given any opportunity of testing the therapeutic value of "alimentary rest' they were pleasantly subjected to that most benign form of all treatments—climatic From the Bridge of Allan they went by car on Saturday afternoon to Pitlochry, passing through the most beautiful country by way of Crieff Sma'Glen and Aberfeldy At Pitlochry they were handsomely entertained at the Atholl Palace Hotel by Mr Holdsworth Lunn Dr Fortescue Fox, speaking in the evening said that the aim of the British Health Resorts Association was to develop the health resorts of this country in accordance with the demands of modern medicine In the modern spa expert medical advice must come first, the other things would then follow On Sunday morning the party left by special train for Gleneagles, where they were the guests of Sir Josiah Stamp as chairman of the London Midland and Scottish Railway Everything at Gleneagles including a cloudless sky, conspired to make the visit there one of the most pleasant episodes in the whole tour On Monday the company moved north to Strathpeffer, where they stayed at the Highland Hotel In the evening the idea that the Scots have no humour was successfully dispelled by Mr MacIver, who, with a number of others, provided the guests with an excellent concert On the last morning Dr F A Bearn took the party round the spa, which is famed for its sulphur springs and peat baths

ACADEMIC ASSISTANCE COUNCIL

AID FOR DISPLACED GERMAN PROFESSORS

A group of forty-one men and women holding high positions in the intellectual life of Great Britain have formed themselves into an Academic Assistance Council, and have issued a public appeal for funds to assist university teachers on the Continent who, "on grounds of religion, political opinion, or race, are unable to carry on their work in their own country" Seven of the signatories are members of the medical profession or intimately connected with it Professors Winifred Cullis G Elliot Smith, M Greenwood, J S Haldane, A V Hill, Sir F Gowland Hopkins and Sir Charles Sherrington Others are distinguished exponents of pure science such as Lord Rutherford Sir Joseph J Thomson, Sir William Pope, Lord Rayleigh and Sir William Bragg The immediate concern of the council is to assist teachers and investigators who have been displaced under the present regime in Germany The appeal states

'If the information before us is correct effective help from outside for more than a small fraction of the teachers now likely to be condemned to want and idleness will depend on the existence of large funds specifically devoted to this purpose It seems clear also that some organization will be needed to act as a centre of information and put the teachers concerned into touch with the institutions that can best help them We have formed ourselves accordingly into a provisional council for these two purposes We shall seek to raise a fund to be used primarily though not exclusively, in providing maintenance for displaced teachers and investigators and finding them the chance of work in universities and scientific institutions

We shall place ourselves in communication both with universities in this country and with organizations which are being formed for similar purposes in other countries and we shall seek to provide a clearing house and centre of information for those who can take any kind of action directed to the same end We welcome offers of co-operation from all quarters We appeal for generous help from all who are concerned for academic freedom and the security of learning We ask for means to prevent the waste of exceptional abilities exceptionally trained The issue raised at the moment is not a Jewish one alone many who have suffered or are threatened have no Jewish connexion

'The issue though raised acutely at the moment in Germany is not confined to that country We should like to regard any funds entrusted to us as available for university teachers and investigators of whatever country who on grounds of religion political opinion or race are unable to carry on their work in their own country The Royal Society has placed office accommodation at the disposal of the council Sir William Beveridge and Professor C S Gibson are acting as honorary secretaries of the council and communications should be sent to them at the Royal Society Burlington House W

"Our action implies no unfriendly feelings to the people of any country it implies no judgement on forms of government or on any political issue between countries Our only aims are the relief of suffering and the defence of learning and science'

LEVERHULME RESEARCH FELLOWSHIPS

The will of the late Lord Leverhulme directed that the income arising from a part of his estate should be devoted to the granting of scholarships for "research and education" and the trustees have recently made grants for this purpose to several institutions They have now resolved to devote from income of the fund a sum of £12 000 a year to the establishment of a scheme of research fellowships These are intended in the first instance for the assistance of experienced workers rather than to add to the provision already existing for workers in the early stages of their careers The trustees have in mind particularly men and women who are prevented either by pressure of routine duties or by any other cause from undertaking or completing an investigation of value They have decided therefore, to place no definite limit to the amount of individual grants which will be adjusted according to the circumstances of each case The duration of grants will normally not exceed two years Fellows will usually be required to work at or in connexion with a recognized centre of research, either at home or abroad No subject of inquiry is excluded from the scope of the scheme but under present conditions the trustees intend that preferential consideration should be given to subjects in which the existing provision is inadequate

The following have accepted their invitation to serve on an advisory committee for the selection of Fellows and for the general supervision of the scheme Dr H J W Hetherington (chairman), Professor A M Carr Saunders Sir William Hardy F R S Dr N V Sidgwick F R S and Mr H T Tizard F R S Dr L Haden Guest has been appointed secretary

Applications (from British born candidates normally resident in the United Kingdom) and all communications in connexion with the scheme should be addressed to the Secretary Leverhulme Fellowship Scheme Union House St Martins le Grand E C 1 who will furnish further information and a schedule of the particulars required

The advisory committee will meet early in July to consider recommendations for the first awards under this scheme They will then be able to deal with applications received up to June 19th Later applications will be considered afterwards But it will be a convenience to the committee if as many applications as possible are in the hands of the secretary by June 19th

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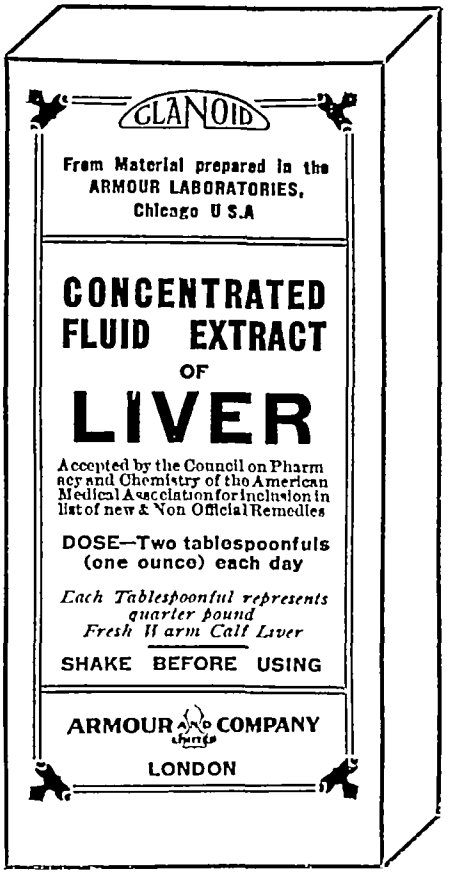

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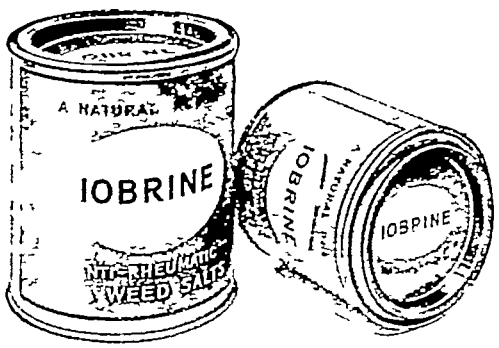

Doctors say—

Cowdenbeath Aug 6th 1932
"I tried IOBRINE on a case of acute rheumatic joint condition in a young girl of 12, in the form of hot fomentations The results were very gratifying as it was very soothing to the patient, and greatly alleviated the pain. The parents procured further supplies for themselves till the treatment ended with satisfactory results to the child." M.B

Oxford, Oct. 7th, 1932.
As I was suffering from Lumbago myself a condition I have been subject to since I sprained my back a few years ago I used the IOBRINE in two baths I am pleased to report that I received great benefit from them, the pain and stiffness in the muscles subsiding and the general tonic effect was very noticeable. M.B., Ch.B

Glasgow Dec 14th, 1932.
I may say that I have found hot IOBRINE BATHS to give great relief to tired aching limbs and to be conducive to sleep
SURGEON

Golder's Green, N.W.11
Dec. 18th 1932.
My wife who suffers from Muscular Rheumatism has found considerable relief from using your IOBRINE SEAWEED BATH SALT and I can certainly recommend it." M.B

Harrogate June 12th 1932.
Re IOBRINE, I may say that it is in my opinion a very useful form of treatment for Rheumatism I tried the sample you sent me on a patient who was very pleased with the results. M.R.C.S L.R.C.P

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Scotland

Scottish Hospital Services

A report on the hospital services of Scotland has been issued to the Department of Health by the Consultative Council on Medical and Allied Services Briefly its recommendations are that all the hospital services in a given area whether voluntary or statutory should be co-ordinated that they should all be equipped for dealing with the same types of illness that the question whether a patient is to receive treatment should be decided purely on medical grounds that the same power of charging should apply in voluntary as in statutory hospitals that the staffs should be of equal professional standing and that there should be a common practice in the matter of payment of the medical staff The report gives a résumé of the changes which have been effected by the Local Government (Scotland) Act of 1929 It points out that the voluntary hospitals differ from the statutory hospitals in that they are maintained wholely or mainly by voluntary contributions and the managers are under no legal obligations to the public The statutory or municipal hospitals however are maintained out of rates levied by the local authorities who have defined obligations for the treatment of the necessitous sick of mothers and children and of patients suffering from infectious diseases under the new powers they may also provide for the same classes of patients and the same types of illness as the voluntary hospitals The report affirms that there should be close co-operation between the voluntary hospital and the statutory hospitals in any given area so that the patient who cannot be provided for in one hospital may be admitted to another It suggests that it may be found desirable in large centres to provide a clearing house where patients may be allocated among the hospitals in the area Such a clearing house would economize accommodation and would be in a position to secure the most effective use of ambulance services The question of payment by patients is regarded as not only of first-class importance but also of great urgency Scottish local authorities have no statutory power to impose charges on patients treated in hospitals for infectious diseases including tuberculosis but they have powers to make charges for other kinds of illness treated in statutory hospitals In general the voluntary hospitals have no power to recover costs of maintenance and treatment being often debarred by their charters from claiming any payment from patients A workman who has been contributing to some organized scheme of subscription to a voluntary hospital may if he falls ill not be able to secure immediate admission to such a hospital and that if he has to be admitted to a statutory hospital and is charged according to his means he may not continue willingly to subscribe to the voluntary hospital It is regarded as essential therefore that the voluntary hospitals and the statutory authorities in each area should work out a common policy and that the same power of charging should apply in voluntary as in statutory hospitals The obstacle to charging patients which might arise under certain charters of incorporation might be met by application to Parliament or the Privy Council or the Court of Session As a corollary to co-ordination of hospital services the staffs of both must be of equal professional standing and members of the staffs of the voluntary hospitals should be eligible to serve at the statutory hospital where local conditions make this practicable It is suggested that opportunity might be taken to increase the number of family doctors brought into active association with the hospitals It is also suggested that for the teaching of medical students and the training of nurses the statutory and the voluntary hospitals should be equally available within their respective limits and that further teaching might be made available at certain hospitals outside the principal centres with arrangements for medical students The situation of the large hospitals in university centres has enabled them to supply specialized services of a kind unobtainable in outlying areas but it is considered that the larger hospitals outside the principal centres—which might be called district hospitals—should be definitely linked up with the central hospitals for transfer of patients provision of consultant and specialist services clinical teaching and the training of nurses It is proposed that there should be some administrative mechanism to secure continuous consultation and co-ordination between the various organizations involved and it is suggested that in each region of Scotland there should be a committee representative of the statutory authorities the voluntary hospitals the medical schools and the medical profession to advise on matters concerned with the co-ordination of hospital services A copy of the report can be obtained from H M Stationery Office 120 George Street Edinburgh price 2d

Medical Education in Scotland

The students of Edinburgh University organized a meeting on May 26th in the University Union to discuss the question of reforming the medical curriculum Mr G N Masheder president of the union was in the chair and said that for some years past the Scottish students at their annual conference had been making demands for improvement of the medical curriculum but so far these demands had not borne fruit Dr Chalmers Watson said that a profound change in the system of medical education in this country was overdue Recent reports of meetings of teachers and students in the hospitals of London showed that the same matter was exciting attention in England and the British Medical Association had appointed a committee to draw up recommendations on this subject The opinions expressed appeared to be practically unanimous that the defects of the present curriculum were primarily due to (1) the excessive time and attention devoted to unnecessary detail in the preliminary scientific subjects such as anatomy physiology and pathology and the failure to correlate these subjects with the later clinical work of the students (2) defective appreciation by specialists of the limitations to the value of teaching in its relation to the daily work of the practitioner and (3) lack of adequate attention to many subjects of great practical importance in preventive medicine Taking anatomy as an example of the scientific subjects Dr Chalmers Watson pointed out that in Edinburgh the time allocated to this subject was 900 hours as against 450 hours devoted to medicine and practical medicine In the leading American universities on the other hand the corresponding figures were 260 and 1 100 hours There was very little doubt that by teaching the anatomy of the living as opposed to over minute anatomy of the dead at least 500 hours could be saved to the advantage of the student A different outlook on these matters would necessitate the following changes The student would begin his clinical studies in his first instead of his third year more time would be given to physiology more attention would be paid to practical surgery in the out patient department at the expense of time wasted in the operating theatre special subjects would be taught from the standpoint of the general practitioner at the end of the curriculum the student would be engaged for three terms in clinical work with no further theoretical examination in front of him The time saved by more effective co-ordination of subjects and teachers would allow more attention to be given to subjects of great importance in preventive and curative medicine at present largely neglected in the curriculum and to the physical well-being of the student If this scheme was adopted the subjects of the present first professional examination—

chemistry, physics and biology—would be taken in the pre-registration period of study In the new curriculum it would be possible and advantageous to arrange for further study of these elementary sciences in their application to the work of the practitioner The medical course proper should begin with anatomy and physiology, and this would still allow for its completion in five years Mr G H Colt of the University of Aberdeen suggested that at the end of five years study the student might become a qualified doctor with a certificate allowing him to practise but without a degree, and further attendance at hospitals and similar institutions might be insisted upon Mr Godfrey, of the department of anatomy in Edinburgh, suggested that the entire course might be increased by a year or eighteen months After a large number of students and others had made various suggestions, the following resolution was passed by an overwhelming majority ' That this House places on record its opinion that the present system of medical education in this country is unsatisfactory In its opinion important changes in the curriculum are essential, whereby more facilities for instruction in practical medicine are available and more assistance given in the principles and practice of preventive medicine The time required for this additional teaching can in its opinion, be obtained by a judicious modification of the teaching in the earlier scientific subjects, with some revision of the time and attention devoted to the teaching in the ' special ' departments of medicine and surgery "

Glasgow Post Graduate Courses

A summer session for post-graduate teaching in Glasgow has again been arranged under the auspices of the Glasgow Post-Graduate Medical Association The teaching facilities will fall chiefly into two divisions (*a*) general medical and surgical course and (*b*) clinical assistantships During the last two weeks of August and the first two weeks of September a whole-time course, for which an inclusive fee is charged, will be conducted in some of the general and special hospitals The course will include most of the subjects of interest to the practitioner—the mornings being occupied with general medicine and surgical diagnosis, and minor surgery in the Western Infirmary and the Royal Infirmary and the afternoons with special subjects in the special hospitals or special departments of the general hospitals, two subjects being dealt with each afternoon Clinical assistantships, which are limited in number are available in the summer months as well as at other times during the year They are designed to make provision for graduates who desire opportunity for detailed study of one or other of the specialties Full particulars may be obtained from the secretary Glasgow Post Graduate Medical Association, The University, Glasgow

Lord High Commissioner and Hospitals

This year the Lord High Commissioner, who represents the King at the General Assembly of the Church of Scotland is Mr John Buchan and, as usual, his duties have included visits to the principal hospitals in Edinburgh On May 24th the Commissioner and Mrs Buchan visited the Royal Infirmary and, after inspecting the surgical wards under the charge of Mr Struthers, presented the prizes gained by nurses Mrs Buchan paid a visit to the Royal Maternity and Simpson Memorial Hospital where special attention was paid to the ante-natal department, and with her husband visited the Scottish National Institution for Blinded Sailors and Soldiers at Newington House, where forty-nine blinded ex-service men are now employed in various processes of mat making, basketry and boot repairing On May 25th a visit was paid to the Deaconess Hospital, where Lord Sands, the chairman of the board, referred to the proposed extension of the hospital for out-patients and for the accommodation during illness of workers in connexion with the Church of Scotland The Deaconess Hospital was he said unique in that it was entirely managed and supported by the Church The institution had managed to balance its budget year by year and had never been in debt—a position due entirely to support from the Church particularly from the Women s Guild A visit was also paid to the Scottish Branch of the Queen's Institute of District Nursing where Lady Finlay joint honorary treasurer of the Scottish Council, explained that the object of the institute was to bring the benefit of skilled nursing into the homes of the people all over the country The district nurse might be described as the most finished product of the nursing profession a hospital training was followed by a complicated post graduate course including the C M B certificate, so that she was competent to meet any emergency that might arise

Slum Clearance in Edinburgh

In an address, on May 18th, on slum clearance in Edinburgh, Mr Allan W Ritchie, chief sanitary inspector of the city said that the Prince of Wales s appeal on behalf of slum clearance and rehousing would stimulate the desire to deal with this urgent problem Edinburgh Corporation he maintained had done more in this direction since the Royal Commission on Housing in Scotland reported in 1917, than other authorities Five improvement schemes had so far been promoted The first was the Cowgate Grassmarket scheme in 1923, which was followed by one for Leith in 1924 , the occupiers in both these areas were transferred to a large district of new houses at Lochend The Cowgate scheme had dealt with properties dating back 200 and 300 years The next scheme, in 1927, had covered many derelict properties, dating as far back as 1737, 1633 and even 1570, in the Canongate and other parts of Edinburgh Schemes for St Leonard s district in 1927 and 1929 provided for the clearance of some 1,544 houses and the people from these areas were in process of transference to Prestonfield and Niddrie Altogether the corporation had dealt with about 4 000 houses having a population of 12 000 people The general experience had been that the occupiers of the new houses appreciated the benefits of better environment and had responded to the fresh claims upon them by keeping their houses and gardens in order

England and Wales

London Voluntary Hospitals Committee

We print below the result of the election of members to the London Voluntary Hospitals Committee for 1933–6 At its first meeting, held on May 24th the committee elected the following officers chairman, Lord Riddell vice chairman Mr O N Chadwyck Healey , honorary treasurer, Mr E Vernor Miles , honorary secretary, Professor L S Dudgeon

Hospitals with Undergraduate Schools Mr C E A Bedwell Mr R Davies Colley F R C S , Professor L S Dudgeon, Mr A G Elliott Dr Geoffrey Evans Dr Anthony Feiling Dr A M H Gray Dr J M H MacLeod, Mr Robert Milne F R C S Sir Edward Penton Lord Riddell Sir Herbert Samuelson Mr Austin Taylor, Mr F P Whitbread Dr C M Wilson

Hospitals without Undergraduate Schools Major F A Attwood Mr L E Barrington Ward F R C S Captain A M Hughes Sir Henry Jackson M P Mr E Vernor Miles Mr Gilbert Painter Mr D Denham Pinnock F R C S Dr Harold Pritchard Mr Cecil Rowntree F R C S

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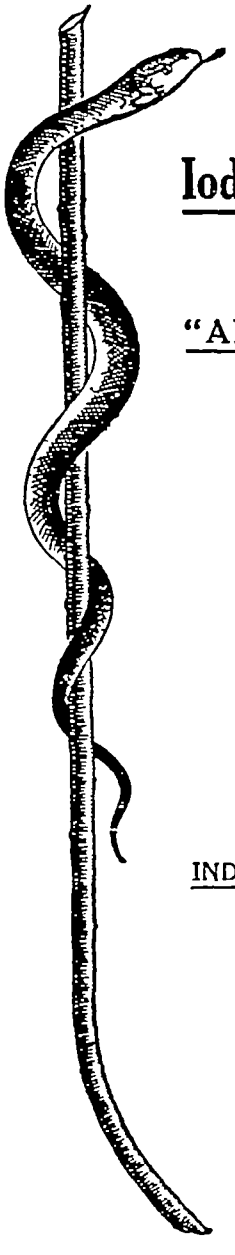

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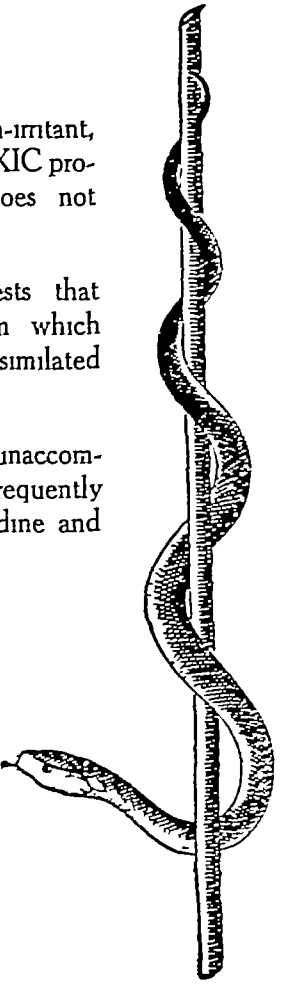

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Welsh Tributes to Sir Robert Jones

The February number of *The Welsh Outlook* contains an editorial tribute to Sir Robert Jones—one of Wales's greatest sons—with a portrait supplement and signed appreciations by Sir John Lynn Thomas and Dr W Thomas of Prestatyn Sir John writes from thirty two years intimate friendship and from first hand knowledge in peace and in war of the great apostle of the Thomas splint There cannot be another Robert Jones He lived through two revolutionary epochs in the medical profession The first was the introduction of antiseptics by Lord Lister for general use in surgery The other was the creation by Hugh Owen Thomas of a special scientific branch in bone setting known as orthopaedic surgery in the very house where Robert Jones and I first met in 1900 Sir Robert Jones Sir John Lynn Thomas and Sir Dawson Williams late Editor of this *Journal* were a trio of intimate friends and here we have a glimpse of them in holiday mood They went together to a boxing match one night and when they returned to the club Williams and I had a revelation into our host's extraordinary character by a scientific racy discourse on the art of boxing with illustrative quick movements

When he sat down and explained how easy it was to control each or every movement by suitable splinting we then realized that Robert Jones's great interest in boxing formed one of the facets of his wide outlook on orthopaedics generally

Royal Sanitary Institute Congress

The programme of the forty fourth Congress of the Royal Sanitary Institute which is to be held at Blackpool from June 17th to 24th has now been issued Lord Cozens-Hardy will deliver his inaugural address as president on the afternoon of June 19th In the Section of Preventive Medicine presided over by Sir Henry Bracken bury the first day (June 20th) will be devoted to a discussion on A General Medical Service for the Nation The speakers will be Dr Alfred Cox Sir William E Hart Dr R M F Picken and Dr R G McGowan On June 21st a discussion on some psychological problems in industry will be opened by Dr Leonard P Lockhart Professor T H Pear of Manchester University and Mr F J Marquis In the Section of Architecture Town Planning and Engineering the subjects include slum clearance and rehousing and the Town and Country Planning Act 1932 Viscountess Erleigh will preside over the Section of Maternity Child Welfare and School Hygiene and papers will be read on the place of the maternity hospital or home in the maternity and child welfare scheme juvenile rheumatism social care work in the organization of a rheumatism supervisory centre the control of rheumatic infection in childhood and the working of the first orthodontic clinic in this country In the Section of Veterinary Hygiene the subjects to be dealt with include developments in the slaughter and inspection of animals for food food adulteration and the diseases of poultry rabbits and game Mr Walter Davies chairman of the Manchester Insurance Committee will preside over the Section on National Health Insurance and papers will be read on insurance of women and on sickness in the insured population of Scotland The Section on the Hygiene of Food is being arranged this year in conjunction with the Food Group of the Society of Chemical Industry During the congress there will also be conferences of representatives of sanitary authorities of medical officers of health of engineers and surveyors of sanitary inspectors and of health visitors

"The Difficult Child"

Guy's Hospital has been working on this problem for three years through its child guidance clinic—a section of the department of psychological medicine The staff of the clinic consists of ten medical and lay workers Problem children attend for a number of causes among which are disorders of behaviour and sleep personality deviations scholastic backwardness speech defects and suspected mental deficiency They are referred by other departments of the hospital or by other hospitals clinics for children's diseases private doctors school care committees and by a number of other organizations including the children's courts Children from 2 to 16 years of age are received the majority being between the ages of 9 and 14 A hospital playroom is provided where the patient spends the afternoon with other children under the watchful eye of a trained observer who makes notes on the child's behaviour towards his companions his preference for certain games or occupations and his general demeanour Finally the psychiatrist assesses the case making use of the reports submitted by the other members of his team Treatment usually consists of very simple common sense measures directed at the correction of the child's particular difficulties—often it is merely a question of his being given more adequate outlets for his energies such as being moved into a higher class at school joining a cub or scout organization etc —while steps are taken by the social worker to alter the home conditions which have led to unusual behaviour The problems met with seem to arise far more often from emotional maladjustments between the child and its parents or between one child and another than from conditions of poverty overcrowding or other bad circumstances in the home The results of three years working and observation at the Guy's Clinic suggest that many children have already been saved from becoming a burden upon their parents while the latest figures show that at least 60 per cent of the patients have well repaid the attention which has been given them

Liverpool Psychiatric Clinic

Since the opening of this clinic in May 1924 1 117 cases have been investigated comprising 12 530 attendances The need for an institution in Liverpool is shown by the fact that the demand for its services not only persists but continues to increase During the year ended March 31st 198 new patients were referred to the clinic —that is thirty-one more than during the previous twelve months Of these sixty two were men seventy one women forty four adolescents under 19 years of age and twenty-one children under 14 From its foundation the clinic has been very largely utilized by the general practitioner and 66 per cent of the new patients have been derived from this source There has also been a steady increase in support from the social organizations of Liverpool and district During recent years there has become apparent the need for linking medical and sociological activities if the best results in both preventive and remedial work are to be achieved and in no branch of medicine has this alliance proved of more value than in the practice of psychiatry Psychological medicine no longer restricts its attention to a study of the individual's ability to cope with the affairs of life but must include

the study of the environment to which that individual is attempting to adapt himself The general practitioner, who has been closely associated with a family group over a number of years, is able to supply the psychiatrist, to whom he refers the case, with relevant environmental details So, too, agencies dealing with the moral, social, and economic welfare of the populace have much information in their case files of the greatest assistance to those who are studying and attempting to remedy states of nervous, mental, and behaviour disorder A clinic at which so wide a variety of nervous and mental disorders is investigated and treated loses its full value unless it also answers the purpose of a teaching centre During the past year this subsidiary function has been brought into action Having at its disposal the part-time services of an experienced psychiatric social worker, the clinic has been able to undertake the training and teaching of moral welfare students from the Josephine Butler Memorial House Opportunity has also arisen for the demonstration of psychological testing and psychiatric methods of approach to graduates and undergraduates in the teaching, medical, and other professions

Deafness

We have received from the Ministry of Health two circulars on this subject, both of which draw attention to a report by the late Dr Eichholz, *A Study of the Deaf* recently published by H M Stationery Office The first,[1] entitled *Prevention of Deafness* is addressed to maternity and child welfare authorities in England, and endorses the suggestion that closer attention be paid to the early and continuous treatment of infants suffering from ear defects particularly in respect of the sequelae of measles, scarlatina, diphtheria and meningitis, and of nose and throat defects It is suggested that wherever practicable, treatment of ear diseases should be entrusted to a medical practitioner who has special experience of this work The second circular,[2] entitled *The Deaf and Dumb*, is addressed to county and county borough councils in England and Wales and deals with questions relating to the social welfare and employment of deaf mutes It is suggested that public assistance authorities should use to a limited extent only the powers entitling them to make, with the consent of the Minister of Health contributions towards the support and maintenance of associations for aiding deaf-and dumb persons

Ireland

The Medical Profession and the Temporary Economies Bill

A meeting of delegates from the medical profession in the several counties in the Irish Free State was held in Dublin on May 9th to consider the Public Services (Temporary Economies) Bill The draft memorandum which had been prepared by the executive committee for submission to the Minister for Local Government and Public Health was adopted after amendment This memorandum has since been presented to the Minister and to representatives of the several parties in the Dail The position of medical officers in the public service, in this matter of proposed reduction in salaries, differs from that of other groups of public officers, and requires special consideration Medical officers are members of a learned profession, whose study for that profession has occupied several years of their lives The emoluments of this section of the Civil Service which includes such officers as the medical inspectors of the Department of Local Government and Public Health and the medical referees of the national health insurance system, are not large, and are certainly less than the emoluments the officers might reasonably have expected to receive if they had devoted themselves to some other line of professional work The attraction in these public health appointments lies in the confidence in their security, and anything which tends to diminish that confidence is likely to deter the most suitable candidates from seeking these appointments in future The conditions of service in the mental hospitals are already unsatisfactory The initial salary of assistant medical officers is £300 a year with unfurnished apartments—tradesmen in mental hospitals are paid as much, in some cases a little more—while the corresponding salary in the English, Scottish, and Welsh services is never lower than £350 per annum, with emoluments (board, fire, light, etc), valued for pensionable purposes at £100 per annum There are very limited prospects of promotion, and the outlook to an assistant medical officer of some seniority is discouraging as his prospect of promotion becomes less and his salary remains stationary The position of the resident medical superintendents is little better, and that of the county hospital surgeons, who are in most cases virtually whole time officers, is very similar to that of the county medical officers of health These medical men in the public health service must not only have a wide knowledge of general medicine, but they must be general surgeons to an extent unknown in any other line of medical professional work They must be, in fact, all-round specialists, for they must have such knowledge of the surgery of the eye, the ear, the nose and throat and of the abdominal organs as will make them prepared to operate in emergency They must also be expert in x-ray work and in pathology Most of the men holding these offices have been appointed in recent years, and have had reasonable hope of gradually increasing, not gradually diminishing, remuneration The position of the Poor Law medical officers, particularly those in dispensary work, deserves special consideration The salary varies between £175 and £350 a year It is not a salary in the ordinary sense of the term in that it is not devoted entirely to remuneration for work done , it is devoted in part to remuneration for work done and in part to payment of out of-pocket expenses It is impossible to allocate the proper proportion under these two heads In most country districts and the great majority of the Poor Law medical officers work in country districts, the annual cost of keeping and running a motor car—with the hire of a man—properly attributable to Poor Law work must be more than 50 per cent of the maximal salary , that is to say, 50 per cent or more of the so called salary is, in fact, out of pocket expenses This must be borne in mind should deductions be forced on dispensary medical officers A "cut" would also press more hardly on a dispensary doctor than on almost any other member of the community because he has been more severely hit than anyone by the financial depression It is the universal experience of country doctors that their income from private practice has almost vanished, and their dispensary work has increased beyond measure Some of those patients who formerly were treated by the dispensary doctor as private patients now attempt to claim his services as dispensary patients Thus his income from private practice has dwindled, while his dispensary work and the expenses incidental thereto have increased At one time the dispensary doctor was allowed a rebate of 50 per cent on his motor tax in view of his public service, but this concession has long since disappeared

[1] Circular 1937A 1933 H M Stationery Office (1d)
[2] Circular 1937 1933 H M Stationery Office (1d)

Nutritional Anæmia in Infancy

THE Medical Research Council's report on this subject shows that a large proportion of infants—breast-fed and artificially fed—under twelve months of age suffer from a mild form of anæmia, which readily disappears when adequate amounts of iron are given

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Coroner for the City of Dublin

Dr D A McErlean who has been appointed coroner for the city of Dublin assumed office on June 1st Dr McErlean was born in Belfast where his father was a well known solicitor He received his early education in Clongowes Wood and subsequently at University College Dublin He commenced law courses in 1900 and having obtained his B L practised as a junior barrister for five years in Dublin and in the North Eastern Circuit until 1908 At this time he started to study medicine graduating M B in 1913 and proceeding M.D in 1926 He is visiting physician to the Mater Misericordiae Hospital Dublin and president of the Leinster Branch of the British Medical Association

The Rotunda Hospital

The annual report of the Rotunda Hospital Dublin covers the twelve months ending October 31st 1932 It has been compiled by the Master Dr Bethel Solomons and the two assistant masters in association with the pathologist and radiologist During the year the number of maternity admissions was the highest on record (2 690) of these patients 2 289 were delivered The intern and extern pre-natal departments were also exceptionally active and there is great need of a few out patient departments Including patients treated in their homes the Rotunda was responsible for 4 469 maternity cases during the year of which 3 842 were delivered In the extern department there was no death in the first ten months in the last two months two deaths occurred but in each case the aid of the hospital was only sought after birth in one instance and after abortion in the other The Master comments on the question of the most suitable form of anaesthesia in labour and refers to the correspondence in the *British Medical Journal* He insists that chloroform is dangerous in the hands of junior assistants that in a large maternity hospital some anaesthetics must be given by these that deaths attributable to chloroform have occurred at the Rotunda as well as at other maternity hospitals and that ether is well nigh foolproof The administration of nembutal by the mouth was tried in a number of cases it succeeded in some but the excitement accompanying the use of this drug was so pronounced that it has been discontinued An investigation is being conducted into the possibilities of sodium amytal Forceps were applied 119 times—a percentage rate of 5 19 In nearly all cases the low forceps procedure was used Dr Solomons states that midstrait forceps operations are only undertaken when very definite indications are present It is recognized that they add considerably to the gravity of the labour and this fact is impressed on all students Delivery is slow and anti streptococcal serum is given in each case as a prophylactic this the Master adds may seem extravagant but it is life saving and also economical for patients leave the hospital earlier Attempts were made to induce labour 169 times puncture of the membranes is still considered the best available method Only two cases were unsuccessful but many gave rise to anxiety owing to the slowness of incidence of labour There were 727 admissions to the gynaecology wing of the hospital and 577 of these patients required operations With regard to non-operative measures it is mentioned that diathermy is used for parametritis and sometimes for chronic salpingitis In surgical procedures the diathermy knife was employed for carcinoma of the vulva and urethral caruncle Radium therapy was conducted in the few cases of carcinoma of the cervix which were encountered Dr Solomons believes that in Ireland the incidence of this condition is relatively low Hysterectomy was performed 52 times in 1930–1 without mortality and on 62 occasions in the year under review with two deaths The varieties were total (28) subtotal (18) vaginal (14) Wertheim (1) and Caesarean hysterectomy (1) The subtotal operation is performed when there is no cervical erosion or ectropion and when leucorrhoea is absent Total hysterectomy is preferred in all other cases unless the patient is very stout or requires much vaginal repair when the vaginal route is chosen Clinical details are given of the more interesting cases The bulk of the report consists of the usual statistical tables

India

Prophylactic Treatment of Rabies

Continuing their investigation into the value of an etherized vaccine in the prophylactic treatment of rabies Lieut -Colonel J Cunningham I M S (ret) Major R H Malone I M S officiating director of the Pasteur Institute Burma and Major A C Craighead I M S assistant director of the Kasauli Pasteur Institute now record a study[1] of the comparative immunizing value of carbolized etherized-carbolized and etherized vaccines tested under identical conditions of dosage and administration In their previous memoir (1930) a complete summary was given of the history of antirabic treatment in India from 1900 until the start of their investigation when they concluded that the administration of etherized vaccine according to the Alivisatos method produced a statistically significant reduction in the mortality rate in the severe type of case as compared with Semple's carbolized vaccine It was noted however that the improvement coincided with the amount of brain substance used and the factors concerned were obscure An attempt was made therefore to elucidate the precise factor and to accumulate further evidence regarding the value of a shorter and more concentrated type of treatment for the less severe type of case The investigators bore in mind the hypotheses that rapid immunization was essential for successful prophylaxis in severely bitten patients with a presumably short incubation period and that larger doses given in as short a time as possible were more likely to produce rapid immunization than smaller doses injected over a longer period It was considered reasonable also to test the further hypothesis that equally good results might be obtained with dead vaccines provided that these essentials for rapid immunization were retained Living virus was eliminated therefore from the tests for the most part and the Alivisatos method of dosage was employed as the one which had proved most successful previously The results are recorded and discussed in the present memoir the most salient being a recommendation that a 5 per cent carbolized dead vaccine should now be substituted for the Alivisatos etherized vaccine previously employed Animal experiments left little doubt that the *virus fixé* from the Pasteur Institute in Paris had better antigenic properties than the Kasauli fixed virus which is commonly employed in India The mortality from the most serious bites—for example multiple ones of the face—was but little influenced by any of the methods of treatment tried and it is thought possible now that better results might be obtained by vaccines containing living virus The experiments brought out little evidence pointing to the value of early treatment this is attributed to the severity of the infection and the susceptibility of the experimental animals but there was a possible suggestion of grading in efficiency of vaccines according to the amount of living virus contained It was noted that treatment had

[1] *Indian Medical Research Memoirs* No 26 January 1933

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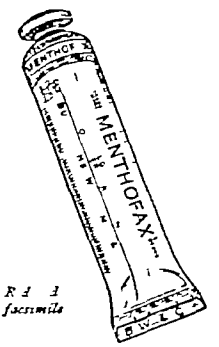

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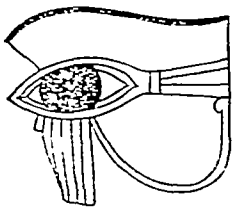
O O O O O

BELIEF IN THE 'EVIL EYE" AS A CAUSE OF DISEASE AND DEATH FIRMLY HELD IN ANCIENT EGYPT.—In Egypt amulets against the evil eye, such as shells and forehead pendants have been found in graves of prehistoric times. Not only human beings but many animals were believed to "fascinate" with a look. Disease caused by the 'evil eye" was also treated by incantation, which could also prevent the dread glance. The "eye of Horus" here depicted, was considered one of the most powerful amulets against "fascination." The underlying idea in the wearing of these amulets was to distract and avert the attention of the "evil eye" from the wearer to the object worn.



DATE From prehistoric times

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no effect in prolonging the incubation period in monkeys In an appendix to the memoir Major Malone gives reasons for believing that in the period 1925–30 any significant differences in the death rates of the various populations studied were due to one exceptional condition—namely the method of treatment employed If no significance can be attached to these differences, it is deducible that no one treatment employed anywhere could be considered better than another

Hospital Services in the Punjab

The triennial report on the Working of Hospitals and Dispensaries in the Punjab for the years 1929 to 1931, inclusive, reveals that considerable progress has been made towards the ideal of providing one dispensary for every area of 100 square miles and one for each 30,000 of population The triennium opened with 964 dispensaries and closed with 1 024 ninety-five of the new ones being situated in rural areas Colonel D P Goil, I M S Inspector-General of Civil Hospitals Punjab, announces that the scheme of medical relief inaugurated in 1925 is almost complete only thirteen dispensaries still being required At the beginning of the triennium there were thirty-two itinerating dispensaries, all have now ceased to function owing to financial difficulties but the need for them has been much reduced by the steady multiplication of these stationary ones The taking over by the Province of district and tansil headquarters hospitals has also been arrested by pecuniary considerations, and sixty seven still await this step in the provincialization of medical treatment Except in Lahore hospitals so taken over are supervised by visiting committees There were large increases in the numbers of patients during the three-year period, and it was estimated that in 1931 more than half the population of the Punjab received medical treatment in the State-public, local fund, and private aided institutions There is considerable overcrowding in all hospitals which are surgical centres of repute throughout the cataract season each year, and extra accommodation has to be improvised to meet the rush of patients who come for operative treatment The figures for the Mayo Hospital at Lahore were the highest since its inauguration Progress in the development of the Government Hospital for Women and Children in the same city was exceptionally rapid, and the new accommodation provided enabled the admission of a larger number of new cases than had been anticipated It is no longer necessary, therefore for Lahore medical students to go to Madras for their obstetrical and gynaecological training The total number of new cases treated in all hospitals and dispensaries during the triennium was 39 363 000 as compared with 27 868,000 in the previous one and 20,750,000 in 1923 to 1925 The inauguration of the scheme of rural dispensaries increased the attendance of out-patients very considerably, many purdah women making use of them Diseases of the eye and malaria were the two outstanding reasons for attendance, there having been no grave epidemic of infectious disease in the three years A new dental hospital was opened at Lahore by the Government and proved very popular, nearly 18 000 patients having been treated there in 1931

Egmore Hospital for Women and Children

The Government Hospital for Women and Children at Egmore in Madras was founded in 1844, in the next year the first complete one of its existence, the number of confinements was 62 Confidence in it slowly grew and in 1861 the figure reached 1 000 to be doubled thirty years later Maternity cases alone numbered 3,311 in 1910 and 3 389 in 1931 There is now a large ante natal department and a children s section Just before the war a separate block was erected for teaching purposes solely This comprised a modern lecture amphitheatre, museum rooms clinical and research laboratories a photographic department, and residential accommodation for men and women students At that time, also additional wards, an out-patient block, an operation theatre and spacious quarters for nurses were provided Although this institution now ranks as one of the largest educational centres in obstetrics and gynaecology for medical students and wives, and specialists, the retiring superintendent, Lieut Colonel C A F Hingston, I M S, enumerates in his last report further steps which should be taken as soon as possible to remove certain inconveniences and to increas the efficiency of the hospital Of these the chief are the establishment of an obstetrical operating theatre re arrangement of the septic delivery ward so as to obviate any possibilities of cross infection, the construction of an ante natal ward and a more suitable ante natal clinic and a separate children's department, so that in the present infant welfare section, which includes this department, there may be more room for greater concentration on the physiological requirements of infants suffering from various diseases or needing safeguarding Colonel Hingston points out that the Egmore Hospital is a provincial institution rather than a Madras city building The majority of the more serious cases are drawn from almost every district in the Presidency and from the neighbouring Indian States Within the last few years a successful mothercraft department has been opened, with which is associated a training centre for midwives, who will thus be enabled to disseminate widely the modern ideals of infant feeding and infant care generally Post-graduate courses for general practitioners have also been a feature of recent years at the Egmore Hospital, they have attended from all parts of India, Burma, the Straits Settlements, Sumatra, Java, and many other parts of the Far East

CORRESPONDENCE

Substitutes for Morphine and Heroin

SIR,—During the past few years three new synthetic drugs have been manufactured and extensively used on the Continent as substitutes for morphine and heroin These drugs are being manufactured in Germany and are marketed under the trade names of dilaudid, dicodid, and eukodol respectively The clinical literature on these drugs is fairly extensive but little has been published with regard to their pharmacological actions A complete survey of the clinical and experimental work on dilaudid is given by Eddy[1] Articles in the medical press in this country and the United States of America show that considerable interest is felt in this drug I therefore venture to put forward briefly some evidence which I have myself obtained during the past eighteen months on the pharmacological actions of the drugs dilaudid dicodid and eukodol

Dilaudid is the hydrochloride of dihydromorphine It is a derivative of morphine and is manufactured from that substance Dilaudid is a white amorphous substance which is freely soluble in water and alcohol but is insoluble in ether The aqueous solution has a neutral reaction The name dilaudid is a registered trade name patented by Knoll A G of Ludwigshafen on the Rhine The drug is marketed as a substitute for morphine and the makers put forward claims for it as an analgesic and as a respiratory sedative

Dicodid is manufactured by Knoll A G and is the bitartrate of dihydrocodeinone Its chemical structure shows it to be a derivative of thebaine Since however it can be obtained from codeine it must be regarded from the stand

[1] *Journ Amer Med Assoc* 1933 c 1062

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point of production as a derivative of codeine and so of morphine It also is advocated as an analgesic and as a sedative of the respiratory tract

Eukodol is the hydrochloride of dihydroxycodeinone and is manufactured by a patent process by E Merck of Darmstadt It is not a derivative of morphine It is manufactured from thebaine and as opium contains but a small quantity of thebaine the amount of eukodol manufactured must be very limited No process is known for the manufacture of thebaine from morphine or codeine Eukodol is used for the same purposes as dilaudid and dicodid

The results of my experiments carried out on laboratory animals show that

1 The action of dilaudid or dicodid (0 5 mg per kg) on the intestine whether the organ be in situ or isolated (1/100 000 concentration) is the same and consists of stimulation of tone and movements (small doses) followed by depression (with large doses—that is 10 mg per kg and 1/20 000) These effects are quite similar to those produced by morphine and heroin except that heroin has a greater effect on intestinal tonus The action of eukodol differs from this since it produces little effect in small doses while large doses produce an increase in tone and movements

2 Dilaudid is the only one of these three drugs which has a marked effect on the pyloric sphincter and the stomach and in this respect it resembles morphine Dilaudid (0 5 mg per kg) produces a well marked increase in the sphincter movements which reach a maximum effect after about thirty minutes These increased movements may continue for a period of two or three hours At the same time the stomach movements are increased but the general muscular tone is not altered The action on the stomach is slow and gradual and reaches a maximum effect after about forty minutes These effects are very similar to those of morphine on the same structures The effects produced by dicodid or eukodol (1 mg per kg) on the movements of the pyloric sphincter and the stomach are so slight as to be negligible In doses of 5 or 10 mg per kg they do however slightly increase tone and movements and in this respect resemble codeine

3 Dilaudid (0 5 mg per kg) dicodid (0 5 mg per kg) and eukodol (5 mg per kg) markedly increase the tone of ileo-colic sphincter In this they resemble morphine and in Larger doses of eukodol than of either dilaudid or dicodid are however required to produce these effects dicodid which has a weak action on the pyloric sphincter has however a well marked action on the ileo-colic sphincter This contraction of the ileo-colic sphincter is very similar to that produced by adrenaline or by stimulation of the sympathetic nerves in the lumbar roots of the spinal column

4 These three drugs in doses as small as 0 1 mg per kg all produce a most profound effect on the respiration which becomes slower and deeper and the general effects resemble those produced by morphine A toxic dose of any one of these drugs produces a serious progressive depression of the respiratory centre as shown by a marked decrease in rate depth and efficiency of respiration The respiration is finally arrested before the heart is seriously injured

An interesting observation with regard to the toxicity of dilaudid and dicodid was made during these experiments It was found that if a small initial dose such as 0.25 mg per kg of one of these drugs was given to an anaesthetized cat the respiration became slower and deeper Enormous doses of the drug such as 20 or 30 mg per kg could then be given without causing death or even indeed producing much further effect on the respiration On the other hand if an initial dose in excess of the therapeutic dose (that is 3 mg per kg) was given then the respiration ceased and the animal died The explanation of this increased tolerance to dilaudid or dicodid after therapeutic doses is not apparent but further experiments are now in progress with a view to elucidating this

An attempt to analyse further the effect on respiration showed that (1) Dilaudid dicodid and eukodol have little or no action on the bronchioles (2) The sensitivity of the vagus centre is much increased after the administration of small doses of dilaudid (0 25 mg per kg) Larger doses (1 mg per kg) quickly depress it after a short initial period of increased sensitivity Similar effects were observed with dicodid Eukodol however appears to depress the vagus centre even in small doses (0 1 mg per kg) It is well known that morphine increases the reflex excitability of the vagus centre dilaudid and dicodid therefore resemble morphine in this respect.

Large doses of dilaudid and dicodid have a well marked action on the spinal reflexes One large dose (20 mg per kg) or several smaller doses given within a short space of time will produce twitching of the limbs or the whole body These twitchings when severe are of a convulsive nature and always can be produced in the conscious in the pithed or in the anaesthetized animal The period during which the reflexes are increased may vary from a few minutes to almost an hour according to the amount of the drug injected The twitchings can be abolished immediately by injecting curare or destroying the cord Dilaudid produces these twitchings much more easily than dicodid They are not produced by therapeutic doses but only when these amounts are grossly exceeded These effects are similar to those produced by heroin or morphine hydrochloride which are much more active in this respect Eukodol even in large doses (30 to 50 mg per kg) does not affect the spinal reflexes This is not what one would expect in view of the fact that eukodol is manufactured from thebaine which is a convulsant

The effects of therapeutic doses of dilaudid dicodid or eukodol on the blood pressure are so slight as to be almost negligible Dilaudid (0 25 to 2 5 mg per kg) however causes a slight slowing of the heart rate which has little effect upon the blood pressure The effects produced in mice (0 25 mg per 20 gram mouse) and rabbits (2 5 mg per kilo) after the injection of small doses of dilaudid and dicodid closely resemble those of morphine Respiration is markedly slower and deeper and signs of restlessness become manifest There is paresis of the hind limbs The gait resembles the hyenoid walk seen in the dog under the influence of morphine Marked analgesia is present Recovery takes place in a few hours Larger doses give rise to the symptoms just described Later there is an increase in reflexes which give place to convulsions and death follows (dilaudid 1 mg dicodid 10 mg per 20 gram mouse)

Eukodol differs from dilaudid and dicodid in two respects it does not cause convulsions and very large doses are needed to cause death The toxicity of dilaudid is much greater than dicodid which is in turn greater than that of eukodol The injection of any of these three drugs into mice causes a stiff erection of the tail which is very similar to that described by Straub for morphine or its esters Van Leersum[1] believes this to be due to intense tenesmus of the anal and bladder sphincters originating in the medulla and transmitted through the pelvic nerves while Heinekamp[2] refers it to stimulation of the spinal cord

The results of the investigation have shown that the pharmacological actions of dilaudid dicodid and eukodol are very similar to morphine but appear to be much more toxic smaller amounts of dilaudid than of morphine are needed to depress the respiratory centre Dicodid on the other hand seems to lie midway between morphine and codeine Eukodol differs from the others in many ways It has a much weaker action on the movements of the alimentary tract and does not increase spinal reflexes It has however a profound effect upon respiration which is as marked as that produced by either dilaudid or morphine So far as these investigations go there is no reason to think that any of these drugs are superior from a therapeutic point of view to morphine Experiments of this type of course throw no light on the question of addiction —I am etc

G NOPLAN MYERS

Pharmacological Laboratory
Cambridge May 28th

[1] *Journ Amer Med Assoc* 1918 lxxi 783.
[2] *Journ Pharm Exp Therap* 1922 x 107

CAUSATION AND TREATMENT OF ARTHRITIS AND ALLIED CONDITIONS

REPORT OF THE B M A COMMITTEE

The Council of the British Medical Association on November 11th 1931 appointed a special committee for the promotion of research into the causes of arthritis and allied conditions and the investigation of methods of treatment etc with the following reference—

(1) *To correlate the present knowledge of chronic arthritis and allied conditions*

(2) *To report on the methods at present in use, and the organizations at present existing both at home and abroad for the treatment of these conditions*

(3) *To report on the directions in which future research into these conditions can be undertaken with most probable profit and the means whereby such researches may be directed and correlated*

(4) *To report on the means whereby a knowledge as to early diagnosis prevention and treatment of these conditions may best be disseminated amongst the medical profession*

The Committee consisted of—

SIR HUMPHRY ROLLESTON Bt, M D F R C P *Chairman*
R G GORDON M D, D Sc F R C P Ed *Vice-chairman and Honorary Secretary*
W G WILLOUGHBY M D
E K LE FLEMING M B B Ch
SIR HENRY BRACKENBURY LL D M R C S
N BISHOP HARMAN LL D F R C S
C W BUCKLEY M D F R C P
JOHN FREEMAN M D
L G GLOVER M D
A H GODSON F R C S
MERVYN H GORDON M D, F R S
C O HAWTHORNE M D D Sc LL D, F R C.P
A P LUFF M D F R C P
G L KERR PRINGLE M D
MATTHEW B RAY M D
S GILBERT SCOTT M R C S D M R E
F G THOMSON M D F R C P
SIR WILLIAM H WILLCOX M D F R C P

PRELIMINARY

The Committee met on eleven occasions and the Drafting Subcommittee on five occasions

The Committee has sought to fulfil its reference under the following headings

I Nomenclature and classification
II Clinical features
  (*a*) Primary rheumatoid arthritis
  (*b*) Secondary rheumatoid arthritis
  (*c*) Chronic villous arthritis
  (*d*) Osteo-arthritis
  (*e*) *Spondylitis*
  (*f*) Fibrositis
III Incidence
IV Aetiology
V Morbid anatomy
VI Biochemistry
VII Radiology
VIII Differential diagnosis
IX Treatment
  (*a*) Prophylaxis
  (*b*) Vaccines
  (*c*) Drugs
  (*d*) Endocrine preparations
  (*e*) Diet
  (*f*) Physical methods
    (i) General
    (ii) Electrical and *x* rays
    (iii) Mineral waters and baths
  (*g*) Climate and Hygiene
X Orthopaedic and Surgical
XI National schemes for treatment
  (*a*) In certain Continental countries
  (*b*) Suggested scheme for Great Britain
XII Observations on advertised remedies
XIII Indications for future research
XIV Suggestions for further professional education

I. NOMENCLATURE AND CLASSIFICATION

At the outset the Committee was faced by the difficulties of nomenclature and classification The term arthritis and allied conditions includes many different manifestations of disease among these are some which can neither be sharply defined nor their cause or causes be regarded as other than uncertain As an aetiological classification is in the present state of knowledge impossible the Committee has adopted as the most practical solution a clinical grouping though this is admittedly unsatisfactory in some respects Further as the titles applied to various forms of joint disease are confusing the Committee while preferring those familiar in British practice prints also the corresponding synonyms employed in some Continental countries and in the United States

The Committee has excluded from the scope of its inquiry the joint affections of

(1) Acute and subacute rheumatism
(2) Specific infections such as those dependent upon gonococcal pyogenic enteric and dysenteric organisms and those associated with the exanthemata
(3) Metabolic and haemopoietic diseases—for example gout haemophilia purpura and
(4) Organic nervous diseases—Charcot's joints

The following is the clinical grouping adopted by the Committee

	SYNONYMS	
Rheumatoid Arthritis	Chronic polyarthritis (*Continental nomenclature*)	*Primary* cause unknown this acknowledge increase may merge into
	Atrophic (Goldthwait)	
	Proliferative (Nichols and Richardson) (*American nomenclature*)	*Secondary* associated with focal or general infection

Genesis of Gall-stones

SIR,—Lord Moynihan, in a letter in your issue of May 27th, has taken Mr Patey to task for failing to mention, in his admirable article on "The Mechanism of Gall-stone Formation," the work of Dr Shiskin, and also for his statement "that attempts to correlate the amount of cholesterol in the blood with gall-stones have failed" Lord Moynihan restates his own views on cholesterol metabolism in this connexion, but we scarcely think that these are in accord with present-day views of workers in this field

Hypercholesterolaemia is not easily defined without a knowledge of normal limits Lord Moynihan quotes MacAdam and Shiskin's work, in which twelve normal cases were examined, the detailed figures not being presented in their original paper They found upper and lower limits of plasma cholesterol of 0 191 per cent and 0 133 per cent, with an average of 0 161 per cent He has quite unjustifiably divided the lower half of this region as normal and the upper half as high normal He then quotes figures of analyses made in abdominal conditions such as gastric ulcer, in which hypercholesterolaemia is not known to occur, and finds 23 per cent of the cases show hypercholesterolaemia, 50 per cent as normal, and 27 per cent show hypocholesterolaemia Surely, then, it is obvious that he has started with inadequately defined normal limits, as is indeed the case, since the data derived from perfectly normal people by many workers show far wider variations than his arbitrarily chosen limits It is, in fact, practically impossible to state that a moderate degree of hypercholesterolaemia is present in an individual case from single observations unless the individual's normal plasma cholesterol content has been previously well studied That he finds somewhat high figures for the plasma cholesterol content in cholelithiasis is not surprising, since both Campbell and ourselves have shown that such hypercholesterolaemia occurs whenever biliary obstruction is present but *not* in uncomplicated cholelithiasis But why does Lord Moynihan ignore the more complicated changes which occur in the blood in these cases of biliary stasis, such as have been demonstrated not only by ourselves but also by Adler and Lemmel, Thannhauser and Schaber, Stern and Suchantke, and Burger and Habs? In biliary obstruction we have shown that two types of change occur the first, a reversal of the free to ester ratio, is caused apparently by the effect of the absence of bile from the intestine (however deviated therefrom) on fat and sterol absorption the second, a hypercholesterolaemia with a reversal of the usual proportion of free and ester forms, is produced when biliary obstruction and retention persist for some time The further study of these phenomena is complicated by the capacity of the intestine of excreting dihydrocholesterol

In Lord Moynihan's paper (*Journal*, 1925, 1, 393, and not as quoted) Dr Shiskin's results are presented only as one graph of changes in pregnancy and one during menstruation, drawn with exaggerated ordinates, but which can hardly be compared with serious studies in which all details are published and available for examination Surely Mr Patey can hardly be blamed for not quoting results which admittedly had never been published That some degree of hypercholesterolaemia sometimes occurs in pregnancy we have shown, but the real point of interest again is the remarkable and constant cyclical change that occurs in the free to ester ratio

Mr Patey's statement as to the correlation between gall-stones and cholesterolaemia is quite correct if we exclude the effect of biliary obstruction There is no unequivocal evidence that either high fat feeding, or hypercholesterolaemia, or pregnancy with its inconstant hypercholesterolaemia, can cause any increase in the cholesterol content of the bile Further gross hypercholesterolaemia such as occurs for long periods in subacute forms of nephritis leads to no increase in the incidence of gall-stones On the other hand the evidence in Fowweather and Collinson's paper that hypercholesterolaemia is produced in gall-bladder disease by a "flood of cholesterol" (quoting Lord Moynihan's words) reabsorbed by the gall-bladder from the bile, is unconvincing

Lastly, we would suggest that no comprehensive theory of gall stone formation can be adequate if it ignores the close chemical relation between cholesterol and the bile acids, and more particularly the properties and distribution of the various bile acids which are so important in maintaining the different sterols of bile in solution At present we have no satisfactory method of estimating even the total quantity of bile acids present in bile, much less of determining their relative proportions—We are, etc,

J A GARDNER
H GAINSBOROUGH

London W, May 29th

Return to Principles

SIR,—When I read in the *Journal* of May 20th, in Lord Horder's address (p 859) on "New Treatments for Old" and in your leading article (p 881), of "deviations from the physiological that constitute disease," and of 'the disharmony we call disease," I was reminded of one of my medical teachers of more than forty years ago, who introduced each description of all the "labels" he had selected for his course of lectures by the words "a morbid process", and I feel now, as I felt long ago, that knowledge is not advanced much, if at all, by such phrases and that we are no further on Indeed, is a "morbid process" not the better term, since it connotes the something further which causes the "deviation from the physiological,' an invasion of something new which somehow determines "physiological disharmony"?

To identify a disharmony of physiology (disease) you say 'the medical man has at his disposal a well tried method upon which he can rely diagnosis" This stops far short of what is required We can all diagnose pneumonia, influenza, erysipelas, osteoarthritis, and the rest, but these are not the disharmonies, they are the full blown effects of an antecedent disharmony What is the nature of that disharmony, that departure from physiology, which produces what we diagnose and call disease? Would anyone say, in a case of pneumonia, that the real disharmony is the consolidation? Yet some knowledge of the underlying processes has been stated, is gaining ground, and may yet answer the questions as to the real principles which govern health and disease

But, leaving this out and departing at once from Harvey's exordium, which he quotes, Lord Horder suggests an interregnum—the cessation of laboratory work and of the seniors' activities in the hospitals—and a conference "to try to see where we are" Well, to me the answer, on the old lines is "Nowhere," and will, on these lines, for long be the answer, despite the enormous masses of accumulated useful knowledge Nor are we better off in therapeutics, unless light is also dawning slowly We assuredly do produce the results we want, and help to cure, or alleviate our patients, but as Lord Horder says, "we know so little about the way in which drugs act' We know the effects many drugs can be trusted to produce, but how they do it and what happens in the process that leads to the result we wish we seldom know "It is always Nature that cures not we', and we can only help But by what process does Nature cure? Not yet can that be answered with full and complete knowledge

	Synonyms	
Chronic Villous Arthritis	—	Mainly occurring in women at or about the climacteric
Osteo arthritis	Hypertrophic (Goldthwait)	*Primary* no definite association with infection
	Degenerative (Nichols and Richardson)	*Secondary* associated with infection
Spondylitis	Ankylopoietica	Arthritis of spinal joints, with bony ankylosis, spreading centrifugally to adjacent large joints
	Osteo arthritica	Osteo arthritis of the spine (the labourer's spine)
Fibrositis	Intramuscular and fascial Periarticular Bursal and teno synovial Subcutaneous (panniculitis) Perineuritic	

II CLINICAL FEATURES

(*a*) PRIMARY RHEUMATOID ARTHRITIS

Occurs particularly during the child-bearing period in women who follow indoor occupations

Prodromal symptoms are attacks of cramps or weakness in the muscles, muscular wasting, and paraesthesias and vasomotor disturbances of the extremities—for example, Raynaud's syndrome, sweating, instability of pulse rate, tremors, fatigability

The *onset* may be acute or subacute, with febrile or subfebrile temperatures, in association with enlargement of one or more of the small joints of the hand

The *course of the disease* may be marked by periods of apparent recovery, on the other hand, any influence, mental or physical, which reduces the general health may aggravate the symptoms

Arthritic manifestations commence in the small joints of the hands, which develop a characteristic fusiform shape without much evidence of active inflammation In time many joints become affected, the progress is centripetal, and the distribution shows bilateral symmetry Muscular wasting is extreme, particularly in the small muscles of the hands In advanced stages stiffness, contractures, especially ulnar deviation, and ankylosis, are prominent The patient's general health declines, and such symptoms as anaemia tachycardia sweating, and coldness of the extremities are noted, perhaps also enlargement of neighbouring lymphatic glands The heart, except for myocardial deficiency, is not directly affected

Aetiology is uncertain Foci of infection are not always found, and their removal is not always followed by improvement Vasomotor phenomena and capillary contraction are held to be significant features, and have been attributed to endocrine imbalance

Prognosis Progress is always slow, and intermissions and recrudescences are frequent

Treatment To secure improvement in the general health is imperative The patient must therefore surrender herself entirely to treatment and avoid all unnecessary fatigue

Diet This should be generous, with plenty of fruit and fresh vegetables

Drugs Iodine in milk and small doses of thyroid extract are the most useful drugs Short courses of general tonics such as cod-liver oil sodium cacodylate and iodide of iron are often useful Anodynes and sedatives are frequently indicated

Physical Methods Massage should be applied to the muscles round the affected joints The joints should be gently moved each day, and should be supported and, if necessary, retained in the optimum position by light splints Heat and counter-irritation may be applied to the affected joints by steam mud packs, diathermy, and blisters, but fatigue must be avoided Intrapelvic diathermy has been advocated and found useful

Infective foci, if found, should be treated very cautiously to avoid shock and toxaemia Vaccines in small doses are favoured by some authorities

(*b*) SECONDARY RHEUMATOID ARTHRITIS

There are two clinical types (*a*) with acute febrile onset resembling rheumatic fever, (*b*) with subacute onset, often followed by periods of activity and remission In each the disease is polyarticular, tends to be symmetrical in distribution, and attacks both large and small joints The disease is usually associated with discoverable septic foci, psoriasis also appears in occasional instances to have some clinical relation to it

Age May occur from childhood to long past middle life, most common between 20 and 40

Sex Men and women suffer in approximately equal numbers

Modes of Onset In the acute types several joints are involved early The fingers, wrists, elbows, toes, ankles, and knees are commonly affected, less commonly the shoulders and hips The jaw and the spine are not infrequently involved

Joint Conditions The joints are swollen, and tend to be fusiform, pale in colour, 'doughy" to the touch, tender on pressure, and painful on movement, the range of movement is restricted Localized sweating over the joints is frequently observed The muscles immediately above and below the joint are wasted, the nearest lymphatic glands may be enlarged Well marked distortion of joints frequently occurs

Temperature In cases with acute onset there is fever of varying intensity Subacute cases show periods of slight pyrexia The more chronic cases are usually afebrile or show subnormal temperatures

Blood Secondary anaemia, slight or pronounced, is common Leucocytosis, lymphocytic in type and moderate in degree, is frequent The sedimentation rate of the red cells is always increased (see p 1040)

Circulation The pulse tends to be rapid and the blood pressure low, vasomotor instability and sweating especially of the extremities, are common, the peripheral circulation in the capillaries is sluggish and defective The heart is enfeebled by toxaemia, but endocarditis as seen in rheumatic fever is rare Subcutaneous fibrous nodules are not uncommon

Pathogenesis The sites of infection are in connexion with the teeth tonsils nasal sinuses, middle ear, gall bladder, appendix bowel genital tract prostate uterus and Fallopian tubes, kidney, bladder and bronchial tubes Koch's postulates are not satisfied

Prognosis Many patients especially if treated in the early stages recover completely after removal of septic foci, whereas in others this procedure is of no avail Possible explanations of such failure are (*a*) the removed focus was not the cause of the disease, (*b*) other foci remain though undiscovered Such foci, it is suggested, may exist in the intestine, due to infection from the tonsils or teeth and from them micro organisms or their toxins may enter the blood or lymph stream through damaged intestinal epithelium while at the same time there may be failure of the antitoxic function of the liver Granted the presence of pathogenic organisms in the intestine, such a course of events is possible, but the proposal cannot yet

claim convincing evidence (c) a third possible explanation of absence of benefit from removal of a septic focus is that sensitization of the joints may have been produced by repeated doses of bacterial antigen perhaps from saprophytic organisms not necessarily pathogenic In some instances general treatment is followed by improvement both of the arthritis and of the infective focus without removal of the latter presumably the natural resistance of the tissues overcomes both pathological reactions

Treatment General measures are (1) Treatment or removal of the infective focus or failing this adequate drainage (for example of the nasal sinuses if these are infected) (2) favourable hygienic surroundings including fresh air and sunshine (3) generous diet not excluding red meat (4) vaccines in some cases (see p 1044)

Treatment of Joints In the acute stage rest to the affected joints is necessary care being taken that they are not allowed to assume faulty positions heat dry or moist either locally to individual joints or if the disease is polyarticular to the whole body by means of baths When the acute phase has subsided massage should be given lightly at first to the joints but freely to the muscles and gradually increased in depth and severity Daily passive movements of the joints are desirable and later active movements

(c) CHRONIC VILLOUS ARTHRITIS

The early symptoms are gradually increasing stiffness and pain in the affected joints (usually the knees) often at the onset worse during rest Later the symptoms become aggravated and walking especially on rough ground or on descending a hill or stairs is difficult Pain and tenderness are particularly severe on the inner aspect of the joint At first the affected joint shows nothing more definite than a slight swelling but on flexion and extension a fine uniform crepitation can be heard or felt As the synovial membrane becomes thickened the swelling is more pronounced it can be noticed below and on each side of the patella and when the knee is extended a tense swelling may be felt in the popliteal space due to distension of a synovial pouch At first there is no muscular wasting later this may be observed in the lower part of the quadriceps A ray examination does not reveal either erosion of the cartilages or bony change Patients are almost invariably inclined to be florid and stout often they show signs of thyroid deficiency especially thinning of the hair and outer halves of the eyebrows and brawny thickening about the shoulders and hips Another feature is the presence of flat foot which develops as the result of defective muscular tone and increasing weight the unusual strain thus thrown on the knee joint may be an element in the causation of the arthritis Heberden's nodes may accompany the disease but there is no evidence that they share with it a common cause

Prognosis With adequate local and general treatment the prospect is favourable

Treatment If the symptoms are urgent complete rest and fixation are necessary in the less severe cases partial rest and a bandage with perhaps a light splint—for example the Howard Marsh form—may be sufficient and counter irritation radiant heat ionization Bier's bandage and local douching are helpful But these local measures will probably fail unless any existing deformity of the foot is corrected or varicose veins if present are treated General measures include thyroid medication and agencies for the reduction or prevention of obesity with sedatives if pain is severe (N B —Schüller's villous arthritis is not discussed because it is held to be due to gonococcal or tuberculous infection)

(d) OSTEO-ARTHRITIS

A disease distinguished by primary degenerative changes in the articular cartilages followed by bony overgrowth in the neighbourhood of the joints mainly the larger joints When a single joint is affected it is rare to find any signs of preceding inflammation (primary form) but when several joints suffer such a history is frequent (secondary form) In each form strain or injury is often in some measure responsible The essential changes are degenerative followed by bony hyperplasias which may or may not cause symptoms The disease occurs in the middle aged and elderly who although healthy in other respects often show evidences of arterial and other degenerations Arteriosclerosis may be well marked in the region of the affected joints The earliest symptom is stiffness experienced after rest and disappearing on movement Pain may be quite absent but if the weight bearing joints are affected it is common particularly after sustained activity The joint is often puffy and tender On active or passive movements a soft creaking can be felt and heard unless there is much synovial effusion This is due either to alteration in the synovial membrane or to thick fluid in the joint Later the cartilages atrophy and bone is exposed and there is coarse grating on movement Muscular spasm restricts movement and muscles near the affected joints waste to some extent and are subject to fibrositis Skiagraphy shows the condition of the cartilage and adjacent bones

Morbus coxae senilis is an example of primary osteo-arthritis restricted abduction and rotation are early signs but flexion remains unimpaired even in advanced cases Pain may be referred not to the hip but to the corresponding knee

Heberden's nodes are sometimes attributed to osteo-arthritis They are often associated with this disease but they commence as a fibrositis followed by bony formation There is often a history of trauma strain arthritis or gout

The *prognosis* in osteo-arthritis is governed by three factors

(1) The cause of the condition —The correction of flat-foot in osteo-arthritis of the knees may be fully successful Gouty cases even with thinning of the cartilages often yield to spa treatment Following mild or cured arthritis the condition may become stationary but when associated with arteriosclerosis the disease tends to progress

(2) The joint affected —Morbus coxae senilis has a bad prospect though temporary relief is possible fixation of the joint provided a good position is secured is sometimes the best result obtainable

(3) The state of the cartilages —If parts of these have disappeared orthopaedic measures are required With merely localized thinning correct splinting and local treatment may mean at least partial recovery

There seems little doubt that certain forms of arthritis in animals constitute a true osteo-arthritis The most typical example cab-horse disease (suffraginitis) is characterized by the formation of a large exostosis of the inner side of the pastern bone of the fore-leg together with disease of the articular cartilage on the inner side of the joint

This condition appears to be due to strain and repeated minor injury such as concussion on hard roads or strain of ligaments produced by jumping or by starting heavy loads

The position of the lesions is constant and is that of the greatest strain the affected bones absorbing most of the concussion before it reaches the larger bones

The hereditary transmission of an upright short neck seems to be a factor in the production of exostoses but even apart from this there would appear to be some constitutional liability to throw out bone in answer to the slightest stimulus

Thus we have reached a stage where we call disease a physiological disharmony the primary nature of which we do not know where we say Nature cures not we but how she does it we do not know (we only know some of the steps she takes) where we know little or nothing of just how our drugs produce their action though fortunately we can so often predict and depend on it We are told to use remedies which will help to restore physiological equilibrium though we do not know the primary essential of that equilibrium nor what has caused and constitutes the primary upset of it The position is not too satisfactory

Yet there are movements in a better direction but I fear some of these come under Lord Horder's ban I do not for a moment advocate the indiscriminate trial of all the nostrums we are bombarded with nor the foolish administration and advocacy of any of them—especially the best and good ones (and these are *not* nostrums)—as recounted by Lord Horder in his Good Samaritan story But I do say the general practitioner is the man to try them out with all the care and discrimination he can bring to bear Many practitioners must see thousands of cases—simple early uncomplicated—which consultants never see in which the best of the newer remedies are useful And in cautiously accepting the stated method of action and using these remedies under whatever class of therapeutic activity they fall we do no more and no worse and may do much better than those who decry them and decline to use them preferring the older remedies though avowedly with little or no knowledge of how the older remedies act in producing the results expected

None but the most foolish would expect of any drug an action so miraculous as to do away with all necessary care (for example the three-day cure of influenza) or fail to employ concurrently every adjunct to the whole welfare of the patient —I am etc

Glasgow May 23rd R O ADAMSON

Meningitis from Bowel Toxaemia

SIR —In the *Journal* of April 8th there is a report of two cases of tuberculous meningitis resembling cerebro-spinal fever in which the main points were (*a*) brothers aged 6 and 3 years (*b*) duration five and three days respectively (*c*) both died within twelve hours of admission (*d*) cerebro-spinal fluid showed trace of albumin and numerous small lymphocytes

I venture to suggest for consideration a diagnosis of meningitis due to bowel toxaemia probably of Flexner group origin It is a not uncommon condition in South India and Flexner group infections are not unknown in Britain There may or not be a previous bowel history there is usually constipation but when the stool is obtained it is loose often contains mucus and cellular exudate is strongly acid and Flexner group organisms are cultivated The cerebro-spinal fluid is under pressure clear globulin is increased and lymphocytes are numerous there is no sugar

The meningitis is either fulminating and fatal or acute with good prognosis under intensive treatment with subcutaneous salines (for an adult 8 pints in twenty four hours) liquid protein diet (swallowing power quickly returns after the salines) and alkalis A curious feature is that except in to-be fatal cases the coma is only apparent the patient looks comatose but there is an awareness and alertness of mind without the power of expression I have known a patient signify disapproval of a relative's inaccuracy of statement by moving one finger and during the early stages of recovery the clear mindedness is very marked A further point is that Flexner group infections cause attacks of influenza like fever Was the mother's attack a week before the source of infection for the two boys?—I am etc

Medical School Vellore South India April 28th FLORA R INNES

Rupture of Lung without External Signs of Trauma

SIR —The remarkable case recorded in your issue of May 27th (p 938) by Dr F W Martin recalls to my memory a case which I reported in the year 1882 of a young man who had been knocked down by a cart and pushed along under its wheel without being actually run over Admitted to the Great Northern Hospital (then in the Caledonian Road) he lay for more than two months with puzzling symptoms indicating severe damage to thoracic and abdominal organs without any external signs of injury Post mortem examination showed that the right lung had been torn and that a portion of it had passed through the diaphragm—presumably ruptured at the same time—and a large piece of collapsed lung was found in the pelvis Hernia of lung into the abdomen is an almost unknown occurrence and the case is therefore doubly interesting The whole case with comments will be found in the *Lancet* 1882 i 139 —I am etc

London S W.3, May 27th E CLIFFORD BEALE

Crypto empyema

SIR —I was interested in the article by Professor A Rendle Short in the *Journal* of May 20th (p 870) in which he refers to three cases of empyema where the diagnosis was difficult where repeated needling failed to reveal the presence of pus but where pus was found at operation Professor Rendle Short states A skiagram is useful it will show some opacity but it cannot be relied on to tell us exactly where the abscess is I cannot entirely agree with this statement Radiology is extremely useful in a large number of cases in determining where the pus is and particularly in those cases of encysted empyemas to which Professor Rendle Short refers Radiograms taken in the direct lateral position are extremely useful in the localization for example of (*a*) an interlobar empyema and (*b*) an empyema encysted between the base of the lung and the diaphragm These illustrate two types of cases to which Professor Rendle Short refers In cases of difficulty of this sort routine postero-anterior and direct lateral radiograms should be taken where possible The latter will often show the exact localization of the pus

I think that needling should not be used too freely as there is a considerable element of danger of infecting the general pleural cavity when one may be dealing with encysted effusions —I am etc

W PATON PHILIP M B D M R E D P H
Consulting Physician Papworth Village Settlement
May 24th Tuberculosis Officer Cambridge Coun

The G P and Midwifery

SIR —I may be wrong in my conclusion but I feel that Professor J M Munro Kerr in all that he writes does so with a bias against the capacity of the general practitioner of medicine to carry out his duties in reference to midwifery in accordance with the highest standards of modern practice In my I suppose bucolic outlook and insight he writes with his head in the clouds full of expert knowledge full of the wise saws of official reports and the brotherhood of the F C O G full of all the conveniences and in his becoated bemashed and waited upon existence the advantages of the clinic and the

hospital, but with no practical knowledge of the capacity of the average general practitioner

I believe that if the work of all the general practitioners in the country were classified according to results, and compared with the results of the maternity hospitals, the results of the general practitioners would easily win We do not shout our gifts and capacities from the housetops and we deal with our difficulties in accordance with Nature, but it is right that we should occasionally raise our voices against a tendency to depreciate our work and belittle our results One cannot but resent the superior air, the almost sneering air, that runs through most of Professor Munro Kerr's writings that it has been my privilege to read He knows nothing of our work In my opinion the greatest work of the general practitioner is that in maternity He realizes that the whole happiness, not only of the mother and her child, but of the involved household, depends upon his work He knows that the mortality is not the chief point for his judgement and anxiety, many mothers would be better dead than face the years of invalidism that is before them The outstanding reward of our work is a healthy mother to rejoice in the birth of a healthy child

If the clinic is the correct place to watch over and guide the "insured person," then surely the clinic is the right place to supervise all potential mothers The law should forbid the general practitioner to deal with, in her own home, any child-bearing woman Surely those poor souls "the non-insured" persons, deserve as much consideration from the powers that be as their more fortunate sisters—those who would come under the schemes adumbrated by Professor Munro Kerr? I do not, however for one moment accept his insinuations and contentions The right place for the mother to have her baby in is her own home and it would be well for modern legislation, as advocated by the Prince of Wales, to see to it that every potential mother has a decent home Were more money spent upon providing decent homes for the people, and less upon pandering to the idiosyncrasies of the so-called health reformer there would be less maternal mortality and morbidity to-day The right person to look after the prospective mother is her private doctor, who knows her, her history, her family, her home, and everything about her, and he should look after her in her own home If the general practitioner is conscientious, has common sense and knows his job, his results from what I have seen of both will easily beat the clinic and the hospital, in spite of the facilities provided for the so-called specialist in the latter There is a kindliness in the home which means far more in the actual results than it gets credit for

What nonsense to write that "only" in the clinic can the bulk of patients be thoroughly examined, there only can health sheets be satisfactorily preserved" Since 1915, although only a rural physician in the Highlands of Scotland, forty-five miles from the nearest hospital, doing some 15,000 miles a year, I have to April 30th, 1932, done 1,032 confinements I have accurate details, antenatal and otherwise, of every case I give every case ante natal guidance I had one maternal death of doubtful classification I have not seen puerperal fever No mother has yet complained that I have done her harm I must have thousands of colleagues who can beat my results The bulk of my patients live in cottages with no sanitary conveniences within their dwelling, and only outside well-water supplies We are a happy and contented family many miles from clinics and officials

Clinics and maternity hospitals are no doubt useful, but go through them and look at them, see the mothers in their beds or on the couch, see the labelled babies in their rows see routine and officialdom in their masks and coats Would anyone compare them with home, would any of us like those near and dear to us to go there? It is perhaps true, as Professor Munro Kerr writes, that the world will move on, and I suppose such things will come but the world or the mothers will be no better Thank God I shall be dead before that day comes at least to the Highlands Again I would pray that the money being spent upon clinics hospitals and the schemes of politicians, and of faddists cranks and specialists who know nothing of what the real life of the people is, should be spent upon improving the lot of the people and their homes This done, you will have to look far to find the superior of the general practitioner in maternity or any other sphere of medical work As one of them I do not blush—I am, etc,

Tain Ross-shire May 22nd E K MACKENZIE

Treatment of Menstrual Irregularities

SIR—Dr Wilfred Shaw's admission, at the end of a most interesting paper in your issue of May 27th (p 907) that modern methods of treatment of menstrual irregularities leave much to be desired justifies my bringing forward the following therapeutic note

I believe it is agreed that a certain balance of function exists between the various endocrine glands and that a diminution in the function of one may show itself by exaggerated action of another Thus a lessened activity of the thyroid gland, such as often takes place at or about the menopause, may cause increased activity of the pituitary This state of affairs, it seems to me may well bring about the condition of epimenorrhoea in patients over 40, such as Dr Shaw describes At any rate, in cases of excessive menstrual discharge at or about the menopause I have found the administration of thyroid extract always worth a trial—I am, etc,

Tamworth May 28th P W PARKES

Treatment of Tuberculosis

SIR—I was glad to read in the *Journal* of May 27th (p 935) Dr L S T Burrell's timely protest against funds "allocated for the prevention and treatment of tuberculosis" being diverted to certain delicate children needing "special food schooling and attention" These children are called by some "pretuberculous" The word should be discarded as a cloak for ignorance All it means is "before becoming tuberculous"

I have no wish to score a dialectic point against Dr Burrell by observing that in the first sentence of his letter he asserts that the child should be removed from the source of infection, whereas in the last sentence of the same paragraph he says "the proper remedy is to remove the source of infection" In point of fact both pleas should have a place in our scheme for treatment The child born of an infectious, tuberculous mother should be removed at birth from its mother and reared artificially, or by a healthy wet-nurse That is the Grancher system, which has given excellent results in Paris The infectious adult who, by reason either of bad housing conditions or of a low mentality, cannot carry out at home the precautions necessary to protect those living in intimate association with him (the contacts) should go to a sanatorium if curable or to a hospital for advanced cases if incurable It is at this point where our much-vaunted system of dealing with tuberculosis breaks down Our sanatorium beds should be reserved for the infectious febrile and debilitated patient who need the optimum of fresh air and fresh food and graduated rest and exercise Most of the other cases could be equally well treated at home by tuberculin and at a fraction of the cost of sanatorium treatment The truth is that some medical superintendents of sanatoriums

others on the nerve trunk as it descends through the pelvis Examples are (1) sacro-iliac and lumbo sacral strain, (2) disease, as meningitis (syphilitic or other variety), or tumour within the spinal canal, (3) vertebral disease—for example, malignant growths, injury, scoliosis or other deformity, arthritis, (4) intrapelvic disease causing pressure on or involving the nerve trunk

When central or intrapelvic disease is responsible a bilateral "sciatica" is obviously possible, and therefore such a distribution necessarily arouses suspicion, sometimes sciatic pain in both lower limbs is associated with glycosuria But whether bilateral or unilateral a diagnosis of "simple" sciatica can never be justified until all the above possibilities have been excluded The absence of tenderness in the course of the nerve suggests that the condition is due to a cause other than perineuritis

In connexion with the differential diagnosis may be mentioned

(1) The "lightning" pains of tabes dorsalis, to be recognized by other evidences of the disease

(2) Disease of the hip joint with pain referred to the corresponding knee, to be excluded by radiological and other examinations

(3) Disease of the sacro-iliac joint
(4) Fibrositis of the hamstring muscles

} No tenderness of the nerve trunk or its branches, no increase of pain on dorsiflexion of the foot when the thigh is flexed to the point at which the position causes pain

(5) Sciatic neuralgia—that is, sciatic pain without central cause or local fibrositis nerve not tender, Achilles jerk not lost, and pains in peripheral distribution of the nerve rather than in the nerve trunk

(6) Sciatic parenchymatous neuritis The nerve fibres being affected, there are, in addition to pain and tenderness, anaesthesia and trophic disturbances The absence of the Achilles jerk indicates some implication of the nerve fibres

Treatment of Sciatica When the symptoms are acute rest in bed is essential The limb may be supported by sandbags or even fixed by a long splint, warmth, radiant heat, poultices or packs are helpful Aspirin in full doses may relieve pain, morphine, if possible, should be avoided Blisters, acupuncture and the injection of normal saline or of oxygen into the nerve sheath are useful If there is a history of gout or rheumatism appropriate remedies should be prescribed When acute pain has been checked massage and electricity and treatment at an appropriate spa are indicated

III INCIDENCE

The forms of disease discussed in this report are very common, but no accurate statistical record of their prevalence is available Some appreciation of the position can be gathered from statistics of the National Health Insurance Service recorded by Dr Alison Glover These and other estimates indicate that the loss of work time due to rheumatic diseases (of all types) is 5,500,000 days in a single year, or for arthritic diseases alone, 4,500,000

The cost involved under the National Health Insurance Scheme in the shape of administrative expenses and disbursements to insured persons suffering from rheumatic diseases (of all types) in one year is in excess of £5 000 000 and for arthritic and allied conditions £4 500 000, further the large amount of rheumatism amongst uninsured persons adds considerably to the above figures

IV AETIOLOGY

Sex Women are the more frequent sufferers from primary rheumatoid arthritis, chronic villous arthritis and panniculitis, men from secondary rheumatoid arthritis and spondylitis The incidence of osteo arthritis and of fibrositis (other than panniculitis) is approximately equal in the two sexes

Age The victims of primary rheumatoid arthritis are often women of child bearing age, of chronic villous arthritis, women in middle life, and of spondylitis ankylopoietica, men from 20 to 40 years Both osteo-arthritis and spondylitis osteo arthritica occur particularly in late middle life and old age

Climate Damp is undoubtedly a factor in the production of rheumatoid arthritis and fibrositis, especially when combined with cold or with marked alternations of temperature Osteo arthritis, on the other hand is rife and has long been so, in the hot, dry climate of Egypt

Occupation Miners are prone to fibrositis Statements that metal workers and railway men are especially liable to arthritic disease have at present no secure foundation These terms cover various groups of workers who work under conditions which differ widely in relation to strain and exposure and risk of injury A careful analysis recognizing these differences must precede any attempt at generalization Primary rheumatoid arthritis is specially liable to affect women in indoor occupations

Endocrine imbalance between thyroid, pituitary, adrenal ovarian, and corpus luteum secretions is very frequent Hyperthyroidism is especially associated with primary rheumatoid arthritis, and hypothyroidism with chronic villous arthritis

Allergic sensitivity is probably an important causative factor, but this is incapable of precise measurement

Infection associated with septic foci admittedly plays an important part in the causation of the disease conditions here under review Streptococci especially of the *viridans* type, less often of the haemolytic type or of other strains, are the commonest infections, but staphylococci or a bacillus of the coliform group may sometimes be concerned

In summary, the important aetiological factors are (1) In primary rheumatoid arthritis, unknown, in secondary, infection (2) In chronic villous arthritis evidence of infection is inconclusive, thyroid deficiency with strain on the affected joint due to excessive bodily weight is important (3) In osteo arthritis infection makes some contribution in secondary cases, but in the primary form strain and arterial degeneration (local and general) are often provocative agencies (4) In spondylitis ankylopoietica infection is the predominant cause (5) Spondylitis *osteo* arthritica (see osteo arthritis) (6) In fibrositis many cases are due to infection but perhaps with equal frequency the cause is metabolic disorder and defective elimination

The following areas demand careful examination

Teeth Both clinical and radiological examination is necessary, apical infection is especially important capped and dead teeth are always to be suspected

Tonsils Tonsillar infections are frequent Arthritis due to these occurs particularly in young persons pyrexial periods are common, and in some cases these are associated with effusion into the joints Unlike subacute rheumatism these cases are not relieved by salicylates and do not develop carditis

Nasal Sinuses Of these the maxillary antrum is the commonest site of infection Radiograms and transillumination should of course be utilized but they are sometimes misleading The only certain test in doubtful cases

want early and hopeful cases to improve their statistics In one well known sanatorium an investigation showed that 14 per cent of the patients were not suffering from tuberculosis On the other hand very few practitioners have been trained to use tuberculin and at very few tuberculosis dispensaries is tuberculin employed In my view all children exposed to infection at home and reacting to tuberculin should be immunized by a course of tuberculin

I agree with Dr Midgley Turner in deploring the term non-clinical tuberculosis All this means is tuberculosis without symptoms and it covers two distinct groups of people (*a*) those who have been infected by the tubercle bacillus but in whom the disease has not yet developed and (*b*) cases such as the patient who has just recovered from tuberculous pleural effusion and has no signs or symptoms of disease Surely the only accurate term for this case is arrested pleural tuberculosis Such a patient is certainly in danger of becoming later on a consumptive—unless immunized by tuberculin To be accurate we should never speak of a cured case of tuberculosis but of arrested disease and if the disease remains arrested for a lifetime the patient will say that this is as good as a cure

As regards Switzerland if a patient wants to go there let him go but also let him know the facts In the treatment of pulmonary tuberculosis dryness calmness and changes of temperature are minor considerations I wrote that in 1916 in my book *Pulmonary Tuberculosis* and am still of this opinion As good results have been achieved in patients homes and in sanatoriums in England Scotland and Wales as in Switzerland Moreover it is better that if possible the disease should be arrested in the climate where the patient is to spend the rest of his working life —I am etc

London W.8 May 27th HALLIDAY SUTHERLAND

SIR —I fear that Dr L S T Burrell and I in our studies of tuberculosis travel by such diverging tracks that we must one or other be travelling further and further from the truth Would that we could have a heart to heart discussion in all friendliness so that we might use our knowledge and experience for the benefit not of individuals but of mankind My experiences are largely among the industrial classes while Dr Burrell must be thinking of the well-to-do and accordingly we can never agree upon the best methods of dealing with the problem of tuberculosis in the aggregate How is it possible to deal with the problem of tuberculosis by means of sanatoriums when the cost is so great and the benefit so small? Even with artificial pneumothorax neither hospitals nor sanatoriums stretched to their uttermost can ever seriously help the poor enmeshed in the coils of this disease Their one hope of salvation lies in scientific methods Surely the disease should be attacked long before conditions arise that need surgical methods

I regret that Dr Burrell uses that misleading term pretuberculous This is merely casting dust into our eyes We must not give countenance to a term that should be condemned at first sight because it means nothing if it does not mean non tuberculous No one who uses tuberculin systematically when there is open phthisis in the family will ever make the mistake of calling healthy persons tuberculous or tuberculous persons healthy I can understand the meaning of pre phthisical We should call a spade a spade

For the last five years I have had too much evidence of haphazard diagnoses in tuberculous diseases of the eye and *mutatis mutandis* these unscientific diagnoses are just as common in tuberculous disease of other organs especially in phthisis I use this term advisedly because it connotes the truth—namely that there is no such thing as chronic pulmonary tuberculosis as an entity If there is chronic tuberculous disease of the lungs there is plenty of evidence that tuberculosis may have also attacked many other organs Moreover—and this point urges me to dissent from Dr Burrell's ideas upon pleural effusion —who has ever seen a sufferer from pleural effusion without signs or symptoms of disease ? Tuberculin which Dr Burrell eschews in diagnosis and treatment would prove that in every case of pleural effusion even after quiescence of the local trouble the tubercle bacilli still live in the tissues awaiting an opportunity for further invasion of the body I would ask Dr Burrell to study the meticulous labours of Anders and Schmoe in 1 500 post mortem examinations in the pathological laboratories of the Freiburg University which demonstrate the fact that in adult life 35 per cent of human beings living in towns are the hosts of living tubercle bacilli causing active lesions in the hitherto ignored subpleural lymphatic glands Strange too we know that our own statistics tell us that 35 per cent of adult women who die between the ages of 15 and 35 die of tuberculosis These lesions are overlooked because tuberculin is not used for diagnosis and these lesions can be brought to a standstill by means of tuberculin used in treatment.

In his recent book Dr Burrell has written these words

Apart from shock or reaction I have failed to find a single case in which tuberculin could be clearly shown to have been of therapeutic value I venture to predict that within the next ten years Dr Burrell will set his compass in a different direction and will become a dutiful disciple in the school of scientific method inaugurated by the master of the method Robert Koch — I am etc

W CAMAC WILKINSON M.D F.R.C.P

London W May 28th

Aetiology of Acute Rheumatism

SIR —The correspondence between Drs Schlesinger and Tertius Clarke would appear to emphasize four points in relation to the aetiology of acute rheumatism

1 Climatic influences together with differences in geographical distribution play an important part

2. There is considerable evidence pointing to familial and racial influences

3 Scottish troops suffered far more from rheumatism in India than did native Indian troops

4 In Holland the ratio of juvenile rheumatism to the adult form differs from that in England

May not a common factor linking together these superficially unconnected data be found in *diet* The food of every nation varies and the further apart two countries are the more do their dietaries differ There is nothing perhaps so essentially national as food and the more a nation departs from its national dietary the more it lays itself open to diseases of constitutional nature In Great Britain the milk supply per head is unsatisfactorily poor in quantity and at times also in quality acute rheumatism and chorea being rife among those children whose intake of lime-containing foods is small In other European countries the milk supplies either from cows or goats are much greater than in Great Britain

Familial influences are closely connected with the family dietaries Mothers who dislike milk are inclined to provide for their families only nominal quantities of that important food and wherever there is a familial tendency to acute rheumatism it will be found that the milk supply of that family is insufficient

The native troops in India obtain less meat and more lime-containing foods than do the Scottish troops and consume little or no alcohol which lessens the calcium content of the body Dutch children are relatively better fed than adults since they are given more lime-containing foods In a large number of children investigated during

is by antral puncture and bacteriological examination of the antral washings

Pharynx There may be a general infection of the mucous membranes of the pharynx and nose altogether apart from any local infection in the tonsils or nasal sinuses

Intestines Infection generally streptococcal without signs of active colitis Chronic appendicitis cholecystitis and diverticulitis may also be responsible

Urogenital Tract The urethra prostate vesiculae seminales and pelves of the kidneys are possible sites of infection bacteriological examination of the urine perhaps after massage of the prostate is of course necessary In women gonorrhoea is a cause of arthritis not infrequently overlooked cervical erosions not necessarily gonococcal and latent salpingitis must be remembered

Infective Origin of Arthritis

Some recent work has been brought forward to support the view of the infective origin of arthritis and allied conditions More especially American observers have claimed positive cultures of streptococci from large quantities of blood incubated for long periods of time These experiments cannot yet be regarded so proof against refutation as to be accepted without reserve It is highly desirable therefore that this cultural work should be repeated with a view to confirmation or otherwise Obvious fallacies arising from the late appearance of streptococci in cultures of material from the human body should be excluded so far as possible by control observations

Similarly when searching for the presence of specific antibodies to streptococci in the blood of patients it is desirable that more than a single method should be employed As suspensions of streptococci may vary in agglutinability from time to time results obtained by agglutination should be checked by examining for the presence of complement fixing or other antibodies as well and here again control observations are essential in order to exclude error

Work on the streptococci (which are regarded as the main bacterial contributors towards rheumatism) cannot at present be carried out with certainty A selection can be made but it is impossible for example to select a particular pathogenic streptococcus in any case with the certainty with which we can identify tubercle or typhoid bacilli and this has led to a multiplicity of incompatible results concerning streptococci all over the world

This work is an important aspect of future research on arthritis (see p 1052)

V MORBID ANATOMY

In considering the morbid anatomy of the several arthritic conditions lack of uniformity in the existing schemes of classification constitutes a difficulty For example the Committee was so fortunate as to obtain a valuable analysis of the Strangeways Collection admittedly the most complete collection of specimens of joint disease in this or perhaps any other country yet to correlate the conditions displayed in this collection to the other aspects of the Committee s work proved impossible because the classification there employed is more elaborate than that in common use

[*Note* The material of the Strangeways Collection is exhaustively analysed in Mr Lawford Knaggs s articles in the *British Journal of Surgery* July (p 113) and October (p 309) 1932 and January (p 425) 1933]

Primary and secondary rheumatoid arthritis do not present any significant differences in morbid anatomy one from the other The following description therefore applies to both

The disease begins with a round-celled infiltration of the synovial membrane most marked at the margins in the neighbourhood of the circulus articuli vasculosus Proliferation in the synovial membrane takes place with the formation of granulation tissue which extends as a pannus over the joint surface of the cartilage Simultaneously proliferation takes place in the connective tissue of the bone in a subchondral area with the formation of granulation tissue on the bone side of the cartilage Between these two layers the cartilage gradually becomes destroyed and replaced by granulation tissue fibrous tissue is formed with resulting partial or complete ankylosis of the joint In the marginal areas osteoid tissue may be formed by proliferation of the connective tissue and the resulting ankylosis may be cartilaginous or partly bony

In the early stages the synovial fluid is increased in the later stages with diminution or disappearance of the joint cavity it becomes lessened in amount or completely absent The capsule of the joint becomes infiltrated by lymphoid cells new blood vessels appear and fibrous tissue is laid down with resulting thickening of the periarticular tissues The lime salts of the bone become absorbed leading to rarefaction and loss of density according to Allison and Ghormley local collections of lymphocytes in the synovial membrane subchondral connective tissue and the capsule is a characteristic feature of rheumatoid arthritis distinguishing it histologically from other forms of joint disease

This process may be contrasted with that in pyogenic arthritis in which the infiltration is by polymorph leucocytes and the destruction of cartilage is due to a chemical process of leucocytic origin On the other hand in rheumatoid arthritis the infiltration is by lymphocytes which do not produce a destructive enzyme the destruction of cartilage is due to invasion by granulation tissue

Again in osteo arthritis the changes begin in the cartilage and appear secondarily in the synovial membrane while other changes are the formation of osteophytes destruction of cartilage eburnation of bone and fixation of the joint but this never proceeds to true bony ankylosis

CHRONIC VILLOUS ARTHRITIS

The synovial membrane in such cases as have been examined is found to be thickened and congested with an increase in the number and size of the fringes (hence the name villous arthritis) Microscopically there is an increase of blood vessels and small-celled infiltration of the tissues In certain cases these changes lead on to typical osteo-arthritis

OSTEO-ARTHRITIS

The earliest histological changes are doubtful but degenerative changes in the articular ends of the bones have been demonstrated in skiagrams as very early manifestations Eventually osteo-arthritis is characterized by degenerative changes in the articular cartilage the synovial membrane the ligaments and the articular ends of the bones The most distinctive feature of the disease is the formation of osteophytes These compensate for weakened ligaments and enlarge the surface over which weight carried by the joint can be distributed (For a detailed description of osteo-arthritic changes see Mr Lawford Knaggs s paper see p 1039 col 1)

SPONDYLITIS

In the ankylopoietic type the ossification of the ligaments is characteristic and osteo-porosis a very marked feature The morbid anatomy of the osteo-arthritic type corresponds in every respect to that of osteo-arthritis in other parts of the body

FIBROSITIS

The fibrositic nodule is formed by a blocking of the lymphatics followed by a localized leucocytic infiltration and this in turn by fibrosis and scar formation There is no record of a recovery of micro-organisms from fibrositic nodules

VI BIOCHEMISTRY

BLOOD

Sedimentation Rate (Suspension Stability) This test depends on the rate at which red blood corpuscles sink under the influence of gravity when oxalated blood is drawn off into glass tubes In all infective conditions there is a tendency for sedimentation to be more rapid than the normal rate

In one method of estimating the sedimentation rate the tubes are graduated into 100 units In freshly drawn blood the red corpuscles are in complete suspension and therefore extend to the 100 mark , later, sedimentation takes place, so that the level of the fluid showing suspension of red cells falls to a lower mark In normal blood the sedimentation does not cause the level of the fluid containing suspended red corpuscles to fall below 80 in one and a half hours In blood from cases of active infection the fluid may fall to the 50 mark in half an hour

Rheumatoid Arthritis This subgroup has the highest sedimentation rate of all forms of chronic arthritis and in many cases the readings approach the possible minimum in thirty minutes , also the percentage of cases showing an improvement after treatment is the lowest of all the types under consideration

The results are often at variance with the subjective and objective clinical findings , these may show a definite improvement although the sedimentation rate is practically unaltered This may be explained either by assuming that the sedimentation rate results lag behind the clinical symptoms or that the clinical improvement is merely a local amelioration leaving the basic condition practically unaltered—a hypothesis supported by clinical experience as to the general intractability of this type to treatment so far as complete recovery is concerned

Chronic Villous Arthritis The cases of chronic villous arthritis examined have given a curve resembling that of rheumatoid arthritis and since metabolic disorders *per se* have but little influence on the sedimentation rate it is possible that the changes found in this type are due to an infective arthritis associated with endocrine deficiency

Osteo arthritis, including Morbus Coxae Senilis Two well marked groups may be differentiated , one of these has a normal or almost normal sedimentation rate and is possibly traumatic or static in origin, and the other possibly of infective origin has a definitely lowered sedimentation rate The former a more numerous group is usually monarticular the latter polyarticular

Spondylitis Spondylitis ankylopoietica and spondylitis osteo arthritica resemble respectively rheumatoid arthritis and osteo arthritis in their sedimentation rate values

Fibrositis (Muscular) The results obtained with this subgroup are variable

Lumbago and Fibrositis In these cases the sedimentation rate is usually either normal or but slightly subnormal In sciatica when the nerve trunk only is involved the results are almost invariably normal but when the nerve root is affected with neurotrophic disturbances the sedimentation rate is increased the level may reach the 50 mark in one hour and at the same time muscular wasting is pronounced

Concurrent Disease When blood samples are taken for the determination of the sedimentation rate it is essential that the presence or absence of a concurrent infection such as a common cold should be noted as such a condition may increase the sedimentation rate to a material extent This particularly applies to determinations made during treatment as the effect of the cold may mask temporarily any improvement due to treatment It is desirable also that determination should not be made for several days after injections of vaccines etc particularly if any reaction has thus been produced A concurrent metabolic disease such as diabetes does not affect the result

pH The hydrogen ion concentration of the blood serum or plasma in rheumatic diseases has not received much attention but the evidence available suggests that there are no material abnormalities

[*Note* The limits usually accepted as normal are 7 35 to 7 45, but it must be remembered that the mode of expression is logarithmic and not arithmetrical so that a change of *p*H from 7 45 to 7 35 represents an increase of no less than 25 per cent in the hydrogen ion concentration]

Uric Acid The different methods in use for testing the amount of uric acid present in normal blood give conflicting results but it may be assumed that the normal content is from 3 5 to 4 mg per 100 c cm in males and about 0 5 mg per 100 c cm less in females The proportion is increased in gout but there is no evidence that it is increased in other arthritic conditions provided these are free from complications

Urea and Renal Functions There is no conclusive evidence either of a retention of urea or of albuminuria or indeed of any disturbance of the renal function that can be attributed to arthritic disease

Liver Function Some results suggesting a disturbance of liver function have been obtained in infective arthritis but these await confirmation

CO_2 Content and Alkaline Reserve These terms are not synonymous The alkaline reserve, expressed as combining power to CO_2, is usually two volumes per cent higher than the total CO_2 content The total CO_2 content of the blood plasma in 149 cases of various rheumatic diseases was found to be normal except in cases of rheumatoid arthritis which gave rather low values the average being 6 to 7 volumes per cent below that of healthy subjects This conclusion has since been confirmed It should be noted, however that in spondylitis the two types give different results, the CO_2 in the osteo arthritica type being normal whilst it is subnormal in the ankylopoietica type, which thus in this respect resembles rheumatoid arthritis The deficiency in the CO_2 content might be regarded as evidence of a tendency towards acidosis but it is equally probable that it is due to an asthenic condition of the tissues which results in the venous blood containing more oxygen and less CO_2 than are present in healthy subjects

Glucose Largely owing to the work of Pemberton of Philadelphia and his associates, work confirmed later by experimenters in other countries, it is now recognized that a majority of cases of rheumatoid arthritis exhibit a definite "glucose intolerance"—that is on the administration of glucose the blood glucose increases more or less normally during the first 30 to 45 minutes, and then decreases at an abnormally slow rate thus producing a characteristic "lag" type of curve Glycosuria rarely occurs The Philadelphia workers found also that if a definite focus of infection could be discovered and removed the arthritis cleared up and the glucose tolerance returned slowly to normal The occurrence of the phenomenon of glucose intolerance in many arthritics is indubitable but its significance appears to have been misinterpreted by some clinicians Pemberton's suggestion that a low carbohydrate diet is indicated may have led to the assumption that there is a disturbance of the carbohydrate metabolism but all his results as he himself emphasized, indicate that the defect is in the tissues and their blood supply and not in the pancreas , and that owing to a vaso constriction the tissues absorb and store glucose at a reduced rate Such a vaso constriction would accord with the findings of Pemberton and others that the venous blood of arthritics often shows a relatively high saturation with oxygen and a low CO_2 content that vaso dilators reduce the intolerance that the first drop of blood from a finger prick shows an abnormal variation from later ones as regards the red cell count that the venous and arterial bloods show abnormal variations during the glucose test and that the constriction in superficial capillaries can be demonstrated by microscopical examination

It may be noted also that the excretion of acetone bodies in the urine of forty six rheumatic cases has been estimated without finding evidence of a disturbed carbohydrate metabolism

Calcium Some workers have reported an increased amount of calcium in the serum of arthritic and gouty patients but the general consensus of opinion is that there is no satisfactory evidence of hypercalcæmia The serum Ca is found to be almost invariably subnormal in the ankylopoietica type of spondylitis and rather variable in the osteo arthritica type

the past six years at the Marylebone Rheumatism Supervisory Centre (J F H D) insufficient calcium intake appears of significance an adequate supply of milk being found to decrease susceptibility to muscular pains and nervous hypersensitiveness With reference to flea bites it is known that children with too little lime in their systems, and therefore with urticarial tendencies, are the ones upon whom fleas delight to batten

Expressed more technically in terms of disease resistance, one may say that the more stable the tissue colloids the less the liability to disease, and that this stability depends upon a condition of acid-base equilibrium The *p*H of the tissues and tissue-fluids can be varied by adjustment of diet, a large protein dietary deviating the acid-base equilibrium in the direction of increased acidity, whilst a lacto-vegetarian diet will cause deviation to the alkaline side At the Marylebone Rheumatic Centre all the children manifesting cardiac involvement—that is, enlargement of heart or murmurs—had in the blood a lowered alkaline reserve and in the urine a deviation of the acid-base balance in the direction of increased acidity — We are, etc ,

J F HALLS DALLY,
London

G ARBOUR STEPHENS,
Swansea

May 24th

SIR —I fear that Dr Bernard Schlesinger has not grasped my idea of the cause of rheumatic fever , I must point out that Norway is not the country of origin of *Rattus norvegicus* It undoubtedly comes from temperate Asia and was introduced into Western Europe by the Russian fleet which visited Copenhagen in 1716 The history and habits of this animal are described by Mr M A C Hinton in a pamphlet on " Rats and Mice as Enemies of Mankind "

Dr Schlesinger states (*Journal* May 20th, 1933) that rheumatic heart disease is relatively uncommon in Scandinavia But according to the late Dr Carey Coombs most of our knowledge of rheumatic heart disease comes from Great Britain, Scandinavia, France, Germany, North America and Australia This statement, as was another by the same author, of the uncertainty of the race incidence, was written in 1924 In spite of this, Dr Schlesinger quotes from (apparently) Sir William Church of 1896 I have pointed out in an article on the geographical distribution of rheumatic fever that Sir William Church himself wrote that the returns were very unsatisfactory The late Dr Carey Coombs obviously did not accept them My opinion still is that it is place, not race, that matters

I do not know whether allergy is affected by climate, but asthma is not uncommon in the Tropics, and when a case of asthma is benefited by transfer from one country to another it is probable that the result is due to removal from a particular protein rather than to a change of climate As regards Holland, I am afraid that I cannot look on differences in that country as other than local, just as there are differences between agricultural and industrial town areas My whole argument has arisen from the immense geographical difference between the Tropics and temperate climates I agree that there is something more in the aetiology of rheumatic fever than " a rat a flea and a haemolytic streptococcus " The whole cause of a disease is not disclosed by the discovery of a bacillus though it may be by finding some defect of sanitation Dr Schlesinger agrees that ' improper sanitation is at fault " Analysis of the significant environmental conditions of rheumatic fever given in Report No 114 of the Medical Research Council shows that they all lead to the environment of the rat The most important environment of the rat is water Rats in a house almost certainly indicate the presence of a broken drain It is therefore not easy to understand why it has become necessary to direct attention from the germ on to the patient or why the relation to rheumatic fever of this one particular item of defective sanitation should not be considered worthy of investigation —I am, etc

J TERTIUS CLARKE
Late Health Officer and Medical Officer Perak

Harrow May 28th

Treatment of Impetigo

SIR —I should like to endorse completely the claims put forward by Dr Newman (*Journal* May 13th p 823) for the use of elastoplast in impetigo having employed it both in school and in child welfare clinics for the past three years in some hundreds of cases with great satisfaction to patients and resultant gratitude of my nursing staff—a matter to which I have drawn attention in my annual reports for 1931 and 1932

At the outset I used an initial soak of peroxide of hydrogen but soon found this quite unnecessary in facial cases Having regard, however, to liability to extra infection, etc in the knee region, I retain the peroxide, my routine in cases which are not definitely inflamed—these are always first subdued—being to clean surroundings with petrol soak in peroxide, then apply elastoplast This treatment is carried out also with abrasions Since the beginning of this year I have had four inguinal abscesses to open, following impetigo of knees, but in none had elastoplast been available, all having arrived too late I have never seen a case where this could in any way be connected with the use of elastoplast The same trouble, noted by Dr Newman, with a few parents of pulling off the elastoplast and applying sulphur ointment, has been my experience With regard to his suggestion of the possibility of non-infection with this treatment I can assure him that he need have no fear whatever I never now exclude from school for impetigo except where parents decline treatment by elastoplast The disease is disappearing from my schools, and would be very seldom seen were it not for infection from children under school age, who are being attacked with coupon captivating soaps and sulphur in their homes

The great drawback to general acceptance of Dr Newman's treatment will be found, I fear to lie in its simplicity Without a more or less elaborate ritual it seems difficult, in my experience extending over thirty years in the clinical field, to persuade professional brethren to give a trial even to a well tested method of treatment —I am, etc ,

J M MORRIS M O H

Neath May 22nd

Motor Function of Ilio-inguinal Nerve

SIR —My recent article (*Journal*, April 1st, p 761) on the efferent fibres in the ilio inguinal nerve and their relation to the incision for appendicectomy was written on purely anatomical grounds, owing to the brief descriptions of that nerve given in anatomical textbooks

The relation of the ilio inguinal nerve to the McBurney incision was referred to, and it was suggested that, should the nerve be damaged whether by scar tissue (where drainage is employed) involvement in sutures or by surgery (namely section), then muscular weakness in the transversalis abdominis and internal oblique muscles will be produced This weakness will predispose to the occurrence of an inguinal hernia

I regret I am not in a position to discuss the aetiology of inguinal herniae, but I suggest on purely anatomical grounds, that muscular weakness will predispose to their occurrence (particularly the direct type), but that the

indirect type is not out of the question since congenital preformed sacs have been observed in dissections where no actual hernia existed admitting that probably this latter theory is the main factor in the majority of the indirect type A combination of both factors would entirely produce such a sequel and the muscular weakness would be caused by damaging the ilio inguinal nerve — I am etc

Blackburn May 28th HENRY J WADE

Bismuth and Peptone in Asthma

SIR —The tests for anaphylaxis show small relation to those of allergy Under the supervision of Professor McIntosh eleven sensitized guinea pigs were carefully tested with bismuth and peptone and with peptone alone They weighed about 400 grams each Those receiving 0 25 c cm of horse serum in racardially were dead in forty minutes though the controls lived for three minutes only It would appear that the recent statement of Dr Gerald Slot that he had found it extraordinarily difficult to find out after making eight post mortems of those who had died of allergy why they had died at all is true [1] I have always used Witte s special peptone 30 intramuscularly (gluteus) and also the bismuth metal *B.P* 1 c cm Those whose skin is little attacked by peptone can receive 0 3 c cm 0 5 c cm and 1 c cm to begin with Those whose skin is tender receive less There is no doubt that the bismuth greatly increases the efficacy of peptone

The lady whose case I mentioned in the *British Medical Journal* (1932 ii 731) remains quite well and I have had numerous other cases equally severe who have succeeded perfectly Some have had to take morphine regularly to relieve their attacks but now all remains right with them The bismuth is given with the fourth dose of peptone The injections are continued weekly for some time afterwards then fortnightly Treatment by bismuth seems to cause catalysis of the peptone in the reticulo-endothelial system into which they both enter — I am etc

London W May 23rd A G ALLD

Mirror-Writing

SIR —With reference to Dr Geoffrey Morey s letter on the above subject (*Journal* April 1st p 588) such cases as he describes are hardly of extreme rarity It is relatively common to find some degree of facility both for mirror writing and for mirror reading in the left handed and many children who are otherwise intelligent but have a specific difficulty in learning to read will also tend to reverse the order of letters the confusion of was and saw dog and god being common errors The tendency to reversals may be in the realm of visual imagery rather than in the order of the letters and commonly b and d p and q are confused Dr S T Orton has suggested an interesting theory which relates the whole problem to that of cerebral dominance and a survey of his work is given in an article by him entitled Word blindness in School Children published in the *Archives of Neurology and Psychiatry* (1925 xiv 581)

The child who is so completely left handed that no attempt is made by him to use the other hand suffers less than does the so-called intergrade —that is to say a child who has difficulty in establishing a definite left or right handedness and who goes through a period of non-dexterous ambidexterity or in whom the handedness and eyedness fail to establish in the same side There seems no doubt that there is a leading eye in every way comparable to the leading hand and that the majority of individuals develop into being right handed and right eyed Many of the intergrades succeed after some difficulty with reading or penmanship during school years in becoming acceptably right handed but they are often found to have a facility in mirror reading and writing which greatly exceeds that of the naturally right sided individual

The case described by Dr Morey is a well marked one of special reading disability for which Orton has suggested the term strephosymbolia It is interesting in that it illustrates very prettily the ease with which the hardly established speech mechanism is upset by a shift from left to right handed training But it is less extreme than that in one case seen recently by the writer of an intelligent girl of 9 years also left handed who wrote mirror writing which was also reversed upside down and which she began by choice at the bottom right hand corner of the page of her exercise book — I am etc

MILDRED CREAK
A M O in charge of Children s Department Maudsley Hospital L C C

Philadelphia U S A April 27th

[1] *Lancet* 1933 i 1084

A Medical History of Liverpool

SIR —A medical history of Liverpool based upon material collected by Mr Thomas H Bickerton is being compiled at the request of the family by Miss M McKisack lecturer in history in the University of Liverpool If any of your readers have letters papers pictures or personal recollections which they would care to submit for the purpose of this history will they kindly send them to me? All communications will be immediately acknowledged and manuscripts will be returned with the least possible delay —I am etc

H RICHARD BICKERTON

88 Rodney Street Liverpool May 25th

Obituary

J HARLEY GOUGH M D F R C S ED

Consulting Physician Torbay Hospital

Dr John Harley Gough died on May 20th at Torquay at the age of 71 He studied medicine in various schools in the North of England and became M R C S in 1884 and L R C P in 1885 At the same time he qualified for the associateship of Owens College Manchester and then graduated B Sc of Victoria University In 1899 he became a Fellow of the Royal College of Surgeons of Edinburgh and seven years later graduated M D of the University of Durham Before going to Torquay Dr Gough was resident medical officer at the Royal Albert Hospital Devonport senior resident medical officer at St Mary s Hospital for Diseases of Women and Children Manchester and senior house surgeon at Wolverhampton General Hospital It was in Torquay that Dr Gough performed the most fruitful of his medical work There he had been honorary physician senior physician and consulting physician to the Torbay Hospital for thirty years For about twenty years he was also honorary physician to the Western Hospital for Consumption Among his many other medical activities may be mentioned his work as physician to Erith House Institute for Invalid Ladies and to Rosehill Hospital for Children

Towards the end of last century Dr Gough published several papers in the *British Medical Journal* and the *Lancet* but his greatest efforts were always in connexion with the advancement of the practice of medicine

Magnesium No data are available in the literature as to the magnesium content of the serum in the diseases here under consideration but the results with forty five samples recently examined indicate that it is remarkably constant at about 2 2 mg per 10 c cm a value that is quite normal

Inorganic Phosphorus With the possible exception of spondylitis ankylopoietica in which the results tend to be low though not outside the usually accepted limits of normality the inorganic phosphorus content is normal in all rheumatic diseases and gout

Proteins The total protein is usually normal in amount except in rheumatoid arthritis and spondylitis ankylopoietica in which it is often 1 to 1 5 per cent. higher Changes in the absolute amounts of albumin and globulin are common and show some correlation with the sedimentation rate In rheumatoid arthritis the low sedimentation rate is associated with a reduction in the albumin/globulin ratio and an increase in the fibrinogen

Cholesterol No significant changes in the cholesterol content of the blood have been reported

Phosphatase Phosphatase an enzyme capable of hydrolysing phosphoric esters and probably associated with ossification can be demonstrated in small amounts in normal blood In some bone diseases the phosphatase content of the blood is increased but in arthritis it is normal except in spondylitis ankylopoietica in which slightly higher values have been found The increase appears to be related to the ligamentous ossification which is a marked feature of this disease

Blood Groups This subject has been investigated and found to be without significance

URINE

Acidity Reaction and Phosphates The hypothesis that different types of rheumatic disease can be divided into two groups one with an acid and the other with an alkaline diathesis has long been popular and is often being revived in one form or another It has been reported that rheumatoid arthritis and osteo-arthritis have an alkaline and acid diathesis respectively the former being characterized by deficient acid elimination and the latter by deficient alkali assimilation The results of more recent and carefully controlled experiments gave no evidence either of an acid or an alkaline diathesis in the two types of disease here mentioned

Uric Acid In rheumatic diseases the amount of uric acid in the urine is normal In gout it becomes subnormal immediately preceding an attack increases sharply with the onset of clinical symptoms and then falls slowly to the normal level

Calcium and Magnesium The published work regarding the urinary excretion of calcium in arthritis is scanty and does not suggest abnormality

Cystine The few cases investigated at the Devonshire Hospital gave no evidence of abnormalities in the excretion of cystine though it has been claimed that the cystine content of the nails is more variable than normal

Creatinine The creatinine coefficient (urinary creatinine in milligrams divided by body weight in kilos) has been found to be approximately normal In the more advanced cases of rheumatoid arthritis in females a number of rather low readings have been obtained a result which can be attributed to the myasthenia so frequently found in this type

Indican Intestinal stasis with excessive absorption of toxic products of bacterial metabolism has been suggested as a possible factor in some cases of arthritis but if indicanuria can be regarded as a criterion of this absorption the available evidence does not support this hypothesis

Sulphur A recent writer has suggested that arthritics exhibit an abnormal sulphur metabolism evidence of which can be obtained by an analysis of the urine also that there is a deficiency of thiopexy (increased katabolism of sulphur) in rheumatoid arthritis but other workers have failed to confirm this

SWEAT

During the latter half of the last century the hypothesis that arthritis was caused by an excessive accumulation of lactic acid in the body was accepted by some workers although the evidence in support of it was rather meagre Recent workers using more exact methods found that the lactic acid in the blood urine and sweat of arthritic subjects showed no material variation from that in non arthritics and concluded that their findings lend no support to the idea that arthritis at least in the types studied is caused or characterized by abnormal production or disposal of lactic acid

The skin reaction of arthritics is generally acid and this coupled with the fact that the reaction of the sweat became more alkaline during heat treatment led some observers to assume that the arthritis was associated with a relatively acid condition of the blood which could temporarily at least be ameliorated by such treatment Physiologists have however demonstrated that the reaction of the secretion of the sweat glands is always alkaline and that the acidity of the skin is due to decomposed sebaceous matter

An acid reaction of the skin is found in non arthritics as well as in arthritics and it has been emphasized that the change in reaction during a hot air or vapour bath is a normal physiological process Owing to the pyrexia induced by the bath respiratory activity increases and results in an excessive loss of carbonic acid from the blood this produces a temporary phase of increased *p*H during which the sweat becomes less acid Later it returns to its normal *p*H

GASTRIC JUICE

The acidity of the gastric secretion in arthritics has received very considerable attention from many investigators One aspect of its importance is based upon the hypothesis that the free HCl acts as a germicidal barrier to the passage of organisms from the buccal and nasal cavities to the intestinal canal Although a few workers have found a very abnormal incidence (up to 70 per cent.) of achlorhydria a less abnormal figure (20 to 30 per cent.) was obtained by others After a complete and thorough examination of this and related problems it has been concluded that the incidence of achlorhydria or hypochlorhydria in arthritics is five times higher than in normal subjects but only slightly higher than in certain other diseases and the difference is too small to warrant any definite conclusion being made as to its aetiological significance The importance of HCl obviously depends upon whether it is the sole line of defence and it has been suggested that there is a germicidal factor in the gastric juice independent of the HCl and a similar one in the duodenum No evidence of a second germicidal factor in the gastric juice has been obtained

VII RADIOLOGY

The diagnostic features are

(*a*) *Osteoporosis* an increased transparency of bone seen as a local change in infective conditions such as tuberculous caries and osteomyelitis in some conditions a widespread loss of bone calcium occurs (general osteoporosis)

(*b*) *Osteosclerosis* an increase in the normal bone density follows the resolution of an inflammatory process

(*c*) *Bone Density Balance* Normally there is a definite relation between the density of the cortex medulla and cancellous ends of the bone the density of the cortex being three times that of the cancellous bone This balance can remain unaltered even in advanced general osteoporosis The significance of a disturbance of this balance is uncertain It is frequently present as a senile manifestation

RADIOGRAPHIC CHANGES

Rheumatoid Arthritis (Primary and Secondary)

During the active stage generalized osteoporosis occurs suggestive of disturbance of metabolism Some cases usually of secondary rheumatoid arthritis show this osteoporosis accentuated around the minor joints This may be followed by destruction of cartilage and articular bone

and subluxation and ankylosis represent the final stages During the quiescent period recalcification has been described

Osteo-arthritis

(*a*) *In the Hand* This condition is characterized by loss of cartilage, followed by irregularity and obliteration of the joint spaces and by the formation of osteophytes

(*b*) *In the Hip* Although the majority of arthritic hips are clinically diagnosed as osteo-arthritis, a condition considered to be of degenerative origin, the remarkable variety of changes seen in the joint radiographically, changes which are often quite opposite in character, suggests that this group includes not one, but several distinct forms of arthritis Further work is necessary to determine the distinguishing radiological features of each

The chief radiographic changes seen in an osteo-arthritic hip may be summed up as follows (1) loss of cartilage, especially at the maximum pressure point , (2) new bone laid down either as " fringe " osteophytes or as new bone deposits in the acetabulum (this latter condition tends to displace the head of the bone outwards and upwards) , (3) cavitation of the acetabulum or femur frequent, either small multiple or several large cavities found , (4) local osteoporosis or osteosclerosis

Much depends on where the disease first attacks the joint In one group new bone becomes thrown out at the junction of the femoral head and neck, the angle of the neck is often increased, and the limb becomes shortened In a second group considerable shortening of the neck takes place with a mushroom-like appearance of the head of the bone, but this is not forced out of the acetabulum because of the ligamentum teres thus differing from tuberculosis, where absorption of the ligament takes place In a third group the disease is mainly in the floor of the acetabulum and evidence of this is seen in a corresponding prominence on the inner aspect of the pelvic wall (Otto's disease)

Spondylitis

(*a*) *Spondylitis Ankylopoietica* The earliest radiographic signs are osteoporosis of the vertebral bodies and changes in the cartilages of the sacro iliac joints and in those of the spinal articular processes Ossification of the margins of the intervertebral disks, leading to fusion of the bones of the spine into a solid mass, follows The distinctive feature is the early ossification of the ligaments and disks —a condition not met with in any other form of arthritis The softening of the vertebral bodies leads to their compression, and a bamboo like appearance often results

(*b*) *Spondylitis Osteo arthritica* This shows radiographic changes similar to those seen in osteo arthritis of the hip Osteophytes form on the bodies of the vertebrae and by uniting may produce fixation of the spine

Gout

Gout is mentioned here because it is frequently mistaken clinically for other forms of arthritis Radiographically gout may be indicated by the presence in the articular ends of bones of deposits of biurate of sodium, giving rise to clear punched-out ' areas All cases however do not necessarily show these deposits, nor do ' punched out ' areas necessarily indicate gout

It has been claimed that it is possible to distinguish in the hand the radiographic changes that characterize rheumatoid arthritis, osteo arthritis, and gout respectively At present the radiographic diagnosis presented in this fashion does not always coincide with the clinical diagnosis This discrepancy may eventually be rectified

[*Note* —Radiology may be expected to supply increasingly useful and direct means of differential diagnosis in cases of chronic arthritis especially as the more accurate methods now being employed enable the minute changes which characterize the early stages of the disease to be recognized and recorded]

VIII DIFFERENTIAL DIAGNOSIS

In discussing differential diagnosis it is necessary (1) to isolate from one another the varieties of arthritic and allied conditions dealt with in the present report , (2) to separate from other forms of arthritis the forms of arthritis here considered , and (3) to distinguish the pain and limitation of movement due to arthritis or fibrositis from similar symptoms produced by conditions other than these diseases

THE DIFFERENTIATION FROM ONE ANOTHER OF THE SEVERAL FORMS OF ARTHRITIS AND ALLIED CONDITIONS DEALT WITH IN THIS REPORT

(A)

—	Primary Rheumatoid Arthritis	Secondary Rheumatoid Arthritis	Chronic Villous Arthritis	Osteo-arthritis
Incidence	Women of child bearing age	Any age either sex	Women at menopause	Both sexes in later decades of life
Onset	Generally subacute	Sometimes acute	Slow and chronic	Slow and chronic
Infection	Not proven	Septic focus	Not proven	Present only in secondary form
Prodromal symptoms	Present	Absent	Absent	Absent
General condition of patient	Ill and emaciated	Affected in later stages only	Florid and healthy	Tending to show signs of senile changes
Joints affected	Small joints tendency to spread centripetally	Any joint distribution tendency to symmetry	Predominantly knees also 1st carpo-metacarpal joints	Large joints especially hip
Appearance of joints	Fusiform swelling accentuated by wasting of surrounding tissues	Fusiform swelling accentuated by wasting of surrounding tissues	Pouched swelling of knees	May be swollen more or less symmetrically In large joints smaller joints tend to be in larger
Movement	Much restricted	Much restricted	Not much restricted	May be very restricted in one directions but free in others
Crepitus	Coarse creaking or absent	Coarse creaking or absent	Fine crepitation	Coarse grating
Muscular wasting	Marked	Variable	Absent	Marked in late stages only
Skin	Trophic changes	Trophic changes sweating often marked	Myxoedematous	Senile changes
Pain	May be severe	May be severe	Aching not severe	May be very severe
Thyroid ..	Hyperthyroidism common	No constant change	Hypothyroidism	Tending to hypothyroidism
Pulse ..	Rate increased	Rate varies with severity	Not affected	Arteriosclerotic
X ray	Marked general osteoporosis	Similar but osteoporosis is often confined to the ends of the bones	No change till late stages when osteophytes may form	Areas of degeneration and osteophytes
Removal of septic focus	No improvement	Often improvement	No constant improvement	No constant improvement

in Devon Torquay now possesses a beautiful, well-equipped, and well-organized hospital, and this achievement is due in no small part to the indefatigable efforts of Dr Gough through many years Among his medical colleagues he was held in the highest esteem, and his opinion on medical problems was much sought after and valued He was for many years a member of the Torquay Medical Society, of which he had held the presidency At the Annual Meeting of the British Medical Association in 1907 he was Secretary of the Section of Diseases of Children

Dr Gough was a very active worker for the social welfare of Torquay He was a keen lover of music, and was a member of the Torquay branch of the British Musical Society and the Torquay and District Organists' Association He was also a zealous student of natural history and archaeology (especially of Devon), and was a member of the Torquay Natural History Society He was one of the first people in the West of England to possess a motor car Although he had been ill since January the end was sudden, and the manner in which Torquay and Paignton reacted to the shock of his death was convincing evidence of the love and admiration held for him, not only by his colleagues and patients, but also by a much wider circle of friends He leaves a widow and five sons, the eldest of whom Dr J H H Gough is practising at Chichester and the youngest is studying medicine in the University of Cambridge

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The recent death of Dr RICHARD MCCULLOCH has been deeply felt by his professional brethren in Northern Ireland Richard McCulloch had an unusually wide circle of friends, and was held in the highest esteem by all who knew him His cheery good humour was a strong and unfailing characteristic, and the kindness and generosity of his nature knew no bounds Few men have been better loved by their fellows or deserved the affection more His memory will long be held dear by his colleagues in Ulster He graduated M B , B Ch , and B A O at the Queen s University of Belfast in 1912, obtaining the D P H in 1916, and after a preliminary resident post in the Belfast Infirmary was appointed assistant tuberculosis officer to the city of Belfast, which office he held until 1928 This experience no doubt prompted him to undertake private consulting practice in clinical and radiological chest work He was appointed honorary radiologist to the Belfast Hospital for Sick Children, and after only five years had succeeded in attaining a sound reputation as an authority on the radiography of the chest This was well deserved, as his radiographs of this region were perfect examples of their kind A man of wide interests, he was a Fellow of the Ulster Medical Society, and a regular attender and contributor to its work At the time of his death he was also honorary treasurer of the Belfast Division of the British Medical Association He was an ardent Freemason and was as well known in Masonic circles as in his own profession

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We regret to record the death of Dr THOMAS CUMING ASKIN M B E , who was at one time a familiar figure at Panel Conferences and before the war at Representative Meetings of the British Medical Association Born in March, 1864, he studied medicine at Trinity College, Dublin, graduating B A , M B , B Ch and B A O in 1899, and proceeding soon after to the M D degree After holding house appointments at the Huntingdon County Hospital and the Liverpool Northern Hospital he practised for many years at Alderton in Suffolk He was a member of the Representative Body in 1912–14, and when he retired to live in London the Suffolk Branch, of which he was a past-president, made him an associate member He was chairman of the Local Medical and Panel Committee from 1915 to 1926 a member of the Insurance Acts Committee 1920–2, and of the Rural Practitioners Subcommittee 1919–25 Dr J R Whitwell sends the following appreciation Dr Cuming Askin a friend of nearly forty years' standing, was a most conscientious and sincere man, always his own hardest taskmaster and judge and a staunch friend In his practice he never spared himself , every minute of his time was devoted either directly to his patients or indirectly to the furthering of some scheme which he believed to be for their ultimate benefit—in fact, he became not only the doctor but also " the father of his people,' and they loved him, for they knew from the squire to the panel patient in his semi-peninsular practice, that in their doctor they had an honest man whose sole aim as a medical man was their welfare In official life he had the reputation of being a ' fighter," but everyone who really knew him realized that this " pugnacity " was the expression of a deep, intense, and dominating principle, based on the highest ideals, and for these he was prepared to sacrifice everything of self Although not attached to any of the organized religions, he was of a deeply religious nature (using that word in the Max Müllerian sense) and this undefinable idealistic relationship to the Infinite governed all his actions, was the keynote of his life He was truly an example of the Ciceronian ideal " Omnia profecto, cum se a caelestibus rebus referet ad humanas excelsius magnificentiusque et dicet et sentiet " (*Orator*)

Dr CORDLEY BRADFORD died on May 17th at his residence in Acocks Green, Birmingham, after a short illness , he had been carrying on his professional duties on the previous Friday Dr Bradford was born at Weston Hills, Lincolnshire, in 1851, and went to Birmingham in the early 'seventies His medical education was carried out at Mason s College and the Queen's Hospital, Birmingham, where, after qualifying he filled the posts of house surgeon and house physician He then took up the post of medical officer to Messrs Tangye's works, Smethwick In 1880 he bought Dr Woodifield's practice in Acocks Green where he remained ever since In 1903 he took the degree of M B , B Ch of Birmingham University He occupied a leading place in the medical life of the Birmingham district, having been president of the Birmingham Branch of the British Medical Association, and of the Birmingham Medical Benevolent Society He was elected a magistrate for the county of Worcester in 1909, and in latter years was chairman of the Wythall Bench In 1878 Dr Bradford married Alice, daughter of George Lunn of Fladbury, and they celebrated their golden wedding five years ago , Mrs Bradford died in 1930 Their son, Dr Ernest Cordley Bradford, is in practice in Sussex Dr Bradford's infinite capacity for work forestight, and love of his fellow men endeared him to all the people of Acocks Green For more than half a century his influence extended over a wide area He was vicar's warden of St Mary's Church for twenty six years His passing will leave a great gap in this district, both on account of his professional services and of his social services As one of his brethren in the profession said 'He was a grand old man, and for the end to come at his age actually in harness was wonderful, and I feel that his type will not be seen again He belonged to a generation that produced some wonderful people, whose enjoyment of work the new generation simply cannot understand ' When in the prime of his life he worked for eight years without a break of as much as a week He often said that work was never a trouble to him and when it was he would give it up

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We regret to announce the death of Dr NORMAN COOK at the Church Missionary Society Hospital, Zaria, Nigeria on May 11th from general septicaemia Norman Ethelbert Cook was born at Kampala Uganda Province on February 21st, 1903, the son of Dr J H Cook medical secretary of the Church Missionary Society and nephew of Sir Albert Cook of Uganda He was educated at Highgate School and St Bartholomew s Hospital, graduating M B , B S Lond in 1928 At school he gained the Lyons Prize for the best all-round athlete and he was captain of cricket at Highgate School St Bartholomew s Hospital, and London University He occupied the post of house-surgeon for a year at the Mildmay Mission Hospital,

where by his courtesy and never failing sympathy as well as by his professional skill he won the hearts of all He sailed for the Zaria Medical Mission in Northern Nigeria in February 1930 and built there several blocks of the Hampstead Centenary Hospital including a small branch hospital at Maska Katsina The medical work has made tremendous progress in Zaria the number of patients having quadrupled during the last three years so that in 1932 there were 441 in patients and 40 000 visits of out patients Dr Cook married only last year

The following well known foreign medical men have recently died Geh Med Rat Professor Dr OTTO LUBARSCH for many years professor of morbid anatomy in Berlin aged 73 Professor V ALGESZKY a Budapest bacteriologist aged 64 Dr GEORGE DAVID STEWART past president of the American College of Surgeons and professor of surgery University and Bellevue Hospital Medical College New York aged 73 Dr GIUSEPPE PIANESE professor of anatomy and pathological history at the University of Naples Professor PETER FOKITSCH BOROWSKY director of the second surgical clinic at Tashkent aged 69 Sanitatsrat Dr EDMUND DIPPEY director of the German Hospital at Pekin and Dr ANDRE BUECKEL lecturer in urology in the Strasbourg Faculty of Medicine

Universities and Colleges

UNIVERSITY OF OXFORD

At the encaenia on June 21st the honorary degree of D Sc will be conferred on Professor J S Haldane M D F R S

UNIVERSITY OF CAMBRIDGE

At a congregation held on May 27th the following medical degrees were conferred

M B B CHIR.—G T Partridge F h Boston J H Fisher
M B.—J W P Thompson R Watson

SOCIETY OF APOTHECARIES OF LONDON

The following candidates have been approved at the examination indicated

MISTER OF MIDWIFERY.—Helen M Jardine Elizabeth M Moore Dorothy M Satur V J Thanavala

The following candidates have passed in the subjects indicated

SURGERY.—J B Frumin S Gurevich R Hill R W J Scheel H B Thornton J A van Rooyen
MEDICINE.—E V Bevan R Hill L R Jain E O C Parsons E Pugh-Jones R W J Scheel F H Williams I M William
FORENSIC MEDICINE.—A H L Baker E V Bevan E H F Cross W H Ekin J P Fitzgerald M S Hendriks R Hill W E Merrick H J Ripka R W J Scheel R Sugarman
MIDWIFERY.—C A Bell F V Bevan W E P Corbett J P Fitzgerald R Hill R W J Scheel D V Smith G Wilson

The diploma of the Society has been granted to Messrs W E P Corbett R Hill E O C Parsons R W J Scheel J A van Rooyen and I M Williams

The Services

INDIAN MEDICAL SERVICE DINNER

The annual dinner of the Indian Medical Service will be held at the Trocadero Restaurant London on Wednesday June 14th at 7 15 p m Air Vice Marshal Sir David Munro K C B C I E (I M S ret) has been invited to take the chair Tickets and all particulars may be had from the joint honorary secretary Major Sir Thomas Carey Evans Hammersmith Hospital Ducane Road W 12

DEATHS IN THE SERVICES

Colonel Harold Hugh Norman C B E R A M C (ret) was killed along with his wife in a railway accident between Wimbledon and Raynes Park on May 25th aged 57 He was born on August 8th 1875 and was educated at Trinity College Dublin where he graduated M B B Ch and B A O in 1898 Entering the R A M C as lieutenant on July 27th 1899 he became lieutenant-colonel in the long war promotion list of March 1st 1915 got a brevet colonelcy on January 1st 1917 and became substantive colonel on March 2nd 1919 retiring in September 1930 He served in the South African war in 1902 taking part in operations in Natal the Orange Free State and the Transvaal was slightly wounded and received the Queen's medal with three clasps and the King's medal with two clasps and in the war of 1914-18 when he was mentioned in dispatches in the *London Gazette* of January 1st 1916 and January 4th 1917 and received a brevet as colonel and the C B E His wife was killed with him in the accident He leaves three children a boy of 12 and two girls of 9 and 7 years old

Lieut.-Colonel John William McCoy O B E Indian Medical Service (ret) died on March 21st aged 57 He was born on April 6th 1875 was educated at the Madras Medical College and at Bart's and took the M R C S and L R C P Lond in 1899 After filling the posts of resident medical officer of the Bethnal Green Infirmary and of the Poplar and Stepney Sick Asylum he entered the I M S as lieutenant on January 29th 1902 attained the rank of lieutenant-colonel on July 29th 1921 and retired on April 6th 1930 He received the O B E on December 15th 1930

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

Before rising for Whitsuntide the House of Commons completed its consideration of the Agricultural Marketing Bill and also the committee stage of the Finance Bill A Standing Committee made progress with the Metropolitan Police Bill In the House of Lords the Rent Restriction Bill was read a second time

In the House of Lords on May 30th Lord MOYNIHAN presented a Bill to make provision for the payment of remuneration to registered medical practitioners and hospitals for treatment rendered to persons injured in the use of motor vehicles on roads The Bill was read the first time

In the House of Lords on May 30th the Cancer Hospital (Free) Bill which has passed through a select committee was read the third time and passed

The Essex County Council Bill was read the third time and passed in the House of Lords on May 30th

In the House of Lords on May 24th the Samaritan Free Hospital for Women Bill was read the second time

The Trout (Scotland) Bill was read a third time in the House of Commons on May 24th

Medical Benefit Expenditure since 1911

On May 29th Sir E HILTON YOUNG informed Mr Rhys Davies that from the inception of the national health insurance scheme up to December 31st 1932 in England and Wales approximately £146 529 000 had been spent on medical benefit During the same period on sickness benefit £154 101 000 had been expended on disablement benefit £65 568 000 on maternity benefit £27 615 000 on dental benefit £14 850 000 and on ophthalmic benefit £2 320 000 On other additional benefits given by way of increases in sickness disablement and maternity benefits £4 726 000 had been expended

Denby Dale Water Supply Proposal.—Sir HILTON YOUNG told Mr Glossop on May 25th that he had received a protest from the ratepayers of the village of Denby Dale concerning the proposal of the Denb and Cumberworth Urban District Council to revert to the use of the Square Wood water reservoir which was the source of the infection of the recent epidemic of typhoid He would consider this protest with the report of his inspector who had visited the locality

Slum Replacement in Aberdeen.—Mr SHELTON told Mr Maclean on May 25th that his attention had been drawn to the fact that although the corporation of Aberdeen had completed over 3 000 houses with State assistance since 1919 none of these had been provided under the Act of 1930

(B)

	Spondylitis Ankylopoietica	Spondylitis Osteo-arthritica
Onset	Gradual sometimes rapid	Slow generally sometimes sudden
Age incidence	20-50	40-70
Sex incidence	Males almost exclusively	Males chiefly
Injury and strain	Not constant and effect indirect	Important
Infection	Important	Not constant and effect in direct
Sedimentation rate	Increased	Normal
X ray	Osteoporosis ossification of ligaments	Degeneration of bone osteophytes
Sacro-iliac joints	Early affected	Not necessarily affected
Deformities	Common sometimes severe	Rare seldom severe
Ankylosis	Characteristic extending to ribs sacro-iliac joints and hips	Localized not extending to other joints
Pain	Often severe	Rarely notable except after injury or if nerve roots are pressed on
Stiffness	Progressing to absolute immobility (poker back)	Never very extreme

Diagnosis between Fibrositis and Arthritis

1 *Movements of Joints*.—In arthritis pain and restriction are marked when executing those movements which cause the articular surfaces to move over one another—for example rotation in ball and socket joints. In fibrositis pain and restriction are prominent in those movements which stretch neighbouring structures (capsules tendons bursae muscles). Such painful or restricted movements will vary according to the structure or structures affected.

2 *Tenderness* is found round the margins of the joint in arthritis; in fibrositis it is confined to the structures affected which may of course be adjacent to the joint.

3 *Nodules*.—In primary rheumatoid arthritis nodules when present are superficial. In fibrositis tender nodules and plaques may be felt deeply in the fibrous tissues surrounding the joints.

4 *X ray Examination*.—In arthritis characteristic changes in bone and thinning of cartilage are seen.

5 *Constitutional symptoms* may be prominent in arthritis; seldom present in fibrositis.

DIFFERENTIATION FROM OTHER FORMS OF ARTHRITIS

Perhaps the most important differentiation here is between (*a*) rheumatic infection acute and subacute and (*b*) rheumatoid arthritis.

	Acute Rheumatism	Rheumatoid Arthritis
Incidence	Chiefly adolescents and young adults of both sexes	Women of child bearing age (at least in the primary form)
Prodromal symptoms	Tonsillitis common	Often present
Onset	Acute	Subacute (sometimes the two conditions are practically indistinguishable in the early stage)
Joints affected	Flitting from one joint to another complete recovery of individual joints	Small peripheral joints with bilateral symmetry persistence of changes after acute stage has passed
Skin over joints	Red and hot	Shiny cold
Pain and tenderness	Severe very tender	Not severe slight tenderness
Swelling	Due to synovial effusion	Slight periarticular
Pyrexia	May be present and is sometimes high	Not marked occurs initially and or intermittently thereafter
Cardiac involvement	Common may be severe and permanent	Frequent tachycardia but permanent lesions are rare
Spleen and lymph glands	Not enlarged	Not infrequently enlarged
X ray	No change	Local or general osteoporosis
Response to salicylates	Satisfactory	Analgesic effect but only temporary

Still's Disease (see primary rheumatoid arthritis)

Gout.—The arthritic and other symptoms of gout are due to deposits of sodium and calcium biurates. The history of an acute arthritis particularly in the metatarsophalangeal joint of the great toe; tophi either superficial or as punched-out areas in the bones (radiogram) and increase in the blood uric acid are prominent features. Gout should not be diagnosed in the absence of one or more of these signs.

Gonococcal arthritis may affect one or several joints and also the fascia. The diagnosis is completed by the history or evidences of a gonococcal infection.

Arthritis in specific infections such as pneumonia scarlet fever enteric fever and dysentery may be acute and may affect one or many joints. The clinical associations establish the cause of the condition.

Tuberculous arthritis is most common in childhood but occurs also at other ages. The affected joint is swollen and stiff but not acutely inflamed. Skiagrams will show tuberculous disease of the adjacent bones. Fluid from the joint inoculated into a guinea pig may give a positive result.

Pseudo-coxalgia (coxa valga) occurs in young subjects. The evidences are pain and stiffness of the hip a valgus deformity and a distinctive *x* ray appearance.

Charcot's joints occur in tabes dorsalis and syringomyelia. A degenerative arthritis is here associated with atrophic changes and with a loss of sensitiveness; this loss means absence of natural protection from damage and consequently considerable disorganization results.

Haemophilic arthropathy due to effusion of blood into the joint (for example the knee); it occurs in males the subjects of haemophilia. Purpura too may be attended by haemorrhage into one or more joints.

Hypertrophic pulmonary osteo-arthropathy is associated with chronic thoracic disease. It causes swelling pain and stiffness of the distal joints of the limbs.

Intermittent hydrarthrosis and other allergic conditions should be differentiated; they are intermittent recurrent and transitory.

Syphilitic arthritis is especially liable to occur in congenital syphilis and is characterized by swelling and limitation of movement of the joint but pain is usually inconspicuous.

DIFFERENTIATION OF CERTAIN PAINFUL CONDITIONS

Headache. This is a recognized symptom of many disorders. One of these is fibrositis of the neck and scalp. The symptoms are pain and stiffness after rest aggravated on initial movement but diminishing as the muscles are used; tender spots (nodules) in the neck muscles and scalp and crepitus (which rarely indicates arthritis). Treatment of the fibrositis gives relief and so confirms the diagnosis. Spondylitis ankylopoietica is an occasional cause of headache; stiffness or rigidity of the cervical spine tenderness of the vertebrae and radiological examination (p. 1036) distinguish it. Neck pain is frequent in spondylitis osteo-arthritica.

Thoracic pain. Intercostal fibrositis affecting the nerves or muscles may cause very severe pain (pleurodynia) aggravated by respiratory or other movements and tender spots can be detected where cutaneous branches of the nerve emerge. Thoracic pain may be due also to synovitis of the costo-vertebral joints. Pleurisy aneurysm and some forms of cardiac disease are other causes of thoracic pain.

Abdominal Pain. Similarly a fibrositis of the abdominal muscles must be distinguished from other causes of abdominal pain. Further pains distributed to the body wall or limbs may indicate disease of the spinal cord or

meninges or vertebrae Alike in the region of the thorax and the abdomen, unexplained pain may be the precursor of herpes zoster Malignant growths in the vertebrae, either primary or more commonly from metastases, are sometimes responsible for pain, and may for some time show no evidence of their existence other than pain

Pain in the Lower Limbs Intermittent claudication due to ischaemia of the leg muscles consequent on arterial spasm or degeneration has been mistaken for fibrositis The pain appears on walking and may seriously disable the patient In some cases absence or diminution of pulse in the affected limb may be recognized Thrombo angutis obliterans also is distinguished by pain and limitation of walking The lightning pains of tabes dorsalis may be mistaken for sciatica

Diseases of the bones—for example, chronic osteomyelitis—yield pain on pressure over the bone rather than over the joint, and give a characteristic radiological picture Localized abscess in the epiphyseal region of the longer bones may produce no symptoms except pain and perhaps localized oedema, but an *x*-ray examination is conclusive A radiogram will distinguish spondylitis from the kyphosis of the tuberculous spine, and malignant growths in the vertebrae may be similarly recognized Periosteal syphilitic gummata and infective non-suppurative osteo arthritis and periostitis—for example, typhoid spine—are sometimes a source of confusion

Osteitis deformans (Paget's disease) may be responsible for pain and stiffness of the hips The distinctive signs are increased thickness and bowing of the long bones, especially of the femur and tibia, and enlargement of the skull, *x*-rays generally show the cancellous bone thickened

Similarly, osteitis fibrosa, osteomalacia, and diffuse carcinomatosis of bone may cause difficulties in diagnosis These diseases can be distinguished in the early stages only by radiological examination Intracapsular fractures of the hip and other joints, and fracture-dislocations of the vertebrae, must also be differentiated from arthritis by *x*-ray examination

Static Deformities Flat-foot, knock-knee, bow legs, and coxa vara may cause pain and stiffness, the true cause of which may be missed

Disturbed gait in the form of stiffness or disability may be attributed to arthritis when it is really an early symptom of central nervous disease The ataxia of tabes dorsalis and the spasticity of disseminated sclerosis of other pyramidal diseases, and of early Parkinsonism are examples

IX TREATMENT

(*a*) PROPHYLAXIS

Measures for the prevention of arthritis and its allied conditions must obviously be correlated with the multiple factors that may be concerned in the aetiology of these diseases In addition to the 'seed' or exciting agents such as bacteria their toxins and possible allergic reactions attention must be directed to the "soil" and the resistance of the body Hence conditions which impair the general health, such as insanitary environment over fatigue malnutrition and chronic diseases prone to induce metabolic disorders must be taken into account The well being of those engaged in industry the provision of properly ventilated workrooms of dwellings free from damp of bathing facilities of proper food of hours of work organized to avoid undue fatigue and to allow for rest pauses are most important in maintaining the general health and resistance to disease These however are largely sociological problems and, though the medical profession may urge the adoption of such obvious precautions, the execution of them requires communal or co operative action The prevention of epidemic disease, especially influenza, which so often breaks down the resistance to existing factors previously latent, such as focal sepsis, is an ideal to which the health services of the country are fully awake

Among the exciting causes of chronic arthritis and fibrositis infection bulks largely, and some would regard it as responsible for 70 per cent or even more, of the cases As focal infection is by no means always followed by arthritis, it is necessary to allow the influence of some further causal factor before arthritic or fibrositic disturbances can be produced Indeed, in some cases in which a septic focus cannot be found it may, perhaps reasonably, be assumed that metabolic defect, upset of the endocrine balance, or deficiency of the anti infective vitamin A is entirely or mainly responsible for the arthritic or fibrositic phenomena On the other hand, chronic sepsis may produce metabolic and endocrine disorder, and thus a vicious series, including chronic sepsis disturbed metabolism, and endocrine deficiency, may play a part in the causation of arthritic and allied conditions

(*b*) VACCINES

As the precise aetiology of none of the forms of arthritis and allied conditions here under review has yet been determined with certainty, vaccine therapy does not rest on so secure a foundation as it does in conditions where the causative agent is beyond dispute Taken as a whole, however, the evidence now available with regard to the bacteriology of arthritis indicates that organisms of the streptococcal group are in some way concerned in its aetiology, and further evidence in favour of this view is furnished by the beneficial results of vaccine therapy in certain cases

Vaccines should not be given until a case has received the fullest clinical investigation If a focus of infection is found it should be eliminated if possible, but as an exacerbation of symptoms frequently follows such removal it is safer to postpone this step until the acute symptoms have been relieved This improvement can be effected by the administration of a suitable vaccine in small doses over a period of a few weeks

A vaccine, whether "autogenous" or "stock" should be given in doses which are followed by a response but not by a reaction By *response* is meant a definite and speedy improvement in the clinical condition both local and general following an injection, and lasting for two to six days there being possibly at the same time slight constitutional disturbance By *reaction* is meant an increase in pathological manifestations, as shown by depression, malaise, nausea, headache, rise of temperature, and increase of symptoms It is difficult to lay down a precise direction for the small safe initial dose In terms of streptococci 20,000 to 50 000 may be suggested where a septic focus is suspected, and half a million where it is fairly certain that no septic focus exists It is rare for a dose of more than ten millions to be required The practitioner treating arthritis with a vaccine should therefore commence with small tentative doses administered in increasing strength every five or six days and should arrive with as little delay as possible at the optimum effective dose Slight local manifestations at the seat of injection may be disregarded Temperature charts should be kept for a few days before and after during the administration of vaccines

While stock streptococcal vaccines are sometimes inferior to autogenous vaccines, they are superior to imperfectly made autogenous vaccines or to no vaccine Speaking generally, the question of dosage is much more important than the question of the exact form or make of the vaccine, but since dosage is the more difficult problem it is less carefully studied

The corporation had however erected 280 houses for slum replacement with the assistance of the grant available under the Act of 1923 The corporation was preparing a scheme for the erection of some 500 houses for slum replacement on land already in their possession

Noise of Aircraft Engines—Replying to Mr Lovat-Fraser on May 25th Sir PHILIP SASSOON said he could not adopt the suggestion that in view of the annoyance caused by the noise of aeroplanes he should restrict commercial flying to definite lines of traffic and pleasure flying to thinly populated districts This would unduly restrict the reasonable development of commercial flying and to a large extent, deprive the public of opportunities for pleasure flying As people usually went to thinly populated areas to be quiet the inhabitants would be the first to complain if the suggestion were carried out Asked by Lord Apsley whether any steps were being taken to prohibit the use of open exhausts on aircraft engines Sir Philip assured him that they would do whatever they possibly could to restrict noise

Stamp Book Advertisements—Mr SUTCLIFFE gave notice that on June 2nd he would ask the Postmaster-General what has been the revenue of the Post Office from the advertisements of patent medicines in books of stamps issued by the Post Office during each of the past three years, whether it is proposed to continue such advertisements and if not on what grounds

Medical News

The annual luncheon of the Irish Medical Schools' and Graduates' Association will be held at the Hibernian Hotel Dublin on Wednesday July 26th, at 1 p m The chair will be taken by the president, Dr T Gillman Moorhead Tickets (6s) may be obtained by members of the association resident in England from the provincial honorary secretary, Dr Falkland L Cary, 67, King s Road, Harrogate and members of the association resident in Ireland may obtain tickets on application to Mr R F J Henry F R C S I 24 Upper Fitzwilliam Street, Dublin The luncheon is open to non members and lady guests are welcome

The eighth annual Macalister Lecture will be delivered at the National Temperance Hospital on Thursday, June 22nd at 9 p m, by Sir Frederick Hobday, on "Our Animal Friends as Patients," illustrated by lantern slides and cinematograph pictures All medical practitioners are invited to be present and may bring friends (ladies or gentlemen)

The new building for the department of zoology and comparative anatomy at University College, London, will be opened on Monday, June 12th, at 3 p m, by the Earl of Athlone Chancellor of the University The chair will be taken by Sir John Rose Bradford, Bt chairman of the college committee

The Wrightington Hospital, near Wigan, will be formally opened on the afternoon of Friday, June 16th, by Sir George Newman, Chief Medical Officer of the Ministry of Health The ceremony will be presided over by Alderman J T Travis Clegg chairman of the Lancashire County Council

A lecture on the theory and practice of contraception will be given to medical students by Dr G M Cox on Monday June 12th at 6 p m at the Walworth Women s Welfare Centre 153A, East Street, S E 17

The first of four advanced lectures arranged by the Fellowship of Medicine will be given at 5 p m on June 7th at 11, Chandos Street, by Dr Leonard Findlay There will be a week-end course in clinical surgery at the Royal Albert Dock Hospital on June 10th and 11th, a course in diseases of the chest at the City of London Hospital, Victoria Park from June 12th to 24th, and a course in medicine, surgery, and the specialties at the Prince of Wales s Hospital from June 12th to 24th Other forthcoming courses include ante-natal treatment, at the Royal Free Hospital, June 16th to July 7th, cardiology at the National Hospital for Diseases of the Heart June 26th to July 8th, diseases of children, at the Children s Clinic, June 26th to July 8th

A post-graduate course under the direction of Professor Gustave Roussy will be held at the Paris Cancer Institute from June 16th to July 13th inclusive It is intended for French and foreign doctors and final year students The fee is 350 francs and the course is limited to forty persons a certificate will be given to those who complete it Applications should be addressed to the Bureau de l A D R M salle Béclard, a la Faculté de Medecine

During Toronto Tuberculosis Week, which opens on June 26th the annual meetings will be held of the National Tuberculosis Association, the Canadian Tuberculosis Association and the American Sanatorium Association, and also the Tuberculosis Secretaries Conference It is described as the most important conference of tuberculosis workers ever held in Canada The British guests of the Ontario Department of Health will be Sir Humphry Rolleston and Professor Lyle Cummins of Cardiff

The East London Child Guidance Clinic announces a course of twelve lectures on the applied psychology of childhood at Toynbee Hall, Commercial Street E, on June 8th, 9th 12th, 13th 14th, and 15th at 3 30 p m and 5 p m each day The fee for the course is £1 1s (students 10s 6d), day tickets 5s single lecture 2s 6d Applications for tickets to the Lecture Secretary, East London Child Guidance Clinic Bell Lane, L 1

An Ulster comedy, entitled 'The Ballad Singer by Dr Ernest H M Milligan, will be broadcast from the Belfast wireless station to day Saturday, June 3rd, at 9 45 p m The author is M O H for the borough of Glossop and honorary secretary of the Glossop Division of the British Medical Association

The general programme of the conference on renal insufficiency which is to be held at Evian on September 18th to 20th, has now been issued Papers to be read by British and French physicians will deal with such topics as alteration in the blood calcium in renal insufficiency (Dr Izod Bennett), the effect of the composition of the blood plasma on the production of the oedemas of Bright s disease high nitrogen content of extrarenal origin, the treatment of infections and toxic anuria the state of elimination of water in renal insufficiency, the mechanical function of the liver in the passage of water nephritic cases with nitrogenous derangement only the relation between arterial hyperpiesis and renal insufficiency, physio chemical aspects of the blood in cardio-renal conditions, chlorine in nephritis, acidosis and renal insufficiency and the surgical aspect of the question Communications and inquiries should be addressed to the Secretariat du Congrès de l'Insuffisance Rénale, 21 Rue de Londres, Paris

At the second annual dinner of the Radiological Section of the Royal Society of Medicine, held at the Dorchester Hotel on May 19th the president, Dr Russell Reynolds, took the chair, and proposed the health of the guests Lord Dawson, the guest of honour, replied, outlining the remarkable progress of radiology and looking forward to its association with cinematography He suggested that the cost of the service might be reduced by mass production and the use of non professional technicians "The Health of the Section of Radiology" was proposed by Mr Warren Low, and Dr R S Paterson president-elect, replied Mr Low said he believed some radiologists thought that of the five years at present allotted to the medical curriculum at least ten should be spent in the study of radiology! That spirit would take the Section far Dr Paterson appealed to London radiologists to attend the meetings of the Section so that provincial workers might have an opportunity of meeting the leaders of radiological thought

Dr William H Park, director of laboratories for the New York City Department of Health, has been appointed to the Hermann M Biggs professorship of preventive medicine at New York University and Bellevue Hospital Medical College

According to certain observers the cocci chiefly concerned in the production of arthritis are (1) a form of *Staphylococcus epidermidis* to which the name of *Micrococcus deformans* has been given and (2) streptococci especially *S salivarius* and a form of *S faecalis* the *S zymogenes* The procedure of practitioners who hold this view is to use a stock vaccine made from all the possible streptococci associated with rheumatic disease (157 in all) and two types of staphylococci and to give an injection once a week

Though it cannot be claimed that vaccines will effect improvement in the bony changes in a damaged joint yet in some cases such as old standing osteo arthritis of the hip vaccine treatment is undoubtedly of value in relieving pain and in checking the progress of the arthritis

Vaccine treatment may be combined with other methods of treatment but the possible constitutional effects of such treatment must be recognized and allowed for Therefore in practice difficulty may arise from the blending of several methods of treatment if clinical reactions in the patient are to be the guide for the administration of any one of them

When inoculations are given other forms of treatment should be suspended on the day of inoculation and for two days afterwards

Anti streptococcal serum is not indicated in chronic arthritis

Protein shock therapy such as injection of peptone solution or of typhoid vaccine milk or colloidal sulphur has on the whole been disappointing In some cases definite temporary improvement has occurred but this has often been followed by a relapse

(*c*) DRUGS

While in the treatment of arthritis drugs have no specific value they are of service in the relief of pain and in improving the patient's resistance and general well being

Analgesics sodium salicylate aceto-salicylic acid (aspirin) and the aceto-salicylate of calcium are largely used in the treatment of arthritis and fibrositis they relieve pain but as just stated have no specific action on infective processes

Other pain relieving agents are phenacetin (5 to 10 grains) with caffeine citrate (1 to 2 grains) and amidopyrin (5 to 8 grains) As a rule opium and its derivatives are to be avoided they involve the risk of addiction and check excretory activity codeine (1/6 to 1 3 grain) with aspirin or phenacetin is reasonably safe The barbituric acid compounds (veronal medinal dial allonal veramon luminal) have their values but tend to addiction and to the production of nervous depression

The quinoline derivatives (atophan agotan cinchophen phenoquin atoquinol) are largely used but their administration should be carefully watched They exercise a toxic effect on the liver and have been followed by jaundice After each dose 20 to 30 grains of sodium bicarbonate in water should be taken and after three or four days administration the drug should be suspended for an equal period Their chief use is in gout and the gouty complications of arthritis They should not be prescribed except under medical supervision

Intestinal Antiseptics Guaiacol carbonate (5 to 10 grains) has the advantage that it can be taken over long periods when there is pain aspirin may be added or magnesium carbonate (5 grains) in dyspeptic conditions The old established Chelsea pensioner (guaiacum and sulphur) has its value in chronic cases Other drugs of this order are salol (combined with quinine in nasopharyngeal toxaemia) cyllin dymol beta naphthol and saline purgatives Sour milk or tablets representing the corresponding bacilli or lactose may be used to change the intestinal flora and when there is hypochlorhydria hydrochloric acid with meals is indicated

Iodine Compounds These are widely prescribed Iodine in alcoholic solution added to milk at the time of administration colloidal preparations and lipiodol the potassium or sodium salt are forms of administration frequently prescribed Fibrolysin as a local injection has not proved satisfactory

Gold preparations given by intramuscular injection have been used abroad for the treatment of arthritis but beneficial results have not been confirmed

Tonics including cod liver oil and vitamin-containing preparations have value in chronic arthritis

Local Treatment

For the relief of pain local applications of methyl salicylate with various other drugs are available The syrupy liquid produced by the combination of chloral menthol and camphor applied as a paint and covered with lint and oiled silk is useful Convenient preparations are the A B C liniment and kaolin poultice

In lumbago the following as local injections are valuable 20 c cm sterile glucose solution (10 per cent) quinine urea hydrochloride 5 c cm (1 per cent.) novocain 5 to 10 c cm (1 per cent) In sciatica the injection of sterile normal saline into the nerve sheath combined if desired with 10 per cent novocain has been used with advantage

(*d*) ENDOCRINE PREPARATIONS

In considering the endocrine factor in the causation and treatment of arthritis attention may be confined to the thyroid and the ovaries Any influence that the other endocrine glands may have is to say the least of it problematical

Thyroid Function in Relation to Arthritis

Relaxation of the articular ligaments particularly of the knee heel ankle and thoracic vertebrae causing knock knee painful heel flat foot and lordosis respectively occur in minor degrees of hypothyroidism These conditions which are often painful are due to defective metabolism and to infiltration of ligaments tendons etc with myxoedematous material It is therefore of the greatest importance to look for any stigmata of hypothyroidism The administration of thyroid extract often leads to marked alleviation of such symptoms

Rheumatoid arthritis is frequently complicated by some symptoms of hyperthyroidism Both Graves's disease and arthritis mainly affect females and especially during the early years of child bearing activity

Villous arthritis and some cases of osteo-arthritis are usually associated with definite evidence of endocrine deficiency

The Relation of Ovarian Function to Arthritis

Monarticular osteo-arthritis is apt to occur in women suffering from a fibroid of the uterus The usual explanation is that the fibroid keeps the cervix patent so that infection of the cervical glands and endometrium by organisms of low virulence can occur and that the absorbed toxins from these excite the arthritis In gonococcal arthritis in women also the primary focus of infection is frequently in the cervix The benefit of diathermy to the cervix in this latter condition has been established but this treatment may be quite successful when there is no evident focus of infection in the uterus or elsewhere Because of the apparent relation of the arthritis in some of these cases to the function of menstruation it has been suggested that the ovaries

The fourth International Congress of Radiology will be held in Zürich under the presidency of Professor H R Schinz from July 24th to 31st 1934 According to the rules the congress may be attended by (1) members of radiological societies in all countries (2) persons introduced by such societies The thirty two countries which were represented at the third international Congress of Radiology in Paris have been invited by the organizing committee to appoint delegates to the international committee and to nominate a speaker to report on the organization of the cancer campaign in his country at the opening session At the general meetings the following subjects will be discussed *x* ray diagnosis of bone tumours vasography the development of pulmonary tuberculosis as seen radiologically radiation treatment of carcinoma of the uterus radiation treatment of malignant tumours of the mouth and pharynx radiation genetics mitogenetic radiation structure analysis identical physical measurement of the dose in *x* ray and radium treatment hard gamma rays cosmic radiation earth radiation short wave therapy In addition the sections for *x* ray diagnosis radiotherapy radiobiology radiophysics and technic electrology and heliotherapy will hold discussions During the congress an exhibition of apparatus photographical accessories chemical products and scientific books will be on view (for details apply to A Strehn Kilchberg/Zürich) All radiological societies are requested to send as soon as possible a list of their members to the general secretary (Dr H E Walther Glonastrasse 14 Zürich)

The issue of *La Medicina Ibera* for April 29th is devoted to the proceedings of the fourteenth International Congress of Ophthalmology recently held at Madrid with portraits of the principal members

Dr Bela Schick of New York has been given the annual gold medal awarded by the Phi Lambda Kappa Society in recognition of his work on diphtheria

In 1932 the numbers of births in Spain exceeded the deaths by 281 630

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal B.M.A. House Tavistock Square W C.1**

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The address of the Irish Office of the British Medical Association is 18 Kildare Street Dublin (telegrams *Bacillus Dublin* telephone 62580 Dublin) and of the Scottish Office 7 Drumsheugh Gardens Edinburgh (telegrams *Associate Edinburgh* telephone 24301 Edinburgh)

QUERIES AND ANSWERS

Pruritus in Pregnancy

DR F W LAWSON (Cheltenham) writes I should be grateful for suggestions for the relief of itching in a woman seven months pregnant She had the same trouble in a previous pregnancy and while almost any cold application will bring temporary relief it is not enough to allow her proper rest There is no rash on the skin but plenty of evidence of the activity of her fingers

Wanted A Drum Defender

T S writes Can any reader tell me of a simple method of blocking the ears of a chronic invalid driven to distraction by motor horns? Cotton wool seems to be of little use

** We are informed that simple devices such as aurapax and quies can be obtained from most pharmacists

Ulcers of the Mouth

M W B writes in reply to H B P (May 27th p 947) I suggest this is probably a case of herpes and recommend painting the ulcers with 2 per cent resorcin in spirit Shock therapy is often successful

DR ALFRED P AMBROSE (Wembley) writes I recommend H B P to try 10 per cent chromic acid—carefully applied to the ulcers

DR V G REID (Upton Manor Essex) writes Recurring ulcers of mouth and tongue are very difficult The pathology is unknown I believe I suggest however a certain empirical treatment which appears to have put an end to the condition in a young woman of 23 (1) Give iron in abundance even if there is no anaemia (in the case of the patient mentioned I gave Blaud's pills) (2) Administer once a week intramuscularly an ampoule of 1 c cm manganese butyrate (British Drug Houses) (3) Make sure that meals are regular liberal and that the vitamin content is satisfactory Although the above treatment appeared to cure her I must say that there was just the possibility of another causal factor during the course of the treatment the patient took to herself a husband pregnancy might profoundly alter what is doubtless a blood perversion

DR A V RUSSELL (Wolverhampton) writes I presume that H B P has given an alkaline mixture or powder but if not the following may be administered with benefit sodii bicarb grains x calcii carb grains v pot chloratis mist tr bellad mv aq menth pip ad ʒss Sig ʒss ex aquae t d s As regards local treatment the application of 1 per cent gentian violet solution as a paint to the ulcers is often successful while the use of milk of magnesia with an equal quantity of tepid water as a mouthwash frequently is soothing The teeth should be carefully examined and any signs of caries or pyorrhoea dealt with

Income Tax

Whole time Appointment—Use of Car

ALEMB has a whole time appointment under a municipal corporation and is allowed £26 a year for the use of his own car on corporation work He estimates the ratio of private to corporation work at half and half and his running expenses at £57 per annum He has recently replaced his car at a net cost of £139 10s What can he claim?

* On the figures given it would be reasonable to deduct one half of the £139 10s as a special expense but there is the difficulty that where an allowance is received from an employer in respect of an expense there is usually an assumption that it is adequate over a period of years Consequently the revenue authorities will probably set up the contention that the £26 per annum paid by the corporation should be assumed to be all that is necessary to cover the costs of going about on corporation work and that no more than is necessary can be allowed under the statute In our experience such arguments are usually accepted by a tribunal hearing appeals unless the facts are exceptional and the allowance can be shown clearly to be inadequate over a series of years

House Belonging to Employer

D P H has hitherto been living in a house which he has rented from the company to whose institution he is appointed It is proposed to allow him to reside rent free and to reduce his salary by the amount of the former rent What will then be the position as regards income tax on the house?

** If the position reached is that D P H has to reside in the house because the company requires him to do so in order to perform his duties then the case falls under old Tennant v South rule the company is the occupier and D P H is liable on his actual salary only In such circumstances he will pay less than at present and the company the same If the intention is to give him full occupiers rights over the property then he will pay the same (or slightly more) because he will be liable to pay the income tax assessed on the premises under Schedule A as well as tax on the cash salary

are at fault Some cases occur in young women when the menstrual function is being established There is a history of irregular menstruation, followed by amenorrhoea and the onset of arthritis Swelling, without excessive pain, develops around the joints, and subluxation occurs in some cases The application of diathermy may be followed by disappearance of pain and swelling, a regaining of full range of movement of the joints, and a return of the monthly periods Other cases are of the climacteric type already referred to , in some, where the climacteric appears abnormally early, the treatment by diathermy is followed by a temporary return of menstruation Arthritis has been successfully treated even when the uterus and tubes have been removed, the ovaries remaining On the other hand, when the ovaries have been removed without the uterus or tubes the arthritis may not respond to treatment by diathermy This suggests that the action of the diathermy is on the ovaries, and that it restores some function dealing with the nutrition of the joints

In view of the admittedly close association between the gonads and the thyroid it is possible that the action of the ovaries, as distinct from that of pelvic sepsis, in arthritis, is an indirect one through the thyroid But the observation that the basal metabolic rate was normal in fifty consecutive cases of chronic arthritis does not indicate that either hypo- or hyper-thyroidism is a very common causative factor in chronic arthritis

Conclusions

Endocrine disturbances are in general not sufficient by themselves to produce joint diseases, but in a considerable proportion of cases they create a suitable soil for other factors to produce effects harmful to the joints In confirmation of this is the general experience that endocrine therapy may often bring about improvement, but will rarely completely cure a joint disease

(*e*) DIET

Diet is a subject upon which there is great diversity of opinion, and error is very prevalent In rheumatoid conditions the first essential is an adequate supply of simple digestible food, and there is no justification for forbidding any article of food which the patient finds easy of digestion, and to which he offers no idiosyncrasy This matter of idiosyncrasy is important, and careful inquiry should be made Some patients appear to suffer more pain or stiffness after articles of food termed 'acid" —certain fruits and wines, and sometimes malt liquors— though these effects are more often met with in fibrositis than in arthritis Others do well on these 'acid' substances No general rule can be laid down If there is a tendency to put on weight as in climacteric arthritis and osteo arthritis, carbohydrates must be limited

The importance which is now attached to vitamins in diet has practical application in arthritic and fibrositic disorders and the best rule is to see that the diet has its due proportion of each of the essential vitamins Where it is readily assimilated milk is of great service both for its nutrient value and for its vitamin content Fresh fruit and vegetables are also important Attention should be given to the supply of vitamin B by means of wholemeal bread wheat germ legumes etc Vitamin A can be added in the form of cod-liver oil or its derivatives to raise the resistance to infection, and in rheumatoid arthritis vitamin D also is indicated to aid assimilation

Thus the diet in rheumatoid arthritis should include milk butter eggs fish, and meat of digestible kinds including liver and some fat , wholemeal bread yeast extracts fresh fruit and vegetables raw and cooked including peas beans, lentils and, when in season young carrots and turnips Foods outside this list are not necessarily prohibited, and may be taken to gratify taste or appetite so long as adequate amounts of the more important foods are included In fibrositis and chronic villous arthritis excess of carbohydrates must be avoided, and in osteo arthritis, in view of the tendency to arterial degeneration and sclerotic changes purines and excess of meat are contraindicated Those articles of diet which aid in procuring efficient action of the bowels are often specially indicated

(*f*) PHYSICAL TREATMENT

(1) *General*

The objects of physical treatment are (1) to relieve pain , (2) to regulate sweat secretion and superficial capillary circulation , (3) to promote the absorption of fibrous thickenings from muscles, fascia and joint capsules also of old inflammatory exudates, and thus to restore mobility in stiff joints and muscles and (4) to regulate bodily metabolism and to raise (when present) a persistently low temperature and thus to stimulate the defence mechanism of the body

These objects can be attained by (1) the application of heat or of alternations of heat and cold (2) massage , (3) passive and active movements, including mechanotherapy and remedial exercises

Application of Heat Hyperthermal temperatures (above 110° F) are stimulating lower temperatures exert a sedative effect Heat applied to a comparatively small area of the body produces a widespread effect on the whole body through the vasomotor system General application of heat by hot air, or by vapour or immersion baths, will induce sweating, increase superficial capillary circulation resolve inflammatory thickenings and exudates and modify tissue metabolism Local application of heat which should be at as high a temperature as can be borne, may be made by mud, peat or wax, by the hyperthermal douche, by hot air or vapour or by diathermy these measures will relieve pain, superficial or deep and will lessen congestion in deeper parts

Massage is especially useful in dispersing nodules and adhesions in fibrositis It improves the peripheral circulation and maintains muscular tone In bed ridden patients it is a substitute for active exercise If a joint is completely ankylosed, massage to its related muscles is useless Applied to inflamed joints massage is definitely harmful

Movements Mechanotherapy and Exercises When a joint is acutely inflamed movement of it should be avoided except on the occasions when it is placed and splinted in the optimum position , this position may have to be reached in steps by the gradual alteration of the angle of the splint Active—that is, voluntary—movements by the patient himself should precede passive movements , in this way there is less risk of injury to the joint Any increase of pain or swelling or a return of heat to the joint is an indication for further rest In the early stages of treatment especially in osteo arthritis movements should be carried out under conditions which exclude weight-bearing—that is either in the recumbent position or in the hot pool bath in the latter the water, by opposing the action of gravity, lends support to the part while the heat allays pain and relaxes muscular spasm For the same reasons a hot immersion bath may usefully precede the adoption of movements In the later stages of arthritis and in certain cases of sciatica and lumbar pain, manipulation of the spine and of joints is of great service The reputation enjoyed by certain irregular practitioners might be reserved for the medical profession if a greater interest were taken in this branch of therapeutics, and were technical skill in the

Unfurnished Letting of Part of Premises

'F R' explains that the top floor of his house was let during 1930 and 1931 unfurnished for 16s per week He is the owner of the house and lives on the premises The net value is £48 and the amount of the local rates paid is £22 per annum

*** F R ' is entitled to regard the income from the unfurnished letting as covered by the Schedule A assessment of £48 But in calculating the proportion of the annual value applicable to the professional occupation, the value of the top floor must be excluded, so that instead of deducting for example one half of £48 = £24 he should deduct say one half of (£48 − £16 =) £32—that is, £16 as a quasi rent paid for the professional portion of the whole premises

Cash Basis—New Practice

DUBIOUS " was in partnership up to May, 1932 from which date he and his former partner have practised separately His accountant informed him about the time of the dissolution that the inspector had agreed to the cash basis being applied to the separate practices but apparently he is now insisting on the bookings basis being applied

*** It has to be admitted that the bookings basis is correct and the cash basis supported by convenience and practice only At the same time this certainly seems to be a case where the Revenue would lose nothing by adhering to the cash basis, seeing that cash received for past work is being brought in and it is obviously convenient to all concerned We suggest that " Dubious might reasonably point out that having been given to understand that the old basis could be continued his receipts from the former practice have been mixed in with the later fees, and cannot now be separated without great trouble and that as *all* receipts are being brought in his cash accounts will show his proper liability

LETTERS, NOTES, ETC

Abdomino-perineal Operation

In the course of a letter in which he refers to a paper on the treatment of carcinoma of the rectum and recto sigmoid function by a two stage abdomino perineal operation read by Dr R C Coffey of Portland Oregon at a meeting of the Royal Society of Medicine (Section of Surgery) on October 17th 1932 Mr EDWARD T THRING F R C S (New South Wales) states that the result of the subsequent discussion reported in the *Proceedings* of the Society (February 1933) did not appear to clarify the situation but rather to leave things *in statu quo* so far as the surgical treatment is concerned Mr Thring would draw attention to a paper of his own, printed in the *Medical Journal of Australia* on February 28th 1925 entitled " The Surgical Treatment of Cancer of the Rectum

Scarlet Fever in Yugoslavia

According to N D CERNOZUBOV (*Bull Off Internat d Hyg Publique* November 1932) the severe epidemic of scarlet fever in Yugoslavia from 1928 to 1930 was preceded by a mild attack without fatalities and with a large number of abortive and atypical cases In April and May 1928, a similar outbreak occurred among the recruits in the Novi Bazar garrison In the autumn of 1928 a sudden and violent epidemic broke out affecting the whole valley of the Ibar from Kus Metrowitza to Raschka and BaGiewatz The disease reached its highest incidence and fatality in December 1928 The fatality which was always very high fell from 34 7 per cent in 1928-9 to 26 3 per cent in 1929-30 The proportion of non eruptive cases was 64 per cent in the first year of the epidemic and 36 per cent in the second year 7 8 per cent of the patients had hypertoxic or fulminant attacks The high fatality was only partly due to lack of proper nursing, and was mainly caused by the epidemic attacking virgin soil The results obtained from active immunization were unsatisfactory as the disease severely attacked the schools in which the children had been given preventive injections or Dick toxin associated with anatoxin

A Stage Doctor

A London correspondent writes The grave frock coated Harley Street specialist has long been a familiar figure on the stage The play *The Late Christopher Bean* which has started on apparently a very successful run at the St James s Theatre gives us for a change a representation of the practitioner in a Midland village Dr Haggett admirably played by Mr Cedric Hardwicke also wears a frock coat but a very frowsy one and although spats give him a touch of smartness, the effect is somewhat spoiled by the bicycle clips which he forgets to remove from his trousers His professional desk swivel chair and medicine cabinet are in the same room as that in which he and his family have all their meals but as the painters are on the premises this may perhaps be excused The one thing in his practice which he seems to do with cheerful thoroughness is to make entries in his day book, but a realistic touch is given when he laments the fact that the patients do not pay their bills There is little reference to professional questions in the play, the theme of which is his and his family s reaction to the possibility of impending fortune Although the time is the present and the practice extensive, including—unless the remark was misheard—a ' panel he does not rise to a car He is a prey to greed although he fulminates against it in others but he shines in moral splendour at the end when he makes reparation to his servant upon whom he has been trying to play a sorry trick I have never met Dr Haggett or anyone resembling him, in town or country practice Is it possible that he may have existed in a previous generation?

A Syringe Case

Dr H L BASU F R F P S G writes from Calcutta Regarding the syringe case mentioned in the *British Medical Journal* of January 21st (p 104) made by Messrs Maw and Sons at the direction of Dr W R Thrower of Weymouth I would like to point out that this particular apparatus is not an original one as I have had in use a number of such for seven years They were obtained through a firm in Bombay and bear marks of being made in Germany In fact they are superior in design and make There are two portions in the cylindrical case—an outer one of metal and an inner one of closely fitting glass The glass cylinder is filled with alcohol and in it is immersed the carrier holding the barrel piston and two sizes of needles vertically The lid being made flat, bearing two knobs for gripping is screwed on to the top of the cylinder and takes up less space The various units can be taken to pieces when necessary

Medical Golf

The annual summer meeting of the Medical Golfing Society was held on May 25th at Walton Heath The competitors were the guests of Lord Riddell Results were as follows Henry Morris Cup (handicap), H L Glyn Hughes (handicap 11) 4 up G D McGrath (5) 1 H P Kolesar (scratch) A C Palmer (9), and H C Apperly (7) 1 up *Lancet* Cup (scratch) T H P Kolesar 1 up T A Torrance and H L Glyn Hughes, all square Veterans Cup (handicap) J Wallace* (9) Sir Milsom Rees (8) 1 down Class I (handicap 9 and under) G D McGrath* (5) T H P Kolesar (scratch), A C Palmer (9), and H C Apperly (7) 1 up * First prize after ties result is reckoned on last nine holes Class I (last nine holes) M F McDonnell (5), 1 up Class II (handicap 10 and over) H L Glyn Hughes (11) 4 up Stanley Wyard (11) all square Class II (last nine holes) H L Glyn Hughes (11) 1 up Foursomes (handicap) T H P Kolesar and D Wheeler 2 up , Leslie Williams and H L Glyn Hughes 1 up

Disclaimer

Dr C B HOGG (Kettering) writes As a sequel to faulty reporting of the proceedings of a local education committee meeting certain investigations concerning left handed children have in the lay press been incorrectly attributed to me My letter to the education committee regarding left-handed children which was read at the meeting gave the names of the investigators, in conjunction with the research work to which reference was made

Endomotriomata

Correction

By an error for which we were not responsible the name of Dr H K DUTTA pathologist to the Eden Hospital, Calcutta, was misspelt in the heading of the article by Colonel Green Armytage and himself in the *Journal* of April 8th

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospital will be found at pages 43 44 45 46 47 50 and 51 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 48 and 49

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 247

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

391 Prevention and Treatment of Diabetic Coma

O STUB (*Tidsskr f d Norske Laegefor* February 1st 1933 p 113) compares the fate of the diabetic patient before and after the insulin era with the help of statistics provided by the Rikshospital in Oslo Between July 1889 and July 1899 fifty seven diabetics were treated at this hospital six of them suffering from diabetic coma on admission There were altogether fourteen deaths in hospital from diabetic coma among these fifty seven cases Between April 1st 1924 and June 1st 1932 the same hospital admitted 302 men and 287 women suffering from diabetes As many as fifty five of these patients were comatose or precomatose (thirty five women twenty men) As many as thirty-eight of these fifty five patients were under the age of 30 and as many as twenty three had suffered from diabetes for less than six months A classification of the causes responsible for the development of coma or its precursors showed that intercurrent infectious diseases were the most important numerically being responsible for as many as nineteen cases Dietetic errors came next with seventeen cases and lack of the diagnosis of diabetes came third with seven cases Fourth in this list was the discontinuation of insulin in six cases There were five cases in which the cause was unknown and one in which it was abuse of alcohol This analysis suggests that such a high coma incidence on admission to hospital as fifty five out of 589 patients (9 4 per cent) is largely preventable The author recommends the supervision of diabetics under a card index system and education of the patient by means of printed instructions The mortality from diabetic coma could also assuredly be reduced by shortening the interval between the first warnings and admission to hospital This point is emphasized by the fact that of the thirteen patients admitted to hospital in full coma as many as eleven died whereas there were only six deaths among the forty two patients admitted in the precomatose stage of stupor or drowsiness Nine patients had been completely comatose from six to twenty four hours before treatment was instituted and fifteen of the seventeen patients who died of coma were women

392 Infectious Mononucleosis Simulating Diphtheria

F WULFF (*Ugeskrift for Laeger* February 2nd 1933 p 131) has made a systematic examination of the blood of all the 238 patients admitted between August 1st 1931 and August 1st 1932 to a hospital in Denmark for observation as diphtheria suspects A blood smear was made on the patient's admission but the staining and counting were usually deferred to the following day The May-Grünwald method of staining was employed and 300 or more leucocytes were counted In no fewer than twenty cases was mononucleosis infectiosa diagnosed by this procedure numerous atypical lymphocytes being found in every case As all the twenty recovered there was no likelihood of these being cases of acute lymphatic leukaemia Among the twenty cases were seven in which the local throat condition as well as the general condition was not only suggestive of diphtheria but also so serious as to indicate antitoxin treatment In some cases the false membrane not only covered the tonsils but also extended to the pillars of the fauces posterior wall of the pharynx uvula and soft palate There was a blood stained serous or purulent discharge from the nose enlargement of the lymphatic glands and a diphtheria like fetor Five of the seven worst cases were at once given antitoxin on admission as the diagnosis of diphtheria seemed so obvious The blood examination did however save these patients from the inconveniences of subsequent injections It has been decided that in the future the blood of diphtheria suspects shall be examined at this hospital before antitoxin is given Cultures were repeatedly made for diphtheria bacilli in all these twenty cases but the results were invariably negative The course of these cases was often protracted With regard to the differential diagnosis it can be made with certainty only by means of the blood count but a demonstrable enlargement of the spleen and of the lymphatic glands in parts of the body other than the neck is suggestive of mononucleosis infectiosa

393 Measles and Tuberculosis

H KOCH (*Arch f Kinderheilk* January 24th 1933 p 129) as the result of his observations at the G V Prever Children's Hospital Vienna comes to the following conclusions In a considerable number of cases measles leads to activation of tuberculosis although this cannot be regarded as a general rule The explanation of this activation is to be found first in the fact that in the prodromal stage measles exerts a powerful action on the cellular infiltration which forms a protective wall round the tuberculous foci—the more severe the attack of measles the more dangerous are its effects In the second place the activation is due to the tuberculous focus itself The more pronounced the exudative character of the tuberculous process the more likely is there to be an activation of the disease whereas tuberculous foci in the proliferative stage are not affected Young children and those whose tuberculous infection is of recent date are liable to most risk from measles In such cases inoculation with convalescent serum should be performed as the danger of activation of tuberculosis is small when the attack of measles is attenuated

Surgery

394 Malignant Prostate

J F MCCARTHY and S E KRAMER (*Amer Journ Surg* February 1933 p 209) point out that whereas carcinoma of the prostate was considered to be a rare disease in the past more accurate diagnosis has now shown it to be comparatively common Out of a total number of 689 prostatic tumours 123 (or 18 per cent) were found to be malignant It is suggested that the epithelial hyperplasia seen in prostatitis and hypertrophy may lead to early cancer but the aetiology is doubtful Diagnosis of malignancy is easy the classical signs being nodulation induration and fixation There is usually a loss of normal elasticity during the introduction of the endoscope Induration is abnormal and there are atypical visual changes near the vesical neck As 25 per cent of all men experience prostatism in greater or less degree it is of the utmost importance that early diagnosis should be made by means of routine palpation of the prostate microscopical and cultural study of the expressed secretion and the treatment of any infections found When malignancy of the prostate has been confirmed the outlook is grave and the chance of a permanent cure is very slight If a localized nodule is discovered a radical perineal prostatectomy may give a fair measure of success In the majority of cases of prostatic cancer either bone metastasis or involvement of the ileo-pelvic or abdominal glands is present therefore the complete surgical removal of such prostates is of little use Radium according to present methods cannot be used effectively in cases of malignant prostate and x rays though they may retard the growth of the cancer have no curative power and may precipitate metastases Endoscopic revision supplemented with x ray therapy offers the patient the greatest degree of comfort and economic usefulness as it restores his bladder function and to a certain extent controls the inevitable pain up to the terminal stage of the disease

methods more widely distributed The promotion of movement in stiff joints by various kinds of mechanical apparatus has a much more extended use on the Continent than in this country but has little to recommend it Treatment by massage and ordinary active and passive movements produces better results and has the advantage of more reliable control and of personal contact and encouragement

(ii) *Electricity and Radiation*

The objects which may be attained by electrical and allied methods are the relief of pain and stiffness the improvement of capillary circulation and the absorption of fluid effusions from the joints and of inflammatory thickenings from the tissues

The methods used are heat light electric currents and ionization Heat may be applied externally by means of radiant heat lamps or infra red rays the latter are the more penetrating and are of value especially in relieving pain and stiffness and improving circulation In conjunction with massage for which electrical vibrators may be used infra red rays are effective in dispersing the nodules and thickenings of fibrositis

Diathermy is used for heating the deeper structures and is of value in relieving the pain of osteo-arthritis of the hip It is applied also to the pelvic organs by means of intrapelvic electrodes and good results are claimed for this method in the treatment of arthritis It is believed to act upon the ovaries and thus to benefit cases in which there is endocrine disturbance also to have a direct effect on septic foci when these exist in the pelvis It is claimed that the rise of temperature produced destroys gonococci in the cervix or prostate and it is in cases of this kind that the most striking results have been obtained

Ultra violet rays act by increasing the general resistance to infection and by producing a general tonic effect over dosage must be carefully avoided There is no definite evidence of any other beneficial effect in arthritis but in acute fibrositis ultra-violet rays often give relief in sciatica they may increase the pain

Ionization by means of the galvanic current is said to act by driving the ions of certain drugs into the tissues It is used for the relief of pain especially in fibrositis and bursitis also to promote the absorption of effusions from joints and tendon sheaths and the resolution of fibrous nodules and indurations

The faradic current is used in the treatment of muscular wasting especially as an adjuvant to massage The electric cautery is a useful form of counter irritation For the technique of the various methods textbooks must be consulted

X rays No definite opinion can be given as to the value of *x* rays in the treatment of arthritis It would appear that *x* ray therapy especially with deep rays is used somewhat indiscriminately yet experienced practitioners declare that they have observed definite benefit in chronic arthritis especially in spondylitis from this form of treatment Used with due precautions the method would seem to be without danger

(iii) *Mineral Waters and Baths*

Mineral waters may be divided into six groups (*a*) thermal springs of low mineralization (*Bath and Buxton*) (*b*) saline and sulphated (*Bridge of Allan Cheltenham Harrogate and Leamington*) (*c*) sulphur (*Harrogate Llandrindod and Strathpeffer*) (*d*) iron (*Buxton Harrogate Llandrindod Strathpeffer and Trefriw*) (*e*) bromo-iodine (*Woodhall*) (*f*) strong saline not used internally (*Droitwich*)

(*a*) *The waters of low mineralization* are hypotonic and act as strong diuretics clinically their radioactivity has some effect on metabolism

(*b*) *Saline and Sulphated Waters* The weaker waters taken fasting increase gastric tone and promote diuresis the stronger ones augment intestinal secretion and are mild aperients The sulphated waters are purgative they are useful in the reduction of fat and of abdominal plethora

(*c*) *Sulphur Group* Sulphur has a powerful action on tissue metabolism The sulphur group of mineral waters includes (1) the *hypertonic* which are purgative increase the flow of bile and stimulate metabolism (2) the *isotonic* with similar but milder action and (3) the *hypotonic* which are diluents and diuretics

(*d*) *Iron or chalybeate waters* vary in strength from the strong sulphate of iron wells of Trefriw Spa and the strong chloride of iron well of Harrogate to the mild chalybeate waters of Buxton Llandrindod Harrogate and Strathpeffer They improve the haemoglobin value of the blood

(*e*) *The Bromo iodine Waters of Woodhall Spa* These are saline and contain an appreciable quantity of iodine and bromine Their special virtue lies in their iodine content and they are therefore alterative in action

Cases of primary and secondary rheumatoid arthritis with much debility often show improvement with radioactive thermal waters and where there is considerable anaemia the chalybeate waters are well borne and assist in building up the patient's general condition In the convalescent stages of the secondary rheumatoid groups when the focal sepsis has been dealt with stronger iron waters may be employed In cases of secondary rheumatoid arthritis chronic villous arthritis osteo-arthritis and fibrositis associated with plethora overfeeding and obesity the hypertonic sulphur waters are useful and a course of these may be followed by one of the chalybeate waters In all forms of arthritis with the exception of the primary rheumatoid type associated with intestinal toxaemia the isotonic and hypotonic sulphur springs and the saline sulphated waters are extensively used

Natural mineral waters are held to be of prophylactic value against the development or recurrence of disorders of metabolic origin Periodic courses are voluntarily undertaken by many persons who are subject to attacks of muscular rheumatism lumbago and sciatica and who find substantial benefit from this method

The main types of bath commonly in use are

General Baths

(1) Immersion baths—
  (*a*) Deep pool baths
  (*b*) Reclining baths
(2) Douche massage baths
(3) Mud baths
(4) Vapour baths
(5) Dry hot air baths

Local Baths

(*a*) Externally applied—
  (1) Undercurrent douches
  (2) Low pressure effusion douches
  (3) High pressure douches (jet douches needle baths etc)
  (4) Local mud packs

(*b*) Internally applied—
  Intestinal lavage

These methods produce certain reactions by virtue of their (1) *Thermal effects* Baths are sedative or stimulant according to temperature (see p 1046) (2) *Percussion effects* Undercurrent douches massage douches jet douches needle baths etc produce local effects by direct action and general effects by reflex action through the nervous system

The *physiological effects* may be summarized as follows

1 *On the Skin* (*a*) Thorough cleansing removal of dried sebaceous material and epithelial debris, thus getting rid of mechanical obstructions to openings of the sebaceous ducts and tubules of sweat glands, (*b*) stimulation of excretion of sweat, with consequent relief of the kidneys

2 *Cardiovascular System* Alteration in rate and volume of blood flow through the skin and subcutaneous tissues, and stimulation through nervous channels of the vasomotor and respiratory centres in the medulla

3 *Kidneys* Diuresis

4 *Central Nervous System* Stimulation of "cutaneo-sympathetic" reflex, thus improving the adaptation of the body to changes of temperature Undue susceptibility to such changes appears to be closely associated with a tendency to arthritic disorders

5 *Metabolism* Increase of metabolic rate

Intestinal lavage This may be of benefit in some cases of arthritis, but a prolonged course or frequent repetition may be harmful

On the Reputed Specific Therapeutic Properties of the Different Natural Waters when Applied Externally in the Form of Baths

There is an old-standing and widely spread popular belief that individual "waters" externally applied have a selective therapeutic action on particular diseases As the skin is incapable of absorbing any appreciable amount of the chemical ingredients of any "natural water, it follows that any therapeutic action which follows immersion (apart from that on cutaneous disorders) must depend entirely on the physical qualities possessed by the water Different waters produce different effects on the skin according to the degree of stimulation or irritation they exert on the sensory nerve endings, and in this connexion there are definite variations between waters of different degrees of hardness, waters containing large quantities of brine, and so forth Any such variations between the actions of different waters are, however, of secondary importance to the effects attributable to the water as a medium for the conveyance of heat, of pressure, and of percussion, and the skill with which the methods are used is in many cases more important than the exact type of water

Whether certain "natural" waters produce specific effects in virtue of their radio activity is a question on which it is impossible to dogmatize The degree of radio-activity present even in those waters which possess this property at all is admittedly small, but in view of the recognized therapeutic effects of small doses of radium emanation in various forms of treatment it is not unreasonable to assume that the radium emanation in natural waters, when these are used as baths may exercise some physiological and perhaps also a therapeutic influence Such a contention, however can at present neither be proved nor disproved

Contraindications to Spa Treatment

1 Arthritis in the acute stage
2 Tuberculosis
3 Severe cardiovascular disease
4 Malignant disease
5 Advanced renal disease

(*g*) CLIMATE AND HYGIENE

The value of climate as a therapeutic factor is not easily defined not all patients react in the same fashion to similar influences and hence personal idiosyncrasies are apt to confuse the issue In general terms climate has no influence on osteo-arthritis but in rheumatoid arthritis it may be utilized to stimulate metabolism and to increase the patient's resistance Generally cold or cool temperatures are to be preferred, provided there is protection from wind and damp, hot humid, and relaxing climates are unfavourable Sunshine has a generally beneficial effect, especially in fibrositis, narrow river valleys, and the proximity of large sheets of water exercise an unfavourable influence For a choice between the seaside and inland places there is little guidance except the experience of the individual patient

The site of a residence is of some importance in particular, the soil and house should be well drained, and this is effectively secured in a gravel or sandy district rather than in a clay one Closely packed slum dwellings with absence of cellars or any ventilated space between the floors and the earth are especially harmful Other things being equal soft water is much to be preferred This applies especially to osteo arthritis and fibrositis, but is of less importance in rheumatoid arthritis

X ORTHOPAEDIC AND SURGICAL

Spine (spondylitis) In the active stage in order among other things, to prevent depression of the viscera by bad posture, the patient suffering from spondylitis or other active spinal disease should be recumbent on a firm bed lying on his back with a small pillow below his head and another below his knees Thrice daily after meals he should be placed in a position of hyperextension of the spine for half an hour For this purpose a pillow is placed beneath the thorax, the lumbar spine is unsupported, and the hands are clasped behind the head He is then rolled over to lie face downwards on a pillow extending from the top of the sternum to the pubes, and in this position treatment by heat or counter-irritation may be applied In more severe cases a plaster bed is necessary The foot of the bed should be raised The period of recumbency should not be less than one month, and may require to be considerably more Later, massage and exercises, first lying and then standing, are indicated Throughout this period breathing exercises are essential When the patient is allowed to get up, a spinal support in the form of a brace and pelvic corset is necessary In progressive cases firm ankylosis lessens the local discomfort, and if this takes place in a good functional position the patient is able to get about with comfort Where the cervical and upper dorsal vertebrae are affected there is often considerable flexion deformity of the trunk and neck, together with torticollis In these cases the head must be supported by pillows, which are gradually withdrawn to allow gravity to act as the remedial agent, traction by means of a head sling with weight and pulley may be necessary In other cases, where the cervical spine alone is affected, a Thomas collar affords a sufficient support

Sacro-iliac Joint Disease in this joint may be treated either (1) by the methods described above, or (2) by prolonged fixation, or (3) by operation—the Smith Peterson method being generally adopted

Hip joint Weight-bearing on the affected joint always leads to a state of progressive flexion and adduction therefore rest and fixation are the first requirements While the disease is active and pain and muscular spasm are present, rest in bed with traction by weight and pulley and fixation are indicated When the acute stage has passed the patient may benefit greatly by simply using crutches, and keeping the weight off the limb by a thickened sole on the boot of the sound limb Use within limits, short of irritating the joint is a valuable aid in maintaining function If however, activity produces pain which is persistent and lasts for a period after the activity ceases he is using the joint too freely and additional protection is required After the acute symptoms

395 Tumours of the Gasserian Ganglion

M J COOPER (*Amer Journ Med Sci*, March, 1933, p 315) records three cases of primary tumour in the region of the Gasserian ganglion, and reviews nineteen additional cases in the literature to illustrate the frequency of occurrence of the various initial symptoms and objective manifestations, and to assess the value of operative intervention Gratifying results were obtained in a few cases where such operation was undertaken early There was a relatively low operative mortality in excision of early lesions and in the less hazardous procedure of section of the sensory root Attention is drawn to the possibility of relieving the symptoms in cases of inoperable tumour by division of this root Cooper points out that the clinical diagnosis of tumour of the Gasserian ganglion is not always possible, even when definite neoplastic involvement of the ganglion has occurred Occasionally such conditions as tic douloureux, atypical neuralgia, post-zoster neuralgia, syphilis, and rarely tuberculosis or angle tumour, may produce a clinical picture which cannot be distinguished from early tumour of the ganglion He considers that an exploratory operation in its region by competent surgeons is justified for patients who are suffering from suspicious constant trigeminal pain of uncertain causation It is also commended for those who show objective indications of interruption of the trigeminal motor or sensory pathways, without evidence of an aetiology other than ganglion tumour In a series of twenty-two cases analysed by the author pain in the ipsolateral trigeminal distribution occurred seventeen times, impairment or loss of touch, pain, heat or cold sensations in the same distribution sixteen times, in fifteen there was ipsolateral involvement of the third, fourth, or sixth nerve in thirteen there was ipsolateral trigeminal motor weakness, and in ten diminution or loss of the ipsolateral conjunctival reflex was demonstrable The clinical picture of tumour of the ganglion appeared, therefore, to be that of some impairment of the sensory or motor functions or of the reflex arcs dependent upon the integrity of the trigeminal pathways, although no single sign or symptom was invariably found In some instances there were no signs or symptoms pointing to any involvement of the ganglion Radiographical examination gave no help In the twenty-two cases the pathological conditions were endothelioma (10) neuroma, sheath neuroma and undetermined (2 each), while there were single examples of neurocytoma neurofibrosarcoma, sarcoma, fibroblastoma, chondroma, and neurofibroma Reviewing the results of operation in these cases Cooper remarks that a definite conclusion cannot be reached until larger figures are available for assessment In his collected series twenty patients were so treated Of these, death attributable to the operation occurred only twice, the operation having been undertaken for decompression in one instance and for exploration in the other Frazier reported the low percentage operative mortality of 0 26 as regards the middle fossa procedure for trigeminal neuralgia and this is held to encourage exploratory investigation in doubtful cases as well as the section of the sensory root in otherwise inoperable cases

Therapeutics

396 Treatment of Strychnine Poisoning

G F KEMPE J T C MCCALLUM and L G ZERFAS (*Journ Amer Med Assoc* February 25th, 1933, p 548) discuss the various lines of treating strychnine poisoning, and record eleven cases successfully dealt with by intravenous injections of sodium amytal or sodium pentobarbital They point out that by the time when the symptoms are first noted much of the poison has already been absorbed, and that therefore the use of the stomach pump and such antidotes as tannic acid, iodine, and potassium permanganate are of little value Although ether chloroform, and chloral hydrate are sometimes effective in controlling the convulsions the doses necessary are often so large as to depress or stop the respiration Similarly morphine may be of no avail owing to the large quantity required Smaller doses of the barbiturates are, however, strikingly effective The authors recommend the following line of treatment When sodium amytal or pentobarbital is used, just enough of the intravenous preparation is given to induce sleep or to stop the convulsions In patients aged about 20 the dose of amytal was about 8 to 12 grains, in one patient, aged 4, who had been accidentally poisoned by an unknown quantity of strychnine, 15 grains were necessary When the phenobarbital salt is employed the dose should be that which is just sufficient to stop the convulsions and not necessarily to cause sleep Should the patient subsequently show any signs of continued strychnine poisoning such as heightened reflexes complaints about noises marked response to slight stimuli, or convulsions, the treatment should be renewed Gastric lavage is held to be neither advisable nor necessary, but it may be undertaken after the patient has fallen asleep if adequate assistance is available to prevent injury or the aspiration of material from the stomach Intravenous injections of sodium chloride solution may be given, but are not deemed necessary Quiet dark surroundings are advisable There is sometimes difficulty in determining after the administration of the antidote whether symptoms are due to it or to continued strychnine action, in such cases it is advisable to await a mild convulsion before increasing the dose of amytal The authors admit that it is not possible to calculate exactly the requisite dose of the remedy unless the amount of strychnine absorbed is known and the presence of idiosyncrasy to it or amytal can be estimated An experimental dosage is usually necessary, therefore, at first Neither morphine nor apomorphine should be given, but ether can be used to control the convulsions until the antidote is available In the absence of the intravenous preparation of amytal oral doses up to the equivalent of 15 grains may be given by the mouth as a preliminary, intravenous injection being subsequently employed

397 Thyroid Medication in Chronic Arthritis

F C HALL and R T MONROE (*Journ Lab and Clin Med* February, 1933, p 439) have studied 300 patients with chronic non tuberculous arthritis for the signs and symptoms of thyroid deficiency the basal metabolic rates and the action of thyroid gland therapy, of these 150 were of the hypertrophic and 150 of the atrophic type In the former group the symptoms and signs of hypothyroidism frequently occurred with no other explanation for them The basal metabolic rates were below minus 10 in 50 per cent and below minus 15 in 34 2 per cent of 108 patients in whom these determinations were made The patients were mostly well nourished and the gland deficiency was apparently the only cause for the hypometabolism Thyroid therapy permanently benefited 49 1 per cent of 116 patients in whom its use seemed wise In the atrophic group the symptoms and signs of hypothyroidism were less frequent and could generally be explained by depletion and under nutrition The basal metabolic rates were below minus 10 in 35 6 per cent and below minus 15 in 17 7 per cent of 106 patients in whom these were determined definite gland deficiency was present in only a few, and usually another explanation existed for the hypometabolism Thyroid therapy was permanently beneficial in 16 5 per cent of 103 suitable cases The authors add Care must be taken in the selection of patients for thyroid medication, its routine use may be harmful, especially if an element of cardiopathy be present it is rarely indicated in active cases of the atrophic type of short duration Its greatest use is in those cases showing hypothyroidism, these include the majority of the hypertrophic and a few of atrophic type of long duration and mixed or hypertrophic elements The action of the extract may be both specific and non specific, it aids in reducing weight increasing the circulation, and regulating calcium and phosphorus metabolism

The authors conclude that thyroid deficiency is a contributory factor in certain cases of chronic arthritis its correction when present improves the general well being and aids in relieving joint pain and disability and in permanently controlling the arthritis probably through better joint nutrition

398 High Carbohydrate Diets in the Treatment of Diabetes

M ROSENBERG (*Deut med Woch* March 3rd 1933 p 320) points out that the dietetic treatment of diabetes even since the introduction of insulin has undergone almost every modification possible for each of which special virtues were and are claimed From low carbohydrate diets in the early days to very high fat diets relatively recently the pendulum has swung to very high carbohydrate diets These latter are by no means advocated by the author who working in Umber's clinic has had consistent success for years with diets containing just enough carbohydrate for the patient's well being and ability to carry on his work the remaining calorie requirements being made up with the protein and fat for the maintenance of nitrogen equilibrium The claims of Adlersberg and Porges that the high carbohydrate treatment of diabetes has a curative effect are regarded with doubt by the author and the phenomena are explained by him as due to the spontaneous improvement in tolerance to sugar which frequently occurs in diabetics kept on a controlled regimen Two cases are however described which in spite of treatment on the ordinary lines frequently developed hypoglycaemic symptoms even though they constantly exhibited glycosuria On changing the diet of these patients to one containing an excess of carbohydrate (200 grams) and very little fat it was found that the glucose equivalent of the insulin now required rose and complete control now became possible gain in weight occurred and the patients were discharged from the clinic with almost normal blood sugars As a result of study of these and similar cases Rosenberg considers that the type which improves on a high carbohydrate diet is that in which there is overactivity of the glands antagonizing the action of insulin so that the insulin administered on ordinary diets is unable to exert its full glucose equivalence When in such cases excessive carbohydrate is administered the insulin can in some as yet unexplained way more readily act upon it so that a higher glucose equivalence is attained Whilst recognizing the purely hypothetical nature of this view the author considers it as more nearly in accordance with the facts than any other

Dermatology

399 Chloasma Faciei

Professor A. JORDAN (*Derm Woch* March 11th 1933 p 336) finds that of a series of fifty cases of chloasma faciei seen privately twenty were unmarried and girls twenty six were pregnant, and four were men Of 461 non pregnant cases taken at random in the dermatological and venereal clinic 129 complained of this condition of these thirty five were unmarried girls seventy six were non pregnant women and eighteen were men An analysis of the age incidence in this series of 129 showed that the disease is one associated with the sexually mature years Its occurrence in men although relatively rare rules out the specific attribution to anomalous conditions of the uterus and appendages The contention of other authors that the aetiology of the disease is associated with trophic changes in the sympathetic fibres running in the trigeminal nerve is not supported by the author who did not find distributions of the pigmentation corresponding to this nerve But in the matter of endocrine disequilibrium definite evidence was almost always obtainable particularly in the young female patients Such evidence included menstrual disturbances diseases of the genital tract and Graves's disease In non gravid cases chloasma faciei seemed to be related to previous pregnancies or to the climacteric The development of the condition during pregnancy is not necessarily followed by its regression after delivery it may remain permanently or for many years In men the disease according to Jordan is associated with sexual weakness thus again supporting the endocrine view Therapy is directed therefore to the endocrine system preparations of ovary thyroid etc being used Prophylactically exposure to the sun should be avoided

400 Favus in Mice and Men

J I CONNOR (*Med Journ of Australia* December 24th 1932 p 765) reports an investigation into the prevalence of favus among the workers in wheat in Australia to whose susceptibility to the disease a recent mouse plague in the wheat growing areas has drawn attention The parasite *Achorion quinckeanum* has been known to be present among wild mice since 1917 An affected mouse has yellow crusts about the nose eyes and ears and also on the legs Some of the men at work rebagging the wheat had circinate ringworm-like lesions on the neck and forearms Two different fungi were grown from these on Sabouraud's maltose agar medium (1) a woolly rapidly growing fungus which later produced black terminal ascospores and (2) a slow growing snow white fungus The second when inoculated into mice produced lesions similar to those found in the wild mice Death of the mice occurred three weeks after infection Cultures from the scutula of these mice on Sabouraud's media produced the same snow white fungus Lesions in man consist of circinate erythematous scaly lesions on the glabrous skin and kerion like lesions on the hairy parts Yellow scutula are seen in a small proportion of cases Only a small percentage of the men exposed to infection contract the disease Treatment consists in applying an ointment composed of benzoic acid 15 grains and salicylic acid 15 grains in 1 ounce of vaseline Kerion of hairy parts is better treated with weak perchloride of mercury or mild antiseptic dressings of eusol

Obstetrics and Gynaecology

401 Subfascial Fixation of the Prolapsed Uterus

C IUBAS (*Zentralbl f Gynäk* January 28th 1933 p 227) reports twenty four successful operations for prolapse performed by the method of Grigoriu In lumbar anaesthesia the abdomen is opened mesially and the uterus together with the adnexa is pulled upwards and forwards The lower end of the uterus is fixed by anterior and posterior sutures to the posterior sheath of the rectus abdominis and the uterus and appendages are then sutured in a bed bounded behind by the rectus muscle and in front by its sheath A plastic vaginal operation now follows but anterior colporrhaphy is unnecessary since the fascial suspension remedies a cystocele The operation can only be undertaken when the uterus and adnexa are healthy or have been made so surgically It must be accompanied in preclimacteric subjects by double resection of the Fallopian tube Popovici has recorded twenty two successful operations of this kind performed by Grigoriu and his pupils According to Iubas who warmly commends the operation it is short and easy recurrence of the prolapse is impossible and menstruation and coitus are not affected

402 Various Treatments of Cervical Carcinoma

Before contrasting the results of radium surgery with those obtained by other methods in the treatment of cervical cancer P PETIT DUTAILLIS (*La Gynécol* January 1933 p 5) describes his three methods in the former procedure He agrees with other authorities that the failures in and accidents following radium therapy are due to faulty technique and not to the radium itself

have subsided gentle massage to the muscles is very useful combined with movements in the direction of abduction and extension short of causing pain or muscular spasm These movements however must not be repeated more than two or three times at each sitting Stimulation of the hip muscles electrically and muscle training by non weight bearing exercises should be encouraged To prevent undue movement when getting about a walking calliper splint may be used or a laced elastic spica in which are incorporated felt straps or flexible canes passing in from behind and over the trochanter gives very efficient protection and yet allows the patient to sit down When the affection is painful destructive and advanced surgical measures whether by fixation manipulation under an anaesthetic or operation are indicated When the condition is quiescent and there has not been great damage to the head of the bone great relief may be obtained by gentle manipulation of the joint under general anaesthesia Radiant heat massage and active weight bearing movements should follow as soon as possible in order to maintain what has been gained Under the anaesthetic it is possible to discover whether the attitude of adduction and flexion is merely due to muscle spasm or whether there is definite shortening of the adductor muscles In the latter event tenotomy of the adducter tendons is necessary followed by fixation of the hip in abduction for two weeks and application of massage and movements (This operation which is not free from the risk of phlebitis can be done under nitrous oxide anaesthesia without causing shock) Operative measures on the joint should be undertaken only when severe pain and disability are present The majority of these patients are old and often stout with myocardial weakness There is always great danger of primary shock especially where the head of the bone requires to be disarticulated

Knee joint The deformities which develop are those of flexion backward subluxation of the tibial head and outward rotation of the lower leg from the pull of the biceps In early stages this condition may be improved by simple weight and pulley traction but in many cases the question will arise as to whether the knee joint should be manipulated under anaesthesia Several attempts may have to be made and great care must be taken as even the mildest manipulation may produce fat embolism The manipulation should not be attempted unless the patella is freely movable Where flexion deformity exists an operation to lengthen the hamstring tendons may be performed In other cases a transverse osteotomy of the femur may be employed straightening the limb on a splint Synovectomy is sometimes attended with the happiest results When it is found that the patella is becoming ankylosed to the femur the operation may be completed by inserting a strip of fascia lata between the two bones In cases where there is much deformity with bone destruction a formal excision often gives the best result Mild cases of flexion can be controlled by a walking calliper splint with a pad over the patella

Ankle and Foot In chronic arthritis of these joints every effort must be made to retain movement and a good functional position In the active stage if immobilization is required it must be in the optimum position especially if fibrous or bony ankylosis is probable In the ankle joint the optimum position is one of dorsiflexion and very slight varus or inversion Disabling positions such as valgus equinus calcaneus or combinations of these should if possible be avoided This may be achieved by splinting the foot and ankle in a good position by means of plaster casing leather or celluloid splints The celluloid splint being light and durable and perfect fitting is the best In the more severe cases surgical intervention in the form of manipulation under an anaesthetic or operation is sometimes necessary The stiffness may be due to intra or extra articular adhesions or may result from destruction of the cartilage and ankylosis In simple adhesions the movements of the joint should not diminish with use If the adhesions do not yield to functional use of the limb or to passive movements they may be broken down under a general anaesthetic When ankylosis has taken place in a good position and there is no pain the condition may be left alone If however the ankylosis is incomplete with pain and deformity the position may be corrected under general anaesthesia either manually or by a Thomas wrench The limb is put up in plaster-of Paris in a position of dorsiflexion and neither inverted nor everted In cases in which the periarticular adhesions snap suddenly and greater freedom of movement results a movable joint should be attempted Massage and movements are therefore begun early Before deciding to manipulate any joint which has been the site of infection it is well to bear in mind the risk of a lighting-up of latent infection To be sure that this will not happen is impossible Some advise preliminary treatment by radiant heat and vigorous massage to see if such measures provoke increased heat and pain in the joint If they do manipulation should not be attempted and in most cases it is a good rule to let six months elapse between the subsidence of the infection and manipulation Pain and limitation of movement in the great toe joint are common from chronic arthritis of the metatarso-phalangeal joint of the great toe The surgical treatment of hallux valgus and rigidus and hammer-toe is described in surgical textbooks Metatarsalgia is a common complaint in the arthritic On examination swelling of one or more of the metatarsal joints hyperextension of the toes and spreading of the fore part of the foot due to muscle weakness are found

Treatment requires examination for faulty statics The shoe should have a thick sole broad enough to prevent lateral compression of the toes the direct aim of treatment being to restore the anterior arch correct the clawing of the toes and increase the power and function of the lumbricales and interossei muscles A metatarsal bar may be placed across the sole under the tread just behind the heads of the metatarsals or a felt pad made of leather oval in shape 1½ in long by 1 in broad and 1/4 in thick with bevelled edges fixed to the inside sole by adhesive strapping may be employed or again a metal support can be slipped into the shoe Success in any of these methods depends on minute attention to detail in making and fitment Exercises to get rid of clawing and to increase flexibility and the strength of the toes and arch are very important Rest and attention to the shoeing and associated flat-foot may in some instances be all that is required

Shoulder joint In chronic arthritis impaired mobility rigidity of muscles and contractures from permanent shortening of muscles tendons and fascia are present When the articular surfaces are affected fibrous or bony ankylosis may occur The all important fact to be noted is that if ankylosis is inevitable the joint must be fixed in the optimum position for function and the ankylosis must be firm In the shoulder ankylosis in adduction means bad function The position to be selected is one in which the upper arm is abducted 60 degrees and externally rotated 15 degrees as from the horizontal The elbow is brought forward so as to be in the same vertical plane as the front of the chest the patient being able to carry his hand to his mouth by means of scapular movement

Synovitis Bursitis and Periarthritis These may be present at one and the same time At first abduction and external rotation are generally affected but later all

The first method described is utero vaginal application of the radium after curettage and thermo cauterization The soft infected tissue is removed with a blunt ended, sharp-edged spoon curette, and the area is then immediately thermo cauterized the latter affords an excellent haemostasis, closes all avenues of future infection, and permits of a better application of the radium The dosage and mode of applying the radium is described , three quarters of the dose is placed in the uterus, the remainder in lateral vaginal culs-de-sac, and left in place for six to eight days Rubber packing and Carrel's drains are also inserted Before the local interventions subcutaneous injections of Delbet s vaccine and blood transfusions are given During the radium application the " delbias s " is continued in tablet form, a vegetable diet is instituted, and daily doses of sodium sulphate and abundant liquid are given After removal of the radium, injections at first intra-uterine, then only vaginal, are administered , the ' delbiasis " is continued extracts of the spleen and of Rubens Duval being added Patients are generally dis charged from hospital in fifteen days , cicatrization occurs in three to four months In the second method, after curettage and cauterization, the radium is inserted both utero vaginally and also parietally in front of each great sciatic notch, between the internal obturator muscle and its aponeurosis , the technique is described In the third method the radium is applied as described, but after amputation of the cervix Comparative tables are appended showing the results obtained by these and purely surgical methods The former apparently furnish the better results

Pathology

403 Infection in Burns

R H ALDRICH (*New England Journ Med* , February 9th, 1933 p 299) discusses and rejects the three theories—destruction of the functions of the skin, absorption, and blood concentration—that have been put forward to account for the various phenomena encountered in a burned patient Bacteriological studies were done by Eiror on a series of these cases, and the beta haemolytic or gamma streptococcus was found to be the invading organism in all extensive burns Further, there are no marked constitutional changes if burns are kept free of infection The author advocates the use of the aniline dye gentian violet in treatment Its advantages are (1) it is a specific antiseptic for the invading organism (2) it forms a thin light eschar tough but flexible (3) it produces practically instantaneous analgesia , (4) minute islands of unburned epithelium, found in practically all third degree burns are conserved under the eschar and the necessity for subsequent skin grafting diminished A 1 per cent aqueous solution of the crystalline form of the dye is sprayed on to the burned area every two hours until the burn is sealed No dressing is applied The usual treatment for shock is carried out After the eschar has formed the patient is sprayed every four to six hours during the day Any blebs or softening of tissues are opened or removed and the underlying portions sprayed The importance of this is stressed The general care of the patient includes forcing of fluids and a high vitamin and high calorie diet A few typical cases are reported

404 Infectious Polypoid Colitis

R M LARSEN (*Arch Int Med* February 1933, p 236), who records an illustrative case states that the colon is a relatively frequent site for multiple polyps of the mucous membrane with and without chronic ulceration The true polyp is composed of hyperplastic glandular mucous membrane projecting into the lumen of the gut Larsen's patient was a man, aged 49, in whom the clinical symptoms simulated those of ordinary polyposis with ulceration, and associated with structures which bore a close gross relation to ordinary polyps of colon The polyps were composed primarily of granulations and massive clusters of large mononuclear inflammatory cells containing numerous Gram negative apparently unencapsulated bacilli which were probably the cause of the condition No previous example of this kind has been recorded

405 Post operative Blood Changes

Referring to recent work of numerous authors regarding the variations in the chloride content of the blood following operations, especially abdominal ones, J DRIESSENS and R DEVERIX (*C R Soc de Biol*, February 3rd, 1933, p 389) record a study of the plasma and corpuscular chloride contents in thirty three cases subsequent to surgical intervention , the findings in three of these are tabulated It was found that an operation, with or without general anaesthesia, brings about a disturbed equilibrium of the blood chlorides , a very marked plasma hypochloraemia was found in 81 per cent of the cases and a corpuscular deficiency in 84 per cent , generalized hypochloraemia of both plasma and corpuscles was found in 73 per cent Cases of increased chloraemia could be explained by changes in the blood before the operation Variations in the plasma corpuscle coefficient characterize this disturbed balance of the blood chlorides being raised in 70 per cent and lowered in 30 per cent of the cases In a further reference to this subject P BOULANGER and J DRIESSENS (ibid p 391) cite recent experiments which indicate that all increases of this coefficient are due to increased acidity of the albumins, the converse being also true In the first case acid stimulation of the respiratory centre occurs, with resulting acidosis , in the second the alkaline reserve is low, a non acid stimulation of the centre takes place, which tends to create an alkalosis These workers found in thirty-three cases after operation the coefficient was lowered in 72 per cent and raised in 28 per cent In the latter cases the fall in the alkali reserve indicated a true acidosis , in the former an increased alkaline reserve was noted only in one-third of the cases, it being lowered in the remainder

406 Repair of Bony Fractures

D MUCCI (*Chir d Org di Movimento* December, 1932, p 498), by a series of experimental fractures of the radius in rabbits in which, after exposure of the shaft (1) the stumps were completely separated from the soft parts (2) the periosteum was also thoroughly removed (3) attached to the muscles, and (3) the site of fracture remained with periosteum and soft parts intact, was examined on killing the animals at intervals of six to sixty days to observe the rate and nature of repair After the operation the animals received daily subcutaneous injections of 1 per cent aqueous solution of trypan blue After death the limb was decalcified and sections were prepared In all cases the wound was healed by first intention Mucci found in group (1) that healing of the fracture occurred by that in the renewal of continuity the periosteum did not share, the histiocytic elements being provided exclusively by the medulla and open Haversian canals at the site of the fracture In group (2), where the separated periosteum remained attached to the muscles, there was even at the sixth day an active production of chondroblastic and osteoid tissue which tended to envelop the site of fracture being collected in dense layers which caused an early thickening of the periosteal lamina and was associated with an outflow of great numbers of histiocytes from the intermuscular tissue Even after two months there was no formation of true callus between the stumps or consolidation of the fracture In group (3) proliferative processes occurred from the beginning accumulation in the periosteum of great quantities of histiocytes (trypanophilic cells) derived from the intermuscular and subcutaneous tissues appeared at the site of fracture with formation of chondroblastic and osteoid tissue so that at the second week the consolidation was well advanced

movements In long-standing cases wasting of the biceps and triceps may weaken the muscular support of the joint, with an increase of the liability to subsequent strain The shoulder should be treated by physical methods, with rest of the limb in an abduction splint In resistive cases adhesions may be gently broken down under a general anaesthetic Many of these cases are associated with fibrositis in the muscles of the shoulder and upper arm In some cases also there is a tendency to the formation of a calcified deposit in the tendon of the supraspinatus muscle—a condition attended by much pain and capable of demonstration by *x* rays , it may require operation

Elbow The elbow when affected should be kept active as long as possible, but if immobilization and rest seem indicated the joint should be fixed in a position of about 100 degrees extension If both elbows are affected, immobilization in one should be at less than 90 degrees and in the other over 100 degrees extension with the forearm in mid-pronation or 15 degrees short of complete pronation When the condition is quiescent an attempt at movement may be made under anaesthesia, followed by physical treatment, provided due precautions are taken If sound ankylosis takes place nothing should be attempted, though in certain cases mobility may be restored by excision of the joint To restore pronation and supination when they are lost, the head of the radius may have to be removed

Hand and Wrist Physical treatment and special splinting may here accomplish much when deformity, stiffness, and loss of function have developed or seem unavoidable In many cases of chronic arthritis especially in elderly people who rise from a chair by resting their weight on their hands it is noticeable in *x*-ray photographs that the breadth of the carpus as a whole is increased A protective wristlet of leather, which holds the bones in proper relationship, often completely relieves this condition In view of the enormous importance of flexibility of the joints of the hands, and especially of the opposing power of the thumb, great efforts to retain these functions should be made in the early stages of arthritis If the wrist is stiff in palmar flexion and ulnar deviation, it may be possible to change the bad position to a good one by gradual correction in a suitably moulded cock-up splint or by gentle reposition under anaesthesia, followed by immobilization in a plaster casing

Fingers Forcible manipulation of stiff fingers under anaesthesia should never be attempted , the results are invariably bad Steady and prolonged traction, which aims at taking a direct pull from the finger-tips in the line of the deformity so as to produce actual separation of the joint surfaces, with stretching of adhesions in the tendon sheaths is the best single aid for the restoration of movement and function This traction should continue in the line of deformity until evidence of joint separation is seen by depression of the skin over the knuckles or by *x* rays The direction of the traction should then be changed day by day in the direction of flexion Traction should be eased several times a day for passive and active movements and the ability to carry out actively what has been gained passively is the indication for altering the line of pull The treatment should cause no pain or reaction, and the traction pull should not be excessive a pull of 4 oz is sufficient to separate the joint surfaces of a normal finger

XI NATIONAL SCHEMES FOR TREATMENT

HOLLAND

The Dutch League for Combating Rheumatic Diseases, with headquarters in Amsterdam supervises the treatment of arthritis in Holland In addition to the therapeutic activities of this organization it concerns itself with the prosecution of research Its most recent activity in this respect is an inquiry into the incidence of rheumatism in various occupations

GERMANY

The information from Germany discloses a general scheme for the treatment of rheumatic diseases which is largely in being, though not complete The out patient departments may be associated with general hospitals, but are usually special centres established by the friendly societies The in-patient departments may be in general hospitals, but are often in the special "friendly society centres" The convalescent homes are established by the friendly societies

The special centres for spa treatment may be established in any large city, but it is recommended that they should be situated in "spas" where the resources of natural therapy are available

It is recommended that rheumatic cases should be distributed as follows

Out-patient Physiotherapy Centres

1 Acute muscular rheumatism
2 Mild cases of primary rheumatoid arthritis
3 Mild cases of spondylitis deformans
4 Neuritis and neuralgias
5 Elderly patients who are unlikely to benefit from or to tolerate spa treatment

In-patient Physiotherapy Centres

Acute rheumatism
Arthritis of uncertain origin in order to recognize and exclude tuberculosis, new growth, etc

Convalescent Homes

Convalescents from acute rheumatism

Spa Centres

SWEDEN

Existing Hospital Provision

In seven hospitals special departments have been built by the Royal Pensions Board for the treatment of rheumatic disease in its more acute phases , each contains fifty-five to sixty beds As many as 2,500 cases are treated in these departments annually , two thirds of the cost is borne by the Royal Pensions Board and one third by the patient himself, or by benefit funds, or by the commune to which he belongs The treatment consists of physical therapy, all varieties of baths, massage hot air, light, electrical, *x* ray, and orthopaedic methods drugs, and protein shock Patients are attended if necessary, by a dentist Some patients after treatment are trained for several years in an occupation suitable to their disability

A patient stays seventy five days in any one of these hospitals and is eligible for one or two periods of treatment of the same duration during the following years In any event he is visited once a year for several years by an official of the Royal Pensions Board to report progress This arrangement has given good results, and 62 per cent of the patients are able to maintain themselves economically three years after the completion of their course It is found, however, that there are not enough of these centres , indeed, twice as many are required The waiting time for patients at present is six to eight weeks No out-patient departments are maintained at present

As further developments the university hospitals hope to establish out-patient and in patient clinics for rheumatic disease, and corresponding plans have been arranged in connexion with the university clinic in Stockholm and also in the municipal hospital for Stockholm , the latter when built will contain a rheumatic department of seventy beds together with an out patient departm

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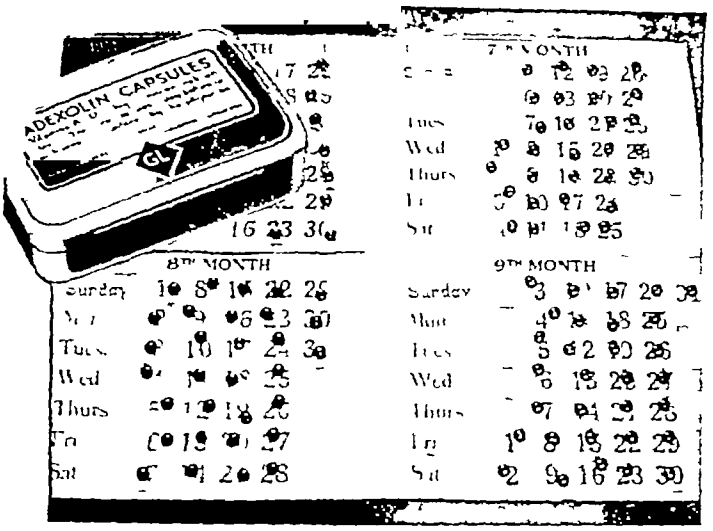

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The Royal Pensions Board administers three sanatoriums for chronic rheumatic disease with a total of nearly 500 beds these admit patients who are not confined to bed and whose condition is suitable for physical treatment To each sanatorium two to four medical men are attached with the necessary nursing staff masseuses bath attendants etc

The Royal Pensions Board corresponds in a large measure to our national health insurance scheme Contributions are however levied from almost every member of the community between the ages of 16 and 66 Thus in 1925 3 628 000 citizens were liable to contribute and only 240 000 were exempt The annual pensions contribution consists partly of a flat basic contribution of 7 kronor per head and partly from those who are liable for income tax of an additional contribution the amount of which depends on the assessed income (minimum 2 kronor maximum 30 kronor) These contributions are paid into the Pensions Insurance Fund and used for treatment purposes 55 per cent has been defrayed out of public funds and 45 per cent out of the Pensions Insurance Fund but for the budget of 1927–8 it was calculated that the Fund would pay 92 per cent and the State 8 per cent of the expenses of these activities

Spas

There are about fifty spas in Sweden mostly with iron waters They are all private and as a rule open only in summer Certain industrial cases are treated at these spas at the charge of benefit funds

Hospitals for totally disabled patients and belonging to local authorities take in a certain number of chronic arthritics

SUGGESTED NATIONAL SCHEME FOR GREAT BRITAIN

For this certain conditions must be satisfied namely

1 Early recognition
2 Thorough treatment in the early stage of the disease
3 Adequate follow up of cases in order to observe the effects of treatment to arrange for further courses of treatment when necessary and to secure readmission if required to treatment centres in case of relapse

In addition the scheme

1 Must not interfere with the proper relation between patient and family doctor more than is necessary to ensure the best interests of the patient
2 Must utilize existing facilities for diagnosis and treatment either in private consulting rooms or in public institutions
3 Must be economically sound

Some type of general organization is necessary to secure and apply these conditions Recognition must be the province of the family doctor Extra facilities will have to be given to provide post graduate instruction in this field In the earlier stages treatment can be carried out very largely by out patient methods at or in the neighbourhood of the patient's home but a certain proportion will require in patient treatment or treatment away from their homes for longer or shorter periods

After the case has been investigated and when possible and desirable aetiological factors have been dealt with either in the patient's home or by means of facilities afforded in hospitals nursing homes etc the treatment will include some or all of the following

(i) General regime rest fresh air diet
(ii) Specific treatment (vaccines etc)
(iii) Drugs (including organotherapy)
(iv) Physical treatment heat massage electricity remedial exercises hydrotherapy
(v) Spa treatment
(vi) Orthopaedic manipulative and other surgical treatment
(vii) Occupational therapy

(i) *General Regime*

General regime will be carried out in conjunction with other forms of treatment

(ii) *Specific Treatment* (iii) *Drugs*

These forms of treatment could be undertaken in large measure by the family doctor in the patient's home and in the case of (ii) in collaboration with the pathological department of the general hospital It is probable that special financial provision would require to be made for materials preparation of vaccines special drugs etc

(iv) *Physical Treatment*

All general hospitals should have a physiotherapy department and in order to make such departments available for patients suffering from chronic rheumatic diseases some grant of funds would be necessary to increase equipment and also some arrangement to cover the cost of treatment including an adequate grant to the medical staff While in certain districts special clinics may be necessary it is desirable that these should be associated professionally with existing general hospitals

(v) *Spa Treatment*

In a certain proportion of cases spa treatment is necessary or desirable Such cases should however be selected with considerable care and approved by a suitable authority since treatment at a spa will necessarily involve greater cost than out patient treatment at a general or special hospital Three large spa hospitals (Bath Buxton and Harrogate) are available for in patient treatment and these contain 600 beds There are similar though smaller institutions at other spas

A scheme is at present in course of organization for the treatment of certain groups of insured persons as out patients at spas This may be extended to the whole group of insured persons but will not be practicable on economic and other grounds unless it is restricted to those persons who cannot be efficiently treated by other methods

(vi) *Orthopaedic Treatment*

Treatment along these lines does not differ in any material respect from treatment carried on in the orthopaedic and surgical departments of general and special hospitals Some organized provision would have to be made for the care and maintenance of those who in spite of treatment or because of lack of treatment had become permanently crippled This could be obtained by suitable arrangement with council and local authority hospitals

(vii) *Occupational Therapy*

In connexion with these hospitals and centres (especially in council and local authority hospitals) it is desirable that patients should be taught trades Each district would have to organize a social work service whether through the existing local authority organization or otherwise to follow up all patients and see that they were kept in touch with their family doctors When necessary this service could be made responsible for assembling and arranging records of each patient from the various treatment centres to which he might be sent Such service it is hoped would in time develop occupational training centres

(viii) *Central Organization*

Some central governmental departmental or other organizing body would require to accept responsibility for the general supervision of this scheme

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XII OBSERVATIONS ON ADVERTISED REMEDIES

The attention of the Committee has been called to the volume and character of the traffic in proprietary remedies and unqualified treatment for the various conditions falling within its reference, and in particular to the use which advertisers make of medical opinion

The Committee considers that the false and misleading statements so widely circulated through the medium of advertisements constitute a material obstacle to the general application of effective measures of treatment, and that, owing to the time wasted in trying these so-called remedies, the disease in many cases may not only be aggravated, but may also pass from a curable into an incurable stage The Committee desires in this connexion to emphasize the need for legislation for the control of the traffic in proprietary remedies and the provision of efficient administrative machinery to enforce such control Meanwhile, members of the profession will be well advised to exercise the greatest care to prevent any expression or misrepresentation of their opinions being used to support the exaggerated claims of the vendors of proprietary articles

XIII INDICATIONS FOR FUTURE RESEARCH

Incidence It is desirable to determine the distribution of the arthritic conditions dealt with in this report (*a*) in the country as a whole, (*b*) in various trades and occupations, and (*c*) in various localities and under different climatic conditions

Bacteriology According to some authorities the pathological conditions which exist in arthritis are due to direct invasion of the joint tissues by micro organisms Opposed to this view is the claim that such changes are due to the sensitization of the tissues by toxins derived from bacterial foci in some other part of the body It would be desirable to determine the relative importance of these two agencies It has been claimed by some and denied by others that it is possible to reproduce in animals arthritic lesions identical with those present in the arthritis of man Confirmation on this point is necessary

The nature and strain of the micro-organisms responsible directly or indirectly for arthritic changes, and the extent to which they may be isolated from the tissues and body fluids, await determination To settle these questions the closest co-operation between clinicians and bacteriologists is necessary The most up to date equipment in the laboratory, and the provision of special research beds in hospitals, is a prerequisite to success, and many experiments will have to be repeated and subjected to the most rigid controls Much of this work can probably be done only in specially equipped hospitals and by specially skilled observers who are able to continue their investigations over a considerable period of time

Biochemistry The general nature of the sedimentation rate test still awaits elucidation and the recognized discrepancy between an improved condition of the patient on the one hand and the delayed return to a normal blood sedimentation rate on the other requires investigation

The following investigations would appear to be important in relation to arthritis and allied conditions (1) calcium metabolism, (2) liver function, (3) the presence of (*a*) haemolysins, (*b*) glutathione in the blood, and (4) skin reactions and allergic manifestations

Clinical Features Co operation between clinicians, radiologists, morbid anatomists, and comparative pathologists is necessary to determine a correspondence between their several findings, so that an agreed classification of arthritic diseases may be obtained

Treatment Controlled experiments are needed to determine the value of the numerous therapeutic methods advised for the treatment of the various forms of arthritis

XIV SUGGESTIONS FOR FURTHER PROFESSIONAL EDUCATION

The Committee inquired from the deans of medical schools if there is any provision, apart from the ordinary routine teaching in medicine, for instruction in the early diagnosis, prevention, and treatment of chronic arthritis and allied conditions A few schools provide special facilities for the study of these subjects, but the majority replied that they were adequately dealt with in the routine instruction in medicine and surgery

The present arrangements should be supplemented by demonstrations in municipal hospitals of clinical cases which illustrate both the various stages and the end results of arthritis, and by demonstrations at adjacent spas and clinics, both of cases and of hydrological and physical methods of treatment

It is clear that most special instruction must be post graduate It is suggested that for this purpose the three spa hospitals (Bath Buxton, Harrogate) and the Red Cross Clinic, London, should be asked to collaborate in the preparation of cinematograph films, lantern slides, and casts, for the purpose of illustrating the diagnosis and treatment of arthritis and allied conditions When this material is complete the Divisions and Branches of the British Medical Association should be informed that lecture demonstrations on this subject can be secured through the Medical Department of the Association A panel of lecturers could no doubt be arranged

APPENDIX

LIST OF MEMORANDA BEFORE THE COMMITTEE

Brown W Langdon The Endocrine Factor in the Etiology and Treatment of Rheumatism
Buckley C W 'Classification of Arthritis and Allied Conditions'
Idem 'Influence of Climate upon the Etiology and Treatment of Arthritis and Allied Conditions'
Idem 'Spondylitis'
Burt J Barnes 'Osteo-arthritis'
Cochrane W A 'Orthopædic and Surgical Treatment of Arthritis'
Copeman W S C 'The Control of Industrial Rheumatism'
Edgecombe Wilfrid 'Secondary Rheumatoid Arthritis'
Fischer Anton (Aachen) Treatment of Chronic Arthritis and Allied Conditions in Germany
Freeman, J, and Gordon M H 'Bacteriological Examinations in Regard to Arthritis'
Freeman J Gordon M H Luff A P and Willcox Sir W 'Vaccine Treatment of Arthritis'
Godson A H Adaptation to Great Britain of the System of Dutch and German Arthritis Clinics
Gordon R G Incidence of Chronic Arthritis'
Idem 'Diet in Chronic Arthritis'
Idem 'Differential Diagnosis'
Idem "Scheme for Treatment of Chronic Rheumatic Diseases"
Hill Sir Leonard 'Radiation and Electrical Treatment'
Hutchison Robert Discussed "Diet in Arthritis" with the Committee
Kahlmeter G (Stockholm) "Treatment of Chronic Arthritis and Allied Conditions in Sweden"
Knaggs R Lawford Morbid Anatomy of Chronic Arthritis
Mitchell W M 'Morbid Anatomy of Arthritis'
Patterson S W and Picton Davies R P 'Dietetic Methods in Treatment of Arthritis'
Pringle G L Kerr Primary Rheumatoid Arthritis
Idem Treatment of Chronic Rheumatic Disease by Mineral Waters"
Race Joseph "Biochemical Findings in Relation to Arthritis and Allied Conditions with special reference to the Blood Sedimentation Test"
Ray Matthew 'Fibrositis'
Idem Methods of Dissemination of Knowledge amongst the Medical Profession
Idem Physical Treatment of Arthritis
Ray Matthew Freeman J, Gordon Mervyn H and Race J 'Future Objects of Research'
Rolleston Sir Humphry 'Prophylaxis of Chronic Arthritis and Allied Conditions'
Scott S Gilbert Radiological Findings in Chronic Arthritis and Allied Conditions, and their value in the Differential Diagnosis
Idem X-ray Treatment of Arthritis
Stockman Ralph Treatment of Arthritis by Drugs
Thomson F G "Balneological Treatment of Chronic Rheumatism"
Idem Chronic Villous Arthritis or Climacteric Arthritis
Van Breeman J (Amsterdam) 'Treatment of Chronic Arthritis and Allied Conditions in Holland'
Willcox Sir William 'Etiological and Infective Aspects of Arthritis from the Clinician's Point of View'
Idem Treatment of Arthritis by Drugs

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Memoranda
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APPENDICITIS AND MECKEL'S DIVERTICULUM

In view of the article on Meckel's Diverticulum and Appendicitis published in the *Journal* of June 3rd the following case may be of interest

J. N. aged 17 was admitted with a diagnosis of acute appendicitis. He complained of abdominal pain of ten hours' duration starting in the region of the umbilicus and settling in the right iliac fossa. He had vomited once soon after the onset and there was no history of constipation. His temperature was 96·6° F. pulse 60. Examination of the abdomen revealed nothing more than tenderness in the right iliac fossa. There was a history of a similar attack lasting a few days five years previously.

On opening the abdomen by Battle's incision the cavity was found to contain some free fluid of a clear watery nature. The appendix apart from some kinking and thickening showed no gross pathological change but the caecum was ensnared and partially obstructed by a Meckel's diverticulum. This was four to five inches in length and was adherent by its extremity to the abdominal wall at the umbilicus. The caecum was uninjured.

Appendix and diverticulum were both excised and the abdomen was closed without drainage. Convalescence was normal the patient being discharged seventeen days after operation.

G. A. WEIR, M.B., Ch.B.
House Surgeon, Royal Victoria Hospital, Dover.

LUTEAL EXTRACT FOR MAINTENANCE OF PREGNANCY

In view of the work done by Pfiffner and Harris [1] Allen and Corner [2] and others on the maintenance of pregnancy in castrated laboratory animals the following case in a human being should prove of interest.

The patient who had had a posterior division of the cervix performed in 1924 and curettage with removal of a pedunculated growth in 1927 became pregnant on three occasions after the last mentioned date. During each pregnancy her health was very bad. Nausea vomiting gastric pain pain in the back nervous irritability pallor emaciation and weakness were all marked. Menstrual flow continued in each pregnancy for the first one or two periods and at each subsequent period a pink colour was noted in the discharge. Each pregnancy terminated about the twenty-second week. The patient had fallen about three weeks before the first miscarriage. There was no known possible external cause in the two subsequent miscarriages. The babies were all born alive. The posterior division of the cervix had been closed after the third miscarriage.

In the fourth pregnancy (January 1932) similar conditions of ill health obtained and the patient was virtually confined to bed. All the usual medical physical and psychical treatments were applied to no purpose.

Treatment by injections of luteal extract (prepared by Messrs. Armour) was started when during the fourth month the patient noticed distinct bleeding at a period and felt as if she were going to miscarry. One cubic centimetre of the extract was injected twice weekly. The digestive system settled down in a few days and the patient was perfectly healthy and physically strong in five weeks. Two doses weekly proved sufficient. A delay of a few days in the administration of the extract on a few occasions caused a recurrence of the symptoms of ill health which again disappeared when the injections recommenced. Injections were stopped at what was believed to be about one fortnight prior to the end of the gestation period to avoid possible overcarry or inhibition of uterine contractions [3]. Five days after the last injection the membranes ruptured and the patient went into labour two days later in hospital. The baby though distressed survived.

The continuance of the menstrual flow and the failure to maintain the pregnancies suggested some deficiency of the luteal hormones. The cessation of the flow and the maintenance of the fourth pregnancy to term with restoration of the health to a normal condition tend strongly to confirm this. I do not think the closure of the posterior cervical division had much to do with the maintenance of the fourth pregnancy as the condition of the patient prior to the use of the extract was worse during the fourth pregnancy than ever before.

R. G. Harris in a personal communication recently received suggests that theelin should be given for the last fortnight of term in cases where luteal extract is used so as to avoid any possible interference with labour.

REFERENCES

[1] Harris, R. G. and Pfiffner, J. J. "Extracts of Corpus Luteum in Relation to Pregnancy," *Ana. Record*, xlix, No. 3, 295.
[2] Allen and Corner, "Physiology of the Corpus Luteum. VII," *Proc. Soc. Exp. Biol. Med.*, 1930, xxvii, 403.
[3] Hisaw, Meyer, Fevold and Leonard, *Ana. Record*, xlix, No. 3, 295.

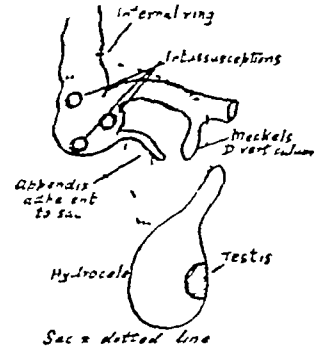
STEPHEN SHEA, M.B.
Professor of Anatomy, University College, Galway.

UNUSUAL CASE OF STRANGULATED HERNIA

The following is a record of a case of strangulated hernia that occurred in Bethlem Royal Hospital and which bears very unusual features.

A man aged 65 was admitted on October 21st 1931 suffering from involutional melancholia. On admission he had a hydrocele of the left tunica vaginalis and a right inguinal hernia. The hydrocele was tapped in December and 16 oz. of fluid withdrawn. No active treatment was considered necessary for the hernia since it was easily reducible and the patient's mental condition necessitated almost total confinement to bed.

The hydrocele gradually enlarged again and in January 1932 the scrotum was about the size of two clenched fists



but quite flabby. On the afternoon of January 25th 1933 the patient was allowed out of bed but shortly after rising doubled up and began to groan. Subjective symptoms were valueless owing to the mental condition but on examination the scrotum was found to have increased in size and to be quite tense. In the scrotum besides the hydrocele there was a large swelling situated above it this was irreducible and tender and was considered to be a strangulated hernia. A firm constriction was palpable in it just above Poupart's ligament. The temperature and pulse were quite normal. The patient had vomited a few times during the previous month but on several such occasions he was observed to induce it by tickling the throat.

Mr. Stanford Cade saw the patient that evening diagnosed a strangulated hernia and proceeded to operate at once. On opening the hernial sac the following structures were found within it: (1) The major part of the caecum in the wall of which were three small early-stage intussusceptions the diameter of each was about 3/4 inch and the depth about 1 inch. (2) The vermiform appendix which was adherent to

the posterior wall of the sac (3) A portion of the ileum about 6 inches from the ileo-cæcal junction with a Meckel's diverticulum measuring about 2 inches in length The appendix was freed from the sac and removed the remaining structures returned to the abdominal cavity and the tunica vaginalis everted The patient's convalescence has been rapid and uneventful

I wish to thank Dr Porter Phillips and Mr Stanford Cade for their kind permission to publish this case

Beckenham OTHO FITZGERALD

THE ELASTICITY OF THE SKIN

I am induced to report the following case because I would have thought such an injury impossible with an intact skin

A boy 13½ years of age jumped on a fence in search of a cricket ball that went into a neighbouring garden He either slipped or fell into the garden in which there was a three-quarter inch water pipe used as a garden stake He struck this pipe an inch within the nipple line at the fourth left costal cartilage He died in a few moments The mark of the circle of the top of the pipe could just be seen in the upper part and in the lower part it had slightly abraded the skin There was no wound and no mark on the skin when reflected His pectoral and intercostal muscle were torn making an opening between the fourth and fifth cartilages but did not fracture or tear either The opening was so made for two inches that the pericardium could be seen and was intact though distended with blood and blood clot There was a tear in the left ventricle which admitted the end of my thumb and was immediately to the left of the interventricular septum

Sydney STRATFORD SHELDON, M.B. Ch.M.

Reports of Societies

SURGICAL TREATMENT OF DUODENAL ULCER

At a meeting of the Aberdeen Medico-Chirurgical Society on June 1st with the president, Dr W CLARK SOUTER in the chair a discussion on the surgical treatment of duodenal ulcer was opened by Mr ALEXANDER MITCHELL

Mr Mitchell based his observations on the records of about 144 cases operated upon by Mr F K Smith and himself during the period 1926–31 The great majority had been males and in these the age incidence at the time surgical treatment had been instituted was much earlier than among females It was generally accepted that unless there was definite evidence of pyloric stenosis, medical treatment should be tried first, but the question as to when the patient should be handed over to the surgeon was difficult and one on which there was no general agreement The modern surgical treatment of duodenal ulcer resolved itself into the choice of four types of operation—namely gastro-enterostomy, excision of the ulcer with some form of pyloroplasty, excision of more than half of the pylorus without opening the duodenum or stomach and excision of the pyloric end of the stomach to diminish acidity Excision and pyloroplasty were applicable only when the duodenum was fairly free, and preferably in the case of an anterior ulcer, when successfully performed however this operation did all that gastro-enterostomy did without the risk of the undesirable sequels especially associated with gastro-enterostomy Mr Mitchell emphasized the necessity in all types of operation of careful examination of the abdomen and of dealing with any abnormal condition, especially of the gall-bladder and appendix Of 114 cases treated by gastro-enterostomy there were eighty-seven good results, fourteen fair nine bad and four deaths, of the twenty-eight cases treated by excision and pyloroplasty eighteen results were good eight fair and one bad while one patient had died of post-operative pneumonia In one case appendicectomy only had produced a good result Gastro-enterostomy was evidently a satisfactory operation in certain cases but there were risks of undesirable sequels, such as anastomotic ulcer, bilious vomiting kinking of the jejunum and haemorrhage Mr Mitchell had been unable to reach a definite finding as to the relation between the duration of symptoms and the age of the patient and the final result, except that better results were obtained in cases with a long history in which very definite pyloric stenosis had been present The after-treatment and the duration of subsequent medical supervision also influenced the final result Mr Mitchell was of opinion that gastric hyperacidity was lessened as well by pyloroplasty as by gastro-enterostomy It was impossible to compare accurately the risks of surgical as opposed to medical treatment, and in surgical failures it could not be said whether one was dealing with failure to cure the original ulcer or with the development of a new ulcer from an inherent predisposition to ulcer

Mr F K SMITH congratulated Mr Mitchell on his study He found the preponderance in males and earlier age incidence very interesting Among possible aetiological factors he mentioned Müller's theory of a vaso-neurotic state or sympathetic derangement He thought Mr Mitchell's results exceedingly good Absolute indications for surgical treatment were perforation and pyloric stenosis Mr Smith was inclined to disagree with Mr Mitchell as to the frequency of anastomotic ulcer especially as this condition was very difficult to diagnose correctly secondary ulceration very seldom occurred if the gastro-enterostomy opening was made towards the pyloric end of the stomach Care had to be taken with materials method of suturing and sufficient size of opening, the latter to be at least twice the diameter of the part of the jejunum to be anastomosed The gastric acidity was sometimes higher after gastro-enterostomy or even after gastro-duodenostomy than before operation Mr Smith considered the good results in many cases due to resting of the affected parts Poor operative results were obtained in recurrent haemorrhagic ulcers, and it was doubtful whether the bleeding always came from an ulcer, either duodenal or anastomotic

Dr H McGIBBON stated that in experimental feeding the impaction of faeces in the cæcum with cæcal ulcers was associated with bleeding points in the stomach and other parts of the gut in the neighbourhood of the pyloric sphincter spasm of which was caused by excessive stimuli from the distal portion of the intestine If the concentration of food were greater than the optimum solution for absorption intense congestion of the duodenum occurred, while the rate of emptying of the stomach was in direct relation to the concentration of the solution

Mr G H COLT stated that there were industrial reasons for surgical treatment as some patients could not obtain appropriate diet The preponderance of males found by Mr Mitchell was not general in the country Perforation cured the ulcer in 90 per cent of cases if the ulcer was anterior and in the first part of the duodenum, and in 50 per cent if the ulcer was far down and posterior In performing gastro-enterostomy the tension of the loop was the important point

Dr A GRAIC ANDERSON quoted the findings of Matthew Stewart of Leeds that in all post-mortems he had performed a duodenal ulcer or the scar of an ulcer was found in 10 per cent Mentioning that out of 100 medical students ten would show a hyperchlorhydria, he stated that a definite ulcer diathesis existed, and that recurrence of symptoms might be due to the gastritis A five-year period was necessary for the proper assessment of treatment either medical or surgical and the good results were not so frequent as had been made out On the five-year period basis the figures from the Charité Clinic in Berlin showed 50 per cent bad results from gastro-enterostomy, figures from other centres were much the same The ulcer might not heal, and there was the possibility of a gastro-jejunal ulcer Partial gastrectomy was preferable Berg's experience showed a 5 per cent mortality figures for bad results (recurrence of symptoms) were 16 per cent for gastro-enterostomy and 2 per cent for gastrectomy The acid factor must be an important

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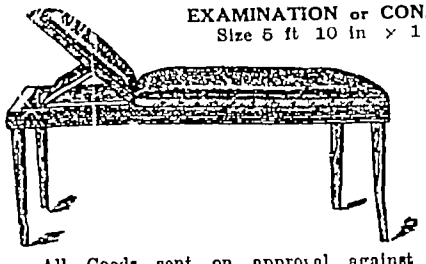

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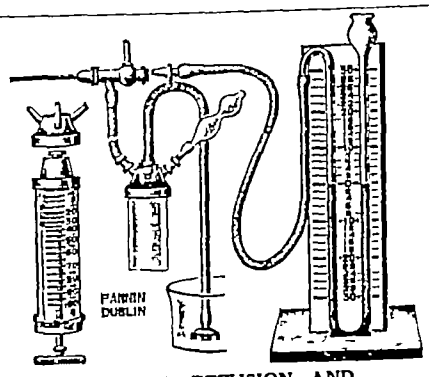

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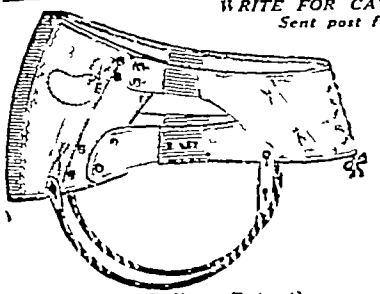


No 5a BELT (Bailey's Patent) FOR FLOATING KIDNEY

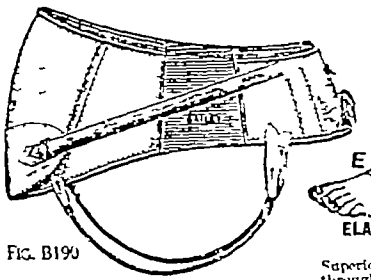
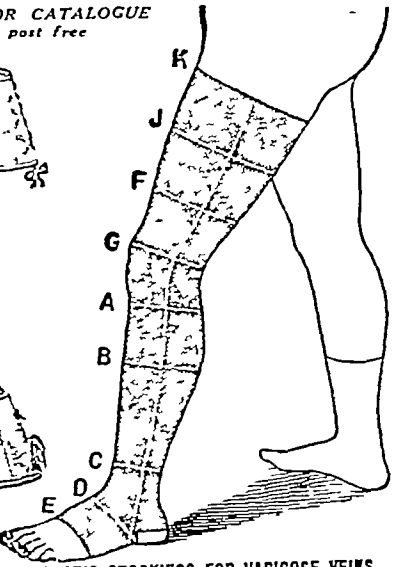


FIG. B190

BELT FOR ENTEROPTOSIS



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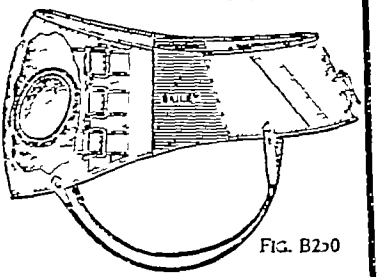
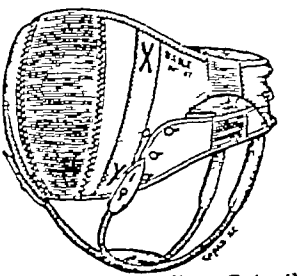


FIG. B200
(Showing Interior of Cup)
SPECIAL BELT FOR AFTER COLOSTOMY



No 3 BELT (Bailey's Patent) FOR PROLAPSUS UTERI

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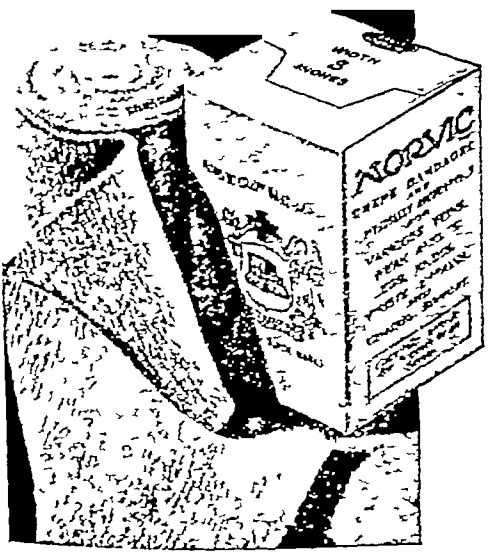

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one and gastro-enterostomy was not likely to lead to achlorhydria

Professor L S P DAVIDSON thought that most acute and chronic ulcers if the history was not too long healed spontaneously if given a chance Dr J E SKINNER had found women more amenable to treatment than men A factor which he had found retarded recovery every time it occurred was constipation

THE PRESACRAL NERVE

At a meeting of the North of England Obstetrical and Gynaecological Society held at Leeds on April 28th with the president Mr LEYLAND ROBINSON in the chair Mr A A DAVIS read a paper on the presacral nerve Mr Davis described in detail from the findings in over seventy dissections the anatomy of the so-called presacral sympathetic nerve He showed the varied forms found—from the rare single nerve to the more usual plexus In defining the relations of this plexus he pointed out that sometimes the pelvic mesocolon with its contained vessels transgressed the midline and so came to form a direct anterior relation of the plexus—a point of surgical importance Discussing briefly the physiology of the plexus he mentioned the following important facts One third of the fibres were centripetal the nerve being in fact viscero-sensitive Section of the presacral nerve relieved pain in the pelvic viscera Painless precipitate labour had followed resection in a case of Dr Addis s Increased frequency and ease of emptying of the bladder and rectum followed resection Resection of the presacral nerve appeared to be harmless to all pelvic functions Mr Davis described the operation by Cotte and Leriche and showed the collected results to date He concluded by claiming for the operation a definite sphere of application and as indications for the operation he gave the following (1) severe dysmenorrhoea which has not reacted to medicinal and minor surgical procedures (2) severe intractable pelvic neuralgias especially of inoperable pelvic carcinoma (3) intractable pruritus vulvae and ani (4) as a corollary to other operative procedures in cases of long standing pelvic pain

Treatment of Hydrocephalus

Dr C H WALSH described a new method of treatment of hydrocephalus which he had employed in two cases recently In each case the hydrocephalus was marked and typical and the diagnosis was confirmed by radiography In both cases there was primary inertia and early rupture of the membranes At the time of treatment—in one case fifty four hours following rupture of the membranes—there was only slight dilatation of the cervix In each case the bladder was emptied and the hydrocephalic head was tapped of its cerebro-spinal fluid by plunging a lumbar puncture needle through the abdominal wall and uterus at a point equidistant from the symphysis pubis and umbilicus Local anaesthesia was used Radiographs before and after tappings were shown In one case delivery was spontaneous In the other case delivery had to be assisted Dr Walsh claimed that this was an easy safe and clean method of treatment of hydrocephalus when the head presented Mrs D W CURRIE described a case of rupture in which auto-transfusion of the blood recovered from the abdomen was performed with good results Mr A M CLAYE in a note on the induction of the menopause by radium described a series of cases he had treated with excellent results Mrs CLAYE stressed the use of correct dosage of radium

---

At a special general meeting of the Royal Academy of Medicine in Ireland held in Dublin at the Royal College of Physicians of Ireland on June 8th the following were unanimously elected Honorary Fellows of the Academy N Bishop Harman LL D F R C S W G Willoughby M D C O Hawthorne M D LL D F R C P

Reviews

CHRONIC RHEUMATIC DISEASES

Dr B L WYATT runs a clinic for the treatment of chronic arthritis and his recent volume[1] is based on a detailed study of 400 cases which have received treatment at that clinic The result is a very valuable work but as with many American books the author s own opinions and conclusions are often overlaid and obscured by a mass of observations and statistics culled from the literature with great erudition and labour For example the first section on nomenclature pathology and aetiology only serves to show how many conflicting data can be found on this subject and how little exact knowledge we possess The author is very much wedded to the infective theory and in this most people will find themselves in agreement but when dealing with metabolic factors he confines himself entirely to a consideration of gout There are several authorities in this country who would extend this view considerably and would regard chronic villous arthritis and many cases of fibrositis and osteo-arthritis as of primarily metabolic origin It would seem that theories both of causation and of treatment are largely determined by the locality and circumstances of the practising physicians Thus it is noticeable that those who practise in spas naturally uphold the efficacy of hydrotherapy and in view of the marked metabolic influence of this form of treatment they are apt to claim an extended field for the aetiological importance of metabolic changes Those who practise in the larger cities on the other hand are found to insist on an almost exclusively infective origin and pin their faith on the therapeutic virtues of vaccines and the simple forms of physical therapy This is somewhat naively brought out by Dr Wyatt who writes

> Thermal effects may be produced by hydrotherapy electrical modalities and other means For the average suite of medical offices hydrotherapy is not readily available and reference to the section dealing with the therapeutic adjunct shows that it has well-defined limitations and is only of special value in a comparatively small number of cases

Compare this with the opinions of perfectly honest spa physicians and the rank and file of the medical profession may well ask what they are to believe The chief merits of this book are that the serious social menace of arthritis is well presented and that it is recognized that

> chronic arthritis is not a disease but rather a group of diseases which differ both aetiologically and pathologically It therefore should be apparent why a panacea for these various ills does not exist It is highly probable that as our knowledge increases medical science will make many important contributions to the treatment of chronic joint disease but it is by no means necessary to await these developments
>
> the treatment of chronic arthritis must be assumed by the general practitioner if the present toll of suffering is to be markedly curtailed and the problems of differential diagnosis and composite therapy do not present unsurmountable obstacles to the average careful and conscientious clinician

Dr Wyatt rightly stresses the necessity of composite treatment comprising (1) attention to the general strength and resistance of the patient by diet sunlight and fresh air adapted to the needs of the individual patients (2) removal of sources of infection (3) treatment thereof by suitable vaccines though he recommends larger doses than would be approved by many English authorities (4) heat and (5) massage the latter of which he regards as of especial importance and utility This book is certainly to be recommended to all those interested in chronic rheumatic diseases

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[1] *Chronic Arthritis and Fibrositis* By B L Wyatt, M.D F.A.C.P London Baillière, Tindall and Cox Ltd. 1933 (Pp xi + 302 17 figures 20s.)

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Dr HINDLEY-SMITH'S book *Chronic Rheumatism and the Pre-rheumatic State*[2] is one which we cannot recommend It seems to be retrograde in every respect, since no clinical distinction is drawn between the various types of acute and chronic rheumatism The author claims that every form of these is a stage of the same disease, because it is the result of a pharyngeal infection with a streptococcus This leads to the conclusion—no doubt comfortable to the author—that he can prevent and even cure all sorts and conditions of chronic rheumatism by his own special regime which is characterized by the administration of large doses of vaccine and the application of ultraviolet rays Practitioners with any sort of experience in dealing with this complex group of diseases know only too well that we are still far from knowing all, or even much, about their aetiology, that treatment is difficult and all too often disappointing, and that there is no sovereign remedy for this any more than for any other group of diseases which appear to have a superficial resemblance to each other Such books are apt to mislead the profession and raise false hopes among the public, which it may take some years to prove to be unfounded

FOOD AND DIETETICS

Dr ROBERT HUTCHISON'S *Food and the Principles of Dietetics*[3] made its bow in 1900, and in the succeeding quarter of a century the author produced six editions singlehanded, but for the production of the seventh edition, which was published a month or two ago he obtained the assistance of Professor V H MOTTRAM This textbook has been a standard work for thirty-two years, and its merits are so well known to our profession that it is superfluous to say anything about its general character Founded upon a course of lectures to medical students at the London Hospital, it quickly met with favour among a far wider audience who already knew of Dr Hutchison's gifts as a clinical lecturer The new edition has been extensively revised In particular the first three chapters have been completely rewritten, and for this Professor Mottram is responsible chiefly Among other points it may be noted that the prices given in the tables and plates have all been revised and brought up to the scale of modern costs The general form and scope of the book has, however, been left unaltered and there is every reason to believe that the new edition will maintain the well-earned popularity and prestige of its predecessors It appears at a time when foods and dietaries in health and disease are attracting more general interest than ever before

REACTION OF TISSUES TO ENVIRONMENT

In a small volume entitled *L'État Réactionnel*[4] Professor GUEYSSE PELLISSIER discusses the problem of tissue reaction occurring within the limits of health, resulting from variations in the environment The relationship is obvious in many cases, as in the pigmentation of the skin in tropical countries and the alteration of the blood in high altitudes In some instances, however, the change in the environment escapes detection, and the tissue reaction is apt to be regarded as pathological Cases of this kind seem to occupy an intermediate position between the normal and the pathological, and the author uses the term 'reactional state" to indicate this he has studied the subject more especially in connexion with the lymphatic tissue, which is peculiarly sensitive to alterations in the environment Hyperplasia of this tissue of a purely reactional nature is very readily mistaken for a pathological change The author adduces many examples If rats are reared in cages furnished with a floor of putrid horse dung they remain in perfect health but their lung tissue is found to be loaded with enormous accumulations of lymphocytes, which might be taken to indicate an inflammatory reaction, but are unaccompanied by fibrosis and other definite signs of inflammation Experiments with mild inhalations of formol and turpentine gave similar results in dogs The author has also made a large number of observations on the variation in the amount of lymphatic tissue in the gills of fish which are very suitable for the study of the effect of alterations in the environment He has observed that the gills of river fish always contain lymphatic tissue in greater abundance than sea fish, and with regard to river fish a greater increase in lymphatic tissue is found in those living in water polluted with sewage

The author looks on the above examples as instances of physiological reaction, although overstepping the normal they are not regarded as pathological, and he places them in his reactional category The subject is interesting in its bearing on the question of the significance of such conditions as hypertrophy of the tonsils in children and the accumulations of lymphatic tissue that are common in the vermiform appendix, which the author regards as merely reactional Although not in themselves pathological, the lymphatic accumulations may cause damage to the tissues in which they occur In the case of the tonsil, for example, the lymphocytes infiltrate the overlying epithelium, destroying it in places, and thus creating gaps which may facilitate the entry of microbes The first half of the book is devoted to a valuable description of the various types of lymphatic tissue and their distribution in the body

THE LIVING CELL

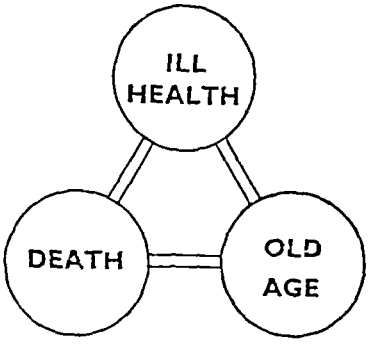
In a volume entitled *The Action of the Living Cell*[5] Dr FENTON B TURCK has published the main results of his experimental work on problems related to cell metabolism This work he has carried on for some forty years, and during this period the results have been communicated to various medical journals Perhaps the most important of Dr Turck's observations has been the demonstration of the relation between injured tissues and shock and the toxic nature of most of the manifestations of this condition In this matter Dr Turck's work was undoubtedly pioneer, the acceptance of his conclusions was long delayed, but they are now, in general, regarded as correct Dr Turck subsequently showed that as a result of injury, such as simple trauma or burn, a process of autolysis occurred in the damaged tissue cells, and that to the absorption of the autolytic products were due the major phenomena of shock Since these experiments he has extended his researches on the nature and effect of autolytic products in various directions He has been unable, even with the aid of expert chemical assistance, to define the chemical nature of the toxic products with which he has worked, but has adopted the designation "cytost" for these products According to his views "cytost" may be produced by any form of injury—mechanical, irritant or bacterial—also by fatigue and by a great variety of other influences On the evidence he does not appear to be entitled to assume, as he does

[2] *Chronic Rheumatism and the Pre rheumatic State* By J D Hindley Smith M A M R C S London H K Lewis and Co, Ltd 1932 (Pp 154 5s 6d)

[3] *Food and the Principles of Dietetics* By R Hutchison M D, F R C P and V H Mottram M A Seventh edition London E Arnold and Co 1933 (Pp xvi + 630 illustrated 21s net)

[4] *L'État Réactionnel* Par Professeur A Gueysse Pellissier Paris Libraire Felix Alcan 1932 (Pp 224 54 figures 20 fr)

[5] *The Action of the Living Cell* Experimental Researches in Biology By Fenton B Turck New York The Macmillan Company 1933 (Pp x + 308 17 figures 18s net)



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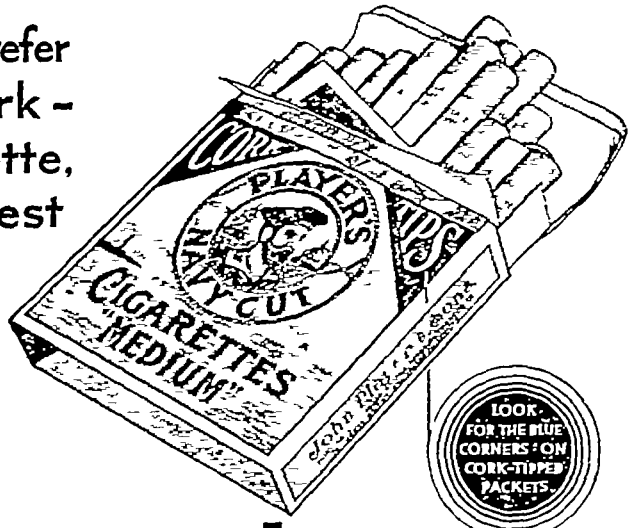

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that a single toxic product results from the action of these various influences on cells of all kinds He expects that many of his deductions and concepts will meet the opposition usually accorded new theories with the logic of some of his arguments fault must be found but there can be no doubt that the experimental work he records breaks new ground in directions which seem well worth following

PSYCHOLOGY AND PSYCHOPATHOLOGY

A Psychologist's Point of View[1] by Dr CHARLES S MYERS contains twelve semi popular essays covering a wide range of topics of general interest The book opens with an essay on Human Improvability which reveals a note of hopefulness and optimism characteristic of the author's outlook on life Three of the papers are concerned respectively with industrial psychology education and vocations and hindrances to output these being practical problems to which Dr Myers has given much attention during the last few years On the anthropological side we find two interesting chapters on The Taste names of Primitive People and The Beginnings of Music This eminently readable book also includes chapters on such widely differing problems as Success Prayer Freudian Psychology and Instinct and Intelligence

Psychopathologists will welcome the publication of a relatively small book on *Psychology of Sex*[2] by Dr HAVELOCK ELLIS This book will meet a need since the monumental volumes on sex and its morbid deviations by the same author deal too exhaustively with the subject to be of practical value to the busy practitioner This smaller volume would appear to provide exactly the amount of knowledge required by the physician when confronted with the not inconsiderable number of patients who are the subjects of sexual difficulties or perversions In his introduction to this volume Dr Havelock Ellis observes that again and again where sexual anomalies are concerned patients complain that the practitioner has shown no comprehension of their sexual difficulties or peculiarities either brushing them aside or treating them as vicious Furthermore the author suggests it is doubtless the patient's consciousness of this attitude in his doctor which leads many physicians to declare that psycho-sexual anomalies are very rare and that they scarcely ever meet with them It would appear to be most desirable that instruction on this subject should be imparted to senior medical students and this volume might suitably be utilized as a textbook since it would seem adequately to convey the information necessary to help those patients who complain of sexual difficulties

Psycho-Analysis and its Derivatives[3] by Dr H CRICHTON MILLER is a useful addition to the Home University Library series It is the aim of the author to study psycho-analysis and the other schools of psychopathology from an external and impartial point of view and in the course of this book he gives a critical survey of Freud's formulations together with those of Jung and Adler The book is lucid in style and may safely be recommended to those who wish to acquaint themselves with the formulations of the three leading schools of psychopathology In a concluding chapter an account is given of the work of Prinzhorn whose book on psychotherapy was recently reviewed in our columns

Medical Pamphlet No 6 of the Individual Psychology Publications includes an interesting communication by Dr Erwin Wexberg one of the leaders of the Adlerian movement The subject of this address is *Individual Psychology and Practice*[4] Also included in this pamphlet is a translation of a paper by Dr Olga Knopf on individual psychology and gynaecology the purpose of which is to show that psychical illness can appear in the garb of an organic disturbance This and the earlier publications of the same series will be found helpful to the medical practitioner

INTERNAL DERANGEMENTS OF THE KNEE

The good opinion which we expressed nine years ago in our review of the first edition of Mr TIMBRELL FISHER'S monograph on *Internal Derangements of the Knee-Joint*[5] is fortified and extended on perusal of the second This is not merely a reprint but a much enlarged and amplified work embodying a great deal of additional matter and enriched by the experience acquired during the interval It is half as large again as the first edition and contains a proportionately larger number of illustrations As the author points out, the subject was little considered on the Continent until recent years but has attracted a great amount of attention lately with the result that knowledge of it has increased Cyst of a semilunar cartilage is cited by the author as a case in point Between 1904 and 1914 only five cases were on record in surgical literature The next ten years produced nineteen more while in the succeeding eight years at least eighty two further cases have been described This extension of knowledge is largely due to Mr Fisher's work and publications on all forms of derangement of the knee-joint The records of after results of treatment which he gives in this volume are of interest and value The notes on various cases and conditions contributed by the late Sir Robert Jones and printed as an appendix are of great value and have a pathetic interest for as Mr Fisher points out they are probably the last surgical writings from the pen of that gifted and beloved orthopaedic surgeon

The advice as to modes of approach to the interior of the knee-joint is sound and we agree with Mr Fisher in regretting that Continental surgeons especially French should advocate incisions which involve a quite unnecessary division of the lateral ligament. Good exposure of the joint and consequent complete removal of the offending cartilage are desiderata of great importance In this respect the author has modified the opinion expressed in the first edition for which he gives convincing arguments In some cases in which it is difficult to be sure that the whole cartilage is removed through the usual anterior incision a modification of Allwyn Smith's combined anterior and posterior incisions is recommended So far from admitting that removal of a semilunar cartilage predisposes to subsequent arthritis Mr Fisher quotes with approval the dictum that a successful operation upon the injured semilunar cartilage is the safest insurance against later arthritis

We think that this monograph may be accepted as the leading and surest guide to this important subject

[1] *A Psychologist's Point of View* By C S Myers C B E F R S London W Heinemann Ltd 1933 (Pp 207 7s 6d net.)

[2] *Psychology of Sex* By Havelock Ellis London W Heinemann Ltd 1933 (Pp 322 12s 6d net.)

[3] *Psycho-Analysis and its Derivatives* By H. Crichton Miller M A M D The Home University Library London Thornton Butterworth Ltd. 1933 (Pp 256 2s 6d net.)

[4] *Individual Psychology and Practice* (1) By Dr. Erwin Wexberg Olga Knopf and H C Squires Medical Pamphlets no 6 Individual Psychology Publications London C W Daniel Company 1932 (Pp 62 2s 6d net.)

[5] *Internal Derangements of the Knee Joint* By T G Timbrell Fisher M C M B Ch B F R C S Second edition London H K Lewis and Co., Ltd. 1933 (Pp xv + 295 120 figures. 15s net.)

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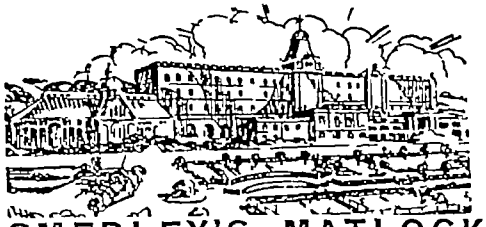

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Notes on Books

Mr E W HEY GROVES's illustrated *Synopsis of Surgery*[11] has now passed into a tenth edition, its predecessor appeared in 1930 This popular compendium has been revised and brought up to date, involving the rewriting of the sections on radium treatment of malignant disease, on the surgery of the sympathetic nervous system, and on the vaseline pack method (Winnett-Orr) of treating septic bone conditions A new chapter outlining the principles governing amputations has been added In this it is mentioned that the art of making artificial limbs has so greatly improved that it is now the case that only those types of amputation after which an artificial limb can be fitted are worth while The book is a highly condensed, but thoroughly practical, survey of the whole field of modern surgery

Principles of Pharmacy,[12] by H B MACKIE, is a textbook designed for students training for examinations in this subject, and is based on the lecture course given by the author at Brighton Technical College The distinctive feature of the work is that he endeavours to explain pharmaceutical methods in terms of physical chemistry The methods of pharmaceutical chemistry were evolved by empirical practice, but any attempt at their theoretical explanation calls for a discussion of difficult and obscure problems in physical chemistry Among the subjects chosen by Mr Mackie for his lessons are the laws of adsorption, the physical chemistry of emulsions, the properties of colloidal solutions, and the mechanism of enzyme action These and many other problems are touched on

Mr JAMES KEMBLE has produced a pleasant little book which he calls *Idols and Invalids*,[13] as a result of browsing in some byways of medical history The essays follow no chronological order, for the first deals with Byron, the last with Queen Anne He includes in his purview Columbus, Judge Jeffreys, Louis XV, the Borgias, Cleopatra, Nelson, and Henry VIII He makes no pretence of original research, but shows evidence of wide reading and a cultured mind He advances sane and plausible reasons for the views he advocates, although some of them are at variance with opinions generally received as to the illnesses of the persons he writes about He throws light upon many conditions that have puzzled previous writers for he has a sound knowledge of modern medicine The book ends on a deep note of pessimism, but in spite of this it serves to pass an idle hour both for the lay and for the medical reader

Whitla's Pharmacy, Materia Medica and Therapeutics[14] was first published in 1881, and during the next forty years eleven editions were prepared under the personal and sole supervision of Sir William Whitla The present edition has been revised by Professor J A GUNN, who has made the alterations necessitated by the appearance of the new *British Pharmacopoeia*, but has avoided alterations in the general form of the work, thus preserving its original scope and character The first two parts are devoted to pharmacy and prescription writing, and this is followed by an account of the materia medica of the *B P* These together occupy nearly half the volume In Part IV the therapeutic properties of the official remedies are treated in alphabetical order, and the accounts contain many interesting observations based on the clinical experience of the original author Part V deals with a selected list of non official remedies, and here the pharmaceutical properties and the therapeutic actions of the drugs are described together The volume concludes with an index of poisons and their antidotes This summary indicates the general scope of the text, which as its title shows, is mainly concerned with the pharmaceutical properties and the therapeutic application of drugs

In a number largely devoted to rheumatic diseases it is appropriate to mention two books received during the past few days *Rheumatismus und Grenzgebiete* by Dr ANTON FISCHER of Aachen (Berlin Julius Springer), and a second edition of Dr A H DOUTHWAITE's *Treatment of Rheumatoid Arthritis and Sciatica* (London H K Lewis and Co), which was favourably noticed in these columns in 1929

[11] *A Synopsis of Surgery* By E W Hey Groves M S M D Tenth edition Bristol J Wright and Sons Ltd 1933 (Pp viii + 693 13 plates 164 figures 17s 6d net)

[12] *Principles of Pharmacy* By H B Mackie B Pharm Ph C London J and A Churchill 1932 (Pp 281 67 figures 10s 6d)

[13] *Idols and Invalids* By J Kemble Ch M F R C S London Methuen and Co, Ltd 1933 (Pp 212 6s net)

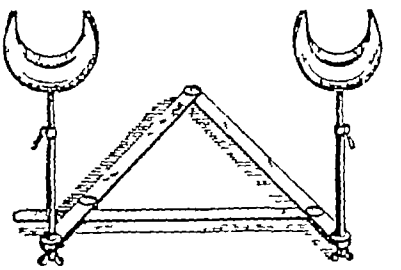
[14] *Whitla's Pharmacy Materia Medica and Therapeutics* Revised by J A Gunn, M A M D D Sc F R C P Assisted by H Berry, B Sc and J Clifford Hoyle M D Twelfth edition London Baillière Tindall and Cox 1933 (Pp xii + 645 16 figures 12s 6d)

Preparations and Appliances

PORTABLE LITHOTOMY SUPPORT

Dr SHEILA MACPHERSON (Invergowrie, Perthshire) writes The portable lithotomy support shown in the accompanying illustration has been designed for me by Miss Alix Crichton It has proved so useful in obstetrical operations performed in the patient's own home that I should like to draw the attention of the medical profession to its advantages

The appliance comprises a base and leg supports The base is a flat triangle adjustable to give any width of abduction of the legs It is placed under the mattress of a bed or under a folded blanket on a table The leg rests



fit into sockets which project beyond the angles of the base and which telescope to the required height, while the crutch tops detachable for cleaning are specially designed to obviate harmful pressure on the popliteal structures The apparatus is sufficiently stable to remain in position even during the strongest pull in difficult instrumental delivery It retains the patient without the aid of an assistant so that the single handed practitioner even in the most adverse circumstances may be afforded the optimum accessibility to the parts for delivery, perineal repair and antiseptic and aseptic work The whole appliance folds neatly into a case for carrying It is made by Messrs Adnatt and Partners Walmer House, Regent Street W 1

AN ELECTRO MAGNETIC EXTRACTOR

Magnets for the removal of foreign bodies of iron or steel from the eye have been in use for many years Rod magnets have had their field of action which is by no means to be despised while the more powerful electro magnets have done good service for close on fifty years It must be nearly that time since Snell of Sheffield introduced his convenient hand form of electro magnet and it is fully half that time since Haab devised his giant magnet Something of the usefulness of these magnets has passed since the introduction of non magnetic steels for the making of fine tools But for all other works where iron is used in manufacture there is value in the provision of a hand electro magnet for the service of the works doctor or nurse Messrs Frank Moss and Co of 25 Warwick Road, Coventry have put on the market a useful form of electro-magnet which is as portable as an electric ophthalmoscope and can be energized by attachment of a dry battery or accumulator of 2 to 6 volt capacity It is stated that the drawing power of the magnet averages from 4 to 10 ounces The specimen tested showed a pull of 4 ounces That is ample for the removal of foreign bodies from the eye Indeed a more powerful pull might be dangerous, since it might tempt the unwary to extract fragments that had penetrated the cornea Such cases should only be dealt with in hospital The magnet under examination is well made, the end of the applicator is blunt so is not likely to be dangerous, and the cost (35s in case post free) is comparatively small

ST. ANDREW'S HOSPITAL
FOR MENTAL DISORDERS,
NORTHAMPTON.

FOR THE UPPER AND MIDDLE CLASSES ONLY

President THE MOST HON. THE MARQUESS OF EXETER C.M.G. A.D.C.

Medical Superintendent DANIEL F. PAMBAKT M.A., M.D.

The registered Hospital is situated in 120 acres of park and pleasure ground. Voluntary patients who are suffering from incipient mental disorders or who wish to prevent recurrent attacks of mental trouble, temporary patients and certified patients of both sexes are received for treatment. Careful clinical, biochemical, bacteriological and pathological examinations. Private rooms with special nurses, male or female, in the Hospital or in one of the numerous villas in the grounds of the various branches can be provided.

WANTAGE HOUSE

This is a Reception Hospital in detached grounds with a separate entrance to which patients can be admitted. It is equipped with all the apparatus for the most modern treatment of Mental and Nervous Disorders. It contains special departments for hydrotherapy by various methods including Turkish and Russian baths, the prolonged immersion bath, Vichy Douche, Scotch Douche, Electrical bath, Plombières treatment, etc. There is an Operating Theatre, a Dental Surgery, an X-ray room, an Ultra-violet Apparatus, and a Department for Diathermy and High Frequency treatment. It also contains Laboratories for biochemical, bacteriological and pathological research.

MOULTON PARK

Two miles from the Main Hospital there are several branch establishments and villas situated in a park and farm of 650 acres. Milk, meat, fruit, and vegetables are supplied from the Hospital farm, gardens, and orchards of Moulton Park. Occupation therapy is a feature of this branch, and patients are given every facility for occupying themselves in farming, gardening, and fruit-growing.

BRYN-Y-NEUADD HALL

The seaside house of St. Andrew's Hospital is beautifully situated in a Park of 330 acres, Llanfairfechan, amidst the finest scenery in North Wales, on the North West side of the Estate, a mile of sea coast forms the boundary. Patients may visit this branch for a short seaside change or for longer period. The Hospital has its own private bathing house on the shore. There is trout fishing in the Park.

At all the branches of the Hospital there are cricket grounds, football and hockey grounds, lawn tennis courts (grass and hard courts), croquet grounds, golf courses, and bowling greens. Ladies and gentlemen have their own gardens, and facilities are provided for handicrafts such as carpentry, etc.

For terms and further particulars apply to the Medical Superintendent (Telephone No. 2356 and 2357 Northampton), who can be seen in London by appointment.

TYKEFORD ABBEY, NEWPORT PAGNELL,
BUCKS
FUNCTIONAL NERVOUS DISORDERS, MEDICAL & CONVALESCENT CASES

An Approved Nursing Home for reception of Female Cases under the Mental Treatment Act

The Home is a Mansion of Historical interest standing in 9 acres of garden and ground and is situated 14 miles from Northampton and 12 miles from Bedford on the main London to Northampton Road, fifty miles from London. Both sexes are accommodated. Psychotherapeutic Treatment is used extensively in suitable cases. Radiant Heat, X-Ray and Ultra Violet Light, Diathermy and Foam Bath. Billiards, tennis, etc. Fees from five guineas per week. Apply Dr. D. E. M. DOUGLAS MORRIS. Telephone: Newport Pagnell 121.

HAYDOCK LODGE,
NEWTON-LE-WILLOWS, LANCASHIRE

Phone 11 Ashton-in-Makerfield.

For the reception and treatment of PRIVATE PATIENTS of both sexes of the UPPER AND MIDDLE CLASSES suffering from mental and nervous diseases, either voluntarily or under certificate. Patients are classified in separate buildings according to their mental condition. Situated in park and grounds of 400 acres. Self-supported by its own farm and gardens in which patients are encouraged to occupy themselves. Every facility for indoor and outdoor recreation. For terms, prospectus, etc., apply MEDICAL SUPERINTENDENT.

THE COPPICE, NOTTINGHAM
HOSPITAL FOR MENTAL DISEASES

This Institution is exclusively for the reception of a limited number of Private Patients of both sexes of the Upper and Middle Classes at moderate rates of payment. It is beautifully situated in its own grounds on an eminence a short distance from [illegible] and from its singularly healthy position and comfortable every facility for the relief and cure of those mentally and Temporary Patients received.

Tel. 6411. *For terms, etc., apply to the Medical Superintendent.*

COURT HALL, KENTON, EXETER,
SOUTH DEVON

For the care and treatment of Ladies suffering from Mental Diseases. Limited to eight patients. Telephone Starcross 59.

CLIFFDEN, TEIGNMOUTH. In connection with Court Hall for early and convalescent cases. Cliffden is a large well appointed house with lovely views of the South Devon Coast. It is beautifully situated in grounds of 24 acres. The gardens are very attractive and there is a private road to the beach.

Resident Physicians BERTHA M. MULES, M.D., B.S., ANNIE S. MULES, M.R.C.S., L.R.C.P.
Telephone Teignmouth 289.

CHISWICK HOUSE

A Private Mental Hospital for the Treatment and Care of Mental and Nervous Disorders in both Sexes.

Now removed to

CHISWICK HOUSE, PINNER, MIDDLESEX

Telephone PINNER 234

A modern country house 12 miles from Marble Arch in beautiful secluded grounds. Fees from 10 guineas per week inclusive. Cases under certificate and Voluntary Patients received for treatment. Special provision for Temporary patients under the new Mental Treatment Act.

Douglas Macaulay, M.D., D.P.M.

BARNWOOD HOUSE,
GLOUCESTER

A REGISTERED HOSPITAL for the CARE and TREATMENT of LADIES and GENTLEMEN suffering from NERVOUS and MENTAL DISORDERS. Within two miles of the G.W. Railway and L.M. & S. Railway Stations at Gloucester. The Hospital is easily accessible by rail from London and all parts of the United Kingdom. It is beautifully situated at the foot of the Cotswold Hills and stands in its own grounds of over 280 acres. Voluntary Boarders of both sexes are also received for treatment.

Special accommodation for Lady Voluntary Boarders is also provided at the MANOR HOUSE, which has its own private grounds and is entirely separate from the main Hospital.

For particulars as to terms, etc., apply to—ARTHUR TOWNSEND, M.D., Medical Supt.
Telephone No. 620 Barnwood.

HILL END AND HIGHFIELD HALL,
ST. ALBANS

(20 miles from London.)

Ladies suffering from all forms of Mental Illness are received for treatment on main lines as Voluntary, Temporary or Certified Private Patients at the Hill End Mental Hospital. Convalescent and mild cases can be treated in a delightful country mansion with extensive grounds known as Highfield Hall situate about a mile away from the Hospital. FEES TWO TO THREE GUINEAS PER WEEK.

For further particulars apply to the Medical Supt., W. J. T. RIVERS, L.R.C.P., D.P.M., Hill End Mental Hospital, St. Albans, Herts.

FENSTANTON,
CHRISTCHURCH ROAD
STREATHAM HILL, S.W.2.

A Private Home for the Care and Treatment of a limited number of Ladies with Mental and Nervous Disorders. Separate accommodation for Voluntary Patients. Large Mansion with 12 acres of ground. (*See Medical Directory*, p. 2294.) Apply J. H. EARLES, M.D., Resident Physician. Telephone: Tulse Hill 7121.

HOME FOR EPILEPTICS,
MAGHULL (near LIVERPOOL)

Chairman Brig.-Gen. G. Evelyn Tate, C.B.E., V.D., D.L.

FARMING and OPEN AIR OCCUPATION for PATIENTS.

A few vacancies in 1st and 2nd Class Houses.

FEES: 1st Class (men only) from £3 per week upwards. 2nd Class (men and women) £2 per week.

For further particulars apply
C. EDGAR GRISEWOOD, Secretary
20 Exchange Street East, Liverpool.

WYE HOUSE, BUXTON

For the treatment of Ladies and Gentlemen mentally afflicted. Voluntary Boarders received. Situated 1,200 ft. above sea level, facing S. [illegible]. For terms, apply to the Resident Medical Superintendent, W. W. HEATON, M.D. [illegible]. T.

SPRINGFIELD HOUSE,
Near BEDFORD (Phone 3417)

For Mental Disorders with or without Certificates.

Resident Physician: CEDRIC W. BOYER.

Ordinary Terms: Five Guineas per week.

(Including Separate Bedroom, which is well above). Interviews in London by appointment.

ARTHRITIS IN THE SPA HOSPITALS

The spa hospitals have a long and honourable record for the treatment of rheumatic diseases but up to twenty years ago their practice was limited mainly to the use of mineral waters of the particular spa for the benefit of the poor The use of mineral waters in baths douches etc was the earliest form of physical treatment for rheumatic conditions and was based largely upon empiricism but the last few years have seen great developments in the study of these diseases and of their treatment Without belittling the results obtained under the more primitive conditions it must be admitted that research—clinical bacteriological radiological and biochemical—has opened up a new era with the prospect it is to be hoped of bringing relief and cure to many cases of arthritis etc which would have formerly been regarded as of a hopeless nature from the onset

In such research the leading spa hospitals have taken a prominent part in spite of the many handicaps with which they have to contend They are all supported by voluntary contributions and are entirely independent of the administration of the spa itself Consequently except at Bath which has its own difficulties they are hampered by the system of subscribers letters of recommendation and it is not an easy matter to keep patients suffering from arthritis in the hospital for the long period which is desirable in those cases where in patient treatment alone is capable of giving anything like good results Too many patients are sent to spa hospitals under the impression that they are merely convalescent homes and beds are thus occupied which might otherwise be used to greater advantage for conditions in which the special methods of investigation and treatment available may make all the difference to prognosis

The use of a subscriber's recommendation to secure a cheap and pleasant holiday is not unknown subjective complaints of muscular rheumatism and the like being put forward as an excuse Another large class of cases needing to be regulated in their use of these hospitals is chronic osteo-arthritis for which little can be done and that little should be available in out patient clinics for physical treament

If the available accommodation could be greatly increased it would probably do more for the effective treatment of arthritis than could be attained at as low a cost in any other way A proper system by which their advantages could be restricted to suitable cases instead of to patients fortunate enough to get the recommendation of a subscriber and by which the patient could be kept in the hospital as long as he was making better progress there than could be obtained at home even within reach of a physical treatment centre is essential if the best use is to be made of the spa hospitals The important factors in treatment—rest favourable climatic conditions diet and nursing—are under present conditions only to be obtained in such institutions They should stand in the same relation to the treatment of arthritis as do sanatoriums to the treatment of tuberculosis the analogy is sound and its importance cannot be too strongly insisted upon

While in patient treatment is spoken of it must be understood that patients are only confined to bed exceptionally Those suffering from febrile conditions acute arthritis or spondylitis and severe sciatica may need to be kept in bed for a part at least of their stay in the hospital Other patients are at liberty to go out of doors during the daytime for exercise and fresh air are important factors in assisting the effect of treatment and in restoring health

In addition to mineral baths these hospitals are fully equipped for treatment by electricity by light rays—ultra-violet and infra red—by massage and by manipulation A massage school is a feature of one of them in which students are fully trained for the examination of the Chartered Society of Massage and Medical Gymnastics At Bath Buxton and Harrogate orthopaedic treatment is carried out under the direction of visiting surgeons a most important feature in the treatment of many joint conditions and especially in spondylitis Cases requiring operation for the relief of deformity are transferred to other hospitals

Radiological investigation is fully provided for by modern installations in skilled hands and excellent work is done Bacteriological and biochemical examinations are part of the routine in all cases in which they can possibly be of any service in diagnosis and treatment Many important pieces of original research have emanated from the laboratories of the spa hospitals

BATH

The Royal Mineral Water Hospital was founded in 1738 and was incorporated in 1739 by an Act of Parliament in which it is stated that any person resident in and belonging to Great Britain or Ireland whose circumstances are such that they are not able to have the benefit of the Bath waters without charitable relief are entitled and have a right to the relief of the Hospital It has now 158 beds and 1 145 patients were admitted in 1932 with an average duration of stay of forty four days There are no out patients The hospital is fully equipped for all forms of mineral water and electrical treatment and massage There is an x ray and dental department and a laboratory with a full time pathologist In addition to mineral baths of all kinds supplied by the Bath mineral springs there is a complete electrical installation and special attention is given to orthopaedic treatment

BUXTON

The Devonshire Hospital for Rheumatic Diseases had its origin in a charity which provided free use of the mineral waters for the poor the first published report was in 1785 Accommodation for in patients was first provided in 1858 through the munificence of the sixth Duke of Devonshire and to this the hospital owes its name It has now 300 beds and in 1932 treated 3 504 in patients and 514 out patients the average stay in hospital being twenty five days Admission is by subscriber's letter as a rule but arrangements are made for admission of a limited number of cases by a special subscription equal to the cost of maintenance The baths are supplied by the Buxton mineral springs and in addition there is a complete installation for electrical and light treatment and a massage school A bacteriological laboratory with a full time pathologist was provided in 1912 together with an x ray outfit This has been brought fully up to date and there is a full time radiographer A special feature is also a laboratory for chemical research which has a full time biochemist at its head Orthopaedic work is carried out under the direction of visiting orthopaedic surgeons and is a special feature

HARROGATE

The Royal Bath Hospital was founded in 1824 and rebuilt in 1888 with it is associated the Rawson Convalescent Home There are 150 beds and 1 805 patients were admitted during 1932 the average length of stay being twenty three days Admission is by subscriber's letter and is subject to the approval of the honorary physicians though admission to the Rawson Home can be arranged at one and a half guineas a week subject to the approval of the committee In common with the other spa hospitals rheumatic diseases are the chief conditions treated but disorders of the liver and skin diseases are also admitted The sulphur waters are supplied from the wells of the Harrogate Corporation and patients have the free use of the whole range of the waters for drinking purposes There is full provision also for electrical

BETHLEM ROYAL HOSPITAL, for Nervous and Mental Disorders,

Monks Orchard, Monks Orchard Road, Eden Park, Beckenham, Kent

Reg Tel Address Bethlem Beckenham *Telephone* Springpark 1180 1181
Station Eden Park (Southern Railway)

President LORD WAKEFIELD OF HYTHE C B E LL D
Treasurer SIR LIONEL FAUDEL PHILLIPS Bart
Physician Supt J G PORTER PHILLIPS M D F R C P

This Registered Hospital is now situated at Monks Orchard in some 250 acres of park pleasure and farm grounds
Applications can be considered on behalf of patients of the educated classes in a presumably curable condition
With a view to early treatment voluntary or uncertified patients are admitted
Patients who can contribute 5 guineas weekly towards the cost of treatment and maintenance may be received as vacancies arise The Committee will also consider applications for admission at lower rates, and in certain cases will be prepared to admit patients free of charge
Every facility for specialized investigation and treatment is provided in the Lord Wakefield Science and Treatment Unit In this unit is found the X-Ray and Dental Departments and the Bio-Chemical Pathological and Psychological Laboratories
Furthermore provision is made for Electro-Therapy and Hydro-Therapy to be carried out in all their forms and Occupational Therapy under competent instruction is encouraged
In addition to the Resident Medical Staff Consultants in special branches of Medicine and Surgery are available whenever required
The comfort of sensitive patients is greatly enhanced by the fact that the majority are given single bedrooms
For forms and further particulars apply to the Physician Superintendent at the Hospital

PECKHAM HOUSE, 112, Peckham Road, London, S.E.15.

Telegrams "Alleviated, London" **Telephone Rodney 4741-4742**

The above House which was established in 1826, is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders Certified voluntary and temporary patients are received Separate houses for treatment and accommodation of special cases adjoin the Institution There is a seaside branch, Kearsney Court, near Dover, to which patients may be sent for treatment or on holiday Motor and carriage exercise is provided as required Patients can avail themselves of a course of physical drill Tennis Courts Entertainments, dances, and indoor amusements held throughout the year Terms from £3 3s per week
Illustrated prospectus and further particulars can be obtained from the **Medical Superintendent**

NORTHUMBERLAND HOUSE,

GREEN LANES, FINSBURY PARK, N 4

Telegrams SUBSIDIARY LONDON *Telephone* NORTH 0889

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses
Conveniently situated four miles from Charing Cross Easy access from all parts Six acres of ground highly situated, facing Finsbury Park Private Suites Voluntary Patients and Temporary Patients received without certification.

Convalescent Home **Kearsney Court, Dover** For further particulars apply to the **Medical Superintendent**

CHEADLE ROYAL MENTAL HOSPITAL,

CHEADLE, CHESHIRE.

This REGISTERED HOSPITAL with a SEASIDE BRANCH at Colwyn Bay, N Wales, is for the treatment and care of those of the Upper and Middle Classes suffering from MENTAL and NERVOUS DISEASES
The Hospital is governed by a COMMITTEE appointed by the TRUSTEES of the Manchester Royal Infirmary
In addition to the Main Building there are separate villas Extensive grounds Hard and grass tennis courts cricket and croquet grounds and a court for badminton There are also wireless installations Golf may be had within easy distance Occupational Therapy
VOLUNTARY TEMPORARY AND CERTIFIED PATIENTS received
The Hospital is nine miles from Manchester, 50 minutes by rail from Liverpool and 3½ hours from London
For terms and further particulars apply to the Medical Superintendent J A C ROY M B who may be seen in Manchester by APPOINTMENT
Telephone CATLEY 2231 (3 lines)

CAMBERWELL HOUSE, 33, Peckham Road, London, S.E.5.

Telegrams PSYCHOLIA LONDON *Telephone* RODNEY 4731—4732

FOR THE TREATMENT OF MENTAL DISORDERS

Also completely detached Villas for mild cases with private suites if desired Voluntary Patients received Twenty acres of grounds Hard and Grass Tennis Courts Putting Greens Bowls Croquet Squash Rackets and all indoor amusements including Wireless and other Concerts Occupational Therapy, Callisthenics and Dancing Classes X ray and Actino-therapy Prolonged Immersion Baths Operating Theatre Pathological Laboratory Dental Surgery and Ophthalmic Dept Chapel Senior Physician Dr HUBERT JAMES NORMAN assisted by three Medical Officers also resident and visiting Consultants
An illustrated Prospectus giving fees which are strictly moderate may be obtained upon application to the Secretary

The Convalescent Branch Is HOVE VILLA, BRIGHTON, and Is 200 feet above sea-level

THE OLD MANOR SALISBURY

A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS

Extensive grounds Detached Villas Chapel Garden and dairy produce from own farm Terms very moderate

CONVALESCENT HOME at BOURNEMOUTH

Detached Villas standing in 12 acres of ornamental grounds with tennis courts etc., which Voluntary Temporary or Certified Patients may visit, by arrangement for long or short periods

Illustrated Brochure on application to the Medical Superintendent, The Old Manor, Salisbury Telephone 51

DARTMOOR CONVALESCENT HOME. 750 FEET ABOVE SEA LEVEL

Established 1903 for Treatment of Pulmonary and other forms of Tuberculosis Sheltered Situation on the slopes of the bracing moorland. Radiographic Installation Electric Light. Central Heating Separate Bedrooms Efficient Treatment combined with individual comfort and minimum restrictions Illustrated Prospectus on request to the Resident Physician C H BERRY, M R C S L R C P Torr House Chagford, Devonshire. *Telephone* 11 CHAGFORD *Telegrams* TORR, CHAGFORD

and light treatment and massage Radiologists bacteriologists and a research chemist are attached to the staff A rheumatism research centre is about to be established and a whole time research worker appointed under the aegis of the University of Leeds

OTHER SPA HOSPITALS

There are smaller institutions for the spa treatment of the poor at Droitwich Llandrindod Wells, Strathpeffer and Woodhall Spa, but at some of these a small payment is required They are capable of great expansion on the lines of the hospitals at Bath, Buxton and Harrogate, and this is very desirable to meet the increasing demand for such treatment as they afford to patients of the poorer classes At the Warneford Hospital at Leamington there is also provision for mineral water and electrical treatment, though it is in the main a general hospital

SOIL AND CLIMATE IN RELATION TO RHEUMATIC DISEASES

DISCUSSION AT THE EASTBOURNE PUBLIC HEALTH CONGRESS

At the annual congress at Eastbourne of the Royal Institute of Public Health on June 1st a discussion took place on "Soil and Climate in Relation to Rheumatic Diseases" This was believed to be the first occasion on which medical men and meteorologists had participated in a joint discussion, and the chair was taken by SIR GILBERT T WALKER, F R S, professor of meteorology at the Imperial College of Science and Technology

DR E C WARNER (assistant physician, Charing Cross Hospital), in introducing the subject, spoke first of juvenile rheumatism, though bringing in to some extent the acute rheumatism of adults He said that the relationship to climate must be considered over a period of years There was considerable variation in the intensity of acute rheumatism from one year to another some years were more or less epidemic in this respect Acute rheumatism was distributed more particularly in the temperate and subtropical zones, and in the northern hemisphere the figures for the large hospitals showed that from 3 to 7 per cent of all admissions were cases of this type The disease was much rarer in the Tropics and in the Arctic, where the Eskimos were almost immune He gave some figures showing the variation in incidence with latitude in the United States For five recent years the incidence of rheumatic cases to total medical admissions in the part of the United States near the Canadian border, in latitude 45–50°, was 2 7 per cent , in latitude 40–45° it was 1 5 , in latitude 35–40° it was in the neighbourhood of 0 6 , and towards the Mexican border it was about 0 3 In this country it was a little difficult to assess the difference between inland and coastal climates, and information was lacking as to variations between place and place It was stated, though also denied, that in Cornwall the Isle of Wight, and Guernsey rheumatic disease in children was particularly rare The influence of sunshine was also difficult to assess From the fact that the maximum number of cases occurred in the winter months it might be inferred that sunshine was beneficial, as it undoubtedly was in treatment, but that would hardly apply in the instance of the Eskimos, where rheumatism was a curiosity Observations by Newsholme and Sandison had shown that after a summer of unusual sunshine the incidence of rheumatism was much higher in the succeeding winter Dampness was another factor to be considered, lowering resistance as it did to all types of disease, not juvenile rheumatism only The greatest incidence of juvenile rheumatism occurred along the course of rivers or former watercourses, or even on the sea coast In New York some investigation had shown that the smallest number of cases occurred in districts furthest away from the river, and Dr Butterworth had shown the same kind of thing in Wigan a few years ago In the St Thomas's Hospital investigation by the Medical Research Council an unduly large proportion of persons who had suffered from rheumatic fever were found to have lived within half a mile of the Thames, the Wandle, the Graveney, or the Surrey Canal In the middle floors of tenement houses rheumatism was rarer than in the top or bottom floors suggesting again that dampness played a part But if dampness was such a considerable factor, why was the incidence of juvenile rheumatism in Holland comparatively low, and why should the incidence in country children be lower than in town children, seeing that the former had to walk long distances to school across damp and muddy fields? In 1914 Newman found that the incidence of rheumatic heart disease in industrial areas was 8 per cent , in residential areas 5 9 per cent , and in rural areas 2 6 per cent This was borne out by the figures for Army conscripts in the war, when, in the men from industrial Cardiff, the incidence of valvular disease of the heart was 22 per 1,000 examined, while in the rural areas of Carmarthenshire it was only 2 per 1,000 Again if dampness played such a part, why was the incidence so low at Eton and other colleges on the river? It looked as though dampness of the neighbourhood might be of not quite so much importance as dampness of the individual and his immediate surroundings It had been suggested that the reason why the very poorest families showed a lower incidence of rheumatic fever than the artisan class was because the latter lived in single houses, perhaps of the "mushroom" type, not properly dried before habitation, whereas the poorest families lived in tenement houses where the degree of dampness was probably less It was generally accepted that higher ground gave relative freedom from juvenile rheumatism and heart disease So far as could be ascertained in this country, prevailing winds had very little effect, but rapid temperature variations did play an important part, liable as they were to produce chill The mean air temperature taken over a period of time showed no influence at all , it was the temperature variations which were of most importance, as had been recently confirmed by some work at Oslo As for soil, it was an old story that clay tended to promote juvenile rheumatism, but this was not adequately confirmed by statistics Coming to adult rheumatism, Dr Warner said that there was here an extraordinary paucity of information The general distribution of adult rheumatism was very much the same as juvenile It was common in this country, Germany, Holland, Scandinavia, and Eastern America, rather less common in France and in the south In Lancashire the incidence of rheumatism was particularly in the direction of lumbago and sciatica, while osteo arthritis was often called the "Manchester disease" Rheumatoid arthritis was much more commonly met with in the south east and south-west of England There was great variation in respect of gout In Birmingham and Northampton the incidence was high (in the latter town, 7 5 per 1 000 insured persons), but in Hull, Exeter, and Norwich it was under 1 per 1,000, though Norwich was celebrated for brewing, and on the Continent, in Leipzig particularly all types of adult rheumatism were shown to be high among people engaged in the brewing trade The period of year, again was important The incidence was highest in winter and at the minimum in summer Dampness, either of the district or of the house, was known to increase the incidence of painful adult rheumatism Sciatica was four times as common in men as in women, the difference being related probably to their occupations Metal workers had been found to show a high incidence of rheumatism, particularly fibrositis and neuritis Puddlers among steel workers were extremely susceptible, probably because their work entailed short spells of hard labour followed by long periods of rest, very often in draughty areas With regard to water supply, he believed that very hard water in certain districts did predispose to fibrositis, which was common in good class residential districts in the South of England, but in joint troubles the quality of the water had little influence The drink

ing water in Lancashire was one of the softest in the country while in spas the drinking water was very hard There was no relation between the plumbo-solvency of water and the local incidence of gout

Dr JANET AITKEN (physician to the Princess Louise Hospital Kensington) said that she had picked out seven places at random from a variety of districts which claimed to have a climate beneficial to rheumatic infections and had classified their weather conditions In one of these places the rainfall and rain-days were markedly above the average for the country and the sunshine and temperature markedly below In two the daily range of temperature was well above the average and in two others well below the average and the same was true of sunshine The rainfall was only below the yearly average in one and the relative humidity was near the normal in all except one where it was below One writer had suggested that the level of human energy and achievement was the function of climate A mean temperature of 64° F seemed to be the most nearly ideal for productive activity But some investigations in America showed that in storm areas where variations of temperature were greatest danger arose from over-stimulation of the ductless glands and failure of their function and statistics had been produced showing that diabetes Graves's disease and pernicious anaemia were particularly prevalent in those areas She did not think that generalization could be made as to any one climatic factor At the supervisory clinic in Kensington careful investigation had been made into the environmental factors in 466 cases of juvenile rheumatism the environment being taken to include the dampness of the district as well as of the houses and the soil on which they were built. In this district there were certain flood areas and old stream tracks made it difficult to prevent dampness in some of the houses Part of the borough also was built on clay soil No connexion however could be found between the incidence of juvenile rheumatism and these two factors

Dr F J BACH (chief assistant cardiographic department St Bartholomew's Hospital) said that in his experience climate had not quite such an important part in the incidence of juvenile rheumatism as many supposed The effect of climate lay much more in modifying the clinical picture than in causing the disease itself Climate and soil might affect the individual either by causing the disease or accentuating certain manifestations in symptomology and clinical signs or by arresting the disease process and with it naturally causing the symptoms to disappear It was known that arthritic pain was related to changes of weather and it was common knowledge that a patient suffering from rheumatoid arthritis felt better and his pains were less severe in a dry and hot climate than in a wet and chilly one It was quite amazing how certain arthritic patients were able to detect the approach of a storm This was well appreciated in bygone times and from some old verse the speaker quoted the couplet

> Hark how the chairs and tables crack
> Old Betty's bones are on the rack

At the same time there was no doubt that the climatic factors might not only modify the clinical picture of the disease but definitely cause it Aetiologically fibrositis and muscular rheumatism divided itself into four main groups according to causation (1) cold or chill (2) fatigue or over exertion (3) infection and (4) associated metabolic changes such as gout and obesity

Dr W S C COPEMAN (physician British Red Cross Society Clinic for Rheumatic Diseases) said that he considered the physiological manifestation of the adult rheumatic diathesis to be an abnormality of the heat-regulating mechanism of the skin and that it was on the basis of this abnormality that meteorological or climatic factors were able to produce their undoubted effects It had been pointed out that apparently no one climatic factor could be held responsible and as a result certain people were rather apt to ignore the effect produced by several of these factors in conjunction It had been shown that mere variations in temperature however marked were not in themselves sufficient to produce the pains and symptoms of rheumatic disease neither apparently was damp Dr Copeman thought however that these factors in conjunction when they did not constitute the permanent climatic condition of the particular environment would appear to be operative in all the cases mentioned Captain D Brunt of the Air Ministry in a paper read earlier in the proceedings had shown that soil containing 20 per cent. of moisture returned only one fifth of the radiation which dry soil was capable of returning This meant that in damp localities the temperature variations in the twenty four hours were considerably less marked than was the case in those well-drained dry localities which were suitable for rheumatic patients This observation was contrary to the general lay belief and confirmed the importance of the conjunction of cold and damp in these cases In certain localities where the subsoil was known to be impermeable to moisture this effect was negatived by the fact that drainage might occur through the subsoil owing to the elevation and slope of the country Examples of the double effect of cold and moisture producing rheumatic pains were to be found in the fact that the seaside was generally unfavourable for these patients in the high incidence of rheumatism amongst iron puddlers who worked at high temperatures for short periods in the rheumatic pains which were exacerbated before a rain storm and in the chill which resulted even in hot weather when people sat in non porous clothes after exercise which had induced perspiration It was Dr Copeman thought obvious that climatic factors were nowadays not the only villains of the piece since by the aid of clothes and bed-clothes we lived largely in an artificial micro-climate of our own choosing and were therefore to a very large extent independent of Nature's climate The speaker expressed his belief also that in all diseases which like rheumatic fever could show a definite class incidence it was likely that a dietetic factor was also concerned In conclusion he agreed that at present too much time was being devoted to the investigation of the rheumatic seed and that a discussion such as the present one would help to direct attention to the need for further investigation of the soil and also to the danger of forgetting what had in the past been discovered in connexion with the various natural phenomena concerned

Dr WILFRID SHELDON (junior physician Children's Department King's College Hospital) said that most people regarded acute rheumatism of childhood as due to an infection and if that was so soil and climate must be regarded as secondary factors They did not on that account lose very much in importance and as secondary factors they might operate in several ways by influencing the infecting germ or by modifying the body resistance He could not doubt that climate influenced rheumatism though he did not think it had any very obvious relation to chorea Certainly it was more closely related to rheumatic polyarthritis and closest of all was the relation of climate to rheumatic pains in the limbs It was common to find aching in a child's arms and legs much worse when the weather was wet During 1929 he tried to correlate the number of complaints of pains in the limbs with the rainfall for the year The work was based on the weekly study of one hundred child out patients In the early part of the year the number of children complaining of pains was high although the rainfall was lower than the average but afterwards the rainfall curve was followed very closely—even to an exceptionally high peak in early July Again during the drought in September of that year no children complained of pains He went on to discuss the micro-climate of the individual Much could be done to help these children by controlling to some extent their clothing The ideal garment next the skin was one which was a poor conductor of heat and if the clothing was porous there was plenty of air space Woollen blankets were more porous than sheets as well as warmer and it was a common thing to advise mothers to put their rheumatic children between blankets and to take the sheets away

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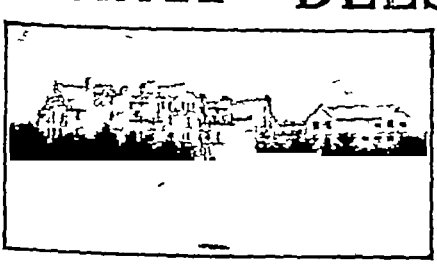

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entirely For clothing, wool or better still some of the new cellular materials, were the most porous A material was wanted which was either non hygroscopic or, if hygroscopic, parted with its moisture readily by evaporation The least hygroscopic of materals was wool Cotton and cellular materials were hygroscopic but the very loose weave of the cellular material allowed of rapid evaporation

Dr J F HALLS DALLY (director, Marylebone Children's Rheumatism Supervisory Centre) submitted the view as a working hypothesis that rheumatism was primarily the outcome of an inherent failure of adaptation to environment especially a failure of the heat-regulating mechanism, and that rheumatic and potentially rheumatic children possessed a certain type of constitution which might become manifest clinically by numerous signs and symptoms A heavy rainfall, especially on a subsoil of low humidity had been termed an advantage rather than a drawback from the point of view of health A rainfall not too persistent to keep children continually indoors might probably be regarded as non-productive of rheumatism Danger would appear to arise from chill, and sleeping in unaired beds came under the same category It was through the medium of the skin that the child like everyone else, adapted or failed to adapt himself to his environment With regard to prevailing winds thyro adrenal instability was a characteristic of the allergic state and those children in whom the allergic factor predominated were prone to disturbance when the wind was in the east for two or three successive days Meteorological changes were of more importance than climate , in other words it was the changes which were important, particularly when sudden and marked Some barometric variations were liable to produce restlessness and irritability in children with an unstable disposition To most people the rapid variations in atmospheric conditions were beneficial, because they did not go beyond the point of adjustment but with the rheumatic child the limits of adaptation were soon exceeded Cold, damp air was devitalizing and children exposed to this must be kept on the move Evidence derived from investigations at the Marylebone centre had shown that damp houses did not appear to warrant the environmental importance attached to them by some observers With regard to sunlight, Rollier and others attributed its beneficial effects chiefly to its luminous and infra red rays Intensity of solar radiation, however, varied directly with season latitude, and altitude, and inversely with cloud, humidity, and dust In England the continuous duration of sunshine was too brief and interrupted for acclimatization to take place so that heliotherapy and ultra violet radiation, although apparently valuable for rheumatic children, should be always initiated gradually and continued cautiously excess resulting in devitalization

Dr L C HILL (Devonshire Hospital Buxton) described the result of an investigation which he had carried out from 1929 to 1932 on a large number of male in patients of the Devonshire Hospital suffering from some form of rheumatism He had divided them into three groups according to occupation—indoor, outdoor and miners—desiring to obtain, with regard to the last named information as to the possible effects of spending a considerable proportion of the day in a rather warm, humid atmosphere devoid of sunshine and light The results were as follows

	Number of Cases	Fibrositis	Subacute Rheumatism	Rheumatoid Arthritis	Osteo-Arthritis
		Per cent	Per cent	Per cent	Per cent
Indoors	533	39	20	29	12
Outdoors	625	51	10	15	24
Miners	670	65	12	11	12

It appeared that hot atmospheres were not necessarily harmful if not too humid That might be due to the fact that miners wore very little clothing, and so did not hamper the action of their skin A hotel manager in Buxton had recently asked him whether it was worth while to put a sun lounge with "vita glass in the hotel because he had noticed the curious fact that a large number of crippled people seemed to avoid the sunshine Sunshine, particularly coming suddenly definitely enhanced rheumatic pains In rheumatoid arthritis the influence of climate in stimulating metabolism and increasing resistance was of great importance, but patients varied widely in their powers of reaction

Dr REGINALD LIGHTWOOD (Great Ormond Street Hospital) mentioned certain investigations in Kensington in connexion with acute and subacute rheumatism North Kensington, he said was a poor and congested area, while South Kensington was well to do About 10 per cent of the rheumatic cases came from South Kensington and 90 per cent from North In North Kensington there had been certain damp areas, due to the periodical flooding of old watercourses but that trouble had been removed of recent years Curiously enough, one damp area in a congested part of North Kensington was full of rheumatic cases and another damp area in the Holland ward, which had only a small and uncrowded population, had very little rheumatism Overcrowding and poverty were probably much more important aetiological factors than climate in the production of rheumatism in children To day one was being forced to discount the importance of dampness and to recognize the importance of overcrowding and bad ventilation

Dr J L NEWMAN (late assistant medical officer Fountain Hospital, L C C) spoke of some investigations carried out in an institution for low grade mentally defective children, of the average age of from 6 to 10 Of 1,700 children examined only seven were found to have contracted rheumatism actually in the hospital, yet this hospital stood only 50 feet above the sea, close to the River Graveney, and, as the name of the hospital implied, it was connected with watercourses The buildings themselves were on the pavilion plan, and had been put up very rapidly to accommodate an overflow of fever patients during an epidemic The ground underneath was excessively wet, and even after a slight shower the airing courts flooded regularly There was a cellar eight feet deep under the main block, and if it were not regularly pumped out it would flood even in summer From the point of view of an assemblage of conditions favourable for the propagation of rheumatism it would be difficult to find a more suitable site On the other side, of course there were the factors of good ventilation, lighting, plentiful spacing of beds, and the suitable dressing of the children The children were not over dressed, wearing cotton in summer and flannel in winter, and in wet weather they walked under covered ways The absence of infection from outside might be another limiting factor but outbreaks of scarlatina and epidemic sore throat had occurred Yet rheumatism was singularly absent

Dr G C SIMPSON, F R S (Director of the Meteorological Office), pointed out that people living in the most damp surroundings, such as sailors and fishermen were not particularly affected by rheumatism, while as for cold, in the Polar regions rheumatism was almost unknown It seemed clear that climate was not a primary predisposing cause , it was doubtless a secondary factor but, of course, climate was always a secondary factor for the healthy as well as for the ill He related his own experience on an Antarctic expedition, where he spent two days digging a cave in an ice cliff, with the ice accumulated around him, the temperature being very nearly zero of the Fahrenheit scale Afterwards he suffered from the most intense rheumatic pains, although he had never had rheumatism in his life before Dr Simpson added that very few people realized that, after all climate normally only acted upon us for about one third of each day There was no climate in the bedroom, nor, generally speaking, in the living rooms which were protected against changes of temperature Therefore one would not expect the climate to be of the absolute importance that was often attributed to it

British Medical Journal

SATURDAY, JUNE 17th, 1933

THE ARTHRITIS COMMITTEE S REPORT

It has been generally agreed for many years that chronic arthritis is of the greatest moment to the community owing to the crippling effects and widespread incidence of this group of diseases It is regrettable however that although the medical profession is and has been well aware of the importance of the subject there has been no agreement as to classification or aetiology and consequently no standardization of the principles of treatment The result has been that sufferers from chronic arthritis have been mystified by conflicting advice discouraged by the pessimism and uncertainty of their legitimate advisers and in consequence too often driven to seek help outside the ranks of the profession from those whose assurance of cure is directly proportionate to the depth of their ignorance of the subject The sociological implications of arthritis were focused by the report of the Ministry of Health published in 1924 with its astounding figures of working hours lost and money expended annually as a result of arthritis of all kinds In view of the interest thus aroused a conference on rheumatic diseases was held at Bath in May 1928 under the presidency of Sir George Newman and with Lord Dawson Sir Humphry Rolleston and Sir Farquhar Buzzard as presidents of Sections At this conference many papers of great interest and importance were presented and published later in book form but its main outcome was to reveal how widely authorities differed and how uncertain was the guidance which the profession offered to the public Of recent years an International League against Rheumatism has been formed to promote the study of the subject in all countries to encourage research and to exchange views at annual meetings held at various European centres Valuable as such work must be it provides no immediate prospect of co-ordinating results or of defining how much of the theory and practice of medicine in the field of chronic rheumatism rests on solid foundation and how much rests on premisses which reflect the fertile imagination of their originators rather than their diligence in the accumulation of scientific observations

Such being the state of affairs the Section of Hydrology at the Annual Meeting of the British Medical Association at Eastbourne in 1931 decided to ask the Council to appoint a committee to survey the subject of arthritis with special reference to the present state of knowledge the indications for future research and the facilities for educating the profession in this special branch of medicine The Council was fortunate in obtaining the services of a strong body of experts in all aspects of arthritis under the chairmanship of Sir Humphry Rolleston with Dr R G Gordon as honorary secretary In receiving the report of its committee which is printed in full in this number of the *Journal* the Council expressed its gratitude to all members of the committee and especially to the chairman and honorary secretary for the labour and skill they had expended in the preparation of the report At the outset the committee was faced by the very serious difficulty that scarcely any authorities agreed as to the classification or even the nomenclature of the diseases to be included in its reference The committee decided to exclude from its consideration those forms of arthritis whose causation was reasonably clear—that is the specific forms of arthritis such as those due to gonococcus pneumococcus and dysentery bacillus that due to frank metabolic abnormality (gout) and that due to neurotrophic changes (Charcot s joints) Of necessity this confined the committee s reference to those conditions whose aetiology was obscure and in consequence a scientific aetiological classification was impossible Recourse was therefore had to a clinical nomenclature comprising rheumatoid arthritis osteo-arthritis chronic villous arthritis spondylitis and fibrositis and so far as possible other nomenclatures were correlated with these Such a terminology is obviously open to criticism For example many will consider that rheumatoid arthritis and osteo-arthritis are outworn and meaningless expressions yet these have the sanction of use and familiarity and the alternative terms atrophic and hypertrophic proliferative and degenerative are in some respects confusing Again others will assert that there is no justification for separating the two forms of spondylitis from rheumatoid arthritis and osteo-arthritis respectively or for separating chronic villous arthritis from osteo-arthritis but in the opinion of the committee both spondylitis and chronic villous arthritis are distinguishable enough both clinically and aetiologically to warrant separate treatment This clinical distinction between the various forms of arthritis with stress on the varying causative factors so far as they are known is a very important feature of the report in view of the tendency of recent years for writers to present all forms of arthritis as variants of one morbid condition for which there is some specific remedy Such a presentation has the merit of simplicity but the defect that it is entirely untrue and we hope therefore that the wide publicity now given to the committee s report will help to correct this heresy

Naturally the subject of vaccine therapy occupied the attention of the committee and was carefully reviewed great assistance being obtained from the critical and judicial contributions of the expert bacteriological members The uses and limitations of vaccine therapy are clearly laid down and attention is drawn to the advantages of small doses Diet in arthritis is of perennial interest to the community as a whole and it would seem that the only reason why patients have more varied theories on this subject than medical men have is that the former still outnumber the latter On this subject the report is emphatic There is no specific diet for chronic arthritis and any dietetic restrictions which may be desirable for a given patient are desirable on

THE INSTITUTE OF MEDICAL PSYCHOLOGY (the Tavistock Clinic), 6, Torrington Place London W C 1

A SHORT COURSE OF LECTURES ON

THE APPROACH TO THE PSYCHONEUROSES

FOR PRACTITIONERS AND MEDICAL STUDENTS

will be given at the Institute's new premises Torrington Place, beginning June 12th 1933.

For particulars of the Course apply to the Hon Lecture Secretary 6 Torrington Place W C 1

MEDICAL CORRESPONDENCE COLLEGE,
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THE UNIVERSITY OF LIVERPOOL

The Council invites applications for the post of LECTURER (ungraded) in the department of Pathology Salary £600 per annum

The Lecturer will commence duty as soon as possible after the date of appointment

The appointment is a whole-time one and the Lecturer will be required to comply with the conditions of the Federated Superannuation System for Universities.

Four typewritten applications together with three references and (if the candidate so desires) copies of testimonials to be forwarded not later than Saturday June 24th to the Registrar

Further enquiries should be addressed to the George Holt Professor of Pathology

EDWARD CAREY Registrar

VACANCY FOR RESEARCH FELLOW (MALE or female) at a Liverpool Hospital The appointment is for one year in the first instance Work may be used for M D thesis—For particulars write Box 4 484 Lee and Nightingale Liverpool 2.

UNIVERSITY OF LONDON

EXTERNAL EXAMINERSHIPS 1934

The Senate announce the following vacant Examinerships for the year 1934

For Final and Higher Examinations for Medical Degrees

MEDICINE SURGERY M D HYGIENE.

For First Examinations for Medical Degrees

CHEMISTRY (TWO). GENERAL BIOLOGY PHYSICS

For Second Examinations for Medical Degrees

ANATOMY CHEMISTRY PHARMACOLOGY

Associate Examinerships

Applications will also be invited for Associate Examinerships in Medicine Obstetric Medicine Pathology and Surgery A separate application form must be used for Associate Examinerships and the word "Associate" must be written on it.

Application forms (or forms if more than one Examinership is applied for) and particulars of the remuneration and duties can be obtained from the External Registrar

Candidates must send in their names to the External Registrar GEO F GOODCHILD M A B Sc with any attestation of their qualifications they may think desirable on or before Monday July 3rd 1933 (Envelopes should be marked Examinership")

The Senate desire that no application of any kind be made to individual members.

If testimonials are submitted one copy only of each is required. In no case should original testimonials be submitted. If more than one Examinership is applied for a separate and complete application must be forwarded in respect of each Examinership The appointments will be made by the Senate in November Applicants who desire that the result should be communicated to them are requested to enclose a stamped and addressed envelope with their application

EDWIN DELLER, Principal.

University of London
South Kensington S W 7
June 1933

UNIVERSITY of CAMBRIDGE

DIPLOMA IN MEDICAL RADIOLOGY AND ELECTROLOGY

New Regulations for the Diploma come into force on October 1st 1933 and apply to all candidates who have not been admitted to any examination for the Diploma before that date The course which occupies nine months in all begins on October 4th 1933 and comprises

(a) Four months instruction in Physics Radiology Electrology and Pathology

(b) Three months further instruction in Radiology and Electrology together with three months clinical work in the Radiological Department of a hospital approved by the Managing Committee for the Diploma

(b) Three months further instruction in ant in the Radiological Department of a hospital approved by the Committee Hospitals in London in the Provinces and Overseas have been approved for this part of the course

Examinations for Part I (Physics) will be held in February and July 1934 and for Part II (Radiology Electrology and Pathology) in July and October 1934

The courses are open to men and women whose medical qualifications are approved by the General Medical Council for purposes of registration and who satisfy the Committee that they have had sufficient post-graduate clinical experience.

Further information as to the courses may be obtained from G STEAD M.A., Secretary for the Diploma Cavendish Laboratory Cambridge or the General Secretary British Institute of Radiology 32, Welbeck Street, London W 1

EDINBURGH DENTAL HOSPITAL AND SCHOOL.

Applications are invited from registered Dental Surgeons for the post of TEACHER of CLINICAL DENTAL SURGERY who would also require to act as Dean

Minimum salary £1 000 per annum For other conditions of appointment apply to—

G M STUART W.S

20 York Place Edinburgh.

EPSOM COLLEGE

Established in 1855 as a Public School with a Royal Medical Foundation.

Notice is hereby given that the ANNUAL GENERAL MEETING of the Governors will be held at the office 49 Bedford Square W C.1 on Friday June 23rd, 1933 at 4 p.m. when the names of the Pensioners and Foundation Scholars appointed by the new Competent Committee will be announced.

In accordance with the provisions of the Acts of Parliament, ten members of the Council will retire at this meeting It will be proposed that the following be re-elected for a further period of three years Dr C Luther Batteson Mr J S Cotman F C A., Dr Raymond Crawford M D., F R C P Sir Henry Dixon Kimber Bart. Dr S Morton Mackenzie M.A. M B., B Ch., Brigadier-General G T Mair C.M G D.S.O Dr Henry Robinson M.D, J P., D L. Sir Squire Sprigge M.D F R C S Dr. Septimus Sunderland M.D Mr George E. Waugh F R C.S

The Council will propose (a) that Colonel Norman C King Mr Horace H. Rew and Mr P D Leake F.C.A be reappointed Auditors for the ensuing year and (b) that Dr L. Prosser White be elected a Vice-President of the College

By Order of the Council,
W L GIFFARD (Major)
Secretary

49 Bedford Sq., W.C.1.
May 15th 1933.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

Prof EDWARD MELLANBY F R S will deliver the CROONIAN LECTURES on June 8th, 13th, and 15th at 5 o'clock, at the College, Pall Mall East S W.1

Subject *Nutrition and Disease—the Interaction of Clinical and Experimental Investigations"*

Any Member of the Medical Profession admitted on presentation of card.

By Order of the President
H. M. BARLOW Secretary

SURGEONS HALL, EDINBURGH

ANATOMY

The Vacation Classes commence on Aug 3rd and terminate on Sept 27th. Lectures and Demonstrations covering the entire subject and including Embryology are given thrice daily

Apply to CHAS R. WHITTAKER F R C.S F R S E. Lecturer

GUY'S HOSPITAL MEDICAL SCHOOL.

Applications are invited for the post of LECTURER on Physiological Chemistry The appointment will be for two years in the first instance with eligibility for reappointment Initial salary £450 per annum The Lecturer will be a member of the Staff of the Department of Physiology and will carry out his duties under the direction of the Head of the Department He may also be required to assist either in the Department of Pharmacology or in the Department of Pathological Chemistry

Candidates who must hold a registrable medical qualification should submit a statement covering education teaching experience and research together with the names of not more than two referees

Application should be sent to the Dean Guy's Hospital Medical School, London Bridge S E.1 not later than the first post on Monday June 19th.

THE SEXOLOGY GROUP OF THE PHYSIOMETHEAN SOCIETY has arranged for a series of TEN LECTURES to be given by Dr NORMAN HAIRE, Ch.M., M.B. on *The Evolution of Sexology* at the London School of Hygiene and Tropical Medicine Keppel Street (Gower Street W.C.1 at 8 p.m. on Thursday October 12th to December 14th inclusive Fee for the course 10s

Application for enrolment should be made on early date on forms to be obtained from Kathleen Styles Federation of Progressive Societies and Individuals, 21 St. Stephen's House, Westminster S.W.1.

secondary grounds, such as obesity, personal idiosyncrasy, and the like, and not because he is a sufferer from arthritis *per se* In the rheumatoid group, generosity within the limits of digestion and not restriction of diet is indicated The investigations of the committee disclosed serious gaps in our knowledge For example, in spite of the researches of Dr Alison Glover into the incidence of arthritis, which are set out in the report of the Ministry of Health already referred to, practically nothing is known of the relative incidence of these various forms in different classes of the community or in different occupational groups Again, radiological and biochemical investigations disclose certain results which appear to be at variance with the findings of the clinicians—a further difficulty It is obvious that both radiology and biochemistry hold out great hopes for the solution of many problems in connexion with arthritis, and if the results of research so far have in many respects been negative, this can only serve as a stimulus for further work The committee has formulated schemes for a national organization for the treatment of this group of diseases, and for post-graduate instruction of the profession, and through the Council it has forwarded a memorandum to the Home Office on the exploitation of the arthritic public by vendors of quack remedies

A word may be said as to the form of the report, since to some it may appear to be repetitive, and in certain respects to lack balance The main object has been to present to the practitioner an authoritative statement on the subject of arthritis which may serve him as a guide amongst the shoals of conflicting theories and the enthusiastic assertions of the advocates of panaceas Brief reviews of the main features of the forms of arthritis under discussion have therefore been given at the outset, so that he may quickly refresh his memory as to the salient characteristics and the main lines of treatment Differential diagnosis has been dealt with fairly fully, and, so far as possible, in tabular form Special aspects have been detailed in so far as they are of real interest to the practitioner, and with reference to the possibility of obtaining apposite information elsewhere Thus, little is said in the report about morbid anatomy, since it is a difficult and technical subject of no great interest to the practitioner, but reference is made to the articles of Mr Lawford Knaggs in which the whole matter is dealt with in great detail On the other hand, the orthopaedic treatment of arthritis is dealt with at some length, since this is, if not of overwhelming importance, of very great use in the management of any arthritic patient, and in the opinion of the committee information on the subject is difficult to find in the literature, and so not often brought before the notice of the practitioner Whatever the merits or demerits of the report, it is the hope of the committee and of the Council that it may prove to be a useful contribution to the study of this important and difficult group of diseases, and that it may stimulate further inquiry and research whereby the many lacunae in our knowledge may be filled and the present relative chaos eventually give place to order

RHEUMATOID ARTHRITIS

The study of affections of the joints goes back through many generations Though it has been marked by much controversy and dogmatism its therapeutic record is not a distinguished one. A favourable movement appeared when certain areas of the subject became confidently identified and classified as due to particular infections Gonococcal, tuberculous, and syphilitic arthritis, for example, were made aetiologically secure, while acute rheumatism and acute gout each presented a clinical distinctness that justified, both for the one and for the other, a nosological label and recognition Yet in spite of these gains there remained a large body of joint disease, for the most part chronic and progressive in character, where confident knowledge was sadly to seek and therapeutic activity boasted little success To apply to such a condition the term " chronic arthritis " was judged inadequate, and hence the accusations of gout as responsible on the one hand, and rheumatism on the other, were freely bestowed, with the implication that the same agent or influence which produced the acute diseases so named produced also the more chronic disturbances The battle of the names had its lively moments, and not many would content themselves with an agreed truce as expressed in the simple formula proposed by Sir Jonathan Hutchinson that " whenever arthritis occurs in connexion with food we call it gout, and whenever such association is wholly absent we name it rheumatism " The controversy took on a new aspect with the appearance of what at the time seemed a revolutionary claim—namely, that whatever else chronic joint disease might be it certainly was not rheumatism, meaning, presumably, that it was not caused by the agency responsible for rheumatic fever It was to enforce this doctrine that Sir Alfred Garrod proposed the term " rheumatoid arthritis " The name has largely held the field until the present day, but its value has been qualified in two respects First it has been applied, and indeed still is applied, almost indiscriminately to any and every form of joint disease which has not an obvious explanation , and secondly, and in spite of the intentions of its author, the term " rheumatoid " has carried the suggestion that the more or less chronic forms of arthritis to which it is attached are, after all, allied to acute rheumatism, and are to be met in principle by the dietetic and medicinal methods recognized as appropriate to that disease It may be that on the surface something like this habit seems to describe the present position But in recent years many workers, both at the bedside and in the laboratory, have faced arthritis as a problem to be solved, and one of the advantages to be expected from the British Medical Association committee's report is the wide diffusion of the results of these investigations and the adoption of the diagnostic and therapeutic methods to which they point the way As a central proposition, now established, it may be stated that whatever else is doubtful rheumatoid arthritis presents without question a definite clinical picture , that it can be clearly separated from other forms of joint disease , that at

METROPOLITAN BOROUGH OF GREENWICH

APPOINTMENT OF A JUNIOR ASSISTANT MATERNITY AND CHILD WELFARE MEDICAL OFFICER

The Council of the Metropolitan Borough of Greenwich is prepared to receive applications from registered Medical Practitioners for the appointment of Junior Assistant Maternity and Child Welfare Medical Officer in the Borough of Greenwich

Applicants must have had experience in connection with Maternity and Child Welfare work generally and shall be registered Medical Practitioners who, prior to April 1st 1930, had held the appointment of Medical Officer of an Ante Natal Clinic with the approval of the Minister of Health or who subsequent to qualification, have had at least 3 years' experience in the practice of his or her profession and special experience of practical midwifery and ante natal work resident Obstetric experience will be considered an additional qualification The person to be appointed will act generally under the direction and supervision of the Medical Officer of Health who is the Administrative Medical Officer of the Maternity and Child Welfare Services

The salary will be at the rate of £500 per annum rising by annual increments of £25 to a maximum of £700 per annum

The successful candidate will be required to reside in the neighbourhood of the Borough Council's Maternity Home, to devote the whole of his or her time to the service of the Council and not to engage in private practice except when called in by Medical Men in the district

The appointment will be subject to the provisions of the Council's Superannuation Act as amended, and to the approval of the Minister of Health and will be terminable by three months notice in writing on either side

Applications must be made on forms to be obtained from the undersigned stating age, qualifications and experience, and accompanied by copies of not more than three recent testimonials and must be sealed up and endorsed Junior Assistant Maternity Medical Officer and reach me not later than 12 o'clock noon on Monday June 19th

Canvassing Members of the Council either directly or indirectly will be a disqualification

Stamped addressed foolscap envelope must accompany application for form

Town Hall FREDERICK J SIMPSON
Greenwich S E 10 Town Clerk
May 18th 1933

COUNTY BOROUGH OF OLDHAM

BOUNDARY PARK MUNICIPAL HOSPITAL.

RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from registered Medical Practitioners for the post of Assistant Resident Medical Officer

Salary £200 per annum, with board residence and laundry

Candidates should be unmarried

The appointment will in the first instance, be for a period of six months The successful applicant however will be eligible for re appointment for a further period of six months

The Hospital comprises 375 beds with facilities for gaining experience in medicine, surgery midwifery and diseases of children

Applications on forms to be obtained from the undersigned endorsed Resident Assistant Medical Officer should be sent to the Medical Officer of Health Town Hall Oldham and should be received not later than Tuesday June 13th

JAMES B WILKINSON M D C M
Town Hall D P H
Oldham Medical Officer of Health

LONDON COUNTY COUNCIL

Applications invited from registered Medical Practitioners of at least one year's standing for appointment as TEMPORARY DISTRICT MEDICAL OFFICER in undermentioned medical districts

Area III—District I (Islington)	£200	p a
Area VII—District D (Battersea)	£275	p a
Area VII—District E (Battersea)	£150	p a
Area VII—District O (Battersea)	£300	p a

Candidate appointed will be required in each case to reside in or near the district Salary in each case is provisional and the remuneration and conditions subject to review

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a) County Hall Westminster Bridge S E 1 returnable by June 9th Canvassing disqualifies

THE INFANTS HOSPITAL, Vincent Square Westminster

Applications are invited for the post of HOUSE PHYSICIAN for three months from July 1st Salary at the rate of £75 per annum, with board residence and laundry

Applications with copies of testimonials to be forwarded to the undersigned

ALFRED J SMALL Secretary

COUNTY COUNCIL OF MIDDLESEX

WEST MIDDLESEX COUNTY HOSPITAL, ISLEWORTH

RESIDENT ASSISTANT MEDICAL OFFICER (Woman)

The County Council invites applications for the above appointment Candidates must be registered Medical Practitioners, unmarried must have held resident appointments in a General Hospital, and have special experience in obstetrics and gynaecology The officer appointed will work under the control of the Medical Superintendent, and will devote her whole time to her official duties

Salary is at the rate of £400 per annum, rising by annual increments of £50 to £600 per annum, together with board, lodging and laundry, valued for superannuation purposes at £100 per annum In view of the national situation a temporary abatement calculated on the following scale is applied to the salary and value of the emoluments for the first £150 per annum, no abatement, for the next £100 per annum, 2½ per cent abatement, for the next £500 per annum, 5 per cent. abatement

The successful candidate will be required to pass such medical examination as the County Council may direct, and, unless subject to the Poor Law Officers Superannuation Act 1896, to contribute to the County Council's Superannuation Fund The appointment will be held during the pleasure of the Council and subject to three months notice on either side

Applications, stating (1) age, (2) qualifications and (3) experience together with copies of not more than three recent testimonials, must be received by the undersigned not later than Thursday, June 8th

No special application forms are provided Envelopes must be endorsed Resident Assistant Medical Officer'

Canvassing directly or indirectly, will be a disqualification

N B—West Middlesex County Hospital is a modern general hospital, with over 500 beds for medical surgical and maternity cases Some 650 beds for chronic cases in Warkworth House, an adjoining institution also are under the care of the medical staff of the Hospital (C D/14)

ERNEST S W HART
Middlesex Guildhall, Clerk of the
Westminster, S W 1 County Council
May 19th 1933

COUNTY BOROUGH OF BIRKENHEAD

DEPARTMENT OF THE MEDICAL OFFICER OF HEALTH

BIRKENHEAD MUNICIPAL HOSPITAL DEPUTY MEDICAL SUPERINTENDENT

Applications are invited for the appointment of Deputy Medical Superintendent (Resident) at the Birkenhead Municipal Hospital (647 beds) This Hospital has been appropriated under the Public Health Acts.

The remuneration attached to the appointment will be £450 per annum, rising by increments of £25 to a maximum of £550 per annum together with residence board etc

Applicants must be single, fully qualified, and registered

The candidate appointed will be required to perform any operative work allotted to him by the Medical Superintendent

He will act as an Assistant Medical Officer on the staff of the Medical Officer of Health and be required to undertake such other duties of a medical or surgical nature in the Public Health Services of the Borough as may be assigned to him

The appointment will be made subject to the Local Government and Other Officers Superannuation Act, 1922 and is determinable by three months calendar notice on either side

Candidates who possess

(a) a special qualification in surgery,

(b) the Diploma in Public Health

will be specially considered

Forms of application and further particulars relating to this appointment can be obtained from D MORLEY MATHIESON Esq M D Medical Officer of Health, 9, Hamilton Square Birkenhead

Canvassing directly or indirectly, will disqualify the applicant

Applications, endorsed Deputy Medical Superintendent' should reach the undersigned not later than Friday, June 16th

Town Hall E W TAMF
Birkenhead Town Clerk
May 29th 1933

STOCKWELL COLLEGE, London S W 9

Applications are invited from WOMEN DOCTORS for appointment as MEDICAL OFFICER at the above Training College The duties will involve a daily visit to the College during term time Salary £100 per annum

For particulars apply to the Secretary British and Foreign School Society, 114, Temple Chambers Temple Avenue E C 4

COUNTY BOROUGH OF HUDDERSFIELD

PUBLIC HEALTH DEPARTMENT

APPOINTMENT OF ASSISTANT MEDICAL OFFICER OF HEALTH

Applications are invited from registered Medical Practitioners for the above appointment

Candidates should be ladies who have had special experience in ante natal work and in the care of infants

The salary offered is according to scale, £500 increasing by £25 per annum to £700 It will be subject to the temporary cut in operation at present on the salaries of all Corporation officials On £500 the reduction amounts to £17 10s

Applications stating age and giving full particulars regarding training qualifications and appointments held since qualification should be forwarded to JOHN M GIBSON Esq, B A M D D P H Medical Officer of Health Public Health Department Huddersfield along with copies of two recent testimonials so as to reach him not later than Thursday June 8th

Town Hall SAMUEL PROCTER
Huddersfield Town Clerk.
May 17th, 1933

COUNTY BOROUGH OF HUDDERSFIELD

PUBLIC HEALTH DEPARTMENT

APPOINTMENT OF RESIDENT MEDICAL OFFICER, MILL HILL ISOLATION HOSPITAL.

Resident Medical Officer required for clinical duties at Mill Hill Isolation Hospital and at St Luke's General Hospital Appointment for one year

Previous experience in Fever work is essential

Salary £350 per annum, with board residence, and travelling expenses

Applications stating age and giving full particulars regarding training, qualifications and appointments held since qualification, should be forwarded to JOHN M GIBSON Esq B A M D D P H Medical Officer of Health Public Health Department Huddersfield along with copies of two recent testimonials so as to reach him not later than Thursday, June 15th

Town Hall SAMUEL PROCTER
Huddersfield Town Clerk
May 27th, 1933

COUNTY BOROUGH OF WEST HAM

EDUCATION COMMITTEE.

APPOINTMENT OF ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited from fully qualified and registered Medical Practitioners for appointment as an Assistant School Medical Officer under the direction of the School Medical Officer The person appointed will be required to devote his or her whole time to the service of the Authority

Salary £500 per annum, rising by annual increments of £25 to a maximum of £700 per annum, allowance being made in respect of similar service under other Local Authorities in fixing the commencing salary in accordance with the scale agreed between the British Medical Association and the Local Education Authorities The salary will be subject to an abatement in accordance with the resolution of the Council for the time being in force at present

From the first £200—2½ per cent
From the next £100—5 per cent
From the next £250—5 per cent
From the next £250—7½ per cent

Applicants must have had not less than three years experience since qualification, and should have had previous experience in medical inspection and treatment of school children A diploma in Public Health will be an advantage

The appointment will be a designated post under the Local Government and Other Officers Superannuation Act 1922 and the successful applicant will be required to pass a medical examination as required by the Council for the purposes of that Act and the statutory contribution of five per cent to the Superannuation Fund will be deducted from his or her salary In the event of the appointment of a woman such appointment will be automatically terminated on marriage

Canvassing members of the Education Committee or the Council either directly or indirectly will be considered a disqualification

Forms of application, together with particulars and conditions of duties may be obtained from the School Medical Officer Municipal Health Offices 88 Romford Road Stratford E 15 upon receipt of a stamped addressed envelope and should be returned to the undersigned not later than Saturday June 17th

CHARLES E CRANFIELD
Education Office, Town Clerk and Education Officer
95 The Grove
Stratford E 15
May 29th 1933

INDIAN MEDICAL SERVICE

Recruitment of European Officers.

Applications are invited from medical men for permanent commissions in H.M.'s Indian Medical Service. The terms offered include a gratuity of £1,000 on retirement after six years' service, or £2,500 after 12 years' service, together with free return passages for those who no longer desire to remain in the Service. In other respects the terms will be as detailed below

Candidates must be European British subjects under 32 years of age at the time of application and must be registered under the Medical Acts in force in Great Britain and Northern Ireland

CAREERS.

The Indian Medical Service offers wide opportunities of medical experience including clinical preventive specialist and research work At the beginning of his career an officer is employed on the military side which has medical charge of the Indian Army Promotion is on a time scale up to the rank of Lieutenant-Colonel and by selection to the ranks of Colonel and Major General An officer may apply after one year's Indian Service to have his name registered for transfer to the civil side from which appointments are made to Civil Surgeoncies which are established at the principal civil centres to provide for the medical needs of civil officials and for general medical administrative purposes to specialist (for example public health and bacteriological) services to research posts and to professorships at the Medical Schools

NOTE.—It is not possible to state at present what, if any prospects of employment on the civil side will be open to Indian Medical Service Officers under the proposed new constitution for India.

PAY

Owing to the state of the financial emergency at present prevailing in India the existing monthly rates of pay which are as follows are subject to a temporary reduction of 5 per cent

Rank.	Service in Rank.	Basic Pay	Overseas Pay	Year of Total Service
		Rs	R	
			150	1st
Lieut.	—	500	150	2nd
			150	3rd
			150	4th
Capt.	(I) During first 3 years service as Captain	600	£15	5th
			£15	6th
	(II) With more than 3 and less than 6 yrs. service as Captain	800	£25	th
			£25	8th
			£25	9th
	(III) With more than 6 years service as Captain	900	£25	10th
			£25	11th
			£30	12th
Major	(I) During first 3 years service as Major	950		
	(II) With more than 3 and less than 6 years service as Major	1100		
	(III) With more than 6 years service as Major ...	1250		
Lieut.-Col.	(I) Until completion of 23 years total service	1,000	£30	13th and over
	(II) During 24th and 25th years service	1600		
	(III) After completion of 25 years total service	1 00		
	(iv) When selected for increased pay	16.0		

EXTRAS.—In addition to the above rates various allowances are admissible for a large number of special appointments on both the military and the civil side which may be held by members of the Indian Medical Service Special high rates of pay are also attached to the numerous administrative appointments open to officers in both branches of the Service.

ANTEDATES IN COMMISSION

Any service rendered by an officer during the war as a medical or combatant officer or in a position usually filled by an officer may be counted as service for increments of pay promotion retirement and retired pay but not for gratuity

One half of any service in the ranks during the war may be counted as service for retirement and retired pay only

Candidates possessing certain higher medical qualifications may be granted an antedate of one year in their commissions Past service in certain hospital appointments may also render candidates eligible for an antedate of one year Persons holding or about to hold resident posts at recognized hospitals may be seconded in those posts for a period not exceeding one year The maximum period of antedate secondment or antedate and secondment combined admissible under this paragraph is limited to one year

OUTFIT ALLOWANCE.

Officers on appointment will receive an allowance of £50 towards the cost of outfit.

PRIVATE PRACTICE.

With the exception of Administrative Officers military or civil and officers holding certain special appointments officers are not debarred from taking private practice so long as it does not interfere with their proper duties

LEAVE

Leave can be taken at reasonable intervals and adequate rates of leave pay are provided Extra leave (known as study leave) which may not exceed 12 months in all during an officer's service may be granted to officers desirous of pursuing special courses of study of a post graduate nature During such leave study allowance at present fixed at the rate of 12s a day in the United Kingdom £1 a day on the Continent of Europe and £1 10s a day in the United States of America is granted to an officer in addition to ordinary rates of leave pay

PENSIONS.

The rates of pension are as follows	Per annum £
After 17 years service for pension	400
18	430
19	460
20	500
21	540
22	580
23	620
24	660
25	700
26	750
27	800

These rates are subject to alteration on account of a rise or fall in the cost of living as compared with the year 1919 to an extent not exceeding 20 per cent. in all At present a reduction of 8½ per cent is being made on this account.

There are additional pensions ranging from £65 to £350 per annum for officers who have held administrative appointments

PASSAGES

An officer on appointment is provided with free passage to India The families of officers who are married prior to the date of the officers embarkation on first appointment will also be provided with free passage to India subject to the payment of messing charges

Officers and their families are also eligible for passage concessions under which they are granted a certain number of return passages home at Government expense during their service

INSTRUCTION PRIOR TO EMBARKATION

Officers are required to undergo courses of instruction at the Royal Army Medical College and at Aldershot lasting approximately six months prior to their embarkation for India on first appointment Information as to the rates of pay admissible during this period and subsequently up to arrival in India is contained in the memorandum referred to below

A memorandum giving full details regarding these appointments and forms of application may be obtained from the Under-Secretary of State for India Military Department, India Office, London, S W 1 The Selection Committee will meet at the India Office early in July next and the selected candidates will be required to join a course of instruction commencing early in August prior to sailing for India early in 1934 Applications should be submitted as soon as possible

least in many instances it is associated with an infective focus and that it calls for methods of treatment other than those which its supposed alliance with rheumatism would suggest

These positions the steps which have led to their establishment and the practical applications they demand are very effectively stated in a recent article by Dr Russell L Cecil of New York.[1] Broadly Dr Cecil's conclusions march with those of the British British Medical Association committee's report He is however quite uncompromising in relation to focal infection as the cause of rheumatoid arthritis and is correspondingly insistent upon the necessity for the elimination of all septic foci as a starting point in the treatment of the disease endocrine abnormalities disturbed metabolism deficiency influences he will allow as perhaps predisposing but certainly not as causative factors In short what the committee recognizes as possible—namely that sooner or later all cases of rheumatoid arthritis may be proved to have an infective source—has in Dr Cecil's view already arrived He admits that the positive observations of himself and his fellow-workers—namely the successful cultivation of streptococci from the blood in a large proportion of cases of the disease—have not been obtained by other bacteriologists but for these failures as they seem to him he offers explanations and in any event he claims that a few positive facts may be held to outweigh a number of purely negative ones Not less convinced is he that the streptococcic agglutinins present in the serum of patients suffering from rheumatoid arthritis are specific agglutinins differing in no respect from the specific agglutinins that occur in infections with the typhoid bacillus the pneumococcus, and other pathogenic micro-organisms On these two bacteriological issues the committee's report holds that not until further evidence is available can a confident verdict be pronounced and similarly in the practical sphere the report suggests caution and gradualness in dealing with infective foci rather than the radical swiftness which Dr Cecil advocates A somewhat similar contrast may be noted when the subject of vaccine treatment is discussed Both the B M A committee and Dr Cecil agree that vaccines have been too loudly exploited and probably not always used with the care and under the conditions which these agents demand and equally they emphasize that reactions are certainly to be avoided But Dr Cecil having secured his typical strains of streptococcus has naturally prepared a corresponding vaccine has used this both by the subcutaneous and by the intravenous method and on the basis of a large experience he is satisfied that 'undoubtedly a certain number of patients are benefited by the treatment indeed his usual practice is to try intravenous injections for at least three or four months and to continue or discontinue the treatment according as the patient has or has not improved over that period The conclusion of the committee is that given certain conditions vaccines have some opportunity of service and there are other well-known workers whose teaching on this point is much more emphatic From all this it is of course evident that the bacteriology of rheumatoid arthritis and the exact value of vaccine treatment are subjects for further investigation and it is certain that the necessary inquiries will be actively prosecuted

Differences of opinion on points which yet await the judgement of experience must however not be allowed to minimize or confuse the positive additions which recent observations and study have made to the diagnosis and treatment of the various forms of arthritis Particularly does this proposition apply to the contrast established between rheumatoid arthritis on the one hand and osteo-arthritis on the other for it is here largely that confusion has existed It is no small gain to have a definite nomenclature and classification set up and to know that the division rests not on fancies but on facts The history and clinical examination of the patient make of course their special claim but ancillary methods have a large application Dr Cecil emphasizes the value of blood and joint cultures though he recognizes that the former require an elaborate technique and a considerable time *x*-ray examinations afford a contrast between changes due to infection and those of a degenerative order the blood sedimentation test he regards as of high diagnostic value as also the Schilling haemogram which shows in the presence of an infective process more or less numerous immature polymorphonucleocytes due to the stimulation of the bone marrow by the infective agent By these or other methods the expectation is that the area of confident diagnosis in joint affections will be greatly enlarged with resulting opportunities for prevention and treatment Of course if these ends are to be attained the new knowledge must pass from academic circles into the busy life of practice and there is the more claim to strive for this development in view of the amount of suffering of disability and of economic loss which joint diseases inflict, and in view too of the brighter therapeutic prospects which research has now established It is all to the good that efforts are being made on both sides of the Atlantic to bring the new opportunities into effective operation

[1] Cecil Russell L Rheumatoid Arthritis A New Method of Approach to the Disease *Journ Amer Med Assoc* April 22nd 1933

RHEUMATIC DISEASES AND HEALTH INSURANCE

The National Federation of Trade Unions Approved Society was in conference at Buxton at the end of last month and discussed many aspects of national health insurance The conference was addressed by Dr C W Buckley on Rheumatic Diseases and their Effect on the Finances of Approved Societies He said that it was by the wise provision and administration of additional benefits that sickness and disability might be lessened and thus in the long run expenditure reduced This principle might be applied with greater force and advantage to the great group of diseases classed as

rheumatic than in any other direction, since they were responsible for an enormous drain on industry and consequently on the insurance funds Rheumatic diseases accounted for one-sixth of the total weeks of sickness among insured male workers alone Although much had already been done in the investigation and treatment of rheumatic fever, chronic arthritis was only beginning to receive the attention it deserved, and the public were still not alive to the importance of thorough treatment in the earlier stages , the sufferer often did not give up work until the stage at which treatment was most likely to be successful was past One approved society had, however, quite recently arranged that every case of arthritis occurring among its members should be notified at once to headquarters and made the object of special care and investigation with a view to early and thorough treatment The Ministry of Health had made several important reports on the subject and suggested schemes for dealing with the problem Dr W S C Copeman had amplified and developed a plan for rheumatism advisory centres to which practitioners might refer their cases These centres would be linked up with the in-patient wards of general hospitals, with the spa hospitals, and with physical treatment centres to be established along the lines of the Red Cross Clinic in Regent's Park Such a plan would do much to solve the problem of early and thorough treatment Dr Buckley suggested that the old Poor Law infirmaries, now termed " municipal hospitals," should be utilized largely in this scheme, with a consultant staff, if necessary, along the lines now under consideration by the London County Council to provide for in-patient treatment, and if properly equipped they would also provide the physical treatment centres The rheumatism advisory centres could be arranged as part of the out-patient department of any hospital or as separate clinics along the lines of the existing tuberculosis and venereal disease clinics Since arthritis is common in country districts and small towns where there is no hospital accommodation to permit of adequate development along these lines, it would be expedient to arrange for skilled physical treatment to be administered by members of the Chartered Society of Massage and Medical Gymnastics, under the general directions of the patient's own doctor If such workers could be established in rural districts, preferably in affiliation with the district nursing scheme but paid an adequate salary from a central fund, a very great deal, in Dr Buckley's view, could be done to cope with the problem of the treatment of arthritis While some of the cost must be met from health insurance funds, aid would also be required from public money, either national or local, since not more than half of the sufferers would be insured Some of the remainder would be in a position to pay, and this would help to reduce the cost

Dr Buckley is right when he says that we, in attacking this great problem, are definitely behind some Continental countries which have proved that such a scheme as he outlined is quite practicable There will be general agreement with him, too, in his insistence that research should be encouraged at the same time into the causes of these diseases and their control Much may be expected from slum clearance and better housing Climate he regards as a much less important factor than defective hygiene in the home Stuffy rooms and workshops, unsuitable food and clothing, want of fresh air, and unfavourable working conditions do far more to lower resistance to rheumatic diseases than climate

THE CURABILITY OF CANCER

At the annual congress of the American College of Surgeons in 1932 a feature of the proceedings was an extensive symposium entitled " Cancer is Curable "[1] The series of thirty individual communications composing it deals largely with five-year cures, of which no fewer than 4,348 are reported Eight of these communications deal exclusively with cancer of the uterus and four with cancer of the breast other organs, considered individually as well as in general reports of the results obtained at particular clinics, are the stomach, kidney, bladder, prostate, testis, larynx, eye, and skin No general analysis is feasible, since the reports cover different periods of time and a variety of forms of treatment , nor can the respective merits of such treatments be readily assessed as a whole On the other hand, there can be few surgeons and radiologists who will not find some record or opinion which will be instructive the reports represent present-day practice in most of the leading surgical centres of America, and, besides furnishing the most extensive statistical data of results in cancer yet published, they include expressions of opinion and descriptions of operative technique which may not be familiar Although the comparison of results and the estimation of prognosis in different types of malignant disease furnish the chief advantage of such a symposium, the motive which led in this case to the choice of subject was avowedly propagandist It was felt that, until the public can be brought to believe that cancer is a curable disease, the earlier treatment which is the first requirement for better success is not likely to be secured, and to that end the fullest " ethical " publication of the proceedings was encouraged The extent to which public attitude must control the possibility of successful results was repeatedly emphasized One speaker referred to a legal acquaintance sceptical of the possibility of any cure of cancer who, unknown to himself, had had a carcinoma of the sigmoid flexure removed fifteen years previously No doubt a considerable proportion of patients from whom malignant growths have been successfully removed are never told the nature of the condition , if they are, the prevalent reaction to the word " cancer " is such that they will be highly reluctant to speak of it The consequence is that successes tend to be obscured, while examples of failure (" poor So-and-so had cancer ") are known to everyone This obstacle to a more enlightened public opinion is a very real one, and not likely to be easily overcome Apart from any indirect effect on the public, however, it was naturally hoped that the profession itself, and in particular those who have possibly been discouraged by a series of unsuccessful cases, might be convinced of the value of modern methods of treatment Not only the diagnostic ability and promptitude of the practitioner first seeing a case, but a conviction on his part of the utility of appropriate measures, are at least as much a *sine qua non* as the seeking of early advice A plea was also made for the advanced case,

[1] *Surg. Gynecol. and Obstet.* 1933, lvi, 412

not merely on the ground that unexpected success may follow radical treatment but in the sense that palliative relief should continue to be afforded by all possible means there is a quack waiting round the corner for every patient whose doctor gives him up There is a remarkable degree of unanimity in the opinions expressed in these reports and their conclusions appear wholly applicable to the same problems in any country

ASSESSMENT OF CLIMATIC FACTORS

One of the Sections at the recent annual congress of the Royal Institute of Public Health at Eastbourne—that concerned with hydrology and climatology—provided a common ground for members of the medical profession and meteorologists and was presided over by Sir Gilbert Walker, professor of meteorology at the Imperial College of Science and Technology South Kensington Sir Gilbert Walker whose presidential address was entitled 'Airs Waters and Places devoted himself to a discussion of the methods of assessing climatic factors in their influence upon disease Of the two methods of proceeding one being to consider the locality and note the effect of varying amounts of rainfall (if that is the climatic factor taken) in successive years upon the extent of the disease and the other to consider a number of places and observe the extent of reaction upon the disease of localities wet and dry he thought the first method the simpler though it required assistance from the second The second method was the more usual practice but it was open by itself to serious objection for there were other respects than rainfall in which places would vary and while the assessment might be easy enough with quantitative factors like sunshine humidity and wind it was not easy with such matters as soil or with the effects of cheerful surroundings and attractive scenery It seemed to him therefore that the second method that of comparing the results of different rainfall experienced in a number of places was only of value in suggesting a working hypothesis to which the first method could be applied Sir Gilbert Walker instanced some precautions to be taken in using statistical methods Although such methods gave the degree of association between different factors they alone could not indicate which was cause and which was effect It had long been known for example that places of abundant tree growth were places of abundant rainfall and while some had deduced that more rain produced more trees others had deduced that it was the forests that produced the rain Clearly the question could only be settled by specialized knowledge Again false inferences might be made unless care was taken that all the relevant factors were included in the examination Useful information as to whether a given factor was a cause or an effect of another factor could sometimes be derived by trying the effect of a change in the epochs in which the two factors were measured It was always the choice of the factors to be examined which made specialized knowledge absolutely necessary and without it the expert in statistical methods was gravely handicapped Indeed he was liable to produce what might seem conclusive evidence of a relationship of cause and effect which in reality did not exist

PREVENTION OF BLINDNESS IN INDIA

The Junior Section of the Indian Red Cross (New Delhi) has published a pamphlet of fourteen pages setting out the salient measures needful for the layman to know for the prevention of blindness It is stated that there are in India about one million blind persons and for each blind person there are three others with seriously impaired sight who are blind in one eye or have some eye disease which seriously impairs their vision A large number of blind persons might recover their sight by having proper medical treatment But a much larger number of people ought never to have gone blind because blindness can be avoided in most cases Simple measures are enough to prevent people from losing their sight as well as to protect the eyes of young children With this introduction the pamphlet gives a series of short clear statements of eight dangerous conditions keratomalacia and night blindness syphilis and gonorrhoea trachoma small-pox the use of dangerous and irritant drugs by quacks and irritation due to dust and dirt baby's sore eyes accidents squint and short sight Each of these sections is written in the clearest of language and there are illustrations which point the moral even more effectively than the printed word Finally, there is a summary in the form of fifteen commandments, the first of which reads

Keep your hands and face clean Wash them thoroughly with soap and clean water at least twice daily The authors of the pamphlet are to be commended for their work and the Red Cross Society for its enterprise in undertaking the publication

SOCIALIZATION OF THE MENTALLY DEFECTIVE

It would be well if all the members of the British Medical Association's special committee on mental deficiency and many of those influenced by its report would continue to draw attention from time to time to the important findings and conclusions contained in that report An admirable example of the way in which this may be done is found in a pamphlet by Dr Henry Herd school medical officer for Manchester and one of the members of the committee [1] It is a reprint of an address given to the North Lancashire Association for Mental Welfare and is largely based upon the third section of the report of the B M A committee What is meant by the socialization of the mentally defective needs expounding and some popular ideas with regard to the relation of such a process to segregation on the one hand and sterilization on the other need correcting In this pamphlet Dr Herd both expounds and corrects very effectively and it is well worth reading by all those interested Most of the points made will be familiar to those whose knowledge of the subject is fairly extensive especially if it is the result of practical experience in dealing with mentally defective children Attention may be drawn particularly to two of those which Dr Herd's address contains He quotes an American writer who almost paraphrasing a sentence in the B M A report says In considering what class of feeble-minded individuals may safely remain in and may be returned to the community it is of more importance to study what

[1] Beeley Bros Penny Street, Lancaster

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association B.M.A. House Tavistock Square W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary 7 Drumsheugh Gardens Edinburgh)

(a) British Islands

Town or District	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH** *(contd.)*
EBBW VALE, MON *(Workmen's Medical Society)*	OAKDALE, MON *(Medical Officer for Medical Aid Association)*	COUNTY BOROUGH OF SOUTH SHIELDS. HARTON INSTITUTION AND CLEADON COTTAGE HOMES *(Medical Officer)*
GILFACH GOCH GLAMORGAN *(Workmen's Medical Scheme)*	OGMORE VALLEY GLAMORGAN *(Wyndham Colliery Medical Aid Society)* *(Workmen's Medical Scheme)*	CITY OF STOKE-ON-TRENT. *(Venereal Diseases Officer)*
LLWYNPIA CLYDACH VALE TENYGRAIG GLAMORGAN *(Workmen's Medical Scheme)*	**PUBLIC HEALTH**	HERTFORDSHIRE COUNTY COUNCIL. WARE SANATORIUM. *(Assistant Medical Officer)*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer)*	KENT COUNTY COUNCIL. LENHAM SANATORIUM. *(Male Assistant Medical Officer)* FARNBOROUGH INSTITUTION HOSPITAL. *(Resident Assistant Medical Officer)*	FULHAM BOROUGH COUNCIL. Maternity and Child Welfare Department. *(Assistant Medical Officer—Women)*
MARDY GLAMORGAN *(Workmen's Medical Scheme)*		
NEATH AND DISTRICT *(Medical Aid Association)*	WORCESTER COUNTY AND CITY MENTAL HOSPITAL. *(Junior Assistant Medical Officer)*	

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B.M.A. House Tavistock Square W.C.1

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments)*	Dr. J. G. HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St. Sydney N.S.W.	**QUEENSLAND** *(Brisbane Associated Friendly Societies Institute)*	The Hon. Sec. Queensland Branch, British Medical Association B.M.A. Building Adelaide St. Brisbane.	**WELLINGTON NEW ZEALAND** *(Contract Practice Appointments)*	Dr. G. F. WANSON (Hon. Sec. New Zealand Branch) British Medical Association P.O. Box 156 Wellington New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries)*	Dr. J. P. MAJOR (Hon. Sec. Victorian Branch British Medical Association Medical Society Hall East Melbourne Victoria.	*(Toowoomba Associated Friendly Societies Medical Institute Toowoomba)*		**WESTERN AUSTRALIA.** *(Contract and Lodge Practices)*	Hon. Sec. Western Australian Branch British Medical Association No. 6 Bank Chambers St. George's Terr. Perth Western Australia.

May 31st, 1933 By Order of the Council G. C. ANDERSON Medical Secretary

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HUDDERSFIELD ROYAL INFIRMARY

Wanted, LADY HOUSE SURGEON to commence duty July 1st. Duties mainly Eye Ear Nose, Throat and Obstetrical Departments Salary £150 per annum with board residence and laundry

Appointment for six months subject to renewal for a similar period

Applications with copies of three recent testimonials to be addressed to the undersigned not later than June 12th

H. E. G. HALL,
Gen. Supt. & Secretary

SANATORIUM BRIDGE OF WEIR.

COLONY FOR EPILEPTICS
BRIDGE OF WEIR

ASSISTANT MALE RESIDENT MEDICAL OFFICER wanted, to commence duties in August. Keen evangelical, and keen research worker preferred. Appointment for six months in first instance at rate of £200 p.a. (renewable by mutual agreement) with board and laundry. Applications to Medical Superintendent stating age experience and qualifications, and enclosing references

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EAST SUFFOLK AND IPSWICH HOSPITAL.
(282 Beds—7 Residents.)

Wanted July 1st HOUSE SURGEON to the Senior Hon. Surgeon (British male). Salary at the rate of £120 per annum

Applications stating age qualification and experience to be sent to the undersigned together with copies of three recent testimonials

The Hospital, Ipswich. ARTHUR GRIFFITHS Secretary

LONDON HOSPITAL, E.1.

Applications are invited for the post of FIRST ASSISTANT AND REGISTRAR to the Children's Department. The appointment is for one year but is renewable annually on application for two further periods of one year

Salary £300 per annum payable by the Hospital and Medical College jointly

Candidates must be fully qualified medically

Applications should arrive at the Hospital not later than by the first post on July 15th.

Further particulars may be obtained from the House Governor

ARTHUR G. ELLIOTT
House Governor

THE HOSPITAL FOR WOMEN Soho Square W.1

Applications from fully qualified men and women are invited for the post of RESIDENT MEDICAL OFFICER for a period of six months commencing July 1st next. The salary is at the rate of £100 per annum, with board residence and laundry. Applications and testimonials must reach the undersigned by Monday June 19th

J. P. HEMING Secretary

ALTRINCHAM GENERAL HOSPITAL.
(100 Beds.)

Applications are invited for the post of JUNIOR HOUSE SURGEON. Salary £120 per annum, with board residence and laundry

The appointment is for six months, in the first instance duties to commence July 1st

Applications stating age and experience together with copies of recent testimonials to be sent to the Secretary General Hospital, Altrincham not later than June 8th.

THE CANCER HOSPITAL (FREE)
(Incorporated under Royal Charter)
Fulham Road, London S.W.3.

The Committee are prepared to receive applications for the post of HOUSE SURGEON to commence duties on July 1st. Salary at the rate of £100 per annum.

The appointment is for six months and subject to rules

Candidates must call upon each Member of the Medical Committee not later than Tuesday June 20th

A copy of the Rules and the names and addresses of the Medical Committee may be obtained from the Secretary

Previous experience as a House Surgeon is indispensable.

Application with three (copies only) testimonials to be sent to the undersigned not later than the first post on Saturday June 10th.

CLEMENT COBBOLD Secretary

BIRMINGHAM AND MIDLAND EYE HOSPITAL.

Applications are invited from duly qualified Medical Practitioners for the post of RESIDENT SURGICAL OFFICER, which will become vacant on or about July 1st.

The Resident Staff also consists of Two House Surgeons and in the event of one of these being promoted, applicants should state whether they will be willing to accept the appointment of House Surgeon.

Applications with testimonials and evidence of registration must be received not later than Tuesday June 6th.

Church St., Birmingham. J. W. PEARCE, Gen. Supt.

(Appointments continued on p. 49.)

communities are safe for the feeble-minded." Again, in Dr Herd's own words "In the average stable, docile type of defective, modifiability is markedly possible His suggestibility can be his salvation, though it can also be his curse Indeed, such a type is exceedingly sensitive to influences around him, and if these influences are good he may become a fairly steady, reliable personality" In this connexion the observations of the Ministry of Health on the paragraphs of the report of the Ray Committee dealing with the care of the mentally defective may be recalled The departmental circular to local authorities says "Neither the Board of Control nor the Minister could subscribe to the view expressed that there is no evidence that more than a negligible number of the mentally deficient are improved in condition by treatment The effect of the experience obtained is, in fact, that all but a negligible number show improvement after treatment, both as regards habits, behaviour, and capacity for work"

AN EARLY DIETETIC PHYSICIAN

Professor Raymond Pearl has recently called attention to Toby Venner and his *Via Recta*[1] Tobias Venner was the son of a gentleman in Somersetshire He was born in 1577, matriculated at Oxford from St Albans Hall in 1595, practised first at Bridgewater, afterwards at Bath, and died in 1660 He wrote the *Via Recta ad vitam longam*, or a treatise wherein is the right way and best manner of living for attaining to a long and healthful life The fourth and final impression was published in 1660, and has a fine portrait of the author, aet su 85, executed by Faithorne Professor Pearl points out that Venner's recommendations as to diet are curiously modern in character, and that without knowing it he was recommending foods rich in vitamins He writes of the dietary virtues of lettuce, milk, egg-yolk, and of the use of bran for those who are costive Cream he thinks is "hurtful to them that be phlegmatic and to old men, but unto young men that have strong stomachs it is (especially in the hot seasons of the year) no less convenient than delightsome, and verily with Straw-berries and Sugar, it is for them, for whom it is convenient, a very delicate and wholesome dish And whosoever he be that delighteth to eat a dish of cream, let him not be parsimonious of sugar, for that is the best correctory for it" Appended to the paper is an interesting diagram which Professor Pearl calls a "biogram," showing Venner's relation to contemporary writers at different periods of his life To the scanty notices of Venner may be added the short article which appeared in the *Hospital* on February 4th, 1905, because it shows that a remarkable personality has not been wholly overlooked by his fellow countrymen Toby also wrote a *Treatise on Tobacco*, which he says "very many in these days doe too licenciously use" He was no friend to its use, for he says, "It drieth the brain, dimmeth the sight, vitiateth the smell, dulleth and dejecteth both the appetite and stomach, destroyeth the concoction disturbeth the humours and spirits, corrupteth the breath, induceth a trembling of the limbs, excoriateth the windpipe, lungs and liver, annoyeth the milt, scorcheth the heart, and causeth the blood to be adusted Moreover it eliquateth the pinguie substance of the kidnies and absumeth the genture In a word it overthroweth the spirits, perverteth the understanding and confoundeth the senses with a sudden astonishment and stupidity of the whole body" Nevertheless if men must smoke it should be "Virginia tobacco and not Verinus or Spanish Tobacco, for the best sort of Virginia tobacco in comparison with the latter is weak, yet it is of reasonable good relish and is best for them that love to play with Tobacco's smoke or know not how to pass the time without a Tobacco pipe in their hands"

[1] *Human Biology* vol iv, No 4 Baltimore Johns Hopkins Press

FROM HATS TO HANDWRITING

A reader in South Southumberland, who liked the "general tone" (as he is kind enough to put it) of our recent note on Hats and Stethoscopes, wishes to "nail a lie to the counter" (as he is unkind enough to put it) He is the son of a doctor and the grandson of a doctor, and neither his father nor his grandfather—all honour to them—ever wore a high silk hat, they covered their heads with "a high square bowler, something betwixt and between" Our correspondent has caught us out here We should have remembered that intermediate nameless kind of hat which combined the professional decorum of the topper with the all-weather qualities of the billycock Did not Mr Churchill attempt to revive it? But the point we wish to make now is that our critic writes illegibly and on both sides of his notepaper, with scarcely any space between the lines and no margins This fourfold literary crime is all too common It is not peculiar to South Southumberland, it is committed by otherwise blameless practitioners in West East Anglia and even in Mid-Middlesex The illegibility for which doctors are notorious has been attributed to note-taking at lectures and the constant scribbling of "rep mist" We think it has deeper origins Did not learned psychologist Dogberry say that to write and read comes by nature? A vile fist may be hereditary in some families or it may be over compensation for an emotional trauma in babyhood On the other hand, there are medical authors who seem, with Hamlet, to hold it a baseness to write fair Sir Clifford Allbutt was not of that opinion, though his MSS and his corrected proofs were often a sore trial to editors and printers So difficult did his "copy" become that none but the most experienced compositor could be trusted to handle it But Sir Clifford was disarmingly ashamed of his MS, and had the grace to write on one side only of the paper It is told of a judge that he kept on saying, "I cannot hear you, Mr X," to a young counsel who had forgotten to put on his wig and who repeated the same opening words crescendo in the belief that his lordship was deaf So, too, there was once a medical editor who, after frowning long over an illegible MS, flung it back to its author with the remark, "Take this to the chemist, I can't dispense it"

The Societe Internationale de Chirurgie Orthopédique, whose president is Professor Nové-Josserand of Lyons, will hold its second congress in London from July 19th to 22nd

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LONG LEASE OF FINE OLD GEORGIAN HOUSE, Harley St. district for disposal. Income-rent of consulting rooms more than covering rent and taxes, leaving excellent flat with additional consulting room for tenant.—No. 3530, B.M.A. House, Tavistock Sq., W.C.1.

NEAR PUTNEY COMMON.—COMFORTABLY furnished compact modern DETACHED HOUSE, open view, 4—5 bed., garage, telephone, good garden, offered Doctor requiring accommodation for one or two patients. Moderate terms for long let.—No. 3506, B.M.A. House, Tavistock Sq., W.C.1.

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IMPORTANT NOTICE

to MEMBERS of the MEDICAL PROFESSION

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WANTED — COPY OF *PEVLE VEUPO TOPIQUE* for June 1925.—Address No. 3629, B.M.A. House, Tavistock Square, W.C.1.

SALE.—CARTER'S FILEY INVALID COUCH, practically new, list price £61, accept £35 or nearest offer.—Box 3, Pibbledale Place, Preston.

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APPOINTMENTS—Contd

COUNTY BOROUGH OF WEST BROMWICH

HALLAM HOSPITAL.

SENIOR RESIDENT MEDICAL OFFICER

Applications are invited from fully qualified male registered practitioners for the above appointment.

The appointment may be terminated by either part giving two months' notice.

The Hospital has 474 beds and is equipped with up-to-date special departments. There is a visiting staff of eight consultant physicians and Surgeons.

Preference will be given to applicant with previous experience of Surgery and Hospital administration.

Salary £350 per annum rising by annual increments of £25. The appointment is limited to 3 years.

Canvassing either directly or indirectly is strictly prohibited and will be deemed a disqualification.

Applications stating age, experience and qualification, together with copies of three recent testimonials must be forwarded to the Medical Officer of Health, 2 Lodge Road, West Bromwich, so as to arrive not later than by first post on Tuesday, June 13th.

ALFRED WICKHAM,
Town Clerk.

Town Hall,
West Bromwich.
May 29th, 1933.

NOTTINGHAM GENERAL DISPENSARY, GREGORY, POULTNEY & ARDE BRANCH, NOTTINGHAM.

Wanted RESIDENT SURGEON (*if male*) unmarried. Must have Medical and Surgical qualifications. Salary £450 with £25 increase per year up to £500. House with attendance, lights and fuel (not board). This institution is a non-provident one. No bad debts. No midwifery. Applications, stating age, and accompanied by copies of recent testimonials, to be sent by June 13th to—

R. J. WILLATT,
Secretary.

5 Thurland St.,
Nottingham.

COUNTY COUNCIL OF DURHAM

ASSISTANT WELFARE MEDICAL OFFICER.

The County Health Committee invite applications for the appointment of an ASSISTANT WELFARE MEDICAL OFFICER (Woman) at a salary commencing at £500 per annum (subject to such temporary reduction as the County Council may order), rising by annual increments of £25 to £600 per annum. Travelling expenses will be paid by the Council according to scale.

The appointment will be held subject to three months' notice on either side and to the following conditions:

(1) The Officer appointed must be a registered Medical Practitioner between the ages of 25 and 35 years, must devote the whole of her time to the duties of the office and must not engage in private practice.

(2) She should either have held a previous appointment as Medical Officer of an ante-natal clinic with the approval of the Minister of Health or have had at least three years' experience in the practice of her profession and special experience of practical midwifery and ante-natal work. The holding of a Diploma in Public Health and practical experience in bacteriological laboratory work will be deemed additional qualifications for the post.

(3) She will be subject to the direction of the County Medical Officer.

(4) She will be required to reside in Durham City or such other place as required by the Council.

(5) She must be prepared if called upon to act as Locum Tenens to other members of the Medical Staff of the County Medical Officer.

(6) The appointment will terminate on marriage.

(7) The candidate appointed will be required to pass the County Council's medical examination and will be subject to the provisions of the Local Government and Other Officers' Superannuation Act, 1922.

Application, endorsed Assistant Welfare Medical Officer, with copies of not more than three recent testimonial must be received by the undersigned not later than June 17th.

C. EVANS,
County Medical Officer.

Shire Hall,
Durham.
May 30th, 1933.

WARRINGTON INFIRMARY AND DISPENSARY.

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON (male) unmarried.

Applicants, who must be of British nationality must be duly qualified Medical Practitioners.

Salary £175 per annum with board apartment and laundry.

Application, stating age, with copies of three recent testimonial, should be sent in at once to the undersigned.

By Order,
HENRY L. POOT,
Sup. & Secretary.

May 30th, 1933

CONNAUGHT HOSPITAL,

Walthamstow, E.17.

(100 Beds with Three Resident Medical Officers.)

RESIDENT CASUALTY OFFICER (male) required. Salary £100 per annum. Appointment for six months from July 1st, with board, residence and laundry. Application, stating age, nationality, qualifications and experience, accompanied by copies of not more than three recent testimonials, should be received not later than Monday, June 5th.

KENELM S. ELLISON,
Secretary.

CONNAUGHT HOSPITAL,

Walthamstow, E.17.

(100 Beds with Three Resident Medical Officers.)

RESIDENT HOUSE PHYSICIAN (male) required. Salary £100 per annum. Appointment for six months from July 1st, with board, residence and laundry. Application, stating age, nationality, qualifications, and experience accompanied by copies of not more than three recent testimonials, should be received on or before Monday, June 5th.

KENELM S. ELLISON, Secretary.

THE WILLESDEN GENERAL HOSPITAL, N.W.10.

Applications are invited from fully qualified and registered candidates (unmarried) for the appointment of a Resident Officer to hold the appointment of CASUALTY OFFICER for three months from July 1st, followed by a six months' appointment as HOUSE SURGEON (non-resident).

Salary at the rate of £100 per annum.

Applications to be received by the Secretary not later than first post Saturday, June 17th.

KING EDWARD'S HOSPITAL FUND

The Prince of Wales presided over the annual meeting of the General Council of King Edward's Hospital Fund for London and read a message from the King congratulating the Fund on the fact that the whole of the increased distribution of £300 000 had been covered by the income of the year

PRESIDENT'S SPEECH

The Prince remarked that this achievement was little short of a miracle In spite of the financial crisis and the very serious time through which the country was passing the King's Fund and the voluntary hospitals had had a successful year in 1932 as indeed they had had for some years past By the end of 1931 they had been able to increase gradually the ordinary distribution to £275 000 and to keep also a margin in reserve partly for maintaining the distribution and partly to provide for the special grants in aid of the pensions scheme for nurses and hospital officers In 1932 the income had again reached the same level There was reason to fear that some hospitals might be suffering seriously from the crisis and it was therefore decided to make an immediate increase in the distribution bringing it up to £300 000 After withdrawing also from the year's income the proper share (£20 000) for 1932 for the pensions reserve fund there was left a balance in hand of £111 The distribution of this sum of £300 000 constituted a new landmark in the history and progress of the King's Fund at a level which it was hoped would be maintained As a whole the hospitals did better themselves in 1932 than in 1931 and for the sixth year in succession had come out with a margin on the right side —a narrow margin but slightly better than that of a year ago This was due said the Prince to sustained efforts on the part of individual hospitals and to steady and continuous support on the part of the public Hospital expenditure had been reduced substantially although the total number of beds available had continued to increase New supporters had come forward and a better standard of propaganda work had been reached Hospitals had purchased 50 000 copies of the King's Fund publicity manifesto and had circulated them in support of their own appeals Moreover the miniature hospital had proved very useful in bringing home to people generally the reason why modern hospitals cost so much to build equip and maintain and how great was their efficiency This exhibit was now being shown in the country to benefit local hospitals

OTHER KING'S FUND ACTIVITIES

The Parliamentary Committee of the King's Fund was co-operating with the British Hospitals Association in pressing for recognition of the just claims of hospitals for fair remuneration in connexion with the treatment of motor accident cases the cost of which was at present falling largely on funds contributed for other purposes The staff of the King's Fund had also assisted the London Voluntary Hospitals Committee in the very valuable survey of medical and surgical services in the county of London which that committee had recently issued jointly with the London County Council His Royal Highness believed that this was the first occasion of there being a complete survey made of both parts of these services—namely those provided by the voluntary agencies and those provided by the public authorities The Out patient Arrangements Committee had been considering the recommendations made by Lord Onslow's Committee in respect of standard forms of doctors letters and hospital time tables for out patients In the first case the action being taken by medical organizations was highly commendable and in the second case the hospitals were already co-operating with Sir John Rose Bradford's Committee Records of the time taken in the various stages of out patient treatment were being compiled The Prince added that after dealing with the problem of reducing the time of waiting for patients the Arrangements Committee proposed to study the possibility of time saving methods at the dispensary stage This seemed to him a very reasonable objective because any improvements found desirable here could be brought into operation without disturbing the rest of the out patient procedure

With the increasing activities of the King's Fund larger and more convenient office accommodation had become necessary and had been obtained The figure for expenses came to 10½d in the pound of the amount received This said the Prince covered more than the cost of collecting and distributing £320 000 among 180 hospitals and convalescent homes and obtaining and studying all the necessary information It included also the cost of performing many of the functions of a central body acting for the voluntary hospitals of almost the whole of Greater London which had between them an annual turnover of nearly £4 000 000

THE 1932 ACCOUNTS

Proposing the adoption of the accounts for 1932, the honorary treasurer Mr E R Peacock explained that these had become rather complicated owing to the fact that the Fund had been asked by some donors to act as trustee for them in allocating their gifts There would now be an income and expenditure account dealing only with the general income the expenses and the distribution receipts for special purposes being dealt with in the balance sheet. Among the receipts he mentioned the increased contribution of £20 000 from the League of Mercy the further £10 000 from the British Charities Association and legacies which were again nearly £60 000 As the result of the bequest to the King's Fund of the residuary estate of the late Lord Mount Stephen the capital would now receive an addition of about £150 000 and a further sum when certain annuities ceased The amount received annually in voluntary contributions had recently averaged £140 000 If the distribution was to be maintained at its present level this amount should be increased

TWENTY-SEVENTH SOUTH AFRICAN MEDICAL CONGRESS

TRAVEL FACILITIES

In connexion with the twenty seventh South African Medical Congress to be held at Capetown from September 25th to 30th 1933 the following announcement is made for the benefit of those who contemplate undertaking the journey

A special concession of 20 per cent. in the ordinary fare to Capetown has been granted by the Union Castle Mail Steamship Company and Messrs Ellerman and Bucknall Ltd Members taking advantage of this concession are required on booking passages to produce a certificate of membership which can be obtained on application to the Medical Secretary British Medical Association House Tavistock Square London W C 1

Those whose time is limited are advised to travel by R.M.S *Balmoral Castle* leaving Southampton on September 8th arriving at Capetown on Monday September 25th at 6 a.m in good time to be present on the opening day of Congress and returning by the R.M.S *Windsor Castle* leaving Capetown at 4 p m on Friday September 29th arriving at Southampton on October 16th

Special excursion rates (first class £90 second class £60 third class £30 not subject to further concession) are available by the R M S *Windsor Castle* sailing from Southampton on August 25th returning from Capetown either on September 29th by the same vessel or on October 6th by the R.M.M.V *Warwick Castle*

For those who prefer the longer sea voyage there are convenient sailings by the intermediate ships of the Union Castle Line and those of the Ellerman and Bucknall Line Full particulars about sailings and further information may be obtained from any of the offices of Messrs Thomas Cook and Son who will be able to make inclusive travel arrangements for the return journey including hotel accommodation Special terms will be granted by most of the important hotels in Capetown

A limited amount of accommodation is available at the University residences Groote Schuur where Congress will meet for the period September 25th to 29th Inclusive tariff will not exceed 10s 6d per diem Immediate application should be made to the honorary organizing secretary Twenty-seventh South African Medical Congress P O Box 643, Capetown by those who wish for this accommodation

Members proposing to attend the Congress are requested to communicate with the honorary organizing secretary at the above address as soon as possible stating by what steamer they are travelling and whether they will be accompanied by lady guests so that arrangements can be made for their reception

The director of the Publicity and Travel Bureau in the Office of the High Commissioner for South Africa in London offers the services and facilities of his bureau in respect of any rail journeys which members may undertake during their stay in South Africa Those who wish to take advantage of this offer of assistance should communicate with the officer in charge Tourist and Travel Bureau South Africa House, 79 Strand, W C 2, where full information about any journey they desire to undertake in the Union of South Africa or in Rhodesia will be gladly furnished

LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY

The annual meeting of the London and Counties Medical Protection Society was held at Victory House, Leicester Square on May 31st

Sir John Rose Bradford who presided said that during the year the work of the society had largely increased The membership had also received a welcome addition of 861 against which had to be set a loss of 422 by death resignation and removal It was still remarkable how many members of the medical profession to their obvious risk remained outside the defence societies and how many joined long after qualification The legal expenses had been high owing to costs and damages awarded in certain cases but, on the whole the year had been a successful one both in respect to favourable decisions obtained in the courts and to satisfactory settlements outside In two notable cases in which the society had not been successful it had had justification for thinking from the narrow medical point of view that it ought to have been The layman's mind to say nothing of the legal mind regarded some of these problems of differential diagnosis or surgical treatment from a different angle from the medical profession Sir John Rose Bradford added that it was curious to note how in different periods there occurred a series of cases of the same class A little while ago numerous cases were brought forward in which fractures had been overlooked owing to the absence of a proper x ray examination During the last year there had been a remarkable series of cases of accidents following dental extractions Some of these had been satisfactorily settled in others the settlement had not been so satisfactory Finally he referred to the loss which the society had sustained in the death of two of its members of council—Dr Owen Fowler and Mr Bayford Underwood

Dr R L Guthrie presented the financial statement which showed that the invested funds had a book value of £52,500 and that the market value had appreciated by £8 000 in a year The cost of the society was £1 0s 10½d per member

Sir John Rose Bradford was re elected president Dr Guthrie treasurer and Dr C M Fegen secretary, all the vice presidents were also re elected, with the addition of Mr F J Steward and the meeting concluded with a number of votes of thanks In proposing one of these resolutions Dr C O Hawthorne suggested that the society's annual report should be sent to every teacher of forensic medicine throughout the country Such teachers would there find, he said the narrative of various experiences which they could place before their students to illustrate the application of medical jurisprudence in practice Dr Fegen replied that the report was already circulated to every person on the *Register* who was resident in the British Isles and copies were also sent to every medical school

The solicitors to the society (Messrs Le Brasseur and Oakley) in reporting on a selection of the cases which came forward during the year mentioned what seemed to be the increasing custom of certain judges of intervening in the hearing of a case and endeavouring to bring the parties to a settlement In some cases it was felt this might create considerable embarrassment to one side in declining the good offices of the learned judge It had to be remembered however that a judge had a unique experience in gauging the strength of a case and in forming an opinion as to the manner in which the mind of the jury might be made up Though it might be better if there was never any intervention it was that human touch in British judicial proceedings which made them a model to the world It was mentioned that the number of applications for advice and assistance from members during the year was 1 264 and the number of cases actually brought to trial in the courts was greater than in any preceding year

W E DIXON MEMORIAL

A meeting of subscribers to the W E Dixon Memorial Fund was held at the Royal Society of Medicine on June 1st, under the chairmanship of Sir William Willcox, who referred to the lamented death of Professor Walter E Dixon on August 16th, 1931, and said how keenly it was felt by his colleagues, friends, and students that some memorial to him should be established

A small executive committee was formed in December, 1931, consisting of Sir Humphry Rolleston, Lord Dawson of Penn, Professor W Langdon Brown, Dr Alfred Cox, Dr Eric Holmes, Dr J Clifford Hoyle, and Sir William Willcox After much thought and discussion it was considered that the best form which the memorial should take would be a lecture on some subject of pharmacological or therapeutic interest Mrs Dixon was consulted and heartily concurred in the proposal, being of opinion that no better form of memorial could be chosen

The executive committee appointed Sir William Willcox as chairman, Professor Langdon Brown as treasurer and as honorary secretaries Dr Eric Holmes and Dr Clifford Hoyle Several meetings of the executive committee were held in London and at the meeting on March 22nd last it was decided that the fund should be closed on May 1st It was resolved that a general meeting of subscribers be held on June 1st, when a recommendation would be brought forward by the committee that the fund be devoted to the establishment of a "W E Dixon Memorial Lecture" which should be delivered biennially or triennially on some subject of pharmacological or therapeutic interest It was further decided to recommend that the trusteeship of the fund be vested in the Royal Society of Medicine, and that the Council of the Section of Therapeutics and Pharmacology be requested to undertake the selection of the lecturer on each occasion

At the meeting of subscribers to the fund the recommendations of the Executive Committee were unanimously adopted It was decided that the Royal Society of Medicine be invited to undertake the trusteeship of the fund as recommended, and that Professor Langdon Brown, the treasurer, should hand over to the Society the proceeds of the memorial fund which amounted to approximately £700 The proceedings closed with a vote of thanks to the chairman and honorary secretaries, which was proposed by Sir Humphry Rolleston seconded by Professor Langdon Brown, and supported by Dr Alfred Cox and Dr C O Hawthorne

The annual report of the board of the Institute of Physics shows that the many activities of the institute have continued to prosper and that the *Journal of Scientific Instruments* has made satisfactory progress A new feature introduced during the year was the inclusion of articles specially written by authorities in their subjects, dealing with the trend of development of various classes of instruments and with matters of general interest to manufacturers The opening in May of the joint library and reading rooms by the president Lord Rutherford, marked an important step forward Its establishment is the result of the work of the Joint Library Committee originally set up by the Institute of Physics, the Physical Society of London and the Optical Society

THE HOSPITAL FOR SICK CHILDREN
Great Ormond St London, W C 1

Applications are invited from registered Medical Practitioners for the following non resident appointments which become vacant on July 1st

A CASUALTY MEDICAL OFFICER (male) Salary £250 p a (half time)
TWO OUT PATIENT MEDICAL REGISTRARS (male) Salary £250 p a (half time)
THREE OUT PATIENT ANAESTHETISTS Honorarium £50 p a (part time)
Also for an IN PATIENT MEDICAL REGISTRAR (male) Salary £300 p a (whole time)

Duties to commence on October 1st

All the above appointments are tenable for twelve months but are renewable

Candidates must be prepared to attend for interview at the Hospital on Wednesday, June 21st at 4 45 p m

Applications supported by not more than three testimonials given specially for the purpose must be submitted to the undersigned not later than Saturday June 17th from whom further particulars and forms of application may be obtained

H F RUTHERFORD Secretary

THE HOSPITAL FOR SICK CHILDREN
Great Ormond Street London, W C 1

A HOUSE PHYSICIAN and a HOUSE SURGEON are required on July 1st

Gentlemen are invited to send in their applications addressed to the Secretary before 12 o clock, on Monday June 5th with copies of not more than three testimonials given specially for the purpose and also evidence of their having held a responsible Hospital appointment

The appointments are made for six months Salaries at the rate of £100 per annum, laundry allowance £5, board and residence in the Hospital

Candidates must be unmarried and possess a legal qualification to practise

All candidates must be in attendance to appear before the Joint Committee, if required at their Meeting on Wednesday June 7th at 5 p m precisely

Forms of application and copies of the Rules may be obtained from the Secretary

By Order of the Board of Management
HERBERT F RUTHERFORD
May 1933 Secretary

HULL ROYAL INFIRMARY
(370 Beds)

Applications are invited from registered Medical Practitioners for the post of THIRD HOUSE SURGEON (male) vacant June 25th

Salary at the rate of £150 per annum plus residence, board and laundry

The candidate appointed will be expected to stay for not less than six months but the appointment is at any time determinable by one month s notice on either side

The Hospital is recognised by the Royal Colleges for the F R C S examinations

Applications giving particulars of age experience, and nationality together with copies of testimonials should be addressed to the undersigned

R J CARLESS
May 29th 1933 House Governor

NATIONAL TEMPERANCE HOSPITAL
Hampstead Road N W 1

Applications are invited for the post of HOUSE SURGEON (male) The appointment will be for a period of six months at a salary of £100 per annum and will date as from June 21st Preference will be given to those who have held a resident post

Candidates must submit applications stating qualifications age etc with copies of not more than three testimonials by Friday June 9th addressed to the Secretary

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NATIONAL TEMPERANCE HOSPITAL
Hampstead Road N W 1

Applications are invited for the post of HOUSE PHYSICIAN (male) The appointment will be for a period of six months at a salary of £100 per annum, and will date as from June 21st Preference will be given to those who have held a resident post

Candidates must submit applications stating qualifications age etc with copies of not more than three testimonials by Friday June 9th, addressed to the Secretary

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NATIONAL TEMPERANCE HOSPITAL
Hampstead Road N W 1

Applications are invited for the post of CASUALTY OFFICER (Male). The appointment will be for a period of six months at a salary of £120 per annum and will date as from June 21st

Candidates must submit applications stating qualifications age etc with copies of not more than three testimonials by Friday June 9th, addressed to the Secretary

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WEST LONDON HOSPITAL
Hammersmith Road W 6 (234 Beds)

Required ONE HOUSE PHYSICIAN, TWO HOUSE SURGEONS and ONE RESIDENT ANAESTHETIST (Males) The duties of the House Physician include some work in the Neurological [illegible]ments The duties of [illegible] some work in the [illegible] and of the other some work in the Gynaecological Department These four appointments are tenable for six months from July 1st next subject to one month s notice on either side Salary at the rate of £100 per annum, with board lodgings, and laundry allowance

Candidates must be registered under the Medical Act Applications (which must be on printed forms obtained from me) must reach me not later than first post on Friday, June 16th Selected candidates will be required to call upon such members of the Medical Staff as directed to be in attendance at the Medical Council Meeting on Friday June 23rd at 4 30 p m and the House Committee Meeting at 5 p m the same day when the appointments will be made

H A MADGE Secretary

MONTAGU HOSPITAL, MEXBOROUGH, YORKS

Applications are invited for the positions of SENIOR HOUSE SURGEON and JUNIOR HOUSE SURGEON (ladies) at the above Hospital The commencing salary attached to each post is £120 and £100 respectively, with board residence laundry etc One month s holiday is allowed annually

The bed accommodation is as follows Surgical 64 Maternity 20 A further 20 beds for medical cases will shortly be brought into commission The appointments become vacant beginning of June

Applications giving full particulars including experience in the administering of anaesthetics together with recent testimonials, should be forwarded without delay to the undersigned

DONALD WILSON Secretary

FREEMASONS HOSPITAL AND NURSING HOME, 237, Fulham Rd Chelsea, S W 3

The post of RESIDENT MEDICAL OFFICER (male) will be vacant on July 1st Salary at the rate of £250 per annum with board residence and laundry The appointment is for six months Candidates must be registered and must have held resident appointments at a General Hospital. The officer appointed will be asked to proceed to the new Hospital in October

The Institution (48 beds) is for paying patients of both sexes of moderate means unable to afford ordinary nursing home treatment etc

Applications stating full particulars to be sent on or before June 6th next to the Honorary Secretaries from whom further information may be obtained The Medical Advisory Committee will meet on June 13th next

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SEAMEN S HOSPITAL SOCIETY

KING GEORGE S SANATORIUM FOR SAILORS VIRUHOOK HANTS
(For the Treatment of Pulmonary and Non Pulmonary Tuberculosis)

ASSISTANT MEDICAL OFFICER required as from July 1st Salary at the rate of £200 per annum with quarters and board The appointment is for six months in the first instance There is no accommodation for a married man Applications, with copies of three recent testimonials to be sent in by Tuesday June 13th to the undersigned

Seamen s Hospital R E V BAX
Greenwich S E 10 Secretary
May 25th 1933

SALFORD ROYAL HOSPITAL
(263 Beds)

Applications are invited from duly registered candidates (male) for

HOUSE SURGEON (Genito Urinary Dept)
HOUSE SURGEON (Neurological Dept)

For six months from July 1st Salary £125 per annum

Forms of application obtainable from the undersigned, must be delivered on or before June 6th

By Order of the Board
H B SHELSWELL
May 22nd 1933 Gen Supt & Sec

ABERDEEN CITY DISTRICT ASYLUM

Applications invited for the post of SENIOR ASSISTANT MEDICAL OFFICER Preference will be given to one who has held a resident appointment in a General Hospital Previous mental hospital experience is essential

Salary £450 per annum, increasing after one year s approved service by annual increments of £25 to £550 with board and apartments. Applications with particulars of age qualifications experience and copies of recent testimonials to be sent to Medical Superintendent

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CITY OF BIRMINGHAM MENTAL HOSPITAL

JUNIOR LADY ASSISTANT MEDICAL OFFICER

The Committee of Visitors invite applications for the above whole time appointment from ladies under 35 years of age who are duly qualified and registered Medical Practitioners. A person who has held for at least six months a medical or surgical residential post in a general hospital will be regarded as having an additional qualification

The successful candidate should be a good anaesthetist

She will be required to reside in the hospital

The commencing salary will be £350 per annum plus the usual residential emoluments of board lodging laundry and attendance Subject to 12 months service satisfactory to the Committee an increase of £50 will be granted and thereafter increases of £25 per annum up to a maximum salary of £450 per annum An additional £50 per annum will be paid to the holder of the D P M qualification or to a person obtaining the D P M after appointment The salary and emoluments will be subject to a temporary deduction amounting to £6 12s. per annum in accordance with the Scale of Temporary Abatements from Salaries approved by the City Council The salary is inclusive of all fees received and any such fees must be accounted for and paid into the hospital account.

The successful candidate will be required to pass satisfactorily a medical examination and to join the scheme under the Asylums Officers Superannuation Act 1909 She will be required to serve in such institution belonging to the Mental Hospitals Committee as they may from time to time direct The appointment is subject to one month s notice on either side

Applications stating full particulars of qualifications experience and appointments held accompanied by copies of three recent testimonials, must be addressed to the undersigned so as to be received not later than June 24th

F H C WHITSHIRE,
Town Clerk s Office, Clerk to the
Council House Committee of Visitors.
Birmingham May 25th 1933

ANCOATS HOSPITAL, MANCHESTER

HONORARY RADIOLOGIST

Applications are invited for the post of Honorary Radiologist The successful applicant will be required to take an active part in the work of the Department with attendance on three mornings per week

Applications, stating age qualifications, experience and appointments held (if any) to be forwarded to the undersigned on or before June 7th together with copies of three recent testimonials

By Order of the Board
HERBERT J DAFFORNE
Gen Supt & Secretary

ANCOATS HOSPITAL MANCHESTER

EAR, NOSE AND THROAT DEPT
OUT PATIENT CLINIC

CLINICAL ASSISTANT required for the above on Thursday afternoons from 2 p m A fee of 10s 6d per clinic will be paid

Applications stating age qualifications experience and appointments held (if any) to be forwarded to the undersigned on or before June 7th next together with copies of three recent testimonials

By Order of the Board
HERBERT J DAFFORNE,
Gen Supt & Secretary

ANCOATS HOSPITAL MANCHESTER

HOUSE PHYSICIAN

House Physician required for a period of six months to commence duty July 1st next Salary £100 per annum, with board, residence laundry etc.

Applications stating age qualifications and experience to be forwarded to the undersigned together with copies of three recent testimonials on or before June 7th next

By Order of the Board
HERBERT J DAFFORNE,
Gen Supt & Secretary

CITY OF LONDON HOSPITAL FOR DISEASES OF THE HEART AND LUNGS
Victoria Park E 2
(Bus, Tram and Rail Cambridge Heath L & N E Railway)

A vacancy for a HOUSE PHYSICIAN (male) will occur on July 1st Six months appointment Salary at the rate of £100 per annum Board residence and laundry provided

Applications with copies of three testimonials should be sent to the undersigned on or before Friday, June 16th

GEORGE WATTS, Secretary

England and Wales

Red Cross Rheumatic Clinic

At the last meeting of the council of the British Red Cross Society with H R H the Duke of York in the chair it was reported that at the society s clinic for rheumatism in Peto Place Regent s Park 78 589 attendances were made last year for treatment in the general patients department as against 77 892 in 1931 In the private patients department there were 8 040 attendances An investigation into the results of treatment of 2 133 patients discharged during the year with treatment completed showed that 73 4 per cent were cured or improved Out of a total of 3 154 discharged cases 36 per cent of the men and 43 per cent of the women were able to come for their treatment without interrupting their work and a further 22 per cent of the men and 6 per cent of the women were hoping to return to work at the end of treatment although they had been off work when they first attended The object of the clinic therefore—to provide facilities for treatment of those patients who are in the early stages of disease and who are still able to remain at work —is thus being clearly maintained The great anxiety of the early days of the clinic due to lack of available staff with experience in treatments by medical hydrology is now over Among the investigations now being carried out the following are mentioned in the medical board s report effect of autogenous antigen immunization in the treatment of rheumatism skin temperature and capillary microscopy in rheumatoid arthritis effect of specific and non specific vaccine therapy in rheumatism comparative radiological findings in non specific infective arthritis and rheumatoid arthritis classification and differentiation of the forms of arthritis occurring at the menopause and an estimation of the value of various forms of treatment in different types of rheumatism Regular courses of post graduate lectures and demonstrations have now been instituted under the auspices of the Fellowship of Medicine to which the clinic is affiliated and it is hoped gradually to extend their scope

Institute of Ray Therapy and Electro Therapy

The third annual report of the Institute of Ray Therapy and Electro-Therapy (Camden Road London) reviews the first three years of the existence of an institution which was primarily designed to help people of small financial means to have the benefit of various forms of electrical treatment From March 1930 to December 1932 4 601 patients were treated the total number of treatments being 194 514 and the number of medical practitioners in touch with the Institute being 1 131 In the twelve months ending December 31st 1932 1 616 new patients attended and over 80 000 treatments were given Of the 1 239 men and women discharged 69 2 per cent were well or improved 6 2 per cent were unimproved and the remainder were discharged because of unsatisfactory attendance or removal from the district Of the 294 children discharged 72 1 per cent were fit or improved and only 1 7 per cent showed no sign of benefit Treatments are arranged by appointment so there is no waiting—a highly appreciated convenience The conditions treated included convalescence after illness and operation general debility morbidity in workers due to deprivation of sunlight by reason of the conditions of their work bronchitis rheumatism and rheumatoid arthritis skin affections and diseases of children including rickets The patients are kept in touch with their own private practitioners during the light treatment being referred back to them should any fresh condition arise No patient has been admitted to the Institute without a commending letter from a medical practitioner The income limit is based on the scheme outlined by the British Medical Association and patients are expected to pay whatever they can afford towards the cost of their treatment the amount being left to the discretion of the patient s doctor A successful training course in ray therapy and electrotherapy was held in 1932 Sir William Hale White is president of the Medical Advisory Committee and its chairman is Sir William Hamer

Spa Treatment of Rheumatic Diseases

The annual report of the Royal Mineral Water Hospital Bath (National Hospital for Rheumatic Diseases) states that a very successful post graduate course arranged by the British Medical Association was held last October and some thirty doctors from various parts of the country attended On the financial and administrative side it was a difficult year with a deficit on the year s working of £1 733 The governors and committee feel that the future of the hospital depends in a great measure on decisions taken now Not only have the old fashioned arrangements structural and otherwise had to be overhauled at considerable expense in keeping with modern improvements but the advance in the treatment of rheumatism has called for outlay in all departments and outlay at the present rate cannot be continued unless means are devised for increasing income The medical report states that 1 145 patients were admitted during the year The diseases treated were chiefly rheumatoid arthritis including spondylitis osteo-arthritis (hips and spine showing the greatest incidence) subacute rheumatic infection gout fibrositis (including periarticular fibrositis, neuritis and sciatica The majority of these patients were benefited there were no deaths and the amount of general illness was very small In answer to a question often asked How far are the laboratories used for routine tests and how far for research purposes? the pathologist says it is impossible to draw any direct line of demarcation between these two uses For example over half of the 1 164 blood sedimentation readings have been for routine requisitions of the physicians the remainder were incidental to a research on the conditions affecting the sedimentation rate jointly undertaken with one of the physicians to which research belong also over 200 estimations of the various blood proteins The bearing of this investigation on the hospital work is direct viz the advisability or otherwise for our patients of a proposed treatment which has been the subject of much recent discussion

In Praise of English Cider

Cider is one of the oldest English beverages and its popularity is increasing Improvements in quality and methods of production that have been effected during the present century have done much to restore it to popular favour as a wholesome and refreshing drink especially during the summer months Even with these improvements there was no generally recognized standard of quality for English cider until 1931 when the national mark was applied to cider made from fruit grown in England and Wales Certain beverages to which the name of cider was attached were far from possessing the characteristic qualities of the vintage fruits with which it should be manufactured The success that had attended the application of the national mark to eggs canned fruits and vegetables and other home products led to requests from the cider industry itself that standards of quality should be set up also for genuine cider made with English fruit We are informed by the Ministry of Agriculture that there is now a national mark cider scheme in operation sixty four cider makers including most of the larger firms and three associations of farm cider makers have

LONDON COUNTY COUNCIL.

Application invited for appointment to undermentioned resident positions. Remuneration and conditions subject to review. Duties assigned by Medical Superintendent and include, if necessary, assistance at other establishments under Council's control.

Candidates for the position of Assistant Medical Officer Grades I and II must be Medical Practitioners of at least one year standing and have held a resident appointment in a general hospital for at least six months.

1. PADDINGTON HOSPITAL, Harrow Road W.9. — ASSISTANT MEDICAL OFFICER (Grade I).

2. BETHNAL GREEN HOSPITAL, Cambridge Road E.2.— ASSISTANT MEDICAL OFFICER (Grade I). Surgical experience desirable.

Salary £350 rising by annual increments of £25 to £425 a year with board lodging and washing. No accommodation for married man or for woman.

3. CONSTANCE ROAD INSTITUTION, Dulwich S.E.22. — ASSISTANT MEDICAL OFFICER (Grade II). Salary £250 a year with board lodging and washing. Appointment for one year only and not renewable. No accommodation for married man or for woman.

4. FULHAM HOSPITAL, St. Dunstan's Road, Hammersmith, W.6. — CLINICAL ASSISTANT. Salary £100 a year with meals on duty. Appointment for six months in first instance but may be extended for a further six months. Candidates must be registered medical practitioners. In the case of a woman marriage terminates contract.

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), County Hall, Westminster Bridge, S.E.1, returnable by June 16th (in the case of Paddington Hospital by June 9th). Canvassing disqualifies. Further enquiries should be addressed to the respective Medical Supts.

NOTTINGHAMSHIRE COUNTY COUNCIL.

EDUCATION COMMITTEE.

ASSISTANT SCHOOL MEDICAL OFFICER (Male).

Applications are invited from duly qualified and registered Medical Practitioners for the post of Assistant School Medical Officer.

Candidates must possess a Diploma in Public Health and have had at least three years experience since qualification.

The officer appointed will be required to devote his whole-time to the duties of the office. He will be a member of the staff of the County Medical Officer will work under his control and direction and will be required to reside in a part of the County to be approved by him and to carry out such duties as may be prescribed.

The salary will be at the rate of £530 per annum rising by annual increments of £25 to £700 with travelling allowances in accordance with the County Council's Scale.

The engagement will be terminable by three months' notice on either side.

The appointment is an established post under the Local Government and Other Officers Superannuation Act, 1922 and the successful candidate will be required to pass a medical examination.

Applications on the prescribed form (which may be obtained upon request at my office) accompanied by copies of not more than three recent testimonials should be forwarded to the County Medical Officer, Shire Hall, Nottingham not later than June 17th.

Shire Hall, Nottingham. May 29th, 1933.

K. TWEEDALE MEABY, Clerk of the County Council.

NOTTINGHAM CHILDREN'S HOSPITAL.

Applications are invited for the post of RESIDENT HOUSE SURGEON (Woman). The salary will be at the rate of £150 per annum with apartments, board and laundry. The appointment will be for six months duties to commence on August 1st.

Applications together with testimonials and stating age, qualification and experience to be sent to F. PRAGNELL, the Honorary Secretary, 1 King John's Chambers, Bridlesmith Gate, Nottingham, by June 19th. Selected candidates will be required to attend at the Hospital for a personal interview on June 27th when the appointment will be made.

QUEEN CHARLOTTE'S MATERNITY HOSPITAL, Marylebone Road, N.W.1.

RESIDENT ANAESTHETIST required to commence duties on July 1st. Applicants must be registered. Appointment for six months. Salary at the rate of £100 per annum with board residence, and washing allowance (4/- weekly). Applications with copies (not original) of not more than three testimonials will be received by the Secretary up to June 14th.

H. B. STOKES, Secretary-Superintendent.

WESTERN INFIRMARY OF GLASGOW (Incorporated.)

The Managers of the Western Infirmary invite applications for a FULL-TIME MEDICAL RADIOLOGIST.

The appointment has hitherto been conjoined with the University Lectureship on Medical Radiology.

Particulars as to duties, salary, etc. may be obtained from the Superintendent at the Infirmary.

Candidates are requested to lodge with the subscriber on or before June 21st, seventeen applications and not less than two copies of testimonial with each application.

J. MATHESON JOHNSTON, Secretary.
8, Union St., Glasgow. May 31st, 1933.

NEWCASTLE THROAT, NOSE AND EAR HOSPITAL.

HOUSE SURGEON required for period of six months. Applicants must be fully qualified and preferably have held Resident appointment. Salary £100 per annum with board, residence and laundry. Applications stating age, qualifications, and where now, and three recent testimonials, should be forwarded to the undermentioned by June 12th.

CHAS. W. LISLE, Secretary.
Newcastle Throat, Nose and Ear Hospital, 95-98, Rye Hill, Newcastle-on-Tyne.

Telephone: WELBECK 2728
Telegrams: ASSISTIAMO, LONDON"

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W. J. HICKS, *Secretary.*

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LONDON (NORTH).—URGENT SALE THROUGH ill-health of Vendor. Well-established and increasing PRACTICE in good residential district, averaging £1,100 p.a. Small panel of 150. Midy. fees 5 to 20 gns. Visits 1/6 to 2/6. Cons. 3/6 to 5/6. Premium £1,650. Good modern corner house, with 5 bed., 3 recep. etc., and good garden. To rent on long lease.—No. 9164.

MANCHESTER.—UPPER WORKING AND middle-class PRACTICE. Nearly £1,000 p.a. Panel 463 in reasonably Opposition weak. Visiting fees mostly 5/-, some 3/6 and 7/6. Surg. 5/6 to 5/-. Premium £1,600 to include drugs, furniture and fittings at both surgeries worth £150.—No. 9163.

LONDON, W.C. — CENTRALLY SITUATED £600 p.a., increasing. Estab. only 2½ years. Vendor accepting appt. abroad. Part 180 Visits 5/-. Cons. 2/6 up. Children 2/6. House on lease at £160 part sublet at £1 per week. Premium only £500.—No. 9161.

KENT.—ABOUT 30 MILES FROM TOWN.—Lease of residential country. Half share of £2,300 after preliminary assistantcy. Good fees. No much midwifery. New house specially built to rent or buy. Further share later. Partner to be Lond. or Camb. Graduate, age 30 to 35.—No. 9152.

SURGICAL.—EXCELLENT OPPORTUNITY TO acquire goodwill of connection established by Vendor over 10 years and returning £1,000 p.a. Income has been more. Desirable modern flat in select West End area. Premium £500 down and £700 spread over 3 years.—No. 9150.

LONDON, N.W. — VERY FINE OUTLYING district. About £1,000 p.a. No panel taken but ample scope. Some dispensing. Expenses low. Corner House in excellent position on main road, 4 bedrooms etc. Long leasehold for sale at £2,220. Vendor giving up general practice. Premium for goodwill 1½ years purchase.—No. 9149.

MANCHESTER. — ABOUT £650 P.A., INcreasing old-established PRACTICE. Panel 790. Opposition less than usual. Visiting fees 4/5 and 5/-. Lower surgery fee 2/6. House off main road, 4/5 beds., 2 recepts., and up surgery. Rent £60 or lease.—No. 9144.

YORKSHIRE. — OUTSKIRTS OF LARGE town. Old-established middle and better class PRACTICE, averaging £980 p.a. Panel 400. Visits 3/6 to 21/-. Very little midwifery. Specially built house, 2 recepts., 6 beds. Surgery with separate entrance etc. On lease at £100. Premium only £1,200.—No. 9141.

LADY PARTNER WANTED IN PRACTICE of about £1,000 p.a. in country district in Kent. Steadily increasing and ample scope for further extension. Panel worth £130 and appts. about £120. Premium for half share £1,000.—No. 9140.

CHANNEL ISLANDS. — URGENT SALE through ill-health of Vendor. Private PRACTICE in best part of Island, or rocking sea averaging £350 p.a. No midwifery taken. Fees 3/6 to 7/6 med. extra. Choice of houses and others building. Good schools. Sea and trout fishing. Prem. 1½ years purch.—No. 9107.

ITALIAN COAST. — DELIGHTFUL SPOT. — About £300 p.a. Scope to increase. Good opening in neighbouring town. No English opposition. Fees 12/6 to 35/-. Flat to rent at under £100. 2 recep., 3 bed., cons. room and usual offices. Furniture etc., can be bought if desired. Goodwill £750 cash.—No. 9129.

RESIDENTIAL SEASIDE RESORT.—WITHIN easy reach of London. £700.—£800 p.a. suffered through Vendor's ill-health. Ample scope. New estate building. Small panel. No dispensing. Midwifery sought. Attractive freehold house built by Vendor, 5 bed., etc., garden, and garage.—No. 9158.

BERKS.—OLD-ESTABLISHED — COUNTRY PRACTICE, about £700 p.a. has been £1,100. Panel about 500. Visiting fees 2/6 to 7/6. Very little midwifery. Specially built house with two acres of ground, 2 reception rooms, 6 bedrooms, surgery and waiting rooms etc. Price £4,000 offer for Practice & house freehold.—No. 910.

WANTED

WANTED BY GENTLEMAN OF EXPERIence aet. 43 and married PRACTICE or PARTNERSHIP about £1,500—£1,600 p.a. London or within 30 miles; some advantage. Thames Valley. Nice commutable house to rent preferred.—No. 272.

WANTED BY M.B., B.S. LONDON, AGED 27, a PRACTICE in Surrey, Sussex, Devon or Hants. Income about £1,000 to £1,500.—No. 1211.

Both the above have ample capital. Details may be sent in confidence to PERCIVAL TURNER LTD. as above.

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adopted the mark for all or part of their output In addition twenty-five firms of bottlers are authorized to bottle national mark cider obtained in bulk from the authorized makers The value of the mark to the distributor and consumer is that it is a national trade-mark, which carries with it a warranty not only of the home origin of the product, but also of its quality There are two grades—namely, ' select cider " and " select cider (champagne process) " For both grades the cider must be produced from apples and pears grown in England and Wales, and the finished product must be prepared from (*a*) pure fruit (apple and pear) juice, or (*b*) a pure fruit juice to which not more than 25 per cent of a syrup made from pure beet or cane sugar has been added The original gravity of the finished product must not be less than 1 04 at 60° F The cider must be made from clean and reasonably sound fruit, and be absolutely free from concentrated apple juice or other fruit juices, from artificial bouquets and essences, and from the recognized signs of inferior ciders such as ropiness sickness, and excess of acetic acid Samples of the product are taken for official analysis and the records of the authorized makers are examined In the national interest it is desirable to encourage the production of genuine English cider, both to provide a good and assured market for the home fruit grower, and to lessen imports of cider and of the raw material from which it is manufactured

Bristol Medical School Centenary

The final programme for the centenary celebrations of the Bristol Medical School is as follows Friday, June 30th 3 30 p m , receptions at the Bristol Royal Infirmary and the Bristol General Hospital by the Presidents , 7 30 p m , dinner at the University Union , 9 30 p m , reception at the University Saturday, July 1st 12 noon, congregation for the conferment of ordinary and honorary degrees in the Great Hall The Chancellor (the Right Hon Winston S Churchill) will confer honorary degrees upon the following the President of the Royal College of Physicians, the President of the Royal College of Surgeons the President of the General Medical Council, Sir Frank Colyer, Emeritus Professor Hey Groves, and Professor Miles H Phillips , 1 15 p m , luncheon at the University Union , 3 30 p m , garden party in the gardens of the Royal Fort, given by the Sheriff of Bristol (Dr W Kenneth Wills) Past and present members of the Medical School who intend to be present at the celebrations may bring a guest to each of the functions mentioned It is essential that applications for tickets should be made not later than to-day (June 17th)

The Harveian Society

The Buckston Browne annual banquet of the Harveian Society of London was held on June 8th at the Star and Garter Home for Disabled Sailors and Soldiers, Richmond After the loyal toasts had been honoured, The Harveian Society ' was proposed by Lord Lee of Fareham in a learned and witty speech The man whom they honoured, he said, had suffered the usual fate of pioneers in having his original communications received with a certain amount of distrust Harvey had no outstanding personal characteristics, and was, as Aubrey had said " a most likeable man ' After telling an anecdote in connexion with Harvey's visit to Germany after the Thirty Years' War, Lord Lee made some humorous references to the " early and disastrous history " of the medical profession The Prince of Orange, he said, had been trephined seventeen times whereas nowadays he would have taken aspirin In replying to the toast the president, Lieut -Colonel E L Gowland, commandant of the Star and Garter Home, expressed regret at the absence of Lord Riddell who had presented the society with a loving cup For the first time the Buckston Browne banquet was being held outside London He announced the gift from the society to Sir Buckston Browne of a garden-seat for the Buckston Browne Research Farm at Downe The health of the visitors was proposed in an amusing speech by Dr T C Hunt Confessing that he was more familiar with the Oval than with Southwark Cathedral, he said that he shared with the Bishop of Southwark common memories of the lectern at Magdalen College Chapel Replying for the guests the Bishop of Southwark remarked upon the magnificent site of the Star and Garter Home He referred to the bells of Hempstead Church, for which the Harveian Society had already raised £250 towards the £400 it had promised to subscribe Judge Cecil Whiteley, who also replied, said that this was the first time he had been entertained as a guest of the medical profession although he admitted that he had often been supplied with cocktails by his own doctor

London University Foundation Stone Ceremony

The following programme of events in celebration of the laying of the foundation stone of the new buildings for the University on the Bloomsbury site by His Majesty the King on Monday, June 26th, at 3 p m has now been provisionally arranged On June 24th, a dinner for about 400 persons at Grosvenor House Park Lane On June 25th, informal hospitality to representatives of British and foreign universities and learned societies On June 26th, informal dinners at certain colleges to the representatives of other universities and of learned societies , at 9 p m a reception given by the Chairman of the London County Council at the County Hall The accommodation on the site for the stone laying ceremony is necessarily limited, but provision is being made for about 3,000 people to be present The King and Queen will drive to the site, where they will be received by the Chancellor, the Earl of Athlone Before Their Majesties arrival there will be processions of teachers and others

Ireland

The Coombe Lying in Hospital

In 1932 the maternity department of the Coombe Lying in Hospital, Dublin, received 1,403 patients, of whom 1,288 were delivered there This represented an increase of 116 deliveries over the figure for the previous year In the extern department 1,480 cases were delivered, as compared with 1,500 in 1931 There were about 3,000 attendances at the ante natal department, one third of which were new cases There were eighteen deaths in the year, and the morbidity rate was 4 8 per cent (British Medical Association standard), the highest recorded during the tenure of office of the present master, Dr T M Healy It is stated in the annual report that examination of the mortality table shows that responsibility for at least three of the deaths does not rest with the hospital Thus one patient was admitted moribund from post-partum haemorrhage and another died an hour after admission in advanced eclamptic coma It is pointed out, however, that there were many cases of minor infection in the spring months, when overcrowding of the hospital is always greatest There were four deaths from sepsis—three in the spring, and one in the autumn Two deaths from detachment of the placenta in cases of marked hydramnios were particularly unfortunate Fewer cases of disproportion were treated operatively than in the preceding year There were ten cases of eclampsia with two deaths Labour was induced on thirty two occasions,

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LONDON, N —Well established mixed middle and working class Lock up PRACTICE situate on main thoroughfare in thickly populated locality Professional accommodation may be rented on lease Receipts average £750 p a Panel 550 Fees 2/ to 10/6 One appointment Premium 1½ years purchase

MANCHESTER — Old established industrial PRACTICE Medium sized house to be rented on lease Receipts approx £650, increasing Panel nearly 800 Fees 2/6 up Premium £950, or near offer (to include furniture)

WEST END —ELECTRO THERAPEUTIC PRACTICE complete with very full equipment Rooms rented on agreement Fees 10/6 upwards Trained staff Receipts average £800 p a Suitable for either sex Premium £1 000 or near offer

LONDON E C —Mixed cash and panel Lock up PRACTICE with living accommodation if desired facing main thoroughfare held on lease at £95 p a Receipts approx £700 Panel 500 (growing steadily) Fees 1/6 to 10/6 (almost entirely cash down) Midwifery not undertaken Prem £1 000 or near offer

LONDON E —Suburban middle-class G P Medium sized house to rent on lease at the low rental of £30 p a Fees 2/ up Average receipts £450 p a Panel 300 Excellent scope for young man Premium for Practice and lease £1 000

DURHAM — Middle-class and industrial PRACTICE Average receipts £550 p a Panel 380 Medium sized house to rent on lease at £52 p a Branch Surgery Fees 2/6 up Premium £450

LIVERPOOL —PARTNERSHIP in good middle class G P in Suburban district Excellent detached house for sale or rent (furnished or unfurnished) garden, garage Receipts approx £2,000 Panel 700 —800 Fees 3/6 up Hospital appointment Excellent scope Premium for one half share £2 100

LONDON W C —Better middle class G P with scope Choice of accommodation on rental Receipts approx £600 Panel 180 (increasing) Fees 3/6 up Premium £600, or near offer to include all furniture, drugs fittings and fixtures

LONDON N 10 —Old established middle-class G P in pleasant residential locality Suitable house to rent on lease at £90 p a Receipts approx £220 p a Panel about 60 Excellent scope Fees 5/ up Premium £200 to include drugs and large stock of instruments

LONDON W —Mixed residential working-class PRACTICE. Corner hon to rent part sub let net rental £37 p a Receipts approx £300 Panel 215 Fees 2/6 up No night work Premium for Practice and lease £500 or near offer

LONDON, E —PARTNERSHIP in old-established G P situate in thickly populated working class locality House to rent at £80 p a Receipts approximately £2 690 Panel 4,780 Fees 1/6 up Premium for one-third share 2 years purchase

LONDON S E —Middle and working class G P situate in pleasant locality Medium sized house available to rent Receipts approx £1 000 p a Panel nearly 1 000 Fees 2/6 up Premium 2 years purchase or near offer

We have numerous applications for Practices and Partnerships, both Town and Country, with incomes from £400 to £6,000

Prospective vendors are invited to send particulars

LONDON, W —Old established middle-class G P situate in well populated locality within 15 minutes of West End Suitable house to rent on lease at £150 p a Receipts £1 600 Panel approx 950 Fees 3/6 up Premium 2 years purchase or near offer

BEDFORDSHIRE — Middle class Country Practice Conveniently situated house available to be rented on lease at £96 p a or purchased for £900 Receipts over £500 Panel 100 (increasing) Scope for increase Premium £500 for quick sale

LONDON W —Middle-class G P situate in the heart of West End Three first floor rooms to be rented on lease May be used as Lock up if desired Receipts average £460 p a (cash) Panel 184 2 appointments. Scope for Surgery Premium £300 (cash)

CUMBERLAND —PARTNERSHIP (after short Preliminary Assistantship) in very old-established Industrial Club and Panel G P Good house available to rent (garden, garage) Receipts average £5 263 p a Panel 2,488 Fees 3/6 up Scope for surgery Two appointments Premium for one-fourth share 1½ years purchase with option of increase within 6/12 months

NORTHANTS —DEATH VACANCY —Well established middle and working class G P situate in Country Town Suitable detached house available, garden, garage Receipts £500 p a Panel 510 Fees 2/6 upwards Premium for Practice £750 House £800

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2 HALIFAX (or within easy reach thereof) —Mixed PRACTICE preferably with Surgical scope Receipts from £700—£1 700

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1 WORCESTERSHIRE —Beautiful District—Urban and country PRACTICE. Well estab Receipts over about £1 258 p a Panel 1 023 Good fees House to rent 4 beds, etc

2 BIRMINGHAM — DEATH VACANCY — Panel and private PRACTICE Receipts £500 last year Panel 80 both increasing Good house 4 beds etc

3 MANCHESTER — Well estab mainly industrial panel and private PRACTICE Receipts about £1 200 p a panel about 1 200, and both increasing Nice modern house to rent 5 bedrooms etc

4 LANCS —FASHIONABLE RESIDENTIAL & SEASIDE TOWN — Good-class non dispensing panel and private PRACTICE. Receipts £874 Good house Garage etc

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4 ESSEX 15 MILES LONDON — Well established PRACTICE in rapidly developing part Receipts at rate of £500 p a Good panel Nice house on rental Prem £350

5 PARTNERSHIP in Large Midland Town Practice Share producing £750 p a total panel 1 200 Half share 2 years purchase Good scope for all round income

6 YORKS — Large Town — Old-established mixed class PRACTICE Average income £900, panel 400 Nice house on rental Premium £1 200 Vendor moving to London

7 LONDON (10 mins Liverpool Street) —PARTNERSHIP Total receipts £2 700 Panel 4 800 Third share 2 years purchase Accommodation available

8 NORTHANTS — DEATH VACANCY — Old established mixed class PRACTICE Receipts average £500 p a panel over 500 Nice house could be rented Locum in charge Premium £750 Suddenly

9 Large MIDLAND TOWN — Old established PRACTICE. Receipts averag £650 p a panel nearly 800 Nice house £50 p a Premium 1½ years purchase

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once by tube twenty seven times by drainage of the liquor amnii and four times medicinally Caesarean section was performed on twenty three patients—in eighteen for disproportion and in the remainder for multiple fibroids cervical fibroid heart disease persistent vomiting and a previous section respectively In the last case the patient had had Caesarean section performed in a preceding pregnancy for placenta praevia convalescence was complicated and it was decided therefore to avoid the risk of a second labour At the operation dense adhesions were found between the primary uterine scar and coils of the small intestine Details are given in the report of the various circumstances leading to the eighteen maternal deaths

Health Week in Belfast

Health Week in Belfast has been a great success Dr C S Thomson medical superintendent officer of health was responsible for the programme and many valuable suggestions were made for the co operation of local authorities in rural areas with the Belfast Corporation in the inspection of milk production In the course of his opening address Alderman J Dunlop Williamson M D chairman of the Public Health Committee said that Belfast was in a unique position It was a new city although it had old traditions and in the extremely rapid progress it had made in the last half-century or so it had suffered more or less by its growth which had been allowed to continue without supervision The result was that the death rate in the latter part of the last century had been far too high and typhoid fever had been endemic and epidemic in the city Something was clearly wrong and measures were required to preserve the health of the people As a consequence the early Sanitary Committee came into being to be followed by the Public Health Committee of the corporation in whose care the health of the city was placed That committee had worked with a will ever since its establishment and he was pleased to be able to say that typhoid was hardly known in Belfast to-day The position of Belfast among surrounding hills was unfortunate because the large chimneys of the various mills and factories spread a canopy of smoke over it through which the sun's rays did not percolate Belfast accordingly suffered from reduction of the health giving sunshine It was hoped however that as science progressed, as the smoke nuisance was abated and as sanitation advanced there would be no city in the kingdom as well and as healthy as Belfast The object of the Health Week was educative it aimed at indicating how every citizen could co-operate in achieving a happy state of health in the city

The Lord Mayor spoke appreciatively of the services of Dr Williamson as chairman and of those of the other members of the Public Health Committee who he said worked steadily and quietly week in and week out under the guidance of Dr Thomson for the benefit of the citizens There were few people who really gave any consideration to what the public health services in the city were doing and the best results could not be obtained unless the co-operation of everyone was secured and unless there was a realization that the public health authorities were working for the benefit of the whole community The Lord Mayor paid a tribute to the Water Board for its work in providing a pure water supply and offered friendly criticism to local authorities outside the city in regard to the inspection of the milk supply He thought there should be greater co-operation in this matter between the authority in Belfast and the local authorities outside the city The milk produced inside the city was examined at the source of supply by their own inspectors but they had no jurisdiction outside their own area He would agree with those outside authorities if all the milk produced in their areas were consumed there but some of it was sent into Belfast and he held therefore that the city authorities should at least have the power to inspect it at the source

Medical Officers' Salaries in Northern Ireland

A letter addressed to the Minister of Home Affairs by the Tuberculosis Committee of Belfast Corporation stated that although the duties and responsibilities devolving upon the three officers had in recent years very greatly increased the remuneration of the medical superintendent had at no time advanced there had been only minor increases in the remuneration of the other two officers concerned and emoluments that formerly attached to these positions had ceased These three officers were not it was added singled out especially for consideration increases were recommended for other officers in the department but the recommendations failed to receive the approval of the General Purposes Committee and were not included in those adopted by the Council The medical superintendent's present salary (£720 per annum) was some £160 below that at which he was appointed in 1924 by reason of (1) a loss of £80 per annum brought about by the passing of the Health Insurance Act of 1930 and (2) a loss of £80 per annum under the corporation's general salary cut It compared unfavourably with that of £950 per annum sanctioned by the Ministry of Health for England and Wales for similar appointments in Britain The Ministry of Labour now requested that the work of medical certification should be carried out as formerly but without fee or reward During the nine years since the medical superintendent's appointment his duties had increased greatly The sanatorium had been extended to 285 beds and the annual admission rate had risen from 467 in 1924 to 605 in 1932 To cope with the emergency a department for the treatment of children suffering from surgical tuberculosis was inaugurated in 1932 As a result the clinical work of the sanatorium had become exceedingly heavy Nevertheless the clinical staff had been reduced The services of a visiting physician had been terminated with a saving of £180 per annum and the services of the dispenser had also been discontinued effecting a further saving of £160 per annum Thus despite an increased number of patients and greatly increased clinical work there had been a reduction in expenditure of £340 per annum The abstract of accounts showed that in 1924 the expenditure was £26 974 while in 1932 it was £22 529 The cost per patient per week was the lowest of any institution in the United Kingdom treating a similar type of case The resident medical officer appointed in 1925 had received one increase of salary This increase of £50 had however been more than nullified by the loss of £80 per annum consequent upon the passing of the Health Insurance Act of 1930 He was in addition subject to the 10 per cent general salary cut the result being that he was to-day in receipt of £70 per annum less than when he was appointed his present salary being £360 The house physician appointed in 1929 on a temporary basis received one increase of £50 per annum in 1930 In her case the certification emoluments were approximately £50 so that no benefit resulted when the latter ceased She was also subject to the 10 per cent general salary abatement her present salary was £225 approximately £25 per annum less than upon appointment In reply to the Tuberculosis Committee the Ministry of Home Affairs stated that it was only a year since the corporation after careful consideration of the salaries in all departments decided that in view of the serious financial position it was necessary to reduce those salaries by 10 per cent and the Ministry

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LARGE LANCS TOWN — Old-established PRACTICE averaging £809 p.a Panel 1 265 Scope Excellent house 2 reception 5 bedrooms. Garage and garden.—No 467

NORTH WEST COAST.—Large residential and seaside town.—Old established PRACTICE. Cash receipts about £1 200 p.a Panel 1,500 Excellent detached corner house (freehold) 3 professional rooms 5 bedrooms, and 2 reception rooms garage and good garden for sale. Premium—Practice—1½ years purchase.—No 417

LAKE DISTRICT — Small Seaside Town.—Beautiful district.—Middle-class PRACTICE. Cash receipts over £800 p.a. Panel 250 Excellent freehold house (on sea front) 3 reception 7 bedrooms garage and nice garden. For sale or may be rented on lease. Premium 1½ years purchase.—No 388

MANCHESTER.—Middle-class PRACTICE, in pleasant suburb. Cash receipts last year £1,327 Panel 528 Charming house to rent 3 reception 6 bedrooms billiard room Large garden and garage Premium—Practice—1½ years purchase.—No 322.

LANCS TOWN near Liverpool.—Mixed General PRACTICE. Average cash receipts £1 458 p.a Panel 1 672. Excellent freehold corner house (facing Park) 2 reception 4 bedrooms 4 professional rooms garage and garden Premium—Practice—1½ years purchase.—No 427

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NORTH WEST COAST.—PARTNERSHIP (after six months assistantship) in mixed panel and private Practice averaging £5 263 p.a Panel 2,500 and appointment Good house available to rent with garden and garage Salary £500 p.a. Premium—¼ share—1½ years purchase Further share later.—No A 15

MANCHESTER.—Old-established panel and private PRACTICE. Cash receipts last year £642. Panel 388 Scope Good corner house 2 reception 4 bedrooms garage. Rent £60 p.a Premium 1½ years purchase or near offer.—No 437

LARGE LANCS TOWN near Manchester.—Old-established mixed PRACTICE. Average cash receipts £1 080 p.a Panel 1 060 Scope Good house 2 reception 4 bedrooms, garage and garden to rent Premium 1½ years purchase.—No 457

NEAR NEWCASTLE-ON-TYNE.—Mixed General PRACTICE, average inc. £800—£850 p.a. Panel 600 Scope for increase Good house 3 reception 5 bedrooms garage and garden. Premium £950.—No 422.

MANCHESTER — PARTNERSHIP in excellent mixed Practice. Cash receipts last year £2 414 Panel 2 670 Suit Irish Graduate Scope for increase. Good accommodation can be secured. Premium—one-third share—2 years purchase (to include book debts).—No 448

BLACKPOOL.—NUCLEUS with great scope in developing district Cash receipts last three months £134 Panel about 70 Excellent corner house for sale or could be rented on lease Premium best offer.—No 444

MANCHESTER.—Very old-established good-class PRACTICE in residential suburb Average cash receipts £1 912 p.a Select panel of 454 Excellent freehold corner house 2 reception 6 bedrooms garage and garden. Price £1 600 Premium 1½ years purchase.—No. 458

NEAR HULL.—Mixed General PRACTICE in pleasant district near Housing Estate. Cash receipts last year £953 Appointments £82 p.a Panel over 500 Scope for increase. Vendor retiring Premium 1½ years purchase.—No 463

LANCS TOWN — Mixed general PRACTICE. Cash receipts last year approx. £1,500 Panel 829 Scope for surgery if desired. Good house containing Operating Theatre, 3 professional rooms 2 small wards and living accommodation. Rent £60 p.a. on lease Prem. 1½ years purchase.—No 460

STAFFS.—Old-established Country PRACTICE in charming district averaging £900 p.a Pan 1 632. Appointments (transferable) £100 p.a. Practically unopposed. Scope for increase. Excellent house with ample accommodation garage and garden rent £84 p.a Prem 1½ years pur.—No 426

LARGE LANCS TOWN.—Very old-established middle-class PRACTICE averaging £3 250 p.a. Panel 500 Appointments £300 p.a Partnership with succession in 12 18 months suggested Good semi-detached house 3 reception 6 bedrooms garage and garden For sale or would rent on lease Vendor retiring Premium 1½ years purchase.—No 464

MEDICAL WOMAN'S PRACTICE.—MANCHESTER.—Cash receipts last year £645 Panel 450 Good scope. Excellent house 3 reception 6 bedrooms garage. Rent £80 p.a. on lease. Premium best offer.—No 330

MANCHESTER.—Old-established mixed PRACTICE, of ring fence. Great scope. Average cash receipts over £500 p.a. Panel 625 Good house in main road 2 reception 4 bedrooms. Rent £-9 p.a Premium best offer Vendor retiring.—No 450

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1 LONDON N—WELL-ESTABLISHED NON DISPENSING PRACTICE averaging £1 100 p a in good-class *Residential District* Small select panel of 150 Visits 7/6 to 10/6 Desirable modern freehold residence (5 bedrooms) with garage and very nice garden for sale or rent Ample scope for increase *Premium* 1½ years purchase

2 PARTNERSHIP IN VERY OLD ESTABLISHED MIDDLE CLASS Practice in County Town within 40 miles of London Cash receipts average £3,300 p a Panel 3 000 Good house with ample accommodation, garden and garage to rent Applicant must be experienced and aged 30—35 Premium one third share 2 years purchase Preliminary Assistantship

3 KENT — FOURTH PARTNER REQUIRED IN OLD ESTABlished Country Practice within *easy reach of London* Freehold house, standing in three and a half acres of garden, to be purchased Price £2 000 Incoming Partner should be keen on country life and have held H P and H S appointments Share worth £800 p a guaranteed *Premium £1 600*

4 W OF ENGLAND — PARTNERSHIP IN OLD ESTABLISHED Practice of about £1 200 p a in picturesque Seaside Place Panel 690 Unique house (6 bed and dressing rooms etc) in excellent state of repair with every modern convenience Beautiful garden and garage to rent on lease Hunting yachting, fishing etc Premium one half share 2 years purchase

5 WEST OF ENGLAND—PARTNERSHIP IN OLD ESTABLISHED PRACTICE over £2 200 p a in County Town Panel about 1 000 Premium one half share 2 years purchase Good prospects for well qualified physician (preferably M R C P) who should be an R C and who would have opportunity of getting on Staff of Hospital in near future.

6 MIDLANDS — PARTNERSHIP IN GOOD MIXED CLASS Practice in Country Town in first rate Hunting Centre Cash receipts about £6 200 p a including panel 3 700 Suitable house to purchase Excellent opening for capable and energetic man aged about 40 who should be able to do Surgery Cottage Hospital Premium one half share 2 years purchase

7 N E OF ENGLAND—PARTNERSHIP IN VERY OLD ESTABlished general Practice in an important City Cash receipts average £4 745 p a including appointment worth about £500 p a and a panel of 4 300 Semi detached ten roomed house with garage and garden for sale Scope for increase Premium two fifths share 1½ years purchase

8 LONDON, N—PRACTICE CARRIED ON BY MEDICAL WOMAN in populous area Cash receipts average £480 p a, including panel 527 Visits 2/6 to 3/6 Small house (6 rooms) to rent at £50 p a on lease Practice capable of increase Premium 1½ years purchase

9 E. ANGLIA—OLD ESTABLISHED COUNTRY PRACTICE OF about £2 700 p a in most beautiful part, easy distance of Coast Panel 1 150 Visits 3/6 to £1 1s medicine extra Recently modernised house (6 bedrooms e l, and central heating) with garden and two acres land for sale Cottage Hospital Scope for increase

10 LONDON, N—PRACTICE CARRIED ON BY MEDICAL WOMAN in populous district Cash receipts average £270 p a including panel 360 Scope for midwifery Six roomed house to rent at £70 p a on lease Premium 1½ years purchase

11 BORDERS OF SHROPSHIRE AND CHESHIRE.—OLD ESTABlished PRACTICE averaging £1 055 p a in Market Town Panel 850 Nice detached house (5 bedrooms, attics etc.) with garage and old world garden, etc, for sale Educational facilities Well equipped Cottage Hospital offering scope for one keen on Surgery Premium £1 580

12 LONDON E—PARTNERSHIP IN WELL ESTABLISHED CASH *and Panel Practice* averaging about £2 700 p a in populous area close to the City Panel nearly 4 800 Living accommodation over Surgery Premium one-third share 2 years purchase

13 PARTNERSHIP (WITH VIEW TO SUCCESSION) IN OPHTHALmic Practice in delightful Southern Seaside Resort *Income* £1 400—£1 500 Must be specially qualified and have sound practical experience in Ophthalmic work Half share at 1½ years purchase

14 LONDON S E WELL ESTABLISHED PRACTICE IN OUTLYING Suburban District Cash receipts 1932 £1 008 including appointments worth £23 p a and Panel 993. Well-situated corner house on main road (5 bed and *dressing rooms*) with garage and large garden to rent also separate Surgery to rent Scope for increase Premium £1 800

15 PRIVATE MENTAL HOME (FOR LADIES ONLY)—EXCEPtionally nice house and grounds. A considerable sum required for the purchase Further particulars on application

was not aware that circumstances had changed so as to justify after such a short interval, increases to certain officers which would not only nullify the reduction but would leave these officers in a better position than before The Ministry regarded the proposal as premature at the present time, but if the corporation wished to submit proposals after the end of the current financial year, the Ministry would be prepared to consider them in the light of the circumstances then existing

Scotland

Welfare of the Blind

At the sixteenth annual conference of the Scottish National Federation for the Welfare of the Blind, held on June 8th and 9th at Kirkcaldy and Dunfermline Dr F M Earle, rector of Kirkcaldy High School contributed an address on the psychology of the blind There was he said a conspicuous lack of established facts regarding the various effects of total and partial blindness upon the learning capacities of different individuals, and there was great scope for psychological research into these problems Partially blind and totally blind children were at present taught in the same classes and by the same methods, and he doubted whether this was a sound procedure Dealing with the question of providing employment for blind workers, Dr Earle said that five years ago, when the National Institute for the Blind made an inquiry into this question all sorts of difficulties were raised by employers, but it had been found that most of these could be removed to some extent by appropriate organization, as, for example, the inclusion of one or more blind workers in a factory "team" It might be possible in the future successfully to provide work for the blind, even though this might have to be of the simplest repetitive kind

A discussion on modern tendencies in blind welfare administration was opened by Mr John R Mackenzie, general superintendent of the Northern Counties Institute for the Blind Inverness, who said he believed that the increased responsibility towards the blind imposed upon local authorities by Act of Parliament might, within the next ten years, entirely alter the character of blind welfare work Managers, staff, and directors of agencies for the blind must place their knowledge at the disposal of the local authorities so that the latter might entrust to them the administration of the schemes which were springing up for the welfare of the blind Dr Robert A Krause deputy medical officer of health for Fife, said that there were both advantages and disadvantages in institutional education for the blind, for such a training made it difficult for a blind child to take his place again naturally in the social system, and teachers also tended to become institutionalized so that they did not sufficiently recognize the social problems outside There was a large proportion of mentally defective children among the blind, recent returns from the Department of Health had shown that over 12 per cent of blind children between the ages of 5 and 15 were mentally defective It was necessary to alter the present purely vocational kind of education

At a public meeting in Kirkcaldy Dr John Marshall, speaking of his experience as a certifying surgeon in the Glasgow Blind Clinic said that, in regard to the standard of blindness, there had been in certain conditions a relaxation in favour of the applicant The great benefit derived from the standards that had been set up was that ophthalmic surgeons in all parts of the country could apply the definition of the Act more uniformly Until the system of certifying all blind persons by regional clinics had been in operation for some years there must be cases involving a certain degree of hardship where persons previously certified as blind had to be de certified

Smoke Abatement

At the annual meeting of the Scottish Branch of the National Smoke Abatement Society, held in Edinburgh, Lord Provost W J Thomson, in welcoming the delegates, said that the society had been engaged on a most important problem for twenty-four years—namely, the abolition of the smoke pollution of the atmosphere It was beyond dispute that if the smoke pall which hung over large towns could be removed, the daily labours of housewives would be reduced by a half A large proportion of deaths from pulmonary disease was due to the inhalation of smoke-laden, poisonous atmosphere It was surely just as essential to secure pure air as to obtain supplies of pure water, milk and food In Edinburgh it had been estimated that the introduction of heating and cooking by gas had supplanted the direct burning of approximately 80,000 tons of coal, and there was now less pollution of the atmosphere by smoke than in most other cities of a similar size The annual report of the society had stated that household chimneys were now responsible for the greater part of air pollution The preference for a raw coal fire was merely sentimental, and an equal, if not a greater, amount of heat could be obtained by smokeless methods Professor William Oliver, Edinburgh University, said that complete smoke abatement was very far from attainment and the problem of domestic smoke diminution depended primarily upon the use of smokeless fuel such as coke together with an increasing use of gas and electricity The ideal system would be one in which all raw coal was treated by low-temperature carbonization, and the gas thus obtained used for boiler firing, while the oil, tar and other by-products were employed to reduce imports of these commodities, and the coke used for domestic purposes

Foot Clinics in Scotland

At the annual meeting of the Edinburgh Foot Clinic, with Professor John Fraser in the chair Mr Walter Mercer said that the number of treatments carried out at the clinic had risen during the past year from 8 297 to 10,362, an increase of 25 per cent It was a matter for gratification that the public was being educated to the preventive aspect of chiropody This was the only school of chiropody in Scotland which was recognized by the medical profession At the close of the meeting the clinic was visited by the Lord High Commissioner to the General Assembly of the Church of Scotland

At the second annual meeting of the Glasgow and West of Scotland Foot Hospital, which was held on the same day, with Lord Provost A B Swan presiding, it was reported that the number of patients treated during the year ended March 31st last was 1,310, and that 5 280 individual treatments had been given Donations from patients had amounted to £132, and the institution had ended the year with a surplus

Health of Dunfermline

The annual report of Dr C Barclay Reekie, medical officer of health for Dunfermline, shows that the estimated population of this burgh to the middle of 1932 was 35,694, and that the number of births registered during the year was 655, giving a rate of 15 4 per 1,000 as compared with the average for the last five years of 16 26 The number of deaths of children under 1 year was

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16 YORKSHIRE (W.R.)—PARTNERSHIP IN OLD ESTABLISHED Practice about £3,700 p.a. in one of the smaller and pleasanter Manufacturing Towns. Panel 3,366. Suitable house available Hospital. Premium one third share 2 years purchase.

17 SUSSEX.—PRACTICE ABOUT £700 P.A. IN FIRST RATE Country Town. Panel over 200 increasing rapidly. Very little midwifery. Well-equipped maisonette containing 6 rooms and bathroom rent £100 p.a. inclusive. Premium £1,000.

18 LONDON N.—OLD ESTABLISHED PRACTICE OF £930 p.a. in pleasant residential district. Panel 910. Excellent corner house (6 bedrooms) fair-sized garden and garage the lease of which is for sale. Scope for increase. Premium £1,500.

19 LONDON E.—CASH AND PANEL PRACTICE OF £860 P.A. in populous district. Panel 570. Small house to rent on lease. Premium 1½ years purchase.

20 EASTERN COUNTIES.—OLD ESTABLISHED COUNTRY PRACTICE. Cash receipts about £720 p.a. including appointments over £150 and a panel of about 590. Detached house (6 bedrooms) in grounds of 1 acre for sale. Premium for Practice £650.

21 CO. DURHAM.—PRACTICE OF £540 P.A. IN RESIDENTIAL Colliery District near two large Towns. Panel 380. Well situated house (7 rooms) with good Surgery and Dispensary for sale or rent. Scope for substantial increase. Premium only £500.

22 S.W. OF ENGLAND.—OLD ESTABLISHED PRACTICE OF £750 p.a. in beautiful district. Panel 300. Excellent house (5 bedrooms) for sale. Premium 1½ years purchase.

23 S. WALES.—PRACTICE BETWEEN £250—£300 P.A. IN beautifully situated village about 4 miles from important town. Small panel. Nice house (6 bedrooms) electric light gas and company's water for sale or rent. Premium £280.

24 S. OF ENGLAND.—PARTNERSHIP IN OLD ESTABLISHED Practice of nearly £1,950 p.a. in important town within 80 miles of London. No panel. Attractive corner residence (7 bed and dressing rooms) in half acre of walled in garden with garage etc. for sale. Ample scope for increase. Premium one half share 2 years purchase.

25 ESSEX.—OLD-ESTABLISHED PRACTICE OF ABOUT £600 P.A. in Suburban District. Panel 500. Well-situated detached house (6 bedrooms) standing in own grounds with nice garden garage and stabling for sale. Scope for increase. Premium £650.

26 LONDON S.W.—OLD ESTABLISHED PRACTICE ABOUT £650 p.a. in well populated area. Panel 850. Separate surgery and private residence to be purchased. Scope for increase. Premium £1,100.

27 SURREY.—PARTNERSHIP IN SOUND OLD ESTABLISHED good mixed-class Practice about £3,000 p.a. in the Croydon area. Small panel. Very little midwifery. Excellent modern detached house for sale. Scope for increase. Premium one half share 2 year purchase.

28 ESSEX COAST.—MEDICAL WOMAN REQUIRED AS PARTNER in Practice of £2,500 p.a. in small Seaside Town. Panel 2,300. Modern house in good position facing Sea with 4 bedrooms for sale. Scope for increase. Premium one-fourth share £1,250 and further share later.

29 LONDON W.—STEADILY INCREASING NUCLEUS OF PRACtice in the Maida Vale district. Bookings for 11 months £249 of which about £100 has been received. Rent of consulting and waiting rooms 30/- weekly. Good scope. Premium £300.

30 LONDON E.C.—PARTNERSHIP IN OLD ESTABLISHED PRACtice in the City. Receipts average about £1,650 p.a., including appointments and panel worth over £500 p.a. Premium one half share £1,000.

31 NORTH OF ENGLAND.—INLAND HEALTH RESORT.—NON dispensing PRACTICE of about £1,000 p.a. Small select panel. House (7 bedrooms) with large garden for sale. Premium—Practice—£750.

32 HOME COUNTY.—WELL-ESTABLISHED PRACTICE OF £700 p.a. in first rate Country Town under 40 miles from London. Panel about 250. Fees 5/- to £1 1s. Large well-built residence (about 6 bedrooms) with modern conveniences. Beautiful garden meadow orchard etc. in all about 24 acres. Excellent hunting. Premium Practice and house £4,500 (or near offer) which is less than the value of the house alone.

33 S. AFRICA.—RADIOLOGICAL PRACTICE IN A MOST DElightful town with excellent climate. Cash receipts last year £1,450. Scope. Premium to include furniture, carpets accessories etc. £2,200.

34 EAST COAST.—PRACTICE OF BETWEEN £750 AND £800 p.a. in a purely Residential Seaside District within 40 miles from London. Small Panel. Detached house (5 bedrooms) for sale. Scope for increase as district is growing.

35 SURREY.—PRACTICE OF £1,000 P.A. IN RAPIDLY GROWing Residential District within 15 miles of London. Panel 400. Suitable house with separate professional accommodation for sale. Scope for considerable increase. Premium £1,600.

36 LONDON W.—GOOD MIDDLE-CLASS PRACTICE £400 P.A. in suburb within easy access of the West End. Panel over 100. Attractive double fronted house with nice garden for sale. Scope for increase. Premium 1½ years purchase.

37 LONDON N.—PARTNERSHIP IN PRACTICE ABOUT £5,250 p.a. in thickly populated Suburban District. Panel about 800. One fourth or one third share at 2 years purchase.

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twenty seven giving an infantile mortality rate of 49 which is a marked reduction on the average of 62 for the last five years and is the lowest infantile mortality rate on record in the burgh The number of deaths registered was 472 and after correction for transfers the rate was 11 9 per 1 000 as compared with the average of 12 58 for the past five years Heart disease was responsible for the greatest number of deaths malignant disease came second The number of cases of scarlet fever notified was 251 diphtheria fifty eight acute pneumonia thirty six puerperal septicaemia three measles 703 whooping-cough fifty five and cerebro-spinal fever nine Insulin was supplied to nine patients during the year five persons in necessitous circumstances received it free two with assistance and two on repayment altogether 382 ampoules each of 100 units were issued from the Public Health Department The report also stated that the town council had become partners with other local authorities in a joint scheme for the West of Fife for the treatment of infectious diseases and the West of Fife Infectious Diseases Hospital had been considerably extended during the year Public assistance patients had been treated by two part time medical practitioners and their prescriptions dealt with as under the national health insurance scheme

France

[FROM OUR CORRESPONDENT IN PARIS]

Professor d Arsonval s Jubilee

On May 27th the jubilee of Professor d Arsonval was celebrated at the Sorbonne in the presence of the President of the Republic Since 1872 this savant who carries his eighty two years with youthful nonchalance has taught at the Collège de France The public and to a certain degree even the medical profession has been ignorant of d Arsonval s contributions to the sciences of physics and medicine To many he has just been a name to still more his name even has been unknown until this present jubilee was made the occasion for short explanatory articles in the medical and lay press Working on the physiology of the muscles and nerves he found he had to create new electrical equipment and as his researches proceeded he conjured up one delicate instrument of precision after another—electrodes galvanometers the electric bistoury etc The father of diathermy he has opened out new fields the therapeutic possibilities of which have not yet been fully explored In response to the many laudatory addresses delivered in the great amphitheatre of the Sorbonne d Arsonval in a simple speech gave the credit for the influences which had inspired him in his youth to one man and one setting The man was Claude Bernard and the setting was the Collège de France Here sixty years ago Claude Bernard made it possible for his youthful pupil to develop those qualities which have yielded such wonderful fruit After Claude Bernard d Arsonval mentioned the names of two men—Marey and Brown Séquard —to whose inspiration he owed much

Problem of the Medical Student

Medical education is still in the melting pot and it is only the clairvoyant who can say what the ultimate stew will be like The passage of the Armbruster Bill through the Legislative Assemblies has been facilitated by the present and impending invasions of the medical profession by foreigners most of whom come from Eastern Europe Whether it be true or not that they are almost as numerous as the French students there is no escaping the fact that the medical profession in France is yearly becoming more overcrowded In the cities in particular it is already difficult for the rank and file to make a respectable living It is therefore quite natural that the provisions of the Armbruster Bill for the exclusion of the foreigner should be generally welcomed Another question over which there is much less sweet reasonableness is that of the medical student s preliminary studies The academically minded would like him to serve an apprenticeship in Greek and Latin The socialistically minded see in these dead languages an artificial barrier protecting the select from the crowd As for the student who has satisfied his examiners in the preliminary subjects how is he to pursue his medical studies so that he emerges from the ordeal as a competent medical practitioner? During a recent discussion at the French Academy of Medicine Professor Georges Haye m indulged in some plain speaking The Ministry of Public Health he pointed out had decided to build a brand new Faculty of Medicine at the cost of some 800 million francs just at a time when serious economies were necessary This he thought was putting the cart before the horse and he suggested that spacious quarters might be wasted if their prospective occupants had no adequate provision for their systematic education In the past the authorities concerned had muddled along attempting to improve the teaching by multiplying the number of chairs in certain disciplines Professor Haye m s calculations as to the number of medical students at the Faculty of Medicine in Paris alone are impressive For the year 1932-3 there were 3 500 matriculations If the duration of the medical curriculum be put at five years there should be over 17 000 medical students in Paris at the same time if there be no fallings off Professor Haye m allows for them liberally and thus reduces his total of medical students to about 10 000 But even so!

Annual Congress of Forensic Medicine

The French Annual Congress of Forensic Medicine was held at the end of May at the Medico-Legal Institute in Paris under the chairmanship of Professor Balthazard One of the most interesting communications was made by Dr Chavigny of Strasbourg who chose as his subject forensic medicine and bacteriology As he pointed out microbic epidemics may have a criminal origin or at least a criminal element Among the incidents with which he chose to illustrate his paper was of course the Lübeck trial It was conspicuous among other things for the human passions it provoked It will be remembered that this trial hinged on the question whether the babies who had died after inoculation had been given pure B C G cultures or virulent tubercle bacilli—a question which could only be satisfactorily approached and answered in a spirit and atmosphere of detached scientific inquiry Instead the trial became a public sensation and the medical profession was butchered to provide a Roman holiday Another case recalled by Dr Chavigny was that of the epidemic of typhoid fever some years ago at Lyons where the geographical distribution of the disease led to the incrimination of a limited section of the town and to a water supply the contamination of which was alleged to be due to criminal negligence After discussing suicides and attempted murders by the inoculation of cultures of virulent germs Dr Chavigny held up the spectre of bacteriological warfare and reminded his audience that the special committee of the Disarmament Conference had concluded that it would be impossible to prevent such warfare His macabre paper is to be recommended as useful raw material to the would be authors of shockers

CORRESPONDENCE

"Back Pressure" and "Compensation"

SIR,—Sir Thomas Lewis's little book, *Diseases of the Heart* has come as a welcome aid to the practitioner, who, while attempting to keep up with the latest findings in connexion with circulatory conditions, is apt to feel swamped by the mass of "new" details that are constantly appearing in print. The book contains the essentials in a delightfully clear and readable form. But while yielding to none in my admiration of the author's work, it seems to me that he goes a little too far in condemning the two time-honoured views as expressed by the terms "back pressure" and "compensation."

To take the latter first, compensation surely well expresses the idea of making up for some deficiency. The word means "the act of giving an equivalent for" and "the act of counterbalancing or recompensating or making amends", and we see the process occurring in every direction, when something lessens the efficiency of an organ or it is called upon to do more work than is its wont. One lung is collapsed and the loss is compensated for by the more efficient action of the other. One kidney is removed and the other works for both. A blacksmith labours harder than the average man and his muscles enlarge in order that he may carry on. An individual goes to a place at several thousand feet elevation and his body compensates for the lowered oxygen pressure by an increase in the number of the red cells and the total haemoglobin, along with deeper and more frequent respirations. A man suffers from some organic lesion of the brain which causes anaemia of a vital centre and the blood pressure rises, sometimes enormously, in an endeavour to get blood into it and so saving life.

In the same way, some lesion of the heart makes that organ a less efficient pump than normal and the myocardium accommodates itself to the increased load by hypertrophying and by more efficient contractions, and thus the sufferer is said to have a compensated lesion. In time, owing to any cause increasing the obstruction or lessening the efficiency of the muscle, he begins to suffer from dyspnoea and other signs of cardiac distress, and it is commonly said, and I think with clarity, that the compensation is lessening. When one watches a patient with, say, mitral stenosis, who for years has been able to live a normal life, and sees, or even hears, that his breath is not so good as formerly and that he cannot do the things that he had been accustomed to do, surely it is correct (without going into details of whether or not dilatation is occurring) to feel assured that his compensation (in other words his cardiac reserve) is diminishing, and that myocardial failure is appearing. It is our duty then to endeavour to discover the cause of this lessening myocardial efficiency, which may be due to some pathological change in the muscle tissue and often to some disturbance in rhythm such as auricular fibrillation. Frequently we are able, by lessening the work of the heart or by improving the action of the muscle, once again to enable the organ to do its work sufficiently, and surely it is correct to say that compensation has been restored.

Back-pressure theory. Sir Thomas is strong in his condemnation of this term, and yet it undoubtedly expresses what may be happening in the circulation when some obstruction or regurgitation is sufficiently severe to hamper the free onflow of the blood and thus tend to raise the pressure behind the lesion. I say "sufficiently severe" because, as is now well recognized, a considerable obstruction or regurgitation often exists without doing any harm. But when in, say, mitral stenosis real obstruction exists and the blood pressure in the left ventricle rises, then there is a tendency to damming back of the pulmonary circulation, and the right ventricle works against extra resistance. It may for long succeed, so that the circulation is successfully carried on and there is no interference with the cardiac output, but in time the systemic venous return is hampered, and so the whole train of signs and symptoms associated with congestive circulatory failure develops. It seems to me that here the idea of back pressure clearly expresses the condition. I think that Sir James Mackenzie was the first to condemn the back pressure theory. He did this in emphasizing the fact, until then not sufficiently recognized, that it was not the valvular defect but rather the myocardial failure that was all important, but all the same it was the valvular trouble that primarily threw the extra work on the right ventricle. If only we could, at an early stage before myocardial changes had occurred, lessen the obstruction—as has even been attempted by keen surgeons—the muscle, thus having less work to do, might for long be able to carry on. For these reasons, which seem to me, at least, to have some weight, I would regret to see the terms "compensation" and "back pressure" relegated to a back shelf.—I am, etc.,

Toronto, May 25th. R. D. RUDOLF.

Specific Treatment of Pneumonia

SIR,—In a leading article in the *Journal* of June 3rd (p. 967) you referred to the enthusiasm displayed in Germany for the treatment of acute lobar pneumonia with optochin (ethyl hydrocuprein), stating that marked reductions in mortality were claimed. You suggested that such claims should surely not be ignored, and you asked whether an extended trial of this drug and of solvochin could not be undertaken.

I have had no experience with solvochin, but an extensive study of optochin was made by me while I was on the staff of the Hospital of the Rockefeller Institute for Medical Research, New York, during the years 1915 to 1918, these studies resulted in three papers on the pneumococcicidal action of optochin *in vitro* and *in vivo*, which appeared in the *Journal of Experimental Medicine* in 1915, and in two papers, published in collaboration with Dr. Alan M. Chesney, on the use of the drug in the treatment of pneumococcal pneumonia in man, which appeared in the *Archives of Internal Medicine* in 1917 and 1918. Although we were able to devise a method of oral administration which readily produced and maintained in the blood of pneumonia patients a strong pneumococcicidal action, we were unable to conclude that the drug was efficient in the treatment of the disease. We stated that the systematic use of optochin in the treatment of seventy-five closely studied cases of lobar pneumonia did not lead to any noteworthy therapeutic benefit and that the rate of pneumococcicidal action in the blood was too slow to be effective in the concentrations of the drug which could be safely attained in the blood stream. Toxic effects were seen in twenty-four of the cases treated, but, fortunately, all were slight and temporary. In the concentrations which might safely be attained in the body fluids the drug probably penetrates but poorly into the alveolar exudate, unless used very early in the disease. Moreover, a progressively increasing bacteriaemia was observed several times in animals and in man, in spite of a considerable degree of pneumococcicidal action in the blood.

As the serum treatment of lobar pneumonia was so successful in Type I we treated only a few cases of that type with optochin. As is suggested in the leader,

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2 MIDLANDS—PARTNERSHIP—A one-half share is offered in a very old established good mixed class Practice situated in country town in attractive hunting district Gross cash receipts about £6 200, including panel of 3 500 and appts about £600 p a Fees from 3/6 Suitable house available to purchase Cottage Hospital Ingoing partner should be experienced about 40 years of age and able to undertake major surgery Premium for share 2 years purchase

3 RIVERSIDE SUBURB—Middle and working-class PRACTICE averaging £1 125 p a including panel producing about £340 and appts nearly £100 p a Fees from 3/6 Detached house, with nice garden and containing 4 reception 6 bedrooms, etc, for sale Premium £2 225

4 HOME COUNTIES—PARTNERSHIP—Residential Town within easy reach of London A share producing about £1 300 p a is offered in a very sound old established Practice producing for the last 12 months approximately £5 200 Panel of 2 500 Fees from 3/6 to 21/ Very nice house with ample accommodation or smaller one if desired Ingoing Partner should be experienced accustomed to better-class work able to undertake major surgery, and preferably a Fellowship Premium 2 years purchase

5 OPHTHALMIC PRACTICE—Within eighty miles of London—Practice is increasing and offers good scope for further development Average gross cash receipts for the past three years £554 Last year over £700 Fees 1 to 2 guineas Opposition slight Choice of houses Premium £700

6 DEATH VACANCY—WEST MIDLANDS—Well established PRACTICE situated in very attractive market town, amidst beautiful surrounding country rapidly increasing, and offering good scope for further development Gross cash receipts for last twelve months £1,814 Panel with mileage brings in about £480, and appts worth £65 Fees 3/6 to 21/ Very good well equipped Cottage Hospital and there is excellent scope for major surgery Nice corner house with good accommodation and pleasant garden Can be purchased or rented Very efficient Locum in charge

7 LONDON WEST END—Very old-established good class non dispensing and non panel PRACTICE held many years by Vendor who is selling owing to failing health Cash receipts for past three years average £3 123 p a Average visiting fee 10/6 up to 21/ No midwifery or night work Good family residence with ample accommodation, for sale Vendor's leasehold property Six months introduction given Premium 1½ years purchase

8 LONDON SUBURB NORTH WEST—Very old established panel PRACTICE with better class connection attached and situated in a pleasant residential suburb Cash receipts over £2 800 including panel of 3 150 and transferable appt worth £70 Very good house with ample accommodation (7 bedrooms etc) Price leasehold (with 11 years to run at a ground rent of £15 p a) £1 500 Rent of separate Surgery on 21 years lease £52 inclusive Premium £7,000

9 LANCASHIRE — LARGE TOWN—Old established good mixed class PRACTICE held by Vendor for the past ten years Average gross cash receipts £1 458 Panel of 1 674, and several Insurance appts Corner house in very pleasant residential locality containing consultation room 2 waiting rooms dispensary 2 reception rooms 4 bedrooms bathroom kitchen etc Garden Garage Price for freehold £1 400 £1 000 on mortgage Good scope for increase

10 LONDON, NORTH—Old-established middle and working class PRACTICE held by Vendor 11 years Average gross cash receipts £975 Panel of over 900 Fees from 2/6 Semi-detached corner house in good condition with ten rooms and usual offices Separate entrance to professional rooms Price for leasehold £600 Premium £1 500

11 LONDON EAST—Middle and working class PRACTICE producing £1 000 p a including panel of about 1 100 Suitable small house with sitting room 2 bedrooms, and attic waiting room surgery and dispensary Rent £52 p a Premium 2 years purchase

12 DORSET—Well established PRACTICE in very pleasant town within easy reach of the coast Gross cash receipts over £1 000 of which about £400 is from panel Fees 3/6 to 21/ Opposition not strong Good house with 2 reception 5 bedrooms etc garden of nearly 3 acres Rent on lease £62 p a Premium £1 750

13 LONDON SOUTH EAST—Old established better working class PRACTICE increasing and situated in well populated district Gross cash receipts for last 12 months £1 263 including panel of over 1 300 Suitable house with 2 reception and 3 bedrooms Garden Price for freehold £1 100 Premium £2 400

14 EASTERN SUBURB—Very old established middle and working-class PRACTICE worth about £1,100 p a, including panel of 1 350 Very little midwifery House contains 2 reception 4 bedrooms etc separate entrance to professional rooms Small garden Garage Price for freehold £1 350 Premium 2 years purchase

15 EASTERN COUNTIES — FAVOURITE SEASIDE AND HOLIDAY RESORT—Good mixed-class PRACTICE established many years and producing for the last twelve months £1 600 Panel brings in £300 p a and an appt worth £100 p a Fees 3/6 to 7/6 with medicine extra Nice house, with 2 reception 5 bedrooms et Garage Garden Price for freehold £2,250 Golf, shooting and other sport Premium 1½ years purchase

16 PARTNERSHIP—In a well populated pleasant South Eastern suburb within ten miles of London the half share of an old-established mixed class Practice is for disposal owing to the retirement of the junior partner Held by the remaining partner 30 years Cash receipts average £2 765 p a including panel of 1 800 and appts worth £150 Very little midwifery Pleasant semi detached corner house with ample accommodation garden Price leasehold (over 900 years, at ground rent of £7 p a) £1,050 Premium 2 years purchase Scottish graduate preferred

17 NORTH EAST COAST—PARTNERSHIP—A one half share is offered in an old established better middle-class Practice in suburb of favourite residential town Steadily increasing and excellent future prospects Gross cash receipts £1 700 Panel of 700 Fees from 3/6 Very nice house with 2 reception 4 bedrooms etc One acre of garden Garage for 2 cars Rent on lease £80 p a Sport of all kinds and good schools Premium for share 2 years purchase

18 MANCHESTER—Old-established middle and working class PRACTICE producing for the last twelve months about £650, including panel of 790 Fees from 3/6 Convenient house, with 2 reception 4 to 5 bedrooms bathroom etc Rent on lease £60 Premium £900 to include furniture

19 SOUTH WALES—Beautiful country district within 4 miles of large town Small PRACTICE producing between £300 and £350 p a offering good scope Visiting fees from 5/ Very little midwifery or night work Well situated house with well kept garden containing 2 reception 3 good sized bedrooms and servants rooms Electric light and gas throughout Garage Rent on lease £70 p a

20 CENTRAL LONDON—Middle and better class PRACTICE averaging for the last two years about £500 p a including small panel of 180 Fees 3/6 to 21/ Professional accommodation can be rented at £200 p a Premium £300, to include furniture drugs instruments etc

21 SOUTH EAST LONDON—Good middle and working-class PRACTICE, producing last twelve months nearly £950 Panel of 986 Suitable house with 2 reception 4 to 5 bedrooms etc Rent on lease £70 p a Premium to include drugs, etc and surgery fittings and furniture £1 450

22 NORTH WALES—Old-established middle and working-class PRACTICE averaging for the last three years over £1 700 including panel of about 1 300 Fees from 2/6 Visits from 3/6 with medicine extra Suitable house with good professional accommodation Electric light Garage for two cars Small garden Rent on lease £100 p a Premium £2 500 £1 700 down balance by instalments Good sport, etc A knowledge of Welsh is not necessary

23 RIVIERA—Old-established PRACTICE the receipts from which have averaged over £1 600 p a but have decreased recently owing to Vendor's ill health Very good prospects of extension Fees from £1 1s Very easy work Suitable flat can be rented at £160 p a. Premium £4 000

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the use of optochin may be more successful in Type I but its possible toxic effects especially those in relation to vision should be remembered.—I am, etc.

June 5th

HENRY MOORE, M.D., D.Sc.
Professor of Medicine, University College, Dublin

Genesis of Gall-stones

SIR,—I join Mr. J. A. Gardner and Dr. H. Gainsborough in absolving Mr. Patey for not mentioning my work in his paper on "The Mechanism of Gall-stone Formation" in the *Journal* of May 20th (p. 866) as it had not been published. Lord Moynihan however was perfectly justified in commenting on Mr. Patey's failure to refer to Lord Moynihan's article on "Some Aspects of Cholelithiasis" in which incidentally my findings are quoted.

Mr. Patey aptly remarks at the conclusion of his paper because of the predominant position that surgery occupies to-day in the treatment of gall-stones the surgeon may yet do much to initiate work which will lead to an increased knowledge of gall-stone formation. Surely then it is an omission on his part to ignore the views of Lord Moynihan whose experience of gall-bladder surgery is unrivalled even though these do not coincide with the views of Mr. Gardner and Dr. Gainsborough. The latter suggest that Lord Moynihan was not in a position to define the term hypercholesterolaemia because he had no knowledge of normal limits. In MacAdam and Shiskin's work which Lord Moynihan quotes the upper and lower limits for plasma cholesterol—based on analysis of the blood of twelve normal individuals—are given as 0·191 per cent. and 0·133 per cent. with an average of 0·162 per cent. Mr. Gardner and Dr. Gainsborough refer very loosely to these limits as arbitrarily chosen because the figures for the normal individuals were not given in detail in that paper. As these figures had already been given in my thesis for M.D. Glasgow (1922) there seemed no need to present them again. However to satisfy Mr. Gardner and Dr. Gainsborough that they were not arbitrarily chosen limits I give them in detail now.

Cholesterol Content of Blood Plasma of Twelve Normal Individuals

Age	Sex	Total Cholesterol in Grams per 100 c.cm.
28	♂	0·191
22	♂	0·155
58	♂	0·164
40	♂	0·160
18	♀	0·156
43	♀	0·191
47	♀	0·164
?	♂	0·133
?	♂	0·150
53	♂	0·180
20	♀	0·148
46	♀	0·153

These figures are in close agreement with those of other workers. McNee[1] (0·150–0·180 per cent.) Autenrieth and Funk (0·140–0·160 per cent.) Weston[2] (0·180 per cent.) Myers[3] (0·168–0·175 per cent.) and Müller[3] (0·140–0·160 per cent.). My average of 0·162 per cent. is even in agreement with that of Mr. Gardner and Dr. Gainsborough (0·170 per cent. for males and 0·153 per cent. for females) although their[4] variations are much wider (0·080–0·230 per cent.). They object to Lord Moynihan's use of the term high normal as applied to figures between 0·160 and 0·192 per cent. Is not one perfectly justified in speaking of figures above the average as on the high side although still within normal limits?

Mr. Gardner and Dr. Gainsborough state that hypercholesterolaemia is not known in cases of gastric ulcer. I invite them to give their figures in this condition. In twenty-six cases of gastric ulcer examined by me 23 per cent. were hypercholesterolaemic as also were 12·2 per cent. of forty-one cases of duodenal ulcer. These cases formed part of a series of 280 cases with various surgical abdominal disorders examined for the purpose of ascertaining whether hypercholesterolaemia occurred with greater frequency in cholelithiasis as compared with other conditions. In 101 cases of cholelithiasis in this series the average cholesterol value was 0·217 per cent. 65 per cent. of these patients showed an absolute hypercholesterolaemia. The diagnostic significance of an increased cholesterol content of the blood is therefore important as in this series of 280 cases over 75 per cent. of patients with hypercholesterolaemia were suffering from cholelithiasis as proved by operation.

Mr. Gardner and Dr. Gainsborough observe that it is practically impossible to state that a moderate degree of hypercholesterolaemia is present in an individual case from single observations unless the individual's normal plasma cholesterol content has been previously well studied. Is this not rather a facetious remark? Surely these patients first present themselves for observation when they are already pathological. How could their previous normal plasma cholesterol content have been well studied?

Mr. Gardner and Dr. Gainsborough state that hypercholesterolaemia occurs whenever biliary obstruction is present but not in uncomplicated cases of cholelithiasis. I dispute the accuracy of that statement. I did find hypercholesterolaemia even in some uncomplicated cases of cholelithiasis. What is more on scrutinizing Mr. Gardner and Dr. Gainsborough's figures as set out in detail by them[4] I find that four of their cases of cholelithiasis without jaundice or other complications were definitely hypercholesterolaemic applying the term as they themselves understand it to figures above 0·23 per cent. I refer to their cases 7 & 15 (second observation) and 17 for which the figures are 0·2548, 0·2769, 0·2563 and 0·2561. They ask "But why does Lord Moynihan ignore the more complicated changes which occur in the blood in these cases of biliary stasis such as have been demonstrated not only by ourselves but also by Thannhäuser and Schaber, Adler and Lemmel etc." Lord Moynihan ignores these changes for a very good reason. His paper was published in 1925. An account of these more complicated changes—a disturbance of the cholesterol to cholesterol-ester ratio—was not given by Thannhäuser and Schaber till 1926. Adler and Lemmel published their results in 1927 and Mr. Gardner and Dr. Gainsborough's paper on the subject appeared in 1930. How could Lord Moynihan in 1925 refer to work which Mr. Gardner and Dr. Gainsborough did not publish until 1930? Their statement that in Lord Moynihan's paper the graphs of changes in pregnancy and during menstruation were drawn with exaggerated ordinates is entirely unwarranted. They were drawn with mathematical accuracy and were based on the figures obtained by me in the case of twelve pregnant women and in the investigation of six menstrual cycles. On the whole Mr. Gardner and Dr. Gainsborough's criticism in this connexion cannot be regarded as other than frivolous especially as they themselves state that some cases of pregnancy show a definite total hypercholesterolaemia a result which is in general agreement with those of earlier observers. Moreover Gonalons[5] and Okey and Bowden[6] have described changes in the menstrual cycle similar to those represented in the graph under discussion.

In conclusion I do not agree with the statement made by Mr. Patey and supported by Mr. Gardner and Dr. Gainsborough that attempts to correlate hypercholesterolaemia with gall-stones have failed. I intend shortly

SIR,—In a letter to the *Journal* of June 10th (p 1025) Dr Spicer states that it would be interesting to know on what grounds the pancreas is considered to be involved in mumps

During the last five years I have met with three cases of extremely severe diabetes mellitus in children in which the onset was immediately preceded by an attack of mumps In the first, a boy of 13, a moderately severe attack of mumps left him out of sorts for three weeks Severe thirst and polyuria then developed, and three days later he sank into a diabetic coma with a blood sugar of 0 6 per cent He never complained of any abdominal symptoms In the second, a boy of 12, the attack was followed by epigastric discomfort for a fortnight, and he then developed thirst and polyuria, and lost weight rapidly Three months later he had a resting blood sugar of 0 28 per cent , and passed 113 grams of glucose in a day In the third, a boy of 7, "influenza" was followed by mumps The attack was a mild one, but was accompanied by some abdominal pain, which lasted for eight days Three weeks after this he developed sudden polyuria and thirst, and began to waste His urine was then found to contain a great deal of sugar and acetone bodies, and he subsequently developed diabetes of the greatest severity

It is impossible to say whether the diabetes in these cases was the result of pancreatic damage due to mumps or whether the latter was merely the infective factor which brought to light a latent diabetes They do, however, suggest that the pancreas may be affected, even though the abdominal symptoms are slight or absent In none of these cases could any family history of diabetes be traced —I am, etc ,

Cambridge June 9th LESLIE COLE

"Observation Hips" and the Mantoux Test

SIR —In your issue of June 3rd (p 951) Mr R W Butler gives an interesting account of a "follow-up" of twenty-two "observation hips" The term (like our war weary P U O and N Y D) is unknown to the compilers of *The Nomenclature of Diseases* but it serves a useful though unofficial function until a more accurate label can be chosen

I have notes of similar cases of my own, and the following are good examples, with a moral at the end of the story

CASE I

Thomas P aged 10 years 9 months was seen at the Hospital for Sick Children Great Ormond Street on March 26th 1928 with pain in the left hip following a slight injury He then had limitation of all movements of the joint His tonsils and adenoids were removed and he was transferred to the country branch at Tadworth where he was treated in a double Thomas hip-splint for two and a half months As he then had no muscular wasting and movements were free and x ray examination was negative he was allowed gradually to resume a normal life and returned home in July 1928 after three months observation Three years later I sent for him and found him completely normal both clinically and radiologically He had no pain and 'played inside left with great success

CASE II

Richard P aged 8½ years, was seen on June 20th 1927 with a history of five weeks' aching in the right hip but no limp There was slight general restriction of movement in all directions and a family history of tuberculosis *X*-ray examination was negative He was also placed in a double Thomas hip splint and transferred to Great Ormond Street Country Branch where he spent a mere six weeks and returned home walking on September 14th 1927 I saw him in October 1931 which was four years after this episode he was normal in every way and a radiogram showed no sign of past or present disease

These children had a transient arthritis, which I do not believe was tuberculous, and yet one was put to the necessity of treating it as such until the clinical course proved otherwise Nowadays I place great reliance on the Mantoux test, and it has many times helped to a correct and early diagnosis in such cases Mr Butler makes no mention of this useful procedure, which still suffers from confusion with less reliable subcutaneous methods and that of von Pirquet The Mantoux test must be carried out in a standardized manner, and the following details are important

Human tuberculin 1 in 1 000 in 0 5 per cent carbolic saline will keep safely for about four weeks in an ice-chest A special intradermal syringe is necessary, and 0 1 to 0 2 c cm are injected into the skin of the forearm No control is necessary and the reaction develops as a marked red ring one inch or more in diameter during the next three days A little experience is necessary in reading the results, but it is soon acquired

My present view is that a negative Mantoux test precludes tuberculosis in these "doubtful hips" and though a positive result is less helpful, it must be remembered that practically 80 per cent of London children under 12 years of age have a negative Mantoux (Gaisford) I believe that this test might be more widely used by doctors in general and by orthopaedic surgeons in particular, for though there are many causes of transitory arthritis of the hip joint there is only one that really matters —I am, etc ,

London W 1 June 6th ERIC I LLOYD

Hernia and Appendicectomy

SIR —I have deliberately refrained from joining in this correspondence till now because I believe that no amount of argument will influence any experienced surgeon to relinquish a technique which in his hands yields satisfactory results Nevertheless I do resent unjust criticism of the gridiron incision on purely theoretical grounds It is common experience in the average hospital to find equally staunch adherents of Battle's incision and McBurney's operation, and most surgeons soon decide which *in their hands* is the better method Surely this is the crux of the matter

An incision placed as near the anterior superior spine of the ilium as possible offers the following practical advantages possessed by no other

1 There is little or no small bowel protrusion even with an indifferent anaesthetic peritoneal closure is simple

2 There is less risk of soiling the peritoneal cavity when dealing with a localized abscess it is nearly always possible to search for and remove the appendix in these cases without any undue risk to the patient

3 In a simple case the peritoneum can be dealt with in the same way as a small hernial sac, leaving no raw edge for subsequent adhesions

4 If drainage is necessary the subsequent adhesions will be between the caecum and peritoneum , this is far better than adhesions between peritoneum and small bowel

I believe that these four points are definitely advantageous to the surgeon and his patient provided that the incision be used with sufficient skill and care

Mr A H Southam, in an article in the *Journal* of February 14th, 1931 (p 258), quotes certain facts collected by Griffiths, Romanis, and Mitchiner to show that cases of inguinal hernia have followed the use (or abuse) of the McBurney technique I read Mr Southam's article and his recent letter (May 6th p 803) with appreciation and interest It is a warning, and a reasonable one to those who, like myself, wish to continue using a gridiron incision wherever possible without detriment to our patients Not so your correspondent in your issue of

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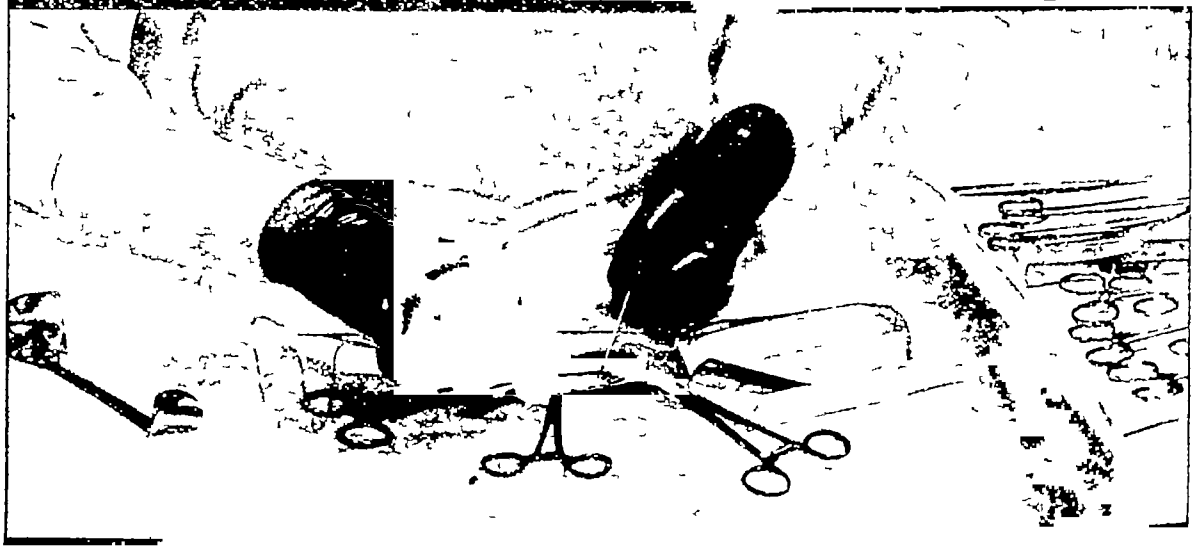

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June 10th (p 1025) whose antagonism to this method knows no bounds

I saw recently an appalling ventral hernia occasioned by the use of a muscle splitting incision plus sepsis Exposure is not so good with a McBurney incision How painful these lateral abdominal incisions can be!

Nobody wishes to deny that evil results sometimes follow this operation but why invariably blame the incision for them? In the Mayo Clinic there is a well known syndrome for the recognition of gastro-jejunostomy sequels due to the anastomosis having been performed with the lower end of the ileum by mistake Yet even the most enthusiastic opponents of short circuiting would hesitate to use this as a valid argument

Mr F A R Stammers (April 29th p 763) Mr C A Moore (May 13th p 846) and Mr J W Geary Grant (May 20th p 892) give convincing testimony to the effect that gridiron incisions done by them do not result in cases of inguinal hernia I am glad to add my own results to these I have not seen any such hernia follow several hundred cases I now use this method exclusively for all definite cases of appendicitis with or without abscess or even general peritonitis and I have found complete satisfaction from its use I have had one case of post operative ventral hernia in a very obese woman of 52 with a gangrenous mass in the right iliac fossa and a pelvic abscess which necessitated prolonged drainage and extension of my incision across the posterior sheath of the rectus but I always regarded this case as my own fault not McBurney's as I deliberately sacrificed the *abdominal wall for the patient's sake*

As for pain in these incisions I have yet to see a case I think in fairness to my own choice I may quote three cases of Battle's incision in which the tenth dorsal or eleventh dorsal nerve has been involved in sutures resulting in persistent pain and a second operation to excise the affected portion This is not a legitimate ground of objection to Battle's incision the surgeon has himself to blame One surgeon of my acquaintance urged me to use this incision because he said one can in cases of mistaken diagnosis extend it upwards or downwards indefinitely as the case requires I make no comment on this except to say that the wrongly diagnosed case of perforated ulcer is probably better off in the hands of a surgeon who has started with a gridiron

I admit the gridiron incision requires care that it is the wrong operation for a novice and that if I were the subject of a budding surgeon's first operation I should ask him to do a Battle's incision but to those of us who have taken the trouble to learn our own limitations and still find a muscle splitting operation satisfactory let there be peace And let us be honest about our bad results and blame ourselves rather than the classical incisions we have misused —I am etc

Walmer June 11th JAMES S HALL

Aetiology of Acute Rheumatism

SIR —In the most useful discussion on the above subject in your columns one generally acknowledged factor (unless I am mistaken) has been overlooked—namely damp In the conference on rheumatism held at Bath some years ago under the auspices of the Ministry of Health the two causes of acute rheumatism which stood out prominently before all others particularly in the case of children were damp and infection—the damp of newly built houses of ill-drained localities and the like But if one went a step further and inquired how damp acts all sorts of views were encountered One expert would promptly say that it produced catarrh and thus prepared the soil for receiving infections another would contradict this and say that it fostered the growth of the infecting organism and others would again offer other explanations But the result of inquiries left one with the impression that the way in which damp acts as a cause had never really been investigated It must I think be admitted that when we have more certain knowledge of this point we shall be in a better position to lessen or prevent its extremely harmful effects —I am etc

Southsea June 5th M ASTON KEY

Raw and Pasteurized Milk

SIR —With regard to the letter (*Journal* May 27th p 937) in defence of the accuracy of some of the statements in Bulletin 5 of the Hannah Dairy Research Institute I do not consider it a good one The interesting chemical details concerning milk do not alter the fact that their statement that high grade milk was used throughout my work is incorrect My paper was written on raw milk and did not pretend to compare raw with pasteurized milk yet some comparison crept in It is quite true that I wrote

I am not aware of any comparable body of children who have been similarly brought up [meaning from birth or weaning] on sterilized or pasteurized milk and so have no exact knowledge whether effects comparable with those recorded might be brought about by such means but such evidence as is available and inference indicate rather that they would not be

As however my thesis did not concern comparison of raw and pasteurized milk such evidence and inference was not included save as in my letter in your issue of May 13th Incidentally too I have made no *claim* whatever about raw or pasteurized milk but merely published clinical evidence and the inferences I drew therefrom

Concerning the numbered paragraphs

1 Until evidence is available as to what ration of milk if any children aged from 9 to 14 years should have no one has any right to make dogmatic statements concerning any difference in the amounts of 12 and 20 oz a day respectively especially as at those ages milk is not a physiological food At the least if pasteurized milk produces effects apparently similar to those of raw milk one might reasonably expect the twenty three children receiving 12 oz a day to show a greater freedom from caries than others in the same school who did not receive it but they did not

2 The reference to inadequate numbers has here only a trifling if any significance as the resulting comparison showed very uniform and widely different incidences of caries in the specific tooth under observation and in a number of children under such conditions the omission of one child is entirely unjustifiable and irrelevant nor does it reverse the conclusions with regard to that specific tooth Even if that one child were omitted it would (in the children in that Table II) still leave the incidence of caries in the specific tooth observed as eleven for raw and sixty three for pasteurized milk and that is granting that that particular child had all four of its second permanent molars carious It was these points which prompted my remark that the comparisons had been missed otherwise it is incomprehensible why the essential point on which this comparison rested was omitted in the partial reproduction of Tables I and II in Bulletin 5 I certainly did not suggest that the authors were not competent as Blackwood and Wright state

3 Their remark here that a very large number of children receive raw milk in the United Kingdom is of course true but not relevant to the point at issue as I refer only to those receiving it (within my definition of raw) from weaning (or birth) to 2½ to 3 years of age and such children from the information of many others than myself I know to be extremely few indeed I have not seen another since the paper was written

The writers of the letter chide me for omitting reference to care cleanliness and irregularity in the spacing of the teeth and I will confess to omitting reference to many other potential *predisposing* factors which may affect the incidence of caries this was done because in the circumstances they appeared to have no relevance The recording

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of the original incidence of caries was not very relevant to my thesis save to show that these children had been exposed to its *exciting* causes, or suffered from it, but it was referred to in Table III (forty children) and Table IV (thirty-three children) with exactness, and in Table V (twenty-eight children), in that "most of them had, or had had, carious deciduous teeth, up to nine still present in one mouth" The authors seem to have missed these points, only noticing them in three cases

It is unusual for a Southron (or rather two) to be accused from North of the Tweed of too much caution, but both Middleburgh and myself are careful what we write, and, seeing that I was up against something which amazed me by its very possibility, I said, in my opening paragraph

The decision whether the clinical facts recorded are caused by the associated circumstances can not be a personal one, but must ultimately depend on the experience and observation of many" Apparently the experience and observation of Blackwood and Wright permit them to make the more definite statement that "the merit of including raw milk in the diet of young children for the prevention or arrest of dental caries has already been demonstrated" I believe this to be true, provided the diet is otherwise well balanced and life is carried on on physiological lines

The writers are incorrect in presuming that I published all evidence available concerning pasteurized milk, I was not really discussing pasteurized milk save as concerned vitamin D and their charge of my neglecting what they regard as "the one outstanding feature" is also wide of the mark as for many years half of the 1,100 girls at A have had a pint of pasteurized milk daily, and I had that evidence—and other—before me, but it was not germane to my subject-matter—I am, etc,

EVELYN SPRAWSON

London Hospital Dental School May 31st

*** This correspondence is now closed

"Sunshine Roof" Rheumatism

SIR,—Mr Donald Currie's letter on the subject of "sunshine roof" rheumatism is an extremely interesting example of the very direct localizing influence by climatic factors of fibrositis in possessors of the rheumatic diathesis It is somewhat unfashionable at the present time to particularize methods for the relief of what are believed to be mere symptoms of this sort, and I was relieved to read that the methods of cure adopted, and which were found by him effective were no more drastic than the wearing of a hat, a change in the driving position, and the injunction of an ointment locally I feel sure that certain more "scientific" practitioners might, as a preliminary measure, have removed the patient's teeth, tonsils, and possibly appendix, before proceeding on the lines indicated by Mr Currie

It seems increasingly certain that the roots of the rheumatic diathesis, by which is meant the specific liability of certain persons to attacks of the disease, must no longer be looked for exclusively in the admittedly fertile soil of sepsis Diathesis, whether it be an inherited or acquired characteristic of "rheumatic" people, would seem to be in fact a physiological defect of the heat-regulating mechanism of their skin, an imperfect adaptation of their body to those changes in local environment which are now sometimes referred to as the "micro climate" of the individual in question When this state has been reached, treatment which has as its object the re education of the skin to this important function must be considered as being much more than palliative, whilst the eradication of any septic focus, although on general principles desirable, can no longer be considered at this stage to be of primary importance It is not sufficient to remove what may have been the original cause of diathesis it is the resulting physiological maladjustment of the body, where this is established, which becomes the primary indication for treatment—I am, etc,

London, W 1, June 10th W S C COPEMAN

IMS Pensions—"Not Guaranteed"

SIR,—On March 7th, 1932, Sir Samuel Hoare, Secretary of State for India, made the startling declaration that pensions of the officers of the Indian Medical Service were "not guaranteed" by the British Government This pronouncement was made in the face of the previously declared policy of the Indian Congress Party to the effect that on accession to power they would repudiate all debts contracted by the British Government otherwise than those in the interests of India, Congress being the *sole* judge of that question

Such ruthless abandonment of the rights of a large Service is inconsistent with British honour Several memorials were addressed to the Secretary of State, and he was also questioned in the House of Commons on the subject on March 7th, 1932, by Mr Kirkpatrick, on April 13th by Viscount Elmley, and on May 22nd by Sir A Knox But to the memorials and questions evasive replies were given without retraction of the "no guarantee" doctrine The following retrospect will show how fallacious that doctrine is

Under the Treaty of Paris England was acknowledged in 1814 to be the paramount power in India Act 16 and 17 Victoria, Caput 95 passed in 1853 substituted British rule for that of the East India Company and *inter alia* confirmed Britain's right of ruling in such matters as education and appointment of officials including the then so called assistant surgeons (Section XL) In 1858 Act 21 and 22 Caput 106 transferred the army and navy of the East India Company to the direct control of the British Government under Section LVI and authorized the payment of all expenses incidental to these forces from Indian revenues In 1858 also Her Majesty Queen Victoria issued her famous proclamation placing India directly under the Crown Royal commissions ('conferring rank in Her Majesty's Service in any part of the world') replaced East India Company's commissions for medical officers under paragraph 44 of dispatch from the Secretary of State for India dated November 7th 1864 Moreover in a number of Royal Warrants* issued subsequently the Government of India was debarred from interference with organization pay promotions and pensions of Indian Medical Service officers and these warrants were usually couched in such forcible language as "Our Viceroy and Governor General in Council etc, *shall be governed*" by the instructions contained therein To leave no doubt about these royal commissions to I M S officers, it was further ruled that notifications of promotions would be made in the *London Gazette*

One fact stands out clearly from this brief retrospect—the British Government *alone* is the employer of the Indian Medical Service, and consequently it cannot escape the position of guarantor of remuneration to its employees By the Act of 1858 it exercised the right to find that remuneration out of Indian revenues, but this in no way lessens its responsibility to continue to find funds for such remuneration, if not from Indian revenues (upon the grant of self-government to India), then from the British Exchequer

This letter raises no question of party politics My suggestion is that, relying upon the clanship of medical men, each one of the thousands scattered over Great Britain should putting aside his particular party creed, address an urgent letter to the member of Parliament for his area calling for a complete retraction of the Secretary

* Vide Royal Warrants dated May 10th 1873, November 16th 1880 May 20th 1881 July 6th 1881 April 30th 1887 May 28th 1913 etc quoted in full in Crawford's *History of the Indian Medical Service*

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and SEYMOUR BARLING C M G, F R C S,
Professor of Surgery in the University of Birmingham Honorary Surgeon to the Children's Hospital, Birmingham; Honorary Surgeon to the General Hospital, Birmingham

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During recent years the call of the child has become insistent, and consequently additions to our knowledge of the subject of paediatrics have been so great that we offer no apologies for presenting to the medical profession another text book Paediatrics is not a speciality in the sense in which that much abused word is ordinarily used on the contrary it is an application of the principles of general preventive and curative medicine and surgery to children who represent a large part, if not the majority of the patients seen in general practice. Until recently instruction in this branch of medicine was greatly neglected in British schools but there are not wanting signs that this reproach may within a few years be removed, and if this text book contributes in any degree to this end both publishers and editors will feel amply repaid. The subject of paediatrics includes the study both of the healthy and of the sick child, not only of curative but also of preventive medicine and special consideration has been given to both these aspects Again the treatment of the sick child by surgical means is so essentially a paediatric as well as a surgical problem that it is only fitting that in a book which seeks to give a full account of paediatrics due prominence should be given to the surgery of disease in childhood. All the contributors have considered their allotted subjects from the clinical standpoint, and have paid special attention to diagnosis and treatment only such pathology and details of technique have been given as are sufficient to elucidate the subject under consideration

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of States no guarantee doctrine in regard to Indian Medical Service pensions A leading British politician not reputed to possess a personal fund acknowledges risk in giving India self government The nature of that risk may be gauged by clear thinking men (*pace* Lord Irwin) in the refusal of British insurance offices to accept proposals What the India Office thinks about that risk may be guessed from the fact that from 1853 to 1919 the Secretary of State for India was paid out of Indian revenues But on the near approach of self government to India a safeguarding section appeared in the 1919 Government of India Act allowing the Secretary of State to obtain his salary from British revenues Five years later in 1924 under the amendments to the 1919 Act his under secretaries might be paid out of the revenues of India or out of moneys provided by Parliament [Part I Section 2 (3)] The India Office has thus guarded against all risk of repudiation of debts by a future Government of India by a safety first formula for itself but has no scruples in abandoning the just and hard earned rights of hundreds of our medical brethren and countrymen —I am etc

W G KING
Colonel I M S (ret.)

Hendon N W 4 June 9th

A Giant Prostate

SIR —Mr Holman is to be congratulated on the successful outcome of his operation on the giant prostate described in your issue of March 4th (p 366) The record as far as mere size is concerned seems to be held by the prostate exhibited by Neupert at a meeting of the Berliner Gesellschaft für Chirurgie in January 1931 (*Zentralbl f Chir* 1931 Nr 17 s 1071) This tumour which extended nearly to the umbilicus and was larger than a man s head weighed 3 600 grams (approx 8 lb) The patient a 67 year-old man had noticed it for ten years An attempt at removal had to be abandoned owing to haemorrhage The patient died on the following day Histologically the tumour was reported to be a benign myoma of the prostate —I am etc

A G CLARK

Napier New Zealand April 15th

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

At a congregation held on June 9th the following medical degrees were conferred

M D—J P Carrod L R Shore
M B B CHIR—T C D Wilson J H Spence W R Winterton C C Bryson J L Wild
M B—P McI Smyth

UNIVERSITY OF LONDON

The official *London University Gazette* dated May 31st (price 6d post free 7d) contains a number of amendments affecting the regulations concerning (1) the advanced and post graduate students (2) the M B B S examination (3) the M D (Branch III psychological medicine) examination (4) the M D (Branch IV midwifery and diseases of women) examination (5) the degrees in Arts and in Science for external students (6) the exemption from first examination for medical degrees for external students through higher school examination (7) the Diploma in Psychological Medicine—regulations regarding practice

The Senate announces the following vacant external examinerships Final and higher examinations for medical degrees medicine surgery M D Hygiene First examinations for medical degrees chemistry (two) general biology physics For second examinations for medical degrees anatomy chemistry pharmacology Also associate examinerships in medicine obstetric medicine pathology and surgery Application form and particulars of the remuneration and duties can be obtained from the External Registrar to whom the names of candidates must be sent on or before July 3rd

The Dunn Exhibitions in Anatomy and Physiology for 1933 have been awarded to J C B Bone (Middlesex Hospital Medical School) and J S Horn (University College)

The fee payable by candidates for the Academic Diploma in Clinical Pathology has been increased from £5 5s to £10 10s

Regulations relating to the External Diploma in Clinical Pathology have been approved and copies may be obtained on application to the External Registrar

A committee has been appointed to consider what action the University could take to assist university teachers and students who on grounds of religion political opinions or race are unable to carry on their work or studies in their own countries and the committee has been authorized to confer as it thinks fit with other universities and learned societies in the British Empire and elsewhere on this matter

The following appointments are announced Dr J Fawcett to be a member of the Council of the Lister Institute of Preventive Medicine Dr R A Young to represent the University at the nineteenth annual conference of the National Association for the Prevention of Tuberculosis Cardiff July 13th to 15th Sir Cooper Perry to be the representative on the governing bodies of the National Training College of Domestic Subjects and the Battersea Polytechnic

Applications for the William Julius Mickle Fellowship must be sent in by October 1st The Fellowship is of the value of at least £200 and is awarded annually by the Senate to the man or woman who being resident in London and a graduate of the University has in its opinion done most to advance medical art or science within the preceding five years and has therein shown conspicuous merit Further particulars may be obtained on application to the Academic Registrar

The following candidates have been approved at the examination indicated

THIRD M B B S— S G Browne ‡A L Eyre Brock C C Harvey ‖Mary H Mayeur ‖R S Ogborn * E J Smith Albertine L Winner *‡Freida Yarmalinsky G N Barker Mary L Birkett B F M Bond Ethel D M Brock A I I Brown Hilda M Brown H W Burge G N Carroll H F Charlton I Clandce Kitty K Cohen D M Cooper M C H Cooray C J Cunningham T J Davies N E D de Silva M F Dinev J C G Evans T J Evans G G Farrington R F Fidler K J Gilchrist Betty F Goldsmith Mary E Gould Lucy W Grace R D Green L J Hackett J L Hamilton Paterson C B Hinkley Constance M Hoare T G Hudson W H Hughes D H Inch J F Jarvis D F V Jones G B Kerr Beatrice Lewis J O McDonagh B M McGwan H A Magnus L H Mattet R Parkinson G H Pearce C F Price H Ramsay J F Rivers-Moore M H P Sayers Emily L Simon V C Snell J R C Spicer Muriel H Steven V M Stewart Wallace G I Thomas Winifred P Thomas R S Trueman V C McD Wellbelt I Whittington Gwladys M William H M William R F Winckworth E J S Woolley Tamin M Wynter

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UNIVERSITY OF WALES

The following candidates have satisfied the examiners in the examination indicated

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ROYAL COLLEGE OF SURGEONS OF ENGLAND

A meeting of the Council of the Royal College of Surgeons of England was held on June 8th when the President Sir Holburt Waring was in the chair

Appointments

Sir Arthur Keith was appointed Master of the Buckston Browne Research Farm for the ensuing year Mr R H Burne was reappointed acting conservator of the museum and Mr T W P Lawrence acting pathological curator

Mr W Sampson Handley was appointed the representative of the College on the Court of Governors of the University of Sheffield

Examiners

The following examiners were elected for the ensuing year

Dental Surgery (Surgical Section)—R J Howard C F O William C F Shattock C P G Wakeley I H Mitchiner E C Slesinger

Fellowship—Anatomy William Wright J F S Fraser J B Hume Grant Marie *Physiology* John Mellanby G V Bodmaster D H le Soeur Samson Wright

Under the Conjoint Board—Elementary Biology T J Evans C I Mudge C H Hentschel A J Crowe *Anatomy* W E Le Gros Clark H A Harris F P Stibbe *Physiology* H Hartridge A St. G J McC Huggett *Midwifery* A W Bourne

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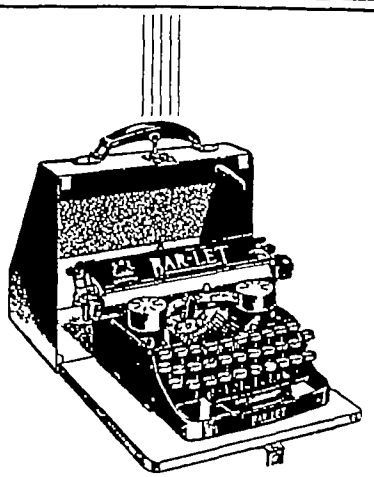

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Fellowship

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Membership

A diploma of Membership was granted to P N Cutner

A portrait of the late Sir Robert Jones presented by Sir Arthur Probyn Jones and Mrs Frederick Watson, was accepted with the thanks of the Council

ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW

At the monthly meeting of the Royal Faculty of Physicians and Surgeons of Glasgow held on June 5th, the following were admitted Fellows of Faculty C Hurwitz, A H Imrie, R W H Jarvie J L Rennie

Medico-Legal

SPARING THE MEDICAL WITNESS

In the case of *Mankum* v *Ace of Spades Petroleum Company* tried by Mr Justice Swift under the New Procedure Rules, the plaintiff M claimed damages for wrongful assault by the servants of the company He was one of a party which visited a restaurant kept by the company on the Kingston by-pass A member of the party became troublesome and involved himself in an undignified quarrel with the waiters, with the result that the party was asked to leave The other members left, but the excited membo refused to go and M stayed behind to persuade him to leave peaceably The staff, in accordance with their legal right, began to eject these two men Owing to the resistance they encountered from the troublesome member, and also owing to the provocation they had received, they were by this time very angry, and not content with ejecting the two, some of them held M and others struck him repeatedly in the face and on the head, inflicting severe injuries Both his eyes were blackened and he had several cuts on the face, he had a compound comminuted fracture of the nasal bone, which has left a permanent deformity, with the blocking of one nostril he had five teeth broken in the alveolus and a fracture of the maxilla and palate, two other teeth which became septic as a result of the injury had to be removed He had previously had perfect teeth The company owning the restaurant attempted to prove that its servants had used only a proper and necessary amount of force, and that M had received his injuries by falling face downwards as a result of being tripped up by some unknown guest who joined in the fracas, either on to a concrete floor or else on to an ornamental wooden tub bound with metal The extent and nature of the injuries were not disputed M called the doctor and dentist who had attended him, and the company called the consulting surgeon to whom M's general practitioner had taken him The only difference in this expert evidence concerned the possible cause of the injuries The dentist's first impression was that his patient had been in an explosion The general practitioner said that in his opinion these were not the sort of injuries received by a man pitching headlong on his face on a concrete pavement, because there was evidence of blows from a number of directions Nor did he think it possible that the injuries could have been inflicted by one man unless the aggressor had walked round the victim and delivered the blows from at least four different angles He thought there was evidence of blows both from a fist and also from some such instrument as a bottle or knuckle duster, producing the punctured wounds The surgeon was alleged to have said at the time to the general practitioner that the man must have been the victim of a brutal assault In the witness box, however, he could not remember whether he had made this remark or not, but in reply to the judge's question as to what he had thought, even if he could not remember what he had said, he admitted that a very great deal of violence must have been used, but at the same time he thought a fall on a concrete surface was a likely cause In replying again to the judge he agreed that a fall would not account for bruises on the back of the head, but he could find in his notes no reference to such bruises He had seen the patient a fortnight after the event

Before the medical evidence was heard Mr Justice Swift inquired of counsel why it had not been agreed in this case, and at the conclusion of the surgeon's evidence he repeated his question, remarking that it seemed to him most undesirable that medical men should be kept from their duties for long hours when there was, so far as he could see absolutely no conflict of evidence in any material particular The only point on which the doctors differed was the method by which the agreed injuries had been inflicted, and, with all respect to the medical men he considered that he was just as competent as any doctor to form an opinion as to whether the injuries described to him had been the result of a fall or of an assault In this case he certainly did not accept the suggestion that what he described as the "very dreadful facial injuries" had been caused by a fall, and he awarded M £413 19s 6d damages and costs against the company

One of the chief aims of the New Procedure is to reduce the amount of evidence given in court by witnesses The judge has wide powers to order that any particular facts may be proved by affidavit instead of by the calling of witnesses, and he can refer any question that involves expert knowledge to a special referee for inquiry and report He can also order that no more than a specified number of expert witnesses shall be called This was obviously a case in which the medical evidence could have been agreed and proved by affidavit, the report of one medical man being countersigned by the others and the question of the causation of the injury being left to the other witnesses In this way the time of three busy practitioners would have been saved The learned judge did not see fit to mark his disapproval by making any special order as to costs The company, in accordance with ordinary practice, has to pay the costs of the plaintiff M, but if the judge had considered that M had called unnecessary medical evidence, he could have ordered M to pay the costs of this evidence There is a special provision in the New Procedure that when an injury is alleged to have been caused by the negligence of a party, the judge may refer to a special referee any question concerning the nature, extent, and permanence of that injury The expert's report is communicated to both parties who may accept it in whole or in part This rule will undoubtedly save much trouble and expense in the road accident cases for which it was framed As, however, the injuries in the present case were not caused by negligence but by wilful assault, presumably the judge could not have exercised the power to refer them to a special referee under this sub rule There does not seem to be any point in differentiating between negligence and wilfulness in the causation of injury, and when the Rules Committee considers the amendment of this experimental procedure they may pay attention to this matter along with many others

Obituary

SIR WALTER FLETCHER K B E C B M D LI D D Sc F R C P F R S

Secretary of the Medical Research Council

Sir Walter Fletcher s death on June 7th after an operation is a great loss to the country and to medical science The establishment of a Medical Research Fund under the first National Health Insurance Act and the constitution of the Medical Research Committee set up in 1913 to administer it were largely due to the vision and driving force of Sir Robert Morant The choice of Fletcher as chief executive officer and guiding spirit of the new committee (reconstituted in 1920 as the Medical Research Council) was singularly happy and holding the same high ideals Morant and Fletcher worked in close alliance to put the scheme on right foundations The eager forward looking minds of these two men were attuned they were passionate in their devotion to the public weal and the debt of medical research to them is incalculable

Walter Morley Fletcher sixth son of Alfred Evans Fletcher was born in Liverpool on July 21st 1873 He went up to Trinity College Cambridge with a scholarship and graduated B A with first class honours in the Natural Sciences Tripos of 1894 As a university athlete he followed in the footsteps of his elder brother Dr Herbert Morley Fletcher Continuing his physiological work at Cambridge he was elected Coutts Trotter student in 1896 and won the Walsingham medal and was elected a Fellow in the following year He then entered St Bartholomew s Hospital with an open scholarship After taking his M B in 1900 he returned to Cambridge as Fellow and lecturer at Trinity and for two years was senior demonstrator in the University physiological laboratory From 1904 to 1914 he was tutor at Trinity He proceeded M D in 1908 and obtained the Sc D degree in 1914 just before coming to London as Secretary of the Medical Research Committee which had recently been set up under the chairmanship of Lord Moulton He was elected F R S in 1915 largely in recognition of researches on the biochemistry of muscular contraction a subject to which he devoted his Croonian Lecture that year

Immediately after the outbreak of war Fletcher put the resources of the new research organization at the disposal of the Admiralty and the War Office and with characteristic zeal threw himself into the many and diverse medical problems that arose He was a member of the Army Pathological Advisory Committee and of the R A F Medical Advisory Committee and after the armistice of the Pensions Disability Committee He also became medical assessor to the University Grants Committee and served on the Royal Commission on Oxford and Cambridge Universities (1919–22) In 1928 he visited India as chairman of the Committee on the Organization of Medical Research under the Government of India In the course of his ever widening administrative and advisory duties as Secretary of the Medical Research Council Fletcher s influence made itself felt in laboratories and research institutes wherever investigations were projected or in progress that might advance medical knowledge or promote the national health To everything that he took in hand he applied the whole force of a first rate intellectual equipment and the unquenchable ardour of a reformer If ever a man could be described as irreplaceable that man was Walter Fletcher

Honours accumulated in the course of years the Universities of Edinburgh Glasgow Birmingham and Pennsylvania made him an honorary LL D and the Universities of Oxford and Leeds an honorary D Sc In recognition of his services during the war he was created K B.E in 1918 and for his work in the organization of medical research in India he received the C B in 1929 The Royal College of Physicians of London elected him a Fellow in 1918 under By law XXXVIII (*b*) and he was an Honorary Freeman of the Society of Apothecaries

Walter Fletcher belonged to that rare class of men who combine wide culture with singleness of purpose and scientific vision with great organizing ability An idealist he pursued realities He was quick as he saw the drift of new work to look for its bearing upon practical problems Generous impulsive and critical by temperament he fought many battles for causes and for friends but none for his own advantage Very formidable as an opponent on questions of public policy he was a charming and witty companion in social life and all who had the privilege of his friendship feel that a unique personality has passed from among them

At the funeral service in Trinity College Chapel on June 10th the Council of the British Medical Association was represented by Mr H S Souttar Deputy Chairman of the Representative Body and at the memorial service in St. Martin in the Fields on June 12th by Mr Souttar and the Editor of the *Journal*

Sir HENRY DALE writes

Many will have pondered during the past few days on all that medical research in this country and far indeed beyond it has gained from the chance which nineteen years ago brought the man and the opportunity together Walter Fletcher had then already left a permanent impress on physiology in particular not only by the earlier research on record in his own name but even more by his inspiring term of office as a tutor of Trinity At the end of that period he might still in the full vigour of early middle life have returned to personal research at the

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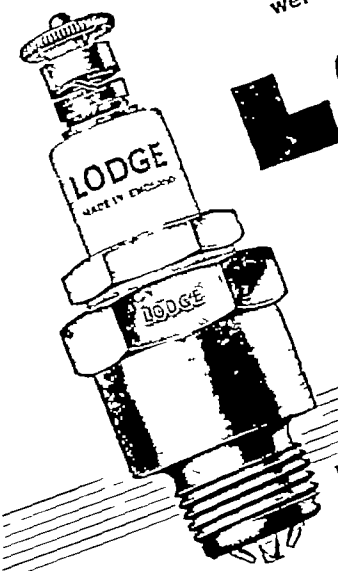

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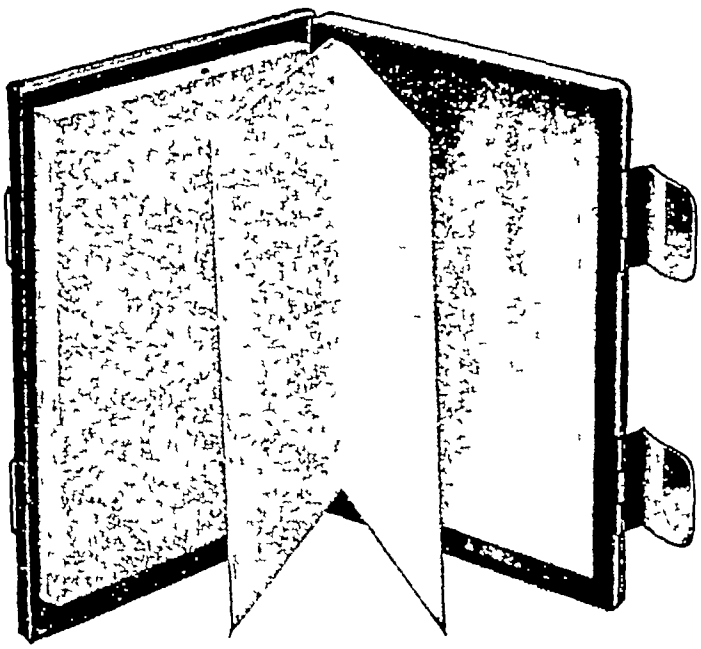

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laboratory bench Had he done so there can be no doubt that he would have produced further work of great distinction in the field of his choice , for he certainly had most of the qualities of the great investigator—a vigorous and logical mind, a quick imagination, prompt to see new possibilities of causal relation, an exacting standard of precision in action and thought, and a tireless curiosity But it cannot be doubted that he made a greater and more permanent gift to science, and to medical science in particular, by devoting the remainder of his life to providing opportunity for research to be carried out by others To this task he brought a first-hand knowledge of the meaning and needs of research, in rare alliance with a personality of remarkable charm and distinction, and with a natural gift for the handling of men and affairs Without Fletcher as its secretary the Medical Research Fund would, no doubt, have been faithfully administered, to provide helpful subventions for the researches of many, and full-time opportunity for a chosen few No committee, however, with a merely administrative secretary, could have made it the transforming influence in medical research which it became It may be doubted whether, under such conditions, it would have moved from its original relation to the national insurance scheme or have grown beyond its original dimensions

Having accepted the opportunity, Fletcher became far more than the executive officer, administering the Fund in accordance with the Committee s and later the Council's decisions From the first his administration was carried out on extraordinarily personal lines He became the friend and counsellor of every worker whose researches the Fund could help and, as time went on, of many others who needed no pecuniary aid His eager mind was always seeking new directions, in which material difficulties could be removed from some already promising line of investigation, or in which some new quest could be stimulated by an offer of support Men came from centres of research all over the country, not merely to enlist his interest with a view to financial support, but to submit new ideas to his keen and critical judgement, to take his advice on matters of planning and administration, or to seek his help and sympathy in personal difficulties An analysis of the calendar of appointments in his office would surely exhibit an amazing variety of obligations cheerfully accepted The fame of his ability and his wisdom went round the world It was natural that the Indian Government should invite him to preside over its Commission of Inquiry on Medical Research His name was as familiar to those concerned with the organization of support to medical research in the United States of America as in the British Oversea Dominions At home his influence spread far beyond the limits of the strictly medical field, and was effective at numerous points where Government action made contact with the applied biological sciences

Fletcher had a large circle of devoted friends, and the range of his personal contacts was wide and influential Probably no man s advice was so widely sought as to the best method of applying funds which had been left in trust or which it was intended to give, for the support of research I do not think that there was any case in which he used such opportunity to bring additional funds under the direct control of the Council and of his own administration it was other institutions rather—the Royal Society the universities, and hospitals—which, on such occasions, received the powerful aid of his advocacy Such funds as came to the Council from outside benefactors came unsought, attracted by the reputation for enlightened administration which Fletcher's work had done so much to establish For the position and the rights of the Council, on the other hand he could be forceful and insistent to a length which some mistook for arrogance, till they came to know the generous heart of the man and to realize that he was fighting for what to him was a sacred cause, and not for a moment for his personal position or prestige

The cause was that of research and of the genuine research workers How often have I heard him with obvious sincerity, depreciate his own activities, in comparison with those of the men and women who were engaged in the work of directly adding to knowledge With his position of growing influence and distinction, with all the calls on his attention of large and important schemes, he always had time to spare for the humblest genuine research worker and kindly encouragement to give He was at his best and happiest in friendly interchange with bright and eager young minds , and to any with a story to tell of new observations made, or of new ideas yet to be brought to the test of experiments, he was always ready to give the true encouragement of a really critical interest No perfunctory compliments from Fletcher , you had to make clear to his quick impatience exactly what you were doing and why you were doing just that and why the suggestions which darted from his alert intelligence were not appropriate And then came the reward of his boyish pleasure, and his insistence on the importance of the work, and his eagerness to help its progress To every worker in medical research he was a friend and a champion

SIR FRANCIS FREMANTLE writes

Sir Walter Fletcher s varied qualities and activities have been well described in the press , and with it the greatness of conception and of opportunity which enabled him to make of the Medical Research Council " one of the most distinguished and useful bodies in the Empire " But his achievement is of great value in even wider fields When one penny out of the weekly contributions was set apart for research work in the Insurance Act of 1911 there was a serious danger that it would be used for petty laboratory work on narrow and established lines under official regulation and control Thanks to Lord Moulton, Lord Rhondda, and others, this danger was averted, and Sir Walter Fletcher made good Curative and preventive work, private practice, institutional service and the public health, each had their new and progressive contributions to make and requirements to ask of medical research All had to be included in the scheme The resources and funds of public authorities, not merely of the new insurance committees, were required no less than those of charity and private enterprise Above all, the individual freedom of the worker in body, mind, and soul was as essential as the co operation and guidance along useful lines which enabled them to conceive a purpose in their work as an integral part of the whole campaign of discovery The Medical Research Council was thus evolved under the cloistered protection of the Privy Council, to serve the Government in all its departments , and not under any one department, where it might be influenced by political necessity or parliamentary pressure and have its reports edited or curtailed A synthesis has thus been effected between the needs of the public and of the individual , between individual freedom and communal rights and resources (the essences of conservative and socialist philosophies) , between prevention and cure , between old and established lines of thought and work and the new ideas, machinery, and opportunities now opening to a new world May it be as our profession should always be, an example for the reconstruction of the national machinery and government, and an enduring monument to one of the most versatile and ablest of our contemporaries

[The photograph reproduced is by Elliott and Fry Ltd]

J A SHAW MACKENZIE M D

Dr John Alexander Shaw Mackenzie died suddenly on June 1st at the age of 75 A correspondent J T C sends the following appreciation

Few have laboured more consistently to ascertain and to use for the benefit of mankind the defensive factors against cancer normally existing in the blood and tissues His whole mind was absorbed in the subject and he sacrificed his professional life to this cause He built up his work not on theories but on laboratory experiment working at King's College the Imperial Cancer Research Fund and both the Brown Institution and the Ross Institute

Dr Shaw Mackenzie began work on the subject of cancer in about 1900 and was much interested by the olive oil soap treatment introduced by Dr J H Webb of Melbourne in 1905 By 1907 he published a work on the peptone splitting ferment erepsin and in 1909 began to give his attention to the fat splitting ferment lipase From his experiments on ferments or enzymes he built up the hypothesis that the cells in cancer proliferate without control because the normal tissue or intracellular enzymes are deficient either in quantity or quality He found that a definite quantity of normal serum had an accelerating effect on certain enzymes whereas the same quantity of cancer serum had an inhibiting effect He used these facts for two of his tests His lipolytic test showed the amount of fatty acids liberated from a neutral olive oil emulsion by lipase these fatty acids being increased by normal serum but diminished by that from cancer patients His tryptic test was similar normal serum diminishes the power of trypsin to digest protein whereas the serum from a cancer case inhibits it more He claimed that these two tests together gave 95 5 per cent correct results His third test consisted in a turbidity produced in cancer serum by a saponified mixed extract of cancer tissues and this he claimed gave a 95 3 per cent correct result in gastric and duodenal cases His treatment which required careful administration was made up of the injection of olive oil soap into the tissues or veins and the administration by the mouth of dried bile and of certain enzymes especially secretin in order to stimulate intracellular enzyme formation and correct the deficiency His reasoning did not exclude the possibility of organisms being the cause of cancer he spoke of cancer houses but he doubted if organisms were the cause or an effect of the disease He claimed that his treatment diminished the risk of recurrence after operation lessened pain stopped fetor prolonged life and in some cases gave a complete cure Many of his cases showed remarkable results and he thought that thousands might have their lives prolonged by his methods

He had held the appointments of medical registrar and pathologist to the Victoria Hospital for Children assistant physician and pathologist to the Chelsea Hospital for Women and physician to the Women and Children's Heart Hospital Soho Square but the tragedy of his life was that in 1900 after being elected an out patient physician to the Samaritan Hospital his services were suddenly dispensed with This was explained and Shaw Mackenzie fully vindicated by Dr A W Oxford in his book on the history of the Samaritan Hospital of which he was chairman He wrote thirty years after the event Although not stated in the minutes this was on account of supposed unorthodox views on the subject of cancer which seem now to meet with some support Shaw Mackenzie suffered from not having his work thoroughly investigated according to his own ideas but in spite of this he pursued steadily the experimental path that he believed would best achieve his aim

GERVASE DIS EY ALEXANDER (eleventh Lord COBHAM, who died on June 10th in St Thomas's Hospital after an operation was born on May 6th 1880 eldest son of the late Reginald Gervase Alexander M D of Halifax From Gonville and Caius College Cambridge where he graduated B A in 1903 he went to St Thomas's Hospital qualifying M R C S L R C P in 1906 and taking the B Ch degree in 1908 Before the war he had been clinical assistant at the Samaritan Hospital for Women the Evelina Hospital the Victoria Hospital for Children Chelsea and the Hospital for Sick Children Great Ormond Street His father spent much trouble and money in establishing a claim to co-heirship to three peerages which had long been regarded as extinct but died early in 1916 before the Crown had taken action to call them out of abevance In September of that year Gervase Alexander was summoned to the House of Lords as Baron Cobham but having indifferent health and a retiring disposition he took no part in parliamentary business or public life and quitted the practice of medicine for which he had little real inclination

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The following well known foreign medical men have recently died Professor PETER FOKITSCH director of the Second Surgical Clinic of Tashkent University aged 69 Dr ANTON CHRISTOMANOS professor of experimental pathology at Athens University aged 63 Dr JUVARA an eminent surgeon of Bucarest and Professor LAGOVSKI a Moscow oto-rhino-laryngologist

The Services

LEISHMAN PRIZE

Major H J Bensted M C Royal Army Medical Corps has been awarded the Leishman Prize (Officers) for the year 1932 consisting of a silver medal and a sum of £30 for his work in the interests of military pathology

The Leishman Prize (Officers) is awarded annually for the best piece of work in any branch of medicine surgery or allied sciences or in connexion with the general duties of the Royal Army Medical Corps by an officer of the R A M C or Army Dental Corps or by an officer removed from either of these corps but still on the active list

NORTH PERSIAN FORCES MEMORIAL MEDAL

Dr H J O D Burke-Gaffney Colonial Medical Service has been awarded the North Persian Forces Memorial Medal for the year 1932 for his paper on the classification of the colon aerogenes group of bacteria in relation to their habitat and its application to the sanitary examination of water supplies in the Tropics and in temperate climates published in the *Journal of Hygiene* January 1932

The North Persian Forces Memorial Medal is awarded annually for the best paper on tropical medicine or hygiene published in any journal during the preceding twelve months by a medical officer of under twelve years service of the Royal Navy Royal Army Medical Corps Royal Air Force Indian Medical Service or of the Colonial Medical Service provided the Memorial Committee considers that any of the papers published has attained a standard of merit justifying an award

R A M C COMMISSIONS

An announcement in our advertising pages this week states that twenty five permanent commissions in the Royal Army Medical Corps will be offered on July 27th and application should reach the War Office not later than July 21st Candidates will be elected for commissions without competitive examination and will be required to present themselves in London for interview and medical examination They must be under 28 years of age on August 1st 1933 and registered under the Medical Acts All particulars may be obtained by application in writing or personally to the Assistant Director General Army Medical Services the War Office Whitehall S W 1

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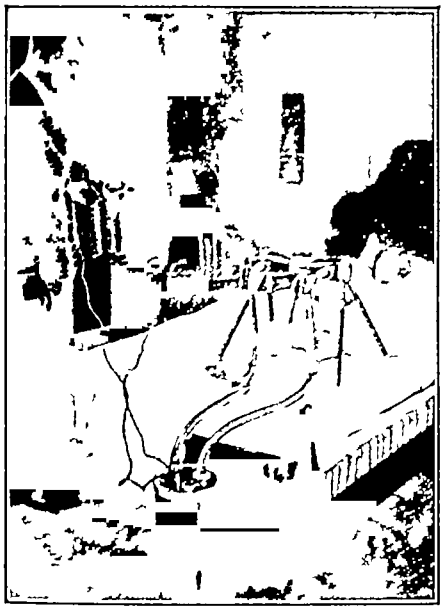

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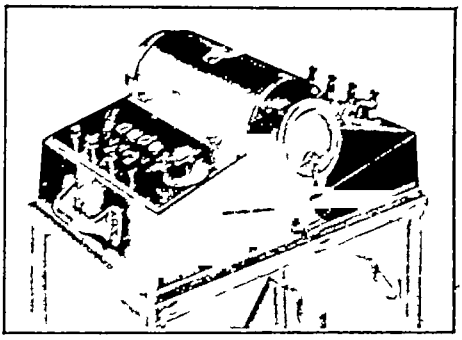

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Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons reassembled on June 13th Foreign affairs were debated, and Mr Chamberlain made a brief statement on the British debt to the United States

Slum Clearance and Increased Malnutrition

In the House of Lords after Viscount Gage had moved the second reading of the Rent Restrictions Bill, Lord MARLEY criticized the Government for its 'five year plan for slums' which in his opinion was preposterous nonsense The problem was getting worse, and despite all the promises that had been made and all the ideals which we had in mind, there was no sign that the housing shortage would be met in five years' time If anything it would be worse, and the sufferings of those unfortunate people whose rents would be raised would be largely increased by the Government's action The fact that the position was getting worse was illustrated by the rise in out-relief From August 1931, to April 1933 according to a recent answer given in the House of Commons, the number of persons drawing out relief had gone up from 900 000 to 1 300 000 How could those people pay this rent except at the cost of their food? The medical officer for Deptford had pointed that out He had said that families in receipt of public assistance could not supply themselves with the minimum diet laid down by the Ministry of Health after paying their rent It was a fact and nobody would wish this to continue that malnutrition was increasing among the children of the poorest families The chief medical officer of the Board of Education in the last report he issued, showed that the starvation of children in the poorest families had increased every year for the last five years It was 9 per 1 000 in 1927 9 5 in 1929 and 11 2 in 1931 A recent report of the medical officer of health for Stockton had proved the connexion between high rents and starvation The Stockton Council established a slum clearance scheme built some very fine new houses, and moved a large number of families out of the slums into them The death rate of those families moved out of the slums went up 50 per cent The council was horrified It examined the question very carefully, and the medical officer of health reported that the only explanation was that, whereas the rent in the slums had been 4s a week the rent in the new house was 8s 10d weekly leaving 4s 10d less to be spent on food The BISHOP OF WINCHESTER said that if that had been a debate on the slums he would have endorsed nearly everything Lord Marley had said From time to time attacks were made against the Ecclesiastical Commissioners for owning slum property He had always asked for specific cases, and when they were given he had inquired into them personally So far he had not found any cases of slum property under the complete control of the Commissioners It was true that there was slum property from which they drew ground rents which had been let on very long leases They had no control over that property whatever If they refused to draw the rents it would simply mean that the slum landlord would profit He could assure the House that as soon as property which had been slum property came under the control of the Commissioners they used every effort in their power to turn it into decent property, run on model lines

The Bill was read a second time

Experiments on Animals—Replying to Mr Groves Sir JOHN GILMOUR said there was no information of the number of experiments on animals attended by inspectors in the year 1899, but the figures for the years 1922 1927, and 1931 were 401, 33, and 125 These figures provided no measure of the amount of inspection since it might be a matter of accident whether a number of brief experiments such as inoculations were performed during an inspector's visit Many procedures, such as feeding experiments or experiments involving inoculations or the administration of drugs extended over several weeks and an inspector in the course of his visit saw thousands of animals which were undergoing such experiments There were two inspectors appointed to visit registered places for the purpose of securing compliance with the provisions of the Cruelty to Animals Act

Blind Pensions in Scotland—On June 13th Mr HORE BELISHA informed Mr Burnett that he was unable to state the number of awards and withdrawals of blind pensions made in Scotland for 1929 1930, 1931 and 1932 The numbers of blind pensions in payment in Scotland at December 31st in each of the years 1929 to 1932 and the net increase or decrease over the preceding year were as follows 1929 3 286 (+193), 1930 3,231 (−55), 1931, 3 234 (+3), and 1932 3,165 (−69)

Use of Hyoscine in Asylums—Replying to Mr Groves Sir HILTON YOUNG stated that during last year a commissioner of the Board of Control made a special investigation of the use of sedatives in institutions for the insane in England and Wales, but the results were not yet available For the year 1930 the average number of patients resident in institutions for the insane was 122 614, and the total quantity of hyoscine used was 851 grains The use of croton oil had not been forbidden, but the amount administered during 1930 was negligible

Medical News

The Lord Mayor of London will distribute the prizes at St Thomas's Hospital Medical School in the Governors' Hall, on Tuesday, June 27th, at 3 p m The annual dinner has been fixed for Friday, September 29th at the Dorchester Hotel It will be preceded by a five day post-graduate course at the hospital, old students wishing to attend this course should notify the secretary to the Medical School without delay

The annual general meeting of the Medico Legal Society will be held at 11, Chandos Street, W, on Thursday, June 22nd, at 8 p m, at the conclusion of which an ordinary meeting of the society will take place Mr Albert Crew will read a paper entitled "Some Functions and Duties of a Medical Practitioner in Criminal Courts", a discussion will follow

The annual dinner of the Cambridge Graduates' Medical Club will be held in Corpus Christi College on Friday, June 23rd, at 7 p m with the president, Professor W Langdon Brown, in the chair The annual meeting will precede the dinner

A reception will be held at the National Physical Laboratory, Teddington, on Tuesday, June 27th from 3 to 6 p m, when visitors will be received by the chairman of the General Board, Sir F Gowland Hopkins, President of the Royal Society

The third of four advanced lectures for post graduates, arranged by the Fellowship of Medicine, will be given at 11, Chandos Street, W, on June 21st, at 5 p m, by Mr F J McCann, on the repair of injuries to the perineum and vaginal walls On June 26th, at 8 30 p m, Dr Roland de Hellebrantbe of New Jersey, U S A, will lecture on modern methods of local and spinal anaesthesia, illustrated by lantern and cinema, and on July 13th, at 4 p m, Dr Kerley will give a demonstration of x ray films, specially suitable for M R C P candidates There will be a week-end course at the General Hospital, Southend-on-Sea, on July 8th and 9th On June 23rd, at 5 p m, there will be an ante-natal demonstration at the Royal Free Hospital On June 27th, at 8 30 p m, at the West End Hospital for Nervous Diseases (In patient Department), Mr Lindsay Rea will give a demonstration on the fundus oculi

The fifth international post graduate course of the Tomarkin Foundation of Locarno will be held at St Moritz from August 13th to 27th, when lectures will be given on allergic diseases, diseases of the blood, climatology, rheumatism and arthritis, and diseases of metabolism The fee is 60 Swiss francs Further information can be obtained from the secretary, Castella Postale 128, Locarno, Switzerland

Harrogate Corporation has just issued an attractively illustrated pamphlet describing the famous Yorkshire spa and its environment under the title "Harrogate for Health and Holiday" Copies may be obtained on application to Mr F J C Broome, general manager of the wells and baths

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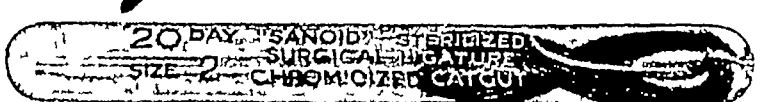

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The annual general meeting of the Research Defence Society will be held at the London School of Tropical Medicine Keppel Street W C on Thursday June 22nd at 3 p m The chair will be taken by the president Lord Lamington and he will be supported by Sir Arthur Stanley chairman of committee The seventh Stephen Paget Memorial Lecture will be delivered by Sir Leonard Rogers F R S on The Saving in Life and Suffering due to Medical and Veterinary Research with Special Reference to the Tropics Tea will be served after the lecture and visitors are invited

A congress of hydrology will be held at Toulouse in October under the presidency of Professors Sabatier and Abelous The subjects to be discussed are the thermo-mineral waters of the French Pyrenees and their geological grouping the rarer gases of mineral waters climatic cures and pulmonary tuberculosis indication for providing treatment for children in spas mountain resorts and at the seaside primary non suppurative infection of the nervous system in relation to hydro mineral therapy utilization of spas by the French Army and the legal control and survey of mineral waters Sir James Purves Stewart is contributing a report on infections of the nervous system After the congress four days will be devoted to motor car tours in Languedoc Pyrenees and the Cote D Argent Further information may be obtained from Dr François Francon Aix les Bains

The British Red Cross Society s Clinic for Rheumatism and Allied Diseases at 28 Nightingale Place Woolwich has been open since 1930 and in that time 9 376 treatments have been given The average yearly number of patients was 233 The following treatments are to be obtained massage and remedial exercises radiant heat diathermy (including intrapelvic) galvanism faradism sinusoidal Schnee bath and ultra violet rays Pyretic couch treatment when recommended is provided at the Seamen s Hospital Greenwich All patients are seen by a visiting physician (who attends once a fortnight) on the presentation of a letter or card from a general practitioner The Seamen s Hospital has undertaken pathological and bacteriological examinations and Dr Eileen Boyd carried out some research work on the analysis of sweat Radiological examinations have been made either at the Miller General Hospital or the Seamen s Hospital

The Congress of Applied Psychopathology and Psychology which had been arranged to take place in Vienna in the beginning of June has been postponed till next year

The twenty first annual report of the *Journal of the American Medical Association* (May 13th) on the cities of the United States with a population of more than 100 000 of which there were ninety three in 1932 shows that the total typhoid mortality is the lowest ever recorded (1 24 per 100 000 of population) fourteen cities registered entire freedom from typhoid death an unprecedented record

A notice appears in our advertisement columns this week of a vacancy for a medical officer at the Methodist Mission s Leprosy Hospital Dichpali India This institution possesses special facilities for research and is closely associated with the British Empire Leprosy Relief Association Information about the various possibilities of this appointment can be obtained from Sir Leonard Rogers

The King has given authority to Dr R S Miller late Egyptian Government Medical Service to wear the insignia of Commander of the Order of the Nile conferred upon him by H M the King of Egypt on the occasion of his retirement from the service of the Egyptian Government

A David Anderson Berry gold medal together with a sum of money amounting to about £100 will be awarded in July 1935 by the Royal Society of Edinburgh to the person who in the opinion of the council has recently produced the best work on the nature of *x* rays in their therapeutical effect on human diseases A further notice will be published early in 1935 A similar award will be made every three years

Letters. Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal B.M.A. House Tavistock Square W C.1**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated Correspondents who wish notice to be taken of their communications should mark attention with their names not necessarily for publication

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager British Medical Association House Tavistock Square W C 1 on receipt of proofs Authors of essays should indicate in MSS if reprints are required as proofs are not sent abroad

All communications with reference to ADVERTISEMENTS as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager

The **TELEPHONE NUMBER** of the British Medical Association and the *British Medical Journal* is EUSTON 2111 (internal exchange four lines)

The **TELEGRAPHIC ADDRESSES** are
EDITOR OF THE *BRITISH MEDICAL JOURNAL* *Aitiology, Westcent London*
FINANCIAL SECRETARY AND BUSINESS MANAGER (Advertisements etc) *Articulate Westcent London*
MEDICAL SECRETARY *Mediocera Westcent London*

The address of the Irish Office of the British Medical Association is *18 Fitzwilliam Street Dublin (telegrams Bacillus Dublin telephone 62307 Dublin)* and of the Scottish Office 7 Drumsheugh Gardens Edinburgh (telegrams *Associate Edinburgh* telephone 24361 Edinburgh)

QUERIES AND ANSWERS

Myositis Ossificans Progressiva

SIR JAMES BARR writes in reply to the inquiry by Help (June 10th p 1032) These cases follow an injury to the muscles succeeded by too much rest and an inordinate supply of lime in the food and drink Milk and hard water vegetables containing much calcium should be cut out of the diet Lemon squash and barley water raisin tea or glucose with alutaris water nitrogenous food butter and fat bacon cod liver oil should be used decalcifying agents such as acid fruits I have found well-diluted phosphoric acid in small doses useful Moderate doses of iodine and thyroid increase calcium metabolism Gentle massage and infra red rays are beneficial About three years ago I saw a lady who had a large solid lump about the size of my fist involving the heads of the eighth ninth and tenth right ribs She had been seen by some of the best surgeons in London and in Italy the diagnosis was osteosarcoma About one half of the surgeons were for removal and the other fault to leave it alone I said that the diagnosis and proposed lines of treatment by both sets of surgeons were wrong It was not a sarcoma but a simple case of myositis ossificans or a deposit of calcium salts in injured muscle and fibrous tissue brought about by injury to the spine and ribs when horse riding and afterwards using hard London and French waters Any attempt at removal would involve a fearful mess including removal of the heads of about four ribs and final cure could only be effected by a further deposit of lime salts On the other hand it must not be left alone but a cure attempted by the removal of the lime salts on the lines sketched out above Any of the cases which we see described in the *B M J* require a little common sense—the rarest of all our senses I advised her husband to take her to see Sir Robert Jones but he need not mention my name until he got Jones s opinion He replied Supposing Sir Robert says Operate will you change your opinion I replied Not in the slightest particular but I have too high an opinion of Jones to think that he would be such a fool Jones did not alter my treatment and I believe the patient is progressing favourably

DR WILLIAM F MAIR (St. Andrews) writes (1) If your correspondent Help could have access to the *Edinburgh Medical Journal* of January and February 1932 he would find the subject very fully dealt with in a monograph contributed from the James Mackenzie Institute for Clinical Research St Andrews and the history of two cases similar to his own It is impossible to give the information he requires in a brief note

Pruritus in Tabes

J E writes in reply to the query by Bewildered (May 20th p 903) I would refer your correspondent to the article by A Winkelried Williams in the *British Medical Journal* of January 24th 1925— Cure of Pruritus Senilis by the Use of a Flesh Brush I had occasion to recom-

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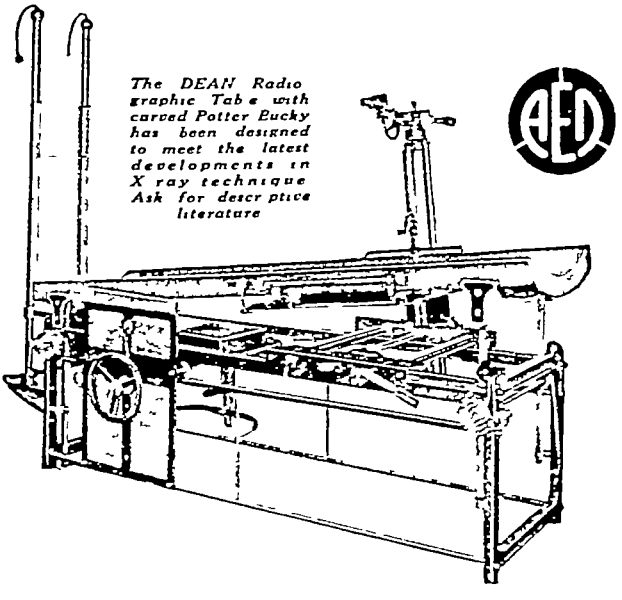

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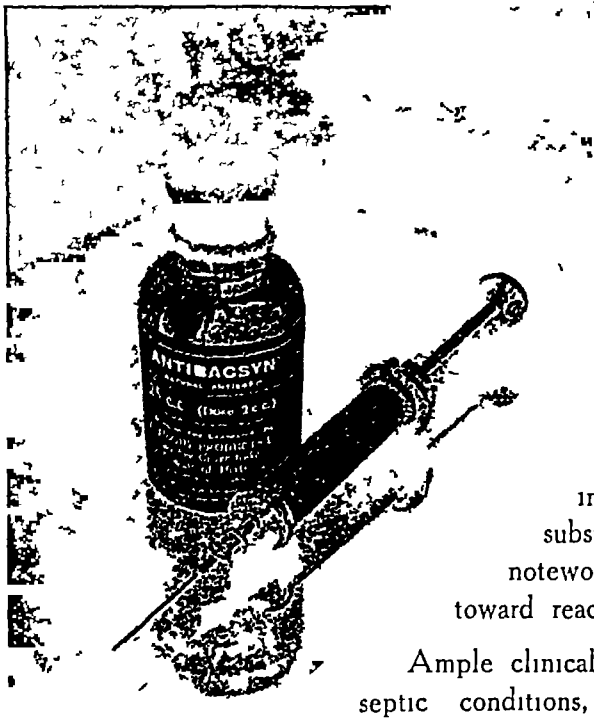

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mend the treatment once to an old man suffering from fibroid phthisis whose life was rendered miserable by incessant generalized pruritus without apparent cause The brush gave immediate complete relief

Income Tax

House Provided by Employer

'DOUBTFUL" has been employed as a whole time medical officer to an institution since January 1st 1916 and has been required by the institution to live in a house provided by them rent and rates free' Subsequent to March 30th 1933 a better house has been provided—as a result of some pressure by 'Doubtful'—but the requirement to reside in the house still applies Is "Doubtful" liable to account for tax on the annual value of the house?

*** Prima facie the case is covered by the old rule laid down in Tennant *v* Smith and Doubtful' need not regard the annual value (nor the amount of the rates paid on the house) as income liable to tax in his hands If in the past he has included the sum in his return and paid tax thereon under Schedule E he can claim repayment for the past six years There is however the possibility that the tax paid has been only that assessed under Schedule A in respect of the residential value of property owned and (technically) occupied' by a charitable body in that case no repayment would be due as the charitable exemption to which the institution may be entitled would not apply to the residence of an official liable to income tax

Cost of Uniform Instruments etc

'SHIP SURGEON asks whether there is a definite sum (?£20 a year) allowed for upkeep of uniform even though a uniform is bought for each year Also can he claim a rebate for expenditure on medical instruments and subscriptions to the B M A, etc

*** We understand that there is a standard uniform allowance applicable to ship surgeons—£20 per annum is probably correct—and that it is allowed each year on the assumption that if excessive for one particular year it is reasonable in the long run (It is presumed that the employing company do not bear any part of the expense) The cost of *replacing* instruments etc, and of membership of medical societies is allowable if the upkeep and membership respectively is required by the employer

LETTERS, NOTES, ETC

Medical Films

Kodak Limited are to be congratulated on the large range of subjects offered in their motion picture library the catalogue of which we have received A new system of indexing by subject and alphabetical groups makes the choice of film easy and no one will quarrel with the wealth of material available which by no means exhausts the possibilities of important future developments Films are offered for both sale and hire, and charges have been reduced The simplified technique of 'cine Kodak" photography now makes it possible for medical men to take their own pictures while the introduction of the super sensitive panchromatic film is an advance of great importance Details may be obtained from the medical department Kodak Limited, Kingsway W C 2

We have also received from the Central Information Bureau for Educational Films, 109 Kingsway W C 2 a catalogue of instructional films which include medical subjects Many of these deal with hygiene from the popular angle but there are also pictures on physiology, psychology, and anthropology

Dr Mary E Walker

Mrs C W M POYNTER (1306 South 35th Avenue Omaha Nebraska U S A) writes At the suggestion of the editor of *Notes and Queries* I am writing to the editors of a few publications in England asking for help in acquiring some biographical material In 1866, when England had but one female physician and was not very anxious to have more Dr Mary E Walker of Oswego New York visited England and created much comment in newspapers and journals of various types including your own She went in time to attend the Social Science Congress in Manchester early in October She visited hospitals and clinics made the acquaintance of many people of all classes apparently lectured in the Great St James's Hall was presented at Court and became known far and wide for her peculiar costume her medical degree and her civil war career There must be a number of people in England and Scotland with perhaps family traditions about her and possibly with letters or newspaper cuttings which I might borrow for a short time I should like to get into communication with anyone who might give me information about Dr Walker during her sojourn in England

The Naive and Sardonic Eye

Dr CLAUDE LILLINGSTON writes from Paris In a singularly charming review of Dr Halliday Sutherland's book *The Arches of the Years* in the *Journal* for June 3rd (p 965) your reviewer credits the author with a naive and sardonic eye We have all met the naive eye though not of course, in Scotsmen The sardonic eye is also quite familiar But is not the eye which simultaneously exhibits *naïveté* and sardonic properties a startlingly novel conception a new clinical syndrome a new psychological or nosological entity? On my first reading I was tempted to wonder if your reviewer had not blundered into a contradiction in terms but on mature reflection I ask myself if he had not rather revealed a profound perspicuity, an intuitive insight into character denied to most mortals If so the day may come when the psychologically trained medical student will be taught how to detect X's (your reviewer's name) eye and how to distinguish it from the possessor of an Argyll Robertson pupil etc Meanwhile is it not up to your reviewer to publish a treatise on his discovery with documentary, cinematographic evidence to substantiate it?

Birth at 20 m p h

"C R H writes from India A short time ago, while on an inspection tour, there came to my notice a birth, with medical factors not uncommon but with related circumstances sufficiently unique that I imagine they will bear record The third-class compartment of the Indian train—'females" utilize such not women or ladies—duly caters for the squatting posture commonly adopted for defaecation in India So we find a small closet with two foot stands and a hole in the floor which in the case in question was directly over one of the rails A female full of belly entered such a closet in Naraynpur station the train moved off and at a time when it was judged the train was travelling at some 20 m p h, a yell was heard to emanate from the lavatory This was forcibly entered by other travellers who found the female lying in a mess of blood and minus her abdominal protuberance Labour had been precipitate but there was no sign of the child The woman was removed from the train at the next station Meanwhile the permanent way inspector and his staff had discovered a newborn child on the line without as much as a bruise and this despite the fact that the child must have fallen on to the rail some foot and a half in front of one of the wheels and then bounced on to the metal The cord had been cut and ligatured (!) by the wheel of the carriage Mother and child were reunited in Naraynpur Hospital and both are very fit—so much so that the mother ran away the same night carrying the child in her arms A touch of humour was added to the case by the permanent way inspector, who concluded his report in the approved official manner 'No damage to the permanent way"

Dermatitis after Depilatories

Dr A KENDREW (Ticehurst Sussex) writes I am surprised to read in Dr Alice Carleton's article on 'The Uses and Dangers of Cosmetics" appearing in your issue of June 10th that she considers depilatories "generally harmless' In the past three years I have seen two patients *suffering* from axillary adenitis after using them one of these cases was reported in the *British Medical Journal* during 1930 and shortly afterwards a case was published by a correspondent from another part of England

Dr ALICE CARLETON writes My article in your last number on "The Uses and Dangers of Cosmetics" has been widely commented on in the daily press May I say that this publicity was unexpected and undesired by me?

Honours List Correction

In the Honours List published in our issue of June 10th (p 1020) Dr Patricia R Elliott and Dr Frederic G Rose should have been described as recipients of the M B E

We are asked to correct a misprint in the advertisement of the Victor X Ray Corporation Ltd, published on May 27th (p 6) The address should have read 15–19, Cavendish Place London W 1

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 52, 58 54 55 56 57 and 60 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 58 and 59

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 276

IRON DEFICIENCY IN NEW-BORN INFANTS

Babies born of mothers with anæmic tendencies are often found to be insufficiently equipped with the supply of iron essential to their proper development during the early months of life

When this is the case the mother's milk is also more than likely to be deficient in iron, so that the best procedure is to start the baby straight away on a diet of Almata which contains ingredients that are *naturally* rich in iron

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EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

422 X Ray Study of Gastro-Intestinal Food Allergy

A H ROWE (*Journ Amer Med Assoc* Feb 11th 1933 p 394) who considers that food allergy is the cause of certain disturbances in the muscular tone and peristaltic activity of the gastro-intestinal tract bases his conclusions on *x* ray observations Since mucous membrane oedema and smooth muscle spasm are the main results of allergy gastro-intestinal symptoms might be expected Four patients are here selected for report They had all suffered from marked and prolonged gastric symptoms which had been relieved by the elimination of specific foods and reproduced by the reintroduction of the same foods Fluoroscopic examinations and roentgenograms were made immediately after the ingestion of barium and again three six and twenty four hours afterwards Such studies were first made when the patients had been free from their symptoms for several weeks as a result of their strict adherence to their elimination diets The barium was given in a corn meal gruel About two to three weeks later a second series of observations was made after the patients had taken milk or milk and eggs for one or two days The barium was given in malted milk to which each patient was sensitive Marked disturbances in muscular tone and motility resulting from probable allergic reactions in the gastro-intestinal tissues were observed in each of the four patients Gastric retention was also seen in each case this was marked in three hours and very definite in six hours This retention might the author adds be explained by some disturbance in peristalsis which interfered with the gastric or intestinal gradient Such disturbance could be the result of localized or generalized oedema or smooth muscle spasm arising from allergic reactions to milk and eggs Spastic colons were observed in three cases and were also thought to be caused by an allergic reaction of the smooth muscle Long standing constipation was relieved in two cases by 'elimination' diets only to return when milk and eggs were again taken That the gastric retention and spastic colons were not due to impaired digestion or to nervousness was shown by the fact that routine indigestion treatment had been previously followed without success and all four cases had already been submitted to *x* ray examinations

423 Hypoglycaemia

O SIPPE and J BOSTOCK (*Med Journ of Australia* February 18th 1933 p 207) believe that hypoglycaemia is a relatively common condition—nearly as frequent as hyperglycaemia—and that it deserves more careful consideration than it has yet received They report twenty five original cases and suggest a classification They suggest that in the study of this condition it is very important to perform a glucose tolerance test in preference to a single fasting sugar test This is based on the assumption that the nervous mechanism associated with the performance of the latter test results in a secretion of adrenaline which mobilizes glycogen and raises the sugar figure above its normal height In the presence of typical symptoms of this condition any fall of the blood sugar below 0 09 per cent is to be regarded with suspicion even though it is known that there may be a complete absence of symptoms associated with a much lower percentage The question of idiosyncrasy is thus important Among the causes of hypoglycaemia are mentioned congenital predisposition (including a family history of acidosis cyclical vomiting or migraine) lack of exercise a hot climate and a high consumption of protein The authors believe that the condition is more common in Australia than in some other parts of the world and attribute this higher incidence to the generally large consumption of meat in that country and to the reduction of exercise during the summer Six aetiological factors are enumerated—namely the pancreas (hyperinsulinism) low intake poor assimilation or excessive use of carbohydrates liver and muscular dystrophies endocrine derangement particularly parathyroid disturbance resulting in hypocalcaemia lowering of the renal threshold for sugar often due to hypocalcaemia and certain allergic states As regards classification the authors suggest a division into two main types *true* and *relative* hypoglycaemia The first contains three groups the fulminating the chronic and the symptomless The second comprises two groups the cyclical vomiting of childhood and simple cases in which a relatively normal blood supply is insufficient for the requirements of the individual They urge recognition of the cause and attention to such possible factors as endocrine maladjustment and focal sepsis The administration of glucose is often very effective but in cases of acidosis it is necessary to restrict fats especially butter and to allow eggs in only very small numbers Hypoglycaemia it is concluded with its attendant train of symptoms is to be regarded as a metabolic disturbance due to many causes comparable with pyrexia and at times preferably dealt with directly rather than indirectly There seems to be some natural mechanism promoting spontaneous recovery from an acute attack possibly the stimulation by the low blood sugar content of some nervous or endocrine centre which mobilizes a supply of glycogen

Surgery

424 Henderson Jones Disease

J L NAVA (*Thèse de Paris* 1933 No 95) who records thirteen illustrative cases in patients aged from 20 to 65 ten of whom were men and three women states that the osteo-chondromatosis described by Henderson and Jones of the Mayo Clinic in 1916 is characterized by the presence usually in large number of fibroid or osteo-cartilaginous foreign bodies in a joint cavity or in the bursa of a tendon sheath The affection is commonest in young adults usually of the male sex without any previous infection or intoxication though in about half the cases there is a history of old or recent trauma The presence of the foreign bodies usually causes little interference with the movement of the joint but may give rise to attacks of articular block and finally symptoms of compression of the vessels or nerves In well marked cases *x* ray examination is sufficient to distinguish the disease from all other arthropathies In mild cases radiotherapy alone is needed but when a large number of foreign bodies are present and especially in complicated cases radiotherapy should be preceded by a conservative arthrotomy

425 Acetylcholine in Post traumatic Ankylosis and Arthritis

As a prophylactic against and a curative of the rigidity or ankylosis pain and osteoporosis that are frequent sequels of articular fracture (especially of the knee ankle shoulder and wrist) or of a prolonged immobilization of a limb R FISCHER (*Presse Méd* March 25th 1933 p 475) advocates the administration of acetylcholine A disturbance of the sympathetic system is a predominant factor in the pathogenesis of these symptoms Fischer considers that circulatory troubles are also essential agents Acetylcholine hydrochlorate is a well known vaso-dilator of the small peripheral and possibly of all the arteries it is indicated in conditions of arterial spasticity such as Raynaud's disease etc and has been beneficially used by Dainow and Fischer himself in varicose ulcers These facts led the latter to employ it in cases of post traumatic fractures To exemplify the excellent results following its administration thirteen cases are recorded in five it was used curatively and in eight prophylactically A course of treatment consists in fifteen to twenty injections each containing 0 1 c cm an injection is given every one or two

days, the dose may be increased during the first days of immobilization This treatment should be started early after immobilization, and continued as the condition of the joint demands Little is known concerning the mechanism of the action of acetylcholine It is probable that the traumatized area presents a vaso-constriction of the secondary arteries, and the good results from its injection are due to the vaso-dilating action of the drug This action of acetylcholine is dependent on the calcium-potassium ratio and the salt appears to have a marked and continued effect on calcium metabolism and the alkalinity of the blood Its combined vaso-dilating action and favourable effect on the calcium metabolism cause the good results These are similar to those obtained by sympathectomy The advantages of acetylcholine over the latter are not only its simpler administration, but also its effect on the osteoporosis After sympathectomy this condition becomes more marked, after acetylcholine it is much improved

426 Embolectomy from Popliteal Artery

I BOEREMA (*Nederl Tijdschr v Geneesk*, March 25th, 1933, p 1281), who records an illustrative case, states that diagnosis of embolism in a limb can usually be made by the sudden onset of very severe pain, pallor of the part, and rapid disappearance of sensation and of the pulse Raynaud's disease can be excluded by its slower onset and bilateral localization, and intermittent claudication by its prodromal symptoms Most of the patients are subjects of heart disease (60 per cent according to Petitpierre) Embolism may also occur after gynaecological operations, as is shown by the fact that Stein collected eighty-six cases of the kind The prognosis of embolectomy is very good within the first ten hours of the occurrence of the embolism Boerema's patient was a woman aged 60 the subject of heart disease (myocardial degeneration and flutter), who suddenly developed typical signs of right popliteal embolism Embolectomy was performed under local anaesthesia Apart from slight gangrene of the terminal phalanges of the second and third toes, complete recovery took place

427 "Fracture Serum" in Pseudarthroses

R IMBERT (*Bull et Mém Soc Nat de Chir*, March 18th, 1933, p 406) discusses the treatment of pseudarthroses and delayed union by "fracture serum" Three cases are reported which made astonishing recoveries after the injection of this substance The serum is taken from a patient who has a healthy healing fracture showing good consolidation, or from one with a recent fracture The serum is given in doses of 10 to 15 c cm, and repeated, if necessary, at varying intervals The injections may be local, hypodermic, or intravenous In one case of fractured femur in a man aged 30 the leg was first immobilized in a Thomas splint and later in plaster After removal of the second plaster, nearly five months after the accident, there was no sign of consolidation Since abnormal mobility persisted with complete absence of pain on pressure over the lesion, and absolute loss of function, it was concluded that a pseudarthrosis existed No specific cause could be assigned to this The Bordet-Wassermann reaction of the blood was negative From another patient whose fracture was consolidating well, 20 grams of blood were taken and prepared Ten c cm of the serum was injected near the site of the pseudarthrosis Six weeks later there was less mobility and the radiograph showed a shadow of new calcification round the broken ends of bone A further injection of 10 c cm "fracture serum" was provided by another patient Manifest callus was seen in a radiograph two and a half months after the first injection A third injection produced a thickening of the callus and also increased its density The final result was complete consolidation, and the patient was discharged without any support Two other cases reported were treated by subcutaneous injections of "fracture serum" Discussing the mechanism of this retarded osteogenesis, Imbert suggests that there may be an absence of an element—possibly a glandular hormone—which is necessary to fix the free calcium at the site of the fracture

Therapeutics

428 A Stable Ferrous Chloride Syrup

G H W LUCAS and V E HENDERSON (*Canadian Med Assoc Journ*, March, 1933, p 298) recall the fact that the success of iron therapy depends on the adequate supply of ferrous salts to the upper part of the large intestine, where they are absorbed When ferric salts such as the chloride, are administered in conjunction with food, the iron is precipitated in the stomach by the protein, and is reduced in some small measure to the ferrous state, which does not act on proteins When reduced iron is given as such, a portion of it is acted on by the gastric hydrochloric acid, and the resulting small amounts of ferrous chloride pass on into the large intestine, where they are absorbed Even large doses of iron and ammonium citrate are inactive until some of this salt has been modified by the free gastric hydrochloric acid, and the free ferric ions resulting have been reduced by the food Since ferrous chloride is the most easily absorbed iron salt, its administration is indicated, some investigators have shown that 1 5 grains of a ferrous salt are capable of producing as good clinical results as are derivable from much larger doses of iron in other forms The difficulty lies in obtaining a ferrous chloride preparation in a suitable state for administration, owing to the ease with which it becomes oxidized Good clinical results have been obtained by the present authors with a syrup prepared by reducing a solution of iron perchloride with an excess of reduced iron and testing the liquid for its content of soluble ferrous iron with potassium permanganate after acidification with hydrochloric acid to stabilize it The liquid was then diluted with syrup so that one fluid drachm contained approximately 0 5 grain of iron in the form of ferrous chloride This dose of syrup, diluted to about one ounce with water, was given three times daily after meals, its small content of free hydrochloric acid possibly aided digestion A simpler method of preparation was then devised, the ingredients being reduced iron (24 grains), dilute hydrochloric acid (1 ounce), and syrup to 6 ounces The reduced iron and acid are placed in a bottle and allowed to stand loosely stoppered until effervescence has ceased and all the iron has disappeared Warming the contents greatly hastens the reaction The solution is then filtered, if necessary, and the bottle is filled with simple syrup This preparation will keep for about a month under ordinary conditions if protected from sunlight It may become a very pale yellow, but only a trace of ferric salt is present When stored in brown bottles in a cool place it will keep much longer Each drachm dose contains approximately half a grain of iron in the form of ferrous chloride, and about 2 to 3 minims of acid

429 Formic Acid in Rheumatic Affections

H TOLDERLUND (*Ugeskrift for Laeger*, March 16th, 1933 p 305) has treated threescore patients during the past six years with intramuscular injections of formic acid for their rheumatic complaints In most cases these were myalgias with tender subcutaneous and muscular infiltrations His material also contained some cases of sciatica articular rheumatism, and neuralgia The treatment was almost invariably ambulant, and the results were, as a rule, not compromised by any other therapeutic measure Some failures had to be recorded but as a rule definite improvement was demonstrable after six or seven injections, sometimes earlier The muscles chosen for the injections were those of the buttocks and thighs, subcutaneous injections were dispensed with on account of the pain they are apt to provoke Intramuscular injections may also at times be painful, but even bad pain passes off quickly Occasionally the seat of the rheumatic ailments, whether it were muscle or joint was particularly painful on the day of an injection, but this could hardly be regarded as a focal reaction The Danish preparation used by the author was sol acidi formici (Leo) 2 c cm of which he injected at a time He gives no further information as to dosage, but he appends details of eight illustrative cases

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Radiology

430 Roentgenotherapy in Arthritis

H LANGER (*Radiology* February 1933 p 78) describes the effects of short wave *x* ray therapy on the vegetative nervous system in arthritic patients as at first exacerbation of symptoms followed by a definite amelioration Cases showing symmetrical arthritic disturbances were treated with *x* rays either over the corresponding sympathetic ganglia alone or in addition to the direct radiological treatment of the affected joints The ganglia were treated with the following technique 185 to 200 kV rays filtered through 0 5 mm of copper and 3 mm of aluminium field 5 × 18 cm over the corresponding lumbar or cervical ganglia 200 *r* units per sitting and per field daily treatments until 500 *r* per field have been reached A similar technique was used for the local treatments of the affected joints In sixty three out of eighty-six cases of arthritis showing disturbances of the vegetative nervous system the effect of the *x* ray treatment of the ganglia was so marked that no local treatment was deemed necessary The treatment had to be repeated in some cases after from six to eight weeks The author strongly urges co operation with the referring physician for the supervision of the reaction following the *x* ray treatment

431 The Action of X Rays on Blood forming Cells

R ISAACS (*Arch Int Med* December 1932 p 836) has studied the problem underlying the opinion that small doses of *x* rays stimulate while large doses depress After the therapeutic use of large doses death or a decrease in size of the tissues affected follows It has been debated whether this result is due to direct toxic necrosis of the tissues or to a mechanism disturbing cell division or to an increase in the rate and intensity of the normal processes in the life of the cell More than 900 patients with various types of leukaemia lymphoblastoma or cancer were investigated Isaacs reports that the effect of *x* ray application whether in small or large doses is stimulating the result depending on the stage of development of the cells Cells in the myeloblastic lymphoblastic or younger stages are stimulated to rapid reproduction because this is their growth potentiality at these stages whereas cells in the myelocytic or the medium-sized lymphocytic stage are stimulated to grow through the rest of their life history in an orderly manner because these cells do not normally divide or multiply They die or are eliminated as normal senile cells The author could obtain no evidence of any toxic necrotic action of *x*-rays when applied in therapeutic doses The process of stimulation is however hastened by the larger doses so that senility is reached more quickly giving the impression of some depressant action The period between exposure to *x* rays and the time when the cells reach senility is indicated by the clinical latent period Tissue cells which have a long adult life (muscle nerve and fibrous tissue cells) appear resistant to *x* rays whereas those cells which have a short adult life (germinal cells and leucocytes) die soon after having been stimulated to progress to senility All cells adds Isaacs have the same susceptibility but death follows at varying intervals depending on how long the cells normally survive in their physiological life

432 Radiological Diagnosis of Biliary Lithiasis

Besides those cases of biliary lithiasis in which *x* ray examination reveals the presence of calculi others occur with no pathological sign in the gall bladder In these by the use of Graham's method this organ becomes opaque and clear images appear in the field these may be due to calculi to superimposition of the gall bladder on an ærocolia of the right angle or very rarely to papillomata Non filling of the gall bladder with the lipiodol usually indicates (except in cases of hepatic insufficiency) vesicular trouble most frequently lithiasis R GILBERT (*Journ de Radiol et d Electrol* January 1933 p 43) records a case in which clear images were shown In this patient who suffered from digestive troubles and right abdominal pains previous diagnosis of appendicitis and visceral and renal ptosis had been erroneously made despite the use of *x* rays treatment producing no results attention was directed to the gall bladder Examination by Graham's method revealed two small calculi the diagnosis was confirmed by functional tests and a subsequent operation The author remarks that clear images are generally seen in gall bladders with well-conserved walls and containing one or only a few calculi These bladders fill easily with iodized bile and respond well to the action of cholecystokinetics such as fatty food and yolk of eggs Gilbert maintains that in all poorly characterized affections of the right upper abdomen exploration of the gall bladder by Graham's method is after clinical investigation a necessary complement of radiological examination of the digestive tube J AIMARD (*ibid* p 41) records a case in which an abnormal shadow at the lower border of the liver had been in error diagnosed as biliary lithiasis At the operation a normal gall bladder was found and microscopical examination of an excised piece of the liver showed a sclerosed calcareous tuberculous tissue As measures to obviate such diagnostic mistakes Aimard recommends cholecystography and stereoradiography

Obstetrics and Gynaecology

433 Puerperal General Peritonitis

L V PYRAH and C OLDFIELD (*Journ Obstet and Gynaecol British Empire* February 1933 p 3) review all the cases of general puerperal peritonitis occurring in the years 1926 and 1931 inclusive in the Leeds General Infirmary the Seacroft Fever Hospital and elsewhere the total being thirty-six Of these patients twenty five died and eleven recovered They find that this complication is present in about half of all patients who die from puerperal fever and in most cases is the immediate cause of death The streptococcus is the organism most frequently identified and has been assumed to be almost invariably fatal The most severe cases are those in which peritoneal inflammation begins within the first three or four days after delivery following the rapid invasion of the cavity by organisms which enter through the lymphatic vessels in the wall of the uterus There is very often a blood infection but rarely any localized pelvic suppuration The mortality rate is very high Cases occurring four days or more after delivery are less severe Localized pelvic suppuration is often found in these most commonly in the wall of the uterus and much less frequently in the ovary and broad ligament The peritoneal infection may originate in the uterus but arises more commonly from the local abscess Other causes of this infection noted are Cæsarean section grave trauma acute appendicitis perforated duodenal ulcer pneumococcal infection and the infection or torsion of pre-existing pelvic tumours The symptomatology varies widely In early cases there is first a rise in temperature with a considerable increase in the pulse rate The onset of peritonitis is signalized by a gradual and insidious change for the worse in the general condition and by abdominal discomfort There may be a rigor and after the succeeding fall the temperature rises and remains elevated The pulse is persistently rapid and its tension weakens The abdominal symptoms may be very slight but there is usually some discomfort vaguely referred to the umbilical region The first physical sign always present is distension of the lower part of the abdomen In the early stages however it may be diminished only with difficulty from persistent fullness This distension gradually increases until the abdomen becomes drum like on percussion as well as tense Abdominal tenderness and hyperæsthesia are usually present but rigidity is generally absent In delayed cases the onset of puerperal peritonitis is signalized by a rigor abdominal pain and greatly increased pulse rate The authors urge that when puerperal peritonitis is suspected an operation should be undertaken much more often than has been in practice hitherto and without waiting for the development of the complete clinical picture Cases of puerperal

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sepsis in which a palpable mass is present must be very carefully watched for signs of involvement of the general peritoneal cavity Should these appear an immediate operation is essential Abscess of the uterine wall is especially liable to become associated with general peritonitis

434 Treatment of Puerperal Infection

E LEVY SOLAL (*Presse Méd*, March 15th, 1933, p 419) outlines the treatment of puerperal infection in cases of unknown origin presenting the usual symptoms of infection (rise of temperature, rapid pulse, rigors) during the first days following delivery Successful treatment entails a correct differential diagnosis and a careful study as to whether the infection is still confined to the uterus or is extending The chief condition to be differentiated is coli bacilluria, a frequent sequel of confinement blood culture on the appearance of fever or rigors and repeated during the following few days is of value in determining the second point Treatment should be both local and general The former consists in dressings of anti-streptococcic filtrate (Besredka) The good results ensuing from this method in numerous cases during the past six years are summarized This treatment should be prophylactic or applied very early before the sixth day of infection, the filtrates should be prepared from cultures obtained from highly infected cases, and the dressings should cover the whole uterine surface, not merely the cervico segmental cavity In preference to the usual methods of general treatment Lévy-Solal now employs simple blood transfusions, immuno transfusions (phylacto transfusions), or convalescent serums The first-named may be given in certain subacute cases and in cases with negative blood cultures but with a rapidly progressive anaemia The best results are obtained with convalescent serums, but, owing to the difficulty in securing suitable donors, phylacto transfusion is usually employed For this the donors are prepared by injections of anti-streptococcic vaccines in doses of 1 c cm the first day and 2 c cm on each of the three succeeding days—that is a total of 7 c cm containing 7 milliards of streptococci, they are revaccinated six hours before the transfusion is given Phylacto-transfusion should be immediately performed in cases with positive blood cultures, and in negative cases giving negative intradermal reactions For the abortive treatment of perigenital infections and phlebitis Levy-Solal advocates pelvic infiltrations with Delbet's vaccine rather than subcutaneous injections, 1 c cm of the vaccine or of a 5 per cent solution of sodium nucleinate should be symmetrically injected intracervically

435 Effect of "Granulosa Cell" Tumours on the Uterus

A LELLBACH (*Zentralbl f Gynak*, March 31st, 1933, p 725) refers to the excessive glandular hypertrophy of the uterine mucosa that is found frequently in association with ovarian tumours of different types After the menopause ovarian tumours may induce hypertrophy of the uterine wall in addition to that of the uterine mucosa The majority of such tumours are of the 'granulosa cell" type R Meyer has suggested that this hypertrophy is a substitute for ordinary follicular stimulation He has not found any evidence of the occurrence of fibromata and sarcomata in association with mucous glandular hyperplasia Lellbach records a case of ovarian tumour associated with excessive uterine mucous and muscular hypertrophy A married woman, aged 60 years was admitted with the diagnosis of uterine myoma and ovarian tumour The menopause occurred when she was 45 Fifteen months before admission she noticed slight irregular haemorrhages Nine months later she observed an abdominal swelling accompanied by frequent haemorrhages The uterus and right adnexa were removed She was discharged cured sixteen days later The uterus was pear-shaped, measuring 6½ by 5 inches it was very hard and greyish yellow on section The uterine cavity measured 2¾ inches, and it was filled with shaggy tufts of hypertrophied mucosa The left tube was 4 inches in length and was much thickened and dilated The nodular ovarian tumour was kidney shaped with a thin smooth capsule, it was hard, solid, and greyish yellow on section Histologically, it exhibited areas in which the 'granulosa cell (ŏophoroma folliculare) type predominated, mixed with large spindle cells of a fibroblast type Evidently it was a "mixed" tumour containing simple carcinomatous and spindle celled sarcomatous elements This case showed that uterine mucous and muscular hypertrophy may occur in association with "mixed" ovarian tumours

Pathology

436 Estimation of Blood Alcohol in Drunkenness

The question of the value of the estimation of alcohol in the blood in cases of alleged drunkenness is reopened by R GOLDHAHN (*Med Welt*, March 11th 1933, p 336), who states that the determination of alcohol in the blood can be carried out on a single drop of blood, but requires the assistance of a trained chemist As a result of such analyses in a large series of cases Widmark has constructed a curve correlating the incidence of symptomatic drunkenness with the percentage of alcohol in the blood From this curve it appears that alcohol may be present in the blood up to a concentration of 80 mg per 100 c cm without the subjects showing any manifestation of being under the influence of drink, at a concentration of about 150 mg per 100 c cm 50 per cent of cases are demonstrably or visibly drunk, whilst at about 200 mg per 100 c cm all are drunk In the police protocols of Germany, if a case is reported as not drunk by the medical attendant but on analysis of the blood 200 mg per 100 c cm are found, then the diagnosis of the doctor is negatived According to Widmark 160 mg per 100 c cm is the upper limit at which it may be considered that a driver may control a vehicle Goldhahn amplifies this by pointing out that motor cyclists and bicyclists show insufficient control at far lower levels of blood alcohol than 160 Attention is drawn to a formula elaborated by Widmark, by means of which it is possible to calculate the intake of alcohol from the blood alcohol, the body weight, and the time between the ingestion of the fluid and the taking of the blood The author has found that this estimate gives values within 5 per cent of a known amount of alcohol taken

437 Active Immunization against Typhus Fever

H ZINSSER and M R CASTANEDA (*Journ Exper Med*, March, 1933, p 381) describe successful vaccination experiments on guinea-pigs against the Mexican typhus virus The vaccine used was prepared from the peritoneal exudate of rats that had been inoculated with the virus and whose resistance had been lowered by exposure to radiation with short wave length *x* rays The peritoneal exudate of such animals contained large numbers of Rickettsiæ, these were treated by formol, so that the vaccine contained only dead organisms Experiments showed that subcutaneous or intraperitoneal inoculation of guinea-pigs with this vaccine afforded them protection against the subsequent intraperitoneal inoculation of approximately 100 to 250 infective doses of Mexican typhus or of the endemic American typhus virus but only partial and feeble protection against the European typhus virus In a second paper (ibid, p 391) the authors describe the production of an immune serum by treatment of a horse with the irradiated rat Mexican typhus virus vaccine Before immunization the serum of the horse agglutinated *B proteus* X 19 in a titre of 1/40, after immunization the titre had risen to between 1/160 and 1/320 Further agglutination experiments showed that the serum agglutinated a suspension of the European virus obtained from lice to a titre of between 1/320 and 1/640 By the use of guinea-pigs this serum was found to afford protection against the Mexican typhus virus when it was injected a week before, or at the time of, or seventy two hours after the infecting dose On the other hand, it did not protect against the European virus This discrepancy between the agglutinating and protective powers of the serum in relation to the European virus is very puzzling, and calls for further investigation

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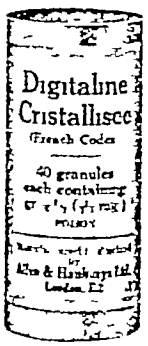

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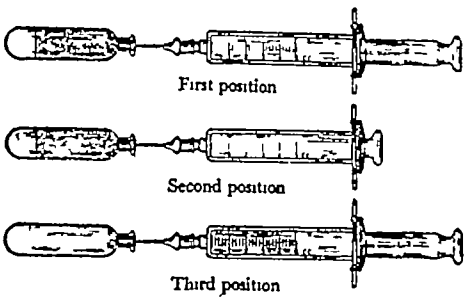

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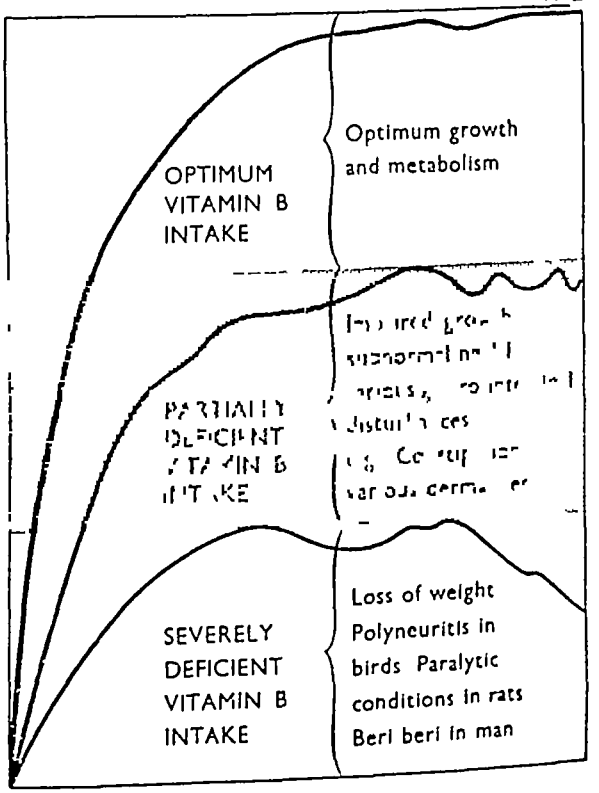

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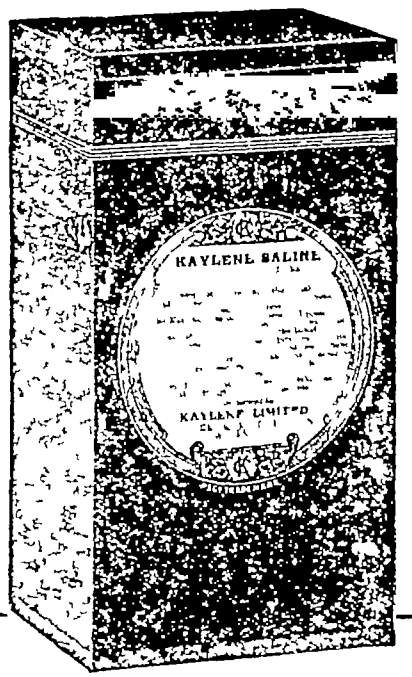

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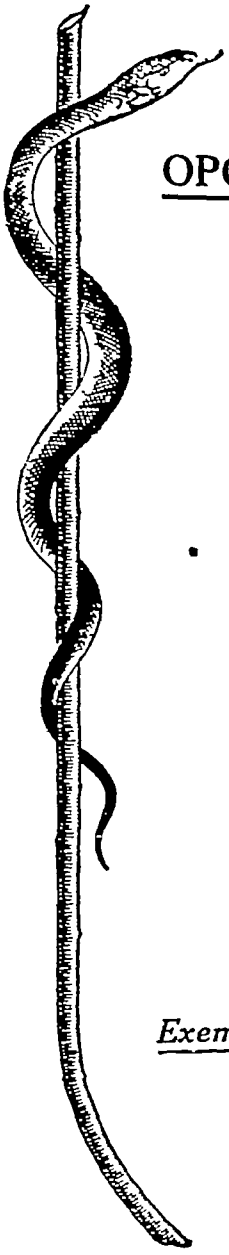

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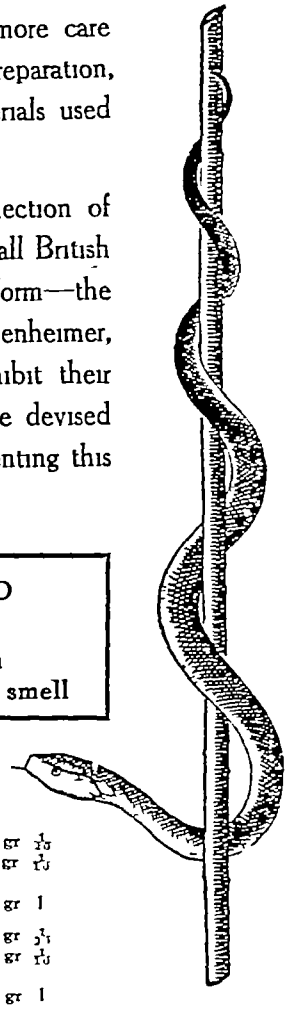

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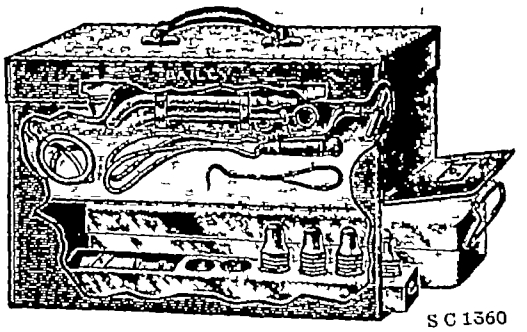

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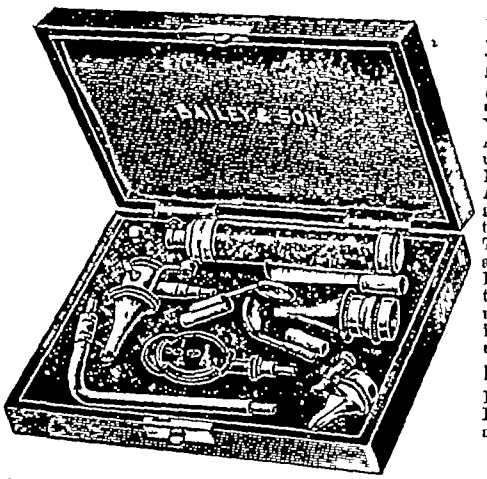

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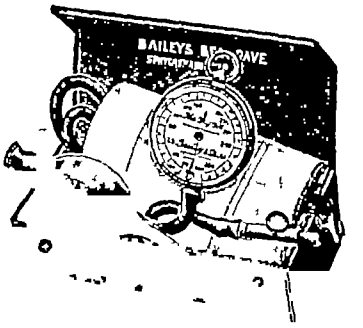

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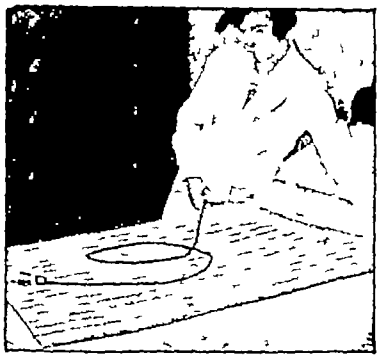

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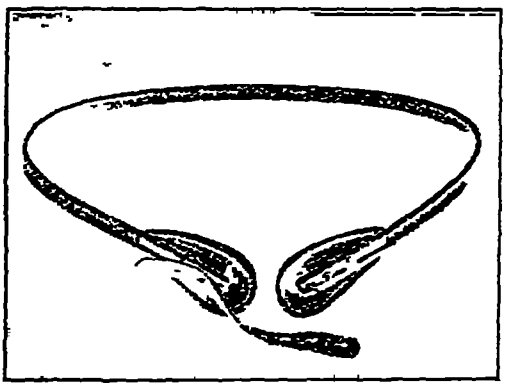

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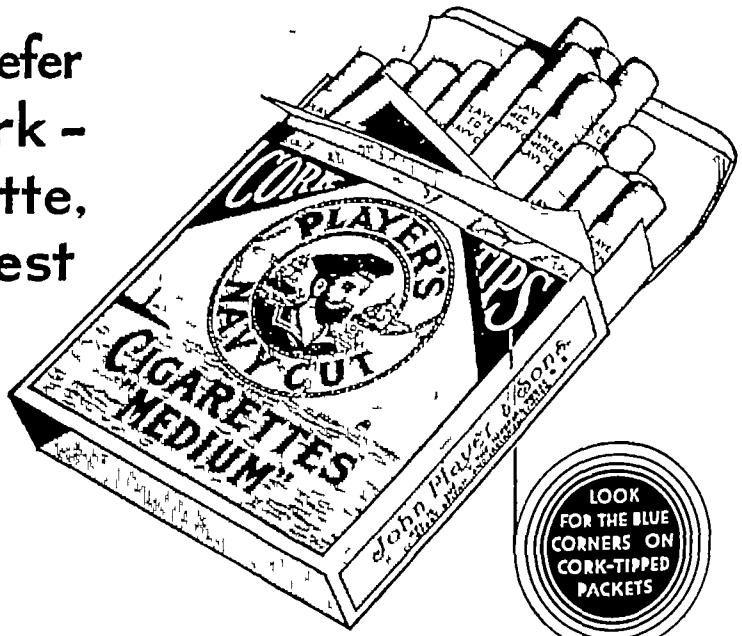

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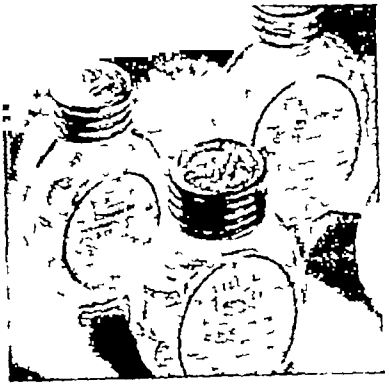

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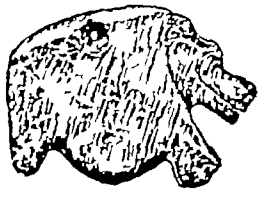

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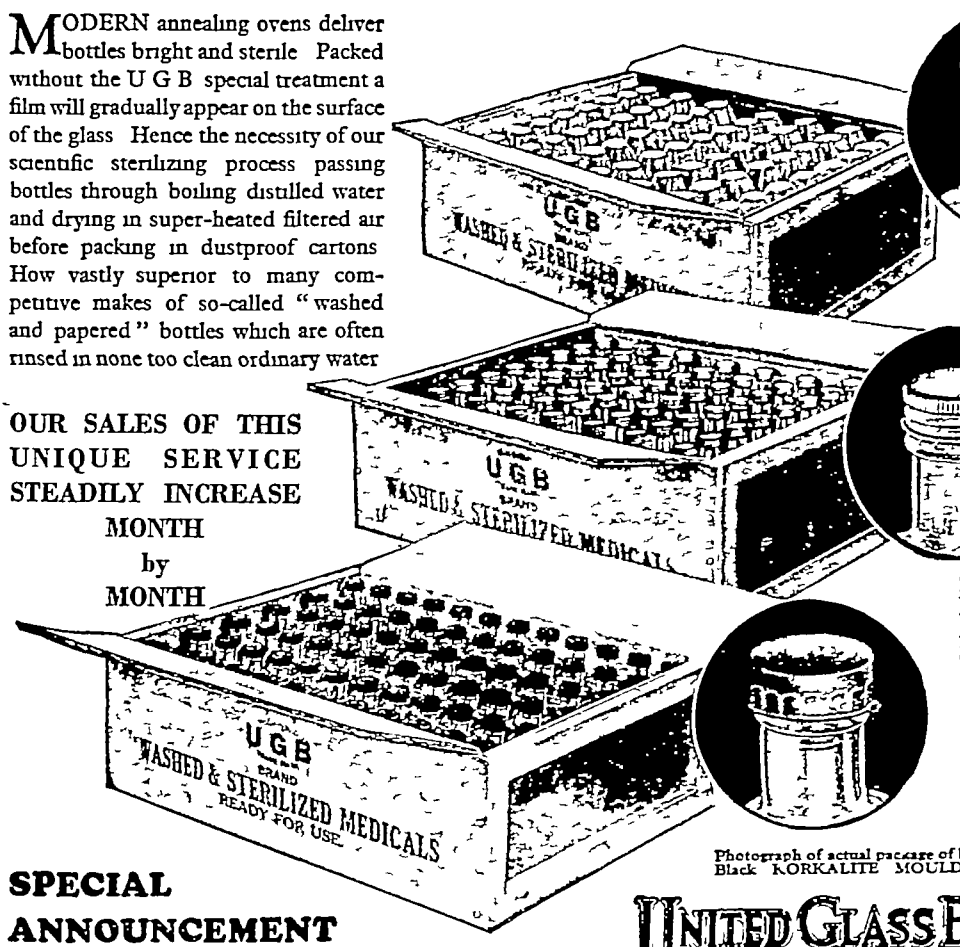
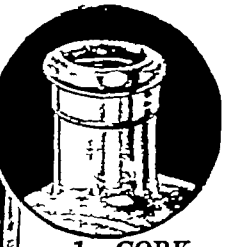
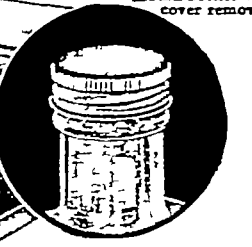




1. CORK MOUTH
Photograph of actual package of Cork mouth bottles with cover removed.



2 WHITE ENAMELLED ALUMINIUM SCREW CAP
Photograph of actual package of Screw-cap bottles with cover removed.

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Photograph of actual package of bottles with Black KORKALITE MOULDED Caps.

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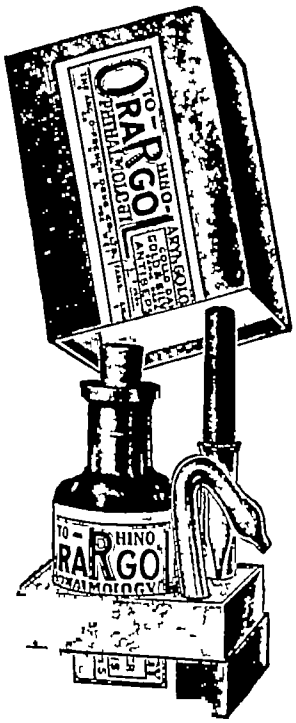

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A Private Home for the Care and Treatment of a limited number of Ladies with Mental and Nervous Disorders Separate accommodation for Voluntary Patients Large Mansion with 12 acres of ground. (See *Medical Directory* p. 2294) Apply J. H. EARLE M.D., D.P.M. Resident Physician Telephone Tulse Hill 2131.

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Observations
ON
THE CURE OF MALARIA WITH ATEBRIN
BY

A. L. HOOPS, C.B.E., M.D., D.P.H.
SENIOR MEDICAL OFFICER, MALACCA AGRICULTURAL MEDICAL BOARD
MALACCA, STRAITS SETTLEMENTS

The production of atebrin, a drug far more effective than quinine in that it apparently eradicates the malaria parasite in man as a rule after only five days' treatment, is an event in the history of tropical medicine. According to R. Green, malaria research officer of the Institute of Medical Research, Kuala Lumpur, it is not unlikely that in the molecular synthesis of atebrin the quinoline nucleus (common to both quinine and plasmoquine) has been retained, and that one of the acridine compounds allied to acriflavine has been incorporated. A paper published by Green [1] together with a synopsis of the German literature on atebrin and a supply of the drug received from Dr. K. Koenig of Singapore led me to give this drug a trial on some of the estates under my charge between June and August 1932. My results were so favourable that atebrin and not quinine is now the drug in ordinary use for the treatment of malaria on estates served by the Malacca Agricultural Medical Board, comprising an area of nearly 150,000 acres.

PREVENTION OF MALARIA

The primary aim of both the estate medical officer and the planter in Malaya is to prevent malaria by anti-malarial drainage, by oiling of the breeding places of malaria-carrying anophelines, and in some places by the use of mosquito curtains or screening. Though these anti-mosquito measures have proved so valuable that they are being retained even in these days of extreme compulsory economy, a more effective drug than quinine for the radical cure of malaria is indispensable for fuller success.

It has been clearly proved that prophylactic quinine, whether administered daily or at intervals, is a delusion and a snare; no amount of quinine will prevent the development of malaria in a person who has been newly infected. This practice has been entirely abandoned on Malacca estates. Quinine owes its past reputation as a prophylactic to the fact that many of those dosed with it were in fact actually infected with undiagnosed malaria, in such cases it was very useful. For the cure of malaria quinine, though for centuries the best drug available, involves a lengthy and debilitating course of treatment followed by a high relapse rate. Atebrin combined with plasmoquine, if the malaria is subtertian in type and reinforced in certain grave cases with quinine administered by injection, appears to effect a complete cure within less than one week in 95 per cent. of cases treated.

THE PROBLEM IN MALACCA

The population with which my colleagues and I deal consists of over 19,000 rubber estate labourers and dependants and of the staff—European and Asiatic—with their households numbering over 800, who control the estates. The following figures show the recent incidence of malaria among labourers and dependants, who are known as the labour population.

Most of those appearing under the heading "Out-patients" are relapse patients who after a chill have one or two days' fever; in this category are also included a number of the primary cases occurring on Asiatic estates where there are no hospitals. Grave cases on these estates are generally sent into Government hospitals, as evidenced by the few deaths among malaria cases treated as out-patients—four in 1931 and three in 1932. The majority of European estates, on which over two-thirds of the labour population, including the great majority of Southern Indians, work, have their own hospitals. The weekly use of anti-malarial oil to spray anopheline breeding grounds within the danger zone of the coolie lines is almost universal on such estates, where a good deal of anti-malarial drainage has also been done in the past. (Anti-malarial oiling is the exception rather than the rule on Asiatic-owned estates.) Owing to the widespread reduction in labour forces many sickly coolies have also been repatriated.

Year	Average Labour Population	Cases of Malaria		Deaths from Malaria
		Out-patients	In-patients	
1931	21,553	1,877	934	35 (4 in lines)
1932	17,511	1,334	595	21 (3 in lines)

The result of these two factors, combined with early and effective treatment of the sick, is shown by a spleen rate of only 4·2 per cent. among 9,722 Southern Indians examined at the last half-yearly musters on European estates. The spleen rate among a thousand-odd Southern Indians employed on Asiatic estates was however over 20 per cent. About 1,400 Chinese work on European-owned estates, and the spleen rate among those examined was 4·27 per cent., while on Asiatic estates where some 4,300 Chinese are employed it was 8·34 per cent. About 1,200 Malays work as estate labourers; nearly all these live in their own kampongs to which they return daily. As is natural, the spleen rates for these workers were almost identical on European and Asiatic estates, being 12·8 per cent. on the former and 11·64 per cent. on the latter. Many Malays have acquired a partial immunity due to repeated attacks of malaria in childhood; this is probably the reason why their spleen rates are so much less than those of Tamils working on Asiatic-owned estates. The high spleen rate among the Southern Indians on Asiatic estates reveals the lot of the careless labourer who unprotected by oiling does not avail himself of a mosquito curtain. The Chinese coolie on the other hand uses a mosquito curtain, has more stamina, feeds better and knows how to look after himself. The result is that placed in the same position as the Tamil he shows less than half the spleen rate.

TREATMENT OF MALARIA WITH ATEBRIN

For the actual treatment of malaria reliance has hitherto been placed on that old and tried remedy quinine. On European estates the sufferer from primary malaria has received full doses in hospital for perhaps ten days, followed by smaller doses for perhaps three weeks in the lines. He has been given more quinine when at labour inspections he has been found to possess an enlarged spleen. And yet with all this dosing it is well known that over 50 per cent. of sufferers so treated relapse and have further attacks of malaria in some cases repeatedly and for years after the original infection. There are several notable disadvantages attending the use of quinine—such as the long continuance of the treatment, the difficulty of carrying this out, the lowering effect on the vitality of its continued administration, the great liability to relapse and finally the expense.

Beginning the trial of atebrin in June 1932 I have found that it has apparently brought about a permanent cure in the great majority of 153 malaria cases treated by me between that month and the end of the year. Two of my colleagues, Dr. I. D. Stubbs and Dr. Foo Hee Seng, who started to use the drug in August 1932 have had

similar results among 163 cases treated by them Our combined figures are

Total Cases Treated	Type of Malaria				Relapses
	Subtertian	Benign Tertian	Quartan	Unclassified	
317	93	114	5	100	11

Eighteen of the ninety-eight patients under the heading "Subtertian" were cases of mixed infection, showing benign tertian parasites as well In four subtertian cases, in which cerebral symptoms appeared, I administered from two to six doses of quinine bihydrochloride intramuscularly, with one death The "unclassified" patients were mainly on estates where no microscope was available, but were clinically cases of malaria The figures for relapse up to the end of March, 1933—that is over nine months after the first case and three months after the last case was treated—are eleven The relapses usually occurred within two months of the first treatment, the types of malaria in which these were noted being subtertian (three), benign tertian (two), unclassified (six)

Relapse Rate

There is little movement among labour forces at present, and it has therefore been possible to keep in touch with the great majority of those treated Deducting, however, the liberal allowance of 20 per cent from the total 317 patients treated, on account of persons since lost sight of, there remain 253 treated and still under observation, with eleven relapses—a relapse rate of 4 34 per cent All persons once treated with atebrin and having further malarial attacks have been counted as relapses, though some may have been fresh infections Of the eighteen cases of mixed infection, eleven occurred on one division, where there was a violent outbreak of malaria due to a temporary failure in oiling—thirty eight out of a population of sixty-seven being affected within one month Microscopical findings were fourteen subtertian (of whom eleven showed benign tertian parasites also) and twenty-four benign tertian In spite of so many double infections, there has not been a single relapse on this division, though seven months have passed since treatment was given

Death Rates

A comparison of the labour death rates among those treated in hospital with quinine and with atebrin respectively is of interest In 1931, 934 cases of malaria were treated in hospital, all with quinine 10 grains of the sulphate or bihydrochloride were given in solution three times daily for nine or ten days, followed usually by small doses of quinine in the lines for three weeks Deaths numbered thirty one, death rate, 3 31 per cent In 1932, 288 patients were treated in hospital with quinine, of whom fourteen died death rate, 4 85 per cent Of the 317 patients who received atebrin, 257 were treated in hospital, with four deaths—a death rate of 1 55 per cent Both the relapse rate and the mortality rate therefore, favour atebrin treatment Of the labour population averaging 19 511 last year two-thirds were Southern Indians—mostly Tamils—less than one third were Chinese and about 1 200 were Malays 85 per cent of those treated with atebrin were Tamils

Staff Treated

In addition to labour eight Europeans, including two ladies and ten members of the Asiatic staff were treated for malaria with atebrin in the last half of the year 1932 All found it easy to take, and experienced a sense of well-being after it None has so far relapsed

Particulars of Treatment

A course of atebrin lasts as a rule for five days only The daily amount administered is 0 3 gram (4½ grains) for adults and for children over 11, 0 1 to 0 2 gram (1½ to 3 grains) for children of 5 to 10 years, and 0 035 to 0 1 gram (1/2 to 1½ grains) for children of 1 to 4 years and is given in three divided doses In addition, plasmoquine is prescribed in subtertian cases only, also for five days—0 03 gram (1/2 grain) daily for adults in three divided doses, children of 11 receive only half this dose of plasmoquine, and younger children proportionately less The bowels are kept freely open throughout The tablets of atebrin and plasmoquine are crushed and taken with a drink of water half an hour before meals Most patients are also dosed with oil of chenopodium to remove their ankylostomes, and those who need it have santonin to relieve them of round-worms At the conclusion of the treatment patients are placed on an iron and arsenic tonic No quinine has been given with atebrin by me, except by injection in a few severe cases

ADVANTAGES OF ATEBRIN

The points in favour of the use of atebrin in place of quinine are

1 The fever is usually reduced as quickly as with quinine it is uncommon to find a temperature above 99° F after forty eight hours' treatment In two cases only did fever persist as long as the fifth day, for these atebrin was continued for eight days

2 With the exception of subtertian gametocytes it is rare to find malarial parasites in the blood after the second day of treatment No parasites of any description were found in the blood of any hospital case on the conclusion of treatment

3 The treatment is short simple, and effective—one 1½ grain tablet three times a day for five days only, as against a prolonged course of quinine

4 The drug is not unpleasant to take and is not depressing It is well tolerated even by pregnant women and young children and in blackwater fever and also by persons suffering as well from other diseases such as pneumonia and influenza

5 Relapses are rare after atebrin while with quinine the relapse rate is high

6 The cost of a course of atebrin (fifteen tablets) is about 75 cents (1s 9d) that is, less than the cost of a course of quinine—one ounce about $1 (2s 4d)—not to speak of the cost of treating the frequent relapses when quinine is used

7 In malaria of the benign tertian and quartan types atebrin only is necessary

8 When malaria is subtertian in type it is necessary to give a five days' course of plasmoquine in addition to atebrin (cost about 43 cents 1s) but this is also needed when quinine is employed as subtertian gametocytes are unaffected by either quinine or atebrin

9 Last but not least atebrin is a powerful preventive of malaria in the sense that most of those treated with it being cured are rid of the infection and completely non infective to their fellows It may well prove that the regular use of atebrin—plus plasmoquine in subtertian cases—for the cure of malaria will lessen the amount spent on antimalarial drainage and oiling

LIMITATIONS OF ATEBRIN

Are there any serious disadvantages in the use of atebrin? So far as my experience goes, "No" A few patients have colicky pains about the last day of treatment, and a few show a temporary yellow discoloration of the skin and conjunctiva, due not to jaundice but to the fact that atebrin contains a yellow dye No form of the drug suitable for injection is yet available consequently in very severe cases of malaria, it is advisable to administer one or several doses of quinine, generally by intramuscular injection Some medical men, though now using atebrin for malaria, are prescribing quinine during the first two days of treatment This may be quite sound but personally I have as far as possible employed

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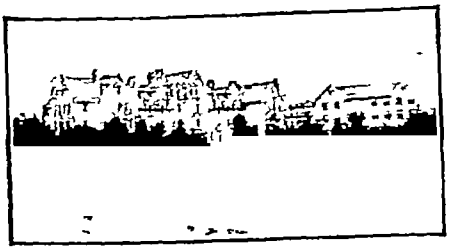

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atebrin alone in order to test fully the value of that drug without quinine

In a progress report issued locally in November 1932 R Green[3] states that both benign tertian and quartan parasites including gametocytes disappear from the blood more quickly with atebrin than with quinine In subtertian malaria the rings disappear either with quinine or with atebrin in about three days The febrile period in all types is slightly shorter with atebrin than with quinine but pending the cessation of febrile symptoms the temperature among some of the subtertian cases seems to remain on the whole somewhat higher and the patient to be more prostrate than with quinine The subtertian infection varies from the very mild case to the fulminating case attended with fatal results whatever the form of therapy In the small but certain proportion of subtertian cases which show alarming symptoms Green regards it as at present advisable to administer quinine for two or three days as a preliminary to atebrin

Green's Relapse Rates

Among forty three patients who had 30 grains of quinine bihydrochloride a day for seven days and were under observation for a maximum of forty six days Green's record is

	Total cases	Relapses
Benign tertian	12	6
Subtertian	13	5
Quartan	18	5

Among forty-eight cases receiving a six-days course of atebrin and kept under observation for a maximum of eighty days (seventeen being benign tertian twenty three subtertian and eight quartan) Green observed one relapse —a benign tertian case on the thirty second day after treatment

ATEBRIN IN SPLENOMEGALY WITHOUT MALARIA SYMPTOMS

On the presumption that an enlarged spleen indicates a latent malaria infection it has been usual to give a course of quinine to all newly engaged local coolies with enlarged spleens and to all coolies and dependants found in a similar state at periodic examinations of labour forces Towards the end of 1932 I gave instead a five days course of atebrin to forty nine such cases the first twenty five were admitted to hospital the other twenty four were treated in the field None of these has since developed malaria

During the present year I am prescribing for the majority of patients with enlarged spleens a course of atebrin in the lines without taking them off work one tablet is administered in the morning and two in the afternoon A careful record is being kept no further atebrin and no quinine will be administered to these cases —even if the spleen continues enlarged—unless an attack of malaria occurs

CONCLUSION

The treatment of malaria with atebrin is short simple and economical Most sufferers appear to be cured within a week The consistent use of this drug should effect a great and permanent diminution of malaria among labour forces by sterilizing most of the reservoirs of infection

I am grateful to Dr Green for valuable information and to my colleagues for their records

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[1] Green R A Report on Fifty Cases of Malaria Treated with Atebrin *Lancet* 1932, i 826
[2] Hoops A L The Treatment of Malaria with Atebrin in Estate Practice *Trans Roy Soc Trop Med and Hyg* November 1932, xxvi No 3 289
[3] Green R A Comparison between Atebrin and Quinine in the Treatment of Malaria a progress report issued locally in November 1932 from the Institute for Medical Research F M S

TREATMENT OF MALARIA BY PLASMOQUINE AND QUININE

BY

M SCHWARTZ M B B S LOND

TRINIDAD

A remedy that will invariably cure malaria after a single course of treatment has yet to be found unless the new preparation atebrin which is still on its trial proves superior in this respect to the drugs at present in use In the Tropics the assessment of the value of anti malarial treatment is generally rendered difficult owing to the frequent presence of other diseases the often poor living conditions of the patient the difficulty of giving a prolonged course of treatment and the liability to re infection In temperate climates patients are often lost sight of after treatment owing to their return to the Tropics and in the event of a relapse they may fail to return to the prescriber of the original course of treat ment Control over any lengthy period is therefore the exception while most of the cases treated must inevitably be cases of relapse It therefore appeared to me that a high percentage of cures obtained with a standardized course of treatment under unusually well-controlled con ditions might be of some general interest

Malaria in Trinidad is the largest single cause of death In 1931 this disease was responsible for 734 deaths out of a total of 5 374 (Registrar-General's Report for Trinidad and Tobago 1931) and it must accordingly be assumed that the disease here is of a moderately severe type All the cases in the accompanying table are those of members of the staff (including dependants) of an oil company operating in Trinidad These form only a small per centage of the total cases of malaria treated the disease being far more common among the labourers but for reasons stated above the latter are unsuitable for the purpose of this paper The total number of staff and dependants in this company is approximately 200 living in several widely scattered fields in the south of the island All cases of illness occurring on these fields are bound to be reported to me and thus no case of relapse could fail to come to my notice The living conditions of these people are good Comfortable mosquito-proof bungalows are provided none of which is situated in a malarial area and infection with this disease is therefore only accidental Other tropical conditions are rarely found among them and the general health is excellent While all three varieties of malaria parasite are found in Trinidad quartan infection is in my experi ence unusual while benign and subtertian are almost equally common though each predominates in its respective areas

In the cases shown in Table I the attacks have generally been severe with maximum temperatures of 103° to 105° F the fever lasting three to four days In no case has the fever persisted longer than the fifth day of treat ment or risen again subsequently I have for long been of the opinion that fever which did not respond to suitable treatment within five days was due to some cause other than malaria providing the drugs administered were being absorbed In nearly all cases the fever was of a remittent type the regular intermittent fever frequently associated with relapses being notably absent This was to be expected in a series where most of the cases were primary In no case was an injection of quinine found necessary I limit such injections entirely to cases in which adminis tration of drugs by mouth is impossible owing to intract able vomiting delirium or coma The treatment prescribed has been in use for over three years and is the outcome of a trial of a number of different combina tions of quinine plasmoquine and arsenic No case of

intolerance to plasmoquine has occurred, nor is it expected to occur with the dosage prescribed, and none of the toxic symptoms occasionally seen with that drug (for example, cyanosis, abdominal pains) has been noted. The treatment pamphlet, together with the requisite drugs, is supplied to the patient as soon as convalescence sets in, and he is instructed to report any symptoms of ill health which may arise.

TABLE I.—*Cases Shown in Tabular Form*

Case	Date First Seen	Previous Malarial History	Type of Infection	Relapse	Under Observation to—	Remarks
F C	12/29	Two previous attacks	Benign and subtertian	None	4/33	Mixed infection contracted in Venezuela five months previously
H P	1/30	Many attacks	Benign	12/30	7/31	Contracted in Ceylon eighteen months previously. Had a cure in European tropical hospital in July 1929. No further attack
C M	3/30	None	Benign	None	4/33	
Mrs F	6/30	None		None	4/33	
L S	7/30	None	Subtertian	None	4/33	
H S	7/30	None		None	4/33	
Mrs T	8/30	None		None	4/33	
G C	9/30	None	Benign	None	12/31	
Miss W	5/31	None	Subtertian	None	10/32	
S L	7/31	None		None	4/33	
Miss L	10/31	None	Benign	None	4/33	
Miss U	11/31	None		3/32	4/33	Child aged 10. Treatment of first attack delayed ten days owing to absence from home
Miss B	12/31	Many attacks		None	4/33	
Mrs F	12/31	None		6/32	4/33	No further attack after relapse
R G	12/31	Two attacks	"	None	4/33	Contracted in Venezuela fifteen months previously. Invalided for malaria
Mrs W	1/32	None	"	None	4/33	
G H	2/32	Many attacks		None	4/33	
Mrs E	2/32	None		None	4/33	
Mrs N	3/32	None		None	4/33	
Mrs B	5/32	None		None	4/33	

TABLE II.—*Standard Five Weeks Antimalaria Course*

Preliminary calomel and Epsom salts. Constipation must be avoided while this course is being taken.

1st week *1st to 3rd day* (inclusive).—Quinine grains v + one plasmoquine tablet morning and night. Quinine grains v midday.
4th to 7th day (inclusive).—Quinine grains v + two tonic pills morning and night. Quinine grains v midday.

2nd week *1st to 3rd day*.—Quinine grains v + one plasmoquine tablet morning and night. Quinine grains v midday.
4th to 7th day.—Quinine grains v + two tonic pills morning and night. Quinine grains v midday.

3rd week *1st to 3rd day*.—Quinine grains v + one plasmoquine tablet morning and night.
4th to 7th day.—Quinine grains v + two tonic pills morning and night. Quinine grains v midday.

4th week.—As for third.

5th week *1st to 3rd day*.—Quinine grains v + one plasmoquine tablet morning and night. Quinine grains v midday.
4th to 7th day.—Quinine grains v + two tonic pills morning and night.

The quinine used is generally quinine hydrochloride in capsule. Occasionally quinine is used in solution (where there is difficulty in swallowing capsule). The plasmoquine referred to is plasmoquine simplex. The tonic pills are the standard pills of B.W. and Co. containing quinine grain 1, iron, arsenic, and strychnine.

In view of recent statements suggesting that delay in commencing treatment in malaria might be of benefit in permitting the acquisition of some natural immunity and thus facilitate subsequent cure, I may state that all these cases commenced treatment as soon as the diagnosis was made, and my own experience indicates that where delay has occurred, owing to incorrect diagnosis or some other cause, the severity of the attack in primary cases has been very much aggravated without any diminished liability to relapse. For the purpose of this paper I am assuming that all patients carried out their treatment according to instructions, and that any subsequent attack of malaria was in the nature of a relapse and not a new infection.

TREATMENT OF ACUTE CORYZA BY AUTOGENOUS VACCINES

BY

L. HOYLE, M.B., CH.B.

DEMONSTRATOR IN PATHOLOGY AND BACTERIOLOGY, UNIVERSITY OF LEEDS

Anti-catarrhal vaccines of various types are widely used by clinicians, and stock vaccines are marketed by a large number of commercial houses. There is, however, very little evidence that such vaccines have any beneficial effects, and extensive investigations by von Sholly and Park (1921), Jordan and Sharp (1921), and Ferguson, Davey, and Topley (1927), showed that stock vaccines exerted no influence on the incidence of acute coryza. The object of this investigation has been to determine whether autogenous vaccines were of any greater value than stock vaccines.

In previous studies of the bacteriology of acute coryza (Hoyle, 1932) it had been found that individuals who suffered from unusually frequent and severe attacks of coryza harboured pneumococci, influenza bacilli, and "mouse pathogenic green streptococci" in large numbers in the upper respiratory tract, these organisms showing an increased incidence during infections. Similar observations have been recorded by Webster and Clow (1932). Haemolytic streptococci, while absent from the upper respiratory flora of the majority of normal individuals, were present in a small number of cases, and showed an increased incidence during infections. Friedländer's bacillus was observed in some cases of chronic catarrh. No other organism which could be cultivated on the media employed appeared to play any part in upper respiratory infection.

TYPE OF VACCINE USED

In view of the above findings it was considered essential that all vaccines employed should contain pneumococci, *B. influenzae*, and "mouse pathogenic green streptococci," and if an autogenous strain was not available a stock strain was included. Haemolytic streptococci and Friedländer's bacillus were only included in the vaccine when autogenous strains were available. The composition of the vaccine was as follows:

1 c.cm. of an eighteen hour culture of pneumococci in 5 per cent. rabbit's serum broth.
1 c.cm. of an eighteen hour culture of "mouse pathogenic green streptococci" in 5 per cent. rabbit's serum broth.
8 c.cm. of saline.

B. influenzae from a chocolate agar slope was suspended in the above to a concentration of 1,000 millions per c.cm., and if autogenous strains of haemolytic streptococci and Friedländer's bacillus were available they were added in concentration of 500 millions per c.cm. and 1,000 millions per c.cm. respectively. 1 in 1,000 formaldehyde was used as antiseptic. Serum

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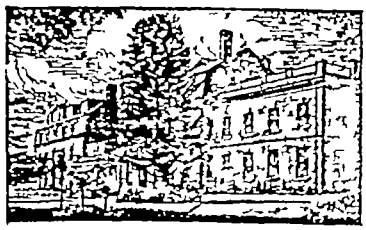

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broth cultures of pneumococci and mouse pathogenic green streptococci were used because in animal experiments it had been found that they were more effective in producing immunity than saline suspensions and experiments with human volunteers showed that the use of serum broth did not result in unduly severe reactions

SOURCE OF CASES

I obtained the co-operation of a number of Leeds general practitioners who sent cases suffering from unusually frequent and severe attacks of coryza A clinical history was obtained from each patient and an examination of his upper respiratory flora was made by the methods described previously (Hoyle 1932) An autogenous vaccine was prepared as set out above and a course of three injections given at weekly intervals—0 25 c cm for the first and second doses and a third and final dose of 1 c cm Six months later a record of progress was obtained and any patient desiring a further course of vaccine was examined again and a fresh vaccine prepared and administered

BACTERIOLOGY AND RESULTS

As was expected these individuals showed unusually large numbers of pathogenic bacteria in the upper respiratory tract Out of ninety four cases examined in only one case were no pathogenic bacteria detected Pneumococci were isolated in 59 per cent of the cases *B influenzae* in 52 per cent mouse pathogenic green streptococci in 72 per cent haemolytic streptococci in 32 per cent and Friedländer's bacillus in 11 per cent

It was only possible to obtain satisfactory records in sixty-seven cases and the results in these cases were as follows twenty eight cases derived no benefit whatever in twenty three cases the incidence of acute coryza was not affected but the severity of the attacks was reduced sixteen cases showed a definite reduction in both the frequency and the severity of the attacks These results indicate that autogenous anti-catarrhal vaccines like stock vaccines do not appreciably affect the incidence of attacks of acute coryza and although some cases showed a reduction in the severity of attacks this was not in my opinion sufficient to justify any very extensive use of such vaccines It has been suggested that the failure of anti-catarrhal vaccines is due to the causal agent of coryza being absent from the vaccine but as the immunity conferred by an attack of coryza is negligible there appears to be no reason for supposing that any greater degree of immunity is to be expected from vaccine therapy and it is probable that a reduction in severity of the attacks is the most that can be expected

SUMMARY

Sixty seven individuals suffering from very frequent and severe attacks of coryza have been treated by autogenous vaccine therapy The results show that the vaccine exerts no influence on the incidence of attacks The suggestion has been made by previous workers that while stock anti-catarrhal vaccines have no effect on the incidence of acute coryza they tend to diminish the frequency of severe complications such as pneumonia and this suggestion has been supported by a small number of cases treated by autogenous vaccines

I should like to express my indebtedness to a number of Leeds general practitioners who have assisted me in this investigation to the Medical Research Council from whom I am in receipt of grants and to Professor J W McLeod for some helpful criticism

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ACETYLCHOLINE IN THE TREATMENT OF EPILEPSY

BY

F L McLAUGHLIN M D D P M

ASSISTANT MEDICAL OFFICER COLNEY HATCH CLINICAL ASSISTANT DEPARTMENT OF PSYCHOLOGICAL MEDICINE UNIVERSITY COLLEGE HOSPITAL

Since Hughlings Jackson[1] in 1870 pointed out the possibility of the epileptic seizure being determined by contraction of the cerebral arteries the role of vascular spasm in this disorder has been a subject of clinical and experimental interest Vascular spasm is a mechanism now accepted by many clinicians as explaining a number of cases of transitory aphasias hemianopias and migraine The sudden blanching of the extremities as a result of vaso-constriction is well illustrated in Raynaud's disease The association of Raynaud's disease with cerebral vascular disturbances has been recorded by Norman[2] and by Carp[3] Russell[4] has noted the similarity between the stages of the epileptic convulsion and the symptoms accompanying heart block in Stokes Adams's disease Many observations of the exposed cortex during epileptic attacks have been made Foerster[5] describes the sequence of events repeatedly seen by him on the operating table Sudden pallor of the cortex and arrest of cerebral pulsation is immediately followed by extreme hyperaemia venous engorgement and bulging of the brain Horsley[6] Leriche[7] and Kennedy and Hartwell[8] have observed practically similar changes Corroborative evidence is to be found in the observations of the fundus oculi during an attack Jackson[9] long ago noticed that the fundus was pale before a seizure during the convulsion the veins became large and dark Experimental evidence has recently been brought forward to show that the cerebral vessels contract after stimulation of the cervical sympathetic and dilate in response to vagus stimulation (Schilf[10] Forbes and Wolff[11]) The effect of these observations has been to bring again to the foreground the hypothesis that fits are precipitated by cerebral vaso-constriction But although it is now generally acknowledged that the cerebral arteries are under vasomotor control a causal relationship between cerebral vaso-constriction and the epileptic attack is by no means accepted (Notkin *et al*[1] Wilson[12]) On the assumption that seizures are due to vaso-constriction of the cerebral arteries various operations on the cervical sympathetic chain have been performed in epileptic patients (Alexander[11] Bojovitch[15] Tinel[16] Zavialoff[17] Lauwers[14]) The results of cervical sympathectomy have on the whole been disappointing Favourable results in certain subjects are reported recently by Lauwers[18] following the removal of the carotid body

Attempts to influence epileptic attacks by the administration of vaso-dilator substances have been made Popea and Eustatziou[9] in 1927 recorded beneficial results following the inhalation of amyl nitrite at the onset of attacks In 1929 Villaret and Justin Besançon[1] demonstrated the therapeutic value of injections of acetylcholine in Raynaud's disease arteritis and similar complaints The beneficial effects of acetylcholine in Raynaud's disease appeared to lend support to the vaso-constriction theory of epilepsy In 1931 Étienne[22] and his co-workers at Nancy investigated the action of this substance in a group of seven epileptics In two cases a notable reduction in the fit incidence was recorded Later de Gennes[3] reported that injections of acetylcholine arrested the seizures in two cases of status epilepticus Similar results were described by Pagniez Plichet and Decourt[4] Dino Bolsi[5] in 1932 reported a dramatic reduction in the number of seizures in five of his eight cases In some of the group investigated the beneficial effect persisted for several days after the injections of acetylcholine

On the other hand Dejean and Hughes[26] in four cases treated over a fourteen-day period did not obtain any favourable results

EXPERIMENTAL

The therapeutic effect of acetylcholine and pacyl was investigated in fourteen epileptics at Colney Hatch Mental Hospital The cases selected were subject to frequent major convulsive attacks, which were unassociated with ascertainable organic disorder in the nervous system or elsewhere The age of onset of the disorder and the age at the time of the investigation are shown in the table Either some degree of congenital mental defect or progressive mental deterioration was present in all members of the group During the experiment no change was made in the diet, usual medication or regimen of the subjects The type and frequency of all convulsions aurae, and equivalents were recorded for stated periods before, during, and after treatment

Table showing age of onset of the disorder present age and the number of seizures occurring during the fourteen day periods before during and after treatment with acetylcholine bromide injections (0 1 to 0.3 gram) and pacyl (two tablets three times daily)

Case No	Age of Onset	Present Age	No of Seizures during Previous 14 Days	No of Seizures during Treatment (14 days) by Pacyl	No of Seizures during Treatment (14 days) by Acetylcholine	No of Seizures during Succeeding 14 Days	Results
1	14	22	23	32	20	19	Unchanged
2	7	31	34	29	30	41	Unchanged
3	16	26	5	4	1	6	Improved
4	7	23	5	4	3	4	Unchanged
5	Infant	30	7	8	3	1	Improved
6	Infant	39	4	4	4	3	Unchanged
7	11	23	37	66	* —	—	Unimproved
				Acetyl choline	Pacyl		
8	3	24	5	1	5	5	Improved
9	3	29	3	1	2	4	Improved
10	Infant	33	2	0	2	1	Improved
11	Infant	21	5	4	5	5	Unchanged
12	Infant	18	2	12	12	4	Unimproved
13	Infant	14	19	18	18	12	Unchanged
14	12	20	9	7	9	8	Unchanged

* Treatment stopped on account of increase in number and severity of seizures

Acetylcholine bromide (B D H) was administered by subcutaneous injection each morning for fourteen days The initial dose given was 0 1 gram, followed by a daily dose of 0 15 gram After seven days the dose was increased to 0 3 gram Pacyl is a derivative of choline and has the advantage of oral administration Its action as a parasympathetic stimulant is said to be more constant than that of acetylcholine Two pacyl tablets were given three times daily for fourteen days Half the cases were first given a course of pacyl tablets followed by a course of acetylcholine injections In the other seven subjects this procedure was reversed

DISCUSSION

The influence of pacyl tablets and acetylcholine injections is shown in the table No beneficial effect was observed during pacyl administration During acetylcholine treatment it will be noted that in five cases a reduction of the number of seizures occurred There was no association between the decrease in the number of convulsions and the increased dosage (0 3 gram) given during the second week In two cases diminution in the number of seizures was accompanied by an increase in psychic equivalents No change in the type or severity of the seizures was observed in the other three cases, classified as improved One of these (No 8) became brighter and more energetic and this mental improvement was maintained for some weeks, although the number of fits again increased after treatment There was no mental change noted in the other two patients, who showed decrease of fits during the injections Case No 5, where a decrease in the number of seizures occurred during the fourteen-day period succeeding acetylcholine administration, was confined to bed at this time With regard to Case No 7, a great increase in the number and severity of attacks coincided with the end of the pacyl treatment An attempt to arrest the rapidly repeated seizures by two 0 4 gram doses of acetylcholine failed, and this form of treatment was in consequence stopped The results obtained in the seven cases classified as unchanged do not call for individual discussion

COMMENT

The question arises whether the beneficial effect occurring in a few cases of the group during acetylcholine therapy may not be dependent on some factor other than the action of this substance It is well known that periodic fluctuations in the incidence of seizures occur in many epileptics An investigation of the incidence of fits occurring in these cases during the previous three months, when the subjects were under the same conditions in all respects except for acetylcholine treatment, did not disclose any fourteen-day periods comparable with those which have been held to justify the use of the word "improved" in the table While, therefore, there was no dramatic reduction in the incidence of seizures, it would seem that a small proportion of the group are less susceptible to attacks when under the influence of acetylcholine

The results obtained from the administration of the choline derivative, pacyl, were discouraging On the whole, it may be said that the results which followed the use of these arterial antispasmodic substances do not lend definite support to the hypothesis that cerebral vasoconstriction is by itself the precipitating factor of the epileptic attack It must, however, be admitted that the action of the drugs may not be the same in the case of the cerebral circulation as in the peripheral vessels of the body

The writer is indebted to Dr F Golla who suggested this investigation and to Dr J Brander, for his help and criticism

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June 1933

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Applications stating age together with copies of three recent testimonials should be sent to the undersigned on or before June 24th

G SUNNUCK
June 12th 1933 Supt & Secretary

(AMENDED ADVERTISEMENT)

THE PRINCESS BEATRICE HOSPITAL, Richmond Road Earls Court S.W.5
(General Hospital—80 Beds)

RESIDENT MEDICAL OFFICER (male) required to act as House Physician and Casualty Officer for six months as from July 1st. Salary at the rate of £110 per annum, with board, residence, and laundry Previous resident experience essential.

Applications to be sent to the House Governor not later than June 20th accompanied by copies of three recent testimonials

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THE QUEEN'S HOSPITAL FOR CHILDREN Hackney Road London E.2.

CLINICAL ASSISTANT required for Medical Out patients Attendance Monday afternoon and Thursday morning Lunch provided Honorarium per attendance to cover expenses Experience as Hospital resident essential. Applications stating qualifications and experience should be addressed to the undersigned as soon as possible

CHARLES H BESSELL,
June 12th 1933. Secretary

WORCESTER COUNTY AND CITY MENTAL HOSPITAL, POWICK, near WORCESTER.

Application are invited for the post of ASSISTANT MEDICAL OFFICER Applicants must be male and single and duly qualified in medicine and surgery Salary £350 rising by yearly increments of £25 to £450 per annum together with furnished apartment board laundry and attendance A further £50 will be paid if the selected candidate holds or obtains a Diploma in Psychological Medicine The commencing salary is subject to a temporary abatement of £13 15s under the National Economy Scheme The appointment is subject to the provisions of the Asylums Officers Superannuation Act 1909

Application stating age experience and full particulars accompanied by copies of three recent testimonials to be forwarded to the Medical Superintendent not later than Saturday July 1 st.

DUPHAM COUNTY MENTAL HOSPITAL.

ASSISTANT MEDICAL OFFICER.

The Visiting Committee invite applications from duly registered Medical Practitioners for the appointment of Assistant Medical Officer at the Mental Hospital. Salary £350 per annum rising by annual increments of £25 to £450 per annum together with board, lodging laundry and attendance valued at £135 per annum plus £50 per annum for the Diploma in Psychological Medicine The appointment will be subject to the conditions of the Asylums Officers Superannuation Act 1909 and the successful candidate will be required to pass a medical examination Preference given to applicant with knowledge of Laboratory routine Applications with copies of three recent testimonial to be forwarded to the Medical Superintendent Winterton Stockton on Tees by June 21

OLDHAM ROYAL INFIRMARY

Application are invited for the following post HOUSE SURGEON required for a period of six months Salary at the rate of £175 per annum with board residence and laundry

Application stating age experience and qualification together with copies of three recent testimonial must be forwarded to the undersigned as soon as possible.

H J CLOUT
Gen Superintendent

ACETYLCHOLINE THERAPY IN EPILEPSY

BY

J E S LLOYD M B

SECOND ASSISTANT MEDICAL OFFICER CANE HILL MENTAL HOSPITAL

A diminution in the number of fits of epileptics following administration of choline derivatives has been recorded in French journals The following investigation of the subject was carried out at Cane Hill Mental Hospital with the permission and help of Dr Lilly the medical superintendent

METHOD

In order to avoid any risk of decomposition the acetylcholine bromide solution was prepared immediately before injection The volume of the injection was maintained at 1 c cm and sterile distilled water was used as the solvent Twenty-one epileptic patients were treated by acetylcholine injections and a similar number of control epileptic patients were given an equal volume of saline hypodermically The dose of acetylcholine was during February 1933 0 12 gram once daily During March the dose was 0 12 gram twice daily All medicines that the patients had been receiving before the course were continued unchanged In April 1933 seven patients were given increasing doses of acetylcholine bromide until they were receiving 0 5 gram hypodermically twice daily The tables show the numbers of fits per month compared with the average numbers per month of 1932

Choline Treatment						Saline Controls					
Case No	Age at onset of fits	Age in 1933	Average fits per 28 days in 1932	February 1 to 28 1933	March 1 to 28 1933	Case No	Age at onset of fits	Age in 1933	Average fits per 28 days in 1932	February 1 to 28 1933	March 1 to 28 1933
1	7	50	6	5	8	22	—	40	5	4	9
2	12	41	16	13	21	23	21	43	15	14	21
3	14	43	9	10	19	24	—	49	9	9	13
4	—	—	1	1	2	25	—	65	1	0	1
5	18	43	1	0	0	26	10	54	1	1	0
6	—	48	1	0	0	27	11	43	4	5	9
7	12	32	2	2	3	28	—	37	15	12	20
8	13	32	18	24	24	29	13	29	11	22	9
9	7	64	9	4	5	30	—	62	7	5	6
10	15	44	9	1	2	31	19	37	8	9	4
11	35	60	2	0	4	32	—	60	3	2	3
12	2	33	6	5	5	33	12	33	7	4	8
13	19	28	5	0	0	34	23	33	5	7	5
14	1	37	0	0	0	35	—	58	0	0	0
15	—	56	7	9	7	36	13	57	5	6	8
16	13	40	10	10	7	37	21	48	8	9	10
17	12	44	6	10	9	38	—	44	4	8	5
18	—	62	4	4	4	39	—	60	4	5	11
19	5	54	10	8	9	40	—	44	12	14	9
20	—	62	3	5	1	41	—	55	2	3	1
21	26	53	3	1	4	42	—	48	4	7	6
Total			123	118	132	Total			133	146	158

Case No	Average per 28 days in 1932	April 1 to 28 1933	Case No	Average per 28 days in 1932	April 1 to 28 1933
3	9	14	23	15	14
16	10	12	24	9	8
17	6	9	33	7	12
19	10	7	Total	60	75

An attempt was made to ascertain whether the intracranial pressure was affected by the hypodermic injection of 0 5 gram acetylcholine bromide In the case of six patients and six controls the cerebro-spinal fluid pressure was measured immediately before and at one minute intervals following the injection The observations were continued for ninety minutes after the injection No significant alteration of the cerebro-spinal pressure was noted No subjective or objective symptoms following the injections were noted in any case

The conclusion arrived at is that acetylcholine bromide does not diminish the number of epileptic fits No change in the character of the fits or of the mental condition of the patients was observed during the course

THE USES AND DANGERS OF COSMETICS

BY

ALICE CARLETON M A M B

ASSISTANT PHYSICIAN DEPARTMENT OF DERMATOLOGY RADCLIFFE INFIRMARY OXFORD

It has been estimated that the fourth largest industry in the United States of America is concerned with the manufacture of cosmetic preparations If they are as is said less commonly used in this country they enter none the less into the daily life of an immense number of women And it is therefore a matter of interest not only to the dermatologist but also to the practitioner to consider their potentialities for good or ill

A formidable list can be made out of cosmetic constituents which have produced harmful results I think the length of the list has sometimes influenced the views of writers on the subject and obscured the fact that many of these substances have caused injurious effects only in rare cases and have otherwise been found harmless or even beneficial I do not propose to make an exhaustive list of substances which have proved irritating or toxic in one or two recorded instances but only to consider a few common preparations and their potentially harmful ingredients

SOME COMMON PREPARATIONS

Powders —Toilet powders consist of a mixture of animal or vegetable powders colouring matter and perfume The vegetable powders include rice wheat corn flour starch acacia and tragacanth The mineral powders in use are chalk talc kaolin magnesium carbonate bismuth nitrate or carbonate and zinc oxide The dyes may be of vegetable origin or may be aniline derivatives Various ethereal oils are used as perfumes and orris root is frequently employed as a fixative The majority of these substances are entirely harmless and unperfumed untinted powders are used in dermatological practice The most dangerous powder ingredient to which most of the recorded instances of poisoning from this source are due is lead Either in the form of lead acetate or lead carbonate this seems to have been a very common powder ingredient in the past though the use of lead acetate is surprising since it is so easily soluble that a shower of rain would dissolve it away But its danger has

ROYAL ARMY MEDICAL CORPS.

TWENTY-FIVE permanent COMMISSIONS in the ROYAL ARMY MEDICAL CORPS will be offered on July 27th, 1933 Applications should reach the War Office not later than July 21st, 1933

Candidates will be selected for commissions without competitive examination, and will be required to present themselves in London for interview and medical examination on July 27th 1933 They must be under 28 years of age on August 1st, 1933, and registered under the Medical Acts

Officers of the R A M C are liable to serve in any part of the world where British troops are quartered

Ample opportunities exist in the Army for clinical professional work both Medical and Surgical, as well as for the study and practice of Hygiene, Pathology, and all the special branches

The cost of Post-Graduate study, which is compulsory, is met from Army Funds

Emoluments Pay—From £356 to £1,542 a year according to rank **Allowances**—Free quarters, fuel and light servant and rations, or cash allowances in lieu, totalling from 6/5 to 23/3 a day according to rank (£117 to £424 a year)

The above rates of allowances apply to Home Commands only At certain stations abroad the rates are considerably higher

Candidates who have held a full-time house appointment in a recognized civil hospital before appointment to a permanent Commission in the R A M C may, subject to certain conditions, be allowed to count the period of service in such an appointment, up to a maximum of 12 months, as Army service for promotion, increase of pay, and retirement

Gratuties on Retirement—After 7 years' service as a medical officer £1,000
" 15 " " " " £2,800
" 18 " " " " £3,500

Current rates of retired pay range from £352 10s per annum, normally earned by a Major after 20 years' service, to £890 per annum, the maximum for which a Major General is eligible The rates of pay and retired pay are subject to revision on or before April 1st, 1934

Outfit Grant.—An officer on joining receives £50 as outfit allowance

Married Officers' Allowances—Officers of 30 years of age and over who are married are entitled to draw special rates of allowances

A Voluntary Widows' and Orphans' Fund exists for officers of the Corps

All particulars may be obtained by application, in writing or personally, to the Assistant Director-General Army Medical Services, The War Office, Whitehall, London, S W 1

COUNTY COUNCIL OF MIDDLESEX
NORTH MIDDLESEX COUNTY HOSPITAL, EDMONTON

RESIDENT PHYSICIAN

The County Council invites applications for the above appointment Candidates must be registered Medical Practitioners, Graduates in Medicine of a British University, and Fellows or Members of the Royal College of Physicians The successful candidate will work under the direction of the Medical Superintendent will reside at the hospital and will devote the whole of his time to his official duties.

Salary £600 per annum, rising by annual increments of £50 to £800 per annum together with residential emoluments valued for superannuation purposes at £150 per annum

In view of the national situation a temporary abatement calculated on the following scale is applied to the salary and value of the emoluments for the first £150 per annum no abatement for the next £100 per annum 2½ per cent abatement for the next £500 per annum 5 per cent abatement for the next £750 per annum 7½ per cent abatement

The successful candidate will be required to pass such medical examination as the Council may direct and unless subject to the Poor Law Officers Superannuation Act 1896 to contribute to the County Council's Superannuation Fund The appointment will be held during the pleasure of the Council and subject to three months notice on either side

Applications stating (1) name (2) age (3) qualifications and (4) experience together with copies of not more than three recent testimonials must be received by the undersigned not later than June 24th

No special application forms are provided Envelopes must be endorsed Resident Physician

Canvassing directly or indirectly will be a disqualification

N B—North Middlesex County Hospital is a modern General Hospital with accommodation for 900 cases chiefly acute 215 beds in the adjoining Edmonton House also are under the care of the Medical Staff of the Hospital The Hospital posses ses a Pathological Laboratory and Radiological Radium Electro therapeutic, Actino-therapeutic Maternity, Massage Ear Nose and Throat Ophthalmic Dental, and Out patient Departments

ERNEST S W HART
Middlesex Guildhall, Westminster S W 1 — Clerk of the County Council.
May 31st 1933

DERBYSHIRE COUNTY COUNCIL
WOMAN ASSISTANT MATERNITY AND CHILD WELFARE MEDICAL OFFICER

The Derbyshire County Council require the services of a fully qualified Whole time Woman Assistant Maternity and Child Welfare Medical Officer experienced in Ante-Natal work Midwifery and Children's diseases to hold (under the direction of the Medical Officer of Health) Consultations at the Ante-Natal and Maternity and Child Welfare Centres of the Derbyshire County Council and (under the like direction) to perform such other duties as appertain to the office

The salary will be £600 per annum rising by £25 per annum to £700 per annum subject to a temporary economy reduction

The appointment will be a designated post under the Local Government and Other Officers Superannuation Act and the successful candidate will be required to pass a medical examination

Applications must be sent to the undersigned together with copies of not more than three recent testimonials not later than Thursday, June 15th

New County Offices, Derby — W M ASH, County Medical Officer
May 30th 1933

ANCOATS HOSPITAL MANCHESTER
HOUSE PHYSICIAN

House Physician required for a period of six months to commence duty on July 1st next Salary £100 per annum, with board, residence, laundry etc

Applications, stating age qualifications and experience to be forwarded to the undersigned, together with copies of three recent testimonials, immediately

By Order of the Board
HERBERT J DAFFORNE
Gen Supt. & Secretary

DREADNOUGHT HOSPITAL GREENWICH, S E 10 (Seamen's Hospital Society)

HOUSE PHYSICIAN required for six months from July 1st Salary £110 per annum and a proportion of fees with board residence and laundry Candidates must be male Applications with copies of three testimonials to be sent in by June 26th to the undersigned

Greenwich — R E V BAX, Secretary
June 10th 1933

CASTLEDERG UNION
DISPENSARY MEDICAL OFFICER WANTED

The Board of Guardians of Castlederg Union will, at their meeting to be held at the Board Room on Friday June 23rd appoint a Dispensary Medical Officer for the Castlederg and Killeter No 2 Dispensary District at an initial salary of £150 per annum, with annual increments of £10 to £200 per annum together with usual Vaccination fees and £30 per annum as Medical Officer of Health under the Rural District Council

Applications with Diplomas to be lodged with me not later than twelve o'clock noon on Friday, 23rd instant

By Order,
R A SCOTT
Clerk of Union
Clerk's Office, Castlederg N I May 26th 1933

THE GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION
(216 Beds.)

TWO HOUSE SURGEONS (male) fully qualified Salary £150 per annum with board residence and laundry

The appointments are for six months which may be extended for similar periods by re election from time to time

Applications, stating age qualifications and nationality with copies of not less than three recent testimonials, should be sent to the undersigned not later than June 29th

The elected candidates will be required to enter upon their duties on July 17th

F J SIMONS
Secretary
June 15th 1933

LONDON HOSPITAL, E.

Applications are invited for the post of SURGICAL FIRST ASSISTANT AND REGISTRAR Candidates must be Fellows of the Royal College of Surgeons The salary is £350 per annum payable by the Hospital and Medical College jointly

The appointment is for one year but is renewable annually on application, for two further periods of one year

Applications should arrive at the Hospital not later than by the first Post on Saturday October 14th

Further particulars may be obtained from the House Governor

ARTHUR G ELLIOTT
House Governor

long been recognized, and its use by reputable firms is now abandoned In Germany it has been prohibited for the last forty years Mayer reports that in Japan the poorer women still use pure lead acetate as a powder and breast fed children have acquired chronic lead poisoning by inhaling it from their mother's skin Barron and Habein give a startling account of five cases of lead poisoning in one family including three deaths two of which were due to lead encephalopathy Only the women of the family were affected, and though the source was not absolutely certain, there was strong presumptive evidence for the prolonged use of a face powder containing lead acetate Bismuth is another metallic powder ingredient which may be harmful if absorbed in sufficient quantities Cole quotes Tuttle as reporting five cases of chronic poisoning due to an insoluble preparation of bismuth in a toilet powder Apart from lead and bismuth toilet powders appear to cause no harm except to individuals who are allergic or hypersensitive Eosin for instance which is used to colour powders causes dermatitis in some few people and orris root is a not uncommon allergen which may give rise to asthma or hay fever as well as dermatitis Rice, wheat and corn flour have also been incriminated as allergens

Lipsticks —These consist of a varying mixture of paraffin lanolin and spermaceti with a dyestuff They scarcely ever cause irritation The rare case of cheilitis from this source is generally due to the dye, and disappears as a rule with a change of lipstick

Cold Creams —These are mixtures of fats and water, with or without the addition of other ingredients The quality depends on the fineness of division of the fats—hence the superiority of proprietary mixtures Some face creams, however contain in addition lead or mercury in the form of white precipitate or calomel Woltman describes a case of chronic lead poisoning due to the use for twelve years of 'owl enamel cream' Creams and lotions containing perchloride of mercury in strengths up to 1 in 200 and white precipitate as strong as 50 per cent are recommended by so called beauty experts' as skin bleaches, the strength of the official white precipitate ointment is 5 per cent Their persistent use has been known to cause a facial pigmentation very difficult to remove Goeckermann mentions two such cases which he believes to have been associated with alkaline sweat He suggests that the normal acidity of the sweat might account for the rarity of this result

Many cosmetic advertisements to day lay stress on the radio active" properties of the wares extolled In the vast majority of cases this is fortunately a fraudulent statement for as Lord Lee of Fareham pointed out recently, in the Silvanus Thompson Lecture such substances, 'to such extent if any as they contain radium must be harmful and potentially dangerous He adds that in his view 'the sale of radio active preparations designed for either internal or external use should be absolutely prohibited"

Vanishing creams are relatively fatless creams and are composed of potassium or sodium stearate and glycerin together with a little fat and rose water or perfume Semi fatless creams may contain almond oil wax or gelatin Casein an occasional constituent of vanishing creams, may produce allergic reactions

Depilatories —Barium sulphide is the commonest constituent but sulphides of calcium, sodium, strontium or magnesium are also used These appear to be generally harmless but in sensitive skins they may give rise to a localized dermatitis

Wrinkle Removers —Astringent lotions are sold for this purpose They are as harmless as they are ineffective Some years ago there was a vogue for the local injection of paraffin Such injections are liable to cause fibrosis with lymphatic blockage and local oedema and in any case the aesthetic effects are most uncertain The method has been abandoned Miller and Faussig describe the appalling results of a third method of removing wrinkles This consists in painting the face with a 65 per cent solution of phenol Strips of adhesive tape are applied next day and removed forty eight hours later together with the adherent epidermis The crust separates in two to three weeks In the resulting scar wrinkles are not apparent Unfortunately it is impossible in some cases to close the lips or approximate the eyelids!

Hair Dyes —These have been grouped as (1) Vegetable dyes such as henna Henna does not irritate but its frequent use makes the hair brittle (2) Metallic dyes Silver copper mercury lead nickel, cobalt and bismuth are used in dilute solutions The metal combines with the sulphur in the hair to form a deposit of metallic sulphide If the metallic dyes are used frequently the metal will be to some extent absorbed and will give rise in time to symptoms of chronic poisoning, a much more serious sequel than the dermatitis of the scalp which may appear at the time of application (3) Compounds of metallic salts and vegetable products such as pyrogallic acid In these not only the metallic salts but also the pyrogallol are potentially toxic and irritant (4) Aniline derivatives of which the best known is paraphenylendiamine The aesthetic advantage of this dye is that it does not merely coat but penetrates the hair It is easy to apply gives a fast colour, and can produce a very varied range of shades For these reasons it became rapidly popular As its popularity spread its danger soon became manifest Its unrestricted sale is now prohibited in Germany Austria and France This dye causes a very severe and persistent dermatitis probably the most persistent of the dermatites due to external applications Miller and Faussig report a case where the eczematous lesions lasted for six months Not only is 'para' an irritant of the skin but it may also produce gastro intestinal and nervous symptoms including retrobulbar neuritis Several fatal cases have been recorded The client's sensitivity to the dye can be estimated beforehand by the Sabouraud Rousseau test But some hairdressers presumably owing to carelessness in application or observation, have failed to detect sensitivity, with disastrous results Several cases have recently been reported of poisoning from 'meeto" a popular preparation containing paraphenylendiamine Unfortunately this does not complete the list of irritants in the process of hair dyeing The first step in the process consists in the removal of the sebum This is usually done by applying an alkaline wash, such as caustic soda or ammonia after the shampoo If the alkaline wash is too strong it may produce a dermatitis of the scalp When the hair has already been dyed or has been unsatisfactorily dyed it may be necessary to remove the dyestuff by bleaching This may be done with hydrogen peroxide which does not irritate, but its excessive use may injure the hair shaft and cause the hairs to break off short Other substances used for hair bleaching are oxalic acid and hydrochloric acid the danger of which need hardly be stressed More disturbing still is the employment for this purpose of potassium cyanide

Hair Lotions —Cases of dermatitis or chronic intoxication have from time to time been traced to the use of hair lotion The incriminated substances have been quinine salicylic acid and resorcin These while beneficial in suitable strengths may cause dermatitis if given in too great strengths or to sensitive individuals Resorcin has the added drawback of causing a dirty discoloration of white or blonde hair Cole describes a case of dermatitis due to arsenious oxide given in a hair tonic Sir Thomas Oliver records a case of asthma which came and went with the use or abandonment of a hair wash containing lead

DISCUSSION

Such a formidable record of injurious effects might well lead one to condemn cosmetics outright This is often and unfortunately done I say "unfortunately" because the result is rarely to deter people from their use but rather to drive them into the hands of unqualified and ignorant or even of definitely fraudulent, persons It seems a pity, therefore, that cosmetics should sometimes be condemned by the medical profession as wholly injurious, not only for their chemical constituents but also for their physical properties, on what appear to be very insufficient grounds

McKenna, in an article in the *British Medical Journal* states that cold creams and vanishing creams "block the sebaceous and sweat glands," and that their use lead eventually to acne rosacea and acne vulgaris This is a common indictment But is there any proof of its validity? McCafferty and Genovese experimented on twenty five cases, and were unable to detect clogging of

the pores in any one McKenna ridicules the cleansing properties of cold cream which are so often advertised But if any observer will apply cold cream to the face and then rub it off with cotton wool he will find that the cream has removed a considerable layer of dirt and dust—more in fact than can be removed with a damp sponge or towel McKenna further dismisses the use of creams and skin foods on the ground that with the exception of glycerin none of the usual constituents are absorbed But Sutton's experiments have shown that fats *are* absorbed though in very varying degrees McKenna would apparently confine the toilet of the face to the use of soap-and water He says that it is only in exceptional cases that the skin of the face is irritated by toilet soaps if we exclude the cheaper soaps containing coco-nut oil and an excess of free alkali This is by no means a universal experience McCafferty and Genovese in addition to their tests with cold cream made further tests with soap They chose patients with moderately dry skins and observed the effect of a few weeks use of soap-and water on the face They found that mild desquamation appeared with a feeling of tautness This disappeared with the application of cold cream They conclude very reasonably that soap-and water are suitable for oily skins and cold cream for dry skins Vanishing creams they condemned as of no value on the ground that these creams were only used as a basis for powder and the same purpose could be served equally well by cold cream From an aesthetic point of view this is not quite true The fatty nature of cold creams makes them too shiny for use by day and it is for this reason that women dislike them

An Experiment with Vanishing Cream

There is however a popular feeling that vanishing creams are drying On theoretical grounds it would seem possible that their high glycerin content might prove irritating As I could find no statements on the subject I tested them myself Trials were made with forty individuals mostly girl undergraduates and a few older women Pond's vanishing cream was rubbed into the right side of the face at night and rubbed off in the morning The other side of the face was left untreated and used as a control The duration of the tests was from four to six weeks in April and early May a period in which many women notice a temporary roughness of the face generally attributed to spring winds The results were as follows

In twelve cases the untreated side of the face became rough while the treated side remained smooth
In one case both sides desquamated but the untreated side was the rougher
In one case both sides desquamated equally which was rapidly cured by cold cream
In one case only the treated side desquamated
In one case small pustules appeared on the treated side
In twenty four cases there was no change

In fact in twenty four cases vanishing cream proved harmless though three of these cases had naturally dry skins In thirteen cases the cream was beneficial In only one out of forty cases did the cream cause dryness

The use of cosmetics is looked upon more kindly on the Continent than in Great Britain In contradistinction to such criticisms as those of McKenna we have the opinion of Kromayer that salves and pastes and the like cause no change in the skin that can produce a bad cosmetic effect Sabouraud goes further and says that he would almost prefer bad creams and bad cosmetics to none at all He has noted as have many others that actresses as a class look younger than their contemporary sisters One sometimes hears the complaint that it is unnatural to put creams and lotions on the skin but it is equally unnatural to wash off the natural oils with soap-and water We live in dry warmed houses and expose the skin to sharp alternations of heat and cold Is it not to be expected that it should need protection and re-oiling?

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THE TREATMENT OF ABSCESS OF THE BREAST*

BY

HAMILTON BAILEY F R C S

SURGEON ROYAL NORTHERN HOSPITAL CONSULTANT SURGEON ESSEX COUNTY COUNCIL

Although great strides have been made in preventing infection of the lactating breast mammary abscess is still an everyday occurrence For many years teaching concerning the treatment of these abscesses has remained stereotyped Under the well known principle of awaiting for fluctuation or at any rate until localization has occurred and then obtaining free drainage by incisions radiating from the nipple results in the majority of cases are good The objections which can be raised to this well tried method are mainly these (1) the resulting scars are too often unsightly (2) a proportion of cases continue to discharge for weeks or months (3) the dressings if secondary infection is to be minimized require the frequent attention of a skilled nurse About two decades ago an innovation was introduced Briefly it consisted of an early but small incision followed by suction with a Bier's hyperaemic bell I saw something of this method and the pain which it caused and the results which ensued were such that I gladly returned to the methods of our forefathers The method of treatment which presently will be described is free from all the objections of its forerunners

Most abscesses of the breast are of the intramammary variety (as opposed to subcutaneous or retromammary) and it is lactating women who are usually sufferers Infection occurs in one of two ways (1) Staphylococci enter the lactiferous ducts and cause clotting of the milk Within the clot these organisms multiply and the acini severed by the obstructed duct become the seat of a lively inflammation (2) Streptococci enter through a crack or abrasion of the nipple and inflammation proceeds apace in the interglandular tissues Unless it is arrested the infection spreads to the glandular mechanism Even

* Being part of an address to the Swindon Division of the British Medical Association February 22nd 1933

INDIAN MEDICAL SERVICE

Recruitment of European Officers.

Applications are invited from medical men for permanent commissions in H.M.'s Indian Medical Service. The terms offered include a gratuity of £1,000 on retirement after six years' service, or £2,500 after 12 years' service, together with free return passages for those who no longer desire to remain in the Service. In other respects the terms will be as detailed below.

Candidates must be European British subjects under 32 years of age at the time of application and must be registered under the Medical Acts in force in Great Britain and Northern Ireland.

CAREERS

The Indian Medical Service offers wide opportunities of medical experience including clinical preventive specialist and research work. At the beginning of his career an officer is employed on the military side which has medical charge of the Indian Army. Promotion is on a time scale up to the rank of Lieutenant-Colonel and by selection to the ranks of Colonel and Major-General. An officer may apply after one year's Indian Service to have his name registered for transfer to the civil side from which appointments are made to Civil Surgeoncies which are established at the principal civil centres to provide for the medical needs of civil officials and for general medical administrative purposes to specialist (for example public health and bacteriological) services to research posts and to professorships at the Medical Schools.

NOTE.—It is not possible to state at present what, if any, prospects of employment on the civil side will be open to Indian Medical Service Officers under the proposed new constitution for India.

PAY

Owing to the state of the financial emergency at present prevailing in India the existing monthly rates of pay which are as follows are subject to a temporary reduction of 5 per cent.

Rank	Service in Rank.	Basic Pay	Overseas Pay	Year of Total Service
		Rs.	Rs.	
Lieut.	—	500	100	1st.
			100	2nd.
			100	3rd.
Capt.	(i) During first 3 years service as Captain	600	100	4th.
			£15	5th.
			£15	6th.
	(ii) With more than 3 and less than 6 yrs. service as Captain	750	£25	7th.
			£25	8th.
			£25	9th.
	(iii) With more than 6 years service as Captain	850	£25	10th.
			£25	11th.
			£30	12th.
Major	(i) During first 3 years service as Major	900		
	(ii) With more than 3 and less than 6 years service as Major	1100		
	(iii) With more than 6 years service as Major	1250		
Lieut.-Col.	(i) Until completion of 23 years total service	1,000	£30	17th and over
	(ii) During 24th and 25th years service	1800		
	(iii) After completion of 25 years total service	1,000		
	(iv) When selected for increased pay	1250		

EXTRAS.—In addition to the above rates various allowances are admissible for a large number of special appointments on both the military and the civil side which may be held by members of the Indian Medical Service. Special high rates of pay are also attached to the numerous administrative appointments open to officers in both branches of the Service.

ANTEDATES IN COMMISSION

Any service rendered by an officer during the war as a medical or combatant officer or in a position usually filled by an officer may be counted as service for increments of pay promotion retirement and retired pay but not for gratuity.

One half of any service in the ranks during the war may be counted as service for retirement and retired pay only.

Candidates possessing certain higher medical qualifications may be granted an antedate of one year in their commissions. Past service in certain hospital appointments may also render candidates eligible for an antedate of one year. Persons holding or about to hold resident posts at recognized hospitals may be seconded in those posts for a period not exceeding one year. The maximum period of antedate secondment or antedate and secondment combined admissible under this paragraph is limited to one year.

OUTFIT ALLOWANCE.

Officers on appointment will receive an allowance of £50 towards the cost of outfit.

PRIVATE PRACTICE.

With the exception of Administrative Officers military or civil and officers holding certain special appointments officers are not debarred from taking private practice so long as it does not interfere with their proper duties.

LEAVE

Leave can be taken at reasonable intervals and adequate rates of leave pay are provided. Extra leave (known as study leave) which may not exceed 12 months in all during an officer's service may be granted to officers desirous of pursuing special courses of study of a post-graduate nature. During such leave study allowance at present fixed at the rate of 12s. a day in the United Kingdom £1 a day on the Continent of Europe and £1 10s. a day in the United States of America is granted to an officer in addition to ordinary rates of leave pay.

PENSIONS

The rates of pension are as follows	Per annum £
After 17 years service for pension	400
18	430
19	460
20	500
21	540
22	580
23	620
24	660
25	700
26	750
27 —	800

These rates are subject to alteration on account of a rise or fall in the cost of living as compared with the year 1919 to an extent not exceeding 20 per cent. in all. At present a reduction of 8¼ per cent. is being made on this account.

There are additional pensions ranging from £65 to £350 per annum for officers who have held administrative appointments.

PASSAGES.

An officer on appointment is provided with free passage to India. The families of officers who are married prior to the date of the officer's embarkation on first appointment will also be provided with free passage to India subject to the payment of messing charges.

Officers and their families are also eligible for passage concessions under which they are granted a certain number of return passages home at Government expense during their service.

INSTRUCTION PRIOR TO EMBARKATION

Officers are required to undergo courses of instruction at the Royal Army Medical College and at Aldershot lasting approximately six months prior to their embarkation for India on first appointment. Information as to the rates of pay admissible during this period and subsequently up to arrival in India is contained in the memorandum referred to below.

A memorandum giving full details regarding these appointments and forms of application may be obtained from the Under-Secretary of State for India, Military Department, India Office, London, S.W.1. The Selection Committee will meet at the India Office early in July next and the selected candidates will be required to join a course of instruction commencing early in August prior to sailing for India early in 1934. Applications should be submitted as soon as possible.

ROYAL VICTORIA INFIRMARY, NEWCASTLE UPON TYNE

RESIDENT APPOINTMENTS

The following Resident appointments will become vacant as from Tuesday, August 1st

The appointments are tenable for six months except the Skin and Venereal Departments and the Out patient Dressing Department, which will alternate for three months in each Department.

FOUR HOUSE PHYSICIANS
SIX HOUSE SURGEONS
ONE HOUSE SURGEON to Throat, Nose, Ear, and Eye Departments
ONE HOUSE SURGEON to Gynaecological Department
ONE HOUSE SURGEON to Orthopaedic Dept
TWO HOUSE SURGEONS to Accident Dept
TWO HOUSE SURGEONS to Skin and Venereal Department and Out-patient Department. (Three months in each Department)
LEAZES HOSPITAL (Pay Bed Section)
TWO HOUSE SURGEONS (may be eligible for re appointment)

Candidates must be registered in Medicine and in Surgery, and must produce evidence of being able to administer anaesthetics

Candidates must be prepared to take any appointment

As regards applications for the appointment of (a) House Surgeons to Accident Room, (b) House Surgeon to Out patient Department and (c) House Surgeons to Special Departments, preference may be given to *candidates who have* previously held two Resident appointments

Residents are remunerated at the rate of £50 per annum except the Residents in the Leazes Hospital who are remunerated at the rate of £96 per annum

Before making application intending candidates are asked to apply to the undermentioned for a copy of the regulations governing the appointments and form of application

Applications stating age experience, and qualifications and accompanied by copies of two testimonials should be sent to the undermentioned not later than first post on Monday, June 26th

S DUNSTAN,
June 9th 1933 House Gov & Sec

ROYAL VICTORIA INFIRMARY, NEWCASTLE UPON TYNE (677 Beds)

Applications are invited for TWO RESIDENT ANAESTHETISTS (open appointment) at a salary of £144 per annum each, with board and residence

The term of appointment is for three months commencing Tuesday August 1st and may be renewed for further periods

Candidates must be registered in Medicine and in Surgery

Applications, stating age experience and accompanied by two recent testimonials should be addressed to the undermentioned not later than first post on Monday June 26th

S DUNSTAN
June 9th 1933 House Gov & Sec

NORTHAMPTON GENERAL HOSPITAL (253 Beds)

There are vacancies immediately for a HOUSE SURGEON for one of the General Honorary Surgeons and a HOUSE SURGEON for the Ear Nose and Throat Department British nationality Salary £150 per annum with board residence and laundry

The successful candidates will be appointed for the period ending on September 30th and will be eligible for re election for a further period of six months

Candidates must be duly qualified and registered

Applications stating age sex, qualifications etc with copies of testimonials, to reach the undersigned not later than first post on Wednesday June 21st

H ST JOHN WOOD,
June 9th 1933 Secretary Supt

DERBYSHIRE HOSPITAL FOR SICK CHILDREN (80 Beds)

Wanted July 1st RESIDENT HOUSE PHYSICIAN (lady) Salary £130 p a The appointment is for twelve months Applicants must be fully qualified Applications with three testimonials one relating to anaesthetics to be sent to the undersigned forthwith

ARTHUR N WHISTON
25 St Mary s Gate, Secretary
Derby

DERBYSHIRE HOSPITAL FOR SICK CHILDREN (80 Beds)

Wanted July 1st, a RESIDENT HOUSE SURGEON (lady) Salary £130 p a The appointment is for twelve months Applicants must be fully qualified Applications with three testimonials one relating to anaesthetics to be sent to the undersigned forthwith

ARTHUR N WHISTON
25 St Mary s Gate Secretary
Derby

WOOLWICH AND DISTRICT WAR MEMORIAL HOSPITAL
Shooters Hill, London S E 18
GENERAL HOSPITAL—112 Beds

HOUSE PHYSICIAN, also HOUSE SURGEON

The Board of Management invites applications from suitably qualified male candidates for appointment as (a) House Physician and (b) House Surgeon for a period of six months from July 1st next In addition to his surgical duties the House Surgeon will have the care of a Maternity Unit of 8 beds

An honorarium of £100 per annum will be paid in respect of each appointment, plus board, residence and laundry

Applications accompanied by copies of not more than three recent testimonials should be addressed to the Secretary (at the Hospital) to reach him not later than Monday June 19th The Appointments Committee will meet on June 23rd to interview short-listed candidates who will be duly advised when and where to attend

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN
St Quintin Avenue, North Kensington, W 10
(58 Beds)

HOUSE SURGEON (male or female) required for six months from July 1st Salary for first three months at the rate of £75 per annum and for the second three months at the rate of £100 per annum, *with board*, residence, and laundry in each case Candidates should have held a responsible Hospital appointment Applications, with copies of three recent testimonials should be submitted to the Secretary (on a form to be obtained from him if time allows) and must reach him not later than first post Wednesday, June 21st

H J ELEY, Secretary

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN,
St. Quintin Avenue North Kensington, W 10
(58 Beds)

HOUSE PHYSICIAN (male or female) required for six months from July 1st Salary for first three months at the rate of £75 per annum, and for second three months at the rate of £100 per annum, with board, residence and laundry in each case Candidates should have held a responsible Hospital appointment. Applications, with copies of three recent testimonials, should be submitted to the Secretary (on a form to be obtained from him if time allows) and must reach him not later than first post on Wednesday June 21st

H J ELEY Secretary

THE ROYAL HOSPITAL, WOLVERHAMPTON
(Incorporated under Charter)

HOUSE SURGEON required, duties to commence July 6th The Hospital contains 300 beds, includes the usual special departments and is recognised by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice

Candidates must be registered under the Medical Acts and unmarried

The appointment is for six months Salary at the rate of £100 per annum, board furnished rooms and laundry provided

Applications with copies of testimonials to be forwarded to the undersigned

Wolverhampton W H HARPER
June 6th 1933 House Governor

HUDDERSFIELD ROYAL INFIRMARY (240 Beds)

MALE HOUSE SURGEON required to commence duty on July 6th

Salary £150 per annum, with board residence and laundry Appointment for six months subject to renewal at the discretion of the Board of Management

The Hospital is officially recognised for the surgical practice required of non members before admission to the Final Fellowship Examination of the Royal College of Surgeons of England

Applications with copies of three recent testimonials to be addressed to the undersigned immediately

H E G HALL
Gen Supt & Secretary

THE ROYAL GWENT HOSPITAL, NEWPORT, MON (160 Beds)

Wanted a JUNIOR RESIDENT MEDICAL OFFICER to act as House Surgeon to Out patients and as *House Physician*

Salary £135 with board lodgings and laundry Resident Medical Staff 5 Eligible for promotion

Large Out patient Department

Applications stating age and qualifications with copies of three recent testimonials, to be sent to the undersigned

Applications from ladies not entertained

J K MILLWARD
June 9th 1933 Secretary Supt

VICTORIA HOSPITAL, BURNLEY (126 Beds.)

HOUSE SURGEON (Male)

Applications are invited for the above post which will become vacant on July 1 t next The appointment is for six months in the first instance at a salary of £150 per annum together with board, residence, and laundry At the end of this period re appointment for a further period may be applied for and if confirmed the salary for the second six months will be at the rate of £200 per annum

Applications with full details of qualifications and experience and stating nationality together with *copies of* recent testimonials, should be addressed to the undersigned forthwith

J E WHEATCROFT Secretary

RADCLIFFE INFIRMARY AND COUNTY HOSPITAL OXFORD

Applications are invited for the post of HOUSEKEEPER DIETITIAN in the above Hospital

Preference will be given to candidates possessing a University degree and previous Hospital experience

The salary will be at the rate of £250 per annum (non resident) rising by annual increments of £10 to £300 *per annum*

Applications stating age experience and qualifications and containing copies of not more than three testimonials must be sent to the undersigned not later than June 26th

A G E SANCTUARY,
Radcliffe Infirmary Administrator
and County Hospital Oxford

ST PETER'S HOSPITAL FOR STONE ETC, Henrietta Street Covent Garden W C 2.

The attendance of CLINICAL ASSISTANTS to the undermentioned members of the Honorary Staff who attend the Out patients Department at the times indicated, is now being considered. A fee of Five Guineas becomes payable to the funds of this Hospital on appointment and applications should be forwarded to the undersigned as early as possible

Mr John Sandrey	Mondays 3 to 6 p m
Mr Alban Andrews	Tuesdays 2 to 5 p m
Mr Ogier Ward	Wednesdays 3 to 6 p m
Mr F J F Barrington	Thursdays 3 to 7 p.m
Mr Ogier Ward	Fridays 9 30 to 11 30 a m. (Women & Children)
Mr Alban Andrews	Fridays 3 to 6 p m (male out patients)
Mr John Sandrey	Saturdays 2 to 6 p m

BEECHEY ROGERS Secretary

NORFOLK AND NORWICH HOSPITAL, NORWICH (392 Beds)

Applications are invited for the following posts —

(a) HOUSE SURGEON
(b) HOUSE PHYSICIAN

Preference will be given to candidates who have held previous appointments Salary for both posts £120 per annum, with board residence, and laundry

Candidates (male) *who must possess registered* qualifications, should forward applications stating age *nationality etc*, together with copies of testimonials, to the undersigned not later than first post on Tuesday June 20th

FRANK INCH
June 9th 1933 House Governor & Sec

KING EDWARD VII HOSPITAL, WINDSOR (181 Beds)

TWO HOUSE SURGEONS required (one for Casualty Department) for six months from date of appointment Applicants must be fully qualified men or women *registered and prefer*ably have held a resident appointment One to have had some experience in Ear, Nose and Throat work

Salary at the rate of £100 per annum together with board residence, and laundry

Applications, stating age qualifications, and experience accompanied by copies of testimonials should be sent to the undersigned not later than June 26th

ARTHUR E. CHURCHER
Secretary

QUEEN MARY'S HOSPITAL FOR THE EAST END E 15
Telephone Maryland 2616

Applications are invited from fully qualified and registered Medical Men for the post of HOUSE SURGEON at the above Hospital at a salary of £120 per annum

The Hospital contains 217 beds including 50 for Maternity and other special Department

Candidates who should have held previous Hospital appointments must send in applications accompanied by testimonials to the undersigned not later than Saturday June 24th The appointment will be for six months, and will date from July 1st

RAPHAEL JACKSON (Major)
Secretary

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary, 7 Drumsheugh Gardens, Edinburgh).

(a) British Islands

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH** *(contd.)*
EBBW VALE, MON. *(Workmen's Medical Society.)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association.)*	COUNTY BOROUGH OF SOUTH SHIELDS. HARTON INSTITUTION AND CLEADON COTTAGE HOMES *(Medical Officer.)*
GILFACH GOCH, GLAMORGAN *(Workmen's Medical Scheme.)*	OGMORE VALLEY, GLAMORGAN *(Wyndham Colliery Medical Aid Society.)* *(Workmen's Medical Scheme.)*	HERTFORDSHIRE COUNTY COUNCIL. WARE SANATORIUM. *(Assistant Medical Officer.)*
LLWYNPIA, CLYDACH VALE, PENYGRAIG, GLAMORGAN *(Workmen's Medical Scheme.)*	**PUBLIC HEALTH**	FULHAM BOROUGH COUNCIL. Maternity and Child Welfare Department. *(Assistant Medical Officer—Woman.)*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer.)*	KENT COUNTY COUNCIL. LENHAM SANATORIUM. *(Male Assistant Medical Officer.)*	
MARDY, GLAMORGAN *(Workmen's Medical Scheme.)*	FARNBOROUGH INSTITUTION HOSPITAL. *(Resident Assistant Medical Officer.)*	
SEATH AND DISTRICT *(Medical Aid Association.)*		

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. G. HUNTER (Medical Secretary, New South Wales Branch), 135, Macquarie St., Sydney, N.S.W.	QUEENSLAND *(Brisbane Associated Friendly Societies Institute.)*	The Hon. Sec., Queensland Branch British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	WELLINGTON, NEW ZEALAND *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec., New Zealand Branch) British Medical Association, P.O. Box 155, Wellington, New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec. Victorian Branch British Medical Association), Medical Society Hall, East Melbourne, Victoria.	*(Toowoomba Associated Friendly Societies Medical Institute, Toowoomba.)*		WESTERN AUSTRALIA. *(Contract and Lodge Practices.)*	Hon. Sec. Western Australian Branch, British Medical Association, No. 6 Bank of N.S.W. Chambers, St. George's Terr., Perth, Western Australia.

June 14th, 1933. By Order of the Council. G. C. ANDERSON, Medical Secretary.

NORTH ORMESBY HOSPITAL, MIDDLESBROUGH.

HOUSE PHYSICIAN required, male and unmarried. Salary £120 per annum with board, residence and laundry. There are three Resident and the successful candidate will be eligible for the post of House Surgeon in due course.

Applications stating age, qualifications, previous experience (if any), with copies of three recent testimonials, should be sent to the undersigned at once.

GEORGE WATTS,
June 6th, 1933. Secretary-Supt.

JENNY LIND HOSPITAL FOR CHILDREN, NORWICH.

Applications are invited for the post of RESIDENT MEDICAL OFFICER. Salary £120 per annum with board, residence and laundry. Candidates (male or female) who must possess registered qualifications, should forward applications, stating age, nationality, etc., together with copies of testimonials, to the undersigned not later than first post on Tuesday, June 20th.

FRANK INCH,
June 9th, 1933. Secretary.

YORK COUNTY HOSPITAL. (200 Beds.)

The post of HOUSE PHYSICIAN will become vacant on July 1st. Salary £150 per annum with board, residence and laundry.

Application, stating age and previous experience, together with copies of not more than three recent testimonials, to be sent to the undersigned not later than 9 a.m. on Tuesday, June 20th.

H. E. RYAN, Gen. Supt.

MANSFIELD AND DISTRICT HOSPITAL.

The Board of Management of the above Hospital (135 beds) invite applications for the post of HOUSE SURGEON (male). Duties to commence July 1st next.

Salary at the rate of £150 per annum with residence, board, and laundry.

The appointment is for six months and is renewable.

The Resident Staff consists of a Resident Surgical Officer and two House Surgeons.

Applications accompanied by not more than three recent testimonials to be sent to the undersigned.

Dated this 31st day of May, 1933.

C. J. ADAMS, Secretary.

PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN, Shadwell, London, E.1.

HOUSE SURGEON required. Salary at the rate of £125 per annum, with board, residence and laundry. The appointment is for six months from July 1st. Applications, stating age, nationality, qualifications and experience, accompanied by copies of no more than three recent testimonials, should reach the undersigned not later than 19th.

J. F. RUSSELL, Secretary.

CHESTER ROYAL INFIRMARY. (211 Beds.)

HOUSE SURGEON (male) required for July 15th. Salary £150 per annum with board, lodging, and washing. Application list closes June 22nd. Application forms may be obtained from W. H. CRAGE, M.D., M.R.C.P., Hon. Superintendent of the Resident Medical Staff.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond St., London, W.C.1.

Applications are invited from registered Medical Practitioners for the following non-resident appointments which become vacant on July 1st:

A CASUALTY MEDICAL OFFICER (male). Salary £250 p.a. (half-time).

TWO OUT-PATIENT MEDICAL REGISTRARS (male). Salary £250 p.a. (half-time).

THREE OUT-PATIENT ANÆSTHETISTS. Honorarium £50 p.a. (part-time).

Also for an IN-PATIENT MEDICAL REGISTRAR (male). Salary £300 p.a. (whole-time).

Duties to commence on October 1st.

All the above appointments are tenable for twelve months but are renewable.

Candidates must be prepared to attend for interview at the Hospital on Wednesday, June 21st, at 4.45 p.m.

Applications supported by not more than three testimonials, given specially for the purpose, must be submitted to the undersigned not later than Saturday, June 17th, from whom further particulars and forms of application may be obtained.

H. F. PUTHERFORD, Secretary.

CHARING CROSS HOSPITAL.

Application are invited for the post of HONORARY CLINICAL ASSISTANT to the Dermatological Department.

Applications, together with copies of three recent testimonials, will be sent to the undersigned not later than July 1st.

PHILIP INMAN, House Governor.

Charing Cross Hospital, London, W.C.2.

(Appointments continued on p. 60.)

Convalescence.—The only dressing now required is a piece of dry folded gauze over the wound kept in place by adhesive plaster. The patient can get up wearing an ordinary brassiere for support. There is always a considerable indurated area in the breast at this period and it persists for some time. Latterly I have placed the patient during convalescence upon iodine in milk therapy similar to that described by Mr. H. Chitty for the treatment of actinomycosis. This has been followed by a more rapid absorption of the massive induration and an obvious improvement in the patient's general condition.

Conclusion

I submit that this technique which largely follows that of Dr. J. E. Hobbs of St. Louis is an advance on older methods. After a considerable experience of it I am confident that those who adopt the method will find that the patient is delighted with the painlessness of the post-operative period. Scarring of the breast is reduced to a minimum—obviously an important consideration. Convalescence is short—much shorter than when the classical treatment is employed. I have found that the after-treatment has received the unqualified approval of the attending nursing staff, and it seems probable that the method will appeal particularly to the more isolated practitioner who of necessity must leave the after-treatment largely in the hands of a district nurse.

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Bennett, T. C. *British Medical Journal*, 1911, i, 864.
Chaput, H. *Presse Méd.*, October 3rd, 1918.
Hobbs, J. E. *Surg. Gynecol. and Obstet.*, liv, No. 5, 839.
Chitty, H. *British Medical Journal*, 1929, i, 347.

A TREATMENT OF SYDENHAM'S CHOREA

BY

DONALD BATEMAN, M.R.C.S., L.R.C.P.

HOUSE PHYSICIAN, HOSPITAL FOR SICK CHILDREN, GREAT ORMOND STREET.

The treatment of Sydenham's chorea as conducted at present may be said to resolve itself into enforced rest and the use of drugs. The most popular drugs for this purpose are probably salicylates, aspirin, chloretone, arsenic and nirvanol. Although much can be said in favour of the use of nirvanol there are those who raise objection to it and who state that harmful effects may arise from its administration even when the greatest care is taken. Of the others none is of proven and specific value in the treatment of this disease. Rest is the fundamental and most important mode of treatment; the drugs play a secondary part. It is almost impossible to secure complete rest in the patient's own home, especially is this so when dealing with the hospital class of patient and it is among this class that the disease is most prevalent. Moreover rest to be effective must be prolonged. The result is that we have throughout the country large numbers of cases of chorea occupying beds for extensive periods in the hospitals supported by voluntary contributions. If there could be discovered a satisfactory method of treatment that would bring about a quicker cure it would be a source of great economy and convenience as well as of satisfaction to the patients' parents. The possibility that there is such a method has now been demonstrated with success by Dr. Lucy Porter Sutton of Bellevue Hospital, New York City. It was observed by her that an intoxication with fever resulting from phenobarbital therapy, when occurring in a case of chorea caused a reduction in the choreic manifestations. The conclusion was drawn that the fever itself was responsible for the effect. On this basis it appeared that the deliberate provocation of fever during the course of an attack of chorea would be a beneficial therapeutic measure. This proved to be so. The induction of fever is now used as a routine procedure in the treatment of chorea in the Children's Medical Service of the Bellevue Hospital. It is upon the observation of Dr. Sutton's methods and the experience derived from a number of patients with chorea whom it was my privilege to treat under her direction that this report is made.

Treatment by Induced Pyrexia

Fever is induced by a triple typhoid vaccine containing 1,000 million typhoid and 750 million each of paratyphoid A and B bacilli per cubic centimetre. Other methods of causing artificial fever have been used and are at present being investigated but the typhoid treatment is at present most commonly employed. The routine is as follows.

On the day following admission to hospital the patient is submitted to a thorough physical examination to make sure that there are no contraindications to treatment. The degree of chorea exhibited in the various limbs at rest and upon the performance of combined movements (walking, dressing, mastication) is estimated and classified as severe, moderate or mild; this is done so that the daily progress may be roughly noted. It should be carried out each day before treatment. On the day treatment is commenced the patient receives a light breakfast (that is, no food within a short time of the induction of fever). The pulse and temperature are taken immediately before the typhoid vaccine injection. It is advisable to take the temperature rectally as it is hard to estimate it accurately elsewhere once the fever is in progress. The vaccine is administered intravenously. It is customary to begin with 0·05 or 0·1 c.cm. as a reasonably high temperature is usually obtained with fairly small doses following the initial injections. The patient is then placed in a blanket bed and is supplied with several hot water bottles. It must be emphasized that the patient requires the most careful observation and attention from the nursing and medical staffs during the course of the fever. The desired object is the attainment of a temperature between 104° F. and 105·5° F. and its maintenance for four hours. At first it should be taken hourly, but once it is above 103° it is as well to take it every thirty minutes. The only objection to the temperature being taken frequently throughout the treatment is that each disturbance of the bed tends to lower the patient's temperature. Once the temperature is rising well it is advisable to remove the hot water bottles.

During the course of the treatment the patient's thirst may be relieved by sips of water; copious draughts should not be allowed as they may be harmful and also have an antipyretic effect. No food should be given, even without it vomiting may occur in a few cases. The earlier after injection the required degree of fever is reached the more likely is the temperature to go on rising. In these cases it is necessary to remove some of the bedclothes until the next temperature is read. The patient should be carefully watched. At the end of the period of desired hyperpyrexia the patient is placed between sheets and the temperature allowed to fall. But this is not an occasion for the relaxation of nursing attention. The temperature should be taken regularly until it is normal again. If it rises above 106° efforts should at once be made to bring it down. The bedclothes should be removed and the patient covered only with a sheet. A tepid sponging should be given and aspirin (5 grains) administered. In addition an ice bag may be applied to the head. The tepid sponging should be continued at intervals of a few minutes until the temperature is below 106°. It is not usual for it to reach this height but if it does harmful effects do not ensue. 106° is used as an indication for active measures as it is well inside the limits of safety. If the patient has been carefully watched this degree of pyrexia should not be reached at all as it should have been possible to regulate the temperature by adjustments of the bedclothes based on previous observations. In this connexion it is important to note whether the patient is of a type that sweats easily or not. In those who do not sweat much the temperature is apt to rise fairly rapidly to a considerable height and close attention is therefore indicated. With patients who sweat easily there may be difficulty in getting the required temperature and they should be wrapped closely in their blankets when it is seen that the temperature

is not rising This measure may send the temperature up quickly, and the patient should be watched for this eventuality

The treatment should be continued each day until the choreic movements have disappeared It is usually found that the dose of typhoid vaccine must be doubled each day in order that it may be effective but no general rule can be made as patients react differently It is a good plan in starting to increase the dose by half that of the day before A rough guide is that it should be increased freely when the previous day's dose gave a poor result and only slightly when the former one was attended with a very high fever But even after a high fever a larger dose is usually necessary if an adequate fever is to be maintained If it is found that a dose of vaccine has not been sufficient, it may be supplemented two to four hours later by another and smaller one

Most patients show a marked improvement after two or three treatments and are usually free from choreic movements in a week As would be expected the milder cases improve more quickly than the severe ones Patients with a long history of chorea before admission to hospital may be slow in their response to treatment and it should be remembered that in these patients habit movements may be superimposed upon those that are essentially of choreic origin At the end of the fever treatment the patients are kept in bed for a few days and are then allowed up for a week before discharge from hospital The usual length of stay in hospital is three weeks This compares very favourably with the seven weeks which most other modes of treatment require Mention may be made of those cases of chorea which on admission to hospital show a cardiac murmur of rheumatic origin This need not be regarded as a contraindication to treatment unless it is thought that the circulatory system cannot support the effects of a high fever The treatment so far has proved satisfactory It has considerably shortened the duration of the stay in hospital and is not accompanied so far as is at present known, by complications The patient's discomfort attendant upon the treatment is much less than might be expected and is probably preferable to the weeks in bed and long continuance of the choreiform movements associated with other methods

I have to thank Dr Charles Hendee Smith and Dr Lucy Porter Sutton of the Children's Medical Division Bellevue Hospital New York City and the Department of Paediatrics New York University for allowing me to treat cases under their direction for teaching me their methods and for permitting me to write this note

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

POST OPERATIVE INTESTINAL OBSTRUCTION

A case reported by Mr A Davies under this heading in the *Journal* of January 7th was interesting and helpful The following case which came under my care involved a similar sequence of problems, but with variations

The patient aged 10 was admitted to the St Albans and Mid Herts Hospital on November 6th 1930, with the history that for three days she had had abdominal pain with vomiting

On November 7th an appendicectomy was performed The appendix was found to be ulcerated but not perforated and the abdomen was closed without drainage Subsequent progress was uneventful and the patient was discharged as fit fourteen days later

On February 28th 1932 the patient was re admitted with a history of sudden onset of abdominal pain on the previous day frequent vomiting and pain on micturition temperature was 101° and pulse 146 On examination there was no abdominal distension but rigidity and tenderness especially in the right lumbar and right iliac regions A laparotomy was performed that evening and a nine inch loop of small intestine was found constricted by an adhesion The constricting band was incised and the gut which was dark purple in colour on being treated with warm saline so improved in appearance as to be considered viable The abdomen was closed without drainage During the following three days the patient's condition was satisfactory the temperature fell gradually to normal on the third day and the pulse rate decreased Much abdominal pain with occasional vomiting, was not considered abnormal Anti gas gangrene serum was given with morphine and heroin and on the third day an enema was administered with good result and passage of flatus On the fourth day blood and mucus was passed per rectum vomiting increased in frequency and became faeculent and the abdomen became more distended An exploration was undertaken and the affected loop of bowel was found to be gangrenous and perforated The pelvis was full of foul intestinal contents which welled out of the abdominal wound A Paul's tube was inserted into the healthy gut proximal to the gangrenous portion the latter being brought into the lower margin of the wound and left *in situ* the pelvis was drained Resection was considered inexpedient in view of the condition of the patient but especially in view of her age Subsequently the ileum drained freely through the enterostomy, the wound gaped widely and ten days later the segment of bowel together with its mesentery separated through the lower extremity of the wound

On April 19th a further operation was undertaken the skin of the abdominal wall having become severely excoriated by the digestive action of the ileal contents There was an extensive 'matting' between coils of gut The ileum above and proximal to the enterostomy was clamped and divided the distal end invaginated, while a lateral anastomosis was performed between the proximal portion of ileum and the transverse colon On April 22nd the bowels opened naturally The patient was again discharged on June 4th both the local and the general condition being very favourable

After re admission three months later the functionless enterostomy was closed by dissection and invaginated extraperitoneally and the patient finally discharged on October 29th

This case demonstrates, as did the one previously recorded, the difficulties of diagnosis in surgical conditions of the abdomen In the interim between the initial operation for intestinal obstruction and the following exploration, the patient's general condition was no criterion of the pathological state The case also illustrates the inherent faculty of the peritoneum to procure the restoration of vital functions This has been the only case in my experience of the separation of a segment of gut together with its mesentery by natural means and its extrusion through the abdominal wound

D S MORGAN JONES F R C S Ed
Honorary Surgeon St Albans and Mid Herts Hospital

P S —Since the above was written the recurrent formation of a mucocele necessitated a complete resection of the blind gut, which was undertaken on March 7th with an entirely successful issue

A CASE OF GENERALIZED VACCINIA

Although, after vaccination, secondary pustules are sometimes seen round the primary mark a case of generalized vaccinia is comparatively rare

On December 1st 1932 I vaccinated D H a well nourished healthy baby weighing 15 lb and aged 3 months using Government establishment lymph and making one scar on the left arm At the same time I vaccinated an older child H H, aged 10 years in the same house using the same lymph On December 7th I inspected both arms and found them clean and healthy presenting the features of a normal six day vaccination On December 20th the medical officer of health asked if I would call and see the younger child as some spots had broken out over the body

When I saw it I learned that the spots had begun to appear about three days previously The outer surface of the left arm was bright red the colour extending from 1 inch below the shoulder to about 1½ inches above the elbow The area was covered by necrosed skin and presented the appearance

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of a large blister out of which the fluid had been withdrawn There was a very slight temperature (99° F) The child was restless fretful and irritable and refused its food On the wrists thighs legs and head there were raised pearly spots in varying stages of development and of various sizes Some were umbilicated and some appeared more like the spots of alastrim than those of small pox On December 21st the child was admitted to Fazackerly Hospital under the care of Dr C Rundle the medical superintendent On admission there were numerous small vesicles around the original larger one on the left arm and the spots on the body had developed into typical vaccination pustules The distribution was then face back of scalp both wrists left thumb right buttock and several on the right leg and thigh and soles of both feet The temperature was still 99° pulse 132 respiration 34 On December 23rd the temperature went up to 100 4° The pulse was 144 and the lesions were spreading with copious eruption on both legs and buttocks and on the face some of these were the size of a shilling The temperature then fell to normal and remained so until December 26th On December 25th fresh pustules developed on the back and front of both thighs but with no accompanying rise of temperature On December 26th the temperature again rose to 99 6° and the arm became very baggy and was inclined to slough There were numerous water vesicles at the outer edge The child was taking food well On December 27th the temperature rose still further to 100 4° pulse 178 and the child developed convulsions and died

The post mortem findings were as follows The body was that of a well nourished child Over the outer surface of the left upper arm was a bare bright red inflamed area 4 inches long by 3½ inches in diameter and extending approximately from the shoulder to the elbow There was some deeper coloration of the central portion suggesting that this was the oldest part of the lesion and that it had commenced there The body was covered with raised pearly spots varying from about 1 8 inch up to 1 2 inch in diameter The larger of these were depressed in the centre and had thickened edges resembling blebs and giving the appearance of developing vaccination pocks The largest and oldest lesions showed necrosis in the centres and the formation of crusts There was little or no pustulation The distribution of the lesions was general but they were more numerous on the lower limbs than on the trunk and upper part of the body The thoracic organs were healthy except for some terminal congestion and oedema of the lung bases The liver and spleen both showed areas of necrosis having the characters of vaccinia lesions The other abdominal organs showed no abnormality Microscopical examination of the skin lesions showed these to have the character of vaccinia papules The same characters were found in the focal lesions of the spleen and liver No changes of importance were found by microscopical examination in the brain and spinal cord or in the other organs (suprarenals heart kidneys pancreas) which were examined in this way

It is obvious from the pathological report that this was a blood borne infection Professor Dible pathologist of Liverpool University has never seen a case of this kind in his experience It could hardly have arisen from any septic infection as both parents and home were extremely clean and there was no evidence of such infection being present While I was in Persia several thousand vaccinations were done either by me or under my supervision The scar was made and the lymph was allowed to dry on It was impossible to keep either pads or bandages on the natives arms so after drying they were left uncovered No untoward result had ever been seen I have had several letters on the subject and in one the writer has reported to me a case of general vaccinia which occurred in a baby that had been washed with water in which an elder child who had been vaccinated was bathed

I am deeply indebted to Professor Dible for a report on his post mortem and bacteriological findings and to Dr C Rundle medical superintendent Fazackerly Fever Hospital for his notes on the case whilst it was under his care

C J DE VERE SHORTT M B D P H
Late M O H and Port Health Officer
Abadan S Persia

Reports of Societies

OVARIOTOMY

At the annual general meeting of the Section of Obstetrics and Gynaecology of the Royal Society of Medicine with the president Mr J P HEDLEY in the chair Dr HERBERT SPENCER in a review of six hundred and fifty eight ovariotomies remarked on the paucity of *personal* records of complete series since Spencer Wells published in 1882 his *One Thousand Ovariotomies* with a mortality rate of 23 2 per cent Dr Spencer had published his first fifty cases (in 1893) with one death but in his complete series there were thirty five deaths (5 3 per cent) of which twelve occurred after the removal of malignant or suppurating tumours

Dr Spencer emphasized the importance of the entering of particulars in an analysis book by the operator immediately after the operation and recovery or death of the patient No patient was discharged from hospital or home before the twenty fourth day after operation As an illustration of the influence on statistics of early discharge from hospital or home he stated that of the thirty five deaths one occurred (from syncope) on the twenty second day two (from embolism) on the twenty fourth day one (malignant) on the thirty fourth day and one (from cachexia) five months after operation The youngest patient was aged 14 the oldest 82 eleven patients being over 70 years of age Sixty three cases associated with pregnancy had been already published in detail Adhesions were present in 448 cases torsions of the pedicle in eighty-five twelve tumours had been tapped before operation There were thirty three benign ovarian tumours (in addition to seventeen malignant cysts) which were papillomatous sixty six were dermoids twenty ovarian fibroids (eighteen fibromata two adenofibromata) forty five were parovarian tumours (eight complicating pregnancy) sixty three tumours were suppurating sixty seven malignant (of which six were sarcomata and two endotheliomata) The proportion of malignant tumours was just over 10 per cent Dr Spencer thought that the proportion (20 to 25 per cent) often stated in textbooks was exaggerated and that the error was due to mistaking benign for malignant papilloma and fibroma for sarcoma He had personally removed eleven papillomatous benign ovarian tumours which after coeliotomy had been declared by experienced gynaecologists to be inoperable and mostly malignant and as a result of a personal experience of this kind if a patient with a tumour supposed to be malignant was found to be in fair condition two years later he advised the operator to believe with him that a mistake had been made and remove the tumour In Dr Spencer's opinion all benign tumours could and should be removed With regard to malignant tumours he was of the opinion that many of these could be removed with advantage even in presence of secondary growths Cases in support of this opinion were mentioned such as cancerous tumours remaining well six and seven years after unilateral removal a patient well four years after removal of cancer of the ovary and breast and a patient with pseudomyxoma ovarii et peritonei who survived four operations and died of heart disease seventeen years after the first operation A notebook with details of the cases was exhibited

Lieut.-Colonel GREEN ARMYTAGE reminded the Section that he had published in 1930 the findings and results of 547 consecutive operations for ovarian neoplasms He was of opinion that the incidence of malignancy was greater than Dr Spencer had indicated (10 per cent) for in his series microscopically malignant tumours amounted to 21 4 per cent a figure which approximated more nearly to the statistics of Döderlein and Lippert He considered also that the chances of recurrence in the opposite ovary in cases of papilliferous tumours was greater than Dr Spencer had suggested In recent years when there was ascites and an extrinsic type of papillary tumour in one ovary he had preferred to remove the uterus and both ovaries With regard to pulmonary embolism he had found this accident a very rare com

plication in clean cases since he had insisted on breathing exercises and active limb and chest movements

Mrs IVENS-KNOWLES said that in a case of bilateral dermoids associated with a five months pregnancy, she had adopted the enucleation as recommended by Dr Spencer The pregnancy continued and menstruation returned normally Twenty years later however, carcinoma of the right ovary had developed This unfortunate sequel to a successful case had made her doubt the safety of the procedure Mr C D LOCHRANE stated that he had experienced the grave complication of pulmonary embolism in his cases in spite of deep breathing exercises and early active movements Dame LOUISE MCILROY and Mr CLIFFORD WHITE also took part in the discussion

Dr HERBERT SPENCER, in reply, referring to Colonel Green-Armytage's practice of removing both ovaries in cases of papilloma of the ovary said that the advantages of leaving one ovary, or even part of the organ, were so great that he preferred to take the risk of development of papillomata on the other side Dr Ivens-Knowles's experience would not affect his belief in the soundness of the practice of enucleating dermoids He did not agree with Colonel Green-Armytage that suppuration never occurred in dermoids he had met with it four times in sixty-six cases He would with Mr Lochrane, express his mistrust of facile statements about methods to avoid pulmonary embolism

SNAKE VENOMS

At a meeting of the Royal Society of Tropical Medicine and Hygiene on May 11th with the president Dr CARMICHAEL LOW in the chair, Dr C H KELLAWAY read a paper entitled "Some Peculiarities of Australian Snake Venom'

In his introductory remarks Dr Kellaway pointed out that, though Fairley (1929) had shown in the common poisonous Australian snakes a gradual transition in morphological characters from the non-poisonous colubrines towards the vipers, no such regular transition was demonstrable in their venom constituents, the death-adder for example, presenting a pure colubrine type of venom Viperine venoms were not so toxic as those of the Colubridae they, however, possessed powerful thrombins and usually killed by causing peripheral circulatory failure which was contributed to by cytolysis of vascular endothelium (haemorrhagin) Viperine venoms were weak in haemolytic and curare-like action The venom of the Colubridae, on the other hand generally possessed no thrombins, but contained powerful haemolysins and were predominantly curare-like poisons some had an additional direct action on muscle These venoms caused death by paralysis of respiration but the action was peripheral, and not central This he had demonstrated experimentally in inoculated animals by placing the phrenic nerve in contact with non-polarizable electrodes the upper of which was earthed and the lower connected to the grid of the first valve of an amplifier whose output passed to a loud speaker Rhythmic rustling sounds due to nervous impulses down the phrenic nerve were heard similar to those studied by Gasser and Newcomer (1921) and Adrian and his colleagues (1928) Certain of the Australian colubrine venoms were powerfully coagulent but haemorrhagins were not strongly represented Their haemolysins though generally similar in action to those of other colubrine venoms, exhibited certain points of difference They were not influenced by the presence of complement indeed, serum frequently inhibited instead of activating haemolysis The haemolysins though they caused inhibition of haemolysis when present in excess did not render the cells less susceptible to other lytic agents The Australian venoms were peculiarly toxic when administered subcutaneously, and though this was in part due to their curare like action it could not be wholly accounted for There was no convincing evidence of direct action on the central nervous system and their extreme toxicity might be due in part to action on the peripheral circulation On smooth muscle the Australian venoms exhibited a wholly peculiar action, which resembled the anaphylactic response of sensitive plain muscle Similar effects could be demonstrated upon the isolated uterine muscle and upon the intact vascular system The potency of this action on smooth muscle was closely paralleled by the lethal action of the venoms when injected subcutaneously in laboratory animals

Dr HAMILTON FAIRLEY referred to the pioneer work on snake venom done by Martin in Australia at the close of the last century and pointed out that until Dr Kellaway and his colleagues had commenced their investigations at the Hall Institute of Research Melbourne little new work had been done Apart from field work and investigations on ophidian immunity, Dr Kellaway had studied a number of entirely new Australian venoms, and re-investigated the commoner colubrine venoms, using modern pharmacological methods the end result had been to establish a very strong case for their peripheral action Essex and Markowitch had done this conclusively for the crotaline viper venoms and since the lesion described in the nervous system by Kilvington Lamb and others could now be explained in terms of asphyxia it looked as if the whole theory of the central action of venom would have to be discarded The killing capacity of the venom yield of certain Australian snakes was amazing and in Australia at one 'milking" he had obtained sufficient venom from a tiger snake to kill a flock of 387 sheep, and from the death adder sufficient to kill 235 , the average venom yield had been 118 and 84 7 lethal sheep doses for these two species respectively In studying snake venoms the zoological approach remained an important and an inadequately explored one After all, snake venom was fundamentally a digestive salivary juice, and the fact that it contained haemorrhagin, haemolysin, and other cytolysins and even thrombin, was not so surprising , but the capacity of the venom gland to manufacture a neuro muscular poison having the effect of rapidly immobilizing the prey was difficult to comprehend except in terms of a spontaneous variation which had become permanently established by natural selection More information was required about the physiology of ophidian digestion and the interrelationship of the digestive juices, and when this was forthcoming the significance of certain venom constituents might become more apparent

Dr MORGAN said that as director of the Commonwealth Serum Institute, he had been asked to produce antivenenes, and had succeeded in the case of the tiger snake and copperhead but not in the death adder Some 2 or 3 mg of the latter venom was the approximate lethal dose for horses, yet after immunizing them to stand as much as 8 grams of venom—that is, 2,700 lethal doses—the serum showed no obvious protective action Dr Kellaway had already referred to this finding in one of his papers So far no polyvalent serum was available throughout Australia, but in tiger-snake bites so treated fourteen out of fourteen cases had recovered Regarding specificity tiger-snake antivenene was only 10 per cent protective for the copperhead, and showed no protection at all for death-adder venom The action of antivenene was specific

Colonel R H ELLIOT stated that some thirty years ago he had started work assuming that all colubrine snakes killed alike but he had soon found that the action of the sea-snake was different from that of the cobra and its venom ten times more lethal In his experience *Tel s carinata* was not a deadly snake He asked whether in inoculated monkeys Dr Kellaway had observed paralysis of the levator palpebrae superioris, and in frogs paralysis of the muscles lifting the lower lids Sir LEONARD ROGERS said that he was not altogether convinced as to the peripheral action of the cobra venom which killed an animal in two to three minutes at a time when there was no paralysis of the phrenic nerve he did not think haemolysin had anything to do with mortality Prof. BOYCOTT asked whether venoms were adapted to the animals they were required to kill and whether they were always compound in their constitution Was any venom known which contained a single constituent, such as thrombin or haemolysin?

Sir HENRY DALE commented on the interesting nature of the diffusible thrombin of brown snake venom and

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President LORD MOYNIHAN OF LEEDS K.C.M.G C.B., M.S., F.R.C.S

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Hours 10 6

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Secretary (Dept B), **C S M M G, Tavistock House (North), Tavistock Square, London, W C 1** 'Phone Euston 1676 7-8

SOUTH DEVON AND EAST CORNWALL HOSPITAL PLYMOUTH
(240 Beds)

Applications are invited for the post of HOUSE PHYSICIAN
Salary £120 with board, residence, and laundry
Appointment tenable for six months and subject to renewal
Duties to commence July 1st
Applicants must be registered under the Medical Acts.
Applications stating age and qualifications with copies of three recent testimonials, to reach the undersigned by June 21st
ARTHUR R CASH
Gen Supt & Secretary

THE WILLESDEN GENERAL HOSPITAL, N W 10

OUT PATIENT DEPARTMENT
CLINICAL ASSISTANTS

Applications are invited for appointment to the following sessions
SURGICAL—Monday afternoons
MEDICAL—Tuesday afternoons
MEDICAL—Friday mornings.
SKIN—Saturday mornings.
DENTAL—
Applications must be received not later than first post on Monday June 26th and should be addressed to the Secretary of the Hospital from whom further details of the appointments may be obtained
June 12th 1933

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY

HOUSE SURGEON wanted Ophthalmic experience preferred Duties to commence in July There are 50 beds for In patients and large Out patient Department Salary £150 a year with furnished apartments board and laundry Ladies and gentlemen applying should state age and experience and send copies of three recent testimonials to reach the Secretary not later than July 3rd
EUSTACE LEES
June 13th 1933 Secretary

ROYAL INFIRMARY BLACKBURN
(240 Beds—Five Residents)

FOURTH HOUSE SURGEON (male) required at a salary of £150 per annum rising to £250 with board residence laundry, etc To commence duties at end of June
Applications with copies of testimonials stating age nationality experience etc to be sent at once to the undersigned
Royal Infirmary NATHAN A SMITH
Blackburn Gen Supt & Secretary
This Institution is recognised for the Surgical Practice required for the F R C S final examination

BOOTHAM PARK MENTAL HOSPITAL, YORK

Wanted ASSISTANT MEDICAL OFFICER male single fully qualified and registered Previous Mental Hospital experience not essential Salary at the rate of £300 per annum with board accommodation attendance and laundry
Apply with copies of testimonials to the Medical Superintendent Bootham Park York

ECCLES AND PATRICROFT HOSPITAL
near MANCHESTER

HOUSE SURGEON required, July 15th Good general surgical work Commencing salary at rate of £150 p a plus usual Six months appointment Apply with copies of testimonials to the Secretary at the Hospital

WEST END HOSPITAL FOR NERVOUS DISEASES
In Patient Department Gloucester Gate, Regent's Park
Out Patient Department 73 Welbeck St, W 1

The Committee of Management invites applications for the post of HON ASSISTANT OPHTHALMIC SURGEON Candidates who must be Fellows of the Royal College of Surgeons Eng are requested to send eleven copies of their application, with recent testimonials not later than Monday June 19th, to the undersigned from whom further particulars should be obtained.
J P WETENHALL,
Welbeck Street W 1 Secretary

CENTRAL LONDON OPHTHALMIC HOSPITAL, Judd Street St Pancras W C 1

Applications are invited for the posts of SENIOR and JUNIOR HOUSE SURGEON Candidates must be registered Medical Practitioners Salary £120 and £100 per annum respectively with board and residence in the Hospital The appointments are for six months from July 15th. The Junior House Surgeon is a candidate for the Senior post
Applications, with copies of three testimonials should reach the undersigned on or before June 30th
GEORGE WATTS Secretary

TORBAY HOSPITAL TORQUAY
(146 Beds)

A HOUSE PHYSICIAN (male) is required for July 14th Salary £175 per annum, with board residence, and laundry allowance Candidates must be fully qualified, registered and unmarried
Applications stating age nationality qualifications and experience to be sent to the undersigned as early as possible with copies of not more than three recent testimonials.
E L GRIST
June 12th 1933 Secretary

THE CHILDREN'S HOSPITAL SHEFFIELD
(110 Beds—Three Residents)

Applications are invited for the following posts vacant August 1st
HOUSE PHYSICIAN HOUSE SURGEON
The appointments are for six months with salary in each case at the rate of £100 per annum with board residence and laundry
Candidates must possess registerable qualifications forward applications etc, together with copies of three recent testimonials to the undersigned
T H G GARTLAND Secretary

SANATORIUM, BRIDGE OF WEIR

COLONY FOR EPILEPTICS, BRIDGE OF WEIR

ASSISTANT MALE RESIDENT MEDICAL OFFICER wanted to commence duties in August
Keen evangelical and keen research worker preferred Appointment for six months in first instance at rate of £200 p a (renewable by mutual agreement) with board and laundry
Applications to Medical Superintendent stating age experience and qualifications and enclosing references

MERTHYR GENERAL HOSPITAL

Applications are invited for the post of RESIDENT SURGEON for the coming six months. Salary £150 per annum plus board lodging and laundry
Applications with three recent testimonials must be in the hands of the Secretary on or before June 24th

CITY OF LIVERPOOL

MEDICAL SUPERINTENDENT
MILL ROAD INFIRMARY

Applications are invited from fully qualified Medical Practitioners with the necessary knowledge and experience of hospital administration for the appointment of full time Medical Superintendent at the above Infirmary at a salary of £1 000 per annum (subject to a temporary deduction authorised by the Council) together with an allowance of £150 per annum in lieu of residence For the time being the appointment will be non resident but the Council reserve the right to call upon the Medical Superintendent to reside in the Infirmary when suitable accommodation is available Any fees received in connection with the appointment to be handed over to the City Treasurer in accordance with the Standing Orders of the Council
The gentleman appointed will assume control of the Infirmary under the direction of the Medical Officer of Health and be responsible for the work of the Medical Surgical Nursing and Administrative Staffs in accordance with the instructions of the Council from time to time Special experience in surgery is essential
The Infirmary accommodates acute medical surgical and maternity patients with approximately 800 beds and has a staff of Resident Assistant Medical Officers Visiting Specialists and a Nursing Staff of 130
The Infirmary is a Training School recognized by the General Nursing Council and the Central Midwives Board and the Medical Superintendent will be required to organise the necessary lectures in connection with the training of Nurses.
The appointment will be made subject to the Local Government and Other Officers Superannuation Act 1922 and the Standing Orders of the City Council and will be determinable by three calendar months notice on either side
Applications to be made upon forms to be obtained from the Medical Officer of Health Municipal Annexe, Dale Street Liverpool to be endorsed Medical Superintendent Mill Road Infirmary' and returned to the undersigned so as to be received not later than first post Tuesday, July 4th Canvassing of members of the City Council either directly or indirectly, will be considered a disqualification
Municipal Buildings, WALTER MOON
Liverpool Town Clerk
June 1933

HILL END MENTAL HOSPITAL
ST ALBANS HERTS

ASSISTANT MEDICAL OFFICER (THIRD) required early in July Male single age not over 30 years Previous Mental Hospital experience not essential Salary £400, rising to £450 per annum with furnished quarters board attendance and washing in addition £50 per annum will be paid upon obtaining the D P M The appointment is subject to the provisions of the Asylums Officers Superannuation Act 1909 At present a temporary economy deduction of 5 per cent on the salary is in force Application stating age qualifications and experience with copies of three recent testimonials to the Medical Superintendent

also asked if there was any evidence that a mush of plain muscle would absorb the venom constituent responsible for the anaphylactic like response of isolated plain muscle Sir RICKARD CHRISTOPHERS said that he would have expected snake-venom haemolysis to resemble saponin haemolysis and so be unassociated with prehaemolytic swelling of the corpuscle He asked what was the degree of dilution in which prehaemolytic swelling was seen Dr MALCOLM SMITH pointed out that the Ophidia were classified into three groups non poisonous snakes with non grooved teeth back fang snakes which possessed grooves on their back teeth and a mildly poisonous venom and the truly poisonous snakes with grooved or canalized front teeth and potent venoms From the evolutionary viewpoint the back fanged snakes with grooved teeth had gradually shortened their maxillary bone until the back has become the first fang

In replying Dr KELLAWAY dealt with the various questions raised With regard to Sir Leonard Rogers's criticism concerning the peripheral action of venom he pointed out that cobra venom was a cardiac poison and where many lethal doses were given the animal died of heart failure before curarization had time to develop He had noted with Australian venoms paralysis of the eyelids of monkeys and frogs similar to those described by Colonel Elliot for Indian venoms In regard to Sir Henry Dale's query he had not determined whether muscle could absorb the constituent of venom concerned in its anaphylactic like response but would do so In haemolytic experiments the order of dose producing strong prehaemolytic swelling varied from 1 to 3 mg for 0·34 c.cm of a 50 per cent suspension of corpuscles

TOXAEMIAS OF PREGNANCY

At a meeting of the London Association of the Medical Women's Federation held on May 23rd Professor M LUCAS KEENE presiding a paper on toxaemias of pregnancy was read by Miss MARGARET BASDEN She said that she proposed to discuss only late toxaemias—namely toxic albuminuria and eclampsia Following Dr James Young's classification she included all cases of albuminuria occurring in late pregnancy and drew attention to Dr Young's view that nearly every case of chronic nephritis met with in pregnancy owed its origin to toxaemia originating in a previous pregnancy The cause of toxaemia of pregnancy was still unknown but certain facts were established that the cause of toxaemia of pregnancy was pregnancy (G F Gibberd) that the organs chiefly involved were the liver and kidneys and that the latter might be permanently affected Miss Basden then gave some statistics for the years 1931 and 1932 from the Mothers' Hospital Clapton

Out of a total of 3,008 deliveries during this period there were 239 cases of albuminuria excluding eclampsia (7·9 per cent.) Fifteen per cent of the patients gave a previous history of scarlet fever or diphtheria but since many case sheets had no reference to past history the proportion of previous infective disease was probably higher The foetal mortality rate in the group was only 3 per cent and 73 per cent of the cases did not show symptoms till the thirty fourth week or later but it was possible that the infective disease had caused an occult nephritis The combined foetal and neo-natal mortality in all cases was 4·5 per cent and in the albuminuria cases 10 per cent High blood pressure in the mother appeared to play the most important part in causing foetal deaths—a blood pressure of 150 or over was present in 64 per cent of the cases and of 170 or over in 44 per cent Prolonged toxaemia was less important as a cause of foetal death and was present in less than 25 per cent

The supervention of eclampsia was no longer looked upon as the only real danger to the mother connected with toxic albuminurias for the work of Gibberd and others had shown that the albuminuria recurred as such in subsequent pregnancies in 50 per cent of cases while in 10 per cent of cases it recurred as chronic nephritis The risks both of recurrent albuminuria and of chronic nephritis were greatly increased when the toxaemia was allowed to continue for more than three weeks The diagnosis of toxic albuminuria was simple and the obstetrician should be prepared to make and act upon it without risking dangerous delay by depending on extraneous aids The two cardinal symptoms were albuminuria and high blood pressure of which the latter was the more important De Lee stated that a blood pressure of 130 should be looked on as a warning to greater vigilance while the limit of safety might be put at 140 This might seem unduly cautious but the blood pressure of a healthy pregnant woman tended to be low and 105/110 was not an uncommon reading

Discussing treatment Miss Basden said that there were two main objects (1) to prevent the patient from getting worse (for the hope of curing her before delivery was but slight) and (2) to do what was possible to prevent permanent damage to the kidneys The urine and blood pressure should if possible be examined daily but in hospital practice twice weekly sufficed for mild cases the more serious ones should be admitted The medical treatment was practically that of nephritis except that milk was restricted or withheld It varied in strictness according to the severity of the case the worst cases being kept in bed on water or water and glucose only The best means at present known of preventing permanent renal damage was the timely termination of a toxic pregnancy It was hardly ever justifiable to allow the toxaemia to continue for more than three weeks and toxaemia appearing at or continuing till full term should be looked upon as an indication for inducing labour at once Fortunately this seldom meant sacrificing the child The Mothers' Hospital statistics for 1931 and 1932 showed that more than 75 per cent of all cases of albuminuria did not show symptoms till the thirty fourth week or later It was therefore seldom necessary to induce labour before the thirty sixth week and a child born at thirty-six weeks had almost as good a chance of survival as one at full term and a much better one than if it had to exist for weeks in the uterus of a toxaemic mother The best and quickest method of induction was by rupture of the membranes as described by Dr Gibbon FitzGibbon and in practice its numerous theoretical disadvantages were found to be non-existent The treatment of severe recurrent toxaemia and of chronic nephritis from which it might not be distinguishable should be by Caesarean section and sterilization

Miss Basden showed a chart giving details of the seven eclampsia cases occurring in the years under review constituting 1 in 427 of all deliveries and about 3 per cent of the albuminuria cases There was one maternal death among them None of the patients had symptoms suggesting the onset of eclampsia until the day on which the fits occurred and even then subjective symptoms were only present in three cases—namely headache and loss of vision in one case and headache alone and vomiting alone in the two others In three cases the blood pressure remained below 140 and the highest blood pressure noted was 190 The prophylactic treatment of eclampsia was far more important than that of the developed condition which was medical not surgical The transition between a severe case of pre-eclamptic toxaemia and eclampsia was often so insidious that prompt Caesarean section was indicated as soon as this stage was reached Recognition of this very severe type of toxaemia depended on its response to medical treatment No single sign or symptom-complex could be relied on as a guide Most patients showed a distinct improvement after treatment in bed for twenty four hours on glucose and water only Should this improvement not occur labour should be induced at once but if the condition worsened Caesarean section should be performed Occasionally even this twenty four-hour delay proved dangerous The symptoms indicating immediate operation would be such a combination as severe headache high blood pressure much albuminuria and dimness of vision a less obvious indication would be recurrence of severe symptoms after temporary improvement Miss Basden referred to her recent report of thirty cases of pre-eclamptic toxaemia treated by Caesarean section with no maternal mortality and no subsequent development of eclampsia She had since added three cases to the series which included three cases of sterilization for severe recurrent toxaemia She would not

LONDON LOCK HOSPITAL AND HOME. (Founded 1746)

HONORARY SURGEON

The Board of Management invite applications for the above appointment. Candidates must be Fellows of Surgeons of England, full particulars and testimonials must be lodged with the undersigned on or before Monday July 3rd. The appointment will be made at a Special Court of the Governors on July 6th.

By Order of the Board
283 Harrow Rd W 9 J F MORTON
June 1st 1933 Secretary

ROYAL EAST SUSSEX HOSPITAL, HASTINGS

...d for the post of the above Institution ... a Fellow or Member of the Royal College of Surgeons of England or a Fellow or a Licentiate of the Royal College of Surgeons of Edinburgh or Ireland or a Graduate in Surgery of one of the Universities of the United Kingdom or Ireland and also be duly registered under the Medical Act.

Application accompanied by ... of three recent testimonials must reach the Secretary not later than Wednesday July 12th.

WILFRID G KEMSLEY
Secretary

The Senior Assistant Surgeon is a candidate for the post.

STOCKTON AND THORNABY HOSPITAL, STOCKTON-ON-TEES
(140 Beds—3 Resident)

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER (male) for a period of at least six months. Duties to commence about July 14th. Salary £175 per annum with board residence and laundry. Candidates must be duly qualified and unmarried. Application stating age, nationality and experience together with copies of three recent testimonials to be sent to the undersigned.

J WILKINSON Secretary.

NEWCASTLE THROAT, NOSE, AND EAR HOSPITAL.

HOUSE SURGEON required for six months from date of appointment. Applicants must be fully qualified registered and preferably have held resident appointment.

Salary £100 per annum together with board residence and laundry. Applications stating age, qualifications and experience accompanied by copies of three recent testimonials should be sent to the undermentioned.

CHAS W LISLE, Secretary.

DISTRICT INFIRMARY ASHTON UNDER LYNE.
(General Hospital—200 Beds mainly Surgical.)

Wanted a HOUSE SURGEON. Six months appointment.

Salary at the rate of £150 per annum with board residence and laundry.

The Resident Staff comprises a Resident Surgical Officer and three House Surgeons.

Application with testimonials to be sent at once to the undersigned.

FRANK OLIVER
June 5th 1933 Gen Supt & Secretary

THE LIVERPOOL EYE, EAR AND THROAT INFIRMARY Myrtle Street LIVERPOOL.

Applications are invited for the post of HOUSE SURGEON (male) to the above Institution. Ear Nose and Throat Dept to take up duties July 1st. Salary £120 per annum. Applications with copies of not more than three recent testimonial should be made as soon as possible to the Chairman CHARLES W WRIGHT Esq 9 Harrington Street Liverpool.

ST JOHN'S HOSPITAL, LEWISHAM S.E.13.

Applications are invited for the post of RESIDENT HOUSE SURGEON (male) which becomes vacant on July 1st. Appointment tenable for six months. Remuneration £100 p.a. Application with copies of testimonial should reach the undersigned not later than the morning of June 20th.

J C CHERRY
Secretary Superintendent

CHEADLE ROYAL MENTAL HOSPITAL, CHEADLE, CHESHIRE.

CLINICAL ASSISTANT for six months which may be extended to twelve. Salary at the rate of £150 per annum with board.

Applications to the Medical Superintendent.

ESSEX COUNTY HOSPITAL, COLCHESTER. (160 Beds)

Wanted end of July a HOUSE PHYSICIAN (male). Salary £150 per annum with board, washing and residence in the Hospital. Medical and Surgical qualifications required.

Applications with three recent testimonials to be sent on or before Wednesday June 21st, to

ALFRED G BUCK Secretary

ESSEX COUNTY HOSPITAL, COLCHESTER. (160 Beds)

Wanted immediately HOUSE SURGEON (male). Salary £175 per annum with board washing and residence in the Hospital. Medical and Surgical qualifications required. Applications with three recent testimonials to be sent by Wednesday June 21st to

ALFRED G BUCK Secretary

GLENGALL HOSPITAL FOR MENTAL DISEASES AYR

Wanted JUNIOR ASSISTANT MEDICAL OFFICER (male). General Practice or Hospital experience desirable. Salary £300 per annum (less contribution to Superannuation Fund) with board, lodging and laundry. Applications, with copies of testimonials to Dr MCRAE.

Telephone WELBECK 2728
Telegrams ASSISTIAMO LONDON."

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W J HICKS *Secretary*

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suggest that without operation all these cases would have developed eclampsia but she was convinced that some would have done Patients with profound toxaemia did not stand the operation badly, and they were not therefore being asked to undergo an undue risk

SURGERY OF FACIAL PARALYSIS

At the May meeting of the Section of Surgery of the Royal Academy of Medicine in Ireland, with the president, Mr H STOKES in the chair, Mr F J MORRIN read a paper on the surgery of facial paralysis

Having reviewed the anatomy of the nerve, Mr Morrin discussed the various conditions producing interruption of its conductivity from the cortex to its distribution Paralysis appearing immediately after a mastoidectomy was probably due to section of the nerve , in such cases faradic response was lost in approximately three weeks The presence of faradism in the muscles was an indication for deferring operative treatment The methods of surgical treatment—plastic operations sympathectomy nerve suture, and nerve anastomosis—were discussed End-to-end suture he described as technically difficult, and if the nerve ends were much damaged or frayed it was impossible as tension could not be avoided He reported two cases in which facio-hypoglossal anastomosis was performed with return of voluntary movement, muscular co ordination and absence of associated movements, but without return of emotional movement Movements occurred in the first case fourteen weeks, and in the second case eighteen weeks following operation The operative procedure was described Mr Morrin considered the hypoglossal nerve more suitable than the spinal accessory as providing better co ordination, while anastomosis of the descendens noni to the cut distal fibres of the twelfth nerve prevented hemiatrophy of the tongue to a very great extent The three desiderata in the surgical treatment of facial paralysis were (1) restoration of normal facial contour and muscular tone during repose , (2) restoration of voluntary muscular control , (3) restoration of emotional expression These three functions would recover if satisfactory end-to end anastomosis could be accomplished , they might recover with a nerve graft The first two functions would recover with facio-hypoglossal anastomosis, and some emotional expression might be acquired Restoration of contour and muscular tone might be improved by sympathectomy, while some restoration of contour might be regained by plastic operations To ensure success, operation must be undertaken without undue delay

The PRESIDENT congratulated Mr Morrin on his successful operations, and on the lucid explanation of his operative technique He referred to a recent paper by Dickson Wright who stated that he did not believe in transverse anastomosis Mr W PEARSON said that the cases described by Dickson Wright were not all cases of facial paralysis , some of the operations had been done for severe facial tic, and in these the operation was much easier to perform Where a nerve graft was necessary, he thought it better not to put in a section of freshly cut nerve It was better to isolate the segment of nerve and then wait for about four weeks before putting it in When a two-stage operation was done a very good result would ensue

Mr C J MACAULEY said that anyone who had seen cases of facial paralysis and realized their distress would appreciate what a tremendous boon operation was In one case in which the facial nerve had been damaged many years previously it was impossible to find the nerve and he concluded that it had atrophied completely He performed a plastic operation which apparently was very successful but about a year later the muscle had completely disappeared This, he thought was the usual result in cases in which muscle grafts were used Dr ALAN THOMPSON referred to a case of facio-hypoglossal anastomosis, performed by Dickson Wright in which return of voluntary power was practically *nil* but emotional return was good In cases of facial spasm there was very ugly grimacing and sometimes complete loss of vision for a short time, so that the operation was very beneficial It had been suggested that facial paralysis was sometimes caused by herpes zoster of the geniculate ganglion

Reviews

A SURGEON S POCKET BOOK

Mr H S SOUTTAR has written a handbook for the use of students under the title of *A Surgeon s Pocket Book* [1] with the idea of providing them with a volume for reference ' at odd moments ' It epitomizes points of first importance in regard to the injuries and diseases with which surgical practice is concerned As in the case of the usual System, ' the book deals first with general and, later, with regional surgery As a companion in ward work and out-patient work such a summary of facts as it provides has definite uses , and it is for reference in association with clinical work we imagine that the author has designed it A few points seem to call for remark Is it correct to describe the fatty protrusions of the mid abdominal line as lipomata and are they the " starting-points " of hernia? The myeloma, or osteoclastoma, should find a place among the catalogued tumours of bone it is described elsewhere but not in this category (p 81) To place chronic mastitis typically in the fourth decade of life is to place it, surely somewhat early , in the distinction from carcinoma the bilaterality of the condition is worth emphasis The occurrence of abscess formation in connexion with diverticulitis needs mention In giving the treatment of enlarged prostate (p 267) the words " suprapubic cystotomy " are used where what seems to be intended is " suprapubic prostatectomy "

A very useful inclusion in the regional chapters is a description of the surgical anatomy relative to each region or viscus A dresser with this book in his hand will certainly find his way made easier amid the multifarious conditions with which he has to become acquainted it will adequately fulfil for him the purpose of ready and serviceable reference

MODERN ASPECTS OF GASTRO ENTEROLOGY

The special subject of diseases of the digestive organs has made great advances in the last half century Not only have the methods of investigation been enlarged by new discoveries and the application of *x*-ray technique and chemical tests, but the underlying conception of the phenomena of disease of these organs has undergone a complete change The textbooks of thirty or forty years ago dealt with the diseases according to the symptoms of the patients, as explicable by the pathology of that day Pathologists were aware of gross changes due to new growth or chronic ulceration, and of anatomical abnormalities of position causing obstruction but post mortem changes obscured the fine details of alterations in the mucous membrane lining the digestive tract Clinicians therefore, in the absence of other data, were led to regard many of the complaints of their patients as due to nervous dyspepsia and gastric or intestinal neuroses The early work with test meals, which differentiated an acid from an atonic or subacid dyspepsia only confirmed the functional aspect of the disorder Though the direct observations of surgeons at operation with their investigation of the pathology of the living took note, for example, of ulcers of the duodenum, they drew a hard-and-fast line between those patients with demonstrable duodenal ulcer and those who only suffered from hyperchlorhydria Failing however to ensure the recovery of the patient by simple short circuiting methods they practised the removal of parts of the badly functioning organ itself These parts when submitted to careful

[1] *A Surgeon s Pocket Book* By H S Souttar D M M.Ch F R C S London W Heinemann (Medical Books) Ltd 1933 (Pp 285 7s 6d net)

histological examination have revealed changes of an organic nature in the portions of viscus far removed from the ulcer itself Now the pendulum has swung across to the other side Gastro-duodenitis is the essential and underlying condition in diseases of the upper digestive tract according to the teaching of Faber and Hurst just as colitis is to be regarded as an organic complaint if we follow von Bergmann and others

A recently published book on the *Modern Aspects of Gastro enterology* emphasizes the changed point of view Dr M A ARAFA the author after serving as medical registrar to Kasr-el Aini Hospital Cairo and medical tutor at the Egyptian University was given three years leave of absence for study abroad He has divided his time between London Berlin and Vienna and has had as Dr Hurst says in a foreword an almost unique opportunity of studying modern medicine under clinicians approaching the subject by very different methods and from very different points of view Dr Arafa has set down the views of his teachers and notes of his reading in the subject of diseases of the digestive system and has combined them in a book that will be read with interest and instruction by all who work on the subject In the investigation of the stomach he declares a good history of the case proper abdominal palpation modern radiology and gastric analysis are the reliable factors for diagnosis Each of these should be given due weight and we must never depend upon the radiological report alone to give a definite diagnosis X rays can only support a provisional diagnosis based on a careful clinical examination as well as on other evidence Modern radiological technique and the chemical examination of gastric contents are described in detail Emphasis is laid on the display by special methods of the condition of the folds of mucous membrane lining the stomach thickening or irregularity of the folds may serve to draw attention to lesions which would otherwise be overlooked In this way the modern conception of the frequency of gastritis has been confirmed there may be two varieties at least—a hypertrophic gastritis where the rugae or folds of mucous membrane are abnormally thickened and tortuous or chronic atrophic gastritis where the rugae are thin and atrophic It is easy to understand that an atrophic gastritis will produce a subacidity or achlorhydria and even achylia or complete absence of gastric secretion if the atrophy has proceeded far enough Hyperchlorhydria on the other hand is not so readily explained as a sequel of gastritis except on the hypothesis that it follows when gastritis occurs in those who have constitutional hyperchlorhydria and the gastritis is thus superadded to a functional hypersecretion Setting aside these considerations however Dr Arafa finds that he can convey the modern conception of gastro-duodenal diseases under two headings—peptic ulcer and gastritis with its sequelae of which the most important is cancer of the stomach

In the investigation of intestinal diseases too radiology plays an important part when the results obtained by it are placed in proper relation to a careful history and physical examination including proctosigmoidoscopy and analysis of the faeces The colon can be demonstrated and information obtained not only about its movements but about the state of the lining membrane as well In this way the portion of the colon involved can be localized when ulceration is shown by the presence of pus and mucus in the faeces Dr Arafa deals only with ulcerations of the colon due to various causes—dysentery tuberculosis and what is called primary ulcerative colitis He omits the simple and catarrhal forms of colitis from his discussion because they clear up rapidly with complete rest and careful dieting But it is these simple and often relapsing forms which many modern authors regard as precursors of the more severe and ulcerative forms In dealing with tests of liver function the author finds none of much value except those which define the gall bladder on the *x* ray screen after the ingestion of opaque dyes containing iodine A short chapter on the diagnosis of pancreatic disease follows and then one on the dietetic treatment of the diseases of the digestive organs Excellent *x* ray photographs illustrate the various lesions described

And yet the practitioner who takes up this book will find that he may be much interested but not so much helped by these modern aspects of gastro-enterology It is right that the pathology of these diseases should be clearly defined for it is only from a basis of sound pathology that any steps towards an adequate therapy can be taken But an over simplification may lead to difficulties When gastritis is so prevalent and so protean in its manifestations the practitioner may well demand some classification with greater clinical application which will display the broad features of the complaints of his patients enabling him thus to make a good attempt to meet and treat them, and only secondarily requiring the aid of elaborate methods with *x* ray and test meals This is perhaps not possible at present but we hope it may be envisaged in more modern aspects of gastro-enterology

[1] *Modern Aspects of Gastro-enterology* By M A Arafa M R C P With foreword by A F Hurst, M D F R C P London Baillière Tindall and Cox 1933 (Pp xviii + 374 56 plates 23 figures 27s 6d)

FUCHS S OPHTHALMOLOGY

It is interesting to recall the aim that ERNST FUCHS had in 1889 when he penned the first edition of his well-known textbook of ophthalmology He abhorred note taking by his students during his professorial lectures at Vienna For these reasons he wrote I am very happy to go to the trouble of writing out the essentials of my lectures for my auditors He planned a small work but it grew under his hand for he remarked that the book the student learned to know became the familiar friend of the practising physician His work[2] has now reached the fifteenth German and the tenth English edition All the German editions except this last were the product of Fuchs s own hand and bore the sole impress of his observant and thoughtful mind In somewhat of the spirit of filial duty Dr Maximilian Salzmann professor of ophthalmology in the University of Graz Austria has now taken over the task of continuing the labours of his revered teacher The English translation has also changed hands the late Dr Alexander Duane having been succeeded by Dr E V L Brown professor of ophthalmology in the University of Chicago

The new edition has the old familiar form but there are changes of moment in its make-up The increase in size of the later editions tended to make the work too costly for undergraduate students—just those for whom it was primarily intended The present authors have taken a bold decision for the chapters on methods of examination refraction and operation have been omitted The omission leaves the book practically a treatise on eye diseases alone—the field in which Fuchs was without a peer—so that it is now called Fuchs s *Diseases of the Eye* A second and lesser change is a reversion to the custom followed by authors of many other textbooks in the inclusion of an atlas of fundus drawings There are forty-one coloured illustrations drawn by Professor Salzmann himself The choice is good and the technique of both artist and printer excellent The new revision will ensure the maintenance of this work in the premier position it

[2] *Diseases of the Eye* By H E Fuch Authorized translation by Professor E V L. Brown M D Tenth English edition. Philadelphia Montreal and London J B Lippincott Company 1933 (Pp xviii + 641 250 illustrations 41 coloured figures. 42s net.)

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LARGE LANCS TOWN near Manchester — Old-established mixed PRACTICE. Average cash receipts £1 080 p.a. Panel 1 060. Scope. Good house 2 reception 4 bedrooms garage, and garden to rent. Premium 1½ years purchase.—No. 457.

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3 N W OF ENGLAND —SEAPORT TOWN —PARTNERSHIP IN well established Practice of about £1 500 p a Panel 1 660 Great scope for increase Premium two fifths share £1,000

4 PARTNERSHIP IN VERY OLD ESTABLISHED MIDDLE CLASS Practice in County Town within 40 miles of London Cash receipts average £3 300 p a Panel 3,000 Good house with ample accommodation garden and garage to rent Applicant must be experienced and aged 30—35 Premium one third share 2 years' purchase Preliminary Assistantship

5 KENT — FOURTH PARTNER REQUIRED IN OLD ESTABlished Country Practice within easy reach of London Freehold house standing in three and a half acres of garden, to be purchased Price £2,000 Incoming Partner should be keen on country life and have held H P and H S appointments Share worth £800 p a, guaranteed Premium £1 600

6 W OF ENGLAND — PARTNERSHIP IN OLD ESTABLISHED Practice of about £1,200 p a in picturesque Seaside Place Panel 690. Unique house (6 bed and dressing rooms etc) in excellent state of repair with every modern convenience Beautiful garden and garage to rent on lease Hunting yachting, fishing etc Premium one half share 2 years purchase

7 WEST OF ENGLAND —PARTNERSHIP IN OLD ESTABLISHED PRACTICE over £2 200 p a in County Town Panel about 1 000 Premium one half share 2 years purchase Good prospects for well-qualified physician (preferably M R C P) who should be an R.C and who would have opportunity of getting on Staff of Hospital in near future.

8 N E. OF ENGLAND —PARTNERSHIP IN VERY OLD ESTABlished general Practice in an important City Cash receipts average £4,743 p a, including appointment worth about £300 p a and a panel of 4 300 Semi-detached ten roomed house with garage and garden for sale Scope for increase. Premium two-fifths share 1¾ years purchase

9 LONDON, N —PRACTICE CARRIED ON BY MEDICAL WOMAN in populous area Cash receipts average £480 p a, including panel 527 Visits 2/6 to 3/6 Small house (6 rooms) to rent at £50 p a. on lease Practice capable of increase Premium 1½ years purchase

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11 LONDON, N —PRACTICE CARRIED ON BY MEDICAL WOMAN in populous district. Cash receipts average £270 p a. including panel 360 Scope for midwifery Six roomed house to rent at £70 p a on lease Premium 1½ years purchase

12 BORDERS OF SHROPSHIRE AND CHESHIRE.—OLD ESTABlished PRACTICE averaging £1 055 p a in Market Town Panel 850 Nice detached house (5 bedrooms attics, etc.) with garage and old world garden etc, for sale Educational facilities. Well equipped Cottage Hospital offering scope for one keen on Surgery Premium £1,580

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14 LONDON, S E WELL-ESTABLISHED PRACTICE IN OUTLYING Suburban District Cash receipts 1932 £1 008 including appointments worth £23 p a and Panel 993. Well-situated corner house on main road (5 bed and dressing rooms) with garage and large garden to rent also separate Surgery to rent Scope for increase Premium £1 800

has held for so long as the most widely read of all the one-volumed textbooks of ophthalmology It is both the guide to the senior student and the reliable mentor of the practitioner, whether ophthalmic specialist or engaged in a wider and more general field of practice

IMMUNITY IN TUBERCULOSIS

Dr JEAN VAN BENEDEN has attacked one of the most complex problems of bacteriology—the nature of immunity in tuberculosis During the past few years his work has brought him into contact with many aspects of this subject and he has now embodied his results in a book with the comprehensive title of "Investigations into Infection, Hypersensitivity, and Immunity towards Virulent or Attenuated Forms of the Tuberculous Virus" [4] His observations, though rambling, are of considerable interest, and his experiments have clearly been made with an attention to detail and a regard to possible errors that are often missing from the work of others in this field One of his main contributions is towards the existence of a filterable form of the tubercle bacillus That the pathological changes occurring in guinea-pigs after inoculation with filtrates of tuberculous material are not the result of the passage of very small numbers of bacilli through the filter he has endeavoured to show by injecting normal guinea-pigs with minute doses of virulent tubercle bacilli These animals, he has found, develop the same type of lesions as do those receiving larger doses, and react quite differently from guinea-pigs inoculated with the so-called filterable form Experiments with B C G have indicated that a considerable degree of allergy develops after subcutaneous inoculation of this organism into guinea-pigs but that the resistance of the animals to subsequent inoculation with virulent bacilli is not increased On the other hand, intracardiac inoculation with B C G , though giving rise to a less durable allergic condition, appears to lead to a significant increase in resistance From this result the author draws the conclusion not only that the route of vaccination may be of much importance but that allergy and immunity are distinct phenomena The final conception that is built up of the nature of immunity in tuberculosis is vague and unsatisfying, but even this is preferable to rationalization and dogmatism

CHEMISTRY

Every new volume of MELLOR'S *Chemistry*[5] is a fresh cause of delight The book is called a comprehensive treatise but while the word comprehensive is most often used in a figurative sense only, it is quite properly applied to Dr Mellor's work and has a literal significance It appears hardly possible that any fact of chemistry can have been overlooked in its preparation and every statement is rendered easily traceable to the authority by whom it was enunciated But if the work is of compendious bulk the arrangement is no less admirable The whole of it forms a context in which nothing appears out of its proper place The copious index need but rarely be consulted to find what is wanted Even ornamentation is not lacking for in regard to existing anomalies in the nomenclature of iron and steel the quotation is introduced

Socrates Why should we dispute about names when we have realities of such importance to consider?

Glaucon Why indeed when any name will do which expresses the thought of the mind with clearness?

Volume XII has now been issued It contains the chemistry of uranium, manganese masurium rhenium and iron There is a complete and interesting account of the physiological effects and the biological functions of manganese, which begins with observations made by Gmelin and extends to matters affecting many varieties of plant and animal life Every forethought has been taken to anticipate the desire of those who may use the book It even includes a map of the geographical distribution of uranium and a summary of the iron ore reserves of Europe

BARGER'S *Organic Chemistry*[6] is written expressly for medical students, and is designed to impart the requisite teaching without penetrating the more technical branches of chemistry as avenues to medical knowledge Such a need has long been recognized, but hitherto attempts to provide it have not all been fully successful They have not escaped the fault of presuming too much on the student's previous learning Professor Barger, however, with a broad appreciation of the student's needs, has produced a constructive scheme of teaching directly connected with the elementary principles as a basis and has made his treatise easily readable, as well as complete in essential matters A pleasing feature of the book is the association of medical knowledge with chemical teaching in a way that provides the student with a connected scheme of study, recalling the manner in which chemistry was taught to medical students sixty or eighty years ago, when the chemistry, such as it was, fitted its place exactly in medical science Thus the chemistry of therapeutic substances and of the materials of metabolism and nutrition is studied in relation to their uses and functions This is a book well suited to the purpose for which it is intended, and one that may confidently be expected to engage the interest of a wider circle of readers than those for whom it was especially written

Notes on Books

The Significance of Phosphoric Esters in Metabolism by Professor R Robison, is based on a course of Herter Lectures delivered by the author in New York in 1931 It forms an authoritative monograph on an important subject in which knowledge is advancing rapidly Books of this type are invaluable, and the appearance of the work will be welcomed by biochemists throughout the world, for the phosphoric esters appear to be of fundamental importance for a considerable proportion of the activities of living cells In the first lecture the author deals with the function of these esters in yeast fermentation and in muscular contraction *Harden* showed that the formation of hexose phosphate was an intermediate stage in the conversion of sugar to alcohol by yeast The author of this monograph was chiefly responsible for advancing our knowledge of these changes to its present stage In recent years it has been shown that another phosphate ester—namely, phosphagen—is the substance whose breakdown is the immediate source of the energy which produces muscular contraction In the second and third lectures Professor Robison deals with the calcification of bone and cartilage *in vivo* and *in vitro* This subject is extremely important in connexion with bone repair and also in defective bone formation such as occurs in rickets A particularly interesting feature of the book is the portion dealing with the author's experiments on bone formation *in vitro* This is fully illustrated with plates and gives a clear account of the present state of knowledge regarding the factors that influence the deposition of calcium salts in cartilage

[4] *Recherches sur l'Infection l'Hypersensibilité et l'Immunité vis-à-vis des formes virulentes ou atténuées du Virus Tuberculeux* Par Dr Jean van Beneden Paris Masson et Cie 1932 (Pp 136 14 figures 25 fr)

[5] *A Comprehensive Treatise on Inorganic and Theoretical Chemistry* Vol XII By J W Mellor D Sc F R S London Longmans Green and Co Ltd 1932 (Pp 956 320 figures 63s net)

[6] *Organic Chemistry for Medical Students* By G Barger M A D Sc F R S Hon D Sc Liverpool Hon M D Heidelberg Professor of Chemistry Edinburgh Gurney and Jackson 1932 (Pp 249 10s 6d net)

[7] *The Significance of Phosphoric Esters in Metabolism* By R Robison Ph D D Sc F R S Herter Lectureship on Biological Chemistry New York The New York University Press London H Milford Oxford University Press 1932 (Pp 164 39 figures 7 tables)

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17 LONDON E.—CASH AND PANEL PRACTICE OF £860 P.A. in populous district. Panel 5,700. Small house to rent on lease. Premium 1½ years' purchase.

18 EASTERN COUNTIES — OLD ESTABLISHED COUNTRY PRACTICE. Cash receipts about £720 p.a. including appointments over £150 and a panel of about 590. Detached house (6 bedrooms) in grounds of 1 acre for sale. Premium for Practice £650.

19 CO. DURHAM.—PRACTICE OF £540 P.A. IN RESIDENTIAL Colliery District near two large Towns. Panel 380. Well-situated house (7 rooms) with good Surgery and Dispensary for sale or rent. Scope for substantial increase. Premium only £500.

20 S.W. OF ENGLAND — OLD-ESTABLISHED PRACTICE OF £750 p.a. in beautiful country district. Panel 300. Excellent house (5 bedrooms) for sale. Premium 1½ years' purchase.

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23 ESSEX.—OLD ESTABLISHED PRACTICE OF ABOUT £600 P.A. in Suburban District. Panel 500. Well-situated detached house (6 bedrooms) standing in own grounds with nice garden, garage, and stabling for sale. Scope for increase. Premium £650.

24 SURREY.—PARTNERSHIP IN SOUND OLD ESTABLISHED good mixed-class Practice about £3,000 p.a. in the Croydon area. Small panel. Very little midwifery. Excellent modern detached house for sale. Scope for increase. Premium one half share 2 years' purchase.

25 ESSEX COAST.—MEDICAL WOMAN REQUIRED AS PARTNER in Practice of £2,500 p.a. in small Seaside Town. Panel 2,300. Modern house in good position facing Sea with 4 bedrooms for sale. Scope for increase. Premium one fourth share £1,250 and further share later.

26 LONDON E.C.—PARTNERSHIP IN OLD ESTABLISHED PRACtice in the City. Receipts average about £1,650 p.a. including appointments and panel worth over £500 p.a. Premium one-half share £1,000.

27 NORTH OF ENGLAND — INLAND HEALTH RESORT.—NOW dispensing PRACTICE of about £1,000 p.a. Small select panel. House (7 bedrooms) with large garden, for sale. Premium—Practice—£750.

28 S. AFRICA.—RADIOLOGICAL PRACTICE IN A MOST DElightful town with excellent climate. Cash receipts last year £1,450. Scope. Premium to include furniture, carpets accessories etc., £2,200.

29 EAST COAST.—PRACTICE OF BETWEEN £750 AND £800 p.a. in a purely Residential Seaside District within 40 miles from London. Small Panel. Detached house (5 bedrooms) for sale. Scope for increase as district is growing.

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31 LONDON W.—GOOD MIDDLE-CLASS PRACTICE £400 P.A. in suburb within easy access of the West End. Panel over 100. Attractive double fronted house with nice garden for sale. Scope for increase. Premium 1½ years' purchase.

32 LONDON N.—PARTNERSHIP IN PRACTICE ABOUT £5,250 p.a. in thickly populated Suburban District. Panel about 2,300. One fourth or one third share at 2 years' purchase.

33 HOME COUNTIES — OPHTHALMIC PRACTICE BETWEEN £300 and £400 p.a. in desirable Residential Town, under 15 miles from London. Good detached house (4 bedrooms) with large garden for sale. Good reasons for plenty of scope for increase. Premium £300.

34 LONDON E.C.—OLD-ESTABLISHED LOCUM PRACTICE of £646 p.a. Panel 459. Living accommodation to rent if desired. Premium £1,000.

35 S. AFRICA. — OPHTHALMIC AND GENERAL PRACTICE about £1,400 p.a. (about 60 per cent. Ophthalmic), including appointment £400. No Ophthalmic opposition. Premium £400.

36 N. OF ENGLAND — OPHTHALMIC PRACTICE OF OVER £1,600 p.a. in an important town. Excellent scope for one keen on clinical and operative Ophthalmology. Large house in first-class condition for sale. Purchaser should be well qualified. Premium £2,500.

37 S. AFRICA. — PRACTICE OF ABOUT £2,000 P.A. IN A famous town. Pleasantly situated detached bungalow (5 bedrooms) garage and small garden for sale. Good hospital (with private wards). Premium £1,100.

38 LONDON WEST END — X-RAY AND ELECTRO-THERAPeutic Practice. Receipts 1931 nearly £630. Suitable and convenient flat at moderate rent can be had on lease. Premium £925.

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The little work on *Heart Burial*[1] by Mr C A BRADFORD deals as he points out in a prefatory note with the ancient custom of division of the human body at death and the separate disposal of its parts as illustrated by cases associated with the London postal area In addition to much curious information which will interest the historian and antiquary the book contains chronological notes on 108 cases ranging from Henry II in the twelfth century to Thomas Hardy in the twentieth About fifty five of these are examples of heart burial and the rest either cases where there was doubt as to whether the heart or other viscera were interred or instances of undoubted visceral interment selected for their historical interest Mr Bradford remarks that though John Hunter expressed a desire that his heart should be preserved in his museum his wish was disregarded On the other hand the heart and other viscera of Livingstone the only other medical man who figures in this list were buried at Ilala in Central Africa while his body was embalmed and buried in the nave of Westminster Abbey We learn from a footnote that among French surgeons whose hearts were buried in Paris separately were Fromentin (1677) De la Peyronie (1747) and Larrey (1842)

An enlarged edition of Dr BUCKSTEIN'S book on the radiology of peptic ulcer[2] has now appeared The first edition was published in December 1929 and reviewed in this *Journal* in July 1930 In the present edition many new illustrations have been added and the literature has been brought up to date The new sections on the differential diagnosis of benign and malignant ulcer and on jejunal ulcer as well as the illustrations of the effect of treatment in the healing of peptic ulcer of stomach and duodenum are interesting and instructive In the three years that have elapsed since the first edition was published radiological technique has improved a great deal and many of the old illustrations should have been replaced by radiograms obtained with modern apparatus and films Although relief pictures are given of the folds of mucous membrane these are not shown in the same cases as the ulcer and much of the teaching value is lost It is doubtful therefore if the book will be of great use to a radiologist as it contains so much that has already appeared in textbooks and journals It may be useful to the practitioner as a summary of the radiological findings in peptic ulcer and its complications and as a reference book in the medical library

Commander W S BAINBRIDGE of the United States Navy Reserve has compiled a report of the Sixth International Congress of Military Medicine and Pharmacy and of the meetings of the Permanent Committee which were held at The Hague in June 1931[3] It is issued by the Department of State of the United States as No 12 of its Conference Series The main topics reported are those relating to the recruiting training and advanced training of military medical officers and pharmacists the psychoneuroses of war including the immediate and remote effects of war on the nervous system of combatants and non-combatants the preparation and storage of medicinal ampoules in use in the medical services and methods of haemostasis on the battlefield with special reference to the standardization of first aid material and the mode of application The contributions made by the delegates of the various countries represented at the congress are clearly set out and the unanimous conclusions reached are detailed The author points out in his introduction that much of the knowledge gained in the war can be utilized in times of peace if rendered available in permanent form The present volume is an effective illustration of this assertion

[1] *Heart Burial* By Charles Angell Bradford F S A London George Allen and Unwin Ltd 1933 (Pp 256 8s 6d net.)

[2] *Peptic Ulcer* Vol X *Annals of Roentgenology* By J Buckstein M D Edited by J T Case M D Second edition revised New York Paul B Hoeber Inc 1933 (Pp xxvii + 417 405 figures 12 dollars)

[3] *Sixth International Congress of Military Medicine and Pharmacy* Report of Commander William Seaman Bainbridge M C U S N R for the delegation from the United States of America Conference Series No 12. Washington United States Government Printing Office. 1933 (Pp xii + 166 1 dollar)

Chinium[1] the annual publication of the Kina Bureau has been written this year by Dr F JOHANNESSOHN This author in the 1930 number gave a summary of the literature on the therapeutic action of quinine during the previous fifteen years and now he summarizes the therapeutic and pharmacological works that have appeared since 1930 The importance of quinine as a drug is evidenced by the fact that he gives 465 references Malaria is dealt with in fifteen pages and references are given to recent work on plasmoquine and atebrin The quinine treatment of pneumonia is dealt with particularly fully and it is interesting to note that about ten German writers have found that quinine injections reduce the mortality of pneumonia by 50 per cent The claims regarding the results of quinine appear to be very similar to those made for the antipneumococcal serum A short account is also given of recent pharmacological work on quinine and its application for various therapeutic purposes in medicine surgery and obstetrics

[1] *Chinin in der Allgemeinpraxis* Von Dr med Fritz Johannessohn Unter berücksichtigung pharmakologischer befunde Amsterdam Bureau tot Bevordering van het Kinine-Gebruik. (Pp 176)

Preparations and Appliances

TANNIC ACID OUTFIT FOR BURNS

Messrs C J Hewlett and Son Ltd (35 42 Charlotte Street E C 2) have sent us a small outfit for the treatment of burns by tannic acid which is both convenient and easy to use The apparatus consists of a 2-ounce bottle with spray attachment in which a tablet of tannic acid compound giving the required strength of solution can be dissolved The composition follows that suggested by Mr Mitchiner in his lecture in the *British Medical Journal* of March 18th 1933 Two different kinds of tablets are supplied ordinary and effervescent With the first a solution is attained in two ounces of warm water in a few minutes the effervescent tablets on the other hand take considerably less time to dissolve and the amount of gas given off by them is not inconvenient The whole apparatus comprising bottle vulcanite spray and rubber bellows together with a supply of tablets complete in cardboard box costs 4s 6d Extra tablets can be obtained at 3s per 100

OIL SOLUBLE BISMUTH

Stabismol is a solution of a new oil soluble bismuth compound which has been discovered and manufactured by Boots Pure Drug Co Ltd The formula of the compound is bismuth α-carboxy-cyclo-hexanyl acetate The drug is supplied in solution in olive oil and 1 c.cm of the solution contains 0 1 gram of bismuth metal The advantages claimed for this preparation are that it is less painful on injection and more rapidly absorbed than are aqueous suspensions of bismuth salts or of bismuth metal The superior rate of absorption has been demonstrated by x ray photographs Pharmacological experiments have proved the non toxicity of the compound and the purity and sterility of the preparation is controlled by analytical and bacteriological tests The dosage recommended is 2 c.cm solution (0 2 gram bismuth metal) weekly

Messrs Boots have prepared an interesting brochure which gives full details of the properties of the drug and its mode of administration and also gives an outline of suitable courses of combined arsenical and bismuth therapy for various types of syphilitic infection The introduction of bismuth by Sazeras and Levaditi has proved a valuable advance in the therapy of syphilis but there has been considerable difficulty in finding a satisfactory preparation of this metal Preparations which form aqueous suspensions are very slowly absorbed whilst those given in aqueous solution are painful and have often proved to be unduly toxic This new oil-soluble preparation ought therefore to prove a valuable advance in bismuth therapy

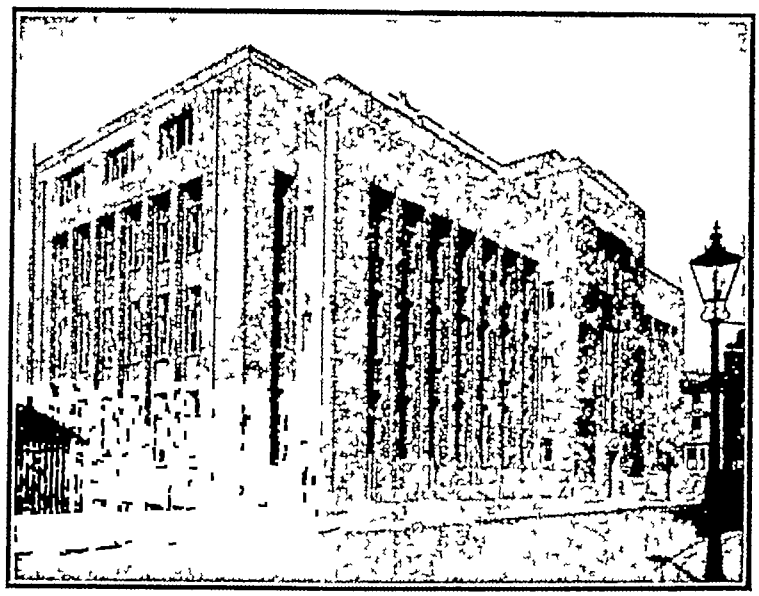
POLYVALENT INTESTINAL BACTERIOPHAGES

Enterofagos is a broth filtrate of polyvalent intestinal bacteriophages which has been prepared by the Laboratoire de Biologie Médicale of Nice and is marketed in this country by Continental Laboratories Ltd (30 Farnham Street S W 1) The mixture is recommended for oral administration in the treatment of intestinal infections of a wide variety The vendors claim that since bacteriophage by virtue of its ultra microscopic dimensions can pass through the intestinal mucosa therefore their preparation should be effective not only against gastro-intestinal infections but also against infections of the bladder and kidney

FIRTH INSTITUTE OF PATHOLOGY, UNIVERSITY OF LEEDS

It is now some seven or eight years since the University of Leeds launched its great rebuilding fund appeal, as a result of which nearly half a million of money has been collected to date The rebuilding scheme itself has made considerable progress during this time In connexion with the main university centre in Woodhouse Lane and University Road, new buildings have been erected for the departments of physics, chemistry, and mining, and the building of the Brotherton Library, for which a special donation of £100,000 was made by the late Lord Brotherton, is about to be commenced All these various sectional activities are component parts of one big architectural scheme of expansion, the architects of which are Messrs Lanchester and Lodge of London

At the Medical School also much additional accommodation has been provided A new School of Dentistry and Dental Hospital was opened some four years ago, and in 1930 a new wing was added to the existing Medical School buildings to provide additional accommodation for physiology and biochemistry Lately we have had to record the opening of the Algernon Firth Institute of Pathology[1] on a site immediately adjacent to the School of Medicine and General Infirmary For some years the department of pathology and bacteriology has been very inadequately housed, much of its accommodation being of a temporary and makeshift character The department of experimental pathology and cancer research also since its inception in 1926, has occupied temporary quarters in Great George Street In future the work of these departments will be centralized in the new institute to the great advantage of all concerned



ALGERNON FIRTH INSTITUTE OF PATHOLOGY
St George's Road Frontage

The new building has cost approximately £50 000 and is the work of Mr J C Procter and Mr F L Charlton associated architects It has been named after Sir Algernon Firth Bt whose gift of £25,000 'towards the building of an institute in which accommodation should be provided for cancer research alone rendered its erection possible The opening ceremony, on April 25th last, was presided over by the Pro Chancellor Colonel C H Tetley and was attended by a large and representative body of Leeds citizens visitors from sister universities, and others The building was declared open by Sir Algernon Firth and an address On the Value of an Institute of Pathology to the Community was delivered by Professor Robert Muir F R S

DESCRIPTION OF THE BUILDING

The new institute is a dignified austerely beautiful brick building of four stories and basement The ground floor and part of the basement provide accommodation for the bacteriological section of the department of pathology and bacteriology (Professor J W McLeod, F R S) while the first floor is occupied by the department of experimental pathology and cancer research (Professor R D Passey), and the second by the pathological section of the department of pathology and bacteriology (Professor M J Stewart) There are two practical classrooms on the ground floor with places for seventy and twenty students respectively The lecture theatre, seated for eighty four, is on the first floor The animal quarters, on the second floor, are arranged so that all the rooms open on to an outside balcony, thus preventing any odour from reaching the interior of the building The third floor is occupied by the Charles Brotherton Museum, with its various annexes The museum a magnificent room with over 4,000 square feet of floor space, is brilliantly lighted by clerestory windows, leaving practically the whole of the walls available for museum purposes

The structure except for a small amount of Portland stone in the plinth and main entrance is entirely of brick Steel stanchions are used on either side of the main central corridors to break the span, but there are no stanchions in the outer walls and the floor girders are supported on the brick walls and central stanchions In other words, it is not a steel framed building Internal partition walls are in patent light brick and are not structural in order that room sizes may be altered in the future if required, with a minimum of disturbance The suspended floors throughout are of expanded metal and concrete the floor coverings to corridors and lavatories being terrazzo, to museum and lecture room oak and in the remaining rooms and laboratories 'battleship" linoleum cemented direct to the concrete The windows are steel framed, and the fenestration is for the most part in regular bays with windows 9 feet 8 inches and piers 3 feet The museum is lighted by three tiers of clerestory windows glazed with special diffusing glass The upper tier is top hung to open out the whole range being electrically operated Stained Columbian pine flush doors are used throughout internally

All the services are exposed, the main runs being carried in ducts over the corridor ceilings on each floor These ducts are served from two vertical ducts one on each side of the staircase well—one carrying all the electrical work and the cold water supply the other hot water heating mains gas etc Each service and run is ringed with a key colour at intervals for identification All internal drainage is exposed that for the laboratories on one floor being carried in glass lined cast iron pipes on the ceiling of the floor below Heating is by low pressure hot water pump circulated from duplicate coke fired boilers in the basement The hot water supply is by gravity from duplicate coke fired boilers in the basement

The general ventilation is natural but exhaust fans have been fitted to the combustion room and fume chambers An incubator room and refrigerator room have been installed in the basement Cleaners' closets with sinks and hot and cold water are provided on each floor There is an automatic electrically operated lift

The building as a whole is spacious and well lighted, and gives the impression of eminent suitability for its purpose It is a great acquisition to the armamentarium of the Leeds School of Medicine

[1] *British Medical Journal* May 6th 1933, p 801

The current issue of *Archivio di Scienze Biologiche* contains the proceedings of the Fourteenth International Congress of Physiology held at Rome from August 29th to September 3rd, including the inaugural address delivered by Professor A V Hill on energy exchanges in nerve and muscle

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3 DEATH VACANCY—SOUTH DEVON—Old established PRACTICE *(held by late Incumbent 43 years) situated in very pretty agricultural* district (pop 3,500) within 2½ miles of the sea Cash receipts average £787 p a including appts worth £200 and panel of 347 Leasehold house with 4½ acres of land (66 years to run at ground rent of £13 10s) having ample accommodation Price for lease and Practice £2,700 Sport and educational facilities Locum in charge

4 WITHIN THIRTY FIVE MILES OF LONDON—Very old established country PRACTICE in pleasant residential district Gross cash receipts for the last twelve months approximately £1 800 Panel brings in over £650 p a, and appts are worth nearly £200 p a Fees from 2/6 to 15/ Midwifery 3 to 10 gns Nice house in one acre of garden and 2 acres of orchard and containing 3 reception 6 bedrooms etc, and professional rooms Electric light Main drainage Garage Price for freehold £2,500 £1 000 on mortgage Golf, tennis and other sport Premium £2 500

5 HANTS—Old-established chiefly better-class PRACTICE steadily increasing and offering very good scope for further development Gross cash receipts for last twelve months £966 and this year estimated to be at the rate of about £1 400 Panel of about 400 Advice and medicine 4/ to 10/6, visits 3/6 to 21/ with medicine extra Not much midwifery from 3 gns. Suitable house, with 2 reception 4 bedrooms, surgery dispensary, and waiting room Electric light Garden, garage Rent £75 p a Sport of all kinds and good schools Premium £1 500

6 LONDON WEST—PARTNERSHIP—A half share, producing about £750 p a (which will be guaranteed for the first year) is offered in a very old-established better class non panel and non-dispensing Practice having exceptional scope for increase Fees from 10/6 to 5 guineas Suitable Flat is available for ingoing Partner who must be experienced in better class work and preferably hold the M R C P Premium for share 2 years purchase

7 SOUTH WALES—Pleasant Coast Town (pop 40 000)—Old established PRACTICE held ten years by present Incumbent, and averaging over £1 000 p a including panel of 1 275 Visits 5/ to 10/6 Good house having charming views of English Channel, and surrounding country Contains professional rooms, 3 reception 6 bedrooms 2 bathrooms Garden with tennis court Garage Price for leasehold *(60 years to run at ground rent of £20 a year)* £1,800 Premium 1½ years purchase

8 LONDON S W—Well-established PRACTICE, worth about £350 p a, including panel of 550 and capable of increase Rent of Flat, consisting of two floors containing 2 professional rooms, dining room, kitchen two other rooms and bathroom £2 2s a week inclusive of rates and taxes Lease 5 years to run, and renewable Premium £450 or near offer

9 EASTERN COUNTIES—ASSISTANTSHIP with view to Partnership (after a preliminary period of six months at a salary of £440 p a, with free house) is offered in an old established good mixed-class Practice situated in pleasant residential and agricultural district within about 15 miles of the coast Gross cash receipts approximately £3 000 A third share is for disposal at a premium of 2 years purch

10 NORTH WALES—ASSISTANTSHIP with view to Partnership (after a preliminary period of about six months at a salary of £300 p a, all found) is offered in a better-class non panel Practice situated in attractive seaside resort A one third or three-sevenths share is for disposal (producing £800 to £900 p a) at a premium of 2 years purch Ingoing Partner should be English and pref London trained

11 PARTNERSHIP — WEST OF ENGLAND SEASIDE RESORT — *A share worth about £600 p a (with succession to the whole Practice eventually)* is offered in a very old established mixed class Practice situated in very attractive small coast town, with beautiful surrounding country Gross cash receipts approximately £1 200 p a including panel worth about £420 Visits 5/ to 30/ Midwifery from 3 gns Exceptionally nice house, with 2 reception 5 bedrooms etc, and usual offices Half an acre of garden Can be rented on lease Premium 2 years purchase

12. HOME COUNTIES—PARTNERSHIP—Residential Town within easy reach of London A share producing about £1 300 p a is offered in a very sound old established Practice producing for the last 12 months approximately £5 200 and offering excellent scope for increase Panel of 2,500 Fees from 3/6 to 21/ Very nice house with ample accommodation, or smaller one if desired Ingoing Partner should be experienced accustomed to better-class work able to undertake major surgery, and pref hold a Fellowship Premium 2 years purchase

13 RIVERSIDE SUBURB—Middle and working class PRACTICE, averaging £1 033 p a, including panel producing about £340 and appts nearly £100 p a Fees from 3/6 Detached house with nice garden and containing 4 reception, 6 bedrooms etc. for sale Premium 2 years purchase

14 OPHTHALMIC PRACTICE.—Within eighty miles of London—Practice is increasing and offers good scope for further development Average gross cash receipts for the past three years £554 Last year over £700 Fees 1 to 2 guineas Opposition slight Choice of houses Premium £700

15 LONDON EAST—Middle and working-class PRACTICE, producing £1 000 p a including panel of about 1 100 Suitable small house with sitting room 2 bedrooms, and attic waiting room, surgery and dispensary Rent £52 p a

16 DORSET—Well-established PRACTICE in very pleasant town within easy reach of the coast Gross cash receipts over £1 000 of which *about £400 is from panel* Fees 3/6 to 21/ Opposition not strong Good house, with 2 reception 5 bedrooms etc garden of nearly 3 acres Rent on lease £62 p a Premium £1 750

17 LONDON SOUTH E[illegible] working-class PRACTICE, increasing a[illegible] district Gross cash receipts for last 12 [illegible] and of 1 370 Suitable house with 2 reception and 3 bedrooms Garden Price for freehold £1 000 Premium £2 500

18 EASTERN COUNTIES — FAVOURITE SEASIDE AND HOLIDAY RESORT—Good mixed-class PRACTICE, established many years and producing for the last twelve months £1,600 Panel brings in £300 *p a and an appt* worth £100 p a Fees 3/6 to 7/6 with medicine extra Nice house, with 2 reception 5 bedrooms etc. Garage Garden Price for freehold £2 250 Golf, shooting, and other sport. Premium 1½ years purchase

19 PARTNERSHIP—In a well populated pleasant South Eastern suburb within ten miles of London the half share of an old established mixed class Practice is for disposal owing to the retirement of the junior partner Held by the remaining partner 30 years Cash receipts average £2 765 p a including panel of 1 800 and appts worth £150 Very little midwifery Pleasant semi detached corner house with ample accommodation, garden Price, leasehold (over 900 years *at ground rent of £7 p a*), £1,050 Premium 2 years purchase.

20 [illegible]erred —PARTNERSHIP—A one half share is offered in better middle class Practice in suburb of own Steadily increasing, and excellent future prospects Gross cash receipts £1 700 Panel of 700 Fees from 3/6 Very nice house with 2 reception 4 bedrooms etc One acre of garden Garage for 2 cars Rent on lease £80 p a Sport of all kinds and good schools Premium for share 2 years purchase

21 MANCHESTER—Old established middle and working-class PRACTICE producing for the last twelve months about £650 including panel *of 790 Fees from 3/6* Convenient house with 2 reception 4 to 5 bedrooms bathroom etc Rent on lease £60 Premium £950 to include furniture

22. SOUTH WALES—Beautiful country district within 4 miles of large town Small PRACTICE producing between £300 and £350 p a offering good scope Visiting fees from 5/ Very little midwifery or night work Well situated house with well kept garden containing 2 reception 3 good sized bedrooms and servants room Electric light and gas throughout Garage Rent on lease £70 p a

23 CENTRAL LONDON—Middle and better-class PRACTICE averaging for the last two years about £500 p a including small panel of 180 Fees 3/6 to 21/ Professional accommodation can be rented at £200 p a Prem £300 to include furn, drugs *instruments etc*

24 SOUTH EAST LONDON—Good middle and working-class PRACTICE, producing last twelve months nearly £950 Panel of 986 Suitable house with 2 reception 4 to 5 bedrooms etc Rent on lease £70 p a. Prem to include drugs etc and surgery fittings and furn £1 450

25 NORTH WALES—*Old-established middle and working-class PRAC*TICE averaging for the last three years over £1 700 *including* panel of about 1 300 Fees from 2/6 Visits from 3/6 with medicine extra Suitable house with good professional accommodation. Rent on lease Electric light Garage for two cars Small garden. Rent on instalment £100 p a. Premium £2 100 £1 700 down balance by instalment Good sport etc A knowledge of Welsh is *not necessary*

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British Medical Journal

SATURDAY, JUNE 10th 1933

THE SUPRARENAL CORTEX

The problem of the function of the suprarenal cortex is occupying the attention of the clinical endocrinologist the pathologist and the physiologist to so great an extent that it seems certain that discoveries of the first importance may be expected in the near future As in all investigations of endocrine function the essential action of any given gland is hidden in the complex of interactions with other glands Indeed it is not easy to define exactly what is meant by the action of a hormone If we take as an analogy the action of an enzyme the substrate upon which the hormone exerts its action is the entire organism and the final effect to be assessed is the resultant of all the responses of which the various components of the endocrine system are capable When so clear a statement as that insulin lowers blood sugar is made no simple picture of the processes leading to this end effect can readily be formed liver muscles suprarenal thyroid pituitary and centres in the pontine region of the brain all being undoubtedly concerned Bearing in mind the reservations which must attach to the term action in reference to hormones we are for most purposes content to express it in terms of the end-effects which dominate the picture Thus for the hormone of the parathyroid we have the changes in the serum calcium for the sex hormone the changes in the genital tract for insulin the blood sugar for the thyroid the metabolic rate for the pituitary the pressor oxytocic and growth effects and so on But in the case of the recently demonstrated hormone of the suprarenal cortex no clearly defined end-effect has been found Estimation of the potency of cortical extracts by the prolongation of the lives of suprarenalectomized animals with the maintenance of their weight and blood urea at normal levels is clearly very indirect and merely indicates that the tissue is essential to life The rise of blood urea after extirpation of the glands is evidence of a certain degree of renal failure and the symptomatology after the operation in animals can be correlated with the progress of this rise Thus Harrop and Weinstein [1] having shown that the normal non protein nitrogen of the blood of dogs is about 40 mg per cent found that after adrenalectomy anorexia and loss in weight begin when this value rises to 64 changes in gait occur when it is at 86 vomiting at 116 and diarrhoea at 123 That the cortical hormone is in some way closely connected with the efficiency of the muscular system is obvious from the well known clinical picture of Addison's disease whether this be due to a tuberculous process or to primary atrophy of the glands and the characteristic muscular asthenia so marked in the adrenalectomized animal Hence we are not altogether surprised that an outstanding feature of the injection of the cortical hormone into normal subjects (human and animal) should be a striking increase in the power of doing work Thus Britton and Silvette [2] have recently shown that injections of potent extracts doubled the running capacity of a normal dog and the effect was still noticeable after fifteen days Further Hartman and his co-workers [3] have found that in asthenia from other causes than Addison's disease cortical extract produced improvement with a capability of increased effort In myasthenia gravis muscular atrophy and dystrophy no benefit was obtained from the cortical extract a result which was perhaps to be expected In an interesting case described by J H Robbins [4] an acute streptococcal sore throat was followed by a complicating series of symptoms which were referred to an acute hyposuprarenalism and obvious benefit followed the administration of Hartman's cortin The evidence for hypofunction of the cortex was low blood pressure anorexia nausea vomiting loss in weight lumbar pains mental depression definite temporary mental changes and extreme weakness This author persuasively argues that if in streptococcal infections renal damage may follow the dissemination of toxic agents there is every reason to believe that suprarenal damage is also probable particularly in view of the very rich blood supply of this gland and that in post-infective asthenias the use of cortical extracts may find an extended field of application

Although we must consider that it is the deficiency of cortical hormone which is the prime cause of the syndrome of Addison's disease there are certain facts which complicate the problem Thus the treatment of such cases with cortical extracts while in most instances it prolongs life and relieves the most urgent symptoms when the process is not too far advanced fails to remove three cardinal features of the disease—namely hypotension pigmentation and hypoglycaemia Strangely enough these three characters are absent from the symptomatology of suprarenal deficiency in the dog a fact recently demonstrated by Harrop and Weinstein [1] From the point of view of the endocrinologist there is little doubt that the suprarenal cortex is intimately connected with the maintenance of what may be called sex balance and in this connexion this tissue must be considered as having some relation to the pituitary gland Neoplasms of the suprarenal cortex cause changes in metabolism changes in the distribution of the hair hypertension and marked abnormality in the secondary sex characters phenomena which are also associated with the basophil tumour of the pituitary described by Cushing In the male before puberty cortical tumours produce great growth of the body and increased development of the muscles and the external genitalia the general features of the subject tend to

[1] Harrop and Weinstein *Journ Exp Med* 1923 lvii 305

[2] Britton et al *Amer Journ Physiol* 1932 cii 70

[3] Hartman et al. *Journ Amer Med Asso* 1932 xcix 1478 and *Journ Nerv and Mental Disease* 1933 lxxvii 1

[4] Robbins J H. *Journ Amer Med Assoc* 1933 c 657

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the adult type, and if the process is slow it leads to premature senility and death After puberty, however, when the virility of the subject is established, no further change in this direction is possible These facts are well known, and led to the view that overactivity of the suprarenal cortex stimulates all the mechanisms associated with virilism Two cases have, however, recently been described by H L Cecil in which the patients, young men of 26 and 27 years, showed pronounced changes in the direction of femininity as a result of hypernephromata , the matter is thus no longer so clear It is in the female subject that cortical tumours or hyperplasia lead to most striking changes in sex characters If the process begins before puberty the child tends to become obese, and develops hair on the face and pubic region , the voice coarsens and the skin becomes coarse and dry , the clitoris enlarges, the internal genitalia diminish in size, and frequently menstruation fails to start at puberty If the onset is after puberty there appears the tragic syndrome of amenorrhoea, loss of sexual interest, hirsutism, and the usual signs of virilism, with marked enlargement of the clitoris and labia and great diminution in the size of the breasts and internal genitalia In addition a sustained hypertension becomes established Heterosexuality gradually disappears In spite of this strong evidence that the suprarenal cortex exerts a stimulus to the male characters Cleghorn[6] was unable to obtain any effect on the growth and maturation of male mice by the injection of potent extracts of the cortex prepared by the method of Swingle and Pfiffner

As if still further to complicate the problem, recent work has shown that the suprarenal cortex is intimately connected with vitamin C The work of Szent-Gyorgyi has shown that the suprarenal cortex is relatively rich in hexuronic acid (ascorbic acid) and that the reducing power of vitamin C concentrates is due to, or associated with, hexuronic acid From beef suprarenal cortex he isolated 300 mg hexuronic acid per kilo and from orange juice only 100 mg , and, although these yields may be rather low, they give a good index of the relative amounts of this substance in the two sources Szent-Gyorgyi concluded that hexuronic acid is identical with vitamin C More recent work by Harris and Ray,[7] who used the ninety-day guinea-pig growth test and the tooth structure method for estimating antiscorbutic activity, strongly confirms the view of Szent-Györgyi Harris and Ray showed that the antiscorbutic power of fresh suprarenal cortex is three times that of fresh orange juice a result which is explicable on the hexuronic acid theory The antiscorbutic properties of suprarenal cortex are higher per unit weight than any other tissue hitherto investigated but the absolute amount in the liver is greater by virtue of its greater weight The peculiar fact observed by Harris that the dog and the rat are able to synthesize vitamin C when this is absent from the diet, whereas guinea-pigs, monkeys, and men are unable to do so, may lead to further knowledge of the role of the suprarenals in this connexion The present position, then, as to the function of the suprarenal cortex is one of considerable confusion, and we must await a greater array of facts before any coherent view can be developed

[6] Cecil H L *Amer Journ Physiol* 1933 c 463
[6] Cleghorn *Journ Physiol* 1932 lxxv 413
Harris and Ray *Biochem Journ* 1932 xxvi 2067

PLANNING BY THE PARKWAY

Those who invented the garden suburb a generation or two ago did not realize that it implied the decentralization of the city of industrialism It was one of England's brilliant improvisations, and, as so often happens, the English people who conceived the idea never thought it out fully, but left the elaboration to other countries Hence, as Mr C R Ashbee explained recently to the Town Planning Institute, we must now look for its logical development to Germany and America The Germans have reasoned the whole thing out , they have developed the law, linked the movement up with education, tackled the problems of transport and hygiene on rational lines, combined the park system with housing, the preservation of monuments, country schools, and museums, and made of the whole a logical cultural movement The Americans have specialized in the park system and the parkway, and it was with the lessons which America has to teach this country that Mr Ashbee mostly concerned himself The chief of these lessons is that the isolated suburb or garden city is no longer practicable The expansion and rebuilding of the city have to be considered in relation to its outlying suburbs and landscape areas The State park systems represent a magnificent piece of work in process of achievement by some four or five inter-State commissions, and America also has some fifty national parks and national monuments surrounded by park areas, together with many great city parks that are being incorporated into town-planning schemes The State park systems cover about ten thousand miles of parkway, which is multiplied many times by the frontage Building is permitted, subject to control, around or within the parkway, but not as a rule on the roadway We in England, in our perverse and short-sighted fashion, try to make the immediate road frontage pay the cost of the road, and so stimulate ribbon development The Americans, by keeping the buildings off the road, also keep off the local car traffic Moreover, American industrialists believe that the future of heavy industry is not in the town but in the country They believe that this development is inevitable, because they will shortly be taxed out of the towns The housing of workpeople will no longer be the affair of the master of industry, because every workman now has his own car The effect of this revolution upon great American cities in process of decentralization has been profound It narrows and simplifies town planning down to definitely reserved areas, or to centres in which all who stand for the finer cultural life may say to the industrialist "Thus far but no farther" The bearing of all this upon health can be perceived without any undue exercise of imagination

The scenery of Massachusetts was a source of wonder to the English colonists of the seventeenth century it was spoilt by industrialism and has been reclaimed by intelligent and logical planning That system is typical of the new philosophic conception which underlies planning in America to day Mr Ashbee thinks that if London had had a survey like that shown in the regional plan of New York it might have solved the problem of its bridges and avoided such blunders as the destruction of the scale of the Mall in its centre and of the many noble parks at its periphery What England has to do as the next step in the process of industrial development is he says to link up its 200 decentralizing towns somewhat on the lines of the American parkway but to a unified system with the farther sighted protective legislation indicated in the Government Parks Report of 1928 Let us never forget that care for the amenities forms part of hygiene A park system for England is necessary to protect our landscape beauty and historical associations It must provide both for national parks and for reserved or controlled private park areas within the danger orbits of the rapidly decentralizing towns Though this project can be aided by the new Town and Country Planning Act it cannot be carried out for the administration of any park system has first to be disentangled from the ordinary democratic machinery of the ballot-box and popular election More authority should be given to unbiased advisory bodies equipped with local knowledge The aim must be to consider every detail of landscape beauty and every English park as a unit for possible incorporation in a plan To produce results effective administration will be necessary Local government is still in terrible confusion and where good planning work has been done it has says Mr Ashbee been done because those engaged upon it were able to establish confidence and handle skilfully the varying and difficult elements of which statutory bodies are composed

THE BIRTHDAY HONOURS

The list of medical honours announced on the occasion of His Majesty's sixty eighth birthday will be found at page 1020 Surgeon Vice Admiral Reginald Bond who is created K C B entered the Royal Naval Medical Service thirty-five years ago and has been Medical Director-General of the Navy since 1931 Mr Thomas P Dunhill honorary surgeon to the King is associate surgeon to the professorial unit at St Bartholomew's and before the war was surgeon to St Vincent's Hospital Melbourne, the honour of K C V O which he receives will be especially welcomed by his fellow members of the Council of the British Medical Association Dr Morton Smart who is also created K C V O had a distinguished record in the R N V R during the war The honour of knighthood is to be conferred on six members of our profession Dr Raymond Crawfurd consulting physician to King's College Hospital and registrar of the Royal College of Physicians of London has long identified himself with the work of Epsom College of which he is now chairman of council Mr William Duke Elder ophthalmic surgeon to St George's Hospital was recently awarded the Nettleship gold medal and prize for the most valuable contribution to ophthalmology during the past three years by the Ophthalmological Society of the United Kingdom Dr Arthur Bagshawe has been for many years Director of the Bureau of Hygiene and Tropical Diseases Mr Hugh Duke Acland vice-president of the Royal Australasian College of Surgeons has been honorary surgeon to the Governor-General of New Zealand since 1930 and during the war served as a consultant to the New Zealand Expeditionary Force Dr Kedar Nath Das is well known to the profession in India as principal of the Carmichael Medical College Calcutta Lastly we mention with particular pleasure the knighthood for Colonel Robert McCarrison I M S director of Nutritional Research Indian Research Fund Association whose original and most valuable investigations on goitre and cretinism and on deficiency diseases have won him world-wide recognition

A SPECIAL ARTHRITIS NUMBER

The opening pages of our forthcoming number dated June 17th will contain the full text of the report of a committee appointed by the Council of the British Medical Association in November 1931 to inquire into the causes and treatment of arthritis and allied conditions This expert committee with Sir Humphry Rolleston as chairman and Dr R G Gordon as honorary secretary and vice-chairman surveyed the whole field that came within its terms of reference The Council felt and every reader will probably agree that the outcome of these deliberations ought to have the widest publicity among practising members of our profession The crippling diseases lumped together in the past almost anyhow as chronic rheumatism rheumatic gout rheumatoid arthritis etc and spoken of as this or that even to-day form a diverse group that cried aloud for critical analysis in the light of advancing knowledge The B M A Committee is modest tentative and cautious It makes no claim to have solved one of the major problems of civilized life Clarification was the aim and this we believe has been achieved In presenting the Arthritis Committee's round unvarnished tale next week as the feature of a special issue of the *British Medical Journal* instead of as a formal appendix to the Annual Report of Council in the *Supplement* we shall take the occasion to point one or two morals and to compare some of the committee's findings with parallel work in America We shall include also an account of the discussion on climatology in relation to rheumatic diseases which took place during the Whitsuntide Public Health Congress at Eastbourne and a note on the spa hospitals of this country

A SYMPOSIUM ON THE MIDWIFE

At the Maternity and Child Welfare Section of the Annual Conference of the Royal Institute of Public Health held at Eastbourne from May 30th to June 4th a discussion took place on The Role of the Midwife in a National Medical Service The uneconomic division of midwives between urban and rural areas the scanty pecuniary rewards and the absence of a pension make the lot of midwives at present an

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unhappy one The rural midwife is the test of the efficiency of the national standard of midwifery Miss E M Wyatt, inspector of midwives of the East Sussex County Council, described the arrangements made between the Council and the County Nursing Federation, whereby district nurses, who were all qualified midwives, were assigned a district for which they did not only the general nursing, but also fourteen to twenty cases of midwifery yearly This had proved quite safe, in 1,333 cases only two maternal deaths had occurred The small cars provided for the district nurses had proved an inestimable boon Refresher courses of a month every five years were necessary, in a little village anyone is liable to become moss-grown There was general agreement among those present that the length of the period of training should be increased Dr Bethel Solomons suggested eighteen months as desirable, the period of instruction in midwifery of the general-trained nurse might remain as it is—six months Opinion differed as to the value of general training to the midwife Some thought the longer obstetrical atmosphere produced a more practical midwife, an inspector of midwives considered that nurses nurse the patients, and midwives were not taught to nurse patients, on the other hand, a midwife was taught to accept responsibility, while the whole tendency of a nurse's training is to refer everything to the doctor Slight modifications of the C M B rules were suggested Dr Solomons considered that midwives should be required to send for medical aid for breech presentations in multigravidae as well as in primigravidae, until the very end of such labours no one could say that difficulty would not arise Again, it is easy for a midwife to mistake a hand for a foot, the change proposed would prevent an unfortunate situation if such a mistake were made Any vaginal examinations made should be limited to the first stage of labour Midwives should be trained and permitted to give intramuscular injections of brandy and ether and hypodermic injections of ergot and, after the third stage but not before, of pituitary extract He thought it disastrous to allow midwives to give chloroform, even in capsules, deaths occurred after the inhalation of even a few breaths of vapour Mr L C Rivett said that these capsules had been used at Queen Charlotte's Hospital in thousands of cases without harm, patients had by their means been maintained in a state of analgesia for ten to fourteen hours Although agreeing that a timely dose of morphine might prevent a labour becoming difficult, Sir Ewen Maclean was very averse to allowing midwives to administer sedatives even doctors were very carefully restricted in the use of these dangerous drugs by the law There might be less objection to the use of anaesthetics and anodynes in midwifery if only midwives who were also registered nurses were allowed to use them but this would have the unfortunate effect of splitting midwives into two distinct classes Much efficient ante-natal work, he held, was being done by general practitioners apart from ante-natal clinics It was suggested that women who book with a midwife for their confinement should be examined ante-natally by the doctor whom the midwife would call in if there were need for medical aid The only objection to experienced general practitioners staffing municipal ante-natal clinics would be the doubt as to their being able to attend regularly Dr A H Crook considered that the proper person to undertake the management of a normal case was a well-trained midwife In Eastbourne there is year by year an increase in the percentage of cases attended by midwives alone in 1928 the figure was 66 per cent, this increased in 1932 to 78 per cent The infantile mortality rate of Eastbourne babies born in institutions was 14 as opposed to 43 among those born at home The point was raised as to whether busy general practitioners with a working class and panel practice wished to do midwifery Sir Ewen Maclean thought there would be little demur to the establishment of a panel of practitioners who were especially interested in midwifery and would be prepared to give up the time necessary for the work Although the custom of women going into institutions to have their babies was increasing, at present of 600,000 births in England and Wales every year only some 50,000 took place in institutions, and it was evident that for many years to come attention would have to be concentrated on the provision of an efficient domiciliary service Dame Louise McIlroy urged the need for providing maternity hospital accommodation for women of moderate means Sending round a questionary had brought out the astonishing lack of hospital beds for women just above the hospital class who urgently required treatment in the ante-natal stage and for abnormal labour

CHINESE QUARANTINE SERVICE

In spite of the Sino-Japanese hostilities at Shanghai the National Quarantine Service of China[1] has managed to carry out its programme with a fair measure of success The doctors at Woosung (the entrance to Shanghai) remained at their post till shot out of it by the intense bombardment They then evacuated to Shanghai During the year under review a total of 2,205 vessels were examined, and of these 733 were fumigated All the recognized fumigants were employed, the most favoured being a convenient form of hydrocyanic gas under the trade name of "zyklon B" A rat-flea survey of the port was undertaken 691 rats were trapped alive and 34,555 fleas recovered from these No plague was discovered either among live rats or those killed by fumigation Warehouses on both sides of the river were treated, by permission of their owners New stations have been taken over and all the port health services in the country have been co-ordinated every effort is being made to bring quarantine practice into line with the established procedure of foreign countries A cholera outbreak, one of the severest and most widespread in the history of China, swept over the country and visited Shanghai with full force last summer By working well together the various health bodies managed to wipe the epidemic out with a comparatively low mortality among the sick The National Quarantine Service controlled the spread of the disease among shipping arrivals and performed several thousand inoculations in the harbour of Shanghai The 1932 epidemic invaded twenty-three provinces and 312 large cities, claiming over 100,000 sick and nearly 34,000 deaths Of the big cities involved Shanghai had the largest number of sick but the smallest mortality rate—7 4 per cent Over one million, or a

[1] Reports National Quarantine Service Series III 1932. Edited by Wu Lien Teh and Wu Chang Yao National Quarantine Service Headquarters 2 Peking Road Shanghai

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third of the population of Shanghai received anti-cholera inoculation This together with a clean water supply and efficient hospitalization no doubt accounted for the low death rate which could very well lay claim to be a record one Those attacked were mostly in the prime of life The outstanding feature of this epidemic is that the efficacy of anti-cholera inoculation has been amply proved A central cholera bureau has now been established and arrangements have been made to tele graph a weekly summary to Geneva Owing to military troubles the North Manchurian Plague Prevention Service with headquarters at Harbin has virtually ceased to exist but it is promised that the work which has been carried on with such marked success for twenty years will be continued with undiminished vigour inside the Great Wall The plague papers which should have been published in the Manchurian Service reports are incorporated in the volume under review There is a good rat-flea survey of Shanghai and a survey of plague in wild rodents throughout the world is embodied in the report.

A CO OPERATIVE HEALTH CENTRE

In a report on ten years work [1] published by the East Harlem Health Center and the New York Chapter of the American Red Cross a stimulating account is given of the results achieved by the Department of Health of the City of New York and twenty-one co-operating voluntary agencies working together in a defined city area to promote the health and welfare of the residents The work was undertaken in the first place as a temporary demonstration the East Harlem district being chosen for the purpose two-thirds of the residents in this area are Italians and the remaining third consists of Jews Irish and negroes with a sprinkling of other nationalities Many of the voluntary agencies co-operating in the demonstration were already doing a certain amount of work in the district but when they had all been grouped in a single building the Health Center they were able to avoid overlapping and to see where the service as a whole was inadequate it speaks highly for the enthusiasm of the workers that these voluntary organizations which came together for a three-year trial period have worked together for ten years with a growing sympathy The executive organization adopted is set out in the report and it is noteworthy that one of the most valuable committees the House Council was developed from the informal meetings held by the various co-operating agencies in their attempts to get to know each other better The aim was not only to extend and improve existing health services but to fill in gaps two of the most noticeable of these were the lack of services for the pre-school child and the absence of dental clinics moreover the nursing service to the district was derived from several different sources and consequently incoordinate The story of the gradual conquest of difficulties and the establishment of a more general service makes encouraging reading at a moment when our own health services are driven to marking time the work of the East Harlem Center is fully justified by the results summarized at the end of the report The death rate between 1916 and 1920 the five year period before the opening of the centre was 15 34 per 1 000 at the end of 1931 it was 10 46 per 1 000 or nearly 32 per cent lower Infant mortality has also shown a marked decrease dropping from 101 per 1 000 during the period 1916–20 to 72 per 1 000 in 1926–30 Infant deaths from diarrhoea and enteritis have fallen in the same period from 22 to 5 per 1 000 On the other hand maternal mortality has not responded to improved public health measures in the same way the death rate due to childbirth instead of falling during the ten-year period under review has risen from 3 2 per 1 000 in the five years before 1920 to 5 3 per 1 000 in the five-year period 1926–30 This finding is in keeping with experience in this country and suggests that the problem of maternal mortality cannot be approached along the ordinary public health lines Effects of the economic depression on residents in the East Harlem district have been observed since 1929 when loss of employment among heads of families began to be noticeable by December 1931 the breadwinner was out of work in 45 per cent of families As a result more people have been seeking the help of the centre So far there has been no increase of mortality among infants and young children but the death rate from tuberculosis and the numbers of cases reported which had been falling have tended to become static or to increase The amount of material help given by family welfare agencies has had to be extended

[1] *A Decade of District Health Center Pioneering* Ten year report of the East Harlem Health Center Prepared under the direction of H D Widdemer Executive Officer New York City Department of Health (1 dollar)

PRIZE FOR MALARIA INVESTIGATION

A foundation was created by the Health Organization of the League of Nations in honour of the late Dr Samuel T Darling who met his death in 1925 by an accident while conducting a mission on behalf of the League The purpose of this foundation is the periodical award of a prize known as The Darling Foundation Prize to the author of an original work on the pathology aetiology and prophylaxis of malaria It is now announced from Geneva that the first award will take place on January 1st 1934 and that the Foundation Committee on the recommendation of the Malaria Commission of the Health Organization of the League has decided at its meeting in Paris on April 29th to award the prize to Lieut -Colonel S P James M D F R S of the Ministry of Health London

Sir Colin MacKenzie M D F R C S Director of the Australian Institute of Anatomy has been elected President of the Royal Society of Australia This is the youngest of the Royal Societies and has been founded with its headquarters in the national capital and branches in the various States for the purpose of advancing the interests of science in general within the Commonwealth of Australia

Cubic Space in the Hospital Ward Corrigendum —In the first sentence of the last paragraph of our leading article on this subject in last week's *Journal* (p 968) the insertion of a wrong line through a printer's error made nonsense of the meaning The sentence should read

It will be seen from what has been said above that the answer to the architect's question is not a simple one Broadly speaking etc

have made special arrangements for their admission This is well illustrated by noticing that there are forty two cases of cancer of the tongue that have been treated at the radiotherapeutic clinic during 1930 and 1931 thirty of which were growths that had started in the posterior half of the tongue, and only twelve in the anterior half It is well known that cancer of the tongue is more hopeful if it starts in the anterior half and such cases have obtained admission elsewhere in larger numbers than those in which growth had started in the posterior half"

These matters are of vast importance as enabling some conclusions to be reached upon large numbers of patients who are prevented from being received into the large voluntary hospitals, where until recently most of the available statistical material has been prepared Moreover, in many cases the disease was found to be so advanced that little or nothing could be expected from the curative point of view, nevertheless, radiotherapy has been employed in all cases when there was possibility of rendering the patient's remaining span of life as comfortable as possible under the circumstances Since the last report the equipment of the department has been augmented by the installation of one of the most recent and efficient types of high-tension generator, together with an equally modern deep therapy tube enclosed in the latest Holfelder "cannon" The new apparatus can be used for from eight to twelve hours each day It is interesting and good news to hear that expert physical advice has been requisitioned in connexion with the department This is specially mentioned in connexion with the radium work, and Mr W V Mayneord of the Cancer Hospital has been engaged in research work bearing upon the question of the amount and distribution of the radium dosage It is essential for the development of radiation therapy in this country that there should be the fullest and most complete co-operation between physician, surgeon, pathologist, physicist, and instrument maker The last of these is a highly trained electrical engineer whose specialty it is to advise upon the lay-out of installations, and who by his experience is specially qualified to give technical advice upon many practical points which might escape attention in the first instance, but which later on give unmistakable evidence of the fact that they have been overlooked We think the London County Council is to be warmly congratulated on this aspect of its hospital work

THE BIRTHDAY HONOURS

The Honours List issued on June 3rd, on the occasion of His Majesty's birthday, includes the names of the following members of the medical profession

K C B (Military Division)

REGINALD ST GEORGE SMALLRIDGE BOND, C B M B, I R C P F R C S K H P, Surgeon Vice Admiral R N

K C V O

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Knights Bachelor

ARTHUR WILLIAM GARRARD BAGSHAWE C M G M B, Director Bureau of Hygiene and Tropical Diseases

RAYMOND HENRY PAYNE CRAWFURD M D F R C P consulting physician King's College Hospital, Registrar of the Royal College of Physicians of London

WILLIAM STEWART DUKE ELDER M D D Sc, F R C S Ophthalmic Surgeon St George's Hospital

ROBERT MCCARRISON C I E, Colonel I M S K H P M D F R C P, Director, Nutritional Research Indian Research Fund Association

KEDAR NATH DAS C I E, M D Principal, Carmichael Medical College Calcutta

HUGH THOMAS DYKE ACLAND C M G C B L I R C S Christchurch New Zealand Vice President of the Royal Australasian College of Surgeons

C B (Military Division)

JAMES ANDREW HARTIGAN C M G D S O, K H P Major General, late Royal Army Medical Corps Deputy Director of Medical Services, Aldershot Command

WILLIAM HUGH LEONARD, F R C S, Colonel late I M S

C M G

JOHN LANGTON GIBBS, F R C S, East African Medical Service Director of Medical and Sanitary Services

FREDERICK ARTHUR MAGUIRE, D S O M D, F R C S F C O G, Gynaecologist St Vincent's Hospital Sydney Colonel A A M S

C I E

JAMES MCPHERSON, K H S, Brevet Colonel I M S, Residency Surgeon in Mysore, Bangalore

WALTER LIDWELL HARNETT, Lieut Colonel I M S Professor of Surgery Medical College, Calcutta and Surgeon to the College Hospital Bengal

JAMSHEDJI NASARVANJI DUGGAN O B E L M and S F C P S, D O Oxon Professor of Ophthalmic Medicine and Surgery, Grant Medical College, and Superintendent, Sir C J Ophthalmic Hospital, Bombay

O B E (Military)

BIJITENDRA BASU, L M S Calcutta F R C S Ed, Major I M S Specialist in Ophthalmology, Rawalpindi District India

ALEXANDER DAWSON M B, Lieut Colonel R A M C Assistant Director of Pathology Eastern Command

ST GEORGE LYRE HARRIS, M D temporary Major R A M C, Cambridge Hospital, Aldershot

O B E (Civil)

EVAN EDWARD OWENS *M C* L R C P and S Ed, L R F P S For political and public services in Glamorgan

CLERMONT GRANTHAM HILL, Senior Surgeon Khartum Hospital

FREDERIC GARDINER ROSE, M D, Medical Superintendent Leper Asylum British Guiana

ERACHSHAW DINSHAW SHROFF L R C P and S Ed L R F P S, Health Officer of the Karachi Municipality Bombay

MAURICE REVELL SINCLAIR Captain I M S, Officer on special duty with the Political Officer in Sikkim

Miss PATRICIA RUTH ELLIOTT M B For services as a missionary doctor in the Straits Settlements

I S O

Companion

CHARLES FRANCIS LASSALLE M D, Deputy Surgeon General and Medical Inspector of Health Colony of Trinidad and Tobago

Kaisar i Hind Medal (First Class)

Mrs LAURA MARGARET HOPE M B, B S medical practitioner Bengal

SAMUEL GEORGE STEELE HAUGHTON O B E Lieut Colonel I M S, Officer Commanding Indian Military Hospital Quetta

The 182nd annual report of the City of London Maternity Hospital covers the year 1932, and shows that there has been a reduction in the number of admissions and deliveries, associated with a longer average stay in hospital and an increase in the average total cost for mothers and children There was a considerable fall in income during the year, mainly owing to a decrease in legacies and donations A successful week end course was organized for medical practitioners, and a residential post graduate course for practising midwives proved popular and helpful In the medical portion of the report it is stated that the mortality rate was 5 91 per 1,000 for delivered cases

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Leicester Royal Infirmary

At the 160th anniversary meeting of the Leicester Royal Infirmary tribute was paid to the immense service rendered by the Hospital Saturday Society in stabilizing to some extent the income of this institution in exceptionally difficult circumstances It was announced that the returns from this fund were higher than at any period in its history and that new homes for convalescent cases would soon be erected at Overstrand near Cromer At the Swithland Home of the Hospital Saturday Society more than half the accommodation was at present reserved for cases from the Leicester Royal Infirmary and when the society's main work was removed to Overstrand the Infirmary hoped to take over the whole of the Swithland Home This would entail an expenditure of about £4 000 a year but since the Infirmary Board was already paying a considerable sum for the reservation of beds it was estimated that the additional cost of maintaining the whole of the beds could be undertaken without imprudence Close co-operation had been effected by the appointment of four members of the Infirmary Board to serve on the committee of the society The annual report of the Infirmary states that there was a slight fall in the number of in patients and a rise in the number of out patient attendances It is mentioned that the administration of the Road Traffic Act has disclosed many loopholes and the financial result of the Infirmary's claims has proved disappointing It is suggested that a small addition to the cost of insurance premiums would give to policy holders the certainty that hospitals would be reimbursed their commitments and would relieve the hospitals of a responsibility which policy holders often give intimation of their desire to accept. The income of the Infirmary for the year fell short of the expenditure by just over £1 000 which is regarded as gratifying in view of the serious financial condition in the country generally Annual subscriptions however are decreasing and the Board appeals urgently for improvement in this respect The amounts received from church collections also continue to fall The number of endowed beds and also of cots in the children's hospital is growing year by year The first stage of the enlargement of the Sir Edward Wood Nurses Home has been completed and work is proceeding on the remainder Money for this has been coming in fairly well and the Board hopes to raise the outstanding sum by June 1934 so that the enlarged home may be opened free from debt. It is felt that there is room for better co-ordination with auxiliary hospitals in the area The long waiting list has however been substantially reduced by administrative changes

Society for Relief of Widows and Orphans of Medical Men

The annual general meeting of the members of this society was held on May 24th with Mr V Warren Low in the chair The report for 1932 was presented and approved and £4 954 was distributed among the fifty two widows and eight orphans in receipt of relief Included in this was a sum of £451 which had been allotted to orphans to enable them to continue their education or to train for a professional or commercial career Three widows had died during the year one had received in grants £3 100 another £2 120 and the third £1 100 five widows and two orphans came on the funds The total membership at the end of the year was 286 which is but a very small proportion of the medical men who are eligible for membership Any medical practitioner who at the time of his election is resident within a twenty mile radius of Charing Cross can apply to become a member of the society The subscription is £2 2s per annum if under 35 years of age at the time of election £3 3s if under 45 and £4 4s if over 45 there are special terms for life membership Relief is only granted to the widows and orphans of deceased members The present scale of grants to widows left with an income of £125 per annum or less is should she be over 65 years of age £75 per annum if under 65 £60 per annum the grant to orphans is £50 per annum In addition a Christmas present of £10 is usually made to each widow and orphan The revised and redrafted by laws passed at a special general meeting on May 12th were confirmed at this meeting A subcommittee had been holding meetings during the year for the purpose of advertising the society and obtaining new members with the latter object in view it has been decided to approach each of the London teaching hospitals in turn Although the society was founded in 1788 and incorporated by Royal Charter in 1864 many medical men still seem to be unaware of its existence The invested funds amount to £140 700 and only the income of this may be applied for the purpose of making grants The capital can never be used as income Particulars and application forms for membership may be obtained from the secretary at the office of the society 11 Chandos Street Cavendish Square W 1

Graded Milk

The Minister of Health received a deputation on May 24th from the Certified and Grade A (T T) Milk Producers Association who desired to bring to his notice their objections to the scheme for the regulation of the marketing of milk submitted to the Ministry of Agriculture by the National Farmers Union The deputation expressed the fear that the proposed marketing scheme apart from its merits for the regulation of the marketing of ordinary milk would be detrimental to the production of graded milks in view of the very special circumstances which apply to this section of the milk industry The Minister of Health said that from the point of view of public health he attached great importance to the graded milk movement He understood that the Minister of Agriculture would shortly hold an inquiry into the proposed marketing scheme and he had no doubt that the association would be given a full opportunity to state at the inquiry the difficulties which they felt in the application of the scheme to graded milks and that their views would be fully considered

Prevention of Cruelty to Children in Liverpool

The Liverpool Society for the Prevention of Cruelty to Children was founded on April 19th 1883 and the fiftieth annual report contains a survey of the work achieved during the last half-century At the inaugural meeting it was pointed out that the value of the efforts made by the Society for the Prevention of Cruelty to Animals had been so noteworthy that a campaign on similar lines on behalf of children might well produce at least as good results Following the issue of the society's first annual report kindred societies were formed in 1884 in London Manchester Edinburgh and Glasgow the Liverpool rules and objectives being adopted by each in turn In 1889 the Act for the prevention of cruelty to and better protection of children placed on a firm basis the ideals which the various societies had promulgated and gave power to punish offenders Some later overlapping with the work of the National Society was removed by an agreement reached in 1897 under which the city of Liverpool and the borough of Bootle remained entirely under the Liverpool Society outlying parts being served by the National Society which had evolved from

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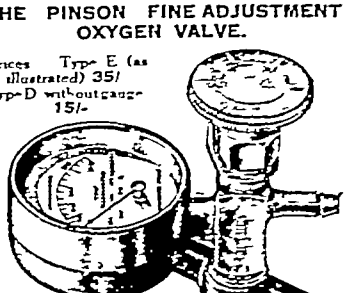

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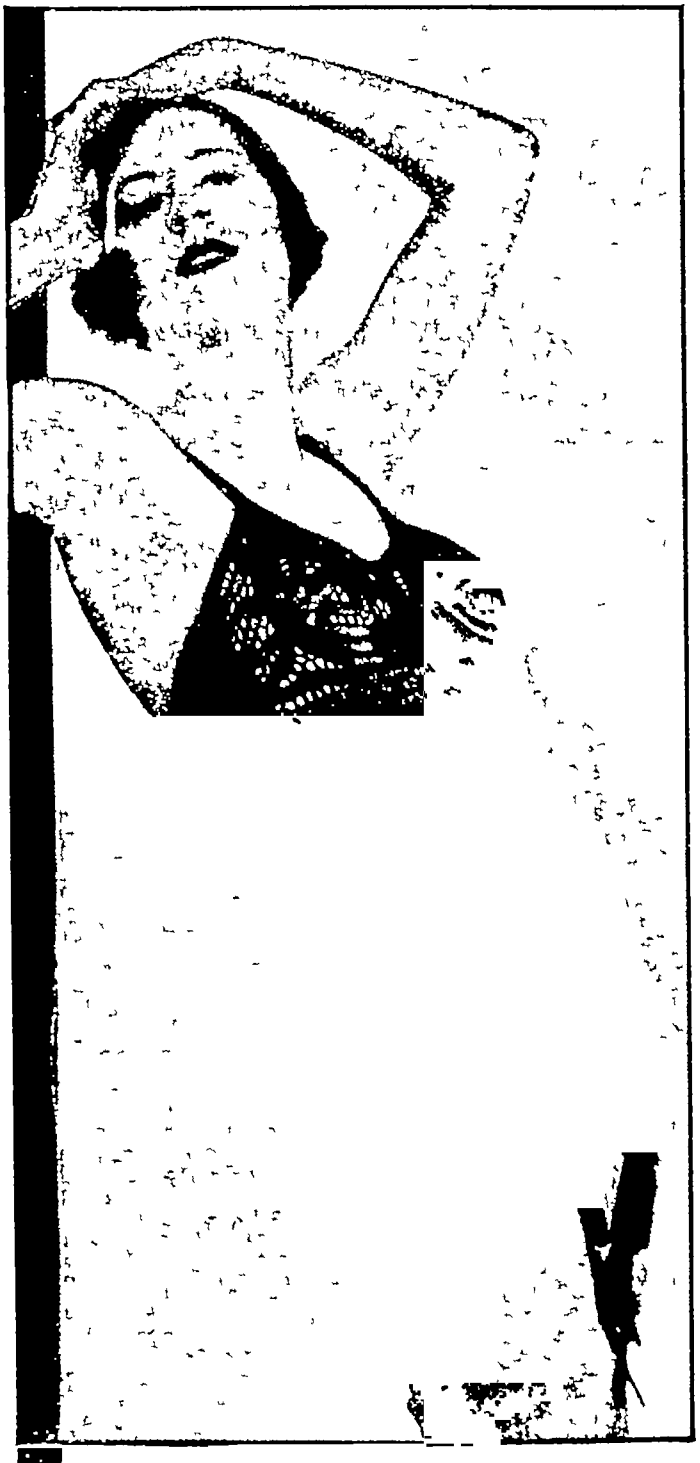

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the London Society Successive Acts of Parliament enabled the work to be extended and intensified, and the advances made are recorded by means of abstracts from the various annual reports up to the present During 1932 the number of children under observation was 3,444, in addition to 3,127 under supervision on January 1st of that year It is stated that most of these were cases of minor neglect The total number of children helped and protected during the half century was 297,857 A statistical table for the fifty years shows that the number of children requiring help was at its maximum during 1904 to 1914 Prosecutions of parents and guardians were highest between 1892 and 1903 when the figures ran to three or four hundred each year This contrasts sharply with four such prosecutions in 1932, one in 1931, and five in 1930

Scotland

Chair of Surgery at St. Andrews

At a meeting of the Court of the University of St Andrews on June 2nd Mr John Anderson was appointed professor of surgery in succession to the late Professor L Turton Price Professor Anderson was born in Banffshire in 1886, and after studying medicine at Aberdeen University, graduated M B , Ch B there in 1908 He then acted as house surgeon at the Royal Infirmary of Dundee, and for two years thereafter studied in Tübingen and Berlin Returning to Dundee, he was appointed a member of the surgical staff of the Royal Infirmary, and during the war became surgical specialist to the 20th Casualty Clearing Station in France with the rank of major R A M C Later he acted as a consulting surgeon in the Third Army, and for his military services was awarded the D S O On his return to Dundee he became surgeon to the Royal Infirmary and was consulting surgeon for orthopaedic cases to the Ministry of Pensions in the Dundee area He has devoted special attention to the use of high-frequency electricity in general surgery, and his numerous contributions to current surgical literature include the following

Surgical Treatment of Severe Penetrating Wounds of the Chest in a Casualty Clearing Station," *British Medical Journal* 1917 , ' Surgical Diathermy in Breast Cancer, ' *British Journal of Surgery*, 1928 , and ' Tuberculous Hyperplasia of the Large Intestine," *Edinburgh Medical Journal* 1931

Health Services Inquiry in Scotland

Sir Godfrey Collins, Secretary of State for Scotland, in addressing a recent meeting at Greenock, announced that a review of the health services in Scotland would be undertaken shortly by a special committee After referring to the Housing Acts of 1926 and 1930, under which nearly 21 600 houses had been completed and over 8,000 were under construction he said that the time had come when it was necessary to take stock of the other health services in Scotland with a view to ascertaining whether expenditure on them was being applied in the wisest and most effective manner He proposed therefore, to appoint a committee to review the existing health services of Scotland in the light of modern conditions and knowledge, and to make recommendations on any changes in policy and organization that might be considered necessary for the promotion of efficiency and economy What was contemplated was a comprehensive inquiry which would survey the whole health organization including sanitation, maternity and child welfare school health services, tuberculosis service the insurance medical service hospitals, and all other agencies concerned with the health of the community These services had grown up in a haphazard way for the past fifty years, and to day they represented a varied series of activities which required pulling together Much had been achieved in reducing death rates, but the results were less than might be expected from so much effort and expenditure

Close of an Old Edinburgh Charity

With the death of Dr Charles H Thatcher the Edinburgh Lying in Institution, in which his family has taken a close interest for 117 years, comes to an end In 1816 a dispensary, which afforded gratuitous advice and medicine in the diseases of women, infants, and children and also attendance during confinement, was established by Dr John Thatcher From 1816 to 1824, 12,000 patients received medical relief at this dispensary from Dr Thatcher and his apprentices, while over 1,000 were attended during confinement The dispensary was then situated at 13, High School Yards, and in 1824 a public appeal was issued and the dispensary came under the management of a committee After the death of Dr John Thatcher in 1853 the work was carried on by his son Dr Lewis Thatcher, who died in 1876 Dr Charles H Thatcher, grandson of the founder, then took over the work, and continued the institution for the training of midwives and nurses, who attended the patients under his supervision He took an active interest in the institution until the time of his death

Ireland

State Control in Public Health

At a recent meeting of the Northern Ireland Branch of the British Medical Association, Dr C S Thomson medical superintendent officer of health, Belfast delivered an address on " The Outlook in Public Health " D aling with modern State services, Dr Thomson pointed out that between 1874 and 1930 Parliament imposed duties of a preventive kind upon every registered medical practitioner With the appointment of so many medical men to State services, such as the school medical and maternity and child welfare services, the general practitioner began to wonder whether this was for him the end of all things The passing of the National Insurance Act had brought in 15,000 doctors as the medical advisers of 15,000,000 people, and it had brought prosperity to the medical profession Would the State system of medical practice engulf the general practitioner? It could never come without his own consent Something might have to be done if the volume of taxation led people to forget their duty to their noble voluntary hospitals Again pensions would have to be found for the older medical practitioners who had faithfully served their fellow men, but the expenditure of public money on pensions involved public control

Co-ordinated Medical Services in the Dublin Hospitals

At the conclusion of the draw for the sweepstakes in Dublin Dr R J Rowlette, vice chairman of the Hospitals Committee, in thanking subscribers for their generous support of the Irish hospitals, said he was particularly grateful for the world wide confidence in the integrity and efficiency of the sweepstakes He also thanked the Hospitals Trust and their staff for the extraordinary efficiency with which they had carried out the sweepstakes, and those others who had contributed to its success, including the nurses and the Commissioner of the Garda Siochana As a result of these sweepstakes it was hoped, within the next few years, to have an efficient hospital system under which there would be a co-ordinated service, and not as in the past, a number of hospitals each trying to cover the whole ground of medical

service That did not give the best results no matter how efficient each individual hospital might be The sweepstakes would also benefit another important aspect of hospital work—namely medical research If they had funds to spare for this worthy object much progress might be made in the alleviation of human suffering

Stamp Duty on Hospital Sweepstakes

SIR JAMES CRAIG (Dublin University) in the course of the debates in the Dail on the committee stage of the Public Hospitals Bill protested against the stamp duty in its application to the moneys derived from the sweepstakes A year ago when the tax was first introduced and the sweepstakes on the Derby was at the peak he warned the Minister of Finance They saw what had happened the sweepstakes on the Derby had fallen by one million pounds and not only was the total sum received less by over £900 000 but the amount going to the hospitals was down by £221 000 He wondered if the Minister even at this late date would not reconsider the matter During the last twelve months the Exchequer had received no less a sum than £1 011 393 from the hospital fund in view of that he supposed he could not expect the Minister to change his mind but he did ask him to consider whether his action would not in the end wreck the whole scheme He had received letters from a great many people who had refused to have anything more to do with the sweepstakes because the Government was collecting as revenue money which was subscribed for the deserving hospitals Sir James subsequently moved two amendments to the Bill The first aimed at deleting the section which provided for the setting up of a single fund and the second at securing that the National Hospitals Trustees should divide the moneys received in respect of a particular sweepstakes into two funds in the proportion of two-thirds and one third the first fund to be known as the Promoting Hospitals Fund and the second as the General Fund In the Bill the Government had gone back on the provision of the original Act and proposed to form the surplus into a single fund This was viewed with suspicion The Minister could do what he liked with the fund and not a single penny unless he chose would go to the voluntary hospitals In reply the Parliamentary Secretary Dr Ward said that the one intention in the minds of the promoters of the Bill was to secure that the best results in the matter of hospital accommodation and equipment should be made available for the poor as the result of the financial opportunity that the sweepstakes offered

CORRESPONDENCE

"New Treatments for Old"

SIR,—Having read and reread with interest and profit Lord Horder's oration I still feel like one of your correspondents last week that it needs some reply or at least some amendment of emphasis It would I think be disastrous for our profession were it allowed to stand as the final word on our attitude to those outside the two old-established firms who are adding to our stock of therapeutic agents if not of knowledge While holding no brief for any of these firms I can only say that on the various occasions I have written to them I have always received the utmost courtesy and consideration they have given the information I asked supplied references to literature or translations from foreign literature and at times they have carried out special clinical investigations on behalf of my patients which neither they nor I could pay for entirely without charge or even any acknowledgement from me until now To throw scorn on such services seems neither helpful nor generous

I think that what is actually happening is that a slow and hitherto silent revolution is taking place in our work Many of the products put on the market are admittedly somewhat experimental For all that the manufacturer—as I have met him—is not merely out to sell his *new* drugs He is even more concerned at first to find out about their clinical action Lord Horder has made it clear that he will not help in this quest and many eminent physicians take the same attitude As a result the maker turns to the general practitioner and gives him the opportunity of doing so instead If he communicates his results direct to the maker the latter is usually most grateful More commonly he does not and the manufacturer then has to form his own opinion by whether the demand for the product increases or not The system is admittedly imperfect or even wasteful but it has one crowning virtue for the profession in that it gives every G P the opportunity—should he wish it—of doing some original clinical investigation If done carefully and critically it sharpens his wits increases his knowledge may add some treatment of value to therapeutics and not infrequently enables him to cure a patient pronounced incurable by a consultant relying on the older methods to which Lord Horder would have us revert

By this I do not mean to imply that every patient should have some new treatment Far from it I still use treatments handed down from my father grandfather and great grandfather among which the use of small doses of digitalis to which Lord Horder refers holds an important place But where patients do not improve as fast as we or they should like it behoves us to see if we cannot do something better A return to principles surely does not mean a return to the primitive meaning of clinical and therapeutics Clinical medicine in this twentieth century surely means more than merely putting a patient to bed and therapeutics more than merely tending him there While granting that the first thing in medicine is diagnosis we must never forget that patients come to us not to be labelled but to be cured In this connexion may I commend to Lord Horder a companion to his Good Samaritan story and one I think much more typical of general practice?

A few weeks ago neither I nor my partner was satisfied with the progress of a lady patient and a consultant (for whom I and the whole profession have the highest regard) kindly came to see her She had been having some of the massive doses to which such exception is taken and as a result the clinical picture was obscured I thought it was probably a case of septicaemia in spite of the mild fever present The advice given was to withhold the obscuring treatment let the temperature soar if it would and then take a blood culture and so the diagnosis would be clenched! Being only a general practitioner I preferred to carry on as I was for I feared that if the weakened patient had been allowed to develop frank signs of septicaemia I might never get it under control again I am glad to say the patient is doing well Unfortunately in general practice we sometimes have to choose between getting a patient well and making a diagnosis This may be rank heresy but it is none the less true

Lord Horder is particularly horrified that a drug should be considered a specific for ailments with so different a pathology as influenza and furunculosis That however does not prevent practitioners from securing striking results in these conditions from such to all's different agents as S U P 36 antibacsyn edwenil or omnadin to mention a few of which I have slight experience and to which some of his remarks seem particularly directed. They do not always work the oracle but they sometimes do and some I think more often than others Our practice is founded above all on observation and surely instead of bewailing these results we should greet them with the hope that even in such varied conditions there

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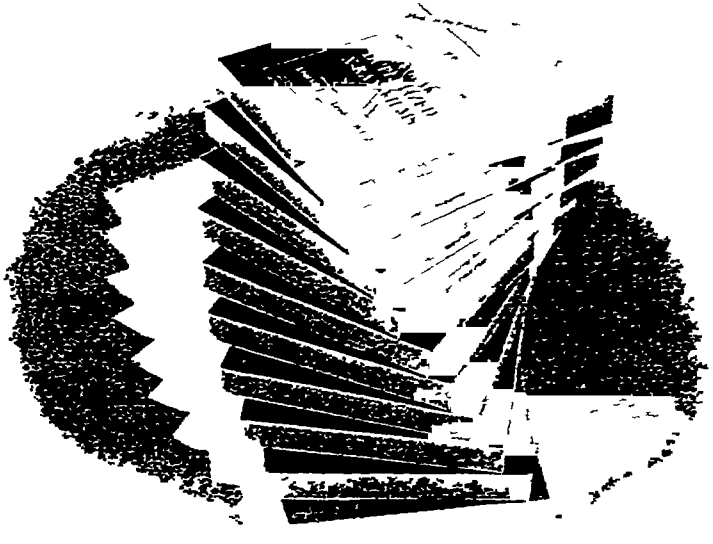

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may be a treatment suitable for all It is really no safer to argue that because the disease processes, as known so far, are different, therefore no one drug can benefit them all than to argue that because all the locks in a house seem different there cannot be a master key

The fact is that modern medicine has passed through many stages First of all, diseases were described and classified, then came the search for causes, lately we have had a wonderful time while biochemistry, etc, has shown how these causes work Preventive medicine has thereby gained a good start, but many of us hope that we may even now be entering on the time for which all this labour is but a preparation—the time, that is, when we may reverse these workings of disease and actively aid, expedite, or imitate the workings of nature, and so really 'cure' disease as well as treat it To this end clinical experiment is actually more important than laboratory tests (immensely valuable though these are), and under present circumstances a vast amount of clinical work is being done The trouble is that the practitioners who are doing it have little time or energy left to classify and communicate their results, otherwise progress would be much faster (Incidentally this letter would never have been written had I not been laid up with influenza)

Let not Lord Horder throw cold water on what we general practitioners are trying to do in our humble way and impeded circumstances Can he not use his great powers and influence to help us to get the best out of the new circumstances and give us an oration to cheer us up in the fight instead of sounding the retreat to the old positions? I am sure that none could do it better, unless it be Sir Humphry Rolleston, the memory of whose profound appreciation of the old with his no less profound appreciation of the new has been for nearly twenty years alike the despair and the inspiration of his clinical clerk,

Your obedient servant,

Winsford Cheshire, May 31st W N LEAK

P S —Lest any should read into parts of this letter anything so stupid as an attack on consultants I would like to say categorically that no such is intended Most of us would be in a poor way without them, and I am especially grateful for the pains taken over my poorer patients when they attend the Manchester Royal Infirmary and for the full reports I often receive about their condition W N L

SIR —With the exception of a few diseases due to gross parasites there is no cure for any disease by medical means No one can say 'This is a case of mumps or meningitis and I can cure it" Physiology and biochemistry are in their infancy, and very little is known of the complicated chemical changes which take place in the tissues in health and disease The constitution of the molecules of proteins, hormones, vitamins, etc is still obscure and without this knowledge there is little hope of a cure for disease or 'morbid process" Palliative treatment is plentiful, dangers can sometimes be avoided and there are some slight indications of the direction in which curative agents are to be sought and possibly found —I am etc

Windsor May 4th W F LLOYD

"Nerve Energy"

SIR —I must see that Professor W Burridge has thrown much if any light on the problem of the reality of nerve energy (*Journal* May 27th, p 936) One physiologist at least does not base his views regarding nerve energy upon the nerve muscle preparation, for quite one of the best accounts of nerve energy is by Professor Howell of Baltimore, in his *Textbook of Physiology* from which I quote (ninth edition, Saunders, 1924 p 134)

"Modern physiologists have considered the cell body of the neuron, including the dendrites as the source of the energy displayed by the nervous system and it has been assumed that this energy arises from chemical changes in the nerve cell as the energy liberated by the muscle arises from or is dependent upon, the chemical changes in its substance It would follow from this standpoint that evidences of chemical activity should be obtained from the cells and that these elements should exhibit the phenomenon of fatigue'

Professor Howell goes on to speak of fatigue of nerve centres (chromatolysis), and correlates this with the familiar sensations of tiredness Here, therefore, we have a physiologist discussing the doctrine, if we may so call it, of nerve energy upon general physiological lines My complaint in the past has been that hardly any other physiologist has seriously dealt with the concept of nerve energy and, consequently not indexed the words whereas, as I have repeatedly pointed out, the clinicians and psychiatrists use the concept freely, and as though it had never been looked at askance

It is, to say the least, very unsatisfactory from the student's point of view, to find his clinical teachers employing as valid a concept which his teachers in physiology either ridicule or ignore One set of writers seem persuaded of the existence of something which the others will not even discuss Ought we not to try to put an end to this state of intellectual indecency, and come to some sort of understanding with the clinicians regarding a concept which some of us believe to be a fundamental one among those which relate to the functions of the central nervous system?—I am, etc

London W 4 May 31st. D FRASER HARRIS

Genesis of Gall-stones

SIR —A not unimportant amendment might be made to the statement in Mr D H Patey's review on the mechanism of gall-stone formation in the *Journal* of May 20th (p 866), that "cholesterol gall stones of the type found in man have never been found naturally' in animals Edington (*Veterinary Record* 1927, vii, 353) found two gall stones, one in the gall bladder and the other in the left bile duct, of a three and a half year old cock canary which was suffering from biliary cirrhosis, the stones gave positive Salkowski and Liebermann reactions for cholesterol In the distended but otherwise normal gall bladder of a two-year old cock canary which died of acute pasteurellosis I found two greyish coloured, semi-translucent, oval-shaped gall stones (each about 0 2 cm long), which readily disintegrated on pressure in a cover-slip preparation into what appeared microscopically to be pure cholesterol crystals Burgom (*Journ de méd vét et de zootech de Lyon* 1882, xxxii 343) described a 320 gram stone which he found in the bile duct of a seven-year old horse as composed almost entirely of cholesterol However, Burgom's statement which was unsupported by competent testimony, is not confirmed by the records in veterinary literature of gall stones in mammals

Stones have been found in the gall bladder or bile ducts of cattle, horse (which does not possess a gall bladder) dog, swine, and rarely of cat and sheep I have found two hard stones (not analysed) in the distended and chronic inflamed gall-bladder of a drake, and Fox (*Diseases in Captive Wild Animals and Birds* 1923) reported six cases of 'gall stones'—in the beaver (2) brant goose, pig-tailed macaque, polar bear, and mongoose lemur The incidence of gall stones is highest in cattle—for example in approximately 0 5 to 1 per cent of cattle slaughtered in the United States of America (vide Feldman *Journ*

Cancer Research 1928 xii 188 Gauss and Davis *Journ Amer Vet Med Assoc* 1932 lxxxi 71) On analysing all the reports in the available veterinary literature of the past fifty years I find there is no significant difference in sex incidence and no constant pathological change associated with the stones No macroscopic abnormality of the biliary system or liver is found in the majority of bovine cases whereas biliary cirrhosis is reported in the majority of equine cases The stones usually found in mammals consist principally of bile pigment and bile salts traces of cholesterol may also be found Concretions composed principally of the carbonate and phosphate of calcium and magnesium mixed with bile and formed around a foreign body—for example a crystal of quartz a grain of corn or a dead parasite—are not uncommon in the horse

I suggest that progress in experiments on the genesis of cholesterol gall stones might result from the investigation of canaries—I am etc

Department of Pathology Royal Veterinary College N W 1 May 31st TOM HARE

Hernia and Appendicectomy

SIR—The correspondence on this subject in your columns has perhaps necessarily brought about a comparison between two incisions—the muscle splitting and the muscle retracting

I have certainly never connected the possibility of the gridiron incision which I practically never use now for appendicectomy with the production later of an inguinal hernia It seems to me very probable however that this may happen even if only on theoretical grounds It is not difficult to imagine where the muscle supports of the inguinal canal are weakened or paralysed and there is loss of shutter action that it might be easier for abdominal contents to slip into a lurking indirect hernial sac I saw recently an appalling ventral hernia occasioned by the use of a muscle splitting incision plus sepsis The last dorsal nerve at least had also been involved and the whole of the right lower abdominal quadrant bulged hideously being surmounted by the actual thinned-out scar and hernial sac During the last year I have seen two other ventral hernias from this incision Furthermore repair of a muscle splitting incisional hernia is surely attended with less chance of cure than a hernia following rectus sheath incisions Why split muscles when there are means of causing less injury by retraction as in Battle's incision? All I think will admit that exposure is not so good with a McBurney incision—surely an important point in almost all appendix cases since we never know beforehand how difficult an appendicectomy may be We may also want to hunt for a concretion I believe that abscesses are better opened by sight so that every drop of escaping pus can be mopped up

Mr Geary Grant's letter (May 20th p 892) gives cause for comment He favours the muscle splitting incision and states I believe it is a better situation for drainage the ilio-inguinal and ilio-hypogastric nerves are unlikely to be injured except from sepsis What of the last dorsal nerve too? He also says I am ready to admit that where drainage has been carried out through this incision it may be a cause of post operative pain And how painful these lateral abdominal incisions can be! Why then employ an incision which may meddle with nerve tracts? In his last paragraph he mentions reasons for giving up Battle's incision which are not easy to agree with It is surely not difficult to avoid dividing one or more of the nerves to the rectus The nerves pierce the posterior sheath of the rectus so that mobilization of the outer edge of muscle is free from danger The nerves now lie in some transparent membranous tissue behind If a bold transverse gap is made through this soft yielding membrane and areolar tissue and the edges are retracted up and down with the finger all nerves and vessels are carried out of harm's way at once It remains to incise the absolutely bare posterior sheath If local difficulties above or in the pelvis demand a little more exposure it is still a simple matter to enlarge the opening in the posterior sheath up or down behind the nerve bearing retracted tissue If the upper abdomen has to be approached I sometimes convert Battle's incision into a right paramesial with retraction of the rectus outwards Adequate drainage of the rectus sheath and a tube (if drainage be employed through the original incision) left in for the shortest possible time and not the longest ensures against ventral hernia The outer edge of the thick muscle is a very adequate barrier for any tendency to hernia under these conditions—I am etc

Torquay May 29th W ETHERINGTON WILSON F R C S

So called Pancreatitis in Mumps

SIR—In case the symptoms of the complication of pancreatitis in mumps are not generally known I am sending you notes of a case I have recently seen as there is a definite danger of unnecessary operative intervention

The patient was a youth aged 20 who developed right sided parotitis The symptoms were very mild and at the end of the fourth day had practically disappeared On the seventh day his temperature ran up to 104° F He was acutely ill His abdomen was much distended with general pain and tenderness all over it but there was no localized pain or rigidity He had nausea but was not sick Restlessness headache and photophobia were prominent symptoms The patient's relatives were apprehensive of appendicitis and both a surgeon and a physician were called in the former taking a serious view of the case and ascribing the symptoms to a partial intestinal obstruction The latter was more cheery about it but both were of the opinion that the case was not mumps and that the parotitis had its origin in some abdominal disease With the exception of a slight leucopenia the blood picture was normal The reactions to the enteric group were negative and the blood was sterile In forty-eight hours the boy was well

In discussing the case with a colleague he informed me that a similar train of symptoms occurred to him in America His condition was so alarming that it was decided to do a laparotomy This fortunately was averted on the advice of a man who recognized the symptoms In his case too the pancreatitis was well in a couple of days but on the fourteenth day of the disease he developed orchitis

The medical officer of a large public school tells me that this complication is not uncommon and he knows of a similar case which was operated on for appendicitis and a normal appendix removed

It would be interesting to know on what grounds the pancreas is considered to be involved In this case there was no tenderness in the epigastrium no sickness no characteristic stools The urinary diastase was unfortunately not estimated till rather late but was then normal—I am etc

London W 1 May 27th A H SPICER

Infra red Rays in Criminal Investigation

SIR—In the investigation of crime it is of the highest importance that the medico-legalist should know what possible assistance he may obtain from science to aid his investigation of crimes and it is equally essential that he should make use of the latest developments of science

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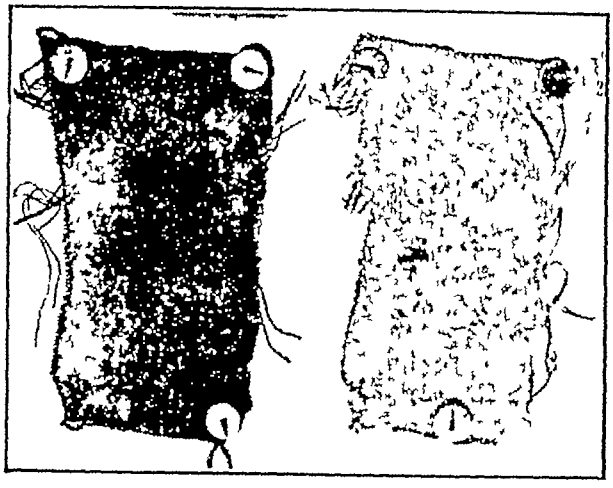
literature provides ample evidence of the many possible applications of the filtered ultra-violet rays in criminal investigation But invisible rays from the other end of the spectrum, infra red rays or heat rays, may be of considerable value to the criminologist The photographs reproduced herewith are, I think, of interest in this respect

On the left is a photograph taken in ordinary light of a piece of blue serge cloth which was being examined for the presence of blood No stain is visible either to the



naked eye or by ordinary photography On the right is the cloth as it appeared when photographed with an infra red plate Now a stain is evident, and this stain, by the usual microscopical, chemical, and spectroscopic tests was proved to be one of blood

I have to thank Professor Glaister of this university for permission to use the photographs —I am, etc ,

Forensic Medicine Department University of Glasgow May 16th F W MARTIN

Mind and Body

SIR —There has been a tendency for many years past to regard the human organism as a rat or a guinea pig is regarded in the laboratory Surely it is time that we all recognized in our work and our hypotheses of disease that our patients have minds, and that this highly civilized part of them has a very strong influence indeed over their bodies

In the *Journal* of May 27th there are two extremely able articles which make very interesting reading , but I feel quite certain that both these articles would be still more interesting and much more valuable if only they were to contain a slight acknowledgement that the mind also comes into the picture I refer to Dr Wilfred Shaw's Treatment of Menstrual Irregularities ' (p 907), and to Dr Norman Burgess s Experiences with Proteose in the Treatment of Diseases of the Skin " (p 914) In the former article there is a paragraph headed " Metropathia haemorrhagica The results of treatment are given as not satisfactory ' though theoretically correct " May I suggest that the reason is that treatment of this sort does not remove the fear of pregnancy which is the real cause of the condition Dr Wilfred Shaw with his wide experience of suffering women must have had to recognize this frequently All general practitioners meet it continually Why do they not admit this state of affairs at least to their own reasoning? Unless we all begin to think fairly we shall never get further than ' hover at the fringe of a complete understanding of these ovarian abnormalities To my mind the last sentence of Dr Shaw s article should read In future it is more than probable that psychotherapy will be the method of choice in the treatment of many cases of this kind "

Is it not time that we as a profession preaching prevention rather than cure, began to teach our patients how best to control their bodies by true harmony of mind rather than how we, by surgical amputations, can try to free them from the anxieties and fears that so often cause their symptoms? Asthma is surely an instance of an anxiety disease Let us admit it and research in that direction, rather than experiment by injecting the abnormal excretions that the body is trying so hard to get rid of We all rejoice with Dr Burgess that he is getting good results, but is he not beginning at the wrong end?

All through the medical, and even surgical, literature of the day one can see our great profession blinding itself at the outset by thinking in terms of the physiologist or pharmacologist, or bacteriologist, doing experiments on animals, instead of starting as a humanist and admitting the very powerful influence of an anxious mind over the body in which it works Many instances occur to one and, indeed, to all of us, but it is not part of the scope of this letter to recount cases of my own experience but rather to express a hope that the profession generally may be stimulated to reorientate its views on disease in the light of recent psychological work —I am, etc ,

Cambridge May 29th C M BILLINGTON, M D

Treatment of Compound Fracture of Femur

SIR,—In your issue of May 27th (p 942) is an account of an action against a surgeon for negligence in the treatment of a compound fracture of a femur In the course of his evidence for the plaintiff, Mr Brockman is stated to have given his opinion that the correct treatment of a compound fracture of four days' duration is excision of the wound I have no more right than he—as neither of us saw the case at the time when the proper treatment was in question—to offer an opinion as to the treatment best for this individual case, but I venture to think such a view ought not to be spread about by the medical press

It is, fortunately, not a common experience to have to undertake the treatment on the fifth day of a compound fracture of a long bone in civil practice All cases in my practice seen within twenty four hours of the accident are cleaned and excised If Mr Brockman had any experience of casualty clearing station surgery in the war I feel sure he would agree with me that late excisions which were at times attempted, were a failure In advocating such a procedure Mr Brockman loses sight of the aim of excision, which is to obtain primary union and to convert an open fracture into a closed one

It was stated by the defendants and by witnesses for the defence that when the patient was admitted to the home his wounds were " very dirty " Does Mr Brockman advocate closure of such wounds? If not excision would be merely meddlesome I am sorry to have to disagree with what is reported as Mr Eccles's evidence for similar reasons When he states that he would excise in the presence of mild sepsis four or five days after an accident he is at variance with me on a question of surgical principle which cannot be a matter for discussion

Of course, one cannot take in the whole of a case by merely reading a newspaper report there were several points in the case which to me were not clear—the chief being why the admittance of the patient to the nursing home was delayed till the fifth day, and what treatment in the way of reduction and immobilization had previously been carried out or attempted Counsel for the defence seems to have ignored these points

The larger question as to the calling of expert evidence by both sides in such a case seems to me to be again brought into prominence by this verdict I submit that the present method is against the public interest and derogatory to the reputation of the medical profession

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Much more reliable medical evidence would be available for the guidance of judge and jury if experts selected from a panel of medical men experienced in that particular type of case were summoned by the court But this is too big a question to discuss fully in your correspondence columns —I am etc

London W June 5th C H FAGGE

"Sunshine Roof" Rheumatism

SIR —With the advent of warmer weather and spells of sunshine the motorist is making full use of his sunshine roof which is now becoming a standard fitting on all saloon cars large and small If the weather is really warm he will also discard his headgear and enjoy to the full the fresh air and sunshine In common with all new ideas which are on the whole an advance and largely beneficial the sunshine roof brings its little drawback which in my small experience is becoming fairly common—namely a subacute rheumatism affecting the musculature of the back between the scapulae

The victim who is usually quite unaware of the cause of his trouble complains of a mild but annoying muscular ache between the shoulder blades which is more marked during rest when the head is rested on a pillow in the lateral recumbent position It is usually the healthy young owner-driver who suffers—the man (or woman) who is keen on motoring and who sits up to the wheel when driving The passenger who sits back against the cushions rarely complains and often the small protection offered by the brim of a hat is enough to ward off the unnoticed but causative back draught

The cause of the rheumatism once discovered the cure soon follows and the sunshine roof motorist either wears a hat or pulls the sliding roof forward an extra foot and sits back in his driving seat Iodex radiant heat and massage soon settle the condition if further treatment is required

In spite of these observations I am an enthusiastic user of a sunshine roof and believe that it is a most necessary fitting to the modern saloon car which has so completely ousted the old fashioned open tourer —I am etc

Colwyn Bay June 1st. DONALD I CURRIE

South African Medical Congress

SIR —In the *British Medical Journal* of March 11th this year you were good enough to publish a letter of mine expressing the hope that some members of the British Medical Association in England and elsewhere might be tempted to attend the twenty seventh Annual Medical Congress to be held in Capetown September 25th to 30th and assuring them of a warm welcome should they do so In response to that letter I have had several inquiries as to the possibility of obtaining some reduction of shipping fares and special terms for those attending the congress at certain hotels in Capetown I have been able to do both these things

Visitors to the congress can leave England and return as follows *Armadale Castle* leaving Southampton August 4th or by the *Windsor Castle* leaving Southampton August 25th and return by the *Windsor Castle* leaving Capetown October 6th The first-class return fare will be £90 and the second-class return fare £60 The second class accommodation on these ships is extremely comfortable and no one need hesitate to travel by it These ships belong to the Union Castle Company of 3 Fenchurch Street London The Ellerman Bucknall Company of Leadenhall Street have monthly sailings of very comfortable one-class ships and the return fare is £72 —I am etc

E BARNARD FULLER
President Elect.

85 St. George's Street, Capetown
May 11th

Medico-Legal

NEGLIGENCE OF A SUBORDINATE
THE SURGEON AND THE THEATRE TEAM*

The surgeon performing an operation relies on his highly trained team to fulfil many vitally important duties The question of the extent to which he is responsible for a negligent act by his anaesthetist assistant or nurse may therefore at any moment call for an answer Considering the thousands of operations performed in this country every week it is astounding that the hundreds of volumes in which English cases are reported contain no judgement by which this responsibility is measured and hardly even a dictum from which it can be inferred Judges seem to have been rather careful to avoid expressing a definite opinion on this important and difficult matter There is on record however a case which originated in a South African hospital and was heard by the Appellate Division of the Supreme Court of South Africa The judgements given in this case are not of course binding on an English court but they represent the opinions of three lawyers of great learning and experience This was the case of Van Wyk *v* Lewis (1924)

A girl was taken suddenly ill and her general practitioner found her to be suffering from acute cholecystitis He advised an immediate operation and called in an eminent consulting surgeon who performed the operation in the nearest hospital at midnight He was assisted by an anaesthetist and by a qualified nurse on the hospital staff who acted as theatre sister The operation was a most difficult and anxious one the gall bladder was in a very bad state and its substance was so friable that it would not hold the sutures The condition of the patient was critical and the anaesthetist warned the surgeon to get her off the table as soon as possible At the end of the operation the surgeon searched for swabs as carefully as he could but was chiefly concerned with closing the abdomen and getting the patient off the table The patient made a quick recovery and the wound healed over Some months afterwards it broke again and discharged some gall stones and about a year after the operation she passed by the bowels an object which was undoubtedly a small swab with tape attachment She sued the surgeon for negligence and claimed £2 000 damages The judge of the inferior court found against her and she appealed

The court first disposed of the contention of the patient's advisers that to leave a swab in the abdomen was itself proof of negligence and that the surgeon must pay damages unless he could prove that he had not been negligent Chief Justice Innes held that on the contrary all the facts must be considered and that the patient must prove the negligence The court quoted the words of Beven on Negligence

Prima facie to sew up a sponge or an instrument in a patient after an operation is negligence Very great care and method is to be observed in accounting for all appliances used and this in proportion to the easiness with which they may escape observation but even here the fact that some needle or portion of an instrument has been left in a wound is not conclusive but the conclusion from the fact must be determined by a jury on a view of the whole circumstances

Wessels Judge of Appeal said Since all the surrounding circumstances are to be taken into consideration there is no room for the maxim (namely *res ipsa loquitur* which means that the fact is itself adequate evidence of negligence) The case hinged on whether the surgeon was entitled to depute to an assistant the task of counting and checking the swabs or whether he did so at his own risk and if she (the assistant) made a mistake was responsible for her negligence Judge Kotzé said The operating surgeon no doubt has control of the operating room or theatre and circumstances may arise where he *may* become liable for the acts of the nurse or sister in attendance

The evidence had established that by the procedure of the hospital the duty of counting all the swabs and particularly of keeping a tally of those used inside the body and checking them as they came out was entrusted to the

* The first part of this article on Negligence of a Surgeon to be by a legal correspondent appeared in the *Journal* of April 29th (p 766) and the second part, dealing particularly with nursing homes and co-operations and the paying patient, on May 27th (p 941)

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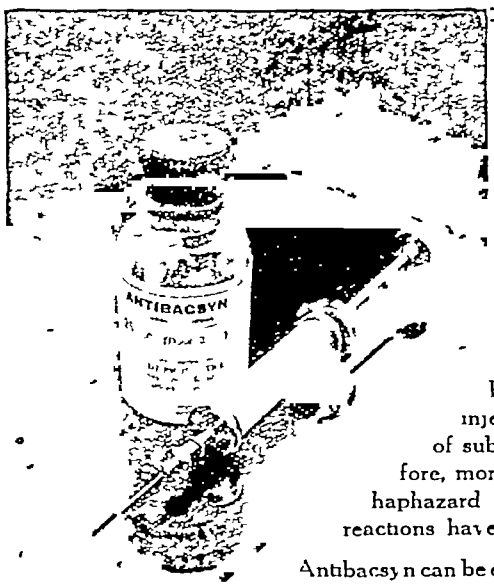

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sister The court held that this practice was reasonable—the sole test of whether the surgeon had used due care On the question of whether the theatre sister was the servant of the surgeon in the sense that he was responsible for her negligence the court expressed a most important opinion Wessels, J A , said

' The relation of a hospital sister or nurse in a public hospital to a surgeon operating in that hospital is not that of master and servant nor is it analogous to such a relationship The sister or nurse is an independent assistant of the surgeon though under his control in respect of the operation The truth is that hospital sisters and nurses form a distinct branch of the hospital They are members of an allied profession and have duties of their own to perform They are subordinate to the surgeons, but they are in no way their servants The surgeon does not insure that he will be responsible for every misfeasance of the nurse To make him so would make his position intolerable "

Speaking of the practice of the profession, he said

' In determining whether a surgeon conducting an abdominal operation in a hospital is entitled to place reliance on the counting of the swabs by a qualified and competent hospital sister we must consider the prevailing practice of the profession and all the circumstances surrounding the operation In operations some team work is essential to what extent the doctor should or should not rely upon the team work of the hospital assistants depends entirely on the nature of the particular case '

He quoted the words of an American annotator " If the surroundings are those of a modern hospital with experienced nurses and attendants, the doctor ought to be entitled to take for granted that they will attend to their ordinary duties without instruction " He said

This appears to me both common sense and sound law in this country [South Africa], taking into consideration modern conditions and modern methods of operating in hospitals The Court of Appeal affirmed the judgement of the court below Here are three learned Dominion judges expressing the emphatic opinion that a surgeon is entitled to rely on expert assistants in an operation and is not to be held personally responsible for every act of those assistants The extent of his responsibility, they suggest will vary in each particular case, but he is not unconditionally responsible, and the fact that a mistake has been made and an appliance has been left in the patient s body will not in itself prove that either he or a subordinate has been guilty of negligence Whether in the circumstances negligence has been committed is a matter for the jury to decide

In March 1930, the Lord Chief Justice, sitting with a special jury heard the case of Crotch *v* Miles, in which a woman claimed damages against Mr Ernest Miles on the ground that he had left a pair of forceps in her abdomen at an operation he had performed ten years before This case was not reported in any of the series of legal reports but a full account appeared in the weekly medical journals [1] The evidence established that, since the operation by Mr Miles the patient had undergone another operation in France Mr Miles gave evidence that he invariably exercised scrupulous personal care in counting all instruments and appliances after an operation and had devised a system by which both he and his theatre sister counted the instruments in multiples of three It appeared that at operations in France no count is made either by the surgeon or by the assistant The jury came to the conclusion that the forceps had not been left in the patient s body at the operation performed by Mr Miles and so the question of the surgeon s responsibility for his assistants at an operation was not a main issue Nevertheless in the course of this case Lord Hewart made several interesting observations which may fairly be taken to represent the attitude of the common law towards a surgeon who accidentally allows an appliance to remain in the body of a patient They show moreover the essential contrast between his attitude and that of the African judges Whereas these judges were concerned with whether a surgeon, generally speaking, should be responsible *in law* for a mistake by his assistant, Lord Hewart was concerned in all he said with asking the jury whether it thought *on the facts* of this particular case that the surgeon had been negligent

Referring to the judgement in Hillyer s case, Lord Hewart said that the operation staff had been held not to be the servants of the governors but, he said it did not follow the other way round that the nurses assisting at the operation were the servants of the surgeon In his summing-up, he said that nobody denied that if a surgical forceps was left in the body of a patient in the course of a surgical operation, that patient ought to have a remedy in damages against somebody—in other words, the case is one where *res ipsa loquitur* He quoted the evidence of Sir Hugh Rigby a surgeon, that in England the theatre sister was exceptionally responsible and highly trained, and that according to the usual practice she was charged with the duty of counting instruments and swabs He very properly left the decision to the jury whether on the evidence in the particular case assuming that the forceps had been left in the body at Mr Miles s operation, it considered that the surgeon was ultimately responsible He recalled that Sir Hugh Rigby had said it was in the interests of the patient that the duty of counting should be left to the sister Sir Thomas Horder (as he then was) had said that he regarded the surgeon as ultimately responsible, and that the surgeon should check the count at the close of the operation Lord Hewart s words to the jury were

" You may think it is right to draw a distinction between what is done in the course of the operation and what is done immediately at its close It may well be that in the actual course of the operation while the surgeon is cutting and opening and attending to his surgical task it is not to be expected nor desired that he should be busying his mind with the counting of instruments and swabs or with the question of whether a swab or instrument is missing But you may think that other considerations apply at the close of the surgery itself It may well be that any delay might be highly prejudicial if it occurred before the body of the patient was stitched up but after that you may think that before the surgeon departs it is reasonable that he should personally satisfy himself that the number is correct and that there is nothing missing

" Was it in November 1920 part of the duty of the surgeon personally to count the instruments and satisfy himself that the number was correct or was he entitled to say that there was present a skilled theatre sister that this was her job, and that he was entitled to act upon her report? She is not his servant she is one of the team We can all make mistakes I suppose it is quite conceivable that somebody in an individual case might miscount a certain instrument You have to address your minds to this question suppose the theatre sister did miscount and thought there were six of these instruments when there were only five is the defendant responsible for that happening? Is it a breach of duty on his part that the theatre sister made that mistake? You may think it is linked up with the question as to what he did afterwards

It was in some ways a pity that the question was not a main issue of the action From the words of the Lord Chief Justice it seems doubtful whether an English court will ever commit itself to an unconditional ruling that the surgeon at an operation can leave the counting of instruments and swabs entirely to the theatre sister and be relieved of all responsibility Lord Hewart hinted strongly that however urgent it may be to get a patient sewn up and off the table the surgeon can reasonably be expected to count his instruments and appliances afterwards In any event the matter rests with the jury to decide on the evidence in the particular case

Attempts have sometimes been made to hold the surgeon responsible together with the anaesthetist if mishap resulted from the administration of the anaesthetic but there appears to be no record of any case in which their respective liabilities have been defined In Hillyer s case Lord Justice Farwell made some remarks about the surgeon being in supreme command at an operation, but these remarks were not directed towards the point at issue—which was the liability of the hospital for injury to a patient at an operation—and were, therefore in the nature of *obiter dicta* and not binding on other judges It is difficult to see how a surgeon can possibly be held responsible for the proper administration of the anaesthetic As a rule the anaesthetist is neither his servant

[1] *Brit. Med. Journ.* 1930, i, 620 *Lancet* 1930, i, 643, 706

nor his servant but an independent contractor upon whose skilled collaboration and assistance he depends If however the selection of the anaesthetist has been left to the surgeon he would probably be held to owe the patient a duty to exercise reasonable care in selecting a competent anaesthetist A surgeon who consents to operate with an anaesthetist whose competence he has reason to doubt probably does so at his own risk

STUDENTS IN A TEACHING HOSPITAL

In a teaching hospital it is part of the training of students to perform subordinate duties such as dressings passing catheters taking specimens of blood and treating minor ailments and injuries in the casualty department The question may at any time arise Who is responsible for injury resulting from lack of reasonable skill or care in a student? The question is not an easy one The governors of the hospital contract with the medical school to give facilities to students to learn their craft within the hospital under the direction of the visiting and resident physicians and surgeons The hospital governors do not exercise any control over the students who learn within the walls of the hospital Nevertheless one of the duties of the hospital to its patients is to protect them or warn them against any dangers they may encounter in the hospital In certain circumstances the ministrations of the student may conceivably be quite dangerous and the question arises whether a patient who enters a teaching hospital of his own will knowingly and willingly takes the risk of being attended in some circumstances by a student There is no explicit guidance in either the law reports or the textbooks and the legal liability would probably vary according to the particular case It seems reasonable that the hospital or the teachers should be liable for any injury caused by the delegation to a student of a duty which he could not reasonably be considered competent to perform On the other hand the governors are never in a position either to control the student or to decide what duties may be properly delegated to a student in any particular case This seems to be peculiarly a matter of professional skill within the compass of the medical staff alone and outside the interference of the governors altogether The inference is therefore that if harm happens through a student being given a task that is in the view of a reasonable man beyond his capacity the liability should rest on the person who appointed him to that task If however a student who was considered on reasonable grounds fit to perform a certain task caused injury by performing it negligently it does not seem good law that the teacher who ordered him to perform it should be held responsible unless he was present and in a position to control the student If the qualified medical staff were liable for isolated acts of negligence by students in their absence clinical teaching would be very seriously hampered if not brought to a standstill altogether When a member of the staff is present and in a position to exercise control the position is different he would then it is submitted have to answer for any injury due to the student's lack of due skill and care

THE QUALIFIED ASSISTANT THE LOCUMTENENT AND THE TECHNICAL EXPERT

Applying the principles laid down in the textbooks and in the cases that have been cited it appears that a medical man in private practice contracts to treat his patient with reasonable skill and care and can only delegate these duties with the consent of the patient If however the patient consents to be treated by a qualified assistant or locumtenent the doctor's duty ceases when he has exercised reasonable skill and care in selecting a competent qualified assistant or locumtenent and he will not be responsible for any isolated act of negligence by such a person Whether the patient has consented must be a matter of fact a patient's consent need not be given in so many words but may sometimes be implied from the fact that he has allowed the substitute to treat him When however a busy medical man finds he cannot pay a certain visit and sends his assistant or locumtenent instead he may put the patient into a position in which he has to choose between putting up with the substitute and going without treatment altogether In such a case the jury is not likely to regard the patient's acquiescence as consent and the substitute will be in the position of the doctor's agent for whose negligence he (the doctor) is responsible If a medical man benefits financially by the work of another there is at any rate a presumption that the other is his agent. It is worth noting that a panel doctor by the form of his contract with the Insurance Committee undertakes liability for his assistant's failure to give a patient proper care and attention

On the other hand when a doctor prescribes expert treatment to be carried out with the consent of the patient by a medically unqualified person skilled in that treatment such as a registered biophysical assistant—a qualification which implies competence in many kinds of treatment such as massage electrotherapy and hydrotherapy—he is not responsible for specific acts of negligence by such persons if he has good reason to believe that they are competent to carry out the treatment which he has prescribed and if it is the custom of the profession to delegate such treatment to such persons He has discharged his duty when he has exercised due care in the selection of an assistant or independent expert competent to perform the task in question If however a subordinate is performing a duty in his presence and he is able to exercise control he may be liable for that subordinate's negligence Whether a given person was in fact a subordinate and whether the doctor could properly have exercised control is a question for the jury in the particular case

Under the Partnership Act 1890 (Sections 10 and 12) each partner in a firm is liable for the misdoings of the others in the firm's ordinary business If therefore one of the partners in a medical firm is so unfortunate as to have damages given against him for negligence any of the others may be made to pay the whole of the amount If the injury was caused by fraud or culpable negligence the offending partner may in some cases be ordered by the Court to indemnify the others but he may not have the means to do so Every member of a partnership would therefore be well advised to insure himself against the risk of being held liable in damages for the act of another practitioner over which he cannot exercise the slightest degree of control Even if his partners are absolutely competent and trustworthy juries are not

* Since the three parts of this article on Negligence of a Subordinate were written Mr H C Dickens barrister at law has delivered a valuable lecture to the Medico-Legal Society entitled Negligence in Hospital and its Legal Consequences in which he dealt with some of the same points and with certain others This paper will in due course appear in the *Medico Legal and Criminological Review*

Universities and Colleges

UNIVERSITY OF OXFORD

At a congregation held on June 3rd the degree of Doctor of Medicine (D M) was conferred on F Hawking

UNIVERSITY OF BRISTOL

Dr Geoffrey Hadfield F R C P Professor of Pathology in the University of London (Royal Free Hospital London School of Medicine for Women) has accepted an invitation to fill the Chair of Pathology shortly to be vacated by Professor Walker Hall

Dr J W de W G Thornton has been appointed Lecturer in Pharmacology and Mr J D A Gray senior Pathological Officer in the Department of Preventive Medicine

UNIVERSITY OF SHEFFIELD

At a congregation on July 1st the honorary degree of Doctor of Science will be conferred upon Professor J B Leathes F R S Dean of the Faculty of Medicine and upon Mrs May Mellanby

UNIVERSITY OF ST ANDREWS

Mr Francis Robert Brown M B Ch B F P C S Ed has been appointed a lecturer in clinical surgery in the University

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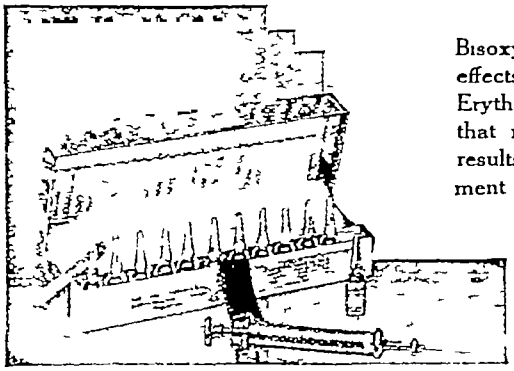

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Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The Unemployment Insurance (Expiring Enactments) Bill was introduced in the House of Commons on May 31st It is a Government measure which proposes to continue for twelve months the Unemployment Insurance Act, 1930, and Sections 1 and 2 of the Unemployment Insurance (No 3) Act, 1931 The second reading is put down for June 14th

The House of Commons will reassemble on June 13th The report and third reading of the Pharmacy and Poisons Bill is set down for June 15th The Bill has already passed the House of Lords

Hospitals and the Tax on Co operative Societies

On May 30th, in the House of Commons the Finance Bill was further considered in committee A new clause moved by Mr HORE BELISHA imposing a charge of income tax on mutual profits of any company or society was read a second time by 253 votes to 77

Mr CAPE moved an amendment to exempt from income tax any profit or surplus allocated by a society to hospitals, convalescent homes or welfare centres He understood from the Chancellor of the Exchequer that donations by societies to such institutions would be on a similar basis to donations given by individuals or companies But he understood that an individual or a company had to give a seven years guarantee that the donation would be paid to these institutions before being able to claim exemption If that was so the case of these societies would not be met because it was very difficult for a mutual trading society to give a guarantee for that length of time most of these societies were run on democratic lines and every half year the meeting of members decided what donations of this kind should be made Having been a general secretary of one of these societies himself he could say that they generally paid something to the hospitals and convalescent homes in the locality every year for the benefit of their people For three or four years they gave a substantial grant to one or two hospitals not only in their own area but outside as well because of the specialist treatment given to their people This year, however owing to so many men being unemployed and their revenue having much decreased they had to reduce their donations to the hospitals The same thing applied to other co operative societies

Mr LOGAN said that it was important in hospital and convalescent treatment for a patient to be able to get out of his own neighbourhood and a wonderful opportunity would be afforded if a big society with 6 500 000 members was in a position to provide additional benefits out of its surplus funds Owing to the great amount of poverty many thousands of people would be turned off health insurance this year Here was an opportunity for the co ordination of the health services of the nation with the work that the co operative society was able to do The expenditure on Poor Law would be relieved by the grants that could be given not only for the relief of distress but for convalescent treatment and after care Mr PRICE appealed to the Chancellor of the Exchequer to give consideration to the matter because it was bound to affect the finance of hospitals all over the country

Government Reply

Mr CHAMBERLAIN Chancellor of the Exchequer said he could not accept the amendment He hoped that the answer he would give to the points raised would satisfy hon members and reassure them as to the fears which had been expressed There had been some misunderstanding on two points He had not said that co operative societies in this respect would be in the same position as private individuals he had said that they would be in the same position as trading companies—quite a different thing The seven year guarantee was something which applied only to subscriptions by private individuals there was no question of the seven year guarantee in considering what had to be allowed as a trading expense or in computing the profits or gains of a trading company To put the matter quite broadly and generally if donations or subscriptions to hospitals and other institutions referred to in the amendment were made for the welfare of the employees of the co-operative society or company they would be admissible as a trade expense In the case of hospitals the question would be whether those hospitals were available for the welfare of the employees If that was the case subscriptions or donations would not be subject to taxation, although they might be taken out of the surplus of the society But with regard to donations or subscriptions—for example by a Yorkshire co operative society to a hospital in London—one could hardly say that that was in connexion with employees of the society and he did not think that they should be permitted as a trade expense

Mr LOGAN asked if the Chancellor would agree that in the case of a company or society in say, Yorkshire or Lancashire, subscribing to a specialist hospital to which they could send a patient even though it might be in the South of England that would be within his description Mr CHAMBERLAIN answered Certainly It is not necessarily a question of the locality The test is whether it is for the welfare of the employees It would of course in the ordinary case be a local hospital, but a subscription to a specialist hospital which was not necessarily in the locality would come within the exemption

Sir S CRIPPS said he was afraid that what Mr Chamberlain had said would not in the least meet the point which the Opposition desired to put forward The right hon gentleman had stressed quite rightly and accurately that all these various payments must be made on behalf of employees and that of course was the existing law as regarded other companies But co operative societies were concerned with payments made on behalf of members and not of employees and the position as he saw it was this a co operative society had a surplus available and in order to provide hospital accommodation for its members made a large donation to a local hospital The members had the alternative of taking the money in dividend or of benefiting the hospital Surely it was a proper and right use of the money on exactly the same basis as the use of the money for dividend

The amendment was rejected by 231 votes to 66

Stamp Book Advertisements —Answering Mr Sutcliffe on June 2nd, Sir KINGSLEY WOOD said that revenue from advertisements of patent medicines in the stamp books was about £530 per annum of which about £30 per annum was from advertisements of medicines for certain diseases referred to in paragraph 58 (2) of the Report of the Select Committee on Patent Medicines In view of the committee's recommendations he had decided that any future contract for the exploitation of advertisement space in the stamp books should prohibit acceptance by the contractor of any advertisement for a patent medicine the terms of which suggest that the medicine had a beneficial effect in respect of the diseases listed

Obituary

Dr T BURNS MOYES, who died at the early age of 40 was well known as a general practitioner in Hull where he had many friends especially among the poorer classes He was born in Calcutta and studied medicine at the University of Edinburgh, graduating M B B Ch in 1918 During his undergraduate days he was president of the Royal Medical Society of Edinburgh and after qualifying held a number of resident posts at the Edinburgh Royal Infirmary In the early part of the war he served with the 28th Brigade R F A, and afterwards as a temporary captain R A M C At Hull he was medical officer to one of the River Boards, and medical referee for the central district in connexion with the examination of superannuated employees of the corporation

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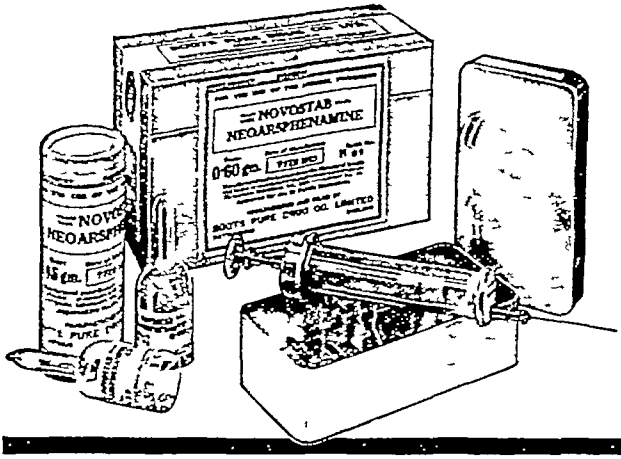

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Medical News

The summer dinner of the Australian and New Zealand Medical Association in England will be held at the Trocadero Restaurant Piccadilly on Friday June 16 h at 7 45 for 8 p m with Mr L Graham Brown F R C S in the chair Sir Thomas Wilford High Commissioner for New Zealand will be the official guest All medical visitors from Australia and New Zealand whether members of the association or not are cordially invited to be present The honorary secretaries are Mr E T C Milligan and Mr Philip Jory (26 Queen Anne Street W 1)

The annual general meeting of the Paddington Medical Society will be held on Tuesday June 13th in the Great Western Royal Hotel Paddington at 9 p m when the presidential valedictory will be delivered by Dr G de Swietochowski and officers for the coming year appointed

The British Institute of Philosophy announces that an address will be given by Sir Herbert Samuel entitled The Tree of Good and Evil at University College Gower Street on Wednesday June 14th at 5 15 p m A limited number of seats are available for the public and applications for tickets should be made to the director of studies University Hall 14 Gordon Square W C 1

The St Cyres Lecture for 1933 on Some Observations on Coronary Thrombosis will be delivered by Professor John Hay at the National Hospital for Diseases of the Heart Westmoreland Street W 1 on Tuesday June 13th at 5 p m All members of the medical profession are invited to attend

At the Princess Elizabeth of York Hospital for Children Shadwell E to-day (Friday June 9th) at 8 45 p m Dr A. P Cawadias will give an address on Hippocrates and Hippocratic Principles of Practice in Contemporary Medicine Dr A M Gossage will preside Visitors are welcomed

The second of four advanced lectures for post graduates arranged by the Fellowship of Medicine and Post Graduate Medical Association will be given on June 14th at 5 p m at the Medical Society of London 11 Chandos Street W by Dr C P Symonds on The Disturbance of Cerebral Function in Head Injury A course in diseases of the chest will take place at the City of London Hospital Victoria Park from June 12th to 24th On June 26th at 8 30 p m at 11 Chandos Street Dr Roland de Hellebranth of New Jersey U S A will deliver a lecture on Modern Methods of Local and Spinal Anaesthesia illustrated by lantern and cinema There will be a practical week end course in general medicine and surgery at the General Hospital Southend on-Sea on July 8th and 9th On June 16th at 5 p m there will be an ante natal demonstration at the Royal Free Hospital Forthcoming courses include cardiology at the National Hospital for Diseases of the Heart June 26th to July 8th diseases of children at the Children s Clinic June 26th to July 8th

A joint conference of the British Hospital Association and the Incorporated Association of Hospital Officers is being held at Bath during the last three days of this week An opportunity will be afforded for viewing officially and in detail the new Bath Royal United Hospital which has lately been completed at a cost of £150 000

The annual congress known as the Journées médicales de Bruxelles will be held at Brussels under the presidency of Professor Valère Cocq from June 24th to 28th when syphilis will be the principal subject for discussion The subscription is 100 francs which should be sent to the general secretary Dr Beckers Rue Belliard 141 Brussels The inaugural address will be given by Professor Charles Saroléa on The Doctor and Medicine in European Literature Excursions and amusements have been arranged for visitors and on June 28th members are invited to the official inauguration of the Palais des Thermes at Ostend

The fifth congress of the International Society of Urology will be held at the Royal Society of Medicine 1 Wimpole Street W from July 10th to 15th under the presidency of Sir John Thomson-Walker

Lord Melchett has accepted the presidency of the British Science Guild in succession to Sir Samuel Hoare whose three year term of office ends in June 1933 Lord Melchett will be formally elected at the annual general meeting to be held in the Mansion House on June 19th at 4 30 p m with the Lord Mayor of London (Sir Percy W Greenaway) in the chair

Dr B Holroyd J P of Pannal near Harrogate has been elected chairman of the Claro Guardians Committee of the West Riding County Council for the fourth year in succession

We have received the first issue published in March of a new monthly Spanish journal entitled *Revista Medica de Toledo* edited by Dr J Ruiz de Guardia It contains original articles on nervous syndromes and hepatic opotherapy by Professor G Marañon treatment of infantile paralysis by irradiation of the spinal and peripheral sympathetic system by Dr A Piga and the causes of error in the determination of age by the measurement of the Haversian canals by Dr Daniel Ortega

A meeting of the Physiological Society will be held in the Physiological Laboratory of the School of Medicine Leeds to-day (Saturday June 10th) at 3 p m On July 1st the society will meet in the University Laboratory of Physiology Oxford

We have to announce with great regret that Sir Walter Fletcher died on June 7th after an operation

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal B.M.A. House Tavistock Square W C.1**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication.

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager British Medical Association House Tavistock Square W C 1 on receipt of proofs Authors overseas should indicate on MSS if reprints are required as proofs are not sent abroad

All communications with reference to ADVERTISEMENTS as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager

The **TELEPHONE NUMBER** of the British Medical Association and the *British Medical Journal* is EUSTON 2111 (internal exchange four lines)

The **TELEGRAPHIC ADDRESSES** are
EDITOR OF THE *BRITISH MEDICAL JOURNAL* *Articulate West cent London*
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The address of the Irish Office of the British Medical Association is 18 Kildare Street Dublin (telegrams *Balilus Dublin* telephone 62350 Dublin) and of the Scottish Office 7 Drumsheugh Garden Edinburgh (telegrams *Associate Edinburgh* telephone 24361 Edinburgh)

QUERIES AND ANSWERS

Sequels of War Gassing

YOUNG G P asks where he can find some authoritative information as to the sequelae of being gassed in the war At least 30 per cent of my male patients (he writes) who were combatants in the war and who are now in an industrial practice blame the effect of poison gas on the lungs for their bronchitis thoracic aches and pains asthma tuberculosis etc All the patients are emphatic in saying they were in perfect health before the war and have never been thoroughly fit since their poison gas experience What and where are the facts?

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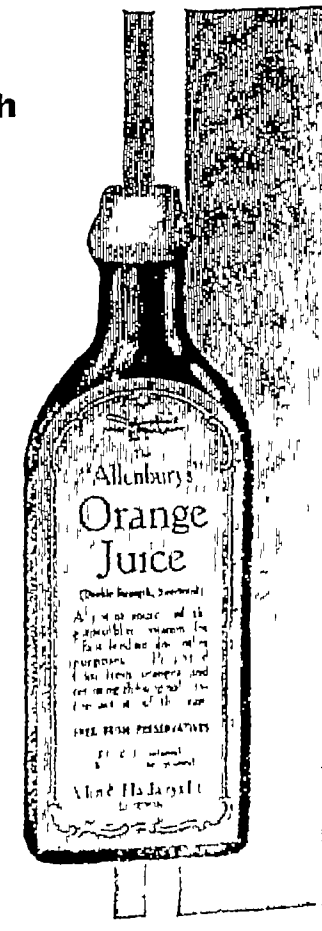

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Myositis Ossificans Progressiva

'HELP' writes A sturdy child of 7 years has developed myositis ossificans progressiva involving chiefly the flat muscles of the back, which are all becoming masses of bone The axillary and neck muscles are also becoming affected so that movements of the head are impossible, and feeding can be achieved only with great difficulty The disease is usually considered hopeless and the sufferer is allowed slowly to become a solid mass of bone Has anyone ever had any success with this disease? Or can anyone make any suggestions? Anything would be tried in a case which, untreated, holds such a hopeless prognosis

Pruritus in Pregnancy

Mr DONALD I CURRIE F R C S (Colwyn Bay) writes in reply to Dr F W Lawson's query under this heading June 3rd p 991) I suggest that he should treat the affected parts by exposure to ultra violet light Two or three exposures at three- or four day intervals are usually all that is required, the patient being placed in the lithotomy position and the parts being well retracted Cold bathing and an antiseptic dusting powder should be used between applications

Income Tax

Board and Lodging of Son Acting as Assistant

"R S" has a son who acts as his locumtenent and assistant, and he claims to deduct as professional expenses "the fees of £7 7s per week as locum and £2 2s as assistant" also £2 2s and £1 1s per week as 'maintenance" expenses The assessor objects to the deduction of £1 1s per week for maintenance as assistant, on the ground that he would have been staying at home in any case

*** The objection does not seem to be well founded If the son does assist in the practice and does in fact receive £2 2s per week in cash and maintenance to the value of £1 1s per week in respect of his services, it seems irrelevant to consider what would have been the position if he were not rendering those services The relationship is also irrelevant unless the value of the emoluments claimed is clearly excessive on a *quantum meruit* basis The amount of the allowances claimed seems reasonable but of course, a lot depends on the facts—that is, on the value and cost of the board and lodging provided

Car Transactions

"MAGNETO'S" car transactions have been as follows

October 1921	Bought car A for £467
December 1926	Bought car B for £130
February 1930	Sold car B for £15 and Bought car C for £165
April 1933	Sold car A for £10 and Bought car D for £180

*** It would have paid "Magneto" better to have claimed the wear and tear allowance throughout, but as it is we advise him to claim the renewal allowance for 1931-2 on car B—that is £130-£15=£115 invoking Section 24 of the Act of 1923 to justify the reopening of the assessment and the repayment of the appropriate amount to him The renewal allowance for car A—that is £180-£10=£170—will affect the profit for the year 1933 and therefore the income tax assessment for 1934-5 The wear and tear allowance should be claimed for 1935-6 and onwards

Allowance for Use of Residence

"M R C S has not practised in recent years She and her husband have now decided to take a house in a suburb M R C S will put up her plate and see whether she can acquire a practice The whole venture is rather in the nature of a speculation' and they are taking a larger house than they would otherwise require so as to be equipped with consulting room etc What expenses can be deducted?

*** The expense of fitting up the consulting room is capital outlay and cannot be deducted but a proportion of the general expenses can be treated as professional It will be a little difficult to fix that proportion because presumably comparatively little use is likely to be made of the consulting room to begin with—we would suggest that one quarter might be claimed

LETTERS, NOTES, ETC

Non differentiation of Abdominal Musculature

Dr NORMAN HOWITT (surgeon to the Yeovil Hospital) writes In view of the rare occurrence of this condition it has been suggested to me that some record should be made The patient a commercial traveller aged 68 was admitted to the Yeovil Hospital with acute appendicitis on January 2nd At the operation a modification of Battle's incision was used, and the following abnormalities of the abdominal wall were revealed There was no linea semilunaris The rectus possessed no separate sheath The rectus and internal oblique did not exist as separate entities The lower quadrant of the abdominal wall was composed of a thick plaque" of muscle, uniform in structure and extending from the middle line to the anterior superior spine and Poupart's ligament, the direction of the fibres being vertical in the mid line and gradually diverging towards the outer side to make their attachment to Poupart's ligament For the purpose of investigation the common aponeurosis was rapidly lifted in both directions to these limits The patient made an uneventful recovery so that no opportunity has been afforded for a more extensive and detailed examination

Simultaneous Herpes Zoster and Varicella in the Same Individual

Dr E B HOLLWAY (Bettiah, Bihar India) writes A lady aged 67 developed a severe attack of herpes zoster of the superior ophthalmic division of the fifth nerve on March 1st 1933 Seven days later she had a slight rise of temperature, followed twenty four hours later by a typical varicella rash over trunk and limbs She had never had chicken pox A garden coolie had had chicken pox fourteen days before her attack of herpes zoster, and her own sister, aged 70, developed the disease ten days later

Artificial Male Urethra

Mr ALEX E ROCHE (London W 1) writes Last December at the West London Hospital, I amputated a penis for urethral carcinoma extending from the external meatus to the scrotum and implanted the urethral stump into the perineum just behind the scrotum Subsequently the patient inquired if he could be fitted with an apparatus to enable him to pass water while standing instead of squatting At my suggestion and request the Genito Urinary Company made a tapering rubber cup about 2 inches deep whose lumen is continued into a rubber tube the length and width of the latter being about 6 inches and ¼ inch respectively The oval mouth of the cup measures about 2½ by 2 inches and has rounded lips for application to the perineum This apparatus (price 10s 6d) enabled the patient at his first attempt on May 11th 1933 to micturate accurately and cleanly while standing into a conical specimen glass without spilling a drop Thus by means of a simple rubber cup and tube this patient is now able to avail himself of the social advantages gratuitously provided by the community, free from the expenses entailed by the squatting position

Mirror Writing

"SINISTRAL" writes Like Dr Richard Bell in his letter on page 947 of your issue of May 27th I was surprised to learn it was not common knowledge that almost anyone with a few minutes' practice can produce mirror writing with his left hand The knowledge is useful for it was a common "tip" in the last war to give to patients with a wound which prevented the use of the right hand And it was uncommon to find one who could not after a little practice write to his friends merely getting someone to hold a note to hold the letter before the mirror

Disclaimer

Dr A C MACIAN writes With regard to the publication in the lay press of certain items highly eulogistic of the work of myself and a colleague in the matter of cancer research and a new line of treatment I desire to state that these have appeared without my consent or approval also that they contain many inaccuracies and are completely misleading as far as my own portion of the work is concerned

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 40 41 42 43 44 45 and 47 of the advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 46 and 47

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 259

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

407 Vocal Symptoms in Addison's and Graves's Disease

R SEGRÉ (*Rev Franç de Phoniatrie* January 1933 p 39) claims that certain vocal troubles observed in connexion with the diseases of Addison and Basedow though not exclusive to these maladies or absolutely characteristic are sufficiently frequent to be recognized as a symptom of endocrine derangement The dysphonia of Addison's disease appears in the period of advanced asthenia and pigmentation and becomes progressively accentuated as the malady advances A subjective sensation of fatigue precedes the vocal trouble There is a difficulty in shouting or emitting sharp sounds At this stage the timbre of voice is not altered in quality or strength and laryngoscopic examination is normal Later a diminution of tone occurs which is quite characteristic This is unaccompanied by hoarseness or uncertainty or tremulousness Occasionally the voice is normal in the dorsal decubitus and becomes feeble several minutes after assuming the upright position Suprarenal extract has benefited some cases the cortical hormone having a more durable action than insulin Alteration of the voice may lead to a diagnosis of exophthalmic goitre The case is quoted of a woman of 36 who complained of stammering for about eight years Her voice had become harsh and sometimes raucous her parents had noted that the timbre was more infantile and singing fatigued her She experienced an occasional difficulty in speech—a sensation of being unable to emit the sound There were no associated movements as in stammering and the difficulty was not accentuated before intimidating persons On examination this patient's eyes were found to be slightly prominent Stellwag's sign was present and though the thyroid was not palpable the pulse was 120 and there was slight trembling of the hands Basal metabolism was found to be much above normal

408 Pneumococcal Bronchial Obstruction

As the result of the experimental production in dogs of atelectasis and lobar pneumonia by the injection into the bronchi of human pneumococcal sputum P N CORYLLOS and G L BIRNBAUM (*Arch Int Med* February 1933 p 290) conclude that bronchial obstruction plays an important part in the pathogenesis of neonatal or postnatal atelectasis and pneumonia post operative atelectasis and pneumonia and lobar pneumonia They consider that the deleterious qualities of the pneumonic exudate are not due solely to its viscosity but also to its content of virulent pneumococci and fibrin the coagulability of which endangers the drainage of the finer bronchioles and pulmonary parenchyma The expectorated sputum should not be taken as indicating the type of bronchial mucus occluding a lobe of the lung for it may be merely an overflow from the bronchus For example the lung parenchyma in lobar pneumonia is filled with coagulated fibrinous exudate while the expectoration is rusty and mucoid and mucous glands are not found in bronchi smaller than 1 mm in diameter Pneumococci produce an exudate which is sufficiently viscid to occlude a lobar bronchus and cause air absorption and atelectasis Lobular involvements on the contrary are usually associated with other organisms such as staphylococci streptococci and *B influenzae* In the recorded experiments it was found that the ease with which atelectasis was produced depended on the virulence as well as on the viscosity of the injected pneumococcal sputum It was shown that 1 c cm of a concentrated broth culture of a virulent strain of pneumococci was sufficient to cause pneumococcal atelectasis when sprayed into the bronchus of a dog The only distinction if any that can be made clinically between post-operative atelectasis and post-operative pneumonia is the greater toxicity of the patient for the physical and radiographical signs are similar The crisis of pneumonia may indicate that there is now a sufficient enzyme liquefaction of the intrapulmonary exudate to allow the beginning of the ingress of air into the finer bronchi and alveoli and the consequent starting of the lung to eject its liquefied matter This is advanced by the authors as a counter theory to the other explanation of some special antibody formation to which they cite such objections as the increased susceptibility sometimes conferred by one attack of pneumonia They deduce the following therapeutic recommendations In pneumococcal bronchitis the repeated inhalation of mixtures of carbon dioxide and oxygen certainly constitutes an excellent preventive and often curative treatment When chill elevation of temperature toxic general symptoms and increased dyspnoea and cyanosis which indicate bronchial obstruction are present nothing is more efficient than bronchoscopic re establishment of the patency of the bronchi a measure which gives gratifying results when instituted early Although the symptom-complex of pneumococcal bronchial obstruction is variable the authors define a syndrome of different phases The underlying or basic condition is held to be atelectasis but the clinical phenomena will depend on the size of the occluded part of the lung the duration of the bronchial occlusion the type and virulence of the infecting micro-organism the character and amount of the alveolar exudate and the complications which may arise The amount of the alveolar exudate it is added determines such diagnostic signs as the degree of shift of the heart and mediastinum and of the elevation of the mediastinum hence the less marked radiographical signs of atelectasis in lobar pneumonia although there are cases in which the radiographical signs in pneumonia are the classic signs of atelectasis especially in children

Surgery

409 Traumatic Rupture of the Liver

Many cases of traumatic splenic rupture have been reported evolving in two stages with an interval of several hours or even days between the accident and the appearance of signs of intraperitoneal haemorrhage F BERTRAND (*Bull et Mém Soc Nat de Chir* March 11th 1933 p 366) believes that this may occur in rupture of any abdominal viscus and records such a sequence in a case of hepatic rupture The patient a young male after a fall on the right hypochondrium was apparently in good health and able to resume his ordinary occupations Eight days later symptoms of intraperitoneal haemorrhage supervened At operation a rupture of the antero-superior surface of the right hepatic lobe was discovered tamponing was the sole treatment performed The patient made an uneventful recovery Two theories are advanced as to the cause of the delayed haemorrhage One suggests that favoured by the syncopal state following the injury a thick clot of blood closed the fissures and prevented immediate bleeding this gradually became detached thus permitting of the secondary haemorrhage The other theory is that a subcapsular haematoma was formed rupture of the capsule subsequently occurring with free haemorrhage into the peritoneum Bertrand advises that strict supervision for at least eight to ten days be made over all cases of abdominal contusions Three interesting points were noted in the present case absence of bradycardia presence of subicterus and slight haematemesis The latter is explained as follows slight traces of blood can through the biliary canaliculi reach the liver bile duct and duodenum causing symptoms

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of hepatic colic, it can then flow backwards into the stomach with ensuing haematemesis The prognosis of hepatic rupture is always grave statistics show a mortality of 56 to 62 5 per cent According to all authorities suturing is the treatment of choice Observations, however, show that tamponing is as effective as simple sutures with closure of the wall

410 Recovery from Mesenteric Embolism

J SMITH, jun (*Aust and New Zeal Journ Surg*, January, 1933, p 309), records in detail three cases of mesenteric embolism in which surgical intervention was followed by recovery A striking feature in each was the abrupt demarcation of the affected from the non-affected portions of the bowel and the mesentery The embolus, which consists of detached vegetations from the mitral or aortic valves or atheromatous aortic patches, usually lodges in the superior mesenteric system The result is generally an infarction of the intestine of the haemorrhagic type Sudden anaemia produced by the blockage of a branch of the artery sets up a violent spasmodic contraction of the bowel, and establishment of the collateral flow is thus often rendered impossible The salient symptoms and signs are intense colicky pain vomiting, abdominal distension, and tenderness, and, in a majority of cases, blood in the stools—almost a pathognomonic sign when present Treatment involves resection of the affected portion of the gut, but it is difficult to indicate the length which may be removed safely, since individual factors are concerned Permanent recovery has followed the excision of as much as fifteen feet of small intestine, but death from inanition has been reported in a case in which only eight feet were removed The author recalls the fact that spontaneous recovery has ensued, even though no resection was attempted This is due to the re establishment of the collateral circulation He thinks, therefore, that surgeons should not be too pessimistic, even though there is a relatively high mortality in cases of mesenteric embolism

Therapeutics

411 Treatment of Gastric Ulcer by Diathermy of the Sympathetic and Parasympathetic

Strikingly successful results are reported in a preliminary communication by R GROTH and P JEGOROW (*Münch med Woch* March 3rd, 1933, p 343) in the treatment of a variety of cases by diathermy applied in the cervical region Two electrodes, 5 by 10 cm, are placed on either side of the neck along the sterno mastoids and current strengths of about 0 5 to 1 ampere are employed The effect of these currents is in part upon the vago-sympathetic, and the improvement in the cases so treated is referred to influences exerted upon the effector organs associated with these nerves In fifty cases of gastric hyperacidity (twenty with haematemesis and blood in the stools, associated with gastric or duodenal ulcers diagnosed by x rays or operation, thirty cases with spastic pains, pylorospasm, etc) the application of the treatment for twenty to thirty sittings of about thirty minutes each was followed by remarkable improvement The gastric pain disappeared, and in most of the cases the pyrosis and regurgitations ceased, and the free acidity of the gastric contents diminished, frequently to normal Gastric syndromes with lessened acidity were unaffected by this procedure Especially noteworthy were the effects produced in cases of epilepsy, the attacks in most instances disappeared completely after a few applications of the current Diathermy of the lumbo sacral vegetative centres also led to very good results in affections of the pelvic organs the lower limbs and even in cases of myelitis In such cases the electrodes are placed one over the affected area in the lumbo-sacral region and one in the rectum Indications are further discussed by the authors for a more extended use of this method particularly in the thoracic, abdominal, and cranial regions

412 Treatment of Mumps by Lead

MARTINY (*Bull Soc de Thér* March 8th 1933 p 72) remarks that though mumps is usually a mild affection and the effects of treatment are difficult to appreciate the swelling and pain in the parotid region last on the average four or five days He had found, however, that the oral administration of minute quantities of metallic lead, triturated in lactose, and placed on the tongue every hour—except during meals and at night—aborts the disease in twenty-four hours and causes rapid disappearance of the pain and swelling The treatment has no effect on mumps orchitis, but none of the patients who had been treated by lead subsequently developed this complication The treatment is described as quite harmless

Disease in Childhood

413 Prognosis in Children with Open Pulmonary Tuberculosis

S HASLE (*Ugeskrift for Laeger* December 22nd 1932 p 1231) has investigated the fate of children suffering from open pulmonary tuberculosis and treated in a Danish sanatorium between 1911 and 1926 Of the 496 sputum positive children fifty-six could not be traced About two-thirds of all the children were girls It was found that five years after discharge 282 (64 per cent) had died Of the survivors, 121 (28 per cent) were well and thirty seven (8 per cent) were still ill About a third of all the children had died within a year of the first discovery of tubercle bacilli, their average length of life after this discovery being only seven months Five years after discharge the average duration of life of the 282 children who died was 20 2 months, as reckoned from the date of the first discovery of tubercle bacilli This average was only 18 2 months for the girls, whereas it was 27 7 for the boys Hasle points out that not only were the girl patients twice as numerous as the boys, but they also succumbed to the disease more quickly A classification of the children in three age groups (1 to 7, 7 to 12, and 12 to 16 years) showed that in the oldest group there were as many as 102 girls and thirty boys The average duration of life of the girls in this group was remarkably short—a finding which tallies with the common clinical observation that at puberty the resistance of girls to tuberculosis is very feeble The practical lesson the author draws from his statistical analysis is that, in view of the bad prognosis for children with open pulmonary tuberculosis, skilled treatment should be provided as early as possible

414 V POULSEN and A O ANDERSEN (ibid, February 9th, 1933, p 169) have investigated the life histories of 622 Pirquet-positive children suffering from pulmonary tuberculosis As many as 199 of them were sputum positive Of these 199 children under the age of 10 years seven could not be traced, forty four were found to have died, and 148 were still alive In the first year of life there were fifty-four infants in whom tubercle bacilli were found, only twenty-three of them had died In the older age groups the proportion of deaths was still lower The authors ask why their findings are so much better than those of other observers such as Hasle Their answer is that by demonstrating tubercle bacilli by such delicate tests as gastric lavage followed by culture and animal inoculations, they have included in their material a number of cases which by other methods of diagnosis would have been classed as sputum negative In about half of these 199 children there were no stethoscopic changes in the lungs, and in thirty one cases even the x ray examination of the lungs was negative In a table dealing with 148 sputum-positive children under the age of 10 and kept under observation for an average period of two years, the authors show that as many as 127, or 85 5 per cent, were apparently well Most of the deaths in this

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material occurred during the first two years of life It would therefore seem that after the age of 2 years the demonstration of tubercle bacilli in the sputum of a child is far from being so fatal a sign as was formerly supposed to be the case

415 Progressive Ossifying Myositis

Progressive ossifying myositis is characterized by multiple osseous formations in the intra and peri muscular connective tissue tendons and aponeuroses and ends in impotence of the affected regions subsequent to successive attacks E APERT and P GARNIER (*Paris Méd* January 28th 1933 p 76) describe this condition after briefly reviewing the literature The Anglo Saxon is more often affected than members of the Latin races and boys than girls (in the ratio of four to one) The affection occurs in infants usually about the fifth year Older children are rarely attacked and in these the onset can generally be traced to infancy In most cases the onset is insidious the general health is not affected local signs are slight pain is absent and the tumour is only accidentally discovered usually on the back or neck In some cases there is more or less general reaction with tenderness heat and oedema of the swollen area and glandular inflammation The initial symptoms subside quickly in about ten days and occasionally the tumour completely disappears When once established the first tumour is rapidly followed at varying intervals by others in different regions after acute attacks intercurrent maladies seasonal changes and traumatism favour the appearance of these sequels The tumour forms an irregular mass with osseous prolongations The skin except in purely superficial growths is non adherent The muscles chiefly affected are those of the back neck trunk upper limbs and the masticators Those of the face eye diaphragm heart sphincters and other non striated ones are never involved The lower extremities are less often attacked and when involved the flexors are predominantly affected The tumours are asymmetrical thus causing abnormal attitudes and deformities The intelligence is unimpaired and the organs function normally for a long period Congenital malformations chiefly microdactylia other exostoses and disorders of development may also coexist The lesions primarily affect the interstitial connective tissue the muscles being secondarily involved The pathology and the still obscure pathogenesis are briefly discussed Certain modern authors consider that the condition is merely an ossification of haematomas due to haemorrhages from congenitally malformed capillaries and vessels The prognosis is always grave and the disease usually slowly progresses to a fatal termination intercurrent maladies chiefly pulmonary tuberculosis may supervene Treatment is usually of no avail though radiotherapy has given some encouraging results Surgery is indicated only in very rare cases to ameliorate or correct embarrassing attitudes or ankyloses

416 Madelung's Disease

E KUN (*Thèse de Paris* 1933 No 23) who records three illustrative cases one of which was in a boy aged 5 and two in girls aged 11 and 14 states that Madelung's disease is not a subluxation but an incurvation of the radius which gives rise to the other deformities simulating subluxation although the bones of the carpus still remain attached to the radius There is however always a dislocation or subluxation of the ulna Madelung's disease is rare and the aetiology is uncertain but the part played by late rickets appears to be of considerable importance The radiological picture is characteristic and always enables the diagnosis to be made The treatment is surgical but an operation should only be performed when the deformity is well marked otherwise there will be recurrence The most logical operation is cuneiform osteotomy of the radius sometimes associated with resection of the lower end of the ulna so as to bring it to the same level as the lower end of the radius Opotherapy should be tried when disturbance of the endocrine glands is suspected

Obstetrics and Gynaecology

417 Cervical Obliteration during Pregnancy

J KREIS (*Gynecol et Obstet* February 1933 p 97) considers and demonstrates by means of diagrams and tables the physiology and pathology of the obliteration of the cervix during pregnancy The period at which the head engages and the times and causation of the rupture of the membranes are also considered Spontaneous delivery is not necessarily a normal one in the physiological sense since there may be defective mechanism even in such cases The mechanism of the preparatory stages which occur during pregnancy (taking up of the cervix and formation of the inferior segment) are not distinguishable in principle from those of labour —dilatation of the os and further formation of the segment Anomalies of the mechanism may be found in both cases The condition of the cervix its length its partial or total permeability present sufficient varieties in primiparae and multiparae as to abolish any rigorous clinical rule Physiologically the multipara should conform to the same postulates as the primipara Any differences should be attributed to a diminution in functional and tissue qualities The same faults may be met with in primiparae although the multipara is more frequently the subject of pathological conditions The fact that the head engages in a primipara relatively early in pregnancy presupposes the early effacement of the cervix If the head remains mobile after the taking up of the cervix there must be special inhibitive forces at work Multiparae examined at the tenth month show a larger number with the head engaged than with it mobile The moment of the rupture of the membranes spontaneous premature or at complete dilatation is decided by the extent of the fixation of the inferior membranous pole to the lower uterine segment By reason of the frequent irregularity of the physiological obliteration of the cervix rupture of the membranes before complete dilatation occurs in at least half the cases Kreis considers that artificial rupture is indicated in cases showing a retardation in the taking up of the cervix That a multipara generally has an easier confinement is considered to be more the result of a pathological disorganization than a favour physiologically acquired

418 Positive Aschheim Zondek Reaction in Spurious Pregnancy

It is recognized generally that a negative Aschheim Zondek reaction is not absolute proof of the non-existence of pregnancy On the other hand a positive reaction may occur in cases of hydatid mole chorion-epithelioma or granuloma—that is in any condition causing hyperhormonic amenorrhoea with excess of lutein production K KAISER (*Zentralbl f Gynäk* February 4th 1933 p 266) reports an illustrative case A married woman aged 33 had had a normal confinement three years previously and no subsequent miscarriage Amenorrhoea and increasing obesity continued for seven months No foetal movements were felt but colostrum was present The vaginal walls were relaxed and livid and there was a slight sanguineous discharge from the closed os A tumour extended to within three inches of the umbilicus No foetal heart sounds were heard. The Aschheim Zondek reaction was strongly positive The diagnosis was that of pregnancy of six to seven months with the probability of a dead foetus although the form of the tumour suggested an extrauterine pregnancy A skiagram showed curved streaky nodular shadows suggestive of a foetal vertebral column The haemorrhage ceased after rest and the general health was good In the eighth month labour appeared imminent but the foetal heart sounds were absent The cervix was dilated with laminaria tents Since there was no pain nor haemorrhage a sound was passed into an empty uterine cavity measuring 4½ inches The tumour lay behind and to the left of the uterus Median laparotomy was performed and a very large left parovarian cyst closely adherent to the uterus was removed with difficulty The right ovary was cystic

The Treatment of ARTHRITIS

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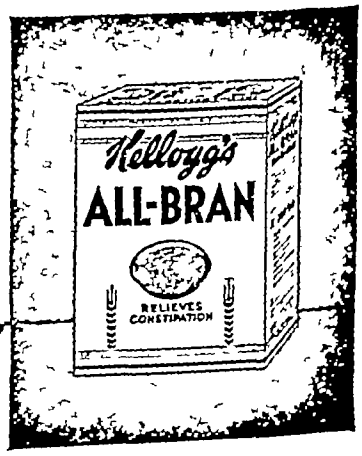

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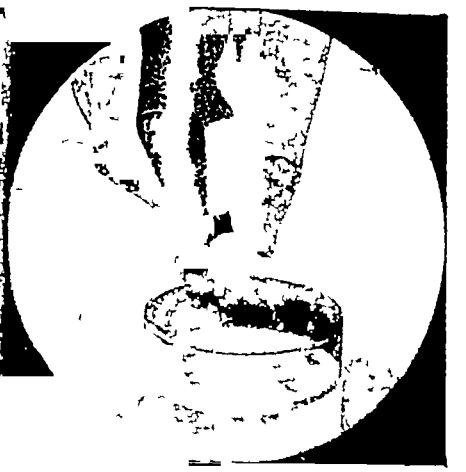

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Other References
B.M.J. June 15 1929 p. 1070
B.M.J., June 28 1930

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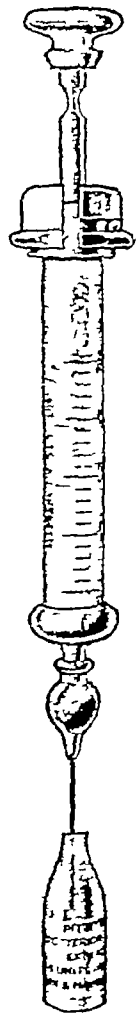

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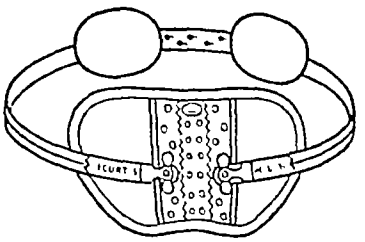

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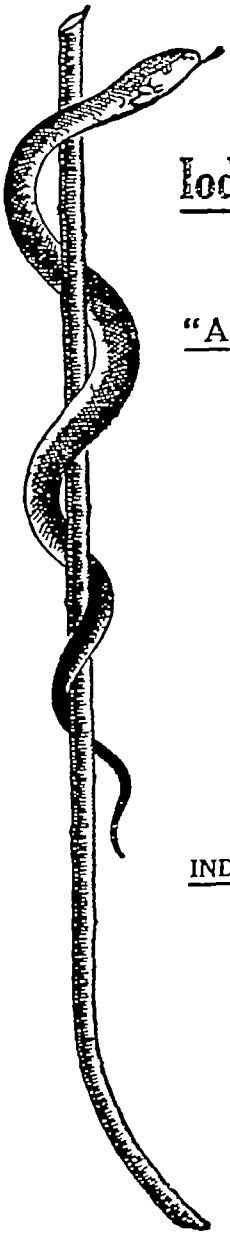

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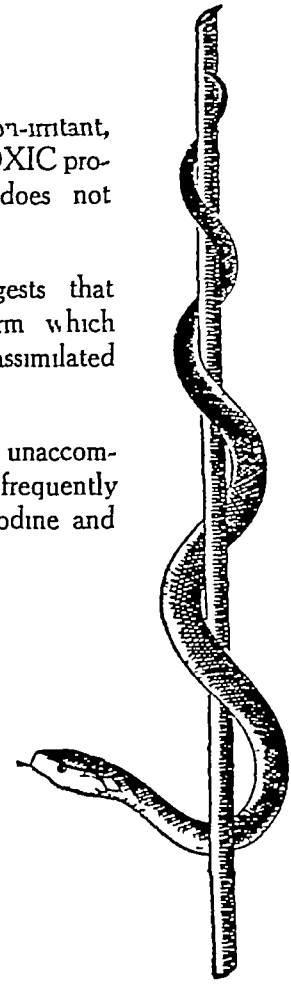

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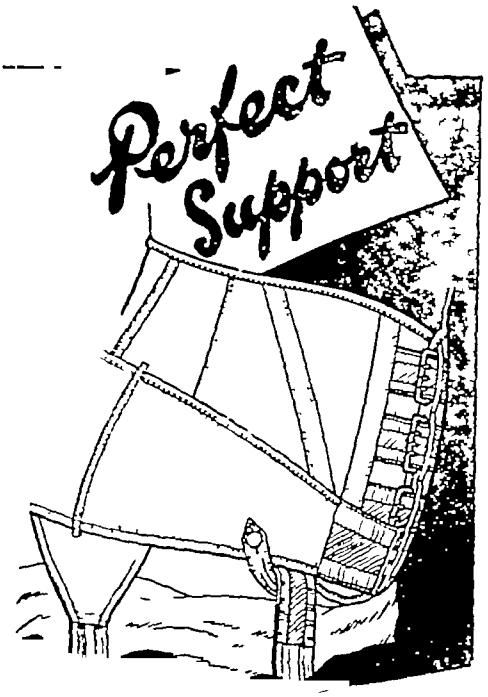

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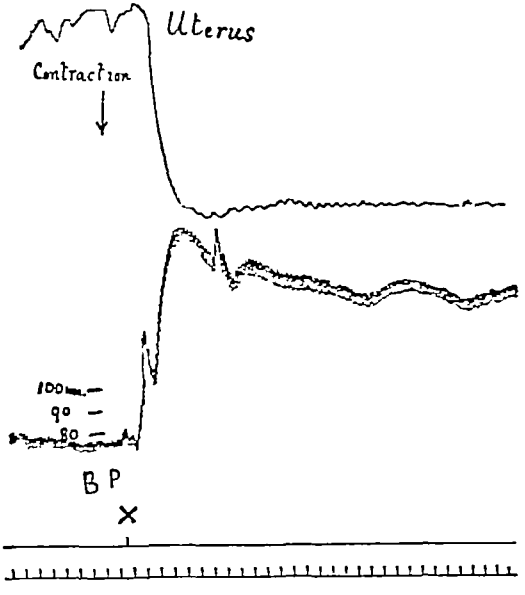

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Date From earliest times The illustration is c. 1580 B.C.

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Remarks
ON
ANAEMIA IN GENERAL PRACTICE *
BY
L J WITTS M D F R C P
ASSISTANT PHYSICIAN GUY'S HOSPITAL WILL EDMONDS CLINICAL RESEARCH FELLOW

About half the patients who are sent to me for anaemia have a normal blood count They are not suffering from anaemia but from debility very often psychological in origin An unhappy love affair does not require treatment with liver extract but I have seen it prescribed in more than one such case on a mistaken interpretation of the symptoms as anaemia On the other hand anaemia is often overlooked especially when it is complicated by the sallow complexion of the chronic abdominal invalid or the parchment skin of old age If we remember that anaemia is likely to be present in long standing cases of dyspepsia and that pernicious anaemia is a disease of old age we shall be forearmed and make fewer such mistakes It is often difficult to be certain of the presence of anaemia from clinical inspection The white face of the sedentary worker usually hides a normal blood while the invalid who has been lying in the sunshine in the garden may have a sunburnt complexion along with a haemoglobin of 40 per cent and anginal pain on exertion The lips are not a much better guide than the skin The conjunctivae and the palate best reflect the state of the blood

Anaemia is one of the few diagnoses about which we can be absolutely certain It is decided at once by the estimation of the haemoglobin and I should like to lay down as my first axiom that *treatment should not be given for anaemia until the diagnosis has been confirmed by the haemoglobinometer* Haemoglobinometry is a controversial subject and the large number of apparatus which are on the market suggests that none is absolutely satisfactory The Haldane apparatus is probably the most accurate for routine use but it is a little too complicated for general practice and not very handy at the bedside The preliminary estimation of the haemoglobin can be rapidly and simply performed by the Tallqvist test in which a drop of freshly drawn blood is taken on a slip of blotting paper and compared with a coloured scale This test is quite as accurate as that made by many an expensive apparatus and it far more sensitive than the unaided eye

My second axiom is that *symptoms of anaemia rarely appear until the haemoglobin has fallen below 75 per cent* There are certain exceptions to this axiom more especially in pernicious anaemia where glossitis and nervous changes may appear with a haemoglobin percentage little below the normal It is nevertheless a good general rule and if a patient has a haemoglobin of 75 per cent or over it is unlikely that weakness or dyspnoea is the result of anaemia On the other hand if the haemoglobin is below 75 per cent the patient is truly suffering from anaemia and the next step is to decide the exact nature of the anaemia It is a short sighted policy to begin treatment without further investigation It is true that the anaemia may sometimes be relieved by a grape shot prescription of iron liver arsenic and hydrochloric acid but in the absence of an accurate diagnosis it is impossible to foresee the future course of the illness or foretell the danger of relapses or complications Moreover the anaemia may be a symptom of some underlying malady which progresses unfavourably while time is lost during symptomatic treatment

My third axiom therefore is that *if the haemoglobin is below 75 per cent a complete blood count should be performed* An accurate blood count may at once elucidate the diagnosis showing perhaps leukaemia or frank pernicious anaemia More commonly a banal anaemia of low colour index is found and the diagnosis must be established by further clinical investigation Anaemias may be roughly divided into

1 Those which are essentially diseases of the blood-forming organs and

2 Those which are secondary to some other disease

AETIOLOGY OF ANAEMIAS

It is wise to remember that symptomatic anaemias are far more common than primary diseases of the blood-forming organs and that they rarely respond to symptomatic treatment until the underlying disease has been corrected The causes of symptomatic anaemia may be roughly classified as haemorrhage infection toxaemia and new growth Common causes of haemorrhagic anaemia are peptic ulcer haemorrhoids and menorrhagia When infection produces anaemia the infection is usually obvious and dominates the clinical picture as in the anaemia associated with rheumatic heart disease with subacute bacterial endocarditis or with typhoid fever Anaemia is often attributed to focal sepsis or to syphilis but I have rarely seen anaemia much improved by the eradication of foci of sepsis or the treatment of a positive Wassermann reaction and such findings are more often coincidences than aetiological factors In respect to toxaemia I would emphasize the importance of chronic nephritis as a cause of anaemia and I deprecate the attribution of anaemia to intestinal toxaemia I have seen more than one patient who had been treated for months with bowel antiseptics colon lavage and vaccines of faecal organisms without any benefit and who improved rapidly on the prescription of iron Malignant disease should be considered in every case of obscure anaemia Anaemia occurs more especially in malignant disease of the stomach and of the large bowel in which it may be the presenting symptom Such anaemia frequently responds well to iron [4] or to liver [5] the haemoglobin rising rapidly under treatment but the growth progresses unchecked Anaemia may be present in growths outside the *gastro-intestinal tract as in one of* my patients who presented an obscure anaemia with a haemoglobin of only 24 per cent and who ultimately proved to have carcinoma of the lung with widespread metastases It is however rarely so severe as in gastro-intestinal carcinoma

It is clear that the diagnosis of a case of anaemia requires a detailed history a complete investigation and a careful weighing of the data obtained Particular attention should be devoted to the gastro-intestinal tract Of special investigations one of the simplest and most informative is the examination of the stools for occult blood I should never be content to treat a patient for anaemia when there was unexplained occult blood in the stools But important as it is to exclude gross organic disease in the diagnosis of a case of anaemia it is equally important not to attribute anaemia to trivial and unreasonable causes The red blood cells and the marrow cells from which they arise constitute an organ larger than the liver This organ is not only bulky but robust as is shown by the sheep used in our bacteriological laboratories which give 100 c cm of blood a week for years on end without developing anaemia or by human transfusion donors who have given a litre of blood at short intervals

* A post graduate lecture to the Leicester Medical Society May 10th 1933

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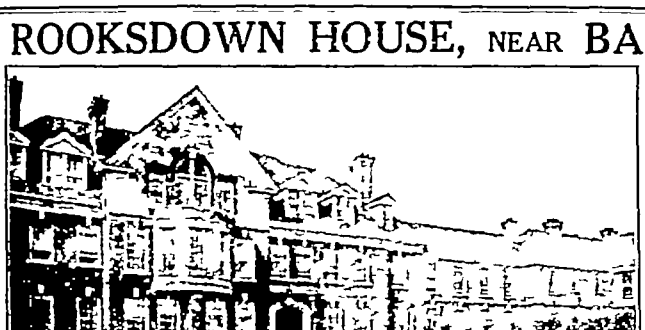

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without any serious fall in haemoglobin When, therefore, severe anaemia develops in a patient who has only a moderate dental sepsis, or slight haemorrhoidal bleeding, or a normal pregnancy, it is much more likely that there is some underlying disorder of the blood than that the anaemia is due to such small causes

CLASSIFICATION

I am accustomed to classify the primary or essential diseases of the blood into four main groups I will dismiss the first three groups rather shortly, so that we may concentrate on the important fourth group, the treatment of which is so largely in the hands of the general practitioner

1 *Leukaemia and Hodgkin's Disease*—These diseases are characterized by changes in the white cells of the blood or enlargement of lymph glands They are probably closely allied to the malignant growths, and are as invariably fatal Treatment with x rays or with arsenic produces great symptomatic improvement, though life is probably but little prolonged

2 *The Hepato-lienal Diseases*—These are diseases of the blood in which the liver and spleen are also involved Here I include acholuric familial jaundice and splenic anaemia Treatment with liver and iron may produce transient improvement, but the only satisfactory treatment is splenectomy

3 *The Haemorrhagic Diseases*—This is an ill-defined assortment of diseases, some of which are of constitutional origin Apart from the group of cases with reduction in the number of blood platelets which is benefited by splenectomy, treatment is empirical and unsatisfactory

4 *The Anhaemopoietic Anaemias*—This is the important group to which I wish to devote the remainder of this lecture I am sorry that my classification compels me to use a rather unfamiliar title but these anaemias can for practical purposes be regarded as conditions in which the nutrition of the bone marrow is impaired, and its ability to form blood cells correspondingly reduced This malnutrition may be the result of defects in the diet, or in the digestion, or in the internal organism, more especially the endocrine glands There are many conditions which give rise to anaemia in this way, but the two most important are (1) iron deficiency, or idiopathic microcytic anaemia, (2) pernicious anaemia

There is reason to believe that some cases of aplastic anaemia come under this same heading, but aplastic anaemia is so rare that we need not discuss it now Deficient supply of iron to the bone marrow results in a shortage of haemoglobin, and the anaemia which follows is characterized by the small size of the red cells and by their deficient complement of haemoglobin and consequent pallor The anaemia is therefore described as microcytic and hypochromic and it is of low colour index This anaemia may occur when the iron and haemoglobin stores of the body are depleted by long-continued bleeding as in haemorrhoids or in hookworm disease The most typical examples, however, are found in infants, and in women of reproductive age Chlorosis was probably a disease of the same type, but chlorosis has disappeared, and need not be considered to day

NUTRITIONAL ANAEMIA OF INFANCY

The investigations of Helen Mackay[4] have shown that 40 per cent of breast-fed babies and 70 per cent of artificially fed babies in the hospital class are anaemic Anaemia is perhaps less frequent in the wealthier classes The anaemia, which is of low colour index, appears about the third month reaches a maximum about the ninth month, and improves spontaneously on weaning It is not a vitamin deficiency as it develops on a high-vitamin diet and is cured by iron alone It is most severe in premature and small babies, which come into the world with a poor store of iron It is almost certainly an iron deficiency, due to the low iron content of the milk, and it is more severe in artificially fed babies, because cow's milk contains less available iron than the mother's Anaemia which is so general might have been regarded as physiological had not Helen Mackay shown that it leads to an increased susceptibility to infection Colds otorrhoea, bronchitis, and enteritis are twice as common in untreated babies as in those in which the anaemia is treated with iron Iron should always be prescribed for small and premature babies, and there are few babies, breast-fed or artificially fed, who will not benefit from it It is given as iron and ammonium citrate, 4½ to 9 grains a day A simple prescription is 1½ grains of iron and ammonium citrate in 1 drachm of chloroform water added to the feeds three times a day Administration must be commenced very slowly, starting with only 2 or 3 drops of the mixture to a feed, and taking a week or ten days before the full dose is given With this precaution it is unusual for the digestion to be upset The mother should be warned that the stools will be black Proprietary milks containing iron are now on the market They are quite effective, but some little time should be taken in incorporating them in the diet to avoid dyspepsia If a milk and cereal diet is prolonged after infancy so also is the anaemia I am a firm believer in the importance of weaning babies early and including eggs, meat, and green vegetables in the diet by the end of the first year Many of the schemes of diet which are in use to-day and which are so strongly advocated in the health pages of the popular papers, underestimate the child's digestive powers, entail extra work and expense for the mother, and produce a flabby, anaemic baby I have already mentioned that anaemia predisposes to infection Such infection greatly aggravates the anaemia, which may be rapidly fatal unless a transfusion is performed

ANAEMIA OF WOMEN

Just when we were congratulating ourselves that chlorosis had disappeared, we discovered that a rather different form of anaemia is very prevalent in women This anaemia differs from chlorosis in having its highest incidence in the late thirties, and in being profoundly aggravated by pregnancy Davidson and co-workers[5] have shown that anaemia of this type with a haemoglobin below 70 per cent is present in approximately 14 per cent of women of the poorer classes in Aberdeen It occurs also in the better classes, though with less frequency The causes are

1 The female reproductive cycle, with the loss of iron in menstruation and pregnancy
2 A diet poor in iron
3 Defective digestion of iron, 80 per cent of cases having achlorhydria or extreme hypochlorhydria

The sexual factor is paramount, while the importance of the dietetic and the digestive factors varies in different cases Associated symptoms are glossitis brittle or depressed finger-nails and splenomegaly, in some cases the resemblance to pernicious anaemia is very striking There is a great tendency to relapse, more especially during pregnancy, or at the menopause, when the menses become excessive I have already commented on the feeding of infants, and I should like to make similar remarks on the feeding of pregnant women The mother has to supply enough iron to her baby to last until it is weaned at approximately 20 lb in weight She also loses blood at the confinement If her diet is insufficient she develops anaemia and becomes more liable to puerperal infection while her baby comes into the world with a poor store

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of iron and develops nutritional anaemia. Anaemia is far more frequent than chronic nephritis or eclampsia and the diet of the ordinary pregnant woman should be designed with this point in view. She should have red meat once a day and abundance of green vegetables and fruit. In menorrhagia near the climacteric severe anaemia will usually bias us in favour of an artificial menopause by *x* rays, radium or operation when we should have otherwise waited for the natural termination of the menses.

The anaemia of women is of low colour index and the specific treatment is iron. Liver is of no value. Iron must be given in large doses and preferably as a scale preparation or as one of the ferrous salts. Minimum doses are: iron and ammonium citrate 60 grains a day, and Blaud's pill 45 grains a day. Iron should always be given by mouth as effective doses cannot be given by injection. Treatment in many cases will require to be continued till after the menopause when the anaemia has been repaired a generous diet and a maintenance dose of 10 grains of Blaud's pill will usually be sufficient. Relapses must always be expected during pregnancy and treated early or the patient may become gravely ill. Once you are on the look-out for this anaemia of women you will be surprised at its frequency. Both you and your patients will be impressed with the dramatic improvement in cases which you had formerly regarded as chronic abdominal invalidism or neurosis. But *you will only get satisfactory results by giving iron in large doses by mouth.*

PERNICIOUS ANAEMIA

In pernicious anaemia the malnutrition of the bone marrow is the result of achylia and defective gastric digestion. In the absence of the proteolytic ferments from the stomach material which is essential for the normal function of the bone marrow and the spinal cord is not extracted from the food and anaemia and degeneration of the spinal cord develop. The anaemia can be repaired by the use of liver or desiccated stomach—a substitution therapy. Pernicious anaemia can usually be diagnosed by the blood picture: the cells are larger than normal, the colour index is high and there is excess of bile pigment in the serum. Owing to the insidious onset the diagnosis is sometimes missed, the symptoms being attributed to the weakness of old age, debility after an influenzal attack, the change of life, carcinoma of the stomach or a disordered liver.

I shall omit any clinical description of pernicious anaemia and devote myself to its treatment. The results are still unsatisfactory and in far too many cases the story is as follows. A patient is found to be suffering from pernicious anaemia and he makes a good response to treatment with liver or allied substances. He is then told to eat 1½ lb. of liver a day and is lost sight of. Feeling himself better he relaxes his treatment, perhaps taking liver only once or twice a week. As a result he develops subacute combined degeneration of the spinal cord and a general and quite unwarranted belief is fostered that treatment of pernicious anaemia is of little value in preventing the onset of spinal symptoms. The real conclusions from this history are: (1) that cases of pernicious anaemia should be kept under regular supervision to see that their haemoglobin is maintained above 90 per cent.; (2) that some less onerous treatment than 1½ lb. of whole liver a day should be prescribed. Just as every patient with diabetes mellitus is under the threat of diabetic coma so every patient with pernicious anaemia is under the threat of subacute combined degeneration. Treatment of pernicious anaemia is easier than that of diabetes mellitus inasmuch as it is impossible to give an overdose of effective substance. *The golden rule of treatment is to give enough effective substance to keep the blood count normal and to increase the dose if any signs of spinal degeneration appear.* Alternatives to whole liver, adequate doses of which are intolerable to many patients, are extracts of liver, oral or intramuscular, and desiccated stomach. Liver extracts are too expensive for general use, but desiccated stomach is as cheap as or cheaper than whole liver.[1] In the vast majority of cases of pernicious anaemia the anaemia is repaired and nerve changes are arrested by a daily dose of one ounce of desiccated stomach. Most of my patients take it in soda-water, half an ounce twice a day, and eat an ordinary diet with appetite and good digestion. They do not take liver regularly and then only as an article of diet. They are warned that they must continue this treatment for the rest of their lives and they are examined at monthly or bi-monthly intervals. My own observations are in complete agreement with the much larger experience of Wilkinson that in patients treated in this way the blood remains perfectly normal, no nerve degeneration occurs and any spinal symptoms present are usually alleviated.

When a patient is seen in relapse it is wise to accelerate recovery by injecting intramuscular extracts of liver. Patients with subacute combined degeneration should also be given intramuscular extracts of liver until the blood is normal, in addition to treatment by mouth to arrest the progress of the disease. For maintenance treatment I rely on desiccated stomach but advise the patient to take as much marmite and bemax as possible. In isolated cases iron and thyroid gland may be indicated. I am not convinced of the value of massive doses of iron in subacute combined degeneration as I have seen subacute combined degeneration develop in a woman who was having massive doses of iron for a microcytic anaemia. Nor do I often prescribe hydrochloric acid in pernicious anaemia as desiccated stomach overcomes any tendency to dyspepsia and it is desirable that treatment should be as simple as possible.

Subacute Combined Degeneration

While it should always be possible to prevent the development of subacute combined degeneration it is more difficult to treat the established disease. Nevertheless it is surprising how much improvement is sometimes made. The victims of subacute combined degeneration are usually elderly people who regard paralytic symptoms as omens of an impending dissolution which they are powerless to avert. They take to their beds and give up hope of ever walking again. This attitude is often encouraged by over-solicitous relatives and it must be vigorously opposed. Every effort should be made to get the patient up on a couch or a wheel chair and to encourage him by massage and re-education to stand and walk. I have been much more vigorous in my treatment of subacute combined degeneration since I had the following experience.

Mrs. C. L. R., aged 40, came to see me supported by two sticks and a devoted husband. She had been anaemic all her life, had had sprue in China at the age of 34 and pernicious anaemia in Jerusalem at age 39. From this last attack she had recovered as regards her blood but had much weakness of her legs which she attributed to a fall and a sprained ankle. In actual fact she had subacute combined degeneration with spastic paresis of both legs and a bilateral extensor plantar response. She was not pleased with my diagnosis and on some excuse did not pay a fee then—or later. A chiropractor agreed with her own diagnosis of a sprain and manipulated her, telling her he had replaced an artery which had been twisted. She promptly gave up her sticks and boarded a ship back to Jerusalem without assistance.

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When a patient has organic disease we are too apt to take symptoms at their face value and to accept a degree of disability which is out of proportion to the anatomical damage Hurst has emphasized this point in his lecture on " The Hysterical Element in Organic Disease,' [3] and elsewhere, and we can hardly be too often reminded about it In subacute combined degeneration the nerve lesions can be arrested by adequate dosage of effective substance, except in the terminal stage of bladder infection and transverse myelitis It is doubtful whether the lesions are entirely spinal in situation or irreparable in nature , some of the sensory change is probably due to degeneration of peripheral nerves, which can recover completely But quite apart from the possibility of the regeneration of damaged nerve tissue, there is no doubt about the gain in bodily vigour under adequate treatment of the anaemia, and the ability of many of these crippled patients to regain the use of their hands and feet if they are properly encouraged and carefully re-educated

Mr M aged 60 developed symptoms of subacute combined degeneration in September 1929, though he had been failing in health for some time before He was rather remiss about attending his doctor and took only the equivalent of 1/4 lb of liver a day in liver extract During 1930 and 1931 the red cells remained between 3½ and 4 millions, and the haemoglobin about 80 per cent The nervous symptoms were unchanged, and paraesthesia was always present In the summer of 1932 he suddenly lost the use of his legs The blood count was now red cells 3 630 000 white cells 7 000, haemoglobin 80 per cent He was confined to his bed for about four months Joint sense was practically absent in the toes the tendon reflexes were depressed and both plantar reflexes were extensor He had much flatulent dyspepsia, and developed a venous thrombosis in the left leg Suspicion of a carcinoma was aroused and the patient himself took so gloomy a view of his future that he gave away his valuable car to a friend He was taken into hospital and treated with intramuscular injections of liver and desiccated stomach by mouth His blood count improved to red cells 4 880 000 white cells 7 800 haemoglobin 96 per cent colour index 1 With massage and re education he learnt to walk with two sticks He continued the desiccated stomach on discharge and six months later the blood count was practically identical Joint sense was still grossly impaired and Romberg s sign positive the tendon reflexes were exaggerated, and the plantar reflexes were both extensor Nevertheless he was able to work in the garden without a stick and had bought a new car in which he had recently driven over 100 miles in one day His handwriting which had previously been almost illegible on account of the numbness of the hands had also much improved

It would be easy for me to multiply instances of this kind for unfortunately about half the cases of pernicious anaemia I see are patients who have relapsed from inadequate treatment and developed subacute combined degeneration And while I have seen several paralysed patients improve so much as to be able to return to normal life, others have been too far advanced to respond, the bladder has been involved, and necropsy has revealed cystitis and ascending nephritis It is lamentable that in so many cases to-day the life of a patient with pernicious anaemia is merely extended long enough for him to develop subacute combined degeneration There is no more reason for patients with pernicious anaemia to succumb to subacute combined degeneration than for diabetics to die in coma Both complications are preventable by careful treatment

I would repeat that the treatment of pernicious anaemia is easier and cheaper than that of diabetes mellitus It is impossible to give an overdose of effective substance, and the treatment need in no way interfere with the enjoyment of a normal diet and an active life There is no excuse for relaxation of treatment and every patient should be frankly told the danger of such a course Occasional estimations of the haemoglobin should be as much a routine as tests of the urine and blood in diabetes mellitus We have had ten years to learn the modern treatment of pernicious anaemia, and it is time we took its lessons to heart

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THE HEALTH OF ANTIMONY OXIDE WORKERS

BY

SIR THOMAS OLIVER, M D , F R C P

NEWCASTLE UPON TYNE

The smelting of antimony ores, and the production of antimony metal, has been practised in England for at least two centuries, but the commercial production of pure grades of antimony oxide for pigmentary and similar purposes has been in operation only since the war Antimony trioxide (Sb_2O_3) is now manufactured in large quantities, and this material, which is in the form of an extremely finely divided white powder, is much used

The smelting of antimony ores has never been regarded as a dangerous occupation, and the only malady from which antimony smelters suffer (and then only occasionally) is an irritation of the skin, which results in blotches or minute pustules—sometimes extremely unpleasant owing to itchiness The parts of the body most affected are the front and back of the forearms, the front of the chest, and the epigastrium The irritation appears to be caused when dust falls on a skin damp with perspiration, but it is noteworthy that many workers are not affected, and that in this connexion personal cleanliness is an important factor It is found that the irritation invariably disappears completely in the course of a few days if the worker ceases to have contact with antimony dust In view of the increasing use of antimony oxide in industry, it was felt desirable in the interest of the worker to ascertain whether or not the handling of this material demands special hygienic precaution Feeling that the conditions of exposure of workers engaged in the manufacture of the material are likely to be more severe than those involved in its use, I made an inquiry into the health of some workers who had been engaged in its manufacture for a period of thirteen years—which period covers the production of this material on a commercial scale in England Shortly after its manufacture was commenced the question was raised as to the possible toxic character of antimony trioxide, and at that time medical opinion could only be based on experience of the processes of antimony smelting, in which the production of antimony fumes, oxide, etc , is inevitable The view then expressed was that there was no evidence to indicate that there were any dangers in the production or use of antimony trioxide , indeed, evidence to the contrary was available The late Sir Thomas Legge, in evidence before the Home Office Departmental Committee on Paints stated that antimony oxide was only a mild irritant and could not be described as a poison at all

THE SURVEY

The following recent investigation, which affords confirmation of earlier medical opinion has been made possible through the courtesy of the Cookson Lead

EDINBURGH POST-GRADUATE COURSES IN MEDICINE

IN CONNECTION WITH THE UNIVERSITY AND ROYAL COLLEGES 1933

The POST-GRADUATE COURSES to be held this year comprise

(1) A GENERAL PRACTITIONERS COURSE from August 14th to September 9th

(2) A GENERAL SURGICAL COURSE from August 14th to September 9th

The composite fee for each Course will be £10 10s. for the four weeks or £6 6s for either the first or second fortnight.

(3) A COURSE IN OBSTETRICS AND GYNAECOLOGY AND CHILD LIFE AND HEALTH from July 17th to Aug 12th Fee £10 10s. (Minimum number 12)

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CLINICAL SURGERY (including Radiology)—Royal Infirmary Fee £4 4s

CLINICAL MEDICINE—Royal Infirmary (May and October). Fee £5 5s.

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DURING THE PERIOD OF THE GENERAL COURSES. (AUGUST SEPTEMBER).

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X RAY PHYSICS AND ELECTRO TECHNICS—Fee £3 3 | OPHTHALMOSCOPY—Minimum number 5. Fee £5 5s.

ULTRA VIOLET RADIATIONS AND THEIR USES—Fee £3 3s | GENETICS IN RELATION TO MEDICINE.—Fee £3 3s.

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Further particulars may be had on application to the Hon Secretary Post-Graduate Courses in Medicine, University New Buildings Edinburgh.

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FOR PRACTITIONERS AND MEDICAL STUDENTS

will be given at the Institute's new premises Torrington Place beginning June 12th, 1933.

For particulars of the Course apply to the Hon Lecture Secretary 6 Torrington Place W C 1

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The following arrangements have been made for POST-GRADUATE TEACHING in Glasgow during the Summer of 1933

A A General Medical and Surgical Course from August 21st to September 15th.

Fee £10 10s or £6 6s for first or second fortnight.

B Clinical Assistantships in General and Special Hospitals

Syllabuses and any other information may be had on application to the Secretary Post Graduate Medical Association, The University Glasgow

Post-Graduate Teaching, West London Hospital.

Continuous Clinical Instruction daily from 10 a.m. to 4 p.m.—Post-Graduates may enrol at any time for any period from 1 week to 3 months—Special facilities for "Study Leave," and for those wishing to take a course under the "Grant-aided Scheme for Post-Graduate Study by Insurance Practitioners."—Anaesthetic Courses—Clinical Assistantships.—Annual Membership Tickets at Special Terms available for General Practitioners who wish to attend the Hospital Practice at irregular intervals.

Prospectus from the DEAN, West London Hospital, Hammersmith, W 6

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Medical Students and Qualified Practitioners admitted to the Practice of this Hospital. Unusual opportunities are afforded of seeing Obstetrical Complications and Operative Midwifery (about one half of the total admission being primiparous cases). Over 2,700 patients are admitted to the Wards annually and in the Ante-natal Department there are over 20 000 attendances per annum.

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For rules fees etc. apply H R STOKES Secretary Superintendent.

MASTERY OF MIDWIFERY

Examinations for the Diploma of the Mastery of Midwifery of the Society of Apothecaries of London will be held beginning Monday November 20th 1933 and Monday May 21st 1934

For regulations apply to the Registrar of the Society Water Lane, E.C.4

Preliminary Examinations

The COLLEGE OF PRECEPTORS holds Preliminary Examinations for Medical and Dental Students in London and at Provincial Centres in March, June September and December For Regulations apply to the Secretary College of Preceptors Bloomsbury Square, London W C 1

STAMMERING SPEECH DEFECTS

BEHNKE METHOD Estab 1882. Cases not resident treated at 39 Earl's Court Square S W 5 and in residence, in the Summer holidays at Miss BEHNKE'S house on the Chilterns

"Pre-eminent success in the education and treatment of stammering and other speech defects."—"Times."

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ANATOMY

The Vacation Classes commence on June 3rd and terminate on Sept. 27th. Lectures and Demonstrations covering the entire subject and including Embryology are given thrice daily.

Apply to CHAS R WHITTAKER F.R.C.S., F.R.S.E. Lecturer

and Antimony Co Ltd of Newcastle Antimony tri oxide is produced on an extensive scale at the Willington-on Tyne works of this company and opportunities were given to me for a full and complete investigation of the processes and examination of the workers It was of interest at the outset to note that no special hygienic precautions are taken—nor do they appear to be necessary—and that although overalls and respirators are provided for the use of men when engaged in packing the final product the regular use of the respirators is difficult to enforce as is the case in other trades It is also interesting to record that in the process of manufacture—particularly in the packing department where the workers are exposed to considerable quantities of antimony oxide dust—there have been very few cases of skin irritation This may be due to the fact that the men are not exposed to high temperatures and therefore perspiration is not abnormal

The total number of men directly engaged in this process was six and their service with the company was as follows

Subject	Age	Total Service	Service in Antimony Oxide Manufacture
I	61	38 years	13 years
II	48	30 years	13 years
III	63	41 years	3 years
IV	43	18 years	13 years
V	47	28 years	13 years
VI	46	20 years	2 years

Subjects I II IV and V had all worked for many years as antimony smelters before the manufacture of antimony oxide was commenced Examination gave the following results

The weights of the men ran from 8 st 10 lb to 11 st 4 lb and this was the only man of the six who weighed more than 9 st 10 lb Three of the men were under 5 ft 3 in in height They were fit felt well were swarthy in appearance and had thin walled chests and somewhat poorly developed upper arms with a scarcity of subcutaneous fat In none was there evidence of heart enlargement or of cardiac trouble Their health had been good little time had been lost through illness appetite was normal and there was no constipation kidney or bladder trouble They were married the wives were living and the mortality rate of their children had been similar to that of the average of children of workers engaged in other industrial occupations As already mentioned little time had been lost through illness Subject I with thirty-eight years service had had no real illness except mild influenza debility and slight skin inflammation while Subject II with thirty years service had had no illness beyond occasional irritable spots on the skin Subject III with forty one years service had been ill only twice the cause being rheumatism and dry pleurisy Subject IV with eighteen years service had been ill only twice through influenza Subject V with twenty eight years service had had influenza once while Subject VI with twenty years service had been ill only twice from *neuralgia and influenza*

Nothing unusual was found on microscopical blood examination The red corpuscles were healthy though the blood of one man showed slight anisocytosis Although two of the men had previously worked as lead smelters for twenty-seven and three years respectively before taking up work in antimony no basophile corpuscles were found in the blood of either of them The white corpuscles were average—that is 50 to 70 per cent polymorphs 6 per cent small lymphocytes and 8 per cent large lymphocytes Eosinophils were as high as 4 per cent Chemical examination of the urine of each workman failed to reveal the presence of antimony—an observation of considerable importance in view of the fact as is shown later that the men were excreting considerable quantities of antimony in their faeces

It is thus clear that in normal circumstances antimony oxide is not appreciably absorbed by the system owing to its relative insolubility in the alkaline and acid juices of the body The following figures which show the results obtained in the determination of antimony in the faeces of the men examined prove definite intake of antimony into the alimentary canal with subsequent elimination by the faeces

Subject	Weight of Faeces in Grams	Solids Per Cent	Dry Weight in Grams	Parts of Sb per Million in Dry Faeces	Grams of Sb in Faeces
I	30.9	22.1	6.8	1,500	0.0105
II	99.7	28.0	27.9	3,510	0.0978
III	109.5	25.8	28.3	2,040	0.0599
IV	31.4	29.4	9.2	1,290	0.0119
V	80.3	27.3	21.9	3,210	0.0703
VI	70.6	28.2	19.9	1,740	0.0346

These figures show a marked daily elimination of antimony in the excreta of the men at a period when they were most casual in the wearing of respirators and in the observance of general hygienic precautions A trial period of close hygienic supervision was then enforced and the faeces of three of the men—Subjects II III and V—were examined. The following facts when compared with the previous figures are of interest as indicating the effect of the control

Subject	Parts of Sb per Million in Dry Faeces		Milligrams of Sb in Faeces	
	N.S	S	N.S	S
II	3,510	533 1,970	97.8	5.1–20.7
III	2,040	1,330–1,640	59.9	12.7–15.2
V	3,210	603–864	70.3	8.3 10.8

N.S — "No supervision" period.
S — Supervision period," representing three samples from each worker

The blood pressure of practically all the men was below the average for their ages—a circumstance unusual among men engaged in heavy work The figures are as under

Age	Total Service	Blood Pressure
61	38	162 84
48	30	138 70
63	41	132 78
43	18	122 78
47	28	144 90
46	20	122 80

As compared with the blood pressures of men engaged in other labouring occupations these figures must be considered as extremely safe and satisfactory from the prospective health point of view

SUMMARY

The investigation has shown that the men look as if they were a year or two older than the ages stated They are swarthy in appearance and have thin chest walls but are free from respiratory disease The heart and kidneys are healthy and except for a very small patch of irritation in two of the men the skin was quite normal Blood pressure is lower than in most men engaged in similar manual work The upper arms are thin and ill developed but the grasp of the hand is good The men enjoy good health and lose little time through illness In view of these observations it is clear that the occupation of these men although it involves exposure to antimony oxide is healthy It presents no industrial hygienic problem or risk and a similar conclusion might justly be extended to workers who in other industries handle this material

INFRA-RED RAYS, COMFORT, AND HEALTH

BY

SIR LEONARD HILL, M B , F R S

While they enjoy a bright open fire some people dislike dull red gas or electric fires, stoves, and hot-water pipes, and usually suppose that such sources are unpleasant because they dry the air, or give off fumes they are supported in this opinion by the relief felt on opening a window These people also feel uncomfortable in a crowded room, and put their discomfort down to pollution of the air by respiration Scientific investigation has, however, proved that in such crowded rooms there is no physiologically significant alteration of chemical purity, and that the cooling power of the air is really the important factor Yaglou[1] and his co workers have shown that ions diminish in number in the air of a crowded room, but no relation has been established between alterations of ionization of the air and comfort While some people are very sensitive others are indifferent to the type of heater used in a room, or to the room's crowded state In the House of Commons some members complain greatly of the system of heating and ventilating used there , others say that it is very good Then again, there are some people who like open windows and others who call these ones ' open-air fiends " When the kata-thermometer was introduced by me as a measure of comfortable conditions I empirically fixed a cooling power of 6 for rooms in this temperate climate It takes a much higher cooling power—for example, 12 to 14—to increase the heat production of a man in ordinary clothing, so efficient are the means of the body for regulating heat loss The feeling of freshness given by a moderate cooling power is not due then to any change in the rate of heat production It is known, too, that alterations in relative humidity at ordinary room temperature from 40 to 70 per cent have no sensible effect on comfort Some people, however, put a bowl of water in front of a stove, and are made more comfortable by this, and yet such a bowl produces no detectable increase of humidity in the air

CAUSE OF " STUFFINESS "

All these facts receive an explanation when it is realized that a cause of discomfort and stuffiness is the quality of the infra red rays given off by the source of heat, and their effect on the naked parts of the skin The feeling of dryness and unpleasant quality of heat is due to direct action of irradiation on the skin, while stuffiness is due to a reflex congestion of the nasal membrane resulting from the action of the rays on the cutaneous nerves [2]

This reflex effect is pronounced in some with a deflected septum or with a chronic catarrhal and stuffy state of the nose It can be made evident to most of those who have widely open noses by means of a screw nose-clip adjusted to narrow the air-way until the breathing is only just adequate in cool air—for example by an open window Exposure of the face to a dull red or dark source of heat then makes the breathing difficult, while screening at once gives relief Cool air from an open window or fan antagonizes the " nose-closing " effect Hence sensitive people with stuffy noses like the open air and an open window, and dislike shut-up rooms heated by dark or dull red sources The less open side of the nose of a sensitive person may be sensibly obstructed by merely covering the face with the hand, or going under the bed-clothes The immediate discomfort felt on throwing a hood over the face may in part be due to this reflex The ' nose closing " effect is at once set aside by cooling the irradiated part of the skin, or other parts of the body, in this case to a sensible degree The open window in the bedroom prevents the stuffy effect and this is one of the benefits of open air treatment In cool air the mucous membrane is kept taut and with a better flow of blood and secretion

PRACTICAL APPLICATIONS

Cooling of the irradiated part of the skin by evaporation of sweat prevents the reflex When one sits down in a warm bath the reflex comes into play until the face is wetted A bowl of water set in front of a dull red and dark source of heat affords relief, because the vapour rising from it screens off some of the offending rays If set to one or other side of the source it ceases to be efficacious, but it can be placed anywhere between the source and the face of a sensitive subject and exert its " nose opening " action A glass screen is also protective In the case of some sensitive people the " nose closing ' effect is set aside by rays from a bright incandescent source acting either on the same or some other part of the skin Such a source gives off more of the short infra red rays and feels pleasanter The makers of modern gas fires have increased the radiant power and brightness of the clay " radiants," with the result that, while the old-fashioned gas fire was a " nose closer," the modern one is a " nose opener " The dull red electric fire is a " nose closer," but by increasing the current through a Ferranti bar fire from 5 to 6 amperes, and so making it brighter, the " nose-closing " effect was abolished A very little alteration then is required to make uncomfortable dull red sources of heat more comfortable A screen of gelatin, horn, or cellophane (acetyl cellulose) converts a bright source into a " nose closer " A study of the transmission of infra red rays by such screens made by Dr H J Taylor, shows that they absorb a group of infra-red rays about 30,000 A U These rays must be " nose-openers " Just like the physiologically active ultra-violet rays, these rays only just reach, in small intensity, the living cells of the epidermis and the nerve endings among them The prickly sensation of heat produced on the face by contiguity with an electric fire is relieved by switching on an incandescent lamp held close to the face, and best used with addition of a glass screen Most people then say " it feels cooler " The shorter infra-red rays, like the red rays, penetrate the skin and provoke flushing, transudation, and a moist skin The heat resulting from their absorption is carried away by the blood The long infra-red rays do not penetrate, and produce a dry and hotter surface The pleasanter feeling of bright sources seems to depend on this difference The bright sources also have more of the " nose opening " group of rays The standard kata thermometer cooling power of 6, which I had empirically fixed as comfortable is explained by the need to counteract by cool air the stuffy and unpleasant quality of dark heat rays

EXPERIMENTAL WORK

Miss Murray, at Bedford College, has recorded the " nose closing " reflex, the mouth being closed by a rubber gag, and the more open side of the nose plugged with cotton-wool, and has found about thirty out of sixty subjects are more or less sensitive In a few cases the breathing is obstructed and in others is made quicker and shallower

I have recorded the reflex effect by fitting the end of a rubber tube in one side of the nose (the best) and connecting this tube with a recording tambour The mouth being kept closed, the changes of pressure produced by breathing through the other side of the nose, are recorded by the tambour, which writes on a smoked drum The effects produced on one sensitive subject, Dr R , are

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The Senate announce the following vacant Examinerships for the year 1934

For Final and Higher Examinations for Medical Degrees

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For Second Examinations for Medical Degrees

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Applications will also be invited for Associate Examiners in Medicine, Obstetric Medicine Pathology and Surgery A separate application form must be used for Associate Examinerships and the word Associate must be written on it

Application form (or forms if more than one Examinership is applied for) and particulars of the remuneration and duties can be obtained from the External Registrar

Candidates must send in their names to the External Registrar GEO I GOODCHILD M A B Sc, with any attestation of their qualifications they may think desirable on or before Monday July 3rd, 1933 (Envelopes should be marked Examinership)

The Senate desire that no application of any kind be made to individual members

If testimonials are submitted one copy only of each is required In no case should original testimonials be submitted If more than one Examinership is applied for, a separate and complete application must be forwarded in respect of each Examinership The appointments will be made by the Senate in November Applicants who desire that the result should be communicated to them are requested to enclose a stamped and addressed envelope with their application

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THE ALL-INDIA INSTITUTE OF HYGIENE AND PUBLIC HEALTH CALCUTTA INVITES APPLICATIONS FOR THE FOLLOWING GAZETTED POSTS, Viz

(1) ASSISTANT PROFESSOR OF PUBLIC HEALTH ADMINISTRATION with additional experience in publicity and propaganda work
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(3) ASSISTANT PROFESSOR OF MALARIOLOGY AND RURAL HYGIENE (including Venereology and Tuberculosis)
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Terms—Pay Rs 375—35—1 075 a calendar month Pay higher than initial rate might be given having regard to age and qualifications. Emoluments liable to revision if necessary in event of any grading down of pay of Public Services in India or of a decision by Bengal Government to revise rates of pay of similar staff of School of Tropical Medicine, Calcutta (Rupee 1s 6d approximately) The appointments are non pensionable but appointees will be eligible for the benefits of the Contributory Provident Fund (India)

Tenure—Five years in the first instance subject to six months notice on either side and extensible thereafter at the discretion of Government for such periods at a time as may be agreed upon A formal agreement will be executed with appointees provided they are not already in Government service in India

Leave—Appointees of non Asiatic domicile will be eligible for leave during agreement in accordance with Model Leave terms those already in Government service in India will be eligible for leave in accordance with Fundamental Rules or such other leave rules applicable to their service to those of Asiatic domicile special leave rules will apply Officers will be bound by the leave rules applicable to them and such revisions thereto as may be made from time to time

Passage—Free first-class passage to India also for candidates of non Asiatic domicile only similar return passage subject to usual conditions

All candidates will on appointment be regarded as serving in a vacation department on distinct understanding that withdrawal of this concession if and when found necessary will not entitle them to compensation No private practice including laboratory and consultant practice will be allowed

Forms of application may be obtained upon request by post card from the High Commissioner for India General Department India House, Aldwych London W C 2 where applications will be received up to July 1st, 1933 for transmission eventually to the Recruitment Board for the All India Institute of Hygiene and Public Health Calcutta

Candidates are liable to be required to attend for interview in England

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THE GOVERNMENT OF INDIA INVITES APPLICATIONS FOR THREE GAZETTED APPOINTMENTS IN THE MEDICAL RESEARCH DEPARTMENT

Applications will be received only from European and Indian candidates who must be natural born British subjects and the children of British subjects, or statutory natives of India

Posts (a) and (b)—Applicants who must be qualified doctors and must not be members of the Indian Medical Service should have had considerable practical experience in Bacteriology and preferably have undertaken some research For post (b) at the Haffkine Institute, Bombay a thorough knowledge of modern technique of preparation of Plague vaccine is also required

Terms—Commencing pay will be fixed at a point in the incremental scale of Rs 625 – Rs 1 350 a calendar month commensurate with age and qualifications etc, and the pay will be subject to such temporary reductions (at present 5 per cent) as may be imposed by Government Sterling equivalents of Rs 625 and Rs.1 350 respectively at present rate of exchange (less 5 per cent) £534 and £1 154 per annum

Tenure—Permanent subject to satisfactory completion of a probationary period of three years Posts are non pensionable but on confirmation appointees are eligible for the benefits of a special provident fund

Passage—Free first class passage to India also for candiates of non Asiatic domicile only similar return passage, subject to usual conditions.

Strict medical examination

Post (c)—Applications are invited from and restricted to officers of the Indian Medical Service The selected officer who will also be required to serve a probationary period of three years, will be eligible for the pay of his rank plus a Bacteriological allowance of Rs 250 a calendar month

Forms of application may be obtained upon request by post card from the High Commissioner for India General Department India House, Aldwych London W C 2 where applications will be received up to July 1st, 1933 for transmission eventually to the Recruitment and Appointments Board for the Medical Research Department in India

Candidates are liable to be required to attend for interview in England

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COUNTY COUNCIL OF MIDDLESEX

NORTH MIDDLESEX COUNTY HOSPITAL EDMONTON

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The County Council invites applications for the above appointment Candidates must be registered Medical Practitioners, Graduates in Medicine of a British University, and Fellows or Members of the Royal College of Physicians The successful candidate will work under the direction of the Medical Superintendent, will reside at the hospital, and will devote the whole of his time to his official duties.

Salary £600 per annum, rising by annual increments of £50 to £800 per annum together with residential emoluments valued for superannuation purposes at £150 per annum

In view of the national situation a temporary abatement calculated on the following scale is applied to the salary and value of the emoluments for the first £150 per annum, no abatement for the next £100 per annum 2½ per cent abatement for the next £500 per annum, 5 per cent abatement for the next £750 per annum 7½ per cent abatement

The successful candidate will be required to pass such medical examination as the Council may direct, and unless subject to the Poor Law Officers Superannuation Act 1896 to contribute to the County Councils Superannuation Fund The appointment will be held during the pleasure of the Council and subject to three months notice on either side

Applications stating (1) name (2) age (3) qualifications and (4) experience, together with copies of not more than three recent testimonials must be received by the undersigned not later than June 24th

No special application forms are provided Envelopes must be endorsed Resident Physician"

Canvassing directly or indirectly will be a disqualification

N B—North Middlesex County Hospital is a modern General Hospital with accommodation for 900 cases chiefly acute 215 beds in the adjoining Edmonton House also are under the care of the Medical Staff of the Hospital The Hospital possesses a Pathological Laboratory, and Radiological Radium Electrotherapeutic, Actino-therapeutic Maternity Massage Ear Nose and Throat Ophthalmic Dental, and Out patient Departments

ERNEST S W HART, Clerk of the County Council.
Middlesex Guildhall, Westminster S W 1
May 31 1933

THE ALL-INDIA INSTITUTE OF HYGIENE AND PUBLIC HEALTH CALCUTTA INVITES APPLICATIONS FOR THE FOLLOWING GAZETTED POSTS Viz

(1) MISTRY AND
(2) BIOLOGY AND Indian Nurse
(3) STATISTICS AND EPIDEMIOLOGY

Terms—Pay Rs.725—120/3—1 065—125/3—1 700 a calendar month plus a compensatory allowance of Rs 500 a calendar month in lieu of private practice Pay higher than initial rate might be given having regard to age and qualifications Emoluments liable to revision if necessary in event of any grading down of pay of Public Services in India or of a decision by Bengal Government to revise rates of pay of similar staff of School of Tropical Medicine Calcutta (Rupee 1s 6d approximately) The appointments are non pensionable but appointees will be eligible for the benefits of the Contributory Provident Fund (India)

Tenure—Five years in the first instance subject to six months notice on either side and extensible thereafter at the discretion of Government for such periods at a time as may be agreed upon A formal agreement will be executed with appointees provided they are not already in Government service in India

Leave—Appointees of non Asiatic domicile will be eligible for leave during agreement in accordance with Model Leave terms those already in Government service in India will be eligible for leave in accordance with Fundamental Rules or such other leave rules applicable to their service to those of Asiatic domicile special leave rules will apply Officers will be bound by the leave rules applicable to them and such revisions thereto as may be made from time to time

Passage—Free first-class passage to India also, for candidates of non Asiatic domicile only similar return passage, subject to usual conditions

Applications for all three posts will be accepted from Officers of the Indian Medical Service to whom the following terms will apply Emoluments—basic pay of rank (time scale of I M S Civil) Overseas pay If admissible at the prescribed rate, special pay as Professor Rs 250 per mensem compensatory allowance in lieu of private practice Rs 500 per mensem Pay subject to emergency cut so long as it lasts Tenure same as for non service men Leave under Fundamental Leave rules as applicable to I M S Officers in Civil employment

All candidates will, on appointment be regarded as serving in a vacation department on distinct understanding that withdrawal of this concession if and when found necessary will not entitle them to compensation No private practice including laboratory and consultant practice will be allowed

Forms of application may be obtained upon request by post card from the High Commissioner for India General Department India House, Aldwych, London W C 2 where applications will be received up to July 1st 1933 for transmission eventually to the Recruitment Board for the All India Institute of Hygiene and Public Health Calcutta

Candidates are liable to be required to attend for interview in England

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FRCS (Edin)

PREP COURSE with daily Lecture-Demonstrations of Museum Specimens of Surg, Path for next Exam will commence shortly Postal TUITION at any time—Further particulars H C ORRIN F R C S Surgeons Hall Edinburgh

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WARRINGTON INFIRMARY AND DISPENSARY

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON (male) unmarried

Applicants who must be of British nationality must be duly qualified Medical Practitioners.

Salary £175 per annum with board apartments and laundry

Applications stating age with copies of three recent testimonials should be sent in at once to the undersigned

By Order
HENRY J FOOT
Supt & Secretary

May 30th 1933

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY

Applications are invited from unmarried gentlemen, properly qualified and registered for the post of HOUSE SURGEON in the Departments with resident care of the Male Department (16 beds) and Eye Ear Nose and Throat (27 beds)

Salary at the rate of £150 per annum with board residence and laundry

Applications stating age qualifications and previous experience to date with copies of testimonials to be forwarded to the undersigned on or before June 16th

JOHN GIBSON Supt

INDIAN MEDICAL SERVICE

Recruitment of European Officers.

Applications are invited from medical men for permanent commissions in H.M.'s Indian Medical Service. The terms offered include a gratuity of £1,000 on retirement after six years' service, or £2,500 after 12 years' service, together with free return passages for those who no longer desire to remain in the Service. In other respects the terms will be as detailed below.

Candidates must be European British subjects under 32 years of age at the time of application and must be registered under the Medical Acts in force in Great Britain and Northern Ireland.

CAREERS

The Indian Medical Service offers wide opportunities of medical experience including clinical preventive specialist and research work. At the beginning of his career an officer is employed on the military side which has medical charge of the Indian Army. Promotion is on a time scale up to the rank of Lieutenant-Colonel and by selection to the ranks of Colonel and Major-General. An officer may apply after one year's Indian Service to have his name registered for transfer to the civil side from which appointments are made to Civil Surgeoncies which are established at the principal civil centres to provide for the medical needs of civil officials and for general medical administrative purposes to specialist (for example public health and bacteriological) services to research posts and to professorships at the Medical Schools.

NOTE.—It is not possible to state at present what if any prospects of employment on the civil side will be open to Indian Medical Service Officers under the proposed new constitution for India.

PAY

Owing to the state of the financial emergency at present prevailing in India the existing monthly rates of pay which are as follows are subject to a temporary reduction of 5 per cent.

Rank.	Service in Rank.	Basic Pay	Overseas Pay	Year of Total Service
		Rs.	Rs.	
Lieut.	—	400	100	1st
			100	2nd
			100	3rd
Capt.	(i) During first 3 years service as Captain	600	100	4th
			£15	5th
			£15	6th
	(ii) With more than 3 and less than 6 yrs. service as Captain	700	£25	7th
			£25	8th
			£25	9th
	(iii) With more than 6 years service as Captain	800	£25	10th
			£25	11th
			£50	12th
Major	(i) During first 3 years service as Major	900		
	(ii) With more than 3 and less than 6 years service as Major	1100		
	(iii) With more than 6 years service as Major	1200		
Lieut.-Col.	(i) Until completion of 23 years total service	1 000	£50	13th and over
	(ii) During 24th and 25th years service	1600		
	(iii) After completion of 25 years total service	1 000		
	(iv) When selected for increased pay	1800		

EXTRAS.—In addition to the above rates various allowances are admissible for a large number of special appointments on both the military and the civil side which may be held by members of the Indian Medical Service. Special high rates of pay are also attached to the numerous administrative appointments open to officers in both branches of the Service.

ANTEDATES IN COMMISSION

Any service rendered by an officer during the war as a medical or combatant officer or in a position usually filled by an officer may be counted as service for increments of pay promotion retirement and retired pay but not for gratuity.

One half of any service in the ranks during the war may be counted as service for retirement and retired pay only.

Candidates possessing certain higher medical qualifications may be granted an antedate of one year in their commissions. Past service in certain hospital appointments may also render candidates eligible for an antedate of one year. Persons holding or about to hold resident posts at recognized hospitals may be seconded in those posts for a period not exceeding one year. The maximum period of an edate secondment or antedate and secondment combined admissible under this paragraph is limited to one year.

OUTFIT ALLOWANCE

Officers on appointment will receive an allowance of £50 towards the cost of outfit.

PRIVATE PRACTICE

With the exception of Administrative Officers military or civil and officers holding certain special appointments officers are not debarred from taking private practice so long as it does not interfere with their proper duties.

LEAVE

Leave can be taken at reasonable intervals and adequate rates of leave pay are provided. Extra leave (known as study leave) which may not exceed 12 months in all during an officer's service may be granted to officers desirous of pursuing special courses of study of a post graduate nature. During such leave study allowance at present fixed at the rate of 12s. a day in the United Kingdom £1 a day on the Continent of Europe and £1 10s. a day in the United States of America is granted to an officer in addition to ordinary rates of leave pay.

PENSIONS

The rates of pension are as follows	Per annum £
After 17 years service for pension	400
18	430
19	460
20	500
21	540
22	580
23	620
24	660
25	700
26	750
27	800

These rates are subject to alteration on account of a rise or fall in the cost of living as compared with the year 1919 to an extent not exceeding 20 per cent. in all. At present a reduction of 8½ per cent. is being made on this account.

There are additional pensions ranging from £65 to £350 per annum for officers who have held administrative appointments.

PASSAGES

An officer on appointment is provided with free passage to India. The families of officers who are married prior to the date of the officers embarkation on first appointment will also be provided with free passage to India subject to the payment of messing charges.

Officers and their families are also eligible for passage concessions under which they are granted a certain number of return passages home at Government expense during their service.

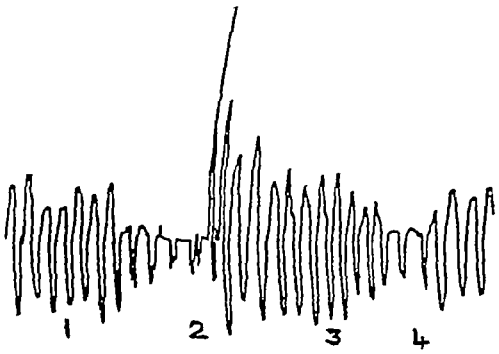
INSTRUCTION PRIOR TO EMBARKATION

Officers are required to undergo courses of instruction at the Royal Army Medical College and at Aldershot lasting approximately six months prior to their embarkation for India on first appointment. Information as to the rates of pay admissible during this period and subsequently up to arrival in India is contained in the memorandum referred to below.

A memorandum giving full details regarding these appointments and forms of application may be obtained from the Under-Secretary of State for India, Military Department, India Office, London, S.W.1. The Selection Committee will meet at the India Office early in July next and the selected candidates will be required to join a course of instruction commencing early in August prior to sailing for India early in 1934. Applications should be submitted as soon as possible.

shown in the figure I also use a mask which covers the mouth and nose The mouth is closed and nasal breathing takes place through an orifice in the mask which is so restricted that step-climbing can just be comfortably carried on in a cool room The steps are made on and off a box in time with the beats of a metronome On allowing the rays from a dull red electric fire to fall on the face the step-climbing soon becomes impossible in a sensitive subject through want of air On switching on a fan or an incandescent lamp ease in step-climbing is renewed The experiment can be carried out with the fire put under the table so as to radiate the bare legs The screen in front of the fire can then be withdrawn silently by an observer while the eyes of the subject are kept shut The eyes should not be covered by a bandage because this in itself affects the nose of a sensitive subject

Inhalation of a vaporized adrenaline solution abolishes the reflex nose-closing effect. The adrenaline constricts the blood vessels and preventing vascular congestion of the membrane keeps the air way open The effect of the inhalation lasts for an hour or so The sensitivity of the skin to the nose-closing rays in certain sensitive susceptible subjects is very great When only one square inch of skin is exposed and the device is put several feet away the reflex may result In a still room at ordinary temperature I was sensitive to the nose-closing rays of an electric fire when facing this at a distance of 47 feet where of course no sensation of heat was felt At a distance of 1 metre from a thermopile the energy of an incandescent lamp was found to be 1/60 of that of an electric fire When one square inch of skin was exposed at that distance to this fire the bad side of my nose became closed when another and equal area of skin was exposed to the lamp the nose was opened The latent time in each case was about six seconds The latent time is much shorter when a large area of skin is exposed the effect varied as $\sqrt{a}t$ where a = the area and t = the time At various distances from the source the effect varies as $\sqrt{i}t$ where i = intensity and t = time



Tracing shows effect on nasal breathing of electric fire fan and incandescent lamp (1) Exposed to electric fire (2) opened mouth to take a breath fan then put on and nasal breathing resumed (3) fan stopped (4) incandescent lamp switched on

Out of sixty seven subjects recently tested at the London Clinic and Institute of Physical Medicine fifteen were insensitive while forty two showed more or less evidence of the nose-closing effect Asthmatic and catarrhal patients are likely to be more sensitive than others In all except four of these forty two the fan made the breathing easier while twenty five found it made easier by the incandescent light, and twenty one by the water bowl

Conclusion

In considering the various baths used for stimulating the skin and producing curative effects it is of interest to have found evidence of a reflex effect of a striking character In my case the nose-closing effect is accompanied by a slight rise of blood pressure In regard to heating and ventilating rooms it is clear that where dark sources of heat are employed there should be adequate ventilation with cool air This is required not only to produce comfort and a feeling of freshness but to keep the atmosphere as clean as possible from dust and microbes Incandescent lamps make such sources pleasanter Electric fires can be improved by making them brighter sources of heat A sensitive subject who suffers from nasal catarrh has been improved by replacing in his room a hot water radiator by a Ferranti bar fire which was made to take 6 amperes Irradiated with this bright heat he works in comfort with a window open and has better health A modern gas fire would have done as well

References

[1] *Journ Indust Hyg* 1933 xv 8
Hill Leonard *Proc Physiol Soc* November 14th 1931 and May 14th 1932 *Compt rend IIe Congres Interrat de la Lumière* Copenhagen August 1932, p 160

REHALATIONAL ANAESTHESIA

A METHOD OF UTILIZING THE RECENT ADVANCES IN ANAESTHETIC ADMINISTRATION

BY

JOHN HALTON M.B CH.B

HONORARY ANAESTHETIST LIVERPOOL ROYAL INFIRMARY

General inhalational anaesthesia to-day is induced and maintained either by one of the modern types of apparatus or by the time honoured open mask and drop bottle Apparatus is of the greatest importance in the anaesthesia of modern surgery In many operations on the head and neck and in thoracic surgery it is essential It is not my object in this article to decry its use but to try and show those who are called upon to give routine or occasional anaesthetics that by adopting a combination of methods of administration which have been advocated from time to time, they can secure practically all the very real advantages of the more costly and complex apparatus by a technique which rivals the open mask for simplicity and economy

The mechanization of anaesthesia is the outcome to a great extent of the practical application of the results of recent research discoveries which cannot be employed when the open mask is used.

Results of Recent Research

Haggard[1] has shown that narcosis depends upon the anaesthetic tension of the agent exhibited which in the case of ether is that concentration of the vapour with which the cells of the central nervous system are in equilibrium This equilibrium is only reached after gaseous interchanges have taken place first between the pulmonary blood and the vapour bearing air entering the lungs and then between this blood and the tissues Furthermore owing to the high absorption quotient of lipoid tissue and the volume of blood passing through the central nervous system this concentration practically equals that of the arterial blood Thus the rate of absorption depends solely on the amount of ether brought to the blood and this depends on the volume of respiration He has shown by experiment that to maintain a state of

surgical anaesthesia the blood must contain 1 to 1 5 grams of ether per litre This necessitates, during induction, introducing to the lungs 8 to 12 grams of ether per minute To attain this with ordinary respiratory excursions, which at the commencement of anaesthesia are often rendered shallow by depressant hypnotics, entails the use of a prohibitively strong vapour, a long induction period with gradual saturation of the whole body, or increasing the depth and volume of respiration, so diluting the vapour strength One gram of ether in one litre of air per minute is as effective for anaesthesia as one gram in five litres per minute

The work done by Haldane[2] on carbon dioxide is a respiratory hormone is so well known that a brief reference to his conclusions will suffice He finds that a rapid induction and termination are essential , the use of rebreathing tends to lessen variations of ether–air composition and the use of carbon dioxide stabilizes the acid-base balance of the blood, and by stimulating respirations ensures full lung expansion, definitely lessening post-operative complications

The toxic effects of ether have been the subject of research since 1850 Stephen[3] gives a very thorough review of this work, and adds valuable facts from her own investigations It is admitted that conservatism in the amount of ether used spares the body tissues and metabolism Ross and Fairlie[4] quote Gwathmey as laying stress on the necessity of warming the vapour, claiming that " this measure will prevent the loss of heat to the patient incidental to the warming up in the air passages, of the cold vapour " Shipway and Pembry[5] show that body heat can definitely be maintained by warm vapour, and Hewer[6] describes the irritating effect of too hot vapour and the loss of body heat by sweating when it is used

In considering the open mask, Rowling[7] has proved clinically that when it is in use the oxygen percentage under it is always reduced and the percentage of carbon dioxide is variable and not maintained Finally, Flux[8 9] has shown that use may be made of the density of anaesthetic vapours, while Miller[10] has gone a step further with his gravitational anaesthesia, showing that this is particularly applicable to ether vapour, nitrous oxide, carbon dioxide, and oxygen, with densities greater than air

COMPARISON OF METHODS

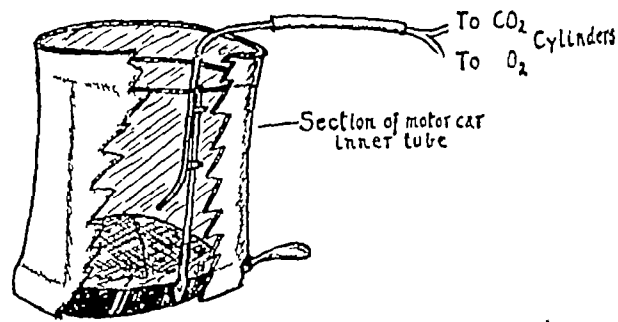
The salient points, therefore, in our present knowledge of the theory and practice of narcosis are rapid induction, usually by nitrous oxide and oxygen with carbon dioxide , rebreathing to warm the vapours and to keep up the carbon dioxide content of the inspired gases with added oxygen and sufficient warmed ether only to saturate the nervous system or as an adjuvant to nitrous oxide Most forms of apparatus aim at utilizing these facts, and the results obtained by anyone accustomed to the apparatus used are excellent from every point of view—from that of the patient the surgeon, and the administrator But gauges and taps are not infallible they may become refractory at critical moments or their readings may be incorrect Also most of the apparatus is costly, and would be employed by many anaesthetists too infrequently to warrant acquisition Lastly, there is the fact that when apparatus is used the anaesthetist's attention is divided, and the temptation may arise to discard the reactions and minute-to-minute symptomatology of the patient for dial readings

On the other hand, when an anaesthetic is administered by the open mask even when carbon dioxide is used owing to the difficulty of controlling respiration, there is a longer induction period with a retarded recovery rate, and a greater tissue saturation is needed before any required level of anaesthesia is attained Again from the purely physical standpoint the method is unscientific, because of the specific gravity of the gases used, and ether vapour as it falls from the mask is often inhaled by all the theatre staff as well as by the patient—a very important point during a full day's work The almost unavoidable freezing of the gauze of the mask, and the constant presence of cold ether vapour and droplets in close approximation to the patient s face, are further disadvantages of the open mask method

APPARATUS AND TECHNIQUE

During the past two years I have evolved a technique which I believe has a very definite position in routine anaesthesia between these two extremes I have named it rehalational anaesthesia, because it takes its place between perhalation with the ordinary mask and rebreathing into a bag

The ' apparatus," at its simplest, consists of a small cylinder of oxygen and a ' J " size carbon dioxide sparklet, which are strapped together, tubes from which are brought to a Y-piece, whence a further tube leads the gases to the mask , a four ounce ether drop bottle with a Bellamy Gardner dropper, the delivery pipe of which is nipped up so that it will deliver an even drop in any position , and a modified Ogston mask, a short description of which was published in the *British Medical Journal* in April, 1930 [11] Two slight modifications have been made since then , first a section of motor car inner tube is slipped over the frame and takes the place of the towel or lint which Ogston suggested and secondly, a short length of metal tube is clipped to one of the uprights, as indicated in the sketch, and the



Section of mask made up indicating lead in tube

gases are, by this means, led to the depths of the mask In use the mask is made up, the gas tube attached, and induction commenced

INDUCTION

Ether, chloroform and ether mixture, or ethyl chloride, can be employed The most pleasant, however, is nitrous oxide , when this is used an extra gas tube fitted to the mask is advantageous If plain ether is chosen a few drops are allowed to fall, not on the dome of the gauze, but at the side away from the direct line of the mouth and nose, while the mask is gradually lowered on to the two thick layers of gamgee covering the patient s face The dropping is slow, and if any gagging or signs of discomfort appear the mask must be lifted momentarily Before the mask is quite lowered the carbon dioxide is turned on so that the gas just flows, gauged by the bu s in the tube The breathing deepens, and it is found that a steady increase in drop rate is comfortably tolerated until the patient passes rapidly and quietly into surgical anaesthesia Very deep breathing before this stage must be avoided , it will cause a sense of suffocation and in crease any tendency to cyanosis If these conditions do appear there is no necessity to shut off the gas it is sufficient to raise the mask slightly for a few seconds

In the case of mixture induction for patients who are not morphinized seven parts of ether to one of chloroform has proved the most satisfactory The chloroform helps to mask the pungency of the ether and it will rarely be found necessary to use the sparklet at all enough carbon dioxide being retained inside the mask chamber from the patient's own expirations A regular drop is maintained until steadiness and increased depth of respiration denotes the establishment of anaesthesia 1 to 1½ drachms is usually sufficient for this A change is then made to pure ether any gagging or breath holding being immediately dealt with by means of the sparklet

With ethyl chloride a very rapid induction is secured by dropping 3 to 5 c.cm gradually on the mask and as soon as sterterous breathing denotes full anaesthesia sufficient ether is used to ensure that the whole of the gauze is moist Any respiratory irregularity exhibited as the patient comes from deep ethyl chloride to light ether anaesthesia can be dealt with by the sparklet

In nitrous oxide induction a second tube is led from the gas cylinder to the mask the gas is turned just on the mask is lowered slowly and as the stertorous breathing and characteristic dusky colour of this anaesthesia begin to show a few breaths of carbon dioxide are given the nitrous oxide is disconnected and an increasing ether drop is commenced until surgical anaesthesia is attained A little practice is perhaps necessary with this method of inducing narcosis for care must be taken that nitrous oxide anaesthesia is not pushed to the jactitation stage when respiratory cessation bars further progress Should this occur it can be corrected by a few breaths from the oxygen cylinder

Whatever form of induction is used the anaesthetic room should be kept quiet and no adjustment of dressings and clothes is permissible until full narcosis is reached Much will be added to the confidence of patients and to the alleviation of fear by a short preliminary conversation as to how easily they will fall asleep and since the auditory sense is one of the last to be abolished—a fact often overlooked—this reassurance with simple directions as to their conduct should be kept up until consciousness is lost This is probably better than the practice of counting which in my opinion, tends to have the opposite effect Finally as soon as the jaw muscles permit an airway is inserted

Maintenance

With anaesthesia fully established the carbon dioxide is turned off the patient is evolving and rebreathing his own carbon dioxide from the mask chamber Respirations are deep and full and there is a slight tendency to cyanosis sufficient oxygen is turned on to counteract this It will be found that ether can now be dropped almost as sparingly as chloroform No freezing of the gauze will take place provided the drops are not directed constantly to one portion of the mask In actual practice unless a deep level of anaesthesia is required when the whole of the gauze is moist the drops should be directed to the sides of the mask

With this form of administration two further important points must be borne in mind First a constant and regular ether dropping is essential secondly since deep levels of anaesthesia are reached much more rapidly than in open administration the difficulty to those experienced only in that method will not be so much in keeping the patient deep as in allowing him to ascend to lighter levels

Recovery

Following the final deepening of anaesthesia to facilitate the closure of the peritoneum the ether dropping can be discontinued Thus by the time the surgeon is closing superficial tissues no ether remains on the mask Six full breaths of carbon dioxide are given from the sparklet and the patient is allowed to inhale with the resultant increased respiration an atmosphere rich in oxygen for the remainder of the time he is on the table After an abdominal operation of the average length when atropine only has been used in premedication the patient leaves the theatre phonating with his essential reflexes present and is usually awake in a further sixty to ninety minutes In the presence of morphine however the final recovery is delayed

It is appropriate to indicate here further simple additions to technique which may be made with advantage In gall bladder surgery of the obese and in cases where an abnormal posture is required the introduction as an airway of a pernasal endotracheal catheter as advocated by McGill [12] will simplify administration giving an even greater control of the patient and rendering the operating field less disturbed by excessive respiratory excursions The use of a simple vaporizing apparatus—such as that of Shipway or of Howard Jones—to replace the drop bottle is a further refinement Some form of flow meter may be introduced into the gas circuit if accurate measurement of the gases is considered desirable

RATIONALE AND ADVANTAGES

What benefits accrue from this technique and how are they brought about? Use is made of all Henderson's tenets for a good anaesthesia Because of the arrangement of partial rebreathing a more constant air mixture is maintained in the lung and this assisted by the addition of carbon dioxide ensures a constantly quiet induction in every type of case with very little experience on the part of the administrator Because of the form of the mask every drop of ether is warmed and vaporized by the patient's own efforts the vapour being concentrated to him alone thus protecting the anaesthetist the operator and the theatre staff

The usual amount of ether used from induction to termination for an adult male undergoing an upper abdominal operation lasting from forty to sixty minutes is six ounces—rarely more often less From this it will be seen that patients anaesthetized by this method are a totally different proposition to those anaesthetized by the open mask In the latter owing to the uncontrolled respiratory excursions deepening of anaesthesia is only secured by the exhibition of a very strong vapour with all it entails—wet and frozen gauze and the use of excessive quantities of ether etc.—so that the whole organism is soaked with the drug and the venous return to the lungs carries sufficient absorbed vapour with it to aid in the building up of the required concentration in the arterial blood This in its turn results in a slow return to lighter anaesthesia and subsequent recovery and because of the toxicity of ether there is the danger of interference with the metabolism and damage to the body cells

On the other hand with rehalational anaesthesia although the concentration in the arterial blood must be the same it is secured much more rapidly by slightly increasing the vapour strength inhaled by the controlled respirations Should this be insufficient to give the depth of anaesthesia required the respirations and therefore the concentration can further be increased by the use of the sparklet When the need for deep anaesthesia passes if the ether dropping ceases recovery is as rapid for the converse of Haggard's findings holds good and the elimination of ether depends upon the volume of respiration Thus by directing the drug practically wholly to the central nervous system an identical degree of anaesthesia can be attained without exposing the rest of the body to toxic doses of ether

CITY OF BIRMINGHAM MENTAL HOSPITAL.

JUNIOR LADY ASSISTANT MEDICAL OFFICER

The Committee of Visitors invite applications for the above wholetime appointment from ladies under 35 years of age who are duly qualified and registered Medical Practitioners. A person who has held for at least six months a medical or surgical residential post in a general hospital will be regarded as having an additional qualification.

The successful candidate should be a good anaesthetist.

She will be required to reside in the hospital.

The commencing salary will be £300 per annum plus the usual residential emoluments of board, lodging, laundry and attendance. Subject to 12 months' service satisfactory to the Committee an increase of £50 will be granted and thereafter increases of £25 per annum up to a maximum salary of £450 per annum. An additional £50 per annum will be paid to the holder of the D.P.M. qualification or to a person obtaining the D.P.M. after appointment. The salaries and emoluments will be subject to a temporary deduction in accordance with the Scale of Temporary Abatements from Salaries approved by the City Council. The salaries are inclusive of all fees received and no such fees must be accounted for and paid into the hospital account.

The successful candidate will be required to pass satisfactorily a medical examination and to join the scheme under the Asylums Officers Superannuation Act, 1909. She will be required to serve in such institution belonging to the Mental Hospital Committee as they may from time to time direct. The appointment is subject to one month's notice on either side.

Applications stating full particulars of qualification, experience and appointments held, accompanied by copies of three recent testimonials must be addressed to the undersigned so as to be received not later than June 24th.

F. H. C. WILTSHIRE,
Town Clerk. Office Clerk to the Council House Committee of Visitors
Birmingham. May 25th, 1933.

HAMPSTEAD GENERAL AND NORTH WEST LONDON HOSPITAL, Haverstock Hill, N.W.3.

APPOINTMENT OF A HOUSE SURGEON

Applications are invited from unmarried Medical Men for an appointment of House Surgeon vacant on July 1st next. The salary will be at the rate of £100 per annum together with board, residence etc. and the term will be for six months.

Application to be made on a form which will be supplied by the Secretary, together with copies of not more than three testimonials, should reach the Secretary not later than noon on Jan. 17th next.

ELLINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.1.

Applications are invited for the post of HOUSE PHYSICIAN (male) for six months from July 1st (first two months in Casualty and Out-patient Department). Salary at the rate of £120 per annum with board and residence.

Applications stating age, experience and qualifications, accompanied by copies of four testimonials, to be sent to the undersigned not later than June 20th, from whom rules and other particulars can be obtained.

By Order of the Committee of Management.

W. H. SIDWELL,
May 24th, 1933. Secretary Supt.

COVENTRY & WARWICKSHIRE HOSPITAL.
307 Bed Main Hospital.
40 Beds Convalescent Hospital.
(Seven Resident Medical Officers.)

Applications are invited for the posts of RESIDENT HOUSE SURGEON and CASUALTY OFFICER (male). Duties to commence on July 1st. Salaries at the rate of £125 per annum with board, lodging and attendance. Candidates must be duly qualified and registered.

Applications stating age and enclosing copies of recent testimonials, to be sent to the undersigned on or before June 14th.

(MISS) R. HOOPER,
May 27th, 1933. Secretary.

CLAYTON HOSPITAL, WAKEFIELD.
(General Hospital—166 Beds.)

Applications are invited for the post of HOUSE SURGEON (male British). The appointment is for six months in the first instance and the salary is at the rate of £200 per annum together with board, residence and laundry.

Application, stating age, qualifications and experience, together with copies of three recent testimonials, should be sent to the undersigned as early as possible.

H. J. LANCASTER, Gen. Supt. & Sec.

WOOLWICH AND DISTRICT WAR MEMORIAL HOSPITAL,
Shooters Hill, London, S.E.18.
GENERAL HOSPITAL—112 Beds.

HOUSE PHYSICIAN also HOUSE SURGEON

The Board of Management invites applications from suitably qualified male candidates for appointment as (a) House Physician and (b) House Surgeon for a period of six months from July 1st next. In addition to his surgical duties the House Surgeon will have the care of a Maternity Unit of 8 beds.

An honorarium of £100 per annum will be paid in respect of each appointment, plus board, residence and laundry.

Applications, accompanied by copies of not more than three recent testimonials, should be addressed to the Secretary (at the Hospital) to reach him not later than Monday, June 19th. The Appointments Committee will meet on June 23rd to interview such of the candidates who will be duly advised when and where to attend.

NORFOLK AND NORWICH HOSPITAL,
NORWICH. (392 Beds.)

Applications are invited for the following posts:—

(a) HOUSE SURGEON.
(b) HOUSE PHYSICIAN.

Preference will be given to candidates who have held previous appointments. Salary for both posts £120 per annum with board, residence and laundry.

Candidates (male) who must possess registered qualifications, should forward applications, stating age, nationality, etc., together with copies of testimonials, to the undersigned not later than the first post in Tuesday, June 20th.

FRANK INCH,
June 7th, 1933. House Governor & Secretary.

ELSIE INGLIS MEMORIAL MATERNITY HOSPITAL,
Spittal Street, EDINBURGH. (60 Beds.)

Applications are invited from fully qualified Medical Women for the following posts:—

1. DISTRICT MEDICAL OFFICER, rising to Senior House Surgeon after three months, honorarium at the rate of £50 per annum with board, residence and laundry.
2. JUNIOR HOUSE SURGEON, honorarium at the rate of £25 per annum with board, residence and laundry.

The appointments are for six months from July 1st. Applications, with copies of testimonials to be sent to the Secretary, 1 Brunstane Road, Craigmillar, Edinburgh, immediately.

EDINBURGH HOSPITAL FOR WOMEN AND CHILDREN,
Whitehouse Loan, EDINBURGH. (56 Beds.)

Applications are invited from fully qualified Medical Women for the post of JUNIOR HOUSE SURGEON, rising to Senior House Surgeon after three months.

Appointment for six months from July 1st, honorarium at the rate of £25 per annum for first three months, £50 per annum for second three months, with board, residence and laundry.

Applications, with copies of testimonials to be sent immediately to the Secretary, 1 Brunstane Road, Craigmillar, Edinburgh.

THE PRINCESS BEATRICE HOSPITAL,
Richmond Road, Earl's Court, S.W.5.
(General Hospital—80 Beds.)

RESIDENT MEDICAL OFFICER (male) required to act as House Surgeon and Casualty Officer for six months from July 1st. Salary at the rate of £110 per annum with board, residence and laundry. Previous resident experience essential.

Applications to be sent to the House Governor not later than June 20th, accompanied by copies of three recent testimonials.

WATERLOO AND DISTRICT GENERAL HOSPITAL, WATERLOO,
Near LIVERPOOL.

HOUSE SURGEON required as from July 1st. The candidate must be fully qualified and registered. Remuneration at the rate of £100 per annum with board, residence and laundry.

Applications with copies of testimonials to be sent to the undersigned on or before June 15th.

W. T. EMERY,
Hon. Secretary & Supt.

YORK COUNTY HOSPITAL.
(200 Beds.)

The post of HOUSE PHYSICIAN will become vacant on July 1st. Salary £150 per annum with board, residence and laundry.

Applications, stating age and previous experience, together with copies of not more than three recent testimonials to be sent to the undersigned not later than 9 a.m. on Tuesday, June 20th.

H. E. RYAN, Gen. Sup.

THE GENERAL INFIRMARY AT LEEDS.

HONORARY ASSISTANT SURGEON.

Notice is hereby given that a Meeting of the Special Election Committee will be held in the Board Room on July 7th to elect an Honorary Assistant Surgeon.

Information as to the duties and necessary qualifications for the office will be supplied on request to the House Governor.

Thirty two copies of application, each accompanied by not less than three recent testimonials, to be addressed to the Chairman of the Infirmary, should be sent in on or before June 23rd.

By Order of the Board of Management,
S. CLAYTON FEYELS,
House Governor & Secretary.

THE GENERAL INFIRMARY AT LEEDS.
(627 Beds.)

(1) TWO JUNIOR RECEIVING ROOM OFFICERS (Candidates must have held a previous resident House appointment).

(2) RESIDENT MEDICAL OFFICER, Ida Robert Arthington Hospital.

Applications are invited for the above posts. Salaries (1) £100 per annum and (2) £60 per annum with board, residence and laundry.

The appointments are for six months, subject to renewal. Candidates must be legally qualified and registered.

Application with copies of testimonials to be sent in at once to the House Governor and Secretary.

June 2nd, 1933.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.
(240 Beds.)

Applications are invited for the post of HOUSE PHYSICIAN.

Salary £120 with board, residence and laundry.

Appointment tenable for six months, and subject to renewal.

Duties to commence July 1st.

Applicants must be registered under the Medical Acts.

Applications, stating age, and qualifications with copies of three recent testimonials, to reach the undersigned by June 21st.

ARTHUR R. CASH,
General Superintendent & Secretary.

WEST END HOSPITAL FOR NERVOUS DISEASES.
In-Patient Department, Gloucester Gate, Regent's Park.
Out-Patient Department, 73 Welbeck St., W.1.

The Committee of Management invite applications for the post of HON. ASSISTANT OPHTHALMIC SURGEON. Candidates who must be Fellows of the Royal College of Surgeons, England, are required to send twenty copies of their application with recent testimonials not later than Monday, June 19th to the undersigned from whom further particulars should be obtained.

J. P. WETENHALL,
Wellbeck Street, W.1. Secretary.

MANSFIELD AND DISTRICT HOSPITAL.

The Board of Management of the above Hospital (135 beds) invite applications for the post of HOUSE SURGEON (male). Duties to commence July 1st next.

Salary at the rate of £150 per annum, with residence, board and laundry.

The appointment is for six months, renewable.

The Resident Staff consists of a Resident Surgical Officer and two House Surgeons.

Applications accompanied by not more than three recent testimonials to be sent to the undersigned.

Dated this 31st day of May, 1933.

C. J. ADAMS, Secretary.

DISTRICT INFIRMARY,
ASHTON-UNDER-LYNE.
(General Hospital—200 Beds. Mainly Surgical.)

Wanted a HOUSE SURGEON for six months' appointment.

Salary at the rate of £150 per annum, with board, residence and laundry.

The Resident Staff comprises a Resident Surgical Officer and three House Surgeons.

Applications with testimonials to be sent at once to the undersigned.

FRANK OLIVER,
June 5th, 1933. Gen. Supt. & Secretary.

CHESTER ROYAL INFIRMARY.
(211 Beds.)

HOUSE PHYSICIAN (male) required as from July 15th. Salary £150 per annum, with board, lodging and washing. Applications close June 22nd. Application forms may be obtained from W. H. GRACE, M.D., M.R.C.P., Hon. Superintendent of the Resident Medical Staff.

ST PETER'S HOSPITAL FOR STONE ETC., Henrietta Street Covent Garden, W.C.2

The attendance of CLINICAL ASSISTANTS to the undermentioned members of the Honorary Staff who attend the Out-patients Department at the times indicated, is now being considered A fee of Five Guineas becomes payable to the funds of this Hospital on appointment and applications should be forwarded to the undersigned as early as possible

Mr John Sandrey	Mondays 3 to 6 p.m.
Mr Alban Andrews	Tuesdays 2 to 5 p.m.
Mr Ogier Ward	Wednesdays 3 to 6 p.m.
Mr F. J. F. Barrington	Thursdays 3 to 7 p.m.
Mr Ogier Ward	Fridays 9.30 to 11.30 a.m. (Women & Children)
Mr Alban Andrews	Fridays 3 to 6 p.m. (male out-patients)
Mr John Sandrey	Saturdays 2 to 5 p.m.

BETCHEY ROGERS Secretary

NOTTINGHAM CHILDREN'S HOSPITAL

Applications are invited for the post of RESIDENT HOUSE SURGEON (Woman) The salary will be at the rate of £150 per annum, with apartments board and laundry The appointment will be for six months, duties to commence on August 1st

Applications, together with testimonials and stating age qualifications, and experience to be sent to F. FRAGNELL the Honorary Secretary, 1 King John's Chambers Bridlesmith Gate Nottingham by June 19th Selected candidates will be required to attend at the Hospital for a personal interview on June 27th, when the appointment will be made

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ROYAL INFIRMARY, BLACKBURN
(240 Beds—Five Residents)

FOURTH HOUSE SURGEON (male) required at a salary of £150 per annum rising to £250, with board residence, laundry, etc. To commence duties at end of June

Applications with copies of testimonials, stating age, nationality experience, etc, to be sent at once to the undersigned

Royal Infirmary, NATHAN A. SMITH
Blackburn Gen. Supt. & Secretary

This Institution is recognised for the Surgical Practice required for the F.R.C.S. final examination

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ADDENBROOKE'S HOSPITAL CAMBRIDGE

Applications are invited for the post of RESIDENT ANAESTHETIST AND EMERGENCY OFFICER (male) The appointment will be for three months from July 1st Salary at the rate of £130 per annum with board residence and laundry Candidates who must be unmarried and duly registered are requested to forward their applications, stating age qualifications etc together with copies of not more than four recent testimonials to the undersigned on or before Wednesday, June 14th

W. H. HEAD
Secretary Superintendent

LINCOLN COUNTY HOSPITAL

Wanted HOUSE SURGEON male, unmarried Salary at the rate of £150 per annum rising to £200 per annum at the conclusion of six months approved service Board residence and washing will also be provided

Every candidate for the appointment must be registered under the Medical Acts

Applications stating age and other particulars with copies of not more than three testimonials are to be sent to the undersigned from whom further particulars may be obtained.

ARTHUR MOORE
Lincoln Secretary Supt

ROYAL ALBERT HOSPITAL AND EYE INFIRMARY DEVONPORT

A vacancy for an ASSISTANT HOUSE SURGEON exists Applicants must be duly registered and unmarried and the appointment will be for six months Salary £100 p.a. with board apartments and laundry free

Application stating age accompanied by copies of not more than three testimonials should be forwarded to the undersigned without delay

By Order of the Committee
FRANK ROWE
May 22nd 1933 Secretary

ALTRINCHAM GENERAL HOSPITAL.
(100 Beds)

Applications are invited for the post of JUNIOR HOUSE SURGEON Salary £120 per annum with board residence and laundry

The appointment is for six months in the first instance to commence July 1st

Applications stating age and experience together with copies of recent testimonials to be sent to the Secretary General Hospital Altrincham not later than June 15th

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CANDIDATES INVITED FOR POST OF HON. RADIOLOGIST HENDON KING EDWARD MEMORIAL HOSPITAL N.W.4 Particulars on request at the Secretary of Hospital Applications for post must be in before June 19th

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NORTHAMPTON GENERAL HOSPITAL
(253 Beds)

There are vacancies immediately for a HOUSE SURGEON for one of the General Honorary Surgeons and a HOUSE SURGEON for the Ear Nose, and Throat Department British nationality Salary £150 per annum, with board, residence and laundry

The successful candidates will be appointed for the period ending on September 30th and will be eligible for re-election for a further period of six months.

Candidates must be duly qualified and registered

Applications stating age sex qualifications etc with copies of testimonials to reach the undersigned not later than first post on Wednesday June 21st

H. ST JOHN WOOD
June 9th 1933 Secretary Supt

NOTTINGHAM GENERAL DISPENSARY GREGORY BOULEVARDE BRANCH NOTTINGHAM

Wanted RESIDENT SURGEON (female) unmarried Must have Medical and Surgical qualifications Salary £250 with £25 increase per year up to £300 House with attendance, lights and fuel (not board) This institution is a non-provident one No beds No midwifery Applications stating age and accompanied by copies of recent testimonials to be sent by June 13th to—

5 Thurland St R. J. WILLATT
Nottingham Secretary

THE CHILDREN'S HOSPITAL SHEFFIELD
(110 Beds—Three Residents)

Applications are invited for the following posts vacant August 1st

HOUSE PHYSICIAN HOUSE SURGEON

The appointments are for six months with salary in each case at the rate of £100 per annum with board residence and laundry

Candidates (male and unmarried) who must possess registered qualifications, should forward applications stating age nationality, etc, together with copies of three recent testimonials to the undersigned

T. H. G. CARTLAND, Secretary

JENNY LIND HOSPITAL FOR CHILDREN, NORWICH

Applications are invited for the post of RESIDENT MEDICAL OFFICER Salary £120 per annum, with board, residence and laundry Candidates (male or female) who must possess registered qualifications should forward applications stating age nationality etc., together with copies of testimonials to the undersigned not later than first post on Tuesday, June 20th

FRANK INCH
June 9th 1933 Secretary

SANATORIUM, BRIDGE OF WEIR.

COLONY FOR EPILEPTICS, BRIDGE OF WEIR

ASSISTANT MALE RESIDENT MEDICAL OFFICER wanted to commence duties in August Keen evangelical and keen research worker preferred Appointment for six months in first instance, at rate of £200 p.a. (renewable by mutual agreement) with board and laundry Applications to Medical Superintendent stating age experience and qualifications and enclosing references

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ROYAL ISLE OF WIGHT COUNTY HOSPITAL, RYDE I.W.

RESIDENT HOUSE SURGEON wanted for married single handed qualified and registered Salary at the rate of £180 yearly with board residence, and laundry Apply enclosing copies of testimonials, to Secretary before Tuesday June 20th Third-class return railway fare for selected candidates.

A. S. GORDON Secretary

ROYAL INFIRMARY, WIGAN
(180 Beds)

HOUSE SURGEON (male) required July 1st for a period of six months Salary £150 per annum with board apartments and washing Staff consists of R.S.O. and three House Surgeons Applications stating age and qualifications with copies of three recent testimonials should be addressed to the undersigned as soon as possible

A. STANLEY BRUNT
June 6th 1933 Gen. Supt. & Sec.

MANCHESTER ROYAL EYE HOSPITAL

Vacancy occurs at once for JUNIOR HOUSE SURGEON Salary £120 per annum with board etc Applications (with copies of testimonials) endorsed House Surgeon to be forwarded to the Chairman of the Board of Management by June 17th

H. R. NORTH
General Superintendent & Secretary

VICTORIA HOSPITAL BLACKPOOL

HOUSE SURGEON OR PHYSICIAN (Male).

Applications are invited for the above post from duly qualified and registered Medical Practitioners

The appointment is for six months from July 1st with salary at the rate of £200 per annum including board lodging and laundry The duties will include the giving of a certain number of anaesthetics The person appointed if satisfactory, will be eligible for the post of House Surgeon for a further period of six months Salary at the rate of £250 per annum

Applications stating age nationality qualifications and experience together with not more than three recent testimonials should be sent to the Hon Secretary endorsed House Surgeon or Physician on or before June 19th

Victoria Hospital JOHN HACKING
Blackpool Hon. Secretary
June 6th 1933

DURHAM COUNTY MENTAL HOSPITAL

ASSISTANT MEDICAL OFFICER

The Visiting Committee invite applications from duly registered Medical Practitioners for the appointment of Assistant Medical Officer at the Mental Hospital Salary £350 per annum rising by annual increments of £25 to £400 per annum, together with board lodging laundry, and attendance valued at £135 per annum plus £50 per annum for the Diploma in Psychological Medicine The appointment will be subject to the conditions of the Asylums Officers Superannuation Act 1909 and the successful candidate will be required to pass a medical examination Preference given to applicants with knowledge of Laboratory routine Applications with copies of three recent testimonials to be forwarded to the Medical Superintendent Winterton Stockton-on-Tees by June 21st

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NATIONAL HOSPITAL FOR DISEASES OF THE HEART, Westmoreland St., W.1

PHYSICIAN TO OUT-PATIENTS

The Committee of Management invites applications for the post of Physician to Out-patients

Candidates must be Graduates in Medicine of a University of the British Empire recognised by the Royal College of Physicians of London and Fellows or Members of that College

Applications with ten copies of not more than three recent testimonials should be sent to me not later than Friday June 16th

ROBERT G. E. WHITBY
Secretary

NORTH ORMESBY HOSPITAL, MIDDLESBROUGH

HOUSE PHYSICIAN required male and unmarried Salary £120 per annum with board residence, and laundry There are three Students and the successful candidate will be eligible for the post of House Surgeon in due course

Applications stating age qualifications previous experience (if any) with copies of three recent testimonials, should be sent to the undersigned at once

GEORGE WATTS
June 6th 1933 Secretary Supt.

PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN Shadwell Lond on E.1

HOUSE SURGEON required Salary at the rate of £125 per annum with board residence and laundry The appointment is for six months from July 1st Application stating age nationality, qualifications and experience accompanied by copies of not more than three recent testimonials should reach the undersigned not later than June 19th

T. F. RUSSELL Secretary

EDINBURGH MUNICIPAL HOSPITALS

There will be a vacancy for a RESIDENT HOUSE PHYSICIAN (male) at the Royal General Hospital Seafield Street Leith for a period of three months from July 1 (with possibility of extension) Salary at rate of £100 per annum (subject to temporary cut of 4½ per cent) plus board etc

Applications and testimonials to be sent as soon as possible to the Medical Officer of Health Johnston Terrace Edinburgh

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SOUTHEND-ON-SEA GENERAL HOSPITAL
(228 Beds—Six Residents)

Wanted CASUALTY OFFICER duties to commence July 1st or as early as possible thereafter in England essential to commence not later than period ending Nov 1st 1933 Salary £150 per annum rising to £175 per annum from 1934 Salary £150 per annum rising to £175 per annum from 1934 Application stating age residence laundry Applications from British male candidates only stating age qualifications and experience with three recent testimonials, to the Joint Secretaries by June 14th

lesions often prove obdurate to treatment The extent of the usefulness of iron in this disease and in others in which this association is found is therefore being investigated

REFERENCES

[1] Sargant W *Lancet* 1932 i 230
Idem Ibid, 1932 ii 1322
[2] Castle W B Townsend W C and Heath C W *Amer Journ Med Sci* 1930 clxxx 305
[4] Heath C W Ibid 1933 clxxxv, 365
[5] Hurst A F and Bell, J R *Brain* 1923 xlv 266
[6] Russell J S R, Batten F E, and Collier J Ibid, 1900 xxiii, 39

WATER EXCRETION AS A MEASURE OF EQUILIBRIUM WITH ENVIRONMENT

BY

D N PARFITT, M D LOND, B SC WALES, D P M

SENIOR ASSISTANT MEDICAL OFFICER, WARWICK COUNTY MENTAL HOSPITAL

The use of biochemical formulae as a measure of the emotional tension in psychotic patients has been advocated by McCowan and Quastel,[1] who suggest that the results of blood sugar curves can be used in the formula—

$$\frac{\text{2 hour blood sugar level minus the fasting level}}{\text{The highest blood sugar level minus the fasting level}} \times 100$$

and that the product in manic-depressive psychoses is in numerical proportion to the degree of emotional tension present The product is known as the hyperglycaemic index Their results have been supported and correlated by Lockwood[2 3] in studies of the psycho-galvanic reflex and of the blood cholesterol levels It is the purpose of this communication to show that the degree of emotional tension or, as it is here called, the measure of equilibrium with environment, can be equally well decided by a water excretion test based on that described by Beaumont and Dodds[4] as used by Strauss Graunwald A table showing the relation between the results of water excretion tests and the hyperglycaemic index in fourteen patients is included

That the renal water excretion is a sensitive index of renal function is well known, but it is so easily affected by nervous influences that its value as an ordinary clinical test is impaired Addis and Watanabe[5] have pointed out the variable water excretion from hour to hour and day to day in normal subjects on a constant water intake, while Goodall and Scholberg[6] have remarked on the low urinary excretion figures shown by many psychotics

For the water excretion test as used in this investigation the patient is completely starved from 5 p m to 4 a m, when the bladder is emptied During the next fifteen minutes one pint of water is drunk and the total quantity of urine excreted by 7 a m is measured, catheterization being resorted to where necessary A normal person excretes one pint of urine during this period, perhaps more, but oftener something less Since renal function is less active by night than by day, it must be noticed that bedtime for patients here considered is 7 p m, and that the ordinary ward work commences at 5 a m Occasionally the test was performed from 9 a m to midday after a night's starvation, but no great differences were observed following the change of time The following results were obtained

In sixteen patients with melancholia the average water excretion obtained was 5 ounces during the first month after admission, whereas when convalescence had set in the average was 14 ounces The increase in these patients was slow and the average time taken to approach normal figures was eight months In simple uncomplicated depression with retardation the average rise in the excretion figure in six months was from 13 to 21 ounces while two cases of depression without retardation or agitation whose only fear after six months was that they might be sent home, gave increased readings from 15 to 17 ounces

Similarly, early manias averaged excretions of 4 ounces those ill after two months 6 ounces, those convalescent after this time 12 ounces, and recovered cases 23 ounces

These figures contrast strikingly with the excretion rates in three placid imbeciles and four simple senile cases In the former the average excretion in the first week was 13 ounces, and after three months it was 15 ounces while in the latter a decrease from 15 ounces to 14 ounces was shown in six months These seven patients were equally at home in any environment if not ill treated

The following table (Table I) illustrates a series of sugar curves and water excretion tests obtained from fourteen patients

TABLE I

Case	Day after Admission	Sugar Level's in Mg % Fasting	2 hourly	Highest	H I	Water Test	Duration of Illness	Diagnosis	Clinical Measure of Emotional Tension†
						oz			
1	3rd	—	—	—	—	10	4 weeks	Melancholia agitated	+
	4th	97	74	123	—	—			—
	15th	97	79	112	—	—			—
	19th	—	—	—	—	19*			—
2	4th	—	—	—	—	7	4 "	Confusional	++
	8th	95	180	180	100	—			++
	15th	—	—	—	—	11			+
	30th	—	—	—	—	15			—
3	6th	90	115	115	100	—	23 "	Mania with some confusion at first	++
	8th	—	—	—	—	7			++
	43rd	—	—	—	—	15			—
	47th	80	77	130	—	—			—
4	11th	—	—	—	—	7	Improving after 17 weeks	Melancholia	++
	43rd	106	132	153	56	—			+
	49th	—	—	—	—	13			+
	95th	110	103	137	—	—			—
5	11th	105	115	144	26	—	Convalescent after 1 year	Melancholia	+
	16th	—	—	—	—	10			+
	180th	—	—	—	—	20			—
	185th	98	80	135	—	—			—
6	3rd	—	—	—	—	4	Remains acutely agitated	Melancholia	++
	15th	93	143	154	80	—			++
	43rd	107	125	125	100	—			++
	45th	—	—	—	—	6*			++
	53rd	—	—	—	—	4*			++
7	13th	—	—	—	—	10	30 weeks	Mania recurrent	+
	25th	82	118	132	72	—			+
	177th	94	78	125	—	—			—
	179th	—	—	—	—	28			—
8	2nd	—	—	—	—	15	14 "	Melancholia	—
	15th	72	88	134	26	—			—
9	41st	—	—	—	—	2	16 "	Mania with confusion at first	++
	45th	80	100	105	80	—			++
	56th	—	—	—	—	13			—
	59th	88	90	118	7	—			—
10	3rd	—	—	—	—	4	11 "	Melancholia agitated	++
	7th	78	113	130	34	—			+
	20th	—	—	—	—	13			—
11	100th	—	—	—	—	8	17 "	Melancholia	++
	115th	107	81	150	—	—			+
	116th	—	—	—	—	12*			+
12	5th	—	—	—	—	5	8 "	Mania with delirium at first	++
	16th	99	148	165	74	—			++
	28th	—	—	—	—	7			++
13	2nd	—	—	—	—	4	23 "	Melancholia agitated	++
	57th	80	128	145	74	—			++
	130th	—	—	—	—	18			—
	135th	85	78	128	—	—			—
14	5th	—	—	—	—	4	9 "	Mania with confusion at first	++
	15th	81	139	162	71	—			++
	27th	—	—	—	—	12			+

H I = Hyperglycaemic Index of McCowan and Quastel
* These results were obtained between 9 a m and midday
† = Rough measure of emotional tension as observed clinically where ++ = well marked + = present and − = absent

There is a fairly general agreement between the two tests Case 1 in this table illustrates the value of the estimations This patient made two attempts at suicide

on the two days prior to admission the first by drowning and the second by gas Clinically she appeared to improve rapidly but suicidal patients are often very deceptive Because of the satisfactory results obtained from the sugar curve and the water excretion tests however she was discharged twenty six days after admission without ill result

As a measure of equilibrium with environment though not of cure in any particular case the water excretion test is also of use in other psychoses Thus in eight schizophrenics and non systematized delusional insanities the average excretion between the third and seventh days was 7 ounces After three months in those still solitary and unoccupied the average was 9 ounces while in those engaging in occupations it was 19 ounces The talkative self sufficient paranoid types were the first to show normal excretion figures

Four cases of puerperal insanity showed an average excretion of 4 ounces between the third and twelfth days In those unimproved after one month the average was 3 ounces while cured cases averaged 22 ounces

Seven senile paranoid patients with fairly well preserved personalities showed an increased excretion from 6 to 17 ounces in two months at which time they were becoming rapidly adapted to their new surroundings and engaged in light occupations

In an endeavour to ascertain the cause of these results an agitated melancholic patient was kept on a strictly fluid diet for ten days the total intake of fluids and the time at which taken were charted together with the amount of urine passed and the time at which it was voided In Table II the result is shown days being divided into quarters of six hours each

TABLE II

(The fluid intake in successive periods of six hours is shown in lines marked A while the urinary excretion is shown in lines marked B. The amounts are given in ounces.)

A		—	30	13	10	—	20	30	10	—	30	10	8	—	20	30	10	—	30	15	10
B	...	10	—	20	2	6	8	10	—	5	20	20	—	10	10	10	—	22	—	10	—
A	...	—	20	30	10	—	30	10	10	—	40	20	10	—	35	15	20	—	50	20	20
B		16	4	10	—	15	12	10	—	12	10	17	10	13	1	8	—	12	6	23	—

During the ten days 641 ounces of fluid were taken and 946 ounces of urine were passed a little over half the fluid intake Study of Table II shows that a corresponding half volume of urine is passed roughly six hours after the fluid intake Thus during this period a water test was performed the water being given at 9 a m At midday a total of 4 ounces had been excreted but at 2 30 p m 10 ounces more urine were passed It would seem then that there is a delay in water excretion in states of emotional tension and that this is the partial explanation of the results recorded

CONCLUSIONS

1 A water excretion test for the measure of equilibrium with environment is described and a comparison with the hyperglycaemic index is made

2 It is suggested that the results obtained are due to the delay in water excretion in states of emotional tension

I wish to thank Dr A T W Forrester medical superintendent Warwick County Mental Hospital for permission to publish this article

REFERENCES

1 McCowan P K and Quastel J H *Lancet* 1931 ii 731
2 Lockwood M R *Journ Ment Science* April 1932, p 288
3 Idem Ibid October 1932, p 801
4 Beaumont G E and Dodds F C *Recent Advances in Medicine* fourth edition
5 Aldis and Watanabe *Journ Biol Chem* 1916 xxiv 203
6 Goodall E and Scholberg H A. *Journ Ment Science* January 1922, p 1

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

EMBOLISM OF THE ABDOMINAL AORTA ASSOCIATED WITH AURICULAR FIBRILLATION

Mr A H Winchester's and Mr A J Hawes's accounts in the *British Medical Journal* of February 18th and April 15th respectively induce me to record the following recent case

The patient F G aged 53 years was admitted to hospital on March 20th 1933 complaining of difficulty in breathing He did not look seriously ill but his radial pulse and cardiac action showed an irregular irregularity suggesting auricular fibrillation Brachial blood pressure 120/80 mm Hg He had been under treatment in 1931 with attacks resembling angina pectoris his brachial blood pressure at that time was always somewhat low varying between 95/50 and 105/80 mm Hg His blood serum gave negative Wassermann and Meinicke reactions He said that during the earlier part of the great war he had been in hospital with severe rheumatism for six weeks He had been formerly a great smoker

On the morning of March 22nd he was suddenly seized with severe pain in the left lower limb The whole left lower limb became pale and there was some mottling in the thigh no pulsation could be felt in the foot or at the groin and no oscillometric movement could be obtained in the calf or thigh In the right lower limb however though I could feel no pulsation in the arteria dorsalis pedis there was some definite pulsation in the femoral artery at the groin and slight oscillometric movement could be obtained—scarcely 1/2 at the calf and 1 in the thigh There was no pain complained of in that limb An embolus lodged at the bifurcation of the aorta was diagnosed

Dry gangrene of almost the whole of the left lower limb followed On April 15th the patient complained of pain in the right leg and no pulsation could be felt in the right femoral artery at the groin A few days later there was cyanotic discoloration of the right foot which however did not become actually gangrenous before the patient's death on May 15th

The necropsy showed sclerosis of coronary arteries aorta and iliac arteries There was ante mortem thrombus in the right and left auricles and in both ventricles An embolus had been arrested (riding) at the bifurcation of the abdominal aorta the right common iliac artery had not been completely blocked but there was occlusion of the right popliteal artery There were likewise embolic infarcts in the lungs kidneys and spleen

London F PARKES WEBER M D F R C P

HAEMOGLOBINOMETERS AND HOW TO CHECK THEM

Every clinical pathologist in his routine work does a large number of normal blood counts sent him because pallor is mistaken for anaemia I noticed in 1922 working among war pensioners that at Hb 100 the red cell count was nearer 6 than 5 millions per cubic millimetre Whence then springs the legend that at Hb 100 the red cell count ought to be 5 millions per cubic millimetre? It is I think because (1) the expression 50 000 Hb R is easy to evaluate and because (2) haemoglobinometers lose their tint so that isolated readings are liable to be too high

The haemoglobinometer ought to be checked on receipt from the manufacturers and from time to time during use Those who work among children have early warning that a standard is losing its tint when they get readings of 90 and over since such readings are seldom found in children apart from polycythaemia—heart lesions for example But with adults there is no such warning nor when the Hb appears to be over 100 is in general any surprise felt

I set myself in 1927 the problem Does any—and if so what—relation exist between the Hb percentage and

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary, 7 Drumsheugh Gardens, Edinburgh).

(a) British Islands

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(cont'd)*	**PUBLIC HEALTH** *(cont'd)*
EBBW VALE, Mon. *(Workmen's Medical Society.)*	OAKDALE, Mon. *(Medical Officer for Medical Aid Association.)*	WORCESTER COUNTY AND CITY MENTAL HOSPITAL. *(Junior Assistant Medical Officer.)*
GILFACH GOCH, GLAMORGAN. *(Workmen's Medical Scheme.)*	OGMORE VALLEY, GLAMORGAN. *(Wyndham Colliery Medical Aid Society.)* *(Workmen's Medical Scheme.)*	COUNTY BOROUGH OF SOUTH SHIELDS. HARTON INSTITUTION AND CLEADON COTTAGE HOMES. *(Medical Officer.)*
LLWYNPIA, CLYDACH VALE, TENYGRAIG, GLAMORGAN. *(Workmen's Medical Scheme.)*	**PUBLIC HEALTH**	HERTFORDSHIRE COUNTY COUNCIL. WARE SANATORIUM. *(Assistant Medical Officer.)*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer.)*	KENT COUNTY COUNCIL. LENHAM SANATORIUM. *(Male Assistant Medical Officer.)*	FULHAM BOROUGH COUNCIL. Maternity and Child Welfare Department. *(Assistant Medical Officer—Women.)*
MARDY, GLAMORGAN. *(Workmen's Medical Scheme.)*	FAR BOROUGH INSTITUTION HOSPITAL. *(Resident Assistant Medical Officer.)*	
NEATH AND DISTRICT. *(Medical Aid Association.)*		

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. G. HUNTER (Medical Secretary, New South Wales Branch), 135 Macquarie St., Sydney, N.S.W.	**QUEENSLAND** *(Institute of Friendly Societies' Institute.)* *(Townsville Associated Friendly Societies' Medical Institute, Townsville.)*	The Hon. Sec., Queensland Branch, British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	**WELLINGTON, NEW ZEALAND** *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec., New Zealand Branch), British Medical Association, P.O. Box 155, Wellington, New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch, British Medical Association), Medical Society Hall, East Melbourne, Victoria.			**WESTERN AUSTRALIA.** *(Contract and Lodge Practices.)*	Hon. Sec., Western Australian Branch, British Medical Association, No. 6 Bank Chambers, St. George's Terr., Perth, Western Australia.

June 7th, 1933 By Order of the Council G. C. ANDERSON, Medical Secretary.

WEST LONDON HOSPITAL, Hammersmith Road, W.6. (234 Beds.)

Required ONE HOUSE PHYSICIAN, TWO HOUSE SURGEONS and ONE RESIDENT ANÆSTHETIST (Males). The duties of the House Physician include some work in the Neurological and Dermatological Departments. The duties of one House Surgeon include some work in the Genito-Urinary Department and of the other some work in the Gynæcological Department. These four appointments are tenable for six months from July 1st next, subject to one month's notice on either side. Salary at the rate of £100 per annum with board, lodgings and laundry allowance.

Candidates must be registered under the Medical Act. Applications (which must be on printed forms obtained from me) must reach me not later than first post on Friday, June 16th. Selected candidates will be required to call upon such members of the Medical Staff as directed to be in attendance at the Medical Council Meeting on Friday, June 23rd, at 4.30 p.m. and the House Committee Meeting at 5 p.m. the same day when the appointment will be made.

H. V. MADGE, Secretary.

THE WILLESDEN GENERAL HOSPITAL, N.W.10.

Applications are invited from fully qualified and registered candidates (unmarried) for the appointment of a Resident Officer to hold the appointment of CASUALTY OFFICER for three months from July 1st, followed by a six months' appointment as HOUSE SURGEON (total nine months).

Salary at the rate of £100 per annum.

Applications to be received by the Secretary not later than first post Saturday, June 17th.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond St., London, W.C.1.

Applications are invited from registered Medical Practitioners for the following non-resident appointments which become vacant on July 1st:—

A CASUALTY MEDICAL OFFICER (male). Salary £250 p.a. (half-time).

TWO OUT-PATIENT MEDICAL REGISTRARS (male). Salary £250 p.a. (half-time).

THREE OUT-PATIENT ANÆSTHETISTS. Honorarium £50 p.a. (part-time).

Also for an IN-PATIENT MEDICAL REGISTRAR (male). Salary £300 p.a. (whole-time).

Duties to commence on October 1st.

All the above appointments are tenable for twelve months but are renewable.

Candidates must be prepared to attend for interview at the Hospital on Wednesday, June 21st, at 4.45 p.m.

Applications supported by not more than three testimonials given especially for this purpose must be submitted to the undersigned not later than Saturday, June 17th, from whom further particulars and forms of application may be obtained.

H. F. RUTHERFORD, Secretary.

THE ROYAL EYE AND EAR HOSPITAL, BRADFORD.

Wanted JUNIOR HOUSE SURGEON (male). Salary £150 with board, residence and laundry.

Application stating qualifications and etc. with copies of recent testimonials to be forwarded to the undersigned on or before June 14th.

F. BRIGGS, Secretary, Sup.

HULL ROYAL INFIRMARY. (350 Beds.)

Applications are invited from registered Medical Practitioners for the post of THIRD HOUSE SURGEON (male), vacant June 25th.

Salary at the rate of £150 per annum, plus residence, board and laundry.

The candidate appointed will be expected to stay for not less than six months, but the appointment is at any time determinable by one month's notice on either side.

The Hospital is recognised by the Royal Colleges for the F.R.C.S. examinations.

Applications giving particulars of age, experience and nationality, together with copies of testimonials, should be addressed to the undersigned.

P. J. CAPLESS, House Governor.

May 29th, 1933.

SEAMEN'S HOSPITAL SOCIETY.

KING GEORGE'S SANATORIUM FOR SAILORS, LIPHOOK, HANTS.
(For the Treatment of Pulmonary and Non-Pulmonary Tuberculosis.)

ASSISTANT MEDICAL OFFICER required, as from July 1st. Salary at the rate of £200 per annum, with quarters and board. The appointment is for six months in the first instance. There is no accommodation for a married man. Application, with not more than three recent testimonials, to be sent in by Tuesday, June 13th to the undersigned.

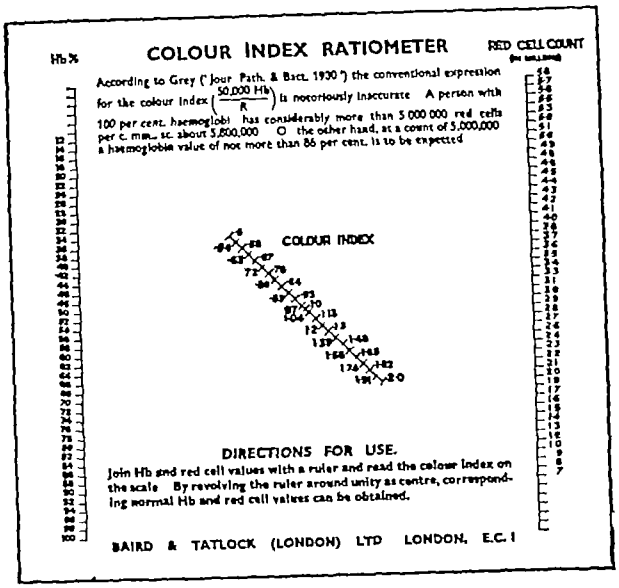
Seamen's Hospital, R. E. V. BAX,
Greenwich, S.E.10. Secretary.

May 25th, 1933.

(Appointments continued on p. 47.)

the red cell count in normal blood? After examining a large number of counts on men, women and children, I came to the conclusion that this was a constant, and was able to confirm the suspicion held by many that the conventional expression for the evaluation of the colour index was wrong and propounded in 1930[1] the expression 58 000 Hb/R, observing at the same time that the ratio Hb/R was a constant in normal blood, and that the theoretical haemoglobin value might be calculated by multiplying the red cell count in millions by 17 (or more accurately by 17 24)

The true colour index may be read from the following chart (obtainable from Messrs Baird and Tatlock)



The application of these data to the checking of haemoglobinometers is obvious Suppose your assistant's red cell count at any given moment is 5 2 millions per cubic millimetre This if I am right, corresponds to Hb 90 Lake and gas 20 c mm of the blood in the usual manner and dilute to the 90 mark (1 8 c cm) If then your standard differs sensibly from this temporary standard, you must either get a fresh standard or apply a correction

It must not be forgotten that the specific gravity of the blood (and in consequence the red cell count and Hb, and indeed all other constituents of the blood) varies from day to day and hour to hour, so that it is useless to attempt to check a haemoglobinometer except by a red cell count and haemoglobin estimation done then and there

London TEMPLE GREY, M B, Ch M

AN UNUSUAL CASE OF PERFORATION OF THE APPENDIX

About the middle of January I was consulted by a girl, aged 17, on account of abdominal pain which had existed for three weeks previously There was no previous history of abdominal pain, and no history of biliousness or of cyclical vomiting The pain, which was at no time severe, was referred to both iliac fossae, but mainly to the right No increase in pulse rate nor elevation of temperature was recorded during the time she was under observation, although an ill-defined swelling could be felt in the right iliac fossa No real resistance existed, and the abdomen moved well on respiration

A diagnosis of 'grumbling appendix" was made and on February 23rd appendicectomy was carried out through a Battle's incision A retrocaecal appendix was found with but little evidence of recent inflammation Lying between the two layers of the meso-appendix was a typical blackish concretion, about the size of a cherry-stone, over the surface of which the two layers of the meso-appendix could be freely moved On slitting open the appendix after removal no evidence of the passage of the stone could be detected in fact the organ was inclined to be fibrotic The clinical course at no time suggested that a perforation had occurred, no doubt owing to the fact that the stone had found its way into the interstitial tissue, leaving the peritoneum intact

Such an event would appear to be as rare as it was fortunate for the patient

Sevenoaks JAMES M HARRISON

[1] *Journ Path and Bact* 1930 xxxiii, 231

Reports of Societies

EXPERIMENTAL PRODUCTION OF MALIGNANT TUMOURS

DISCUSSION AT THE ROYAL SOCIETY

A discussion meeting took place at the Royal Society on June 15th, with the president Sir F GOWLAND HOPKINS in the chair, the subject was the experimental production of tumours

Dr J A MURRAY, F R S, in opening said that the investigations of the last thirty years had proved that under appropriate conditions, the cells of the higher vertebrates were capable of unlimited proliferation Nothing was commoner in the literature of cancer than loose statements that this or that agent conferred on the cells powers of unlimited new growth, which was non sense, seeing they already possessed such powers The essential feature was the uncontrolled or autonomous character of the cellular proliferation—that is to say, the agencies which were effective in the body in limiting the rate and amount of growth and cell division were in effective against true new growths This applied to growths both benign and malignant Examples were seen in the fatty tumours, lipomata, which went on increasing in size in an emaciated individual, and the uterine myomata, which grew progressively even after the menopause The malignant new growths, carcinoma and sarcoma, exhibited this proliferation still more clearly, showing often a more rapid rate of growth The other distinctive features of the malignant as contrasted with the benign new growths were differences in degree rather than in kind, and their more perfect independence or autonomy manifested itself in infiltrative progress dis organizing and destroying the normal tissues by pressure from without or occlusion and rupture of blood supply The stretching and tearing of the walls of blood and lymph vessels opened the way for the entrance of aggregates of parenchyma cells into the vessels, and these, transferred to remote situations, formed secondary centres of growth or metastases It was these manifestations of neoplasia which rendered cancer so formidable a problem in treatment The new proliferative conditions arose in limited localized foci, and once they had reached a size sufficient for recognition further increase took place only from the descendants of the already transformed cells, without fresh accessions from the surrounding elements of the same kind One type of cell by its multiplication gave rise to the new formation, so that it was usually possible by microscopical examination to infer the tissue of origin, even after the tumour had reached a great size Dr Murray went on to say that these ideas and conclusions had obtained a welcome precision and validity from the study of the transplanted malignant new growths of the mouse and rat In consequence, it was now possible to define new growths with some confidence, as single-tissue proliferations arising in a localized area, growing from their own resources in an uncontrolled manner, and showing a continuous graduated series in those arising from any one tissue, both in histological structure and in rate and habit of growth He discussed the various attempted solutions of the problem of the nature and causation of malignant new growths There was first of all, the genetical hypothesis originating with Boveri, and modified by Bauer, the main objection to which now was the necessity of assuming a large number of constituent units in each gene, to allow for the great number of slight modifications present d by the new growths of any one tissue, all practically

permanent There was next the virus hypothesis particularly associated with the names of Borrel Rous and Gye Gye's genial conception of a factor derived from the host cells and carrying all the specific distinctive characters of the tumour strain acting in conjunction with a relatively non specific virus was still without direct experimental proof Like the enzyme modification the greatest obstacle to its acceptance was the failure to demonstrate cell free transmission in the laboratory strains of mouse and rat tumours Finally there was the special form of the chronic irritation theory of Virchow which had arisen on the basis of the work of Yamagiwa on the experimental production of tar cancer The experimental confirmation of Virchow's theory had established its validity as a concise description of the emergence of cancer after prolonged localized slight irritation of the tissues by a variety of agents and nothing more Wide differences of opinion still existed as to how this result was brought about Dr Murray said that in his opinion the chemical and physical carcinogenic agents acted indirectly they set up such conditions in the tissues that as a new departure here and there cancerous foci were started The chemical properties of these agents gave no indication of how the autonomous uncontrolled type of proliferation was induced indeed they were so varied that it was difficult to see how they could give any definite indication of the nature of the cellular mechanism involved In conclusion Dr Murray said that it was clear that the experimental induction of malignant growth reproduced perfectly the phenomena which occurred in the development of occupational cancer from exposure to tar or x rays for example The other forms of cancer for which no definite irritant could be identified at present were so similar in their mode of occurrence and the length of time necessary for their appearance that it was reasonable to accept the facts of experimental carcinogenesis as a model of the genesis of the others also An attempt had been made to indicate directions in which difficulties still remained The definition of those difficulties and the material and methods by which they were being attacked were due to the modern development of experimental carcinogenesis

Dr J W COOK discussed certain results obtained at the Cancer Hospital by his colleagues and himself He regarded the term chronic irritation as an entirely inadequate description of the effect of applying a carcinogenic substance to animal tissue There were many examples of industrial diseases brought about by chemical irritation but few of them led to malignant tumours Many constituents of coal tar were powerful irritants yet were entirely without result in experimental carcinogenesis The most powerful carcinogenic compound yet obtained was benzpyrene which had recently been isolated from coal tar He described experiments with this and related substances particularly benzanthracene which had very definite cancer properties and gave tumours in a large proportion of the animals treated It seemed clear from a study of the chemistry of these substances that the property of cancer production was a constituent one depending on the type of molecular arrangement

Dr W CRAMER agreed with Dr Murray that growth was a phenomenon taking place in the tissues of the body and integrated to the needs of the organism being subject to inhibitions and stimulations Malignancy was the negation of that integration Here the condition progressed when the stimulus ceased The malignant cell was no longer subject to the stimuli or inhibitions which controlled normal cells If one took a normal tissue and inoculated it from one animal to another of the same species a connective tissue reaction resulted which led eventually to the disappearance and absorption of the inoculated transplant Malignant cells elicited in the host a connective tissue reaction which by providing a stroma enabled them to establish themselves in the next host so as to form a tumour Sometimes the connective tissue regained its dominance and invaded the tumour which disappeared This occurred in the rare cases of spontaneous absorption and was also the basis of the disappearance of tumours by radium There were many different types of malignancy all of which bred true suggesting that the cellular changes resided in the nucleus the cell organ mostly responsible for inheritance It also indicated that malignancy was not cell anarchy The life and behaviour of a malignant cell was not lawless but governed by laws as strict as those governing normal cells The phenomena of carcinogenesis presented two problems the nature of the cellular change responsible for the behaviour of the malignant cell and the manner in which this change was brought about The first of these problems was still a matter of speculation and dispute the second was solved so far as essential features were concerned Cancer could be produced experimentally at will Excepting tuberculosis syphilis and vaccinia which were caused by a specific organism there were very few diseases which could be produced experimentally and none in which the experimental production in animals simulated the natural disease as completely as in cancer The period required to produce cancer when measured in actual time was very much shorter in the mouse (four to six months) than in man (ten to fifteen years) but when measured in biological time as a fraction of the normal span of life it was almost identical A long period of induction was necessary whatever agent was used and might be regarded as an essential feature of the process of carcinogenesis Experimental carcinogenesis gave no support to the view that there was a greater tendency of the senile tissues to undergo malignant transformation to produce cancer experimentally in the aged animal was if anything more difficult than in the young The age incidence of cancer must be due to the fact that the conditions which induced spontaneous cancer required a considerable fraction of the span of life in order to produce a malignant transformation Referring to the induction of carcinogenesis experimentally by the so-called filterable virus of fowls Dr Cramer said that the immunological work of Gye and Purdy and of Andrewes furnished convincing evidence to his mind that the agent responsible for the transmission of these tumours contained an element which was not of fowl origin—in other words a virus With regard to the nature of the change in the cell which constituted malignancy he felt that those who so confidently denied the possibility of a virus being responsible for malignancy took a somewhat narrow view The existence of viruses was known only in so far as they were pathogenic but just as there were non pathogenic bacteria there might be non pathogenic viruses Their presence could not be recognized because they could not be seen and they did not produce a disease Since they were supposed to be living matter they might produce chemical reactions without themselves being used up in those reactions If so they would simulate the behaviour of ferments and since most viruses could only live and multiply in living cells their presence would be masked by the activity of the cells In conclusion Dr Cramer said that there was a curious tendency even in the medical profession to surround cancer with a mystery and the most foolish statements got a hearing if they were sufficiently sensational He saw no more mystery in cancer than in any other manifestations of cell life Cancer began as a local disease it could then be cured and was being cured in a high percentage of cases in those sites where it could be diagnosed most readily It was seen that in the great majority of organs and tissues cancer was due to some extraneous factor setting up a condition of chronic irritation If there were such extraneous factors it must be possible to avoid them on learning what they were and cancer would then be a preventable disease

Dr C H ANDREWES found it very difficult to believe that fowl sarcomas were essentially a different type of tumour from mammalian sarcomas and he did not think it possible to maintain the attitude that these filterable fowl tumours afforded an example of a peculiar disease in fowls quite apart from fowl tumours as a whole Whenever a fowl sarcoma had been studied over a reasonable period—a year or two—the tumour was sooner or later found to be filterable He proceeded to show how serological evidence supported the view that the agents were viruses Dr Murray had suggested that many people fought shy of a virus theory of cancer because it would be necessary to postulate the existence of an inordinate number of viruses producing all sorts of histological types all through the animal kingdom But he

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CONSULTING ROOMS TO LET — HARLEY Street and Mayfair districts. Particulars sent on application. Those having consulting rooms to let should send particulars to ELGOOD & Co., 10 Henrietta Street, Cavendish Square, W.1. Langham 2561.

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FOR SALE.—FREEHOLD.—£6,000.—CHARMING HOUSE, 5 acres of wooded rifle grounds, 2 acres. Suitable for establishment for nervous cases who require peaceful, cheerful surroundings, equable climate, 4 reception, 18 bedrooms, very large sun lounge, 2 baths. Further particulars.—"Minto," Pentire, Newquay, Cornwall.

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APPOINTMENTS—Contd.

THE ROYAL HOSPITAL, WOLVERHAMPTON (Incorporated under Charter)

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Candidates must be registered under the Medical Acts and unmarried.

The appointment is for six months. Salary at the rate of £100 per annum board, furnished rooms and laundry provided.

Applications with copies of testimonials to be forwarded to the undersigned.

Wolverhampton, June 6th, 1933. W. H. HAPPER, House Governor.

COUNTY MENTAL HOSPITAL PRESTWICH, MANCHESTER.

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KENT—ABOUT 30 MILES FROM TOWN.—Residential country. Half share of £2,300 after preliminary Assistancy. Good fees. Not much midwifery. New house, specially built to rent or buy. Further share later. Partner to be Lond. or Camb. Graduate, age 30 to 33.—No. 9152.

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9 E ANGLIA —OLD ESTABLISHED COUNTRY PRACTICE OF about £2 700 p a in most beautiful part easy distance of Coast Panel 1 150 Visits 3/6 to £1 1s , medicine extra Lovely modernised house (6 bedrooms etc and central heating) with garden and two acres land for sale Cottage Hospital Scope for increase

10 LONDON, N —PRACTICE CARRIED ON BY MEDICAL WOMAN in populous district Cash receipts average £270 p a including panel 360 Scope for midwifery Six roomed house to rent at £70 p a on lease Premium 1½ years purchase

11 BORDERS OF SHROPSHIRE AND CHESHIRE—OLD ESTABlished PRACTICE averaging £1 055 p a in Market Town Panel 850 Nice detached house (5 bedrooms attics etc) with pretty old world garden etc , for sale Educational facilities Well equipped Cottage Hospital offering scope for one keen on Surgery Premium £1,580

12 LONDON E —PARTNERSHIP IN WELL ESTABLISHED CASH and Panel Practice averaging about £2 700 p a in popular suburb close to the City Panel nearly 4 800 Living accommodation over Surgery Premium one third share 2 years purchase

13 PARTNERSHIP (WITH VIEW TO SUCCESSION) IN OPHTHALmic Practice in delightful Southern Seaside Resort In 1st £1 400—£1 500 Must be specially qualified and have had practical experience in Ophthalmic work Half share at 1½ years purchase

14 LONDON S E WELL ESTABLISHED PRACTICE IN OUTER Suburban District Cash receipts 1932 £1 008 including appointments worth £23 p a and Panel 993 Well situated corner house on main road (5 bed and dressing rooms) with garage and large garden to rent also separate Surgery to rent Scope for increase Premium £1,800

15 PRIVATE MENTAL HOME (FOR LADIES ONLY)—EXCEPtionally nice house and grounds A considerable sum required for the purchase Further particulars on application

bacteriologist, aware of the wayward habits of bacteria, was not very much surprised at finding that sort of thing, because many bacteria had specific antigens which were peculiar to themselves, and group antigens which were common to a number of species It must be taken as the unsatisfying conclusion that these different tumour viruses were neither identical serologically nor yet wholly distinct There was something in them which was individual, and something which was shared by a number, and according to one's private tastes in the making of theories one might gloss over the common element and stress the specific, or vice versa He was hopeful that in course of time complement fixation, agglutination, and other reactions would be applicable to the study of fowl tumours, and thus there was a considerable field in which it might be possible to relate all the intermediate conditions between true tumours and infections and to throw light on the really vital problem of the relation between avian and mammalian new growths

Dr P R PEACOCK said that it was now recognized that the filterable avian tumours and their relation to mammalian tumours constituted a problem which must be solved before generalizations as to the cause of tumours could be regarded as more than interesting speculations About four years ago he had set about producing tumours with recognized carcinogenic samples of tar injected intramuscularly into fowls, and he found no real difficulty in producing tumours, provided the birds could be kept alive from six months to a year He gave a general account of these experiments, and added that there could be no doubt, with regard to the mode of producing these tumours, that the growths in the fowl were exactly comparable to growths in mammals produced by similar means

Dr J MCINTOSH laid before the meeting the outcome of some experiments on the virus theory of cancer To determine the relation of the Rous sarcoma to the ordinary mammalian tumours, he had taken a series of fowls and injected tar diluted in lard Tumours of one type or another were found in just over half the birds treated with the tar Microscopically the tumours varied considerably in character some being fibrosarcomatous and others definitely leucosarcomatous, with numerous intermediate grades Others were predominantly endotheliomatous and angio-endotheliomatous More curious was the tendency to obtain mixed or pleomorphic tumours associated with leukaemia He offered three explanations of the experimental findings The occurrence of a filterable leukaemia and a filterable Rous type of tumour suggested that the action of a virus must be taken into account It would seem that the tar injections in some manner, by stimulating cell proliferation, allowed the virus to get a hold on the young cells and come into evidence as a leukaemia or sarcoma Again, it might be that the proliferative and tumour-like effects were due to one single pleomorphic virus with an affinity for any tissue of mesoblastic origin Thus at one time the result of its action might be a leukaemia, at another a fibrosarcoma, and at another an endothelioma The third and perhaps simplest explanation of pleomorphism was the acceptance of the specific factor of Gye, this specific factor, being derived from the tissues themselves and thus linked with the common virus of the fowl, determined the type of tissue proliferation

Dr W E GYE said that one important point had not been touched upon in the discussion It concerned work done largely by Murphy—though, he thought he could say started by himself—on the inhibitory factor in fowl tumours The Rous sarcoma grew at a great rate normally, but from time to time it entered upon a benign stage, when growth was very slow How was one to explain this great variation in the rate of growth, and the corresponding clinical and pathological appearances? The observation had been made that the slow-growing tumours contained some inhibitory substance, and Murphy apparently had devised a technique whereby some constant results in this direction were obtained The tumour cell in this stage apparently responded to the presence of the virus by producing something which checked or restrained the activity of the virus itself

Professor A E BOYCOTT could not see that the three hypotheses which Dr Murray had brought forward for the cause of cancer were alternatives in the sense he used them, they seemed to him to be rather complementary to one another He agreed with Dr Cramer that the growth of tumours could not be described as lawless or anarchical, in the same way the criminal had his own code, and stuck to it The tumours maintained the characteristics of their type through successive generations of cells, different from the normal tissues among which they grew The problem was whether the carcinogenic agents acted directly on normal cells and produced the mutation, or all of them caused the tissues themselves to produce some particular carcinogenic substance Another view of the nature of these irritating substances was that they afforded a suitable nidus on which the supposed extraneous virus obtained a lodging He thought that the idea of an extraneous virus had little to be said for it It seemed unlikely that something capable of independent life—Dr Cramer had said that it was living matter—could endure the amount of 'knocking about," in the shape of precipitation, adsorption, resuspension and so on, which was inflicted on these agents, and still preserve its integrity

NIETZSCHE AND PSYCHOLOGY

At a meeting of the Medical Society of Individual Psychology on June 8th, with Dr H WOODCOCK in the chair, Dr F G CROOKSHANK read an abstract of a paper on individual psychology and Nietzsche Dr CROOKSHANK said that the psychological movement of the last thirty or forty years had its source in the Nietzschean revolt against the whole artificial structure of categories, classes, causes, and concepts set up in the nineteenth century upon a basis of mediaevalism This earlier psychology, founded upon the separation of human beings from one another in terms of differences, contrasted with the new psychology, which was based on the recognition of what we had in common with one another as men and women Much as Freud and Jung owed to Nietzsche, the bond between Nietzsche and Adler was particularly close Not only did both consider that purpose was the mainspring of action, but Nietzsche, in an early work, saw in the *will to power*—that fundamental of individual psychology—the motive force in all living *phenomena* The Nietzschean philosophy regarded pain as the greatest educator and ennobling force in Nature here was the germ of Adler's doctrine of the overcoming of weakness by courageous effort Again, Nietzsche, like Adler, emphasized the relation between physical ill-health and emotional feeling, especially resentment, and elsewhere he foreshadowed Adler's doctrine of compensation Not that all individual psychology was to be found, even in embryo in Nietzsche's writings Nor was individual psychology's debt to Nietzsche consciously incurred Nietzsche failed in his own life, partly because he carried his revolt of the individual to such a pitch that he, the superindividual, became mad as a result of self isolation Adler on the other hand, considered that the essence of sanity lay in the relation of the individual to the community and to that extent individual rights were subordinate to social rights Nietzsche glorified the strong for their strength, and despised the weak for their weakness In dividual psychology spelt encouragement for all weak and strong alike The paradox here was in keeping with individual psychology, which was itself a paradox from beginning to end Called individual psychology and rightly, it was nevertheless the first and best, if not the only, social psychology

Mr LUDOVICI remarked that certain factors separated Nietzsche definitely from Adler Nietzsche would have asked if it was necessary to allege that the *neuroses* resulted from a revolt against society His attack was against Plato and Socrates He fought against dualism, against the transvaluation of values which enabled men to excuse appearance Disease and abnormality were disfigurements Morality was largely a matter of taste Nowhere did Adler ask a question of this sort Nietzsche would ask, With whom were we to co-operate? Dr J C YOUNG pointed out that consideration of the

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18 LONDON E.—CASH AND PANEL PRACTICE OF £860 P.A. in populous district. Panel 570. Small house to rent on lease. Premium 1½ years' purchase.

19 EASTERN COUNTIES — OLD ESTABLISHED COUNTRY PRACTICE. Cash receipts about £720 p.a. including appointments over £150 and a panel of about 590. Detached house (6 bedrooms) in grounds of 1 acre for sale. Premium for Practice £650.

20 CO. DURHAM—PRACTICE OF £540 P.A. IN RESIDENTIAL Colliery District near two large Towns. Panel 380. Well situated house (7 rooms) with good Surgery and Dispensary for sale or rent. Scope for substantial increase. Premium only £500.

21 S.W. OF ENGLAND — OLD-ESTABLISHED PRACTICE OF £750 p.a. in beautiful district. Panel 300. Excellent house (5 bedrooms) for sale. Premium 1½ years' purchase.

22 S. WALES — PRACTICE BETWEEN £250—£300 P.A. IN beautifully situated village about 4 miles from important town. Small panel. Nice house (6 bedrooms) electric light, gas and company's water for sale or rent. Premium £280.

23 S. OF ENGLAND — PARTNERSHIP IN OLD ESTABLISHED Practice of nearly £1,950 p.a. in important town within 80 miles of London. No panel. Attractive corner residence (7 bed and dressing rooms) in half acre of walled in garden with garage etc., for sale. Ample scope for increase. Premium one-half share 2 years purchase.

24 ESSEX—OLD-ESTABLISHED PRACTICE OF ABOUT £600 P.A. in Suburban District. Panel 500. Well-situated detached house (6 bedrooms) standing in own grounds with nice garden, garage and stabling for sale. Scope for increase. Premium £650.

25 LONDON S.W.—OLD ESTABLISHED PRACTICE ABOUT £650 p.a. in well populated area. Panel 850. Separate surgery and private residence to be purchased. Scope for increase. Premium £1,100.

26 SURREY—PARTNERSHIP IN SOUND OLD ESTABLISHED good mixed-class Practice about £3,000 p.a. in the Croydon area. Small panel. Very little midwifery. Excellent modern detached house for sale. Scope for increase. Premium one half share 2 years purchase.

27 ESSEX COAST—MEDICAL WOMAN REQUIRED AS PARTNER in Practice of £2,500 p.a. in small Seaside Town. Panel 2,500. Modern house in good position facing Sea with 4 bedrooms for sale. Scope for increase. Premium one fourth share £1,250 and further share later.

28 LONDON E.C.—PARTNERSHIP IN OLD ESTABLISHED PRACtice in the City. Receipts average about £1,650 p.a., including appointments and panel worth over £500 p.a. Premium one half share £1,000.

29 NORTH OF ENGLAND — INLAND HEALTH RESORT—NO dispensing PRACTICE of about £1,000 p.a. Small select panel. House (7 bedrooms) with large garden for sale. Premium—Practice—£750.

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31 S. AFRICA—RADIOLOGICAL PRACTICE IN A MOST DElightful town with excellent climate. Cash receipts last year £1,450. Scope. Premium to include furniture, carpets, accessories etc. £2,200.

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34 LONDON W.—GOOD MIDDLE-CLASS PRACTICE £400 P.A. in suburb within easy access of the West End. Panel over 100. Attractive double fronted house with nice garden for sale. Scope for increase. Premium 1 years' purchase.

35 LONDON N.—PARTNERSHIP IN PRACTICE ABOUT £5,250 p.a. in thickly populated Suburban District. Panel about 800. One fourth or one third share at 2 years' purchase.

36 HOME COUNTIES — OPHTHALMIC PRACTICE BETWEEN £300 and £400 p.a. in desirable Residential Town under 15 miles from London. Good detached house (4 bedrooms) with large garden for sale. Good reason for client's of scope for increase. Premium £300.

37 LONDON E.C.—OLD ESTABLISHED LOCK UP PRACTICE of £646 p.a. Panel 459. Living accommodation to rent if desired. Premium £1,000.

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39 S. OF ENGLAND — OPHTHALMIC PRACTICE OF OVER £1,600 p.a. in an important town. Excellent scope for one keen on clinical and operative Ophthalmology. Large house in first-class condition for sale. Purchaser should be well qualified. Premium £2,500.

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Nietzschean philosophy was of value when dealing with the schools of Freud Adler and Jung Much that Nietzsche prophesied had come to pass Dr S VERE PEARSON said that forty five years had passed since the publication of Nietzsche's last work Nietzsche's attack was on the Christian church of his day It was now recognized that men were not equal—it was equality of opportunity that was required In Nietzsche's day this idea was not prevalent Dr A SANDISON agreed that psychology and philosophy were possibly matters of taste But it was not so so far as fundamental truths were concerned

Dr F G CROOKSHANK in reply said that though Adler differed in some respects from Nietzsche yet always he continued his line of thought Individual psychology worked pragmatically Adler's psychology was justified practically his patients got well Nietzsche opposed academic Christianity In individual psychology the question of taste did not arise

LEGAL PITFALLS OF THE SURGEON

Mr D HARCOURT KITCHIN read a paper on this subject at a post graduate course arranged by the Fellowship of Medicine at the Royal Albert Docks Hospital on June 11th He pointed out that although the surgeon usually came to the law courts as respondent to a civil action he might find himself in the dock of a criminal court if he performed an illegal operation Most surgical procedures caused grievous bodily harm but the law assumed that the surgeon had good therapeutic grounds and that his theoretical offence was excusable Nevertheless an aggrieved patient might always prosecute thus requiring the surgeon to prove his therapeutic reasons Sterilization unless necessary for the health of the patient was likely to expose the surgeon to a criminal prosecution Similarly abortion was a felony and must not be performed without good therapeutic reason Any operation performed without consent of the patient might lead to a civil action against the surgeon unless he had operated in emergency on an unconscious patient with due skill and care and had done no more than was reasonable Most disputes about consent arose when the uterus or both ovaries had been removed from a woman the classical case being Beatty *v* Cullingworth Miss Beatty had said in the theatre If you find both ovaries diseased you must remove neither and Mr Cullingworth had replied You must really leave that to me The fact that she had then taken the anaesthetic led the jury to imply that consent had been given and she lost her case Mr Cullingworth had been perhaps rather lucky In the more recent case of Cull *v* the Royal Surrey Hospital and Butler the plaintiff's doctor had written to the hospital saying that she had decided not to undergo the hysterectomy recommended by Mr Butler She entered hospital for a simple curettage but the letter never reached Mr Butler and he removed the uterus He got off with a farthing damages because he could not possibly have known of the letter but the hospital had to pay £120 Mr Kitchin advised the surgeon to obtain written consent for the operation which he intended to do and to explain to the patient the possibilities involved in his procedure Oral consent could not be really safe nor was it desirable to obtain too comprehensive a permission for a jury might be much influenced in assessing damages if it felt that a surgeon had taken advantage of a *carte blanche*

NEGLIGENCE

Negligence in law was the breach of a duty to take reasonable care and use a reasonable degree of skill the interpretation of the word reasonable being a matter for the jury in each case The degree of skill varied with the circumstances a general practitioner being expected to have less than a specialist The pitfalls in this branch of the law were so numerous that they could hardly be counted and many of them could not be avoided by the most scrupulous care and the most exceptional skill In Tyndall *v* Allcock the surgeon had taken the most elaborate care and treated the little girl patient as if she were his own child The jury did not want to find him negligent but very much wanted to compensate the little girl for the deformity which would prevent her from continuing her study of the piano When the judge explained to them that they could not give compensation without finding Mr Allcock negligent they found him negligent and awarded £2 000 damages At appeal Lord Justice Scrutton remarked that a jury was seldom a suitable tribunal to try a case which involved right differentiation between an error of judgement and a departure from the required degree of skill Lord Justice Sankey however thought a jury more likely to come to the right conclusion than a committee of experts and Lord Justice Romer observed somewhat ironically that Mr Allcock must get such consolation as he could out of the fact that trial by jury was the foundation of his liberties Mishaps might be the result of some special sensitivity or idiosyncrasy in the patient In Murdock *v* Holmes and Taylor some anaesthetic had dropped into a patient's eye and he had lost the sight of it Evidence was given that the anaesthetic would not greatly damage a normal eye and that the patient had been in a highly toxic state The jury disagreed When possible it was advisable to test for sensitivity beforehand If a newly invented form of treatment was tried the surgeon should explain to the patient clearly what he intended to do and why and the extra risk it entailed If the method were carefully thought out and proceeded logically from scientific research he would be justified in using it Every medical man knew that the value of a radiograph might in practice be very small but in the law courts it was very high indeed To omit to take an *x* ray photograph of possible bony injury was in itself regarded as an act of negligence If the patient objected the surgeon should get the objection in writing or make a note of the refusal at the time

The surgeon might be held liable for the negligence of his assistants A long series of decisions had restricted his liability for other people's mistakes he was not responsible for the negligence of a nurse carrying out in his absence some task which it was quite proper to delegate to her but his responsibility for assistants at an operation had not been definitely settled In Hillyer *v* St. Bartholomew's Hospital Lord Justice Farwell had expressed the opinion that a surgeon was in supreme command of his team as soon as the doors of the operating theatre had closed Since the point at issue was the liability of the hospital governors and not that of the surgeon these remarks could only be regarded as *obiter dicta* they had never been tested in a case It was practically certain that a surgeon could never be held liable for the mistake of an anaesthetist unless he had reason to doubt his competence The assistant surgeon the theatre sister and other members of the team were also highly skilled people doing their respective jobs but at any stage the surgeon might say to any one of them You are doing that wrong To that extent the law might say that he had control of them and was therefore responsible for their misdoings In practice however his own job required a very high degree of concentration and in the interests of the patient he could spare little time for supervision of others It was the custom for example for the theatre sister to count the swabs and instruments before and after the operation and for the surgeon to take her word that nothing had been left in the patient's body The law was not certain whether to free him from responsibility for the count or not In South Africa the case of Van Wyk *v* Lewis had made it a settled rule of law that the surgeon might rely on her but this case did not bind English courts and the Lord Chief Justice in Crotch *v* Wiles had suggested that the jury might think that a surgeon should count the instruments himself when the operation was completed Some surgeons suggested that all swabs should be made opaque to *x* rays so that she could at any rate be located before the patient left hospital others thought a human count was inevitably unreliable and they relied on long tapes attached to even the smallest swab Finally Mr Kitchin pointed out that most actions brought against surgeons were based on flimsy pretexts and urged every surgeon to join a defence society

Reviews

ENGLISH DICTIONARIES

In his *Survey of English Dictionaries*[1] Mr M M MATHEWS of Cambridge, Massachusetts, provides a great deal of information in a small space We are too apt to look back to Samuel Johnson's great work as the beginning of English lexicography, but a very cursory reference to Mr Mathews's book shows our error Dictionaries, as he has pointed out, began with collection of glosses, forming glossaries of hard words made by students of a foreign language, alive or dead English dictionaries began when the student first found lists of hard words in his own tongue useful or necessary The first English dictionary in our modern sense of the term was that of Robert Cawdrey, who in 1604 published his modest *Table Alphabetical* of about three thousand words From that time till the publication of Johnson's work in 1755 various dictionaries appeared, of which Henry Cockeram's, in 1623, was the first to bear the title of " The English Dictionary " As Mr Mathews says " As long as the vocabulary continues to grow—that is, as long as English continues to be a living language—new dictionaries will be necessary to record the ever-growing vocabulary " In the great *Oxford English Dictionary* half a million words are recorded, and in the five years which have passed since the appearance of its last part many thousands of words have been collected ready for insertion in a supplement Dictionaries have become so numerous that the time cannot be far distant when a ' dictionary of dictionaries " will be called for Mr Mathews foreshadows such a publication in his interesting survey

To possess the recently published *Shorter Oxford English Dictionary*[2] in two volumes is the next best thing to owning the parent work There are any number of small dictionaries (of the size of the admirable *Concise Oxford*) on the book market which supply the modest reader with all he wants But dictionaries which bridge over the verbal gap between the small dictionary and the giant twelve-volumed *O E D* and which are also of proved excellence, are few and far between The dictionaries and those painstaking compilers of dictionaries—the lexicographers—are the guardians of the language They preserve it from corrupt spellings and loose extensions of meaning The fact that a dictionary of any size must by its nature lag behind the current usage of words is something to be not regretted but praised A word has to prove its worth before it attains its proud position as part of the language The editors of the *Shorter Oxford* have had the advantage of being able to incorporate in it new words and new meanings of words which have been collected for a Supplement (to the major work) of new words and phrases to appear in the autumn of this year The selection of these new words, the tactful separation of the " gate-crasher " from the bona fide guest must have been an arduous and invidious task for those who had to make the final decision Looking for these new words we note the omission of " gene," and of ' chromosome ' among the many scientific terms beginning with " chromo " There can be no doubt that this dictionary will be of untold value to those who need authoritative pronouncement on the right meanings of words, and who by reason of scanty shelf-space, smallness of purse or inaccessibility to libraries are unable to consult the greater dictionary To attempt such an abridgement, and—to use a vulgarism— to " get away with it," must have been a task almost as formidable as the preparation of the major work The editors are to be warmly congratulated on preserving those features of the original work which distinguished it from all other dictionaries as " the dictionary " It is in truth, at a moderate price, a quintessence of the vast material of the *O E D*

[1] *A Survey of English Dictionaries* By M M Mathews London H Milford Oxford University Press 1933 (Pp 123 5s net)

[2] *Shorter Oxford English Dictionary* Oxford The Clarendon Press 1933 (Pp 2 475 2 vols £3 3s)

ANATOMY OF THE EYE AND ORBIT

Mr WOLFF's monograph on *The Anatomy of the Eye and Orbit*[3] is an addition of considerable value to ophthalmological literature In its range of subjects it is comprehensive, dealing seriatim with the bony orbit and accessory nasal sinuses, the eyeball itself, the appendages of the eye (lids, conjunctiva, and lachrymal apparatus), the extrinsic muscles of the eye, the nerves connected with it (motor, sensory, and involuntary), and the blood vessels, while the last two chapters describe the development of the eye and its comparative anatomy The description of the anatomy is classical—in places indeed too classical, when it tends to retain the older views without discussing their newer modifications For example, the corneal nerves are described (as if in man) in the classical way as distributing themselves in three plexuses—one in the substantia propria, one subepithelial and one intra-epithelial , the work of Attias and others is not mentioned, while a footnote draws attention to the fact that such a distribution has never been demonstrated in man Again, the newer radiographic work on the mechanism of the conduction of tears is inadequately noticed These, however, are small points of criticism in the main the book is a very sound and concise exposition of its subject

More interesting actually than the anatomical descriptions themselves are the constantly recurring notes on applied anatomy and points of clinical importance which follow from anatomical relationships These give an unusual interest to the text, and will help to impress anatomical facts upon the student's mind as no other method can Particularly is this so in the sections dealing with the nerves and their central connexions, wherein the bare presentation of a large array of anatomical data is relieved by short descriptions of the effects of lesions as interpreted from their topographical relationships Some typographic errors have crept in, such as the repeated spelling of Greeff with one " f," but on the whole the volume is extremely well presented, and the illustrations are of a high order Many of these are borrowed from classical sources, but the author has enriched the literature with many original drawings and microscopical sections of considerable value and artistic merit

The book is essentially for the senior student (it is too large for the junior one) , but it does not include sufficient detail nor is there a sufficiently exhaustive bibliography to serve for purposes of research or reference

[3] *The Anatomy of the Eye and Orbit* By F Wolff I P B S F R C S London H K Lewis and Co, Ltd 1933 (Pp xiii + 310 173 figures 31s 6d net)

SURGICAL TUBERCULOSIS

The series of handbooks to which Dr FLESCH THEBESIUS contributes a volume on surgical tuberculosis[4] is designed as a kind of post-graduate or finishing course for medical practitioners The work has no pretensions to be a textbook, but consists of a series of essays on the various aspects of the subject and discussions of the vexed questions which still remain unanswered The author

[4] *Chirurgische Tuberkulose* Von Dr med Max Flesch Thebesius Medizinische Praxis Band XV Dresden und Leipzig Theodor Steinkopff 1933 (Pp xiv + 194 , 58 figures Geh RM 15 Geb RM 16 20)

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3 RIVERSIDE SUBURB—Middle and working class PRACTICE averaging £1 125 p a, including panel producing about £340 and appts nearly £100 p a Fees from 3/6 Detached house, with nice garden and containing 4 reception, 6 bedrooms, etc for sale Premium £2 225

4 HOME COUNTIES—PARTNERSHIP—Residential Town within easy reach of London A share producing about £1 300 p a is offered in a very sound old established Practice producing for the last 12 months approximately £5 200 Panel of 2 500 Fees from 3/6 to 21/ Very nice house, with ample accommodation or smaller one if desired Ingoing Partner should be experienced accustomed to better-class work able to undertake major surgery, and preferably a Fellowship Premium 2 years purchase

5 OPHTHALMIC PRACTICE—Within eighty miles of London—Practice is increasing and offers good scope for further development Average gross cash receipts for the past three years £554 Last year over £700 Fees 1 to 2 guineas Opposition slight Choice of houses Premium £700

6 DEATH VACANCY—WEST MIDLANDS—Well established PRACTICE situated in very attractive market town, amidst beautiful surrounding country rapidly increasing, and offering good scope for further development Gross cash receipts for last twelve months £1,814 Panel with mileage brings in about £480, and appts worth £65 Fees 3/6 to 21/ Very good well equipped Cottage Hospital and there is excellent scope for major surgery Nice corner house with good accommodation and pleasant garden Can be purchased or rented Very efficient Locum in charge

7 LONDON, WEST END—Very old-established good-class non dispensing and non panel PRACTICE held many years by Vendor who is selling owing to failing health Cash receipts for past three years average £3 123 p a Average visiting fee 10/6 up to 21/ No midwifery or night work Good family residence with ample accommodation, for sale Vendor's leasehold property Six months' introduction given Premium 1½ years purchase

8 LONDON SUBURB NORTH WEST—Very old established panel PRACTICE with better class connection attached and situated in a pleasant residential suburb Cash receipts over £2 800 including panel of 3 150 and transferable appt worth £70 Very good house with ample accommodation (7 bedrooms etc) Price leasehold (with 11 years to run at a ground rent of £15 p a) £1 500 Rent of separate Surgery on 21 years lease £52 inclusive Premium £7 000

9 LANCASHIRE — LARGE TOWN—Old established good mixed class PRACTICE held by Vendor for the past ten years Average gross cash receipts £1 458 Panel of 1 674 and several Insurance appts Corner house in very pleasant residential locality containing consultation room 2 waiting rooms dispensary 2 reception rooms 4 bedrooms bathroom kitchen etc Garden Garage Price for freehold £1 400 £1 000 on mortgage Good scope for increase

10 LONDON, NORTH—Old-established middle and working-class PRACTICE held by Vendor 11 years Average gross cash receipts £975 Panel of over 900 Fees from 2/6 Semi-detached corner house, in good condition with ten rooms and usual offices Separate entrance to professional rooms Price for leasehold £600 Premium £1 500

11 LONDON, EAST—Middle and working class PRACTICE producing £1 000 p a including panel of about 1 100 Suitable small house with sitting room 2 bedrooms and attic waiting room surgery and dispensary Rent £52 p a Premium 2 years purchase

12 DORSET—Well-established PRACTICE in very pleasant town within easy reach of the coast Cross cash receipts over £1 000 of which about £400 is from panel Fees 3/6 to 21/ Opposition not strong Good house with 2 reception 5 bedrooms etc garden of nearly 3 acres Rent on lease £62 p a Premium £1 750

13 LONDON, SOUTH EAST—Old-established better working-class PRACTICE in rising and situated in well populated district Gross cash receipts for last 12 months £1 263 including panel of over 1 300 Suitable house with 2 reception and 3 bedrooms Garden Price for freehold £1 100 Premium £2 400

14 EASTERN SUBURB—Very old-established middle and working class PRACTICE worth about £1 100 p a including panel of 1 300 Very little midwifery House contains 2 reception 4 bedrooms etc separate entrance to professional rooms. Small garden Garage Price for freehold £1 350 Premium 2 years purchase

15 EASTERN COUNTIES — FAVOURITE SEASIDE AND HOLIDAY RESORT—Good mixed-class PRACTICE established many years and producing for the last twelve months £1 600 Panel brings in £300 p a and an appt worth £100 p a Fees 3/6 to 7/6 with medicine extra Nice house, with 2 reception 5 bedrooms etc Garage Garden Price for freehold £2,250 Golf shooting and other sports Premium 1½ years purchase

16 PARTNERSHIP—In a well populated pleasant South Eastern suburb within ten miles of London the half share of an old-established mixed class Practice is for disposal owing to the retirement of the junior partner Held by the remaining partner 30 years Cash receipts average £2 765 p a. including panel of 1 800 and appts worth £150 Very little midwifery Pleasant semi detached corner house with ample accommodation garden Price leasehold (over 900 years at ground rent of £7 p a) £1,050 Premium 2 years purchase Scottish graduate preferred

17 NORTH EAST COAST—PARTNERSHIP—A one-half share is offered in an old established better middle class Practice, in suburb of favourite residential town Steadily increasing and excellent future prospects Cross cash receipts £1 700 Panel of 700 Fees from 3/6 Very nice house with 2 reception 4 bedrooms etc One acre of garden Garage for 2 cars Rent on lease £80 p a Sport of all kinds and good schools Premium for share 2 years purchase

18 MANCHESTER—Old established middle and working-class PRACTICE producing for the last twelve months about £650 including panel of 790 Fees from 3/6 Convenient house with 2 reception 4 to 5 bedrooms bathroom etc Rent on lease £60 Premium £900 to include furniture

19 SOUTH WALES—Beautiful country district within 4 miles of large town Small PRACTICE producing between £300 and £350 p a offering good scope Visiting fees from 5/ Very little midwifery or night work Well situated house with well kept garden containing 2 reception 3 good sized bedrooms and servants' rooms. Electric light and gas throughout Garage Rent on lease £70 p a

20 CENTRAL LONDON—Middle and better-class PRACTICE, averaging for the last three years over £1 700 including panel of about 1,300 Fees from 2/6 Visits from 3/6 with medicine extra Suitable house with good professional accommodation. Electric light. Garage for two cars Small garden Rent on lease £100 p a Premium £2 500 £1 700 down balance by instalments Good sport etc. A knowledge of Welsh is not necessary

21 SOUTH EAST LONDON—Good middle and working-class PRACTICE producing last twelve months nearly £950 Panel of 986 Suitable house, with 2 reception 4 to 5 bedrooms etc Rent on lease £70 p a Premium, to include drugs etc. and surgery fittings and furniture £1 450

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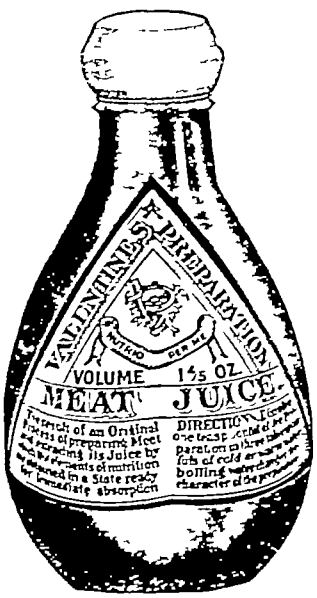

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well recognizes that definite answers in all sorts and conditions of patients cannot always be given that for instance longer and more elaborate treatment may be afforded by the patients of Rollier at Leysin than by the working classes who are treated on the prescription of the workmen's sick insurance funds and that consequently more radical surgical measures may have to be taken in the latter class of case—the choice having to be made between them and a grave risk of relapse The author puts forward as a typical example of the problems which come before the inquirer that of the relation (if any) between injury and tuberculosis of bones and joints The very widest divergence of views has been held by high authorities on this matter In Germany from an insurance point of view the question is important as also is the question of injury or infection in prescribing treatment To order massage and movement of a tuberculous joint may have very grave and evil consequences Opinion has changed from that of Volkmann and König who saw trauma as the cause of nearly all surgical tuberculosis to that of Limiger who admitted its occurrence in only 3 per cent of cases Since the first Accident Congress at Leipzig in 1922 opinion in Germany has been greatly strengthened in favour of the belief that a causal relation between injury and tubercle is extraordinarily rare The difficulty of an experimental investigation is however great Dr Flesch Thebesius describes attempts that have been made by various methods without very definite results The desirability of removing by operation tuberculous foci when they are easily accessible and when there is no mixed infection is reasonably maintained No doubt some extreme advocates of non interference go too far when they refuse to remove an enlarged but isolated gland but condemn the patient to months of restraint in expectation of resolution by means of the sun's or other rays The author offers some striking illustrations purporting to show bony ankylosis of tuberculous vertebrae This is so rare a phenomenon that care has to be taken to exclude other causes of osteomyelitis before making such a diagnosis The brochure is well illustrated though the author does not go into many details of treatment or describe splints or operations

A SURVEY OF RADIOLOGY

The 1932 Year Book of Radiology[1] by CHARLES A WATERS and IRA I KAPLAN serves as a landmark in the literature of this subject It is divided into two parts—one dealing with diagnosis and the other with treatment. An enormous amount of work has been done in abstracting radiological literature in all languages in sifting the wheat from the chaff and in presenting to radiologists a very concise and complete account of all important work which has appeared during the past fifteen years The authors felt that in this branch of medicine there was special need for a volume which would give an outline of progress in radiology and the articles reproduced have been chosen as representing a compact view of the whole subject uninfluenced by the personal opinions or ideas of the editors It is intended to serve as a reference book for the radiologist the research worker and the general practitioner of medicine All the systems of the body are surveyed and a very high standard is maintained throughout but the sections concerned with the osseous system and the gastro-intestinal tract deserve special commendation Special chapters deal with technique medico-legal matters teaching and instruction

Part II of the book is devoted to radiotherapeutics It deals with both *x* rays and radium therapy and does not attempt to separate these into watertight compartments—a method to be commended because in actual practice a combination of the two is frequently necessary In *x* ray therapy the maximum voltage in general use is about 200 kV but there are many who are desirous of using higher and higher voltages so as to produce *x* rays approximating to the gamma rays of radium The question whether short wave lengths show greater elective action is still unsolved but all these problems are fully discussed by the authors opinions of the leading writers on the subject being given An excellent chapter deals with general considerations in radiotherapeutics and special chapters are devoted to radiation biology the physics of radiation and the radiation treatment of various diseases The different methods of *x* ray therapy are outlined the newer methods being given in detail

The chapter on diseases of the blood is of special interest all the newer methods of treatment being described The results of Dale's method in the treatment of leukaemia are given and appear to be satisfactory Dale's method consists in irradiating almost the whole body with small doses of *x* rays from a distance of 1 metre It is claimed that by this means there is an avoidance of anaemia which may result from heavy applications of rays to the bone marrow that larger numbers of white blood cells are affected because of daily doses over long periods of time and on a large surface of the body that there is less general reaction and a greater possibility of affecting the organs primarily at fault The radiations are given daily for about five weeks the anterior and posterior surfaces of the body being irradiated on alternate days This method undoubtedly deserves further trial Other chapters deal with Grenz ray therapy radiation therapy in chest conditions radiation in gynaecology etc Practically speaking all diseases which may be amenable to radiation treatment are described special attention being paid to recent methods Chapters which will be of interest to many are those on cancer cures and injuries in radiation therapy

The book is well illustrated with *x* ray photographs and diagrams and an excellent index makes it quite easy to use as a work of reference It will be welcomed by all who specialize in this subject and who find increasing difficulty in keeping in touch with the numerous journals of radiology published in their own and in other countries

BLOOD TRANSFUSION FROM THE DEAD BODY

The book on Transfusion of Blood from Corpse to Patient[2] by Professor SERGE JUDINE is an account of work carried out at the author's emergency surgical clinic in Moscow where insufficient live donors are available and considerations that would affect British surgeons and British hospital authorities do not seem to apply Schamoff of Dniepropetrovsk experimented with dogs and found that animals bled up to 90 per cent of their blood volume could be revived satisfactorily with blood collected from the corpses of other dogs provided the blood was of a compatible group Such blood retained its oxygen carrying function and had no toxic effects after being kept for ten hours In human cases the bodies chosen were those of subjects who had died from street accidents (without possibility of blood infection through the wound) from angina pectoris and other forms of heart failure and cases of suicide by hanging or drowning

No evidence of intravascular clotting in the corpse was found up to eight to ten hours after death and in over 100 cases of transfusion there were no signs of toxicity of the blood Preservation of the body at temperatures

[1] *The 1932 Year Book of Radiology.* Diagnosis edited by Charles A Waters I D Therapeutics edited by Ira I Kaplan B Sc M D Chicago The Year Book Publishers Company Inc. (Pp 750 498 figures)

[2] *La Transfusion du Sang de Cadavre à l'Homme.* Par Professeur Serge Judine Préface du Professeur A Gosset. Paris Masson et Cie. 1933 (Pp 150 15 graphs 24 fr)

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below 0° C does not injure the red cells Infection of the blood in the mesenteric veins occurs twenty hours after death at room temperature The blood is obtained from the internal jugular vein, using sterile precautions with the body in the Trendelenburg position A cannula is introduced into the vein in the direction of the head and the blood conveyed to a vessel containing 4 per cent sodium citrate solution by means of rubber tubing The yield from corpses with intact vascular systems is 1,500 to 2,500 c cm Such blood is stored at 1° or 2° C , and has been used successfully after keeping for sixteen days

The general impression the author has is that, following transfusion with blood older than ten days, there are more complications and post-operative troubles, though the immediate beneficial effects are the same as with fresher blood He believes also that corpse blood less than ten days old gives fewer and milder reactions than blood from living donors Bacteriological cultures of the corpse blood are made at all stages, from the moment of obtaining and through the period of keeping The blood of the corpse keeps its specific agglutinative properties In addition to the usual grouping with stock serums, a direct test was always carried out between recipient's serum and the corpuscles from the corpse The Wassermann reaction was found to be unaffected in the serum of the latter No special transfusion technique was employed , the stored blood was raised very slowly to 40° C prior to use Clinical results are recorded in various types of cases

Notes on Books

It is surprising how many parasitic worms infect the human eye and Madame LAIGNIER-TERRASSE has done a service in collecting the available information in a single volume (*Nemathelminthes et Plathelminthes de l Appareil Oculaire Humain*) of 185 pages She classifies these parasites in two groups—the first causing a remote toxic effect on the eye (ascarids, pin-worms hookworms, and the broad tapeworm), the second acting directly This group is also subdivided into parasites causing an exophthalmia (trichinosis, sparganosis, hydatid and cysticercosis) and those not causing this condition although appearing continuously or intermittently in the eye (loa, thelazia, and bilharzia) The volume contains adequate bibliographies and about twenty illustrations—mostly rather poor It should however, be of considerable use to those who are interested in tropical diseases of the eye

The current number of *Tabulae Biologicae Periodicae*[8] contains a wide variety of useful data One article of thirty pages summarizes the muscle physiology exclusive of the two large divisions of heat formation and chemistry of muscle The two last mentioned subjects have attained such a predominance in recent years that there is a danger of work in any other field being neglected, and for this reason this article is particularly useful One of the most interesting features of the volume is a short summary of the known pharmacological properties of histamine and of acetylcholine The figures given are somewhat surprising, for the minimum concentrations that produce an effect on isolated organs are mostly in the range of one part in 1 milliard to one part in 10 milliards and the minimum doses that produce an effect on the cat's blood pressure are given as 0 000001 mg histamine and 0 0000000024 mg acetylcholine The fact that living tissues are affected by such quantities of drugs raises interesting problems regarding the nature of cell structure and the physical chemistry of drug action Other articles in the *Tabulae* provide collected data about radiochemistry enzyme actions, and vitamin research

It is announced in the *Medical and Dental Students Register*[9] that the number of medical students registered in 1932 was 1,947, representing an increase over the previous year of 304 This last figure was made up of 170 at English training centres 82 in Scotland and 52 in Ireland The number of dental students registered in 1932 was 322 an advance of 26 on the figure for the previous year In this volume will also be found the regulations of the General Medical Council relating to such registrations, and a list of the examining bodies whose regulations fulfil the conditions imposed in respect of preliminary examinations

The monograph on Meningeal Spirochaetosis,[10] by MM JEAN TROISIER and YVES BOQUIEN contains a full and up-to date account from the historical pathological clinical, and experimental aspects of the invasion of the meninges by the spirochaete of Inado and Ido The work is of particular value because the senior author has devoted special attention to the subject since 1916, as can be seen by his communications to various Paris medical societies In addition to the ordinary meningeal form of spirochaetal infection, the authors describe a variety characterized by numerous relapses, a subicteric meningeal form which represents a transition between spirochaetosis icterohaemorrhagica and the pure meningeal form and a rare meningo renal form The affinity of the spirochaete for the meninges is not confined to the human race The disease can readily be inoculated into animals such as the guinea-pig, rabbit, monkey, or dog, as is shown by the record of the authors' experiments A bibliography of the literature of the various forms of spirochaetosis is appended

The 1933 edition of the *Scottish Youth Hostels Handbook*[11] with its foreword by Sir J M BARRIE reveals the rapid progress made by those concerned with promoting an organization which it is difficult to realize was founded so recently as 1931 This is much more than a directory of shelter-places for those engaged in exploring their own country and gaining at the same time physical health and new knowledge Maps and short descriptive articles and paragraphs indicate routes of exploration which will lead to places of historic interest or natural beauty, illustrated in some cases by photographs which are incentives to see the originals in the charm of their colour and setting Again an excellent lead is given to those in other parts of Great Britain who might well attempt to rival this publication, and so do something practical to help the young people of to day and to morrow to guard themselves against the threats to health and outlook which are imposed by the modern tendency to urbanization

[7] *Nemathelminthes et Plathelminthes de l Appareil Oculaire Humain* Par Pierrette Laignier Terrisse Action parasitaire directe ou indirecte Paris N Maloine 1932 (Pp 185 19 figures)

[8] *Tabulae Biologicae Periodicae* Herausgegeben von C Oppenheimer und L Pincussen Band II Nr 3 (= *Tabulae Periodicae* Band VIII Nr 3) Berlin W Junk 1932 (Pp 241–320 complete volume RM 55 subscription price, RM 48)

[9] Published for the General Medical Council by Constable and Co Ltd 10 Orange Street W C 2

[10] *La Spirochétose Méningée* Par Jean Troisier and Yves Boquien Paris Masson et Cie 1933 (Pp 187 22 figures 24 fr)

[11] *Scottish Youth Hostels Handbook 1933* Edited by John Francey and Dr Alan Fothergill Edinburgh The Scottish Youth Hostels Association 1933 (Pp 126 maps 6d net.)

Preparations and Appliances

A METERING VALVE FOR GASES

Dr E ROLAND WILLIAMS (Clynderwen Wales) writes It is perhaps not generally known that the 'regulators' made by the British Oxygen Company for industrial uses serve as excellent reducing valves for anaesthetic purposes They are very strongly made and are fitted with a safety valve and pressure gauge Being mass produced for to meet a large industrial demand they are much cheaper, albeit a little heavier than the reducing valves especially manufactured and listed for anaesthetic purposes They are supplied in a form that fits on to the ordinary oxygen CO_2 or N_2O cylinders and can be set to deliver any of these gases at a practically uniform pressure of five pounds to the square inch until the cylinder is nearly empty After using two of these regulators for a considerable time in my general practice it occurred to me that since the delivery pressure was constant it would be possible to modify the outlet valve so that it would act not only as a fine-adjustment valve but also as a metering

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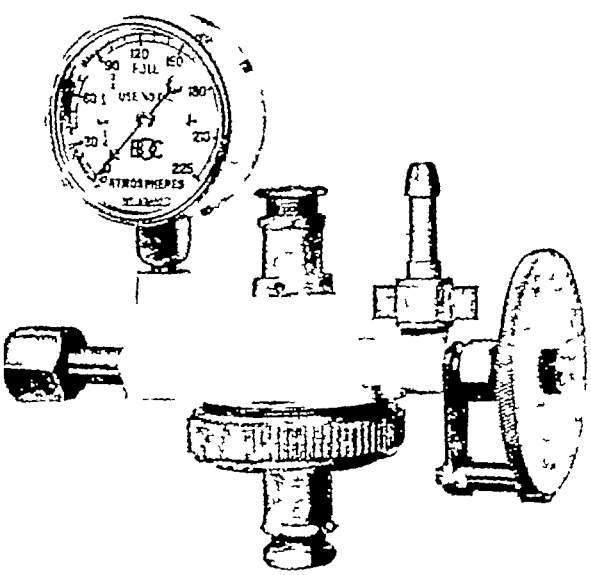
valve thus making it unnecessary to use a flowmeter when administering a mixture of oxygen with N_2O or with CO_2. I was able to contrive a tap on these lines and later as it had proved satisfactory in use I conveyed my suggestions to the British Oxygen Company. They kindly interested themselves in the matter and now their regulators can be obtained fitted with a metering type of outlet valve which gives effect to my suggestions.

This outlet valve is of the ordinary pin valve fine adjustment type but the disk wheel operating the spindle is calibrated so as to show the rate of flow in litres per minute. The range on one turn of the disk is from half a litre to forty litres per minute. The valve is also furnished with a spring and plunger ratchet giving a click for each division marked on the disk. This renders it unnecessary for the anaesthetist to look away from the patient when adjusting the flow. There is a simple arrangement whereby the valve can be reset periodically to allow for any back lash that may develop due to wear on the valve facing. The valves are coloured to match the cylinder colours of the gases with which they are meant to be used—white for oxygen black for N_2O and green for CO. The black or the green valves should not be used for oxygen. In the case of the oxygen valve it is essential that it be fitted with a pressure gauge so as to show how much gas there is in the cylinder a fresh cylinder being turned on when the pressure is down to about five atmospheres. In the case of the other gases the gauges do not in the same way register the exact contents of the cylinders but they are handy in that they give the anaesthetist some warning when to be ready to turn on fresh cylinders. (In the case of CO and N_2O cylinders the gauge needle does not begin to move towards zero until all the liquid CO or liquid N_2O has become vaporized in the cylinder.)

The uses to which these valves can be put are manifold.

1. Used with an oxygen cylinder in the ordinary way they provide a far better means of regulating the rate of flow than that afforded by holding up the end of the delivery tube to the ear and judging by the hiss of escaping gas.

2. When administering oxygen or a mixture of oxygen with



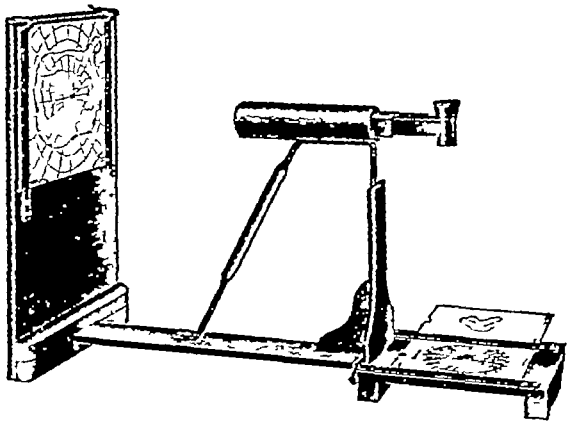
CO_2 they render it possible to give exact instructions as to dosage even to unskilled attendants—for example. Turn the white valve to the ten mark and the green valve to the half mark and let the patient breathe the gases for so many minutes.

3. By fitting these valves any ordinary pattern of dental gas apparatus can be used for the administration of gas and-oxygen one of the N_2O cylinders in the stand being replaced by an oxygen cylinder of dental pattern.

The valves can be obtained from the British Oxygen Company (Angel Road Upper Edmonton N 18) or from the Surgical Manufacturing Company (83-85 Mortimer Street W 1) for whose good offices I am also indebted in the matter.

A SCOTOMA PROTRACTOR

Mr JOHN FOSTER F.R.C.S. (ophthalmic surgeon Leeds General Infirmary) writes: Since Traquair and others have pointed out the value of comparative perimetry in glaucoma whereby one places on the same chart the outlines of a scotoma—a field taken with a small object at one or two metres and a field taken with a perimeter at 33 cm.—some workers in this field including myself have found it difficult to transfer the outline of a scotoma or field taken with a small object from a scotoma chart to the perimeter chart for



comparison. This difficulty is due to the much smaller scale of the perimeter chart and attempts at freehand drawing from one to the other always end in an extremely inaccurate representation both as to size and to shape. This is especially marked where the blind spot and a small nerve fibre bundle scotoma to take an example are so transferred.

The instrument which I have invented to get over this difficulty is a camera lucida with an erecting prism. A diminishing lens is introduced into the system so that its position can be moved to vary the relative amount of reduction required. The scotometer and perimeter charts are arranged on the instrument as shown in the illustration and having arranged the relative illumination of the two charts by placing the instrument in an appropriately lighted part of the room one can by looking through the eye piece of the instrument observe a proportionately reduced image of the scotoma superimposed over that of the perimeter chart. This can be outlined in a few seconds with the aid of a fine pointed pencil or pen the point of which is also visible simultaneously through the eye-piece. As the position of the diminishing lens can be varied any variety of perimeter and scotoma charts may be used together those shown in the illustration are of two different optical instrument makers.

The instrument is made by Rayner and Keeler Ltd. of 100 New Bond Street London W.

ERGOCHOLIN AND ANGIOLYSIN

We have received two preparations introduced by Dr Joachim Wiernik and Co. Berlin and marketed by Messrs Coates and Cooper of 94 Clerkenwell Road E.C.1. In each case the manufacturers refer to various favourable clinical reports which have appeared in German medical periodicals.

Ergocholin tablets each contain the choline derivative pacyl (8 mg.) and ergot alkaloids (0.5 mg.). This combination is intended for treatment of hyperthyroidism. Ergot alkaloids have been used extensively on the Continent for the treatment of this condition some authors have reported favourably on the results. The ergot alkaloids have a general depressant action on the sympathetic but they do not reduce the pulse rate in hyperthyroidism. Pacyl which has an acetylcholine-like action has been added for the purpose of causing reduction of the pulse rate.

Angiolysin tablets each contain 12 mg. adenosin phosphonic acid and 0.125 gram pyrrhodid dimethylaminophenyldimethyl pyrazolon rhodanide. Adenosin phosphonic acid has been shown to produce a dilator effect on the coronary arteries of animals. The makers state that pyrrhodid has a saturating effect on colloidal tissue which facilitates the access of adenosin phosphonic acid to the coronary vessels.

FEE-SPLITTING AND THE LAW

[FROM A LEGAL CORRESPONDENT]

At the end of his opening address to the General Medical Council on May 23rd the President, Sir Norman Walker, warned medical men that the practice of fee-splitting or dichotomy, was an offence against the law as well as against the good feeling of the profession, and that any conviction in the courts would inevitably bring the offender within the jurisdiction of the Council. The present note deals solely with some legal aspects of a practice which is condemned by every right-thinking member of the medical profession. The principle of law, as stated by Halsbury, is that an agent must not, without the knowledge of his principal acquire any profit or benefit from his agency other than that contemplated by the principal at the time of making the contract of agency. *The general practitioner who calls a specialist into* consultation on a case is the patient's agent for that purpose, the terms of the contract of agency being that in return for the practitioner's skill' and experience in choosing a suitable specialist, and for his services in co-operation with the specialist and his trouble in arranging consultations, the patient pays him a fee either agreed beforehand or reasonable in the circumstances. It is obviously most undesirable that the practitioner should receive or withhold a part of the fee from the specialist without the patient's knowledge, for such a practice would encourage a tendency among advisers to call in, not the best specialist for the purpose, but the man who would hand over to them the largest proportion of his fee.

There seems to be no reason why the law should not deal with medical dichotomists in exactly the same way as it deals with commercial agents who receive secret commissions or bribes. If this view is correct then a general practitioner who agrees to take part of the consultant's fee commits both a civil wrong against his patient and an offence against the criminal law. It does not even matter whether he is influenced by the bribe to the prejudice of his patient's interest, he is guilty even if his patient does not suffer any harm. When a commercial agent is found to have received a bribe he *can claim no commission for the transaction, and becomes* liable to pay to his principal not only the amount of the bribe but also interest at 5 per cent. from the date when he received it. He must also make good any loss his principal has sustained through his breach of duty. In the same way a patient should be able to sue for the return of the fees he has paid to the general practitioner in respect of the specialist's services and also for that part of the specialist's fee which the general practitioner has wrongfully received. He also has an action for any loss or injury he may have suffered through the transaction and this damage is measured, prima facie, by the amount of the bribe. The specialist is, as a guilty party also liable for these damages and it seems probable that he would be liable to return the whole of his fee because the patient would not have employed him but for the bribe. The patient may choose whether he will repudiate the whole contract, or stand by it and obtain such relief as the court may think fit to give him. If he chooses to repudiate the contract presumably he has a right to have his whole fee back. In any event as he is supposed to have suffered damage equal to the amount of the bribe he can apparently claim this amount from the specialist irrespective of what if anything, he has recovered from his usual medical attendant.

Dichotomy as a criminal offence may be dealt with as a conspiracy to defraud or under the statute mentioned by Sir Norman Walker—the Prevention of Corruption Act, 1906 (6 Edward VII, 34). Under Section 1 of the Act it is a misdemeanour punishable with two years imprisonment, or a fine of £500, or both, for an agent corruptly to accept or obtain any consideration as an inducement to show favour to anyone in relation to his principal's business. It is the same offence to agree to accept such a reward, or to attempt to obtain it or to give or offer it. Conviction for this offence as for any other makes a practitioner liable to have his name erased from the *Medical Register* by the General Medical Council without further inquiry into the facts on which the conviction was based.

AN EXHIBITION OF DOCTORS' HOBBIES

In connexion with the forthcoming Annual Meeting of the British Medical Association in Dublin an Historical and Hobbies Exhibition is being organized in Trinity College. It will be open for inspection on Tuesday July 25th *at 11 a.m., and will remain open on July 26th, 27th,* and 28th. The following note addressed to members proposing to visit Dublin, has been supplied by Dr. F. S. Bourke.

OUTSIDE THE CONSULTING ROOM"

Everyone will agree with the truth of the saying 'All work and no play makes Jack a dull boy.' Perhaps to the medical profession more than any other the necessity for relaxation of some kind is nearly every day emphasized. This may explain the fact that so many medical men have turned their attention to other than professional spheres after the exacting duties of the day. The variety of their diversa hobbies which is the term usually applied to such *divertissement*, is quite easy to explain but it is no easy matter to obtain the consent of those concerned to exhibit the results of their labours or activities outside the consulting room as on this occasion we have the privilege to present. We would stress at the outset that this exhibition does not pretend to be anything like complete. Even with the time at our disposal it will be readily understood how impossible it was to get into touch with all the medical men and then to find out the individual hobbies. Whether we have succeeded in our efforts remains to be seen. We have, however endeavoured to appeal to every interest by the variety of the work shown which embraces art including pictures in oil and water colour etchings dry points charcoal, and pen and ink drawings by doctors examples from collections of mezzotints and old masters. Next in favour would seem to be antiquities then fishing a more recent development of which appears to be big game fishing for which we foresee a great future here in Ireland, judging, at any rate from the fascinating account which one of its devotees gives of this exhilarating sport. We are also showing examples of flies tied by some of the enthusiasts of fishing.

How many of us can appreciate the primitive lighting systems in ancient Ireland? Here we are fortunate in having examples of the rushlight holders and candle moulds which are sure to arouse interest and which are now so scarce. China collecting is represented by some magnificent pieces of Spode and we are fortunate in having at least one exhibitor who actually designs and makes pottery himself. The philatelist is not forgotten and we can promise some rare items among those shown including examples of the early Dublin penny post. In coins we are only showing those of Irish origin or use and here also is a representative collection. For the bibliophile we have some specimens of the early presses calculated to appeal to the most fastidious book collector. We are also showing some of the published work in prose and verse by doctors which has obtained universal praise. Were we to continue we would merely make this an enlargement of our catalogue when our purpose is only to arouse the interest of our visitors to see a side of our life which under ordinary circumstances they could never see. We would point out that many of the hobbies do not lend themselves to our purpose—for example many members of our profession have taken up stock breeding and farming.

In conclusion we would ask you to look with a kindly eye on our efforts and to appreciate that in the majority of cases what you look upon was never intended for public view at all but merely as a relaxation outside the consulting room.

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British Medical Journal

SATURDAY, JUNE 24th, 1933

GASTRIC SECRETION IN ANAEMIA

It has long been known that in cases of pernicious anaemia a very severe defect in the gastric secretion is usually present Indeed many cases have been reported in which achlorhydria was observed long before the onset of the anaemia Not only is the defective gastric secretion shown by the ordinary test meals but there is a failure to secrete free hydrochloric acid after the injection of histamine As part of an investigation of the relation of gastric secretion to anaemia by a number of workers at Guy's Hospital the results of which were published in the January number of *Guy's Hospital Reports* Dr Hartfall[1] has demonstrated that in the great majority of cases of pernicious anaemia no free hydrochloric acid is secreted after histamine and the gastric juice obtained has on an average an extremely low total chloride concentration and very small quantities of pepsin Exceptions to this are rare but he quotes an example of pernicious anaemia with free acid in the gastric juice, and Dr Hurst[2] records another associated with chronic obstruction of the ileum Castle and his co-workers have demonstrated the presence in normal gastric juice of a ferment-like principle with properties different from pepsin and rennin to which they have given the name of the *intrinsic factor* it acts on the proteins of the diet more especially the vitamin B complex or *extrinsic factor* to produce a substance which has a curative action in pernicious anaemia In typical cases of the disease the stomach secretes no intrinsic factor and according to Castle's theory the absence of this is the essential cause of the disease but its loss does not necessarily run parallel with the loss of other elements of gastric secretion such as free acid chloride or pepsin this provides a rational explanation for the rare cases of pernicious anaemia with little or no gastric secretory abnormality

In pernicious anaemia the normal red corpuscles tend to be replaced by cells which are larger (*macrocytes*) and which therefore each contain more haemoglobin so that the colour index is greater than normal But in 1909 Faber had already discovered that patients with achylia gastrica frequently suffered from a hypochromic anaemia in which the circulating red blood corpuscles were smaller thus bringing the colour index below unity A revival of interest in this group of cases has recently brought out many new facts The patients are usually women at child-bearing age who present a hypochromic anaemia running a chronic course without spontaneous remissions and without increased haemolysis There is usually a leucopenia and relative lymphocytosis A characteristic feature is atrophy and aphthous inflammation of the tongue and pharynx giving rise to dysphagia In addition there are trophic lesions of the skin the nails become rough and easily broken cracks appear on the fingers and at the angles of the mouth the teeth decay and the hair falls excessively The outstanding symptoms are tiredness and easy fatigue Diarrhoea is common and the gastric secretion is upset achylia gastrica is not constant however many cases showing only achlorhydria or considerable hypochlorhydria In a series of 137 cases investigated by Hartfall and Witts complete achlorhydria or extreme hypochlorhydria was present in 108 or nearly 80 per cent. In a considerable number of these cases the effect of histamine injection was noted and it was found that a true achlorhydria was present in a little over half of them The authors believe that the achlorhydria of simple achlorhydric anaemia is not the result of the anaemia but precedes it and predisposes to it The achlorhydria has been demonstrated before the onset of the anaemia The development of anaemias either of microcytic or of megalocytic type after operations on the stomach is one of the strongest reasons for believing in their gastrogenous origin The achlorhydria is usually a permanent phenomenon and persists when the anaemia is cured Moreover it is in many cases a hereditary abnormality and is thus not the result of the anaemia Possible aetiological factors in order of importance are heredity the action of haematogenous toxic agents on the stomach operative or other trauma to the stomach and gastritis from direct irritation of the stomach In a significant number of their cases the authors showed that the gastric secretion was deficient in total chlorides and contained no free hydrochloric acid and little or no pepsin—that is it was indistinguishable by ordinary tests from the gastric secretion in pernicious anaemia Nevertheless it is unusual for these women to develop pernicious anaemia

In an effort to confirm the presence of Castle's intrinsic factor in simple achlorhydric anaemia Hartfall and Witts[4] carried out experiments with gastric digests on four patients with pernicious anaemia The gastric secretion was obtained by histamine stimulation from normal men cases of pernicious anaemia and those of simple achlorhydric anaemia About 200 grams of lean beef steak were thoroughly mixed with the gastric juice obtained from the donor and after incubation were given to the recipient in whom daily observations of the blood were made an adequate reticulocyte crisis was taken as proof of the existence of the active principle in the juice under investigation In these experiments the authors confirmed the presence of the intrinsic factor of Castle in normal gastric juice and its absence in pernicious anaemia the juice obtained by histamine stimulation from women with simple achlorhydric anaemia contains variable amounts of the intrinsic factor of Castle and in some cases only a very small quantity was demonstrable They are not convinced that the present knowledge of the gastric secretion in pernicious and simple achlorhydric anaemia supplies a satisfactory explanation of their differences

[1] *Guy's Hospital Reports* January 1933 p 57
Ibid January 1933 p 47

[2] *Guy's Hospital Reports* January 1933 p 3
[4] Ibid January 1933 p 24

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Indeed, there is much experimental and clinical evidence that life and health may be maintained after extirpation of the whole stomach, and we may have to look elsewhere for the final solution of the pathology of these anaemias That the intestine may be the site of trouble in some of the macrocytic forms is evident in such conditions as sprue, and van Leeuwen[5] has shown that microcytic anaemias may be due to a malabsorption of iron owing to intestinal disease when the gastric secretion is normal There may not yet be evidence enough to justify the acceptance of these anaemias as a specific disease, but it is clear that a syndrome exists with the clinical picture above described, usually associated with achlorhydria and curable by sufficient doses of iron For the present they may be classified under the heading of idiopathic hypochromic anaemia,[6] until further work leads to better differentiation

ACADEMIC ASSISTANCE COUNCIL

In the *Journal* of June 3rd (p 974) we reported the formation by a number of British men and women eminent in the fields of scholarship and science of an Academic Assistance Council, having for its object the raising and administration of funds to enable foreign university teachers and investigators who are at present prevented from carrying on their researches in their own countries to do so, for a time, elsewhere We understand that the council has appointed an executive committee, of which Lord Rutherford is chairman, and that the committee has begun work on its Herculean task Our country may well be proud of her responses to the appeals of scholars who have found shelter on her soil More than three centuries ago the great humanist Isaac Casaubon found an asylum in England More than two centuries ago Abraham de Moivre sought shelter here and, in England, carried out researches which are the foundation not only of much pure mathematical science but also of modern systems of life assurance We have indeed succoured many men of genius, who repaid the debt in the only way honourable men could wish it to be repaid, by enlarging the bounds of knowledge That the Academic Assistance Council's appeal for support will find a ready response within our own profession is certain In these days of rapidly accumulating knowledge general culture, in the old-fashioned sense, may be on the wane , but there can be no doubt of the catholicity in intellectual achievement and interests of a profession which recently counted among its members Thomas Clifford Allbutt and Edward Granville Browne and is still fortunate enough to possess the president and an ex-president of the Royal Society We note with satisfaction that the Academic Assistance Council bases its appeal on the ground of intellectual obligation, of gratitude to those who have increased and will continue to increase the stock of human knowledge, and wholly abstains from any utterance which might be construed as an attack on individuals or institutions in foreign countries No useful purpose could be served by language tending to wound national susceptibilities already inflamed We also commend the prudence of the council in limiting the scope of its activities

"Of possible places of refuge in case of necessity," wrote Mark Pattison in his life of Casaubon, "there remained—England Had it been 200 years earlier nothing would have been more simple, than that a learned man, who was dissatisfied in Paris, should have migrated to Oxford, for a time, or for life But now it was different Neither North nor South Britain entered in the comity of nations, in such a way that natives of all countries indiscriminately circulated through our universities, either as students or professors as they had once done, and as they still did in the other parts of western Europe" The necessity for the final reservation in favour of countries other than England no longer exists The free circulation of learned men which characterized an age when learned men were few and used a common tongue is long past It would be idle to pretend that among the university teachers on the Continent who are suffering persecution for political or racial reasons there are not many who, while perfectly competent to perform creditably the duties of such posts, are not more competent to do so than equally large numbers of persons already filling or ambitious of filling similar posts in this country It would be equally unwise to make such a pretence with respect to members of other professions No humane man can read of professional colleagues losing their means of living through no fault of their own without pity and a strong desire to help Were England El Dorado we should all desire to offer hospitality to any liberally educated person suffering unmerited misfortune But England is not El Dorado , it is a sorely distressed industrial State, already carrying more than its share of the world's burden We are, however, still capable of working for the common good of mankind, still prepared to make sacrifices for those who *quasi cursores vitai lampada tradunt*

In the delicate and responsible task of identifying those who are indeed handing on the vital torches the Academic Assistance Council deserves and will receive the support of the whole medical profession But, for the sake of the torch-bearers themselves, no encouragement must be given, either here or abroad, to the hope that any, even temporary, migration to this country of more than small numbers of exceptionally gifted individuals is within the bounds of possibility As is pointed out in an editorial in *Nature* of June 17th "In teaching and research, competition for appointments at the moment is intense , and it would be neither fair nor practicable for a 'most-favoured nation clause' to be extended to displaced German teachers and research workers It should be no matter for surprise that, while the appeal has been received with much sympathy, it has aroused misgiving, in view of the financial situation and the difficulty of finding appointments for

[5] *Klin Woch* May 6th 1933 p 698
[6] Wintrobe, M M , and Beebe R T *Medicine*, May, 1933, xii 187

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trained scientific men many with high qualifications from our own universities and places of higher education while among school teachers the position is equally if not more grave Obviously it would be far from politic and indeed unfair to the displaced teachers and research workers to offer them posts in a market which is already overstocked These and other difficulties are realized by those who are endeavouring to meet the situation in this country The moderation of the Academic Assistance Council's appeal both in its language and its scope must command the approval of all Even so limited the pecuniary requirements must be very large and we are sure that all will do their utmost to help an eminently worthy undertaking

THE REGISTRATION OF MEDICAL STUDENTS

At the May session of the General Medical Council in 1904 a resolution was passed that the Lord President of the Privy Council be requested to introduce into Parliament a Bill to confer upon the General Medical Council statutory power to establish and maintain registers of medical and dental students and to impose a fee not exceeding £1 for registration therein In the following session the Lord President was further addressed by the Council and the request to introduce the Bill was withdrawn the reason given being opposition by certain licensing bodies The opposition came from the Royal College of Physicians of London and the Royal College of Surgeons of England and the grounds of opposition were that the proposed Bill would infringe the powers of the Colleges safeguarded in the Medical Acts of determining the conditions of admission to their professional qualifications Since that time the Council has maintained a students register on a voluntary basis and the medical schools have been invited to recommend all entering students to place their names upon it Had the statutory power been obtained the Council would have had direct control over the length of the course of medical study in each individual case and also over the conditions of enrolment as a medical student The latter would have given it powers to prescribe the courses of study and examinations to be taken before admission to the *Students Register* In spite of its possessing no such powers the Council has sought to exercise them by resolutions and recommendations and has required as a condition of enrolment on its voluntary *Students Register* the passing of one examination in general education and of another in physics and chemistry it has prescribed the subjects and type of examination in each case and brought pressure to bear upon any medical school where the entrance examinations did not conform to its prescriptions Much confusion has arisen as the result of this action and the arrangements which have been made by the medical schools with a view to conforming to the letter of the Council's resolutions have been various Several factors have contributed to this confusion but these need not now be enumerated At the present time there are medical schools which do not hold any preregistration examination in chemistry and physics but teach them within the five years course there are schools which require an entrance examination in these subjects but no further study of them by their students there are schools which hold a pre-registration examination based on one term's work and there are others which maintaining that the student should be taught physics and chemistry within the medical school itself have added a year to the curriculum and occupy this year with instruction in these two subjects and biology This state of affairs is unsatisfactory and has arisen out of the unusual course taken by the Council in seeking to impose on the medical schools and their students requirements which it has no statutory right to enforce There appear to be but two ways in which it can be ended either by the General Medical Council's obtaining powers to regulate preliminary studies and examinations or by its ceasing to exercise a control the right to which is not conferred upon it by the Medical Acts so leaving the regulation of admission examinations to the medical schools themselves

SO CALLED IDIOPATHIC HYPERTROPHY OF THE HEART

A contribution by Howland to the Osler Memorial Volumes [1] on idiopathic hypertrophy of the heart in young children served to make the existence of this condition more widely known and cases have since been described from many centres In a recent article M A Kugel and E G Stoloff [2] claim to review all the reported cases of the condition with complete clinical *x*-ray and pathological studies of seven additional patients of their own making in all fifty-nine cases The clinical picture is that of a young child usually in the first or second year of life who either dies suddenly with or without signs of acute heart failure or with a more insidious onset becomes fretful has attacks of syncope with cyanosis or of sudden dyspnoea and dies in an attack Fever is absent the pulse is rapid and physical examination usually reveals a very large heart confirmed on *x*-ray examination Another feature is lack of signs or history of congenital malformation of the heart rheumatic fever diphtheria or other known infection The child has generally been perfectly well until the sudden manifestation of the disorder The earlier reports stressed the fact that microscopical examination of the myocardium showed only simple hypertrophy of the muscle bundles More systematic examination—especially by standardized sections including all the valves left and right auricles left and right ventricles the intraventricular septum and the papillary muscle—indicates that other changes are frequently present such as degenerative lesions fibrosis and lymphocytic infiltrations The present authors therefore regard pure idiopathic hypertrophy of the heart as a very rare condition and they classify the existing cases as follows a group of true congenital idiopathic hypertrophy of the heart in which no aetiological factor was discovered and a thorough histological examination demonstrated a pure hypertrophy with no demonstrable pathological lesions (seventeen cases) a secondary form of hypertrophy in which histological examination showed myocardial damage (this included certain cases with anaemia congenital anomalies intrapulmonary disease or primary vascular disease—twenty seven cases in the literature and the

[1] *Contributions to Medical and Biological Research* vol i p 785 New York Paul B Hoeber 1919
[2] *Amer Journ Dis Child* April 1933 xlv 828

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seven here reported), and a third group (eight cases), in which a complete examination was not reported, and hence no definite classification could be made. The aetiological factors are obscure, and on the whole the evidence, in the genuine cases, is in favour of a true "germ-plasm" defect, since a familial incidence has been recorded by some authors, and in a particular group in which two brothers married two sisters, being first cousins as well, there was a definite case in a child of one pair and four likely cases in four children of the other pair. Other theories include one which links the heart condition with an enlarged thymus, but, as the present authors point out, in the sudden death which is common among these cases a normal degree of lymphoid tissue is often found. Hypertension, either in the mother or the affected child, can generally be ruled out, while in some cases infection may play a part, especially whooping-cough. This is most likely to be true in the second group of cases, in which pathological lesions are present in the myocardium. Drs Kugel and Stoloff are inclined to think that a more careful study will demonstrate such lesions in nearly all cases, and that the true so-called idiopathic hypertrophy of the heart in infancy will probably disappear as a clinical entity if the rigid standards they lay down are accepted. Their claim to have collected all the cases in the literature—always a dangerous claim to make—can be disputed by the citation of a case not mentioned by them and exhibited at the Section for the Study of Disease in Children of the Royal Society of Medicine in October, 1929, by Dr Alan Moncrieff.[1] In this instance a baby of 1 year had recurrent attacks of unexplained dyspnoea and cyanosis, in one of which she died. Clinical examination had shown a very large heart, and histological examination revealed an apparently pure hypertrophy of the cardiac muscle.

THE TEETH IN FORENSIC MEDICINE

That individual differences in the human subject may be recognized as easily by dental examination as by a study of, say, the physiognomy seems not unreasonable. Forensic medicine already has anthropometry and dactylography to assist it in the more difficult problems of identification, but Mr B. H. Humble, who makes an extremely interesting contribution to the literature,[2] shows that greater use might be made of dental evidence in this respect. If he is right—and there seems good reason in favour of this—the criminal of the future must expect a life full of shocks, while we may anticipate a rapid diminution in the number of unidentified bodies. Among historical examples where the teeth have been instrumental in settling identity Mr Humble quotes the case of Charles the Bold, whose body was found on the field of Nancy in 1477, the famous Parkman and Webster case in 1849, in which a murderer's guilt was established by the recognition of a platinum and gold denture among the clinkers of a laboratory furnace, the occasion, in 1879, on which the mutilated body of the French Prince Imperial was identified by means of filled molar teeth, and the touching story of how a Chilean dentist saved his country from possible war when, in 1908, he established the fact that the consul of an important European power had not, after all, been murdered! More recently, an impostor masquerading as a Grand Duchess was convicted on data supplied by a plaster cast of the jaws, while M. Lowenstein, whose body was recovered from the English Channel in 1928, was not recognized positively until dental evidence had been brought forward. Passing from a consideration of marks left by the teeth on food, the author recalls how, in the Düsseldorf murder case, the impression of a complete front dentition found on the skin of the victim finally led to the identification of the murderer. In a second case, in which toothmarks were found on the forearm of a murdered man, the prosecution was unsuccessful—despite close correspondence between a plaster cast of the defendant's teeth and the marks—owing to post-mortem changes which had taken place in the skin. In yet another German case, however, photographs of the toothmarks in the victim's skin were taken immediately, and before there was any time for contraction to cause change in shape. By this means Dr Sorup was able to incriminate one of two suspects by using plaster casts, from which marks were made on paper and compared with the photograph of the original toothmarks. Mr Humble describes his modification of Sorup's method. He suggests that there will, sooner or later, be a much larger number of insured persons coming under dental benefit—in Britain the present figure is estimated at about 1,000,000. When more people have dental treatment there will be a greater number of records of the teeth, and dentists will be able to narrow the field of identification. There are many morphological characteristics in each tooth, and these, with the possible addition of fillings, inlays, crowns, partial dentures, or absence of one or more teeth, will be of considerable assistance in this direction. Mr Humble urges that, where a body is unidentified, a full description should be published, and a dental surgeon called in to make a careful examination of teeth and jaws. His description could then be circulated in the dental journals, with the hope of bringing the necessary dental identification to bear on the problem. This method has already been in use in Germany, and there seems no reason why it should not be employed here.

ACCIDENT PRONENESS

In a report of the Industrial Health Research Board on "Tests for Accident Proneness"[1] Messrs E. Farmer, E. G. Chambers, and F. J. Kirk describe a further instalment of their systematic study on the part played by individual susceptibility in accident causation. It has long been known that certain individuals are much more liable than others to incur accidents in the course of their daily work, and it is evident that if such individuals could be weeded out and transferred to other occupations where they had less chance of incurring accidents the average accident rate of the whole community would be reduced. The difficult problem is to identify these accident-prone persons, and so be enabled to transfer them before they have had much opportunity of exhibiting their susceptibility. It is not easy to find suitable groups of subjects for examination, for it is desirable that those selected should be kept under observation for several years in order to increase the

[1] *Proc. Roy. Soc. Med.* 1929, xxiii, Part I, 110.
[2] *Brit. Dental Journ.* May 15th, 1933.

[1] Medical Research Council, Industrial Health Research Board. Report No. 68. Tests for Accident Proneness. By E. Farmer, E. C. Chambers, and F. J. Kirk. London: H.M. Stationery Office. 1933. (6d. net.)

reliability of the results obtained The investigators were fortunate in obtaining permission to test all the apprentices entering the naval dockyard at Portsmouth and they obtained statistics relating to groups of 101 shipwrights and 150 fitters for a five year period They also tested 163 naval artificers for a three year period The subjects were given certain sensorimotor tests (reaction time dotting pursuit meter) which previous investigations had shown to be suitable and on comparing their test performances with their accident rate it was found that one group the shipwrights showed a fairly high correlation between the two variables They showed it steadily throughout the test period and as they incurred accidents about three times more frequently than the other groups of youths tested the results were of special interest They were indeed of some direct practical interest for it was calculated that if the small number (amounting to 12 per cent of the whole group) of shipwrights who incurred two or more accidents in their first year had been rejected the remainder incurred 13 per cent less accidents in subsequent years than those actually observed in the whole group If however the shipwrights were divided into four equal fractions according to their performance of the sensorimotor tests and the fraction who did worst were rejected the remainder were found to incur 20 per cent less accidents than those observed If a more stringent selection were adopted and only the fraction who did best at the tests were retained they were found to incur 39 per cent less accidents than those observed in the whole group The investigators point out that they have no evidence that the particular tests employed are the best for the purpose In course of time other tests may be evolved which give much more striking results than those already attained It appeared that intelligence tests were of no value for the elimination of accident prone individuals in the particular occupations studied This might have been expected for the accidents sustained were mostly cuts and bruises caused by the faulty manipulation of tools but it is obvious that in some occupations intelligence tests must be of value

THE UNIVERSITY OF LONDON

The work of excavation on the Bloomsbury site for the new buildings of the University of London has been actively proceeding (at the southern end of the site nearest the British Museum) since the end of last year and matters have advanced sufficiently to enable the foundation stone to be laid by the King on Monday next June 26th In the report by the Principal of the University on its work during the year 1932-3 reference is made to the handsome gift of the Corporation of the City of London of £100 000 towards the cost of the new ceremonial hall This gift has been followed by other splendid benefactions towards the same purpose from a number of the City Companies including the Apothecaries Society the amount totalling to over £166 000 The further identification of these famous guilds with the university is regarded with very much gratification The same report recounts other gifts not connected with the Bloomsbury site One of these is a generous gift by Lord Riddell to enable the Royal Free Hospital to complete a wing of the hospital building thus providing more clinical facilities which will indirectly benefit the work of the hospital school The Chair of Public Health tenable at the London School of Hygiene and Tropical Medicine has been endowed by the Prudential Assurance Company for a period of seven years and is to be known as the Prudential Chair of Public Health The School has also received £2 000 to establish a fund for the advancement of study and research in entomology as a memorial to the first Lord Avebury a former vice-chancellor of the university Mr S A Courtauld has added to his munificent gifts to the Middlesex Hospital Medical School a further sum of £20 000 towards the endowment of the Biochemical Institute Another gift of £48 000 has been made by the Rockefeller Foundation for the endowment in connexion with University College Hospital and Medical School of a post the holder of which will devote his whole energies to the advancement of clinical research In dealing with the organization of teaching the Principal mentions the institution of a new academic diploma in medical radiology also the institution of readerships in pathological chemistry at the Cancer Hospital and in experimental pathology at the Lister Institute The Court of the University has made grants of £10 000 to King's College Hospital Medical School and to St Mary's Hospital Medical School in both cases towards the cost of new buildings which are approaching completion

EPSOM COLLEGE

Now that the voting system has been abolished the beneficiaries of the Royal Medical Foundation of Epsom College are elected by a conjoint committee consisting of twenty governors ten being members of the council and ten non-members of the council This committee met on June 14th to elect (*a*) eleven foundation scholars who will receive education board clothing maintenance and pocket-money free of all cost whatsoever and (*b*) two ordinary pensioners who will receive £40 a year namely £30 from the general funds of the college and £10 from a special fund There were no fewer than twenty-four candidates for the eleven vacant scholarships and forty-six candidates for the two vacant pensionerships The result of this election will be found in our advertisement pages to-day In view of the large number of candidates who cannot stand again owing to age the council has decided to maintain fifty-four foundation scholars instead of the usual number of 50 This will cost the foundation in 1933 an extra sum of £600 which means that contributions totalling some £10 600 must be collected in subscriptions and donations—a task by no means easy in these days

HARVEY MEMORIAL TOWER

The rebuilding of the Hempstead Church Tower (William Harvey Memorial) has been commenced and the foundation stone will be laid by Lord Davison of Penn on Friday July 7th at 3 30 p m Any member of the medical profession will be welcome Those desirous of attending should notify the Rev T P Conyers Barker the Vicarage Hempstead Saffron Walden Essex Arrangements will be made for those who desire to travel by coach from London provided notice is given to Mr Barker by July 3rd There will be tea at the vicarage after the ceremony With the funds in hand only the first section of the work can be completed but it is hoped that further donations will be forthcoming They should be sent to Dr Arnold W Stott 58 Harley Street W 1

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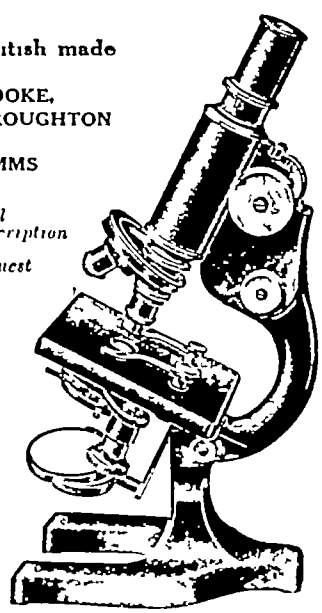

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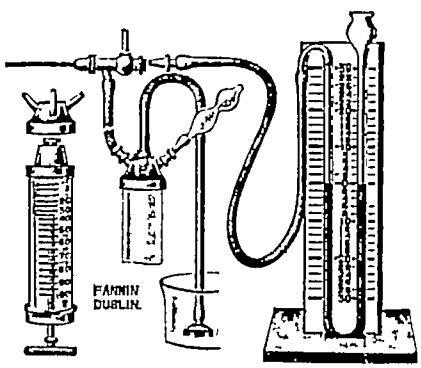

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NEW ZOOLOGY DEPARTMENT AT UNIVERSITY COLLEGE

The Earl of Athlone, Chancellor of the University of London who was accompanied by Princess Alice, opened the new building for the Department of Zoology and Comparative Anatomy at University College on June 12th The department in its new home embodies one of the most important developments of the college in recent years Eighteen months ago the college acquired a site to the south of the great building which houses the departments of anatomy and embryology, physiology and biochemistry, and pharmacology The site contained a range of buildings surrounding the courtyard (which is to be known as Foster Court, in memory of the first provost of the college, the late Sir Gregory Foster), and the building on one side of this courtyard has been adapted for the new department It consists mainly of three floors, with some rooms on a fourth, and includes a theatre (named after Ray Lankester), classrooms research rooms, workrooms, and teaching laboratories, a museum and preparation room, and accommodation for living material in the shape of a large aquarium, a series of constant temperature rooms and an animal house for the maintenance of small animals for the use of geneticists The whole building is severely utilitarian, except for a beautiful seventeenth century gateway, possibly designed by Wren, removed from the hall of the Pewterers' Company, and re-erected here, where, amidst plane-trees, it offers one of the pleasantest views in the college precincts

SIR JOHN ROSE BRADFORD chairman of the college committee who presided over the brief function said that a department of zoology was established at University College in 1828 very shortly after the college itself was founded It had had some half dozen professors but he made no apology for mentioning one outstanding name that of Edwin Ray Lankester who was appointed to the chair of zoology in 1874 The department under his inspiration became a centre of extraordinary activity where researches were carried on in many fields and the personality of its professor attracted men of ability so that presently a large proportion of the chairs of zoology in the Empire came to be filled from University College It was just fifty years said Sir John Rose Bradford since he became Lankester's demonstrator and there were few men for whom he retained so great an affection He was a strong personality caustic of speech and unable to suffer fools gladly but remarkable for his enthusiasm for genuine scientific work and especially for the generosity with which he acclaimed the work of colleagues With him he linked another great name of the same period at University College that of Burdon Sanderson, who was professor of practical physiology and Jodrell professor of human physiology In appearance no two men could have been more unlike than Lankester and Burdon Sanderson But they had this in common that they both sought the larger view in all their work, and did their best to inculcate general principles which up to their time had never been recognized

THE EARL OF ATHLONE paid a tribute first of all to Sir Gregory Foster a tablet to whom he had just unveiled He said that Sir Gregory was one of those who had realized the new fields which were opening up to zoology and the evident influence of this science upon human thought in general and the practical problems of the modern world He induced the college to set itself to the task of providing new laboratories for adequate study with fresh equipment and an enlarged staff The Chancellor went on to acknowledge the great financial assistance which had been furnished from two quarters The cost of the site building and equipment of the new department had been as to by far the larger part defrayed by a grant of £30 000 made by the university court out of the capital grant of £150 000 by the London County Council for the quinquennium 1931–5 For the endowment and upkeep of the new work the college had received a benefaction on specially generous conditions of £88 000 from the Rockefeller Foundation

Professor D M S WATSON the Jodrell professor in expressing to the Chancellor the thanks of those assembled said that those concerned for the progress of the college had realized in particular the necessity of providing staff and laboratories for the study of genetics comparative physiology and animal behaviour so as to ensure an adequate training for students in zoology Animals must be studied as live things not in the restricted sense of the older zoology but in their more interesting and vital aspect from the point of view of human relations Such far reaching studies would have been impossible in the old home of the department but now in the new building—formerly as to its ground floor a set of stables and as to its upper floors carpenters' workshops—it had a habitation admirably adapted to its purpose With regard to the staff the services of Mr J B S Haldane as professor of genetics had been obtained His great knowledge of biochemistry would enable him to introduce into genetics those physiological conceptions which alone could lead to an understanding of hereditary transmission of structure Provision had also been made for the establishment of a professorship in comparative physiology The staff and equipment bade fair to be as complete as any zoologist could desire

THE LISTER INSTITUTE

A COMPREHENSIVE YEAR'S WORK

A wide range of subjects is dealt with in the thirty ninth annual report of the Lister Institute of Preventive Medicine, which was presented by the governing body at the annual general meeting During the past year virus studies have, as usual, occupied a large amount of attention

VACCINIA AND VARIOLA

It now seems well established that the elementary bodies in vaccinia lesions represent the actual virus agents Dr C R Amies has found that while pure suspensions of the elementary bodies of vaccinia were readily agglutinated by antivaccinial serum from man, monkey, and rabbit, the serum of patients convalescent from small pox failed to give any uniform agglutination The next step was to obtain a suspension of variola elementary bodies This was done by inoculating monkeys with two different strains of human variola virus—a virulent one obtained from Calcutta and a mild one taken from a typical case of alastrim in this country Suspensions of elementary bodies taken from the skin pulp of the inoculated animals were, it was found, agglutinated by the serum of patients convalescent from either the English or the Indian small pox, while antivaccinial serum obtained from rabbits either failed to produce agglutination of the variola bodies or did so to a lower titre than that given by a vaccinial suspension Cow-pox elementary bodies were agglutinated by the homologous antiserum and also by antivaccinial serum Human antivariola serum failed to agglutinate a suspension of these bodies, though a hyper immune antivariola serum obtained from monkeys which had had repeated infections of the virus, agglutinated the suspension to a fairly high titre

It would seem from other experiments that variola virus can be readily changed into a strain indistinguishable from vaccinia serologically The conclusion is, therefore, that variola and vaccinia are very closely related antigenically, the difference being quantitative rather than qualitative

VARICELLA, ETC

Dr Amies has confirmed the finding of elementary bodies in human varicella fluid Somewhat smaller than those of vaccinia-variola, they are present in enormous numbers in the clear fluid taken from early vesicles Suspensions of them are agglutinated specifically by convalescent chicken-pox serum while agglutinins have been demonstrated in the blood as early as the fifth day after the appearance of the eruption (As already pointed out in the *Journal* of May 27th the presence of elementary bodies has also been demonstrated in the expired air of

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a patient in the early stages of chicken pox) It thus seems highly probable that the elementary bodies represent the actual aetiological agents

Other virus studies include the cultivation of vaccinia virus in cell free media and of louping ill virus *in vitro* The successive stages in the growth of the pleuropneumonia organism have again been studied by Professor Ledingham and it may shortly be possible to attack the problem of its systematic position

SEROLOGY

Serological studies include an examination of the antigenic constitution and immunizing properties of bacteria Dr T S Schütze is continuing his studies on the antigen concerned in the immunity conferred by anti plague vaccine After establishing the importance of the heat labile envelope antigen he is investigating methods for the best production of it and is endeavouring to determine whether the vaccine should be grown in a fluid or on a solid medium Dr A Felix has been studying the serological varieties of typhus with particular regard to the São Paulo endemic of this disease Dr J T Edwards has continued his work on foot and mouth disease He has been unable to demonstrate the existence of carriers after a search for the persistence of the virus in the urine or blood of guinea pigs which have recovered from an attack of the disease Observations on rats have shown that susceptibility is much influenced by diet

ENDOCRINOLOGY

Dr V Korenchevsky has been studying the action and assay of testicular hormone and the mechanism of action of vitamin A deficiency on various organs and functions The changes obtained by injection of testicular hormone in various conditions are recorded Experiments demonstrated a powerful influence on several organs and functions The anabolic properties of the hormone essential for the building of tissues and the growth of organs and animal were evidenced by increase in body weight and increase of weight in sexual organs thyroid liver and kidneys of the injected castrated rats The katabolic or disintegrating properties of the hormone were shown by the acceleration of thymus involution and by decrease in adrenal weight In this connexion the mechanism of the influence of vitamin A and its anabolic function were also investigated Paired feeding experiments were performed as a result of which vitamin A was shown to have in addition to an appetite producing principle an anabolic principle Both of these are essential for the building of tissues for increase in body weight and for growth of the animal

VITAMINS

Further work has been carried out with vitamin standardization Under the heading of Vitamin B Complex Dr H Chick Miss A M Copping and Miss H M Jackson have been unable apart from growth limitation to define any syndrome of factor Y deficiency This factor appears to be present in concentrates from brewers yeast Therapeutic trials with human cases have been carried out by Dr Lucy Wills with a series of tested fractions of the B complex It had already been found that marmite was effective in the cure of tropical macrocytic anaemia and pernicious anaemia of pregnancy Subsequently marmite with normal gastric juice was found effective in true Addison's anaemia a fact which suggested the possibility of the active fraction in this substance being identical with vitamin B Dr Wills's researches seem however to exclude any known fraction of the vitamin B complex as the active factor As regards the growth promoting and anti dermatitis functions of vitamin B_2 these two properties have now been shown to run parallel in a number of materials and to be equally affected by heat The relation between pellagra and wheat and maize still appears to be shrouded in mystery and no explanation is yet forthcoming as to why the disease should be associated with the consumption of maize rather than of wheat Miss E M Hume and Miss Henderson Smith studying carotene as a source of vitamin A have found that the solvent in which it is given is of considerable importance Coco-nut oil stands out easily as the best solvent

Antiscorbutic Principle

Dr Zilva has continued his investigations on the chemical nature of vitamin C As has already been stated in previous reports earlier attempts to isolate this substance from lemon juice have shown that active fractions possessed strong reducing properties Although there was some parallelism between the reducing capacity and the antiscorbutic potency this was not found to be the case in a great number of chemical fractions from lemon juice and it is still concluded that vitamin C and the reducing substance are not identical Further researches are however being pursued in this connexion A practical point emerges from experiments conducted on applying a low temperature to Bramley's seedling apples It was found that in the apples stored at −5° C the loss in vitamin C was very great in those stored at −10° C the loss was less but even then amounted to almost 50 per cent at −15° C there was a slight loss, and at −20° C no loss at all In these experiments the apples were stored for as long as seven months In another variety of apple King Edward VII the vitamin C content was considerably raised by lowering the nitrogen content of the fruit both by cultural methods and by barkringing the trees

OTHER STUDIES

The department for study and preparation of therapeutic serums has been concerned with the lethal action of Type I pneumococcus and with the titration of a Type I antiserum Drs Petrie and Morgan have assigned a provisional unit of protective value to the British Standard Serum by comparison with a standard liquid serum supplied by Dr Felton of Harvard The general results of experiments are as follows (1) The lethal power of a virulent test culture can be maintained within reasonably narrow limits and (2) the method which they have employed during the past three years allows of the titration of serums within reasonable limits of accuracy A horse has been immunized with a rough Type I pneumococcus Tested in mice the serum gave a slight but definite protection against the virulent Type I strain No evidence of reinforcement was found however when the serum was administered in conjunction with type specific serum The observation is of interest in indicating that the protective action of type specific serum in the mouse is directed almost exclusively against the capsular and not against the somatic component of the pneumococcus

Other researches include the isolation from Type I meningococcus of a polysaccharide substance which gives specific precipitation with the homologous precipitating serum at a dilution of 1 in 1 000 000 The characteristics of the endotoxin of the meningococcus have also been investigated The Institute is co-operating with the Medical Research Council and the Public Health Department of the L C C in the preparation of a serum for the treatment of poliomyelitis This is obtained from healthy donors who have suffered from the disease and is intended for use only in the preparalytic stage In the department of biochemistry Professor Robison and Dr Rosenheim have obtained interesting results in their study of the mechanism of ossification Dr Gulland has continued the work on the oxytocic hormone of the posterior lobe of the pituitary This hormone has not been isolated and financial as well as practical difficulties still stand in the way It is hoped however that investigation may eventually lead to the building up by synthetic chemistry of compounds which satisfy the experimental facts One interesting and useful aspect of these studies is the effect of proteolytic enzymes in destruction of the hormone

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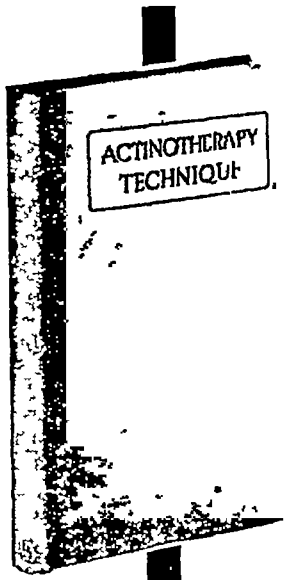

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SPA DEVELOPMENT AT HARROGATE

OPENING BY LORD HORDER OF A "SUN COLONNADE"

What was described as the first instalment of a "new Harrogate" was opened on June 17th by Lord Horder of Ashford. It takes the form of a delightful sun colonnade and other new buildings which add to the beauty of the spa and its amenities for visitors. For some years the corporation has had in mind the construction of a covered walk for the benefit of invalids so that on wet days they need no longer rest in the sulphurous atmosphere of the pump room. The project has now materialized in the shape of a colonnade, 600 feet in length, on the highest ridge of the familiar Valley Gardens. It is so situated as to obtain the maximum sunshine, and so built as to afford shelter from the occasional bleakness which reaches Harrogate from the Yorkshire moors. With a glazed roof and one open side, it is divided into three sections, enlarging at each division into a sun parlour or solarium. These sun parlours, fitted with 'vita' glass, heated electrically by wall and overhead panels, tastefully furnished, and decorated with palms and plants, are places where visitors may rest and enjoy the 'outdoors' feeling whatever the weather. At the end of the covered promenade, which, though built on high and uneven ground sloping downwards, is of the easiest gradient throughout, there is a large pavilion, with a big dome-light in electro copper glazing, of pleasant design and a veranda in front from which a view is obtained over a series of grass terraces and the rock garden. The cost of the completed portion of the scheme is £22,500, but the total project, which includes a general rearrangement in the neighbourhood of the old sulphur well and pump room, is expected to cost £60,000.

The Harrogate Corporation entertained as its guests nearly two hundred members of the medical profession from London and other centres. Those who came by special train from London were met on arrival by the mayor (Alderman Whiteoak) and the president of the Harrogate Medical Society (Dr. Laura Veale). The opening of the new buildings was made the occasion of a civic procession and other ceremonies, attended by the mayors of many Yorkshire towns. In handing to Lord Horder a gold key, Alderman Stott, the chairman of the Spa Development Committee, claimed for Harrogate a progressive spirit and a resolve to offer a "British cure for British people." He said that an entirely new and up to date pump room, close to the sulphur spring and worked in conjunction with the bathing establishment was envisaged. Lord Horder, who spoke as a friend and patron of Harrogate of many years' standing, said that the possibilities offered by the medicinal waters of this country were only beginning to be appreciated. Too long had we suffered the illusion that the rivers of Damascus were better than all the waters of Israel. If the tightening of purse strings had had no other good result it had at least constrained people to look at home for the means of health, and they had found that in the matter of spa treatment, at any rate the facilities were as good in Great Britain as they were abroad. But the provisions of Nature had to be made available and amenities must not be omitted. The influence of a beautiful and peaceful environment upon the promotion of health had never been more obvious, and this attempt by Harrogate to bring the gifts of design and adaptation to bear upon natural beauty was a recognition of that fact and a testimony to the wisdom of its authorities. Given, as in this case, the energetic and intelligent co-operation of the doctors, the municipal authorities and the townspeople, there was no reason why British spas should not be as successful and popular as their Continental rivals. Later in the afternoon the medical visitors were taken over the Royal Baths, members of the Harrogate Medical Society acting as guides. They were told that last year 120,000 various treatments were given, 86 per cent. of them under medical prescription. The number of different treatment methods is about one hundred, with the saline sulphur bath in various forms the most prominent. The peat mud bath is a relatively new introduction. The extent of the establishment was a surprise to many of the visitors, the staff employed numbers nearly 200.

The day ended with a banquet given by the corporation and the medical society and presided over by the mayor. The company was representative of the civic life of Yorkshire, the medical profession, and the press. The health of 'Harrogate, town and spa," was proposed by Major J. W. Hills, the member of Parliament for the division in which Harrogate is situated, who revealed the fact that free treatment at the baths is one of the perquisites of Harrogate's M.P. A reply was made by Dr. Wilfrid Edgecombe, who read an ode which he had composed many years ago on his first acquaintance with the Harrogate sulphur water. Dr. Edgecombe spoke of Harrogate's up-to-date pathological laboratory, its clinic for the investigation of disease, its Royal Bath Hospital with provision for spa treatment of necessitous patients, and its efficient organization for transfusion. The Royal Bath Hospital had, in conjunction with Leeds University, instituted a scheme for the appointment of a whole-time research worker, who would make his special subject the investigation of rheumatic disorders. Lord Horder, in his speech gave certain advice to spas, being careful to except Harrogate from any implied criticism. A complaint frequently made at British spas was that, although the doctors knew their job, the amenities of the place did not rank with those of Continental resorts. A second complaint was that bathing treatments cost too much; a third that not enough attention was paid by the hotels to special diets for patients, and a fourth that measures were not taken to put down noise, especially the noise arising from motor traffic. Lord Horder said that a resort might cater either for the seeker after health or for the hooligan, but it could hardly cater for both.

On Sunday morning the medical and other guests of the Corporation were taken to Fountains Abbey, where an address on the history of the abbey was given by Captain F. M. Sutherland. They then returned to London by special train.

OESTRUS-PRODUCING HORMONE

AN INTERNATIONAL STANDARD

The following statement has been prepared with the object of making known to all those interested that the international standard for the oestrus producing hormone, recently adopted by the Health Organization of the League of Nations, is now available for research workers, laboratories, and institutions in Great Britain and Ireland.

In July of last year a Conference was held in London under the auspices of the Permanent Commission on Biological Standardization of the Health Organization of the League of Nations, with the object of discussing the possibility of securing international agreement on standards of reference and units of activity for the sex hormones. While the Conference agreed that knowledge of the male sex hormone and of the hormones of the corpus luteum and of the anterior pituitary body is at present sufficiently advanced to permit of a standard of reference being established and a unit of activity defined for these substances, important decisions were reached in regard to the oestrus producing hormone. This hormone has been prepared in pure crystalline form from the urine of pregnancy in quantities sufficient to admit of chemical examination; it exists in two forms—a ketohydroxy form and a trihydroxy form—the first named being the more active by the ordinary methods of testing in producing oestrus in animals subjected to oöphorectomy.

The oestrus producing hormone has been the subject of extensive investigations in recent years and a state of confusion was developing in consequence of the adoption of different "units." As in the case of other substances exhibiting marked and specific biological activity attempts to define units in terms of animal reaction had only served to show that units defined on such a basis lacked uniformity, the unit varied not only from one species of animal to another but in the same species, was dependent upon the method of

administration and the method chosen for interpreting the result of the administration of the hormone

The Conference agreed that as in other similar cases the only safe basis for international agreement on a unit was the adoption of a standard substance in terms of which the unit could be defined The standard adopted by the Conference for international use is a quantity of the ketohydroxy form of the hormone in pure crystalline condition which is preserved at the National Institute for Medical Research London and the unit of activity is defined as the specific oestrus producing activity contained in 0 1 γ (= 0 0001 mg) of this standard preparation

In order to provide an adequate amount of material to serve as an international standard different countries have sent samples of the pure crystalline ketohydroxy form of the oestrus producing hormone to the National Institute for Medical Research London (acting for this purpose as the central laboratory on behalf of the Health Organization of the League of Nations) where the final preparation of the standard has been completed and arrangements have been made for the storage of the standard and for its dispatch to the central laboratories and institutions in other countries which have been nominated by the Health Organization of the League of Nations for local distribution

Institutions or individual investigators in Great Britain and Ireland requiring the standard for the oestrus producing hormone should apply to the Department of Biological Standards the National Institute for Medical Research Hampstead N W 3

INTERNATIONAL OPHTHALMIC CONGRESS IN MADRID

The fourteenth Concilium Ophthalmologicum was held in Madrid from April 16th to 22nd and was attended by numerous delegates from about forty countries At the first session inaugural addresses were delivered by the President of the Spanish Republic Professor van der Hoeksve (president of the International Council of Ophthalmology) and Professor M Márquez (president of the congress) who also read a message of greeting from the veteran Professor Ramon y Cajal Sir John Parsons on behalf of Great Britain and delegates from other parts of the world followed with official expressions of congratulation and good wishes

The first of the main topics for discussion—namely tuberculosis of the iris and ciliary body—was introduced by Dr E V L Brown of Chicago who criticized the failure in practice of such modern lines of local therapy as the use of x rays and the introduction of the patient's own blood into his anterior chamber Tuberculin had not been shown to prevent recurrences nor attacks in the other eye nor did it seem to influence favourably the intrathoracic infection Open air rest dieting and the promotion of a feeling of confidence would often cure the lesion Dr Igersheimer of Frankfort dealt with the pathological anatomy of this manifestation of tuberculosis and suggested a basis for classification The characteristic differences between the acute subacute and chronic recurrent types were he said attributable conceivably to immuno-biological conditions The third speaker Dr H Lagrange of Paris devoted his address to the recognition of this form of tuberculosis and its differential diagnosis—a matter of especial importance in the presence of diffuse and anodular iritis or iridocyclitis In the absence of any direct indications of focal infections and syphilis the diagnosis could be only a statement of probability since no special clinical signs had yet been defined The therapeutical test with tuberculin afforded the most dependable criterion The second main topic for discussion was retinal detachment This was introduced by Dr H Arruga of Barcelona who critically reviewed the aetiology and pathology paying special attention to the theories relating to choroidal exudation and vitreous shrinking He considered that the idiopathic form in the vast majority of instances was due to retinal lesions The medical treatment of the disease was reviewed by Professor G Ovio of Rome the principal lines being keeping the patient at rest in the dark diaphoresis the instillation of eserine or atropine electrolysis massage preparations of iodine subconjunctival and intravitreous injections and other means such as mercury adrenaline tuberculin and a salt free diet Operative treatment for the closure of the retinal hole was considered in detail by Professor A Vogt of Zürich Various methods were compared and the simpler procedures—ignipuncture with the galvanocautery and diathermy—were held to be likely to become the most popular Special advantages in certain circumstances were possessed however by each of the other lines of intervention Cauterization it was added might be dangerous if too prolonged

With commendable rapidity these valuable addresses have now been published in full in two volumes fully documented and excellently illustrated A third volume contains the contributions made during a session on trachoma in which the progress of the campaign against it in various countries was described One attractive feature of the congress was the publication each day of a bulletin this summarized the proceedings of the previous day and announced details of the programmes of the current and following days As a souvenir an album of the names descriptions and photographs of those taking part in the congress was prepared and distributed

ROCKEFELLER MEDICAL FELLOWSHIPS

The Medical Research Council announces that on behalf of the Rockefeller Foundation it has made the following awards of travelling Fellowships for the academic year 1933–4 These Fellowships are awarded to graduates who have had some training in research work either in the primary sciences of medicine or in clinical medicine and surgery and who are likely to profit by a period of work at a chosen centre in America or in special cases in Europe before taking up positions for higher teaching or research in the British Isles

HAROLD WILLIAMS FULLERTON M B Aberd Department of Medicine University of Aberdeen

MARGARET HONORA ROSCOE B Sc Lond Lister Institute London

DONAL SHEEHAN M D M Sc Manch Department of Anatomy University of Manchester

SOLLY ZUCKERMAN D Sc Lond M R C S Department of Anatomy University College London

Dr Sheehan's Fellowship is tenable at Montreal the others at centres in the United States

England and Wales

Hospital Conference at Bath

Bath maintained her well-earned reputation of ideal hostess when the British Hospitals Association and the Incorporated Association of Hospital Officers held their annual conference there on June 8th 9th and 10th There was a large attendance and papers of interest were read and discussed Under the chairmanship of Sir Harold Pinl the council reported that the membership was now 1 300 and that 640 hospitals were associated The first paper was by Mr G T Whiteley (King's College Hospital) on pay beds in hospitals He mentioned that there were no 1 680 pay beds in London but this was not enough to supply the demand in his opinion the best system was the separate block and the time would come when the general practitioner would be allowed to attend his patients in hospital Dr C E S Flemming said that pay beds would enable the general practitioner to attend some of his patients in hospital it was important to himself and to the public for him to have the advantage of an institution The young medical man of to-day inherited a vast fortune of scientific and technical knowledge but in practice he was disheartened to find that he was so often unable to use that knowledge for the benefit of his patients The Royal United Hospital Bath had to some extent met the difficulty for it had associated with it the Forbes Fraser Hospital a pay bed hospital of 72 beds which was used by general practitioners as well as by specialists Mr C H Terry Bath

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read a paper on the institutional treatment of adult cases of surgical tuberculosis He prefaced it by well chosen words on the importance of friendly co operation between the administrative and medical staffs of voluntary hospitals He advocated special wards and special hospitals for the treatment of these cases, which occupied the ordinary beds for an undue length of time On Friday, June 9th, interesting papers were read by Mr Rowse Mitchell (Chester Royal Infirmary) and Mr C M Power (Westminster Hospital), on hospital systems and administration in other countries, and on the Road Traffic Act Saturday morning was occupied by a debate on "The Area Problem of the Contributory Schemes," but this was, in fact, a discussion of the policy of the Hospital Saving Association The subject was set out in a report dealing with the negotiations between the British Hospitals Association and the H S A regarding the difficulty that had arisen with certain provincial hospitals This report only came into the hands of the members at the beginning of the meeting Part of the report, issued at the invitation of the British Hospitals Contributory Schemes Association, stated the policy of the H S A and the method by which it proposed to meet the difficulty that had arisen The report also included a memorandum of the B H A with recommendations for the consideration of the meeting There was a long discussion, in which was pointed out the injury that would be done to local contributory schemes if an opposition scheme was set up in the same area There was obviously a strong feeling against the action of the Hospitals Association, on the other hand, there were those who, like Mr Lamb, thought that the B H A had been more sinned against than sinning Dr Flemming said that the solution of the difficulty was to ensure that in every area there was a satisfactory contributory scheme, and that these schemes were properly co-ordinated and reciprocated, that the voluntary hospitals were now so dependent on contributory schemes that their supporters could not afford to be divided, and he proposed that the council of the B H A be requested, in conference with the Contributory Schemes Association, to formulate a proposal to solve the present area difficulty Another proposal, moved by Mr Stamford Hutton of Gloucester, that the recommendations in the report of the council be endorsed, was put first, and agreed to The original motion was dropped, and it was left to the council to take the course it considered best

There are many medical members of the British Hospitals Association, and it is a pity that more of them do not attend the annual meetings Their contribution to the discussions would often be of value, and for them to meet with the administrators of the hospitals on mutual ground and in free debate would be instructive to both sides, and help to advance that friendly co-operation which is so much desired

International Congress of Urology

The International Society of Urology, which, as previously announced in these columns, is holding its fifth annual congress in London from July 10th to 15th, was founded in 1919 Previous congresses took place in Paris in 1921 in Rome in 1924, in Brussels in 1927, and in Madrid in 1930 Nearly every nation is represented in the society, but the number of members allotted to each nation is strictly limited Only members may take part in the congresses At the coming one the president is Sir John Thomson Walker, and the vice-presidents are Professors Leon Kogen of Belgrade and P N Hansen of Copenhagen The first day will be devoted to business, but the president will give a reception in the evening at the Dorchester Hotel, Park Lane On Tuesday July 11th, Prince Arthur of Connaught will formally open the congress at the Royal Society of Medicine This will be followed by a discussion on tumours of the renal pelvis and ureter, initiated by Professors Salvador Pascual of Madrid and F Van den Branden of Brussels and Mr Swift Joly The discussion will continue through the afternoon In the evening the President and Council of the Royal College of Surgeons will hold a reception at the College in Lincoln's Inn Fields The morning and afternoon of July 12th will be devoted to the consideration of pyelography by the descending route, the opening speakers being Professor von Lichtenberg of Berlin and C Ravasini of Trieste, and Mr R Ogier Ward A banquet will be given in the evening by the British section in Merchant Taylors Hall The surgery of the neck of the bladder will be the topic for discussion on July 13th, it will be introduced by Professors G Marion of Paris and J Weijtland of Amsterdam, and Mr Kenneth Walker In the afternoon there will be a reception by the Lord Mayor at the Mansion House, and another by the Government in the evening at the London Museum Friday, July 14th, will be spent in a visit to Oxford On the final day of the congress there will be a general assembly at the Royal Society of Medicine, followed by the reading of independent papers, including one by Dr Edwin Beer of New York, on the value of ureteral reimplantation in the bladder Further details are obtainable from Mr J Swift Joly, F R C S, 80, Harley Street, W 1, who is secretary of the congress

The Wrightington Hospital

On May 10th members of the Lancashire and Cheshire Branch of the British Medical Association had the opportunity of visiting the Wrightington Hospital, near Wigan The hospital, which exists for the treatment of tuberculous disease, contains 226 beds, of which 126, housed in three one-story pavilions, are for adults, 92, in two one story pavilions, for non-pulmonary cases among children, and 8 comprise an isolation block For "dispensary" purposes Lancashire is divided into five large areas (average population, 320,000 each) and three sub areas Each large area is under a consultant tuberculosis officer, with a staff of assistants and health visitors The officers also do hospital work, and the medical superintendents undertake some dispensary work—for example, the medical superintendent of the Wrightington Hospital is responsible for the dispensary work in the Wigan county sub area The Lancashire County Council's scheme provides for the treatment of tuberculosis—pulmonary, non pulmonary, and mixed Dispensary registers at the end of 1932 showed 4,357 pulmonary and 3,531 non pulmonary cases Cases of actual or suspected tuberculosis are referred to the tuberculosis officers at the dispensaries, who recommend treatment at appropriate institutions—lung cases at sanatoriums and pulmonary hospitals, and surgical cases at special (for example, Wrightington) and general hospitals Pulmonary cases occupy 689 beds, non pulmonary 301 Modern methods of treatment of non pulmonary tuberculosis in the county show that of 2,600 patients treated for this condition during the years 1920–4, 75 per cent have now recovered or have the disease quiescent

National Baby Week

Since its inauguration in 1917 Baby Week has been celebrated annually, and the seventeenth of the series will continue from July 1st to 7th It is proposed to concentrate special attention this year on the ways and means of preparation for parenthood and on the furtherance of the aims and objects of the Central Union of Fathers' Councils, with the intent to promote the formation of more "fathers' committees" at infant welfare

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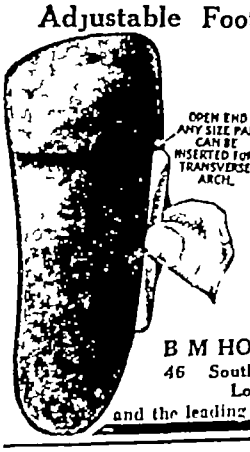

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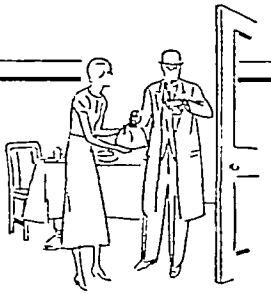

OF all married women, yours is perhaps the most difficult task Your husband may be the soul of consideration, but his patients certainly are not Any hour of the day or night he is at their beck and call—consultations here, visits there Likely as not, when he seems to have a quiet hour or two for dinner, the 'phone rings and in ten minutes' time the car is at the door and he's away again

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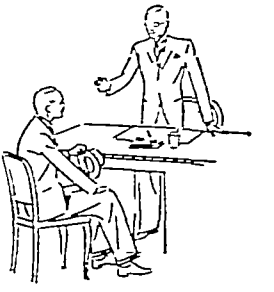

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centres throughout the Empire It is hoped that these subjects will find place in local and national propaganda programmes for treatment in lectures discussions articles in the Press and in sermons A conference on maternity and child welfare organized by the National Association for the Prevention of Infant Mortality is to be held at the Friends House Euston Road N W on July 5th to 7th Mr A M Hendry assistant surgeon to the Shropshire Orthopaedic Hospital will speak on team work in the discovery of the cripple Dr W A Bullough county medical officer of health for Essex will discuss the possibilities of propaganda in rural areas Dr E H T Nash medical officer of health for Heston and Isleworth will indicate ways and means of propaganda with special reference to immunization and Dr Harold Waller will deal with the diet of the child after the period of milk feeding In connexion with this conference visits are being arranged to child welfare institutions of different kinds During the whole week there will be displays of propaganda films in London Further details of these and other information may be obtained from the offices of the National Baby Week Council 117 Piccadilly W

Scotland

Dundee Royal Infirmary

The annual meeting of Dundee Royal Infirmary was held on June 12th Mr D A Anderson presiding The main feature of the meeting was the statement by the chairman that the reserve funds of the institution were now exhausted through the writing-off for some years past of the deficits in the annual accounts The hospital had been working at a loss of £10 000 per annum and this gulf between income and expenditure must be bridged if the hospital was to continue to provide the same service as before An appeal had been made last March both to employed persons and to employers of labour for the organization of regular weekly or monthly contributions This appeal had met with a response in a few instances but in the majority of cases nothing had been done so far There was still time before the end of the financial year to rescue the Royal Infirmary from this position but unless either employers or employees rose to the occasion the services of the hospital would have to be curtailed Something definite and regular in the way of income was essential in the future

Maternal Mortality

The sixteenth annual meeting of the Scottish Midwives Association was held at Hamilton on June 10th when a civic reception was given by Provost Andrew Brown and the magistrates Mrs Millar Glasgow occupied the chair and Dr J Hume Paterson medical officer of health for the county of Lanark delivered an address in the course of which he said that measures were being taken by local authorities to frustrate attempts at midwifery work by unqualified persons In Lanarkshire such unauthorized practice had almost ceased It was a tragic feature of the social life of the country that despite the recent advances in the attention which was given to the health of expectant and nursing mothers the maternal death rate had shown practically no improvement There had however been a decline in 1931 which was very satisfactory An analysis of 248 maternal deaths in Edinburgh during the years 1924–8 had shown that the death rate among mothers who had had no prenatal supervision was twice as great as among those who had received this supervision

Ireland

Public Services (Temporary Economies) Bill

In the recent debate in the Dail on the Public Services (Temporary Economies) Bill Mr P McGilligan (National University) moved an amendment to exclude medical officers in the services of local authorities from the scope of the Bill There could he said be no question that this measure was intended to apply to medical officers or that as drafted it carried out that intention The medical men affected by the Bill had met to consider their present position under the local authorities and the adverse change which would be made if the measure went through The meeting had been given a certain amount of publicity in the Press and a memorandum had been circulated he thought to all deputies of the House In that memorandum they dealt with the various sections of the medical profession attached to local authorities the county medical officers of health and their assistants medical officers in the mental hospital service county hospital surgeons and finally the Poor Law medical officers or as they were better known the dispensary medical officers He had asked previously whether it was intended to cut the fees for the registration of births deaths and marriages and the fees in relation to the Vaccination Acts the only satisfaction he had received was to be told that these fees were to be cut though there was some dispute as to whether they would be cut under Part II or Part III of the Bill However the doctors made their case apart from the distinction of the groups into which they divided themselves They said that their position differed from that of other people affected by the Bill such as lay civil servants Civic Guards school teachers and so on They were members of a learned profession—that is they had been required to spend many years of study in order to equip themselves even technically for the posts they held These posts required rather specialized qualifications and the ordinary doctor who did not become qualified until he was somewhere between 22 and 23 years of age could not get any experience which would be counted sufficient for them In addition he had to have considerable experience of a post-graduate type and it was now generally required that those appointed to public positions should have the Diploma in Public Health That again entailed special study and meant that a medical man had to attain that position in which he could leave his practice to study in Dublin or in one of the other university colleges for the diploma It was no small thing to ask a young man who had just entered the profession to do this Not only was this diploma necessary but the struggle for public appointments was so great that applicants required also to have had considerable experience in actual public health work This meant a visit to England or the Continent to acquire an experience in some way related to the work or the activities they would afterwards have to perform and a consequent postponement of the date on which they could be ready to make application Moreover it was unusual for a medical man to succeed on his first application The result was that when he did secure an appointment he entered the public service at a much later age than say lay members of the civil service and the period to which he had to look forward for the purpose of making savings or securing a pension was very short This made it all the more necessary that he should save substantially before taking up any of these posts

The medical teachers in the university—and Mr McGilligan presumed that they came under this also—had to be specially commented upon It had been recognized everywhere that their salaries had been cut as far as

they could be The universities, whose financial resources had been somewhat cramped, had not been liberal towards anybody who could be described as a part-time teacher, and medical men were among that group It was not possible to save out of what they received from the university These men needed a certain amount of leisure They nearly all had the work of an outside practice to add to that of teaching and examining If without adequate leisure neither their teaching nor their professional work would be up to the standard expected of them If the emoluments from university chairs were insufficient to pay a professional man for the loss of his time the best men would not offer themselves for appointment, and those instructing the youth of the country would not be those from whom the best medical knowledge could be derived The county medical officers of health constituted one of the newest of the medical services It was definitely laid down with regard to these posts that in order to be qualified a man must hold a D P H after completing a two years' course The only place where he could get the necessary training in administrative work was still England, or the Continent Having secured an appointment in England, he was induced to resign, surrendering promotion chances and pension rights, and to take up a position in the Free State, where the salaries were much smaller, and where, it could also be said, the work was harder in the sense that there were probably more cases brought under a doctor's notice It could be readily seen why these salaries were fixed on a low scale Anybody who looked back on the time, not so long ago, when these positions were established would remember that the county boards of health did not, at the start, favourably receive them In order to gild the pill as much as possible for the local authorities who had to foot the bill the salaries were scaled down in an extraordinary way The officers who first took up the appointments were told that if they were successful in their work, and if they succeeded in impressing on the minds of the people in the locality that their work was of benefit, then they could count upon a betterment of their conditions and particularly, upon a rise in their pay It was now proposed to have the salaries of these men cut still further When the salary was first fixed there was an association of county medical officers of health After meeting and discussing the matter they passed a recommendation to the effect that £800 should be regarded as the minimum at which any one of them should take up the work The scale was then fixed The county medical officers of health had assistants, and whatever was said about the medical officers themselves applied with much greater force to the assistants Their present salaries were far too small to permit any deduction The work they were engaged on was mainly connected with tuberculosis and the inspection of school children and school clinics work which had always been regarded as of the utmost importance The assistants, however, were paid at scandalously low rates, which it was proposed further to reduce Those in the mental hospital service had been suffering from a peculiar disadvantage for years past Their salaries had always been regarded as very low in comparison with those paid in England and the allowances they received which counted for pension purposes, were also rated very much lower The people who secured those positions did so at a relatively late period The peculiarity of the new situation was that under the Local Appointments Commissioners it was a rarity—if, indeed, it had ever happened—for one of the senior medical officers in the asylum to secure any of the better appointments Invariably the younger men obtained the posts and the older men were left to follow along as before The surgeons in county hospitals were also paid on a very low scale for years they had been agitating for a betterment in their conditions Their grievance had been that they were supposed to be specialists in certain work, and yet they received rates which would be offered to very junior people going into practice for the first time These county hospital surgeons had to be expert so far as surgery of the eye, the ear, the nose, and throat was concerned, they had also to be expert in abdominal surgery In recent years they had been asked to undertake x-ray and pathological work Notwithstanding all this, there had not been any change for the better in their salaries Now it was proposed to reduce their poor emoluments In regard to the salaries of dispensary doctors these had been the subject, he supposed, of meeting after meeting, agitation after agitation, and of many deputations to the Government The salary started at £175, rising to a maximum of £300, in some instances it started a little higher, and in exceptional cases it rose to £350 a year, but that maximum included out of pocket expenses As far as the present depression was concerned doctors had got to the point of admitting that they would rather not get a call from a private patient Even Ministers themselves knew that there was a special case to be made for dispensary medical officers

Professor J M O'Sullivan (Kerry) said he wanted to stress one particular case put forward by Deputy McGilligan—the case of the dispensary doctor Anyone connected with the establishment of the public health services knew that the salaries of the county medical officers of health were fixed as low as possible owing to the great difficulty in getting a number of county councils to have them at all They were really calling upon men to do very expert work and not paying them properly He asked the House to consider how these dispensary doctors were hit at present, in the first place by the increased income tax, and in the second because they were getting no payment for private practice

The amendment was defeated

CORRESPONDENCE

Unqualified Medical Practice and the Medical Curriculum

SIR,—Certain recent legal decisions and dicta seem to foreshadow a new orientation of unqualified to qualified medical practice, the tendency of which is to reduce to vanishing point the differentiation between "registered" and "unregistered" medical practitioners In the present state of the law any person, whether he has had any professional training or not, can assume the titles of "physician," "surgeon," "medical practitioner," "doctor," and can practise medicine with impunity so long as he does not claim to be a "*registered* medical practitioner" This single restriction on his freedom, meagre as it is, is rendered largely nugatory by the circumstance that considerable sections of persons although "unqualified" now claim to be "registered" the 'registration" being by unofficial corporations with no statutory status such as is possessed by the body dealing with "registered medical practitioners"

The object of the Medical Acts (which was not to prevent unqualified practice but to distinguish clearly in the interests of the public those who had had an accredited professional training from those who had not) has been thus practically defeated It follows inevitably from these facts that in the public mind there is very little distinction between 'registered" and "unregistered" medical practitioners the prejudice being often in favour of the latter group But there is notwithstanding this prevalent feeling still a very real and important difference To secure the lowest registrable medical qualifica

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tion students (1) must give evidence of a general education of matriculation standard (2) must spend a minimum period of five and a half to six years in subjects of professional study prescribed and regulated by a statutory body at institutions sanctioned by an impartial inspectorate (3) must pass a series of examinations which are also inspected and supervised by the same statutory body the requirements of which progressively increase with the inevitable result that the duration of preparation also rises None of these conditions obtain in the case of unregistered practitioners The expense of this prolonged preparation for registration has become so onerous that for the past twenty five years the State has been called upon to subsidize ever more heavily the medical education which leads to registration The grant made by the State for this medical education now bears a proportion to its actual cost which varies from an average of 40 per cent at a general medical school to 80 per cent or even more in the case of some special schools The aggregate public expenditure thus incurred is a very serious and growing burden upon the community already so grossly overtaxed Furthermore the cost in money and effort to the individual student seeking to become a registered medical practitioner must be added to the ever mounting sacrifice which registration entails

If then the ultimate product of this very expensive education differs so little (in public estimation at any rate) from the product of methods of preparation which may not involve a tithe of that cost in money and effort it may not perhaps be worth while either on the part of the public or of the profession to persist in that production In point of fact the dissatisfaction among both teachers and students with the curriculum now required for registration has become acute At a very fully attended meeting of St Mary s Hospital Medical Society held on May 19th 1932 the following resolution was passed by a large majority That the present system of medical education does not produce an efficient practitioner Again at a recent meeting of the Students Union of Edinburgh University after a discussion opened by Dr Chalmers Watson a still more sweeping resolution was passed with only seven dissentients in a very large assembly

That this house places on record its opinion that the present system of medical education in this country is unsatisfactory In its opinion important changes in the curriculum are essential whereby more facilities for instruction in practical medicine are available and more assistance given in the principles and practices of preventive medicine The time required for this additional teaching can in its opinion be obtained by a judicious modification of the teaching in the earlier scientific subjects with some revision of the time and attention devoted to the teaching in the specials department of medicine and surgery —*The Student* June 2nd 1933

At the present moment a committee initiated by the University of London and comprising representatives from all the qualifying bodies which examine students educated in the London medical schools is sitting to offer suggestions for dealing with that dissatisfaction In an admirable address given at St George s Hospital last October by Dr Le Fleming Chairman of the Representative Body of the British Medical Association a very weighty plea was made for a quite different curriculum suited to the needs of general practitioners who form such an enormously large majority of the profession It is clear that a movement in the direction of establishing a much shorter and simpler curriculum better designed for fitting the average general practitioner for the work he has to do than the present overloaded course which would seem to have as its goal the production of specialists rather than of general practitioners is gaining ground rapidly and it is significant that the British Medical Association has instituted its own committee for investigating this question from the point of view of the general practitioner I suggest that in this movement may be found a possible solution of the present position unsatisfactory alike to registered and to the better class of unregistered practitioners

It must surely be obvious that any person claiming to treat disease and to be paid for doing so should be required to have had some training the value and scope of which can be attested by an impartial inspectorate operating in this country [The Osteopaths Bill at present before Parliament seeks to put on an equal footing with British qualifications foreign courses of study and foreign diplomas the standard of which is incapable of assessment in this country] That essential training must provide some acquaintance with the functions and framework of the body some experience of disease as an entity some initiation into the principles of preventive medicine and public health work wholly neglected by the present curriculum some expert knowledge of how to use material required in medical and surgical treatment Such preparation would probably call for something like four years study tested by examinations of an appreciably more restricted scope than is enforced at present for the minimal registrable qualification and should be compulsory for *all* persons desiring to practise medicine or surgery whether proceeding to registration or not This minimal training would be sufficient in the opinion of many expert authorities to afford a safe entrance upon the general practice of medicine and surgery and should be awarded registration under the Medical Acts I have sketched in outline the general principles of such a curriculum in an address given last October and published in the *Journal of State Medicine* in February 1933 The more ambitious man who wished to take a university degree in medicine or to qualify himself for any particular specialism or for research work or for holding an appointment at a teaching hospital would follow further courses of study as a post graduate student The complexity of modern medicine is such that it is quite impossible any longer to pursue the ideal hitherto seemingly cherished by medical schools and examining bodies that a student before qualification must possess some knowledge of every branch of medicine and surgery both general and special Under the present dispensation and even with a constantly increased period of study all that can be imparted is a very inadequate smattering of any particular item and the knowledge of the three essential subjects for qualification—general medicine general surgery and midwifery—has as examiners are everywhere complaining also become dangerously superficial

Whatever may be the solution ultimately adopted I hope I have made it clear that it is high time in the interests both of the public and of the profession to overhaul our present practice —I am etc

E GRAHAM LITTLE

House of Commons June 9th

Transitory Arthritis of the Hip in Children

SIR —Mr R W Butler s interesting paper in your issue of June 3rd (p 951) is of special value in drawing attention to the large proportion of non tuberculous affections of the hip joint in childhood as compared with the number of true tuberculous cases The pathology of the type of case aptly termed by Mr Butler observation hip is obscure as suggested by him it is probably that such cases occur as the result of several diverse pathological processes Of recent years I have been led to believe that some of the cases are a sequel of a mild and aberrant attack of encephalitis lethargica These have occurred with greater frequency at periods when epidemics of this has been prevalent and in several of my cases there has been a history of disturbances of sleep alteration of

disposition, and the like The local symptoms have been marked by muscular spasm in the neighbourhood of the hip sometimes associated with a spasmodic posture of the lower part of the spine resembling hysteria I notice that two of Mr Butler's cases presented hysterical postures In my cases the posture was more consistent than is usual in hysteria , in one case definite mental changes subsequently showed themselves Other special features were abduction or inversion of the hip-joint greatly disproportionate to the severity of the other symptoms

It is difficult to form a definite opinion as to the part played by encephalitis in these cases, because the acute phase of that disease in young subjects may be in the highest degree insidious, and may even pass unnoticed It would therefore appear desirable that in all cases of " observation hip " careful inquiry should be made as to preceding symptoms, such as disturbance of sleep, transient diplopia, clonic movements, or alteration in disposition —I am, etc ,

Sheffield June 15th R G ABERCROMBIE, M D

"New Treatments for Old"

SIR —I should like to endorse very heartily the sentiments of the letter written by Dr W F Lloyd (June 10th p 1024) Being a general practitioner of some twenty-seven years' standing, and during that period having tried very many new drugs for the ever-recurring everyday ailments, I have learnt a wholesome spirit of scepticism, but that does not deter me from welcoming some of these which have rendered me Trojan service Among the latter are two whose merits are now under discussion—namely antibacsyn or its equivalent edenwil, and S U P 36 We should, of course, keep careful case records and statistics but even these may be misleading in epidemics such as influenza, which vary so much in severity We do, however, accumulate evidence of the value of a remedy—which to my mind is more convincing than statistics—from certain individual cases, that is, patients who have also acquired a wholesome scepticism from the recurring nature of their maladies May I give an example of this type of evidence

A woman of 45 stout and slightly inclined to be glycosuric has been attended by me for many years Every spring she is afflicted by carbuncles on the back which usually keep her in bed for about three weeks I have tried all the usual treatments and up to three years ago had most success with injections of manganese butyrate For the last three years I have given injections of edenwil or antibacsyn She never calls me in until the carbuncle is well developed but not discharging and her temperature about 101° F She now insists on having this remedy and tells me that after an injection of 2 c cm in the morning she always applies a double dressing that night knowing that there will be a very copious discharge The temperature will be normal in the morning, and her time of recovery is now limited to one week from the time of the first injection Neither the patient nor I have any doubt about the efficacy of the drug in her case The local treatment has always been the same—namely ung hyd nit dil There is but little scope for faith cure in this type of case I have never had to incise a carbuncle or boil since using this treatment and must have employed it in scores of cases also recurrences are very rare if three doses have been given ,

Then again, with another of these remedies so much mistrusted by Lord Horder—S U P 36 After a trial of over four years this seems to me invaluable in certain cases often of a dangerous character The firm producing the drug complained some years ago that it was brought into disrepute by practitioners who used it in conditions for which it was unsuitable While no panacea, to my mind it is invaluable in certain cases Some individuals are refractory to it, but to these it does no harm and I hope gradually to recognize the types which do not respond It is invaluable in all bronchopneumonias of children, and will never fail to produce the measles rash in a case where it is sometimes desirable to do so—that is, if the child is really ill, with a high temperature, is bronchial, and the rash delayed The whole condition is wonderfully improved twenty hours later at most

With influenza we can again sometimes get the evidence from the patient himself There is the class of patient who gets influenza regularly every year throws it off with difficulty, and remains feeble and often depressed for some time afterwards After treatment with S U P 36, given early in the case, many of these patients have volunteered the information that the after effects of their attack, and especially the depression, have been much lessened One does like to have a reason for the faith that is in one, and from this point of view I have studied three volumes of McDonagh's work *The Nature of Disease*, and tried to understand the theory of the action of the S U P 's and other remedies This proves very interesting, but mainly beyond my grasp

We general practitioners get very tired of treating these common maladies with the same old remedies, which we know to be only palliative *Plus ça change plus ça reste la même chose* Intelligent patients are fully aware of this, and many treat themselves for recurring troubles, using the prescriptions we have given them for years —I am, etc ,

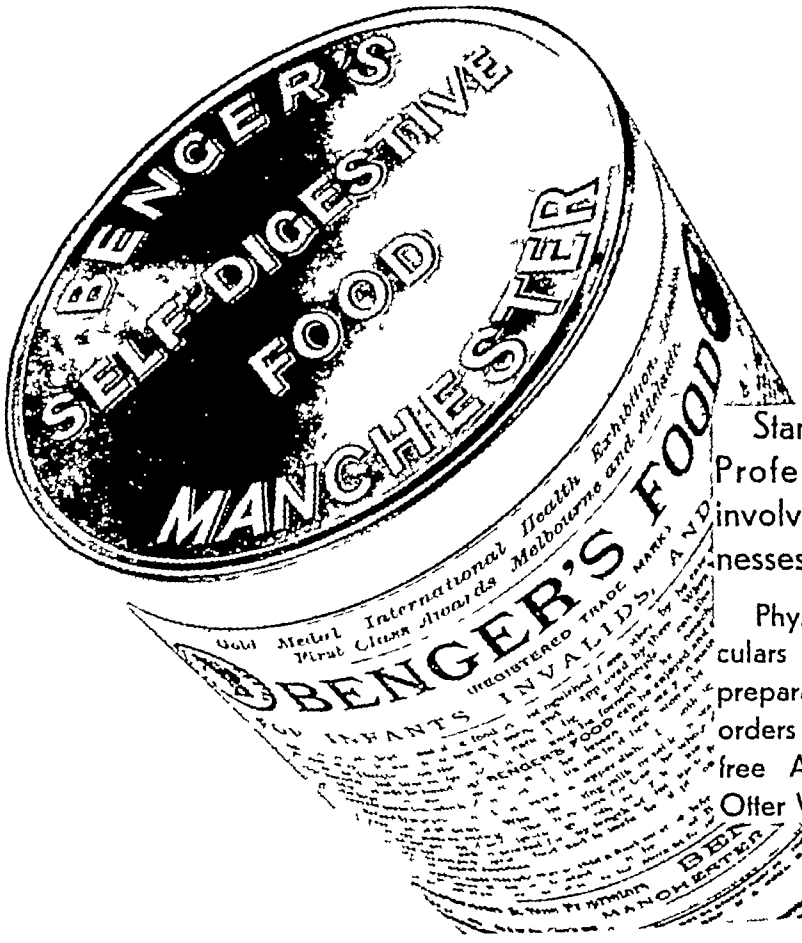
Oxford June 10th D C NASMYTH

SIR,—I am surprised at the depth and extent of the therapeutic pessimism displayed in this correspondence so far For Dr Lloyd and those who think with him one can only " shed a bitter tear " and marvel at their courage in taking any food to appease their hunger when " the constitution of the molecules of proteins, hormones, vitamins etc , is so obscure "

Dr Julian's letter to-day is of a different class He has studied the working of the mind He has also apparently studied our profession, and come to the simple conclusion that we are all gullible fools For he would have us believe that the " master key " in the treatment of influenza and furunculosis is suggestion Now my mother has told me that when a child her warts were charmed away by a genial uncle, but I am perfectly sure that if Dr Julian had a bad attack of influenza, or a boil on the buttock, he would need something stronger than charms and suggestion before he felt that his condition had been adequately treated

I must confess that there seems something strange in the implications of Dr Julian's letter that I, who have been entranced for hours watching and hearing the great " J J " lecture in the Cavendish Laboratory, who have sat at the feet of both Allbutt and Rolleston, that I and thousands like me should be considered absolutely ignorant of the need of controls, utterly devoid of the critical faculty, lacking even a modicum of *common sense* Such an implication, I say, seems strange , it makes nonsense of university and medical training, just as—for the matter of that—Dr Julian's letter makes nonsense of *most* of medical precept and practice To become a G P does not necessarily mean to become a general paralytic In spite of the paralysing effect of festoons of panel and other red tape, of little intellectual society, and still less leisure, there are practitioners who try to keep up with new work, and try to add something to medical science as well as relieve the sufferings of mankind Like many other practitioners, I have women patients who have been relieved of a " wind in the bowels " only to find it has become a " wind in the head " or the toe, but I have never yet heard of an eczema being " driven inwardly " and causing nephritis or myocarditis Apparently we don't see these things in the country

I will however, with your permission relate a little story It is not intended to be convincing but it is at least true On Christmas Day three years ago I woke up



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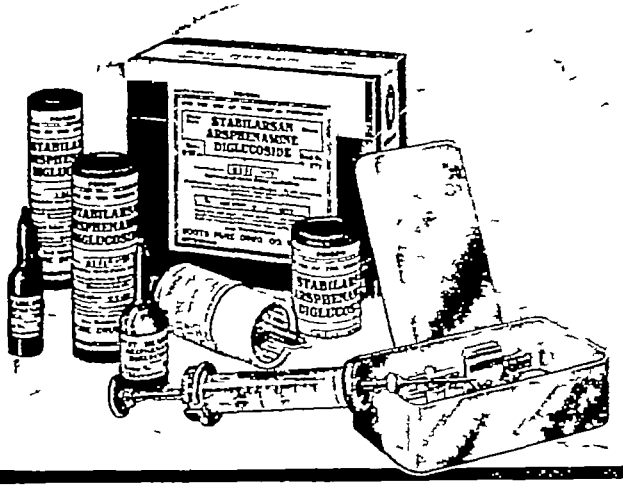

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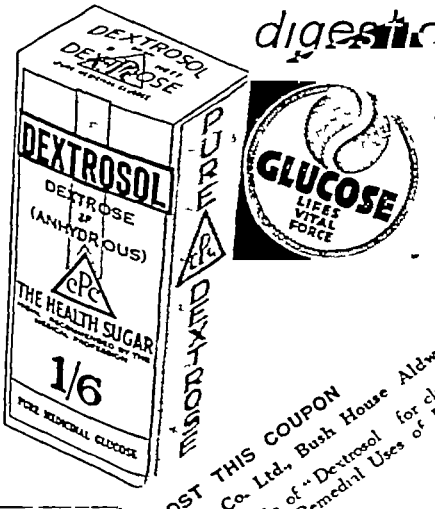

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to find that my little daughter aged 5½ months had a temperature of 104° and well marked bronchopneumonia She was at once given an ampoule of omnadin and the more usual treatment for her condition Next morning her temperature was normal and remained so and we never had the least further trouble with her If Dr Julian's assertion that this was due to suggestion is correct I can only say that at that tender age she was more susceptible to suggestion than she has proved since (Incidentally if the action of these drugs is due to suggestion, how is it that they act equally well if given when the patient is asleep?) Dr Julian will however find proof of the evil done that day in the fact that nearly three years later she developed an acute appendix The abundant fluid found in the abdominal cavity at the operation was undoubtedly that which we so summarily drove out of her chest three years before This theory however does not explain why she should have been so amazingly well in the meantime

Yet Dr Julian will at least admit that to produce such results it must have been a powerful drug and here I am entirely at one with him that these things need to be used with great care and discrimination That is why guinea pigs and cats are used so that by giving overdoses we may find where harm is likely to show itself and so avoid damage in therapeutic work Incidentally the reason we do not give medicines as he suggests to normal men is because our object is not to make men ill but to make them well

I do not for one moment suggest that the newer therapeutic remedies have come to stay Far from it Most of them only point the way to better things But that there has been an enormous advance in therapeutics recently I think no unprejudiced person can deny All honour therefore to those firms who are providing remedies many of which they know will soon be superseded And may we as doctors do our best with what we have got, instead of croaking because we have not got what we believe may come in ten or fifteen years time — I am etc

Winsford June 17th W N LEAK.

Vaccines in Coryza

SIR —The results obtained by Dr Hoyle in the employment of autogenous vaccines for the treatment of acute coryza may deter many practitioners from using stock vaccines in the treatment of that condition Dr Hoyle's failure to record better results may be due to (1) the composition of the vaccine and (2) the severity of the cases with inadequate number of injections and wrong dosage

I have used a stock vaccine for a number of years to protect patients against recurrent coryzal attacks and although I cannot give any accurate statistics I believe that I am safe in stating that at least 70 per cent of patients inoculated can be protected The majority can be protected by three injections at weekly intervals but there are others who require further injections at fortnightly or monthly intervals In severe cases it is sometimes necessary to give as many as eighteen to twenty A patient who suffered from almost continual attacks—he informed me that he used twelve handkerchiefs daily —was completely cured by a course of twenty injections He has remained free for more than three years But the proof of the efficacy of vaccine treatment lies in the fact that a large number of patients demand it annually

Dr Hoyle does not make it clear at what stage of the coryzal attack he treated his patients If in the acute stage it is quite apparent that he blundered in administration It is impossible to protect a patient who is suffering from coryza with three injections Indeed it is not safe to attempt to protect a patient who has any signs of coryza with what Dr Hoyle has evidently done—prophylactic dosage When any signs of coryza exist it is necessary to start with a small dose—for example 1/10 c cm —and to repeat every fourth day by doubling the dose until 1 c cm is reached and then to give the full dose at weekly intervals Care however should be exercised in increasing the dose as this must be regulated by reaction which must if possible be avoided The full protective dose and the number required vary according to individual susceptibility which is the important guide to successful treatment. It appears to me that an omission in Dr Hoyle's vaccine is the *Micrococcus catarrhalis* this I believe to be the precursor of all coryzal attacks and the other constituents secondary —I am etc

Edinburgh June 10th FREDERICK POPTER

Mind and Body

SIR —It was with especial interest that I read Dr C M Billington's remarks on my paper Experiences with Proteose in the Treatment of Diseases of the Skin as it came to my notice immediately after a morning's teaching in the out patient department in the course of which I had remarked to my students that a psychological factor is present in many cases of chronic urticaria In one case the patient's husband was in hospital suffering from carcinoma and she was paying daily visits to the hospital which was some distance from her home When her husband returned home and there was some temporary improvement in his condition in patient's urticaria almost disappeared It will be seen therefore that Dr Billington and I are so far in agreement I did not discuss this matter in my paper as I wished to keep to the subject of experiences with proteose —I am etc

Bristol June 15th NORMAN BURGESS M D M R C P

Control of Tuberculosis

SIR —One cannot help but be impressed by the large amount of investigation that is being made into the *raison d'être* of tuberculosis and your report of the Tyneside inquiry under the heading Causal Factors in Tuberculosis in your issue of June 10th (p 1018) is just another example But surely there is sufficient evidence that poverty with its concomitant factors —overcrowding under nourishment etc —is certainly a *predisposing* factor in the incidence of tuberculosis On the other hand tuberculosis does occur among the rich so that it is only reasonable to suppose that there is one prime *causal* factor common to all and what can that be but infection from person to person if one excludes the few cases resulting from the ingestion of infected milk etc? That this has been recognized in part is evidenced by the notices one sees in diverse places and couched in various terms admonishing one against expectorating Whether or not this has been a factor in the decline in the death rate from tuberculosis is impossible to estimate but in any case it is a reasonable precaution But there is no tangible evidence that the infection factor has been fully appreciated Infection is essentially in the home and during childhood and it is difficult to believe that spitting in the home is common among the rich or poor How then is the infection spread? The obvious answer is the spray of droplet infection by coughing and this factor is common to all classes with open phthisis and fits in with the clinical evidence of the disease

Can this be prevented or at least greatly minimized Yes by avoiding coughing without covering the mouth during the act—not with the hand but with a handkerchief To appreciate the force and density of this

unhindered spray one has only to travel in a crowded public conveyance in winter, or sit in front of a person with a cough in a theatre Desiring to ascertain if this precaution was being taught, I asked about one hundred patients who had had sanatorium treatment if they had been told to cover the mouth while coughing one admitted that she had, but the others denied having received such instruction Unfortunately, in the out-patient departments of some of our hospitals, patients are *not only allowed to cough as they please, but are ordered* to cough as a ritual, without any provision being made to limit the accompanying spray Is it because the practice is considered harmless, or is it neglect or apathy on the part of our teachers and public health administrators?

An intensive campaign to teach and enforce the precaution I have mentioned must find favour with all people who have the health of themselves and the community at heart It need not be expensive, and if it had the backing of the public health authorities and all the members of the medical profession, but particularly tuberculosis officers and sanatorium physicians, the Press and the public would soon fall into line While not wishing to belittle the efforts of those who are seriously trying to find a means of diminishing the incidence and mortality of tuberculosis, it seems reasonable that the obvious should not be overlooked or neglected amidst our masses of statistics Is it worth making a small effort which might easily be the means of preventing much ill-health and many deaths, especially of young children?—I am, etc ,

London, W 1 June 12th W BRUCE FRY

Treatment of Tuberculosis

SIR —It seems impossible to lay the ghost of tuberculin Some two or three times every year it is resurrected , the same old claims are put forward by the same protagonists, but no fresh evidence is forthcoming One would have thought that after all these years we should have arrived at a common agreement whether tuberculin is or is not an effective remedy against tuberculosis It is surely something of a mystery that a remedy so widely tested should still continue to give great results in the hands of a minority of the profession, while the rest of the profession have come definitely to the conclusion that it is of no therapeutic value How often those who deal with pulmonary tuberculosis must have wished that they could get the satisfying results from tuberculin that Dr Camac Wilkinson has persistently claimed to obtain But somehow or other it is not to be

Twenty years ago like many others, I tried tuberculin on a large scale and found that the only cases that appeared to do well were precisely those which one would have expected to do well under any treatment , but that when one tried it with those cases for which one would have given much to have found an effective remedy, it was useless or—worse still—resulted in exacerbation of the disease This experience was confirmed subsequently when tuberculin was tried on a sufficiently extensive scale *with proper controls*—a result which the tuberculin enthusiasts seem to have persistently ignored Dr Camac Wilkinson indulges in a prophetic vision as to the attitude of Dr Burrell towards tuberculin in ten years' time I would go so far as to venture to believe that the great master, Robert Koch himself, were it possible for him to have lived to the present time, would have admitted that tuberculin had not fulfilled his hopes as a *therapeutic* remedy—whatever its value in *diagnosis*

The scientific position of vaccines in therapeutics appears to be still open to question, as distinct from their position in prophylaxis, where it is established Professor J C G Ledingham, who should surely speak with some authority, made this clear in an article in the *British Medical Journal* of May 8th and 15th, 1926, and so far as I am aware the position remains unchanged I am glad to find that Dr Halliday Sutherland and Dr Camac Wilkinson both oppose the use of such a term as "pre tuberculous" The employment of such a term is unscientific, and is better dropped Dr Halliday Sutherland still believes that the more favourable cases of tuberculosis (meaning apparently pulmonary tuberculosis) can be treated at home by tuberculin, and would reserve sanatoriums "for the infectious, febrile, and debilitated patients" This is certainly strongly counter to the opinions of most tuberculosis specialists, but Dr Sutherland is surely—to put it mildly—rather unkind when he asserts that "the truth is that some medical superintendents of sanatoriums want early and hopeful cases *to improve their statistics,*" rather than because they believe that they are especially the cases which may be expected to benefit most from sanatorium treatment

Moreover, I would venture to dissent from his opinion as regards Switzerland Of course, many cases, we know, do well in England , but to say that such good results are just as likely to be obtained by treatment in England as in a climate like that of Switzerland is, I should have thought, against the evidence I know in which country I would prefer to take my chance—and I speak from personal experience, having had an unquestionable infection *some thirty five years ago,* for which I went to Davos —and I have always held that tuberculosis is one of those diseases in which money does count, giving the patient who can *afford to get away from the English winter* a distinct advantage over his less fortunate brethren Only let it be realized that there is no earthly use in imagining that a patient who is in an advanced stage of disease is going to do any better in Switzerland than he would in England Just as in England the sanatorium is likely to do most for the patient who comes "early," so in Switzerland it is the early case which benefits , but Switzerland has the immense advantage of offering "dryness, calmness," more equable temperature (conditions which Dr Sutherland belittles), and sunny skies, in place of the damp, cold, dreary, and inconstant English winter

As regards other considerations, no fool, as I believe Marcus Paterson said, can be cured of phthisis, and the man who will not co operate in his own treatment will do no better in Switzerland than elsewhere The great little Dr Huggard in the Davos of thirty five years ago had a short way with such patients He simply told them or their relatives that the sooner they went the better —I am, etc ,

Southborough, Kent, June 4th E WYATT HUTHEAD

*** This correspondence is now closed

Uses and Dangers of Cosmetics

SIR,—On May 17th, 1930, a paper of mine on modern cosmetic preparations was published in the *British Medical Journal* (p 899) It achieved a horrid notoriety in the daily press, and was honoured by some slight attention of a depreciatory nature in one of the journals which voice the opinions of the vested interests the *British Journal of Dermatology* appeared to consider it to be of some little interest What criticism it aroused was either fair comment, backed by scientific argument, or else mere journalistic facetiousness which, I hope, helped some hungry free lance workers to earn a little bread and-butter

The paper by Dr Alice Carleton, which is published in your issue of June 10th, is somewhat provocative in nature, first, because the author fails entirely to

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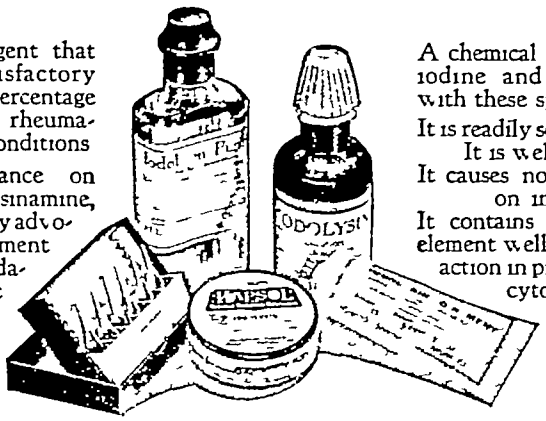

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acknowledge the assistance my paper has been in the construction of her own contribution and secondly because by making full use of fragmentary excerpts torn from their contexts she attributes to me a bias which is I think undeserved Upon reading her remarks I learn that I have stated that cold creams and vanishing creams block the sebaceous and sweat glands and that their use leads eventually to acne rosacea and acne vulgaris What any person who troubles to consult the article in question will find is that in discussing the probable and possible ill effects of the frequent application of cold and vanishing creams (formulae for which are given) I have emphasized the fact that any remarks made under these headings refer to the prolonged use of the preparations The reservation is justifiable because once a woman has taken the trouble to learn a beauty treatment the routine is usually carried on daily for some years I certainly stated that the fats block the sebaceous and sweat glands and if I had written the fats and waxes tend to block the sebaceous and sweat glands it might have been more accurate With regard to the production of acne vulgaris the actual words used were the formation of comedones is thus facilitated and acne vulgaris may develop especially if the patient is between 17 and 25 years of age

I am not as Dr Carleton insinuates unaware that dirt may be removed with cold cream but I still believe the definition clean—free from foreign matter and a skin is not clean which is wiped down with cold cream massaged with vanishing cream and then powdered being left coated with a layer of grease to which dust as well as toilet powder readily adheres With regard to Sutton's experiments on the absorption of fats even though a very small proportion of the fats in a cream or skin food are absorbed is there any evidence to show that they are absorbed by the epidermal cells and act as foods ? We are told that McCafferty and Genovese made experiments with patients with moderately dry skins and observed the effect of washing their faces with soap and water We are not told the extremely important facts as to why these patients had moderately dry skins Was the moderate dryness due to chronic seborrhoeic dermatitis hypothyroidism xeroderma or to the gradual atrophy of their sebaceous glands due to years of cosmetic treatments? If so the use of soap and water was not entirely to blame for any desquamation that occurred and the conclusion which is reached is not valid Finally I object to being classified by insinuation as a person who condemns cosmetics as wholly injurious Cold cream is a useful emollient and vanishing cream a less useful preparation for the same purpose The windmill against which I have tilted is the continuous use of cosmetic preparations—the endless application of astringent lotions and fatty and waxy ointments to the detriment of the individual and the very definite benefit of numerous commercial interests — I am etc

Liverpool June 12th R M B MACKENNA

Treatment of Breast Abscess

SIR —After reading the most interesting article in the *British Medical Journal* of June 10th by Mr Hamilton Bailey on The Treatment of Abscess of the Breast I feel that it might be of some interest to readers to know of the years success we have had at the Christiana Hartley Maternity Hospital Southport since we have developed a form of treatment for aborting breast abscess This however entails the close co-operation of a conscientious staff

In the hospital as a routine every patient has a daily dose of a mixture containing 10 grains of quinine sulphate This I mention as it may have some bearing on results With a view to aborting breast abscess as we tried Bier hyperaemic bell but like the experience of Mr Hamilton Bailey we found it caused intense pain and an unsatisfactory result and gave it up We gradually evolved the following regime which so far has been encouraging as we have had no breast abscess for over a year with over four hundred cases

Every morning after the babies have fed the sister makes a careful examination of every breast to see (1) if they have been thoroughly emptied by the baby (2) if there is any tenderness whatsoever on carefully palpating the breast The examination is repeated after the evening feed by the sister or staff nurse on duty The staff nurse on night duty makes a similar examination before she leaves the wards in the morning

If the breast has not been thoroughly emptied this is completed by Dr Abt's electric breast pump The ordinary hand breast pump which was used previously caused the patient nearly as much pain as the Bier's hyperaemic bell but Abt's pump causes no more pain than the sucking child and is most effective Now if (1) the ducts are not all emptied or (2) if there is tenderness over any part of the breast massage along the ducts towards the nipple is commenced at once and every acinus is followed up to see if milk comes from the duct (3) Where there is tenderness on palpation a slight swelling can usually be felt massage with olive oil over this swelling is at first painful and result in some clotted milk being forced out or even milk intermixed with pus The baby is put on the breast as usual and the breast massaged after each time the baby feeds

The sister tells me that occasionally a patient develops a rigor although pulse and temperature at the last taking were normal If there be no other cause a blocked duct can always be found and relieved But the secret of our possible success is undoubtedly the conscientious and careful examination of the breasts three times a day and the instituting of massage *at once* The daily breast drill is essential and treatment by massage to be successful must be commenced at once before any of the classical signs of abscess have developed —I am etc

Southport, June 13th A S GARDEN M D L M

Treatment of Compound Fracture of the Femur

SIR —How easy life would be if septic wounds could be excised and closed with impunity! It is though perhaps scarcely fair to take reported statements made in a witness box as a true expression of medical or surgical opinion The desire of counsel to obtain a direct affirmative or negative answer to questions which are open to argument is incompatible with accurate or helpful statements being made

An open (compound) fracture of the femur which has become heavily infected is probably at the best two or three years concern at the worst it may be loss of the limb or of life It does not seem possible therefore for anyone who takes over such a case for two or three weeks to have either immediate or ultimate full responsibility for an indifferent result When faced with an already infected fracture treatment must be directed towards controlling sepsis the alignment of the fractured fragments having become for the time being a secondary consideration In my opinion manipulation for reduction of a displacement should not be attempted at this stage but the limb should be immobilized by means of splinting and traction as the best means of dealing with the sepsis and of bringing about some gradual improvement in the alignment I gather this was the treatment adopted in the particular case under consideration (May 27th p 942)

The only time that active and accurate treatment can be carried out in an open fracture with success is in the first few hours after the accident, and then only in an institution which has the capacity to deal with such cases Until this is still more fully realized and arrangements are made in every district for the more efficient handling of fracture cases it is to be feared that these lawsuits will be a recurring indignity —I am, etc ,

London, W June 14th F D SINER

SIR —In your issue of June 10th appeared a letter from Mr C H Fagge commenting on an action against a surgeon for negligence in the treatment of a compound fracture Mr Fagge's view that the present method of conducting these cases is against the public interest and is derogatory to the reputation of the profession must be shared by many who have given serious thought to the matter It is scarcely possible for a lay judge and jury, without the guidance of a neutral medical assessor, to sift and evaluate the evidence given by rival expert witnesses in cases of this nature, and it would be to the interest of all concerned that the whole subject should be aired in the hope that opinion might be crystallized and that improvement in the procedure might follow Members of the legal profession would surely be glad to assist, for they must often picture the situation that would arise if barristers were sued for negligence after the termination of a difficult case, and if such actions had to be tried and conducted before a judge and jury who had no special legal training or knowledge

I am not in a position to form an opinion on the rights or wrongs of the verdict in the case just decided, and it seems to me that Mr Brockman had no choice but to give evidence and express his considered opinion of the treatment of the patient before and after the latter came under his care While the present method of trying these actions is in force however one cannot but feel critical of the attitude of members of the profession who, having had no responsibility for the treatment of the patient, are willing to come forward and give evidence in support of an action for negligence in cases such as this — I am etc ,

London W June 14th GEOFFREY MARSHALL

Monilia Infection of Respiratory Tract

SIR —I have read with great interest in the *Journal* of May 27th p 917) Dr P J Marett s note on monilia infection of the respiratory tract, and have noted his figures as to the incidence of monilia in sputa in Jersey I believe in connexion with this point that most people who have had occasion to handle large numbers of sputa will agree as to the high incidence of monilia therein, but that unfortunately does not necessarily prove pathogenicity as is elsewhere recorded, one can find monilia with great frequency in the upper respiratory tract of many apparently normal people That such monilia might gain access to bronchi in cases of subnormal health of the mucosa seems beyond question, but to postulate an active primary broncho moniliasis seems a very tall order, and, indeed, from Dr Marett s own note, there is evidence refuting this He says ' If we compare the bronchi and bronchioles to test tubes ' Now in my submission we can only liken the bronchi and bronchioles to test tubes when they are grossly diseased and full of retained secretions when so diseased as to have lost the power of expelling their contents , and so once again, we see that as far as pulmonary disease is concerned monilia must be regarded in the nature of a secondary invading organism —I am, etc ,

DAVID H HALER

Infants Hosp 31 Vincent Square June 2nd

Pancreatitis in Mumps

SIR,—Dr A H Spicer may be interested to know that some nine months ago I saw a boy aged 7 years who was admitted to hospital in a moribund condition ten days after the onset of an apparently ordinary attack of mumps The main symptoms were restlessness, repeated blood-stained vomit, and a rapid, feeble pulse The abdomen was not distended, while, possibly because of the boy's condition, no complaint of pain or tenderness could be elicited The patient died soon after admission and a post-mortem examination showed the macroscopic and microscopical appearances of acute pancreatitis No other gross lesion was found in the body One swallow does not make a summer, however, and so far as I know no other similar case has been reported in this country —I am, etc

E JAMES,
Medical Superintendent

Isolation Hospital Romford June 12th

Treatment of Sydenham's Chorea

SIR —I was interested in Dr Donald Bateman's article (*Journal* June 10th, p 1003) on the treatment of chorea by artificial pyrexia, since I myself began to use this method in November, 1931 shortly after I received details from an eye-witness of Lucy Porter Sutton's cases in New York City It is a pity that Dr Bateman merely reiterates Dr Sutton s claims, and does not give any details of actual cases, or his opinion of the value of the method, beyond the statement that " the treatment has so far proved satisfactory " Such a general recommendation may be insufficient to induce others to try this method

It has been repeatedly emphasized that the degree of cardiac involvement in any rheumatic manifestation such as chorea is of prime importance Since a large proportion of choreas have some form of carditis, the inevitable question will be asked, Does the artificial pyrexia have any adverse effect on the heart condition? Neither Dr Sutton nor Dr Bateman appears to have considered this point, but have merely concerned themselves with the movements which are but the outward manifestation of the disease There is thus a danger in any form of treatment which rapidly checks the movements, since it may give rise too early to the conclusion that the case is cured

I hope shortly to publish a series of cases in which this new method of treatment has been tried and in which sufficient time has elapsed subsequently to give an indication as to whether or not induced pyrexia has a beneficial or harmful effect—both immediate and remote—on the course of Sydenham's chorea —I am, etc

J W CHEETHAM, M D
Late Resident Medical Officer Royal Liverpool Children s Hospital

Rainhill June 12th

The G P and Midwifery

SIR —I read the article by Professor Munro Kerr on the above subject, and the subsequent letters from Drs Mackenzie (June 3rd, p 983), Popplewell, Abercrombie and Fraser (June 17th, p 1078) with interest Dr Popplewell states that, after a thorough grounding in modern hospital maternity work, he was appalled to find an area in England eighty miles from London, with a population of at least 60,000, without a maternity hospital of any kind, let alone an ante-natal clinic, and that the only general hospital in the area clearly states that it has no facilities for treating maternity cases I am in complete agreement that the lack of hospital facilities

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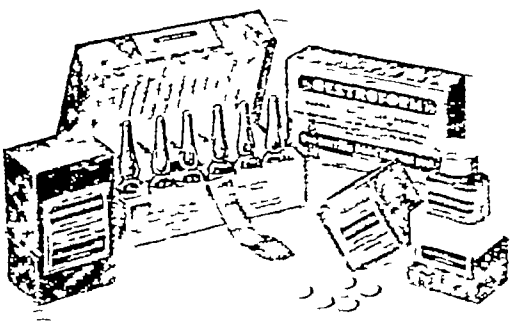

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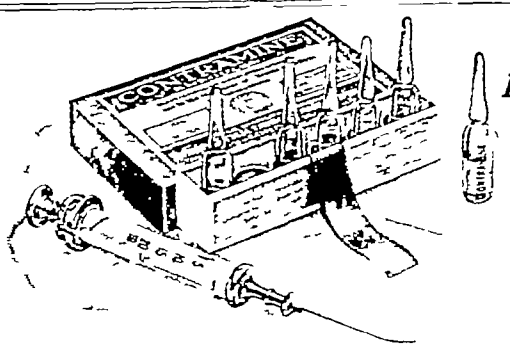

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Con 124

in the area is appalling to say the least But would an ante natal clinic enable Dr Popplewell to relegate his perforator and cranioclast to the museum of obsolete instruments? I think he would find that if a clinic were established in his area the number of working-class maternity cases he would have the opportunity to offer ante natal supervision would fade almost to zero and he would only be called in when some abnormality became apparent either before during or after labour

Professor Munro Kerr's wish for better methods in the training of the student in practical obstetrics and ante natal care is very praiseworthy but will the fruits of his labours not be lost if the clinics which he advocates take away the means by which the practitioner whom he has trained so thoroughly keeps his hand in? How long would the general practitioner remain proficient in the use of the stethoscope if he were allowed to use it only on half a dozen or so of his better-class patients during the course of the year? The powers that be should make up their minds whether they require the services of the G P or not in their maternity schemes If they decide that they are themselves to be responsible for the ante natal care of the pregnant woman they must in fairness to the patient be responsible for the treatment of abnormalities arising during parturition If on the other hand they decide that they still wish for the services of the G P in cases of difficulty they must in fairness to the patient and the practitioner give the practitioner the care of his patient during the ante natal period

In regard to the question whether the home or hospital is the better place for the woman of the working class to have her baby I think one has to take into consideration the type of woman The majority of working-class women are house proud and keep their homes spotlessly clean however poor the house may be That type is infinitely happier in her own home as Dr Mackenzie says The other type happily in the minority and chiefly confined to the cities is too lazy to bother about where she is confined and makes little or no provision for the event it is therefore better for all concerned that she should be submitted to the officialdom and routine of hospital which Dr Mackenzie describes

I believe that if the standard of midwifery in this country is to be raised a national scheme on the lines suggested by the Glasgow Division of the British Medical Association (*Supplement* June 10th) will have to be evolved In existing circumstances the authorities will have themselves to blame if the general practitioner's midwifery does not keep abreast of the times and if the highly proficient product of the proposed new teaching method rusticates.—I am etc

Epsom June 17th TERENCE G ROBINSON

SIR,—Dr E B Mackenzie's letter in your issue of June 3rd delights me Immediately after qualification I went for a fortnight as locum for the parish doctor of two Orkney islands Well do I remember my first maternity case—a moonlight night and having to drive myself in a little cart across the sands at low tide to get to a two-roomed shepherd's cottage The shepherd walked about outside all night and an old and dirty woman—the hands woman—made up the peat fire till my eyes streamed with tears and explained to me where the clothes and the whisky bottle were kept and departed The patient lay on straw I have never forgotten that night alone in the intervals of fetching what was wanted and washing my hands I thought of every complication likely to occur—occipito-posterior prolapse of cord post partum haemorrhage uterine inertia and what would one do alone on this island in the middle of the sea if Caesarean section became necessary In self-defence I was silent except to assure the patient that all was well and I remembered Dame Mary Scharlieb's remark that in midwifery fools usually rushed in where angels feared to tread To my surprise the crofter-midwife tiptoed herself quite normally about four in the morning as the cold dawn was creeping in and was much less perturbed about the whole process than I was or following with knowledge as I seemed to be!

That taught me a lesson—and though I have seen about as bad obstetric cases in India as anyone I have never forgotten it—that birth is a natural act and will accomplish itself simply if you or your stupid civilization have not put obstacles in the way by deforming the pelvis when growing suffering the joints of the brim that it cannot expand and most important of all in that the woman is confined in an unnatural position This last is the only one of the obstacles we have it in our power to control when she is already in labour De Jellett of Rotunda fame in his book *Maternal Mortality* (p 260) explains why the squatting position is the natural one for accouchement and my wife here by kind permission of Professor Rechou in the Department of Radiology demonstrates the increase in size of the human pelvis in the squatting position and the area enclosed by the chest walls is increased by inspiration This being so the crouching position must exert a suction action on all the abdominal contents and is of course the only position in which bladder bowel or uterus can be completely emptied

If people would only read *Histoire des accouchements* by Witkowski they would see that many harmful acts been hedged about by superstitious practices perhaps in order to make it more difficult and more impressive for the patient He gives over 1 000 illustrations and along side of holy girdles holy chairs to aid delivery holy images to ensure safety to mother and child we are shown the woodcut copied from Playfair of position des Anglaises pour accoucher and we are told that though the English idea of confinement is not in Ireland and Scotland the women are often confined squatting and that if the confinement is normal they go down on knees and elbows because they believe this position will hasten the labour and diminish the pain As I cannot get anyone in England to allow me to do anything so dangerous as to return to Nature and allow the patient to do herself naturally I have had to come to France to study the subject because many French women still insist on being confined thus—when the *docteur* is not there—I am etc

Bordeaux June 8th KATHLEEN VICH

I M S Pensions

SIR,—Colonel W G King has replied and truly protests on the statement that the pension of officers of the Indian Medical Service are not guaranteed by the British Government deserves more than a passing reply Pension is deferred pay and has always been a great inducement whereby to obtain recruits for the Service The present situation is far more full of peril for young officers who have recently entered the Indian Medical Service or for men who are thinking of doing so than for the men who retired From all the signs to-day the danger will grow with the years

To look to the Indian administration for protection is to lean on a reed The real source of strength lies in the British Medical Association which fought so fiercely for the I M S in 1914–20 It is well known that the Indian Government is anxious to keep up the standard of its recruits and to attract a certain number of good European officers Can the B M A fairly advise young officers to join the I M S under the conditions of uncertainty now prevailing? It has greater power to-day

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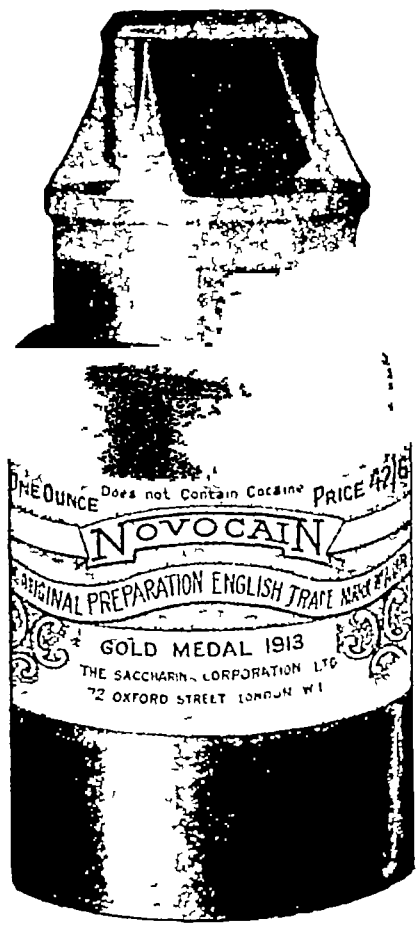

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even than it had in the last fight If it takes up the cudgels for its medical men it is as sure to win as ever I have never forgotten the grand support the Association gave me as chairman of the Naval and Military Committee throughout that struggle I hope that committee will take this matter up, and press it until the very grave injustice involved is eliminated There can be only one end to the affair if it does, unless the Indian Government is willing to see the recruitment of the Service go down to a hopelessly low level, which I do not for a moment believe it is —I am, etc ,

London W June 17th R H ELLIOT

Obituary

ROBERT HAMILTON RUSSELL, F R C S

Consulting Surgeon Alfred Hospital and Children s Hospital Melbourne

The death of Mr R H Russell at the age of 73, following a motor accident in Melbourne on April 28th, has removed one who achieved world-wide eminence as a pioneer of surgery in Australia, a country to which he brought the teaching and enthusiasm he had derived from direct contact with Lord Lister

Born at Farningham, Kent, in 1860, Robert Hamilton Russell received his medical education at King s College, London, where he was one of Lister's pupils, and subsequently became the last house surgeon to work under his personal guidance He obtained the diploma M R C S in 1882, the L S A in 1884, the L R C P Lond in 1886, and the F R C S Eng in 1889 Fellowship of the American College of Surgeons was conferred upon him in 1924, and in 1927 he became one of the first Fellows of the College of Surgeons of Australia His first appointments after qualification included those of house physician at King s College Hospital, under Dr William Playfair, and for two years house-surgeon at the Shropshire County Hospital Following the custom of the time he also studied in hospitals on the Continent Mr Russell went out to Melbourne in 1889 and, apart from journeys to Europe and America, and service in France and England during the war remained in continuous practice there until his retirement some seven years ago He was appointed surgeon to the Alfred Hospital and Children's Hospital, retaining both posts until shortly before his retirement Lister had inspired him with a zest for research, and the results of Russell s original work soon brought him into prominence He identified himself at first with the treatment of hernia, and a paper by him on the aetiology and treatment of this condition in the young was read before the Intercolonial Medical Congress at Brisbane in 1899 and subsequently published He followed this up with papers on cognate subjects, and his views attracted considerable attention—to begin with often of a controversial nature He was also responsible for original and important work on the treatment of fractures Following his master he became renowned as a teacher of students, and some years ago his house surgeons gathered together to express to him personally their gratitude for the benefits he had conferred upon them A man of singularly attractive personality and exceptional scientific ability, he exerted a powerful influence on the profession especially towards the improvement of surgical technique

In recognition of his work on behalf of the Alfred Hospital the new community block there has been named after him His bust stands at the entrance to the hospital, and a life mask has been placed in the Institute of Anatomy at Canberra He was in England at the outbreak of war and went to France with the British Expeditionary Force He returned to Australia before November, 1918, and was attached for a time to military hospitals there With his great intellectual and personal endowments it was natural that he should take an active share in the creation of the Royal Australasian College of Surgeons in 1927 He was a member of its council from its inception At the time of his death he was censor-in-chief of the college, being in control of admissions to its Fellowship As a tribute to his work on behalf of surgery the Fellows of the college presented to him two years ago his portrait painted by George Lambert He had attended his last meeting of the council two days before the fatal accident Mr Russell was a highly esteemed member of the British Medical Association

C G C SCUDAMORE L R C P AND S ED

Croydon

We regret to announce the death on June 11th of Dr Charles George Colin Scudamore, who was for many years the mainstay of the Croydon Division of the British Medical Association After studying in Glasgow and Edinburgh he obtained the Scottish triple qualification in 1893, and three years later started practice at Croydon

Dr MORTON MACKENZIE writes I have been asked to write something of the work done by Dr Scudamore for his colleagues beyond the Division of which he was secretary for so many years and in deeply mourning the loss of my old friend I wish to pay a tribute of gratitude to one of those hard-working, loyal members whose steady work, without perhaps coming to the notice of those outside his own area as it deserved, has done so much to augment the strength of the Association during many years He was the representative of the Croydon Division for thirteen years, and for the same number of years served on the Surrey Branch Council , he was president of the Surrey Branch in 1924 and till his illness he never missed a meeting He also served on the Organization Committee and Propaganda Subcommittee, and to his great pleasure was elected to the Council of the Association in 1929–30 Regular in his attendance sound in his judgement, he was a most useful and loyal colleague to those with whom he served, and it is to be hoped that his splendid example may encourage some of our younger members to carry on the tradition he built up in Croydon and in Surrey

Dr P W HAMOND writes Dr Scudamore commenced practice in Croydon about thirty seven years ago and during the whole of that time he took an interest in the work of the Association For several years he was joint secretary of the Division with Dr Willock and on the departure of the latter from Croydon in 1920 Dr Scudamore became senior honorary secretary, and shortly afterwards I was appointed his assistant secretary As all who have been connected in any capacity with the work of the Division know, Scudamore was the man to whom we turned whenever any problem arose or any difficult bit of work had to be done He had the procedure of the Association at his finger ends, and, combined with his exceptional administrative and organizing ability he had an understanding of human nature and a tact which rendered it a pleasure and a privilege to work with him His heart was bound up with the welfare of the Association, and especially of the Croydon Division, and nothing he could do to forward the interests of either was ever left undone When in 1931 he was elected chairman of the Division a post he would have held long before had it not seemed impossible to do without him as secretary he agreed to occupy both positions, and did so with equal efficiency and success

Dr NORMAN E ALDRIDGE formerly of Southampton died at Alton on June 15th aged 71 Son of J H Aldridge M D J P of Southampton whose forebears for many generations lived in Hampshire he received his medical education at Edinburgh University where he graduated M B C M in 1884 He obtained the D P H of the London Royal Colleges in 1890 After taking up general practice in Southampton he became interested in radiography and in 1896—very soon after the discovery of *x* rays—became one of the earliest workers in this field Some few years later when the importance of this subject was apparent he devoted himself entirely to electrotherapeutics Having served as house-surgeon to the Royal South Hants and Southampton Hospital he was appointed honorary physician in 1893 and was in charge of the radiotherapeutic department from its incept on until 1929 when he retired as senior physician having been on the honorary staff of the hospital for thirty six years His work for the hospital has been fittingly commemorated by the naming after him of one of the new wards Dr Aldridge was also for some years radiographer to the Hants County Hospital Winchester and to the Southampton Infirmary During the war he served with the rank of major R A M C (T) as radiologist to the Royal Victoria Hospital at Netley and the Auxiliary Military Hospital at Southampton and latterly was inspector of radiography Southern Command It was during this period under the high pressure of work that he contracted *x* ray dermatitis of both hands which gradually extended until in spite of more than one operation he became completely crippled and on this account had to give up practice

Medico-Legal

DOCTOR INJURED IN MOTOR CAR ACCIDENT

£12 000 DAMAGES AWARDED

At Gloucester Assizes on June 9th before Mr Justice Lawrence and a special jury Dr Abraham Goldfoot a medical practitioner of Cheltenham brought an action against Mr R J K Brewer a publishers salesman of Bristol for damages for personal injuries received in a motor car accident

Sir Patrick Hastings K C for the plaintiff asked the jury to award Dr Goldfoot not merely substantial but very heavy damages In June of last year Dr Goldfoot was driving from Cheltenham to Clifton Something went wrong with his car and stopping at the side of the road which was twenty five feet wide he got out and opened the bonnet and looked at the carburettor Defendant's car was coming in the opposite direction Defendant pulled his car out from behind a larger one and in attempting to pass it struck the plaintiff and despite the fact that the doctor was seriously injured the defendant drove on He did not return to the scene of the accident until three-quarters of an hour later when he refused to give any explanation to the police Later he alleged that the plaintiff had walked suddenly out from behind his car but there was no foundation for that statement The injuries which Dr Goldfoot received were extremely serious His right hand was rendered useless and since the accident occurred his practice which had risen in seven years from £700 a year to £1 500 had to be conducted by a locumtenent to whom he gave what assistance he could He could not even write a prescription and up to now there was no sign of real improvement of his hand Professor Hey Groves said that he could give no definite promise that Dr Goldfoot's hand would ever be right again

Sir Reginald Coventry K C for the defendant said that his case was that Dr Goldfoot was mistaken as to what had happened The injuries he had suffered could not have been received in the way he claimed He suggested that Dr Goldfoot stepped out from behind the car which made the case one of contributory negligence The defendant in evidence said that he had been driving a car for two and a half years without accident He saw a stationary car with a man standing in front of the radiator While he was trying to pass a large car in front of him someone stepped from behind the stationary car but he had not the slightest idea that he had touched him and drove on He admitted that as a result of the accident he had been convicted of dangerous driving and of failing to stop after an accident Dr Hill Ernest Griffiths a consulting surgeon said that in his view the improvement in Dr Goldfoot's hand was likely to continue during the next two years the grip he could now exert when the hand would be a really useful member and he did not think Dr Goldfoot would ever be able to act as midwifery or surgery again At the same time he would be a considerable amount of useful work which he could do in his practice even if his hand remained as at present

The jury awarded Dr Goldfoot £12 000 damages and the judge granted a stay of execution for fourteen days subject to payment into court or the giving of a bond for the amount awarded

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

At a special congregation of the Senate on June 8th the honorary degree of Doctor of Science (Sc D) was conferred on Sir Frederick Gowland Hopkins M B F R C P P R S Professor of Biochemistry in the University

Among those who received the degree of Ph D on June 9th was Mr L W G Malcolm M Sc conservator of the Wellcome Historical Medical Museum London

Under Regulation 15 for degrees in medicine and surgery the Faculty Board of Medicine has published in the *University Reporter* for June 13th a revised schedule for Part IV of the first examination for the degree of Bachelor of Medicine The schedule which has been drawn up by the Faculty Board of Biology A and Medicine is to replace on January 1st 1935 the schedule published in *Ordinances* p 31

At a congregation held on June 17th the following medical degrees were conferred

M B B CHIR—W H M Inchcost

L CHIR—C E R Wood

The Council of the Senate has appointed Prof or H R Dean M D Master of Trinity Hall a member of the Court of Governors of Sheffield University until June 30th 1936 The Vice-Chancellor the Master of Gonville and Caius College the Regius Professor of Civil Law and the Regius Professor of Physic have appointed G S Haynes M D F R C P a Distributor of Crane's Charity in Chemistry in the place of the late Mr Arthur Cooke

UNIVERSITY OF BRISTOL

The following candidates have been approved at the examinations indicated

FINAL M B CH B (*Part I Pharmacology Forensic Medicine and Toxicology*)—R D Berman J R C [illegible] J I V [illegible] S P V Williams (*Part II*) M V [illegible]

FINAL M B CH B—(*Part II*) A J [illegible] with distinction in Public Health [illegible] (with distinction in Obstetric [illegible] R L Mark H E Pear [illegible] Francis F Powell

ROYAL COLLEGE OF SURGEONS IN IRELAND

The following have been appointed examiners for the ensuing year

For examinations under the management of the Conjoint Committee (Conjoint Licence Diploma in Public Health and Preliminary)—*Anatomy* Prof E J R Eames Surgery Prof A Chance Mr H Arthur Stoker *Physiology and Chemistry* Prof W J E Jones *Pathology and Bacteriology* Prof W Boyd *Midwifery and Gynæcology* Prof A H Dobbin Prof E M R F J Henry *Ophthalmology* Mr E M Mayou D L Werner *Chemistry and Physics Public Health* Dr [illegible] Prof W J E Jessop Prof E A Werner *Pharmacy and Therapeutics* Prof L Macassey *Forensic Medicine and Public Health* Prof C Be

For examinations conducted by the Council alone under the management of the Conjoint Committee Fellowship Licence in Dental Surgery—*Anatomy* Prof F J R Evatt *Surgery* Prof A Chance Mr A B Clery Mr R F J Henry Mr Henry Stokes *Physiology and Histology* Prof W J E Jessop *Pathology and Bacteriology* Prof W E Wyllie Dr J T Wigham *Chemistry and Physics* Prof W J E Jessop Dr E A Werner

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Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons this week took the report and third reading stages of the Finance Bill, and also of the Unemployment Insurance (Expiring Enactments) Bill The Estimates of the Department of Health, Scotland, and Public Education, Scotland, were down for discussion

In the House of Lords on June 20th the Aberdeen Royal Infirmary and Mental Hospital Bill and the Victoria Infirmary and Glasgow Act (1888) Amendment Bill were read a third time

The Road Traffic Emergency Treatment Bill was set down in the Lords for June 22nd

In the House of Commons on June 20th the Cancer Hospital (Free) Bill was read a second time

Finance Bill

During the report stage of the Finance Bill on June 19th Mr H WILLIAMS moved a new clause providing that British liqueurs and perfumed spirits might be warehoused in accordance with Section 95 of the Spirits Act 1880 for home consumption and accordingly that the words 'medicinal spirits or tinctures other than perfumed spirits' should be substituted for the words British liqueurs or tinctures or medicinal spirits' in Subsections (1) and (2) of Section 95 and in Section 74 of the Act Mr HORE BELISHA accepted the clause which was added to the Bill

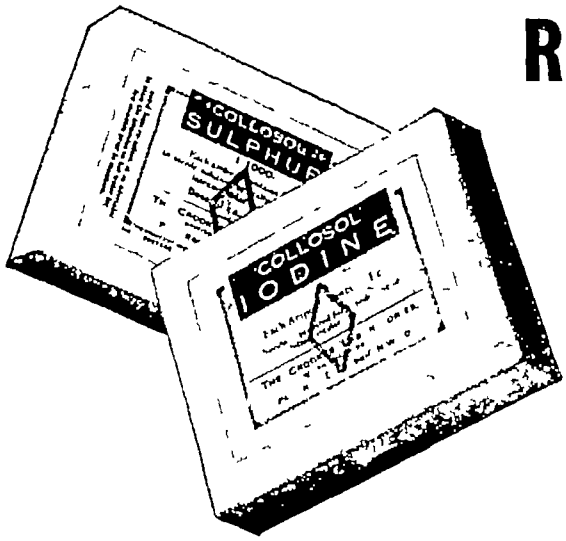
The Government also accepted a new clause to authorize the sale of spirits in half bottles by holders of retailers off licences in England and Wales During the discussion it was argued that this concession would meet the need for small bottles of brandy for medicinal purposes

Captain FRASER moved an amendment providing that heavy oil used as a fuel in any voluntary hospital for the sick poor equipped prior to April 25th 1933 with apparatus especially designed for the use of such oil should be exempt from duty He said that the amendment only asked that the rebate should be given in the case of voluntary hospitals, because it was only in their case that there was a very real difficulty in raising the money to pay the tax If the tax went on, a certain number of voluntary hospitals would have to reduce the services which they rendered to their patients In London there was a small number of hospitals using oil, and if they were to be compelled to pay the tax it would cost them about £12 000 a year In the provinces the figure would be about £8 000 so that the total cost of this concession would be about £20 000 a year That was very little indeed to the Chancellor of the Exchequer but it meant much to these hospitals Only about fifty five hospitals had installed and were using the plant and he asked the right hon gentleman to exempt them from the tax Where hospitals had this apparatus they had found it beneficial to their patients, because there was less noise and because it had made available for hospital purposes other parts of the building hitherto used for storage There was reason to believe that the concession could be worked and that it was administratively possible to operate it For example the Lifeboat Institution secured a rebate for lifeboats in the matter of the petrol duty Again alcohol when used for medicinal purposes was tax free There were plenty of precedents for this concession

Dr O DONOVAN in seconding the amendment said he did not wish to say anything on the question of cost Hospital managers would appeal to the public for more money for every new development in medical science and surgical art but he would like the Chancellor of the Exchequer to exercise a little more directive force in the development of hospital life We could heat our hospitals with coal but those of them who worked in hospitals felt that better work could be done for them by the administrative side if the latter was not compelled to give so much time to the very many administrative problems brought into being by the use of coal in the matter of storage insurance and man power If by encouraging hospitals to use oil fuel such administrative aid could be given to doctors and to the sick it would be an advance in hospital practice Major HILLS agreed that the was not entirely a matter of cost The real argument against the tax was that oil was a much better fuel for use in a hospital It was more convenient to transport and was easier to store which as hospitals were chiefly in busy centres was an important item The service of the oil was easier than in the case of coal, no stoking was required no ashes had to be removed and there was no dirt or noise with all their evil effects on patients It would be a set back to the modern equipment of hospitals if this tax was imposed It was recognized by the medical profession that by far the best fuel to use was oil fuel and he did not think that the Chancellor of the Exchequer would like to force hospitals back to coal Sir W DAVISON also appealed to the Chancellor to exempt the voluntary hospitals He said that any hospital which might, in future be inclined to install plant for burning oil would do it with its eyes open and would have to make provision for the additional expenditure By the tax the Cancer Hospital in his constituency would incur an additional charge of £900 a year and St George's Hospital would have to meet an additional cost of £2 000 Sir Arthur Stanley had stated in the *Times* that morning that it would cost St Thomas's Hospital £2 400 a year, or add 50 per cent to their bill for fuel Major LLEWELLIN said that the Cancer Hospital in his constituency would have to pay an extra £500 a year if the duty were levied on oil That would mean that the hospital could take in fewer cancer cases They had not the capital available with which to alter the machinery already installed in the hospital

Mr CHAMBERLAIN said that everyone who had represented the Treasury knew how difficult it was to resist these insidious and rather dangerous arguments which were brought forward in support of a concession which was asked for on the ground that it was only a little one The precedents which had been quoted showed how dangerous it was to begin whittling away the foundations on which one rested and how one concession was immediately made the precedent for asking for another He had already thought of asylums, sanatoriums and convalescent homes and if he had more time he could think of many other institutions supported by voluntary contributions which might make an equally sound claim When in addition to the argument that this was only a little concession, they were brought into contact with the idea of voluntary hospitals and the relief of the sick poor, the sympathies of everybody were naturally aroused, and it was perhaps easy for all of them to be led away towards the cause to which their inclinations would naturally turn them If it were actually true that all these hospitals which were dependent on voluntary contributions would be obliged to find an additional £400 £500 £1 000 or £2,000 a year it would be very difficult to maintain his position but he had a very good reply After all although the supporters of the amendment had adduced the convenience of oil as a strong reason why the hospitals should have installed it and should continue to use it the fact that there were only fifty-five hospitals in the country which were concerned, and which had actually installed oil showed that that was not a very powerful consideration The real consideration was the comparative cost of the two kinds of apparatus Not only would this not necessarily cost the hospitals a large sum per annum, but if they followed the example of some very progressive and efficient hospitals which had made the most of the time that had elapsed since the Budget proposals were introduced, they could actually save money Here was a case of a hospital in London where conversion from oil to coke had actually taken place since the oil duty was first proposed The total cost of conversion was £80 and the estimated annual saving due to the use of coke was £2 000 so that in two weeks the hospital would have paid off the extra cost of conversion and would be in receipt of an additional source of income which was never thought of before In the case of a much larger hospital the cost of conversion was no less than £680 and they were going to save £1 670 The relative improvement was not so great as in the first case but the capital expenditure would be paid off in five months and the hospital would have a new source of income Conditions varied in different cases and a great deal depended on such technical questions as whether a natural draught was sufficient or whether there would have to be a forced draught With a natural draught the cost

IN RHEUMATIC CONDITIONS



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In cases of ASTHMA the nose piece should be inserted in a glass of water and Valve Key should then be very slowly turned in an anti clockwise direction until a moderately rapid stream of small bubbles is seen to issue from the tube The nose piece is then dried and inserted into one nostril The patient should breathe through the mouth and the gas should be allowed to flow into the nose without being actually inhaled

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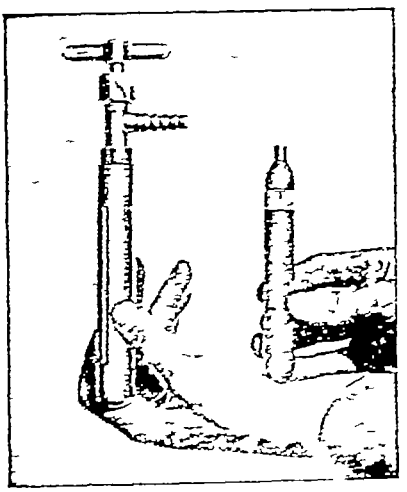
* *Proc Roy Soc Med Section of Laryng., Dec 1930 p 441.*



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General Medical Council's Registrar—Mr HORE BELISHA announced on June 14th that the post of Joint Registrar of the General Medical Council and of the Dental Board had been recognized as approved employment within the meaning of the Superannuation Act 1914

Superannuation of Local Government Officers—In the House of Commons on June 20th the Local Government and other Officers Superannuation (Temporary Provisions) Bill was read a second time The Bill makes provision for certain deductions from remuneration to be disregarded in the computation of contributions, pensions and gratuities under enactments relating to the superannuation of persons employed by local authorities and other public bodies The Bill was supported by Mr SHAKESPEARE and Mr GREENWOOD both of whom said it legalized an honourable undertaking entered into by local authorities with their employees who agreed to cuts in salaries Sir HENRY JACKSON welcomed the Bill on behalf of the National Association of Local Government Officers as evidence of the interest which the Government and the Ministry of Health were taking in the officers of the Local Government service It was he added the first occasion on which the Government of the day had introduced a superannuation bill dealing with Local Government officers The Bill was committed to a Committee of the whole House

Examination of Blind Persons in Scotland—Replying to Mr Burnett Sir GODFREY COLLINS said on June 20th that in all cases which came before the Department of Health of Scotland on appeal where examination had been made at a blind clinic the Department were furnished with detailed reports by the examining surgeons These specialists were fully conversant with the standards adopted for the purposes of the Blind Persons Act 1920 and their reports formed the basis of the Department's decisions If in any case of special difficulty further examination was thought desirable arrangements would be made to have this done

The Services

INDIAN MEDICAL SERVICE ANNUAL DINNER

The annual dinner of the Indian Medical Service took place at the Trocadero London on June 14th with Air Vice Marshal Sir David Munro in the chair The official guests were Sir Findlater Stewart Permanent Under-Secretary of State for India Major General S F Muspratt Military Secretary India Office Dr N G Horner Dr E C Morland, and Mr F H Brown together with six officers on probation

The chairman in proposing the toast of "The Service," read a message of greeting from I M S officers in Lucknow and said that he was proud to preside at the dinner of his own Service the finest in the world In the great variety of its work—clinical scientific and administrative—the I M S was unrivalled and its officers were in touch with the life of the people of India The medical problems of India were immense and for their solution humanity would require the continued efforts of the I M S Sir David Munro ended with a brief tribute to the memory of Sir Walter Fletcher a man with a flair for the best of everything and a good friend to the I M S

Sir Leonard Rogers in proposing the chairman's health said that the prospects of the I M S were better now than for some years past Twenty five recruits with high qualifications had joined this year In former times the greatest attraction of the I M S was the opportunity it gave for research in the sciences such as botany zoology and ethnology Nowadays with the extreme specialization of the sciences this was no longer possible but the career of Sir David Munro illustrated the versatility of the I M S

The health of the secretaries Colonel Granger and Sir Carey Evans and of the Indian secretary Colonel Stanger-Leathes was proposed by Lieut Colonel J Anderson who mingled good advice with humorous anecdotes in his inimitable manner and expressed the thanks of the company to those who had organized a most enjoyable evening Sir Carey Evans in a brief response spoke of the death of two great I M S men of science during the past year—Sir Ronald Ross and Colonel Alcock

The officers present at the dinner were

Major-Generals Sir Havelock Charles Bt W V Coppinger Sir Leonard Rogers,

Colonels H Ainsworth J Anderson R F Baird L P Brees J P Cameron, Sir Richard Christophers Sir Frank Connor V B Fry T A Granger C R M Green W H Leonard Sir Robert McCarrison F P Mackie W O S Murphy A J Macnab C W F Melville Sir Richard Needham, J J Pratt H L Stanger Leathes C N C Wimberley

Lieut.-Colonels H P Cook, A G Coulhe D Coutts D G Crawford J M Crawford J T Calvert H Dalzell I Davenport Jones H R Dutton, R H Elliot J K S Fleming G I Graham V B Green Armytage A F Gristwood A F Hamilton W C Hamilton, J B Hamlin F V Hugo M L C Irvine S P James S Whitworth Jones J C H Leicester V M Mackenzie A C A McNeight, E C G Maddock I O N Mell P S Mills T R Mulroney J H Murray F O Kinealy J Robertson H Rose H K Rowntree A J H Russell R Stein C M C Smith W D H Stevenson Ashton Street W V Sykes C S Thomson E O Thurston R G Turner S S Vazifdar R T Wells E L Ward K E Wright

Majors D P Bhargava H C Brown F M Collins G Covell W H Crighton W E R Dimond A J D'Souza, H H Elliot Sir T Carey Evans, A H Harty N S Jatar V V Lopes J G McCann S R Prill C G Seymour B Z Shah

Captains Devi Dutt D T Lambert S M K Mallick E C Montgomery T B Pahlajani

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OSBORNE CONVALLSCENT HOME

The King has approved the appointment of the following to the civil consulting staff of King Edward VII's Convalescent Home for Officers Osborne Isle of Wight as from May 31st

Sir Cuthbert Wallace K C M G, C B F R C S
Professor George E Cask C M C D S O F R C S
E Rock Carling M B B S I R C S
W Rowley Bristow F R C S
Claude H S Frankau, C B E D S O F R C S
Sir William H Willcox K C I E C B C M G F R C P
Professor F R Fraser M D, F R C P
Gordon M Holmes C M G, C B E, M D, F R C P

DEATHS IN THE SERVICES

Surgeon William John Butler Madras Medical Service (ret) died in London on June 5th aged 87 He was born on May 21st 1846 the youngest son of Dr William Butler superintending surgeon in the Madras Service was educated at St Mary's and took the M R C S in 1870 and the L S A in 1872 also subsequently, after leaving the I M S the L R C P Lond in 1882 After serving as resident obstetric officer at St Mary's he entered the I M S as assistant surgeon on March 30th, 1872 but retired after only eight years' service on February 25th 1880 While in India he held the post of resident surgeon of the Madras General Hospital

Lieut.-Colonel Frederick Wynne Hardy R A M C (ret) died at Ealing on June 14th aged 68 He was born at Bolas Magna Salop, on September 2nd 1864 and was educated at Cambridge and at Bart's He won a mathematical scholarship at Jesus College Cambridge and graduated B A with honours in the Natural Sciences Tripos in 1886 and later as M B, Ch B and D P H in 1902 He also took the I S A in 1890 and entered the Army as surgeon on January 31st 1891 reached the rank of lieutenant colonel on January 26th 1913 and retired on March 27th 1919 In 1899–1902 he was health officer at Bermuda He served in the war of 1914–18 was mentioned in dispatches in the *London Gazette* of February 17th 1915 and June 15th 1916 and acted from 1915 on as a D M S of a Division with temporary rank of colonel

Major Satyendra Nath Mukerji Indian Medical Service died at Zürich on May 15th aged 51 He was born on June 24th 1881, and was educated at Calcutta University where he took the diploma of L M S in 1909 Coming to Europe soon after he obtained the L R C P Ed in 1911 and the F R C S Ed in 1913 Soon after the war began he took a temporary commission in the I M S as lieutenant on November 20th 1914, becoming captain after 2 years service On December 8th 1915 he received a permanent commission as lieutenant and temporary captain and attained the rank of major on November 20th 1926 He served in the war of 1914–18 in Iraq Before coming to Europe on furlough he held the post of superintendent of the Campbell Medical School and Hospital in Calcutta

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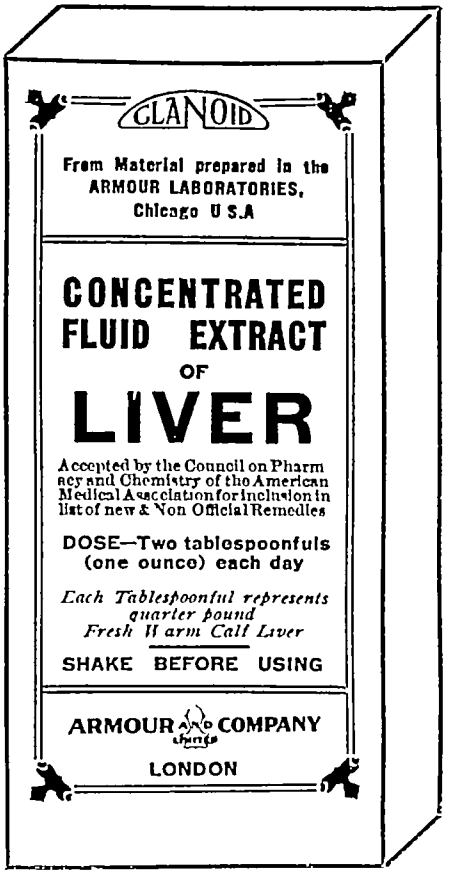

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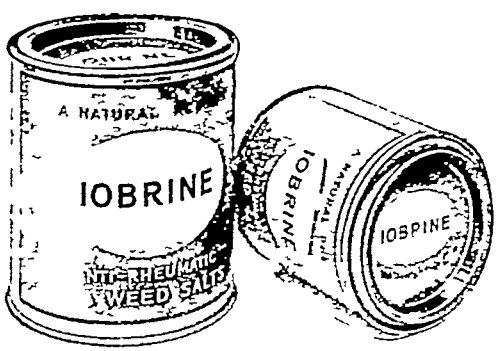

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Cowdenbeath Aug 6th 1932
"I tried IOBRINE on a case of acute rheumatic joint condition in a young girl of 12, in the form of hot fomentations The results were very gratifying as it was very soothing to the patient, and greatly alleviated the pain. The parents procured further supplies for themselves till the treatment ended with satisfactory results to the child." M.B

Oxford, Oct. 7th, 1932.
As I was suffering from Lumbago myself a condition I have been subject to since I sprained my back a few years ago I used the IOBRINE in two baths I am pleased to report that I received great benefit from them, the pain and stiffness in the muscles subsiding and the general tonic effect was very noticeable. M.B., Ch.B

Glasgow Dec 14th, 1932.
I may say that I have found hot IOBRINE BATHS to give great relief to tired aching limbs and to be conducive to sleep
SURGEON

Golder's Green, N.W.11
Dec. 18th 1932.
My wife who suffers from Muscular Rheumatism has found considerable relief from using your IOBRINE SEAWEED BATH SALT and I can certainly recommend it." M.B

Harrogate June 12th 1932.
Re IOBRINE, I may say that it is in my opinion a very useful form of treatment for Rheumatism I tried the sample you sent me on a patient who was very pleased with the results. M.R.C.S. L.R.C.P

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Medical News

The Ingleby Lectures will be delivered by Dr Alfred F Hess of New York in the Medical Lecture Theatre Birmingham University on June 27th and 29th at 4 p m The subject will be the fat soluble vitamins The first lecture will be devoted to vitamin A in relation to nutrition and infection and the second lecture to an appraisal of the prophylactic measures against rickets

The Cavendish Lecture before the West London Medico-Chirurgical Society will be given by Sir Peter Chalmers Mitchell F R S in Kensington Town Hall on Thursday June 29th at 8 30 p m Subject The Diet of Animals The lecture will be followed by a conversazione

The annual general meeting of the Fever Hospital Medical Service Group of the Society of Medical Officers of Health will take place at the house of the society 1 Upper Montague Street Russell Square on Friday June 30th at 3 30 p m The principal business will be the election of officers and council for 1933–4 and an address by Dr E C Benn on Heart Failure in Diphtheria The above meeting will be preceded by a meeting of the council at 3 o clock

The Dean of St Paul s will present the prizes to successful students of the London Hospital Medical College on Tuesday June 27th at 3 p m in the College Library

The ninety second annual meeting of the Royal Medico Psychological Association will be held partly at Colchester and partly at Clacton-on Sea on July 5th 6th and 7th under the presidency of Dr F Douglas Turner The annual dinner will be held at the Grand Hotel Clacton-on Sea on Wednesday July 5th at 8 p m

The last of four lectures for advanced post graduates arranged by the Fellowship of Medicine will be given at 11 Chandos Street W on June 28th at 5 p m by Mr A McAllister on Some Features of Eclampsia ' On June 26th at 8 30 p m Dr R de Hellebranthe will lecture on Modern Methods of Local and Spinal Anaesthesia On June 27th at 8 30 p m Mr Lindsay Rea will give a demonstration on the fundus oculi at the West End Hospital for Nervous Diseases in patient department On July 13th at 4 p m at 11 Chandos Street there will be a demonstration of x ray films by Dr Kerley for M R C P candidates A week end course in general medicine and surgery will be held at the General Hospital Southend-on Sea on July 8th and 9th On June 30th there will be an ante natal demonstration at the Royal Free Hospital at 5 p m Forthcoming courses include proctology at St Mark s Hospital July 3rd to 8th ophthalmology at the Royal Westminster Ophthalmic Hospital July 10th to 29th dermatology at the Black friars Hospital July 10th to 22nd practical pathology at the Brompton Hospital July 10th to 22nd urology at All Saints Hospital July 10th to 29th

A medical conference on contraception will be held in the Great Hall B M A House Tavistock Square W C on Saturday July 8th at 10 30 a m It has been arranged by the National Birth Control Association with which is incorporated the Birth Control Investigation Committee The subjects for discussion are Recent Researches on Temporary Hormonic Sterilization (chairman Professor Julian Huxley) Public Health Authorities and Information on Contraception (chairman Dr Helena Wright) Chemical Spermicides and their Effects and General Practice and Information on Contraception (chairman Lord Horder) Application for tickets (price 2s 6d) should be made to the secretary 26 Eccleston Square S W 1

At the June meeting of the Central Midwives Board for England and Wales approval as lecturer was granted to Mr H S Allen (Cheltenham District Nursing Association) Mr B K T Collins was appointed an examiner of the Board at Bristol

An international post graduate course in paediatrics will be held at the Kaiserin Augusta Viktoria Haus Berlin from July 9th to 15th

An international congress for the protection of infancy will be held in Paris from July 24th to 29th under the presidency of M Paul Strauss late Minister of Health and a member of the Academy of Medicine The subjects to be dealt with include prenatal consultation and the importance of maternal instruction in connection with reduction of the infantile mortality supervision of physical development during the school and post school periods vocational guidance for mentally deficient children and the organization of legal guardianship of illegitimate children The fee for membership of the congress is 100 francs and further information can be obtained from the secretary of the congress 28 Boulevard de Vaugirard Paris XV e

The sixth French Provincial Congress of Hygiene will be held at Nancy from July 3rd to 5th when the following subjects will be discussed (1) preventive control of the health of adolescents (2) the morbidity of venereal disease (3) disposal of rubbish The subscription is 50 francs Further information can be obtained from the president M Jean Beneth Terre Plein Sant Epvre Nancy

The fourth International Congress of Radiology will be held at Zürich and St Moritz from July 29th to 31st 1934 under the presidency of Professor N Schinz Further information can be obtained from the general secretary D N S Wolther Gloriastrasse 14 Zurich

The executive committee of the International Congress for the Protection of Childhood to be held in Paris on July 4th has decided to include a colonial section for the study of maternity and child welfare

The trustees of the Lady Tata Memorial Fund announce that on the recommendation of the scientific advisory committee they have made the following awards of scholarships for the academic year 1933–4 Dr Walter Büngeler University of Frankfort-on Main Dr Leonid Dolschansky University of Berlin Dr Martin Cyril Gordon Israëls University of Manchester Dr Charles Oberling Faculty of Medicine Paris These scholarships were open to graduates of any nationality for research work in diseases of blood with special reference to leukaemia (see *British Medical Journal* February 18th p 284)

The Import Duties (Exemptions) (No 6) Order 1933 issued by the Treasury on the recommendation of the Import Duties Advisory Committee exempts untrimmed natural silkworm gut in hanks or bundles from duty chargeable under the Import Duties Act and comes into operation on June 23rd Untrimmed natural silkworm gut is the raw material for making gut for fishing tackle and for surgical sutures it is not produced in the United Kingdom or in any other part of the Empire

In the advertisement columns this week will be found a notice regarding the fourth award of the Nichols Prize by the Royal Society of Medicine The prize being the accumulated interest on £2 200 is offered every three years and is open to any British subject for the most valuable contribution towards the discovery of the causes and the prevention of death in childbirth from septicaemia The work must be submitted to the secretary of the society 1 Wimpole Street W by October 1st

On Empire Day the ceremony of opening the operating theatre at Southwold Cottage Hospital was performed by Lord Stradbroke in the presence of a large number of subscribers of all classes Soon after his death in 1928 there was a general feeling that some tribute should be paid to the memory of Dr R Wilson Mullock who for twenty five years had been the moving spirit in the work of the hospital and who had won the gratitude and devotion of all with whom he came in contact The affection and esteem which he had inspired were amply expressed by the readiness with which the sum of over £600 was raised by the subscriptions of rich and poor alike

Professor Karl Pearson has been awarded the Rudolf Virchow medal by the Berlin Society for Anthropology

The March issue of the *Chinese Medical Journal* is devoted to leprosy

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QUERIES AND ANSWERS

Gerard's "Herball"

Dr. W. DARLEY HARTLEY (Rondebosch, Capetown) writes: I have in my possession a copy of Gerard's *Herball*, that great volume of Elizabethan materia medica, published in 1597 and printed by John Norton at London. I should be very grateful if any of your bibliophile readers could inform me what edition of Gerard this is, and whether copies are rare. If they could at the same time give me any particulars about the author himself I would be grateful. I have been asked to show the book at a historical exhibition arranged for the ensuing South African Medical Congress in September, and any information would be of value. It contains a dedication to Lord Burghley.

*** John Gerard was born in 1545 at Nantwich and died in 1612 in London. At the age of 17 he was apprenticed to Alexander Mason, a surgeon in large practice and twice Warden of the Barber Surgeons Company of which Gerard was admitted a freeman in 1569 and a member of the Court of Assistants in 1595. Gerard was by then well known as a skilled herbalist; he was superintendent of Lord Burghley's gardens in the Strand and at Theobalds in Hertfordshire. In 1596 he published a list of the plants cultivated in his own garden in Holborn. In December, 1597, appeared the folio volume which has made his name a household word, his *Herball*. The original of this was the *Stirpium Historiae Pemptades* (1583) of Rembert Dodoens of Malines with many of Gerard's own remarks inserted such as localities for scarce plants in various parts of England and allusions to persons and places. In 1633 Thomas Johnson prepared a new edition of the *Herball* which was reprinted word for word three years later. The genus *Gerardia* was named by Linnaeus in memory of Gerard. In 1639 the Barber Surgeons Company of which he was Master in 1608 paid 25s. 6d. for a copy of the *Herball* for its library. Further information will be found in the article on Gerard in the *Dictionary of National Biography*.

Vehicle Sickness

YORKSHIRE writes: A woman patient suffers from vomiting every time she rides in her husband's motor car. She states she has suffered ever since she can remember, when riding in trains, buses, and trams. No treatment seems to benefit her. Can anyone having experience of similar cases suggest a remedy?

Nocturnal Enuresis at Menopause

O. OKIEP (London, W.) asks for suggestions in the treatment of spasmodic nocturnal enuresis in a woman aged 55. Menstruation has been absent for some months past, though it has recently been present—scanty and irregular in character. No other abnormalities physical or psychical.

Alopecia Areata

"A. A. H." writes: I have a patient with alopecia areata who has seen everybody in this part of the world and tried all the usual remedies—with no avail. The Wassermann reaction is negative. I should be grateful for suggestions as to any recent treatment.

LETTERS, NOTES, ETC.

Tobias Venner and his 'Via Recta"

A correspondent writes: Apropos of your amusing synopsis of some of Tobias Venner's views on tobacco, strawberries and cream, etc. (June 17th, p. 1068) it may interest some of the profession to know that a copy of the 1638 edition of this very book is to be sold at Sotheby's in Bond Street, on July 4th. The abbreviated title, as given in the catalogue, is *Via Recta ad vitam longam*: 'Or a plain Philosophicall Demonstration . . . for the preservation of health . . . a Treatise of the Famous Baths of Bathe . . . as also an accurate Treatise concerning Tobacco.' R. Bishop for H. Hood.' There are a few other old medical books in the same sale. Vesalius, *Anatomy*, Amsterdam, 1617, with forty anatomical plates; Otto Tachenius, *Hippocrates Chymicus discovering the ancient foundation of the late Viperine Salt with his Clavis thereunto annexed translated by I. W.* 1677; Hieronymus Von Braunschweig, *Das Buch zu istilieren*, 1532; Cogan, *The Haven of Health* "Hereunto is added Preservation from the Pestilence, with a short Censure of the late Sicknesse at Oxford" 1589; Luis Lobera de Avila, *Ein Nutzlich Regiment der Gesundtheit* with woodcuts of bloodletting, Augsburg, 1531; Marsilius Ficinus, *De Triplici vita libritres*, Bologna, 1501; and one or two others.

Posture in Labour

Dr. CHARLES J. HILL AITKEN (Rotherham) writes: The late Dr. W. E. Fothergill in his *Manual of Midwifery*, recommended that the legs be down when the head is still above the brim, that the legs be up when the head is in the pelvis, and that the legs be down again when the head is passing the perineum. This procedure will facilitate labour. These positions can be taken up by the patient lying on her left side and on her bed. The manual was published in the late 'nineties.

Portable Lithotomy Support

Dr. SHEILA MACPHERSON asks us to state that the makers in London of the portable lithotomy support, described in the *Journal* of June 17th (p. 1058), are Messrs. Allnatt and Partners. The appliance is also to be obtained from Messrs. J. Gardner and Son, Forrest Road, Edinburgh.

Inflammation after Use of Depilatories

Dr. L. H. FISHER (Brighton) writes: In your Letters, Notes and Answers column of June 17th there is a reference to adenitis following the use of depilatories. Recently I had a similar case, and I have treated at least half a dozen cases in six or seven years. The condition, in my opinion does not appear to be an adenitis. It resembles more a subcutaneous abscess, probably at the root of a sweat gland. In each case there has been two or more present—in one case eight small abscesses about the size of a hazel nut. I consider depilatories to be definitely dangerous.

The A.A. Irish Handbook

The Automobile Association (Fanum House, New Coventry Street, W.1) has now issued its *Irish Handbook* for 1933-4. Particulars are given of all Irish hotels and garages holding the full A.A. appointment and a note is included of houses where hot and cold running water is provided in the bedrooms. Details are given concerning the services to which members are entitled from the A.A. road patrols and departments, and there is a map in atlas form (scale sixteen miles to the inch). Further information covers foreign tours, steamship rates for motor vehicles, times of lighting up for Northern Ireland and the Irish Free State, and formalities in connexion with crossing from the Free State to Northern Ireland and vice versa.

Vacancies

Notifications of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals will be found at pages 42, 43, 44, 45, 46, 47, 50, and 51 of our advertisement columns; and advertisements as to partnerships, assistantships, and locumtenencies at pages 48 and 49.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 296.

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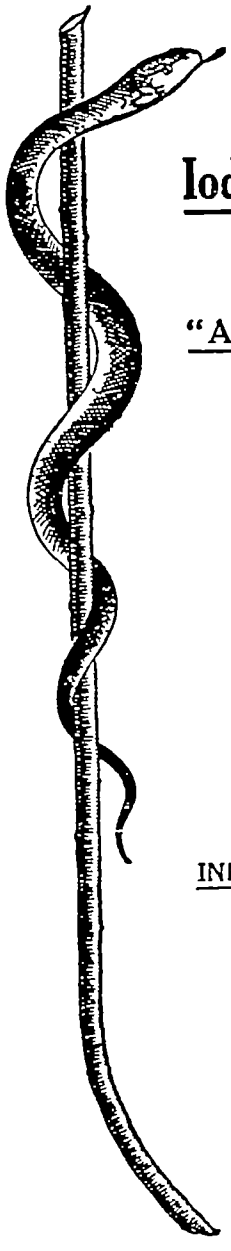

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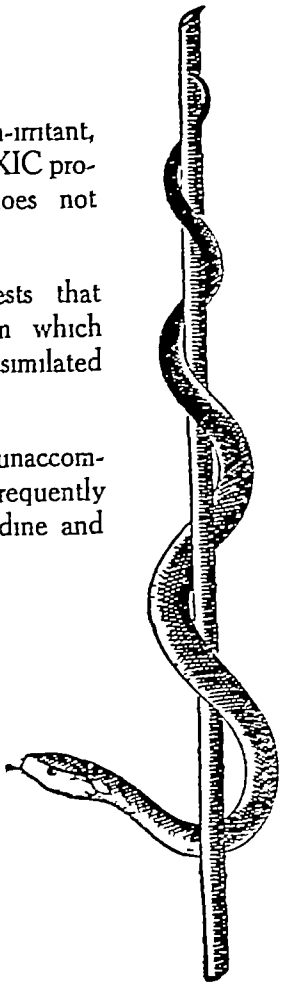

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EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

438 Arterial Blood Pressure during Attacks of Angina

SAMUEL A LEVINE and A CARLTON ERNSTENE (*Amer Heart Journ* February 1933 p 123) report their observations on arterial blood pressure during attacks of angina pectoris Readings were obtained in spontaneous attacks occurring in twenty three patients In seven the previous blood pressure readings were known In three the attacks were allowed to end spontaneously and in twenty nitroglycerin was given to obtain relief In every case the systolic pressure was distinctly higher during the attack Although this may not be an invariable occurrence it is concluded that a failure of the blood pressure to rise in an anginal attack is rare Evidence is presented to show that in patients with angina pectoris pain alone such as that of renal colic neither produces an elevation of the blood pressure nor brings on an attack of angina It is suggested that a temporary elevation of the blood pressure is an important factor in the production of anginal attacks and may even be a necessary immediate cause of the attack although a final decision as to this relation will require further investigation

439 Spontaneous Subarachnoid Haemorrhage

C K RUSSEL (*Canadian Med Assoc Journ* February 1933 p 133) has encountered twenty six cases of this disease and believes that it is too often overlooked despite the distinctive clinical picture The average age of these patients was 38 the eldest was 69 and the youngest 12 Recurrent attacks were noted in some cases Fourteen patients were women and twelve were men In five instances the haemorrhage was associated with pregnancy In three of these there was renal toxaemia and hypertension but of too short duration to suggest such a sequel Only in one case in the whole series was there a suspicion of vascular syphilis and in none was there evidence of thrombosis of the longitudinal sinus Russel considers that developmental defects are the underlying factors in the majority of the cases The onset is always sudden Headache begins in the frontal region but soon becomes occipital also and frequently spreads down the neck and back It is often associated with vomiting but the headache being severe is always the outstanding symptom Consciousness may be dulled or lost in the first case the patient when roused is rational and not toxic as in an infective meningitis In coma or semi-coma supervenes there is still evidence of extreme irritability A generalized convulsion occurred in two cases in the series The temperature is normal at first but may rise slightly later due probably to the absorption of the blood There is definite stiffness of the neck on passive movement especially obvious if an attempt is made to flex the head on the chest Kernig's sign is present in the more severe cases but there are as a rule no paralyses and no pathological reflexes In half the series there was slight blurring of the optic disks and in one third definite haemorrhages were seen in the fundi Albuminuria was present in 50 per cent but in no instance in very great amount This sign disappeared before healing was complete The leucocyte count averaged 11 000 The blood pressure was usually on the high side Lumbar puncture clinches the diagnosis The spinal fluid is under increased pressure and its colour ranges from pink to that of pure blood It does not clot and on standing the cells sink to the bottom of the tube the supernatant fluid remains coloured by altered blood pigment Withdrawal of the fluid relieves the headache but the intracranial pressure must not be lowered too rapidly at one time nor too soon after the onset and before a clot has had time to form at the bleeding point Yet it is important to remove as much as possible of the blood in view of possible complications later such as the formation of an interstitial hydrocephalus The disease was of the meningitic type in fourteen of the twenty six cases at the onset with symptoms of meningeal irritation In ten cases however either at the onset or subsequently a second haemorrhage occurred which had the character of an apoplexy causing a hemiplegia Spontaneous subarachnoid haemorrhage is most frequent at the junction of the anterior cerebral and the anterior communicating arteries Developmental aneurysms are attached by the author to this fact but in the older patients acquired disease is more commonly the cause Advanced atheromatous changes occur with surprising frequency even in young persons

440 Spontaneous Serum Sickness

W MIKULOWSKI (*Arch de Méd des Enf* March 1933 p 161) who records two illustrative cases states that spontaneous absorption of the patient's own albumin may under certain conditions produce serum sickness and a joint reaction The first patient was a boy aged 8 suffering from tuberculous peritonitis who on absorption of the peritoneal effusion developed a transient and painful oedema of several joints a haemorrhagic eruption and urticaria accompanied by leucopenia hypochromia and oliguria The second patient was a girl aged 8 years suffering from tuberculous pleurisy and peritonitis who developed arthralgia in the cerebral joints and upper limbs accompanied by generalized urticaria as the effusion became absorbed

Surgery

441 Plastic Surgery in Chronic Radio-Dermatitis

Sir HAROLD D GILLIES and A H MCINDOE (*Brit Journ Radiol* March 1933 p 132) describe the treatment of chronic radio-dermatitis and radio-necrosis by plastic surgery Analysis of the records of their patients shows that they fall naturally into three groups (1) patients who have received a single dose of radium or x rays for diagnosis or treatment (2) patients who have undergone treatment for a chronic condition and who have received small but oft repeated doses for a long period often resulting in ulceration and (3) professional workers with x ray apparatus suffering from burns of the hands and face It is stated that the full effects of excessive radiation may not become apparent at once and a latent period of months or even years may intervene between the last dose of x rays and the final breaking down of the tissues The hopelessness of conservative treatment is stressed and the necessity is urged for adequate excision of all the devitalized tissues at a suitable time in order to prepare a healthy foundation for immediate grafting The indications for operation are (1) pain itching ulceration and discharge (2) deformity from contraction (3) cosmetic appearance and (4) epithelomatous change Treatment falls naturally into two stages (*a*) excision and (*b*) repair and in the vast majority of cases both stages are carried out at one operation Excision is usually simple and should extend into healthy skin on all sides A guide to the depth of excision is furnished by traction on the ruddy line supervening which a cleavage plane which is easily followed being thereby established Three methods of repair are available (1) Thick razor grafts these applied on a Scott pressure mould of the defect have a wide field of use (2) Full thickness dissected grafts these in the writers hands have not proved as reliable in this type of repair as the first method (3) Pedicle flaps these may be of the sliding rotation transposed or tubed pedicle variety according to the difficulties to be overcome and the

cosmetic result desired The results in the authors' hands are excellent, and many illustrations of cases are given proving this It is noteworthy that radio-dermatitis and necrosis are cured as soon as excision is complete, and the relief of the pain is usually immediate and permanent Success thus depends entirely on the technical excellence of the plastic treatment In general it may be said that the results are most favourable with thick razor grafts and flaps, and that a successful repair in this type of burn may be more confidently predicted than after burns by fire

442 Ambulatory Treatment of Fractures of the Instep

Of the various fractures of the tibio-fibular mortise J DELCHEF (*Journ de Méd de Bordeaux*, March 20th, 1933, p 223) deals only with Dupuytren's Though it is generally agreed that these are caused by a movement of abduction, he does not concur in the usual method of treatment by placing the foot at rest for some time in a position of hyperadduction For some twenty years he has employed an ambulatory method, and immobilizes the foot in an anatomical position as recommended by Lorenz-Bohler, but without the stirrup used by the latter The following is his technique After determining the lesions by clinical and radiological examinations, local anaesthesia is produced by the interfragmentary method of Quenu, 10 c cm of a 1 per cent solution of scurocaine being injected amongst the fragments Should much swelling be present this may be reduced by massage The patient sits with the injured limb on a table The surgeon also seated, grasps the foot, the homologous hand holding the calcaneum between the thumb and index finger, the other firmly holding the mediotarsus with the thumb under the sole and the fingers on the back of the foot An assistant exercises contra-extension at the popliteal space Reduction, which is usually easy, is made by traction on the calcaneum and metatarsus, the displacement being most frequently corrected automatically When the fracture includes a posterior marginal fragment deviation is apt to recur but this is easily overcome A plaster cast, reaching from the popliteal space to the ends of the toes, is then applied, the foot being maintained at right angles to the leg without abduction or adduction Circular bands of gauze fix the toes to the knee The cast is completed by plaster bands very exactly moulded to the foot and upper ends of the tibia and fibula Walking is allowed immediately the plaster is dry The cast is retained for forty-two days, the circulation being carefully watched After its removal a course of massage and thermotherapy is given To prevent the frequent subsequent swelling a boot composed of Unna's gum should be applied and worn for eight days Short notes are given of thirteen cases—in only two was osteosynthesis performed In conclusion, Delchef discusses the logic of this method and the essentials for success, such as the anaesthesia and correct moulding of the cast

Therapeutics

443 Treatment of Post operative Hypoparathyroidism

R ELLSWORTH (*Bull Johns Hopkins Hosp*, February, 1933 p 131) reports in detail a case of this condition and emphasizes the importance of regulating both the intake of calcium and of phosphorus At first the typical symptoms were partly relieved by a daily calcium intake of 2 grams and a limitation of the phosphorus intake to 1 gram The serum calcium content rose, as also did the serum phosphorus Further limitation of the phosphorus intake to 0 27 gram daily resulted in accentuated relief of the symptoms a slightly higher rise in the serum calcium figure and a fall of the serum phosphorus figure towards the normal The patient returned home and resumed her usual life, but the prescribed regime proved to be ineffectual The calcium ingestion was then raised to 5 grams daily by giving calcium chloride relief of the symptoms ensued, associated with a return towards the normal of the serum calcium and phosphorus figures In the course of the condition viosterol was tried, possibly in too large doses (4 c cm daily) The serum calcium rose at first, but then fell, and the serum phosphorus figure was definitely increased with clinical signs of tetany The author thinks it possible that a very high calcium intake ought to have been associated with this administration of viosterol in order that its calcium increasing potentialities might have been realized Magnesium salts were also tried, and some evidence was obtained that a partial inactivation of the blood inorganic phosphorus content resulted The injection of 80 units of parathormone was followed by a prompt and very rapid fall in the serum inorganic phosphorus, with symptomatic improvement, beginning about eight hours after the injection The serum calcium had reached a level of 9 2 mg per 100 c cm twenty-four hours after the parathyroid extract had been administered

444 Treatment of Erysipelas

W VOGEL (*Deut med Woch* March 10th, 1933, p 365) reports good results in severe cases of erysipelas treated with a combination of local applications and serum injections In regard to local treatment he has found ichthyol ointments, confinement to bed, and immobilization of the affected part in general satisfactory Sometimes *x*-radiation is also applied Mild cases heal rapidly and without exception More severe cases with high fever and urgent general symptoms are treated with injections of autogenous serum, omnadin, or horse serum, sometimes collargol and vaccines are used The author points out that whilst all these methods are successful in individual cases there are many occasions on which no improvement attends their use In recent years the author has used a polyvalent anti-streptococcal horse serum (streptoserin) prepared according to Meyer's technique for the immunization of horses with streptococcal cultures and toxins This serum has given excellent results in gynaecological cases of streptococcal infections In erysipelas the dose varies from 20 to 100 c cm intramuscularly, according to the severity of the condition This may be repeated in twenty-four hours In nearly all cases the temperature is down to normal the next day and the symptoms are definitely improved Failure to bring down the temperature is due to insufficient dosage or to abscess formation deeper in This latter is considered so strongly to be the case that the author regards it as of diagnostic importance Whilst the temperature is brought down rapidly and the general symptoms are improved, the local manifestations may be affected more slowly, but even where these latter extend there is always an amelioration of the symptoms

445 Prevention of Chills following Blood Transfusion

According to R LEWISOHN and N ROSENTHAL (*Journ Amer Med Assoc*, February 18th, 1933, p 466) the occurrence of chills after blood transfusion is preventable whether the blood has been citrated or not They refer to investigations by various authors who have shown that chills ensue with the same frequency in both cases, and submit arguments that the addition of the citrate solution has no such predisposing influence in this respect as has been sometimes attributed to it It appears to the present authors that chills and other reactions following intravenous therapy are due to the existence of foreign protein, which is either extraneous matter present in the insufficiently distilled water or the remains of changed blood proteins left in the apparatus from previous transfusions As the result of centralization of the cleansing of the apparatus and the preparation of the solutions by competent persons, a marked fall in the incidence of chills was recorded—namely, from 12 to 1 per cent With such precautions only five cases occurred in a series of 477, and in four of these an error in technique was demonstrable Many of the patients were desperately ill at the time of transfusion The procedure was undertaken by a considerable number of members of the consulting and resident staffs of the hospital concerned, and the

Nutritional Anæmia in Infancy

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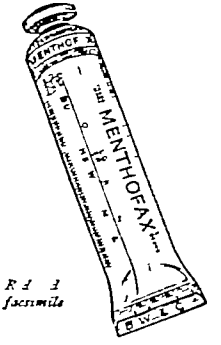

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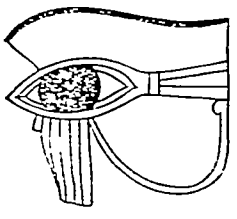
BELIEF IN THE 'EVIL EYE" AS A CAUSE OF DISEASE AND DEATH FIRMLY HELD IN ANCIENT EGYPT—In Egypt amulets against the evil eye, such as shells and forehead pendants have been found in graves of prehistoric times Not only human beings but many animals were believed to "fascinate" with a look. Disease caused by the 'evil eye" was also treated by incantation, which could also prevent the dread glance The "eye of Horus" here depicted, was considered one of the most powerful amulets against "fascination." The underlying idea in the wearing of these amulets was to distract and avert the attention of the "evil eye" from the wearer to the object worn.



DATE From prehistoric times

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authors suggest that complete elimination of chills would follow the reservation of blood transfusion to a small expert team which should also be solely responsible for intravenous therapy generally Apart from the proper cleansing and sterilization of the apparatus other factors concerned are the securing of a rapid flow of blood from the donor into the glass receptacle to prevent the formation of small clots and the maintenance of a slow rate of introduction of citrated blood into the recipient Accuracy of blood grouping is also an important safeguard Triple distilled water is indispensable in the preparation of the sodium citrate and normal saline solutions Details are given about the special cleansing of the apparatus and the precautions advisable in securing purity of the fluids for intravenous therapy

Laryngology

446 Ozaena

LEROUX ROBERT and COSTIOL (*Rev de Laryngol d Otol et de Rhinol* February 1933 p 172) review the present knowledge of the aetiology pathology and bacteriology of ozaena They consider the subject from two aspects—the endogenous one in which the patient himself is the determining factor of his affection and the exogenous one in which germ transmission from another individual plays the chief part It has been proved experimentally that implantation of the fetid bacillus does not result in ozaena unless a preceding atrophic rhinitis is present This atrophic condition may be produced by local conditions such as repeated coryza or general diseases such as scarlet fever measles diphtheria and hereditary syphilis The atrophy results from a neuritis by a descending process or by an ascending process affecting the nerve endings The neuritis is dependent on toxins of general maladies The frequency with which such conditions arise at puberty shows that there exists some relation between them and the endocrines The pituitary gland appears to be particularly involved Calcium imbalance also favours the endocrine dysfunction The atrophied condition provides a soil favourable to infection The infection the result of a microbic process determines the odour which heralds the establishment of the malady Certain preventive measures are suggested—the careful examination of the nasal fossa after infantile or puberty infections and a consideration of the possibility of pituitary insufficiency As curative measures autovaccines mono- or polymicrobic vaccines or bacteriophage injections endocrine administration and general treatment are advised Finally local measures in the shape of anatomical or physiological prosthesis including a periarterial sympathectomy in order to produce a humidification of the mucous membrane are indicated

447 Endonasal Radical Operation on the Antrum

A WACHSBERGER (*Arch of Otolaryngol* February 1933 p 222) describes and commends a modification of the radical operation on the maxillary antrum which was first suggested independently in 1908 by both Canfield and Sturman The advantage of this procedure is that the oral incision is obviated the operation being performed entirely through the nostril The present authors consider that this line of approach is indicated whenever a radical operation on the antrum is required unless a combined oral and nasal approach is preferable as it is in cases in which there is a tumour formation—particularly a large tumour of suspected malignancy—and also in cases of dental origin in which there is involvement of the alveolar process of the upper maxilla such as osteomyelitis occurring after the extraction of a tooth The incision is made in the nasal vestibule in the fold which forms between the pyriform crest and the ala when the speculum is inserted and spread It starts at the level of the insertion of the inferior turbinate and is drawn downwards and parallel with the pyriform crest to the level of the nasal floor the periosteum being simultaneously incised Joseph's elevator is employed to separate the soft parts of the cheek from the bony facial antral wall but the exit of the infra-orbital nerve must not be exposed lest severe post-operative pain ensue The present author unlike Sturman limits the separation to the extent of the inferior meatus stopping at the insertion of the inferior turbinate A speculum is now introduced to reveal the medial and outer antral wall and these are opened with Halle's largest circular trephine placed firmly against the facial wall at a point as far laterally from the pyriform crest as possible and at the level of the mid-section of the inferior meatus The opening can also be made by a gouge The cavity can now be viewed and the degree of pathological change be estimated The opening is then enlarged by removing the facial antral wall medial to the original opening the crista pyriformis and the bony naso-antral wall as in the Denker operation When enough has been removed the interior of the antrum is fully exposed for observation and curetting The final stage in the operation is the cutting of a flap by an incision along the attachment of the inferior turbinate the tip of which need not be excised No packing is used There may be some swelling of the cheek on the second day but this is less than with the Denker operation Wachsberger claims that the avoidance of the oral incision prevents the formation of any bucco-antral fistula through which the stratified squamous epithelium of the oral cavity may grow into the antrum thus delaying healing and establishing a non-physiological condition in the antrum Similarly lodging of food in the antrum and inability to blow the nose properly are obviated nor is there any necessity for secondary plastic procedures to close a pathological fistula The inferior turbinate is retained intact and does not interfere with any inspection of the cavity which indeed is facilitated by the removal of the pyriform crest This removal also permits direct ventilation by the inhaled air which is beneficial for the promotion of healing The author has had gratifying results from this method in over eighty patients

Obstetrics and Gynaecology

448 Total and Subtotal Hysterectomy

Referring to the different opinions as to the choice between total and subtotal hysterectomy J OKINCZYC (*Ginecol et Obstét* March 1933 p 215) states his opinions on the subject basing his conclusions on 365 personal cases These gave a mortality of sixteen (4·12 per cent) The subtotal operation was performed in 256 cases with seven deaths (2·7 per cent) and the total in 132 with nine deaths (6·8 per cent) In 211 cases of fibromata treated by hysterectomy four deaths (1·8 per cent) occurred 164 subtotal operations were performed with three deaths (1·8 per cent) and forty-seven total with one death (2·1 per cent) In eighty-one cases these tumours were associated with other conditions such as salpingitis pregnancy cancer etc A study of these figures and of the causes of the deaths does not show a preference for either operation nor does it indicate that an error had been made in the one chosen For other affections ninety one subtotal hysterectomies were performed with four deaths (4·3 per cent) and eighty six total with eight deaths (9·3 per cent) Though one fatal case in the former group might have benefited by a total operation an analysis of the causes of these deaths does not indicate any preference for the one or other procedure In only eighty-one cases was hysterectomy performed for salpingitis as this condition is better treated by more conservative methods Okinczyc states that the choice of operation is often rendered difficult by the fact that cases in which the total method is the more indicated are precisely those of more difficult if not impossible execution He believes that the indications for total hysterectomy lie less in the pelvis than in the vagina and that the condition of the cervix should determine the choice of operation The total is indicated when the

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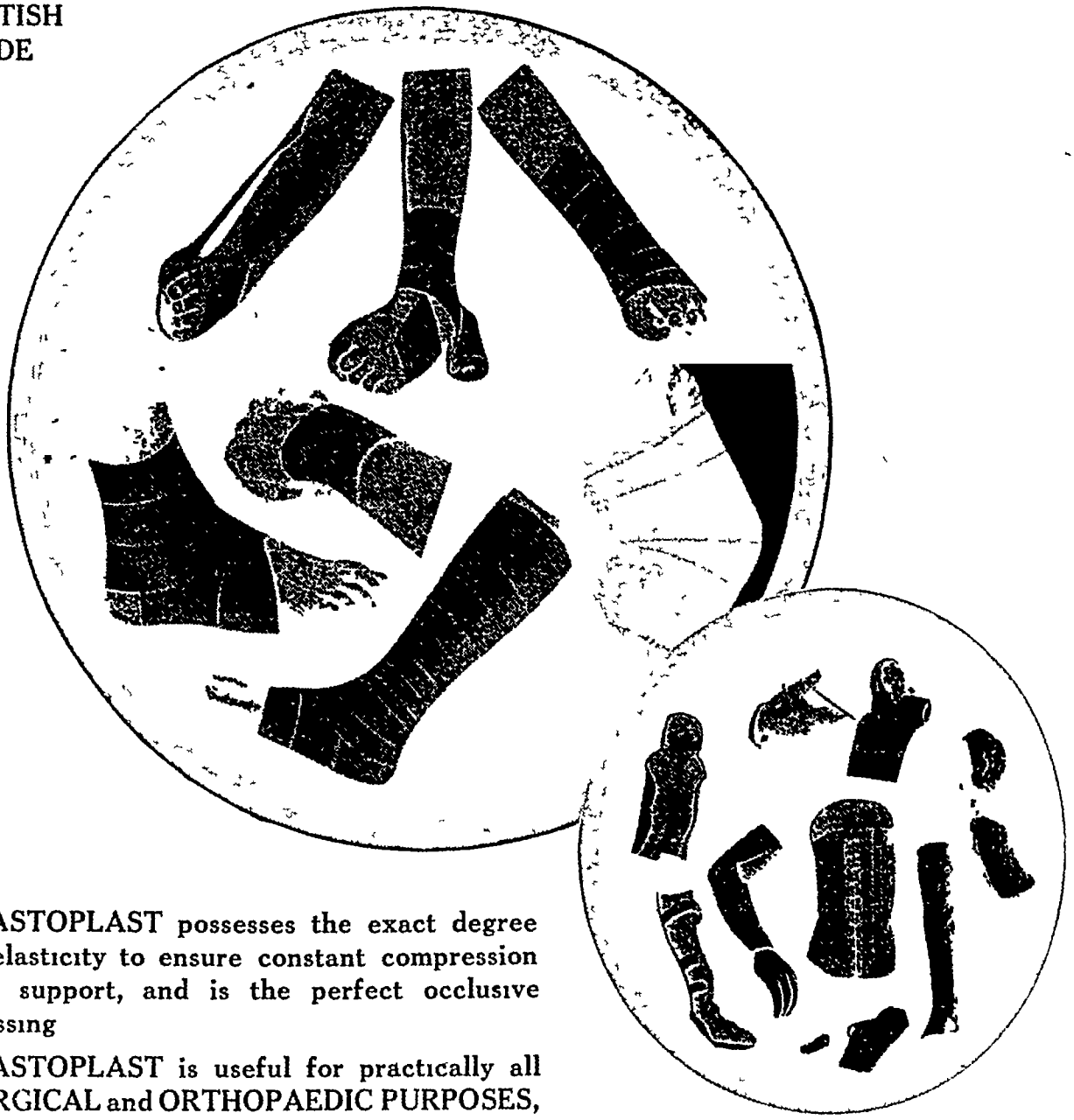

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cervix is suspicious, being large, hard, infected, and adenomatous The subtotal is the choice where pelvic indications alone exist, in these cases drainage can be made to the vagina by posterior section of the stump after excising the cervix Little importance is attached to secondary cancerization of the stump The after-effects of each operation show no advantage in favour of either The author maintains that both are excellent, each has its advantages, disadvantages, and indications, and the choice must be governed by the conditions in each individual case

449 Persistent Corpus Luteum

M REEB (*La Gynécol*, February, 1933, p 65) reports two observations of cases with disturbance of menstrual function due to retention of the corpus luteum A woman, aged 35 had had one previous confinement, premature at the seventh month, and one miscarriage at three months Present cessation of menses dated from two months Her general condition was good, Wassermann reaction negative blood pressure 130/85, the urine showing traces of albumin without casts Drops of colostrum were present in the breasts, and the vulva and vagina presented the typical violet coloration The cervix was softened, uterus anteflexed, enlarged, and soft Hegar's sign was positive To the right of the uterus was felt a cystic tumour, very mobile, and round like a small orange The left adnexa were normal A diagnosis of a two months pregnancy complicated by a right ovarian cyst was made At operation several days later there was found a pedunculated cyst of the right ovary, and the very soft uterus corresponded to a three months' pregnancy In the piece removed was a large corpus luteum 22 by 18 by 12 mm Histological examination of the corpus luteum showed it to be in the stage of proliferation and vascularization, the lutein cells were grouped in lobules, the central coagulum was not organized The cyst was a unilocular Wolffian cyst Three days after the operation a slight loss of blood appeared This lasted for three days and scrupulous examination revealed no clots, ovarian debris, or uterine shreds It was then thought that the pregnancy was continuing On the thirteenth and again on the fifteenth day after operation the uterus was found to be of normal size and quite hard The violet coloration had disappeared and an Aschheim-Zondek test was negative The conclusion reached was that the pseudo pregnancy was caused by the abnormal persistence of the corpus luteum, the progestin maintaining the uterine mucosa in its pregravid phase The operative removal of the corpus had acted on the uterus in the same way as its spontaneous regression The second case quoted illustrates the results of hyper secretion of the lutein hormone over a long period —namely delayed menses and pseudo pregnancy Slight excess only of the hormone produced membranous dysmenorrhoea

Pathology

450 The Gono-reaction

The gono-reaction stands in the same relation to gonorrhoea as the Wassermann does to syphilis It is a reaction of complement deviation revealing the presence of gonococcal antibodies According to P BARBELLION and Mlle LEBERT (*Journ d Urol* February, 1933 p 97) the four essentials for the reaction are antigen, the test serum the alexin and a haemolytic system The antigen is obtained from gonococci treated by various agents, an alcohol potassium antigen gives excellent results A good antigen must be prepared from numerous strains of gonococci The test serum is procured from 10 c cm of the patient's blood, this is placed on ice and the serum withdrawn after coagulation The alexin, a thermolabile substance is obtained from any fresh serum, such as the guinea-pig's The haemolytic system is composed of washed defibrinated sheep's red cells and an anti-sheep serum which is prepared by injecting sheep's red cells into a rabbit The alexin and haemolytic system must be accurately dosed The results of the gono-reaction obtained by various workers are summarized A study of these reveals the following facts a strongly positive Wassermann can give a positive gono-reaction though gonococci be absent (therefore, the former should be done concurrently with the latter), a negative reaction is important in the diagnosis of cure provided that the patient has had a previously positive one, during pregnancy and the puerperium the test is of no value, meningococci give a negative reaction, but the *Micrococcus catarrhalis* gives a slightly positive one in 10 per cent of cases The present authors describe their technique for the test, which is similar to that employed in the Wassermann In conclusion, they state that the reaction becomes positive about the third week of the infection, and is always positive in complications, especially in articular localizations It remains positive during the whole course of the disease and often for two months after apparent cure, if the reaction does not become negative at the third month cure is doubtful The test, while not absolute is of value in determining the presence and cure of gonorrhoea, particularly in females It is useful as a prenuptial test, and also in determining the aetiology of a rheumatism, epididymitis, or urethritis

451 Alimentary Value of Lactic Acid

J A COLLAZO J PUYAL, and I TORRES (*Anales de Medicina Interna*, February, 1933, p 133), in order to determine whether the lactic acid formed in the intestine by acidophilous flora is absorbed and passes into the blood as an alimentary product, investigated its assimilation and toxicity by administering it to rabbits by mouth, and then estimating the lactic acid and glucose in the blood The results were as follows Lactic acid and its salts could be tolerated in amounts of 5 to 6 grams per kilo without causing any severe disturbance The curve of the lactic acid in the blood reached a maximum level of 200 to 250 mg per cent compatible with the life of the animal Symptoms of intolerance then appeared, such as dyspnoea, tachycardia, and excitement The amount of glucose in the blood showed a rise corresponding to that of the lactic acid in the proportion of 20 to 50 per cent of the initial fasting value

452 Relation between Streptococcal Antitoxin and Antistreptolysin

E W TODD, L J M LAURENT and N G HILL (*Journ Path and Bact*, March, 1933, p 201) examined fifteen antistreptococcal horse serums, and found that in eleven of them the antitoxin titre was more or less proportional to the antistreptolysin titre In two of them the antitoxin titre was high while the antistreptolysin titre remained comparatively low, and in a further two the relation was reversed, the antistreptolysin titre being exceptionally high in the presence of a low antitoxin titre Ten mild cases of scarlet fever, untreated by antiserum, were then studied, the Dick test being performed at weekly intervals and the blood serum examined at the same time In all the cases the Dick reaction changed from positive to negative between the first and the second week This change was accompanied in six cases by a corresponding rise in the antistreptolysin titre, while in four of the cases no increase in antistreptolysin was apparent during a period of three weeks A further corroboration of the independence of antistreptotoxin and antistreptolysin was obtained by a study of twelve convalescent rheumatic fever patients who had remained Dick positive The serum of eight of these cases had normal antistreptolysin titres, while the serum of the other four cases had abnormally high titres—higher, in fact, than the serum of any of the Dick negative scarlet fever patients in their second week of illness It is known that many strains of haemolytic streptococci may produce a large amount of filterable haemolysin in serum broth cultures, and yet form only small quantities of Dick toxin as measured either by skin reactions in sensitive persons or by lethal effects on rabbits It is therefore concluded that the antibodies formed to the haemolysin and the toxin are distinct

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CAUSATION AND TREATMENT OF ARTHRITIS AND ALLIED CONDITIONS

REPORT OF THE B M A COMMITTEE

The Council of the British Medical Association on November 11th 1931 appointed a special committee for the promotion of research into the causes of arthritis and allied conditions and the investigation of methods of treatment etc with the following reference—

(1) *To correlate the present knowledge of chronic arthritis and allied conditions*

(2) *To report on the methods at present in use, and the organizations at present existing both at home and abroad for the treatment of these conditions*

(3) *To report on the directions in which future research into these conditions can be undertaken with most probable profit and the means whereby such researches may be directed and correlated*

(4) *To report on the means whereby a knowledge as to early diagnosis prevention and treatment of these conditions may best be disseminated amongst the medical profession*

The Committee consisted of—

SIR HUMPHRY ROLLESTON Bt, M D F R C P *Chairman*
R G GORDON M D, D Sc F R C P Ed *Vice-chairman and Honorary Secretary*
W G WILLOUGHBY M D
E K LE FLEMING M B B Ch
SIR HENRY BRACKENBURY LL D M R C S
N BISHOP HARMAN LL D F R C S
C W BUCKLEY M D F R C P
JOHN FREEMAN M D
L G GLOVER M D
A H GODSON F R C S
MERVYN H GORDON M D, F R S
C O HAWTHORNE M D D Sc LL D, F R C.P
A P LUFF M D F R C P
G L KERR PRINGLE M D
MATTHEW B RAY M D
S GILBERT SCOTT M R C S D M R E
F G THOMSON M D F R C P
SIR WILLIAM H WILLCOX M D F R C P

PRELIMINARY

The Committee met on eleven occasions and the Drafting Subcommittee on five occasions

The Committee has sought to fulfil its reference under the following headings

I Nomenclature and classification
II Clinical features
  (*a*) Primary rheumatoid arthritis
  (*b*) Secondary rheumatoid arthritis
  (*c*) Chronic villous arthritis
  (*d*) Osteo-arthritis
  (*e*) Spondylitis
  (*f*) Fibrositis
III Incidence
IV Aetiology
V Morbid anatomy
VI Biochemistry
VII Radiology
VIII Differential diagnosis
IX Treatment
  (*a*) Prophylaxis
  (*b*) Vaccines
  (*c*) Drugs
  (*d*) Endocrine preparations
  (*e*) Diet
  (*f*) Physical methods
    (i) General
    (ii) Electrical and *x* rays
    (iii) Mineral waters and baths
  (*g*) Climate and Hygiene
X Orthopaedic and Surgical
XI National schemes for treatment
  (*a*) In certain Continental countries
  (*b*) Suggested scheme for Great Britain
XII Observations on advertised remedies
XIII Indications for future research
XIV Suggestions for further professional education

I. NOMENCLATURE AND CLASSIFICATION

At the outset the Committee was faced by the difficulties of nomenclature and classification The term arthritis and allied conditions includes many different manifestations of disease among these are some which can neither be sharply defined nor their cause or causes be regarded as other than uncertain As an aetiological classification is in the present state of knowledge impossible the Committee has adopted as the most practical solution a clinical grouping though this is admittedly unsatisfactory in some respects Further as the titles applied to various forms of joint disease are confusing the Committee while preferring those familiar in British practice prints also the corresponding synonyms employed in some Continental countries and in the United States

The Committee has excluded from the scope of its inquiry the joint affections of

(1) Acute and subacute rheumatism
(2) Specific infections such as those dependent upon gonococcal pyogenic enteric and dysenteric organisms and those associated with the exanthemata
(3) Metabolic and haemopoietic diseases—for example gout haemophilia purpura and
(4) Organic nervous diseases—Charcot's joints

The following is the clinical grouping adopted by the Committee

	SYNONYMS	
Rheumatoid Arthritis	Chronic polyarthritis (*Continental nomenclature*)	*Primary* cause not known this acknowledgment may merge into
	Atrophic (Goldthwait)	
	Proliferative (Nichols and Richardson) (*American nomenclature*)	*Secondary* associated with focal or general infection

	SYNONYMS	
Chronic Villous Arthritis	—	Mainly occurring in women at or about the climacteric
Osteo arthritis	Hypertrophic (Goldthwait)	*Primary* no definite association with infection
	Degenerative (Nichols and Richardson)	*Secondary* associated with infection
Spondylitis	Ankylopoietica	Arthritis of spinal joints, with bony ankylosis, spreading centrifugally to adjacent large joints
	Osteo arthritica	Osteo arthritis of the spine (the labourer's spine)
Fibrositis	Intramuscular and fascial Periarticular Bursal and teno synovial Subcutaneous (panniculitis) Perineuritic	

II CLINICAL FEATURES

(*a*) PRIMARY RHEUMATOID ARTHRITIS

Occurs particularly during the child-bearing period in women who follow indoor occupations

Prodromal symptoms are attacks of cramps or weakness in the muscles, muscular wasting, and paraesthesias and vasomotor disturbances of the extremities—for example, Raynaud's syndrome, sweating, instability of pulse rate, tremors, fatigability

The *onset* may be acute or subacute, with febrile or subfebrile temperatures, in association with enlargement of one or more of the small joints of the hand

The *course of the disease* may be marked by periods of apparent recovery, on the other hand, any influence, mental or physical, which reduces the general health may aggravate the symptoms

Arthritic manifestations commence in the small joints of the hands, which develop a characteristic fusiform shape without much evidence of active inflammation In time many joints become affected, the progress is centripetal, and the distribution shows bilateral symmetry Muscular wasting is extreme, particularly in the small muscles of the hands In advanced stages stiffness, contractures, especially ulnar deviation, and ankylosis, are prominent The patient's general health declines, and such symptoms as anaemia tachycardia sweating, and coldness of the extremities are noted, perhaps also enlargement of neighbouring lymphatic glands The heart, except for myocardial deficiency, is not directly affected

Aetiology is uncertain Foci of infection are not always found, and their removal is not always followed by improvement Vasomotor phenomena and capillary contraction are held to be significant features, and have been attributed to endocrine imbalance

Prognosis Progress is always slow, and intermissions and recrudescences are frequent

Treatment To secure improvement in the general health is imperative The patient must therefore surrender herself entirely to treatment and avoid all unnecessary fatigue

Diet This should be generous, with plenty of fruit and fresh vegetables

Drugs Iodine in milk and small doses of thyroid extract are the most useful drugs Short courses of general tonics such as cod-liver oil sodium cacodylate and iodide of iron are often useful Anodynes and sedatives are frequently indicated

Physical Methods Massage should be applied to the muscles round the affected joints The joints should be gently moved each day, and should be supported and, if necessary, retained in the optimum position by light splints Heat and counter-irritation may be applied to the affected joints by steam mud packs, diathermy, and blisters, but fatigue must be avoided Intrapelvic diathermy has been advocated and found useful

Infective foci, if found, should be treated very cautiously to avoid shock and toxaemia Vaccines in small doses are favoured by some authorities

(*b*) SECONDARY RHEUMATOID ARTHRITIS

There are two clinical types (*a*) with acute febrile onset resembling rheumatic fever, (*b*) with subacute onset, often followed by periods of activity and remission In each the disease is polyarticular, tends to be symmetrical in distribution, and attacks both large and small joints The disease is usually associated with discoverable septic foci, psoriasis also appears in occasional instances to have some clinical relation to it

Age May occur from childhood to long past middle life, most common between 20 and 40

Sex Men and women suffer in approximately equal numbers

Modes of Onset In the acute types several joints are involved early The fingers, wrists, elbows, toes, ankles, and knees are commonly affected, less commonly the shoulders and hips The jaw and the spine are not infrequently involved

Joint Conditions The joints are swollen, and tend to be fusiform, pale in colour, 'doughy" to the touch, tender on pressure, and painful on movement, the range of movement is restricted Localized sweating over the joints is frequently observed The muscles immediately above and below the joint are wasted, the nearest lymphatic glands may be enlarged Well marked distortion of joints frequently occurs

Temperature In cases with acute onset there is fever of varying intensity Subacute cases show periods of slight pyrexia The more chronic cases are usually afebrile or show subnormal temperatures

Blood Secondary anaemia, slight or pronounced, is common Leucocytosis, lymphocytic in type and moderate in degree, is frequent The sedimentation rate of the red cells is always increased (see p 1040)

Circulation The pulse tends to be rapid and the blood pressure low, vasomotor instability and sweating especially of the extremities, are common, the peripheral circulation in the capillaries is sluggish and defective The heart is enfeebled by toxaemia, but endocarditis as seen in rheumatic fever is rare Subcutaneous fibrous nodules are not uncommon

Pathogenesis The sites of infection are in connexion with the teeth tonsils nasal sinuses, middle ear, gall bladder, appendix bowel genital tract prostate uterus and Fallopian tubes, kidney, bladder and bronchial tubes Koch's postulates are not satisfied

Prognosis Many patients especially if treated in the early stages recover completely after removal of septic foci, whereas in others this procedure is of no avail Possible explanations of such failure are (*a*) the removed focus was not the cause of the disease, (*b*) other foci remain though undiscovered Such foci, it is suggested, may exist in the intestine, due to infection from the tonsils or teeth and from them micro organisms or their toxins may enter the blood or lymph stream through damaged intestinal epithelium while at the same time there may be failure of the antitoxic function of the liver Granted the presence of pathogenic organisms in the intestine, such a course of events is possible, but the proposal cannot yet

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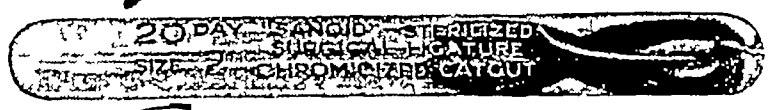

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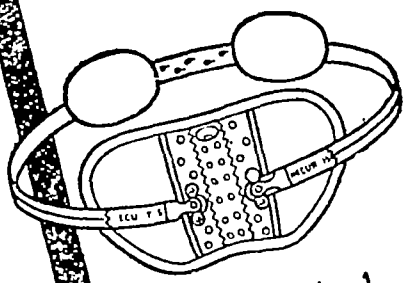

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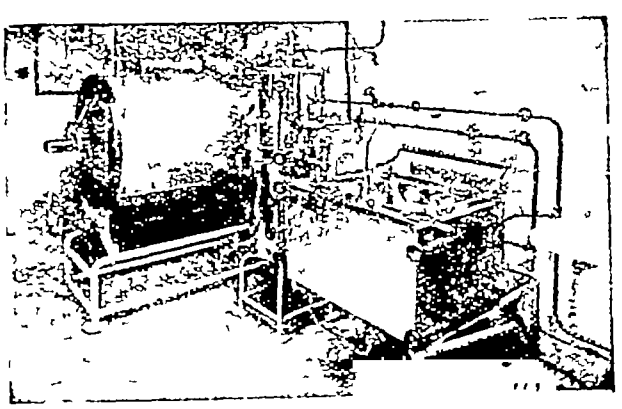

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claim convincing evidence (c) a third possible explanation of absence of benefit from removal of a septic focus is that sensitization of the joints may have been produced by repeated doses of bacterial antigen perhaps from saprophytic organisms not necessarily pathogenic In some instances general treatment is followed by improvement both of the arthritis and of the infective focus without removal of the latter presumably the natural resistance of the tissues overcomes both pathological reactions

Treatment General measures are (1) Treatment or removal of the infective focus or failing this adequate drainage (for example of the nasal sinuses if these are infected) (2) favourable hygienic surroundings including fresh air and sunshine (3) generous diet not excluding red meat (4) vaccines in some cases (see p 1044)

Treatment of Joints In the acute stage rest to the affected joints is necessary care being taken that they are not allowed to assume faulty positions heat dry or moist either locally to individual joints or if the disease is polyarticular to the whole body by means of baths When the acute phase has subsided massage should be given lightly at first to the joints but freely to the muscles and gradually increased in depth and severity Daily passive movements of the joints are desirable and later active movements

(c) CHRONIC VILLOUS ARTHRITIS

The early symptoms are gradually increasing stiffness and pain in the affected joints (usually the knees) often at the onset worse during rest Later the symptoms become aggravated and walking especially on rough ground or on descending a hill or stairs is difficult Pain and tenderness are particularly severe on the inner aspect of the joint At first the affected joint shows nothing more definite than a slight swelling but on flexion and extension a fine uniform crepitation can be heard or felt As the synovial membrane becomes thickened the swelling is more pronounced it can be noticed below and on each side of the patella and when the knee is extended a tense swelling may be felt in the popliteal space due to distension of a synovial pouch At first there is no muscular wasting later this may be observed in the lower part of the quadriceps A ray examination does not reveal either erosion of the cartilages or bony change Patients are almost invariably inclined to be florid and stout often they show signs of thyroid deficiency especially thinning of the hair and outer halves of the eyebrows and brawny thickening about the shoulders and hips Another feature is the presence of flat foot which develops as the result of defective muscular tone and increasing weight the unusual strain thus thrown on the knee joint may be an element in the causation of the arthritis Heberden's nodes may accompany the disease but there is no evidence that they share with it a common cause

Prognosis With adequate local and general treatment the prospect is favourable

Treatment If the symptoms are urgent complete rest and fixation are necessary in the less severe cases partial rest and a bandage with perhaps a light splint—for example the Howard Marsh form—may be sufficient and counter irritation radiant heat ionization Bier's bandage and local douching are helpful But these local measures will probably fail unless any existing deformity of the foot is corrected or varicose veins if present are treated General measures include thyroid medication and agencies for the reduction or prevention of obesity with sedatives if pain is severe (N B —Schüller's villous arthritis is not discussed because it is held to be due to gonococcal or tuberculous infection)

(d) OSTEO-ARTHRITIS

A disease distinguished by primary degenerative changes in the articular cartilages followed by bony overgrowth in the neighbourhood of the joints mainly the larger joints When a single joint is affected it is rare to find any signs of preceding inflammation (primary form) but when several joints suffer such a history is frequent (secondary form) In each form strain or injury is often in some measure responsible The essential changes are degenerative followed by bony hyperplasias which may or may not cause symptoms The disease occurs in the middle aged and elderly who although healthy in other respects often show evidences of arterial and other degenerations Arteriosclerosis may be well marked in the region of the affected joints The earliest symptom is stiffness experienced after rest and disappearing on movement Pain may be quite absent but if the weight bearing joints are affected it is common particularly after sustained activity The joint is often puffy and tender On active or passive movements a soft creaking can be felt and heard unless there is much synovial effusion This is due either to alteration in the synovial membrane or to thick fluid in the joint Later the cartilages atrophy and bone is exposed and there is coarse grating on movement Muscular spasm restricts movement and muscles near the affected joints waste to some extent and are subject to fibrositis Skiagraphy shows the condition of the cartilage and adjacent bones

Morbus coxae senilis is an example of primary osteo-arthritis restricted abduction and rotation are early signs but flexion remains unimpaired even in advanced cases Pain may be referred not to the hip but to the corresponding knee

Heberden's nodes are sometimes attributed to osteo-arthritis They are often associated with this disease but they commence as a fibrositis followed by bony formation There is often a history of trauma strain arthritis or gout

The *prognosis* in osteo-arthritis is governed by three factors

(1) The cause of the condition —The correction of flat-foot in osteo-arthritis of the knees may be fully successful Gouty cases even with thinning of the cartilages often yield to spa treatment Following mild or cured arthritis the condition may become stationary but when associated with arteriosclerosis the disease tends to progress

(2) The joint affected —Morbus coxae senilis has a bad prospect though temporary relief is possible fixation of the joint provided a good position is secured is sometimes the best result obtainable

(3) The state of the cartilages —If parts of these have disappeared orthopaedic measures are required With merely localized thinning correct splinting and local treatment may mean at least partial recovery

There seems little doubt that certain forms of arthritis in animals constitute a true osteo-arthritis The most typical example cab-horse disease (suffraginitis) is characterized by the formation of a large exostosis of the inner side of the pastern bone of the fore-leg together with disease of the articular cartilage on the inner side of the joint

This condition appears to be due to strain and repeated minor injury such as concussion on hard roads or strain of ligaments produced by jumping or by starting heavy loads

The position of the lesions is constant and is that of the greatest strain the affected bones absorbing most of the concussion before it reaches the larger bones

The hereditary transmission of an upright short pack seems to be a factor in the production of exostoses but even apart from this there would appear to be some constitutional liability to throw out bone in answer to the slightest stimulus

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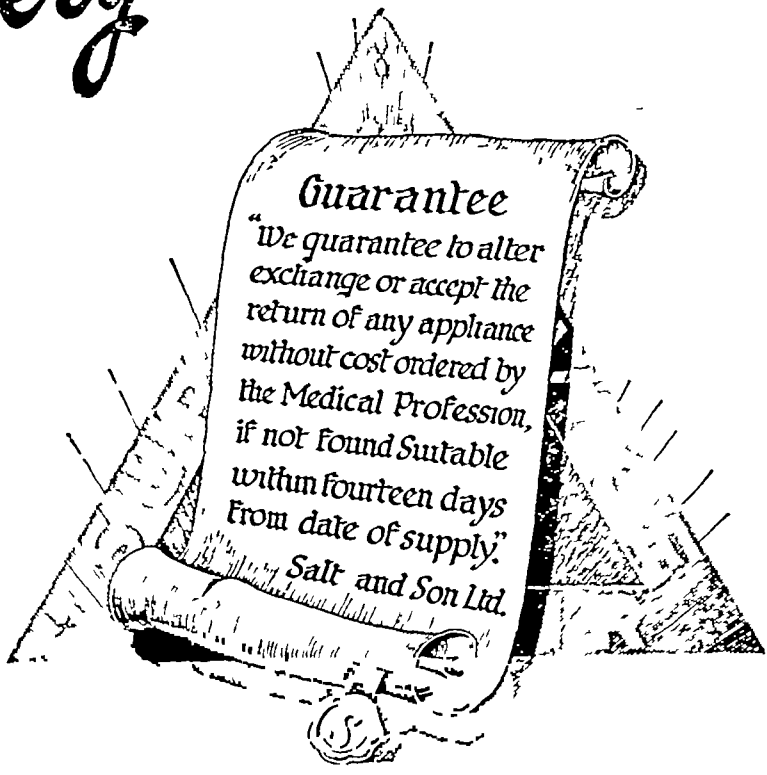

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others on the nerve trunk as it descends through the pelvis Examples are (1) sacro-iliac and lumbo sacral strain, (2) disease, as meningitis (syphilitic or other variety), or tumour within the spinal canal, (3) vertebral disease—for example, malignant growths, injury, scoliosis or other deformity, arthritis, (4) intrapelvic disease causing pressure on or involving the nerve trunk

When central or intrapelvic disease is responsible a bilateral "sciatica" is obviously possible, and therefore such a distribution necessarily arouses suspicion, sometimes sciatic pain in both lower limbs is associated with glycosuria But whether bilateral or unilateral a diagnosis of "simple" sciatica can never be justified until all the above possibilities have been excluded The absence of tenderness in the course of the nerve suggests that the condition is due to a cause other than perineuritis

In connexion with the differential diagnosis may be mentioned

(1) The "lightning" pains of tabes dorsalis, to be recognized by other evidences of the disease

(2) Disease of the hip joint with pain referred to the corresponding knee, to be excluded by radiological and other examinations

(3) Disease of the sacro-iliac joint
(4) Fibrositis of the hamstring muscles

} No tenderness of the nerve trunk or its branches, no increase of pain on dorsiflexion of the foot when the thigh is flexed to the point at which the position causes pain

(5) Sciatic neuralgia—that is, sciatic pain without central cause or local fibrositis nerve not tender, Achilles jerk not lost, and pains in peripheral distribution of the nerve rather than in the nerve trunk

(6) Sciatic parenchymatous neuritis The nerve fibres being affected, there are, in addition to pain and tenderness, anaesthesia and trophic disturbances The absence of the Achilles jerk indicates some implication of the nerve fibres

Treatment of Sciatica When the symptoms are acute rest in bed is essential The limb may be supported by sandbags or even fixed by a long splint, warmth, radiant heat, poultices or packs are helpful Aspirin in full doses may relieve pain, morphine, if possible, should be avoided Blisters, acupuncture and the injection of normal saline or of oxygen into the nerve sheath are useful If there is a history of gout or rheumatism appropriate remedies should be prescribed When acute pain has been checked massage and electricity and treatment at an appropriate spa are indicated

III INCIDENCE

The forms of disease discussed in this report are very common, but no accurate statistical record of their prevalence is available Some appreciation of the position can be gathered from statistics of the National Health Insurance Service recorded by Dr Alison Glover These and other estimates indicate that the loss of work time due to rheumatic diseases (of all types) is 5,500,000 days in a single year, or for arthritic diseases alone, 4,500,000

The cost involved under the National Health Insurance Scheme in the shape of administrative expenses and disbursements to insured persons suffering from rheumatic diseases (of all types) in one year is in excess of £5 000 000 and for arthritic and allied conditions £4 500 000, further the large amount of rheumatism amongst uninsured persons adds considerably to the above figures

IV AETIOLOGY

Sex Women are the more frequent sufferers from primary rheumatoid arthritis, chronic villous arthritis and panniculitis, men from secondary rheumatoid arthritis and spondylitis The incidence of osteo arthritis and of fibrositis (other than panniculitis) is approximately equal in the two sexes

Age The victims of primary rheumatoid arthritis are often women of child bearing age, of chronic villous arthritis, women in middle life, and of spondylitis ankylopoietica, men from 20 to 40 years Both osteo-arthritis and spondylitis osteo arthritica occur particularly in late middle life and old age

Climate Damp is undoubtedly a factor in the production of rheumatoid arthritis and fibrositis, especially when combined with cold or with marked alternations of temperature Osteo arthritis, on the other hand is rife and has long been so, in the hot, dry climate of Egypt

Occupation Miners are prone to fibrositis Statements that metal workers and railway men are especially liable to arthritic disease have at present no secure foundation These terms cover various groups of workers who work under conditions which differ widely in relation to strain and exposure and risk of injury A careful analysis recognizing these differences must precede any attempt at generalization Primary rheumatoid arthritis is specially liable to affect women in indoor occupations

Endocrine imbalance between thyroid, pituitary, adrenal ovarian, and corpus luteum secretions is very frequent Hyperthyroidism is especially associated with primary rheumatoid arthritis, and hypothyroidism with chronic villous arthritis

Allergic sensitivity is probably an important causative factor, but this is incapable of precise measurement

Infection associated with septic foci admittedly plays an important part in the causation of the disease conditions here under review Streptococci especially of the *viridans* type, less often of the haemolytic type or of other strains, are the commonest infections, but staphylococci or a bacillus of the coliform group may sometimes be concerned

In summary, the important aetiological factors are (1) In primary rheumatoid arthritis, unknown, in secondary, infection (2) In chronic villous arthritis evidence of infection is inconclusive, thyroid deficiency with strain on the affected joint due to excessive bodily weight is important (3) In osteo arthritis infection makes some contribution in secondary cases, but in the primary form strain and arterial degeneration (local and general) are often provocative agencies (4) In spondylitis ankylopoietica infection is the predominant cause (5) Spondylitis osteo arthritica (see osteo arthritis) (6) In fibrositis many cases are due to infection but perhaps with equal frequency the cause is metabolic disorder and defective elimination

The following areas demand careful examination

Teeth Both clinical and radiological examination is necessary, apical infection is especially important capped and dead teeth are always to be suspected

Tonsils Tonsillar infections are frequent Arthritis due to these occurs particularly in young persons pyrexial periods are common, and in some cases these are associated with effusion into the joints Unlike subacute rheumatism these cases are not relieved by salicylates and do not develop carditis

Nasal Sinuses Of these the maxillary antrum is the commonest site of infection Radiograms and transillumination should of course be utilized but they are sometimes misleading The only certain test in doubtful cases

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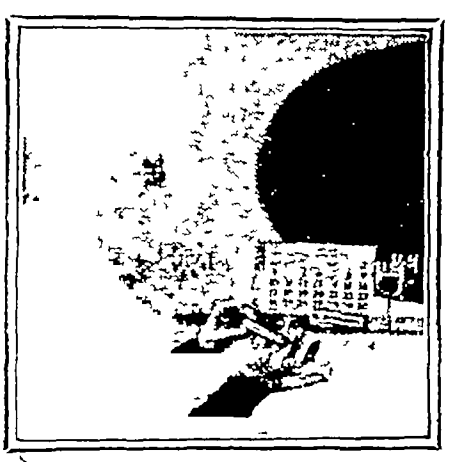

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Intestines Infection generally streptococcal without signs of active colitis Chronic appendicitis cholecystitis and diverticulitis may also be responsible

Urogenital Tract The urethra prostate vesiculae seminales and pelves of the kidneys are possible sites of infection bacteriological examination of the urine perhaps after massage of the prostate is of course necessary In women gonorrhoea is a cause of arthritis not infrequently overlooked cervical erosions not necessarily gonococcal and latent salpingitis must be remembered

Infective Origin of Arthritis

Some recent work has been brought forward to support the view of the infective origin of arthritis and allied conditions More especially American observers have claimed positive cultures of streptococci from large quantities of blood incubated for long periods of time These experiments cannot yet be regarded so proof against refutation as to be accepted without reserve It is highly desirable therefore that this cultural work should be repeated with a view to confirmation or otherwise Obvious fallacies arising from the late appearance of streptococci in cultures of material from the human body should be excluded so far as possible by control observations

Similarly when searching for the presence of specific antibodies to streptococci in the blood of patients it is desirable that more than a single method should be employed As suspensions of streptococci may vary in agglutinability from time to time results obtained by agglutination should be checked by examining for the presence of complement fixing or other antibodies as well and here again control observations are essential in order to exclude error

Work on the streptococci (which are regarded as the main bacterial contributors towards rheumatism) cannot at present be carried out with certainty A selection can be made but it is impossible for example to select a particular pathogenic streptococcus in any case with the certainty with which we can identify tubercle or typhoid bacilli and this has led to a multiplicity of incompatible results concerning streptococci all over the world

This work is an important aspect of future research on arthritis (see p 1052)

V MORBID ANATOMY

In considering the morbid anatomy of the several arthritic conditions lack of uniformity in the existing schemes of classification constitutes a difficulty For example the Committee was so fortunate as to obtain a valuable analysis of the Strangeways Collection admittedly the most complete collection of specimens of joint disease in this or perhaps any other country yet to correlate the conditions displayed in this collection to the other aspects of the Committee's work proved impossible because the classification there employed is more elaborate than that in common use

[*Note* The material of the Strangeways Collection is exhaustively analysed in Mr Lawford Knaggs's articles in the *British Journal of Surgery* July (p 113) and October (p 309) 1932 and January (p 425) 1933.]

Primary and secondary rheumatoid arthritis do not present any significant differences in morbid anatomy one from the other The following description therefore applies to both

The disease begins with a round-celled infiltration of the synovial membrane most marked at the margins in the neighbourhood of the circulus articuli vasculosus Proliferation in the synovial membrane takes place with the formation of granulation tissue which extends as a pannus over the joint surface of the cartilage Simultaneously proliferation takes place in the connective tissue of the bone in a subchondral area with the formation of granulation tissue on the bone side of the cartilage Between these two layers the cartilage gradually becomes destroyed and replaced by granulation tissue fibrous tissue is formed with resulting partial or complete ankylosis of the joint In the marginal areas osteoid tissue may be formed by proliferation of the connective tissue and the resulting ankylosis may be cartilaginous or partly bony

In the early stages the synovial fluid is increased in the later stages with diminution or disappearance of the joint cavity it becomes lessened in amount or completely absent The capsule of the joint becomes infiltrated by lymphoid cells new blood vessels appear and fibrous tissue is laid down with resulting thickening of the periarticular tissues The lime salts of the bone become absorbed leading to rarefaction and loss of density according to Allison and Ghormley local collections of lymphocytes in the synovial membrane subchondral connective tissue and the capsule is a characteristic feature of rheumatoid arthritis distinguishing it histologically from other forms of joint disease

This process may be contrasted with that in pyogenic arthritis in which the infiltration is by polymorph leucocytes and the destruction of cartilage is due to a chemical process of leucocytic origin On the other hand in rheumatoid arthritis the infiltration is by lymphocytes which do not produce a destructive enzyme the destruction of cartilage is due to invasion by granulation tissue

Again in osteo arthritis the changes begin in the cartilage and appear secondarily in the synovial membrane while other changes are the formation of osteophytes destruction of cartilage eburnation of bone and fixation of the joint but this never proceeds to true bony ankylosis

CHRONIC VILLOUS ARTHRITIS

The synovial membrane in such cases as have been examined is found to be thickened and congested with an increase in the number and size of the fringes (hence the name villous arthritis) Microscopically there is an increase of blood vessels and small-celled infiltration of the tissues In certain cases these changes lead on to typical osteo-arthritis

OSTEO-ARTHRITIS

The earliest histological changes are doubtful but degenerative changes in the articular ends of the bones have been demonstrated in skiagrams as very early manifestations Eventually osteo-arthritis is characterized by degenerative changes in the articular cartilage the synovial membrane the ligaments and the articular ends of the bones The most distinctive feature of the disease is the formation of osteophytes These compensate for weakened ligaments and enlarge the surface over which weight carried by the joint can be distributed (For a detailed description of osteo-arthritic changes see Mr Lawford Knaggs's paper see p 1039 col 1)

SPONDYLITIS

In the ankylopoietic type the ossification of the ligaments is characteristic and osteo-porosis a very marked feature The morbid anatomy of the osteo-arthritic type corresponds in every respect to that of osteo-arthritis in other parts of the body

FIBROSITIS

The fibrositic nodule is formed by a blocking of the lymphatics followed by a localized leucocytic infiltration and this in turn by fibrosis and scar formation There is no record of a recovery of micro-organisms from fibrositic nodules

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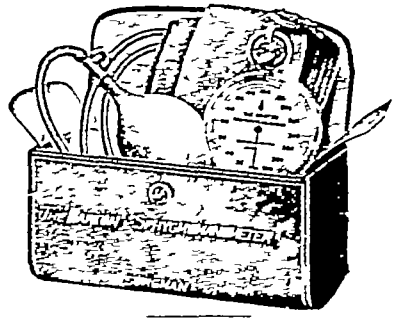

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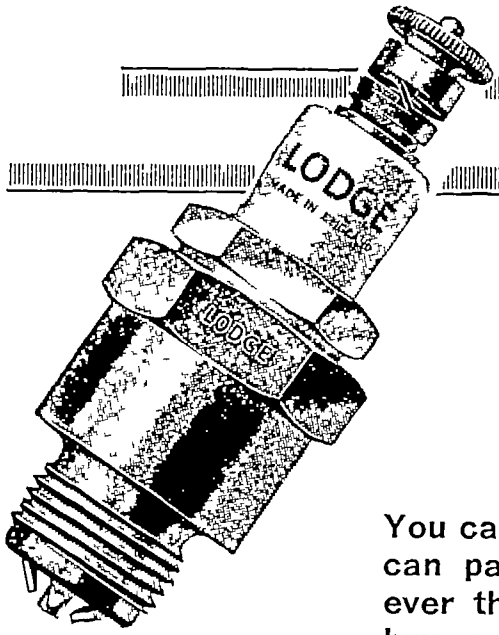

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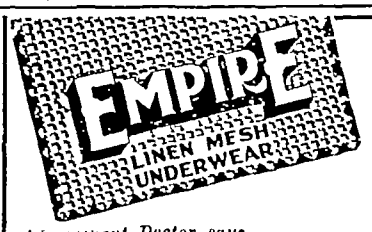

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Rheumatoid Arthritis This subgroup has the highest sedimentation rate of all forms of chronic arthritis and in many cases the readings approach the possible minimum in thirty minutes , also the percentage of cases showing an improvement after treatment is the lowest of all the types under consideration

The results are often at variance with the subjective and objective clinical findings , these may show a definite improvement although the sedimentation rate is practically unaltered This may be explained either by assuming that the sedimentation rate results lag behind the clinical symptoms or that the clinical improvement is merely a local amelioration leaving the basic condition practically unaltered—a hypothesis supported by clinical experience as to the general intractability of this type to treatment so far as complete recovery is concerned

Chronic Villous Arthritis The cases of chronic villous arthritis examined have given a curve resembling that of rheumatoid arthritis and since metabolic disorders *per se* have but little influence on the sedimentation rate it is possible that the changes found in this type are due to an infective arthritis associated with endocrine deficiency

Osteo arthritis, including Morbus Coxae Senilis Two well marked groups may be differentiated , one of these has a normal or almost normal sedimentation rate and is possibly traumatic or static in origin, and the other possibly of infective origin has a definitely lowered sedimentation rate The former a more numerous group is usually monarticular the latter polyarticular

Spondylitis Spondylitis ankylopoietica and spondylitis osteo arthritica resemble respectively rheumatoid arthritis and osteo arthritis in their sedimentation rate values

Fibrositis (Muscular) The results obtained with this subgroup are variable

Lumbago and Fibrositis In these cases the sedimentation rate is usually either normal or but slightly subnormal In sciatica when the nerve trunk only is involved the results are almost invariably normal but when the nerve root is affected with neurotrophic disturbances the sedimentation rate is increased the level may reach the 50 mark in one hour and at the same time muscular wasting is pronounced

Concurrent Disease When blood samples are taken for the determination of the sedimentation rate it is essential that the presence or absence of a concurrent infection such as a common cold should be noted as such a condition may increase the sedimentation rate to a material extent This particularly applies to determinations made during treatment as the effect of the cold may mask temporarily any improvement due to treatment It is desirable also that determination should not be made for several days after injections of vaccines etc particularly if any reaction has thus been produced A concurrent metabolic disease such as diabetes does not affect the result

pH The hydrogen ion concentration of the blood serum or plasma in rheumatic diseases has not received much attention but the evidence available suggests that there are no material abnormalities

[*Note* The limits usually accepted as normal are 7 35 to 7 45, but it must be remembered that the mode of expression is logarithmic and not arithmetrical so that a change of *p*H from 7 45 to 7 35 represents an increase of no less than 25 per cent in the hydrogen ion concentration]

Uric Acid The different methods in use for testing the amount of uric acid present in normal blood give conflicting results but it may be assumed that the normal content is from 3 5 to 4 mg per 100 c cm in males and about 0 5 mg per 100 c cm less in females The proportion is increased in gout but there is no evidence that it is increased in other arthritic conditions provided these are free from complications

Urea and Renal Functions There is no conclusive evidence either of a retention of urea or of albuminuria or indeed of any disturbance of the renal function that can be attributed to arthritic disease

Liver Function Some results suggesting a disturbance of liver function have been obtained in infective arthritis but these await confirmation

CO_2 Content and Alkaline Reserve These terms are not synonymous The alkaline reserve, expressed as combining power to CO_2, is usually two volumes per cent higher than the total CO_2 content The total CO_2 content of the blood plasma in 149 cases of various rheumatic diseases was found to be normal except in cases of rheumatoid arthritis which gave rather low values the average being 6 to 7 volumes per cent below that of healthy subjects This conclusion has since been confirmed It should be noted, however that in spondylitis the two types give different results, the CO_2 in the osteo arthritica type being normal whilst it is subnormal in the ankylopoietica type, which thus in this respect resembles rheumatoid arthritis The deficiency in the CO_2 content might be regarded as evidence of a tendency towards acidosis but it is equally probable that it is due to an asthenic condition of the tissues which results in the venous blood containing more oxygen and less CO_2 than are present in healthy subjects

Glucose Largely owing to the work of Pemberton of Philadelphia and his associates, work confirmed later by experimenters in other countries, it is now recognized that a majority of cases of rheumatoid arthritis exhibit a definite "glucose intolerance"—that is on the administration of glucose the blood glucose increases more or less normally during the first 30 to 45 minutes, and then decreases at an abnormally slow rate thus producing a characteristic "lag" type of curve Glycosuria rarely occurs The Philadelphia workers found also that if a definite focus of infection could be discovered and removed the arthritis cleared up and the glucose tolerance returned slowly to normal The occurrence of the phenomenon of glucose intolerance in many arthritics is indubitable but its significance appears to have been misinterpreted by some clinicians Pemberton's suggestion that a low carbohydrate diet is indicated may have led to the assumption that there is a disturbance of the carbohydrate metabolism but all his results as he himself emphasized, indicate that the defect is in the tissues and their blood supply and not in the pancreas , and that owing to a vaso constriction the tissues absorb and store glucose at a reduced rate Such a vaso constriction would accord with the findings of Pemberton and others that the venous blood of arthritics often shows a relatively high saturation with oxygen and a low CO_2 content that vaso dilators reduce the intolerance that the first drop of blood from a finger prick shows an abnormal variation from later ones as regards the red cell count that the venous and arterial bloods show abnormal variations during the glucose test and that the constriction in superficial capillaries can be demonstrated by microscopical examination

It may be noted also that the excretion of acetone bodies in the urine of forty six rheumatic cases has been estimated without finding evidence of a disturbed carbohydrate metabolism

Calcium Some workers have reported an increased amount of calcium in the serum of arthritic and gouty patients but the general consensus of opinion is that there is no satisfactory evidence of hypercalcæmia The serum Ca is found to be almost invariably subnormal in the ankylopoietica type of spondylitis and rather variable in the osteo arthritica type

Magnesium No data are available in the literature as to the magnesium content of the serum in the diseases here under consideration but the results with forty five samples recently examined indicate that it is remarkably constant at about 2 2 mg per 10 c cm a value that is quite normal

Inorganic Phosphorus With the possible exception of spondylitis ankylopoietica in which the results tend to be low though not outside the usually accepted limits of normality the inorganic phosphorus content is normal in all rheumatic diseases and gout

Proteins The total protein is usually normal in amount except in rheumatoid arthritis and spondylitis ankylopoietica in which it is often 1 to 1 5 per cent. higher Changes in the absolute amounts of albumin and globulin are common and show some correlation with the sedimentation rate In rheumatoid arthritis the low sedimentation rate is associated with a reduction in the albumin/globulin ratio and an increase in the fibrinogen

Cholesterol No significant changes in the cholesterol content of the blood have been reported

Phosphatase Phosphatase an enzyme capable of hydrolysing phosphoric esters and probably associated with ossification can be demonstrated in small amounts in normal blood In some bone diseases the phosphatase content of the blood is increased but in arthritis it is normal except in spondylitis ankylopoietica in which slightly higher values have been found The increase appears to be related to the ligamentous ossification which is a marked feature of this disease

Blood Groups This subject has been investigated and found to be without significance

URINE

Acidity Reaction and Phosphates The hypothesis that different types of rheumatic disease can be divided into two groups one with an acid and the other with an alkaline diathesis has long been popular and is often being revived in one form or another It has been reported that rheumatoid arthritis and osteo-arthritis have an alkaline and acid diathesis respectively the former being characterized by deficient acid elimination and the latter by deficient alkali assimilation The results of more recent and carefully controlled experiments gave no evidence either of an acid or an alkaline diathesis in the two types of disease here mentioned

Uric Acid In rheumatic diseases the amount of uric acid in the urine is normal In gout it becomes subnormal immediately preceding an attack increases sharply with the onset of clinical symptoms and then falls slowly to the normal level

Calcium and Magnesium The published work regarding the urinary excretion of calcium in arthritis is scanty and does not suggest abnormality

Cystine The few cases investigated at the Devonshire Hospital gave no evidence of abnormalities in the excretion of cystine though it has been claimed that the cystine content of the nails is more variable than normal

Creatinine The creatinine coefficient (urinary creatinine in milligrams divided by body weight in kilos) has been found to be approximately normal In the more advanced cases of rheumatoid arthritis in females a number of rather low readings have been obtained a result which can be attributed to the myasthenia so frequently found in this type

Indican Intestinal stasis with excessive absorption of toxic products of bacterial metabolism has been suggested as a possible factor in some cases of arthritis but if indicanuria can be regarded as a criterion of this absorption the available evidence does not support this hypothesis

Sulphur A recent writer has suggested that arthritics exhibit an abnormal sulphur metabolism evidence of which can be obtained by an analysis of the urine also that there is a deficiency of thiopexy (increased katabolism of sulphur) in rheumatoid arthritis but other workers have failed to confirm this

SWEAT

During the latter half of the last century the hypothesis that arthritis was caused by an excessive accumulation of lactic acid in the body was accepted by some workers although the evidence in support of it was rather meagre Recent workers using more exact methods found that the lactic acid in the blood urine and sweat of arthritic subjects showed no material variation from that in non arthritics and concluded that their findings lend no support to the idea that arthritis at least in the types studied is caused or characterized by abnormal production or disposal of lactic acid

The skin reaction of arthritics is generally acid and this coupled with the fact that the reaction of the sweat became more alkaline during heat treatment led some observers to assume that the arthritis was associated with a relatively acid condition of the blood which could temporarily at least be ameliorated by such treatment Physiologists have however demonstrated that the reaction of the secretion of the sweat glands is always alkaline and that the acidity of the skin is due to decomposed sebaceous matter

An acid reaction of the skin is found in non arthritics as well as in arthritics and it has been emphasized that the change in reaction during a hot air or vapour bath is a normal physiological process Owing to the pyrexia induced by the bath respiratory activity increases and results in an excessive loss of carbonic acid from the blood this produces a temporary phase of increased *p*H during which the sweat becomes less acid Later it returns to its normal *p*H

GASTRIC JUICE

The acidity of the gastric secretion in arthritics has received very considerable attention from many investigators One aspect of its importance is based upon the hypothesis that the free HCl acts as a germicidal barrier to the passage of organisms from the buccal and nasal cavities to the intestinal canal Although a few workers have found a very abnormal incidence (up to 70 per cent.) of achlorhydria a less abnormal figure (20 to 30 per cent.) was obtained by others After a complete and thorough examination of this and related problems it has been concluded that the incidence of achlorhydria or hypochlorhydria in arthritics is five times higher than in normal subjects but only slightly higher than in certain other diseases and the difference is too small to warrant any definite conclusion being made as to its aetiological significance The importance of HCl obviously depends upon whether it is the sole line of defence and it has been suggested that there is a germicidal factor in the gastric juice independent of the HCl and a similar one in the duodenum No evidence of a second germicidal factor in the gastric juice has been obtained

VII RADIOLOGY

The diagnostic features are

(*a*) *Osteoporosis* an increased transparency of bone seen as a local change in infective conditions such as tuberculous caries and osteomyelitis in some conditions a widespread loss of bone calcium occurs (general osteoporosis)

(*b*) *Osteosclerosis* an increase in the normal bone density follows the resolution of an inflammatory process

(*c*) *Bone Density Balance* Normally there is a definite relation between the density of the cortex medulla and cancellous ends of the bone the density of the cortex being three times that of the cancellous bone This balance can remain unaltered even in advanced general osteoporosis The significance of a disturbance of this balance is uncertain It is frequently present as a senile manifestation

RADIOGRAPHIC CHANGES

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W W HORTON M D

and subluxation and ankylosis represent the final stages During the quiescent period recalcification has been described

Osteo-arthritis

(*a*) *In the Hand* This condition is characterized by loss of cartilage, followed by irregularity and obliteration of the joint spaces and by the formation of osteophytes

(*b*) *In the Hip* Although the majority of arthritic hips are clinically diagnosed as osteo-arthritis, a condition considered to be of degenerative origin, the remarkable variety of changes seen in the joint radiographically, changes which are often quite opposite in character, suggests that this group includes not one, but several distinct forms of arthritis Further work is necessary to determine the distinguishing radiological features of each

The chief radiographic changes seen in an osteo-arthritic hip may be summed up as follows (1) loss of cartilage, especially at the maximum pressure point , (2) new bone laid down either as " fringe " osteophytes or as new bone deposits in the acetabulum (this latter condition tends to displace the head of the bone outwards and upwards) , (3) cavitation of the acetabulum or femur frequent, either small multiple or several large cavities found , (4) local osteoporosis or osteosclerosis

Much depends on where the disease first attacks the joint In one group new bone becomes thrown out at the junction of the femoral head and neck, the angle of the neck is often increased, and the limb becomes shortened In a second group considerable shortening of the neck takes place with a mushroom-like appearance of the head of the bone, but this is not forced out of the acetabulum because of the ligamentum teres thus differing from tuberculosis, where absorption of the ligament takes place In a third group the disease is mainly in the floor of the acetabulum and evidence of this is seen in a corresponding prominence on the inner aspect of the pelvic wall (Otto's disease)

Spondylitis

(*a*) *Spondylitis Ankylopoietica* The earliest radiographic signs are osteoporosis of the vertebral bodies and changes in the cartilages of the sacro iliac joints and in those of the spinal articular processes Ossification of the margins of the intervertebral disks, leading to fusion of the bones of the spine into a solid mass, follows The distinctive feature is the early ossification of the ligaments and disks —a condition not met with in any other form of arthritis The softening of the vertebral bodies leads to their compression, and a bamboo like appearance often results

(*b*) *Spondylitis Osteo arthritica* This shows radiographic changes similar to those seen in osteo arthritis of the hip Osteophytes form on the bodies of the vertebrae and by uniting may produce fixation of the spine

Gout

Gout is mentioned here because it is frequently mistaken clinically for other forms of arthritis Radiographically gout may be indicated by the presence in the articular ends of bones of deposits of biurate of sodium, giving rise to clear punched-out ' areas All cases however do not necessarily show these deposits, nor do ' punched out ' areas necessarily indicate gout

It has been claimed that it is possible to distinguish in the hand the radiographic changes that characterize rheumatoid arthritis, osteo arthritis, and gout respectively At present the radiographic diagnosis presented in this fashion does not always coincide with the clinical diagnosis This discrepancy may eventually be rectified

[*Note* —Radiology may be expected to supply an increasingly useful and direct means of differential diagnosis in cases of chronic arthritis especially as the more accurate methods now being employed enable the minute changes which characterize the early stages of the disease to be recognized and recorded]

VIII DIFFERENTIAL DIAGNOSIS

In discussing differential diagnosis it is necessary (1) to isolate from one another the varieties of arthritic and allied conditions dealt with in the present report , (2) to separate from other forms of arthritis the forms of arthritis here considered , and (3) to distinguish the pain and limitation of movement due to arthritis or fibrositis from similar symptoms produced by conditions other than these diseases

THE DIFFERENTIATION FROM ONE ANOTHER OF THE SEVERAL FORMS OF ARTHRITIS AND ALLIED CONDITIONS DEALT WITH IN THIS REPORT

(A)

—	Primary Rheumatoid Arthritis	Secondary Rheumatoid Arthritis	Chronic Villous Arthritis	Osteo-arthritis
Incidence	Women of child bearing age	Any age either sex	Women at menopause	Both sexes in later decades of life
Onset	Generally subacute	Sometimes acute	Slow and chronic	Slow and chronic
Infection	Not proven	Septic focus	Not proven	Present only in secondary form
Prodromal symptoms	Present	Absent	Absent	Absent
General condition of patient	Ill and emaciated	Affected in later stages only	Florid and healthy	Tending to show signs of senile changes
Joints affected	Small joints tendency to spread centripetally	Any joint distribution tendency to symmetry	Predominantly knees also 1st carpo-metacarpal joints	Large joints especially hip
Appearance of joints	Fusiform swelling accentuated by wasting of surrounding tissues	Fusiform swelling accentuated by wasting of surrounding tissues	Pouched swelling of knees	May be swollen more or less symmetrically in large joints smaller joints tend to be in later
Movement	Much restricted	Much restricted	Not much restricted	May be very restricted in one directions but free in others
Crepitus	Coarse creaking or absent	Coarse creaking or absent	Fine crepitation	Coarse grating
Muscular wasting	Marked	Variable	Absent	Marked in late stages only
Skin	Trophic changes	Trophic changes sweating often marked	Myxoedematous	Senile changes
Pain	May be severe	May be severe	Aching not severe	May be very severe
Thyroid ..	Hyperthyroidism common	No constant change	Hypothyroidism	Tending to hypothyroidism
Pulse ..	Rate increased	Rate varies with severity	Not affected	Arteriosclerotic
X ray	Marked general osteoporosis	Similar but osteoporosis is often confined to the ends of the bones	No change till late stages when osteophytic formation	Areas of degeneration and osteophytes
Removal of septic focus	No improvement	Often improvement	No constant improvement	No constant improvement

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(B)

	Spondylitis Ankylopoietica	Spondylitis Osteo-arthritica
Onset	Gradual sometimes rapid	Slow generally sometimes sudden
Age incidence	20-50	40-70
Sex incidence	Males almost exclusively	Males chiefly
Injury and strain	Not constant and effect indirect	Important
Infection	Important	Not constant and effect indirect
Sedimentation rate	Increased	Normal
X ray	Osteoporosis ossification of ligaments	Degeneration of bone osteophytes
Sacro iliac joints	Early affected	Not necessarily affected
Deformities	Common sometimes severe	Rare seldom severe
Ankylosis	Characteristic extending to ribs sacro-iliac joints and hips	Localized not extending to other joints
Pain	Often severe	Rarely notable except after injury or if nerve roots are pressed on
Stiffness	Progressing to absolute immobility (poker back)	Never very extreme

Diagnosis between Fibrositis and Arthritis

1 *Movements of Joints*.—In arthritis pain and restriction are marked when executing those movements which cause the articular surfaces to move over one another—for example rotation in ball and socket joints. In fibrositis pain and restriction are prominent in those movements which stretch neighbouring structures (capsules tendons bursae muscles). Such painful or restricted movements will vary according to the structure or structures affected.

2 *Tenderness* is found round the margins of the joint in arthritis; in fibrositis it is confined to the structures affected which may of course be adjacent to the joint.

3 *Nodules*.—In primary rheumatoid arthritis nodules when present are superficial. In fibrositis tender nodules and plaques may be felt deeply in the fibrous tissues surrounding the joints.

4 *X ray Examination*.—In arthritis characteristic changes in bone and thinning of cartilage are seen.

5 *Constitutional symptoms* may be prominent in arthritis seldom present in fibrositis.

DIFFERENTIATION FROM OTHER FORMS OF ARTHRITIS

Perhaps the most important differentiation here is between (*a*) rheumatic infection acute and subacute and (*b*) rheumatoid arthritis.

	Acute Rheumatism	Rheumatoid Arthritis
Incidence	Chiefly adolescents and young adults of both sexes	Women of child bearing age (at least in the primary form)
Prodromal symptoms	Tonsillitis common	Often present
Onset	Acute	Subacute (sometimes the two conditions are practically indistinguishable in the early stage)
Joints affected	Flitting from one joint to another complete recovery of individual joints	Small peripheral joints with bilateral symmetry persistence of changes after acute stage has passed
Skin over joints	Red and hot	Shiny cold
Pain and tenderness	Severe very tender	Not severe slight tenderness
Swelling	Due to synovial effusion	Slight periarticular
Pyrexia	May be present and is sometimes high	Not marked occurs initially and or intermittently thereafter
Cardiac involvement	Common may be severe and permanent	Frequent tachycardia but permanent lesions are rare
Spleen and lymph glands	Not enlarged	Not infrequently enlarged
X ray	No change	Local or general osteoporosis
Response to salicylates	Satisfactory	Analgesic effect but only temporary

Still's Disease (see primary rheumatoid arthritis).

Gout.—The arthritic and other symptoms of gout are due to deposits of sodium and calcium biurates. The history of an acute arthritis particularly in the metatarsophalangeal joint of the great toe; tophi either superficial or as punched-out areas in the bones (radiogram) and increase in the blood uric acid are prominent features. Gout should not be diagnosed in the absence of one or more of these signs.

Gonococcal arthritis may affect one or several joints and also the fascia. The diagnosis is completed by the history or evidences of a gonococcal infection.

Arthritis in specific infections such as pneumonia scarlet fever enteric fever and dysentery may be acute and may affect one or many joints. The clinical associations establish the cause of the condition.

Tuberculous arthritis is most common in childhood but occurs also at other ages. The affected joint is swollen and stiff but not acutely inflamed. Skiagrams will show tuberculous disease of the adjacent bones. Fluid from the joint inoculated into a guinea pig may give a positive result.

Pseudo-coxalgia (coxa valga) occurs in young subjects. The evidences are pain and stiffness of the hip a valgus deformity and a distinctive *x* ray appearance.

Charcot's joints occur in tabes dorsalis and syringomyelia. A degenerative arthritis is here associated with atrophic changes and with a loss of sensitiveness this loss means absence of natural protection from damage and consequently considerable disorganization results.

Haemophilic arthropathy due to effusion of blood into the joint (for example the knee) it occurs in males the subjects of haemophilia. Purpura too may be attended by haemorrhage into one or more joints.

Hypertrophic pulmonary osteo-arthropathy is associated with chronic thoracic disease. It causes swelling pain and stiffness of the distal joints of the limbs.

Intermittent hydrarthrosis and other allergic conditions should be differentiated they are intermittent recurrent and transitory.

Syphilitic arthritis is especially liable to occur in congenital syphilis and is characterized by swelling and limitation of movement of the joint but pain is usually inconspicuous.

DIFFERENTIATION OF CERTAIN PAINFUL CONDITIONS

Headache. This is a recognized symptom of many disorders. One of these is fibrositis of the neck and scalp. The symptoms are pain and stiffness after rest aggravated on initial movement but diminishing as the muscles are used; tender spots (nodules) in the neck muscles and scalp and crepitus (which rarely indicates arthritis). Treatment of the fibrositis gives relief and so confirms the diagnosis. Spondylitis ankylopoietica is an occasional cause of headache stiffness or rigidity of the cervical spine tenderness of the vertebrae and radiological examination (p. 1036) distinguish it. Neck pain is frequent in spondylitis osteo-arthritica.

Thoracic pain. Intercostal fibrositis affecting the nerves or muscles may cause very severe pain (pleurodynia) aggravated by respiratory or other movements and tender spots can be detected where cutaneous branches of the nerve emerge. Thoracic pain may be due also to synovitis of the costo-vertebral joints. Pleurisy aneurysm and some forms of cardiac disease are other causes of thoracic pain.

Abdominal Pain. Similarly a fibrositis of the abdominal muscles must be distinguished from other causes of abdominal pain. Further pains distributed to the body wall or limbs may indicate disease of the spinal cord or

meninges or vertebrae Alike in the region of the thorax and the abdomen, unexplained pain may be the precursor of herpes zoster Malignant growths in the vertebrae, either primary or more commonly from metastases, are sometimes responsible for pain, and may for some time show no evidence of their existence other than pain

Pain in the Lower Limbs Intermittent claudication due to ischaemia of the leg muscles consequent on arterial spasm or degeneration has been mistaken for fibrositis The pain appears on walking and may seriously disable the patient In some cases absence or diminution of pulse in the affected limb may be recognized Thrombo angutis obliterans also is distinguished by pain and limitation of walking The lightning pains of tabes dorsalis may be mistaken for sciatica

Diseases of the bones—for example, chronic osteomyelitis—yield pain on pressure over the bone rather than over the joint, and give a characteristic radiological picture Localized abscess in the epiphyseal region of the longer bones may produce no symptoms except pain and perhaps localized oedema, but an *x*-ray examination is conclusive A radiogram will distinguish spondylitis from the kyphosis of the tuberculous spine, and malignant growths in the vertebrae may be similarly recognized Periosteal syphilitic gummata and infective non-suppurative osteo arthritis and periostitis—for example, typhoid spine—are sometimes a source of confusion

Osteitis deformans (Paget's disease) may be responsible for pain and stiffness of the hips The distinctive signs are increased thickness and bowing of the long bones, especially of the femur and tibia, and enlargement of the skull, *x*-rays generally show the cancellous bone thickened

Similarly, osteitis fibrosa, osteomalacia, and diffuse carcinomatosis of bone may cause difficulties in diagnosis These diseases can be distinguished in the early stages only by radiological examination Intracapsular fractures of the hip and other joints, and fracture-dislocations of the vertebrae, must also be differentiated from arthritis by *x*-ray examination

Static Deformities Flat-foot, knock-knee, bow legs, and coxa vara may cause pain and stiffness, the true cause of which may be missed

Disturbed gait in the form of stiffness or disability may be attributed to arthritis when it is really an early symptom of central nervous disease The ataxia of tabes dorsalis and the spasticity of disseminated sclerosis of other pyramidal diseases, and of early Parkinsonism are examples

IX TREATMENT

(*a*) PROPHYLAXIS

Measures for the prevention of arthritis and its allied conditions must obviously be correlated with the multiple factors that may be concerned in the aetiology of these diseases In addition to the 'seed' or exciting agents such as bacteria their toxins and possible allergic reactions attention must be directed to the "soil" and the resistance of the body Hence conditions which impair the general health, such as insanitary environment over fatigue malnutrition and chronic diseases prone to induce metabolic disorders must be taken into account The well being of those engaged in industry the provision of properly ventilated workrooms of dwellings free from damp of bathing facilities of proper food of hours of work organized to avoid undue fatigue and to allow for rest pauses are most important in maintaining the general health and resistance to disease These however are largely sociological problems and, though the medical profession may urge the adoption of such obvious precautions, the execution of them requires communal or co operative action The prevention of epidemic disease, especially influenza, which so often breaks down the resistance to existing factors previously latent, such as focal sepsis, is an ideal to which the health services of the country are fully awake

Among the exciting causes of chronic arthritis and fibrositis infection bulks largely, and some would regard it as responsible for 70 per cent or even more, of the cases As focal infection is by no means always followed by arthritis, it is necessary to allow the influence of some further causal factor before arthritic or fibrositic disturbances can be produced Indeed, in some cases in which a septic focus cannot be found it may, perhaps reasonably, be assumed that metabolic defect, upset of the endocrine balance, or deficiency of the anti infective vitamin A is entirely or mainly responsible for the arthritic or fibrositic phenomena On the other hand, chronic sepsis may produce metabolic and endocrine disorder, and thus a vicious series, including chronic sepsis disturbed metabolism, and endocrine deficiency, may play a part in the causation of arthritic and allied conditions

(*b*) VACCINES

As the precise aetiology of none of the forms of arthritis and allied conditions here under review has yet been determined with certainty, vaccine therapy does not rest on so secure a foundation as it does in conditions where the causative agent is beyond dispute Taken as a whole, however, the evidence now available with regard to the bacteriology of arthritis indicates that organisms of the streptococcal group are in some way concerned in its aetiology, and further evidence in favour of this view is furnished by the beneficial results of vaccine therapy in certain cases

Vaccines should not be given until a case has received the fullest clinical investigation If a focus of infection is found it should be eliminated if possible, but as an exacerbation of symptoms frequently follows such removal it is safer to postpone this step until the acute symptoms have been relieved This improvement can be effected by the administration of a suitable vaccine in small doses over a period of a few weeks

A vaccine, whether "autogenous" or "stock" should be given in doses which are followed by a response but not by a reaction By *response* is meant a definite and speedy improvement in the clinical condition both local and general following an injection, and lasting for two to six days there being possibly at the same time slight constitutional disturbance By *reaction* is meant an increase in pathological manifestations, as shown by depression, malaise, nausea, headache, rise of temperature, and increase of symptoms It is difficult to lay down a precise direction for the small safe initial dose In terms of streptococci 20,000 to 50 000 may be suggested where a septic focus is suspected, and half a million where it is fairly certain that no septic focus exists It is rare for a dose of more than ten millions to be required The practitioner treating arthritis with a vaccine should therefore commence with small tentative doses administered in increasing strength every five or six days and should arrive with as little delay as possible at the optimum effective dose Slight local manifestations at the seat of injection may be disregarded Temperature charts should be kept for a few days before and after during the administration of vaccines

While stock streptococcal vaccines are sometimes inferior to autogenous vaccines, they are superior to imperfectly made autogenous vaccines or to no vaccine Speaking generally, the question of dosage is much more important than the question of the exact form or make of the vaccine, but since dosage is the more difficult problem it is less carefully studied

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According to certain observers the cocci chiefly concerned in the production of arthritis are (1) a form of *Staphylococcus epidermidis* to which the name of *Micrococcus deformans* has been given and (2) streptococci especially *S salivarius* and a form of *S faecalis* the *S zymogenes* The procedure of practitioners who hold this view is to use a stock vaccine made from all the possible streptococci associated with rheumatic disease (157 in all) and two types of staphylococci and to give an injection once a week

Though it cannot be claimed that vaccines will effect improvement in the bony changes in a damaged joint yet in some cases such as old standing osteo arthritis of the hip vaccine treatment is undoubtedly of value in relieving pain and in checking the progress of the arthritis

Vaccine treatment may be combined with other methods of treatment but the possible constitutional effects of such treatment must be recognized and allowed for Therefore in practice difficulty may arise from the blending of several methods of treatment if clinical reactions in the patient are to be the guide for the administration of any one of them

When inoculations are given other forms of treatment should be suspended on the day of inoculation and for two days afterwards

Anti streptococcal serum is not indicated in chronic arthritis

Protein shock therapy such as injection of peptone solution or of typhoid vaccine milk or colloidal sulphur has on the whole been disappointing In some cases definite temporary improvement has occurred but this has often been followed by a relapse

(*c*) DRUGS

While in the treatment of arthritis drugs have no specific value they are of service in the relief of pain and in improving the patient's resistance and general well being

Analgesics sodium salicylate aceto-salicylic acid (aspirin) and the aceto-salicylate of calcium are largely used in the treatment of arthritis and fibrositis they relieve pain but as just stated have no specific action on infective processes

Other pain relieving agents are phenacetin (5 to 10 grains) with caffeine citrate (1 to 2 grains) and amidopyrin (5 to 8 grains) As a rule opium and its derivatives are to be avoided they involve the risk of addiction and check excretory activity codeine (1/6 to 1 3 grain) with aspirin or phenacetin is reasonably safe The barbituric acid compounds (veronal medinal dial allonal veramon luminal) have their values but tend to addiction and to the production of nervous depression

The quinoline derivatives (atophan agotan cinchophen phenoquin atoquinol) are largely used but their administration should be carefully watched They exercise a toxic effect on the liver and have been followed by jaundice After each dose 20 to 30 grains of sodium bicarbonate in water should be taken and after three or four days administration the drug should be suspended for an equal period Their chief use is in gout and the gouty complications of arthritis They should not be prescribed except under medical supervision

Intestinal Antiseptics Guaiacol carbonate (5 to 10 grains) has the advantage that it can be taken over long periods when there is pain aspirin may be added or magnesium carbonate (5 grains) in dyspeptic conditions The old established Chelsea pensioner (guaiacum and sulphur) has its value in chronic cases Other drugs of this order are salol (combined with quinine in nasopharyngeal toxaemia) cyllin dymol beta naphthol and saline purgatives Sour milk or tablets representing the corresponding bacilli or lactose may be used to change the intestinal flora and when there is hypochlorhydria hydrochloric acid with meals is indicated

Iodine Compounds These are widely prescribed Iodine in alcoholic solution added to milk at the time of administration colloidal preparations and lipiodol the potassium or sodium salt are forms of administration frequently prescribed Fibrolysin as a local injection has not proved satisfactory

Gold preparations given by intramuscular injection have been used abroad for the treatment of arthritis but beneficial results have not been confirmed

Tonics including cod liver oil and vitamin-containing preparations have value in chronic arthritis

Local Treatment

For the relief of pain local applications of methyl salicylate with various other drugs are available The syrupy liquid produced by the combination of chloral menthol and camphor applied as a paint and covered with lint and oiled silk is useful Convenient preparations are the A B C liniment and kaolin poultice

In lumbago the following as local injections are valuable 20 c cm sterile glucose solution (10 per cent) quinine urea hydrochloride 5 c cm (1 per cent.) novocain 5 to 10 c cm (1 per cent) In sciatica the injection of sterile normal saline into the nerve sheath combined if desired with 10 per cent novocain has been used with advantage

(*d*) ENDOCRINE PREPARATIONS

In considering the endocrine factor in the causation and treatment of arthritis attention may be confined to the thyroid and the ovaries Any influence that the other endocrine glands may have is to say the least of it problematical

Thyroid Function in Relation to Arthritis

Relaxation of the articular ligaments particularly of the knee heel ankle and thoracic vertebrae causing knock knee painful heel flat foot and lordosis respectively occur in minor degrees of hypothyroidism These conditions which are often painful are due to defective metabolism and to infiltration of ligaments tendons etc with myxoedematous material It is therefore of the greatest importance to look for any stigmata of hypothyroidism The administration of thyroid extract often leads to marked alleviation of such symptoms

Rheumatoid arthritis is frequently complicated by some symptoms of hyperthyroidism Both Graves's disease and arthritis mainly affect females and especially during the early years of child bearing activity

Villous arthritis and some cases of osteo-arthritis are usually associated with definite evidence of endocrine deficiency

The Relation of Ovarian Function to Arthritis

Monarticular osteo-arthritis is apt to occur in women suffering from a fibroid of the uterus The usual explanation is that the fibroid keeps the cervix patent so that infection of the cervical glands and endometrium by organisms of low virulence can occur and that the absorbed toxins from these excite the arthritis In gonococcal arthritis in women also the primary focus of infection is frequently in the cervix The benefit of diathermy to the cervix in this latter condition has been established but this treatment may be quite successful when there is no evident focus of infection in the uterus or elsewhere Because of the apparent relation of the arthritis in some of these cases to the function of menstruation it has been suggested that the ovaries

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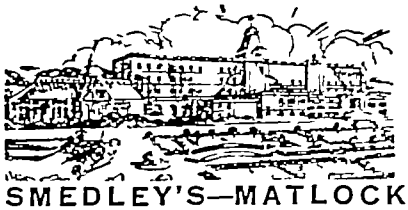

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If testimonials are submitted one copy only of each is required In no case should original testimonials be submitted If more than one Examinership is applied for, a separate and complete application must be forwarded in respect of each Examinership The appointments will be made by the Senate in November Applicants who desire that the result should be communicated to them are requested to enclose a stamped and addressed envelope with their application

University of London, South Kensington S W 7
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June 1933

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are at fault Some cases occur in young women when the menstrual function is being established There is a history of irregular menstruation, followed by amenorrhoea and the onset of arthritis Swelling, without excessive pain, develops around the joints, and subluxation occurs in some cases The application of diathermy may be followed by disappearance of pain and swelling, a regaining of full range of movement of the joints, and a return of the monthly periods Other cases are of the climacteric type already referred to , in some, where the climacteric appears abnormally early, the treatment by diathermy is followed by a temporary return of menstruation Arthritis has been successfully treated even when the uterus and tubes have been removed, the ovaries remaining On the other hand, when the ovaries have been removed without the uterus or tubes the arthritis may not respond to treatment by diathermy This suggests that the action of the diathermy is on the ovaries, and that it restores some function dealing with the nutrition of the joints

In view of the admittedly close association between the gonads and the thyroid it is possible that the action of the ovaries, as distinct from that of pelvic sepsis, in arthritis, is an indirect one through the thyroid But the observation that the basal metabolic rate was normal in fifty consecutive cases of chronic arthritis does not indicate that either hypo- or hyper-thyroidism is a very common causative factor in chronic arthritis

Conclusions

Endocrine disturbances are in general not sufficient by themselves to produce joint diseases, but in a considerable proportion of cases they create a suitable soil for other factors to produce effects harmful to the joints In confirmation of this is the general experience that endocrine therapy may often bring about improvement, but will rarely completely cure a joint disease

(*e*) DIET

Diet is a subject upon which there is great diversity of opinion, and error is very prevalent In rheumatoid conditions the first essential is an adequate supply of simple digestible food, and there is no justification for forbidding any article of food which the patient finds easy of digestion, and to which he offers no idiosyncrasy This matter of idiosyncrasy is important, and careful inquiry should be made Some patients appear to suffer more pain or stiffness after articles of food termed 'acid" —certain fruits and wines, and sometimes malt liquors— though these effects are more often met with in fibrositis than in arthritis Others do well on these 'acid' substances No general rule can be laid down If there is a tendency to put on weight as in climacteric arthritis and osteo arthritis, carbohydrates must be limited

The importance which is now attached to vitamins in diet has practical application in arthritic and fibrositic disorders and the best rule is to see that the diet has its due proportion of each of the essential vitamins Where it is readily assimilated milk is of great service both for its nutrient value and for its vitamin content Fresh fruit and vegetables are also important Attention should be given to the supply of vitamin B by means of wholemeal bread wheat germ legumes etc Vitamin A can be added in the form of cod-liver oil or its derivatives to raise the resistance to infection, and in rheumatoid arthritis vitamin D also is indicated to aid assimilation

Thus the diet in rheumatoid arthritis should include milk butter eggs fish, and meat of digestible kinds including liver and some fat , wholemeal bread yeast extracts fresh fruit and vegetables raw and cooked including peas beans, lentils and, when in season young carrots and turnips Foods outside this list are not necessarily prohibited, and may be taken to gratify taste or appetite so long as adequate amounts of the more important foods are included In fibrositis and chronic villous arthritis excess of carbohydrates must be avoided, and in osteo arthritis, in view of the tendency to arterial degeneration and sclerotic changes purines and excess of meat are contraindicated Those articles of diet which aid in procuring efficient action of the bowels are often specially indicated

(*f*) PHYSICAL TREATMENT

(1) *General*

The objects of physical treatment are (1) to relieve pain , (2) to regulate sweat secretion and superficial capillary circulation , (3) to promote the absorption of fibrous thickenings from muscles, fascia and joint capsules also of old inflammatory exudates, and thus to restore mobility in stiff joints and muscles and (4) to regulate bodily metabolism and to raise (when present) a persistently low temperature and thus to stimulate the defence mechanism of the body

These objects can be attained by (1) the application of heat or of alternations of heat and cold (2) massage , (3) passive and active movements, including mechanotherapy and remedial exercises

Application of Heat Hyperthermal temperatures (above 110° F) are stimulating lower temperatures exert a sedative effect Heat applied to a comparatively small area of the body produces a widespread effect on the whole body through the vasomotor system General application of heat by hot air, or by vapour or immersion baths, will induce sweating, increase superficial capillary circulation resolve inflammatory thickenings and exudates and modify tissue metabolism Local application of heat which should be at as high a temperature as can be borne, may be made by mud, peat or wax, by the hyperthermal douche, by hot air or vapour or by diathermy these measures will relieve pain, superficial or deep and will lessen congestion in deeper parts

Massage is especially useful in dispersing nodules and adhesions in fibrositis It improves the peripheral circulation and maintains muscular tone In bed ridden patients it is a substitute for active exercise If a joint is completely ankylosed, massage to its related muscles is useless Applied to inflamed joints massage is definitely harmful

Movements Mechanotherapy and Exercises When a joint is acutely inflamed movement of it should be avoided except on the occasions when it is placed and splinted in the optimum position , this position may have to be reached in steps by the gradual alteration of the angle of the splint Active—that is, voluntary—movements by the patient himself should precede passive movements , in this way there is less risk of injury to the joint Any increase of pain or swelling or a return of heat to the joint is an indication for further rest In the early stages of treatment especially in osteo arthritis movements should be carried out under conditions which exclude weight-bearing—that is either in the recumbent position or in the hot pool bath in the latter the water, by opposing the action of gravity, lends support to the part while the heat allays pain and relaxes muscular spasm For the same reasons a hot immersion bath may usefully precede the adoption of movements In the later stages of arthritis and in certain cases of sciatica and lumbar pain, manipulation of the spine and of joints is of great service The reputation enjoyed by certain irregular practitioners might be reserved for the medical profession if a greater interest were taken in this branch of therapeutics, and were technical skill in the

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Prospectus from the DEAN, West London Hospital, Hammersmith, W 6

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THOS. L. GARNER, Secretary

methods more widely distributed The promotion of movement in stiff joints by various kinds of mechanical apparatus has a much more extended use on the Continent than in this country but has little to recommend it Treatment by massage and ordinary active and passive movements produces better results and has the advantage of more reliable control and of personal contact and encouragement

(ii) *Electricity and Radiation*

The objects which may be attained by electrical and allied methods are the relief of pain and stiffness the improvement of capillary circulation and the absorption of fluid effusions from the joints and of inflammatory thickenings from the tissues

The methods used are heat light electric currents and ionization Heat may be applied externally by means of radiant heat lamps or infra red rays the latter are the more penetrating and are of value especially in relieving pain and stiffness and improving circulation In conjunction with massage for which electrical vibrators may be used infra red rays are effective in dispersing the nodules and thickenings of fibrositis

Diathermy is used for heating the deeper structures and is of value in relieving the pain of osteo-arthritis of the hip It is applied also to the pelvic organs by means of intrapelvic electrodes and good results are claimed for this method in the treatment of arthritis It is believed to act upon the ovaries and thus to benefit cases in which there is endocrine disturbance also to have a direct effect on septic foci when these exist in the pelvis It is claimed that the rise of temperature produced destroys gonococci in the cervix or prostate and it is in cases of this kind that the most striking results have been obtained

Ultra violet rays act by increasing the general resistance to infection and by producing a general tonic effect over dosage must be carefully avoided There is no definite evidence of any other beneficial effect in arthritis but in acute fibrositis ultra-violet rays often give relief in sciatica they may increase the pain

Ionization by means of the galvanic current is said to act by driving the ions of certain drugs into the tissues It is used for the relief of pain especially in fibrositis and bursitis also to promote the absorption of effusions from joints and tendon sheaths and the resolution of fibrous nodules and indurations

The faradic current is used in the treatment of muscular wasting especially as an adjuvant to massage The electric cautery is a useful form of counter irritation For the technique of the various methods textbooks must be consulted

X rays No definite opinion can be given as to the value of *x* rays in the treatment of arthritis It would appear that *x* ray therapy especially with deep rays is used somewhat indiscriminately yet experienced practitioners declare that they have observed definite benefit in chronic arthritis especially in spondylitis from this form of treatment Used with due precautions the method would seem to be without danger

(iii) *Mineral Waters and Baths*

Mineral waters may be divided into six groups (*a*) thermal springs of low mineralization (*Bath and Buxton*) (*b*) saline and sulphated (*Bridge of Allan Cheltenham Harrogate and Leamington*) (*c*) sulphur (*Harrogate Llandrindod and Strathpeffer*) (*d*) iron (*Buxton Harrogate Llandrindod Strathpeffer and Trefriw*) (*e*) bromo-iodine (*Woodhall*) (*f*) strong saline not used internally (*Droitwich*)

(*a*) *The waters of low mineralization* are hypotonic and act as strong diuretics clinically their radioactivity has some effect on metabolism

(*b*) *Saline and Sulphated Waters* The weaker waters taken fasting increase gastric tone and promote diuresis the stronger ones augment intestinal secretion and are mild aperients The sulphated waters are purgative they are useful in the reduction of fat and of abdominal plethora

(*c*) *Sulphur Group* Sulphur has a powerful action on tissue metabolism The sulphur group of mineral waters includes (1) the *hypertonic* which are purgative increase the flow of bile and stimulate metabolism (2) the *isotonic* with similar but milder action and (3) the *hypotonic* which are diluents and diuretics

(*d*) *Iron or chalybeate waters* vary in strength from the strong sulphate of iron wells of Trefriw Spa and the strong chloride of iron well of Harrogate to the mild chalybeate waters of Buxton Llandrindod Harrogate and Strathpeffer They improve the haemoglobin value of the blood

(*e*) *The Bromo iodine Waters of Woodhall Spa* These are saline and contain an appreciable quantity of iodine and bromine Their special virtue lies in their iodine content and they are therefore alterative in action

Cases of primary and secondary rheumatoid arthritis with much debility often show improvement with radioactive thermal waters and where there is considerable anaemia the chalybeate waters are well borne and assist in building up the patient's general condition In the convalescent stages of the secondary rheumatoid groups when the focal sepsis has been dealt with stronger iron waters may be employed In cases of secondary rheumatoid arthritis chronic villous arthritis osteo-arthritis and fibrositis associated with plethora overfeeding and obesity the hypertonic sulphur waters are useful and a course of these may be followed by one of the chalybeate waters In all forms of arthritis with the exception of the primary rheumatoid type associated with intestinal toxaemia the isotonic and hypotonic sulphur springs and the saline sulphated waters are extensively used

Natural mineral waters are held to be of prophylactic value against the development or recurrence of disorders of metabolic origin Periodic courses are voluntarily undertaken by many persons who are subject to attacks of muscular rheumatism lumbago and sciatica and who find substantial benefit from this method

The main types of bath commonly in use are

General Baths

(1) Immersion baths—
  (*a*) Deep pool baths
  (*b*) Reclining baths
(2) Douche massage baths
(3) Mud baths
(4) Vapour baths
(5) Dry hot air baths

Local Baths

(*a*) Externally applied—
  (1) Undercurrent douches
  (2) Low pressure effusion douches
  (3) High pressure douches (jet douches needle baths etc)
  (4) Local mud packs

(*b*) Internally applied—
  Intestinal lavage

These methods produce certain reactions by virtue of their (1) *Thermal effects* Baths are sedative or stimulant according to temperature (see p 1046) (2) *Percussion effects* Undercurrent douches massage douches jet douches needle baths etc produce local effects by direct action and general effects by reflex action through the nervous system

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The officer appointed will be required to act under the supervision and control of the County Medical Officer and to live at some centre to be approved by the Council

Commencing salary £500 per annum, rising by increments of £20 for each year of approved service to £600 per annum but subject to a reduction of 5 per cent on the amount in excess of £150 until October 31st

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922

Form of application together with further particulars may be obtained from the County Medical Officer County Hall Kingston upon Thames and must be returned duly completed not later than Friday July 7th

Communications must be endorsed School Dental Surgeon Canvassing will disqualify

County Hall DUDLEY AUKLAND
Kingston upon Thames Clerk of the Council.
June 16th 1933

EPSOM COLLEGE.

ROYAL MEDICAL FOUNDATION

ELECTION OF FOUNDATIONERS AND PENSIONERS

The following were elected by the CONJOINT COMMITTEE on June 14th, 1933 —

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W L GIFFARD (Major) Secretary

ROYAL SOCIETY OF MEDICINE

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In accordance with the will of the late Dr Robert Thomas Nichols, the Royal Society of Medicine offers every three years a prize (being the accumulated interest on £2,200) open to any British subject for the most valuable contribution towards The Discovery of the Causes and the Prevention of Death in Childbirth from Septicaemia

Work submitted for the fourth award must reach the Secretary of the Society (1, Wimpole Street London W 1), not later than October 1st 1933 and must be marked 'Nichols Prize It must be typewritten or printed in English and accompanied by the name and address of the author

Work already published may be submitted provided that publication was not earlier than October 1st 1930

If no work of sufficient merit be submitted the prize will not be awarded

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CITY OF NOTTINGHAM

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The duties will include assisting the Medical Officer of Health in the administration of the Maternity and Child Welfare Department, taking medical charge of certain Infant Welfare sessions undertaking medical duties of a non-specialist type at the Tuberculosis Clinic, together with such other duties as may from time to time be allotted

The possession of a Diploma in Public Health is essential

Service with other Local Authorities will be taken into consideration in fixing the commencing salary which will be on the scale £500, rising by annual increments to £700

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922, and to one months notice on either side

The successful candidate will be required to live within the City Boundary and to pass a medical examination

Applications must be made on a form to be obtained from me and must be addressed so as to reach me not later than July 15th

Guildhall W J BOARD
Nottingham Town Clerk
June 19th 1933

HEREFORD COUNTY AND CITY MENTAL HOSPITAL

Wanted, a SECOND ASSISTANT MEDICAL OFFICER (male unmarried) not exceeding 40 years of age doubly qualified, and registered under the Medical Act Salary £350, rising by increments of £25 to £400 subject to a temporary reduction of 4 per cent with board, furnished apartments laundry etc.

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Applications with one or more personal references to be made to the Medical Superintendent County and City Mental Hospital Burghill, Hereford

CITY OF BIRMINGHAM

APPOINTMENT OF CONSULTANT MEDICAL OFFICER FOR THE POLICE FORCE AND FIRE BRIGADE.

The Watch Committee invite applications from qualified medical gentlemen for the position of Consultant Medical Officer for the Police Force and Fire Brigade

The Committee have fixed the remuneration at Two Hundred and Fifty Guineas per annum but this amount in common with police salaries and wages generally will be subject to a temporary economy abatement The amount of the abatement in this case has been fixed by the Watch Committee at Twenty two guineas, leaving a net annual remuneration of Two Hundred and Twenty-eight guineas

Intending applicants should communicate with the Chief Constable, Newton Street Birmingham, who will be pleased to furnish full particulars and details of the duties attaching to the appointment

Applicants should be gentlemen practising in the City of Birmingham

The strength of the Birmingham Police Force is 1,687, and of the Fire Brigade 300

Applications to be made to me not later than Saturday July 8th

The Council House F H C WILTSHIRE
Birmingham Town Clerk
June 14th, 1933

CITY OF BIRMINGHAM

SELLY OAK HOSPITAL (500 Beds)

CASUALTY OFFICER (MALE)

Applications are invited from fully qualified Medical Practitioners for whole time appointment as Casualty Officer' (male) at the Selly Oak Hospital, Birmingham The appointment will be for a period of six months in the first instance, but may be extended at the end of that time for a further period of not exceeding six months

Salary at the rate of £200 per annum and full residential emoluments The salary and emoluments will be subject to any voluntary abatement in force from time to time

The officer appointed will be required to refund to the Council all fees allowances and emoluments (other than the foregoing) received by him

Further particulars may be obtained from the Medical Superintendent at Selly Oak Hospital, to whom applications stating age experience and qualifications, with copies of recent testimonials should be forwarded not later than Wednesday, July 12th

F H C WILTSHIRE,
The Council House, Town Clerk
Birmingham June, 1933

CITY OF BIRMINGHAM

DUDLEY ROAD HOSPITAL (926 Beds)

Applications are invited from fully qualified Medical Practitioners for whole time appointment as JUNIOR MEDICAL OFFICERS (male) at the Dudley Road Hospital, Birmingham The appointment will be for a period of six months, but may be extended for a further period of not exceeding six months Salary at the rate of £200 per annum and full residential emoluments, subject to any voluntary abatement in force from time to time The officer appointed will be required to refund to the Council all fees allowances and emoluments (other than the foregoing) received by him

Further particulars may be obtained from the Medical Superintendent at Dudley Road Hospital to whom applications stating age experience, and qualifications, with copies of recent testimonials should be forwarded not later than June 29th

CENTRAL LONDON OPHTHALMIC HOSPITAL Judd Street, St Pancras, W C 1

Applications are invited for the posts of SENIOR and JUNIOR HOUSE SURGEON Candidates must be registered Medical Practitioners Salary £120 and £100 per annum respectively with board and residence in the Hospital The appointments are for six months from July 15th The Junior House Surgeon is a candidate for the Senior post

Applications, with copies of three testimonials should reach the undersigned on or before June 30th

GEORGE WATTS, Secretary

CHARING CROSS HOSPITAL.

Applications are invited for the post of HONORARY CLINICAL ASSISTANT to the Dermatological Department

Applications, together with copies of three recent testimonials should be sent to the undersigned not later than July 1st

PHILIP INMAN, House Governor
Charing Cross Hospital London W C 2.

The *physiological effects* may be summarized as follows

1 *On the Skin* (*a*) Thorough cleansing removal of dried sebaceous material and epithelial debris, thus getting rid of mechanical obstructions to openings of the sebaceous ducts and tubules of sweat glands, (*b*) stimulation of excretion of sweat, with consequent relief of the kidneys

2 *Cardiovascular System* Alteration in rate and volume of blood flow through the skin and subcutaneous tissues, and stimulation through nervous channels of the vasomotor and respiratory centres in the medulla

3 *Kidneys* Diuresis

4 *Central Nervous System* Stimulation of "cutaneo-sympathetic" reflex, thus improving the adaptation of the body to changes of temperature Undue susceptibility to such changes appears to be closely associated with a tendency to arthritic disorders

5 *Metabolism* Increase of metabolic rate

Intestinal lavage This may be of benefit in some cases of arthritis, but a prolonged course or frequent repetition may be harmful

On the Reputed Specific Therapeutic Properties of the Different Natural Waters when Applied Externally in the Form of Baths

There is an old-standing and widely spread popular belief that individual "waters" externally applied have a selective therapeutic action on particular diseases As the skin is incapable of absorbing any appreciable amount of the chemical ingredients of any "natural water, it follows that any therapeutic action which follows immersion (apart from that on cutaneous disorders) must depend entirely on the physical qualities possessed by the water Different waters produce different effects on the skin according to the degree of stimulation or irritation they exert on the sensory nerve endings, and in this connexion there are definite variations between waters of different degrees of hardness, waters containing large quantities of brine, and so forth Any such variations between the actions of different waters are, however, of secondary importance to the effects attributable to the water as a medium for the conveyance of heat, of pressure, and of percussion, and the skill with which the methods are used is in many cases more important than the exact type of water

Whether certain "natural" waters produce specific effects in virtue of their radio activity is a question on which it is impossible to dogmatize The degree of radio-activity present even in those waters which possess this property at all is admittedly small, but in view of the recognized therapeutic effects of small doses of radium emanation in various forms of treatment it is not unreasonable to assume that the radium emanation in natural waters, when these are used as baths may exercise some physiological and perhaps also a therapeutic influence Such a contention, however can at present neither be proved nor disproved

Contraindications to Spa Treatment

1 Arthritis in the acute stage
2 Tuberculosis
3 Severe cardiovascular disease
4 Malignant disease
5 Advanced renal disease

(*g*) CLIMATE AND HYGIENE

The value of climate as a therapeutic factor is not easily defined not all patients react in the same fashion to similar influences and hence personal idiosyncrasies are apt to confuse the issue In general terms climate has no influence on osteo-arthritis but in rheumatoid arthritis it may be utilized to stimulate metabolism and to increase the patient's resistance Generally cold or cool temperatures are to be preferred, provided there is protection from wind and damp, hot humid, and relaxing climates are unfavourable Sunshine has a generally beneficial effect, especially in fibrositis, narrow river valleys, and the proximity of large sheets of water exercise an unfavourable influence For a choice between the seaside and inland places there is little guidance except the experience of the individual patient

The site of a residence is of some importance in particular, the soil and house should be well drained, and this is effectively secured in a gravel or sandy district rather than in a clay one Closely packed slum dwellings with absence of cellars or any ventilated space between the floors and the earth are especially harmful Other things being equal soft water is much to be preferred This applies especially to osteo arthritis and fibrositis, but is of less importance in rheumatoid arthritis

X ORTHOPAEDIC AND SURGICAL

Spine (spondylitis) In the active stage in order among other things, to prevent depression of the viscera by bad posture, the patient suffering from spondylitis or other active spinal disease should be recumbent on a firm bed lying on his back with a small pillow below his head and another below his knees Thrice daily after meals he should be placed in a position of hyperextension of the spine for half an hour For this purpose a pillow is placed beneath the thorax, the lumbar spine is unsupported, and the hands are clasped behind the head He is then rolled over to lie face downwards on a pillow extending from the top of the sternum to the pubes, and in this position treatment by heat or counter-irritation may be applied In more severe cases a plaster bed is necessary The foot of the bed should be raised The period of recumbency should not be less than one month, and may require to be considerably more Later, massage and exercises, first lying and then standing, are indicated Throughout this period breathing exercises are essential When the patient is allowed to get up, a spinal support in the form of a brace and pelvic corset is necessary In progressive cases firm ankylosis lessens the local discomfort, and if this takes place in a good functional position the patient is able to get about with comfort Where the cervical and upper dorsal vertebrae are affected there is often considerable flexion deformity of the trunk and neck, together with torticollis In these cases the head must be supported by pillows, which are gradually withdrawn to allow gravity to act as the remedial agent, traction by means of a head sling with weight and pulley may be necessary In other cases, where the cervical spine alone is affected, a Thomas collar affords a sufficient support

Sacro-iliac Joint Disease in this joint may be treated either (1) by the methods described above, or (2) by prolonged fixation, or (3) by operation—the Smith Peter on method being generally adopted

Hip joint Weight-bearing on the affected joint always leads to a state of progressive flexion and adduction therefore rest and fixation are the first requirements While the disease is active and pain and muscular spasm are present, rest in bed with traction by weight and pulley and fixation are indicated When the acute stage has passed the patient may benefit greatly by simply using crutches, and keeping the weight off the limb by a thickened sole on the boot of the sound limb Use within limits, short of irritating the joint is a valuable aid in maintaining function If however, activity produces pain which is persistent and lasts for a period after the activity ceases he is using the joint too freely and additional protection is required After the acute symptoms

have subsided gentle massage to the muscles is very useful combined with movements in the direction of abduction and extension short of causing pain or muscular spasm These movements however must not be repeated more than two or three times at each sitting Stimulation of the hip muscles electrically and muscle training by non weight bearing exercises should be encouraged To prevent undue movement when getting about a walking calliper splint may be used or a laced elastic spica in which are incorporated felt straps or flexible canes passing in from behind and over the trochanter gives very efficient protection and yet allows the patient to sit down When the affection is painful destructive and advanced surgical measures whether by fixation manipulation under an anaesthetic or operation are indicated When the condition is quiescent and there has not been great damage to the head of the bone great relief may be obtained by gentle manipulation of the joint under general anaesthesia Radiant heat massage and active weight bearing movements should follow as soon as possible in order to maintain what has been gained Under the anaesthetic it is possible to discover whether the attitude of adduction and flexion is merely due to muscle spasm or whether there is definite shortening of the adductor muscles In the latter event tenotomy of the adducter tendons is necessary followed by fixation of the hip in abduction for two weeks and application of massage and movements (This operation which is not free from the risk of phlebitis can be done under nitrous oxide anaesthesia without causing shock) Operative measures on the joint should be undertaken only when severe pain and disability are present The majority of these patients are old and often stout with myocardial weakness There is always great danger of primary shock especially where the head of the bone requires to be disarticulated

Knee joint The deformities which develop are those of flexion backward subluxation of the tibial head and outward rotation of the lower leg from the pull of the biceps In early stages this condition may be improved by simple weight and pulley traction but in many cases the question will arise as to whether the knee joint should be manipulated under anaesthesia Several attempts may have to be made and great care must be taken as even the mildest manipulation may produce fat embolism The manipulation should not be attempted unless the patella is freely movable Where flexion deformity exists an operation to lengthen the hamstring tendons may be performed In other cases a transverse osteotomy of the femur may be employed straightening the limb on a splint Synovectomy is sometimes attended with the happiest results When it is found that the patella is becoming ankylosed to the femur the operation may be completed by inserting a strip of fascia lata between the two bones In cases where there is much deformity with bone destruction a formal excision often gives the best result Mild cases of flexion can be controlled by a walking calliper splint with a pad over the patella

Ankle and Foot In chronic arthritis of these joints every effort must be made to retain movement and a good functional position In the active stage if immobilization is required it must be in the optimum position especially if fibrous or bony ankylosis is probable In the ankle joint the optimum position is one of dorsiflexion and very slight varus or inversion Disabling positions such as valgus equinus calcaneus or combinations of these should if possible be avoided This may be achieved by splinting the foot and ankle in a good position by means of plaster casing leather or celluloid splints The celluloid splint being light and durable and perfect fitting is the best In the more severe cases surgical intervention in the form of manipulation under an anaesthetic or operation is sometimes necessary The stiffness may be due to intra or extra articular adhesions or may result from destruction of the cartilage and ankylosis In simple adhesions the movements of the joint should not diminish with use If the adhesions do not yield to functional use of the limb or to passive movements they may be broken down under a general anaesthetic When ankylosis has taken place in a good position and there is no pain the condition may be left alone If however the ankylosis is incomplete with pain and deformity the position may be corrected under general anaesthesia either manually or by a Thomas wrench The limb is put up in plaster-of Paris in a position of dorsiflexion and neither inverted nor everted In cases in which the periarticular adhesions snap suddenly and greater freedom of movement results a movable joint should be attempted Massage and movements are therefore begun early Before deciding to manipulate any joint which has been the site of infection it is well to bear in mind the risk of a lighting-up of latent infection To be sure that this will not happen is impossible Some advise preliminary treatment by radiant heat and vigorous massage to see if such measures provoke increased heat and pain in the joint If they do manipulation should not be attempted and in most cases it is a good rule to let six months elapse between the subsidence of the infection and manipulation Pain and limitation of movement in the great toe joint are common from chronic arthritis of the metatarso-phalangeal joint of the great toe The surgical treatment of hallux valgus and rigidus and hammer-toe is described in surgical textbooks Metatarsalgia is a common complaint in the arthritic On examination swelling of one or more of the metatarsal joints hyperextension of the toes and spreading of the fore part of the foot due to muscle weakness are found

Treatment requires examination for faulty statics The shoe should have a thick sole broad enough to prevent lateral compression of the toes the direct aim of treatment being to restore the anterior arch correct the clawing of the toes and increase the power and function of the lumbricales and interossei muscles A metatarsal bar may be placed across the sole under the tread just behind the heads of the metatarsals or a felt pad made of leather oval in shape 1¼ in long by 1 in broad and 1/4 in thick with bevelled edges fixed to the inside sole by adhesive strapping may be employed or again a metal support can be slipped into the shoe Success in any of these methods depends on minute attention to detail in making and fitment Exercises to get rid of clawing and to increase flexibility and the strength of the toes and arch are very important Rest and attention to the shoeing and associated flat-foot may in some instances be all that is required

Shoulder joint In chronic arthritis impaired mobility rigidity of muscles and contractures from permanent shortening of muscles tendons and fascia are present When the articular surfaces are affected fibrous or bony ankylosis may occur The all important fact to be noted is that if ankylosis is inevitable the joint must be fixed in the optimum position for function and the ankylosis must be firm In the shoulder ankylosis in adduction means bad function The position to be selected is one in which the upper arm is abducted 60 degrees and externally rotated 15 degrees as from the horizontal The elbow is brought forward so as to be in the same vertical plane as the front of the chest the patient being able to carry his hand to his mouth by means of scapular movement

Synovitis Bursitis and Periarthritis These may be present at one and the same time At first abduction and external rotation are generally affected but later all

INDIAN MEDICAL SERVICE

Recruitment of European Officers.

Applications are invited from medical men for permanent commissions in H.M.'s Indian Medical Service The terms offered include a gratuity of £1,000 on retirement after six years' service, or £2,500 after 12 years' service, together with free return passages for those who no longer desire to remain in the Service In other respects the terms will be as detailed below

Candidates must be European British subjects under 32 years of age at the time of application and must be registered under the Medical Acts in force in Great Britain and Northern Ireland

CAREERS

The Indian Medical Service offers wide opportunities of medical experience including clinical preventive specialist and research work At the beginning of his career an officer is employed on the military side which has medical charge of the Indian Army Promotion is on a time scale up to the rank of Lieutenant-Colonel and by selection to the ranks of Colonel and Major General An officer may apply after one year's Indian Service to have his name registered for transfer to the civil side from which appointments are made to Civil Surgeoncies which are established at the principal civil centres to provide for the medical needs of civil officials and for general medical administrative purposes to specialist (for example public health and bacteriological) services to research posts and to professorships at the Medical Schools

NOTE.—It is not possible to state at present what, if any prospects of employment on the civil side will be open to Indian Medical Service Officers under the proposed new constitution for India.

PAY

Owing to the state of the financial emergency at present prevailing in India the existing monthly rates of pay which are as follows are subject to a temporary reduction of 5 per cent

Rank	Service in Rank.	Rate of Pay	Overseas Pay	Year of Total Service.
		Rs	Rs	
			100	1st
Lieut.	—	600	100	2nd
			100	3rd
			100	4th
Capt	(i) During first 3 years service as Captain	650	£15	5th
			£15	6th
	(ii) With more than 3 and less than 6 yrs service as Captain	750	£25	7th
			£25	8th
			£25	9th
	(iii) With more than 6 years service as Captain	850	£25	10th
			£25	11th
			£30	12th
Major	(i) During first 3 years service as Major ...	950		
	(ii) With more than 3 and less than 6 years service as Major	1100		
	(iii) With more than 6 years service as Major ..	1250		
Lieut.-Col	(i) Until completion of 23 years total service	1 00	£30	13th and over
	(ii) During 24th and 25th years service	1600		
	(iii) After completion of 25 years total service ..	1 00		
	(iv) When selected for increased pay ...	1800		

EXTRAS.—In addition to the above rates various allowances are admissible for a large number of special appointments on both the military and the civil side which may be held by members of the Indian Medical Service Special high rates of pay are also attached to the numerous administrative appointments open to officers in both branches of the Service.

ANTEDATES IN COMMISSION

Any service rendered by an officer during the war as a medical or combatant officer or in a position usually filled by an officer may be counted as service for increments of pay promotion retirement and retired pay but not for gratuity

One half of any service in the ranks during the war may be counted as service for retirement and retired pay only

Candidates possessing certain higher medical qualifications may be granted an antedate of one year in their commissions Past service in certain hospital appointments may also render candidates eligible for an antedate of one year Persons holding or about to hold resident posts at recognized hospitals may be seconded in those posts for a period not exceeding one year The maximum period of antedate secondment, or antedate and secondment combined admissible under this paragraph is limited to one year

OUTFIT ALLOWANCE.

Officers on appointment will receive an allowance of £50 towards the cost of outfit.

PRIVATE PRACTICE

With the exception of Administrative Officers military or civil and officers holding certain special appointments officers are not debarred from taking private practice so long as it does not interfere with their proper duties

LEAVE

Leave can be taken at reasonable intervals and adequate rates of leave pay are provided Extra leave (known as study leave) which may not exceed 12 months in all during an officer's service may be granted to officers desirous of pursuing special courses of study of a post graduate nature During such leave study allowance at present fixed at the rate of 12s a day in the United Kingdom £1 a day on the Continent of Europe and £1 10s a day in the United States of America is granted to an officer in addition to ordinary rates of leave pay

PENSIONS

The rates of pension are as follows	Per annum £
After 17 years service for pension	400
18	430
19	460
20	500
21	540
22	580
23	620
24	660
25	700
26	750
27	800

These rates are subject to alteration on account of a rise or fall in the cost of living as compared with the year 1919 to an extent not exceeding 20 per cent in all At present a reduction of 8⅓ per cent is being made on this account.

There are additional pensions ranging from £65 to £350 per annum for officers who have held administrative appointments

PASSAGES.

An officer on appointment is provided with free passage to India The families of officers who are married prior to the date of the officers embarkation on first appointment will also be provided with free passage to India subject to the payment of messing charges

Officers and their families are also eligible for passage concessions under which they are granted a certain number of return passages home at Government expense during their service

INSTRUCTION PRIOR TO EMBARKATION

Officers are required to undergo courses of instruction at the Royal Army Medical College and at Aldershot lasting approximately six months prior to their embarkation for India on first appointment Information as to the rates of pay admissible during this period and subsequently up to arrival in India is contained in the memorandum referred to below

A memorandum giving full details regarding these appointments and forms of application may be obtained from the Under-Secretary of State for India Military Department, India Office, London S W 1 The Selection Committee will meet at the India Office early in July next, and the selected candidates will be required to join a course of instruction commencing early in August prior to sailing for India early in 1934 Applications should be submitted as soon as possible

CARDIFF ROYAL INFIRMARY
(Associated with the Welsh National School of Medicine)

HONORARY PHYSICIAN REQUIRED

Applications are invited for the vacancy arising in the office of Honorary Physician
The regulations provide that Each Honorary Physician and Honorary Assistant Physician shall be a Graduate in Medicine of a University of the United Kingdom and he shall not practise Surgery or Midwifery He shall also be or within a year of his appointment shall become a Fellow or Member of the Royal College of Physicians of London, or a Fellow of one of the other Royal Colleges of Physicians in the United Kingdom
The present Senior Assistant Physician is a candidate for the vacancy
Each candidate is required to send fifty copies of his application and testimonials (for circulation amongst members of the Election Committee and Medical Board) stating age, qualifications appointments held etc and endorsed Honorary Physician" to reach the undersigned on or before Saturday, July 8th
LEONARD D REA
June 19th, 1933 Secretary

ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN

Wanted for this Hospital, TWO HONORARY RESIDENT HOUSE SURGEONS and THREE HONORARY RESIDENT HOUSE PHYSICIANS one of the latter shall have charge of both a medical ward and an ear and throat ward, the appointment shall commence on October 2nd, and shall be for a period of six months Information as to duties etc can be obtained from the ordinary physicians and surgeons at the hospital Thirty copies of applications and relative testimonials to be lodged, on or before July 22nd with Messrs HENRY & SCOTT, W S 50 Frederick Street Edinburgh No application will be received after that date

WARRINGTON INFIRMARY AND DISPENSARY

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON (male), unmarried Applicants, who must be of British nationality must be duly qualified Medical Practitioners Salary £175 per annum with board apartments and laundry Applications, stating age with copies of three recent testimonials should be sent in at once to the undersigned
By Order
HENRY I BOOT
June 19th 1933 Supt & Secretary

DERBYSHIRE HOSPITAL FOR SICK CHILDREN (80 Beds)

Wanted July 1st RESIDENT HOUSE PHYSICIAN (lady) Salary £130 p a The appointment is for twelve months Applicants must be fully qualified Applications with three testimonials, one relating to anaesthetics to be sent to the undersigned forthwith
ARTHUR N WHISTON
25 St Mary s Gate Secretary
Derby

DERBYSHIRE HOSPITAL FOR SICK CHILDREN (80 Beds)

Wanted July 1st a RESIDENT HOUSE SURGEON (lady) Salary £130 p a The appointment is for twelve months. Applicants must be fully qualified Applications with three testimonials one relating to anaesthetics to be sent to the undersigned forthwith
ARTHUR N WHISTON
25 St Mary s Gate Secretary
Derby

ROYAL ELF HOSPITAL,
St George s Circus Southwark S E 1

The Council invite applications for the appointment of HONORARY PHYSICIAN to the above Hospital Candidates must be a Graduate of Medicine of a British University and a Fellow or Member of the Royal College of Physicians of London
Applications with copies of testimonials, to be sent to the Secretary on or before July 1st
F E D ALTON Secretary

DREADNOUGHT HOSPITAL GREENWICH S E 10 (Seamen s Hospital Society)

HOUSE PHYSICIAN required for six months from July 1st Salary £110 per annum and a proportion of fees with board residence and laundry Candidates must be male Applications with copies of three testimonials to be sent in by June 26th to the undersigned
Greenwich R E V BAX
June 10th 1933 Secretary

ROYAL NORTHERN HOSPITAL, Holloway N 7

Applications are invited for the following posts
(1) HOUSE SURGEON vacant on August 15th The appointment is for nine months (six months as House Surgeon and three months as Casualty Officer) with salary at the rate of £70 per annum with board residence and laundry
(2) OBSTETRIC HOUSE SURGEON vacant on September 15th The appointment is for nine months (six months as Obstetric House Surgeon three months as Casualty Officer) Salary as above
(3) HOUSE PHYSICIAN vacant on September 1st The appointment is for nine months three months as Out patient Casualty Officer and Anaesthetist and six months as House Physician Salary as above
Applications with copies of testimonials should be sent by July 8th to the undersigned from whom forms of application and rules can be obtained
GILBERT G PANTER Secretary

COVENTRY AND WARWICKSHIRE HOSPITAL
(307 Beds Main Hospital—40 Beds Alcock Convalescent Hospital)
(Seven Resident Medical Officers)

RESIDENT CASUALTY OFFICER (Male) wanted Salary £125 per annum with board, laundry and attendance provided Candidates must be duly qualified and registered
Applications stating age and enclosing copies of recent testimonials should be sent to the undersigned immediately
(Miss) R HOOPER
June 17th 1933 Secretary

THE CHILDREN S HOSPITAL SHEFFIELD
(110 Beds—Three Residents)

Applications are invited for the following posts vacant August 1st
HOUSE PHYSICIAN HOUSE SURGEON
The appointments are for six months with salary in each case at the rate of £100 per annum with board residence and laundry
Candidates (male and unmarried) who must possess registered qualifications should forward applications stating age nationality, etc, together with copies of three recent testimonials to the undersigned
T H C GARTLAND, Secretary

THE ROYAL VICTORIA HOSPITAL, FOLKESTONE

The Committee of Management invite application for the post of JUNIOR RESIDENT MEDICAL OFFICER (male) to commence duty August 1st The salary attached to the post is £120 per annum with board and residence
The appointment is for six months subject to one month s notice on either side Applications together with copies of recent testimonials should be sent to the Secretary Superintendent, The Royal Victoria Hospital Folkestone Kent not later than Friday July 7th

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY

HOUSE SURGEON wanted Ophthalmic experience preferred Duties to commence in July There are 50 beds for In patients and large Out patient Department Salary £150 a year, with furnished apartments board and laundry Ladies and gentlemen applying should state age and experience and send copies of three recent testimonials to reach the Secretary not later than July 3rd
EUSTACE LEFS
June 13th 1933 Secretary

WRLNHAM AND EAST DENBIGHSHIRE WAR MEMORIAL HOSPITAL
(109 Beds)

ONE RESIDENT HOUSE SURGEON (male or female) required by the above Hospital to commence on August 1st Appointment for a period of six months Salary £150 per annum, with board and laundry
Applications stating age nationality experience and qualifications accompanied by copies of three recent testimonials to be sent to the undersigned immediately
LESLIE SPENCER
June 15th 1933 Secretary

THE NORTH STAFFS ORTHOPAEDIC HOSPITAL STOKE ON TRENT

Applications are invited for a HOUSE SURGEON (male) to this Hospital at a salary of £150 per annum plus board residence and laundry Applications accompanied by three recent testimonials to be sent to the Secretary Orthopaedic Hospital Hartshill Stoke-on Trent.

THE QUEEN S HOSPITAL FOR CHILDREN
Hackney Road London E.2.

RESIDENT MEDICAL OFFICER required on August 1st
The appointment is made for six months and may be extended for further periods of six months, but cannot be held for more than two years
The Resident Medical Staff consists of the Resident Medical Officer as above three Casualty Officers two House Physicians and one House Surgeon
Salary (inclusive of panel fees) £200 per annum, with board residence and laundry Candidates must have held a resident appointment at a recognised hospital
Forms of application may be obtained from the undersigned and must be completed and returned on or before July 8th
CHARLES H BESSELL
June 12th 1933 Secretary

ROYAL SUSSEX COUNTY HOSPITAL, BRIGHTON (Beds 245—Six R M O s)

HOUSE SURGEON (and in the event of this office being filled by promotion a CASUALTY HOUSE SURGEON) (Male) required at the end of July
Salary £150 (and £120) per annum respectively with board residence and laundry
Candidates must hold medical and surgical qualifications of the British Empire and be duly registered under the Medical Acts
They must be unmarried and when elected under 30 years of age
Applications with copies of recent testimonials should be sent immediately to the undersigned
Candidates should state whether they wish their applications to stand for either post
L L W LANCASTER CAYE
Secretary Superintendent

THE ROYAL HOSPITAL, WOLVERHAMPTON
(Incorporated under Charter)

TWO HOUSE SURGEONS required
The Hospital contains 300 beds includes the usual special departments and is recognized by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice.
Candidates must be registered under the Medical Acts and unmarried
The appointments are for six months, Salary at the rate of £100 per annum, board furnished rooms and laundry provided
Applications, with copies of testimonials to be forwarded to the undersigned
Wolverhampton W H HARPER
June 19th, 1933 House Governor

QUEEN MARY S HOSPITAL FOR THE EAST END STRATFORD
Telephone Maryland 2615

Applications are invited from fully qualified and registered medical men for the post of CASUALTY OFFICER at the above Hospital at a salary of £150 per annum
The Hospital contains 217 beds including 50 for Maternity and other Special Departments.
Candidates who should have held previous Hospital posts must send in application accompanied by testimonials, to the undersigned not later than Saturday July 1st The appointment will be for six months
RAPHAEL JACKSON (Major)
Secretary

MANFIELD ORTHOPAEDIC HOSPITAL NORTHAMPTON (128 Beds)

The Board of Management invite applications for the post of RESIDENT MEDICAL OFFICER Commencing salary £250 p r annum together with board residence and laundry
Applicants must be duly qualified registered and unmarried Previous Hospital experience essential and a knowledge of Orthopaedics desirable
Applications stating age qualification and experience with copies of three recent testimonials to be sent to the undersigned, not later than Monday July 3rd
H G LEWIS Secretary Supt

APPOINTMENT OF HONORARY DIRECTOR OF ORTHOPAEDICS

The Council invites applications for the above appointment which carries with it all the privileges of an Honorary Surgeon
Applications (with copies of testimonials) must be in writing and addressed to the Chairman ROYAL LIVERPOOL CHILDREN S HOSPITAL Myrtle Street Liverpool 7 by Friday July 7th
A candidate may send copies of his application and testimonials to members of the Election Committee but personal canvassing of any member will be a disqualification
R H ARMISTRONG Chairman

movements In long-standing cases wasting of the biceps and triceps may weaken the muscular support of the joint, with an increase of the liability to subsequent strain The shoulder should be treated by physical methods, with rest of the limb in an abduction splint In resistive cases adhesions may be gently broken down under a general anaesthetic Many of these cases are associated with fibrositis in the muscles of the shoulder and upper arm In some cases also there is a tendency to the formation of a calcified deposit in the tendon of the supraspinatus muscle—a condition attended by much pain and capable of demonstration by *x* rays , it may require operation

Elbow The elbow when affected should be kept active as long as possible, but if immobilization and rest seem indicated the joint should be fixed in a position of about 100 degrees extension If both elbows are affected, immobilization in one should be at less than 90 degrees and in the other over 100 degrees extension with the forearm in mid-pronation or 15 degrees short of complete pronation When the condition is quiescent an attempt at movement may be made under anaesthesia, followed by physical treatment, provided due precautions are taken If sound ankylosis takes place nothing should be attempted, though in certain cases mobility may be restored by excision of the joint To restore pronation and supination when they are lost, the head of the radius may have to be removed

Hand and Wrist Physical treatment and special splinting may here accomplish much when deformity, stiffness, and loss of function have developed or seem unavoidable In many cases of chronic arthritis especially in elderly people who rise from a chair by resting their weight on their hands it is noticeable in *x*-ray photographs that the breadth of the carpus as a whole is increased A protective wristlet of leather, which holds the bones in proper relationship, often completely relieves this condition In view of the enormous importance of flexibility of the joints of the hands, and especially of the opposing power of the thumb, great efforts to retain these functions should be made in the early stages of arthritis If the wrist is stiff in palmar flexion and ulnar deviation, it may be possible to change the bad position to a good one by gradual correction in a suitably moulded cock-up splint or by gentle reposition under anaesthesia, followed by immobilization in a plaster casing

Fingers Forcible manipulation of stiff fingers under anaesthesia should never be attempted , the results are invariably bad Steady and prolonged traction, which aims at taking a direct pull from the finger-tips in the line of the deformity so as to produce actual separation of the joint surfaces, with stretching of adhesions in the tendon sheaths is the best single aid for the restoration of movement and function This traction should continue in the line of deformity until evidence of joint separation is seen by depression of the skin over the knuckles or by *x* rays The direction of the traction should then be changed day by day in the direction of flexion Traction should be eased several times a day for passive and active movements and the ability to carry out actively what has been gained passively is the indication for altering the line of pull The treatment should cause no pain or reaction, and the traction pull should not be excessive a pull of 4 oz is sufficient to separate the joint surfaces of a normal finger

XI NATIONAL SCHEMES FOR TREATMENT

HOLLAND

The Dutch League for Combating Rheumatic Diseases, with headquarters in Amsterdam supervises the treatment of arthritis in Holland In addition to the therapeutic activities of this organization it concerns itself with the prosecution of research Its most recent activity in this respect is an inquiry into the incidence of rheumatism in various occupations

GERMANY

The information from Germany discloses a general scheme for the treatment of rheumatic diseases which is largely in being, though not complete The out patient departments may be associated with general hospitals, but are usually special centres established by the friendly societies The in-patient departments may be in general hospitals, but are often in the special "friendly society centres" The convalescent homes are established by the friendly societies

The special centres for spa treatment may be established in any large city, but it is recommended that they should be situated in "spas" where the resources of natural therapy are available

It is recommended that rheumatic cases should be distributed as follows

Out-patient Physiotherapy Centres

1 Acute muscular rheumatism
2 Mild cases of primary rheumatoid arthritis
3 Mild cases of spondylitis deformans
4 Neuritis and neuralgias
5 Elderly patients who are unlikely to benefit from or to tolerate spa treatment

In-patient Physiotherapy Centres

Acute rheumatism
Arthritis of uncertain origin in order to recognize and exclude tuberculosis, new growth, etc

Convalescent Homes

Convalescents from acute rheumatism

Spa Centres

SWEDEN

Existing Hospital Provision

In seven hospitals special departments have been built by the Royal Pensions Board for the treatment of rheumatic disease in its more acute phases , each contains fifty-five to sixty beds As many as 2,500 cases are treated in these departments annually , two thirds of the cost is borne by the Royal Pensions Board and one third by the patient himself, or by benefit funds, or by the commune to which he belongs The treatment consists of physical therapy, all varieties of baths, massage hot air, light, electrical, *x* ray, and orthopaedic methods drugs, and protein shock Patients are attended if necessary, by a dentist Some patients after treatment are trained for several years in an occupation suitable to their disability

A patient stays seventy five days in any one of these hospitals and is eligible for one or two periods of treatment of the same duration during the following years In any event he is visited once a year for several years by an official of the Royal Pensions Board to report progress This arrangement has given good results, and 62 per cent of the patients are able to maintain themselves economically three years after the completion of their course It is found, however, that there are not enough of these centres , indeed, twice as many are required The waiting time for patients at present is six to eight weeks No out-patient departments are maintained at present

As further developments the university hospitals hope to establish out-patient and in patient clinics for rheumatic disease, and corresponding plans have been arranged in connexion with the university clinic in Stockholm and also in the municipal hospital for Stockholm , the latter when built will contain a rheumatic department of seventy beds together with an out patient department

The Royal Pensions Board administers three sanatoriums for chronic rheumatic disease with a total of nearly 500 beds these admit patients who are not confined to bed and whose condition is suitable for physical treatment To each sanatorium two to four medical men are attached with the necessary nursing staff masseuses bath attendants etc

The Royal Pensions Board corresponds in a large measure to our national health insurance scheme Contributions are however levied from almost every member of the community between the ages of 16 and 66 Thus in 1925 3 628 000 citizens were liable to contribute and only 240 000 were exempt The annual pensions contribution consists partly of a flat basic contribution of 7 kronor per head and partly from those who are liable for income tax of an additional contribution the amount of which depends on the assessed income (minimum 2 kronor maximum 30 kronor) These contributions are paid into the Pensions Insurance Fund and used for treatment purposes 55 per cent has been defrayed out of public funds and 45 per cent out of the Pensions Insurance Fund but for the budget of 1927–8 it was calculated that the Fund would pay 92 per cent and the State 8 per cent of the expenses of these activities

Spas

There are about fifty spas in Sweden mostly with iron waters They are all private and as a rule open only in summer Certain industrial cases are treated at these spas at the charge of benefit funds

Hospitals for totally disabled patients and belonging to local authorities take in a certain number of chronic arthritics

SUGGESTED NATIONAL SCHEME FOR GREAT BRITAIN

For this certain conditions must be satisfied namely

1 Early recognition
2 Thorough treatment in the early stage of the disease
3 Adequate follow up of cases in order to observe the effects of treatment to arrange for further courses of treatment when necessary and to secure readmission if required to treatment centres in case of relapse

In addition the scheme

1 Must not interfere with the proper relation between patient and family doctor more than is necessary to ensure the best interests of the patient
2 Must utilize existing facilities for diagnosis and treatment either in private consulting rooms or in public institutions
3 Must be economically sound

Some type of general organization is necessary to secure and apply these conditions Recognition must be the province of the family doctor Extra facilities will have to be given to provide post graduate instruction in this field In the earlier stages treatment can be carried out very largely by out patient methods at or in the neighbourhood of the patient's home but a certain proportion will require in patient treatment or treatment away from their homes for longer or shorter periods

After the case has been investigated and when possible and desirable aetiological factors have been dealt with either in the patient's home or by means of facilities afforded in hospitals nursing homes etc the treatment will include some or all of the following

(i) General regime rest fresh air diet
(ii) Specific treatment (vaccines etc)
(iii) Drugs (including organotherapy)
(iv) Physical treatment heat massage electricity remedial exercises hydrotherapy
(v) Spa treatment
(vi) Orthopaedic manipulative and other surgical treatment
(vii) Occupational therapy

(i) *General Regime*

General regime will be carried out in conjunction with other forms of treatment

(ii) *Specific Treatment* (iii) *Drugs*

These forms of treatment could be undertaken in large measure by the family doctor in the patient's home and in the case of (ii) in collaboration with the pathological department of the general hospital It is probable that special financial provision would require to be made for materials preparation of vaccines special drugs etc

(iv) *Physical Treatment*

All general hospitals should have a physiotherapy department and in order to make such departments available for patients suffering from chronic rheumatic diseases some grant of funds would be necessary to increase equipment and also some arrangement to cover the cost of treatment including an adequate grant to the medical staff While in certain districts special clinics may be necessary it is desirable that these should be associated professionally with existing general hospitals

(v) *Spa Treatment*

In a certain proportion of cases spa treatment is necessary or desirable Such cases should however be selected with considerable care and approved by a suitable authority since treatment at a spa will necessarily involve greater cost than out patient treatment at a general or special hospital Three large spa hospitals (Bath Buxton and Harrogate) are available for in patient treatment and these contain 600 beds There are similar though smaller institutions at other spas

A scheme is at present in course of organization for the treatment of certain groups of insured persons as out patients at spas This may be extended to the whole group of insured persons but will not be practicable on economic and other grounds unless it is restricted to those persons who cannot be efficiently treated by other methods

(vi) *Orthopaedic Treatment*

Treatment along these lines does not differ in any material respect from treatment carried on in the orthopaedic and surgical departments of general and special hospitals Some organized provision would have to be made for the care and maintenance of those who in spite of treatment or because of lack of treatment had become permanently crippled This could be obtained by suitable arrangement with council and local authority hospitals

(vii) *Occupational Therapy*

In connexion with these hospitals and centres (especially in council and local authority hospitals) it is desirable that patients should be taught trades Each district would have to organize a social work service whether through the existing local authority organization or otherwise to follow up all patients and see that they were kept in touch with their family doctors When necessary this service could be made responsible for assembling and arranging records of each patient from the various treatment centres to which he might be sent Such service it is hoped would in time develop occupational training centres

(viii) *Central Organization*

Some central governmental departmental or other organizing body would require to accept responsibility for the general supervision of this scheme

ROYAL SALOP INFIRMARY SHREWSBURY
(150 Beds)

APPOINTMENT OF RESIDENT HOUSE PHYSICIAN

Applications are invited from fully qualified men for the appointment of Resident House Physician vacant July 1st. Salary £160 per annum with board, residence etc. The appointment is for six months in the first instance subject to re-appointment for a further period of six months. Resident Staff comprises Resident Surgical Officer House Physician and Casualty Officer and Resident Anæsthetist. The Resident House Physician is Resident Officer to the Medical Ward of the Hospital under the direction of three Honorary Physician and is also Resident Officer to the Maternity Department for difficult cases under the direction of the Honorary Obstetrician.

Application stating age qualification experience nationality and accompanied by copies of three recent testimonial to be sent to the undersigned forthwith.

Board Room J. W. NOBLE,
June 13th 1933. Secretary Supt.

WEST END HOSPITAL FOR NERVOUS DISEASES
In Patient Department Gloucester Gate Regents Park, N.W.1.
Out Patient Department 73 Welbeck St. W.1

The Committee of Management invites applications for the post of HONORARY ASSISTANT OPHTHALMIC SURGEON. The date by which applications must be received has been extended to Monday July 10th. Candidates who must be Fellows of the Royal College of Surgeons of England are requested to send eleven copies of their application with recent testimonials by *July 10th to the undersigned* from whom further particulars should be obtained.

J. P. WETENHALL,
Welbeck Street W.1. Secretary.

THE GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION
(216 Beds.)

TWO HOUSE SURGEONS (male) fully qualified. Salary £150 per annum with *board residence and laundry*.

The appointments are for six months which may be extended for similar periods by re-election from time to time.

Applications stating age qualification and nationality with copies of not less than three recent testimonials should be sent to the undersigned not later than June 29th.

The elected candidates will be required to enter upon their duties on July 17th.

F. J. SYMONS,
June 15th, 1933. Secretary.

ST MARY'S HOSPITAL, W.2.

SURGICAL REGISTRAR.

The Board of Management invite applications for the above post. Candidates for the appointment must be registered Medical Practitioners and Fellows or Members of the Royal College of Surgeons of England or Graduates in Surgery of a University in the British Empire.

The salary is £200 per annum with luncheon and tea. Copies of the regulations for the Surgical Registrar may be obtained on application to the Secretary's Office.

Application with copies of testimonials not exceeding three in number should reach the undersigned on or before Wednesday June 28th.

W. PARKES Secretary.

LONDON LOCK HOSPITAL AND HOME.
(Founded 1746.)

HONORARY SURGEON

The Board of Management invite applications for the [illegible] must be Fellows [illegible] Englands and [illegible] must be lodged with the undersigned on or before Monday July 3rd. The appointment will be made at a Special Court of the Governors on July 6th.

By Order of the Board
283 Harrow Rd. W.9 J. F. MORTON
June 1st 1933. Secretary.

ROYAL INFIRMARY WIGAN
(180 Beds.)

HOUSE SURGEON (male) required July 1st for a period of six month. Salary £150 per annum with board, apartments, and washing. Staff consists of R.S.O. and three House Surgeons. Applications stating age and qualifications with copies of three recent testimonials, should be addressed to the undersigned as soon as possible.

A. STANLEY BRUNT
June 6th 1933. Gen. Supt. & Sec.

MANCHESTER ROYAL INFIRMARY

CENTRAL BRANCH ROBY STREET MANCHESTER.

HOUSE SURGEON (LADY).

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment. Applicants must be registered and hold a medical and surgical qualification.

The appointment is tenable for nine months commencing July 1st three months as Junior at £100 per annum three months as Assistant at £100 per annum and three months as Senior at £200 per annum together with board and allowance for laundry.

Applicants must state age and qualifications and send twelve copies of their application and testimonials to the undersigned by 9 a.m. on Thursday June 29th.

By Order
FRANK G. HAZELL,
Gen. Supt. & Secretary.

HULL ROYAL INFIRMARY
(370 Beds.)

Applications are invited from registered Medical Practitioners for the post of CASUALTY OFFICER (male) vacant now.

Salary at the rate of £150 per annum plus residence board and laundry.

The officer appointed will work mainly under the direction of the Resident Surgical Officer.

The appointment will be for six months but will at any time be determinable by one month's notice on either side.

Applications stating age qualification and nationality together with copies of testimonials should be addressed to the undersigned.

R. J. CAPLESS
June 17th 1933. House Governor.

KING EDWARD VII HOSPITAL, WINDSOR.
(181 Beds.)

TWO HOUSE SURGEONS required (one for Casualty Department) for six months from date of appointment. Applicants must be fully qualified men or women registered and preferably have held a resident appointment. One to have had some experience in Ear Nose, and Throat work.

Salary at the rate of £100 per annum, together with board, residence and laundry.

Applications stating age, qualification and *experience* accompanied by copies of testimonials should be sent to the undersigned not later than June 26th.

ARTHUR E. CHURCHER,
Secretary.

RADCLIFFE INFIRMARY AND COUNTY HOSPITAL, OXFORD

Applications are invited for the following post on the Honorary Medical Staff of the above Hospital

1. HONORARY SURGEON
2. HONORARY SURGEON to the Ear Nose and Throat Department (with charge of sixteen beds).

Twenty-five copies of applications and testimonial *which will be forwarded* to members of the Electing Committee must be sent to the undersigned, from whom further particulars may be obtained not later than July 10th.

A. G. E. SANCTUARY
Radcliffe Infirmary Administrator
and County Hospital Oxford.

MANSFIELD AND DISTRICT HOSPITAL.

The Board of Management of the above Hospital (135 beds) invite applications for the post of HOUSE SURGEON (male). Duties to commence July 1st next.

Salary at the rate of £150 per annum with residence board and laundry.

The appointment is for six months and is renewable.

The Resident Staff consists of a Resident Surgical Officer and two House Surgeons.

Applications accompanied by not more than three recent testimonials to be sent to the *undersigned*.

Dated this 31st day of May 1933.

C. J. ADAMS Secretary.

LIVERPOOL HEART HOSPITAL.

ASSISTANT PHYSICIAN.

Applications are invited for the position of Assistant Physician to the above Hospital. The Hospital is run as one unit and is particularly well equipped for Research. The Assistant Physician will be eligible for a part-time Research Fellowship of £200 per annum, tenable for five years. Outside candidates will receive the same consideration as Local men. Applications to be sent to the Secretary Miss LEWIS 14 Cook Street Liverpool.

GILBERT BAIN MEMORIAL HOSPITAL, LERWICK.

The Trustees invite applications for the post of SURGEON and CONSULTANT for the County of Zetland and Superintendent of the Gilbert Bain Memorial Hospital. Applicants must be of the status of Fellows of the Royal Colleges of Surgeons. Salary £700 per annum, with allowance of £200 for travelling expenses to be fixed by fees and allowances from private patients and the local authority.

This appointment is made with the approval of the Department of Health for Scotland in terms of a Scheme under the Highlands and Islands (Medical Service) Grant Act 1913 and further particulars of the post may be obtained from the Secretary Department of Health for Scotland, Edinburgh, to whom applications with copies of testimonials are to be sent on or before July 8th.

VICTORIA HOSPITAL, BURNLEY
(125 Beds.)

HOUSE SURGEON (Male).

Applications are invited for the above post which will become vacant on July 1st next. The appointment is for six months in the first instance at a salary of £150 per annum, together with board, residence and laundry. At the end of this period re-appointment for a further period may be appointed and if confirmed, the salary for the second six months will be at the rate of £200 per annum.

Applications with full details of qualifications and experience, and stating nationality together with copies of recent testimonials should be addressed to the undersigned forthwith.

J. E. WHEATCROFT Secretary.

THE WILLESDEN GENERAL HOSPITAL, N.W.10

OUT PATIENT DEPARTMENT CLINICAL ASSISTANTS

Applications are invited for appointment to the following sessions

SURGICAL—Monday afternoons.
MEDICAL—Tuesday afternoons
MEDICAL—Friday mornings.
SKIN—Saturday mornings
DENTAL—

Applications must be received not later than first post on Monday June 26th, and should be addressed to the Secretary of the Hospital, from whom further details of the appointments may be obtained.

June 12th, 1933.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST
Brompton S.W.3

The Committee of Management invite applications for the post of HOUSE PHYSICIAN (for which there are three vacancies). The duties include work in the Out-patient Department as well as in the Wards. The appointment is for six months commencing on August 1st, with an honorarium of £50.

Application with copies of testimonial must reach the undersigned not later than Saturday July 8th.

Brompton S.W.3 FREDERICK WOOD Secretary.
June 1933.

HARROGATE AND DISTRICT GENERAL HOSPITAL (140 Beds.)

Applications are invited from British subjects (male) for the post of SECOND RESIDENT MEDICAL OFFICER. The duties include those of House Physician and Casualty Officer.

Salary at the rate of £150 per annum, with board and lodging.

The post will become vacant on July 31 and the appointment is for six months. Applications must reach the undersigned not later than July 8th.

GEO. BALLANTYNE, Secretary.

HERTFORD COUNTY HOSPITAL.

Applications are invited for the post of HOUSE SURGEON (Male). Salary £200 per annum with board, residence and laundry. The appointment is for six months in the first instance, commencing on or about July 16th.

Applications with copies of three recent testimonials should be sent to the undersigned not later than Saturday July 1st.

PERCY G. BROOKS Secretary.

ECCLES AND PATRICROFT HOSPITAL, near MANCHESTER.

HOUSE SURGEON required, July 15th. Good general surgical work. Commencing salary at rate of £150 p.a., plus usual. Six months' appointment. Apply, with copies of testimonials to the Secretary at the Hospital.

XII OBSERVATIONS ON ADVERTISED REMEDIES

The attention of the Committee has been called to the volume and character of the traffic in proprietary remedies and unqualified treatment for the various conditions falling within its reference, and in particular to the use which advertisers make of medical opinion

The Committee considers that the false and misleading statements so widely circulated through the medium of advertisements constitute a material obstacle to the general application of effective measures of treatment, and that, owing to the time wasted in trying these so-called remedies, the disease in many cases may not only be aggravated, but may also pass from a curable into an incurable stage The Committee desires in this connexion to emphasize the need for legislation for the control of the traffic in proprietary remedies and the provision of efficient administrative machinery to enforce such control Meanwhile, members of the profession will be well advised to exercise the greatest care to prevent any expression or misrepresentation of their opinions being used to support the exaggerated claims of the vendors of proprietary articles

XIII INDICATIONS FOR FUTURE RESEARCH

Incidence It is desirable to determine the distribution of the arthritic conditions dealt with in this report (*a*) in the country as a whole, (*b*) in various trades and occupations, and (*c*) in various localities and under different climatic conditions

Bacteriology According to some authorities the pathological conditions which exist in arthritis are due to direct invasion of the joint tissues by micro organisms Opposed to this view is the claim that such changes are due to the sensitization of the tissues by toxins derived from bacterial foci in some other part of the body It would be desirable to determine the relative importance of these two agencies It has been claimed by some and denied by others that it is possible to reproduce in animals arthritic lesions identical with those present in the arthritis of man Confirmation on this point is necessary

The nature and strain of the micro-organisms responsible directly or indirectly for arthritic changes, and the extent to which they may be isolated from the tissues and body fluids, await determination To settle these questions the closest co-operation between clinicians and bacteriologists is necessary The most up to date equipment in the laboratory, and the provision of special research beds in hospitals, is a prerequisite to success, and many experiments will have to be repeated and subjected to the most rigid controls Much of this work can probably be done only in specially equipped hospitals and by specially skilled observers who are able to continue their investigations over a considerable period of time

Biochemistry The general nature of the sedimentation rate test still awaits elucidation and the recognized discrepancy between an improved condition of the patient on the one hand and the delayed return to a normal blood sedimentation rate on the other requires investigation

The following investigations would appear to be important in relation to arthritis and allied conditions (1) calcium metabolism, (2) liver function, (3) the presence of (*a*) haemolysins, (*b*) glutathione in the blood, and (4) skin reactions and allergic manifestations

Clinical Features Co operation between clinicians, radiologists, morbid anatomists, and comparative pathologists is necessary to determine a correspondence between their several findings, so that an agreed classification of arthritic diseases may be obtained

Treatment Controlled experiments are needed to determine the value of the numerous therapeutic methods advised for the treatment of the various forms of arthritis

XIV SUGGESTIONS FOR FURTHER PROFESSIONAL EDUCATION

The Committee inquired from the deans of medical schools if there is any provision, apart from the ordinary routine teaching in medicine, for instruction in the early diagnosis, prevention, and treatment of chronic arthritis and allied conditions A few schools provide special facilities for the study of these subjects, but the majority replied that they were adequately dealt with in the routine instruction in medicine and surgery

The present arrangements should be supplemented by demonstrations in municipal hospitals of clinical cases which illustrate both the various stages and the end results of arthritis, and by demonstrations at adjacent spas and clinics, both of cases and of hydrological and physical methods of treatment

It is clear that most special instruction must be post graduate It is suggested that for this purpose the three spa hospitals (Bath Buxton, Harrogate) and the Red Cross Clinic, London, should be asked to collaborate in the preparation of cinematograph films, lantern slides, and casts, for the purpose of illustrating the diagnosis and treatment of arthritis and allied conditions When this material is complete the Divisions and Branches of the British Medical Association should be informed that lecture demonstrations on this subject can be secured through the Medical Department of the Association A panel of lecturers could no doubt be arranged

APPENDIX

LIST OF MEMORANDA BEFORE THE COMMITTEE

Brown W Langdon The Endocrine Factor in the Etiology and Treatment of Rheumatism
Buckley C W 'Classification of Arthritis and Allied Conditions
Idem 'Influence of Climate upon the Etiology and Treatment of Arthritis and Allied Conditions
Idem 'Spondylitis
Burt J Barnes 'Osteo-arthritis'
Cochrane W A 'Orthopædic and Surgical Treatment of Arthritis'
Copeman W S C 'The Control of Industrial Rheumatism'
Edgecombe Wilfrid 'Secondary Rheumatoid Arthritis
Fischer Anton (Aachen) Treatment of Chronic Arthritis and Allied Conditions in Germany
Freeman, J, and Gordon M H 'Bacteriological Examinations in Regard to Arthritis
Freeman J Gordon M H Luff A P and Willcox Sir W 'Vaccine Treatment of Arthritis'
Godson A H Adaptation to Great Britain of the System of Dutch and German Arthritis Clinics
Gordon R G Incidence of Chronic Arthritis'
Idem 'Diet in Chronic Arthritis'
Idem 'Differential Diagnosis
Idem "Scheme for Treatment of Chronic Rheumatic Diseases"
Hill Sir Leonard 'Radiation and Electrical Treatment
Hutchison Robert Discussed "Diet in Arthritis with the Committee
Kahlmeter G (Stockholm) "Treatment of Chronic Arthritis and Allied Conditions in Sweden
Knaggs R Lawford Morbid Anatomy of Chronic Arthritis
Mitchell W M 'Morbid Anatomy of Arthritis
Patterson S W and Picton Davies R P 'Dietetic Methods in Treatment of Arthritis
Pringle G L Kerr Primary Rheumatoid Arthritis
Idem Treatment of Chronic Rheumatic Disease by Mineral Waters"
Race Joseph "Biochemical Findings in Relation to Arthritis and Allied Conditions with special reference to the Blood Sedimentation Test'
Ray Matthew 'Fibrositis'
Idem Methods of Dissemination of Knowledge amongst the Medical Profession
Idem Physical Treatment of Arthritis
Ray Matthew Freeman J, Gordon Mervyn H and Race J 'Future Objects of Research'
Rolleston Sir Humphry 'Prophylaxis of Chronic Arthritis and Allied Conditions
Scott S Gilbert Radiological Findings in Chronic Arthritis and Allied Conditions, and their value in the Differential Diagnosis
Idem X-ray Treatment of Arthritis
Stockman Ralph Treatment of Arthritis by Drugs
Thomson T G "Balneological Treatment of Chronic Rheumatism
Idem Chronic Villous Arthritis or Climacteric Arthritis
Van Breeman J (Amsterdam) 'Treatment of Chronic Arthritis and Allied Conditions in Holland
Willcox Sir William 'Etiological and Infective Aspects of Arthritis from the Clinician's Point of View
Idem Treatment of Arthritis by Drugs

CITY OF MANCHESTER

PUBLIC HEALTH DEPARTMENT

WITHINGTON HOSPITAL AND INSTITUTION

APPOINTMENT OF AN ASSISTANT MEDICAL OFFICER

The Public Health Committee invites applications from qualified medical men for the position of Assistant Medical Officer at the Withington Hospital (1 290 beds) and Institution (1 200 beds) Nell Lane, West Didsbury Manchester

Every applicant must be a registered medical practitioner and unmarried

Preference will be given to applicants with previous hospital experience

The Hospital is a recognised training school for nurses and is equipped with all modern hospital requirements

Salary £275 per annum, subject to a temporary deduction of £4 5s per annum The amount payable is therefore, £270 15s per annum with board residence, and laundry in addition subject to the terms and conditions of the Manchester Corporation Grading Scheme No bonus

The appointment will be made, in the first instance for a period of six months The successful candidate, however, will be eligible for reappointment for a further period of six months at the end of that period

Applications stating fully the age training qualifications and experience of the candidate with copies of three recent testimonials and endorsed on the envelope Assistant Medical Officer Withington Hospital must be addressed to the Medical Officer of Health Civic Buildings 1 Mount Street Manchester only, and not to members of the Committee or Council and must be received by him not later than Saturday July 1st

The candidate appointed will be required to commence duty as soon as possible after appointment, to devote the whole of his time to the duties of the position to pass a medical examination to contribute to the Corporation Superannuation Fund and to execute the Deed of Service

Canvassing in any form oral or written direct or indirect is prohibited

Town Hall T E WARBRECK HOWELL
Manchester Town Clerk
June 17th 1933

COUNTY BOROUGH OF SOUTHEND ON SEA

APPOINTMENT OF ASSISTANT MEDICAL OFFICER OF HEALTH (WOMAN)

The Town Council invite applications from Medical Women for appointment as Assistant Medical Officer of Health and Assistant School Medical Officer at a salary of £600 per annum, increasing by annual increments of £25 to a maximum of £700

Candidates must hold a Diploma in Public Health have held a resident appointment in a general hospital and have had not less than three years post graduate experience Preference will be given to candidates who have had special experience in the treatment of Venereal Diseases

The appointment is designated under the Local Government and Other Officers Superannuation Act and the salary will be subject to the usual deductions for superannuation and also a temporary economy cut amounting to £17 10s on the first years salary

Applications on forms to be obtained from the Medical Officer of Health Public Health Offices Southend on Sea should be returned to him with copies of three recent testimonials on or before Wednesday July 12th in sealed envelopes endorsed 'Assistant Medical Officer'

Town Clerks Office H J WORWOOD
Southend on Sea Town Clerk
June 17th 1933

WESTERN OPHTHALMIC HOSPITAL
Marylebone Road, N W 1

The Committee have now been able to arrange for the JUNIOR HOUSE SURGEON to be resident and have charge of a certain number of beds and applications are invited for the post

The salary is at the rate of £100 per annum and the appointment is for six months

Some previous Ophthalmic experience is required

The selected candidate will be required to take up duty at an early date

Applications accompanied by copies of three testimonials should be sent in at once and not later than July 1st

H W BURLEIGH
Honorary Secretary

BRISTOL EYE HOSPITAL.

Applications are invited for the post of ASSISTANT RESIDENT HOUSE SURGEON Salary £100 per annum vacant August 1st Senior post available after six months Applications and testimonials to be received by the Secretary not later than Monday July 3rd.

CITY OF LIVERPOOL.

MEDICAL SUPERINTENDENT MILL ROAD INFIRMARY

Applications are invited from fully qualified Medical Practitioners with the necessary knowledge and experience of hospital administration for the appointment of full time Medical Superintendent at the above Infirmary at a salary of £1 000 per annum (subject to a temporary deduction authorised by the Council) together with an allowance of £150 per annum in lieu of residence For the time being the appointment will be non resident but the Council reserve the right to call upon the Medical Superintendent to reside in the Infirmary when suitable accommodation is available Any fees received in connection with the appointment to be handed over to the City Treasurer in accordance with the Standing Orders of the Council

The gentleman appointed will assume control of the Infirmary under the direction of the Medical Officer of Health and be responsible for the work of the Medical Surgical Nursing and Administrative Staffs In accordance with the instructions of the Council from time to time Special experience in surgery is essential

The Infirmary accommodates acute medical surgical and maternity patients with approximately 800 beds and has a staff of Resident Assistant Medical Officers Visiting Specialists, and a Nursing Staff of 130

The Infirmary is a Training School recognized by the General Nursing Council and the Central Midwives Board, and the Medical Superintendent will be required to organise the necessary lectures in connection with the training of Nurses

The appointment will be made subject to the Local Government and Other Officers Superannuation Act 1922 and the Standing Orders of the City Council and will be determinable by three calendar months notice on either side

Applications to be made upon forms to be obtained from the Medical Officer of Health Municipal Annexe Dale Street Liverpool to be endorsed Medical Superintendent, Mill Road Infirmary ' and returned to the undersigned so as to be received not later than first post Tuesday July 4th Canvassing of members of the City Council either directly or indirectly will be considered a disqualification

Municipal Buildings, WALTER MOON
Liverpool Town Clerk
June 1933

COUNTY BOROUGH OF EAST HAM

Applications are invited for the appointment of MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER for the Borough

The salary will be in accordance with the agreed scale, viz, £1 100 per annum subject to deductions under the Local Government Officers Superannuation Act

Candidates must be under 45 years of age be duly qualified and possess a Diploma in Public Health Sanitary Science or State Medicine The appointment will be subject to the Sanitary Officers Order 1926 to the approval of the Ministry of Health, and to the person appointed satisfactorily passing a medical examination

Further particulars of the duties terms and conditions of the appointment and form of application can be obtained on application to the undersigned

Applications on the form provided (accompanied by a copy of three recent testimonials) are to be endorsed Medical Officer of Health and delivered to the undersigned not later than the first post on Thursday June 29th

Canvassing directly or indirectly will be a disqualification

Town Hall C EUSTACE WILSON
East Ham E 6 Town Clerk
June 14th 1933

COUNTY BOROUGH OF WARRINGTON

WHITECROSS HOSPITAL. (300 Beds)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (Male)

Salary £225 per annum together with board residence and laundry at the Hospital

The above is a General Hospital recently transferred to the Local Authority from the Board of Guardians and the duties of the candidate will chiefly comprise the treatment of patients in the male Medical and Surgical and Male and Female Mental Wards

Candidates must be single, not exceeding 30 years of age fully qualified and registered

Appointment for six months which may be extended for a further period of six months

age, qualifications and ith copies of not less to be sent to the under signed not later than first post Thursday July 6th

C W N JOSEPH M D D P H
Health Dept Medical Officer of Health
Sankey Street Warrington

LONDON COUNTY COUNCIL.

HOSPITAL LABORATORY SERVICE.

Medical Practitioners required with appropriate qualifications for appointment at undermentioned laboratories Remuneration and conditions subject to review In case of a woman marriage terminates contract of service

(a) PATHOLOGIST Group Laboratory ST MARY ABBOTS HOSPITAL Marloes Road Kensington W —Salary £1 100 by £50 to £1 300 Responsible for organisation and development of pathological work for Council's general hospitals in group expected to visit each hospital in group at frequent intervals act generally as consulting pathologist to group and to carry out research work as opportunities arise.

(b) ASSISTANT PATHOLOGIST at the aforementioned laboratory Salary £650 by £25 to £800 Required to act under direction of Pathologist Duties include visitation of hospitals, conduct of post mortem examinations and generally carrying out of examinations in laboratories in area

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a) County Hall Westminster Bridge S E 1 and returnable by July 7th Candidates should specify position or positions for which they desire to apply

Canvassing disqualifies

LONDON COUNTY COUNCIL.

ASSISTANT MEDICAL OFFICER Grade II (non resident) required at ST CHARLES HOSPITAL St. Charles Square, Ladbrok Grove W 10 Salary £250, together with non residential allowance at rate of £150 a year in lieu of board, lodging and washing Appointment at this hospital for one year only and not renewable Remuneration and conditions subject to review In case of a woman marriage terminates contract of service Candidates must be registered medical practitioners of at least one year's standing, and have held a resident appointment in a general hospital for six months. Duties assigned by medical superintendent and include if necessary assistance at other establishments under the control of the Council

Application forms obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), County Hall Westminster Bridge S E 1 returnable by July 7th Canvassing disqualifies Inquiries should be addressed to Medical Superintendent

CITY AND COUNTY OF NEWCASTLE UPON TYNE

NEWCASTLE GENERAL HOSPITAL
(650 Beds)

ONE HOUSE SURGEON AND ONE HOUSE PHYSICIAN (Male)

The above posts will become vacant on August 1st and applications are invited from duly qualified and registered Medical Practitioners

The salary in respect of each of the appointments which are tenable for six months is at the rate of £150 per annum with board lodging etc

Applications, stating age and qualifications together with copies of not more than three recent testimonials to be addressed to the Medical Officer of Health Town Hall Newcastle upon Tyne

June 19th, 1933

VICTORIA HOSPITAL FOR CHILDREN,
Tite Street Chelsea S W 3 (138 Beds)

The Committee of Management invite applications for the posts of HOUSE PHYSICIAN and HOUSE SURGEON (both vacant August 1st) The appointments are for six months Salaries at the rate of £100 p a with board lodging and washing

Candidates must attend the hospital for the purpose of an interview at 4 p m on Tuesday July 11th (No travelling or other expenses will be paid) They must hold medical and surgical qualifications and be registered under the Medical Act

Applications with copies of three recent testimonials should be sent to the Secretary not later than first post on Monday, July 10th

By Order
D ST JOHN BAMFORD Secretary

ROYAL NATIONAL ORTHOPAEDIC HOSPITAL 234 Gt Portland St W 1

Applications are invited for the post of HONORARY ASSISTANT SURGEON (for acute abdominal cases) and should be sent to the Secretary on or before June 30th The Surgeon who has recently been undertaking the work is a candidate for the appointment

Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

APPENDICITIS AND MECKEL'S DIVERTICULUM

In view of the article on Meckel's Diverticulum and Appendicitis published in the *Journal* of June 3rd the following case may be of interest

J. N. aged 17 was admitted with a diagnosis of acute appendicitis. He complained of abdominal pain of ten hours' duration starting in the region of the umbilicus and settling in the right iliac fossa. He had vomited once soon after the onset and there was no history of constipation. His temperature was 96·6° F. pulse 60. Examination of the abdomen revealed nothing more than tenderness in the right iliac fossa. There was a history of a similar attack lasting a few days five years previously.

On opening the abdomen by Battle's incision the cavity was found to contain some free fluid of a clear watery nature. The appendix apart from some kinking and thickening showed no gross pathological change but the caecum was ensnared and partially obstructed by a Meckel's diverticulum. This was four to five inches in length and was adherent by its extremity to the abdominal wall at the umbilicus. The caecum was uninjured.

Appendix and diverticulum were both excised and the abdomen was closed without drainage. Convalescence was normal the patient being discharged seventeen days after operation.

G. A. WEIR, M.B., Ch.B.
House Surgeon, Royal Victoria Hospital, Dover.

LUTEAL EXTRACT FOR MAINTENANCE OF PREGNANCY

In view of the work done by Pfiffner and Harris [1] Allen and Corner [2] and others on the maintenance of pregnancy in castrated laboratory animals the following case in a human being should prove of interest.

The patient who had had a posterior division of the cervix performed in 1924 and curettage with removal of a pedunculated growth in 1927 became pregnant on three occasions after the last mentioned date. During each pregnancy her health was very bad. Nausea vomiting gastric pain pain in the back nervous irritability pallor emaciation and weakness were all marked. Menstrual flow continued in each pregnancy for the first one or two periods and at each subsequent period a pink colour was noted in the discharge. Each pregnancy terminated about the twenty-second week. The patient had fallen about three weeks before the first miscarriage. There was no known possible external cause in the two subsequent miscarriages. The babies were all born alive. The posterior division of the cervix had been closed after the third miscarriage.

In the fourth pregnancy (January 1932) similar conditions of ill health obtained and the patient was virtually confined to bed. All the usual medical physical and psychical treatments were applied to no purpose.

Treatment by injections of luteal extract (prepared by Messrs. Armour) was started when during the fourth month the patient noticed distinct bleeding at a period and felt as if she were going to miscarry. One cubic centimetre of the extract was injected twice weekly. The digestive system settled down in a few days and the patient was perfectly healthy and physically strong in five weeks. Two doses weekly proved sufficient. A delay of a few days in the administration of the extract on a few occasions caused a recurrence of the symptoms of ill health which again disappeared when the injections recommenced. Injections were stopped at what was believed to be about one fortnight prior to the end of the gestation period to avoid possible overcarry or inhibition of uterine contractions [3]. Five days after the last injection the membranes ruptured and the patient went into labour two days later in hospital. The baby though distressed survived.

The continuance of the menstrual flow and the failure to maintain the pregnancies suggested some deficiency of the luteal hormones. The cessation of the flow and the maintenance of the fourth pregnancy to term with restoration of the health to a normal condition tend strongly to confirm this. I do not think the closure of the posterior cervical division had much to do with the maintenance of the fourth pregnancy as the condition of the patient prior to the use of the extract was worse during the fourth pregnancy than ever before.

R. G. Harris in a personal communication recently received suggests that theelin should be given for the last fortnight of term in cases where luteal extract is used so as to avoid any possible interference with labour.

REFERENCES

[1] Harris, R. G. and Pfiffner, J. J. Extracts of Corpus Luteum in Relation to Pregnancy. *Ana. Record*, xlix, No. 3, 295.
Allen and Corner. Physiology of the Corpus Luteum. VII. *Proc. Soc. Exp. Biol. Med.* 1930, xxvii, 403.
[3] Hisaw, Meyer, Fevold and Leonard. *Ana. Record*, xlix, No. 3, 295.

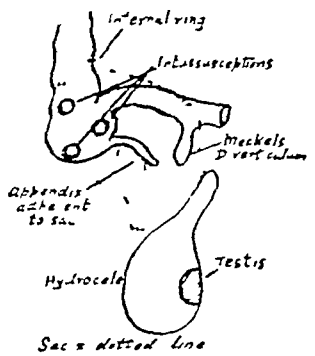
STEPHEN SHEA, M.B.
Professor of Anatomy, University College, Galway.

UNUSUAL CASE OF STRANGULATED HERNIA

The following is a record of a case of strangulated hernia that occurred in Bethlem Royal Hospital and which bears very unusual features.

A man aged 65 was admitted on October 21st 1931 suffering from involutional melancholia. On admission he had a hydrocele of the left tunica vaginalis and a right inguinal hernia. The hydrocele was tapped in December and 16 oz. of fluid withdrawn. No active treatment was considered necessary for the hernia since it was easily reducible and the patient's mental condition necessitated almost total confinement to bed.

The hydrocele gradually enlarged again and in January 1932 the scrotum was about the size of two clenched fists



but quite flabby. On the afternoon of January 25th 1933 the patient was allowed out of bed but shortly after rising doubled up and began to groan. Subjective symptoms were valueless owing to the mental condition but on examination the scrotum was found to have increased in size and to be quite tense. In the scrotum besides the hydrocele there was a large swelling situated above it this was irreducible and tender and was considered to be a strangulated hernia. A firm constriction was palpable in it just above Poupart's ligament. The temperature and pulse were quite normal. The patient had vomited a few times during the previous month but on several such occasions he was observed to induce it by tickling the throat.

Mr. Stanford Cade saw the patient that evening diagnosed a strangulated hernia and proceeded to operate at once. On opening the hernial sac the following structures were found within it: (1) The major part of the caecum in the wall of which were three small early-stage intussusceptions the diameter of each was about 3/4 inch and the depth about 1 inch. (2) The vermiform appendix which was adherent to

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary 7, Drumsheugh Gardens Edinburgh)

(a) British Islands

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH** *(contd.)*
EBBW VALE, MON *(Workmen's Medical Society)*	OAKDALE, MON *(Medical Officer for Medical Aid Association.)*	COUNTY BOROUGH OF SOUTH SHIELDS. HARTON INSTITUTION AND CLEADON COTTAGE HOMES *(Medical Officer)*
GILFACH GOCH GLAMORGAN *(Workmen's Medical Scheme)*	OGMORE VALLEY GLAMORGAN *(Wyndham Colliery Medical Aid Society)* *(Workmen's Medical Scheme)*	
LLWYNPIA, CLYDACH VALE, PENYGRAIG GLAMORGAN *(Workmen's Medical Scheme)*	**PUBLIC HEALTH**	HERTFORDSHIRE COUNTY COUNCIL. WARE SANATORIUM. *(Assistant Medical Officer)*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer)*	KENT COUNTY COUNCIL. LENHAM SANATORIUM *(Male Assistant Medical Officer)*	FULHAM BOROUGH COUNCIL. Maternity and Child Welfare Department. *(Assistant Medical Officer—Woman.)*
MARDY GLAMORGAN *(Workmen's Medical Scheme)*	FARNBOROUGH INSTITUTION HOSPITAL. *(Resident Assistant Medical Officer)*	
NEATH AND DISTRICT *(Medical Aid Association.)*		

(b) Overseas.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association B.M.A. House Tavistock Square W.C.1

Town or District.	Hon. Sec. of Division or Branch	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments)*	Dr. J. G. HUNTER (Medical Secretary New South Wales Branch) 135 Macquarie St., Sydney N.S.W.	QUEENSLAND *(Brisbane Associated Friendly Societies Institute)*	The Hon. Sec. Queensland Branch, British Medical Association B.M.A. Building Adelaide St., Brisbane.	WELLINGTON NEW ZEALAND *(Contract Practice Appointments)*	Dr. G. F. V. ANSON (Hon. Sec. New Zealand Branch) British Medical Association, P.O. Box 156, Wellington, New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch, British Medical Association Medical Society Hall East Melbourne Victoria.	*(Toowoomba Associated Friendly Societies Medical Institute Toowoomba.)*		WESTERN AUSTRALIA. *(Contract and Lodge Practices)*	Hon. Sec., Western Australian Branch, British Medical Association No. 6 Bank of N.S.W. Chambers St. George's Terr., Perth, Western Australia.

June 21st, 1933 By Order of the Council G. C. ANDERSON Medical Secretary

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WORCESTER COUNTY AND CITY MENTAL HOSPITAL, POWICK, near WORCESTER.

Applications are invited for the post of ASSISTANT MEDICAL OFFICER. Applicants must be male and single and duly qualified in medicine and surgery. Salary £350 rising by yearly increments of £25 to £450 per annum together with furnished apartments, board, laundry and attendance. A further £50 will be paid if the selected candidate holds or obtains a Diploma in Psychological Medicine. The commencing salary is subject to a temporary abatement of £13 15s. under the National Economy Scheme. The appointment is subject to the provisions of the Asylums Officers Superannuation Act 1909.

Applications stating age, experience, and full particulars, accompanied by copies of three recent testimonials, to be forwarded to the Medical Superintendent not later than Saturday, July 1st.

HUDDERSFIELD ROYAL INFIRMARY (240 Beds.)

MALE HOUSE SURGEON required to commence duty on July 6th.

Salary £150 per annum with board, residence, and laundry. Appointment for six months, subject to renewal at the discretion of the Board of Management.

The Hospital is officially recognised for the surgical practice required of non-members before admission to the Final Fellowship Examination of the Royal College of Surgeons of England.

Applications, with copies of three recent testimonials, to be addressed to the undersigned immediately.

H. E. G. HALL,
Gen. Supt. & Secretary.

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY

The Board of Management invites applications for the following posts from unmarried gentlemen of British Nationality who are properly qualified and registered:

HOUSE SURGEON. Duties under Consulting Surgeon.

SPECIAL HOUSE SURGEON. Duties in Obstetric Department and Eye, Ear, Nose and Throat Wards.

Salary in each case at the rate of £150 per annum with board, residence and laundering. Appointments six months.

The Hospital is recognized for post-graduate study by the Joint Colleges of Physicians and Surgeons.

Resident Staff 6 Beds. Infirmary 278. Homes of Recovery 72.

Application, stating age, qualifications and experience, together with copies of testimonials to be forwarded to the undersigned.

JOHN GIBSON,
June 12th, 1933. Supt. & Secretary.

THE ROYAL GWENT HOSPITAL, NEWPORT, MON. (160 Beds.)

Wanted a JUNIOR RESIDENT MEDICAL OFFICER to act as House Surgeon to Out-patients and as House Physician.

Salary £135 with board, lodgings, and laundry. Resident Medical Staff 5. Eligible for promotion.

Large Out-patient Department.

Applications, stating age and qualifications, with copies of three recent testimonials to be sent to the undersigned.

Applications from ladies not entertained.

J. K. MILLWARD,
June 9th, 1933. Secretary Supt.

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY

The Board of Management invites applications from unmarried gentlemen of British nationality properly qualified and registered, for the post of RESIDENT SURGICAL OFFICER, which will fall vacant early in August.

Preference will be given to candidates with F.R.C.S. degree.

The Central Hospital in Preston contains 278 beds and in addition there are 72 at the Homes of Recovery in the country.

The Resident staff numbers six: R.S.O., House Physician, Casualty Officer, 3 House Surgeons.

Salary at the rate of £300 per annum, with rooms, board, and laundry. The appointment is in the first instance for twelve months.

Applications stating age, qualifications, and experience, together with testimonials, to be forwarded to the undersigned (who will supply any particulars desired) on or before July 1st.

JOHN GIBSON,
June 12th, 1933. Supt. & Secretary.

NORTH ORMESBY HOSPITAL, MIDDLESBROUGH.

HOUSE PHYSICIAN required male and unmarried. Salary £120 per annum, with board, residence and laundering. There are three Residents and the successful candidate will be elected for the post of House Surgeon in due course.

Application, stating age, qualifications, previous experience (if any), with copies of three recent testimonials, should be sent to the undersigned at once.

GEORGE WATTS,
June 6th, 1933. Secretary Supt.

(Appointments continued on p. 50)

the posterior wall of the sac (3) A portion of the ileum about 6 inches from the ileo-cæcal junction with a Meckel's diverticulum measuring about 2 inches in length The appendix was freed from the sac and removed the remaining structures returned to the abdominal cavity and the tunica vaginalis everted The patient's convalescence has been rapid and uneventful

I wish to thank Dr Porter Phillips and Mr Stanford Cade for their kind permission to publish this case

Beckenham OTHO FITZGERALD

THE ELASTICITY OF THE SKIN

I am induced to report the following case because I would have thought such an injury impossible with an intact skin

A boy 13½ years of age jumped on a fence in search of a cricket ball that went into a neighbouring garden He either slipped or fell into the garden in which there was a three-quarter inch water pipe used as a garden stake He struck this pipe an inch within the nipple line at the fourth left costal cartilage He died in a few moments The mark of the circle of the top of the pipe could just be seen in the upper part and in the lower part it had slightly abraded the skin There was no wound and no mark on the skin when reflected His pectoral and intercostal muscle were torn making an opening between the fourth and fifth cartilages but did not fracture or tear either The opening was so made for two inches that the pericardium could be seen and was intact though distended with blood and blood clot There was a tear in the left ventricle which admitted the end of my thumb and was immediately to the left of the interventricular septum

Sydney STRATFORD SHELDON, M B Ch M

Reports of Societies

SURGICAL TREATMENT OF DUODENAL ULCER

At a meeting of the Aberdeen Medico-Chirurgical Society on June 1st with the president, Dr W CLARK SOUTER in the chair a discussion on the surgical treatment of duodenal ulcer was opened by Mr ALEXANDER MITCHELL

Mr Mitchell based his observations on the records of about 144 cases operated upon by Mr F K Smith and himself during the period 1926–31 The great majority had been males and in these the age incidence at the time surgical treatment had been instituted was much earlier than among females It was generally accepted that unless there was definite evidence of pyloric stenosis, medical treatment should be tried first, but the question as to when the patient should be handed over to the surgeon was difficult and one on which there was no general agreement The modern surgical treatment of duodenal ulcer resolved itself into the choice of four types of operation—namely gastro-enterostomy, excision of the ulcer with some form of pyloroplasty, excision of more than half of the pylorus without opening the duodenum or stomach and excision of the pyloric end of the stomach to diminish acidity Excision and pyloroplasty were applicable only when the duodenum was fairly free, and preferably in the case of an anterior ulcer, when successfully performed however this operation did all that gastro-enterostomy did without the risk of the undesirable sequels especially associated with gastro-enterostomy Mr Mitchell emphasized the necessity in all types of operation of careful examination of the abdomen and of dealing with any abnormal condition, especially of the gall-bladder and appendix Of 114 cases treated by gastro-enterostomy there were eighty-seven good results, fourteen fair nine bad and four deaths, of the twenty-eight cases treated by excision and pyloroplasty eighteen results were good eight fair and one bad while one patient had died of post-operative pneumonia In one case appendicectomy only had produced a good result Gastro-enterostomy was evidently a satisfactory operation in certain cases but there were risks of undesirable sequels, such as anastomotic ulcer, bilious vomiting kinking of the jejunum and haemorrhage Mr Mitchell had been unable to reach a definite finding as to the relation between the duration of symptoms and the age of the patient and the final result, except that better results were obtained in cases with a long history in which very definite pyloric stenosis had been present The after-treatment and the duration of subsequent medical supervision also influenced the final result Mr Mitchell was of opinion that gastric hyperacidity was lessened as well by pyloroplasty as by gastro-enterostomy It was impossible to compare accurately the risks of surgical as opposed to medical treatment, and in surgical failures it could not be said whether one was dealing with failure to cure the original ulcer or with the development of a new ulcer from an inherent predisposition to ulcer

Mr F K SMITH congratulated Mr Mitchell on his study He found the preponderance in males and earlier age incidence very interesting Among possible aetiological factors he mentioned Müller's theory of a vaso-neurotic state or sympathetic derangement He thought Mr Mitchell's results exceedingly good Absolute indications for surgical treatment were perforation and pyloric stenosis Mr Smith was inclined to disagree with Mr Mitchell as to the frequency of anastomotic ulcer especially as this condition was very difficult to diagnose correctly secondary ulceration very seldom occurred if the gastro-enterostomy opening was made towards the pyloric end of the stomach Care had to be taken with materials method of suturing and sufficient size of opening, the latter to be at least twice the diameter of the part of the jejunum to be anastomosed The gastric acidity was sometimes higher after gastro-enterostomy or even after gastro-duodenostomy than before operation Mr Smith considered the good results in many cases due to resting of the affected parts Poor operative results were obtained in recurrent haemorrhagic ulcers, and it was doubtful whether the bleeding always came from an ulcer, either duodenal or anastomotic

Dr H MCGILL stated that in experimental feeding the impaction of faeces in the cæcum with cæcal ulcers was associated with bleeding points in the stomach and other parts of the gut in the neighbourhood of the pyloric sphincter spasm of which was caused by excessive stimuli from the distal portion of the intestine If the concentration of food were greater than the optimum solution for absorption intense congestion of the duodenum occurred, while the rate of emptying of the stomach was in direct relation to the concentration of the solution

Mr G H COTT stated that there were industrial reasons for surgical treatment as some patients could not obtain appropriate diet The preponderance of males found by Mr Mitchell was not general in the country Perforation cured the ulcer in 90 per cent of cases if the ulcer was anterior and in the first part of the duodenum, and in 50 per cent if the ulcer was far down and posterior In performing gastro-enterostomy the tension of the loop was the important point

Dr A GRANT ANDERSON quoted the findings of Matthew Stewart of Leeds that in all post-mortems he had performed a duodenal ulcer or the scar of an ulcer was found in 10 per cent Mentioning that out of 100 medical students ten would show a hyperchlorhydria, he stated that a definite ulcer diathesis existed, and that recurrence of symptoms might be due to the gastritis A five-year period was necessary for the proper assessment of treatment either medical or surgical and the good results were not so frequent as had been made out On the five-year period basis the figures from the Charité Clinic in Berlin showed 50 per cent bad results from gastro-enterostomy, figures from other centres were much the same The ulcer might not heal, and there was the possibility of a gastro-jejunal ulcer Partial gastrectomy was preferable Berg's experience showed a 5 per cent mortality figures for bad results (recurrence of symptoms) were 16 per cent for gastro-enterostomy and 2 per cent for gastrectomy The acid factor must be an important

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WANTED IMMEDIATELY AN ASSISTANT in a large mixed Practice in Lancashire Male Irish English or Scotch —Address No 4025 B M A House Tavistock Square W C 1

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MALE ASSISTANT WANTED AT ONCE — Devon Seaside Resort Over 30 Good Anaesthetist, Public School man exp Prov Hosp and C P £400 out Prospects — Address with photo No 4020 B M A House Tavistock Square W C 1

OPHTHALMIC ASSISTANTSHIP WANTED in the South by M B B S D O D O M S, aet 28 To commence in the Autumn — Address No 3302 B M A House Tavistock Square W C 1

PART TIME ASSISTANTSHIP OR INSTITUtional POST (afternoons free) wanted in London or Manchester next October by Scots man 31, single qualified Edin 1925 3½ yrs hospital (General Mental T B and Fevers) 3½ yrs G P midwifery and panel Own car —No 4083 B M A House Tavistock Sq W C 1

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one and gastro-enterostomy was not likely to lead to achlorhydria

Professor L S P DAVIDSON thought that most acute and chronic ulcers if the history was not too long healed spontaneously if given a chance Dr J E SKINNER had found women more amenable to treatment than men A factor which he had found retarded recovery every time it occurred was constipation

THE PRESACRAL NERVE

At a meeting of the North of England Obstetrical and Gynaecological Society held at Leeds on April 28th with the president Mr LEYLAND ROBINSON in the chair Mr A A DAVIS read a paper on the presacral nerve Mr Davis described in detail from the findings in over seventy dissections the anatomy of the so-called presacral sympathetic nerve He showed the varied forms found—from the rare single nerve to the more usual plexus In defining the relations of this plexus he pointed out that sometimes the pelvic mesocolon with its contained vessels transgressed the midline and so came to form a direct anterior relation of the plexus—a point of surgical importance Discussing briefly the physiology of the plexus he mentioned the following important facts One third of the fibres were centripetal the nerve being in fact viscero-sensitive Section of the presacral nerve relieved pain in the pelvic viscera Painless precipitate labour had followed resection in a case of Dr Addis s Increased frequency and ease of emptying of the bladder and rectum followed resection Resection of the presacral nerve appeared to be harmless to all pelvic functions Mr Davis described the operation by Cotte and Leriche and showed the collected results to date He concluded by claiming for the operation a definite sphere of application and as indications for the operation he gave the following (1) severe dysmenorrhoea which has not reacted to medicinal and minor surgical procedures (2) severe intractable pelvic neuralgias especially of inoperable pelvic carcinoma (3) intractable pruritus vulvae and ani (4) as a corollary to other operative procedures in cases of long standing pelvic pain

Treatment of Hydrocephalus

Dr C H WALSH described a new method of treatment of hydrocephalus which he had employed in two cases recently In each case the hydrocephalus was marked and typical and the diagnosis was confirmed by radiography In both cases there was primary inertia and early rupture of the membranes At the time of treatment—in one case fifty four hours following rupture of the membranes—there was only slight dilatation of the cervix In each case the bladder was emptied and the hydrocephalic head was tapped of its cerebro-spinal fluid by plunging a lumbar puncture needle through the abdominal wall and uterus at a point equidistant from the symphysis pubis and umbilicus Local anaesthesia was used Radiographs before and after tappings were shown In one case delivery was spontaneous In the other case delivery had to be assisted Dr Walsh claimed that this was an easy safe and clean method of treatment of hydrocephalus when the head presented Mrs D W CURRIE described a case of rupture in which auto-transfusion of the blood recovered from the abdomen was performed with good results Mr A M CLAYE in a note on the induction of the menopause by radium described a series of cases he had treated with excellent results Mrs CLAYE stressed the use of correct dosage of radium

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At a special general meeting of the Royal Academy of Medicine in Ireland held in Dublin at the Royal College of Physicians of Ireland on June 8th the following were unanimously elected Honorary Fellows of the Academy N Bishop Harman LL D F R C S W G Willoughby M D C O Hawthorne M D LL D F R C P

Reviews

CHRONIC RHEUMATIC DISEASES

Dr B L WYATT runs a clinic for the treatment of chronic arthritis and his recent volume[1] is based on a detailed study of 400 cases which have received treatment at that clinic The result is a very valuable work but as with many American books the author s own opinions and conclusions are often overlaid and obscured by a mass of observations and statistics culled from the literature with great erudition and labour For example the first section on nomenclature pathology and aetiology only serves to show how many conflicting data can be found on this subject and how little exact knowledge we possess The author is very much wedded to the infective theory and in this most people will find themselves in agreement but when dealing with metabolic factors he confines himself entirely to a consideration of gout There are several authorities in this country who would extend this view considerably and would regard chronic villous arthritis and many cases of fibrositis and osteo-arthritis as of primarily metabolic origin It would seem that theories both of causation and of treatment are largely determined by the locality and circumstances of the practising physicians Thus it is noticeable that those who practise in spas naturally uphold the efficacy of hydrotherapy and in view of the marked metabolic influence of this form of treatment they are apt to claim an extended field for the aetiological importance of metabolic changes Those who practise in the larger cities on the other hand are found to insist on an almost exclusively infective origin and pin their faith on the therapeutic virtues of vaccines and the simple forms of physical therapy This is somewhat naively brought out by Dr Wyatt who writes

> Thermal effects may be produced by hydrotherapy electrical modalities and other means For the average suite of medical offices hydrotherapy is not readily available and reference to the section dealing with the therapeutic adjunct shows that it has well-defined limitations and is only of special value in a comparatively small number of cases

Compare this with the opinions of perfectly honest spa physicians and the rank and file of the medical profession may well ask what they are to believe The chief merits of this book are that the serious social menace of arthritis is well presented and that it is recognized that

> chronic arthritis is not a disease but rather a group of diseases which differ both aetiologically and pathologically It therefore should be apparent why a panacea for these various ills does not exist It is highly probable that as our knowledge increases medical science will make many important contributions to the treatment of chronic joint disease but it is by no means necessary to await these developments the treatment of chronic arthritis must be assumed by the general practitioner if the present toll of suffering is to be markedly curtailed and the problems of differential diagnosis and composite therapy do not present unsurmountable obstacles to the average careful and conscientious clinician

Dr Wyatt rightly stresses the necessity of composite treatment comprising (1) attention to the general strength and resistance of the patient by diet sunlight and fresh air adapted to the needs of the individual patients (2) removal of sources of infection (3) treatment thereof by suitable vaccines though he recommends larger doses than would be approved by many English authorities (4) heat and (5) massage the latter of which he regards as of especial importance and utility This book is certainly to be recommended to all those interested in chronic rheumatic diseases

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[1] *Chronic Arthritis and Fibrositis* By B L Wyatt, M.D F.A.C.P London Baillière, Tindall and Cox Ltd. 1933 (Pp xii + 202 17 figures 20s.)

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Dr HINDLEY-SMITH'S book *Chronic Rheumatism and the Pre-rheumatic State*[2] is one which we cannot recommend It seems to be retrograde in every respect, since no clinical distinction is drawn between the various types of acute and chronic rheumatism The author claims that every form of these is a stage of the same disease, because it is the result of a pharyngeal infection with a streptococcus This leads to the conclusion—no doubt comfortable to the author—that he can prevent and even cure all sorts and conditions of chronic rheumatism by his own special regime which is characterized by the administration of large doses of vaccine and the application of ultraviolet rays Practitioners with any sort of experience in dealing with this complex group of diseases know only too well that we are still far from knowing all, or even much, about their aetiology , that treatment is difficult and all too often disappointing , and that there is no sovereign remedy for this any more than for any other group of diseases which appear to have a superficial resemblance to each other Such books are apt to mislead the profession and raise false hopes among the public, which it may take some years to prove to be unfounded

FOOD AND DIETETICS

Dr ROBERT HUTCHISON S *Food and the Principles of Dietetics*[3] made its bow in 1900, and in the succeeding quarter of a century the author produced six editions singlehanded , but for the production of the seventh edition, which was published a month or two ago he obtained the assistance of Professor V H MOTTRAM This textbook has been a standard work for thirty-two years, and its merits are so well known to our profession that it is superfluous to say anything about its general character Founded upon a course of lectures to medical students at the London Hospital, it quickly met with favour among a far wider audience who already knew of Dr Hutchison s gifts as a clinical lecturer The new edition has been extensively revised In particular the first three chapters have been completely rewritten, and for this Professor Mottram is responsible chiefly Among other points it may be noted that the prices given in the tables and plates have all been revised and brought up to the scale of modern costs The general form and scope of the book has, however, been left unaltered and there is every reason to believe that the new edition will maintain the well-earned popularity and prestige of its predecessors It appears at a time when foods and dietaries in health and disease are attracting more general interest than ever before

REACTION OF TISSUES TO ENVIRONMENT

In a small volume entitled *L'État Réactionnel*[4] Professor GUIEYSSE PELLISSIER discusses the problem of tissue reaction occurring within the limits of health, resulting from variations in the environment The relationship is obvious in many cases, as in the pigmentation of the skin in tropical countries and the alteration of the blood in high altitudes In some instances, however, the change in the environment escapes detection, and the tissue reaction is apt to be regarded as pathological Cases of this kind seem to occupy an intermediate position between the normal and the pathological, and the author uses the term ' reactional state " to indicate this he has studied the subject more especially in connexion with the lymphatic tissue, which is peculiarly sensitive to alterations in the environment Hyperplasia of this tissue of a purely reactional nature is very readily mistaken for a pathological change The author adduces many examples If rats are reared in cages furnished with a floor of putrid horse dung they remain in perfect health but their lung tissue is found to be loaded with enormous accumulations of lymphocytes, which might be taken to indicate an inflammatory reaction, but are unaccompanied by fibrosis and other definite signs of inflammation Experiments with mild inhalations of formol and turpentine gave similar results in dogs The author has also made a large number of observations on the variation in the amount of lymphatic tissue in the gills of fish which are very suitable for the study of the effect of alterations in the environment He has observed that the gills of river fish always contain lymphatic tissue in greater abundance than sea fish , and with regard to river fish a greater increase in lymphatic tissue is found in those living in water polluted with sewage

The author looks on the above examples as instances of physiological reaction , although overstepping the normal they are not regarded as pathological, and he places them in his reactional category The subject is interesting in its bearing on the question of the significance of such conditions as hypertrophy of the tonsils in children and the accumulations of lymphatic tissue that are common in the vermiform appendix, which the author regards as merely reactional Although not in themselves pathological, the lymphatic accumulations may cause damage to the tissues in which they occur In the case of the tonsil, for example, the lymphocytes infiltrate the overlying epithelium, destroying it in places, and thus creating gaps which may facilitate the entry of microbes The first half of the book is devoted to a valuable description of the various types of lymphatic tissue and their distribution in the body

THE LIVING CELL

In a volume entitled *The Action of the Living Cell*[5] Dr FENTON B TURCK has published the main results of his experimental work on problems related to cell metabolism This work he has carried on for some forty years, and during this period the results have been communicated to various medical journals Perhaps the most important of Dr Turck's observations has been the demonstration of the relation between injured tissues and shock and the toxic nature of most of the manifestations of this condition In this matter Dr Turck's work was undoubtedly pioneer , the acceptance of his conclusions was long delayed, but they are now, in general, regarded as correct Dr Turck subsequently showed that as a result of injury, such as simple trauma or burn, a process of autolysis occurred in the damaged tissue cells, and that to the absorption of the autolytic products were due the major phenomena of shock Since these experiments he has extended his researches on the nature and effect of autolytic products in various directions He has been unable, even with the aid of expert chemical assistance, to define the chemical nature of the toxic products with which he has worked, but has adopted the designation "cytost" for these products According to his views "cytost" may be produced by any form of injury—mechanical, irritant or bacterial—also by fatigue and by a great variety of other influences On the evidence he does not appear to be entitled to assume, as he does

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Chronic Rheumatism and the Pre rheumatic State By J D Hindley Smith M A M R C S London H K Lewis and Co, Ltd 1932 (Pp 154 5s 6d)

[3] *Food and the Principles of Dietetics* By R Hutchison M D, F R C P and V H Mottram M A Seventh edition London E Arnold and Co 1933 (Pp xvi + 630 illustrated 21s net)

[4] *L État Réactionnel* Par Professeur A Guieysse Pellissier Paris Libraire Felix Alcan 1932 (Pp 224 54 figures 20 fr)

[5] *The Action of the Living Cell* Experimental Researches in Biology By Fenton B Turck New York The Macmillan Company 1933 (Pp x + 308 17 figures 18s net)

that a single toxic product results from the action of these various influences on cells of all kinds He expects that many of his deductions and concepts will meet the opposition usually accorded new theories with the logic of some of his arguments fault must be found but there can be no doubt that the experimental work he records breaks new ground in directions which seem well worth following

PSYCHOLOGY AND PSYCHOPATHOLOGY

A Psychologist's Point of View[1] by Dr CHARLES S MYERS contains twelve semi popular essays covering a wide range of topics of general interest The book opens with an essay on Human Improvability which reveals a note of hopefulness and optimism characteristic of the author's outlook on life Three of the papers are concerned respectively with industrial psychology education and vocations and hindrances to output these being practical problems to which Dr Myers has given much attention during the last few years On the anthropological side we find two interesting chapters on The Taste names of Primitive People and The Beginnings of Music This eminently readable book also includes chapters on such widely differing problems as Success Prayer Freudian Psychology and Instinct and Intelligence

Psychopathologists will welcome the publication of a relatively small book on *Psychology of Sex*[2] by Dr HAVELOCK ELLIS This book will meet a need since the monumental volumes on sex and its morbid deviations by the same author deal too exhaustively with the subject to be of practical value to the busy practitioner This smaller volume would appear to provide exactly the amount of knowledge required by the physician when confronted with the not inconsiderable number of patients who are the subjects of sexual difficulties or perversions In his introduction to this volume Dr Havelock Ellis observes that again and again where sexual anomalies are concerned patients complain that the practitioner has shown no comprehension of their sexual difficulties or peculiarities either brushing them aside or treating them as vicious Furthermore the author suggests it is doubtless the patient's consciousness of this attitude in his doctor which leads many physicians to declare that psycho-sexual anomalies are very rare and that they scarcely ever meet with them It would appear to be most desirable that instruction on this subject should be imparted to senior medical students and this volume might suitably be utilized as a textbook since it would seem adequately to convey the information necessary to help those patients who complain of sexual difficulties

Psycho-Analysis and its Derivatives[3] by Dr H CRICHTON MILLER is a useful addition to the Home University Library series It is the aim of the author to study psycho-analysis and the other schools of psychopathology from an external and impartial point of view and in the course of this book he gives a critical survey of Freud's formulations together with those of Jung and Adler The book is lucid in style and may safely be recommended to those who wish to acquaint themselves with the formulations of the three leading schools of psychopathology In a concluding chapter an account is given of the work of Prinzhorn whose book on psychotherapy was recently reviewed in our columns

Medical Pamphlet No 6 of the Individual Psychology Publications includes an interesting communication by Dr Erwin Wexberg one of the leaders of the Adlerian movement The subject of this address is *Individual Psychology and Practice*[4] Also included in this pamphlet is a translation of a paper by Dr Olga Knopf on individual psychology and gynaecology the purpose of which is to show that psychical illness can appear in the garb of an organic disturbance This and the earlier publications of the same series will be found helpful to the medical practitioner

INTERNAL DERANGEMENTS OF THE KNEE

The good opinion which we expressed nine years ago in our review of the first edition of Mr TIMBRELL FISHER'S monograph on *Internal Derangements of the Knee-Joint*[5] is fortified and extended on perusal of the second This is not merely a reprint but a much enlarged and amplified work embodying a great deal of additional matter and enriched by the experience acquired during the interval It is half as large again as the first edition and contains a proportionately larger number of illustrations As the author points out, the subject was little considered on the Continent until recent years but has attracted a great amount of attention lately with the result that knowledge of it has increased Cyst of a semilunar cartilage is cited by the author as a case in point Between 1904 and 1914 only five cases were on record in surgical literature The next ten years produced nineteen more while in the succeeding eight years at least eighty two further cases have been described This extension of knowledge is largely due to Mr Fisher's work and publications on all forms of derangement of the knee-joint The records of after results of treatment which he gives in this volume are of interest and value The notes on various cases and conditions contributed by the late Sir Robert Jones and printed as an appendix are of great value and have a pathetic interest for as Mr Fisher points out they are probably the last surgical writings from the pen of that gifted and beloved orthopaedic surgeon

The advice as to modes of approach to the interior of the knee-joint is sound and we agree with Mr Fisher in regretting that Continental surgeons especially French should advocate incisions which involve a quite unnecessary division of the lateral ligament. Good exposure of the joint and consequent complete removal of the offending cartilage are desiderata of great importance In this respect the author has modified the opinion expressed in the first edition for which he gives convincing arguments In some cases in which it is difficult to be sure that the whole cartilage is removed through the usual anterior incision a modification of Allwyn Smith's combined anterior and posterior incisions is recommended So far from admitting that removal of a semilunar cartilage predisposes to subsequent arthritis Mr Fisher quotes with approval the dictum that a successful operation upon the injured semilunar cartilage is the safest insurance against later arthritis

We think that this monograph may be accepted as the leading and surest guide to this important subject

[1] *A Psychologist's Point of View* By C S Myers C B E F R S London W Heinemann Ltd 1933 (Pp 297 7s 6d net.)

[2] *Psychology of Sex* By Havelock Ellis London W Heinemann Ltd 1933 (Pp 322 12s 6d net.)

[3] *Psycho-Analysis and its Derivatives* By H. Crichton Miller M A M D The Home University Library London Thornton Butterworth Ltd. 1933 (Pp 256 2s 6d net.)

[4] *Individual Psychology and Practice* (1) By Dr Erwin Wexberg Olga Knopf and H C Squires Medical Pamphlets no 6 Individual Psychology Publications London C W Daniel Company 1932 (Pp 62 2s 6d net.)

[5] *Internal Derangements of the Knee Joint* By A G Timbrell Fisher M C M.B Cantab F R C S Second edition London H K Lewis and Co., Ltd. 1933 (Pp xv + 205 120 figures. 15s net.)

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J. W. PEARCE,
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Applications to the Medical Superintendent.

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Application together with copies of testimonials to be sent to the undersigned not later than June 27th.

LOUISE BAILEY, Secretary.

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Application in envelope marked surgical officer to be sent to the undersigned not later than June 30th.

Christie Hospital & Holt Radium Institute, Wilmslow Road, Manchester. JAMES C. DANIELS, Secretary.

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Notes on Books

Mr E W HEY GROVES's illustrated *Synopsis of Surgery*[11] has now passed into a tenth edition, its predecessor appeared in 1930 This popular compendium has been revised and brought up to date, involving the rewriting of the sections on radium treatment of malignant disease, on the surgery of the sympathetic nervous system, and on the vaseline pack method (Winnett-Orr) of treating septic bone conditions A new chapter outlining the principles governing amputations has been added In this it is mentioned that the art of making artificial limbs has so greatly improved that it is now the case that only those types of amputation after which an artificial limb can be fitted are worth while The book is a highly condensed, but thoroughly practical, survey of the whole field of modern surgery

Principles of Pharmacy,[12] by H B MACKIE, is a textbook designed for students training for examinations in this subject, and is based on the lecture course given by the author at Brighton Technical College The distinctive feature of the work is that he endeavours to explain pharmaceutical methods in terms of physical chemistry The methods of pharmaceutical chemistry were evolved by empirical practice, but any attempt at their theoretical explanation calls for a discussion of difficult and obscure problems in physical chemistry Among the subjects chosen by Mr Mackie for his lessons are the laws of adsorption, the physical chemistry of emulsions, the properties of colloidal solutions, and the mechanism of enzyme action These and many other problems are touched on

Mr JAMES KEMBLE has produced a pleasant little book which he calls *Idols and Invalids*,[13] as a result of browsing in some byways of medical history The essays follow no chronological order, for the first deals with Byron, the last with Queen Anne He includes in his purview Columbus, Judge Jeffreys, Louis XV, the Borgias, Cleopatra, Nelson, and Henry VIII He makes no pretence of original research, but shows evidence of wide reading and a cultured mind He advances sane and plausible reasons for the views he advocates, although some of them are at variance with opinions generally received as to the illnesses of the persons he writes about He throws light upon many conditions that have puzzled previous writers for he has a sound knowledge of modern medicine The book ends on a deep note of pessimism, but in spite of this it serves to pass an idle hour both for the lay and for the medical reader

Whitla's Pharmacy, Materia Medica and Therapeutics[14] was first published in 1881, and during the next forty years eleven editions were prepared under the personal and sole supervision of Sir William Whitla The present edition has been revised by Professor J A GUNN, who has made the alterations necessitated by the appearance of the new *British Pharmacopoeia*, but has avoided alterations in the general form of the work, thus preserving its original scope and character The first two parts are devoted to pharmacy and prescription writing, and this is followed by an account of the materia medica of the *B P* These together occupy nearly half the volume In Part IV the therapeutic properties of the official remedies are treated in alphabetical order, and the accounts contain many interesting observations based on the clinical experience of the original author Part V deals with a selected list of non official remedies, and here the pharmaceutical properties and the therapeutic actions of the drugs are described together The volume concludes with an index of poisons and their antidotes This summary indicates the general scope of the text, which as its title shows, is mainly concerned with the pharmaceutical properties and the therapeutic application of drugs

In a number largely devoted to rheumatic diseases it is appropriate to mention two books received during the past few days *Rheumatismus und Grenzgebiete* by Dr ANTON FISCHER of Aachen (Berlin Julius Springer), and a second edition of Dr A H DOUTHWAITE's *Treatment of Rheumatoid Arthritis and Sciatica* (London H K Lewis and Co), which was favourably noticed in these columns in 1929

[11] *A Synopsis of Surgery* By E W Hey Groves M S M D Tenth edition Bristol J Wright and Sons Ltd 1933 (Pp viii + 693 13 plates 164 figures 17s 6d net)

[12] *Principles of Pharmacy* By H B Mackie B Pharm Ph C London J and A Churchill 1932 (Pp 281 67 figures 10s 6d)

[13] *Idols and Invalids* By J Kemble Ch M F R C S London Methuen and Co, Ltd 1933 (Pp 212 6s net)

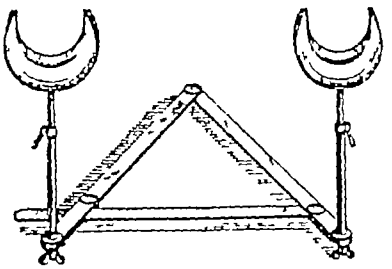
[14] *Whitla's Pharmacy Materia Medica and Therapeutics* Revised by J A Gunn, M A M D D Sc F R C P Assisted by H Berry, B Sc and J Clifford Hoyle M D Twelfth edition London Baillière Tindall and Cox 1933 (Pp xii + 645 16 figures 12s 6d)

Preparations and Appliances

PORTABLE LITHOTOMY SUPPORT

Dr SHEILA MACPHERSON (Invergowrie, Perthshire) writes The portable lithotomy support shown in the accompanying illustration has been designed for me by Miss Alix Crichton It has proved so useful in obstetrical operations performed in the patient's own home that I should like to draw the attention of the medical profession to its advantages

The appliance comprises a base and leg supports The base is a flat triangle adjustable to give any width of abduction of the legs It is placed under the mattress of a bed or under a folded blanket on a table The leg rests



fit into sockets which project beyond the angles of the base and which telescope to the required height, while the crutch tops detachable for cleaning are specially designed to obviate harmful pressure on the popliteal structures The apparatus is sufficiently stable to remain in position even during the strongest pull in difficult instrumental delivery It retains the patient without the aid of an assistant so that the single handed practitioner even in the most adverse circumstances may be afforded the optimum accessibility to the parts for delivery, perineal repair and antiseptic and aseptic work The whole appliance folds neatly into a case for carrying It is made by Messrs Adnatt and Partners Walmer House, Regent Street W 1

AN ELECTRO MAGNETIC EXTRACTOR

Magnets for the removal of foreign bodies of iron or steel from the eye have been in use for many years Rod magnets have had their field of action which is by no means to be despised while the more powerful electro magnets have done good service for close on fifty years It must be nearly that time since Snell of Sheffield introduced his convenient hand form of electro magnet and it is fully half that time since Haab devised his giant magnet Something of the usefulness of these magnets has passed since the introduction of non magnetic steels for the making of fine tools But for all other works where iron is used in manufacture there is value in the provision of a hand electro magnet for the service of the works doctor or nurse Messrs Frank Moss and Co of 25 Warwick Road, Coventry have put on the market a useful form of electro-magnet which is as portable as an electric ophthalmoscope and can be energized by attachment of a dry battery or accumulator of 2 to 6 volt capacity It is stated that the drawing power of the magnet averages from 4 to 10 ounces The specimen tested showed a pull of 4 ounces That is ample for the removal of foreign bodies from the eye Indeed a more powerful pull might be dangerous, since it might tempt the unwary to extract fragments that had penetrated the cornea Such cases should only be dealt with in hospital The magnet under examination is well made, the end of the applicator is blunt so is not likely to be dangerous, and the cost (35s in case post free) is comparatively small

ARTHRITIS IN THE SPA HOSPITALS

The spa hospitals have a long and honourable record for the treatment of rheumatic diseases but up to twenty years ago their practice was limited mainly to the use of mineral waters of the particular spa for the benefit of the poor The use of mineral waters in baths douches etc was the earliest form of physical treatment for rheumatic conditions and was based largely upon empiricism but the last few years have seen great developments in the study of these diseases and of their treatment Without belittling the results obtained under the more primitive conditions it must be admitted that research—clinical bacteriological radiological and biochemical—has opened up a new era with the prospect it is to be hoped of bringing relief and cure to many cases of arthritis etc which would have formerly been regarded as of a hopeless nature from the onset

In such research the leading spa hospitals have taken a prominent part in spite of the many handicaps with which they have to contend They are all supported by voluntary contributions and are entirely independent of the administration of the spa itself Consequently except at Bath which has its own difficulties they are hampered by the system of subscribers letters of recommendation and it is not an easy matter to keep patients suffering from arthritis in the hospital for the long period which is desirable in those cases where in patient treatment alone is capable of giving anything like good results Too many patients are sent to spa hospitals under the impression that they are merely convalescent homes and beds are thus occupied which might otherwise be used to greater advantage for conditions in which the special methods of investigation and treatment available may make all the difference to prognosis

The use of a subscriber's recommendation to secure a cheap and pleasant holiday is not unknown subjective complaints of muscular rheumatism and the like being put forward as an excuse Another large class of cases needing to be regulated in their use of these hospitals is chronic osteo-arthritis for which little can be done and that little should be available in out patient clinics for physical treament

If the available accommodation could be greatly increased it would probably do more for the effective treatment of arthritis than could be attained at as low a cost in any other way A proper system by which their advantages could be restricted to suitable cases instead of to patients fortunate enough to get the recommendation of a subscriber and by which the patient could be kept in the hospital as long as he was making better progress there than could be obtained at home even within reach of a physical treatment centre is essential if the best use is to be made of the spa hospitals The important factors in treatment—rest favourable climatic conditions diet and nursing—are under present conditions only to be obtained in such institutions They should stand in the same relation to the treatment of arthritis as do sanatoriums to the treatment of tuberculosis the analogy is sound and its importance cannot be too strongly insisted upon

While in patient treatment is spoken of it must be understood that patients are only confined to bed exceptionally Those suffering from febrile conditions acute arthritis or spondylitis and severe sciatica may need to be kept in bed for a part at least of their stay in the hospital Other patients are at liberty to go out of doors during the daytime for exercise and fresh air are important factors in assisting the effect of treatment and in restoring health

In addition to mineral baths these hospitals are fully equipped for treatment by electricity by light rays—ultra-violet and infra red—by massage and by manipulation A massage school is a feature of one of them in which students are fully trained for the examination of the Chartered Society of Massage and Medical Gymnastics At Bath Buxton and Harrogate orthopaedic treatment is carried out under the direction of visiting surgeons a most important feature in the treatment of many joint conditions and especially in spondylitis Cases requiring operation for the relief of deformity are transferred to other hospitals

Radiological investigation is fully provided for by modern installations in skilled hands and excellent work is done Bacteriological and biochemical examinations are part of the routine in all cases in which they can possibly be of any service in diagnosis and treatment Many important pieces of original research have emanated from the laboratories of the spa hospitals

BATH

The Royal Mineral Water Hospital was founded in 1738 and was incorporated in 1739 by an Act of Parliament in which it is stated that any person resident in and belonging to Great Britain or Ireland whose circumstances are such that they are not able to have the benefit of the Bath waters without charitable relief are entitled and have a right to the relief of the Hospital It has now 158 beds and 1 145 patients were admitted in 1932 with an average duration of stay of forty four days There are no out patients The hospital is fully equipped for all forms of mineral water and electrical treatment and massage There is an x ray and dental department and a laboratory with a full time pathologist In addition to mineral baths of all kinds supplied by the Bath mineral springs there is a complete electrical installation and special attention is given to orthopaedic treatment

BUXTON

The Devonshire Hospital for Rheumatic Diseases had its origin in a charity which provided free use of the mineral waters for the poor the first published report was in 1785 Accommodation for in patients was first provided in 1858 through the munificence of the sixth Duke of Devonshire and to this the hospital owes its name It has now 300 beds and in 1932 treated 3 504 in patients and 514 out patients the average stay in hospital being twenty five days Admission is by subscriber's letter as a rule but arrangements are made for admission of a limited number of cases by a special subscription equal to the cost of maintenance The baths are supplied by the Buxton mineral springs and in addition there is a complete installation for electrical and light treatment and a massage school A bacteriological laboratory with a full time pathologist was provided in 1912 together with an x ray outfit This has been brought fully up to date and there is a full time radiographer A special feature is also a laboratory for chemical research which has a full time biochemist at its head Orthopaedic work is carried out under the direction of visiting orthopaedic surgeons and is a special feature

HARROGATE

The Royal Bath Hospital was founded in 1824 and rebuilt in 1888 with it is associated the Rawson Convalescent Home There are 150 beds and 1 805 patients were admitted during 1932 the average length of stay being twenty three days Admission is by subscriber's letter and is subject to the approval of the honorary physicians though admission to the Rawson Home can be arranged at one and a half guineas a week subject to the approval of the committee In common with the other spa hospitals rheumatic diseases are the chief conditions treated but disorders of the liver and skin diseases are also admitted The sulphur waters are supplied from the wells of the Harrogate Corporation and patients have the free use of the whole range of the waters for drinking purposes There is full provision also for electrical

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3 LONDON E —OLD ESTABLISHED CASH AND PANEL PRACTICE of about £1 200 p a in residential part of populous district Good appointments and panel 950 Small house (3 bedrooms etc) in pleasant road to rent on lease Scope for increase Premium 2 years purchase

4 SUFFOLK AND NORFOLK BORDERS —SMALL PRACTICE IN Market Town Cash receipts 1932 £285 including panel of 80 Nice house (6 bedrooms) garage and good sized garden Price of freehold £850 Excellent schools Plenty of sport Cottage Hospital Premium £450

5 LONDON E —CASH AND PANEL PRACTICE OF OVER £600 p a in populous district Panel 590 Small house to rent on lease Premium £800

6 LONDON S E —WELL ESTABLISHED PRACTICE AVERAGING £1 715 p a in populous Suburban District Panel about 1 650 Plenty of scope for midwifery House (4 bedrooms garage etc) held on long lease at nominal rent Premium 2 years purchase

7 S WALES —ASSISTANTSHIP PRELIMINARY ASSISTantship) in of nearly £5 000 p a in important appointments and panel of nearly 3 00 Assistantship a one third share would be sold at first to a suitable man who should have held Hospital Appointment and have some knowledge of Midwifery and Anaesthetics

8 N W OF ENGLAND —SEAPORT TOWN —PARTNERSHIP IN well established Practice of about £1 500 p a Panel 1 660 Great scope for Increase Premium two fifths share £1,000

9 KENT — FOURTH PARTNER REQUIRED IN OLD ESTABlished Country Practice within easy reach of London Freehold house standing in three and a half acres of garden, to be purchased Price £2 000 Incoming Partner should be keen on country life and have held H P and H S appointments Share worth £800 p a, guaranteed Premium £1 600

10 W OF ENGLAND — PARTNERSHIP IN OLD ESTABLISHED Practice of about £1 200 p a in picturesque Seaside Place Panel 690 Unique house (6 bed and dressing rooms etc) in excellent state of repair with every modern convenience Beautiful garden and garage to rent on lease Hunting yachting fishing etc Premium one half share 2 years purchase

11 WEST OF ENGLAND —PARTNERSHIP IN OLD ESTABLISHED PRACTICE over £2 200 p a in County Town Panel about 1 000 Premium one half share 2 years purchase. Good prospects for well qualified physician (preferably M R C P) who should be an R C and who would have opportunity of getting on Staff of Hospital in near future.

12 LONDON N —PRACTICE CARRIED ON BY MEDICAL WOMAN in populous area Cash receipts average £480 p a including panel 527 Visits 2/6 to 3/6 Small house (6 rooms) to rent at £50 p a on lease Practice capable of increase Premium 1½ years purchase

and light treatment and massage Radiologists bacteriologists and a research chemist are attached to the staff A rheumatism research centre is about to be established and a whole time research worker appointed under the aegis of the University of Leeds

OTHER SPA HOSPITALS

There are smaller institutions for the spa treatment of the poor at Droitwich Llandrindod Wells, Strathpeffer and Woodhall Spa, but at some of these a small payment is required They are capable of great expansion on the lines of the hospitals at Bath, Buxton and Harrogate, and this is very desirable to meet the increasing demand for such treatment as they afford to patients of the poorer classes At the Warneford Hospital at Leamington there is also provision for mineral water and electrical treatment, though it is in the main a general hospital

SOIL AND CLIMATE IN RELATION TO RHEUMATIC DISEASES

DISCUSSION AT THE EASTBOURNE PUBLIC HEALTH CONGRESS

At the annual congress at Eastbourne of the Royal Institute of Public Health on June 1st a discussion took place on "Soil and Climate in Relation to Rheumatic Diseases" This was believed to be the first occasion on which medical men and meteorologists had participated in a joint discussion, and the chair was taken by SIR GILBERT T WALKER, F R S, professor of meteorology at the Imperial College of Science and Technology

DR E C WARNER (assistant physician, Charing Cross Hospital), in introducing the subject, spoke first of juvenile rheumatism, though bringing in to some extent the acute rheumatism of adults He said that the relationship to climate must be considered over a period of years There was considerable variation in the intensity of acute rheumatism from one year to another some years were more or less epidemic in this respect Acute rheumatism was distributed more particularly in the temperate and subtropical zones, and in the northern hemisphere the figures for the large hospitals showed that from 3 to 7 per cent of all admissions were cases of this type The disease was much rarer in the Tropics and in the Arctic, where the Eskimos were almost immune He gave some figures showing the variation in incidence with latitude in the United States For five recent years the incidence of rheumatic cases to total medical admissions in the part of the United States near the Canadian border, in latitude 45–50°, was 2 7 per cent , in latitude 40–45° it was 1 5 , in latitude 35–40° it was in the neighbourhood of 0 6 , and towards the Mexican border it was about 0 3 In this country it was a little difficult to assess the difference between inland and coastal climates, and information was lacking as to variations between place and place It was stated, though also denied, that in Cornwall the Isle of Wight, and Guernsey rheumatic disease in children was particularly rare The influence of sunshine was also difficult to assess From the fact that the maximum number of cases occurred in the winter months it might be inferred that sunshine was beneficial, as it undoubtedly was in treatment, but that would hardly apply in the instance of the Eskimos, where rheumatism was a curiosity Observations by Newsholme and Sandison had shown that after a summer of unusual sunshine the incidence of rheumatism was much higher in the succeeding winter Dampness was another factor to be considered, lowering resistance as it did to all types of disease, not juvenile rheumatism only The greatest incidence of juvenile rheumatism occurred along the course of rivers or former watercourses, or even on the sea coast In New York some investigation had shown that the smallest number of cases occurred in districts furthest away from the river, and Dr Butterworth had shown the same kind of thing in Wigan a few years ago In the St Thomas's Hospital investigation by the Medical Research Council an unduly large proportion of persons who had suffered from rheumatic fever were found to have lived within half a mile of the Thames, the Wandle, the Graveney, or the Surrey Canal In the middle floors of tenement houses rheumatism was rarer than in the top or bottom floors suggesting again that dampness played a part But if dampness was such a considerable factor, why was the incidence of juvenile rheumatism in Holland comparatively low, and why should the incidence in country children be lower than in town children, seeing that the former had to walk long distances to school across damp and muddy fields? In 1914 Newman found that the incidence of rheumatic heart disease in industrial areas was 8 per cent , in residential areas 5 9 per cent , and in rural areas 2 6 per cent This was borne out by the figures for Army conscripts in the war, when, in the men from industrial Cardiff, the incidence of valvular disease of the heart was 22 per 1,000 examined, while in the rural areas of Carmarthenshire it was only 2 per 1,000 Again if dampness played such a part, why was the incidence so low at Eton and other colleges on the river? It looked as though dampness of the neighbourhood might be of not quite so much importance as dampness of the individual and his immediate surroundings It had been suggested that the reason why the very poorest families showed a lower incidence of rheumatic fever than the artisan class was because the latter lived in single houses, perhaps of the "mushroom" type, not properly dried before habitation, whereas the poorest families lived in tenement houses where the degree of dampness was probably less It was generally accepted that higher ground gave relative freedom from juvenile rheumatism and heart disease So far as could be ascertained in this country, prevailing winds had very little effect, but rapid temperature variations did play an important part, liable as they were to produce chill The mean air temperature taken over a period of time showed no influence at all , it was the temperature variations which were of most importance, as had been recently confirmed by some work at Oslo As for soil, it was an old story that clay tended to promote juvenile rheumatism, but this was not adequately confirmed by statistics Coming to adult rheumatism, Dr Warner said that there was here an extraordinary paucity of information The general distribution of adult rheumatism was very much the same as juvenile It was common in this country, Germany, Holland, Scandinavia, and Eastern America, rather less common in France and in the south In Lancashire the incidence of rheumatism was particularly in the direction of lumbago and sciatica, while osteo arthritis was often called the "Manchester disease" Rheumatoid arthritis was much more commonly met with in the south east and south-west of England There was great variation in respect of gout In Birmingham and Northampton the incidence was high (in the latter town, 7 5 per 1 000 insured persons), but in Hull, Exeter, and Norwich it was under 1 per 1,000, though Norwich was celebrated for brewing, and on the Continent, in Leipzig particularly all types of adult rheumatism were shown to be high among people engaged in the brewing trade The period of year, again was important The incidence was highest in winter and at the minimum in summer Dampness, either of the district or of the house, was known to increase the incidence of painful adult rheumatism Sciatica was four times as common in men as in women, the difference being related probably to their occupations Metal workers had been found to show a high incidence of rheumatism, particularly fibrositis and neuritis Puddlers among steel workers were extremely susceptible, probably because their work entailed short spells of hard labour followed by long periods of rest, very often in draughty areas With regard to water supply, he believed that very hard water in certain districts did predispose to fibrositis, which was common in good class residential districts in the South of England, but in joint troubles the quality of the water had little influence The drink

ing water in Lancashire was one of the softest in the country while in spas the drinking water was very hard There was no relation between the plumbo-solvency of water and the local incidence of gout

Dr JANET ATTLEY (physician to the Princess Louise Hospital Kensington) said that she had picked out seven places at random from a variety of districts which claimed to have a climate beneficial to rheumatic infections and had classified their weather conditions In one of these places the rainfall and rain-days were markedly above the average for the country and the sunshine and temperature markedly below In two the daily range of temperature was well above the average and in two others well below the average and the same was true of sunshine The rainfall was only below the yearly average in one and the relative humidity was near the normal in all except one where it was below One writer had suggested that the level of human energy and achievement was the function of climate A mean temperature of 64° F seemed to be the most nearly ideal for productive activity But some investigations in America showed that in storm areas where variations of temperature were greatest danger arose from over-stimulation of the ductless glands and failure of their function and statistics had been produced showing that diabetes Graves's disease and pernicious anaemia were particularly prevalent in those areas She did not think that generalization could be made as to any one climatic factor At the supervisory clinic in Kensington careful investigation had been made into the environmental factors in 466 cases of juvenile rheumatism the environment being taken to include the dampness of the district as well as of the houses and the soil on which they were built. In this district there were certain flood areas and old stream tracks made it difficult to prevent dampness in some of the houses Part of the borough also was built on clay soil No connexion however could be found between the incidence of juvenile rheumatism and these two factors

Dr F J BACH (chief assistant cardiographic department St Bartholomew's Hospital) said that in his experience climate had not quite such an important part in the incidence of juvenile rheumatism as many supposed The effect of climate lay much more in modifying the clinical picture than in causing the disease itself Climate and soil might affect the individual either by causing the disease or accentuating certain manifestations in symptomology and clinical signs or by arresting the disease process and with it naturally causing the symptoms to disappear It was known that arthritic pain was related to changes of weather and it was common knowledge that a patient suffering from rheumatoid arthritis felt better and his pains were less severe in a dry and hot climate than in a wet and chilly one It was quite amazing how certain arthritic patients were able to detect the approach of a storm This was well appreciated in bygone times and from some old verse the speaker quoted the couplet

> Hark how the chairs and tables crack
> Old Betty's bones are on the rack

At the same time there was no doubt that the climatic factors might not only modify the clinical picture of the disease but definitely cause it Aetiologically fibrositis and muscular rheumatism divided itself into four main groups according to causation (1) cold or chill (2) fatigue or over exertion (3) infection and (4) associated metabolic changes such as gout and obesity

Dr W S C COPEMAN (physician British Red Cross Society Clinic for Rheumatic Diseases) said that he considered the physiological manifestation of the adult rheumatic diathesis to be an abnormality of the heat-regulating mechanism of the skin and that it was on the basis of this abnormality that meteorological or climatic factors were able to produce their undoubted effects It had been pointed out that apparently no one climatic factor could be held responsible and as a result certain people were rather apt to ignore the effect produced by several of these factors in conjunction It had been shown that mere variations in temperature however marked were not in themselves sufficient to produce the pains and symptoms of rheumatic disease neither apparently was damp Dr Copeman thought however that these factors in conjunction when they did not constitute the permanent climatic condition of the particular environment would appear to be operative in all the cases mentioned Captain D Brunt of the Air Ministry in a paper read earlier in the proceedings had shown that soil containing 20 per cent. of moisture returned only one fifth of the radiation which dry soil was capable of returning This meant that in damp localities the temperature variations in the twenty four hours were considerably less marked than was the case in those well-drained dry localities which were suitable for rheumatic patients This observation was contrary to the general lay belief and confirmed the importance of the conjunction of cold and damp in these cases In certain localities where the subsoil was known to be impermeable to moisture this effect was negatived by the fact that drainage might occur through the subsoil owing to the elevation and slope of the country Examples of the double effect of cold and moisture producing rheumatic pains were to be found in the fact that the seaside was generally unfavourable for these patients in the high incidence of rheumatism amongst iron puddlers who worked at high temperatures for short periods in the rheumatic pains which were exacerbated before a rain storm and in the chill which resulted even in hot weather when people sat in non porous clothes after exercise which had induced perspiration It was Dr Copeman thought obvious that climatic factors were nowadays not the only villains of the piece since by the aid of clothes and bed-clothes we lived largely in an artificial micro-climate of our own choosing and were therefore to a very large extent independent of Nature's climate The speaker expressed his belief also that in all diseases which like rheumatic fever could show a definite class incidence it was likely that a dietetic factor was also concerned In conclusion he agreed that at present too much time was being devoted to the investigation of the rheumatic seed and that a discussion such as the present one would help to direct attention to the need for further investigation of the soil and also to the danger of forgetting what had in the past been discovered in connexion with the various natural phenomena concerned

Dr WILFRID SHELDON (junior physician Children's Department King's College Hospital) said that most people regarded acute rheumatism of childhood as due to an infection and if that was so soil and climate must be regarded as secondary factors They did not on that account lose very much in importance and as secondary factors they might operate in several ways by influencing the infecting germ or by modifying the body's resistance He could not doubt that climate influenced rheumatism though he did not think it had any very obvious relation to chorea Certainly it was more closely related to rheumatic polyarthritis and closest of all was the relation of climate to rheumatic pains in the limbs It was common to find aching in a child's arms and legs much worse when the weather was wet During 1929 he tried to correlate the number of complaints of pains in the limbs with the rainfall for the year The work was based on the weekly study of one hundred child out patients In the early part of the year the number of children complaining of pains was high although the rainfall was lower than the average but afterwards the rainfall curve was followed very closely—even to an exceptionally high peak in early July Again during the drought in September of that year no children complained of pains He went on to discuss the micro-climate of the individual Much could be done to help these children by controlling to some extent their clothing The ideal garment next the skin was one which was a poor conductor of heat and if the clothing was porous there was plenty of air space Woollen blankets were more porous than sheets as well as warmer and it was a common thing to advise mothers to put their rheumatic children between blankets and to take the sheets away

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Practices and Partnerships for Disposal (continued)

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21. S. OF ENGLAND. — PARTNERSHIP IN OLD ESTABLISHED Practice of nearly £1,950 p.a. in important town within 80 miles of London. No panel. Attractive corner residence (7 bed and dressing rooms) in half acre of walled in garden with garage etc. for sale. Ample scope for increase. Premium one-half share 2 years' purchase.

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23. SURREY.—PARTNERSHIP IN SOUND OLD ESTABLISHED good mixed-class Practice about £3,000 p.a. in the Croydon area. Small panel. Very little midwifery. Excellent modernised detached house for sale. Scope for increase. Premium one-half share 2 years' purchase.

24. LONDON, E.C.—PARTNERSHIP IN OLD ESTABLISHED PRACTICE in the City. Receipts average also £1,500 p.a. in addition appointments and panel worth over £500 p.a. Premium one-half share £1,000.

25. S. AFRICA.—RADIOLOGICAL PRACTICE IN A COAST RESIDENTIAL town with excellent climate. Cash receipts last year £1,450. Scope. Premium to include furniture, carpets, accessories etc., £2,200.

26. EAST COAST.—PRACTICE OF BETWEEN £700 AND £800 p.a. in a pleasant Residential Seaside District within 40 miles from London. Small Panel. Detached house (5 bedrooms) for sale. Scope for increase as district is growing.

27. SURREY.—PRACTICE OF £1,000 P.A. IN RAPIDLY GROWING Residential District within 15 miles of London. Panel 4. Suitable house with separate professional accommodation for sale. Scope for considerable increase. Premium £1,500.

28. LONDON, W.—GOOD MIDDLE-CLASS PRACTICE £400 P.A. in suburb within easy access of the West End. Panel over 100. Attractive double fronted house with garage for sale. Scope for increase. Premium 1½ years' purchase.

29. LONDON, N.—PARTNERSHIP IN PRACTICE ABOUT £[illegible] p.a. *in this well regulated Suburban District.* Panel [illegible]. One fourth or one third share 2 years' purchase.

30. HOME COUNTIES. — OPHTHALMIC PRACTICE BETWEEN £300 and £400 p.a. in desirable Residential Town [illegible] miles from London. Good detached house (4 bedrooms) [illegible] garden for sale. Good reason for disposing of practice. Premium £300.

31. LONDON, E.C.—OLD ESTABLISHED LOCUM TENENCY of £646 p.a. Panel 459. Living accommodation to rent if desired. Premium £1,000.

32. S. AFRICA. — OPHTHALMIC AND GENERAL PRACTICE about £1,400 p.a. (about 60 per cent. Ophthalmic) [illegible] appointments £400. No Ophthalmic [illegible]

33. N. OF ENGLAND. — OPHTHALMIC PRACTICE OF OVER £1,600 p.a. in an important [illegible]. Excellent [illegible] keen on clinical and operative Ophthalmology. Large [illegible] first-class conditions for sale. Further particulars [illegible]. Premium £2,500.

34. S. AFRICA. — PRACTICE OF ABOUT £600 P.A. IN A famous town. Pleasant detached bungalow (5 bedrooms) garage, small surgery for sale. Good [illegible] private water). Premium £1,100.

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entirely For clothing, wool or better still some of the new cellular materials, were the most porous A material was wanted which was either non hygroscopic or, if hygroscopic, parted with its moisture readily by evaporation The least hygroscopic of materals was wool Cotton and cellular materials were hygroscopic but the very loose weave of the cellular material allowed of rapid evaporation

Dr J F HALLS DALLY (director, Marylebone Children's Rheumatism Supervisory Centre) submitted the view as a working hypothesis that rheumatism was primarily the outcome of an inherent failure of adaptation to environment especially a failure of the heat-regulating mechanism, and that rheumatic and potentially rheumatic children possessed a certain type of constitution which might become manifest clinically by numerous signs and symptoms A heavy rainfall, especially on a subsoil of low humidity had been termed an advantage rather than a drawback from the point of view of health A rainfall not too persistent to keep children continually indoors might probably be regarded as non-productive of rheumatism Danger would appear to arise from chill, and sleeping in unaired beds came under the same category It was through the medium of the skin that the child like everyone else, adapted or failed to adapt himself to his environment With regard to prevailing winds thyro adrenal instability was a characteristic of the allergic state and those children in whom the allergic factor predominated were prone to disturbance when the wind was in the east for two or three successive days Meteorological changes were of more importance than climate , in other words it was the changes which were important, particularly when sudden and marked Some barometric variations were liable to produce restlessness and irritability in children with an unstable disposition To most people the rapid variations in atmospheric conditions were beneficial, because they did not go beyond the point of adjustment but with the rheumatic child the limits of adaptation were soon exceeded Cold, damp air was devitalizing and children exposed to this must be kept on the move Evidence derived from investigations at the Marylebone centre had shown that damp houses did not appear to warrant the environmental importance attached to them by some observers With regard to sunlight, Rollier and others attributed its beneficial effects chiefly to its luminous and infra red rays Intensity of solar radiation, however, varied directly with season latitude, and altitude, and inversely with cloud, humidity, and dust In England the continuous duration of sunshine was too brief and interrupted for acclimatization to take place so that heliotherapy and ultra violet radiation, although apparently valuable for rheumatic children, should be always initiated gradually and continued cautiously excess resulting in devitalization

Dr L C HILL (Devonshire Hospital Buxton) described the result of an investigation which he had carried out from 1929 to 1932 on a large number of male in patients of the Devonshire Hospital suffering from some form of rheumatism He had divided them into three groups according to occupation—indoor, outdoor and miners—desiring to obtain, with regard to the last named information as to the possible effects of spending a considerable proportion of the day in a rather warm, humid atmosphere devoid of sunshine and light The results were as follows

	Number of Cases	Fibrositis	Subacute Rheumatism	Rheumatoid Arthritis	Osteo-Arthritis
		Per cent	Per cent	Per cent	Per cent
Indoors	533	39	20	29	12
Outdoors	625	51	10	15	24
Miners	670	65	12	11	12

It appeared that hot atmospheres were not necessarily harmful if not too humid That might be due to the fact that miners wore very little clothing, and so did not hamper the action of their skin A hotel manager in Buxton had recently asked him whether it was worth while to put a sun lounge with "vita glass in the hotel because he had noticed the curious fact that a large number of crippled people seemed to avoid the sunshine Sunshine, particularly coming suddenly definitely enhanced rheumatic pains In rheumatoid arthritis the influence of climate in stimulating metabolism and increasing resistance was of great importance, but patients varied widely in their powers of reaction

Dr REGINALD LIGHTWOOD (Great Ormond Street Hospital) mentioned certain investigations in Kensington in connexion with acute and subacute rheumatism North Kensington, he said was a poor and congested area, while South Kensington was well to do About 10 per cent of the rheumatic cases came from South Kensington and 90 per cent from North In North Kensington there had been certain damp areas, due to the periodical flooding of old watercourses but that trouble had been removed of recent years Curiously enough, one damp area in a congested part of North Kensington was full of rheumatic cases and another damp area in the Holland ward, which had only a small and uncrowded population, had very little rheumatism Overcrowding and poverty were probably much more important aetiological factors than climate in the production of rheumatism in children To day one was being forced to discount the importance of dampness and to recognize the importance of overcrowding and bad ventilation

Dr J L NEWMAN (late assistant medical officer Fountain Hospital, L C C) spoke of some investigations carried out in an institution for low grade mentally defective children, of the average age of from 6 to 10 Of 1,700 children examined only seven were found to have contracted rheumatism actually in the hospital, yet this hospital stood only 50 feet above the sea, close to the River Graveney, and, as the name of the hospital implied, it was connected with watercourses The buildings themselves were on the pavilion plan, and had been put up very rapidly to accommodate an overflow of fever patients during an epidemic The ground underneath was excessively wet, and even after a slight shower the airing courts flooded regularly There was a cellar eight feet deep under the main block, and if it were not regularly pumped out it would flood even in summer From the point of view of an assemblage of conditions favourable for the propagation of rheumatism it would be difficult to find a more suitable site On the other side, of course there were the factors of good ventilation, lighting, plentiful spacing of beds, and the suitable dressing of the children The children were not over dressed, wearing cotton in summer and flannel in winter, and in wet weather they walked under covered ways The absence of infection from outside might be another limiting factor but outbreaks of scarlatina and epidemic sore throat had occurred Yet rheumatism was singularly absent

Dr G C SIMPSON, F R S (Director of the Meteorological Office), pointed out that people living in the most damp surroundings, such as sailors and fishermen were not particularly affected by rheumatism, while as for cold, in the Polar regions rheumatism was almost unknown It seemed clear that climate was not a primary predisposing cause , it was doubtless a secondary factor but, of course, climate was always a secondary factor for the healthy as well as for the ill He related his own experience on an Antarctic expedition, where he spent two days digging a cave in an ice cliff, with the ice accumulated around him, the temperature being very nearly zero of the Fahrenheit scale Afterwards he suffered from the most intense rheumatic pains, although he had never had rheumatism in his life before Dr Simpson added that very few people realized that, after all climate normally only acted upon us for about one third of each day There was no climate in the bedroom, nor, generally speaking, in the living rooms which were protected against changes of temperature Therefore one would not expect the climate to be of the absolute importance that was often attributed to it

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2 *EASTERN COUNTIES* —Very old established PRACTICE unopposed, and situated in pleasant agricultural district within reach of two good towns. Average gross cash receipts for the last three years £1 849 (last year £2 237) Panel with mileage produces over £900 p a, and appts are worth about £130 Fees from 3/6 Comfortable house with 2 reception 6 bedrooms, etc Carden Garage Price (freehold) £1 500 Premium £3,200

3 LONDON SURBURB (EAST) —In a clean and well populated district an old-established PRACTICE worth about £1 200 p a including transferable appt of £150 and panel of 950 is for immediate disposal, owing to ill health of Vendor Small house (3 bedrooms, etc) with fair sized garden Rent on lease £78 a year, inclusive of rates and taxes Premium 2 years' purchase

4 LIVERPOOL — Old established PRACTICE, averaging £1,046 p a., including panel of about 1,500 Fees from 2/6 Midwifery refused Eight roomed house with professional accommodation electric light Small garden Price £500 Premium 1½ years purchase

5 PARTNERSHIP —RIVERSIDE SUBURB (WEST) —A fourth Partner (who should be married and about 35 years of age) is required in a very old-established mixed class Practice, situated in pleasant residential suburb Cash receipts for past three years average £6,879 p a A three twentieths share is offered with option in four years to increase up to equal shares with the other Partners Appts held and panel of about 3 000 Visits 3/6 to 21/ Modern house with good accommodation (5 bedrooms garden) Price (freehold) £2 000, or would be let at £125 p a Premium 2 years' purchase

6 PARTNERSHIP KENT (within about 8 mles of the Sea, and similar distance from large town) —A fourth Partner (with some knowledge of Surgery preferred) is required in a very old established mixed class Practice, situated in beautiful country district. Cash receipts about £4 800 p a A sixth share producing £800 p a (which will be guaranteed for the first year) is offered with option of increase at end of two years Good house with ample accommodation (5 bedrooms, etc) and 3½ acres of ground Price (freehold) £2,000, or can be rented at £110 a year Premium £1,600

7 WITHIN THIRTY FIVE MILES OF LONDON —Very old established country PRACTICE, in pleasant residential district Gross cash receipts for the last twelve months approximately £1,800 Panel brings in over £650 p a and appts are worth nearly £200 p a Fees from 2/6 to 15/ Midwifery 3 to 10 gns Nice house in one acre of garden and 2 acres of orchard and containing 3 reception 6 bedrooms, etc and professional rooms Electric light Main drainage Carage Price for freehold £2,500 £1 000 on mortgage Golf, tennis and other sport. Premium £2,500

8 LONDON WEST —PARTNERSHIP —A half share producing about £750 p a (which will be guaranteed for the first year) is offered in a very old-established better class non panel and non-dispensing Practice having exceptional scope for increase Fees from 10/6 to 5 guineas Suitable Flat is available for ingoing Partner who must be experienced in better class work and preferably hold the M R C P Premium for share 2 years purchase

9 SOUTH WALES —Pleasant Coast Town (pop 40,000) —Old-established PRACTICE held ten years by present incumbent and averaging over £1 000 p a including panel of 1 275 Visits 5/ to 10/6 Good house having charming views of English Channel and surrounding country Contains professional rooms 3 reception, 6 bedrooms 2 bathrooms Garden with tennis court Garage Price for leasehold (60 years to run at ground rent of £20 a year) £1,800 Premium 1½ years purchase

10 LONDON S W —Well-established PRACTICE worth about £350 p a including panel of 550 and capable of increase Rent of Flat, consisting of two floors containing 2 professional rooms dining room kitchen, two other rooms and bathroom £2 2s a week inclusive of rates and taxes Lease 5 years to run, and renewable Premium £450 or near offer

11 EASTERN COUNTIES —ASSISTANTSHIP with view to Partnership (after a preliminary period of six months at a salary of £440 p a, with free house) is offered in an old-established good mixed-class Practice situated in pleasant residential and agricultural district within about 15 miles of the coast Cross cash receipts approximately £3 000 A third share is for disposal at a premium of 2 years purch

12 NORTH WALES —ASSISTANTSHIP with view to Partnership (after a preliminary period of about six months at a salary of £300 p a all found) is offered in a better-class non panel Practice situated in attractive seaside resort A one third or three sevenths share is for disposal (producing £800 to £900 p a) at a premium of 2 years purch Ingoing Partner should be English and pref London trained

13 PARTNERSHIP — WEST OF ENGLAND SEASIDE RESORT — A share worth about £600 p a (with succession to the whole Practice eventually) is offered in a very old-established mixed-class Practice situated in very attractive small coast town, with beautiful surrounding country Gross cash receipts approximately £1 200 p a including panel worth about £420 Visits 5/ to 30/ Midwifery from 3 gns Exceptionally nice house with 2 reception 5 bedrooms etc and usual offices. Half an acre of garden Can be rented on lease Premium 2 years purchase

14 HOME COUNTIES —PARTNERSHIP —Residential Town within easy reach of London A share producing about £1 300 p a is offered in a very sound old established Practice producing for the last 12 months approximately £5 200 and offering excellent scope for increase Panel of 2 500 Fees from 3/6 to 21/ Very nice house with ample accommodation, or smaller one if desired Ingoing Partner should be experienced accustomed to better class work able to undertake major surgery, and pref hold a Fellowship Premium 2 years purchase

15 RIVERSIDE SUBURB —Middle and working class PACTICE averaging £1 033 p a, including panel producing about £340 and appts nearly £100 p a. Fees from 3/6 Detached house with nice garden, and containing 4 reception, 6 bedrooms etc for sale Premium 2 years purchase

16 OPHTHALMIC PRACTICE.—Within eighty miles of London —Practice is increasing, and offers good scope for further development Average gross cash receipts for the past three years £554 Last year over £700 Fees 1 to 2 guineas Opposition slight Choice of houses. Premium £700

17 LONDON, EAST —Middle and working-class PRACTICE producing £1,000 p a. including panel of about 1 100 Suitable small house with sitting room 2 bedrooms, and attic, waiting room, surgery and dispensary Rent £52 p a

18 LONDON, SOUTH EAST —Old established better working class PRACTICE increasing and situated in well populated district Gross cash receipts for last 12 months £1 263, including panel of 1 370 Suitable house with 2 reception and 3 bedrooms Garden Price for freehold £1,000 Premium £2 500

19 EASTERN COUNTIES — FAVOURITE SEASIDE AND HOLIDAY RESORT —Good mixed-class PRACTICE, established many years and producing for the last twelve months £1 600 Panel brings in £300 p a and an appt worth £100 p a Fees 3/6 to 7/6 with medicine extra. Nice house with 2 reception 5 bedrooms etc Garage Garden Price for freehold £2,250 Golf, shooting and other sport Premium 1½ years purchase

20 NORTH EAST COAST —PARTNERSHIP —A one half share is offered in an old established better middle class Practice in suburb of favourite residential town Steadily increasing and excellent future prospects Gross cash receipts £1 700 Panel of 700 Fees from 3/6 Very nice house with 2 reception 4 bedrooms, etc One acre of garden Garage for 2 cars Rent on lease £80 p a Sport of all kinds and good schools Premium for share 2 years purchase

21 MANCHESTER —Old-established middle and working-class PRACTICE producing for the last twelve months about £650, including panel of 790 Fees from 3/6 Convenient house with 2 reception 4 to 5 bedrooms bathroom etc Rent on lease £60 Premium £950 to include furniture

22 SOUTH WALES —Beautiful country district within 4 miles of large town Small PRACTICE producing between £300 and £350 p a Very little midwifery offering good scope Visiting fees from 5/ or night work Well situated house with well kept garden containing 2 reception 3 good sized bedrooms and servants rooms. Electric light and gas throughout Garage Rent on lease £70 p a

23 CENTRAL LONDON —Middle and better-class PRACTICE averaging for the last two years about £500 p a including small panel of 180 Fees 3/6 to 21/ Professional accommodation can be rented at £200 p a Prem £300 to include furn, drugs, instruments etc

24 SOUTH EAST LONDON —Good middle and working-class PRACTICE producing last twelve months nearly £950 Panel of 936 Suitable house with 2 reception 4 to 5 bedrooms etc Rent on lease £70 p a Prem, to include drugs, etc and surgery fittings and furn £1 450

25 PARTNERSHIP —LONDON SUBURB —A one-third share with increase up to one half later is offered in a very old-established good mixed-class Practice, situated in a well populated district and offering good scope Gross cash receipts average between £4 000 and £4 500 p a Guaranteed income of £1 500 for the first year Panel 800 Suitable accommodation available Premium for share £3,250

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British Medical Journal

SATURDAY, JUNE 17th, 1933

THE ARTHRITIS COMMITTEE S REPORT

It has been generally agreed for many years that chronic arthritis is of the greatest moment to the community owing to the crippling effects and widespread incidence of this group of diseases It is regrettable however that although the medical profession is and has been well aware of the importance of the subject there has been no agreement as to classification or aetiology and consequently no standardization of the principles of treatment The result has been that sufferers from chronic arthritis have been mystified by conflicting advice discouraged by the pessimism and uncertainty of their legitimate advisers and in consequence too often driven to seek help outside the ranks of the profession from those whose assurance of cure is directly proportionate to the depth of their ignorance of the subject The sociological implications of arthritis were focused by the report of the Ministry of Health published in 1924 with its astounding figures of working hours lost and money expended annually as a result of arthritis of all kinds In view of the interest thus aroused a conference on rheumatic diseases was held at Bath in May 1928 under the presidency of Sir George Newman and with Lord Dawson Sir Humphry Rolleston and Sir Farquhar Buzzard as presidents of Sections At this conference many papers of great interest and importance were presented and published later in book form but its main outcome was to reveal how widely authorities differed and how uncertain was the guidance which the profession offered to the public Of recent years an International League against Rheumatism has been formed to promote the study of the subject in all countries to encourage research and to exchange views at annual meetings held at various European centres Valuable as such work must be it provides no immediate prospect of co-ordinating results or of defining how much of the theory and practice of medicine in the field of chronic rheumatism rests on solid foundation and how much rests on premisses which reflect the fertile imagination of their originators rather than their diligence in the accumulation of scientific observations

Such being the state of affairs the Section of Hydrology at the Annual Meeting of the British Medical Association at Eastbourne in 1931 decided to ask the Council to appoint a committee to survey the subject of arthritis with special reference to the present state of knowledge the indications for future research and the facilities for educating the profession in this special branch of medicine The Council was fortunate in obtaining the services of a strong body of experts in all aspects of arthritis under the chairmanship of Sir Humphry Rolleston with Dr R G Gordon as honorary secretary In receiving the report of its committee which is printed in full in this number of the *Journal* the Council expressed its gratitude to all members of the committee and especially to the chairman and honorary secretary for the labour and skill they had expended in the preparation of the report At the outset the committee was faced by the very serious difficulty that scarcely any authorities agreed as to the classification or even the nomenclature of the diseases to be included in its reference The committee decided to exclude from its consideration those forms of arthritis whose causation was reasonably clear—that is the specific forms of arthritis such as those due to gonococcus pneumococcus and dysentery bacillus that due to frank metabolic abnormality (gout) and that due to neurotrophic changes (Charcot s joints) Of necessity this confined the committee s reference to those conditions whose aetiology was obscure and in consequence a scientific aetiological classification was impossible Recourse was therefore had to a clinical nomenclature comprising rheumatoid arthritis osteo-arthritis chronic villous arthritis spondylitis and fibrositis and so far as possible other nomenclatures were correlated with these Such a terminology is obviously open to criticism For example many will consider that rheumatoid arthritis and osteo-arthritis are outworn and meaningless expressions yet these have the sanction of use and familiarity and the alternative terms atrophic and hypertrophic proliferative and degenerative are in some respects confusing Again others will assert that there is no justification for separating the two forms of spondylitis from rheumatoid arthritis and osteo-arthritis respectively or for separating chronic villous arthritis from osteo-arthritis but in the opinion of the committee both spondylitis and chronic villous arthritis are distinguishable enough both clinically and aetiologically to warrant separate treatment This clinical distinction between the various forms of arthritis with stress on the varying causative factors so far as they are known is a very important feature of the report in view of the tendency of recent years for writers to present all forms of arthritis as variants of one morbid condition for which there is some specific remedy Such a presentation has the merit of simplicity but the defect that it is entirely untrue and we hope therefore that the wide publicity now given to the committee s report will help to correct this heresy

Naturally the subject of vaccine therapy occupied the attention of the committee and was carefully reviewed great assistance being obtained from the critical and judicial contributions of the expert bacteriological members The uses and limitations of vaccine therapy are clearly laid down and attention is drawn to the advantages of small doses Diet in arthritis is of perennial interest to the community as a whole and it would seem that the only reason why patients have more varied theories on this subject than medical men have is that the former still outnumber the latter On this subject the report is emphatic There is no specific diet for chronic arthritis and any dietetic restrictions which may be desirable for a given patient are desirable on

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secondary grounds, such as obesity, personal idiosyncrasy, and the like, and not because he is a sufferer from arthritis *per se* In the rheumatoid group, generosity within the limits of digestion and not restriction of diet is indicated The investigations of the committee disclosed serious gaps in our knowledge For example, in spite of the researches of Dr Alison Glover into the incidence of arthritis, which are set out in the report of the Ministry of Health already referred to, practically nothing is known of the relative incidence of these various forms in different classes of the community or in different occupational groups Again, radiological and biochemical investigations disclose certain results which appear to be at variance with the findings of the clinicians—a further difficulty It is obvious that both radiology and biochemistry hold out great hopes for the solution of many problems in connexion with arthritis, and if the results of research so far have in many respects been negative, this can only serve as a stimulus for further work The committee has formulated schemes for a national organization for the treatment of this group of diseases, and for post-graduate instruction of the profession, and through the Council it has forwarded a memorandum to the Home Office on the exploitation of the arthritic public by vendors of quack remedies

A word may be said as to the form of the report, since to some it may appear to be repetitive, and in certain respects to lack balance The main object has been to present to the practitioner an authoritative statement on the subject of arthritis which may serve him as a guide amongst the shoals of conflicting theories and the enthusiastic assertions of the advocates of panaceas Brief reviews of the main features of the forms of arthritis under discussion have therefore been given at the outset, so that he may quickly refresh his memory as to the salient characteristics and the main lines of treatment Differential diagnosis has been dealt with fairly fully, and, so far as possible, in tabular form Special aspects have been detailed in so far as they are of real interest to the practitioner, and with reference to the possibility of obtaining apposite information elsewhere Thus, little is said in the report about morbid anatomy, since it is a difficult and technical subject of no great interest to the practitioner, but reference is made to the articles of Mr Lawford Knaggs in which the whole matter is dealt with in great detail On the other hand, the orthopaedic treatment of arthritis is dealt with at some length, since this is, if not of overwhelming importance, of very great use in the management of any arthritic patient, and in the opinion of the committee information on the subject is difficult to find in the literature, and so not often brought before the notice of the practitioner Whatever the merits or demerits of the report, it is the hope of the committee and of the Council that it may prove to be a useful contribution to the study of this important and difficult group of diseases, and that it may stimulate further inquiry and research whereby the many lacunae in our knowledge may be filled and the present relative chaos eventually give place to order

RHEUMATOID ARTHRITIS

The study of affections of the joints goes back through many generations Though it has been marked by much controversy and dogmatism its therapeutic record is not a distinguished one. A favourable movement appeared when certain areas of the subject became confidently identified and classified as due to particular infections Gonococcal, tuberculous, and syphilitic arthritis, for example, were made aetiologically secure, while acute rheumatism and acute gout each presented a clinical distinctness that justified, both for the one and for the other, a nosological label and recognition Yet in spite of these gains there remained a large body of joint disease, for the most part chronic and progressive in character, where confident knowledge was sadly to seek and therapeutic activity boasted little success To apply to such a condition the term " chronic arthritis " was judged inadequate, and hence the accusations of gout as responsible on the one hand, and rheumatism on the other, were freely bestowed, with the implication that the same agent or influence which produced the acute diseases so named produced also the more chronic disturbances The battle of the names had its lively moments, and not many would content themselves with an agreed truce as expressed in the simple formula proposed by Sir Jonathan Hutchinson that " whenever arthritis occurs in connexion with food we call it gout, and whenever such association is wholly absent we name it rheumatism " The controversy took on a new aspect with the appearance of what at the time seemed a revolutionary claim—namely, that whatever else chronic joint disease might be it certainly was not rheumatism, meaning, presumably, that it was not caused by the agency responsible for rheumatic fever It was to enforce this doctrine that Sir Alfred Garrod proposed the term " rheumatoid arthritis " The name has largely held the field until the present day, but its value has been qualified in two respects First it has been applied, and indeed still is applied, almost indiscriminately to any and every form of joint disease which has not an obvious explanation , and secondly, and in spite of the intentions of its author, the term " rheumatoid " has carried the suggestion that the more or less chronic forms of arthritis to which it is attached are, after all, allied to acute rheumatism, and are to be met in principle by the dietetic and medicinal methods recognized as appropriate to that disease It may be that on the surface something like this habit seems to describe the present position But in recent years many workers, both at the bedside and in the laboratory, have faced arthritis as a problem to be solved, and one of the advantages to be expected from the British Medical Association committee's report is the wide diffusion of the results of these investigations and the adoption of the diagnostic and therapeutic methods to which they point the way As a central proposition, now established, it may be stated that whatever else is doubtful rheumatoid arthritis presents without question a definite clinical picture , that it can be clearly separated from other forms of joint disease , that at

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least in many instances it is associated with an infective focus and that it calls for methods of treatment other than those which its supposed alliance with rheumatism would suggest

These positions the steps which have led to their establishment and the practical applications they demand are very effectively stated in a recent article by Dr Russell L Cecil of New York.[1] Broadly Dr Cecil's conclusions march with those of the British British Medical Association committee's report He is however quite uncompromising in relation to focal infection as the cause of rheumatoid arthritis and is correspondingly insistent upon the necessity for the elimination of all septic foci as a starting point in the treatment of the disease endocrine abnormalities disturbed metabolism deficiency influences he will allow as perhaps predisposing but certainly not as causative factors In short what the committee recognizes as possible—namely that sooner or later all cases of rheumatoid arthritis may be proved to have an infective source—has in Dr Cecil's view already arrived He admits that the positive observations of himself and his fellow-workers—namely the successful cultivation of streptococci from the blood in a large proportion of cases of the disease—have not been obtained by other bacteriologists but for these failures as they seem to him he offers explanations and in any event he claims that a few positive facts may be held to outweigh a number of purely negative ones Not less convinced is he that the streptococcic agglutinins present in the serum of patients suffering from rheumatoid arthritis are specific agglutinins differing in no respect from the specific agglutinins that occur in infections with the typhoid bacillus the pneumococcus, and other pathogenic micro-organisms On these two bacteriological issues the committee's report holds that not until further evidence is available can a confident verdict be pronounced and similarly in the practical sphere the report suggests caution and gradualness in dealing with infective foci rather than the radical swiftness which Dr Cecil advocates A somewhat similar contrast may be noted when the subject of vaccine treatment is discussed Both the B M A committee and Dr Cecil agree that vaccines have been too loudly exploited and probably not always used with the care and under the conditions which these agents demand and equally they emphasize that reactions are certainly to be avoided But Dr Cecil having secured his typical strains of streptococcus has naturally prepared a corresponding vaccine has used this both by the subcutaneous and by the intravenous method and on the basis of a large experience he is satisfied that 'undoubtedly a certain number of patients are benefited by the treatment indeed his usual practice is to try intravenous injections for at least three or four months and to continue or discontinue the treatment according as the patient has or has not improved over that period The conclusion of the committee is that given certain conditions vaccines have some opportunity of service and there are other well-known workers whose teaching on this point is much more emphatic From all this it is of course evident that the bacteriology of rheumatoid arthritis and the exact value of vaccine treatment are subjects for further investigation and it is certain that the necessary inquiries will be actively prosecuted

Differences of opinion on points which yet await the judgement of experience must however not be allowed to minimize or confuse the positive additions which recent observations and study have made to the diagnosis and treatment of the various forms of arthritis Particularly does this proposition apply to the contrast established between rheumatoid arthritis on the one hand and osteo-arthritis on the other for it is here largely that confusion has existed It is no small gain to have a definite nomenclature and classification set up and to know that the division rests not on fancies but on facts The history and clinical examination of the patient make of course their special claim but ancillary methods have a large application Dr Cecil emphasizes the value of blood and joint cultures though he recognizes that the former require an elaborate technique and a considerable time *x*-ray examinations afford a contrast between changes due to infection and those of a degenerative order the blood sedimentation test he regards as of high diagnostic value as also the Schilling haemogram which shows in the presence of an infective process more or less numerous immature polymorphonucleocytes due to the stimulation of the bone marrow by the infective agent By these or other methods the expectation is that the area of confident diagnosis in joint affections will be greatly enlarged with resulting opportunities for prevention and treatment Of course if these ends are to be attained the new knowledge must pass from academic circles into the busy life of practice and there is the more claim to strive for this development in view of the amount of suffering of disability and of economic loss which joint diseases inflict, and in view too of the brighter therapeutic prospects which research has now established It is all to the good that efforts are being made on both sides of the Atlantic to bring the new opportunities into effective operation

[1] Cecil Russell L Rheumatoid Arthritis A New Method of Approach to the Disease *Journ Amer Med Assoc* April 22nd 1933

RHEUMATIC DISEASES AND HEALTH INSURANCE

The National Federation of Trade Unions Approved Society was in conference at Buxton at the end of last month and discussed many aspects of national health insurance The conference was addressed by Dr C W Buckley on Rheumatic Diseases and their Effect on the Finances of Approved Societies He said that it was by the wise provision and administration of additional benefits that sickness and disability might be lessened and thus in the long run expenditure reduced This principle might be applied with greater force and advantage to the great group of diseases classed as

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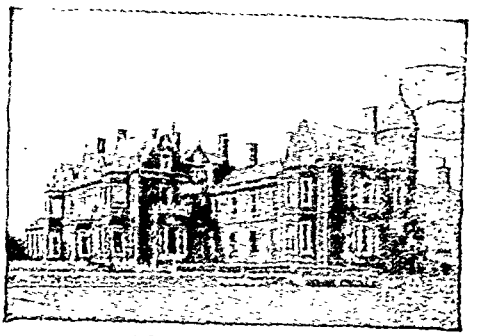

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rheumatic than in any other direction, since they were responsible for an enormous drain on industry and consequently on the insurance funds Rheumatic diseases accounted for one-sixth of the total weeks of sickness among insured male workers alone Although much had already been done in the investigation and treatment of rheumatic fever, chronic arthritis was only beginning to receive the attention it deserved, and the public were still not alive to the importance of thorough treatment in the earlier stages , the sufferer often did not give up work until the stage at which treatment was most likely to be successful was past One approved society had, however, quite recently arranged that every case of arthritis occurring among its members should be notified at once to headquarters and made the object of special care and investigation with a view to early and thorough treatment The Ministry of Health had made several important reports on the subject and suggested schemes for dealing with the problem Dr W S C Copeman had amplified and developed a plan for rheumatism advisory centres to which practitioners might refer their cases These centres would be linked up with the in-patient wards of general hospitals, with the spa hospitals, and with physical treatment centres to be established along the lines of the Red Cross Clinic in Regent's Park Such a plan would do much to solve the problem of early and thorough treatment Dr Buckley suggested that the old Poor Law infirmaries, now termed " municipal hospitals," should be utilized largely in this scheme, with a consultant staff, if necessary, along the lines now under consideration by the London County Council to provide for in-patient treatment, and if properly equipped they would also provide the physical treatment centres The rheumatism advisory centres could be arranged as part of the out-patient department of any hospital or as separate clinics along the lines of the existing tuberculosis and venereal disease clinics Since arthritis is common in country districts and small towns where there is no hospital accommodation to permit of adequate development along these lines, it would be expedient to arrange for skilled physical treatment to be administered by members of the Chartered Society of Massage and Medical Gymnastics, under the general directions of the patient's own doctor If such workers could be established in rural districts, preferably in affiliation with the district nursing scheme but paid an adequate salary from a central fund, a very great deal, in Dr Buckley's view, could be done to cope with the problem of the treatment of arthritis While some of the cost must be met from health insurance funds, aid would also be required from public money, either national or local, since not more than half of the sufferers would be insured Some of the remainder would be in a position to pay, and this would help to reduce the cost

Dr Buckley is right when he says that we, in attacking this great problem, are definitely behind some Continental countries which have proved that such a scheme as he outlined is quite practicable There will be general agreement with him, too, in his insistence that research should be encouraged at the same time into the causes of these diseases and their control Much may be expected from slum clearance and better housing Climate he regards as a much less important factor than defective hygiene in the home Stuffy rooms and workshops, unsuitable food and clothing, want of fresh air, and unfavourable working conditions do far more to lower resistance to rheumatic diseases than climate

THE CURABILITY OF CANCER

At the annual congress of the American College of Surgeons in 1932 a feature of the proceedings was an extensive symposium entitled " Cancer is Curable "[1] The series of thirty individual communications composing it deals largely with five-year cures, of which no fewer than 4,348 are reported Eight of these communications deal exclusively with cancer of the uterus and four with cancer of the breast other organs, considered individually as well as in general reports of the results obtained at particular clinics, are the stomach, kidney, bladder, prostate, testis, larynx, eye, and skin No general analysis is feasible, since the reports cover different periods of time and a variety of forms of treatment , nor can the respective merits of such treatments be readily assessed as a whole On the other hand, there can be few surgeons and radiologists who will not find some record or opinion which will be instructive the reports represent present-day practice in most of the leading surgical centres of America, and, besides furnishing the most extensive statistical data of results in cancer yet published, they include expressions of opinion and descriptions of operative technique which may not be familiar Although the comparison of results and the estimation of prognosis in different types of malignant disease furnish the chief advantage of such a symposium, the motive which led in this case to the choice of subject was avowedly propagandist It was felt that, until the public can be brought to believe that cancer is a curable disease, the earlier treatment which is the first requirement for better success is not likely to be secured, and to that end the fullest " ethical " publication of the proceedings was encouraged The extent to which public attitude must control the possibility of successful results was repeatedly emphasized One speaker referred to a legal acquaintance sceptical of the possibility of any cure of cancer who, unknown to himself, had had a carcinoma of the sigmoid flexure removed fifteen years previously No doubt a considerable proportion of patients from whom malignant growths have been successfully removed are never told the nature of the condition , if they are, the prevalent reaction to the word " cancer " is such that they will be highly reluctant to speak of it The consequence is that successes tend to be obscured, while examples of failure (" poor So-and-so had cancer ") are known to everyone This obstacle to a more enlightened public opinion is a very real one, and not likely to be easily overcome Apart from any indirect effect on the public, however, it was naturally hoped that the profession itself, and in particular those who have possibly been discouraged by a series of unsuccessful cases, might be convinced of the value of modern methods of treatment Not only the diagnostic ability and promptitude of the practitioner first seeing a case, but a conviction on his part of the utility of appropriate measures, are at least as much a *sine qua non* as the seeking of early advice A plea was also made for the advanced case,

[1] *Surg. Gynecol. and Obstet.* 1933, lvi, 412

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not merely on the ground that unexpected success may follow radical treatment but in the sense that palliative relief should continue to be afforded by all possible means there is a quack waiting round the corner for every patient whose doctor gives him up There is a remarkable degree of unanimity in the opinions expressed in these reports and their conclusions appear wholly applicable to the same problems in any country

ASSESSMENT OF CLIMATIC FACTORS

One of the Sections at the recent annual congress of the Royal Institute of Public Health at Eastbourne—that concerned with hydrology and climatology—provided a common ground for members of the medical profession and meteorologists and was presided over by Sir Gilbert Walker, professor of meteorology at the Imperial College of Science and Technology South Kensington Sir Gilbert Walker whose presidential address was entitled 'Airs Waters and Places devoted himself to a discussion of the methods of assessing climatic factors in their influence upon disease Of the two methods of proceeding one being to consider the locality and note the effect of varying amounts of rainfall (if that is the climatic factor taken) in successive years upon the extent of the disease and the other to consider a number of places and observe the extent of reaction upon the disease of localities wet and dry he thought the first method the simpler though it required assistance from the second The second method was the more usual practice but it was open by itself to serious objection for there were other respects than rainfall in which places would vary and while the assessment might be easy enough with quantitative factors like sunshine humidity and wind it was not easy with such matters as soil or with the effects of cheerful surroundings and attractive scenery It seemed to him therefore that the second method that of comparing the results of different rainfall experienced in a number of places was only of value in suggesting a working hypothesis to which the first method could be applied Sir Gilbert Walker instanced some precautions to be taken in using statistical methods Although such methods gave the degree of association between different factors they alone could not indicate which was cause and which was effect It had long been known for example that places of abundant tree growth were places of abundant rainfall and while some had deduced that more rain produced more trees others had deduced that it was the forests that produced the rain Clearly the question could only be settled by specialized knowledge Again false inferences might be made unless care was taken that all the relevant factors were included in the examination Useful information as to whether a given factor was a cause or an effect of another factor could sometimes be derived by trying the effect of a change in the epochs in which the two factors were measured It was always the choice of the factors to be examined which made specialized knowledge absolutely necessary and without it the expert in statistical methods was gravely handicapped Indeed he was liable to produce what might seem conclusive evidence of a relationship of cause and effect which in reality did not exist

PREVENTION OF BLINDNESS IN INDIA

The Junior Section of the Indian Red Cross (New Delhi) has published a pamphlet of fourteen pages setting out the salient measures needful for the layman to know for the prevention of blindness It is stated that there are in India about one million blind persons and for each blind person there are three others with seriously impaired sight who are blind in one eye or have some eye disease which seriously impairs their vision A large number of blind persons might recover their sight by having proper medical treatment But a much larger number of people ought never to have gone blind because blindness can be avoided in most cases Simple measures are enough to prevent people from losing their sight as well as to protect the eyes of young children With this introduction the pamphlet gives a series of short clear statements of eight dangerous conditions keratomalacia and night blindness syphilis and gonorrhoea trachoma small-pox the use of dangerous and irritant drugs by quacks and irritation due to dust and dirt baby's sore eyes accidents squint and short sight Each of these sections is written in the clearest of language and there are illustrations which point the moral even more effectively than the printed word Finally, there is a summary in the form of fifteen commandments, the first of which reads

Keep your hands and face clean Wash them thoroughly with soap and clean water at least twice daily The authors of the pamphlet are to be commended for their work and the Red Cross Society for its enterprise in undertaking the publication

SOCIALIZATION OF THE MENTALLY DEFECTIVE

It would be well if all the members of the British Medical Association's special committee on mental deficiency and many of those influenced by its report would continue to draw attention from time to time to the important findings and conclusions contained in that report An admirable example of the way in which this may be done is found in a pamphlet by Dr Henry Herd school medical officer for Manchester and one of the members of the committee[1] It is a reprint of an address given to the North Lancashire Association for Mental Welfare and is largely based upon the third section of the report of the B M A committee What is meant by the socialization of the mentally defective needs expounding and some popular ideas with regard to the relation of such a process to segregation on the one hand and sterilization on the other need correcting In this pamphlet Dr Herd both expounds and corrects very effectively and it is well worth reading by all those interested Most of the points made will be familiar to those whose knowledge of the subject is fairly extensive especially if it is the result of practical experience in dealing with mentally defective children Attention may be drawn particularly to two of those which Dr Herd's address contains He quotes an American writer who almost paraphrasing a sentence in the B M A report says In considering what class of feeble-minded individuals may safely remain in and may be returned to the community it is of more importance to study what

[1] Beeley Bros Penny Street, Lancaster

communities are safe for the feeble-minded " Again, in Dr Herd's own words " In the average stable, docile type of defective, modifiability is markedly possible His suggestibility can be his salvation, though it can also be his curse Indeed, such a type is exceedingly sensitive to influences around him, and if these influences are good he may become a fairly steady, reliable personality " In this connexion the observations of the Ministry of Health on the paragraphs of the report of the Ray Committee dealing with the care of the mentally defective may be recalled The departmental circular to local authorities says " Neither the Board of Control nor the Minister could subscribe to the view expressed that there is no evidence that more than a negligible number of the mentally deficient are improved in condition by treatment The effect of the experience obtained is, in fact, that all but a negligible number show improvement after treatment, both as regards habits, behaviour, and capacity for work "

AN EARLY DIETETIC PHYSICIAN

Professor Raymond Pearl has recently called attention to Toby Venner and his *Via Recta* [1] Tobias Venner was the son of a gentleman in Somersetshire He was born in 1577, matriculated at Oxford from St Albans Hall in 1595, practised first at Bridgewater, afterwards at Bath, and died in 1660 He wrote the *Via Recta ad vitam longam*, or a treatise wherein is the right way and best manner of living for attaining to a long and healthful life The fourth and final impression was published in 1660, and has a fine portrait of the author, aet su 85, executed by Faithorne Professor Pearl points out that Venner's recommendations as to diet are curiously modern in character, and that without knowing it he was recommending foods rich in vitamins He writes of the dietary virtues of lettuce, milk, egg-yolk, and of the use of bran for those who are costive Cream he thinks is " hurtful to them that be phlegmatic and to old men, but unto young men that have strong stomachs it is (especially in the hot seasons of the year) no less convenient than delightsome , and verily with Straw-berries and Sugar, it is for them, for whom it is convenient, a very delicate and wholesome dish And whosoever he be that delighteth to eat a dish of cream, let him not be parsimonious of sugar, for that is the best correctory for it " Appended to the paper is an interesting diagram which Professor Pearl calls a " biogram," showing Venner's relation to contemporary writers at different periods of his life To the scanty notices of Venner may be added the short article which appeared in the *Hospital* on February 4th, 1905, because it shows that a remarkable personality has not been wholly overlooked by his fellow countrymen Toby also wrote a *Treatise on Tobacco*, which he says " very many in these days doe too licenciously use " He was no friend to its use, for he says, " It drieth the brain, dimmeth the sight , vitiateth the smell, dulleth and dejecteth both the appetite and stomach, destroyeth the concoction disturbeth the humours and spirits, corrupteth the breath, induceth a trembling of the limbs, exciccateth the windpipe, lungs and liver, annoyeth the milt, scorcheth the heart, and causeth the blood to be adusted Moreover it eliquateth the pinguie substance of the kidnies and absumeth the genture In a word it overthroweth the spirits, perverteth the understanding and confoundeth the senses with a sudden astonishment and stupidity of the whole body " Nevertheless if men must smoke it should be " Virginia tobacco and not Verinus or Spanish Tobacco, for the best sort of Virginia tobacco in comparison with the latter is weak, yet it is of reasonable good relish and is best for them that love to play with Tobacco's smoke or know not how to pass the time without a Tobacco pipe in their hands "

[1] *Human Biology* vol iv, No 4 Baltimore Johns Hopkins Press

FROM HATS TO HANDWRITING

A reader in South Southumberland, who liked the " general tone " (as he is kind enough to put it) of our recent note on Hats and Stethoscopes, wishes to " nail a lie to the counter " (as he is unkind enough to put it) He is the son of a doctor and the grandson of a doctor, and neither his father nor his grandfather—all honour to them—ever wore a high silk hat , they covered their heads with " a high square bowler, something betwixt and between " Our correspondent has caught us out here We should have remembered that intermediate nameless kind of hat which combined the professional decorum of the topper with the all-weather qualities of the billycock Did not Mr Churchill attempt to revive it? But the point we wish to make now is that our critic writes illegibly and on both sides of his notepaper, with scarcely any space between the lines and no margins This fourfold literary crime is all too common It is not peculiar to South Southumberland , it is committed by otherwise blameless practitioners in West East Anglia and even in Mid-Middlesex The illegibility for which doctors are notorious has been attributed to note-taking at lectures and the constant scribbling of " rep mist " We think it has deeper origins Did not learned psychologist Dogberry say that to write and read comes by nature? A vile fist may be hereditary in some families or it may be over compensation for an emotional trauma in babyhood On the other hand, there are medical authors who seem, with Hamlet, to hold it a baseness to write fair Sir Clifford Allbutt was not of that opinion, though his MSS and his corrected proofs were often a sore trial to editors and printers So difficult did his " copy " become that none but the most experienced compositor could be trusted to handle it But Sir Clifford was disarmingly ashamed of his MS , and had the grace to write on one side only of the paper It is told of a judge that he kept on saying, " I cannot hear you, Mr X," to a young counsel who had forgotten to put on his wig and who repeated the same opening words crescendo in the belief that his lordship was deaf So, too, there was once a medical editor who, after frowning long over an illegible MS , flung it back to its author with the remark, " Take this to the chemist , I can't dispense it "

The Societe Internationale de Chirurgie Orthopédique, whose president is Professor Nové-Josserand of Lyons, will hold its second congress in London from July 19th to 22nd

RUTHIN CASTLE, NORTH WALES

REDUCTION OF FEES

In view of the present economic position, the inclusive fees at Ruthin Castle, formerly from 17 guineas a week, have been reduced to from 15 guineas a week.

The fees include medical attendance, all scientific investigations that may be needed, such as analyses, bacteriological cultures, the ordinary x-ray examinations, and electrocardiograph readings; all treatment that may be prescribed, such as special diets, insulin, artificial sunlight, electrical treatment, baths, massage, nursing; medicines or vaccines, board, and lodging.

The only extra charge is that for a complete alimentary x-ray examination, or for x-ray therapy.

Many people who would go abroad for health will not do so this winter. All the usual forms of treatment are given at Ruthin Castle. The climate is mild. The annual rainfall is 30.5 inches, that is, less than the average for England. There is central heating throughout. Should the accommodation in the Castle not prove sufficient, comfortable rooms can be obtained near by for those undergoing treatment.

Address—THE SECRETARY, Ruthin Castle, North Wales. Telegrams: CASTLE, RUTHIN. Telephone: RUTHIN 66.

WOODSIDE HOSPITAL

WOODSIDE AVENUE, MUSWELL HILL, LONDON, N.10

President: THE RT. HON. THE EARL OF ATHLONE, K.G., P.C.

Fully equipped with every modern appliance for the diagnosis and treatment of

FUNCTIONAL NERVOUS DISORDERS

Private Rooms, Broad Verandahs, Physiotherapy and Psychotherapy, X-ray and Dental departments, Laboratories for investigation and research. For terms and particulars apply to the Physician in charge at the Hospital. Telephone: Tudor 4211.

CHEADLE ROYAL MENTAL HOSPITAL,

CHEADLE, CHESHIRE.

This REGISTERED HOSPITAL, with a SEASIDE BRANCH at Colwyn Bay, N. Wales, is for the treatment and care of those of the Upper and Middle Classes suffering from MENTAL and NERVOUS DISEASES.

The Hospital is governed by a COMMITTEE, appointed by the TRUSTEES of the Manchester Royal Infirmary.

In addition to the Main Building there are separate villas. Extensive grounds. Hard and grass tennis courts, cricket and croquet grounds, and a court for badminton. There are also wireless installations. Golf may be had within easy distance. Occupational Therapy.

VOLUNTARY, TEMPORARY, AND CERTIFIED PATIENTS received.

The Hospital is nine miles from Manchester, 50 minutes by rail from Liverpool, and 3½ hours from London.

For terms and further particulars apply to the Medical Superintent, J. A. C. ROY, M.B., who may be seen in Manchester by APPOINTMENT.

Telephone: GATLEY 2231 (3 lines).

CAMBERWELL HOUSE, 33, Peckham Road, London, S.E.5.

Telegrams: "PSYCHOLIA, LONDON." FOR THE TREATMENT OF MENTAL DISORDERS. *Telephone*: RODNEY 4731—4732.

Also completely detached Villas for mild cases, with private suites if desired. Voluntary Patients received. Twenty acres of grounds. Hard and Grass Tennis Courts, Putting Greens, Bowls, Croquet, Squash Rackets, and all indoor amusements, including Wireless and other Concerts. Occupational Therapy, Callisthenics, and Dancing Classes, X-ray and Actino-therapy, Prolonged Immersion Baths, Operating Theatre, Pathological Laboratory, Dental Surgery, and Ophthalmic Dept. Chapel. Senior Physician: Dr. HUBERT JAMES NORMAN, assisted by three Medical Officers, also resident and visiting Consultants.

An illustrated Prospectus, giving fees which are strictly moderate, may be obtained upon application to the Secretary.

The Convalescent Branch is HOVE VILLA, BRIGHTON, and is 200 feet above sea-level.

NORTHUMBERLAND HOUSE,

GREEN LANES, FINSBURY PARK, N.4.

Telegrams: "SUBSIDIARY, LONDON." *Telephone*: NORTH 0888.

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses. Conveniently situated four miles from Charing Cross. Easy access from all parts. Six acres of ground highly situated, facing Finsbury Park. Private Suites. Voluntary Patients and Temporary Patients received without certification.

Convalescent Home, Kearsney Court, Dover. For further particulars, apply to the Medical Superintendent.

PECKHAM HOUSE, 112, Peckham Road, London, S.E.15.

Telegrams: "Alleviated, London." Telephone: Rodney 4741-4742.

The above House, which was established in 1826, is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders. Certified voluntary and temporary patients are received. Separate houses for treatment and accommodation of special cases adjoin the Institution. There is a seaside branch, Kearsney Court, near Dover, to which patients may be sent for treatment or on holiday. Motor and carriage exercise is provided as required. Patients can avail themselves of a course of physical drill. Tennis Courts. Entertainments, dances, and indoor amusements held throughout the year. Terms from £3 3s. per week.

Illustrated prospectus and further particulars can be obtained from the MEDICAL SUPERINTENDENT.

THE OLD MANOR SALISBURY

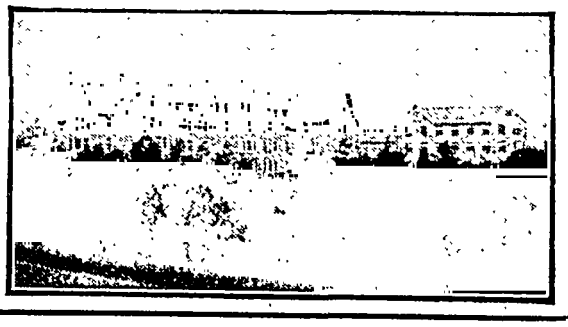
A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS.

Extensive grounds. Detached Villas. Chapel. Garden and dairy produce from own farm. Terms very moderate.

CONVALESCENT HOME at BOURNEMOUTH. Detached Villas standing in 12 acres of ornamental grounds, with tennis courts, etc., which Voluntary, Temporary or Certified Patients may visit, by arrangement, for long or short periods.

Illustrated Brochure on application to the Medical Superintendent, The Old Manor, Salisbury. Telephone 51.

TOR-NA-DEE SANATORIUM
MURTLE DEESIDE ABERDEENSHIRE



Medical Director: David Lawson, M.D., F.R.S.E.

FULLY EQUIPPED WITH EVERY MODERN APPLIANCE FOR THE DIAGNOSIS AND TREATMENT OF ALL FORMS OF TUBERCULOSIS AND ALLIED DISEASES

Physician Superintendent. J. M. JOHNSTON, M.B., D.P.H., etc.

Full particulars and Prospectus on application to the Secretary.

Inclusive Terms: SEVEN GUINEAS A WEEK.

The MUNDESLEY SANATORIUM

The newly opened central building makes the Mundesley Sanatorium the best equipped building in England for the cure of Tuberculosis. All the bedrooms have hot and cold running water, electric light, and wireless headphones. The new public rooms are spacious and comfortable.

Resident Physicians:
S. VERE PEARSON, M.D.(Cantab.), M.R.C.P.(Lond.).
ANDREW MORLAND, M.D.(Lond.), M.R.C.P.
E. C. WYNNE-EDWARDS, M.B.(Cantab.).

For all information apply:
THE SANATORIUM, MUNDESLEY, NORFOLK.
(Telephone: Mundesley 4.)

The buildings face S.S.W. and are sheltered from the sea by a pine-clad ridge. The sunshine record and dry air complete a perfect site. The medical equipment is of the latest kind, and there is a day and night nursing staff.

TERMS FROM 7½ GUINEAS WEEKLY.

NORDRACH-UPON-MENDIP SANATORIUM

FOR THE TREATMENT OF TUBERCULOSIS, was opened in January, 1899, by ROWLAND THURNAM, M.D.

All modern forms of treatment are available. There are X-ray and ultra-violet ray installations. Full day and night nursing staff. The Sanatorium stands in gardens and private grounds of 65 acres, at an altitude of 802 feet above sea-level, surrounded by woods and moorland. All rooms are heated by hot-water pipes and electrically lighted.

Fees 4, 5, and 6 guineas per week.

CYRIL FRANCIS ASHBY, M.R.C.S., L.R.C.P., Certificate of Sanatorium Stephani, Switzerland, *Resident Medical Supt.*
For full particulars apply to *The Secretary*, Nordrach-upon-Mendip, Blagdon, Bristol. *Telegrams*: Nordrach Blagdon. *Telephone*: Blagdon 25

THE COTSWOLD SANATORIUM

First opened in 1898 and rebuilt in 1925. On the Cotswold Hills, seven miles from Cheltenham, for the treatment of Pulmonary and all other forms of Tuberculosis. Aspect S.S.W., sheltered from North and East, elevation 800 feet. Pure bracing air. Special Treatment by artificial Pneumothorax (X-ray controlled), Tuberculins, Medicated Inhalations by means of the Apneu Inhalation Installation, and Ultra-Violet Rays is available, when necessary, without extra charge. X-ray plant. Electric light. Radiators, hot and cold basins, and Wireless in all rooms.

Full day and night Nursing Staff.

Medical Superintendent: GEOFFREY A. HOFFMAN, B.A., M.B., T.C.Dub. *Assistant Physician*: MARGARET A. HARRISON, M.B., B.S.Lond.
Consulting Laryngologist: SIDNEY BERNSTEIN, M.R.C.S.Eng., L.R.C.P.Lond. (Attends Regularly.)
Apply: The Secretary, The Cotswold Sanatorium, Cranham, Gloucester. *Telephone*: 41 WITCOMBE. *Telegrams*: "HOFFMAN, BIRDLIP."

LINFORD SANATORIUM,
RINGWOOD, NEW FOREST, HANTS.

Fi
to ei

CL Established 1898 for the treatment of Tuberculosis. Radiators and Electric Light throughout. Hot and
cases. d water and shower bath in nearly all rooms. Powerful X-ray Plant. Ultra-violet Rays. Full Nursing Staff.
It is be forms of treatment available. Farm of 120 acres, including 40 acres of wood. Herd of Tuberculin-tested
is a priv nsey cows kept. Resident Physicians—ARTHUR DE W. SNOWDEN, M.D., B.Ch.(Cantab.), A. G. E. WILCOCK,
Reside M.R.C.S., L.R.C.P., COLIN CASSIDY, M.B., B.Ch.(Cantab.).

TYK NTANA HALL, Montana, Switzerland

FUNCTIONA. Built 1929-30.

.Y SANATORIUM IN SWITZERLAND UNDER BRITISH OWNERSHIP TROL, AND WITH A DAY AND NIGHT STAFF OF BRITISH TRAINED NURSING SISTERS.

The Home is a M. and is situated 14 m to Northampton Road therapeutic Treatment violet Light. Diathermy Apply, Dr D. E. *REDUCED TERMS.——QUOTED IN STERLING.*
ARY ROCHE, M.D.(Melb.), M.R.C.P.(Lond.), Tuberc. Dis. Dip. (Wales).

GRAMPIAN SANATORIUM,
KINGUSSIE, INVERNESS-SHIRE.

Specially built for the Open-air Treatment of Tuberculosis, and opened in 1901. Bracing mountain air. Elevation 860 ft. above sea-level. Sheltered situation in pine wood. Grounds and walks. Electric light throughout. Fully equipped in shelters. Central heating. Fully equipped X-ray Plant. Inoculation Treatment available. Private patients—24 beds. Trained Nurse on duty day and night. Terms £4 7s. 6d. to £6 6s. per week. No extras. Med. Supt.—FELIX SAVY, M.D.
For particulars apply to the Secretary.

KING EDWARD'S HOSPITAL FUND

The Prince of Wales presided over the annual meeting of the General Council of King Edward's Hospital Fund for London and read a message from the King congratulating the Fund on the fact that the whole of the increased distribution of £300 000 had been covered by the income of the year

PRESIDENT'S SPEECH

The Prince remarked that this achievement was little short of a miracle In spite of the financial crisis and the very serious time through which the country was passing the King's Fund and the voluntary hospitals had had a successful year in 1932 as indeed they had had for some years past By the end of 1931 they had been able to increase gradually the ordinary distribution to £275 000 and to keep also a margin in reserve partly for maintaining the distribution and partly to provide for the special grants in aid of the pensions scheme for nurses and hospital officers In 1932 the income had again reached the same level There was reason to fear that some hospitals might be suffering seriously from the crisis and it was therefore decided to make an immediate increase in the distribution bringing it up to £300 000 After withdrawing also from the year's income the proper share (£20 000) for 1932 for the pensions reserve fund there was left a balance in hand of £111 The distribution of this sum of £300 000 constituted a new landmark in the history and progress of the King's Fund at a level which it was hoped would be maintained As a whole the hospitals did better themselves in 1932 than in 1931 and for the sixth year in succession had come out with a margin on the right side —a narrow margin but slightly better than that of a year ago This was due said the Prince to sustained efforts on the part of individual hospitals and to steady and continuous support on the part of the public Hospital expenditure had been reduced substantially although the total number of beds available had continued to increase New supporters had come forward and a better standard of propaganda work had been reached Hospitals had purchased 50 000 copies of the King's Fund publicity manifesto and had circulated them in support of their own appeals Moreover the miniature hospital had proved very useful in bringing home to people generally the reason why modern hospitals cost so much to build equip and maintain and how great was their efficiency This exhibit was now being shown in the country to benefit local hospitals

OTHER KING'S FUND ACTIVITIES

The Parliamentary Committee of the King's Fund was co-operating with the British Hospitals Association in pressing for recognition of the just claims of hospitals for fair remuneration in connexion with the treatment of motor accident cases the cost of which was at present falling largely on funds contributed for other purposes The staff of the King's Fund had also assisted the London Voluntary Hospitals Committee in the very valuable survey of medical and surgical services in the county of London which that committee had recently issued jointly with the London County Council His Royal Highness believed that this was the first occasion of there being a complete survey made of both parts of these services—namely those provided by the voluntary agencies and those provided by the public authorities The Out patient Arrangements Committee had been considering the recommendations made by Lord Onslow's Committee in respect of standard forms of doctors letters and hospital time tables for out patients In the first case the action being taken by medical organizations was highly commendable and in the second case the hospitals were already co-operating with Sir John Rose Bradford's Committee Records of the time taken in the various stages of out patient treatment were being compiled The Prince added that after dealing with the problem of reducing the time of waiting for patients the Arrangements Committee proposed to study the possibility of time saving methods at the dispensary stage This seemed to him a very reasonable objective because any improvements found desirable here could be brought into operation without disturbing the rest of the out patient procedure

With the increasing activities of the King's Fund larger and more convenient office accommodation had become necessary and had been obtained The figure for expenses came to 10½d in the pound of the amount received This said the Prince covered more than the cost of collecting and distributing £320 000 among 180 hospitals and convalescent homes and obtaining and studying all the necessary information It included also the cost of performing many of the functions of a central body acting for the voluntary hospitals of almost the whole of Greater London which had between them an annual turnover of nearly £4 000 000

THE 1932 ACCOUNTS

Proposing the adoption of the accounts for 1932, the honorary treasurer Mr E R Peacock explained that these had become rather complicated owing to the fact that the Fund had been asked by some donors to act as trustee for them in allocating their gifts There would now be an income and expenditure account dealing only with the general income the expenses and the distribution receipts for special purposes being dealt with in the balance sheet. Among the receipts he mentioned the increased contribution of £20 000 from the League of Mercy the further £10 000 from the British Charities Association and legacies which were again nearly £60 000 As the result of the bequest to the King's Fund of the residuary estate of the late Lord Mount Stephen the capital would now receive an addition of about £150 000 and a further sum when certain annuities ceased The amount received annually in voluntary contributions had recently averaged £140 000 If the distribution was to be maintained at its present level this amount should be increased

TWENTY-SEVENTH SOUTH AFRICAN MEDICAL CONGRESS

TRAVEL FACILITIES

In connexion with the twenty seventh South African Medical Congress to be held at Capetown from September 25th to 30th 1933 the following announcement is made for the benefit of those who contemplate undertaking the journey

A special concession of 20 per cent. in the ordinary fare to Capetown has been granted by the Union Castle Mail Steamship Company and Messrs Ellerman and Bucknall Ltd Members taking advantage of this concession are required on booking passages to produce a certificate of membership which can be obtained on application to the Medical Secretary British Medical Association House Tavistock Square London W C 1

Those whose time is limited are advised to travel by R M S *Balmoral Castle* leaving Southampton on September 8th arriving at Capetown on Monday September 25th at 6 a.m in good time to be present on the opening day of Congress and returning by the R M S *Windsor Castle* leaving Capetown at 4 p m on Friday September 29th arriving at Southampton on October 16th

Special excursion rates (first class £90 second class £60 third class £30 not subject to further concession) are available by the R M S *Windsor Castle* sailing from Southampton on August 25th returning from Capetown either on September 29th by the same vessel or on October 6th by the R M S *Warwick Castle*

For those who prefer the longer sea voyage there are convenient sailings by the intermediate ships of the Union Castle Line and those of the Ellerman and Bucknall Line Full particulars about sailings and further information may be obtained from any of the offices of Messrs Thomas Cook and Son who will be able to make inclusive travel arrangements for the return journey including hotel accommodation Special terms will be granted by most of the important hotels in Capetown

A limited amount of accommodation is available at the University residences Groote Schuur where Congress will meet for the period September 25th to 29th Inclusive tariff will not exceed 10s 6d per diem Immediate application should be made to the honorary organizing secretary Twenty-seventh South African Medical Congress P O Box 643, Capetown by those who wish for this accommodation

Members proposing to attend the Congress are requested to communicate with the honorary organizing secretary at the above address as soon as possible stating by what steamer they are travelling and whether they will be accompanied by lady guests so that arrangements can be made for their reception

The director of the Publicity and Travel Bureau in the Office of the High Commissioner for South Africa in London offers the services and facilities of his bureau in respect of any rail journeys which members may undertake during their stay in South Africa Those who wish to take advantage of this offer of assistance should communicate with the officer in charge Tourist and Travel Bureau South Africa House, 79 Strand, W C 2, where full information about any journey they desire to undertake in the Union of South Africa or in Rhodesia will be gladly furnished

LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY

The annual meeting of the London and Counties Medical Protection Society was held at Victory House, Leicester Square on May 31st

Sir John Rose Bradford who presided said that during the year the work of the society had largely increased The membership had also received a welcome addition of 861 against which had to be set a loss of 422 by death resignation and removal It was still remarkable how many members of the medical profession to their obvious risk remained outside the defence societies and how many joined long after qualification The legal expenses had been high owing to costs and damages awarded in certain cases but, on the whole the year had been a successful one both in respect to favourable decisions obtained in the courts and to satisfactory settlements outside In two notable cases in which the society had not been successful it had had justification for thinking from the narrow medical point of view that it ought to have been The layman's mind to say nothing of the legal mind regarded some of these problems of differential diagnosis or surgical treatment from a different angle from the medical profession Sir John Rose Bradford added that it was curious to note how in different periods there occurred a series of cases of the same class A little while ago numerous cases were brought forward in which fractures had been overlooked owing to the absence of a proper x ray examination During the last year there had been a remarkable series of cases of accidents following dental extractions Some of these had been satisfactorily settled in others the settlement had not been so satisfactory Finally he referred to the loss which the society had sustained in the death of two of its members of council—Dr Owen Fowler and Mr Bayford Underwood

Dr R L Guthrie presented the financial statement which showed that the invested funds had a book value of £52,500 and that the market value had appreciated by £8 000 in a year The cost of the society was £1 0s 10½d per member

Sir John Rose Bradford was re elected president Dr Guthrie treasurer and Dr C M Fegen secretary, all the vice presidents were also re elected, with the addition of Mr F J Steward and the meeting concluded with a number of votes of thanks In proposing one of these resolutions Dr C O Hawthorne suggested that the society's annual report should be sent to every teacher of forensic medicine throughout the country Such teachers would there find, he said the narrative of various experiences which they could place before their students to illustrate the application of medical jurisprudence in practice Dr Fegen replied that the report was already circulated to every person on the *Register* who was resident in the British Isles and copies were also sent to every medical school

The solicitors to the society (Messrs Le Brasseur and Oakley) in reporting on a selection of the cases which came forward during the year mentioned what seemed to be the increasing custom of certain judges of intervening in the hearing of a case and endeavouring to bring the parties to a settlement In some cases it was felt this might create considerable embarrassment to one side in declining the good offices of the learned judge It had to be remembered however that a judge had a unique experience in gauging the strength of a case and in forming an opinion as to the manner in which the mind of the jury might be made up Though it might be better if there was never any intervention it was that human touch in British judicial proceedings which made them a model to the world It was mentioned that the number of applications for advice and assistance from members during the year was 1 264 and the number of cases actually brought to trial in the courts was greater than in any preceding year

W E DIXON MEMORIAL

A meeting of subscribers to the W E Dixon Memorial Fund was held at the Royal Society of Medicine on June 1st, under the chairmanship of Sir William Willcox, who referred to the lamented death of Professor Walter E Dixon on August 16th, 1931, and said how keenly it was felt by his colleagues, friends, and students that some memorial to him should be established

A small executive committee was formed in December, 1931, consisting of Sir Humphry Rolleston, Lord Dawson of Penn, Professor W Langdon Brown, Dr Alfred Cox, Dr Eric Holmes, Dr J Clifford Hoyle, and Sir William Willcox After much thought and discussion it was considered that the best form which the memorial should take would be a lecture on some subject of pharmacological or therapeutic interest Mrs Dixon was consulted and heartily concurred in the proposal, being of opinion that no better form of memorial could be chosen

The executive committee appointed Sir William Willcox as chairman, Professor Langdon Brown as treasurer and as honorary secretaries Dr Eric Holmes and Dr Clifford Hoyle Several meetings of the executive committee were held in London and at the meeting on March 22nd last it was decided that the fund should be closed on May 1st It was resolved that a general meeting of subscribers be held on June 1st, when a recommendation would be brought forward by the committee that the fund be devoted to the establishment of a "W E Dixon Memorial Lecture" which should be delivered biennially or triennially on some subject of pharmacological or therapeutic interest It was further decided to recommend that the trusteeship of the fund be vested in the Royal Society of Medicine, and that the Council of the Section of Therapeutics and Pharmacology be requested to undertake the selection of the lecturer on each occasion

At the meeting of subscribers to the fund the recommendations of the Executive Committee were unanimously adopted It was decided that the Royal Society of Medicine be invited to undertake the trusteeship of the fund as recommended, and that Professor Langdon Brown, the treasurer, should hand over to the Society the proceeds of the memorial fund which amounted to approximately £700 The proceedings closed with a vote of thanks to the chairman and honorary secretaries, which was proposed by Sir Humphry Rolleston seconded by Professor Langdon Brown, and supported by Dr Alfred Cox and Dr C O Hawthorne

The annual report of the board of the Institute of Physics shows that the many activities of the institute have continued to prosper and that the *Journal of Scientific Instruments* has made satisfactory progress A new feature introduced during the year was the inclusion of articles specially written by authorities in their subjects, dealing with the trend of development of various classes of instruments and with matters of general interest to manufacturers The opening in May of the joint library and reading rooms by the president Lord Rutherford, marked an important step forward Its establishment is the result of the work of the Joint Library Committee originally set up by the Institute of Physics, the Physical Society of London and the Optical Society

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The Seamen's Hospital Society announces that Part 2 of these courses—i.e., Tropical Medicine and Hygiene, will be held from April 3rd to April 28th, 1933, at the Hospital for Tropical Diseases, Endsleigh Gardens, W.C., and the London School of Hygiene and Tropical Medicine, W.C.1.

Further particulars may be obtained on application to the Secretary, Seamen's Hospital, Greenwich, S.E.10.

MASTERY OF MIDWIFERY.

Examinations for the Diploma of the Worshipful Society of Apothecaries of London will be held beginning Monday, May 15th, and Monday, November 20th, 1933.

For regulations, apply to the Registrar of the Society, Water Lane, E.C.4.

England and Wales

Red Cross Rheumatic Clinic

At the last meeting of the council of the British Red Cross Society with H R H the Duke of York in the chair it was reported that at the society s clinic for rheumatism in Peto Place Regent s Park 78 589 attendances were made last year for treatment in the general patients department as against 77 892 in 1931 In the private patients department there were 8 040 attendances An investigation into the results of treatment of 2 133 patients discharged during the year with treatment completed showed that 73 4 per cent were cured or improved Out of a total of 3 154 discharged cases 36 per cent of the men and 43 per cent of the women were able to come for their treatment without interrupting their work and a further 22 per cent of the men and 6 per cent of the women were hoping to return to work at the end of treatment although they had been off work when they first attended The object of the clinic therefore—to provide facilities for treatment of those patients who are in the early stages of disease and who are still able to remain at work —is thus being clearly maintained The great anxiety of the early days of the clinic due to lack of available staff with experience in treatments by medical hydrology is now over Among the investigations now being carried out the following are mentioned in the medical board s report effect of autogenous antigen immunization in the treatment of rheumatism skin temperature and capillary microscopy in rheumatoid arthritis effect of specific and non specific vaccine therapy in rheumatism comparative radiological findings in non specific infective arthritis and rheumatoid arthritis classification and differentiation of the forms of arthritis occurring at the menopause and an estimation of the value of various forms of treatment in different types of rheumatism Regular courses of post graduate lectures and demonstrations have now been instituted under the auspices of the Fellowship of Medicine to which the clinic is affiliated and it is hoped gradually to extend their scope

Institute of Ray Therapy and Electro Therapy

The third annual report of the Institute of Ray Therapy and Electro-Therapy (Camden Road London) reviews the first three years of the existence of an institution which was primarily designed to help people of small financial means to have the benefit of various forms of electrical treatment From March 1930 to December 1932 4 601 patients were treated the total number of treatments being 194 514 and the number of medical practitioners in touch with the Institute being 1 131 In the twelve months ending December 31st 1932 1 616 new patients attended and over 80 000 treatments were given Of the 1 239 men and women discharged 69 2 per cent were well or improved 6 2 per cent were unimproved and the remainder were discharged because of unsatisfactory attendance or removal from the district Of the 294 children discharged 72 1 per cent were fit or improved and only 1 7 per cent showed no sign of benefit Treatments are arranged by appointment so there is no waiting—a highly appreciated convenience The conditions treated included convalescence after illness and operation general debility morbidity in workers due to deprivation of sunlight by reason of the conditions of their work bronchitis rheumatism and rheumatoid arthritis skin affections and diseases of children including rickets The patients are kept in touch with their own private practitioners during the light treatment being referred back to them should any fresh condition arise No patient has been admitted to the Institute without a commending letter from a medical practitioner The income limit is based on the scheme outlined by the British Medical Association and patients are expected to pay whatever they can afford towards the cost of their treatment the amount being left to the discretion of the patient s doctor A successful training course in ray therapy and electrotherapy was held in 1932 Sir William Hale White is president of the Medical Advisory Committee and its chairman is Sir William Hamer

Spa Treatment of Rheumatic Diseases

The annual report of the Royal Mineral Water Hospital Bath (National Hospital for Rheumatic Diseases) states that a very successful post graduate course arranged by the British Medical Association was held last October and some thirty doctors from various parts of the country attended On the financial and administrative side it was a difficult year with a deficit on the year s working of £1 733 The governors and committee feel that the future of the hospital depends in a great measure on decisions taken now Not only have the old fashioned arrangements structural and otherwise had to be overhauled at considerable expense in keeping with modern improvements but the advance in the treatment of rheumatism has called for outlay in all departments and outlay at the present rate cannot be continued unless means are devised for increasing income The medical report states that 1 145 patients were admitted during the year The diseases treated were chiefly rheumatoid arthritis including spondylitis osteo-arthritis (hips and spine showing the greatest incidence) subacute rheumatic infection gout fibrositis (including periarticular fibrositis, neuritis and sciatica The majority of these patients were benefited there were no deaths and the amount of general illness was very small In answer to a question often asked How far are the laboratories used for routine tests and how far for research purposes? the pathologist says it is impossible to draw any direct line of demarcation between these two uses For example over half of the 1 164 blood sedimentation readings have been for routine requisitions of the physicians the remainder were incidental to a research on the conditions affecting the sedimentation rate jointly undertaken with one of the physicians to which research belong also over 200 estimations of the various blood proteins The bearing of this investigation on the hospital work is direct viz the advisability or otherwise for our patients of a proposed treatment which has been the subject of much recent discussion

In Praise of English Cider

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Conditions of appointment obtainable on personal or written request to the Agent-General for Queensland, 409-410, Strand, London, W.C.2, by whom all applications will be received up to April 19th.

WEYMOUTH AND DISTRICT HOSPITAL, WEYMOUTH. (86 Beds and Cots.)

Wanted, April 28th, HOUSE SURGEON, male (European). Salary £180 per annum, with board, residence, and laundry. Applications, stating age, qualifications, and copies of testimonials, to be sent to the undersigned not later than April 11th.

MORRIS LODGE,
Honorary Secretary.

THE BARBADOS GENERAL HOSPITAL.

Wanted, a duly qualified Medical Practitioner (male) as JUNIOR RESIDENT SURGEON of the Barbados General Hospital (224 beds). A man who has had experience in administering anaesthetics preferred.

Salary £325 per annum, with quarters furnished for a single man, free water, lighting allowance, and no local rates. The appointment is for three years, with three months' notice on either side to terminate the engagement, and first-class passage out (direct from England) will be paid by the Hospital for the full term of service, a proportionate part to be refunded in case of service for a shorter period.

Applications, accompanied by a recent medical certificate of physical fitness, and professional and other testimonials, stating age and date of graduation, will be received by the undersigned up to May 31st, 1933.

Canadian Graduates must be registered in a province, registration in which will entitle them to be registered in the United Kingdom.

Candidates holding a United States degree must be registered in the State of New York.

By Order of the Court of Trustees and Directors,

General Hospital, J. WARD,
Jemmotts Lane, Manager & Secretary.
Bridgetown No. 6,
Barbados, B.W.I. March 14th, 1933.

LANCASHIRE COUNTY COUNCIL.

PUBLIC ASSISTANCE COMMITTEE.

LAKE HOSPITAL AND DARNTON HOUSE, ASHTON-UNDER-LYNE, Nr MANCHESTER.

APPOINTMENT OF JUNIOR RESIDENT MEDICAL OFFICER.

Applications are invited from registered Medical Practitioners for the appointment of Junior Resident Medical Officer at the above Hospital and Institution, comprising 300 and 600 beds respectively.

Candidates must be unmarried.

Salary, subject at the present time to an emergency abatement of 5 per cent., at the rate of £175 per annum, together with the usual residential emoluments.

The appointment will, in the first instance, be for a period of six months, the successful applicant being eligible for reappointment for a further period of six months at the end of that period.

Applications, accompanied by copies of not more than two recent testimonials, should be addressed to County Medical Officer, Public Assistance (Hospital and Medical) Department, County Offices, Preston, not later than April 19th. Envelopes should be endorsed "Junior Resident Medical Officer."

County Offices, GEORGE ETHERTON,
Preston Clerk of the County Council.
March 27th, 1933.

WEST END HOSPITAL FOR NERVOUS DISEASES

In-Patient Department, Gloucester Gate, Regent's Park, N.W.1.
Out-Patient Department and Secretary's Office: 73, Welbeck Street, W.1.

The Committee of Management invites applications for the post of HON. ORTHOPAEDIC SURGEON. The names of the Medical Selection Committee, upon whom candidates are requested to call together with other information should be obtained from the undersigned, to whom it is requested that applications, with copies of testimonials, be sent not later than Wednesday, April 12th.

J. P. WETENHALL, Secretary.

adopted the mark for all or part of their output In addition twenty-five firms of bottlers are authorized to bottle national mark cider obtained in bulk from the authorized makers The value of the mark to the distributor and consumer is that it is a national trade-mark, which carries with it a warranty not only of the home origin of the product, but also of its quality There are two grades—namely, ' select cider " and " select cider (champagne process) " For both grades the cider must be produced from apples and pears grown in England and Wales, and the finished product must be prepared from (*a*) pure fruit (apple and pear) juice, or (*b*) a pure fruit juice to which not more than 25 per cent of a syrup made from pure beet or cane sugar has been added The original gravity of the finished product must not be less than 1 04 at 60° F The cider must be made from clean and reasonably sound fruit, and be absolutely free from concentrated apple juice or other fruit juices, from artificial bouquets and essences, and from the recognized signs of inferior ciders such as ropiness sickness, and excess of acetic acid Samples of the product are taken for official analysis and the records of the authorized makers are examined In the national interest it is desirable to encourage the production of genuine English cider, both to provide a good and assured market for the home fruit grower, and to lessen imports of cider and of the raw material from which it is manufactured

Bristol Medical School Centenary

The final programme for the centenary celebrations of the Bristol Medical School is as follows Friday, June 30th 3 30 p m , receptions at the Bristol Royal Infirmary and the Bristol General Hospital by the Presidents , 7 30 p m , dinner at the University Union , 9 30 p m , reception at the University Saturday, July 1st 12 noon, congregation for the conferment of ordinary and honorary degrees in the Great Hall The Chancellor (the Right Hon Winston S Churchill) will confer honorary degrees upon the following the President of the Royal College of Physicians, the President of the Royal College of Surgeons the President of the General Medical Council, Sir Frank Colyer, Emeritus Professor Hey Groves, and Professor Miles H Phillips , 1 15 p m , luncheon at the University Union , 3 30 p m , garden party in the gardens of the Royal Fort, given by the Sheriff of Bristol (Dr W Kenneth Wills) Past and present members of the Medical School who intend to be present at the celebrations may bring a guest to each of the functions mentioned It is essential that applications for tickets should be made not later than to-day (June 17th)

The Harveian Society

The Buckston Browne annual banquet of the Harveian Society of London was held on June 8th at the Star and Garter Home for Disabled Sailors and Soldiers, Richmond After the loyal toasts had been honoured, The Harveian Society ' was proposed by Lord Lee of Fareham in a learned and witty speech The man whom they honoured, he said, had suffered the usual fate of pioneers in having his original communications received with a certain amount of distrust Harvey had no outstanding personal characteristics, and was, as Aubrey had said " a most likeable man ' After telling an anecdote in connexion with Harvey's visit to Germany after the Thirty Years' War, Lord Lee made some humorous references to the " early and disastrous history " of the medical profession The Prince of Orange, he said, had been trephined seventeen times whereas nowadays he would have taken aspirin In replying to the toast the president, Lieut -Colonel E L Gowland, commandant of the Star and Garter Home, expressed regret at the absence of Lord Riddell who had presented the society with a loving cup For the first time the Buckston Browne banquet was being held outside London He announced the gift from the society to Sir Buckston Browne of a garden-seat for the Buckston Browne Research Farm at Downe The health of the visitors was proposed in an amusing speech by Dr T C Hunt Confessing that he was more familiar with the Oval than with Southwark Cathedral, he said that he shared with the Bishop of Southwark common memories of the lectern at Magdalen College Chapel Replying for the guests the Bishop of Southwark remarked upon the magnificent site of the Star and Garter Home He referred to the bells of Hempstead Church, for which the Harveian Society had already raised £250 towards the £400 it had promised to subscribe Judge Cecil Whiteley, who also replied, said that this was the first time he had been entertained as a guest of the medical profession although he admitted that he had often been supplied with cocktails by his own doctor

London University Foundation Stone Ceremony

The following programme of events in celebration of the laying of the foundation stone of the new buildings for the University on the Bloomsbury site by His Majesty the King on Monday, June 26th, at 3 p m has now been provisionally arranged On June 24th, a dinner for about 400 persons at Grosvenor House Park Lane On June 25th, informal hospitality to representatives of British and foreign universities and learned societies On June 26th, informal dinners at certain colleges to the representatives of other universities and of learned societies , at 9 p m a reception given by the Chairman of the London County Council at the County Hall The accommodation on the site for the stone laying ceremony is necessarily limited, but provision is being made for about 3,000 people to be present The King and Queen will drive to the site, where they will be received by the Chancellor, the Earl of Athlone Before Their Majesties arrival there will be processions of teachers and others

Ireland

The Coombe Lying in Hospital

In 1932 the maternity department of the Coombe Lying in Hospital, Dublin, received 1,403 patients, of whom 1,288 were delivered there This represented an increase of 116 deliveries over the figure for the previous year In the extern department 1,480 cases were delivered, as compared with 1,500 in 1931 There were about 3,000 attendances at the ante natal department, one third of which were new cases There were eighteen deaths in the year, and the morbidity rate was 4 8 per cent (British Medical Association standard), the highest recorded during the tenure of office of the present master, Dr T M Healy It is stated in the annual report that examination of the mortality table shows that responsibility for at least three of the deaths does not rest with the hospital Thus one patient was admitted moribund from post-partum haemorrhage and another died an hour after admission in advanced eclamptic coma It is pointed out, however, that there were many cases of minor infection in the spring months, when overcrowding of the hospital is always greatest There were four deaths from sepsis—three in the spring, and one in the autumn Two deaths from detachment of the placenta in cases of marked hydramnios were particularly unfortunate Fewer cases of disproportion were treated operatively than in the preceding year There were ten cases of eclampsia with two deaths Labour was induced on thirty two occasions,

ROYAL ARMY MEDICAL CORPS.

TWENTY-FIVE *permanent* COMMISSIONS *in the* ROYAL ARMY MEDICAL CORPS will be offered on April 28th, 1933. Applications should reach the War Office not later than April 21st, 1933.

Candidates will be selected for commissions *without competitive* examination, and will be required to present themselves in London for interview and medical examination on April 28th, 1933. They must be under 28 years of age on May 1st, 1933, and registered under the Medical Acts.

Officers of the R.A.M.C. are liable to serve in any part of the world where British troops are quartered.

Ample opportunities exist in the Army for clinical professional work, both Medical and Surgical, as well as for the study and practice of Hygiene, Pathology, and all the special branches.

The cost of Post-Graduate study, which is compulsory, is met from Army Funds.

Emoluments: Pay—From £356 to £1,542 a year according to rank. **Allowances**—Free quarters, fuel and light, servant and rations, or cash allowance in lieu, totalling from 6/5d. to 23/3d. a day according to rank (£117 to £424 a year).

The above rates of allowances apply to Home Commands only. At certain stations abroad the rates are considerably higher.

Candidates who have held a full-time house appointment in a recognized civil hospital before appointment to a permanent Commission in the R.A.M.C. may, subject to certain conditions, be allowed to count the period of service in such an appointment, up to a maximum of 12 months, as Army service for promotion, increase of pay, and retirement.

Gratuities on Retirement.—After 7 years' service as a medical officer £1,000
„ 15 „ „ „ „ £2,800
„ 18 „ „ „ „ £3,500

Current rates of retired pay range from £352 10s. per annum, normally earned by a Major after 20 years' service, to £890 per annum, the maximum for which a Major-General is eligible. The rates of pay and retired pay are *subject to periodical variation consequent on fluctuations in the cost of living.*

Outfit Grant.—An officer on joining receives £50 as outfit allowance.

Married Officers' Allowances.—Officers of 30 years of age and over who are married are entitled to draw special rates of allowance.

A Voluntary Widows' and Orphans' Fund exists for officers of the Corps.

All particulars may be obtained by application, in writing or personally, to the Assistant Director-General, Army Medical Services, The War Office, Whitehall, London, S.W.1.

COUNTY BOROUGH OF BLACKBURN.

PUBLIC ASSISTANCE COMMITTEE.

RESIDENT JUNIOR ASSISTANT MEDICAL OFFICER.

Applications are invited from Medical Practitioners (male) for the appointment of a Resident Junior Assistant Medical Officer at Queen's Park Institution and Infirmary. The applicants must be registered as Medical Practitioners.

The staff consists of a Resident Medical Officer, a Resident Assistant Medical Officer, a Consulting Surgeon, a Laboratory Assistant and X-ray Attendant.

There is a separate Infirmary, separate Mental Block, and a separate Sanatorium for Children, and there is opportunity for experience in all departments, including medical, surgical, and midwifery cases. An X-ray apparatus is installed.

The person appointed will be required to devote his whole time to the duties, and also to act as may be directed by the Resident Medical Officer.

The appointment will be limited to a term not exceeding one year, with a minimum period of six months.

Salary £150 per annum (subject to a temporary economy deduction of £3 5s., together with board, apartments, and attendance.

Applications, stating age, qualifications, and experience, and accompanied by copies of not more than three recent testimonials, must be sent so as to reach the Public Assistance Officer, Public Assistance Offices, Cardwell Place, Blackburn, not later than April 5th.

Town Hall, BRIGGS H. MARSDEN,
Blackburn. Town Clerk.
March 25th, 1933.

ROYAL NORTHERN HOSPITAL, Holloway, N.7.

Applications are invited for the post of HOUSE PHYSICIAN, vacant on June 1st. The appointment is for nine months (three months as Out-patient Casualty Officer and Anaesthetist from June 1st, and six months as House Physician). Salary at the rate of £70 per annum, with board, residence, and laundry.

Applications, with copies of testimonials, should be sent by April 8th to the undersigned, from whom forms of application and rules can be obtained.

GILBERT G. PANTER, Secretary.

CITY OF BIRMINGHAM.

SELLY OAK HOSPITAL. (500 Beds.)

CASUALTY OFFICER (Male).

Applications are invited from fully qualified Medical Practitioners for whole-time appointment as "Casualty Officer" (male) at the Selly Oak Hospital, Birmingham. The appointment will be for a period of six months in the first instance, but may be extended at the end of that time for a further period of not exceeding six months.

Salary at the rate of £200 per annum and full residential emoluments. The salary and emoluments will be subject to any "voluntary abatement" in force from time to time. The officer appointed will be required to refund to the Council all fees, allowances, and emoluments (other than the foregoing) received by him.

Further particulars may be obtained from the Medical Superintendent at Selly Oak Hospital, to whom applications, stating age, experience, and qualifications, with copies of recent testimonials, should be forwarded not later than Wednesday, April 12th.

The Council House, F. H. C. WILTSHIRE,
Birmingham. Town Clerk.
March, 1933.

ROYAL SURREY COUNTY HOSPITAL, GUILDFORD. (182 Beds.)

Applications are invited for the post of SECRETARY-SUPERINTENDENT. Applicants should be under 45 years of age and should preferably have had previous experience of Hospital *management. Salary £500.* Full particulars, to be given in own handwriting, and copies of three testimonials, should be addressed to the Chairman at the Hospital on or before *April 15th. Canvassing prohibited.*

THE ROYAL INFIRMARY, SUNDERLAND. (290 Beds.)

TWO HOUSE SURGEONS and ONE HOUSE PHYSICIAN (male) required on May 1st. Salaries £140 per annum, with board, residence, and laundry. Applications, stating age, qualifications, and accompanied by copies of testimonials, to be sent to the undersigned immediately.

J. A. BEARDSALL,
House Governor & Secretary.

GLOUCESTERSHIRE JOINT COMMITTEE FOR TUBERCULOSIS.

STANDISH HOUSE SANATORIUM, STONEHOUSE, GLOS.

Applications are invited from registered Medical Men for the post of JUNIOR ASSISTANT MEDICAL OFFICER at the above Institution. No previous professional experience is necessary.

There are at present 250 beds, including men, *women, and children.* There is an orthopaedic block.

The salary is £250 per annum, with board, furnished apartments, and laundry, in addition, subject to an *economy* deduction of combined salary and value of emoluments as follows:

On the first £65 per annum, nil;
On the next £205 per annum, 2½ per cent.;
and 3½ per *cent. on* the remainder.

The appointment is for six months (with the possibility of extension for a further period of six months) and will be *terminable* within that period by one *month's notice* on either side.

Applications, stating qualifications and age, and accompanied by copies of three recent testimonials, should be received not later than *April 4th.*

Shire Hall, E. T. GARDOM,
Gloucester. Clerk of the Joint
March 23rd, 1933. Committee.

HULL ROYAL INFIRMARY. (367 Beds.)

Applications are *invited from* registered Medical Practitioners for the following posts (male):

ASSISTANT HOUSE PHYSICIAN. Vacant April 14th. Salary *at the rate of* £150 per annum, plus residence, board, and laundry.

CASUALTY OFFICER. Vacant April 17th. Salary at the rate of *£150* per annum, plus residence, board, and laundry. The officer appointed will work mainly under the direction of the Resident Surgical Officer.

The Successful candidates will be expected to stay for not less than six months, but the appointments are at any time determinable by one month's notice on either side.

Applications, giving particulars of age, experience and nationality, together with copies of testimonials, should be addressed to the undersigned.

R. J. CARLESS,
House Governor.
March 27th, 1933.

once by tube twenty seven times by drainage of the liquor amnii and four times medicinally Caesarean section was performed on twenty three patients—in eighteen for disproportion and in the remainder for multiple fibroids cervical fibroid heart disease persistent vomiting and a previous section respectively In the last case the patient had had Caesarean section performed in a preceding pregnancy for placenta praevia convalescence was complicated and it was decided therefore to avoid the risk of a second labour At the operation dense adhesions were found between the primary uterine scar and coils of the small intestine Details are given in the report of the various circumstances leading to the eighteen maternal deaths

Health Week in Belfast

Health Week in Belfast has been a great success Dr C S Thomson medical superintendent officer of health was responsible for the programme and many valuable suggestions were made for the co operation of local authorities in rural areas with the Belfast Corporation in the inspection of milk production In the course of his opening address Alderman J Dunlop Williamson M D chairman of the Public Health Committee said that Belfast was in a unique position It was a new city although it had old traditions and in the extremely rapid progress it had made in the last half-century or so it had suffered more or less by its growth which had been allowed to continue without supervision The result was that the death rate in the latter part of the last century had been far too high and typhoid fever had been endemic and epidemic in the city Something was clearly wrong and measures were required to preserve the health of the people As a consequence the early Sanitary Committee came into being to be followed by the Public Health Committee of the corporation in whose care the health of the city was placed That committee had worked with a will ever since its establishment and he was pleased to be able to say that typhoid was hardly known in Belfast to-day The position of Belfast among surrounding hills was unfortunate because the large chimneys of the various mills and factories spread a canopy of smoke over it through which the sun's rays did not percolate Belfast accordingly suffered from reduction of the health giving sunshine It was hoped however that as science progressed, as the smoke nuisance was abated and as sanitation advanced there would be no city in the kingdom as well and as healthy as Belfast The object of the Health Week was educative it aimed at indicating how every citizen could co-operate in achieving a happy state of health in the city

The Lord Mayor spoke appreciatively of the services of Dr Williamson as chairman and of those of the other members of the Public Health Committee who he said worked steadily and quietly week in and week out under the guidance of Dr Thomson for the benefit of the citizens There were few people who really gave any consideration to what the public health services in the city were doing and the best results could not be obtained unless the co-operation of everyone was secured and unless there was a realization that the public health authorities were working for the benefit of the whole community The Lord Mayor paid a tribute to the Water Board for its work in providing a pure water supply and offered friendly criticism to local authorities outside the city in regard to the inspection of the milk supply He thought there should be greater co-operation in this matter between the authority in Belfast and the local authorities outside the city The milk produced inside the city was examined at the source of supply by their own inspectors but they had no jurisdiction outside their own area He would agree with those outside authorities if all the milk produced in their areas were consumed there but some of it was sent into Belfast and he held therefore that the city authorities should at least have the power to inspect it at the source

Medical Officers' Salaries in Northern Ireland

A letter addressed to the Minister of Home Affairs by the Tuberculosis Committee of Belfast Corporation stated that although the duties and responsibilities devolving upon the three officers had in recent years very greatly increased the remuneration of the medical superintendent had at no time advanced there had been only minor increases in the remuneration of the other two officers concerned and emoluments that formerly attached to these positions had ceased These three officers were not it was added singled out especially for consideration increases were recommended for other officers in the department but the recommendations failed to receive the approval of the General Purposes Committee and were not included in those adopted by the Council The medical superintendent's present salary (£720 per annum) was some £160 below that at which he was appointed in 1924 by reason of (1) a loss of £80 per annum brought about by the passing of the Health Insurance Act of 1930 and (2) a loss of £80 per annum under the corporation's general salary cut It compared unfavourably with that of £950 per annum sanctioned by the Ministry of Health for England and Wales for similar appointments in Britain The Ministry of Labour now requested that the work of medical certification should be carried out as formerly but without fee or reward During the nine years since the medical superintendent's appointment his duties had increased greatly The sanatorium had been extended to 285 beds and the annual admission rate had risen from 467 in 1924 to 605 in 1932 To cope with the emergency a department for the treatment of children suffering from surgical tuberculosis was inaugurated in 1932 As a result the clinical work of the sanatorium had become exceedingly heavy Nevertheless the clinical staff had been reduced The services of a visiting physician had been terminated with a saving of £180 per annum and the services of the dispenser had also been discontinued effecting a further saving of £160 per annum Thus despite an increased number of patients and greatly increased clinical work there had been a reduction in expenditure of £340 per annum The abstract of accounts showed that in 1924 the expenditure was £26 974 while in 1932 it was £22 529 The cost per patient per week was the lowest of any institution in the United Kingdom treating a similar type of case The resident medical officer appointed in 1925 had received one increase of salary This increase of £50 had however been more than nullified by the loss of £80 per annum consequent upon the passing of the Health Insurance Act of 1930 He was in addition subject to the 10 per cent general salary cut the result being that he was to-day in receipt of £70 per annum less than when he was appointed his present salary being £360 The house physician appointed in 1929 on a temporary basis received one increase of £50 per annum in 1930 In her case the certification emoluments were approximately £50 so that no benefit resulted when the latter ceased She was also subject to the 10 per cent general salary abatement her present salary was £225 approximately £25 per annum less than upon appointment In reply to the Tuberculosis Committee the Ministry of Home Affairs stated that it was only a year since the corporation after careful consideration of the salaries in all departments decided that in view of the serious financial position it was necessary to reduce those salaries by 10 per cent and the Ministry

INDIAN MEDICAL SERVICE

Recruitment of European Officers.

Applications are invited from medical men for permanent commissions in H.M.'s Indian Medical Service. The terms offered include a gratuity of £1,000 on retirement after six years' service, or £2,500 after 12 years' service, together with free return passages for those who no longer desire to remain in the Service. *In other respects the terms will be as detailed below.*

Candidates must be European British subjects under 32 years of age at the time of application, and must be registered under the Medical Acts in force in Great Britain and Northern Ireland.

CAREERS.

The Indian Medical Service offers wide opportunities of medical experience, including clinical, preventive, specialist, and research work. At the beginning of his career an officer is employed on the military side, which has medical charge of the Indian Army. Promotion is on a time scale up to the rank of Lieutenant-Colonel, and by selection to the ranks of Colonel and Major-General. An officer may apply after one year's Indian Service to have his name registered for transfer to the civil side, from which appointments are made to Civil Surgeoncies, which are established at the principal civil centres to provide for the medical needs of civil officials and for general medical administrative purposes; to specialist (for example, public health and bacteriological) services; to research posts; and to professorships at the Medical Schools.

NOTE.—It is not possible to state at present what, if any, prospects of employment on the civil side will be open to Indian Medical Service Officers under the proposed new constitution for India.

PAY.

Owing to the state of the financial emergency at present prevailing in India it is proposed to subject the existing monthly rates of pay, which are as follows, to a temporary reduction not exceeding 5 per cent.

Rank.	Service in Rank.	Basic Pay.	Overseas Pay.	Year of Total Service.
		Rs.	Rs.	
			150	1st
Lieut.	—	500	150	2nd
			150	3rd
			150	4th
Capt.	(i) During first 3 years' service as Captain	650	£15	5th
			£15	6th
			£25	7th
	(ii) With more than 3 and less than 6 yrs.' service as Captain	750	£25	8th
			£25	9th
			£25	10th
	(iii) With more than 6 years' service as Captain	850	£25	11th
			£30	12th
Major	(i) During first 3 years' service as Major	950		
	(ii) With more than 3 and less than 6 years' service as Major	1100		
	(iii) With more than 6 years' service as Major	1250		
Lieut.-Col.	(i) Until completion of 23 years' total service	1500	£30	13th and over
	(ii) During 24th and 25th years' service	1600		
	(iii) After completion of 25 years' total service	1700		
	(iv) When selected for increased pay	1850		

EXTRAS.—In addition to the above rates various allowances are admissible for a large number of special appointments on both the military and the civil side which may be held by members of the Indian Medical Service. Special high rates of pay are also attached to the numerous administrative appointments open to officers in both branches of the Service.

ANTEDATES IN COMMISSION.

Any service rendered by an officer during the war as a medical or combatant officer, or in a position usually filled by an officer, may be counted as service for increments of pay, promotion, retirement and retired pay, but not for gratuity.

One half of any service in the ranks during the war may be counted as service for retirement and retired pay only.

Candidates possessing certain higher medical qualifications may be granted an antedate of one year in their commissions. Past service in certain hospital appointments may also render candidates eligible for an antedate of one year. Persons holding or about to hold resident posts at recognized hospitals may be seconded in those posts for a period not exceeding one year. The maximum period of antedate, secondment, or antedate and secondment combined, admissible under this paragraph, is limited to one year.

OUTFIT ALLOWANCE.

Officers on appointment will receive an allowance of £50 towards the cost of outfit.

PRIVATE PRACTICE.

With the exception of Administrative Officers, military or civil, and officers holding certain special appointments, officers are not debarred from taking private practice, so long as it does not interfere with their proper duties.

LEAVE.

Leave can be taken at reasonable intervals, and adequate rates of leave pay are provided. Extra leave (known as study leave), which may not exceed 12 months in all during an officer's service, may be granted to officers desirous of pursuing special courses of study of a post-graduate nature. During such leave, study allowance, at present fixed at the rate of 12s. a day in the United Kingdom, £1 a day on the Continent of Europe, and £1 10s. a day in the United States of America, is granted to an officer in addition to ordinary rates of leave pay.

PENSIONS.

The rates of pension are as follows:

	Per annum £
After 17 years' service for pension	400
,, 18 ,, ,, ,, ...	430
,, 19 ,, ,, ,, ...	460
,, 20 ,, ,, ,, ...	500
,, 21 ,, ,, ,, ...	540
,, 22 ,, ,, ,, ...	580
,, 23 ,, ,, ,, ...	620
,, 24 ,, ,, ,, ...	660
,, 25 ,, ,, ,, ...	700
,, 26 ,, ,, ,, ...	750
,, 27 ,, ,, ,, ...	800

These rates are subject to alteration on account of a rise or fall in the cost of living as compared with the year 1919 to an extent not exceeding 20 per cent. in all. At present a reduction of 8½ per cent. is being made on this account.

There are additional pensions ranging from £65 to £350 per annum for officers who have held administrative appointments.

PASSAGES.

An officer on appointment is provided with free passage to India. The wives and families of officers who are married prior to the date of the officers' embarkation on first appointment will also be provided with free passage to India, subject to the payment of messing charges.

Officers and their families are also eligible for passage concessions under which they are granted a certain number of return passages home at Government expense during their service.

INSTRUCTION PRIOR TO EMBARKATION.

Officers are required to undergo courses of instruction at the Royal Army Medical College and at Aldershot, lasting approximately six months, prior to their embarkation for India on first appointment. Information as to the rates of pay admissible during this period and subsequently up to arrival in India is contained in the memorandum referred to below.

A memorandum giving full details regarding these appointments and forms of application may be obtained from the Under-Secretary of State for India, Military Department, India Office, London, S.W.1. The Selection Committee will meet at the India Office early in April next, and the selected candidates will be required to join a course of instruction commencing towards the end of April prior to sailing for India about November, 1933. Applications should be submitted as soon as possible.

was not aware that circumstances had changed so as to justify after such a short interval, increases to certain officers which would not only nullify the reduction but would leave these officers in a better position than before The Ministry regarded the proposal as premature at the present time, but if the corporation wished to submit proposals after the end of the current financial year, the Ministry would be prepared to consider them in the light of the circumstances then existing

Scotland

Welfare of the Blind

At the sixteenth annual conference of the Scottish National Federation for the Welfare of the Blind, held on June 8th and 9th at Kirkcaldy and Dunfermline Dr F M Earle, rector of Kirkcaldy High School contributed an address on the psychology of the blind There was he said a conspicuous lack of established facts regarding the various effects of total and partial blindness upon the learning capacities of different individuals, and there was great scope for psychological research into these problems Partially blind and totally blind children were at present taught in the same classes and by the same methods, and he doubted whether this was a sound procedure Dealing with the question of providing employment for blind workers, Dr Earle said that five years ago, when the National Institute for the Blind made an inquiry into this question all sorts of difficulties were raised by employers, but it had been found that most of these could be removed to some extent by appropriate organization, as, for example, the inclusion of one or more blind workers in a factory "team" It might be possible in the future successfully to provide work for the blind, even though this might have to be of the simplest repetitive kind

A discussion on modern tendencies in blind welfare administration was opened by Mr John R Mackenzie, general superintendent of the Northern Counties Institute for the Blind Inverness, who said he believed that the increased responsibility towards the blind imposed upon local authorities by Act of Parliament might, within the next ten years, entirely alter the character of blind welfare work Managers, staff, and directors of agencies for the blind must place their knowledge at the disposal of the local authorities so that the latter might entrust to them the administration of the schemes which were springing up for the welfare of the blind Dr Robert A Krause deputy medical officer of health for Fife, said that there were both advantages and disadvantages in institutional education for the blind, for such a training made it difficult for a blind child to take his place again naturally in the social system, and teachers also tended to become institutionalized so that they did not sufficiently recognize the social problems outside There was a large proportion of mentally defective children among the blind, recent returns from the Department of Health had shown that over 12 per cent of blind children between the ages of 5 and 15 were mentally defective It was necessary to alter the present purely vocational kind of education

At a public meeting in Kirkcaldy Dr John Marshall, speaking of his experience as a certifying surgeon in the Glasgow Blind Clinic said that, in regard to the standard of blindness, there had been in certain conditions a relaxation in favour of the applicant The great benefit derived from the standards that had been set up was that ophthalmic surgeons in all parts of the country could apply the definition of the Act more uniformly Until the system of certifying all blind persons by regional clinics had been in operation for some years there must be cases involving a certain degree of hardship where persons previously certified as blind had to be de certified

Smoke Abatement

At the annual meeting of the Scottish Branch of the National Smoke Abatement Society, held in Edinburgh, Lord Provost W J Thomson, in welcoming the delegates, said that the society had been engaged on a most important problem for twenty-four years—namely, the abolition of the smoke pollution of the atmosphere It was beyond dispute that if the smoke pall which hung over large towns could be removed, the daily labours of housewives would be reduced by a half A large proportion of deaths from pulmonary disease was due to the inhalation of smoke-laden, poisonous atmosphere It was surely just as essential to secure pure air as to obtain supplies of pure water, milk and food In Edinburgh it had been estimated that the introduction of heating and cooking by gas had supplanted the direct burning of approximately 80,000 tons of coal, and there was now less pollution of the atmosphere by smoke than in most other cities of a similar size The annual report of the society had stated that household chimneys were now responsible for the greater part of air pollution The preference for a raw coal fire was merely sentimental, and an equal, if not a greater, amount of heat could be obtained by smokeless methods Professor William Oliver, Edinburgh University, said that complete smoke abatement was very far from attainment and the problem of domestic smoke diminution depended primarily upon the use of smokeless fuel such as coke together with an increasing use of gas and electricity The ideal system would be one in which all raw coal was treated by low-temperature carbonization, and the gas thus obtained used for boiler firing, while the oil, tar and other by-products were employed to reduce imports of these commodities, and the coke used for domestic purposes

Foot Clinics in Scotland

At the annual meeting of the Edinburgh Foot Clinic, with Professor John Fraser in the chair Mr Walter Mercer said that the number of treatments carried out at the clinic had risen during the past year from 8,297 to 10,362, an increase of 25 per cent It was a matter for gratification that the public was being educated to the preventive aspect of chiropody This was the only school of chiropody in Scotland which was recognized by the medical profession At the close of the meeting the clinic was visited by the Lord High Commissioner to the General Assembly of the Church of Scotland

At the second annual meeting of the Glasgow and West of Scotland Foot Hospital, which was held on the same day, with Lord Provost A B Swan presiding, it was reported that the number of patients treated during the year ended March 31st last was 1,310, and that 5,230 individual treatments had been given Donations from patients had amounted to £132, and the institution had ended the year with a surplus

Health of Dunfermline

The annual report of Dr C Barclay Reekie, medical officer of health for Dunfermline, shows that the estimated population of this burgh to the middle of 1932 was 35,694, and that the number of births registered during the year was 655, giving a rate of 15.4 per 1,000 as compared with the average for the last five years of 16.26 The number of deaths of children under 1 year was

THE ROYAL HOSPITAL, WOLVERHAMPTON.
(Incorporated under Charter.)

HOUSE SURGEON required. Duties include Orthopaedic Surgery as well as General Surgery.
The Hospital contains 300 beds, includes the usual special departments and is recognised by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice.
Candidates must be registered under the Medical Acts, and unmarried.
The appointment is for six months. Salary at the rate of £100 per annum, board, furnished rooms, and laundry provided.
Applications, with copies of testimonials, to be forwarded to the undersigned.
Wolverhampton. W. H. HARPER,
March 27th, 1933. House Governor.

HOVE HOSPITAL, HOVE, SUSSEX.

Applications are invited for the post of RESIDENT MEDICAL OFFICER.
The appointment is for six months.
Salary £200 per annum, with board, residence, and laundry.
The Hospital contains 24 beds.
The appointment offers excellent opportunities for Surgical experience and for acquiring knowledge of Radium Treatment.
Applications, stating age, qualifications, together with three recent testimonials, must be forwarded to the undersigned not later than Wednesday, April 5th.
H. AUBREY FROGGATT, Gen. Secretary.

GENERAL HOSPITAL, NOTTINGHAM.
(386 Beds.)

A HOUSE SURGEON is required at the above Institution. The appointment is for six months with salary at the rate of £150 a year, with board, residence, and laundry. Candidates, who must have had previous Hospital experience, are desired to send applications and full particulars as to age, qualifications, and experience, together with copies of testimonials, to the undersigned not later than Wednesday, April 19th.
The appointment will be made on Wednesday, April 26th. Duties to commence on May 6th.
PETER M. MACCOLL,
House Governor & Sec.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.13.

Applications are invited for the posts of RESIDENT and ASSISTANT RESIDENT MEDICAL OFFICERS (vacant April 30th), male or female. The appointments are for six months and will expire on October 31st next. Board and residence are provided. Salaries at the rate of £175 and £120 per annum respectively, including £5 allowance for laundry. The duties of the R.M.O., are mainly surgical and those of the A.R.M.O. mainly medical. Personal canvassing not desired. Applications, with copies of three recent testimonials, to be sent to the undersigned not later than April 6th.
A. ERNEST WILKES, Secretary.

THE WILLESDEN GENERAL HOSPITAL,
Harlesden Road, N.W.10.

The Council of Management invite applications for the appointment of ASSISTANT SURGICAL OFFICER, who will be required to commence duty on July 1st.
Candidates, who must be Fellows of the Royal College of Surgeons of England, are invited to send six copies of their application and testimonials, to the Secretary not later than first post on Thursday, April 20th.
An honorarium at the rate of £50 per annum attached to this appointment, and candidates will be provided with a copy of the Regulations, upon written application to the Secretary.
March 20th, 1933.

EAST HAM MEMORIAL HOSPITAL, Shrewsbury Rd., E.7. (100 Beds.)

Applications are invited for the post of ANAESTHETIST. The successful candidate will be required to attend on Wednesday afternoons. Honorarium 50 guineas per annum.
Applications, stating age, experience, and full particulars, together with copies of three testimonials, should be forwarded to the undersigned immediately.
REGINALD PERRY, Secretary.

SEAMEN'S HOSPITAL SOCIETY,
Greenwich.

RESIDENT MEDICAL OFFICER required at ALBERT DOCK HOSPITAL, Connaught Road, E.16, for six months from May 1st. Salary £110 per annum and a proportion of fees, with board, residence, and washing. Candidates must be male. Applications, with copies of three testimonials, to be sent in by April 11th to the undersigned.
Greenwich. R. E. V. BAX,
March 27th, 1933. Secretary.

ST. BARTHOLOMEW'S HOSPITAL.

APPOINTMENT OF DENTAL HOUSE SURGEON.

Applications are invited for the office of House Surgeon to the Dental Department. Candidates must hold a registrable Dental qualification and a medical qualification in addition is desirable but not essential.
Appointment will be made for six or twelve months from May 1st.
The salary attaching to the office is £80 per annum (non-resident).
Twelve copies of applications, with testimonials, must be left with the undersigned on or before Wednesday, April 19th.
THOMAS HAYES,
March 1st, 1933. Clerk to the Governors.

ROYAL MANCHESTER CHILDREN'S HOSPITAL, PENDLEBURY.
Near MANCHESTER. (190 Beds.)

Wanted, a RESIDENT SURGICAL OFFICER, salary £125 per annum, who will be appointed for six months. Duties to commence May 1st. Candidates must be unmarried and duly registered. Previous hospital experience essential. A Fellow of one of the Royal Colleges of Surgeons would receive preference. Applications, stating age, and accompanied by copies of not more than three testimonials, to be sent to the undersigned not later than Thursday, April 6th. Canvassing, directly or indirectly, may disqualify.
By Order,
W. M. HUMPHRY, Secretary.

ROYAL MANCHESTER CHILDREN'S HOSPITAL, PENDLEBURY.
Near MANCHESTER. (190 Beds.)

Wanted, a RESIDENT MEDICAL OFFICER, salary £125 per annum, who will be appointed for six months. Duties to commence May 1st. Candidates must be unmarried and duly registered. Previous hospital experience essential. Applications, stating age, and accompanied by copies of not more than three testimonials, to be sent to the undersigned not later than Thursday, April 6th. Canvassing, directly or indirectly, may disqualify.
By Order,
W. M. HUMPHRY, Secretary.

WESTERN OPHTHALMIC HOSPITAL,
Marylebone Road, London, N.W.1.

Applications are invited for the post of SENIOR RESIDENT and JUNIOR NON-RESIDENT HOUSE SURGEON. The salaries are at the rate of £150 and £100 per annum respectively, and the appointments are for six months.
Some previous Ophthalmic experience is required.
The selected candidates will be required to take up duty on May 1st.
Applications, accompanied by copies of three testimonials, should reach me by April 12th.
Candidates should state in their applications whether they are prepared to accept either post.
H. W. BURLEIGH, Hon. Secretary.

PADDINGTON GREEN CHILDREN'S HOSPITAL (Incorporated),
London, W.2.

HOUSE PHYSICIAN.
HOUSE SURGEON.

These appointments will become vacant on May 1st. Gentlemen (unmarried) are invited to send in their applications, with copies of three testimonials, to the undersigned not later than first post on Friday, April 7th. Salary of each at the rate of £150 per annum, with board and residence. Candidates, who have held a responsible Resident Hospital appointment are preferred. The appointments are for a period of six months.
JAMES A. HAMLIN, Secretary.

PADDINGTON GREEN CHILDREN'S HOSPITAL (Incorporated),
London, W.2.

Applications (male or female) are invited from registered Medical Practitioners for the appointment of CLINICAL ASSISTANT to Medical Outpatients on Wednesday mornings at 9.30 a.m. Intending candidates should submit applications, stating age and qualifications, to the undersigned not later than Wednesday, April 12th.
JAMES A. HAMLIN, Secretary.

ROYAL LANCASTER INFIRMARY.

SENIOR and JUNIOR HOUSE SURGEONS (male) wanted for a period of six months commencing May 1st.
Salary £175 and £130 per annum respectively, with board, residence, and laundry.
Applications from British graduates, stating age, experience, and qualifications, together with copies of testimonials, should be sent not later than April 18th, to Secretary, Medical Committee.

NORWICH INFIRMARY.
RESIDENT ASSISTANT MEDICAL OFFICER.

Applications are invited for the post of Resident Assistant Medical Officer at the Norwich Infirmary. The gross salary will be £480 per annum, rising by annual increments of £24 to £576 per annum (which represents £500 per annum, rising to £600 per annum after having been subjected to a temporary adjustment, from which a deduction at the rate of £150 per annum will be made for residential allowances. The salary may be subjected to further temporary adjustments, but the total amount of reductions from the gross salary will not exceed 10 per cent. For further particulars send stamped addressed envelope to the Medical Officer, Norwich Infirmary, Bowthorpe Road, Norwich.

BURY INFIRMARY, LANCS.
(127 Beds.)

Applications are invited for the post of THIRD HOUSE SURGEON (male), who must have both Medical and Surgical qualifications. The appointment is for six months at a salary at the rate of £150 per annum, with board, residence, and laundry. The successful applicant will be required to commence duties beginning of May.
Applications, stating age, qualifications, and nationality, with copies of three recent testimonials, to be sent to the undersigned not later than April 7th.
Particulars of duties may be had on application.
ALEX. W. MAITLAND,
Hon. Secretary.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST,
Brompton, S.W.3.

The Committee of Management invite applications for the post of ASSISTANT SURGEON for which there are two vacancies.
Candidates must be Fellows of the Royal College of Surgeons of England, and hold the appointment of Surgeon or Assistant Surgeon at a General Hospital in London.
Applications, with copies of testimonials, must reach the undersigned from whom further particulars of the post can be obtained, not later than Saturday, April 22nd.
FREDERICK WOOD,
March 24th, 1933. Secretary

THE STAFFORDSHIRE GENERAL INFIRMARY, STAFFORD.

HOUSE PHYSICIAN required. Salary £150 per annum and board residence. The appointment must be held for at least six months and the duties will include those of Casualty Officer. The selected candidate will be required to take up duties as early as possible. The Hospital has 100 beds and there are two Residents. Applications, stating age, accompanied by copies of three recent testimonials as to qualifications and experience, should be forwarded to the undersigned forthwith.
Stafford. A. E. COLLINS,
March 27th, 1933. Secretary.

NEWCASTLE THROAT, NOSE, AND EAR HOSPITAL.

HOUSE SURGEON required for six months from date of appointment. Applicants must be fully qualified, registered, and preferably have held Resident appointment.
Salary £100 per annum, together with board, residence, and laundry. Applications, stating age, qualifications, and experience, accompanied by copies of three recent testimonials, should be sent to the undermentioned not later than April 8th.
CHAS. W. LISLE, Secretary.

YORK COUNTY HOSPITAL
(200 Beds.)

The post of [illegible] AND ASSISTANT [illegible] will become vacant. Salary £150 per annum, with board, residence, and laundry.
Applications from men or women, stating age and previous experience, together with copies of not more than three recent testimonials, to be sent to the undersigned not later than 9 a.m. on Saturday, April 15th.
H. E. RYAN, Gen. Superintendent.

HOUNSLOW HOSPITAL, STAINES ROAD,
Hounslow, Middlesex. (70 Beds.)

Applications are invited for the posts of SENIOR and JUNIOR HOUSE SURGEONS, commencing May 1st. Salary £150 and £120 p.a. respectively, with board, residence, etc. The appointment will be for six months.
Applications, stating age, qualifications, and experience, and enclosing copies of three testimonials, should be sent by April 11th (marked "House Surgeon" top left-hand corner of envelope), to W. T. ROSS, Secretary.

twenty seven giving an infantile mortality rate of 49 which is a marked reduction on the average of 62 for the last five years and is the lowest infantile mortality rate on record in the burgh The number of deaths registered was 472 and after correction for transfers the rate was 11 9 per 1 000 as compared with the average of 12 58 for the past five years Heart disease was responsible for the greatest number of deaths malignant disease came second The number of cases of scarlet fever notified was 251 diphtheria fifty eight acute pneumonia thirty six puerperal septicaemia three measles 703 whooping-cough fifty five and cerebro-spinal fever nine Insulin was supplied to nine patients during the year five persons in necessitous circumstances received it free two with assistance and two on repayment altogether 382 ampoules each of 100 units were issued from the Public Health Department The report also stated that the town council had become partners with other local authorities in a joint scheme for the West of Fife for the treatment of infectious diseases and the West of Fife Infectious Diseases Hospital had been considerably extended during the year Public assistance patients had been treated by two part time medical practitioners and their prescriptions dealt with as under the national health insurance scheme

France

[FROM OUR CORRESPONDENT IN PARIS]

Professor d Arsonval s Jubilee

On May 27th the jubilee of Professor d Arsonval was celebrated at the Sorbonne in the presence of the President of the Republic Since 1872 this savant who carries his eighty two years with youthful nonchalance has taught at the Collège de France The public and to a certain degree even the medical profession has been ignorant of d Arsonval s contributions to the sciences of physics and medicine To many he has just been a name to still more his name even has been unknown until this present jubilee was made the occasion for short explanatory articles in the medical and lay press Working on the physiology of the muscles and nerves he found he had to create new electrical equipment and as his researches proceeded he conjured up one delicate instrument of precision after another—electrodes galvanometers the electric bistoury etc The father of diathermy he has opened out new fields the therapeutic possibilities of which have not yet been fully explored In response to the many laudatory addresses delivered in the great amphitheatre of the Sorbonne d Arsonval in a simple speech gave the credit for the influences which had inspired him in his youth to one man and one setting The man was Claude Bernard and the setting was the Collège de France Here sixty years ago Claude Bernard made it possible for his youthful pupil to develop those qualities which have yielded such wonderful fruit After Claude Bernard d Arsonval mentioned the names of two men—Marey and Brown Séquard —to whose inspiration he owed much

Problem of the Medical Student

Medical education is still in the melting pot and it is only the clairvoyant who can say what the ultimate stew will be like The passage of the Armbruster Bill through the Legislative Assemblies has been facilitated by the present and impending invasions of the medical profession by foreigners most of whom come from Eastern Europe Whether it be true or not that they are almost as numerous as the French students there is no escaping the fact that the medical profession in France is yearly becoming more overcrowded In the cities in particular it is already difficult for the rank and file to make a respectable living It is therefore quite natural that the provisions of the Armbruster Bill for the exclusion of the foreigner should be generally welcomed Another question over which there is much less sweet reasonableness is that of the medical student s preliminary studies The academically minded would like him to serve an apprenticeship in Greek and Latin The socialistically minded see in these dead languages an artificial barrier protecting the select from the crowd As for the student who has satisfied his examiners in the preliminary subjects how is he to pursue his medical studies so that he emerges from the ordeal as a competent medical practitioner? During a recent discussion at the French Academy of Medicine Professor Georges Haye m indulged in some plain speaking The Ministry of Public Health he pointed out had decided to build a brand new Faculty of Medicine at the cost of some 800 million francs just at a time when serious economies were necessary This he thought was putting the cart before the horse and he suggested that spacious quarters might be wasted if their prospective occupants had no adequate provision for their systematic education In the past the authorities concerned had muddled along attempting to improve the teaching by multiplying the number of chairs in certain disciplines Professor Hayem s calculations as to the number of medical students at the Faculty of Medicine in Paris alone are impressive For the year 1932-3 there were 3 500 matriculations If the duration of the medical curriculum be put at five years there should be over 17 000 medical students in Paris at the same time if there be no fallings off Professor Hayem allows for them liberally and thus reduces his total of medical students to about 10 000 But even so!

Annual Congress of Forensic Medicine

The French Annual Congress of Forensic Medicine was held at the end of May at the Medico-Legal Institute in Paris under the chairmanship of Professor Balthazard One of the most interesting communications was made by Dr Chavigny of Strasbourg who chose as his subject forensic medicine and bacteriology As he pointed out microbic epidemics may have a criminal origin or at least a criminal element Among the incidents with which he chose to illustrate his paper was of course the Lübeck trial It was conspicuous among other things for the human passions it provoked It will be remembered that this trial hinged on the question whether the babies who had died after inoculation had been given pure B C G cultures or virulent tubercle bacilli—a question which could only be satisfactorily approached and answered in a spirit and atmosphere of detached scientific inquiry Instead the trial became a public sensation and the medical profession was butchered to provide a Roman holiday Another case recalled by Dr Chavigny was that of the epidemic of typhoid fever some years ago at Lyons where the geographical distribution of the disease led to the incrimination of a limited section of the town and to a water supply the contamination of which was alleged to be due to criminal negligence After discussing suicides and attempted murders by the inoculation of cultures of virulent germs Dr Chavigny held up the spectre of bacteriological warfare and reminded his audience that the special committee of the Disarmament Conference had concluded that it would be impossible to prevent such warfare His macabre paper is to be recommended as useful raw material to the would be authors of shockers

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh).

(a) British Islands.

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH**
EBBW VALE, MON. *(Workmen's Medical Society.)*	MARDY, GLAMORGAN. *(Workmen's Medical Scheme.)*	KENT COUNTY COUNCIL. LENHAM SANATORIUM. *(Male Assistant Medical Officer.)* FARNBOROUGH INSTITUTION HOSPITAL. *(Resident Assistant Medical Officer.)*
GILFACH GOCH, GLAMORGAN. *(Workmen's Medical Scheme.)*	NEATH AND DISTRICT *(Medical Aid Association.)*	WORCESTER COUNTY AND CITY MENTAL HOSPITAL. *(Junior Assistant Medical Officer.)*
LLWYNPIA, CLYDACH VALE, PENYGRAIG, GLAMORGAN. *(Workmen's Medical Scheme.)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association.)*	LLANTRISANT AND LLANTWIT FARDRE RURAL DISTRICT COUNCIL. (1) *Medical Officer of Health (part-time.)* (2) *Medical Officer (woman—part-time) for Maternity and Child Welfare.*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer.)*	OGMORE VALLEY, GLAMORGAN. *(Wyndham Colliery Medical Aid Society.)* *(Workmen's Medical Scheme.)*	

(b) Overseas.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. G. HUNTER (Medical Secretary, New South Wales Branch), 135, Macquarie St., Sydney, N.S.W.	**QUEENSLAND.** *(Brisbane Associated Friendly Societies Institute.)*	The Hon. Sec., Queensland Branch, British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	**WELLINGTON, NEW ZEALAND.** *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec., New Zealand Branch), British Medical Association, P.O. Box 156, Wellington, New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch, British Medical Association, Medical Society Hall, East Melbourne, Victoria.	*(Toowoomba Associated Friendly Societies, Medical Institute, Toowoomba.)*		**WESTERN AUSTRALIA.** *(Contract and Lodge Practices.)*	Hon. Sec., Western Australian Branch, British Medical Association, No. 6, Bank of N.S.W. Chambers, St. George's Terr., Perth, Western Australia.

March 29th, 1933. By Order of the Council. C. C. ANDERSON, Medical Secretary.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone Road, N.W.1.

Applications are invited for the post of HOUSE SURGEON for a period of six months commencing May 1st next. Salary at the rate of £100 per annum, with board, lodging, and washing. Previous experience as House Surgeon essential.

Applications, stating age, accompanied by copies only of testimonials, must reach the Secretary at the Hospital on or before Thursday noon, April 6th.

G. H. HAWKINS, Secretary.

FORSTER GREEN HOSPITAL For Consumption and Chest Diseases, FORTBREDA, BELFAST.

An additional HOUSE PHYSICIAN is required. The appointment will be for a period of six months, renewable for a further six months.

Salary £150 per annum, with board, residence, and laundry.

Applications, with copies of testimonials, to be sent on or before April 15th, to the Secretary, 99, Scottish Provident Buildings, Belfast.

WARNEFORD GENERAL HOSPITAL, LEAMINGTON SPA. (145 Beds.)

RESIDENT HOUSE PHYSICIAN required on May 1st next. Salary £165 per annum, with board and laundry. Applications from qualified and registered Medical Practitioners (single men) should be sent to the undersigned by April 7th, accompanied by copies of at least three recent testimonials.

EDWARD L. WIRGMAN, House Governor and Secretary.

DERBYSHIRE ROYAL INFIRMARY, DERBY. (General Hospital—347 Beds.)

Applications are invited for the post of OPHTHALMIC HOUSE SURGEON AND ANAESTHETIST. Candidates must be qualified and registered under the Medical Acts.

Salary will be £150 per annum, with apartments, board, etc.

Applications, with copies of testimonials, to be sent to the undersigned.

WALTER BANKS, March 30th, 1933. Supt. & Secretary.

THE SHEFFIELD ROYAL HOSPITAL. (340 Beds.)

There will be vacancies on April 1st for a HOUSE SURGEON and an ASSISTANT CASUALTY OFFICER who also acts as Assistant House Surgeon. Salary at the rate of £80 per annum, rising to £100 in six months, with board, residence, and laundry. There are eleven resident medical officers. Applications should be forwarded as soon as possible to—

W. H. BOOTH, March 24th, 1933. Supt. & Secretary.

SOUTH-EASTERN HOSPITAL FOR CHILDREN, Sydenham, S.E.26.

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER (lady) The appointment will be for six months from April 11th. Honorarium £120 per annum, with board, residence, and laundry. Applications, by letter only, stating age and qualifications, with copies of three testimonials, should be sent to the Hon. Secretary, Mr E. E. DENT, 182, Turney Road, Dulwich, S.E.21, to be received not later than Monday, April 3rd.

KENT COUNTY OPHTHALMIC AND AURAL HOSPITAL, MAIDSTONE. (109 Beds.)

Applications are invited for the post o HOUSE SURGEON (male) to the Ear, Nose, and Throat Department, which post will shortly become vacant. Candidates must be duly qualified and registered medical practitioners single, and of British birth and nationality, and should have had some experience in the treatment of diseases of the Ear, Nose, and Throat The Hospital is recognised by the Examining Board for the D.L.O. The appointment will be for six months, but may be renewed for a second six months Salary at the rate of £200 per annum, with board, residence, and laundry.

Applications, stating age, together with copies of not more than three testimonials, should be sent to the undersigned.

JOHN W. STRICKLAND, Secretary

CITY MENTAL HOSPITAL, FULFORD, YORK.

ASSISTANT MEDICAL OFFICER (Deputy Medical Superintendent) required. Previous experience essential. Salary £400 p.a., rising by two annual increments of £25 to £450 p.a., with an additional £50 per annum if the selected candidate possesses a D.P.M., less a temporary deduction of £13 15s. p.a., with emoluments valued at £150 p.a., which include furnished house, board, laundry, and attendance. The appointment is subject to the provisions of the Asylum Officers Superannuation Act, 1909. Applications, stating age, qualifications, experience, and nationality, accompanied by copies of three recent testimonials to be sent to the Medical Superintendent.

(Appointments continued on p. 52)

CORRESPONDENCE

"Back Pressure" and "Compensation"

SIR,—Sir Thomas Lewis's little book, *Diseases of the Heart* has come as a welcome aid to the practitioner, who, while attempting to keep up with the latest findings in connexion with circulatory conditions, is apt to feel swamped by the mass of "new" details that are constantly appearing in print. The book contains the essentials in a delightfully clear and readable form. But while yielding to none in my admiration of the author's work, it seems to me that he goes a little too far in condemning the two time-honoured views as expressed by the terms "back pressure" and "compensation."

To take the latter first, compensation surely well expresses the idea of making up for some deficiency. The word means "the act of giving an equivalent for" and "the act of counterbalancing or recompensating or making amends", and we see the process occurring in every direction, when something lessens the efficiency of an organ or it is called upon to do more work than is its wont. One lung is collapsed and the loss is compensated for by the more efficient action of the other. One kidney is removed and the other works for both. A blacksmith labours harder than the average man and his muscles enlarge in order that he may carry on. An individual goes to a place at several thousand feet elevation and his body compensates for the lowered oxygen pressure by an increase in the number of the red cells and the total haemoglobin, along with deeper and more frequent respirations. A man suffers from some organic lesion of the brain which causes anaemia of a vital centre and the blood pressure rises, sometimes enormously, in an endeavour to get blood into it and so saving life.

In the same way, some lesion of the heart makes that organ a less efficient pump than normal and the myocardium accommodates itself to the increased load by hypertrophying and by more efficient contractions, and thus the sufferer is said to have a compensated lesion. In time, owing to any cause increasing the obstruction or lessening the efficiency of the muscle, he begins to suffer from dyspnoea and other signs of cardiac distress, and it is commonly said, and I think with clarity, that the compensation is lessening. When one watches a patient with, say, mitral stenosis, who for years has been able to live a normal life, and sees, or even hears, that his breath is not so good as formerly and that he cannot do the things that he had been accustomed to do, surely it is correct (without going into details of whether or not dilatation is occurring) to feel assured that his compensation (in other words his cardiac reserve) is diminishing, and that myocardial failure is appearing. It is our duty then to endeavour to discover the cause of this lessening myocardial efficiency, which may be due to some pathological change in the muscle tissue and often to some disturbance in rhythm such as auricular fibrillation. Frequently we are able, by lessening the work of the heart or by improving the action of the muscle, once again to enable the organ to do its work sufficiently, and surely it is correct to say that compensation has been restored.

Back-pressure theory. Sir Thomas is strong in his condemnation of this term, and yet it undoubtedly expresses what may be happening in the circulation when some obstruction or regurgitation is sufficiently severe to hamper the free onflow of the blood and thus tend to raise the pressure behind the lesion. I say "sufficiently severe" because, as is now well recognized, a considerable obstruction or regurgitation often exists without doing any harm. But when in, say, mitral stenosis real obstruction exists and the blood pressure in the left ventricle rises, then there is a tendency to damming back of the pulmonary circulation, and the right ventricle works against extra resistance. It may for long succeed, so that the circulation is successfully carried on and there is no interference with the cardiac output, but in time the systemic venous return is hampered, and so the whole train of signs and symptoms associated with congestive circulatory failure develops. It seems to me that here the idea of back pressure clearly expresses the condition. I think that Sir James Mackenzie was the first to condemn the back pressure theory. He did this in emphasizing the fact, until then not sufficiently recognized, that it was not the valvular defect but rather the myocardial failure that was all important, but all the same it was the valvular trouble that primarily threw the extra work on the right ventricle. If only we could, at an early stage before myocardial changes had occurred, lessen the obstruction—as has even been attempted by keen surgeons—the muscle, thus having less work to do, might for long be able to carry on. For these reasons, which seem to me, at least, to have some weight, I would regret to see the terms "compensation" and "back pressure" relegated to a back shelf.—I am, etc.,

Toronto, May 25th. R. D. RUDOLF.

Specific Treatment of Pneumonia

SIR,—In a leading article in the *Journal* of June 3rd (p. 967) you referred to the enthusiasm displayed in Germany for the treatment of acute lobar pneumonia with optochin (ethyl hydrocuprein), stating that marked reductions in mortality were claimed. You suggested that such claims should surely not be ignored, and you asked whether an extended trial of this drug and of solvochin could not be undertaken.

I have had no experience with solvochin, but an extensive study of optochin was made by me while I was on the staff of the Hospital of the Rockefeller Institute for Medical Research, New York, during the years 1915 to 1918, these studies resulted in three papers on the pneumococcicidal action of optochin *in vitro* and *in vivo*, which appeared in the *Journal of Experimental Medicine* in 1915, and in two papers, published in collaboration with Dr. Alan M. Chesney, on the use of the drug in the treatment of pneumococcal pneumonia in man, which appeared in the *Archives of Internal Medicine* in 1917 and 1918. Although we were able to devise a method of oral administration which readily produced and maintained in the blood of pneumonia patients a strong pneumococcicidal action, we were unable to conclude that the drug was efficient in the treatment of the disease. We stated that the systematic use of optochin in the treatment of seventy-five closely studied cases of lobar pneumonia did not lead to any noteworthy therapeutic benefit and that the rate of pneumococcicidal action in the blood was too slow to be effective in the concentrations of the drug which could be safely attained in the blood stream. Toxic effects were seen in twenty-four of the cases treated, but, fortunately, all were slight and temporary. In the concentrations which might safely be attained in the body fluids the drug probably penetrates but poorly into the alveolar exudate, unless used very early in the disease. Moreover, a progressively increasing bacteriaemia was observed several times in animals and in man, in spite of a considerable degree of pneumococcicidal action in the blood.

As the serum treatment of lobar pneumonia was so successful in Type I we treated only a few cases of that type with optochin. As is suggested in the leader,

the use of optochin may be more successful in Type I but its possible toxic effects especially those in relation to vision should be remembered —I am etc

June 5th

HENRY MOORE M D D Sc
Professor of Medicine University College Dublin

Genesis of Gall stones

SIR —I join Mr J A Gardner and Dr H Gainsborough in absolving Mr Patey for not mentioning my work in his paper on The Mechanism of Gall stone Formation in the *Journal* of May 20th (p 866) as it had not been published Lord Moynihan however was perfectly justified in commenting on Mr Patey's failure to refer to Lord Moynihan's article on Some Aspects of Cholelithiasis in which incidentally my findings are quoted

Mr Patey aptly remarks at the conclusion of his paper because of the predominant position that surgery occupies to-day in the treatment of gall stones the surgeon may yet do much to initiate work which will lead to an increased knowledge of gall stone formation Surely then it is an omission on his part to ignore the views of Lord Moynihan whose experience of gall bladder surgery is unrivalled even though these do not coincide with the views of Mr Gardner and Dr Gainsborough The latter suggest that Lord Moynihan was not in a position to define the term hypercholesterolaemia because he had no knowledge of normal limits In MacAdam and Shiskin's work which Lord Moynihan quotes the upper and lower limits for plasma cholesterol—based on analysis of the blood of twelve normal individuals—are given as 0 191 per cent and 0 133 per cent with an average of 0 162 per cent Mr Gardner and Dr Gainsborough refer very loosely to these limits as arbitrarily chosen because the figures for the normal individuals were not given in detail in that paper As these figures had already been given in my thesis for M D Glasgow (1922) there seemed no need to present them again However to satisfy Mr Gardner and Dr Gainsborough that they were not arbitrarily chosen limits I give them in detail now

Cholesterol Content of Blood Plasma of Twelve Normal Individuals

Age	Sex	Total Cholesterol in Grams per 100 c.cm.
28	♂	0 191
22	♂	0 155
58	♂	0 164
40	♂	0 160
18	♂	0 156
43	♂	0 191
47	♂	0 164
?	♂	0 133
?	♂	0 150
53	♂	0 180
20	♀	0 148
46	♀	0 153

These figures are in close agreement with those of other workers McNee[1] (0 150–0 180 per cent) Autenrieth and Funk (0 140–0 160 per cent) Weston[2] (0 180 per cent) Myers[3] (0 168–0 175 per cent) and Müller[5] (0 140–0 160 per cent) My average of 0 162 per cent is even in agreement with that of Mr Gardner and Dr Gainsborough (0 170 per cent for males and 0 153 per cent for females) although their[4] variations are much wider (0 080–0 230 per cent) They object to Lord Moynihan's use of the term high normal as applied to figures between 0 160 and 0 192 per cent Is not one perfectly justified in speaking of figures above the average as on the high side although still within normal limits ?

Mr Gardner and Dr Gainsborough state that hypercholesterolaemia is not known in cases of gastric ulcer I invite them to give their figures in this condition In twenty six cases of gastric ulcer examined by me 23 per cent were hypercholesterolaemic as also were 12.2 per cent of forty-one cases of duodenal ulcer These cases formed part of a series of 280 cases with various surgical abdominal disorders examined for the purpose of ascertaining whether hypercholesterolaemia occurred with greater frequency in cholelithiasis as compared with other conditions In 101 cases of cholelithiasis in this series the average cholesterol value was 0 217 per cent 65 per cent of these patients showed an absolute hypercholesterolaemia The diagnostic significance of an increased cholesterol content of the blood is therefore important as in this series of 280 cases over 75 per cent of patients with hypercholesterolaemia were suffering from cholelithiasis as proved by operation

Mr Gardner and Dr Gainsborough observe that it is practically impossible to state that a moderate degree of hypercholesterolaemia is present in an individual case from single observations unless the individual's normal plasma cholesterol content has been previously well studied Is this not rather a facetious remark? Surely these patients first present themselves for observation when they are already pathological How could their previous normal plasma cholesterol content have been well studied ?

Mr Gardner and Dr Gainsborough state that hypercholesterolaemia occurs whenever biliary obstruction is present but not in uncomplicated cases of cholelithiasis I dispute the accuracy of that statement I did find hypercholesterolaemia even in some uncomplicated cases of cholelithiasis What is more on scrutinizing Mr Gardner and Dr Gainsborough's figures as set out in detail by them[7] I find that four of their cases of cholelithiasis without jaundice or other complications were definitely hypercholesterolaemic applying the term as they themselves understand it to figures above 0 23 per cent I refer to their cases 7 8 15 (second observation) and 17 for which the figures are 0 2548 0 2769 0 2563 and 0 2561 They ask But why does Lord Moynihan ignore the more complicated changes which occur in the blood in these cases of biliary stasis such as have been demonstrated not only by ourselves but also by Thannhäuser and Schaber Adler and Lemmel etc Lord Moynihan ignores these changes for a very good reason His paper was published in 1925 An account of these more complicated changes —a disturbance of the cholesterol to cholesterol-ester ratio—was not given by Thannhäuser and Schaber till 1926 Adler and Lemmel published their results in 1927 and Mr Gardner and Dr Gainsborough's paper on the subject appeared in 1930 How could Lord Moynihan in 1925 refer to work which Mr Gardner and Dr Gainsborough did not publish until 1930? Their statement that in Lord Moynihan's paper the graphs of changes in pregnancy and during menstruation were drawn with exaggerated ordinates is entirely unwarranted They were drawn with mathematical accuracy and were based on the figures obtained by me in the case of twelve pregnant women and in the investigation of six menstrual cycles On the whole Mr Gardner and Dr Gainsborough's criticism in this connexion cannot be regarded as other than frivolous especially as they themselves state that some cases of pregnancy show a definite total hypercholesterolaemia a result which is in general agreement with those of earlier observers Moreover Gonalous[8] and Okey and Bowden[9] have described changes in the menstrual cycle similar to those represented in the graph under discussion

In conclusion I do not agree with the statement made by Mr Patey and supported by Mr Gardner and Dr Gainsborough that attempts to correlate hypercholesterolaemia with gall stones have failed I intend shortly

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SIR,—In a letter to the *Journal* of June 10th (p 1025) Dr Spicer states that it would be interesting to know on what grounds the pancreas is considered to be involved in mumps

During the last five years I have met with three cases of extremely severe diabetes mellitus in children in which the onset was immediately preceded by an attack of mumps In the first, a boy of 13, a moderately severe attack of mumps left him out of sorts for three weeks Severe thirst and polyuria then developed, and three days later he sank into a diabetic coma with a blood sugar of 0 6 per cent He never complained of any abdominal symptoms In the second, a boy of 12, the attack was followed by epigastric discomfort for a fortnight, and he then developed thirst and polyuria, and lost weight rapidly Three months later he had a resting blood sugar of 0 28 per cent , and passed 113 grams of glucose in a day In the third, a boy of 7, "influenza" was followed by mumps The attack was a mild one, but was accompanied by some abdominal pain, which lasted for eight days Three weeks after this he developed sudden polyuria and thirst, and began to waste His urine was then found to contain a great deal of sugar and acetone bodies, and he subsequently developed diabetes of the greatest severity

It is impossible to say whether the diabetes in these cases was the result of pancreatic damage due to mumps or whether the latter was merely the infective factor which brought to light a latent diabetes They do, however, suggest that the pancreas may be affected, even though the abdominal symptoms are slight or absent In none of these cases could any family history of diabetes be traced —I am, etc ,

Cambridge June 9th LESLIE COLE

"Observation Hips" and the Mantoux Test

SIR —In your issue of June 3rd (p 951) Mr R W Butler gives an interesting account of a "follow-up" of twenty-two "observation hips" The term (like our war weary P U O and N Y D) is unknown to the compilers of *The Nomenclature of Diseases* but it serves a useful though unofficial function until a more accurate label can be chosen

I have notes of similar cases of my own, and the following are good examples, with a moral at the end of the story

CASE I

Thomas P aged 10 years 9 months was seen at the Hospital for Sick Children Great Ormond Street on March 26th 1928 with pain in the left hip following a slight injury He then had limitation of all movements of the joint His tonsils and adenoids were removed and he was transferred to the country branch at Tadworth where he was treated in a double Thomas hip-splint for two and a half months As he then had no muscular wasting and movements were free and x ray examination was negative he was allowed gradually to resume a normal life and returned home in July 1928 after three months observation Three years later I sent for him and found him completely normal both clinically and radiologically He had no pain and 'played inside left with great success

CASE II

Richard P aged 8½ years, was seen on June 20th 1927 with a history of five weeks' aching in the right hip but no limp There was slight general restriction of movement in all directions and a family history of tuberculosis *X*-ray examination was negative He was also placed in a double Thomas hip splint and transferred to Great Ormond Street Country Branch where he spent a mere six weeks and returned home walking on September 14th 1927 I saw him in October 1931 which was four years after this episode he was normal in every way and a radiogram showed no sign of past or present disease

These children had a transient arthritis, which I do not believe was tuberculous, and yet one was put to the necessity of treating it as such until the clinical course proved otherwise Nowadays I place great reliance on the Mantoux test, and it has many times helped to a correct and early diagnosis in such cases Mr Butler makes no mention of this useful procedure, which still suffers from confusion with less reliable subcutaneous methods and that of von Pirquet The Mantoux test must be carried out in a standardized manner, and the following details are important

Human tuberculin 1 in 1 000 in 0 5 per cent carbolic saline will keep safely for about four weeks in an ice-chest A special intradermal syringe is necessary, and 0 1 to 0 2 c cm are injected into the skin of the forearm No control is necessary and the reaction develops as a marked red ring one inch or more in diameter during the next three days A little experience is necessary in reading the results, but it is soon acquired

My present view is that a negative Mantoux test precludes tuberculosis in these "doubtful hips" and though a positive result is less helpful, it must be remembered that practically 80 per cent of London children under 12 years of age have a negative Mantoux (Gaisford) I believe that this test might be more widely used by doctors in general and by orthopaedic surgeons in particular, for though there are many causes of transitory arthritis of the hip joint there is only one that really matters —I am, etc ,

London W 1 June 6th ERIC I LLOYD

Hernia and Appendicectomy

SIR —I have deliberately refrained from joining in this correspondence till now because I believe that no amount of argument will influence any experienced surgeon to relinquish a technique which in his hands yields satisfactory results Nevertheless I do resent unjust criticism of the gridiron incision on purely theoretical grounds It is common experience in the average hospital to find equally staunch adherents of Battle's incision and McBurney's operation, and most surgeons soon decide which *in their hands* is the better method Surely this is the crux of the matter

An incision placed as near the anterior superior spine of the ilium as possible offers the following practical advantages possessed by no other

1 There is little or no small bowel protrusion even with an indifferent anaesthetic peritoneal closure is simple

2 There is less risk of soiling the peritoneal cavity when dealing with a localized abscess it is nearly always possible to search for and remove the appendix in these cases without any undue risk to the patient

3 In a simple case the peritoneum can be dealt with in the same way as a small hernial sac, leaving no raw edge for subsequent adhesions

4 If drainage is necessary the subsequent adhesions will be between the caecum and peritoneum , this is far better than adhesions between peritoneum and small bowel

I believe that these four points are definitely advantageous to the surgeon and his patient provided that the incision be used with sufficient skill and care

Mr A H Southam, in an article in the *Journal* of February 14th, 1931 (p 258), quotes certain facts collected by Griffiths, Romanis, and Mitchiner to show that cases of inguinal hernia have followed the use (or abuse) of the McBurney technique I read Mr Southam's article and his recent letter (May 6th p 803) with appreciation and interest It is a warning, and a reasonable one to those who, like myself, wish to continue using a gridiron incision wherever possible without detriment to our patients Not so your correspondent in your issue of

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June 10th (p 1025) whose antagonism to this method knows no bounds

I saw recently an appalling ventral hernia occasioned by the use of a muscle splitting incision plus sepsis Exposure is not so good with a McBurney incision How painful these lateral abdominal incisions can be!

Nobody wishes to deny that evil results sometimes follow this operation but why invariably blame the incision for them? In the Mayo Clinic there is a well known syndrome for the recognition of gastro-jejunostomy sequels due to the anastomosis having been performed with the lower end of the ileum by mistake Yet even the most enthusiastic opponents of short circuiting would hesitate to use this as a valid argument

Mr F A R Stammers (April 29th p 763) Mr C A Moore (May 13th p 846) and Mr J W Geary Grant (May 20th p 892) give convincing testimony to the effect that gridiron incisions done by them do not result in cases of inguinal hernia I am glad to add my own results to these I have not seen any such hernia follow several hundred cases I now use this method exclusively for all definite cases of appendicitis with or without abscess or even general peritonitis and I have found complete satisfaction from its use I have had one case of post operative ventral hernia in a very obese woman of 52 with a gangrenous mass in the right iliac fossa and a pelvic abscess which necessitated prolonged drainage and extension of my incision across the posterior sheath of the rectus but I always regarded this case as my own fault not McBurney's as I deliberately sacrificed the abdominal wall for the patient's sake

As for pain in these incisions I have yet to see a case I think in fairness to my own choice I may quote three cases of Battle's incision in which the tenth dorsal or eleventh dorsal nerve has been involved in sutures resulting in persistent pain and a second operation to excise the affected portion This is not a legitimate ground of objection to Battle's incision the surgeon has himself to blame One surgeon of my acquaintance urged me to use this incision because he said one can in cases of mistaken diagnosis extend it upwards or downwards indefinitely as the case requires I make no comment on this except to say that the wrongly diagnosed case of perforated ulcer is probably better off in the hands of a surgeon who has started with a gridiron

I admit the gridiron incision requires care that it is the wrong operation for a novice and that if I were the subject of a budding surgeon's first operation I should ask him to do a Battle's incision but to those of us who have taken the trouble to learn our own limitations and still find a muscle splitting operation satisfactory let there be peace And let us be honest about our bad results and blame ourselves rather than the classical incisions we have misused —I am etc

Walmer June 11th JAMES S HALL

Aetiology of Acute Rheumatism

SIR —In the most useful discussion on the above subject in your columns one generally acknowledged factor (unless I am mistaken) has been overlooked—namely damp In the conference on rheumatism held at Bath some years ago under the auspices of the Ministry of Health the two causes of acute rheumatism which stood out prominently before all others particularly in the case of children were damp and infection—the damp of newly built houses of ill-drained localities and the like But if one went a step further and inquired how damp acts all sorts of views were encountered One expert would promptly say that it produced catarrh and thus prepared the soil for receiving infections another would contradict this and say that it fostered the growth of the infecting organism and others would again offer other explanations But the result of inquiries left one with the impression that the way in which damp acts as a cause had never really been investigated It must I think be admitted that when we have more certain knowledge of this point we shall be in a better position to lessen or prevent its extremely harmful effects —I am etc

Southsea June 5th M ASTON KEY

Raw and Pasteurized Milk

SIR —With regard to the letter (*Journal* May 27th p 937) in defence of the accuracy of some of the statements in Bulletin 5 of the Hannah Dairy Research Institute I do not consider it a good one The interesting chemical details concerning milk do not alter the fact that their statement that high grade milk was used throughout my work is incorrect My paper was written on raw milk and did not pretend to compare raw with pasteurized milk yet some comparison crept in It is quite true that I wrote

I am not aware of any comparable body of children who have been similarly brought up [meaning from birth or weaning] on sterilized or pasteurized milk and so have no exact knowledge whether effects comparable with those recorded might be brought about by such means but such evidence as is available and inference indicate rather that they would not be

As however my thesis did not concern comparison of raw and pasteurized milk such evidence and inference was not included save as in my letter in your issue of May 13th Incidentally too I have made no *claim* whatever about raw or pasteurized milk but merely published clinical evidence and the inferences I drew therefrom

Concerning the numbered paragraphs

1 Until evidence is available as to what ration of milk if any children aged from 9 to 14 years should have no one has any right to make dogmatic statements concerning any difference in the amounts of 12 and 20 oz a day respectively especially as at those ages milk is not a physiological food At the least if pasteurized milk produces effects apparently similar to those of raw milk one might reasonably expect the twenty three children receiving 12 oz a day to show a greater freedom from caries than others in the same school who did not receive it but they did not

2 The reference to inadequate numbers has here only a trifling if any significance as the resulting comparison showed very uniform and widely different incidences of caries in the specific tooth under observation and in a number of children under such conditions the omission of one child is entirely unjustifiable and irrelevant nor does it reverse the conclusions with regard to that specific tooth Even if that one child were omitted it would (in the children in that Table II) still leave the incidence of caries in the specific tooth observed as eleven for raw and sixty three for pasteurized milk and that is granting that that particular child had all four of its second permanent molars carious It was these points which prompted my remark that the comparisons had been missed otherwise it is incomprehensible why the essential point on which this comparison rested was omitted in the partial reproduction of Tables I and II in Bulletin 5 I certainly did not suggest that the authors were not competent as Blackwood and Wright state

3 Their remark here that a very large number of children receive raw milk in the United Kingdom is of course true but not relevant to the point at issue as I refer only to those receiving it (within my definition of raw) from weaning (or birth) to 2½ to 3 years of age and such children from the information of many others than myself I know to be extremely few indeed I have not seen another since the paper was written

The writers of the letter chide me for omitting reference to care cleanliness and irregularity in the spacing of the teeth and I will confess to omitting reference to many other potential *predisposing* factors which may affect the incidence of caries this was done because in the circumstances they appeared to have no relevance The recording

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APPOINTMENTS.—Contd

ANCOATS HOSPITAL, MANCHESTER.

HOUSE SURGEON (General) required to commence duty on May 1st next. Appointment for six months. Salary at the rate of £100 per annum, with board, apartments, etc.

Applications, stating previous experience, and copies of three recent warded to the undersigned, not later than April 13th.

By Order of the Board,
HERBERT J. DAFFORNE,
Gen. Supt. & Secretary.

ROYAL SUSSEX COUNTY HOSPITAL, BRIGHTON. (Beds 246.) (6 R.M.O.'s.)

CASUALTY HOUSE SURGEON (male) required. Salary £120 per annum, with board, residence, and laundry. Candidates must hold Medical and Surgical qualifications of the British Empire, and be duly registered under the Medical Acts.

They must be unmarried, and when elected under 30 years of age.

Applications, with copies of recent testimonials, should be sent immediately to the undersigned.

L. L. W. LANCASTER-GAYE,
Secretary-Superintendent.

NATIONAL TEMPERANCE HOSPITAL, Hampstead Road, N.W.1.

Applications are invited for the appointment of HONORARY MEDICAL OFFICER (RADIOLOGIST) to take charge of the X-Ray Therapy Department, duties to include charge of the Physico-Therapy Department.

Candidates, who must hold the D.M.R.E. diploma, and have had experience in deep X-Ray Therapy, are asked to submit their applications, accompanied by copies of not more than three testimonials, by Thursday, April 6th, addressed to the Secretary.

CARDIGANSHIRE GENERAL HOSPITAL, ABERYSTWYTH. (40 Beds.)

HOUSE SURGEON required (male). Salary £200 per annum, with board, residence, and laundry.

Candidates must be fully qualified and registered, and must be experienced Anaesthetist; the duties will include lectures to probationers. Knowledge of Welsh desirable.

Applications, stating age and qualifications, together with three recent testimonials, to be sent by Monday, April 17th, to the Secretary, Cardiganshire General Hospital, Aberystwyth.

SOUTHEND-ON-SEA GENERAL HOSPITAL, ESSEX.
(221 Beds—Six Residents.)

Applications are invited for the following posts, vacant on May 10th next, six months' appointments:

ONE CASUALTY OFFICER,
ONE HOUSE PHYSICIAN,
TWO HOUSE SURGEONS, male officers.

Salaries £100 per annum, with board, residence, and laundry.

Applications, stating age, qualifications, and experience, and accompanied by three recent testimonials, to be sent on or before April 14th to the Joint Secretaries.

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN,
St. Quintin Avenue, North Kensington, W.10.
(58 Beds.)

The Board of Management invite applications for the post of HONORARY ASSISTANT SURGEON, with beds. Applicants must hold the F.R.C.S.(Eng.), and the candidate appointed will be required to see Out-patients at 2 sessions a week. Applications from members of either sex, accompanied by copies of three testimonials, will be received by the Secretary at the Hospital up to Monday, May 1st.

COUNTY BOROUGH OF BIRKENHEAD.

MEDICAL OFFICER'S DEPARTMENT.

MEDICAL SUPERINTENDENT.

Applications are invited from duly qualified Medical Practitioners, with personal experience in the administrative control of a public general hospital, for the post of Medical Superintendent of Birkenhead Infirmary, which Infirmary has been appropriated under the Public Health Acts.

The remuneration attached to the appointment will be £1,000 per annum, rising by biennial increments of £50 to a maximum of £1,100.

The Medical Superintendent will be required to reside within easy reach of the Infirmary. He will be an Assistant Medical Officer on the Staff of the Medical Officer of Health and will be responsible to the Medical Officer of Health, and through him to the Health Committee, for the control of the Infirmary, and for the supervision of the work of the Medical, Surgical, Nursing, and other personnel.

The Infirmary, which has accommodation for 547 patients, provides treatment for medical, surgical, and maternity cases, and has a staff of Resident Medical Officers and Visiting Specialists, and a Nursing Staff of 112.

The appointment will be made subject to the Local Government and Other Officers Superannuation Act, 1922, and is determinable by three calendar months' notice on either side.

Form of application and further particulars, relating to this appointment can be obtained from D. MORLEY MATHIESON, Esq., M.D., Medical Officer of Health, 9, Hamilton Square, Birkenhead.

Canvassing, directly or indirectly, will disqualify the applicant.

Applications, endorsed "Medical Superintendent," should reach the undersigned not later than Saturday, April 15th.

Town Hall, Birkenhead. March, 1933.

E. W. TAME,
Town Clerk.

URBAN DISTRICT OF OSWALDTWISTLE.

MEDICAL OFFICER OF HEALTH.

Applications are invited from duly qualified gentlemen for the appointment of a part-time Medical Officer of Health of the Urban District subject to the provisions of the Public Health (Officers) Act, 1921, and the Sanitary Officers Order, 1926.

The gentleman appointed will be required to perform all the duties imposed on a Medical Officer of Health and to carry out all such duties as the Council may with the consent (if necessary) of the Minister of Health from time to time direct.

He must reside in the district and will be allowed to engage in private practice.

The appointment will be subject to the approval of the Minister of Health.

The salary to cover all the duties specified above (other than duties in connection with the Isolation Hospital) will be £100 per annum, subject to a temporary deduction of 7½ per cent.

Applications, stating age, qualifications, and experience, and with two recent testimonials, must be sent to the undersigned not later than April 8th, and endorsed "Medical Officer."

Town Hall, Oswaldtwistle.

J. W. BOOTH,
Clerk to the Council.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.

Wanted, a RESIDENT for the In-patient Department (50 beds—Surgical and Medical). Bowdon, Cheshire. Must be registered. Salary £200 per annum, with board, apartments, laundry, and railway contract. Duties include attendance on three mornings a week at the Out-patient Department, Manchester.

Application, with copies of testimonials, to be sent not later than April 7th, to—

Hardman Street, Deansgate, Manchester, 3.

W. HUNT,
Secretary.

BUCHANAN HOSPITAL, ST. LEONARDS-ON-SEA.

A vacancy occurs on the Honorary Medical Staff for a PHYSICIAN in charge of the Department for Diseases of the Chest.

Applications, accompanied by copies of at least three recent testimonials, should be sent before Saturday, April 15th, to the undersigned from whom further particulars may be obtained.

S. C. W. DISNEY, Secretary.

MAIDENHEAD HOSPITAL.
(56 Beds.)

Applications are invited for the appointments of HONORARY CONSULTING PHYSICIAN and HONORARY CONSULTING GYNAECOLOGIST to the above Hospital. The Secretary, Maidenhead Hospital. Telephone: Maidenhead 1361.

LONDON COUNTY COUNCIL.

ASSISTANT MEDICAL OFFICERS required at undermentioned Hospitals for resident appointments except at St. Charles' Hospital. Duties assigned by Medical Superintendents and include, if necessary, assistance at other establishments under control of the Council. Valuation of emoluments is subject to temporary reduction. Candidates must be registered Medical Practitioners of at least one year's standing, and have held resident appointment in general hospital (a maternity hospital in case of St. Andrew's Hospital) for at least six months. Remuneration and conditions subject to review.

1. ST. PANCRAS HOSPITAL, Pancras Road, N.W.1.—*Assistant Medical Officer (Grade I). Duties mainly medical.

2. PADDINGTON HOSPITAL, Harrow Road, W.9.—*Assistant Medical Officer (Grade I). Duties mainly medical.

3. QUEEN MARY'S HOSPITAL FOR CHILDREN, Carshalton.—*Assistant Medical Officer (Grade I).

4 LAMBETH HOSPITAL, Brook Street, S.E.11.—*Assistant Medical Officer (Grade I).

5. ST. PETER'S (WHITECHAPEL) HOSPITAL, Vallance Road, E.1.—Assistant Medical Officer (Grade I). *Midwifery experience desirable.*

*Salary £350 a year, rising annually by £25 to £425, with board, lodging, and washing. No accommodation for married man or for a woman.

†BOW INSTITUTION, 2a, Bow Road, E.3.
†HACKNEY HOSPITAL, High Street, Homerton, E.9
†MILE END HOSPITAL, Bancroft Road, E.1.
†ST. MARY ABBOTS HOSPITAL, Marloes Road, W.8.
†ST. CHARLES' HOSPITAL, Ladbroke Grove, St. Charles' Square, W.10.
†ST. NICHOLAS HOSPITAL, Plumstead, S.E.18.
†HOLBORN AND FINSBURY INSTITUTION, Shepherdess Walk, N.1.
†PADDINGTON HOSPITAL, Harrow Road, W.9.

†Positions at these Hospitals are for Assistant Medical Officers (Grade II). Salary £250 a year, with board, lodging, and washing, but with non-residential allowance of £150 a year in lieu for St. Charles' Hospital. Appointments for one year only and not renewable. No accommodation for married man or for a woman at any hospital where appointment is resident. In case of St. Charles' Hospital marriage terminates contract of service if a woman is appointed.

ST. ANDREW'S HOSPITAL, Bow, E.3.—Temporary Assistant Medical Officer (woman). Salary £250 a year, together with board, lodging, and [illegible] will be paid June 20[illegible] e. Duties will include [illegible]nsia in maternity cases. Marriage terminates contract of service.

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), County Hall, Westminster Bridge, S.E.1. Last date for receipt of applications April 14th.

Candidates should specify position or positions for which they desire to apply. Canvassing disqualifies. Further enquiries should be addressed to Medical Superintendent at the respective hospitals.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.1.

Applications are invited for the post of HOUSE SURGEON (male) for six months from April 12th (first two months in Casualty and Out-patient Department). Salary at the rate of £120 per annum, with board and residence.

Applications, stating age, experience, and qualifications, accompanied by copies of four testimonials, to be sent to the undersigned as soon as possible, from whom rules and other particulars can be obtained.

By Order of the Committee of Management,
W. H. SIDNELL,
March 28th, 1933. Secretary-Supt.

THERE IS A VACANCY FOR A RESIDENT MEDICAL OFFICER at WESTMINSTER HOSPITAL ANNEXE, 66, Fitzjohn's Avenue, Hampstead.

Salary at the rate of £200 p.a., plus accommodation and board.

The post offers an opportunity for wide and unique Radium experience.

Candidates who previously have held a Resident post preferred.

Applications should be submitted to the undersigned at Westminster Hospital, Broad Sanctuary, S.W.1, not later than April 7th.

CHARLES M. POWER, Secretary.

HERZL HOSPITAL, MOSER Leopold Street, LEEDS.

RESIDENT MEDICAL OFFICER required. Salary £200 per annum. Ample time for post-graduate study. Apply Secretary.

of the original incidence of caries was not very relevant to my thesis save to show that these children had been exposed to its *exciting* causes, or suffered from it, but it was referred to in Table III (forty children) and Table IV (thirty-three children) with exactness, and in Table V (twenty-eight children), in that "most of them had, or had had, carious deciduous teeth, up to nine still present in one mouth" The authors seem to have missed these points, only noticing them in three cases

It is unusual for a Southron (or rather two) to be accused from North of the Tweed of too much caution, but both Middleburgh and myself are careful what we write, and, seeing that I was up against something which amazed me by its very possibility, I said, in my opening paragraph

The decision whether the clinical facts recorded are caused by the associated circumstances can not be a personal one, but must ultimately depend on the experience and observation of many" Apparently the experience and observation of Blackwood and Wright permit them to make the more definite statement that "the merit of including raw milk in the diet of young children for the prevention or arrest of dental caries has already been demonstrated" I believe this to be true, provided the diet is otherwise well balanced and life is carried on on physiological lines

The writers are incorrect in presuming that I published all evidence available concerning pasteurized milk, I was not really discussing pasteurized milk save as concerned vitamin D and their charge of my neglecting what they regard as "the one outstanding feature" is also wide of the mark as for many years half of the 1,100 girls at A have had a pint of pasteurized milk daily, and I had that evidence—and other—before me, but it was not germane to my subject-matter—I am, etc,

EVELYN SPRAWSON

London Hospital Dental School May 31st

*** This correspondence is now closed

"Sunshine Roof" Rheumatism

SIR—Mr Donald Currie's letter on the subject of "sunshine roof' rheumatism is an extremely interesting example of the very direct localizing influence by climatic factors of fibrositis in possessors of the rheumatic diathesis It is somewhat unfashionable at the present time to particularize methods for the relief of what are believed to be mere symptoms of this sort, and I was relieved to read that the methods of cure adopted, and which were found by him effective were no more drastic than the wearing of a hat, a change in the driving position, and the injunction of an ointment locally I feel sure that certain more 'scientific" practitioners might, as a preliminary measure, have removed the patient's teeth, tonsils, and possibly appendix, before proceeding on the lines indicated by Mr Currie

It seems increasingly certain that the roots of the rheumatic diathesis, by which is meant the specific liability of certain persons to attacks of the disease, must no longer be looked for exclusively in the admittedly fertile soil of sepsis Diathesis, whether it be an inherited or acquired characteristic of "rheumatic" people, would seem to be in fact a physiological defect of the heat-regulating mechanism of their skin, an imperfect adaptation of their body to those changes in local environment which are now sometimes referred to as the "micro climate" of the individual in question When this state has been reached, treatment which has as its object the re education of the skin to this important function must be considered as being much more than palliative, whilst the eradication of any septic focus, although on general principles desirable, can no longer be considered at this stage to be of primary importance It is not sufficient to remove what may have been the original cause of diathesis it is the resulting physiological maladjustment of the body, where this is established, which becomes the primary indication for treatment—I am, etc,

London, W 1, June 10th W S C COPEMAN

I M S Pensions—"Not Guaranteed"

SIR,—On March 7th, 1932, Sir Samuel Hoare, Secretary of State for India, made the startling declaration that pensions of the officers of the Indian Medical Service were "not guaranteed" by the British Government This pronouncement was made in the face of the previously declared policy of the Indian Congress Party to the effect that on accession to power they would repudiate all debts contracted by the British Government otherwise than those in the interests of India, Congress being the *sole* judge of that question

Such ruthless abandonment of the rights of a large Service is inconsistent with British honour Several memorials were addressed to the Secretary of State, and he was also questioned in the House of Commons on the subject on March 7th, 1932, by Mr Kirkpatrick, on April 13th by Viscount Elmley, and on May 22nd by Sir A Knox But to the memorials and questions evasive replies were given without retraction of the "no guarantee" doctrine The following retrospect will show how fallacious that doctrine is

Under the Treaty of Paris England was acknowledged in 1814 to be the paramount power in India Act 16 and 17 Victoria, Caput 95 passed in 1853 substituted British rule for that of the East India Company and *inter alia* confirmed Britain's right of ruling in such matters as education and appointment of officials including the then so called assistant surgeons (Section XL) In 1858 Act 21 and 22 Caput 106 transferred the army and navy of the East India Company to the direct control of the British Government under Section LVI and authorized the payment of all expenses incidental to these forces from Indian revenues In 1858 also Her Majesty Queen Victoria issued her famous proclamation placing India directly under the Crown Royal commissions ('conferring rank in Her Majesty's Service in any part of the world') replaced East India Company's commissions for medical officers under paragraph 44 of dispatch from the Secretary of State for India dated November 7th 1864 Moreover in a number of Royal Warrants* issued subsequently the Government of India was debarred from interference with organization pay promotions and pensions of Indian Medical Service officers and these warrants were usually couched in such forcible language as "Our Viceroy and Governor General in Council etc, *shall be governed*" by the instructions contained therein To leave no doubt about these royal commissions to I M S officers, it was further ruled that notifications of promotions would be made in the *London Gazette*

One fact stands out clearly from this brief retrospect—the British Government *alone* is the employer of the Indian Medical Service, and consequently it cannot escape the position of guarantor of remuneration to its employees By the Act of 1858 it exercised the right to find that remuneration out of Indian revenues, but this in no way lessens its responsibility to continue to find funds for such remuneration, if not from Indian revenues (upon the grant of self-government to India), then from the British Exchequer

This letter raises no question of party politics My suggestion is that, relying upon the clanship of medical men, each one of the thousands scattered over Great Britain should putting aside his particular party creed, address an urgent letter to the member of Parliament for his area calling for a complete retraction of the Secretary

* Vide Royal Warrants dated May 10th 1873, November 16th 1880 May 20th 1881 July 6th 1881 April 30th 1887 May 28th 1913 etc quoted in full in Crawford's *History of the Indian Medical Service*

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.3.

The Committee of Management invite applications for the following posts:

ASSISTANT RESIDENT MEDICAL OFFICER. Candidates must have held a resident hospital appointment for not less than six months. Salary £150 per annum, with board and residence. The appointment is for six months in the first instance.

HOUSE PHYSICIANS. There are three vacancies for House Physicians. The duties include work in the Out-patient Department as well as in the Wards, and one of the selected candidates will also be appointed Assistant to the Tuberculosis Officer for the Local Tuberculosis Dispensary at the Hospital. The appointment is for six months, commencing May 1st, with an honorarium of £50.

JUNIOR HOUSE PHYSICIAN (MALE) AT THE SANATORIUM AT FRIMLEY. The appointment is for six months, commencing May 1st, with an honorarium of £50. At the expiration of his term of office, or in the event of a vacancy, the Junior House Physician will be expected to apply for, and, if appointed, to hold the post of Senior House Physician for a further term of six months.

Applications, with copies of testimonials, must reach the undersigned not later than Saturday, April 8th.

Brompton, March, 1933. FREDERICK WOOD, Secretary.

LONDON HOMOEOPATHIC HOSPITAL, Great Ormond Street and Queen Square, Bloomsbury, W.C.1.

The Board of Management invite applications, male or female, for the following appointment: SURGEON FOR DISEASES OF THE EYE.

The successful candidate must possess a registrable University degree and the Fellowship of one of the Royal Colleges of Surgeons or one of the higher qualifications in Ophthalmology, and must be or become a Member of the British Homoeopathic Society. Candidates are requested to state whether, in the event of one of the present Assistant Surgeons being appointed to the post, they would be willing to accept, if elected, the post of Assistant Surgeon for Diseases of the Eye. Any candidates canvassing the members of the Board are thereby disqualified.

Candidates will be required to attend a meeting of the Medical Committee.

Applications, stating age, with thirty-five copies of application and thirty-five copies of each testimonial, should be sent addressed to the Secretary, of whom further particulars may be obtained.

EDWARD A. ATTWOOD, Secretary.

THE CANCER HOSPITAL (FREE) (Incorporated under Royal Charter), Fulham Road, London, S.W.3.

The Committee are prepared to receive applications for the post of HOUSE SURGEON to commence duties on May 1st. Salary at the rate of £100 per annum.

The appointment is for six months, and subject to rules.

Candidates must call upon each member of the Medical Committee not later than Tuesday, April 18th.

A copy of the rules and the names and addresses of the Medical Committee may be obtained from the Secretary.

Previous experience as a House Surgeon is indispensable.

Applications, with three (copies only) testimonials, to be sent to the Secretary not later than the first post on Saturday, April 8th.

THE CANCER HOSPITAL (FREE) (Incorporated under Royal Charter), Fulham Road, London, S.W.3.

The Committee are prepared to receive applications for the post of CLINICAL PATHOLOGIST to the Hospital.

Experience in Clinical Pathology is essential. Salary £850 per annum.

The appointment is subject to rules, a copy of which can be obtained from the Secretary. Applications, accompanied by copies of not more than three recent testimonials, to be sent to the Secretary not later than Thursday, April 13th.

The Assistant Pathologist is a candidate for the post, and in the event of her being appointed a vacancy for an Assistant Pathologist will occur, for which applications are now invited. The salary attached to this post is £500 per annum.

ROYAL NORTHERN INFIRMARY, INVERNESS. (150 Beds.)

HOUSE SURGEON (male) wanted to commence duty on May 1st. The appointment is for six months. Salary at the rate of £100 a year, with board, residence, and laundry.

Applications, stating age, qualifications, etc., with copies of recent testimonials, to be sent not later than April 15th to ROBERT GILBERT, Hon. Secretary, 20, Church Street, Inverness.

WEST LONDON HOSPITAL, Hammersmith, W.6. (234 Beds.)

Required, ONE NON-RESIDENT HOUSE OFFICER (part-time) for Children's Department for six months from May 1st next, subject to one month's notice on either side. Applicants may be male or female. Salary at the rate of £150 per annum. Candidates must be registered under the Medical Act and have held a resident appointment at a Children's Hospital or in the Children's Department of a General Hospital.

Applications and copies of testimonials in quadruplicate (which must be made on printed forms obtained from me) must reach me not later than first post on Friday, April 21st. Selected candidates will be required to call upon such members of the Medical Staff as directed, to be in attendance at a Meeting of the Medical Council on Friday, April 28th, at 4.30 p.m. and the House Committee Meeting at 5 p.m. the same day, when the appointment will be made.

H. A. MADGE, Secretary.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

The General Committee invite applications for the appointment of an HONORARY SURGEON in Charge of the Ophthalmic Department.

Applications, accompanied by sixteen copies of each of three recent testimonials, to be sent to the undersigned on or before Thursday, April 20th.

Personal canvass of the Committee is expressly forbidden.

W. H. HEAD, Secretary-Supt.

March 20th, 1933.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

The General Committee invite applications for the appointment of an HONORARY SURGEON.

Applications, accompanied by sixteen copies of each of three recent testimonials, to be sent to the undersigned on or before Thursday, April 20th.

Personal canvass of the Committee is expressly forbidden.

W. H. HEAD, Secretary-Supt.

March 20th, 1933.

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MENTION B.M.J.

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of State's no guarantee doctrine in regard to Indian Medical Service pensions A leading British politician not reputed to possess a personal fund acknowledges risk in giving India self government The nature of that risk may be gauged by clear thinking men (*pace* Lord Irwin) in the refusal of British insurance offices to accept proposals What the India Office thinks about that risk may be guessed from the fact that from 1853 to 1919 the Secretary of State for India was paid out of Indian revenues But on the near approach of self government to India a safeguarding section appeared in the 1919 Government of India Act allowing the Secretary of State to obtain his salary from British revenues Five years later in 1924 under the amendments to the 1919 Act his under secretaries might be paid out of the revenues of India or out of moneys provided by Parliament [Part I Section 2 (3)] The India Office has thus guarded against all risk of repudiation of debts by a future Government of India by a safety first formula for itself but has no scruples in abandoning the just and hard earned rights of hundreds of our medical brethren and countrymen —I am etc

W G KING
Colonel I M S (ret.)

Hendon N W 4 June 9th

A Giant Prostate

SIR —Mr Holman is to be congratulated on the successful outcome of his operation on the giant prostate described in your issue of March 4th (p 366) The record as far as mere size is concerned seems to be held by the prostate exhibited by Neupert at a meeting of the Berliner Gesellschaft für Chirurgie in January 1931 (*Zentralbl f Chir* 1931 Nr 17 s 1071) This tumour which extended nearly to the umbilicus and was larger than a man's head weighed 3 600 grams (approx 8 lb) The patient a 67 year-old man had noticed it for ten years An attempt at removal had to be abandoned owing to haemorrhage The patient died on the following day Histologically the tumour was reported to be a benign myoma of the prostate —I am etc

A G CLARK

Napier New Zealand April 15th

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UNIVERSITY OF LONDON

The official *London University Gazette* dated May 31st (price 6d post free 7d) contains a number of amendments affecting the regulations concerning (1) the advanced and post graduate students (2) the M B B S examination (3) the M D (Branch III psychological medicine) examination (4) the M D (Branch IV midwifery and diseases of women) examination (5) the degrees in Arts and in Science for external students (6) the exemption from first examination for medical degrees for external students through higher school examination (7) the Diploma in Psychological Medicine—regulations regarding practice

The Senate announces the following vacant external examinerships Final and higher examinations for medical degrees medicine surgery M D Hygiene First examinations for medical degrees chemistry (two) general biology physics For second examinations for medical degrees anatomy chemistry pharmacology Also associate examiners in medicine obstetric medicine pathology and surgery Application form and particulars of the remuneration and duties can be obtained from the External Registrar to whom the names of candidates must be sent on or before July 3rd

The Dunn Exhibitions in Anatomy and Physiology for 1933 have been awarded to J C B Bone (Middlesex Hospital Medical School) and J S Horn (University College)

The fee payable by candidates for the Academic Diploma in Clinical Pathology has been increased from £5 5s to £10 10s

Regulations relating to the External Diploma in Clinical Pathology have been approved and copies may be obtained on application to the External Registrar

A committee has been appointed to consider what action the University could take to assist university teachers and students who on grounds of religion political opinions or race are unable to carry on their work or studies in their own countries and the committee has been authorized to confer as it thinks fit with other universities and learned societies in the British Empire and elsewhere on this matter

The following appointments are announced Dr J Fawcett to be a member of the Council of the Lister Institute of Preventive Medicine Dr R A Young to represent the University at the nineteenth annual conference of the National Association for the Prevention of Tuberculosis Cardiff July 13th to 15th Sir Cooper Perry to be the representative on the governing bodies of the National Training College of Domestic Subjects and the Battersea Polytechnic

Applications for the William Julius Mickle Fellowship must be sent in by October 1st The Fellowship is of the value of at least £200 and is awarded annually by the Senate to the man or woman who being resident in London and a graduate of the University has in its opinion done most to advance medical art or science within the preceding five years and has therein shown conspicuous merit Further particulars may be obtained on application to the Academic Registrar

The following candidates have been approved at the examination indicated

THIRD M B B S— S G Browne ‡A L Eyre Brook C C Harvey ‡Mary H Mayeur †R S Ogborn *†E J Smith Albertine L Winner *‡Freida Yarmalinsky G N Barker Mary L Birkett B F M Bond Ethel D M Brock A I I Brown Hilda M Brown H W Burge G N Carroll H F Charl F I Clandce Kitty K Cohen D M Cooper M C H Cooray C J Cunningham T J Davies N E D de Silva M F Dinet J C G Evans T J Evans G G Farrington R F Fidler K J Gilchrist, Betty F Goldsmith Mary E Gould Lucy W Grace R D Green L J Hackett, J L Hamilton Paterson C B Hinkley, Constance M Hoare T G Hudson W H Hughes D H Inch J F Jarvis D F N Jones G B Kerr Beatrice Lewi J O McDonagh B M McOwan H A Magnu L H Mittet, R Parkinson G H Pearce C F Price H Ramsay J F Rivers-Moore M H P Savers Emily L Simon N C Snell J R C Spicer Muriel H Steven N M Stewart Wallace G I Thomas Winifred P Thomas R S Trueman N C McD Wellell I Whittington Gwladys M William H M William R F Winckworth E J S Woolley Tamin M Wynter

* Distinguished in Medicine
† Distinguished in Forensic Medicine and Hygiene
‡ Distinguished in Surgery
‖ Distinguished in Obstetrics and Gynaecology

UNIVERSITY OF WALES

The following candidates have satisfied the examiners in the examination indicated

TUBERCULOUS DISEASES DIPLOMA—P P Bhavnagri E F J Dunlop Joan Goodger M S Kavarana K K Pillai

ROYAL COLLEGE OF SURGEONS OF ENGLAND

A meeting of the Council of the Royal College of Surgeons of England was held on June 8th when the President Sir Holburt Waring was in the chair

Appointments

Sir Arthur Keith was appointed Master of the Buckston Browne Research Farm for the ensuing year Mr R H Burne was reappointed acting conservator of the museum and Mr T W P Lawrence acting pathological curator

Mr W Sampson Handley was appointed the representative of the College on the Court of Governors of the University of Sheffield

Examiners

The following examiners were elected for the ensuing year

Dental Surgery (Surgical Section)—R J Howard C F O William C F Shattock C P G Wakeley I H Mitchiner E C Slesinger

Fellowship—Anatomy William Wright J F S Fraser J B Hume Grant Maxie *Physiology* John Meikle G N Buchanan D H le Soura Samson Wright

Under the Conjoint Board—Elementary Biology T J Evans C I Mudge C H Hentschel N J Crowe *Anatomy* W E Le Gros Clark H A Harris F P Subbe *Physiology* H Hartridge A St. G J McC Huggett *Midwifery* A W Bourne

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NORTH-WEST COAST.—Large residential and seaside town.—Old-established PRACTICE. Cash receipts about £1,200 p.a. Panel 1,500. Excellent detached corner house (freehold), 3 professional rooms, 5 beds., and 2 recep. rooms, garage, and good garden. for sale. Premium—Practice—1½ years' pur.—No. 417.

MANCHESTER. — Middle-class PRACTICE in good residential district which is rapidly developing. Average cash receipts £1,427 p.a., excluding appointment £120 to £150 p.a. Panel 700. Excellent corner house, 3 reception, 5 bedrooms, 3 professional rooms, garage, to rent or for sale. Premium—Practice—1½ yrs.' pur.—No. 438.

NR. MANCHESTER. — PARTNERSHIP in excellent mixed PRACTICE. Cash receipts last year £2,414. Panel 2,670. Scope for increase. Good accommodation can be secured. Premium—one-third share—2 years' purchase (to include share of book debts).—No. 448.

LAKE DISTRICT. — Small Seaside Town. — Middle-class PRACTICE. Cash receipts over £800 p.a. Panel 250. Excellent house (freehold) on sea front, 3 reception, 7 bedrooms. Garage and nice garden. All kinds of sport. Vendor retiring. Premium—Practice—1½ years' purchase. —No. 383.

MANCHESTER.—Middle-class PRACTICE, in pleasant suburb. Cash receipts last year, £1,327. Panel 528. Charming house to rent, 3 reception, 6 bedrooms, billiard room. Large garden and garage. Premium—Practice—1½ years' purchase.—No. 322.

NORTH WALES. — Old-established mixed PRACTICE, in Country Town, near coast. Cash receipts last year £700. Panel 538. Scope for increase as the Practice has been neglected. Excellent house, 3 reception, 5 bedrooms, garage, and large garden. Net rent £50 p.a. Good sport and educational facilities. Welsh not essential. Cottage Hospital. Premium £800.—No. 412.

EAST YORKS. — Country Town near Coast. — Unopposed mixed PRACTICE. Cash receipts last year £960. Panel 630. Excellent detached house, 3 reception, 4 bedrooms; garage and large garden. Premium 1½ years' purchase.—No. 346.

NORTH-EAST COAST. — MIXED PANEL AND PRIVATE PRACTICE. Cash receipts last year £2,354. Appointment £120 p.a. Panel 2,070. Modern house, built specially for Practice, 2 reception, 5 bedrooms, 3 professional rooms, garage; also Branch Surgery, for sale. Premium—Practice—2 years' purchase; part by arrangement. Good introduction.—No. 445.

LARGE LANCS TOWN, Nr. Manchester.—Panel and Private PRACTICE, in present hands 23 years. Suitable for Principal and Assistant or two in Partnership. Average cash receipts £1,900 p.a. Panel 2,950. Surgery premises, with living accommodation, to rent at £55 p.a. Good house also available in best part of town where there is an opportunity of building up a Practice. Premium, best offer.—No. 435.

MANCHESTER.—Small mixed PRACTICE offering great scope for increase. Cash receipts last year £600. Panel 450 Suitable house in main road, 2 professional, 2 reception, and 4 bedrooms. Rent £42 p.a. Premium £750.—No. 433.

LANCS TOWN, near Country.—Old-established mixed PRACTICE. Cash receipts last year £725. Panel about 1,000. Excellent detached corner house, 3 reception, 6 bedrooms, garage, and large garden. To rent on lease. Premium 1½ years' purchase, or near offer.—No. 403.

MANCHESTER. — Residential Suburb. — Middle-class PRACTICE. Suitable for two in Partnership. Cash receipts last year £4,578. Panel 1,400. Two excellent houses to rent with ample accommodation. Premium 1½ years' pur., part by arrangement.—No. 277.

N. STAFFS.—Old-established Country PRACTICE in charming district, averaging £900 p.a. Panel 632. Appointments (transferable) £100 p.a. Practically unopposed. Scope for increase. Excellent house, with ample accommodation; garage and garden; rent £84 p.a. Premium 1½ years' purchase.—No. 426.

CO. DURHAM. — Small PRACTICE offering great scope in beautiful country district. Cash receipts £550 p.a Panel 380. Good semi-detached house (3 bedrooms) to rent at £55 p.a. Garden. Premium £350.—No. 446.

LIVERPOOL. — Mixed PRACTICE Cash receipts last year £943. Panel 876. Scope for increase. Hospital appointment £75—£100 p.a. Good house, 3 reception, 5 bedrooms, professional rooms, to rent, or would sell Premium—Practice—best offer. —No. 436.

NR. NEWCASTLE - ON - TYNE.—Mixed general PRACTICE, averaging £800—£850 p.a. Panel 600. Scope for increase. Good house, 3 rec p, 5 bed-, garage, and garden. Premium £950.—No. 422.

BLACKPOOL. — NUCLEUS, established 4 months, in rapidly developing district. Cash receipts £134, excluding Panel of 50. Exceptional scope. Imposing corner house to rent or would sell. Prem.—goodwill, household, & all other furn., etc. £350.-No. 444

MANCHESTER.—Old-established panel and private PRACTICE. Cash receipts last year £642. Panel 788. Scope. Good corner house, 2 reception, 4 bedrooms; garage. Rent £60 p.a. Premium 1½ years' purchase.—No. 437.

SCOTLAND.—Mixed PRACTICE producing £700 p.a., including appointments £400 p.a. Panel 226. Pleasant district House, with modern conveniences. Rent £16 p.a. Prem. £450 —No 434.

MEDICAL WOMAN'S PRACTICE.—MANCHESTER —Cash receipts last year £645. Panel 450. Good scope. Excellent house, 5 reception, 6 bedrooms, garage. Rent £80 p.a. on lease. Premium, best offer.—No. 330.

DEATH VACANCY.—CHESHIRE Coast Town, near Liverpool.—Cash receipts £500 £550 p.a. Panel 100. Good house, 3 recep., 5 beds., garage & gard. Rent £80 p.a. Prem., best offer.—No. 429

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Fellowship

Diplomas of Fellowship were granted to the following forty-four successful candidates at the recent examination

L C Rogers D P Bhargava J Jemson E K Seah, F S Tait, L Fatti J A Kerr W Leslie G W Black I W Allinson E A H Hindhaugh J E Semple, K L James, A J C Latchmore, J M Leggate Jocelyn A Moore M J Bennett Jones E A Butterworth S N Mistri D Stanley Jones G H Bateman, A Lister C J Thurgar W D Coltart J H Peel A R Clarke, V S John, H W Rodgers J E A O Connell N B Tadiri, A V Baliga A J Grace B Kapur H I McNickle, G L Alexander H C Barrett J H Beasley G Y Teggetter, R R Fitzgerald H M Hill R J W Malcolm K G Munsif, N H Robinson J B Turner

Membership

A diploma of Membership was granted to P N Cutner

A portrait of the late Sir Robert Jones presented by Sir Arthur Probyn Jones and Mrs Frederick Watson, was accepted with the thanks of the Council

ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW

At the monthly meeting of the Royal Faculty of Physicians and Surgeons of Glasgow held on June 5th, the following were admitted Fellows of Faculty C Hurwitz, A H Imrie, R W H Jarvie J L Rennie

Medico-Legal

SPARING THE MEDICAL WITNESS

In the case of *Manikum* v *Ace of Spades Petrpleum Company* tried by Mr Justice Swift under the New Procedure Rules, the plaintiff M claimed damages for wrongful assault by the servants of the company He was one of a party which visited a restaurant kept by the company on the Kingston by-pass A member of the party became troublesome and involved himself in an undignified quarrel with the waiters, with the result that the party was asked to leave The other members left, but the excited membo refused to go and M stayed behind to persuade him to leave peaceably The staff, in accordance with their legal right, began to eject these two men Owing to the resistance they encountered from the troublesome member, and also owing to the provocation they had received, they were by this time very angry, and not content with ejecting the two, some of them held M and others struck him repeatedly in the face and on the head, inflicting severe injuries Both his eyes were blackened and he had several cuts on the face, he had a compound comminuted fracture of the nasal bone, which has left a permanent deformity, with the blocking of one nostril he had five teeth broken in the alveolus and a fracture of the maxilla and palate, two other teeth which became septic as a result of the injury had to be removed He had previously had perfect teeth The company owning the restaurant attempted to prove that its servants had used only a proper and necessary amount of force, and that M had received his injuries by falling face downwards as a result of being tripped up by some unknown guest who joined in the fracas, either on to a concrete floor or else on to an ornamental wooden tub bound with metal The extent and nature of the injuries were not disputed M called the doctor and dentist who had attended him, and the company called the consulting surgeon to whom M s general practitioner had taken him The only difference in this expert evidence concerned the possible cause of the injuries The dentist's first impression was that his patient had been in an explosion The general practitioner said that in his opinion these were not the sort of injuries received by a man pitching headlong on his face on a concrete pavement, because there was evidence of blows from a number of directions Nor did he think it possible that the injuries could have been inflicted by one man unless the aggressor had walked round the victim and delivered the blows from at least four different angles He thought there was evidence of blows both from a fist and also from some such instrument as a bottle or knuckle duster, producing the punctured wounds The surgeon was alleged to have said at the time to the general practitioner that the man must have been the victim of a brutal assault In the witness box, however, he could not remember whether he had made this remark or not, but in reply to the judge's question as to what he had thought, even if he could not remember what he had said, he admitted that a very great deal of violence must have been used, but at the same time he thought a fall on a concrete surface was a likely cause In replying again to the judge he agreed that a fall would not account for bruises on the back of the head, but he could find in his notes no reference to such bruises He had seen the patient a fortnight after the event

Before the medical evidence was heard Mr Justice Swift inquired of counsel why it had not been agreed in this case, and at the conclusion of the surgeon s evidence he repeated his question, remarking that it seemed to him most undesirable that medical men should be kept from their duties for long hours when there was, so far as he could see absolutely no conflict of evidence in any material particular The only point on which the doctors differed was the method by which the agreed injuries had been inflicted, and, with all respect to the medical men he considered that he was just as competent as any doctor to form an opinion as to whether the injuries described to him had been the result of a fall or of an assault In this case he certainly did not accept the suggestion that what he described as the "very dreadful facial injuries" had been caused by a fall, and he awarded M £413 19s 6d damages and costs against the company

One of the chief aims of the New Procedure is to reduce the amount of evidence given in court by witnesses The judge has wide powers to order that any particular facts may be proved by affidavit instead of by the calling of witnesses, and he can refer any question that involves expert knowledge to a special referee for inquiry and report He can also order that no more than a specified number of expert witnesses shall be called This was obviously a case in which the medical evidence could have been agreed and proved by affidavit, the report of one medical man being countersigned by the others and the question of the causation of the injury being left to the other witnesses In this way the time of three busy practitioners would have been saved The learned judge did not see fit to mark his disapproval by making any special order as to costs The company, in accordance with ordinary practice, has to pay the costs of the plaintiff M, but if the judge had considered that M had called unnecessary medical evidence, he could have ordered M to pay the costs of this evidence There is a special provision in the New Procedure that when an injury is alleged to have been caused by the negligence of a party, the judge may refer to a special referee any question concerning the nature, extent, and permanence of that injury The expert's report is communicated to both parties who may accept it in whole or in part This rule will undoubtedly save much trouble and expense in the road accident cases for which it was framed As, however, the injuries in the present case were not caused by negligence but by wilful assault, presumably the judge could not have exercised the power to refer them to a special referee under this sub rule There does not seem to be any point in differentiating between negligence and wilfulness in the causation of injury, and when the Rules Committee considers the amendment of this experimental procedure they may pay attention to this matter along with many others

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The business undertaken by the British Medical Bureau is divided under the following heads:—

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Medical Practitioners wishing to dispose of Practices, or desiring to take Partners, are advised to negotiate the business through the British Medical Bureau. Vendors may depend upon receiving introductions only to eligible and bona-fide purchasers. All information is treated in strictest confidence. Full and trustworthy information regarding Practices, Partnerships, etc., for disposal, supplied gratis to Purchasers.

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Assistants and Locum Tenens can be secured at short notice. It is the foremost aim of the British Medical Bureau to ensure that only the most Trustworthy and Reliable Locums and Assistants are sent out.

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1 KENT.—PARTNERSHIP IN MIDDLE AND WORKING-CLASS Practice averaging nearly £4,450 p.a., in an industrial Town under 25 miles of London. Panel about 2,600. Detached house (4 bedrooms) with garden to rent. Plenty of scope for increase. Premium one fifth share 2 years' purchase.

2 S. OF ENGLAND. — PARTNERSHIP IN OLD-ESTABLISHED Practice of nearly £1,950 p.a. in important town within 80 miles of London. No panel. Attractive corner residence (7 bed and dressing rooms), in half-acre of walled-in garden, with garage, etc., for sale. Ample scope for increase. Premium one-half share 2 years' purchase.

3 ESSEX.—OLD-ESTABLISHED PRACTICE OF ABOUT £600 P.A. in Suburban District. Panel 500. Well-situated detached house (6 bedrooms) standing in own grounds with nice garden, garage, and stabling for sale. Scope for increase. Premium £650.

4 DEATH VACANCY. — WELL-ESTABLISHED OPHTHALMIC PRACTICE of over £1,500 p.a. (in addition to General Surgery) in first-rate town within 60 miles of London. Well-qualified man would have every chance of being elected Hon. Surgeon in charge of the Ophthalmic Department of the local Hospital. Excellently situated house to rent on lease.

5 S.W. OF ENGLAND. — WELL-ESTABLISHED MIDDLE AND better-class PRACTICE of between £1,200 and £1,300 p.a. in Seaside Resort. Panel 500. Excellent and well-situated large detached corner house with every modern convenience, to rent on lease. Very good Educational facilities. Sport of all kinds including golf, yachting, etc. Premium £2,000

6 MIDLANDS. — OLD-ESTABLISHED PRACTICE, AVERAGING £1,230 p.a. in prosperous town about 70 miles from London. Panel 1,836. Semi-detached house in good position to rent. Good scope for increase. Premium £2,000.

7 LONDON, S.W.—OLD-ESTABLISHED PRACTICE ABOUT £650 p.a. in well-populated area. Panel 850. Separate Surgery and private residence to be purchased. Scope for increase. Premium £1,100.

8 S. COAST.—SMALL BUT INCREASING PRACTICE OVER £300 p.a. in developing district within 2 miles of favourite watering-place. Panel 120. No midwifery. Detached house (4 bedrooms), garage, and good garden, for sale. Scope as building is going on. Premium £300.

9 SURREY.—PARTNERSHIP IN SOUND OLD-ESTABLISHED good mixed-class Practice about £3,000 p.a. in the Croydon area. Small panel. Very little midwifery. Suitable house could be obtained. Scope for increase. One-fourth share at first at 2 years' purchase, with option to increase in twelve months.

10 S. MIDLANDS. — OLD-ESTABLISHED COUNTRY PRACTICE over £2 000 p.a. in attractive part. Good appointments and panel of nearly 1,600. House (6 bedrooms), garage, and three-quarters of an acre of garden, for sale. Shooting, fishing, etc. Scope for increase. Premium 1½ years' purchase.

11 S.E. COAST.—MIDDLE AND WORKING-CLASS PRACTICE OF £1,000 p.a., in favourite summer resort. Panel over 1,000. Corner house (4 bedrooms), with garage and garden, for sale. Premium one and a half years' purchase.

12 N. WALES.—STEADILY INCREASNG COUNTRY PRACTICE in partly Welsh-speaking district. Receipts average £1,115 p.a., including panel over 530. No resident opposition. Convenient and centrally situated house (4 bedrooms), with garden. Shooting, fishing, etc. Premium—house and Practice—only £2,000.

13 S. MIDLANDS.—VERY OLD-ESTABLISHED PRACTICE ABOUT £500 p.a. in a town of about 50,000 inhabitants. Panel 450. Very good detached double-fronted house with 7 bed and dressing rooms, garage, and good garden. Great scope for an energetic man. Premium, freehold house and Practice, £4,000.

14 ESSEX COAST.—PARTNERSHIP IN PRACTICE OF £2,500 p.a. in small Seaside Town. Panel 2,300. Modern house in good position facing Sea with 4 bedrooms for sale. Scope for increase. Premium one-fourth share £1,250, and further share later.

15 ESSEX.—PRACTICE ABOUT £1,150 P.A. IN DEVELOPING district in the Thames Estuary. Panel 350. House with ample accommodation. Electric light, main drainage, garage, and very nice garden to rent. Yachting. Plenty of scope for increase. Premium £1,600.

16 LONDON, W.—STEADILY INCREASING NUCLEUS OF PRACtice in the Maida Vale district. Bookings for 11 months £249, of which about £100 has been received. Rent of consulting and waiting rooms 30/- weekly. Good scope. Premium £300.

Obituary

SIR WALTER FLETCHER K B E C B M D LI D D Sc F R C P F R S

Secretary of the Medical Research Council

Sir Walter Fletcher s death on June 7th after an operation is a great loss to the country and to medical science The establishment of a Medical Research Fund under the first National Health Insurance Act and the constitution of the Medical Research Committee set up in 1913 to administer it were largely due to the vision and driving force of Sir Robert Morant The choice of Fletcher as chief executive officer and guiding spirit of the new committee (reconstituted in 1920 as the Medical Research Council) was singularly happy and holding the same high ideals Morant and Fletcher worked in close alliance to put the scheme on right foundations The eager forward looking minds of these two men were attuned they were passionate in their devotion to the public weal and the debt of medical research to them is incalculable

Walter Morley Fletcher sixth son of Alfred Evans Fletcher was born in Liverpool on July 21st 1873 He went up to Trinity College Cambridge with a scholarship and graduated B A with first class honours in the Natural Sciences Tripos of 1894 As a university athlete he followed in the footsteps of his elder brother Dr Herbert Morley Fletcher Continuing his physiological work at Cambridge he was elected Coutts Trotter student in 1896 and won the Walsingham medal and was elected a Fellow in the following year He then entered St Bartholomew s Hospital with an open scholarship After taking his M B in 1900 he returned to Cambridge as Fellow and lecturer at Trinity and for two years was senior demonstrator in the University physiological laboratory From 1904 to 1914 he was tutor at Trinity He proceeded M D in 1908 and obtained the Sc D degree in 1914 just before coming to London as Secretary of the Medical Research Committee which had recently been set up under the chairmanship of Lord Moulton He was elected F R S in 1915 largely in recognition of researches on the biochemistry of muscular contraction a subject to which he devoted his Croonian Lecture that year

Immediately after the outbreak of war Fletcher put the resources of the new research organization at the disposal of the Admiralty and the War Office and with characteristic zeal threw himself into the many and diverse medical problems that arose He was a member of the Army Pathological Advisory Committee and of the R A F Medical Advisory Committee and after the armistice of the Pensions Disability Committee He also became medical assessor to the University Grants Committee and served on the Royal Commission on Oxford and Cambridge Universities (1919–22) In 1928 he visited India as chairman of the Committee on the Organization of Medical Research under the Government of India In the course of his ever widening administrative and advisory duties as Secretary of the Medical Research Council Fletcher s influence made itself felt in laboratories and research institutes wherever investigations were projected or in progress that might advance medical knowledge or promote the national health To everything that he took in hand he applied the whole force of a first rate intellectual equipment and the unquenchable ardour of a reformer If ever a man could be described as irreplaceable that man was Walter Fletcher

Honours accumulated in the course of years the Universities of Edinburgh Glasgow Birmingham and Pennsylvania made him an honorary LL D and the Universities of Oxford and Leeds an honorary D Sc In recognition of his services during the war he was created K B.E in 1918 and for his work in the organization of medical research in India he received the C B in 1929 The Royal College of Physicians of London elected him a Fellow in 1918 under By law XXXVIII (*b*) and he was an Honorary Freeman of the Society of Apothecaries

Walter Fletcher belonged to that rare class of men who combine wide culture with singleness of purpose and scientific vision with great organizing ability An idealist he pursued realities He was quick as he saw the drift of new work to look for its bearing upon practical problems Generous impulsive and critical by temperament he fought many battles for causes and for friends but none for his own advantage Very formidable as an opponent on questions of public policy he was a charming and witty companion in social life and all who had the privilege of his friendship feel that a unique personality has passed from among them

At the funeral service in Trinity College Chapel on June 10th the Council of the British Medical Association was represented by Mr H S Souttar Deputy Chairman of the Representative Body and at the memorial service in St. Martin in the Fields on June 12th by Mr Souttar and the Editor of the *Journal*

Sir HENRY DALE writes

Many will have pondered during the past few days on all that medical research in this country and far indeed beyond it has gained from the chance which nineteen years ago brought the man and the opportunity together Walter Fletcher had then already left a permanent impress on physiology in particular not only by the earlier research on record in his own name but even more by his inspiring term of office as a tutor of Trinity At the end of that period he might still in the full vigour of early middle life have returned to personal research at the

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Practices and Partnerships for Disposal (continued).

17 WEST OF ENGLAND.—PARTNERSHIP IN OLD-ESTABLISHED PRACTICE over £2,200 p.a. in County Town. Panel about 1,000. Premium one-half share 2 years' purchase. Good prospects for well-qualified physician (preferably M.R.C.P.), who should be an R.C. and who would have opportunity of getting on Staff of Hospital in near future.

18 LONDON, E.C.—PARTNERSHIP IN OLD-ESTABLISHED PRACtice in the City. Receipts average about £1,650 p.a., including appointments and panel worth over £500 p.a. Premium one-half share £1,000.

19 NORTH OF ENGLAND. — INLAND HEALTH RESORT. — NON-dispensing PRACTICE of about £1,000 p.a. Small select panel. House (7 bedrooms) with large garden, for sale. Premium—Practice—£750.

20 N. MIDLANDS.—PARTNERSHIP IN SOUND AND LUCRATIVE Practice in manufacturing district. Good appointments and large panel. House, with 7 bedrooms, to rent on lease. Premium for share worth about £2,600 p.a., 1½ years' purchase.

21 HOME COUNTIES. — PARTNERSHIP (AFTER PRELIMINARY Assistantship) in large mixed Practice in growing district within 20 miles N.W. of London. Applicant should be a keen and energetic young Englishman.

22 LONDON, E.C. — NUCLEUS OF PRACTICE (ABOUT FOUR-fifths Ophthalmic) in the City. Cash receipts average £268 p.a. Fees for Consultations £1 1s. to £2 2s. Consulting and waiting room to rent. Premium £250.

23 HOME COUNTY.—WELL-ESTABLISHED PRACTICE OF £700 p.a. in first-rate Country Town under 40 miles from London. Panel about 250. Fees 5/- to £1 1s. Large well-built residence (about 6 bedrooms) with modern conveniences. Beautiful garden, meadow, orchard, etc., in all about 24 acres. Excellent hunting. Premium, Practice and house, £4,500 (or near offer), which is less than the value of the house alone.

24 EASTERN COUNTIES. — OLD-ESTABLISHED PRACTICE about £2,750 p.a. in beautiful country district. Panel 1,150. Good house (6 bedrooms), with electric light and central heating, in large grounds, for sale. Good scope.

25 MIDLANDS. — PARTNERSHIP IN WELL-ESTABLISHED AND increasing Practice of nearly £1,550 p.a. in growing residential neighbourhood on outskirts of first-rate town. Panel 1,830. House (4 bedrooms, etc.), in acre of garden, for sale or rent. Excellent prospects of increase. Premium one-half share 2 years' purchase.

26 S. AFRICA.—RADIOLOGICAL PRACTICE IN A MOST DElightful town, with excellent climate. Cash receipts last year £1,450. Scope. Premium, to include furniture, carpets, accessories, etc., £2,200.

27 PRIVATE MENTAL HOME (FOR LADIES ONLY).—EXCEPtionally nice house and grounds. A considerable sum required for the purchase. Further particulars on application.

28 EASTERN COUNTIES. — OLD-ESTABLISHED COUNTRY PRACTICE. Cash receipts about £720 p.a., including appointments over £150 and a panel of about 590. Detached house (6 bedrooms) in grounds of 1 acre for sale. Prem. for Practice £650.

29 EAST COAST.—PRACTICE OF BETWEEN £750 AND £800 p.a. in a purely Residential Seaside District within 40 miles from London. Small Panel. Detached house (5 bedrooms) for sale. Scope for increase as district is growing.

30 SOUTH AFRICA (CAPE PROVINCE).—PRACTICE OF OVER £2,600 p.a. in Residential District on outskirts of one of the Principal Coastal Towns. Good house (5 bedrooms, etc.) to rent. Scope for Surgery. Premium £1,750 or offer.

31 LANCASHIRE. — OLD-ESTABLISHED PRACTICE IN SMALL Manufacturing Town. Cash receipts last 12 months £725, including a panel of over 1,050. Detached house (5 bedrooms), with garage and good garden, to rent. Premium 1½ years' purchase or near offer.

32 HOME COUNTIES. — PRACTICE IN DELIGHTFUL COUNTRY District, easy distance of London. Earnings past 12 months £667. Panel over 300. Attractive house (7 bed and dressing rooms) in grounds of two acres, with garage, for sale. Very suitable for Resident Patients. Good scope for increase. Premium £700.

33 SURREY.—PRACTICE OF £1,000 P.A. IN RAPIDLY GROWing Residential District within 15 miles of London. Panel 400. Suitable house, with separate professional accommodation, for sale. Scope for considerable increase. Premium £1,600.

34 LONDON, W.—GOOD MIDDLE-CLASS PRACTICE £400 P.A. in suburb within easy access of the West End. Panel over 100. Attractive double-fronted house with nice garden for sale. Scope for increase. Premium 1½ years' purchase.

35 CORNWALL.—VERY OLD-ESTABLISHED PRACTICE OF OVER £1,100 p.a. in delightfully situated seaside village on West Coast. Panel about 550. Well-built house (7 bed and dressing rooms), standing in half-acre of ground for sale. Scope, as building is going on. Premium 1½ years' purchase.

36 LONDON, N.—PARTNERSHIP IN PRACTICE, ABOUT £5,250 p.a. in thickly populated Suburban District. Panel about 800 One-fourth or one-third share at 2 years' purchase.

37 HOME COUNTIES. — OPHTHALMIC PRACTICE BETWEEN £300 and £400 p.a. in desirable Residential Town, under 15 miles from London. Good detached house (4 bedrooms) with large garden for sale. Good reasons for plenty of scope for increase. Premium £300.

38 LONDON, E.C.—OLD-ESTABLISHED "LOCK-UP" PRACTICE of £646 p.a. Panel 459. Living accommodation to rent if desired. Premium £1,000.

39 S. AFRICA. — OPHTHALMIC AND GENERAL PRACTICE about £1,400 p.a. (about 60 per cent. Ophthalmic), including appointments £400. No Ophthalmic opposition. Premium £400.

40 CO. DURHAM.—PRACTICE OVER £500 P.A. IN RESIDENtial colliery district, near two large towns. Panel 370. Centrally situated 7-roomed house, with good Surgery and Dispensary, for sale or rent. Practice could be very quickly substantially increased. Premium £650.

41 N. OF ENGLAND. — OPHTHALMIC PRACTICE OF OVER £1,600 p.a. in an important town. Excellent scope for one keen on clinical and operative Ophthalmology. Large house in first-class condition for sale. Purchaser should be well qualified. Premium £2,500.

42 S. AFRICA. — PRACTICE OF ABOUT £2,000 P.A. IN A famous town. Pleasantly situated detached bungalow (5 bedrooms), garage, and small garden for sale. Good hospital (with private wards). Premium £1,100.

43 LONDON, WEST END. — X-RAY AND ELECTRO-THERApeutic Practice. Receipts 1931, nearly £620. Suitable and convenient flat at moderate rent, on lease. Premium £925.

44 LONDON, E.—CASH AND PANEL PRACTICE OF £860 P.A. in populous district. Panel 570. Small house to rent on lease. Premium 1½ years' purchase.

"MEDICAL PARTNERSHIPS, TRANSFER, AND ASSISTANTSHIPS" (BARNARD & STOCKER). *Post free* 12/6.

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laboratory bench Had he done so there can be no doubt that he would have produced further work of great distinction in the field of his choice , for he certainly had most of the qualities of the great investigator—a vigorous and logical mind, a quick imagination, prompt to see new possibilities of causal relation, an exacting standard of precision in action and thought, and a tireless curiosity But it cannot be doubted that he made a greater and more permanent gift to science, and to medical science in particular, by devoting the remainder of his life to providing opportunity for research to be carried out by others To this task he brought a first-hand knowledge of the meaning and needs of research, in rare alliance with a personality of remarkable charm and distinction, and with a natural gift for the handling of men and affairs Without Fletcher as its secretary the Medical Research Fund would, no doubt, have been faithfully administered, to provide helpful subventions for the researches of many, and full-time opportunity for a chosen few No committee, however, with a merely administrative secretary, could have made it the transforming influence in medical research which it became It may be doubted whether, under such conditions, it would have moved from its original relation to the national insurance scheme or have grown beyond its original dimensions

Having accepted the opportunity, Fletcher became far more than the executive officer, administering the Fund in accordance with the Committee s and later the Council's decisions From the first his administration was carried out on extraordinarily personal lines He became the friend and counsellor of every worker whose researches the Fund could help and, as time went on, of many others who needed no pecuniary aid His eager mind was always seeking new directions, in which material difficulties could be removed from some already promising line of investigation, or in which some new quest could be stimulated by an offer of support Men came from centres of research all over the country, not merely to enlist his interest with a view to financial support, but to submit new ideas to his keen and critical judgement, to take his advice on matters of planning and administration, or to seek his help and sympathy in personal difficulties An analysis of the calendar of appointments in his office would surely exhibit an amazing variety of obligations cheerfully accepted The fame of his ability and his wisdom went round the world It was natural that the Indian Government should invite him to preside over its Commission of Inquiry on Medical Research His name was as familiar to those concerned with the organization of support to medical research in the United States of America as in the British Oversea Dominions At home his influence spread far beyond the limits of the strictly medical field, and was effective at numerous points where Government action made contact with the applied biological sciences

Fletcher had a large circle of devoted friends, and the range of his personal contacts was wide and influential Probably no man s advice was so widely sought as to the best method of applying funds which had been left in trust or which it was intended to give, for the support of research I do not think that there was any case in which he used such opportunity to bring additional funds under the direct control of the Council and of his own administration it was other institutions rather—the Royal Society the universities, and hospitals—which, on such occasions, received the powerful aid of his advocacy Such funds as came to the Council from outside benefactors came unsought, attracted by the reputation for enlightened administration which Fletcher's work had done so much to establish For the position and the rights of the Council, on the other hand he could be forceful and insistent to a length which some mistook for arrogance, till they came to know the generous heart of the man and to realize that he was fighting for what to him was a sacred cause, and not for a moment for his personal position or prestige

The cause was that of research and of the genuine research workers How often have I heard him with obvious sincerity, depreciate his own activities, in comparison with those of the men and women who were engaged in the work of directly adding to knowledge With his position of growing influence and distinction, with all the calls on his attention of large and important schemes, he always had time to spare for the humblest genuine research worker and kindly encouragement to give He was at his best and happiest in friendly interchange with bright and eager young minds , and to any with a story to tell of new observations made, or of new ideas yet to be brought to the test of experiments, he was always ready to give the true encouragement of a really critical interest No perfunctory compliments from Fletcher , you had to make clear to his quick impatience exactly what you were doing and why you were doing just that and why the suggestions which darted from his alert intelligence were not appropriate And then came the reward of his boyish pleasure, and his insistence on the importance of the work, and his eagerness to help its progress To every worker in medical research he was a friend and a champion

SIR FRANCIS FREMANTLE writes

Sir Walter Fletcher s varied qualities and activities have been well described in the press , and with it the greatness of conception and of opportunity which enabled him to make of the Medical Research Council " one of the most distinguished and useful bodies in the Empire " But his achievement is of great value in even wider fields When one penny out of the weekly contributions was set apart for research work in the Insurance Act of 1911 there was a serious danger that it would be used for petty laboratory work on narrow and established lines under official regulation and control Thanks to Lord Moulton, Lord Rhondda, and others, this danger was averted, and Sir Walter Fletcher made good Curative and preventive work, private practice, institutional service and the public health, each had their new and progressive contributions to make and requirements to ask of medical research All had to be included in the scheme The resources and funds of public authorities, not merely of the new insurance committees, were required no less than those of charity and private enterprise Above all, the individual freedom of the worker in body, mind, and soul was as essential as the co operation and guidance along useful lines which enabled them to conceive a purpose in their work as an integral part of the whole campaign of discovery The Medical Research Council was thus evolved under the cloistered protection of the Privy Council, to serve the Government in all its departments , and not under any one department, where it might be influenced by political necessity or parliamentary pressure and have its reports edited or curtailed A synthesis has thus been effected between the needs of the public and of the individual , between individual freedom and communal rights and resources (the essences of conservative and socialist philosophies) , between prevention and cure , between old and established lines of thought and work and the new ideas, machinery, and opportunities now opening to a new world May it be as our profession should always be, an example for the reconstruction of the national machinery and government, and an enduring monument to one of the most versatile and ablest of our contemporaries

[The photograph reproduced is by Elliott and Fry Ltd]

BOVRIL MEDICAL AGENCY, Ltd.

ALDINE HOUSE,

10-13, BEDFORD STREET, STRAND, LONDON, W.C.2.

Telegrams: BOVMEDICAL, LESQUARE-LONDON. Telephone: TEMPLE BAR 1616 (3 Lines).

Under the personal directorship of Dr. J. FIELD HALL and J. C. NEEDES

who have both had many years' experience as Medical Transfer Agents.

The commission chargeable in respect of any practice or partnership in Great Britain placed exclusively in the hands of this Agency has been fixed on an exceptionally favourable scale, the maximum chargeable on any transfer being fifty pounds (£50). Full Schedule of Terms and Conditions will be forwarded on application.

Accountancy and legal services furnished by the Agency, where desired, at moderate inclusive charges. No charge is made to Principals for the introduction of Locum Tenens or Assistants.

1. PARTNERSHIP.—In a well-populated pleasant South-Eastern suburb, within ten miles of London, the half share of an old-established mixed class Practice is for disposal owing to the retirement of the junior partner. Held by the remaining partner 30 years. Cash receipts average £2,765 p.a., including panel of 1,800 and appts. worth £150. Very little midwifery. Pleasant semi-detached corner house, with ample accommodation, garden. Price, leasehold (over 900 years, at ground rent of £7 p.a.), £1,050. Premium 2 years' purchase. Scottish graduate preferred.

2. NORTH-EAST COAST.—FAVOURITE TOWN.—Old-established good mixed general Practice, offering considerable scope for increase. Gross cash receipts for the past twelve months approximately £1,800. Selected panel of 100. Fees 5/- to 7/6. Very little midwifery. Well-situated house, with 3 reception, 5 to 6 bedrooms, etc., and separate professional rooms. Electric light. Garage. Price for Practice and house £5,400, part on mortgage. Good opportunity for Eye work, and Ear, Nose, and Throat work if desired. Sport of all kinds and excellent schools.

3. LANCASHIRE. — Well-established PRACTICE, situated in pleasant agricultural district, within easy reach of neighbouring towns, and Lake district. Gross cash receipts average about £1,200 p.a., and Practice is steadily increasing. Fees 3/6 to 10/-, visits 5/-, with medicine extra. Midwifery not encouraged. Suitable house, with 2 reception rooms, 5 bedrooms, and two large attics, bathroom, etc., consulting and waiting rooms. Electric light. Good garage. One acre of ground. Can be rented on lease. Premium 1½ years' purchase.

4. MANCHESTER.—Old-established middle and working-class PRACTICE, producing for the last twelve months about £650, including panel of 790. Fees from 3/6. Convenient house, with 2 reception, 4 to 5 bedrooms bathroom, etc. Rent on lease £60. Premium £950, to include furniture.

5. LONDON, NORTH-WEST. — Middle-class PRACTICE, in new and developing district, producing last year £400 and this year at the rate of about £600. Panel of 230. Fees 2/6 and 3/6, visits from 5/-. Six-roomed house, with bathroom, electric light. Garage. Garden. Price for freehold £1,000, £850 on mortgage. Prem. £650.

6. LONDON, SOUTH-WEST.—Old-established middle and working-class PRACTICE, producing about £1,100 p.a., including panel of about 1,150. Visits 3/6 to 5/-. Suitable corner house, with 2 reception, 4 bedrooms, bathroom, and separate professional accommodation. Can be rented on lease. Premium £1,750. Easily worked, and offering very good scope for increase.

7. SOUTH-WEST OF ENGLAND.—In a thriving and pleasant seaport town, with beautiful surrounding country, a well-established increasing PRACTICE worth last year over £1,100, including panel producing £286 and appts. £200. Visits 3/6 to 21/-. Midwifery practically refused. House is Vendor's property and is for sale. Premium £2,000, or near offer.

8. WITHIN SIXTEEN MILES OF LONDON.—Small PRACTICE, offering large scope in good residential town. Receipts estimated to be between £500 and £600 p.a. Good house. Price for Practice and house £4,000, or near offer.

9. PARTNERSHIP. — NEAR EPPING FOREST. — A one-third share is offered in a well-established and rapidly developing good middle-class Practice, averaging for the past three years £3,504, including appointments worth £250. Selected panel of 660. Good house available (professional accommodation, 3 reception, 5 bedrooms, etc.). Large and secluded garden. Garage. Freehold for sale, or might be rented. Premium 2 years' purchase.

10. LANCASHIRE.—LARGE TOWN.—Old-established chiefly working-class PRACTICE, averaging for the last three years nearly £1,900. Panel of 2,950. Advice and medicine from 3/6. Surgery can be rented at £55 p.a. Premium £3,000, or near offer.

11. LIVERPOOL.—Well-established PRACTICE in rapidly growing district, Gross cash receipts over £950, including panel of 876. Fees from 2/6. Suitable house can be rented at £80 p.a. Premium 1½ years' purchase.

12. WITHIN FIFTEEN MILES OF LONDON.—Old-established better middle and working-class PRACTICE, producing last year £1,536, of which £689 is from panel. Fees 2/6 to 7/6. Midwifery discouraged. Large house in one acre of ground, with ample accommodation. Price (freehold) £4,750 (£2,750 on mortgage or might be rented). Premium £2,500. Very good scope for increase.

13. MIDDLESEX.—ASSISTANTSHIP, with view to Partnership offered in a large mixed general Practice, after a preliminary period of six months. Ingoing partner must be English and experienced.

14. SOUTH-EAST LONDON.—Good middle and working-class PRACTICE, producing last twelve months nearly £950. Panel of 986. Suitable house, with 2 reception, 4 to 5 bedrooms, etc. Rent on lease £70 p.a. Premium, to include drugs, etc., and surgery fittings and furniture, £1,450.

15. HOME COUNTIES.—ASSISTANTSHIP, with view to Partnership offered in a better-class Practice in residential town. Ingoing partner must have experience of general Practice and be able to undertake major surgery, and preferably hold a Fellowship.

16. NORTH WALES.—Old-established middle and working-class PRACTICE, averaging for the last three years over £1,700, with panel of about 1,300. Fees from 2/6. Visits from 3/6, with medicine extra. Suitable house, with good professional accommodation. Electric light. Garage for two cars. Small garden. Rent on lease £100 p.a. Premium £2,500, £1,700 down, balance by instalments. Good sport, etc. A knowledge of Welsh is not necessary.

17. PARTNERSHIP.—CHESHIRE.—Half share (producing over £2,000 p.a.) of very old-established Practice, situated in most pleasant residential district within few miles of a large town, can be acquired by an experienced gentleman between 35 and 40 years of age. Panel of 1,200—1,300. Patients all classes. Fees good and expenses light. Suitable house available containing 2 reception rooms, 3 bedrooms and 3 attic bedrooms, bathroom, etc. Garage and garden. Rent £65 p.a. Premium £4,000. Every social amenity, sport, and very good educational facilities.

18. RIVIERA.—Old-established PRACTICE the receipts from which have averaged over £1,600 p.a., but have decreased recently owing to Vendor's ill-health. Very good prospects of extension. Fees from £1 1s. Very easy work. Suitable flat can be rented at £100 p.a. Premium £4,000.

19. MIDLANDS.—Old-established middle and better-class PRACTICE in clean and attractive manufacturing city. Cash receipts average over £1,600 p.a., including appt. worth £165 (transferable) and panel of 1,220. Visits 5/- to 2 gns. Midwifery discouraged, fee 5 to 15 gns. Exceptionally good house, in its own grounds, with ample accommodation; fitted with every labour-saving device, and economically run. Situated in the best residential part. A cottage in the grounds is let at £37 a year. Price, freehold, £5,000 (£3,500 on mortgage). Premium £3,500. Scope for active man.

20. WESTERN SUBURB.—Well-established PRACTICE, producing £950 p.a., including panel of nearly 600. Suitable house available. Premium 1½ years' purchase.

21. LANCS.—Well-established mixed-class PRACTICE, producing for the last 12 months £725. Panel of 1,055. Fees from 3/6. House contains 3 reception, 5 bedrooms, etc. Rent on lease £85 p.a. Premium 1½ years' purchase.

22. LANCS. — LARGE TOWN. — Old-established upper and middle class PRACTICE, situated in purely residential district and averaging about £1,700 p.a. including appts. of £130, and panel of 700. Visits 5/- upwards. Very little midwifery at 5 to 10 guineas. Expenses low. Excellent and well-built house, ideally situated, having ample accommodation (surgery, waiting room, and dispensary, 3 reception, 5 bedrooms, etc.). Rent on lease £120. Premium £2,500. Good educational facilities.

23. EGYPT.—Well-established PRACTICE, producing about £950 p.a., and offering good scope for increase. Fees 10/6 to 2 guineas. Excellent accommodation can be rented at £16 10s. monthly. Premium to include all furniture, drugs, drug bottles, instruments, etc., £2,000.

ASSISTANTS REQUIRED.—(1) BRISTOL. Outdoor, £350 p.a., all found. Scottish graduate preferred. Must be single. (2) LONDON. Indoor, £300 p.a. (3) LONDON, S.E. Indoor, £300 p.a. (4) LONDON, EAST. Indoor, with view to Partnership. £300 p.a. capital for purchase of house and Practice. (5) YORKSHIRE. Outdoor, £300 p.a., all found. Single, aged 21 to 30. English or Scot, and willing to cycle. (6) STAFFS. Outdoor, £450 p.a. Must provide own car.

WANTED TO PURCHASE.

1. OUTLYING SUBURB.—Middle and working-class PRACTICE, producing in about £1,500 p.a., with panel of 1,000 upwards. Must have house and garden. Capital available.
2. BUCKS, BERKS, or near locality.—Better-class PRACTICE, averaging about £1,500 p.a., with good scope. Panel not necessary. Apply capital for purchase of house and Practice.
3. SOUTH OF ENGLAND.—Good town, with educational facilities. Income £1,200 to £1,800, with substantial panel. Fair-sized house with garden.
4. SOUTH COAST TOWN, or near locality.—PRACTICE averaging about £1,500 p.a., with panel of 1,000 or thereabouts. Small house preferably on rental. Capital available.
5. LONDON OR SUBURBS.—PRACTICE, producing £1,400 to £1,600 p.a., with panel of 1,500. Good house, with garden.
6. COUNTRY PRACTICE, within 60 to 80 miles of London. Income from £1,000 upwards.
7. PRACTICE or PARTNERSHIP, suitable for LADY DOCTOR, within easy reach of London. Income approximately £300. Capital available.

The Agency has made arrangements for special facilities, on very favourable terms, to be afforded to approved purchasers for the advance of part of the premium for any suitable practice or partnership. Full details on application.

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J A SHAW MACKENZIE M D

Dr John Alexander Shaw Mackenzie died suddenly on June 1st at the age of 75 A correspondent J T C sends the following appreciation

Few have laboured more consistently to ascertain and to use for the benefit of mankind the defensive factors against cancer normally existing in the blood and tissues His whole mind was absorbed in the subject and he sacrificed his professional life to this cause He built up his work not on theories but on laboratory experiment working at King's College the Imperial Cancer Research Fund and both the Brown Institution and the Ross Institute

Dr Shaw Mackenzie began work on the subject of cancer in about 1900 and was much interested by the olive oil soap treatment introduced by Dr J H Webb of Melbourne in 1905 By 1907 he published a work on the peptone splitting ferment erepsin and in 1909 began to give his attention to the fat splitting ferment lipase From his experiments on ferments or enzymes he built up the hypothesis that the cells in cancer proliferate without control because the normal tissue or intracellular enzymes are deficient either in quantity or quality He found that a definite quantity of normal serum had an accelerating effect on certain enzymes whereas the same quantity of cancer serum had an inhibiting effect He used these facts for two of his tests His lipolytic test showed the amount of fatty acids liberated from a neutral olive oil emulsion by lipase these fatty acids being increased by normal serum but diminished by that from cancer patients His tryptic test was similar normal serum diminishes the power of trypsin to digest protein whereas the serum from a cancer case inhibits it more He claimed that these two tests together gave 95 5 per cent correct results His third test consisted in a turbidity produced in cancer serum by a saponified mixed extract of cancer tissues and this he claimed gave a 95 3 per cent correct result in gastric and duodenal cases His treatment which required careful administration was made up of the injection of olive oil soap into the tissues or veins and the administration by the mouth of dried bile and of certain enzymes especially secretin in order to stimulate intracellular enzyme formation and correct the deficiency His reasoning did not exclude the possibility of organisms being the cause of cancer he spoke of cancer houses but he doubted if organisms were the cause or an effect of the disease He claimed that his treatment diminished the risk of recurrence after operation lessened pain stopped fetor prolonged life and in some cases gave a complete cure Many of his cases showed remarkable results and he thought that thousands might have their lives prolonged by his methods

He had held the appointments of medical registrar and pathologist to the Victoria Hospital for Children assistant physician and pathologist to the Chelsea Hospital for Women and physician to the Women and Children's Heart Hospital Soho Square but the tragedy of his life was that in 1900 after being elected an out patient physician to the Samaritan Hospital his services were suddenly dispensed with This was explained and Shaw Mackenzie fully vindicated by Dr A W Oxford in his book on the history of the Samaritan Hospital of which he was chairman He wrote thirty years after the event Although not stated in the minutes this was on account of supposed unorthodox views on the subject of cancer which seem now to meet with some support Shaw Mackenzie suffered from not having his work thoroughly investigated according to his own ideas but in spite of this he pursued steadily the experimental path that he believed would best achieve his aim

GERVASE DIS EY ALEXANDER (eleventh Lord COBHAM, who died on June 10th in St Thomas's Hospital after an operation was born on May 6th 1880 eldest son of the late Reginald Gervase Alexander M D of Halifax From Gonville and Caius College Cambridge where he graduated B A in 1903 he went to St Thomas's Hospital qualifying M R C S L R C P in 1906 and taking the B Ch degree in 1908 Before the war he had been clinical assistant at the Samaritan Hospital for Women the Evelina Hospital the Victoria Hospital for Children Chelsea and the Hospital for Sick Children Great Ormond Street His father spent much trouble and money in establishing a claim to co-heirship to three peerages which had long been regarded as extinct but died early in 1916 before the Crown had taken action to call them out of abevance In September of that year Gervase Alexander was summoned to the House of Lords as Baron Cobham but having indifferent health and a retiring disposition he took no part in parliamentary business or public life and quitted the practice of medicine for which he had little real inclination

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The following well known foreign medical men have recently died Professor PETER FOKITSCH director of the Second Surgical Clinic of Tashkent University aged 69 Dr ANTON CHRISTOMANOS professor of experimental pathology at Athens University aged 63 Dr JUVARA an eminent surgeon of Bucarest and Professor LAGOVSKI a Moscow oto-rhino-laryngologist

The Services

LEISHMAN PRIZE

Major H J Bensted M C Royal Army Medical Corps has been awarded the Leishman Prize (Officers) for the year 1932 consisting of a silver medal and a sum of £30 for his work in the interests of military pathology

The Leishman Prize (Officers) is awarded annually for the best piece of work in any branch of medicine surgery or allied sciences or in connexion with the general duties of the Royal Army Medical Corps by an officer of the R A M C or Army Dental Corps or by an officer removed from either of these corps but still on the active list

NORTH PERSIAN FORCES MEMORIAL MEDAL

Dr H J O D Burke-Gaffney Colonial Medical Service has been awarded the North Persian Forces Memorial Medal for the year 1932 for his paper on the classification of the colon aerogenes group of bacteria in relation to their habitat and its application to the sanitary examination of water supplies in the Tropics and in temperate climates published in the *Journal of Hygiene* January 1932

The North Persian Forces Memorial Medal is awarded annually for the best paper on tropical medicine or hygiene published in any journal during the preceding twelve months by a medical officer of under twelve years service of the Royal Navy Royal Army Medical Corps Royal Air Force Indian Medical Service or of the Colonial Medical Service provided the Memorial Committee considers that any of the papers published has attained a standard of merit justifying an award

R A M C COMMISSIONS

An announcement in our advertising pages this week states that twenty five permanent commissions in the Royal Army Medical Corps will be offered on July 27th and application should reach the War Office not later than July 21st Candidates will be elected for commissions without competitive examination and will be required to present themselves in London for interview and medical examination They must be under 28 years of age on August 1st 1933 and registered under the Medical Acts All particulars may be obtained by application in writing or personally to the Assistant Director General Army Medical Services the War Office Whitehall S W 1

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons reassembled on June 13th Foreign affairs were debated, and Mr Chamberlain made a brief statement on the British debt to the United States

Slum Clearance and Increased Malnutrition

In the House of Lords after Viscount Gage had moved the second reading of the Rent Restrictions Bill, Lord MARLEY criticized the Government for its 'five year plan for slums' which in his opinion was preposterous nonsense The problem was getting worse, and despite all the promises that had been made and all the ideals which we had in mind, there was no sign that the housing shortage would be met in five years' time If anything it would be worse, and the sufferings of those unfortunate people whose rents would be raised would be largely increased by the Government's action The fact that the position was getting worse was illustrated by the rise in out-relief From August 1931, to April 1933 according to a recent answer given in the House of Commons, the number of persons drawing out relief had gone up from 900 000 to 1 300 000 How could those people pay this rent except at the cost of their food? The medical officer for Deptford had pointed that out He had said that families in receipt of public assistance could not supply themselves with the minimum diet laid down by the Ministry of Health after paying their rent It was a fact and nobody would wish this to continue that malnutrition was increasing among the children of the poorest families The chief medical officer of the Board of Education in the last report he issued, showed that the starvation of children in the poorest families had increased every year for the last five years It was 9 per 1 000 in 1927 9 5 in 1929 and 11 2 in 1931 A recent report of the medical officer of health for Stockton had proved the connexion between high rents and starvation The Stockton Council established a slum clearance scheme built some very fine new houses, and moved a large number of families out of the slums into them The death rate of those families moved out of the slums went up 50 per cent The council was horrified It examined the question very carefully, and the medical officer of health reported that the only explanation was that, whereas the rent in the slums had been 4s a week the rent in the new house was 8s 10d weekly leaving 4s 10d less to be spent on food The BISHOP OF WINCHESTER said that if that had been a debate on the slums he would have endorsed nearly everything Lord Marley had said From time to time attacks were made against the Ecclesiastical Commissioners for owning slum property He had always asked for specific cases, and when they were given he had inquired into them personally So far he had not found any cases of slum property under the complete control of the Commissioners It was true that there was slum property from which they drew ground rents which had been let on very long leases They had no control over that property whatever If they refused to draw the rents it would simply mean that the slum landlord would profit He could assure the House that as soon as property which had been slum property came under the control of the Commissioners they used every effort in their power to turn it into decent property, run on model lines

The Bill was read a second time

Experiments on Animals—Replying to Mr Groves Sir JOHN GILMOUR said there was no information of the number of experiments on animals attended by inspectors in the year 1899, but the figures for the years 1922 1927, and 1931 were 401, 33, and 125 These figures provided no measure of the amount of inspection since it might be a matter of accident whether a number of brief experiments such as inoculations were performed during an inspector's visit Many procedures, such as feeding experiments or experiments involving inoculations or the administration of drugs extended over several weeks and an inspector in the course of his visit saw thousands of animals which were undergoing such experiments There were two inspectors appointed to visit registered places for the purpose of securing compliance with the provisions of the Cruelty to Animals Act

Blind Pensions in Scotland—On June 13th Mr HORE BELISHA informed Mr Burnett that he was unable to state the number of awards and withdrawals of blind pensions made in Scotland for 1929 1930, 1931 and 1932 The numbers of blind pensions in payment in Scotland at December 31st in each of the years 1929 to 1932 and the net increase or decrease over the preceding year were as follows 1929 3 286 (+193), 1930 3,231 (−55), 1931, 3 234 (+3), and 1932 3,165 (−69)

Use of Hyoscine in Asylums—Replying to Mr Groves Sir HILTON YOUNG stated that during last year a commissioner of the Board of Control made a special investigation of the use of sedatives in institutions for the insane in England and Wales, but the results were not yet available For the year 1930 the average number of patients resident in institutions for the insane was 122 614, and the total quantity of hyoscine used was 851 grains The use of croton oil had not been forbidden, but the amount administered during 1930 was negligible

Medical News

The Lord Mayor of London will distribute the prizes at St Thomas's Hospital Medical School in the Governors' Hall, on Tuesday, June 27th, at 3 p m The annual dinner has been fixed for Friday, September 29th at the Dorchester Hotel It will be preceded by a five day post-graduate course at the hospital, old students wishing to attend this course should notify the secretary to the Medical School without delay

The annual general meeting of the Medico Legal Society will be held at 11, Chandos Street, W, on Thursday, June 22nd, at 8 p m, at the conclusion of which an ordinary meeting of the society will take place Mr Albert Crew will read a paper entitled "Some Functions and Duties of a Medical Practitioner in Criminal Courts", a discussion will follow

The annual dinner of the Cambridge Graduates' Medical Club will be held in Corpus Christi College on Friday, June 23rd, at 7 p m with the president, Professor W Langdon Brown, in the chair The annual meeting will precede the dinner

A reception will be held at the National Physical Laboratory, Teddington, on Tuesday, June 27th from 3 to 6 p m, when visitors will be received by the chairman of the General Board, Sir F Gowland Hopkins, President of the Royal Society

The third of four advanced lectures for post graduates, arranged by the Fellowship of Medicine, will be given at 11, Chandos Street, W, on June 21st, at 5 p m, by Mr F J McCann, on the repair of injuries to the perineum and vaginal walls On June 26th, at 8 30 p m, Dr Roland de Hellebranthe of New Jersey, U S A, will lecture on modern methods of local and spinal anaesthesia, illustrated by lantern and cinema, and on July 13th, at 4 p m, Dr Kerley will give a demonstration of x ray films, specially suitable for M R C P candidates There will be a week-end course at the General Hospital, Southend-on-Sea, on July 8th and 9th On June 23rd, at 5 p m, there will be an ante-natal demonstration at the Royal Free Hospital On June 27th, at 8 30 p m, at the West End Hospital for Nervous Diseases (In patient Department), Mr Lindsay Rea will give a demonstration on the fundus oculi

The fifth international post graduate course of the Tomarkin Foundation of Locarno will be held at St Moritz from August 13th to 27th, when lectures will be given on allergic diseases, diseases of the blood, climatology, rheumatism and arthritis, and diseases of metabolism The fee is 60 Swiss francs Further information can be obtained from the secretary, Castella Postale 128, Locarno, Switzerland

Harrogate Corporation has just issued an attractively illustrated pamphlet describing the famous Yorkshire spa and its environment under the title "Harrogate for Health and Holiday" Copies may be obtained on application to Mr F J C Broome, general manager of the wells and baths

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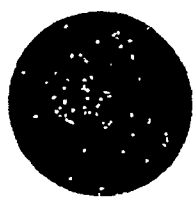

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The annual general meeting of the Research Defence Society will be held at the London School of Tropical Medicine Keppel Street W C on Thursday June 22nd at 3 p m The chair will be taken by the president Lord Lamington and he will be supported by Sir Arthur Stanley chairman of committee The seventh Stephen Paget Memorial Lecture will be delivered by Sir Leonard Rogers F R S on The Saving in Life and Suffering due to Medical and Veterinary Research with Special Reference to the Tropics Tea will be served after the lecture and visitors are invited

A congress of hydrology will be held at Toulouse in October under the presidency of Professors Sabatier and Abelous The subjects to be discussed are the thermo-mineral waters of the French Pyrenees and their geological grouping the rarer gases of mineral waters climatic cures and pulmonary tuberculosis indications for providing treatment for children in spas mountain resorts and at the seaside primary non suppurative infection of the nervous system in relation to hydro mineral therapy utilization of spas by the French Army and the legal control and survey of mineral waters Sir James Purves Stewart is contributing a report on infections of the nervous system After the congress four days will be devoted to motor car tours in Languedoc Pyrenees and the Cote D Argent Further information may be obtained from Dr François Francon Aix les Bains

The British Red Cross Society's Clinic for Rheumatism and Allied Diseases at 28 Nightingale Place Woolwich has been open since 1930 and in that time 9 376 treatments have been given The average yearly number of patients was 233 The following treatments are to be obtained massage and remedial exercises radiant heat diathermy (including intrapelvic) galvanism faradism sinusoidal Schnee bath and ultra violet rays Pyretic couch treatment when recommended is provided at the Seamen's Hospital Greenwich All patients are seen by a visiting physician (who attends once a fortnight) on the presentation of a letter or card from a general practitioner The Seamen's Hospital has undertaken pathological and bacteriological examinations and Dr Eileen Boyd carried out some research work on the analysis of sweat Radiological examinations have been made either at the Miller General Hospital or the Seamen's Hospital

The Congress of Applied Psychopathology and Psychology which had been arranged to take place in Vienna in the beginning of June has been postponed till next year

The twenty first annual report of the *Journal of the American Medical Association* (May 13th) on the cities of the United States with a population of more than 100 000 of which there were ninety three in 1932 shows that the total typhoid mortality is the lowest ever recorded (1 24 per 100 000 of population) fourteen cities registered entire freedom from typhoid death an unprecedented record

A notice appears in our advertisement columns this week of a vacancy for a medical officer at the Methodist Mission's Leprosy Hospital Dichpali India This institution possesses special facilities for research and is closely associated with the British Empire Leprosy Relief Association Information about the various possibilities of this appointment can be obtained from Sir Leonard Rogers

The King has given authority to Dr R S Miller late Egyptian Government Medical Service to wear the insignia of Commander of the Order of the Nile conferred upon him by H M the King of Egypt on the occasion of his retirement from the service of the Egyptian Government

A David Anderson Berry gold medal together with a sum of money amounting to about £100 will be awarded in July 1935 by the Royal Society of Edinburgh to the person who in the opinion of the council has recently produced the best work on the nature of *x* rays in their therapeutical effect on human diseases A further notice will be published early in 1935 A similar award will be made every three years

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal B.M.A. House Tavistock Square W.C.1**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager British Medical Association House Tavistock Square W C 1 on receipt of proofs Authors overseas should indicate on MSS if reprints are required as proofs are not sent abroad

All communications with reference to ADVERTISEMENTS as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager

The **TELEPHONE NUMBER** of the British Medical Association and the *British Medical Journal* is EUSTON 2111 (internal exchange four lines)

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MEDICAL SECRETARY *Mediocera Westcent London*

The address of the Irish Office of the British Medical Association is 18 Kildare Street Dublin (telegrams *Bullus Dublin* telephone 62297 Dublin) and of the Scottish Office 7 Drumsheugh Gardens Edinburgh (telegrams *Associate Edinburgh* telephone 24361 Edinburgh)

QUERIES AND ANSWERS

Myositis Ossificans Progressiva

SIR JAMES BARR writes in reply to the inquiry by Help (June 10th p 1032) These cases follow an injury to the muscles succeeded by too much rest and an inordinate supply of lime in the food and drink Milk and hard water vegetables containing much calcium should be cut out of the diet Lemon quash and barley water raisin tea or glucose with alutaris water nitrogenous food butter and fat bacon cod liver oil should be used decalcifying agents such as acid fruits I have found well-diluted phosphoric acid in small doses useful Moderate doses of iodine and thyroid increase calcium metabolism Gentle massage and infra red rays are beneficial About three years ago I saw a lady who had a large solid lump about the size of my fist involving the heads of the eighth ninth and tenth right ribs She had been seen by some of the best surgeons in London and in Italy the diagnosis was osteosarcoma About one half of the surgeons were for removal and the other half to leave it alone I said that the diagnosis and proposed lines of treatment by both sets of surgeons were wrong It was not a sarcoma but a simple case of myositis ossificans or a deposit of calcium salts in injured muscle and fibrous tissue brought about by injury of the spine and ribs when horse riding and afterwards using hard London and French waters Any attempt at removal would involve a fearful mess including removal of the heads of about four ribs and final cure could only be effected by a further deposit of lime salts On the other hand it must not be left alone but a cure attempted by the removal of the lime salts on the lines sketched out above Many of the cases which we see described in the *B M J* require a little common sense—the rarest of all our senses I advised her husband to take her to see Sir Robert Jones but he need not mention my name until he got Jones's opinion He replied Supposing Sir Robert says Operate will you change your opinion I replied Not in the slightest particular but I have too high an opinion of Jones to think that he would be such a fool Jones did not alter my treatment and I believe the patient is progressing favourably

DR WILLIAM F MUIR (St. Andrews) writes If your correspondent Help could have access to the *Edinburgh Medical Journal* of January and February 1932 he would find the subject very fully dealt with in a monograph contributed from the James Mackenzie Institute for Clinical Research St Andrews and the history of two cases similar to his own It is impossible to give the information he requires in a brief note

Pruritus in Tabes

J E writes in reply to the query by Bridgeness (May 20th p 903) I would refer your correspondent to the article by A Winkelried Williams in the *British Medical Journal* of January 24th 1925— Cure of Pruritus Senilis by the Use of a Flesh Brush I had occasion to recom-

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mend the treatment once to an old man suffering from fibroid phthisis whose life was rendered miserable by incessant generalized pruritus without apparent cause The brush gave immediate complete relief

Income Tax

House Provided by Employer

'DOUBTFUL" has been employed as a whole time medical officer to an institution since January 1st 1916 and has been required by the institution to live in a house provided by them rent and rates free' Subsequent to March 30th 1933 a better house has been provided—as a result of some pressure by 'Doubtful'—but the requirement to reside in the house still applies Is "Doubtful" liable to account for tax on the annual value of the house?

*** Prima facie the case is covered by the old rule laid down in Tennant *v* Smith and Doubtful' need not regard the annual value (nor the amount of the rates paid on the house) as income liable to tax in his hands If in the past he has included the sum in his return and paid tax thereon under Schedule E he can claim repayment for the past six years There is however the possibility that the tax paid has been only that assessed under Schedule A in respect of the residential value of property owned and (technically) occupied' by a charitable body in that case no repayment would be due as the charitable exemption to which the institution may be entitled would not apply to the residence of an official liable to income tax

Cost of Uniform Instruments etc

'SHIP SURGEON asks whether there is a definite sum (?£20 a year) allowed for upkeep of uniform even though a uniform is bought for each year Also can he claim a rebate for expenditure on medical instruments and subscriptions to the B M A, etc

*** We understand that there is a standard uniform allowance applicable to ship surgeons—£20 per annum is probably correct—and that it is allowed each year on the assumption that if excessive for one particular year it is reasonable in the long run (It is presumed that the employing company do not bear any part of the expense) The cost of *replacing* instruments etc, and of membership of medical societies is allowable if the upkeep and membership respectively is required by the employer

LETTERS, NOTES, ETC

Medical Films

Kodak Limited are to be congratulated on the large range of subjects offered in their motion picture library the catalogue of which we have received A new system of indexing by subject and alphabetical groups makes the choice of film easy and no one will quarrel with the wealth of material available which by no means exhausts the possibilities of important future developments Films are offered for both sale and hire, and charges have been reduced The simplified technique of 'cine Kodak" photography now makes it possible for medical men to take their own pictures while the introduction of the super sensitive panchromatic film is an advance of great importance Details may be obtained from the medical department Kodak Limited, Kingsway W C 2

We have also received from the Central Information Bureau for Educational Films, 109 Kingsway W C 2 a catalogue of instructional films which include medical subjects Many of these deal with hygiene from the popular angle but there are also pictures on physiology, psychology, and anthropology

Dr Mary E Walker

Mrs C W M POYNTER (1306 South 35th Avenue Omaha Nebraska U S A) writes At the suggestion of the editor of *Notes and Queries* I am writing to the editors of a few publications in England asking for help in acquiring some biographical material In 1866, when England had but one female physician and was not very anxious to have more Dr Mary E Walker of Oswego New York visited England and created much comment in newspapers and journals of various types including your own She went in time to attend the Social Science Congress in Manchester early in October She visited hospitals and clinics made the acquaintance of many people of all classes apparently lectured in the Great St James's Hall was presented at Court and became known far and wide for her peculiar costume her medical degree and her civil war career There must be a number of people in England and Scotland with perhaps family traditions about her and possibly with letters or newspaper cuttings which I might borrow for a short time I should like to get into communication with anyone who might give me information about Dr Walker during her sojourn in England

The Naive and Sardonic Eye

Dr CLAUDE LILLINGSTON writes from Paris In a singularly charming review of Dr Halliday Sutherland's book *The Arches of the Years* in the *Journal* for June 3rd (p 965) your reviewer credits the author with a naive and sardonic eye We have all met the naive eye though not of course, in Scotsmen The sardonic eye is also quite familiar But is not the eye which simultaneously exhibits *naïveté* and sardonic properties a startlingly novel conception a new clinical syndrome a new psychological or nosological entity? On my first reading I was tempted to wonder if your reviewer had not blundered into a contradiction in terms but on mature reflection I ask myself if he had not rather revealed a profound perspicuity, an intuitive insight into character denied to most mortals If so the day may come when the psychologically trained medical student will be taught how to detect X's (your reviewer's name) eye and how to distinguish it from the possessor of an Argyll Robertson pupil etc Meanwhile is it not up to your reviewer to publish a treatise on his discovery with documentary, cinematographic evidence to substantiate it?

Birth at 20 m p h

"C R H writes from India A short time ago, while on an inspection tour, there came to my notice a birth, with medical factors not uncommon but with related circumstances sufficiently unique that I imagine they will bear record The third-class compartment of the Indian train—'females" utilize such not women or ladies—duly caters for the squatting posture commonly adopted for defaecation in India So we find a small closet with two foot stands and a hole in the floor which in the case in question was directly over one of the rails A female full of belly entered such a closet in Naraynpur station the train moved off and at a time when it was judged the train was travelling at some 20 m p h, a yell was heard to emanate from the lavatory This was forcibly entered by other travellers who found the female lying in a mess of blood and minus her abdominal protuberance Labour had been precipitate but there was no sign of the child The woman was removed from the train at the next station Meanwhile the permanent way inspector and his staff had discovered a newborn child on the line without as much as a bruise and this despite the fact that the child must have fallen on to the rail some foot and a half in front of one of the wheels and then bounced on to the metal The cord had been cut and ligatured (!) by the wheel of the carriage Mother and child were reunited in Naraynpur Hospital and both are very fit—so much so that the mother ran away the same night carrying the child in her arms A touch of humour was added to the case by the permanent way inspector, who concluded his report in the approved official manner 'No damage to the permanent way"

Dermatitis after Depilatories

Dr A KENDREW (Ticehurst Sussex) writes I am surprised to read in Dr Alice Carleton's article on 'The Uses and Dangers of Cosmetics" appearing in your issue of June 10th that she considers depilatories "generally harmless' In the past three years I have seen two patients *suffering* from axillary adenitis after using them one of these cases was reported in the *British Medical Journal* during 1930 and shortly afterwards a case was published by a correspondent from another part of England

Dr ALICE CARLETON writes My article in your last number on "The Uses and Dangers of Cosmetics" has been widely commented on in the daily press May I say that this publicity was unexpected and undesired by me?

Honours List Correction

In the Honours List published in our issue of June 10th (p 1020) Dr Patricia R Elliott and Dr Frederic G Rose should have been described as recipients of the M B E

We are asked to correct a misprint in the advertisement of the Victor X Ray Corporation Ltd, published on May 27th (p 6) The address should have read 15–19, Cavendish Place London W 1

Vacancies

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 52, 58 54 55 56 57 and 60 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 58 and 59

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 276

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

422 X Ray Study of Gastro-Intestinal Food Allergy

A H ROWE (*Journ Amer Med Assoc* Feb 11th 1933 p 394) who considers that food allergy is the cause of certain disturbances in the muscular tone and peristaltic activity of the gastro-intestinal tract bases his conclusions on *x* ray observations Since mucous membrane oedema and smooth muscle spasm are the main results of allergy gastro-intestinal symptoms might be expected Four patients are here selected for report They had all suffered from marked and prolonged gastric symptoms which had been relieved by the elimination of specific foods and reproduced by the reintroduction of the same foods Fluoroscopic examinations and roentgenograms were made immediately after the ingestion of barium and again three six and twenty four hours afterwards Such studies were first made when the patients had been free from their symptoms for several weeks as a result of their strict adherence to their elimination diets The barium was given in a corn meal gruel About two to three weeks later a second series of observations was made after the patients had taken milk or milk and eggs for one or two days The barium was given in malted milk to which each patient was sensitive Marked disturbances in muscular tone and motility resulting from probable allergic reactions in the gastro-intestinal tissues were observed in each of the four patients Gastric retention was also seen in each case this was marked in three hours and very definite in six hours This retention might the author adds be explained by some disturbance in peristalsis which interfered with the gastric or intestinal gradient Such disturbance could be the result of localized or generalized oedema or smooth muscle spasm arising from allergic reactions to milk and eggs Spastic colons were observed in three cases and were also thought to be caused by an allergic reaction of the smooth muscle Long standing constipation was relieved in two cases by 'elimination' diets only to return when milk and eggs were again taken That the gastric retention and spastic colons were not due to impaired digestion or to nervousness was shown by the fact that routine indigestion treatment had been previously followed without success and all four cases had already been submitted to *x* ray examinations

423 Hypoglycaemia

O SIPPE and J BOSTOCK (*Med Journ of Australia* February 18th 1933 p 207) believe that hypoglycaemia is a relatively common condition—nearly as frequent as hyperglycaemia—and that it deserves more careful consideration than it has yet received They report twenty five original cases and suggest a classification They suggest that in the study of this condition it is very important to perform a glucose tolerance test in preference to a single fasting sugar test This is based on the assumption that the nervous mechanism associated with the performance of the latter test results in a secretion of adrenaline which mobilizes glycogen and raises the sugar figure above its normal height In the presence of typical symptoms of this condition any fall of the blood sugar below 0 09 per cent is to be regarded with suspicion even though it is known that there may be a complete absence of symptoms associated with a much lower percentage The question of idiosyncrasy is thus important Among the causes of hypoglycaemia are mentioned congenital predisposition (including a family history of acidosis cyclical vomiting or migraine) lack of exercise a hot climate and a high consumption of protein The authors believe that the condition is more common in Australia than in some other parts of the world and attribute this higher incidence to the generally large consumption of meat in that country and to the reduction of exercise during the summer Six aetiological factors are enumerated—namely the pancreas (hyperinsulinism) low intake poor assimilation or excessive use of carbohydrates liver and muscular dystrophies endocrine derangement particularly parathyroid disturbance resulting in hypocalcaemia lowering of the renal threshold for sugar often due to hypocalcaemia and certain allergic states As regards classification the authors suggest a division into two main types *true* and *relative* hypoglycaemia The first contains three groups the fulminating the chronic and the symptomless The second comprises two groups the cyclical vomiting of childhood and simple cases in which a relatively normal blood supply is insufficient for the requirements of the individual They urge recognition of the cause and attention to such possible factors as endocrine maladjustment and focal sepsis The administration of glucose is often very effective but in cases of acidosis it is necessary to restrict fats especially butter and to allow eggs in only very small numbers Hypoglycaemia it is concluded with its attendant train of symptoms is to be regarded as a metabolic disturbance due to many causes comparable with pyrexia and at times preferably dealt with directly rather than indirectly There seems to be some natural mechanism promoting spontaneous recovery from an acute attack possibly the stimulation by the low blood sugar content of some nervous or endocrine centre which mobilizes a supply of glycogen

Surgery

424 Henderson Jones Disease

J L NAVA (*Thèse de Paris* 1933 No 95) who records thirteen illustrative cases in patients aged from 20 to 65 ten of whom were men and three women states that the osteo-chondromatosis described by Henderson and Jones of the Mayo Clinic in 1916 is characterized by the presence usually in large number of fibroid or osteo-cartilaginous foreign bodies in a joint cavity or in the bursa of a tendon sheath The affection is commonest in young adults usually of the male sex without any previous infection or intoxication though in about half the cases there is a history of old or recent trauma The presence of the foreign bodies usually causes little interference with the movement of the joint but may give rise to attacks of articular block and finally symptoms of compression of the vessels or nerves In well marked cases *x* ray examination is sufficient to distinguish the disease from all other arthropathies In mild cases radiotherapy alone is needed but when a large number of foreign bodies are present and especially in complicated cases radiotherapy should be preceded by a conservative arthrotomy

425 Acetylcholine in Post traumatic Ankylosis and Arthritis

As a prophylactic against and a curative of the rigidity or ankylosis pain and osteoporosis that are frequent sequels of articular fracture (especially of the knee ankle shoulder and wrist) or of a prolonged immobilization of a limb R FISCHER (*Presse Méd* March 25th 1933 p 475) advocates the administration of acetylcholine A disturbance of the sympathetic system is a predominant factor in the pathogenesis of these symptoms Fischer considers that circulatory troubles are also essential agents Acetylcholine hydrochlorate is a well known vaso-dilator of the small peripheral and possibly of all the arteries it is indicated in conditions of arterial spasticity such as Raynaud's disease etc and has been beneficially used by Dainow and Fischer himself in varicose ulcers These facts led the latter to employ it in cases of post traumatic fractures To exemplify the excellent results following its administration thirteen cases are recorded in five it was used curatively and in eight prophylactically A course of treatment consists in fifteen to twenty injections each containing 0 1 c cm an injection is given every one or two

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British Medical Journal

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days, the dose may be increased during the first days of immobilization This treatment should be started early after immobilization, and continued as the condition of the joint demands Little is known concerning the mechanism of the action of acetylcholine It is probable that the traumatized area presents a vaso-constriction of the secondary arteries, and the good results from its injection are due to the vaso-dilating action of the drug This action of acetylcholine is dependent on the calcium-potassium ratio and the salt appears to have a marked and continued effect on calcium metabolism and the alkalinity of the blood Its combined vaso-dilating action and favourable effect on the calcium metabolism cause the good results These are similar to those obtained by sympathectomy The advantages of acetylcholine over the latter are not only its simpler administration, but also its effect on the osteoporosis After sympathectomy this condition becomes more marked, after acetylcholine it is much improved

426 Embolectomy from Popliteal Artery

I BOEREMA (*Nederl Tijdschr v Geneesk*, March 25th, 1933, p 1281), who records an illustrative case, states that diagnosis of embolism in a limb can usually be made by the sudden onset of very severe pain, pallor of the part, and rapid disappearance of sensation and of the pulse Raynaud's disease can be excluded by its slower onset and bilateral localization, and intermittent claudication by its prodromal symptoms Most of the patients are subjects of heart disease (60 per cent according to Petitpierre) Embolism may also occur after gynaecological operations, as is shown by the fact that Stein collected eighty-six cases of the kind The prognosis of embolectomy is very good within the first ten hours of the occurrence of the embolism Boerema's patient was a woman aged 60 the subject of heart disease (myocardial degeneration and flutter), who suddenly developed typical signs of right popliteal embolism Embolectomy was performed under local anaesthesia Apart from slight gangrene of the terminal phalanges of the second and third toes, complete recovery took place

427 "Fracture Serum" in Pseudarthroses

R IMBERT (*Bull et Mém Soc Nat de Chir*, March 18th, 1933, p 406) discusses the treatment of pseudarthroses and delayed union by "fracture serum" Three cases are reported which made astonishing recoveries after the injection of this substance The serum is taken from a patient who has a healthy healing fracture showing good consolidation, or from one with a recent fracture The serum is given in doses of 10 to 15 c cm, and repeated, if necessary, at varying intervals The injections may be local, hypodermic, or intravenous In one case of fractured femur in a man aged 30 the leg was first immobilized in a Thomas splint and later in plaster After removal of the second plaster, nearly five months after the accident, there was no sign of consolidation Since abnormal mobility persisted with complete absence of pain on pressure over the lesion, and absolute loss of function, it was concluded that a pseudarthrosis existed No specific cause could be assigned to this The Bordet-Wassermann reaction of the blood was negative From another patient whose fracture was consolidating well, 20 grams of blood were taken and prepared Ten c cm of the serum was injected near the site of the pseudarthrosis Six weeks later there was less mobility and the radiograph showed a shadow of new calcification round the broken ends of bone A further injection of 10 c cm "fracture serum" was provided by another patient Manifest callus was seen in a radiograph two and a half months after the first injection A third injection produced a thickening of the callus and also increased its density The final result was complete consolidation, and the patient was discharged without any support Two other cases reported were treated by subcutaneous injections of "fracture serum" Discussing the mechanism of this retarded osteogenesis, Imbert suggests that there may be an absence of an element—possibly a glandular hormone—which is necessary to fix the free calcium at the site of the fracture

Therapeutics

428 A Stable Ferrous Chloride Syrup

G H W LUCAS and V E HENDERSON (*Canadian Med Assoc Journ*, March, 1933, p 298) recall the fact that the success of iron therapy depends on the adequate supply of ferrous salts to the upper part of the large intestine, where they are absorbed When ferric salts such as the chloride, are administered in conjunction with food, the iron is precipitated in the stomach by the protein, and is reduced in some small measure to the ferrous state, which does not act on proteins When reduced iron is given as such, a portion of it is acted on by the gastric hydrochloric acid, and the resulting small amounts of ferrous chloride pass on into the large intestine, where they are absorbed Even large doses of iron and ammonium citrate are inactive until some of this salt has been modified by the free gastric hydrochloric acid, and the free ferric ions resulting have been reduced by the food Since ferrous chloride is the most easily absorbed iron salt, its administration is indicated, some investigators have shown that 1 5 grains of a ferrous salt are capable of producing as good clinical results as are derivable from much larger doses of iron in other forms The difficulty lies in obtaining a ferrous chloride preparation in a suitable state for administration, owing to the ease with which it becomes oxidized Good clinical results have been obtained by the present authors with a syrup prepared by reducing a solution of iron perchloride with an excess of reduced iron and testing the liquid for its content of soluble ferrous iron with potassium permanganate after acidification with hydrochloric acid to stabilize it The liquid was then diluted with syrup so that one fluid drachm contained approximately 0 5 grain of iron in the form of ferrous chloride This dose of syrup, diluted to about one ounce with water, was given three times daily after meals, its small content of free hydrochloric acid possibly aided digestion A simpler method of preparation was then devised, the ingredients being reduced iron (24 grains), dilute hydrochloric acid (1 ounce), and syrup to 6 ounces The reduced iron and acid are placed in a bottle and allowed to stand loosely stoppered until effervescence has ceased and all the iron has disappeared Warming the contents greatly hastens the reaction The solution is then filtered, if necessary, and the bottle is filled with simple syrup This preparation will keep for about a month under ordinary conditions if protected from sunlight It may become a very pale yellow, but only a trace of ferric salt is present When stored in brown bottles in a cool place it will keep much longer Each drachm dose contains approximately half a grain of iron in the form of ferrous chloride, and about 2 to 3 minims of acid

429 Formic Acid in Rheumatic Affections

H TOLDERLUND (*Ugeskrift for Laeger*, March 16th, 1933 p 305) has treated threescore patients during the past six years with intramuscular injections of formic acid for their rheumatic complaints In most cases these were myalgias with tender subcutaneous and muscular infiltrations His material also contained some cases of sciatica articular rheumatism, and neuralgia The treatment was almost invariably ambulant, and the results were, as a rule, not compromised by any other therapeutic measure Some failures had to be recorded but as a rule definite improvement was demonstrable after six or seven injections, sometimes earlier The muscles chosen for the injections were those of the buttocks and thighs, subcutaneous injections were dispensed with on account of the pain they are apt to provoke Intramuscular injections may also at times be painful, but even bad pain passes off quickly Occasionally the seat of the rheumatic ailments, whether it were muscle or joint was particularly painful on the day of an injection, but this could hardly be regarded as a focal reaction The Danish preparation used by the author was sol acidi formici (Leo) 2 c cm of which he injected at a time He gives no further information as to dosage, but he appends details of eight illustrative cases

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Radiology

430 Roentgenotherapy in Arthritis

H LANGER (*Radiology* February 1933 p 78) describes the effects of short wave *x* ray therapy on the vegetative nervous system in arthritic patients as at first exacerbation of symptoms followed by a definite amelioration Cases showing symmetrical arthritic disturbances were treated with *x* rays either over the corresponding sympathetic ganglia alone or in addition to the direct radiological treatment of the affected joints The ganglia were treated with the following technique 185 to 200 kV rays filtered through 0 5 mm of copper and 3 mm of aluminium field 8 × 18 cm over the corresponding lumbar or cervical ganglia 200 *r* units per sitting and per field daily treatments until 500 *r* per field have been reached A similar technique was used for the local treatments of the affected joints In sixty three out of eighty-six cases of arthritis showing disturbances of the vegetative nervous system the effect of the *x* ray treatment of the ganglia was so marked that no local treatment was deemed necessary The treatment had to be repeated in some cases after from six to eight weeks The author strongly urges co operation with the referring physician for the supervision of the reaction following the *x* ray treatment

431 The Action of X Rays on Blood forming Cells

R ISAACS (*Arch Int Med* December 1932 p 836) has studied the problem underlying the opinion that small doses of *x* rays stimulate while large doses depress After the therapeutic use of large doses death or a decrease in size of the tissues affected follows It has been debated whether this result is due to direct toxic necrosis of the tissues or to a mechanism disturbing cell division or to an increase in the rate and intensity of the normal processes in the life of the cell More than 900 patients with various types of leukaemia lymphoblastoma or cancer were investigated Isaacs reports that the effect of *x* ray application whether in small or large doses is stimulating the result depending on the stage of development of the cells Cells in the myeloblastic lymphoblastic or younger stages are stimulated to rapid reproduction because this is their growth potentiality at these stages whereas cells in the myelocytic or the medium-sized lymphocytic stage are stimulated to grow through the rest of their life history in an orderly manner because these cells do not normally divide or multiply They die or are eliminated as normal senile cells The author could obtain no evidence of any toxic necrotic action of *x*-rays when applied in therapeutic doses The process of stimulation is however hastened by the larger doses so that senility is reached more quickly giving the impression of some depressant action The period between exposure to *x* rays and the time when the cells reach senility is indicated by the clinical latent period Tissue cells which have a long adult life (muscle nerve and fibrous tissue cells) appear resistant to *x* rays whereas those cells which have a short adult life (germinal cells and leucocytes) die soon after having been stimulated to progress to senility All cells adds Isaacs have the same susceptibility but death follows at varying intervals depending on how long the cells normally survive in their physiological life

432 Radiological Diagnosis of Biliary Lithiasis

Besides those cases of biliary lithiasis in which *x* ray examination reveals the presence of calculi others occur with no pathological sign in the gall bladder In these by the use of Graham's method this organ becomes opaque and clear images appear in the field these may be due to calculi to superimposition of the gall bladder on an ectocolia of the right angle or very rarely to papillomata Non filling of the gall bladder with the lipiodol usually indicates (except in cases of hepatic insufficiency) vesicular trouble most frequently lithiasis R GILBERT (*Journ de Radiol et d Electrol* January 1933 p 43) records a case in which clear images were shown In this patient who suffered from digestive troubles and right abdominal pains previous diagnosis of appendicitis and visceral and renal ptosis had been erroneously made despite the use of *x* rays treatment producing no results attention was directed to the gall bladder Examination by Graham's method revealed two small calculi the diagnosis was confirmed by functional tests and a subsequent operation The author remarks that clear images are generally seen in gall bladders with well-conserved walls and containing one or only a few calculi These bladders fill easily with iodized bile and respond well to the action of cholecystokinetics such as fatty food and yolk of eggs Gilbert maintains that in all poorly characterized affections of the right upper abdomen exploration of the gall bladder by Graham's method is after clinical investigation a necessary complement of radiological examination of the digestive tube J ARMAND (*ibid* p 41) records a case in which an abnormal shadow at the lower border of the liver had been in error diagnosed as biliary lithiasis At the operation a normal gall bladder was found and microscopical examination of an excised piece of the liver showed a sclerosed calcareous tuberculous tissue As measures to obviate such diagnostic mistakes Armand recommends cholecystography and stereoradiography

Obstetrics and Gynaecology

433 Puerperal General Peritonitis

L V PYRAH and C OLDFIELD (*Journ Obstet and Gynaecol British Empire* February 1933 p 3) review all the cases of general puerperal peritonitis occurring in the years 1926 and 1931 inclusive in the Leeds General Infirmary the Seacroft Fever Hospital and elsewhere the total being thirty-six Of these patients twenty five died and eleven recovered They find that this complication is present in about half of all patients who die from puerperal fever and in most cases is the immediate cause of death The streptococcus is the organism most frequently identified and has been assumed to be almost invariably fatal The most severe cases are those in which peritoneal inflammation begins within the first three or four days after delivery following the rapid invasion of the cavity by organisms which enter through the lymphatic vessels in the wall of the uterus There is very often a blood infection but rarely any localized pelvic suppuration The mortality rate is very high Cases occurring four days or more after delivery are less severe Localized pelvic suppuration is often found in these more commonly in the wall of the uterus and much less frequently in the ovary and broad ligament The peritoneal infection may originate in the uterus but arises more commonly from the local abscess Other causes of this infection noted are Caesarean section gross trauma acute appendicitis perforated duodenal ulcer pneumococcal infection and the infection or torsion of pre-existing pelvic tumours The symptomatology varies widely In early cases there is first a rise in temperature with a considerable increase in the pulse rate The onset of peritonitis is signalized by a gradual and insidious change for the worse in the general condition and by abdominal discomfort There may be a rigor and after the succeeding fall the temperature rises and remains elevated The pulse is persistently rapid and its tension weakens The abdominal symptoms may be very slight but there is usually some discomfort vaguely referred to the umbilical region The first physical sign always present is distension of the lower part of the abdomen In the early stages however it may be disproportionate only with difficulty from persistent flatulence This distension gradually increases until the abdomen becomes drum like on percussion as well as tender abdominal tenderness and hyperaesthesia are usually present Rigidity is generally absent In delayed cases the onset of puerperal peritonitis is signalized by a rigor abdominal pain and greatly increased pulse rate The authors urge that when puerperal peritonitis is suspected an operation should be undertaken much more often than has been the practice hitherto and without waiting for the development of the complete clinical picture Cases of puerperal

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sepsis in which a palpable mass is present must be very carefully watched for signs of involvement of the general peritoneal cavity Should these appear an immediate operation is essential Abscess of the uterine wall is especially liable to become associated with general peritonitis

434 Treatment of Puerperal Infection

E LÉVY SOLAL (*Presse Méd*, March 15th, 1933, p 419) outlines the treatment of puerperal infection in cases of unknown origin presenting the usual symptoms of infection (rise of temperature, rapid pulse, rigors) during the first days following delivery Successful treatment entails a correct differential diagnosis and a careful study as to whether the infection is still confined to the uterus or is extending The chief condition to be differentiated is coli bacilluria, a frequent sequel of confinement blood culture on the appearance of fever or rigors and repeated during the following few days is of value in determining the second point Treatment should be both local and general The former consists in dressings of anti-streptococcic filtrate (Besredka) The good results ensuing from this method in numerous cases during the past six years are summarized This treatment should be prophylactic or applied very early before the sixth day of infection, the filtrates should be prepared from cultures obtained from highly infected cases, and the dressings should cover the whole uterine surface, not merely the cervico segmental cavity In preference to the usual methods of general treatment Lévy-Solal now employs simple blood transfusions, immuno transfusions (phylacto transfusions), or convalescent serums The first-named may be given in certain subacute cases and in cases with negative blood cultures but with a rapidly progressive anaemia The best results are obtained with convalescent serums, but, owing to the difficulty in securing suitable donors, phylacto transfusion is usually employed For this the donors are prepared by injections of anti-streptococcic vaccines in doses of 1 c cm the first day and 2 c cm on each of the three succeeding days—that is a total of 7 c cm containing 7 milliards of streptococci, they are revaccinated six hours before the transfusion is given Phylacto-transfusion should be immediately performed in cases with positive blood cultures, and in negative cases giving negative intradermal reactions For the abortive treatment of perigenital infections and phlebitis Levy-Solal advocates pelvic infiltrations with Delbet's vaccine rather than subcutaneous injections, 1 c cm of the vaccine or of a 5 per cent solution of sodium nucleinate should be symmetrically injected intracervically

435 Effect of "Granulosa Cell" Tumours on the Uterus

A LELLBACH (*Zentralbl f Gynak*, March 31st, 1933, p 725) refers to the excessive glandular hypertrophy of the uterine mucosa that is found frequently in association with ovarian tumours of different types After the menopause ovarian tumours may induce hypertrophy of the uterine wall in addition to that of the uterine mucosa The majority of such tumours are of the 'granulosa cell' type R Meyer has suggested that this hypertrophy is a substitute for ordinary follicular stimulation He has not found any evidence of the occurrence of fibromata and sarcomata in association with mucous glandular hyperplasia Lellbach records a case of ovarian tumour associated with excessive uterine mucous and muscular hypertrophy A married woman, aged 60 years was admitted with the diagnosis of uterine myoma and ovarian tumour The menopause occurred when she was 45 Fifteen months before admission she noticed slight irregular haemorrhages Nine months later she observed an abdominal swelling accompanied by frequent haemorrhages The uterus and right adnexa were removed She was discharged cured sixteen days later The uterus was pear-shaped, measuring 6½ by 5 inches it was very hard and greyish yellow on section The uterine cavity measured 2¾ inches, and it was filled with shaggy tufts of hypertrophied mucosa The left tube was 4 inches in length and was much thickened and dilated The nodular ovarian tumour was kidney shaped with a thin smooth capsule, it was hard, solid, and greyish yellow on section Histologically, it exhibited areas in which the 'granulosa cell (öophoroma folliculare) type predominated, mixed with large spindle cells of a fibroblast type Evidently it was a "mixed" tumour containing simple carcinomatous and spindle celled sarcomatous elements This case showed that uterine mucous and muscular hypertrophy may occur in association with "mixed" ovarian tumours

Pathology

436 Estimation of Blood Alcohol in Drunkenness

The question of the value of the estimation of alcohol in the blood in cases of alleged drunkenness is reopened by R GOLDHAHN (*Med Welt*, March 11th 1933, p 336), who states that the determination of alcohol in the blood can be carried out on a single drop of blood, but requires the assistance of a trained chemist As a result of such analyses in a large series of cases Widmark has constructed a curve correlating the incidence of symptomatic drunkenness with the percentage of alcohol in the blood From this curve it appears that alcohol may be present in the blood up to a concentration of 80 mg per 100 c cm without the subjects showing any manifestation of being under the influence of drink, at a concentration of about 150 mg per 100 c cm 50 per cent of cases are demonstrably or visibly drunk, whilst at about 200 mg per 100 c cm all are drunk In the police protocols of Germany, if a case is reported as not drunk by the medical attendant but on analysis of the blood 200 mg per 100 c cm are found, then the diagnosis of the doctor is negatived According to Widmark 160 mg per 100 c cm is the upper limit at which it may be considered that a driver may control a vehicle Goldhahn amplifies this by pointing out that motor cyclists and bicyclists show insufficient control at far lower levels of blood alcohol than 160 Attention is drawn to a formula elaborated by Widmark, by means of which it is possible to calculate the intake of alcohol from the blood alcohol, the body weight, and the time between the ingestion of the fluid and the taking of the blood The author has found that this estimate gives values within 5 per cent of a known amount of alcohol taken

437 Active Immunization against Typhus Fever

H ZINSSER and M R CASTANEDA (*Journ Exper Med*, March, 1933, p 381) describe successful vaccination experiments on guinea-pigs against the Mexican typhus virus The vaccine used was prepared from the peritoneal exudate of rats that had been inoculated with the virus and whose resistance had been lowered by exposure to radiation with short wave length *x* rays The peritoneal exudate of such animals contained large numbers of Rickettsiæ, these were treated by formol, so that the vaccine contained only dead organisms Experiments showed that subcutaneous or intraperitoneal inoculation of guinea-pigs with this vaccine afforded them protection against the subsequent intraperitoneal inoculation of approximately 100 to 250 infective doses of Mexican typhus or of the endemic American typhus virus but only partial and feeble protection against the European typhus virus In a second paper (ibid, p 391) the authors describe the production of an immune serum by treatment of a horse with the irradiated rat Mexican typhus virus vaccine Before immunization the serum of the horse agglutinated *B proteus* X 19 in a titre of 1/40, after immunization the titre had risen to between 1/160 and 1/320 Further agglutination experiments showed that the serum agglutinated a suspension of the European virus obtained from lice to a titre of between 1/320 and 1/640 By the use of guinea-pigs this serum was found to afford protection against the Mexican typhus virus when it was injected a week before, or at the time of, or seventy two hours after the infecting dose On the other hand, it did not protect against the European virus This discrepancy between the agglutinating and protective powers of the serum in relation to the European virus is very puzzling, and calls for further investigation

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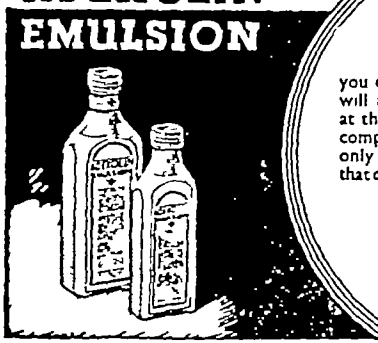

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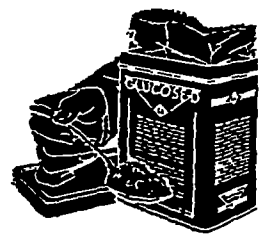

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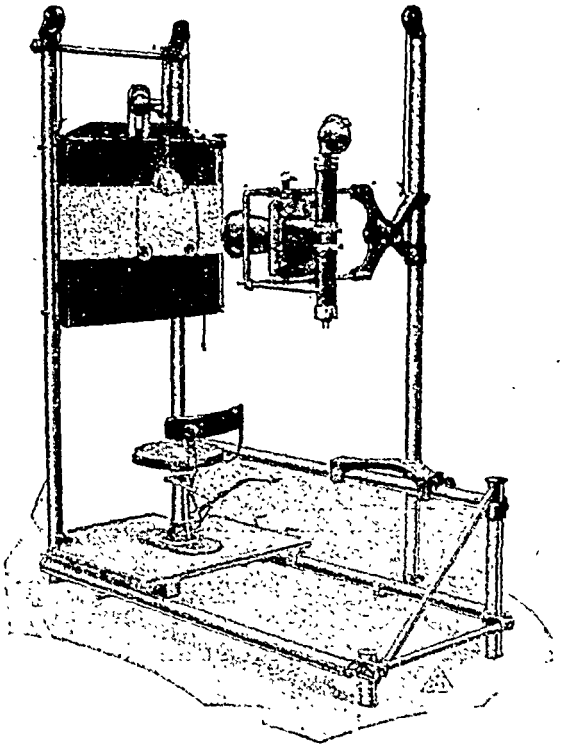

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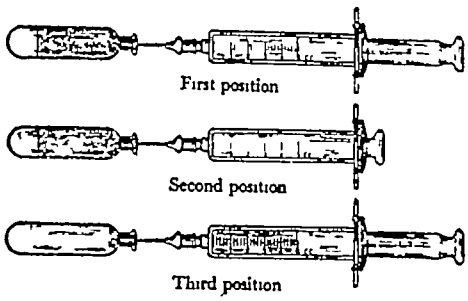

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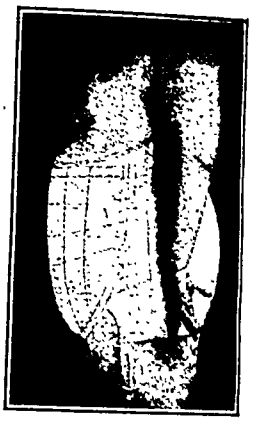

Above is shewn one type of Spencer Abdominal Belt, for the control of umbilical hernia.

The belt is made in two sections—a close fitting, long back, and a strong flexible front, attached to the back by a set of straps and buckles which also give adjustment.

The Spencer Corsetière in your town will call at your Surgery or at your patient's home to take measurements under your supervision. Spencer Supports and Corsets are never sold in shops.

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Expert Fitters (Trained Nurses) at your immediate Service.

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Booklets Listed below gladly sent on request.

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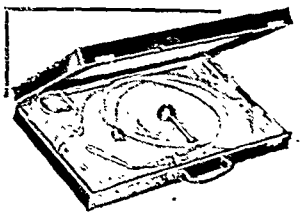
Name, Dr. ..... *Address* .....



The Colonator outfit is fitted in attache type of case for convenience of transport.

COLONIC LAVAGE

As an Aid in Medical Diagnosis and a Valuable Therapeutic Method in the Treatment of Numerous Ailments Particularly when they arise from Auto-Intoxication resulting from Intestinal Stasis.

WITH SPECIAL REFERENCE TO A NEW SCIENTIFIC PORTABLE APPARATUS COMBINING CONVENIENCE SIMPLICITY AND EFFICIENCY

COLONIC lavage, which in the Eighteenth Century enjoyed Royal Patronage, and an enormous vogue in the best circles of Society, has re-emerged after a period of comparative oblivion to receive once more the endorsement and recommendation of the Medical Profession. This is largely due to the invention of new and improved apparatus.

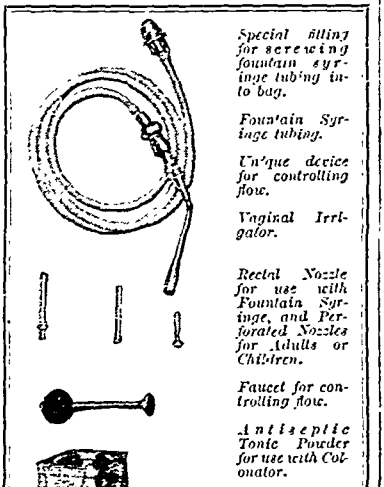
The elaborate apparatus installed in institutions, however, has left a blank still to be filled.

We refer to the vast number of cases in private practice where what is really needed is an outfit that conforms with the latest dictates of medical science, yet is convenient, simple, and portable, and can be operated by the nurse in attendance, or even by the patient himself with little or no supervision if his condition of health permits it.

Such an outfit is now available in the COLONATOR. This apparatus consists of a stout rubber bag, with detachable vulcanite nozzle, which in place of the usual end opening, has pin-hole perforations at the sides. The disadvantage and danger of directing a stream of water violently against the Colon Wall, as may happen with ordinary apparatus, is thus avoided. The flow of the water, being actuated by the pressure of the body seated upon the rubber bag, can thus easily be retarded at will, while the control tap also allows the volume to be increased, or diminished, or the flow instantly cut off altogether the moment this is desired. By means of this apparatus the entire contents of the Colon can be progressively evacuated as far as and including the Caecum.

The value of the apparatus in the diagnosis of obscure conditions will at once be realised. A few such cases among many where it can be of undoubted service are:—

1. Where Mucous Colitis is suspected.
2. Cases of Dysentery thought to be of bacillic origin.
3. Prior to an X-ray examination of the bowels, and in all abdominal conditions where a clean bowel simplifies examination and is a safeguard against errors in diagnosis.
4. The suspected presence of parasitic pests.



Special fitting for screwing fountain syringe tubing into bag.

Fountain Syringe tubing.

Unique device for controlling flow.

Vaginal Irrigator.

Rectal Nozzle for use with Fountain Syringe, and Perforated Nozzles for Adults or Children.

Faucet for controlling flow.

Antiseptic Tonic Powder for use with Colonator.

Emollient Lubricant and Brass Cup for seating bag on hot-water bottle.

As to the therapeutic uses of the Colonator, these obviously embrace all those numerous conditions which are directly or indirectly traceable to auto-intoxication arising from intestinal stasis. Apart from this, the advantage of having such a simple, convenient, and easily portable apparatus at hand for use in urgent cases of Food Poisoning, in numerous cases of Chronic Poisoning, Drug Addiction, Tobacco Poisoning, etc., may be emphasized.

The following are a few of the conditions which, as is well known, are greatly benefited by Colonic Irrigations, and for the treatment of which the Colonator may be strongly recommended as an eminently practical and efficient apparatus:—

Appendicitis, threatened, and in cases where it is desirable to avoid operative treatment.

Asthmatical attacks, where the dyspnoea are aggravated if not actually caused by constipation.

Blood Pressure, abnormal.

Bronchitis and Catarrhal Conditions, Colitis, Dysentery, Dyspepsia, Gastric Ulcer, Gastric Disorders such as Hyper-Acidity, Liver Diseases, Nervous Disorders, Rheumatic Ailments, Sexual Disorders, numerous Urinary Disorders.

The following is a summary of some of the important practical features of the Colonator:—

1. The Hot Water Bag, made of the finest rubber, and extremely tough, strong, and durable, is shaped to fit comfortably upon the ordinary lavatory seat.

2. The flow of the water is actuated by the gentle pressure of the body, while the Control Tap allows the volume to be gradually increased or decreased, or the flow cut off altogether at will.

3. The nozzle is pin-hole perforated at the sides, without any orifice at the extremity, to provide complete insurance against a powerful jet of water being directed violently against the Colon wall in any circumstances.

4. Nozzles are supplied with all outfits in two sizes for children and adults.

IN AN EDITORIAL NOTICE OF THE COLONATOR THE "BRITISH MEDICAL JOURNAL" SAYS:—
"... a new apparatus for colonic lavage, which seems to combine ease in operation with ingenuity and simplicity in design ... The complete apparatus is put up in a convenient and light portable case."

5. A length of rubber tubing and a special fitment is provided for use in feminine hygiene.

6. The movable parts are beautifully machined, ensuring perfect fitting and easy detachment.

7. The complete outfit is supplied in fitted attache type of case for convenience of transport.

Full particulars of the Outfit, and of Special Terms to the Profession, will be sent to medical men on application to:—

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Premier House,
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INSULIN 'A.B.'

The world-wide supremacy of Insulin 'A B' is due to its unequivocal purity no less than to its well-known potency and stability under all conditions

Insulin 'A B' contains the minute quantity of phenolic preservative originally recommended by the Medical Research Council and still considered necessary by bacteriologists (*Lancet* Sept 12, 1931, pp 582-584) as a complete safeguard against the development of bacteria that may be accidentally introduced during self-administration.

Supplied in three strengths

20 units per c c Packed in bottles containing
5 c.c. (100 units) - 2/- each
10 c c. (200 ") - - 4/
25 c.c. (500 ") - 10/ "

40 units per c c Packed in bottles containing
5 c c (200 units) - - 4/- each

80 units per c c Packed in bottles containing
5 c c (400 units) - - 8/- each

Full particulars and the latest literature will be sent free to members of the Medical Profession.

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See pp. 46-47 Special Report No. 175. Published by H.M. Stationery Office.

Issued by the Director, Trade Publicity, Australia House, London.

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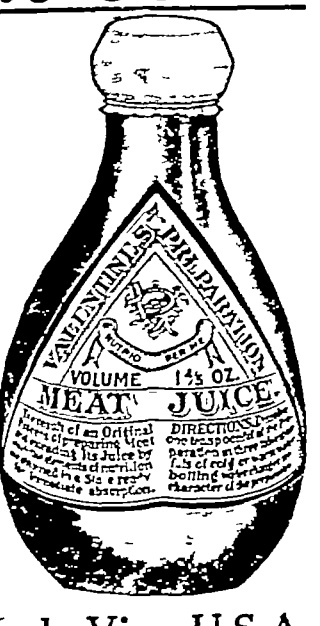

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For sale by European and American Chemists and Druggists.

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Thyminic Acid — Hexamethylene-Tetramine — Lysidin

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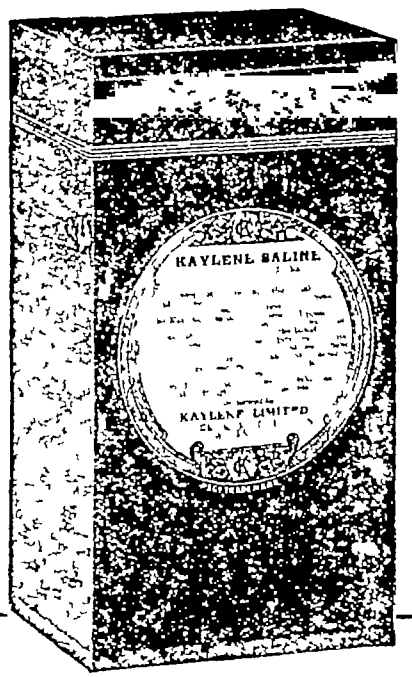

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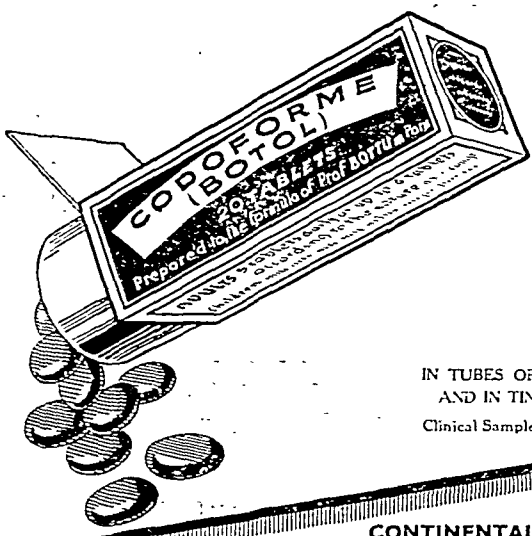

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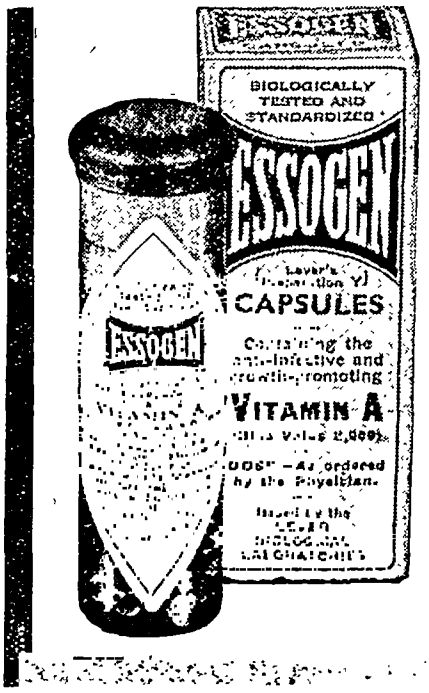
Issued by the Director Trade Publicity Australia House London.



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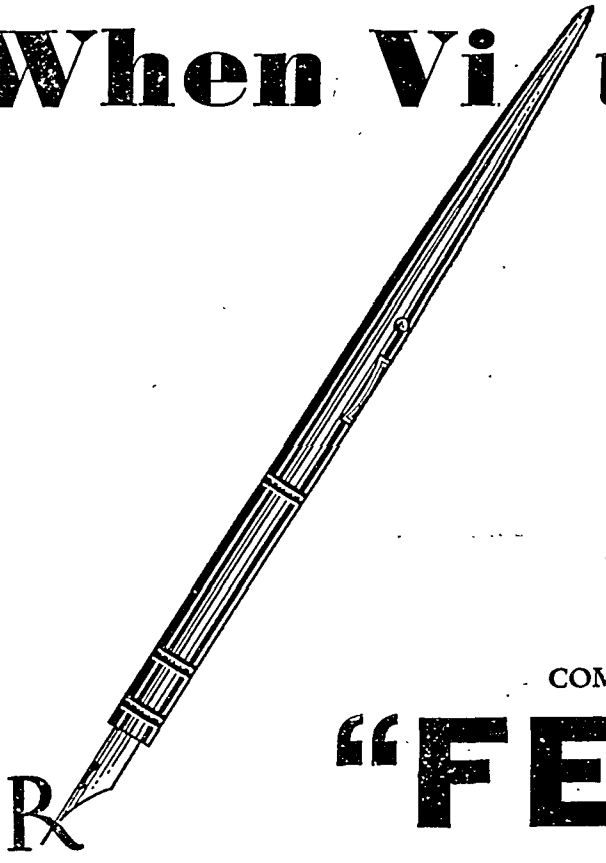

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COMPOUND SYRUP OF HYPOPHOSPHITES

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It supplies the needed minerals

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The remarkable results which have followed the oral administration of Caprokol in the collateral treatment of gonorrhoea over an extended period in the V.D. Clinic attached to an important infirmary in this country demonstrate the value of this urinary antiseptic as a valuable adjunct to the routine treatment of gonorrhoea, one physician describing it as *'of sound therapeutic value in chronic gonorrhoea.'*

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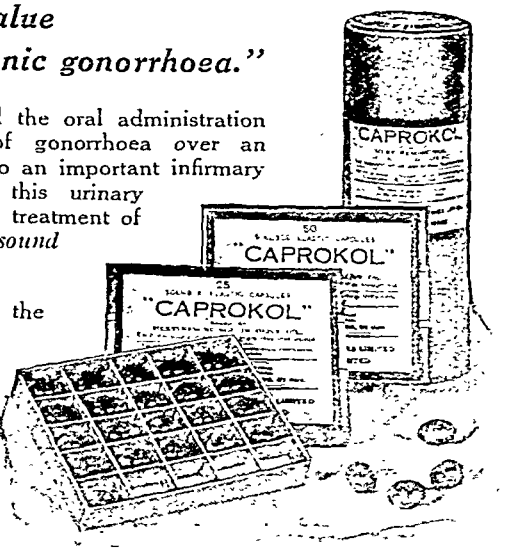

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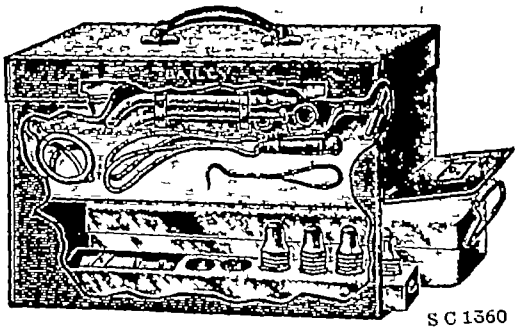

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Size 17 × 10 × 7 £3 15 0

Ditto fitted with best nickel plated stamped out seamless 16 in Steriliser (with lamp and tray) £5 15 0

Cases fitted complete—Prices on application

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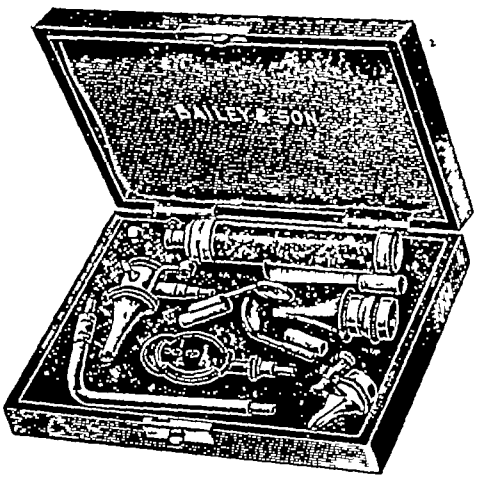

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Price £5 15 0

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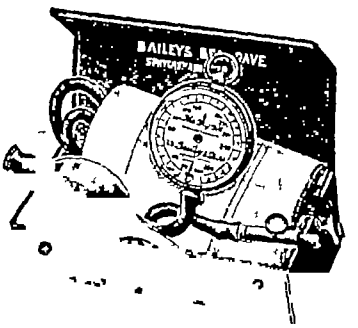

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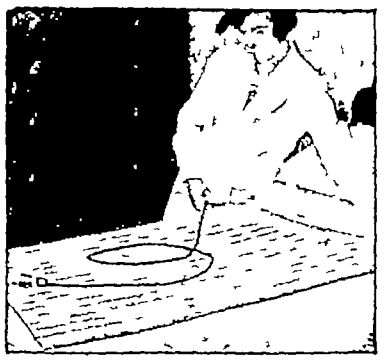

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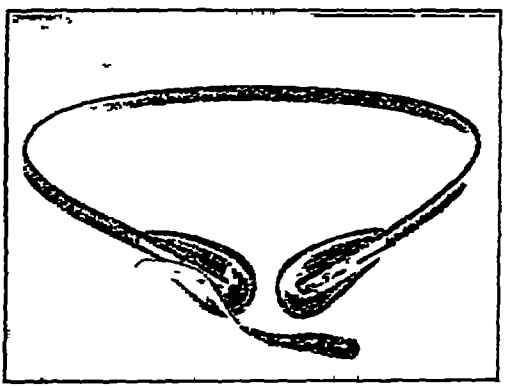

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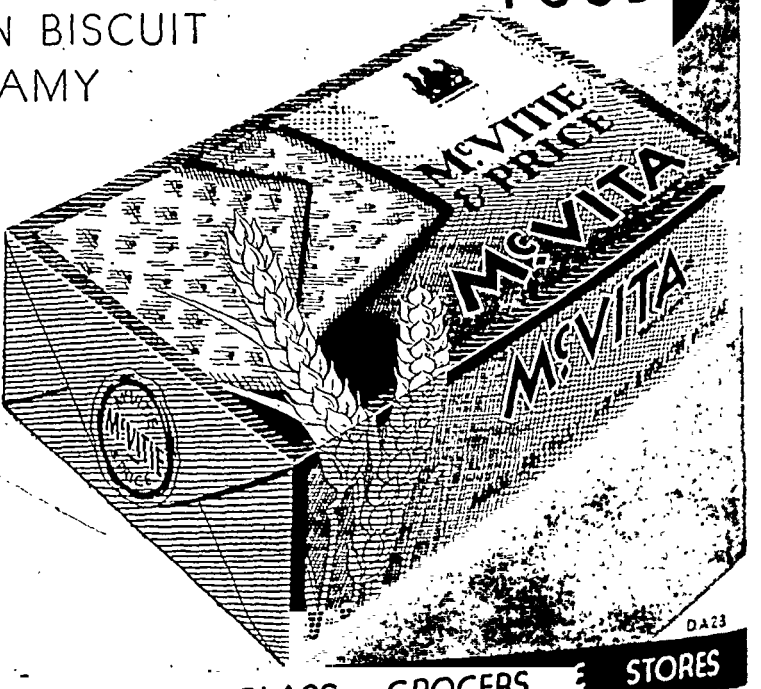

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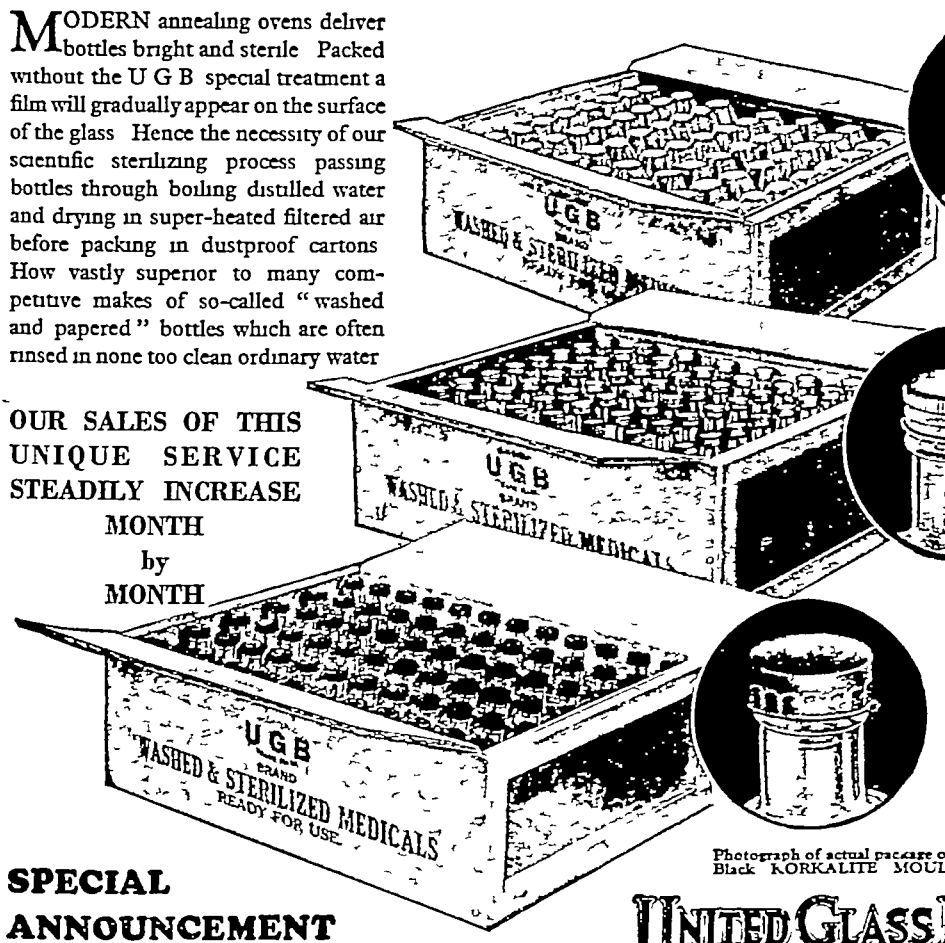

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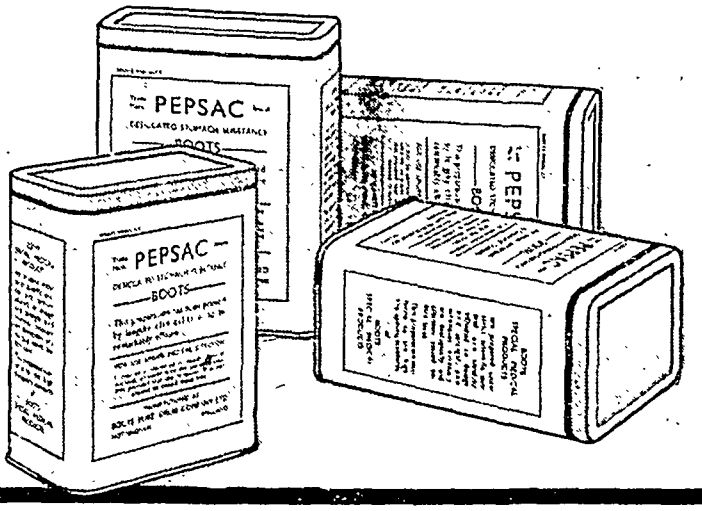

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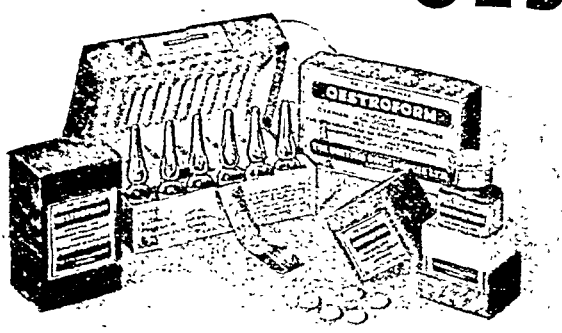

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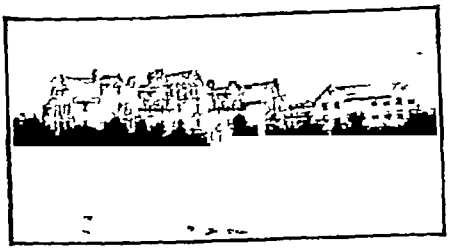

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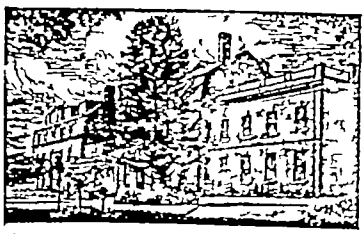

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SURGEONS HALL, EDINBURGH

ANATOMY

The Vacation Classes commence on Aug 3rd and terminates on Sept 27th Lectures and Demonstrations covering the entire subject and including Embryology are given thrice daily

Apply to CHAS R WHITTAKER F.R.C.S. F.R.S.E. Lecturer

NORTH-EAST LONDON POST-GRADUATE COLLEGE

PRINCE OF WALLS GENERAL HOSPITAL, N 15

The Practice of the Hospital is limited to Medical Practitioners. Particulars from J BROWNING ALEXANDER M.D. Dean

BRISTOL EYE HOSPITAL

Applications are invited for the post of ASSISTANT RESIDENT HOUSE SURGEON Salary £100 per annum vacant August 1st. Senior post available after six months. Applications and testimonials to be received by the Secretary not later than Monday July 3rd

UNIVERSITY OF LONDON

EXTERNAL EXAMINERSHIPS, 1934

The Senate announce the following vacant Examinerships for the year 1934

For Final and Higher Examinations for Medical Degrees

MEDICINE SURGERY M D HYGIENE

For First Examinations for Medical Degrees

CHEMISTRY (TWO) GENERAL BIOLOGY PHYSICS

For Second Examinations for Medical Degrees

ANATOMY CHEMISTRY PHARMACOLOGY

Associate Examinerships

Applications will also be invited for Associate Examiners in Medicine, Obstetric Medicine Pathology, and Surgery A separate application form must be used for Associate Examinerships and the word Associate must be written on it

Application form (or forms if more than one Examinership is applied for) and particulars of the remuneration and duties can be obtained from the External Registrar

Candidates must send in their names to the External Registrar Gro B GOODCHILD M.A., B.Sc., with any attestation of their qualifications they may think desirable, on or before Monday, July 3rd, 1933 (Envelopes should be marked Examinership)

The Senate desire that no application of any kind be made to individual members

If testimonials are submitted one copy only of each is required In no case should original testimonials be submitted If more than one Examinership is applied for a separate and complete application must be forwarded in respect of each Examinership The appointments will be made by the Senate in November Applicants who desire that the result should be communicated to them are requested to enclose a stamped and addressed envelope with their application

University of London, South Kensington, S W 7 — EDWIN DELLER, Principal

June 1933

CITY OF BIRMINGHAM

DUDLEY ROAD HOSPITAL (926 Beds.)

Applications are invited from fully qualified Medical Practitioners for whole time appointment as JUNIOR MEDICAL OFFICERS (male) at the Dudley Road Hospital, Birmingham The appointment will be for a period of six months but may be extended for a further period of not exceeding six months Salary at the rate of £200 per annum and full residential emoluments subject to any voluntary abatement in force from time to time The officer appointed will be required to refund to the Council all fees allowances and emoluments (other than the foregoing) received by him

Further particulars may be obtained from the Medical Superintendent at Dudley Road Hospital to whom applications stating age experience and qualifications with copies of recent testimonials should be forwarded not later than June 29th

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark S E 1

Applications are invited for the post of HOUSE PHYSICIAN (male) for six months from July 1st (first two months in Casualty and Out patient Department) Salary at the rate of £120 per annum with board and residence

Applications stating age, experience and qualifications accompanied by copies of four testimonials to be sent to the undersigned not later than June 20th from whom rules and other particulars can be obtained

By Order of the Committee of Management,
W H SIDNELL
May 24th 1933 Secretary Supt.

LONDON HOMOEOPATHIC HOSPITAL

(Incorporated by Royal Charter)
Great Ormond Street, W C 1

POST GRADUATE SUMMER COURSE, 1933

The Medical Staff of this Hospital have arranged special teaching in Homoeopathy on Friday afternoons during the month of June

Each Friday at 2 o'clock a Clinical Tutorial will be conducted by Dr W W Rorke and each Tutorial Class will be followed by a Lecture in accordance with the following time table

Friday, June 16th, 5 p m —Sir JOHN WEIR, K C V O, Compton Burnett Lecturer "The Principles involved in Homoeopathic Prescribing"

Friday, June 23rd, 5 p m —Dr D M BORLAND "The Homoeopathic Repertory, and how to use it"

Friday, June 30th, 5 p m —Dr W W RORKE A Series of Clinical Cases, showing results of Homoeopathic Prescribing

All graduates in medicine will be welcome Tea will be served at 4 30 p m

ROYAL NAVAL DENTAL SERVICE

The Admiralty is prepared to receive applications for commissions as DENTAL OFFICERS in the Royal Navy Three appointments are offered

Candidates must be below 28 years of age on September 1st (unless granted an allowance for age not exceeding six months in respect of a period served in a recognised wholetime civil hospital appointment) and must be registered as British Graduates or Licentiates in Dental Surgery

Approved candidates will be required to appear before a Selection Committee at the Admiralty, and to pass a medical examination by a Board of Naval Medical Officers as to their physical fitness for entry

A pamphlet outlining the conditions of service and the forms to be completed by candidates may be obtained on application to the Medical Director General of the Navy, Admiralty London, S W 1

Applications accompanied by the necessary documents must reach the Medical Director General not later than July 22nd

UNIVERSITY OF LONDON

The Senate invite applications for the UNIVERSITY CHAIR OF PATHOLOGY tenable at the London (Royal Free Hospital) School of Medicine for Women Initial salary £1 100 a year Applications (12 copies) must be received not later than first post on June 23rd by the Academic Registrar University of London S W 7, from whom further particulars may be obtained

METHODIST MISSION LEPROSY HOSPITAL DICHPALI

The post of MEDICAL OFFICER at the Leper Hospital Dichpali, H F H The Nizam's Dominions, India is vacant

The unique opportunities of this Hospital have been recognised not only in India but throughout the world, and there is ample scope for Leprosy Research

Applications in the first place should be made to Sir LEONARD ROGERS British Empire Leprosy Relief Association 29 Dorset Square London N W 1 from whom all particulars can be obtained

CITY OF MANCHESTER

PUBLIC HEALTH DEPARTMENT

BOOTH HALL HOSPITAL

APPOINTMENT OF ASSISTANT MEDICAL OFFICER

The Public Health Committee invites applications from qualified Medical Men for the position of Assistant Medical Officer at the Booth Hall Hospital for Children (750 beds) Charlestown Road Blackley Manchester

Every applicant must be a registered Medical Practitioner and unmarried

Preference will be given to applicants with previous hospital experience and good surgical experience

The hospital is a recognised training school for nurses and is equipped with all modern hospital requirements

Salary £250 per annum subject to a temporary deduction of £6 10s. per annum The amount payable is therefore £243 10s with board residence and laundry in addition subject to the terms and conditions of the Manchester Corporation Grading Scheme No bonus

The appointment will be made in the first instance for a period of six months The successful candidate however will be eligible for re-appointment for a further period of six months at the end of that period.

Applications stating fully the age training qualifications and experience of the candidate with copies of three recent testimonials and endorsed on the envelope Assistant Medical Officer Booth Hall Hospital must be addressed to the Medical Officer of Health Civic Buildings 1 Mount Street Manchester 2 and not to members of the Committee or Council and must be received by him not later than Friday June 23rd.

The candidate appointed will be required to commence duty as soon as possible after appointment to devote the whole of his time to the duties of the position to pass a medical examination to contribute to the Corporation Superannuation Fund and to execute the Deed of Service.

Canvassing in any form oral or written direct or indirect, is prohibited.

F E WARBRECK HOWELL,
Town Clerk.

Town Hall
Manchester 2. June 12th. 1933

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY

The Board of Management invites application for the following posts from unmarried gentlemen of British Nationality who are properly qualified and registered

HOUSE SURGEON Duties under Consulting Surgeon

SPECIAL HOUSE SURGEON Duties in Obstetric Department and Ear Nose and Throat Wards

Salary in each case at the rate of £150 per annum with board residence and laundering Appointments six months

The Hospital is recognized for post graduate study by the Joint Colleges of Physicians and Surgeons.

Resident Staff 6 Beds Infirmary 278 Homes of Recovery 72

Applications stating age qualifications and experience together with copies of testimonials to be forwarded to the undersigned

JOHN GIBSON
Supt. & Secretary

June 12th 1933

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY

The Board of Management invites applications from unmarried gentlemen of British nationality properly qualified and registered for the post of RESIDENT SURGICAL OFFICER which will fall vacant early in August

Preference will be given to candidates with F R C S degree

The Central Hospital in Preston contains 278 beds and in addition there are 72 at the Homes of Recovery in the country

The Resident staff numbers six R S O House Physician Casualty Officer 3 House Surgeon

Salary at the rate of £300 per annum with rooms board and laundry The appointment is in the first instance for twelve months

Applications stating age qualification and experience together with testimonials to be forwarded to the undersigned (who will supply any particulars desired) on or before July 1st.

JOHN GIBSON
Supt & Secretary

June 12th 1933

HERTFORD COUNTY HOSPITAL.

Applications are invited for the post of HOUSE SURGEON (Male). Salary £200 per annum with board residence and laundry The appointment is for six month in the first instance commencing on or about July 16th

Applications with copies of three recent testimonial should be sent to the undersigned not later than Saturday July 1st

PERCY G BROOKS Secretary

SPA TREATMENT IN LONDON.

AT the Central Research Clinic 20-22 Chenies Street London W C 1 (Telephone Museum 3252) which is a complete private hospital intended for middle class patients who desire Harley Street conditions at hospital prices

ANY Registered Medical Practitioner by paying a membership fee of One Guinea per annum may use a consulting room and treat his patients at this Clinic thus deriving the advantages usually restricted to the consulting staff of a large general hospital

ANY Member of the Chartered Society of Massage may treat patients referred by their Doctors in the Hydrotherapy Electrical and Sun rooms

ALL Patients are accepted on the recommendation of their own Doctor and not otherwise so the Clinic is entirely dependent on the support of registered Medical Practitioners

A Welcome is extended to all visitors who may be shown round the premises at any time

ACCOMMODATION —*Lower Ground Floor:* Hydrotherapy Solarium Restaurant

Ground Floor—Departments for General Medical Investigation General Surgery Diseases of the Chest Diseases of the Cardiovascular System Disorders of Metabolism Gynaecological and Ante-natal Diseases of Children Child Welfare Mothercraft and Nursery Hygiene Ear Nose and Throat Ophthalmic and Refraction including Squint Training Skin Neurology Psychology Rheumatism Asthma Hay Fever and Immunisation Tropical Medicine Dental; Cancer Investigation Colonic Lavage Manipulative Surgery Dispensary

First Floor:—Resident Staff Quarters

Second Floor:—Resident Patients

Fourth Floor:—Operating Theatre X Ray Department (Diagnostic and Deep Therapy) Electrical Light and Massage Departments Occupational Therapy Clinic

Fifth Floor —Department of Pathology Bacteriology and Biochemistry

AN Unrivalled Opportunity is afforded for the investigation and treatment of rheumatism arthritis fibrositis neuritis etc by pathological, electro-cardiological and radiological investigation and by the following methods of treatment —

Hydrotherapy Aix and Vichy Douche Wildes Pyretic Couch Pistany soapless foam, peat and aeration baths needle shower and Scotch douche

Colonic therapy Vaccines Diathermy Infra red and ultra violet radiation Massage Manipulation Dietetic Treatment

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CHESTERFIELD AND NORTH DERBYSHIRE ROYAL HOSPITAL.
(220 Surgical and Medical Beds)

CASUALTY OFFICER (DEPUTY RESIDENT SURGICAL OFFICER).

Applications are invited from fully qualified men for the above post. The appointment is for six months Candidates must have held previous Hospital appointments

Duties include House Surgeon to the Ear Nose and Throat Department

Salary at the rate of £200 per annum with board apartments and laundry

Applications stating age, together with copies of three recent testimonials to be sent to the undersigned on or before June 24th.

HOUSE SURGEON

Applications are also invited from fully qualified men for the above post

The appointment is for six month

Salary at the rate of £150 per annum with board, apartment and laundry

Applications stating age together with copies of three recent testimonials should be sent to the undersigned on or before June 24th

G SUNNUCK
Supt & Secretary

June 12th 1933

(AMENDED ADVERTISEMENT)

THE PRINCESS BEATRICE HOSPITAL, Richmond Road Earls Court S.W.5
(General Hospital—80 Beds)

RESIDENT MEDICAL OFFICER (male) required to act as House Physician and Casualty Officer for six months as from July 1st. Salary at the rate of £110 per annum, with board, residence, and laundry Previous resident experience essential.

Applications to be sent to the House Governor not later than June 20th accompanied by copies of three recent testimonials

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THE QUEEN'S HOSPITAL FOR CHILDREN Hackney Road London E.2.

CLINICAL ASSISTANT required for Medical Out patients Attendance Monday afternoon and Thursday morning Lunch provided Honorarium per attendance to cover expenses Experience as Hospital resident desirable. Applications stating qualifications and experience should be addressed to the undersigned as soon as possible

CHARLES H BESSELL,
Secretary

June 12th 1933.

WORCESTER COUNTY AND CITY MENTAL HOSPITAL, POWICK, near WORCESTER.

Application are invited for the post of ASSISTANT MEDICAL OFFICER Applicants must be male and single and duly qualified in medicine and surgery Salary £350 rising by yearly increments of £25 to £450 per annum together with furnished apartment board laundry and attendance A further £50 will be paid if the selected candidate holds or obtains a Diploma in Psychological Medicine The commencing salary is subject to a temporary abatement of £13 15s under the National Economy Scheme The appointment is subject to the provisions of the Asylums Officers Superannuation Act 1909

Application stating age experience and full particulars accompanied by copies of three recent testimonials to be forwarded to the Medical Superintendent not later than Saturday July 1st.

DURHAM COUNTY MENTAL HOSPITAL.

ASSISTANT MEDICAL OFFICER.

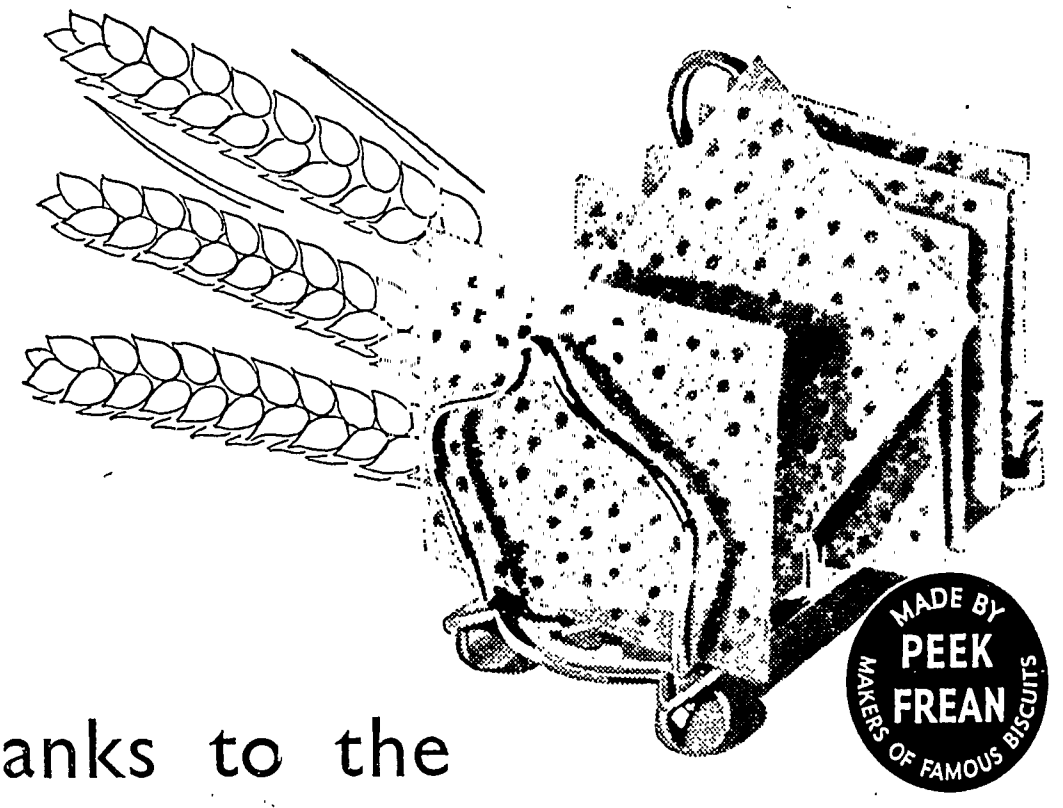
The Visiting Committee invite applications from duly registered Medical Practitioners for the appointment of Assistant Medical Officer at the Mental Hospital. Salary £350 per annum rising by annual increments of £25 to £450 per annum together with board, lodging laundry and attendance valued at £135 per annum plus £50 per annum for the Diploma in Psychological Medicine The appointment will be subject to the conditions of the Asylums Officers Superannuation Act 1909 and the successful candidate will be required to pass a medical examination Preference given to applicant with knowledge of Laboratory routine Applications with copies of three recent testimonial to be forwarded to the Medical Superintendent Winterton Stockton on Tees by June 21

OLDHAM ROYAL INFIRMARY

Application are invited for the following post HOUSE SURGEON required for a period of six month Salary at the rate of £150 per annum with board residence and laundry

Application stating age experience and qualification together with copies of three recent testimonial must be forwarded to the undersigned as soon as possible.

H J CLOUT
General Superintendent



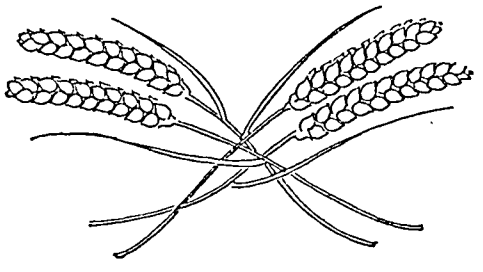
Thanks to the whole wheat in

Vita-Weat

REGD.

(the all-British Crispbread)

constipation can be counteracted without drugs



VITA-WEAT contains the bran of the whole wheat berry in just that degree of fineness which ensures natural elimination. Moreover, for greater ease of digestion it has the wheat starch thoroughly broken up. And its ripe 'crunchiness' tempts jaded appetite and encourages proper mastication.

Analysis gives the following comparison with wholemeal bread :—

	Vita-Weat (*The Lancet*)	Wholemeal Bread (*The Practitioner*)
Moisture - - -	4.90	45.00
Protein - - - -	10.32	6.30
Fat - - - - -	7.90	1.20
Carbohydrates, etc. - -	74.28	46.30
Mineral matter, ash, etc.	2.60	1.20
	100%	100%
Calorific Value per lb.	1846	1105

The manufacturing process conserves all three vitamins—A, B, and D. Here, then, in an ideal substitute for ordinary bread or toast, are all the foodstuffs essential to vigorous health, complete with the roughage required to stimulate peristalsis without undue irritation of the intestinal mucous membrane.

M2

ROYAL ARMY MEDICAL CORPS.

TWENTY-FIVE permanent COMMISSIONS in the ROYAL ARMY MEDICAL CORPS will be offered on July 27th, 1933 Applications should reach the War Office not later than July 21st, 1933

Candidates will be selected for commissions without competitive examination, and will be required to present themselves in London for interview and medical examination on July 27th 1933 They must be under 28 years of age on August 1st, 1933, and registered under the Medical Acts

Officers of the R A M C are liable to serve in any part of the world where British troops are quartered

Ample opportunities exist in the Army for clinical professional work both Medical and Surgical, as well as for the study and practice of Hygiene, Pathology, and all the special branches

The cost of Post-Graduate study, which is compulsory, is met from Army Funds

Emoluments Pay—From £356 to £1,542 a year according to rank **Allowances**—Free quarters, fuel and light servant and rations, or cash allowances in lieu, totalling from 6/5 to 23/3 a day according to rank (£117 to £424 a year)

The above rates of allowances apply to Home Commands only At certain stations abroad the rates are considerably higher

Candidates who have held a full-time house appointment in a recognized civil hospital before appointment to a permanent Commission in the R A M C may, subject to certain conditions, be allowed to count the period of service in such an appointment, up to a maximum of 12 months, as Army service for promotion, increase of pay, and retirement

Gratuties on Retirement—After 7 years' service as a medical officer £1,000
" 15 " " " " £2,800
" 18 " " " " £3,500

Current rates of retired pay range from £352 10s per annum, normally earned by a Major after 20 years' service, to £890 per annum, the maximum for which a Major General is eligible The rates of pay and retired pay are subject to revision on or before April 1st, 1934

Outfit Grant.—An officer on joining receives £50 as outfit allowance

Married Officers' Allowances—Officers of 30 years of age and over who are married are entitled to draw special rates of allowances

A Voluntary Widows' and Orphans' Fund exists for officers of the Corps

All particulars may be obtained by application, in writing or personally, to the Assistant Director-General Army Medical Services, The War Office, Whitehall, London, S W 1

COUNTY COUNCIL OF MIDDLESEX
NORTH MIDDLESEX COUNTY HOSPITAL, EDMONTON

RESIDENT PHYSICIAN

The County Council invites applications for the above appointment Candidates must be registered Medical Practitioners, Graduates in Medicine of a British University, and Fellows or Members of the Royal College of Physicians The successful candidate will work under the direction of the Medical Superintendent will reside at the hospital and will devote the whole of his time to his official duties.

Salary £600 per annum, rising by annual increments of £60 to £800 per annum together with residential emoluments valued for superannuation purposes at £150 per annum

In view of the national situation a temporary abatement calculated on the following scale is applied to the salary and value of the emoluments for the first £150 per annum no abatement for the next £100 per annum 2½ per cent abatement for the next £500 per annum 5 per cent abatement for the next £750 per annum 7½ per cent abatement

The successful candidate will be required to pass such medical examination as the Council may direct and unless subject to the Poor Law Officers Superannuation Act 1896 to contribute to the County Council's Superannuation Fund The appointment will be held during the pleasure of the Council and subject to three months notice on either side

Applications stating (1) name (2) age (3) qualifications and (4) experience together with copies of not more than three recent testimonials must be received by the undersigned not later than June 24th

No special application forms are provided Envelopes must be endorsed Resident Physician

Canvassing directly or indirectly will be a disqualification

N B—North Middlesex County Hospital is a modern General Hospital with accommodation for 900 cases chiefly acute 215 beds in the adjoining Edmonton House also are under the care of the Medical Staff of the Hospital The Hospital possesses a Pathological Laboratory and Radiological Radium Electro therapeutic, Actino-therapeutic Maternity, Massage Ear Nose and Throat Ophthalmic Dental, and Out patient Departments

ERNEST S W HART
Middlesex Guildhall Clerk of the
Westminster S W 1 County Council.
May 31st 1933

DERBYSHIRE COUNTY COUNCIL

WOMAN ASSISTANT MATERNITY AND CHILD WELFARE MEDICAL OFFICER

The Derbyshire County Council require the services of a fully qualified Whole time Woman Assistant Maternity and Child Welfare Medical Officer experienced in Ante-Natal work Midwifery and Children's diseases to hold (under the direction of the Medical Officer of Health) Consultations at the Ante-Natal and Maternity and Child Welfare Centres of the Derbyshire County Council and (under the like direction) to perform such other duties as appertain to the office

The salary will be £600 per annum rising by £25 per annum to £700 per annum subject to a temporary economy reduction

The appointment will be a designated post under the Local Government and Other Officers Superannuation Act and the successful candidate will be required to pass a medical examination

Applications must be sent to the undersigned together with copies of not more than three recent testimonials not later than Thursday, June 15th

New County Offices, W M ASH
Derby County Medical Officer
May 30th 1933

ANCOATS HOSPITAL MANCHESTER

HOUSE PHYSICIAN

House Physician required for a period of six months to commence duty on July 1st next Salary £100 per annum, with board, residence, laundry etc

Applications, stating age qualifications and experience to be forwarded to the undersigned, together with copies of three recent testimonials, immediately

By Order of the Board
HERBERT J DAFFORNE
Gen Supt. & Secretary

DREADNOUGHT HOSPITAL GREENWICH, S E 10 (Seamen's Hospital Society)

HOUSE PHYSICIAN required for six months from July 1st Salary £110 per annum and a proportion of fees with board residence and laundry Candidates must be male Applications with copies of three testimonials to be sent in by June 26th to the undersigned

Greenwich R E V BAX
June 10th 1933 Secretary

CASTLEDERG UNION

DISPENSARY MEDICAL OFFICER WANTED

The Board of Guardians of Castlederg Union will, at their meeting to be held at the Board Room on Friday June 23rd appoint a Dispensary Medical Officer for the Castlederg and Killeter No 2 Dispensary District at an initial salary of £150 per annum, with annual increments of £10 to £200 per annum together with usual Vaccination fees and £30 per annum as Medical Officer of Health under the Rural District Council

Applications with Diplomas to be lodged with me not later than twelve o clock noon on Friday, 23rd instant

By Order,
R A SCOTT
Clerk of Union

Clerk's Office,
Castlederg N I May 26th 1933

THE GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION
(216 Beds.)

TWO HOUSE SURGEONS (male) fully qualified Salary £150 per annum with board residence and laundry

The appointments are for six months which may be extended for similar periods by election from time to time

Applications, stating age qualifications and nationality with copies of not less than three recent testimonials, should be sent to the undersigned not later than June 29th

The elected candidates will be required to enter upon their duties on July 17th

F J SIMONS
June 15th 1933 Secretary

LONDON HOSPITAL, E.

Applications are invited for the post of SURGICAL FIRST ASSISTANT AND REGISTRAR Candidates must be Fellows of the Royal College of Surgeons The salary is £340 per annum payable by the Hospital and Medical College jointly

The appointment is for one year but is renewable annually on application, for two further periods of one year

Applications should arrive at the Hospital not later than by the first Post on Saturday October 14th

Further particulars may be obtained from the House Governor

ARTHUR G ELLIOTT
House Governor

TAKING human milk as the standard, a good deal of the difficulty in using cow's milk for infant feeding lies in the nature of the proteins of cow's milk. In breast milk much of the protein is present in a form that is not curdled in the stomach ; in cow's milk the contrary is the case.

■ ■ ■ ■

The "curd" produced in the stomach from ordinary liquid cow's milk can be modified considerably to the great advantage of the infant. By drying the milk *in vacuo* in the presence of a suitable colloid (dextrin-maltose) the protein particles are prevented from coagulating to a solid clot.

■ ■ ■ ■

The "curd" formed in the stomach of the infant when the "Allenburys" Modified Milk Foods are used is finely flocculent, light, and readily digestible.

■

This announcement regarding the 'Allenburys' Foods is No. 4 of a series which will be continued.

INDIAN MEDICAL SERVICE

Recruitment of European Officers.

Applications are invited from medical men for permanent commissions in H.M.'s Indian Medical Service. The terms offered include a gratuity of £1,000 on retirement after six years' service, or £2,500 after 12 years' service, together with free return passages for those who no longer desire to remain in the Service. In other respects the terms will be as detailed below.

Candidates must be European British subjects under 32 years of age at the time of application and must be registered under the Medical Acts in force in Great Britain and Northern Ireland.

CAREERS

The Indian Medical Service offers wide opportunities of medical experience including clinical preventive specialist and research work. At the beginning of his career an officer is employed on the military side which has medical charge of the Indian Army. Promotion is on a time scale up to the rank of Lieutenant Colonel and by selection to the ranks of Colonel and Major General. An officer may apply after one year's Indian Service to have his name registered for transfer to the civil side from which appointments are made to Civil Surgeoncies which are established at the principal civil centres to provide for the medical needs of civil officials and for general medical administrative purposes to specialist (for example public health and bacteriological) services to research posts and to professorships at the Medical Schools.

NOTE.—It is not possible to state at present what, if any prospects of employment on the civil side will be open to Indian Medical Service Officers under the proposed new constitution for India.

PAY

Owing to the state of the financial emergency at present prevailing in India the existing monthly rates of pay which are as follows are subject to a temporary reduction of 5 per cent.

Rank	Service in Rank.	Basic Pay	Overseas Pay	Year of Total Service
		Rs.	Rs.	
Lieut.	—	500	100	1st
			100	2nd
			100	3rd
Capt.	(i) During first 3 years service as Captain	600	100	4th
			£15	5th
			£15	6th
	(ii) With more than 3 and less than 6 yrs. service as Captain	750	£25	7th
			£25	8th
			£25	9th
	(iii) With more than 6 years service as Captain	850	£25	10th
			£25	11th
			£30	12th
Major	(i) During first 3 years service as Major	900		
	(ii) With more than 3 and less than 6 years service as Major	1100		
	(iii) With more than 6 years service as Major	1250		
Lieut.-Col.	(i) Until completion of 23 years total service	1,000	£30	17th and over
	(ii) During 24th and 25th years service	1800		
	(iii) After completion of 25 years total service	1,000		
	(iv) When selected for increased pay	1250		

EXTRAS.—In addition to the above rates various allowances are admissible for a large number of special appointments on both the military and the civil side which may be held by members of the Indian Medical Service. Special high rates of pay are also attached to the numerous administrative appointments open to officers in both branches of the Service.

ANTEDATES IN COMMISSION

Any service rendered by an officer during the war as a medical or combatant officer or in a position usually filled by an officer may be counted as service for increments of pay promotion retirement and retired pay but not for gratuity.

One half of any service in the ranks during the war may be counted as service for retirement and retired pay only.

Candidates possessing certain higher medical qualifications may be granted an antedate of one year in their commissions. Past service in certain hospital appointments may also render candidates eligible for an antedate of one year. Persons holding or about to hold resident posts at recognized hospitals may be seconded in those posts for a period not exceeding one year. The maximum period of antedate secondment or antedate and secondment combined admissible under this paragraph is limited to one year.

OUTFIT ALLOWANCE.

Officers on appointment will receive an allowance of £50 towards the cost of outfit.

PRIVATE PRACTICE.

With the exception of Administrative Officers military or civil and officers holding certain special appointments officers are not debarred from taking private practice so long as it does not interfere with their proper duties.

LEAVE

Leave can be taken at reasonable intervals and adequate rates of leave pay are provided. Extra leave (known as study leave) which may not exceed 12 months in all during an officer's service may be granted to officers desirous of pursuing special courses of study of a post graduate nature. During such leave study allowance at present fixed at the rate of 12s. a day in the United Kingdom £1 a day on the Continent of Europe and £1 10s. a day in the United States of America is granted to an officer in addition to ordinary rates of leave pay.

PENSIONS

The rates of pension are as follows	Per annum £
After 17 years service for pension	400
18	430
19	460
20	500
21	540
22	580
23	620
24	660
25	700
26	750
27 —	800

These rates are subject to alteration on account of a rise or fall in the cost of living as compared with the year 1919 to an extent not exceeding 20 per cent. in all. At present a reduction of 8¼ per cent. is being made on this account.

There are additional pensions ranging from £65 to £350 per annum for officers who have held administrative appointments.

PASSAGES.

An officer on appointment is provided with free passage to India. The families of officers who are married prior to the date of the officers embarkation on first appointment will also be provided with free passage to India subject to the payment of messing charges.

Officers and their families are also eligible for passage concessions under which they are granted a certain number of return passages home at Government expense during their service.

INSTRUCTION PRIOR TO EMBARKATION

Officers are required to undergo courses of instruction at the Royal Army Medical College and at Aldershot lasting approximately six months prior to their embarkation for India on first appointment. Information as to the rates of pay admissible during this period and subsequently up to arrival in India is contained in the memorandum referred to below.

A memorandum giving full details regarding these appointments and forms of application may be obtained from the Under-Secretary of State for India, Military Department India Office London S.W.1. The Selection Committee will meet at the India Office early in July next and the selected candidates will be required to join a course of instruction commencing early in August prior to sailing for India early in 1934. Applications should be submitted as soon as possible.

● SAMPLE SUPPLIES of any PREPARATIONS ILLUSTRATED HERE will be sent with pleasure. Brand & Co. Ltd., Dept. B.M. 21, Mayfair Works, South Lambeth Road, London, S.W.8.

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Presents the well-known haemostatic and vasoconstrictive properties of the adrenal hormone associated with the analgesic and anaesthetic effect of Eucaine Lactate. Indicated in acute coryza, wounds, conditions of cutaneous inflammation, and particularly in haemorrhoids and fistula.

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ROYAL VICTORIA INFIRMARY, NEWCASTLE UPON TYNE

RESIDENT APPOINTMENTS

The following Resident appointments will become vacant as from Tuesday, August 1st
The appointments are tenable for six months except the Skin and Venereal Departments and the Out patient Dressing Department, which will alternate for three months in each Department.
FOUR HOUSE PHYSICANS
SIX HOUSE SURGEONS
ONE HOUSE SURGEON to Throat, Nose, Ear, and Eye Departments
ONE HOUSE SURGEON to Gynaecological Department
ONE HOUSE SURGEON to Orthopaedic Dept
TWO HOUSE SURGEONS to Accident Dept
TWO HOUSE SURGEONS to Skin and Venereal Department and Out-patient Department. (Three months in each Department)
LEAZES HOSPITAL (Pay Bed Section)
TWO HOUSE SURGEONS (may be eligible for re appointment)
Candidates must be registered in Medicine and in Surgery, and must produce evidence of being able to administer anaesthetics
Candidates must be prepared to take any appointment
As regards applications for the appointment of (a) House Surgeons to Accident Room, (b) House Surgeon to Out patient Department and (c) House Surgeons to Special Departments, preference may be given to candidates who have previously held two Resident appointments
Residents are remunerated at the rate of £50 per annum except the Residents in the Leazes Hospital who are remunerated at the rate of £96 per annum
Before making application intending candidates are asked to apply to the undermentioned for a copy of the regulations governing the appointments and form of application
Applications stating age experience, and qualifications and accompanied by copies of two testimonials should be sent to the undermentioned not later than first post on Monday, June 26th

S DUNSTAN,
June 9th 1933 House Gov & Sec

ROYAL VICTORIA INFIRMARY, NEWCASTLE UPON TYNE
(677 Beds)

Applications are invited for TWO RESIDENT ANAESTHETISTS (open appointment) at a salary of £144 per annum each, with board and residence
The term of appointment is for three months commencing Tuesday August 1st and may be renewed for further periods
Candidates must be registered in Medicine and in Surgery
Applications, stating age experience and accompanied by two recent testimonials should be addressed to the undermentioned not later than first post on Monday June 26th

S DUNSTAN
June 9th 1933 House Gov & Sec

NORTHAMPTON GENERAL HOSPITAL
(253 Beds)

There are vacancies immediately for a HOUSE SURGEON for one of the General Honorary Surgeons and a HOUSE SURGEON for the Ear Nose and Throat Department British nationality Salary £150 per annum with board residence and laundry
The successful candidates will be appointed for the period ending on September 30th and will be eligible for re election for a further period of six months
Candidates must be duly qualified and registered
Applications stating age sex, qualifications etc with copies of testimonials, to reach the undersigned not later than first post on Wednesday June 21st

H ST JOHN WOOD,
June 9th 1933 Secretary Supt

DERBYSHIRE HOSPITAL FOR SICK CHILDREN (80 Beds)

Wanted July 1st RESIDENT HOUSE PHYSICIAN (lady) Salary £130 p a The appointment is for twelve months Applicants must be fully qualified Applications with three testimonials one relating to anaesthetics to be sent to the undersigned forthwith

ARTHUR N WHISTON
25 St Mary s Gate, Secretary
Derby

DERBYSHIRE HOSPITAL FOR SICK CHILDREN (80 Beds)

Wanted July 1st, a RESIDENT HOUSE SURGEON (lady) Salary £130 p a The appointment is for twelve months Applicants must be fully qualified Applications with three testimonials one relating to anaesthetics to be sent to the undersigned forthwith.

ARTHUR N WHISTON
25 St Mary s Gate Secretary
Derby

WOOLWICH AND DISTRICT WAR MEMORIAL HOSPITAL
Shooters Hill, London S E 18
GENERAL HOSPITAL—112 Beds

HOUSE PHYSICIAN, also HOUSE SURGEON

The Board of Management invites applications from suitably qualified male candidates for appointment as (a) House Physician and (b) House Surgeon for a period of six months from July 1st next In addition to his surgical duties the House Surgeon will have the care of a Maternity Unit of 8 beds
An honorarium of £100 per annum will be paid in respect of each appointment, plus board, residence and laundry
Applications accompanied by copies of not more than three recent testimonials should be addressed to the Secretary (at the Hospital) to reach him not later than Monday June 19th The Appointments Committee will meet on June 23rd to interview short-listed candidates who will be duly advised when and where to attend

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN
St Quintin Avenue, North Kensington, W 10
(58 Beds)

HOUSE SURGEON (male or female) required for six months from July 1st Salary for first three months at the rate of £75 per annum and for the second three months at the rate of £100 per annum, with board, residence, and laundry in each case Candidates should have held a responsible Hospital appointment Applications, with copies of three recent testimonials should be submitted to the Secretary (on a form to be obtained from him if time allows) and must reach him not later than first post Wednesday, June 21st

H J ELEY, Secretary

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN,
St. Quintin Avenue North Kensington, W 10
(58 Beds)

HOUSE PHYSICIAN (male or female) required for six months from July 1st Salary for first three months at the rate of £75 per annum, and for second three months at the rate of £100 per annum, with board, residence and laundry in each case Candidates should have held a responsible Hospital appointment. Applications, with copies of three recent testimonials, should be submitted to the Secretary (on a form to be obtained from him if time allows) and must reach him not later than first post on Wednesday June 21st

H J ELEY Secretary

THE ROYAL HOSPITAL, WOLVERHAMPTON
(Incorporated under Charter)

HOUSE SURGEON required, duties to commence July 6th The Hospital contains 300 beds, includes the usual special departments and is recognised by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice
Candidates must be registered under the Medical Acts and unmarried
The appointment is for six months Salary at the rate of £100 per annum, board furnished rooms and laundry provided
Applications with copies of testimonials to be forwarded to the undersigned

Wolverhampton W H HARPER
June 6th 1933 House Governor

HUDDERSFIELD ROYAL INFIRMARY
(240 Beds)

MALE HOUSE SURGEON required to commence duty on July 6th
Salary £150 per annum, with board residence and laundry Appointment for six months subject to renewal at the discretion of the Board of Management
The Hospital is officially recognised for the surgical practice required of non members before admission to the Final Fellowship Examination of the Royal College of Surgeons of England
Applications with copies of three recent testimonials to be addressed to the undersigned immediately

H E G HALL
Gen Supt & Secretary

THE ROYAL GWENT HOSPITAL, NEWPORT, MON (160 Beds)

Wanted a JUNIOR RESIDENT MEDICAL OFFICER to act as House Surgeon to Out patients and as House Physician
Salary £135 with board lodgings and laundry Resident Medical Staff 5 Eligible for promotion
Large Out patient Department
Applications stating age and qualifications with copies of three recent testimonials, to be sent to the undersigned
Applications from ladies not entertained

J K MILLWARD
June 9th 1933 Secretary Supt

VICTORIA HOSPITAL, BURNLEY
(126 Beds.)

HOUSE SURGEON (Male)

Applications are invited for the above post which will become vacant on July 1 t next The appointment is for six months in the first instance at a salary of £150 per annum together with board, residence, and laundry At the end of this period re appointment for a further period may be applied for and if confirmed the salary for the second six months will be at the rate of £200 per annum
Applications with full details of qualifications and experience and stating nationality together with copies of recent testimonials, should be addressed to the undersigned forthwith

J E WHEATCROFT Secretary

RADCLIFFE INFIRMARY AND COUNTY HOSPITAL OXFORD

Applications are invited for the post of HOUSEKEEPER DIETITIAN in the above Hospital
Preference will be given to candidates possessing a University degree and previous Hospital experience
The salary will be at the rate of £250 per annum (non resident) rising by annual increments of £10 to £300 per annum
Applications stating age experience and qualifications and containing copies of not more than three testimonials must be sent to the undersigned not later than June 26th

A G E SANCTUARY,
Radcliffe Infirmary Administrator
and County Hospital Oxford

ST PETER S HOSPITAL FOR STONE ETC, Henrietta Street Covent Garden W C 2.

The attendance of CLINICAL ASSISTANTS to the undermentioned members of the Honorary Staff who attend the Out patients Department at the times indicated, is now being considered. A fee of Five Guineas becomes payable to the funds of this Hospital on appointment and applications should be forwarded to the undersigned as early as possible

Mr John Sandrey	Mondays 3 to 6 p m
Mr Alban Andrews	Tuesdays 2 to 5 p m
Mr Ogier Ward	Wednesdays 3 to 6 p m
Mr F J F Barrington	Thursdays 3 to 7 p.m
Mr Ogier Ward	Fridays 9 30 to 11 30 a m. (Women & Children)
Mr Alban Andrews	Fridays 3 to 6 p m (male out patients)
Mr John Sandrey	Saturdays 2 to 6 p m

BEECHEY ROGERS Secretary

NORFOLK AND NORWICH HOSPITAL, NORWICH (392 Beds)

Applications are invited for the following posts —
(a) HOUSE SURGEON
(b) HOUSE PHYSICIAN
Preference will be given to candidates who have held previous appointments Salary for both posts £120 per annum, with board residence, and laundry
Candidates (male) who must possess registered qualifications, should forward applications stating age nationality etc, together with copies of testimonials, to the undersigned not later than first post on Tuesday June 20th

FRANK INCH
June 9th 1933 House Governor & Sec

KING EDWARD VII HOSPITAL, WINDSOR
(181 Beds)

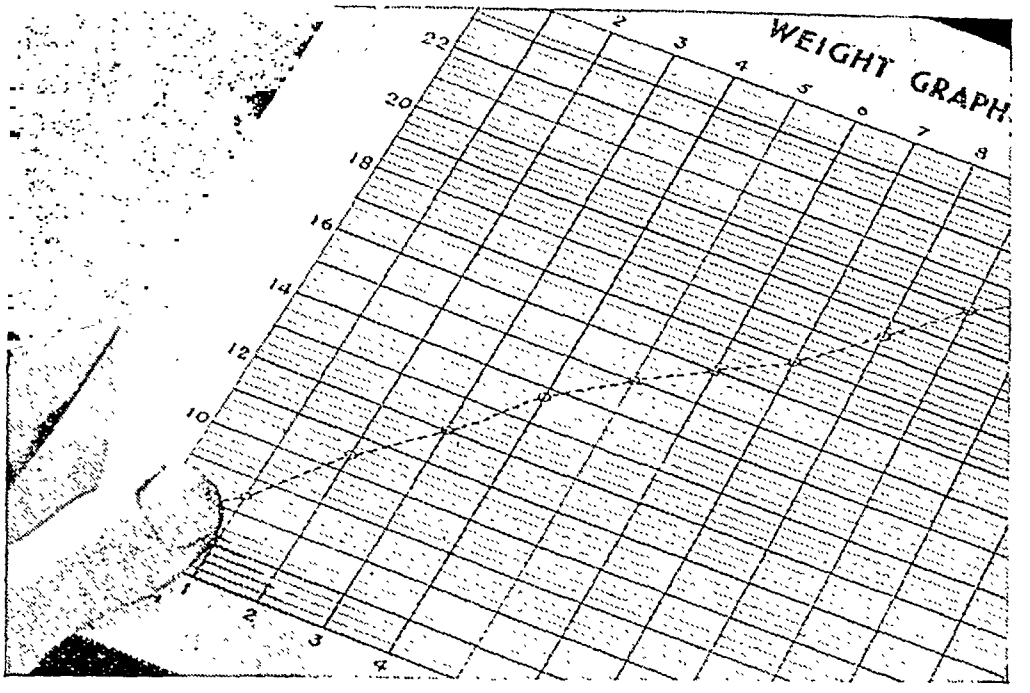
TWO HOUSE SURGEONS required (one for Casualty Department) for six months from date of appointment Applicants must be fully qualified men or women registered and preferably have held a resident appointment One to have had some experience in Ear, Nose and Throat work
Salary at the rate of £100 per annum together with board residence, and laundry
Applications, stating age qualifications, and experience accompanied by copies of testimonials should be sent to the undersigned not later than June 26th

ARTHUR E. CHURCHER
Secretary

QUEEN MARY S HOSPITAL FOR THE EAST END F 15
Telephone Maryland 2616

Applications are invited from fully qualified and registered Medical Men for the post of HOUSE SURGEON at the above Hospital at a salary of £120 per annum
The Hospital contains 217 Beds including 50 for Maternity and other special Department
Candidates who should have held previous Hospital appointments must send in applications accompanied by testimonials to the undersigned not later than Saturday June 24th The appointment will be for six months, and will date from July 1st

RAPHAEL JACKSON (Major)
Secretary



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CVS—82

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary, 7 Drumsheugh Gardens, Edinburgh).

(a) British Islands

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH** *(contd.)*
EBBW VALE, MON. *(Workmen's Medical Society.)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association.)*	COUNTY BOROUGH OF SOUTH SHIELDS. HARTON INSTITUTION AND CLEADON COTTAGE HOMES. *(Medical Officer.)*
GILFACH GOCH, GLAMORGAN. *(Workmen's Medical Scheme.)*	OGMORE VALLEY, GLAMORGAN. *(Wyndham Colliery Medical Aid Society.)* *(Workmen's Medical Scheme.)*	HERTFORDSHIRE COUNTY COUNCIL. WARE SANATORIUM. *(Assistant Medical Officer.)*
LLWYNPIA, CLYDACH VALE, PENYGRAIG, GLAMORGAN. *(Workmen's Medical Scheme.)*	**PUBLIC HEALTH**	FULHAM BOROUGH COUNCIL. Maternity and Child Welfare Department. *(Assistant Medical Officer—Woman.)*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer.)*	KENT COUNTY COUNCIL. LENHAM SANATORIUM. *(Male Assistant Medical Officer.)*	
MARDY, GLAMORGAN. *(Workmen's Medical Scheme.)*	FARNBOROUGH INSTITUTION HOSPITAL. *(Resident Assistant Medical Officer.)*	
NEATH AND DISTRICT. *(Medical Aid Association.)*		

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. G. HUNTER (Medical Secretary, New South Wales Branch), 135, Macquarie St., Sydney, N.S.W.	QUEENSLAND *(Brisbane Associated Friendly Societies Institute.)*	The Hon. Sec., Queensland Branch British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	WELLINGTON, NEW ZEALAND *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec., New Zealand Branch) British Medical Association, P.O. Box 156, Wellington, New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec. Victorian Branch British Medical Association), Medical Society Hall, East Melbourne, Victoria.	*(Toowoomba Associated Friendly Societies Medical Institute, Toowoomba.)*		WESTERN AUSTRALIA. *(Contract and Lodge Practices.)*	Hon. Sec., Western Australian Branch, British Medical Association, No. 6 Bank of N.S.W. Chambers, St. George's Terr., Perth, Western Australia.

June 14th, 1933. By Order of the Council. G. C. ANDERSON, Medical Secretary.

NORTH ORMESBY HOSPITAL, MIDDLESBROUGH.

HOUSE PHYSICIAN required; male and unmarried. Salary £120 per annum with board, residence and laundry. There are three Resident and the successful candidate will be eligible for the post of House Surgeon in due course.

Applications stating age, qualifications, previous experience (if any), with copies of three recent testimonials, should be sent to the undersigned at once.

GEORGE WATTS,
June 6th, 1933. Secretary Supt.

JENNY LIND HOSPITAL FOR CHILDREN, NORWICH.

Applications are invited for the post of RESIDENT MEDICAL OFFICER. Salary £120 per annum with board, residence and laundry. Candidates (male or female) who must possess registered qualifications, should forward applications, stating age, nationality, etc., together with copies of testimonials, to the undersigned not later than first post on Tuesday, June 20th.

FRANK INCH,
June 9th, 1933. Secretary.

YORK COUNTY HOSPITAL. (200 Beds.)

The post of HOUSE PHYSICIAN will become vacant on July 1st. Salary £150 per annum with board, residence and laundry.

Application, stating age and previous experience, together with copies of not more than three recent testimonials, to be sent to the undersigned not later than 9 a.m. on Tuesday, June 20th.

H. E. RYAN, Gen. Supt.

MANSFIELD AND DISTRICT HOSPITAL.

The Board of Management of the above Hospital (135 beds) invite applications for the post of HOUSE SURGEON (male). Duties to commence July 1st next.

Salary at the rate of £150 per annum with residence, board, and laundry.

The appointment is for six months and is renewable.

The Resident Staff consists of a Resident Surgical Officer and two House Surgeons.

Applications accompanied by not more than three recent testimonials to be sent to the undersigned.

Dated this 31st day of May, 1933.

C. J. ADAMS, Secretary.

PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN, Shadwell, London, E.1.

HOUSE SURGEON required. Salary at the rate of £125 per annum, with board, residence and laundry. The appointment is for six months from July 1st. Applications, stating age, nationality, qualifications and experience, accompanied by copies of no more than three recent testimonials, should reach the undersigned not later than June 19th.

J. F. RUSSELL, Secretary.

CHESTER ROYAL INFIRMARY. (211 Beds.)

HOUSE SURGEON (male) required for July 15th. Salary £150 per annum with board, lodging and washing. Application list closes June 22nd. Application forms may be obtained from W. H. CAGE, M.D., M.R.C.P., Hon. Superintendent of the Resident Medical Staff.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond St., London, W.C.1.

Applications are invited from registered Medical Practitioners for the following non-resident appointments which become vacant on July 1st:

A CASUALTY MEDICAL OFFICER (male). Salary £250 p.a. (half-time).

TWO OUT-PATIENT MEDICAL REGISTRARS (male). Salary £250 p.a. (half-time).

THREE OUT-PATIENT ANAESTHETISTS. Honorarium £50 p.a. (part-time).

Also for an IN-PATIENT MEDICAL REGISTRAR (male). Salary £300 p.a. (whole-time).

Duties to commence on October 1st.

All the above appointments are tenable for twelve months but are renewable.

Candidates must be prepared to attend for interview at the Hospital on Wednesday, June 21st, at 4.45 p.m.

Applications supported by not more than three testimonials, given specially for the purpose, must be submitted to the undersigned not later than Saturday, June 17th, from whom further particulars and forms of application may be obtained.

H. F. PETHERBRIDGE, Secretary.

CHARING CROSS HOSPITAL.

Application are invited for the post of HONORARY CLINICAL ASSISTANT to the Dermatological Department.

Applications, together with copies of three recent testimonials, should be sent to the undersigned not later than July 1st.

PHILIP INMAN, House Governor.
Charing Cross Hospital, London, W.C.2.

(Appointments continued on p. 60.)

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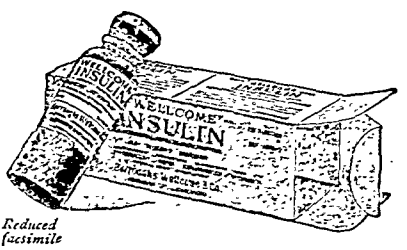

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Date: Present day

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WANTED FOR LARGE MIDDLE AND working-class Practice in Midlands, single male ASSISTANT, ex H S and H P preferred Can live with Junior Partner Salary £400 plus allowance if has car Usual bond State age, nationality and other essential particulars — Address No 3947, B M A House, Tavistock Square, W C 1

WANTED — RELIABLE INDOOR, MALE ASSISTANT for private and panel practice in London, near West End No branch surgery Usual bond Com salary £300 p a State age, date of qualification, exper, refs — No 3941, B M A House, Tavistock Sq, W C 1

WANTED IMMEDIATELY, MALE ASSISTANT, in panel Practice, London, E Salary £350—£400, with rooms and attendance — Address No 3914, B M A House, Tavistock Square W C 1

WANTED IMMEDIATELY, FOR WORKING class Practice, N London, young Scotch Indoor ASSISTANT Salary £300 per annum, rooms, light, and attendance — Address No 3920 B M A House Tavistock Square, W C 1

WANTED IMMEDIATELY — INDOOR AND Outdoor ASSISTANTS for Town and Country Practices with and without view Good salaries State full particulars —BRITISH MEDICAL BUREAU 33, Cross St Manchester, 2

WANTED — RADIOLOGICAL ASSISTANT SHIP with view, Partnership or Practice, by experienced D M R E (Camb) London or South preferred — Address No 3907, B M A House Tavistock Square W C 1

WANTED —ASSISTANTSHIP BY MARRIED man act. 27 M B, B Ch ex H S, energetic abstainer Own car Free now —Add, No 3939 B M A House Tavistock Sq W C 1

WANTED —OUTDOOR ASSISTANT £400 p a Married preferred — Address stating age and experience, No 3929, B M A House Tavistock Square, W C 1

ASSISTANTSHIP OR LOCUM DUTY REquired by woman doctor, ex H S, ex R M O experienced general practice, age 29 If assistantship, preferably University town with opport for attend Post graduate lectures — No 3901 B M A House, Tavistock Sq, W C 1

ASSISTANTSHIP WITH VIEW, OR PARTnership urgently required by M B, Ch B, B Sc Edin Univ, Scot Christian act 30 married 7 years experience Hosp and General Practice Industrial or middle class Practice preferred Well received Free now Go anywhere Limited capital available — Address No 3945 B M A House Tavistock Sq, W C 1

ASSISTANT, WITH VIEW WANTED IN large private and panel Practice in South Wales seaport town Should have done House jobs or had special experience —Address No 3917 B M A House Tavistock Square W C 1

CAMBRIDGE GRADUATE M R C P (Lond) aged 41, single resigned two Hon Staff appointments during period of ill health (peptic ulcer) with experience of best class general practice desires ASSISTANTSHIP, with view to Partnership in good class Practice, preferably non panel London South, or West Country Highest social and professional refs — No 3931 B M A House Tavistock Sq W C 1

M B B S DESIRES ASSISTANTSHIP Hospital and G P experience, and references Prepared to stay in congenial Practice Motorist abstainer young energetic —Address, No 3922 B M A House Tavistock Sq W C 1

OPHTHALMIC ASSISTANTSHIP WANTED in the South by M B B S D O D O M S, act 28 To commence in the Autumn — Address, No 3302 B M A House, Tavistock Square W C 1

LOCUMS

WANTED — LOCUMS OR TEMPORARY ASSISTANTSHIP by Woman Doctor 6 years experience private and panel practice Dispensing Can drive car Free now — Address No 3942 B M A House Tavistock Square W C 1

WANTED—LOCUM TENENCY BY EXPERIenced Doctor who has recently got rid of his practice Own car if desired Fishing (espec trout) most acceptable Graduate of Oxford University —Address No 3938 B M A House Tavistock Square W C 1

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WANTED BY OXFORD GRADUATE, single, age 33, 3 years experience, LOCUM TENENCY in or near Bournemouth Free July and August — Address, No 3928, B M A House Tavistock Square W C 1

WANTED —LOCUM TENENS, AUGUST 8th— 31st, for Practice in South Bucks Seven guineas per week —Address, No 3930, B M A House Tavistock Square W C 1

DOCTOR, SOUTH COUNTY, OFFERS HOSPItality to Doctor and wife or small fee, Doctor alone, for two weeks LOCUM now Beautiful country Work light —Address No 3919 B M A House Tavistock Square W C 1

DOCTOR WISHES TO DO LOCUM WORK Large experience in general practice Own car available — Address, No 3950, B M A House Tavistock Square W C 1

HIGHLY SUCCESSFUL GENERAL PRACTItioner just retired 29 years country town desires work as LOCUM Periodically held several appointments, married Own car Exceptional references — Address No 3940, B M A House, Tavistock Square W C 1

HOSPITALITY LOCUM WANTED IN CORNwall for September (during partner's holiday) Very light work Beautiful neighbourhood Full particulars on application — Address, No 3925, B M A House, Tavistock Square W C 1

LOCUM WANTED BY M B, Ch B (1923), Scot, single, aged 36 years Total abstainer motorist. Experienced in all types of general practice Excellent testimonials Now free, in London — Address No 3936 B M A House Tavistock Square W C 1

LOCUMS —WOMAN DOCTOR EXPERIENCED Midwifery, Public Health, Antenatal, and Infant Welfare Clinics, Anæsthetics Some G P Free from July — Address No 3934 B M A House Tavistock Square W C 1

LOCUMS OR ASSISTANTSHIP WANTED BY Conj man act 31, active, reliable well received, 5 years exp G P Free July 15th— end September Terms 7 guineas —Address, No 3937 B M A House Tavistock Sq W C 1

LOCUM WANTED FOR AUGUST PLEASANT Yorkshire City Prospect of Assistantship with view Edin graduate preferred Own car an advantage —Address No 3924, B M A House, Tavistock Square W C 1

RETIRED PRACTITIONER IS FREE FOR LOCUM or PART TIME WORK in July References —Address No 3926, B M A House, Tavistock Square, W C 1

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(240 Beds)

Applications are invited for the post of HOUSE PHYSICIAN
Salary £120 with board, residence, and laundry
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Duties to commence July 1st
Applicants must be registered under the Medical Acts.
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ARTHUR R CASH
Gen Supt & Secretary

THE WILLESDEN GENERAL HOSPITAL, N W 10

OUT PATIENT DEPARTMENT
CLINICAL ASSISTANTS

Applications are invited for appointment to the following sessions
SURGICAL—Monday afternoons
MEDICAL—Tuesday afternoons
MEDICAL—Friday mornings.
SKIN—Saturday mornings.
DENTAL—
Applications must be received not later than first post on Monday June 26th and should be addressed to the Secretary of the Hospital from whom further details of the appointments may be obtained
June 12th 1933

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY

HOUSE SURGEON wanted Ophthalmic experience preferred Duties to commence in July There are 50 beds for In patients and large Out patient Department Salary £150 a year with furnished apartments board and laundry Ladies and gentlemen applying should state age and experience and send copies of three recent testimonials to reach the Secretary not later than July 3rd

EUSTACE LEES
June 13th 1933 Secretary

ROYAL INFIRMARY BLACKBURN
(240 Beds—Five Residents)

FOURTH HOUSE SURGEON (male) required at a salary of £150 per annum rising to £250 with board residence laundry, etc To commence duties at end of June
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Royal Infirmary, Blackburn NATHAN A SMITH
Gen Supt & Secretary

This Institution is recognised for the Surgical Practice required for the F R C S final examination

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BOOTHAM PARK MENTAL HOSPITAL, YORK

Wanted ASSISTANT MEDICAL OFFICER male single fully qualified and registered Previous Mental Hospital experience not essential Salary at the rate of £300 per annum with board accommodation attendance and laundry
Apply with copies of testimonials to the Medical Superintendent Bootham Park York

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ECCLES AND PATRICROFT HOSPITAL near MANCHESTER

HOUSE SURGEON required, July 15th Good general surgical work Commencing salary at rate of £150 p a plus usual Six months appointment Apply with copies of testimonials to the Secretary at the Hospital

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WEST END HOSPITAL FOR NERVOUS DISEASES
In Patient Department Gloucester Gate, Regent's Park
Out Patient Department 73 Welbeck St, W 1

The Committee of Management invites applications for the post of HON ASSISTANT OPHTHALMIC SURGEON Candidates who must be Fellows of the Royal College of Surgeons Eng are requested to send eleven copies of their application, with recent testimonials not later than Monday June 19th, to the undersigned from whom further particulars should be obtained

J P WETENHALL,
Welbeck Street W 1 Secretary

CENTRAL LONDON OPHTHALMIC HOSPITAL, Judd Street St Pancras W C 1

Applications are invited for the posts of SENIOR and JUNIOR HOUSE SURGEON Candidates must be registered Medical Practitioners Salary £120 and £100 per annum respectively with board and residence in the Hospital The appointments are for six months from July 15th. The Junior House Surgeon is a candidate for the Senior post
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GEORGE WATTS Secretary

TORBAY HOSPITAL TORQUAY
(146 Beds)

A HOUSE PHYSICIAN (male) is required for July 14th Salary £175 per annum, with board residence, and laundry allowance Candidates must be fully qualified, registered and unmarried
Applications stating age nationality qualifications and experience to be sent to the undersigned as early as possible with copies of not more than three recent testimonials.

E L GRIST
June 12th 1933 Secretary

THE CHILDREN'S HOSPITAL SHEFFIELD
(110 Beds—Three Residents)

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The appointments are for six months with salary in each case at the rate of £100 per annum with board residence and laundry
Candidates (male) must possess registered qualifications
to be forwarded etc, together with copies of three recent testimonials to the undersigned

T H G GARTLAND Secretary

SANATORIUM, BRIDGE OF WEIR

COLONY FOR EPILEPTICS, BRIDGE OF WEIR

ASSISTANT MALE RESIDENT MEDICAL OFFICER wanted to commence duties in August
Keen evangelical and keen research worker preferred Appointment for six months in first instance at rate of £200 p a (renewable by mutual agreement) with board and laundry
Applications to Medical Superintendent stating age experience and qualifications and enclosing references

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MERTHYR GENERAL HOSPITAL

Applications are invited for the post of RESIDENT SURGEON for the coming six months. Salary £150 per annum plus board lodging and laundry
Applications with three recent testimonials must be in the hands of the Secretary on or before June 24th

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CITY OF LIVERPOOL

MEDICAL SUPERINTENDENT
MILL ROAD INFIRMARY

Applications are invited from fully qualified Medical Practitioners with the necessary knowledge and experience of hospital administration for the appointment of full time Medical Superintendent at the above Infirmary at a salary of £1 000 per annum (subject to a temporary deduction authorised by the Council) together with an allowance of £150 per annum in lieu of residence For the time being the appointment will be non resident but the Council reserve the right to call upon the Medical Superintendent to reside in the Infirmary when suitable accommodation is available Any fees received in connection with the appointment to be handed over to the City Treasurer in accordance with the Standing Orders of the Council
The gentleman appointed will assume control of the Infirmary under the direction of the Medical Officer of Health and be responsible for the work of the Medical Surgical Nursing and Administrative Staffs in accordance with the instructions of the Council from time to time Special experience in surgery is essential
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The Infirmary is a Training School recognized by the General Nursing Council and the Central Midwives Board and the Medical Superintendent will be required to organise the necessary lectures in connection with the training of Nurses.
The appointment will be made subject to the Local Government and Other Officers' Superannuation Act 1922 and the Standing Orders of the City Council and will be determinable by three calendar months notice on either side
Applications to be made upon forms to be obtained from the Medical Officer of Health Municipal Annexe, Dale Street Liverpool to be endorsed Medical Superintendent Mill Road Infirmary' and returned to the undersigned so as to be received not later than first post Tuesday, July 4th Canvassing of members of the City Council either directly or indirectly, will be considered a disqualification

Municipal Buildings, Liverpool WALTER MOON
Town Clerk
June 1933

HILL END MENTAL HOSPITAL ST ALBANS HERTS

ASSISTANT MEDICAL OFFICER (THIRD) required early in July Male single age not over 30 years Previous Mental Hospital experience not essential Salary £400, rising to £450 per annum with furnished quarters board attendance and washing in addition £50 per annum will be paid upon obtaining the D P M The appointment is subject to the provisions of the Asylums Officers Superannuation Act 1909 At present a temporary economy deduction of 5 per cent on the salary is in force Application stating age qualifications and experience with copies of three recent testimonials to the Medical Superintendent

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JOHN H YOUNG
Secretary Superintendent

Observations
ON
DRY BRONCHIECTASIS

BY

CECIL WALL, D.M., F.R.C.P.

PHYSICIAN TO THE LONDON HOSPITAL AND BROMPTON HOSPITAL FOR DISEASES OF THE CHEST

AND

J. CLIFFORD HOYLE, M.D., M.R.C.P.

MEDICAL FIRST ASSISTANT, LONDON HOSPITAL; GILLSON SCHOLAR OF THE SOCIETY OF APOTHECARIES

(With Special Plate)

Accounts of bronchiectasis which have appeared hitherto have connoted almost invariably the accumulation and decomposition of secretions in the bronchi. Until Sicard and Forestier[1] began to investigate the condition of the bronchial tree by radiography after the introduction of lipiodol there was no certain method by which bronchiectasis could be recognized during life if the characteristic sputa were not present. It is now possible to prove that bronchi may be dilated even when there is not any expectoration. The purpose of this paper is to describe a series of cases in which bronchiectasis of this "dry" or "silent" type was demonstrated, and to discuss the symptoms and signs with which it may be associated, together with problems which arise with regard to aetiology, prognosis, and treatment.

The first account of dry bronchiectasis was given by Bezançon, Weil, Azoulay, and Bernard in 1924.[2] In a paper entitled *Sèche hémoptoïque de la dilatation des bronchis*, they described two patients in whom recurrent haemoptysis was found by lipiodol radiography to be associated with bronchial dilatation. Neither patient had any sputum or other symptoms apart from haemoptysis. A few other examples of the condition have been described by various writers,[3 4 5 6 7 8 9 10] and Pinchin and Morlock[11] have recorded nine cases in all of which, with one exception, there was recurrent haemoptysis. In his recent paper on bronchiectasis Moll[12] also mentions two dry cases, but gives no details.

The important features of all the cases of which we have found records are given in Appendix I, and they will be mentioned later in the discussion. Nevertheless, it appears that dry bronchiectasis has not been generally recognized, because several recent reviews give it no special mention.[13 14 15 16 17 18 19 20] We believe, however, that it is comparatively common.

ANALYSIS OF CASES

The present series consists of twenty patients who have come under our personal observation in the last two years. A short account of each patient is given in Appendix II. Reproductions of some typical lipiodol radiograms are given on the special plate. Of the twenty patients, seven were males and thirteen females. Their ages ranged from 5 to 64 years, and nine were under and eleven over 15 years.

Previous Medical History.—There was a history of measles in childhood in eight, of whooping-cough in eleven, and of bronchitis or bronchopneumonia in thirteen of the twenty patients. In only three did we fail to obtain a history of at least one of these conditions, and together they form by far the most striking feature of the previous history. Recurrent attacks of bronchitis or bronchopneumonia had occurred in no fewer than ten of the twenty patients. A few patients in the series, however, had suffered from other illnesses, which may have contributed to the production of the bronchiectasis. Thus, four gave a history of influenza, two of lobar pneumonia, three of diphtheria (tracheotomy in one), one of chronic otorrhoea, one of chronic tonsillitis and adenoids, one of double mastoiditis, three of scarlet fever, two of chicken-pox, one of rheumatic fever, and one had been gassed by chlorine during the late war. When there was a previous history of otorrhoea, diphtheria, scarlet fever, or rheumatic fever—except for one instance in each case—there was also a history of either measles, whooping-cough, influenza, or pneumonia. The length of time which elapsed between these various illnesses and the onset of bronchiectasis could not be determined; but in two patients the interval before it was recognized seemed to be only a few months, and in one patient as long as fifty years.

Symptoms.—The symptoms recorded in the few cases of dry bronchiectasis hitherto published have been few, and of these haemoptysis has been the most common, having been noted in nineteen out of thirty patients (see Table). In many of the patients the bronchiectasis was discovered only when investigation for the cause of an unexplained haemoptysis was undertaken. In our series haemorrhage was not the most prominent symptom, and had occurred only in five out of twenty patients. Cough was the commonest symptom, and was present in all but three of our patients. In nine it was slight, in eight definite. Sputum was absent in nine, scanty and occasional in six, up to approximately half a drachm daily in one, and to about two or three drachms daily in four cases. In all those patients where sputum could be obtained for examination tubercle bacilli were not found. The characteristic cumulative fetid expectoration of infected bronchiectasis had not been present at any time in any patient. Of other local symptoms, pain in the chest was noted in eight and dyspnoea in nine cases. Constitutional symptoms were generally mild; they were completely absent in nine patients; in the other eleven loss of weight, or failure to gain weight normally, occurred in nine, night sweats in five, and weakness in two.

Physical Signs.—Abnormal physical signs in the chest were present in all but two patients. One of these had some degree of clubbing of the finger-tips, but this was absent in the other. Clubbing of the fingers was present in four only out of the twenty patients. In all four cough with sputum was present; in three this was scanty, in one up to two drachms daily. Evidence of some degree of constitutional disturbance was shown by a history of loss of weight in three out of the four. Dullness on percussion with weak breath sounds and crepitations were the usual abnormal signs on physical examination of the chest. Dullness was present in seventeen, and varied considerably in degree from a slight impairment to complete loss of normal resonance. Weak breath sounds were noted in thirteen patients and crepitations in thirteen. Bronchial breathing was present in four, granular breathing in one, and pleural friction in one. Definite signs of a cavity were found in one patient only. In all patients where abnormal signs were present they were basal in distribution, and, with three exceptions, corresponded with the situation of the bronchial dilatation. These exceptions occurred in one patient who presented bilateral signs, although bronchiectasis was found to be present on one side only, and in two others in whom unilateral signs accompanied bilateral bronchiectasis.

Radiographic Findings.—Radiographs were taken in every patient both before and after introduction of lipiodol into the bronchi. In nineteen the bronchiectasis present was considerable; in the remaining patient, a child of 6 years, there was probably some bronchial dilatation at both bases. The left base was affected in nine patients,

the right in five, and both bases in six. In fourteen the bronchial dilatation was cylindrical or fusiform, in six it was saccular.

DISCUSSION

The fact that we have been able to collect twenty cases of dry bronchiectasis in about two years strongly suggests that the condition is fairly common. The few references in the literature give an erroneous idea of its frequency. Most of the cases described by previous writers have been investigated because of haemoptysis, and this has come to be regarded as the commonest symptom of the condition. In our series haemoptysis had been infrequent, and this suggests that when investigation is made because of symptoms other than haemoptysis, dry bronchiectasis will be found in many patients in whom it would not have been recognized otherwise. It is not improbable that it may prove to be commoner than the fetid type of the disease.

The important features of the cases previously recorded (Appendix I) and of our own series (Appendix II) are given in the accompanying table. This includes in all fifty patients from which to construct a clinical picture of the disease.

Main Features of Cases	30 Cases Recorded in Literature	20 Cases Recorded in Present Paper	Total 50 Cases
Males	14	7	21
Females	16	13	29
Age	8 to 60 years	5 to 61 years	5 to 64 years
Previous medical history:			
Bronchitis or bronchopneumonia	17	13	30
Measles	5	8	13
Whooping-cough	6	11	17
Influenza	7	4	11
Lobar pneumonia	3	2	5
Symptoms:			
Cough	16	17	33
Sputum	10	11	21
Haemoptysis	19	5	24
Pain	1	8	9
Dyspnœa	2	9	11
Constitutional symptoms	5	11	16
Physical signs:			
Clubbing	0	4	4
Dullness	18	17	35
Weak breath sounds	6	13	19
Bronchial breath sounds	8	4	12
Pleural friction	2	1	3
Crepitations	14	13	27
Signs of cavity	5	1	6
Radiograph:			
Bronchiectasis: Right	13 (12 basal)	5 (all basal)	18
Bronchiectasis: Left	11 (all „)	9 („)	20
Bronchiectasis: Both	5 (all „)	6 („)	11
	(1 not stated)		(1 not stated)
Ditto: Cylindrical or fusiform	8	14	22
Ditto: Saccular or ampullary	22	6	28

Both sexes are equally affected and the condition may be met with at any age, though it is most commonly recognized during late childhood. Bronchopneumonia is the most important antecedent, and very often has been recurrent. In the majority of patients it has followed either measles, whooping-cough, or influenza during childhood. Other acute infections in the nose, throat, bronchi, or lungs are recorded less often in the previous history. Whatever the antecedent illness, the patient is generally left with some residual local symptom such as a dry cough, less commonly recurrent haemoptysis, and occasionally pain in the chest. This insidious onset is followed by an equally insidious course that may for long periods be almost free from any symptoms, or be disturbed from time to time by recurrent acute bronchitis or bronchopneumonia. Apart from these acute infections, there is cough is frequent, sputum is scanty or entirely absent. If present it is not fetid. Haemoptysis, should it occur, is not uncommonly copious and repeated. Constitutional disturbance is almost always slight, and clubbing of the finger-tips is found only occasionally. The physical signs in the chest are generally those of some increase in density, with slight contraction of the underlying lung tissue, but abnormal signs may be entirely absent. Evidence of gross fibrosis or cavity formation is exceptional. Radiographic examination is essential for diagnosis, and requires previous introduction of lipiodol into the bronchial tree in order to demonstrate satisfactorily the bronchial dilatation. Three problems arise for consideration—its origin, prognosis, and treatment.

Aetiology

In none of the patients recorded in the present paper has the bronchiectasis been of the congenital type recently described from the radiological aspect by Möller,[21] Gibson,[22] and Dethmers,[23] or of the so-called atelectatic type described by Sparks[24] and others. Apart from these two causes, bronchiectasis has been ascribed in the past to one or other of three factors—raised intrabronchial pressure during forced expiratory efforts, inflammatory changes weakening the bronchial wall, or to fibrous traction. It is not necessary to review here the evidence for and against each of these views, except in so far as it applies to the dry variety of the disease. Here the comparative slightness of the cough and absence of much expiratory effort strongly suggest that intermittent increase in the intrabronchial pressure is not concerned in producing bronchial dilatation during the chronic stage of the disease. Moreover, even though forced expiratory efforts certainly occurred during the antecedent acute pulmonary infections, it is doubtful whether these played any part in producing the dilatation, because, as pointed out by Hedblom,[19] in forced expiration, as in coughing, the force which raises the intrabronchial pressure is applied to the outside of the bronchi.

Again, in these patients there is no evidence of chronic bronchitis, and usually little evidence of pulmonary fibrosis. Moll[12] in his recent paper held that bronchial dilatation is mainly due to inflammatory processes weakening the bronchial wall. This explanation was confined to "wet" cases, and he pointed out that stasis of secretions would not account for "dry" bronchiectasis where this factor is absent. Chronic bronchial infection can therefore be excluded as a constant aetiological factor. The third suggested explanation—fibrous traction upon the bronchi—may sometimes be concerned where evidence of contraction of lung tissue is found; but often this is absent, and radiography does not consistently reveal either an increased density in the affected region or displacement of the mediastinal contents or diaphragm. It seems, therefore, that fibrous traction must be excluded as a common cause of the bronchial dilatation.

The evidence suggests that some other explanation must be found for the production of the dry variety of the disease. We believe that the bronchial dilatation is due to the action of inspiratory efforts. The act of inspiration increases the capacity of the thorax. In health the lung expands to prevent a vacuum, the air entering the alveoli freely. If, however, the air cannot enter the alveoli as the thorax enlarges, one of four things must happen if the visceral pleura remains intact: either the bronchi must dilate, the mediastinum must be drawn over to the affected side, the diaphragm on that side must rise, or a vacuum be produced in the pleural space. The mechanical difficulty is often overcome by a diminished expansion of the chest such as is met with in pneumonia. Forced inspiratory movements commonly occur when

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excessive secretion blocks the finer bronchioles in acute bronchiolitis or bronchopneumonia, and in this event the whole force of costal inspiration would be exerted to produce bronchial dilatation unless the mediastinum were drawn over to the affected side or the diaphragm became elevated during each inspiration. Previous fixation of the mediastinum would thus increase the mechanical difficulty and bronchial dilatation be likely to occur. Again, if interference with alveolar expansion was bilateral rather than confined to one side only, compensatory movement of the mediastinum would be much less, because inspiratory traction on the mediastinum would be bilateral. The probability of the bronchi undergoing dilatation in order to prevent a threatened vacuum in the pleura would then be greater and a more or less acute bronchiectasis might develop rapidly. This is very commonly seen at necropsy in such patients. When attacks of bronchiolitis or bronchopneumonia occur frequently the larger bronchi would undergo this tendency to dilatation on each occasion. The likelihood of complete return to the normal size in the quiescent intervals would become less likely with each succeeding attack because of the abnormal stretching of the musculature and elastic tissue.

Prognosis and Treatment

Two main factors have to be considered in the prognosis and treatment—the risk of sepsis ensuing and "wet" bronchiectasis developing, and also the risk of serious haemoptysis. Present knowledge does not allow of a final expression of opinion upon either of these risks. One patient recorded by Bezançon, Weil, Azoulay, and Bernard[2] developed copious fetid expectoration following bronchopneumonia while under observation (Case 2, Appendix I), and one of Reinberg's[4] patients had copious foul sputum when seen three and a half years later (Case 7, Appendix I). None of the other cases described in the literature and none in our own series have shown this feature. Of the cases recorded by others, one of Bezançon, Weil, Azoulay, and Bernard's patients had a probable duration of eighteen years dating from whooping-cough in infancy (Case 1, Appendix I); one of Reinberg's patients had a probable duration of fifteen years (Case 4, Appendix I); another eighteen years (Case 5, Appendix I); another twenty years (Case 6, Appendix I); another probably over twenty years (Case 8, Appendix I); and another five years (Case 9, Appendix I); one of the cases recorded by Pinchin and Morlock[11] had a probable duration of twelve years (Case 14, Appendix I), and another thirteen years (Case 19, Appendix I); one of Ihre's[10] patients had a probable duration of approximately forty years (Case 23, Appendix I), and another at least eleven years (Case 25, Appendix I).

Of our patients one (Case 7, Appendix II) had a probable duration of forty-seven years, another (Case 14, Appendix II) approximately thirty years, another (Case 19, Appendix II) twenty to twenty-five years, another (Case 13, Appendix II) fifteen years, another (Case 10, Appendix II) twelve years, two others (Cases 2 and 17, Appendix II) eleven years, and another (Case 3, Appendix II) five years. It is true that in our cases the period of observation has been at most two years, yet in none of these eighteen patients had sepsis supervened, though in every case there is reasonable ground for supposing that bronchiectasis had been present for many years. These records suggest that the risk of sepsis is not very great. Conceivably the typical septic type of the disease may follow a dry bronchiectasis or be septic from the start. If the former sequence be common, then the risk of sepsis in the dry form must be weighed carefully. But if it be uncommon, then the prognosis and management of the two types of the disease must be different. If the risk of sepsis is slight, conservative medical treatment is justifiable, but if the risk is considerable then phrenic evulsion or lobectomy should be considered as soon as the condition is recognized, seeing that surgical treatment used prophylactically in the absence of sepsis has far greater opportunity of effecting radical cure than if the decision is postponed until sepsis has supervened.

The risk of haemoptysis would appear to be greater than the risk of sepsis, though it is hardly so frequent as previous writers have held. When it occurs it is usually recurrent, and may be serious enough to endanger life. Both these considerations point to the advisability of surgical procedures if haemoptysis supervenes. Artificial pneumothorax may serve as a temporary measure, but the practical difficulty of maintaining refills makes it unsuitable as a permanent treatment. Moreover, pleural adhesions may entirely prevent the establishment of a satisfactory pulmonary collapse. Hence, although lobectomy does not seem to have been undertaken in the recorded cases, we believe that it should be advised in unilateral affections. The immediate mortality of the operation in skilled hands has become low when sepsis is absent, and the patient is freed permanently from the risk of future danger.

One point in favour of conservative treatment when symptoms are slight is certain evidence which goes to show that a "dry" bronchiectasis may sometimes disappear with spontaneous return of the tubes towards their normal size. Ochsner and Nesbit[6] noticed a considerable improvement in the degree of bronchial dilatation in one of their cases (Case 2, Appendix I)) when a further lipiodol radiograph was taken after two months' interval. Similar improvement was found in two of our patients. In Case 5 (Appendix II) slight dilatation of the basal tubes, though definite at the first examination, was not seen two years later, and in Case 12 (Appendix II) a fairly well marked degree of cylindrical dilatation at both bases had practically disappeared in eight months. The explanation which we have given to account for the condition would suggest that this sequence of events might not be uncommon, especially in patients seen shortly after an attack of bronchitis or bronchopneumonia. How often improvement of this kind occurs, how complete it may be, and how great a degree of bronchial dilatation may eventually disappear are problems which invite further investigation.

SUMMARY AND CONCLUSIONS

1. Twenty cases of dry bronchiectasis are described, and the opinion is expressed that the condition is comparatively common.

2. Bronchopneumonia, usually following measles, whooping-cough, or influenza, during childhood or adolescence, is the commonest antecedent condition.

3. Dry cough is the commonest symptom. Haemoptysis is not so frequent as the cases previously recorded would suggest.

4. The condition is usually basal, and abnormal physical signs—dullness, weak breath sounds, and crepitations—often serve to indicate the affected area, though they may be entirely absent. Frank signs of cavitation are exceptional.

5. Lipiodol radiography is the only certain means of diagnosis.

6. The explanation of dry bronchiectasis seems to be that if, for any reason, air does not enter the alveoli during inspiration the force of the inspiratory effort is transmitted to the bronchi to which the air has access.

7. Treatment is governed by two main factors, the risk of sepsis and of haemoptysis. Further information is needed, but the suggestion is made that lobectomy should be considered in each case.

This investigation was made while one of us (J. C. H.) worked as medical first assistant to the London Hospital and as Gillson scholar to the Society of Apothecaries.

We are much indebted to Dr. S. Melville, Dr. Vilvandré, and Dr. Jupe for the radiographs illustrating our cases.

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APPENDIX I*

The following cases of dry bronchiectasis are recorded in the literature.

Case 1.[2]—Male, aged 23. Whooping-cough at 5. Adenoids. Recurrent haemoptysis for four years. *Signs:* Dullness and rales right chest posteriorly. *Radiograph:* Right ampullary bronchiectasis. This patient also had aortic incompetence and (?) congenital syphilis.

Case 2.[2]—Female, aged 38. Bronchitis at 9–10. Pleurisy at 29. Recurrent haemoptysis for eight years. Weakness. *Signs:* Fibrosis with excavation left lung. *Radiograph:* Left bronchiectasis (fourteen cavities). Also congenital syphilis. *Result:* Developed influenzal bronchopneumonia in hospital. Subsequent course of infected bronchiectasis.

Case 3.[3]—Male, aged 23. No pulmonary disease. Blow on right chest followed by haemoptysis next day. Recurrent severe haemoptysis. *Signs:* Rales right base. Bronchial breathing and crepitations left apex. *Radiograph:* Ampullary bronchiectasis, right base posteriorly. Also chronic pulmonary tuberculosis, quiescent left Zone I. Right artificial pneumothorax arrested haemoptysis.

Case 4.[4]—Male, aged 60. Bronchopneumonia at 45. Morning cough and sputum from 45 to 47. *Nil* since, except recent dysphagia. *Signs:* Slight emphysema. *Radiograph:* Right and left multiple saccular bronchiectases.

Case 5.[4]—Male, aged 39. Left pneumonia at 21. Repeated haemoptyses. *Signs:* Fibrosis and excavation left lung. *Radiograph:* Cylindrical bronchiectasis left main bronchus and saccular dilatation of branches.

Case 6.[4]—Male, aged 28. Pneumonia at 8. Recurrent haemoptysis from 8 to 13, and again from 23 on. *Signs:* Poor movements and crepitations right base. *Radiograph:* Multiple saccular bronchiectases right lower lobe.

Case 7.[4]—Female, aged 36. Pneumonia at 28. Periodic cough, fever, rigors, and pain left chest for few months after 28. Recurrent haemoptysis since one year after pneumonia. Febrile symptoms. *Signs:* Dullness and crepitations left base; crepitations right base. *Radiograph:* Cylindrical and varicose bronchiectasis left lower lobe. Cylindrical dilatation right main bronchi. *Result:* Seen three and a half years later—copious foul sputum. Left bronchiectasis worse.

Case 8.[4]—Female, aged 30. No previous illnesses recorded. Dry cough and occasional recurrent slight haemoptysis since childhood. *Signs:* Dullness and rales both bases. Right pleural friction. *Radiograph:* Right and left basal saccular bronchiectasis.

Case 9.[4]—Female, aged 28. Influenzal pneumonia and right empyema at 23. Recurrent haemoptysis for five years. Loss of weight. *Signs:* Dullness, weak breath sounds, and rales right base. *Radiograph:* Bronchiectatic cavity right lower lobe.

Case 10.[6]—Female, aged 25. Recent bronchitis. Cough following bronchitis. *Signs:* None given. *Radiograph.* Saccular bronchiectasis left and right lower lobes.

Case 11.[6]—Female, aged 16. Chronic bronchitis for years. *Signs:* None given. *Radiograph:* Fusiform and saccular bronchiectasis right lower lobe. Lipiodol repeated in two months; dilatation much less.

Case 12.[6]—Male, aged 49. Influenza six months previously, followed by pneumonia and left empyema. Cough and slight muco-purulent sputum for six months. *Signs:* None given. *Radiograph:* Left saccular bronchiectasis.

Case 13.[7]—Male, aged 23. No previous illnesses. Large haemoptysis. *Signs:* Few moist sounds at right base. *Radiograph:* Right basal bronchiectasis.

Case 14.[11]—Female, aged 20. Pneumonia at 8. Cough, slight sputum. *Signs:* Dullness and weak breath sounds left base. *Radiograph:* Cylindrical and saccular bronchiectasis left base.

Case 15.[11]—Female, aged 28. Influenza at 20. Haemoptysis at 26, repeated since. *Signs:* None. *Radiograph:* Glove-finger bronchiectasis (? site).

Case 16.[11]—Female, aged 14. Pneumonia at 12. Cough, slight sputum. Haemoptysis at 13½. *Signs:* Dullness, weak breath sounds right base. *Radiograph:* Well-marked bronchiectasis of right base.

Case 17.[11]—Male, aged 51. Empyema at 45. Slight cough and repeated haemoptysis for two months. *Signs:* Emphysema. Bronchial breathing right base. *Radiograph:* Saccular bronchiectasis right base.

Case 18.[11]—Male, aged 50. Subphrenic abscess and empyema at 30. Haemoptysis at 48 and 49½. *Signs:* Crepitations. *Radiograph:* Cavity seen through heart shadow.

Case 19.[11]—Female, aged 17. Whooping-cough at 4. Bronchitis since. Recurrent haemoptysis for four years. *Signs:* Dullness and crepitations at left base. *Radiograph:* Left basal bronchiectasis.

Case 20.[11]—Female, aged 31. Pneumonia at 17, with empyema. Haemoptysis at 30. Slight sputum since. *Signs:* Fibrosis left base. *Radiograph:* Cylindrical bronchiectasis left base.

Case 21.[11]—Female, aged 40. Haemoptysis, occasional sputum. *Signs:* Bronchitis. *Radiograph:* Bronchiectasis left base.

Case 22.[11]—Female, aged 28. Influenza at 27. Recurrent haemoptysis and slight sputum for three months. *Signs:* Dullness and weak breath sounds right upper lobe. *Radiograph:* Dilated bronchi right upper lobe.

Case 23.[10]—Female, aged 53. Whooping-cough and measles as a child. (?) Pulmonary tuberculosis at 27 and 30, right Zones I, II, and III. Periodic slight cough for a few years. *Signs:* Fibrosis and excavation right lung. *Radiograph:* Multiple "cystic" bronchiectasis right lung. Also high blood pressure. Probably atelectatic bronchiectasis (? congenital.)

Case 24.[10]—Female, ? age. Pneumonia at 3 months (? left), and on seven subsequent occasions. Whooping-cough and measles, with pneumonia. Influenza. Slight cough and sputum. *Signs:* Dullness and cavity signs, with rales at left base. *Radiograph:* Saccular bronchiectasis left base.

Case 25.[10]—Male, aged 56. (?) pneumonia at 27 and at 43, following influenza; chronic bronchitis, with two acute relapses at 44 and 45. Tuberculous epididymis at 54. Cough with paroxysmal dyspnoea and sputum for four years. *Signs:* Excavations right Zone II. *Radiograph:* Saccular bronchiectasis right lung.

Case 26.[9]—Male, aged 8 years 7 months. Whooping-cough and bronchopneumonia at 5. Bronchopneumonia at 6. Measles and bronchopneumonia at 7. Dry cough since whooping-cough, and small haemoptysis six months ago. *Signs:* Dullness, weak breath sounds, and few crepitations right axilla. Bronchial breathing right interscapular region. *Radiograph:* Right basal bronchiectasis.

Case 27.[9]—Male, aged 9. Bronchitis and influenza at 2. Relapse in three months and recurrent attacks of bronchitis since. Cough following bronchitis. *Signs:* Dullness, bronchial breathing, crepitations, and pleural rub left base. Pleural rub and rough breath sounds right base. *Radiograph:* Saccular and ampullary bronchiectasis left base.

Case 28.[9]—Male, aged 10. Bronchitis at 11 months. Whooping-cough at 3, and bronchopneumonia. Measles at 4. Recurrent bronchitis—serious attack at 9. Bronchitis with haemoptysis at 9. *Signs:* Dullness, weak breath sounds anteriorly, and bronchial breathing posteriorly over right chest. *Radiograph:* Right basal saccular bronchiectasis.

Case 29.[9]—Male, aged 8. Bronchopneumonia at 14 months. Frequent bronchitis since. Bronchopneumonia again at 3. Occasional cough for one year. Under weight. *Signs:* Dullness, bronchial breathing, and rales left chest. *Radiograph:* Left basal saccular bronchiectasis.

Case 30.[9]—Female, aged 11. Measles and bronchopneumonia at 2. Frequent bronchitis. Mastoid at 10 years 9 months. Persistent dry cough. Under weight. *Signs:* Bronchial breathing and rales left chest. *Radiograph:* Right ampullary bronchiectasis, basal. Left cylindrical dilatation of main bronchi to lower lobe.

* Additional cases to those reported here are recorded in two papers[5] [8] to which we have not had access.

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APPENDIX II *

The following are the brief records of our own cases.

Case 1.—Male, aged 6. Admitted for acute bronchitis. (L. H., 31683/1931.) Measles and bronchopneumonia at 18 months. Whooping-cough and pneumonia at 3. Bronchitis each winter since. Dry cough since measles. *Signs:* Dullness, bronchial breath sounds, and rales at both bases. *Radiograph:* Bilateral cylindrical basal bronchiectasis. *Result:* Bronchitis subsided rapidly. Discharged to convalescent home with persistent slight dry cough, the physical signs remaining unchanged.

Case 2.—Female, aged 15. A factory worker. (Br. H., 5710.) Measles in infancy, bronchitis and whooping-cough at 4 years. Recurrent bronchitis since. Cough, scanty sputum, and loss of weight for two weeks two months prior to observation. *Signs:* Dullness and crepitations at left base. *Radiograph:* Saccular bronchiectasis at left base.

Case 3.—Female, aged 24. (Br. H., 4852.) Perfume finisher. Pneumonia at 3. Further attack after influenza at 19. Came under observation for a slight haemoptysis of about half an ounce. *Signs:* Dullness, granular breath sounds, and crepitations at left base. *Radiograph:* Cylindrical bronchiectasis of some branches of left descending bronchus.

Case 4.—Female, aged 32. (L. H., 41897 1932.) Housewife. Bronchopneumonia, following influenza, at 18. Left pneumonia complicated by empyema at 30. Three aspirations, no open drainage. Prolonged convalescence. Dry cough since, and recently slight mucoid or muco-purulent sputum. Recurrent left pleuritis pain for fifteen months, and recurrent slight haemoptysis for four months, with loss of weight, lassitude, and night sweats. *Signs:* Fibrosis of left base. *Radiograph:* Extensive cylindrical bronchiectasis behind the heart shadow (Fig. 1). *Result:* No change during six months' observation. Lobectomy advised, but refused by patient.

Case 5.—Male, aged 6. (Br. H., 2396.) Six attacks of pneumonia, the last attack following influenza shortly before admission. Double mastoidectomy at 3. Whooping-cough and scarlet fever, followed by otorrhoea at 4. At this time a lipiodol radiograph suggested slight dilatation of the bronchi at both bases. Subsequently persistent slight cough and recurrent pain in right chest, loss of weight, night sweats, and occasional vomiting. *Signs:* Dullness at both bases. A further lipiodol radiograph showed no definite bronchial dilatation.

Case 6.—Male, aged 18, traveller. (Br. H., 6500.) Scarlet fever in childhood and bronchopneumonia at 18. Persistent nocturnal cough since, scanty yellow sputum, streaks of haemoptysis, and loss of weight. *Signs:* Moderate clubbing of the finger-tips. No signs in chest. *Radiograph:* Cylindrical bronchiectasis of mesial branches of left descending bronchus.

Case 7.—Female, aged 64, secretary. (L. H., 40522/1932.) Measles and pleurisy at 14. Whooping-cough at 17. Sent to Davos because of "weak lungs" at 19. Since good health, except for occasional recurrent cough, with moderate sputum. Three months before observation, attack of "influenza," with severe cough and expectoration for three weeks. Weakness and anorexia since, but no further cough or sputum. *Signs:* Slight dullness, with crackling rales at left base. *Radiograph:* Left basal bronchiectasis of cylindrical type (Fig. 2). *Result:* Well under observation. Special treatment not advised.

Case 8.—Male, aged 6. (Br. H., 6596.) Double pneumonia at 3 years. Whooping-cough at 4. For four years attack of bronchitis each year. Slight persisting dry cough, shortness of breath, loss of weight, and night sweats. *Signs:* Dullness and crepitations at right base. *Radiograph:* Probable dilatation of bronchi at right base. *Result:* No change during short period of observation; right phrenic evulsion.

Case 9.—Female, aged 6. (Br. H., 2824.) Whooping-cough and double pneumonia at 2. Several further attacks of acute pneumonia since. Persistent slight cough, with frothy sputum (about half drachm daily), shortness of breath, night sweats, and one attack of left pleuritic pain. *Signs:* Dullness and weak breath sounds at right base. *Radiograph:* Bilateral basal bronchiectasis.

* L. H. = London Hospital; Br. H. = Brompton Hospital.

Case 10.—Female, aged 24, domestic servant. (Br. H., 6565.) *Previous illnesses:* nasal catarrh with otorrhoea and influenza at 12. Slight nocturnal cough, scanty mucoid sputum, and shortness of breath from 21. *Signs:* Dullness and weak breath sounds at right base. *Radiograph:* Saccular bronchiectasis of right descending bronchi (Fig. 3).

Case 11.—Female, aged 8. (Br. H., 1693.) Bronchitis and pneumonia at 2 years. Whooping-cough and pneumonia at 5. Also chicken-pox. Since last attack of pneumonia persistent cough, with loss of weight. *Signs:* Dullness, bronchial breath sounds, and crepitations at both bases. *Radiograph:* Extensive bronchiectasis at both bases, with multiple small cavities on right side.

Case 12.—Female, aged 13. (Br. H., 6938.) Marasmus at 2 months. Double pneumonia at 1, 2, and 3 years. Measles at 5. Diphtheria and whooping-cough at 7. Colds since; (?) asthmatic attacks at night. *Signs:* Dullness and weak breath sounds at right base. *Radiograph:* Cylindrical dilatation of basal bronchi at both bases. *Result:* Sputum up to 2 drachms in hospital. T.B. negative three times. To convalescent home. Eight months later occasional slight cough, no sputum. A second lipiodol radiograph showed the bronchi to be almost normal.

Case 13.—Male, aged 16, messenger. (Br. H., 4916.) Slight nocturnal cough with scanty sputum as long as he could remember, shortness of breath, and slight loss of weight. Whooping-cough, diphtheria, and measles in infancy. *Signs:* Clubbing of the fingers, dullness and crepitations at both bases. *Radiograph:* Bilateral basal bronchiectasis, with sacculation.

Case 14.—Female, aged 32, street trader. (L. H., 41826/1931.) Since whooping-cough in infancy, cough with occasional slight sputum. Slight recurrent haemoptysis and pain in left chest for two months before admission to hospital. *Signs:* Dullness, weak breath sounds, and crepitations over the left base. *Radiograph:* Left basal bronchiectasis. *Result:* Haemoptysis not repeated while under observation. Special treatment was not advised in view of slight symptoms.

Case 15.—Female, aged 10. (Br. H., 5959.) Measles and whooping-cough during infancy. Mumps at 4. Enlarged tonsils and adenoids at 5. Dry cough from 2, with slight mucoid sputum since pneumonia at 8. Recurrent pain in left chest, with loss of weight and night sweats. *Signs:* Clubbing of fingers, dullness, diminished breath sounds, and crepitations over the left base. *Radiograph:* Left basal bronchiectasis.

Case 16.—Female, aged 23. (Br. H., 6689.) Only previous illness an attack of rheumatic fever a few months before admission to hospital. Attack of right pleuritic pain four weeks before admission. No abnormal physical signs. *Radiograph:* Considerable dilatation, with some sacculation of the branches of the right descending bronchus

Case 17.—Male, aged 33, fruit porter. (L. H., 30734/1932.) Admitted for attack of acute basal bronchopneumonia. Gassed by chlorine in 1918. Pneumonia 1921 for three months. Since occasional dry cough. Signs of consolidation of left lower lobe on admission to hospital. Pneumonia subsided in two weeks, but dullness, with broncho-vesicular breath sounds and crepitations, persisted at left base. *Radiograph:* Cylindrical bronchiectasis of posterior branches of left descending bronchus. Also slight dilatation of some of anterior branches.

Case 18.—Male, aged 7. (L. H., 30436/1931.) Measles and bronchitis at 4. Pneumonia at 6. Since dry cough and shortness of breath. *Signs:* Persistent dullness, weak breath sounds, and scattered rhonchi at right base during one year's observation. *Radiograph:* Right basal bronchiectasis of smaller bronchi, especially posteriorly.

Case 19.—Female, aged 27. (Br. H., 5057.) Diphtheria requiring tracheotomy at 2 years. Scarlet fever at 12 Said to have had a cough "always," with occasional scanty sputum. Periodic haemoptysis and shortness of breath since 21. *Signs:* Moderate clubbing of fingers, dullness, and signs of excavation at left base. *Radiograph:* Considerable dilatation with sacculation of branches of left descending bronchus. *Result:* This patient had a left phrenic evulsion done.

Case 20.—Female, aged 8. (L. H., 40250/1932.) Chicken-pox and measles as an infant. Attacks of winter bronchitis followed by pneumonia for three to four years. Came under observation during one of these attacks, which rapidly

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3 N W OF ENGLAND —SEAPORT TOWN —PARTNERSHIP IN well established Practice of about £1 500 p a Panel 1 660 Great scope for increase Premium two fifths share £1,000

4 PARTNERSHIP IN VERY OLD ESTABLISHED MIDDLE CLASS Practice in County Town within 40 miles of London Cash receipts average £3 300 p a Panel 3,000 Good house with ample accommodation garden and garage to rent Applicant must be experienced and aged 30—35 Premium one third share 2 years' purchase Preliminary Assistantship

5 KENT — FOURTH PARTNER REQUIRED IN OLD ESTABlished Country Practice within easy reach of London Freehold house standing in three and a half acres of garden, to be purchased Price £2,000 Incoming Partner should be keen on country life and have held H P and H S appointments Share worth £800 p a, guaranteed Premium £1 600

6 W OF ENGLAND — PARTNERSHIP IN OLD ESTABLISHED Practice of about £1,200 p a in picturesque Seaside Place Panel 690. Unique house (6 bed and dressing rooms etc) in excellent state of repair with every modern convenience Beautiful garden and garage to rent on lease Hunting yachting, fishing etc Premium one half share 2 years purchase

7 WEST OF ENGLAND —PARTNERSHIP IN OLD ESTABLISHED PRACTICE over £2 200 p a in County Town Panel about 1 000 Premium one half share 2 years purchase Good prospects for well-qualified physician (preferably M R C P) who should be an R.C and who would have opportunity of getting on Staff of Hospital in near future.

8 N E. OF ENGLAND —PARTNERSHIP IN VERY OLD ESTABlished general Practice in an important City Cash receipts average £4,743 p a, including appointment worth about £300 p a and a panel of 4 300 Semi-detached ten roomed house with garage and garden for sale Scope for increase. Premium two-fifths share 1¾ years purchase

9 LONDON, N —PRACTICE CARRIED ON BY MEDICAL WOMAN in populous area Cash receipts average £480 p a, including panel 527 Visits 2/6 to 3/6 Small house (6 rooms) to rent at £50 p a. on lease Practice capable of increase Premium 1½ years purchase

10 E. ANGLIA —OLD ESTABLISHED COUNTRY PRACTICE OF about £2 700 p a in most beautiful part, easy distance of Coast Panel 1,150 Visits 3/6 to £1 1s., medicine extra Recently modernised house (6 bedrooms c l and central heating) with garden and two acres land for sale Cottage Hospital Scope for increase.

11 LONDON, N —PRACTICE CARRIED ON BY MEDICAL WOMAN in populous district. Cash receipts average £270 p a. including panel 360 Scope for midwifery Six roomed house to rent at £70 p a on lease Premium 1½ years purchase

12 BORDERS OF SHROPSHIRE AND CHESHIRE.—OLD ESTABlished PRACTICE averaging £1 055 p a in Market Town Panel 850 Nice detached house (5 bedrooms attics, etc.) with garage and old world garden etc, for sale Educational facilities. Well equipped Cottage Hospital offering scope for one keen on Surgery Premium £1,580

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14 LONDON, S E WELL-ESTABLISHED PRACTICE IN OUTLYING Suburban District Cash receipts 1932 £1 008 including appointments worth £23 p a and Panel 993. Well-situated corner house on main road (5 bed and dressing rooms) with garage and large garden to rent also separate Surgery to rent Scope for increase Premium £1 800

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16 YORKSHIRE (W.R.)—PARTNERSHIP IN OLD ESTABLISHED Practice about £3,700 p.a. in one of the smaller and pleasanter Manufacturing Towns. Panel 3,366. Suitable house available. Hospital. Premium one third share 2 years' purchase.

17 LONDON E.—CASH AND PANEL PRACTICE OF £860 P.A. in populous district. Panel 5,700. Small house to rent on lease. Premium 1½ years' purchase.

18 EASTERN COUNTIES — OLD ESTABLISHED COUNTRY PRACTICE. Cash receipts about £720 p.a. including appointments over £150 and a panel of about 590. Detached house (6 bedrooms) in grounds of 1 acre for sale. Premium for Practice £650.

19 CO. DURHAM.—PRACTICE OF £540 P.A. IN RESIDENTIAL Colliery District near two large Towns. Panel 380. Well-situated house (7 rooms) with good Surgery and Dispensary for sale or rent. Scope for substantial increase. Premium only £500.

20 S.W. OF ENGLAND — OLD-ESTABLISHED PRACTICE OF £750 p.a. in beautiful country district. Panel 300. Excellent house (5 bedrooms) for sale. Premium 1½ years' purchase.

21 S. WALES — PRACTICE BETWEEN £250—£300 P.A. IN beautifully situated village about 4 miles from important town. Small panel. Nice house (6 bedrooms) electric light, gas and company's water for sale or rent. Premium £280.

22 S. OF ENGLAND — PARTNERSHIP IN OLD ESTABLISHED Practice of nearly £1,950 p.a. in important town within 80 miles of London. No panel. Attractive corner residence (7 bed and dressing rooms) in half acre of walled-in garden with garage etc. for sale. Ample scope for increase. Premium one half share 2 years' purchase.

23 ESSEX.—OLD ESTABLISHED PRACTICE OF ABOUT £600 P.A. in Suburban District. Panel 500. Well-situated detached house (6 bedrooms) standing in own grounds with nice garden, garage, and stabling for sale. Scope for increase. Premium £650.

24 SURREY.—PARTNERSHIP IN SOUND OLD ESTABLISHED good mixed-class Practice about £3,000 p.a. in the Croydon area. Small panel. Very little midwifery. Excellent modern detached house for sale. Scope for increase. Premium one half share 2 years' purchase.

25 ESSEX COAST.—MEDICAL WOMAN REQUIRED AS PARTNER in Practice of £2,500 p.a. in small Seaside Town. Panel 2,300. Modern house in good position facing Sea with 4 bedrooms for sale. Scope for increase. Premium one fourth share £1,250 and further share later.

26 LONDON E.C.—PARTNERSHIP IN OLD ESTABLISHED PRACtice in the City. Receipts average about £1,650 p.a. including appointments and panel worth over £500 p.a. Premium one-half share £1,000.

27 NORTH OF ENGLAND — INLAND HEALTH RESORT.—NOW dispensing PRACTICE of about £1,000 p.a. Small select panel. House (7 bedrooms) with large garden, for sale. Premium—Practice—£750.

28 S. AFRICA.—RADIOLOGICAL PRACTICE IN A MOST DElightful town with excellent climate. Cash receipts last year £1,450. Scope. Premium to include furniture, carpets accessories etc., £2,200.

29 EAST COAST.—PRACTICE OF BETWEEN £750 AND £800 p.a. in a purely Residential Seaside District within 40 miles from London. Small Panel. Detached house (5 bedrooms) for sale. Scope for increase as district is growing.

30 SURREY.—PRACTICE OF £1,000 P.A. IN RAPIDLY GROWing Residential District within 15 miles of London. Panel 400. Suitable house with separate professional accommodation for sale. Scope for considerable increase. Premium £1,600.

31 LONDON W.—GOOD MIDDLE-CLASS PRACTICE £400 P.A. in suburb within easy access of the West End. Panel over 100. Attractive double fronted house with nice garden for sale. Scope for increase. Premium 1½ years' purchase.

32 LONDON N.—PARTNERSHIP IN PRACTICE ABOUT £5,250 p.a. in thickly populated Suburban District. Panel about 2,300. One fourth or one third share at 2 years' purchase.

33 HOME COUNTIES — OPHTHALMIC PRACTICE BETWEEN £300 and £400 p.a. in desirable Residential Town, under 15 miles from London. Good detached house (4 bedrooms) with large garden for sale. Good reasons for plenty of scope for increase. Premium £300.

34 LONDON E.C.—OLD-ESTABLISHED LOCUM PRACTICE of £646 p.a. Panel 459. Living accommodation to rent if desired. Premium £1,000.

35 S. AFRICA. — OPHTHALMIC AND GENERAL PRACTICE about £1,400 p.a. (about 60 per cent. Ophthalmic), including appointment £400. No Ophthalmic opposition. Premium £400.

36 N. OF ENGLAND — OPHTHALMIC PRACTICE OF OVER £1,600 p.a. in an important town. Excellent scope for one keen on clinical and operative Ophthalmology. Large house in first-class condition for sale. Purchaser should be well qualified. Premium £2,500.

37 S. AFRICA. — PRACTICE OF ABOUT £2,000 P.A. IN A famous town. Pleasantly situated detached bungalow (5 bedrooms) garage and small garden for sale. Good hospital (with private wards). Premium £1,100.

38 LONDON WEST END — X-RAY AND ELECTRO-THERAPeutic Practice. Receipts 1931 nearly £630. Suitable and convenient flat at moderate rent can be had on lease. Premium £925.

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subsided. Sputum negative for tubercle bacilli. Dry cough, and had failure to gain weight between these attacks. *Signs*. Undernourished, and dullness, with weak breath sounds and crepitations at right base, and weak breath sounds and crepitations at left base. *Radiograph*: Tubular bronchiectasis of the right lower bronchi (Fig. 4). *Result*: Bronchitis rapidly subsided. Discharged to convalescent home, with persistent slight dry cough. No change in physical signs.

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ENDOMETRIOMATA: THE FIVE CLINICAL TYPES*

BY

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In Collaboration With

S. K. DATTA, M.B.,

PATHOLOGIST TO THE EDEN HOSPITAL

(*With Special Plate*)

I deal here with a condition which is very commonly found in women at or before operation, and one which is very rarely diagnosed or even thought of by practitioners. I refer to endometriomata, tumours which have only come into prominence during the last ten years. I have chosen this subject because my private and hospital records show that a state of endometriosis existed in 8.9 per cent. of my last consecutive 1,000 abdominal operation cases, which proves that this pathological condition is of sufficient frequency to warrant notice. It may be of interest to state that many of these had been treated for months as cases of chronic tubo-ovarian disease, others as slowly growing innocuous tumours of the uterus, others as cases of intractable dysmenorrhoea, and still others as dyspareunia, lumbago, appendicular colic, piles, and *B. coli* infections.

PATHOLOGY

In 1921 Sampson advanced the work of Cullen and Lockyer by demonstrating that tumours frequently found in the ovary, uterus, and broad ligament contained cells exactly resembling those of the mucous membrane of the uterus. From this finding he evolved the theory that at times menstrual blood regurgitates through the tubes into the pelvic cavity. This retrogressing tide carries with it particles of endometrium, which implant and graft themselves upon pelvic structures and then tend to invade particular viscera, setting up intense tissue reaction. These aberrant endometrial cells, subject to the influence of hormones from the hypophysis and ovary, retain their physiological capacity of cystic proliferation, secretion, and necrosis, with the result that cysts form, varying in size from a partridge's egg to that of a duck's egg, and surrounded by dense fibrous tissue. The cysts, small or large, contain tarry, chocolate-like material. Such an entertaining theory compels immediate criticism, for there would seem no reason why dying cells of the cast-off endometrium should thrive and multiply, though it must be admitted that such cells falling into the stoma of a recently ruptured Graafian follicle would have an ideal medium for tissue culture. So far, however, experiments along these lines in monkeys have failed to show that desquamating menstrual epithelium can grow upon the peritoneum; nor can such a theory explain how endometriomata can occur at the umbilicus or in the canal of Nuck, or why they are found upon the large intestine and not on the walls of the small gut.

I think I have seen and operated upon endometriomata in every site described above, and it is for that reason—though freely admitting the possibility of Sampson's theory—that I prefer to accept the assumption that these tumours originate from metaplasia of the cells of the peritoneum. The lining mucous membrane of all parts of the Müllerian canal (tubes, uterus, and vagina), as well as the germinal epithelium of the ovary and the pelvic peritoneum, is derived from the same parent tissue—that is, the coelomic epithelium; for it will be recalled that an invagination of this structure gives rise to the Müllerian mucous membrane, which undergoes further differentiation in its various segments from the fimbriae of the Fallopian tubes to the hymen. If such embryonic differentiation is possible, is it not probable that the germinal epithelium of the ovary and the cells of the pelvic peritoneum may come under the influence of certain stimuli (probably endocrinal) in adult life, and undergo or take part in similar changes, resulting in tumours large or small containing coelomic epithelium which has undergone metamorphosis and now has the structure and function of tubal or endometrial mucous membrane?

Whether to believe in the theory of Sampson or that of metaplasia, or, with others, in the assumption of lymphatic or embolic transference, is of little concern here, for this is a matter upon which, in the present state of our knowledge, it is impossible to be dogmatic.

CLASSIFICATION

Clinically my cases of endometriomata indicate that there are five distinct types:

1. That of a uterine tumour.
2. That of obstruction or invasion.
3. That of a tubo-ovarian mass.
4. The symptomatic type, where symptoms only predominate.
5. The post-operative scar type, which is very rare.

Though these variations are often very clearly differentiated, it is not uncommon to find one or more types present in the same individual.

Type 1.—These tumours grow slowly, and are soft and without a capsule. As a rule they are situated near one cornu, and are associated with profuse menorrhagia, but

* A paper read before the All-India Science Congress, January, 1933.

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1 PARTNERSHIP—RIVERSIDE SUBURB (WEST)—A fourth Partner (who should be married and about 35 years of age) is required in a very old established mixed-class Practice situated in pleasant residential suburb Cash receipts for past three years average £6,879 p a A three twentieths share is offered, with option in four years to increase up to equal shares with the other Partners Appts held and panel of about 3 000 Visits 3/6 to 21/ Modern house with good accommodation (5 bedrooms, garden) Price (freehold) £2,000, or would be let at £125 p a Premium 2 years purchase

2 PARTNERSHIP KENT (within about 8 miles of the Sea, and similar distance from large town)—A fourth Partner (with some knowledge of Surgery preferred) is required in a very old-established mixed class Practice, situated in beautiful country district Cash receipts about £4 800 p a A sixth share producing £800 p a (which will be guaranteed for the first year) is offered, with option of increase at end of two years Good house with ample accommodation (5 bed rooms etc) and 3½ acres of ground Price (freehold) £2 000 or can be rented at £110 a year Premium £1,600

3 DEATH VACANCY—SOUTH DEVON—Old established PRACTICE (held by late Incumbent 43 years) situated in very pretty agricultural district (pop 3,500) within 2½ miles of the sea Cash receipts aver age £787 p a including appts worth £200 and panel of 347 Leasehold house with 4½ acres of land (66 years to run at ground rent of £13 10s) having ample accommodation Price for lease and Practice £2,700 Sport and educational facilities Locum in charge

4 WITHIN THIRTY FIVE MILES OF LONDON—Very old established country PRACTICE in pleasant residential district Cross cash re ceipts for the last twelve months approximately £1 800 Panel brings in over £650 p a, and appts are worth nearly £200 p a Fees from 2/6 to 15/ Midwifery 3 to 10 gns Nice house in one acre of garden and 2 acres of orchard and containing 3 reception 6 bed rooms etc, and professional rooms Electric light Main drainage Garage Price for freehold £2,500 £1 000 on mortgage Golf, tennis and other sport Premium £2 500

5 HANTS—Old-established chiefly better-class PRACTICE steadily in creasing and offering very good scope for further development Gross cash receipts for last twelve months £966 and this year estimated to be at the rate of about £1 400 Panel of about 400 Advice and medicine 4/ to 10/6, visits 3/6 to 21/ with medicine extra Not much midwifery from 3 gns. Suitable house, with 2 reception 4 bedrooms, surgery dispensary, and waiting room Electric light Garden, garage Rent £75 p a Sport of all kinds and good schools Premium £1 500

6 LONDON WEST—PARTNERSHIP—A half share, producing about £750 p a (which will be guaranteed for the first year) is offered in a very old-established better class non panel and non-dispensing Prac tice having exceptional scope for increase Fees from 10/6 to 5 guineas Suitable Flat is available for ingoing Partner who must be experienced in better class work and preferably hold the M R C P Premium for share 2 years purchase

7 SOUTH WALES—Pleasant Coast Town (pop 40 000)—Old established PRACTICE held ten years by present Incumbent, and averaging over £1 000 p a including panel of 1 275 Visits 5/ to 10/6 Good house having charming views of English Channel, and sur rounding country Contains professional rooms, 3 reception 6 bed rooms 2 bathrooms Garden with tennis court Garage Price for leasehold (60 years to run at ground rent of £20 a year) £1,800 Premium 1½ years purchase

8 LONDON S W—Well-established PRACTICE, worth about £350 p a, including panel of 550 and capable of increase Rent of Flat, con sisting of two floors containing 2 professional rooms, dining room, kitchen two other rooms and bathroom £2 2s a week inclusive of rates and taxes Lease 5 years to run, and renewable Premium £450 or near offer

9 EASTERN COUNTIES—ASSISTANTSHIP with view to Partnership (after a preliminary period of six months at a salary of £440 p a, with free house) is offered in an old established good mixed-class Practice situated in pleasant residential and agricultural district within about 15 miles of the coast Gross cash receipts approximately £3 000 A third share is for disposal at a premium of 2 years purch

10 NORTH WALES—ASSISTANTSHIP with view to Partnership (after a preliminary period of about six months at a salary of £300 p a, all found) is offered in a better-class non panel Practice situated in attractive seaside resort A one third or three-sevenths share is for disposal (producing £800 to £900 p a) at a premium of 2 years purch Ingoing Partner should be English and pref London trained

11 PARTNERSHIP — WEST OF ENGLAND SEASIDE RESORT — A share worth about £600 p a (with succession to the whole Prac tice eventually) is offered in a very old established mixed class Practice situated in very attractive small coast town, with beautiful surrounding country Gross cash receipts approximately £1 200 p a including panel worth about £420 Visits 5/ to 30/ Mid wifery from 3 gns Exceptionally nice house, with 2 reception 5 bedrooms etc, and usual offices Half an acre of garden Can be rented on lease Premium 2 years purchase

12. HOME COUNTIES—PARTNERSHIP—Residential Town within easy reach of London A share producing about £1 300 p a is offered in a very sound old established Practice producing for the last 12 months approximately £5 200 and offering excellent scope for in crease Panel of 2,500 Fees from 3/6 to 21/ Very nice hous with ample accommodation, or smaller one if desired Ingoing Partner should be experienced accustomed to better-cla s work able to undertake major surgery, and pref hold a Fellowship Premium 2 years purchase

13 RIVERSIDE SUBURB—Middle and working class PRACTICE, aver aging £1 033 p a, including panel producing about £340 and appts nearly £100 p a Fees from 3/6 Detached house with nice garden and containing 4 reception, 6 bedrooms etc. for sale Pre mium 2 years purchase

14 OPHTHALMIC PRACTICE.—Within eighty miles of London—Practice is increasing, and offers good scope for further development Average gross cash receipts for the past three years £554 Last year over £700 Fees 1 to 2 guineas Opposition slight Choice of houses. Premium £700

15 LONDON EAST—Middle and working-class PRACTICE, producing £1 000 p a including panel of about 1 100 Suitable small house with sitting room 2 bedrooms, and attic waiting room, surgery and dispensary Rent £52 p a

16 DORSET—Well-established PRACTICE in very pleasant town within easy reach of the coast Gross cash receipts over £1 000 of which about £400 is from panel Fees 3/6 to 21/ Opposition not strong Good house, with 2 reception 5 bedrooms etc garden of nearly 3 acres Rent on lease £62 p a Premium £1 750

17 LONDON SOUTH E working-class PRAC TICE, increasing ar district (gross cash receipts for last 12 anel of 1 370 Suit able house with 2 reception and 3 bedrooms Garden Price for freehold £1 000 Premium £2 500

18 EASTERN COUNTIES — FAVOURITE SEASIDE AND HOLIDAY RESORT—Good mixed-class PRACTICE, established many years and producing for the last twelve months £1,600 Panel brings in £300 p a and an appt worth £100 p a Fees 3/6 to 7/6 with medicine extra Nice house, with 2 reception 5 bedrooms etc. Garage Garden Price for freehold £2 250 Golf, shooting, and other sport. Premium 1½ years purchase

19 PARTNERSHIP—In a well populated pleasant South Eastern suburb within ten miles of London the half share of an old established mixed class Practice is for disposal owing to the retirement of the junior partner Held by the remaining partner 30 years Cash receipts average £2 765 p a including panel of 1 800 and appts worth £150 Very little midwifery Pleasant semi detached corner house with ample accommodation, garden Price, leasehold (over 900 years at ground rent of £7 p a), £1,050 Premium 2 years purchase

20 erred —PARTNERSHIP—A one half share is offered better middle class Practice in suburb of own Steadily increasing, and excellent future prospects Gross cash receipts £1 700 Panel of 700 Fees from 3/6 Very nice house with 2 reception 4 bedrooms etc One acre of garden Garage for 2 cars Rent on lease £80 p a Sport of all kinds and good schools Premium for share 2 years purchase

21 MANCHESTER—Old established middle and working-class PRACTICE producing for the last twelve months about £650 including panel of 790 Fees from 3/6 Convenient house with 2 reception 4 to 5 bedrooms bathroom etc Rent on lease £60 Premium £950 to include furniture

22. SOUTH WALES—Beautiful country district within 4 miles of large town Small PRACTICE producing between £300 and £350 p a offering good scope Visiting fees from 5/ Very little midwifery or night work Well situated house with well kept garden containing 2 reception 3 good sized bedrooms and servants room Electric light and gas throughout Garage Rent on lease £70 p a

23 CENTRAL LONDON—Middle and better-class PRACTICE averaging for the last two years about £500 p a including small panel of 180 Fees 3/6 to 21/ Professional accommodation can be rented at £200 p a Prem £300 to include furn, drugs instruments etc

24 SOUTH EAST LONDON—Good middle and working-class PRACTICE, producing last twelve months nearly £950 Panel of 986 Suitable house with 2 reception 4 to 5 bedrooms etc Rent on lease £70 p a. Prem to include drugs etc and surgery fittings and furn £1 450

25 NORTH WALES—Old-established middle and working-class PRAC TICE averaging for the last three years over £1 700 including panel of about 1 300 Fees from 2/6 Visits from 3/6 with medi cine extra Suitable house with good professional accommodation. Electric light Garage for two cars Small garden. Rent on lease £100 p a. Premium £2 100 £1 700 down balance by instalment

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dysmenorrhoea is by no means constant. They grow slowly, are not painful, and are rarely seen larger than an orange. There is a tendency to diagnose them as small simple fibroids, to put off surgical treatment, and treat them with radium. I am sure this is a mistake, for personal records show that despite radium treatment elsewhere many of my patients have continued to bleed and have pain. Moreover, in several the tumour has grown larger after radium treatment—which is perhaps not unlikely, seeing that endometriomata are dependent upon sex hormones distilled some distance from the cavity of the uterus. In most countries women with fibroids are on the fat side. My experience of patients suffering from adenomyoma is that they are usually thin. These tumours may originate from the tubal mucosa at the isthmus, or in the interstitial portion of the tube, but most often they commence—as was shown by Cullen—from ingrowths of diverticula of the mucous membrane of the corpus uteri.

Type 2.—This is, I think, the most interesting of all. The tumour formation is most frequently in the recto-vaginal space, and with a forefinger in the vagina and a middle finger in the rectum it can be felt as a wedge with scattered hard nodules projecting into the lumen of the vagina or rectum. The patient may complain of pain during defaecation, and blood-stained mucus with the stool or from the anus, but very rarely indeed is the mucous membrane actually eroded. Until recently many of these women were diagnosed as cases of cancer of the rectum and treated some by mutilative operations, others by deep *x* rays or radium. As a result of such diagnosis and treatment some have been cured, but it is unfortunate that the reputation of radium and Roentgen rays should be enhanced by virtue of a wrong diagnosis, for the condition was never cancer. In some cases the nodular growth fills and bulges the vault of the vagina, causing dyspareunia. In several such cases sent to me with the diagnosis of cancer, a speculum in the vagina has shown *œil-de-perdrix* purplish nodules projecting through the mucous membrane. These women were all under the age of 40, and in one case only 19 years of age. There is nothing so pathognomonic of an endometrioma as dense nodules at the vault of the vagina in a young woman who is not wasted.

In three of my cases the obstruction was in the large intestine, due to the invasion of the wall of the bowel by an adherent so-called chocolate cyst of the ovary. The cyst had burst, and the endometrial cells had invaded the wall of the sigmoid colon, forming a hard, nodular growth, which partially obstructed the lumen, and might, in pre-war days, have been diagnosed and treated as secondary carcinoma.

In another case, with bilateral chocolate cysts, there was a tumour at the mesenteric border of a prolapsed loop of the large intestine—the size of a golf ball—which had infiltrated almost the complete circumference of the gut. This particular patient had been treated for months as a case of appendicular colic and inflammation of the ovaries.

Very occasionally the endometrial deposits may grow on the anterior surface of the bladder and protrude into the cavity of that organ, giving rise to dysuria and a diagnosis of cystitis or papilloma. I have seen only one such case, and in that the cystoscopic diagnosis was typical. The patient was a young woman. There was no wasting or bleeding, but she gave a history of recent very severe dysuria and dysmenorrhoea. In the anterior wall were nodules under the mucous membrane. The uterus was retroverted and fixed; there was a history of sterility. Both ovaries were prolapsed, fixed, and tender. Following operation, the bladder symptoms entirely disappeared.

Type 3.—In these a mass can almost invariably be found on either side of the uterus, tender and nodular, and in places perhaps cystic and fixed, exactly resembling the inflammatory tubo-ovarian mass which so frequently follows pelvic gonorrhoea, abortion, or a septic puerperium. A diagnosis of inflammatory origin is the more readily thought of because, as a rule, the uterus is retroverted and fixed, but in cases of endometriomata there is rarely a history of labour or abortion within the last five years, and there may be no reason for suspecting gonorrhoea. This type of case is perhaps the commonest of all, for generally those admitted into hospital have been treated for many months, or it may be years, by diathermy, tamponage, or milk injections, on the incorrect assumption that the tubo-ovarian masses were of inflammatory origin. Frequently they seek hospital on their own account because of continuous pain, menorrhagia, and dyspareunia, or perhaps they have had recurrent attacks of acute pain (not unlike appendicitis) with fever, due to the bursting of one of the chocolate cysts, in which either the tension has become too great or the wall has become perforated by the hyperplasia of the endometrial secreting cells, thereby causing the effusion of grumous fluid, which is intensely irritating and induces dense adhesions to form in surrounding structures. I have operated upon a great number of such cases, and rarely has it been possible to bring the tubo-ovarian mass out of the pelvis without it bursting. The brown fluid extravasated is intensely irritating, and should be carefully mopped up, otherwise it causes fever and pelvic pain for many days. In young people, especially if they are thin, anaemic, or sterile, and have a history of low fever and dysmenorrhoea, this type of case is very often diagnosed as tuberculous. The mistake is most easily made in early cases, where there may be only nodulation or irregularities on the surface of the tubes and ovary, but such error is avoidable if it is remembered that primary tuberculosis of the tubes is rare, that *x*-ray examination of the lungs will be negative, and no calcareous nodules will be seen in a radiograph of the pelvis. Moreover, a blood count and possibly a von Pirquet test will add confirmation.

If in doubt one can apply a very useful therapeutic test—namely, the injection of 10 c.cm. of skimmed milk or aolan into the gluteal muscle—for in inflammatory disease of the tubes and ovary, and even in long-standing gonococcal cases, there is always a reaction of from 2° to 3° F., but in tuberculous disease of the tubes and in endometriomata of the tubo-ovarian types there is no such reaction. On many occasions I have applied this test when diagnosis was doubtful, or have suggested it in order to convince the doctor of patients I have seen in consultation.

Type 4.—The patients in this group may be spinsters, widows, or married women, long under the care of practitioners without expert knowledge, who have treated symptoms rather than looking for the causes thereof. In some cases, because the symptoms were not outrageous, no pelvic (rectal or vaginal) examination whatever has been made, doctor and patient being diffident about such a proceeding until all treatment has failed. The first and only symptom may be late dysmenorrhoea.

In 1932 a doctor brought his wife from Delhi; her only symptom was recent intense dysmenorrhoea, which he had treated on the usual lines. She was 34 years old, and her last child was born nine years ago. The pain each month was agonizing, accompanied by bearing-down pains in the rectum, which were thought to be due to the congestion of piles. On examination she proved to be a classic case of recto-vaginal endometrioma.

The second symptom, and the only one present, may be *low-grade* fever, which comes on before the period and may last for weeks. Perhaps there may be pelvic heaviness, or there may be tingling pains in the vagina or down the legs. Very often in such cases a vaginal or rectal examination will demonstrate tender, enlarged, fixed ovaries, with nodules on the back of a retroverted uterus or in the line of the broad ligament.

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I have a case of this nature in hospital at present. She is a single woman, aged 40. In another institution a few *B. coli* were found in her urine and *B. morgani* in her stools. Because of the fever she was treated with a view to this for months, but rectal examination clearly demonstrated the cause of her symptoms. At operation a typical perforating cyst, the size of a golf ball, was found in the left ovary, and there were at least a dozen *œil-de-perdrix* cysts on the uterus, tubes, and right ovary.

Dyspareunia coming on late in life is always a symptom demanding investigation, and the same observation is necessary for rectal or bearing-down pain in the sacral region, for these may be the only symptoms for months or maybe years before examination proves that a growth of undoubted endometrial origin is invading the rectum or vagina. In another case the only symptom which the patient complains of is a sense of swelling and distension of the structures in the pelvis, which comes on eight or ten days before the period is due and continues during menstruation, gradually getting worse every period. Such a patient may be known to have a retroverted uterus, and her doctor may put such a condition down to congestive dysmenorrhoea, when all the time she is slowly developing endometriosis somewhere in her pelvis. Each month these grafts or heteroplastic coelomic cells swell up, secrete, and necrose, forming cysts containing menstrual-like fluid, for they are directly under the influence of the hormones of the anterior pituitary and ovary, exactly in the same way as is the mucous membrane of the uterus. This being so, any woman suffering from such symptoms should be carefully examined to distinguish pathological from physiological changes in the pelvis. It must not be thought that the first three types are finely demarcated, for it is by no means uncommon to find all three varieties in one patient if diagnosis and treatment have been delayed.

An engineer's wife, 39 years old, was brought to me from Bombay. She had a large adenomyoma at one cornu of the uterus, possibly arising from tubal mucous membrane. At the same time she had double tubo-ovarian chocolate cysts, one of which had perforated and caused partial obstruction of the sigmoid colon by a fresh endometrial growth.

A banker's wife from Allahabad was seen by me in 1925. She had had a Caesarean operation six months previously at Lucknow. There was a beautiful endometrial tumour the size of a pigeon's egg in the scar line, and a typical endometrial deposit in the recto-vaginal space, with *œil-de-perdrix* cysts on both ovaries and at the back of the broad ligament.

DIAGNOSIS

With the knowledge of the different clinical types that may occur I do not think diagnosis is difficult, for, examined with a forefinger in the vagina and the middle finger in the rectum, there are few conditions so typical as nodular endometriomata in the recto-vaginal space. Cancer may be thought of, but the age and health of the patients, the "feel" on examination, and the fact that the mucous membrane is rarely eroded, should help one. A blood count with excess of polymorphonuclear cells would suggest inflammatory tubo-ovarian disease, but in endometriosis there is no such excess, despite the fever and pain, and, possibly, cystic swelling of both ovaries. In tuberculosis there is, as a rule, a high lymphocyte count and anaemia. The therapeutic test—that is, the injection of 10 c.cm. of milk or aolan—is of much assistance in a doubtful case. In endometriosis there will be no reaction, whereas in inflammatory conditions of the tube and ovary the reaction will be high. *X* rays are useful in difficult cases to exclude tuberculosis, for calcareous nodules may be seen in the pelvis, or possibly arthritic changes between the sacrum and ilium may be demonstrated. Occasionally *x* rays may show the presence of an unsuspected dermoid which, being small and subject to inflammatory changes, has simulated and deceived one into making a diagnosis of endometriosis. Finally, a tumour, whether at the umbilicus or in a subnavel scar or in the pelvis, which enlarges at each menstrual period, should always suggest the possibility of endometrial origin.

TREATMENT

To-day expectant treatment is not permissible if the diagnosis and chances of endometriosis exist. The surgical measures should be as conservative as possible, provided the whole area of endometrial cells and their cystic formation are removed. For instance, in an endometrial tumour of the uterus it may be possible to do a myomectomy or an amputation just below the level of the tubes, taking care to remove both Fallopian tubes at the same time. In the same way, on several occasions I have deliberately left a seemingly healthy portion of one or both ovaries when compelled to dissect out tumours of these structures. On the other hand, where there are large cysts, or there is general involvement of the pelvis—particularly if there are recto-vaginal adenomyomata—I have not hesitated to remove tubes, ovary, and uterus. It is never necessary to excise a recto-vaginal growth, nor, in my opinion, is it wise to attempt a total hysterectomy in such a case. In two cases where there was partial obstruction of the bowel due to secondary endometriomata, I did double salpingo-oophorectomy and partial hysterectomy. Both patients have been followed up for the last eighteen months, and have had no recurrence of symptoms.

I have no personal experience of radium in these cases, but I have operated three times for adenomyomata of the uterus which continued to give symptoms despite radium treatment elsewhere. In none of these cases had this element the least effect; indeed, the symptoms of haemorrhage and pain progressively increased, which is perhaps what one would expect when one realizes that the ovaries are probably three or more inches away from the radium, and therefore will not be destroyed. *X* rays, however, have been used by some with great success, but the danger of using *x* rays in a case where the diagnosis is doubtful, or in which there is the possibility of inflammation, is great, for an intense inflammatory reaction may result. For this reason I never recommend *x* rays, although it is possible that many a case of so-called cancer of the rectum, and possibly of the ovary and uterus, has been permanently cured by this means when really all the time it was one of the various types of endometriosis which the patient suffered from, the *x* rays curing the patient by killing the ovary.

PROGNOSIS

Operative results are as a rule without mortality, provided the patient is seen moderately early. It must, however, be realized that the physiological change we call the menopause will cure, provided the patient is willing to suffer years of invalidism. But to-day such suffering without diagnosis or surgical treatment is surely an anachronism.

During the last twelve months I have done 342 abdominal operations in the Eden Hospital and in private, and of them thirty-eight gave microscopical evidence of endometriosis—that is, 10.1 per cent. In three the tumours were uterine, in twelve they were recto-vaginal, in twenty-three they were tubo-ovarian, and associated with deposits of endometrial structures on bowel, bladder, and broad ligament.

This paper could not have been written had I not the enthusiasm and skill of my pathologist, Dr. S. K. Datta, whose beautiful photomicrographs demonstrate my material.

CLOSED RENAL TUBERCULOSIS

WITH SPECIAL REFERENCE TO THE POSSIBILITY OF HEALING IN THIS DISEASE

BY

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(*With Special Plate*)

The possibility of spontaneous healing in renal tuberculosis must arouse great theoretical interest. Where bilateral renal involvement is diagnosed its possible occurrence would influence prognosis and stimulate the adoption of thorough treatment. It is stated that no case of healed renal tuberculosis of the chronic ulcerative type has yet been noted in the post-mortem room (Boyd),[1] and with this in mind no surgeon would ever employ treatment other than nephrectomy in the attempt to cure unilateral renal tuberculosis, uncomplicated by other factors contraindicating operation. The healing of artificially produced renal tuberculosis has been observed experimentally,[2] but there is little literature on the subject by clinicians. The following case is reported as a slight contribution to the subject. There is no pretence to offer a case of healed disease, though it certainly appears to have been arrested. The intensity of the reaction to the disease, the extremely localized nature of the process, and the length of history are features that appear to make the case worthy of record.

CASE HISTORY

An engineer, aged 55, was admitted to the General Hospital, Birmingham, on May 26th, 1932, complaining of frequency of micturition associated with a little scalding pain. There had been two attacks of haematuria in the three weeks previous to admission. The other symptoms were of eleven months' duration. An inquiry into his past history revealed that eight years previously he suffered from an attack of haematuria, which lasted several days, being accompanied by no other symptoms. After that no obvious bleeding occurred until the recent attacks during the three weeks preceding his admission to hospital. His family history was of no importance, and there was no tuberculous disease known.

Examination

The patient appeared to be healthy and of average size and muscular development. He was apyrexial, and the only physical sign observed was some tenderness on palpating the right loin. Urine: specific gravity, 1016; reaction, acid. A cloud of albumin was present, and pus and red blood corpuscles were seen on microscopical examination. No fragments of growth or organisms were detected. Staphylococci were obtained on culture. *X*-ray examination revealed stones in the upper pole of the right kidney. An interesting finding was that Paget's disease existed in the pelvic bones. No abnormality of the bladder was seen on cystoscopy. Unfortunately accidental bleeding prevented ureteral catheterization. Intravenous pyelography was done with uroselectan B. The left kidney was normal, but the right one showed defective filling of the upper part of the pelvis in addition to shadows in the upper renal pole. The urea concentration test revealed a slight impairment of renal function. The blood urea was 60 mg. per 100 c.cm. The pre-operative diagnosis was "renal calculi."

Operation

On June 6th, 1932, the right kidney was explored by the lumbar route. The lower three-quarters of the organ appeared to be normal. The perirenal fat was firmly adherent to the upper quarter of the kidney. On stripping this off, the renal tissue in this area appeared to be shrunken, and contained several hard nodules. This area was sharply demarcated from the normal kidney substance below by a definite moat-like depression, which suggested that a partial auto-nephrectomy had been executed by a fibrotic process. An exact diagnosis was not obvious, and, a tuberculous process being suggested, nephrectomy was performed, the left kidney being assumed to be normal on the evidence of the pyelographic examination. The post-operative convalescence was uneventful, and the patient was discharged three weeks later with the wound soundly healed.

Morbid Anatomy

The kidney is represented in photographs (see Special Plate, Figs. 1 and 2) showing the appearances on anterior and cut-surface views. The specimen measures $3\frac{3}{4}$ inches by 2 inches. The upper quarter of the organ is sharply differentiated from the lower three-quarters by a line of demarcation in the form of a definite circular depression. The former portion consists of completely disorganized renal tissue with an irregular bossy outline, contrasting markedly with the smooth normal appearance of the somewhat lobulated lower three-quarters. The first impression suggests a diseased suprarenal body resting upon a normal kidney. This faulty conception is at once corrected by a glance at the cut surface (Fig. 2). Here a portion of the upper pole is destroyed and distorted by a chronic fibrotic mass, embedded in which are several small calculi standing out as dark areas. These contrast well with two points of caseation in the periphery of the affected area. The fibrotic area is sharply delineated from tissue below, which retains the normal renal architecture. The upper calix of the pelvis, around which is a notable deposition of fat, has been destroyed by fibrosis, and provides the pathological basis for the distorted pyelographic appearance. The remainder of the pelvis shows no dilatation. The gross appearance suggests some chronic pyelitis, and the ureter exhibits only a little thickening of its wall, with slight accompanying fibrosis, very different from the condition usually seen in renal tuberculosis of long duration. A microscopical examination of tissues from the diseased area reveals giant cells of the tuberculous type, and the general picture confirms the macroscopic diagnosis of tuberculosis.

COMMENTS

The patient gave a history of renal disease, which commenced at least eight years before the nephrectomy. The first symptom was haematuria. Was this due to a renal calculus or was it the first sign of tuberculous disease? The fact that the bleeding occurred without other symptoms such as pain is strong presumptive evidence in favour of a tuberculous rather than a calculous cause at that time. This view would point to the calculi being secondary to the tuberculous disease rather than to the assumption that a tuberculous process had developed in a kidney damaged by stone. Calcareous material is frequently noted in renal tuberculosis.[3] The length of time, eight years, during which tuberculosis existed in this kidney without marked advancement is remarkable. Thomson-Walker speaks with surprise of a case in which he observed haematuria as long ago as two years before the onset of any other symptoms.[3] The resistance of the kidney to the disease is demonstrated by the macroscopic appearances, by the mildness of the symptoms, by the absence of tubercle bacilli in the urine, and by the remarkable freedom of the ureter and bladder from obvious involvement. These factors led to the incorrect pre-operative diagnosis. While there can be no doubt that nephrectomy was the only treatment to be considered, the kidney reveals a remarkable degree of healing. It is conceivable that in rare cases complete healing, as a result of sequestration of the caseous areas by a ring of fibrous tissue, might occur. It is to be noted, however, that in the case described the development of symptoms after many years' quiescence suggests an advance rather than a retrogression of morbidity.

It remains to classify this specimen according to the usual grouping adopted in this country. Four types are considered.

1. Miliary tuberculosis, in which the generalized nature of the disease excludes surgical interest.
2. Ulcero-cavernous tuberculosis, which commences in the pelvis and extends outwards.
3. Caseous or massive tuberculosis, which is an advanced form of No. 2.
4. Tuberculous hydronephrosis.

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The two latter are considered by some authorities to constitute "closed" tuberculosis, but the term does not appear to be quite accurate, as the pelvis is so extensively involved. It is difficult to place this particular specimen in the groups mentioned. If placed in Group 3 almost complete destruction of the whole kidney would be implied, and this is far from being the case. Such a specimen might be rightly considered as one of "closed renal tuberculosis," and be placed accordingly in a final and fifth group under that heading. The term "closed" could then be considered inadmissible in cases falling into Groups 3 and 4.

I am greatly indebted to Professor Seymour Barling for permission to publish this case and for his advice and help.

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NEW GROWTHS OF THE KIDNEY*

WITH ANALYSIS OF SIXTY-FIVE CASES

BY

R. H. JOCELYN SWAN, O.B.E., M.S., F.R.C.S.

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(With Special Plate)

The following survey is entirely limited to new growths occurring primarily in the kidney, and excludes all those renal enlargements due to hydronephrosis, calculus, or cystic disease. I have collected all my private and hospital cases, and, for the purpose of arriving at some statistical figures, have added some notes of specimens of renal tumours from the pathological museums of the Cancer Hospital and St. Paul's Hospital. I would like to thank my colleagues for their permission to make use of these cases. In this way I have fairly complete clinical and pathological records of sixty-five cases from which to draw my conclusions.

The subject of new growths in the kidney presents many features of great interest—interest to the pathologist, clinician, and surgeon alike. Pathologists have for several years expressed many and varied opinions as to the origin and the true nature of these tumours, and even at the present time no definite conclusion has been arrived at. The clinician has improved his methods of examination in so marked a degree that he is able to demonstrate almost with certainty whether a renal growth is present or not.

CLASSIFICATION AND PATHOLOGY

With the uncertainty that exists as to the true pathology of renal tumours it is somewhat difficult to attempt any exact classification, but for clinical purposes the following will cover all forms of growth:

RENAL TISSUE	*Innocent* ...	Adenoma Fibroma Lipoma Angioma
	Malignant ...	Carcinoma—Papillary adenocarcinoma Alveolar adenocarcinoma Hypernephroma Sarcoma, including embryonic tumours
RENAL PELVIS	*Innocent* ...	Papilloma
	Malignant ...	Villous carcinoma Squamous epithelioma

* A clinical lecture delivered before the Fellowship of Medicine on November 24th, 1932.

The benign tumours of the renal parenchyma can be dismissed in a few words. They are usually found at post-mortem examinations, and very rarely give rise to any clinical symptoms. Adenomata are found as small rounded nodules, especially in a kidney affected with interstitial nephritis, and are of some interest in that they may form a focus in which carcinoma is likely to arise. Small fibromata and lipomata have been found in the kidney, and I[1] have described a case of cavernous angioma of the kidney which gave rise to such profuse haematuria as to necessitate nephrectomy as a life-saving measure. Only about twelve similar cases have been recorded.

The Neoplasms

It is the malignant new growths of the renal tissue that have caused so much discussion as to their true pathology. At one time they were variously classified as sarcoma and carcinoma, and the first great interest was kindled when, in 1883, Grawitz[2] published his paper describing these tumours as arising from "adrenal rests." The latter are small subcapsular islets of suprarenal tissue left in immediate conjunction with the renal cortex in the process of development. Grawitz based his opinion on the similarity of these cells to those of the suprarenal cortex—particularly in that they both contain fat and highly refractile particles—on the fact that the cells are quite unlike those of the normal renal tubule, and that the growths are found beneath the renal capsule, a place where adrenal rests are found. He also made a point of the occurrence of a fibrous core in the central part of the tumour, from which pass septa dividing the tumour into lobules. In 1893 Suder[3] described these Grawitzian growths as actually arising from the renal tubules, and in 1908 Stoerk[4] showed that the tumours had a papillary basis, an opinion which was upheld by Wright[5] in 1922, after a very critical examination of nineteen specimens of renal growths, most of which were removed from patients under my care in the Cancer Hospital. Doubt has been expressed by some as to whether aberrant suprarenal rests do actually occur under the renal capsule, but Shaw Dunn[6] and Ewing[7] definitely state that they do exist. Arguments have been put forward from the embryological side that these adrenal rests may originate from the remains of the Wolffian ridge, from which the testes and ovaries are developed, and in which organs somewhat similar tumours have been rarely recorded. These tumours, however, differ from renal tumours in that they contain no fat and no haemorrhagic or necrotic areas, while they further possess a uniform structure. Though I cannot attempt to discuss the histogenesis of these tumours, there exists a very interesting specimen, which to my mind throws a good deal of light on the origin of them. This specimen was found in the kidney of a man aged 75 who died in the Cancer Hospital from advanced epithelioma of the tongue. He had no symptom referable to the urinary organs, but on post-mortem examination a small, rounded, yellowish tumour about 1½ cm. in diameter was found wholly embedded in the renal tissues. It was separated from the capsule of the kidney by a covering of normal renal substance quite 1 cm. in thickness, and thus could not possibly have originated from a subcapsular adrenal rest. In cross-section the growth is lobulated, necrotic in the centre, shows some small areas of haemorrhage, and is surrounded by a thin capsule. Histologically the structure is typical of a hypernephroma with large vacuolated cells.

Ewing, in his last work on *Neoplastic Diseases*, gives his opinion that these tumours arise in the renal epithelium, and divides them into papillary and alveolar adenocarcinoma, reserving the term "hypernephroma" for the rare tumours arising from adrenal rests. This divi[illegible]

eally confuses the issue, as the term " hypernephroma " as for many years been used to include all those renal umours which show areas of necrosis and haemorrhage, nd microscopically exhibit large vacuolated cells containing fat. It is by no means easy to classify these rowths from their histological appearances, as various arts of the same tumour seem to approximate to more han one variety, while in some vacuolation of the cells nay be due to fatty degeneration. After a critical survey of these growths at the Cancer Hospital by Dr. Piney and Dr. Hawksley, I have separated those showing a distinct papillary or alveolar structure into separate classes, and collected all those showing masses of large, clear, vacuolated cells into another group, for which I have retained the term " hypernephroma," as will be seen in the tabulated list of cases.

It should be recognized that these growths are really all carcinomata, and that the word " hypernephroma " is unfortunate, as it implies a growth arising in an adrenal rest; in fact, Hugh Young[9] suggests that it should be given up and the term " nephroma " used to cover all these growths. For the present I look upon them all under the generic term of " carcinoma," although I must admit that they differ very largely in their virulence towards metastatic spread, some remaining localized to the kidney for months or years, whilst others rapidly infiltrate the kidney and give rise to early metastases.

There remains the group which I have included in the classification as sarcomata. Sarcomata of the kidney form a small proportion of malignant tumours, and may exist as round, spindle-celled, or mixed-celled growths, sometimes including striped or even unstriped muscle fibres or other forms of developed tissue. In one particular form, described by Wilms[2] as embryonic adenosarcoma, there are, in addition to muscle fibres, cartilage, or fat, masses of tubules lined by cuboidal epithelial cells. The tumours occur usually in infants and children under 5 years of age, but may, like other sarcomata, be found in adults. Sarcomata rarely cause haemorrhage, but first attract attention by the appearance of a tumour in the loin, which rapidly increases in size and which is exceedingly malignant.

Hypernephroma

Carcinomata are growths of later age, and in my series of fifty-one cases the following table gives the ages in decades:

Decade	No. Cases	Percentage	Decade	No. Cases	Percentage
30 to 39 years	1	1.9	51 to 60 years	19	37.2
41 to 40 ,,	2	3.9	61 to 70 ,,	11	21.5
41 to 50 ,,	13	25.4	71 to 80 ,,	5	9.8

These figures approximate very closely with those given by Garceau[10] in 176 cases. The youngest case in my series was that of a woman of 27, who was under the care of my colleague Mr. Percival Cole for enlarged glands in the left supraclavicular fossa. On removal these presented the histological appearance of hypernephroma. Later on, the patient developed haematuria and died with further glandular metastases from a large hypernephroma of the left kidney. The oldest patient was aged 75—the one who died from epithelioma of the tongue, and in whom the very early carcinoma of the kidney was found. There were thirty-two men and nineteen women presenting hypernephromata, and, whereas most authorities record a larger percentage occurring on the right side, in my series there are thirty-two on the left to eighteen on the right. In one case the side has not been mentioned.

The tumour may occur in any part of the kidney, though it is most frequently found in the upper or lower pole. In some cases it arises in the central portion extending into the hilum, and in two cases it seemed to cause hydronephrosis by direct pressure on the pelvis of the kidney. It is at first globular in shape, surrounded by a fibrous capsule of varying thickness and compressing the adjacent renal tissue—almost suggesting an innocent tumour—though in some cases this capsule is absent and the growth directly invades the kidney substance. On section the macroscopic appearance is fairly characteristic. The surface presents a mottled, lobulated, or mosaic appearance, divided into lobules by the fibrous septa. There will be seen areas of haemorrhage, some of fresh blood and others of organizing clot. Areas of necrosis are also found, occasionally to a fluid consistency. The growth gradually extends, invading a calix and causing haematuria ; it also tends to spread into the veins, reaching the renal vein and giving rise to metastases in the lungs via the vena cava. The growth may gradually distend the kidney, or may form a rounded projection from it, infiltrating the capsule and spreading into the perirenal fat. In this way it may, in advanced cases, become adherent to the diaphragm, liver, or colon. Extension may also occur in the lymphatic glands along the abdominal aorta, to the mediastinal glands, or even to the cervical or inguinal glands. The most common metastatic deposits are seen in the lungs, in the liver, and in the bones—especially in the bodies of the vertebrae—whilst in two cases secondary growth was present in the humerus and femur, causing a spontaneous fracture in the latter.

SYMPTOMATOLOGY

The prominent symptoms of renal growth are haematuria, tumour, and pain.

Haematuria is the most common symptom, and in the majority of cases is the first to attract the attention of the patient. It is present in over 90 per cent. of all cases, and occurs as the initial symptom in nearly 70 per cent. The blood may be slight from the surrounding nephritis, or it may more frequently be due to the direct involvement of a calix or the renal pelvis by the growth. It is often profuse and accompanied by the passage of worm-like clots, and sometimes seems to follow exertion or injury. In one case haemorrhage followed a fall and in another it occurred after mountain climbing. It is usually sudden in onset, may last several days, and then clear away to recur after a time varying from weeks to months. In one case under my care attacks of fairly profuse haematuria had been present for four years before nephrectomy was performed, and this patient still remains well seven years after his kidney was removed. More usually, however, the initial attack of haematuria has been within twelve months of the patient first coming under observation. Haematuria occurs in all forms of growth, but is infrequent with the sarcomata and the embryonal tumours of children. In the intervals between the attacks of profuse haematuria, microscopic blood may be present in the urine from haemorrhage in the compressed renal tubules surrounding the growth. In cases of profuse haematuria clots may be formed in the renal pelvis and ureter, the passage down which may cause pain very similar to renal colic. The clots are thin, rounded, and worm-like in shape, and if found in the urine are certainly indicative of a severe renal bleeding. It should be stated that the severity of the haemorrhage bears no relation to the size of the growth, for I have seen quite small growths give rise to profuse bleeding, and large growths which have caused no macroscopic blood in the urine.

In one case a man, aged 49, was found to have a palpable tumour in the left subcostal area, and was thought by a surgeon in South Africa to have a carcinoma of the colon.

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On laparotomy a renal tumour was found, the incision was closed, and he was subsequently sent to England. He had no haematuria at any time, but a pyelographic examination showed considerable deformity of the renal pelvis and calices. Nephrectomy was performed, when an extensive growth was found, and the patient developed metastases in the abdominal glands after a year.

A small central growth may invade the pelvis of the kidney comparatively early in its spread, and so give rise to haemorrhage.

Pain is present in some form in the majority of cases. It may be severe from ureteric colic, when clots pass down the ureter, or there may be pain and frequent desire to pass urine from retention of clots in the bladder. There may be occasional attacks of lumbar aching, due to increased tension in the kidney from small haemorrhages into the growth, or more or less continuous aching in the loin from involvement of the tissues surrounding the kidney. In advanced cases it may exist as a nerve pain due to pressure on nerve roots from metastases in the vertebral bodies. I cannot trace any relation or difference in the pain experienced in growths of the upper, as compared with the lower, pole of the kidney.

A *tumour* may be palpable, and in children is usually the first sign of a renal sarcoma. If the tumour is large it causes a rounded swelling, which can be grasped bimanually and felt to descend on inspiration. The colon occupies a position anterior to it and may be palpated, or may produce a resonant note on percussion. The mass is usually smooth, but in some cases and in thin subjects rounded bosses can be detected on the surface. A tumour of the upper pole may not be palpable, but the lower pole of the kidney may be felt to descend to more than a normal extent on deep inspiration. In one case under my care a fairly large tumour of the upper pole of the right kidney dislocated the liver around a transverse axis, so that the anterior hepatic margin descended well below the costal margin. A renal tumour which appears fixed in the loin implies that perirenal infiltration has already taken place, and is a bad prognostic indication.

Albumin may be present in the urine, in some cases due to traces of blood, in others due to nephritis. Albarran states that it may result from toxic nephritis in the other kidney. Pyuria is rarely present unless the kidney is also the seat of calculous disease. In this series of cases calculus was present in two instances—one in which carcinoma was associated with pyonephrosis, and another where there was epithelioma of the renal pelvis. *Varicocele* has been stated to be frequently present, but I can only find a note of this in two out of fifty-one cases. If it is present and does not disappear upon lying down, it may be due to pressure on the spermatic vein by the growth or by glands, or possibly to extension of the growth into the renal vein. *Pyrexia* was present in two cases in the absence of any infection. It is stated by Israel[11] to be fairly frequent, but I cannot confirm this.

DIAGNOSIS

The combination of haematuria, localized lumbar pain, and the palpation of a tumour in the renal area should form fairly conclusive evidence of a new growth in the kidney. In calculous disease pyuria will be present, whilst in polycystic disease both kidneys will nearly always be palpable, although one may be much larger than the other. In tuberculous disease the kidney is rarely very much enlarged, pus is present in the urine, the average age is between 15 and 30 years, tubercle bacilli may be found, and increased frequency of micturition is a prominent symptom. Haematuria may occur with hydronephrosis.

In cases where haematuria is the only symptom it cannot be too strongly urged that further and complete urinary examination should be immediately carried out. So often do we see cases in which intermittent attacks of profuse haematuria have cleared up with rest, and the patient—and probably the doctor—has been lulled into a sense of false security and valuable time has been lost in which the growth is spreading or metastases have occurred. No one would leave a case of haemoptysis or haematemesis without full examination—why leave a case of haematuria? Haematuria should be looked upon as a symptom which may be of grave import, and therefore demanding complete examination.

Cystoscopic examination should be insisted upon. I am often asked if cystoscopy should be carried out during a period of haematuria, to which my reply is that I prefer it then. If the bleeding comes from the kidney, irrigation of the bladder will quickly produce a clear medium, blood may be seen to be emitted from one ureteric orifice, and the haematuria immediately localized to that kidney. On the other hand, should the bleeding come from a vesical growth or an enlarged prostate, careful irrigation with silver nitrate solution 1 in 4,000 or adrenaline will usually produce a medium clear enough for diagnostic purposes. The two most likely causes of painless intermittent haematuria are growth of some type in the bladder or in the kidney. I have seen cases in which haematuria has been accompanied by aching in the loin and by a renal tumour, in which cystoscopic examination showed the presence of a growth in the bladder obstructing the ureteric orifice and causing hydronephrosis.

In cases of renal growth in which haematuria is absent or has ceased, ordinary cystoscopic examination does not give any information, as the vesical wall and ureteric orifices are normal. In some cases the elimination of indigo-carmine from the kidney, after an intravenous injection of 2 c.cm. of a 0.4 per cent. solution, is absent or delayed, but in cases in which the renal tissue is not much destroyed the dye may be present within normal time. Segregation of the urines by ureteric catheter may show a low urea content on the affected side, especially if urea has been administered some one and a half hours before the examination. Personally I carry out these tests in order to ascertain the functional activity of the presumed unaffected kidney rather than for diagnostic purposes. No reliance can be placed on the presence of blood in the urine drawn off by ureteric catheterization, as it may be due to the passage of the catheter.

Pyelography is of great value in these cases, and should always be carried out whenever any doubt exists. A plain *x*-ray may show an increased area of density in one renal area, but it is rarely to be relied upon. Pyelography may be carried out by intravenous injection of uroselectan B or by direct injection of the renal pelvis and calices by a solution of sodium bromide after ureteric catheterization, or it may be necessary to confirm or supplement the findings of the first method by the second. In a case of growth in the kidney there may be marked deformity or even absence of some of the calices, or of the pelvis of the kidney, depending upon the position and extent of the growth. No definite configuration can be laid down as there are very considerable variations, and in an early case there may only be elongation of one calix, with possibly a concavity of one aspect suggesting the rounded, bulging periphery of a tumour. In polycystic disease all the calices are elongated into spidery processes, and in one case in which I diagnosed a growth from pressure upon, and deformity of, a lower calix of an enlarged kidney, I found on operation the lower pole occupied by a large unilocular cyst.

In those cases in which tumour is the only symptom—as usually occurs in renal growths in children—there may be difficulty in diagnosis from tumours of the spleen, liver, or gall-bladder, or of the colon, but a pyelograph

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INNOCENT NEW GROWTHS OF KIDNEY

Initials	Sex	Age	Side	Initial Symptom	Operation	Histological Examination	Remarks
A. S.	M	19	L.	Profuse haematuria	Nephrectomy	Cavernous angioma	Recovery

MALIGNANT NEW GROWTHS OF KIDNEY

	Initials	Sex	Age	Side	Initial Symptom	Operation	Histological Examination	Remarks
	SARCOMATA							
	A. L.	M.	54	L.	P. and H.	Nephrectomy	Mixed-celled sarcoma	Recurrence in scar and in lungs in 8 months
	J. D.	M.	71	L.	H.	,,	Leio-myosarcoma	Well after 12 months
	E. Y.	M.	6 mos.	R.	T.	,,	Emb. adenosarcoma (Wilms)	Died 6 weeks later. Metastases in chest
	J. R.	M.	6	—	T.	,,	Mixed-celled sarcoma	—
	J. P.	M.	2	R.	T. no H.	,,	Emb. adenosarcoma (Wilms)	Well 2 years 7 months after
	L. S.	F.	10	L.	T. no H	None	—	Clinical diagnosis: sarcoma
	J. C.	F.	2	L.	T.	,,	Adenosarcoma	P.M. specimen: Adherent colon; metastases in lung and portal fissure
	T. A.	M.	55	L.	H.	Exploration and biopsy	Spindle-celled sarcoma	Capsule infiltrated; not removable
	CARCINOMATA:—1. Papillary Adenocarcinomata (Ewing)							
1	A. F.	M.	50	L.	H.	Nephrectomy	Papillary adeno-carcinoma with gran. cells	Well after 6 years
1	M. C.	F.	53	L.	T.	,,	,,	Died pneumonia 5 days after operation
2	C. N.	F.	55	R.	P.	None	Papillary adeno-carcinoma	P.M. Metastases in abdominal glands and lumbar spine
3	H. L.	M.	72	L.	H.	Nephrectomy	,,	Well for 7 years; died of influenza
4	Mrs. P.	F.	59	R.	H.	,,	,,	Died after 6 months. Metastases in lung
5	A. S.	M.	35	L.	H.	None	,,	P.M. specimen
	2. Alveolar Adenocarcinomata (Ewing)							
6	C. B.	M.	63	R.	F.	Exploration	Alveolar adenocarcinoma	Kidney contained 7 calculi and was distended with pus and soft growth. Died 6 hours after operation
7	M. S.	F.	58	R.	H.	Nephrectomy	,,	Cerebral embolism 2½ years later. No recurrence
8	M. I.	F.	43	L.	T.	,,	,,	Well 2½ years later
9	A. S.	M.	54	R.	H.	,,	,,	Well 1 year 7 months after operation
10	W. P.	M.	67	R.	H.	,,	,,	Well 6 months after
11	E. V.	M.	50	L.	H.	,,	,,	Recurrence in scar, iliac fossa, and lung. Died after 4 months
12	I. F.	M.	63	L.	P.	Exploration	,,	P.M. specimen. Metastases lumbar vertebrae
13	J. C.	M.	57	L.	P.	None	,,	Spontaneous fracture of femur. Later haematuria and death 3 years after fracture. Metastases in lung and heart
14	J. B.	M.	50	L.	H.	,,	,,	P.M. specimen
	3. Hypernephromata							
25	A. H.	M.	63	R.	P.	Nephrectomy	Hypernephroma	Died 13 days after operation. Nephritis
26	W. W.	M.	43	R.	H.	,,	,,	Adherent to diaphragm. Recurred
27	A. W.	M.	73	L.	H.	,,	,,	Growth in renal vein
28	M. B.	F.	52	L.	H.	,,	,,	Well after 10 years. Renal dilatation from pelvic pressure
29	J. S.	M	61	L.	H.	,,	,,	Well after 9 years
30	L. U.	M.	49	L.	H.	,,	,,	—
31	A. R.	F.	41	R.	H.	,,	,,	Growth in renal vein. Recurred abdominal glands
32	M. J.	F.	47	L.	H.	,,	,,	—
33	A. I.	F.	58	R.	P.	,,	,,	Hydronephrosis from pressure on pelvis
34	G. J.	M.	49	R.	P.	,,	,,	Died from shock after operation
35	R. C.	M.	49	L.	P.	,,	,,	Died after 1 month
36	Ford	M.	53	L.	T.	,,	,,	Growth in renal vein
37	J. S.	M.	51	L.	H.	,,	,,	Capsule infiltrated. Recurrence 8 months
38	J. T.	F.	63	R.	P.	,,	,,	—
39	C. J.	M.	57	L.	H.	,,	,,	Well after 9 years
40	J. H. T.	M.	59	L.	H.	,,	,,	Local recurrence. Died 1 year after
41	J. S.	M.	55	L.	H.	,,	,,	Well after 12 years
42	W. P. G.	M.	63	L.	H.	,,	,,	Well after 7 years
43	J. B.	M.	53	R.	H.	,,	,,	Died 2 years later; recurrence in liver
44	M. Y.	F.	47	L.	H.	,,	,,	Died 1 year 9 months later; recurrence in lung
45	J. F. D.	M.	49	L.	T.	,,	,,	Died with abdominal recurrence 1 year later
46	Mrs. T.	F.	70	R.	H.	,,	,,	Alive 10 months after, but has nephritis
47	W. L.	M.	53	R.	H.	,,	,,	Only 3 months since operation
48	A. C.	F.	53	R.	T.	Exploration	No section	Too extensive to remove
49	M. M.	F.	60	L.	H.	None	,,	Clinical diagnosis
50	M. C.	F.	27	L.	P.	,,	Hypernephroma	P.M. specimen. Metastases cervical and abdominal glands
51	F. H.	M.	61	R.	H.	Exploration	No section	Adherent to liver and colon: irremovable
52	E. W.	F.	73	L.	H.	None	Hypernephroma	P.M. Metastases liver, thoracic glands, and vertebrae
53	C. C.	F.	59	L.	H.	Exploration	,,	Aortic glands involved
54	W. N.	M.	74	L.	H.	None	,,	P.M. specimen. Metastases in lung and liver
55	P.	F.	47	L.	P.	,,	,,	P.M. specimen. Deposit in pelvic bones
56	McL.	M.	75	—	—	,,	,,	Very early growth found on P.M. Death from cancer of tongue
57	A. C.	M.	62	L.	—	,,	,,	P.M. specimen. Death from cancer of rectum
58	E. T.	M.	53	R.	T.	Exploration	,,	Inoperable; metastases head of humerus
59	P. C.	M.	61	L.	T.	None	No section	Clinical diagnosis
60	A. G.	F.	40	L.	H.	Exploration		Clinical diagnosis; too fixed to remove

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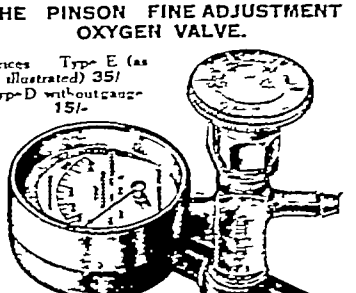

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NEW GROWTHS OF THE RENAL PELVIS

	Initials	Sex	Age	Side	Initial Symptom	Operation	Histological Examination	Remarks
	INNOCENT:—Papilloma of pelvis							
61	G. P.	M.	68	R.	H.	Nephrectomy	Papilloma, non-malignant	—
	MALIGNANT:—1. Villous-covered carcinoma of pelvis							
62	—	F.	53	R.	H.	,,	Villous carcinoma of pelvis	Recurrence in lumbar glands 15 months later
63	A. C.	M.	58	—	H.	,,	,, ,, ,,	Recent case
	2. Epithelioma of Renal Pelvis							
64	E. J.	M.	54	R.	P.	,,	Epithelioma involving middle calix and infiltrating kidney	Calculus in pelvis of kidney
65	G. W.	M.	64	L.	H.	,,	Squamous-celled carcinoma	—

NOTE.—H. denotes haematuria. P. denotes pain. T. denotes tumour.

examination will usually determine a lesion in the kidney or prove it to be normal. In every case in which a carcinoma is suspected an *x*-ray examination should be made of the chest and of the skeleton to search for any metastatic deposit of the growth.

GROWTHS OF THE RENAL PELVIS

New growths arising in the renal pelvis are distinctly uncommon, and are very similar to the growths seen in the bladder. A villous papilloma of the renal pelvis may give rise to intermittent profuse haematuria, and from its position cause recurrent renal distension, with pain and a tumour of varying size in the loin. A significant feature of these growths is their tendency to multiplicity. Thus, small tumours may be present in the ureter or in the bladder, and small tufts of papillomatous growth have been seen to be extruded from the ureteric orifice upon cystoscopic examination. A more common form of growth in the renal pelvis is the villous-covered, or papillary, carcinoma, in which malignant infiltration occurs in the pelvic wall and also directly into the renal tissue. Squamous epithelioma also occurs, probably in cases of old-standing infection of the pelvis, and in the only case to which I can refer, a calculus was present in the pelvis of the kidney.

All these forms of growth may cause hydro- or haematonephrosis from obstruction to the pelvic outlet, and in the malignant forms spread to the lymphatic glands about the renal vessels seems to appear early. They all cause haematuria, but a diagnosis is rarely made before operation, though a pyelographic examination may show an absence of, or filling defect in, the renal pelvis.

TREATMENT

Nephrectomy, with removal of the perirenal fatty tissue and the lymphatic glands along the aorta and vena cava, is the only procedure which gives prospect of success, but before any operation is undertaken a careful examination must be made for metastatic spread in other organs and also of the functional capacity of the other kidney. Immobility of a kidney which is the seat of a growth implies that perirenal infiltration has occurred, and it must be remembered that the removal of a renal tumour may be a very difficult operation, trouble being frequently encountered from profuse bleeding from the dilated, thin-walled vessels covering the growths. The operation often commences as an exploration of the kidney for unilateral haematuria, when the renal fatty tissue is necessarily opened, but if a firm swelling is palpated in the kidney it is better to proceed immediately to nephrectomy and subsequent removal of the fatty tissue and glands than to incur the strong probability of early local recurrence by direct incision of the renal cortex. If a diagnosis of growth has been made the kidney should be removed together with the fatty capsule, lymphatic, and suprarenal glands in one mass. The question of operative route varies with individual surgeons, but the transperitoneal operation holds advantages for large tumours. A preliminary exploration will show the extent of glandular invasion, or may even show that the peritoneum is directly involved, but it has the additional advantage that haemorrhage may be more effectually controlled by early ligature of the renal vessels. Greater freedom is also found in separating the upper pole of the kidney, which may be so difficult in these cases where large veins are lacerated early in the operation by the lumbar route. Gregoire has described an extraperitoneal operation from an anterior incision which is very useful in these cases. The chief danger in the operation is haemorrhage from the dilated veins, whilst the renal vein may be easily lacerated if it contains growth. Injury to the vena cava can also occur, and may require lateral suture.

RESULTS

Of fifty-one cases of carcinoma operation was not advised in six cases owing to the extent of the disease or because of the presence of metastases. A total of thirty-nine underwent operations, but in seven the growth was found too extensive for removal. The remaining thirty-two had nephrectomy performed. Of these, five died as the result of the operation—two from shock, one from pneumonia, and two within a month of the operation, one death being due to nephritis. Ten have subsequently succumbed from recurrence of the disease at intervals varying from four months to over two years, the most common seat of recurrence being the abdominal glands, in the lungs, the liver, and the bones. The fate of four is unknown. Thirteen patients recovered from the operation, but of these two have subsequently died from intercurrent disease—one from acute post-influenzal pneumonia after seven years, and one from cerebral haemorrhage after five and a half years. Including these two cases, the interval since the operation has been: twelve years, 1 case; ten years, 1 case; nine years, two cases; seven years, 2 cases; six years, 1 case; five and a half years, 1 case; two and a half years, 1 case; under two years, 4 cases.

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MUSCLE EXTRACT TREATMENT OF INTERMITTENT CLAUDICATION

BY

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During the last few years much interest has been aroused by various papers, appearing chiefly on the Continent, on the treatment of circulatory disorders with extracts of mammalian muscle. In 1929 L. Haberlandt obtained an extract from the sinus of the frog's heart which increased the force of the ventricular contraction. He called this substance "Das Herzhormon" (heart hormone). Later G. Zuelzer obtained an extract from the liver which he called "eutonon," and which was said to have a similar action. Since then numerous other muscle and glandular extracts, such as myoston (myol 111), hormocardial, kallikrein, and lacarnol have been used for various types of circulatory troubles. Since the chief action of these muscle extracts is to dilate the coronary arteries and peripheral vessels, they have been used in such conditions as angina pectoris, thrombo-angiitis obliterans, intermittent claudication, etc. Many observers have published favourable results in angina pectoris.[1 2 3 4] M. S. Schwartzman used muscle extract in the treatment of intermittent claudication and similar peripheral vascular diseases and obtained very favourable results.[5] The extract he used was myol 111, and in a few cases myoston.

I have treated a series of ten cases of intermittent claudication with muscle extract using lacarnol and padutin (kallikrein) prepared by Bayer. Lacarnol is a nucleoside extract prepared from mammalian skeletal muscle. It does not contain histamine, and is free from suprarenin and choline. The exact chemical nature of the active principle has not yet been determined, but it is probably a non-specific chemical substance, present in many animal tissues, containing adenosin. Padutin is an extract obtained from the pancreas, but is quite distinct from insulin; it is a complex chemical substance the formula of which is at present unknown. The most important action of these extracts is their vaso-dilatation effect on the arterioles of the periphery, and the dilatation of the coronary arteries.

Of these ten cases of intermittent claudication all except one showed some definite degree of improvement after treatment with muscle extract. The one exception was an advanced case of general arteriosclerosis with calcified arteries. Some of the cases had been progressively deteriorating in spite of all other methods of treatment, but after administration of muscle extract remarkable improvement occurred; in the words of one patient he "felt ten years younger in activity." The extract was first injected into the gluteus muscle; a course of six daily injections of one ampoule was given, followed by 20 minims of the extract by the mouth, three times a day, for some weeks. A general examination was then made, the amount of improvement noted with particular regard to the intensity of pain, the distance the patient was able to walk free of pain, pace, and frequency of attacks. Further courses of treatment were then given until the maximum improvement was obtained.

Space will not allow me to record the ten cases in detail, all of which have maintained their improvement for over six months and several for over twelve months; I will therefore briefly describe the first three. As the patient in Case I was a highly educated and intelligent person who described his symptoms very accurately I will record his case more fully.

CASE I

The patient, a man aged 55, had no history of venereal disease, alcoholism, or tobacco smoking, nor had he had any previous serious illness. He had always been a keen sportsman; he played tennis and golf, and was fond of shooting, swimming, etc. In 1924 he began to have severe cramp-like pains in the right leg localized to the calf muscles. The pains came on after walking a short distance, particularly if uphill and in cold weather. He could not walk faster than two miles an hour, and when the pains came on he had to stop for a few seconds, when the pains disappeared and he could walk on. In 1927 the left leg began to give similar trouble, and he had to give up his daily round of golf.

On examination the heart was normal in size and the heart sounds normal; blood pressure was 145/95. There was no thickening of the superficial arteries. The femoral arteries were palpable, but the posterior tibial arteries were not. The feet were cold but not blue. The nervous system was quite normal: knee-jerk and pupil reflexes normal. Before coming under my care the patient had been all over Europe trying to find some relief for his leg condition. Electric treatment such as radiant heat and diathermy had been applied, vaccines for protein shock had been given, and various mud baths, etc., administered, but without relief; the patient himself said "life was a misery to him."

Treatment.—I gave the patient a course of six intramuscular injections of lacarnol followed by the extract per os. He then wrote to me stating he found "his legs greatly improved, being able to walk much more quickly without inconvenience for about 500 yards. When the pain does come on it is much less acute than it was before treatment, even when I push the pace when it comes on." After an interval I gave him another course of injections. He subsequently wrote to me stating that "the sensation of cramp in the calf of the legs has not been apparent at all. The trouble is now definitely lower down the leg, and feels to be between the calf and ankle." I gave him a third and final course of injections, after which he sent me a report of his condition, stating that "there was a marked improvement. I am walking more quickly and in greater comfort than since the trouble began. There is now never any feeling of cramp or severe pains, but occasionally an aching, tired feeling after walking some distance. I can now walk in comparative comfort at three miles per hour, and can play and enjoy a round of golf." This patient is still keeping well, although he has had no treatment for some months.

CASE II

In this case, that of an engineer aged 57, the cramp-like pains in the calves of the legs on walking some distance had started four years previously. He had to stop, when the pains would cease and he could then resume his walk. Recently the pains had become more frequent, so that he could only walk a hundred yards without discomfort. On examination the superficial arteries were hard and calcified. There was no pulse in the posterior tibial or dorsalis pedis arteries. The lower limbs were cold and blue. The heart, knee-jerk, pupil reflexes, etc., were normal. Blood pressure 160/90.

Treatment.—The patient had had various medical treatments with no signs of improvement. I gave him two courses of injections of lacarnol, followed by the extract per os for some weeks. At the final examination he stated that he no longer suffered from any pain on walking; he could walk a greater distance in comfort and at a quicker pace. A feeling of stiffness came on if he walked too fast or for too long at a time. There was some pulsation in the posterior tibial arteries. The limbs were warmer and not blue, and the blood pressure was 140/85.

CASE III

A commercial traveller, aged 62, had complained since 1928 of pain in the legs on walking fast or uphill. Resting a few seconds relieved him, but lately the pain had become more intense and more frequent; he also had an occasional tight feeling over the sternum on exertion. There was no history of any previous illness. He was a teetotaler and moderate smoker; he had given up tobacco on his doctor's advice, but the pains still persisted on effort. On examination no

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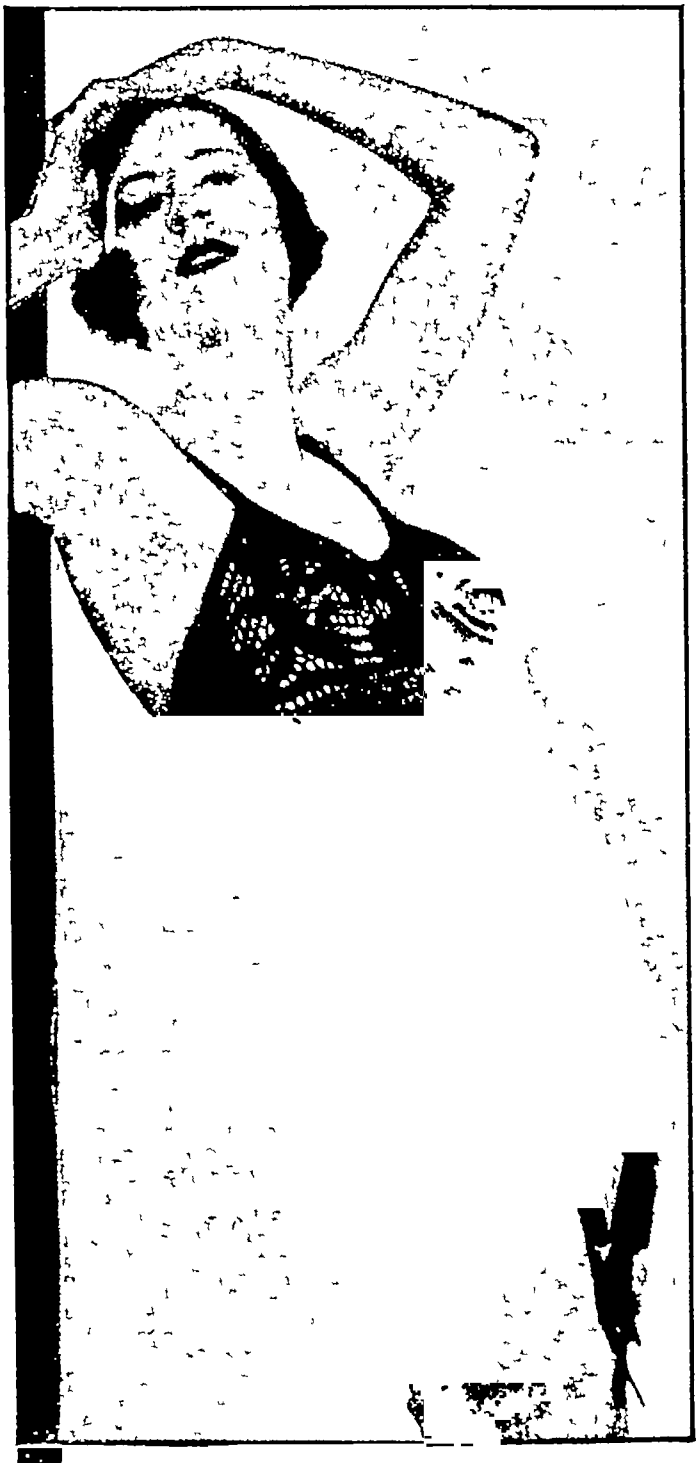

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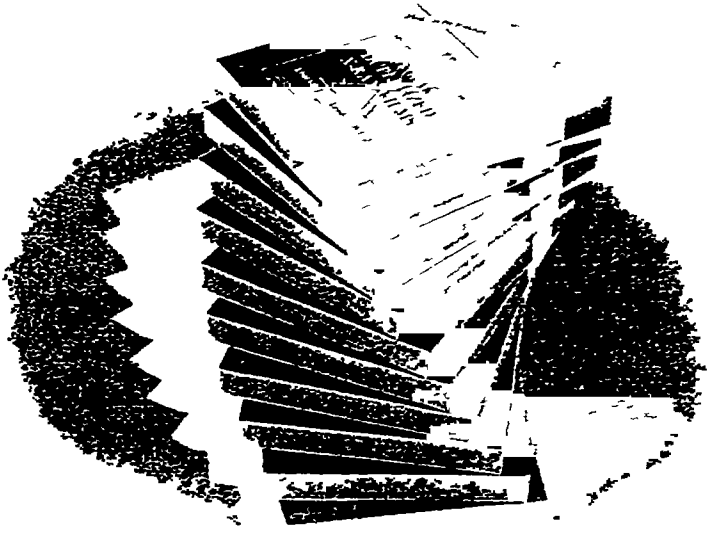

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abnormality was made out in the heart apart from an accentuated aortic second sound. The blood pressure was raised 180/110. There was no albuminuria or enlargement of liver or spleen. Reflexes were normal.

Treatment.—After two courses of intramuscular injections of padutin his symptoms were relieved to a certain extent but, in his own words, he was "still unable to walk smartly, particularly if the weather was cold, for more than about 200 yards without having to slow down." I then gave him two more courses of lacarnol, and there was then more definite improvement in his legs as well as in his chest. He can now "walk for an hour and three-quarters, in spite of a strong head wind, without discomfort."

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Memoranda

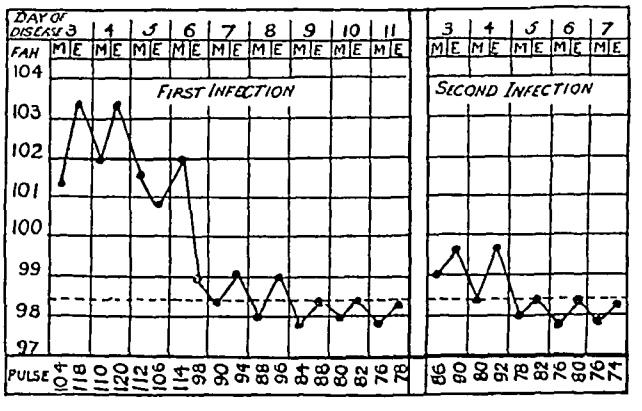
MEDICAL, SURGICAL, OBSTETRICAL

RECURRENCE OF MALIGNANT PUSTULE

Cutaneous anthrax is by no means rare in Iraq, but as this country has a large export trade in hides and wool the actual existence of the infection can hardly occasion surprise. The literature contains but few references to recurrence of the infection, and the case about to be recorded represents the first instance of the phenomenon in my experience here. Since cases of recurrence afford, to some extent, indication of the period of immunity which infection with *B. anthracis* confers, a further example may be of sufficient interest to merit publication. Reviewing the cases previously recorded, the time interval in the following appears to have been exceptionally short, sixteen months only having elapsed between the two infections.

CASE HISTORY

An Englishman, aged 30, who was employed by a British firm in the purchase and exportation of sheep's wool, consulted me on the morning of February 4th, 1931, complaining of a "boil" on the left side of the neck about an inch below



the centre of the lower jaw. Thirty-six hours previously he had first noticed a small red papule, and when examined by me the lesion had become vesiculo-pustular, and had a central blackened scab. A wide zone of inflammatory oedema, characteristically brawny, surrounded the pustule, itself ringed by an incomplete circle of small secondary vesicles. Pain was slight but tenderness marked. The temperature was 101.4°, pulse 104, and the patient complained of malaise and severe headache; toxic symptoms, however, were not pronounced. Smears from the pustule revealed *B. anthracis* in large numbers, the identity of the infective organism being confirmed later by culture. Forty c.cm. of Sclavo's serum was at once administered subcutaneously, and the patient was admitted to the Civil Isolation Hospital, Bagdad.

By the evening the temperature had risen to 103.4°, the pulse was 118, and the general symptoms were much more severe. A further 20 c.cm. of serum was injected subcutaneously. The temperature on the following morning (February 5th) was 102° and the pulse 110, when a further 40 c.cm. of serum was given subcutaneously. That evening the temperature was 103.4° and the pulse 120, but neither general nor local symptoms showed aggravation. On the following morning (February 6th) the patient felt very much better; the local condition too showed decided improvement. The temperature, however, was 101.6° and the pulse 112; a further 20 c.cm. of serum was injected. By the evening, following a series of profuse sweats during the afternoon, a further improvement was noted; the temperature was 100.8° and the pulse 106. The next morning (February 7th) the temperature had risen to 102°, but the patient was obviously so much better that no further serum was injected. By evening the temperature had fallen to 99°, and by the morning of February 8th had reached normal. For the two following nights the temperature rose to 99°, but convalescence was rapid and uninterrupted. The patient was discharged from hospital on February 17th, the lesion having completely healed, leaving at the site a slightly depressed irregular rounded scar about half an inch in diameter. The left side of the neck was still swollen and extremely indurated. The induration disappeared very slowly, persisting for several months. It was associated with contracture of the superficial tissues of the neck, evidence of which still remains and is the cause of slight limitation of neck movements.

RECURRENCE OF INFECTION

On discharge the patient resumed his former employment. On May 28th, 1932, he again consulted me for what he described as "three septic mosquito bites." There were three small pustules situated triangularly above the right orbit; two were half an inch from each other just above the eyebrow, and the third an inch higher. There was no definite evidence of the pustules being insect bites, but their multiplicity was at least suggestive. The three lesions had been noticed in the form of minute red papules a little over two days previously. When I saw the patient each pustule was scantily surrounded by small vesicles, and both right eyelids were very swollen and the eye almost closed. Constitutional symptoms were slight, the temperature only 99° and the pulse 86.

Smears and cultures again identified *B. anthracis*. The patient was readmitted to the Civil Isolation Hospital, and 20 c.cm. of Sclavo's serum was at once administered subcutaneously. The evening temperature was 99.5° and the pulse 90; the patient complained of a headache, but otherwise the symptoms showed no aggravation. The temperature had fallen to normal by the following morning, and the patient felt a little better. The three pustules had dried considerably, and were covered by dry black scabs; the eye, however, was still closed. A further 20 c.cm. of serum was injected. The temperature rose to 99.4° at night, but was subnormal the next morning; fever did not recur. Convalescence was rapid. The lesions were completely healed by June 4th, on which date the patient was discharged. Three very small depressed scars remained, but the oedema had almost completely disappeared.

SUMMARY

Second attacks of malignant pustule are rare, and recorded cases suggest that any immunity produced by infection is comparatively short-lived. In this case the extreme mildness of the symptoms of the second attack suggests the existence of partial immunity after a lapse of sixteen months. In conclusion, I would emphasize the therapeutic value of the appropriate serum in this infection. My experience of the condition in Iraq prompts me to the belief that excision of the pustule is inadvisable, and that early and adequate administration of serum constitutes the essence of successful treatment.

H. C. SINDERSON, PASHA, M.D., F.R.C.P.Ed.
D.T.M. and H.Eng.
Professor of Medicine, Royal College of Medicine of Iraq.

Bagdad.

TUBERCULOUS MENINGITIS RESEMBLING CEREBRO-SPINAL FEVER

The following two cases of tuberculosis meningitis appear to be of interest for the manner in which, except for the absence of a rash, they completely resembled cerebro-spinal fever.

The patients, who were brothers, aged 6 and 3 respectively, were admitted to Hinckley Isolation Hospital early on October 7th, 1932, as cases of cerebro-spinal fever. The elder child had been ill for five days and the younger for three. They seemed typical cases of cerebro-spinal fever. All the classical signs of meningitis were present—sickness, coma, head retraction, strabismus, pupils unequal, muscular spasms, and Kernig's sign. There was, however, no rash. Lumbar puncture was performed, and to my surprise the fluid was quite clear in both cases. It was under increased, but not abnormally increased, pressure. The pathological report was as follows: "Both of these specimens contained a trace of albumin, but no sugar. They showed numerous small lymphocytes, which suggests tuberculosis, but no actual bacilli could be found. There were no pus cells and no micro-organisms. Cultures did not produce any growth." Although the tubercle bacillus was not isolated the fact that the fluid was quite clear and the presence of the numerous small lymphocytes made the report diagnostic. Both children died within twelve hours of admission.

The interest of the cases lies in the apparent infectious nature and rapid fatal termination. No source of infection could be elicited. There was no history of tuberculosis in the family, and previous to this illness both children had been healthy. The mother had had influenza about a week before but had recovered without complications. In every detail except for the absence of a rash they seemed cases of cerebro-spinal fever, the ultimate diagnosis resting with the result of the pathological report on the fluid.

I am indebted for this to Dr. Fairer, county medical officer of health, and also for permission to publish the cases.

Leicester. JAMES COOK, M.B., Ch.B.

Reports of Societies

PUERPERAL PYREXIA

At the meeting of the Section of Obstetrics and Gynaecology of the Royal Society of Medicine on March 17th Mr. L. CARNAC RIVETT read selected portions of a report on cases of puerperal pyrexia admitted to the isolation block of Queen Charlotte's Hospital between September, 1930, and December, 1932. This had been compiled by himself, Mr. Leslie Williams, Dr. Leonard Colebrook, and Dr. R. M. Fry, and was presented on behalf of the clinical and laboratory staffs of the hospital.

Of the cases concerned, 213 were received from Queen Charlotte's main hospital and its attached districts, and 320 were from outside sources. The mortality rate of the latter group was 19 per cent. Analysis of the Queen Charlotte's cases showed that of 9,500 booked cases 177 were transferred on account of pyrexia after delivery, and of these six died (3.5 per cent.), whereas out of 408 emergency admissions thirty-six were transferred, and of these seven died (19.4 per cent.). The total mortality rate for all Queen Charlotte's cases during the period under review was 1.3 per 1,000 deliveries. Mr. Rivett claimed that this low death rate, for an institution which admitted a large number of emergency cases, was due to the early transfer of febrile cases to the isolation block. Analysis of factors bearing on the incidence of infections brought out some interesting points. Nearly 50 per cent. of the cases admitted were following spontaneous delivery; three-fourths of the cases were primiparae; in forty-seven of the cases albuminuria had been noted during pregnancy; sepsis following assisted delivery was less lethal than the average for the whole series; high vaginal and cervical lacerations were found to be particularly serious. The cases had been separated into seven classes, on the basis of the chief clinical features. In this classification the term "sapraemia" did not appear. All cases of sepsis had been regarded as primary wound infection, which either remains limited to the site of inoculation, or spreads to the blood stream, or produces consecutive or remote lesions. Under the seven headings indicated correlation of clinical with laboratory findings had been made. In the section dealing with treatment, emphasis had been laid on the necessity for good food, fresh air, sunshine, and mental and physical rest. Glycerin injections into the uterus had been used as a routine method, and no other local treatment had been adopted except on account of severe puerperal haemorrhage. No evidence had been adduced for the use of serums, and vaccines had proved of benefit in only one small group of cases. Metarsenobillon had been tried in a considerable number of cases infected with haemolytic streptococci for the purpose of increasing the streptococcoidal power of the blood. The results appear to have supported the previously published opinions of Dr. Colebrook, based on experimental evidence. An analysis of the predominant pathological condition found at necropsy, of the bacteriology of the infection, and of the nature of the delivery had been combined in statistical tables. Much research had been carried out to determine the "source of the infection" in each individual case.

Dr. LEONARD COLEBROOK gave some details of the extensive bacteriological investigations for which he had been responsible. He described how treatment with metarsenobillon had been controlled by estimations of the bacterial content of the blood, and he also touched on the treatment of resistant *B. coli* urinary infections by means of ketogenic diets.

Dr. PYRAH, introduced by Professor Oldfield, read a paper entitled "Some observations on the pathology, diagnosis, and treatment of puerperal peritonitis." The material upon which the communication was based consisted of thirty-six cases of peritonitis following parturition, which had been under Professor Oldfield's care at Leeds. Of these twenty-five died. In seven cases operation was not undertaken, as the patients were almost moribund, and a further six cases survived less than twenty-four hours after operation. Out of twenty-nine cases operated upon, eleven recovered. Mr. Pyrah was of opinion that peritonitis is seldom a manifestation of a general blood infection. He had found that peritonitis developing within four days of labour was almost invariably fatal, but he had had more favourable results with later cases. He recorded an unusually high proportion of cases with uterine abscesses and abscesses in the appendages, several of which did well after drainage. He regarded early operation as of prime importance, and discussed at length the clinical points which have helped him in arriving at the decision to open the abdomen.

Mr. J. M. WYATT considered that the low mortality rate shown in Mr. Rivett's figures was due to the large proportion of anaerobic infections found. He had found on analysing his own cases that in 87 per cent., among seventy-nine cases of the severe type of puerperal infection, a haemolytic streptococcus was the infecting organism. With regard to peritonitis, he was uncertain as to the value of early operation. In 183 cases of this nature which had been under his charge there had been no spread above the level of the umbilicus in ninety-six, and ninety-three of them had made recovery without operation. In eighty-seven cases of generalized peritonitis in which he had performed laparotomy twenty-four had survived. Commenting on the excellent paper of Professor Oldfield and Mr. Pyrah, he said that he was surprised that they had not found acute diarrhoea a common symptom of generalizing peritonitis, as he had noted it in over 70 per cent. of his cases.

Dr. MALCOLM DONALDSON did not consider that Mr. Rivett had proved his case in favour of early exploration of the abdomen in puerperal peritonitis. Assuming that the method of defence of the peritoneum was to pour out lymph, it was not until fluid had accumulated in sufficient quantity to prevent further secretion that drainage could be of value. Mr. CLIFFORD WHITE was surprised

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that more stress had not been laid on the importance of an increasing pulse rate in the diagnosis of puerperal peritonitis. To get good response to treatment it was no good waiting for the appearance of all the classical signs and symptoms. Dr. O'DONEL BROWNE strongly supported the contention of Professor Oldfield and Mr. Pyrah that puerperal peritonitis was not a blood-borne infection. Once general peritonitis or septicaemia had developed no treatment was of avail. He advocated radical surgical treatment in the earlier stages of the infection. Professor OLDFIELD wished to make one criticism of Mr. Rivett's statistical tables relating to the incidence of puerperal fever. He considered that the figures would be of more value if the cases were divided into two groups: those that had been examined vaginally and those that had not. He was firmly convinced that infection was introduced from without, before, during, or after labour, in practically every case of puerperal fever. He emphasized that the most important diagnostic point in puerperal peritonitis was a change for the worse in the patient's general condition.

Mr. RIVETT, in reply, referred to the fact that three of the cases of fatal peritonitis were "B.B.A.'s." He thought that this fact upset Professor Oldfield's claim that infection occurred only as a consequence of intervention. He could not agree that the diagnosis of peritonitis was easy. In five of the Queen Charlotte's cases it was discovered unexpectedly at necropsy.

ASTHMA AND HAY FEVER

At a meeting of the Manchester Medical Society held on February 1st, with the president, Professor E. D. TELFORD, in the chair, Mr. F. HOLT DIGGLE and Dr. G. E. LOVEDAY opened a discussion on asthma and hay fever.

Mr. Diggle dealt with the nasal factor in asthma. After a brief reference to experimental work, in which definite bronchospasm had been produced by stimulation of the nasal mucosa, the speaker described the results which had followed nasal treatment in twenty-one patients from his own practice. His remarks were based on replies he had received to a questionary. Much confusion and discredit to nasal therapy had, he thought, been due to indiscriminate treatment without regard to the type of asthma. There were three broad groups—primary allergic asthma, secondary bronchial asthma, and bronchitic asthma. Nasal cauterization with the electric cautery, particularly in primary allergic asthmatics, still deserved a place in treatment, but such could not be expected to influence paroxysms which were dependent upon or associated with some form of respiratory infection, such as a nasal sinus suppuration or a bronchial infection. He agreed that cauterization seemed to produce the best results in apparently normal nasal passages, and the indication for it was often greater with an associated history of recurrent colds or sneezing, especially if such ushered in an asthmatic attack. Recurrent colds and sneezing usually signified an associated nasal form of allergism—namely, spasmodic [illegible]itis—and in the interim the nose not infrequently [illegible] more or less normal appearance, though occa[illegible]mucosa had a pale bluish tinge. Under [illegible] also advocated the correction of [illegible]itation, such as enlarged middle [illegible]asal septa, etc., which, during [illegible] an associated vasomotor [illegible]re on the nasal spasmogenic [illegible]y relief or great improve[illegible]ment cure seemed, on the [illegible]line of treatment there [illegible]two cures for ten and [illegible]ients greatly improved, [illegible]asthmatic should not be [illegible]results were often most [illegible]o some views, no harm [illegible]ful conservative surgery [illegible]undue nasal patency [illegible]h highly physiological [illegible]body, tended to make [illegible]often merely an intra-[illegible], and although their removal often produced temporary relief, they tended to recur rapidly, with return of asthma, when allergism was pronounced. The relation between asthma and septic foci in the upper respiratory tract depended largely on the history of the case. In his experience the removal of enlarged tonsils and adenoids rarely influenced the paroxysms, though Margaret Todd had, from the Edinburgh school, produced figures in support of such treatment. When the onset or return of asthma was definitely related to an acute tonsillar infection the prognosis was much more hopeful. It was surprising how frequently an unsuspected occult nasal sinus infection was discovered. In a group of eleven secondary bronchial and bronchitic asthmatics, maxillary sinus infection had been present in six instances, and of these four were examples of concealed infection. All were surgically drained, and the results showed two cures of eight and three years' duration, one case free of asthma for four years, another greatly improved, and two only temporarily relieved. Was the prognosis dependent upon an early recognition of nasal sinus infection? Of the two failures following nasal sinus drainage, not only had the asthma been present for two and three years respectively, but the pus was sterile. Mr. Diggle stressed the value of prolonged administration of autogenous vaccines, whether prepared from the sputum, a nasal sinus, or an intrabronchial swab. Although nasal treatment in any form did not relieve all cases, still he considered that, having regard to the inveteracy of asthma in general, the results compared very favourably with those obtained by medicine and other means, particularly when one realized that the rhinologist was the last resort. Including all forms of nasal treatment, there had been in his series of twenty-one cases 28.6 per cent. absolute cures, 38.1 per cent. greatly improved, and 31.3 per cent. no better.

Dr. LOVEDAY said that hay fever and asthma belonged to that group of conditions which were the result of a peculiar sensitiveness on the part of the sufferer to some foreign protein. For the production of a protein ideopathy four things were apparently necessary. (1) The peculiar condition of sensitiveness in the patient. Everyone was subject to a bacterial infection at some time or other, and individuals showed variations merely of degree, but in an allergic condition things were very different. Grass pollen did not affect the normal man at all, but in a small proportion of persons would always produce hay fever and sometimes asthma. This sensitiveness showed marked hereditary qualities. (2) The foreign protein. This might be from more than one source, and in sensitive persons two or more proteins acting together would add their effects. (3) Trauma. This played some part in the form in which protein sensitiveness was manifested. Bronchial asthma followed bronchitis partly, no doubt, because the bacterial irritant was produced locally, and partly because of the damage done by the bronchitis. When once such damage had been done other protein irritants were likely to express themselves as asthma. (4) Nerve reaction. Nervous disturbances such as emotion affected the condition, and there were many examples of this. In regard to hay fever, persistence of attacks after the "season," or onset before it, suggested some additional complicating protein sensitization. Pollen toxin inoculations were of very great value in hay fever, and better immunization was obtained by an intensive course than by a leisurely one. The course should be begun before the hay fever season and timed to end some few days before the onset of the pollen cloud. Overdose might produce urticaria, angioneurotic oedema, and even asthma, but these could be controlled by calcium lactate and adrenaline. The object was to use as large a dose as possible without reactions. In the hay fever season doses similar to those used in prophylactic immunization were impossible, for they would produce a violent attack of hay fever. It was possible, however, by small and frequent doses, to put the sufferer in a condition in which life was tolerable. The "rush method" of immunization demanded rest in bed on the part of the sufferer and a competent attendant to give the frequent doses required. These conditions were not often attainable. In asthma the diagnostic skin reactions indicating the causal proteins were sometimes useful and

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sometimes not. Observers differed as to what constituted a positive reaction. Skin tests could never be complete because the proteins were so numerous and so specific. The reaction also varied greatly in intensity, and it did not follow that the most marked reaction was with the protein most causal. Bacterial proteins always gave very slight reactions or none, but when present were very significant. In spite of these limitations the skin tests were useful in practice, and would often extract confirmatory information previously withheld or assist enforcement on the patient of abstention from some protein food. The mechanism of the production of the symptoms of asthma required reconsideration. The relief of an attack by adrenaline was not proof of the attack being due to bronchial spasm. Dr. Loveday suggested that the dyspnoea was caused by swelling of the mucosa. In dealing with a case of asthma the first step was to try and find the cause. In adults with a suggestive history a bacterial origin was most likely. Skin tests were not always practicable. If done, it was best to withhold all the incriminated proteins. Then, if the condition was relieved, the forbidden foods could be tried tentatively in the diet, one at a time, though with the egg proteins desensitization was advisible. In animal sensitizations, desensitization must be done and carried out on the same lines as prophylactic desensitization for hay fever. In nearly every case of bronchial asthma there was generally remarkable response to, and relief from, suitable doses of a weak vaccine of catarrhal organisms. Treatment, however, could not be carried out with doses such as would be suitable for chronic bronchitis. The patient was first sensitized and was also liable at any time to absorption of an unknown amount of bacterial toxins. Nor could desensitization be carried out by progressively increasing doses as in the case of hay fever. The vaccine he used was an ordinary "asthma vaccine" diluted 1 in 10 and 1 in 100. Many cases received only a dose of vaccine equivalent to 1/200 c.cm. of the asthma vaccine. The doses he found best were, according to usual advice, ridiculous but beneficial. Onset of an attack after inoculation might be due to an absolute overdose or due to the dose + absorption from the focus of infection. The only safe procedure was to wait, and then give a smaller dose. He usually gave doses weekly. In conclusion, Dr. Loveday said he did not claim that every case of bronchial asthma was relieved by vaccine therapy, but he did maintain that the majority of patients were very greatly relieved and their lives made more tolerable. Not only were the symptoms relieved but the general condition improved, and they put on weight.

The annual report of the Department of Scientific and Industrial Research (Cmd. 4254, H.M. Stationery Office, 3s. 3d.) deals with a comprehensive range of subjects, examples from which are given below. The use of 20 per cent. carbon dioxide has been found to prolong storage life sufficiently to enable chilled beef to be brought from Australia to this country; the aerodynamics department of the National Physical Laboratory has been investigating the question of safer flying; the glare effect of various systems of street lighting has provided another field for research; while frost bursting of water-pipes, and industrial materials capable of withstanding high temperature have also been studied. Work undertaken by the Electrical Research Association shows that fire risks —of some topical interest just at present—can be lessened by better lighting fittings. Research in the motor industry has been devoted particularly to lubricating oils, while under the heading of "textiles" studies have been made on fading wools and defects in cotton. Prevention of wear of a fabric in washing has been included in laundry research, and may perhaps encourage sufferers to hope. Other investigations have dealt with electrical fusion welding for steel-framed buildings, water-softening processes, pulverized fuel burners, concrete in road construction, temperature preservation, weathering of building stones, and therapeutic preparations of fish liver for pernicious anaemia. The total expenditure of the department during the year was £549,700.

Reviews

PRACTICAL ANAESTHESIA

The Baker Research Institute of the Alfred Hospital, Melbourne, has planned a new series of monographs, of which the first, *Practical Anaesthesia*,[1] has just been issued. It is the work of seven anaesthetists and a surgeon, all members of the hospital staff, under the general editorship of Dr. W. J. PENFOLD, director of the Institute. The intention is to provide instruction designed for senior students and junior medical officers. The result will, in our judgement, be found much more suitable for the latter than for the former; on a foundation of some practical experience the reader will find the teaching most valuable. The outlook is essentially practical: theory and physiology are virtually omitted, and pharmacology is discussed very briefly indeed. The authors are well abreast of the numerous recent advances in the science of anaesthesia; and it is clear that, as in Britain, the rapid progress made has not as yet spread far beyond the ranks of the specialists—witness the statement that "gaseous anaesthetics are . . . mainly selected for gravely sick or shocked patients." Whereas twenty years ago the specialist anaesthetist in this country, and no doubt in Australasia equally, and the best instructed general practitioner differed only in experience, not in methods and technique, nowadays there is a wide cleavage in the latter respects also. This gap should be sensibly lessened by the clearness of the post-graduate instruction offered to house-officers at the Alfred Hospital by the symposium of its staff, as set out in this textbook. Dogmatic as the editor expressly sets himself out to be, he has here and there allowed ambiguous phrases to pass unchallenged —as, for example, in the sections upon the treatment of respiratory embarrassment, wherein it is stated that "treatment of overdosage and circulatory stimulants *may* be indicated," without any advice as to how the anaesthetist is to discriminate between such cases and others. A similar objection can be offered to the subsequent statement that "benefit *may* follow the aspiration of the right auricle through a needle" (italics not in the original). Incidentally, the prophylaxis of respiratory obstruction is not mentioned; and in treatment tongue forceps, gag, and mechanical airway are all mentioned together.

In the section on ethyl chloride not a word is said about the dosage of that anaesthetic; the open method is alone countenanced, but even so dosage is of some importance. In describing the administration of ether there is no explanation of the stages of anaesthesia or how to gauge the progress of the induction; these come in a later section, somewhat out of the logical order of arrangement. As to chloroform, which is rightly regarded as indicated for a very small minority of exceptional cases, it is disturbing to find an old and dangerous catchword quoted with apparent approval—to wit, "plenty of chloroform and plenty of air," a half-truth that has cost numberless lives. The inner cannula, which is widely used in Britain in the technique of spinal anaesthesia, is, one must suppose, not regarded as necessary in Australia, as it is not mentioned; novocain is the drug recommended, and in rather free dosage. Basal narcosis is damned with very faint praise, and the oral administration for this purpose of barbiturates, etc., is absolutely prohibited. In the description of intratracheal administration it is stressed that the laryngoscope should not be tilted after it has passed the epiglottis, and two photographs are reproduced

[1] *Practical Anaesthesia*. By the Anaesthetic Staff of the Alfred Hospital, Melbourne. No. I. Monographs of the Baker Institute of Medical Research. Foreword by F. H. McMechan, M.M., M.D. London: H. K. Lewis and Co., Ltd. 1932. (Pp. 249; 70 figures. 10s. 6d.)

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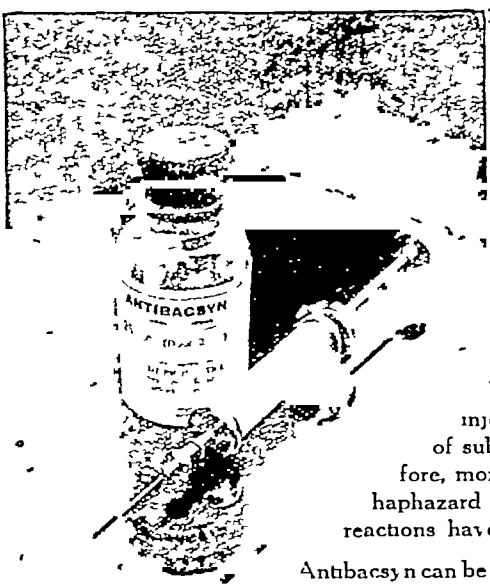

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which are said to demonstrate this point. As a fact, however, there is a quite obvious tilt of more than thirty degrees between the one photograph and the other—and, incidentally, most anaesthetists here habitually and purposely do employ a tilt during the manœuvre.

Like many other textbooks of anaesthesia, this one gives no explicit instruction as to whether the proportions of ether and chloroform in mixtures of those two drugs should be by mass or by volume—a point of considerable importance in view of the fact that the specific gravity of the latter is more than double that of the former. The surgical member of Dr. Penfold's team must be of a very equable disposition, or perhaps the "barracking" of the cricketing spectators has spread to the operating theatres, for he passed without any qualms, apparently, the counsel of perfection (for the anaesthetist) that "the surgeon should be encouraged to handle tissues gently, and to waste no time"—shades of Harrison Cripps and Christopher Heath! The Baker Institute Series has made an excellent and thoroughly practical start; we shall look forward with keen interest to subsequent volumes.

THE KNEE-JOINT

In *Le Genou*[2] Professor ANTOINE BASSET of the Beaujon Hospital in Paris presents a useful monograph on the knee without overburdening himself with too great a mass of details of any kind. In his preface he tells us that this is to be the first of a series of monographs in which will be found all that is important to know of the normal regional anatomy and operative technique of each of the greater joints, not forgetting the importance of radiographic appearances, both normal and pathological.

Under the heading of anatomy the exterior form of the normal part is described and then the normal radiographic appearances of the bones. The normal capsule and ligaments are adequately described, and illustrated by well-known figures from standard anatomical works. The chapters on operative surgery include discussions on the best road of approach to the joint and the treatment of trauma of the joint and fractures of the articular ends of the long bones and of the patella, lesions of the semilunar cartilages and crucial ligaments. The concluding chapters treat of the surgery of ankylosis, tubercle of the joint, arthrodesis and the surgery of genu valgum and luxation of the knee-cap, with a few pages on intra-articular amputations. The sections on normal regional anatomy call for no remark. The reproductions of radiographs of the knee in various postures should furnish useful reminders of the actual relations of the parts, as long as the reader does not forget that there are invisible cartilages as well as visible bones.

presented [illegible]ons of ligaments and capsules from standard [illegible]-atomical works are apt to mislead, because the dissector, [illegible]ake structures clear and distinct one in his desire to ma[illegible]roduces sharp borders which do from another, too often [illegible]called them into being. This not exist till the scalpel has [illegible]plates from Poirier and Fick. is most noticeable in th[illegible]the knee capsule and the neigh- The representations of [illegible]led with radio-opaque fluid are bouring arteries distend[illegible]seful in planning incisions which striking, and should be u[illegible]ssible with vessels and capsule. will interfere as little as p[illegible]isions are illustrated and dis- A number of different inci[illegible] arthrotomy Professor Basset cussed. For suture after [illegible] threads. In the treatment much prefers interrupted lines. C[illegible]od of the knee the author of fractures in the neighbourh[illegible]ce modified Lane's plates, recommends osteosynthesis wit[illegible]of su the choice of route of screws, and bands. Here again[illegible]ate

[2] *Le Genou.* Par Professeur Antoine Basset. Anatomie Chirurgicale et Radiographique Chirurgie Opératoire. Paris: Masson et Cie. 1932. (Pp. 190; 120 figures. 45 fr.)

access to the fractures is carefully discussed. This subject has hitherto had little attention from surgeons, although Professor Arnold K. Henry of Dublin made a notable contribution to our knowledge of it in his work *Exposures of the Long Bones*, reviewed in our issue of July 21st, 1928. Various procedures for suture and grafting of fractured patella are discussed and described. The author's opinions are, in our judgement, very sound. The pros and cons of the various operations for removal of semilunar cartilages are stated, and the views of a number of authors as to the advisability of respecting the integrity of lateral ligaments are quoted, but British and American practice is ignored. Professor Basset barely mentions the external meniscus.

A good deal of space is devoted to consideration of various operations for restoration of the crucial ligament. Several proceedings for the correction of ankylosis in vicious position are described, as also is the operation of arthroplasty, which latter Professor Basset characterizes as "in France an operation *de luxe*, reserved for some individuals, certain professions, and certain social circumstances." The proceedings of Murphy, Putti, Willis Campbell, Chevallier, and others are described. The author is judicially cautious in his comments on these operations. That the subject is not neglected is shown by the reproduction of twenty-four illustrations of the operation and its results. Section E of the book is headed "Surgery of tuberculous osteo-arthritis," but is really confined to a discussion of operative treatment, such as synovectomy, resection, etc., with or without the use of bone-grafts. The rather elaborate resections of Fredet and Dupuy de Frenelle are fully described.

As a guide to contemporary operative practice, especially in France, this monograph is valuable. It is well illustrated.

INTRAVENOUS PYELOGRAPHY

It is appropriate that a very complete work on the subject of intravenous pyelography should have emanated from the country of its birth, and Professor EUGEN JOSEPH and Dr. S. PERLMANN'S "Radiography of the Urinary Tract"[3] should undoubtedly be well received. Professor Joseph, after discussing technique, describes the radiography of the normal urinary system. As he points out, it is only when the clinician is absolutely familiar with the outline of the healthy kidney, ureters, and bladder that departures from the normal can be detected. What makes it still more essential that this should be properly understood is the fact that the range of appearances within the limits of normality is very wide. Having given a standard for comparison, the authors discuss in Part 3 the various pathological conditions that may be diagnosed by means of intravenous urography. Part 4 is devoted to radiography of the bladder, the prostate, the urethra, and seminal vesicles, while the concluding section deals with indications for the use of intravenous pyelography. The work is profusely illustrated by means of plates, so that it may be regarded as an atlas of urography as well as a very complete treatise on the subject. It also includes some excellent colour plates of such pathological conditions as hydronephrosis, lymphangioma of the kidney, and bilharzia.

Professor Joseph is so well known as a urologist that any work for which he is responsible must be regarded as an important contribution to medical literature, and even apart from this recommendation "Radiography of the Urinary Tract" is of such a high standard of

[3] *Archiv und Atlas der Normalen und Pathologischen Anatomie in Typischen Röntgenbildern: Die Harnorgane im Röntgenbild.* Von Professor Dr. Eugen Joseph and Dr. S. Perlmann. 2. völlig ungearbeitete und erweiterte auflage. Leipzig: G. Thieme. (Pp. 60; 336 figures on plates, 33 figures in text. M.64, Geb. M.68.50.)

excellence that it should recommend itself to all who are interested in this subject. Not only are the authors to be congratulated, but the publishers also deserve commendation for the good quality of the plates with which it is illustrated.

THE PRACTICE OF MEDICINE

The third volume of "The Practitioner's Library of Medicine and Surgery" has now been issued under the title *Practice of Medicine*,[1] with the name of Dr. H. M. MARVIN as associate editor. It may be remembered that this huge undertaking is mainly of American authorship, and is intended to supply the general practitioner with a complete work of reference for all branches of his activities. The present volume is a massive book of 1,400 pages, and includes all the subjects usually considered under the heading "internal medicine," with the exception of the nervous system. Thirty contributors divide the work between them, and notable authorities have been secured to write on their special subjects, as, for example, Dr. W. W. Duke on allergic disorders, and Dr. Donald Hunter on diseases of the endocrine glands—the only contributor from this side of the Atlantic. In a work of this nature there is always a risk of new discoveries being made while it is in the process of publication, and it is satisfactory to note that random sampling shows that very little has been missed in this way. The section on blood diseases is somewhat disappointing in this respect, since the microcytic anaemia syndrome described by Witts and others is not dealt with. Throughout the book the dosage is far from being uniform—sometimes the metric system being used alone, sometimes the apothecaries' measures, and sometimes both.

CHRONIC INDIGESTION

The patient who is the victim of "indigestion" is a frequent experience in medical practice, but as the term, according to modern knowledge, admits many interpretations it demands both completeness of examination and a careful judgement. In his book *The Common Causes of Chronic Indigestion*[2] Dr. THOMAS C. HUNT endeavours to equip the practitioner with the knowledge necessary to meet these two responsibilities, and it may fairly be said that he has attained a considerable measure of success. All the recognized gastric lesions and their respective symptoms are carefully described, and emphasis is laid on the differential diagnosis and on methods of treatment rather than on pathological problems or debatable aetiological issues. Attention, too, is directed to indigestion as an expression of disease in the gall-bladder, appendix, and colon; also as a manifestation of nerve strain and of pulmonary tuberculosis. A chapter dealing with modern methods of investigation is of practical service, but Dr. Hunt keeps in the foreground the importance of a careful clinical study of the patient's history and symptoms, with, in the second place, due recognition of the aid that may be given by skiagrams and chemical tests. He has written a useful manual, and his pages provide easy reading in a department where an opportunity for originality and novelty hardly exists. If his book is not brilliant it is certainly sound, and it deserves recognition as a body of clearly presented teaching on a subject which daily makes a claim on the practitioner's attention.

[1] *Practice of Medicine*. Vol. iii of "The Practitioner's Library of Medicine and Surgery." Associate Editor, H. M. Marvin, B.A., M.D. London and New York: D. Appleton and Co. 1933. (Pp. li + 1,400. 50s. net.)

[2] *The Common Causes of Chronic Indigestion*. By Thomas C. Hunt, B.A., D.M., M.R.C.P. Differential Diagnosis and Treatment. London: Baillière, Tindall and Cox. 1933. (Pp. vii + 341; 16 plates. 12s. 6d. net.)

INDIA AND ITS PEOPLE

Incomparable India: Tradition, Superstition, and Truth,[3] is a sympathetic, popular account of the country and its people by Colonel ROBERT J. BLACKHAM, who had a varied experience of military and sanitary work in India and in connexion with the Red Cross Society, which gave him unusual opportunities for seeing much of the country. It deals, necessarily briefly, with a great variety of subjects, such as religions, customs, caste, temples, sacred places, and festivals and fairs, together with social matters, such as crime and criminals, marriage and widowhood, the use of drink and drugs, interspersed with some historical data regarding invasions, Freemasonry, and Christian missions. The following are some medical subjects touched upon. A chapter on sorrows of childbirth describes the terrible conditions of the lying-in chamber, with a quotation from an Indian lady doctor, but ends with a hopeful note due to the valuable work now being carried on by a combination under the Indian Red Cross Society of three charitable organizations founded by the great Vicereines, the Countess of Dufferin, happily still active in the work at the age of 90, Lady Curzon, and Lady Chelmsford, which is doing much to improve the conditions of women in India with the support of some enlightened Indians. In the chapter on the divine art of healing, a good account is given of the various grades of the higher university and shorter-course medical school qualifications which are so confusing to medical teachers and many others in this country. Only the university medical qualifications of India rank with ordinary medical qualifications in Great Britain, and practitioners with somewhat less training are provided by the medical schools for subordinate posts in the British and Indian Army Services and, as less highly remunerated practitioners, for villages and small towns, who alone can be afforded by so many Indians. Testimony is also borne to the fine work in many fields of the Indian Medical Service and of the British generally in bringing peace and good administration. There is much in this book to interest both those going for the first time to India and also many who have worked there for long.

Notes on Books

First published during the war, BEATRICE COPESTAKE'S *Theory and Practice of Massage and Medical Gymnastics*[4] has now appeared in its fifth edition. Coincident with recent progress in other branches of physical treatment, the standard of work for the Chartered Society's examination has been raised, and increased efficiency and skill is expected of students. The author has now revised and enlarged her book to meet present-day needs. More detail is given in describing remedial exercises, a helpful feature being that the muscles involved in each exercise are mentioned. Fracture treatments have been revised, but the treatment of special fractures (for example, Colles's) deserves more attention than the meagre notes given here. The chapter on rheumatic conditions, though brief, is lucid and up to date. The section dealing with deformities is definitely improved, as it includes a series of photographs illustrating suitable exercises for the correction of the various conditions. The opening chapter on the history of massage is interesting, while a note on the physics of movement shows the link between theory and practical application. The book will continue to be a useful exposition of the groundwork and principles of massage and medical gymnastics.

[3] *Incomparable India: Tradition, Superstition, and Truth*. By Colonel R. J. Blackham, C.B., C.M.G., D.S.O. Foreword by Field-Marshal Sir William Birdwood, Bt. London: Sampson Low, Marston and Co., Ltd. 1933. (Pp. xiv + 302; 53 illustrations. 12s. 6d. net.)

[4] *The Theory and Practice of Massage and Medical Gymnastics*. By B. M. Goodall-Copestake. Fifth edition. London: H. K. Lewis and Co., Ltd. 1933. (Pp. xx + 332; 118 figures. 12s. 6d. net.)

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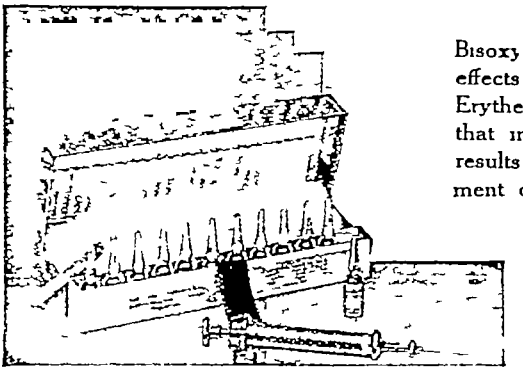

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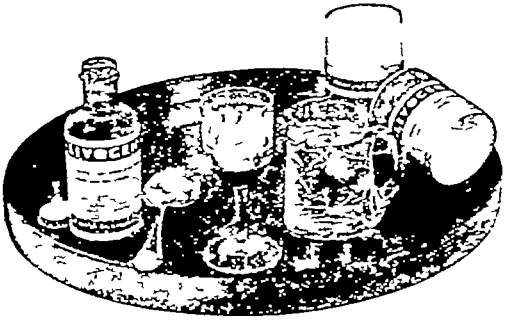

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WILLIAMS'S *Introduction to Biochemistry*[8] appears to be an excellent book of its kind. It covers, in an elementary but adequate style, the field of biochemistry, and it has the great merit of presenting the subject as a coherent whole. Attention is not confined to the metabolism of one particular type, but the ways in which the different types—bacterial, plant, and animal—deal with the various problems of metabolism are considered side by side. This plan has the obvious advantage of giving to the elementary student, in particular, a sense of coherence and orderly arrangement which is so often lacking from presentations of the subject. Later, of course, classification of a different sort must be adopted, for the student must learn more deliberately to fit in biochemical facts with the other aspects of physiology; inevitably, too, his interests will become more specialized, as the claims of medicine, plant biology, agriculture, and so forth begin to assert themselves more definitely. As an introduction to any or all of these the present volume is sound and useful.

The "upper" which will not stay up and the unstable "lower" have long been thorns in the dentist's side. In *Principles of Full Denture Prosthesis*[9] Dr. E. W. FISH has made a serious attempt to grapple with the problem. He has analysed the physical forces and, literally, dissected the anatomical (muscular) forces to which dentures may be subjected, and from the data so obtained he suggests that there are ways of harnessing the apparently hostile forces and making them useful in stabilizing full dentures. The author reports gratifying success from the application of the principles so deduced, especially in the utilization of the compressing action of the lips, cheeks, and tongue to control properly shaped dentures. Particular attention may, indeed, be drawn to the excellent description of the action of the facial muscles in mastication, though we doubt whether in ordinary eating the buccinator "humps up in the middle" like the contracting biceps. The author does not pretend to offer a complete solution of the difficulties. He claims, however, that the line of approach is sound, and that he has set out the factors which make or mar the stability of full dentures in scientific and teachable form, and with this claim anyone who reads the book will fully concur.

Mysteries in connexion with uncertainty of sex have their interest for a number of readers. Whether it be the Chevalier D'Eon and Phoebe Hessel of fact or Mademoiselle de Maupin of fiction, books on such subjects will have plenty of readers. OLGA RACSTER and JESSICA GROVE have added another volume to the list in *Dr. James Barry: Her Secret Story*.[10] The only sure fact about the hero or heroine of this book is the record of his or her death as inspector-general in the Army Medical Department in 1865. The *Dictionary of National Biography* states that after death it was officially reported that the inspector was a woman, but there is no official record of this report extant. The copy of the death certificate quoted in this book gives the sex as "male." It seems clear that Barry was of effeminate appearance, though of high spirit. He served chiefly in Cape Colony and Malta. This "journal" is confessedly imaginary, and in the author's words only what "she might have written."

The *Transactions of the Edinburgh Obstetrical Society*[11] has now reached its fifty-second volume, which covers the period 1931–2. In his valedictory address (the first article) the outgoing president, Dr. H. S. Davidson, reviews the activities of the society and brings into prominence the advances made in gynaecological and obstetrical technique. Three gynaecological papers follow, dealing respectively with menstruation in mental disorder, the palliative treatment of salpingitis, and the investigation, prognosis, and treatment of tubal conditions, with special reference to insufflation and *x*-ray examination after injection with lipiodol. Eight papers on obstetrics are included, the topics dealt with being pregnancy toxaemia; puerperal temperatures and sepsis; the social, legal, and ethical aspects of abortion; primary ovarian pregnancy; eclampsia associated with intense cerebral haemorrhage; and the influence of age on the process of childbirth. Under the heading of paediatrics a clinical record is provided of a case of exomphalos. The present volume well maintains the high standard set by its predecessors.

[8] *An Introduction to Biochemistry*. By R. J. Williams, Ph.D. London: Chapman and Hall, Ltd. 1932. (Pp. xiv + 501; illustrated. 21s. net.)

[9] *Principles of Full Denture Prosthesis*. By E. Wilfred Fish, M.D., L.D.S. London: J. Bale, Sons and Danielsson, Ltd. 1933. (Pp. ix + 100; 31 illustrations, 6 plates. 10s. 6d. net.)

[10] *Dr. James Barry: Her Secret Story*. By Olga Racster and Jessica Grove. London: Gerald Howe, Ltd. 1932. (Pp. 283; illustrated. 8s. 6d. net.)

[11] *Transactions of the Edinburgh Obstetrical Society*. Session 1931–1932. Vol. lii. Edinburgh: Oliver and Boyd, Ltd. 1932. (Pp. 175.)

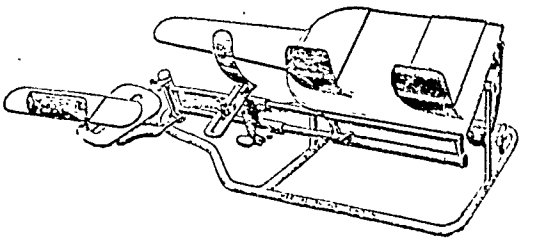
Preparations and Appliances

A TILTING TABLE FOR HIP OPERATIONS IN CHILDREN

Mr. ERIC I. LLOYD, F.R.C.S. (surgeon to the Hospital for Sick Children, Great Ormond Street, and orthopaedic surgeon to the Royal Northern Hospital), writes:

The operating table shown in the accompanying figures has been in use since March, 1932, and has seemed to fulfil the purposes for which it was designed. The requirements were as follows:

1. A lateral tilt available for either side up to a maximum of 60 degrees, thus facilitating approach to the hip-joint through a Smith-Petersen incision.



2. Fixation of the opposite limb in varying degrees of flexion—for example, when operating upon one of two congenitally dislocated hips.

3. Adaptability to children of different ages.

4. Ease of application of plaster-of-Paris without moving the patient.

5. Cheapness in comparison with the standard orthopaedic tables, few of which permit of this tilted position.

The table was primarily designed as an adjunct to Fairbank's operation for making a new upper lip to the acetabulum in certain cases of congenital dislocation of the hip. It has now been used for this operation and for others in the same region of the body. It seems to work very well, but is probably susceptible of improvement in minor respects.

Mr. H. A. T. Fairbank has kindly helped with advice and criticism on several occasions, and the makers have been both patient and ingenious. It was made for me at the Hospital for Sick Children, Great Ormond Street, by the Medical Supply Association of Gray's Inn Road. The cost is about £8.

MEDICINAL CHARCOAL

The adsorbent properties of medicinal charcoal for the relief of gastro-intestinal flatulence depend much on the method of preparation. Carboserin (Bayer Products Ltd.) is a vegetable charcoal prepared by a special process which ensures a very high state of activity. The methylene-blue test indicates that its adsorbent power is forty times greater than that of ordinary charcoal. Carboserin is issued in tins of 50 tablets, each containing 6 grains of activated charcoal.

Nova et Vetera

THE CHOLERA EPIDEMIC IN EXETER, 1832

Cholera is now such a rare disease in this country that we are apt to forget that it was present as recently as 1866, that a hundred years ago it raged throughout England, Scotland, and Ireland, and that its disappearance was due almost solely to improvements in health administration. It is probable that during the years 1831–2 cholera caused over 20,000 deaths in England and Wales alone. In 1832 it visited many counties in England, the district most severely attacked, apart from London and Lancashire, being the county of Devon, in which 1,901 deaths occurred. Plymouth and the neighbouring towns were most affected, but unfortunately little is known of the outbreak there. On the other hand, the epidemic at Exeter was very fully reported by Thomas Shapter,* who himself went through the epidemic, and the material for the following account is derived mainly from this work. I am indebted to Mr. F. J. Boardman for directing my attention to the book.

The disease broke out in Exeter on July 18th, 1832, and prevailed until the end of October. It is difficult to give the actual number of persons affected during those three months, but the official returns to the Central Board of Health show that 1,135 persons sickened and that 345 died. It is probable that many cases occurred which were not returned, and from other evidence Shapter states that the actual number of deaths was 402. Creighton, on the other hand, gives the number as 386.

In 1832 the city of Exeter was a very different place from what it had become seventeen years later, when the book was written. Indeed, Shapter says in his introduction: "The progress of the last seventeen years in destroying 'Old Exeter' is remarkable, and constitutes an era in its history." In 1832 the population was 28,242 persons, living mostly in congested areas. The streets were narrow, and were paved with rounded pebbles, so arranged as to form a gutter in the centre of the roadway; this gutter was in most instances the only means of sewerage. The water supply was very inadequate, and consisted mainly of private wells, a few public pumps, the waterworks, and the ancient conduit. The history of the latter extended back to 1221, and before the year 1832 the outlet had seen many changes of position. These sources were totally inadequate for the needs of the city, and much of the water used was carried by professional water carriers from the River Exe or other streams. The sanitary condition of the city seems to have been extremely bad; dung heaps and collections of offal were very numerous, and scavenging, such as it was, was performed only once a week.

Cholera, which had been raging in many parts of England for some time, appeared in Plymouth on July 13th. On July 19th four cases occurred in Exeter: one in the neighbouring parish of St. Thomas the Apostle, and the other three—a woman and her two children—in the city itself. From a letter sent by Dr. Blackall to the chairman of the Central Board of Health on July 21st it would appear that the woman had just returned from Plymouth, where she had nursed a case of cholera. The disease now spread rapidly. The number of new cases reported in the city grew daily larger—with occasional remissions—until August 13th, on which day eighty-nine new cases were reported. By that date 482 patients had been officially reported as having sickened, and there had been 150 deaths. Thereafter the epidemic began to wane in a gradual but rather irregular fashion; the last two cases were reported on October 27th. During July—that is, from the 19th onwards—45 cases were reported; in August, 980; in September, 96; and in October, 17. It is evident that August saw the peak of the epidemic.

Shapter describes very fully the clinical features of an attack of the disease. Of the first stage he says that the early symptoms "were succeeded, if not accompanied, by cramps, proceeding from the extremities of the toes and fingers upwards, rendering the surface hard and knotty, and were at times so painful in their nature, as to exact from the patient the loudest cries." The "rice-water discharges" are well described, and he notes, as common symptoms of this stage, vertigo, tinnitus aurium, and even slight deafness.

In his description of the collapse stage, Shapter states that "the hands and feet become shrunk, corrugated, and as if sodden in water, while those of the young presented the appearance of the hands of very aged persons." All secretions were arrested, including urine, saliva, and bile, and thirst was incessant. There was an intense sensation of weight about the heart, and the hypochondria were drawn inwards by spasms. We may infer his views as to the cause of these features of the second stage from the following statement:

> "The pulse was entirely wanting, and all indicated a badly organized blood, and a stagnation in the circulation itself; that this was the case was rendered evident by the condition of this fluid which, on opening a vein, flowed with difficulty, was dark in colour, and produced a loose coagulum."

The author noticed that after this stage had lasted twelve hours or so the patient usually resembled a corpse.

Under the heading of modifications of the typical features Shapter notes that

> "the nervous system . . . was differently affected; in place of the cramps a numbness only was experienced, or which passed into tremors (a most fatal symptom); or the cramps ceased entirely on free dejection taking place." In some cases "a peculiar dark ring round the eyes was developed, and which might continue observable for a considerable time after recovery."

The natural duration of an attack is stated to have been short, and in fatal cases death usually ensued between the eighteenth and forty-eighth hours after the first onset.

Shapter describes a milder disease, which he calls "cholerine," and which was common at the time. It was characterized by "tinglings of the surface, weakness, and numbness of the limbs, slight spasms, feelings of languor and depression, often accompanied by a flatulent dyspepsia or diarrhoea, and in which the discharges were occasionally of a light colour." He does not decide whether this condition was a mild form of the more severe disease, or whether it was an "accidental accompaniment of the period," but he notes that persons who had experienced these milder symptoms did not appear to be exempt from the true cholera.

Treatment in the early stages consisted mainly in administering ammonia and carminatives, together with opium and brandy where sickness was severe; for the latter condition lime-water and milk was also used with success. Before complete collapse had set in, venesection was frequently employed; Shapter considers that, if venesection was performed later in the disease, it often hastened a fatal result. Mercury was a favourite drug; it was given in the form of calomel (as much as 20 grains frequently repeated), and as mercurial ointment, both in the early stages and after collapse had set in. At the height of the disease stimulants, together with hot-air baths, friction to the skin, and poultices were freely used. The saline treatment of the disease, which has now become standard, is thus referred to by Shapter:

> "I do not think the saline treatment, as propounded and administered by Dr. Stevens, has found many advocates, it has been resorted to, but certainly not with the results one was led to expect from his reports."

On another page he says: "Transfusion was resorted to but in one case, and without success." The following footnote to this statement apparently indicates that by 'transfusion" he means intravenous injection:

> "From the peculiarity of this mode of treatment the following details are extracted from the official reports of this case:—

* *The History of the Cholera in Exeter in 1832.* By Thomas Shapter, M.D. London: John Churchill; Exeter: Adam Holden. 1849.

L. S., aet. 43, a manufacturer of 'taffies,' was taken ill in the street at 3 p.m., and reached home with difficulty. Before 2 a.m. she had all the true characteristics of Asiatic Cholera in its worst form, but from this time no evacuations. The treatment was first a full dose of tincture of opium, with some brandy and other stimulants, 20 grains of calomel, bleeding from the arm, from which about 2 oz. of a fluid resembling tar issued; 40 oz. of weak broth containing the quantity of saline matter directed by Dr. Stevens was then thrown into the veins. She expired at 3 p.m."

The administrative measures which were taken to control the spread of cholera in Exeter are intimately connected with the activities of the local Board of Health and the Corporation of the Poor. Shapter deals very fully with every measure which was effected, and the history of the relations between these two bodies is an example of the dangers of dual control.

By an Order in Council, dated June 21st, 1831, a Central Board of Health had been gazetted in London. This Order, together with certain proposed regulations, were forwarded to Exeter on October 20th. The regulations dealt with quarantine, the formation of local Boards of Health, the removal of the sick, terminal disinfection, the provision of separate burial grounds for those who died of the disease, and the observation of "convalescents." On October 27th a preliminary meeting of magistrates and physicians was held, and on November 1st a local Board of Health was formed, consisting of magistrates, physicians and surgeons, and representatives from the Corporation of the Poor and the Commissioners of Improvement. On November 9th, at a meeting of the latter body, a sum of £1,000 was voted for "covering in and making such drains as may be *absolutely* necessary for the protection of the health of the inhabitants, as also for procuring water, and for cleansing the streets." Three days later handbills were distributed through the city, which dealt with the steps taken to combat the disease, and described the chief symptoms and gave copious instructions regarding emergency treatment. By this time, however, the whole country was in a state of alarm, and, as a means of appeasing this unrest, a new Central Board of Health was formed in London on November 12th. This body deprecated any coercive separation of the infected, and condemned the erection of hospitals as "expensive, wasteful, and, maybe, useless." Local boards were soon required to report daily to this new Central Board.

On February 13th, 1832, the disease reached London, and accordingly the Cholera Prevention Act was rapidly passed. This Act ordered that any expenses incurred in carrying out the regulations made by the Privy Council should be "defrayed out of the rates for the relief of the poor of the parish, township, or extra-parochial place maintaining its own poor." An Order issued on March 6th enabled a local Board of Health to remove compulsorily any person suspected of being sick of cholera, while those actually suffering from the disease could be removed only with their consent.

Difficulties now arose. Exeter consisted of nineteen parishes and three precincts, and no parish maintained its own poor. The poor rates were received by the whole corporation, which maintained the poor of the city as a whole. Poverty was so great in some of the parishes that they were quite incapable of supporting their own poor. This matter was taken up by one of the members of Parliament for Exeter, but he was unable to remedy it, and it now constituted a constant source of trouble. The abatement of nuisances also presented difficulties, and it would appear that the Cholera Act gave little power in this direction. After the disease broke out in Exeter on July 19th, other attempts were made to legalize the position, and Lord Melbourne was himself approached. On July 25th the secretary of the Central Board of Health intimated that "the difficulties of the Exeter Board were under consideration."

Since the position was now at an impasse the Exeter Board of Health appealed to the Corporation of the Poor of the City to advance moneys for the prevention of cholera. The latter body, however, decided that such moneys could only be advanced if an estimate of the expenses under each separate head had been previously received. The Corporation of the Poor now took independent action, and provided doctors, nurses, medicines, clothing, and food. At this time there was certainly jealousy between the two bodies.

The straight path of administration was once again diverted. The most populous parish in the city, St. Sidwell, took it upon itself to form an independent Board of Health. This it did on August 2nd, 1832, but it was also confronted by the difficulty of raising money. In the following three months its activities extended only to whitewashing a few houses, removing some pigs, and erecting sties. The total cost of these proceedings was £26 13s. 6d., and this sum was ultimately paid by the Exeter Board of Health.

Early in August it was evident that little was to be gained by statutory action. Accordingly it was arranged to raise funds by subscription, and in this way all the original schemes of the Board of Health were financed. On September 18th the work of the Board virtually came to an end. The account of its difficult career occupies seventy-three pages in Shapter's book, and is an illuminating document on the perversity of municipal bodies when confronted by a common danger.

Some of the matters dealt with by the Board were: supervision of quarantine; cleansing of the city, and the provision of water; the provision of medical advice; hospitals and burying grounds; fumigation; the provision of food and clothing. The city was in a disgusting sanitary state at this time. Scavenging was let out to contractors who paid £63 per annum for the privilege of removing soil and filth from the streets, and unfortunately they removed only what was of use to them. In August, 1832, the Commissioners of Improvement voted a sum of £2,000 for the provision of new sewers. In this volume a description is given of the practice of cleansing the streets by "throwing" water by hand. The existing water supply also gave much trouble, and led to very lengthy negotiations between the Commissioners and Mr. James Golsworthy, the proprietor of the waterworks. The latter must have been, not only a very philanthropic, but also a very patient man; apparently he was the first to use iron pipes for the conveyance of water.

Shapter describes fully the effect of the epidemic on the people as a whole. As in many great epidemics, there was much rioting and licence. The feelings of the people are well shown in the abortive attempts to procure hospitals and burial grounds. After many changes of site and much protestation from interested householders, a hospital was fitted up just as the epidemic declined, and burial grounds were licensed only after many protests—even from the clergy. The carrying of bodies "underhand," so as to avoid the discharges which leaked through the coffins, aroused the people to fury, and a cholera hearse had to be provided.

Shapter devotes some pages to a description of the disease in the parish of St. Thomas the Apostle, which was just outside the municipal boundary. This parish had a population of 4,176, and 275 cases of cholera occurred there between July and September, with 38 deaths. This gives, as the total number of deaths in the whole area, 440. The actual numbers of cases reported were: Exeter, 1,135; St. Thomas, 275. Shapter brings evidence to show that the number of cases for Exeter should be increased by about a third.

His description of the epidemiology of the disease is lengthy, but, unfortunately, he is rather non-committal on those questions which interest us historically to-day. He shows that the mean mortality during the epidemic was about 33 per cent. The mortality rate was slightly higher in children under 10 than in patients between 10 and 35; over 35 years the rate increased rapidly; the death rate was slightly higher in males than in females. Occupation had no marked effect on the prevalence or severity of the disease. It is to be noted, however, that in the forms which were sent out by the Central Board of Health in March, 1832, a column was provided for particulars of any washerwoman employed by the sick.

The author is much concerned with the cause of the collapse. He decides that this is not dependent on the discharges, and that the latter are, "to a certain extent, the means whereby a *materies morbi* are exuded." He concludes that Asiatic cholera "consists essentially of a congestive collapse consequent on disordered action in the great sympathetic system of nerves." Concerning the actual cause of the disease he is non-committal, but says that he personally believes that the disease is "essentially an epidemic, originating in, and chiefly due to, aerial influences, but capable, under peculiar and rare conditions, of being transmitted from man to man."

This book is a mine of information, and it must be one of the best descriptions extant of an historical epidemic.

E. ASHWORTH UNDERWOOD.

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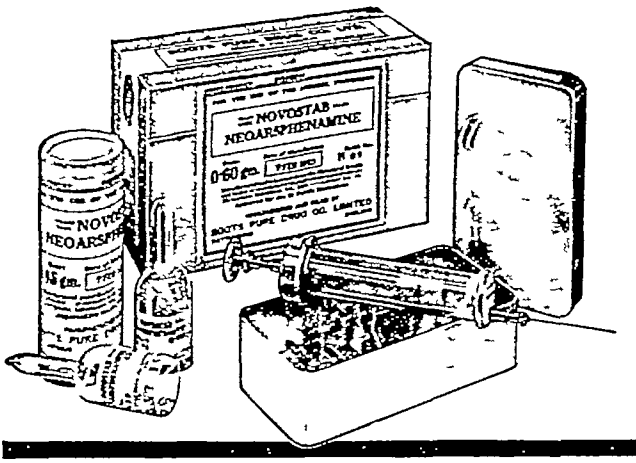

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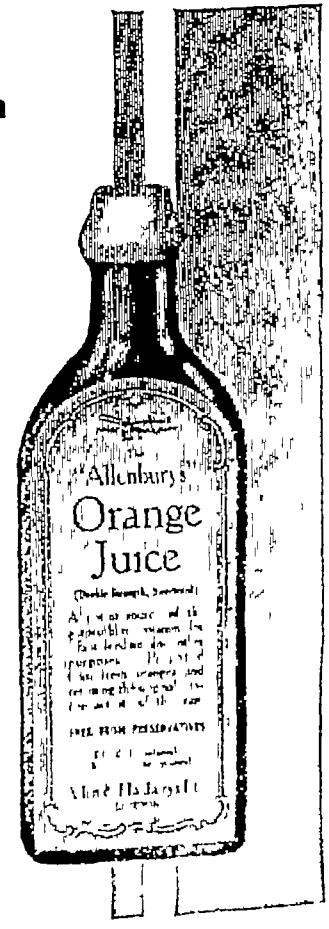

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FIG. 1.—Case 4. Cylindrical bronchiectasis of left descending bronchi.

FIG. 2.—Case 7. Cylindrical bronchiectasis of left descending bronchi.

FIG. 3.—Case 10. Saccular bronchiectasis of right descending bronchi.

FIG. 4.—Case 20. Cylindrical bronchiectasis of right descending bronchi.

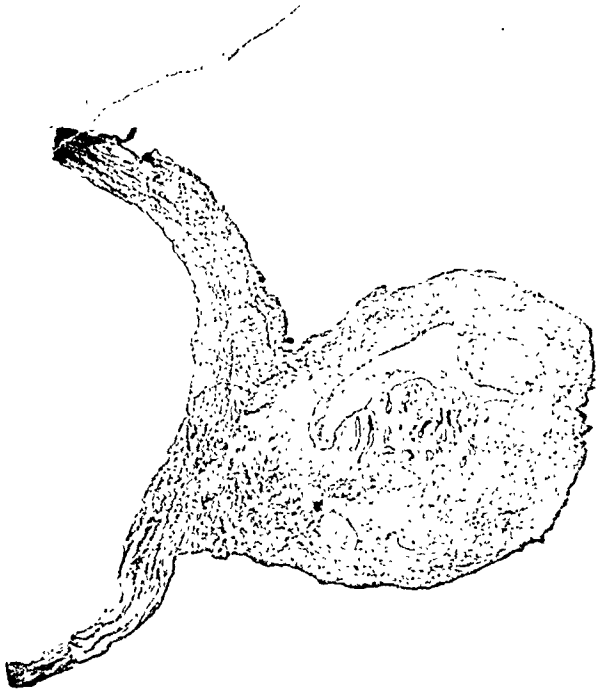

FIG. 1.—*Endometriosis of the ovary.* Section shows, on the left, a portion of cyst-wall formed by thinned-out and compressed ovarian stroma. Just beyond this wall is a mass of typical endometrial tissue embedded in ovarian stroma. Above this highly congested endometrial tissue is a small cystic space; below, two other smaller cysts are also seen, of which the one to the right shows a glandular acinus near its wall.

FIG. 2.—*Endometriosis of the ovary.* Higher magnification of a portion of the endometrial tissue.

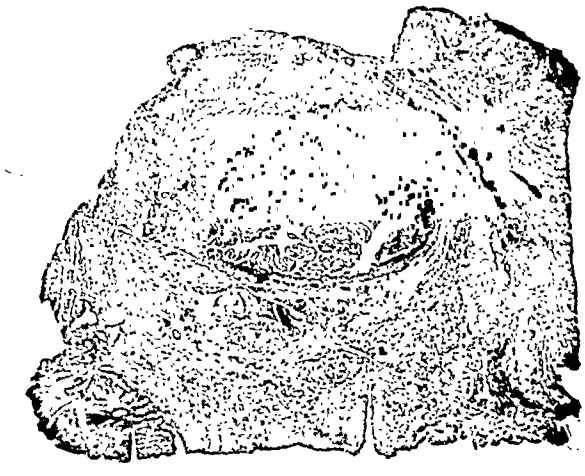

FIG. 3.—*Endometriosis of tubo-ovarian mass.* Section showing a mass of tissue consisting of endometrial glands and a highly congested stroma, situated below and to the left of the centrally placed lumen of the tube. Also, surrounding the lumen, above and to the right, is a band of endometrial tissue in the musculature of the tube.

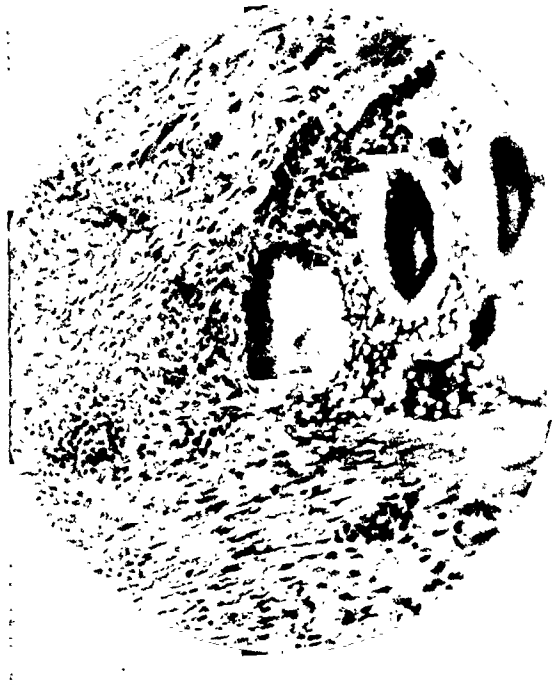

FIG. 4.—*Endometriosis of tubo-ovarian mass.* Higher magnification of a portion of the invading band of endometrial tissue in the muscular coat.

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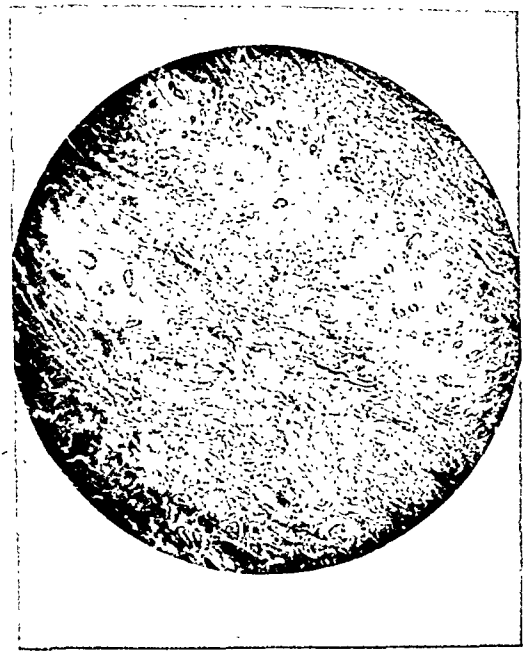

FIG. 5.—*Endometriosis of the uterus.* Section shows scattered areas of cellular connective tissue with tubular glands embedded in them (resembling endometrial tissue), surrounded by muscle bundles.

shows a cystic
In the fibrous
h typical stroma

cells.

A. L. D'ABREU: CLOSED RENAL TUBERCULOSIS

FIG. 1.—External appearance of the removed kidney.

FIG. 2.—Cut surface of the removed kidney.

FIG. 1.—Case 14. Papillary adenocarcinoma involving upper two-thirds of kidney with irregular infiltration into lower pole. Renal pelvis and vein invaded.

FIG. 2.—Case 20. Hypernephroma. Involvement of upper calyx by growth.

FIG. 3.—Case 20 [illegible] involves upper calyx. Renal tissue shows chronic interstitial nephritis.

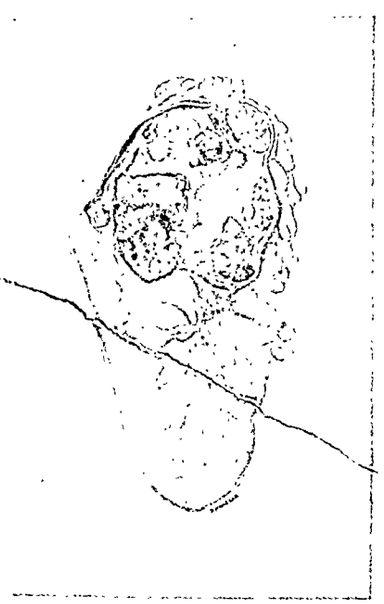

FIG. 4.—Case 41. Typical [illegible] of upper pole of [illegible] Area of [illegible] growth.

FIG. 5.—Case 42. Large hypernephroma of upper pole of kidney invading renal pelvis and showing partial encapsulation with areas of necrosis and haemorrhage.

FIG. 6.—Case 16. Hypernephroma [illegible] vading practically the whole kidney.

The Treatment of ARTHRITIS

IN the report just issued by the B M A on the causation and treatment of Arthritis and allied conditions, attention is called (Section IXe) to the importance of Vitamins in the diet in Arthritic and Fibrositic disorders, and especially to the supply of Vitamin B Wheat germ is specifically recommended as a source of this Vitamin

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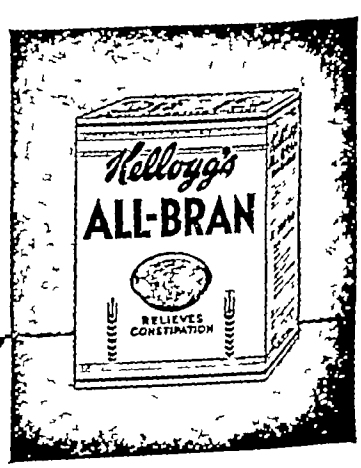

British Medical Journal

SATURDAY, APRIL 8th, 1933

ACCIDENT AND DISEASE IN WORKMEN'S COMPENSATION

The concept of "personal injury by accident arising out of or in the course of employment" has been considerably widened since the first Workmen's Compensation Act of 1897. Mr. W. A. Robson, in a recent lecture before the London School of Economics on the interpretation of the Acts, showed to what an extent the apparently simple words of the Act had been obscured by successive layers of case law until the problems of interpretation had become almost insoluble. Lord Justice Slesser, taking the chair at a meeting of the Solicitors' Managing Clerks' Association on the following day, had some strong words to say about the "over-reporting" of workmen's compensation cases. A question which has arisen acutely during the last year is the extent to which an injury where pre-existing disease is a large factor can be said to arise out of or in the course of the employment. The question is no new one: in 1903, in the case of Fenton *v.* Thorley, in which a workman ruptured himself by an act of over-exertion in turning a wheel, the House of Lords held that his injury was due to accident. Lord Macnaghten said that the expression "accident" was here used in the popular and ordinary sense of the word as denoting an unlooked-for event not expected or designed. Their Lordships ruled that it was not necessary that an incident should be "fortuitous" in order to bring it within the meaning of the Act. This was a case in which the workman was physically sound. In Clover Clayton and Co. *v.* Hughes (1910) a workman died at work from the bursting of an aneurysm while tightening a nut with a spanner, an operation which involved the most trivial of exertions, and the House of Lords decided that he died by accident arising out of the employment. Lord Loreburn then laid down the test question by which accident and disease cases are still settled. The county court judge is required to decide whether the accident came from the disease alone, and whether, whatever the man had been doing, the result would probably have been the same; or whether the employment contributed to it. More simply put, the question is: "Broadly speaking, did the man die from the disease, or from the disease and employment taken together?"

Mr. Robson quoted four cases from last year's reports in which workmen suffering from some form of heart disease have died at work. In the first one a dock labourer, while helping to load a ship, tried to steady some sacks which were swinging and received a jerk. He scraped his finger as a result of the jerk, but continued to work. A little later there was a slight pause, and on going to sit down he found that it would be necessary to move one of the sacks. He got up and tried to stick his hook into the sack, but fell forward and died. The certified cause of death was myocarditis and syncope. The surgeon at the local hospital said that if the deceased was suffering from heart disease his work must have affected him; that very probably the work had contributed to death. This evidence, if accepted, fully answers Lord Loreburn's question and entitles the dependants of the workman to compensation. The county court judge, however, thought that there was not sufficient evidence to prove that the cause of death was an accident under the Act. He said that death might equally well have been due to a number of other causes, such as indigestion, or even the natural course of the disease. The Court of Appeal reversed his decision on the ground that it did not matter how slight the strain of lifting the sack had been; the workman had incurred that strain in performing his work and death had resulted—death was due to an accident arising out of and in the course of employment. In the second case a workman was employed as a dipper in a galvanizing shop. At about 12.30 p.m. he was resting with another workman; he left his companion for a few minutes, returned, and then fell down dead. The cause of death was certified to be angina pectoris. The widow claimed that death was due to strain on the heart caused by the arduous nature of the work and by fumes arising from the dipping process. At the first hearing the county court judge did not find that the workman suffered any strain or that the work contributed to his death, but the Court of Appeal ordered a new trial because the judge had not answered Lord Loreburn's question. At the second hearing the judge found that the physical exertion of the ordinary work had accelerated death, though the man was suffering from disease of the arteries, and the House of Lords upheld his award of compensation. In the third of these cases a workman suffered from an attack of muscular rheumatism two years before death, but otherwise appeared to have been in excellent health. He was reaching over a tram in order to get at a piece of coal with his pick, and during the act he said "Oh!" twice and then collapsed and died immediately. It was admitted that his work was not heavy. At the post-mortem examination he was found to have been suffering from a very serious cardiac disease, and the immediate cause of death was a large rupture of the left ventricle, which obviously could have been caused by very little strain. The county court judge could find no evidence that the work had contributed to his death. The Court of Appeal upheld the judge on the ground that the question of whether the miner's death was

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accelerated to any material extent by the work he was doing was a question of fact, and there was evidence to support the decision. In workmen's compensation cases, of course, the Court of Appeal does not interfere with the judge's findings of fact but only with his interpretation of the law, unless it considers that there was no evidence at all for the judge to find as he did. There seems to be no difference in any respect between the facts in this case and in Clover Clayton and Co. *v.* Hughes mentioned above. In both the workman was suffering from an abnormal and very dangerous weakness of the circulatory system; in both he was doing ordinary and not heavy work; and in both—to use Lord Macnaghten's words—the fact that the result would have been contemplated as a certainty by a medical man of ordinary skill was nothing to the purpose. Yet the House of Lords allowed compensation in the first case and not in the second. In the fourth case a miner was pulling down coal with an iron bar. His mate asked him for the bar and he handed it over; a few minutes afterwards the man was seen lying on the ground; he gave a groan and died. The cause of death was syncope due to double pneumonia of one or two days' duration, and, according to the medical evidence, death was accelerated by the strain of the work on an overburdened heart. The county court judge, however, refused compensation, and seems to have confused the issue by finding that there was no real evidence that any particular piece of work caused the death. The House of Lords ordered a new trial, partly to have Lord Loreburn's question answered explicitly and partly to clear up the question of whether the judge had misdirected himself, for it is not necessary to connect the death with a particular piece of work or a particular action.

For an injury to be due to accident there must be an element of suddenness, which was present in all these cases. A stoker, predisposed by weakness and emaciation, died of heat-stroke at work and his representatives were awarded compensation. Another stoker, who had complained of heat for four or five days but had continued at work to relieve his mates, collapsed on the fifth day; he was taken on deck, and there he died. His representatives did not get compensation, as the element of suddenness or unexpectedness was lacking. The conflict and uncertainty of the present decisions were ascribed by Mr. Robson to two causes. In the present state of medical knowledge it is virtually impossible in most cases for a doctor to state with any precision whether a man suffering from heart disease who dies at work dies solely from disease or from disease plus work. Medical science is not yet capable of such precision in the analysis of causation. The second reason is the necessity for the element of suddenness laid down in the heat-stroke cases. The dividing line between being gradually overcome by disease and suddenly succumbing to personal injury by accident operating on a predisposed condition is, he points out, so fine that justice cannot yet perceive it with any certainty.

INFLUENZA IN 1932-3

In the week ending March 25th the number of deaths ascribed to influenza in the 118 Great Towns of England and Wales decreased to sixty-five, and it is unlikely that any further large addition to the casualties of this season's epidemic will be made. In the weeks from that ending December 3rd, 1932, to that ending March 25th, 1933, more than 40,000 cases of acute pneumonia (primary or influenzal) have been notified in England and Wales. In the 118 Great Towns, which include rather more than half the population of England and Wales, 10,628 deaths have been attributed to influenza—2,033 of these in London. Hence the deaths directly attributed to influenza in the whole country may be estimated as some 20,000. This, of course, is not the whole bill, since increases under the headings of diseases of the respiratory organs and of the heart are usually associated with an epidemic of influenza. This is a formidable total, but much smaller than at one time seemed probable. In its rate of increase at the end of last year the epidemic looked like depriving that of 1928–9 of its position as the worst recrudescence since the pandemic of 1918–19. It seems clear now that the 1932–3 outbreak will prove to have been definitely less severe than that of 1928–9, but comparable with those of 1922 and 1927.

Owing to differences in the time of emergence no very strict arithmetical comparisons can be made, but against the 10,628 deaths in the 118 Great Towns of this winter we can put 13,884 in 107 Great Towns in 1928–9, from the week ending December 1st, 1928, to that ending April 27th, 1929. The population at risk this year is 4.5 per cent. greater, the deaths nearly 25 per cent. fewer. In London the comparison is between 2,033 in 1932–3 and 2,899 in 1928–9. Even in 1921–2 the London deaths were more numerous than this winter—namely, 2,545 in corresponding weeks. But if we compare with pre-war experience the result is not flattering. Indeed, between the return of influenza in 1889 and the great war there were only three years (1891, 1892, and 1895) when the London experience was definitely worse than this winter. An idea of the scale of mortality attributable directly or indirectly to influenza is afforded by taking the experience of the first quarter of 1929. In that quarter 204,293 deaths were registered in England and Wales, 88,654 more than in the previous quarter and 67,978 above the corresponding quarter of 1928. The death rate was 21 per 1,000, more than half as much again as in the corresponding quarter of 1928 and within 0.3 per 1,000 of the highest first quarter death rate during the twentieth century (the worst was, of course, the first quarter of 1919, the third phase of the great pandemic). Influenza as a certified cause accounted for 23,763 deaths, but this was only a fraction of the excess mortality. In the whole year 1929 the deaths assigned to bronchitis, pneumonia, and diseases of the heart exceeded the corresponding totals of 1928 by more than 40,000. Were we to reduce

these figures by some 25 per cent. we should probably not be far from the truth for this year.

These figures are not pleasant reading, yet the reflections suggested by a study of our rates of mortality are not wholly pessimistic. Let us ignore the brightest side of the picture—namely, the improvement in mortality during the first year of life—and take the least favourable periods ; for instance, mortality in middle life. In 1920 the rate of mortality on males aged 45 to 55 was 12.1 per 1,000 living ; the rate never exceeded 12 again until the influenza year of 1929, when it reached 12.9. In 1930 it was 11.2, and in 1931 11.6. For women the rate was 9.0 in 1920, 8.1 in 1928, 9.0 in 1929 ; in 1930 it fell to 7.8, and was 8.2 in 1931. Fifty years ago (1883) these rates were 19.7 and 15.6, rather worse than what they were ninety years ago (1841–5)—17.2 and 15.1. Just before the war they were 15.1 and 11.5. If we are not gaining much ground we have lost none. In spite of influenza and economic depression the mortality rates of this country are not less but more favourable than in what seems to many of us after reading the newspapers a golden age.

RESEARCH ON VITAMINS

Professor J. C. Drummond's Cantor Lectures, delivered in 1932 before the Royal Society of Arts, consist of a survey of vitamin research, a field in which he is himself an active worker. The general outline of the subject needs little comment here, though the lectures would form very interesting reading, even to those directly concerned with vitamin work. Several noteworthy points, however, which are made by the lecturer, are perhaps not generally appreciated. It is startling to realize how effective a weapon the spectroscope—and more especially the apparatus for ultra-violet spectroscopy—is becoming in the hands of the biochemist. Accurate study of absorption spectra has proved of great, probably of decisive, importance in the separation and identification of vitamin D and in the investigation of vitamin A. The claim made at one point by Professor Drummond that the latter substance has been isolated, may be questioned by the more meticulous-minded, but there is no doubt that it is a product of carotene, and it is possible to assign to it a provisional formula. The final steps of isolation are hindered by the fact that so far no crystalline derivative has been found, and the task of purifying completely a viscous oil is one before which any chemist might quail. The isolation, in a state of purity, of vitamin D is largely due to the circumstance that it forms a crystalline derivative, with 3,5 dinitro-benzoyl chloride. In connexion with vitamin D, a provocative, and at the moment unsolved, problem presents itself. Vitamin D is found in the green plant after recent exposure to sunlight, and partly from this source the animal organism obtains it. But the cod, whose liver is the usual source of this vitamin both for commerce and for medicine, lives in the deep sea, far below the point to which sunlight penetrates. The phytoplankton, which form the ultimate food supply for marine life, contain but small amounts of " D," and then only if recently irradiated. The cod, therefore, has no obvious means either of ingesting ready-formed " D " or of forming it for itself as the result of direct irradiation. Professor Drummond has considered the very important effect of vitamin A on resistance to infection, an aspect of therapeutics which the work of Mellanby of Sheffield brought into prominence. He has also stressed the fact that vitamin deficiency in human beings is rarely uncomplicated. Grave general nutritional deficiency is usually also present, and this fact complicates both the clinical picture and the immediate response to treatment. From the practical point of view, his discussion of the vitamin content of ordinary diets is of great interest. Two matters which are not included in the lectures deserve brief mention. Professor Drummond refers to the claim that " C " is a narcotine derivative. More recently Szent Gyorgyi has suggested, and on better grounds, that it is a body of the nature of hexuronic acid, which he has obtained both from citrus fruits and from the suprarenal cortex. More recently still he has found reason to modify the suggested formula of the substance to some extent. Much interest surrounds the question of the chemical nature of vitamin D. It appears to be certain that it (and ergosterol) are derivatives of di-benz-anthracene, and within the last few months strong evidence has come to light that oestrin, and some of the more potent members of the carcinogenetic fractions of tar, are also closely related to the same substance.

THE INDIA MEDICAL COUNCIL BILL

During a recent debate in the Legislative Assembly on the Government's new Indian Medical Council Bill a well-argued speech in support of the measure was made by Dr. R. D. Dalal of Bombay, one of the non-official nominated members of the Assembly. Dr. Dalal was able to speak with some knowledge and authority, because, in addition to his Bombay medical degree, he has held English qualifications for many years, and also the D.P.H. His speech (which, to judge from the interruptions, was not altogether to the liking of some of his fellow members) recalled the origin of the controversy between the General Medical Council and the Indian universities. This began in 1920, when the attention of the Council was called to the inadequacy of the training in midwifery, and widened until, in 1930, following upon an objection by the Assembly to the Council's suggestion that, pending the setting up of a Medical Council for India, a Commissioner of Medical Qualifications and Standards should be appointed, the Council refused to continue recognition of the degrees of Indian universities as a sufficient guarantee for the practice of medicine, surgery, and midwifery in Great Britain.[1] The General Medical Council, Dr. Dalal declared, had played an important part in bringing medical education in India to its present standard, and, although it had not forced the Government of India to establish a Medical Council, it had recommended that India should set up its own organization for the co-ordination of its medical education so that the Council itself might escape from an invidious intervention. Dr. Dalal went on to defend an aspect of the Bill which has

[1] For a general account of the whole matter see *British Medical Journal*, March 15th, 1930 (pp. 508–11).

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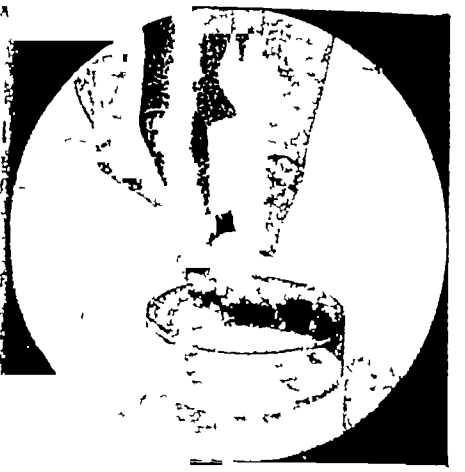

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been assailed—namely, the exclusion from its scope of those who hold merely a licentiateship, as distinguished from the graduates of the medical colleges. He pointed to the example of Japan, where there are several standards of medical qualification, but only the highest standard is recognized for reciprocity in other countries. If licentiates and medical graduates were given equal rights, candidates might gravitate to the easiest examination. So far as India was concerned, the licentiates, who composed a very large section of the Indian profession, and through whom vast areas of rural India were served, would have the same recognition as before, with their names on the provincial registers to distinguish them from unqualified practitioners, to entitle them to certain service under the authorities, and to bring them under professional discipline. Moreover, when their training and examinations were brought up to the desired standards they would automatically come within the scope of the measure. But if they insisted on equality of status at the moment, and gained their point, the result would be to withhold reciprocity for India. Dr. Dalal pointed out that many Indian medical men were earning their livelihood in Great Britain, and many others sought a career among the Indian populations of South Africa, Uganda, the Straits Settlements, and other places, where, however, recognition by the General Medical Council was regarded as an essential condition of practice. With regard to the presidency of the new Council, he gave reasons for his view that the President should be nominated by the Governor-General in Council. He also stated that the Bill had received the approval of the medical faculties of the universities and of the provincial medical councils—a statement greeted with some dissent—and he believed it to be generally acceptable, representing as it did a genuine attempt to secure a sound and dignified status for the medical degrees of Indian universities. Objections would be critically examined by a Select Committee which was proposed for the consideration and amendment of the Bill, and of which he himself had been invited to become a member.

FLIGHT OVER EVEREST

On Monday last the Houston expedition made its epic flight over the summit of Mount Everest—a triumph in which courage, skill, organization, and good fortune played their several parts, and one which well merits the congratulation of the world. To what extent the photographic records obtained on this trip will have come up to expectations is of less concern at the moment than the fact of the achievement itself, as all will agree who have read in the *Times* the modest but graphic accounts by the members of the expedition. Perhaps the most dramatic incident of the flight was when the machines, after passing over Chamlang at an altitude of 31,000 feet, approached the southern peak of the Everest group and found themselves in a strong down current of wind which caused the pilots to lose 1,500 feet of altitude, despite all their efforts to climb. Shortly afterwards they had made the summit with only a few hundred feet to spare, and were circling round it with occasional steep bankings to give the observers chances for taking oblique views. In his account for the *Times* Colonel Blacker describes the "hectic period" during which he was cramming plateholders into the camera and clicking the shutter as fast as he could train the camera. At this altitude, with the oxygen flow meter at the maximum, he was panting for breath, and each lift of the heavy camera was a real exertion. Cork plugs in the air apertures of his mask seem to have proved of considerable help when, with head and shoulders out in the slipstream, he was taking his photographs. Mr. Bonnett, observer in the other machine, appears to have had a lucky escape in which presence of mind may well have averted disaster. During the second circuit of the peak, when he too was working with his head out of the cockpit, he became conscious of a buzzing in the ears and was seized with violent pains in the stomach. Sitting down for a while he noticed a break in his oxygen tube, and, after tying a handkerchief round it, "soon began to recover." Possibly at such an altitude this sudden lowering of the partial pressure of oxygen in the lungs would be insufficient to cause any serious damage, but at all events the experience must have been unpleasantly alarming. Examined after the flight by the doctor attached to the expedition Mr. Bonnett was described as "shaken, but suffering no serious harm." Colonel Blacker appears to have been pale and tired, but not suffering from exhaustion, while the pilots showed no sign of strain.

RAW APPLES FOR DIARRHOEA IN CHILDREN

Adopting a popular remedy in many parts of Germany, Professor E. Moro a few years ago introduced the two-day raw apple diet for the treatment of certain cases of diarrhoea in children. Since then other physicians have testified to the great value of the method, and various theories have been put forward to account for the success obtained. In a recent article[1] Dr. T. L. Birnberg of St. Paul describes his use of this diet in seventy children, with ages ranging from 9 months to nearly 12 years. Only three of the series were under the age of 1 year, however, indicating that the method is not apparently suitable for the infantile types of diarrhoea. The treatment consists of a diet of only scraped raw apples. Completely ripe and mellow fruit should be used, and, after it has been peeled and cored, it is scraped to a pulp with a knife or rubbed on a grater. Sometimes sugar was added to the fruit because the child objected to the taste. (Certain other workers have suggested saccharine instead of sugar in such a case). The child received from one to four tablespoonfuls of apple every hour or two for forty-eight hours, the exact dose varying with the age of the patient; on an average about thirty tablespoonfuls in the two days are used. Nothing else is given unless thirst is excessive, when small amounts of weak tea are allowed. If the apple is completely refused the addition of banana pulp is allowed, and makes it more palatable. After forty-eight hours on this therapy a transitional diet containing neither milk nor vegetables is given—a cooked cereal without milk, toast, potato gruel, scraped beef, banana, weak tea, or cocoa made with water. After a further forty-eight hours gradual return is made to a normal diet. Treatment should be begun as soon as possible

[1] *Amer. Journ. Dis. Child.*, January, 1933, xlv, 18.

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after the onset of diarrhoea. In Dr. Birnberg's cases fever was usually present, but generally disappeared in forty-eight hours. The number of stools at once diminishes, and, as a rule, formed stools appear in twenty-four hours after the beginning of the treatment, mucus disappearing from the stools in about sixty hours. In older children, who could answer questions, it was possible to determine that pain was not increased at all by the raw apples, and usually disappeared rapidly. Even quite severe pain in the abdomen promptly vanished. Various suggestions have been advanced to explain these remarkable results. Moro favours the view that the pulpy mass is not irritating and acts as an absorbent, attributing the main effects to tannic acid. Some workers have favoured malic acid, and others, "pectin," a substance said to be present in the juice of many fruits, which by virtue of its colloidal and inherent "buffer" property can regulate the hydrogen-ion concentration in the bowel. Bacteria are said to be adsorbed and excreted. It should also be noted that the apple diet provides sufficient nourishment and fluid, so that it does not mean any interference with the normal secretion of the digestive ferments, which is apt to happen with starvation methods. Dr. Birnberg claims success in 88 per cent. of his series, stating that some of his failures were due to lack of co-operation of the patient or the mother, since fifty out of the seventy cases were treated outside hospital. He does not mention how many apples are necessary in his regime, but Moro frequently uses any number up to twenty medium-sized apples in a day.

TREATMENT OF DELINQUENCY

The Institute of Medical Psychology held the last of its course of lectures on "The Approach to the Wrong-doer" on March 30th, when Dr. Emanuel Miller spoke on the treatment of delinquency. He agreed that on the whole the long history of human beings and the reasonable satisfaction obtained from law and moral custom suggest that the moral integrity of the individual has, in fact, been maintained by the projection of inner moral sanctions into a system of law, but only in so far as that system represents the best possible organization of morals. It is true, as he says, that no evidence exists to show that crime has diminished with the development of human culture. Certainly war and civil strife, themselves evidence of "mass delinquency," have not. Even if the law were assumed to be efficient in weeding out crime, it concerns itself almost wholly with the offence and hardly at all with the individual. In short, Dr. Miller says that the present legal means of dealing with crime should be replaced, or at least supplemented, by psychological methods of dealing with the criminal. Working from the axiom that all human acts are motivated largely by unconscious forces, he places in the forefront of treatment the diagnosis of what forces have led to the anti-social behaviour of the given individual. His view is that all convicted offenders ought to be examined psychologically and the appropriate treatment prescribed by experts, instead of sentence. Segregation is, of course, necessary, but under Dr. Miller's system the officers of approved schools, Borstal institutions, and prisons would be chosen for their skill in cultivating morale and social sense, and, knowing the full details of the history of the offender, they would adjust their treatment of him to supply the social training he has lacked. Dr. Miller is an opponent of corporal punishment both for children and for adults; those adults who nowadays are liable to flogging he would ostracize as a fitting expression of the injury which their offence has inflicted upon the feeling of common humanity. Theft he considers as especially suitable for treatment, as it is so often a compulsive act; murder he regards as often due to an over-tyrannical inner control. He would like to see an experimental station set up where psychological methods might be tried and statistics compiled. Dr. Miller's views, which are fairly familiar to our readers, represent a somewhat extreme attitude towards delinquency; it is none the less a corrective to the traditional view which stresses the importance of justice and revenge, but which leaves unanswered a fundamental question. Few persons with knowledge of the subject doubt that a small percentage of pathological thieves and sexual offenders can be reformed by treatment, but no one can benefit in the least degree by treatment unless he wishes to be cured. The belief that this wish exists in all offenders is one with which those who come constantly into practical contact with delinquents cannot agree. It would be much easier to sympathize with the aims of medical penologists if they would suggest some form of treatment—almost certainly an uncomfortable one—whereby an effective wish to be cured of anti-social tendencies might be instilled or evoked.

SOUTH AFRICAN MEDICAL CONGRESS

The sixth annual scientific meeting, and twenty-seventh annual South African Medical Congress, will be held in Capetown from September 25th to 30th, under the presidency of Mr. E. Barnard Fuller, F.R.C.S. The honorary organizing secretary of the congress, Dr. Alan W. S. Sichel (P.O. Box 643, Capetown) asks us to issue a cordial invitation to members of the British Medical Association who are likely to be in South Africa at that time to attend the proceedings. The work of the congress will be divided among five Sections as follows: medicine, surgery, gynaecology and obstetrics, public health, and special subjects (six subsections). At the three plenary sessions the topics for general discussion are: diet in relation to health in South Africa; prevention of maternal mortality in urban and rural areas in South Africa; and medico-legal problems of general practice. An exhibition of specimens of medical interest from a historical point of view is being arranged in conjunction with the trades exhibition.

The Swedish Medical Society has awarded the Gulstrand gold medal to Professor Priestley Smith of Birmingham for his work on glaucoma.

We regret to announce the death, on April 4th, of Mr. John Herbert Fisher, consulting ophthalmic surgeon to St. Thomas's Hospital and to the Royal London Ophthalmic Hospital.

HEALTH OF THE NAVY

REPORT FOR 1931

The statistical report on the health of the Navy for the year 1931[1] comprises three main sections: a general summary of statistical information; comments on certain diseases as they affect the total Force and the various stations; and the articles relating to the work of the special departments of hygiene, pathology, surgery, medicine, and dentistry. In addition to these there are the usual tables of the number of cases under treatment, invalided, or otherwise dealt with at the various stations at home and abroad.

There was an increased incidence of disease in 1931, as compared with the previous year and also with the average for the five years 1926 to 1930, but the invaliding ratio shows a decline in both comparisons. The Atlantic Fleet had the lowest sick rate, and the "Irregular List" the highest. Next to the Atlantic Fleet came the two stations in the Mediterranean and in America and the West Indies. The Home station invaliding figure was rather higher, but less by 7.63 per mille than the previous five-year average. Increases occurred on the America and West Indies station, the East Indies station, and the "Irregular List." The death ratios declined in all cases except the China station (0.84) and the East Indies station (1.36). Of the 1,319 cases invalided, 1,214 (13.94 per mille) were for disease and 105 (1.2) for injury. Some of these men were only temporarily invalided; the number of those who were finally invalided was 901, being 3.89 per mille below the five-year average and 2.21 below the figure for 1930.

One case of anthrax occurred on the China station, traced to a shaving brush bought from a travelling vendor. The patient recovered, the remaining brushes of the series were confiscated, and the Governor took steps to prevent the future importation of infected brushes. Dysentery diminished, but one patient who had had bacillary infection in 1926 and amoebic in 1929 died during the year under review. Influenza was not unduly prevalent, though the admission rate was higher than the abnormally low figure for 1930. The cases were generally mild, the characteristic symptoms being post-orbital headache, aching in the back and limbs, malaise, and pyrexia which rarely exceeded 102° F. In one ship 30 per cent. of those inoculated preventively developed the disease at a later date; the percentage of infections among the non-inoculated was about the same.

There was a further reduction in the incidence of malaria, greatly diminished figures being returned by the Home, Mediterranean, and East Indies stations. The China station showed a slight increase. All the cases from the Home station were relapses of infections acquired on foreign stations. On the Mediterranean station most of the patients had become infected from the Greek islands. To prevent mosquitos being carried into ships on fruit and vegetables, orders have been issued that these commodities must be thoroughly cleansed before they are taken between decks, and stowed when possible in mosquito-proof receptacles. The America and West Indies station reported that plasmoquine had been found more powerful than quinine in destroying the gametocytes of all forms of malaria, but less effective in the destruction of the "ring form" trophozoites of aestivo-autumnal malaria. A combination of these two drugs proved to be most valuable in rapidly controlling the symptoms, preventing the formation of gametocytes, and quickly destroying existing gametocytes and trophozoites. As a prophylactic, plasmoquine was considered satisfactory. Meningococcal infections diminished slightly; the recovery rate was about 43 per cent.

Fresh venereal infections fell in number. There were fewer cases of syphilis and chancroid, but the figure for acute gonorrhoea rose slightly. The highest syphilis case ratios occurred on the Africa, China, and America and West Indies stations; the lowest were returned from the East Indies station and the Atlantic Fleet. A decreased incidence of gonorrhoea was reported from the Home, America and West Indies, and East Indies stations, but the figures for the Atlantic Fleet and the Mediterranean, China, and Africa stations rose. The length of time spent in hospital decreased as compared with the previous year. Diseases of the respiratory system increased, including laryngitis, asthma, and bronchitis, but there were fewer cases of pleurisy and fibrosis of the lungs. Owing to the periodic appearance of excretal micro-organisms in the Malta water supply, steps are being taken to render all the Admiralty establishments independent of the civil supply. The reservoir at Casa Luca has been fitted with an automatic chloronome, which has proved to be most satisfactory. The high incidence and fatality of undulant fever among Maltese civilians has led to a proposal for the compulsory sterilization of goat's milk at a central distributing station, and the prohibition of retail sales from door to door as at present practised. Investigations have been in progress also at the Royal Naval Hospital, Malta, but attempts to differentiate *Br. melitensis* and *Br. abortus* by serological and biochemical methods and by the use of dyes have so far been unsatisfactory. The macroscopic whole-blood agglutination test devised by Huddleston was given an exhaustive trial on men and animals, and was found to be a reliable and sensitive means of detecting Brucella agglutinins in the blood. The suitability of this method for use in H.M. ships is under consideration.

Solaria at Plymouth Hospital and Haslar have been completed and brought into use. Skin sterilization at Chatham Royal Naval Hospital is now effected by methylated spirit in place of tincture of iodine. The results of this routine over a period of twelve months have been very satisfactory. The post-operative skin edges united firmly with a minimum of fibrous tissue, leaving a thin, supple, and pearly pink scar. The healing process was not associated with the redness, induration, and sticky serous discharge often present after application of tincture of iodine and solutions of picric acid or mercury perchloride. It is hoped to establish a follow-up system whereby the end-results of the various types of operation can be examined and correlated. The increasing incidence of fractures is attributed to the rise in popularity of motor cycles in recent years.

A slight improvement is recorded in the average dental condition. A higher percentage of recruits entering were found to need dental treatment on admission, but a smaller proportion required extensive operations. Freer use was made of the facilities for radiographic and bacteriological investigations. Appropriate dental treatment in some cases of long-standing physical ailments led to rapid improvement and ultimate cure. There is evidence of a growing demand for dental supervision among the personnel, and cases of individual neglect are now rare. The number of men refusing treatment is almost negligible, while voluntary attendances for periodical examination and treatment continue to increase.

[1] H.M. Stationery Office. 1933. (2s. 6d. net.)

A new quarterly periodical, the *Medico-Legal and Criminological Review*, embodies the transactions of the Medico-Legal Society, which have hitherto been appearing at irregular intervals. In an introductory note Lord Riddell, who is president of this society, expresses the hope that interest in medico-legal problems will thus be stimulated by the provision of a survey of both sides, and that further study will be promoted. The contents of the first issue include a discussion of medico-legal practice, by Sir John Collie; a review, by Dr. F. J. McCann, of the significance of impotence in the male and female; the discussions which followed the reading of these two papers; abstracts from current medico-legal literature; and reviews of books. A retrospect of the society's activities in the past is provided by Dr. R. Henslowe Wellington, one of its first honorary secretaries. The price of this periodical is 3s. 2d. for a single copy, or 12s. 6d. for the annual subscription; it is published by Messrs. Ballière, Tindall and Cox.

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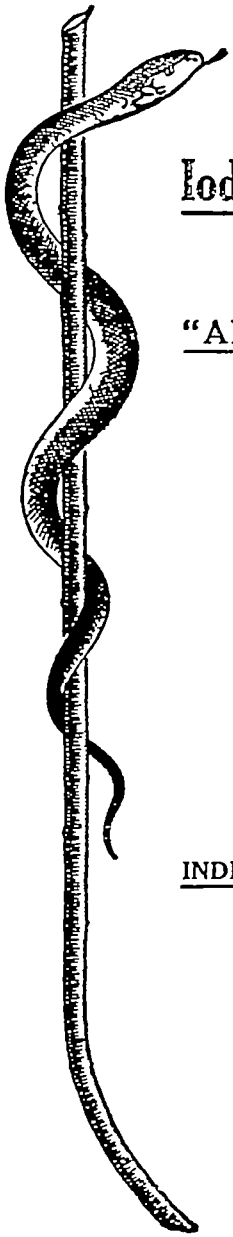

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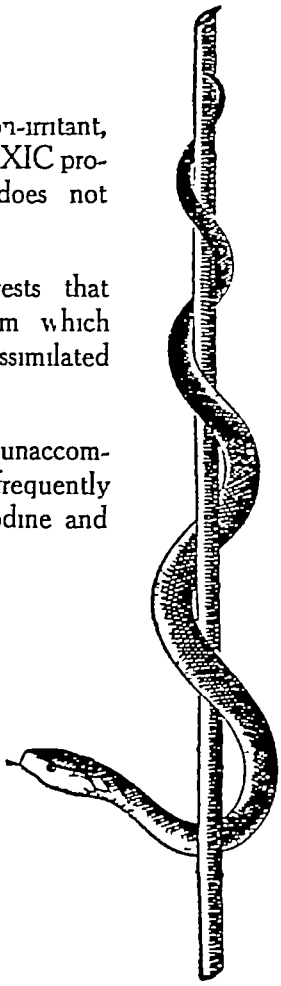

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Scotland

Aberdeen University Graduation

At the graduation ceremony of Aberdeen University, on March 29th, Principal Sir George Adam Smith, who presided, conferred the degree of doctor of medicine upon six candidates, that of master of surgery upon one, and that of bachelor of medicine upon thirteen. The list of honorary recipients of the LL.D. degree included Sir John Marnoch, emeritus professor of surgery in the University. The Dean of the Faculty of Law remarked that the university had accepted Sir John's resignation with profound regret; he had acted as professor of surgery at Aberdeen from 1909 to 1932, and during his tenure of office had laboured in the University Court, Senate, and Infirmary for the enrichment of their academic life. His unselfish devotion to the exacting claims of his profession was acknowledged by many who owed continued existence and health to his skill and sympathy. The honorary degree of LL.D. was also conferred upon Dr. D'Arcy Wentworth Thompson, professor of natural history in St. Andrews University, in recognition of the fact that he had played a leading part in guiding the scientific investigation of an industry of immense importance to the city of Aberdeen, since the time when, in 1897, as a British delegate, he had attended the Behring Seas Fisheries Conference. On a profound knowledge of zoological facts as well as on mathematical and statistical ability. Professor Thompson's great work *Growth and Form* had been founded.

Glasgow Royal Samaritan Hospital

At the annual meeting of the Glasgow Royal Samaritan Hospital for Women it was announced that the directors contemplated an extension of the hospital which would involve an outlay of £12,000. Lord Provost A. B. Swan, who presided, said that with the advance of science and the introduction of new methods in the treatment of disease, the directors had come to the conclusion that the time was ripe for extending the institution, particularly its diagnostic and radiological departments. The cost of the new building would be £6,000 and the equipment a further £6,000. The report showed that the number of in-patients treated during the past year had been 3,250, and the number of out-patients 5,071. The ordinary income had amounted to £15,241, with an extraordinary revenue of £10,219. The ordinary expenditure had been £16,609, a decrease of £1,271 when compared with the preceding year. The retirement of Dr. John T. West, who had been one of the visiting surgeons to the institution for thirty-six years, was mentioned, and also his appointment as an honorary consulting surgeon.

Glasgow Lock Hospital

The report presented to the annual meeting of Glasgow Lock Hospital, on March 28th, showed that 463 patients had been treated in the hospital during the year, an increase of fourteen as compared with 1931, and that the number of out-patients had been 16,488, as against 19,871 in the preceding year. Dr. A. K. Chalmers, formerly medical officer of health for Glasgow, drew attention to the fact that a number of the new attendances in the out-patient department had been made by children; this indicated the necessity for legislative action of some sort. Corporations all over the country had the advantage of a new Local Government Act to organize the medical service of the country, so that they would have a complete domiciliary service which would lead, when occasion arose, to admission to hospital for satisfactory treatment.

The Deaconess Hospital

At the annual meeting of the Church of Scotland Deaconess Hospital, Edinburgh, Lord Sands, who presided, referred to the clearance of slum tenements in the neighbourhood of the hospital, where the town council had decided to leave an open space, which would add greatly to the amenities of the institution. During the year the hospital had treated 868 in-patients, 339 of whom were children, and 6,039 out-patients. The accounts of the hospital balanced satisfactorily, and it was hoped very soon to build a new out-patient department and additional accommodation for nurses. The hospital had recently sustained a loss through the death of Dr. H. L. Watson Wemyss, who had been physician-in-ordinary. Dr. J. K. Slater had been appointed to fill his place, with Dr. W. Ritchie Russell as assistant physician. Dr. E. F. Fisher had resigned from the post of gynaecologist, and Dr. C. D. Kennedy had been appointed in his place, with Dr. MacGregor as assistant gynaecologist. Mr. J. W. Dowden, President of the Royal College of Surgeons of Edinburgh, said he held very strong views on hospital extension. He believed that these institutions should be built of the cheapest possible materials, for even in twenty-five years hospitals required changes, and should be rebuilt.

National Institution for Feeble-minded

Presiding at the annual meeting of the Royal Scottish National Institution for the Feeble-minded at Lambert, which was held in Glasgow on March 22nd, Lord Polwarth announced that the new colony in connexion with the institution was making good progress, and that it was expected the opening ceremony would take place at an early date. This development, he said, was necessary to the work of the institution, because it had been found that many of the children treated there in early years were unfit to face the world alone; the colony would, in effect, maintain them in safety, comfort, and happiness during the remainder of their lives. It was not yet complete, and more funds would be required for establishing workshops. The ordinary work of the institution had been carried on successfully; this was as necessary to-day as it had ever been, although education committees and town and county councils were doing what they could in the way of providing special schools for those of the feeble-minded who were merely backward or slightly defective. Lord Provost A. B. Swan, in commending the work of the institution and colony to the people of Scotland, said that mental defect had become one of the largest and most difficult problems of city life at the present day.

England and Wales

The Maudsley Hospital

The London County Council has agreed that an honorarium not exceeding £50 a year should be paid to a neuro-neurologist of King's College Hospital acting as neurological consultant at Maudsley Hospital. The King's College Hospital annexe (Pantia Ralli ward) is being used as far as possible for cases in which the mental symptoms are associated with obvious organic disease. In arranging for neurological consultant services in respect of these patients it is considered desirable to associate the neurological staff of King's College Hospital, and therefore it is considered that the senior neurological physician on the staff of King's College Hospital should be appointed neurological consultant to the Maudsley Hospital, and that an honorarium of £50 should be attached to the appointment. The Council had previously decided that

the services of specialists on the staff of King's College Hospital, other than those specially appointed as consultants to the Maudsley Hospital, might be employed at a fee of one guinea for each consultation at Maudsley in respect of a patient at that hospital. To be consistent with the practice in the public health service, it is now proposed that the fee paid to visiting specialists when attending the Maudsley Hospital shall be increased to two guineas payable for advice in a single case, or for a session if more than one case is to be seen. The fixed staff of medical assistants to the medical superintendent at Maudsley comprises one deputy medical superintendent, one first assistant medical officer, one second assistant medical officer, five assistant medical officers, with three more engaged temporarily, and two part-time assistant medical officers. The establishment of three psychiatric clinics north of the Thames has imposed greatly increased responsibility upon the three medical officers from the Maudsley Hospital who are entrusted with the charge of those clinics. Each is, during two sessions every week, the completely responsible director of a centre for out-patient treatment to which are being referred in increasing numbers patients of the type who, if these centres did not exist, would have to go to the Maudsley Hospital itself. One of the three is already a first assistant, but the other two rank as assistant medical officers only. It is now thought that officers chosen for these responsible positions should be of a rank not less than that of secondary assistant medical officer, and the two positions of assistant medical officer are to be up-graded accordingly.

Rearrangement of Administrative Areas

A statistical report on the county of Warwick (Part II, H.M. Stationery Office, 9d.), which is supplementary to Part I published a few weeks ago, supplies Census figures for the new and altered areas in Warwickshire resulting from the extensive changes in boundaries which have taken place since the date of the last Census. The issue of a special series of supplementary county Census volumes is due to the fact that under the operation of the Local Government Act of 1929 the area and boundaries of all boroughs, urban districts, rural districts, and civil parishes in the country are undergoing a comprehensive review and that, in consequence, a large number of them will have been subject to substantial rearrangement within a few years of the Census date. The statistics refer in all cases to the population enumerated on April 26th, 1931, though the areas for which they are given are those as existing and as constituted on June 30th, 1932. Of the changes in Warwickshire it may be noted that the county borough of Coventry has been increased at the expense of the administrative county to the extent of some 6,310 acres and 11,043 population, and that the latter has suffered a further small loss by a marginal adjustment in favour of Staffordshire. In the administrative county a new urban district of Solihull has been created, and the former urban district of Bulkington has lost its identity in a merger with Rugby rural district. Three of the eight remaining urban areas have been increased. Of the fourteen rural districts of 1931, five have been abolished and seven others subjected to alterations.

Donations for Cancer Research

Recently the investigations on chemical aspects of the cancer problem which are in progress at the Research Institute of the Cancer Hospital, London, have received recognition and financial assistance from two sources. The trustees of the Halley Stewart Trust have made a grant for a period of three years to support a whole-time worker who will undertake biochemical investigations into the metabolism of cancerous growths. Dr. C. A. Mawson of the Manchester University has been appointed to carry out this work. A grant has been received also from the International Cancer Research Foundation, which is an organization established last year in Philadelphia by Mr. William H. Donner and endowed by him with 2,000,000 dollars. Although its administrative headquarters are situated in America, the Foundation is world-wide in its scope. The income of the fund is to be applied to assist research into the causes, prevention, control, relief, and cure of cancer, and this income is to be so distributed that not less than 35 per cent. nor more than 50 per cent. is to be allotted in countries other than the United States. The trustees have awarded a sum of £1,000 per annum for a period of two years to the Cancer Hospital Research Institute in support of investigations into factors which underlie the origin of malignant growths. This sum will provide two research studentships, to one of which Mr. G. A. D. Haslewood has been appointed. The two research students will investigate special problems in connexion with the general scheme of research now in progress at the Cancer Hospital.

Cancer of the Rectum

The Lord Mayor of London, in presiding at the annual meeting of St. Mark's Hospital, City Road, said that the work in every department showed a decided increase. Unfortunately, like other voluntary institutions, the hospital had passed through a critical twelve months, and but for a timely legacy the position would have been very serious. St. Mark's carried on a specialized work of great value. It had a splendidly equipped research laboratory, where some very promising investigations into the cause and treatment of cancer were being carried out in conjunction with the British Empire Cancer Campaign. The annual report stated that among the cases admitted during the year 119 had been those of carcinoma of the rectum. A gradual decrease in the number of patients treated each year by radium was noted. During 1932 only nine cases had radium treatment. Inhalation anaesthesia, particularly ether, was used less than in the previous year, and in the great majority of cases low spinal anaesthesia was employed, in the shape of stovaine solution (10 per cent.). A report was also presented on the follow-up scheme for cancer cases. It was stated that a systematic record was now available of all cases admitted to the hospital with cancer of the rectum from 1910 to the present time. Examination of the available figures showed the extremely good results, both immediate and remote, which followed operation in early operable cases. The need for earlier application for treatment was indicated by the fact that of the total number of new cases of rectal cancer admitted into the hospital, rather less than 50 per cent. were within the scope of treatment by radical operation.

The Battersea Power Station

It is proposed to install an additional generating set of 100,000 kilowatts at Battersea power station. When the new station at Battersea was projected much public apprehension was felt with regard to the risk to health and property from sulphur fumes emitted from the chimneys, and in the House of Lords the First Commissioner of Works promised that no extension of the station would be undertaken unless it was understood and agreed by the authorities that this would be free from danger. The proposal to add a further set to the two already in place has been the subject of an interview between the London County Council and the Electricity Commissioners, and assurances have been given that the additional set, which is to be for stand-by purposes, will involve no additional coal consumption at the station, that the maximum output will be limited to a number of units which it would

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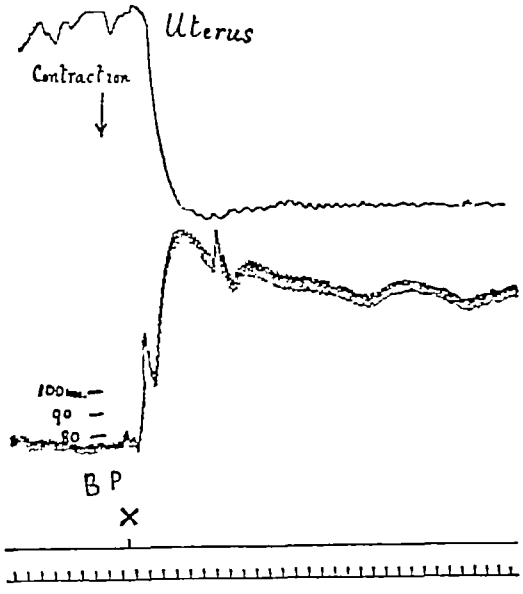

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IBIS-HEADED GOD THOTH, THE GREAT MYTHICAL PRIEST-PHYSICIAN, WHOSE INFLUENCE PERVADED ANCIENT EGYPTIAN MEDICINE.—Thoth (or Tahuti) plays an essential part in religio-medical history for not only did he, in Egyptian belief invent medicine but without him there would have been no magic. Thoth as Lord of Divine words, 'was Pā s magician and the supreme magician of Egypt The words referred to are the words of power" whatever was commanded in these magic words came to pass Thoth alone knew them originally and he only could teach them to the priest physicians, who were not qualified healers until they had been revealed to them It was these words, pronounced over them that imparted power to the remedies taken and to the unguents and bandages applied Thoth is often represented with a pen and writing palette, as here depicted, for he was the inventor of writing and acted as scribe of the gods

Date From earliest times The illustration is c. 1580 B.C.

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be practicable to produce with the present authorized plant, that the efficacy of the gas-washing plant will be satisfactorily tested, and that by the rearrangement there will be a substantial reduction of coal consumption at two other generating stations in London. The Central Public Health Committee and the Public Control Committee of the L.C.C. are therefore proposing to offer no objection, but this is without prejudice to any action that may be taken if the company concerned makes a further application to extend the station or the plant.

CORRESPONDENCE

Changes in the Character of Diseases

SIR,—In his interesting paper on changes in the character of diseases in your issue of March 25th (p. 499), Sir Humphry Rolleston refers to a number of diseases in which changes in incidence have occurred within comparatively recent times. He discusses chlorosis, the disappearance of which has been noted in all parts of the world. The almost equally striking disappearance of muco-membranous colic has, however, escaped mention in medical literature, except for a short note by Boas in his *Archiv* a couple of years ago. Though always rare among hospital patients, it was one of the commonest conditions among women seen in private consulting practice before the war. It was a very usual event for a patient to bring with her a bottle containing a mucous cast of her colon, often several inches in length. I have hardly seen a single large cast for nearly twenty years. Though colon spasm is as common as ever, or perhaps even more common than formerly, it is nowadays generally accompanied by the passage of either no mucus at all or only a small quantity of shreds or jelly.

The disappearance of muco-membranous colic is difficult to explain. It is not due to the disappearance of the Plombières douche, which Mathieu regarded as one of its chief causes, as unfortunately this pernicious form of treatment has recently become fashionable again, after having sunk for a period into well-merited oblivion, nor is it due to any widespread change in diet. It is interesting to note that the corresponding form of asthma, in which Curschmann's spirals and plugs of coagulated mucus are formed, is as common as ever.—I am, etc.,

Windsor Forest, March 29th. ARTHUR F. HURST.

X Rays in the Treatment of Asthma

SIR,—A report on 120 cases of asthma treated by *x* rays of medium wave-length was given by me at the Second International Congress at Stockholm, 1928, and published in the *British Medical Journal* in January, 1929. Despite much research since then, it can scarcely be said that any advance in medicinal treatment has been made, and a further note on the value of radiation therapy may therefore be of interest to your readers, especially with regard to the permanency or otherwise of the results.

In the paper referred to I divided the cases treated into three types—namely, asthma without bronchitis, asthma with some bronchitis, and those with emphysema, chronic bronchitis, and accompanying asthma. There was surprisingly little difference in the results, at any rate as regards the immediate effects—about two-thirds of the patients in each group were relieved of symptoms. In this series those with asthma and some bronchitis certainly did the best, although further experience indicates that the uncomplicated cases give almost an equal percentage. As the majority of these patients were seen at hospital it has not been possible for me to follow up many of them in the past four or five years, but private cases are more easily kept in touch with, and of those who derived early benefit very few have gone back to their former condition. It is true that we can never say in any individual case that the condition is "cured," for relapses may occur after years of freedom. It is also true that there is a definite percentage of cases that show not the slightest response to *x* rays—so far, no reason for this has been formulated. A trial series of radiation treatments is therefore insisted upon in each case before deciding whether the full course is worth while. It is nevertheless true that many people have been able to carry on their businesses and enjoy life during the past four or five years who would otherwise have been complete invalids.

A recent discussion at the Royal Society of Medicine brought out the fact that other radiologists have obtained similar results. Dr. Mucklow of Cheltenham stated that some of his cases had remained well since he first treated them one or two years ago; others had lasted nine months, and had responded to further treatment; and yet others seemed to require treatment every two or three months. I think this is a very fair statement of the general results of *x*-ray treatment in asthma. Admittedly they are not ideal, nor do all patients derive the same benefit; nevertheless, the results compare favourably with those of other forms of therapy.

Secondly, as to the method of treatment. I omit technical details, but the following points are important. The thorax is excluded entirely from radiation. One large field is used for the abdomen and one for the back, lead rubber protecting the thorax and genitals in the male. High-voltage radiation—so-called "deep *x* rays"—is unnecessary. I use a medium wave-length, and do not push the dosage beyond the production of slight nausea, this symptom indicating, I consider, the saturation point. It should be noted that with the large field used constitutional results can be obtained without visible effect on the skin.

With regard to how the treatment acts. As many patients state that the effect is more apparent when the radiation is applied to the back, this leads one to think that the functioning of the suprarenal bodies is in some way influenced; or again, there may be what we vaguely call a metabolic change; or possibly one is dealing with a form of protein shock therapy. Increase in weight, loss of nasal catarrh, and other phenomena which coincide with the disappearance of the asthma, show that the system as a whole is in some way being influenced.

Obviously here is a new field awaiting investigation.—I am, etc.,

London, W., March 31st. S. GILBERT SCOTT.

Hernia and Appendicectomy

SIR,—I have read with great interest the article in your issue of April 1st by Mr. Henry J. Wade concerning McBurney's incision for appendicectomy and its relationship with inguinal hernia. Mr. Wade, quoting Southam, states that examination of excised portions of ilio-inguinal nerves during operations for inguinal hernia showed partial degeneration consistent with pressure on the nerve by scar tissue following McBurney's incision. No mention is made of the common cause of scar tissue—namely, infection—which is encouraged by the presence of a drainage tube. It is surprising how often drainage is attempted through a gridiron incision, thus encouraging spread of infection along muscular planes, and risk of subsequent fibrosis and pressure on nerves. If pelvic drainage is required a suprapubic incision allows more direct and dependent drainage, and similarly, a stab

The great psychologist,
William James,
Sized man up rightly
As a creature of habit.
His habits once formed,
Man holds on to them
Tenaciously
Any attempt at change meets
With great resistance
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But also certain
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Is taken
At bedtime
Soon after breakfast
Next morning
Evacuation
Takes place
Repeated daily
This soon will grow
Into constant habit
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Remarks
ON
ANAEMIA IN GENERAL PRACTICE *
BY

L J WITTS M D F R C P
ASSISTANT PHYSICIAN GUY'S HOSPITAL WILL EDMONDS CLINICAL RESEARCH FELLOW

About half the patients who are sent to me for anaemia have a normal blood count They are not suffering from anaemia but from debility very often psychological in origin An unhappy love affair does not require treatment with liver extract but I have seen it prescribed in more than one such case on a mistaken interpretation of the symptoms as anaemia On the other hand anaemia is often overlooked especially when it is complicated by the sallow complexion of the chronic abdominal invalid or the parchment skin of old age If we remember that anaemia is likely to be present in long standing cases of dyspepsia and that pernicious anaemia is a disease of old age we shall be forearmed and make fewer such mistakes It is often difficult to be certain of the presence of anaemia from clinical inspection The white face of the sedentary worker usually hides a normal blood while the invalid who has been lying in the sunshine in the garden may have a sunburnt complexion along with a haemoglobin of 40 per cent and anginal pain on exertion The lips are not a much better guide than the skin The conjunctivae and the palate best reflect the state of the blood

Anaemia is one of the few diagnoses about which we can be absolutely certain It is decided at once by the estimation of the haemoglobin and I should like to lay down as my first axiom that *treatment should not be given for anaemia until the diagnosis has been confirmed by the haemoglobinometer* Haemoglobinometry is a controversial subject and the large number of apparatus which are on the market suggests that none is absolutely satisfactory The Haldane apparatus is probably the most accurate for routine use but it is a little too complicated for general practice and not very handy at the bedside The preliminary estimation of the haemoglobin can be rapidly and simply performed by the Tallqvist test in which a drop of freshly drawn blood is taken on a slip of blotting paper and compared with a coloured scale This test is quite as accurate as that made by many an expensive apparatus and it far more sensitive than the unaided eye

My second axiom is that *symptoms of anaemia rarely appear until the haemoglobin has fallen below 75 per cent* There are certain exceptions to this axiom more especially in pernicious anaemia where glossitis and nervous changes may appear with a haemoglobin percentage little below the normal It is nevertheless a good general rule and if a patient has a haemoglobin of 75 per cent or over it is unlikely that weakness or dyspnoea is the result of anaemia On the other hand if the haemoglobin is below 75 per cent the patient is truly suffering from anaemia and the next step is to decide the exact nature of the anaemia It is a short sighted policy to begin treatment without further investigation It is true that the anaemia may sometimes be relieved by a grape shot prescription of iron liver arsenic and hydrochloric acid but in the absence of an accurate diagnosis it is impossible to foresee the future course of the illness or foretell the danger of relapses or complications Moreover the anaemia may be a symptom of some underlying malady which progresses unfavourably while time is lost during symptomatic treatment

My third axiom therefore is that *if the haemoglobin is below 75 per cent a complete blood count should be performed* An accurate blood count may at once elucidate the diagnosis showing perhaps leukaemia or frank pernicious anaemia More commonly a banal anaemia of low colour index is found and the diagnosis must be established by further clinical investigation Anaemias may be roughly divided into

1 Those which are essentially diseases of the blood-forming organs and

2 Those which are secondary to some other disease

AETIOLOGY OF ANAEMIAS

It is wise to remember that symptomatic anaemias are far more common than primary diseases of the blood-forming organs and that they rarely respond to symptomatic treatment until the underlying disease has been corrected The causes of symptomatic anaemia may be roughly classified as haemorrhage infection toxaemia and new growth Common causes of haemorrhagic anaemia are peptic ulcer haemorrhoids and menorrhagia When infection produces anaemia the infection is usually obvious and dominates the clinical picture as in the anaemia associated with rheumatic heart disease with subacute bacterial endocarditis or with typhoid fever Anaemia is often attributed to focal sepsis or to syphilis but I have rarely seen anaemia much improved by the eradication of foci of sepsis or the treatment of a positive Wassermann reaction and such findings are more often coincidences than aetiological factors In respect to toxaemia I would emphasize the importance of chronic nephritis as a cause of anaemia and I deprecate the attribution of anaemia to intestinal toxaemia I have seen more than one patient who had been treated for months with bowel antiseptics colon lavage and vaccines of faecal organisms without any benefit and who improved rapidly on the prescription of iron Malignant disease should be considered in every case of obscure anaemia Anaemia occurs more especially in malignant disease of the stomach and of the large bowel in which it may be the presenting symptom Such anaemia frequently responds well to iron * or to liver † the haemoglobin rising rapidly under treatment but the growth progresses unchecked Anaemia may be present in growths outside the gastro-intestinal tract as in one of my patients who presented an obscure anaemia with a haemoglobin of only 24 per cent and who ultimately proved to have carcinoma of the lung with widespread metastases It is however rarely so severe as in gastro-intestinal carcinoma

It is clear that the diagnosis of a case of anaemia requires a detailed history a complete investigation and a careful weighing of the data obtained Particular attention should be devoted to the gastro-intestinal tract Of special investigations one of the simplest and most informative is the examination of the stools for occult blood I should never be content to treat a patient for anaemia when there was unexplained occult blood in the stools But important as it is to exclude gross organic disease in the diagnosis of a case of anaemia it is equally important not to attribute anaemia to trivial and unreasonable causes The red blood cells and the marrow cells from which they arise constitute an organ larger than the liver This organ is not only bulky but robust as is shown by the sheep used in our bacteriological laboratories which give 100 c cm of blood a week for years on end without developing anaemia or by human transfusion donors who have given a litre of blood at short intervals

* A post graduate lecture to the Leicester Medical Society May 10th 1933

wound in the loin parallel to the nerves is an efficient method of drainage if infection is limited to the iliac fossa or flank.

A second cause of nerve involvement is inclusion by a suture. In McBurney's incision either the ilio-hypogastric or ilio-inguinal nerve is sometimes seen on the surface of the internal oblique, lying parallel and close to the line of separation of the muscular fibres. In a fat patient the depth of the wound renders identification of the nerve difficult, and in any case a suture carelessly introduced may include it.

These remarks are in defence of McBurney's incision, which is most unlikely to be followed by nerve involvement provided that (1) it is not used for drainage, and (2) care is taken to avoid inclusion of a nerve in the stitches which approximate the separated fibres of the internal oblique muscle.—I am, etc.,

London, W.1, April 2nd. R. J. MCNEILL LOVE.

Small-pox Nomenclature

SIR,—In my letter (*Journal*, March 18th) the term "modified small-pox" is used in the sense implied by Ricketts, described in his writings, and adopted by his pupils; and on this conception, which I maintain is conducive to that clear thinking and scientific accuracy which Dr. Killick Millard seeks, "modified small-pox" includes cases of "variola minor." I am afraid, however, that I must repudiate responsibility for the suggestion that "there may conceivably be more than the two varieties of small-pox," for I well know that the disease has many forms. What I do suggest is that there may be more than two strains of small-pox virus—a very different thing, and one which does bear on the original issue in this correspondence.

The question of compulsory vaccination, which Dr. Millard raises in his second letter (*Journal*, March 25th), should not, in my opinion, be affected by current small-pox mortality or morbidity. I consider that we should offer protection against small-pox (as against diphtheria, enteric fever, etc.), with advice suitable to the circumstances and to the special needs of individuals. The public should be taught to realize that protection from small-pox is a personal matter, and in this respect there is much to be said for the suggestion put forward by Dr. A. F. Cameron (*Public Health*, November, 1932, p. 50), that removal to hospital should be limited to cases in need of medical and nursing attention not readily obtainable at home.—I am, etc.,

Dartford, March 26th. J. PICKFORD MARSDEN.

"Nerve Energy"

SIR,—Professor R. J. A. Berry, in his letter in the *Journal* of March 25th, urges us to forget some of the things we have been taught about the anatomy and physiology of the nervous system. But he uses the term "nerve energy," which refers to a subject about which we were taught nothing, and therefore have nothing to forget. The majority of contemporary physiologists do not allow us to employ the term "nerve energy," whether linked to the words "potential" or "kinetic."

Many years ago Professor Macdougall told us that "the professional physiologists referred to it contemptuously as a survival from the Dark Ages," and a little later Professor Adrian said that he would like to banish it from our vocabulary. Nevertheless neurologists, clinicians, psychiatrists, a very few physiologists, and a great many of the laity are constantly using the term "nerve energy." Neither the word "neuro-rheuma" introduced by Dr. (now Sir) William Hale-White in 1886, nor "neurine," introduced by Professor Macdougall some seventeen years later, has been adopted. The physiologists have never discussed the conception of "nerve energy" as an integral and essential part of their exposition of the activities of the central nervous system, although, indeed, Professor Howell of Baltimore has written: "Physiologists have considered the cell-body of the neuron . . . as the source of the energy displayed by the nervous system."

This extreme reluctance to grapple with the reality of nerve energy is not shared by the clinicians. Sir William Osler wrote of "nerve-force," Mott used the expression "innervation currents," Halliburton, expounding a view of Hughlings Jackson, spoke of "nervous energy," Sir Maurice Craig of "potential energy," and Dr. Crookshank of "nervous tension." At the Oxford meeting of the British Association in August, 1926, I initiated a discussion on the "Reality of Nerve Energy" (cf. *Brit. Journ. Med. Psych.*, 1927, vii, Part 2). After an exchange of views, Dr. Adrian's definition (1922) was thought to be the best: "the total potential energy in the neuron available for use in the transmission of impulses."

Professor Berry writes as though no exception had ever been taken to the term, and as though it had never been looked at askance. Surely it is not a satisfactory state of matters to have clinicians, neurologists, psychiatrists, and lay writers all employing the term "nerve energy" while most of the physiologists do not even recognize the reality of the thing connoted. If, however, they do now agree with Dr. Adrian's definition, then it is time they discussed nerve energy in their textbooks, and placed the words in the respective indices.—I am, etc.,

London, March 27th. D. FRASER-HARRIS.

Tonsils and Diathermy

SIR,—The article in the *Journal* of February 25th (p. 313) on reconditioning of the tonsils by the diathermy current by Dr. W. S. Gross and Dr. B. Varvill I find very interesting in the results obtained, although the investigation has been carried on only for eighteen months. I have used this method of diathermy puncture for some time, having seen it first in Paris, but I have always looked upon it as an operation of convenience—where the patient is infirm or unable to spare the time for a removal of the tonsils by dissection.

It has always been my practice at the British Red Cross Society rheumatism clinic to advise removal of the tonsils by dissection where there is a history of infection of a year or more. A tonsil damaged by disease or by previous operative intervention is always a "weakened" tonsil, and readily becomes a source of infection. Heating up the tonsil by "medical" diathermy current produces no trauma and often does good *in recent cases* of tonsillar infection. No method short of removal can guarantee that there is no small concealed abscess in the tonsils, or that they will not do damage to the patient again.—I am, etc.,

C. HAMBLEN THOMAS, F.R.C.S.

London, W.1, March 28th.

Distinctive Colour for Chloroform

SIR,—I am glad that Dr. G. R. Phillips has drawn attention to the need for some distinguishing feature between chloroform and ether, but I fear that there might be some difficulty in colouring chloroform, as one would then be unable to rely on its purity. In conjunction with Mr. L. F. G. Simmons of the National Physical Laboratory, I have had made some glass density balls of a size to drop into the ordinary medicine bottle one uses for

without any serious fall in haemoglobin When, therefore, severe anaemia develops in a patient who has only a moderate dental sepsis, or slight haemorrhoidal bleeding, or a normal pregnancy, it is much more likely that there is some underlying disorder of the blood than that the anaemia is due to such small causes

CLASSIFICATION

I am accustomed to classify the primary or essential diseases of the blood into four main groups I will dismiss the first three groups rather shortly, so that we may concentrate on the important fourth group, the treatment of which is so largely in the hands of the general practitioner

1 *Leukaemia and Hodgkin's Disease*—These diseases are characterized by changes in the white cells of the blood or enlargement of lymph glands They are probably closely allied to the malignant growths, and are as invariably fatal Treatment with x rays or with arsenic produces great symptomatic improvement, though life is probably but little prolonged

2 *The Hepato-lienal Diseases*—These are diseases of the blood in which the liver and spleen are also involved Here I include acholuric familial jaundice and splenic anaemia Treatment with liver and iron may produce transient improvement, but the only satisfactory treatment is splenectomy

3 *The Haemorrhagic Diseases*—This is an ill-defined assortment of diseases, some of which are of constitutional origin Apart from the group of cases with reduction in the number of blood platelets which is benefited by splenectomy, treatment is empirical and unsatisfactory

4 *The Anhaemopoietic Anaemias*—This is the important group to which I wish to devote the remainder of this lecture I am sorry that my classification compels me to use a rather unfamiliar title but these anaemias can for practical purposes be regarded as conditions in which the nutrition of the bone marrow is impaired, and its ability to form blood cells correspondingly reduced This malnutrition may be the result of defects in the diet, or in the digestion, or in the internal organism, more especially the endocrine glands There are many conditions which give rise to anaemia in this way, but the two most important are (1) iron deficiency, or idiopathic microcytic anaemia, (2) pernicious anaemia

There is reason to believe that some cases of aplastic anaemia come under this same heading, but aplastic anaemia is so rare that we need not discuss it now Deficient supply of iron to the bone marrow results in a shortage of haemoglobin, and the anaemia which follows is characterized by the small size of the red cells and by their deficient complement of haemoglobin and consequent pallor The anaemia is therefore described as microcytic and hypochromic and it is of low colour index This anaemia may occur when the iron and haemoglobin stores of the body are depleted by long-continued bleeding as in haemorrhoids or in hookworm disease The most typical examples, however, are found in infants, and in women of reproductive age Chlorosis was probably a disease of the same type, but chlorosis has disappeared, and need not be considered to day

NUTRITIONAL ANAEMIA OF INFANCY

The investigations of Helen Mackay[4] have shown that 40 per cent of breast-fed babies and 70 per cent of artificially fed babies in the hospital class are anaemic Anaemia is perhaps less frequent in the wealthier classes The anaemia, which is of low colour index, appears about the third month reaches a maximum about the ninth month, and improves spontaneously on weaning It is not a vitamin deficiency as it develops on a high-vitamin diet and is cured by iron alone It is most severe in premature and small babies, which come into the world with a poor store of iron It is almost certainly an iron deficiency, due to the low iron content of the milk, and it is more severe in artificially fed babies, because cow's milk contains less available iron than the mother's Anaemia which is so general might have been regarded as physiological had not Helen Mackay shown that it leads to an increased susceptibility to infection Colds otorrhoea, bronchitis, and enteritis are twice as common in untreated babies as in those in which the anaemia is treated with iron Iron should always be prescribed for small and premature babies, and there are few babies, breast-fed or artificially fed, who will not benefit from it It is given as iron and ammonium citrate, 4½ to 9 grains a day A simple prescription is 1½ grains of iron and ammonium citrate in 1 drachm of chloroform water added to the feeds three times a day Administration must be commenced very slowly, starting with only 2 or 3 drops of the mixture to a feed, and taking a week or ten days before the full dose is given With this precaution it is unusual for the digestion to be upset The mother should be warned that the stools will be black Proprietary milks containing iron are now on the market They are quite effective, but some little time should be taken in incorporating them in the diet to avoid dyspepsia If a milk and cereal diet is prolonged after infancy so also is the anaemia I am a firm believer in the importance of weaning babies early and including eggs, meat, and green vegetables in the diet by the end of the first year Many of the schemes of diet which are in use to-day and which are so strongly advocated in the health pages of the popular papers, underestimate the child's digestive powers, entail extra work and expense for the mother, and produce a flabby, anaemic baby I have already mentioned that anaemia predisposes to infection Such infection greatly aggravates the anaemia, which may be rapidly fatal unless a transfusion is performed

ANAEMIA OF WOMEN

Just when we were congratulating ourselves that chlorosis had disappeared, we discovered that a rather different form of anaemia is very prevalent in women This anaemia differs from chlorosis in having its highest incidence in the late thirties, and in being profoundly aggravated by pregnancy Davidson and co-workers[5] have shown that anaemia of this type with a haemoglobin below 70 per cent is present in approximately 14 per cent of women of the poorer classes in Aberdeen It occurs also in the better classes, though with less frequency The causes are

1 The female reproductive cycle, with the loss of iron in menstruation and pregnancy
2 A diet poor in iron
3 Defective digestion of iron, 80 per cent of cases having achlorhydria or extreme hypochlorhydria

The sexual factor is paramount, while the importance of the dietetic and the digestive factors varies in different cases Associated symptoms are glossitis brittle or depressed finger-nails and splenomegaly, in some cases the resemblance to pernicious anaemia is very striking There is a great tendency to relapse, more especially during pregnancy, or at the menopause, when the menses become excessive I have already commented on the feeding of infants, and I should like to make similar remarks on the feeding of pregnant women The mother has to supply enough iron to her baby to last until it is weaned or approximately 20 lb in weight She also loses blood at the confinement If her diet is insufficient she develops anaemia and becomes more liable to puerperal infection while her baby comes into the world with a poor store

anaesthetics. These balls are easily made of such a density that they float in chloroform and sink in ether. In addition, these balls, being blown from capillary tubing, have a projection where they are sealed off, and I find that when put in the ordinary C_2E_3 mixture they just float below the surface with this projection downwards, whereas in chloroform they float on the surface with the projection almost level. Thus one of these balls kept in each of the bottles in one's bag or on the anaesthetic table enables one to tell immediately what anaesthetic that bottle contains, even should someone pour chloroform into a bottle already containing ether. As an additional safeguard it is an easy matter to have on each label the position of the indicator for that particular fluid.

We are arranging to have these balls made up and put on the market for anyone requiring them.—I am, etc.,

Teddington, March 28th. C. G. A. SADLER.

SIR,—With reference to the letter in the *British Medical Journal* of March 25th (p. 535) under the above title, it may be of interest to you to know that about 1908 we conducted experiments with regard to distinctive colourings of chloroform. This was done at the wish of one or two anaesthetists at that time. We were successful in producing a red-coloured chloroform which was found perfectly stable and free from any objectionable features. The demand for it was, however, on a comparatively small scale, although we took steps to make it generally known, and as time went on this demand gradually fell away. We can still supply if desired, and if any anaesthetist or other medical man would care to have samples, these would be gladly placed at their disposal.—We are, etc.,

DUNCAN, FLOCKHART AND CO.

Edinburgh and London, March 28th.

Halibut-liver Oil

SIR,—The article by Haines and Drummond (*British Medical Journal*, April 1st) on "The Properties of Halibut-liver Oil" is of great interest. The conclusions are largely confirmed by my own experience in the manufacture and analysis of this oil. There is no doubt that the largest livers (presumably those from the oldest fish) give the highest values for vitamin A. In my experience the largest livers give oils having "blue values" (antimony trichloride test) of about 2,000, the spectrographic determination showing up to 4 per cent. of vitamin A (calculated in the same way as Haines and Drummond's results), while small livers have given an oil with a "blue value" as low as 180. My results also confirm the authors' that the "blue value" of halibut oil is a trustworthy measure of the vitamin A content, though this is not so for cod-liver oil.

The problem of a seasonal variation in the vitamin A content of halibut-liver oils is one that has been occupying my attention. There has certainly been a big drop during the winter months, but it is too early to make any definite statement at the moment, as the size of the livers has not been taken into account. Certainly seasonal variations occur in the cod.

I note that Mr. Haines and Professor Drummond have adopted the method of converting the spectrographic value (E 1 cm./1 %) to actual percentages of vitamin A on the assumption that pure vitamin A has E 1 cm./1 % = 1,600. This is, perhaps, a little premature, as it is not yet absolutely certain that pure vitamin A has been obtained, but if it is justifiable it has the advantage of being a perfectly clear method of expressing vitamin A content. There are, at the moment, at least five methods of expressing vitamin A potency, and for the benefit of the physician it is essential that some uniform method should be adopted. The Permanent Commission on Biological Standardization of the League of Nations has recommended that a system of biological units based on a pure carotene standard should be adopted. These units are not yet in practical use, and one may hope that they will never be adopted, as they will add to the present confusion and are bound to be superseded in a short time by the much clearer method of giving actual percentages of vitamin A.—I am, etc.,

London, E., April 4th. NORMAN EVERS, B.Sc., F.I.C.

Forethought in Midwifery

SIR,—There does not seem to be a great deal of difference between Dr. White's views and mine. He agrees that a medical examination early in pregnancy is desirable, but thinks that it will be difficult to get the patient to the doctor. Had he said "to the clinic," or "to a strange doctor," he would have been right, but there would be no difficulty if the patient could go to her own family doctor, as I suggested. I agree that all midwives *should* be able to pick out cases of doubtful normality—and the highly experienced sisters at my own and other maternity hospitals are doing so with great success—but all the midwives in the country do not attain this high standard. To educate them all would take years, whereas the services of general practitioners can be obtained by a stroke of the pen, and for reasons which I gave in my lecture this method of supplementing the work of midwives has many advantages over clinics.

A wider aspect of the problem, and one which is apt to be overlooked by administrators in compact areas, is that if all ante-natal work—which, after all, is only a means to an end and not an end in itself—be done by other than general practitioners, their interest in midwifery will diminish, and their value in the emergencies which still happen even with the best ante-natal care will fall to *nil*, with disastrous results. Surely the encouragement of team work between doctors and midwives throughout pregnancy, labour, and puerperium is more likely than any other practicable measure to lead to immediate benefit to the mothers of the country as a whole.—I am, etc.,

Poplar, E., April 1st. W. H. F. OXLEY.

Early Dermatological Journals

SIR,—In an annotation, "The History of Dermatology," in your issue of March 25th, mention is made of the first British dermatological journal, the *Journal of Cutaneous Diseases*, started by Sir Erasmus Wilson in 1867. Actually Wilson's journal was called the *Journal of Cutaneous Medicine and Diseases of the Skin*, edited by Erasmus Wilson, F.R.S.—he was not knighted until 1881. Wilson's use of the words "cutaneous medicine" is noteworthy because it indicates his great ambition—that dermatology should be acknowledged as a legitimate branch of general medicine; and on relinquishing the editorship in 1871 he wrote: "It has been received into the fold of general medicine; it has been recognized as a part of medical education." Three volumes were published under Wilson's editorship (1869, 1870, 1871), and the fourth and final volume was edited by Purdon of Belfast. It ceased for want of "pecuniary support," and there was no other journal for diseases of the skin in this country for the next seventeen years.

When the *Journal of Cutaneous Medicine* was founded in 1867 there was only one other such journal in existence—the present *Giornale Italiano delle Malattie Veneree e delle Malattie della Pelle*, which was founded in 1866. The

present French and German journals, the *Annales* and the *Archiv*, were first published in 1869, and the American *Archives* in 1875.—I am, etc.,

London, W.1, March 28th. H. G. ADAMSON.

Vagitus Uterinus

SIR,—Dr. Clouston's article on the subject of the child crying in the uterus, in the *Journal* of February 4th, interested me greatly, and especially so because I am one of the few lucky witnesses to that rare phenomenon. This happened in 1908—a woman in labour with her sixth child; delivery by forceps; child in good health. I wrote about the case in the Danish medical journal *Hospitalstidende* (Nr. 20, 1908). I also mentioned the occurrence in the lay press (the weekly paper *Norðurland of Akureyri*, Nr. 5, 1909).

Like Dr. Clouston, I deplored the scanty literature on the subject, but from Bumm's *Geburtshilfe* and Eulenberg's *Medical Encyclopaedia* (the article on "Kindstödtung" by Halban) I learned that some most reliable obstetricians had observed and described the uterine crying. To myself and to my two helpers (the midwife and a medical student) there was no doubt as to the origin of the crying. It sounded pitiful, and was much like the crying of a new-born child hidden under a duvet (an eiderdown).

My article in *Hospitalstidende* did not seem to arouse any particular interest, and there came no remarks upon it later. The lay article was, on the contrary, more appreciated, and some of my farmer friends then told me that they had heard of vagitus uterinus occurring occasionally in the cow-stables, when there were difficulties in extracting the calf. An old woman friend also informed me that in one of our sagas it is mentioned that vagitus has been observed in dogs. This is to be read in *Fornmannasögur* (Copenhagen, 1828, Bd. 11th, 10), where it is said to have occurred before great events—"the whelps barked within the wombs of the bitches."—I am, etc.,

HEINGRIMUR MATTHIASSON,
M.O.H. and Surgeon to the Hospital of
March 6th. Akureyri, Iceland.

First Use of Gloves in Surgery

SIR,—The statement in the review of Sir D'Arcy Power's *Short History of Surgery* in your issue of March 11th, that "W. S. Halstead of Baltimore introduced the use of rubber gloves as a protection both for patient and for surgeon in 1891," tends to conceal a little bit of antecedent history touched with romance. Halstead first introduced rubber gloves into his theatre a year or so earlier, in the winter of 1889–90, for a slightly different purpose. The nurse in charge of the operating room had complained to him that the solution of mercuric chloride used in sterilizing the hands had caused a dermatitis on her forearms and hands. In Halstead's own words: "As she was an unusually efficient woman, I gave the matter my consideration and one day in New York requested the Goodyear Rubber Company to make as an experiment two pairs of thin rubber gloves with gauntlets. On trial, these proved to be so satisfactory that additional gloves were ordered." Later the assistant in charge of instruments was given gloves. The operator wore them at first only when making exploratory incisions into joints. After a time men who had grown accustomed to wearing gloves as assistants came to wear them habitually as operators, because they felt more expert with gloves than without. I owe the story to my friend Dr. F. L. Reichert, himself trained at Baltimore, who remarks (*International Abstract of Surgery*, May, 1930):

> "It is interesting that the use of rubber gloves in surgery was not the result of an inspiration to eliminate the hands as a source of infection during the operation. Their use was a matter of slow evolution, first as a protection for the hands of the assistants from irritating solutions, then as an added precaution on the part of the operator in exploring joints, later as an aid to the operative dexterity of those accustomed to gloves as assistants, and finally as a regular adornment to be worn invariably in all cases, clean and septic, by the operator and all members of the operating team."

The "unusually efficient woman" for whom it all began in due course became Mrs. Halstead.—I am, etc.,

King's College, London, March 20th. D. M. BLAIR.

Doctors and Unemployment

SIR,—With reference to Dr. W. H. Emslie's letter in your issue of April 1st (p. 588) I wish to express my delight with the ideas therein propounded. To-day we have existing, side by side, unemployment, poverty, and superabundance. It is absurd to talk of over-population. It is also absurd that our increasing ability to produce goods and services should be accompanied by a diminishing ability to consume them. In the solution of this problem of production without consumption rests the prosperity of the nation and of the medical profession. What is the use of our growing power over Nature if this increased power (which is real wealth) cannot be distributed to the population because of lack of money? Without money (which is cheap enough to make), goods and services, abundant though they be, cannot be distributed. We, as doctors, are concerned with the proper distribution of the fruits of science, because on things like food, shelter, and clothing depend health and life itself. Man does not live by bread alone, but certainly on a minimum of food, clothing, and shelter. The problem of the distribution, not of scarcity, which was what concerned Malthus, but of plenty, is one that is concerned with our money system—that is, our ticket system—and necessarily deserves the attention of the medical profession especially. As Dr. Emslie points out—and rightly, I think—this problem has been solved to-day by an engineer, Major Douglas, and only awaits application.—I am, etc.,

JOHN LEISHMAN, M.A., M.B., Ch.B.

Barnard Castle, April 2nd.

SIR,—The chronic lack of purchasing power, emphasized by Dr. Emslie, is closely related to the losing battle being fought by the London consultants with the bureaucrats of the L.C.C., and the confusion of the district medical officers recorded in the same issue.

In a world burdened with food, goods, and potential services, the need for statutory medical treatment of the destitute is as anomalous as the widespread bad housing and malnutrition which accompany it. When the medical profession realizes that the greatest bar to all medical progress—"finance"—is capable of being overcome easily by the social credit proposals of the "engineer economist," Major Douglas, it will use its unique opportunities for disseminating truth, and so forward the establishment of the social credit state, a state in which every individual will have increasing financial independence and be able to pay for his own medical treatment. As a result, most of the difficulties of private medical treatment would disappear, the future of the voluntary hospitals as self-supporting units would be assured, and the public health hospitals would be reduced (or elevated) to a condition of supplying medical treatment for payment, on terms agreeable to the patients and to the medical and other staff.

So long as the profession confines its activities to making the best of the present incorrect and centralized system of financial power, so long will it find its activities thwarted, its income diminishing, and its prestige continually depreciated.—I am, etc.,

J. EWART PURVES.

Bromley, Kent, April 2nd.

of iron and develops nutritional anaemia' Anaemia is far more frequent than chronic nephritis or eclampsia and the diet of the ordinary pregnant woman should be designed with this point in view she should have red meat once a day and abundance of green vegetables and fruit. In menorrhagia near the climacteric severe anaemia will usually bias us in favour of an artificial menopause by *x* rays radium or operation when we should have otherwise waited for the natural termination of the menses

The anaemia of women is of low colour index and the specific treatment is iron Liver is of no value Iron must be given in large doses and preferably as a scale preparation or as one of the ferrous salts Minimum doses are iron and ammonium citrate 60 grains a day and Blaud's pill 45 grains a day Iron should always be given by mouth as effective doses cannot be given by injection Treatment in many cases will require to be continued till after the menopause when the anaemia has been repaired a generous diet and a maintenance dose of 10 grains of Blaud's pill will usually be sufficient Relapses must always be expected during pregnancy and treated early or the patient may become gravely ill Once you are on the look-out for this anaemia of women you will be surprised at its frequency Both you and your patients will be impressed with the dramatic improvement in cases which you had formerly regarded as chronic abdominal invalidism or neurosis But *you will only get satisfactory results by giving iron in large doses by mouth*

PERNICIOUS ANAEMIA

In pernicious anaemia the malnutrition of the bone marrow is the result of achylia and defective gastric digestion In the absence of the proteolytic ferments from the stomach material which is essential for the normal function of the bone marrow and the spinal cord is not extracted from the food and anaemia and degeneration of the spinal cord develop The anaemia can be repaired by the use of liver or desiccated stomach—a substitution therapy Pernicious anaemia can usually be diagnosed by the blood picture the cells are larger than normal the colour index is high and there is excess of bile pigment in the serum Owing to the insidious onset the diagnosis is sometimes missed the symptoms being attributed to the weakness of old age debility after an influenzal attack the change of life carcinoma of the stomach or a disordered liver

I shall omit any clinical description of pernicious anaemia and devote myself to its treatment The results are still unsatisfactory and in far too many cases the story is as follows A patient is found to be suffering from pernicious anaemia and he makes a good response to treatment with liver or allied substances He is then told to eat 1 1/2 lb of liver a day and is lost sight of Feeling himself better he relaxes his treatment perhaps taking liver only once or twice a week As a result he develops subacute combined degeneration of the spinal cord and a general and quite unwarranted belief is fostered that treatment of pernicious anaemia is of little value in preventing the onset of spinal symptoms The real conclusions from this history are (1) that cases of pernicious anaemia should be kept under regular supervision to see that their haemoglobin is maintained above 90 per cent (2) that some less onerous treatment than 1 2 lb of whole liver a day should be prescribed Just as every patient with diabetes mellitus is under the threat of diabetic coma so every patient with pernicious anaemia is under the threat of subacute combined degeneration Treatment of pernicious anaemia is easier than that of diabetes mellitus inasmuch as it is impossible to give an overdose of effective substance *The golden rule of treatment is to give enough effective substance to keep the blood count normal and to increase the dose if any signs of spinal degeneration appear* Alternatives to whole liver adequate doses of which are intolerable to many patients are extracts of liver oral or intramuscular and desiccated stomach Liver extracts are too expensive for general use but desiccated stomach is as cheap as or cheaper than whole liver' In the vast majority of cases of pernicious anaemia the anaemia is repaired and nerve changes are arrested by a daily dose of one ounce of desiccated stomach Most of my patients take it in soda-water half an ounce twice a day and eat an ordinary diet with appetite and good digestion They do not take liver regularly and then only as an article of diet The are warned that they must continue this treatment for the rest of their lives and they are examined at monthly or bi monthly intervals My own observations are in complete agreement with the much larger experience of Wilkinson that in patients treated in this way the blood remains perfectly normal no nerve degeneration occurs and any spinal symptoms present are usually alleviated

When a patient is seen in relapse it is wise to accelerate recovery by injecting intramuscular extracts of liver Patients with subacute combined degeneration should also be given intramuscular extracts of liver until the blood is normal in addition to treatment by mouth to arrest the progress of the disease For maintenance treatment I rely on desiccated stomach but advise the patient to take as much marmite and bemax as possible In isolated cases iron and thyroid gland may be indicated I am not convinced of the value of massive doses of iron in subacute combined degeneration as I have seen subacute combined degeneration develop in a woman who was having massive doses of iron for a microcytic anaemia Nor do I often prescribe hydrochloric acid in pernicious anaemia as desiccated stomach overcomes any tendency to dyspepsia and it is desirable that treatment should be as simple as possible

Subacute Combined Degeneration

While it should always be possible to prevent the development of subacute combined degeneration it is more difficult to treat the established disease Nevertheless it is surprising how much improvement is sometimes made The victims of subacute combined degeneration are usually elderly people who regard paralytic symptoms as omens of an impending dissolution which they are powerless to avert They take to their beds and give up hope of ever walking again This attitude is often encouraged by over solicitous relatives and it must be vigorously opposed Every effort should be made to get the patient up on a couch or a wheel chair and to encourage him by massage and re education to stand and walk I have been much more vigorous in my treatment of subacute combined degeneration since I had the following experience

Mrs C L R aged 40 came to see me supported by two sticks and a devoted husband She had been anaemic all her life had had sprue in China at the age of 34 and pernicious anaemia in Jerusalem at age 39 From this last attack she had recovered as regards her blood but had much weakness of her legs which she attributed to a fall and a sprained ankle In actual fact she had subacute combined degeneration with spastic paresis of both legs and a bilateral extensor plantar response She was not pleased with my diagnosis and on some excuse did not pay a fee then—or later A chiropractor agreed with her own diagnosis of a sprain and manipulated her telling her he had replaced an artery which had been twisted She promptly gave up her sticks and boarded a ship back to Jerusalem without assistance

When a patient has organic disease we are too apt to take symptoms at their face value and to accept a degree of disability which is out of proportion to the anatomical damage Hurst has emphasized this point in his lecture on " The Hysterical Element in Organic Disease,' [3] and elsewhere, and we can hardly be too often reminded about it In subacute combined degeneration the nerve lesions can be arrested by adequate dosage of effective substance, except in the terminal stage of bladder infection and transverse myelitis It is doubtful whether the lesions are entirely spinal in situation or irreparable in nature , some of the sensory change is probably due to degeneration of peripheral nerves, which can recover completely But quite apart from the possibility of the regeneration of damaged nerve tissue, there is no doubt about the gain in bodily vigour under adequate treatment of the anaemia, and the ability of many of these crippled patients to regain the use of their hands and feet if they are properly encouraged and carefully re-educated

Mr M aged 60 developed symptoms of subacute combined degeneration in September 1929, though he had been failing in health for some time before He was rather remiss about attending his doctor and took only the equivalent of 1/4 lb of liver a day in liver extract During 1930 and 1931 the red cells remained between 3½ and 4 millions, and the haemoglobin about 80 per cent The nervous symptoms were unchanged, and paraesthesia was always present In the summer of 1932 he suddenly lost the use of his legs The blood count was now red cells 3 630 000 white cells 7 000, haemoglobin 80 per cent He was confined to his bed for about four months Joint sense was practically absent in the toes the tendon reflexes were depressed and both plantar reflexes were extensor He had much flatulent dyspepsia, and developed a venous thrombosis in the left leg Suspicion of a carcinoma was aroused and the patient himself took so gloomy a view of his future that he gave away his valuable car to a friend He was taken into hospital and treated with intramuscular injections of liver and desiccated stomach by mouth His blood count improved to red cells 4 880 000 white cells 7 800 haemoglobin 96 per cent colour index 1 With massage and re education he learnt to walk with two sticks He continued the desiccated stomach on discharge and six months later the blood count was practically identical Joint sense was still grossly impaired and Romberg s sign positive the tendon reflexes were exaggerated, and the plantar reflexes were both extensor Nevertheless he was able to work in the garden without a stick and had bought a new car in which he had recently driven over 100 miles in one day His handwriting which had previously been almost illegible on account of the numbness of the hands had also much improved

It would be easy for me to multiply instances of this kind for unfortunately about half the cases of pernicious anaemia I see are patients who have relapsed from inadequate treatment and developed subacute combined degeneration And while I have seen several paralysed patients improve so much as to be able to return to normal life, others have been too far advanced to respond, the bladder has been involved, and necropsy has revealed cystitis and ascending nephritis It is lamentable that in so many cases to-day the life of a patient with pernicious anaemia is merely extended long enough for him to develop subacute combined degeneration There is no more reason for patients with pernicious anaemia to succumb to subacute combined degeneration than for diabetics to die in coma Both complications are preventable by careful treatment

I would repeat that the treatment of pernicious anaemia is easier and cheaper than that of diabetes mellitus It is impossible to give an overdose of effective substance, and the treatment need in no way interfere with the enjoyment of a normal diet and an active life There is no excuse for relaxation of treatment and every patient should be frankly told the danger of such a course Occasional estimations of the haemoglobin should be as much a routine as tests of the urine and blood in diabetes mellitus We have had ten years to learn the modern treatment of pernicious anaemia, and it is time we took its lessons to heart

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THE HEALTH OF ANTIMONY OXIDE WORKERS

BY

SIR THOMAS OLIVER, M D , F R C P

NEWCASTLE UPON TYNE

The smelting of antimony ores, and the production of antimony metal, has been practised in England for at least two centuries, but the commercial production of pure grades of antimony oxide for pigmentary and similar purposes has been in operation only since the war Antimony trioxide (Sb_2O_3) is now manufactured in large quantities, and this material, which is in the form of an extremely finely divided white powder, is much used

The smelting of antimony ores has never been regarded as a dangerous occupation, and the only malady from which antimony smelters suffer (and then only occasionally) is an irritation of the skin, which results in blotches or minute pustules—sometimes extremely unpleasant owing to itchiness The parts of the body most affected are the front and back of the forearms, the front of the chest, and the epigastrium The irritation appears to be caused when dust falls on a skin damp with perspiration, but it is noteworthy that many workers are not affected, and that in this connexion personal cleanliness is an important factor It is found that the irritation invariably disappears completely in the course of a few days if the worker ceases to have contact with antimony dust In view of the increasing use of antimony oxide in industry, it was felt desirable in the interest of the worker to ascertain whether or not the handling of this material demands special hygienic precaution Feeling that the conditions of exposure of workers engaged in the manufacture of the material are likely to be more severe than those involved in its use, I made an inquiry into the health of some workers who had been engaged in its manufacture for a period of thirteen years—which period covers the production of this material on a commercial scale in England Shortly after its manufacture was commenced the question was raised as to the possible toxic character of antimony trioxide, and at that time medical opinion could only be based on experience of the processes of antimony smelting, in which the production of antimony fumes, oxide, etc , is inevitable The view then expressed was that there was no evidence to indicate that there were any dangers in the production or use of antimony trioxide , indeed, evidence to the contrary was available The late Sir Thomas Legge, in evidence before the Home Office Departmental Committee on Paints stated that antimony oxide was only a mild irritant and could not be described as a poison at all

THE SURVEY

The following recent investigation, which affords confirmation of earlier medical opinion has been made possible through the courtesy of the Cookson Lead

SIR,—May I be permitted to reply to Dr. Emslie's letter of friendly criticism? In the first place, we are agreed that the world food supply is more than sufficient for all needs. But of what use is surplus food that is being dumped into the sea in various parts of the globe to an unemployed Englishman "enjoying" seven days a week of enforced unpaid leisure (without any capital to draw on)? The treatment suggested is to increase the buying power of the population—How? Every one of our recent Governments has failed to find the solution of our unemployment problem. Although it would appear so far to have been discredited, the doctrine of Malthus is still of the gravest import to us, for the underlying principles unfortunately still hold good, and now that we no longer hold the lead we obtained, it has already begun to operate again, as evinced in the suffering of the unemployed. Rather than gaze on our successful defiance of the Malthusian doctrine in the past, would it not be wiser to look to the future and realize that our feet are already engulfed in a slough of unemployment? And as the general population (apart from the engineer mentioned by Dr. Emslie) have so far failed to solve the problem of distribution, let us not increase our burden lest we sink irretrievably.—I am, etc.,

Litcham, King's Lynn, April 2nd. E. I. PUDDY.

SIR,—I presume that the engineer economist to whom Dr. Emslie refers is Major C. H. Douglas, who has recently written extensively on economic problems, and has demonstrated a system, which he describes as "social credit," whereby the present discrepancy between purchasing power and real wealth—that is, goods—could be overcome. It is a great pity that his works are not better known.—I am, etc.,

London, W.1, April 3rd. R. CHRISTIE BROWN.

Consultants and Specialists, L.C.C.

SIR,—As more senior men who have no direct interest in the part-time consultant service of the L.C.C. we should like to draw the attention of our colleagues to what appears to us to be the significance of the London County Council's recent action in connexion with the appointment of part-time consultants and specialists to the Council's hospitals. We are not concerned here with the justice or injustice of the actual terms of appointment. To us the disturbing feature of the London County Council's action has been its unwillingness to co-operate in free and open discussion with the consultants so that a competent and well-organized consultant service should be at the disposal of the ratepayers of London. It is surely to the advantage of the London County Council that such co-operation and consultation as have been offered to it by the consultants should be exploited to the full. How could it be otherwise? A service of highly skilled technicians cannot be properly organized unless the organizing body has the benefit of the experience of the technicians concerned.

The particular point in question is no mere local incident of only contemporary importance. We see in it that element of despotism which in these days takes shelter behind the name of democracy, but which is essentially anti-democratic. Times are changing rapidly, and the closest co-operation of all men of good will in the hospital field is essential if the difficult problems of the future are to be solved. No authority can afford to neglect any contribution of value. The consultant section of the profession is equipped in a peculiar way to give valuable advice on the organization of the consultant service. Powerful bodies are not unnaturally jealous of their rights, but the London County Council, if it lost a little in absolute power, would gain a great deal in knowledge and real power if it exhibited a warmer desire for co-operation with voluntary hospitals and with the men and women who staff them.—We are, etc.,

CHARLTON BRISCOE
E. FARQUHAR BUZZARD
CRISP ENGLISH
STCLAIR THOMSON
JOHN S. FAIRBAIRN
FRANCIS MUECKE
London, April 4th. A. JAMES WALTON

SIR,—As a member of the British Medical Association I have been much interested in the various statements which have appeared in the last three issues of the *British Medical Journal* concerning the L.C.C. scheme for the appointment of consultants and specialists to its Hospital Service. From these statements it would appear that Dr. O'Donovan and Dr. Anderson, the Medical Secretary of the B.M.A., have been extremely active in organizing what, for convenience, we may call a "strike of London consultants," with the object of defeating the proposals of the L.C.C.

I am not in the least degree anxious, or in any way concerned in my mind, as to what may be the effect of the proposed "strike" upon the L.C.C. A great public authority is quite capable of looking after itself, and it may be safely assumed that, in any event, the L.C.C. will take all necessary measures to ensure that the patients under its care shall not suffer in any way, whatever may be the result of the "strike." Nor am I in the least degree interested in the antics of Dr. O'Donovan, who looks extremely like living well up to the traditions of the "Wild Irish," who love a fight at any time, and at any place, and for any cause, however mistaken. As a member of the British Medical Association, I am, however, seriously concerned with respect to the part played in this connexion by Dr. Anderson. He is the Medical Secretary of the British Medical Association, and, as such, holds a very important and responsible position of trust, and presumably it is his duty to carry out the policy of the Association, of which body he is an official.

The question, therefore, which I ask myself, and which I imagine a good many other members of the Association are asking themselves, is this: Are the members of the Council of the Association aware of his activities in this "strike campaign" against the L.C.C., and do they approve of the action taken by the Medical Secretary? If so, it is surely without precedent in the history of the Association for a "strike" to be organized by officials of the B.M.A. against a public authority, which has never been asked, until it was obviously much too late, to receive a deputation from the so-called "Consultants' Committee," the very existence of which committee was never known to the L.C.C. until several weeks after the L.C.C. scheme had been approved by the Council.—I am, etc.,

London, S.W.3, April 4th. FREDERICK MENZIES.

*** It is essential that the position of the L.C.C. and of its Chief Medical Officer in relation to the matters in dispute should be understood; but it is not less important that the motives and actions of those who have voiced the feelings of the consultants, and of the Medical Secretary of the Association (who has so far acted at the request of and on behalf of the Metropolitan Counties Branch Council), should not be misrepresented. Sir Frederick Menzies, before he sent the above letter, had written to the Chairman of Council of the British Medical Association asking him for information, and the Chairman of

Council made Sir Frederick acquainted with the facts. "The concern of the consultants," he was informed on March 30th, "has arisen and developed spontaneously. . . . If . . . you are under the impression that the Medical Secretary has taken the initiative in arousing or fomenting an artificial agitation which otherwise would not have come about, or would have been only of trivial importance, I must ask you to accept my assurance that this is not so. Dr. Anderson has taken no action of this kind, but you will be the first to recognize that it is his duty to act loyally in carrying out the decisions and presenting the opinions of those whose official servant he is." The Chairman of Council added that the only wish of the Council of the Association would be to deal with the matter at its meeting on April 12th in the friendliest possible way with a view to amicable negotiations, and he assured Sir Frederick Menzies that "any obstacles to getting the matter on to this footing will certainly not come from the B.M.A."

Obituary

JONATHAN HUTCHINSON, F.R.C.S.

Consulting Surgeon to the London Hospital

We announced last week with regret the death of Mr. Jonathan Hutchinson, who, like his distinguished father Sir Jonathan Hutchinson, had been surgeon to the London Hospital. When he was born at Reigate in 1859 it was still possible for a surgeon to be encyclopaedic. Few advances had been made, Lister was still a physiologist, anaesthesia was on its trial, the microscope was but little used, for the staining and hardening of tissues was in its infancy. The ophthalmoscope and laryngoscope were new instruments. He lived to see everything changed, for he lived in the very heart of scientific surgery both at home and in the hospital.

Educated at University College School, then in Gower Street, he entered the London Hospital Medical College in October, 1876, having gained the Buxton scholarship in arts. During his student career he was awarded honorary certificates in anatomy, physiology, and chemistry, and won the medical scholarship. He qualified M.R.C.S.Eng. in July, 1880, passed the primary Fellowship examination in 1883, and was admitted F.R.C.S. on November 13th, 1884, after serving as house-surgeon to Frederick Treves. In the medical school he was appointed assistant demonstrator of anatomy in 1882 and filled the post of full demonstrator from 1893 to 1895. At the hospital he was elected surgical registrar in 1885, and served until 1889, when he became assistant surgeon, succeeding to the full staff in 1898, and becoming consulting surgeon in June, 1920.

He soon showed a versatility comparable with that of his father, for he filled the office of clinical assistant at the Royal London Ophthalmic Hospital, Moorfields, was ophthalmic surgeon to the Great (now the Royal) Northern Hospital, and was surgeon to the Lock Hospital. He began his connexion with the Royal College of Surgeons of England by winning the Jacksonian prize in 1888 with an essay on the diagnosis, effects, and treatment of injuries to the epiphyses of long bones. The prize was awarded to him again in 1914, when he competed with "The Pathology, Diagnosis, and Treatment of Trigeminal Neuralgia." The honour was great, for in the long history of the Jacksonian prize it had only been gained more than once by Joseph Swan in 1819, by George Calvert in 1824, and by Rutherford Alcock in 1841. Hutchinson delivered the Erasmus Wilson Lecture in 1892 on syphilitic affections of bones, joints, and the lymphatic system, and in the following year he spoke on injuries to the epiphyses and their results in his capacity as Hunterian professor of surgery and pathology. He was a member of the Court of Examiners from 1911 to 1921, and was elected a member of the council in 1913. This honourable position he resigned in 1914, as no member of the Council can compete for the Jacksonian prize. Although he was never greatly interested in committee work, he acted as secretary of the Medical Society of London, was a member of the Pathological Society, and as early as 1888 was elected a Fellow of the Royal Medical and Chirurgical Society, then a somewhat exclusive body. He lived during the greater part of his professional life at 1, Park Crescent, Regent's Park, W., where he died on March 27th, having survived his wife for nine years. In an annexe to the house there was long maintained the clinical museum collected by his father, which was used to illustrate post-graduate lectures at the policlinic.

Hutchinson showed many of the best traits of his Quaker ancestry and upbringing. Quiet in speech, courteous in manners, endowed with a sober humour and a love of artistic shape and colour, he was so reserved that his life was spent in domestic peace and comfort. He did everything conscientiously and to the very best of his ability. He was a good clinical teacher and a fine but not showy operator. His interests were manifold and were not confined to his profession, for he became interested in Japanese and English art and was a member of the Burlington Fine Arts Club. As a good citizen he took an active part in maintaining the amenities of the district in which he lived. He wrote comparatively little. *Aids to Ophthalmic Medicine and Surgery* in early life, *The Treatment of Facial Neuralgia* later, and some papers in the transactions of medical societies comprise his individual work; he edited the second and third editions of Treves's *Handbook of Operative Surgery* and himself wrote the articles on hernia, diseases of the tongue, and syphilis.

DAVID SAMUEL DAVIES, M.D., LL.D.

Late Medical Officer of Health, Bristol

We regret to announce the death on March 26th, at Exmouth, of Dr. D. S. Davies, who was for forty-two years medical officer of health of the city and port of Bristol.

David Samuel Davies was born in Bristol in 1855, and from Bristol Grammar School went to St. Thomas's Hospital, qualifying as M.R.C.S. and L.S.A. in 1879. Two years later, after serving as house-surgeon to St. Thomas's, he became L.R.C.P. and M.B.Lond., and obtained the Cambridge D.P.H. For several years he held office under the Local Government Board as medical inspector on the cholera survey and general sanitary survey of England and Wales, and then in 1886 was appointed M.O.H. for Bristol. In 1891 he graduated M.D.Lond. in State Medicine, and in 1912 the University of Bristol, for which he lectured and examined in public health, conferred on him its LL.D. Dr. Davies was also examiner for the Universities of London and Belfast and the English Conjoint Board. During the war he was specialist sanitary adviser to the Southern Command, with the rank of lieutenant-colonel R.A.M.C.(T.), having previously held the rank of surgeon colonel in the 1st Gloucestershire R.G.A. Volunteers. He was a member of the old Epidemiological Society, which, at the amalgamation in 1907, became a section of the Royal Society of Medicine, and he had held office as president of the Society of Medical Officers of Health. His published writings included reports on small-pox, on typhoid carriers and milk-borne typhoid, on scarlet fever, and on plague in Bristol.

Dr. J. MIDDLETON MARTIN writes:

As a colleague of the late Dr. D. S. Davies, being medical officer of health for an adjoining area, I had the

and Antimony Co Ltd of Newcastle Antimony tri oxide is produced on an extensive scale at the Willington-on Tyne works of this company and opportunities were given to me for a full and complete investigation of the processes and examination of the workers It was of interest at the outset to note that no special hygienic precautions are taken—nor do they appear to be necessary—and that although overalls and respirators are provided for the use of men when engaged in packing the final product the regular use of the respirators is difficult to enforce as is the case in other trades It is also interesting to record that in the process of manufacture—particularly in the packing department where the workers are exposed to considerable quantities of antimony oxide dust—there have been very few cases of skin irritation This may be due to the fact that the men are not exposed to high temperatures and therefore perspiration is not abnormal

The total number of men directly engaged in this process was six and their service with the company was as follows

Subject	Age	Total Service	Service in Antimony Oxide Manufacture
I	61	38 years	13 years
II	48	30 years	13 years
III	63	41 years	3 years
IV	43	18 years	13 years
V	47	28 years	13 years
VI	46	20 years	2 years

Subjects I II IV and V had all worked for many years as antimony smelters before the manufacture of antimony oxide was commenced Examination gave the following results

The weights of the men ran from 8 st 10 lb to 11 st 4 lb and this was the only man of the six who weighed more than 9 st 10 lb Three of the men were under 5 ft 3 in in height They were fit felt well were swarthy in appearance and had thin walled chests and somewhat poorly developed upper arms with a scarcity of subcutaneous fat In none was there evidence of heart enlargement or of cardiac trouble Their health had been good little time had been lost through illness appetite was normal and there was no constipation kidney or bladder trouble They were married the wives were living and the mortality rate of their children had been similar to that of the average of children of workers engaged in other industrial occupations As already mentioned little time had been lost through illness Subject I with thirty-eight years service had had no real illness except mild influenza debility and slight skin inflammation while Subject II with thirty years service had had no illness beyond occasional irritable spots on the skin Subject III with forty one years service had been ill only twice the cause being rheumatism and dry pleurisy Subject IV with eighteen years service had been ill only twice through influenza Subject V with twenty eight years service had had influenza once while Subject VI with twenty years service had been ill only twice from neuralgia and influenza

Nothing unusual was found on microscopical blood examination The red corpuscles were healthy though the blood of one man showed slight anisocytosis Although two of the men had previously worked as lead smelters for twenty-seven and three years respectively before taking up work in antimony no basophile corpuscles were found in the blood of either of them The white corpuscles were average—that is 50 to 70 per cent polymorphs 6 per cent small lymphocytes and 8 per cent large lymphocytes Eosinophils were as high as 4 per cent Chemical examination of the urine of each workman failed to reveal the presence of antimony—an observation of considerable importance in view of the fact as is shown later that the men were excreting considerable quantities of antimony in their faeces

It is thus clear that in normal circumstances antimony oxide is not appreciably absorbed by the system owing to its relative insolubility in the alkaline and acid juices of the body The following figures which show the results obtained in the determination of antimony in the faeces of the men examined prove definite intake of antimony into the alimentary canal with subsequent elimination by the faeces

Subject	Weight of Faeces in Grams	Solids Per Cent	Dry Weight in Grams	Parts of Sb per Million in Dry Faeces	Grams of Sb in Faeces
I	30.9	22.1	6.8	1,500	0.0103
II	99.7	28.0	27.9	3,510	0.0978
III	109.5	25.8	29.3	2,040	0.0599
IV	31.4	29.4	9.2	1,299	0.0119
V	80.3	27.3	21.9	3,210	0.0703
VI	70.6	28.2	19.9	1,740	0.0346

These figures show a marked daily elimination of antimony in the excreta of the men at a period when they were most casual in the wearing of respirators and in the observance of general hygienic precautions A trial period of close hygienic supervision was then enforced and the faeces of three of the men—Subjects II III and V—were examined The following facts when compared with the previous figures are of interest as indicating the effect of the control

Subject	Parts of Sb per Million in Dry Faeces		Milligrams of Sb in Faeces	
	N.S	S	N.S	S
II	3,510	503 1,970	97.8	5.1–20.7
III	2,040	1,330–1,640	59.9	12.7–15.2
V	3,210	608–864	70.3	8.3 10.8

N.S — "No supervision" period.
S — "Supervision period," representing three samples from each worker

The blood pressure of practically all the men was below the average for their ages—a circumstance unusual among men engaged in heavy work The figures are as under

Age	Total Service	Blood Pressure
61	38	162 84
48	30	138 70
63	41	132 78
43	18	122 78
47	28	144 90
46	20	122 80

As compared with the blood pressures of men engaged in other labouring occupations these figures must be considered as extremely safe and satisfactory from the prospective health point of view

SUMMARY

The investigation has shown that the men look as if they were a year or two older than the ages stated They are swarthy in appearance and have thin chest walls but are free from respiratory disease The heart and kidneys are healthy and except for a very small patch of irritation in two of the men the skin was quite normal Blood pressure is lower than in most men engaged in similar manual work The upper arms are thin and ill developed but the grasp of the hand is good The men enjoy good health and lose little time through illness In view of these observations it is clear that the occupation of these men although it involves exposure to antimony oxide is healthy It presents no industrial hygienic problem or risk and a similar conclusion might justly be extended to workers who in other industries handle this material

INFRA-RED RAYS, COMFORT, AND HEALTH

BY

SIR LEONARD HILL, M B , F R S

While they enjoy a bright open fire some people dislike dull red gas or electric fires, stoves, and hot-water pipes, and usually suppose that such sources are unpleasant because they dry the air, or give off fumes they are supported in this opinion by the relief felt on opening a window These people also feel uncomfortable in a crowded room, and put their discomfort down to pollution of the air by respiration Scientific investigation has, however, proved that in such crowded rooms there is no physiologically significant alteration of chemical purity, and that the cooling power of the air is really the important factor Yaglou[1] and his co workers have shown that ions diminish in number in the air of a crowded room, but no relation has been established between alterations of ionization of the air and comfort While some people are very sensitive others are indifferent to the type of heater used in a room, or to the room's crowded state In the House of Commons some members complain greatly of the system of heating and ventilating used there , others say that it is very good Then again, there are some people who like open windows and others who call these ones ' open-air fiends " When the kata-thermometer was introduced by me as a measure of comfortable conditions I empirically fixed a cooling power of 6 for rooms in this temperate climate It takes a much higher cooling power—for example, 12 to 14—to increase the heat production of a man in ordinary clothing, so efficient are the means of the body for regulating heat loss The feeling of freshness given by a moderate cooling power is not due then to any change in the rate of heat production It is known, too, that alterations in relative humidity at ordinary room temperature from 40 to 70 per cent have no sensible effect on comfort Some people, however, put a bowl of water in front of a stove, and are made more comfortable by this, and yet such a bowl produces no detectable increase of humidity in the air

CAUSE OF " STUFFINESS "

All these facts receive an explanation when it is realized that a cause of discomfort and stuffiness is the quality of the infra red rays given off by the source of heat, and their effect on the naked parts of the skin The feeling of dryness and unpleasant quality of heat is due to direct action of irradiation on the skin, while stuffiness is due to a reflex congestion of the nasal membrane resulting from the action of the rays on the cutaneous nerves [2]

This reflex effect is pronounced in some with a deflected septum or with a chronic catarrhal and stuffy state of the nose It can be made evident to most of those who have widely open noses by means of a screw nose-clip adjusted to narrow the air-way until the breathing is only just adequate in cool air—for example by an open window Exposure of the face to a dull red or dark source of heat then makes the breathing difficult, while screening at once gives relief Cool air from an open window or fan antagonizes the " nose-closing " effect Hence sensitive people with stuffy noses like the open air and an open window, and dislike shut-up rooms heated by dark or dull red sources The less open side of the nose of a sensitive person may be sensibly obstructed by merely covering the face with the hand, or going under the bed-clothes The immediate discomfort felt on throwing a hood over the face may in part be due to this reflex The ' nose closing " effect is at once set aside by cooling the irradiated part of the skin, or other parts of the body, in this case to a sensible degree The open window in the bedroom prevents the stuffy effect and this is one of the benefits of open air treatment In cool air the mucous membrane is kept taut and with a better flow of blood and secretion

PRACTICAL APPLICATIONS

Cooling of the irradiated part of the skin by evaporation of sweat prevents the reflex When one sits down in a warm bath the reflex comes into play until the face is wetted A bowl of water set in front of a dull red and dark source of heat affords relief, because the vapour rising from it screens off some of the offending rays If set to one or other side of the source it ceases to be efficacious, but it can be placed anywhere between the source and the face of a sensitive subject and exert its " nose opening " action A glass screen is also protective In the case of some sensitive people the " nose closing ' effect is set aside by rays from a bright incandescent source acting either on the same or some other part of the skin Such a source gives off more of the short infra red rays and feels pleasanter The makers of modern gas fires have increased the radiant power and brightness of the clay " radiants," with the result that, while the old-fashioned gas fire was a " nose closer," the modern one is a " nose opener " The dull red electric fire is a " nose closer," but by increasing the current through a Ferranti bar fire from 5 to 6 amperes, and so making it brighter, the " nose-closing " effect was abolished A very little alteration then is required to make uncomfortable dull red sources of heat more comfortable A screen of gelatin, horn, or cellophane (acetyl cellulose) converts a bright source into a " nose closer " A study of the transmission of infra red rays by such screens made by Dr H J Taylor, shows that they absorb a group of infra-red rays about 30,000 A U These rays must be " nose-openers " Just like the physiologically active ultra-violet rays, these rays only just reach, in small intensity, the living cells of the epidermis and the nerve endings among them The prickly sensation of heat produced on the face by contiguity with an electric fire is relieved by switching on an incandescent lamp held close to the face, and best used with addition of a glass screen Most people then say " it feels cooler " The shorter infra-red rays, like the red rays, penetrate the skin and provoke flushing, transudation, and a moist skin The heat resulting from their absorption is carried away by the blood The long infra-red rays do not penetrate, and produce a dry and hotter surface The pleasanter feeling of bright sources seems to depend on this difference The bright sources also have more of the " nose opening " group of rays The standard kata thermometer cooling power of 6, which I had empirically fixed as comfortable is explained by the need to counteract by cool air the stuffy and unpleasant quality of dark heat rays

EXPERIMENTAL WORK

Miss Murray, at Bedford College, has recorded the " nose closing " reflex, the mouth being closed by a rubber gag, and the more open side of the nose plugged with cotton-wool, and has found about thirty out of sixty subjects are more or less sensitive In a few cases the breathing is obstructed and in others is made quicker and shallower

I have recorded the reflex effect by fitting the end of a rubber tube in one side of the nose (the best) and connecting this tube with a recording tambour The mouth being kept closed, the changes of pressure produced by breathing through the other side of the nose, are recorded by the tambour, which writes on a smoked drum The effects produced on one sensitive subject, Dr R , are

privilege of association with him for well over a quarter of a century. My earliest recollections of him were the occasions of the meetings of medical officers of health in the West, and his reception of the young members well exemplified his kindness of heart; however humble the contribution, never was man more encouraging than Dr. Davies in the way he picked out any good points in the address and encouraged the junior to further efforts. During our long association he took pleasure in keeping me in touch with his work and special experiences—in the very early days of the century when he started a small laboratory in his office for the examination of diphtheria swabs, and later in his almost pioneer discovery in 1906 of the enteric fever "carrier" at the Brentry Inebriate Home in this county, and in his inimitable dealings with introductions of small-pox and plague into the port of Bristol. Few in this county and in the country at large realize how much they owe to men like Davies, and how great the troubles they save this country. It was a great loss to one who had had the privilege of his friendship so long when he resigned his appointment as medical officer of health for Bristol a few years ago, and finally retired to Devon. When I saw him there last September he displayed the same mental keenness in work and friendship, and the same charm of manner. Other sides of his character will be described by other persons, but there is no one who appreciated more than myself the value of his work, his lack of ostentation, his friendship, and his kindness of heart.

SIR GEORGE CUSCADEN, F.R.A.C.S.

Consulting Surgeon, Women's Hospital, Melbourne

We have to announce with regret the death of Sir George Cuscaden on February 6th in Melbourne, at the age of 75. He was a leading figure in the medical and civic life of the city, and had played a prominent part in the medical services of the Commonwealth of Australia.

George Cuscaden was born in Wexford, Ireland, in 1857, and, after qualification as L.R.C.P. and L.R.C.S.Ed. in 1880, served as a ship surgeon in oversea liners. He was present as a transport surgeon during the bombardment of Alexandria in 1882. He settled in Melbourne, and took up private practice forty-seven years ago. Very early in his career Cuscaden took an interest in municipal affairs, and was a member of the Port Melbourne Council, and later mayor of that city. In 1912 he was elected to the Melbourne City Council, and in 1929 he became an alderman. In later years he was chairman of the Health Committee of the council, and represented it on the committees of many public organizations. On the professional side he also played a prominent part. He was honorary surgeon to the Women's Hospital, Melbourne, for many years, and was at one time president of the Victorian Branch of the British Medical Association. As an obstetrician he was a leading practitioner and consultant during the greater part of his long and very active practice, and was trusted and esteemed by his patients and professional colleagues.

At the outbreak of war in 1914 he was appointed Principal Medical Officer in Victoria. Early in 1918 he become Director-General of the Medical Services of the Commonwealth, which position he held until he retired in June, 1921. In 1923 he was created Knight Bachelor in recognition of his military services. He was a Fellow of the Royal College of Surgeons of Australia. His death leaves a gap which will be hard to fill in the ranks of many organizations carrying out social services, particularly those associated with public health and infant welfare.

Sir George Cuscaden is survived by a widow, two daughters, and a son—Dr. W. G. H. Cuscaden of Melbourne.

Dr. ALLAN OGIER WARD, who died on March 25th, aged 80, was the only son of Thomas Ogier Ward, M.D., first honorary secretary of the Metropolitan Counties Branch of the British Medical Association, who practised for many years in Kensington and afterwards lived in France, where the family underwent trying experiences at St. Germains during the war with Prussia. In the winter of 1870–1, after the declaration of the amnesty, Allan went with the first party from England to France, and had many adventures before reaching St. Germains. Owing to the vicissitudes of home life his school education was much interrupted, and he only began the study of medicine at Edinburgh after some years as private tutor and in a London bank. In 1883 he obtained the M.R.C.S. diploma and graduated M.B., C.M.Ed., proceeding M.D. three years later. After graduation he spent some time in Prague and Leipzig, and returned to practise for seventeen years in Tottenham; he then took consulting rooms in Cheapside, and became chief medical officer for England to the New York Life Assurance Company, being appointed later principal medical officer to the British General Insurance Company and other offices. For some years before and during the war he practised in Onslow Square. Having been trained at Edinburgh in the Lister tradition, Dr. Ogier Ward was always a firm believer in the value of antiseptics. He was a thoroughly well educated man; without being a scholar he had a general knowledge of the classics, an intimate acquaintance with natural history, and took a deep interest in palaeontology, ancient history, astronomy (in its non-mathematical parts), and geology. His instincts and the family medical tradition made him a sound doctor, who kept himself abreast of recent additions to professional knowledge by his habit of continuous study. In 1925 he sent several notes to this *Journal* on the association of high barometric readings during November with deaths from circulatory diseases. For thirty years he was honorary medical referee to the British Home and Hospital for Incurables at Putney, and a member of the board of management since 1926. His wide knowledge and excellent memory made him a welcome companion to old and young. During the whole of his active professional life he was a member of the British Medical Association. His wife, a daughter of the late Dr. John Cox Lynch of Sudbury, Suffolk, survives him, with one son, Mr. Ronald Ogier Ward.

Dr. GRAHAM ROBERTSON, who had been in general practice at Dartford, Kent, since 1911, died in London on March 29th, after an operation, aged 49. He was educated at George Watson's College, and graduated M.B., Ch.B. at Edinburgh University in 1906. In the following year he was appointed house-surgeon to the Royal National Orthopaedic Hospital, and subsequently held the appointments of assistant house-surgeon at Liverpool Infirmary for Children, house-surgeon at Queen's Hospital for Children, London, N.E., and house-physician at Brompton Hospital for Consumption, before entering into practice at Dartford.

Universities and Colleges

UNIVERSITY OF OXFORD

The Theodore Williams Scholarship in Physiology has been awarded to R. H. S. Thompson of Trinity College.

UNIVERSITY OF LONDON

UNIVERSITY COLLEGE HOSPITAL

The following scholarships and exhibitions, tenable at University College Hospital Medical School, are announced. Two Goldsmid Entrance Scholarships (value 112 guineas each), entitling the holder to the final course of medical study, are offered for competition in July, 1933. They are open to students preparing for degrees of the Universities of London, Cambridge, Durham, and other British universities, or for the diplomas of the Royal Colleges of Physicians and Surgeons, or for the licence of the Society of Apothecaries. One Goldsmid Entrance Exhibition, entitling the holder to a reduction of £80 in the fees due for the full course of final medical study. The Filliter Entrance Scholarship in Pathology,

entitling the holder to a reduction of £52 10s. in the fees due for the full course of final medical study. Notice of intention to compete must reach the secretary, University College Hospital Medical School, University Street, W.C.1, by July 1st.

UNIVERSITY OF GLASGOW

On June 21st the honorary degree of LL.D. will be conferred upon W. Blair-Bell, M.D., F.R.C.S., F.C.O.G., Emeritus Professor of Obstetrics and Gynaecology, University of Liverpool.

UNIVERSITY OF ABERDEEN

The following degrees were conferred on March 29th:

HON. LL.D.—Sir John Marnoch, K.C.V.O., Emeritus Professor of Surgery, University of Aberdeen.

M.D.—*A. G. Emslie, N. D. Begg, E. D. Gray, Jean N. Howie, J. B. Jessiman, R. A. Stephen.

CH.M.—*G. A. G. Mitchell.

M.B., CH.B.—†R. M. Campbell.

* Commended for thesis. † With second-class honours.

UNIVERSITY OF DUBLIN

TRINITY COLLEGE

The following candidates have been approved at the examinations indicated:

FINAL MEDICAL EXAMINATION.—Part I (Old Regulations) (*Materia Medica and Therapeutics, Medical Jurisprudence and Hygiene, Pathology and Bacteriology*): M. H. Cesbie, H. S. J. van Niekerk, Helena G. G. Bennett. (New Regulations) (*Materia Medica and Therapeutics, Pathology and Bacteriology*): H. D. O'Brien (passed on high marks), N. Weinstein, B. Tager, A. C. Pilkington, P. A. M'Nally, F. J. B. Convery, H. A. Wells. Part II—M.B.: J. R. Counihan, E. A. Smyth, D. S. Torrens, R. G. Taylor, P. A. O'Callaghan, A. W. Callaghan. B.CH.: J. R. Counihan, E. A. Smyth, R. G. Taylor, R. G. Barron, W. M. E. Anderson, R. M'Neilly, C. C. Langford, J. J. Russell, A. B. Warren-Darley, Edith M. P. Brodrick. B.A.O.: R. B. Hunter, K. O'Toole, I. T. F. Wiley, Una M. Irvine, R. H. Simon, E. G. Ashton, J. A. M'Ilveen. M.D.: L. J. Coetzee, W. B. Hamilton, F. M. Purcell, H. V. Tighe, P. F. H. Wagner.

D.P.H.—(Part I): S. G. Rainsford, W. E. Holmes, E. S. Duthie, Marjorie L. Campbell, J. V. Ryan, A. A. Lisney, I. G. M'Intyre.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

COUNCIL ELECTION

Monday, March 20th, was the last day for the receipt of nominations of candidates for the Council. Of the four retiring members—Lord Moynihan, K.C.M.G., C.B., Sir John Lynn-Thomas, K.B.E., C.B., C.M.G., Mr. A. H. Burgess, and Mr. V. Warren Low, C.B.—only Mr. Burgess seeks re-election. A fifth vacancy is caused by the death of Sir Percy Sargent, C.M.G., D.S.O. The following candidates have been nominated: Mr. A. W. Sheen, C.B.E., Sir Charles Gordon-Watson, K.B.E., C.M.G., Mr. Cyril A. R. Nitch, Mr. R. C. Elmslie, O.B.E., Mr. Duncan C. L. Fitzwilliams, C.M.G., Mr. L. R. Braithwaite, Mr. C. Max Page, D.S.O., Mr. Claude H. S. Frankau, C.B.E., D.S.O., and Mr. H. S. Souttar, C.B.E.

The composition of the Council since July, 1932, has been as follows:

President.—Sir Holburt Waring, Council (1) 1913, (2) 1921, (3) 1929.

Vice-Presidents.—Mr. W. Sampson Handley, C. (1) 1923 (substitute), (2) 1929; Sir Percy Sargent, C. (1) 1923 (substitute), (2) 1930 (died January, 1933); Mr. G. E. Gask, C. (1) 1923, (2) 1931.

Other Members of the Council.—Lord Moynihan, C. (1) 1912 (substitute), (2) 1919; Sir John Lynn-Thomas, C. (1) 1918 (substitute), (2) 1925; Mr. Ernest W. Hey Groves, C. (1) 1918, (2) 1926; Sir Cuthbert Wallace, C (1) 1919, (2) 1927; Mr. F. J. Steward, C. (1) 1920, (2) 1928; Mr. C. H. Fagge, C. (1) 1921, (2) 1929; Mr. R. P. Rowlands, C. (1) 1922, (2) 1930; Mr. Wilfred Trotter, C. (1) 1924, (2) 1932; Mr. A. H. Burgess, C. 1925; Mr. V. Warren Low, C. (1) 1916 (substitute), (2) 1917, (3) 1926 (substitute); Mr. Victor Bonney, C. (1) 1926 (substitute), (2) 1930; Mr. G. Grey Turner, C. 1926; Mr. Hugh Lett, C. 1927; Mr. Leonard Gamgee, C. 1928 (substitute); Mr. R. G. Hogarth, C. 1928; Mr. R. E. Kelly, C. 1928; Mr. Graham Simpson, C. (1) 1929 (substitute), (2) 1931; Mr. A. James Walton, C. 1931; Mr. A. E. Webb-Johnson, C. 1932; Mr. G. Gordon-Taylor, C. 1932.

The medical schools are represented as follows:

St Bartholomew's	2	Birmingham	1
Guy's	3	Bristol	1
London	2	Cardiff	1
Middlesex	4	Leeds	1
St. Mary's	1	Liverpool	1
St Thomas's	2	Manchester	1
University College	1	Newcastle	1
		Nottingham	1
		Sheffield	1
Total London	15	Total Provinces	9

SOCIETY OF APOTHECARIES OF LONDON

The following candidates have passed in the subjects indicated:

SURGERY.—B. K. Siddhanta.

MEDICINE.—F. W. Baskerville, L. Bhanot, J. E. Morrish, J. A. van Rooyen.

FORENSIC MEDICINE.—C. W. Cross, J. B. Frumin, L. R. Jain, V. L. Kahan, E. Pugh-Jones, J. D. Taylor, P. D. Thomas.

MIDWIFERY.—J. Burdon-Cooper, T. R. Hornby, L. R. Jain, V. L. Kahan, J. D. Taylor, A. W. Turner.

The diploma of the Society has been granted to Messrs. F. W. Baskerville, L. Bhanot, J. Burdon-Cooper, V. L. Kahan, and B. K. Siddhanta.

Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Lords discussed this week the motion to set up a Joint Select Committee on India. In the House of Commons the Army and Air Force Bill and the Rent Restriction Amendment Bill were further considered. A Bill to authorize the prohibition of the importation of Russian goods was introduced by the Government, and discussed.

Last week a meeting of members, numbering about seventy, was addressed on birth control by Lord Horder and Lady Maureen Stanley. A keen but friendly discussion followed.

The Parliamentary Medical Committee arranged that at its meeting on April 6th it would hear Dr. Neville Blenkinsop, managing director of Messrs. May and Baker, on the chemists' protest against the method of publication of the *British Pharmacopoeia*, and also Dr. G. P. Crowder, honorary secretary of the Research Defence Society, in view of the fact that the Protection of Dogs Bill was set down for second reading on the following day in the House of Commons.

Osteopaths Bill

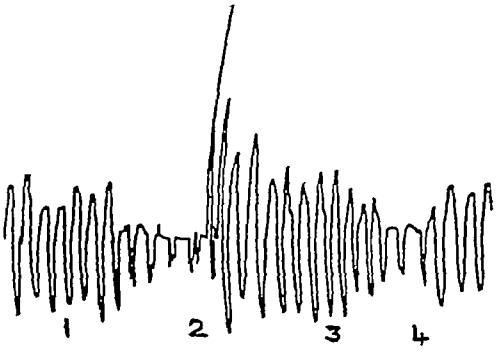
In the House of Commons, on April 4th, Mr. BOOTHBY asked leave to introduce the Registration and Regulation of Osteopaths Bill. He said that the Bill proposed to set up a Statutory Board with the necessary powers and authority to compile a register of qualified osteopaths and to supervise the admission to that register of persons who had followed a prescribed course of study and who had acquired a prescribed standard of professional competence. Under the Bill an unqualified and incompetent charlatan and quack would be debarred from practising osteopathy. Further, a fully qualified osteopath would be in a position to employ a fully qualified anaesthetist without the latter falling under the ban of the General Medical Council. The case of Dr. Axham would probably still be fresh in the memory of the House; members would not wish to see the case repeated in the future. Osteopaths did not seek inclusion in the general medical profession; all they asked in the Bill was recognition by the Legislature, with statutory authority to regulate their own affairs with a view to the protection of the public. The methods of qualified osteopaths had been attended during the last two or three years with a great measure of success. If osteopathy was bad it should be prohibited in the public interest, or, alternatively, it should be regulated, as was the case in forty-seven out of forty-eight States in America. Leave to introduce the Bill was granted.

Illicit Drug Traffic

On April 3rd Sir J. SIMON informed Mr. Hannon that his attention had been called to the publication of the annual report for 1932 of the Central Narcotics Intelligence Bureau, presented to the Egyptian Government by Russell Pasha, in which co-operation among European nations for the suppression of the drug traffic trade was emphasized. The ratification of the Geneva Convention of 1931 for the limita-

shown in the figure I also use a mask which covers the mouth and nose The mouth is closed and nasal breathing takes place through an orifice in the mask which is so restricted that step-climbing can just be comfortably carried on in a cool room The steps are made on and off a box in time with the beats of a metronome On allowing the rays from a dull red electric fire to fall on the face the step-climbing soon becomes impossible in a sensitive subject through want of air On switching on a fan or an incandescent lamp ease in step-climbing is renewed The experiment can be carried out with the fire put under the table so as to radiate the bare legs The screen in front of the fire can then be withdrawn silently by an observer while the eyes of the subject are kept shut The eyes should not be covered by a bandage because this in itself affects the nose of a sensitive subject

Inhalation of a vaporized adrenaline solution abolishes the reflex nose-closing effect. The adrenaline constricts the blood vessels and preventing vascular congestion of the membrane keeps the air way open The effect of the inhalation lasts for an hour or so The sensitivity of the skin to the nose-closing rays in certain sensitive susceptible subjects is very great When only one square inch of skin is exposed and the device is put several feet away the reflex may result In a still room at ordinary temperature I was sensitive to the nose-closing rays of an electric fire when facing this at a distance of 47 feet where of course no sensation of heat was felt At a distance of 1 metre from a thermopile the energy of an incandescent lamp was found to be 1/60 of that of an electric fire When one square inch of skin was exposed at that distance to this fire the bad side of my nose became closed when another and equal area of skin was exposed to the lamp the nose was opened The latent time in each case was about six seconds The latent time is much shorter when a large area of skin is exposed the effect varied as $\sqrt{a}t$ where a = the area and t = the time At various distances from the source the effect varies as $\sqrt{i}t$ where i = intensity and t = time



Tracing shows effect on nasal breathing of electric fire fan and incandescent lamp (1) Exposed to electric fire (2) opened mouth to take a breath fan then put on and nasal breathing resumed (3) fan stopped (4) incandescent lamp switched on

Out of sixty seven subjects recently tested at the London Clinic and Institute of Physical Medicine fifteen were insensitive while forty two showed more or less evidence of the nose-closing effect Asthmatic and catarrhal patients are likely to be more sensitive than others In all except four of these forty two the fan made the breathing easier while twenty five found it made easier by the incandescent light, and twenty one by the water bowl

Conclusion

In considering the various baths used for stimulating the skin and producing curative effects it is of interest to have found evidence of a reflex effect of a striking character In my case the nose-closing effect is accompanied by a slight rise of blood pressure In regard to heating and ventilating rooms it is clear that where dark sources of heat are employed there should be adequate ventilation with cool air This is required not only to produce comfort and a feeling of freshness but to keep the atmosphere as clean as possible from dust and microbes Incandescent lamps make such sources pleasanter Electric fires can be improved by making them brighter sources of heat A sensitive subject who suffers from nasal catarrh has been improved by replacing in his room a hot water radiator by a Ferranti bar fire which was made to take 6 amperes Irradiated with this bright heat he works in comfort with a window open and has better health A modern gas fire would have done as well

References

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Hill Leonard *Proc Physiol Soc* November 14th 1931 and May 14th 1932 *Compt rend IIe Congres Interrat de la Lumière* Copenhagen August 1932, p 160

REHALATIONAL ANAESTHESIA

A METHOD OF UTILIZING THE RECENT ADVANCES IN ANAESTHETIC ADMINISTRATION

BY

JOHN HALTON M.B CH.B

HONORARY ANAESTHETIST LIVERPOOL ROYAL INFIRMARY

General inhalational anaesthesia to-day is induced and maintained either by one of the modern types of apparatus or by the time honoured open mask and drop bottle Apparatus is of the greatest importance in the anaesthesia of modern surgery In many operations on the head and neck and in thoracic surgery it is essential It is not my object in this article to decry its use but to try and show those who are called upon to give routine or occasional anaesthetics that by adopting a combination of methods of administration which have been advocated from time to time, they can secure practically all the very real advantages of the more costly and complex apparatus by a technique which rivals the open mask for simplicity and economy

The mechanization of anaesthesia is the outcome to a great extent of the practical application of the results of recent research discoveries which cannot be employed when the open mask is used.

Results of Recent Research

Haggard[1] has shown that narcosis depends upon the anaesthetic tension of the agent exhibited which in the case of ether is that concentration of the vapour with which the cells of the central nervous system are in equilibrium This equilibrium is only reached after gaseous interchanges have taken place first between the pulmonary blood and the vapour bearing air entering the lungs and then between this blood and the tissues Furthermore owing to the high absorption quotient of lipoid tissue and the volume of blood passing through the central nervous system this concentration practically equals that of the arterial blood Thus the rate of absorption depends solely on the amount of ether brought to the blood and this depends on the volume of respiration He has shown by experiment that to maintain a state of

surgical anaesthesia the blood must contain 1 to 1 5 grams of ether per litre This necessitates, during induction, introducing to the lungs 8 to 12 grams of ether per minute To attain this with ordinary respiratory excursions, which at the commencement of anaesthesia are often rendered shallow by depressant hypnotics, entails the use of a prohibitively strong vapour, a long induction period with gradual saturation of the whole body, or increasing the depth and volume of respiration, so diluting the vapour strength One gram of ether in one litre of air per minute is as effective for anaesthesia as one gram in five litres per minute

The work done by Haldane[2] on carbon dioxide is a respiratory hormone is so well known that a brief reference to his conclusions will suffice He finds that a rapid induction and termination are essential , the use of rebreathing tends to lessen variations of ether-air composition and the use of carbon dioxide stabilizes the acid-base balance of the blood, and by stimulating respirations ensures full lung expansion, definitely lessening post-operative complications

The toxic effects of ether have been the subject of research since 1850 Stephen[3] gives a very thorough review of this work, and adds valuable facts from her own investigations It is admitted that conservatism in the amount of ether used spares the body tissues and metabolism Ross and Fairlie[4] quote Gwathmey as laying stress on the necessity of warming the vapour, claiming that " this measure will prevent the loss of heat to the patient incidental to the warming up in the air passages, of the cold vapour " Shipway and Pembry[5] show that body heat can definitely be maintained by warm vapour, and Hewer[6] describes the irritating effect of too hot vapour and the loss of body heat by sweating when it is used

In considering the open mask, Rowling[7] has proved clinically that when it is in use the oxygen percentage under it is always reduced and the percentage of carbon dioxide is variable and not maintained Finally, Flux[8 9] has shown that use may be made of the density of anaesthetic vapours, while Miller[10] has gone a step further with his gravitational anaesthesia, showing that this is particularly applicable to ether vapour, nitrous oxide, carbon dioxide, and oxygen, with densities greater than air

COMPARISON OF METHODS

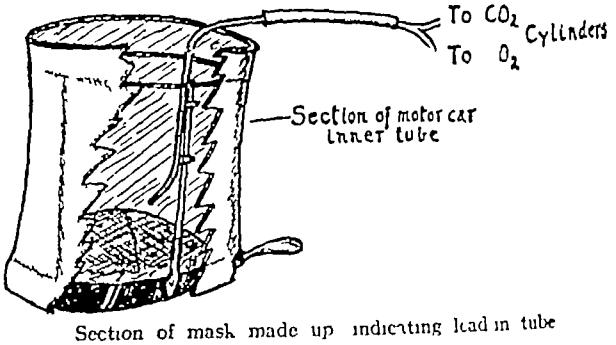
The salient points, therefore, in our present knowledge of the theory and practice of narcosis are rapid induction, usually by nitrous oxide and oxygen with carbon dioxide , rebreathing to warm the vapours and to keep up the carbon dioxide content of the inspired gases with added oxygen and sufficient warmed ether only to saturate the nervous system or as an adjuvant to nitrous oxide Most forms of apparatus aim at utilizing these facts, and the results obtained by anyone accustomed to the apparatus used are excellent from every point of view—from that of the patient the surgeon, and the administrator But gauges and taps are not infallible they may become refractory at critical moments or their readings may be incorrect Also most of the apparatus is costly, and would be employed by many anaesthetists too infrequently to warrant acquisition Lastly, there is the fact that when apparatus is used the anaesthetist's attention is divided, and the temptation may arise to discard the reactions and minute-to-minute symptomatology of the patient for dial readings

On the other hand, when an anaesthetic is administered by the open mask even when carbon dioxide is used owing to the difficulty of controlling respiration, there is a longer induction period with a retarded recovery rate, and a greater tissue saturation is needed before any required level of anaesthesia is attained Again from the purely physical standpoint the method is unscientific, because of the specific gravity of the gases used, and ether vapour as it falls from the mask is often inhaled by all the theatre staff as well as by the patient—a very important point during a full day's work The almost unavoidable freezing of the gauze of the mask, and the constant presence of cold ether vapour and droplets in close approximation to the patient s face, are further disadvantages of the open mask method

APPARATUS AND TECHNIQUE

During the past two years I have evolved a technique which I believe has a very definite position in routine anaesthesia between these two extremes I have named it rehalational anaesthesia, because it takes its place between perhalation with the ordinary mask and rebreathing into a bag

The ' apparatus," at its simplest, consists of a small cylinder of oxygen and a ' J " size carbon dioxide sparklet, which are strapped together, tubes from which are brought to a Y-piece, whence a further tube leads the gases to the mask , a four ounce ether drop bottle with a Bellamy Gardner dropper, the delivery pipe of which is nipped up so that it will deliver an even drop in any position , and a modified Ogston mask, a short description of which was published in the *British Medical Journal* in April, 1930 [11] Two slight modifications have been made since then , first a section of motor car inner tube is slipped over the frame and takes the place of the towel or lint which Ogston suggested and secondly, a short length of metal tube is clipped to one of the uprights, as indicated in the sketch, and the



Section of mask made up indicating lead in tube

gases are, by this means, led to the depths of the mask In use the mask is made up, the gas tube attached, and induction commenced

INDUCTION

Ether, chloroform and ether mixture, or ethyl chloride, can be employed The most pleasant, however, is nitrous oxide , when this is used an extra gas tube fitted to the mask is advantageous If plain ether is chosen a few drops are allowed to fall, not on the dome of the gauze, but at the side away from the direct line of the mouth and nose, while the mask is gradually lowered on to the two thick layers of gamgee covering the patient s face The dropping is slow, and if any gagging or signs of discomfort appear the mask must be lifted momentarily Before the mask is quite lowered the carbon dioxide is turned on so that the gas just flows, gauged by the bubbles in the tube The breathing deepens, and it is found that a steady increase in drop rate is comfortably tolerated until the patient passes rapidly and quietly into surgical anaesthesia Very deep breathing before this stage must be avoided , it will cause a sense of suffocation and in crease any tendency to cyanosis If these conditions do appear there is no necessity to shut off the gas it is sufficient to raise the mask slightly for a few seconds

tion of the manufacture of narcotics in respect of the United Kingdom was dispatched to the Secretary-General of the League of Nations on March 30th. He was not in a position to give any precise information as to which other States had decided to ratify the Convention, but he anticipated that sufficient ratifications would have been received to enable the Convention to be brought into force by July 13th, 1933. He saw no reason to anticipate the failure of any party to the Convention to conform to its provisions.

Sir J. GILMOUR, replying on April 3rd to Mr. Neil Maclean, who asked if the Government proposed to introduce legislation to ratify the proposals of the Anti-drug Convention, said the Dangerous Drugs Act, 1932, was passed to give effect to the Convention of 1931, and no further legislation for that purpose was required.

On April 4th, in reply to Mr. Llewellyn-Jones, Mr. EDEN said that under Article 23 of the Covenant of the League of Nations the general supervision over the execution of agreements in regard to the traffic in opium and other dangerous drugs was entrusted to the League of Nations, and he presumed that the question as to what international action it was proposed to take with a view to dealing with the illicit trade in dangerous drugs would be considered by the Opium Advisory Committee at its next meeting in May.

Hospital Porters Classed as Domestic Servants.—Sir HENRY BETTERTON stated, on March 30th, that he was aware that a ruling of the High Court had decided that hospital porters should be classed as domestics and therefore not insurable under the Unemployment Insurance Acts. The Royal Commission on Unemployment Insurance had recommended that this class of workers should be brought within the scope of the Acts. This recommendation was under consideration.

Overcrowding in Public Assistance Institutions.—On April 3rd Mr. THORNE asked the Minister of Health if he had considered the report from the Lancashire Mental Hospitals Board in regard to the overcrowding at the Green Lane Public Assistance Institution, Patricroft. Mr. SHAKESPEARE replied that no such report had reached the Minister from the Lancashire Mental Hospitals Board. In December last he called the attention of the public assistance authority to a report made by a Commissioner of the Board of Control on this matter, and the Minister was informed that the authority was now in communication with the Lancashire Mental Hospitals Board.

Mitcham Chemical Factory Explosion.—On April 3rd Sir J. GILMOUR informed Mr. Thorne that immediate steps were taken by the Factory Department of the Home Office to inquire into the explosion at a chemical works at Mitcham, one of the engineering inspectors with special knowledge of chemical works being detailed for the purpose. The advisability of preventing similar factories being built adjacent to residential villas would be most carefully reviewed when the full results of the inspector's inquiries and the proceedings at the inquest were available.

Children and Young Persons Act.—On April 3rd Sir J. GILMOUR informed Mr. Groves that the following sections of the Children and Young Persons Act, 1932, had been brought into force: 19 (2), 64-9, 79, and, for certain purposes, Sections 77 and 88. He could not add anything as to the date on which the remaining sections were likely to be brought into force.

Registration of Nurses.—On April 3rd Mr. Batey presented a Bill to Amend the Nurses Registration Act, 1919, with respect to the registration of existing nurses, and it was read a first time.

Medical Benefit and the Unemployed.—On April 4th Mr. SHAKESPEARE informed Mr. Neil Maclean that the Minister of Health was aware that a certain number of people who had not paid any contributions under the scheme of national health insurance for many years would cease at the end of the present year to be entitled to benefits under the scheme, though they would remain insured under the Contributory Pensions Scheme until the end of 1935. The Minister was afraid that it would be impracticable to impose any further burden on the funds of approved societies by once again extending the title of these people to health insurance benefits. Mr. Shakespeare further told Mr. Leckie and Mr. Llewellyn-Jones that the possibility of extending the title of these persons to medical benefit beyond the end of the present year was fully discussed when the amending National Health Insurance Bill of last year was before Parliament. The Minister was not prepared to introduce further legislation on the subject.

Isolation for Infectious Diseases.—Mr. NEIL MACLEAN, on April 4th, asked the Minister of Health if he would make available to members of the House the circular issued by his Department to local authorities instructing them to reduce the period of isolation in infectious cases and to have the patients discharged sooner from institutions, and the instructions to local authorities to abandon the disinfecting of houses from which cases of infectious diseases had been removed. Mr. SHAKESPEARE replied that the Minister had issued no such instruction, but he assumed that Mr. Maclean referred to the circular issued on March 22nd, in which he asked local authorities to give special consideration to the recommendations on those subjects which were contained in the report of the Committee on Local Expenditure.

Experiments in Locust Control.—The fifth report of the Committee on Locust Control of the Economic Advisory Council, which will shortly be published, will contain a report on experiments into locust control by subjecting the flying swarms to a cloud of poisonous material discharged from an aeroplane.

Notes in Brief

In England and Wales during 1932 nine persons, all males, were executed. Their ages were 32, 25, 22, 49, 36, 36, 23, 18 years and 11 months, and 43.

The Home Secretary will consider what action can appropriately be taken on the proposed "all-in" wrestling between women, which he holds to be open to the strongest objection.

Medico-Legal

HERBALIST ACQUITTED OF MANSLAUGHTER

At the Manchester Assizes, before Mr. Justice Lawrence, from March 29th to 31st, the trial took place of Charles Clement Abbott of Leigh, Lancashire, described as a "physico-medical practitioner," on a charge of manslaughter in respect of a boy named Taylor, who had been under his care for nine months until January of this year, when his death took place owing to meningitis. The circumstances of two recent inquests in which the defendant was concerned, one of which led to the criminal proceedings, were detailed in the *Journal* of March 25th (p. 541).

Sir Reginald Banks, K.C., who prosecuted for the Crown, stated the facts which were brought out at the inquest. The "Abrams's box" method was used by Abbott in the treatment of the boy. The boy was taken to Abbott about twelve times, and on every occasion except one this "humbug and hocus-pocus," in the words of counsel, was followed. The night before Taylor died Abbott rubbed his chest and head with a lotion. It was also alleged that Abbott in conversation had claimed to be entitled, like a qualified doctor, to give a death certificate, though after this boy's death he stated that this case was different from the others, and that he could only give a letter of notification to the coroner.

Evidence was given by the father of the dead boy, who stated that Abbott and two other men were all introduced to him as doctors, and were spoken of by that term. The mother also stated that all along she had taken Abbott for a fully qualified practitioner. She admitted that, a month before the boy died, she had expressed herself as very pleased with the treatment he was receiving from Abbott, and the improvement that he showed. An analytical and consulting chemist stated that the lotion used by Abbott simply consisted of oils commonly employed for external dressings, and another of Abbott's preparations which was given to the boy was an aqueous extract of liquorice.

In the case of mixture induction for patients who are not morphinized seven parts of ether to one of chloroform has proved the most satisfactory The chloroform helps to mask the pungency of the ether and it will rarely be found necessary to use the sparklet at all enough carbon dioxide being retained inside the mask chamber from the patient's own expirations A regular drop is maintained until steadiness and increased depth of respiration denotes the establishment of anaesthesia 1 to 1½ dra ms is usually sufficient for this A change is then made to pure ether any gagging or breath holding being immediately dealt with by means of the sparklet

With ethyl chloride a very rapid induction is secured by dropping 3 to 5 c cm gradually on the mask and as soon as sterterous breathing denotes full anaesthesia sufficient ether is used to ensure that the whole of the gauze is moist Any respiratory irregularity exhibited as the patient comes from deep ethyl chloride to light ether anaesthesia can be dealt with by the sparklet

In nitrous oxide induction a second tube is led from the gas cylinder to the mask the gas is turned just on the mask is lowered slowly and as the stertorous breathing and characteristic dusky colour of this anaesthesia begin to show a few breaths of carbon dioxide are given the nitrous oxide is disconnected and an increasing ether drop is commenced until surgical anaesthesia is attained A little practice is perhaps necessary with this method of inducing narcosis for care must be taken that nitrous oxide anaesthesia is not pushed to the jactitation stage when respiratory cessation bars further progress Should this occur it can be corrected by a few breaths from the oxygen cylinder

Whatever form of induction is used the anaesthetic room should be kept quiet and no adjustment of dressings and clothes is permissible until full narcosis is reached Much will be added to the confidence of patients and to the alleviation of fear by a short preliminary conversation as to how easily they will fall asleep and since the auditory sense is one of the last to be abolished—a fact often overlooked—this reassurance with simple directions as to their conduct should be kept up until consciousness is lost This is probably better than the practice of counting which in my opinion, tends to have the opposite effect Finally as soon as the jaw muscles permit an airway is inserted

Maintenance

With anaesthesia fully established the carbon dioxide is turned off the patient is evolving and rebreathing his own carbon dioxide from the mask chamber Respirations are deep and full and there is a slight tendency to cyanosis sufficient oxygen is turned on to counteract this It will be found that ether can now be dropped almost as sparingly as chloroform No freezing of the gauze will take place provided the drops are not directed constantly to one portion of the mask In actual practice unless a deep level of anaesthesia is required when the whole of the gauze is moist the drops should be directed to the sides of the mask

With this form of administration two further important points must be borne in mind First a constant and regular ether dropping is essential secondly since deep levels of anaesthesia are reached much more rapidly than in open administration the difficulty to those experienced only in that method will not be so much in keeping the patient deep as in allowing him to ascend to lighter levels

Recovery

Following the final deepening of anaesthesia to facilitate the closure of the pentoneum the ether dropping can be discontinued Thus by the time the surgeon is closing superficial tissues no ether remains on the mask Six full breaths of carbon dioxide are given from the sparklet and the patient is allowed to inhale with the resultant increased respiration an atmosphere rich in oxygen for the remainder of the time he is on the table After an abdominal operation of the average length when atropine only has been used in premedication the patient leaves the theatre phonating with his essential reflexes present and is usually awake in a further sixty to ninety minutes In the presence of morphine however the final recovery is delayed

It is appropriate to indicate here further simple additions to technique which may be made with advantage In gall bladder surgery of the obese and in cases where an abnormal posture is required the introduction as an airway of a pernasal endotracheal catheter as advocated by McGill [12] will simplify administration giving an even greater control of the patient and rendering the operating field less disturbed by excessive respiratory excursions The use of a simple vaporizing apparatus—such as that of Shipway or of Howard Jones—to replace the drop bottle is a further refinement Some form of flow meter may be introduced into the gas circuit if accurate measurement of the gases is considered desirable

RATIONALE AND ADVANTAGES

What benefits accrue from this technique and how are they brought about? Use is made of all Henderson's tenets for a good anaesthesia Because of the arrangement of partial rebreathing a more constant air mixture is maintained in the lung and this assisted by the addition of carbon dioxide ensures a constantly quiet induction in every type of case with very little experience on the part of the administrator Because of the form of the mask every drop of ether is warmed and vaporized by the patient's own efforts the vapour being concentrated to him alone thus protecting the anaesthetist the operator and the theatre staff

The usual amount of ether used from induction to termination for an adult male undergoing an upper abdominal operation lasting from forty to sixty minutes is six ounces—rarely more often less From this it will be seen that patients anaesthetized by this method are a totally different proposition to those anaesthetized by the open mask In the latter owing to the uncontrolled respiratory excursions deepening of anaesthesia is only secured by the exhibition of a very strong vapour with all it entails—wet and frozen gauze and the use of excessive quantities of ether etc —so that the whole organism is soaked with the drug and the venous return to the lungs carries sufficient absorbed vapour with it to aid in the building up of the required concentration in the arterial blood This in its turn results in a slow return to lighter anaesthesia and subsequent recovery and because of the toxicity of ether there is the danger of interference with the metabolism and damage to the body cells

On the other hand with rehalational anaesthesia although the concentration in the arterial blood must be the same it is secured much more rapidly by slightly increasing the vapour strength inhaled by the controlled respirations Should this be insufficient to give the depth of anaesthesia required the respirations and therefore the concentration can further be increased by the use of the sparklet When the need for deep anaesthesia passes if the ether dropping ceases recovery is as rapid for the converse of Haggard's findings holds good and the elimination of ether depends upon the volume of respiration Thus by directing the drug practically wholly to the central nervous system an identical degree of anaesthesia can be attained without exposing the rest of the body to toxic doses of ether

Dr. E. P. Maitland of Shaw, who made a post-mortem examination, attributed death to meningitis, and said that if a lumbar puncture had been performed there would probably have been amelioration of symptoms and prolongation of life. Dr. R. Mackinnon of Oldham gave similar evidence.

Dr. J. F. Ward of Manchester stated that in his opinion if a lumbar puncture had been made and a proper serum used the boy might have been cured. In cross-examination, he agreed that if the disease was pneumococcal meningitis lumbar puncture would not have prevented death for long. With regard to "Abrams's box," he agreed that there were a few qualified practitioners of some distinction who were still pursuing investigations into that method.

Mr. E. G. Hemmerde, K.C., for the defence, said that Abbott when a miner, at the age of 17, was cured by a herbalist after his life had been despaired of, and henceforth he devoted himself to herbalism. For twenty years he had been engaged in "the work of healing," and some 100,000 persons had passed through his hands. He had built up a big practice in his native town, and had made a large income, the major part of which he was devoting to pursuing his researches. He had specially interested himself in the "Abrams's box" theory, whereby it was claimed that disease could be diagnosed by vibrations.

The defendant in evidence said that although his patients sometimes called him "doctor," he always let them know that he was not a registered medical man. With regard to this boy, under the treatment he had given, satisfactory improvement was made, but there were occasional relapses. He had treated six or seven cases of meningitis, and had had one previous death in a very advanced case. He had no faith in serum treatment. He also stated that he was given a special exemption from war service by Sir Auckland Geddes, and that his "sick notes" were accepted by approved societies for the purpose of sickness benefit.

Evidence on behalf of the defendant was given by Mr. Percy Bean, an analytical chemist, and by his son, Dr. Percy Bean, also by certain physio-medical practitioners, and by several persons who declared themselves to have been cured by Abbott's treatment. Mr. Hemmerde urged that there was no justification for describing Abrams's method as hocus-pocus, seeing that a committee of distinguished medical men appointed some years ago to consider the method did not so describe it.

Mr. Justice Lawrence, in summing up, said that the jury had to be satisfied beyond all reasonable doubt that the treatment accelerated the death of the patient, and that it was so negligent and unskilful that it went beyond that negligence which might be a matter for civil action. A man, whether registered or not, was entitled to practise medicine within certain limits. There were some diseases which the unregistered practitioner was not entitled to treat. The jury had nothing to do in this case with the difference of opinion existing between herbalists and the orthodox practitioner. It appeared that there were genuine differences of opinion even among registered medical practitioners as to the methods of treatment in a variety of cases, particularly in reference to the use of serums and vaccines. A fact which had not been sufficiently brought to the attention of the court was that this boy who had died had been virtually given up by two registered doctors who had been called in, and it was agreed by the parents that Abbott's treatment had improved the boy's condition. He had made no mistake in the diagnosis, and it did not seem that he could be charged with neglect because he had not suggested the operation of lumbar puncture. As for the box, which it was said proved him to be an impostor, it appeared that this was a contrivance invented by a member of the medical profession, and inquired into in 1924 by a committee. It had also not been proved that the contents of the medicines which Abbott supplied were valueless; they apparently contained a large variety of herbal ingredients of the best sort, and were compounded in the most scientific and up-to-date way. Sufficient patients who had recovered had been called to show that Abbott was not incompetent. After full consideration of the case, in his lordship's view, it was quite unsafe to do anything but acquit the prisoner.

The jury thereupon, without further consultation, returned a verdict of "Not guilty."

The Services

COMMISSIONS IN THE R.A.M.C.

The War Office announces that twenty-five permanent commissions in the Royal Army Medical Corps are being offered to qualified medical practitioners, under 28 years of age, registered under the Medical Acts. There will be no entrance examination, but candidates will be required to present themselves in London for interview and medical examination on April 28th, 1933. Applications should reach the War Office not later than April 21st. Further particulars will be found in our advertisement columns this week at page 43. All information as to conditions of service and emoluments may be obtained either by letter or in person from the Assistant Director-General, Army Medical Services, the War Office, Whitehall, S.W.1.

AUXILIARY R.A.M.C. FUNDS

The annual meeting of the members of the Auxiliary R.A.M.C. Funds will be held at 5.45 p.m. on Friday, April 21st, at 11, Chandos Street, Cavendish Square, W., when the annual report and financial statement for the year ended December 31st, 1932, will be presented and the officers and committee for the current year elected.

DEATHS IN THE SERVICES

Surgeon General William Johnston Charlton, late R.A.M.C., died in Dublin on March 29th, aged 84. He was born on April 11th, 1848, was educated in the medical school of the Royal College of Surgeons, Ireland, and took the L.R.C.S.I. in 1868 and the L.K.Q.C.P. in 1869. Entering the Army as assistant surgeon on April 1st, 1871, he became colonel on July 1st, 1899, and surgeon general on August 11th, 1902, retiring on April 11th, 1908. He served in the Tirah campaign of 1897-8 on the North-West Frontier of India, in command of a general hospital, and later as principal medical officer on the Malakand.

Medical News

A discussion, with cinema demonstration, on Böhler's influence on the treatment of fractures will be opened by Mr. R. Watson Jones, Mr. E. P. Brockman, and Mr. Bryan Burns at the meeting of the Harveian Society of London at the Paddington Town Hall, Harrow Road, W., on Thursday, April 13th, at 8.30 p.m.

The Royal Sanitary Institute will hold a sessional meeting in the Town Hall, Dover, on Friday, April 21st, at 4 p.m. After a reception by the mayor, there will be discussions on difficulties in the administration of by-laws and regulations, opened by Mr. W. Boulton Smith, and on diphtheria immunization, opened by Dr. T. J. Nicholl.

A short course of instruction on the nature and treatment of disorders of speech will be conducted by Dr. Douglas Guthrie, Mr. George Seth, M.A., and Miss Elsa Davidson, at the Speech Clinic of the Royal Hospital for Sick Children, Edinburgh, commencing on Monday, May 8th, at 5 p.m. The course, consisting of six meetings, will deal with the evolution of speech, the anatomy and physiology of the speech mechanism, the psychology of speech, and the treatment of speech disorders. Further particulars may be had from the secretary, Edinburgh Post-Graduate Courses in Medicine, Dean's Office, New University Buildings, Edinburgh.

A post-graduate course on infantile tuberculosis will be held by Dr. P. F. Armand-Delille at the Hôpital Hérold, Paris, from April 24th to May 15th. The fee is 200 francs. Applications for tickets should be made to the secretary of the Faculty of Medicine, Paris.

A course of post-graduate lectures on genito-urinary diseases will be given at St. Paul's Hospital, Endell Street, W.C., on Wednesdays at 4.30 p.m., from April 19th to June 21st, with the exception of May 31st. The course is free to registered medical practitioners and students.

lesions often prove obdurate to treatment The extent of the usefulness of iron in this disease and in others in which this association is found is therefore being investigated

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[1] Sargant W *Lancet* 1932 i 230
Idem Ibid, 1932 ii 1322
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[5] Hurst A F and Bell, J R *Brain* 1923 xlv 266
[6] Russell J S R, Batten F E, and Collier J Ibid, 1900 xxiii, 39

WATER EXCRETION AS A MEASURE OF EQUILIBRIUM WITH ENVIRONMENT

BY

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The use of biochemical formulae as a measure of the emotional tension in psychotic patients has been advocated by McCowan and Quastel,[1] who suggest that the results of blood sugar curves can be used in the formula—

$$\frac{\text{2 hour blood sugar level minus the fasting level}}{\text{The highest blood sugar level minus the fasting level}} \times 100$$

and that the product in manic-depressive psychoses is in numerical proportion to the degree of emotional tension present The product is known as the hyperglycaemic index Their results have been supported and correlated by Lockwood[2 3] in studies of the psycho-galvanic reflex and of the blood cholesterol levels It is the purpose of this communication to show that the degree of emotional tension or, as it is here called, the measure of equilibrium with environment, can be equally well decided by a water excretion test based on that described by Beaumont and Dodds[4] as used by Strauss Graunwald A table showing the relation between the results of water excretion tests and the hyperglycaemic index in fourteen patients is included

That the renal water excretion is a sensitive index of renal function is well known, but it is so easily affected by nervous influences that its value as an ordinary clinical test is impaired Addis and Watanabe[5] have pointed out the variable water excretion from hour to hour and day to day in normal subjects on a constant water intake, while Goodall and Scholberg[6] have remarked on the low urinary excretion figures shown by many psychotics

For the water excretion test as used in this investigation the patient is completely starved from 5 p m to 4 a m, when the bladder is emptied During the next fifteen minutes one pint of water is drunk and the total quantity of urine excreted by 7 a m is measured, catheterization being resorted to where necessary A normal person excretes one pint of urine during this period, perhaps more, but oftener something less Since renal function is less active by night than by day, it must be noticed that bedtime for patients here considered is 7 p m, and that the ordinary ward work commences at 5 a m Occasionally the test was performed from 9 a m to midday after a night s starvation, but no great differences were observed following the change of time The following results were obtained

In sixteen patients with melancholia the average water excretion obtained was 5 ounces during the first month after admission, whereas when convalescence had set in the average was 14 ounces The increase in these patients was slow and the average time taken to approach normal figures was eight months In simple uncomplicated depression with retardation the average rise in the excretion figure in six months was from 13 to 21 ounces while two cases of depression without retardation or agitation whose only fear after six months was that they might be sent home, gave increased readings from 15 to 17 ounces

Similarly, early manias averaged excretions of 4 ounces those ill after two months 6 ounces, those convalescent after this time 12 ounces, and recovered cases 23 ounces

These figures contrast strikingly with the excretion rates in three placid imbeciles and four simple senile cases In the former the average excretion in the first week was 13 ounces, and after three months it was 15 ounces while in the latter a decrease from 15 ounces to 14 ounces was shown in six months These seven patients were equally at home in any environment if not ill treated

The following table (Table I) illustrates a series of sugar curves and water excretion tests obtained from fourteen patients

TABLE I

Case	Day after Admission	Sugar Level's in Mg % Fasting	2 hours	Highest	H I	Water Test oz	Duration of Illness	Diagnosis	Clinical Measure of Emotional Tension†
1	3rd	—	—	—	—	10	4 weeks	Melancholia agitated	+
	4th	97	74	123	—	—			—
	15th	97	79	112	—	—			—
	19th	—	—	—	—	19*			—
2	4th	—	—	—	—	7	4 "	Confusional	++
	8th	95	180	180	100	—			++
	15th	—	—	—	—	11			+
	30th	—	—	—	—	15			—
3	6th	90	115	115	100	—	23 "	Mania with some confusion at first	++
	8th	—	—	—	—	7			++
	43rd	—	—	—	—	15			—
	47th	80	77	130	—	—			—
4	11th	—	—	—	—	7	Improving after 17 weeks	Melancholia	++
	43rd	106	132	153	56	—			+
	49th	—	—	—	—	13			+
	95th	110	103	137	—	—			—
5	11th	105	115	144	26	—	Convalescent after 1 year	Melancholia	+
	16th	—	—	—	—	10			+
	180th	—	—	—	—	20			—
	185th	98	80	135	—	—			—
6	3rd	—	—	—	—	4	Remains acutely agitated	Melancholia	++
	15th	93	143	154	80	—			++
	43rd	107	125	125	100	—			++
	45th	—	—	—	—	6*			++
	53rd	—	—	—	—	4*			++
7	13th	—	—	—	—	10	30 weeks	Mania recurrent	+
	25th	82	118	132	72	—			+
	177th	94	78	125	—	—			—
	179th	—	—	—	—	28			—
8	2nd	—	—	—	—	15	14 "	Melancholia	—
	15th	72	88	134	26	—			—
9	41st	—	—	—	—	2	16 "	Mania with confusion at first	++
	45th	80	100	105	80	—			++
	56th	—	—	—	—	13			—
	59th	88	90	118	7	—			—
10	3rd	—	—	—	—	4	11 "	Melancholia agitated	++
	7th	78	113	130	34	—			+
	20th	—	—	—	—	13			—
11	100th	—	—	—	—	8	17 "	Melancholia	++
	115th	107	81	150	—	—			+
	116th	—	—	—	—	12*			+
12	5th	—	—	—	—	5	8 "	Mania with delirium at first	++
	16th	99	148	165	74	—			++
	28th	—	—	—	—	7			++
								Melancholia agitated	
13	2nd	—	—	—	—	4	23 "		++
	57th	80	128	145	71	—			—
	130th	—	—	—	—	18			—
	135th	85	78	128	—	—			
14	5th	—	—	—	—	4	9 "	Mania with confusion at first	++
	15th	81	139	162	71	—			++
	27th	—	—	—	—	12			+

H I = Hyperglycaemic Index of McCowan and Quastel
* These results were obtained between 9 a m and midday
† = Rough measure of emotional tension as observed clinically where ++ = well marked + = present and — = absent

There is a fairly general agreement between the two tests Case 1 in this table illustrates the value of the estimations This patient made two attempts at suicide

The week beginning Monday, June 26th, will be an important one for St. George's Hospital and for all who are interested in its work. This is the bicentenary year of St. George's, and the celebrations so far arranged include a special thanksgiving service at St. Paul's Church, Knightsbridge, on Tuesday, June 27th, when the Bishop of London will preach, and a conversazione at the hospital the same evening, at which all old St. George's graduates and nurses will be welcome. It is hoped also to hold a dinner in the Egyptian Hall of the Mansion House, when H.R.H. Prince George, president of the hospital, will be in the chair, and at which a special appeal for funds will be made. There will also be a wireless appeal on St. George's Day, Sunday, April 23rd.

The second demonstration in the series on surgical technique arranged by the Fellowship of Medicine and Post-Graduate Medical Association will be given at 11, Chandos Street, Cavendish Square, W., on April 12th, at 8.30 p.m., by Mr. Tudor Edwards, on some aspects of the technique of thoracic surgery. A demonstration of *x*-ray films specially suitable for M.R.C.P. candidates will be given at 11, Chandos Street, by Dr. Kerley on April 20th, at 4.30 p.m. There will be a week-end course in gynaecology, with all-day instruction, at the Samaritan Hospital for Women, Marylebone Road, N.W., on April 29th and 30th. An evening course in physical medicine has been arranged at the London Clinic and Institute of Physical Medicine from April 24th to May 19th, at 8 p.m.; post-graduates attending can see clinical cases and their treatment in the various departments. Demonstrations on plastic surgery will be given at the Hammersmith Hospital on April 25th by Mr. Pomfret Kilner, and on April 28th by Sir Harold Gillies and Mr. A. H. McIndoe. There will be an afternoon course in psychological medicine at the Maudsley Hospital from April 24th to May 31st.

The next meeting of the Illuminating Engineering Society will be held in the hall of the Institution of Mechanical Engineers (Storey's Gate, St. James's Park, S.W.) on Tuesday, April 11th, at 6.30 p.m., when Mr. F. Charles Raphael will open a discussion on hospital lighting.

The London County Council proposes to form a central histological laboratory at Archway Hospital, Highgate, comprising chief histologist's and assistant histologist's laboratories, senior and junior laboratories, museum, photographic rooms, and offices, at an estimated cost of £3,375. It will serve all the Council's Hospitals.

The twenty-third French Congress of Legal Medicine will be held in Paris from May 22nd to 24th, under the presidency of Professor Balthazard of Paris, when the following subjects will be discussed: bacteriological legal medicine, introduced by Dr. Chavigny of Strasbourg; traumatic delirium tremens, introduced by Dr. Mazel of Lyons; and the insane at liberty, introduced by Professor H. Claude of Paris.

The Executive Committee of the sixth International Congress for Industrial Diseases and Accidents, held at Geneva last year, has instituted a prize of 1,000 Swiss francs for the best essay on the estimation of the consequences of an industrial accident. The typescript of the essay, which may be written in English, French, German, or Italian should be sent to the general secretary of the congress, Geneva, before December 31st, 1934.

Mr. E. W. G. Masterman, F.R.C.S., medical superintendent of St. Giles's Hospital, having reached the age of 65, retired on March 31st, after seventeen years in the service of the late Camberwell guardians and of the London County Council.

Dr. J. S. Crone (Ealing) has been appointed Sheriff for the County of Middlesex for 1933.

Geheimrat Professor His of Berlin has been awarded the Silver Carl Ludwig medal for 1933, which is given every year by the society for outstanding services in research on the circulation.

Dr. Egas Moniz of Lisbon and Dr. De Beco of Liége have been elected foreign corresponding members of the Académie de Médecine.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR, British Medical Journal, B.M.A. House, Tavistock Square, W.C.1.**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names, not necessarily for publication.

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager, British Medical Association House, Tavistock Square, W.C.1, on receipt of *proofs*.

All communications with reference to ADVERTISEMENTS, as well as orders for copies of the *Journal*, should be addressed to the Financial Secretary and Business Manager.

The **TELEPHONE NUMBERS** of the British Medical Association and the *British Medical Journal* are MUSEUM 9861, 9862, 9863, and 9864 (internal exchange, four lines).

The **TELEGRAPHIC ADDRESSES** are:
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The address of the Irish Office of the British Medical Association is 18, Kildare Street, Dublin (telegrams: *Bacillus, Dublin*; telephone: 62550 Dublin), and of the Scottish Office, 7, Drumsheugh Gardens, Edinburgh (telegrams: *Associate, Edinburgh*; telephone: 24361 Edinburgh).

QUERIES AND ANSWERS

Dry Mouth

"RETIRED" writes: For some months past I have been troubled with intense dryness and acute soreness of the tongue on awakening due to snoring, due in turn to partial obstruction from a deflected septum. Can any reader suggest an effective head bandage (and the address of the maker) which will prevent dropping of the chin during sleep? The primary trouble—the deflected nasal septum—I am advised, is not bad enough to warrant operative interference. I should be grateful for suggestions on both matters—the mouth and the nasal condition.

Gnashing of Teeth

"P. T." writes: I should be grateful for information as to the treatment of teeth-grinding in adults—noticed particularly during sleep.

Proteinuria in Pregnancy

Dr. V. NEWTON (Salford) writes: What is the significance of a fairly heavy cloud that appears sometimes on heating the urine of pregnant women *after* the addition to it of acetic acid? If this is a nucleoprotein, is it an indication of renal damage? In those cases in which I have discovered it there has been no other sign of kidney disease or of bone disease, and the women have run through pregnancy and labour otherwise normally.

Arteriosclerosis: Subjective Symptoms

"ANXIOUS" writes: A man aged 67 has been arteriosclerotic for some years, and has been subject to attacks of "trembling" all over the body, and particularly in the legs. The trembling is not visible, but is felt by the sufferer. He was examined by a specialist about six years ago, but is averse to consulting a specialist again, and I do not feel justified in pressing him to do so on account of his temperament. Of late he has complained of frequent giddiness, lasting at times more or less all day, and a day or two ago he felt unsafe when in the street for this reason. I shall be grateful for any suggestions on treatment. At present he is on small doses (3 grains) of potassium iodide combined with a 3-minim dose of arsenic t.d.s. He is a total abstainer and a mild cigarette smoker.

Phlebitis after Childbirth

Dr. J. WALKER (Bootle), replying to "G. N. W." (*Journal*, March 25th, p. 548), writes: I would suggest that he might give ammon. carb. in 5-grain doses thrice daily to his patient, and continue the treatment for some months. Application of an ointment of glycerin of belladonna and ung. hydrarg. might give relief to the pain.

on the two days prior to admission the first by drowning and the second by gas Clinically she appeared to improve rapidly but suicidal patients are often very deceptive Because of the satisfactory results obtained from the sugar curve and the water excretion tests however she was discharged twenty six days after admission without ill result

As a measure of equilibrium with environment though not of cure in any particular case the water excretion test is also of use in other psychoses Thus in eight schizophrenics and non systematized delusional insanities the average excretion between the third and seventh days was 7 ounces After three months in those still solitary and unoccupied the average was 9 ounces while in those engaging in occupations it was 19 ounces The talkative self sufficient paranoid types were the first to show normal excretion figures

Four cases of puerperal insanity showed an average excretion of 4 ounces between the third and twelfth days In those unimproved after one month the average was 3 ounces while cured cases averaged 22 ounces

Seven senile paranoid patients with fairly well preserved personalities showed an increased excretion from 6 to 17 ounces in two months at which time they were becoming rapidly adapted to their new surroundings and engaged in light occupations

In an endeavour to ascertain the cause of these results an agitated melancholic patient was kept on a strictly fluid diet for ten days the total intake of fluids and the time at which taken were charted together with the amount of urine passed and the time at which it was voided In Table II the result is shown days being divided into quarters of six hours each

TABLE II

(The fluid intake in successive periods of six hours is shown in lines marked A while the urinary excretion is shown in lines marked B. The amounts are given in ounces.)

A		—	30	13	10	—	20	30	10	—	30	10	8	—	20	30	10	—	30	15	10
B	...	10	—	[illegible]	2	6	8	10	—	5	20	20	—	10	10	10	—	22	—	10	—
A	...	—	30	30	10	—	30	10	10	—	40	20	10	—	35	15	20	—	50	20	20
B		16	4	10	—	15	12	10	—	12	10	17	10	13	1	8	—	12	6	23	—

During the ten days 641 ounces of fluid were taken and 346 ounces of urine were passed a little over half the fluid intake Study of Table II shows that a corresponding half volume of urine is passed roughly six hours after the fluid intake Thus during this period a water test was performed the water being given at 9 a m At midday a total of 4 ounces had been excreted but at 2 30 p m 10 ounces more urine were passed It would seem then that there is a delay in water excretion in states of emotional tension and that this is the partial explanation of the results recorded

CONCLUSIONS

1 A water excretion test for the measure of equilibrium with environment is described and a comparison with the hyperglycaemic index is made

2 It is suggested that the results obtained are due to the delay in water excretion in states of emotional tension

I wish to thank Dr A T W Forrester medical superintendent Warwick County Mental Hospital for permission to publish this article

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Memoranda

MEDICAL, SURGICAL, OBSTETRICAL

EMBOLISM OF THE ABDOMINAL AORTA ASSOCIATED WITH AURICULAR FIBRILLATION

Mr A H Winchester's and Mr A J Hawes's accounts in the *British Medical Journal* of February 18th and April 15th respectively induce me to record the following recent case

The patient F G aged 53 years was admitted to hospital on March 20th 1933 complaining of difficulty in breathing He did not look seriously ill but his radial pulse and cardiac action showed an irregular irregularity suggesting auricular fibrillation Brachial blood pressure 120/80 mm Hg He had been under treatment in 1931 with attacks resembling angina pectoris his brachial blood pressure at that time was always somewhat low varying between 95/50 and 105/80 mm Hg His blood serum gave negative Wassermann and Meinicke reactions He said that during the earlier part of the great war he had been in hospital with severe rheumatism for six weeks He had been formerly a great smoker

On the morning of March 22nd he was suddenly seized with severe pain in the left lower limb The whole left lower limb became pale and there was some mottling in the thigh no pulsation could be felt in the foot or at the groin and no oscillometric movement could be obtained in the calf or thigh In the right lower limb however though I could feel no pulsation in the arteria dorsalis pedis there was some definite pulsation in the femoral artery at the groin and slight oscillometric movement could be obtained—scarcely 1/2 at the calf and 1 in the thigh There was no pain complained of in that limb An embolus lodged at the bifurcation of the aorta was diagnosed

Dry gangrene of almost the whole of the left lower limb followed On April 15th the patient complained of pain in the right leg and no pulsation could be felt in the right femoral artery at the groin A few days later there was cyanotic discoloration of the right foot which however did not become actually gangrenous before the patient's death on May 15th

The necropsy showed sclerosis of coronary arteries aorta and iliac arteries There was ante mortem thrombus in the right and left auricles and in both ventricles An embolus had been arrested (riding) at the bifurcation of the abdominal aorta the right common iliac artery had not been completely blocked but there was occlusion of the right popliteal artery There were likewise embolic infarcts in the lungs kidneys and spleen

London F PARKES WEBER M D F R C P

HAEMOGLOBINOMETERS AND HOW TO CHECK THEM

Every clinical pathologist in his routine work does a large number of normal blood counts sent him because pallor is mistaken for anaemia I noticed in 1922 working among war pensioners that at Hb 100 the red cell count was nearer 6 than 5 millions per cubic millimetre Whence then springs the legend that at Hb 100 the red cell count ought to be 5 millions per cubic millimetre? It is I think because (1) the expression 50 000 Hb R is easy to evaluate and because (2) haemoglobinometers lose their tint so that isolated readings are liable to be too high

The haemoglobinometer ought to be checked on receipt from the manufacturers and from time to time during use Those who work among children have early warning that a standard is losing its tint when they get readings of 90 and over since such readings are seldom found in children apart from polycythaemia—heart lesions for example But with adults there is no such warning nor when the Hb appears to be over 100 is in general any surprise felt

I set myself in 1927 the problem Does any—and if so what—relation exist between the Hb percentage and

Post-Influenzal Tachycardia

Dr. A. D. MACDONALD (Alloa, Clackmannanshire) writes, in reply to "H. I. M.'s" query (April 1st, p. 595): May I suggest that he tries tincture of aconite in 1- or 2-minim doses thrice daily. I have found this a most useful remedy for slowing the pulse. If necessary, the dose may be gradually increased, but the results do not usually show this to be necessary.

Income Tax

Charity : Annual Contribution

"J. C." undertook some time ago to give "a sum of £50 during seven years free of tax" to a charitable fund. He has been informed that the Inland Revenue is "deducting tax at the other end." What is the legal position?

*** When "J. C." speaks of £50 free of tax we assume that he means such a sum as after deducting income tax will leave £50 net; in other words, he is really paying a larger gross sum than £50 and deducting tax from that gross amount. In such circumstances the charitable fund should be able to claim repayment of the tax so deducted. If, on the other hand, "J. C." is liable for £50 gross only, and in fact pays £50, then the fund does not suffer income tax, and could not claim repayment. But in no circumstances that we can conceive would the fund be liable to a direct payment of income tax on the £50.

Expenses of Residence

"S. L." understands that one-half of the expenses of the professional-private residence are allowed for income tax purposes, and inquires whether this is by arrangement with the Inland Revenue or merely the customary practice.

*** There is no official "arrangement," and we have always taken the view that any general agreed proportion is impossible in view of the great variety of circumstances. At the same time it is our experience that one-half is usually agreed as fair to both sides, except where an abnormal proportion of the accommodation is used professionally or a high rent is paid for special location—as in certain quarters of large cities or the West End of London.

Organized Tour Abroad

"N. A." is going with a party of medical men on an organized tour to visit certain Continental spas. Are the expenses of such a tour allowable?

*** Rule 3, Cases I and II, Schedule D, restrict the allowable deduction to expenses "wholly and exclusively laid out for the purposes of the profession," and it is doubtful whether the cost of such a tour can properly be brought within that definition. Further, any increased medical knowledge or experience gained would bring in results over a tract of future time, and consequently the expenditure, in so far as it is professional, has a capital value. On the whole we cannot recommend "N. A." to press for the deduction of the expenses.

Purchase of Share in Practice

"N. R." puts the following question. (1) A buys out a partner (B), who has two sons studying medicine; are the legal expenses for the purchase of the share and the binding of B's sons not to practise within a certain radius allowable? (2) C buys a half share of a practice from D on March 1st, 1930. Accounts are supplied showing the profits of the practice for the thirteen months to April 5th, 1931, and the year to April 5th, 1932. The partners have exercised their option to have the practice regarded as having ceased at February 28th, 1930, and commenced again at March 1st, 1930. On what year's profits must the assessments be based?

*** (1) The legal expenses cannot be deducted for income tax purposes. In both cases the purpose served is of a capital nature. (2) The basis is laid down in Rule 1, Cases I and II, Sched. D, Income Tax Act of 1918, which provides that for the balance of the year in which the practice is set up the assessment shall be made on the profits for that period, for the year following, on the amount of the profits for the first year; for the next year the normal rule applies, and the assessment has to be made on the profits of the then preceding year. Applying this to the facts of the case, C and D will be assessable for the period March 1st to April 5th on 1/13 of the profits of the period to April 5th, 1931, and for the year ending April 5th, 1931, on 12/13 of those profits, and for the year to April 5th, 1932, on the same amount. An option is, however, provided for the taxpayer by Section 15 of the Finance Act, 1930, under which if C and D give notice to the inspector of taxes by April 5th, 1933, they can require that tax for the year 1932-3 can be charged on the amount of the profits of that year. The notice can, if desired, be revoked by April 5th, 1934, but not at a later date. If, therefore, the profits for 1932-3 are less than those of 1933-4 the option should be claimed.

LETTERS, NOTES, ETC.

Unusual Sequel of Influenza

Dr. W. M. CORBET (London, E.C.) writes: A healthy woman, aged 49, had a rather severe attack of influenza, which commenced on January 15th with the usual febrile and other symptoms. This responded to ordinary treatment, and she was soon up and about again. A fortnight later she came to see me complaining of difficulty in chewing, swallowing, and speaking. Her speech, indeed, was comparable to that of a person with a cleft palate. The tongue, on protrusion, deviated markedly to the right, without tremor. There was also paresis of the soft palate on the right side. The tongue was almost completely insensitive on the affected side to touch, heat, and cold. Taste appeared unaffected. There was no involvement of the facial muscles, and on laryngoscopy the vocal cords moved normally to phonation. Her condition is clearing up under appropriate treatment. The interest in this case lies in the fact that it appears to be a pure toxic neuritis of the right ninth nerve, there being no symptoms suggesting implication either of the pneumogastric or hypoglossal nerves. Such a condition, according to the literature, is very rare, and there was nothing to account for it except the patient's attack of influenza.

Colonel Kunhardt

Lieut.-Colonel S. H. BURNETT, I.M.S. (ret.), writes from Nice: May I recall that, in addition to the war service mentioned in your obituary notice of March 18th, the late Lieut.-Colonel J. C. G. Kunhardt was on active service during the great war, first on the North-West Frontier of India with the force operating in the Swat Valley against the Shinwaris, and later in Mesopotamia. John Kunhardt will be affectionately remembered by his many friends for his outstanding qualities of loyalty and sincerity.

Tuberculosis in Belfast

Corrigendum

Dr. Andrew Trimble was reported in the *Journal* of March 25th (p. 533) as having said: "In Belfast 50 per cent. of the pulmonary cases in children were due to tubercle-infected milk." What he did say was that, in his opinion, 50 per cent. of *non-pulmonary* cases of tuberculosis in Belfast children were due to tubercle-infected milk.

Halibut-liver Oil

Mr. R. T. M. HAINES (University College, London) writes: May I add an acknowledgement which was unfortunately omitted from the conclusion of the paper on halibut-liver oil printed in your last issue? The material used throughout the investigation was supplied by Messrs. The Crookes Laboratories, who took great pains to ensure that a series of representative oils could be examined.

The British Drug Houses Ltd. (Graham Street, City Road, N.1) have issued a pamphlet on radiostoleum, radio-malt, radiostol, and avoleum, with special reference to the application of these substances in general practice.

Berkefeld Filters and Water-Softeners Ltd. is the title of a recently registered company which has taken over the business of the Berkefeld Filter Company (British), together with that of the firm of Slack and Brownlow. The London offices of the company are at Sardinia House, Kingsway, W.C.2.

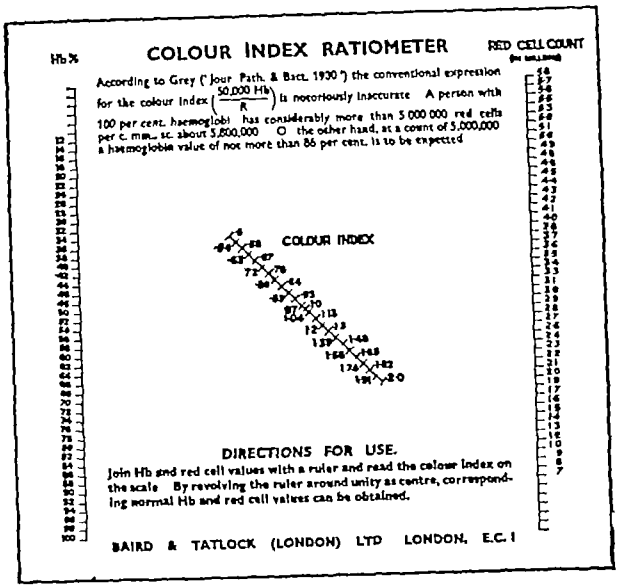
Vacancies

Notifications of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 42, 43, 44, 45, 46, 47, 50, and 51 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 48 and 49.

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 132.

the red cell count in normal blood? After examining a large number of counts on men, women and children, I came to the conclusion that this was a constant, and was able to confirm the suspicion held by many that the conventional expression for the evaluation of the colour index was wrong and propounded in 1930[1] the expression 58 000 Hb/R, observing at the same time that the ratio Hb/R was a constant in normal blood, and that the theoretical haemoglobin value might be calculated by multiplying the red cell count in millions by 17 (or more accurately by 17 24)

The true colour index may be read from the following chart (obtainable from Messrs Baird and Tatlock)



The application of these data to the checking of haemoglobinometers is obvious Suppose your assistant's red cell count at any given moment is 5 2 millions per cubic millimetre This if I am right, corresponds to Hb 90 Lake and gas 20 c mm of the blood in the usual manner and dilute to the 90 mark (1 8 c cm) If then your standard differs sensibly from this temporary standard, you must either get a fresh standard or apply a correction

It must not be forgotten that the specific gravity of the blood (and in consequence the red cell count and Hb, and indeed all other constituents of the blood) varies from day to day and hour to hour, so that it is useless to attempt to check a haemoglobinometer except by a red cell count and haemoglobin estimation done then and there

London TEMPLE GREY, M B, Ch M

AN UNUSUAL CASE OF PERFORATION OF THE APPENDIX

About the middle of January I was consulted by a girl, aged 17, on account of abdominal pain which had existed for three weeks previously There was no previous history of abdominal pain, and no history of biliousness or of cyclical vomiting The pain, which was at no time severe, was referred to both iliac fossae, but mainly to the right No increase in pulse rate nor elevation of temperature was recorded during the time she was under observation, although an ill-defined swelling could be felt in the right iliac fossa No real resistance existed, and the abdomen moved well on respiration

A diagnosis of 'grumbling appendix" was made and on February 23rd appendicectomy was carried out through a Battle's incision A retrocaecal appendix was found with but little evidence of recent inflammation Lying between the two layers of the meso-appendix was a typical blackish concretion, about the size of a cherry-stone, over the surface of which the two layers of the meso-appendix could be freely moved On slitting open the appendix after removal no evidence of the passage of the stone could be detected in fact the organ was inclined to be fibrotic The clinical course at no time suggested that a perforation had occurred, no doubt owing to the fact that the stone had found its way into the interstitial tissue, leaving the peritoneum intact

Such an event would appear to be as rare as it was fortunate for the patient

Sevenoaks JAMES M HARRISON

[1] *Journ Path and Bact* 1930 xxxiii, 231

Reports of Societies

EXPERIMENTAL PRODUCTION OF MALIGNANT TUMOURS

DISCUSSION AT THE ROYAL SOCIETY

A discussion meeting took place at the Royal Society on June 15th, with the president Sir F GOWLAND HOPKINS in the chair, the subject was the experimental production of tumours

Dr J A MURRAY, F R S, in opening said that the investigations of the last thirty years had proved that under appropriate conditions, the cells of the higher vertebrates were capable of unlimited proliferation Nothing was commoner in the literature of cancer than loose statements that this or that agent conferred on the cells powers of unlimited new growth, which was non sense, seeing they already possessed such powers The essential feature was the uncontrolled or autonomous character of the cellular proliferation—that is to say, the agencies which were effective in the body in limiting the rate and amount of growth and cell division were in effective against true new growths This applied to growths both benign and malignant Examples were seen in the fatty tumours, lipomata, which went on increasing in size in an emaciated individual, and the uterine myomata, which grew progressively even after the menopause The malignant new growths, carcinoma and sarcoma, exhibited this proliferation still more clearly, showing often a more rapid rate of growth The other distinctive features of the malignant as contrasted with the benign new growths were differences in degree rather than in kind, and their more perfect independence or autonomy manifested itself in infiltrative progress dis organizing and destroying the normal tissues by pressure from without or occlusion and rupture of blood supply The stretching and tearing of the walls of blood and lymph vessels opened the way for the entrance of aggregates of parenchyma cells into the vessels, and these, transferred to remote situations, formed secondary centres of growth or metastases It was these manifestations of neoplasia which rendered cancer so formidable a problem in treatment The new proliferative conditions arose in limited localized foci, and once they had reached a size sufficient for recognition further increase took place only from the descendants of the already transformed cells, without fresh accessions from the surrounding elements of the same kind One type of cell by its multiplication gave rise to the new formation, so that it was usually possible by microscopical examination to infer the tissue of origin, even after the tumour had reached a great size Dr Murray went on to say that these ideas and conclusions had obtained a welcome precision and validity from the study of the transplanted malignant new growths of the mouse and rat In consequence, it was now possible to define new growths with some confidence, as single-tissue proliferations arising in a localized area, growing from their own resources in an uncontrolled manner, and showing a continuous graduated series in those arising from any one tissue, both in histological structure and in rate and habit of growth He discussed the various attempted solutions of the problem of the nature and causation of malignant new growths There was first of all, the genetical hypothesis originating with Boveri, and modified by Bauer, the main objection to which now was the necessity of assuming a large number of constituent units in each gene, to allow for the great number of slight modifications present d by the new growths of any one tissue, all practically

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

256 Electrocardiographic Diagnosis of Abnormalities of the Left Ventricle

As the result of a study of a large Q wave in Lead III in a series of seventy-five cases S. STRAUSS and L. FELDMAN (*Amer. Journ. Med. Sci.*, January, 1933, p. 87) conclude that this abnormality, which is very rare in healthy hearts, is a useful additional diagnostic sign which is usually associated with diseases of the left ventricle. In fifty-four of these cases (72 per cent.) the clinical condition was such as to give rise to involvement of the coronary vessels or of their mouths, to myocardial fibrosis, or to cardiac hypertrophy with functional strain on the left ventricle. Clinically, most of the patients had one of the following conditions: hypertensive heart disease (33 per cent.), frank anginal syndrome (16 per cent.), syphilitic aortitis (12 per cent.), and arteriosclerosis (10 per cent.). All these diseases are known to exert their influence chiefly on the left ventricle. The rheumatic heart group made up 16 per cent. of these cases, the highest incidence reported so far. The authors suggest that further investigation is obviously indicated in order to confirm this finding and determine its significance. The remaining patients in the series were suffering from miscellaneous conditions, some of which undoubtedly had effects on the left ventricle. Left axis deviation was encountered in forty-three cases, but T wave negatively in only 29 per cent. of the whole series. One transient enlargement of the Q wave was observed in a pregnant woman, but it had disappeared within one year after delivery. In the whole series there were only two normal hearts. The authors compare these results with those obtained by Pardee and Willius, there being a marked discrepancy between their figures as regards the incidence of the anginal syndrome and those of Pardee, and a smaller discrepancy when compared with the figures of Willius. They argue that the symptom of angina pectoris varies with the individual "pain threshold," which is not the same in different social classes. They have found, for example, that in dispensary practice the incidence of syphilitic aortitis is high and the pain perception low, as compared with private practice. By making allowance for this factor, and for a difference in interpretation of the aortic syndrome, the figures of the present authors and those of Pardee and Willius are less discordant, and indicate that this large Q wave is closely associated with pathological changes which may involve the coronary arteries or produce myocardial fibrosis. All the figures agree fairly well as regards the incidence of hypertensive heart disease.

257 Endocrine Aspects of Chronic Arthritis

L. SAXON (*Med. Journ. and Record*, January 4th, 1933, p. 18) is satisfied that there is ample proof that the chronic arthritic patient is either congenitally deficient as regards the functioning of his endocrine glands or that this system, consequent on toxic effects due to disease, has become secondarily deficient. He remarks that, even though this may be only one factor of importance in preparing the body tissues for the contracting of rheumatic disease, it is well worthy of careful investigation. In women particularly this is the case, and Fortescue Fox in 1895 called attention to a special type designated as "climacteric arthritis." This author then emphasized the frequency of amenorrhoea in the initial stages of arthritis, when occurring early in life; he pointed out that there was observable a high incidence of arthritis at the normal or induced menopause, and cited cases of spontaneous recovery brought about by the ovarian hyperactivity during the first months of pregnancy. Saxon suggests that ovarian hypofunction may give rise to hypertrophic arthritis by originating local spasm in the vascular area about the joints through sympathetico-tonia. Yet the administration of ovarian substance has often proved to be without benefit, but this may be due to therapeutic inadequacy of the preparations employed. Similarly, in the case of the thyroid gland, there has been demonstrated a lowered basal rate in many instances, but the administration of thyroid preparations is not helpful except when there is definite obesity or other pronounced symptoms of hypothyroidism. The author explains this on the grounds that damage to the thyroid gland does not always result in a decrease or an increase of the normal secretion, but occasionally in an altered secretion—a dyscrasia or a dysthyroidism. After mentioning cases reported by other authors, Saxon records a personal case of atrophic arthritis, which responded well to the exhibition of thyroid extract. The tonsils were septic and were removed, but without benefit. The patient, a woman aged 23, was then put on thyroid treatment, with the idea that some dysfunction might be present, although the metabolic rate was normal. After taking the powdered extract for four weeks she improved remarkably, although the largest daily dose was 4 grains. Spindle-shaped swellings of the proximal and distal phalanges in the fourth and fifth fingers of both hands disappeared, the motility of the finger-joints increased remarkably, and pain ceased. Saxon concludes that in this patient the explanation of the arthritic condition was either hypothyroidism or some dysfunction of the gland, and that the arthritic manifestations will be kept under control so long as she is supplied with a sufficient amount of thyroid substance. He discusses the way in which such alteration of the nature of the thyroid secretion may tend to arthritis, even though there is no increase or decrease in the amount secreted. The good results which have been obtained in some cases by the application of diathermy to the pelvic organs may similarly be explained as proceeding from stimulation of the ovarian hormones.

Surgery

258 Linitis Plastica

C. P. HOWARD (*Quart. Journ. Med.*, January, 1933, p. 59), who reports a study of ten cases of linitis plastica, and discusses the literature on the subject, concludes that in most cases there appears to exist a peculiar form of gastric carcinoma, probably occurring in resistant subjects. It originates from cells of limited growth capacity, pursues a chronic course, and tends to spontaneous regression of the tumour process, but, nevertheless, to the death of the patient. While the author does not categorically deny the existence of a benign form, the so-called fibromatosis, he believes that many of the reported cases so diagnosed were not submitted to a sufficiently intensive histological scrutiny to eliminate malignancy. In this connexion he recalls the evidence that the malignant cells in scirrhous gastric cancer may be reduced to minimal numbers, or may be apparently absent, so that an extremely minute histological search is essential for a correct diagnosis to be established. Syphilis seems to be an exciting factor in some cases, but Howard believes that in the majority of the leather-bottle stomachs of this aetiology there has been a secondary invasion by cancer cells. Linitis plastica is a disease of adult life, and is more common in men than in women. There is generally a history of cardiac or arterial disease, but this does not appear to be in excess of the expected disease incidence of patients of cancer age. Alcohol may be at times an exciting cause, but most authorities exempt tuberculosis in this respect. There may be no symptoms referable to the stomach

but when present they resemble those of scirrhous carcinoma. Anaemia is a constant finding, but jaundice and haemorrhage are rare. Radiographical examination is useful, but usually only as a confirmatory procedure, and definitely diagnostic only in the later stages when an operation is of but little value. The disease is uniformly fatal unless treated surgically, and even then results are not encouraging. Procedures that have been tried are total gastrectomy, partial gastrectomy, gastroenterostomy, pyloroplasty, gastrostomy, jejunostomy, and manual dilatation.

259 Surgical Abnormalities simulating Gynaecological Conditions

W. STOECKEL (*Münch. med. Woch.*, January 6th, 1933, p. 13) draws attention to several surgical conditions which may confuse the diagnosis in a gynaecological examination. Inflammatory conditions of the adnexa may result from appendicitis. In these cases the uterus is drawn to the right, and the right infundibulum is slightly kinked and dilated. Adhesions, giving rise to symptoms, may be formed, and overlooked when the appendix is removed through a small incision. A dilated caecum may be diagnosed as an ovarian tumour. A smooth elastic tumour of the size of a foetal head is felt immediately to the right of the uterus; it cannot be differentiated from a cyst. In most cases a purge will cause the caecum to collapse, but the author relates a case in which he thought of the possibility, and in which the caecum remained dilated after the bowel had been cleared. A similar mistake may be made when the sigmoid flexure is dilated, but it is much rarer. Tumours of the adnexa on the left side may be simulated by appendices epiploicae which have become greatly enlarged, due to deposition of fat. Such cases can only be diagnosed at laparotomy. A true lipoma of the appendices epiploicae is less common than climacteric deposition of fat in them. Stoeckel describes a case of lipoma of the omentum which was diagnosed as a carcinoma of the ovary.

260 Intrarenal and Perirenal Lipomata

J. DE J. PEMBERTON and J. M. MCCAUGHAN (*Surg., Gynecol. and Obstet.*, January, 1933, p. 110) give the following analysis of forty-two cases of retroperitoneal lipomata observed at the Mayo Clinic between 1910 and 1930: of these cases forty were extrarenal and two intrarenal; nineteen occurred in men and twenty-three in women. The ages ranged from 28 to 68, the average being 49.3 years. The average duration of the symptoms was 5.8 years, the shortest being three weeks and the longest twenty years. In only five cases was a diagnosis of retroperitoneal lipoma made before operation. As regards the symptoms, enlargement of the abdomen or the discovery of a mass by the patient was most common, and occurred in twenty-eight cases. Abdominal pain or discomfort was noted in twenty instances; dyspepsia in eleven; loss of weight, strength, and appetite in eleven; constipation or diarrhoea in eight; nausea and vomiting in four; and swollen testes in one. The operative mortality was high (19 per cent.) and recurrence fairly common (14 per cent.).

Therapeutics

261 Medicinal Control of Exophthamic Goitre

A. MINNIG (*Med. Journ. and Record*, January 4th, 1933, p. 31) holds that surgery has no place in the treatment of exophthalmic goitre, the thyroid manifestation being secondary probably to suprarenal insufficiency. The precipitation of the disease may be due to shock, not always recognized as being concerned, and psychotherapy in such cases will be helpful. The next consideration is the enforcement of such a degree of rest as is indicated by the degree of damage to the heart and nervous system, estimated by investigating the basal metabolic rate, the pulse rate, the pulse pressure, and the vital capacity. The diet and habits must be controlled, red meats being avoided, and milk at first being the sole food. Tobacco must be abandoned entirely. Once each week a dose of calomel and salts is advised; this may well be continued for a year or two. Other intestinal antiseptics such as thymol are helpful, buttermilk being especially recommended. Minnig has obtained good results from Lugol's solution, but emphasizes the importance of graduating the administration and dosage in each individual case. It may be necessary at times to discontinue the drug or lessen the dose. He alternates this with the exhibition of quinine hydrobromide, which he has found to be definitely valuable, alone or in such association. Insulin will sometimes be effective in stimulating a waning appetite, or as an antipyretic, but the daily dosage should not exceed 30 units. Minnig warmly commends the employment of the hormone of the suprarenal cortex, which in his hands has proved to be most potent in diminishing the signs and symptoms of exophthalmic goitre. He has often found it necessary to use nerve sedatives for the insomnia and nervous symptoms, and prefers luminal and the bromides in this connexion, since they can be continued for long periods better than other drugs.

262 Amytal and Ephedrine in Asthma

Since the administration of ephedrine to asthmatic patients results not infrequently in unpleasant sequels, such as nervousness, palpitation, and a sensation of trembling, amytal has been suggested as a suitable corrective. M. W. BINGER (*Minnesota Med.*, January, 1933, p. 44) has obtained encouraging results from such a combination, which, he finds, relieves the unpleasant feelings due to the ephedrine, and also is in some measure an adjuvant, having a sedative effect on the nervous system. After trying a larger dose of amytal the author came to the conclusion that it was better to start with a dose of 3/4 grain of this drug associated with 3/8 grain of ephedrine. If no untoward effects are noted the dose of amytal is increased to 1½ grains, the ephedrine remaining unaltered. Binger reports that this combination seems to be particularly effective in cases of asthma with a highly nervous background, and when the attacks come on at night. The much needed night's rest is thus ensured and the patients begin to improve in general health. He employs this treatment for patients who have been shown by their clinical histories and cutaneous testing to be specifically sensitive to foreign proteins, and also for those in whom no special allergy can be determined, but in whom the neurogenic factor appears to predominate. The treatment may be supplemented by expectorant and antispasmodic remedies. It is not regarded as curative, but as palliative and symptomatic.

263 Intraperitoneal Injection of Salyrgan

K. HASTL (*Klin. Woch.*, January 28th, 1933, p. 148) draws attention to the increased effectiveness of salyrgan in the treatment of ascites or other pathological accumulation of fluid in the tissues if the intraperitoneal route is chosen for injection. In a case of chronic nephritis with cardiac decompensation a striking diuresis was obtained in this way. By the intravenous injection of a single dose of 6 c.cm. of salyrgan urine volumes of 500, 150, 350, 600 c.cm. per day were obtained on successive days, but an intraperitoneal injection of the same amount was followed by a diuresis of 8,500 c.cm. on the first day. The effect continued on the second day, when 6,800 c.cm. were excreted; on the succeeding four days the daily urine volume was between one and two litres. These effects were obtained after digitalis had been used in a variety of forms during the preceding two months without success. The author draws attention to the lasting effects of the drug for several days after the injection. The marked diuresis was followed by a considerable amelioration of the stasis in the liver and elsewhere, and a disappearance of the ascites, hydrothorax, and oedema. The same effect was obtained in several other cases, in which 2 c.cm. of salyrgan injected intraperitoneally increased the diuresis fourfold as compared with the intravenous injection. It is stated that no toxic signs of any kind were observed. The effect is explained as due to the slower absorption of the drug, and hence the continued activity of the kidneys.

permanent There was next the virus hypothesis particularly associated with the names of Borrel Rous and Gye Gye's genial conception of a factor derived from the host cells and carrying all the specific distinctive characters of the tumour strain acting in conjunction with a relatively non specific virus was still without direct experimental proof Like the enzyme modification the greatest obstacle to its acceptance was the failure to demonstrate cell free transmission in the laboratory strains of mouse and rat tumours Finally there was the special form of the chronic irritation theory of Virchow which had arisen on the basis of the work of Yamagiwa on the experimental production of tar cancer The experimental confirmation of Virchow's theory had established its validity as a concise description of the emergence of cancer after prolonged localized slight irritation of the tissues by a variety of agents and nothing more Wide differences of opinion still existed as to how this result was brought about Dr Murray said that in his opinion the chemical and physical carcinogenic agents acted indirectly they set up such conditions in the tissues that as a new departure here and there cancerous foci were started The chemical properties of these agents gave no indication of how the autonomous uncontrolled type of proliferation was induced indeed they were so varied that it was difficult to see how they could give any definite indication of the nature of the cellular mechanism involved In conclusion Dr Murray said that it was clear that the experimental induction of malignant growth reproduced perfectly the phenomena which occurred in the development of occupational cancer from exposure to tar or *x* rays for example The other forms of cancer for which no definite irritant could be identified at present were so similar in their mode of occurrence and the length of time necessary for their appearance that it was reasonable to accept the facts of experimental carcinogenesis as a model of the genesis of the others also An attempt had been made to indicate directions in which difficulties still remained The definition of those difficulties and the material and methods by which they were being attacked were due to the modern development of experimental carcinogenesis

Dr J W COOK discussed certain results obtained at the Cancer Hospital by his colleagues and himself He regarded the term chronic irritation as an entirely inadequate description of the effect of applying a carcinogenic substance to animal tissue There were many examples of industrial diseases brought about by chemical irritation but few of them led to malignant tumours Many constitutents of coal tar were powerful irritants yet were entirely without result in experimental carcinogenesis The most powerful carcinogenic compound yet obtained was benzpyrene which had recently been isolated from coal tar He described experiments with this and related substances particularly benzanthracene which had very definite cancer properties and gave tumours in a large proportion of the animals treated It seemed clear from a study of the chemistry of these substances that the property of cancer production was a constituent one depending on the type of molecular arrangement

Dr W CRAMER agreed with Dr Murray that growth was a phenomenon taking place in the tissues of the body and integrated to the needs of the organism being subject to inhibitions and stimulations Malignancy was the negation of that integration Here the condition progressed when the stimulus ceased The malignant cell was no longer subject to the stimuli or inhibitions which controlled normal cells If one took a normal tissue and inoculated it from one animal to another of the same species a connective tissue reaction resulted which led eventually to the disappearance and absorption of the inoculated transplant Malignant cells elicited in the host a connective tissue reaction which by providing a stroma enabled them to establish themselves in the next host so as to form a tumour Sometimes the connective tissue regained its dominance and invaded the tumour which disappeared This occurred in the rare cases of spontaneous absorption and was also the basis of the disappearance of tumours by radium There were many different types of malignancy all of which bred true suggesting that the cellular changes resided in the nucleus the cell organ mostly responsible for inheritance It also indicated that malignancy was not cell anarchy The life and behaviour of a malignant cell was not lawless but governed by laws as strict as those governing normal cells The phenomena of carcinogenesis presented two problems the nature of the cellular change responsible for the behaviour of the malignant cell and the manner in which this change was brought about The first of these problems was still a matter of speculation and dispute the second was solved so far as essential features were concerned Cancer could be produced experimentally at will Excepting tuberculosis syphilis and vaccinia which were caused by a specific organism there were very few diseases which could be produced experimentally and none in which the experimental production in animals simulated the natural disease as completely as in cancer The period required to produce cancer when measured in actual time was very much shorter in the mouse (four to six months) than in man (ten to fifteen years) but when measured in biological time as a fraction of the normal span of life it was almost identical A long period of induction was necessary whatever agent was used and might be regarded as an essential feature of the process of carcinogenesis Experimental carcinogenesis gave no support to the view that there was a greater tendency of the senile tissues to undergo malignant transformation to produce cancer experimentally in the aged animal was if anything more difficult than in the young The age incidence of cancer must be due to the fact that the conditions which induced spontaneous cancer required a considerable fraction of the span of life in order to produce a malignant transformation Referring to the induction of carcinogenesis experimentally by the so-called filterable virus of fowls Dr Cramer said that the immunological work of Gye and Purdy and of Andrewes furnished convincing evidence to his mind that the agent responsible for the transmission of these tumours contained an element which was not of fowl origin—in other words a virus With regard to the nature of the change in the cell which constituted malignancy he felt that those who so confidently denied the possibility of a virus being responsible for malignancy took a somewhat narrow view The existence of viruses was known only in so far as they were pathogenic but just as there were non pathogenic bacteria there might be non pathogenic viruses Their presence could not be recognized because they could not be seen and they did not produce a disease Since they were supposed to be living matter they might produce chemical reactions without themselves being used up in those reactions If so they would simulate the behaviour of ferments and since most viruses could only live and multiply in living cells their presence would be masked by the activity of the cells In conclusion Dr Cramer said that there was a curious tendency even in the medical profession to surround cancer with a mystery and the most foolish statements got a hearing if they were sufficiently sensational He saw no more mystery in cancer than in any other manifestations of cell life Cancer began as a local disease it could then be cured and was being cured in a high percentage of cases in those sites where it could be diagnosed most readily It was seen that in the great majority of organs and tissues cancer was due to some extraneous factor setting up a condition of chronic irritation If there were such extraneous factors it must be possible to avoid them on learning what they were and cancer would then be a preventable disease

Dr C H ANDREWES found it very difficult to believe that fowl sarcomas were essentially a different type of tumour from mammalian sarcomas and he did not think it possible to maintain the attitude that these filterable fowl tumours afforded an example of a peculiar disease in fowls quite apart from fowl tumours as a whole Whenever a fowl sarcoma had been studied over a reasonable period—a year or two—the tumour was sooner or later found to be filterable He proceeded to show how serological evidence supported the view that the agents were viruses Dr Murray had suggested that many people fought shy of a virus theory of cancer because it would be necessary to postulate the existence of an inordinate number of viruses producing all sorts of histological types all through the animal kingdom But he

bacteriologist, aware of the wayward habits of bacteria, was not very much surprised at finding that sort of thing, because many bacteria had specific antigens which were peculiar to themselves, and group antigens which were common to a number of species It must be taken as the unsatisfying conclusion that these different tumour viruses were neither identical serologically nor yet wholly distinct There was something in them which was individual, and something which was shared by a number, and according to one's private tastes in the making of theories one might gloss over the common element and stress the specific, or vice versa He was hopeful that in course of time complement fixation, agglutination, and other reactions would be applicable to the study of fowl tumours, and thus there was a considerable field in which it might be possible to relate all the intermediate conditions between true tumours and infections and to throw light on the really vital problem of the relation between avian and mammalian new growths

Dr P R PEACOCK said that it was now recognized that the filterable avian tumours and their relation to mammalian tumours constituted a problem which must be solved before generalizations as to the cause of tumours could be regarded as more than interesting speculations About four years ago he had set about producing tumours with recognized carcinogenic samples of tar injected intramuscularly into fowls, and he found no real difficulty in producing tumours, provided the birds could be kept alive from six months to a year He gave a general account of these experiments, and added that there could be no doubt, with regard to the mode of producing these tumours, that the growths in the fowl were exactly comparable to growths in mammals produced by similar means

Dr J MCINTOSH laid before the meeting the outcome of some experiments on the virus theory of cancer To determine the relation of the Rous sarcoma to the ordinary mammalian tumours, he had taken a series of fowls and injected tar diluted in lard Tumours of one type or another were found in just over half the birds treated with the tar Microscopically the tumours varied considerably in character some being fibrosarcomatous and others definitely leucosarcomatous, with numerous intermediate grades Others were predominantly endotheliomatous and angio-endotheliomatous More curious was the tendency to obtain mixed or pleomorphic tumours associated with leukaemia He offered three explanations of the experimental findings The occurrence of a filterable leukaemia and a filterable Rous type of tumour suggested that the action of a virus must be taken into account It would seem that the tar injections in some manner, by stimulating cell proliferation, allowed the virus to get a hold on the young cells and come into evidence as a leukaemia or sarcoma Again, it might be that the proliferative and tumour-like effects were due to one single pleomorphic virus with an affinity for any tissue of mesoblastic origin Thus at one time the result of its action might be a leukaemia, at another a fibrosarcoma, and at another an endothelioma The third and perhaps simplest explanation of pleomorphism was the acceptance of the specific factor of Gye, this specific factor, being derived from the tissues themselves and thus linked with the common virus of the fowl, determined the type of tissue proliferation

Dr W E GYE said that one important point had not been touched upon in the discussion It concerned work done largely by Murphy—though, he thought he could say started by himself—on the inhibitory factor in fowl tumours The Rous sarcoma grew at a great rate normally, but from time to time it entered upon a benign stage, when growth was very slow How was one to explain this great variation in the rate of growth, and the corresponding clinical and pathological appearances? The observation had been made that the slow-growing tumours contained some inhibitory substance, and Murphy apparently had devised a technique whereby some constant results in this direction were obtained The tumour cell in this stage apparently responded to the presence of the virus by producing something which checked or restrained the activity of the virus itself

Professor A E BOYCOTT could not see that the three hypotheses which Dr Murray had brought forward for the cause of cancer were alternatives in the sense he used them, they seemed to him to be rather complementary to one another He agreed with Dr Cramer that the growth of tumours could not be described as lawless anarchical, in the same way the criminal had his own code, and stuck to it The tumours maintained the characteristics of their type through successive generations of cells, different from the normal tissues among which they grew The problem was whether the carcinogenic agents acted directly on normal cells and produced the mutation, or all of them caused the tissues themselves to produce some particular carcinogenic substance Another view of the nature of these irritating substances was that they afforded a suitable nidus on which the supposed extraneous virus obtained a lodging He thought that the idea of an extraneous virus had little to be said for it It seemed unlikely that something capable of independent life—Dr Cramer had said that it was living matter—could endure the amount of 'knocking about," in the shape of precipitation, adsorption, resuspension and so on, which was inflicted on these agents, and still preserve its integrity

NIETZSCHE AND PSYCHOLOGY

At a meeting of the Medical Society of Individual Psychology on June 8th, with Dr H WOODCOCK in the chair, Dr F G CROOKSHANK read an abstract of a paper on individual psychology and Nietzsche Dr CROOKSHANK said that the psychological movement of the last thirty or forty years had its source in the Nietzschean revolt against the whole artificial structure of categories, classes, causes, and concepts set up in the nineteenth century upon a basis of mediaevalism This earlier psychology, founded upon the separation of human beings from one another in terms of differences, contrasted with the new psychology, which was based on the recognition of what we had in common with one another as men and women Much as Freud and Jung owed to Nietzsche, the bond between Nietzsche and Adler was particularly close Not only did both consider that purpose was the mainspring of action, but Nietzsche, in an early work, saw in the will to power—that fundamental of individual psychology—the motive force in all living phenomena The Nietzschean philosophy regarded pain as the greatest educator and ennobling force in Nature here was the germ of Adler's doctrine of the overcoming of weakness by courageous effort Again, Nietzsche, like Adler, emphasized the relation between physical ill-health and emotional feeling, especially resentment, and elsewhere he foreshadowed Adler's doctrine of compensation Not that all individual psychology was to be found, even in embryo, in Nietzsche's writings Nor was individual psychology's debt to Nietzsche consciously incurred Nietzsche failed in his own life, partly because he carried his revolt of the individual to such a pitch that he, the super individual, became mad as a result of self isolation Adler on the other hand, considered that the essence of sanity lay in the relation of the individual to the community and to that extent individual rights were subordinate to social rights Nietzsche glorified the strong for their strength, and despised the weak for their weakness In individual psychology spelt encouragement for all weak and strong alike The paradox here was in keeping with individual psychology, which was itself a paradox from beginning to end Called individual psychology and rightly, it was nevertheless the first and best, if not the only, social psychology

Mr LUDOVICI remarked that certain factors separated Nietzsche definitely from Adler Nietzsche would have asked if it was necessary to allege that the neuroses resulted from a revolt against society His attack was against Plato and Socrates He fought against dualism, against the transvaluation of values which enabled men to excuse appearance Disease and abnormality were disfigurements Morality was largely a matter of taste Nowhere did Adler ask a question of this sort Nietzsche would ask, With whom were we to co operate? Dr J C YOUNG pointed out that consideration of the

Ophthalmology

264 Diagnosis of Trachoma

In Egypt, especially in the examination of school children, a frequent problem is the differential diagnosis between a healthy conjunctiva, a mild follicular conjunctivitis, and a healed mild trachoma. As a suggestion for clearing away this difficulty, R. P. WILSON (*Folia Ophthalmol. Orientalia*, November, 1932, p. 52) records a slit-lamp study of the corneal vessels, and discusses their diagnostic value in doubtful cases. He states that in an examination for the signs of trachoma it is as important to examine the cornea as the palpebral conjunctiva. Pannus in one form or another is invariably present in the disease, and should be considered an essential part of it, and not merely a complication. New vessel formation may be observed in the limbus at the same time as, or immediately after, the first signs of trachoma become manifest in the tarsal conjunctiva. While the natural tendency of the disease is to assume a chronic course, with the after-production of much cicatrization, cases occur where the cicatricial changes in the palpebral conjunctiva and vascular changes in the cornea may be so slight as to be easily missed by the ordinary methods of examination. A bio-microscopical investigation in such cases will, however, always reveal vascular changes in the end capillary zone of the limbal system of vessels, and the changes thus found may be of very great value as regards differential diagnosis. Thus, when the end capillary loop zone no longer appears as a delicate narrow fringe on the opaque limbal border (just on the axial side of the secondary groove), the vascular meshwork is much more open, the loops are slightly elongated, the vessels are thicker and more irregular in thickness, the shapes of the loops are more variable, and the edge of the capillary zone is less regular than normal, a strong suspicion must be entertained of a previous mild trachomatous infection. In a series of cases of follicular and acute or chronic conjunctivitis there was no instance of a definitely abnormal limbus or any scarring in the upper conjunctival fornices. Wilson is satisfied, therefore, that when there are doubtful signs of scarring on the tarsal or upper fornicial conjunctiva, the presence of such corneal changes stamps the case as trachomatous. An examination of infants with the slit-lamp showed definitely that vascular changes in the cornea might be expected almost immediately after the appearance of definite lesions in the tarsal conjunctiva.

265 Cataract of Endocrine Aetiology

A. SÉZARY and H. MAMOU (*Presse Méd.*, November 30th, 1932, p. 1797) refer to the generally recognized connexion of many dermatoses with the endocrine system. This may be difficult to prove in every instance, but the connexion between thyroid disturbance and some forms of alopecia is incontrovertible. Several authors have described a variety of bilateral cataract, dependent on endocrine disturbance, which may be recognized easily by means of the slit-lamp. This association of cataract with the endocrine system is confirmed by the observation that parathyroidectomy (in men or in animals) is followed by tetany and bilateral cataract. Sixty years ago one author reported fifteen cases of bilateral cataract in patients who suffered from convulsions of unknown origin; later observers added cases of cataract associated with epileptiform attacks. In the case of a man whose parathyroids had been removed, cataract supervened. Thus experimental and clinical observations combine to prove the association of cataract with parathyroid deficiency, but cataract may occur with other endocrine disturbances. In incomplete hypothyroidism and in definite myxoedema, certain hypophyseal syndromes—for example, acromegaly and diabetes insipidus—are always associated with parathyroid disturbance. Cataract occurs in syndromes associated with rickets, mongoloid idiocy, and amyctonia dystrophica; it appears in children and adolescents, but the senile form has also been attributed to endocrine, and especially gonadal, deficiency. Such cataracts occur at the commencement of genital involution in both sexes. Some authors attribute diabetic cataract to endocrine (pancreatic) deficiency. The slit-lamp permits the differentiation of endocrine cataract from the commoner forms—traumatic, congenital or senile—and its classification into several types. The authors add that cataract may accompany various dermatoses, especially scleroderma, and is often associated with plantar hyperkeratosis. Pigmentation, premature whitening of the hair, and telangiectasis are frequently found. These ocular and cutaneous signs are accompanied by alteration in the voice, due to thinning of the vocal cords. The teeth become loose. These patients are usually undeveloped and of childish appearance, though occasionally the facies is senile. The association of cataract with dermatoses is explained by the common epiblastic embryonic origin of the lens and skin.

266 Transplanting the Lachrymal Sac

For the purpose of transplantation of the lachrymal sac in chronic suppurative dacryocystitis J. A. MACMILLAN (*Arch. Ophthalmol.*, December, 1932, p. 831) makes an incision following the line of the anterior lachrymal crest; he then exposes the sac, and frees it from its bed below the intact tendo oculi. The fascia is left on the surface of the sac to carry a suture by which the sac, having been divided transversely above the obstruction, is lifted up, allowing a punctum dilator to be pushed through the floor of the lachrymal fossa into the nose. This opening is enlarged to accommodate the diameter of the sac. A filiform bougie is passed through this opening into the pharynx, and its end, together with the end of a rubber catheter which has also been passed into the pharynx through the same side of the nose, is brought out of the mouth. The two ends having been tied together, withdrawal of the catheter brings the bougie out of the nose. The bougie is then used to draw out the two ends of the suture passed through the sac; these, in turn, pull the sac into the nasal cavity, and anchor it in position by being tied round a nasal plug. This plug is renewed on the second day, and discarded, together with the suture, on the fifth day. The function of the sac is thus preserved. If insuperable difficulties are met with during the operation, the surgeon is not prevented from extirpating the sac. The author records a good percentage of cures.

Obstetrics and Gynaecology

267 Treatment of Menstrual Disorders

J. NOVAK (*Wien. klin. Woch.*, December 2nd, 1932, p. 1512) considers it important to overcome amenorrhoea in order to restore the ovarian function to normal and not because of any supposed elimination of toxins with the menstrual flow. The value of the production of genital hyperaemia, reflexly by heat and directly by ovarian diathermy, is stressed. Among drugs iron is beneficial even if anaemia is absent. Hormone preparations, especially those containing the female sex hormone in almost pure form—for example, folliculin—only act through hyperaemia. The dosage should be increased gradually to the maximum, and stopped suddenly before the end of the fourth week to imitate normal cyclic changes in the hormone content of the blood. The treatment is useless if the amenorrhoea is secondary to marked underdevelopment of the uterus. Anterior lobe pituitary extract influences the ovaries greatly, but research has yet to find an active preparation for human administration. *X*-ray treatment should not be applied direct to the ovaries, but it influences these organs if applied to the pituitary. In menorrhagia, styptics, the hydrastis group, and ergot hold their own; corpus luteum extracts may check menorrhagia due to "small cystic degeneration" of ovaries. Pituitrin is efficacious by injection, but an intranasal snuff would be preferable were such available. Vaginal irrigations are good if given hot and not prolonged.

Nietzschean philosophy was of value when dealing with the schools of Freud Adler and Jung Much that Nietzsche prophesied had come to pass Dr S VERE PEARSON said that forty five years had passed since the publication of Nietzsche's last work Nietzsche's attack was on the Christian church of his day It was now recognized that men were not equal—it was equality of opportunity that was required In Nietzsche's day this idea was not prevalent Dr A SANDISON agreed that psychology and philosophy were possibly matters of taste But it was not so so far as fundamental truths were concerned

Dr F G CROOKSHANK in reply said that though Adler differed in some respects from Nietzsche yet always he continued his line of thought Individual psychology worked pragmatically Adler's psychology was justified practically his patients got well Nietzsche opposed academic Christianity In individual psychology the question of taste did not arise

LEGAL PITFALLS OF THE SURGEON

Mr D HARCOURT KITCHIN read a paper on this subject at a post graduate course arranged by the Fellowship of Medicine at the Royal Albert Docks Hospital on June 11th He pointed out that although the surgeon usually came to the law courts as respondent to a civil action he might find himself in the dock of a criminal court if he performed an illegal operation Most surgical procedures caused grievous bodily harm but the law assumed that the surgeon had good therapeutic grounds and that his theoretical offence was excusable Nevertheless an aggrieved patient might always prosecute thus requiring the surgeon to prove his therapeutic reasons Sterilization unless necessary for the health of the patient was likely to expose the surgeon to a criminal prosecution Similarly abortion was a felony and must not be performed without good therapeutic reason Any operation performed without consent of the patient might lead to a civil action against the surgeon unless he had operated in emergency on an unconscious patient with due skill and care and had done no more than was reasonable Most disputes about consent arose when the uterus or both ovaries had been removed from a woman the classical case being Beatty *v* Cullingworth Miss Beatty had said in the theatre If you find both ovaries diseased you must remove neither and Mr Cullingworth had replied You must really leave that to me The fact that she had then taken the anaesthetic led the jury to imply that consent had been given and she lost her case Mr Cullingworth had been perhaps rather lucky In the more recent case of Cull *v* the Royal Surrey Hospital and Butler the plaintiff's doctor had written to the hospital saying that she had decided not to undergo the hysterectomy recommended by Mr Butler She entered hospital for a simple curettage but the letter never reached Mr Butler and he removed the uterus He got off with a farthing damages because he could not possibly have known of the letter but the hospital had to pay £120 Mr Kitchin advised the surgeon to obtain written consent for the operation which he intended to do and to explain to the patient the possibilities involved in his procedure Oral consent could not be really safe nor was it desirable to obtain too comprehensive a permission for a jury might be much influenced in assessing damages if it felt that a surgeon had taken advantage of a *carte blanche*

NEGLIGENCE

Negligence in law was the breach of a duty to take reasonable care and use a reasonable degree of skill the interpretation of the word reasonable being a matter for the jury in each case The degree of skill varied with the circumstances a general practitioner being expected to have less than a specialist The pitfalls in this branch of the law were so numerous that they could hardly be counted and many of them could not be avoided by the most scrupulous care and the most exceptional skill In Tyndall *v* Allcock the surgeon had taken the most elaborate care and treated the little girl patient as if she were his own child The jury did not want to find him negligent but very much wanted to compensate the little girl for the deformity which would prevent her from continuing her study of the piano When the judge explained to them that they could not give compensation without finding Mr Allcock negligent they found him negligent and awarded £2 000 damages At appeal Lord Justice Scrutton remarked that a jury was seldom a suitable tribunal to try a case which involved right differentiation between an error of judgement and a departure from the required degree of skill Lord Justice Sankey however thought a jury more likely to come to the right conclusion than a committee of experts and Lord Justice Romer observed somewhat ironically that Mr Allcock must get such consolation as he could out of the fact that trial by jury was the foundation of his liberties Mishaps might be the result of some special sensitivity or idiosyncrasy in the patient In Murdock *v* Holmes and Taylor some anaesthetic had dropped into a patient's eye and he had lost the sight of it Evidence was given that the anaesthetic would not greatly damage a normal eye and that the patient had been in a highly toxic state The jury disagreed When possible it was advisable to test for sensitivity beforehand If a newly invented form of treatment was tried the surgeon should explain to the patient clearly what he intended to do and why and the extra risk it entailed If the method were carefully thought out and proceeded logically from scientific research he would be justified in using it Every medical man knew that the value of a radiograph might in practice be very small but in the law courts it was very high indeed To omit to take an *x* ray photograph of possible bony injury was in itself regarded as an act of negligence If the patient objected the surgeon should get the objection in writing or make a note of the refusal at the time

The surgeon might be held liable for the negligence of his assistants A long series of decisions had restricted his liability for other people's mistakes he was not responsible for the negligence of a nurse carrying out in his absence some task which it was quite proper to delegate to her but his responsibility for assistants at an operation had not been definitely settled In Hillyer *v* St. Bartholomew's Hospital Lord Justice Farwell had expressed the opinion that a surgeon was in supreme command of his team as soon as the doors of the operating theatre had closed Since the point at issue was the liability of the hospital governors and not that of the surgeon these remarks could only be regarded as *obiter dicta* they had never been tested in a case It was practically certain that a surgeon could never be held liable for the mistake of an anaesthetist unless he had reason to doubt his competence The assistant surgeon the theatre sister and other members of the team were also highly skilled people doing their respective jobs but at any stage the surgeon might say to any one of them You are doing that wrong To that extent the law might say that he had control of them and was therefore responsible for their misdoings In practice however his own job required a very high degree of concentration and in the interests of the patient he could spare little time for supervision of others It was the custom for example for the theatre sister to count the swabs and instruments before and after the operation and for the surgeon to take her word that nothing had been left in the patient's body The law was not certain whether to free him from responsibility for the count or not In South Africa the case of Van Wyk *v* Lewis had made it a settled rule of law that the surgeon might rely on her but this case did not bind English courts and the Lord Chief Justice in Crotch *v* Wiles had suggested that the jury might think that a surgeon should count the instruments himself when the operation was completed Some surgeons suggested that all swabs should be made opaque to *x* rays so that she could at any rate be located before the patient left hospital others thought a human count was inevitably unreliable and they relied on long tapes attached to even the smallest swab Finally Mr Kitchin pointed out that most actions brought against surgeons were based on flimsy pretexts and urged every surgeon to join a defence society

Of operative measures—as a last resource—if curetting fails vaginal hysterectomy is suggested at the climacteric or if the uterus is myomatous; in younger women bilateral ovarian wedge-excisions may be useful, or high uterine amputation. If an operation is impracticable irradiation of the liver and spleen is helpful, but x rays should only be used if permanent amenorrhoea is desired or not objected to, since this may follow in any case. In dysmenorrhoea, if due to abnormal clotting with much bleeding or extrauterine adhesions, the author advises analgesia with hydrastis or ergot; but in the more usual or spasmodic type, which he attributes to unpleasant psychic associations together with fear of recurrence of pain, he strongly advises psychotherapy directed to the unravelling of the cause of the first attack and explaining the psychic mechanism to the patient. Various antispasmodics and analgesics have also proved successful. If surgery is essential as a last resource he considers the older methods greatly inferior to the interruption of the centripetal nerve tracts by alcoholic injection of the cervico-uterine ganglion, sympathectomy (Leriche), or, best of all, resection of the pre-sacral nerve (Cotte).

268 Shoulder Pain in Ruptured Ectopic Gestation

According to PETRIGNANI (*Bull. Soc. d'Obstét. et de Gynécol. de Paris*, November, 1932, p. 645), Laffont in 1919 reported sixteen cases in which pain in the shoulder was a striking symptom of ruptured ectopic pregnancy. In a case here described shoulder pain was the only symptom of which complaint was made, except that some abdominal pain and a tendency to faint had been noted forty-eight hours previously. The pain was very sudden and very severe; it immobilized the arm and made the upright position impossible. At operation, on the same side as the shoulder pain, numerous clots were found in the iliac fossa and the subphrenic region.

269 Treatment of Vesico-vaginal Fistula

L. E. PHANEUF (*Amer. Journ. Surg.*, January, 1933, p. 29) reports the case of a woman, aged 28, who developed a vesico-vaginal fistula after an instrumental delivery. Eight months later the fistula lay behind the right pubic ramus, to which it was firmly attached. The first four attempts at closure (two transvesical and two vaginal) were unsuccessful. At the fifth operation the recti muscles were cut across and the fistula approached extraperitoneally. It was then seen that the previous failures had been due to the fact that it had not been possible to separate the bladder from the pubic ramus. The extraperitoneal route, now adopted, permitted the free mobilization of the bladder, which made the large rent in it easily closable. For identification the lower part of the right ureter had been dissected free from the surrounding tissues, and the patient subsequently developed a uretero-vaginal fistula on the right side, which might have closed spontaneously had not the patient again become pregnant. This pregnancy was not suspected at the time of the operation, since it had been deemed impossible for coitus to take place through a vaginal tube encrusted with lime salts. However, term was reached without complications, and the patient was delivered of a normal infant by a classical Caesarean section. Fourteen days later the incision opened, and a loop of ileum was extruded; this was returned under spinal anaesthesia, and the wound was closed. Five months subsequently the ureter was implanted in the fundus of the bladder, and the leakage was stopped. Suprapubic drainage was considered, but could not be effected owing to dense scar tissue. Later investigations indicated that the right kidney had ceased to function, having atrophied. The patient was, however, free from symptoms, and in perfect health, although she had had more than three years of urinary incontinence and discomfort. Phaneuf considers this a satisfactory result, although he is convinced that suprapubic drainage might have been helpful in keeping patent the lumen of the newly implanted ureter. He adds that the two types of fistula in which trouble may be anticipated are those where there is extensive loss of tissue, or where the fistula is situated high up in the vaginal vault or adherent to bone.

Pathology

270 The Blood in Serum Sickness

E. POUHIN (*Thèse de Paris*, 1932, No. 604), who records his observations on thirty-six cases of serum sickness in patients aged from 3 to 46, following the injection of antitoxin for diphtheria, cerebro-spinal fever, and scarlet fever, comes to the following conclusions. The existence of serum sickness has no influence on the variations in the amount of horse albumin in the blood serum, since no changes in the amount of the albumin can be detected before, during, or after serum sickness. In the course of the occurrence of serum sickness the blood serum acquires the property of producing flocculation in the presence of horse serum. Precipitins appear at the onset, and increase until the end of serum sickness, when their quantity diminishes. Their disappearance often precedes that of horse albumin, when serum sickness appears twice after a single injection of horse serum; the precipitins may disappear after the end of the first manifestation of serum sickness and return in the course of the second. Their quantity does not bear any relation to the intensity of the serum sickness. In some cases they may not even develop at all, or more rarely still they may appear in the absence of any symptom of serum sickness.

271 Decreased Dextrose Tolerance in Acute Infectious Diseases

J. L. WILLIAMS and G. F. DICK (*Arch. Int. Med.*, December, 1932, p. 801) performed glucose tolerance tests in 108 patients—sixty-seven of whom had scarlet fever, seventeen diphtheria, eight pneumonia, five influenza, three acute tonsillitis, three measles, one each erysipelas, encephalitis, mumps, epidemic meningitis, and poliomyelitis—and in ten normal subjects. Glycosuria was found in 41 per cent., the largest amount of dextrose being excreted by patients with influenza and miscellaneous acute infections. The glycosuria was accompanied by a lower carbohydrate tolerance, as shown by dextrose tolerance tests and blood sugar curves, both in acute infectious diseases and in experimental infections in animals. The dextrose tolerance was improved by the administration of insulin. The authors suggest that in infectious diseases there is often an injury to the islands of Langerhans, with a lessened production of insulin.

272 Identity of Cholera and El Tor Vibrios

ZIMMERMANN (*Zentralbl. f. Bakt.*, December 30th, 1932, p. 146) records his studies on the much-disputed identity of the El Tor with the cholera vibrio. Particular attention was devoted to the production of a haemolysin. Examination was made of seventy cholera, twenty-one El Tor, and thirteen other strains. Broth of *p*H 7.4, containing 5 per cent. defibrinated sheep blood, was inoculated from a twenty-four-hour culture of the strain to be tested and examined for haemolysis after forty-eight hours' incubation at 37° C. The results were confusing. While the El Tor strains produced marked haemolysis, the cholera strains sometimes caused haemolysis and sometimes did not. This irregular behaviour of the cholera strains was attributed to variations in the broth. In order to avoid these a synthetic medium was prepared containing 4 per cent. sheep blood. Tubes of 5 c.cm. of this medium were inoculated, each with a loopful of a twelve- to twenty-four-hour peptone water culture of the strain under test. Though haemolysis was often marked after twenty-four hours' incubation, the final readings were not made till after forty-eight hours. The results were now much more concordant. Of the seventy cholera strains, sixty-six produced no haemolysis, while of the twenty-one El Tor strains all but one produced haemolysis. Further examination of the strains that had behaved anomalously cast doubt on their correct identification. The thirteen strains of other vibrios all produced marked haemolysis. The conclusion is therefore drawn that in a synthetic medium the El Tor strains produce an active haemolysin, while cholera strains do not.

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Reviews

ENGLISH DICTIONARIES

In his *Survey of English Dictionaries*[1] Mr M M MATHEWS of Cambridge, Massachusetts, provides a great deal of information in a small space We are too apt to look back to Samuel Johnson's great work as the beginning of English lexicography, but a very cursory reference to Mr Mathews's book shows our error Dictionaries, as he has pointed out, began with collection of glosses, forming glossaries of hard words made by students of a foreign language, alive or dead English dictionaries began when the student first found lists of hard words in his own tongue useful or necessary The first English dictionary in our modern sense of the term was that of Robert Cawdrey, who in 1604 published his modest *Table Alphabetical* of about three thousand words From that time till the publication of Johnson's work in 1755 various dictionaries appeared, of which Henry Cockeram's, in 1623, was the first to bear the title of " The English Dictionary " As Mr Mathews says " As long as the vocabulary continues to grow—that is, as long as English continues to be a living language—new dictionaries will be necessary to record the ever-growing vocabulary " In the great *Oxford English Dictionary* half a million words are recorded, and in the five years which have passed since the appearance of its last part many thousands of words have been collected ready for insertion in a supplement Dictionaries have become so numerous that the time cannot be far distant when a ' dictionary of dictionaries " will be called for Mr Mathews foreshadows such a publication in his interesting survey

To possess the recently published *Shorter Oxford English Dictionary*[2] in two volumes is the next best thing to owning the parent work There are any number of small dictionaries (of the size of the admirable *Concise Oxford*) on the book market which supply the modest reader with all he wants But dictionaries which bridge over the verbal gap between the small dictionary and the giant twelve-volumed *O E D* and which are also of proved excellence, are few and far between The dictionaries and those painstaking compilers of dictionaries—the lexicographers—are the guardians of the language They preserve it from corrupt spellings and loose extensions of meaning The fact that a dictionary of any size must by its nature lag behind the current usage of words is something to be not regretted but praised A word has to prove its worth before it attains its proud position as part of the language The editors of the *Shorter Oxford* have had the advantage of being able to incorporate in it new words and new meanings of words which have been collected for a Supplement (to the major work) of new words and phrases to appear in the autumn of this year The selection of these new words, the tactful separation of the " gate-crasher " from the bona fide guest must have been an arduous and invidious task for those who had to make the final decision Looking for these new words we note the omission of " gene," and of ' chromosome ' among the many scientific terms beginning with " chromo " There can be no doubt that this dictionary will be of untold value to those who need authoritative pronouncement on the right meanings of words, and who by reason of scanty shelf-space, smallness of purse or inaccessibility to libraries are unable to consult the greater dictionary To attempt such an abridgement, and—to use a vulgarism— to " get away with it," must have been a task almost as formidable as the preparation of the major work The editors are to be warmly congratulated on preserving those features of the original work which distinguished it from all other dictionaries as " the dictionary " It is in truth, at a moderate price, a quintessence of the vast material of the *O E D*

[1] *A Survey of English Dictionaries* By M M Mathews London H Milford Oxford University Press 1933 (Pp 123 5s net)

[2] *Shorter Oxford English Dictionary* Oxford The Clarendon Press 1933 (Pp 2 475 2 vols £3 3s)

ANATOMY OF THE EYE AND ORBIT

Mr WOLFF's monograph on *The Anatomy of the Eye and Orbit*[3] is an addition of considerable value to ophthalmological literature In its range of subjects it is comprehensive, dealing seriatim with the bony orbit and accessory nasal sinuses, the eyeball itself, the appendages of the eye (lids, conjunctiva, and lachrymal apparatus), the extrinsic muscles of the eye, the nerves connected with it (motor, sensory, and involuntary), and the blood vessels, while the last two chapters describe the development of the eye and its comparative anatomy The description of the anatomy is classical—in places indeed too classical, when it tends to retain the older views without discussing their newer modifications For example, the corneal nerves are described (as if in man) in the classical way as distributing themselves in three plexuses—one in the substantia propria, one subepithelial and one intra-epithelial , the work of Attias and others is not mentioned, while a footnote draws attention to the fact that such a distribution has never been demonstrated in man Again, the newer radiographic work on the mechanism of the conduction of tears is inadequately noticed These, however, are small points of criticism in the main the book is a very sound and concise exposition of its subject

More interesting actually than the anatomical descriptions themselves are the constantly recurring notes on applied anatomy and points of clinical importance which follow from anatomical relationships These give an unusual interest to the text, and will help to impress anatomical facts upon the student's mind as no other method can Particularly is this so in the sections dealing with the nerves and their central connexions, wherein the bare presentation of a large array of anatomical data is relieved by short descriptions of the effects of lesions as interpreted from their topographical relationships Some typographic errors have crept in, such as the repeated spelling of Greeff with one " f," but on the whole the volume is extremely well presented, and the illustrations are of a high order Many of these are borrowed from classical sources, but the author has enriched the literature with many original drawings and microscopical sections of considerable value and artistic merit

The book is essentially for the senior student (it is too large for the junior one) , but it does not include sufficient detail nor is there a sufficiently exhaustive bibliography to serve for purposes of research or reference

[3] *The Anatomy of the Eye and Orbit* By E Wolff I P B S F R C S London H K Lewis and Co, Ltd 1933 (Pp viii + 310 173 figures 31s 6d net)

SURGICAL TUBERCULOSIS

The series of handbooks to which Dr FLESCH THEFFSIUS contributes a volume on surgical tuberculosis[4] is designed as a kind of post-graduate or finishing course for medical practitioners The work has no pretensions to be a textbook, but consists of a series of essays on the various aspects of the subject and discussions of the vexed questions which still remain unanswered The author

[4] *Chirurgische Tuberkulose* Von Dr med Max Flesch Thebesius Medizinische Praxis Band XV Dresden und Leipzig Theodor Steinkopf 1933 (Pp xiv + 194 , 58 figures Geh RM 15 Geb RM 16 20)

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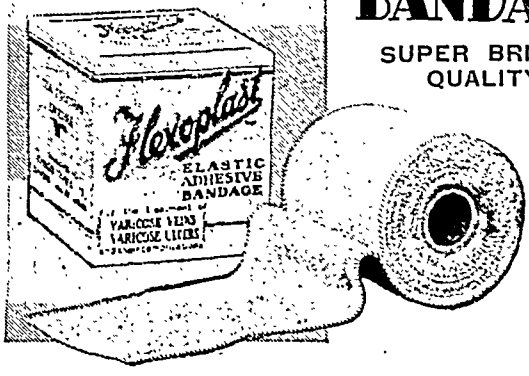

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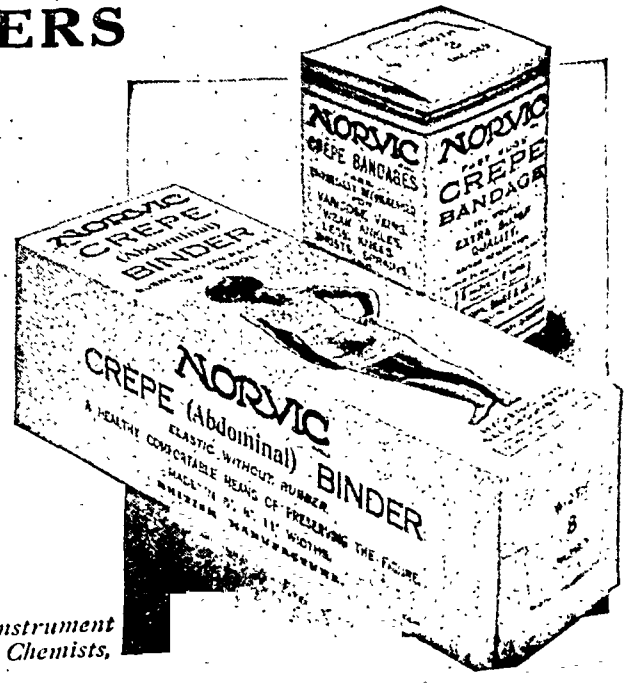

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well recognizes that definite answers in all sorts and conditions of patients cannot always be given that for instance longer and more elaborate treatment may be afforded by the patients of Rollier at Leysin than by the working classes who are treated on the prescription of the workmen's sick insurance funds and that consequently more radical surgical measures may have to be taken in the latter class of case—the choice having to be made between them and a grave risk of relapse The author puts forward as a typical example of the problems which come before the inquirer that of the relation (if any) between injury and tuberculosis of bones and joints The very widest divergence of views has been held by high authorities on this matter In Germany from an insurance point of view the question is important as also is the question of injury or infection in prescribing treatment To order massage and movement of a tuberculous joint may have very grave and evil consequences Opinion has changed from that of Volkmann and König who saw trauma as the cause of nearly all surgical tuberculosis to that of Liniger who admitted its occurrence in only 3 per cent of cases Since the first Accident Congress at Leipzig in 1922 opinion in Germany has been greatly strengthened in favour of the belief that a causal relation between injury and tubercle is extraordinarily rare The difficulty of an experimental investigation is however great Dr Flesch Thebesius describes attempts that have been made by various methods without very definite results The desirability of removing by operation tuberculous foci when they are easily accessible and when there is no mixed infection is reasonably maintained No doubt some extreme advocates of non interference go too far when they refuse to remove an enlarged but isolated gland but condemn the patient to months of restraint in expectation of resolution by means of the sun's or other rays The author offers some striking illustrations purporting to show bony ankylosis of tuberculous vertebrae This is so rare a phenomenon that care has to be taken to exclude other causes of osteomyelitis before making such a diagnosis The brochure is well illustrated though the author does not go into many details of treatment or describe splints or operations

A SURVEY OF RADIOLOGY

The 1932 Year Book of Radiology[1] by CHARLES A WATERS and IRA I KAPLAN serves as a landmark in the literature of this subject It is divided into two parts—one dealing with diagnosis and the other with treatment. An enormous amount of work has been done in abstracting radiological literature in all languages in sifting the wheat from the chaff and in presenting to radiologists a very concise and complete account of all important work which has appeared during the past fifteen years The authors felt that in this branch of medicine there was special need for a volume which would give an outline of progress in radiology and the articles reproduced have been chosen as representing a compact view of the whole subject uninfluenced by the personal opinions or ideas of the editors It is intended to serve as a reference book for the radiologist the research worker and the general practitioner of medicine All the systems of the body are surveyed and a very high standard is maintained throughout but the sections concerned with the osseous system and the gastro-intestinal tract deserve special commendation Special chapters deal with technique medico-legal matters teaching and instruction

Part II of the book is devoted to radiotherapeutics It deals with both *x* rays and radium therapy and does not attempt to separate these into watertight compartments—a method to be commended because in actual practice a combination of the two is frequently necessary In *x* ray therapy the maximum voltage in general use is about 200 kV but there are many who are desirous of using higher and higher voltages so as to produce *x* rays approximating to the gamma rays of radium The question whether short wave lengths show greater elective action is still unsolved but all these problems are fully discussed by the authors opinions of the leading writers on the subject being given An excellent chapter deals with general considerations in radiotherapeutics and special chapters are devoted to radiation biology the physics of radiation and the radiation treatment of various diseases The different methods of *x* ray therapy are outlined the newer methods being given in detail

The chapter on diseases of the blood is of special interest all the newer methods of treatment being described The results of Dale's method in the treatment of leukaemia are given and appear to be satisfactory Dale's method consists in irradiating almost the whole body with small doses of *x* rays from a distance of 1 metre It is claimed that by this means there is an avoidance of anaemia which may result from heavy applications of rays to the bone marrow that larger numbers of white blood cells are affected because of daily doses over long periods of time and on a large surface of the body that there is less general reaction and a greater possibility of affecting the organs primarily at fault The radiations are given daily for about five weeks the anterior and posterior surfaces of the body being irradiated on alternate days This method undoubtedly deserves further trial Other chapters deal with Grenz ray therapy radiation therapy in chest conditions radiation in gynaecology etc Practically speaking all diseases which may be amenable to radiation treatment are described special attention being paid to recent methods Chapters which will be of interest to many are those on cancer cures and injuries in radiation therapy

The book is well illustrated with *x* ray photographs and diagrams and an excellent index makes it quite easy to use as a work of reference It will be welcomed by all who specialize in this subject and who find increasing difficulty in keeping in touch with the numerous journals of radiology published in their own and in other countries

[1] *The 1932 Year Book of Radiology.* Diagnosis edited by Charles A Waters I D Therapeutics edited by Ira I Kaplan B Sc M D Chicago The Year Book Publishers Company Inc. (Pp 750 468 figures)

BLOOD TRANSFUSION FROM THE DEAD BODY

The book on Transfusion of Blood from Corpse to Patient[2] by Professor SERGE JUDINE is an account of work carried out at the author's emergency surgical clinic in Moscow where insufficient live donors are available and considerations that would affect British surgeons and British hospital authorities do not seem to apply Schamoff of Dniepropetrovsk experimented with dogs and found that animals bled up to 90 per cent of their blood volume could be revived satisfactorily with blood collected from the corpses of other dogs provided the blood was of a compatible group Such blood retained its oxygen carrying function and had no toxic effects after being kept for ten hours In human cases the bodies chosen were those of subjects who had died from street accidents (without possibility of blood infection through the wound) from angina pectoris and other forms of heart failure and cases of suicide by hanging or drowning

No evidence of intravascular clotting in the corpse was found up to eight to ten hours after death and in over 100 cases of transfusion there were no signs of toxicity of the blood Preservation of the body at temperatures

[2] *La Transfusion du Sang de Cadavre à l'Homme* Par Professeur Serge Judine Préface du Professeur A. Gosset. Paris Masson et Cie. 1933 (Pp 150 15 graphs 24 fr.)

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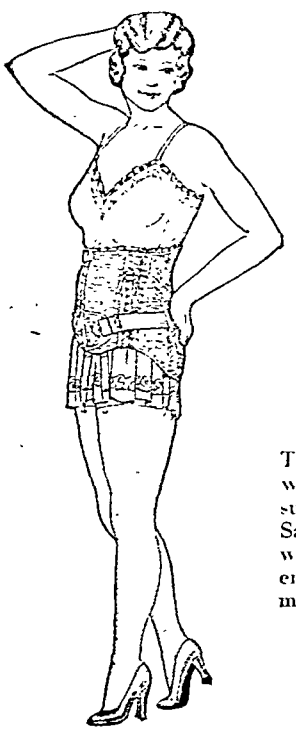

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below 0° C does not injure the red cells Infection of the blood in the mesenteric veins occurs twenty hours after death at room temperature The blood is obtained from the internal jugular vein, using sterile precautions with the body in the Trendelenburg position A cannula is introduced into the vein in the direction of the head and the blood conveyed to a vessel containing 4 per cent sodium citrate solution by means of rubber tubing The yield from corpses with intact vascular systems is 1,500 to 2,500 c cm Such blood is stored at 1° or 2° C , and has been used successfully after keeping for sixteen days

The general impression the author has is that, following transfusion with blood older than ten days, there are more complications and post-operative troubles, though the immediate beneficial effects are the same as with fresher blood He believes also that corpse blood less than ten days old gives fewer and milder reactions than blood from living donors Bacteriological cultures of the corpse blood are made at all stages, from the moment of obtaining and through the period of keeping The blood of the corpse keeps its specific agglutinative properties In addition to the usual grouping with stock serums, a direct test was always carried out between recipient's serum and the corpuscles from the corpse The Wassermann reaction was found to be unaffected in the serum of the latter No special transfusion technique was employed , the stored blood was raised very slowly to 40° C prior to use Clinical results are recorded in various types of cases

Notes on Books

It is surprising how many parasitic worms infect the human eye and Madame LAIGNIER-TERRASSE has done a service in collecting the available information in a single volume (*Nemathelminthes et Plathelminthes de l Appareil Oculaire Humain*) of 185 pages She classifies these parasites in two groups—the first causing a remote toxic effect on the eye (ascarids, pin-worms hookworms, and the broad tapeworm), the second acting directly This group is also subdivided into parasites causing an exophthalmia (trichinosis, sparganosis, hydatid and cysticercosis) and those not causing this condition although appearing continuously or intermittently in the eye (loa, thelazia, and bilharzia) The volume contains adequate bibliographies and about twenty illustrations—mostly rather poor It should however, be of considerable use to those who are interested in tropical diseases of the eye

The current number of *Tabulae Biologicae Periodicae*[8] contains a wide variety of useful data One article of thirty pages summarizes the muscle physiology exclusive of the two large divisions of heat formation and chemistry of muscle The two last mentioned subjects have attained such a predominance in recent years that there is a danger of work in any other field being neglected, and for this reason this article is particularly useful One of the most interesting features of the volume is a short summary of the known pharmacological properties of histamine and of acetylcholine The figures given are somewhat surprising, for the minimum concentrations that produce an effect on isolated organs are mostly in the range of one part in 1 milliard to one part in 10 milliards and the minimum doses that produce an effect on the cat's blood pressure are given as 0 000001 mg histamine and 0 0000000024 mg acetylcholine The fact that living tissues are affected by such quantities of drugs raises interesting problems regarding the nature of cell structure and the physical chemistry of drug action Other articles in the *Tabulae* provide collected data about radiochemistry enzyme actions, and vitamin research

[7] *Nemathelminthes et Plathelminthes de l Appareil Oculaire Humain* Par Pierrette Laignier Terrisse Action parasitaire directe ou indirecte Paris N Maloine 1932 (Pp 185 19 figures)

[8] *Tabulae Biologicae Periodicae* Herausgegeben von C Oppenheimer und L Pincussen Band II Nr 3 (= *Tabulae Periodicae* Band VIII Nr 3) Berlin W Junk 1932 (Pp 241–320 complete volume RM 55 subscription price, RM 48)

It is announced in the *Medical and Dental Students Register*[9] that the number of medical students registered in 1932 was 1,947, representing an increase over the previous year of 304 This last figure was made up of 170 at English training centres 82 in Scotland and 52 in Ireland The number of dental students registered in 1932 was 322 an advance of 26 on the figure for the previous year In this volume will also be found the regulations of the General Medical Council relating to such registrations, and a list of the examining bodies whose regulations fulfil the conditions imposed in respect of preliminary examinations

The monograph on Meningeal Spirochaetosis,[10] by MM JEAN TROISIER and YVES BOQUIEN contains a full and up-to date account from the historical pathological clinical, and experimental aspects of the invasion of the meninges by the spirochaete of Inado and Ido The work is of particular value because the senior author has devoted special attention to the subject since 1916, as can be seen by his communications to various Paris medical societies In addition to the ordinary meningeal form of spirochaetal infection, the authors describe a variety characterized by numerous relapses, a subicteric meningeal form which represents a transition between spirochaetosis icterohaemorrhagica and the pure meningeal form and a rare meningo renal form The affinity of the spirochaete for the meninges is not confined to the human race The disease can readily be inoculated into animals such as the guinea-pig, rabbit, monkey, or dog, as is shown by the record of the authors' experiments A bibliography of the literature of the various forms of spirochaetosis is appended

The 1933 edition of the *Scottish Youth Hostels Handbook*[11] with its foreword by Sir J M BARRIE reveals the rapid progress made by those concerned with promoting an organization which it is difficult to realize was founded so recently as 1931 This is much more than a directory of shelter-places for those engaged in exploring their own country and gaining at the same time physical health and new knowledge Maps and short descriptive articles and paragraphs indicate routes of exploration which will lead to places of historic interest or natural beauty, illustrated in some cases by photographs which are incentives to see the originals in the charm of their colour and setting Again an excellent lead is given to those in other parts of Great Britain who might well attempt to rival this publication, and so do something practical to help the young people of to day and to morrow to guard themselves against the threats to health and outlook which are imposed by the modern tendency to urbanization

[9] Published for the General Medical Council by Constable and Co Ltd 10 Orange Street W C 2

[10] *La Spirochétose Méningée* Par Jean Troisier and Yves Boquien Paris Masson et Cie 1933 (Pp 187 22 figures 34 fr)

[11] *Scottish Youth Hostels Handbook 1933* Edited by John Francey and Dr Alan Fothergill Edinburgh The Scottish Youth Hostels Association 1933 (Pp 126 maps 6d net.)

Preparations and Appliances

A METERING VALVE FOR GASES

Dr E ROLAND WILLIAMS (Clynderwen Wales) writes It is perhaps not generally known that the 'regulators' made by the British Oxygen Company for industrial uses serve as excellent reducing valves for anaesthetic purposes They are very strongly made and are fitted with a safety valve and pressure gauge Being 'mass produced' to meet a large industrial demand they are much cheaper, albeit a little heavier than the reducing valves especially manufactured and listed for anaesthetic purposes They are supplied in a form that fits on to the ordinary oxygen CO_2 or N_2O cylinders and can be set to deliver any of these gases at a practically uniform pressure of five pounds to the square inch until the cylinder is nearly empty After using two of these regulators for a considerable time in my general practice it occurred to me that since the delivery pressure was constant it would be possible to modify the outlet valve so that it would act not only as a fine-adjustment valve but also as a metering

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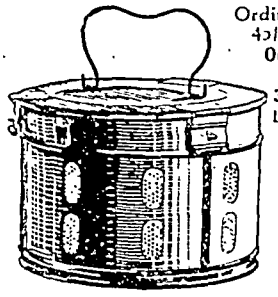

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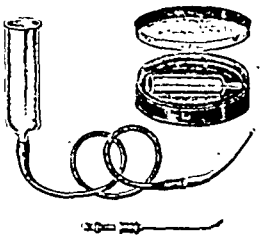

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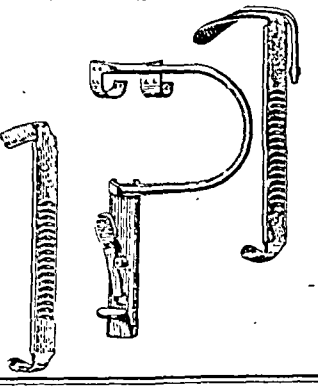

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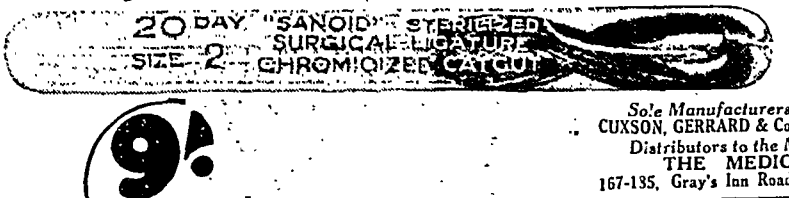

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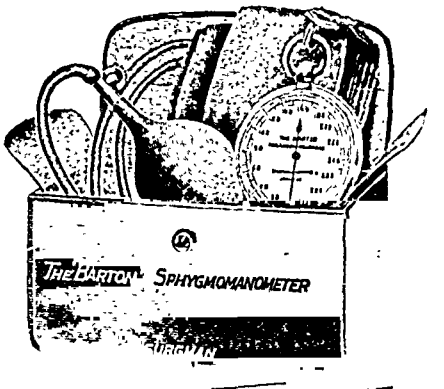


The Surgical Manufacturing Co., Ltd.,
83-85, MORTIMER STREET, LONDON, W.1.

BRITISH MADE THROUGHOUT.

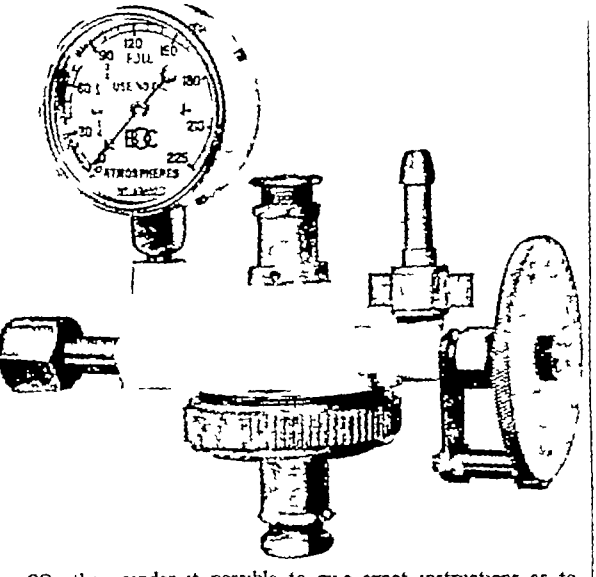
valve thus making it unnecessary to use a flowmeter when administering a mixture of oxygen with N_2O or with CO_2. I was able to contrive a tap on these lines and later as it had proved satisfactory in use I conveyed my suggestions to the British Oxygen Company. They kindly interested themselves in the matter and now their regulators can be obtained fitted with a metering type of outlet valve which gives effect to my suggestions.

This outlet valve is of the ordinary pin valve fine adjustment type but the disk wheel operating the spindle is calibrated so as to show the rate of flow in litres per minute. The range on one turn of the disk is from half a litre to forty litres per minute. The valve is also furnished with a spring and plunger ratchet giving a click for each division marked on the disk. This renders it unnecessary for the anæsthetist to look away from the patient when adjusting the flow. There is a simple arrangement whereby the valve can be reset periodically to allow for any back lash that may develop due to wear on the valve facing. The valves are coloured to match the cylinder colours of the gases with which they are meant to be used—white for oxygen black for N_2O and green for CO. The black or the green valves should not be used for oxygen. In the case of the oxygen valve it is essential that it be fitted with a pressure gauge so as to show how much gas there is in the cylinder a fresh cylinder being turned on when the pressure is down to about five atmospheres. In the case of the other gases the gauges do not in the same way register the exact contents of the cylinders but they are handy in that they give the anæsthetist some warning when to be ready to turn on fresh cylinders. (In the case of CO and N_2O cylinders the gauge needle does not begin to move towards zero until all the liquid CO or liquid N_2O has become vaporized in the cylinder.)

The uses to which these valves can be put are manifold.

1. Used with an oxygen cylinder in the ordinary way they provide a far better means of regulating the rate of flow than that afforded by holding up the end of the delivery tube to the ear and judging by the hiss of escaping gas.

2. When administering oxygen or a mixture of oxygen with



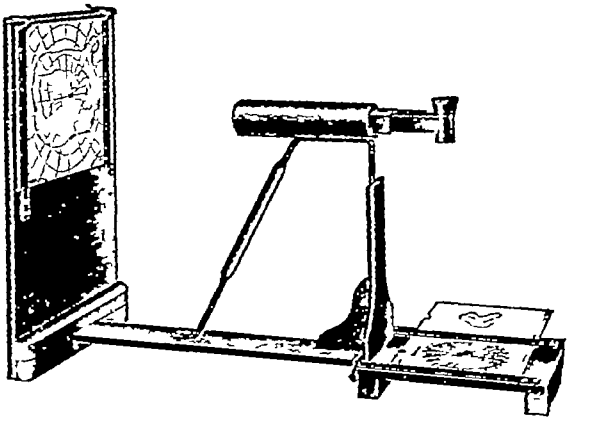
CO_2 they render it possible to give exact instructions as to dosage even to unskilled attendants—for example Turn the white valve to the ten mark and the green valve to the half mark and let the patient breathe the gases for so many minutes.

3. By fitting these valves any ordinary pattern of dental gas apparatus can be used for the administration of gas-and-oxygen one of the N_2O cylinders in the stand being replaced by an oxygen cylinder of dental pattern.

The valves can be obtained from the British Oxygen Company (Angel Road Upper Edmonton N 18) or from the Surgical Manufacturing Company (83-85 Mortimer Street W 1) for whose good offices I am also indebted in the matter.

A SCOTOMA PROTRACTOR

Mr JOHN FOSTER F.R.C.S. (ophthalmic surgeon Leeds General Infirmary) writes: Since Traquair and others have pointed out the value of comparative perimetry in glaucoma whereby one places on the same chart the outlines of a scotoma—a field taken with a small object at one or two metres and a field taken with a perimeter at 33 cm.—some workers in this field including myself have found it difficult to transfer the outline of a scotoma or field taken with a small object from a scotoma chart to the perimeter chart for



comparison. This difficulty is due to the much smaller scale of the perimeter chart and attempts at freehand drawing from one to the other always end in an extremely inaccurate representation both as to size and to shape. This is especially marked where the blind spot and a small nerve fibre bundle scotoma to take an example are so transferred.

The instrument which I have invented to get over this difficulty is a camera lucida with an erecting prism. A diminishing lens is introduced into the system so that its position can be moved to vary the relative amount of reduction required. The scotometer and perimeter charts are arranged on the instrument as shown in the illustration and having arranged the relative illumination of the two charts by placing the instrument in an appropriately lighted part of the room one can by looking through the eye piece of the instrument observe a proportionately reduced image of the scotoma superimposed over that of the perimeter chart. This can be outlined in a few seconds with the aid of a fine pointed pencil or pen the point of which is also visible simultaneously through the eye-piece. As the position of the diminishing lens can be varied any variety of perimeter and scotoma charts may be used together those shown in the illustration are of two different optical instrument makers.

The instrument is made by Rayner and Keeler Ltd. of 100 New Bond Street London W.

ERGOCHOLIN AND ANGIOLYSIN

We have received two preparations introduced by Dr. Joachim Wiernik and Co. Berlin and marketed by Messrs. Coates and Cooper of 94 Clerkenwell Road E.C.1. In each case the manufacturers refer to various favourable clinical reports which have appeared in German medical periodicals.

Ergocholin tablets each contain the choline derivative pacyl (8 mg.) and ergot alkaloids (0.5 mg.). This combination is intended for treatment of hyperthyroidism. Ergot alkaloids have been used extensively on the Continent for the treatment of this condition some authors have reported favourably on the results. The ergot alkaloids have a general depressant action on the sympathetic but they do not reduce the pulse rate in hyperthyroidism. Pacyl which has an acetylcholine-like action has been added for the purpose of causing reduction of the pulse rate.

Angiolysin tablets each contain 12 mg. adenosin phosphonic acid and 0.125 gram pyrrhodid dimethylaminophenyldimethyl pyrazolon rhodanide. Adenosin phosphonic acid has been shown to produce a dilator effect on the coronary arteries of animals. The makers state that pyrrhodid has a saturating effect on colloidal tissue which facilitates the access of adenosin phosphonic acid to the coronary vessels.

FEE-SPLITTING AND THE LAW

[FROM A LEGAL CORRESPONDENT]

At the end of his opening address to the General Medical Council on May 23rd the President, Sir Norman Walker, warned medical men that the practice of fee-splitting or dichotomy, was an offence against the law as well as against the good feeling of the profession, and that any conviction in the courts would inevitably bring the offender within the jurisdiction of the Council The present note deals solely with some legal aspects of a practice which is condemned by every right-thinking member of the medical profession The principle of law, as stated by Halsbury, is that an agent must not, without the knowledge of his principal acquire any profit or benefit from his agency other than that contemplated by the principal at the time of making the contract of agency The general practitioner who calls a specialist into consultation on a case is the patient's agent for that purpose, the terms of the contract of agency being that in return for the practitioner's skill' and experience in choosing a suitable specialist, and for his services in co-operation with the specialist and his trouble in arranging consultations, the patient pays him a fee either agreed beforehand or reasonable in the circumstances It is obviously most undesirable that the practitioner should receive or withhold a part of the fee from the specialist without the patient's knowledge, for such a practice would encourage a tendency among advisers to call in, not the best specialist for the purpose, but the man who would hand over to them the largest proportion of his fee

There seems to be no reason why the law should not deal with medical dichotomists in exactly the same way as it deals with commercial agents who receive secret commissions or bribes If this view is correct then a general practitioner who agrees to take part of the consultant s fee commits both a civil wrong against his patient and an offence against the criminal law It does not even matter whether he is influenced by the bribe to the prejudice of his patient s interest , he is guilty even if his patient does not suffer any harm When a commercial agent is found to have received a bribe he can claim no commission for the transaction, and becomes liable to pay to his principal not only the amount of the bribe but also interest at 5 per cent from the date when he received it He must also make good any loss his principal has sustained through his breach of duty In the same way a patient should be able to sue for the return of the fees he has paid to the general practitioner in respect of the specialist s services and also for that part of the specialist s fee which the general practitioner has wrongfully received He also has an action for any loss or injury he may have suffered through the transaction and this damage is measured, prima facie, by the amount of the bribe The specialist is, as a guilty party also liable for these damages and it seems probable that he would be liable to return the whole of his fee because the patient would not have employed him but for the bribe The patient may choose whether he will repudiate the whole contract, or stand by it and obtain such relief as the court may think fit to give him If he chooses to repudiate the contract presumably he has a right to have his whole fee back In any event as he is supposed to have suffered damage equal to the amount of the bribe he can apparently claim this amount from the specialist irrespective of what if anything, he has recovered from his usual medical attendant

Dichotomy as a criminal offence may be dealt with as a conspiracy to defraud or under the statute mentioned by Sir Norman Walker—the Prevention of Corruption Act, 1906 (6 Edward VII, 34) Under Section 1 of the Act it is a misdemeanour punishable with two years imprisonment, or a fine of £500, or both, for an agent corruptly to accept or obtain any consideration as an inducement to show favour to anyone in relation to his principal's business It is the same offence to agree to accept such a reward, or to attempt to obtain it or to give or offer it Conviction for this offence as for any other makes a practitioner liable to have his name erased from the *Medical Register* by the General Medical Council without further inquiry into the facts on which the conviction was based

AN EXHIBITION OF DOCTORS' HOBBIES

In connexion with the forthcoming Annual Meeting of the British Medical Association in Dublin an Historical and Hobbies Exhibition is being organized in Trinity College It will be open for inspection on Tuesday July 25th at 11 a m , and will remain open on July 26th, 27th, and 28th The following note addressed to members proposing to visit Dublin, has been supplied by Dr F S Bourke

OUTSIDE THE CONSULTING ROOM"

Everyone will agree with the truth of the saying All work and no play makes Jack a dull boy ' Perhaps to the medical profession more than any other the necessity for relaxation of some kind is nearly every day emphasized This may explain the fact that so many medical men have turned their attention to other than professional spheres after the exacting duties of the day The variety of their diversi hobbies which is the term usually applied to such *divertissement*, is quite easy to explain but it is no easy matter to obtain the consent of those concerned to exhibit the results of their labours or activities outside the consulting room as on this occasion we have the privilege to present We would stress at the outset that this exhibition does not pretend to be anything like complete Even with the time at our disposal it will be readily understood how impossible it was to get into touch with all the medical men and then to find out the individual hobbies Whether we have succeeded in our efforts remains to be seen We have, however endeavoured to appeal to every interest by the variety of the work shown which embraces art including pictures in oil and water colour etchings dry points charcoal, and pen and ink drawings by doctors examples from collections of mezzotints and old masters Next in favour would seem to be antiquities then fishing a more recent development of which appears to be big game fishing for which we foresee a great future here in Ireland, judging, at any rate from the fascinating account which one of its devotees gives of this exhilarating sport We are also showing examples of flies tied by some of the enthusiasts of fishing

How many of us can appreciate the primitive lighting systems in ancient Ireland? Here we are fortunate in having examples of the rushlight holders and candle moulds which are sure to arouse interest and which are now so scarce China collecting is represented by some magnificent pieces of Spode and we are fortunate in having at least one exhibitor who actually designs and makes pottery himself The philatelist is not forgotten and we can promise some rare items among those shown including examples of the early Dublin penny post In coins we are only showing those of Irish origin or use and here also is a representative collection For the bibliophile we have some specimens of the early presses calculated to appeal to the most fastidious book collector We are also showing some of the published work in prose and verse by doctors which has obtained universal praise Were we to continue we would merely make this an enlargement of our catalogue when our purpose is only to arouse the interest of our visitors to see a side of our life which under ordinary circumstances they could never see We would point out that many of the hobbies do not lend themselves to our purpose—for example many members of our profession have taken up stock breeding and farming

In conclusion we would ask you to look with a kindly eye on our efforts and to appreciate that in the majority of cases what you look upon was never intended for public view at all but merely as a relaxation outside the consulting room

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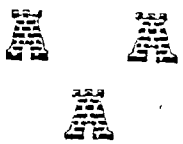

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British Medical Journal

SATURDAY, JUNE 24th, 1933

GASTRIC SECRETION IN ANAEMIA

It has long been known that in cases of pernicious anaemia a very severe defect in the gastric secretion is usually present Indeed many cases have been reported in which achlorhydria was observed long before the onset of the anaemia Not only is the defective gastric secretion shown by the ordinary test meals but there is a failure to secrete free hydrochloric acid after the injection of histamine As part of an investigation of the relation of gastric secretion to anaemia by a number of workers at Guy s Hospital the results of which were published in the January number of *Guy s Hospital Reports* Dr Hartfall[1] has demonstrated that in the great majority of cases of pernicious anaemia no free hydrochloric acid is secreted after histamine and the gastric juice obtained has on an average an extremely low total chloride concentration and very small quantities of pepsin Exceptions to this are rare but he quotes an example of pernicious anaemia with free acid in the gastric juice, and Dr Hurst records another associated with chronic obstruction of the ileum Castle and his co-workers have demonstrated the presence in normal gastric juice of a ferment-like principle with properties different from pepsin and rennin to which they have given the name of the *intrinsic factor* it acts on the proteins of the diet more especially the vitamin B complex or *extrinsic factor* to produce a substance which has a curative action in pernicious anaemia In typical cases of the disease the stomach secretes no intrinsic factor and according to Castle s theory the absence of this is the essential cause of the disease but its loss does not necessarily run parallel with the loss of other elements of gastric secretion such as free acid chloride or pepsin this provides a rational explanation for the rare cases of pernicious anaemia with little or no gastric secretory abnormality

In pernicious anaemia the normal red corpuscles tend to be replaced by cells which are larger (macrocytes) and which therefore each contain more haemoglobin so that the colour index is greater than normal But in 1909 Faber had already discovered that patients with achylia gastrica frequently suffered from a hypochromic anaemia in which the circulating red blood corpuscles were smaller thus bringing the colour index below unity A revival of interest in this group of cases has recently brought out many new facts The patients are usually women at child-bearing age who present a hypochromic anaemia running a chronic course without spontaneous remissions and without increased haemolysis There is usually a leucopenia and relative lymphocytosis A characteristic feature is atrophy and aphthous inflammation of the tongue and pharynx giving rise to dysphagia In addition there are trophic lesions of the skin the nails become rough and easily broken cracks appear on the fingers and at the angles of the mouth the teeth decay and the hair falls excessively The outstanding symptoms are tiredness and easy fatigue Diarrhoea is common and the gastric secretion is upset achylia gastrica is not constant however many cases showing only achlorhydria or considerable hypochlorhydria In a series of 137 cases investigated by Hartfall and Witts complete achlorhydria or extreme hypochlorhydria was present in 108 or nearly 80 per cent. In a considerable number of these cases the effect of histamine injection was noted and it was found that a true achlorhydria was present in a little over half of them The authors believe that the achlorhydria of simple achlorhydric anaemia is not the result of the anaemia but precedes it and predisposes to it The achlorhydria has been demonstrated before the onset of the anaemia The development of anaemias either of microcytic or of megalocytic type after operations on the stomach is one of the strongest reasons for believing in their gastrogenous origin The achlorhydria is usually a permanent phenomenon and persists when the anaemia is cured Moreover it is in many cases a hereditary abnormality and is thus not the result of the anaemia Possible aetiological factors in order of importance are heredity the action of haematogenous toxic agents on the stomach operative or other trauma to the stomach and gastritis from direct irritation of the stomach In a significant number of their cases the authors showed that the gastric secretion was deficient in total chlorides and contained no free hydrochloric acid and little or no pepsin—that is it was indistinguishable by ordinary tests from the gastric secretion in pernicious anaemia Nevertheless it is unusual for these women to develop pernicious anaemia

In an effort to confirm the presence of Castle s intrinsic factor in simple achlorhydric anaemia Hartfall and Witts[4] carried out experiments with gastric digests on four patients with pernicious anaemia The gastric secretion was obtained by histamine stimulation from normal men cases of pernicious anaemia and those of simple achlorhydric anaemia About 200 grams of lean beef steak were thoroughly mixed with the gastric juice obtained from the donor and after incubation were given to the recipient in whom daily observations of the blood were made an adequate reticulocyte crisis was taken as proof of the existence of the active principle in the juice under investigation In these experiments the authors confirmed the presence of the intrinsic factor of Castle in normal gastric juice and its absence in pernicious anaemia the juice obtained by histamine stimulation from women with simple achlorhydric anaemia contains variable amounts of the intrinsic factor of Castle and in some cases only a very small quantity was demonstrable They are not convinced that the present knowledge of the gastric secretion in pernicious and simple achlorhydric anaemia supplies a satisfactory explanation of their differences

[1] *Guy s Hospital Reports* January 1933 p 37
Ibid January 1933 p 47

[3] *Guy s Hospital Reports* January 1933 p 3
[4] Ibid January 1933 p 24

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Indeed, there is much experimental and clinical evidence that life and health may be maintained after extirpation of the whole stomach, and we may have to look elsewhere for the final solution of the pathology of these anaemias That the intestine may be the site of trouble in some of the macrocytic forms is evident in such conditions as sprue, and van Leeuwen[5] has shown that microcytic anaemias may be due to a malabsorption of iron owing to intestinal disease when the gastric secretion is normal There may not yet be evidence enough to justify the acceptance of these anaemias as a specific disease, but it is clear that a syndrome exists with the clinical picture above described, usually associated with achlorhydria and curable by sufficient doses of iron For the present they may be classified under the heading of idiopathic hypochromic anaemia,[6] until further work leads to better differentiation

ACADEMIC ASSISTANCE COUNCIL

In the *Journal* of June 3rd (p 974) we reported the formation by a number of British men and women eminent in the fields of scholarship and science of an Academic Assistance Council, having for its object the raising and administration of funds to enable foreign university teachers and investigators who are at present prevented from carrying on their researches in their own countries to do so, for a time, elsewhere We understand that the council has appointed an executive committee, of which Lord Rutherford is chairman, and that the committee has begun work on its Herculean task Our country may well be proud of her responses to the appeals of scholars who have found shelter on her soil More than three centuries ago the great humanist Isaac Casaubon found an asylum in England More than two centuries ago Abraham de Moivre sought shelter here and, in England, carried out researches which are the foundation not only of much pure mathematical science but also of modern systems of life assurance We have indeed succoured many men of genius, who repaid the debt in the only way honourable men could wish it to be repaid, by enlarging the bounds of knowledge That the Academic Assistance Council's appeal for support will find a ready response within our own profession is certain In these days of rapidly accumulating knowledge general culture, in the old-fashioned sense, may be on the wane , but there can be no doubt of the catholicity in intellectual achievement and interests of a profession which recently counted among its members Thomas Clifford Allbutt and Edward Granville Browne and is still fortunate enough to possess the president and an ex-president of the Royal Society We note with satisfaction that the Academic Assistance Council bases its appeal on the ground of intellectual obligation, of gratitude to those who have increased and will continue to increase the stock of human knowledge, and wholly abstains from any utterance which might be construed as an attack on individuals or institutions in foreign countries No useful purpose could be served by language tending to wound national susceptibilities already inflamed We also commend the prudence of the council in limiting the scope of its activities

" Of possible places of refuge in case of necessity," wrote Mark Pattison in his life of Casaubon, " there remained—England Had it been 200 years earlier nothing would have been more simple, than that a learned man, who was dissatisfied in Paris, should have migrated to Oxford, for a time, or for life But now it was different Neither North nor South Britain entered in the comity of nations, in such a way that natives of all countries indiscriminately circulated through our universities, either as students or professors as they had once done, and as they still did in the other parts of western Europe " The necessity for the final reservation in favour of countries other than England no longer exists The free circulation of learned men which characterized an age when learned men were few and used a common tongue is long past It would be idle to pretend that among the university teachers on the Continent who are suffering persecution for political or racial reasons there are not many who, while perfectly competent to perform creditably the duties of such posts, are not more competent to do so than equally large numbers of persons already filling or ambitious of filling similar posts in this country It would be equally unwise to make such a pretence with respect to members of other professions No humane man can read of professional colleagues losing their means of living through no fault of their own without pity and a strong desire to help Were England El Dorado we should all desire to offer hospitality to any liberally educated person suffering unmerited misfortune But England is not El Dorado , it is a sorely distressed industrial State, already carrying more than its share of the world's burden We are, however, still capable of working for the common good of mankind, still prepared to make sacrifices for those who *quasi cursores vitai lampada tradunt*

In the delicate and responsible task of identifying those who are indeed handing on the vital torches the Academic Assistance Council deserves and will receive the support of the whole medical profession But, for the sake of the torch-bearers themselves, no encouragement must be given, either here or abroad, to the hope that any, even temporary, migration to this country of more than small numbers of exceptionally gifted individuals is within the bounds of possibility As is pointed out in an editorial in *Nature* of June 17th " In teaching and research, competition for appointments at the moment is intense , and it would be neither fair nor practicable for a ' most-favoured nation clause ' to be extended to displaced German teachers and research workers It should be no matter for surprise that, while the appeal has been received with much sympathy, it has aroused misgiving, in view of the financial situation and the difficulty of finding appointments for

[5] *Klin Woch* May 6th 1933 p 698
[6] Wintrobe, M M , and Beebe R T *Medicine*, May, 1933, xii 187

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trained scientific men many with high qualifications from our own universities and places of higher education while among school teachers the position is equally if not more grave Obviously it would be far from politic and indeed unfair to the displaced teachers and research workers to offer them posts in a market which is already overstocked These and other difficulties are realized by those who are endeavouring to meet the situation in this country The moderation of the Academic Assistance Council's appeal both in its language and its scope must command the approval of all Even so limited the pecuniary requirements must be very large and we are sure that all will do their utmost to help an eminently worthy undertaking

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At the May session of the General Medical Council in 1904 a resolution was passed that the Lord President of the Privy Council be requested to introduce into Parliament a Bill to confer upon the General Medical Council statutory power to establish and maintain registers of medical and dental students and to impose a fee not exceeding £1 for registration therein In the following session the Lord President was further addressed by the Council and the request to introduce the Bill was withdrawn the reason given being opposition by certain licensing bodies The opposition came from the Royal College of Physicians of London and the Royal College of Surgeons of England and the grounds of opposition were that the proposed Bill would infringe the powers of the Colleges safeguarded in the Medical Acts of determining the conditions of admission to their professional qualifications Since that time the Council has maintained a students register on a voluntary basis and the medical schools have been invited to recommend all entering students to place their names upon it Had the statutory power been obtained the Council would have had direct control over the length of the course of medical study in each individual case and also over the conditions of enrolment as a medical student The latter would have given it powers to prescribe the courses of study and examinations to be taken before admission to the *Students Register* In spite of its possessing no such powers the Council has sought to exercise them by resolutions and recommendations and has required as a condition of enrolment on its voluntary *Students Register* the passing of one examination in general education and of another in physics and chemistry it has prescribed the subjects and type of examination in each case and brought pressure to bear upon any medical school where the entrance examinations did not conform to its prescriptions Much confusion has arisen as the result of this action and the arrangements which have been made by the medical schools with a view to conforming to the letter of the Council's resolutions have been various Several factors have contributed to this confusion but these need not now be enumerated At the present time there are medical schools which do not hold any preregistration examination in chemistry and physics but teach them within the five years course there are schools which require an entrance examination in these subjects but no further study of them by their students there are schools which hold a pre-registration examination based on one term's work and there are others which maintaining that the student should be taught physics and chemistry within the medical school itself have added a year to the curriculum and occupy this year with instruction in these two subjects and biology This state of affairs is unsatisfactory and has arisen out of the unusual course taken by the Council in seeking to impose on the medical schools and their students requirements which it has no statutory right to enforce There appear to be but two ways in which it can be ended either by the General Medical Council's obtaining powers to regulate preliminary studies and examinations or by its ceasing to exercise a control the right to which is not conferred upon it by the Medical Acts so leaving the regulation of admission examinations to the medical schools themselves

SO CALLED IDIOPATHIC HYPERTROPHY OF THE HEART

A contribution by Howland to the Osler Memorial Volumes [1] on idiopathic hypertrophy of the heart in young children served to make the existence of this condition more widely known and cases have since been described from many centres In a recent article M A Kugel and E G Stoloff [2] claim to review all the reported cases of the condition with complete clinical *x*-ray and pathological studies of seven additional patients of their own making in all fifty-nine cases The clinical picture is that of a young child usually in the first or second year of life who either dies suddenly with or without signs of acute heart failure or with a more insidious onset becomes fretful has attacks of syncope with cyanosis or of sudden dyspnoea and dies in an attack Fever is absent the pulse is rapid and physical examination usually reveals a very large heart confirmed on *x*-ray examination Another feature is lack of signs or history of congenital malformation of the heart rheumatic fever diphtheria or other known infection The child has generally been perfectly well until the sudden manifestation of the disorder The earlier reports stressed the fact that microscopical examination of the myocardium showed only simple hypertrophy of the muscle bundles More systematic examination—especially by standardized sections including all the valves left and right auricles left and right ventricles the intraventricular septum and the papillary muscle—indicates that other changes are frequently present such as degenerative lesions fibrosis and lymphocytic infiltrations The present authors therefore regard pure idiopathic hypertrophy of the heart as a very rare condition and they classify the existing cases as follows a group of true congenital idiopathic hypertrophy of the heart in which no aetiological factor was discovered and a thorough histological examination demonstrated a pure hypertrophy with no demonstrable pathological lesions (seventeen cases) a secondary form of hypertrophy in which histological examination showed myocardial damage (this included certain cases with anaemia congenital anomalies intrapulmonary disease or primary vascular disease—twenty seven cases in the literature and the

[1] *Contributions to Medical and Biological Research* New York Paul B Hoeber 1919

[2] *Amer Journ Dis Child* April 1933 xlv 828

seven here reported), and a third group (eight cases), in which a complete examination was not reported, and hence no definite classification could be made The aetiological factors are obscure, and on the whole the evidence, in the genuine cases, is in favour of a true "germ-plasm" defect, since a familial incidence has been recorded by some authors, and in a particular group in which two brothers married two sisters, being first cousins as well, there was a definite case in a child of one pair and four likely cases in four children of the other pair Other theories include one which links the heart condition with an enlarged thymus, but, as the present authors point out, in the sudden death which is common among these cases a normal degree of lymphoid tissue is often found Hypertension, either in the mother or the affected child, can generally be ruled out, while in some cases infection may play a part, especially whooping-cough This is most likely to be true in the second group of cases, in which pathological lesions are present in the myocardium Drs Kugel and Stoloff are inclined to think that a more careful study will demonstrate such lesions in nearly all cases, and that the true so-called idiopathic hypertrophy of the heart in infancy will probably disappear as a clinical entity if the rigid standards they lay down are accepted Their claim to have collected all the cases in the literature—always a dangerous claim to make—can be disputed by the citation of a case not mentioned by them and exhibited at the Section for the Study of Disease in Children of the Royal Society of Medicine in October, 1929, by Dr Alan Moncrieff [1] In this instance a baby of 1 year had recurrent attacks of unexplained dyspnoea and cyanosis, in one of which she died Clinical examination had shown a very large heart, and histological examination revealed an apparently pure hypertrophy of the cardiac muscle

THE TEETH IN FORENSIC MEDICINE

That individual differences in the human subject may be recognized as easily by dental examination as by a study of, say, the physiognomy seems not unreasonable Forensic medicine already has anthropometry and dactylography to assist it in the more difficult problems of identification, but Mr B H Humble, who makes an extremely interesting contribution to the literature,[2] shows that greater use might be made of dental evidence in this respect If he is right—and there seems good reason in favour of this—the criminal of the future must expect a life full of shocks, while we may anticipate a rapid diminution in the number of unidentified bodies Among historical examples where the teeth have been instrumental in settling identity Mr Humble quotes the case of Charles the Bold, whose body was found on the field of Nancy in 1477, the famous Parkman and Webster case in 1849, in which a murderer's guilt was established by the recognition of a platinum and gold denture among the clinkers of a laboratory furnace, the occasion, in 1879, on which the mutilated body of the French Prince Imperial was identified by means of filled molar teeth, and the touching story of how a Chilean dentist saved his country from possible war when, in 1908, he established the fact that the consul of an important European power had not, after all, been murdered! More recently, an impostor masquerading as a Grand Duchess was convicted on data supplied by a plaster cast of the jaws, while M Lowenstein, whose body was recovered from the English Channel in 1928, was not recognized positively until dental evidence had been brought forward Passing from a consideration of marks left by the teeth on food, the author recalls how, in the Düsseldorf murder case, the impression of a complete front dentition found on the skin of the victim finally led to the identification of the murderer In a second case, in which toothmarks were found on the forearm of a murdered man, the prosecution was unsuccessful—despite close correspondence between a plaster cast of the defendant's teeth and the marks—owing to post-mortem changes which had taken place in the skin In yet another German case, however, photographs of the toothmarks in the victim's skin were taken immediately, and before there was any time for contraction to cause change in shape By this means Dr Sorup was able to incriminate one of two suspects by using plaster casts, from which marks were made on paper and compared with the photograph of the original toothmarks Mr Humble describes his modification of Sorup's method He suggests that there will, sooner or later, be a much larger number of insured persons coming under dental benefit—in Britain the present figure is estimated at about 1,000,000 When more people have dental treatment there will be a greater number of records of the teeth, and dentists will be able to narrow the field of identification There are many morphological characteristics in each tooth, and these, with the possible addition of fillings, inlays, crowns, partial dentures, or absence of one or more teeth, will be of considerable assistance in this direction Mr Humble urges that, where a body is unidentified a full description should be published, and a dental surgeon called in to make a careful examination of teeth and jaws His description could then be circulated in the dental journals, with the hope of bringing the necessary dental identification to bear on the problem This method has already been in use in Germany, and there seems no reason why it should not be employed here

ACCIDENT PRONENESS

In a report of the Industrial Health Research Board on "Tests for Accident Proneness" [1] Messrs E Farmer E G Chambers, and F J Kirk describe a further instalment of their systematic study on the part played by individual susceptibility in accident causation It has long been known that certain individuals are much more liable than others to incur accidents in the course of their daily work, and it is evident that if such individuals could be weeded out and transferred to other occupations where they had less chance of incurring accidents the average accident rate of the whole community would be reduced The difficult problem is to identify these accident-prone persons, and so be enabled to transfer them before they have had much opportunity of exhibiting their susceptibility It is not easy to find suitable groups of subjects for examination, for it is desirable that those selected should be kept under observation for several years in order to increase the

[1] *Proc Roy Soc Med* 1929 xxiii Part I 110
Brit Dental Journ May 15th 1933

[1] Medical Research Council Industrial Health Research Board Report No 68 Tests for Accident Proneness By E Farmer E G Chambers and F J Kirk London H M Stationery Office 1933 (6d net)

BETHLEM ROYAL HOSPITAL, for Nervous and Mental Disorders,

Monks Orchard, Monks Orchard Road, Eden Park, Beckenham, Kent.

Reg. Tel. Address: Bethlem, Beckenham. *Telephone*: Springpark 1180-1181

Station: Eden Park (Southern Railway).

President: LORD WAKEFIELD OF HYTHE, C.B.E., LL.D.
Treasurer: SIR LIONEL FAUDEL-PHILLIPS, Bart.
Physician-Supt.: J. G. PORTER-PHILLIPS, M.D., F.R.C.P.

This Registered Hospital is now situated at Monks Orchard, in some 250 acres of park, pleasure, and farm grounds.
Applications can be considered on behalf of patients of the educated classes in a presumably curable condition.
With a view to early treatment voluntary or uncertified patients are admitted.
Patients who can contribute 5 guineas weekly towards the cost of treatment and maintenance may be received as vacancies arise. The Committee will also consider applications for admission at lower rates, and in certain cases will be prepared to admit patients free of charge.
Every facility for specialized investigation and treatment is provided in the Lord Wakefield Science and Treatment Unit. In this unit is found the X-ray and Dental Departments and the Bio-Chemical, Pathological, and Psychological Laboratories.
Furthermore, provision is made for Electro-Therapy and Hydro-Therapy to be carried out in all their forms, and Occupational Therapy under competent instruction is encouraged.
In addition to the Resident Medical Staff, Consultants in special branches of Medicine and Surgery are available whenever required.
The comfort of sensitive patients is greatly enhanced by the fact that the majority are given single bedrooms.
For forms and further particulars apply to the Physician-Superintendent at the Hospital.

THE OLD MANOR SALISBURY

A Private Hospital for the Care and Treatment of those of both sexes suffering from MENTAL DISORDERS.

Extensive grounds. Detached Villas. Chapel. Garden and dairy produce from own farm. Terms very moderate.

CONVALESCENT HOME at BOURNEMOUTH.

Detached Villas standing in 12 acres of ornamental grounds, with tennis courts, etc., which Voluntary, Temporary or Certified Patients may visit, by arrangement, for long or short periods.

Illustrated Brochure on application to the Medical Superintendent, The Old Manor, Salisbury. Telephone 51.

PECKHAM HOUSE, 112, Peckham Road, London, S.E.15.

Telegrams: "Alleviated, London." Telephone: Rodney 4741-4742.

The above House, which was established in 1826, is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders. Certified voluntary and temporary patients are received. Separate houses for treatment and accommodation of special cases adjoin the Institution. There is a seaside branch, Kearsney Court, near Dover, to which patients may be sent for treatment or on holiday. Motor and carriage exercise is provided as required. Patients can avail themselves of a course of physical drill. Tennis Courts. Entertainments, dances, and indoor amusements held throughout the year. Terms from £3 3s. per week.
Illustrated prospectus and further particulars can be obtained from the **Medical Superintendent.**

NORTHUMBERLAND HOUSE,

GREEN LANES, FINSBURY PARK, N.4.

Telegrams: "SUBSIDIARY, LONDON." *Telephone*: NORTH 0888.

A PRIVATE HOME for the treatment of patients of both sexes suffering from Mental Illnesses.
Conveniently situated four miles from Charing Cross. Easy access from all parts. Six acres of ground highly situated, facing Finsbury Park. Private Suites. Voluntary Patients and Temporary Patients received without certification.

Convalescent Home, **Kearsney Court, Dover.** For further particulars, apply to the **Medical Superintendent.**

CAMBERWELL HOUSE, 33, Peckham Road, London, S.E.5.

Telegrams: "PSYCHOLIA, LONDON." **FOR THE TREATMENT OF MENTAL DISORDERS.** *Telephone*: RODNEY 4731—4732.

Also completely detached Villas for mild cases, with private suites if desired. Voluntary Patients received. Twenty acres of grounds. Hard and Grass Tennis Courts, Putting Greens, Bowls, Croquet, Squash Rackets, and all indoor amusements, including Wireless and other Concerts. Occupational Therapy, Callisthenics, and Dancing Classes, X-ray and Actino-therapy, Prolonged Immersion Baths, Operating Theatre, Pathological Laboratory, Dental Surgery, and Ophthalmic Dept. Chapel. Senior Physician: Dr. HUBERT JAMES NORMAN, assisted by three Medical Officers, also resident and visiting Consultants.
An illustrated Prospectus, giving fees which are strictly moderate, may be obtained upon application to the Secretary.
The Convalescent Branch is HOVE VILLA, BRIGHTON, and is 200 feet above sea-level.

CHEADLE ROYAL MENTAL HOSPITAL,

CHEADLE, CHESHIRE.

This REGISTERED HOSPITAL, with a SEASIDE BRANCH at Colwyn Bay, N. Wales, is for the treatment and care of those of the Upper and Middle Classes suffering from MENTAL and NERVOUS DISEASES.
The Hospital is governed by a COMMITTEE, appointed by the TRUSTEES of the Manchester Royal Infirmary.
In addition to the Main Building there are separate villas. Extensive grounds. Hard and grass tennis courts, cricket and croquet grounds, and a court for badminton. There are also wireless installations. Golf may be had within easy distance. Occupational Therapy.
VOLUNTARY, TEMPORARY, AND CERTIFIED PATIENTS received.
The Hospital is nine miles from Manchester, 50 minutes by rail from Liverpool, and 3½ hours from London.
For terms and further particulars apply to the Medical Superintendent, J. A. C. ROY, M.B., who may be seen in Manchester by APPOINTMENT.
Telephone: GATLEY 2231 (3 lines).

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Established 1903 for Treatment of Pulmonary and other forms of Tuberculosis. Sheltered Situation on the slopes of the bracing moorland. Radiographic Installation. Electric Light. Central Heating. Separate Bedrooms. Efficient Treatment combined with individual comfort and minimum restrictions. Illustrated Prospectus on request to the Resident Physician: C. H. BERRY, M.R.C.S., L.R.C.P., Torr House, Chagford, Devonshire. *Telephone*: 11 CHAGFORD. *Telegrams*: TORR, CHAGFORD.

GREAT BRITAIN'S GREATEST HYDRO

Unrivalled suites of Baths for Ladies and Gentlemen, including Turkish and Russian Baths, Aix and Vichy Douches, Massage and Plombières Treatment, and Electric Installation for Baths and other Medical Purposes, Dowsing Radiant Heat, D'Arsonval High Frequency, Diathermy, Nauheim Baths, for Invalids. "Certified" Milk from our farm of 300 acres. Large Winter Garden. Soapless Foam Baths, etc. Special provision Night Attendance. Rooms well ventilated and all bedrooms warmed in Winter. A large Staff (upwards of 60) of trained Male and Female Nurses, Masseurs, & Attendants. *Resident Physicians*: G. C. R. HARBINSON, M.B., B.Ch., B.A.O., (R.U.I.); R. MACLELLAND, M.D., C.M.(Ed.).

SMEDLEY'S—MATLOCK

'Grams: "Smedley's Matlock." 'Phone: No. 17.
For prospectus and full information please write MANAGER, M.J.

CALDECOTE HALL

Nr. NUNEATON, WARWICKSHIRE.

'Phone: NUNEATON 241.

Particulars may also be had from the Secretary, 40, Marsham Street, London, S.W.1.

ALCOHOLISM, NEURASTHENIA, Etc.
(For Men)

At this beautifully situated country mansion in Warwickshire (2 hrs. from London on L.M.S.R.), the residential treatment of Alcoholism, Neurasthenia, Insomnia, and Nervous breakdown is carried out on the most modern principles under the supervision of the Res. Med. Supt. Recreation and graduated occupational therapy are available in the extensive secluded grounds. Prospectus from A. E. CARVER, M.D., D.P.M., Resident Medical Superintendent.

ALCOHOLISM, DRUG HABIT, NEURASTHENIA, etc.

BAY MOUNT, PAIGNTON.

ESTABLISHED 1922. *Phone*: PAIGNTON 5110.

A comfortable private HOME, charmingly situated overlooking Torbay, near Torquay. Main line 3½ hours from Paddington. Both Ladies and Gentlemen admitted as voluntary patients. The treatment is the outcome of many years experience, and besides removing all craving for drink and drugs, it has a tonic action on the system, and the general health is improved. Alcohol and drugs reduced gradually.

FUNCTIONAL NERVOUS DISEASES . . . . . are also treated with excellent results. Cases with insomnia, depressi , well.

Exceptionally good climate and ample and varied amusement. Moderate, inclusive terms. Prospectus, etc., from STANFORD PARK, M.B., Ch.B., Res. Med. Supt., Bay Mount, Paignton.

ALCOHOLISM & DRUG HABIT

DALRYMPLE HOUSE, RICKMANSWORTH, HERTS.

For the treatment of GENTLEMEN. Estab. 1883 by an Association of prominent medical men and others for the study and treatment of alcohol and drug abuse. Large secluded grounds on the bank of the River Colne. Voluntary Patients can be received under the Inebriates Act. Full-sized billiards, tennis, croquet, bowls. Golf (Moor Park, Sandy Lodge) close by. For parties, apply to—F. S. D. HOGG, M.R.C.S., &c., Resident Med. Supt. Telephone: 16 RICKMANSWORTH.

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Specially built and licensed for the care and treatment of a limited number of Ladies and Gentlemen suffering from Nervous and Mental breakdown. Voluntary and certified patients received. Ladies also admitted as "Temporary Patients" without certification. Terms moderate. Apply, RESIDENT PHYSICIAN. Tel.: No. 8 Formby.

ALCOHOLISM & OTHER DRUG HABITS.

THE HARE NURSING HOME.

As founded and established by the late Dr. FRANCIS HARE, for 20 years Med. Supt. of the Norwood Sanatorium, and author of "Alcoholism," etc.; for the treatment of ALCOHOLISM, other Drug Habits, Insomnia, Neurasthenia, Functional Nervous Disorders.

"THE OLD HILL HOUSE," CHISLEHURST, KENT.

Fees 5—10 guineas. Ample amusements. 25 bedrooms. Annexe for mild cases. Quiet and pleasant situation.

Ladies and gentlemen admitted for treatment. For prospectus, etc., write or 'phone: WALTER E. MASTERS, M.D., M.R.C.S., D.P.H., Barrister-at-Law (Res. Med. Supt.), Author of "The Alcohol Habit."

'Phone: Chislehurst 451. *Telegrams*: "Masters." Chislehurst.

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A PRIVATE MENTAL HOME situated in 14 acres of well-wooded grounds. For Ladies and Gentlemen suffering from Nervous or Mental Illness. Voluntary Patients, Temporary Patients, and Patients under Certificates are admitted for Treatment. Fees: from 4 guineas a week upwards, according to requirements. A few vacancies exist for Ladies and Gentlemen at reduced fees on the recommendation of the Patient's own Physician. Apply to Medical Superintendent Telephone: 80 Norwich.

DOCTOR, WITH LARGE HOUSE IN MOST beautiful part of Kent, willing to take in PATIENTS suffering from "Nerves."—Address, No 2301, B.M.A. House, Tavistock Sq., W.C.1.

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A well-appointed PRIVATE HOME for the dietetic treatment of

DISSEMINATED SCLEROSIS, PERNICIOUS ANAEMIA, & DIABETES MELLITUS.

Apply to Medical Officer, The Croft, WHALLEY, LANCS.

HOME FOR EPILEPTICS,

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Chairman: Brig.-Gen. G. Ryllin-Taylor, C.B.E., V.D., D.L.

FARMING and OPEN-AIR OCCUPATION for PATIENTS.
A few vacancies in 1st and 2nd Class Houses.

FEES: 1st Class (men only) from £3 p.w. upwards. 2nd Class (men and women) 32/- p.w.

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A PRIVATE HOSPITAL for the care and treatment of persons with mental and nervous disorders.

Voluntary Patients received in the Villas. Large Mansion on outskirts of Bath, with 20 acres of grounds (see *Medical Directory*, page 2306.)

For terms apply S. J. GILFILLAN, O.B.E., M.B., C.M.Edin., Resident Physician.
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In the winter garden of Scotland, [illegible] feet up. Tonic air, beauty in every [illegible] tered balconies. Dancing, winter garden, [illegible] bath, tennis, badminton, golf, fishing. Fully [illegible] Modern baths installation. Physio-therapeutics [illegible] sage, electrical treatment, ultra-violet radiant [illegible] Physician in attendance. Write for prospectus.

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with Vita-glass Sun-lounge and Marine Balcony.

Pyretic and
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Every kind of Massage. Ultra-violet Light.
Every kind of Electricity. Diathermy.
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High Frequency. Electric Lift.
Prospectus from Secretary. *Tele.* 341.
Resident Physicians: { W. JOHNSTON SMYTH, M.D. L. T. ROSE-HUTCHINSON, M.D.

THE GRANGE,

near ROTHERHAM.

A HOUSE Licensed for the reception of a limited number of Ladies suffering from Nervous and Mental disorders. Both certified and voluntary patients received. Approved for temporary Patients. This is a large country house, with beautiful grounds and park, five miles from Sheffield. Station: Grange Lane, L. & N.E. Rly. Sheffield. Tel.: No. 40030 Ecclesfield. Res. Phys.: GILBERT E. MOULD, L.R.C.P., M.R.C.S.

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TAMWORTH, STAFFS.

Established 1816. For the TREATMENT of a few LADIES suffering from NERVOUS and MENTAL DISORDERS. Voluntary patients received. For terms apply to the Resident Medical Attendant. Telephone: Tamworth 16

CLARENCE LODGE,

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Situated in 3½ acres of secluded garden.

HOME FOR TWELVE MENTAL PATIENTS (LADIES).

Well-appointed private house. Home comforts and Trained Nursing Staff. Eminent Medical Specialist Visiting Physician.

Station: Clapham Common Tube. *Telephone*: Tulse Hill 4213. Apply, Miss TIWANA.

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Ladies and Gentlemen received for treatment under certificates, and without certificate, as either VOLUNTARY or TEMPORARY PATIENTS, at a weekly fee of TWO GUINEAS and upwards.

Patients of both sexes with any *disorder* to which PSYCHOTHERAPY is applicable are received for treatment at ELMSLEIGH, BASSETT, SOUTHAMPTON. *Domestic* arrangements well ordered and surroundings pleasant. Terms and particulars from T. A. HAWKESWORTH, M.B.

Tel. and Telegrams: "Haynes, Brentwood, 40."

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Bishopstone House, Bedford.

PRIVATE HOME FOR MENTALLY AFFLICTED LADIES. Ten only received. Apply, Medical Officer or Mrs. PEELE. *Telephone*: 270.

Doctor's widow in North London

having large house, garden, car, [illegible] would like some PAYING GUESTS. Furnished bungalow at the Sea. *Terms* moderate. Address, No. 371, B.M.A. House, Tavistock Square, W.C.1.

reliability of the results obtained The investigators were fortunate in obtaining permission to test all the apprentices entering the naval dockyard at Portsmouth and they obtained statistics relating to groups of 101 shipwrights and 150 fitters for a five year period They also tested 163 naval artificers for a three year period The subjects were given certain sensorimotor tests (reaction time dotting pursuit meter) which previous investigations had shown to be suitable and on comparing their test performances with their accident rate it was found that one group the shipwrights showed a fairly high correlation between the two variables They showed it steadily throughout the test period and as they incurred accidents about three times more frequently than the other groups of youths tested the results were of special interest They were indeed of some direct practical interest for it was calculated that if the small number (amounting to 12 per cent of the whole group) of shipwrights who incurred two or more accidents in their first year had been rejected the remainder incurred 13 per cent less accidents in subsequent years than those actually observed in the whole group If however the shipwrights were divided into four equal fractions according to their performance of the sensorimotor tests and the fraction who did worst were rejected the remainder were found to incur 20 per cent less accidents than those observed If a more stringent selection were adopted and only the fraction who did best at the tests were retained they were found to incur 39 per cent less accidents than those observed in the whole group The investigators point out that they have no evidence that the particular tests employed are the best for the purpose In course of time other tests may be evolved which give much more striking results than those already attained It appeared that intelligence tests were of no value for the elimination of accident prone individuals in the particular occupations studied This might have been expected for the accidents sustained were mostly cuts and bruises caused by the faulty manipulation of tools but it is obvious that in some occupations intelligence tests must be of value

THE UNIVERSITY OF LONDON

The work of excavation on the Bloomsbury site for the new buildings of the University of London has been actively proceeding (at the southern end of the site nearest the British Museum) since the end of last year and matters have advanced sufficiently to enable the foundation stone to be laid by the King on Monday next June 26th In the report by the Principal of the University on its work during the year 1932–3 reference is made to the handsome gift of the Corporation of the City of London of £100 000 towards the cost of the new ceremonial hall This gift has been followed by other splendid benefactions towards the same purpose from a number of the City Companies including the Apothecaries Society the amount totalling to over £166 000 The further identification of these famous guilds with the university is regarded with very much gratification The same report recounts other gifts not connected with the Bloomsbury site One of these is a generous gift by Lord Riddell to enable the Royal Free Hospital to complete a wing of the hospital building thus providing more clinical facilities which will indirectly benefit the work of the hospital school The Chair of Public Health tenable at the London School of Hygiene and Tropical Medicine has been endowed by the Prudential Assurance Company for a period of seven years and is to be known as the Prudential Chair of Public Health The School has also received £2 000 to establish a fund for the advancement of study and research in entomology as a memorial to the first Lord Aveburv a former vice-chancellor of the university Mr S A Courtauld has added to his munificent gifts to the Middlesex Hospital Medical School a further sum of £20 000 towards the endowment of the Biochemical Institute Another gift of £48 000 has been made by the Rockefeller Foundation for the endowment in connexion with University College Hospital and Medical School of a post the holder of which will devote his whole energies to the advancement of clinical research In dealing with the organization of teaching the Principal mentions the institution of a new academic diploma in medical radiology also the institution of readerships in pathological chemistry at the Cancer Hospital and in experimental pathology at the Lister Institute The Court of the University has made grants of £10 000 to King's College Hospital Medical School and to St Mary's Hospital Medical School in both cases towards the cost of new buildings which are approaching completion

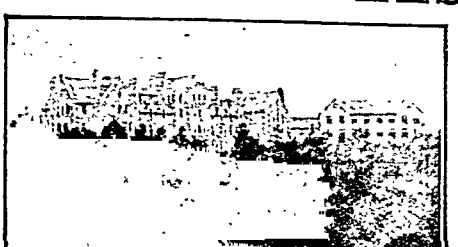
EPSOM COLLEGE

Now that the voting system has been abolished the beneficiaries of the Royal Medical Foundation of Epsom College are elected by a conjoint committee consisting of twenty governors ten being members of the council and ten non-members of the council This committee met on June 14th to elect (*a*) eleven foundation scholars who will receive education board clothing maintenance and pocket-money free of all cost whatsoever and (*b*) two ordinary pensioners who will receive £40 a year namely £30 from the general funds of the college and £10 from a special fund There were no fewer than twenty-four candidates for the eleven vacant scholarships and forty-six candidates for the two vacant pensionerships The result of this election will be found in our advertisement pages to-day In view of the large number of candidates who cannot stand again owing to age the council has decided to maintain fifty-four foundation scholars instead of the usual number of 50 This will cost the foundation in 1933 an extra sum of £600 which means that contributions totalling some £10 600 must be collected in subscriptions and donations—a task by no means easy in these days

HARVEY MEMORIAL TOWER

The rebuilding of the Hempstead Church Tower (William Harvey Memorial) has been commenced and the foundation stone will be laid by Lord Davison of Penn on Friday July 7th at 3 30 p m Any member of the medical profession will be welcome Those desirous of attending should notify the Rev T P Convers Barker the Vicarage Hempstead Saffron Walden Essex Arrangements will be made for those who desire to travel by coach from London provided notice is given to Mr Barker by July 3rd There will be tea at the vicarage after the ceremony With the funds in hand only the first section of the work can be completed but it is hoped that further donations will be forthcoming They should be sent to Dr Arnold W Stott 58 Harley Street W 1

TOR-NA-DEE SANATORIUM
MURTLE DEESIDE ABERDEENSHIRE



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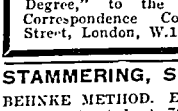

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NEW ZOOLOGY DEPARTMENT AT UNIVERSITY COLLEGE

The Earl of Athlone, Chancellor of the University of London who was accompanied by Princess Alice, opened the new building for the Department of Zoology and Comparative Anatomy at University College on June 12th The department in its new home embodies one of the most important developments of the college in recent years Eighteen months ago the college acquired a site to the south of the great building which houses the departments of anatomy and embryology, physiology and biochemistry, and pharmacology The site contained a range of buildings surrounding the courtyard (which is to be known as Foster Court, in memory of the first provost of the college, the late Sir Gregory Foster), and the building on one side of this courtyard has been adapted for the new department It consists mainly of three floors, with some rooms on a fourth, and includes a theatre (named after Ray Lankester), classrooms research rooms, workrooms, and teaching laboratories, a museum and preparation room, and accommodation for living material in the shape of a large aquarium, a series of constant temperature rooms and an animal house for the maintenance of small animals for the use of geneticists The whole building is severely utilitarian, except for a beautiful seventeenth century gateway, possibly designed by Wren, removed from the hall of the Pewterers' Company, and re-erected here, where, amidst plane-trees, it offers one of the pleasantest views in the college precincts

SIR JOHN ROSE BRADFORD chairman of the college committee who presided over the brief function said that a department of zoology was established at University College in 1828 very shortly after the college itself was founded It had had some half dozen professors but he made no apology for mentioning one outstanding name that of Edwin Ray Lankester who was appointed to the chair of zoology in 1874 The department under his inspiration became a centre of extraordinary activity where researches were carried on in many fields and the personality of its professor attracted men of ability so that presently a large proportion of the chairs of zoology in the Empire came to be filled from University College It was just fifty years said Sir John Rose Bradford since he became Lankester's demonstrator and there were few men for whom he retained so great an affection He was a strong personality caustic of speech and unable to suffer fools gladly but remarkable for his enthusiasm for genuine scientific work and especially for the generosity with which he acclaimed the work of colleagues With him he linked another great name of the same period at University College that of Burdon Sanderson, who was professor of practical physiology and Jodrell professor of human physiology In appearance no two men could have been more unlike than Lankester and Burdon Sanderson But they had this in common that they both sought the larger view in all their work, and did their best to inculcate general principles which up to their time had never been recognized

THE EARL OF ATHLONE paid a tribute first of all to Sir Gregory Foster a tablet to whom he had just unveiled He said that Sir Gregory was one of those who had realized the new fields which were opening up to zoology and the evident influence of this science upon human thought in general and the practical problems of the modern world He induced the college to set itself to the task of providing new laboratories for adequate study with fresh equipment and an enlarged staff The Chancellor went on to acknowledge the great financial assistance which had been furnished from two quarters The cost of the site building and equipment of the new department had been as to by far the larger part defrayed by a grant of £30 000 made by the university court out of the capital grant of £150 000 by the London County Council for the quinquennium 1931–5 For the endowment and upkeep of the new work the college had received a benefaction on specially generous conditions of £88 000 from the Rockefeller Foundation

Professor D M S WATSON the Jodrell professor in expressing to the Chancellor the thanks of those assembled said that those concerned for the progress of the college had realized in particular the necessity of providing staff and laboratories for the study of genetics comparative physiology and animal behaviour so as to ensure an adequate training for students in zoology Animals must be studied as live things not in the restricted sense of the older zoology but in their more interesting and vital aspect from the point of view of human relations Such far reaching studies would have been impossible in the old home of the department but now in the new building—formerly as to its ground floor a set of stables and as to its upper floors carpenters' workshops—it had a habitation admirably adapted to its purpose With regard to the staff the services of Mr J B S Haldane as professor of genetics had been obtained His great knowledge of biochemistry would enable him to introduce into genetics those physiological conceptions which alone could lead to an understanding of hereditary transmission of structure Provision had also been made for the establishment of a professorship in comparative physiology The staff and equipment bade fair to be as complete as any zoologist could desire

THE LISTER INSTITUTE

A COMPREHENSIVE YEAR'S WORK

A wide range of subjects is dealt with in the thirty ninth annual report of the Lister Institute of Preventive Medicine, which was presented by the governing body at the annual general meeting During the past year virus studies have, as usual, occupied a large amount of attention

VACCINIA AND VARIOLA

It now seems well established that the elementary bodies in vaccinia lesions represent the actual virus agents Dr C R Amies has found that while pure suspensions of the elementary bodies of vaccinia were readily agglutinated by antivaccinial serum from man, monkey, and rabbit, the serum of patients convalescent from small pox failed to give any uniform agglutination The next step was to obtain a suspension of variola elementary bodies This was done by inoculating monkeys with two different strains of human variola virus—a virulent one obtained from Calcutta and a mild one taken from a typical case of alastrim in this country Suspensions of elementary bodies taken from the skin pulp of the inoculated animals were, it was found, agglutinated by the serum of patients convalescent from either the English or the Indian small pox, while antivaccinial serum obtained from rabbits either failed to produce agglutination of the variola bodies or did so to a lower titre than that given by a vaccinial suspension Cow-pox elementary bodies were agglutinated by the homologous antiserum and also by antivaccinial serum Human antivariola serum failed to agglutinate a suspension of these bodies, though a hyper immune antivariola serum obtained from monkeys which had had repeated infections of the virus, agglutinated the suspension to a fairly high titre

It would seem from other experiments that variola virus can be readily changed into a strain indistinguishable from vaccinia serologically The conclusion is, therefore, that variola and vaccinia are very closely related antigenically, the difference being quantitative rather than qualitative

VARICELLA, ETC

Dr Amies has confirmed the finding of elementary bodies in human varicella fluid Somewhat smaller than those of vaccinia-variola, they are present in enormous numbers in the clear fluid taken from early vesicles Suspensions of them are agglutinated specifically by convalescent chicken-pox serum while agglutinins have been demonstrated in the blood as early as the fifth day after the appearance of the eruption (As already pointed out in the *Journal* of May 27th the presence of elementary bodies has also been demonstrated in the expired air of

a patient in the early stages of chicken pox) It thus seems highly probable that the elementary bodies represent the actual aetiological agents

Other virus studies include the cultivation of vaccinia virus in cell free media and of louping ill virus *in vitro* The successive stages in the growth of the pleuropneumonia organism have again been studied by Professor Ledingham and it may shortly be possible to attack the problem of its systematic position

SEROLOGY

Serological studies include an examination of the antigenic constitution and immunizing properties of bacteria Dr T S Schütze is continuing his studies on the antigen concerned in the immunity conferred by anti plague vaccine After establishing the importance of the heat labile envelope antigen he is investigating methods for the best production of it and is endeavouring to determine whether the vaccine should be grown in a fluid or on a solid medium Dr A Felix has been studying the serological varieties of typhus with particular regard to the São Paulo endemic of this disease Dr J T Edwards has continued his work on foot and mouth disease He has been unable to demonstrate the existence of carriers after a search for the persistence of the virus in the urine or blood of guinea pigs which have recovered from an attack of the disease Observations on rats have shown that susceptibility is much influenced by diet

ENDOCRINOLOGY

Dr V Korenchevsky has been studying the action and assay of testicular hormone and the mechanism of action of vitamin A deficiency on various organs and functions The changes obtained by injection of testicular hormone in various conditions are recorded Experiments demonstrated a powerful influence on several organs and functions The anabolic properties of the hormone essential for the building of tissues and the growth of organs and animal were evidenced by increase in body weight and increase of weight in sexual organs thyroid liver and kidneys of the injected castrated rats The katabolic or disintegrating properties of the hormone were shown by the acceleration of thymus involution and by decrease in adrenal weight In this connexion the mechanism of the influence of vitamin A and its anabolic function were also investigated Paired feeding experiments were performed as a result of which vitamin A was shown to have in addition to an appetite producing principle an anabolic principle Both of these are essential for the building of tissues for increase in body weight and for growth of the animal

VITAMINS

Further work has been carried out with vitamin standardization Under the heading of Vitamin B Complex Dr H Chick Miss A M Copping and Miss H M Jackson have been unable apart from growth limitation to define any syndrome of factor Y deficiency This factor appears to be present in concentrates from brewers yeast Therapeutic trials with human cases have been carried out by Dr Lucy Wills with a series of tested fractions of the B complex It had already been found that marmite was effective in the cure of tropical macrocytic anaemia and pernicious anaemia of pregnancy Subsequently marmite with normal gastric juice was found effective in true Addison's anaemia a fact which suggested the possibility of the active fraction in this substance being identical with vitamin B Dr Wills's researches seem however to exclude any known fraction of the vitamin B complex as the active factor As regards the growth promoting and anti dermatitis functions of vitamin B, these two properties have now been shown to run parallel in a number of materials and to be equally affected by heat The relation between pellagra and wheat and maize still appears to be shrouded in mystery and no explanation is yet forthcoming as to why the disease should be associated with the consumption of maize rather than of wheat Miss E M Hume and Miss Henderson Smith studying carotene as a source of vitamin A have found that the solvent in which it is given is of considerable importance Coco-nut oil stands out easily as the best solvent

Antiscorbutic Principle

Dr Zilva has continued his investigations on the chemical nature of vitamin C As has already been stated in previous reports earlier attempts to isolate this substance from lemon juice have shown that active fractions possessed strong reducing properties Although there was some parallelism between the reducing capacity and the antiscorbutic potency this was not found to be the case in a great number of chemical fractions from lemon juice and it is still concluded that vitamin C and the reducing substance are not identical Further researches are however being pursued in this connexion A practical point emerges from experiments conducted on applying a low temperature to Bramley's seedling apples It was found that in the apples stored at −5° C the loss in vitamin C was very great in those stored at −10° C the loss was less but even then amounted to almost 50 per cent at −15° C there was a slight loss, and at −20° C no loss at all In these experiments the apples were stored for as long as seven months In another variety of apple King Edward VII the vitamin C content was considerably raised by lowering the nitrogen content of the fruit both by cultural methods and by barkringing the trees

OTHER STUDIES

The department for study and preparation of therapeutic serums has been concerned with the lethal action of Type I pneumococcus and with the titration of a Type I antiserum Drs Petrie and Morgan have assigned a provisional unit of protective value to the British Standard Serum by comparison with a standard liquid serum supplied by Dr Felton of Harvard The general results of experiments are as follows (1) The lethal power of a virulent test culture can be maintained within reasonably narrow limits and (2) the method which they have employed during the past three years allows of the titration of serums within reasonable limits of accuracy A horse has been immunized with a rough Type I pneumococcus Tested in mice the serum gave a slight but definite protection against the virulent Type I strain No evidence of reinforcement was found however when the serum was administered in conjunction with type specific serum The observation is of interest in indicating that the protective action of type-specific serum in the mouse is directed almost exclusively against the capsular and not against the somatic component of the pneumococcus

Other researches include the isolation from Type I meningococcus of a polysaccharide substance which gives specific precipitation with the homologous precipitating serum at a dilution of 1 in 1 000 000 The characteristics of the endotoxin of the meningococcus have also been investigated The Institute is co-operating with the Medical Research Council and the Public Health Department of the L C C in the preparation of a serum for the treatment of poliomyelitis This is obtained from healthy donors who have suffered from the disease and is intended for use only in the preparalytic stage In the department of biochemistry Professor Robison and Dr Rosenheim have obtained interesting results in their study of the mechanism of ossification Dr Gulland has continued the work on the oxytocic hormone of the posterior lobe of the pituitary This hormone has not been isolated and financial as well as practical difficulties still stand in the way It is hoped however that investigation may eventually lead to the building up by synthetic chemistry of compounds which satisfy the experimental facts One interesting and useful aspect of these studies is the effect of proteolytic enzymes in destruction of the hormone

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R. A. MICKELWRIGHT,
Secretary Superintendent.

SPA DEVELOPMENT AT HARROGATE

OPENING BY LORD HORDER OF A "SUN COLONNADE"

What was described as the first instalment of a "new Harrogate" was opened on June 17th by Lord Horder of Ashford It takes the form of a delightful sun colonnade and other new buildings which add to the beauty of the spa and its amenities for visitors For some years the corporation has had in mind the construction of a covered walk for the benefit of invalids so that on wet days they need no longer rest in the sulphurous atmosphere of the pump room The project has now materialized in the shape of a colonnade, 600 feet in length, on the highest ridge of the familiar Valley Gardens It is so situated as to obtain the maximum sunshine, and so built as to afford shelter from the occasional bleakness which reaches Harrogate from the Yorkshire moors With a glazed roof and one open side, it is divided into three sections, enlarging at each division into a sun parlour or solarium These sun parlours, fitted with 'vita' glass, heated electrically by wall and overhead panels tastefully furnished, and decorated with palms and plants, are places where visitors may rest and enjoy the 'outdoors" feeling whatever the weather At the end of the covered promenade, which, though built on high and uneven ground sloping downwards, is of the easiest gradient throughout, there is a large pavilion, with a big dome-light in electro copper glazing, of pleasant design and a veranda in front from which a view is obtained over a series of grass terraces and the rock garden The cost of the completed portion of the scheme is £22 500 but the total project, which includes a general rearrangement in the neighbourhood of the old sulphur well and pump room, is expected to cost £60,000

The Harrogate Corporation entertained as its guests nearly two hundred members of the medical profession from London and other centres Those who came by special train from London were met on arrival by the mayor (Alderman Whiteoak) and the president of the Harrogate Medical Society (Dr Laura Veale) The opening of the new buildings was made the occasion of a civic procession and other ceremonies, attended by the mayors of many Yorkshire towns In handing to Lord Horder a gold key, Alderman Stott the chairman of the Spa Development Committee, claimed for Harrogate a progressive spirit and a resolve to offer a "British cure for British people" He said that an entirely new and up to date pump room, close to the sulphur spring and worked in conjunction with the bathing establishment was envisaged Lord Horder, who spoke as a friend and patron of Harrogate of many years' standing, said that the possibilities offered by the medicinal waters of this country were only beginning to be appreciated Too long had we suffered the illusion that the rivers of Damascus were better than all the waters of Israel If the tightening of purse strings had had no other good result it had at least constrained people to look at home for the means of health, and they had found that in the matter of spa treatment, at any rate the facilities were as good in Great Britain as they were abroad But the provisions of Nature had to be made available and amenities must not be omitted The influence of a beautiful and peaceful environment upon the promotion of health had never been more obvious, and this attempt by Harrogate to bring the gifts of design and adaptation to bear upon natural beauty was a recognition of that fact and a testimony to the wisdom of its authorities Given, as in this case, the energetic and intelligent co operation of the doctors, the municipal authorities and the townspeople, there was no reason why British spas should not be as successful and popular as their Continental rivals Later in the afternoon the medical visitors were taken over the Royal Baths members of the Harrogate Medical Society acting as guides They were told that last year 120,000 various treatments were given, 86 per cent of them under medical prescription The number of different treatment methods is about one hundred, with the saline sulphur bath in various forms the most prominent The peat mud bath is a relatively new introduction The extent of the establishment was a surprise to many of the visitors, the staff employed numbers nearly 200

The day ended with a banquet given by the corporation and the medical society and presided over by the mayor The company was representative of the civic life of Yorkshire, the medical profession, and the press The health of 'Harrogate, town and spa," was proposed by Major J W Hills, the member of Parliament for the division in which Harrogate is situated who revealed the fact that free treatment at the baths is one of the perquisites of Harrogate's M P A reply was made by Dr Wilfrid Edgecombe, who read an ode which he had composed many years ago on his first acquaintance with the Harrogate sulphur water Dr Edgecombe spoke of Harrogate s up-to date pathological laboratory, its clinic for the investigation of disease its Royal Bath Hospital with provision for spa treatment of necessitous patients, and its efficient organization for transfusion The Royal Bath Hospital had, in conjunction with Leeds University instituted a scheme for the appointment of a whole time research worker, who would make his special subject the investigation of rheumatic disorders Lord Horder, in his speech gave certain advice to spas, being careful to except Harrogate from any implied criticism A complaint frequently made at British spas was that, although the doctors knew their job, the amenities of the place did not rank with those of Continental resorts A second complaint was that bathing treatments cost too much a third that not enough attention was paid by the hotels to special diets for patients, and a fourth that measures were not taken to put down noise, especially the noise arising from motor traffic Lord Horder said that a resort might cater either for the seeker after health or for the hooligan, but it could hardly cater for both

On Sunday morning the medical and other guests of the Corporation were taken to Fountains Abbey, where an address on the history of the abbey was given by Captain F M Sutherland They then returned to London by special train

OESTRUS-PRODUCING HORMONE

AN INTERNATIONAL STANDARD

The following statement has been prepared with the object of making known to all those interested that the international standard for the oestrus producing hormone, recently adopted by the Health Organization of the League of Nations, is now available for research workers, laboratories, and institutions in Great Britain and Ireland

In July of last year a Conference was held in London under the auspices of the Permanent Commission on Biological Standardization of the Health Organization of the League of Nations, with the object of discussing the possibility of securing international agreement on standards of reference and units of activity for the sex hormones While the Conference agreed that knowledge of the male sex hormone and of the hormones of the corpus luteum and of the anterior pituitary body is at present sufficiently advanced to permit of a standard of reference being established and a unit of activity defined for these substances, important decisions were reached in regard to the oestrus producing hormone This hormone has been prepared in pure crystalline form from the urine of pregnancy in quantities sufficient to admit of chemical examination, it exists in two forms—a ketohydroxy form and a trihydroxy form—the first named being the more active by the ordinary methods of testing in producing oestrus in animals subjected to oöphorectomy

The oestrus producing hormone has been the subject of extensive investigations in recent years and a state of confusion was developing in consequence of the adoption of different "units' As in the case of other substances exhibiting marked and specific biological activity attempts to define units in terms of animal reaction had only served to show that units defined on such a basis lacked uniformity, the unit varied not only from one species of animal to another but in the same species, was dependent upon the method of

ROYAL ARMY MEDICAL CORPS.

TWENTY-FIVE permanent COMMISSIONS in the ROYAL ARMY MEDICAL CORPS will be offered on April 28th, 1933. Applications should reach the War Office not later than April 21st, 1933.

Candidates will be selected for commissions without competitive examination, and will be required to present themselves in London for interview and medical examination on April 28th, 1933. They must be under 28 years of age on May 1st, 1933, and registered under the Medical Acts.

Officers of the R.A.M.C. are liable to serve in any part of the world where British troops are quartered.

Ample opportunities exist in the Army for clinical professional work, both Medical and Surgical, as well as for the study and practice of Hygiene, Pathology, and all the special branches.

The cost of Post-Graduate study, which is compulsory, is met from Army Funds.

Emoluments: Pay—From £356 to £1,542 a year according to rank. **Allowances**—Free quarters, fuel and light, servant and rations, or cash allowance in lieu, totalling from 6/5d. to 23/3d. a day according to rank (£117 to £424 a year).

The above rates of allowances apply to Home Commands only. At certain stations abroad the rates are considerably higher.

Candidates who have held a full-time house appointment in a recognized civil hospital before appointment to a permanent Commission in the R.A.M.C. may, subject to certain conditions, be allowed to count the period of service in such an appointment, up to a maximum of 12 months, as Army service for promotion, increase of pay, and retirement.

Gratuities on Retirement.—After 7 years' service as a medical officer £1,000
" 15 " " " " £2,000
" 18 " " " " £3,500

Current rates of retired pay range from £352 10s. per annum, normally earned by a Major after 20 years' service, to £890 per annum, the maximum for which a Major-General is eligible. The rates of pay and retired pay are subject to periodical variation consequent on fluctuations in the cost of living.

Outfit Grant.—*An officer on joining receives £50 as outfit allowance.*

Married Officers' Allowances.—Officers of 30 years of age and over who are married are entitled to draw special rates of allowance.

A Voluntary Widows' and Orphans' Fund exists for officers of the Corps.

All particulars may be obtained by application, in writing or personally, to the Assistant Director-General, Army Medical Services, The War Office, Whitehall, London, S.W.1.

LIVERPOOL COUNTY BOROUGH.

LOCAL EDUCATION AUTHORITY.

JUNIOR ASSISTANT SCHOOL MEDICAL OFFICER.

Applications are invited for a Junior Assistant School Medical Officer, at a salary of £500 per annum (less the temporary deduction authorised by the City Council), rising by annual increments of £25 to £700 per annum.

Applicants must be registered Medical Practitioners, and must have had at least three years' experience. It is desirable that they should have had some special experience in school hygiene and in diseases of children.

The officer appointed will be required to devote whole time to the service of the Education Authority under the direction of the Medical Officer to the Education Authority, and will be required to reside within the City. The officer will not be allowed to undertake private practice.

Form of application, which may be had by forwarding a stamped addressed foolscap envelope, should be returned, together with *copies of three recent testimonials*, to the undersigned not later than Monday, May 1st, and endorsed "Junior Assistant School Medical Officer."

The canvassing of members of the Education Committee or the City Council is strictly prohibited, and will be considered a disqualification.

Municipal Buildings, WALTER MOON,
Liverpool. Town Clerk, and Clerk to the Local Education Authority.

April 8th, 1933.

BURY INFIRMARY, LANCS. (127 Beds.)

Applications are invited for the post of THIRD HOUSE SURGEON (male), who must have both Medical and Surgical qualifications. The appointment is for six months at a salary at the rate of £150 per annum, with board, residence, and laundry. The successful applicant will be required to commence duties beginning of May.

Applications, stating age, qualifications, and nationality, with copies of three recent testimonials, to be sent to the undersigned not later than April 7th.

Particulars of duties may be had on application.

ALEX. W. MAITLAND,
Hon. Secretary.

LANCASHIRE COUNTY COUNCIL.

PUBLIC ASSISTANCE COMMITTEE.

LAKE HOSPITAL AND DARNTON HOUSE, ASHTON-UNDER-LYNE, Nr. MANCHESTER.

APPOINTMENT OF JUNIOR RESIDENT MEDICAL OFFICER.

Applications are invited from registered Medical Practitioners for the appointment of *Junior Resident Medical Officer* at the above Hospital and Institution, comprising 300 and 600 *beds* respectively.

Candidates must be unmarried.

Salary, subject at the present time to an emergency abatement of 5 per cent., at the rate of £175 per annum, together with the usual residential emoluments.

The appointment will, in the first instance, be for a period of six months, the successful applicant being eligible for reappointment for a further period of six months at the *end of that* period.

Applications, accompanied by copies of not more than two recent testimonials, should be addressed to County Medical Officer, Public Assistance (Hospital and Medical) Department, County Offices, Preston, not later than April 19th. Envelopes should be endorsed "Junior Resident Medical Officer."

County Offices, *GEORGE ETHERTON,*
Preston. Clerk of the County Council.
March 27th, 1933.

WEYMOUTH AND DISTRICT HOSPITAL, WEYMOUTH. (86 Beds and Cots.)

Wanted, April 28th, HOUSE SURGEON, male (European). Salary £180 per annum, with board, residence, and laundry. Applications, stating age, qualifications, and copies of testimonials, to be sent to the undersigned not later than April 11th.

MORRIS LODGE.
Honorary Secretary.

ELIZABETH GARRETT ANDERSON HOSPITAL, Euston Road, N.W.1.

CLINICAL ASSISTANTS (HONORARY).

Wanted, fully qualified Medical Women for: V.D. Department. Wednesday evenings 6 to 8. Medical Out-patients. Monday afternoon.

Applications, with copies of testimonials, to the undersigned.

JEAN R. MURRAY, Secretary.

CITY OF PLYMOUTH MENTAL HOSPITAL.

Applications are invited for the post of ASSISTANT MEDICAL OFFICER.

Candidates must be single and under 35 years of age.

The commencing salary is £350, rising by annual increments of £25 to £450 per annum, with board, lodging, laundry, and attendance, valued for Superannuation purposes at £150 per annum.

A further £50 per annum will be paid if the *selected candidate has a degree or diploma in* Psychological Medicine.

A *temporary abatement from the initial* cash salary will be made amounting to £11 5s.

A deduction of 3 per cent. under the Asylum Officers Superannuation Act, 1909, will be made.

Forms of applications may be obtained from the Medical Superintendent, Blackadon, Ivybridge, S. Devon.

CITY AND COUNTY OF BRISTOL.

HEALTH COMMITTEE.

TO MEDICAL PRACTITIONERS.

The Health Committee invite applications for the appointment of PUBLIC VACCINATOR for the Bristol *Central Sub-Registration* District.

Further particulars may be obtained from the undersigned, and applications must be received not later than 10 a.m. on April 15th.

By Order,
R. H. PARRY, M.B., B.S., D.P.H.,
Public Health Offices, Medical Officer
40, Prince Street, of Health.
Bristol, 1. April, 1933.

SURREY COUNTY COUNCIL.

THIRD ASSISTANT RESIDENT MEDICAL OFFICER (male) required at COUNTY SANATORIUM (360 beds), MILFORD, near Godalming. Resident experience in general hospital essential. Appointment is for six months, renewable for further six months. Salary £255 per annum (less an emergency abatement of £10 per annum), with board, lodging, and laundry. Appointment subject to the Standing Orders of the County Council. Forms of application from County Medical Officer, County Hall, Kingston-upon-Thames, to whom forms should be returned with copies of three recent testimonials by April 15th.

administration and the method chosen for interpreting the result of the administration of the hormone

The Conference agreed that as in other similar cases the only safe basis for international agreement on a unit was the adoption of a standard substance in terms of which the unit could be defined The standard adopted by the Conference for international use is a quantity of the ketohydroxy form of the hormone in pure crystalline condition which is preserved at the National Institute for Medical Research London and the unit of activity is defined as the specific oestrus producing activity contained in 0 1 γ (= 0 0001 mg) of this standard preparation

In order to provide an adequate amount of material to serve as an international standard different countries have sent samples of the pure crystalline ketohydroxy form of the oestrus producing hormone to the National Institute for Medical Research London (acting for this purpose as the central laboratory on behalf of the Health Organization of the League of Nations) where the final preparation of the standard has been completed and arrangements have been made for the storage of the standard and for its dispatch to the central laboratories and institutions in other countries which have been nominated by the Health Organization of the League of Nations for local distribution

Institutions or individual investigators in Great Britain and Ireland requiring the standard for the oestrus producing hormone should apply to the Department of Biological Standards the National Institute for Medical Research Hampstead N W 3

INTERNATIONAL OPHTHALMIC CONGRESS IN MADRID

The fourteenth Concilium Ophthalmologicum was held in Madrid from April 16th to 22nd and was attended by numerous delegates from about forty countries At the first session inaugural addresses were delivered by the President of the Spanish Republic Professor van der Hoeksve (president of the International Council of Ophthalmology) and Professor M Márquez (president of the congress) who also read a message of greeting from the veteran Professor Ramon y Cajal Sir John Parsons on behalf of Great Britain and delegates from other parts of the world followed with official expressions of congratulation and good wishes

The first of the main topics for discussion—namely tuberculosis of the iris and ciliary body—was introduced by Dr E V L Brown of Chicago who criticized the failure in practice of such modern lines of local therapy as the use of x rays and the introduction of the patient's own blood into his anterior chamber Tuberculin had not been shown to prevent recurrences nor attacks in the other eye nor did it seem to influence favourably the intrathoracic infection Open air rest dieting and the promotion of a feeling of confidence would often cure the lesion Dr Igersheimer of Frankfort dealt with the pathological anatomy of this manifestation of tuberculosis and suggested a basis for classification The characteristic differences between the acute subacute and chronic recurrent types were he said attributable conceivably to immuno-biological conditions The third speaker Dr H Lagrange of Paris devoted his address to the recognition of this form of tuberculosis and its differential diagnosis—a matter of especial importance in the presence of diffuse and anodular iritis or indocyclitis In the absence of any direct indications of focal infections and syphilis the diagnosis could be only a statement of probability since no special clinical signs had yet been defined The therapeutical test with tuberculin afforded the most dependable criterion The second main topic for discussion was retinal detachment This was introduced by Dr H Arruga of Barcelona who critically reviewed the aetiology and pathology paying special attention to the theories relating to choroidal exudation and vitreous shrinking He considered that the idiopathic form in the vast majority of instances was due to retinal lesions The medical treatment of the disease was reviewed by Professor G Ovio of Rome the principal lines being keeping the patient at rest in the dark diaphoresis the instillation of eserine or atropine electrolysis massage preparations of iodine subconjunctival and intravitreous injections and other means such as mercury adrenaline tuberculin and a salt free diet Operative treatment for the closure of the retinal hole was considered in detail by Professor A Vogt of Zürich Various methods were compared and the simpler procedures—ignipuncture with the galvanocautery and diathermy—were held to be likely to become the most popular Special advantages in certain circumstances were possessed however by each of the other lines of intervention Cauterization it was added might be dangerous if too prolonged

With commendable rapidity these valuable addresses have now been published in full in two volumes fully documented and excellently illustrated A third volume contains the contributions made during a session on trachoma in which the progress of the campaign against it in various countries was described One attractive feature of the congress was the publication each day of a bulletin this summarized the proceedings of the previous day and announced details of the programmes of the current and following days As a souvenir an album of the names descriptions and photographs of those taking part in the congress was prepared and distributed

ROCKEFELLER MEDICAL FELLOWSHIPS

The Medical Research Council announces that on behalf of the Rockefeller Foundation it has made the following awards of travelling Fellowships for the academic year 1933–4 These Fellowships are awarded to graduates who have had some training in research work either in the primary sciences of medicine or in clinical medicine and surgery and who are likely to profit by a period of work at a chosen centre in America or in special cases in Europe before taking up positions for higher teaching or research in the British Isles

HAROLD WILLIAMS FULLERTON M B Aberd Department of Medicine University of Aberdeen

MARGARET HONORA ROSCOE B Sc Lond Lister Institute London

DONAL SHEEHAN M D M Sc Manch Department of Anatomy University of Manchester

SOLLY ZUCKERMAN D Sc Lond M R C S Department of Anatomy University College London

Dr Sheehan's Fellowship is tenable at Montreal the others at centres in the United States

England and Wales

Hospital Conference at Bath

Bath maintained her well-earned reputation of ideal hostess when the British Hospitals Association and the Incorporated Association of Hospital Officers held their annual conference there on June 8th 9th and 10th There was a large attendance and papers of interest were read and discussed Under the chairmanship of Sir Harold Pinl the council reported that the membership was now 1 300 and that 640 hospitals were associated The first paper was by Mr G T Whitelev (King's College Hospital) on pay beds in hospitals He mentioned that there were no 1 680 pay beds in London but this was not enough to supply the demand in his opinion the best system was the separate block and the time would come when the general practitioner would be allowed to attend his patients in hospital Dr C E S Flemming said that pay beds would enable the general practitioner to attend some of his patients in hospital it was important to himself and to the public for him to have the advantage of an institution The young medical man of to-day inherited a vast fortune of scientific and technical knowledge but in practice he was disheartened to find that he was so often unable to use that knowledge for the benefit of his patients The Royal United Hospital Bath had to some extent met the difficulty for it had associated with it the Forbes Fraser Hospital a pay bed hospital of 72 beds which was used by general practitioners as well as by specialists Mr C H Terry Bath

NORTH RIDING MENTAL HOSPITAL, YORK.

RESIDENT ASSISTANT MEDICAL OFFICER.

Applications are invited from duly qualified Medical Practitioners.

Candidates should be under 32 years of age and have held a resident appointment in a General Hospital.

Salary £350 per annum, increasing by annual increments of £25 to £450, with board and apartments. An additional £50 per annum will be paid to an officer holding a recognized Diploma in Psychological Medicine.

Salary subject to 3 per cent. deduction in accordance with the Superannuation Act, 1909, and to a temporary deduction, the latter amounting to approximately £11 on the initial salary.

Applications, with full particulars of age, qualifications, and experience, and with copies of recent testimonials, to be sent to the Medical Superintendent.

ROYAL HALIFAX INFIRMARY.

Wanted, a THIRD HOUSE SURGEON (male, unmarried). Candidates must be duly qualified and registered. The appointment will be for six months from May 1st. Probable promotion if satisfactory. Salaries of Resident Medical Staff are as follows: Resident Surgical Officer £250; First House Surgeon £200; Second House Surgeon £175; Third House Surgeon £150 per annum; with residence, board, and laundry. The Hospital contains 250 beds, including Maternity Department and Paying Patients' Block. There is also a Pathological Laboratory and a large Eye, Ear, Nose, and Throat Department.

Particulars of duties may be obtained from the undersigned, to whom applications should be sent.

A. MIDGLEY,
April 4th, 1933. Secretary.

THE FRIENDS' RETREAT, YORK.

Applications are invited for the post of JUNIOR MEDICAL OFFICER (Woman) at the above registered Mental Hospital (200 beds). The appointment is for three years. The commencing salary is £300 per annum, with board, residence, and laundry. An additional salary of £50 per annum is paid to Assistants who hold, or who obtain, the D.P.M. The appointment is subject to the provisions of the Retreat Superannuation Scheme.

There are two other Medical Officers on the Staff. Previous hospital experience is desirable.

Applications, with copies of three recent testimonials, stating qualifications, experience, age, nationality, and religion, to be sent on or before April 19th, to the Medical Superintendent.

THE ROYAL INFIRMARY, SHEFFIELD. (500 Beds.)

The Weekly Board of Management invite applications for the post of ASSISTANT AURAL AND OPHTHALMIC HOUSE SURGEON. The appointment is tenable for the residue of the term of six months ending June 30th next, but the successful applicant will be eligible for re-election to this or one of the other thirteen House appointments. Salary £80 per annum, with board and residence, rising after six months' service to £100 per annum.

Applications, together with copies of testimonials, to be sent to the undersigned forthwith.

Board Room. JNO. W. BARNES, F.C.I.S.,
March 28th, 1933. Gen. Supt. & Sec.

THE WILLESDEN GENERAL HOSPITAL, Harlesden Road, N.W.10.

The Council of Management invite applications for the appointment of ASSISTANT SURGICAL OFFICER, who will be required to commence duty on July 1st.

Candidates, who must be Fellows of the Royal College of Surgeons of England, are invited to send six copies of their application and testimonials, to the Secretary not later than first post on Thursday, April 20th.

An honorarium at the rate of £50 per annum attached to this appointment, and candidates will be provided with a copy of the Regulations, upon written application to the Secretary.

March 20th, 1933.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.1.

Applications are invited for the post of HOUSE SURGEON (male) for six months from April 12th (first two months in Casualty and Out-patient Department). Salary at the rate of £120 per annum, with board and residence.

Applications, stating age, experience, and qualifications, accompanied by copies of four testimonials, to be sent to the undersigned as soon as possible, from whom rules and other particulars can be obtained.

By Order of the Committee of Management,
W. H. SIDNELL,
March 28th, 1933. Secretary-Supt.

MANCHESTER ROYAL INFIRMARY.

MEDICAL OFFICER TO OUT-PATIENTS.

The Board of Management invite applications from registered Medical Practitioners for the above appointment.

The duties are to assist in the treatment of Medical Out-patients on two mornings per week. The appointment (non-resident) is for one year, but the holder of the office is eligible for re-election on two subsequent occasions for a similar period. Salary £35. Candidates must state age and send twelve copies of their application and testimonials, to the undersigned on or before 9 a.m. on Thursday, April 27th.

By Order,
FRANK G. HAZELL,
Gen. Supt. & Secretary.

MANCHESTER ROYAL INFIRMARY.

HOUSE SURGEON (Male)—AURAL, OPHTHALMIC, AND GYNAECOLOGICAL DEPARTMENTS.

The Board of Management invite applications for the above appointment, now vacant. Applicants must be registered and hold a Medical and Surgical qualification.

The appointment is for the period to November 15th (the first three months as Junior) subject to the provisions of the By-laws as to notice, etc. Salary at the rate of £50 per annum, with board, residence, and allowance for laundry.

Applications, stating age, to be sent at once to the Chairman of the Medical Board.

By Order,
FRANK G. HAZELL,
April 3rd, 1933. Gen. Supt. & Sec.

BRISTOL GENERAL HOSPITAL.

A Meeting of the Election Committee will be held at the Hospital on Wednesday, May 10th, at 1 o'clock p.m., to appoint an HONORARY ASSISTANT SURGEON.

Candidates are requested to send their applications, with copies of testimonials, and proof of qualification, to the undersigned on or before Monday, May 8th next, from whom further particulars may be obtained. Every candidate is also required to forward copy of his application and testimonials to each member of the Election Committee.

By Order of the Committee,
THOMAS W. GREGG, Secretary.

BRISTOL GENERAL HOSPITAL.

The Committee invites applications from fully qualified and registered Medical Practitioners for the post of HONORARY MEDICAL REGISTRAR. The appointment will be made for twelve months and the holder will be eligible for re-election. Applications, stating age, qualifications, etc., accompanied by copies of testimonials, to be delivered to the undersigned on or before Tuesday, April 18th, from whom further particulars as to the duties attached to the post may be obtained.

THOMAS W. GREGG, Secretary.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL, Haverstock Hill, N.W.3.

APPOINTMENT OF A HOUSE SURGEON.

Applications are invited from unmarried registered Medical Men for the appointment of House Surgeon, vacant on May 1st next. The salary will be at the rate of £100 per annum, together with board, residence, etc., and the term will be for six months.

Applications to be made on a form which will be supplied by the Secretary, together with copies of not more than three testimonials, should reach the Secretary not later than noon on April 15th next.

HOUNSLOW HOSPITAL, STAINES ROAD, Hounslow, Middlesex. (70 Beds.)

Applications are invited for the posts of SENIOR and JUNIOR HOUSE SURGEONS, commencing May 1st. Salary £150 and £100 p.a. respectively, with board, residence, etc. The appointment will be for six months.

Applications, stating age, qualifications, and experience, and enclosing copies of three recent testimonials, should be sent by April 11th (marked "House Surgeon" top left hand corner of envelope), to W. T. ROSS, Secretary.

ITALIAN HOSPITAL, Queen Square, W.C.1.

The Committee of Management invite applications for the appointment of HONORARY ASSISTANT PHYSICIAN. Candidates must be Fellows or Members of the Royal College of Physicians of London, and be in Consultant practice only.

Applications, with copies only of testimonials, must reach the undersigned on or before Tuesday, April 11th.

E. R. HANCHET, Secretary.

HUDDERSFIELD ROYAL INFIRMARY. (240 Beds.)

Applications are invited for the following post:

JUNIOR CASUALTY OFFICER AND RESIDENT ANAESTHETIST (male or female) to commence duty immediately after appointment.

Salary at the rate of £150 per annum, with board, residence, and laundry.

The Hospital is officially recognized for the Surgical Practice required of non-members before admission to the Final Fellowship Examination of the Royal College of Surgeons of England.

Applications, with copies of three recent testimonials, to be addressed to the undersigned not later than April 17th.

H. E. G. HALL,
Gen. Supt. & Secretary.

WESTERN OPHTHALMIC HOSPITAL, Marylebone Road, London, N.W.1.

Applications are invited for the post of SENIOR RESIDENT and JUNIOR NON-RESIDENT HOUSE SURGEON. The salaries are at the rate of £150 and £100 per annum respectively, and the appointments are for six months.

Some previous Ophthalmic experience is required.

The selected candidates will be required to take up duty on May 1st.

Applications, accompanied by copies of three testimonials, should reach me by April 12th.

Candidates should state in their applications whether they are prepared to accept either post.

H. W. BURLEIGH, Hon. Secretary.

THE FINCHLEY MEMORIAL HOSPITAL, Granville Road, London, N.12. (72 Beds.)

RESIDENT MEDICAL OFFICER.

Applications are invited for the post of Resident Medical Officer at this Hospital. The appointment is for six months, which may be extended by a further six months. Salary at rate of £150 per annum for first six months and £200 per annum for a further period of six months, with board, rooms, and laundry.

The appointment is open to men or women.

Applications, stating age, qualifications, and enclosing copies of testimonials, should be addressed to—

Miss M. A. BRUCE, Secretary.

WEST END HOSPITAL FOR NERVOUS DISEASES.

In-Patient Department: Gloucester Gate, Regent's Park, N.W.1.
Out-Patient Department and Secretary's Office: 73, Welbeck Street, W.1.

The Committee of Management invites applications for the post of HON. ORTHOPAEDIC SURGEON. The names of the Medical Selection Committee, upon whom candidates are requested to call, together with other information should be obtained from the undersigned, to whom it is requested that applications, with copies of testimonials, be sent not later than Wednesday, April 12th.

J. P. WETENHALL, Secretary.

DERBYSHIRE ROYAL INFIRMARY, DERBY. (General Hospital—347 Beds.)

Applications are invited for the post of OPHTHALMIC HOUSE SURGEON AND ANAESTHETIST. Candidates must be qualified and registered under the Medical Acts.

Salary will be £150 per annum, with apartments, board, etc.

Applications, with copies of testimonials, to be sent to the undersigned.

WALTER BANKS,
March 30th, 1933. Supt. & Secretary.

EASTBOURNE: PRINCESS ALICE MEMORIAL HOSPITAL. (116 Beds.)

Applications are invited for the post of HOUSE SURGEON (male). Salary at the rate of £150 per annum, with board, lodging, and laundry. There are two residents and the appointment is for six months.

Candidates must be unmarried, fully qualified, and registered. Applications, stating age, qualifications, etc., accompanied by not more than three testimonials (one of which should be from Medical School), should be sent at once to the Secretary.

EAST HAM MEMORIAL HOSPITAL, Shrewsbury Rd., E.7. (160 Beds.)

Applications are invited for the post of ANAESTHETIST. The successful candidate will be required to attend on Wednesday afternoons. Honorarium 50 guineas per annum.

Applications, stating age, experience, and full particulars, together with copies of three testimonials, should be forwarded to the undersigned immediately.

REGINALD PERRY, Secretary.

read a paper on the institutional treatment of adult cases of surgical tuberculosis He prefaced it by well chosen words on the importance of friendly co operation between the administrative and medical staffs of voluntary hospitals He advocated special wards and special hospitals for the treatment of these cases, which occupied the ordinary beds for an undue length of time On Friday, June 9th, interesting papers were read by Mr Rowse Mitchell (Chester Royal Infirmary) and Mr C M Power (Westminster Hospital), on hospital systems and administration in other countries, and on the Road Traffic Act Saturday morning was occupied by a debate on "The Area Problem of the Contributory Schemes," but this was, in fact, a discussion of the policy of the Hospital Saving Association The subject was set out in a report dealing with the negotiations between the British Hospitals Association and the H S A regarding the difficulty that had arisen with certain provincial hospitals This report only came into the hands of the members at the beginning of the meeting Part of the report, issued at the invitation of the British Hospitals Contributory Schemes Association, stated the policy of the H S A and the method by which it proposed to meet the difficulty that had arisen The report also included a memorandum of the B H A with recommendations for the consideration of the meeting There was a long discussion, in which was pointed out the injury that would be done to local contributory schemes if an opposition scheme was set up in the same area There was obviously a strong feeling against the action of the Hospitals Association, on the other hand, there were those who, like Mr Lamb, thought that the B H A had been more sinned against than sinning Dr Flemming said that the solution of the difficulty was to ensure that in every area there was a satisfactory contributory scheme, and that these schemes were properly co-ordinated and reciprocated, that the voluntary hospitals were now so dependent on contributory schemes that their supporters could not afford to be divided, and he proposed that the council of the B H A be requested, in conference with the Contributory Schemes Association, to formulate a proposal to solve the present area difficulty Another proposal, moved by Mr Stamford Hutton of Gloucester, that the recommendations in the report of the council be endorsed, was put first, and agreed to The original motion was dropped, and it was left to the council to take the course it considered best

There are many medical members of the British Hospitals Association, and it is a pity that more of them do not attend the annual meetings Their contribution to the discussions would often be of value, and for them to meet with the administrators of the hospitals on mutual ground and in free debate would be instructive to both sides, and help to advance that friendly co-operation which is so much desired

International Congress of Urology

The International Society of Urology, which, as previously announced in these columns, is holding its fifth annual congress in London from July 10th to 15th, was founded in 1919 Previous congresses took place in Paris in 1921 in Rome in 1924, in Brussels in 1927, and in Madrid in 1930 Nearly every nation is represented in the society, but the number of members allotted to each nation is strictly limited Only members may take part in the congresses At the coming one the president is Sir John Thomson Walker, and the vice-presidents are Professors Leon Kogen of Belgrade and P N Hansen of Copenhagen The first day will be devoted to business, but the president will give a reception in the evening at the Dorchester Hotel, Park Lane On Tuesday July 11th, Prince Arthur of Connaught will formally open the congress at the Royal Society of Medicine This will be followed by a discussion on tumours of the renal pelvis and ureter, initiated by Professors Salvador Pascual of Madrid and F Van den Branden of Brussels and Mr Swift Joly The discussion will continue through the afternoon In the evening the President and Council of the Royal College of Surgeons will hold a reception at the College in Lincoln's Inn Fields The morning and afternoon of July 12th will be devoted to the consideration of pyelography by the descending route, the opening speakers being Professor von Lichtenberg of Berlin and C Ravasini of Trieste, and Mr R Ogier Ward A banquet will be given in the evening by the British section in Merchant Taylors Hall The surgery of the neck of the bladder will be the topic for discussion on July 13th, it will be introduced by Professors G Marion of Paris and J Weijtland of Amsterdam, and Mr Kenneth Walker In the afternoon there will be a reception by the Lord Mayor at the Mansion House, and another by the Government in the evening at the London Museum Friday, July 14th, will be spent in a visit to Oxford On the final day of the congress there will be a general assembly at the Royal Society of Medicine, followed by the reading of independent papers, including one by Dr Edwin Beer of New York, on the value of ureteral reimplantation in the bladder Further details are obtainable from Mr J Swift Joly, F R C S, 80, Harley Street, W 1, who is secretary of the congress

The Wrightington Hospital

On May 10th members of the Lancashire and Cheshire Branch of the British Medical Association had the opportunity of visiting the Wrightington Hospital, near Wigan The hospital, which exists for the treatment of tuberculous disease, contains 226 beds, of which 126, housed in three one-story pavilions, are for adults, 92, in two one story pavilions, for non-pulmonary cases among children, and 8 comprise an isolation block For "dispensary" purposes Lancashire is divided into five large areas (average population, 320,000 each) and three sub areas Each large area is under a consultant tuberculosis officer, with a staff of assistants and health visitors The officers also do hospital work, and the medical superintendents undertake some dispensary work—for example, the medical superintendent of the Wrightington Hospital is responsible for the dispensary work in the Wigan county sub area The Lancashire County Council's scheme provides for the treatment of tuberculosis—pulmonary, non pulmonary, and mixed Dispensary registers at the end of 1932 showed 4,357 pulmonary and 3,531 non pulmonary cases Cases of actual or suspected tuberculosis are referred to the tuberculosis officers at the dispensaries, who recommend treatment at appropriate institutions—lung cases at sanatoriums and pulmonary hospitals, and surgical cases at special (for example, Wrightington) and general hospitals Pulmonary cases occupy 689 beds non pulmonary 301 Modern methods of treatment of non pulmonary tuberculosis in the county show that of 2,600 patients treated for this condition during the years 1920–4, 75 per cent have now recovered or have the disease quiescent

National Baby Week

Since its inauguration in 1917 Baby Week has been celebrated annually, and the seventeenth of the series will continue from July 1st to 7th It is proposed to concentrate special attention this year on the ways and means of preparation for parenthood and on the furtherance of the aims and objects of the Central Union of Fathers' Councils, with the intent to promote the formation of more "fathers' committees" at infant welfare

CITY OF MANCHESTER.

PUBLIC HEALTH DEPARTMENT.

APPOINTMENT OF FIRST ASSISTANT RESIDENT MEDICAL OFFICER.

The Public Health Committee invites applications from qualified Medical Men for the position of First Assistant Resident Medical Officer at MONSALL HOSPITAL (600 Beds), Newton Heath, Manchester.

Every applicant must be a registered Medical Practitioner and unmarried. Applicants, whose age must be between 30 and 45 years, must have held resident appointments at a general hospital, and must hold, or have held, appointments at a large fever hospital. A knowledge of clinical bacteriology and laboratory methods is essential.

The hospital contains 600 beds, including special wards for puerperal fever and otological complications.

Salary £600 per annum, subject to a temporary deduction of £25 15s. per annum. The amount payable is, therefore, £574 5s. per annum, with board, residence, and laundry in addition, subject to the terms and conditions of the Corporation Grading Scheme. No bonus.

Applications, stating fully the age, training, qualifications, and experience of the candidate, with copies of three recent testimonials, and endorsed on the envelope "First Assistant Resident Medical Officer, Monsall Hospital," must be addressed to the Medical Officer of Health, Civic Buildings, 1, Mount Street, Manchester, 2, only, and not to members of the Committee or Council, and must be received by him not later than Saturday, April 22nd.

The candidate appointed will be required to commence duty as soon as possible after appointment, to devote the whole of his time to the duties of the position, to pass a medical examination, to contribute to the Corporation Superannuation Fund, and to execute the Deed of Service.

Canvassing in any form, oral or written, direct or indirect, is prohibited.

F. E. WABRRECK HOWELL,
Town Clerk.

Town Hall,
Manchester. March 31st, 1933.

CITY OF MANCHESTER.

PUBLIC HEALTH DEPARTMENT.

BAGULEY SANATORIUM.

APPOINTMENT OF SENIOR ASSISTANT MEDICAL OFFICER.

The Public Health Committee invites applications from qualified Medical Men for the position of Senior Assistant Medical Officer at the Baguley Sanatorium (333 beds), Baguley, Manchester.

Every applicant must be a registered medical practitioner and unmarried.

Applicants, whose age must not exceed 40 years, must have held resident hospital and sanatorium appointments, and have had practical experience in the diagnosis and modern methods of treatment of tuberculosis; practical experience in X-ray work is desirable.

Salary £500 per annum, subject to a temporary deduction of £19 per annum. The amount payable is, therefore, £481 per annum, with board, residence, and laundry in addition, subject to the terms and conditions of the Corporation Grading Scheme. No bonus.

Applications, stating fully the age, training, qualifications, and experience of the candidate, with copies of three recent testimonials, and endorsed on the envelope "Assistant Medical Officer, Baguley Sanatorium," must be addressed to the Medical Officer of Health, Civic Buildings, 1, Mount Street, Manchester, 2, only, and not to members of the Committee or Council, and must be received by him not later than Saturday, April 22nd.

The candidate appointed will be required to commence duty as soon as possible after appointment, to devote the whole of his time to the duties of the position, to pass a medical examination, to contribute to the Corporation Superannuation Fund, and to execute the Deed of Service.

Canvassing in any form, oral or written, direct or indirect, is prohibited.

Town Hall, F. E. WARBRECK HOWELL.
Manchester, 2. Town Clerk.
March 30th, 1933.

INSTITUTE OF CHILD PSYCHOLOGY.

Applications are invited for the post of HONORARY PHYSICIAN in the Parents' Department. Applicants (men or women) must be registered Medical Practitioners, and should have a thorough experience of psychological methods in the diagnosis and treatment of adults, also, preferably, some experience of gynaecology. Particulars may be obtained from the Secretary, 20, Warwick Crescent, W.2, and all applications, with testimonials, must be sent in by April 24th.

B. WHITING, Secretary.

LONDON COUNTY COUNCIL.

ASSISTANT MEDICAL OFFICERS required at undermentioned Hospitals for resident appointments except at St. Charles' Hospital. Duties assigned by Medical Superintendents and include, if necessary, assistance at other establishments under control of the Council. Valuation of emoluments is subject to temporary reduction. Candidates must be registered Medical Practitioners of at least one year's standing, and have held resident appointment in general hospital (a maternity hospital in case of St. Andrew's Hospital) for at least six months. Remuneration and conditions subject to review.

1. ST. PANCRAS HOSPITAL, Pancras Road, N.W.1.—*Assistant Medical Officer (Grade I). Duties mainly medical.

2 PADDINGTON HOSPITAL, Harrow Road, W.9.—*Assistant Medical Officer (Grade I). Duties mainly medical.

3. QUEEN MARY'S HOSPITAL FOR CHILDREN, Carshalton.—*Assistant Medical Officer (Grade I).

4 LAMBETH HOSPITAL, Brook Street, S.E.11.—*Assistant Medical Officer (Grade I).

5. ST. PETER'S (WHITECHAPEL) HOSPITAL, Vallance Road, E.1.—Assistant Medical Officer (Grade I). Midwifery experience desirable.

*Salary £350 a year, rising annually by £25 to £425, with board, lodging, and washing. No accommodation for married man or for a woman.

†BOW INSTITUTION, 2a, Bow Road, E.3.
†HACKNEY HOSPITAL, High Street, Homerton, E.9
†MILE END HOSPITAL, Bancroft Road, E.1.
†ST. MARY ABBOTS HOSPITAL, Marloes Road, W.8.
†ST CHARLES' HOSPITAL, Ladbroke Grove, St. Charles' Square, W.10.
†ST. NICHOLAS HOSPITAL, Plumstead, S.E.18.
†HOLBORN AND FINSBURY INSTITUTION, Shepherdess Walk, N.1.
†PADDINGTON HOSPITAL, Harrow Road, W.9

†Positions at these Hospitals are for Assistant Medical Officers (Grade II). Salary £250 a year, with board, lodging, and washing, but with non-residential allowance of £150 a year in lieu for St. Charles' Hospital. Appointments for one year only and not renewable. No accommodation for married man or for a woman at any hospital where appointment is resident. In case of St. Charles' Hospital marriage terminates contract of service if a woman is appointed.

ST. ANDREW'S HOSPITAL, Bow, E.3.—Temporary Assistant Medical Officer (woman). Salary £250 a year, together with board, lodging, and washing. Appointment will be until June 20th, 1933, in first instance. Duties will include administration of anaesthesia in maternity cases. Marriage terminates contract of service.

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), County Hall, Westminster Bridge, S.E.1. Last date for receipt of applications April 14th.

Candidates should specify position or positions for which they desire to apply. Canvassing disqualifies. Further enquiries should be addressed to Medical Superintendent at the respective hospitals.

COUNTY BOROUGH OF WALSALL.

ASSISTANT MEDICAL OFFICER OF HEALTH.

Applications are invited from duly qualified and registered Medical Practitioners (male, single) for the post of Assistant Medical Officer of Health.

Salary £500 per annum, rising by £25 per annum to £700 per annum, subject to the Council's "Economy" Cut.

Statement of duties and terms and conditions of appointment and form of application, may be obtained from the undersigned. The envelope applying for the prints should be endorsed "Asst. M.O.H."

Applications should be sent to me not later than April 20th. Envelopes to be marked outside "Application *re* Asst. M.O.H."

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922.

Canvassing, directly or indirectly, will be a disqualification.

Council House, H. LEE.
Walsall. Town Clerk.
April 3rd, 1933.

LEWISHAM TREATMENT CENTRE (L.C.C.).

Applications are invited for post of AURAL SURGEON (Treatment of Tonsils and Adenoids) Attendances required: one per month inspections, and one or two per month operations (at the Woolwich In-patient centre). Applicants must have held an appointment at a Throat Hospital or have had similar special experience. Applications sent to the Chairman, The British Dental Hospital, 31, Camden Rd., N.W.1, by April 19th.

LONDON COUNTY COUNCIL.

Registered Medical Practitioners required of at least one year's standing as TEMPORARY DISTRICT MEDICAL OFFICERS at undermentioned districts.

Candidates appointed required to reside in or near district, to carry out duties prescribed by Public Assistance Order, to work under general direction of medical superintendent of hospital most conveniently situated, and to provide at own expense approved deputy during absence from any cause. In the case of a woman, marriage terminates contract of service. Remuneration and conditions subject to review.

Area I.—District J (Poplar).—Provisional salary £275 a year.
Area I.—District L (Poplar).—Provisional salary £300 a year.
Area II.—District B (Hackney).—Provisional salary £140 a year.
Area II.—District D (Hackney).—Provisional salary £140 a year.
Area II.—District E (Hackney).—Provisional salary £200 a year.
Area III.—District J (Islington).—Provisional salary £200 a year.
Area III.—District K (Islington).—Provisional salary £125 a year.
Area IV.—District D (St. Pancras).—Provisional salary £125 a year.
Area IV.—District E (St. Pancras).—Provisional salary £200 a year.
Area IV.—District G (St. Pancras).—Provisional salary £140 a year.
Area IV.—District H (St. Pancras).—Provisional salary £200 a year.
Area IV.—District J (St. Pancras).—Provisional salary £125 a year.
Area V.—District D (Fulham).—Provisional salary £200 a year.
Area VII.—District C (Lambeth). Provisional salary £125 a year.
Area VII.—District G (Battersea).—Provisional salary £140 a year.
Area VII.—District H. (Wandsworth).—Provisional salary £140 a year.
Area VII.—District M (Wandsworth).—Provisional salary £125 a year.
Area VIII.—District J (Camberwell).—Provisional salary £200 a year.
Area IX.—District B (Deptford).—Provisional salary £250 a year.
Area IX.—District E (Deptford).—Provisional salary £175 a year.
Area IX.—District G (Lewisham).—Provisional salary £135 a year.
Area IX.—District I (Lewisham).—Provisional salary £150 a year
Area X.—District C (Greenwich).—Provisional salary £200 a year.

Application forms obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), County Hall, Westminster Bridge, S.E.1, returnable by April 21st. Canvassing disqualifies.

LONDON COUNTY COUNCIL.

Registered Medical Practitioner required for position of MEDICAL OFFICER at LINDEN LODGE RESIDENTIAL SCHOOL FOR ELDER BLIND BOYS, Bolingbroke Grove, Wandsworth Common, S.W.11. Remuneration £42 14s. a year. Remuneration and conditions subject to review. Duties include attendance at the school at least once every week on a fixed day and at such other times as may be necessary. Officer must reside within easy reach. Application form, obtainable from School Medical Officer (S.D.5), County Hall, Westminster Bridge, S.E.1 (stamped addressed envelope necessary), returnable April 22nd. Canvassing disqualifies.

CITY OF BIRMINGHAM.

PUBLIC HEALTH DEPARTMENT.

LITTLE BROMWICH HOSPITAL FOR INFECTIOUS DISEASES

JUNIOR ASSISTANT MEDICAL OFFICER

Junior Assistant Medical Officer required. Candidates must be single and have held previous resident posts in General or Children's Hospitals.

Salary at the rate of £300 per annum, together with board, etc. This appointment is limited to twelve months, and is subject to one month's notice on either side. The salary and emoluments will be subject to the voluntary abatement approved by the Council in respect of its officers.

The officer appointed will be required to pay to the Council all fees, allowances, and emoluments (other than the foregoing) received by him.

It is not feasible to attend classes for Part I of the D.P.H. in conjunction with this appointment.

Forms of application may be obtained from the Medical Superintendent, Little Bromwich Hospital, Birmingham, 9, and should be returned to him on or before Monday, April 24th.

F. H. C. WILTSHIRE,
Town Clerk.

The Council House,
Birmingham.

THE ROYAL HOSPITAL, WOLVERHAMPTON.
(Incorporated under Charter.)

HOUSE SURGEON required. Duties include Orthopaedic Surgery as well as General Surgery.

The Hospital contains 300 beds, includes the usual special department, and is recognized by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice.

Candidates must be registered under the Medical Acts, and unmarried.

The appointment is for six months. Salary at the rate of £100 per annum, board, furnished rooms and laundry provided.

Applications, with copies of testimonials, to be forwarded to the undersigned.

Wolverhampton. W. H. HARPER,
April 3rd, 1933. House Governor.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

Applications are invited for the post of HOUSE PHYSICIAN. The appointment will be for six months from April 23rd, but is terminable at an earlier date by one month's written notice on either side. Salary at the rate of £130 per annum, with board, residence, and laundry. Candidates (male), who must be unmarried and duly registered, are requested to forward their applications, stating age, qualifications, etc., together with copies of not more than four testimonials, to the undersigned on or before Monday, April 17th.

W. H. HEAD, Secretary-Supt.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

The General Committee invite applications for the appointment of an HONORARY SURGEON in Charge of the Ophthalmic Department.

Applications, accompanied by sixteen copies of each of three recent testimonials, to be sent to the undersigned on or before Thursday, April 20th.

Personal canvass of the Committee is expressly forbidden.

W. H. HEAD,
March 20th, 1933. Secretary-Supt.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

The General Committee invite applications for the appointment of an HONORARY SURGEON.

Applications, accompanied by sixteen copies of each of three recent testimonials, to be sent to the undersigned on or before Thursday, April 20th.

Personal canvass of the Committee is expressly forbidden.

W. H. HEAD,
March 20th, 1933. Secretary-Supt.

STOCKTON AND THORNABY HOSPITAL, STOCKTON-ON-TEES.
(140 Beds—Three Residents.)

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER (male) for a period of at least six months. Duties to commence earliest possible. Salary £160 per annum, with board, residence, and laundry. Candidates must be duly qualified and unmarried. Applications, stating age, nationality, and experience, together with copies of three recent testimonials, to be sent to the undersigned.

J. WILKINSON, Secretary.

NORTH LONSDALE HOSPITAL, BARROW-IN-FURNESS. (152 Beds.)

RESIDENT CASUALTY OFFICER (male appointment). Applications are invited for the above resident appointment from fully qualified practitioners experienced in the administration of anaesthetics. Duties to commence at once. Salary £150 per annum, with board, residence, and laundry.

Applications, stating age, qualifications, experience, and nationality, accompanied by copies of three recent testimonials, should be sent to the Secretary as early as possible.

ROYAL NORTHERN INFIRMARY, INVERNESS. (150 Beds.)

HOUSE SURGEON (male) wanted to commence duty on May 1st. The appointment is for six months. Salary at the rate of £100 a year, with board, residence, and laundry.

Applications, stating age, qualifications, etc., with copies of recent testimonials, to be sent not later than April 15th to ROBERT GILBERT, Hon. Secretary, 20, Church Street, Inverness.

TAUNTON AND SOMERSET HOSPITAL, TAUNTON. (104 Beds.)

LADY HOUSE SURGEON required June 1st. Three Residents on Staff. Six months' appointment. Salary at the rate of £100 per annum.

Applications, with testimonials, to—
F. J. J. STACEY, Secretary.

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN,
St. Quintin Avenue, North Kensington, W.10.
(58 Beds.)

The Board of Management invite applications for the post of HONORARY ASSISTANT SURGEON, with beds. Applicants must hold the F.R.C.S.(Eng.), and the candidate appointed will be required to see Out-patients at 2 sessions a week. Applications from members of either sex, accompanied by copies of three testimonials, will be received by the Secretary at the Hospital up to Monday, May 1st.

ANCOATS HOSPITAL, MANCHESTER.

HOUSE SURGEON (General) required to commence duty on May 1st next. Appointment for six months. Salary at the rate of £100 per annum, with board, apartments, etc.

Applications, stating age, qualifications, previous experience, if any, together with copies of three recent testimonials, to be forwarded to the undersigned, not later than April 13th.

By Order of the Board,
HERBERT J. DAFFORNE,
Gen. Supt. & Secretary.

ROYAL BUCKINGHAMSHIRE HOSPITAL, AYLESBURY.

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) for six months. To commence duty on May 1st. Salary £200 per annum, with board, residence, and laundry. Candidates must be fully qualified and registered.

Applications, stating age, qualifications, and experience, with copies of not more than three testimonials, should be sent to the undersigned on or before April 18th.

M. W. BROWN, Secretary.

LIVERPOOL HAHNEMANN HOSPITAL, Hope Street. (52 Beds.)

Applications are invited for the post of RESIDENT MEDICAL OFFICER to the above Institution, which falls vacant on May 1st. Appointment is for six months, renewable. Salary at the rate of £100 per annum. Duties include some casualties, occasional anaesthetics, and assisting at operations, general, gynaecological, aural, and ophthalmic.

Apply, stating age, sex, nationality, and previous experience, and enclosing copies of recent testimonials, to the Registrar before April 24th.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE HEART AND LUNGS,
Victoria Park, E.2.

The Committee of Management are desirous of filling a vacancy in a post of PHYSICIAN to In-patients. In the event of an Out-patient Physician being appointed a vacancy will occur for an Out-patient Physician, and applications are provisionally invited for that post also.

Applications should reach the Secretary at the Hospital not later than Monday, May 1st.

GEORGE WATTS, Secretary.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN,
Waterloo Road, S.E.1.

There will be a vacancy on May 1st, for a HOUSE PHYSICIAN (male) at the above Hospital. The appointment is in the first instance for a period of six months. Salary at the rate of £100 per annum, with board and residence. Applications, with copies of testimonials, should be forwarded not later than Thursday morning, April 20th, to the Secretary at the above address, from whom further particulars can be obtained.

SEAMEN'S HOSPITAL SOCIETY,
Greenwich.

RESIDENT MEDICAL OFFICER required at ALBERT DOCK HOSPITAL, Connaught Road, E.16, for six months from May 1st. Salary £110 per annum and a proportion of fees, with board, residence, and washing. Candidates must be male. Applications, with copies of three testimonials, to be sent in by April 11th to the undersigned.

Greenwich. R. E. V. BAX,
March 27th, 1933. Secretary.

ANCOATS HOSPITAL CONVALESCENT HOME, GREAT WARFORD, ALDERLEY EDGE.

Applications are invited for the post of HONORARY VISITING PHYSICIAN to the above. Honorarium £50 per annum. Applications, stating age, qualifications, etc., to be in by April 19th next, accompanied by not more than three recent testimonials, and to be forwarded to the undersigned, from whom all particulars can be obtained.

By Order of the Board,
HERBERT J. DAFFORNE,
Gen. Supt. & Secretary.

TYNEMOUTH VICTORIA JUBILEE INFIRMARY.

HOUSE SURGEON (male) required May 1st. Applicants must be doubly qualified and registered. Salary £150 per annum, with board, residence, and laundry.

Applications, stating age and other essential particulars, and accompanied by copies of recent testimonials, to be addressed to the undersigned, from whom all particulars may be obtained.

The Hospital has two resident House Surgeons and contains 80 beds and cots, and X-ray department, and an Out-patient department where accident cases are received.

CHARLES ROWELL,
Assistant Secretary.
1, Northumberland Place, North Shields.

BETHLEM HOSPITAL, MONKS' ORCHARD, Eden Park, Beckenham, KENT.

Wanted, ONE RESIDENT HOUSE PHYSICIAN (Gentleman, unmarried), recently qualified in Medicine and Surgery.

The term of residence is for six months from May 1st, apartments, complete board, and laundry being provided, and an honorarium at the rate of £150 per annum will be paid for the first three months, rising, if commendable service be given, to the rate of £200 per annum for the second period of three months.

Written applications, with testimonials, are to be forwarded to the Physician-Superintendent at the Hospital, from whom copies of the duties can be obtained.

THE STAFFORDSHIRE GENERAL INFIRMARY, STAFFORD.

HOUSE PHYSICIAN required. Salary £150 per annum and board residence. The appointment must be held for at least six months and the duties will include those of Casualty Officer. The selected candidate will be required to take up duties as early as possible. The Hospital has 100 beds and there are two Residents. Applications, stating age, accompanied by copies of three recent testimonials as to qualifications and experience, should be forwarded to the undersigned forthwith.

Stafford. A. E. COLLINS,
April 5th, 1933. Secretary.

WEST SUFFOLK GENERAL HOSPITAL.
(108 Beds.)

SENIOR RESIDENT MEDICAL OFFICER wanted May 1st for surgical beds. Applicants must be fully qualified and registered, and should have had experience and have held a Hospital appointment. Salary £180 per annum, with board, residence, and laundry.

Applications, with copies of recent testimonials, to be sent to the undersigned.

E. E. HARDWICKE,
March 31st, 1933. Secretary.

GRIMSBY AND DISTRICT HOSPITAL.
(125 Beds.)

Applications are invited for the post of JUNIOR HOUSE SURGEON. Salary £150 per annum, with board and residence. Applicants must be registered and hold a Medical and Surgical qualification. Previous Hospital appointment experience desirable.

Applications, stating age, qualifications, and [illegible] not more than three recent [illegible] arded at once to the

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MACCLESFIELD GENERAL INFIRMARY.
(General Hospital—100 Beds.)

Applications are invited for the appointment of SECOND HOUSE SURGEON (male) for a period of six months. Salary £150 per annum, with board and residence. Candidates must have had experience in administration of Anaesthetics.

Applications, with copies of three testimonials, should be sent to the undersigned at once.

A. E. HANRAHAN, Secretary.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.2.

REFRACTION OFFICER required for one session weekly (Wed. morning) of approximately 2½ hours. Salary £1 16s. per session. Applications, giving qualifications and details of experience should be sent to the undersigned as soon as possible.

C. H. BESSELL, Secretary.
March 30th, 1933.

GLENGALL HOSPITAL FOR MENTAL DISEASES, AYR.

Wanted, ASSISTANT MEDICAL OFFICER (Male). General Practice or Hospital experience essential. Salary £300 per annum, [illegible] temporary reduction of 5 per cent. and [illegible] tribution to Superannuation Fund, with board, lodging, and laundry. Applications, with [illegible] of testimonials, to Dr. MCRAE.

centres throughout the Empire It is hoped that these subjects will find place in local and national propaganda programmes for treatment in lectures discussions articles in the Press and in sermons A conference on maternity and child welfare organized by the National Association for the Prevention of Infant Mortality is to be held at the Friends House Euston Road N W on July 5th to 7th Mr A M Hendry assistant surgeon to the Shropshire Orthopaedic Hospital will speak on team work in the discovery of the cripple Dr W A Bullough county medical officer of health for Essex will discuss the possibilities of propaganda in rural areas Dr E H T Nash medical officer of health for Heston and Isleworth will indicate ways and means of propaganda with special reference to immunization and Dr Harold Waller will deal with the diet of the child after the period of milk feeding In connexion with this conference visits are being arranged to child welfare institutions of different kinds During the whole week there will be displays of propaganda films in London Further details of these and other information may be obtained from the offices of the National Baby Week Council 117 Piccadilly W

Scotland

Dundee Royal Infirmary

The annual meeting of Dundee Royal Infirmary was held on June 12th Mr D A Anderson presiding The main feature of the meeting was the statement by the chairman that the reserve funds of the institution were now exhausted through the writing-off for some years past of the deficits in the annual accounts The hospital had been working at a loss of £10 000 per annum and this gulf between income and expenditure must be bridged if the hospital was to continue to provide the same service as before An appeal had been made last March both to employed persons and to employers of labour for the organization of regular weekly or monthly contributions This appeal had met with a response in a few instances but in the majority of cases nothing had been done so far There was still time before the end of the financial year to rescue the Royal Infirmary from this position but unless either employers or employees rose to the occasion the services of the hospital would have to be curtailed Something definite and regular in the way of income was essential in the future

Maternal Mortality

The sixteenth annual meeting of the Scottish Midwives Association was held at Hamilton on June 10th when a civic reception was given by Provost Andrew Brown and the magistrates Mrs Millar Glasgow occupied the chair and Dr J Hume Paterson medical officer of health for the county of Lanark delivered an address in the course of which he said that measures were being taken by local authorities to frustrate attempts at midwifery work by unqualified persons In Lanarkshire such unauthorized practice had almost ceased It was a tragic feature of the social life of the country that despite the recent advances in the attention which was given to the health of expectant and nursing mothers the maternal death rate had shown practically no improvement There had however been a decline in 1931 which was very satisfactory An analysis of 248 maternal deaths in Edinburgh during the years 1924–8 had shown that the death rate among mothers who had had no prenatal supervision was twice as great as among those who had received this supervision

Ireland

Public Services (Temporary Economies) Bill

In the recent debate in the Dail on the Public Services (Temporary Economies) Bill Mr P McGilligan (National University) moved an amendment to exclude medical officers in the services of local authorities from the scope of the Bill There could he said be no question that this measure was intended to apply to medical officers or that as drafted it carried out that intention The medical men affected by the Bill had met to consider their present position under the local authorities and the adverse change which would be made if the measure went through The meeting had been given a certain amount of publicity in the Press and a memorandum had been circulated he thought to all deputies of the House In that memorandum they dealt with the various sections of the medical profession attached to local authorities the county medical officers of health and their assistants medical officers in the mental hospital service county hospital surgeons and finally the Poor Law medical officers or as they were better known the dispensary medical officers He had asked previously whether it was intended to cut the fees for the registration of births deaths and marriages and the fees in relation to the Vaccination Acts the only satisfaction he had received was to be told that these fees were to be cut though there was some dispute as to whether they would be cut under Part II or Part III of the Bill However the doctors made their case apart from the distinction of the groups into which they divided themselves They said that their position differed from that of other people affected by the Bill such as law civil servants Civic Guards school teachers and so on They were members of a learned profession—that is they had been required to spend many years of study in order to equip themselves even technically for the posts they held These posts required rather specialized qualifications and the ordinary doctor who did not become qualified until he was somewhere between 22 and 23 years of age could not get any experience which would be counted sufficient for them In addition he had to have considerable experience of a post-graduate type and it was now generally required that those appointed to public positions should have the Diploma in Public Health That again entailed special study and meant that a medical man had to attain that position in which he could leave his practice to study in Dublin or in one of the other university colleges for the diploma It was no small thing to ask a young man who had just entered the profession to do this Not only was this diploma necessary but the struggle for public appointments was so great that applicants required also to have had considerable experience in actual public health work This meant a visit to England or the Continent to acquire an experience in some way related to the work or the activities they would afterwards have to perform and a consequent postponement of the date on which they could be ready to make application Moreover it was unusual for a medical man to succeed on his first application The result was that when he did secure an appointment he entered the public service at a much later age than say lay members of the civil service and the period to which he had to look forward for the purpose of making savings or securing a pension was very short This made it all the more necessary that he should save substantially before taking up any of these posts

The medical teachers in the university—and Mr McGilligan presumed that they came under this also—had to be specially commented upon It had been recognized everywhere that their salaries had been cut as far as

APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh).

(a) British Islands.

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH**
EBBW VALE, MON. *(Workmen's Medical Society.)*	MARDY, GLAMORGAN. *(Workmen's Medical Scheme.)*	KENT COUNTY COUNCIL. LENHAM SANATORIUM. *(Male Assistant Medical Officer.)* FARNBOROUGH INSTITUTION HOSPITAL. *(Resident Assistant Medical Officer.)*
GILFACH GOCH, GLAMORGAN. *(Workmen's Medical Scheme.)*	NEATH AND DISTRICT *(Medical Aid Association.)*	WORCESTER COUNTY AND CITY MENTAL HOSPITAL. *(Junior Assistant Medical Officer.)*
LLWYNPIA, CLYDACH VALE, PENYGRAIG, GLAMORGAN. *(Workmen's Medical Scheme.)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association.)*	LLANTRISANT AND LLANTWIT FARDRE RURAL DISTRICT COUNCIL. (1) *Medical Officer of Health (part-time.)* (2) *Medical Officer (woman—part-time) for Maternity and Child Welfare.*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer.)*	OGMORE VALLEY, GLAMORGAN. *(Wyndham Colliery Medical Aid Society.)* *(Workmen's Medical Scheme.)*	

(b) Overseas.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. G. HUNTER (Medical Secretary, New South Wales Branch), 135, Macquarie St., Sydney, N.S.W.	**QUEENSLAND.** *(Brisbane Associated Friendly Societies Institute.)*	The Hon. Sec., Queensland Branch, British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	**WELLINGTON, NEW ZEALAND.** *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec., New Zealand Branch), British Medical Association, P.O. Box 156, Wellington, New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch, British Medical Association, Medical Society Hall, East Melbourne, Victoria.	*(Toowoomba Associated Friendly Societies, Medical Institute, Toowoomba.)*		**WESTERN AUSTRALIA.** *(Contract and Lodge Practices.)*	Hon. Sec., Western Australian Branch, British Medical Association, No. 6, Bank of N.S.W. Chambers, St. George's Terr., Perth, Western Australia.

April 5th, 1933. By Order of the Council. G. C. ANDERSON, Medical Secretary.

WEST LONDON HOSPITAL, Hammersmith, W.6. (234 Beds.)

Required, ONE NON-RESIDENT HOUSE OFFICER (part-time) for Children's Department for six months from May 1st next, subject to one month's notice on either side. Applicants may be male or female. Salary at the rate of £150 per annum. Candidates must be registered under the Medical Act and have held a resident appointment at a Children's Hospital or in the Children's Department of a General Hospital.

Applications and copies of testimonials in quadruplicate (which must be made on printed forms obtained from me) must reach me not later than first post on Friday, April 21st. Selected candidates will be required to call upon such members of the Medical Staff as directed, to be in attendance at a Meeting of the Medical Council on Friday, April 28th, at 4.30 p.m. and the House Committee Meeting at 5 p.m. the same day, when the appointment will be made.

H. A. MADGE, Secretary.

GENERAL HOSPITAL, NOTTINGHAM. (386 Beds.)

A HOUSE SURGEON is required at the above Institution. The appointment is *for six months* with salary at the rate of £150 a year, with board, residence, and laundry. Candidates, who must have had previous Hospital experience, are desired to send applications and full particulars as to age, qualifications, and experience, together with copies of testimonials, to the undersigned not later than Wednesday, *April 19th.*

The appointment will be made on Wednesday, April 26th. Duties to commence on May 6th.

PETER M. MACCOLL, House Governor & Sec.

CARDIGANSHIRE GENERAL HOSPITAL, ABERYSTWYTH. (40 Beds.)

HOUSE SURGEON required (male). Salary £200 per annum, with board, residence, and laundry.

Candidates must be fully qualified and registered, and must be experienced *Anaesthetist*; the duties will include lectures to probationers. Knowledge of Welsh desirable.

Applications, stating age and qualifications, together with three recent testimonials, to be sent by Monday, April 17th, to the Secretary, Cardiganshire General Hospital, Aberystwyth.

CITY OF LONDON *HOSPITAL FOR DISEASES* OF THE HEART AND LUNGS, Victoria Park, E.2. ('Bus, Tram, and Rail, Cambridge Heath, L. & N.E. Railway.)

A vacancy for a HOUSE PHYSICIAN (male) will occur on May 1st. Six months' appointment. Salary at the rate of £100 per annum. Board, residence, and laundry provided.

Applications, with copies of three testimonials, should be sent to the undersigned on or before Friday, April 21st.

GEORGE WATTS, Secretary.

ROYAL LANCASTER INFIRMARY.

SENIOR and JUNIOR HOUSE SURGEONS (male) wanted for a period of six months commencing May 1st.

Salary £175 and £130 per annum respectively, with board, residence, and laundry.

Applications from British graduates, stating age, experience, *and qualifications, together* with copies of testimonials, should be sent not later than April 18th, to Secretary, Medical Committee.

THE CANCER HOSPITAL (FREE) (Incorporated under Royal Charter), Fulham Road, London, S.W.3.

The Committee are prepared to receive applications for the post of CLINICAL PATHOLOGIST to the Hospital.

Experience in *Clinical Pathology* is essential. Salary £850 per annum.

The appointment is subject to rules, a copy of which can be obtained from the Secretary. Applications, accompanied by copies of not more than three recent testimonials, to be sent to the Secretary not later than Thursday, April 13th.

The Assistant Pathologist is a candidate for the post, and in the event of her being appointed a vacancy for an Assistant Pathologist will occur, for which applications are now invited. The salary attached to this post is £500 per annum.

HOSPITAL *FOR CONSUMPTION AND* DISEASES OF THE CHEST, Brompton, S.W.3.

The Committee of Management invite applications for the post of ASSISTANT SURGEON for which there are two vacancies.

Candidates must be Fellows of the Royal College of Surgeons of England, and hold the appointment of Surgeon or Assistant Surgeon at a General Hospital in London.

Applications, with copies of testimonials, must reach the undersigned from whom further particulars of the post can be obtained, not later than Saturday, April 22nd.

FREDERICK WOOD, March 24th, 1933. Secretary.

(Appointments continued on p. 50.)

they could be The universities, whose financial resources had been somewhat cramped, had not been liberal towards anybody who could be described as a part-time teacher, and medical men were among that group It was not possible to save out of what they received from the university These men needed a certain amount of leisure They nearly all had the work of an outside practice to add to that of teaching and examining If without adequate leisure neither their teaching nor their professional work would be up to the standard expected of them If the emoluments from university chairs were insufficient to pay a professional man for the loss of his time the best men would not offer themselves for appointment, and those instructing the youth of the country would not be those from whom the best medical knowledge could be derived The county medical officers of health constituted one of the newest of the medical services It was definitely laid down with regard to these posts that in order to be qualified a man must hold a D P H after completing a two years' course The only place where he could get the necessary training in administrative work was still England, or the Continent Having secured an appointment in England, he was induced to resign, surrendering promotion chances and pension rights, and to take up a position in the Free State, where the salaries were much smaller, and where, it could also be said, the work was harder in the sense that there were probably more cases brought under a doctor's notice It could be readily seen why these salaries were fixed on a low scale Anybody who looked back on the time, not so long ago, when these positions were established would remember that the county boards of health did not, at the start, favourably receive them In order to gild the pill as much as possible for the local authorities who had to foot the bill the salaries were scaled down in an extraordinary way The officers who first took up the appointments were told that if they were successful in their work, and if they succeeded in impressing on the minds of the people in the locality that their work was of benefit, then they could count upon a betterment of their conditions and particularly, upon a rise in their pay It was now proposed to have the salaries of these men cut still further When the salary was first fixed there was an association of county medical officers of health After meeting and discussing the matter they passed a recommendation to the effect that £800 should be regarded as the minimum at which any one of them should take up the work The scale was then fixed The county medical officers of health had assistants, and whatever was said about the medical officers themselves applied with much greater force to the assistants Their present salaries were far too small to permit any deduction The work they were engaged on was mainly connected with tuberculosis and the inspection of school children and school clinics work which had always been regarded as of the utmost importance The assistants, however, were paid at scandalously low rates, which it was proposed further to reduce Those in the mental hospital service had been suffering from a peculiar disadvantage for years past Their salaries had always been regarded as very low in comparison with those paid in England and the allowances they received which counted for pension purposes, were also rated very much lower The people who secured those positions did so at a relatively late period The peculiarity of the new situation was that under the Local Appointments Commissioners it was a rarity—if, indeed, it had ever happened—for one of the senior medical officers in the asylum to secure any of the better appointments Invariably the younger men obtained the posts and the older men were left to follow along as before The surgeons in county hospitals were also paid on a very low scale for years they had been agitating for a betterment in their conditions Their grievance had been that they were supposed to be specialists in certain work, and yet they received rates which would be offered to very junior people going into practice for the first time These county hospital surgeons had to be expert so far as surgery of the eye, the ear, the nose, and throat was concerned, they had also to be expert in abdominal surgery In recent years they had been asked to undertake x-ray and pathological work Notwithstanding all this, there had not been any change for the better in their salaries Now it was proposed to reduce their poor emoluments In regard to the salaries of dispensary doctors these had been the subject, he supposed, of meeting after meeting, agitation after agitation, and of many deputations to the Government The salary started at £175, rising to a maximum of £300, in some instances it started a little higher, and in exceptional cases it rose to £350 a year, but that maximum included out of pocket expenses As far as the present depression was concerned doctors had got to the point of admitting that they would rather not get a call from a private patient Even Ministers themselves knew that there was a special case to be made for dispensary medical officers

Professor J M O'Sullivan (Kerry) said he wanted to stress one particular case put forward by Deputy McGilligan—the case of the dispensary doctor Anyone connected with the establishment of the public health services knew that the salaries of the county medical officers of health were fixed as low as possible owing to the great difficulty in getting a number of county councils to have them at all They were really calling upon men to do very expert work and not paying them properly He asked the House to consider how these dispensary doctors were hit at present, in the first place by the increased income tax, and in the second because they were getting no payment for private practice

The amendment was defeated

CORRESPONDENCE

Unqualified Medical Practice and the Medical Curriculum

SIR,—Certain recent legal decisions and dicta seem to foreshadow a new orientation of unqualified to qualified medical practice, the tendency of which is to reduce to vanishing point the differentiation between "registered" and "unregistered" medical practitioners In the present state of the law any person, whether he has had any professional training or not, can assume the titles of "physician," "surgeon," "medical practitioner," "doctor," and can practise medicine with impunity so long as he does not claim to be a "*registered* medical practitioner" This single restriction on his freedom, meagre as it is, is rendered largely nugatory by the circumstance that considerable sections of persons although "unqualified" now claim to be "registered" the 'registration" being by unofficial corporations with no statutory status such as is possessed by the body dealing with "registered medical practitioners"

The object of the Medical Acts (which was not to prevent unqualified practice but to distinguish clearly in the interests of the public those who had had an accredited professional training from those who had not) has been thus practically defeated It follows inevitably from these facts that in the public mind there is very little distinction between 'registered" and "unregistered" medical practitioners the prejudice being often in favour of the latter group But there is notwithstanding this prevalent feeling still a very real and important difference To secure the lowest registrable medical qualifica

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WANTED IMMEDIATELY, NEAR LONDON or S. of England, by M.B., B.Ch., ex H.P., H.S., some G.P., ASSISTANTSHIP (three months), with view, in good-class Practice. Small panel. Suburb or country. Scope for surgery. — Address, No. 2224, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — ASSISTANTSHIP OR LOCUM engagement (with or without view) by M.R.C.P., British Indian, young, energetic, abstainer, exp. G.P. and panel. Drive car. Refs. and testimonials. Free now.—Address, No. 2302, B.M.A. House, Tavistock Sq., W.C.1.

WANTED. — ASSISTANT WITH HOSPITAL experience, as in Lumbar punctures, refractions, etc. 6½ guineas weekly (indoor). No clubs. If with view, state available capital. —Address, with height, photo., No. 2248, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — IN OR NEAR LONDON, ASSISTANTSHIP, with definite view Partnership, by M.B., Scot, aged 28. Good Hospital and G.P. experience, well received. Own car. Free now, London.—Address, No. 2236, B.M.A. House, Tavistock Square, W.C.1.

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WANTED IMMEDIATELY FOR COLLIERY and panel Practice near Newcastle, unmarried, male, outdoor ASSISTANT, British. Salary £400 per annum, furnished house, coal, light, and attendance. — Address, No. 2220, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — OUTDOOR ASSISTANT, Country Town (Cheshire), male, single, British or Irish. Saloon car for use in Practice. Dispenser kept. Usual bond. Salary according to experience. — Address, No. 2227, B.M.A. House, Tavistock Square, W.C.1.

WANTED, ASSISTANTSHIP BY M.B., CH.B. (Glasgow), age 27, ex H.S., H.P., well-experienced G.P. Excellent testimonials. Free now. — Address, No. 2226, B.M.A. House, Tavistock Square, W.C.1.

WANTED IMMEDIATELY. — INDOOR AND outdoor ASSISTANTS for Town and Country Practices, with and without view. Good salaries. State full particulars.—BRITISH MEDICAL BUREAU, 33, Cross St., Manchester, 2.

WANTED.—INDOOR MALE ASSISTANT IN mixed Practice in Liverpool. Salary £300 p.a. British essential. Suitable for graduate studying for higher degree.—Address, No 2245, B.M.A. House, Tavistock Sq., W.C.1.

WANTED IN MAY, INDOOR ASSISTANT, male, single, for general Practice in South-West Lancashire. Dispenser kept. Salary £300 p.a. Allowance for car.—Address, No. 2222, B.M.A. House, Tavistock Square, W.C.1.

WANTED. — MARRIED ASSISTANT, JULY, British, under 35. Salary £400—£450, unfurnished house. Car allowance or car provided. South coast.—Address, No. 2239, B.M.A. House, Tavistock Square, W.C.1.

M.B., B.S.LOND., SEEKS ASSISTANTSHIP, preferably with view, ex H.P. and C.O., A.R.M.O., H.S., Children, exp. G.P., aet. 25 yrs. Excellent test. London suburb or small provincial town. — Address, No. 2244, B.M.A. House, Tavistock Square, W.C.1.

ASSISTANT, AFTER EASTER, IN MIXED West Country Suburban Practice, male, single, Protestant. Motor cycle provided. Salary £400, outdoor. — Address, No. 2241, B.M.A. House, Tavistock Square, W.C.1.

PATHOLOGICAL AND BACTERIOLOGICAL LABORATORY ASSSITANTS ASSOCIATION.—Pathologists and Bacteriologists requiring SKILLED CERTIFICATED LABORATORY ASSISTANTS are invited to communicate with H. GOODING, Hon. Sec., "Moelfre," 10, Holbeck Grove, Victoria Park, Manchester. No fees.

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WANTED. — PARTNER FOR WEST END private Practice, gross receipts about £3,000 per annum. Guaranteed net income of £900 per annum. Expenses moderate. Premium £2,400 cash. Banker's reference. M.R.C.P. advisable.—Address, No. 2228, B.M.A. House, Tavistock Square, W.C.1.

WANTED BY M.B., CH.B.EDIN (1922), married, aged 33, PARTNERSHIP. £1,000 minimum, with substantial panel, preferably in Southern half of England. Disposing of own practice in Yorkshire. — Address, No. 2225, B.M.A. House, Tavistock Square, W.C.1.

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tion students (1) must give evidence of a general education of matriculation standard (2) must spend a minimum period of five and a half to six years in subjects of professional study prescribed and regulated by a statutory body at institutions sanctioned by an impartial inspectorate (3) must pass a series of examinations which are also inspected and supervised by the same statutory body the requirements of which progressively increase with the inevitable result that the duration of preparation also rises None of these conditions obtain in the case of unregistered practitioners The expense of this prolonged preparation for registration has become so onerous that for the past twenty five years the State has been called upon to subsidize ever more heavily the medical education which leads to registration The grant made by the State for this medical education now bears a proportion to its actual cost which varies from an average of 40 per cent at a general medical school to 80 per cent or even more in the case of some special schools The aggregate public expenditure thus incurred is a very serious and growing burden upon the community already so grossly overtaxed Furthermore the cost in money and effort to the individual student seeking to become a registered medical practitioner must be added to the ever mounting sacrifice which registration entails

If then the ultimate product of this very expensive education differs so little (in public estimation at any rate) from the product of methods of preparation which may not involve a tithe of that cost in money and effort it may not perhaps be worth while either on the part of the public or of the profession to persist in that production In point of fact the dissatisfaction among both teachers and students with the curriculum now required for registration has become acute At a very fully attended meeting of St Mary s Hospital Medical Society held on May 19th 1932 the following resolution was passed by a large majority That the present system of medical education does not produce an efficient practitioner Again at a recent meeting of the Students Union of Edinburgh University after a discussion opened by Dr Chalmers Watson a still more sweeping resolution was passed with only seven dissentients in a very large assembly

That this house places on record its opinion that the present system of medical education in this country is unsatisfactory In its opinion important changes in the curriculum are essential whereby more facilities for instruction in practical medicine are available and more assistance given in the principles and practices of preventive medicine The time required for this additional teaching can in its opinion be obtained by a judicious modification of the teaching in the earlier scientific subjects with some revision of the time and attention devoted to the teaching in the specials department of medicine and surgery —*The Student* June 2nd 1933

At the present moment a committee initiated by the University of London and comprising representatives from all the qualifying bodies which examine students educated in the London medical schools is sitting to offer suggestions for dealing with that dissatisfaction In an admirable address given at St George s Hospital last October by Dr Le Fleming Chairman of the Representative Body of the British Medical Association a very weighty plea was made for a quite different curriculum suited to the needs of general practitioners who form such an enormously large majority of the profession It is clear that a movement in the direction of establishing a much shorter and simpler curriculum better designed for fitting the average general practitioner for the work he has to do than the present overloaded course which would seem to have as its goal the production of specialists rather than of general practitioners is gaining ground rapidly and it is significant that the British Medical Association has instituted its own committee for investigating this question from the point of view of the general practitioner I suggest that in this movement may be found a possible solution of the present position unsatisfactory alike to registered and to the better class of unregistered practitioners

It must surely be obvious that any person claiming to treat disease and to be paid for doing so should be required to have had some training the value and scope of which can be attested by an impartial inspectorate operating in this country [The Osteopaths Bill at present before Parliament seeks to put on an equal footing with British qualifications foreign courses of study and foreign diplomas the standard of which is incapable of assessment in this country] That essential training must provide some acquaintance with the functions and framework of the body some experience of disease as an entity some initiation into the principles of preventive medicine and public health work wholly neglected by the present curriculum some expert knowledge of how to use material required in medical and surgical treatment Such preparation would probably call for something like four years study tested by examinations of an appreciably more restricted scope than is enforced at present for the minimal registrable qualification and should be compulsory for *all* persons desiring to practise medicine or surgery whether proceeding to registration or not This minimal training would be sufficient in the opinion of many expert authorities to afford a safe entrance upon the general practice of medicine and surgery and should be awarded registration under the Medical Acts I have sketched in outline the general principles of such a curriculum in an address given last October and published in the *Journal of State Medicine* in February 1933 The more ambitious man who wished to take a university degree in medicine or to qualify himself for any particular specialism or for research work or for holding an appointment at a teaching hospital would follow further courses of study as a post graduate student The complexity of modern medicine is such that it is quite impossible any longer to pursue the ideal hitherto seemingly cherished by medical schools and examining bodies that a student before qualification must possess some knowledge of every branch of medicine and surgery both general and special Under the present dispensation and even with a constantly increased period of study all that can be imparted is a very inadequate smattering of any particular item and the knowledge of the three essential subjects for qualification—general medicine general surgery and midwifery—has as examiners are everywhere complaining also become dangerously superficial

Whatever may be the solution ultimately adopted I hope I have made it clear that it is high time in the interests both of the public and of the profession to overhaul our present practice —I am etc

E GRAHAM LITTLE

House of Commons June 9th

Transitory Arthritis of the Hip in Children

SIR —Mr R W Butler s interesting paper in your issue of June 3rd (p 951) is of special value in drawing attention to the large proportion of non tuberculous affections of the hip joint in childhood as compared with the number of true tuberculous cases The pathology of the type of case aptly termed by Mr Butler observation hip is obscure as suggested by him it is probably that such cases occur as the result of several diverse pathological processes Of recent years I have been led to believe that some of the cases are a sequel of a mild and aberrant attack of encephalitis lethargica These have occurred with greater frequency at periods when epidemics of this has been prevalent and in several of my cases there has been a history of disturbances of sleep alteration of

disposition, and the like The local symptoms have been marked by muscular spasm in the neighbourhood of the hip sometimes associated with a spasmodic posture of the lower part of the spine resembling hysteria I notice that two of Mr Butler's cases presented hysterical postures In my cases the posture was more consistent than is usual in hysteria, in one case definite mental changes subsequently showed themselves Other special features were abduction or inversion of the hip-joint greatly disproportionate to the severity of the other symptoms

It is difficult to form a definite opinion as to the part played by encephalitis in these cases, because the acute phase of that disease in young subjects may be in the highest degree insidious, and may even pass unnoticed It would therefore appear desirable that in all cases of "observation hip" careful inquiry should be made as to preceding symptoms, such as disturbance of sleep, transient diplopia, clonic movements, or alteration in disposition —I am, etc,

Sheffield June 15th R G ABERCROMBIE, M D

"New Treatments for Old"

SIR —I should like to endorse very heartily the sentiments of the letter written by Dr W F Lloyd (June 10th p 1024) Being a general practitioner of some twenty-seven years' standing, and during that period having tried very many new drugs for the ever-recurring everyday ailments, I have learnt a wholesome spirit of scepticism, but that does not deter me from welcoming some of these which have rendered me Trojan service Among the latter are two whose merits are now under discussion—namely antibacsyn or its equivalent edenwil, and S U P 36 We should, of course, keep careful case records and statistics but even these may be misleading in epidemics such as influenza, which vary so much in severity We do, however, accumulate evidence of the value of a remedy—which to my mind is more convincing than statistics—from certain individual cases, that is, patients who have also acquired a wholesome scepticism from the recurring nature of their maladies May I give an example of this type of evidence

A woman of 45 stout and slightly inclined to be glycos uric has been attended by me for many years Every spring she is afflicted by carbuncles on the back which usually keep her in bed for about three weeks I have tried all the usual treatments and up to three years ago had most success with injections of manganese butyrate For the last three years I have given injections of edenwil or antibacsyn She never calls me in until the carbuncle is well developed but not discharging and her temperature about 101° F She now insists on having this remedy and tells me that after an injection of 2 c cm in the morning she always applies a double dressing that night knowing that there will be a very copious discharge The temperature will be normal in the morning, and her time of recovery is now limited to one week from the time of the first injection Neither the patient nor I have any doubt about the efficacy of the drug in her case The local treatment has always been the same—namely ung hyd nit dil There is but little scope for faith cure in this type of case I have never had to incise a carbuncle or boil since using this treatment and must have employed it in scores of cases also recurrences are very rare if three doses have been given,

Then again, with another of these remedies so much mistrusted by Lord Horder—S U P 36 After a trial of over four years this seems to me invaluable in certain cases often of a dangerous character The firm producing the drug complained some years ago that it was brought into disrepute by practitioners who used it in conditions for which it was unsuitable While no panacea, to my mind it is invaluable in certain cases Some individuals are refractory to it, but to these it does no harm and I hope gradually to recognize the types which do not respond It is invaluable in all bronchopneumonias of children, and will never fail to produce the measles rash in a case where it is sometimes desirable to do so—that is, if the child is really ill, with a high temperature, is bronchial, and the rash delayed The whole condition is wonderfully improved twenty hours later at most

With influenza we can again sometimes get the evidence from the patient himself There is the class of patient who gets influenza regularly every year throws it off with difficulty, and remains feeble and often depressed for some time afterwards After treatment with S U P 36, given early in the case, many of these patients have volunteered the information that the after effects of their attack, and especially the depression, have been much lessened One does like to have a reason for the faith that is in one, and from this point of view I have studied three volumes of McDonagh's work *The Nature of Disease*, and tried to understand the theory of the action of the S U P 's and other remedies This proves very interesting, but mainly beyond my grasp

We general practitioners get very tired of treating these common maladies with the same old remedies, which we know to be only palliative *Plus ça change plus ça reste la même chose* Intelligent patients are fully aware of this, and many treat themselves for recurring troubles, using the prescriptions we have given them for years —I am, etc,

Oxford June 10th D C NASMYTH

SIR,—I am surprised at the depth and extent of the therapeutic pessimism displayed in this correspondence so far For Dr Lloyd and those who think with him one can only "shed a bitter tear" and marvel at their courage in taking any food to appease their hunger when "the constitution of the molecules of proteins, hormones, vitamins etc, is so obscure"

Dr Julian's letter to-day is of a different class He has studied the working of the mind He has also apparently studied our profession, and come to the simple conclusion that we are all gullible fools For he would have us believe that the "master key" in the treatment of influenza and furunculosis is suggestion Now my mother has told me that when a child her warts were charmed away by a genial uncle, but I am perfectly sure that if Dr Julian had a bad attack of influenza, or a boil on the buttock, he would need something stronger than charms and suggestion before he felt that his condition had been adequately treated

I must confess that there seems something strange in the implications of Dr Julian's letter that I, who have been entranced for hours watching and hearing the great "J J" lecture in the Cavendish Laboratory, who have sat at the feet of both Allbutt and Rolleston, that I and thousands like me should be considered absolutely ignorant of the need of controls, utterly devoid of the critical faculty, lacking even a modicum of common sense Such an implication, I say, seems strange, it makes nonsense of university and medical training, just as—for the matter of that—Dr Julian's letter makes nonsense of most of medical precept and practice To become a G P does not necessarily mean to become a general paralytic In spite of the paralysing effect of festoons of panel and other red tape, of little intellectual society, and still less leisure, there are practitioners who try to keep up with new work, and try to add something to medical science as well as relieve the sufferings of mankind Like many other practitioners, I have women patients who have been relieved of a "wind in the bowels" only to find it has become a "wind in the head" or the toe, but I have never yet heard of an eczema being "driven inwardly" and causing nephritis or myocarditis Apparently we don't see these things in the country

I will however, with your permission relate a little story It is not intended to be convincing but it is at least true On Christmas Day three years ago I woke up

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APPOINTMENTS.—Contd.

CITY OF PLYMOUTH.

ASSISTANT RESIDENT MEDICAL OFFICER.

Applications are invited from duly qualified and registered male medical practitioners for the post of Resident Medical Officer at the City Hospital, Plymouth—a General Hospital of 577 beds.

The person appointed will work under the control of the Medical Superintendent.

The appointment will be for twelve months at a salary of £200 per annum (subject to a temporary reduction of 7½ per cent.) and quarters, food, etc., will be provided. The appointment will be terminable by one month's notice on either side.

Forms of application will not be provided, but candidates should state their age, their previous experience, and present appointment, if any. Canvassing will disqualify.

Applications, endorsed "Resident Medical Officer," together with copies of three recent testimonials, must be received by the undersigned by first post Wednesday, April 19th.

T. PEIRSON, M.D., M.R.C.S., D.P.H., etc.,
Town Hall, Medical Officer of Health.
Stonehouse, Plymouth.

NEWCASTLE-UPON-TYNE EDUCATION COMMITTEE.

APPOINTMENT OF ASSISTANT SCHOOL MEDICAL OFFICER.

Applications are invited for an appointment as full-time Assistant School Medical Officer (man or woman). Salary £500 per annum, rising by £25 per annum to a maximum of £700 per annum in accordance with the national scale. Applicants should have had at least three years' experience in the practice of their profession subsequent to obtaining their qualifications. Special experience in the administration of anaesthetics is essential.

Form of application and particulars of the appointment may be obtained by sending a stamped addressed foolscap envelope to the Director of Education, Education Office, Northumberland Road, Newcastle-upon-Tyne, 2. Applications will be received up to and including April 22nd.

QUEEN CHARLOTTE'S MATERNITY HOSPITAL, Marylebone Road, N.W.1.

APPOINTMENT OF REGISTRAR.

The Committee of Management invite applications for the appointment of Registrar.

The duties will include the compilation of the Annual Medical Report, the superintendence of the notes and monthly reports, and elementary teaching of Students.

An honorarium of twenty guineas per annum will be paid.

Applications should be sent to the undersigned not later than April 28th.

H. B. STOKES,
Secretary-Supt.

THE SOUTHEND-ON-SEA GENERAL HOSPITAL.
(221 Beds—Six Residents.)

Wanted immediately, a SECOND HOUSE SURGEON. Salary £100 per annum, board, residence, and laundry, to complete a period ending May 14th, eligible for re-appointment.

Application from British (male, single) candidates, stating age, qualification, and experience, and accompanied by three recent testimonials, to be sent to the undersigned.

Southend General Hospital. C. G. PEARSON, Joint Secretary.

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MANCHESTER. — ABOUT £650 P.A., increasing, old-established PRACTICE [illegible] 790. Opposition less than usual. Visiting 4/5 and 5/-. Lowest surgery fee 2/6. [illegible] off main road, 4/5 beds, 2 recep., and [illegible] surgery. Rent £60 on lease.—No. 9144.

YORKSHIRE. — OUTSKIRTS OF [illegible] town. Old-established middle and [illegible] class PRACTICE, averaging £930 p.a. [illegible] 400. Visits 3/6 to 21/-. Very little [illegible] wifery. Specially built house, 2 recep., 5 [illegible] Surgery, with separate entrance, etc. Valued at £100. Premium £1,350.—No. 9141.

CHANNEL ISLANDS. — URGENT SALE through ill-health of Vendor. Private PRACTICE in best part of Island, overlooking sea, averaging £367 p.a. No midwifery taken. Fees 3/6 to 7/6, med extra. Choice of houses and others building. Good schools. Sea and trout fishing. Prem. 1½ years' purch.—No. 9107.

EASTERN COUNTY. — ASSISTANT (UNDER 30) wanted with view to Partnership in old-established Town Practice. One third share worth nearly £1,000 p.a. at 2 years' purchase after 6 months (or more if desired) Assistantship at £400 p.a., plus allowance towards car. Good modern house (specially built) with [illegible] acre of garden.—No. 9139.

LONDON, E.C.—AVERAGE OVER £640 P.A. Panel about 500, rapidly increasing. [illegible]ng fees 3/6 to 10/6. No midwifery. Small house at £95 p.a. incl. on long lease. Could be run as lock-up. Prem. 1½ yrs.' pur.—No. 9135.

WITHIN 16 MILES OF LONDON. — Rising Town. Small PRACTICE worth about £500, [illegible]
Selling [illegible]
tice £4, .. [illegible]

NORT[illegible] a year. Old-established PRACTICE in best position in residential district. Opposition not strong. Appt. worth £150. Panel of 700. Fees 5/- up. Ex. house with 5 beds., 3 recep., well designed professional offices, etc. To rent on lease. Would suit gentleman of some experience.—No. 9134.

ITALIAN COAST. — DELIGHTFUL SPOT. — About £500 p.a. Scope to increase. Good opening in neighbouring town. No English opposition. Fees 12/6 to 35/-. Flat to rent of 3 bed., cons. room, [illegible] etc., can be bought for cash.—No. 9124.

[illegible] DE RESORT.—WITHIN easy reach of London. £700–£800 p.a. Practice suffered through Vendor's ill-health. Ample scope. New estate building. Small panel. No dispensing. Midy. not sought. Attractive freehold house, built by Vendor, 5 bed., etc., garden, and garage.—No. 9127.

SOUTH WALES.—MINING PRACTICE worth £1,250 p.a., mostly panel and contract. Scope to increase further. Mids. 2–3 guineas. Visits 3/6. House, with 2 recep., 4 bed., etc., to rent. Collieries working full time. Option to rent not severe. Prem. £1,500.—No. 9125.

LANCS MANUFACTURING TOWN. — £[illegible] p.a. Panel over 1,050. No appts. Must dispensing PRACTICE. Detached house, 5 bed., 3 recep., surg., etc., with separate entrance. Garden and garage. To rent on lease.—No. 9[illegible]

BERKS. — OLD-ESTABLISHED. — COUNTRY PRACTICE, about £700 p.a. [illegible] £1,100. Panel about 500. Visiting fees 2/6 to 7/6. Very little midwifery. Splendid house, specially built for Vendor, with two acres of grounds, 2 reception rooms, 6 bedrooms, surgery; and waiting rooms, etc. Consider £4,[illegible] offer for Practice & house, freehold.—No. 9[illegible]

WEST OF ENGLAND. — UNIQUE opportunity.—A Doctor's House can be rented or purchased in popular residential district or fringe of moors. Situated on main road, centre of town.—No. 9145.

WANTED.

REQUIRED BY M.B., 41, MARRIED, [illegible] capital £5,000, PRACTICE, £3[illegible] on or near South Coast between Dover and Plymouth. Free to negotiate at once.—No. 4[illegible]

WANTED BY M.R.C.P., AGED 34, [illegible] TICE or PARTNERSHIP, within [illegible] —£1,500 p.a. Better-class, small or [illegible] In Liverpool or Country Town, with [illegible] in South or Midlands. Cash to [illegible] if necessary.—No. 742.

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to find that my little daughter aged 5½ months had a temperature of 104° and well marked bronchopneumonia She was at once given an ampoule of omnadin and the more usual treatment for her condition Next morning her temperature was normal and remained so and we never had the least further trouble with her If Dr Julian's assertion that this was due to suggestion is correct I can only say that at that tender age she was more susceptible to suggestion than she has proved since (Incidentally if the action of these drugs is due to suggestion, how is it that they act equally well if given when the patient is asleep?) Dr Julian will however find proof of the evil done that day in the fact that nearly three years later she developed an acute appendix The abundant fluid found in the abdominal cavity at the operation was undoubtedly that which we so summarily drove out of her chest three years before This theory however does not explain why she should have been so amazingly well in the meantime

Yet Dr Julian will at least admit that to produce such results it must have been a powerful drug and here I am entirely at one with him that these things need to be used with great care and discrimination That is why guinea pigs and cats are used so that by giving overdoses we may find where harm is likely to show itself and so avoid damage in therapeutic work Incidentally the reason we do not give medicines as he suggests to normal men is because our object is not to make men ill but to make them well

I do not for one moment suggest that the newer therapeutic remedies have come to stay Far from it Most of them only point the way to better things But that there has been an enormous advance in therapeutics recently I think no unprejudiced person can deny All honour therefore to those firms who are providing remedies many of which they know will soon be superseded And may we as doctors do our best with what we have got, instead of croaking because we have not got what we believe may come in ten or fifteen years time — I am etc

Winsford June 17th W N LEAK.

Vaccines in Coryza

SIR —The results obtained by Dr Hoyle in the employment of autogenous vaccines for the treatment of acute coryza may deter many practitioners from using stock vaccines in the treatment of that condition Dr Hoyle's failure to record better results may be due to (1) the composition of the vaccine and (2) the severity of the cases with inadequate number of injections and wrong dosage

I have used a stock vaccine for a number of years to protect patients against recurrent coryzal attacks and although I cannot give any accurate statistics I believe that I am safe in stating that at least 70 per cent of patients inoculated can be protected The majority can be protected by three injections at weekly intervals but there are others who require further injections at fortnightly or monthly intervals In severe cases it is sometimes necessary to give as many as eighteen to twenty A patient who suffered from almost continual attacks—he informed me that he used twelve handkerchiefs daily —was completely cured by a course of twenty injections He has remained free for more than three years But the proof of the efficacy of vaccine treatment lies in the fact that a large number of patients demand it annually

Dr Hoyle does not make it clear at what stage of the coryzal attack he treated his patients If in the acute stage it is quite apparent that he blundered in administration It is impossible to protect a patient who is suffering from coryza with three injections Indeed it is not safe to attempt to protect a patient who has any signs of coryza with what Dr Hoyle has evidently done—prophylactic dosage When any signs of coryza exist it is necessary to start with a small dose—for example 1/10 c cm —and to repeat every fourth day by doubling the dose until 1 c cm is reached and then to give the full dose at weekly intervals Care however should be exercised in increasing the dose as this must be regulated by reaction which must if possible be avoided The full protective dose and the number required vary according to individual susceptibility which is the important guide to successful treatment. It appears to me that an omission in Dr Hoyle's vaccine is the *Micrococcus catarrhalis* this I believe to be the precursor of all coryzal attacks and the other constituents secondary —I am etc

Edinburgh June 10th FREDERICK POPTER

Mind and Body

SIR —It was with especial interest that I read Dr C M Billington's remarks on my paper Experiences with Proteose in the Treatment of Diseases of the Skin as it came to my notice immediately after a morning's teaching in the out patient department in the course of which I had remarked to my students that a psychological factor is present in many cases of chronic urticaria In one case the patient's husband was in hospital suffering from carcinoma and she was paying daily visits to the hospital which was some distance from her home When her husband returned home and there was some temporary improvement in his condition in patient's urticaria almost disappeared It will be seen therefore that Dr Billington and I are so far in agreement I did not discuss this matter in my paper as I wished to keep to the subject of experiences with proteose —I am etc

Bristol June 15th NORMAN BURGESS M D M R C P

Control of Tuberculosis

SIR —One cannot help but be impressed by the large amount of investigation that is being made into the *raison d'être* of tuberculosis and your report of the Tyneside inquiry under the heading Causal Factors in Tuberculosis in your issue of June 10th (p 1018) is just another example But surely there is sufficient evidence that poverty with its concomitant factors —overcrowding under nourishment etc —is certainly a *predisposing* factor in the incidence of tuberculosis On the other hand tuberculosis does occur among the rich so that it is only reasonable to suppose that there is one prime *causal* factor common to all and what can that be but infection from person to person if one excludes the few cases resulting from the ingestion of infected milk etc? That this has been recognized in part is evidenced by the notices one sees in diverse places and couched in various terms admonishing one against expectorating Whether or not this has been a factor in the decline in the death rate from tuberculosis is impossible to estimate but in any case it is a reasonable precaution But there is no tangible evidence that the infection factor has been fully appreciated Infection is essentially in the home and during childhood and it is difficult to believe that spitting in the home is common among the rich or poor How then is the infection spread? The obvious answer is the spray of droplet infection by coughing and this factor is common to all classes with open phthisis and fits in with the clinical evidence of the disease

Can this be prevented or at least greatly minimized Yes by avoiding coughing without covering the mouth during the act—not with the hand but with a handkerchief To appreciate the force and density of this

unhindered spray one has only to travel in a crowded public conveyance in winter, or sit in front of a person with a cough in a theatre Desiring to ascertain if this precaution was being taught, I asked about one hundred patients who had had sanatorium treatment if they had been told to cover the mouth while coughing one admitted that she had, but the others denied having received such instruction Unfortunately, in the out-patient departments of some of our hospitals, patients are not only allowed to cough as they please, but are ordered to cough as a ritual, without any provision being made to limit the accompanying spray Is it because the practice is considered harmless, or is it neglect or apathy on the part of our teachers and public health administrators?

An intensive campaign to teach and enforce the precaution I have mentioned must find favour with all people who have the health of themselves and the community at heart It need not be expensive, and if it had the backing of the public health authorities and all the members of the medical profession, but particularly tuberculosis officers and sanatorium physicians, the Press and the public would soon fall into line While not wishing to belittle the efforts of those who are seriously trying to find a means of diminishing the incidence and mortality of tuberculosis, it seems reasonable that the obvious should not be overlooked or neglected amidst our masses of statistics Is it worth making a small effort which might easily be the means of preventing much ill-health and many deaths, especially of young children?—I am, etc ,

London, W 1 June 12th W BRUCE FRY

Treatment of Tuberculosis

SIR —It seems impossible to lay the ghost of tuberculin Some two or three times every year it is resurrected , the same old claims are put forward by the same protagonists, but no fresh evidence is forthcoming One would have thought that after all these years we should have arrived at a common agreement whether tuberculin is or is not an effective remedy against tuberculosis It is surely something of a mystery that a remedy so widely tested should still continue to give great results in the hands of a minority of the profession, while the rest of the profession have come definitely to the conclusion that it is of no therapeutic value How often those who deal with pulmonary tuberculosis must have wished that they could get the satisfying results from tuberculin that Dr Camac Wilkinson has persistently claimed to obtain But somehow or other it is not to be

Twenty years ago like many others, I tried tuberculin on a large scale and found that the only cases that appeared to do well were precisely those which one would have expected to do well under any treatment , but that when one tried it with those cases for which one would have given much to have found an effective remedy, it was useless or—worse still—resulted in exacerbation of the disease This experience was confirmed subsequently when tuberculin was tried on a sufficiently extensive scale *with proper controls*—a result which the tuberculin enthusiasts seem to have persistently ignored Dr Camac Wilkinson indulges in a prophetic vision as to the attitude of Dr Burrell towards tuberculin in ten years' time I would go so far as to venture to believe that the great master, Robert Koch himself, were it possible for him to have lived to the present time, would have admitted that tuberculin had not fulfilled his hopes as a *therapeutic* remedy—whatever its value in *diagnosis*

The scientific position of vaccines in therapeutics appears to be still open to question, as distinct from their position in prophylaxis, where it is established Professor J C G Ledingham, who should surely speak with some authority, made this clear in an article in the *British Medical Journal* of May 8th and 15th, 1926, and so far as I am aware the position remains unchanged I am glad to find that Dr Halliday Sutherland and Dr Camac Wilkinson both oppose the use of such a term as "pre-tuberculous" The employment of such a term is unscientific, and is better dropped Dr Halliday Sutherland still believes that the more favourable cases of tuberculosis (meaning apparently pulmonary tuberculosis) can be treated at home by tuberculin, and would reserve sanatoriums "for the infectious, febrile, and debilitated patients" This is certainly strongly counter to the opinions of most tuberculosis specialists, but Dr Sutherland is surely—to put it mildly—rather unkind when he asserts that "the truth is that some medical superintendents of sanatoriums want early and hopeful cases *to improve their statistics*," rather than because they believe that they are especially the cases which may be expected to benefit most from sanatorium treatment

Moreover, I would venture to dissent from his opinion as regards Switzerland Of course, many cases, we know, do well in England , but to say that such good results are just as likely to be obtained by treatment in England as in a climate like that of Switzerland is, I should have thought, against the evidence I know in which country I would prefer to take my chance—and I speak from personal experience, having had an unquestionable infection some thirty five years ago, for which I went to Davos —and I have always held that tuberculosis is one of those diseases in which money does count, giving the patient who can afford to get away from the English winter a distinct advantage over his less fortunate brethren Only let it be realized that there is no earthly use in imagining that a patient who is in an advanced stage of disease is going to do any better in Switzerland than he would in England Just as in England the sanatorium is likely to do most for the patient who comes "early," so in Switzerland it is the early case which benefits , but Switzerland has the immense advantage of offering "dryness, calmness," more equable temperature (conditions which Dr Sutherland belittles), and sunny skies, in place of the damp, cold, dreary, and inconstant English winter

As regards other considerations, no fool, as I believe Marcus Paterson said, can be cured of phthisis, and the man who will not co-operate in his own treatment will do no better in Switzerland than elsewhere The great little Dr Huggard in the Davos of thirty five years ago had a short way with such patients He simply told them or their relatives that the sooner they went the better —I am, etc ,

E WYATT RIPLEY

Southborough, Kent, June 4th

*** This correspondence is now closed

Uses and Dangers of Cosmetics

SIR,—On May 17th, 1930, a paper of mine on modern cosmetic preparations was published in the *British Medical Journal* (p 899) It achieved a horrid notoriety in the daily press, and was honoured by some slight attention of a depreciatory nature in one of the journals which voice the opinions of the vested interests the *British Journal of Dermatology* appeared to consider it to be of some little interest What criticism it aroused was either fur comment, backed by scientific argument, or else mere journalistic facetiousness which, I hope, helped some hungry free lance workers to earn a little bread and-butter

The paper by Dr Alice Carleton, which is published in your issue of June 10th, is somewhat provocative in nature, first, because the author fails entirely to

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COUNTY BOROUGH OF BIRKENHEAD

MEDICAL OFFICER'S DEPARTMENT.

MEDICAL SUPERINTENDENT.

Applications are invited from duly qualified Medical Practitioners, with personal experience in the administrative control of a public general hospital, for the post of Medical Superintendent of Birkenhead Infirmary, which Infirmary has been appropriated under the Public Health Acts.

The remuneration attached to the appointment will be £1,000 per annum, rising by biennial increments of £50 to a maximum of £1,100.

The Medical Superintendent will be required to reside within easy reach of the Infirmary. He will be an Assistant Medical Officer on the Staff of the Medical Officer of Health and will be responsible to the Medical Officer of Health, and through him to the Health Committee, for the control of the Infirmary, and for the supervision of the work of the Medical, Surgical, Nursing, and other personnel.

The Infirmary, which has accommodation for 547 patients, provides treatment for medical, surgical, and maternity cases, and has a staff of Resident Medical Officers and Visiting Specialists, and a Nursing Staff of 112.

The appointment will be made subject to the Local Government and Other Officers Superannuation Act, 1922, and is determinable by three calendar months' notice on either side.

Form of application and further particulars, relating to this appointment can be obtained from D. MORLEY MATHIESON, Esq., M.D., Medical Officer of Health, 9, Hamilton Square, Birkenhead.

Canvassing, directly or indirectly, will disqualify the applicant.

Applications, endorsed "Medical Superintendent," should reach the undersigned not later than Saturday, April 15th.

Town Hall, Birkenhead. March, 1933. E. W. TAME, Town Clerk.

COUNTY COUNCIL OF THE WEST RIDING OF YORKSHIRE.

ASSISTANT TUBERCULOSIS OFFICER.

The County Council of the West Riding of Yorkshire invite applications for the appointment of Assistant Tuberculosis Officer. Candidates must be qualified in accordance with the Regulations of the Minister of Health.

Salary £500 per annum, rising by annual increments of £25 to £700. This salary is subject to a temporary deduction.

The appointment is subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922.

Further particulars and form of application may be had from the undersigned by whom all applications, together with copies of not more than three recent testimonials, must be received not later than April 17th.

County Hall, Wakefield. April, 1933. J. CHARLES McGRATH, Clerk of the County Council.

ROYAL INFIRMARY, BLACKBURN.
(240 Beds—Five Residents.)

FOURTH HOUSE SURGEON (male) required at a salary of £150 per annum, rising to £250, with board, residence, laundry, etc. To commence duties as soon as possible.

Applications, with copies of testimonials, stating age, nationality, experience, etc., to be sent at once to the undersigned.

Royal Infirmary, Blackburn. NATHAN A. SMITH, Gen. Supt. & Secretary.

This Institution is recognized for the Surgical Practice required for the F.R.C.S. final examination.

CITY OF BIRMINGHAM.

SELLY OAK HOSPITAL. (500 Beds.)

CASUALTY OFFICER (Male).

Applications are invited from fully qualified Medical Practitioners for whole-time appointment as "Casualty Officer" (male) at the Selly Oak Hospital, Birmingham. The appointment will be for a period of six months in the first instance, but may be extended at the end of that time for a further period of not exceeding six months.

Salary at the rate of £200 per annum and full residential emoluments. The salary and emoluments will be subject to any "voluntary abatement" in force from time to time. The officer appointed will be required to refund to the Council all fees, allowances, and emoluments (other than the foregoing) received by him.

Further particulars may be obtained from the Medical Superintendent at Selly Oak Hospital, to whom applications, stating age, experience, and qualifications, with copies of recent testimonials, should be forwarded not later than Wednesday, April 12th.

The Council House, Birmingham. March, 1933. F. H. C. WILTSHIRE, Town Clerk.

THE WELSH NATIONAL SCHOOL OF MEDICINE.
UNIVERSITY OF WALES.

Applications are invited for the full-time post of JUNIOR ASSISTANT in the Surgical Unit.

Salary £450 per annum to be increased, after one year's service, to a maximum of £500 per annum. Duties to commence as soon as possible. The appointment to be for a period not exceeding two years, in the first instance, and to be subject to three months' notice on either side. Further particulars may be obtained from the undersigned.

Six copies of application, each accompanied by copies of not more than four testimonials, must be received by April 25th.

Welsh National School of Medicine, The Parade, Cardiff. S. C. EDWARDS, Secretary.

LEICESTER ROYAL INFIRMARY.
(472 Beds.)

CASUALTY HOUSE SURGEON.

A Casualty House Surgeon is required. Salary at the rate of £125 per annum. Applicants must have held a resident Hospital post or had similar experience of Hospital work.

Applications to the House Governor and Secretary.

April 1st, 1933

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No. 2582. — OUTSKIRTS OF WEST RIDING Town, healthy locality, well established. Average receipts £930, panel 400. Good house, rent £100

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HANTS.—Middle-class Country PRACTICE. Practically unoppo.ed. Great scope for increase. Receipts £450. Panel 94. Fees 2/6 up. Premium £450.

BEDFORDSHIRE.—NUCLEUS middle-class Country Practice. Conveniently situated house available to be rented on lease at £56 p.a. or purchased for £900. Receipts over £500. Panel 100 (increasing). Scope for increase. Premium £500 for quick sale.

LONDON, E.—Suburban middle-class G.P. Medium-sized house to rent on lease at the low rental of £30 p.a. Fees 2/- up. Average receipts £516. Panel 350. Excellent scope for young man. Premium for Practice and lease £1,050 cash, or near offer.

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NEWCASTLE (near). — Well-established middle-class and club PRACTICE. Medium-sized house to rent. Receipts over £450. Panel 500. Fees 2/6 up. Premium £775, to include drugs, instruments, surgery fittings, etc.

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acknowledge the assistance my paper has been in the construction of her own contribution and secondly because by making full use of fragmentary excerpts torn from their contexts she attributes to me a bias which is I think undeserved Upon reading her remarks I learn that I have stated that cold creams and vanishing creams block the sebaceous and sweat glands and that their use leads eventually to acne rosacea and acne vulgaris What any person who troubles to consult the article in question will find is that in discussing the probable and possible ill effects of the frequent application of cold and vanishing creams (formulae for which are given) I have emphasized the fact that any remarks made under these headings refer to the prolonged use of the preparations The reservation is justifiable because once a woman has taken the trouble to learn a beauty treatment the routine is usually carried on daily for some years I certainly stated that the fats block the sebaceous and sweat glands and if I had written the fats and waxes tend to block the sebaceous and sweat glands it might have been more accurate With regard to the production of acne vulgaris the actual words used were the formation of comedones is thus facilitated and acne vulgaris may develop especially if the patient is between 17 and 25 years of age

I am not as Dr Carleton insinuates unaware that dirt may be removed with cold cream but I still believe the definition clean—free from foreign matter and a skin is not clean which is wiped down with cold cream massaged with vanishing cream and then powdered being left coated with a layer of grease to which dust as well as toilet powder readily adheres With regard to Sutton's experiments on the absorption of fats even though a very small proportion of the fats in a cream or skin food are absorbed is there any evidence to show that they are absorbed by the epidermal cells and act as foods ? We are told that McCafferty and Genovese made experiments with patients with moderately dry skins and observed the effect of washing their faces with soap and water We are not told the extremely important facts as to why these patients had moderately dry skins Was the moderate dryness due to chronic seborrhoeic dermatitis hypothyroidism xeroderma or to the gradual atrophy of their sebaceous glands due to years of cosmetic treatments? If so the use of soap and water was not entirely to blame for any desquamation that occurred and the conclusion which is reached is not valid Finally I object to being classified by insinuation as a person who condemns cosmetics as wholly injurious Cold cream is a useful emollient and vanishing cream a less useful preparation for the same purpose The windmill against which I have tilted is the continuous use of cosmetic preparations—the endless application of astringent lotions and fatty and waxy ointments to the detriment of the individual and the very definite benefit of numerous commercial interests — I am etc

Liverpool June 12th R M B MACKENNA

Treatment of Breast Abscess

SIR —After reading the most interesting article in the *British Medical Journal* of June 10th by Mr Hamilton Bailey on The Treatment of Abscess of the Breast I feel that it might be of some interest to readers to know of the years success we have had at the Christiana Hartley Maternity Hospital Southport since we have developed a form of treatment for aborting breast abscess This however entails the close co-operation of a conscientious staff

In the hospital as a routine every patient has a daily dose of a mixture containing 10 grains of quinine sulphate This I mention as it may have some bearing on results With a view to aborting breast abscess as we tried Bier hyperaemic bell but like the experience of Mr Hamilton Bailey we found it caused intense pain and an unsatisfactory result and gave it up We gradually evolved the following regime which so far has been encouraging as we have had no breast abscess for over a year with over four hundred cases

Every morning after the babies have fed the sister makes a careful examination of every breast to see (1) if they have been thoroughly emptied by the baby (2) if there is any tenderness whatsoever on carefully palpating the breast The examination is repeated after the evening feed by the sister or staff nurse on duty The staff nurse on night duty makes a similar examination before she leaves the wards in the morning

If the breast has not been thoroughly emptied this is completed by Dr Abt's electric breast pump The ordinary hand breast pump which was used previously caused the patient nearly as much pain as the Bier's hyperaemic bell but Abt's pump causes no more pain than the sucking child and is most effective Now if (1) the ducts are not all emptied or (2) if there is tenderness over any part of the breast massage along the ducts towards the nipple is commenced at once and every acinus is followed up to see if milk comes from the duct (3) Where there is tenderness on palpation a slight swelling can usually be felt massage with olive oil over this swelling is at first painful and result in some clotted milk being forced out or even milk intermixed with pus The baby is put on the breast as usual and the breast massaged after each time the baby feeds

The sister tells me that occasionally a patient develops a rigor although pulse and temperature at the last taking were normal If there be no other cause a blocked duct can always be found and relieved But the secret of our possible success is undoubtedly the conscientious and careful examination of the breasts three times a day and the instituting of massage *at once* The daily breast drill is essential and treatment by massage to be successful must be commenced at once before any of the classical signs of abscess have developed —I am etc

Southport, June 13th A S GARDEN M D L M

Treatment of Compound Fracture of the Femur

SIR —How easy life would be if septic wounds could be excised and closed with impunity! It is though perhaps scarcely fair to take reported statements made in a witness box as a true expression of medical or surgical opinion The desire of counsel to obtain a direct affirmative or negative answer to questions which are open to argument is incompatible with accurate or helpful statements being made

An open (compound) fracture of the femur which has become heavily infected is probably at the best two or three years concern at the worst it may be loss of the limb or of life It does not seem possible therefore for anyone who takes over such a case for two or three weeks to have either immediate or ultimate full responsibility for an indifferent result When faced with an already infected fracture treatment must be directed towards controlling sepsis the alignment of the fractured fragments having become for the time being a secondary consideration In my opinion manipulation for reduction of a displacement should not be attempted at this stage but the limb should be immobilized by means of splinting and traction as the best means of dealing with the sepsis and of bringing about some gradual improvement in the alignment I gather this was the treatment adopted in the particular case under consideration (May 27th p 942)

The only time that active and accurate treatment can be carried out in an open fracture with success is in the first few hours after the accident, and then only in an institution which has the capacity to deal with such cases Until this is still more fully realized and arrangements are made in every district for the more efficient handling of fracture cases it is to be feared that these lawsuits will be a recurring indignity —I am, etc ,

London, W June 14th F D SINER

SIR —In your issue of June 10th appeared a letter from Mr C H Fagge commenting on an action against a surgeon for negligence in the treatment of a compound fracture Mr Fagge's view that the present method of conducting these cases is against the public interest and is derogatory to the reputation of the profession must be shared by many who have given serious thought to the matter It is scarcely possible for a lay judge and jury, without the guidance of a neutral medical assessor, to sift and evaluate the evidence given by rival expert witnesses in cases of this nature, and it would be to the interest of all concerned that the whole subject should be aired in the hope that opinion might be crystallized and that improvement in the procedure might follow Members of the legal profession would surely be glad to assist, for they must often picture the situation that would arise if barristers were sued for negligence after the termination of a difficult case, and if such actions had to be tried and conducted before a judge and jury who had no special legal training or knowledge

I am not in a position to form an opinion on the rights or wrongs of the verdict in the case just decided, and it seems to me that Mr Brockman had no choice but to give evidence and express his considered opinion of the treatment of the patient before and after the latter came under his care While the present method of trying these actions is in force however one cannot but feel critical of the attitude of members of the profession who, having had no responsibility for the treatment of the patient, are willing to come forward and give evidence in support of an action for negligence in cases such as this — I am etc ,

London W June 14th GEOFFREY MARSHALL

Monilia Infection of Respiratory Tract

SIR —I have read with great interest in the *Journal* of May 27th p 917) Dr P J Marett s note on monilia infection of the respiratory tract, and have noted his figures as to the incidence of monilia in sputa in Jersey I believe in connexion with this point that most people who have had occasion to handle large numbers of sputa will agree as to the high incidence of monilia therein, but that unfortunately does not necessarily prove pathogenicity as is elsewhere recorded, one can find monilia with great frequency in the upper respiratory tract of many apparently normal people That such monilia might gain access to bronchi in cases of subnormal health of the mucosa seems beyond question, but to postulate an active primary broncho moniliasis seems a very tall order, and, indeed, from Dr Marett s own note, there is evidence refuting this He says ' If we compare the bronchi and bronchioles to test tubes ' Now in my submission we can only liken the bronchi and bronchioles to test tubes when they are grossly diseased and full of retained secretions when so diseased as to have lost the power of expelling their contents , and so once again, we see that as far as pulmonary disease is concerned monilia must be regarded in the nature of a secondary invading organism —I am, etc ,

DAVID H HALER

Infants Hosp al Vincent Square June 2nd

Pancreatitis in Mumps

SIR,—Dr A H Spicer may be interested to know that some nine months ago I saw a boy aged 7 years who was admitted to hospital in a moribund condition ten days after the onset of an apparently ordinary attack of mumps The main symptoms were restlessness, repeated blood-stained vomit, and a rapid, feeble pulse The abdomen was not distended, while, possibly because of the boy's condition, no complaint of pain or tenderness could be elicited The patient died soon after admission and a post-mortem examination showed the macroscopic and microscopical appearances of acute pancreatitis No other gross lesion was found in the body One swallow does not make a summer, however, and so far as I know no other similar case has been reported in this country —I am, etc

E JAMES,
Medical Superintendent

Isolation Hospital Romford June 12th

Treatment of Sydenham's Chorea

SIR —I was interested in Dr Donald Bateman's article (*Journal* June 10th, p 1003) on the treatment of chorea by artificial pyrexia, since I myself began to use this method in November, 1931 shortly after I received details from an eye-witness of Lucy Porter Sutton's cases in New York City It is a pity that Dr Bateman merely reiterates Dr Sutton s claims, and does not give any details of actual cases, or his opinion of the value of the method, beyond the statement that " the treatment has so far proved satisfactory " Such a general recommendation may be insufficient to induce others to try this method

It has been repeatedly emphasized that the degree of cardiac involvement in any rheumatic manifestation such as chorea is of prime importance Since a large proportion of choreas have some form of carditis, the inevitable question will be asked, Does the artificial pyrexia have any adverse effect on the heart condition? Neither Dr Sutton nor Dr Bateman appears to have considered this point, but have merely concerned themselves with the movements which are but the outward manifestation of the disease There is thus a danger in any form of treatment which rapidly checks the movements, since it may give rise too early to the conclusion that the case is cured

I hope shortly to publish a series of cases in which this new method of treatment has been tried and in which sufficient time has elapsed subsequently to give an indication as to whether or not induced pyrexia has a beneficial or harmful effect—both immediate and remote—on the course of Sydenham's chorea —I am, etc

J W CHEETHAM, M D
Late Resident Medical Officer Royal Liverpool Children s Hospital

Rainhill June 12th

The G P and Midwifery

SIR —I read the article by Professor Munro Kerr on the above subject, and the subsequent letters from Drs Mackenzie (June 3rd, p 983), Popplewell, Abercrombie and Fraser (June 17th, p 1078) with interest Dr Popplewell states that, after a thorough grounding in modern hospital maternity work, he was appalled to find an area in England eighty miles from London, with a population of at least 60,000, without a maternity hospital of any kind, let alone an ante-natal clinic, and that the only general hospital in the area clearly states that it has no facilities for treating maternity cases I am in complete agreement that the lack of hospital facilities

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in the area is appalling to say the least But would an ante natal clinic enable Dr Popplewell to relegate his perforator and cranioclast to the museum of obsolete instruments? I think he would find that if a clinic were established in his area the number of working-class maternity cases he would have the opportunity to offer ante natal supervision would fade almost to zero and he would only be called in when some abnormality became apparent either before during or after labour

Professor Munro Kerr's wish for better methods in the training of the student in practical obstetrics and ante natal care is very praiseworthy but will the fruits of his labours not be lost if the clinics which he advocates take away the means by which the practitioner whom he has trained so thoroughly keeps his hand in? How long would the general practitioner remain proficient in the use of the stethoscope if he were allowed to use it only on half a dozen or so of his better-class patients during the course of the year? The powers that be should make up their minds whether they require the services of the G P or not in their maternity schemes If they decide that they are themselves to be responsible for the ante natal care of the pregnant woman they must in fairness to the patient be responsible for the treatment of abnormalities arising during parturition If on the other hand they decide that they still wish for the services of the G P in cases of difficulty they must in fairness to the patient and the practitioner give the practitioner the care of his patient during the ante natal period

In regard to the question whether the home or hospital is the better place for the woman of the working class to have her baby I think one has to take into consideration the type of woman The majority of working-class women are house proud and keep their homes spotlessly clean however poor the house may be That type is infinitely happier in her own home as Dr Mackenzie says The other type happily in the minority and chiefly confined to the cities is too lazy to bother about where she is confined and makes little or no provision for the event it is therefore better for all concerned that she should be submitted to the officialdom and routine of hospital which Dr Mackenzie describes

I believe that if the standard of midwifery in this country is to be raised a national scheme on the lines suggested by the Glasgow Division of the British Medical Association (*Supplement* June 10th) will have to be evolved In existing circumstances the authorities will have themselves to blame if the general practitioner's midwifery does not keep abreast of the times and if the highly proficient product of the proposed new teaching method rusticates —I am etc

TERENCE G ROBINSON

Epsom June 17th

SIR —Dr E K Mackenzie's letter in your issue of June 3rd delights me Immediately after qualification I went for a fortnight as locum for the parish doctor of two Orkney islands Well do I remember my first maternity case—a moonlight night and having to drive myself in a little cart across the sands at low tide to get to a two-roomed shepherd's cottage The shepherd walked about outside all night and an old and dirty woman—the hands woman—made up the peat fire till my eyes streamed with tears and explained to me where the clothes and the whisky bottle were kept and departed The patient lay on straw I have never forgotten that night alone in the intervals of fetching what was wanted and washing my hands I thought of every complication likely to occur—occipito-posterior prolapse of cord post partum haemorrhage uterine inertia and what would one do alone on this island in the middle of the sea in Caesarean section became necessary In self-defence I was silent except to assure the patient that all was well and I remembered Dame Mary Scharlieb's remark that midwifery fools usually rushed in where angels feared to tread To my surprise the crofter's wife did indeed herself quite normally about four in the morning as the cold dawn was creeping in and was much less perturbed about the whole process than I was as I performing with knowledge as I seemed to be!

That taught me a lesson—and though I have seen about as bad obstetric cases in India as anyone I have never forgotten it—that birth is a natural act and will accomplish itself simply if you or your stupid civilization have not put obstacles in the way by deforming the pelvis when growing suffering the joints of the born that it cannot expand and most important of all insisting that the woman is confined in an unnatural position This last is the only one of the obstacles we have power in our power to control when she is already in labour Dr Jellett of Rotunda fame in his book *Maternal Mortality* (p 280) explains why the squatting position is the natural one for accouchement and my wife here by kind permission of Professor Rechou in the Department of Radiology demonstrates the increase in size of the human pelvis in the squatting position much as the area enclosed by the chest walls is increased by inspiration This being so the crouching position must exert a suction action on all the abdominal contents and is of course the only position in which bladder bowel or uterus can be completely emptied

If people would only read *Histoire des accouchements* by Witkowski they would see that many harmless practices perhaps have been hedged about by superstitious practices perhaps in order to make it more difficult and more impossible for the patient He gives over 1 000 illustrations and along details of holy girdles holy chairs to aid delivery holy images to ensure safety to mother and child we are shown the woodcut copied from Playfair of position des Anglaises pour accoucher and we are told that though this the English idea of confinement is not in Ireland and Scotland the women are often confined squatting and that if the confinement is normal they go down on knees and elbows because they believe this position will hasten the labour and diminish the pain As I cannot get an ear in England to allow me to do anything so dangerous as to return to Nature and allow the patient to deliver herself naturally I have had to come to France to study the subject because many French women still insist on being confined thus—when the doctor is not there— I am etc

KATHLEEN VICH

Bordeaux June 6th

IMS Pensions

SIR —Colonel W G King has recorded and timely protest on the statement that the pensions of officers of the Indian Medical Service are not guaranteed by His Majesty's Government deserves more than a passing notice Pension is deferred pay and has always been a great inducement whereby to obtain recruits for the Service The present situation is far more full of peril for young officers who have recently entered the Indian Medical Service or for men who are thinking of doing so than for the men now retired From all the signs to-day the danger will grow with the years

To look to the Indian administration for protection is to lean on a reed The real source of strength lies in the British Medical Association which fought so gallantly for the I M S in 1914-20 It is well known that the Indian Government is anxious to keep up the standard of its recruits and to attract a certain number of good European officers Can the B M A fairly advise young officers to join the I M S under the conditions of uncertainty now prevailing? It has greater power to-day

British Medical Bureau

(THE SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD.)
(FOUNDED 1880.)

Tele. Address: Triform, Wesdo—London.

12, Stratford Place, Oxford Street, W.1.

Telephone: Mayfair { 1782 / 1783

The Association has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful Agency for the transaction of every description of Medical, Scholastic and Accountancy business, and the BRITISH MEDICAL ASSOCIATION has every confidence in recommending its members to consult Mr. A. V. STOREY, the General Manager, in all transactions requiring the services of a Medical Agent.

Members of the British Medical Association may take advantage of a reduced scale of charges applicable to them.

NORTHERN BRANCH.

The Manchester Medical Agency, lately under the control and Management of the Manchester Medical Committee, has now been taken over by the British Medical Bureau as their Northern Branch.

Medical Practitioners in the North requiring the services of the Bureau are recommended to consult the Branch Manager, at the Offices, 33, Cross Street, Manchester.

Telephones: BLACKFRIARS 3925; after Office Hours: RUSHOLME 2549.
Telegrams: "LOCUM, MANCHESTER."

Practices and Partnerships for Disposal.

Full particulars sent free.

1 HOME COUNTIES. — PARTNERSHIP IN OLD-ESTABLISHED Practice in first-rate Residential Country District about 20 miles from London. Cottage Hospital. Applicant should be aged 28—30 and a Graduate of Oxford or Cambridge. Share worth about £1,000 p.a., at 2 years' purchase.

2 YORKSHIRE (W.R.).—PARTNERSHIP IN OLD-ESTABLISHED Practice nearly £3,900 p.a. in one of the smaller and pleasanter Manufacturing Towns. Panel nearly 3,400. Excellently situated modern detached house (6 bedrooms) with ¾ acre garden, for sale. Hospital and fair amount of surgery. Premium one-half share 2 years' purchase.

3 N. OF ENGLAND.—OLD-ESTABLISHED GOOD-CLASS PRACTICE of about £2,000 in favourite Seaside Resort. Small Panel. Large modern residence for sale. Scope for increase. Prem. £2,700.

4 KENT.—PARTNERSHIP IN MIDDLE AND WORKING-CLASS Practice averaging nearly £4,450 p.a., in an industrial Town under 25 miles of London. Panel about 2,600. Detached house (4 bedrooms) with garden to rent. Plenty of scope for increase. Premium one-fifth share 2 years' purchase.

5 S OF ENGLAND. — PARTNERSHIP IN OLD-ESTABLISHED Practice of nearly £1,950 p.a. in important town within 80 miles of London. No panel. Attractive corner residence (7 bed and dressing rooms), in half-acre of walled-in garden, with garage, etc., for sale. Ample scope for increase. Premium one-half share 2 years' purchase.

6 ESSEX.—OLD-ESTABLISHED PRACTICE OF ABOUT £600 P.A. in Suburban District. Panel 500. Well-situated detached house (6 bedrooms) standing in own grounds with nice garden, garage, and stabling for sale Scope for increase. Premium £650.

7 DEATH VACANCY. — OPHTHALMIC PRACTICE of over £1,600 (...eneral Surgery) in first-rate town within 60 miles of London. Well-qualified man would have every chance of being elected Hon. Surgeon in charge of the Ophthalmic Department of the local Hospital. Excellently situated house to rent on lease.

8 S.W. OF ENGLAND. — WELL-ESTABLISHED MIDDLE AND better-class PRACTICE of between £1,200 and £1,500 p.a. in Seaside Resort. Panel 500. Excellent and well-situated large detached corner house with every modern convenience, to rent on lease. Very good Educational facilities. Sport of all kinds including golf, yachting, etc. Premium £2,000.

9 LONDON, S.W.—OLD-ESTABLISHED PRACTICE ABOUT £ p.a. in well-populated area. Panel 850. Separate Surgery private residence to be purchased. Scope for increase. mium £1,100.

10 SURREY.—PARTNERSHIP IN SOUND OLD ESTABLISH good mixed-class Practice about £3,000 p.a. in the Croydon a Small panel. Very little midwifery. Suitable house could obtained. Scope for increase. One-fourth share at first at 2 ye purchase, with option to increase.

11 S.E. COAST.—MIDDLE AND WORKING-CLASS PRACTICE £1,000 p.a., in favourite summer resort. Panel over 1,(Corner house (4 bedrooms), with garage and garden, for s Premium one and a-half years' purchase.

12 S. MIDLANDS.—VERY OLD-ESTABLISHED PRACTICE ABOU £500 p.a. in a town of about 50,000 inhabitants. Panel 4(Very good detached double-fronted house with 7 bed and dres rooms, garage, and good garden. Great scope for an energetic man. Premium, freehold house and Practice, £4,000.

13 ESSEX COAST.—PARTNERSHIP IN PRACTICE OF £2,5(p.a. in small Seaside Town. Panel 2,300. Modern house in position facing Sea with 4 bedrooms for sale. Scope for increase Premium one-fourth share £1,250, and further share later.

14 ESSEX.—PRACTICE ABOUT £1,150 P.A. IN DEVELOPING district in the Thames Estuary. Panel 350. House with ... accommodation. Electric light, main drainage, garage, and ... nice garden to rent Yachting. Plenty of scope for increase Premium £1,600.

15 LONDON, W.—STEADILY INCREASING NUCLEUS OF PRACtice in the Maida Vale district. Bookings for 11 months £... of which about £100 has been received. Rent of consulting ... waiting rooms 30/- weekly. Good scope. Premium £...

16 WEST OF ENGLAND.—PARTNERSHIP IN OLD ESTABLISHED PRACTICE over £2,200 p.a. in County Town. Panel about 3,... Premium one-half share 2 years' purchase. Good practice ... well-qualified physician (preferably M.R.C.P.), who should be ... R.C. and who would have opportunity of getting on Staff of Hospital in near future.

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Practices and Partnerships for Disposal (continued).

17 LONDON, E.C.—PARTNERSHIP IN OLD-ESTABLISHED PRACtice in the City. Receipts average about £1,650 p.a., including appointments and panel worth over £500 p.a. Premium one-half share £1,000.

18 NORTH OF ENGLAND. — INLAND HEALTH RESORT. — NON-dispensing PRACTICE of about £1,000 p.a. Small select panel. House (7 bedrooms) with large garden, for sale. Premium—Practice—£750.

19 N. MIDLANDS.—PARTNERSHIP IN SOUND AND LUCRATIVE Practice in manufacturing district. Good appointments and large panel. House, with 7 bedrooms, to rent on lease. Premium for share worth about £2,600 p.a., 1½ years' purchase.

20 HOME COUNTIES. — PARTNERSHIP (AFTER PRELIMINARY Assistantship) in large mixed Practice in growing district within 20 miles N.W. of London. Applicant should be a keen and energetic young Englishman.

21 LONDON, E.C. — NUCLEUS OF PRACTICE (ABOUT FOUR-fifths Ophthalmic) in the City. Cash receipts average £268 p.a. Fees for Consultations £1 1s. to £2 2s. Consulting and waiting room to rent. Premium £100.

22 HOME COUNTY.—WELL-ESTABLISHED PRACTICE OF £700 p.a. in first-rate Country Town under 40 miles from London. Panel about 250. Fees 5/- to £1 1s. Large well-built residence (about 6 bedrooms) with modern conveniences. Beautiful garden, meadow, orchard, etc., in all about 24 acres. Excellent hunting. Premium, Practice and house, £4,500 (or near offer), which is less than the value of the house alone.

23. EASTERN COUNTIES. — OLD-ESTABLISHED PRACTICE about £2,750 p.a. in beautiful country district. Panel 1,150. Good house (6 bedrooms), with electric light and central heating, in large grounds, for sale. Good scope.

24 MIDLANDS. — PARTNERSHIP IN WELL-ESTABLISHED AND increasing Practice of nearly £1,550 p.a. in growing residential neighbourhood on outskirts of first-rate town. Panel 1,830. House (4 bedrooms, etc.), in acre of garden, for sale or rent. Excellent prospects of increase. Premium one-half share 2 years' purchase.

25 S. AFRICA.—RADIOLOGICAL PRACTICE IN A MOST DElightful town, with excellent climate. Cash receipts last year £1,450. Scope. Premium, to include furniture, carpets, accessories, etc., £2,200.

26 PRIVATE MENTAL HOME (FOR LADIES ONLY).—EXCEPtionally nice house and grounds. A considerable sum required for the purchase. Further particulars on application.

27 EASTERN COUNTIES. — OLD-ESTABLISHED COUNTRY PRACTICE. Cash receipts about £720 p.a., including appointments over £150 and a panel of about 590. Detached house (6 bedrooms) in grounds of 1 acre for sale. Prem. for Practice £650.

28 EAST COAST.—PRACTICE OF BETWEEN £750 AND £800 p.a. in a purely Residential Seaside District within 40 miles from London. Small Panel. Detached house (5 bedrooms) for sale. Scope for increase as district is growing.

29 SOUTH AFRICA (CAPE PROVINCE).—PRACTICE OF OVER £2,600 p.a. in Residential District on outskirts of one of the Principal Coastal Towns. Good house (5 bedrooms, etc.) to rent. Scope for Surgery. Premium £1,750 or offer.

30 LANCASHIRE. — OLD-ESTABLISHED PRACTICE IN SMALL Manufacturing Town. Cash receipts last 12 months £725, including a panel of over 1,050. Detached house (5 bedrooms), with garage and good garden, to rent. Premium 1½ years' purchase or near offer.

31 SURREY.—PRACTICE OF £1,000 P.A. IN RAPIDLY GROWing Residential District within 15 miles of London. Panel 400. Suitable house, with separate professional accommodation, for sale. Scope for considerable increase. Premium £1,600.

32 LONDON, W.—GOOD MIDDLE-CLASS PRACTICE £400 P.A. in suburb within easy access of the West End. Panel over 100. Attractive double-fronted house with nice garden for sale. Scope for increase. Premium 1½ years' purchase.

33 CORNWALL.—VERY OLD-ESTABLISHED PRACTICE OF OVER £1,100 p.a. in delightfully situated seaside village on West Coast. Panel about 550. Well-built house (7 bed and dressing rooms), standing in half-acre of ground for sale. Scope, as building is going on. Premium 1½ years' purchase.

34 LONDON, N.—PARTNERSHIP IN PRACTICE, ABOUT £5,250 p.a. in thickly populated Suburban District. Panel about 800. One-fourth or one-third share at 2 years' purchase.

35 HOME COUNTIES. — OPHTHALMIC PRACTICE BETWEEN £300 and £400 p.a. in desirable Residential Town, under 15 miles from London. Good detached house (4 bedrooms) with large garden for sale. Good reasons for plenty of scope for increase. Premium £300.

36 LONDON, E.C.—OLD-ESTABLISHED "LOCK-UP" PRACTICE of £646 p.a. Panel 459. Living accommodation to rent if desired. Premium £1,000.

37 S. AFRICA. — OPHTHALMIC AND GENERAL PRACTICE about £1,400 p.a. (about 60 per cent. Ophthalmic), including appointments £400. No Ophthalmic opposition. Premium £400.

38 CO. DURHAM.—PRACTICE OVER £500 P.A. IN RESIDENtial colliery district, near two large towns. Panel 370. Centrally situated 7-roomed house, with good Surgery and Dispensary, for sale or rent. Practice could be very quickly substantially increased. Premium £650.

39 N. OF ENGLAND — OPHTHALMIC PRACTICE OF OVER £1,600 p.a. in an important town. Excellent scope for one keen on clinical and operative Ophthalmology. Large house in first-class condition for sale. Purchaser should be well qualified. Premium £2,500.

40 S. AFRICA. — PRACTICE OF ABOUT £2,000 P.A. IN A famous town. Pleasantly situated detached bungalow (5 bedrooms), garage, and small garden for sale. Good hospital (with private wards). Premium £1,100.

41. LONDON, WEST END. — X-RAY AND ELECTRO THERAPeutic Practice. Receipts 1931, nearly £620. Suitable and convenient flat at moderate rent, on lease. Premium £925.

42 LONDON, E.—CASH AND PANEL PRACTICE OF £800 P.A. in populous district. Panel 570. Small house to rent on lease. Premium 1½ years' purchase.

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even than it had in the last fight If it takes up the cudgels for its medical men it is as sure to win as ever I have never forgotten the grand support the Association gave me as chairman of the Naval and Military Committee throughout that struggle I hope that committee will take this matter up, and press it until the very grave injustice involved is eliminated There can be only one end to the affair if it does, unless the Indian Government is willing to see the recruitment of the Service go down to a hopelessly low level, which I do not for a moment believe it is —I am, etc ,

London W June 17th R H ELLIOT

Obituary

ROBERT HAMILTON RUSSELL, F R C S

Consulting Surgeon Alfred Hospital and Children s Hospital Melbourne

The death of Mr R H Russell at the age of 73, following a motor accident in Melbourne on April 28th, has removed one who achieved world-wide eminence as a pioneer of surgery in Australia, a country to which he brought the teaching and enthusiasm he had derived from direct contact with Lord Lister

Born at Farningham, Kent, in 1860, Robert Hamilton Russell received his medical education at King s College, London, where he was one of Lister's pupils, and subsequently became the last house surgeon to work under his personal guidance He obtained the diploma M R C S in 1882, the L S A in 1884, the L R C P Lond in 1886, and the F R C S Eng in 1889 Fellowship of the American College of Surgeons was conferred upon him in 1924, and in 1927 he became one of the first Fellows of the College of Surgeons of Australia His first appointments after qualification included those of house physician at King s College Hospital, under Dr William Playfair, and for two years house-surgeon at the Shropshire County Hospital Following the custom of the time he also studied in hospitals on the Continent Mr Russell went out to Melbourne in 1889 and, apart from journeys to Europe and America, and service in France and England during the war remained in continuous practice there until his retirement some seven years ago He was appointed surgeon to the Alfred Hospital and Children's Hospital, retaining both posts until shortly before his retirement Lister had inspired him with a zest for research, and the results of Russell s original work soon brought him into prominence He identified himself at first with the treatment of hernia, and a paper by him on the aetiology and treatment of this condition in the young was read before the Intercolonial Medical Congress at Brisbane in 1899 and subsequently published He followed this up with papers on cognate subjects, and his views attracted considerable attention—to begin with often of a controversial nature He was also responsible for original and important work on the treatment of fractures Following his master he became renowned as a teacher of students, and some years ago his house surgeons gathered together to express to him personally their gratitude for the benefits he had conferred upon them A man of singularly attractive personality and exceptional scientific ability, he exerted a powerful influence on the profession especially towards the improvement of surgical technique

In recognition of his work on behalf of the Alfred Hospital the new community block there has been named after him His bust stands at the entrance to the hospital, and a life mask has been placed in the Institute of Anatomy at Canberra He was in England at the outbreak of war and went to France with the British Expeditionary Force He returned to Australia before November, 1918, and was attached for a time to military hospitals there With his great intellectual and personal endowments it was natural that he should take an active share in the creation of the Royal Australasian College of Surgeons in 1927 He was a member of its council from its inception At the time of his death he was censor-in-chief of the college, being in control of admissions to its Fellowship As a tribute to his work on behalf of surgery the Fellows of the college presented to him two years ago his portrait painted by George Lambert He had attended his last meeting of the council two days before the fatal accident Mr Russell was a highly esteemed member of the British Medical Association

C G C SCUDAMORE L R C P AND S ED

Croydon

We regret to announce the death on June 11th of Dr Charles George Colin Scudamore, who was for many years the mainstay of the Croydon Division of the British Medical Association After studying in Glasgow and Edinburgh he obtained the Scottish triple qualification in 1893, and three years later started practice at Croydon

Dr MORTON MACKENZIE writes I have been asked to write something of the work done by Dr Scudamore for his colleagues beyond the Division of which he was secretary for so many years and in deeply mourning the loss of my old friend I wish to pay a tribute of gratitude to one of those hard-working, loyal members whose steady work, without perhaps coming to the notice of those outside his own area as it deserved, has done so much to augment the strength of the Association during many years He was the representative of the Croydon Division for thirteen years, and for the same number of years served on the Surrey Branch Council , he was president of the Surrey Branch in 1924 and till his illness he never missed a meeting He also served on the Organization Committee and Propaganda Subcommittee, and to his great pleasure was elected to the Council of the Association in 1929–30 Regular in his attendance sound in his judgement, he was a most useful and loyal colleague to those with whom he served, and it is to be hoped that his splendid example may encourage some of our younger members to carry on the tradition he built up in Croydon and in Surrey

Dr P W HAMOND writes Dr Scudamore commenced practice in Croydon about thirty seven years ago and during the whole of that time he took an interest in the work of the Association For several years he was joint secretary of the Division with Dr Willock and on the departure of the latter from Croydon in 1920 Dr Scudamore became senior honorary secretary, and shortly afterwards I was appointed his assistant secretary As all who have been connected in any capacity with the work of the Division know, Scudamore was the man to whom we turned whenever any problem arose or any difficult bit of work had to be done He had the procedure of the Association at his finger ends, and, combined with his exceptional administrative and organizing ability he had an understanding of human nature and a tact which rendered it a pleasure and a privilege to work with him His heart was bound up with the welfare of the Association, and especially of the Croydon Division, and nothing he could do to forward the interests of either was ever left undone When in 1931 he was elected chairman of the Division a post he would have held long before had it not seemed impossible to do without him as secretary he agreed to occupy both positions, and did so with equal efficiency and success

DR NORMAN E ALDRIDGE formerly of Southampton died at Alton on June 15th aged 71 Son of J H Aldridge M D J P of Southampton whose forebears for many generations lived in Hampshire he received his medical education at Edinburgh University where he graduated M B C M in 1884 He obtained the D P H of the London Royal Colleges in 1890 After taking up general practice in Southampton he became interested in radiography and in 1896—very soon after the discovery of *x* rays—became one of the earliest workers in this field Some few years later when the importance of this subject was apparent he devoted himself entirely to electrotherapeutics Having served as house-surgeon to the Royal South Hants and Southampton Hospital he was appointed honorary physician in 1893 and was in charge of the radiotherapeutic department from its incept on until 1929 when he retired as senior physician having been on the honorary staff of the hospital for thirty six years His work for the hospital has been fittingly commemorated by the naming after him of one of the new wards Dr Aldridge was also for some years radiographer to the Hants County Hospital Winchester and to the Southampton Infirmary During the war he served with the rank of major R A M C (T) as radiologist to the Royal Victoria Hospital at Netley and the Auxiliary Military Hospital at Southampton and latterly was inspector of radiography Southern Command It was during this period under the high pressure of work that he contracted *x* ray dermatitis of both hands which gradually extended until in spite of more than one operation he became completely crippled and on this account had to give up practice

Medico-Legal

DOCTOR INJURED IN MOTOR CAR ACCIDENT

£12 000 DAMAGES AWARDED

At Gloucester Assizes on June 9th before Mr Justice Lawrence and a special jury Dr Abraham Goldfoot a medical practitioner of Cheltenham brought an action against Mr R J K Brewer a publishers salesman of Bristol for damages for personal injuries received in a motor car accident

Sir Patrick Hastings K C for the plaintiff asked the jury to award Dr Coldfoot not merely substantial but very heavy damages In June of last year Dr Goldfoot was driving from Cheltenham to Clifton Something went wrong with his car and stopping at the side of the road which was twenty five feet wide he got out and opened the bonnet and looked at the carburettor Defendant's car was coming in the opposite direction Defendant pulled his car out from behind a larger one and in attempting to pass it struck the plaintiff and despite the fact that the doctor was seriously injured the defendant drove on He did not return to the scene of the accident until three-quarters of an hour later when he refused to give any explanation to the police Later he alleged that the plaintiff had walked suddenly out from behind his car but there was no foundation for that statement The injuries which Dr Goldfoot received were extremely serious His right hand was rendered useless and since the accident occurred his practice which had risen in seven years from £700 a year to £1 500 had to be conducted by a locumtenent to whom he gave what assistance he could He could not even write a prescription and up to now there was no sign of real improvement of his hand Professor Hey Groves said that he could give no definite promise that Dr Goldfoot's hand would ever be right again

Sir Reginald Coventry K C for the defendant said that his case was that Dr Goldfoot was mistaken as to what had happened The injuries he had suffered could not have been received in the way he claimed He suggested that Dr Goldfoot stepped out from behind the car which made the case one of contributory negligence The defendant in evidence said that he had been driving a car for two and a half years without accident He saw a stationary car with a man standing in front of the radiator While he was trying to pass a large car in front of him someone stepped from behind the stationary car but he had not the slightest idea that he had touched him and drove on He admitted that as a result of the accident he had been convicted of dangerous driving and of failing to stop after an accident Dr Hill Ernest Griffiths a consulting surgeon said that in his view the improvement in Dr Goldfoot's hand would continue during the next two years then he could not say when the hand would be a really useful member and he did not think Dr Goldfoot would ever be able to do midwifery or surgery again At the same time he would be a considerable amount of useful work which he could do in his practice even if his hand remained as at present

The jury awarded Dr Goldfoot £12 000 damages and the judge granted a stay of execution for fourteen days subject to payment into court or the giving of a bond for the amount awarded

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

At a special congregation of the Senate on June 8th the honorary degree of Doctor of Science (Sc D) was conferred on Sir Frederick Gowland Hopkins M B F R C P P R S Professor of Biochemistry in the University

Among those who received the degree of Ph D on June 9th was Mr L W G Malcolm M Sc conservator of the Wellcome Historical Medical Museum London

Under Regulation 15 for degrees in medicine and surgery the Faculty Board of Medicine has published in the *University Reporter* for June 13th a revised schedule for Part IV of the first examination for the degree of Bachelor of Medicine The schedule which has been drawn up by the Faculty Board of Biology A and Medicine is to replace on January 1st 1935 the schedule published in *Ordinances* p 31

At a congregation held on June 17th the following medical degrees were conferred

M B B Chir—W H M Hebblethwaite
B Chir—C E R Wood

The Council of the Senate has appointed Professor H R Dean M D Master of Trinity Hall a member of the Court of Governors of Sheffield University until June 30th 1936 The Vice-Chancellor the Master of Gonville and Caius College the Regius Professor of Civil Law and the Regius Professor of Physic have appointed G S Haynes M D F R C P a Distributor of Cranes Chantrell Chief Assistant in the place of the late Mr Arthur Cooke

UNIVERSITY OF BRISTOL

The following candidates have been approved by the examiners indicated

Final M P Ch B (Part I) (Pharmacology Toxicology)—R D Beeman J R C [illegible] E J V [illegible] S P V Williams (Part II) M V [illegible]

Final M B Ch B—(Part II) V J [illegible] with distinction in Public Health [illegible] (with distinction in Obstetrics) M L [illegible] V H R L Mark H E Pear[illegible] D J [illegible] Francis F Lovell

ROYAL COLLEGE OF SURGEONS IN IRELAND

The following have been appointed examiners for the ensuing year

For examinations under the management of the Conjoint Committee (Conjoint Licence Diploma in Public Health and Preliminary)—*Anatomy* Prof E J R Esson *Surgery* Prof A Chance Mr Henry Stokes *Physiology and Chemistry and Pharmacology* Prof W J E Jessop *Pathology and Bacteriology* Prof W Boyd *Midwifery and Gynaecology* Prof A H Dobbin *Ophthalmology* Mr E Mayerl D L R F J Henry *Chemistry and Physics Public Health* Dr [illegible] Werner *Chemistry and Physics Pharmacy and Therapeutics* Prof W J E Jessop Prof E A Werner *Pharmacy and Therapeutics* Prof L Abrahamson *Medicine and Public Health* Prof C Be[illegible]

For examinations conducted by the Conjoint Committee the management of the Conjoint Committee Fellowship Licence in Dental Surgery—*Anatomy* Prof F R Evatt *Surgery* Prof A Chance Mr A B Clerk Mr R F J Henry Mr Henry Stokes *Physiology and Histology* Prof W J E Jessop *Pathology and Bacteriology* Prof W J E Jessop Dr J T Wigham *Chemistry and Physics* Prof W J E Jessop Dr E A Werner

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who have both had many years' experience as Medical Transfer Agents.

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Accountancy and legal services furnished by the Agency, where desired, at moderate inclusive charges. No charge is made to Principals for the introduction of Locum Tenens or Assistants.

1. OUTLYING NORTHERN SUBURB.—Very old-established middle and working-class PRACTICE in pleasant and increasing residential district. Cash receipts average £1,342, including panel of 1,356. Very attractive house, with 2 reception, 6 bedrooms, etc., and large garden. Garage. Price for freehold £2,500. Premium 1½ years' purchase.
2. PARTNERSHIP.—In a well-populated pleasant South-Eastern suburb, within ten miles of London, the half share of an old-established mixed class Practice is for disposal owing to the retirement of the junior partner. Held by the remaining partner 30 years. Cash receipts average £2,765 p.a., including panel of 1,800 and appts. worth £150. Very little midwifery. Pleasant semi-detached corner house, with ample accommodation, garden. Price, leasehold (over 900 years, at ground rent of £7 p.a.), £1,050. Premium 2 years' purchase. Scottish graduate preferred.
3. NORTH-EAST COAST.—FAVOURITE TOWN.—Old-established good mixed general Practice, offering considerable scope for increase. Gross cash receipts for the past twelve months approximately £1,800. Selected panel of 100. Fees 5/- to 7/6. Very little midwifery. Well-situated house, with 3 reception, 5 to 6 bedrooms, etc., and separate professional rooms. Electric light. Garage. Price for Practice and house £5,400, part on mortgage. Good opportunity for Eye work, and Ear, Nose, and Throat work if desired. Sport of all kinds and excellent schools.
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Medical Notes in Parliament

[FROM OUR PARLIAMENTARY CORRESPONDENT]

The House of Commons this week took the report and third reading stages of the Finance Bill, and also of the Unemployment Insurance (Expiring Enactments) Bill The Estimates of the Department of Health, Scotland, and Public Education, Scotland, were down for discussion

In the House of Lords on June 20th the Aberdeen Royal Infirmary and Mental Hospital Bill and the Victoria Infirmary and Glasgow Act (1888) Amendment Bill were read a third time

The Road Traffic Emergency Treatment Bill was set down in the Lords for June 22nd

In the House of Commons on June 20th the Cancer Hospital (Free) Bill was read a second time

Finance Bill

During the report stage of the Finance Bill on June 19th Mr H WILLIAMS moved a new clause providing that British liqueurs and perfumed spirits might be warehoused in accordance with Section 95 of the Spirits Act 1880 for home consumption and accordingly that the words 'medicinal spirits or tinctures other than perfumed spirits' should be substituted for the words British liqueurs or tinctures or medicinal spirits' in Subsections (1) and (2) of Section 95 and in Section 74 of the Act Mr HORE BELISHA accepted the clause which was added to the Bill

The Government also accepted a new clause to authorize the sale of spirits in half bottles by holders of retailers off licences in England and Wales During the discussion it was argued that this concession would meet the need for small bottles of brandy for medicinal purposes

Captain FRASER moved an amendment providing that heavy oil used as a fuel in any voluntary hospital for the sick poor equipped prior to April 25th 1933 with apparatus especially designed for the use of such oil should be exempt from duty He said that the amendment only asked that the rebate should be given in the case of voluntary hospitals, because it was only in their case that there was a very real difficulty in raising the money to pay the tax If the tax went on, a certain number of voluntary hospitals would have to reduce the services which they rendered to their patients In London there was a small number of hospitals using oil, and if they were to be compelled to pay the tax it would cost them about £12 000 a year In the provinces the figure would be about £8 000 so that the total cost of this concession would be about £20 000 a year That was very little indeed to the Chancellor of the Exchequer but it meant much to these hospitals Only about fifty five hospitals had installed and were using the plant and he asked the right hon gentleman to exempt them from the tax Where hospitals had this apparatus they had found it beneficial to their patients, because there was less noise and because it had made available for hospital purposes other parts of the building hitherto used for storage There was reason to believe that the concession could be worked and that it was administratively possible to operate it For example the Lifeboat Institution secured a rebate for lifeboats in the matter of the petrol duty Again alcohol when used for medicinal purposes was tax free There were plenty of precedents for this concession

Dr O DONOVAN in seconding the amendment said he did not wish to say anything on the question of cost Hospital managers would appeal to the public for more money for every new development in medical science and surgical art but he would like the Chancellor of the Exchequer to exercise a little more directive force in the development of hospital life We could heat our hospitals with coal but those of them who worked in hospitals felt that better work could be done for them by the administrative side if the latter was not compelled to give so much time to the very many administrative problems brought into being by the use of coal in the matter of storage insurance and man power If by encouraging hospitals to use oil fuel such administrative aid could be given to doctors and to the sick it would be an advance in hospital practice Major HILLS agreed that the was not entirely a matter of cost The real argument against the tax was that oil was a much better fuel for use in a hospital It was more convenient to transport and was easier to store which as hospitals were chiefly in busy centres was an important item The service of the oil was easier than in the case of coal, no stoking was required no ashes had to be removed and there was no dirt or noise with all their evil effects on patients It would be a set back to the modern equipment of hospitals if this tax was imposed It was recognized by the medical profession that by far the best fuel to use was oil fuel and he did not think that the Chancellor of the Exchequer would like to force hospitals back to coal Sir W DAVISON also appealed to the Chancellor to exempt the voluntary hospitals He said that any hospital which might, in future be inclined to install plant for burning oil would do it with its eyes open and would have to make provision for the additional expenditure By the tax the Cancer Hospital in his constituency would incur an additional charge of £900 a year and St George's Hospital would have to meet an additional cost of £2 000 Sir Arthur Stanley had stated in the *Times* that morning that it would cost St Thomas's Hospital £2 400 a year, or add 50 per cent to their bill for fuel Major LLEWELLIN said that the Cancer Hospital in his constituency would have to pay an extra £500 a year if the duty were levied on oil That would mean that the hospital could take in fewer cancer cases They had not the capital available with which to alter the machinery already installed in the hospital

Mr CHAMBERLAIN said that everyone who had represented the Treasury knew how difficult it was to resist these insidious and rather dangerous arguments which were brought forward in support of a concession which was asked for on the ground that it was only a little one The precedents which had been quoted showed how dangerous it was to begin whittling away the foundations on which one rested and how one concession was immediately made the precedent for asking for another He had already thought of asylums, sanatoriums and convalescent homes and if he had more time he could think of many other institutions supported by voluntary contributions which might make an equally sound claim When in addition to the argument that this was only a little concession, they were brought into contact with the idea of voluntary hospitals and the relief of the sick poor, the sympathies of everybody were naturally aroused, and it was perhaps easy for all of them to be led away towards the cause to which their inclinations would naturally turn them If it were actually true that all these hospitals which were dependent on voluntary contributions would be obliged to find an additional £400 £500 £1 000 or £2,000 a year it would be very difficult to maintain his position but he had a very good reply After all although the supporters of the amendment had adduced the convenience of oil as a strong reason why the hospitals should have installed it and should continue to use it the fact that there were only fifty-five hospitals in the country which were concerned, and which had actually installed oil showed that that was not a very powerful consideration The real consideration was the comparative cost of the two kinds of apparatus Not only would this not necessarily cost the hospitals a large sum per annum, but if they followed the example of some very progressive and efficient hospitals which had made the most of the time that had elapsed since the Budget proposals were introduced, they could actually save money Here was a case of a hospital in London where conversion from oil to coke had actually taken place since the oil duty was first proposed The total cost of conversion was £80 and the estimated annual saving due to the use of coke was £2 000 so that in two weeks the hospital would have paid off the extra cost of conversion and would be in receipt of an additional source of income which was never thought of before In the case of a much larger hospital the cost of conversion was no less than £680 and they were going to save £1 670 The relative improvement was not so great as in the first case but the capital expenditure would be paid off in five months and the hospital would have a new source of income Conditions varied in different cases and a great deal depended on such technical questions as whether a natural draught was sufficient or whether there would have to be a forced draught With a natural draught the cost

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General Medical Council's Registrar—Mr HORE BELISHA announced on June 14th that the post of Joint Registrar of the General Medical Council and of the Dental Board had been recognized as approved employment within the meaning of the Superannuation Act 1914

Superannuation of Local Government Officers—In the House of Commons on June 20th the Local Government and other Officers Superannuation (Temporary Provisions) Bill was read a second time The Bill makes provision for certain deductions from remuneration to be disregarded in the computation of contributions, pensions and gratuities under enactments relating to the superannuation of persons employed by local authorities and other public bodies The Bill was supported by Mr SHAKESPEARE and Mr GREENWOOD both of whom said it legalized an honourable undertaking entered into by local authorities with their employees who agreed to cuts in salaries Sir HENRY JACKSON welcomed the Bill on behalf of the National Association of Local Government Officers as evidence of the interest which the Government and the Ministry of Health were taking in the officers of the Local Government service It was he added the first occasion on which the Government of the day had introduced a superannuation bill dealing with Local Government officers The Bill was committed to a Committee of the whole House

Examination of Blind Persons in Scotland—Replying to Mr Burnett Sir GODFREY COLLINS said on June 20th that in all cases which came before the Department of Health of Scotland on appeal where examination had been made at a blind clinic the Department were furnished with detailed reports by the examining surgeons These specialists were fully conversant with the standards adopted for the purposes of the Blind Persons Act 1920 and their reports formed the basis of the Department's decisions If in any case of special difficulty further examination was thought desirable arrangements would be made to have this done

The Services

INDIAN MEDICAL SERVICE ANNUAL DINNER

The annual dinner of the Indian Medical Service took place at the Trocadero London on June 14th with Air Vice Marshal Sir David Munro in the chair The official guests were Sir Findlater Stewart Permanent Under-Secretary of State for India Major General S F Muspratt Military Secretary India Office Dr N G Horner Dr E C Morland, and Mr F H Brown together with six officers on probation

The chairman in proposing the toast of "The Service," read a message of greeting from I M S officers in Lucknow and said that he was proud to preside at the dinner of his own Service the finest in the world In the great variety of its work—clinical scientific and administrative—the I M S was unrivalled and its officers were in touch with the life of the people of India The medical problems of India were immense and for their solution humanity would require the continued efforts of the I M S Sir David Munro ended with a brief tribute to the memory of Sir Walter Fletcher a man with a flair for the best of everything and a good friend to the I M S

Sir Leonard Rogers in proposing the chairman's health said that the prospects of the I M S were better now than for some years past Twenty five recruits with high qualifications had joined this year In former times the greatest attraction of the I M S was the opportunity it gave for research in the sciences such as botany zoology and ethnology Nowadays with the extreme specialization of the sciences this was no longer possible but the career of Sir David Munro illustrated the versatility of the I M S

The health of the secretaries Colonel Granger and Sir Carey Evans and of the Indian secretary Colonel Stanger-Leathes was proposed by Lieut Colonel J Anderson who mingled good advice with humorous anecdotes in his inimitable manner and expressed the thanks of the company to those who had organized a most enjoyable evening Sir Carey Evans in a brief response spoke of the death of two great I M S men of science during the past year—Sir Ronald Ross and Colonel Alcock

The officers present at the dinner were

Major-Generals Sir Havelock Charles Bt W A Coppinger Sir Leonard Rogers,

Colonels H Ainsworth J Anderson R T Baird L P Brees J P Cameron, Sir Richard Christophers Sir Frank Connor A B Dey T A Granger C R M Green W H Leonard Sir Robert McCarrison T P Mackie W O S Murphy A J Macnab C W T Melville Sir Richard Needham, J J Pratt H L Stanger Leathes C N C Wimberley

Lieut.-Colonels H P Cook, A G Coulhe D Coutts D G Crawford J M Crawford J T Calvert H Dalzell I Davenport Jones H R Dutton, R H Elliot J K S Fleming G I Graham V B Green Armytage A T Grisewood A T Hamilton W C Hamilton, J B Hamfin T A Hugo M L C Irvine S P James S Whitworth Jones J C H Leicester V M Mackenzie A C A McNeight, E C G Maddock I O N Mell P S Mills T R Mulroney J H Murray T O Kinealy J Robertson H Rose H K Rowntree A J H Russell R Steen C M C Smith W D H Stevenson Ashton Street W A Sykes C S Thomson E O Thurston R G Turner S S Yazdfar R T Wells E L Ward K E Wright

Majors D P Bhargava H C Brown T M Collins G Covell W H Crighton W E R Dimond A J D'Souza, H H Elliot Sir T Carey Evans, A H Harty A S Jafar A V Lopes J G McCann S R Prill C G Seymour B Z Shah

Captains Devi Dutt D T Lambert S M K Mallick E C Montgomery T B Pahlajani

Officers on Probation Captain W J Moody Lieut A T Andreason Lieut M E Kirwan Lieut M S Purvis Lieut B A Pornit, Lieut D K L Lindsay

OSBORNE CONVALLSCENT HOME

The King has approved the appointment of the following to the civil consulting staff of King Edward VII's Convalescent Home for Officers Osborne Isle of Wight as from May 31st

Sir Cuthbert Wallace K C M G, C B F R C S
Professor George E Cask C M G D S O F R C S
E Rock Carling M B B S F R C S
W Rowley Bristow F R C S
Claude H S Frankau, C B E D S O F R C S
Sir William H Willcox K C I E C B C M G F R C P
Professor T R Fraser M D, F R C P
Gordon M Holmes C M G, C B E, M D, F R C P

DEATHS IN THE SERVICES

Surgeon William John Butler Madras Medical Service (ret) died in London on June 5th aged 87 He was born on May 21st 1846 the youngest son of Dr William Butler superintending surgeon in the Madras Service was educated at St Mary's and took the M R C S in 1870 and the L S A in 1872 also subsequently, after leaving the I M S the L R C P Lond in 1882 After serving as resident obstetric officer at St Mary's he entered the I M S as assistant surgeon on March 30th, 1872 but retired after only eight years' service on February 25th 1880 While in India he held the post of resident surgeon of the Madras General Hospital

Lieut.-Colonel Frederick Wynne Hardy R A M C (ret) died at Ealing on June 14th aged 68 He was born at Bolas Magna Salop, on September 2nd 1864 and was educated at Cambridge and at Bart's He won a mathematical scholarship at Jesus College Cambridge and graduated B A with honours in the Natural Sciences Tripos in 1886 and later as M B, Ch B and D P H in 1902 He also took the I S A in 1890 and entered the Army as surgeon on January 31st 1891 reached the rank of lieutenant colonel on January 26th 1913 and retired on March 27th 1919 In 1899-1902 he was health officer at Bermuda He served in the war of 1914-18 was mentioned in dispatches in the *London Gazette* of February 17th 1915 and June 15th 1916 and acted from 1915 on as a D M S of a Division with temporary rank of colonel

Major Satyendra Nath Mukerji Indian Medical Service died at Zürich on May 15th aged 51 He was born on June 24th 1881, and was educated at Calcutta University where he took the diploma of L M S in 1909 Coming to Europe soon after he obtained the L R C P Ed in 1911 and the F R C S Ed in 1913 Soon after the war began he took a temporary commission in the I M S as lieutenant on November 20th 1914, becoming captain after a year's service On December 8th 1915 he received a permanent commission as lieutenant and temporary captain and attained the rank of major on November 20th 1926 He served in the war of 1914-18 in Iraq Before coming to Europe on furlough he held the post of superintendent of the Campbell Medical School and Hospital in Calcutta

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EDITOR OF THE *British Medical Journal*.

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EDITED BY

S. A. KINNIER WILSON.

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Medical News

The Ingleby Lectures will be delivered by Dr Alfred F Hess of New York in the Medical Lecture Theatre Birmingham University on June 27th and 29th at 4 p m The subject will be the fat soluble vitamins The first lecture will be devoted to vitamin A in relation to nutrition and infection and the second lecture to an appraisal of the prophylactic measures against rickets

The Cavendish Lecture before the West London Medico-Chirurgical Society will be given by Sir Peter Chalmers Mitchell F R S in Kensington Town Hall on Thursday June 29th at 8 30 p m Subject The Diet of Animals The lecture will be followed by a conversazione

The annual general meeting of the Fever Hospital Medical Service Group of the Society of Medical Officers of Health will take place at the house of the society 1 Upper Montague Street Russell Square on Friday June 30th at 3 30 p m The principal business will be the election of officers and council for 1933–4 and an address by Dr E C Benn on Heart Failure in Diphtheria The above meeting will be preceded by a meeting of the council at 3 o clock

The Dean of St Paul s will present the prizes to successful students of the London Hospital Medical College on Tuesday June 27th at 3 p m in the College Library

The ninety second annual meeting of the Royal Medico Psychological Association will be held partly at Colchester and partly at Clacton-on Sea on July 5th 6th and 7th under the presidency of Dr F Douglas Turner The annual dinner will be held at the Grand Hotel Clacton-on Sea on Wednesday July 5th at 8 p m

The last of four lectures for advanced post graduates arranged by the Fellowship of Medicine will be given at 11 Chandos Street W on June 28th at 5 p m by Mr A McAllister on Some Features of Eclampsia ' On June 26th at 8 30 p m Dr R de Hellebranthe will lecture on Modern Methods of Local and Spinal Anaesthesia On June 27th at 8 30 p m Mr Lindsay Rea will give a demonstration on the fundus oculi at the West End Hospital for Nervous Diseases in patient department On July 13th at 4 p m at 11 Chandos Street there will be a demonstration of x ray films by Dr Kerley for M R C P candidates A week end course in general medicine and surgery will be held at the General Hospital Southend-on Sea on July 8th and 9th On June 30th there will be an ante natal demonstration at the Royal Free Hospital at 5 p m Forthcoming courses include proctology at St Mark s Hospital July 3rd to 8th ophthalmology at the Royal Westminster Ophthalmic Hospital July 10th to 29th dermatology at the Black friars Hospital July 10th to 22nd practical pathology at the Brompton Hospital July 10th to 22nd urology at All Saints Hospital July 10th to 29th

A medical conference on contraception will be held in the Great Hall B M A House Tavistock Square W C on Saturday July 8th at 10 30 a m It has been arranged by the National Birth Control Association with which is incorporated the Birth Control Investigation Committee The subjects for discussion are Recent Researches on Temporary Hormonic Sterilization (chairman Professor Julian Huxley) Public Health Authorities and Information on Contraception (chairman Dr Helena Wright) Chemical Spermicides and their Effects and General Practice and Information on Contraception (chairman Lord Horder) Application for tickets (price 2s 6d) should be made to the secretary 26 Eccleston Square S W 1

At the June meeting of the Central Midwives Board for England and Wales approval as lecturer was granted to Mr H S Allen (Cheltenham District Nursing Association) Mr B K T Collins was appointed an examiner of the Board at Bristol

An international post graduate course in paediatrics will be held at the Kaiserin Augusta Viktoria Haus Berlin from July 9th to 15th

An international congress for the protection of infancy will be held in Paris from July 24th to 29th under the presidency of M Paul Strauss late Minister of Health and a member of the Academy of Medicine The subjects to be dealt with include prenatal consultation and the importance of maternal instruction in connection with reduction of the infantile mortality supervision of physical development during the school and post school periods vocational guidance for mentally deficient children and the organization of legal guardianship of illegitimate children The fee for membership of the congress is 100 francs and further information can be obtained from the secretary of the congress 28 Boulevard de Vaugirard Paris XV e

The sixth French Provincial Congress of Hygiene will be held at Nancy from July 3rd to 5th when the following subjects will be discussed (1) preventive control of the health of adolescents (2) the morbidity of venereal disease (3) disposal of rubbish The subscription is 50 francs Further information can be obtained from the president M Jean Beneth Terre Plein Sant Epvre Nancy

The fourth International Congress of Radiology will be held at Zürich and St Moritz from July 29th to 31st 1934 under the presidency of Professor N Schinz Further information can be obtained from the general secretary D N S Wolther Gloriastrasse 14 Zurich

The executive committee of the International Congress for the Protection of Childhood to be held in Paris on July 4th has decided to include a colonial section for the study of maternity and child welfare

The trustees of the Lady Tata Memorial Fund announce that on the recommendation of the scientific advisory committee they have made the following awards of scholarships for the academic year 1933–4 Dr Walter Büngeler University of Frankfort-on Main Dr Leonid Dolschansky University of Berlin Dr Martin Cyril Gordon Israëls University of Manchester Dr Charles Oberling Faculty of Medicine Paris These scholarships were open to graduates of any nationality for research work in diseases of blood with special reference to leukaemia (see *British Medical Journal* February 18th p 284)

The Import Duties (Exemptions) (No 6) Order 1933 issued by the Treasury on the recommendation of the Import Duties Advisory Committee exempts untrimmed natural silkworm gut in hanks or bundles from duty chargeable under the Import Duties Act and comes into operation on June 23rd Untrimmed natural silkworm gut is the raw material for making gut for fishing tackle and for surgical sutures it is not produced in the United Kingdom or in any other part of the Empire

In the advertisement columns this week will be found a notice regarding the fourth award of the Nichols Prize by the Royal Society of Medicine The prize being the accumulated interest on £2 200 is offered every three years and is open to any British subject for the most valuable contribution towards the discovery of the causes and the prevention of death in childbirth from septicaemia The work must be submitted to the secretary of the society 1 Wimpole Street W by October 1st

On Empire Day the ceremony of opening the operating theatre at Southwold Cottage Hospital was performed by Lord Stradbroke in the presence of a large number of subscribers of all classes Soon after his death in 1928 there was a general feeling that some tribute should be paid to the memory of Dr R Wilson Mullock who for twenty five years had been the moving spirit in the work of the hospital and who had won the gratitude and devotion of all with whom he came in contact The affection and esteem which he had inspired were amply expressed by the readiness with which the sum of over £600 was raised by the subscriptions of rich and poor alike

Professor Karl Pearson has been awarded the Rudolf Virchow medal by the Berlin Society for Anthropology

The March issue of the *Chinese Medical Journal* is devoted to leprosy

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to **The EDITOR British Medical Journal B M A House Tavistock Square, W C.1**

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication

Authors desiring REPRINTS of their articles published in the *British Medical Journal* must communicate with the Financial Secretary and Business Manager British Medical Association House Tavistock Square W C 1 on receipt of proofs Authors overseas should indicate on MSS if reprints are required as proofs are not sent abroad

All communications with reference to ADVERTISEMENTS as well as orders for copies of the *Journal* should be addressed to the Financial Secretary and Business Manager

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The address of the Irish Office of the British Medical Association is 18 Kildare Street Dublin (telegrams *Bacillus Dublin* telephone 62550 Dublin) and of the Scottish Office 7 Drumsheugh Gardens Edinburgh (telegrams *Associate Edinburgh*, telephone 24361 Edinburgh)

QUERIES AND ANSWERS

Gerard s "Herball"

Dr W DARLEY HARTLEY (Rondebosch, Capetown) writes I have in my possession a copy of Gerard s *Herball* that great volume of Elizabethan materia medica, published in 1597 and printed by John Norton at London I should be very grateful if any of your bibliophile readers could inform me what edition of Gerard this is, and whether copies are rare If they could at the same time give me any particulars about the author himself I would be grateful I have been asked to show the book at a historical exhibition arranged for the ensuing South African Medical Congress in September and any information would be of value It contains a dedication to Lord Burghley

*** John Gerard was born in 1545 at Nantwich and died in 1612 in London At the age of 17 he was apprenticed to Alexander Mason a surgeon in large practice and twice Warden of the Barber Surgeons Company of which Gerard was admitted a freeman in 1569 and a member of the Court of Assistants in 1595 Gerard was by then well known as a skilled herbalist he was superintendent of Lord Burghley s gardens in the Strand and at Theobalds in Hertfordshire In 1596 he published a list of the plants cultivated in his own garden in Holborn In December, 1597 appeared the folio volume which has made his name a household word his *Herball* The original of this was the *Stirpium Historiae Pemptades* (1583) of Rembert Dodoens of Malines with many of Gerard s own remarks inserted such as localities for scarce plants in various parts of England and allusions to persons and places In 1633 Thomas Johnson prepared a new edition of the *Herball* which was reprinted word for word three years later The genus *Gerardia* was named by Linnaeus in memory of Gerard In 1639 the Barber Surgeons Company of which he was Master in 1608 paid 25s 6d for a copy of the *Herball* for its library Further information will be found in the article on Gerard in the *Dictionary of National Biography*

Vehicle Sickness

YORKSHIRE writes A woman patient suffers from vomiting every time she rides in her husband s motor car She states she has suffered ever since she can remember, when riding in trains buses, and trams No treatment seems to benefit her Can anyone having experience of similar cases suggest a remedy?

Nocturnal Enuresis at Menopause

O OKIEP (London, W) asks for suggestions in the treatment of spasmodic nocturnal enuresis in a woman aged 55 Menstruation has been absent for some months past, though it has recently been present—scanty and irregular in character No other abnormalities physical or psychical

Alopecia Areata

"A A H" writes I have a patient with alopecia areata who has seen everybody in this part of the world and tried all the usual remedies—with no avail The Wassermann reaction is negative I should be grateful for suggestions as to any recent treatment

LETTERS, NOTES, ETC

Tobias Venner and his 'Via Recta"

A correspondent writes Apropos of your amusing synopsis of some of Tobias Venner's views on tobacco, straw' ries and cream, etc (June 17th, p 1068) it may interest some of the profession to know that a copy of the 1638 edition of this very book is to be sold at Sotheby s in Bond Street, on July 4th The abbreviated title, as given in the catalogue, is *Via Recta ad vitam longam* ' Or a plain Philosophicall Demonstration for the preservation of health a Treatise of the Famous Baths of Bathe as also an accurate Treatise concerning Tobacco R Bishop for H Hood ' There are a few other old medical books in the same sale Vesalius *Anatomy* Amsterdam, 1617 with forty anatomical plates, Otto Tachenius, *Hippocrates Chymicus discovering the ancient foundation of the late Viperine Salt with his Clavis thereunto annexed translated by I W* 1677, Hieronymus Von Braunschweig *Das Buch zu istilieren*, 1532 Cogan *The Haven of Health* " Hereunto is added Preservation from the Pestilence, with a short Censure of the late Sicknesse at Oxford ' 1589, Luis Lobera de Avila *Ein Nutzlich Regiment der Gesundt heit* with woodcuts of bloodletting Augsburg, 1531, Marsilius Ficinus, *De Triplici vita libritres* Bologna 1501 and one or two others

Posture in Labour

Dr CHARLES J HILL AITKEN (Rotherham) writes The late Dr W E Fothergill in his *Manual of Midwifery*, recommended that the legs be down when the head is still above the brim, that the legs be up when the head is in the pelvis, and that the legs be down again when the head is passing the perineum This procedure will facilitate labour These positions can be taken up by the patient lying on her left side and on her bed The manual was published in the late 'nineties

Portable Lithotomy Support

Dr SHEILA MACPHERSON asks us to state that the makers in London of the portable lithotomy support, described in the *Journal* of June 17th (p 1058), are Messrs Allnatt and Partners The appliance is also to be obtained from Messrs J Gardner and Son, Forrest Road Edinburgh

Inflammation after Use of Depilatories

Dr L H FISHER (Brighton) writes In your Letters Notes and Answers column of June 17th there is a reference to adenitis following the use of depilatories Recently I had a similar case, and I have treated at least half a dozen cases in six or seven years The condition, in my opinion does not appear to be an adenitis It resembles more a subcutaneous abscess, probably at the root of a sweat gland In each case there has been two or more present—in one case eight small abscesses about the size of a hazel nut I consider depilatories to be definitely dangerous

The A.A Irish Handbook

The Automobile Association (Fanum House New Coventry Street W 1) has now issued its *Irish Handbook* for 1933-4 Particulars are given of all Irish hotels and garages holding the full A A appointment and a note is included of houses where hot and cold running water is provided in the bedrooms Details are given concerning the services to which members are entitled from the A A road patrols and departments and there is a map in atlas form (scale sixteen miles to the inch) Further information covers foreign tours steamship rates for motor vehicles times of lighting up for Northern Ireland and the Irish Free State and formalities in connexion with crossing from the Free State to Northern Ireland and vice versa

Vacancies

Notifications of offices vacant in universities medical colleges, and of vacant resident and other appointments at hospitals will be found at pages 42 43 44 45 46 47 50 and 51 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 48 and 49

A short summary of vacant posts notified in the advertisement columns appears in the *Supplement* at page 296

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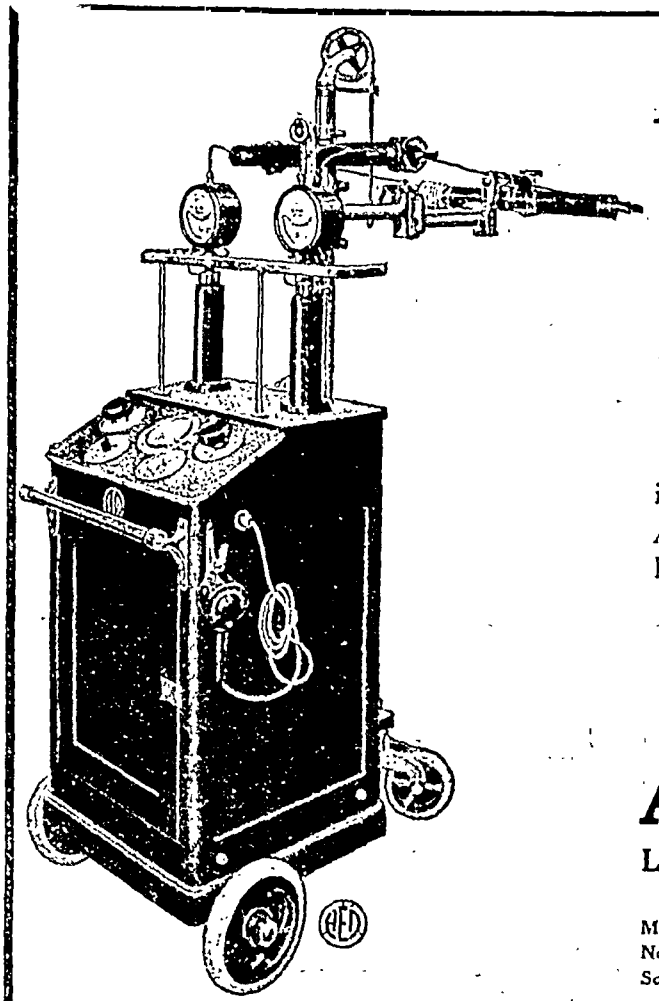

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EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

438 Arterial Blood Pressure during Attacks of Angina

SAMUEL A LEVINE and A CARLTON ERNSTENE (*Amer Heart Journ* February 1933 p 123) report their observations on arterial blood pressure during attacks of angina pectoris Readings were obtained in spontaneous attacks occurring in twenty three patients In seven the previous blood pressure readings were known In three the attacks were allowed to end spontaneously and in twenty nitroglycerin was given to obtain relief In every case the systolic pressure was distinctly higher during the attack Although this may not be an invariable occurrence it is concluded that a failure of the blood pressure to rise in an anginal attack is rare Evidence is presented to show that in patients with angina pectoris pain alone such as that of renal colic neither produces an elevation of the blood pressure nor brings on an attack of angina It is suggested that a temporary elevation of the blood pressure is an important factor in the production of anginal attacks and may even be a necessary immediate cause of the attack although a final decision as to this relation will require further investigation

439 Spontaneous Subarachnoid Haemorrhage

C K RUSSEL (*Canadian Med Assoc Journ* February 1933 p 133) has encountered twenty six cases of this disease and believes that it is too often overlooked despite the distinctive clinical picture The average age of these patients was 38 the eldest was 69 and the youngest 12 Recurrent attacks were noted in some cases Fourteen patients were women and twelve were men In five instances the haemorrhage was associated with pregnancy In three of these there was renal toxaemia and hypertension but of too short duration to suggest such a sequel Only in one case in the whole series was there a suspicion of vascular syphilis and in none was there evidence of thrombosis of the longitudinal sinus Russel considers that developmental defects are the underlying factors in the majority of the cases The onset is always sudden Headache begins in the frontal region but soon becomes occipital also and frequently spreads down the neck and back It is often associated with vomiting but the headache being severe is always the outstanding symptom Consciousness may be dulled or lost in the first case the patient when roused is rational and not toxic as in an infective meningitis In coma or semi-coma supervenes there is still evidence of extreme irritability A generalized convulsion occurred in two cases in the series The temperature is normal at first but may rise slightly later due probably to the absorption of the blood There is definite stiffness of the neck on passive movement especially obvious if an attempt is made to flex the head on the chest Kernig's sign is present in the more severe cases but there are as a rule no paralyses and no pathological reflexes In half the series there was slight blurring of the optic disks and in one third definite haemorrhages were seen in the fundi Albuminuria was present in 50 per cent but in no instance in very great amount This sign disappeared before healing was complete The leucocyte count averaged 11 000 The blood pressure was usually on the high side Lumbar puncture clinches the diagnosis The spinal fluid is under increased pressure and its colour ranges from pink to that of pure blood It does not clot and on standing the cells sink to the bottom of the tube the supernatant fluid remains coloured by altered blood pigment Withdrawal of the fluid relieves the headache but the intracranial pressure must not be lowered too rapidly at one time nor too soon after the onset and before a clot has had time to form at the bleeding point Yet it is important to remove as much as possible of the blood in view of possible complications later such as the formation of an interstitial hydrocephalus The disease was of the meningitic type in fourteen of the twenty six cases at the onset with symptoms of meningeal irritation In ten cases however either at the onset or subsequently a second haemorrhage occurred which had the character of an apoplexy causing a hemiplegia Spontaneous subarachnoid haemorrhage is most frequent at the junction of the anterior cerebral and the anterior communicating arteries Developmental aneurysms are attached by the author to this fact but in the older patients acquired disease is more commonly the cause Advanced atheromatous changes occur with surprising frequency even in young persons

440 Spontaneous Serum Sickness

W MIKULOWSKI (*Arch de Méd des Enf* March 1933 p 161) who records two illustrative cases states that spontaneous absorption of the patient's own albumin may under certain conditions produce serum sickness and a joint reaction The first patient was a boy aged 8 suffering from tuberculous peritonitis who on absorption of the peritoneal effusion developed a transient and painful oedema of several joints a haemorrhagic eruption and urticaria accompanied by leucopenia hypochromia and oliguria The second patient was a girl aged 8 years suffering from tuberculous pleurisy and peritonitis who developed arthralgia in the cerebral joints and upper limbs accompanied by generalized urticaria as the effusion became absorbed

Surgery

441 Plastic Surgery in Chronic Radio-Dermatitis

Sir HAROLD D GILLIES and A H MCINDOE (*Brit Journ Radiol* March 1933 p 132) describe the treatment of chronic radio-dermatitis and radio-necrosis by plastic surgery Analysis of the records of their patients shows that they fall naturally into three groups (1) patients who have received a single dose of radium or x rays for diagnosis or treatment (2) patients who have undergone treatment for a chronic condition and who have received small but oft repeated doses for a long period often resulting in ulceration and (3) professional workers with x ray apparatus suffering from burns of the hands and face It is stated that the full effects of excessive radiation may not become apparent at once and a latent period of months or even years may intervene between the last dose of x rays and the final breaking down of the tissues The hopelessness of conservative treatment is stressed and the necessity is urged for adequate excision of all the devitalized tissues at a suitable time in order to prepare a healthy foundation for immediate grafting The indications for operation are (1) pain itching ulceration and discharge (2) deformity from contraction (3) cosmetic appearance and (4) epithelomatous change Treatment falls naturally into two stages (*a*) excision and (*b*) repair and in the vast majority of cases both stages are carried out at one operation Excision is usually simple and should extend into healthy skin on all sides A guide to the depth of excision is furnished by traction on the ruddy line supervening which a cleavage plane which is easily followed being thereby established Three methods of repair are available (1) Thick razor grafts these applied on a Scott pressure mould of the defect have a wide field of use (2) Full thickness dissected grafts these in the writers hands have not proved as reliable in this type of repair as the first method (3) Pedicle flaps these may be of the sliding rotation transposed or tubed pedicle variety according to the difficulties to be overcome and the

cosmetic result desired The results in the authors' hands are excellent, and many illustrations of cases are given proving this It is noteworthy that radio-dermatitis and necrosis are cured as soon as excision is complete, and the relief of the pain is usually immediate and permanent Success thus depends entirely on the technical excellence of the plastic treatment In general it may be said that the results are most favourable with thick razor grafts and flaps, and that a successful repair in this type of burn may be more confidently predicted than after burns by fire

442 Ambulatory Treatment of Fractures of the Instep

Of the various fractures of the tibio-fibular mortise J DELCHEF (*Journ de Méd de Bordeaux*, March 20th, 1933, p 223) deals only with Dupuytren's Though it is generally agreed that these are caused by a movement of abduction, he does not concur in the usual method of treatment by placing the foot at rest for some time in a position of hyperadduction For some twenty years he has employed an ambulatory method, and immobilizes the foot in an anatomical position as recommended by Lorenz-Bohler, but without the stirrup used by the latter The following is his technique After determining the lesions by clinical and radiological examinations, local anaesthesia is produced by the interfragmentary method of Quenu, 10 c cm of a 1 per cent solution of scurocaine being injected amongst the fragments Should much swelling be present this may be reduced by massage The patient sits with the injured limb on a table The surgeon also seated, grasps the foot, the homologous hand holding the calcaneum between the thumb and index finger, the other firmly holding the mediotarsus with the thumb under the sole and the fingers on the back of the foot An assistant exercises contra-extension at the popliteal space Reduction, which is usually easy, is made by traction on the calcaneum and metatarsus, the displacement being most frequently corrected automatically When the fracture includes a posterior marginal fragment deviation is apt to recur but this is easily overcome A plaster cast, reaching from the popliteal space to the ends of the toes, is then applied, the foot being maintained at right angles to the leg without abduction or adduction Circular bands of gauze fix the toes to the knee The cast is completed by plaster bands very exactly moulded to the foot and upper ends of the tibia and fibula Walking is allowed immediately the plaster is dry The cast is retained for forty-two days, the circulation being carefully watched After its removal a course of massage and thermotherapy is given To prevent the frequent subsequent swelling a boot composed of Unna's gum should be applied and worn for eight days Short notes are given of thirteen cases—in only two was osteosynthesis performed In conclusion, Delchef discusses the logic of this method and the essentials for success, such as the anaesthesia and correct moulding of the cast

Therapeutics

443 Treatment of Post operative Hypoparathyroidism

R ELLSWORTH (*Bull Johns Hopkins Hosp*, February, 1933 p 131) reports in detail a case of this condition and emphasizes the importance of regulating both the intake of calcium and of phosphorus At first the typical symptoms were partly relieved by a daily calcium intake of 2 grams and a limitation of the phosphorus intake to 1 gram The serum calcium content rose, as also did the serum phosphorus Further limitation of the phosphorus intake to 0 27 gram daily resulted in accentuated relief of the symptoms a slightly higher rise in the serum calcium figure and a fall of the serum phosphorus figure towards the normal The patient returned home and resumed her usual life, but the prescribed regime proved to be ineffectual The calcium ingestion was then raised to 5 grams daily by giving calcium chloride relief of the symptoms ensued, associated with a return towards the normal of the serum calcium and phosphorus figures In the course of the condition viosterol was tried, possibly in too large doses (4 c cm daily) The serum calcium rose at first, but then fell, and the serum phosphorus figure was definitely increased with clinical signs of tetany The author thinks it possible that a very high calcium intake ought to have been associated with this administration of viosterol in order that its calcium increasing potentialities might have been realized Magnesium salts were also tried, and some evidence was obtained that a partial inactivation of the blood inorganic phosphorus content resulted The injection of 80 units of parathormone was followed by a prompt and very rapid fall in the serum inorganic phosphorus, with symptomatic improvement, beginning about eight hours after the injection The serum calcium had reached a level of 9 2 mg per 100 c cm twenty-four hours after the parathyroid extract had been administered

444 Treatment of Erysipelas

W VOGEL (*Deut med Woch* March 10th, 1933, p 365) reports good results in severe cases of erysipelas treated with a combination of local applications and serum injections In regard to local treatment he has found ichthyol ointments, confinement to bed, and immobilization of the affected part in general satisfactory Sometimes x-radiation is also applied Mild cases heal rapidly and without exception More severe cases with high fever and urgent general symptoms are treated with injections of autogenous serum, omnadin, or horse serum, sometimes collargol and vaccines are used The author points out that whilst all these methods are successful in individual cases there are many occasions on which no improvement attends their use In recent years the author has used a polyvalent anti-streptococcal horse serum (streptoserin) prepared according to Meyer's technique for the immunization of horses with streptococcal cultures and toxins This serum has given excellent results in gynaecological cases of streptococcal infections In erysipelas the dose varies from 20 to 100 c cm intramuscularly, according to the severity of the condition This may be repeated in twenty-four hours In nearly all cases the temperature is down to normal the next day and the symptoms are definitely improved Failure to bring down the temperature is due to insufficient dosage or to abscess formation deeper in This latter is considered so strongly to be the case that the author regards it as of diagnostic importance Whilst the temperature is brought down rapidly and the general symptoms are improved, the local manifestations may be affected more slowly, but even where these latter extend there is always an amelioration of the symptoms

445 Prevention of Chills following Blood Transfusion

According to R LEWISOHN and N ROSENTHAL (*Journ Amer Med Assoc*, February 18th, 1933, p 466) the occurrence of chills after blood transfusion is preventable whether the blood has been citrated or not They refer to investigations by various authors who have shown that chills ensue with the same frequency in both cases, and submit arguments that the addition of the citrate solution has no such predisposing influence in this respect as has been sometimes attributed to it It appears to the present authors that chills and other reactions following intravenous therapy are due to the existence of foreign protein, which is either extraneous matter present in the insufficiently distilled water or the remains of changed blood proteins left in the apparatus from previous transfusions As the result of centralization of the cleansing of the apparatus and the preparation of the solutions by competent persons, a marked fall in the incidence of chills was recorded—namely, from 12 to 1 per cent With such precautions only five cases occurred in a series of 477, and in four of these an error in technique was demonstrable Many of the patients were desperately ill at the time of transfusion The procedure was undertaken by a considerable number of members of the consulting and resident staffs of the hospital concerned, and the

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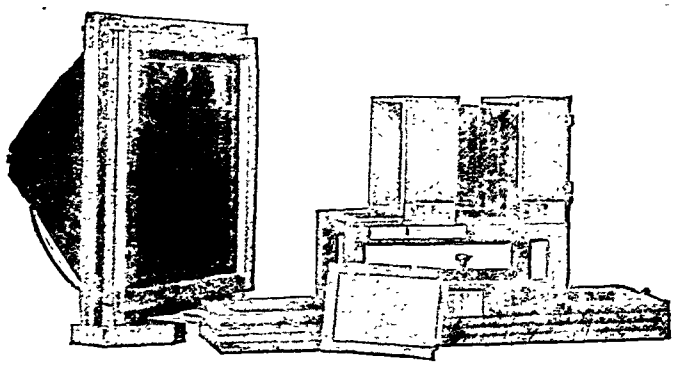

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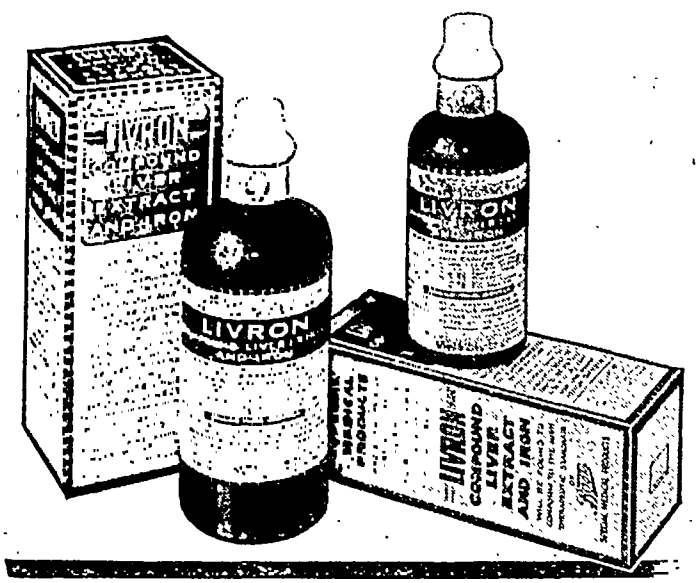

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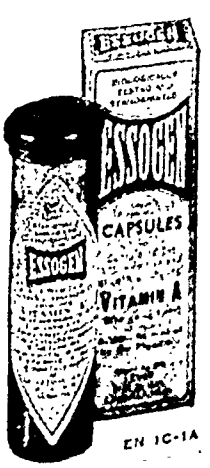

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authors suggest that complete elimination of chills would follow the reservation of blood transfusion to a small expert team which should also be solely responsible for intravenous therapy generally Apart from the proper cleansing and sterilization of the apparatus other factors concerned are the securing of a rapid flow of blood from the donor into the glass receptacle to prevent the formation of small clots and the maintenance of a slow rate of introduction of citrated blood into the recipient Accuracy of blood grouping is also an important safeguard Triple distilled water is indispensable in the preparation of the sodium citrate and normal saline solutions Details are given about the special cleansing of the apparatus and the precautions advisable in securing purity of the fluids for intravenous therapy

Laryngology

446 Ozaena

LEROUX ROBERT and COSTIOL (*Rev de Laryngol d Otol et de Rhinol* February 1933 p 172) review the present knowledge of the aetiology pathology and bacteriology of ozaena They consider the subject from two aspects—the endogenous one in which the patient himself is the determining factor of his affection and the exogenous one in which germ transmission from another individual plays the chief part It has been proved experimentally that implantation of the fetid bacillus does not result in ozaena unless a preceding atrophic rhinitis is present This atrophic condition may be produced by local conditions such as repeated coryza or general diseases such as scarlet fever measles diphtheria and hereditary syphilis The atrophy results from a neuritis by a descending process or by an ascending process affecting the nerve endings The neuritis is dependent on toxins of general maladies The frequency with which such conditions arise at puberty shows that there exists some relation between them and the endocrines The pituitary gland appears to be particularly involved Calcium imbalance also favours the endocrine dysfunction The atrophied condition provides a soil favourable to infection The infection the result of a microbic process determines the odour which heralds the establishment of the malady Certain preventive measures are suggested—the careful examination of the nasal fossa after infantile or puberty infections and a consideration of the possibility of pituitary insufficiency As curative measures autovaccines mono- or polymicrobic vaccines or bacteriophage injections endocrine administration and general treatment are advised Finally local measures in the shape of anatomical or physiological prosthesis including a periarterial sympathectomy in order to produce a humidification of the mucous membrane are indicated

447 Endonasal Radical Operation on the Antrum

A WACHSBERGER (*Arch of Otolaryngol* February 1933 p 222) describes and commends a modification of the radical operation on the maxillary antrum which was first suggested independently in 1908 by both Canfield and Sturman The advantage of this procedure is that the oral incision is obviated the operation being performed entirely through the nostril The present authors consider that this line of approach is indicated whenever a radical operation on the antrum is required unless a combined oral and nasal approach is preferable as it is in cases in which there is a tumour formation—particularly a large tumour of suspected malignancy—and also in cases of dental origin in which there is involvement of the alveolar process of the upper maxilla such as osteomyelitis occurring after the extraction of a tooth The incision is made in the nasal vestibule in the fold which forms between the pyriform crest and the ala when the speculum is inserted and spread It starts at the level of the insertion of the inferior turbinate and is drawn downwards and parallel with the pyriform crest to the level of the nasal floor the periosteum being simultaneously incised Joseph's elevator is employed to separate the soft parts of the cheek from the bony facial antral wall but the exit of the infra-orbital nerve must not be exposed lest severe post-operative pain ensue The present author unlike Sturman limits the separation to the extent of the inferior meatus stopping at the insertion of the inferior turbinate A speculum is now introduced to reveal the medial and outer antral wall and these are opened with Halle's largest circular trephine placed firmly against the facial wall at a point as far laterally from the pyriform crest as possible and at the level of the mid-section of the inferior meatus The opening can also be made by a gouge The cavity can now be viewed and the degree of pathological change be estimated The opening is then enlarged by removing the facial antral wall medial to the original opening the crista pyriformis and the bony naso-antral wall as in the Denker operation When enough has been removed the interior of the antrum is fully exposed for observation and curetting The final stage in the operation is the cutting of a flap by an incision along the attachment of the inferior turbinate the tip of which need not be excised No packing is used There may be some swelling of the cheek on the second day but this is less than with the Denker operation Wachsberger claims that the avoidance of the oral incision prevents the formation of any bucco-antral fistula through which the stratified squamous epithelium of the oral cavity may grow into the antrum thus delaying healing and establishing a non-physiological condition in the antrum Similarly lodging of food in the antrum and inability to blow the nose properly are obviated nor is there any necessity for secondary plastic procedures to close a pathological fistula The inferior turbinate is retained intact and does not interfere with any inspection of the cavity which indeed is facilitated by the removal of the pyriform crest This removal also permits direct ventilation by the inhaled air which is beneficial for the promotion of healing The author has had gratifying results from this method in over eighty patients

Obstetrics and Gynaecology

448 Total and Subtotal Hysterectomy

Referring to the different opinions as to the choice between total and subtotal hysterectomy J OKINCZYC (*Ginecol et Obstét* March 1933 p 215) states his opinions on the subject basing his conclusions on 365 personal cases These gave a mortality of sixteen (4·12 per cent) The subtotal operation was performed in 256 cases with seven deaths (2·7 per cent) and the total in 132 with nine deaths (6·8 per cent) In 211 cases of fibromata treated by hysterectomy four deaths (1·8 per cent) occurred 164 subtotal operations were performed with three deaths (1·8 per cent) and forty-seven total with one death (2·1 per cent) In eighty-one cases these tumours were associated with other conditions such as salpingitis pregnancy cancer etc A study of these figures and of the causes of the deaths does not show a preference for either operation nor does it indicate that an error had been made in the one chosen For other affections ninety one subtotal hysterectomies were performed with four deaths (4·3 per cent) and eighty six total with eight deaths (9·3 per cent) Though one fatal case in the former group might have benefited by a total operation an analysis of the causes of these deaths does not indicate any preference for the one or other procedure In only eighty-one cases was hysterectomy performed for salpingitis as this condition is better treated by more conservative methods Okinczyc states that the choice of operation is often rendered difficult by the fact that cases in which the total method is the more indicated are precisely those of more difficult if not impossible execution He believes that the indications for total hysterectomy lie less in the pelvis than in the vagina and that the condition of the cervix should determine the choice of operation The total is indicated when the

cervix is suspicious, being large, hard, infected, and adenomatous The subtotal is the choice where pelvic indications alone exist, in these cases drainage can be made to the vagina by posterior section of the stump after excising the cervix Little importance is attached to secondary cancerization of the stump The after-effects of each operation show no advantage in favour of either The author maintains that both are excellent, each has its advantages, disadvantages, and indications, and the choice must be governed by the conditions in each individual case

449 Persistent Corpus Luteum

M REEB (*La Gynécol*, February, 1933, p 65) reports two observations of cases with disturbance of menstrual function due to retention of the corpus luteum A woman, aged 35 had had one previous confinement, premature at the seventh month, and one miscarriage at three months Present cessation of menses dated from two months Her general condition was good, Wassermann reaction negative blood pressure 150/85, the urine showing traces of albumin without casts Drops of colostrum were present in the breasts, and the vulva and vagina presented the typical violet coloration The cervix was softened, uterus anteflexed, enlarged, and soft Hegar's sign was positive To the right of the uterus was felt a cystic tumour, very mobile, and round like a small orange The left adnexa were normal A diagnosis of a two months pregnancy complicated by a right ovarian cyst was made At operation several days later there was found a pedunculated cyst of the right ovary, and the very soft uterus corresponded to a three months' pregnancy In the piece removed was a large corpus luteum 22 by 18 by 12 mm Histological examination of the corpus luteum showed it to be in the stage of proliferation and vascularization, the lutein cells were grouped in lobules, the central coagulum was not organized The cyst was a unilocular Wolffian cyst Three days after the operation a slight loss of blood appeared This lasted for three days and scrupulous examination revealed no clots, ovarian debris, or uterine shreds It was then thought that the pregnancy was continuing On the thirteenth and again on the fifteenth day after operation the uterus was found to be of normal size and quite hard The violet coloration had disappeared and an Aschheim-Zondek test was negative The conclusion reached was that the pseudo pregnancy was caused by the abnormal persistence of the corpus luteum, the progestin maintaining the uterine mucosa in its pregravid phase The operative removal of the corpus had acted on the uterus in the same way as its spontaneous regression The second case quoted illustrates the results of hyper secretion of the lutein hormone over a long period —namely delayed menses and pseudo pregnancy Slight excess only of the hormone produced membranous dysmenorrhoea

Pathology

450 The Gono-reaction

The gono-reaction stands in the same relation to gonorrhoea as the Wassermann does to syphilis It is a reaction of complement deviation revealing the presence of gonococcal antibodies According to P BARBELLION and Mlle LEBERT (*Journ d Urol* February, 1933 p 97) the four essentials for the reaction are antigen, the test serum the alexin and a haemolytic system The antigen is obtained from gonococci treated by various agents, an alcohol potassium antigen gives excellent results A good antigen must be prepared from numerous strains of gonococci The test serum is procured from 10 c cm of the patient's blood, this is placed on ice and the serum withdrawn after coagulation The alexin, a thermolabile substance is obtained from any fresh serum, such as the guinea-pig's The haemolytic system is composed of washed defibrinated sheep's red cells and an anti-sheep serum which is prepared by injecting sheep's red cells into a rabbit The alexin and haemolytic system must be accurately dosed The results of the gono-reaction obtained by various workers are summarized A study of these reveals the following facts a strongly positive Wassermann can give a positive gono-reaction though gonococci be absent (therefore, the former should be done concurrently with the latter), a negative reaction is important in the diagnosis of cure provided that the patient has had a previously positive one, during pregnancy and the puerperium the test is of no value, meningococci give a negative reaction, but the *Micrococcus catarrhalis* gives a slightly positive one in 10 per cent of cases The present authors describe their technique for the test, which is similar to that employed in the Wassermann In conclusion, they state that the reaction becomes positive about the third week of the infection, and is always positive in complications, especially in articular localizations It remains positive during the whole course of the disease and often for two months after apparent cure, if the reaction does not become negative at the third month cure is doubtful The test, while not absolute is of value in determining the presence and cure of gonorrhoea, particularly in females It is useful as a prenuptial test, and also in determining the aetiology of a rheumatism, epididymitis, or urethritis

451 Alimentary Value of Lactic Acid

J A COLLAZO J PUYAL, and I TORRES (*Anales de Medicina Interna*, February, 1933, p 133), in order to determine whether the lactic acid formed in the intestine by acidophilous flora is absorbed and passes into the blood as an alimentary product, investigated its assimilation and toxicity by administering it to rabbits by mouth, and then estimating the lactic acid and glucose in the blood The results were as follows Lactic acid and its salts could be tolerated in amounts of 5 to 6 grams per kilo without causing any severe disturbance The curve of the lactic acid in the blood reached a maximum level of 200 to 250 mg per cent compatible with the life of the animal Symptoms of intolerance then appeared, such as dyspnoea, tachycardia, and excitement The amount of glucose in the blood showed a rise corresponding to that of the lactic acid in the proportion of 20 to 50 per cent of the initial fasting value

452 Relation between Streptococcal Antitoxin and Antistreptolysin

E W TODD, L J M LAURENT and N G HILL (*Journ Path and Bact*, March, 1933, p 201) examined fifteen antistreptococcal horse serums, and found that in eleven of them the antitoxin titre was more or less proportional to the antistreptolysin titre In two of them the antitoxin titre was high while the antistreptolysin titre remained comparatively low, and in a further two the relation was reversed, the antistreptolysin titre being exceptionally high in the presence of a low antitoxin titre Ten mild cases of scarlet fever, untreated by antiserum, were then studied, the Dick test being performed at weekly intervals and the blood serum examined at the same time In all the cases the Dick reaction changed from positive to negative between the first and the second week This change was accompanied in six cases by a corresponding rise in the antistreptolysin titre, while in four of the cases no increase in antistreptolysin was apparent during a period of three weeks A further corroboration of the independence of antistreptotoxin and antistreptolysin was obtained by a study of twelve convalescent rheumatic fever patients who had remained Dick positive The serum of eight of these cases had normal antistreptolysin titres, while the serum of the other four cases had abnormally high titres—higher, in fact, than the serum of any of the Dick negative scarlet fever patients in their second week of illness It is known that many strains of haemolytic streptococci may produce a large amount of filterable haemolysin in serum broth cultures, and yet form only small quantities of Dick toxin as measured either by skin reactions in sensitive persons or by lethal effects on rabbits It is therefore concluded that the antibodies formed to the haemolysin and the toxin are distinct

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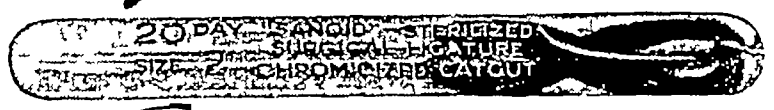

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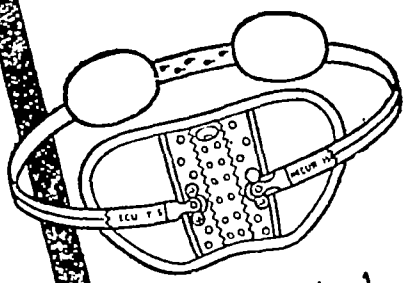

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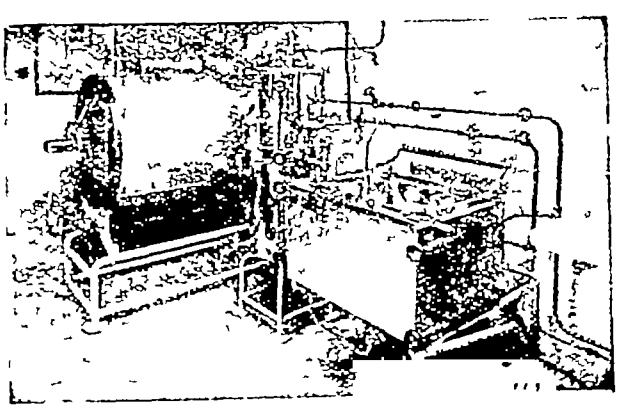

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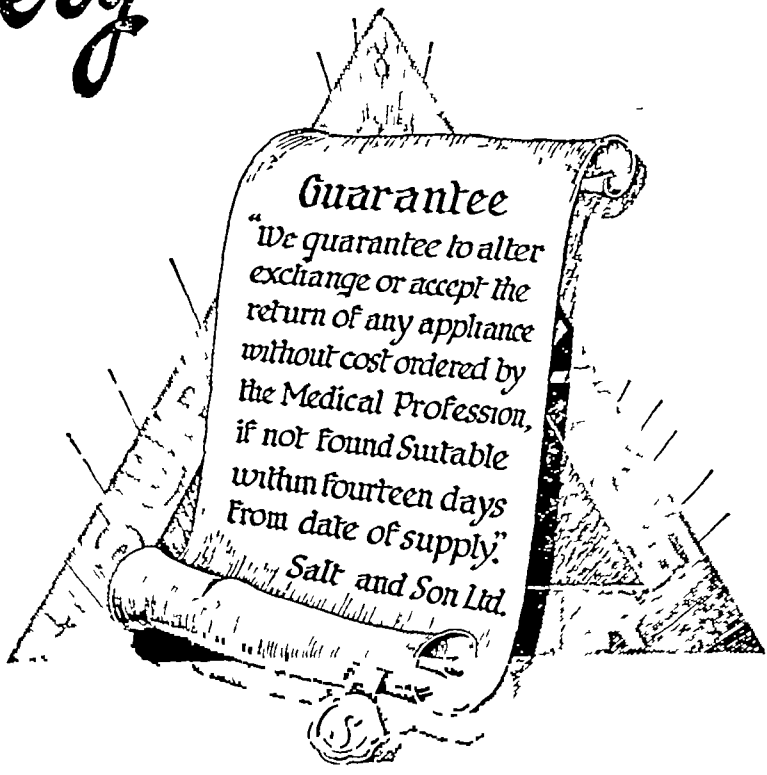

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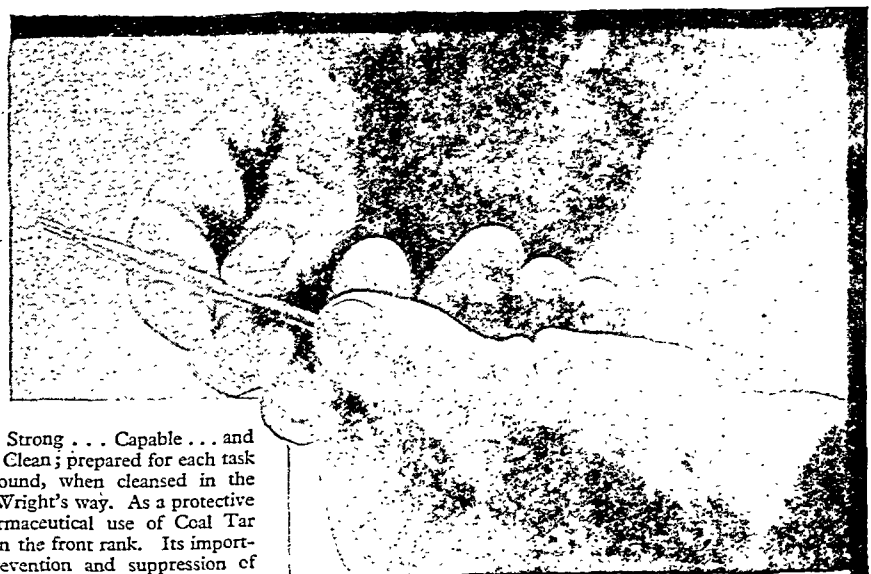

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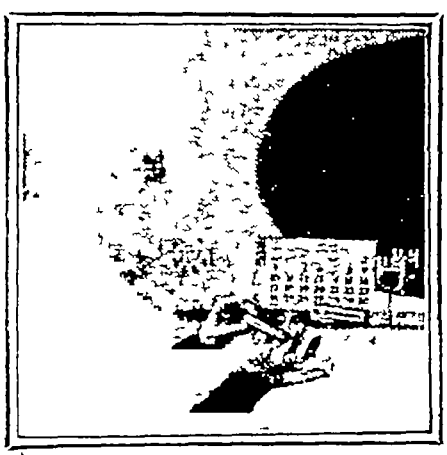

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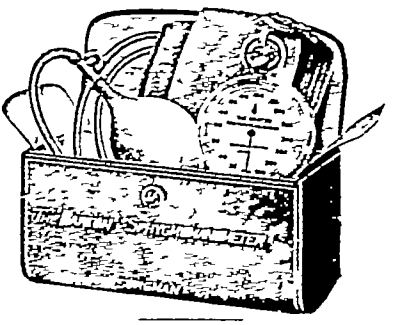

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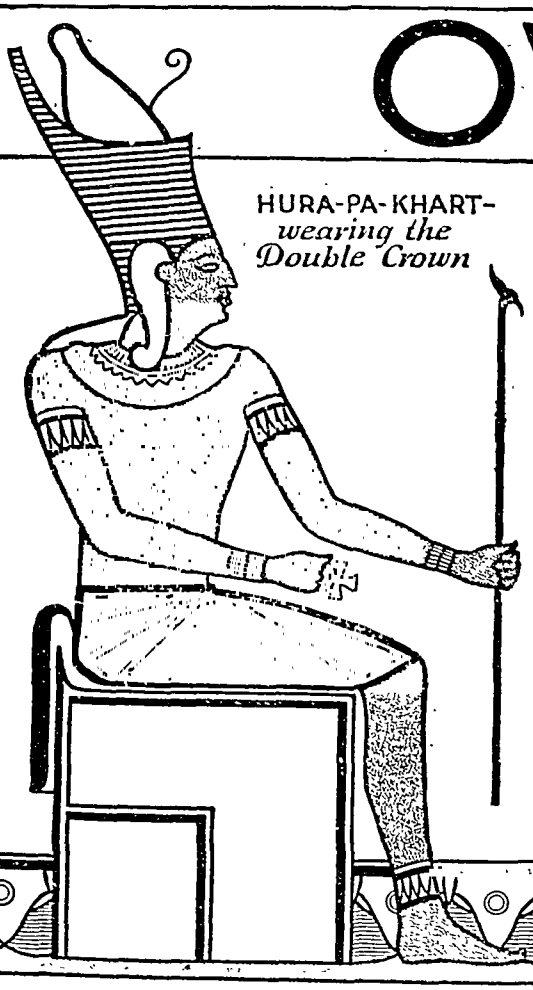

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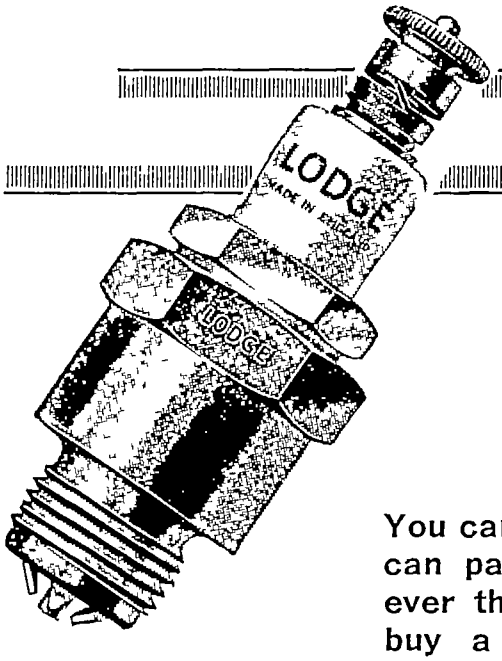

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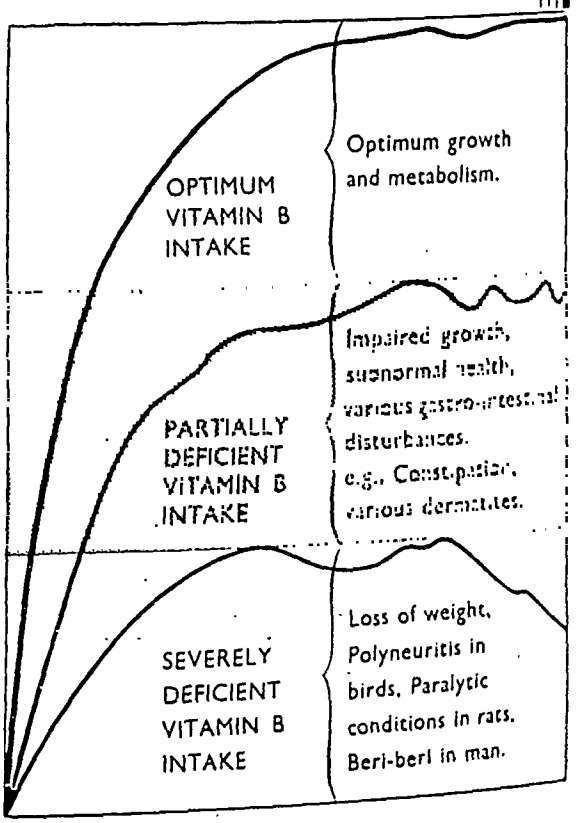

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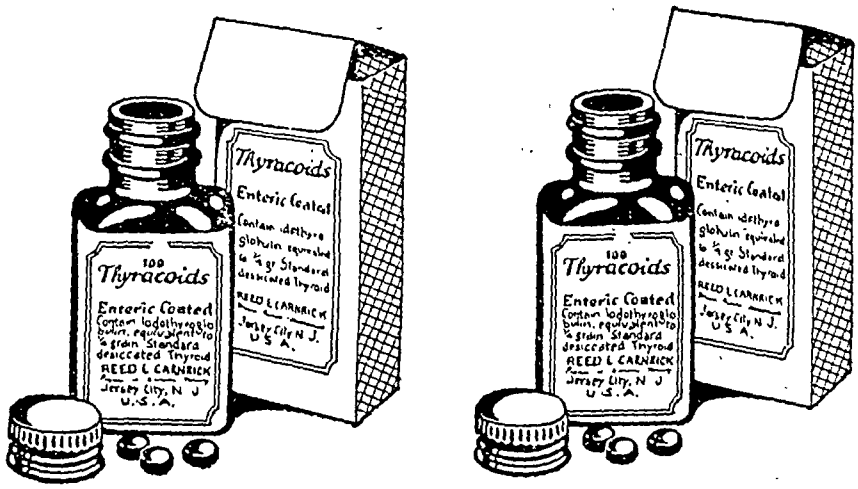

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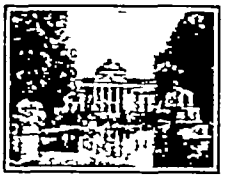

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In the winter garden of Scotland, facing the sun 600 feet up. Tonic air beauty in every land expe from hotel sered balconies Dancing winter garden, swimming bath tennis, badminton golf fishing Fully licensed. Modern bath installation. Physio-therapeutic, massage, electrical treatment, ultra violet radiation. Physician in attendance Write for prospectus
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Every kind of Bath Plombière Lavage.
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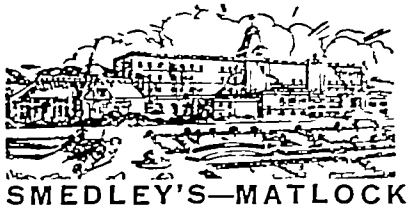

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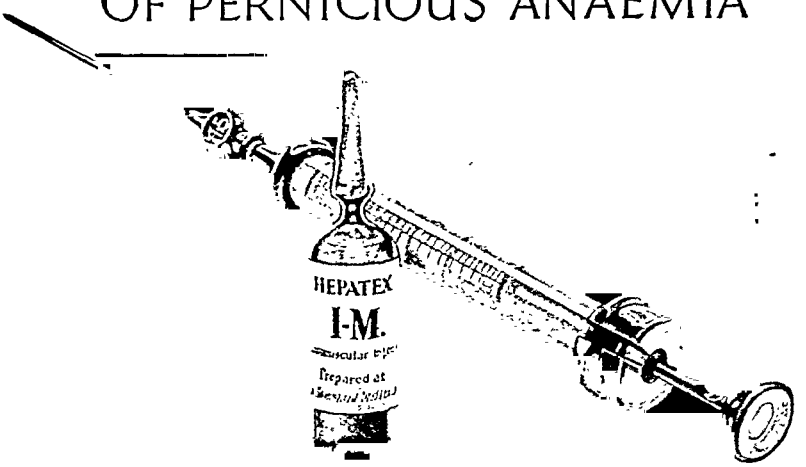

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COURSES OF INSTRUCTION (lasting about three months) for the Diploma in Tropical Medicine commence on October 2nd, 1933 and January 3rd 1934 and for the Diploma in Tropical Hygiene on January 11th and April 26th 1934 (Candidates for the D T H must possess the D T M of this University)
For particulars apply to the Hon Dean Liverpool School of Tropical Medicine Pembroke Place Liverpool

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UNIVERSITY OF LONDON.
EXTERNAL EXAMINERSHIPS, 1934

The Senate announce the following vacant Examinerships for the year 1934
For Final and Higher Examinations for Medical Degrees
MEDICINE, SURGERY, M D HYGIENE.
For First Examinations for Medical Degrees
CHEMISTRY (TWO) GENERAL BIOLOGY PHYSICS
For Second Examinations for Medical Degrees
ANATOMY CHEMISTRY PHARMACOLOGY
Associate Examiners
Applications will also be invited for Associate Examiners in Medicine, Obstetric Medicine Pathology, and Surgery A separate application form must be used for Associate Examinerships and the word Associate must be *written on it*
Application form (or forms if more than one Examinership is applied for) and particulars of the remuneration and duties can be obtained from the External Registrar
Candidates must send in their names to the External Registrar GEO F GODCHILD M A B Sc, with any attestation of their qualifications they may think desirable, on or before Monday, July 3rd 1933 (Envelopes should be marked Examinership)
The Senate desire that no application of any kind be made to individual members
If testimonials are submitted one copy only of each is required In no case should original testimonials be submitted If more than one Examinership is applied for, a separate and complete application must be forwarded in respect of each Examinership The appointments will be made by the Senate in November Applicants who desire that the result should be communicated to them are requested to enclose a stamped and addressed envelope with their application
University of London, South Kensington S W 7 EDWIN DELLER Principal.
June 1933

UNIVERSITY OF BIRMINGHAM
INCLEBY LECTURES 1933

The Dean and the Faculty of Medicine request the pleasure of the attendance of Members of the Medical Profession at the Inchby Lectures on TUESDAY 27th and THURSDAY JUNE 29th at 4 o'clock, in the Medical Lecture Theatre, The University (Edmund Street Birmingham) to be delivered by ALFRED F HESS, M D (New York, U S A)
Subject *The Fat Soluble Vitamins*
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Master of Hygiene	M H	Licence in Dental Surgery	L D S
Master of Orthopaedic Surgery	M Ch Orth	Diploma in Public Health	D P H
Bachelor of Dental Surgery	B D S	Diploma in Tropical Medicine	D T.M
Master of Dental Surgery	M D S	Diploma in Tropical Hygiene	D T.H
Bachelor of Veterinary Science	B V Sc	Diploma in Veterinary Hygiene	D V H
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These Hospitals contain in all about 1 500 Beds

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Twenty-one house physicians and house surgeons are appointed every six months in the General Hospitals and the majority of these receive salaries ranging from £60 to £100 per annum Five resident medical officers are also appointed at intervals to the Special Hospitals

Infectious Diseases are studied in the Local and District Hospitals and Mental Diseases at the County Mental Hospital Rainhill

For information on all matters concerning the curriculum application should be made to the Dean of the Faculty of Medicine the University of Liverpool.

Information regarding the special regulations for Hospital Practice may be obtained from the Secretary of the School Dr N B CAPON

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The following arrangements have been made for POST-GRADUATE TEACHING in Glasgow during the Summer of 1933

A. A General Medical and Surgical Course from August 21st to September 15th.

Fee £10 10s or £6 6s for first or second fortnight.

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Syllabuses and any other information may be had on application to the **Secretary Post Graduate Medical Association The University Glasgow**

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Continuous Clinical Instruction daily from 10 a.m. to 4 p.m.—Post-Graduates may enrol at any time for any period from 1 week to 3 months—Special facilities for "Study Leave" and for those wishing to take a course under the "Grant aided Scheme for Post Graduate Study by Insurance Practitioners."—Anaesthetic Courses—Clinical Assistantships—Annual Membership Tickets at Special Terms available for General Practitioners who wish to attend the Hospital Practice at irregular intervals.

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Medical Students and Qualified Practitioners admitted to the Practice of this Hospital. Unusual opportunities are afforded of seeing Obstetrical Complications and Operative Midwifery (about one half of the total admission being primiparous cases). Over 2,700 patients are admitted to the Wards annually and in the Ante-natal Department there are over 20 000 attendances per annum

Certificates awarded as required by the various Examining Bodies.

For rules fees etc. apply H. B. STOKES Secretary Superintendent.

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A Course in RADIOTHERAPY

especially in its relation to Malignant Disease

will be held at the above School commencing Monday October 2nd 1933

Copy of the syllabus and full particulars may be obtained on application to

THOS. L. GARNER, Secretary

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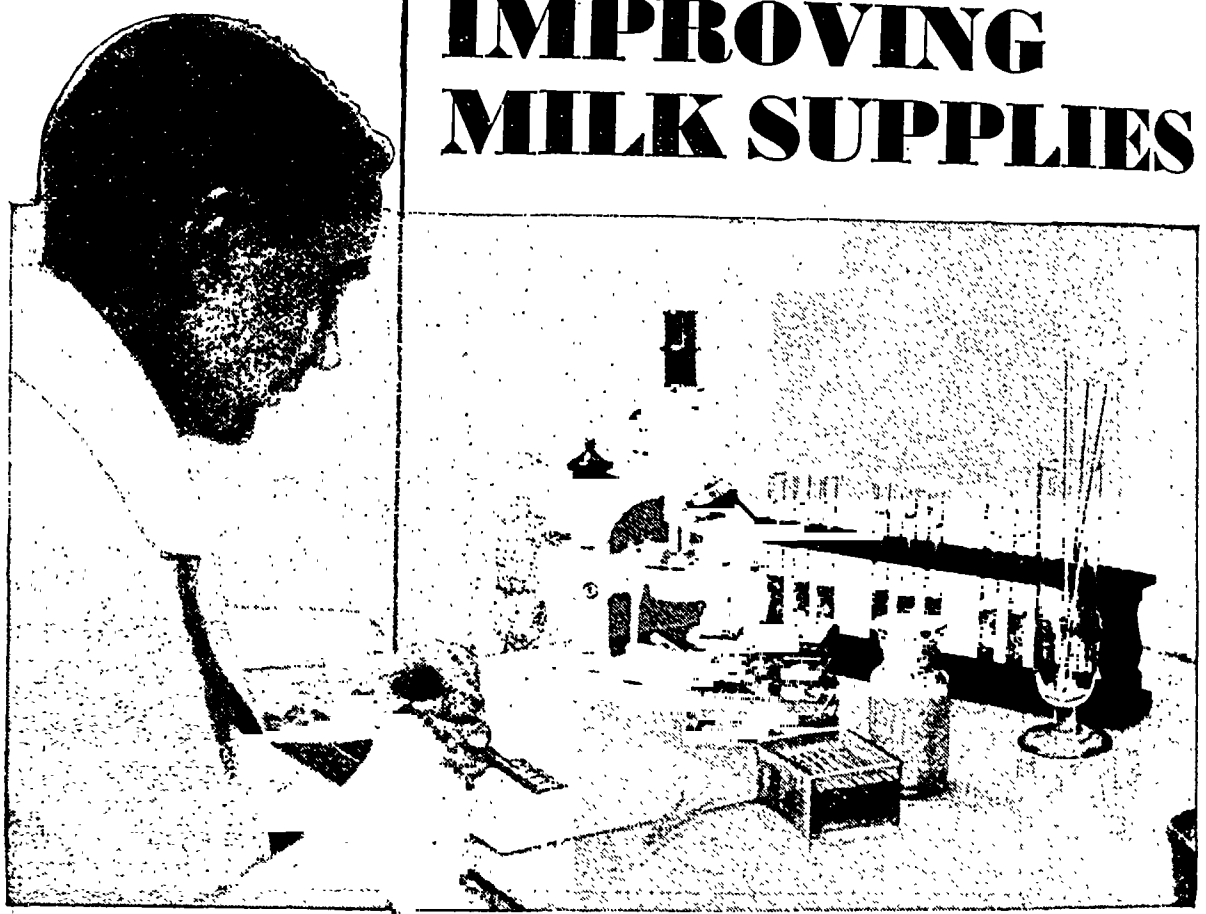

Reference has been made in previous advertisements to the institution at our Factories of a Bonus Scheme for farmers in order that only the highest quality milk shall be used in the preparation of our Foods.

In addition to the Official Ministry of Health plate methods we are adopting as part of the routine the Breed method of bacteria testing, which has been used extensively and successfully in the U.S.A. The method of scoring is based on the Ministry of Agriculture's scoring lists for clean milk competitions (Bulletin No. 46, Ministry of Agriculture and Fisheries).

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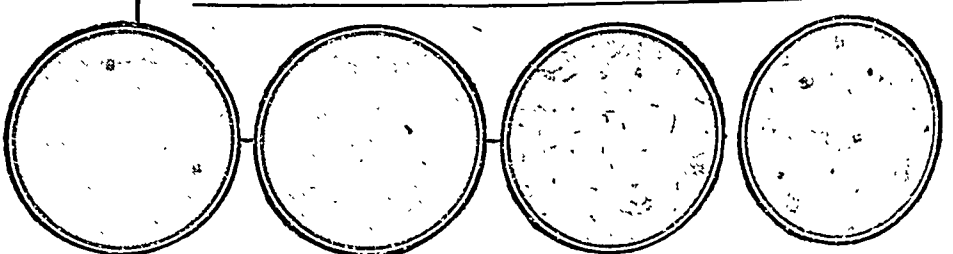

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SURREY COUNTY COUNCIL.

SCHOOL DENTAL SURGEON

Applications are invited from qualified registered Dental Surgeons, preferably under 35 years of age for whole time dental work in the County

The officer appointed will be required to act under the supervision and control of the County Medical Officer and to live at some centre to be approved by the Council

Commencing salary £500 per annum, rising by increments of £20 for each year of approved service to £600 per annum but subject to a reduction of 5 per cent on the amount in excess of £150 until October 31st

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922

Form of application together with further particulars may be obtained from the County Medical Officer County Hall Kingston upon Thames and must be returned duly completed not later than Friday July 7th

Communications must be endorsed School Dental Surgeon Canvassing will disqualify

County Hall DUDLEY AUKLAND
Kingston upon Thames Clerk of the Council.
June 16th 1933

EPSOM COLLEGE.

ROYAL MEDICAL FOUNDATION

ELECTION OF FOUNDATIONERS AND PENSIONERS

The following were elected by the CONJOINT COMMITTEE on June 14th, 1933 —

FOUNDATIONERS

Edward H Couper — William J Dunlop
Hugh W Macintyre — William M Pinder
Anthony G Quinlan — George L H Steede
Robert S Sunderland — Peter B Verver
Robert D West — Brian H Harriss
Michael R Tosswill

PENSIONERS

Mrs. Mary J Lindsay — Dr Herbert Blott

W L GIFFARD (Major) Secretary

ROYAL SOCIETY OF MEDICINE

NICHOLS PRIZE—FOURTH AWARD

In accordance with the will of the late Dr Robert Thomas Nichols, the Royal Society of Medicine offers every three years a prize (being the accumulated interest on £2,200) open to any British subject for the most valuable contribution towards The Discovery of the Causes and the Prevention of Death in Childbirth from Septicaemia

Work submitted for the fourth award must reach the Secretary of the Society (1, Wimpole Street London W 1), not later than October 1st 1933 and must be marked 'Nichols Prize It must be typewritten or printed in English and accompanied by the name and address of the author

Work already published may be submitted provided that publication was not earlier than October 1st 1930

If no work of sufficient merit be submitted the prize will not be awarded

CENTRAL LONDON OPHTHALMIC HOSPITAL Judd Street, W C 1

There will shortly be a vacancy in the Orthoptic Department for a STUDENT (female) Full particulars may be obtained on application to the Secretary

CITY OF NOTTINGHAM

ASSISTANT MEDICAL OFFICER OF HEALTH

Applications are invited for the appointment of Assistant Medical Officer of Health (male) to commence duty on October 1st

The duties will include assisting the Medical Officer of Health in the administration of the Maternity and Child Welfare Department, taking medical charge of certain Infant Welfare sessions undertaking medical duties of a non-specialist type at the Tuberculosis Clinic, together with such other duties as may from time to time be allotted

The possession of a Diploma in Public Health is essential

Service with other Local Authorities will be taken into consideration in fixing the commencing salary which will be on the scale £500, rising by annual increments to £700

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922, and to one months notice on either side

The successful candidate will be required to live within the City Boundary and to pass a medical examination

Applications must be made on a form to be obtained from me and must be addressed so as to reach me not later than July 15th

Guildhall W J BOARD
Nottingham Town Clerk
June 19th 1933

HEREFORD COUNTY AND CITY MENTAL HOSPITAL

Wanted, a SECOND ASSISTANT MEDICAL OFFICER (male unmarried) not exceeding 40 years of age doubly qualified, and registered under the Medical Act Salary £350, rising by increments of £25 to £400 subject to a temporary reduction of 4 per cent with board, furnished apartments laundry etc.

Ample opportunities exist for research with trained laboratory assistance in bacteriology, pathology and [illegible] Preference will be given to a [illegible] tory experience, and to c [illegible] in Psychological Medicine

The appointment is subject to the provisions of the Asylum Officers Superannuation Act 1909

Applications with one or more personal references to be made to the Medical Superintendent County and City Mental Hospital Burghill, Hereford

CITY OF BIRMINGHAM

APPOINTMENT OF CONSULTANT MEDICAL OFFICER FOR THE POLICE FORCE AND FIRE BRIGADE.

The Watch Committee invite applications from qualified medical gentlemen for the position of Consultant Medical Officer for the Police Force and Fire Brigade

The Committee have fixed the remuneration at Two Hundred and Fifty Guineas per annum but this amount in common with police salaries and wages generally will be subject to a temporary economy abatement The amount of the abatement in this case has been fixed by the Watch Committee at Twenty two guineas, leaving a net annual remuneration of Two Hundred and Twenty-eight guineas

Intending applicants should communicate with the Chief Constable, Newton Street Birmingham, who will be pleased to furnish full particulars and details of the duties attaching to the appointment

Applicants should be gentlemen practising in the City of Birmingham

The strength of the Birmingham Police Force is 1,687, and of the Fire Brigade 300

Applications to be made to me not later than Saturday July 8th

The Council House F H C WILTSHIRE
Birmingham Town Clerk
June 14th, 1933

CITY OF BIRMINGHAM

SELLY OAK HOSPITAL (500 Beds)

CASUALTY OFFICER (MALE)

Applications are invited from fully qualified Medical Practitioners for whole time appointment as Casualty Officer' (male) at the Selly Oak Hospital, Birmingham The appointment will be for a period of six months in the first instance, but may be extended at the end of that time for a further period of not exceeding six months

Salary at the rate of £200 per annum and full residential emoluments The salary and emoluments will be subject to any voluntary abatement in force from time to time

The officer appointed will be required to refund to the Council all fees allowances and emoluments (other than the foregoing) received by him

Further particulars may be obtained from the Medical Superintendent at Selly Oak Hospital, to whom applications stating age experience and qualifications, with copies of recent testimonials should be forwarded not later than Wednesday, July 12th

F H C WILTSHIRE,
The Council House, Town Clerk
Birmingham June, 1933

CITY OF BIRMINGHAM

DUDLEY ROAD HOSPITAL (926 Beds)

Applications are invited from fully qualified Medical Practitioners for whole time appointment as JUNIOR MEDICAL OFFICERS (male) at the Dudley Road Hospital, Birmingham The appointment will be for a period of six months, but may be extended for a further period of not exceeding six months Salary at the rate of £200 per annum and full residential emoluments, subject to any voluntary abatement in force from time to time The officer appointed will be required to refund to the Council all fees allowances and emoluments (other than the foregoing) received by him

Further particulars may be obtained from the Medical Superintendent at Dudley Road Hospital to whom applications stating age experience, and qualifications, with copies of recent testimonials should be forwarded not later than June 29th

CENTRAL LONDON OPHTHALMIC HOSPITAL Judd Street, St Pancras, W C 1

Applications are invited for the posts of SENIOR and JUNIOR HOUSE SURGEON Candidates must be registered Medical Practitioners Salary £120 and £100 per annum respectively with board and residence in the Hospital The appointments are for six months from July 15th The Junior House Surgeon is a candidate for the Senior post

Applications, with copies of three testimonials should reach the undersigned on or before June 30th

GEORGE WATTS, Secretary

CHARING CROSS HOSPITAL.

Applications are invited for the post of HONORARY CLINICAL ASSISTANT to the Dermatological Department

Applications, together with copies of three recent testimonials should be sent to the undersigned not later than July 1st

PHILIP INMAN, House Governor
Charing Cross Hospital London W C 2.

INDIAN MEDICAL SERVICE

Recruitment of European Officers.

Applications are invited from medical men for permanent commissions in H.M.'s Indian Medical Service The terms offered include a gratuity of £1,000 on retirement after six years' service, or £2,500 after 12 years' service, together with free return passages for those who no longer desire to remain in the Service In other respects the terms will be as detailed below

Candidates must be European British subjects under 32 years of age at the time of application and must be registered under the Medical Acts in force in Great Britain and Northern Ireland

CAREERS

The Indian Medical Service offers wide opportunities of medical experience including clinical preventive specialist and research work At the beginning of his career an officer is employed on the military side which has medical charge of the Indian Army Promotion is on a time scale up to the rank of Lieutenant-Colonel and by selection to the ranks of Colonel and Major General An officer may apply after one year's Indian Service to have his name registered for transfer to the civil side from which appointments are made to Civil Surgeoncies which are established at the principal civil centres to provide for the medical needs of civil officials and for general medical administrative purposes to specialist (for example public health and bacteriological) services to research posts and to professorships at the Medical Schools

NOTE.—It is not possible to state at present what, if any prospects of employment on the civil side will be open to Indian Medical Service Officers under the proposed new constitution for India.

PAY

Owing to the state of the financial emergency at present prevailing in India the existing monthly rates of pay which are as follows are subject to a temporary reduction of 5 per cent

Rank	Service in Rank.	Rate Pay	Overseas Pay	Year of Total Service.
		Rs	Rs	
			1.0	1st
Lieut.	—	500	1.0	2nd
			1.0	3rd
			1.0	4th
Capt	(i) During first 3 years service as Captain	600	£15	5th
			£15	6th
	(ii) With more than 3 and less than 6 yrs service as Captain	750	£25	th
			£25	8th
			£25	9th
	(iii) With more than 6 years service as Captain	850	£25	10th
			£25	11th
			£30	12th
Major	(i) During first 3 years service as Major ...	950		
	(ii) With more than 3 and less than 6 years service as Major	1100		
	(iii) With more than 6 years service as Major ..	1250		
Lieut. Col	(i) Until completion of 23 years total service	1 000	£30	19th and over
	(ii) During 24th and 25th years service	1600		
	(iii) After completion of 25 years total service ..	1 000		
	(iv) When selected for increased pay ...	1800		

EXTRAS.—In addition to the above rates various allowances are admissible for a large number of special appointments on both the military and the civil side which may be held by members of the Indian Medical Service Special high rates of pay are also attached to the numerous administrative appointments open to officers in both branches of the Service.

ANTEDATES IN COMMISSION

Any service rendered by an officer during the war as a medical or combatant officer or in a position usually filled by an officer may be counted as service for increments of pay promotion retirement and retired pay but not for gratuity

One half of any service in the ranks during the war may be counted as service for retirement and retired pay only

Candidates possessing certain higher medical qualifications may be granted an antedate of one year in their commissions Past service in certain hospital appointments may also render candidates eligible for an antedate of one year Persons holding or about to hold resident posts at recognized hospitals may be seconded in those posts for a period not exceeding one year The maximum period of antedate secondment, or antedate and secondment combined admissible under this paragraph is limited to one year

OUTFIT ALLOWANCE.

Officers on appointment will receive an allowance of £50 towards the cost of outfit.

PRIVATE PRACTICE

With the exception of Administrative Officers military or civil and officers holding certain special appointments officers are not debarred from taking private practice so long as it does not interfere with their proper duties

LEAVE

Leave can be taken at reasonable intervals and adequate rates of leave pay are provided Extra leave (known as study leave) which may not exceed 12 months in all during an officer's service may be granted to officers desirous of pursuing special courses of study of a post graduate nature During such leave study allowance at present fixed at the rate of 12s a day in the United Kingdom £1 a day on the Continent of Europe and £1 10s a day in the United States of America is granted to an officer in addition to ordinary rates of leave pay

PENSIONS

The rates of pension are as follows	Per annum £
After 17 years service for pension	400
18	430
19	460
20	500
21	540
22	580
23	620
24	660
25	700
26	750
27	800

These rates are subject to alteration on account of a rise or fall in the cost of living as compared with the year 1919 to an extent not exceeding 20 per cent in all At present a reduction of 8⅓ per cent is being made on this account.

There are additional pensions ranging from £65 to £350 per annum for officers who have held administrative appointments

PASSAGES.

An officer on appointment is provided with free passage to India The families of officers who are married prior to the date of the officers embarkation on first appointment will also be provided with free passage to India subject to the payment of messing charges

Officers and their families are also eligible for passage concessions under which they are granted a certain number of return passages home at Government expense during their service

INSTRUCTION PRIOR TO EMBARKATION

Officers are required to undergo courses of instruction at the Royal Army Medical College and at Aldershot lasting approximately six months prior to their embarkation for India on first appointment Information as to the rates of pay admissible during this period and subsequently up to arrival in India is contained in the memorandum referred to below

A memorandum giving full details regarding these appointments and forms of application may be obtained from the Under-Secretary of State for India Military Department, India Office, London S W 1 The Selection Committee will meet at the India Office early in July next, and the selected candidates will be required to join a course of instruction commencing early in August prior to sailing for India early in 1934 Applications should be submitted as soon as possible

HEWLETT'S
ORIGINAL PREPARATIONS.

HORMONIGEN

(HEWLETT'S)

Hormonigen Tablets (Hewlett's) contain the hormones of the thyroid, pituitary, ovary, and testes.

Useful in Neurasthenia and all asthenic conditions, obesity, chronic cardiac cases, aplasias of the pluriglandular system, and in anæmia. In Amenorrhœa, Dysmenorrhœa, and at the Menopause, Hormonigen is particularly effective, and even in chlorosis.

If there is high blood pressure, Hormonigen Sine Pituitary is indicated.

PRICE: HORMONIGEN, OR HORMONIGEN SINE PITUITARY,

3/3 PER 100; 30/- PER 1,000.

UNG. IODERMIOL

An ointment of IODERMIOL that contains about 5 per cent. of Iodine, and is, therefore, stronger than the B.P. Ointment, whilst it does not harden or discolour the skin.

It has been found most useful for Enlarged Glands, Rheumatic and Gouty Affections, Lumbago, Sciatica, Swollen and Stiff Joints, Skin Diseases, Ringworm, etc. Ung. Iodermiol has also been used in cases of burns and scalds, and in the treatment of Chronic Lymphadenitis, Simple Bronchocele, and Atrophic Rhinitis, and in Purulent Ulcerative Otitis.

PRICE 6/- PER LB.

UNGUENTUM IODERMIOL et METHYL SALICYL. (HEWLETT'S)

Useful in the treatment of Enlarged Joints, Synovitis, Rheumatoid Affections, etc.

PRICE 7/6 PER LB.

LIN. BETULAE CO.

(HEWLETT'S)

Therapeutically equivalent to several times its weight of Sodium Salicylate without causing headache, tinnitus, etc. Has proved most useful in the external treatment of pure Rheumatism, Sciatica, Lumbago, etc. The external dose is about one drachm rubbed over the affected parts.

In 5, 10, 22, 40, and 90-oz Bottles.

PRICE 10/6 PER LB.

VERONIGEN

(HEWLETT'S)

A liquid Preparation of this prompt and reliable HYPNOTIC has long been desired as a useful means of procuring sleep. When given in reasonable doses it is claimed that it does not produce any toxic symptoms whatever, and in ordinary cases of insomnia one fluid drachm of Veronigen (Hewlett's) is quite sufficient dose for an adult.

Dose for Adults.—One fluid drachm diluted, about one hour before going to bed.

For Nervous Sleeplessness in Children.—10 to 20 minims diluted.

VERONIGEN, 10/6 PER LB.

MIST. PRUNI VIRG. CONC.

(HEWLETT'S)

A valuable stimulant and expectorant cough mixture, containing Carbonate of Ammonium, Ipecacuanha, Senega, Squill, and Syrup of Wild Cherry Bark. Quite free from Morphine, Opium, or poisons, so can be safely administered to children.

Dose: 1 to 2 drachms diluted.

In 22, 40, and 90-oz. Bottles only.

PRICE 3/3 PER LB.

MIST. TUSSI RUB. CONC.

(HEWLETT'S)

A favourite and economical cough mixture, containing Hydrobromic Acid, Chlorodyne, Dilute Hydrocyanic Acid, etc. Most successful in allaying post-influenza coughs that are so persistent. One or two ounces diluted with water to make eight ounces forms one of the most effective and elegant mixtures that can be made, and certainly the least expensive.

In 22-oz., 40-oz., 4½-lb., and 8-lb. Bottles only.

PRICE 2/9 PER LB.

C. J. HEWLETT & SON, LTD., 35 to 42, Charlotte Street,

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Telegraphic Address: "PEPSINE, BETH, LONDON."

Telephones: BISHOPSGATE 1172 and 1173.

ESTABLISHED OVER 100 YEARS.

'A&H' Catgut

"Azoule" Brand

Possesses a good tensile strength both on the knot and in the suture as a whole.

It has a smooth, even surface, which holds securely—knots do not slip.

It has flexibility and suppleness.

Every suture is accurately gauged.

There is complete absence of irritant action in the tissues.

The absorption times are correct.

Sterility is guaranteed by the most stringent tests of the Therapeutic Substances (Catgut) Regulations.

Descriptive leaflet will be sent on application

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Telephone: Bishopsgate 3201 (12 lines) Telegrams: "Greenburys Beth London"

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CARDIFF ROYAL INFIRMARY
(Associated with the Welsh National School of Medicine)

HONORARY PHYSICIAN REQUIRED

Applications are invited for the vacancy arising in the office of Honorary Physician
The regulations provide that Each Honorary Physician and Honorary Assistant Physician shall be a Graduate in Medicine of a University of the United Kingdom and he shall not practise Surgery or Midwifery He shall also be or within a year of his appointment shall become a Fellow or Member of the Royal College of Physicians of London, or a Fellow of one of the other Royal Colleges of Physicians in the United Kingdom
The present Senior Assistant Physician is a candidate for the vacancy
Each candidate is required to send fifty copies of his application and testimonials (for circulation amongst members of the Election Committee and Medical Board) stating age, qualifications appointments held etc and endorsed Honorary Physician" to reach the undersigned on or before Saturday, July 8th
LEONARD D REA
June 19th, 1933 Secretary

ROYAL EDINBURGH HOSPITAL FOR SICK CHILDREN

Wanted for this Hospital, TWO HONORARY RESIDENT HOUSE SURGEONS and THREE HONORARY RESIDENT HOUSE PHYSICIANS one of the latter shall have charge of both a medical ward and an ear and throat ward, the appointment shall commence on October 2nd, and shall be for a period of six months Information as to duties etc can be obtained from the ordinary physicians and surgeons at the hospital Thirty copies of applications and relative testimonials to be lodged, on or before July 22nd with Messrs HENRY & SCOTT, W S 5o Frederick Street Edinburgh No application will be received after that date

WARRINGTON INFIRMARY AND DISPENSARY

The Board of Management invite applications for the post of JUNIOR HOUSE SURGEON (male), unmarried Applicants, who must be of British nationality must be duly qualified Medical Practitioners Salary £175 per annum with board apartments and laundry Applications, stating age with copies of three recent testimonials should be sent in at once to the undersigned
By Order
HENRY I BOOT
June 19th 1933 Supt & Secretary

DERBYSHIRE HOSPITAL FOR SICK CHILDREN (80 Beds)

Wanted July 1st RESIDENT HOUSE PHYSICIAN (lady) Salary £130 p a The appointment is for twelve months Applicants must be fully qualified Applications with three testimonials, one relating to anaesthetics to be sent to the undersigned forthwith
ARTHUR N WHISTON
25 St Mary s Gate Secretary
Derby

DERBYSHIRE HOSPITAL FOR SICK CHILDREN (80 Beds)

Wanted July 1st a RESIDENT HOUSE SURGEON (lady) Salary £130 p a The appointment is for twelve months. Applicants must be fully qualified Applications with three testimonials one relating to anaesthetics to be sent to the undersigned forthwith
ARTHUR N WHISTON
25 St Mary s Gate Secretary
Derby

ROYAL EYE HOSPITAL, St George s Circus Southwark S E 1

The Council invite applications for the appointment of HONORARY PHYSICIAN to the above Hospital Candidates must be a Graduate of Medicine of a British University and a Fellow or Member of the Royal College of Physicians of London
Applications with copies of testimonials, to be sent to the Secretary on or before July 1st
F E D ALTON Secretary

DREADNOUGHT HOSPITAL GREENWICH S E.10 (Seamen s Hospital Society)

HOUSE PHYSICIAN required for six months from July 1st Salary £110 per annum and a proportion of fees with board residence and laundry Candidates must be male Applications with copies of three testimonials to be sent in by June 26th to the undersigned
Greenwich R E V BAX
June 10th 1933 Secretary

ROYAL NORTHERN HOSPITAL, Holloway N 7

Applications are invited for the following posts
(1) HOUSE SURGEON vacant on August 15th The appointment is for nine months (six months as House Surgeon and three months as Casualty Officer) with salary at the rate of £70 per annum with board residence and laundry
(2) OBSTETRIC HOUSE SURGEON vacant on September 15th The appointment is for nine months (six months as Obstetric House Surgeon three months as Casualty Officer) Salary as above
(3) HOUSE PHYSICIAN vacant on September 1st The appointment is for nine months three months as Out patient Casualty Officer and Anaesthetist and six months as House Physician Salary as above
Applications with copies of testimonials should be sent by July 8th to the undersigned from whom forms of application and rules can be obtained
GILBERT G PANTER Secretary

COVENTRY AND WARWICKSHIRE HOSPITAL
(307 Beds Main Hospital—40 Beds Alcock Convalescent Hospital)
(Seven Resident Medical Officers)

RESIDENT CASUALTY OFFICER (Male) wanted Salary £125 per annum with board, laundry and attendance provided Candidates must be duly qualified and registered
Applications stating age and enclosing copies of recent testimonials should be sent to the undersigned immediately
(Miss) R HOOPER
June 17th 1933 Secretary

THE CHILDREN S HOSPITAL SHEFFIELD
(110 Beds—Three Residents)

Applications are invited for the following posts vacant August 1st
HOUSE PHYSICIAN HOUSE SURGEON
The appointments are for six months with salary in each case at the rate of £100 per annum with board residence and laundry
Candidates (male and unmarried) who must possess registered qualifications should forward applications stating age nationality, etc, together with copies of three recent testimonials to the undersigned
T H C GARTLAND, Secretary

THE ROYAL VICTORIA HOSPITAL, FOLKESTONE

The Committee of Management invite application for the post of JUNIOR RESIDENT MEDICAL OFFICER (male) to commence duty August 1st The salary attached to the post is £120 per annum with board and residence
The appointment is for six months subject to one month s notice on either side Applications together with copies of recent testimonials should be sent to the Secretary Superintendent, The Royal Victoria Hospital Folkestone Kent not later than Friday July 7th

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY

HOUSE SURGEON wanted Ophthalmic experience preferred Duties to commence in July There are 50 beds for In patients and large Out patient Department Salary £150 a year, with furnished apartments board and laundry Ladies and gentlemen applying should state age and experience and send copies of three recent testimonials to reach the Secretary not later than July 3rd
EUSTACE LEFS
June 13th 1933 Secretary

WORTHING AND EAST DENBIGHSHIRE WAR MEMORIAL HOSPITAL
(109 Beds)

ONE RESIDENT HOUSE SURGEON (male or female) required by the above Hospital to commence on August 1st Appointment for a period of six months Salary £150 per annum, with board and laundry
Applications stating age nationality experience and qualifications accompanied by copies of three recent testimonials to be sent to the undersigned immediately
LESLIE SPENCER
June 15th 1933 Secretary

THE NORTH STAFFS ORTHOPAEDIC HOSPITAL STOKE ON TRENT

Applications are invited for a HOUSE SURGEON (male) to this Hospital at a salary of £150 per annum plus board residence and laundry Applications accompanied by three recent testimonials to be sent to the Secretary Orthopaedic Hospital Hartshill Stoke-on Trent.

THE QUEEN S HOSPITAL FOR CHILDREN Hackney Road London E.2.

RESIDENT MEDICAL OFFICER required on August 1st
The appointment is made for six months and may be extended for further periods of six months, but cannot be held for more than two years
The Resident Medical Staff consists of the Resident Medical Officer as above three Casualty Officers two House Physicians and one House Surgeon
Salary (inclusive of panel fees) £200 per annum, with board residence and laundry Candidates must have held a responsible resident appointment at a recognised hospital
Forms of application may be obtained from the undersigned and must be completed and returned on or before July 8th
CHARLES H BESSELL
June 12th 1933 Secretary

ROYAL SUSSEX COUNTY HOSPITAL, BRIGHTON (Beds 245—Six R M O s)

HOUSE SURGEON (and in the event of this office being filled by promotion a CASUALTY HOUSE SURGEON) (Male) required at the end of July
Salary £150 (and £120) per annum respectively with board residence and laundry
Candidates must hold medical and surgical qualifications of the British Empire and be duly registered under the Medical Acts
They must be unmarried and when elected under 30 years of age
Applications with copies of recent testimonials should be sent immediately to the undersigned
Candidates should state whether they wish their applications to stand for either post
L L W LANCASTER CAYE
Secretary Superintendent

THE ROYAL HOSPITAL, WOLVERHAMPTON
(Incorporated under Charter)

TWO HOUSE SURGEONS required
The Hospital contains 300 beds includes the usual special departments and is recognized by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice.
Candidates must be registered under the Medical Acts and unmarried
The appointments are for six months, Salary at the rate of £100 per annum, board furnished rooms and laundry provided
Applications, with copies of testimonials to be forwarded to the undersigned
Wolverhampton W H HARPER
June 19th, 1933 House Governor

QUEEN MARY S HOSPITAL FOR THE EAST END STRATFORD
Telephone Maryland 2616

Applications are invited from fully qualified and registered medical men for the post of CASUALTY OFFICER at the above Hospital at a salary of £150 per annum
The Hospital contains 217 beds including 50 for Maternity and other Special Departments.
Candidates who should have held previous Hospital posts must send in application accompanied by testimonials, to the undersigned not later than Saturday July 1st The appointment will be for six months
RAPHAEL JACKSON (Major)
Secretary

MANSFIELD ORTHOPAEDIC HOSPITAL NORTHAMPTON (128 Beds)

The Board of Management invite applications for the post of RESIDENT MEDICAL OFFICER Commencing salary £250 p r annum together with board residence and laundry
Applicants must be duly qualified registered and unmarried Previous Hospital experience essential and a knowledge of Orthopaedics desirable
Applications stating age qualification and experience with copies of three recent testimonials to be sent to the undersigned, not later than Monday July 3rd
H G LEWIS Secretary Supt

APPOINTMENT OF HONORARY DIRECTOR OF ORTHOPAEDICS

The Council invites applications for the above appointment which carries with it all the privileges of an Honorary Surgeon
Applications (with copies of testimonials) must be in writing and addressed to the Chairman ROYAL LIVERPOOL CHILDREN S HOSPITAL Myrtle Street Liverpool by Friday July 7th
A candidate may send copies of his application and testimonials to members of the Election Committee but personal canvassing of any member will be a disqualification
R H ARMSTRONG Chairman

ROYAL SALOP INFIRMARY SHREWSBURY
(150 Beds)

APPOINTMENT OF RESIDENT HOUSE PHYSICIAN

Applications are invited from fully qualified men for the appointment of Resident House Physician vacant July 1st. Salary £160 per annum with board residence etc. The appointment is for six months in the first instance subject to re-appointment for a further period of six months. Resident Staff comprises Resident Surgical Officer House Physician and Casualty Officer and Resident Anaesthetist. The Resident House Physician is Resident Officer to the Medical Ward of the Hospital under the direction of three Honorary Physicians and is also Resident Officer to the Maternity Department for difficult cases under the direction of the Honorary Obstetrician.

Application stating age qualification experience nationality and accompanied by copies of three recent testimonial to be sent to the undersigned forthwith.

Board Room J. W. NOBLE,
June 13th 1933. Secretary Supt.

WEST END HOSPITAL FOR NERVOUS DISEASES
In Patient Department Gloucester Gate Regents Park N.W.1.
Out Patient Department 73 Welbeck St. W.1

The Committee of Management invites applications for the post of HONORARY ASSISTANT OPHTHALMIC SURGEON. The date by which applications must be received has been extended to Monday July 10th. Candidates who must be Fellows of the Royal College of Surgeons England are requested to send eleven copies of their application with recent testimonials by July 10th to the undersigned from whom further particulars should be obtained.

J. P. WETENHALL,
Welbeck Street W.1. Secretary.

THE GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION
(216 Beds.)

TWO HOUSE SURGEONS (male) fully qualified. Salary £150 per annum with board residence and laundry.

The appointments are for six months which may be extended for similar periods by re-election from time to time.

Applications stating age qualification and nationality with copies of not less than three recent testimonials should be sent to the undersigned not later than June 29th.

The elected candidates will be required to enter upon their duties on July 17th.

F. J. SYMONS,
June 15th, 1933. Secretary.

ST. MARY'S HOSPITAL, W.2.

SURGICAL REGISTRAR.

The Board of Management invite applications for the above post. Candidates for the appointment must be registered Medical Practitioners and Fellows or Members of the Royal College of Surgeons of England or Graduates in Surgery of a University in the British Empire.

The salary is £200 per annum with luncheon and tea. Copies of the regulations for the Surgical Registrar may be obtained on application to the Secretary's Office.

Application with copies of testimonials not exceeding three in number should reach the undersigned on or before Wednesday June 28th.

W. PARKES Secretary.

LONDON LOCK HOSPITAL AND HOME.
(Founded 1746.)

HONORARY SURGEON

The Board of Management invite applications for the [illegible] must be Fellows [illegible] Surgeons of England [illegible] colars and [illegible] must be lodged with the undersigned on or before Monday July 3rd. The appointment will be made at a Special Court of the Governors on July 6th.

By Order of the Board
283 Harrow Rd. W.9 J. F. MORTON
June 1st 1933. Secretary.

ROYAL INFIRMARY WIGAN
(180 Beds.)

HOUSE SURGEON (male) required July 1st for a period of six months. Salary £150 per annum with board, apartments, and washing. Staff consists of R.S.O. and three House Surgeons. Applications stating age and qualifications with copies of three recent testimonials, should be addressed to the undersigned as soon as possible.

A. STANLEY BRUNT
June 6th 1933. Gen. Supt. & Sec.

MANCHESTER ROYAL INFIRMARY
CENTRAL BRANCH ROBY STREET MANCHESTER.

HOUSE SURGEON (LADY).

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment. Applicants must be registered and hold a medical and surgical qualification.

The appointment is tenable for nine months commencing July 1st three months as Junior at £100 per annum three months as Assistant at £100 per annum and three months as Senior at £200 per annum together with board and allowance for laundry.

Applicants must state age and qualifications and send twelve copies of their application and testimonials to the undersigned by 9 a.m. on Thursday June 29th.

By Order
FRANK G. HAZELL,
Gen. Supt. & Secretary.

HULL ROYAL INFIRMARY
(370 Beds.)

Applications are invited from registered Medical Practitioners for the post of CASUALTY OFFICER (male) vacant now.

Salary at the rate of £150 per annum plus residence board and laundry.

The officer appointed will work mainly under the direction of the Resident Surgical Officer.

The appointment will be for six months but will at any time determinable by one month's notice on either side.

Applications stating age qualification and nationality together with copies of testimonials should be addressed to the undersigned.

R. J. CAPLESS
June 17th 1933. House Governor.

KING EDWARD VII HOSPITAL, WINDSOR.
(181 Beds.)

TWO HOUSE SURGEONS required (one for Casualty Department) for six months from date of appointment. Applicants must be fully qualified men or women registered and preferably have held a resident appointment. One to have had some experience in Ear Nose and Throat work.

Salary at the rate of £100 per annum, together with board, residence and laundry.

Applications stating age, qualification and experience accompanied by copies of testimonials should be sent to the undersigned not later than June 26th.

ARTHUR E. CHURCHER,
Secretary.

RADCLIFFE INFIRMARY AND COUNTY HOSPITAL, OXFORD

Applications are invited for the following post on the Honorary Medical Staff of the above Hospital:

1. HONORARY SURGEON
2. HONORARY SURGEON to the Ear Nose and Throat Department (with charge of sixteen beds).

Twenty-five copies of applications and testimonial which will be forwarded to members of the Electing Committee must be sent to the undersigned, from whom further particulars may be obtained not later than July 10th.

A. G. E. SANCTUARY
Radcliffe Infirmary and County Hospital Oxford. Administrator.

MANSFIELD AND DISTRICT HOSPITAL.

The Board of Management of the above Hospital (135 beds) invite applications for the post of HOUSE SURGEON (male). Duties to commence July 1st next.

Salary at the rate of £150 per annum with residence board and laundry.

The appointment is for six months and is renewable.

The Resident Staff consists of a Resident Surgical Officer and two House Surgeons.

Applications accompanied by not more than three recent testimonials to be sent to the undersigned.

Dated this 31st day of May 1933.

C. J. ADAMS Secretary.

LIVERPOOL HEART HOSPITAL.

ASSISTANT PHYSICIAN

Applications are invited for the position of Assistant Physician to the above Hospital. The Hospital is run as one unit and is particularly well equipped for Research. The Assistant Physician will be eligible for a part-time Research Fellowship of £200 per annum, tenable for five years. Outside candidates will receive the same consideration as local men. Applications to be sent to the Secretary Miss Lewis 14 Cook Street Liverpool.

GILBERT BAIN MEMORIAL HOSPITAL, LERWICK.

The Trustees invite applications for the post of SURGEON and CONSULTANT for the County of Zetland and Superintendent of the Gilbert Bain Memorial Hospital. Applicants must be of the status of Fellows of the Royal Colleges of Surgeons. Salary £700 per annum, with allowance of £200 for travelling supplemented by fees and allowances from private patients and the local authority.

This appointment is made with the approval of the Department of Health for Scotland in terms of a Scheme under the Highlands and Islands (Medical Service) Grant Act 1913 and further particulars of the post may be obtained from the Secretary Department of Health for Scotland, Edinburgh, to whom applications with copies of testimonials are to be sent on or before July 8th.

VICTORIA HOSPITAL, BURNLEY
(125 Beds.)

HOUSE SURGEON (Male).

Applications are invited for the above post which will become vacant on July 1st next. The appointment is for six months in the first instance at a salary of £150 per annum, together with board, residence and laundry. At the end of this period re-appointment for a further period may be appointed if confirmed, the salary for the second six months will be at the rate of £200 per annum.

Applications with full details of qualifications and experience and stating nationality together with copies of recent testimonials should be addressed to the undersigned forthwith.

J. E. WHEATCROFT Secretary.

THE WILLESDEN GENERAL HOSPITAL, N.W.10

OUT PATIENT DEPARTMENT CLINICAL ASSISTANTS

Applications are invited for appointment to the following sessions:

SURGICAL—Monday afternoons.
MEDICAL—Tuesday afternoons.
MEDICAL—Friday mornings.
SKIN—Saturday mornings.
DENTAL—

Applications must be received not later than first post on Monday June 26th, and should be addressed to the Secretary of the Hospital, from whom further details of the appointments may be obtained.

June 12th, 1933.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST
Brompton S.W.3

The Committee of Management invite applications for the post of HOUSE PHYSICIAN (for which there are three vacancies). The duties include work in the Out-patient Department as well as in the Wards. The appointment is for six months commencing on August 1st, with an honorarium of £50.

Application with copies of testimonial must reach the undersigned not later than Saturday July 8th.

Brompton FREDERICK WOOD
S.W.3 Secretary.
June 1933.

HARROGATE AND DISTRICT GENERAL HOSPITAL (150 Beds.)

Applications are invited from British subjects (male) for the post of SECOND RESIDENT MEDICAL OFFICER. The duties include those of House Physician and Casualty Officer.

Salary at the rate of £150 per annum, with board and lodging.

The post will become vacant on July 31 and the appointment is for six months. Applications must reach the undersigned not later than July 8th.

GEO. BALLANTYNE, Secretary.

HERTFORD COUNTY HOSPITAL.

Applications are invited for the post of HOUSE SURGEON (Male). Salary £200 per annum with board, residence and laundry. The appointment is for six months in the first instance, commencing on or about July 16th.

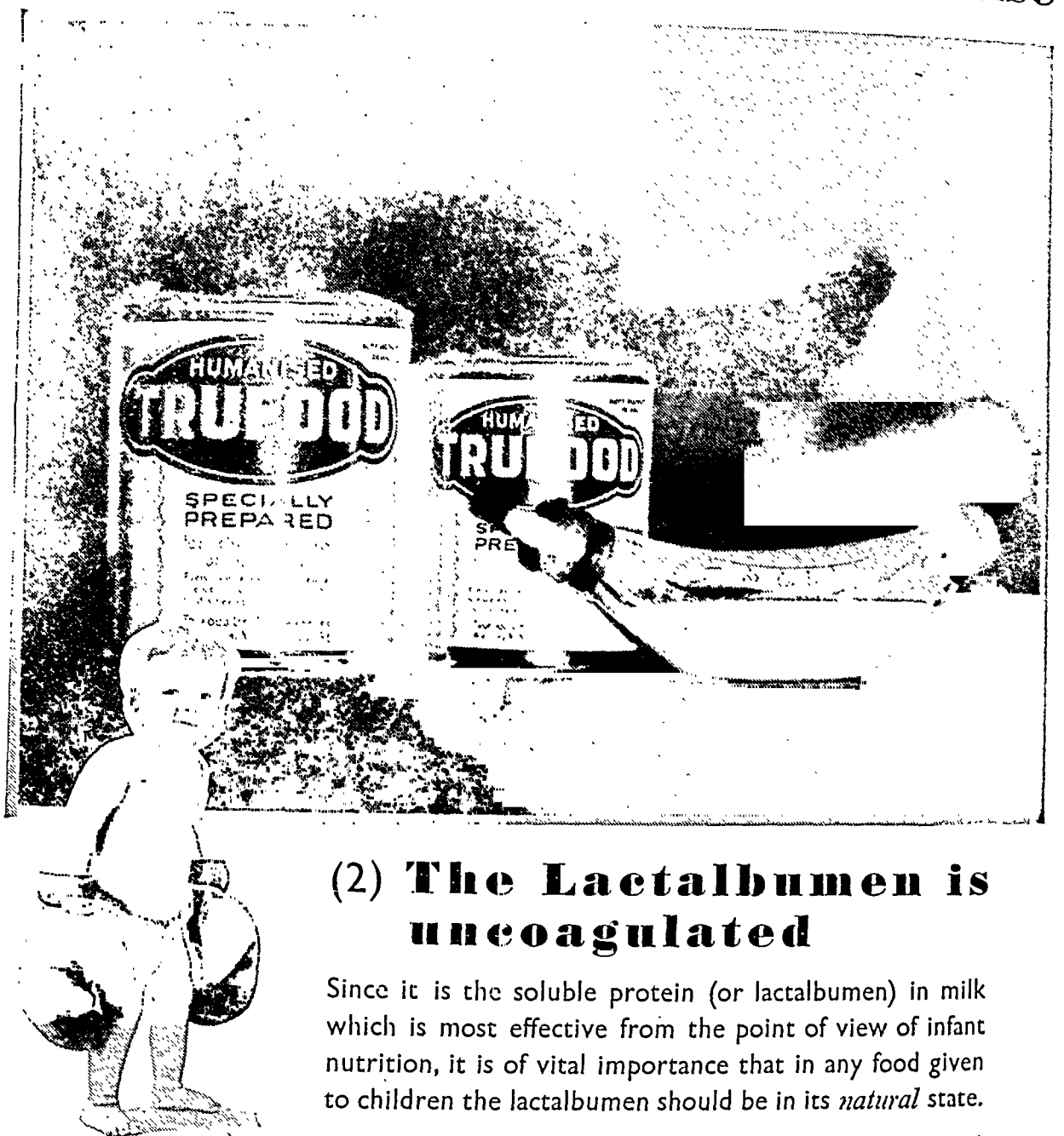
Applications with copies of three recent testimonials should be sent to the undersigned not later than Saturday July 1st.

PERCY G. BROOKS Secretary.

ECCLES AND PATRICROFT HOSPITAL, near MANCHESTER.

HOUSE SURGEON required, July 15th. Good general surgical work. Commencing salary at rate of £150 p.a., plus usual. Six months appointment. Apply, with copies of testimonials to the Secretary at the Hospital.

nearest to mother's milk because



(2) The Lactalbumen is uncoagulated

Since it is the soluble protein (or lactalbumen) in milk which is most effective from the point of view of infant nutrition, it is of vital importance that in any food given to children the lactalbumen should be in its *natural* state.

In Humanised Trufood the lactalbumen is uncoagulated in the drying process. Thus, in Humanised Trufood, an infant receives correct nutrition *in the correct manner* —a manner virtually identical with breast feeding. When reconstituted with water, Humanised Trufood is, in fact, virtually *identical* with mother's milk.

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Trufood Ltd. The Creameries, Wrenbury, Ches.

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CITY OF MANCHESTER

PUBLIC HEALTH DEPARTMENT

WITHINGTON HOSPITAL AND INSTITUTION

APPOINTMENT OF AN ASSISTANT MEDICAL OFFICER

The Public Health Committee invites applications from qualified medical men for the position of Assistant Medical Officer at the Withington Hospital (1 290 beds) and Institution (1 200 beds) Nell Lane, West Didsbury Manchester

Every applicant must be a registered medical practitioner and unmarried

Preference will be given to applicants with previous hospital experience

The Hospital is a recognised training school for nurses and is equipped with all modern hospital requirements

Salary £275 per annum, subject to a temporary deduction of £4 5s per annum The amount payable is therefore, £270 15s per annum with board residence, and laundry in addition subject to the terms and conditions of the Manchester Corporation Grading Scheme No bonus

The appointment will be made, in the first instance for a period of six months The successful candidate, however, will be eligible for reappointment for a further period of six months at the end of that period

Applications stating fully the age training qualifications and experience of the candidate with copies of three recent testimonials and endorsed on the envelope Assistant Medical Officer Withington Hospital must be addressed to the Medical Officer of Health Civic Buildings 1 Mount Street Manchester only, and not to members of the Committee or Council and must be received by him not later than Saturday July 1st

The candidate appointed will be required to commence duty as soon as possible after appointment, to devote the whole of his time to the duties of the position to pass a medical examination to contribute to the Corporation Superannuation Fund and to execute the Deed of Service

Canvassing in any form oral or written direct or indirect is prohibited

Town Hall T E WARBRECK HOWELL
Manchester Town Clerk
June 17th 1933

COUNTY BOROUGH OF SOUTHEND ON SEA

APPOINTMENT OF ASSISTANT MEDICAL OFFICER OF HEALTH (WOMAN)

The Town Council invite applications from Medical Women for appointment as Assistant Medical Officer of Health and Assistant School Medical Officer at a salary of £600 per annum, increasing by annual increments of £25 to a maximum of £700

Candidates must hold a Diploma in Public Health have held a resident appointment in a general hospital and have had not less than three years post graduate experience Preference will be given to candidates who have had special experience in the treatment of Venereal Diseases

The appointment is designated under the Local Government and Other Officers Superannuation Act and the salary will be subject to the usual deductions for superannuation and also a temporary economy cut amounting to £17 10s on the first years salary

Applications on forms to be obtained from the Medical Officer of Health Public Health Offices Southend on Sea should be returned to him with copies of three recent testimonials on or before Wednesday July 12th in sealed envelopes endorsed 'Assistant Medical Officer'

Town Clerks Office H J WORWOOD
Southend on Sea Town Clerk
June 17th 1933

WESTERN OPHTHALMIC HOSPITAL
Marylebone Road, N W 1

The Committee have now been able to arrange for the JUNIOR HOUSE SURGEON to be resident and have charge of a certain number of beds and applications are invited for the post

The salary is at the rate of £100 per annum and the appointment is for six months

Some previous Ophthalmic experience is required

The selected candidate will be required to take up duty at an early date

Applications accompanied by copies of three testimonials should be sent in at once and not later than July 1st

H W BURLEIGH
Honorary Secretary

BRISTOL EYE HOSPITAL.

Applications are invited for the post of ASSISTANT RESIDENT HOUSE SURGEON Salary £100 per annum vacant August 1st Senior post available after six months Applications and testimonials to be received by the Secretary not later than Monday July 3rd.

CITY OF LIVERPOOL.

MEDICAL SUPERINTENDENT MILL ROAD INFIRMARY

Applications are invited from fully qualified Medical Practitioners with the necessary knowledge and experience of hospital administration for the appointment of full time Medical Superintendent at the above Infirmary at a salary of £1 000 per annum (subject to a temporary deduction authorised by the Council) together with an allowance of £150 per annum in lieu of residence For the time being the appointment will be non resident but the Council reserve the right to call upon the Medical Superintendent to reside in the Infirmary when suitable accommodation is available Any fees received in connection with the appointment to be handed over to the City Treasurer in accordance with the Standing Orders of the Council

The gentleman appointed will assume control of the Infirmary under the direction of the Medical Officer of Health and be responsible for the work of the Medical Surgical Nursing and Administrative Staffs in accordance with the instructions of the Council from time to time Special experience in surgery is essential

The Infirmary accommodates acute medical surgical and maternity patients with approximately 800 beds and has a staff of Resident Assistant Medical Officers Visiting Specialists, and a Nursing Staff of 130

The Infirmary is a Training School recognized by the General Nursing Council and the Central Midwives Board, and the Medical Superintendent will be required to organise the necessary lectures in connection with the training of Nurses

The appointment will be made subject to the Local Government and Other Officers Superannuation Act 1922 and the Standing Orders of the City Council and will be determinable by three calendar months notice on either side

Applications to be made upon forms to be obtained from the Medical Officer of Health Municipal Annexe Dale Street Liverpool to be endorsed 'Medical Superintendent, Mill Road Infirmary' and returned to the undersigned so as to be received not later than first post Tuesday July 4th Canvassing of members of the City Council either directly or indirectly will be considered a disqualification

Municipal Buildings, WALTER MOON
Liverpool Town Clerk
June 1933

COUNTY BOROUGH OF EAST HAM

Applications are invited for the appointment of MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER for the Borough

The salary will be in accordance with the agreed scale, viz, £1 100 per annum subject to deductions under the Local Government Officers Superannuation Act

Candidates must be under 45 years of age be duly qualified and possess a Diploma in Public Health Sanitary Science or State Medicine The appointment will be subject to the Sanitary Officers Order 1926 to the approval of the Ministry of Health, and to the person appointed satisfactorily passing a medical examination

Further particulars of the duties terms and conditions of the appointment and form of application can be obtained on application to the undersigned

Applications on the form provided (accompanied by a copy of three recent testimonials) are to be endorsed 'Medical Officer of Health' and delivered to the undersigned not later than the first post on Thursday June 29th

Canvassing directly or indirectly will be a disqualification

Town Hall C EUSTACE WILSON
East Ham E 6 Town Clerk
June 14th 1933

COUNTY BOROUGH OF WARRINGTON

WHITECROSS HOSPITAL. (300 Beds)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (Male)

Salary £225 per annum together with board residence and laundry at the Hospital

The above is a General Hospital recently transferred to the Local Authority from the Board of Guardians and the duties of the candidate will chiefly comprise the treatment of patients in the male Medical and Surgical and Male and Female Mental Wards

Candidates must be single, not exceeding 30 years of age fully qualified and registered

Appointment for six months which may be extended for a further period of six months

age, qualifications and with copies of not less to be sent to the under signed not later than first post Thursday July 6th

C W N JOSEPH M D D P H
Health Dept Medical Officer of Health
Sankey Street Warrington

LONDON COUNTY COUNCIL.

HOSPITAL LABORATORY SERVICE.

Medical Practitioners required with appropriate qualifications for appointment at under mentioned laboratories Remuneration and conditions subject to review In case of a woman marriage terminates contract of service

(a) PATHOLOGIST Group Laboratory ST MARY ABBOTS HOSPITAL Marloes Road Kensington W —Salary £1 100 by £50 to £1 300 Responsible for organisation and development of pathological work for Council's general hospitals in group expected to visit each hospital in group at frequent intervals act generally as consulting pathologist to group and to carry out research work as opportunities arise.

(b) ASSISTANT PATHOLOGIST at the above-mentioned laboratory Salary £650 by £25 to £800 Required to act under direction of Pathologist Duties include visitation of hospitals, conduct of post mortem examinations and generally carrying out of examinations in laboratories in area

Forms of application obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a) County Hall Westminster Bridge S E 1 and returnable by July 7th Candidates should specify position or positions for which they desire to apply

Canvassing disqualifies

LONDON COUNTY COUNCIL.

ASSISTANT MEDICAL OFFICER Grade II (non resident) required at ST CHARLES HOSPITAL St. Charles Square, Ladbroke Grove W 10 Salary £250, together with non residential allowance at rate of £150 a year in lieu of board, lodging and washing Appointment at this hospital for one year only and not renewable Remuneration and conditions subject to review In case of a woman marriage terminates contract of service Candidates must be registered medical practitioners of at least one years standing, and have held a resident appointment in a general hospital for six months. Duties assigned by medical superintendent and include if necessary assistance at other establishments under the control of the Council

Application forms obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 3a), County Hall Westminster Bridge S E 1 returnable by July 7th Canvassing disqualifies Inquiries should be addressed to Medical Superintendent

CITY AND COUNTY OF NEWCASTLE UPON TYNE

NEWCASTLE GENERAL HOSPITAL
(650 Beds)

ONE HOUSE SURGEON AND ONE HOUSE PHYSICIAN (Male)

The above posts will become vacant on August 1st and applications are invited from duly qualified and registered Medical Practitioners

The salary in respect of each of the appointments which are tenable for six months is at the rate of £150 per annum with board lodging etc

Applications, stating age and qualifications together with copies of not more than three recent testimonials to be addressed to the Medical Officer of Health Town Hall Newcastle upon Tyne

June 19th, 1933

VICTORIA HOSPITAL FOR CHILDREN, Tite Street Chelsea S W 3 (138 Beds)

The Committee of Management invite applications for the posts of HOUSE PHYSICIAN and HOUSE SURGEON (both vacant August 1st) The appointments are for six months Salaries at the rate of £100 p a with board lodging and washing

Candidates must attend the hospital for the purpose of an interview at 4 p m on Tuesday July 11th (No travelling or other expenses will be paid) They must hold medical and surgical qualifications and be registered under the Medical Act

Applications with copies of three recent testimonials should be sent to the Secretary not later than first post on Monday, July 10th

By Order
D ST JOHN BAMFORD Secretary

ROYAL NATIONAL ORTHOPAEDIC HOSPITAL 234 Gt Portland St W 1

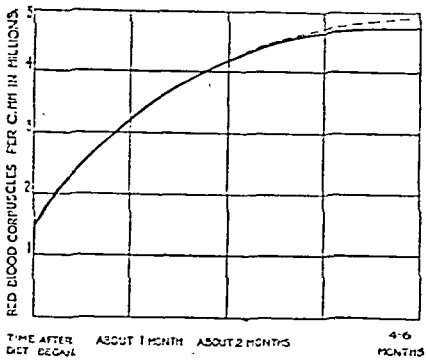
Applications are invited for the post of HONORARY ASSISTANT SURGEON (for acute abdominal cases) and should be sent to the Secretary on or before June 30th The Surgeon who has recently been undertaking the work is a candidate for the appointment

RELIGIO-MEDICAL SERIES, No. 30—PRIMITIVE PEOPLES

Liver Treatment in Pernicious Anæmia

Burroughs Wellcome & Co. place at the disposal of physicians two palatable liver extracts. Both have given satisfactory results and can be administered over long periods without causing gastric or other disturbance.

THE AVERAGE INCREASE OF RED BLOOD CELLS IN NINETY OF MINOT AND MURPHY'S CASES OF PERNICIOUS ANÆMIA UNDER LIVER TREATMENT



———— Average for all data, which includes data for patients who took diet unsatisfactorily.

– – – – – – – – Average for 71 patients who took diet satisfactorily.

TRADE MARK 'WELLCOME' BRAND
LIVER EXTRACT
(DRY)

In tubes, each containing an active selected fraction of an extract derived from half-a-pound of fresh liver

Boxes of 12 tubes, 32/5 per box

CONCENTRATED
LIQUID LIVER
EXTRACT
(B.W. & CO.)

A preparation of whole liver. One fluid ounce contains the equivalent of half-a-pound of liver

Bottles containing 4 fl. oz., 6/10 each; 16 fl. oz., 25/- each

London Prices to the Medical Profession

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Address for communications: SNOW HILL BUILDINGS, E.C. 1
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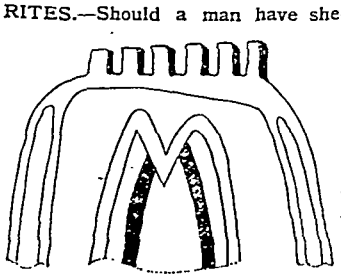
NEW YORK MONTREAL SYDNEY CAPE TOWN MILAN BOMBAY SHANGHAI BUENOS AIRES

O O O O O

NORTH AMERICAN INDIAN SWEAT-BATH USED FOR MAGICO-MEDICAL PURIFICATORY RITES.—Should a man have shed the blood of another, the natives believe he will be haunted and made sick by his victim's ghost which clings to his body for this purpose (either invisibly or in the form of blood stains, etc.) until he has removed the ghost by bathing and washing in water with ceremonial rites. Sometimes the demon is driven out in the form of perspiration by steam, as in the sweat-bath here depicted, so common an institution among the North American Indians for this as well as for hygienic reasons; the steam is produced by pouring water over heated stones on the floor of the sweat-house.



DATE: Present day

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An electrically prepared Gold-Silver Colloid in a special O.R.L. Outfit for nasal irrigation in the treatment of all Naso-Pharyngeal Inflammations, Coryza, Catarrh, Rhinitis, Hay Fever, etc.

ORARGOL

Extremely valuable in the early stages of

THE COMMON COLD

"I have found it possible to abort a cold almost infallibly by spraying the throat and nose with 'Orargol' as soon as the first symptoms make their appearance."

Correspondence on The Common Cold,
"British Medical Journal," March 19th, 1932

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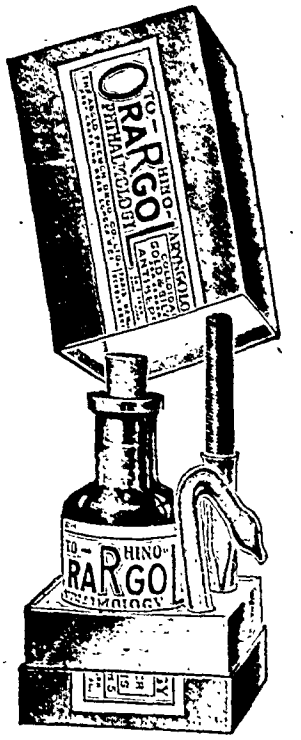
1 Orargol Outfit, A.F.D.

Sig: 4-5 drops to be applied to each nostril (in the douche provided) three or four times daily.



Price 3/6. Subject to the usual professional discount.

The Anglo-French Drug Co. Ltd., 11 & 12, Guilford Street, London, W.C.1.

Vitamin D IS PRESENT IN ALL

CADBURY'S
CHOCOLATES

1 Cadbury Bros. wish to inform doctors that, as a result of tests carried out for them by a high authority, it has been shown that the cacao bean contains Vitamin D (one unit of anti-rachitic activity per gram).

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APPOINTMENTS.—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary 7, Drumsheugh Gardens, Edinburgh).

(a) British Islands

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	**CONTRACT PRACTICE** *(contd.)*	**PUBLIC HEALTH** *(contd.)*
EBBW VALE, MON. *(Workmen's Medical Society.)*	OAKDALE, MON. *(Medical Officer for Medical Aid Association.)*	COUNTY BOROUGH OF SOUTH SHIELDS. HARTON INSTITUTION AND CLEADON COTTAGE HOMES *(Medical Officer.)*
GILFACH GOCH, GLAMORGAN. *(Workmen's Medical Scheme.)*	OGMORE VALLEY, GLAMORGAN. *(Wyndham Colliery Medical Aid Society.)* *(Workmen's Medical Scheme.)*	HERTFORDSHIRE COUNTY COUNCIL. WARE SANATORIUM. *(Assistant Medical Officer.)*
LLWYNPIA, CLYDACH VALE, PENYGRAIG, GLAMORGAN. *(Workmen's Medical Scheme.)*	**PUBLIC HEALTH**	FULHAM BOROUGH COUNCIL, Maternity and Child Welfare Department. *(Assistant Medical Officer—Woman.)*
LOWESTOFT MEDICAL INSTITUTE. *(Medical Officer.)*	KENT COUNTY COUNCIL. LENHAM SANATORIUM. *(Male Assistant Medical Officer.)*	
MARDY, GLAMORGAN. *(Workmen's Medical Scheme.)*	FARNBOROUGH INSTITUTION HOSPITAL. *(Resident Assistant Medical Officer.)*	
NEATH AND DISTRICT. *(Medical Aid Association.)*		

(b) Overseas.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1.

Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.	Town or District.	Hon. Sec. of Division or Branch.
NEW SOUTH WALES. *(All Friendly Society Appointments.)*	Dr. J. G. HUNTER (Medical Secretary, New South Wales Branch), 135, Macquarie St., Sydney, N.S.W.	QUEENSLAND *(Brisbane Associated Friendly Societies Institute.)*	The Hon. Sec., Queensland Branch, British Medical Association, B.M.A. Building, Adelaide St., Brisbane.	WELLINGTON, NEW ZEALAND *(Contract Practice Appointments.)*	Dr. G. F. V. ANSON (Hon. Sec., New Zealand Branch), British Medical Association, P.O. Box 156, Wellington, New Zealand.
VICTORIA. *(All Institute or Medical Dispensaries.)*	Dr. J. P. MAJOR (Hon. Sec., Victorian Branch, British Medical Association), Medical Society Hall, East Melbourne, Victoria.	*(Toowoomba Associated Friendly Societies' Medical Institute, Toowoomba.)*		WESTERN AUSTRALIA. *(Contract and Lodge Practices.)*	Hon. Sec., Western Australian Branch, British Medical Association, No. 6 Bank of N.S.W. Chambers, St. George's Terr., Perth, Western Australia.

June 21st, 1933 By Order of the Council. G. C. ANDERSON, Medical Secretary.

WORCESTER COUNTY AND CITY MENTAL HOSPITAL, POWICK, near WORCESTER.

Applications are invited for the post of ASSISTANT MEDICAL OFFICER. Applicants must be male and single and duly qualified in medicine and surgery. Salary £350 rising by yearly increments of £25 to £450 per annum together with furnished apartments, board, laundry and attendance. A further £50 will be paid if the selected candidate holds or obtains a Diploma in Psychological Medicine. The commencing salary is subject to a temporary abatement of £13 15s. under the National Economy Scheme. The appointment is subject to the provisions of the Asylums Officers' Superannuation Act, 1909.

Applications, stating age, experience, and full particulars, accompanied by copies of three recent testimonials, to be forwarded to the Medical Superintendent not later than Saturday, July 1st.

HUDDERSFIELD ROYAL INFIRMARY (240 Beds.)

MALE HOUSE SURGEON required to commence duty on July 6th.

Salary £150 per annum, with board, residence, and laundry. Appointment for six months, subject to renewal at the discretion of the Board of Management.

The Hospital is officially recognised for the surgical practice required of non-members before admission to the Final Fellowship Examination of the Royal College of Surgeons of England.

Applications, with copies of three recent testimonials, to be addressed to the undersigned immediately.

H. E. G. HALL,
Gen. Supt. & Secretary.

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY.

The Board of Management invites applications for the following posts from unmarried gentlemen of British Nationality who are properly qualified and registered:

HOUSE SURGEON. Duties under Consulting Surgeon.

SPECIAL HOUSE SURGEON. Duties in Obstetric Department and Eye, Ear, Nose and Throat Wards.

Salary in each case at the rate of £150 per annum with board, residence and laundering. Appointments six months.

The Hospital is recognized for post-graduate study by the Joint Colleges of Physicians and Surgeons.

Resident Staff 6. Beds: Infirmary 278, Homes of Recovery 72.

Application, stating age, qualifications and experience, together with copies of testimonials to be forwarded to the undersigned.

JOHN GIBSON,
Supt. & Secretary.

June 12th, 1933.

THE ROYAL GWENT HOSPITAL, NEWPORT, MON. (160 Beds.)

Wanted, a JUNIOR RESIDENT MEDICAL OFFICER to act as House Surgeon to Out-patients and as House Physician.

Salary £135 with board, lodgings, and laundry. Resident Medical Staff 5. Eligible for promotion.

Large Out-patient Department.

Applications, stating age and qualifications, with copies of three recent testimonials to be sent to the undersigned.

Applications from ladies not entertained.

J. K. MILLWARD,
Secretary Supt.

June 9th, 1933.

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY.

The Board of Management invites applications from unmarried gentlemen of British nationality properly qualified and registered, for the post of RESIDENT SURGICAL OFFICER, which will fall vacant early in August.

Preference will be given to candidates with F.R.C.S. degree.

The Central Hospital in Preston contains 278 beds and in addition there are 72 at the Homes of Recovery in the country.

The Resident staff numbers six: R.S.O., House Physician, Casualty Officer, 3 House Surgeons.

Salary at the rate of £300 per annum, with rooms, board, and laundry. The appointment is in the first instance for twelve months.

Applications, stating age, qualifications, and experience, together with testimonials to be forwarded to the undersigned (who will supply any particulars desired) on or before July 1st.

JOHN GIBSON,
Supt. & Secretary.

June 12th, 1933.

NORTH ORMESBY HOSPITAL, MIDDLESBROUGH.

HOUSE PHYSICIAN required, male and unmarried. Salary £120 per annum, with board, residence, and laundry. There are three Residents, and the successful candidate will be eligible for the post of House Surgeon in due course.

Application, stating age, qualifications, previous experience (if any), with copies of three recent testimonials, should be sent to the undersigned at once.

GEORGE WATTS,
Secretary Supt.

June 6th, 1933.

(Appointments continued on p. 50.)

Remarks
ON
HODGKIN'S DISEASE
A PATHOGENIC AGENT IN THE GLANDS, AND ITS APPLICATION IN DIAGNOSIS

BY

M. H. GORDON, D.M., F.R.S.

CONSULTING BACTERIOLOGIST TO ST. BARTHOLOMEW'S HOSPITAL; MEMBER OF SCIENTIFIC STAFF, MEDICAL RESEARCH COUNCIL

lis pathogenic agent—apparently a virus—was found the course of an inquiry in which a group of vestigators—medical, surgical, and pathological—have en co-operating at St. Bartholomew's Hospital during e past five years with the express object of defining the usal agent of lymphadenoma, and the circumstances which it came to light have been fully described in e report of the Rose Research on that disease. The rpose of the present communication is to report briefly e chief results of the observations carried out up to te. This seemed desirable, because experience already licates that the presence of this pathogenic agent is pable of affording useful evidence in the practical ignosis of lymphadenoma and its differentiation from ied conditions—a task in which any further help from e laboratory cannot be otherwise than welcome.

MODE OF DEMONSTRATION

Glands removed aseptically from suspected cases of lymph-enoma are placed in a sterile test tube or bottle and taken the laboratory. After a piece has been removed and fixed section one or more grams of the rest are cut off, ighed on a sterilized watch-glass, and transferred to a all sterile mortar under cover. The rest of the gland may placed in the refrigerator and frozen; it remains active re for several weeks. With a sharp pair of scissors the rtion of the gland in the mortar is now cut up as finely possible and thoroughly ground to pulp with the pestle hand, sufficient ordinary broth being gradually added make a 10 per cent. suspension, which may be decanted o a tube, transferred to the refrigerator, and allowed to nain there for a week. One cubic centimetre of this sus-nsion, which should be quite free of bacteria, is next ected into a rabbit, under light anaesthesia, 0.4 c.cm. ng injected slowly into the brain and the rest into a rginal vein of the ear. Further particulars of the technique described in the Rose Report.

When suspensions of glands from cases in which lymph-enoma is in active evolution have been injected, these obits, after an incubation period of two to six days, ay show symptoms such as head retraction, pareses, d fits—symptoms indicative of meningo-encephalitis, d similar to those excited by the viruses of dermo-ccine, herpes, or psittacosis, when injected cerebrally the same way. In the case of suspensions of lymph-enoma glands, however, the usual clinical picture pre-ted by the rabbits is peculiar and characteristic, and kes the form of muscular rigidity combined with inco-lination and ataxia, and a condition of spastic paralysis, st seen by observing their gait on the floor. These mptoms are invariably accompanied by a progressive s of weight. The disease thus engendered in the rabbit cerebral inoculation with lymphadenoma gland is fre-ently fatal in a time varying from three days to a nth or more, usually in about ten days. A large pro-rtion of the rabbits, however, slowly get well, and e of these, when recovery is complete, have been und to be immune to a second dose of the same material ministered by the cerebral and venous routes in the ne way and positive in a control animal. Post-mortem amination of the rabbits that die shows generally a nounced degree of marasmus, but no naked-eye lesion any kind, except occasionally for some slight con-gestion of the meninges. Bacteria cannot be demonstrated either in the blood or in the meningeal fluid. In spite of the striking clinical picture, sections of the brains of the earlier rabbits that succumbed showed, as in the case of rabbits that die after cerebral inoculation with dermovaccine, a scarcity or absence of infiltrative lesions; but with the more active lymphadenoma material that killed the rabbit in four days, definite lymphocytic meningitis was present, and a proportion of the blood vessels in the cortex and elsewhere were seen to be surrounded with a perivascular cuff of lymphocytes. This has since been confirmed in two further cases in which the rabbits either died or were killed early when the disease was at its height. There can therefore be little doubt, both on clinical and on histological grounds, as to the ability of this pathogenic agent that is present in lymphadenoma gland to give rise to meningo-encephalitis in the rabbit.

Since the Rose Report was completed an important saving of time has been found to be practicable. Glands from five further cases of lymphadenoma have been tested by injecting the broth suspensions intracerebrally into rabbits, either directly or on the same day that they were made, and the result in all has been positive. It is therefore unnecessary to wait for the gland suspension to macerate in the refrigerator for a week, although the effect appears to be rendered more certain by that procedure.

OCCURRENCE IN LYMPHADENOMA

Up to the present the pathogenic agent has proved to occur in the lymphatic gland in no fewer than nineteen out of twenty cases in which the clinical and histological evidence placed the diagnosis of lymphadenoma beyond reasonable doubt. The agent would appear to be present either in a more active state or in greater abundance in glands removed from patients in the acute stage of the disease. On the other hand, in both of two patients who had succumbed to the chronic form of lymphadenoma, the pathogenic agent was limited to a minority of the glands of the neck that showed the typical histological changes; and it could not be demonstrated in the glands elsewhere, or in the liver or spleen, in which fibrosis had occurred, but the typical histological features were absent. In one of these two cases examined after death, however, the patient had died of septicaemia from a haemolytic streptococcus.

CONTROL OBSERVATIONS

The presence of this pathogenic agent in lymphadenoma glands only came to notice after three years of negative results, in which the action of spirochaetes, tubercle of human or bovine type, and pathogenic fungi had been excluded in turn. The careful work of van Rooyen recently reported in this *Journal* (January 14th, 1933) has since excluded avian tubercle as a causative factor in lymphadenoma. In order to define the significance of this new pathogenic agent it was necessary first of all to examine in the same way glands removed from patients suffering from other diseases. This investigation has now been in progress for a period of two years, during which glands from over forty control cases, chiefly removed for biopsy, have been tested in the same way—namely, by making a 1 in 10 suspension in broth, and after maceration for a week in the refrigerator by injecting it intracerebrally and intravenously into rabbits. The changes shown by these control glands and the conditions with which they were associated were as follows:

Hyperplasia and chronic adenitis	11
Leukaemia	5
Sarcoma, including lympho-sarcoma	8
Carcinoma	6
Tubercle	6
Various (normal, allergic, mycosis fungoides, etc.)	5
Total	41

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In none of these control cases did the gland suspension produce any obvious effect when allowed to macerate for a week in broth and injected intracerebrally and intravenously into rabbits in the same way as the suspensions of lymphadenoma gland.

Specific Diagnostic Test

It would appear, therefore, that the pathogenic agent in question is limited to lymphadenoma, and is specific to that disease. Accordingly, the presence of this agent can be applied as a specific test in the practical diagnosis of lymphadenoma, and it may be mentioned that the test has, in fact, been on trial for that purpose at St. Bart's for some time past with promising results. That this biological test is capable of performing useful service in the diagnosis of lymphadenoma is evident from the following incidents. (1) Until recently the proportion of cases of lymphadenoma in which glands had given positive results was seventeen out of twenty, but on closer histological examination it has been found that two of the three negative cases are not histologically identical with lymphadenoma—one being probably a variety of lymphosarcoma, the other possibly a giant-cell tumour. (2) In April, 1932, a small piece of gland was received that had been removed from the neck of a patient suspected to be suffering from sarcoma of the mediastinum. This was the only palpable gland present, and the amount of it received weighed only 0.3 gram. As it was too small for a section, the whole of it was suspended in 3 c.cm. of broth, which was allowed to macerate in the refrigerator for a week, and was then injected intracerebrally into a rabbit. After an interval of two days this rabbit developed the typical syndrome produced by lymphadenoma glands, and when the test had been repeated and confirmed a report was sent to the effect that there was not enough material for a section, but that the biological test for lymphadenoma was positive. Six months later this patient returned to hospital with enlarged glands in the groins and axillae, and one of these on removal was found to show microscopically the changes characteristic of Hodgkin's disease in the acute stage, and it also gave positive results once again when the suspension was injected into three rabbits directly it had been made. It is clear, therefore, that the presence of this pathogenic agent can perform a useful service practically in the identification of cases of lymphadenoma.

Characteristics of the Pathogenic Agent

By employing the rabbit's brain as reagent in the manner described, the following information has been obtained with regard to the properties of the pathogenic agent present in the glands in lymphadenoma.

Morphology

With efficient aseptic technique, suspensions of lymphadenoma gland containing the pathogenic agent are found to be quite free of bacteria or other micro-organisms recognizable by the usual procedures. By intensive staining of films after they have been suitably fixed and mordanted, however, minute, deep-staining, spherical granules or "elementary bodies" can be made out that seem to be of the same category as the well-known Paschen bodies that recent experimental evidence is fast establishing as the actual virus of vaccinia. Similar minute bodies have been seen in impression preparations and smears made from the cut surfaces of the brains of rabbits that have succumbed to intracerebral injection with suspensions of lymphadenoma gland. But while the presence of these minute bodies is suggestive, their significance has still to be proved.

Cultures

No certain growth of this pathogenic agent, either aerobically or anaerobically, has yet been obtained on artificial culture media. The increased pathogenicity, as time goes on, of broth suspensions of lymphadenoma glands when kept in the refrigerator seems to be due to the setting free of the agent by autolysis of the tissue rather than to actual multiplication; but this point, like so many others, is still an open one.

Resistance to Desiccation

The pathogenic agent in lymphadenoma gland withstands desiccation extremely well. Glands dried in a vacuum desiccator at room temperature in the dark, then sealed in a test tube and kept in the refrigerator, preserve the agent in active condition for at least six months. A gland, taken out one month before death from an exceptionally acute case of lymphadenoma, promptly dried, and preserved in a glass-stoppered bottle kept in the dark in an ordinary cupboard in the laboratory, was found to contain the pathogenic agent in an active condition after an interval of two years.

Resistance to Heat

This fundamental property—of resistance to heat—of the agent has been tested in gland suspensions from fifteen different cases of lymphadenoma. The results are summarized in the following table, and are very consistent.

Effect of Heat on the Pathogenic Agent in Lymphadenoma Gland Suspensions

	65° C.	75° C.	80° C.	100 C.
No. of tests	17	3	5	5
No. of cases	15	3	5	4
Inactivated	0	1	5	5

As throughout, a 1 in 10 suspension of the gland in broth was used. The duration of exposure at each temperature was thirty minutes, and in each test a control was performed with the same suspension unheated in order to make sure that the pathogenic agent was present and in an active condition.

As all of the fifteen strains retained their activity after exposure for thirty minutes to 65° C., it is clear that this pathogenic agent in lymphadenoma gland possesses very pronounced thermostability. It would seem that with an exposure of thirty minutes inactivation is not effected until the temperature reaches the neighbourhood of 80° C. It must be stated, however, that, although heating for thirty minutes to 65° C. has not inactivated this pathogenic agent for the rabbit's brain in any of the examples so far tested, this degree of heating has nevertheless been repeatedly found to reduce the pathogenic activity somewhat as compared with that of the same suspension when unheated. In other words, there is evidence that exposure to heat in this way does produce some slight weakening or attenuation of the pathogenic agent.

Resistance to Disinfectants

Phenol at 37° C.—The addition of carbolic acid to the extent of 0.5 per cent., followed by incubation for twenty-four hours at 37° C., has been repeatedly found to kill the tubercle bacillus and other forms of non-sporing bacteria but to be practically without effect on the activity of a suspension of vaccinia virus. Phenolation in this way has also resisted successfully by psittacosis virus. A point of interest therefore attaches to the fact that four out of five examples of this pathogenic agent in lymphadenoma

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gland have been found to retain their activity when carbolized in the manner described and then kept for twenty hours at 37° C. Further experiments are in progress on this matter as opportunity offers, and an attempt is being made to see how long the agent retains its activity in the presence of 0.5 per cent. carbolic at 37° C. In the first test, now in progress, the pathogenic agent is still active in both of two specimens after a week at 37° C., but the pathogenicity for the rabbit's brain is less intense than that of another portion of the same suspension free from carbolic and kept in the refrigerator over the same period.

Phenol at 0° to 6° C.—In the refrigerator all of five strains of this pathogenic agent in lymphadenoma gland to which 0.5 per cent. of carbolic was added were found to retain their pathogenicity for at least a fortnight. Here again further experiments are under way. This resistance of the pathogenic agent in lymphadenoma gland to carbolic promises to be of much practical convenience, as it should enable suspensions in broth of glands from suspected cases to be sent through the post for testing, and should eliminate trouble from the presence of contaminating bacteria such as *B. coli*, staphylococci, etc. If this should prove to be practicable, all that would be necessary would be to keep in store a 5 per cent. solution of phenol in distilled water, and to add one-tenth part of that to the broth in which the gland is placed when removed from a suspected case.

Ether.—While the addition of ether to the extent of 10 per cent. by volume, followed by storage in a glass-stoppered bottle in the refrigerator, destroys non-sporing bacteria such as cocci and *B. coli*, it does not inactivate vaccinia virus, and is a valuable method of preserving it free of bacteria for several months. Etherization in this way is also resisted by psittacosis virus. Accordingly, suspensions of glands from five cases of lymphadenoma were each divided into two parts, one of which was transferred to a stoppered test tube and received an addition of 10 per cent. of ether. The control suspensions and their etherized counterparts were stored in the refrigerator, and after 10 days the first pair were tested intracerebrally on rabbits, the others being tested in the same way after eleven, fourteen, sixteen, and seventeen days respectively. The pathogenic agent was found to be still active in all of these suspensions, but in the case of two of the etherized suspensions its pathogenicity was weakened as compared with that of their non-etherized controls. One of these five duplicate suspensions of lymphadenoma glands, where the etherized portion was found to be still active after fourteen days, was examined again after three months had elapsed; and, while the pathogenic agent was found to be still active in the control, it had become inactivated in the portion to which ether had been added. From these preliminary observations it would therefore seem that while the pathogenic agent in lymphadenoma glands withstands the addition of 10 per cent. of ether for a period, attenuation may be produced thereby in course of time. Further experiments on this matter are in progress, and a comparison is being made of the effect of carbolic and ether respectively on the same suspensions of lymphadenoma gland. Present results suggest that the pathogenic agent resists phenol better than ether.

Filterability

Six filtering experiments have been carried out in which broth suspensions of lymphadenoma gland of proved activity for the rabbit's brain have been passed through the more permeable bacterial filters. Four of these experiments were performed with the ordinary Berkefeld V filter and two with the Chamberland L2 filter. In all instances the filtrates when injected intracerebrally into rabbits proved to be inert. While these results clearly prove that this pathogenic agent that is present in lymphadenoma glands is particulate, they do not preclude the possibility of its being a filter-passing virus, for the following reason. Dilution experiments have shown that, before filtering, these broth suspensions of lymphadenoma gland do not give a positive result on the rabbit's brain when diluted above 1 in 150, and control experiments carried out with duplicates of the filters have shown that a broth suspension of dermovaccine with over ten times that titre of active virus when graded on the rabbit's skin gave equally negative results with regard to filtrates. For these reasons the question of the filterability of this pathogenic agent in lymphadenoma gland is not yet decided.

Immune Serum

As a proportion of the rabbits injected intracerebrally with suspensions of lymphadenoma gland and giving positive results recover, it was desirable to see if the serum of these recovered rabbits is capable of inactivating the pathogenic agent *in vitro*. It may be of interest to state that preliminary experiments have shown that the serum of one of these rabbits that had recovered completely after a severe attack very definitely inactivated the pathogenic agent when left in contact with a suspension of lymphadenoma gland for two hours in a water bath at 37° C., whereas a control test carried out with serum from a normal rabbit failed to do so. Here again further experiments are in progress.

Intracerebral Inoculation of Animals other than the Rabbit

Experiments were included in the Rose Report in which broth suspensions of lymphadenoma gland of proved activity for the rabbit by the cerebral route were injected into the brains of mice, but the latter were unaffected. Since these experiments were reported, glands removed from twelve patients have been suspended in broth 1 in 10, allowed to macerate in the refrigerator for a week, and, after having been proved free of bacteria, have been injected at the same time into the brains of rabbits, guinea-pigs, and mice. Six of these patients were suffering from lymphadenoma; the others served as controls. All the animals were lightly anaesthetized by the inhalation of equal parts of alcohol and ether. The dose given to rabbits was the standard one of 0.4 c.cm. intracerebrally, followed by 0.6 c.cm. intravenously, as described previously. With regard to guinea-pigs, preliminary experiments having shown that a cerebral dose of 0.1 c.cm. of the lymphadenoma gland suspension was too small, the dose was raised to 0.15 c.cm., and as the effect then

Comparative Pathogenicity of Gland Suspensions by the Cerebral Route

No.	Case	Condition	Rabbit	Guinea-pig	Mouse
1	P.	Syphilis (III)	Negative	Negative	Negative
2	At	Lymphosarcoma	"	"	"
3	S.	Sarcoma	"	"	
4	AV	Lymphosarcoma	"	"	"
5	C.	Leukaemia	"	"	"
6	H.	Tubercle	"	Died 25 days Died 33 days	"
7	De	Lymphadenoma	Positive	Died 8 days Died 14 days	"
8	C.	"	"	Died 10 days	"
9	Si	"	"	Negative	"
10	Cr	"	"	Died 10 days Died 10 days Died 9 days	"
11	Di	"	"	Died 10 days Died 21 days	"
12	Sn	"	"	Died 12 days	"

became far more definite and constant this was adopted as the standard procedure. In the case of mice the dose was 0.05 c.cm., as more than that cannot safely be injected. The result of these observations is summarized in the preceding table.

It will be observed that none of the broth suspensions of the six control glands gave evidence of any pathogenic action when administered by the cerebral route except No. 6—the tuberculous gland which killed both of two guinea-pigs from tuberculous meningitis, with generalization evident post mortem in the cervical lymph glands and spleen. On the other hand, the broth suspensions of all the six lymphadenoma glands gave typical positive results in the rabbits, and five of them produced as well a fatal disease in the guinea-pig, chiefly characterized by pareses, occasional rigidity of the muscles of the back, and by progressive weakness and loss of weight. The clinical picture of the disease thus produced in guinea-pigs by intracerebral injection of suspensions of lymphadenoma glands, however, is far less striking and obvious than in the rabbits. Post mortem, several of these guinea-pigs showed some congestion of their subcutaneous tissues and slight but definite congestion and enlargement of their lymphatic glands in the axillae and groin. Bacteria were absent from their meningeal fluid and from their blood. Sections of the brains, however, of some of these guinea-pigs have shown the presence of lymphocytic exudate and some thickening of the meninges ; and a few of the vessels in the cortex occasionally show a cuff of lymphocytes. There would seem to be little doubt, therefore, that suspensions in broth of lymphadenoma gland where injected intracerebrally can give rise to meningo-encephalitis in the guinea-pig as well as in the rabbit. With one exception, the broth suspensions of the glands used in these experiments had been allowed to macerate in the refrigerator for one to two weeks before injection. The exception was Case No. 9, in which the only broth suspension of gland available was a hundred days old. It is interesting to note that, while this old suspension was still active for the rabbit, it failed to affect the guinea-pig. Throughout these experiments the mice, of which four to six were injected with each of the suspensions, remained unaffected.

COMMENTARY

Although the characters of the pathogenic agent present in lymphadenoma glands have not yet been fully ascertained, the available evidence leaves little room for doubt that it is a specific micro-organism belonging to the virus group. This was the view expressed in the Rose Report on the evidence then available, and it is confirmed by the further particulars obtained since and reported in the present paper—namely, its capacity to produce meningo-encephalitis in guinea-pigs, its strong resistance to phenol nd ether, and the presence of a neutralizing antibody in erum from an immune animal. From its pronounced esistance to heat the present agent would appear to elong to the same category as the heat-resisting viruses f trench fever and hog cholera or swine fever, the former f which withstands heating to 60° C. for thirty minutes, ut is inactivated in that time at 70° C., as proved by Iajor Strong and his colleagues of the Medical Research ommittee of the American Red Cross by human experiments during the war. The resistance to heat of the hog holera or swine fever virus has been carefully determined y McArthur by experiments on pigs, and he found that it is not inactivated by exposure for two hours to 65° C., and that it can occasionally withstand exposure for four hours to 70° C. The pathogenic agent that is present so constantly in lymphadenoma glands would thus appear to belong to this group of the thermostable viruses ; but final proof of this matter must be awaited until its filterability has been established and passage in series has been effected. The uniformity with which the agent has been found present in the glands of cases of lymphadenoma, and its equally constant absence in other conditions, are highly suggestive that this pathogenic agent or thermostable virus is the primary causative agent of lymphadenoma ; it is difficult to see any other explanation. In the meantime, experience indicates that its presence is capable of affording valuable information in the practical diagnosis of Hodgkin's disease.

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A BIOLOGICAL TEST IN THE DIAGNOSIS OF HODGKIN'S DISEASE

BY

C. E. VAN ROOYEN, M.B., CH.B.

ASSISTANT, BACTERIOLOGY DEPARTMENT, UNIVERSITY OF EDINBURGH

Recent literature has shed fresh light on many hitherto obscure factors concerning the nature of Hodgkin's disease. Thus the workers of the Rose Research on lymphadenoma have shown, after a careful search, that neither spirochaetes, yeasts, diphtheroids, nor acid-fast bacteria have any relation to the condition. Similarly, the finding of L'Esperance (1931) that the avian tubercle bacillus may be causally associated with the disease has not been confirmed (van Rooyen, 1933).

Perhaps the most interesting contribution towards the study of the problem has been the work of M. H. Gordon (1932). He showed that the intracerebral inoculation of rabbits and guinea-pigs with suitable suspensions of lymphadenomatous tissue was followed in a few days by spastic paralysis of the hind limbs, rigidity, ataxia, and muscular weakness. Such effects, however, were not produced by the injection of similarly prepared suspensions of normal, leukaemic, sarcomatous, and carcinomatous lymphatic tissue. It thus appeared that lymphoid tissue affected by Hodgkin's disease acquires properties which this tissue does not exhibit when affected by certain other pathological conditions. Work bearing on the precise nature of the agent responsible for the syndrome produced experimentally in rabbits is without the scope of the present article, and demands further investigation. It is proposed, however, to draw attention to the possibilities which this phenomenon offers as a means of identifying true lymphadenomatous tissue, and also to its clinical value as an aid in the diagnosis of certain doubtful cases. The following brief abstracts from case and post-mortem reports of patients treated in the Royal Infirmary of Edinburgh describe subjects from which material was obtained. The first five were cases of Hodgkin's disease, the sixth was one of pseudo-leukaemia, and the seventh one of lymphosarcoma.

CASE I

A miner, aged 43, under the care of Dr. Goodall, had a swelling on the side of his neck for three to four years, and complained of cough for six months. Enlarged glands were palpable in the neck and axillae, whilst *x*-ray examination revealed enlargement of the superior mediastinal and bronchial groups as well. The spleen was not palpable. The blood count was as follows: red cells, 4,700,000 per c.mm. ; white cells, 6,800 per c.mm.—neutrophils 82 per cent., eosinophils

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CASE II

A forester, aged 53, under the care of Dr. Matthew, had noticed progressive enlargement of his right axillary glands for ten weeks before admission. Temperature varying between 102° and 103° F., accompanied the illness. *X*-ray treatment produced no benefit, and death followed shortly.

Post-mortem Appearances.—Glands about three inches in diameter were present in both axillae, together with bilateral enlargement of those occupying the anterior triangles of the neck; the retrosternal, tracheal, para-aortic, and lumbar lymphatic glands were also enlarged. The spleen was about twice its normal size and typical in appearance. The liver was slightly enlarged. The pleural and pericardial sacs contained effusions; the heart showed fatty degeneration, and the bone marrow slight haemopoietic activity.

Histology.—The lymphatic glands exhibited extensive replacement of normal glandular architecture with Hodgkin's tissue, numerous giant cells being noticeable. The liver and spleen revealed similar changes. The bone marrow showed some erythroblastic and leucoblastic reaction.

CASE III

A miner, aged 52, under the care of Professor Murray Lyon, for five weeks had had pain in the abdomen extending into his right leg. Enlarged glands were present in inguinal, axillary, and posterior cervical areas. There were considerable bilateral muscular atrophy and loss of motor power, lateral nystagmus, and weakness of facial movements. Tenderness was elicited over third lumbar vertebra. Fever accompanied his illness. The blood count was: red cells, 4,800,000 per c.mm.; white cells, 3,200 per c.mm.; haemoglobin, 70 per cent.; colour index, 0.7; a film showed slight anisocytosis. Wassermann reaction was negative.

Post-mortem Appearances.—There was considerable enlargement of the para-aortic glands, with some increase in size of those in the right groin; the left inguinal group was slightly enlarged. The spleen was twice its normal size, and contained numerous small patches of yellowish-white tissue scattered throughout its substance. The liver displayed similar deposits, some of which were about one and a half inches in diameter. Both pleural and pericardial sacs contained serous effusions, while the left pleura showed deposits of lymphadenomatous tissue and commencing infiltration of the diaphragm. The vertebrae were also affected, and the bone marrow of the right femur showed haemopoietic activity. Histological examination revealed the typical features of an acute case of Hodgkin's disease.

CASE IV

A fisherman, aged 24, under the care of Dr. Goodall, had had cough and pallor of one year's duration, accompanied by swellings in his neck for five to six months. *X*-ray examination showed enlargement of the mediastinal glands and slight compression of the trachea. The spleen was not enlarged. The Pel-Ebstein type of fever was present. The blood count was as follows: red cells, 2,590,000 per c.mm.; white cells, 7,800 per c.mm.—polymorphs 69 per cent., small lymphocytes 20 per cent. and large 8 per cent., eosinophils 3 per cent.—haemoglobin, 85 per cent. Histological diagnosis: Hodgkin's disease.

CASE V

A packer, aged 29, under the care of Dr. Chalmers Watson, had had an enlargement of the left side of his neck for sixteen months, followed by swellings in axillae and groins. *X*-ray examination revealed secondary deposits in the bony pelvis, ribs, and lumbar vertebrae. Motor and sensory paralysis was present from the lower costal margin downwards, accompanied by acute backache.

Post-mortem Appearances.—Considerable enlargement of the lymphatic glands existed throughout the body; several of them were hard and tough in consistence. The spleen weighed 500 grams, being greatly increased in size and typical in appearance. The vertebral column showed involvement near the sixth, seventh, and eighth ribs. The brain and meninges were normal in appearance.

CASE VI

A housewife, aged 59, under the care of Dr. Comrie, complained of breathlessness, loss of appetite, and lassitude for one month. A single painless mass of slightly enlarged lymph glands was observed in the right axilla, and there was also some slight swelling in the left groin. The spleen was not palpable. Blood count showed: red cells, 3,640,000 per c.mm.; white cells, 6,400 per c.mm.; haemoglobin, 60 per cent.; colour index, 0.8. A film revealed neither visible abnormality of the erythrocytes nor any alteration in the proportion of leucocytes. Wassermann reaction was negative. *X*-ray examination showed a large right pleural effusion. Clinical diagnosis: pleurisy with effusion; carcinoma or tuberculosis of the lung.

Post-mortem Appearances.—There was considerable enlargement of the upper abdominal and tracheo-bronchial lymphatic glands, both of which were heavily infiltrated with soft, whitish tissue. The glands in the lesser omentum were similarly affected, the invading tissue extending up the porta hepatis along the larger branches of the portal vein to involve the liver and cause thickening of the wall of the gall-bladder. The kidneys and peri-pancreatic tissue were likewise affected. The spleen was twice its normal size, and exhibited numerous whitish areas about 3 mm. in diameter. In the bone marrow erythroblastic and leucoblastic reaction was present.

Histology.—There was widespread infiltration with small lymphocytes of liver, spleen, lymph glands, and bone marrow, including a subcapsular infiltration of the kidney.

Diagnosis.—The absence of a blood leucocytosis during life, accompanied by the histological appearances as described, indicated that the case was one of pseudo-leukaemia.

CASE VII

A chauffeur, aged 50, under the care of Dr. Goodall, gave a history of seven weeks' enlargement of glands in both axillae and groins, together with a swelling in his right preauricular region. Illness was accompanied by progressive enlargement of the spleen, some pain in his side, and a pleural effusion. *X*-ray treatment gave slight relief. Blood count showed: red cells, 4,900,000 per c.mm.; white cells, 7,600 per c.mm.—neutrophils 72 per cent., basophils 0.5 per cent., eosinophils 4 per cent., small lymphocytes 9 per cent, large 14 per cent.—haemoglobin, 85 per cent.

Post-mortem Appearances.—The entire para-aortic lymphatic chain was extensively involved with whitish-looking lymphoid tissue, and also the pelvic, inguinal, supraclavicular, cervical, and axillary glands. The tracheo-bronchial and mediastinal lymphatic groups were likewise affected, but to a lesser degree. Bilateral permeation from the axillary glands extended into each pectoralis major muscle. The spleen was slightly enlarged, and showed necrotic changes. Both pancreas and suprarenals exhibited secondary invasion.

Histology.—Normal lymphoid tissue was replaced by numerous mononucleated cells, some of whose nuclei displayed mitotic figures and other degenerative changes. The capsule of the gland was invaded.

EXPERIMENTAL WORK

Enlarged glands removed at biopsy were collected in a sterile test tube and 2 grams of glandular tissue were placed in a sterile mortar, finely minced, and ground in 20 c.cm. of nutrient broth of *p*H 7.2. This 1 in 10 suspension of material was maintained in a refrigerator at −4° C. for seven days, and was then tested for sterility both aerobically and anaerobically. Post-mortem material was dipped into absolute alcohol, which was burnt off; it was then plunged into boiling water for two seconds and allowed to dry in an incubator at 37° C. The superficial tissues were now cut away, and the central portion prepared for emulsification. This was performed after the manner described above, with the exception that either 3 per cent. ether or 0.5 per cent. phenol was incorporated in the broth as an additional precaution against contamination. After ten days in the refrigerator these suspensions were standardized to approximately the density of a Brown's standard opacity tube No. 2 by the addition of fresh broth, before being used for injection. All the material used was prepared in this manner.

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Intracerebral Inoculation of Rabbits

The procedure adopted was similar to that used by Gordon (1932), and was briefly as follows. Animals were deeply anaesthetized with ether, the hair over the head shaved, and the skin disinfected with absolute alcohol, tincture of iodine, and ether. A short incision was made through the soft tissues of the scalp down to the pericranium at a point situated 2 mm. lateral to the sagittal suture and 1.5 mm. anterior to the lambdoidal suture. The skull was now penetrated with a mechanical drill, or alternatively by means of a trephine. A fine intradermal needle was introduced through the aperture, and about 0.45 c.cm. of tissue emulsion was inoculated into the occipital lobe of the brain to a depth of about 3 mm. The needle was quickly withdrawn to avoid regurgitation, and the skin opening was united with a horse-hair suture and its edges brushed over with collodion. An intravenous dose of 0.5 to 0.7 c.cm. of the same inoculum was also administered through the ear vein.

Although the method described above gave satisfactory results, yet access to the frontal lobe of the brain gained by trephining at a point situated 2 mm. lateral to the median plane on an imaginary line joining the two lateral ocular canthi yielded equally good results. This entry was the route of choice in the case of young rabbits from 6 to 8 weeks old. The sites of inoculation into the brain in both methods were situated well behind and in front of the motor area respectively. Deliberate experimental damage to the motor area was, however, inflicted on the brains of six animals. The features of damage to this area, which were characterized by the onset of paralysis within five to twenty-four hours, and its subsequent course were carefully noted.

Results Obtained with Lymphadenomatous Material

Glandular extracts of varying age were introduced into rabbits (vide supra) and their effects observed.

Case 1.—Suspensions which had been left for periods varying from one hour to seven days were found to be completely inactive, but after ten days in the refrigerator slight activity was noted. Two large rabbits which were inoculated showed, some three to four days later, a trace of stiffness in their hind limbs and some interference with their power of locomotion. At twenty days' broth suspension was next employed, and was found to be highly active. Thus four animals which were injected all showed the typical appearances of the encephalitic syndrome described by Gordon (1932), the principal features of which were the onset, after an incubation period of three to five days, of stiffness and paralysis of the hind limbs, ataxia (elicited by Gordon's "Romberg test" for rabbits), arching of the back, retraction of the head, incontinence of urine and faeces, nystagmus, and grinding of teeth. Death often occurred, but many of the rabbits passed into a chronic condition that was characterized by loss of weight and extreme muscular atrophy of their hind quarters. A few were observed to recover completely. The cranial contents of all such animals were examined for the presence of bacteria by aerobic and anaerobic methods of cultivation, but none were found at the end of six weeks' incubation of cultures. Histologically no obvious changes in the rabbits' brains could be seen.

Case 2.—Tissue emulsions became active at the end of the third week, and the typical encephalitic syndrome was obtained in six animals.

Case 3.—Pathological material removed from this acute case of lymphadenoma was found to be active after eight days in the refrigerator. It is possible that the acuteness of the condition in man bears some relation to the results obtained in the rabbit by the biological test. Thus, of eleven rabbits and one guinea-pig which were inoculated, every animal showed paralysis and ataxia on the third day, and six of them died. The site of inoculation, together with the surrounding brain and meninges, was subjected to a lengthy examination for the presence of bacteria, but none were found.

Case 4.—Although clinically and histologically characteristic of lymphadenoma, the gland removed at biopsy was unfortunately unsuitable as a specimen, first by reason of the smallness of its size, and secondly, owing to the fact that it had been subjected to intensive deep *x*-ray therapy prior to removal. The fragment, which was less than 1 gram in weight, was emulsified and injected intracerebrally, but no definite results were elicited. Of several rabbits and guinea-pigs inoculated, only two of the former showed a transient stiffness of their hind limbs on the fourth day after inoculation.

Case 5.—An enlarged lymph gland removed from the axilla of this patient was used for test. The gland, however, proved to be one that was extremely hard and tough in consistency owing to the presence of extensive fibrotic changes. A uniform suspension of the gland tissue could not, therefore, be prepared, since it did not readily emulsify or disintegrate after standing in the refrigerator. Twelve animals were injected at weekly intervals for six weeks with this material, while the suspension was left in the refrigerator, but no results followed. In view of these findings it is suggested that the test is not applicable in the case of tough fibrotic glands which do not readily emulsify, disintegrate, or undergo autolysis after standing at low temperatures for several weeks.

Action of Tuberculous, Leukaemic, Sarcomatous, and other Tissues

A suspension of an enlarged cervical tuberculous lymphatic gland, prepared as in the case of lymphadenomatous tissue, was repeatedly introduced into five animals without any sign of appearance of the syndrome in question. Animals were observed for four weeks only, and then destroyed prior to the development of tuberculosis.

Similarly, glands removed from cases of pseudo-leukaemia (Case VI) and lymphosarcoma (Case VII) yielded consistently negative results throughout, suspensions varying in age from one hour to six weeks being unsuccessfully employed.

Reinoculation with Lymphadenomatous Material

Four rabbits unaffected after inoculation with non-lymphadenomatous material were reinoculated with Hodgkin's tissue obtained from three separate cases described. After an incubation period of four days all the animals showed the characteristic syndrome.

Toxins, Proteins, and Chemical and Mechanical Irritants

In an endeavour to reproduce this encephalitic syndrome by other means the following substances were inoculated intracerebrally: 0.2 c.cm. of an active streptococcal toxin; 0.4 c.cm. of a killed emulsion of *B. typhosus* (916 million organisms); 0.7 c.cm. of sterile milk; 0.4 c.cm. of 5 per cent. solution nucleate with 5 per cent. aleuronat; 0.2 c.cm. of a mixture of 1 per cent. solution of quinine hydrochloride and 2 per cent. urethane; 0.4 c.cm. of 1 per cent. peptone water; 0.2 c.cm. of 1 per cent. turpentine oil; and 0.3 c.cm. of a sterile suspension of powdered glass in gum tragacanth. In each case, excepting the last, an intravenous dose of 0.4 c.cm. was also given.

Rabbits injected with turpentine and powdered glass showed signs of cerebral irritation accompanied by increasing restlessness after forty-eight hours, followed by sudden collapse and death three to four days later. The remaining animals were kept under observation for periods varying from seven to fourteen days and then examined for histological changes at the site of inoculation in the brain, but on no single occasion was it found possible to reproduce effects which bore the least resemblance to the syndrome under discussion. Indeed, some of these irritant substances could be introduced into the brains of rabbits as young as six weeks old without the slightest visible effects being produced.

From the results indicated above it was concluded that the inability of irritant substances to produce paralysis, ataxia, and muscular wasting in rabbits strongly supports the view that the changes following the introduction of lymphadenomatous material cannot be attributed to the outcome of simple traumatic and inflammatory changes produced in the brains of these animals. It would thus appear that the symptoms are the result of the action of a diffusible agent present in suspensions of lymphadenomatous glands when kept at −4° C. for ten days or longer. The nature of this pathogenic agent is the subject of a further investigation.

Discussion

From the results described above it will be noted that lymphadenomatous tissue, when ground, suspended in broth, and kept at −4° C. for over ten days, produces

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striking effects when introduced into the brains of rabbits. It is also evident that these effects appear to be specific in character, for it has been shown that similarly prepared suspensions of lymphoid tissue removed from cases which clinically resembled Hodgkin's disease yielded negative results on test. Such cases have included glandular tuberculosis, lymphosarcoma, and leukaemia, all of which perhaps may be regarded as the commonest forms of lymphatic enlargement that may simulate Hodgkin's disease in temperate climates.

Calvert and Sanguinetti (1933), in their description of a case of Hodgkin's disease with relapsing pyrexia, have drawn attention to the extraordinary difficulties which may occasionally confront the clinician and pathologist alike when attempting to arrive at a diagnosis in certain atypical forms of lymphadenoma. Dr. Goodall's case (Case VII) illustrates a somewhat similar example. This patient's clinical history was suggestive of Hodgkin's disease, and clinical examination revealed the presence in both axillae and groins of enlarged glands whose size, consistence, and feel were not unlike those of a lymphadenomatous gland. The case, however, presented difficulties, since the histological appearance of these glands was not characteristic of lymphadenoma. Professor Drennan and Dr. James Davidson, however, regarded the condition as being one of lymphosarcoma, and were proved to be correct at necropsy. The case under the care of Dr. John Comrie (Case VI) illustrates another such example, for the diagnosis of pseudo-leukaemia was only first accurately established at post-mortem examination. In both these cases the Gordon biological test repeatedly yielded uniformly negative results throughout.

Space does not permit of a detailed account of experiments which have been directed towards ascertaining the precise nature of the agent responsible for paralysis, ataxia, and muscular wasting in rabbits. The results obtained so far indicate that the autolysis, disintegration, and cellular destruction of lymphadenomatous tissue liberates a product which is capable of producing an encephalitic syndrome in rabbits and guinea-pigs. Neither the inoculum nor the brain of an animal which succumbs to the condition shows the presence of bacteria after lengthy periods of observation.

Whether this toxic agent be living or dead cannot be stated at the moment, but it may be said that the changes produced in rabbits cannot be interpreted on the basis of nervous changes following the introduction of a simple non-specific irritant substance into the brain. Thus it can be demonstrated that substances such as a streptococcal toxin, sodium nucleate, aleuronat, quinine urethane, or finely powdered glass, which are capable of producing inflammatory tissue reactions, may be introduced into the brain of a rabbit with impunity. Indeed, these irritants may even be introduced in combination into the same animal on repeated occasions without the least visible effect.

The encouraging results given by this biological test are worthy of great attention, and we would suggest that glands removed at biopsy in suspected cases of Hodgkin's disease should not only be examined histologically and bacteriologically, but should also be subjected to Gordon's biological test.

SUMMARY AND CONCLUSIONS

Enlarged lymph glands removed from five cases of Hodgkin's disease have been subjected to the test devised by Gordon, three typical positive, one doubtful, and a negative result being obtained.

The syndrome produced in rabbits by Hodgkin's tissue cannot be elicited by the introduction of normal, lymphosarcomatous, leukaemic, or tuberculous lymphatic tissue. Neither can it be brought about by the intracerebral inoculation of dead bacteria, streptococcal toxin, sterile milk, peptone water, aleuronat, sodium nucleate, quinine urethane, or finely powdered glass.

Gordon's biological test affords an easy method whereby lymphadenomatous tissue may be differentiated from lymphosarcomatous, leukaemic, and tuberculous tissue. In consequence of this it may be utilized as a laboratory aid to the diagnosis of Hodgkin's disease.

The writer desires to express his thanks to Dr. Alex. Goodall for the supply of clinical material; also to Professors Mackie and Drennan, and Drs. J. Davidson, W. G. Millar, and R. Ogilvie for their advice. He is deeply indebted to Dr. M. H. Gordon of St. Bartholomew's Hospital, London, for his valuable guidance and encouragement.

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SO-CALLED "NEURASTHENIA"*

BY

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PHYSICIAN IN PSYCHOLOGICAL MEDICINE, UNIVERSITY COLLEGE HOSPITAL

Affections of the nervous system are usually divided into two main groups, dependent upon whether, on the one hand, they are the result of obvious disease or alterations of structure, or on the other hand, they are not accompanied by demonstrable structural lesions. Those affections which come within the first group are termed organic diseases; those within the second, functional disorders.

It is often stated that these functional disorders have become more prevalent during recent years, and quite apart from the large number of cases directly or indirectly consequent on the great war this is possibly true. Functional nervous disorders, however, are by no means new; they have been known and described for hundreds of years, and it is even likely that the physicians of the ancient civilizations were well acquainted with them. In early days it is probable that many of them were attributed to "possession" by spirits; in more recent times—namely, the seventeenth and eighteenth centuries—those which did not amount to insanity were commonly grouped together under the designation of "the vapours," although even as early as 1765 such cases were differentiated by Whytt into three groups, which he called respectively *Nervousness*, *Hypochondria*, and *Hysteria*. In the nineteenth century more definite attempts were made to explain their causation in physical terms, and in 1879 Beard of New York published a lengthy description of a large and important collection of them under the title *The Nature and Diagnosis of Neurasthenia*. Beard considered that the whole collection of cases which he described were due to neurasthenia in the literal meaning of the word—that is, to a state of nervous exhaustion—and he divided the manifestations of this state into a number of clinical groups, such as cerebral, spinal, gastric, cardiac, and sexual. Although his "neurasthenia" was at first received with considerable scepticism, indeed by some persons with actual ridicule, nevertheless his views gradually gained acceptance. At the present time every textbook on general medicine treats of neurasthenia as a more or less definite clinical entity, and the older books on psychological medicine do the same. On the

* A lecture before the Guildford Division of the British Medical Association on March 2nd, 1933.

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other hand, the attitude of many modern psychiatrists is closely akin to that which greeted Beard fifty years ago, some of them going so far as to say that neurasthenia does not exist at all, and that the word is merely a cover for ignorance. It is worth noting that so recently as December, 1932, a county court judge, in adjudicating upon a claim for compensation, remarked that he had "yet to be convinced that there was any such thing as neurasthenia. Apparently when a doctor could not find any specific cause for a patient's illness it was put down to neurasthenia."

I am inclined to think that the truth in this matter, as in many others, lies between these two extreme views. On the one hand, there would appear to be good evidence that neurasthenia, in the literal meaning of the word, does really exist. On the other hand, however, there is no doubt that the term is applied much too widely, that many cases which are thus labelled are not neurasthenia at all, and that many others, although presenting some indications of nervous exhaustion, are more correctly placed in other categories. In passing, it may be remarked that certain qualities inherent in the word itself are in no small measure responsible for its very wide and prevalent use. The term "neurasthenia" is nowadays so free from opprobrium—indeed, one might almost say has become so fashionable—and it fulfils so admirably the requirements of patient and practitioner in their demand for a label, that its popularity with both is readily understandable. While therefore it does not follow that the word "neurasthenia" is a cover for ignorance, it has certainly become a cloak of very ample dimensions, and one under which nowadays almost every variety of nervous disorder thought to be functional is apt to find a convenient shelter. It is my purpose to attempt briefly to describe the chief conditions which go by this name.

ACUTE NEURASTHENIA

In order to understand the nature of neurasthenia in its real sense it is necessary to refer to some points regarding nervous energy. The working of mind, and of most of the physiological processes taking place within the body, is intimately connected with, if not dependent upon, a flow of energy from the cells of the central nervous system. This energy would appear to be stored as potential in the special protoplasm, or neurokyme, contained within the nerve cells. It is released by the stimulus of afferent impulses, which cause a reduction of the highly complex neurokyme to a simpler chemical molecule. It is claimed that this reduction has been demonstrated chemically; also that it can be seen under the microscope as a structural change in the cell contents, known as chromatolysis. Such chromatolysis has been demonstrated in the brain cells of the bee and wasp after prolonged work; it also occurs in the brain cells of man after exposure to certain poisons. After rest or removal of the poison, provided the change has not gone too far, recovery takes place, and the cell regains its normal appearance. There can be little doubt that this recovery is due to the vital activity of the cell enabling it to build up a fresh supply of neurokyme from the blood plasma. There is every reason to conclude, therefore, that exhaustion of nervous energy is a definite physical state, that it may result from excessive work or from the presence of circulating poisons, and that the energy can be restored under suitable conditions. Clinical experience accords with these findings. As is well known, prolonged mental work is followed by mental fatigue and inability for further sustained application. In ordinary circumstances the fatigue disappears with rest and sleep, but should it happen that the mental strain has been excessive and prolonged, and that sleep has been inadequate, the fatigue continues, and a marked failure of mental capacity results. In extreme cases physical fatigue becomes superadded, and the individual suffers from a general nervous exhaustion. In addition to the incapacity for sustained effort, either mental or physical, there is inability to make decisions, faulty attention and memory, loss of emotional control, and increased irritability. The whole condition is well described by the term "irritable weakness." Such a state is seen even more frequently after serious and exhausting illnesses, especially when associated with toxaemia, as in influenza and enteric.

There seems every justification to conclude that in cases such as these the fatigue is due to an exhaustion of nervous energy brought about either by excessive mental strain with inadequate opportunity for recuperation, or by a poisoning of the nerve cells. The condition is, in fact, one of true neurasthenia, and, since it occurs in persons who previously have been in good health and is the result of some definite exciting factor, the neurasthenia may be termed "acute" or "secondary." Such cases, however, are characterized by one important feature—namely, that upon removal of the cause, and with adequate rest and appropriate treatment, they almost invariably make a good recovery. The condition neither becomes chronic nor does it tend to relapse.

PRIMARY NEURASTHENIA

There is another type of case, characterized by signs of nervous exhaustion, which is much more frequent than the foregoing, and which differs from it in several important respects. In the first place, there is no evidence of any sufficient exciting cause. The patients often state that they have been overworked or have had serious troubles and worries, but inquiries show that these factors, if they have existed at all, have been comparatively trivial, and certainly not such as would cause nervous exhaustion in the average person. Neither is there any evidence of serious illness or infection. Meticulous examination, it is true, may bring to light some focus of chronic sepsis, but much more extensive sepsis is often found in persons who present none of the signs of nervous exhaustion. Again, it will either be found that the symptoms complained of have been present for many years, or that there have been several previous similar attacks; the condition is, in fact, either a chronic or a recurrent one. Lastly, inquiries into the family histories of these patients will usually show that they come of stocks which evince a marked tendency to psychopathic disorders.

Whilst many of the persons of the type I am here referring to are capable of performing quite useful work of a routine character, some of them indeed of spurts of brilliant work, their life-history clearly shows that they are lacking in staying power. Should they be exposed to any comparatively slight overstrain, or to any departure from their normal routine, they will undergo a breakdown with the signs and symptoms of nervous exhaustion. Then they become restless, irritable, incapable of mental application, and unduly prone to physical fatigue. They complain of sleeping badly, of headaches, and of various bodily pains and abnormal sensations. Their appetite is capricious, and they often suffer from constipation; their pulse is quickened and unusually labile, and their blood pressure is low. In short, their whole condition is one of irritable weakness, with a hypochondriacal trend. It is important to note, however, that although these patients show considerable concern regarding themselves and their health, there is no real fear or anxiety. With rest and appropriate treatment the majority of them recover and return to their work, but recurrences are very common, and the life-history of many of them is one of repeated nervous breakdowns. A not inconsiderable number [illegible]

ito a state of more or less continuous, querulous, self-itying invalidism. Whilst some psychiatrists would :gard patients of this type as cases of anxiety neurosis, ypochondria, or even manic-depressive psychosis, it :ems to me that if we carefully consider the family and ersonal history it is very difficult to avoid the conclusion :at the essential underlying condition is a constitutional ck of nervous stamina. From what we know of nervous ergy it seems reasonable to regard this as the result f an inherent defect of vitality of the nerve cells, in con-quence of which they are incapable of maintaining adequate reserve of potential energy or of readily placing such energy when it is depleted. We may there-re rightly regard them as cases of primary neurasthenia.

MENTAL INSTABILITY

Although patients suffering from primary and secondary eurasthenia make up a considerable total, they never-eless constitute only a minority of those to whom the bel "neurasthenia" is applied. It is now necessary, erefore, to describe certain other forms of so-called eurasthenia. In a considerable proportion of the cases be discussed it will be found that other members of the mily suffer from some form or other of mental or nervous isorder, and this makes it highly probable that the atients themselves have some constitutional peculiarity. is possible that in some instances this may be neur-sthenic in character—that is to say, it may consist of a bnormal reserve of nervous energy. This, however, is ot so in all, and the essential underlying characteristic these cases is a condition of mental instability.

Mental instability is a condition of much importance, r the reason that it constitutes the soil from which is oduced many, if not most, of the psychoses and psycho-uroses. Clinically, it is characterized by three main atures—namely, (1) a hypersensitiveness to all kinds stimuli; (2) a tendency for the thoughts and feelings the moment to dominate consciousness to such an tent as to take complete possession of the individual; and) a proneness to impulsive and violent motor response. he mentally unstable person is acutely conscious of the nsations arising from the working of his body and bnormally sensitive to everything happening around him. He consequently tends to be hypochondriacal, self-ying, to seek sympathy, and to be profoundly depressed unduly elated by comparatively trivial happenings. n emotion or idea tends to reach a magnitude which is t of all proportion and perspective to the cause which ed it. Any desire which is aroused must be mediately gratified, so that the whole behaviour is pricious and impulsive. In short, the mentally unstable rson is one who wears his heart on his sleeve, and who e acutely and reacts abnormally to many of the dinary experiences of life. From our present point of ew the importance of this condition lies in the manner which the individual reacts when exposed to some rticular strain. It is not suggested, of course, that ry mentally unstable individual will necessarily have "nervous breakdown." On the contrary, there are many ho go through life without such an occurrence; they are lly dubbed highly strung, cranks, faddists, neurotics, sterics, and even neurasthenics: they are only too often almost intolerable burden and nuisance to all who have do with them; but they do not develop any definite tal disorder. On the other hand, it is from persons this type that the mass of the psychotics and psycho-uroties are recruited, and many of them do develop definite mental disorder, which renders them incapable continuing their work, and which calls for treatment.

The nature of this disorder—that is, the particular type their reaction—varies greatly in different cases. It is fluenced by the nature of the exciting cause as well as by the temperament and general mental make-up of the individual. In some cases it is a definite psychosis; in others—and it is these with which we are now dealing—it is a minor mental disorder or psychoneurosis. In the latter case, however, there are wide differences in the type of reaction. In the main there are three which are commonly designated neurasthenia, and which I shall therefore describe; they are (1) anxiety states, (2) hysteria, and (3) mixed types.

The Three Main Groups

ANXIETY STATE

Perhaps the commonest type of functional nervous disorder met with in practice, and certainly the one to which the term "neurasthenia" is most frequently applied, is that which is more correctly known as an anxiety state. As will be seen presently, cases of this kind differ from those of pure neurasthenia in the presence of very definite anxiety as well as of certain other physical signs. The predisposing cause of this condition is the mental instability already described, with which there is usually associated a special peculiarity in the form of timidity and tendency to worry over trifles. The exciting cause is any experience capable of arousing the emotion of fear. Cases of anxiety state occurred by the thousand during the great war, and were usually, but erroneously, attributed to "shell-shock." In reality the exciting cause was fear and anxiety—either the fear of death, of mutilation, or of *showing* fear, or the anxiety bred of months of hardship and exposure to the hazards and horrors of war. As a matter of fact, many cases occurred in men who had never seen a shell or even left the home training camp. In civil life the exciting cause may be any frightening experience, such, for instance, as being involved in, or merely witnessing, a serious accident, or it may be domestic trouble, bereavement, business worry, financial loss, or any happening which has produced a state of mental conflict. However these cases may arise, the outstanding features are fear and anxiety. Either immediately, or more often after a short interval, the patient becomes apprehensive, depressed, filled with forbodings, and in such a state of mental unrest as to be incapable of performing his work or of any sustained mental effort. In a certain number of cases this state of mental disquietude persists and exerts its disabling effect long after the cause which originally produced it has been forgotten. In others, the fear becomes attached to some thought or object which is not in itself a cause of fear, but which has been associated with the original cause. It is probable that some of the more specialized fears—such as agoraphobia, claustrophobia, nyctophobia, etc.—may arise in this way. In yet other cases the constant brooding of the patient and his withdrawal into himself result in a morbid consciousness of his bodily feelings. The anxiety then becomes transferred to and fixed upon these sensations, with the result that complaints of physical illness become the dominating clinical feature.

It has been shown that one of the first effects of fear is to stimulate the secretion of adrenaline, whereby the glycogen of the liver is mobilized and the individual rendered more fitted to meet the situation which has given rise to the fear. The action of adrenaline, however, is only temporary, and its supply is soon exhausted, and it would appear that after a brief period increased thyroid secretion occurs for the purpose of supplementing the adrenaline and maintaining the metabolism of the body. Provided that the fear is not prolonged, this disturbance of endocrine balance is soon corrected, but where the emotion is protracted over a considerable time this cannot take place, and there then results an endocrine imbalance, which gives rise to marked physical signs and

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2 EASTERN COUNTIES —Very old established PRACTICE unopposed, and situated in pleasant agricultural district within reach of two good towns Average gross cash receipts for the last three years £1 849 (last year £2 237) Panel with mileage produces over £900 p a, and appts are worth about £130 Fees from 3/6 Comfortable house with 2 reception 6 bedrooms, etc Garden Garage Price (freehold) £1 500 Premium £3,200

3 LONDON SURBURB (EAST) —In a clean and well populated district an old-established PRACTICE worth about £1 200 p a including transferable appt of £150 and panel of 950 is for immediate disposal, owing to ill health of Vendor Small house (3 bedrooms, etc) with fair sized garden Rent on lease £78 a year, inclusive of rates and taxes Premium 2 years' purchase

4 LIVERPOOL — Old established PRACTICE, averaging £1,046 p a., including panel of about 1,500 Fees from 2/6 Midwifery refused Eight roomed house with professional accommodation electric light Small garden Price £500 Premium 1½ years purchase

5 PARTNERSHIP —RIVERSIDE SUBURB (WEST) —A fourth Partner (who should be married and about 35 years of age) is required in a very old-established mixed class Practice, situated in pleasant residential suburb Cash receipts for past three years average £6,879 p a A three twentieths share is offered with option in four years to increase up to equal shares with the other Partners Appts held and panel of about 3 000 Visits 3/6 to 21/ Modern house with good accommodation (5 bedrooms garden) Price (freehold) £2 000, or would be let at £125 p a Premium 2 years' purchase

6 PARTNERSHIP KENT (within about 8 mies of the Sea, and similar distance from large town) —A fourth Partner (with some knowledge of Surgery preferred) is required in a very old established mixed class Practice, situated in beautiful country district. Cash receipts about £4 800 p a A sixth share producing £800 p a (which will be guaranteed for the first year) is offered with option of increase at end of two years Good house with ample accommodation (5 bedrooms, etc) and 3½ acres of ground Price (freehold) £2,000, or can be rented at £110 a year Premium £1,600

7 WITHIN THIRTY FIVE MILES OF LONDON —Very old established country PRACTICE, in pleasant residential district Gross cash receipts for the last twelve months approximately £1,800 Panel brings in over £650 p a and appts are worth nearly £200 p a Fees from 2/6 to 15/ Midwifery 3 to 10 gns Nice house in one acre of garden and 2 acres of orchard and containing 3 reception 6 bedrooms, etc and professional rooms Electric light Main drainage Garage Price for freehold £2,500 £1 000 on mortgage Golf, tennis and other sport. Premium £2,500

8 LONDON WEST —PARTNERSHIP —A half share producing about £750 p a (which will be guaranteed for the first year) is offered in a very old-established better class non panel and non-dispensing Practice having exceptional scope for increase Fees from 10/6 to 5 guineas Suitable Flat is available for ingoing Partner who must be experienced in better class work and preferably hold the M R C P Premium for share 2 years purchase

9 SOUTH WALES —Pleasant Coast Town (pop 40,000) —Old-established PRACTICE held ten years by present incumbent and averaging over £1 000 p a including panel of 1 275 Visits 5/ to 10/6 Good house having charming views of English Channel and surrounding country Contains professional rooms 3 reception, 6 bedrooms 2 bathrooms Garden with tennis court Garage Price for leasehold (60 years to run at ground rent of £20 a year) £1,800 Premium 1½ years purchase

10 LONDON S W —Well-established PRACTICE worth about £350 p a including panel of 550 and capable of increase Rent of Flat, consisting of two floors containing 2 professional rooms dining room kitchen, two other rooms and bathroom £2 2s a week inclusive of rates and taxes Lease 5 years to run, and renewable Premium £450 or near offer

11 EASTERN COUNTIES —ASSISTANTSHIP with view to Partnership (after a preliminary period of six months at a salary of £440 p a, with free house) is offered in an old-established good mixed-class Practice situated in pleasant residential and agricultural district within about 15 miles of the coast Cross cash receipts approximately £3 000 A third share is for disposal at a premium of 2 years purch

12 NORTH WALES —ASSISTANTSHIP with view to Partnership (after a preliminary period of about six months at a salary of £300 p a all found) is offered in a better-class non panel Practice situated in attractive seaside resort A one third or three sevenths share is for disposal (producing £800 to £900 p a) at a premium of 2 years purch Ingoing Partner should be English and pref London trained

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symptoms. The chief of these are tremors, increased reflexes, dilated pupils, flushes, sweatings, rapid and often irregular pulse, and a raised blood pressure. It is the presence of these signs, together with the usually obvious anxiety and mental unrest, which distinguish an anxiety state from a condition of simple neurasthenia, in which listlessness, fatigue, and low blood pressure are the chief characteristics.

Hysteria

The second group of cases commonly labelled neurasthenia consists of those which are more rightly called hysteria. Unfortunately, the word "hysteria" is applied almost as loosely as is neurasthenia, and even among psychiatrists there are as many different views as to what should be included in this term as there are opinions regarding the causation and psychopathology of the condition. I think a great deal of the confusion is due to the failure to distinguish between certain mental peculiarities which are commonly present in persons who develop hysteria, and the actual hysterical manifestations themselves. Thus most persons who develop hysteria are emotionally unstable, and this instability results in a desire to attract attention and sympathy, in rapid changes of mood, with attacks of laughing and crying, exaggerated language, demonstrative behaviour, restless excitement, and often violent outbreaks of temper and passion. Although these conditions are often called hysterical, they are in reality merely manifestations of emotional instability; they occur in persons who may never develop hysteria at all, and they are not infrequent precursors of an anxiety state.

In my view the type of mental constitution which is necessary for the development of hysteria is one of instability plus an abnormal suggestibility, and I agree with Babinsky, who limits the term "hysteria" to the physical manifestations which are produced in such a person by suggestion. The actual mechanism of the process may briefly be described as follows. The mentally unstable and suggestible individual is, let us say, involved in an accident in which a comparatively slight injury is inflicted on a limb. The limb is painful and difficult to move, and this suggests that it has been paralysed. The suggestion is accepted, the idea of paralysis takes possession of the victim and becomes woven into his personality, conscious and subconscious, and a paralysis results which will remain until it is removed by an equally powerful contra-suggestion. Hysterical deafness, blindness, mutism, and anaesthesia may similarly be explained by the action of an appropriate suggestion conveyed during an emotional crisis. In other cases the mechanism may be somewhat more complex, but the process is essentially the same. For instance, the emotionally unstable individual is threatened with some social or other situation which is profoundly distasteful to him and from which he shrinks. He becomes anxious and fearful, and the anxiety is accompanied by a feeling of physical distress in one or other organ of his body. The distress suggests the presence of a definite disability or disease; with the acceptance of this suggestion the mental unrest usually disappears, but the physical disability remains and is to the patient a real condition. The symptoms of pure hysteria, therefore, are in many ways markedly different from those of neurasthenia and anxiety state. There are none of the usual signs of nervous exhaustion, no undue fatigability, and no mental unrest once the physical disability has made its appearance. Indeed, with this physical disability the hysteric usually passes into a state of mental calm and complacency. On the other hand, there is some definite impairment or loss of physical function, usually in the form of localized paralysis or anaesthesia, and this in itself, provided care be taken to exclude organic disease, should make the diagnosis clear. Many authorities include purely psychic disturbances—fugues, amnesias, double personalities, and the like—in the category of hysteria; these states, however, are due to a dissociation of the personality, and I regard them as more properly placed amongst the epilepsies.

Mixed Reaction Types

While there are many cases in which the symptoms presented by the patient conform fairly strictly to one or other of the two foregoing types—namely, anxiety state and hysteria—there are very many others in which the reaction to environmental stress or to a situation of difficulty is not thus simple, but is of a mixed character. Indeed, I think it may be said that the majority of patients suffering from so-called neurasthenia present a combination, in varying degree, of the symptoms of nervous debility, anxiety, and hysteria. This will be apparent if I briefly describe two conditions which are very common in medical practice.

The first is the state which usually goes by the name of "traumatic neurasthenia," and which was formerly known as "railway spine." The sequence of events is as follows. The patient is involved in an accident of some kind or other which may or may not be attended with a definite physical injury. In some cases at once, but usually after an interval, he becomes timid, fearful, and apprehensive, and shortly afterwards he develops a definite sensory or motor disability. The sensory disturbance usually takes the form of a persistent pain in the occipital region or the spine. The motor disturbance is either a tremor, a paralysis localized to one or more limbs, or a general muscular weakness. Gradually the signs and symptoms of nervous exhaustion supervene in the form of defective attention and faulty memory, incapacity for mental effort, irritable restlessness, and inability to withstand excitement, noise, strong light, or any kind of powerful stimulus; these are accompanied by tachycardia, tremors, sweating, increased reflexes, and proneness to fatigue on slight exertion. There are, of course, considerable variations in different cases, but if careful investigation be made of the signs and symptoms it will usually be found that they are compounded of the three conditions which have been described. Thus the initial emotional disturbance is an anxiety state begotten by fear; the motor and sensory disturbances are hysterical manifestations induced by suggestion during this stage; and the nervous exhaustion is consequent upon the depletion of nervous energy by the continued mental unrest. Many of these cases are complicated, and the anxiety kept up, by impending litigation, and such might not inaptly be termed "compensation neurosis." Doubtless also in a number of these cases there is some conscious and deliberate exaggeration of the disability, while some of them are pure malingering. It would, however, be a great mistake to assume that this is so in all—hysteria and anxiety states are genuine disorders of mind, and as such are in need of treatment.

The second prevalent type of case is characterized by an emotional disturbance followed by a pronounced hypochondriacal trend. It is commoner in females, and it usually arises in the later years of adolescence. Either as the result of some mental conflict, some disappointment, or some inability of the individual to meet the demands of her work or surroundings, she develops a feeling of failure and incompetence; she becomes introspective and filled with self-pity. Her consciousness of self, and particularly of her bodily sensations, becomes exaggerated, with the result that a trifling indigestion or flatulence becomes magnified into a severe and continuous pain. She eagerly seizes upon this pain as the indication of some physical disease which is responsible for, and is

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explanation of, her failure, and with it she goes to the doctor. In the circumstances it is perhaps not unnatural that chronic appendicitis should be suspected, and that the appendix should be accordingly removed. But the patient is barely recovered from the operation before the pain returns, and again she seeks medical advice. The gall-bladder now comes under suspicion, and this in its turn is removed. But again the pain returns. The pelvic organs now become suspect, and she undergoes dilatation and curettage for chronic endometritis or removal of an ovary for chronic ovaritis. Still there is no improvement, and after, it may be, a final attempt to deal with adhesions, or a laparotomy to clear up the mystery, or even removal of the colon, the conclusion is reached that the case is one of " chronic neurasthenia," and the neurologist is called in. Of course, it is not suggested that a patient suffering from an anxiety-hysteria neurosis, which is really what this condition is, is thereby immune to appendicitis or to any other condition which may require surgical treatment. I do desire, however, to emphasize the extreme importance of remembering that abdominal pain, especially in girls and young women, and even when accompanied by vomiting, may be hysterical in origin. The importance lies in the results which only too frequently follow a wrong diagnosis. It used to be thought that, even if a condition was hysterical, the performance of an operation was the right treatment, because it would cause the patient to think she had been cured. It is now realized that this is a complete fallacy, and most surgeons of experience are well aware of, and very chary of operating upon, what they call the " abdominal woman " ; for it is recognized that with each operation performed upon her the prospect of cure becomes more and more remote. The emotional, querulous, introspective person whose abdomen is covered with operation scars is practically incurable, and it is tolerably certain that he or she will go through the remainder of life as a chronic, complaining, and exacting invalid, usually labelled "chronic neurasthenia." Indeed, in not a few of these patients the hypochondriacal trend develops into an incurable delusion which may render certification necessary.

Importance of Diagnosis and Treatment

Just as a psychoneurosis may be mistaken for organic disease, so may organic disease be thought to be a psychoneurosis and labelled neurasthenia, and it is very necessary that the practitioner should be on his guard against such an error. Careful investigation of the history, consideration of the symptoms, and a complete physical examination will usually suffice to prevent a mistake ; but if this is not done there are several diseases of body and mind, which may readily be thought to be merely neurasthenia. Amongst the chief of them are early phthisis, diabetes, Addison's disease, disseminated sclerosis, cerebral tumour, cerebral arteriosclerosis, and encephalitis lethargica. It is also necessary to bear in mind the possibility of an early psychosis of the depressive or melancholic type, or of general paralysis, or dementia praecox.

The importance of distinguishing organic disease from functional nervous disturbance is obvious. It may, however, be asked, Is there any particular value from the point of view of the practitioner in differentiating between the various types of functional disorder which have been described? I think there is very great value, not merely as helping to a right understanding of the nature of the patient's illness, but also in regard to the practical issues of prognosis and treatment. As has been pointed out, cases of neurasthenia which are secondary to prolonged overstrain or exhausting illness almost invariably make a complete recovery, and all that is needed is rest and appropriate treatment. In cases of this kind such drugs as phosphorus, iron, arsenic, and strychnine are often of considerable benefit. Organotherapy in various forms has been extensively used ; its chief effect, however, is in stimulating metabolism, and it is very doubtful whether it has any specific action beyond this: in some cases it seems harmful rather than beneficial. The patient who breaks down from primary neurasthenia may also be restored to a moderate degree of fitness by similar means. In these cases, however, it is essential to remember that unless careful and detailed directions are given, and followed, for the proper ordering of his life so as to avoid any kind of overstrain, the patient will certainly break down again. Cases of anxiety state, on the other hand, require radically different treatment. In these an appropriate form of psychotherapy is indicated, and will usually be attended with good results. It may with considerable advantage be supplemented by the administration of mild sedatives, of which the most suitable are bromide and luminal in small doses. In these cases such drugs as strychnine, phosphorus, and thyroid are contraindicated. They will not only do no good, but may be positively dangerous. It has not rarely happened that the administration of a course of strychnine to a patient suffering from an anxiety neurosis has increased his mental unrest to such a state of desperation as to cause him to commit suicide. Cases of hysteria in which anxiety is present are also benefited to a certain extent by sedatives ; but psychotherapy, on sensible lines, is the only method which is likely to yield lasting results.

Finally, I would particularly stress the importance of distinguishing between a psychoneurosis and a psychosis. The differentiation, it must be admitted, is at times far from easy, for the dividing line between the two conditions is often very ill defined. But failure to do so may be attended with very grave consequences to the reputation of the practitioner as well as by serious danger to the patient and his relatives. It is not uncommon for a patient who has been under treatment for so-called neurasthenia but who is really suffering from an early stage of general paralysis to make a sudden homicidal attack ; it is still more common for a patient under treatment for so-called neurasthenia but who is really suffering from manic-depressive insanity to be found dead by his own hand.

OTITIS MEDIA DUE TO PNEUMOCOCCUS MUCOSUS

BY

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The condition to be described, though well known, has not attracted, in this country, the attention it deserves. The stealthy onset, deceptive course, frequent complications, and high mortality of this type of infection present a clinical picture of the greatest interest and importance. It is imperative that an early bacteriological examination should be made in order to ensure a timely diagnosis. The features of this condition are ably dealt with in numerous publications abroad, but the paucity of references in English literature seems to justify the publication of this communication.

Researches into Continental literature of the last twenty-five years disclosed references to 498 cases of mucosus otitis. The bacteriological diagnosis was made by examination either of the aural discharge or of pus contained in the mastoid cells at the time of the operation. The former group supplied 154 cases (14.5 per cent.) out of

1,063 instances of acute otitis media, and the latter 344 cases (13.5 per cent.) out of 2,577 mastoids operated on. In 207 of these 498 cases where the age was given, the incidence in decades was as follows:

Decades	I	II	III	IV	V	VI	VII	VIII	IX
Percentage ...	5.5	8.0	14.7	15.7	16.0	20.1	16.0	3.4	0.5

The incidence is thus seen to increase with age, reaching its maximum in the sixth decade. With regard to sex, of 263 cases published by various authors, 202 (77 per cent.) were males and 61 (23 per cent.) were females.

Mucosus otitis shows little tendency towards spontaneous recovery. According to some observers, 80 per cent. of cases terminate in acute mastoiditis with or without other complications; the incidence of mastoiditis in streptococcal otitis is approximately 38 to 40 per cent. Further, in a series of 203 cases receiving operative treatment, intracranial complications ensued in 45 per cent., the usual being: extradural and perisinus abscesses 28.5 per cent., meningitis 10.8 per cent., sinus thrombosis 2.4 per cent., labyrinthitis 1.9 per cent., brain abscess 1.2 per cent. Abscesses in the deep cervical muscles were 7.3 per cent. Finally, the average mortality in 175 collected cases was 16 per cent., as against 6.6 per cent. in the contemporary literature of streptococcal middle-ear infections. Figures at the West London Hospital are of less statistical value owing to the limited number of cases. They cover eighty investigated cases of acute otitis media in the last fifteen months. Seven cases of mucosus otitis were proved, four males and three females, giving an incidence of 8.8 per cent. Their ages were: 1½, 5, 6, 16, 38, 53, and 62 years. Of these seven cases, six were operated on; the seventh recovered spontaneously. Intracranial complications have not occurred in this small series of cases, but, following the operation, two patients developed an abscess in the deep muscles of the neck.

Symptomatology

The characteristic features of the disease are the stealthy onset, lack of prominent symptoms, protracted course, infrequency of spontaneous recovery, and the great disparity between its benign aspect and the extensive destruction of bone in the mastoid process. Four different types of mucosus otitis can be distinguished.

Latent Type.—The onset is mild. The initial symptom slight transient earache, followed by moderate local headache, tinnitus, progressive deafness, and sensation of pressure in the affected ear. Gradually, within a week or so, some of these symptoms tend to subside and a latent period ensues, during which tinnitus, deafness, and local hyperaesthesia remain. This period of apparent inactivity may last as long as six months, but at any time it may be broken by an exacerbation of middle-ear symptoms, with signs of mastoiditis and sometimes of intracranial complications. Thus a very deceptive condition of affairs may be present for long periods before dangerous signs and symptoms make themselves apparent. A bacteriological examination carried out in the early stage would reveal the dangerous nature of the condition. The drum is pale pink and its radial vessels injected. The normal lustre, the light reflex, and the details of the hammer are lost. It is thickened by infiltration—a most important characteristic in the clinical diagnosis of mucosus otitis—which is such that the drum may present the appearance of having been lifted outwards. There may be local bulging later, usually at the posterior superior quadrant. A scanty, mucoid discharge occurs after a spontaneous perforation or a myringotomy. The perforation generally closes during the period of latency and the drum is approximately restored to the appearance presented before perforation or incision.

Subacute Progressive Type.—The initial mild symptoms already described gradually increase with varying intensity, and after six to eight weeks culminate in a fully developed suppurating mastoiditis. The course of the otitis is usually milder and more prolonged than in streptococcal infection. The drum is pink and bulging, requiring myringotomy if a spontaneous perforation has not yet occurred. Aural discharge is more abundant than in the latent form, and becomes muco-purulent in the later stages. The perforation may intermittently close, causing exacerbation of pain, and requiring a further myringotomy.

Acute Type.—This uncommon type is characterized by severe initial subjective symptoms and a rapid development of mastoiditis. The drum, however, is pink and only slightly bulging, affording a striking contrast to the appearance present in a streptococcal infection. It is possible that such cases should be relegated to the latent group described, the mild onset and latent period having unrecognized.

Benign Type.—About 20 per cent. of *Pneumococcus mucosus* infections of the middle ear resolve without complications. After the same mild onset and subacute course during which there is slight deafness with moderate sanguineous aural discharge, the condition clears up in three to five weeks.

Diagnosis

In all cases of mucosus otitis, even in the presence of complications, the complete absence of pyrexia or significant variations of temperature is an important diagnostic feature. Case 1 illustrates this point, and shows that a clinical diagnosis is made with difficulty and after some delay. A syringe aspiration of the tympanic cavity (which I hope to show in a further communication) is far more trustworthy, from the point of view of bacteriological results, than the examination of aural discharge after myringotomy. Using a 1 c.cm. hypodermic syringe containing a little sterile saline or broth, and a two and a half inch needle with short bevel and wide bore, the drum is pierced at the site of maximal visible bulging, or, in the absence of bulging, in the postero-inferior quadrant. There is more resistance to penetration in mucosus than in streptococcal otitis; this is ascribed to the fact that in mucosus otitis there is a greater thickening of the drum due to cellular infiltration. In cases where a spontaneous perforation has already occurred, more reliable bacteriological results are obtained by puncturing the drum elsewhere than by examining the aural discharge which is contaminated by secondary organisms.

The sterile saline or broth permits even the smallest amount of aspirate to be collected for examination. The bacteriological routine depends on the amount of the aspirate. If it is small, plating out on blood agar is the sole procedure, with subsequent typing of organisms if sufficient, smear and hang-drop preparations, with or without type serum, may indicate a provisional diagnosis which later work on the plate cultures qualifies. A bacteriological diagnosis having been achieved, confusion with Eustachian catarrh cannot arise, and knowledge has been gained that will ensure early and correct treatment.

The next procedure, during the latent period, is to obtain *x*-ray records of both mastoid regions. These provide standards of comparison for future reference, and knowledge as to the cellularity of the mastoid process, and evidence of inflammatory changes. In mucosus mastoiditis there may be seen: (1) a diffuse clouding due to fluid and infiltration of the cell mucosal linings; (2) well-described shadows caused by destroyed groups of cells which are being replaced by granulation tissue and pus; (3) healthy air-containing cells between diseased areas